Lower Duwamish Waterway NPDES Inspection Sampling Support

Technical Memorandum

Final

Prepared for

Toxics Cleanup Program
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Appendix K
Union Pacific Railroad – Argo Yard

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

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Table of Contents

Page

K-1 Introduction and Background K-1
K-1.1 Stormwater Conveyance and Treatment System K-1
K-1.2 Recent Compliance History K-2

K-2 Inspection and Sampling K-4
K-2.1 June 2013 Stormwater Compliance Inspection K-4
K-2.2 Stormwater Conveyance System Sampling K-4
K-2.2.1 Water Sample K-4
K-2.2.2 Solids Samples K-4

K-3 Results K-6
K-3.1 Chemical Analysis K-6
K-3.2 Inspection Results and Permit Compliance Requirements K-6

K-4 References K-7

Figures

Figure K-1a. Union Pacific Railroad Facility SWPPP Map

Figure K-1b. Union Pacific Railroad Facility SWPPP Map

Figure K-1c. Union Pacific Railroad Facility SWPPP Map

Figure K-2. Union Pacific Railroad Inspection and Sample Locations

Tables

Table K-1. Sample Analytical Methods - Water

Table K-2. Water Sample Water Quality Data

Table K-3. Water Sample Results Compared to Criteria

Table K-4. Water Sample Results – PCB Congeners

Table K-5. Water Sample Results – Conventionals

Table K-6. Sample Analytical Methods – Solids

Table K-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs

Attachments

Attachment K-1. Inspection Photographic Log

Attachment K-2. Field Documentation

Attachment K-3. Chain of Custody Forms

Attachment K-4. Laboratory Reports (on CD)

Attachment K-5. Ecology Inspection Report

K-1 Introduction and Background

Facility Name	Union Pacific Railroad – Argo Yard
Address	402 S Dawson Street Seattle, WA 98108
NPDES Permit Type	Industrial Stormwater General Permit
NPDES Permit No.	WAR001155
Permit Monitoring Requirements	Turbidity, pH, oil sheen, total copper, total zinc
SIC Code	4011: Railroads, Line-Haul Operating 4013: Railroad Switching and Terminal Establishments
Inspection Date	June 26, 2013
Grab Samples	1 Water Sample, 3 Solids Samples
Sample ID(s)	UP-CB-B8-20130626-S UP-MHF-165-20130626-S UP-CB-A6-20130626-S UP-CB-B8-20130626-W
Water Sample Analytes	PCB Congeners, SVOCs (including phthalates and PAHs), pesticides, metals, mercury, pH, specific conductance, anions, alkalinity, TOC/DOC, TSS
Solids Sample Analytes	Dioxins/furans (CB-B8), PCB Aroclors, SVOCs (including phthalates and PAHs), pesticides, TPH-Diesel and Motor Oil, TPH-Gasoline, VOCs, metals, mercury, TOC, total solids, grain size
Split Samples with Facility	Yes

The Union Pacific Railroad (UPRR) – Argo Yard is located at 402 S Dawson Street, Seattle, Washington, at Milepost 180.1 of the Portland Service Unit of UPRR. The Argo Yard is a railcar switching and intermodal station, and a maintenance facility for the railroad. Activities conducted at this location include vehicle fueling (packer cranes, dray tractors, and trucks), locomotive maintenance and fueling, rail car maintenance (rip track), parts storage, and intermodal operations (CH2MHill 2011). A facility map is presented on Figures K-1a, K-1b, and K-1c.

K-1.1 Stormwater Conveyance and Treatment System

Stormwater drainage from UPRR – Argo Yard is generally routed to the Seattle Public Utilities (SPU) storm drain system, except for one combined (storm and sanitary) sewer discharge to the sanitary sewer system and one industrial process wastewater discharge to the sanitary sewer system. Stormwater and process discharges have alphabetic "system" designations associated with nine different drainage areas, Systems A, B, E, F, G, H, L, X, and Z (Figures K-1a, K-1b, K-1c). There are three specific areas at the Argo Yard where industrial activities are conducted

that are regulated under the Industrial Stormwater General Permit (ISGP). The One Spot Maintenance Area (System L), which is devoted to locomotive fueling and locomotive/railcar maintenance and subject to ISGP regulations, is instead regulated under a separate King County Major Discharge Authorization permit. Therefore, only two stormwater discharges, Systems F and B, are regulated under the ISGP for activities including vehicle and equipment maintenance and/or fueling operations within these drainage areas. No other stormwater discharges are associated with regulated industrial activities (CH2MHill 2011).

System F receives storm drainage from the areas around the Tractor Maintenance Structure and from intermodal ramps north, east, and southeast of the building. The Tractor Maintenance Structure is located near the intersection of Denver Avenue S and Second Avenue S. This area is entirely paved and is sloped to contain storm runoff (Figure K-1b) (CH2MHill 2011).

System B receives storm drainage from the areas around the Packer Maintenance Structure at S Lucile Street and from intermodal ramps north and northwest of the building (Figure K-1c). Stormwater runoff is collected in catch basins and conveyed to SD Vault B that gravity discharges to the SPU storm drain system. Regulated industrial activities for the Packer Maintenance Area include packer and equipment washing at a dedicated wash pad (washwater is collected separately and hauled offsite for disposal) and maintenance of packer cranes at the Packer Maintenance Structure. Maintenance fluids and a small quantity of diesel fuel are stored in above-ground storage tanks within a containment area inside the structure. Maintenance of packer cranes and other equipment generally occurs under roof, but some activities occur outdoors for cranes that cannot fit completely under the roof (CH2MHill 2011).

Both System F and System B discharge to the SPU storm drain main that runs along the Denver Avenue S alignment. The Denver Avenue S storm drain mainline increases from 18-inch to 36-inch diameter as it runs northwest to the intersection of Colorado Avenue S and Diagonal Avenue S where it connects to the 144-inch storm trunk sewer. This storm trunk drain continues west along the S Oregon Street alignment to where it discharges into the LDW at the Diagonal Avenue S CSO/SD Outfall (Figure K-1b and K-1c) (CH2MHill 2011).

During the June 2013 inspection, UPRR was in the final stages of completing the construction of StormwateRx sand filter systems for Systems A, B, and F (Ecology 2013b).

K-1.2 Recent Compliance History

Ecology previously inspected UPRR – Argo Yard on April 24, 2008. The inspection report was not available for review.

UPRR – Argo Yard triggered a Level Three Corrective Action for benchmark exceedances of turbidity, copper, and zinc during 2010 and 2011. Prior to implementing the Level Three Corrective Action, UPRR jet cleaned approximately 9,200 feet of drainage piping, performed monthly monitoring of solids accumulation in catch basins, increased frequency of vacuum sweeping in areas of high traffic and dust suspension, repaved approximately 6 acres of cracked pavement, replaced catch basins during installation of the Crane Wash Pad, and performed grain size distribution, copper, and zinc analysis to assist with the design of the Level Three Treatment best management practice (BMP) (UPRR 2011).

According to available discharge monitoring report (DMR) data, UPRR – Argo Yard exceeded benchmarks for turbidity and zinc during the 1st and 2nd quarters of 2012. UPRR observed oil and grease in discharge water during the 1st quarter of 2012 (Ecology 2013c).

K-2 Inspection and Sampling

K-2.1 June 2013 Stormwater Compliance Inspection

On June 26, 2013, Ecology conducted a stormwater compliance inspection at UPRR – Argo Yard. Leidos assisted Ecology with the inspection and sampling of the facility's stormwater conveyance system. The inspection included investigating influent and effluent points at each drainage structure, written and photo documentation, and assessing whether the drainage structures contained sufficient sampleable material. The coordinates of sample locations were measured with a survey-quality global positioning system and plotted on Figure K-2 using geographic information system software. An inspection photographic log and field documentation are presented in Attachments K-1 and K-2, respectively.

The field team inspected the following stormwater conveyance structures at the UPRR – Argo Yard (Figure K-2): catch basin B8 (CB-B8), stormwater treatment system B (UP-VT-B), stormwater treatment system F (UP-VT-F), manhole F165 (MH-F165), stormwater treatment system A (UP-VT-A), and catch basin A6 (CB-A6). Location CB-B8 contained sufficient water to collect a water grab sample. Locations CB-B8, CB-A6, and MH-F165 contained sufficient sampleable solids to collect grab samples.

K-2.2 Stormwater Conveyance System Sampling

Ecology collected one water sample and three solids samples from the stormwater conveyance system at UPRR – Argo Yard. Leidos provided split samples of all samples collected to the facility. Laboratory analyses for the water sample are listed on Table K-1 and analytical data for water sample are presented in Tables K-2 through K-5. Laboratory analyses for the solids samples are listed on Table K-6 and analytical data are presented in Table K-7. Chain of custody forms and the laboratory reports are provided as Attachments K-3 and K-4, respectively.

K-2.2.1 Water Sample

Water sample UP-CB-B8-20130626-W was collected from CB-B8, located upstream of SD Vault B (Figure K-2, Attachment K-1). CB-B8 receives stormwater from the southern portion of the facility. Stormwater is conveyed from the catch basin through a 90-degree elbow to the southwest towards SD Vault B. A low volume of flow was observed in CB-B8 during sample collection. The sample is representative of stormwater in the System B drainage area.

K-2.2.2 Solids Samples

Solids sample UP-CB-B8-20130626-S was collected from CB-B8 located upstream of the SD Vault B (Figure K-2, Attachment K-1) and is representative of storm drain solids in the System B drainage area. The sample was collected from the center of the catch basin. The sample consisted of black fine-grained sand, silt/clay, organic matter, and debris. A moderate petroleum odor was detected during sample collection. After multiple grab attempts, sufficient sample volume was obtained for all analyses. Per discussion with Ecology, dioxin/furan analysis was requested for this sample.

Solids sample UP-MHF-165-20130626-S was collected from MHF-165 located at the western portion of the facility (Figure K-2, Attachment K-1) and is representative of storm drain solids in the System F drainage area. MHF-165 receives stormwater from three influent pipes draining the central and eastern portion of the facility. Sampleable material was not present in the central or western portion of the manhole. The solids sample was collected from the northeast corner of the storm drain structure. The sample consisted of dark gray gravel, coarse- to medium-grained sand and silt, organic matter, and debris. A slight petroleum odor was detected during sample collection. After multiple grab attempts, sufficient sample volume was obtained for all analyses. Per discussion with Ecology, dioxin/furan analysis was not requested for this sample.

Solids sample UP-CB-A6-20130626-S was collected from CB-A6 located upstream of SD Vault A (Figure K-2, Attachment K-1) and is representative of storm drain solids in the System A drainage area. CB-A6 receives stormwater from the central portion of the facility. The sample was collected from the center of the catch basin and consisted of black fine-grained sand and silt, organic matter, and debris. A strong petroleum odor was detected during sample collection. After multiple grab attempts, sufficient sample volume was obtained for all analyses. Per discussion with Ecology, dioxin/furan analysis was not requested for this sample.

K-3 Results

K-3.1 Chemical Analysis

Ecology collected one water sample and three solids samples during the June 26, 2013 stormwater compliance inspection at the UPRR – Argo Yard. Analytical methods, chemical results and regulatory criteria are presented in Tables K-1 through K-7.

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

K-3.2 Inspection Results and Permit Compliance Requirements

During the June 2013 inspection, Ecology determined UPRR – Argo Yard was out of compliance with permit requirements. The main areas of noncompliance consisted of deficiencies in the facility's Stormwater Pollution Prevention Plan (SWPPP). Ecology identified the following requirements during the inspection:

- Clearly label all sampling locations and include all 13 elements on the site map as required by the ISGP.
- Remove references to expired ISGP from the SWPPP.
- Resign and certify the official SWPPP.
- Clearly identify mandatory BMPs in the SWPPP.
- Include the Operations and Maintenance Manual for the new stormwater treatment system in the SWPPP.
- Store all chemical liquids, fluids, and petroleum products and wastes, on an impervious surface and provide proper secondary containment.

Additional information regarding compliance with corrective actions was not available for review.

On July 18, 2013, Ecology approved UPRR's *Stormwater Treatment System Design Engineering Report* describing the StorwmateRx treatment system (Ecology 2013a).

K-4 References

CH2MHill. 2011. Stormwater Pollution Prevention Plan, Union Pacific Railroad – Argo Yard, Seattle, Washington. Original SWPPP 2010. Addendum 1 – July 2011.

Ecology (Washington Department of Ecology). 2013a. Letter from Kevin Fitzpatrick, Ecology, to Carolyn Kossik, CH2MHill. Re: UPRR Argo Yard Stormwater Treatment System Design Engineering Report Approval. July 18, 2013.

Ecology. 2013b. Stormwater Compliance Inspection Report, Union Pacific Railroad – Argo Yard. September 24, 2013.

Ecology. 2013c. Water Quality Permitting and Reporting Information System, Union Pacific Railroad – Argo Yard. November 26, 2013.

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

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

UPRR (Union Pacific Railroad). 2011. Letter from Christi Hornick, UPRR, to Ecology. RE: Permit Modification – WAR001155. May 31, 2011.

Figures

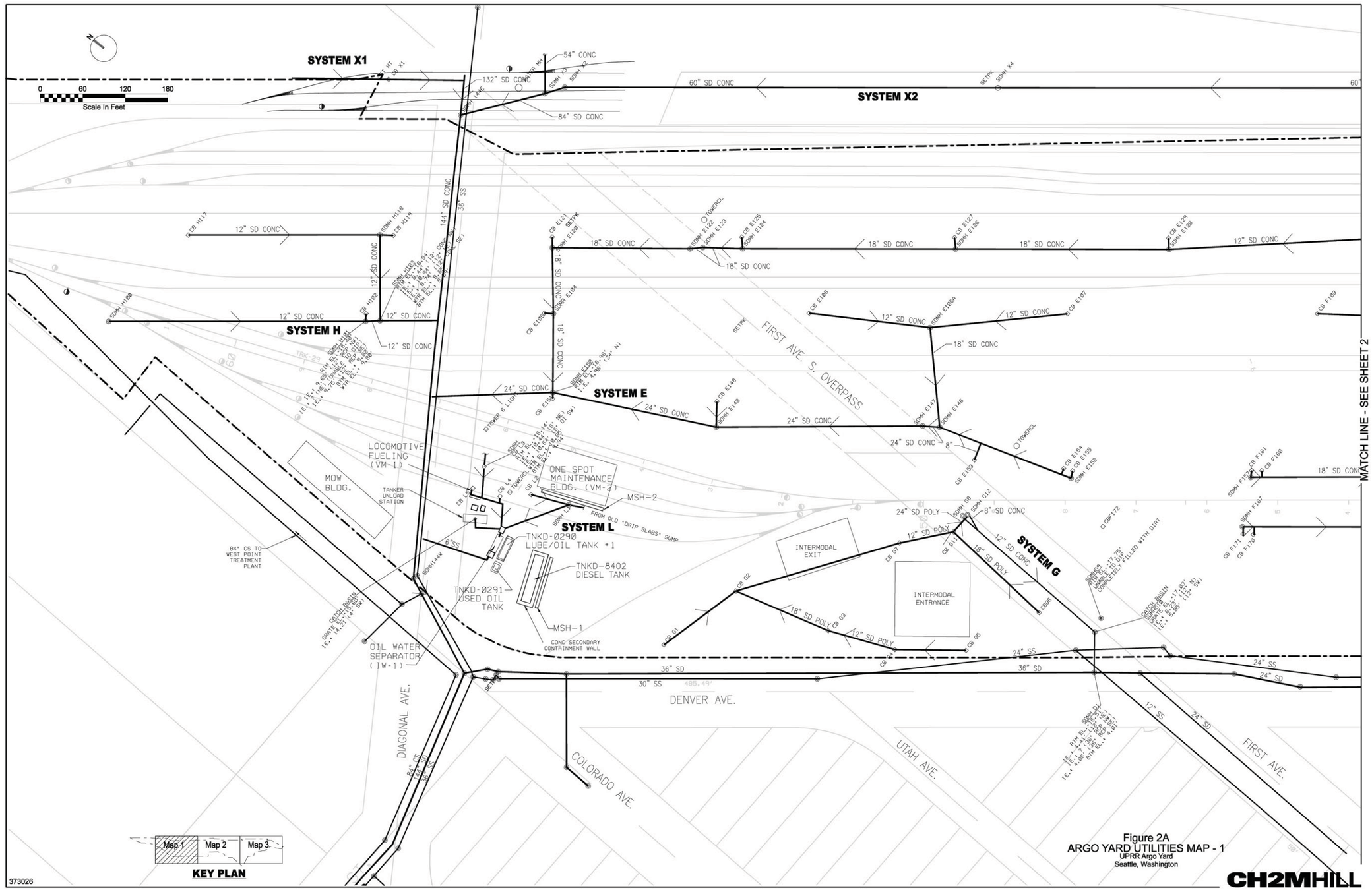

Figure 2A
ARGO YARD UTILITIES MAP - 1
UPRR Argo Yard
Seattle, Washington

Source: CH2MHill [10460]

Figure K–1a. Union Pacific Railroad Facility SWPPP Map

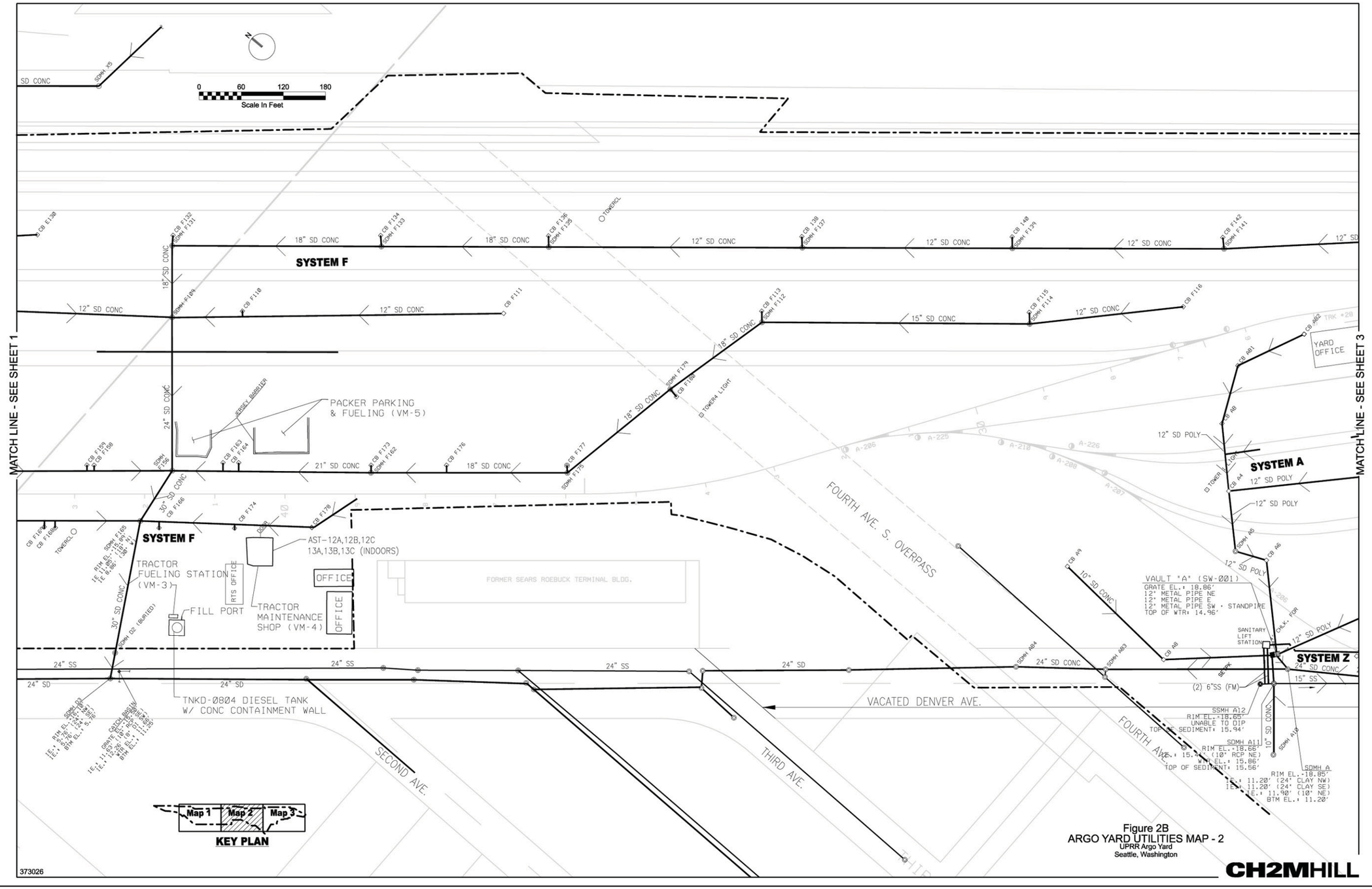

Figure 2B
ARGO YARD UTILITIES MAP - 2
UPRR Argo Yard
Seattle, Washington

CH2MHILL

Source: CH2MHill [10460]

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Figure K–1b. Union Pacific Railroad Facility SWPPP Map

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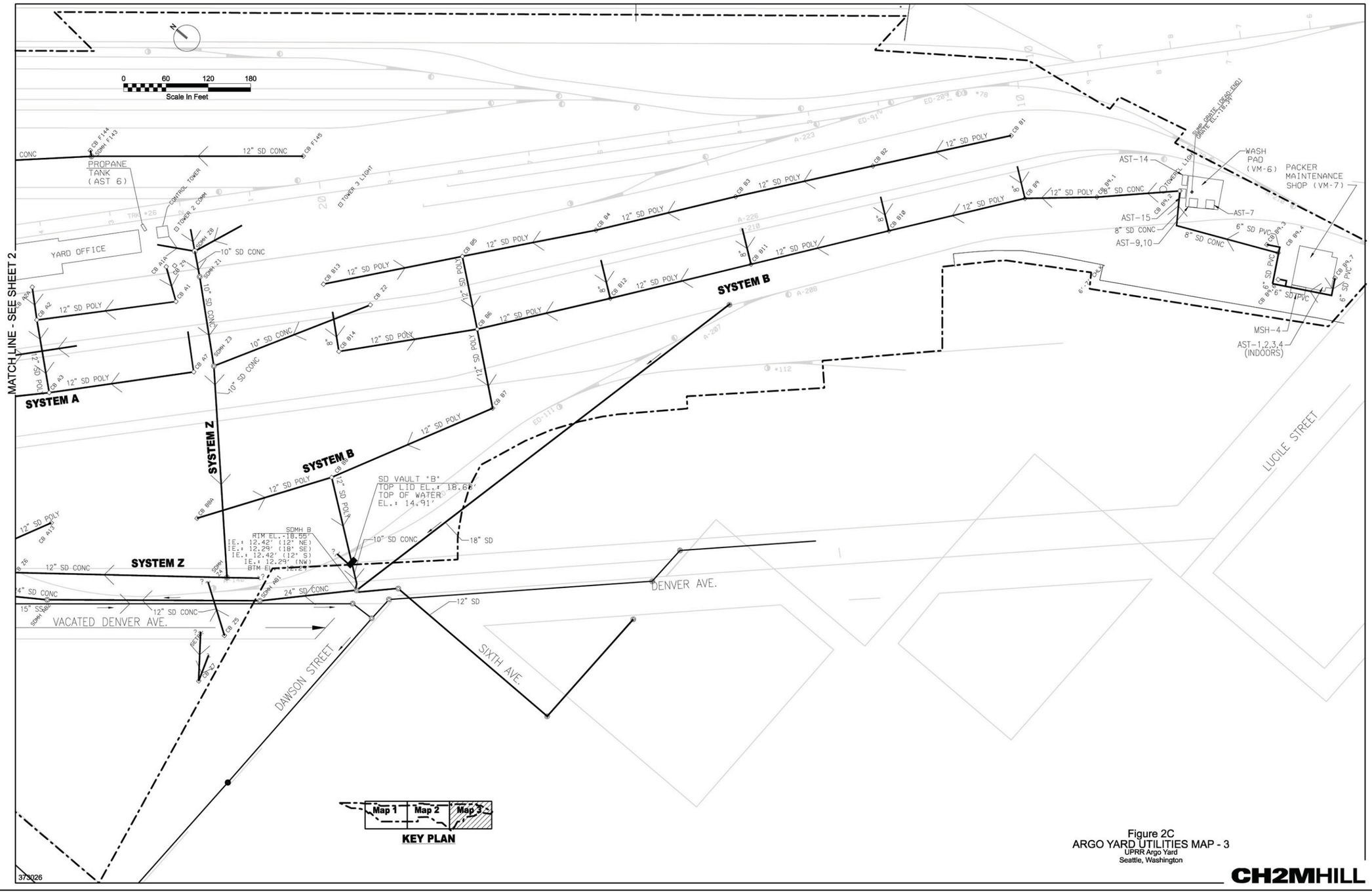

Figure 2C
ARGO YARD UTILITIES MAP - 3
UPRR Argo Yard
Seattle, Washington

CH2MHILL

Source: CH2MHill [10460]

Figure K–1c. Union Pacific Railroad Facility SWPPP Map

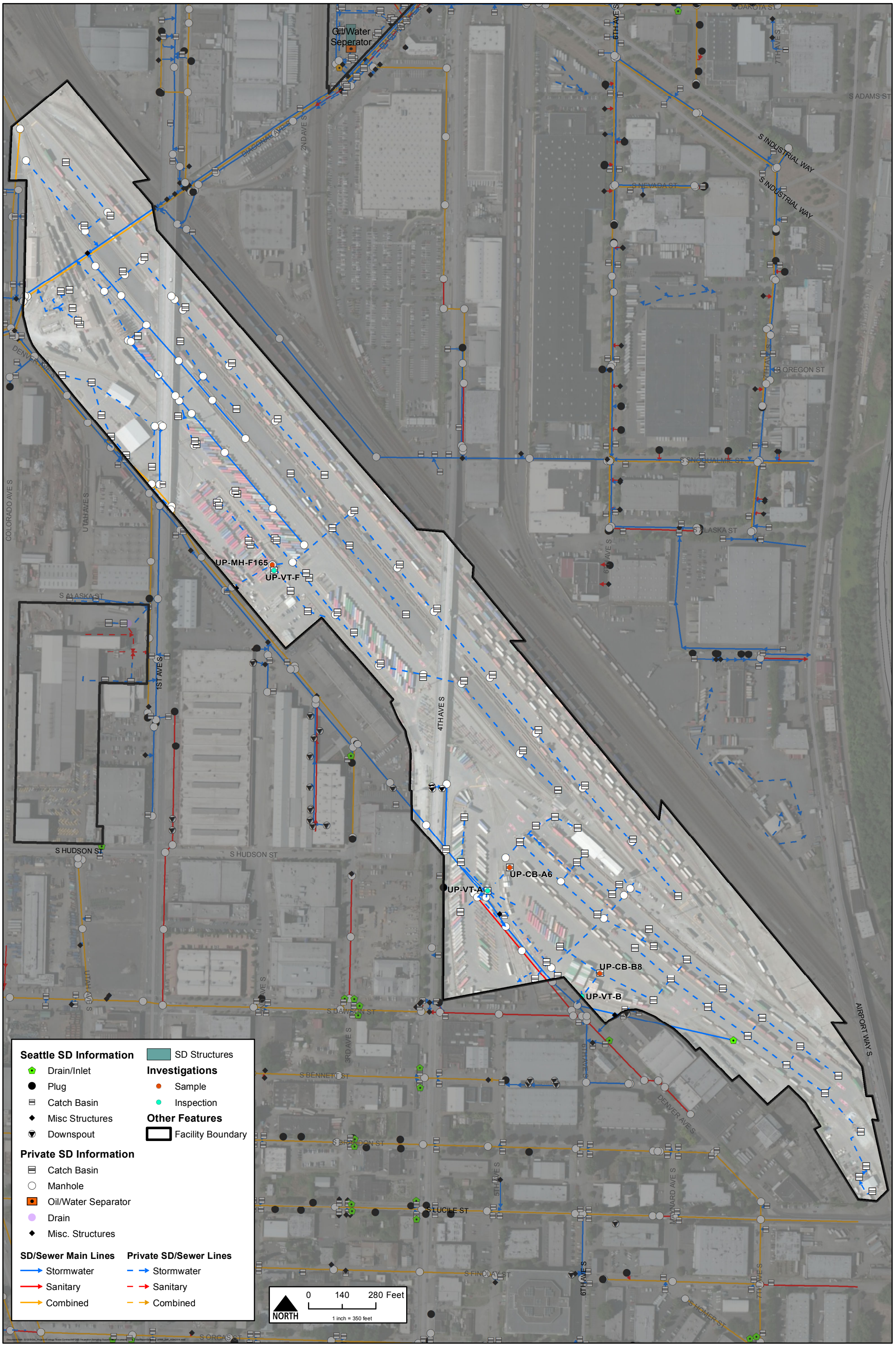

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Figure K–2.Union Pacific Railroad Argo Yard Inspection and Sample Locations

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Tables

Table K-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID / Collection Date		UP-CB-B8
Analyte	**Units**	**6/26/2013**
Metals (Total)		
Antimony	µg/L	E200.8
Arsenic	µg/L	E200.8
Beryllium	µg/L	E200.8
Cadmium	µg/L	E200.8
Chromium	µg/L	E200.8
Copper	µg/L	E200.8
Lead	µg/L	E200.8
Mercury	µg/L	SW7470A
Nickel	µg/L	E200.8
Selenium	µg/L	E200.8
Silver	µg/L	E200.8
Thallium	µg/L	E200.8
Zinc	µg/L	E200.8
Metals (Dissolved)		
Antimony	µg/L	E200.8
Arsenic	µg/L	E200.8
Beryllium	µg/L	E200.8
Cadmium	µg/L	E200.8
Chromium	µg/L	E200.8
Copper	µg/L	E200.8
Lead	µg/L	E200.8
Mercury	µg/L	SW7470A
Nickel	µg/L	E200.8
Selenium	µg/L	E200.8
Silver	µg/L	E200.8
Thallium	µg/L	E200.8
Zinc	µg/L	E200.8
PAHs		
1-Methylnaphthalene	µg/L	SW8270DSIM
2-Chloronaphthalene	µg/L	SW8270D
2-Methylnaphthalene	µg/L	SW8270DSIM
Acenaphthene	µg/L	SW8270DSIM
Acenaphthylene	µg/L	SW8270DSIM
Anthracene	µg/L	SW8270DSIM
Benzo(a)anthracene	µg/L	SW8270DSIM
Benzo(a)pyrene	µg/L	SW8270DSIM
Benzo(b)fluoranthene	µg/L	SW8270DSIM
Benzo(g,h,i)perylene	µg/L	SW8270DSIM
Benzo(k)fluoranthene	µg/L	SW8270DSIM
Chrysene	µg/L	SW8270DSIM
Dibenz(a,h)anthracene	µg/L	SW8270DSIM
Dibenzofuran	µg/L	SW8270DSIM
Fluoranthene	µg/L	SW8270DSIM
Fluorene	µg/L	SW8270DSIM

Table K-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID / Collection Date		UP-CB-B8
Analyte	**Units**	**6/26/2013**
Indeno(1,2,3-cd)pyrene	µg/L	SW8270DSIM
Naphthalene	µg/L	SW8270DSIM
Phenanthrene	µg/L	SW8270DSIM
Pyrene	µg/L	SW8270DSIM
Total Benzofluoranthenes	µg/L	SW8270DSIM
Total HPAHs	µg/L	SW8270DSIM
Total LPAHs	µg/L	SW8270DSIM
Total PAHs	µg/L	SW8270DSIM
cPAHs, nd RL*0	µg/L	SW8270DSIM
cPAHs, nd RL*0.5	µg/L	SW8270DSIM
cPAHs, nd RL*1	µg/L	SW8270DSIM
Phthalates		
bis(2-Ethylhexyl)phthalate	µg/L	SW8270D
Butylbenzylphthalate	µg/L	SW8270D
Di-n-Butylphthalate	µg/L	SW8270D
Diethylphthalate	µg/L	SW8270D
Dimethylphthalate	µg/L	SW8270D
Di-n-Octyl phthalate	µg/L	SW8270D
Phenols		
2,3,4,6-Tetrachlorophenol	µg/L	SW8270D
2,4,5-Trichlorophenol	µg/L	SW8270D
2,4,6-Trichlorophenol	µg/L	SW8270D
2,4-Dichlorophenol	µg/L	SW8270D
2,4-Dimethylphenol	µg/L	SW8270D
2,4-Dinitrophenol	µg/L	SW8270D
2-Chlorophenol	µg/L	SW8270D
2-Methylphenol	µg/L	SW8270D
2-Nitrophenol	µg/L	SW8270D
4,6-Dinitro-2-Methylphenol	µg/L	SW8270D
4-Chloro-3-methylphenol	µg/L	SW8270D
4-Methylphenol	µg/L	SW8270D
4-Nitrophenol	µg/L	SW8270D
Pentachlorophenol	µg/L	SW8270D
Phenol	µg/L	SW8270D
Other SVOCs		
1,2,4-Trichlorobenzene	µg/L	SW8270D
1,2-Dichlorobenzene	µg/L	SW8270D
1,2-Diphenylhydrazine	µg/L	R
1,3-Dichlorobenzene	µg/L	SW8270D
1,4-Dichlorobenzene	µg/L	SW8270D
2,4-Dinitrotoluene	µg/L	SW8270D
2,6-Dinitrotoluene	µg/L	SW8270D
2-Nitroaniline	µg/L	SW8270D
3,3'-Dichlorobenzidine	µg/L	SW8270D
3-Nitroaniline	µg/L	SW8270D

Table K-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID / Collection Date		UP-CB-B8
Analyte	**Units**	**6/26/2013**
4-Bromophenyl-phenylether	µg/L	SW8270D
4-Chloroaniline	µg/L	SW8270D
4-Chlorophenyl-phenylether	µg/L	SW8270D
4-Nitroaniline	µg/L	SW8270D
Aniline	µg/L	SW8270D
Azobenzene	µg/L	R
Benzoic Acid	µg/L	SW8270D
Benzyl Alcohol	µg/L	SW8270D
2,2'-Oxybis(1-Chloropropane)	µg/L	SW8270D
bis(2-Chloroethoxy) Methane	µg/L	SW8270D
Bis-(2-Chloroethyl) Ether	µg/L	SW8270D
Carbazole	µg/L	SW8270D
Hexachlorobenzene	µg/L	SW8081B
Hexachlorobutadiene	µg/L	SW8081B
Hexachlorocyclopentadiene	µg/L	SW8270D
Hexachloroethane	µg/L	SW8270D
Isophorone	µg/L	SW8270D
Nitrobenzene	µg/L	SW8270D
N-Nitrosodimethylamine	µg/L	SW8270D
N-Nitroso-Di-N-Propylamine	µg/L	SW8270D
N-Nitrosodiphenylamine	µg/L	SW8270D
N-Nitrosomethylethylamine	µg/L	na
PCB Aroclors		
PCB Aroclors	µg/L	na
PCB Congeners		
PCB Congeners	pg/L	1668C
Pesticides		
Pesticides	µg/L	SW8081B
Conventionals		
Alkalinity	mg/L CaCO3	SM2320
Bicarbonate	mg/L CaCO3	SM2320
Carbonate	mg/L CaCO3	SM2320
Chloride	mg/L	EPA300.0
Conductivity	µmhos/cm	EPA120.1
Dissolved Organic Carbon	mg/L	SM5310B
Hydroxide	mg/L CaCO3	SM2320
Nitrate + Nitrite	mg-N/L	na
N-Nitrate	mg-N/L	EPA300.0
N-Nitrite	mg-N/L	na
pH	std units	SM4500H
Sulfate	mg/L	EPA300.0
Total Organic Carbon	mg/L	SM5310B
Total Suspended Solids	mg/L	SM2540D

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

Table K-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID / Collection Date		UP-CB-B8
Analyte	Units	6/26/2013

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

Table K-2. Water Quality Data
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID			UP-CB-B8
Collection Date			6/26/2013
Analyte	**WA NPDES ISGP**	**Unit**	**Result**
Field Parameters			
Flow	--	Yes/No	Yes
pH	5.0 to 9.0	std units	6.72
Conductivity	--	mS/cm	713
Temperature	--	degrees C	21.6
Total Dissolved Solids	--	g/L	0.47
Turbidity	25	NTU	**59.8**
Oil & Grease	No visible sheen	Yes/No	No
Dissolved Oxygen	--	mg/L	na

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

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

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

Table K-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID						UP-CB-B8				
Collection Date						6/26/2013				
Analyte	WA NPDES ISGP	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Total Metals (µg/L)										
Antimony	--	--	--	--	--	6.0				
Arsenic	150	36	69	--	--	2.0				
Beryllium	--	--	--	--	--	< 0.2 U				
Cadmium	2.1	9.4	42	--	--	0.6				
Chromium	--	--	--	--	--	4.5				
Copper	14	3.7	5.8	--	--	***21.9***	5.9	3.8		
Lead	81.6	8.5	221	--	--	**13.3**	1.6			
Mercury	1.4	0.025	2.1	--	--	**0.0433**	1.7			
Nickel	--	8.3	75	--	--	**14.4**	1.7			
Selenium	5	71	291	--	--	< 0.5 U				
Silver	3.8	--	2.2	--	--	< 0.2 UJ				
Thallium	--	--	--	--	--	< 0.2 U				
Zinc	117	86	95	--	--	***490***	5.7	5.2		
Dissolved Metals (µg/L)										
Antimony		--	--	4,300	640	5.9				
Arsenic		36	69	--	--	1.6				
Beryllium		--	--	--	--	< 0.2 U				
Cadmium		9.3	42	--	--	0.4				
Chromium		--	--	--	--	1.5				
Copper		3.1	4.8	--	--	***10.5***	3.4	2.2		
Lead		8.1	210	--	--	0.9				
Mercury		0.025	1.8	0.15	--	< 0.02 U				
Nickel		8.2	74	4,600	4,600	**12.4**	1.5			
Selenium		71	290	--	4,200	< 0.5 U				
Silver		--	1.9	--	--	< 0.2 UJ				
Thallium		--	--	6.3	0.47	< 0.2 U				
Zinc		81	90	--	26,000	***370***	4.6	4.1		
PAHs (µg/L)										
1-Methylnaphthalene		--	--	--	--	0.01 J				
2-Chloronaphthalene		--	--	--	1,600	< 1.0 U				
2-Methylnaphthalene		--	--	--	--	< 0.012 U				
Acenaphthene		--	--	--	990	0.018				
Acenaphthylene		--	--	--	--	< 0.01 U				
Anthracene		--	--	110,000	40,000	0.024				
Benzo(a)anthracene		--	--	0.031	0.018	**0.055**			1.8	3.1
Benzo(a)pyrene		--	--	0.031	0.018	0.026				1.4
Benzo(b)fluoranthene		--	--	0.031	0.018	0.031				1.7
Benzo(g,h,i)perylene		--	--	--	--	0.022				
Benzo(k)fluoranthene		--	--	0.031	0.018	0.017				
Chrysene		--	--	0.031	0.018	**0.075**			2.4	4.2
Dibenz(a,h)anthracene		--	--	0.031	0.018	< 0.01 U				
Dibenzofuran		--	--	--	--	0.012				
Fluoranthene		--	--	370	140	0.15				
Fluorene		--	--	14,000	5,300	0.028				
Indeno(1,2,3-cd)pyrene		--	--	0.031	0.018	0.011				
Naphthalene		--	--	--	--	< 0.017 U				
Phenanthrene		--	--	--	--	0.084				
Pyrene		--	--	11,000	4,000	0.13				
Total Benzofluoranthenes		--	--	--	--	0.06				
Total HPAHs		--	--	--	--	0.53				

Table K-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID						UP-CB-B8				
Collection Date						6/26/2013				
Analyte	WA NPDES ISGP	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Total LPAHs		--	--	--	--	0.15				
Total PAHs		--	--	--	--	0.68				
cPAHs, nd RL*0		--	--	--	--	0.039				
cPAHs, nd RL*0.5		--	--	--	--	0.04				
cPAHs, nd RL*1		--	--	--	--	0.04				
Phthalates (µg/L)										
bis(2-Ethylhexyl)phthalate		--	--	5.9	2.2	**14**			2.4	6.4
Butylbenzylphthalate		--	--	--	1,900	< 1.0 U				
Di-n-Butylphthalate		--	--	12,000	4,500	0.8 J				
Diethylphthalate		--	--	120,000	44,000	< 0.8 U				
Dimethylphthalate		--	--	2,900,000	1,100,000	1.0				
Di-n-Octyl phthalate		--	--	--	--	< 1.0 U				
Phenols (µg/L)										
2,3,4,6-Tetrachlorophenol		--	--	--	--	< 1.0 U				
2,4,5-Trichlorophenol		--	--	--	3,600	< 5.0 U				
2,4,6-Trichlorophenol		--	--	6.5	2.4	< 3.0 U				
2,4-Dichlorophenol		--	--	790	290	< 3.0 UJ				
2,4-Dimethylphenol		--	--	--	850	< 3.0 UJ				
2,4-Dinitrophenol		--	--	14,000	5,300	< 20 U				
2-Chlorophenol		--	--	--	150	< 1.0 U				
2-Methylphenol		--	--	--	--	1.4				
2-Nitrophenol		--	--	--	--	< 3.0 UJ				
4,6-Dinitro-2-Methylphenol		--	--	765	280	< 10 U				
4-Chloro-3-methylphenol		--	--	--	--	< 3.0 UJ				
4-Methylphenol		--	--	--	--	4.0				
4-Nitrophenol		--	--	--	--	< 10 U				
Pentachlorophenol		7.9	13	8.2	3	**< 10 U**				
Phenol		--	--	4,600,000	860,000	5.1				
Other SVOCs (µg/L)										
1,2,4-Trichlorobenzene		--	--	--	70	< 1.0 UJ				
1,2-Dichlorobenzene		--	--	17,000	1,300	< 1.0 U				
1,2-Diphenylhydrazine		--	--	0.54	0.2	R				
1,3-Dichlorobenzene		--	--	2,600	960	< 1.0 U				
1,4-Dichlorobenzene		--	--	2,600	190	< 1.0 U				
2,4-Dinitrotoluene		--	--	9.1	3.4	< 3.0 U				
2,6-Dinitrotoluene		--	--	--	--	< 3.0 U				
2-Nitroaniline		--	--	--	--	< 3.0 U				
3,3'-Dichlorobenzidine		--	--	0.077	0.028	**< 5.0 U**				
3-Nitroaniline		--	--	--	--	< 3.0 U				
4-Bromophenyl-phenylether		--	--	--	--	< 1.0 U				
4-Chloroaniline		--	--	--	--	< 5.0 UJ				
4-Chlorophenyl-phenylether		--	--	--	--	< 1.0 U				
4-Nitroaniline		--	--	--	--	< 3.0 U				
Aniline		--	--	--	--	< 1.0 U				
Azobenzene		--	--	--	--	R				
Benzoic Acid		--	--	--	--	110 J				
Benzyl Alcohol		--	--	--	--	2.0 J				
2,2'-Oxybis(1-Chloropropane)		--	--	170,000	65,000	< 1.0 U				
bis(2-Chloroethoxy) Methane		--	--	--	--	< 1.0 UJ				
Bis-(2-Chloroethyl) Ether		--	--	1.4	0.53	< 1.0 U				
Carbazole		--	--	--	--	< 1.0 U				

Table K-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID						UP-CB-B8				
Collection Date						6/26/2013				
Analyte	WA NPDES ISGP	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Hexachlorobenzene		--	--	0.00077	0.00029	**< 0.05 U**				
Hexachlorobutadiene		--	--	50	18	< 0.05 U				
Hexachlorocyclopentadiene		--	--	17,000	1,100	< 5.0 U				
Hexachloroethane		--	--	8.9	3.3	< 2.0 U				
Isophorone		--	--	600	960	< 1.0 UJ				
Nitrobenzene		--	--	1,900	690	< 1.0 UJ				
N-Nitrosodimethylamine		--	--	8.1	3	< 3.0 U				
N-Nitroso-Di-N-Propylamine		--	--	--	0.51	< 1.0 U				
N-Nitrosodiphenylamine		--	--	16	6	< 1.0 U				
PCB Aroclors (µg/L)										
Aroclor 1016		--	--	--	--	na				
Aroclor 1221		--	--	--	--	na				
Aroclor 1232		--	--	--	--	na				
Aroclor 1242		--	--	--	--	na				
Aroclor 1248		--	--	--	--	na				
Aroclor 1254		--	--	--	--	na				
Aroclor 1260		--	--	--	--	na				
Aroclor 1262		--	--	--	--	na				
Aroclor 1268		--	--	--	--	na				
Total PCB Aroclors		0.03	10	0.00017	0.000064	na				
Pesticides (µg/L)										
4,4'-DDD		--	--	0.00084	0.00031	**< 0.1 U**				
4,4'-DDE		--	--	0.00059	0.00022	**< 0.1 U**				
4,4'-DDT		--	--	0.00059	0.00022	**< 0.1 U**				
Total DDTs		0.001	0.13	--	--	**< 0.1 U**				
Aldrin		--	--	0.00014	0.00005	**< 0.05 U**				
alpha-BHC		--	--	0.013	0.0049	**< 0.05 U**				
beta-BHC		--	--	0.046	0.017	**< 0.05 U**				
cis-Chlordane		--	--	--	--	< 0.05 U				
delta-BHC		--	--	--	--	< 0.05 UJ				
Dieldrin		--	--	0.00014	0.000054	**< 0.1 U**				
Endosulfan I		0.0087	0.034	2.0	89	***< 0.13 U***				
Endosulfan II		0.0087	0.034	2.0	89	***< 0.1 U***				
Endosulfan Sulfate		0.0087	0.034	2.0	89	***< 0.1 U***				
Endrin		0.0023	0.037	0.81	0.06	***< 0.1 U***				
Endrin Aldehyde		--	--	0.81	0.3	< 0.1 U				
Endrin Ketone		--	--	--	--	< 0.1 U				
Heptachlor		0.0036	0.053	0.00021	0.000079	**< 0.05 U**				
Heptachlor Epoxide		--	--	0.00011	0.000039	**< 0.05 U**				
gamma-BHC (Lindane)		--	0.16	0.063	1.8	< 0.05 U				
Methoxychlor		--	--	--	--	< 0.5 U				
Toxaphene		0.0002	0.21	0.00075	0.00028	***< 5.0 U***				
trans-Chlordane		--	--	--	--	< 0.05 U				
Total aldrin/dieldrin		0.0019	0.71	--	--	**< 0.1 U**				
Total Chlordane		0.004	0.09	0.00059	0.00081	**< 0.05 U**				

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

Results in underline exceed the WA NPDES ISGP Benchmark for that parameter.
Results in **bold** exceed the WA WQC Marine Chronic.
Results in ***bold italics*** exceed the WA WQC Marine Acute.

Table K-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID						UP-CB-B8				
Collection Date						6/26/2013				
Analyte	WA NPDES ISGP	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO

Results that are shaded gray exceed the NTR HHO criteria.

Exceedance Factors (EFs) are presented for detected concentrations that exceed the WA, NTR, or NR WQC.
The EFs are calculated (result/criterion) and have no regulatory relevance. They provide an
concentration relative to the

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

Table K-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID					UP-CB-B8				
Collection Date					6/26/2013				
Analyte	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Total PCB Congeners (µg/L)[a]	0.03	10	0.00017	0.000064	**0.0418** CJ	1.4		246	653
Total PCB Congeners (pg/L)[a]					41,800 CJ				
Estimated Total PCB Congeners (pg/L)[b]					42,000 CJ				
Total Monochlorobiphenyl (pg/L)[a]					175				
Estimated Total Monochlorobiphenyl (pg/L)[b]					175				
PCB-1					95.5				
PCB-2					11.8				
PCB-3					67.9				
Total Dichlorobiphenyl (pg/L)[a]					3,010				
Estimated Total Dichlorobiphenyl (pg/L)[b]					3,010				
PCB-4					323				
PCB-5					26.9				
PCB-6					255				
PCB-7					38.6				
PCB-8					1,300				
PCB-9					80.7				
PCB-10					17.8				
PCB-11					159				
PCB-12/13					101 C				
PCB-14					< 5.46 U				
PCB-15					711				
Total Trichlorobiphenyl (pg/L)[a]					10,800				
Estimated Total Trichlorobiphenyl (pg/L)[b]					10,800				
PCB-16					590				
PCB-17					565				
PCB-18/30					1,150 C				
PCB-19					120				
PCB-20/28					2,180 C				
PCB-21/33					1,450 C				
PCB-22					903				
PCB-23					< 7.59 U				
PCB-24					23.7				
PCB-25					175				
PCB-26/29					382 C				
PCB-27					91.9				
PCB-31					1,940				
PCB-32					412				
PCB-34					< 7.71 U				
PCB-35					44.7				
PCB-36					< 7.41 U				
PCB-37					761				
PCB-38					< 7.86 U				
PCB-39					13.6				
Total Tetrachlorobiphenyl (pg/L)[a]					13,000				
Estimated Total Tetrachlorobiphenyl (pg/L)[b]					13,100 J				
PCB-40/71					958 C				
PCB-41					308				
PCB-42					552				
PCB-43					88.6				
PCB-44/47/65					1,730 C				
PCB-45					315				

Table K-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID					UP-CB-B8				
Collection Date					6/26/2013				
Analyte	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
PCB-46					139				
PCB-48					505				
PCB-49/69					1,000 C				
PCB-50/53					251 C				
PCB-51					79.4				
PCB-52					1,740				
PCB-54					4.94 J				
PCB-55					31.2				
PCB-56					584				
PCB-57					9.75				
PCB-58					< 5.34 U				
PCB-59/62/75					190 C				
PCB-60					304				
PCB-61/70/74/76					2,090 C				
PCB-63					49.0				
PCB-64					788				
PCB-66					1,100				
PCB-67					57.2				
PCB-68					< 4.81 U				
PCB-72					< 6.47 U				
PCB-73					6.41 J				
PCB-77					155				
PCB-78					< 5.95 U				
PCB-79					< 4.83 U				
PCB-80					< 4.87 U				
PCB-81					9.02 J				
Total Pentachlorobiphenyl (pg/L)[a]					7,230				
Estimated Total Pentachlorobiphenyl (pg/L)[b]					7,270 J				
PCB-82					198				
PCB-83					57.6				
PCB-84					313				
PCB-85/116					188 C				
PCB-86/87/97/109/119/125					794 C				
PCB-88					< 4.63 U				
PCB-89					21.9				
PCB-90/101/113					960 C				
PCB-91					160				
PCB-92					161				
PCB-93/100					< 14.0 U				
PCB-94					7.72 J				
PCB-95					830				
PCB-96					< 17.4 U				
PCB-98					< 4.34 U				
PCB-99					448				
PCB-102					63.2				
PCB-103					7.10 J				
PCB-104					< 2.34 U				
PCB-105					509				
PCB-106					< 3.25 U				
PCB-107					73.6				
PCB-108/124					48.7 C				

Table K-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID					UP-CB-B8				
Collection Date					6/26/2013				
Analyte	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
PCB-110					1,280				
PCB-111					< 3.02 U				
PCB-112					< 3.04 U				
PCB-114					25.9				
PCB-115					31.3				
PCB-117					35.7				
PCB-118					969				
PCB-120					< 3.01 U				
PCB-121					< 3.04 U				
PCB-122					21.0				
PCB-123					19.0				
PCB-126					9.49 J				
PCB-127					< 3.38 U				
Total Hexachlorobiphenyl (pg/L)[a]					4,560				
Estimated Total Hexachlorobiphenyl (pg/L)[b]					4,610 J				
PCB-128/166					212 C				
PCB-129/138/163					1,110 C				
PCB-130					68.9				
PCB-131					14.0				
PCB-132					362				
PCB-133					< 9.23 U				
PCB-134					58.1				
PCB-135/151					279 C				
PCB-136					107				
PCB-137					47.8				
PCB-139/140					16.3 CJ				
PCB-141					204				
PCB-142					< 2.75 U				
PCB-143					< 2.49 U				
PCB-144					< 39.7 U				
PCB-145					< 1.82 U				
PCB-146					155				
PCB-147/149					774 C				
PCB-148					< 2.40 U				
PCB-150					< 1.70 U				
PCB-152					< 1.74 U				
PCB-153/168					753 C				
PCB-154					5.62 J				
PCB-155					< 1.59 U				
PCB-156/157					133 C				
PCB-158					115				
PCB-159					10.9				
PCB-160					< 1.98 U				
PCB-161					< 1.84 U				
PCB-162					< 3.76 U				
PCB-164					89.8				
PCB-165					< 1.99 U				
PCB-167					43.0				
PCB-169					< 4.92 U				

Table K-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID					UP-CB-B8				
Collection Date					6/26/2013				
Analyte	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Total Heptachlorobiphenyl (pg/L)[a]					2,230				
Estimated Total Heptachlorobiphenyl (pg/L)[b]					2,240 J				
PCB-170					239				
PCB-171/173					81.6 C				
PCB-172					47.2				
PCB-174					322				
PCB-175					12.1				
PCB-176					29.3				
PCB-177					156				
PCB-178					50.1				
PCB-179					115				
PCB-180/193					570 C				
PCB-181					< 5.04 U				
PCB-182					< 4.68 U				
PCB-183					166				
PCB-184					< 2.35 U				
PCB-185					30.5				
PCB-186					< 2.27 U				
PCB-187					359				
PCB-188					< 2.11 U				
PCB-189					< 5.81 U				
PCB-190					45.6				
PCB-191					9.32 J				
PCB-192					< 4.30 U				
Total Octachlorobiphenyl (pg/L)[a]					691				
Estimated Total Octachlorobiphenyl (pg/L)[b]					695 J				
PCB-194					150				
PCB-195					61.4				
PCB-196					82.2				
PCB-197					6.42 J				
PCB-198/199					188 C				
PCB-200					25.0				
PCB-201					27.7				
PCB-202					45.3				
PCB-203					105				
PCB-204					< 2.23 U				
PCB-205					< 4.49 U				
Total Nonachlorobiphenyl (pg/L)[a]					112				
Estimated Total Nonachlorobiphenyl (pg/L)[b]					112				
PCB-206					77.4				
PCB-207					12.1				
PCB-208					22.2				
Decachlorobiphenyl (pg/L)					18.1				
PCB-209					18.1				
PCB TEQ, nd SDL*0					1.02 J				
PCB TEQ, nd SDL*0.5					1.09 J				
PCB TEQ, nd SDL*1					1.17 J				

Table K-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID					UP-CB-B8				
Collection Date					6/26/2013				
Analyte	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO

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

Results in **bold** exceed the WA WQC Marine Chronic.
Results in ***bold italics*** exceed the WA WQC Marine Acute.
Results that are shaded gray exceed the NTR HHO criteria.
Exceedance Factors (EFs) are presented for detected concentrations that exceed the WA, NTR, or NR WQC.

The EFs are calculated (result/criterion) and have no regulatory relevance. They provide an indication of the general magnitude of the concentration relative to the WA, NTR, or NR WQC.

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

Table K-5. Water Sample Results – Conventionals
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID			UP-CB-B8
Collection Date			6/26/2013
Analyte	WA NPDES ISGP	Unit	Result
Conventionals			
Alkalinity	--	mg/L CaCO3	33.9
Bicarbonate	--	mg/L CaCO3	33.9
Carbonate	--	mg/L CaCO3	< 1.0 U
Chloride	--	mg/L	80.4
Conductivity	--	µmhos/cm	528
Dissolved Organic Carbon	--	mg/L	64.8
Hydroxide	--	mg/L CaCO3	< 1.0 U
N-Nitrate	--	mg-N/L	0.2
pH	5-9	std units	6.45
Sulfate	--	mg/L	66.3
Total Organic Carbon	--	mg/L	65.7 J
Total Suspended Solids	--	mg/L	30.2

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

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

Table K-6. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID / Collection Date	UP-CB-A6	UP-CB-B8	UP-MHF-165
Analyte	**6/26/2013**	**6/26/2013**	**6/26/2013**
Metals (Total) (mg/kg)			
Antimony	EPA200.8	EPA200.8	EPA200.8
Arsenic	EPA200.8	EPA200.8	EPA200.8
Beryllium	SW6010C	SW6010C	SW6010C
Cadmium	EPA200.8	EPA200.8	EPA200.8
Chromium	EPA200.8	EPA200.8	EPA200.8
Copper	SW6010C	SW6010C	SW6010C
Lead	EPA200.8	EPA200.8	EPA200.8
Mercury	SW7471A	SW7471A	SW7471A
Nickel	EPA200.8	EPA200.8	EPA200.8
Selenium	EPA200.8	EPA200.8	EPA200.8
Silver	EPA200.8	EPA200.8	EPA200.8
Thallium	EPA200.8	EPA200.8	EPA200.8
Zinc	SW6010C	SW6010C	SW6010C
PAHs (µg/kg)			
1-Methylnaphthalene	SW8270D	SW8270D	SW8270D
2-Chloronaphthalene	SW8270D	SW8270D	SW8270D
2-Methylnaphthalene	SW8270D	SW8270D	SW8270D
Acenaphthene	SW8270D	SW8270D	SW8270D
Acenaphthylene	SW8270D	SW8270D	SW8270D
Anthracene	SW8270D	SW8270D	SW8270D
Benzo(a)anthracene	SW8270D	SW8270D	SW8270D
Benzo(a)pyrene	SW8270D	SW8270D	SW8270D
Benzo(g,h,i)perylene	SW8270D	SW8270D	SW8270D
Chrysene	SW8270D	SW8270D	SW8270D
Dibenz(a,h)anthracene	SW8270DSIM	SW8270DSIM	SW8270DSIM
Dibenzofuran	SW8270D	SW8270D	SW8270D
Fluoranthene	SW8270D	SW8270D	SW8270D
Fluorene	SW8270D	SW8270D	SW8270D
Indeno(1,2,3-cd)pyrene	SW8270D	SW8270D	SW8270D
Naphthalene	SW8270D	SW8270D	SW8270D
Phenanthrene	SW8270D	SW8270D	SW8270D
Pyrene	SW8270D	SW8270D	SW8270D
Total Benzofluoranthenes	SW8270D	SW8270D	SW8270D
Total HPAHs	SW8270DSIM	SW8270DSIM	SW8270DSIM
Total LPAHs	SW8270D	SW8270D	SW8270D
Total PAHs	SW8270DSIM	SW8270DSIM	SW8270DSIM
cPAHs, nd RL*0	SW8270DSIM	SW8270DSIM	SW8270DSIM
cPAHs, nd RL*0.5	SW8270DSIM	SW8270DSIM	SW8270DSIM
cPAHs, nd RL*1	SW8270DSIM	SW8270DSIM	SW8270DSIM
Phthalates (µg/kg)			
bis(2-Ethylhexyl)phthalate	SW8270D	SW8270D	SW8270D
Butylbenzylphthalate	SW8270DSIM	SW8270D	SW8270D
Di-n-Butylphthalate	SW8270D	SW8270D	SW8270D
Diethylphthalate	SW8270D	SW8270DSIM	SW8270DSIM

Table K-6. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID / Collection Date	UP-CB-A6	UP-CB-B8	UP-MHF-165
Analyte	**6/26/2013**	**6/26/2013**	**6/26/2013**
Dimethylphthalate	SW8270DSIM	SW8270DSIM	SW8270D
Di-n-Octyl phthalate	SW8270D	SW8270D	SW8270D
Phenols (µg/kg)			
2,4,5-Trichlorophenol	SW8270D	SW8270D	SW8270D
2,4,6-Trichlorophenol	SW8270D	SW8270D	SW8270D
2,4-Dichlorophenol	SW8270D	SW8270D	SW8270D
2,4-Dimethylphenol	SW8270DSIM	SW8270DSIM	SW8270DSIM
2,4-Dinitrophenol	SW8270D	SW8270D	SW8270D
2-Chlorophenol	SW8270D	SW8270D	SW8270D
2-Methylphenol	SW8270DSIM	SW8270DSIM	SW8270DSIM
2-Nitrophenol	SW8270D	SW8270D	SW8270D
4,6-Dinitro-2-Methylphenol	SW8270D	SW8270D	SW8270D
4-Chloro-3-methylphenol	SW8270D	SW8270D	SW8270D
4-Methylphenol	SW8270D	SW8270D	SW8270D
4-Nitrophenol	SW8270D	SW8270D	SW8270D
Pentachlorophenol	SW8270DSIM	SW8270DSIM	SW8270DSIM
Phenol	SW8270D	SW8270D	SW8270D
Other SVOCs (µg/kg)			
1,2,4-Trichlorobenzene	SW8260C	SW8260C	SW8270DSIM
1,2-Dichlorobenzene	SW8260C	SW8260C	SW8260C
1,3-Dichlorobenzene	SW8260C	SW8260C	SW8260C
1,4-Dichlorobenzene	SW8260C	SW8270DSIM	SW8260C
2,4-Dinitrotoluene	SW8270D	SW8270D	SW8270D
2,6-Dinitrotoluene	SW8270D	SW8270D	SW8270D
2-Nitroaniline	SW8270D	SW8270D	SW8270D
3,3'-Dichlorobenzidine	R	R	R
3-Nitroaniline	SW8270D	R	SW8270D
4-Bromophenyl-phenylether	SW8270D	SW8270D	SW8270D
4-Chloroaniline	R	R	R
4-Chlorophenyl-phenylether	SW8270D	SW8270D	SW8270D
4-Nitroaniline	SW8270D	R	SW8270D
Aniline	R	R	R
Benzoic Acid	SW8270D	SW8270D	SW8270D
Benzyl Alcohol	SW8270DSIM	SW8270DSIM	SW8270DSIM
2,2'-Oxybis(1-Chloropropane)	SW8270D	SW8270D	SW8270D
bis(2-Chloroethoxy) Methane	SW8270D	SW8270D	SW8270D
Bis-(2-Chloroethyl) Ether	SW8270D	SW8270D	SW8270D
Carbazole	SW8270D	SW8270D	SW8270D
Hexachlorobenzene	SW8081B	SW8081B	SW8081B
Hexachlorobutadiene	SW8260C	SW8260C	SW8260C
Hexachlorocyclopentadiene	SW8270D	R	SW8270D
Hexachloroethane	SW8270D	SW8270D	SW8270D
Isophorone	SW8270D	SW8270D	SW8270D
Nitrobenzene	SW8270D	SW8270D	SW8270D
N-Nitrosodimethylamine	SW8270DSIM	SW8270DSIM	SW8270DSIM

Table K-6. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID / Collection Date	UP-CB-A6	UP-CB-B8	UP-MHF-165
Analyte	**6/26/2013**	**6/26/2013**	**6/26/2013**
N-Nitroso-Di-N-Propylamine	SW8270DSIM	SW8270DSIM	SW8270DSIM
N-Nitrosodiphenylamine	SW8270DSIM	SW8270D	SW8270DSIM
PCB Aroclors (µg/kg)			
PCB Aroclors	SW8082A	SW8082A	SW8082A
Pesticides (µg/kg)			
Pesticides	SW8081B	SW8081B	SW8081B
VOCs (µg/kg)			
VOCs	SW8260C	SW8260C	SW8260C
TPHs (mg/kg)			
Gasoline-Range Hydrocarbons	NWTPHG	NWTPHG	NWTPHG
Diesel-Range Hydrocarbons	NWTPHD	NWTPHD	NWTPHD
Motor Oil-Range Hydrocarbons	NWTPHD	NWTPHD	NWTPHD
Dioxins and Furans (ng/kg)			
Dioxins and Furans	na	EPA 1613B	na
Grain size (%)			
Grain size	PSEP-PS	PSEP-PS	PSEP-PS
Conventionals (%)			
Total Organic Carbon	PLUMB81TC	PLUMB81TC	PLUMB81TC
Total Solids	SM2540B	SM2540B	SM2540B

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

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

Table K-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID			UP-CB-A6			UP-CB-B8			UP-MHF-165		
Collection Date			6/26/2013			6/26/2013			6/26/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Metals (Total) (mg/kg)											
Antimony	--	--	< 0.3 U			< 0.3 U			< 0.2 U		
Arsenic	57	93	5.8			8.0			5.7		
Beryllium	--	--	0.2			< 0.3 U			0.2		
Cadmium	5.1	6.7	1.1			1.3			1.2		
Chromium	260	270	50.2			47.2			40.2		
Copper	390	390	278			81.5			65		
Lead	450	530	96.4			94.3			144		
Mercury	0.41	0.59	0.08			0.2			0.04		
Nickel	--	--	31.3			34.2			28.1		
Selenium	--	--	< 0.7 U			< 0.7 U			< 0.6 U		
Silver	6.1	6.1	< 0.3 U			0.3			< 0.2 U		
Thallium	--	--	< 0.3 U			< 0.3 U			< 0.2 U		
Zinc	410	960	**1,250**	3.0	1.3	**974**	2.4	1.0	**618**	1.5	
PAHs (µg/kg)											
1-Methylnaphthalene	--	--	92 J			140			38 J		
2-Chloronaphthalene	--	--	< 140 U			< 120 U			< 59 U		
2-Methylnaphthalene	670	1,400	200			250			41 J		
Acenaphthene	500	730	180			470			76		
Acenaphthylene	1,300	1,300	71 J			< 120 U			< 59 U		
Anthracene	960	4,400	320			600			310		
Benzo(a)anthracene	1,300	1,600	450			510			290		
Benzo(a)pyrene	1,600	3,000	350			320			240		
Benzo(g,h,i)perylene	670	720	460			430			200		
Chrysene	1,400	2,800	1,200			1,000			600		
Dibenz(a,h)anthracene	230	540	75			110			65		
Dibenzofuran	540	700	190			400			67		
Fluoranthene	1,700	2,500	**2,000**	1.2		**2,700**	1.6	1.1	1,200		
Fluorene	540	1,000	300			**700**	1.3		140		

Table K-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID			UP-CB-A6			UP-CB-B8			UP-MHF-165		
Collection Date			6/26/2013			6/26/2013			6/26/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Indeno(1,2,3-cd)pyrene	600	690	150			160			130		
Naphthalene	2,100	2,400	230			220			50 J		
Phenanthrene	1,500	5,400	**2,000**	1.3		**3,700**	2.5		900		
Pyrene	2,600	3,300	2,100			2,300			990		
Total Benzofluoranthenes	3,200	3,600	920			800			630		
Total HPAHs	12,000	17,000	7,700			8,300			4,300		
Total LPAHs	5,200	13,000	3,100 J			**5,700**	1.1		1,500 J		
Total PAHs	--	--	11,000 J			14,000			5,800 J		
cPAHs, nd RL*0	1,000	--	520			490			360		
cPAHs, nd RL*0.5	1,000	--	520			490			360		
cPAHs, nd RL*1	1,000	--	520			490			360		
Phthalates (µg/kg)											
bis(2-Ethylhexyl)phthalate	1,300	1,900	**54,000**	42	28	**67,000**	52	35	**2,300**	1.8	1.2
Butylbenzylphthalate	63	900	**1,800**	29	2.0	**12,000**	190	13	**97**	1.5	
Di-n-Butylphthalate	1,400	5,100	1,100			590			180		
Diethylphthalate	200	1,200	< 140 U			< 120 U			< 59 U		
Dimethylphthalate	71	160	**110**	1.5		40			**5,700**	80	36
Di-n-Octyl phthalate	6,200	--	460			580 J			< 59 U		
Phenols (µg/kg)											
2,4,5-Trichlorophenol	--	--	< 710 U			< 620 U			< 290 U		
2,4,6-Trichlorophenol	--	--	< 710 U			< 620 U			< 290 U		
2,4-Dichlorophenol	--	--	< 710 U			< 620 U			< 290 U		
2,4-Dimethylphenol	29	29	**< 180 U**			**< 150 U**			**< 73 U**		
2,4-Dinitrophenol	--	--	< 1,400 U			< 1,200 U			< 590 U		
2-Chlorophenol	--	--	< 140 U			< 120 U			< 59 U		
2-Methylphenol	63	63	< 35 U			< 31 U			< 15 U		
2-Nitrophenol	--	--	< 140 U			< 120 U			< 59 U		
4,6-Dinitro-2-Methylphenol	--	--	< 1,400 U			< 1,200 U			< 590 U		
4-Chloro-3-methylphenol	--	--	< 710 U			< 620 U			< 290 U		

Table K-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID			UP-CB-A6			UP-CB-B8			UP-MHF-165		
Collection Date			6/26/2013			6/26/2013			6/26/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
4-Methylphenol	670	670	130 J			540			< 59 U		
4-Nitrophenol	--	--	< 710 U			< 620 U			< 290 U		
Pentachlorophenol	360	690	< 140 U			< 120 U			41 J		
Phenol	420	1,200	< 180 U			< 180 U			< 47 U		
Other SVOCs (µg/kg)											
1,2,4-Trichlorobenzene	31	51	< 4.1 UJ			< 4.5 UJ			10 J		
1,2-Dichlorobenzene	35	50	< 0.8 UJ			< 0.9 UJ			< 0.8 UJ		
1,3-Dichlorobenzene	--	--	< 0.8 UJ			< 0.9 UJ			< 0.8 UJ		
1,4-Dichlorobenzene	110	120	0.9 J			44			< 0.8 UJ		
2,4-Dinitrotoluene	--	--	< 710 U			< 620 U			< 290 U		
2,6-Dinitrotoluene	--	--	< 710 U			< 620 U			< 290 U		
2-Nitroaniline	--	--	< 710 U			< 620 U			< 290 U		
3,3'-Dichlorobenzidine	--	--	R			R			R		
3-Nitroaniline	--	--	< 710 U			R			< 290 U		
4-Bromophenyl-phenylether	--	--	< 140 U			< 120 U			< 59 U		
4-Chloroaniline	--	--	R			R			R		
4-Chlorophenyl-phenylether	--	--	< 140 U			< 120 U			< 59 U		
4-Nitroaniline	--	--	< 710 U			R			< 290 U		
Aniline	--	--	R			R			R		
Benzoic Acid	650	650	**< 1,400 U**			**840 J**	1.3	1.3	< 590 U		
Benzyl Alcohol	57	73	**260**	4.6	3.6	**< 120 U**			**< 59 U**		
2,2'-Oxybis(1-Chloropropane)	--	--	< 140 U			< 120 U			< 59 U		
bis(2-Chloroethoxy) Methane	--	--	< 140 U			< 120 U			< 59 U		
Bis-(2-Chloroethyl) Ether	--	--	< 140 U			< 120 U			< 59 U		
Carbazole	--	--	350 J			610 J			160 J		
Hexachlorobenzene	22	70	< 9.8 U			< 6.6 U			< 4.9 U		
Hexachlorobutadiene	11	120	< 4.1 UJ			< 4.5 UJ			< 3.8 UJ		
Hexachlorocyclopentadiene	--	--	< 710 U			R			< 290 U		
Hexachloroethane	--	--	< 140 U			< 120 U			< 59 U		

Table K-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID			UP-CB-A6			UP-CB-B8			UP-MHF-165		
Collection Date			6/26/2013			6/26/2013			6/26/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Isophorone	--	--	< 140 U			< 120 U			< 59 U		
Nitrobenzene	--	--	< 140 U			< 120 U			< 59 U		
N-Nitrosodimethylamine	--	--	< 180 U			< 150 U			< 73 U		
N-Nitroso-Di-N-Propylamine	--	--	< 140 U			< 120 U			< 59 U		
N-Nitrosodiphenylamine	28	40	**170**	6.1	4.3	**170**	6.1	4.3	**71**	2.5	1.8
PCB Aroclors (µg/kg)											
Aroclor 1016	--	--	< 39 U			< 19 U			< 19 U		
Aroclor 1221	--	--	< 39 U			< 19 U			< 19 U		
Aroclor 1232	--	--	< 39 U			< 19 U			< 19 U		
Aroclor 1242	--	--	530			< 19 U			< 19 U		
Aroclor 1248	--	--	< 39 U			270			30		
Aroclor 1254	--	--	120			180			32		
Aroclor 1260	--	--	80			79			28		
Aroclor 1262	--	--	< 39 U			< 19 U			< 19 U		
Aroclor 1268	--	--	< 39 U			< 19 U			< 19 U		
Total PCB Aroclors	130	1,000	**730**	5.6		**530**	4.1		90		
Pesticides (µg/kg)											
4,4'-DDD	--	--	< 4.9 U			< 22 U			< 4.9 U		
4,4'-DDE	--	--	< 4.9 U			< 11 U			< 4.9 U		
4,4'-DDT	--	--	< 4.9 UJ			< 10 U			< 4.9 U		
Total DDTs	--	--	< 4.9 U			< 22 U			< 4.9 U		
Aldrin	--	--	< 32 U			< 25 U			< 2.4 U		
alpha-BHC	--	--	< 2.5 U			< 2.4 U			< 2.4 U		
beta-BHC	--	--	< 17 U			< 13 U			< 2.4 U		
cis-Chlordane	--	--	< 2.5 UJ			< 23 UJ			< 2.4 UJ		
delta-BHC	--	--	< 8.4 U			< 7.4 U			< 120 U		
Dieldrin	--	--	< 28 UJ			< 210 UJ			< 4.9 UJ		
Endosulfan I	--	--	< 2.5 UJ			< 8.9 UJ			< 2.4 UJ		
Endosulfan II	--	--	< 9.2 U			< 4.8 U			< 4.9 U		

Table K-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID			UP-CB-A6			UP-CB-B8			UP-MHF-165		
Collection Date			6/26/2013			6/26/2013			6/26/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Endosulfan Sulfate	--	--	< 4.9 U			< 4.8 U			< 4.9 U		
Endrin	--	--	< 4.9 UJ			< 8.8 U			< 4.9 U		
Endrin Aldehyde	--	--	< 4.9 UJ			< 4.8 U			< 4.9 U		
Endrin Ketone	--	--	< 10 UJ			< 13 U			< 4.9 U		
Heptachlor	--	--	< 8.8 U			< 11 U			< 2.4 U		
Heptachlor Epoxide	--	--	< 12 U			< 64 U			< 4.9 U		
gamma-BHC (Lindane)	--	--	< 4.8 U			< 5.1 U			< 2.4 U		
Methoxychlor	--	--	< 25 UJ			< 24 U			< 24 U		
Toxaphene	--	--	< 490 U			< 480 U			< 490 U		
trans-Chlordane	--	--	< 12 U			< 28 U			< 2.4 U		
Total aldrin/dieldrin	--	--	< 32 U			< 210 U			< 4.9 U		
Total Chlordane	--	--	< 12 U			< 28 U			< 2.4 U		
VOCs (µg/kg)											
1,1,1,2-Tetrachloroethane	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
1,1,1-Trichloroethane	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
1,1,2,2-Tetrachloroethane	--	--	< 0.8 UJ			< 0.9 UJ			< 0.8 UJ		
1,1,2-Trichloro-1,2,2-trifluoroetha	--	--	< 1.6 U			< 1.8 U			< 1.5 U		
1,1,2-Trichloroethane	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
1,1-Dichloroethane	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
1,1-Dichloroethene	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
1,1-Dichloropropene	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
1,2,3-Trichlorobenzene	--	--	< 4.1 UJ			< 4.5 UJ			< 3.8 UJ		
1,2,3-Trichloropropane	--	--	< 1.6 UJ			< 1.8 UJ			< 1.5 UJ		
1,2,4-Trimethylbenzene	--	--	23 J			15 J			6.1 J		
1,2-Dibromo-3-chloropropane	--	--	< 4.1 UJ			< 4.5 UJ			< 3.8 UJ		
1,2-Dibromoethane	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
1,2-Dichloroethane	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
1,2-Dichloropropane	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
1,3,5-Trimethylbenzene	--	--	11 J			6.3 J			2.2 J		

Table K-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID			UP-CB-A6			UP-CB-B8			UP-MHF-165		
Collection Date			6/26/2013			6/26/2013			6/26/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
1,3-Dichloropropane	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
2,2-Dichloropropane	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
2-Chloroethylvinylether	--	--	R			R			R		
2-Chlorotoluene	--	--	< 0.8 UJ			< 0.9 UJ			< 0.8 UJ		
2-Hexanone	--	--	< 4.1 U			< 4.5 U			< 3.8 U		
4-Chlorotoluene	--	--	< 0.8 UJ			< 0.9 UJ			< 0.8 UJ		
Acetone	--	--	< 4.1 U			< 4.5 U			< 3.8 U		
Acrolein	--	--	< 41 U			< 45 U			< 38 U		
Acrylonitrile	--	--	< 4.1 U			< 4.5 U			< 3.8 U		
Benzene	--	--	3.8			2.8			1.1		
Bromobenzene	--	--	< 0.8 UJ			< 0.9 UJ			< 0.8 UJ		
Bromochloromethane	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
Bromoethane	--	--	< 1.6 U			< 1.8 U			< 1.5 U		
Bromoform	--	--	< 0.8 UJ			< 0.9 UJ			< 0.8 UJ		
Bromomethane	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
Carbon Disulfide	--	--	15			16			8.3		
Carbon Tetrachloride	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
Chlorobenzene	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
Dibromochloromethane	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
Chloroethane	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
Chloroform	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
Chloromethane	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
cis-1,2-Dichloroethene	--	--	< 0.8 U			0.5 J			< 0.8 U		
cis-1,3-Dichloropropene	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
Dibromomethane	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
Bromodichloromethane	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
Dichlorodifluoromethane	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
Ethylbenzene	--	--	65			15			2.3		
Isopropylbenzene	--	--	33 J			2.2 J			1.0 J		

Table K-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID			UP-CB-A6			UP-CB-B8			UP-MHF-165		
Collection Date			6/26/2013			6/26/2013			6/26/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
m,p-Xylene	--	--	24			21			3.4		
2-Butanone	--	--	37			46			23		
Iodomethane	--	--	0.7 J			< 0.9 U			< 0.8 U		
4-Methyl-2-Pentanone (MIBK)	--	--	< 4.1 U			30			23		
Methyl tert-Butyl Ether	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
Methylene Chloride	--	--	< 1.6 U			< 1.8 U			< 1.5 U		
n-Butylbenzene	--	--	5.4 J			< 0.9 UJ			1.8 J		
n-Propylbenzene	--	--	17 J			2.4 J			1.2 J		
o-Xylene	--	--	15			12			3.0		
4-Isopropyltoluene	--	--	5.2 J			8.7 J			2.0 J		
sec-Butylbenzene	--	--	7.8 J			2.9 J			1.2 J		
Styrene	--	--	11			3.4			0.4 J		
tert-Butylbenzene	--	--	< 0.8 UJ			< 0.9 UJ			< 0.8 UJ		
Tetrachloroethene	--	--	1.7			0.5 J			< 0.8 U		
Toluene	--	--	42			61			11		
Total Xylenes	--	--	39			33			6.4		
trans-1,2-Dichloroethene	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
trans-1,3-Dichloropropene	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
trans-1,4-Dichloro-2-butene	--	--	< 4.1 UJ			< 4.5 UJ			< 3.8 UJ		
Trichloroethene	--	--	0.5 J			< 0.9 U			< 0.8 U		
Trichlorofluoromethane	--	--	3.3			5.6			< 0.8 U		
Vinyl Acetate	--	--	< 4.1 U			< 4.5 U			< 3.8 U		
Vinyl Chloride	--	--	< 0.8 U			< 0.9 U			< 0.8 U		
TPH (mg/kg)											
Gasoline-Range Hydrocarbons	30/100	--	< 9.0 U			< 5.9 U			< 7.4 U		
Diesel-Range Hydrocarbons	2,000	--	**3,600**	1.8		**3,100**	1.6		**1,500**		
Motor Oil-Range Hydrocarbons	2,000	--	**14,000**	7.0		**9,700**	4.9		**4,100**	2.1	
Dioxins and Furans (ng/kg)											
2,3,7,8-TCDD	--	--	na			0.877 J			na		

Table K-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID			UP-CB-A6			UP-CB-B8			UP-MHF-165		
Collection Date			6/26/2013			6/26/2013			6/26/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
1,2,3,7,8-PeCDD	--	--	na			3.87			na		
1,2,3,4,7,8-HxCDD	--	--	na			5.6			na		
1,2,3,6,7,8-HxCDD	--	--	na			23			na		
1,2,3,7,8,9-HxCDD	--	--	na			11.9			na		
1,2,3,4,6,7,8-HpCDD	--	--	na			617			na		
OCDD	--	--	na			6,500 J			na		
2,3,7,8-TCDF	--	--	na			2.85			na		
1,2,3,7,8-PeCDF	--	--	na			2.26 J			na		
2,3,4,7,8-PeCDF	--	--	na			3.71			na		
1,2,3,4,7,8-HxCDF	--	--	na			9.1			na		
1,2,3,6,7,8-HxCDF	--	--	na			4.87			na		
1,2,3,7,8,9-HxCDF	--	--	na			2.88			na		
2,3,4,6,7,8-HxCDF	--	--	na			7.18			na		
1,2,3,4,6,7,8-HpCDF	--	--	na			111			na		
1,2,3,4,7,8,9-HpCDF	--	--	na			8.48			na		
OCDF	--	--	na			420			na		
Dioxin/Furan TEQ, nd SDL*0	25	--	na			22.1 J			na		
Dioxin/Furan TEQ, nd SDL*0.5	25	--	na			22.1 J			na		
Dioxin/Furan TEQ, nd SDL*1	25	--	na			22.1 J			na		
Total TCDD	--	--	na			14.1 J			na		
Total TCDF	--	--	na			59.9 J			na		
Total PeCDD	--	--	na			28.8			na		
Total PeCDF	--	--	na			81.5 J			na		
Total HxCDD	--	--	na			180			na		
Total HxCDF	--	--	na			177 J			na		
Total HpCDD	--	--	na			1,550			na		
Total HpCDF	--	--	na			409 J			na		
Grain size (%)											
> 10 Phi Clay	--	--	2.8			1.4			1.3		

Table K-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

Location ID			UP-CB-A6			UP-CB-B8			UP-MHF-165		
Collection Date			6/26/2013			6/26/2013			6/26/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
8-9 Phi Clay	--	--	2.7			2.5			0.6		
9-10 Phi Clay	--	--	0.3			0.8			< 0.1 U		
Very Fine Silt	--	--	4.1			2.2			2.1		
Fine Silt	--	--	4.4			3.7			2.1		
Medium Silt	--	--	12			16.1			5.7		
Coarse Silt	--	--	8.1			14.3			3.5		
Total Fines	--	--	34.4			41			15.2		
Very Fine Sand	--	--	9.4			9.5			2.3		
Fine Sand	--	--	14.2			12.9			3.5		
Medium Sand	--	--	15.3			13.4			12.3		
Coarse Sand	--	--	11.4			10.5			24.2		
Very Coarse Sand	--	--	10			8.4			25.9		
Gravel	--	--	5.3			4.3			16.5		
Conventionals (%)											
Total Organic Carbon	--	--	11.3			9.47			10		
Total Solids	--	--	70.48			67.64			79.36		

a - LDW RALs are presented for cPAHs and Dioxin/Furan TEQs. MTCA Method A cleanup levels for soil are presented for TPH.

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

Results in **bold** exceed the SQS/LAET/RAL.

Results in **bold and shaded gray** exceed the CSL/2LAET.

EFs are presented for detected concentrations that exceed the SMS/AET criteria, LDW RALs, or MTCA Method A cleanup levels for soil only.

The EFs are calculated (result/criterion) and have no regulatory relevance. They provide an indication of the general magnitude of the concentration relative to the SMS criteria or LDW RALs.

% - percent

< - not detected

2LAET - Second Lowest Apparent Effects Threshold

AET - Apparent Effects Threshold

cPAHs - carcinogenic polycyclic aromatic hydrocarbons

nd - non-detect

ng/kg - nanograms per kilogram

NPDES - National Pollutant Discharge Elimination System

OC - organic carbon

PCBs - polychlorinated biphenyls

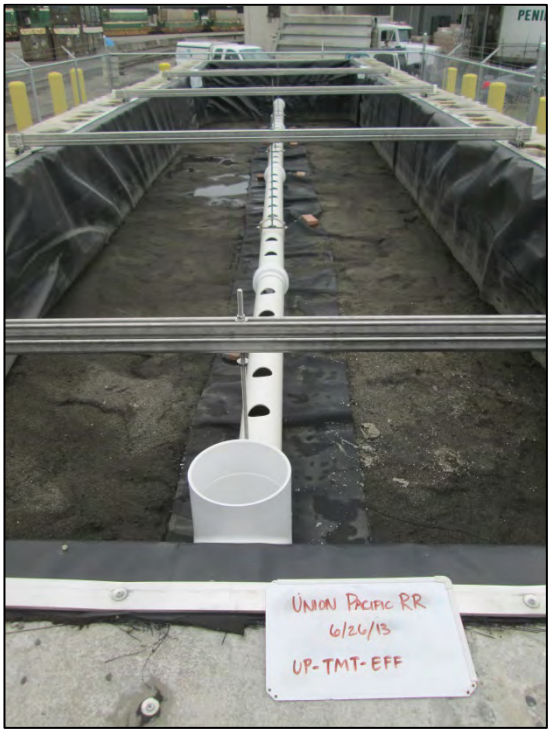
Table K-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Union Pacific Railroad - Argo Yard

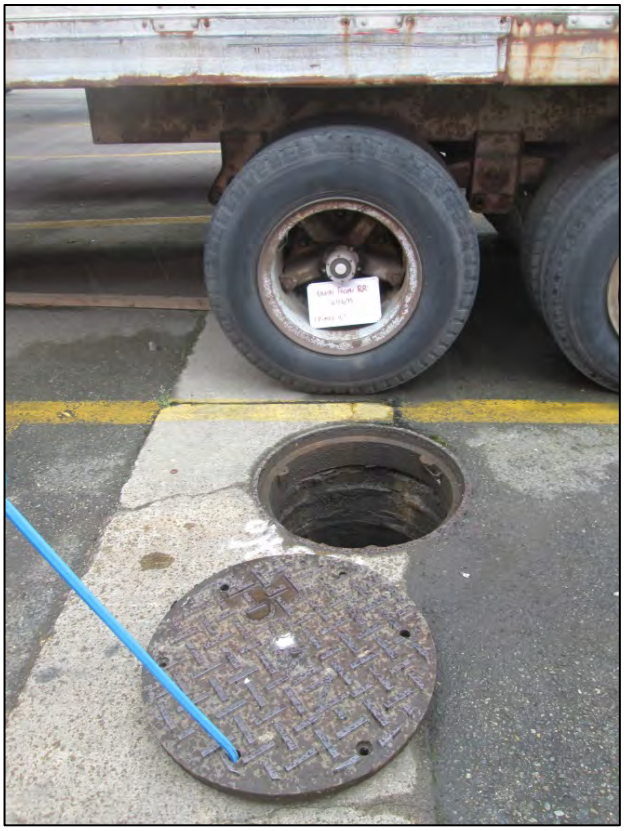
Location ID			UP-CB-A6			UP-CB-B8			UP-MHF-165		
Collection Date			6/26/2013			6/26/2013			6/26/2013		
Analyte	SMS Criteria		Result	EF		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET

CSL - Cleanup Screening Level
EF - exceedance factor (sample result/criteria value)
HPAHs - high molecular weight polycyclic aromatic hydrocarbons
J - estimated concentration
LAET - Lowest Apparent Effects Threshold
LDW - Lower Duwamish Waterway
LPAHs - low molecular weight polycyclic aromatic hydrocarbons
mg/kg - micrograms per kilogram
mg/kg - milligrams per kilogram
MTCA - Model Toxics Control Act
na - not analyzed
nc - not calculated
R - Rejected completely during data validation review
RAL - Remedial Action Levels
RL - reporting limit
SDL - sample detection limit
SMS - Washington State Sediment Management Standards
SQS - Sediment Quality Standard
SVOCs - semivolatile organic compounds
TEQ - toxic equivalency
TPH - total petroleum hydrocarbons
U - not detected
VOCs - volatile organic compounds

Attachment K-1
Inspection Photographic Log

Conveyance Structure Information	
Structure Identification Number: UP-CB-B8	**N➔** 
Structure Type: Catch Basin	
General Location: Southwestern portion of facility	
Characteristics: 7 feet to bottom of structure	
Pump Capacity (gpm): n/a	
Design Storm: n/a	
Access: Catch basin grate	
Volume Gauge: No	
Sample ID: UP-CB-B8-20130626-S	
Drainage Information:	
Location UP-CB-B8 receives stormwater from the southern portion of the Union Pacific Railroad – Argo Yard. Stormwater from UP-CB-B8 is conveyed west towards SD Vault B. Stormwater from SD Vault B is conveyed to the public storm drain system and discharges to the LDW via the Diagonal Avenue S CSO/SD Outfall.	**N➔** 

Conveyance Structure Information	
Structure Identification Number: UP-TMT-EFF	**N↑** 
Structure Type: Treatment System	
General Location: Southwestern portion of facility	
Characteristics: Open settling vault	
Pump Capacity (gpm): n/a	
Design Storm: n/a	
Access: Open top	
Volume Gauge: No	
Sample ID: Not sampled	
Drainage Information:	
Stormwater from System B is conveyed to the treatment system in the picture to the right prior to discharge to the public storm drain system that runs along the Denver Ave S alignment. Detention and treatment systems in Systems A and F are similar to System B shown at the right.	**N↓** 

Conveyance Structure Information	
Structure Identification Number: UP-MHF-165	**N↑** 
Structure Type: Manhole	
General Location: Central portion of facility	
Characteristics: 9 feet to bottom of structure	
Pump Capacity (gpm): n/a	
Design Storm: n/a	
Access: Sealed manhole cover	
Volume Gauge: No	
Sample ID: UP-MHF-165-20130626-S	
Drainage Information	
Location UP-MHF-165 receives stormwater from the northern portion of the Union Pacific Railroad – Argo Yard. Stormwater from UP-MHF-165 is conveyed west towards SD Vault F. Stormwater from SD Vault F is conveyed to the public storm drain system and discharges to the LDW via the Diagonal Avenue S CSO/SD Outfall.	**N↑** 

Conveyance Structure Information	
Structure Identification Number: UP-CB-A6	**N↑**
Structure Type: Catch basin	
General Location: Central portion of facility	
Characteristics: 6 feet to bottom of structure	
Pump Capacity (gpm): n/a	
Design Storm: n/a	
Access: Catch basin grate	
Volume Gauge: No	
Sample ID: UP-CB-A6-20130626-S	
Drainage Information	
Location UP-CB-A6 receives stormwater from the central portion of the Union Pacific Railroad – Argo Yard. Stormwater from UP-CB-A6 is conveyed west towards SD Vault A. Stormwater from SD Vault A is conveyed to the public storm drain system and discharges to the LDW via the Diagonal Way CSO/SD Outfall.	**N↑**

Attachment K-2
Field Documentation

SAIC
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SURFACE WATER SAMPLING FORM

Client: Department of Ecology **Site:** Union Pacific Rail Road **Job #:** 209977

Sample ID	TIME	DATE	Flow	pH	Electrical Conductivity	Temp (°C)	Total Dissolved Solids	Turbidity (NTU)	Oil & Grease (visible?)	COMMENTS
UP-CB-B8-20130626-W	1054	6/26/13	Yes	6.72	0.713 m S/cm	21.6	0.47 g/L	59.8	No	
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
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Sample Date: 6 / 26 /2013

SAIC
From Science to Solutions

Sediment Collection Form

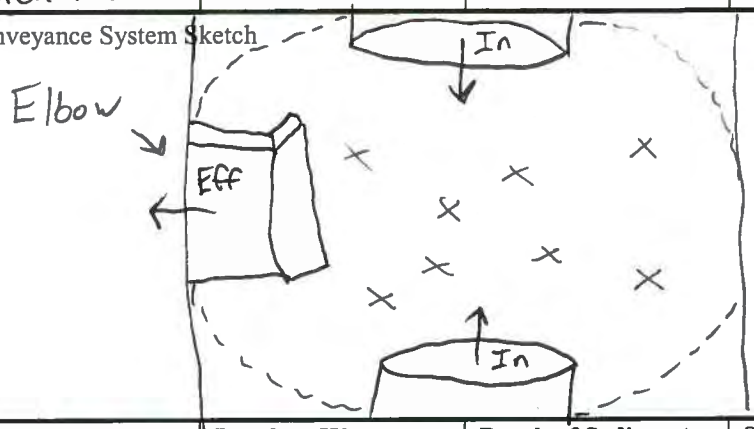
Project: NPDES Sampling Support **Location ID:** UP-CB-B8

Facility Name: **Sample ID:** UP-CB-B8-20130626-S

Sampled By: CW CN **Date:** 6 / 26 / 2013 **Time:** 1133

Structure Type:	Dimensions:	Standing Water:	Flow:
Catch Basin	W 18" L 24"	(Y) / N	(Y) / N Minimal

Conveyance System Sketch



↑N

X - Sample Locations
Influent Pipes flush w/ Structure walls

Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: (Y) / N
7 ft	4 ft	6-12 in	(Discrete) / Composite *(circle one)*

Sediment type:	*Sediment color:*	*Sediment Odor:*	*Comments:*
Cobble	Drab olive	None	
Gravel	Brown	Slight	
Sand C M (F)	Brown surface	(Moderate)	
(Silt/clay)	Gray	Strong	
(Organic matter)	(Black)	Overwhelming	Photo ID(s): UP-CB-B8
(Debris)	Tan	H_2S	GPS ID: UP-CB-B8
		(Petroleum)	

NOTES: Location is directly upstream of settling system
CB is located on System B
Collected water + sediment sample and split sample w/ Union Pacific.

Recorded By/Date: C. Wilson 6-26-13 **Reviewed By/Date:** _____

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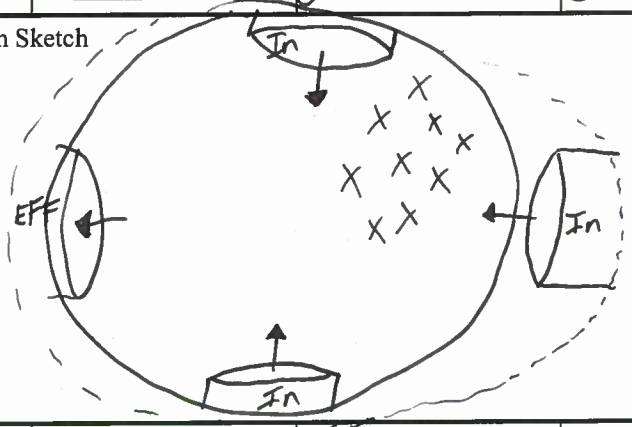
Sediment Collection Form

Project: NPDES Sampling Support
Location ID: UP-MHF-165
Facility Name: Union Pacific
Sample ID: UP-MHF-165-20130626-S
Sampled By: CW CN **Date:** 6 / 26 / 2013 **Time:** 1409

Structure Type:	Dimensions: Standard	Standing Water:	Flow:
Manhole	W ____ L MH	Y / N	(Y) / N Minimal

Conveyance System Sketch



Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: (Y) / N
~9 ft	~7 ft	6 in	(Discrete) / Composite *(circle one)*

Sediment type:	*Sediment color:*	*Sediment Odor:*	***Comments:***
Cobble	Drab olive	None	
(Gravel)	Brown	(Slight)	
Sand (C) (M) F	Brown surface	Moderate	
(Silt/clay)	(Gray) Dark	Strong	
(Organic matter)	Black	Overwhelming	Photo ID(s): UP-MHF-165
(Debris)	Tan	H_2S	GPS ID: UP-MHF-165
		(Petroleum)	

NOTES:

Influent from north + south collects SW from 3 to 4 catch basins on each line. Main force of influent is from ~~location~~ influent to east.

Central and western portion of manhole was hard pan/no solids. Majority of sediment was in eastern portion of catch basin. Difficult to collect sediment because of angle at above ground access point.

Recorded By/Date: Corey Wilson 6-26-13 **Reviewed By/Date:** _____

Version2 -030311

SAIC
From Science to Solutions

Sediment Collection Form

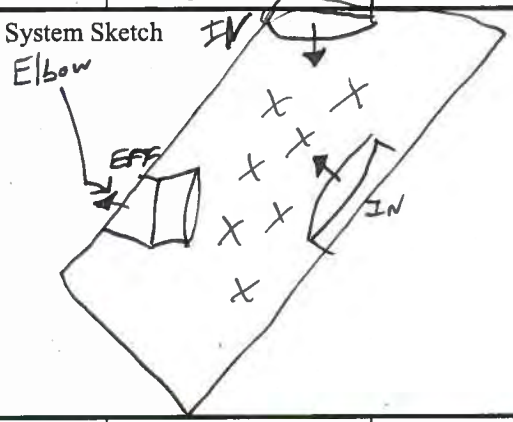
Project: NPDES Sampling Support **Location ID:** UP-CBA-006

Facility Name: Union Pacific **Sample ID:** ~~UP-CBA-006-20130626S~~ UP-CB-A6-2013

Sampled By: CJ CN **Date:** 6 / 26 / 2013 **Time:** 1547

Structure Type:	Dimensions:	Standing Water:	Flow:
CB	W 18" L 24"	(Y) / N	(Y) / N

Conveyance System Sketch



↑N

X - Sample Grab Location

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

Sediment type:	*Sediment color:*	*Sediment Odor:*	***Comments:***
Cobble	Drab olive	None	
Gravel	Brown	Slight	
Sand C M (F)	Brown surface	Moderate	
(Silt/clay)	Gray	(Strong)	
(Organic matter)	(Black)	Overwhelming	Photo ID(s): UP-CBA-006
(Debris)	Tan	H_2S	GPS ID: UP-CBA-006
		(Petroleum)	

NOTES:

Catch Basin located on System A

Recorded By/Date: Corey Wilson 6-26-13 **Reviewed By/Date:** _____

Version2 -030311

UPRR NPDES Sampling 6/26/13
Support Overcast, 65°

0858 SAIC arrive on site
Meet Bob Wright, Warren Walton and UPRR representative from CH2M Hill - Mario
Discuss site plans; Meagan Wisdom (SPU) on site
Daman Larkin with Union Pacific Railroad. He is the SR Manager of Intermodal Terminal Operations
Phone call to Tracey Ponde at UPRR Environmental Operations to discuss sampling operations for the day. UPRR would like to split all samples.

0932 Finished discussion in office
Held H+S meeting
MOB to first inspection location
UP-CB-BB Int System B

0951 

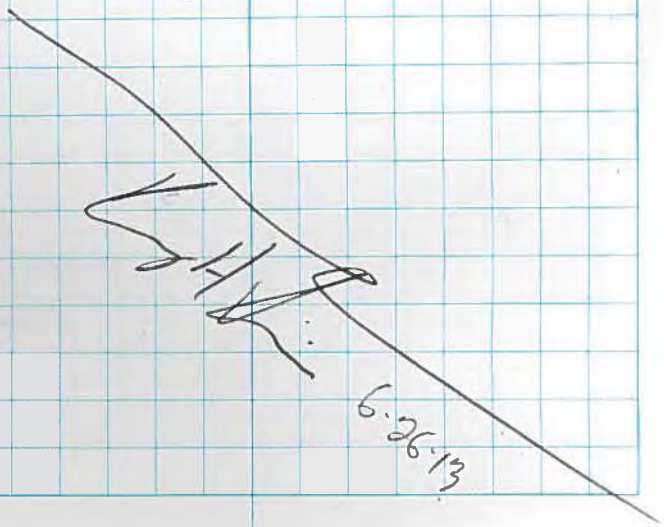
6"-1' Seds
low surface runoff
flocculates on surface

6/26/13 UP RR

1003 Team mob to SW Tmt System B, photos of Inf/Eff; tmt influent pump vault collected.
1019 Inspection team MOBs w/ Damon to southern end of facility
SAIC prep for sampling at CB-B8
1054 Collected UP-CB-B8-20130626-W
1114 Parameters @ CB-B8 collected
pH 6.72
Cond. ~~0.739~~ 0.713 ms/cm
TURB 59.8 NTU
D.O. 7.5 mg/L
Temp 21.6 °C
SAL 0.0 %
TDS 0.47 g/L
ORP 122 mV
1133 Collected UP-CB-B8-20130626-S
1213 Decon. Inspection team back at CB-B8
1231 SAIC off site to field lab; Dropped 1 sample cooler
1301 SAIC, ECY, CH2MHill back on site Investigating treatment system F
1354 Setup to collect sample at UP-MHF165

UPRR 6-26-13

1354 Will collect sediment sample at UP-MHF-165 and split w/ UPRR No dioxin collected
1409 Collected Split Samples UP-MHF-165-20130626-S
MOBs to Tmt System A; no seeds avail. in vault.
Mobbed to CB upstream of treatment system
1547 Collected Sediment Sample UP-CB-AC-20130626-S
Split Sample w/ CH2MHill.
~1700 Mobbed offsite
1732 Delivered samples to ARI.
Returned to field office to
1800 unload equipment



Attachment K-3
Chain of Custody Forms

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: WI67	Turn-around Requested: 2 day TAT	Date: C-26-13
ARI Client Company: **SAIC**	Phone: **206.300.2144** nancarrowc@saic.com	Page: 1 of 1
Client Contact: **Christine Nancarrow**		No. of Coolers: 2 Cooler Temps: 17.6, 8.3
Client Project Name: **NPDES Sampling Support**		
Client Project #: **209977**	Samplers: CW CN	

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

Sample ID	Date	Time	Matrix	No. Containers	PCB Aroclors (EPA 8082)	SVOCs/PAHs (EPA 8270 / EPA 8270-SIM)	Pesticides (EPA 8081)	Dioxins/Furans (EPA 1613B)	TPH-Diesel (NWTPH-DW)	VOCs (EPA8260)	Metals (EPA 6010/200.8)	Mercury (EPA 7471)	TOC (Plumb 1981)	Total Solids (SM2540B)	Particle Size Distribution (Sedigraph)	NWTPH-Gas (NWTPH-Gx)	Notes/Comments
UP-CB-BR-20130626-S	6-26-13	1133	Sediment	12	✓	✓	✓	✓+	✓	✓	✓+	✓+	✓	✓	✓+	✓	+HOLD
UP-MHF-165-20130626-S	6-26-13	1409	Sediment	11	✓	✓	✓	CW 6-26-13 ✓	✓	✓	✓+	✓+	✓	✓	✓+	✓	Do not analyze for Dioxin/Furan
UP-CB-A6-20130626-S	6-26-13	1547	Sediment	11	✓	✓	✓		✓	✓	✓+	✓+	✓	✓	✓+	✓	
										CW							

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Due to pending state shutdown please expedite samples on a 2-d TAT EXCEPT those noted on hold per the '+'.	Printed Name: Corey Wilson	Printed Name: Jennifer Mitsop	Printed Name:	Printed Name:
	Company: SAIC	Company: ARI	Company:	Company:
	Date & Time: 6-26-13 1732	Date & Time: 6/26/13 1732	Date & Time:	Date & Time:

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

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

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: 2 day TAT	Date: 6-26-13
ARI Client Company: **SAIC**	Phone: **206.300.2144**	Page: 1 of 1
Client Contact: **Christine Nancarrow**	**nancarrowc@saic.com**	No. of Coolers: 2 Cooler Temps: 17.6, 8.3
Client Project Name: **NPDES Sampling Support**		
Client Project #: **209977**	Samplers: CW CN	

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

Sample ID	Date	Time	Matrix	No. Containers	SVOCs/PAHs (EPA 8270/8270 SIM)	Pesticides (EPA 8081)	Total Metals (EPA 200.8)	Mercury (EPA 7470)	Dissolved Metals (EPA 200.8)	pH (SM4500H)	Specific Conductance (EPA 120.1)	Anions (EPA 300.0/353.2)	Alkalinity (SM2320)	TOC (SM5310)	DOC (SM5310)	TSS (SM2540D)	Notes/Comments: TPH (NWTPH-Gx)	Notes/Comments: VOCs (EPA 8260)	Notes/Comments: +'= HOLD
UP-CB-B8-20130626-W	6-26-13	1054	Water	12	✓	✓	✓+	✓+	✓+	✓	✓+	✓	✓	✓+	✓+	✓			+
UP-TB-01-20130626-W	6-26-13	1200	Water	2													✓	✓	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Do not dispose of samples without prior written authorization from SAIC PM. Please expedite Samples on a 2 day TAT EXCEPT those noted on HOLD per the '+'.	Printed Name: Corey Wilson	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: SAIC	Company: ARI	Company:	Company:
	Date & Time: 6-26-13 1732	Date & Time: 6/26/13 1732	Date & Time:	Date & Time:

Attachment K-4
Laboratory Reports

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

Table of Contents: ARI Job WV67

Client: SAIC

Project: 209977 NPDES Sampling Support

	Page From:	Page To:
Inventory Sheet		
Cover Letter	1	1
Chain of Custody Documentation	2	6
Case Narrative, Data Qualifiers, Control Limits	7	24
Volatile Analysis		
Report and Summary QC Forms	25	79
Semivolatile Analysis		
Report and Summary QC Forms	80	100
SIM PAH Analysis		
Report and Summary QC Forms	101	112
Pesticide Analysis		
Report and Summary QC Forms	113	135
TPHG Analysis		
Report and Summary QC Forms	136	152
General Chemistry Analysis		
Report and Summary QC Forms	153	159
Volatile Raw Data		
Initial Calibration + Bench Sheet	163	288
Run Logs, Continuing Calibrations, and Raw Data	289	554
Semivolatile Raw Data		
Extractions Bench Sheets and Notes	555	558
Initial Calibration	559	649
Run Logs, Continuing Calibrations, and Raw Data	650	729
SIM PAH Raw Data		
Extractions Bench Sheets and Notes	730	733
Initial Calibration	734	787
Run Logs, Continuing Calibrations, and Raw Data	788	851
Pesticide Raw Data		
Extractions Bench Sheets and Notes	852	855
Initial Calibration	856	953
Run Logs, Continuing Calibrations, and Raw Data	954	980

AV
Signature

June-27-2013
Date

Table of Contents: ARI Job WV67

Client: SAIC

Project: 209977 NPDES Sampling Support

	Page From:	Page To:
TPHG Raw Data		
Preparation Log	981	982
Initial Calibration	983	1151
Run Logs, Continuing Calibrations, and Raw Data	1152	1184
General Chemistry Raw Data		
Analyst Notes and Raw Data	1185	1276
Total Solids	1160	1162

AV
Signature

June-27-2013
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

June 28, 2013

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

RE: Project: NPDES Sampling Support, 209977
ARI Job No.: WV67

Dear Christine:

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

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

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

Sincerely,

ANALYTICAL RESOURCES, INC.

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

cc: eFile WV67

Enclosures

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

Chain of Custody Documentation

ARI Job ID: WV67

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: WV67	Turn-around Requested: 2 day TAT	Date: 6-26-13	
ARI Client Company: **SAIC**	Phone: **206.300.2144** nancarrowc@saic.com	Page: 1 of 1	
Client Contact: **Christine Nancarrow**		No. of Coolers: 2	Cooler Temps: 17.6, 8.3
Client Project Name: **NPDES Sampling Support**			
Client Project #: **209977**	Samplers: CW CN		

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

Sample ID	Date	Time	Matrix	No Containers	PCB Aroclors (EPA 8082)	SVOCs/PAHs (EPA 8270 / EPA 8270-SIM)	Pesticides (EPA 8081)	Dioxins/Furans (EPA 1613B)	TPH-Diesel (NWTPH-DW)	VOCs (EPA8260)	Metals (EPA 6010/200.8)	Mercury (EPA 7471)	TOC (Plumb 1981)	Total Solids (SM2540B)	Particle Size Distribution (Sedigraph)	NWTPH-Gas (NWTPH-Gx)	Notes/Comments
UP-CB-B8-20130626-S	6-26-13	1133	Sediment	12	✓	✓	✓	✓+	✓	✓	✓+	✓+	✓	✓	✓+	✓	+HOLD
UP-MHF-165-20130626-S	6-26-13	1409	Sediment	11	✓	✓	✓	CW 6-26-13 ✓	✓	✓	✓+	✓+	✓	✓	✓+	✓	Do not analyze for Dioxin/Furan
UP-CB-A6-20130626-S	6-26-13	1547	Sediment	11	✓	✓	✓		✓	✓	✓+	✓+	✓	✓	✓+	✓	
										CW							

Comments/Special Instructions: Due to pending state shutdown please expedite samples on a 2-d TAT EXCEPT those noted on hold per the '+'.	Relinquished by (Signature):	Received by (Signature):	Relinquished by (Signature):	Received by (Signature):
	Printed Name: Corey Wilson	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: SAIC	Company: ARI	Company:	Company:
	Date & Time: 6-26-13 1732	Date & Time: 6/26/13 1732	Date & Time:	Date & Time:

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

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: 2 day TAT
ARI Client Company: **SAIC**	Phone: **206.300.2144** **nancarrowc@saic.com**
Client Contact: **Christine Nancarrow**	
Client Project Name: **NPDES Sampling Support**	
Client Project #: **209977**	Samplers: CW CN

Date: 6-26-13
Page: 1 of 1
No. of Coolers: 2 Cooler Temps: 17.6, 8.3

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

Sample ID	Date	Time	Matrix	No Containers	SVOCs/PAHs (EPA 8270/8270 SIM)	Pesticides (EPA 8081)	Total Metals (EPA 200.8)	Mercury (EPA 7470)	Dissolved Metals (EPA 200.8)	pH (SM4500H)	Specific Conductance (EPA 120.1)	Anions (EPA 300.0/353.2)	Alkalinity (SM2320)	TOC (SM5310)	DOC (SM5310)	TSS (SM2540D)	Notes/Comments: TPH (NWTPH-Gx)	VOCs (EPA 8260)	
UP-CB-BS-20130626-W	6-26-13	1054	Water	12	✓	✓	✓+	✓+	✓+	✓	✓+	✓	✓	✓+	✓+	✓			+'= HOLD
UP-TB-01-20130626-W	6-26-13	1200	Water	2													✓	✓	

Comments/Special Instructions
Do not dispose of samples without prior written authorization from SAIC PM.
Please expedite samples on a 2-day TAT EXCEPT those noted on HOLD per the '+'.

	Relinquished by	Received by	Relinquished by	Received by
(Signature)				
Printed Name	Corey Wilson	Jennifer Millsap		
Company	SAIC	ARI		
Date & Time	6-26-13 1732	6/26/13 1732		

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client SAIC

Project Name NPDES Sampling Support

COC No(s) _____ (NA)

Delivered by Fed-Ex UPS Courier (Hand Delivered) Other _____

Assigned ARI Job No VV67

Tracking No _____ NA

Preliminary Examination Phase.

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6 0 °C for chemistry) 17.6 8.3

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID# 90877952

Cooler Accepted by JM Date 6/26/13 Time 1737

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used?	Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other:		
Was sufficient ice used (if appropriate)?	NA	YES	(NO)
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	NA	(YES)	NO
Were all VOC vials free of air bubbles?	NA	(YES)	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	NA	4/15/13	

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

Samples Logged by: JM Date: 6/26/13 Time: 1740

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

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

Additional Notes, Discrepancies, & Resolutions:

By: Date:

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

VV67 : 89895

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Temperature Compliance Form

WV67

Cooler#: _____ Temperature(°C): 17.6, 8.3

Sample ID	Bottle Count	Bottle Type
All samples associated with this job were received at a temp greater than 6°C.		

Cooler#: _____ Temperature(°C): _____

Sample ID	Bottle Count	Bottle Type

Cooler#: _____ Temperature(°C): _____

Sample ID	Bottle Count	Bottle Type

Cooler#: _____ Temperature(°C): _____

Sample ID	Bottle Count	Bottle Type

Completed by: JM Date: 6/26/13 Time: 1940

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: WV67

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative

Client: SAIC
Project: NPDES Sampling Support, 209977
ARI Job No.: WV67

Sample Receipt

Three sediment samples and two water samples on June 26, 2013 under ARI job WV67. The cooler temperatures measured by IR thermometer following ARI SOP were 8.3 and 17.6°C. For further details regarding sample receipt, please refer to the Cooler Receipt Form.

Volatiles by SW8260C

The samples were analyzed within the recommended holding times.

The initial calibration was outside the 20% control limit high for Iodomethane. All detected results for this compound have been flagged with a "Q" qualifier. No further corrective action was taken. Initial calibrations were within method requirements.

The continuing calibration (CCAL) on 6/27/13 fell outside the control limits low for Acrylonitrile, and was out high for Acrolein and Iodomethane. All detected results associated with this CCAL have been flagged with a "Q" qualifier. No further corrective action was taken.

The CCAL on 6/28/13 fell outside the control limits low for Bromomethane and Methylene Chloride. The CCAL was also outside the control limit high for Acrolein and 2-Chloroethylvinylether. All detected results associated with this CCAL have been flagged with a "Q" qualifier. No further corrective action was taken.

The internal standard areas fell outside the control limits low for samples **UP-CB-B8-20130626-S**, **UP-MHF-165-20130626-S**, and **UP-CB-A6-20130626-S**. The samples were re-analyzed and internal standard areas were comparable to the initial analysis. No further corrective action was taken.

The surrogate percent recovery of Bromofluorobenzene fell outside the control limits low for sample **UP-CB-B8-20130626-S**. The sample was re-analyzed twice and all surrogate percent recoveries were within control limits. No further corrective action was taken.

The surrogate percent recoveries of Bromofluorobenzene fell outside the control limits low for samples **UP-MHF-165-20130626-S** and **UP-CB-A6-20130626-S**. The samples were re-analyzed and surrogate percent recoveries were comparable to the initial analysis. No further corrective action was taken.

Methylene Chloride, 1,2,4-Trichlorobenzene Naphthalene, and 1,2,3-Trichlorobenzene were present in **MB-062713A** at low levels. All detected results associated with this method blank have been flagged with a "B" qualifier. No further corrective action was taken.

Methylene Chloride was present in **MB-062813A** at a low level. All detected results associated with this method blank have been flagged with a "B" qualifier. No further corrective action was taken.

The LCS percent recovery of Acrolein was outside the control limits high for **LCS-062713A**. All other percent recoveries were within control limits. No corrective action was taken.

Semivolatiles by SW8270D

The sample was extracted and analyzed within recommended holding times.

Initial and continuing calibrations were within method requirements.

The internal standard area of Naphthalene-d8 fell outside the control limits low for sample **UP-CB-B8-20130626-W**. The sample was re-analyzed and all internal standard areas were within control limits. No further corrective action was taken.

The surrogate percent recoveries of d5-Nitrobenzene and 2,4,6-Tribromophenol were outside the control limits high for **UP-CB-B8-20130626-W**. The sample was re-analyzed and the surrogate percent recovery of 2,4,6-Tribromophenol was outside the control limits high. No further corrective action was taken.

The surrogate percent recovery of 2,4,6-Tribromophenol fell outside the control low for **LCS-062613**. All other percent recoveries were within control limits. No corrective action was taken.

The method blank was clean at the reporting limits.

The LCS percent recoveries of 1,2-Diphehylhydrazine and Azobenzene were outside the control limits for **LCS-062613**. All other percent recoveries were within control limits. No corrective action was taken.

Low-Level PAHs by SW8270D-SIM

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

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

The surrogate percent recoveries were within control limits.

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

Pesticides by SW8081

The sample was extracted and analyzed within recommended holding times.

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

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limits.

Due to laboratory error, the LCS and LCSD extracts were not spiked with the appropriate spike solution. Only the method blank and sample extract results have been reported. The sample and associated laboratory QC will be re-extracted and re-analyzed under a separate cover. No further corrective action was taken.

NWTPH-Gx

The samples were analyzed within recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

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

General Chemistry

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

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

The SRM percent recoveries were within limits.

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

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: WV67
Client: SAIC
Project Event: 209977
Project Name: NPDES Sampling Support

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	UP-CB-B8-20130626-S	WV67A	13-13657	Sediment	06/26/13 11:33	06/26/13 17:32
2.	UP-MHF-165-20130626-S	WV67B	13-13658	Sediment	06/26/13 14:09	06/26/13 17:32
3.	UP-CB-A6-20130626-S	WV67C	13-13659	Sediment	06/26/13 15:47	06/26/13 17:32
4.	UP-TB-01-20130626-W	WV67D	13-13660	Water	06/26/13	06/26/13 17:32
5.	UP-CB-B8-20130626-W	WV67E	13-13661	Water	06/26/13 10:54	06/26/13 17:32

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

U — Indicates that the target analyte was not detected at the reported concentration

* — Duplicate RPD is not within established control limits

B — Reported value is less than the CRDL but ≥ the Reporting Limit

N — Matrix Spike recovery not within established control limits

NA — Not Applicable, analyte not spiked

H — The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible

L — Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U — Indicates that the target analyte was not detected at the reported concentration

* — Flagged value is not within established control limits

B — Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.

J — Estimated concentration when the value is less than ARI's established reporting limits

D — The spiked compound was not detected due to sample extract dilution

E — Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

Q — Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).

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

NA The flagged analyte was not analyzed for

NR Spiked compound recovery is not reported due to chromatographic interference

NS The flagged analyte was not spiked into the sample

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

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

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

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

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

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

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

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

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

Geotechnical Data

A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.

F Samples were frozen prior to particle size determination

SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations

SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis

W Weight of sample in some pipette aliquots was below the level required for accurate weighting

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

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

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

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

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

Analyte	DL[1,5] µg/kg	LOD[1] µg/kg	LOQ[1] µg/kg	LCS Recovery[2,4]	Replicate RPD[3]
n-Butylbenzene	0.262	0.5	**1.0**	75 – 134	≤ 40
1,2-Dichlorobenzene	0.293	0.5	**1.0**	77 – **120**	≤ 40
1,2-Dibromo-3-Chloropropane	0.586	2.5	**5.0**	61 – 128	≤ 40
1,2,4-Trichlorobenzene	0.332	2.5	**5.0**	75 – 130	≤ 40
Hexachloro-1,3-Butadiene	0.410	2.5	**5.0**	72 – 135	≤ 40
Naphthalene	0.429	2.5	**5.0**	71 – 122	≤ 40
1,2,3-Trichlorobenzene	0.305	2.5	**5.0**	76 – 122	≤ 40
1,2-Dichloroethane-d_4			**80** – 122	**80** – 149	≤ 40
1,2-Dichlorobenzene-d_4			**80 – 120**	**80 – 120**	≤ 40
Toluene-d_8			**80 – 120**	77 – **120**	≤ 40
4-Bromofluorobenzene			**80 – 120**	**80 – 120**	≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation (LOQ) are defined in ARI SOP 1018S
(2) Control limits calculated using all data from 1/1/12 through 5/31/12.
(3) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$

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

LOD, LOQ and Control Limits Summary
GC - MS – SVOA Analysis of Aqueous Samples
EPA Method 8270D
Separatory Funnel Extraction

Samples extracted using Separatory Funnel Extraction (EPA method 3510C, Bench Sheet 3010F)
500mL sample concentrated to 0.5 mL final extract volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	LCS, MS Recovery[2,3]	Replicate RPD[4]
Phenol	**0.154**	**0.5**	**1**	19 – **120**	≤ 40
Bis(2-Chloroethyl)ether	**0.235**	**0.5**	**1**	45 – **120**	≤ 40
2-Chlorophenol	**0.276**	**0.5**	**1**	44 – **120**	≤ 40
1,3-Dichlorobenzene	**0.242**	**0.5**	**1**	38 – **120**	≤ 40
1,4-Dichlorobenzene	**0.212**	**0.5**	**1**	39 – **120**	≤ 40
1,2-Dichlorobenzene	**0.231**	**0.5**	**1**	41 – **120**	≤ 40
Benzyl alcohol	**0.607**	**1.0**	**2**	13 – **120**	≤ 40
2,2'-oxybis(1-Chloropropane)	**0.191**	**0.5**	**1**	38 – **120**	≤ 40
2-Methylphenol	**0.240**	**0.5**	**1**	37 – **120**	≤ 40
Hexachloroethane	**0.244**	**1.0**	**2**	34 – **120**	≤ 40
N-Nitroso-di-n-propylamine	**0.296**	**0.5**	**1**	46 – **120**	≤ 40
4-Methylphenol	**0.445**	**1.0**	**2**	37 – **120**	≤ 40
Nitrobenzene	**0.202**	**0.5**	**1**	48 – **120**	≤ 40
Isophorone	**0.222**	**0.5**	**1**	56 – **120**	≤ 40
2-Nitrophenol	**1.667**	**3.0**	**3**	46 – **120**	≤ 40
2,4-Dimethylphenol	**0.350**	**1.5**	**3**	38 – **120**	≤ 40
Bis(2-Chloroethoxy)methane	**0.292**	**0.5**	**1**	48 – **120**	≤ 40
2,4-Dichlorophenol	**0.816**	**1.5**	**3**	50 – **120**	≤ 40
1,2,4-Trichlorobenzene	**0.227**	**0.5**	**1**	44 – **120**	≤ 40
Naphthalene	**0.243**	**0.5**	**1**	41 – **120**	≤ 40
Benzoic acid	**3.029**	**10**	**20**	21 – **120**	≤ 40
4-Chloroaniline	**1.327**	**2.5**	**5**	29 – **120**	≤ 40
2,6-Dinitrotoluene	**1.173**	**1.5**	**3**	61 – **120**	≤ 40
Hexachlorobutadiene	**0.297**	**1.5**	**3**	36 – **120**	≤ 40
4-Chloro-3-methylphenol	**1.004**	**1.5**	**3**	53 – **120**	≤ 40
Hexachlorocyclopentadiene	**1.488**	**2.5**	**5**	26 – **120**	≤ 40
2,4,6-Trichlorophenol	**0.934**	**1.5**	**3**	57 – **120**	≤ 40
2,4,5-Trichlorophenol	**1.031**	**2.5**	**5**	58 – **120**	≤ 40
2-Chloronaphthalene	**0.302**	**0.5**	**1**	52 – **120**	≤ 40
2-Nitroaniline	**1.575**	**3.0**	**3**	31 – **120**	≤ 40
Acenaphthylene	**0.287**	**0.5**	**1**	49 – **120**	≤ 40
Dimethylphthalate	**0.362**	**0.5**	**1**	60 – **120**	≤ 40
Acenaphthene	**0.274**	**0.5**	**1**	45 – **120**	≤ 40

LOD, LOQ and Control Limits Summary
GC - MS – SVOA Analysis of Aqueous Samples
EPA Method 8270D
Separatory Funnel Extraction

Samples extracted using Separatory Funnel Extraction (EPA method 3510C, Bench Sheet 3010F)
500mL sample concentrated to 0.5 mL final extract volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	LCS, MS Recovery[2,3]	Replicate RPD[4]
3-Nitroaniline	**1.720**	**3.0**	**3**	24 – 123	≤ 40
2-Methylnaphthalene	**0.216**	**0.5**	**1**	34 – **120**	≤ 40
2,4-Dinitrophenol	**4.249**	**10**	**20**	49 – **120**	≤ 40
Dibenzofuran	**0.359**	**0.5**	**1**	37 – **120**	≤ 40
4-Nitrophenol	**0.903**	**5.0**	**10**	25 – **120**	≤ 40
2,4-Dinitrotoluene	**1.178**	**1.5**	**3**	60 – **120**	≤ 40
Fluorene	**0.307**	**0.5**	**1**	47 – **120**	≤ 40
4-Chlorophenyl-phenylether	**0.298**	**0.5**	**1**	58 – **120**	≤ 40
Diethylphthalate	**0.292**	**0.5**	**1**	60 - **120**	≤ 40
4-Nitroaniline	**1.904**	**3.0**	**3**	31 – 126	≤ 40
4,6-Dinitro-2-methylphenol	**3.413**	**5.0**	**10**	56 – 121	≤ 40
N-Nitrosodiphenylamine	**0.252**	**0.5**	**1**	55 – **120**	≤ 40
4-Bromophenyl-phenylether	**0.371**	**0.5**	**1**	58 – **120**	≤ 40
Hexachlorobenzene	**0.333**	**0.5**	**1**	58 – **120**	≤ 40
Pentachlorophenol	**1.580**	**5.0**	**10**	52 – 126	≤ 40
Phenanthrene	**0.402**	**0.5**	**1**	48 – **120**	≤ 40
Anthracene	**0.317**	**0.5**	**1**	47 – **120**	≤ 40
Carbazole	**0.369**	**0.5**	**1**	62 – **120**	≤ 40
Di-n-butylphthalate	**0.336**	**0.5**	**1**	64 – **120**	≤ 40
Fluoranthene	**0.404**	**0.5**	**1**	52 – **120**	≤ 40
Pyrene	**0.362**	**0.5**	**1**	46 – **120**	≤ 40
Butylbenzylphthalate	**0.320**	**0.5**	**1**	52 – **120**	≤ 40
Benzo(a)anthracene	**0.348**	**0.5**	**1**	51 – **120**	≤ 40
3,3'-Dichlorobenzidine	**1.573**	**2.5**	**5**	60 – **120**	≤ 40
Chrysene	**0.417**	**0.5**	**1**	42 – **120**	≤ 40
bis(2-Ethylhexyl)phthalate	**0.345**	**1.5**	**3**	58 – **120**	≤ 40
Di-n-octylphthalate	**0.330**	**0.5**	**1**	62 – **120**	≤ 40
Benzo(b)fluoranthene	**0.379**	**0.5**	**1**	42 – **120**	≤ 40
Benzo(k)fluoranthene	**0.393**	**0.5**	**1**	43 – **120**	≤ 40
Benzo(a)pyrene	**0.334**	**0.5**	**1**	50 – **120**	≤ 40
Indeno(1,2,3-cd)pyrene	**0.386**	**0.5**	**1**	33 – **120**	≤ 40
Dibenzo(a,h)anthracene	**0.429**	**0.5**	**1**	24 – 123	≤ 40
Benzo(g,h,i)perylene	**0.412**	**0.5**	**1**	28 – **120**	≤ 40
N-Nitrosodimethylamine	**0.935**	**1.5**	**3**	21 – **120**	≤ 40

LOD, LOQ and Control Limits Summary
GC - MS – SVOA Analysis of Aqueous Samples
EPA Method 8270D
Separatory Funnel Extraction

Samples extracted using Separatory Funnel Extraction (EPA method 3510C, Bench Sheet 3010F)
500mL sample concentrated to 0.5 mL final extract volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	LCS, MS Recovery[2,3]	Replicate RPD[4]
Aniline	**0.912**	**0.5**	**1**	**10** – 125	≤ 40
1-methylnaphthalene	**0.375**	**0.5**	**1**	46 – **120**	≤ 40
Azobenzene (1,2-DP-Hydrazine)	**0.269**	**0.5**	**1**	54 – **120**	≤ 40
Benzofluoranthenes, Total	**0.779**	**2.5**	**5**	60 – 130[5]	≤ 40
Pyridine	**1.310**	**2.5**	**5**	26 – **120**	≤ 40
2-Fluorophenol			30 – **120**	21 – **120**	≤ 40
Phenol-d_5			20 – **120**	12 – **120**	≤ 40
2-Chlorophenol-d_4			49 – **120**	33 – **120**	≤ 40
1,2-Dichlorobenzene-d_4			40 – **120**	33 – **120**	≤ 40
Nitrobenzene-d_5			46 – **120**	38 – **120**	≤ 40
2-Fluorobiphenyl			50 – **120**	40 – **120**	≤ 40
2,4,6-Tribromophenol			55 – 124	37 – 126	≤ 40
p-Terphenyl-d_{14}			57 – **120**	39 – **120**	≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation (LOQ) are defined in ARI SOP 1018S
(2) Control limits calculated using all data from 4/14/11 through 3/22/13.
(3) Highlighted control limits (**bold font**) are adjusted from the calculated values to reflect that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.
(4) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

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

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

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

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

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

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

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

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

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

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

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

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

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

LOD Spike level = LOQ Concentration

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

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

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

Analytical Resources,Incorporated
Analytical Chemists and Consultants

Quality Control Criteria
Gasoline and BTEX

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

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

Analytical Resources,Incorporated
Analytical Chemists and Consultants

Spike Recovery Control Limits for Conventional Wet Chemistry

Effective 5/1/09

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

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

Volatile Analysis
Report and Summary QC Forms

ARI Job ID: WV67

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: UP-CB-B8-20130626-S**
 SAMPLE

Lab Sample ID: WV67A
LIMS ID: 13-13657
Matrix: Sediment
Data Release Authorized:
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/27/13 22:04

Sample Amount: 9.32 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 33.9%

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.14	0.5	< 0.5 U
74-83-9	Bromomethane	0.10	0.5	< 0.5 U
75-01-4	Vinyl Chloride	0.13	0.5	< 0.5 U
75-00-3	Chloroethane	0.25	0.5	< 0.5 U
75-09-2	Methylene Chloride	0.34	1.1	< 1.1 U
67-64-1	Acetone	0.26	2.7	< 2.7 U
75-15-0	**Carbon Disulfide**	**0.30**	**0.5**	**17**
75-35-4	1,1-Dichloroethene	0.18	0.5	< 0.5 U
75-34-3	1,1-Dichloroethane	0.11	0.5	< 0.5 U
156-60-5	trans-1,2-Dichloroethene	0.14	0.5	< 0.5 U
156-59-2	**cis-1,2-Dichloroethene**	**0.13**	**0.5**	**0.6**
67-66-3	Chloroform	0.13	0.5	< 0.5 U
107-06-2	1,2-Dichloroethane	0.10	0.5	< 0.5 U
78-93-3	**2-Butanone**	**0.28**	**2.7**	**28**
71-55-6	1,1,1-Trichloroethane	0.12	0.5	< 0.5 U
56-23-5	Carbon Tetrachloride	0.11	0.5	< 0.5 U
108-05-4	Vinyl Acetate	0.20	2.7	< 2.7 U
75-27-4	Bromodichloromethane	0.14	0.5	< 0.5 U
78-87-5	1,2-Dichloropropane	0.09	0.5	< 0.5 U
10061-01-5	cis-1,3-Dichloropropene	0.12	0.5	< 0.5 U
79-01-6	Trichloroethene	0.11	0.5	< 0.5 U
124-48-1	Dibromochloromethane	0.14	0.5	< 0.5 U
79-00-5	1,1,2-Trichloroethane	0.15	0.5	< 0.5 U
71-43-2	**Benzene**	**0.16**	**0.5**	**3.4**
10061-02-6	trans-1,3-Dichloropropene	0.12	0.5	< 0.5 U
110-75-8	2-Chloroethylvinylether	0.15	2.7	< 2.7 U
75-25-2	Bromoform	0.16	0.5	< 0.5 U
108-10-1	**4-Methyl-2-Pentanone (MIBK)**	**0.23**	**2.7**	**17**
591-78-6	2-Hexanone	0.24	2.7	< 2.7 U
127-18-4	Tetrachloroethene	0.14	0.5	< 0.5 U
79-34-5	1,1,2,2-Tetrachloroethane	0.14	0.5	< 0.5 U
108-88-3	**Toluene**	**0.08**	**0.5**	**13**
108-90-7	Chlorobenzene	0.12	0.5	< 0.5 U
100-41-4	**Ethylbenzene**	**0.11**	**0.5**	**15**
100-42-5	**Styrene**	**0.07**	**0.5**	**1.5**
75-69-4	Trichlorofluoromethane	0.14	0.5	< 0.5 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.15	1.1	< 1.1 U
179601-23-1	**m,p-Xylene**	**0.21**	**0.5**	**26**
95-47-6	**o-Xylene**	**0.12**	**0.5**	**19**
95-50-1	1,2-Dichlorobenzene	0.16	0.5	< 0.5 U
541-73-1	1,3-Dichlorobenzene	0.12	0.5	< 0.5 U
106-46-7	**1,4-Dichlorobenzene**	**0.12**	**0.5**	**9.4**
107-02-8	Acrolein	2.0	27	< 27 U

Lab Sample ID: WV67A
LIMS ID: 13-13657
Matrix: Sediment
Date Analyzed: 06/27/13 22:04

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
74-88-4	Iodomethane	0.12	0.5	< 0.5 U
74-96-4	Bromoethane	0.24	1.1	< 1.1 U
107-13-1	Acrylonitrile	0.55	2.7	< 2.7 U
563-58-6	1,1-Dichloropropene	0.17	0.5	< 0.5 U
74-95-3	Dibromomethane	0.08	0.5	< 0.5 U
630-20-6	1,1,1,2-Tetrachloroethane	0.12	0.5	< 0.5 U
96-12-8	1,2-Dibromo-3-chloropropane	0.31	2.7	< 2.7 U
96-18-4	1,2,3-Trichloropropane	0.28	1.1	< 1.1 U
110-57-6	trans-1,4-Dichloro-2-butene	0.23	2.7	< 2.7 U
108-67-8	**1,3,5-Trimethylbenzene**	**0.14**	**0.5**	**20**
95-63-6	**1,2,4-Trimethylbenzene**	**0.12**	**0.5**	**32**
87-68-3	Hexachlorobutadiene	0.22	2.7	< 2.7 U
106-93-4	1,2-Dibromoethane	0.09	0.5	< 0.5 U
74-97-5	Bromochloromethane	0.17	0.5	< 0.5 U
75-71-8	Dichlorodifluoromethane	0.11	0.5	< 0.5 U
594-20-7	2,2-Dichloropropane	0.16	0.5	< 0.5 U
142-28-9	1,3-Dichloropropane	0.11	0.5	< 0.5 U
98-82-8	**Isopropylbenzene**	**0.12**	**0.5**	**4.3**
103-65-1	**n-Propylbenzene**	**0.15**	**0.5**	**3.8**
108-86-1	Bromobenzene	0.08	0.5	< 0.5 U
95-49-8	2-Chlorotoluene	0.16	0.5	< 0.5 U
106-43-4	4-Chlorotoluene	0.15	0.5	< 0.5 U
98-06-6	tert-Butylbenzene	0.16	0.5	< 0.5 U
135-98-8	**sec-Butylbenzene**	**0.13**	**0.5**	**3.4**
99-87-6	**4-Isopropyltoluene**	**0.13**	**0.5**	**9.2**
104-51-8	n-Butylbenzene	0.14	0.5	< 0.5 U
120-82-1	1,2,4-Trichlorobenzene	0.18	2.7	< 2.7 U
91-20-3	**Naphthalene**	**0.23**	**2.7**	**7.9 B**
87-61-6	1,2,3-Trichlorobenzene	0.16	2.7	< 2.7 U
1634-04-4	Methyl tert-Butyl Ether	0.12	0.5	< 0.5 U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	109%
d8-Toluene	88.5%
Bromofluorobenzene	72.2%
d4-1,2-Dichlorobenzene	94.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: UP-CB-B8-20130626-S**
Page 1 of 2 **REANALYSIS**

Lab Sample ID: WV67A
LIMS ID: 13-13657
Matrix: Sediment
Data Release Authorized:
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/28/13 04:03

Sample Amount: 5.54 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 33.9%

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.24	0.9	< 0.9 U
74-83-9	Bromomethane	0.17	0.9	< 0.9 U
75-01-4	Vinyl Chloride	0.21	0.9	< 0.9 U
75-00-3	Chloroethane	0.42	0.9	< 0.9 U
75-09-2	Methylene Chloride	0.57	1.8	< 1.8 U
67-64-1	Acetone	0.44	4.5	< 4.5 U
75-15-0	**Carbon Disulfide**	**0.50**	**0.9**	**16**
75-35-4	1,1-Dichloroethene	0.30	0.9	< 0.9 U
75-34-3	1,1-Dichloroethane	0.18	0.9	< 0.9 U
156-60-5	trans-1,2-Dichloroethene	0.24	0.9	< 0.9 U
156-59-2	**cis-1,2-Dichloroethene**	**0.22**	**0.9**	**0.5 J**
67-66-3	Chloroform	0.21	0.9	< 0.9 U
107-06-2	1,2-Dichloroethane	0.17	0.9	< 0.9 U
78-93-3	**2-Butanone**	**0.46**	**4.5**	**46**
71-55-6	1,1,1-Trichloroethane	0.20	0.9	< 0.9 U
56-23-5	Carbon Tetrachloride	0.19	0.9	< 0.9 U
108-05-4	Vinyl Acetate	0.34	4.5	< 4.5 U
75-27-4	Bromodichloromethane	0.23	0.9	< 0.9 U
78-87-5	1,2-Dichloropropane	0.15	0.9	< 0.9 U
10061-01-5	cis-1,3-Dichloropropene	0.20	0.9	< 0.9 U
79-01-6	Trichloroethene	0.19	0.9	< 0.9 U
124-48-1	Dibromochloromethane	0.24	0.9	< 0.9 U
79-00-5	1,1,2-Trichloroethane	0.26	0.9	< 0.9 U
71-43-2	**Benzene**	**0.27**	**0.9**	**2.8**
10061-02-6	trans-1,3-Dichloropropene	0.19	0.9	< 0.9 U
110-75-8	2-Chloroethylvinylether	0.25	4.5	< 4.5 U
75-25-2	Bromoform	0.27	0.9	< 0.9 U
108-10-1	**4-Methyl-2-Pentanone (MIBK)**	**0.38**	**4.5**	**30**
591-78-6	2-Hexanone	0.40	4.5	< 4.5 U
127-18-4	**Tetrachloroethene**	**0.23**	**0.9**	**0.5 J**
79-34-5	1,1,2,2-Tetrachloroethane	0.23	0.9	< 0.9 U
108-88-3	**Toluene**	**0.14**	**0.9**	**210 E**
108-90-7	Chlorobenzene	0.20	0.9	< 0.9 U
100-41-4	**Ethylbenzene**	**0.18**	**0.9**	**15**
100-42-5	**Styrene**	**0.12**	**0.9**	**3.4**
75-69-4	**Trichlorofluoromethane**	**0.24**	**0.9**	**5.6**
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.26	1.8	< 1.8 U
179601-23-1	**m,p-Xylene**	**0.35**	**0.9**	**21**
95-47-6	**o-Xylene**	**0.20**	**0.9**	**12**
95-50-1	1,2-Dichlorobenzene	0.26	0.9	< 0.9 U
541-73-1	1,3-Dichlorobenzene	0.20	0.9	< 0.9 U
106-46-7	**1,4-Dichlorobenzene**	**0.21**	**0.9**	**1.0**
107-02-8	Acrolein	3.4	45	< 45 U

Lab Sample ID: WV67A
LIMS ID: 13-13657
Matrix: Sediment
Date Analyzed: 06/28/13 04:03

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
74-88-4	Iodomethane	0.19	0.9	< 0.9 U
74-96-4	Bromoethane	0.40	1.8	< 1.8 U
107-13-1	Acrylonitrile	0.93	4.5	< 4.5 U
563-58-6	1,1-Dichloropropene	0.28	0.9	< 0.9 U
74-95-3	Dibromomethane	0.13	0.9	< 0.9 U
630-20-6	1,1,1,2-Tetrachloroethane	0.21	0.9	< 0.9 U
96-12-8	1,2-Dibromo-3-chloropropane	0.53	4.5	< 4.5 U
96-18-4	1,2,3-Trichloropropane	0.47	1.8	< 1.8 U
110-57-6	trans-1,4-Dichloro-2-butene	0.39	4.5	< 4.5 U
108-67-8	**1,3,5-Trimethylbenzene**	**0.23**	**0.9**	**6.3**
95-63-6	**1,2,4-Trimethylbenzene**	**0.21**	**0.9**	**15**
87-68-3	Hexachlorobutadiene	0.37	4.5	< 4.5 U
106-93-4	1,2-Dibromoethane	0.16	0.9	< 0.9 U
74-97-5	Bromochloromethane	0.29	0.9	< 0.9 U
75-71-8	Dichlorodifluoromethane	0.19	0.9	< 0.9 U
594-20-7	2,2-Dichloropropane	0.26	0.9	< 0.9 U
142-28-9	1,3-Dichloropropane	0.19	0.9	< 0.9 U
98-82-8	**Isopropylbenzene**	**0.21**	**0.9**	**2.2**
103-65-1	**n-Propylbenzene**	**0.25**	**0.9**	**2.4**
108-86-1	Bromobenzene	0.14	0.9	< 0.9 U
95-49-8	2-Chlorotoluene	0.27	0.9	< 0.9 U
106-43-4	4-Chlorotoluene	0.25	0.9	< 0.9 U
98-06-6	tert-Butylbenzene	0.28	0.9	< 0.9 U
135-98-8	**sec-Butylbenzene**	**0.22**	**0.9**	**2.9**
99-87-6	**4-Isopropyltoluene**	**0.21**	**0.9**	**8.7**
104-51-8	n-Butylbenzene	0.24	0.9	< 0.9 U
120-82-1	1,2,4-Trichlorobenzene	0.30	4.5	< 4.5 U
91-20-3	**Naphthalene**	**0.39**	**4.5**	**12 B**
87-61-6	1,2,3-Trichlorobenzene	0.28	4.5	< 4.5 U
1634-04-4	Methyl tert-Butyl Ether	0.21	0.9	< 0.9 U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	108%
d8-Toluene	96.2%
Bromofluorobenzene	85.4%
d4-1,2-Dichlorobenzene	95.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: UP-CB-B8-20130626-S**
Page 1 of 2 **REANALYSIS**

Lab Sample ID: WV67A
LIMS ID: 13-13657
Matrix: Sediment
Data Release Authorized: MDB
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/28/13 11:26

Sample Amount: 91.7 mg-dry-wt
Purge Volume: 5.0 mL
Moisture: 33.9%

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	27	54	< 54 U
74-83-9	Bromomethane	56	110	< 110 U
75-01-4	Vinyl Chloride	27	54	< 54 U
75-00-3	Chloroethane	33	54	< 54 U
75-09-2	**Methylene Chloride**	**39**	**110**	**120 QB**
67-64-1	**Acetone**	**260**	**270**	**550**
75-15-0	Carbon Disulfide	17	54	< 54 U
75-35-4	1,1-Dichloroethene	28	54	< 54 U
75-34-3	1,1-Dichloroethane	25	54	< 54 U
156-60-5	trans-1,2-Dichloroethene	26	54	< 54 U
156-59-2	cis-1,2-Dichloroethene	26	54	< 54 U
67-66-3	Chloroform	21	54	< 54 U
107-06-2	1,2-Dichloroethane	21	54	< 54 U
78-93-3	2-Butanone	120	270	< 270 U
71-55-6	1,1,1-Trichloroethane	16	54	< 54 U
56-23-5	Carbon Tetrachloride	27	54	< 54 U
108-05-4	Vinyl Acetate	26	270	< 270 U
75-27-4	Bromodichloromethane	27	54	< 54 U
78-87-5	1,2-Dichloropropane	28	54	< 54 U
10061-01-5	cis-1,3-Dichloropropene	29	54	< 54 U
79-01-6	Trichloroethene	18	54	< 54 U
124-48-1	Dibromochloromethane	28	54	< 54 U
79-00-5	1,1,2-Trichloroethane	25	54	< 54 U
71-43-2	Benzene	19	54	< 54 U
10061-02-6	trans-1,3-Dichloropropene	31	54	< 54 U
110-75-8	2-Chloroethylvinylether	91	270	< 270 U
75-25-2	Bromoform	30	54	< 54 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	230	270	< 270 U
591-78-6	2-Hexanone	29	270	< 270 U
127-18-4	Tetrachloroethene	25	54	< 54 U
79-34-5	1,1,2,2-Tetrachloroethane	29	54	< 54 U
108-88-3	**Toluene**	**50**	**54**	**61**
108-90-7	Chlorobenzene	26	54	< 54 U
100-41-4	Ethylbenzene	25	54	< 54 U
100-42-5	Styrene	34	54	< 54 U
75-69-4	**Trichlorofluoromethane**	**21**	**54**	**66**
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	27	110	< 110 U
179601-23-1	m,p-Xylene	60	110	< 110 U
95-47-6	o-Xylene	31	54	< 54 U
95-50-1	1,2-Dichlorobenzene	29	54	< 54 U
541-73-1	1,3-Dichlorobenzene	36	54	< 54 U
106-46-7	1,4-Dichlorobenzene	40	54	< 54 U
107-02-8	Acrolein	160	2700	< 2,700 U

Lab Sample ID: WV67A
LIMS ID: 13-13657
Matrix: Sediment
Date Analyzed: 06/28/13 11:26

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
74-88-4	Iodomethane	32	54	< 54 U
74-96-4	Bromoethane	16	110	< 110 U
107-13-1	Acrylonitrile	20	270	< 270 U
563-58-6	1,1-Dichloropropene	38	54	< 54 U
74-95-3	Dibromomethane	41	54	< 54 U
630-20-6	1,1,1,2-Tetrachloroethane	40	54	< 54 U
96-12-8	1,2-Dibromo-3-chloropropane	88	270	< 270 U
96-18-4	1,2,3-Trichloropropane	110	110	< 110 U
110-57-6	trans-1,4-Dichloro-2-butene	270	270	< 270 U
108-67-8	1,3,5-Trimethylbenzene	40	54	< 54 U
95-63-6	1,2,4-Trimethylbenzene	33	54	< 54 U
87-68-3	Hexachlorobutadiene	63	270	< 270 U
106-93-4	1,2-Dibromoethane	31	54	< 54 U
74-97-5	Bromochloromethane	26	54	< 54 U
75-71-8	Dichlorodifluoromethane	33	54	< 54 U
594-20-7	2,2-Dichloropropane	42	54	< 54 U
142-28-9	1,3-Dichloropropane	35	54	< 54 U
98-82-8	Isopropylbenzene	33	54	< 54 U
103-65-1	n-Propylbenzene	35	54	< 54 U
108-86-1	Bromobenzene	18	54	< 54 U
95-49-8	2-Chlorotoluene	38	54	< 54 U
106-43-4	4-Chlorotoluene	44	54	< 54 U
98-06-6	tert-Butylbenzene	38	54	< 54 U
135-98-8	sec-Butylbenzene	41	54	< 54 U
99-87-6	4-Isopropyltoluene	42	54	< 54 U
104-51-8	n-Butylbenzene	49	54	< 54 U
120-82-1	1,2,4-Trichlorobenzene	75	270	< 270 U
91-20-3	Naphthalene	64	270	< 270 U
87-61-6	1,2,3-Trichlorobenzene	67	270	< 270 U
1634-04-4	Methyl tert-Butyl Ether	34	54	< 54 U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	100%
d8-Toluene	101%
Bromofluorobenzene	99.7%
d4-1,2-Dichlorobenzene	99.8%

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: UP-MHF-165-20130626-S**
 SAMPLE

Lab Sample ID: WV67B
LIMS ID: 13-13658
Matrix: Sediment
Data Release Authorized:
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/27/13 22:28

Sample Amount: 6.53 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 33.1%

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.20	0.8	< 0.8 U
74-83-9	Bromomethane	0.14	0.8	< 0.8 U
75-01-4	Vinyl Chloride	0.18	0.8	< 0.8 U
75-00-3	Chloroethane	0.35	0.8	< 0.8 U
75-09-2	Methylene Chloride	0.49	1.5	< 1.5 U
67-64-1	Acetone	0.37	3.8	< 3.8 U
75-15-0	**Carbon Disulfide**	**0.43**	**0.8**	**8.3**
75-35-4	1,1-Dichloroethene	0.26	0.8	< 0.8 U
75-34-3	1,1-Dichloroethane	0.16	0.8	< 0.8 U
156-60-5	trans-1,2-Dichloroethene	0.20	0.8	< 0.8 U
156-59-2	cis-1,2-Dichloroethene	0.18	0.8	< 0.8 U
67-66-3	Chloroform	0.18	0.8	< 0.8 U
107-06-2	1,2-Dichloroethane	0.15	0.8	< 0.8 U
78-93-3	**2-Butanone**	**0.39**	**3.8**	**23**
71-55-6	1,1,1-Trichloroethane	0.17	0.8	< 0.8 U
56-23-5	Carbon Tetrachloride	0.16	0.8	< 0.8 U
108-05-4	Vinyl Acetate	0.29	3.8	< 3.8 U
75-27-4	Bromodichloromethane	0.19	0.8	< 0.8 U
78-87-5	1,2-Dichloropropane	0.12	0.8	< 0.8 U
10061-01-5	cis-1,3-Dichloropropene	0.17	0.8	< 0.8 U
79-01-6	Trichloroethene	0.16	0.8	< 0.8 U
124-48-1	Dibromochloromethane	0.20	0.8	< 0.8 U
79-00-5	1,1,2-Trichloroethane	0.22	0.8	< 0.8 U
71-43-2	**Benzene**	**0.23**	**0.8**	**1.1**
10061-02-6	trans-1,3-Dichloropropene	0.17	0.8	< 0.8 U
110-75-8	2-Chloroethylvinylether	0.21	3.8	< 3.8 U
75-25-2	Bromoform	0.23	0.8	< 0.8 U
108-10-1	**4-Methyl-2-Pentanone (MIBK)**	**0.32**	**3.8**	**23**
591-78-6	2-Hexanone	0.34	3.8	< 3.8 U
127-18-4	Tetrachloroethene	0.20	0.8	< 0.8 U
79-34-5	1,1,2,2-Tetrachloroethane	0.19	0.8	< 0.8 U
108-88-3	**Toluene**	**0.12**	**0.8**	**11**
108-90-7	Chlorobenzene	0.17	0.8	< 0.8 U
100-41-4	**Ethylbenzene**	**0.15**	**0.8**	**2.3**
100-42-5	**Styrene**	**0.11**	**0.8**	**0.4 J**
75-69-4	Trichlorofluoromethane	0.20	0.8	< 0.8 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.22	1.5	< 1.5 U
179601-23-1	**m,p-Xylene**	**0.30**	**0.8**	**3.4**
95-47-6	**o-Xylene**	**0.17**	**0.8**	**3.0**
95-50-1	1,2-Dichlorobenzene	0.22	0.8	< 0.8 U
541-73-1	1,3-Dichlorobenzene	0.17	0.8	< 0.8 U
106-46-7	1,4-Dichlorobenzene	0.18	0.8	< 0.8 U
107-02-8	Acrolein	2.9	38	< 38 U

Lab Sample ID: WV67B
LIMS ID: 13-13658
Matrix: Sediment
Date Analyzed: 06/27/13 22:28

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
74-88-4	Iodomethane	0.16	0.8	< 0.8 U
74-96-4	Bromoethane	0.34	1.5	< 1.5 U
107-13-1	Acrylonitrile	0.79	3.8	< 3.8 U
563-58-6	1,1-Dichloropropene	0.24	0.8	< 0.8 U
74-95-3	Dibromomethane	0.11	0.8	< 0.8 U
630-20-6	1,1,1,2-Tetrachloroethane	0.18	0.8	< 0.8 U
96-12-8	1,2-Dibromo-3-chloropropane	0.45	3.8	< 3.8 U
96-18-4	1,2,3-Trichloropropane	0.40	1.5	< 1.5 U
110-57-6	trans-1,4-Dichloro-2-butene	0.33	3.8	< 3.8 U
108-67-8	**1,3,5-Trimethylbenzene**	**0.19**	**0.8**	**2.2**
95-63-6	**1,2,4-Trimethylbenzene**	**0.18**	**0.8**	**6.1**
87-68-3	Hexachlorobutadiene	0.31	3.8	< 3.8 U
106-93-4	1,2-Dibromoethane	0.13	0.8	< 0.8 U
74-97-5	Bromochloromethane	0.25	0.8	< 0.8 U
75-71-8	Dichlorodifluoromethane	0.16	0.8	< 0.8 U
594-20-7	2,2-Dichloropropane	0.22	0.8	< 0.8 U
142-28-9	1,3-Dichloropropane	0.16	0.8	< 0.8 U
98-82-8	**Isopropylbenzene**	**0.18**	**0.8**	**1.0**
103-65-1	**n-Propylbenzene**	**0.21**	**0.8**	**1.2**
108-86-1	Bromobenzene	0.12	0.8	< 0.8 U
95-49-8	2-Chlorotoluene	0.23	0.8	< 0.8 U
106-43-4	4-Chlorotoluene	0.21	0.8	< 0.8 U
98-06-6	tert-Butylbenzene	0.23	0.8	< 0.8 U
135-98-8	**sec-Butylbenzene**	**0.18**	**0.8**	**1.2**
99-87-6	**4-Isopropyltoluene**	**0.18**	**0.8**	**2.0**
104-51-8	**n-Butylbenzene**	**0.20**	**0.8**	**1.8**
120-82-1	1,2,4-Trichlorobenzene	0.25	3.8	< 3.8 U
91-20-3	Naphthalene	0.33	3.8	< 3.8 U
87-61-6	1,2,3-Trichlorobenzene	0.23	3.8	< 3.8 U
1634-04-4	Methyl tert-Butyl Ether	0.18	0.8	< 0.8 U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	104%
d8-Toluene	92.3%
Bromofluorobenzene	79.2%
d4-1,2-Dichlorobenzene	96.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: UP-MHF-165-20130626-S**
 REANALYSIS

Lab Sample ID: WV67B
LIMS ID: 13-13658
Matrix: Sediment
Data Release Authorized:
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/28/13 04:27

Sample Amount: 7.42 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 33.1%

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.18	0.7	< 0.7 U
74-83-9	Bromomethane	0.13	0.7	< 0.7 U
75-01-4	Vinyl Chloride	0.16	0.7	< 0.7 U
75-00-3	Chloroethane	0.31	0.7	< 0.7 U
75-09-2	**Methylene Chloride**	**0.43**	**1.4**	**1.4 B**
67-64-1	Acetone	0.32	3.4	< 3.4 U
75-15-0	**Carbon Disulfide**	**0.38**	**0.7**	**6.2**
75-35-4	1,1-Dichloroethene	0.23	0.7	< 0.7 U
75-34-3	1,1-Dichloroethane	0.14	0.7	< 0.7 U
156-60-5	trans-1,2-Dichloroethene	0.18	0.7	< 0.7 U
156-59-2	**cis-1,2-Dichloroethene**	**0.16**	**0.7**	**0.5 J**
67-66-3	Chloroform	0.16	0.7	< 0.7 U
107-06-2	1,2-Dichloroethane	0.13	0.7	< 0.7 U
78-93-3	**2-Butanone**	**0.35**	**3.4**	**24**
71-55-6	1,1,1-Trichloroethane	0.15	0.7	< 0.7 U
56-23-5	Carbon Tetrachloride	0.14	0.7	< 0.7 U
108-05-4	Vinyl Acetate	0.26	3.4	< 3.4 U
75-27-4	Bromodichloromethane	0.17	0.7	< 0.7 U
78-87-5	1,2-Dichloropropane	0.11	0.7	< 0.7 U
10061-01-5	cis-1,3-Dichloropropene	0.15	0.7	< 0.7 U
79-01-6	Trichloroethene	0.14	0.7	< 0.7 U
124-48-1	Dibromochloromethane	0.18	0.7	< 0.7 U
79-00-5	1,1,2-Trichloroethane	0.19	0.7	< 0.7 U
71-43-2	**Benzene**	**0.20**	**0.7**	**1.0**
10061-02-6	trans-1,3-Dichloropropene	0.15	0.7	< 0.7 U
110-75-8	2-Chloroethylvinylether	0.19	3.4	< 3.4 U
75-25-2	Bromoform	0.20	0.7	< 0.7 U
108-10-1	**4-Methyl-2-Pentanone (MIBK)**	**0.28**	**3.4**	**42**
591-78-6	2-Hexanone	0.30	3.4	< 3.4 U
127-18-4	Tetrachloroethene	0.17	0.7	< 0.7 U
79-34-5	1,1,2,2-Tetrachloroethane	0.17	0.7	< 0.7 U
108-88-3	**Toluene**	**0.10**	**0.7**	**16**
108-90-7	Chlorobenzene	0.15	0.7	< 0.7 U
100-41-4	**Ethylbenzene**	**0.14**	**0.7**	**1.8**
100-42-5	**Styrene**	**0.09**	**0.7**	**0.9**
75-69-4	Trichlorofluoromethane	0.18	0.7	< 0.7 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.19	1.4	< 1.4 U
179601-23-1	**m,p-Xylene**	**0.26**	**0.7**	**3.0**
95-47-6	**o-Xylene**	**0.15**	**0.7**	**2.6**
95-50-1	1,2-Dichlorobenzene	0.20	0.7	< 0.7 U
541-73-1	1,3-Dichlorobenzene	0.15	0.7	< 0.7 U
106-46-7	1,4-Dichlorobenzene	0.16	0.7	< 0.7 U
107-02-8	Acrolein	2.6	34	< 34 U

Lab Sample ID: WV67B QC Report No: WV67-SAIC
LIMS ID: 13-13658 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 06/28/13 04:27

CAS Number	Analyte	DL	LOQ	Result
74-88-4	Iodomethane	0.14	0.7	< 0.7 U
74-96-4	Bromoethane	0.30	1.4	< 1.4 U
107-13-1	Acrylonitrile	0.69	3.4	< 3.4 U
563-58-6	1,1-Dichloropropene	0.21	0.7	< 0.7 U
74-95-3	Dibromomethane	0.10	0.7	< 0.7 U
630-20-6	1,1,1,2-Tetrachloroethane	0.16	0.7	< 0.7 U
96-12-8	1,2-Dibromo-3-chloropropane	0.39	3.4	< 3.4 U
96-18-4	1,2,3-Trichloropropane	0.35	1.4	< 1.4 U
110-57-6	trans-1,4-Dichloro-2-butene	0.29	3.4	< 3.4 U
108-67-8	**1,3,5-Trimethylbenzene**	**0.17**	**0.7**	**1.7**
95-63-6	**1,2,4-Trimethylbenzene**	**0.15**	**0.7**	**5.0**
87-68-3	Hexachlorobutadiene	0.28	3.4	< 3.4 U
106-93-4	1,2-Dibromoethane	0.12	0.7	< 0.7 U
74-97-5	Bromochloromethane	0.22	0.7	< 0.7 U
75-71-8	Dichlorodifluoromethane	0.14	0.7	< 0.7 U
594-20-7	2,2-Dichloropropane	0.20	0.7	< 0.7 U
142-28-9	1,3-Dichloropropane	0.14	0.7	< 0.7 U
98-82-8	**Isopropylbenzene**	**0.16**	**0.7**	**0.8**
103-65-1	**n-Propylbenzene**	**0.18**	**0.7**	**1.1**
108-86-1	Bromobenzene	0.10	0.7	< 0.7 U
95-49-8	2-Chlorotoluene	0.20	0.7	< 0.7 U
106-43-4	4-Chlorotoluene	0.19	0.7	< 0.7 U
98-06-6	tert-Butylbenzene	0.21	0.7	< 0.7 U
135-98-8	**sec-Butylbenzene**	**0.16**	**0.7**	**1.8**
99-87-6	**4-Isopropyltoluene**	**0.16**	**0.7**	**2.5**
104-51-8	**n-Butylbenzene**	**0.18**	**0.7**	**2.2**
120-82-1	1,2,4-Trichlorobenzene	0.22	3.4	< 3.4 U
91-20-3	Naphthalene	0.29	3.4	< 3.4 U
87-61-6	1,2,3-Trichlorobenzene	0.21	3.4	< 3.4 U
1634-04-4	Methyl tert-Butyl Ether	0.16	0.7	< 0.7 U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	104%
d8-Toluene	90.8%
Bromofluorobenzene	79.5%
d4-1,2-Dichlorobenzene	92.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: UP-CB-A6-20130626-S**
 SAMPLE

Lab Sample ID: WV67C
LIMS ID: 13-13659
Matrix: Sediment
Data Release Authorized:
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/27/13 22:52

Sample Amount: 6.12 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 33.4%

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.21	0.8	< 0.8 U
74-83-9	Bromomethane	0.15	0.8	< 0.8 U
75-01-4	Vinyl Chloride	0.19	0.8	< 0.8 U
75-00-3	Chloroethane	0.38	0.8	< 0.8 U
75-09-2	Methylene Chloride	0.52	1.6	< 1.6 U
67-64-1	Acetone	0.39	4.1	< 4.1 U
75-15-0	**Carbon Disulfide**	**0.46**	**0.8**	**15**
75-35-4	1,1-Dichloroethene	0.27	0.8	< 0.8 U
75-34-3	1,1-Dichloroethane	0.17	0.8	< 0.8 U
156-60-5	trans-1,2-Dichloroethene	0.22	0.8	< 0.8 U
156-59-2	cis-1,2-Dichloroethene	0.20	0.8	< 0.8 U
67-66-3	Chloroform	0.19	0.8	< 0.8 U
107-06-2	1,2-Dichloroethane	0.16	0.8	< 0.8 U
78-93-3	**2-Butanone**	**0.42**	**4.1**	**37**
71-55-6	1,1,1-Trichloroethane	0.18	0.8	< 0.8 U
56-23-5	Carbon Tetrachloride	0.17	0.8	< 0.8 U
108-05-4	Vinyl Acetate	0.31	4.1	< 4.1 U
75-27-4	Bromodichloromethane	0.21	0.8	< 0.8 U
78-87-5	1,2-Dichloropropane	0.13	0.8	< 0.8 U
10061-01-5	cis-1,3-Dichloropropene	0.18	0.8	< 0.8 U
79-01-6	**Trichloroethene**	**0.17**	**0.8**	**0.5 J**
124-48-1	Dibromochloromethane	0.22	0.8	< 0.8 U
79-00-5	1,1,2-Trichloroethane	0.23	0.8	< 0.8 U
71-43-2	**Benzene**	**0.24**	**0.8**	**3.8**
10061-02-6	trans-1,3-Dichloropropene	0.18	0.8	< 0.8 U
110-75-8	2-Chloroethylvinylether	0.23	4.1	< 4.1 U
75-25-2	Bromoform	0.24	0.8	< 0.8 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	0.34	4.1	< 4.1 U
591-78-6	2-Hexanone	0.36	4.1	< 4.1 U
127-18-4	**Tetrachloroethene**	**0.21**	**0.8**	**1.7**
79-34-5	1,1,2,2-Tetrachloroethane	0.21	0.8	< 0.8 U
108-88-3	**Toluene**	**0.12**	**0.8**	**42**
108-90-7	Chlorobenzene	0.18	0.8	< 0.8 U
100-41-4	**Ethylbenzene**	**0.17**	**0.8**	**65**
100-42-5	**Styrene**	**0.11**	**0.8**	**11**
75-69-4	**Trichlorofluoromethane**	**0.22**	**0.8**	**3.3**
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.23	1.6	< 1.6 U
179601-23-1	**m,p-Xylene**	**0.32**	**0.8**	**24**
95-47-6	**o-Xylene**	**0.18**	**0.8**	**15**
95-50-1	1,2-Dichlorobenzene	0.24	0.8	< 0.8 U
541-73-1	1,3-Dichlorobenzene	0.19	0.8	< 0.8 U
106-46-7	**1,4-Dichlorobenzene**	**0.19**	**0.8**	**0.9**
107-02-8	Acrolein	3.1	41	< 41 U

Lab Sample ID: WV67C
LIMS ID: 13-13659
Matrix: Sediment
Date Analyzed: 06/27/13 22:52

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
74-88-4	**Iodomethane**	**0.18**	**0.8**	**0.7 J**
74-96-4	Bromoethane	0.36	1.6	< 1.6 U
107-13-1	Acrylonitrile	0.84	4.1	< 4.1 U
563-58-6	1,1-Dichloropropene	0.25	0.8	< 0.8 U
74-95-3	Dibromomethane	0.12	0.8	< 0.8 U
630-20-6	1,1,1,2-Tetrachloroethane	0.19	0.8	< 0.8 U
96-12-8	1,2-Dibromo-3-chloropropane	0.48	4.1	< 4.1 U
96-18-4	1,2,3-Trichloropropane	0.42	1.6	< 1.6 U
110-57-6	trans-1,4-Dichloro-2-butene	0.36	4.1	< 4.1 U
108-67-8	**1,3,5-Trimethylbenzene**	**0.21**	**0.8**	**11**
95-63-6	**1,2,4-Trimethylbenzene**	**0.19**	**0.8**	**23**
87-68-3	Hexachlorobutadiene	0.33	4.1	< 4.1 U
106-93-4	1,2-Dibromoethane	0.14	0.8	< 0.8 U
74-97-5	Bromochloromethane	0.26	0.8	< 0.8 U
75-71-8	Dichlorodifluoromethane	0.17	0.8	< 0.8 U
594-20-7	2,2-Dichloropropane	0.24	0.8	< 0.8 U
142-28-9	1,3-Dichloropropane	0.17	0.8	< 0.8 U
98-82-8	**Isopropylbenzene**	**0.19**	**0.8**	**33**
103-65-1	**n-Propylbenzene**	**0.22**	**0.8**	**17**
108-86-1	Bromobenzene	0.12	0.8	< 0.8 U
95-49-8	2-Chlorotoluene	0.25	0.8	< 0.8 U
106-43-4	4-Chlorotoluene	0.23	0.8	< 0.8 U
98-06-6	tert-Butylbenzene	0.25	0.8	< 0.8 U
135-98-8	**sec-Butylbenzene**	**0.20**	**0.8**	**7.8**
99-87-6	**4-Isopropyltoluene**	**0.19**	**0.8**	**5.2**
104-51-8	**n-Butylbenzene**	**0.21**	**0.8**	**5.4**
120-82-1	1,2,4-Trichlorobenzene	0.27	4.1	< 4.1 U
91-20-3	**Naphthalene**	**0.35**	**4.1**	**4.5 B**
87-61-6	1,2,3-Trichlorobenzene	0.25	4.1	< 4.1 U
1634-04-4	Methyl tert-Butyl Ether	0.19	0.8	< 0.8 U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.0%
d8-Toluene	90.2%
Bromofluorobenzene	67.9%
d4-1,2-Dichlorobenzene	93.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: UP-CB-A6-20130626-S**
 REANALYSIS

Lab Sample ID: WV67C
LIMS ID: 13-13659
Matrix: Sediment
Data Release Authorized:
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/28/13 04:51

Sample Amount: 5.15 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 33.4%

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.26	1.0	< 1.0 U
74-83-9	Bromomethane	0.18	1.0	< 1.0 U
75-01-4	Vinyl Chloride	0.23	1.0	< 1.0 U
75-00-3	Chloroethane	0.45	1.0	< 1.0 U
75-09-2	Methylene Chloride	0.62	1.9	< 1.9 U
67-64-1	Acetone	0.47	4.8	< 4.8 U
75-15-0	**Carbon Disulfide**	**0.54**	**1.0**	**12**
75-35-4	1,1-Dichloroethene	0.33	1.0	< 1.0 U
75-34-3	1,1-Dichloroethane	0.20	1.0	< 1.0 U
156-60-5	trans-1,2-Dichloroethene	0.26	1.0	< 1.0 U
156-59-2	cis-1,2-Dichloroethene	0.23	1.0	< 1.0 U
67-66-3	Chloroform	0.23	1.0	< 1.0 U
107-06-2	1,2-Dichloroethane	0.19	1.0	< 1.0 U
78-93-3	**2-Butanone**	**0.50**	**4.8**	**56**
71-55-6	1,1,1-Trichloroethane	0.22	1.0	< 1.0 U
56-23-5	Carbon Tetrachloride	0.21	1.0	< 1.0 U
108-05-4	Vinyl Acetate	0.37	4.8	< 4.8 U
75-27-4	Bromodichloromethane	0.25	1.0	< 1.0 U
78-87-5	1,2-Dichloropropane	0.16	1.0	< 1.0 U
10061-01-5	cis-1,3-Dichloropropene	0.22	1.0	< 1.0 U
79-01-6	Trichloroethene	0.21	1.0	< 1.0 U
124-48-1	Dibromochloromethane	0.26	1.0	< 1.0 U
79-00-5	1,1,2-Trichloroethane	0.28	1.0	< 1.0 U
71-43-2	**Benzene**	**0.29**	**1.0**	**2.9**
10061-02-6	trans-1,3-Dichloropropene	0.21	1.0	< 1.0 U
110-75-8	2-Chloroethylvinylether	0.27	4.8	< 4.8 U
75-25-2	Bromoform	0.29	1.0	< 1.0 U
108-10-1	**4-Methyl-2-Pentanone (MIBK)**	**0.41**	**4.8**	**93**
591-78-6	2-Hexanone	0.43	4.8	< 4.8 U
127-18-4	**Tetrachloroethene**	**0.25**	**1.0**	**1.2**
79-34-5	1,1,2,2-Tetrachloroethane	0.25	1.0	< 1.0 U
108-88-3	**Toluene**	**0.15**	**1.0**	**35**
108-90-7	Chlorobenzene	0.21	1.0	< 1.0 U
100-41-4	**Ethylbenzene**	**0.20**	**1.0**	**18**
100-42-5	**Styrene**	**0.13**	**1.0**	**4.9**
75-69-4	**Trichlorofluoromethane**	**0.26**	**1.0**	**1.7**
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.28	1.9	< 1.9 U
179601-23-1	**m,p-Xylene**	**0.38**	**1.0**	**17**
95-47-6	**o-Xylene**	**0.22**	**1.0**	**12**
95-50-1	1,2-Dichlorobenzene	0.28	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.22	1.0	< 1.0 U
106-46-7	**1,4-Dichlorobenzene**	**0.23**	**1.0**	**1.0**
107-02-8	Acrolein	3.7	48	< 48 U

Lab Sample ID: WV67C
LIMS ID: 13-13659
Matrix: Sediment
Date Analyzed: 06/28/13 04:51

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
74-88-4	Iodomethane	0.21	1.0	< 1.0 U
74-96-4	Bromoethane	0.43	1.9	< 1.9 U
107-13-1	Acrylonitrile	1.0	4.8	< 4.8 U
563-58-6	1,1-Dichloropropene	0.30	1.0	< 1.0 U
74-95-3	Dibromomethane	0.14	1.0	< 1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	0.23	1.0	< 1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	0.57	4.8	< 4.8 U
96-18-4	1,2,3-Trichloropropane	0.50	1.9	< 1.9 U
110-57-6	trans-1,4-Dichloro-2-butene	0.42	4.8	< 4.8 U
108-67-8	**1,3,5-Trimethylbenzene**	**0.25**	**1.0**	**9.9**
95-63-6	**1,2,4-Trimethylbenzene**	**0.22**	**1.0**	**22**
87-68-3	Hexachlorobutadiene	0.40	4.8	< 4.8 U
106-93-4	1,2-Dibromoethane	0.17	1.0	< 1.0 U
74-97-5	Bromochloromethane	0.31	1.0	< 1.0 U
75-71-8	Dichlorodifluoromethane	0.20	1.0	< 1.0 U
594-20-7	2,2-Dichloropropane	0.28	1.0	< 1.0 U
142-28-9	1,3-Dichloropropane	0.20	1.0	< 1.0 U
98-82-8	**Isopropylbenzene**	**0.23**	**1.0**	**5.6**
103-65-1	**n-Propylbenzene**	**0.26**	**1.0**	**4.1**
108-86-1	Bromobenzene	0.15	1.0	< 1.0 U
95-49-8	2-Chlorotoluene	0.29	1.0	< 1.0 U
106-43-4	4-Chlorotoluene	0.27	1.0	< 1.0 U
98-06-6	tert-Butylbenzene	0.30	1.0	< 1.0 U
135-98-8	**sec-Butylbenzene**	**0.23**	**1.0**	**5.4**
99-87-6	**4-Isopropyltoluene**	**0.23**	**1.0**	**7.5**
104-51-8	**n-Butylbenzene**	**0.25**	**1.0**	**4.4**
120-82-1	1,2,4-Trichlorobenzene	0.32	4.8	< 4.8 U
91-20-3	**Naphthalene**	**0.42**	**4.8**	**6.7 B**
87-61-6	1,2,3-Trichlorobenzene	0.30	4.8	< 4.8 U
1634-04-4	Methyl tert-Butyl Ether	0.22	1.0	< 1.0 U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	108%
d8-Toluene	86.5%
Bromofluorobenzene	63.6%
d4-1,2-Dichlorobenzene	93.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: UP-TB-01-20130626-W**
 SAMPLE

Lab Sample ID: WV67D
LIMS ID: 13-13660
Matrix: Water
Data Release Authorized:
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/27/13 21:40

Sample Amount: 5.00 mL
Purge Volume: 5.0 mL

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

WV67:00016

Lab Sample ID: WV67D
LIMS ID: 13-13660
Matrix: Water
Date Analyzed: 06/27/13 21:40

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
209977

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

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	103%
d8-Toluene	100%
Bromofluorobenzene	99.2%
d4-1,2-Dichlorobenzene	100%

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

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

ANALYTICAL RESOURCES INCORPORATED

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
209977

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-062713A	Method Blank	5	102%	100%	99.9%	101%	0
LCS-062713A	Lab Control	5	102%	99.6%	99.8%	100%	0
LCSD-062713A	Lab Control Dup	5	100%	99.6%	101%	98.9%	0
WV67D	UP-TB-01-20130626-W	5	103%	100%	99.2%	100%	0

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

Prep Method: SW5030B
Log Number Range: 13-13660 to 13-13660

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-062713A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-062713A
LIMS ID: 13-13660
Matrix: Water
Data Release Authorized:
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT5/PAB
LCSD: NT5/PAB
Date Analyzed LCS: 06/27/13 19:30
LCSD: 06/27/13 20:05

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

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	51.4	50.0	103%	50.8	50.0	102%	1.2%
Bromomethane	49.7	50.0	99.4%	47.2	50.0	94.4%	5.2%
Vinyl Chloride	57.3	50.0	115%	54.2	50.0	108%	5.6%
Chloroethane	56.7	50.0	113%	52.4	50.0	105%	7.9%
Methylene Chloride	39.3 B	50.0	78.6%	36.8 B	50.0	73.6%	6.6%
Acetone	228	250	91.2%	166	250	66.4%	31.5%
Carbon Disulfide	57.9	50.0	116%	52.2	50.0	104%	10.4%
1,1-Dichloroethene	58.2	50.0	116%	52.1	50.0	104%	11.1%
1,1-Dichloroethane	56.8	50.0	114%	54.5	50.0	109%	4.1%
trans-1,2-Dichloroethene	51.1	50.0	102%	47.4	50.0	94.8%	7.5%
cis-1,2-Dichloroethene	53.4	50.0	107%	51.0	50.0	102%	4.6%
Chloroform	53.8	50.0	108%	51.5	50.0	103%	4.4%
1,2-Dichloroethane	51.4	50.0	103%	49.5	50.0	99.0%	3.8%
2-Butanone	237	250	94.8%	233	250	93.2%	1.7%
1,1,1-Trichloroethane	55.2	50.0	110%	51.3	50.0	103%	7.3%
Carbon Tetrachloride	56.2	50.0	112%	51.6	50.0	103%	8.5%
Vinyl Acetate	51.6	50.0	103%	50.3	50.0	101%	2.6%
Bromodichloromethane	53.1	50.0	106%	50.9	50.0	102%	4.2%
1,2-Dichloropropane	53.1	50.0	106%	50.3	50.0	101%	5.4%
cis-1,3-Dichloropropene	54.5	50.0	109%	52.2	50.0	104%	4.3%
Trichloroethene	54.6	50.0	109%	50.5	50.0	101%	7.8%
Dibromochloromethane	52.8	50.0	106%	50.6	50.0	101%	4.3%
1,1,2-Trichloroethane	50.8	50.0	102%	49.0	50.0	98.0%	3.6%
Benzene	55.1	50.0	110%	51.7	50.0	103%	6.4%
trans-1,3-Dichloropropene	53.2	50.0	106%	51.5	50.0	103%	3.2%
2-Chloroethylvinylether	60.2	50.0	120%	59.6	50.0	119%	1.0%
Bromoform	51.4	50.0	103%	48.2	50.0	96.4%	6.4%
4-Methyl-2-Pentanone (MIBK)	253	250	101%	247	250	98.8%	2.4%
2-Hexanone	256	250	102%	248	250	99.2%	3.2%
Tetrachloroethene	56.5	50.0	113%	51.2	50.0	102%	9.8%
1,1,2,2-Tetrachloroethane	50.5	50.0	101%	47.4	50.0	94.8%	6.3%
Toluene	54.5	50.0	109%	51.0	50.0	102%	6.6%
Chlorobenzene	54.7	50.0	109%	51.1	50.0	102%	6.8%
Ethylbenzene	58.5	50.0	117%	53.9	50.0	108%	8.2%
Styrene	58.4	50.0	117%	54.6	50.0	109%	6.7%
Trichlorofluoromethane	55.7	50.0	111%	51.2	50.0	102%	8.4%
1,1,2-Trichloro-1,2,2-trifluoroetha	58.9	50.0	118%	51.7	50.0	103%	13.0%
m,p-Xylene	116	100	116%	108	100	108%	7.1%

Lab Sample ID: LCS-062713A QC Report No: WV67-SAIC
LIMS ID: 13-13660 Project: NPDES Sampling Support
Matrix: Water 209977

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
o-Xylene	57.3	50.0	115%	53.5	50.0	107%	6.9%
1,2-Dichlorobenzene	54.4	50.0	109%	49.7	50.0	99.4%	9.0%
1,3-Dichlorobenzene	56.5	50.0	113%	50.9	50.0	102%	10.4%
1,4-Dichlorobenzene	55.5	50.0	111%	50.5	50.0	101%	9.4%
Acrolein	330 Q	250	132%	306 Q	250	122%	7.5%
Iodomethane	71.1 Q	50.0	142%	63.0 Q	50.0	126%	12.1%
Bromoethane	53.8	50.0	108%	48.4	50.0	96.8%	10.6%
Acrylonitrile	52.1 Q	50.0	104%	52.2 Q	50.0	104%	0.2%
1,1-Dichloropropene	54.2	50.0	108%	49.7	50.0	99.4%	8.7%
Dibromomethane	51.3	50.0	103%	49.6	50.0	99.2%	3.4%
1,1,1,2-Tetrachloroethane	53.7	50.0	107%	51.0	50.0	102%	5.2%
1,2-Dibromo-3-chloropropane	46.6	50.0	93.2%	46.0	50.0	92.0%	1.3%
1,2,3-Trichloropropane	49.8	50.0	99.6%	47.5	50.0	95.0%	4.7%
trans-1,4-Dichloro-2-butene	50.7	50.0	101%	47.2	50.0	94.4%	7.2%
1,3,5-Trimethylbenzene	60.6	50.0	121%	54.3	50.0	109%	11.0%
1,2,4-Trimethylbenzene	60.9	50.0	122%	54.8	50.0	110%	10.5%
Hexachlorobutadiene	54.3	50.0	109%	49.2	50.0	98.4%	9.9%
1,2-Dibromoethane	51.5	50.0	103%	49.8	50.0	99.6%	3.4%
Bromochloromethane	51.7	50.0	103%	50.2	50.0	100%	2.9%
Dichlorodifluoromethane	56.3	50.0	113%	53.4	50.0	107%	5.3%
2,2-Dichloropropane	55.6	50.0	111%	51.3	50.0	103%	8.0%
1,3-Dichloropropane	53.0	50.0	106%	51.0	50.0	102%	3.8%
Isopropylbenzene	61.7	50.0	123%	55.3	50.0	111%	10.9%
n-Propylbenzene	60.9	50.0	122%	54.0	50.0	108%	12.0%
Bromobenzene	54.0	50.0	108%	49.5	50.0	99.0%	8.7%
2-Chlorotoluene	58.9	50.0	118%	52.7	50.0	105%	11.1%
4-Chlorotoluene	59.0	50.0	118%	52.7	50.0	105%	11.3%
tert-Butylbenzene	60.2	50.0	120%	54.2	50.0	108%	10.5%
sec-Butylbenzene	61.3	50.0	123%	54.7	50.0	109%	11.4%
4-Isopropyltoluene	63.1	50.0	126%	56.0	50.0	112%	11.9%
n-Butylbenzene	63.6	50.0	127%	56.1	50.0	112%	12.5%
1,2,4-Trichlorobenzene	54.7 B	50.0	109%	49.9 B	50.0	99.8%	9.2%
Naphthalene	49.0 B	50.0	98.0%	47.6 B	50.0	95.2%	2.9%
1,2,3-Trichlorobenzene	50.8 B	50.0	102%	47.5 B	50.0	95.0%	6.7%
Methyl tert-Butyl Ether	51.2	50.0	102%	51.9	50.0	104%	1.4%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	102%	100%
d8-Toluene	99.6%	99.6%
Bromofluorobenzene	99.8%	101%
d4-1,2-Dichlorobenzene	100%	98.9%

ANALYTICAL RESOURCES INCORPORATED

VOA SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
209977

ARI ID	Client ID	Level	DCE	TOL	BFB	DCB	TOT OUT
MB-062813A	Method Blank	Med	99.8%	101%	100%	100%	0
LCS-062813A	Lab Control	Med	99.3%	101%	101%	98.8%	0
LCSD-062813A	Lab Control Dup	Med	101%	101%	101%	99.9%	0
WV67A	UP-CB-B8-20130626-S	Low	109%	88.5%	72.2%*	94.5%	1
WV67ARE	UP-CB-B8-20130626-S	Low	108%	96.2%	85.4%	95.6%	0
WV67ARE	UP-CB-B8-20130626-S	Med	100%	101%	99.7%	99.8%	0
WV67B	UP-MHF-165-20130626-S	Low	104%	92.3%	79.2%*	96.2%	1
WV67BRE	UP-MHF-165-20130626-S	Low	104%	90.8%	79.5%*	92.4%	1
MB-062713A	Method Blank	Low	102%	100%	99.9%	101%	0
LCS-062713A	Lab Control	Low	102%	99.6%	99.8%	100%	0
LCSD-062713A	Lab Control Dup	Low	100%	99.6%	101%	98.9%	0
WV67C	UP-CB-A6-20130626-S	Low	99.0%	90.2%	67.9%*	93.0%	1
WV67CRE	UP-CB-A6-20130626-S	Low	108%	86.5%	63.6%*	93.0%	1

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

Log Number Range: 13-13657 to 13-13659

WV67:60845

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-062713A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-062713A
LIMS ID: 13-13659
Matrix: Sediment
Data Release Authorized: B
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT5/PAB
LCSD: NT5/PAB
Date Analyzed LCS: 06/27/13 19:30
LCSD: 06/27/13 20:05

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

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	51.4	50.0	103%	50.8	50.0	102%	1.2%
Bromomethane	49.7	50.0	99.4%	47.2	50.0	94.4%	5.2%
Vinyl Chloride	57.3	50.0	115%	54.2	50.0	108%	5.6%
Chloroethane	56.7	50.0	113%	52.4	50.0	105%	7.9%
Methylene Chloride	39.3 B	50.0	78.6%	36.8 B	50.0	73.6%	6.6%
Acetone	228	250	91.2%	166	250	66.4%	31.5%
Carbon Disulfide	57.9	50.0	116%	52.2	50.0	104%	10.4%
1,1-Dichloroethene	58.2	50.0	116%	52.1	50.0	104%	11.1%
1,1-Dichloroethane	56.8	50.0	114%	54.5	50.0	109%	4.1%
trans-1,2-Dichloroethene	51.1	50.0	102%	47.4	50.0	94.8%	7.5%
cis-1,2-Dichloroethene	53.4	50.0	107%	51.0	50.0	102%	4.6%
Chloroform	53.8	50.0	108%	51.5	50.0	103%	4.4%
1,2-Dichloroethane	51.4	50.0	103%	49.5	50.0	99.0%	3.8%
2-Butanone	237	250	94.8%	233	250	93.2%	1.7%
1,1,1-Trichloroethane	55.2	50.0	110%	51.3	50.0	103%	7.3%
Carbon Tetrachloride	56.2	50.0	112%	51.6	50.0	103%	8.5%
Vinyl Acetate	51.6	50.0	103%	50.3	50.0	101%	2.6%
Bromodichloromethane	53.1	50.0	106%	50.9	50.0	102%	4.2%
1,2-Dichloropropane	53.1	50.0	106%	50.3	50.0	101%	5.4%
cis-1,3-Dichloropropene	54.5	50.0	109%	52.2	50.0	104%	4.3%
Trichloroethene	54.6	50.0	109%	50.5	50.0	101%	7.8%
Dibromochloromethane	52.8	50.0	106%	50.6	50.0	101%	4.3%
1,1,2-Trichloroethane	50.8	50.0	102%	49.0	50.0	98.0%	3.6%
Benzene	55.1	50.0	110%	51.7	50.0	103%	6.4%
trans-1,3-Dichloropropene	53.2	50.0	106%	51.5	50.0	103%	3.2%
2-Chloroethylvinylether	60.2	50.0	120%	59.6	50.0	119%	1.0%
Bromoform	51.4	50.0	103%	48.2	50.0	96.4%	6.4%
4-Methyl-2-Pentanone (MIBK)	253	250	101%	247	250	98.8%	2.4%
2-Hexanone	256	250	102%	248	250	99.2%	3.2%
Tetrachloroethene	56.5	50.0	113%	51.2	50.0	102%	9.8%
1,1,2,2-Tetrachloroethane	50.5	50.0	101%	47.4	50.0	94.8%	6.3%
Toluene	54.5	50.0	109%	51.0	50.0	102%	6.6%
Chlorobenzene	54.7	50.0	109%	51.1	50.0	102%	6.8%
Ethylbenzene	58.5	50.0	117%	53.9	50.0	108%	8.2%
Styrene	58.4	50.0	117%	54.6	50.0	109%	6.7%
Trichlorofluoromethane	55.7	50.0	111%	51.2	50.0	102%	8.4%
1,1,2-Trichloro-1,2,2-trifluoroetha	58.9	50.0	118%	51.7	50.0	103%	13.0%

Lab Sample ID: LCS-062713A QC Report No: WV67-SAIC
LIMS ID: 13-13659 Project: NPDES Sampling Support
Matrix: Sediment 209977

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
m,p-Xylene	116	100	116%	108	100	108%	7.1%
o-Xylene	57.3	50.0	115%	53.5	50.0	107%	6.9%
1,2-Dichlorobenzene	54.4	50.0	109%	49.7	50.0	99.4%	9.0%
1,3-Dichlorobenzene	56.5	50.0	113%	50.9	50.0	102%	10.4%
1,4-Dichlorobenzene	55.5	50.0	111%	50.5	50.0	101%	9.4%
Acrolein	330 Q	250	132%	306 Q	250	122%	7.5%
Iodomethane	71.1 Q	50.0	142%	63.0 Q	50.0	126%	12.1%
Bromoethane	53.8	50.0	108%	48.4	50.0	96.8%	10.6%
Acrylonitrile	52.1 Q	50.0	104%	52.2 Q	50.0	104%	0.2%
1,1-Dichloropropene	54.2	50.0	108%	49.7	50.0	99.4%	8.7%
Dibromomethane	51.3	50.0	103%	49.6	50.0	99.2%	3.4%
1,1,1,2-Tetrachloroethane	53.7	50.0	107%	51.0	50.0	102%	5.2%
1,2-Dibromo-3-chloropropane	46.6	50.0	93.2%	46.0	50.0	92.0%	1.3%
1,2,3-Trichloropropane	49.8	50.0	99.6%	47.5	50.0	95.0%	4.7%
trans-1,4-Dichloro-2-butene	50.7	50.0	101%	47.2	50.0	94.4%	7.2%
1,3,5-Trimethylbenzene	60.6	50.0	121%	54.3	50.0	109%	11.0%
1,2,4-Trimethylbenzene	60.9	50.0	122%	54.8	50.0	110%	10.5%
Hexachlorobutadiene	54.3	50.0	109%	49.2	50.0	98.4%	9.9%
1,2-Dibromoethane	51.5	50.0	103%	49.8	50.0	99.6%	3.4%
Bromochloromethane	51.7	50.0	103%	50.2	50.0	100%	2.9%
Dichlorodifluoromethane	56.3	50.0	113%	53.4	50.0	107%	5.3%
2,2-Dichloropropane	55.6	50.0	111%	51.3	50.0	103%	8.0%
1,3-Dichloropropane	53.0	50.0	106%	51.0	50.0	102%	3.8%
Isopropylbenzene	61.7	50.0	123%	55.3	50.0	111%	10.9%
n-Propylbenzene	60.9	50.0	122%	54.0	50.0	108%	12.0%
Bromobenzene	54.0	50.0	108%	49.5	50.0	99.0%	8.7%
2-Chlorotoluene	58.9	50.0	118%	52.7	50.0	105%	11.1%
4-Chlorotoluene	59.0	50.0	118%	52.7	50.0	105%	11.3%
tert-Butylbenzene	60.2	50.0	120%	54.2	50.0	108%	10.5%
sec-Butylbenzene	61.3	50.0	123%	54.7	50.0	109%	11.4%
4-Isopropyltoluene	63.1	50.0	126%	56.0	50.0	112%	11.9%
n-Butylbenzene	63.6	50.0	127%	56.1	50.0	112%	12.5%
1,2,4-Trichlorobenzene	54.7 B	50.0	109%	49.9 B	50.0	99.8%	9.2%
Naphthalene	49.0 B	50.0	98.0%	47.6 B	50.0	95.2%	2.9%
1,2,3-Trichlorobenzene	50.8 B	50.0	102%	47.5 B	50.0	95.0%	6.7%
Methyl tert-Butyl Ether	51.2	50.0	102%	51.9	50.0	104%	1.4%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	102%	100%
d8-Toluene	99.6%	99.6%
Bromofluorobenzene	99.8%	101%
d4-1,2-Dichlorobenzene	100%	98.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-062813A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-062813A
LIMS ID: 13-13657
Matrix: Sediment
Data Release Authorized: MAB
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT5/PAB
LCSD: NT5/PAB
Date Analyzed LCS: 06/28/13 09:16
LCSD: 06/28/13 09:40

Sample Amount LCS: 100 mg-dry-wt
LCSD: 100 mg-dry-wt
Purge Volume LCS: 5.0 mL
LCSD: 5.0 mL
Moisture: NA

Analyte	LCS		Spike Added-LCS	LCS Recovery	LCSD		Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	2010		2500	80.4%	2180		2500	87.2%	8.1%
Bromomethane	1740	Q	2500	69.6%	2000	Q	2500	80.0%	13.9%
Vinyl Chloride	2270		2500	90.8%	2510		2500	100%	10.0%
Chloroethane	2480		2500	99.2%	2760		2500	110%	10.7%
Methylene Chloride	1720	QB	2500	68.8%	2270	QB	2500	90.8%	27.6%
Acetone	13100		12500	105%	19300		12500	154%	38.3%
Carbon Disulfide	2360		2500	94.4%	2130		2500	85.2%	10.2%
1,1-Dichloroethene	2380		2500	95.2%	2160		2500	86.4%	9.7%
1,1-Dichloroethane	2560		2500	102%	2740		2500	110%	6.8%
trans-1,2-Dichloroethene	2260		2500	90.4%	3070		2500	123%	30.4%
cis-1,2-Dichloroethene	2450		2500	98.0%	2590		2500	104%	5.6%
Chloroform	2430		2500	97.2%	2570		2500	103%	5.6%
1,2-Dichloroethane	2240		2500	89.6%	2350		2500	94.0%	4.8%
2-Butanone	11800		12500	94.4%	12500		12500	100%	5.8%
1,1,1-Trichloroethane	2370		2500	94.8%	2520		2500	101%	6.1%
Carbon Tetrachloride	2300		2500	92.0%	2450		2500	98.0%	6.3%
Vinyl Acetate	2340		2500	93.6%	2490		2500	99.6%	6.2%
Bromodichloromethane	2370		2500	94.8%	2460		2500	98.4%	3.7%
1,2-Dichloropropane	2340		2500	93.6%	2470		2500	98.8%	5.4%
cis-1,3-Dichloropropene	2500		2500	100%	2610		2500	104%	4.3%
Trichloroethene	2360		2500	94.4%	2500		2500	100%	5.8%
Dibromochloromethane	2380		2500	95.2%	2510		2500	100%	5.3%
1,1,2-Trichloroethane	2370		2500	94.8%	2490		2500	99.6%	4.9%
Benzene	2420		2500	96.8%	2550		2500	102%	5.2%
trans-1,3-Dichloropropene	2440		2500	97.6%	2560		2500	102%	4.8%
2-Chloroethylvinylether	3160	Q	2500	126%	3350	Q	2500	134%	5.8%
Bromoform	2330		2500	93.2%	2480		2500	99.2%	6.2%
4-Methyl-2-Pentanone (MIBK)	11700		12500	93.6%	12300		12500	98.4%	5.0%
2-Hexanone	11300		12500	90.4%	12000		12500	96.0%	6.0%
Tetrachloroethene	2420		2500	96.8%	2510		2500	100%	3.7%
1,1,2,2-Tetrachloroethane	2250		2500	90.0%	2410		2500	96.4%	6.9%
Toluene	2420		2500	96.8%	2540		2500	102%	4.8%
Chlorobenzene	2400		2500	96.0%	2520		2500	101%	4.9%
Ethylbenzene	2510		2500	100%	2630		2500	105%	4.7%
Styrene	2600		2500	104%	2700		2500	108%	3.8%
Trichlorofluoromethane	2320		2500	92.8%	2450		2500	98.0%	5.5%
1,1,2-Trichloro-1,2,2-trifluoroetha	2370		2500	94.8%	2120		2500	84.8%	11.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-062813A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-062813A QC Report No: WV67-SAIC
LIMS ID: 13-13657 Project: NPDES Sampling Support
Matrix: Sediment 209977

Analyte	LCS		Spike Added-LCS	LCS Recovery	LCSD		Spike Added-LCSD	LCSD Recovery	RPD
m,p-Xylene	5050		5000	101%	5300		5000	106%	4.8%
o-Xylene	2520		2500	101%	2660		2500	106%	5.4%
1,2-Dichlorobenzene	2350		2500	94.0%	2480		2500	99.2%	5.4%
1,3-Dichlorobenzene	2400		2500	96.0%	2540		2500	102%	5.7%
1,4-Dichlorobenzene	2370		2500	94.8%	2510		2500	100%	5.7%
Acrolein	13300	Q	12500	106%	11800	Q	12500	94.4%	12.0%
Iodomethane	2780		2500	111%	2600		2500	104%	6.7%
Bromoethane	2250		2500	90.0%	2140		2500	85.6%	5.0%
Acrylonitrile	2510		2500	100%	2650		2500	106%	5.4%
1,1-Dichloropropene	2300		2500	92.0%	2430		2500	97.2%	5.5%
Dibromomethane	2350		2500	94.0%	2450		2500	98.0%	4.2%
1,1,1,2-Tetrachloroethane	2380		2500	95.2%	2490		2500	99.6%	4.5%
1,2-Dibromo-3-chloropropane	2040		2500	81.6%	2210		2500	88.4%	8.0%
1,2,3-Trichloropropane	2180		2500	87.2%	2350		2500	94.0%	7.5%
trans-1,4-Dichloro-2-butene	41.1		2500	1.6%	2350		2500	94.0%	193%
1,3,5-Trimethylbenzene	2530		2500	101%	2670		2500	107%	5.4%
1,2,4-Trimethylbenzene	2560		2500	102%	2700		2500	108%	5.3%
Hexachlorobutadiene	2330		2500	93.2%	2440		2500	97.6%	4.6%
1,2-Dibromoethane	2420		2500	96.8%	2520		2500	101%	4.0%
Bromochloromethane	2620		2500	105%	2580		2500	103%	1.5%
Dichlorodifluoromethane	2300		2500	92.0%	2680		2500	107%	15.3%
2,2-Dichloropropane	2390		2500	95.6%	2530		2500	101%	5.7%
1,3-Dichloropropane	2410		2500	96.4%	2520		2500	101%	4.5%
Isopropylbenzene	2560		2500	102%	2730		2500	109%	6.4%
n-Propylbenzene	2500		2500	100%	2640		2500	106%	5.4%
Bromobenzene	2340		2500	93.6%	2480		2500	99.2%	5.8%
2-Chlorotoluene	2450		2500	98.0%	2590		2500	104%	5.6%
4-Chlorotoluene	2450		2500	98.0%	2600		2500	104%	5.9%
tert-Butylbenzene	2480		2500	99.2%	2640		2500	106%	6.2%
sec-Butylbenzene	2530		2500	101%	2680		2500	107%	5.8%
4-Isopropyltoluene	2640		2500	106%	2770		2500	111%	4.8%
n-Butylbenzene	2690		2500	108%	2790		2500	112%	3.6%
1,2,4-Trichlorobenzene	2470		2500	98.8%	2580		2500	103%	4.4%
Naphthalene	2370		2500	94.8%	2560		2500	102%	7.7%
1,2,3-Trichlorobenzene	2320		2500	92.8%	2480		2500	99.2%	6.7%
Methyl tert-Butyl Ether	2630		2500	105%	3000		2500	120%	13.1%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	99.3%	101%
d8-Toluene	101%	101%
Bromofluorobenzene	101%	101%
d4-1,2-Dichlorobenzene	98.8%	99.9%

4A
VOLATILE METHOD BLANK SUMMARY

Method Blank ID.

MB0627

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WV67

Project: NPDES SAMPLING SUPPORT

Lab File ID: MB0627

Lab Sample ID: MB0627

Date Analyzed: 06/27/13

Time Analyzed: 2053

Instrument ID: NT5

Heated Purge: (Y/N) Y

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS0627	LCS0627	LCS0627	1930
02	LCC0627	LCS0627	LCS0627A	2005
03	UP-TB-01-201	WV67D	WV67D	2140
04	UP-CB-B8-201	WV67A	WV67A	2204
05	UP-MHF-165-2	WV67B	WV67B	2228
06	UP-CB-A6-201	WV67C	WV67C	2252
07	UP-CB-B8-201	WV67A	WV67A2	0403
08	UP-MHF-165-2	WV67B	WV67B2	0427
09	UP-CB-A6-201	WV67C	WV67C2	0451
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COMMENTS:

FORM IV VOA

OLM3.2M

WV67:00019

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-062713A**
METHOD BLANK

Lab Sample ID: MB-062713A
LIMS ID: 13-13659
Matrix: Sediment
Data Release Authorized:
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/27/13 20:53

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

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.26	1.0	< 1.0 U
74-83-9	Bromomethane	0.19	1.0	< 1.0 U
75-01-4	Vinyl Chloride	0.24	1.0	< 1.0 U
75-00-3	Chloroethane	0.46	1.0	< 1.0 U
75-09-2	**Methylene Chloride**	**0.64**	**2.0**	**3.3**
67-64-1	Acetone	0.48	5.0	< 5.0 U
75-15-0	Carbon Disulfide	0.56	1.0	< 1.0 U
75-35-4	1,1-Dichloroethene	0.34	1.0	< 1.0 U
75-34-3	1,1-Dichloroethane	0.20	1.0	< 1.0 U
156-60-5	trans-1,2-Dichloroethene	0.27	1.0	< 1.0 U
156-59-2	cis-1,2-Dichloroethene	0.24	1.0	< 1.0 U
67-66-3	Chloroform	0.23	1.0	< 1.0 U
107-06-2	1,2-Dichloroethane	0.19	1.0	< 1.0 U
78-93-3	2-Butanone	0.51	5.0	< 5.0 U
71-55-6	1,1,1-Trichloroethane	0.23	1.0	< 1.0 U
56-23-5	Carbon Tetrachloride	0.21	1.0	< 1.0 U
108-05-4	Vinyl Acetate	0.38	5.0	< 5.0 U
75-27-4	Bromodichloromethane	0.25	1.0	< 1.0 U
78-87-5	1,2-Dichloropropane	0.16	1.0	< 1.0 U
10061-01-5	cis-1,3-Dichloropropene	0.23	1.0	< 1.0 U
79-01-6	Trichloroethene	0.21	1.0	< 1.0 U
124-48-1	Dibromochloromethane	0.27	1.0	< 1.0 U
79-00-5	1,1,2-Trichloroethane	0.29	1.0	< 1.0 U
71-43-2	Benzene	0.30	1.0	< 1.0 U
10061-02-6	trans-1,3-Dichloropropene	0.22	1.0	< 1.0 U
110-75-8	2-Chloroethylvinylether	0.28	5.0	< 5.0 U
75-25-2	Bromoform	0.30	1.0	< 1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	0.42	5.0	< 5.0 U
591-78-6	2-Hexanone	0.44	5.0	< 5.0 U
127-18-4	Tetrachloroethene	0.26	1.0	< 1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	0.25	1.0	< 1.0 U
108-88-3	Toluene	0.15	1.0	< 1.0 U
108-90-7	Chlorobenzene	0.22	1.0	< 1.0 U
100-41-4	Ethylbenzene	0.20	1.0	< 1.0 U
100-42-5	Styrene	0.14	1.0	< 1.0 U
75-69-4	Trichlorofluoromethane	0.27	1.0	< 1.0 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.29	2.0	< 2.0 U
179601-23-1	m,p-Xylene	0.39	1.0	< 1.0 U
95-47-6	o-Xylene	0.22	1.0	< 1.0 U
95-50-1	1,2-Dichlorobenzene	0.29	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.23	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.23	1.0	< 1.0 U
107-02-8	Acrolein	3.8	50	< 50 U

Lab Sample ID: MB-062713A
LIMS ID: 13-13659
Matrix: Sediment
Date Analyzed: 06/27/13 20:53

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
74-88-4	Iodomethane	0.22	1.0	< 1.0 U
74-96-4	Bromoethane	0.44	2.0	< 2.0 U
107-13-1	Acrylonitrile	1.0	5.0	< 5.0 U
563-58-6	1,1-Dichloropropene	0.31	1.0	< 1.0 U
74-95-3	Dibromomethane	0.15	1.0	< 1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	0.23	1.0	< 1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	0.59	5.0	< 5.0 U
96-18-4	1,2,3-Trichloropropane	0.52	2.0	< 2.0 U
110-57-6	trans-1,4-Dichloro-2-butene	0.44	5.0	< 5.0 U
108-67-8	1,3,5-Trimethylbenzene	0.25	1.0	< 1.0 U
95-63-6	1,2,4-Trimethylbenzene	0.23	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	0.41	5.0	< 5.0 U
106-93-4	1,2-Dibromoethane	0.18	1.0	< 1.0 U
74-97-5	Bromochloromethane	0.32	1.0	< 1.0 U
75-71-8	Dichlorodifluoromethane	0.21	1.0	< 1.0 U
594-20-7	2,2-Dichloropropane	0.29	1.0	< 1.0 U
142-28-9	1,3-Dichloropropane	0.21	1.0	< 1.0 U
98-82-8	Isopropylbenzene	0.23	1.0	< 1.0 U
103-65-1	n-Propylbenzene	0.27	1.0	< 1.0 U
108-86-1	Bromobenzene	0.15	1.0	< 1.0 U
95-49-8	2-Chlorotoluene	0.30	1.0	< 1.0 U
106-43-4	4-Chlorotoluene	0.28	1.0	< 1.0 U
98-06-6	tert-Butylbenzene	0.31	1.0	< 1.0 U
135-98-8	sec-Butylbenzene	0.24	1.0	< 1.0 U
99-87-6	4-Isopropyltoluene	0.24	1.0	< 1.0 U
104-51-8	n-Butylbenzene	0.26	1.0	< 1.0 U
120-82-1	**1,2,4-Trichlorobenzene**	**0.33**	**5.0**	**0.7 J**
91-20-3	**Naphthalene**	**0.43**	**5.0**	**1.4 J**
87-61-6	**1,2,3-Trichlorobenzene**	**0.30**	**5.0**	**0.8 J**
1634-04-4	Methyl tert-Butyl Ether	0.23	1.0	< 1.0 U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	100%
Bromofluorobenzene	99.9%
d4-1,2-Dichlorobenzene	101%

4A
VOLATILE METHOD BLANK SUMMARY

Method Blank ID.

MB0628

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WV67

Project: NPDES SAMPLING SUPPORT

Lab File ID: MB0628

Lab Sample ID: MB0628

Date Analyzed: 06/28/13

Time Analyzed: 1004

Instrument ID: NT5

Heated Purge: (Y/N) Y

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS0628	LCS0628	LCS0628	0916
02	LCS0628	LCS0628	LCS0628A	0940
03	UP-CB-B8-201	WV67A	WV67A3	1126
04				
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COMMENTS:

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-062813A**
 METHOD BLANK

Lab Sample ID: MB-062813A
LIMS ID: 13-13657
Matrix: Sediment
Data Release Authorized: MOB
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/28/13 10:04

Sample Amount: 100 mg-dry-wt
Purge Volume: 5.0 mL
Moisture: NA

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	25	50	< 50 U
74-83-9	Bromomethane	51	100	< 100 U
75-01-4	Vinyl Chloride	25	50	< 50 U
75-00-3	Chloroethane	30	50	< 50 U
75-09-2	**Methylene Chloride**	**36**	**100**	**120 Q**
67-64-1	Acetone	230	250	< 250 U
75-15-0	Carbon Disulfide	16	50	< 50 U
75-35-4	1,1-Dichloroethene	26	50	< 50 U
75-34-3	1,1-Dichloroethane	23	50	< 50 U
156-60-5	trans-1,2-Dichloroethene	24	50	< 50 U
156-59-2	cis-1,2-Dichloroethene	23	50	< 50 U
67-66-3	Chloroform	19	50	< 50 U
107-06-2	1,2-Dichloroethane	19	50	< 50 U
78-93-3	2-Butanone	110	250	< 250 U
71-55-6	1,1,1-Trichloroethane	15	50	< 50 U
56-23-5	Carbon Tetrachloride	24	50	< 50 U
108-05-4	Vinyl Acetate	24	250	< 250 U
75-27-4	Bromodichloromethane	24	50	< 50 U
78-87-5	1,2-Dichloropropane	26	50	< 50 U
10061-01-5	cis-1,3-Dichloropropene	27	50	< 50 U
79-01-6	Trichloroethene	17	50	< 50 U
124-48-1	Dibromochloromethane	25	50	< 50 U
79-00-5	1,1,2-Trichloroethane	23	50	< 50 U
71-43-2	Benzene	18	50	< 50 U
10061-02-6	trans-1,3-Dichloropropene	28	50	< 50 U
110-75-8	2-Chloroethylvinylether	84	250	< 250 U
75-25-2	Bromoform	27	50	< 50 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	210	250	< 250 U
591-78-6	2-Hexanone	26	250	< 250 U
127-18-4	Tetrachloroethene	23	50	< 50 U
79-34-5	1,1,2,2-Tetrachloroethane	27	50	< 50 U
108-88-3	Toluene	46	50	< 50 U
108-90-7	Chlorobenzene	24	50	< 50 U
100-41-4	Ethylbenzene	23	50	< 50 U
100-42-5	Styrene	31	50	< 50 U
75-69-4	Trichlorofluoromethane	19	50	< 50 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	24	100	< 100 U
179601-23-1	m,p-Xylene	55	100	< 100 U
95-47-6	o-Xylene	28	50	< 50 U
95-50-1	1,2-Dichlorobenzene	27	50	< 50 U
541-73-1	1,3-Dichlorobenzene	33	50	< 50 U
106-46-7	1,4-Dichlorobenzene	36	50	< 50 U
107-02-8	Acrolein	150	2500	< 2,500 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-062813A**
 METHOD BLANK

Lab Sample ID: MB-062813A QC Report No: WV67-SAIC
LIMS ID: 13-13657 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 06/28/13 10:04

CAS Number	Analyte	DL	LOQ	Result
74-88-4	Iodomethane	29	50	< 50 U
74-96-4	Bromoethane	15	100	< 100 U
107-13-1	Acrylonitrile	19	250	< 250 U
563-58-6	1,1-Dichloropropene	35	50	< 50 U
74-95-3	Dibromomethane	37	50	< 50 U
630-20-6	1,1,1,2-Tetrachloroethane	36	50	< 50 U
96-12-8	1,2-Dibromo-3-chloropropane	81	250	< 250 U
96-18-4	1,2,3-Trichloropropane	100	100	< 100 U
110-57-6	trans-1,4-Dichloro-2-butene	250	250	< 250 U
108-67-8	1,3,5-Trimethylbenzene	36	50	< 50 U
95-63-6	1,2,4-Trimethylbenzene	30	50	< 50 U
87-68-3	Hexachlorobutadiene	58	250	< 250 U
106-93-4	1,2-Dibromoethane	28	50	< 50 U
74-97-5	Bromochloromethane	24	50	< 50 U
75-71-8	Dichlorodifluoromethane	31	50	< 50 U
594-20-7	2,2-Dichloropropane	39	50	< 50 U
142-28-9	1,3-Dichloropropane	32	50	< 50 U
98-82-8	Isopropylbenzene	30	50	< 50 U
103-65-1	n-Propylbenzene	32	50	< 50 U
108-86-1	Bromobenzene	17	50	< 50 U
95-49-8	2-Chlorotoluene	35	50	< 50 U
106-43-4	4-Chlorotoluene	40	50	< 50 U
98-06-6	tert-Butylbenzene	34	50	< 50 U
135-98-8	sec-Butylbenzene	38	50	< 50 U
99-87-6	4-Isopropyltoluene	38	50	< 50 U
104-51-8	n-Butylbenzene	45	50	< 50 U
120-82-1	1,2,4-Trichlorobenzene	69	250	< 250 U
91-20-3	Naphthalene	59	250	< 250 U
87-61-6	1,2,3-Trichlorobenzene	61	250	< 250 U
1634-04-4	Methyl tert-Butyl Ether	31	50	< 50 U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.8%
d8-Toluene	101%
Bromofluorobenzene	100%
d4-1,2-Dichlorobenzene	100%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-062713A**
 METHOD BLANK

Lab Sample ID: MB-062713A
LIMS ID: 13-13660
Matrix: Water
Data Release Authorized:
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/27/13 20:53

Sample Amount: 5.00 mL
Purge Volume: 5.0 mL

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.13	1.0	< 1.0 U
74-83-9	Bromomethane	0.43	1.0	< 1.0 U
75-01-4	Vinyl Chloride	0.25	1.0	< 1.0 U
75-00-3	Chloroethane	0.19	1.0	< 1.0 U
75-09-2	**Methylene Chloride**	**0.19**	**2.0**	**3.3**
67-64-1	Acetone	3.0	10	< 10 U
75-15-0	Carbon Disulfide	0.18	1.0	< 1.0 U
75-35-4	1,1-Dichloroethene	0.30	1.0	< 1.0 U
75-34-3	1,1-Dichloroethane	0.21	1.0	< 1.0 U
156-60-5	trans-1,2-Dichloroethene	0.20	1.0	< 1.0 U
156-59-2	cis-1,2-Dichloroethene	0.10	1.0	< 1.0 U
67-66-3	Chloroform	0.19	1.0	< 1.0 U
107-06-2	1,2-Dichloroethane	0.24	1.0	< 1.0 U
78-93-3	2-Butanone	2.0	5.0	< 5.0 U
71-55-6	1,1,1-Trichloroethane	0.18	1.0	< 1.0 U
56-23-5	Carbon Tetrachloride	0.23	1.0	< 1.0 U
108-05-4	Vinyl Acetate	0.22	5.0	< 5.0 U
75-27-4	Bromodichloromethane	0.19	1.0	< 1.0 U
78-87-5	1,2-Dichloropropane	0.23	1.0	< 1.0 U
10061-01-5	cis-1,3-Dichloropropene	0.23	1.0	< 1.0 U
79-01-6	Trichloroethene	0.29	1.0	< 1.0 U
124-48-1	Dibromochloromethane	0.23	1.0	< 1.0 U
79-00-5	1,1,2-Trichloroethane	0.26	1.0	< 1.0 U
71-43-2	Benzene	0.25	1.0	< 1.0 U
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	< 1.0 U
110-75-8	2-Chloroethylvinylether	0.22	5.0	< 5.0 U
75-25-2	Bromoform	0.29	1.0	< 1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	0.37	5.0	< 5.0 U
591-78-6	2-Hexanone	0.93	5.0	< 5.0 U
127-18-4	Tetrachloroethene	0.09	1.0	< 1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	0.14	1.0	< 1.0 U
108-88-3	Toluene	0.18	1.0	< 1.0 U
108-90-7	Chlorobenzene	0.14	1.0	< 1.0 U
100-41-4	Ethylbenzene	0.18	1.0	< 1.0 U
100-42-5	Styrene	0.12	1.0	< 1.0 U
75-69-4	Trichlorofluoromethane	0.18	1.0	< 1.0 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.18	2.0	< 2.0 U
179601-23-1	m,p-Xylene	0.36	2.0	< 2.0 U
95-47-6	o-Xylene	0.22	1.0	< 1.0 U
95-50-1	1,2-Dichlorobenzene	0.20	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.28	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.28	1.0	< 1.0 U
107-02-8	Acrolein	1.9	10	< 10 U
74-88-4	Iodomethane	0.26	1.0	< 1.0 U
74-96-4	Bromoethane	0.42	2.0	< 2.0 U
107-13-1	Acrylonitrile	0.50	5.0	< 5.0 U
563-58-6	1,1-Dichloropropene	0.27	1.0	< 1.0 U
74-95-3	Dibromomethane	0.29	1.0	< 1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	0.29	1.0	< 1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	0.44	5.0	< 5.0 U

Lab Sample ID: MB-062713A
LIMS ID: 13-13660
Matrix: Water
Date Analyzed: 06/27/13 20:53

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
96-18-4	1,2,3-Trichloropropane	0.54	2.0	< 2.0 U
110-57-6	trans-1,4-Dichloro-2-butene	0.86	5.0	< 5.0 U
108-67-8	1,3,5-Trimethylbenzene	0.14	1.0	< 1.0 U
95-63-6	1,2,4-Trimethylbenzene	0.15	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	0.18	5.0	< 5.0 U
106-93-4	1,2-Dibromoethane	0.18	1.0	< 1.0 U
74-97-5	Bromochloromethane	0.20	1.0	< 1.0 U
75-71-8	Dichlorodifluoromethane	0.25	1.0	< 1.0 U
594-20-7	2,2-Dichloropropane	0.10	1.0	< 1.0 U
142-28-9	1,3-Dichloropropane	0.17	5.0	< 5.0 U
98-82-8	Isopropylbenzene	0.30	1.0	< 1.0 U
103-65-1	n-Propylbenzene	0.12	1.0	< 1.0 U
108-86-1	Bromobenzene	0.24	1.0	< 1.0 U
95-49-8	2-Chlorotoluene	0.14	1.0	< 1.0 U
106-43-4	4-Chlorotoluene	0.21	1.0	< 1.0 U
98-06-6	tert-Butylbenzene	0.40	1.0	< 1.0 U
135-98-8	sec-Butylbenzene	0.13	1.0	< 1.0 U
99-87-6	4-Isopropyltoluene	0.35	1.0	< 1.0 U
104-51-8	n-Butylbenzene	0.37	1.0	< 1.0 U
120-82-1	**1,2,4-Trichlorobenzene**	**0.34**	**5.0**	**0.7 J**
91-20-3	**Naphthalene**	**0.23**	**5.0**	**1.4 J**
87-61-6	**1,2,3-Trichlorobenzene**	**0.32**	**5.0**	**0.8 J**
1634-04-4	Methyl tert-Butyl Ether	0.16	1.0	< 1.0 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	100%
Bromofluorobenzene	99.9%
d4-1,2-Dichlorobenzene	101%

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES INC Contract: SAIC

Lab Code: ARI Case No.: NPDES SAMPLING SUPPORT SDG No.: WV67

Lab File ID: BFB0627 BFB Injection Date: 06/27/13

Instrument ID: NT5 BFB Injection Time: 0940

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	18.6
75	30.0 - 66.0% of mass 95	45.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.2
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 101.0% of mass 95	83.7
175	4.0 - 9.0% of mass 174	5.9 (7.1)1
176	95.0 - 101.0% of mass 174	80.6 (96.3)1
177	5.0 - 9.0% of mass 176	5.2 (6.4)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD1	IC0627	0010627	06/27/13	1043
02	VSTD200	IC0627	2000627	06/27/13	1107
03	VSTD150	IC0627	1500627	06/27/13	1131
04	VSTD100	IC0627	1000627	06/27/13	1155
05	VSTD10	IC0627	0100627	06/27/13	1243
06	VSTD5	IC0627	0050627	06/27/13	1307
07	VSTD2	IC0627	0020627	06/27/13	1330
08	VSTD50	IC0627	0500627A	06/27/13	1548
09					
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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES INC Contract: SAIC

Lab Code: ARI Case No.: NPDES SAMPLING SUPPORT SDG No.: WV67

Lab File ID: BFB0627X BFB Injection Date: 06/27/13

Instrument ID: NT5 BFB Injection Time: 1658

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	19.6
75	30.0 - 66.0% of mass 95	46.5
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 101.0% of mass 95	77.7
175	4.0 - 9.0% of mass 174	5.7 (7.3)1
176	95.0 - 101.0% of mass 174	74.2 (95.5)1
177	5.0 - 9.0% of mass 176	4.9 (6.7)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	CC0627	CC0627	06/27/13	1746
02	LCS0627	LCS0627	LCS0627	06/27/13	1930
03	LCC0627	LCS0627	LCS0627A	06/27/13	2005
04	MB0627	MB0627	MB0627	06/27/13	2053
05	UP-TB-01-2013062	WV67D	WV67D	06/27/13	2140
06	UP-CB-B8-2013062	WV67A	WV67A	06/27/13	2204
07	UP-MHF-165-20130	WV67B	WV67B	06/27/13	2228
08	UP-CB-A6-2013062	WV67C	WV67C	06/27/13	2252
09	UP-CB-B8-2013062	WV67A	WV67A2	06/28/13	0403
10	UP-MHF-165-20130	WV67B	WV67B2	06/28/13	0427
11	UP-CB-A6-2013062	WV67C	WV67C2	06/28/13	0451
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5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES INC Contract: SAIC

Lab Code: ARI Case No.: NPDES SAMPLING SUPPORT SDG No.: WV67

Lab File ID: BFB0628 BFB Injection Date: 06/28/13

Instrument ID: NT5 BFB Injection Time: 0803

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	17.4
75	30.0 - 66.0% of mass 95	44.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.3
173	Less than 2.0% of mass 174	0.2 (0.2)1
174	50.0 - 101.0% of mass 95	84.8
175	4.0 - 9.0% of mass 174	6.1 (7.2)1
176	95.0 - 101.0% of mass 174	82.1 (96.9)1
177	5.0 - 9.0% of mass 176	5.4 (6.6)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	CC0628	CC0628	06/28/13	0836
02	LCS0628	LCS0628	LCS0628	06/28/13	0916
03	LCS0628	LCS0628	LCS0628A	06/28/13	0940
04	MB0628	MB0628	MB0628	06/28/13	1004
05	UP-CB-B8-2013062	WV67A	WV67A3	06/28/13	1126
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FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 06/27/13

LAB FILE ID: RF1: 0010627 RF2: 0020627 RF5: 0050627
RF10: 0100627 RF50: 0500627A

COMPOUND	RF1	RF2	RF5	RF10	RF50
Chloromethane	0.550	0.615	0.582	0.631	0.641
Vinyl Chloride	0.472	0.530	0.538	0.515	0.622
Bromomethane	0.328	0.358	0.329	0.315	0.308
Chloroethane	0.343	0.341	0.332	0.331	0.365
Trichlorofluoromethane	0.530	0.568	0.576	0.608	0.646
Acrolein				0.058	0.045
112Trichloro122Trifluoroetha	0.330	0.304	0.374	0.335	0.430
Acetone	0.089	0.080	0.101	0.072	0.093
1,1-Dichloroethene	0.327	0.322	0.388	0.364	0.428
Bromoethane	0.237	0.235	0.285	0.218	0.302
Iodomethane	0.236	0.192	0.263	0.214	0.440
Methylene Chloride	0.789	0.664	0.497	0.323	0.441
Acrylonitrile	0.161	0.216	0.144	0.214	0.140
Carbon Disulfide	1.259	1.166	1.443	1.292	1.536
Trans-1,2-Dichloroethene	0.347	0.423	0.384	0.312	0.450
Vinyl Acetate	0.804	1.161	1.148	1.198	1.099
1,1-Dichloroethane	0.681	0.866	0.703	0.894	0.774
2-Butanone	0.043	0.058	0.059	0.062	0.056
2,2-Dichloropropane	0.560	0.627	0.654	0.695	0.718
Cis-1,2-Dichloroethene	0.374	0.447	0.464	0.505	0.479
Chloroform	0.624	0.750	0.720	0.769	0.744
Bromochloromethane	0.168	0.198	0.206	0.217	0.203
1,1,1-Trichloroethane	0.546	0.666	0.652	0.719	0.690
1,1-Dichloropropene	0.321	0.366	0.425	0.437	0.415
Carbon Tetrachloride	0.284	0.325	0.321	0.362	0.357
1,2-Dichloroethane	0.291	0.371	0.366	0.384	0.358
Benzene	0.904	1.122	1.175	1.262	1.164
Trichloroethene	0.229	0.260	0.274	0.292	0.293
1,2-Dichloropropane	0.245	0.304	0.319	0.344	0.320
Bromodichloromethane	0.279	0.340	0.350	0.370	0.356
Dibromomethane	0.122	0.153	0.151	0.162	0.152
2-Chloroethyl Vinyl Ether		0.043	0.043	0.048	0.057
4-Methyl-2-Pentanone	0.090	0.136	0.142	0.150	0.131
Cis 1,3-dichloropropene	0.301	0.409	0.438	0.477	0.458
Toluene	0.601	0.710	0.724	0.778	0.731
Trans 1,3-Dichloropropene	0.297	0.386	0.399	0.433	0.408
2-Hexanone	0.146	0.222	0.239	0.256	0.219

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 06/27/13

LAB FILE ID: RF1: 0010627 RF2: 0020627 RF5: 0050627
RF10: 0100627 RF50: 0500627A

COMPOUND	RF1	RF2	RF5	RF10	RF50
1,1,2-Trichloroethane	0.186	0.232	0.234	0.247	0.225
1,3-Dichloropropane	0.296	0.403	0.432	0.468	0.430
Tetrachloroethene	0.235	0.282	0.286	0.312	0.322
Chlorodibromomethane	0.200	0.249	0.260	0.277	0.267
1,2-Dibromoethane	0.165	0.224	0.226	0.240	0.223
Chlorobenzene	0.612	0.740	0.753	0.806	0.758
Ethyl Benzene	1.014	1.260	1.331	1.436	1.374
1,1,1,2-Tetrachloroethane	0.209	0.247	0.265	0.282	0.273
m,p-xylene	0.353	0.465	0.491	0.534	0.515
o-Xylene	0.308	0.410	0.450	0.506	0.502
Styrene	0.498	0.726	0.788	0.857	0.837
Bromoform	0.253	0.343	0.350	0.384	0.346
1,1,2,2-Tetrachloroethane	0.424	0.589	0.583	0.634	0.558
1,2,3-Trichloropropane	0.129	0.181	0.183	0.196	0.173
Trans-1,4-Dichloro 2-Butene	0.164	0.197	0.211	0.226	0.214
N-Propyl Benzene	1.974	2.607	2.753	3.073	2.858
Bromobenzene	0.417	0.572	0.590	0.646	0.585
Isopropyl Benzene	1.358	2.027	2.262	2.555	2.404
2-Chloro Toluene	1.126	1.543	1.651	1.852	1.740
4-Chloro Toluene	1.127	1.633	1.720	1.908	1.834
T-Butyl Benzene	1.050	1.489	1.666	1.886	1.794
1,3,5-Trimethyl Benzene	1.204	1.739	1.897	2.147	2.043
1,2,4-Trimethylbenzene	1.143	1.697	1.850	2.101	2.015
S-Butyl Benzene	1.662	2.354	2.497	2.778	2.643
4-Isopropyl Toluene	1.245	1.715	1.957	2.251	2.206
1,3-Dichlorobenzene	0.820	1.088	1.099	1.189	1.124
1,4-Dichlorobenzene	0.901	1.102	1.106	1.215	1.149
N-Butyl Benzene	1.177	1.577	1.742	2.006	2.108
1,2-Dichlorobenzene	0.822	1.053	1.066	1.143	1.055
1,2-Dibromo 3-Chloropropane		0.104	0.112	0.120	0.109
1,2,4-Trichlorobenzene		0.662	0.673	0.787	0.820
Hexachloro 1,3-Butadiene		0.453	0.458	0.500	0.518
Naphthalene		1.641	1.651	1.873	1.648
1,2,3-Trichlorobenzene		0.698	0.720	0.797	0.759
Dichlorodifluoromethane	0.293	0.286	0.268	0.259	0.335
Methyl tert butyl ether	0.941	1.242	1.147	0.872	1.214

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 06/27/13

LAB FILE ID: RF1: 0010627 RF2: 0020627 RF5: 0050627
RF10: 0100627 RF50: 0500627A

COMPOUND	RF1	RF2	RF5	RF10	RF50
d4-1,2-Dichloroethane	0.550	0.561	0.550	0.544	0.548
d8-Toluene	1.260	1.244	1.247	1.242	1.226
4-Bromofluorobenzene	0.535	0.533	0.532	0.527	0.534
d4-1,2-Dichlorobenzene	0.927	0.918	0.911	0.920	0.901
Dibromofluoromethane	0.491	0.492	0.477	0.488	0.456

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 06/27/13

LAB FILE ID: RF100: 1000627 RF150: 1500627 RF200: 2000627

COMPOUND	RF100	RF150	RF200
Chloromethane	0.590	0.589	0.572
Vinyl Chloride	0.574	0.520	0.525
Bromomethane	0.288	0.276	0.262
Chloroethane	0.326	0.300	0.276
Trichlorofluoromethane	0.604	0.612	0.618
Acrolein	0.054	0.059	0.056
112Trichloro122Trifluoroetha	0.307	0.332	0.327
Acetone	0.063		
1,1-Dichloroethene	0.322	0.345	0.331
Bromoethane	0.203	0.208	0.200
Iodomethane	0.281	0.304	0.335
Methylene Chloride			
Acrylonitrile	0.215	0.173	
Carbon Disulfide	1.136	1.186	1.104
Trans-1,2-Dichloroethene	0.289	0.300	0.304
Vinyl Acetate	1.152	1.105	1.009
1,1-Dichloroethane	0.901		
2-Butanone	0.062	0.061	0.060
2,2-Dichloropropane	0.689	0.692	0.700
Cis-1,2-Dichloroethene	0.477	0.474	0.458
Chloroform	0.758	0.746	0.736
Bromochloromethane	0.207	0.205	0.201
1,1,1-Trichloroethane	0.694	0.698	0.692
1,1-Dichloropropene	0.402	0.400	0.391
Carbon Tetrachloride	0.361	0.365	0.366
1,2-Dichloroethane	0.357	0.351	0.343
Benzene	1.102	1.024	0.946
Trichloroethene	0.283	0.285	0.280
1,2-Dichloropropane	0.323	0.315	0.298
Bromodichloromethane	0.354	0.347	0.336
Dibromomethane	0.155	0.153	0.149
2-Chloroethyl Vinyl Ether	0.050	0.049	0.046
4-Methyl-2-Pentanone	0.136	0.130	0.125
Cis 1,3-dichloropropene	0.454	0.442	0.415
Toluene	0.694	0.654	0.610
Trans 1,3-Dichloropropene	0.409	0.399	0.381
2-Hexanone	0.227	0.231	0.186

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 06/27/13

LAB FILE ID: RF100: 1000627 RF150: 1500627 RF200: 2000627

COMPOUND	RF100	RF150	RF200
1,1,2-Trichloroethane	0.231	0.224	0.215
1,3-Dichloropropane	0.440	0.429	0.411
Tetrachloroethene	0.305	0.307	0.306
Chlorodibromomethane	0.273	0.271	0.266
1,2-Dibromoethane	0.228	0.224	0.215
Chlorobenzene	0.717	0.687	0.648
Ethyl Benzene	1.205	1.094	1.009
1,1,1,2-Tetrachloroethane	0.269	0.267	0.261
m,p-xylene	0.464	0.428	0.400
o-Xylene	0.487	0.478	0.462
Styrene	0.784	0.732	0.680
Bromoform	0.370	0.370	0.362
1,1,2,2-Tetrachloroethane	0.600	0.612	0.598
1,2,3-Trichloropropane	0.186	0.191	0.189
Trans-1,4-Dichloro 2-Butene	0.237	0.237	0.246
N-Propyl Benzene	2.469	2.236	2.018
Bromobenzene	0.588	0.592	0.571
Isopropyl Benzene	2.176	2.006	1.804
2-Chloro Toluene	1.644	1.580	1.462
4-Chloro Toluene	1.700	1.637	1.553
T-Butyl Benzene	1.691	1.621	1.507
1,3,5-Trimethyl Benzene	1.882	1.775	1.618
1,2,4-Trimethylbenzene	1.845	1.739	1.594
S-Butyl Benzene	2.310	2.116	1.907
4-Isopropyl Toluene	1.954	1.812	1.657
1,3-Dichlorobenzene	1.041	1.013	0.963
1,4-Dichlorobenzene	1.074	1.057	1.021
N-Butyl Benzene	1.868	1.759	1.648
1,2-Dichlorobenzene	1.008	0.998	0.984
1,2-Dibromo 3-Chloropropane	0.123	0.130	0.134
1,2,4-Trichlorobenzene	0.766	0.800	0.802
Hexachloro 1,3-Butadiene	0.482	0.498	0.508
Naphthalene	1.688	1.662	1.559
1,2,3-Trichlorobenzene	0.738	0.778	0.775
Dichlorodifluoromethane	0.284	0.286	0.316
Methyl tert butyl ether			

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 06/27/13

LAB FILE ID: RF100: 1000627 RF150: 1500627 RF200: 2000627

COMPOUND	RF100	RF150	RF200
d4-1,2-Dichloroethane	0.533	0.541	0.549
d8-Toluene	1.239	1.235	1.223
4-Bromofluorobenzene	0.531	0.532	0.532
d4-1,2-Dichlorobenzene	0.894	0.908	0.918
Dibromofluoromethane	0.483	0.484	0.479

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 06/27/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2	
Chloromethane	AVRG	0.596	5.1	
Vinyl Chloride	AVRG	0.537	8.3	
Bromomethane	AVRG	0.308	10.3	
Chloroethane	AVRG	0.327	8.4	
Trichlorofluoromethane	AVRG	0.595	6.0	
Acrolein	AVRG	0.055	10.4	
112Trichloro122Trifluoroetha	AVRG	0.342	12.0	
Acetone	AVRG	0.083	17.0	
1,1-Dichloroethene	AVRG	0.353	10.7	
Bromoethane	AVRG	0.236	16.2	
Iodomethane	AVRG	0.283	27.8	<-
Methylene Chloride	LINR		0.9946	
Acrylonitrile	AVRG	0.180	19.0	
Carbon Disulfide	AVRG	1.265	12.1	
Trans-1,2-Dichloroethene	AVRG	0.351	17.4	
Vinyl Acetate	AVRG	1.084	11.7	
1,1-Dichloroethane	AVRG	0.803	12.1	
2-Butanone	AVRG	0.058	11.1	
2,2-Dichloropropane	AVRG	0.667	7.8	
Cis-1,2-Dichloroethene	AVRG	0.460	8.4	
Chloroform	AVRG	0.731	6.2	
Bromochloromethane	AVRG	0.201	7.2	
1,1,1-Trichloroethane	AVRG	0.670	8.0	
1,1-Dichloropropene	AVRG	0.394	9.3	
Carbon Tetrachloride	AVRG	0.343	8.7	
1,2-Dichloroethane	AVRG	0.353	8.0	
Benzene	AVRG	1.087	11.2	
Trichloroethene	AVRG	0.275	7.8	
1,2-Dichloropropane	AVRG	0.308	9.4	
Bromodichloromethane	AVRG	0.342	8.1	
Dibromomethane	AVRG	0.150	7.8	
2-Chloroethyl Vinyl Ether	AVRG	0.048	9.7	
4-Methyl-2-Pentanone	AVRG	0.130	13.8	
Cis 1,3-dichloropropene	AVRG	0.424	12.9	
Toluene	AVRG	0.688	8.9	
Trans 1,3-Dichloropropene	AVRG	0.389	10.4	
2-Hexanone	AVRG	0.216	16.0	

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

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 06/27/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
1,1,2-Trichloroethane	AVRG	0.224	8.0
1,3-Dichloropropane	AVRG	0.414	12.4
Tetrachloroethene	AVRG	0.294	9.3
Chlorodibromomethane	AVRG	0.258	9.7
1,2-Dibromoethane	AVRG	0.218	10.4
Chlorobenzene	AVRG	0.715	8.9
Ethyl Benzene	AVRG	1.216	13.5
1,1,1,2-Tetrachloroethane	AVRG	0.259	8.7
m,p-xylene	AVRG	0.456	13.2
o-Xylene	AVRG	0.450	14.5
Styrene	AVRG	0.738	15.3
Bromoform	AVRG	0.347	11.7
1,1,2,2-Tetrachloroethane	AVRG	0.575	11.3
1,2,3-Trichloropropane	AVRG	0.179	11.7
Trans-1,4-Dichloro 2-Butene	AVRG	0.217	12.3
N-Propyl Benzene	AVRG	2.498	15.9
Bromobenzene	AVRG	0.570	11.6
Isopropyl Benzene	AVRG	2.074	18.0
2-Chloro Toluene	AVRG	1.575	13.8
4-Chloro Toluene	AVRG	1.639	14.4
T-Butyl Benzene	AVRG	1.588	16.1
1,3,5-Trimethyl Benzene	AVRG	1.788	16.2
1,2,4-Trimethylbenzene	AVRG	1.748	16.9
S-Butyl Benzene	AVRG	2.283	16.4
4-Isopropyl Toluene	AVRG	1.850	17.5
1,3-Dichlorobenzene	AVRG	1.042	10.9
1,4-Dichlorobenzene	AVRG	1.078	8.6
N-Butyl Benzene	AVRG	1.736	16.5
1,2-Dichlorobenzene	AVRG	1.016	9.2
1,2-Dibromo 3-Chloropropane	AVRG	0.119	9.4
1,2,4-Trichlorobenzene	AVRG	0.759	8.5
Hexachloro 1,3-Butadiene	AVRG	0.488	5.1
Naphthalene	AVRG	1.674	5.7
1,2,3-Trichlorobenzene	AVRG	0.752	4.7
Dichlorodifluoromethane	AVRG	0.291	8.4
Methyl tert butyl ether	AVRG	1.083	15.4

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

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 06/27/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
d4-1,2-Dichloroethane	AVRG	0.547	1.5
d8-Toluene	AVRG	1.239	0.9
4-Bromofluorobenzene	AVRG	0.532	0.4
d4-1,2-Dichlorobenzene	AVRG	0.912	1.2
Dibromofluoromethane	AVRG	0.481	2.4

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

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Cont. Calib. Date: 06/27/13

Init. Calib. Date: 06/27/13 Cont. Calib. Time: 1746

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Chloromethane	0.596	0.5801	0.100	AVRG	-2.7	
Vinyl Chloride	0.537	0.5595	0.010	AVRG	4.2	
Bromomethane	0.308	0.2853	0.010	AVRG	-7.4	
Chloroethane	0.327	0.3412	0.010	AVRG	4.3	
Trichlorofluoromethane	0.595	0.5984	0.010	AVRG	0.6	
Acrolein	0.054	0.1013	0.010	AVRG	87.6	<-
112Trichloro122Trifluoroetha	0.342	0.3958	0.010	AVRG	15.7	
Acetone	0.083	0.0800	0.010	AVRG	-3.6	
1,1-Dichloroethene	0.353	0.3984	0.010	AVRG	12.9	
Bromoethane	0.236	0.2762	0.010	AVRG	17.0	
Iodomethane	0.283	0.4071	0.010	AVRG	43.8	<-
Methylene Chloride	50.000	45.295	0.010	LINR	-9.4	
Acrylonitrile	0.180	0.1374	0.010	AVRG	-23.7	<-
Carbon Disulfide	1.265	1.4301	0.010	AVRG	13.0	
Trans-1,2-Dichloroethene	0.351	0.3936	0.010	AVRG	12.1	
Vinyl Acetate	1.084	1.0742	0.010	AVRG	-0.9	
1,1-Dichloroethane	0.803	0.6906	0.100	AVRG	-14.0	
2-Butanone	0.058	0.0554	0.010	AVRG	-4.5	
2,2-Dichloropropane	0.667	0.6606	0.010	AVRG	-1.0	
Cis-1,2-Dichloroethene	0.460	0.4525	0.010	AVRG	-1.6	
Chloroform	0.731	0.7016	0.010	AVRG	-4.0	
Bromochloromethane	0.201	0.1933	0.010	AVRG	-3.8	
1,1,1-Trichloroethane	0.670	0.6452	0.010	AVRG	-3.7	
1,1-Dichloropropene	0.395	0.3926	0.010	AVRG	-0.6	
Carbon Tetrachloride	0.343	0.3310	0.010	AVRG	-3.5	
1,2-Dichloroethane	0.353	0.3400	0.010	AVRG	-3.7	
Benzene	1.087	1.0992	0.010	AVRG	1.1	
Trichloroethene	0.274	0.2741	0.010	AVRG	0.0	
1,2-Dichloropropane	0.308	0.3025	0.010	AVRG	-1.8	
Bromodichloromethane	0.342	0.3360	0.010	AVRG	-1.8	
Dibromomethane	0.150	0.1458	0.010	AVRG	-2.8	
2-Chloroethyl Vinyl Ether	0.048	0.0553	0.010	AVRG	15.2	
4-Methyl-2-Pentanone	0.130	0.1309	0.010	AVRG	0.7	
Cis 1,3-dichloropropene	0.424	0.4302	0.010	AVRG	1.5	
Toluene	0.688	0.6873	0.010	AVRG	-0.1	
Trans 1,3-Dichloropropene	0.389	0.3884	0.010	AVRG	-0.2	
2-Hexanone	0.216	0.2215	0.010	AVRG	2.5	

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

FORM VII VOA

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Cont. Calib. Date: 06/27/13

Init. Calib. Date: 06/27/13 Cont. Calib. Time: 1746

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
1,1,2-Trichloroethane	0.224	0.2153	0.010	AVRG	-3.9
1,3-Dichloropropane	0.414	0.4144	0.010	AVRG	0.1
Tetrachloroethene	0.294	0.2990	0.010	AVRG	1.7
Chlorodibromomethane	0.258	0.2558	0.010	AVRG	-0.8
1,2-Dibromoethane	0.218	0.2160	0.010	AVRG	-0.9
Chlorobenzene	0.715	0.7206	0.300	AVRG	0.8
Ethyl Benzene	1.215	1.2977	0.010	AVRG	6.8
1,1,1,2-Tetrachloroethane	0.259	0.2574	0.010	AVRG	-0.6
m,p-xylene	0.456	0.4870	0.010	AVRG	6.8
o-Xylene	0.450	0.4727	0.010	AVRG	5.0
Styrene	0.738	0.7953	0.010	AVRG	7.8
Bromoform	0.347	0.3378	0.100	AVRG	-2.6
1,1,2,2-Tetrachloroethane	0.575	0.5523	0.300	AVRG	-3.9
1,2,3-Trichloropropane	0.178	0.1738	0.010	AVRG	-2.4
Trans-1,4-Dichloro 2-Butene	0.216	0.2054	0.010	AVRG	-4.9
N-Propyl Benzene	2.498	2.7177	0.010	AVRG	8.8
Bromobenzene	0.570	0.5620	0.010	AVRG	-1.4
Isopropyl Benzene	2.074	2.3088	0.010	AVRG	11.3
2-Chloro Toluene	1.575	1.6662	0.010	AVRG	5.8
4-Chloro Toluene	1.639	1.7328	0.010	AVRG	5.7
T-Butyl Benzene	1.588	1.7190	0.010	AVRG	8.2
1,3,5-Trimethyl Benzene	1.788	1.9443	0.010	AVRG	8.7
1,2,4-Trimethylbenzene	1.748	1.9137	0.010	AVRG	9.5
S-Butyl Benzene	2.283	2.5135	0.010	AVRG	10.1
4-Isopropyl Toluene	1.850	2.0799	0.010	AVRG	12.4
1,3-Dichlorobenzene	1.042	1.0613	0.010	AVRG	1.8
1,4-Dichlorobenzene	1.078	1.0829	0.010	AVRG	0.4
N-Butyl Benzene	1.736	1.9665	0.010	AVRG	13.3
1,2-Dichlorobenzene	1.016	1.0029	0.010	AVRG	-1.3
1,2-Dibromo 3-Chloropropane	0.119	0.1072	0.010	AVRG	-9.9
1,2,4-Trichlorobenzene	0.758	0.7487	0.010	AVRG	-1.2
Hexachloro 1,3-Butadiene	0.488	0.4674	0.010	AVRG	-4.2
Naphthalene	1.674	1.5359	0.010	AVRG	-8.2
1,2,3-Trichlorobenzene	0.752	0.6972	0.010	AVRG	-7.3
Dichlorodifluoromethane	0.291	0.2978	0.010	AVRG	2.3
Methyl tert butyl ether	1.083	1.1126	0.010	AVRG	2.7

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

FORM VII VOA

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Cont. Calib. Date: 06/27/13

Init. Calib. Date: 06/27/13 Cont. Calib. Time: 1746

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
d4-1,2-Dichloroethane	0.547	0.5452	0.010	AVRG	-0.3
d8-Toluene	1.240	1.2317	0.010	AVRG	-0.7
4-Bromofluorobenzene	0.532	0.5352	0.010	AVRG	0.6
d4-1,2-Dichlorobenzene	0.912	0.9059	0.010	AVRG	-0.7
Dibromofluoromethane	0.481	0.4524	0.010	AVRG	-5.9

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

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Cont. Calib. Date: 06/28/13

Init. Calib. Date: 06/27/13 Cont. Calib. Time: 0836

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Chloromethane	0.596	0.5033	0.100	AVRG	-15.6	
Vinyl Chloride	0.537	0.5347	0.010	AVRG	-0.4	
Bromomethane	0.308	0.2184	0.010	AVRG	-29.1	<-
Chloroethane	0.327	0.3412	0.010	AVRG	4.3	
Trichlorofluoromethane	0.595	0.5768	0.010	AVRG	-3.0	
Acrolein	0.054	0.0682	0.010	AVRG	26.3	<-
112Trichloro122Trifluoroetha	0.342	0.3627	0.010	AVRG	6.0	
Acetone	0.083	0.0779	0.010	AVRG	-6.1	
1,1-Dichloroethene	0.353	0.3732	0.010	AVRG	5.7	
Bromoethane	0.236	0.2368	0.010	AVRG	0.3	
Iodomethane	0.283	0.3271	0.010	AVRG	15.6	
Methylene Chloride	50.000	37.871	0.010	LINR	-24.2	<-
Acrylonitrile	0.180	0.1812	0.010	AVRG	0.7	
Carbon Disulfide	1.265	1.3355	0.010	AVRG	5.6	
Trans-1,2-Dichloroethene	0.351	0.3320	0.010	AVRG	-5.4	
Vinyl Acetate	1.084	1.0518	0.010	AVRG	-3.0	
1,1-Dichloroethane	0.803	0.8289	0.100	AVRG	3.2	
2-Butanone	0.058	0.0556	0.010	AVRG	-4.1	
2,2-Dichloropropane	0.667	0.6566	0.010	AVRG	-1.6	
Cis-1,2-Dichloroethene	0.460	0.4645	0.010	AVRG	1.0	
Chloroform	0.731	0.7311	0.010	AVRG	0.0	
Bromochloromethane	0.201	0.2215	0.010	AVRG	10.2	
1,1,1-Trichloroethane	0.670	0.6617	0.010	AVRG	-1.2	
1,1-Dichloropropene	0.395	0.3741	0.010	AVRG	-5.3	
Carbon Tetrachloride	0.343	0.3290	0.010	AVRG	-4.1	
1,2-Dichloroethane	0.353	0.3268	0.010	AVRG	-7.4	
Benzene	1.087	1.0848	0.010	AVRG	-0.2	
Trichloroethene	0.274	0.2679	0.010	AVRG	-2.2	
1,2-Dichloropropane	0.308	0.2992	0.010	AVRG	-2.8	
Bromodichloromethane	0.342	0.3325	0.010	AVRG	-2.8	
Dibromomethane	0.150	0.1438	0.010	AVRG	-4.1	
2-Chloroethyl Vinyl Ether	0.048	0.0630	0.010	AVRG	31.2	<-
4-Methyl-2-Pentanone	0.130	0.1265	0.010	AVRG	-2.7	
Cis 1,3-dichloropropene	0.424	0.4365	0.010	AVRG	2.9	
Toluene	0.688	0.6840	0.010	AVRG	-0.6	
Trans 1,3-Dichloropropene	0.389	0.3921	0.010	AVRG	0.8	
2-Hexanone	0.216	0.2038	0.010	AVRG	-5.6	

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

FORM VII VOA

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Cont. Calib. Date: 06/28/13

Init. Calib. Date: 06/27/13 Cont. Calib. Time: 0836

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
1,1,2-Trichloroethane	0.224	0.2199	0.010	AVRG	-1.8
1,3-Dichloropropane	0.414	0.4102	0.010	AVRG	-0.9
Tetrachloroethene	0.294	0.2899	0.010	AVRG	-1.4
Chlorodibromomethane	0.258	0.2546	0.010	AVRG	-1.3
1,2-Dibromoethane	0.218	0.2181	0.010	AVRG	0.0
Chlorobenzene	0.715	0.7041	0.300	AVRG	-1.5
Ethyl Benzene	1.215	1.2534	0.010	AVRG	3.2
1,1,1,2-Tetrachloroethane	0.259	0.2550	0.010	AVRG	-1.5
m,p-xylene	0.456	0.4728	0.010	AVRG	3.7
o-Xylene	0.450	0.4653	0.010	AVRG	3.4
Styrene	0.738	0.7848	0.010	AVRG	6.3
Bromoform	0.347	0.3346	0.100	AVRG	-3.6
1,1,2,2-Tetrachloroethane	0.575	0.5361	0.300	AVRG	-6.8
1,2,3-Trichloropropane	0.178	0.1640	0.010	AVRG	-7.9
Trans-1,4-Dichloro 2-Butene	0.216	0.1785	0.010	AVRG	-17.4
N-Propyl Benzene	2.498	2.5674	0.010	AVRG	2.8
Bromobenzene	0.570	0.5474	0.010	AVRG	-4.0
Isopropyl Benzene	2.074	2.1891	0.010	AVRG	5.5
2-Chloro Toluene	1.575	1.5835	0.010	AVRG	0.5
4-Chloro Toluene	1.639	1.6493	0.010	AVRG	0.6
T-Butyl Benzene	1.588	1.6338	0.010	AVRG	2.9
1,3,5-Trimethyl Benzene	1.788	1.8569	0.010	AVRG	3.8
1,2,4-Trimethylbenzene	1.748	1.8388	0.010	AVRG	5.2
S-Butyl Benzene	2.283	2.3807	0.010	AVRG	4.3
4-Isopropyl Toluene	1.850	1.9966	0.010	AVRG	7.9
1,3-Dichlorobenzene	1.042	1.0204	0.010	AVRG	-2.1
1,4-Dichlorobenzene	1.078	1.0462	0.010	AVRG	-2.9
N-Butyl Benzene	1.736	1.8997	0.010	AVRG	9.4
1,2-Dichlorobenzene	1.016	0.9706	0.010	AVRG	-4.5
1,2-Dibromo 3-Chloropropane	0.119	0.1032	0.010	AVRG	-13.3
1,2,4-Trichlorobenzene	0.758	0.7616	0.010	AVRG	0.5
Hexachloro 1,3-Butadiene	0.488	0.4750	0.010	AVRG	-2.7
Naphthalene	1.674	1.6475	0.010	AVRG	-1.6
1,2,3-Trichlorobenzene	0.752	0.7212	0.010	AVRG	-4.1
Dichlorodifluoromethane	0.291	0.2829	0.010	AVRG	-2.8
Methyl tert butyl ether	1.083	1.0718	0.010	AVRG	-1.0

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

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Cont. Calib. Date: 06/28/13

Init. Calib. Date: 06/27/13 Cont. Calib. Time: 0836

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
d4-1,2-Dichloroethane	0.547	0.5511	0.010	AVRG	0.7
d8-Toluene	1.240	1.2430	0.010	AVRG	0.2
4-Bromofluorobenzene	0.532	0.5347	0.010	AVRG	0.5
d4-1,2-Dichlorobenzene	0.912	0.9079	0.010	AVRG	-0.4
Dibromofluoromethane	0.481	0.5085	0.010	AVRG	5.7

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

FORM VII VOA

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WV67 | Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: 0100627 | Ical Date: 06/27/13

Instrument ID: NT5 | Project Run Date: 06/27/13

		IS1(PFB) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CLB) AREA #	RT #
	ICAL MIDPT	1723537	4.65	2831384	5.11	2756425	7.59
	UPPER LIMIT	3447074	5.15	5662768	5.61	5512850	8.09
	LOWER LIMIT	861768	4.15	1415692	4.61	1378212	7.09
	Sample ID						
01	LCS0627	1473161	4.67	2440245	5.11	2335287	7.60
02	LCC0627	1561743	4.66	2584151	5.11	2491123	7.60
03	MB0627	1528018	4.67	2529819	5.12	2494290	7.60
04	UP-TB-01-201	1523627	4.67	2521626	5.12	2507425	7.60
05	UP-CB-B8-201	1223518	4.66	2004618	5.11	1390109	7.59
06	UP-MHF-165-2	1489276	4.67	2446781	5.11	1895964	7.59
07	UP-CB-A6-201	1475877	4.67	2347847	5.12	1652442	7.60
08	UP-CB-B8-201	1359159	4.67	2283262	5.12	1933608	7.60
09	UP-MHF-165-2	1387314	4.66	2314220	5.11	1678117	7.59
10	UP-CB-A6-201	1393353	4.67	2310682	5.12	1485534	7.60
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

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

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

* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: 0100627 Ical Date: 06/27/13

Instrument ID: NT5 Project Run Date: 06/27/13

		IS4(DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	1422668	9.67				
	UPPER LIMIT	2845336	10.17				
	LOWER LIMIT	711334	9.17				
	Sample ID						
01	LCS0627	1219894	9.67				
02	LCC0627	1341563	9.67				
03	MB0627	1323306	9.67				
04	UP-TB-01-201	1330016	9.67				
05	UP-CB-B8-201	349584*	9.67				
06	UP-MHF-165-2	581282*	9.67				
07	UP-CB-A6-201	317209*	9.67				
08	UP-CB-B8-201	673495*	9.67				
09	UP-MHF-165-2	522337*	9.67				
10	UP-CB-A6-201	310157*	9.67				
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

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

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

* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WV67 | Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: 0100627 | Ical Date: 06/27/13

Instrument ID: NT5 | Project Run Date: 06/28/13

		IS1(PFB) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CLB) AREA #	RT #
	ICAL MIDPT	1723537	4.65	2831384	5.11	2756425	7.59
	UPPER LIMIT	3447074	5.15	5662768	5.61	5512850	8.09
	LOWER LIMIT	861768	4.15	1415692	4.61	1378212	7.09
	Sample ID						
01	LCS0628	1638718	4.67	2789415	5.12	2734604	7.60
02	LCS0628	1602728	4.66	2745419	5.11	2678861	7.60
03	MB0628	1625273	4.66	2772718	5.11	2788806	7.59
04	UP-CB-B8-201	1593406	4.66	2724789	5.11	2724311	7.60
05							
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19							
20							
21							
22							

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

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

* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: 0100627 Ical Date: 06/27/13

Instrument ID: NT5 Project Run Date: 06/28/13

		IS4(DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	1422668	9.67				
	UPPER LIMIT	2845336	10.17				
	LOWER LIMIT	711334	9.17				
	Sample ID						
01	LCS0628	1483504	9.67				
02	LCS0628	1432480	9.67				
03	MB0628	1516209	9.67				
04	UP-CB-B8-201	1455919	9.67				
05							
06							
07							
08							
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22							

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

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

* Values outside of QC limits.

Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: WV67

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: UP-CB-B8-20130626-W
SAMPLE

Lab Sample ID: WV67E
LIMS ID: 13-13661
Matrix: Water
Data Release Authorized:
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 06/26/13
Date Analyzed: 06/28/13 15:48
Instrument/Analyst: NT6/JZ

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

CAS Number	Analyte	DL	LOQ	Result
108-95-2	**Phenol**	**0.15**	**1.0**	**5.1**
111-44-4	Bis-(2-Chloroethyl) Ether	0.24	1.0	< 1.0 U
95-57-8	2-Chlorophenol	0.28	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.24	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.21	1.0	< 1.0 U
100-51-6	**Benzyl Alcohol**	**0.61**	**2.0**	**2.0 J**
95-50-1	1,2-Dichlorobenzene	0.23	1.0	< 1.0 U
95-48-7	**2-Methylphenol**	**0.24**	**1.0**	**1.4**
108-60-1	2,2'-Oxybis(1-Chloropropane)	0.19	1.0	< 1.0 U
106-44-5	**4-Methylphenol**	**0.44**	**2.0**	**4.0**
621-64-7	N-Nitroso-Di-N-Propylamine	0.30	1.0	< 1.0 U
67-72-1	Hexachloroethane	0.24	2.0	< 2.0 U
98-95-3	Nitrobenzene	0.20	1.0	< 1.0 U
78-59-1	Isophorone	0.22	1.0	< 1.0 U
88-75-5	2-Nitrophenol	1.7	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	0.35	3.0	< 3.0 U
65-85-0	**Benzoic Acid**	**3.0**	**20**	**110**
111-91-1	bis(2-Chloroethoxy) Methane	0.29	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	0.82	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	0.23	1.0	< 1.0 U
91-20-3	Naphthalene	0.24	1.0	< 1.0 U
106-47-8	4-Chloroaniline	1.3	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.30	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	1.0	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	0.22	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	1.5	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	0.93	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	1.0	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	0.30	1.0	< 1.0 U
88-74-4	2-Nitroaniline	1.6	3.0	< 3.0 U
131-11-3	**Dimethylphthalate**	**0.36**	**1.0**	**1.0**
208-96-8	Acenaphthylene	0.29	1.0	< 1.0 U
99-09-2	3-Nitroaniline	1.7	3.0	< 3.0 U
83-32-9	Acenaphthene	0.27	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	4.2	20	< 20 U
100-02-7	4-Nitrophenol	0.90	10	< 10 U
132-64-9	Dibenzofuran	0.36	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	1.2	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	1.2	3.0	< 3.0 U

Lab Sample ID: WV67E
LIMS ID: 13-13661
Matrix: Water
Date Analyzed: 06/28/13 15:48

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
84-66-2	**Diethylphthalate**	**0.29**	**1.0**	**0.8 J**
7005-72-3	4-Chlorophenyl-phenylether	0.30	1.0	< 1.0 U
86-73-7	Fluorene	0.31	1.0	< 1.0 U
100-01-6	4-Nitroaniline	1.9	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	3.4	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	0.25	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	0.37	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	0.33	1.0	< 1.0 U
87-86-5	Pentachlorophenol	1.6	10	< 10 U
85-01-8	Phenanthrene	0.40	1.0	< 1.0 U
86-74-8	Carbazole	0.37	1.0	< 1.0 U
120-12-7	Anthracene	0.32	1.0	< 1.0 U
84-74-2	**Di-n-Butylphthalate**	**0.34**	**1.0**	**0.8 J**
206-44-0	Fluoranthene	0.40	1.0	< 1.0 U
129-00-0	Pyrene	0.36	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	0.32	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	1.6	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	0.35	1.0	< 1.0 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**0.34**	**3.0**	**14**
218-01-9	Chrysene	0.42	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	0.33	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	0.33	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.39	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	0.43	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	0.41	1.0	< 1.0 U
62-53-3	Aniline	0.91	1.0	< 1.0 U
122-66-7	1,2-Diphenylhydrazine	0.40	1.0	< 1.0 U
62-75-9	N-Nitrosodimethylamine	0.94	3.0	< 3.0 U
103-33-3	Azobenzene	0.27	1.0	< 1.0 U
58-90-2	2,3,4,6-Tetrachlorophenol	0.15	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	0.38	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	0.78	5.0	< 5.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	144%	2-Fluorobiphenyl	77.2%
d14-p-Terphenyl	89.6%	d4-1,2-Dichlorobenzene	69.2%
d5-Phenol	36.3%	2-Fluorophenol	50.7%
2,4,6-Tribromophenol	210%	d4-2-Chlorophenol	77.1%

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

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: UP-CB-B8-20130626-W
DILUTION

Lab Sample ID: WV67E
LIMS ID: 13-13661
Matrix: Water
Data Release Authorized:
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 06/26/13
Date Analyzed: 06/28/13 16:41
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 3.00

CAS Number	Analyte	DL	LOQ	Result
108-95-2	**Phenol**	**0.46**	**3.0**	**4.4**
111-44-4	Bis-(2-Chloroethyl) Ether	0.70	3.0	< 3.0 U
95-57-8	2-Chlorophenol	0.83	3.0	< 3.0 U
541-73-1	1,3-Dichlorobenzene	0.73	3.0	< 3.0 U
106-46-7	1,4-Dichlorobenzene	0.64	3.0	< 3.0 U
100-51-6	Benzyl Alcohol	1.8	6.0	< 6.0 U
95-50-1	1,2-Dichlorobenzene	0.69	3.0	< 3.0 U
95-48-7	2-Methylphenol	0.72	3.0	< 3.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	0.57	3.0	< 3.0 U
106-44-5	**4-Methylphenol**	**1.3**	**6.0**	**3.6 J**
621-64-7	N-Nitroso-Di-N-Propylamine	0.89	3.0	< 3.0 U
67-72-1	Hexachloroethane	0.73	6.0	< 6.0 U
98-95-3	Nitrobenzene	0.61	3.0	< 3.0 U
78-59-1	Isophorone	0.67	3.0	< 3.0 U
88-75-5	2-Nitrophenol	5.0	9.0	< 9.0 U
105-67-9	**2,4-Dimethylphenol**	**1.0**	**9.0**	**2.3 J**
65-85-0	**Benzoic Acid**	**9.1**	**60**	**42 J**
111-91-1	bis(2-Chloroethoxy) Methane	0.88	3.0	< 3.0 U
120-83-2	2,4-Dichlorophenol	2.4	9.0	< 9.0 U
120-82-1	1,2,4-Trichlorobenzene	0.68	3.0	< 3.0 U
91-20-3	Naphthalene	0.73	3.0	< 3.0 U
106-47-8	4-Chloroaniline	4.0	15	< 15 U
87-68-3	Hexachlorobutadiene	0.89	9.0	< 9.0 U
59-50-7	4-Chloro-3-methylphenol	3.0	9.0	< 9.0 U
91-57-6	2-Methylnaphthalene	0.65	3.0	< 3.0 U
77-47-4	Hexachlorocyclopentadiene	4.5	15	< 15 U
88-06-2	2,4,6-Trichlorophenol	2.8	9.0	< 9.0 U
95-95-4	2,4,5-Trichlorophenol	3.1	15	< 15 U
91-58-7	2-Chloronaphthalene	0.91	3.0	< 3.0 U
88-74-4	2-Nitroaniline	4.7	9.0	< 9.0 U
131-11-3	Dimethylphthalate	1.1	3.0	< 3.0 U
208-96-8	Acenaphthylene	0.86	3.0	< 3.0 U
99-09-2	3-Nitroaniline	5.2	9.0	< 9.0 U
83-32-9	Acenaphthene	0.82	3.0	< 3.0 U
51-28-5	2,4-Dinitrophenol	13	60	< 60 U
100-02-7	4-Nitrophenol	2.7	30	< 30 U
132-64-9	Dibenzofuran	1.1	3.0	< 3.0 U
606-20-2	2,6-Dinitrotoluene	3.5	9.0	< 9.0 U
121-14-2	2,4-Dinitrotoluene	3.5	9.0	< 9.0 U

Lab Sample ID: WV67E
LIMS ID: 13-13661
Matrix: Water
Date Analyzed: 06/28/13 16:41

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
84-66-2	Diethylphthalate	0.88	3.0	< 3.0 U
7005-72-3	4-Chlorophenyl-phenylether	0.89	3.0	< 3.0 U
86-73-7	Fluorene	0.92	3.0	< 3.0 U
100-01-6	4-Nitroaniline	5.7	9.0	< 9.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	30	< 30 U
86-30-6	N-Nitrosodiphenylamine	0.76	3.0	< 3.0 U
101-55-3	4-Bromophenyl-phenylether	1.1	3.0	< 3.0 U
118-74-1	Hexachlorobenzene	1.0	3.0	< 3.0 U
87-86-5	Pentachlorophenol	4.7	30	< 30 U
85-01-8	Phenanthrene	1.2	3.0	< 3.0 U
86-74-8	Carbazole	1.1	3.0	< 3.0 U
120-12-7	Anthracene	0.95	3.0	< 3.0 U
84-74-2	Di-n-Butylphthalate	1.0	3.0	< 3.0 U
206-44-0	Fluoranthene	1.2	3.0	< 3.0 U
129-00-0	Pyrene	1.1	3.0	< 3.0 U
85-68-7	Butylbenzylphthalate	0.96	3.0	< 3.0 U
91-94-1	3,3'-Dichlorobenzidine	4.7	15	< 15 U
56-55-3	Benzo(a)anthracene	1.0	3.0	< 3.0 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**1.0**	**9.0**	**12**
218-01-9	Chrysene	1.3	3.0	< 3.0 U
117-84-0	Di-n-Octyl phthalate	0.99	3.0	< 3.0 U
50-32-8	Benzo(a)pyrene	1.0	3.0	< 3.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.2	3.0	< 3.0 U
53-70-3	Dibenz(a,h)anthracene	1.3	3.0	< 3.0 U
191-24-2	Benzo(g,h,i)perylene	1.2	3.0	< 3.0 U
62-53-3	Aniline	2.7	3.0	< 3.0 U
122-66-7	1,2-Diphenylhydrazine	1.2	3.0	< 3.0 U
62-75-9	N-Nitrosodimethylamine	2.8	9.0	< 9.0 U
103-33-3	Azobenzene	0.81	3.0	< 3.0 U
58-90-2	2,3,4,6-Tetrachlorophenol	0.46	3.0	< 3.0 U
90-12-0	1-Methylnaphthalene	1.1	3.0	< 3.0 U
TOTBFA	Total Benzofluoranthenes	2.3	15	< 15 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.7%	2-Fluorobiphenyl	61.0%
d14-p-Terphenyl	72.0%	d4-1,2-Dichlorobenzene	55.0%
d5-Phenol	30.7%	2-Fluorophenol	41.0%
2,4,6-Tribromophenol	140%	d4-2-Chlorophenol	61.8%

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
209977

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-062613	82.4%	86.0%	110%	78.8%	40.5%	60.8%	107%	87.5%	0
LCS-062613	82.8%	90.0%	105%	73.2%	40.8%	55.2%	8.1%*	82.4%	1
UP-CB-B8-20130626-	144%*	77.2%	89.6%	69.2%	36.3%	50.7%	210%*	77.1%	2
UP-CB-B8-20130626- DL	63.7%	61.0%	72.0%	55.0%	30.7%	41.0%	140%*	61.8%	1

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

Prep Method: SW3510C
Log Number Range: 13-13661 to 13-13661

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-062613
LAB CONTROL

Lab Sample ID: LCS-062613
LIMS ID: 13-13661
Matrix: Water
Data Release Authorized:
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 06/26/13
Date Analyzed: 06/28/13 14:39
Instrument/Analyst: NT6/JZ
GPC Cleanup: NO

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

Analyte	Lab Control	Spike Added	Recovery
Phenol	14.1	25.0	56.4%
Bis-(2-Chloroethyl) Ether	18.0	25.0	72.0%
2-Chlorophenol	19.8	25.0	79.2%
1,3-Dichlorobenzene	14.4	25.0	57.6%
1,4-Dichlorobenzene	15.1	25.0	60.4%
Benzyl Alcohol	21.1	25.0	84.4%
1,2-Dichlorobenzene	15.3	25.0	61.2%
2-Methylphenol	18.4	25.0	73.6%
2,2'-Oxybis(1-Chloropropane)	18.3	25.0	73.2%
4-Methylphenol	36.3	50.0	72.6%
N-Nitroso-Di-N-Propylamine	19.4	25.0	77.6%
Hexachloroethane	14.4	25.0	57.6%
Nitrobenzene	18.7	25.0	74.8%
Isophorone	21.1	25.0	84.4%
2-Nitrophenol	21.1	25.0	84.4%
2,4-Dimethylphenol	56.5	75.0	75.3%
Benzoic Acid	48.8	138	35.4%
bis(2-Chloroethoxy) Methane	19.0	25.0	76.0%
2,4-Dichlorophenol	61.5	75.0	82.0%
1,2,4-Trichlorobenzene	15.6	25.0	62.4%
Naphthalene	19.3	25.0	77.2%
4-Chloroaniline	74.8	75.0	99.7%
Hexachlorobutadiene	14.7	25.0	58.8%
4-Chloro-3-methylphenol	62.9	75.0	83.9%
2-Methylnaphthalene	20.8	25.0	83.2%
Hexachlorocyclopentadiene	47.4	75.0	63.2%
2,4,6-Trichlorophenol	65.4	75.0	87.2%
2,4,5-Trichlorophenol	66.2	75.0	88.3%
2-Chloronaphthalene	19.7	25.0	78.8%
2-Nitroaniline	73.0	75.0	97.3%
Dimethylphthalate	21.8	25.0	87.2%
Acenaphthylene	22.3	25.0	89.2%
3-Nitroaniline	93.7	75.0	125%
Acenaphthene	22.2	25.0	88.8%
2,4-Dinitrophenol	97.4	138	70.6%
4-Nitrophenol	35.6	75.0	47.5%
Dibenzofuran	22.9	25.0	91.6%
2,6-Dinitrotoluene	66.5	75.0	88.7%
2,4-Dinitrotoluene	65.8	75.0	87.7%
Diethylphthalate	22.9	25.0	91.6%
4-Chlorophenyl-phenylether	21.9	25.0	87.6%
Fluorene	24.2	25.0	96.8%
4-Nitroaniline	80.2	75.0	107%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-062613
LAB CONTROL

Lab Sample ID: LCS-062613
LIMS ID: 13-13661
Matrix: Water
Date Analyzed: 06/28/13 14:39

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
209977

Analyte	Lab Control	Spike Added	Recovery
4,6-Dinitro-2-Methylphenol	97.5	138	70.7%
N-Nitrosodiphenylamine	22.3	25.0	89.2%
4-Bromophenyl-phenylether	20.1	25.0	80.4%
Hexachlorobenzene	18.8	25.0	75.2%
Pentachlorophenol	70.7	75.0	94.3%
Phenanthrene	23.8	25.3	94.1%
Carbazole	23.0	25.0	92.0%
Anthracene	23.1	25.0	92.4%
Di-n-Butylphthalate	23.1	25.0	92.4%
Fluoranthene	25.4	25.0	102%
Pyrene	24.8	25.0	99.2%
Butylbenzylphthalate	22.1	25.0	88.4%
3,3'-Dichlorobenzidine	65.1	75.0	86.8%
Benzo(a)anthracene	21.0	25.0	84.0%
bis(2-Ethylhexyl)phthalate	22.2	25.0	88.8%
Chrysene	23.7	25.3	93.7%
Di-n-Octyl phthalate	21.5	25.0	86.0%
Benzo(a)pyrene	24.3	25.0	97.2%
Indeno(1,2,3-cd)pyrene	23.2	25.0	92.8%
Dibenz(a,h)anthracene	21.0	25.0	84.0%
Benzo(g,h,i)perylene	20.2	25.0	80.8%
Aniline	56.6	75.0	75.5%
1,2-Diphenylhydrazine	< 1.0 U	25.0	NA
N-Nitrosodimethylamine	38.9	75.0	51.9%
Azobenzene	< 1.0 U	25.0	NA
2,3,4,6-Tetrachlorophenol	23.3	25.0	93.2%
1-Methylnaphthalene	21.5	25.0	86.0%
Total Benzofluoranthenes	49.0	50.0	98.0%

Semivolatile Surrogate Recovery

d5-Nitrobenzene	82.8%	2-Fluorobiphenyl	90.0%
d14-p-Terphenyl	105%	d4-1,2-Dichlorobenzene	73.2%
d5-Phenol	40.8%	2-Fluorophenol	55.2%
2,4,6-Tribromophenol	8.1%	d4-2-Chlorophenol	82.4%

Results reported in µg/L

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WV67MBW1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WV67

Project: NPDES SAMPLING SUPPO

Lab File ID: 06281309

Date Extracted: 06/26/13

Instrument ID: NT6

Date Analyzed: 06/28/13

Matrix: LIQUID

Time Analyzed: 1514

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WV67LCSW1	WV67LCSW1	06281308	06/28/13
02	UP-CB-B8-2013062	WV67E	06281310	06/28/13
03	UP-CB-B8-2013062	WV67E	06281311	06/28/13
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FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MB-062613
METHOD BLANK

Lab Sample ID: MB-062613
LIMS ID: 13-13661
Matrix: Water
Data Release Authorized:
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/26/13
Date Analyzed: 06/28/13 15:14
Instrument/Analyst: NT6/JZ

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

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

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MB-062613
METHOD BLANK

Lab Sample ID: MB-062613
LIMS ID: 13-13661
Matrix: Water
Date Analyzed: 06/28/13 15:14

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
209977

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

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	82.4%	2-Fluorobiphenyl	86.0%
d14-p-Terphenyl	110%	d4-1,2-Dichlorobenzene	78.8%
d5-Phenol	40.5%	2-Fluorophenol	60.8%
2,4,6-Tribromophenol	107%	d4-2-Chlorophenol	87.5%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT6 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 06/28/13 DFTPP Injection Time: 1039

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	33.5
68	Less than 2.0% of mass 69	0.3 (1.1)1
69	Mass 69 relative abundance	25.7
70	Less than 2.0% of mass 69	0.1 (0.4)1
127	10.0 - 80.0% of mass 198	39.6
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	17.3
365	Greater than 1.0% of mass 198	1.47
441	0.0 - 24.0% of mass 442	9.7 (14.5)2
442	50.0 - 200.0% of mass 198	66.6
443	15.0 - 24.0% of mass 442	12.9 (19.3)2

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	IC250628	IC250628	06281301	06/28/13	1039
02	IC10628	IC10628	06281302	06/28/13	1113
03	IC50628	IC50628	06281303	06/28/13	1148
04	IC100628	IC100628	06281304	06/28/13	1222
05	IC400628	IC400628	06281305	06/28/13	1256
06	IC600628	IC600628	06281306	06/28/13	1331
07	IC800628	IC800628	06281307	06/28/13	1405
08	WV67LCSW1	WV67LCSW1	06281308	06/28/13	1439
09	WV67MBW1	WV67MBW1	06281309	06/28/13	1514
10	UP-CB-B8-2013062	WV67E	06281310	06/28/13	1548
11	UP-CB-B8-2013062	WV67E	06281311	06/28/13	1641
12					
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19					
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22					

FORM V SV

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT6 Calibration Date: 06/28/13

Method = SW846062813.m
Cal levels = 8

LAB FILE ID: RRF1 =06281302 RRF5 =06281303 RRF10 =06281304
RRF25 =06281301 RRF40 =06281305 RRF60 =06281306
RRF80 =06281307 RRF0.2=

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	RRF 0.2	___ RRF	%RSD /R^2
Phenol	1.775	1.769	1.698	1.932	1.811	1.930	1.704		1.803	5.3
Bis(2-Chloroethyl)ether	1.415	1.303	1.392	1.490	1.475	1.475	1.433		1.426	4.6
2-Chlorophenol	1.312	1.306	1.248	1.481	1.457	1.499	1.371		1.382	7.1
1,3-Dichlorobenzene	1.618	1.632	1.646	1.798	1.769	1.760	1.618		1.692	4.7
1,4-Dichlorobenzene	1.665	1.581	1.675	1.827	1.841	1.726	1.603		1.702	6.0
1,2-Dichlorobenzene	1.550	1.490	1.575	1.760	1.699	1.646	1.569		1.613	5.8
Benzyl alcohol	0.842	0.797	0.858	0.941	0.990	1.032	1.007		0.924	10.0
2,2'-oxybis(1-Chloropropane)	2.838	2.540	2.558	2.565	2.398	2.260	2.048		2.458	10.3
2-Methylphenol	1.229	1.229	1.165	1.406	1.373	1.404	1.286		1.299	7.4
Hexachloroethane	0.565	0.514	0.563	0.562	0.564	0.536	0.513		0.545	4.4
N-Nitroso-di-n-propylamine	0.990	0.903	0.944	0.978	0.927	0.915	0.909		0.938	3.6
4-Methylphenol	1.258	1.289	1.238	1.520	1.453	1.464	1.325		1.364	8.3
Nitrobenzene	0.357	0.349	0.409	0.363	0.348	0.326	0.307		0.351	9.1
Isophorone	0.585	0.561	0.659	0.606	0.596	0.587	0.587		0.597	5.1
2-Nitrophenol	0.154	0.175	0.195	0.209	0.211	0.222	0.212		0.197	12.3
2,4-Dimethylphenol	0.306	0.303	0.332	0.337	0.332	0.337	0.311		0.322	4.7
Bis(2-Chloroethoxy)methane	0.458	0.440	0.526	0.482	0.475	0.466	0.445		0.470	6.1
2,4-Dichlorophenol	0.266	0.279	0.311	0.348	0.341	0.342	0.311		0.314	10.3
1,2,4-Trichlorobenzene	0.354	0.393	0.411	0.386	0.384	0.377	0.353		0.380	5.5
Naphthalene	1.012	0.999	1.153	1.103	1.031	0.946	0.825		1.010	10.5
Benzoic acid		0.172	0.220	0.222	0.275	0.289	0.288		0.244	19.4
4-Chloroaniline	0.389	0.379	0.460	0.354	0.359	0.367	0.313		0.374	11.9
Hexachlorobutadiene	0.184	0.166	0.208	0.181	0.178	0.170	0.150		0.177	10.2
4-Chloro-3-methylphenol	0.244	0.262	0.281	0.293	0.289	0.291	0.269		0.276	6.6
2-Methylnaphthalene	0.511	0.495	0.616	0.570	0.587	0.582	0.506		0.552	8.7
Hexachlorocyclopentadiene		0.248	0.309	0.371	0.366	0.366	0.351		0.335	14.4
2,4,6-Trichlorophenol	0.286	0.308	0.317	0.370	0.376	0.380	0.362		0.343	11.1
2,4,5-Trichlorophenol	0.315	0.324	0.328	0.381	0.379	0.387	0.356		0.353	8.6
2-Chloronaphthalene	1.180	1.126	1.477	1.306	1.199	1.107	0.985		1.197	13.1
2-Nitroaniline	0.228	0.231	0.261	0.266	0.282	0.292	0.265		0.261	9.2
Acenaphthylene	1.568	1.517	1.702	1.766	1.654	1.572	1.458		1.605	6.7
Dimethylphthalate	1.182	1.111	1.222	1.319	1.317	1.311	1.327		1.256	6.8
2,6-Dinitrotoluene	0.209	0.248	0.291	0.305	0.294	0.280	0.273		0.271	12.2
Acenaphthene	1.039	0.973	1.095	1.226	1.162	1.147	1.073		1.102	7.6
3-Nitroaniline	0.240	0.249	0.276	0.250	0.263	0.250	0.229		0.251	6.1
2,4-Dinitrophenol		0.037	0.083	0.132	0.177	0.181	0.175		0.131	0.992
Dibenzofuran	1.279	1.169	1.277	1.334	1.407	1.371	1.194		1.290	6.8

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

FORM VI SV-1

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT6 Calibration Date: 06/28/13

Method = SW846062813.m
Cal levels = 8

LAB FILE ID: RRF1 =06281302 RRF5 =06281303 RRF10 =06281304
RRF25 =06281301 RRF40 =06281305 RRF60 =06281306
RRF80 =06281307 RRF0.2=

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	RRF 0.2	___ RRF	%RSD /R^2	
4-Nitrophenol	0.052	0.073	0.076	0.091	0.086	0.088	0.084		0.078	16.9	
2,4-Dinitrotoluene	0.252	0.299	0.338	0.361	0.356	0.354	0.353		0.330	12.3	
Fluorene	1.139	1.117	1.245	1.313	1.155	1.036	0.888		1.128	12.3	
4-Chlorophenyl-phenylether	0.593	0.558	0.619	0.603	0.520	0.455	0.378		0.532	16.6	
Diethylphthalate	1.195	1.070	1.138	1.113	1.009	0.952	0.836		1.045	11.7	
4-Nitroaniline	0.226	0.222	0.216	0.196	0.229	0.244	0.234		0.224	6.8	
4,6-Dinitro-2-methylphenol		0.081	0.109	0.143	0.166	0.181	0.171		0.142	0.994	
N-Nitrosodiphenylamine (1)	0.543	0.529	0.578	0.658	0.666	0.684	0.616		0.610	10.1	
4-Bromophenyl-phenylether	0.218	0.203	0.227	0.271	0.246	0.249	0.233		0.235	9.4	
Hexachlorobenzene	0.278	0.252	0.262	0.265	0.250	0.251	0.222		0.254	6.9	
Pentachlorophenol		0.096	0.104	0.130	0.142	0.151	0.144		0.128	17.7	
Phenanthrene	1.067	1.018	1.143	1.262	1.222	1.198	1.154		1.152	7.5	
Anthracene	1.040	1.036	1.149	1.269	1.224	1.190	1.074		1.140	8.1	
Carbazole	1.005	0.978	1.043	1.081	1.082	1.147	1.097		1.062	5.4	
Di-n-butylphthalate	1.259	1.262	1.374	1.520	1.508	1.451	1.352		1.389	7.8	
Fluoranthene	1.034	1.051	1.174	1.366	1.293	1.274	1.158		1.193	10.5	
Pyrene	1.170	1.115	1.221	1.382	1.323	1.295	1.249		1.251	7.3	
Butylbenzylphthalate	0.566	0.534	0.578	0.652	0.650	0.663	0.649		0.613	8.5	
Benzo(a)anthracene	1.163	1.120	1.238	1.276	1.151	1.062	0.998		1.144	8.4	
3,3'-Dichlorobenzidine	0.391	0.387	0.435	0.393	0.359	0.330	0.249		0.363	16.5	
Chrysene	1.005	0.969	1.087	1.228	1.139	1.098	1.007		1.076	8.4	
bis(2-Ethylhexyl)phthalate	0.560	0.533	0.573	0.631	0.599	0.592	0.594		0.583	5.4	
Di-n-octylphthalate	1.276	1.142	1.148	1.112	1.036	0.995	0.940		1.093	10.3	
Benzo(b)fluoranthene	0.936	0.949	1.095	1.304	1.206	1.259	1.162		1.130	12.8	
Benzo(k)fluoranthene	0.937	1.028	1.119	1.254	1.203	1.125	0.815		1.069	14.4	
Benzo(a)pyrene	0.826	0.829	0.959	1.123	1.066	1.072	0.944		0.974	12.2	
Indeno(1,2,3-cd)pyrene	1.042	1.090	1.234	1.394	1.337	1.350	1.201		1.235	10.9	
Dibenzo(a,h)anthracene	0.839	0.896	1.020	1.195	1.111	1.076	0.886		1.003	13.3	
Benzo(g,h,i)perylene	0.907	0.911	1.009	1.197	1.212	1.300	1.228		1.109	14.7	
N-Nitrosodimethylamine	0.866	0.909	0.931	1.008	0.953	0.932	1.025		0.946	5.8	
Aniline	1.962	1.821	1.885	1.860	1.769	1.862	1.647		1.829	5.4	
Benzidine		0.306	0.251	0.161	0.162	0.205	0.162		0.208	28.8	<-
Pyridine	1.329	1.364	1.375	1.347	1.421	1.433	1.624		1.413	7.1	
1-methylnaphthalene	0.505	0.497	0.608	0.569	0.592	0.584	0.502		0.551	8.7	
Azobenzene (1,2-DP-Hydrazine	0.051	0.049	0.050	0.051	0.052	0.056	0.055		0.052	5.4	
2,3,4,6-Tetrachlorophenol	0.207	0.229	0.228	0.261	0.264	0.263	0.245		0.242	9.2	
1,2,4,5-Tetrachlorobenzene	0.472	0.472	0.510	0.582	0.584	0.577	0.546		0.535	9.4	

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

FORM VI SV-2

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT6 Calibration Date: 06/28/13

Method = SW846062813.m
Cal levels = 8

LAB FILE ID: RRF1 =06281302 RRF5 =06281303 RRF10 =06281304
RRF25 =06281301 RRF40 =06281305 RRF60 =06281306
RRF80 =06281307 RRF0.2=

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	RRF 0.2	___ RRF	%RSD /R^2	
Total Benzofluoranthenes	0.899	0.933	1.050	1.210	1.132	1.115	0.923		1.037	11.7	
2-Fluorophenol	1.302	1.261	1.139	1.202	1.427	1.428			1.293	9.1	
Phenol-d5	1.564	1.582	1.434	1.599	1.696	1.663			1.590	5.7	
2-Chlorophenol-d4	1.346	1.333	1.209	1.361	1.525	1.540			1.386	9.1	
1,2-Dichlorobenzene-d4	0.919	0.877	0.818	0.951	1.071	1.041			0.946	10.2	
Nitrobenzene-d5	0.318	0.319	0.324	0.306	0.347	0.311			0.321	4.5	
2-Fluorobiphenyl	1.174	1.134	1.095	1.227	1.341	1.293			1.211	7.8	
2,4,6-Tribromophenol			0.016	0.024	0.119	0.107			0.066	81.2	<-
Terphenyl-d14	0.712	0.675	0.626	0.743	0.798	0.782			0.723	9.0	

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

FORM VI SV-3

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT6 Cont. Calib. Date: 06/28/13

Init. Calib. Date: 06/28/13 Cont. Calib. Time: 1039

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Phenol	1.803	1.932	0.800	AVRG	7.2
Bis(2-Chloroethyl)ether	1.426	1.490	0.700	AVRG	4.5
2-Chlorophenol	1.382	1.481	0.800	AVRG	7.2
1,3-Dichlorobenzene	1.692	1.798	0.010	AVRG	6.3
1,4-Dichlorobenzene	1.702	1.827	0.010	AVRG	7.3
1,2-Dichlorobenzene	1.613	1.760	0.010	AVRG	9.1
Benzyl alcohol	0.924	0.941	0.010	AVRG	1.8
2,2'-oxybis(1-Chloropropane)	2.458	2.565	0.010	AVRG	4.4
2-Methylphenol	1.299	1.406	0.700	AVRG	8.2
Hexachloroethane	0.545	0.562	0.300	AVRG	3.1
N-Nitroso-di-n-propylamine	0.938	0.978	0.500	AVRG	4.3
4-Methylphenol	1.364	1.520	0.600	AVRG	11.4
Nitrobenzene	0.351	0.363	0.200	AVRG	3.4
Isophorone	0.597	0.606	0.400	AVRG	1.5
2-Nitrophenol	0.197	0.209	0.100	AVRG	6.1
2,4-Dimethylphenol	0.322	0.337	0.200	AVRG	4.6
Bis(2-Chloroethoxy)methane	0.470	0.482	0.300	AVRG	2.6
2,4-Dichlorophenol	0.314	0.348	0.200	AVRG	10.8
1,2,4-Trichlorobenzene	0.380	0.386	0.010	AVRG	1.6
Naphthalene	1.010	1.103	0.700	AVRG	9.2
Benzoic acid	0.244	0.222	0.010	AVRG	-9.0
4-Chloroaniline	0.374	0.354	0.010	AVRG	-5.3
Hexachlorobutadiene	0.177	0.181	0.010	AVRG	2.2
4-Chloro-3-methylphenol	0.276	0.293	0.200	AVRG	6.2
2-Methylnaphthalene	0.552	0.570	0.400	AVRG	3.3
Hexachlorocyclopentadiene	0.335	0.371	0.050	AVRG	10.7
2,4,6-Trichlorophenol	0.343	0.370	0.200	AVRG	7.9
2,4,5-Trichlorophenol	0.353	0.381	0.200	AVRG	7.9
2-Chloronaphthalene	1.197	1.306	0.800	AVRG	9.1
2-Nitroaniline	0.261	0.266	0.010	AVRG	1.9
Acenaphthylene	1.605	1.766	0.900	AVRG	10.0
Dimethylphthalate	1.256	1.319	0.010	AVRG	5.0
2,6-Dinitrotoluene	0.271	0.305	0.200	AVRG	12.5
Acenaphthene	1.102	1.226	0.900	AVRG	11.2
3-Nitroaniline	0.251	0.250	0.010	AVRG	-0.4
2,4-Dinitrophenol	50.00	41.28	0.010	2ORDR	-17.4
Dibenzofuran	1.290	1.334	0.800	AVRG	3.4

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-1

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT6 Cont. Calib. Date: 06/28/13

Init. Calib. Date: 06/28/13 Cont. Calib. Time: 1039

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
4-Nitrophenol	0.078	0.091	0.010	AVRG	16.7	
2,4-Dinitrotoluene	0.330	0.361	0.200	AVRG	9.4	
Fluorene	1.128	1.313	0.900	AVRG	16.4	
4-Chlorophenyl-phenylether	0.532	0.603	0.400	AVRG	13.3	
Diethylphthalate	1.045	1.113	0.010	AVRG	6.5	
4-Nitroaniline	0.224	0.196	0.010	AVRG	-12.5	
4,6-Dinitro-2-methylphenol	50.00	45.20	0.010	2ORDR	-9.6	
N-Nitrosodiphenylamine(1)	0.610	0.658	0.010	AVRG	7.9	
4-Bromophenyl-phenylether	0.235	0.271	0.100	AVRG	15.3	
Hexachlorobenzene	0.254	0.265	0.100	AVRG	4.3	
Pentachlorophenol	0.128	0.130	0.050	AVRG	1.6	
Phenanthrene	1.152	1.262	0.700	AVRG	9.5	
Anthracene	1.140	1.269	0.700	AVRG	11.3	
Carbazole	1.062	1.081	0.010	AVRG	1.8	
Di-n-butylphthalate	1.389	1.520	0.010	AVRG	9.4	
Fluoranthene	1.193	1.366	0.600	AVRG	14.5	
Pyrene	1.251	1.382	0.600	AVRG	10.5	
Butylbenzylphthalate	0.613	0.652	0.010	AVRG	6.4	
Benzo(a)anthracene	1.144	1.276	0.800	AVRG	11.5	
3,3'-Dichlorobenzidine	0.363	0.393	0.010	AVRG	8.3	
Chrysene	1.076	1.228	0.700	AVRG	14.1	
bis(2-Ethylhexyl)phthalate	0.583	0.631	0.010	AVRG	8.2	
Di-n-octylphthalate	1.093	1.112	0.010	AVRG	1.7	
Benzo(b)fluoranthene	1.130	1.304	0.700	AVRG	15.4	
Benzo(k)fluoranthene	1.069	1.254	0.700	AVRG	17.3	
Benzo(a)pyrene	0.974	1.123	0.700	AVRG	15.3	
Indeno(1,2,3-cd)pyrene	1.235	1.394	0.500	AVRG	12.9	
Dibenzo(a,h)anthracene	1.003	1.195	0.400	AVRG	19.1	
Benzo(g,h,i)perylene	1.109	1.197	0.500	AVRG	7.9	
N-Nitrosodimethylamine	0.946	1.008	0.010	AVRG	6.6	
Aniline	1.829	1.860	0.010	AVRG	1.7	
Benzidine	0.208	0.161	0.010	AVRG	-22.6	<-
Pyridine	1.413	1.347	0.010	AVRG	-4.7	
1-methylnaphthalene	0.551	0.569	0.010	AVRG	3.3	
Azobenzene (1,2-DP-Hydrazine	0.052	0.051	0.010	AVRG	-1.9	
2,3,4,6-Tetrachlorophenol	0.242	0.261	0.010	AVRG	7.8	

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-2

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT6 Cont. Calib. Date: 06/28/13

Init. Calib. Date: 06/28/13 Cont. Calib. Time: 1039

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
1,2,4,5-Tetrachlorobenzene	0.535	0.582	0.010	AVRG	8.8	
Total Benzofluoranthenes	1.037	1.210	0.010	AVRG	16.7	
2-Fluorophenol	1.293	1.202	0.010	AVRG	-7.0	
Phenol-d5	1.590	1.599	0.010	AVRG	0.6	
2-Chlorophenol-d4	1.386	1.361	0.010	AVRG	-1.8	
1,2-Dichlorobenzene-d4	0.946	0.951	0.010	AVRG	0.5	
Nitrobenzene-d5	0.321	0.306	0.010	AVRG	-4.7	
2-Fluorobiphenyl	1.211	1.227	0.010	AVRG	1.3	
2,4,6-Tribromophenol	0.066	0.024	0.010	AVRG	-63.6	<-
Terphenyl-d14	0.723	0.743	0.010	AVRG	2.8	

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-3

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: 06281301 Ical Date: 06/28/13

Instrument ID: NT6 Cont. Cal Date: 06/28/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	461788	8.59	1684670	10.63	967427	13.50
	UPPER LIMIT	923576		3369340		1934854	
	LOWER LIMIT	230894		842335		483714	
	CCAL	461788	8.59	1684670	10.63	967427	13.50
	UPPER LIMIT		9.09		11.13		14.00
	LOWER LIMIT		8.09		10.13		13.00
01	WV67LCSW1	472193	8.60	1671598	10.64	941643	13.51
02	WV67MBW1	461181	8.60	1711497	10.64	1019256	13.50
03	UP-CB-B8-201	441245	8.60	836098*	10.64	1018520	13.52
04	UP-CB-B8-201	590258	8.60	2133315	10.64	1359406	13.51
05							
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IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

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

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: 06281301 Ical Date: 06/28/13

Instrument ID: NT6 Cont. Cal Date: 06/28/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	1360143	15.88	1402665	20.20	1443992	22.36
	UPPER LIMIT	2720286		2805330		2887984	
	LOWER LIMIT	680072		701332		721996	
	CCAL	1360143	15.88	1402665	20.20	1443992	22.36
	UPPER LIMIT		16.38		20.70		22.86
	LOWER LIMIT		15.38		19.70		21.86
01	WV67LCSW1	1272040	15.89	1309736	20.21	1398310	22.38
02	WV67MBW1	1556980	15.89	1431842	20.21	1554548	22.38
03	UP-CB-B8-201	1559376	15.90	1453945	20.21	1668571	22.38
04	UP-CB-B8-201	2015286	15.89	1885961	20.21	2049533	22.38
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IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

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

* Values outside of QC limits.

FORM VIII SV-2

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: 06281301 Ical Date: 06/28/13

Instrument ID: NT6 Cont. Cal Date: 06/28/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	2121193	21.27				
	UPPER LIMIT	4242386					
	LOWER LIMIT	1060596					
	CCAL	2121193	21.27				
	UPPER LIMIT		21.77				
	LOWER LIMIT		20.77				
01	WV67LCSW1	2035846	21.29				
02	WV67MBW1	1951431	21.29				
03	UP-CB-B8-201	2057957	21.29				
04	UP-CB-B8-201	2639926	21.29				
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06							
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25							

IS7 = Di-n-octylphthalate-d4

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

* Values outside of QC limits.

FORM VIII SV-3

SIM PAH Analysis
Report and Summary QC Forms

ARI Job ID: WV67

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: UP-CB-B8-20130626-W**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: WV67E
LIMS ID: 13-13661
Matrix: Water
Data Release Authorized:
Reported: 08/16/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 06/26/13
Date Analyzed: 06/27/13 10:51
Instrument/Analyst: NT11/VTS

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

CAS Number	Analyte	DL	LOQ	Result
91-20-3	**Naphthalene**	**0.00085**	**0.010**	**0.017**
91-57-6	**2-Methylnaphthalene**	**0.00072**	**0.010**	**0.012**
90-12-0	1-Methylnaphthalene	0.00088	0.010	< 0.010 U
208-96-8	Acenaphthylene	0.00081	0.010	< 0.010 U
83-32-9	**Acenaphthene**	**0.00083**	**0.010**	**0.018**
86-73-7	**Fluorene**	**0.0014**	**0.010**	**0.028**
85-01-8	**Phenanthrene**	**0.0010**	**0.010**	**0.084**
120-12-7	**Anthracene**	**0.00058**	**0.010**	**0.024**
206-44-0	**Fluoranthene**	**0.00092**	**0.010**	**0.15**
129-00-0	**Pyrene**	**0.00070**	**0.010**	**0.13**
56-55-3	**Benzo(a)anthracene**	**0.0013**	**0.010**	**0.055**
218-01-9	**Chrysene**	**0.0016**	**0.010**	**0.075**
205-99-2	**Benzo(b)fluoranthene**	**0.0025**	**0.010**	**0.031**
207-08-9	**Benzo(k)fluoranthene**	**0.00085**	**0.010**	**0.017**
50-32-8	**Benzo(a)pyrene**	**0.0011**	**0.010**	**0.026**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**0.0018**	**0.010**	**0.011**
53-70-3	Dibenz(a,h)anthracene	0.00097	0.010	< 0.010 U
191-24-2	**Benzo(g,h,i)perylene**	**0.0019**	**0.010**	**0.022**
132-64-9	**Dibenzofuran**	**0.00094**	**0.010**	**0.012**
TOTBFA	**Total Benzofluoranthenes**	**0.0025**	**0.020**	**0.060**

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	72.3%
d10-2-Methylnaphthalene	50.3%
d14-Dibenzo(a,h)anthracen	58.3%

8/16/13

WV67: 00107_REV

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
209977

Client ID	FLN	MNP	DBA	TOT OUT
MB-062613	85.7%	73.7%	82.3%	0
LCS-062613	84.7%	79.0%	80.3%	0
LCSD-062613	82.7%	79.7%	73.0%	0
UP-CB-B8-20130626-W	72.3%	50.3%	58.3%	0

	LCS/MB LIMITS	QC LIMITS
(FLN) = d10-Fluoranthene	(30-160)	(30-150)
(MNP) = d10-2-Methylnaphthalene	(40-120)	(35-120)
(DBA) = d14-Dibenzo(a,h)anthracene	(31-120)	(26-120)

Prep Method: SW3510C
Log Number Range: 13-13661 to 13-13661

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS

Sample ID: LCS-062613
LAB CONTROL SAMPLE

Lab Sample ID: LCS-062613
LIMS ID: 13-13661
Matrix: Water
Data Release Authorized: MW
Reported: 06/27/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 06/26/13

Date Analyzed LCS: 06/27/13 09:56
LCSD: 06/27/13 10:24
Instrument/Analyst LCS: NT11/VTS
LCSD: NT11/VTS

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

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Naphthalene	0.225	0.300	75.0%	0.227	0.300	75.7%	0.9%
2-Methylnaphthalene	0.231	0.300	77.0%	0.233	0.300	77.7%	0.9%
1-Methylnaphthalene	0.226	0.300	75.3%	0.231	0.300	77.0%	2.2%
Acenaphthylene	0.235	0.300	78.3%	0.241	0.300	80.3%	2.5%
Acenaphthene	0.227	0.300	75.7%	0.231	0.300	77.0%	1.7%
Fluorene	0.245	0.300	81.7%	0.249	0.300	83.0%	1.6%
Phenanthrene	0.230	0.300	76.7%	0.231	0.300	77.0%	0.4%
Anthracene	0.231	0.300	77.0%	0.228	0.300	76.0%	1.3%
Fluoranthene	0.234	0.300	78.0%	0.238	0.300	79.3%	1.7%
Pyrene	0.217	0.300	72.3%	0.220	0.300	73.3%	1.4%
Benzo(a)anthracene	0.237	0.300	79.0%	0.236	0.300	78.7%	0.4%
Chrysene	0.233	0.300	77.7%	0.236	0.300	78.7%	1.3%
Benzo(b)fluoranthene	0.240	0.300	80.0%	0.237	0.300	79.0%	1.3%
Benzo(k)fluoranthene	0.245	0.300	81.7%	0.245	0.300	81.7%	0.0%
Benzo(a)pyrene	0.214	0.300	71.3%	0.209	0.300	69.7%	2.4%
Indeno(1,2,3-cd)pyrene	0.240	0.300	80.0%	0.236	0.300	78.7%	1.7%
Dibenz(a,h)anthracene	0.237	0.300	79.0%	0.215	0.300	71.7%	9.7%
Benzo(g,h,i)perylene	0.235	0.300	78.3%	0.235	0.300	78.3%	0.0%
Dibenzofuran	0.236	0.300	78.7%	0.240	0.300	80.0%	1.7%
Total Benzofluoranthenes	0.740	0.900	82.2%	0.738	0.900	82.0%	0.3%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-Fluoranthene	84.7%	82.7%
d10-2-Methylnaphthalene	79.0%	79.7%
d14-Dibenzo(a,h)anthracene	80.3%	73.0%

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WV67MBW1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WV67

Project: NPDES SAMPLING SUPPO

Lab File ID: WV67MB

Date Extracted: 06/26/13

Instrument ID: NT11

Date Analyzed: 06/27/13

Matrix: LIQUID

Time Analyzed: 0928

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WV67LCSW1	WV67LCSW1	WV67SB	06/27/13
02	WV67LCSDW1	WV67LCSDW1	WV67SBD	06/27/13
03	UP-CB-B8-2013062	WV67E	WV67E	06/27/13
04				
05				
06				
07				
08				
09				
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FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MB-062613**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-062613
LIMS ID: 13-13661
Matrix: Water
Data Release Authorized: MW
Reported: 06/27/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/26/13
Date Analyzed: 06/27/13 09:28
Instrument/Analyst: NT11/VTS

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

CAS Number	Analyte	DL	LOQ	Result
91-20-3	Naphthalene	0.00085	0.010	< 0.010 U
91-57-6	2-Methylnaphthalene	0.00072	0.010	< 0.010 U
90-12-0	1-Methylnaphthalene	0.00088	0.010	< 0.010 U
208-96-8	Acenaphthylene	0.00081	0.010	< 0.010 U
83-32-9	Acenaphthene	0.00083	0.010	< 0.010 U
86-73-7	Fluorene	0.0014	0.010	< 0.010 U
85-01-8	Phenanthrene	0.0010	0.010	< 0.010 U
120-12-7	Anthracene	0.00058	0.010	< 0.010 U
206-44-0	Fluoranthene	0.00092	0.010	< 0.010 U
129-00-0	Pyrene	0.00070	0.010	< 0.010 U
56-55-3	Benzo(a)anthracene	0.0013	0.010	< 0.010 U
218-01-9	Chrysene	0.0016	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.0025	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.00085	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.0011	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.0018	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.00097	0.010	< 0.010 U
191-24-2	Benzo(g,h,i)perylene	0.0019	0.010	< 0.010 U
132-64-9	Dibenzofuran	0.00094	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.0025	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	85.7%
d10-2-Methylnaphthalene	73.7%
d14-Dibenzo(a,h)anthracen	82.3%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT11 Project: NPDES SAMPLING

DFTPP Injection Date: 06/12/13 DFTPP Injection Time: 1530

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	41.8
68	Less than 2.0% of mass 69	0.3 (0.8)1
69	Mass 69 relative abundance	42.1
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	10.0 - 80.0% of mass 198	47.1
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.3
275	10.0 - 60.0% of mass 198	26.0
365	Greater than 1.0% of mass 198	3.37
441	0.0 - 24.0% of mass 442	15.9 (17.3)2
442	50.0 - 200.0% of mass 198	92.3
443	15.0 - 24.0% of mass 442	19.1 (20.7)2

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SIM 250	IC0612A	06/12/13	1546
02		SIM 1000	IC0612B	06/12/13	1615
03		SIM 10	IC0612C	06/12/13	1644
04		SIM 500	IC0612D	06/12/13	1713
05		SIM 50	IC0612E	06/12/13	1742
06		SIM 100	IC0612F	06/12/13	1811
07					
08					
09					
10					
11					
12					
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16					
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18					
19					
20					
21					
22					

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT11 Project: NPDES SAMPLING

DFTPP Injection Date: 06/27/13 DFTPP Injection Time: 0836

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	38.6
68	Less than 2.0% of mass 69	0.1 (0.3)1
69	Mass 69 relative abundance	40.4
70	Less than 2.0% of mass 69	0.5 (1.1)1
127	10.0 - 80.0% of mass 198	45.0
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.1
275	10.0 - 60.0% of mass 198	27.3
365	Greater than 1.0% of mass 198	3.09
441	0.0 - 24.0% of mass 442	16.5 (16.5)2
442	50.0 - 200.0% of mass 198	100.0
443	15.0 - 24.0% of mass 442	21.4 (21.4)2

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		SIM 250	CC0627	06/27/13	0851
02	WV67MBW1	WV67MBW1	WV67MB	06/27/13	0928
03	WV67LCSW1	WV67LCSW1	WV67SB	06/27/13	0956
04	WV67LCSDW1	WV67LCSDW1	WV67SBD	06/27/13	1024
05	UP-CB-B8-2013062	WV67E	WV67E	06/27/13	1051
06					
07					
08					
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22					

FORM V SV

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING

Instrument ID: NT11 Calibration Date: 06/12/13

Method = lowsim.m
Cal levels = 6

LAB FILE ID: RRF10 =IC0612C RRF50 =IC0612E RRF100=IC0612F
RRF250=IC0612A RRF500=IC0612D RRF1000=IC0612B

COMPOUND	RRF 10	RRF 50	RRF 100	RRF 250	RRF 500	RRF 1000	___ RRF	%RSD /R^2
Naphthalene	1.170	0.967	1.043	0.974	0.942	0.841	0.990	11.1
2-Methylnaphthalene	0.638	0.541	0.629	0.624	0.621	0.576	0.605	6.3
Acenaphthylene	1.769	1.408	1.564	1.581	1.535	1.400	1.543	8.8
Acenaphthene	1.231	0.973	1.087	1.038	1.010	0.930	1.045	10.1
Dibenzofuran	1.861	1.430	1.644	1.559	1.474	1.328	1.549	12.1
Fluorene	1.268	1.010	1.117	1.121	1.091	1.023	1.105	8.4
Phenanthrene	1.408	1.055	1.208	1.104	1.073	0.956	1.134	13.8
Anthracene	1.016	0.806	0.984	1.005	1.015	0.940	0.961	8.5
Fluoranthene	1.506	0.990	1.293	1.186	1.180	1.072	1.204	15.0
Pyrene	2.133	1.319	1.625	1.449	1.444	1.311	1.547	20.0
Benzo(a)anthracene	1.538	1.123	1.328	1.271	1.232	1.160	1.275	11.6
Chrysene	1.835	1.305	1.528	1.402	1.360	1.227	1.443	15.0
Benzo(b)fluoranthene	1.715	1.325	1.560	1.502	1.482	1.410	1.499	8.9
Benzo(k)fluoranthene	1.696	1.368	1.604	1.540	1.564	1.475	1.541	7.3
Benzo(j)fluoranthene	1.928	1.637	1.854	1.689	1.732	1.562	1.734	7.9
Benzo(a)pyrene	1.385	1.086	1.280	1.260	1.260	1.206	1.246	7.9
Indeno(1,2,3-cd)pyrene	1.778	1.410	1.692	1.708	1.719	1.635	1.657	7.8
Dibenzo(a,h)anthracene	1.249	1.098	1.284	1.333	1.353	1.296	1.269	7.2
Benzo(g,h,i)perylene	1.763	1.333	1.513	1.463	1.453	1.367	1.482	10.3
1-methylnaphthalene	0.667	0.581	0.644	0.630	0.619	0.582	0.620	5.5
Perylene	1.665	1.357	1.510	1.445	1.455	1.356	1.465	7.8
2-Methylnaphthalene-d10	0.648	0.566	0.627	0.617	0.609	0.572	0.606	5.3
Dibenzo(a,h)anthracene-d14	1.099	0.936	1.121	1.158	1.166	1.126	1.101	7.7
Fluoranthene-d10	1.127	0.894	1.081	1.060	1.056	0.980	1.033	8.0

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

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING

Instrument ID: NT11 Cont. Calib. Date: 06/27/13

Init. Calib. Date: 06/12/13 Cont. Calib. Time: 0851

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Naphthalene	0.990	0.955	0.700	AVRG	-3.5
2-Methylnaphthalene	0.605	0.611	0.400	AVRG	1.0
Acenaphthylene	1.543	1.548	0.900	AVRG	0.3
Acenaphthene	1.045	1.037	0.900	AVRG	-0.8
Dibenzofuran	1.549	1.568	0.800	AVRG	1.2
Fluorene	1.105	1.124	0.900	AVRG	1.7
Phenanthrene	1.134	1.113	0.700	AVRG	-1.8
Anthracene	0.961	1.009	0.700	AVRG	5.0
Fluoranthene	1.204	1.270	0.600	AVRG	5.5
Pyrene	1.547	1.401	0.600	AVRG	-9.4
Benzo(a)anthracene	1.275	1.269	0.800	AVRG	-0.5
Chrysene	1.443	1.379	0.700	AVRG	-4.4
Benzo(b)fluoranthene	1.499	1.437	0.700	AVRG	-4.1
Benzo(k)fluoranthene	1.541	1.537	0.700	AVRG	-0.2
Benzo(j)fluoranthene	1.734	1.783	0.010	AVRG	2.8
Benzo(a)pyrene	1.246	1.235	0.700	AVRG	-0.9
Indeno(1,2,3-cd)pyrene	1.657	1.632	0.500	AVRG	-1.5
Dibenzo(a,h)anthracene	1.269	1.281	0.400	AVRG	0.9
Benzo(g,h,i)perylene	1.482	1.424	0.500	AVRG	-3.9
1-methylnaphthalene	0.620	0.613	0.010	AVRG	-1.1
Perylene	1.465	1.426	0.010	AVRG	-2.7
2-Methylnaphthalene-d10	0.606	0.602	0.010	AVRG	-0.7
Dibenzo(a,h)anthracene-d14	1.101	1.113	0.010	AVRG	1.1
Fluoranthene-d10	1.033	1.156	0.010	AVRG	11.9

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING

Ical Midpoint ID: IC0612A Ical Date: 06/12/13

Instrument ID: NT11 Cont. Cal Date: 06/27/13

		IS1(NPT) AREA #	RT #	IS2(ANT) AREA #	RT #	IS3(PHN) AREA #	RT #
	ICAL MIDPT	270479	5.98	156669	8.94	244223	11.57
	UPPER LIMIT	540958		313338		488446	
	LOWER LIMIT	135240		78334		122112	
	CCAL	237573	5.98	132905	8.94	212117	11.57
	UPPER LIMIT		6.48		9.44		12.07
	LOWER LIMIT		5.48		8.44		11.07
01	WV67MBW1	255392	5.98	137669	8.94	233543	11.59
02	WV67LCSW1	254238	5.98	146619	8.94	247127	11.57
03	WV67LCSDW1	259041	5.98	149098	8.94	247991	11.57
04	UP-CB-B8-201	348287	5.98	178029	8.94	262667	11.57
05							
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25							

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

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

* Values outside of QC limits.

FORM VIII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WV67 Project: NPDES SAMPLING

Ical Midpoint ID: IC0612A Ical Date: 06/12/13

Instrument ID: NT11 Cont. Cal Date: 06/27/13

		IS4(CRY) AREA #	RT #	IS5(PRY) AREA #	RT #	AREA #	RT #
	ICAL MIDPT	194330	16.28	162839	18.81		
	UPPER LIMIT	388660		325678			
	LOWER LIMIT	97165		81420			
	CCAL	186989	16.28	156312	18.81		
	UPPER LIMIT		16.78		19.31		
	LOWER LIMIT		15.78		18.31		
01	WV67MBW1	176483	16.28	143197	18.81		
02	WV67LCSW1	199109	16.28	161406	18.81		
03	WV67LCSDW1	199703	16.28	160493	18.81		
04	UP-CB-B8-201	207505	16.28	211837	18.81		
05							
06							
07							
08							
09							
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21							
22							
23							
24							
25							

IS4 = Chrysene-d12
IS5 = Perylene-d12

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

* Values outside of QC limits.

FORM VIII SV-2

Pesticide Analysis
Report and Summary QC Forms

ARI Job ID: WV67

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: UP-CB-B8-20130626-W**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: WV67E
LIMS ID: 13-13661
Matrix: Water
Data Release Authorized:
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 06/26/13
Date Analyzed: 06/27/13 17:23
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.0085	0.050	< 0.050 U
319-85-7	beta-BHC	0.0098	0.050	< 0.050 U
319-86-8	delta-BHC	0.0087	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.016	0.050	< 0.050 U
76-44-8	Heptachlor	0.011	0.050	< 0.050 U
309-00-2	Aldrin	0.010	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.0079	0.050	< 0.050 U
959-98-8	Endosulfan I	0.0089	0.091	< 0.091 Y
60-57-1	Dieldrin	0.017	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.018	0.10	< 0.10 U
72-20-8	Endrin	0.017	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.014	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.019	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.024	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.017	0.10	< 0.10 U
72-43-5	Methoxychlor	0.074	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.015	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.016	0.10	< 0.10 U
5103-74-2	trans-Chlordane	0.0082	0.050	< 0.050 U
5103-71-9	cis-Chlordane	0.0082	0.050	< 0.050 U
8001-35-2	Toxaphene	0.22	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	0.010	0.050	< 0.050 U
87-68-3	Hexachlorobutadiene	0.012	0.050	< 0.050 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	78.0%
Tetrachlorometaxylene	64.5%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

SW8081/PESTICIDE WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP	TCMX	TOT OUT
MB-062613	71.0%	63.0%	0
UP-CB-B8-20130626-W	78.0%	64.5%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(37-125)	(11-144)
(TCMX) = Tetrachlorometaxylene	(38-103)	(30-105)

Prep Method: SW3510C
Log Number Range: 13-13661 to 13-13661

FORM 4
PESTICIDE METHOD BLANK SUMMARY

BLANK NO.

WV67MBW1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WV67
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WV67MBW1
Lab File ID: 0627A008

Date Extracted: 06/26/13
Matrix: LIQUID

Date Analyzed: 06/27/13
Instrument ID: ECD6

Time Analyzed: 1629
GC Columns: STX-CLP1/STX-CLP2

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WV67LCSW1	WV67LCSW1	06/27/13
02	WV67LCSDW1	WV67LCSDW1	06/27/13
03	UP-CB-B8-20130626-W	WV67E	06/27/13

ALL RUNS ARE DUAL COLUMN

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: MB-062613**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-062613
LIMS ID: 13-13661
Matrix: Water
Data Release Authorized:
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/26/13
Date Analyzed: 06/27/13 16:29
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.0085	0.050	< 0.050 U
319-85-7	beta-BHC	0.0098	0.050	< 0.050 U
319-86-8	delta-BHC	0.0087	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.016	0.050	< 0.050 U
76-44-8	Heptachlor	0.011	0.050	< 0.050 U
309-00-2	Aldrin	0.010	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.0079	0.050	< 0.050 U
959-98-8	Endosulfan I	0.0089	0.050	< 0.050 U
60-57-1	Dieldrin	0.017	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.018	0.10	< 0.10 U
72-20-8	Endrin	0.017	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.014	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.019	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.024	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.017	0.10	< 0.10 U
72-43-5	Methoxychlor	0.074	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.015	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.016	0.10	< 0.10 U
5103-74-2	trans-Chlordane	0.0082	0.050	< 0.050 U
5103-71-9	cis-Chlordane	0.0082	0.050	< 0.050 U
8001-35-2	Toxaphene	0.22	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	0.010	0.050	< 0.050 U
87-68-3	Hexachlorobutadiene	0.012	0.050	< 0.050 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	71.0%
Tetrachlorometaxylene	63.0%

6D
8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV67 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

COMPOUND	RT OF STANDARDS LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN RT	RT WINDOW FROM	TO
alpha-BHC	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.24	4.34
beta-BHC	4.65	4.65	4.65	4.64	4.64	4.64	4.64	4.64	4.59	4.69
delta-BHC	4.82	4.82	4.81	4.81	4.81	4.81	4.81	4.81	4.76	4.86
gamma-BHC (Lindane)	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.52	4.62
Heptachlor	5.01	5.01	5.01	5.01	5.01	5.01	5.01	5.01	4.96	5.06
Aldrin	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.26	5.36
Heptachlor epoxide b	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.83	5.93
Endosulfan I	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.21	6.31
Dieldrin	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.43	6.53
4,4'-DDE	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.13	6.23
Endrin	6.70	6.70	6.70	6.70	6.70	6.70	6.70	6.70	6.65	6.75
Endosulfan II	6.91	6.91	6.91	6.91	6.91	6.91	6.91	6.91	6.86	6.96
4,4'-DDD	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.69	6.79
Endosulfan sulfate	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.62	7.72
4,4'-DDT	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.95	7.05
Methoxychlor	7.43	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.37	7.47
Endrin ketone	7.93	7.93	7.93	7.93	7.93	7.93	7.93	7.93	7.88	7.98
Endrin aldehyde	7.28	7.28	7.28	7.28	7.28	7.28	7.28	7.28	7.23	7.33
gamma-Chlordane	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.95	6.05
alpha-Chlordane	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.08	6.18
Hexachlorobutadiene	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.26	2.36
Hexachlorobenzene	4.14	4.14	4.14	4.14	4.14	4.14	4.14	4.14	4.09	4.19
Tetrachloro-m-xylene	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.75	3.85
Decachlorobiphenyl	8.78	8.78	8.78	8.78	8.78	8.78	8.78	8.78	8.73	8.83

6D

8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV67 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

COMPOUND	RT OF STANDARDS LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN RT	RT WINDOW FROM	TO
alpha-BHC	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.66	4.76
beta-BHC	5.14	5.14	5.14	5.14	5.14	5.14	5.14	5.14	5.09	5.19
delta-BHC	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.40	5.50
gamma-BHC (Lindane)	5.07	5.07	5.07	5.06	5.07	5.07	5.07	5.07	5.02	5.12
Heptachlor	5.53	5.53	5.53	5.53	5.53	5.53	5.53	5.53	5.48	5.58
Aldrin	5.87	5.87	5.87	5.87	5.87	5.87	5.87	5.87	5.82	5.92
Heptachlor epoxide b	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.37	6.47
Endosulfan I	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.76	6.86
Dieldrin	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.02	7.12
4,4'-DDE	6.87	6.87	6.87	6.87	6.87	6.87	6.87	6.87	6.82	6.92
Endrin	7.36	7.36	7.35	7.35	7.36	7.36	7.36	7.36	7.31	7.41
Endosulfan II	7.54	7.54	7.54	7.54	7.54	7.54	7.55	7.54	7.50	7.60
4,4'-DDD	7.41	7.41	7.41	7.41	7.41	7.41	7.41	7.41	7.36	7.46
Endosulfan sulfate	8.09	8.09	8.09	8.09	8.09	8.09	8.09	8.09	8.04	8.14
4,4'-DDT	7.69	7.69	7.69	7.69	7.69	7.69	7.69	7.69	7.64	7.74
Methoxychlor	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.23	8.33
Endrin ketone	8.58	8.58	8.58	8.58	8.58	8.58	8.58	8.58	8.53	8.63
Endrin aldehyde	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.79	7.89
gamma-Chlordane	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.55	6.65
alpha-Chlordane	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.69	6.79
Hexachlorobutadiene	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.42	2.52
Hexachlorobenzene	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.54	4.64
Tetrachloro-m-xylene	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.08	4.18
Decachlorobiphenyl	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.67	9.77

FORM VI PEST-1

6E

8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV67 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

COMPOUND	CALIBRATION FACTORS LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	R^2 %RSD
alpha-BHC	1.5439	1.5547	1.5102	1.6675	1.5722	1.6801	1.7024	1.6044	4.8
beta-BHC	0.7227	0.6940	0.6288	0.6544	0.5978	0.6172	0.6154	0.6472	7.1
delta-BHC	1.3108	1.3377	1.2922	1.4417	1.3673	1.4738	1.5010	1.3892	6.0
gamma-BHC (Lindane)	1.4389	1.4516	1.3866	1.5141	1.4188	1.5091	1.5210	1.4629	3.6
Heptachlor	1.4611	1.4499	1.3707	1.4603	1.3396	1.3863	1.3590	1.4038	3.7
Aldrin	1.3809	1.3803	1.3036	1.4204	1.3102	1.3714	1.3549	1.3602	3.0
Heptachlor epoxide b	1.3713	1.3363	1.2293	1.3089	1.1855	1.2139	1.1821	1.2610	6.1
Endosulfan I	1.2951	1.2614	1.1522	1.2204	1.1025	1.1230	1.0962	1.1787	6.8
Dieldrin	1.2872	1.2978	1.2235	1.3084	1.1909	1.2167	1.1938	1.2455	4.1
4,4'-DDE	1.0139	0.9831	0.9049	0.9548	0.8804	0.9337	0.9621	0.9476	4.8
Endrin	1.2671	1.2700	1.2054	1.2552	1.1578	1.1596	1.1241	1.2056	5.0
Endosulfan II	1.2826	1.2659	1.1980	1.2432	1.1395	1.1415	1.1072	1.1968	5.8
4,4'-DDD	1.2001	1.1988	1.1420	1.1784	1.1006	1.1329	1.1060	1.1512	3.6
Endosulfan sulfate	1.1243	1.1172	1.0439	1.0892	0.9973	1.0231	1.0024	1.0568	5.0
4,4'-DDT	1.1508	1.1600	1.1076	1.1738	1.0915	1.1372	1.1217	1.1346	2.6
Methoxychlor	0.6089	0.5929	0.5343	0.5362	0.4840	0.4979	0.5049	0.5370	8.9
Endrin ketone	1.4712	1.4100	1.2991	1.3397	1.2084	1.2410	1.2163	1.3122	7.7
Endrin aldehyde	1.0260	1.0155	0.9446	0.9809	0.8892	0.8943	0.8714	0.9460	6.7
gamma-Chlordane	1.3445	1.3274	1.2342	1.3370	1.2340	1.2975	1.2933	1.2954	3.6
alpha-Chlordane	1.3528	1.3154	1.2108	1.2957	1.1858	1.2371	1.2288	1.2609	4.8
Hexachlorobutadiene	1.9025	1.8274	1.7247	1.8054	1.6395	1.7040	1.7020	1.7579	5.1
Hexachlorobenzene	1.4861	1.3849	1.2506	1.2922	1.1582	1.1894	1.1740	1.2765	9.5
Tetrachloro-m-xylene	1.1560	1.1331	1.0665	1.1244	1.0248	1.0590	1.0400	1.0862	4.7
Decachlorobiphenyl	1.1337	1.0998	0.9925	1.0181	0.9174	0.9470	0.9398	1.0069	8.2

6E
8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV67 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

	CALIBRATION FACTORS								R^2
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	%RSD
alpha-BHC	1.8907	1.9585	1.8601	2.0205	1.8576	1.9256	1.8660	1.9113	3.2
beta-BHC	1.0592	0.9600	0.8113	0.8084	0.7203	0.7323	0.7044	0.8280	16.2
delta-BHC	1.6482	1.6625	1.5719	1.7263	1.5992	1.6594	1.6648	1.6475	3.0
gamma-BHC (Lindane)	1.7179	1.7217	1.6316	1.7706	1.6273	1.6803	1.6806	1.6900	3.0
Heptachlor	1.9323	1.7962	1.6666	1.7262	1.5264	1.4801	1.3470	1.6392	12.3
Aldrin	1.8340	1.6659	1.5367	1.6223	1.4440	1.4302	1.3301	1.5519	11.0
Heptachlor epoxide b	1.8168	1.6398	1.4044	1.4381	1.2629	1.2239	1.1149	1.4144	17.4
Endosulfan I	1.5192	1.4169	1.2720	1.3234	1.1718	1.1458	1.0476	1.2710	12.9
Dieldrin	1.5995	1.4528	1.3259	1.3512	1.1540	1.1018	0.9936	1.2827	16.5
4,4'-DDE	1.5367	1.4595	1.3241	1.3606	1.1790	1.1494	1.0294	1.2912	14.0
Endrin	1.9014	1.8672	1.7277	1.7487	1.5208	1.4564	1.3250	1.6496	13.2
Endosulfan II	1.9719	1.9168	1.7752	1.8312	1.5816	1.5646	1.4555	1.7281	11.3
4,4'-DDD	2.1094	1.9958	1.8121	1.8464	1.6032	1.5801	1.4841	1.7759	13.0
Endosulfan sulfate	1.7321	1.6421	1.4774	1.5146	1.3442	1.3332	1.2549	1.4712	11.8
4,4'-DDT	1.7471	1.6963	1.5902	1.6301	1.4383	1.4739	1.4388	1.5735	8.0
Methoxychlor	0.7305	0.7076	0.6202	0.6027	0.5239	0.5120	0.4022	0.5856	19.7
Endrin ketone	1.6388	1.6002	1.4832	1.5356	1.3499	1.3642	1.3207	1.4704	8.7
Endrin aldehyde	1.5847	1.5114	1.3396	1.3594	1.1937	1.1861	1.1117	1.3266	13.3
gamma-Chlordane	1.8298	1.6423	1.4613	1.5070	1.3462	1.3504	1.2825	1.4885	13.0
alpha-Chlordane	1.6047	1.4942	1.3505	1.4009	1.2502	1.2566	1.1949	1.3646	10.8
Hexachlorobutadiene	1.7754	1.7738	1.6689	1.7660	1.5610	1.5866	1.4596	1.6559	7.5
Hexachlorobenzene	1.9001	1.7583	1.5690	1.6119	1.4286	1.4201	1.3431	1.5759	12.7
Tetrachloro-m-xylene	1.5306	1.4889	1.3673	1.4133	1.2254	1.1895	1.0472	1.3232	13.2
Decachlorobiphenyl	1.4748	1.4207	1.2965	1.3235	1.1681	1.1996	1.1690	1.2932	9.5

6G

8081 INITIAL CALIBRATION OF SINGLE POINT PCBs and TOXAPHENE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV67 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

Toxaphene			
Peak	RT	RT WIN	Cal Factor
1	6.958	6.91- 7.01	0.0513
2	7.010	6.96- 7.06	0.0354
3	7.267	7.22- 7.32	0.0585
4	7.593	7.54- 7.64	0.0595
5	7.632	7.58- 7.68	0.0395
6	7.913	7.86- 7.96	0.0336

6G

8081 INITIAL CALIBRATION OF SINGLE POINT PCBs and TOXAPHENE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV67 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

Toxaphene			
Peak	RT	RT WIN	Cal Factor
1	7.291	7.24- 7.34	0.0560
2	7.615	7.57- 7.67	0.0826
3	7.846	7.80- 7.90	0.0906
4	8.314	8.26- 8.36	0.0653
5	8.353	8.30- 8.40	0.0831

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.: 20130619PEST

Analysis Date: 27-JUN-2013 15:36 Init. Calib. Date: 19-JUN-2013

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.174	145239
Endrin	6.688	8151160
4,4'-DDD	6.729	349710
4,4'-DDT	6.986	8116391
Endrin ketone	7.913	375555
Endrin aldehyde	7.270	227931

DDT Percent Breakdown = 5.7 %
((145239+349710) * 100)/(145239+349710+8116391)

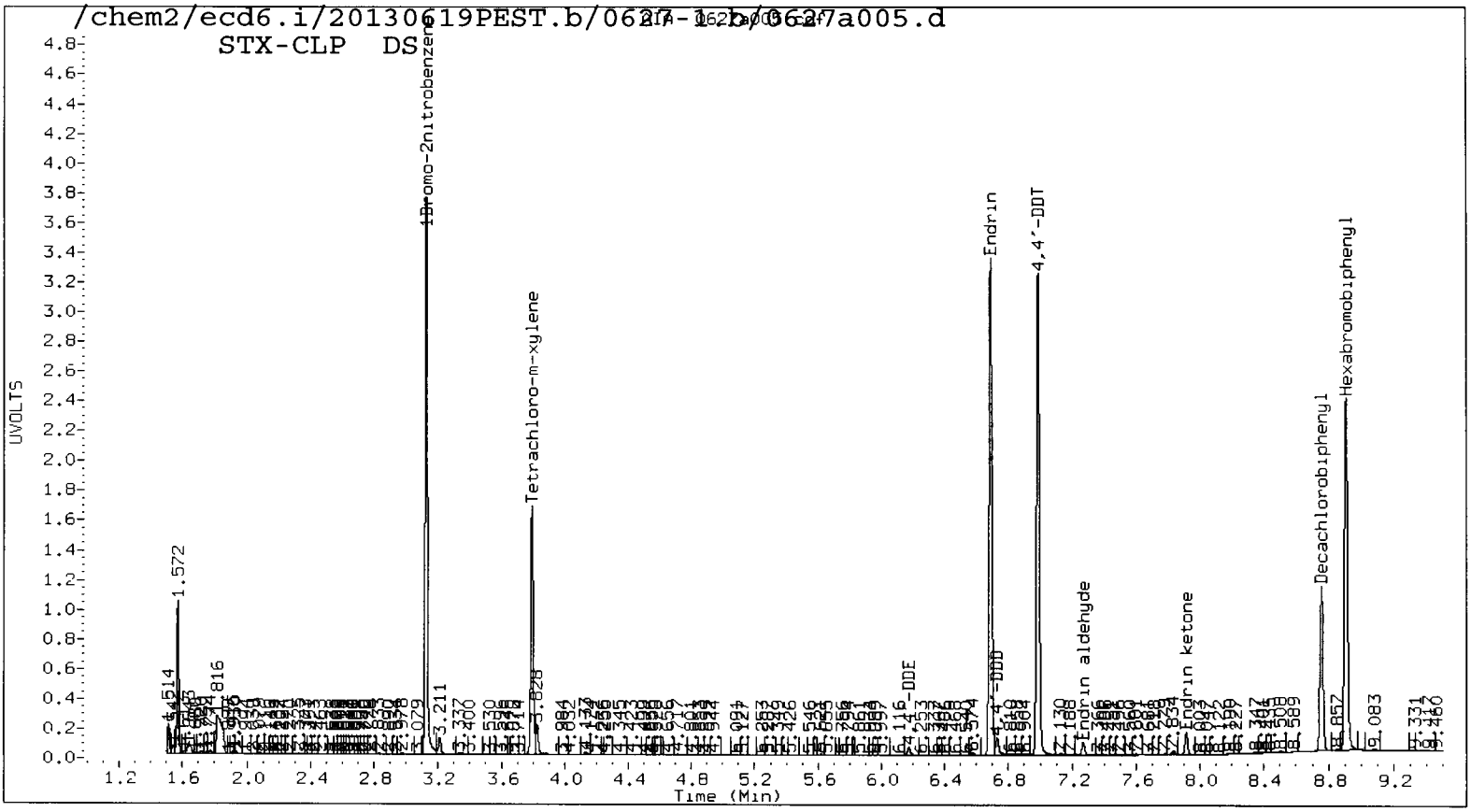
Endrin Percent Breakdown = 6.9 %
((227931+375555) * 100)/(227931+375555+8151160)

GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.872	509245
Endrin	7.358	25938491
4,4'-DDD	7.410	1483878
4,4'-DDT	7.697	26016190
Endrin ketone	8.579	951483
Endrin aldehyde	7.844	722749

DDT Percent Breakdown = 7.1 %
((509245+1483878) * 100)/(509245+1483878+26016190)

Endrin Percent Breakdown = 6.1 %
((722749+951483) * 100)/(722749+951483+25938491)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Time (Min)
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3.211
3.828
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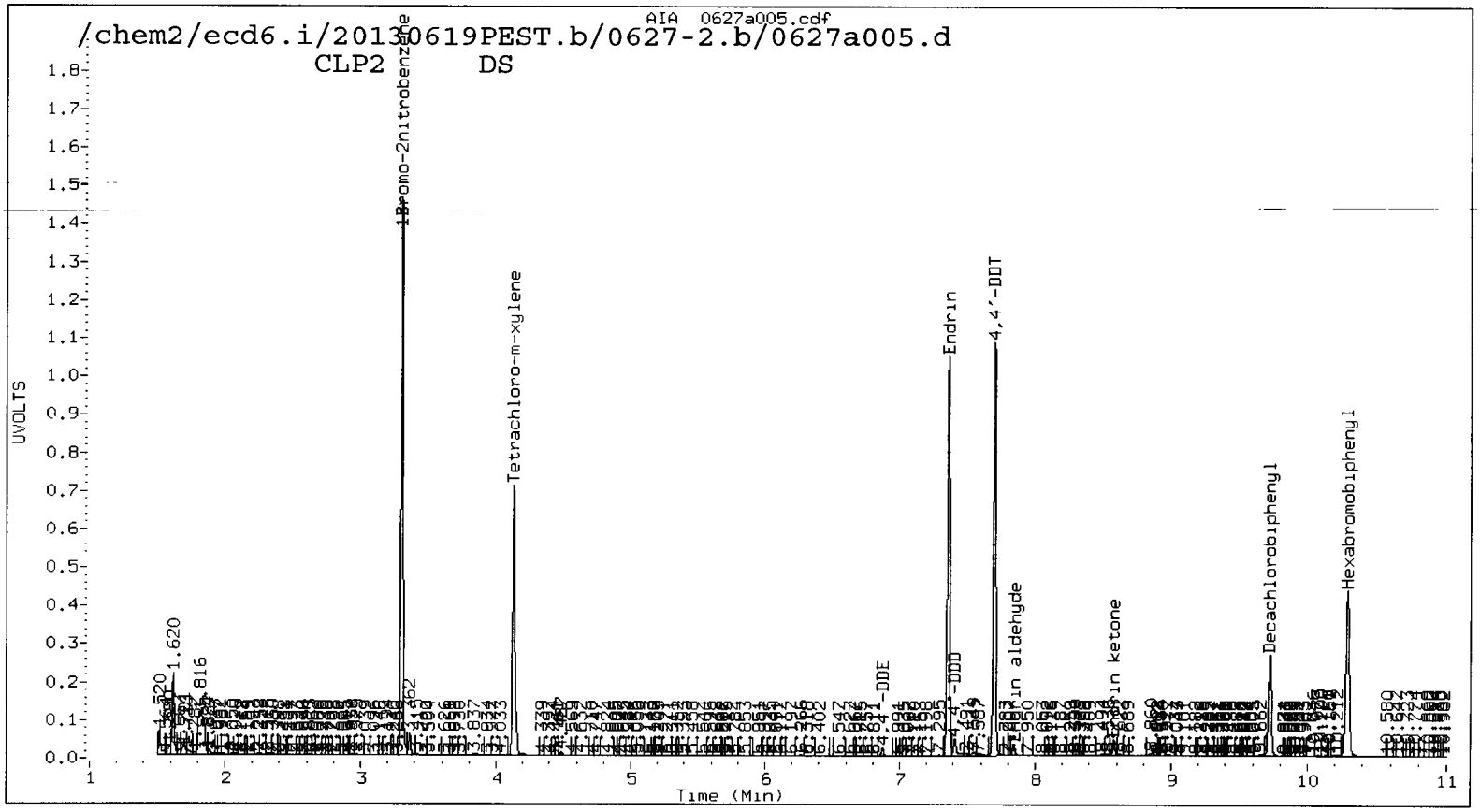
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 DS
UVOLTS
Time (Min)
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4,4'-DDE
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.: 20130619PEST

Analysis Date: 27-JUN-2013 17:41 Init. Calib. Date: 19-JUN-2013

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.173	100097
Endrin	6.687	7785229
4,4'-DDD	6.729	303347
4,4'-DDT	6.985	7446937
Endrin ketone	7.913	322031
Endrin aldehyde	7.269	143096

DDT Percent Breakdown = 5.1 %
((100097+303347) * 100)/(100097+303347+7446937)

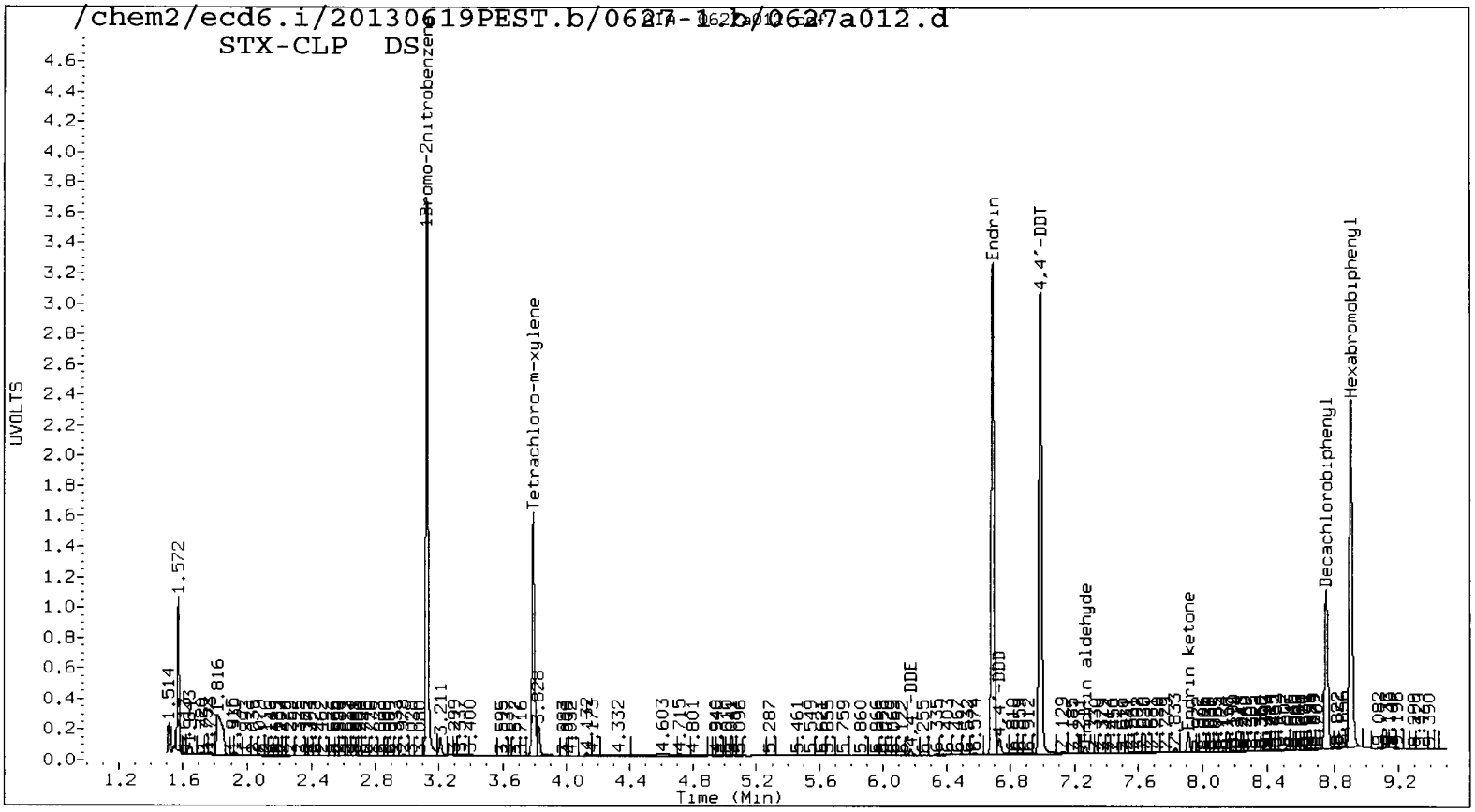
Endrin Percent Breakdown = 5.6 %
((143096+322031) * 100)/(143096+322031+7785229)

GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.871	342967
Endrin	7.357	21627319
4,4'-DDD	7.409	1234223
4,4'-DDT	7.697	20722803
Endrin ketone	8.579	812075
Endrin aldehyde	7.844	411340

DDT Percent Breakdown = 7.1 %
((342967+1234223) * 100)/(342967+1234223+20722803)

Endrin Percent Breakdown = 5.4 %
((411340+812075) * 100)/(411340+812075+21627319)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Time (Min)
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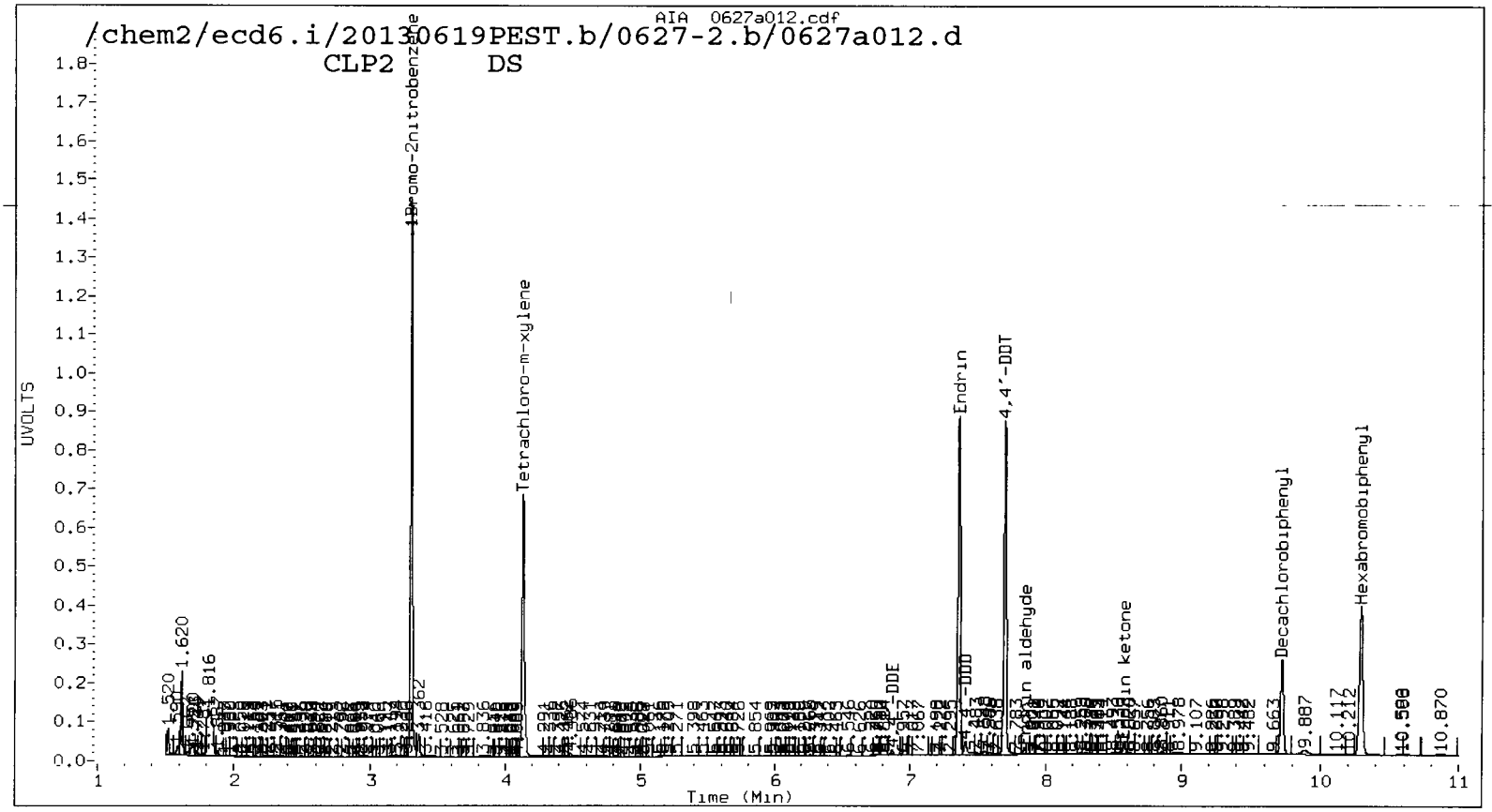
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 DS
UVOLTS
Time (Min)
1.620
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV67 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/27/13,1554

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	4.71	4.66	4.76	20.8	20.0	4.1
beta-BHC	5.14	5.09	5.19	17.9	20.0	-10.7
delta-BHC	5.45	5.40	5.50	20.5	20.0	2.7
gamma-BHC (Lindane)	5.07	5.02	5.12	20.6	20.0	3.0
Heptachlor	5.53	5.48	5.58	19.2	20.0	-4.2
Aldrin	5.87	5.82	5.92	19.7	20.0	-1.4
Heptachlor epoxide b	6.42	6.37	6.47	18.9	20.0	-5.6
Endosulfan I	6.81	6.76	6.86	19.4	20.0	-3.0
Dieldrin	7.07	7.02	7.12	38.3	40.0	-4.2
4,4'-DDE	6.87	6.82	6.92	38.4	40.0	-3.9
Endrin	7.36	7.31	7.41	44.1	40.0	10.2
Endosulfan II	7.55	7.50	7.60	45.5	40.0	13.8
4,4'-DDD	7.41	7.36	7.46	43.3	40.0	8.2
Endosulfan sulfate	8.09	8.04	8.14	42.7	40.0	6.8
4,4'-DDT	7.70	7.64	7.74	44.0	40.0	10.1
Methoxychlor	8.28	8.23	8.33	188.5	200.0	-5.8
Endrin ketone	8.58	8.53	8.63	42.6	40.0	6.6
Endrin aldehyde	7.84	7.79	7.89	44.7	40.0	11.8
gamma-Chlordane	6.61	6.55	6.65	18.7	20.0	-6.7
alpha-Chlordane	6.74	6.69	6.79	19.0	20.0	-5.2
Hexachlorobutadiene	2.47	2.42	2.52	20.3	20.0	1.7
Hexachlorobenzene	4.59	4.54	4.64	20.8	20.0	3.9
Tetrachloro-m-xylene	4.13	4.08	4.18	41.9	40.0	4.6
Decachlorobiphenyl	9.72	9.67	9.77	39.6	40.0	-1.1

FORM VII PEST-2

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV67 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/27/13,1554

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
alpha-BHC	4.28	4.24	4.34	22.8	20.0	13.8
beta-BHC	4.64	4.59	4.69	20.9	20.0	4.6
delta-BHC	4.81	4.76	4.86	22.3	20.0	11.7
gamma-BHC (Lindane)	4.56	4.52	4.62	22.3	20.0	11.4
Heptachlor	5.00	4.96	5.06	21.8	20.0	9.1
Aldrin	5.30	5.26	5.36	22.7	20.0	13.3
Heptachlor epoxide b	5.87	5.83	5.93	21.7	20.0	8.7
Endosulfan I	6.25	6.21	6.31	21.6	20.0	7.8
Dieldrin	6.47	6.43	6.53	44.3	40.0	10.8
4,4'-DDE	6.17	6.13	6.23	43.8	40.0	9.5
Endrin	6.69	6.65	6.75	41.4	40.0	3.6
Endosulfan II	6.89	6.86	6.96	42.5	40.0	6.1
4,4'-DDD	6.73	6.69	6.79	41.9	40.0	4.7
Endosulfan sulfate	7.66	7.62	7.72	41.5	40.0	3.8
4,4'-DDT	6.98	6.95	7.05	42.3	40.0	5.6
Methoxychlor	7.41	7.37	7.47	189.6	200.0	-5.2
Endrin ketone	7.91	7.88	7.98	41.7	40.0	4.1
Endrin aldehyde	7.27	7.23	7.33	41.8	40.0	4.4
gamma-Chlordane	5.99	5.95	6.05	22.4	20.0	12.0
alpha-Chlordane	6.11	6.08	6.18	21.9	20.0	9.6
Hexachlorobutadiene	2.31	2.26	2.36	21.5	20.0	7.5
Hexachlorobenzene	4.13	4.09	4.19	20.9	20.0	4.3
Tetrachloro-m-xylene	3.79	3.75	3.85	43.5	40.0	8.8
Decachlorobiphenyl	8.76	8.73	8.83	40.2	40.0	0.6

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV67 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/27/13,1758

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	4.71	4.66	4.76	20.3	20.0	1.3
beta-BHC	5.14	5.09	5.19	17.4	20.0	-13.0
delta-BHC	5.45	5.40	5.50	20.1	20.0	0.7
gamma-BHC (Lindane)	5.07	5.02	5.12	20.1	20.0	0.6
Heptachlor	5.53	5.48	5.58	18.7	20.0	-6.5
Aldrin	5.87	5.82	5.92	18.8	20.0	-6.0
Heptachlor epoxide b	6.42	6.37	6.47	17.7	20.0	-11.4
Endosulfan I	6.81	6.76	6.86	18.0	20.0	-10.2
Dieldrin	7.07	7.02	7.12	35.6	40.0	-11.1
4,4'-DDE	6.87	6.82	6.92	35.5	40.0	-11.2
Endrin	7.36	7.31	7.41	42.1	40.0	5.3
Endosulfan II	7.55	7.50	7.60	43.0	40.0	7.4
4,4'-DDD	7.41	7.36	7.46	40.6	40.0	1.6
Endosulfan sulfate	8.09	8.04	8.14	41.6	40.0	4.0
4,4'-DDT	7.70	7.64	7.74	41.7	40.0	4.2
Methoxychlor	8.28	8.23	8.33	195.2	200.0	-2.4
Endrin ketone	8.58	8.53	8.63	41.9	40.0	4.7
Endrin aldehyde	7.84	7.79	7.89	42.4	40.0	6.0
gamma-Chlordane	6.61	6.55	6.65	17.3	20.0	-13.3
alpha-Chlordane	6.74	6.69	6.79	17.5	20.0	-12.5
Hexachlorobutadiene	2.47	2.42	2.52	20.2	20.0	1.0
Hexachlorobenzene	4.59	4.54	4.64	20.2	20.0	1.1
Tetrachloro-m-xylene	4.13	4.08	4.18	40.8	40.0	2.0
Decachlorobiphenyl	9.72	9.67	9.77	40.0	40.0	-0.0

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV67 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/27/13,1758

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
alpha-BHC	4.28	4.24	4.34	22.6	20.0	13.2
beta-BHC	4.64	4.59	4.69	20.8	20.0	4.0
delta-BHC	4.81	4.76	4.86	22.4	20.0	12.0
gamma-BHC (Lindane)	4.56	4.52	4.62	22.2	20.0	11.0
Heptachlor	5.00	4.96	5.06	21.8	20.0	8.8
Aldrin	5.30	5.26	5.36	22.4	20.0	12.1
Heptachlor epoxide b	5.87	5.83	5.93	21.5	20.0	7.7
Endosulfan I	6.25	6.21	6.31	21.4	20.0	6.8
Dieldrin	6.47	6.43	6.53	43.8	40.0	9.5
4,4'-DDE	6.17	6.13	6.23	43.8	40.0	9.5
Endrin	6.69	6.65	6.75	41.6	40.0	4.0
Endosulfan II	6.89	6.86	6.96	41.7	40.0	4.3
4,4'-DDD	6.73	6.69	6.79	41.4	40.0	3.5
Endosulfan sulfate	7.66	7.62	7.72	41.1	40.0	2.8
4,4'-DDT	6.98	6.95	7.05	41.8	40.0	4.5
Methoxychlor	7.41	7.37	7.47	194.3	200.0	-2.8
Endrin ketone	7.91	7.88	7.98	41.2	40.0	2.9
Endrin aldehyde	7.27	7.23	7.33	41.2	40.0	2.9
gamma-Chlordane	5.99	5.95	6.05	22.1	20.0	10.4
alpha-Chlordane	6.11	6.08	6.18	21.6	20.0	7.8
Hexachlorobutadiene	2.30	2.26	2.36	21.3	20.0	6.6
Hexachlorobenzene	4.13	4.09	4.19	20.7	20.0	3.3
Tetrachloro-m-xylene	3.79	3.75	3.85	43.3	40.0	8.1
Decachlorobiphenyl	8.76	8.73	8.83	40.1	40.0	0.3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV67 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 06/27/13,1612

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Toxaphene -1	7.29	7.24	7.34	2400	2500	-4.0
Toxaphene -2	7.62	7.57	7.67	2380	2500	-4.8
Toxaphene -3	7.85	7.80	7.90	2350	2500	-6.0
Toxaphene -4	8.31	8.26	8.36	2120	2500	-15.2
Toxaphene -5	8.35	8.30	8.40	2110	2500	-15.6

AVERAGE %D = 9.1

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV67 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 06/27/13,1612

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
Toxaphene -1	6.94	6.91	7.01	2140	2500	-14.4	
Toxaphene -2	7.00	6.96	7.06	2270	2500	-9.2	
Toxaphene -3	7.25	7.22	7.32	2130	2500	-14.8	
Toxaphene -4	7.58	7.54	7.64	2100	2500	-16.0	
Toxaphene -5	7.64	7.58	7.68	1700	2500	-32.0	<-
Toxaphene -6	7.90	7.86	7.96	2060	2500	-17.6	

AVERAGE %D = 17.3

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV67 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 06/27/13,1816

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Toxaphene -1	7.29	7.24	7.34	2250	2500	-10.0
Toxaphene -2	7.62	7.57	7.67	2240	2500	-10.4
Toxaphene -3	7.85	7.80	7.90	2200	2500	-12.0
Toxaphene -4	8.32	8.26	8.36	2060	2500	-17.6
Toxaphene -5	8.36	8.30	8.40	2050	2500	-18.0

AVERAGE %D = 13.6

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV67 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 06/27/13,1816

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
Toxaphene -1	6.94	6.91	7.01	2110	2500	-15.6	
Toxaphene -2	7.00	6.96	7.06	2260	2500	-9.6	
Toxaphene -3	7.25	7.22	7.32	2110	2500	-15.6	
Toxaphene -4	7.58	7.54	7.64	2070	2500	-17.2	
Toxaphene -5	7.64	7.58	7.68	1700	2500	-32.0	<-
Toxaphene -6	7.90	7.86	7.96	2030	2500	-18.8	

AVERAGE %D = 18.1

FORM VII PEST-3

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV67 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP1 ID: 0.53(mm) Instrument ID: ECD6

Init. Calib. Date: 06/19/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

			IS1 AREA	RT	IS2 AREA	RT
		ICAL MIDPT	5590801	3.130	4870538	8.927
		UPPER LIMIT	11181602	3.180	9741076	8.977
		LOWER LIMIT	2795400	3.080	2435269	8.877

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		INDAE	06/19/13	1757	5590801	3.130	4870538	8.927
02		INDAA	06/19/13	1814	5443407	3.130	4756712	8.927
03		INDAB	06/19/13	1832	5578569	3.131	4877747	8.927
04		INDAC	06/19/13	1850	5651084	3.130	4910634	8.926
05		INDAD	06/19/13	1908	5597417	3.130	4918023	8.927
06		INDAF	06/19/13	1926	5751246	3.130	5082371	8.927
07		INDAG	06/19/13	1944	5601251	3.131	5032937	8.927
08		TOXAPHENE	06/19/13	2317	6058478	3.132	5799142	8.927
09		DS	06/27/13	1536	7085015	3.125	6469572	8.908
10		INDAE	06/27/13	1554	6716702	3.125	6186287	8.908
11		TOXAPH	06/27/13	1612	6884179	3.124	6535923	8.908
12	WV67MBW1	WV67MBW1	06/27/13	1629	6088456	3.124	5566355	8.907
13	WV67LCSW1	WV67LCSW1	06/27/13	1647	6226610	3.124	5817251	8.907
14	WV67LCSDW1	WV67LCSDW1	06/27/13	1705	6586791	3.124	6147462	8.907
15	UP-CB-B8-201	WV67E	06/27/13	1723	6067558	3.123	5937024	8.905
16		DS	06/27/13	1741	6906356	3.125	6141043	8.907
17		INDAE	06/27/13	1758	6715782	3.124	6193033	8.908
18		TOXAPH	06/27/13	1816	6878588	3.125	6507625	8.908

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- .05 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV67 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP2 ID: 0.53(mm) Instrument ID: ECD6

Init. Calib. Date: 06/19/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

					IS1 AREA	RT	IS2 AREA	RT
				ICAL MIDPT	28320361	3.300	16454599	10.289
				UPPER LIMIT	56640722	3.350	32909198	10.339
				LOWER LIMIT	14160180	3.250	8227300	10.239
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		INDAE	06/19/13	1757	28320361	3.300	16454599	10.289
02		INDAA	06/19/13	1814	27626455	3.300	16087272	10.288
03		INDAB	06/19/13	1832	28124817	3.300	16392538	10.289
04		INDAC	06/19/13	1850	28473248	3.299	16513179	10.289
05		INDAD	06/19/13	1908	28402073	3.299	16714534	10.289
06		INDAF	06/19/13	1926	29146657	3.300	17347014	10.289
07		INDAG	06/19/13	1944	28311756	3.300	17081518	10.289
08		TOXAPHENE	06/19/13	2317	29930668	3.301	19105364	10.289
09		DS	06/27/13	1536	28391467	3.301	14804724	10.288
10		INDAE	06/27/13	1554	27503611	3.300	14266865	10.288
11		TOXAPH	06/27/13	1612	28637360	3.301	14844952	10.288
12	WV67MBW1	WV67MBW1	06/27/13	1629	25739849	3.301	13281981	10.288
13	WV67LCSW1	WV67LCSW1	06/27/13	1647	26650891	3.301	13964574	10.288
14	WV67LCSDW1	WV67LCSDW1	06/27/13	1705	27710254	3.300	15021244	10.288
15	UP-CB-B8-201	WV67E	06/27/13	1723	21858598	3.300	10844374	10.287
16		DS	06/27/13	1741	27872166	3.301	13624364	10.289
17		INDAE	06/27/13	1758	28121646	3.300	14179509	10.288
18		TOXAPH	06/27/13	1816	29135804	3.301	15486641	10.289

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- .05 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

TPHG Analysis
Report and Summary QC Forms

ARI Job ID: WV67

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Matrix: Sediment

Data Release Authorized:
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

ARI ID	Client ID	Analysis Date	Range	Result	LOQ	DL
MB-062713	Method Blank	06/27/13	Gasoline	< 5.0 U	5.0	1.7
13-13657		PID1	HC ID	---		
			Trifluorotoluene	107%		
			Bromobenzene	100%		
WV67A	UP-CB-B8-201306206	06/27/13	Gasoline	< 5.9 U	5.9	2.0
13-13657		PID1	HC ID	---		
			Trifluorotoluene	102%		
			Bromobenzene	96.3%		
WV67B	UP-MHF-165-20130	06/27/13	Gasoline	< 7.4 U	7.4	2.5
13-13658		PID1	HC ID	---		
			Trifluorotoluene	104%		
			Bromobenzene	98.9%		
WV67C	UP-CB-A6-201306206	06/27/13	Gasoline	< 9.0 U	9.0	3.0
13-13659		PID1	HC ID	---		
			Trifluorotoluene	103%		
			Bromobenzene	98.8%		

Gasoline values reported in mg/kg (ppm)

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

ANALYTICAL RESOURCES INCORPORATED

TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WV67
Matrix: Sediment

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
Event: 209977

Client ID	BFB	TFT	BBZ	TOT OUT
MB-062713	NA	107%	100%	0
LCS-062713	NA	117%	100%	0
LCSD-062713	NA	116%	102%	0
UP-CB-B8-20130626-S	NA	102%	96.3%	0
UP-MHF-165-20130626-S	NA	104%	98.9%	0
UP-CB-A6-20130626-S	NA	103%	98.8%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-13657 to 13-13659

FORM II TPHG

WV67:0614

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: LCS-062713
LAB CONTROL SAMPLE

Lab Sample ID: LCS-062713
LIMS ID: 13-13657
Matrix: Sediment
Data Release Authorized:
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 06/27/13 11:00
LCSD: 06/27/13 11:29
Instrument/Analyst LCS: PID1/PKC
LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt
LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	58.3	50.0	117%	55.2	50.0	110%	5.5%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	117%	116%
Bromobenzene	100%	102%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Matrix: Water

Data Release Authorized:
Reported: 06/28/13

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

ARI ID	Client ID	Analysis Date	Basis	Range	Result	LOQ	DL
WV67D	UP-TB-01-201306206	27/13	Wet	Gasoline	< 0.25 U	0.25	0.057
13-13660		PID1		HC ID	---		
				Trifluorotoluene	109%		
				Bromobenzene	94.9%		

Gasoline values reported in mg/L (ppm)

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

ANALYTICAL RESOURCES INCORPORATED

TPHG WATER SURROGATE RECOVERY SUMMARY

ARI Job: WV67
Matrix: Water

QC Report No: WV67-SAIC
Project: NPDES Sampling Support
Event: 209977

Client ID	TFT	BBZ	TOT OUT
UP-TB-01-20130626-	109%	94.9%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(80-120)
(BBZ) = Bromobenzene	(80-120)	(80-120)

Log Number Range: 13-13660 to 13-13660

4

BETX/GAS METHOD BLANK SUMMARY

BLANK NO.

MB0627

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

SDG No.: WV67

Project No.: NPDES SAMPLING SUPPORT

Date Analyzed : 06/27/13

Matrix: SOIL

Time Analyzed : 1158

Instrument ID : PID1

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	LCS0627	LCS0627	06/27/13
02	LCSD0627	LCSD0627	06/27/13
03	UP-TB-01-201	WV67D	06/27/13
04	UP-CB-B8-201	WV67A	06/27/13
05	UP-MHF-165-2	WV67B	06/27/13
06	UP-CB-A6-201	WV67C	06/27/13
07			
08			
09			
10			
11			
12			
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6a

GAS INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

Instrument/Det: PID1.I/RTX 502-2 FID Project: NPDES SAMPLING SUPPORT

Calibration Date: 23-OCT-2012 SDG No.: WV67

Surr Calibration Date: 22-MAY-2013

Gas Range	RF1 0.1	RF2 0.25	RF3 1.0	RF4 2.5	RF5 5.0	RF6 10	Ave RF	%RSD
WA Gas	371020	379456	358654	339293	340260	360001	358114	4.5
AK Gas	579135	648986	585010	543304	542244	598628	582885	6.8
NW Gas	394025	395072	376837	353939	355113	375572	375093	4.8
Cal Gas	761375	793504	721427	674216	671666	730795	725497	6.6
8015Gas	742770	796044	725276	674926	670493	732827	723723	6.4
Surrogates Rel. Rec.	RF1	RF2	RF3	RF4	RF5	RF6	Ave RF	%RSD
$ TFT(Surr)	+++++	30.63636	30.95455	30.54545	29.88060	29.37000		
	28.75188	28.18539	28.40000				29.59053	3.634
$ BB(Surr)	+++++	20.63636	20.13636	20.50000	19.88060	19.80000		
	19.51128	19.17978	19.32000				19.87055	2.668

<- Indicates %RSD outside limits
Surrogate areas are not included in RF calculation.

Quant Ranges : WA Gas Toluene - nC12
AK Gas nC6 - nC10
NW Gas Toluene - Naphthalene
Cal Gas nC6 - nC12
8015 Gas 2-Methylpentane - 1,2,4-Trimethylbenzene

Calibration Files	Analysis Time
1023a013.d	23-OCT-2012 22:13
1023a014.d	23-OCT-2012 22:42
1023a015.d	23-OCT-2012 23:11
1023a016.d	23-OCT-2012 23:40
1023a017.d	24-OCT-2012 00:10
1023a018.d	24-OCT-2012 00:39

Surr Calibration Files	Analysis Time
0522a002.d	22-MAY-2013 09:02
0522a003.d	22-MAY-2013 09:30
0522a004.d	22-MAY-2013 09:58
0522a005.d	22-MAY-2013 10:27
0522a006.d	22-MAY-2013 10:56
0522a007.d	22-MAY-2013 11:25
0522a008.d	22-MAY-2013 11:55
0522a009.d	22-MAY-2013 12:24

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 23-OCT-2012
Project: NPDES SAMPLING

CCal Date: 27-JUN-2013
SDG No.: WV67

Lab File Name: 0627a003.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	812266	2.27	2.50	-9.3
AKGas (C6-C10)	1249470	2.14	2.50	-14.3
NWGas (Tol-Nap)	872234	2.33	2.50	-7.0
8015C (2MP-TMB)	1535314	2.12	2.50	-15.1

* Surrogate areas are subtracted from Total Area
<- Indicates an RPD outside QC limits

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 23-OCT-2012
Project: NPDES SAMPLING

CCal Date: 27-JUN-2013
SDG No.: WV67

Lab File Name: 0627a003.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	48018	116.8	100.0	16.8
Bromobenzene	18654	99.7	100.0	-0.3

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 23-OCT-2012
Project: NPDES

CCal Date: 27-JUN-2013
SDG No.: WV67

Lab File Name: 0627a014.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	841220	2.35	2.50	-6.0
AKGas (C6-C10)	1336304	2.29	2.50	-8.3
NWGas (Tol-Nap)	884486	2.36	2.50	-5.7
8015C (2MP-TMB)	1647674	2.28	2.50	-8.9

* Surrogate areas are subtracted from Total Area
<- Indicates an RPD outside QC limits

FORM VII-GAS

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 23-OCT-2012
Project: NPDES

CCal Date: 27-JUN-2013
SDG No.: WV67

Lab File Name: 0627a014.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	48060	116.2	100.0	16.2
Bromobenzene	19084	104.5	100.0	4.5

BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: PID1 GC Detector: RTX 502-2 FID

Run Date: 10/23/12

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

METHOD SURROGATE RT
S1 : 7.89 S2 : 15.39

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		RINSE	10/23/12	0941		
02		RT1023+BCAL1	10/23/12	1010	7.88	15.39
03		GCAL1	10/23/12	1039	7.88	15.39
04		B 200	10/23/12	1750	7.89	15.39
05		B 100	10/23/12	1820	7.88	15.39
06		B 50	10/23/12	1849	7.88	15.39
07		B 25	10/23/12	1918	7.89	15.39
08		B 5	10/23/12	1947	7.88	15.39
09		B 1	10/23/12	2016	7.88	15.39
10		B 0.5	10/23/12	2045	7.88	15.39
11		B 0.25	10/23/12	2115	7.89	15.39
12		BICV	10/23/12	2144	7.88	15.39
13		G 0.10	10/23/12	2213	7.89	15.39
14		G 0.25	10/23/12	2242	7.89	15.39
15		G 1.0	10/23/12	2311	7.89	15.39
16		G 2.5	10/23/12	2340	7.88	15.39
17		G 5.0	10/24/12	0010	7.88	15.39
18		G 10	10/24/12	0039	7.88	15.39
19		GICV	10/24/12	0108	7.88	15.39

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)
S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

FORM VIII-2 BETX

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: PID1 GC Column: RTX 502-2 FID

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
S1 : 7.85 S2 : 15.38

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01	BCAL0.25	BCAL0.25	05/22/13	0902	7.85	15.38
02	BCAL0.5	BCAL0.5	05/22/13	0930	7.85	15.38
03	BCAL1	BCAL1	05/22/13	0958	7.85	15.38
04	BCAL5	BCAL5	05/22/13	1027	7.85	15.38
05	BCAL25	BCAL25	05/22/13	1056	7.85	15.38
06	BCAL50	BCAL50	05/22/13	1125	7.85	15.38
07	BCAL100	BCAL100	05/22/13	1155	7.85	15.38
08	BCAL200	BCAL200	05/22/13	1224	7.85	15.38
09	ICV25	ICV25	05/22/13	1253	7.85	15.38

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)
S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WV67 Project: NPDES SAMPLING SUPPORT

Instrument ID: PID1 GC Detector: RTX 502-2 FID

Run Date: 06/27/13

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

METHOD SURROGATE RT
S1 : 7.84 S2 : 15.38

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	S1 #	S2 RT	S2 #
01	RT0626+BCAL	RT0626+BCAL	06/27/13	0926	7.84		15.38	
02	NPDES SAMPLI	GCAL 1	06/27/13	0955	7.84		15.38	
03	LCS0627	LCS0627	06/27/13	1100	7.84		15.38	
04	LCSD0627	LCSD0627	06/27/13	1129	7.84		15.38	
05	MB0627	MB0627	06/27/13	1158	7.84		15.38	
06	UP-TB-01-201	WV67D	06/27/13	1320	7.84		15.38	
07	UP-CB-B8-201	WV67A	06/27/13	1447	7.84		15.38	
08	UP-MHF-165-2	WV67B	06/27/13	1517	7.84		15.38	
09	UP-CB-A6-201	WV67C	06/27/13	1546	7.84		15.38	
10	NPDES	GCAL 2	06/27/13	1644	7.84		15.38	

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)

S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

FORM VIII-2 BETX

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: WV67

SAMPLE RESULTS-CONVENTIONALS
WV67-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/28/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Client ID: UP-CB-B8-20130626-W
ARI ID: 13-13661 WV67E

Analyte	Date Batch	Method	Units	RL	Sample
pH	06/26/13 062613#1	SM4500H	std units	0.01	6.45
Alkalinity	06/27/13 062713#1	SM 2320	mg/L CaCO3	1.0	33.9
Carbonate	06/27/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	06/27/13	SM 2320	mg/L CaCO3	1.0	33.9
Hydroxide	06/27/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Total Suspended Solids	06/27/13 062713#1	SM2540D	mg/L	1.6	30.2
Chloride	06/27/13 062713#1	EPA 300.0	mg/L	2.0	80.4
N-Nitrate	06/26/13 062613#1	EPA 300.0	mg-N/L	0.1	0.2
Sulfate	06/27/13 062713#1	EPA 300.0	mg/L	2.0	66.3

RL Analytical reporting limit
U Undetected at reported detection limit

MS/MSD RESULTS-CONVENTIONALS
WV67-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: MB
Reported: 06/28/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: WV67E Client ID: UP-CB-B8-20130626-W							
Chloride	EPA 300.0	06/27/13	mg/L	80.4	171	100	90.6%
N-Nitrate	EPA 300.0	06/26/13	mg-N/L	0.2	2.2	2.0	100.0%
Sulfate	EPA 300.0	06/27/13	mg/L	66.3	160	100	93.7%

REPLICATE RESULTS-CONVENTIONALS
WV67-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized
Reported: 06/28/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: WV67E Client ID: UP-CB-B8-20130626-W						
pH	SM4500H	06/26/13	std units	6.45	6.53	0.08
Alkalinity	SM 2320	06/27/13	mg/L CaCO3	33.9	34.6	2.0%
Carbonate	SM 2320	06/27/13	mg/L CaCO3	< 1.0	< 1.0	NA
Bicarbonate	SM 2320	06/27/13	mg/L CaCO3	33.9	34.6	2.0%
Hydroxide	SM 2320	06/27/13	mg/L CaCO3	< 1.0	< 1.0	NA
Chloride	EPA 300.0	06/27/13	mg/L	80.4	81.1	0.9%
N-Nitrate	EPA 300.0	06/26/13	mg-N/L	0.2	0.2	0.0%
Sulfate	EPA 300.0	06/27/13	mg/L	66.3	66.9	0.9%

pH is evaluated as the Absolute Difference between the values rather than Relative Percent Difference

LAB CONTROL RESULTS-CONVENTIONALS
WV67-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/28/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
pH SM4500H	ICVL	06/26/13	std units	7.05	7.00	0.05
Total Suspended Solids SM2540D	ICVL	06/27/13	mg/L	50.3	50.0	100.6%

pH is evaluated as the Absolute Difference between the values rather than Percent Recovery.

METHOD BLANK RESULTS-CONVENTIONALS
WV67-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/28/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Total Suspended Solids	SM2540D	06/27/13	mg/L	< 1.0 U	
Chloride	EPA 300.0	06/27/13	mg/L	< 0.1 U	
N-Nitrate	EPA 300.0	06/26/13	mg-N/L	< 0.1 U	
Sulfate	EPA 300.0	06/27/13	mg/L	< 0.1 U	

STANDARD REFERENCE RESULTS-CONVENTIONALS
WV67-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/28/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
Alkalinity ERA #P114506	SM 2320	06/27/13	mg/L CaCO3	32.2	32.1	100.3%
Chloride ERA 210312	EPA 300.0	06/27/13	mg/L	2.9	3.0	96.7%
N-Nitrate ERA #220912	EPA 300.0	06/26/13	mg-N/L	2.9	3.0	96.7%
Sulfate ERA 240312	EPA 300.0	06/27/13	mg/L	2.9	3.0	96.7%

Total Solids

ARI Job ID: WV67

BETX/TPHG Total Solids-betxts
Data By: Paul K. Campbell
Created: 6/28/13

Worklist: 5941
Analyst: PKC
Comments:

Oven ID:_____

Balance ID:_____

Samples In: Date:_____ Time:_____ Temp:_____ Analyst:_____

Samples Out: Date:_____ Time:_____ Temp:_____ Analyst:_____

	ARI ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids
1.	WV67A 13-13657	1.14	14.00	9.64	66.10
2.	WV67B 13-13658	1.13	11.60	8.13	66.86
3.	WV67C 13-13659	1.12	11.88	8.29	66.64

Worklist ID: 5941 Page: 1
* - BETX TS Copied From VOA TS
% - BETX TS Copied From Metals TS
$ - BETX TS Copied From Extraction TS

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Total Solids Bench Sheet

Laboratory Section: VOA

Oven Identification: PC 6/27/13 1/6 (~~1/4~~)

Balance ID: 4005006 PTI20

Samples in Oven: Date: 6/27/13 Time: 1250 Temp: 101 Analyst: PC

Removed from Oven: Date: 6/28/13 Time: 0815 Temp: 102 Analyst: PC

Source of Total Solids Data If From A Different Lab:

ARI Sample ID	Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs[1]
WW70B	1,13	12,45	7,84	6/28/13 0820	X
WW87A	1,14	14,00	9,64	↓	↓
B	1,13	11,60	8,13	↓	↓
C	1,12	11,88	8,29	↓	↓

1) Place a check mark in this column if samples have dried > 12 but < 24 hours. When samples have been at 104°C < 12 hours, constant weight must be verified as described in SOP 10023S. Use a 2nd bench sheet for additional weightings.

Volatile Raw Data
Initial Calibration Notes and Raw Data

ARI Job ID: WV67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Method 5035 Extraction Bench Sheet

(8260B, 8260B-SIM, 8021, NWTPH-Gx, AK-101, TPH-G, VPH, TCLP-ZHE)

ARI Project No.	Client ID	Prep/Extraction Date	MeOH Lot No.	Analyst
WV67		6/27/14		IP

	Lab ID	Vial No.	Preservative			Method 5035 Sample Weight					Comments
			$NaHSO_4$	CH_3OH	Lot #	Vial Weight (g)	Tare (from vial) (g)	Sample Weight (g)	Extract Volume (mL)	MeOH Spilt Volume (µL)	
1	WV670	2	*					5 mL			
2	A	1	–		W795-1	48.77	34.04	14.13			
3	B	1	–		↓	45.06	35.29	9.77			
4	C	1	–			44.22	35.03	9.19			
5	A2	2	–			47.45	39.87	8.38			
6	B2	2	–			46.09	34.98	11.11			
7	C2	2	–		↓	41.94	34.24	7.73			
8											
9	B2	4		–	DE695	37.95	28.141	9.809			
10	A2	4		–	↓	41.12	28.037	13.083	5 mL	100 µL	
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
					Balance ID:						

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Initial Calibration Notes

ARI SOP: **404S**(Gas) **410S**(BTEX) **430S**(VPH) **700S**(8260C) **703S**(SIM) **706S**(524.3) **710S**(RSK-175)

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 PID-1 PID-2 PID-3 FID-6

Curve Date(s): 6/27/17 Internal Standard ID B000643 / B000644 Expiration 12/11/17

BFB Tune Meets Criteria?	YES / NO	ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria?	YES / NO	ICV Exceeding ±30%?	YES / NO
Q flag applied?	YES / NO	Linear Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Quadratic Fits Used?	YES / NO
Spectral Library Updated?	YES / NO	Calibration Points Dropped?	YES / NO
Minimum Response Factors Met	YES / NO	Purge Volume (mL)	5

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
ultra	B000147	11/16/17	accustd	mi797-4	11/11/17
restek/ultra	B000799	12/22/17	SIES	mi797-5	6/26/17
restek	B000731	7/31/17	ultra	IR201	7/31/17
restek	B000611	11/5/17			

Detail problems, corrective actions and/or other pertinent information below:

indirect ham - 27.8% RSD - doesn't meet linear/quadratic fit $\geq r^2$ 0.990
- Q flag in all runs

DCM - 34% RSD - meets linear fit

Analyst: [signature] **Date:** 6/28/17

Reviewer: _____ **Date:** _____

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-5 Serial No.:GC=US10228086, MS=US10462818

Date: 6/27/13 Analysis: 8260C Analyst: JD

GC Program: VOA4 Column No: 93855L Column Type: MXVOA

Instrument Tune (.U or .CT.): PAT(100) EM Voltage: 1494

Inj. Vol: 5 Calibration File: b130627 Curve Date: 6/27/13

IS/SS	Ical/Ccal	LCS/ICV
B000643	B000803	iv7944-4
B000644	B000804	iv7947
		IRW1

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt5.i/27JUN13.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF							
1	0940	bfb0627.d	BFB0627	BFB0627			1							
2	1043	0010627.d	IC0627	VSTD1			1	4.66	1806972	5.11	2944860	7.59	2931914	9.67 1662438
3	1107	2000627.d	IC0627	VSTD200			1	4.65	1657456	5.11	2736925	7.60	2540726	9.68 1324580
4	1131	1500627.d	IC0627	VSTD150			1	4.66	1735360	5.11	2861897	7.60	2697287	9.68 1385568
5	1155	1000627.d	IC0627	VSTD100			1	4.67	1756133	5.12	2890240	7.60	2761179	9.67 1447038
6	1243	0100627.d	IC0627	VSTD10			1	4.65	1723537	5.11	2831384	7.59	2756425	9.67 1422668
7	1307	0050627.d	IC0627	VSTD5			1	4.66	1694501	5.11	2786053	7.59	2729297	9.67 1446481
8	1330	0020627.d	IC0627	VSTD2			1	4.66	1629659	5.11	2671641	7.59	2648389	9.67 1408047
9	1548	0500627a.d	IC0627	VSTD50			1	4.65	1613586	5.11	2656709	7.60	2557235	9.67 1374359
10	1722	icv0627.d	ICV0627	ICV0627			1	4.67	1611945	5.12	2662626	7.60	2557796	9.67 1386219

6/27/13

Maintenance / Comments

Maintenance Verification (Identify ICal or CCal that demonstrates the instrument is in control):

Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

Data File: /chem1/nt5.i/27JUN13.b/bfb0627.d

Date : 27-JUN-2013 09:40

Client ID: BFB0627

Instrument: nt5.i

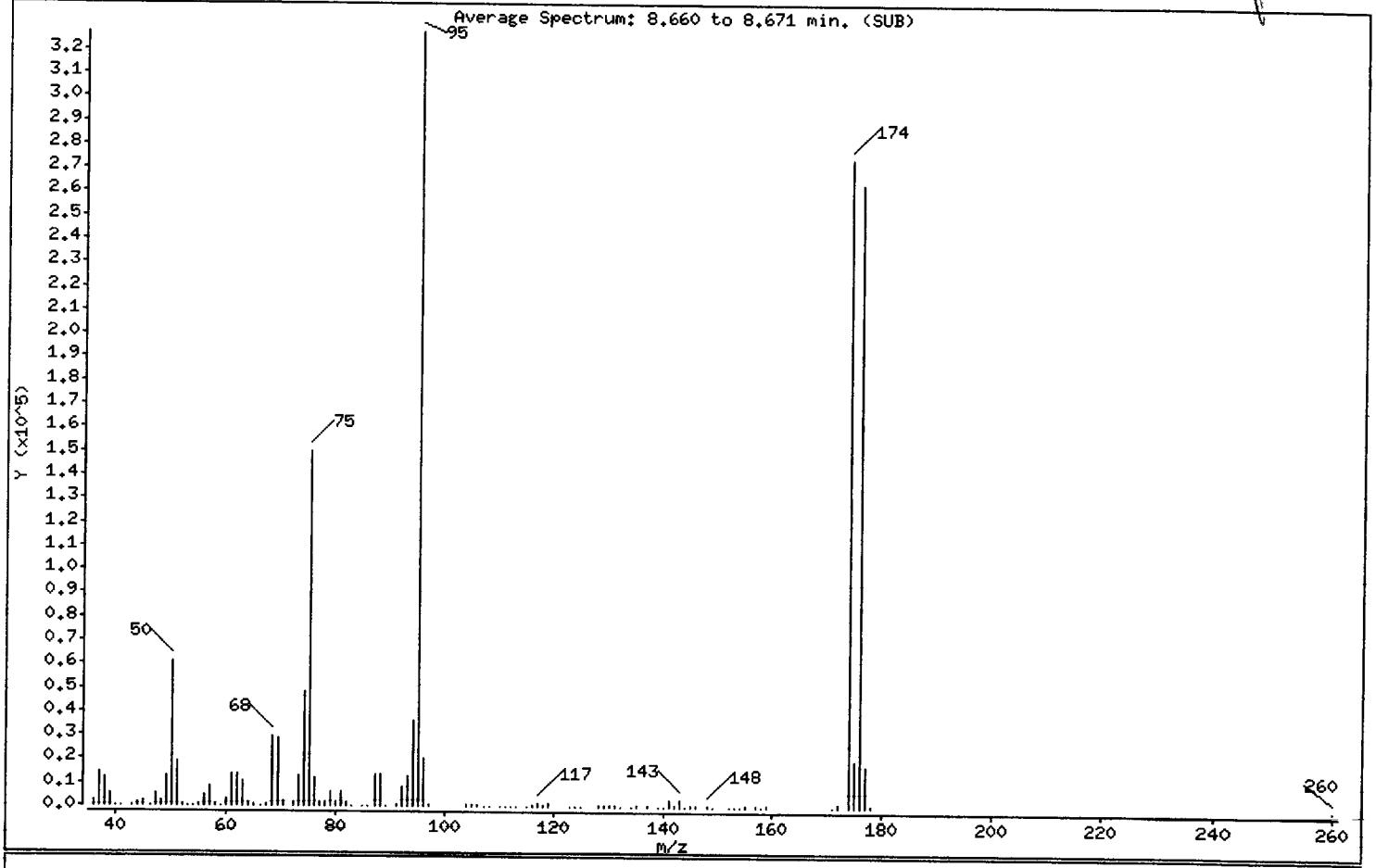
Sample Info: BFB0627,BFB0627,,1,27JUN13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	18.57
75	30.00 - 66.00% of mass 95	45.69
96	5.00 - 9.00% of mass 95	6.19
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 101.00% of mass 95	83.67
175	4.00 - 9.00% of mass 174	5.93 (7.08)
176	95.00 - 101.00% of mass 174	80.56 (96.29)
177	5.00 - 9.00% of mass 176	5.19 (6.44)

Data File: /chem1/nt5.i/27JUN13.b/bfb0627.d

Date : 27-JUN-2013 09:40

Client ID: BFB0627

Instrument: nt5.i

Sample Info: BFB0627,BFB0627,,1,27JUN13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0627.d

Spectrum: Average Spectrum: 8.660 to 8.671 min. (SUB)

Location of Maximum: 95.00

Number of points: 116

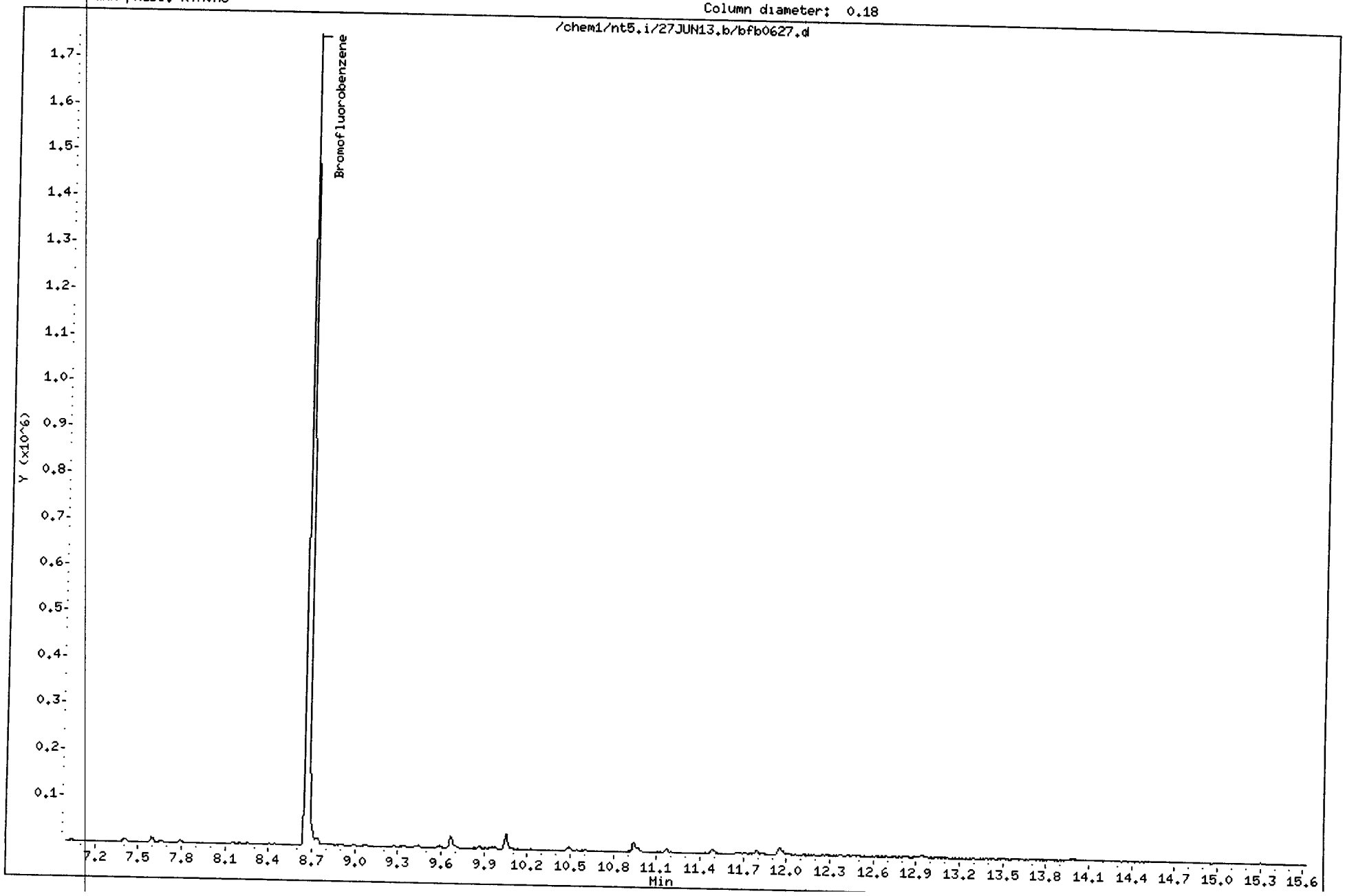
m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2413	67.00	593	104.00	1058	142.00	430
37.00	14073	68.00	29584	105.00	432	143.00	3080
38.00	12168	69.00	28904	106.00	1077	144.00	258
39.00	5333	70.00	2138	107.00	211	145.00	645
40.00	61	71.00	99	108.00	91	146.00	456
41.00	36	72.00	1441	110.00	223	147.00	275
43.00	103	73.00	12577	111.00	244	148.00	816
44.00	1357	74.00	47784	112.00	227	149.00	190
45.00	2483	75.00	149568	113.00	189	150.00	369
46.00	238	76.00	12339	115.00	295	152.00	188
47.00	5379	77.00	1841	116.00	902	153.00	257
48.00	1882	78.00	1197	117.00	1866	154.00	240
49.00	12737	79.00	5874	118.00	879	155.00	812
50.00	60792	80.00	1804	119.00	1407	156.00	102
51.00	19056	81.00	6243	123.00	41	157.00	613
52.00	1001	82.00	1196	124.00	160	158.00	137
53.00	185	83.00	232	125.00	43	159.00	408
54.00	178	85.00	51	126.00	106	161.00	376
55.00	712	86.00	330	127.00	82	171.00	342
56.00	4299	87.00	13622	128.00	830	172.00	1482
57.00	8035	88.00	13621	129.00	447	174.00	273856
58.00	400	89.00	50	130.00	988	175.00	19392
59.00	38	91.00	817	131.00	468	176.00	263680
60.00	2754	92.00	8203	132.00	40	177.00	16976
61.00	13557	93.00	12592	134.00	81	178.00	533
62.00	13729	94.00	35816	135.00	508	260.00	50
63.00	10450	95.00	327296	137.00	734		
64.00	1218	96.00	20272	139.00	65		
65.00	930	97.00	763	140.00	295		
66.00	148	99.00	54	141.00	2804		

Data File: /chem1/nt5.i/27JUN13.b/bfb0627.d
Date : 27-JUN-2013 09:40
Client ID: BFB0627
Sample Info: BFB0627,BFB0627,,1,27JUN13,,

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/VO121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Calibration File Names:
Level 1: /chem1/nt5.i/27JUN13.b/0010627.d
Level 2: /chem1/nt5.i/27JUN13.b/0020627.d
Level 3: /chem1/nt5.i/27JUN13.b/0050627.d
Level 4: /chem1/nt5.i/27JUN13.b/0100627.d
Level 5: /chem1/nt5.i/27JUN13.b/0500627a.d
Level 6: /chem1/nt5.i/27JUN13.b/1000627.d
Level 7: /chem1/nt5.i/27JUN13.b/1500627.d
Level 8: /chem1/nt5.i/27JUN13.b/2000627.d

7/1/2013

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
1 Dichlorodifluoromethane	0.29309	0.28584	0.26797	0.25924	0.33463	0.28372					
	0.28554	0.31573					AVRG		0.29072		8.39284
2 Chloromethane	0.55017	0.61493	0.58189	0.63104	0.64077	0.59042					
	0.58944	0.57243					AVRG		0.59639		5.11665
3 Vinyl Chloride	0.47176	0.53011	0.53772	0.51473	0.62244	0.57436					
	0.52040	0.52535					AVRG		0.53711		8.29899

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	150 Level 7	200 Level 8										
4 Bromomethane	0.32776	0.35834	0.32930	0.31488	0.30763	0.28758						
	0.27571	0.26154					AVRG		0.30784		10.30446	
5 Chloroethane	0.34284	0.34133	0.33155	0.33145	0.36515	0.32596						
	0.29951	0.27632					AVRG		0.32676		8.40236	
6 Trichlorofluoromethane	0.52992	0.56766	0.57657	0.60795	0.64635	0.60415						
	0.61162	0.61850					AVRG		0.59534		6.03579	
7 1,1-Dichloroethene	0.32668	0.32254	0.38804	0.36363	0.42794	0.32175						
	0.34538	0.33111					AVRG		0.35338		10.74379	
8 Carbon Disulfide	1.25910	1.16627	1.44320	1.29187	1.53623	1.13643						
	1.18644	1.10426					AVRG		1.26547		12.10862	
9 112Trichloro122Trifluoroethan	0.33003	0.30450	0.37374	0.33495	0.43004	0.30701						
	0.33161	0.32699					AVRG		0.34236		12.05063	
10 Iodomethane	0.23589	0.19257	0.26331	0.21356	0.44010	0.28139						
	0.30456	0.33544					AVRG		0.28335		27.82180	<-

Analytical Resources, Inc.

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Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
11 Bromoethane	0.23664	0.23531	0.28484	0.21834	0.30216	0.20316					
	0.20764	0.20031					AVRG		0.23605		16.19705
12 Acrolein	+++++	+++++	+++++	0.05813	0.04498	0.05444					
	0.05914	0.05648					AVRG		0.05463		10.39878
13 Methylene Chloride	28528	43270	84192	111292	711184	+++++					
	+++++	+++++					LINR	0.000e+00	0.43880		0.99463
14 Acetone	0.08935	0.08026	0.10115	0.07213	0.09297	0.06303					
	+++++	+++++					AVRG		0.08315		16.95430
15 Trans-1,2-Dichloroethene	0.34738	0.42262	0.38453	0.31232	0.45052	0.28941					
	0.30049	0.30360					AVRG		0.35136		17.43083
16 Methyl tert butyl ether	0.94124	1.24166	1.14693	0.87163	1.21409	+++++					
	+++++	+++++					AVRG		1.08311		15.39513
17 1,1-Dichloroethane	0.68131	0.86652	0.70338	0.89460	0.77401	0.90080					
	+++++	+++++					AVRG		0.80343		12.13942

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
18 Acrylonitrile	0.16082	0.21627	0.14411	0.21353	0.13976	0.21536					
	0.17302	+++++					AVRG		0.18041		18.95091
19 Vinyl Acetate	0.80391	1.16079	1.14781	1.19825	1.09867	1.15218					
	1.10468	1.00948					AVRG		1.08447		11.68005
20 Cis-1,2-Dichloroethene	0.37416	0.44704	0.46392	0.50519	0.47880	0.47709					
	0.47410	0.45751					AVRG		0.45973		8.40187
21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
22 2,2-Dichloropropane	0.56055	0.62663	0.65387	0.69498	0.71806	0.68869					
	0.69233	0.70004					AVRG		0.66689		7.75571
23 Bromochloromethane	0.16796	0.19831	0.20551	0.21747	0.20330	0.20700					
	0.20541	0.20146					AVRG		0.20080		7.17034
24 Chloroform	0.62411	0.75006	0.72026	0.76941	0.74394	0.75776					
	0.74582	0.73649					AVRG		0.73098		6.22909

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	 m1	 m2	%RSD or R^2
	150 Level 7	200 Level 8									
25 Carbon Tetrachloride	0.28404	0.32517	0.32078	0.36155	0.35718	0.36121					
	0.36504	0.36650					AVRG		0.34268		8.68659
26 1,1,1-Trichloroethane	0.54602	0.66603	0.65196	0.71868	0.69036	0.69446					
	0.69755	0.69205					AVRG		0.66964		8.04955
28 1,1-Dichloropropene	0.32100	0.36638	0.42468	0.43700	0.41499	0.40165					
	0.40006	0.39061					AVRG		0.39455		9.30135
29 2-Butanone	0.04271	0.05788	0.05898	0.06239	0.05569	0.06173					
	0.06127	0.05951					AVRG		0.05752		11.08413
30 Benzene	0.90402	1.12161	1.17472	1.26220	1.16364	1.10201					
	1.02456	0.94576					AVRG		1.08732		11.15703
33 1,2-Dichloroethane	0.29081	0.37134	0.36649	0.38448	0.35803	0.35733					
	0.35088	0.34288					AVRG		0.35278		7.96506
34 Trichloroethene	0.22899	0.26004	0.27389	0.29246	0.29348	0.28315					
	0.28498	0.28027					AVRG		0.27466		7.76129

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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End Cal Date : 27-JUN-2013 15:48
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Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
36 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
37 Dibromomethane	0.12247	0.15346	0.15073	0.16184	0.15243	0.15532					
	0.15349	0.14900					AVRG		0.14984		7.80686
38 1,2-Dichloropropane	0.24480	0.30418	0.31913	0.34384	0.31967	0.32267					
	0.31541	0.29852					AVRG		0.30852		9.41858
39 Bromodichloromethane	0.27860	0.33987	0.35054	0.37021	0.35652	0.35408					
	0.34729	0.33555					AVRG		0.34158		8.06866
40 2-Chloroethyl Vinyl Ether	+++++	0.04331	0.04335	0.04769	0.05691	0.05006					
	0.04879	0.04614					AVRG		0.04803		9.74282
41 Cis 1,3-dichloropropene	0.30100	0.40885	0.43824	0.47721	0.45812	0.45431					
	0.44157	0.41545					AVRG		0.42434		12.86330
43 Toluene	0.60106	0.71053	0.72444	0.77755	0.73091	0.69413					
	0.65376	0.61034					AVRG		0.68784		8.94429

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	 m1	 m2	%RSD or R^2
	150 Level 7	200 Level 8									
44 Tetrachloroethene	0.23478	0.28256	0.28623	0.31252	0.32223	0.30480					
	0.30705	0.30585					AVRG		0.29450		9.31105
45 4-Methyl-2-Pentanone	0.08983	0.13595	0.14231	0.15020	0.13087	0.13635					
	0.13032	0.12539					AVRG		0.13015		13.83944
46 Trans 1,3-Dichloropropene	0.29713	0.38646	0.39938	0.43298	0.40777	0.40882					
	0.39862	0.38065					AVRG		0.38898		10.37319
47 1,1,2-Trichloroethane	0.18600	0.23239	0.23391	0.24675	0.22507	0.23071					
	0.22427	0.21469					AVRG		0.22422		8.01801
48 Chlorodibromomethane	0.20028	0.24902	0.26029	0.27734	0.26746	0.27348					
	0.27121	0.26622					AVRG		0.25816		9.67017
49 1,3-Dichloropropane	0.29626	0.40342	0.43207	0.46764	0.42987	0.43989					
	0.42935	0.41136					AVRG		0.41373		12.37279
50 1,2-Dibromoethane	0.16500	0.22380	0.22654	0.24048	0.22325	0.22849					
	0.22372	0.21489					AVRG		0.21827		10.39017

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
51 2-Hexanone	0.14596	0.22249	0.23866	0.25611	0.21870	0.22678					
	0.23115	0.18576					AVRG		0.21570		15.99877
53 Chlorobenzene	0.61172	0.73953	0.75326	0.80617	0.75775	0.71666					
	0.68679	0.64765					AVRG		0.71494		8.87894
54 Ethyl Benzene	1.01434	1.26017	1.33128	1.43642	1.37422	1.20543					
	1.09353	1.00922					AVRG		1.21558		13.46010
55 1,1,1,2-Tetrachloroethane	0.20881	0.24720	0.26522	0.28171	0.27285	0.26877					
	0.26748	0.26087					AVRG		0.25911		8.72239
56 m,p-xylene	0.35279	0.46533	0.49082	0.53392	0.51519	0.46424					
	0.42803	0.40030					AVRG		0.45633		13.22102
57 o-Xylene	0.30835	0.41001	0.44982	0.50599	0.50168	0.48686					
	0.47821	0.46212					AVRG		0.45038		14.47979
58 Styrene	0.49822	0.72635	0.78816	0.85715	0.83737	0.78445					
	0.73196	0.68037					AVRG		0.73800		15.34131

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
59 Bromoform	0.25276	0.34342	0.34984	0.38411	0.34624	0.36968					
	0.37040	0.36173					AVRG		0.34727		11.70069
60 Isopropyl Benzene	1.35819	2.02699	2.26150	2.55549	2.40369	2.17576					
	2.00598	1.80399					AVRG		2.07395		18.02436
61 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00 <-
63 Bromobenzene	0.41719	0.57241	0.59012	0.64561	0.58506	0.58806					
	0.59238	0.57137					AVRG		0.57028		11.58136
64 N-Propyl Benzene	1.97454	2.60716	2.75292	3.07288	2.85782	2.46869					
	2.23611	2.01778					AVRG		2.49849		15.94465
65 1,1,2,2-Tetrachloroethane	0.42384	0.58894	0.58264	0.63388	0.55796	0.60002					
	0.61215	0.59856					AVRG		0.57475		11.27981
66 2-Chloro Toluene	1.12570	1.54349	1.65109	1.85215	1.74056	1.64411					
	1.57958	1.46179					AVRG		1.57481		13.79766

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
67 1,3,5-Trimethyl Benzene	1.20411	1.73863	1.89672	2.14669	2.04291	1.88189					
	1.77468	1.61757					AVRG		1.78790		16.19489
68 1,2,3-Trichloropropane	0.12948	0.18149	0.18334	0.19593	0.17333	0.18580					
	0.19086	0.18892					AVRG		0.17864		11.74275
69 Trans-1,4-Dichloro 2-Butene	0.16440	0.19680	0.21147	0.22554	0.21442	0.23717					
	0.23731	0.24659					AVRG		0.21671		12.30780
70 4-Chloro Toluene	1.12741	1.63310	1.71985	1.90827	1.83411	1.69985					
	1.63746	1.55349					AVRG		1.63919		14.39760
71 T-Butyl Benzene	1.04960	1.48905	1.66608	1.88614	1.79418	1.69148					
	1.62105	1.50672					AVRG		1.58804		16.06441
72 1,2,4-Trimethylbenzene	1.14287	1.69692	1.85017	2.10121	2.01532	1.84536					
	1.73916	1.59425					AVRG		1.74816		16.86759
73 S-Butyl Benzene	1.66184	2.35390	2.49731	2.77753	2.64262	2.30961					
	2.11624	1.90668					AVRG		2.28322		16.39454

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/VO121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
74 4-Isopropyl Toluene	1.24501	1.71495	1.95678	2.25072	2.20625	1.95367					
	1.81225	1.65716					AVRG		1.84960		17.48955
75 1,3-Dichlorobenzene	0.82012	1.08858	1.09898	1.18882	1.12389	1.04101					
	1.01285	0.96339					AVRG		1.04221		10.87615
77 1,4-Dichlorobenzene	0.90073	1.10177	1.10641	1.21485	1.14882	1.07382					
	1.05714	1.02086					AVRG		1.07805		8.60654
78 N-Butyl Benzene	1.17683	1.57702	1.74179	2.00573	2.10846	1.86804					
	1.75912	1.64832					AVRG		1.73566		16.51447
80 1,2-Dichlorobenzene	0.82220	1.05293	1.06651	1.14331	1.05473	1.00855					
	0.99831	0.98409					AVRG		1.01633		9.15257
81 1,2-Dibromo 3-Chloropropane	+++++	0.10373	0.11220	0.12029	0.10922	0.12267					
	0.13007	0.13429					AVRG		0.11892		9.37957
82 Hexachloro 1,3-Butadiene	+++++	0.45277	0.45831	0.50040	0.51853	0.48232					
	0.49822	0.50794					AVRG		0.48836		5.11384

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
83 1,2,4-Trichlorobenzene	+++++	0.66241	0.67343	0.78724	0.81979	0.76633					
	0.79972	0.80232					AVRG		0.75875		8.46192
84 Naphthalene	+++++	1.64126	1.65074	1.87303	1.64800	1.68837					
	1.66153	1.55889					AVRG		1.67455		5.74406
85 1,2,3-Trichlorobenzene	+++++	0.69856	0.72000	0.79736	0.75893	0.73768					
	0.77822	0.77486					AVRG		0.75223		4.66880
$ 27 Dibromofluoromethane	0.49143	0.49229	0.47698	0.48835	0.45642	0.48289					
	0.48434	0.47875					AVRG		0.48143		2.39247
$ 32 d4-1,2-Dichloroethane	0.55020	0.56114	0.55027	0.54459	0.54753	0.53306					
	0.54104	0.54891					AVRG		0.54709		1.48252
$ 42 d8-Toluene	1.25954	1.24423	1.24694	1.24151	1.22576	1.23886					
	1.23533	1.22289					AVRG		1.23938		0.94792
$ 62 4-Bromofluorobenzene	0.53541	0.53267	0.53218	0.52739	0.53438	0.53142					
	0.53201	0.53177					AVRG		0.53215		0.44480

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
$ 79 d4-1,2-Dichlorobenzene	0.92719	0.91822	0.91106	0.91970	0.90066	0.89375					
	0.90757	0.91763					AVRG		0.91197		1.20306

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Linear	Amt = b + Rsp/m1	Response

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/VO121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt5.i/27JUN13.b/0010627.d
Level 2: /chem1/nt5.i/27JUN13.b/0020627.d
Level 3: /chem1/nt5.i/27JUN13.b/0050627.d
Level 4: /chem1/nt5.i/27JUN13.b/0100627.d
Level 5: /chem1/nt5.i/27JUN13.b/0500627a.d
Level 6: /chem1/nt5.i/27JUN13.b/1000627.d
Level 7: /chem1/nt5.i/27JUN13.b/1500627.d
Level 8: /chem1/nt5.i/27JUN13.b/2000627.d

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
1 Dichlorodifluoromethane	0.29309	0.28584	0.26797	0.25924	0.33463	0.28372		
	0.28554	0.31573					0.29072	8.393
2 Chloromethane	0.55017	0.61493	0.58189	0.63104	0.64077	0.59042		
	0.58944	0.57243					0.59639	5.117
3 Vinyl Chloride	0.47176	0.53011	0.53772	0.51473	0.62244	0.57436		
	0.52040	0.52535					0.53711	8.299
4 Bromomethane	0.32776	0.35834	0.32930	0.31488	0.30763	0.28758		
	0.27571	0.26154					0.30784	10.304
5 Chloroethane	0.34284	0.34133	0.33155	0.33145	0.36515	0.32596		
	0.29951	0.27632					0.32676	8.402
6 Trichlorofluoromethane	0.52992	0.56766	0.57657	0.60795	0.64635	0.60415		
	0.61162	0.61850					0.59534	6.036

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
	150.000 Level 7	200.000 Level 8							
7 1,1-Dichloroethene	0.32668	0.32254	0.38804	0.36363	0.42794	0.32175			
	0.34538	0.33111					0.35338	10.744	
8 Carbon Disulfide	1.25910	1.16627	1.44320	1.29187	1.53623	1.13643			
	1.18644	1.10426					1.26547	12.109	
9 112Trichloro122Trifluoroethan	0.33003	0.30450	0.37374	0.33495	0.43004	0.30701			
	0.33161	0.32699					0.34236	12.051	
10 Iodomethane	0.23589	0.19257	0.26331	0.21356	0.44010	0.28139			
	0.30456	0.33544					0.28335	27.822	<-
11 Bromoethane	0.23664	0.23531	0.28484	0.21834	0.30216	0.20316			
	0.20764	0.20031					0.23605	16.197	
12 Acrolein	+++++	+++++	+++++	0.05813	0.04498	0.05444			
	0.05914	0.05648					0.05463	10.399	
13 Methylene Chloride	0.78939	0.66379	0.49685	0.32286	0.44075	+++++			
	+++++	+++++					0.54273	34.018	<-
14 Acetone	0.08935	0.08026	0.10115	0.07213	0.09297	0.06303			
	+++++	+++++					0.08315	16.954	
15 Trans-1,2-Dichloroethene	0.34738	0.42262	0.38453	0.31232	0.45052	0.28941			
	0.30049	0.30360					0.35136	17.431	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	150.000 Level 7	200.000 Level 8	RRF	% RSD	
16 Methyl tert butyl ether	0.94124	1.24166	1.14693	0.87163	1.21409	+++++	+++++	+++++	1.08311	15.395	
17 1,1-Dichloroethane	0.68131	0.86652	0.70338	0.89460	0.77401	0.90080	+++++	+++++	0.80343	12.139	
18 Acrylonitrile	0.16082	0.21627	0.14411	0.21353	0.13976	0.21536	0.17302	+++++	0.18041	18.951	
19 Vinyl Acetate	0.80391	1.16079	1.14781	1.19825	1.09867	1.15218	1.10468	1.00948	1.08447	11.680	
20 Cis-1,2-Dichloroethene	0.37416	0.44704	0.46392	0.50519	0.47880	0.47709	0.47410	0.45751	0.45973	8.402	
21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
22 2,2-Dichloropropane	0.56055	0.62663	0.65387	0.69498	0.71806	0.68869	0.69233	0.70004	0.66689	7.756	
23 Bromochloromethane	0.16796	0.19831	0.20551	0.21747	0.20330	0.20700	0.20541	0.20146	0.20080	7.170	
24 Chloroform	0.62411	0.75006	0.72026	0.76941	0.74394	0.75776	0.74582	0.73649	0.73098	6.229	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
	150.000 Level 7	200.000 Level 8							
25 Carbon Tetrachloride	0.28404	0.32517	0.32078	0.36155	0.35718	0.36121			
	0.36504	0.36650					0.34268	8.687	
26 1,1,1-Trichloroethane	0.54602	0.66603	0.65196	0.71868	0.69036	0.69446			
	0.69755	0.69205					0.66964	8.050	
28 1,1-Dichloropropene	0.32100	0.36638	0.42468	0.43700	0.41499	0.40165			
	0.40006	0.39061					0.39455	9.301	
29 2-Butanone	0.04271	0.05788	0.05898	0.06239	0.05569	0.06173			
	0.06127	0.05951					0.05752	11.084	
30 **Benzene**	0.90402	1.12161	1.17472	1.26220	1.16364	1.10201			
	1.02456	0.94576					1.08732	11.157	
33 1,2-Dichloroethane	0.29081	0.37134	0.36649	0.38448	0.35803	0.35733			
	0.35088	0.34288					0.35278	7.965	
34 Trichloroethene	0.22899	0.26004	0.27389	0.29246	0.29348	0.28315			
	0.28498	0.28027					0.27466	7.761	
36 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
37 Dibromomethane	0.12247	0.15346	0.15073	0.16184	0.15243	0.15532			
	0.15349	0.14900					0.14984	7.807	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
38 1,2-Dichloropropane	0.24480	0.30418	0.31913	0.34384	0.31967	0.32267		
	0.31541	0.29852					0.30852	9.419
39 Bromodichloromethane	0.27860	0.33987	0.35054	0.37021	0.35652	0.35408		
	0.34729	0.33555					0.34158	8.069
40 2-Chloroethyl Vinyl Ether	+++++	0.04331	0.04335	0.04769	0.05691	0.05006		
	0.04879	0.04614					0.04803	9.743
41 Cis 1,3-dichloropropene	0.30100	0.40885	0.43824	0.47721	0.45812	0.45431		
	0.44157	0.41545					0.42434	12.863
43 Toluene	0.60106	0.71053	0.72444	0.77755	0.73091	0.69413		
	0.65376	0.61034					0.68784	8.944
44 Tetrachloroethene	0.23478	0.28256	0.28623	0.31252	0.32223	0.30480		
	0.30705	0.30585					0.29450	9.311
45 4-Methyl-2-Pentanone	0.08983	0.13595	0.14231	0.15020	0.13087	0.13635		
	0.13032	0.12539					0.13015	13.839
46 Trans 1,3-Dichloropropene	0.29713	0.38646	0.39938	0.43298	0.40777	0.40882		
	0.39862	0.38065					0.38898	10.373
47 1,1,2-Trichloroethane	0.18600	0.23239	0.23391	0.24675	0.22507	0.23071		
	0.22427	0.21469					0.22422	8.018

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/VO121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
48 Chlorodibromomethane	0.20028	0.24902	0.26029	0.27734	0.26746	0.27348		
	0.27121	0.26622					0.25816	9.670
49 1,3-Dichloropropane	0.29626	0.40342	0.43207	0.46764	0.42987	0.43989		
	0.42935	0.41136					0.41373	12.373
50 1,2-Dibromoethane	0.16500	0.22380	0.22654	0.24048	0.22325	0.22849		
	0.22372	0.21489					0.21827	10.390
51 2-Hexanone	0.14596	0.22249	0.23866	0.25611	0.21870	0.22678		
	0.23115	0.18576					0.21570	15.999
53 Chlorobenzene	0.61172	0.73953	0.75326	0.80617	0.75775	0.71666		
	0.68679	0.64765					0.71494	8.879
54 Ethyl Benzene	1.01434	1.26017	1.33128	1.43642	1.37422	1.20543		
	1.09353	1.00922					1.21558	13.460
55 1,1,1,2-Tetrachloroethane	0.20881	0.24720	0.26522	0.28171	0.27285	0.26877		
	0.26748	0.26087					0.25911	8.722
56 m,p-xylene	0.35279	0.46533	0.49082	0.53392	0.51519	0.46424		
	0.42803	0.40030					0.45633	13.221
57 o-Xylene	0.30835	0.41001	0.44982	0.50599	0.50168	0.48686		
	0.47821	0.46212					0.45038	14.480

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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End Cal Date : 27-JUN-2013 15:48
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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
	150.000 Level 7	200.000 Level 8							
58 Styrene	0.49822	0.72635	0.78816	0.85715	0.83737	0.78445			
	0.73196	0.68037					0.73800	15.341	
59 Bromoform	0.25276	0.34342	0.34984	0.38411	0.34624	0.36968			
	0.37040	0.36173					0.34727	11.701	
60 Isopropyl Benzene	1.35819	2.02699	2.26150	2.55549	2.40369	2.17576			
	2.00598	1.80399					2.07395	18.024	
61 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
63 Bromobenzene	0.41719	0.57241	0.59012	0.64561	0.58506	0.58806			
	0.59238	0.57137					0.57028	11.581	
64 N-Propyl Benzene	1.97454	2.60716	2.75292	3.07288	2.85782	2.46869			
	2.23611	2.01778					2.49849	15.945	
65 1,1,2,2-Tetrachloroethane	0.42384	0.58894	0.58264	0.63388	0.55796	0.60002			
	0.61215	0.59856					0.57475	11.280	
66 2-Chloro Toluene	1.12570	1.54349	1.65109	1.85215	1.74056	1.64411			
	1.57958	1.46179					1.57481	13.798	
67 1,3,5-Trimethyl Benzene	1.20411	1.73863	1.89672	2.14669	2.04291	1.88189			
	1.77468	1.61757					1.78790	16.195	

Analytical Resources, Inc.

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Cal Date : 28-Jun-2013 11:09 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
68 1,2,3-Trichloropropane	0.12948	0.18149	0.18334	0.19593	0.17333	0.18580		
	0.19086	0.18892					0.17864	11.743
69 Trans-1,4-Dichloro 2-Butene	0.16440	0.19680	0.21147	0.22554	0.21442	0.23717		
	0.23731	0.24659					0.21671	12.308
70 4-Chloro Toluene	1.12741	1.63310	1.71985	1.90827	1.83411	1.69985		
	1.63746	1.55349					1.63919	14.398
71 T-Butyl Benzene	1.04960	1.48905	1.66608	1.88614	1.79418	1.69148		
	1.62105	1.50672					1.58804	16.064
72 1,2,4-Trimethylbenzene	1.14287	1.69692	1.85017	2.10121	2.01532	1.84536		
	1.73916	1.59425					1.74816	16.868
73 S-Butyl Benzene	1.66184	2.35390	2.49731	2.77753	2.64262	2.30961		
	2.11624	1.90668					2.28322	16.395
74 4-Isopropyl Toluene	1.24501	1.71495	1.95678	2.25072	2.20625	1.95367		
	1.81225	1.65716					1.84960	17.490
75 1,3-Dichlorobenzene	0.82012	1.08858	1.09898	1.18882	1.12389	1.04101		
	1.01285	0.96339					1.04221	10.876
77 1,4-Dichlorobenzene	0.90073	1.10177	1.10641	1.21485	1.14882	1.07382		
	1.05714	1.02086					1.07805	8.607

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Cal Date : 28-Jun-2013 11:09 patrickb
Curve Type : Average

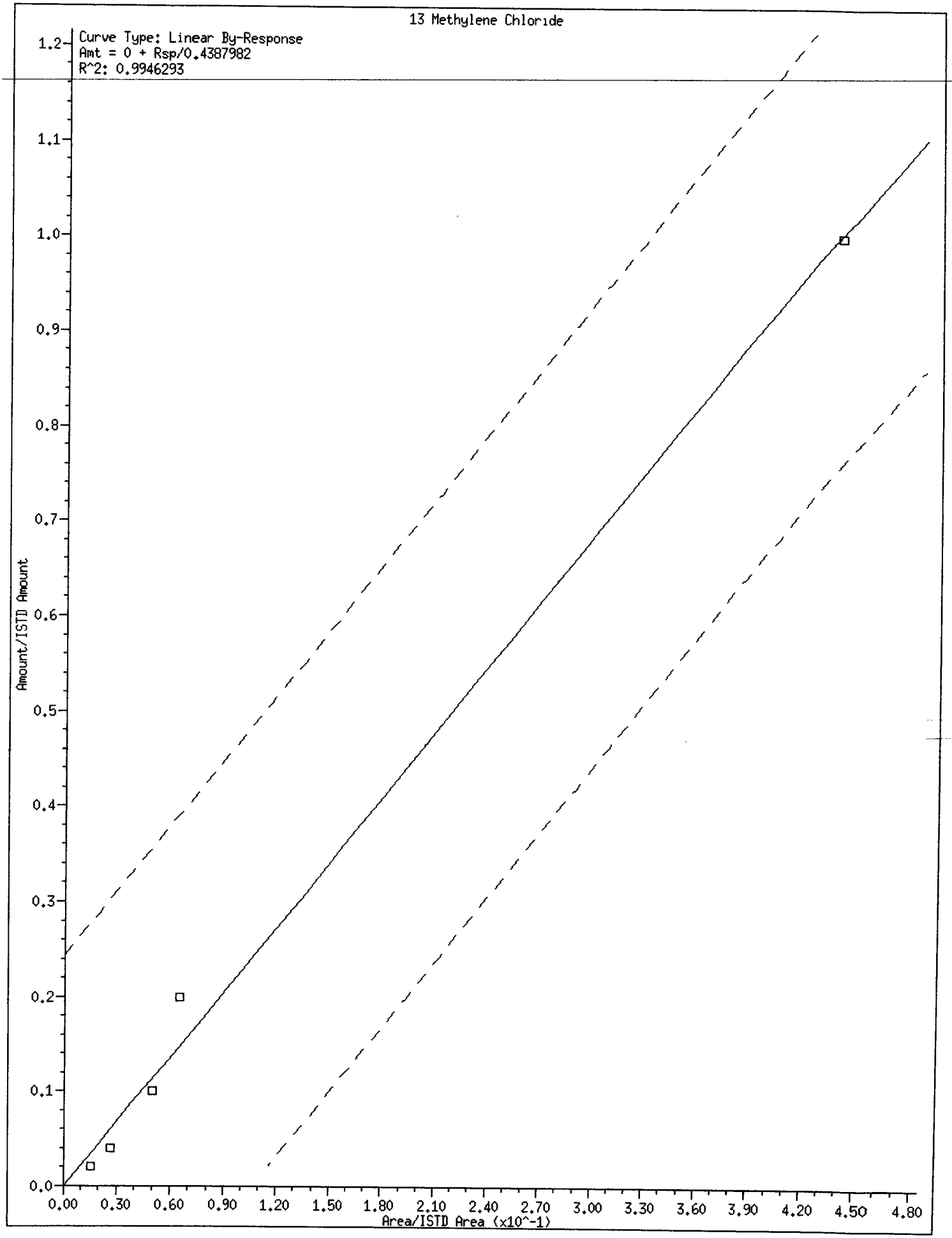
Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
78 N-Butyl Benzene	1.17683	1.57702	1.74179	2.00573	2.10846	1.86804	1.73566	16.514
	1.75912	1.64832						
80 1,2-Dichlorobenzene	0.82220	1.05293	1.06651	1.14331	1.05473	1.00855	1.01633	9.153
	0.99831	0.98409						
81 1,2-Dibromo 3-Chloropropane	+++++	0.10373	0.11220	0.12029	0.10922	0.12267	0.11892	9.380
	0.13007	0.13429						
82 Hexachloro 1,3-Butadiene	+++++	0.45277	0.45831	0.50040	0.51853	0.48232	0.48836	5.114
	0.49822	0.50794						
83 1,2,4-Trichlorobenzene	+++++	0.66241	0.67343	0.78724	0.81979	0.76633	0.75875	8.462
	0.79972	0.80232						
84 Naphthalene	+++++	1.64126	1.65074	1.87303	1.64800	1.68837	1.67455	5.744
	1.66153	1.55889						
85 1,2,3-Trichlorobenzene	+++++	0.69856	0.72000	0.79736	0.75893	0.73768	0.75223	4.669
	0.77822	0.77486						
$ 27 Dibromofluoromethane	0.49143	0.49229	0.47698	0.48835	0.45642	0.48289	0.48143	2.392
	0.48434	0.47875						
$ 32 d4-1,2-Dichloroethane	0.55020	0.56114	0.55027	0.54459	0.54753	0.53306	0.54709	1.483
	0.54104	0.54891						

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
$ 42 d8-Toluene	1.25954	1.24423	1.24694	1.24151	1.22576	1.23886		
	1.23533	1.22289					1.23938	0.948
$ 62 4-Bromofluorobenzene	0.53541	0.53267	0.53218	0.52739	0.53438	0.53142		
	0.53201	0.53177					0.53215	0.445
$ 79 d4-1,2-Dichlorobenzene	0.92719	0.91822	0.91106	0.91970	0.90066	0.89375		
	0.90757	0.91763					0.91197	1.203


13 Methylene Chloride
Curve Type: Linear By-Response
Amt = 0 + Rsp/0.4387982
R^2: 0.9946293
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
0.00
0.30
0.60
0.90
1.20
1.50
1.80
2.10
2.40
2.70
3.00
3.30
3.60
3.90
4.20
4.50
4.80

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt5.i/27JUN13.b

ARI Job No.: BFB0 Method: bfb8260.m Instrument: nt5.i Date: 27-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0940	bfb0627.d	BFB0627	BFB0627	1	NO MANUAL INTEGRATION
1043	0010627.d	IC0627	VSTD1	1	Chloromethane, Acrolein, Acetone, Acrylonitrile, 1,2,3-Trichloropropane, Trans-1,4-Dichloro 2-Butene,
1107	2000627.d	IC0627	VSTD200	1	Chloromethane,
1131	1500627.d	IC0627	VSTD150	1	Chloromethane,
1155	1000627.d	IC0627	VSTD100	1	Chloromethane,
1243	0100627.d	IC0627	VSTD10	1	Chloromethane, Acetone,
1307	0050627.d	IC0627	VSTD5	1	Chloromethane, Acrolein,
1330	0020627.d	IC0627	VSTD2	1	Chloromethane, 1,2,3-Trichloropropane, Trans-1,4-Dichloro 2-Butene,
1548	0500627a.d	IC0627	VSTD50	1	Chloromethane, Acrolein, Acetone,
1722	icv0627.d	ICV0627	ICV0627	1	Chloromethane, Acetone,

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Batch File: /chem1/nt5.i/27JUN13.b
Inst ID: nt5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	0010627	2000627	1500627	1000627	0100627	0050627	0020627	0500627a
INJ.DATE:	27-JUN-2013	27-JUN-2013	27-JUN-2013	27-JUN-2013	27-JUN-2013	27-JUN-2013	27-JUN-2013	27-JUN-2013
INJ.TIME:	10:43	11:07	11:31	11:55	12:43	13:07	13:30	15:48

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Dichlorodifluoromethan	1.028	1.034	1.045	1.057	1.034	1.040	1.034	1.028	1.057	0.963-1.150	1.038	0.010
2 Chloromethane	1.153	1.153	1.159	1.176	1.153	1.159	1.159	1.147	1.176	1.082-1.269	1.157	0.008
3 Vinyl Chloride	1.198	1.204	1.215	1.227	1.204	1.210	1.204	1.198	1.226	1.133-1.320	1.207	0.010
4 Bromomethane	1.413	1.407	1.419	1.430	1.407	1.413	1.407	1.407	1.436	1.342-1.529	1.413	0.008
5 Chloroethane	1.492	1.498	1.509	1.521	1.498	1.504	1.498	1.492	1.521	1.427-1.614	1.502	0.010
6 Trichlorofluoromethane	1.583	1.588	1.600	1.611	1.589	1.594	1.594	1.583	1.611	1.518-1.704	1.593	0.010
7 1,1-Dichloroethene	1.951	1.939	1.956	1.968	1.945	1.956	1.951	1.945	1.973	1.880-2.066	1.951	0.009
8 Carbon Disulfide	1.951	1.945	1.956	1.968	1.951	1.956	1.951	1.945	1.979	1.885-2.072	1.953	0.007
9 112Trichloro122Trifluo	1.990	1.984	1.996	2.007	1.984	1.996	1.990	1.990	2.018	1.925-2.112	1.992	0.007
10 Iodomethane	2.047	2.047	2.058	2.064	2.047	2.058	2.047	2.047	2.075	1.981-2.168	2.052	0.007
11 Bromoethane	2.143	2.143	2.154	2.160	2.143	2.154	2.149	2.143	2.171	2.078-2.264	2.149	0.007
12 Acrolein	2.262	2.245	2.262	2.267	2.245	2.290	2.250	2.301	2.313	2.219-2.406	2.265	0.021
13 Methylene Chloride	2.426	2.409	2.420	2.432	2.414	2.437	2.420	2.420	2.454	2.360-2.547	2.422	0.009
14 Acetone	2.652	2.584	2.595	2.596	2.584	2.726	2.567	2.725	2.742	2.649-2.836	2.629	0.065
15 Trans-1,2-Dichloroethe	2.567	2.545	2.556	2.567	2.550	2.573	2.567	2.561	2.590	2.496-2.683	2.561	0.010
16 Methyl tert butyl ethe	2.731	2.731	2.743	2.765	2.737	2.737	2.743	2.725	2.754	2.660-2.847	2.739	0.012
17 1,1-Dichloroethane	3.172	3.144	3.161	3.178	3.155	3.178	3.178	3.172	3.201	3.107-3.294	3.168	0.013

Reviewer 1 _____ Date: 6/4/13

Reviewer 2 _____ Date: _____

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Batch File: /chem1/nt5.i/27JUN13.b
Inst ID: nt5.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 Acrylonitrile	3.303	3.297	3.303	3.314	3.297	3.320	3.286	3.336	3.348	3.254-3.441	3.307	0.016
	19 Vinyl Acetate	3.512	3.512	3.529	3.540	3.518	3.523	3.518	3.517	3.540	3.447-3.633	3.521	0.010
	20 Cis-1,2-Dichloroethene	3.727	3.704	3.716	3.733	3.716	3.727	3.721	3.721	3.744	3.650-3.837	3.720	0.009
	21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.560	4.467-4.653	+++++	+++++
	22 2,2-Dichloropropane	3.823	3.795	3.812	3.829	3.812	3.823	3.829	3.817	3.840	3.746-3.933	3.817	0.011
	23 Bromochloromethane	3.913	3.897	3.908	3.919	3.902	3.919	3.908	3.908	3.930	3.837-4.024	3.909	0.008
	24 Chloroform	4.010	4.010	4.015	4.027	4.010	4.015	4.015	4.010	4.027	3.933-4.120	4.014	0.006
	25 Carbon Tetrachloride	4.100	4.072	4.089	4.100	4.089	4.100	4.106	4.094	4.117	4.015-4.219	4.094	0.011
	26 1,1,1-Trichloroethane	4.174	4.151	4.162	4.174	4.162	4.174	4.174	4.168	4.185	4.091-4.278	4.167	0.008
$	27 Dibromofluoromethane	4.179	4.179	4.185	4.196	4.179	4.185	4.179	4.179	4.196	4.103-4.290	4.183	0.006
	28 1,1-Dichloropropene	4.287	4.270	4.281	4.293	4.281	4.293	4.292	4.287	4.304	4.201-4.406	4.285	0.008
	29 2-Butanone	4.383	4.434	4.428	4.411	4.400	4.428	4.372	4.428	4.434	4.340-4.527	4.411	0.024
	30 Benzene	4.519	4.507	4.519	4.525	4.513	4.519	4.519	4.519	4.530	4.428-4.632	4.517	0.005
*	31 Pentafluorobenzene	4.660	4.649	4.660	4.666	4.655	4.660	4.660	4.654	4.671	4.578-4.765	4.658	0.005
$	32 d4-1,2-Dichloroethane	4.649	4.649	4.655	4.660	4.649	4.655	4.655	4.649	4.666	4.572-4.759	4.652	0.004
	33 1,2-Dichloroethane	4.711	4.711	4.717	4.723	4.711	4.717	4.717	4.711	4.728	4.626-4.830	4.715	0.004
	34 Trichloroethene	5.056	5.051	5.056	5.062	5.051	5.056	5.056	5.056	5.067	4.965-5.170	5.055	0.004
*	35 1,4-Difluorobenzene	5.113	5.107	5.113	5.119	5.107	5.113	5.113	5.107	5.118	5.016-5.221	5.111	0.004
	36 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.693	5.591-5.795	+++++	+++++
	37 Dibromomethane	5.413	5.413	5.418	5.418	5.413	5.418	5.413	5.412	5.424	5.321-5.526	5.415	0.003
	38 1,2-Dichloropropane	5.509	5.509	5.509	5.515	5.503	5.509	5.509	5.503	5.514	5.412-5.617	5.508	0.004
	39 Bromodichloromethane	5.582	5.588	5.588	5.588	5.582	5.582	5.582	5.582	5.588	5.485-5.690	5.584	0.003

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Batch File: /chem1/nt5.i/27JUN13.b
Inst ID: nt5.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	40 2-Chloroethyl Vinyl Et	6.120	6.125	6.125	6.125	6.120	6.125	6.120	6.120	6.125	6.023-6.228	6.123	0.003
	41 Cis 1,3-dichloropropen	6.131	6.131	6.137	6.137	6.131	6.131	6.131	6.131	6.137	6.034-6.239	6.132	0.003
$	42 d8-Toluene	6.289	6.289	6.289	6.295	6.284	6.290	6.289	6.289	6.295	6.193-6.397	6.289	0.003
	43 Toluene	6.329	6.335	6.335	6.335	6.329	6.329	6.329	6.329	6.335	6.232-6.437	6.331	0.003
	44 Tetrachloroethene	6.646	6.646	6.646	6.646	6.640	6.646	6.640	6.646	6.646	6.494-6.798	6.644	0.003
	45 4-Methyl-2-Pentanone	6.697	6.725	6.719	6.714	6.702	6.702	6.697	6.702	6.708	6.606-6.810	6.707	0.011
	46 Trans 1,3-Dichloroprop	6.691	6.702	6.702	6.702	6.697	6.697	6.691	6.697	6.702	6.600-6.805	6.697	0.005
	47 1,1,2-Trichloroethane	6.827	6.838	6.832	6.833	6.821	6.827	6.821	6.827	6.827	6.724-6.929	6.828	0.006
	48 Chlorodibromomethane	6.957	6.968	6.968	6.968	6.963	6.963	6.957	6.962	6.963	6.811-7.114	6.963	0.005
	49 1,3-Dichloropropane	7.042	7.053	7.053	7.048	7.042	7.042	7.042	7.042	7.047	6.895-7.199	7.045	0.005
	50 1,2-Dibromoethane	7.132	7.144	7.144	7.144	7.138	7.138	7.138	7.138	7.144	7.041-7.246	7.139	0.004
	51 2-Hexanone	7.409	7.432	7.426	7.421	7.415	7.415	7.409	7.415	7.421	7.269-7.573	7.418	0.008
*	52 d5-Chlorobenzene	7.590	7.596	7.596	7.596	7.590	7.591	7.590	7.596	7.596	7.444-7.748	7.593	0.003
	53 Chlorobenzene	7.607	7.613	7.613	7.613	7.607	7.608	7.607	7.607	7.613	7.461-7.765	7.610	0.003
	54 Ethyl Benzene	7.658	7.670	7.670	7.664	7.653	7.658	7.653	7.658	7.664	7.512-7.816	7.661	0.007
	55 1,1,1,2-Tetrachloroeth	7.670	7.687	7.687	7.681	7.670	7.675	7.670	7.675	7.675	7.523-7.827	7.677	0.007
	56 m,p-xylene	7.788	7.805	7.805	7.800	7.788	7.789	7.788	7.794	7.794	7.642-7.946	7.795	0.008
	57 o-Xylene	8.150	8.162	8.162	8.156	8.151	8.151	8.150	8.156	8.156	8.004-8.308	8.155	0.005
	58 Styrene	8.201	8.213	8.207	8.207	8.196	8.202	8.201	8.201	8.201	8.049-8.353	8.204	0.005
	59 Bromoform	8.190	8.207	8.201	8.202	8.190	8.190	8.190	8.196	8.196	8.002-8.389	8.196	0.007
	60 Isopropyl Benzene	8.439	8.450	8.445	8.445	8.439	8.439	8.439	8.445	8.445	8.251-8.638	8.443	0.004
	61 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.568	8.416-8.720	+++++	+++++
$	62 4-Bromofluorobenzene	8.665	8.665	8.665	8.665	8.660	8.660	8.660	8.665	8.665	8.513-8.817	8.663	0.003
	63 Bromobenzene	8.739	8.744	8.745	8.745	8.739	8.739	8.739	8.739	8.739	8.545-8.932	8.741	0.003

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Batch File: /chem1/nt5.i/27JUN13.b
Inst ID: nt5.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	64 N-Propyl Benzene	8.807	8.818	8.818	8.812	8.807	8.807	8.807	8.812	8.812	8.619-9.006	8.811	0.005
	65 1,1,2,2-Tetrachloroeth	8.869	8.897	8.880	8.875	8.869	8.869	8.869	8.869	8.869	8.675-9.062	8.875	0.010
	66 2-Chloro Toluene	8.920	8.931	8.926	8.926	8.914	8.914	8.914	8.920	8.920	8.726-9.113	8.921	0.006
	67 1,3,5-Trimethyl Benzen	8.999	9.016	9.010	9.005	8.993	8.993	8.993	9.005	8.999	8.806-9.192	9.002	0.009
	68 1,2,3-Trichloropropane	8.965	8.982	8.976	8.971	8.965	8.965	8.965	8.971	8.971	8.777-9.164	8.970	0.006
	69 Trans-1,4-Dichloro 2-B	9.027	9.044	9.039	9.033	9.022	9.022	9.022	9.027	9.027	8.834-9.221	9.029	0.009
	70 4-Chloro Toluene	9.073	9.084	9.078	9.078	9.067	9.067	9.067	9.072	9.073	8.879-9.266	9.073	0.006
	71 T-Butyl Benzene	9.276	9.282	9.282	9.276	9.271	9.271	9.271	9.276	9.276	9.083-9.470	9.276	0.005
	72 1,2,4-Trimethylbenzene	9.344	9.350	9.350	9.344	9.338	9.339	9.338	9.344	9.338	9.145-9.532	9.343	0.005
	73 S-Butyl Benzene	9.440	9.452	9.446	9.440	9.435	9.435	9.435	9.440	9.440	9.247-9.634	9.440	0.006
	74 4-Isopropyl Toluene	9.587	9.599	9.593	9.588	9.582	9.582	9.582	9.587	9.582	9.388-9.775	9.587	0.006
	75 1,3-Dichlorobenzene	9.599	9.610	9.604	9.599	9.593	9.593	9.593	9.599	9.599	9.405-9.792	9.599	0.006
*	76 d4-1,4-Dichlorobenzene	9.672	9.678	9.678	9.672	9.667	9.667	9.667	9.672	9.672	9.479-9.866	9.672	0.005
	77 1,4-Dichlorobenzene	9.684	9.695	9.689	9.689	9.678	9.678	9.678	9.689	9.683	9.490-9.877	9.685	0.007
	78 N-Butyl Benzene	9.972	9.978	9.978	9.972	9.966	9.966	9.966	9.972	9.966	9.773-10.160	9.971	0.005
$	79 d4-1,2-Dichlorobenzene	10.057	10.063	10.057	10.057	10.051	10.051	10.051	10.057	10.051	9.858-10.245	10.055	0.004
	80 1,2-Dichlorobenzene	10.063	10.074	10.068	10.063	10.057	10.057	10.057	10.068	10.062	9.869-10.256	10.063	0.006
	81 1,2-Dibromo 3-Chloropr	10.821	10.826	10.821	10.815	10.809	10.809	10.809	10.815	10.809	10.616-11.003	10.816	0.006
	82 Hexachloro 1,3-Butadie	11.499	11.505	11.494	11.494	11.488	11.483	11.482	11.505	11.488	11.295-11.681	11.494	0.009
	83 1,2,4-Trichlorobenzene	11.488	11.494	11.482	11.483	11.477	11.471	11.477	11.488	11.477	11.283-11.670	11.482	0.007
	84 Naphthalene	11.805	11.805	11.799	11.794	11.788	11.788	11.788	11.805	11.788	11.594-11.981	11.796	0.008
	85 1,2,3-Trichlorobenzene	11.986	11.986	11.980	11.975	11.969	11.963	11.969	11.986	11.969	11.775-12.162	11.977	0.009

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/0010627.d
Lab Smp Id: IC0627 Client Smp ID: VSTD1
Inj Date : 27-JUN-2013 10:43
Operator : PB Inst ID: nt5.i
Smp Info : IC0627,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 12:58 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 10:43 Cal File: 0010627.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.028	1.057	(0.221)	10592	1.00000	1.008
2 Chloromethane	50	1.153	1.176	(0.247)	19883	1.00000	0.9225 (M)
3 Vinyl Chloride	62	1.198	1.226	(0.257)	17049	1.00000	0.8783
4 Bromomethane	94	1.413	1.436	(0.303)	11845	1.00000	1.065
5 Chloroethane	64	1.492	1.521	(0.320)	12390	1.00000	1.049
6 Trichlorofluoromethane	101	1.583	1.611	(0.340)	19151	1.00000	0.8901
7 1,1-Dichloroethene	96	1.951	1.973	(0.419)	11806	1.00000	0.9244
8 Carbon Disulfide	76	1.951	1.979	(0.419)	45503	1.00000	0.9950 (T)
9 112Trichloro122Trifluoroethane	101	1.990	2.018	(0.427)	11927	1.00000	0.9640
10 Iodomethane	142	2.047	2.075	(0.439)	8525	1.00000	0.8325
11 Bromoethane	108	2.143	2.171	(0.460)	8552	1.00000	1.002
12 Acrolein	56	2.262	2.313	(0.485)	14275	5.00000	7.230 (M)
13 Methylene Chloride	84	2.426	2.454	(0.520)	28528	1.00000	1.799
14 Acetone	43	2.652	2.742	(0.569)	16146	5.00000	5.373 (M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.567	2.590	(0.551)	12554	1.00000	0.9887
	16 Methyl tert butyl ether	73	2.731	2.754	(0.586)	34016	1.00000	0.8690
	17 1,1-Dichloroethane	63	3.172	3.201	(0.681)	24622	1.00000	0.8480
	18 Acrylonitrile	53	3.303	3.348	(0.709)	5812	1.00000	0.8914(M)
	19 Vinyl Acetate	43	3.512	3.540	(0.754)	29053	1.00000	0.7413
	20 Cis-1,2-Dichloroethene	96	3.727	3.744	(0.800)	13522	1.00000	0.8139
	22 2,2-Dichloropropane	77	3.823	3.840	(0.820)	20258	1.00000	0.8405
	23 Bromochloromethane	128	3.913	3.930	(0.840)	6070	1.00000	0.8364
	24 Chloroform	83	4.010	4.027	(0.860)	22555	1.00000	0.8538
	25 Carbon Tetrachloride	117	4.100	4.117	(0.802)	16729	1.00000	0.8289
$	27 Dibromofluoromethane	111	4.179	4.196	(0.897)	887996	50.0000	51.038
	26 1,1,1-Trichloroethane	97	4.174	4.185	(0.896)	19733	1.00000	0.8154
	28 1,1-Dichloropropene	75	4.287	4.304	(0.838)	18906	1.00000	0.8136
	29 2-Butanone	72	4.383	4.434	(0.941)	7717	5.00000	3.712
	30 Benzene	78	4.519	4.530	(0.884)	53244	1.00000	0.8314
*	31 Pentafluorobenzene	168	4.660	4.671	(1.000)	1806972	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.666	(0.998)	994205	50.0000	50.284
	33 1,2-Dichloroethane	62	4.711	4.728	(0.921)	17128	1.00000	0.8243
	34 Trichloroethene	95	5.056	5.067	(0.989)	13487	1.00000	0.8337
*	35 1,4-Difluorobenzene	114	5.113	5.118	(1.000)	2944860	50.0000	
	37 Dibromomethane	93	5.413	5.424	(1.059)	7213	1.00000	0.8173
	38 1,2-Dichloropropane	63	5.509	5.514	(1.077)	14418	1.00000	0.7935
	39 Bromodichloromethane	83	5.582	5.588	(1.092)	16409	1.00000	0.8156
	41 Cis 1,3-dichloropropene	75	6.131	6.137	(1.199)	17728	1.00000	0.7093
$	42 d8-Toluene	98	6.289	6.295	(1.230)	3709177	50.0000	50.813
	43 Toluene	92	6.329	6.335	(1.238)	35401	1.00000	0.8738
	44 Tetrachloroethene	166	6.646	6.646	(0.876)	13767	1.00000	0.7972
	45 4-Methyl-2-Pentanone	58	6.697	6.708	(1.310)	26453	5.00000	3.451
	46 Trans 1,3-Dichloropropene	75	6.691	6.702	(1.309)	17500	1.00000	0.7639
	47 1,1,2-Trichloroethane	97	6.827	6.827	(1.335)	10955	1.00000	0.8295
	48 Chlorodibromomethane	129	6.957	6.963	(0.917)	11744	1.00000	0.7758
	49 1,3-Dichloropropane	76	7.042	7.047	(0.928)	17372	1.00000	0.7161
	50 1,2-Dibromoethane	107	7.132	7.144	(1.395)	9718	1.00000	0.7559
	51 2-Hexanone	43	7.409	7.421	(0.976)	42795	5.00000	3.383
*	52 d5-Chlorobenzene	117	7.590	7.596	(1.000)	2931914	50.0000	
	53 Chlorobenzene	112	7.607	7.613	(1.002)	35870	1.00000	0.8556
	54 Ethyl Benzene	91	7.658	7.664	(1.009)	59479	1.00000	0.8344
	55 1,1,1,2-Tetrachloroethane	131	7.670	7.675	(1.010)	12244	1.00000	0.8058
	56 m,p-xylene	106	7.788	7.794	(1.026)	41374	2.00000	1.546
	57 o-Xylene	106	8.150	8.156	(1.074)	18081	1.00000	0.6846
	58 Styrene	104	8.201	8.201	(1.080)	29215	1.00000	0.6751
	59 Bromoform	173	8.190	8.196	(0.847)	8404	1.00000	0.7278
	60 Isopropyl Benzene	105	8.439	8.445	(0.872)	45158	1.00000	0.6549
$	62 4-Bromofluorobenzene	95	8.665	8.665	(1.142)	1569762	50.0000	50.306
	63 Bromobenzene	156	8.739	8.739	(0.903)	13871	1.00000	0.7316
	64 N-Propyl Benzene	91	8.807	8.812	(0.911)	65651	1.00000	0.7903
	65 1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	14092	1.00000	0.7374

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	66 2-Chloro Toluene	91	8.920	8.920	(0.922)	37428	1.00000	0.7148
	67 1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.930)	40035	1.00000	0.6735
	68 1,2,3-Trichloropropane	110	8.965	8.971	(0.927)	4305	1.00000	0.7248(TM)
	69 Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	5466	1.00000	0.7586(M)
	70 4-Chloro Toluene	91	9.073	9.073	(0.938)	37485	1.00000	0.6878
	71 T-Butyl Benzene	119	9.276	9.276	(0.959)	34898	1.00000	0.6609
	72 1,2,4-Trimethylbenzene	105	9.344	9.338	(0.966)	37999	1.00000	0.6538
	73 S-Butyl Benzene	105	9.440	9.440	(0.976)	55254	1.00000	0.7278
	74 4-Isopropyl Toluene	119	9.587	9.582	(0.991)	41395	1.00000	0.6731
	75 1,3-Dichlorobenzene	146	9.599	9.599	(0.992)	27268	1.00000	0.7869
*	76 d4-1,4-Dichlorobenzene	152	9.672	9.672	(1.000)	1662438	50.0000	
	77 1,4-Dichlorobenzene	146	9.684	9.683	(1.001)	29948	1.00000	0.8355
	78 N-Butyl Benzene	91	9.972	9.966	(1.031)	39128	1.00000	0.6780
$	79 d4-1,2-Dichlorobenzene	152	10.057	10.051	(1.040)	1541404	50.0000	50.835
	80 1,2-Dichlorobenzene	146	10.063	10.062	(1.040)	27337	1.00000	0.8090
	81 1,2-Dibromo 3-Chloropropane	75	10.821	10.809	(1.119)	2437	1.00000	0.6163
	82 Hexachloro 1,3-Butadiene	225	11.499	11.488	(1.189)	12172	1.00000	0.7496
	83 1,2,4-Trichlorobenzene	180	11.488	11.477	(1.188)	15953	1.00000	0.6324
	84 Naphthalene	128	11.805	11.788	(1.220)	29227	1.00000	0.5249
	85 1,2,3-Trichlorobenzene	180	11.986	11.969	(1.239)	15157	1.00000	0.6060

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0010627.d
Lab Smp Id: IC0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 27-JUN-2013
Calibration Time: 17:46
Client Smp ID: VSTD1
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1806972	11.98
35 1,4-Difluorobenze	2656709	1328354	5313418	2944860	10.85
52 d5-Chlorobenzene	2557235	1278618	5114470	2931914	14.65
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1662438	20.96

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.24
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

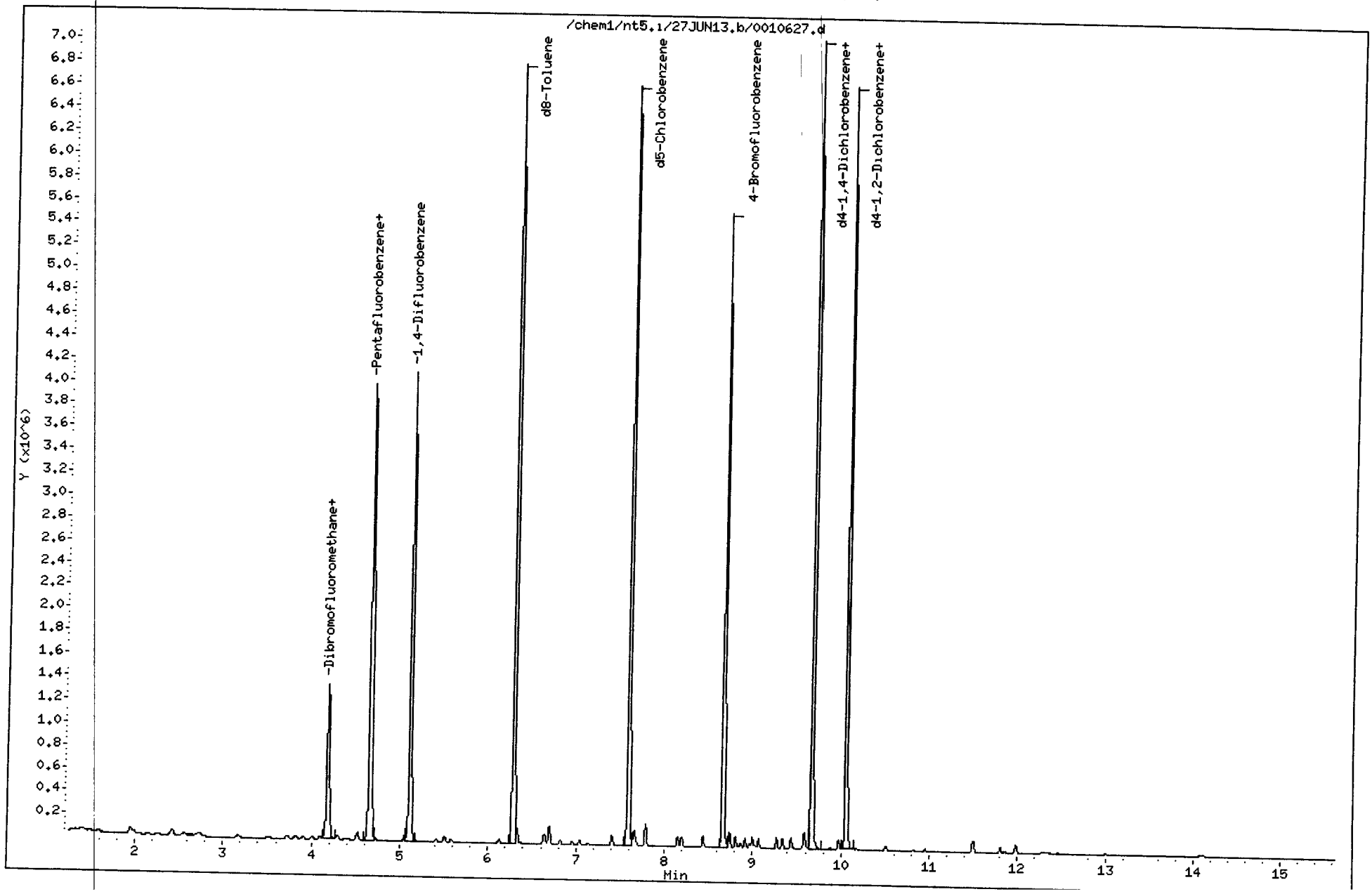
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/27JUN13.b/0010627.d
Date : 27-JUN-2013 10:43
Client ID: VSTD1
Sample Info: IC0627,5,5,0

Instrument: nt5.i

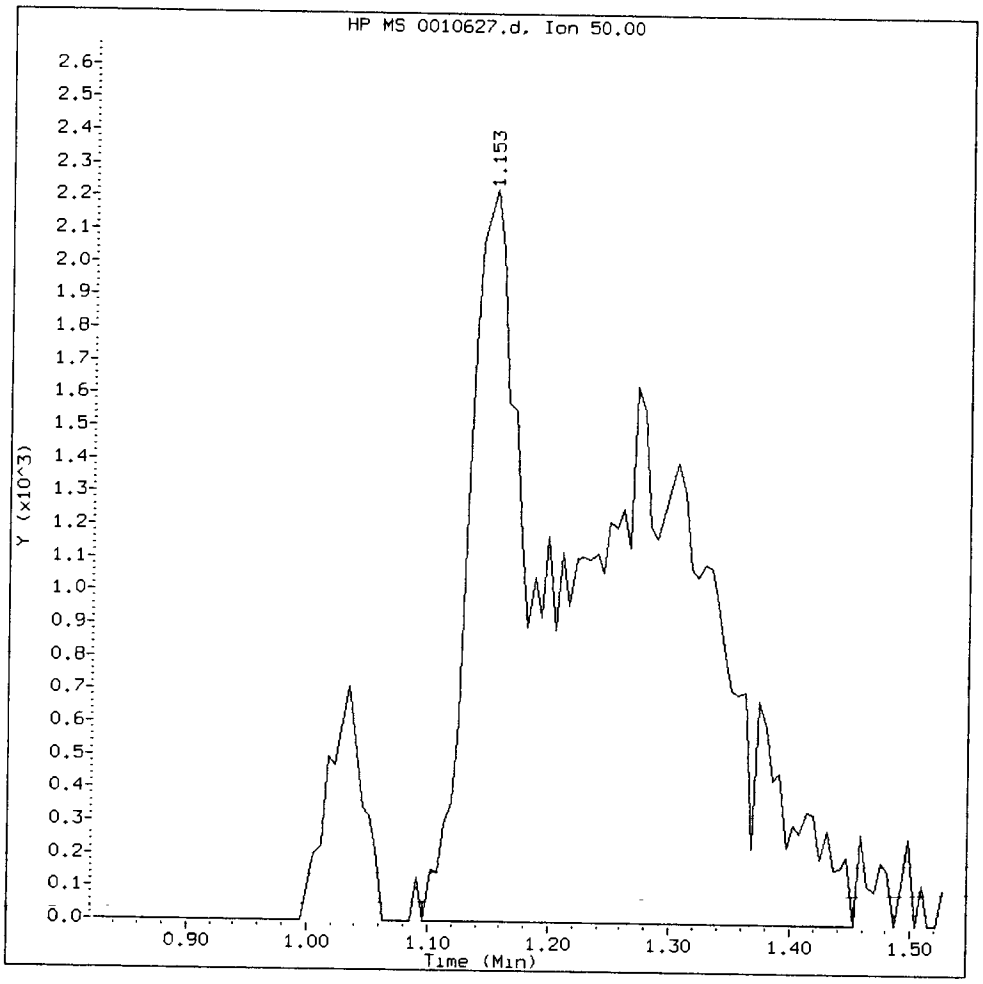
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0627, /chem1/nt5.i/27JUN13.b/0010627.d

Chloromethane Amount: 0.92 Area: 19883



MANUAL INTEGRATION for Chloromethane

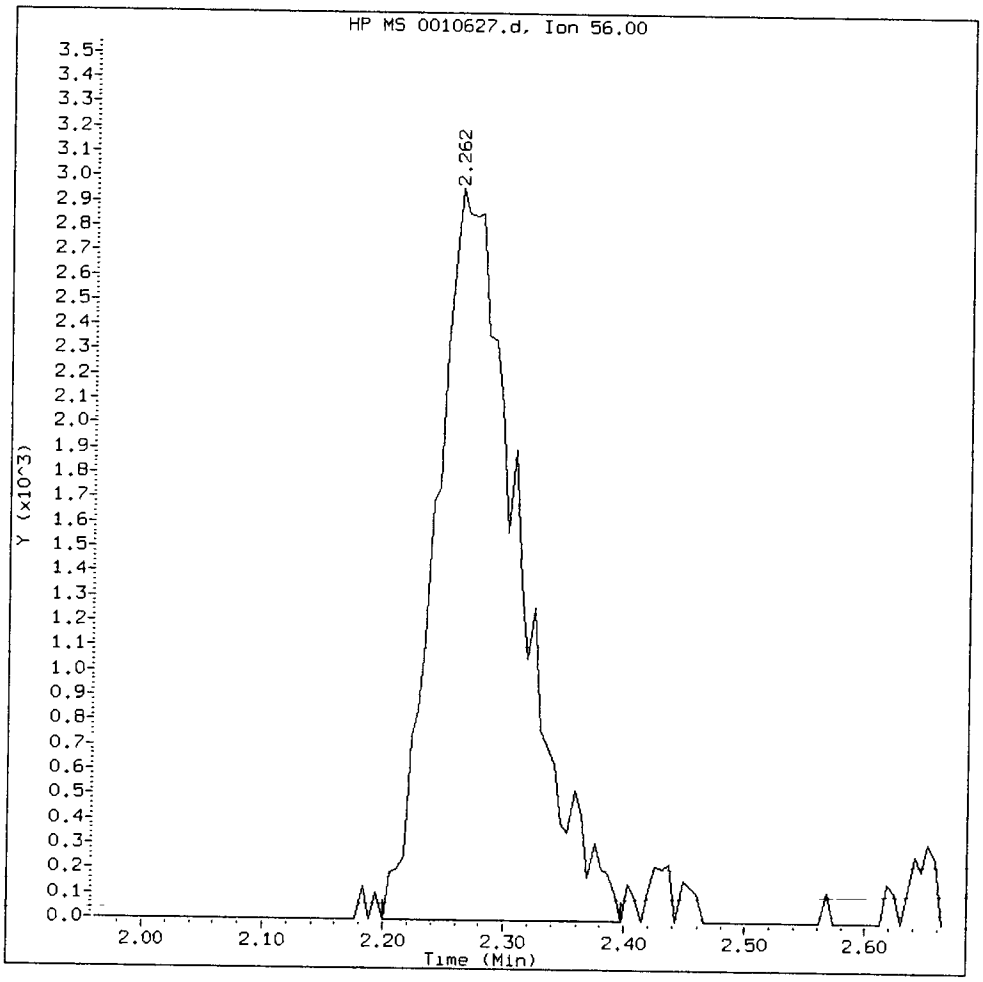
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/27/13

IC0627, /chem1/nt5.i/27JUN13.b/0010627.d

Acrolein Amount: 7.23 Area: 14275



MANUAL INTEGRATION for Acrolein

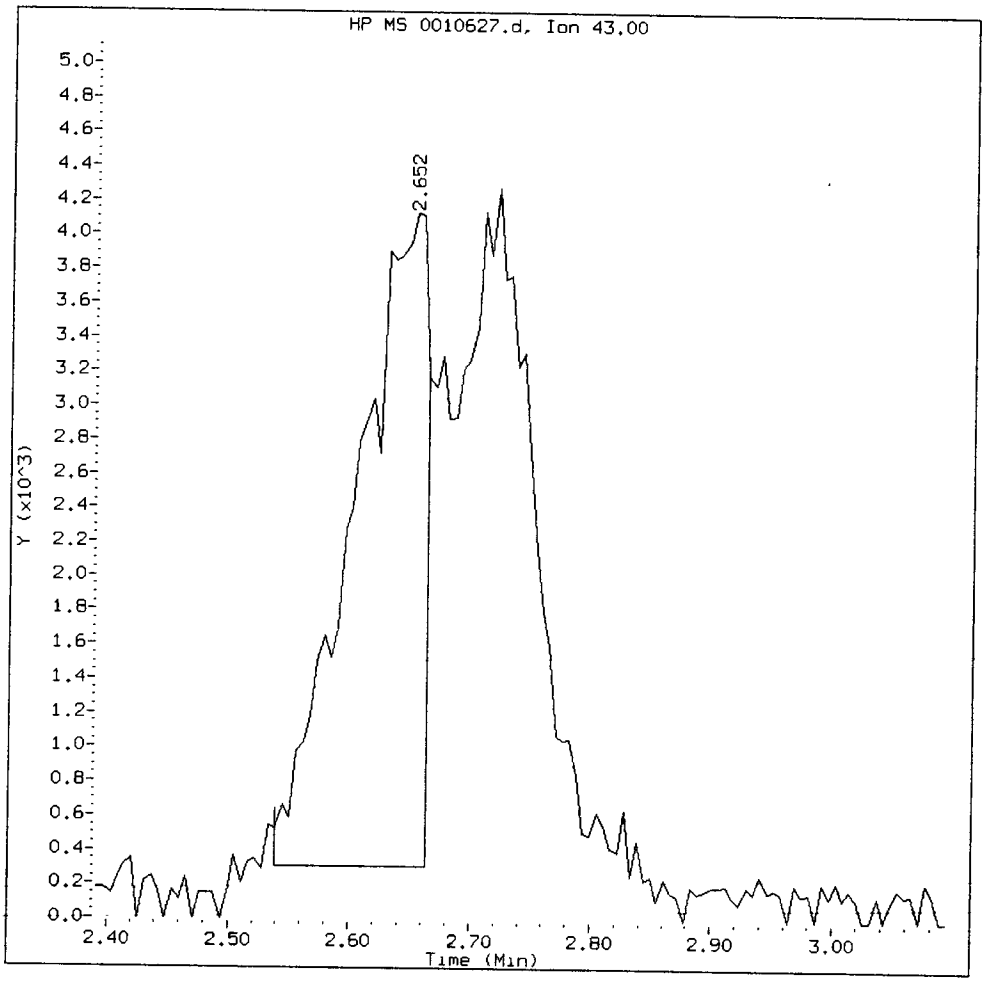
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/19/13

IC0627, /chem1/nt5.i/27JUN13.b/0010627.d

Acetone Amount: 5.37 Area: 16146



MANUAL INTEGRATION for Acetone

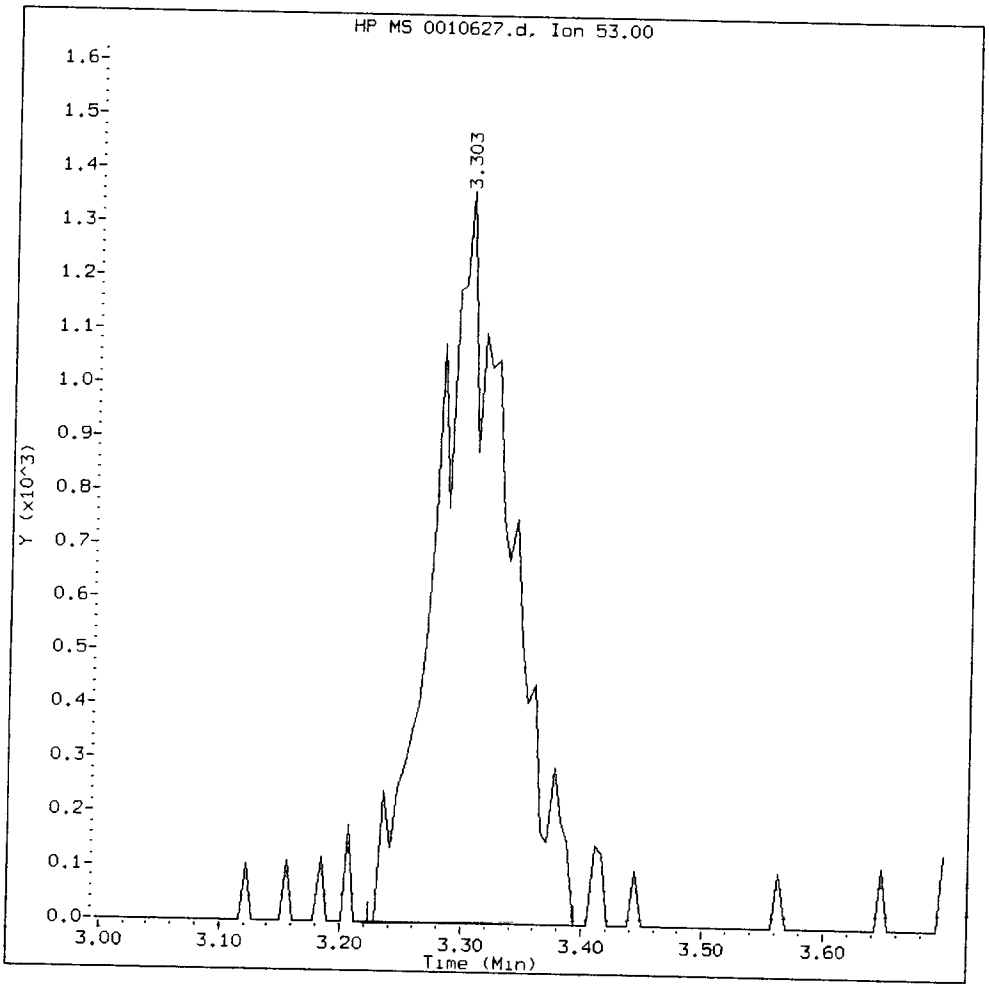
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/4/13

IC0627, /chem1/nt5.i/27JUN13.b/0010627.d

Acrylonitrile Amount: 0.89 Area: 5812



MANUAL INTEGRATION for Acrylonitrile

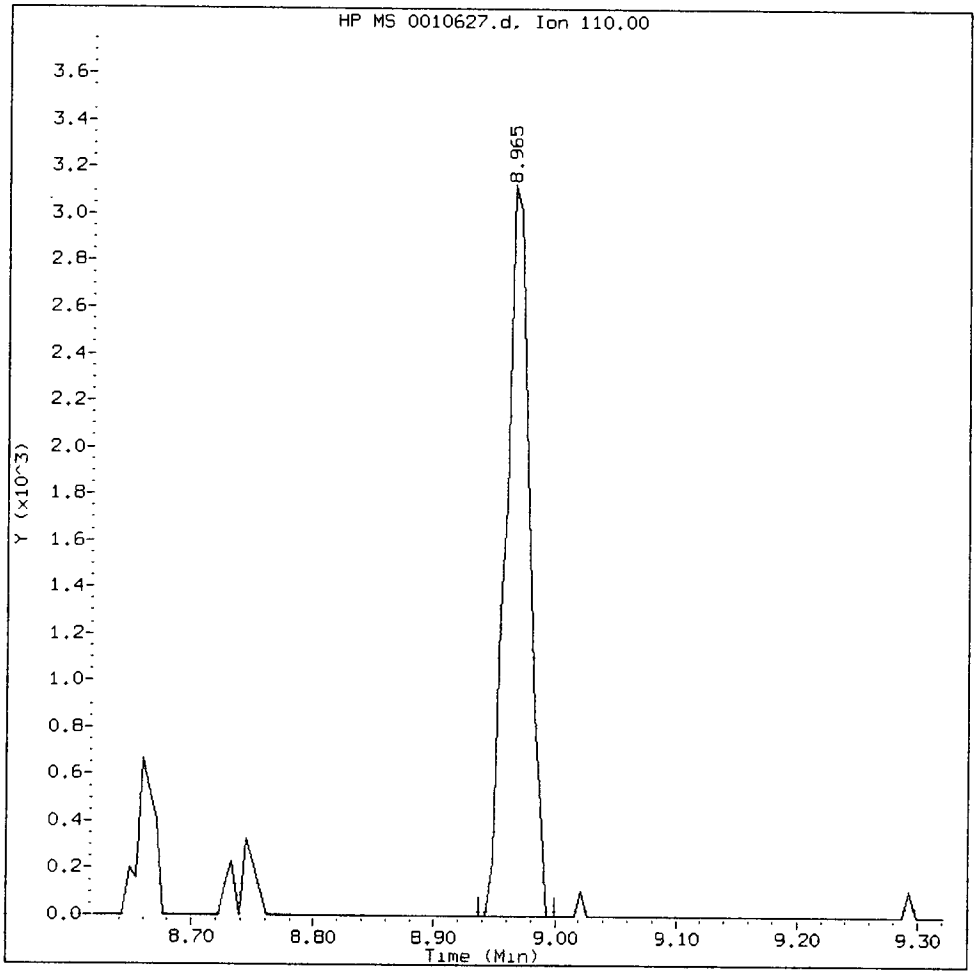
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 10/29/13

IC0627, /chem1/nt5.i/27JUN13.b/0010627.d

1,2,3-Trichloropropane Amount: 0.72 Area: 4305



MANUAL INTEGRATION for 1,2,3-Trichloropropane

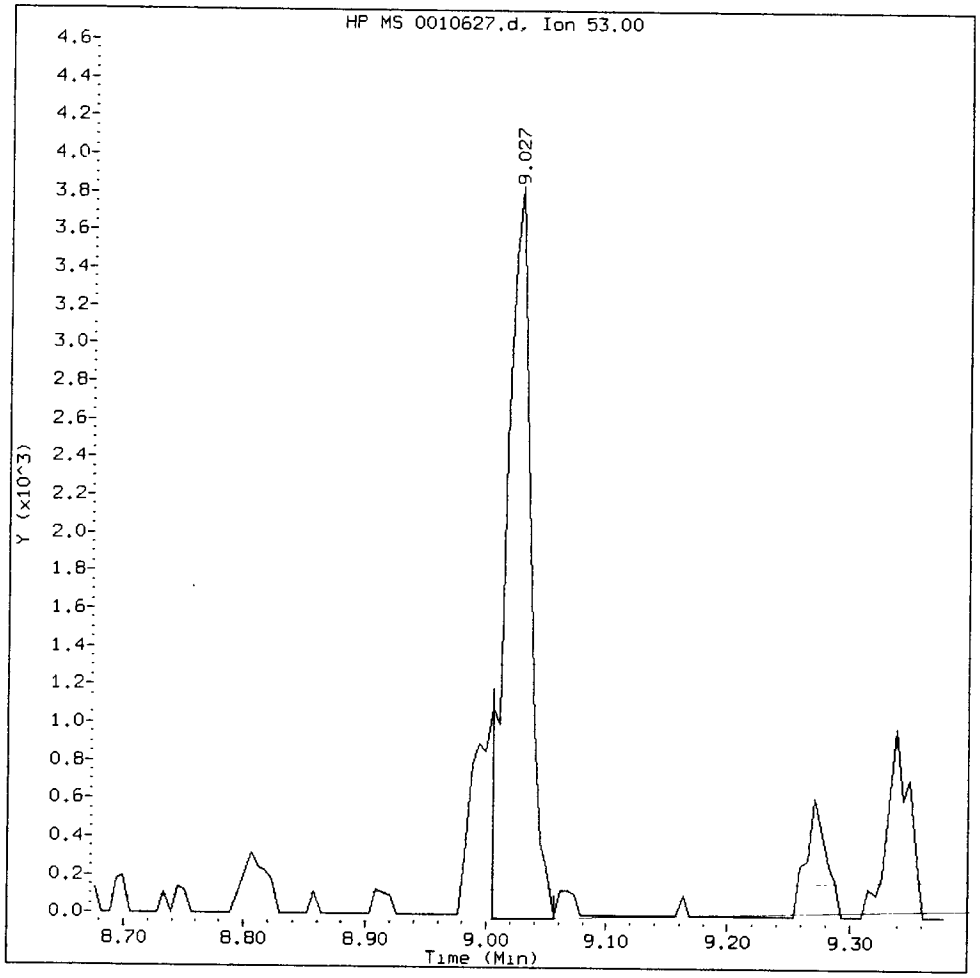
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: _____

IC0627, /chem1/nt5.i/27JUN13.b/0010627.d

Trans-1,4-Dichloro 2-Butene Amount: 0.76 Area: 5466



MANUAL INTEGRATION for Trans-1,4-Dichloro 2-Butene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/27/13

CO-ELUTION SUMMARY FOR FILE - 0010627.d

Lab ID: IC0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/0020627.d
Lab Smp Id: IC0627 Client Smp ID: VSTD2
Inj Date : 27-JUN-2013 13:30
Operator : PB Inst ID: nt5.i
Smp Info : IC0627,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 12:58 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 13:30 Cal File: 0020627.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.034	1.057	(0.222)	18633	2.00000	1.966
2 Chloromethane	50	1.159	1.176	(0.249)	40085	2.00000	2.062(M)
3 Vinyl Chloride	62	1.204	1.226	(0.258)	34556	2.00000	1.974
4 Bromomethane	94	1.407	1.436	(0.302)	23359	2.00000	2.328
5 Chloroethane	64	1.498	1.521	(0.321)	22250	2.00000	2.089
6 Trichlorofluoromethane	101	1.594	1.611	(0.342)	37004	2.00000	1.907
7 1,1-Dichloroethene	96	1.951	1.973	(0.419)	21025	2.00000	1.825
8 Carbon Disulfide	76	1.951	1.979	(0.419)	76025	2.00000	1.843
9 112Trichloro122Trifluoroethane	101	1.990	2.018	(0.427)	19849	2.00000	1.779
10 Iodomethane	142	2.047	2.075	(0.439)	12553	2.00000	1.359
11 Bromoethane	108	2.149	2.171	(0.461)	15339	2.00000	1.994
12 Acrolein	56	2.250	2.313	(0.483)	29063	10.0000	16.321
13 Methylene Chloride	84	2.420	2.454	(0.519)	43270	2.00000	3.025
14 Acetone	43	2.567	2.742	(0.551)	26160	10.0000	9.653(T)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.567	2.590	(0.551)	27549	2.00000	2.406
	16 Methyl tert butyl ether	73	2.743	2.754	(0.588)	80939	2.00000	2.293
	17 1,1-Dichloroethane	63	3.178	3.201	(0.682)	56485	2.00000	2.157
	18 Acrylonitrile	53	3.286	3.348	(0.705)	14098	2.00000	2.398
	19 Vinyl Acetate	43	3.518	3.540	(0.755)	75668	2.00000	2.141
	20 Cis-1,2-Dichloroethene	96	3.721	3.744	(0.798)	29141	2.00000	1.945
	22 2,2-Dichloropropane	77	3.829	3.840	(0.822)	40848	2.00000	1.879
	23 Bromochloromethane	128	3.908	3.930	(0.839)	12927	2.00000	1.975
	24 Chloroform	83	4.015	4.027	(0.862)	48894	2.00000	2.052
	25 Carbon Tetrachloride	117	4.106	4.117	(0.803)	34749	2.00000	1.898
$	27 Dibromofluoromethane	111	4.179	4.196	(0.897)	802261	50.0000	51.127
	26 1,1,1-Trichloroethane	97	4.174	4.185	(0.896)	43416	2.00000	1.989
	28 1,1-Dichloropropene	75	4.292	4.304	(0.840)	39153	2.00000	1.857
	29 2-Butanone	72	4.372	4.434	(0.938)	18866	10.0000	10.063
	30 Benzene	78	4.519	4.530	(0.884)	119862	2.00000	2.063
*	31 Pentafluorobenzene	168	4.660	4.671	(1.000)	1629659	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.666	(0.999)	914466	50.0000	51.284
	33 1,2-Dichloroethane	62	4.717	4.728	(0.923)	39683	2.00000	2.105
	34 Trichloroethene	95	5.056	5.067	(0.989)	27789	2.00000	1.894
*	35 1,4-Difluorobenzene	114	5.113	5.118	(1.000)	2671641	50.0000	
	37 Dibromomethane	93	5.413	5.424	(1.059)	16400	2.00000	2.048
	38 1,2-Dichloropropane	63	5.509	5.514	(1.077)	32506	2.00000	1.972
	39 Bromodichloromethane	83	5.582	5.588	(1.092)	36320	2.00000	1.990
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.125	(1.197)	4628	2.00000	1.803
	41 Cis 1,3-dichloropropene	75	6.131	6.137	(1.199)	43692	2.00000	1.927
$	42 d8-Toluene	98	6.289	6.295	(1.230)	3324149	50.0000	50.196
	43 Toluene	92	6.329	6.335	(1.238)	75931	2.00000	2.066
	44 Tetrachloroethene	166	6.640	6.646	(0.875)	29933	2.00000	1.919
	45 4-Methyl-2-Pentanone	58	6.697	6.708	(1.310)	72642	10.0000	10.446
	46 Trans 1,3-Dichloropropene	75	6.691	6.702	(1.309)	41299	2.00000	1.987
	47 1,1,2-Trichloroethane	97	6.821	6.827	(1.334)	24834	2.00000	2.073
	48 Chlorodibromomethane	129	6.957	6.963	(0.917)	26380	2.00000	1.929
	49 1,3-Dichloropropane	76	7.042	7.047	(0.928)	42737	2.00000	1.950
	50 1,2-Dibromoethane	107	7.138	7.144	(1.396)	23916	2.00000	2.051
	51 2-Hexanone	43	7.409	7.421	(0.976)	117850	10.0000	10.315
	52 d5-Chlorobenzene	117	7.590	7.596	(1.000)	2648389	50.0000	
	53 Chlorobenzene	112	7.607	7.613	(1.002)	78342	2.00000	2.069
	54 Ethyl Benzene	91	7.653	7.664	(1.008)	133497	2.00000	2.073
	55 1,1,1,2-Tetrachloroethane	131	7.670	7.675	(1.010)	26187	2.00000	1.908
	56 m,p-xylene	106	7.788	7.794	(1.026)	98591	4.00000	4.079
	57 o-Xylene	106	8.150	8.156	(1.074)	43435	2.00000	1.821
	58 Styrene	104	8.201	8.201	(1.080)	76946	2.00000	1.968
	59 Bromoform	173	8.190	8.196	(0.847)	19342	2.00000	1.978
	60 Isopropyl Benzene	105	8.439	8.445	(0.873)	114164	2.00000	1.955
	62 4-Bromofluorobenzene	95	8.660	8.665	(1.141)	1410717	50.0000	50.049
	63 Bromobenzene	156	8.739	8.739	(0.904)	32239	2.00000	2.007
	64 N-Propyl Benzene	91	8.807	8.812	(0.911)	146840	2.00000	2.087

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	33170	2.00000	2.049
66	2-Chloro Toluene	91	8.914	8.920	(0.922)	86932	2.00000	1.960
67	1,3,5-Trimethyl Benzene	105	8.993	8.999	(0.930)	97923	2.00000	1.945
68	1,2,3-Trichloropropane	110	8.965	8.971	(0.927)	10222	2.00000	2.032(M)
69	Trans-1,4-Dichloro 2-Butene	53	9.022	9.027	(0.933)	11084	2.00000	1.816(M)
70	4-Chloro Toluene	91	9.067	9.073	(0.938)	91979	2.00000	1.993
71	T-Butyl Benzene	119	9.271	9.276	(0.959)	83866	2.00000	1.875
72	1,2,4-Trimethylbenzene	105	9.338	9.338	(0.966)	95574	2.00000	1.941
73	S-Butyl Benzene	105	9.435	9.440	(0.976)	132576	2.00000	2.062
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	96589	2.00000	1.854
75	1,3-Dichlorobenzene	146	9.593	9.599	(0.992)	61311	2.00000	2.089
* 76	d4-1,4-Dichlorobenzene	152	9.667	9.672	(1.000)	1408047	50.0000	
77	1,4-Dichlorobenzene	146	9.678	9.683	(1.001)	62054	2.00000	2.044
78	N-Butyl Benzene	91	9.966	9.966	(1.031)	88821	2.00000	1.817
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1292894	50.0000	50.342
80	1,2-Dichlorobenzene	146	10.057	10.062	(1.040)	59303	2.00000	2.072
81	1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	5842	2.00000	1.744
82	Hexachloro 1,3-Butadiene	225	11.482	11.488	(1.188)	25501	2.00000	1.854
83	1,2,4-Trichlorobenzene	180	11.477	11.477	(1.187)	37308	2.00000	1.746
84	Naphthalene	128	11.788	11.788	(1.219)	92439	2.00000	1.960
85	1,2,3-Trichlorobenzene	180	11.969	11.969	(1.238)	39344	2.00000	1.857

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0020627.d
Lab Smp Id: IC0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 27-JUN-2013
Calibration Time: 17:46
Client Smp ID: VSTD2
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1629659	1.00
35 1,4-Difluorobenze	2656709	1328354	5313418	2671641	0.56
52 d5-Chlorobenzene	2557235	1278618	5114470	2648389	3.56
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1408047	2.45

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.24
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

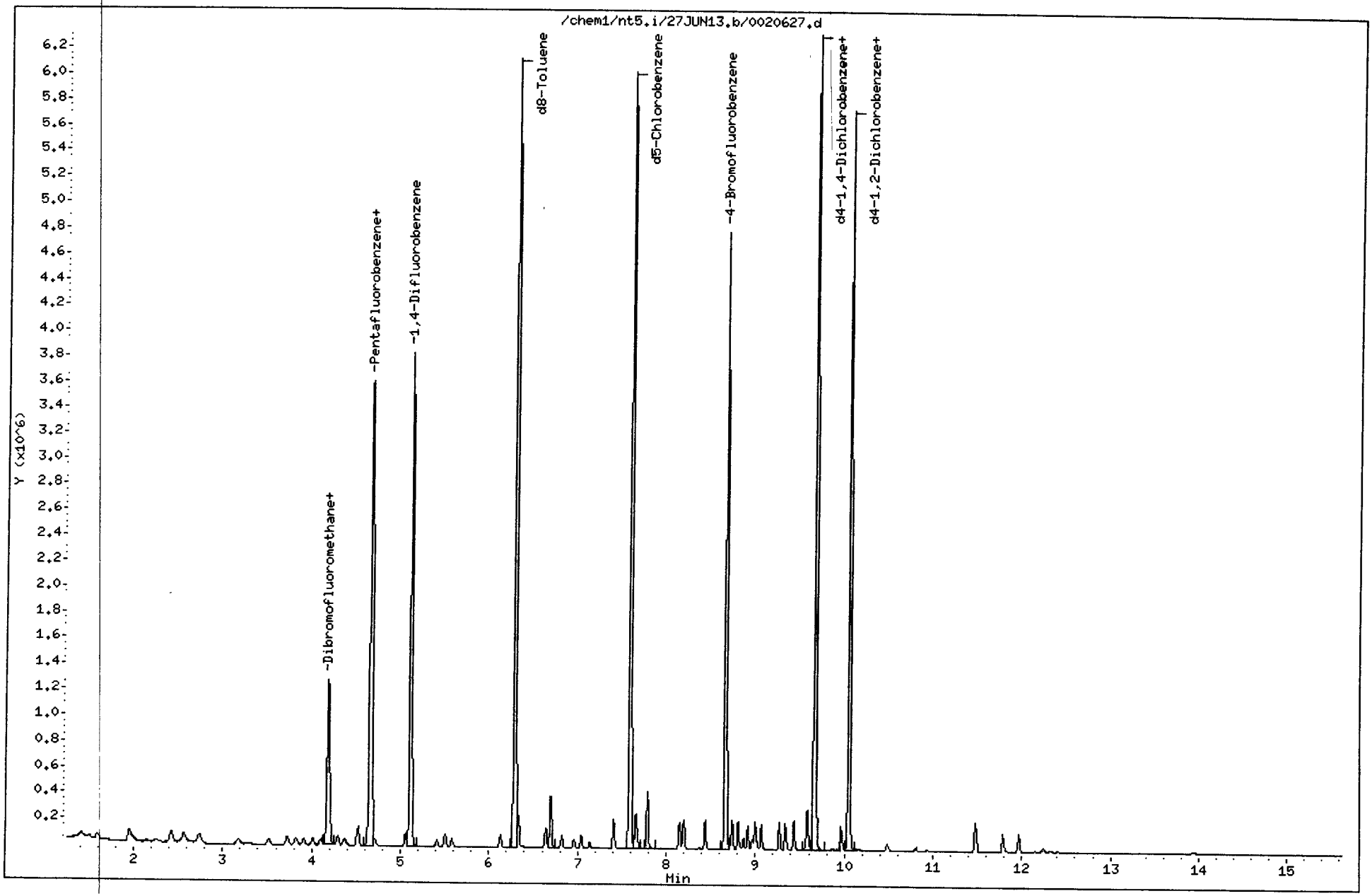
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/27JUN13.b/0020627.d
Date : 27-JUN-2013 13:30
Client ID: VSTD2
Sample Info: IC0627,5,5,0

Column phase: RTXVMS

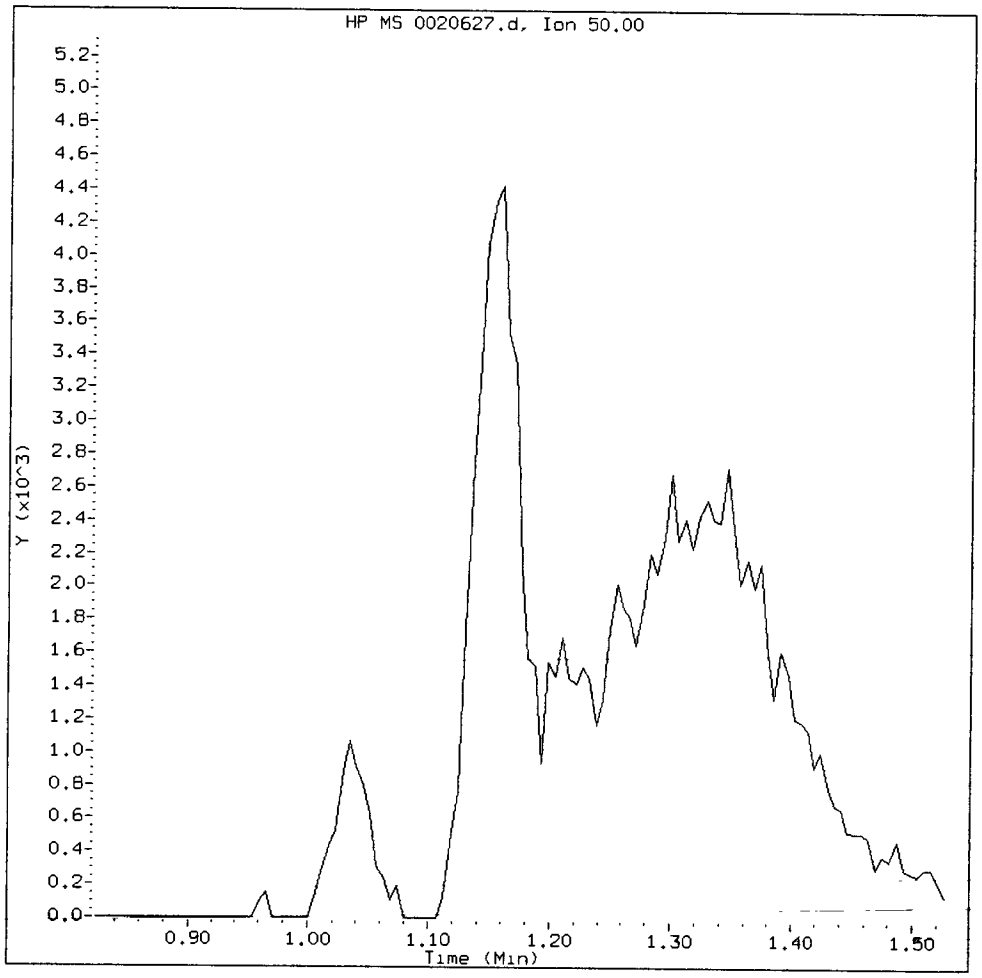
Instrument: nt5.i

Operator: PB
Column diameter: 0.18



IC0627, /chem1/nt5.i/27JUN13.b/0020627.d

Chloromethane Amount: 2.06 Area: 40085



MANUAL INTEGRATION for Chloromethane

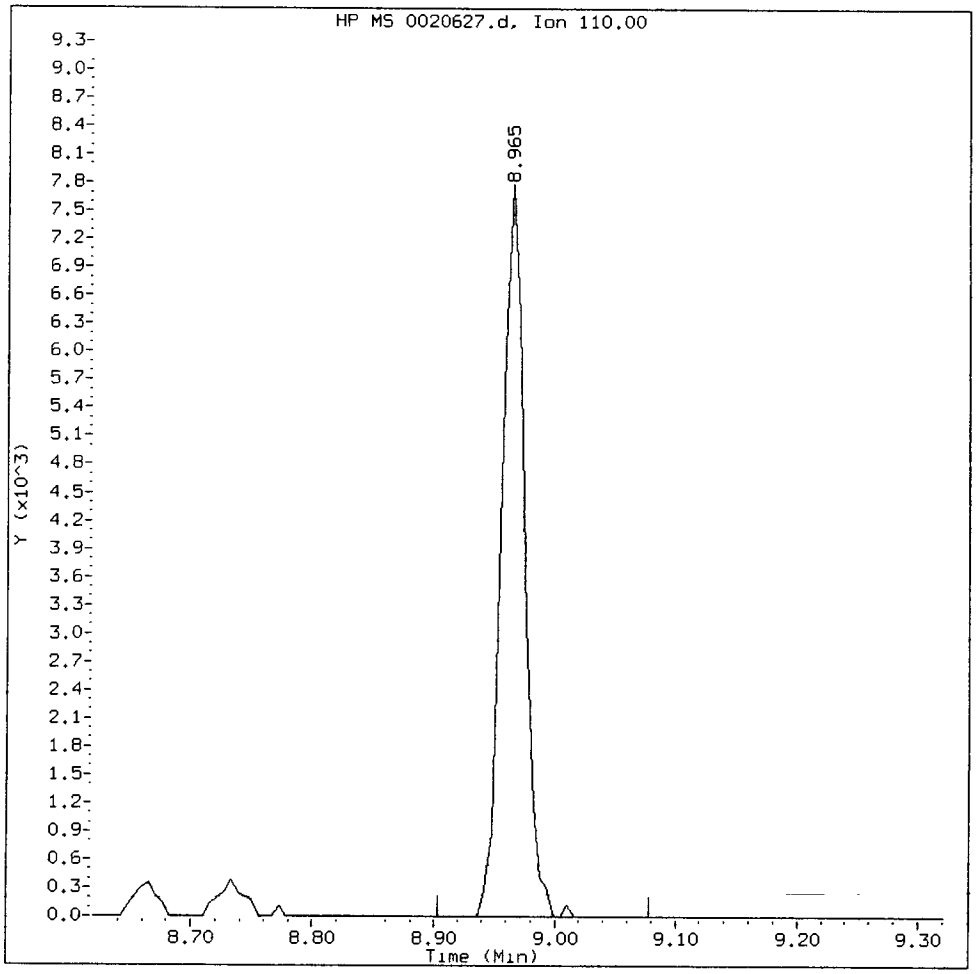
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/25/13

IC0627, /chem1/nt5.i/27JUN13.b/0020627.d

1,2,3-Trichloropropane Amount: 2.03 Area: 10222



MANUAL INTEGRATION for 1,2,3-Trichloropropane

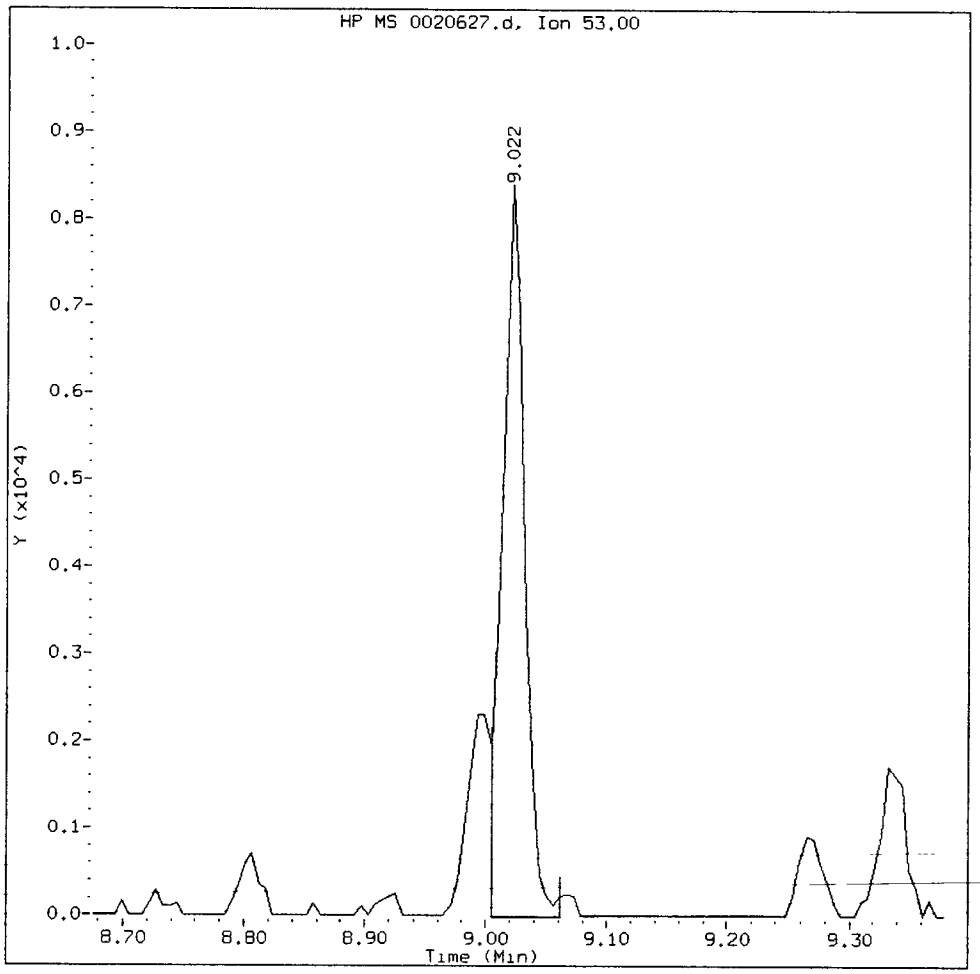
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/28/13

IC0627, /chem1/nt5.i/27JUN13.b/0020627.d

Trans-1,4-Dichloro 2-Butene Amount: 1.82 Area: 11084



MANUAL INTEGRATION for Trans-1,4-Dichloro 2-Butene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/21/13

CO-ELUTION SUMMARY FOR FILE - 0020627.d

Lab ID: IC0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/0050627.d
Lab Smp Id: IC0627 Client Smp ID: VSTD5
Inj Date : 27-JUN-2013 13:07
Operator : PB Inst ID: nt5.i
Smp Info : IC0627,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 12:58 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 13:07 Cal File: 0050627.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.040	1.057	(0.223)	45408	5.00000	4.609
2 Chloromethane	50	1.159	1.176	(0.249)	98602	5.00000	4.878(M)
3 Vinyl Chloride	62	1.210	1.226	(0.260)	91117	5.00000	5.006
4 Bromomethane	94	1.413	1.436	(0.303)	55800	5.00000	5.349
5 Chloroethane	64	1.504	1.521	(0.323)	56181	5.00000	5.073
6 Trichlorofluoromethane	101	1.594	1.611	(0.342)	97700	5.00000	4.842
7 1,1-Dichloroethene	96	1.956	1.973	(0.420)	65754	5.00000	5.490
8 Carbon Disulfide	76	1.956	1.979	(0.420)	244550	5.00000	5.702
9 112Trichloro122Trifluoroethane	101	1.996	2.018	(0.428)	63331	5.00000	5.458
10 Iodomethane	142	2.058	2.075	(0.442)	44618	5.00000	4.646
11 Bromoethane	108	2.154	2.171	(0.462)	48267	5.00000	6.034
12 Acrolein	56	2.290	2.313	(0.491)	88041	25.0000	47.550(M)
13 Methylene Chloride	84	2.437	2.454	(0.523)	84192	5.00000	5.662
14 Acetone	43	2.726	2.742	(0.585)	85702	25.0000	30.413

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.573	2.590	(0.552)	65159	5.00000	5.472
	16 Methyl tert butyl ether	73	2.737	2.754	(0.587)	194347	5.00000	5.295
	17 1,1-Dichloroethane	63	3.178	3.201	(0.682)	119187	5.00000	4.377
	18 Acrylonitrile	53	3.320	3.348	(0.712)	24420	5.00000	3.994
	19 Vinyl Acetate	43	3.523	3.540	(0.756)	194496	5.00000	5.292
	20 Cis-1,2-Dichloroethene	96	3.727	3.744	(0.800)	78612	5.00000	5.046
	22 2,2-Dichloropropane	77	3.823	3.840	(0.820)	110799	5.00000	4.902
	23 Bromochloromethane	128	3.919	3.930	(0.841)	34824	5.00000	5.117
	24 Chloroform	83	4.015	4.027	(0.862)	122048	5.00000	4.927
	25 Carbon Tetrachloride	117	4.100	4.117	(0.802)	89371	5.00000	4.680
$	27 Dibromofluoromethane	111	4.185	4.196	(0.898)	808248	50.0000	49.538
	26 1,1,1-Trichloroethane	97	4.174	4.185	(0.896)	110474	5.00000	4.868
	28 1,1-Dichloropropene	75	4.293	4.304	(0.840)	118318	5.00000	5.382
	29 2-Butanone	72	4.428	4.434	(0.950)	49974	25.0000	25.636
	30 Benzene	78	4.519	4.530	(0.884)	327283	5.00000	5.402
*	31 Pentafluorobenzene	168	4.660	4.671	(1.000)	1694501	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.666	(0.999)	932437	50.0000	50.291
	33 1,2-Dichloroethane	62	4.717	4.728	(0.923)	102107	5.00000	5.194
	34 Trichloroethene	95	5.056	5.067	(0.989)	76308	5.00000	4.986
*	35 1,4-Difluorobenzene	114	5.113	5.118	(1.000)	2786053	50.0000	
	37 Dibromomethane	93	5.418	5.424	(1.060)	41993	5.00000	5.030
	38 1,2-Dichloropropane	63	5.509	5.514	(1.077)	88910	5.00000	5.172
	39 Bromodichloromethane	83	5.582	5.588	(1.092)	97663	5.00000	5.131
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.198)	12077	5.00000	4.512
	41 Cis 1,3-dichloropropene	75	6.131	6.137	(1.199)	122097	5.00000	5.164
$	42 d8-Toluene	98	6.290	6.295	(1.230)	3474044	50.0000	50.305
	43 Toluene	92	6.329	6.335	(1.238)	201833	5.00000	5.266
	44 Tetrachloroethene	166	6.646	6.646	(0.876)	78122	5.00000	4.860
	45 4-Methyl-2-Pentanone	58	6.702	6.708	(1.311)	198236	25.0000	27.335
	46 Trans 1,3-Dichloropropene	75	6.697	6.702	(1.310)	111270	5.00000	5.134
	47 1,1,2-Trichloroethane	97	6.827	6.827	(1.335)	65169	5.00000	5.216
	48 Chlorodibromomethane	129	6.963	6.963	(0.917)	71042	5.00000	5.041
	49 1,3-Dichloropropane	76	7.042	7.047	(0.928)	117926	5.00000	5.222
	50 1,2-Dibromoethane	107	7.138	7.144	(1.396)	63114	5.00000	5.189
	51 2-Hexanone	43	7.415	7.421	(0.977)	325688	25.0000	27.661
*	52 d5-Chlorobenzene	117	7.591	7.596	(1.000)	2729297	50.0000	
	53 Chlorobenzene	112	7.608	7.613	(1.002)	205588	5.00000	5.268
	54 Ethyl Benzene	91	7.658	7.664	(1.009)	363346	5.00000	5.476
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.011)	72386	5.00000	5.118
	56 m,p-xylene	106	7.789	7.794	(1.026)	267917	10.0000	10.756
	57 o-Xylene	106	8.151	8.156	(1.074)	122769	5.00000	4.994
	58 Styrene	104	8.202	8.201	(1.080)	215113	5.00000	5.340
	59 Bromoform	173	8.190	8.196	(0.847)	50604	5.00000	5.037
	60 Isopropyl Benzene	105	8.439	8.445	(0.873)	327122	5.00000	5.452
$	62 4-Bromofluorobenzene	95	8.660	8.665	(1.141)	1452484	50.0000	50.003
	63 Bromobenzene	156	8.739	8.739	(0.904)	85360	5.00000	5.174
	64 N-Propyl Benzene	91	8.807	8.812	(0.911)	398204	5.00000	5.509

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	84278	5.00000	5.069
66	2-Chloro Toluene	91	8.914	8.920	(0.922)	238827	5.00000	5.242
67	1,3,5-Trimethyl Benzene	105	8.993	8.999	(0.930)	274357	5.00000	5.304
68	1,2,3-Trichloropropane	110	8.965	8.971	(0.927)	26520	5.00000	5.131
69	Trans-1,4-Dichloro 2-Butene	53	9.022	9.027	(0.933)	30589	5.00000	4.879
70	4-Chloro Toluene	91	9.067	9.073	(0.938)	248773	5.00000	5.246
71	T-Butyl Benzene	119	9.271	9.276	(0.959)	240996	5.00000	5.246
72	1,2,4-Trimethylbenzene	105	9.339	9.338	(0.966)	267624	5.00000	5.292
73	S-Butyl Benzene	105	9.435	9.440	(0.976)	361231	5.00000	5.469
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	283044	5.00000	5.290
75	1,3-Dichlorobenzene	146	9.593	9.599	(0.992)	158966	5.00000	5.272
* 76	d4-1,4-Dichlorobenzene	152	9.667	9.672	(1.000)	1446481	50.0000	
77	1,4-Dichlorobenzene	146	9.678	9.683	(1.001)	160040	5.00000	5.132
78	N-Butyl Benzene	91	9.966	9.966	(1.031)	251947	5.00000	5.018
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1317833	50.0000	49.950
80	1,2-Dichlorobenzene	146	10.057	10.062	(1.040)	154268	5.00000	5.247
81	1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	16230	5.00000	4.717
82	Hexachloro 1,3-Butadiene	225	11.483	11.488	(1.188)	66293	5.00000	4.692
83	1,2,4-Trichlorobenzene	180	11.471	11.477	(1.187)	97410	5.00000	4.438
84	Naphthalene	128	11.788	11.788	(1.219)	238777	5.00000	4.929
85	1,2,3-Trichlorobenzene	180	11.963	11.969	(1.238)	104146	5.00000	4.786

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0050627.d
Lab Smp Id: IC0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 27-JUN-2013
Calibration Time: 17:46
Client Smp ID: VSTD5
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1694501	5.01
35 1,4-Difluorobenze	2656709	1328354	5313418	2786053	4.87
52 d5-Chlorobenzene	2557235	1278618	5114470	2729297	6.73
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1446481	5.25

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.24
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

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

Data File: /chem1/nt5.i/27JUN13.b/0050627.d

Date : 27-JUN-2013 13:07

Client ID: VSTD5

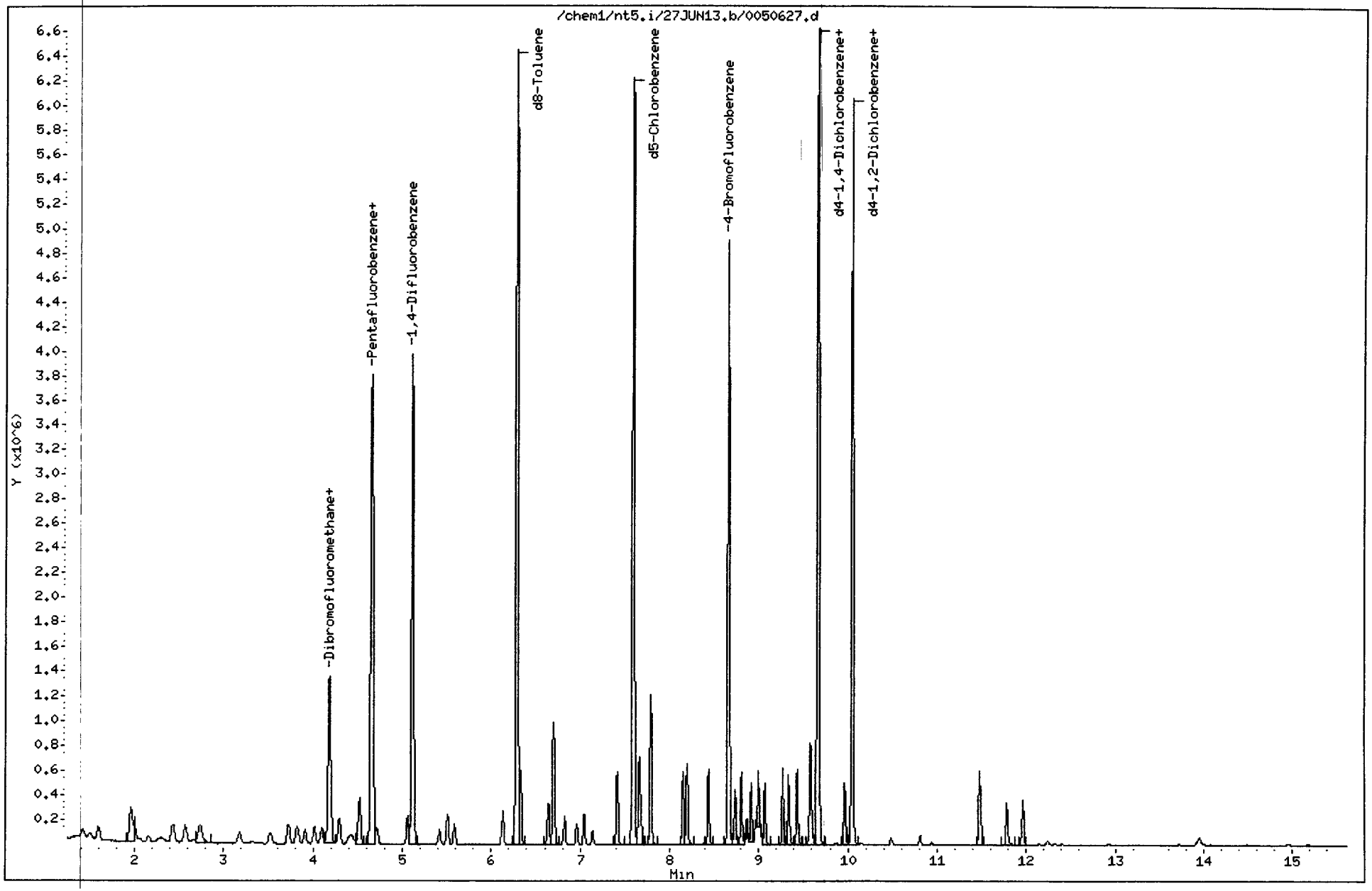
Sample Info: IC0627,5,5,0

Instrument: nt5.i

Operator: PB

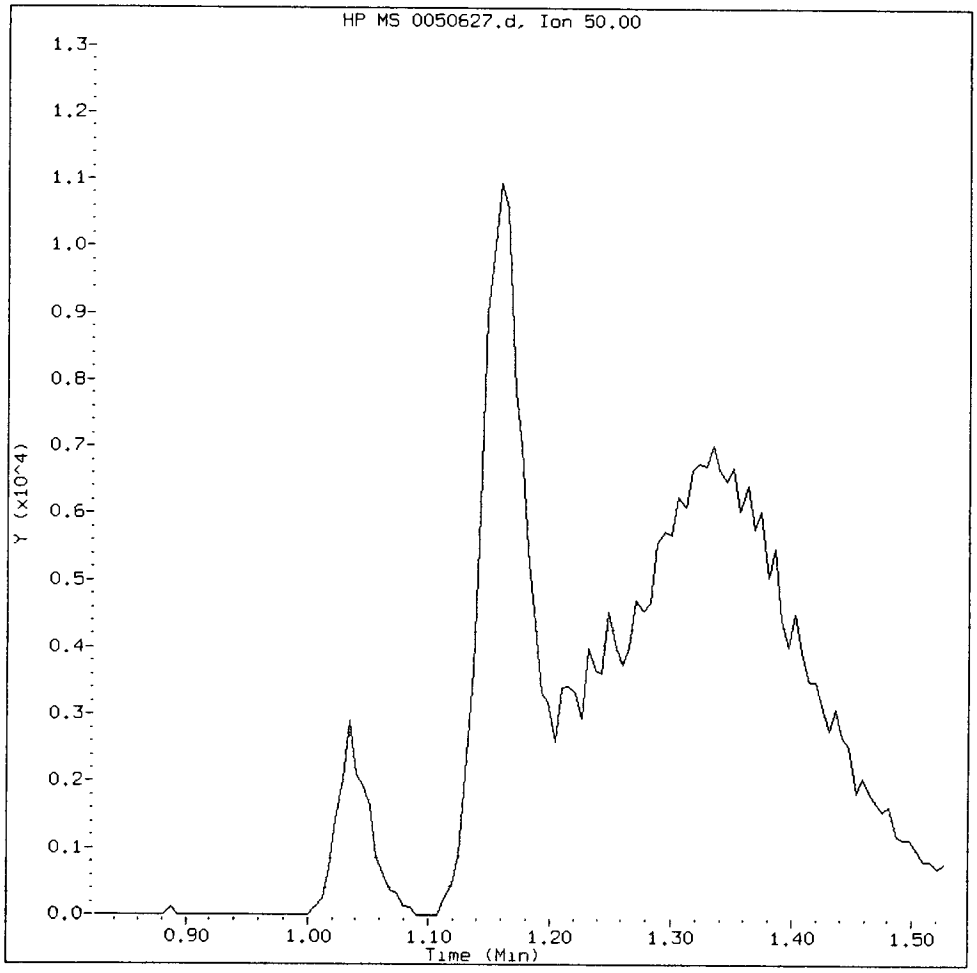
Column phase: RTXVMS

Column diameter: 0.18



IC0627, /chem1/nt5.i/27JUN13.b/0050627.d

Chloromethane Amount: 4.88 Area: 98602



MANUAL INTEGRATION for Chloromethane

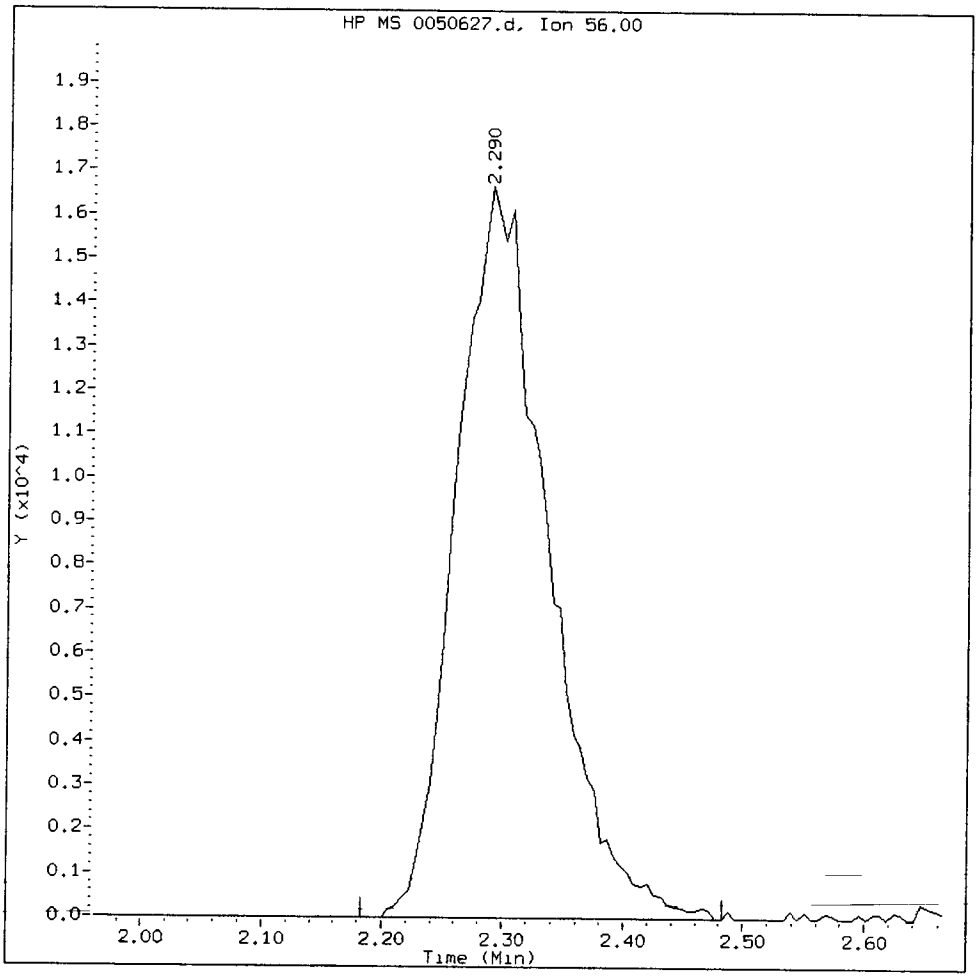
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JC Date: 6/24

IC0627, /chem1/nt5.i/27JUN13.b/0050627.d

Acrolein Amount: 47.55 Area: 88041



MANUAL INTEGRATION for Acrolein

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14

CO-ELUTION SUMMARY FOR FILE - 0050627.d

Lab ID: IC0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/0100627.d
Lab Smp Id: IC0627 Client Smp ID: VSTD10
Inj Date : 27-JUN-2013 12:43
Operator : PB Inst ID: nt5.i
Smp Info : IC0627,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 12:58 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 12:43 Cal File: 0100627.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.034	1.057	(0.222)	89363	10.0000	8.917
2 Chloromethane	50	1.153	1.176	(0.248)	217525	10.0000	10.581(M)
3 Vinyl Chloride	62	1.204	1.226	(0.259)	177432	10.0000	9.583
4 Bromomethane	94	1.407	1.436	(0.302)	108543	10.0000	10.229
5 Chloroethane	64	1.498	1.521	(0.322)	114252	10.0000	10.143
6 Trichlorofluoromethane	101	1.589	1.611	(0.341)	209565	10.0000	10.212
7 1,1-Dichloroethene	96	1.945	1.973	(0.418)	125345	10.0000	10.290
8 Carbon Disulfide	76	1.951	1.979	(0.419)	445316	10.0000	10.209
9 112Trichloro122Trifluoroethane	101	1.984	2.018	(0.426)	115460	10.0000	9.784
10 Iodomethane	142	2.047	2.075	(0.440)	73617	10.0000	7.537
11 Bromoethane	108	2.143	2.171	(0.460)	75262	10.0000	9.250
12 Acrolein	56	2.245	2.313	(0.482)	100186	50.0000	53.197
13 Methylene Chloride	84	2.414	2.454	(0.519)	111292	10.0000	7.358
14 Acetone	43	2.584	2.742	(0.555)	124315	50.0000	43.372(TMH)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.550	2.590	(0.548)	107660	10.0000	8.889
	16 Methyl tert butyl ether	73	2.737	2.754	(0.588)	300456	10.0000	8.047
	17 1,1-Dichloroethane	63	3.155	3.201	(0.678)	308375	10.0000	11.135
	18 Acrylonitrile	53	3.297	3.348	(0.708)	73606	10.0000	11.836
	19 Vinyl Acetate	43	3.518	3.540	(0.756)	413045	10.0000	11.049
	20 Cis-1,2-Dichloroethene	96	3.716	3.744	(0.798)	174143	10.0000	10.989
	22 2,2-Dichloropropane	77	3.812	3.840	(0.819)	239566	10.0000	10.421
	23 Bromochloromethane	128	3.902	3.930	(0.838)	74964	10.0000	10.830
	24 Chloroform	83	4.010	4.027	(0.861)	265223	10.0000	10.526
	25 Carbon Tetrachloride	117	4.089	4.117	(0.801)	204737	10.0000	10.551
$	27 Dibromofluoromethane	111	4.179	4.196	(0.898)	841682	50.0000	50.718
	26 1,1,1-Trichloroethane	97	4.162	4.185	(0.894)	247736	10.0000	10.732
	28 1,1-Dichloropropene	75	4.281	4.304	(0.838)	247462	10.0000	11.076
	29 2-Butanone	72	4.400	4.434	(0.945)	107538	50.0000	54.236
	30 Benzene	78	4.513	4.530	(0.884)	714754	10.0000	11.608
*	31 Pentafluorobenzene	168	4.655	4.671	(1.000)	1723537	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.666	(0.999)	938616	50.0000	49.771
	33 1,2-Dichloroethane	62	4.711	4.728	(0.922)	217720	10.0000	10.898
	34 Trichloroethene	95	5.051	5.067	(0.989)	165611	10.0000	10.648
*	35 1,4-Difluorobenzene	114	5.107	5.118	(1.000)	2831384	50.0000	
	37 Dibromomethane	93	5.413	5.424	(1.060)	91646	10.0000	10.801
	38 1,2-Dichloropropane	63	5.503	5.514	(1.078)	194706	10.0000	11.145
	39 Bromodichloromethane	83	5.582	5.588	(1.093)	209640	10.0000	10.838
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.125	(1.198)	27007	10.0000	9.929
	41 Cis 1,3-dichloropropene	75	6.131	6.137	(1.200)	270232	10.0000	11.246
$	42 d8-Toluene	98	6.284	6.295	(1.230)	3515193	50.0000	50.086
	43 Toluene	92	6.329	6.335	(1.239)	440309	10.0000	11.304
	44 Tetrachloroethene	166	6.640	6.646	(0.875)	172286	10.0000	10.612
	45 4-Methyl-2-Pentanone	58	6.702	6.708	(1.312)	425285	50.0000	57.704
	46 Trans 1,3-Dichloropropene	75	6.697	6.702	(1.311)	245188	10.0000	11.131
	47 1,1,2-Trichloroethane	97	6.821	6.827	(1.336)	139731	10.0000	11.005
	48 Chlorodibromomethane	129	6.963	6.963	(0.917)	152892	10.0000	10.743
	49 1,3-Dichloropropane	76	7.042	7.047	(0.928)	257803	10.0000	11.303
	50 1,2-Dibromoethane	107	7.138	7.144	(1.398)	136178	10.0000	11.018
	51 2-Hexanone	43	7.415	7.421	(0.977)	705941	50.0000	59.366
*	52 d5-Chlorobenzene	117	7.590	7.596	(1.000)	2756425	50.0000	
	53 Chlorobenzene	112	7.607	7.613	(1.002)	444430	10.0000	11.276
	54 Ethyl Benzene	91	7.653	7.664	(1.008)	791879	10.0000	11.817
	55 1,1,1,2-Tetrachloroethane	131	7.670	7.675	(1.010)	155300	10.0000	10.872
	56 m,p-xylene	106	7.788	7.794	(1.026)	588683	20.0000	23.401
	57 o-Xylene	106	8.151	8.156	(1.074)	278946	10.0000	11.235
	58 Styrene	104	8.196	8.201	(1.080)	472534	10.0000	11.614
	59 Bromoform	173	8.190	8.196	(0.847)	109291	10.0000	11.061
	60 Isopropyl Benzene	105	8.439	8.445	(0.873)	727122	10.0000	12.322
$	62 4-Bromofluorobenzene	95	8.660	8.665	(1.141)	1453706	50.0000	49.552
	63 Bromobenzene	156	8.739	8.739	(0.904)	183698	10.0000	11.321
	64 N-Propyl Benzene	91	8.807	8.812	(0.911)	874337	10.0000	12.299

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	180359	10.0000	11.029
66	2-Chloro Toluene	91	8.914	8.920	(0.922)	527000	10.0000	11.761
67	1,3,5-Trimethyl Benzene	105	8.993	8.999	(0.930)	610805	10.0000	12.007
68	1,2,3-Trichloropropane	110	8.965	8.971	(0.927)	55748	10.0000	10.967
69	Trans-1,4-Dichloro 2-Butene	53	9.022	9.027	(0.933)	64174	10.0000	10.407
70	4-Chloro Toluene	91	9.067	9.073	(0.938)	542967	10.0000	11.642
71	T-Butyl Benzene	119	9.271	9.276	(0.959)	536670	10.0000	11.877
72	1,2,4-Trimethylbenzene	105	9.338	9.338	(0.966)	597866	10.0000	12.020
73	S-Butyl Benzene	105	9.435	9.440	(0.976)	790302	10.0000	12.165
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	640405	10.0000	12.169
75	1,3-Dichlorobenzene	146	9.593	9.599	(0.992)	338260	10.0000	11.407
* 76	d4-1,4-Dichlorobenzene	152	9.667	9.672	(1.000)	1422668	50.0000	
77	1,4-Dichlorobenzene	146	9.678	9.683	(1.001)	345667	10.0000	11.269
78	N-Butyl Benzene	91	9.966	9.966	(1.031)	570697	10.0000	11.556
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1308425	50.0000	50.424
80	1,2-Dichlorobenzene	146	10.057	10.062	(1.040)	325311	10.0000	11.249
81	1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	34226	10.0000	10.115
82	Hexachloro 1,3-Butadiene	225	11.488	11.488	(1.188)	142380	10.0000	10.247
83	1,2,4-Trichlorobenzene	180	11.477	11.477	(1.187)	223995	10.0000	10.375
84	Naphthalene	128	11.788	11.788	(1.219)	532940	10.0000	11.185
85	1,2,3-Trichlorobenzene	180	11.969	11.969	(1.238)	226875	10.0000	10.600

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0100627.d
Lab Smp Id: IC0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 27-JUN-2013
Calibration Time: 17:46
Client Smp ID: VSTD10
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1723537	6.81
35 1,4-Difluorobenze	2656709	1328354	5313418	2831384	6.57
52 d5-Chlorobenzene	2557235	1278618	5114470	2756425	7.79
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1422668	3.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.65	-0.36
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.22
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

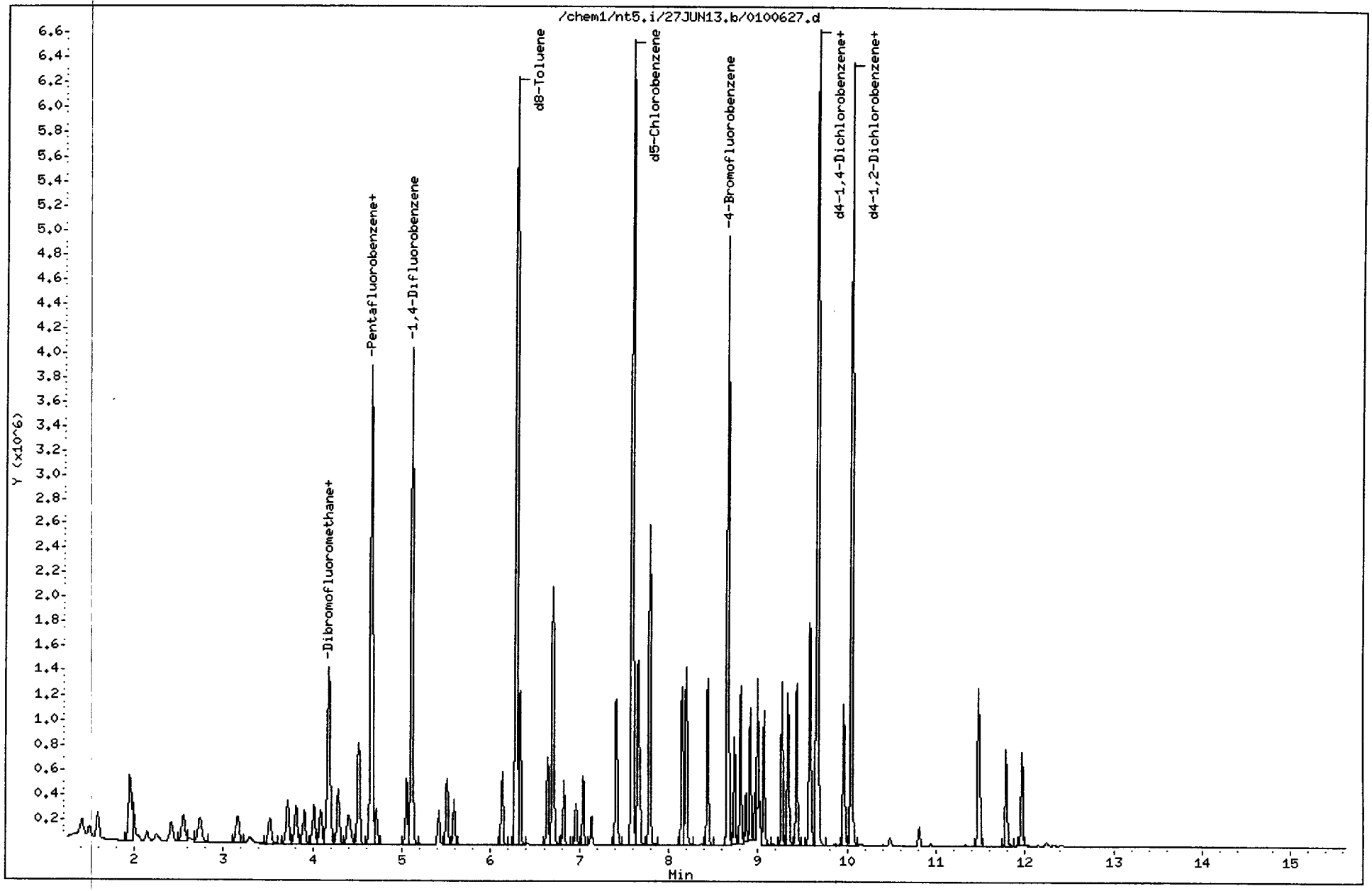
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/27JUN13.b/0100627.d
Date : 27-JUN-2013 12:43
Client ID: VSTD10
Sample Info: IC0627,5,5,0

Instrument: nt5.i

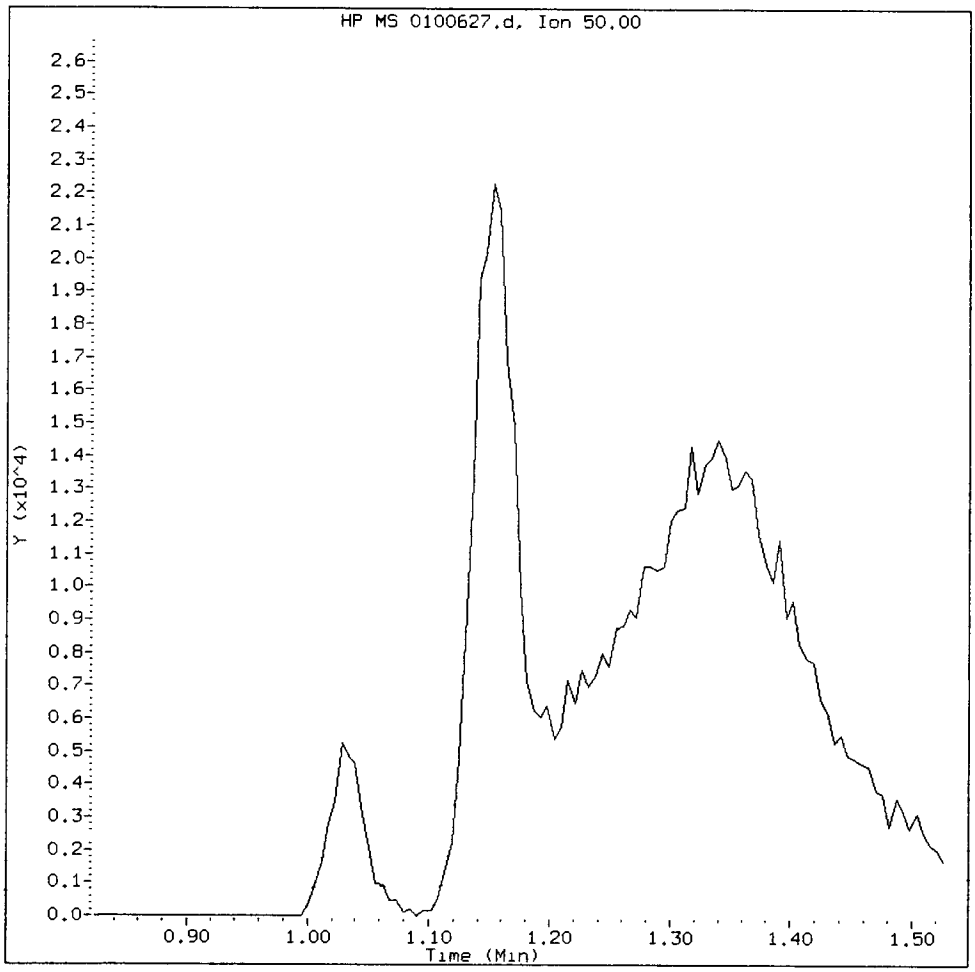
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0627, /chem1/nt5.i/27JUN13.b/0100627.d

Chloromethane Amount: 10.58 Area: 217525



MANUAL INTEGRATION for Chloromethane

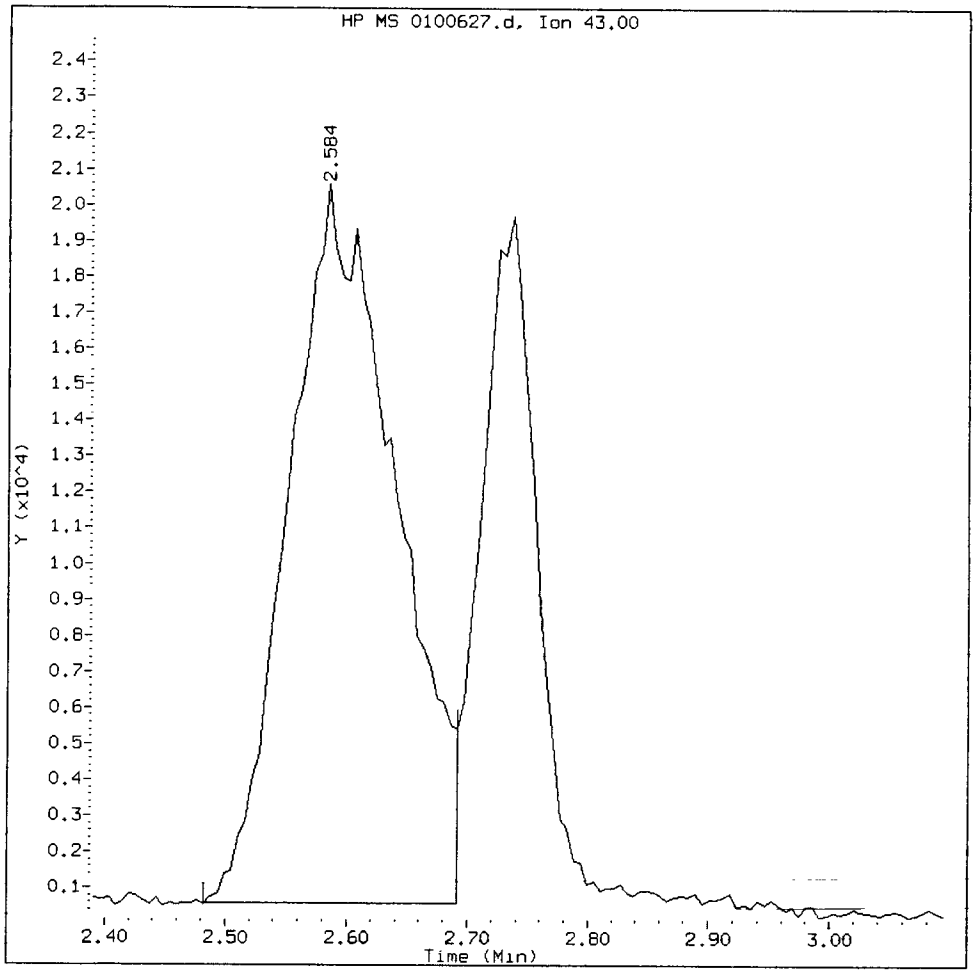
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/26/14

IC0627, /chem1/nt5.i/27JUN13.b/0100627.d

Acetone Amount: 43.37 Area: 124315



MANUAL INTEGRATION for Acetone

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/27/13

CO-ELUTION SUMMARY FOR FILE - 0100627.d

Lab ID: IC0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/0500627a.d
Lab Smp Id: IC0627 Client Smp ID: VSTD50
Inj Date : 27-JUN-2013 15:48
Operator : PB Inst ID: nt5.i
Smp Info : IC0627,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 12:58 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 15:48 Cal File: 0500627a.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.028	1.028	(0.221)	539961	50.0000	57.553
2 Chloromethane	50	1.147	1.147	(0.246)	1033938	50.0000	53.721(M)
3 Vinyl Chloride	62	1.198	1.198	(0.257)	1004366	50.0000	57.944
4 Bromomethane	94	1.407	1.407	(0.302)	496390	50.0000	49.966
5 Chloroethane	64	1.492	1.492	(0.321)	589206	50.0000	55.874
6 Trichlorofluoromethane	101	1.583	1.583	(0.340)	1042947	50.0000	54.284
7 1,1-Dichloroethene	96	1.945	1.945	(0.418)	690512	50.0000	60.549
8 Carbon Disulfide	76	1.945	1.945	(0.418)	2478833	50.0000	60.698
9 112Trichloro122Trifluoroethane	101	1.990	1.990	(0.428)	693903	50.0000	62.805
10 Iodomethane	142	2.047	2.047	(0.440)	710144	50.0000	77.660
11 Bromoethane	108	2.143	2.143	(0.460)	487566	50.0000	64.004
12 Acrolein	56	2.301	2.301	(0.494)	362914	250.000	205.83(M)
13 Methylene Chloride	84	2.420	2.420	(0.520)	711184	50.0000	50.222
14 Acetone	43	2.725	2.725	(0.586)	750099	250.000	279.53(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.561	2.561	(0.550)	726949	50.0000	64.111
	16 Methyl tert butyl ether	73	2.725	2.725	(0.586)	1959040	50.0000	56.047
	17 1,1-Dichloroethane	63	3.172	3.172	(0.682)	1248938	50.0000	48.169
	18 Acrylonitrile	53	3.336	3.336	(0.717)	225507	50.0000	38.732
	19 Vinyl Acetate	43	3.517	3.517	(0.756)	1772791	50.0000	50.654
	20 Cis-1,2-Dichloroethene	96	3.721	3.721	(0.799)	772580	50.0000	52.074
	22 2,2-Dichloropropane	77	3.817	3.817	(0.820)	1158646	50.0000	53.836
	23 Bromochloromethane	128	3.908	3.908	(0.840)	328045	50.0000	50.622
	24 Chloroform	83	4.010	4.010	(0.861)	1200413	50.0000	50.886
	25 Carbon Tetrachloride	117	4.094	4.094	(0.802)	948930	50.0000	52.115
$	27 Dibromofluoromethane	111	4.179	4.179	(0.898)	736475	50.0000	47.402
	26 1,1,1-Trichloroethane	97	4.168	4.168	(0.895)	1113958	50.0000	51.547
	28 1,1-Dichloropropene	75	4.287	4.287	(0.839)	1102512	50.0000	52.591
	29 2-Butanone	72	4.428	4.428	(0.951)	449293	250.000	242.04
	30 Benzene	78	4.519	4.519	(0.885)	3091456	50.0000	53.510
*	31 Pentafluorobenzene	168	4.654	4.654	(1.000)	1613586	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.649	(0.999)	883484	50.0000	50.040
	33 1,2-Dichloroethane	62	4.711	4.711	(0.922)	951170	50.0000	50.743
	34 Trichloroethene	95	5.056	5.056	(0.990)	779694	50.0000	53.427
*	35 1,4-Difluorobenzene	114	5.107	5.107	(1.000)	2656709	50.0000	
	37 Dibromomethane	93	5.412	5.412	(1.060)	404953	50.0000	50.863
	38 1,2-Dichloropropane	63	5.503	5.503	(1.078)	849266	50.0000	51.806
	39 Bromodichloromethane	83	5.582	5.582	(1.093)	947181	50.0000	52.187
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.120	(1.198)	151189	50.0000	59.236
	41 Cis 1,3-dichloropropene	75	6.131	6.131	(1.200)	1217103	50.0000	53.980
$	42 d8-Toluene	98	6.289	6.289	(1.232)	3256477	50.0000	49.450
	43 Toluene	92	6.329	6.329	(1.239)	1941825	50.0000	53.131
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	824011	50.0000	54.707
	45 4-Methyl-2-Pentanone	58	6.702	6.702	(1.312)	1738379	250.000	251.37
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.311)	1083319	50.0000	52.415
	47 1,1,2-Trichloroethane	97	6.827	6.827	(1.337)	597946	50.0000	50.189
	48 Chlorodibromomethane	129	6.962	6.962	(0.917)	683963	50.0000	51.801
	49 1,3-Dichloropropane	76	7.042	7.042	(0.927)	1099272	50.0000	51.950
	50 1,2-Dibromoethane	107	7.138	7.138	(1.398)	593106	50.0000	51.140
	51 2-Hexanone	43	7.415	7.415	(0.976)	2796363	250.000	253.48
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2557235	50.0000	
	53 Chlorobenzene	112	7.607	7.607	(1.001)	1937755	50.0000	52.994
	54 Ethyl Benzene	91	7.658	7.658	(1.008)	3514205	50.0000	56.525
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	697740	50.0000	52.651
	56 m,p-xylene	106	7.794	7.794	(1.026)	2634940	100.000	112.90
	57 o-Xylene	106	8.156	8.156	(1.074)	1282915	50.0000	55.695
	58 Styrene	104	8.201	8.201	(1.080)	2141346	50.0000	56.732
	59 Bromoform	173	8.196	8.196	(0.847)	475860	50.0000	49.852
	60 Isopropyl Benzene	105	8.445	8.445	(0.873)	3303536	50.0000	57.950
$	62 4-Bromofluorobenzene	95	8.665	8.665	(1.141)	1366538	50.0000	50.209
	63 Bromobenzene	156	8.739	8.739	(0.903)	804085	50.0000	51.296
	64 N-Propyl Benzene	91	8.812	8.812	(0.911)	3927668	50.0000	57.191

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	766836	50.0000	48.539
66	2-Chloro Toluene	91	8.920	8.920	(0.922)	2392152	50.0000	55.263
67	1,3,5-Trimethyl Benzene	105	9.005	9.005	(0.931)	2807692	50.0000	57.132
68	1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	238221	50.0000	48.513
69	Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	294684	50.0000	49.470
70	4-Chloro Toluene	91	9.072	9.072	(0.938)	2520724	50.0000	55.946
71	T-Butyl Benzene	119	9.276	9.276	(0.959)	2465851	50.0000	56.491
72	1,2,4-Trimethylbenzene	105	9.344	9.344	(0.966)	2769771	50.0000	57.641
73	S-Butyl Benzene	105	9.440	9.440	(0.976)	3631905	50.0000	57.871
74	4-Isopropyl Toluene	119	9.587	9.587	(0.991)	3032182	50.0000	59.641
75	1,3-Dichlorobenzene	146	9.599	9.599	(0.992)	1544630	50.0000	53.919
* 76	d4-1,4-Dichlorobenzene	152	9.672	9.672	(1.000)	1374359	50.0000	
77	1,4-Dichlorobenzene	146	9.689	9.689	(1.002)	1578891	50.0000	53.282
78	N-Butyl Benzene	91	9.972	9.972	(1.031)	2897783	50.0000	60.739
$ 79	d4-1,2-Dichlorobenzene	152	10.057	10.057	(1.040)	1237835	50.0000	49.380
80	1,2-Dichlorobenzene	146	10.068	10.068	(1.041)	1449577	50.0000	51.889
81	1,2-Dibromo 3-Chloropropane	75	10.815	10.815	(1.118)	150104	50.0000	45.919
82	Hexachloro 1,3-Butadiene	225	11.505	11.505	(1.189)	712650	50.0000	53.090
83	1,2,4-Trichlorobenzene	180	11.488	11.488	(1.188)	1126687	50.0000	54.023
84	Naphthalene	128	11.805	11.805	(1.220)	2264939	50.0000	49.207
85	1,2,3-Trichlorobenzene	180	11.986	11.986	(1.239)	1043041	50.0000	50.445

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0500627a.d
Lab Smp Id: IC0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 27-JUN-2013
Calibration Time: 15:48
Client Smp ID: VSTD50
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1613586	0.00
35 1,4-Difluorobenze	2656709	1328354	5313418	2656709	0.00
52 d5-Chlorobenzene	2557235	1278618	5114470	2557235	0.00
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1374359	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.65	0.00
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.00
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

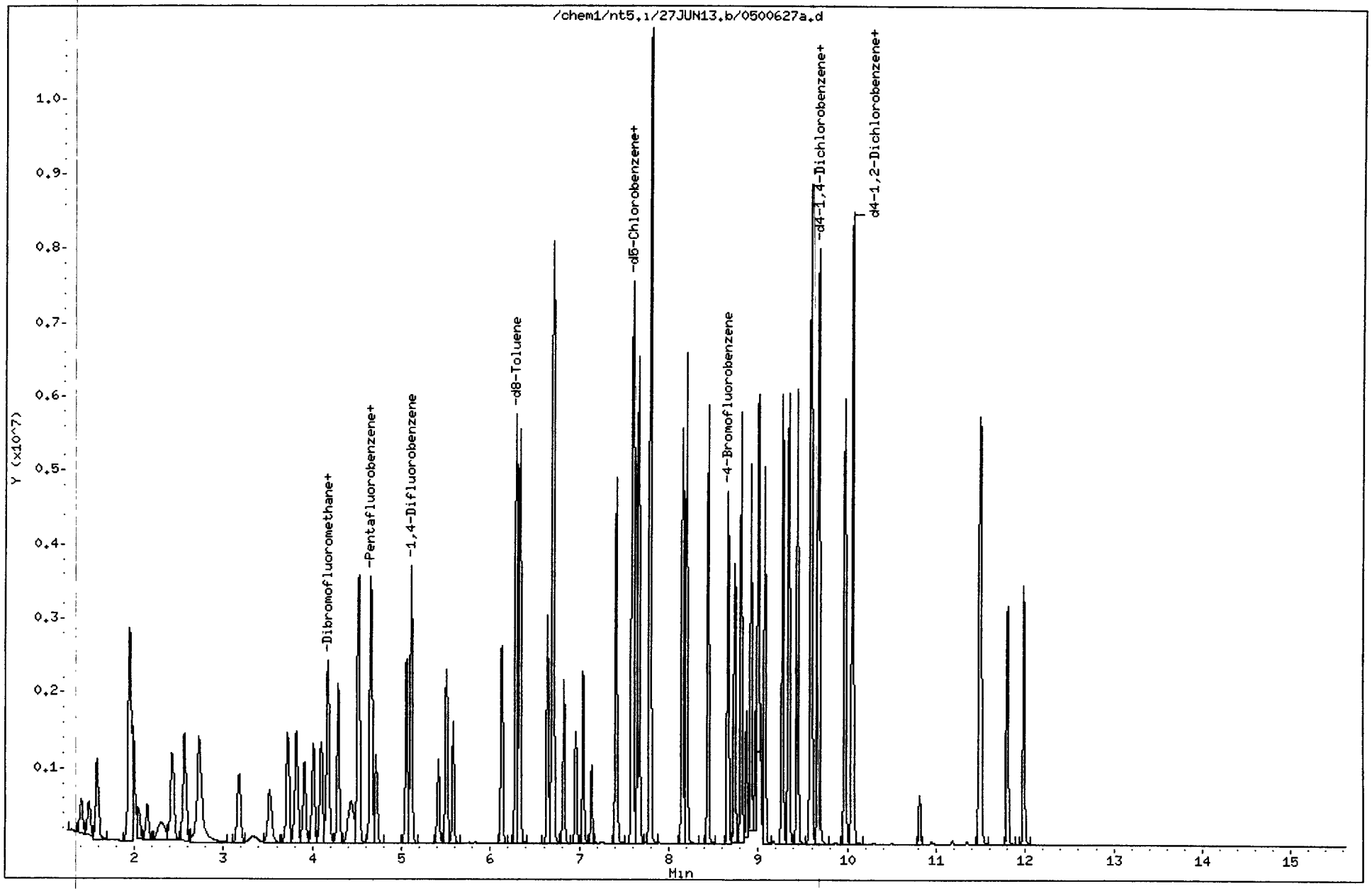
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/27JUN13.b/0500627a.d
Date : 27-JUN-2013 15:48
Client ID: VSTD50
Sample Info: IC0627,5,5,0

Column phase: RTXVMS

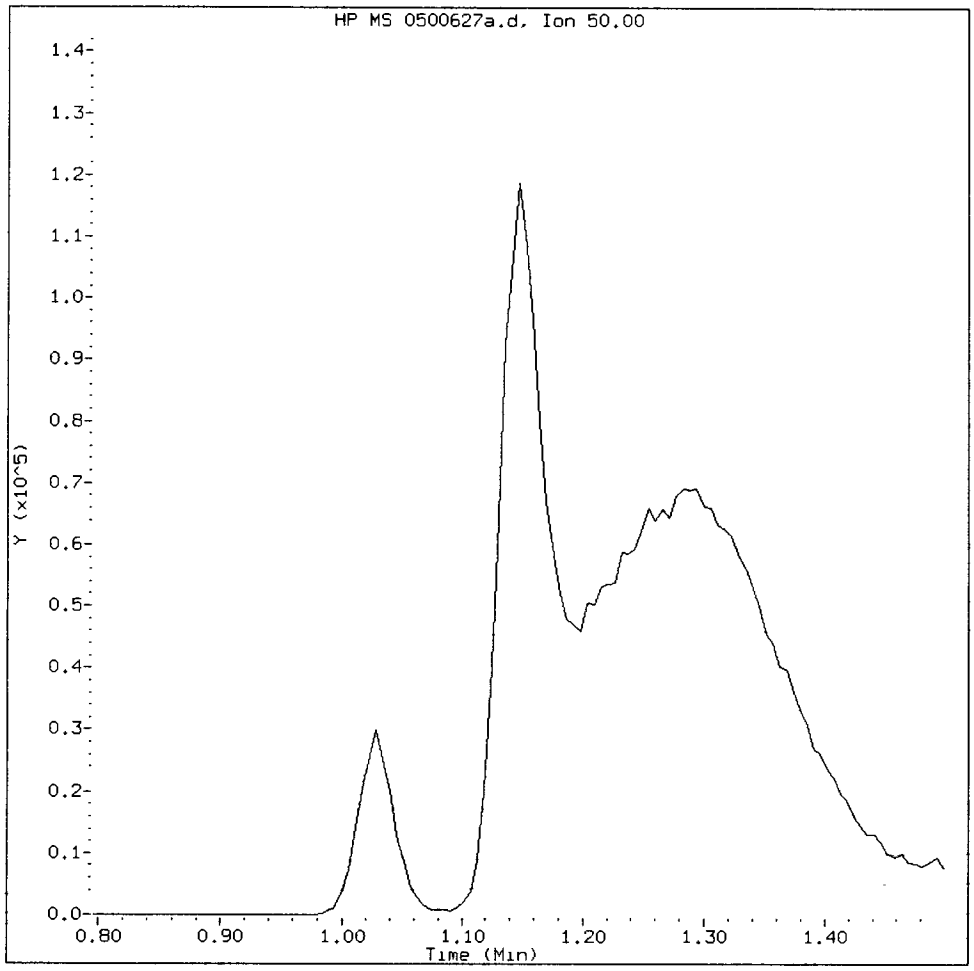
Instrument: nt5.i

Operator: PB
Column diameter: 0.18



IC0627, /chem1/nt5.i/27JUN13.b/0500627a.d

Chloromethane Amount: 53.72 Area: 1033938



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/27/13

CO-ELUTION SUMMARY FOR FILE - 0500627a.d

Lab ID: IC0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/1000627.d
Lab Smp Id: IC0627 Client Smp ID: VSTD100
Inj Date : 27-JUN-2013 11:55
Operator : PB Inst ID: nt5.i
Smp Info : IC0627,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 12:58 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:55 Cal File: 1000627.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.057	1.028	(0.226)	996484	100.000	97.591
2 Chloromethane	50	1.176	1.147	(0.252)	2073708	100.000	98.999(M)
3 Vinyl Chloride	62	1.227	1.198	(0.263)	2017304	100.000	106.94
4 Bromomethane	94	1.430	1.407	(0.307)	1010054	100.000	93.417
5 Chloroethane	64	1.521	1.492	(0.326)	1144851	100.000	99.753
6 Trichlorofluoromethane	101	1.611	1.583	(0.345)	2121930	100.000	101.48
7 1,1-Dichloroethene	96	1.968	1.945	(0.422)	1130056	100.000	91.047
8 Carbon Disulfide	76	1.968	1.945	(0.422)	3991456	100.000	89.803
9 112Trichloro122Trifluoroethane	101	2.007	1.990	(0.430)	1078299	100.000	89.675
10 Iodomethane	142	2.064	2.047	(0.442)	988310	100.000	99.306
11 Bromoethane	108	2.160	2.143	(0.463)	713548	100.000	86.066
12 Acrolein	56	2.267	2.301	(0.486)	956072	500.000	498.24
13 Methylene Chloride	84	2.432	2.420	(0.521)	910446	100.000	59.075
14 Acetone	43	2.596	2.725	(0.556)	1106904	500.000	379.02(TH)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.567	2.561	(0.550)	1016485	100.000	82.369
	16 Methyl tert butyl ether	73	2.765	2.725	(0.593)	2678889	100.000	70.420
	17 1,1-Dichloroethane	63	3.178	3.172	(0.681)	3163841	100.000	112.12
	18 Acrylonitrile	53	3.314	3.336	(0.710)	756417	100.000	119.37
	19 Vinyl Acetate	43	3.540	3.517	(0.759)	4046749	100.000	106.24
	20 Cis-1,2-Dichloroethene	96	3.733	3.721	(0.800)	1675659	100.000	103.78
	22 2,2-Dichloropropane	77	3.829	3.817	(0.821)	2418861	100.000	103.27
	23 Bromochloromethane	128	3.919	3.908	(0.840)	727039	100.000	103.09
	24 Chloroform	83	4.027	4.010	(0.863)	2661439	100.000	103.66
	25 Carbon Tetrachloride	117	4.100	4.094	(0.801)	2087996	100.000	105.41
$	27 Dibromofluoromethane	111	4.196	4.179	(0.899)	848027	50.0000	50.152
	26 1,1,1-Trichloroethane	97	4.174	4.168	(0.895)	2439128	100.000	103.71
	28 1,1-Dichloropropene	75	4.293	4.287	(0.839)	2321750	100.000	101.80
	29 2-Butanone	72	4.411	4.428	(0.945)	1084114	500.000	536.62
	30 Benzene	78	4.525	4.519	(0.884)	6370174	100.000	101.35
*	31 Pentafluorobenzene	168	4.666	4.654	(1.000)	1756133	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.649	(0.999)	936121	50.0000	48.717
	33 1,2-Dichloroethane	62	4.723	4.711	(0.923)	2065567	100.000	101.29
	34 Trichloroethene	95	5.062	5.056	(0.989)	1636716	100.000	103.09
*	35 1,4-Difluorobenzene	114	5.119	5.107	(1.000)	2890240	50.0000	
	37 Dibromomethane	93	5.418	5.412	(1.059)	897820	100.000	103.66
	38 1,2-Dichloropropane	63	5.515	5.503	(1.077)	1865186	100.000	104.58
	39 Bromodichloromethane	83	5.588	5.582	(1.092)	2046777	100.000	103.66
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.120	(1.197)	289354	100.000	104.21
	41 Cis 1,3-dichloropropene	75	6.137	6.131	(1.199)	2626106	100.000	107.06
$	42 d8-Toluene	98	6.295	6.289	(1.230)	3580613	50.0000	49.979
	43 Toluene	92	6.335	6.329	(1.238)	4012420	100.000	100.91
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	1683209	100.000	103.50
	45 4-Methyl-2-Pentanone	58	6.714	6.702	(1.312)	3940743	500.000	523.80
	46 Trans 1,3-Dichloropropene	75	6.702	6.697	(1.309)	2363181	100.000	105.10
	47 1,1,2-Trichloroethane	97	6.833	6.827	(1.335)	1333591	100.000	102.89
	48 Chlorodibromomethane	129	6.968	6.962	(0.917)	1510254	100.000	105.93
	49 1,3-Dichloropropane	76	7.048	7.042	(0.928)	2429216	100.000	106.32
	50 1,2-Dibromoethane	107	7.144	7.138	(1.396)	1320785	100.000	104.68
	51 2-Hexanone	43	7.421	7.415	(0.977)	6261913	500.000	525.69
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2761179	50.0000	
	53 Chlorobenzene	112	7.613	7.607	(1.002)	3957643	100.000	100.24
	54 Ethyl Benzene	91	7.664	7.658	(1.009)	6656793	100.000	99.165
	55 1,1,1,2-Tetrachloroethane	131	7.681	7.675	(1.011)	1484227	100.000	103.73
	56 m,p-xylene	106	7.800	7.794	(1.027)	5127453	200.000	203.47
	57 o-Xylene	106	8.156	8.156	(1.074)	2688608	100.000	108.10
	58 Styrene	104	8.207	8.201	(1.080)	4332016	100.000	106.29
	59 Bromoform	173	8.202	8.196	(0.848)	1069886	100.000	106.45
	60 Isopropyl Benzene	105	8.445	8.445	(0.873)	6296814	100.000	104.91
$	62 4-Bromofluorobenzene	95	8.665	8.665	(1.141)	1467338	50.0000	49.931
	63 Bromobenzene	156	8.745	8.739	(0.904)	1701889	100.000	103.12
	64 N-Propyl Benzene	91	8.812	8.812	(0.911)	7144564	100.000	98.807

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.875	8.869	(0.918)	1736506	100.000	104.40
66	2-Chloro Toluene	91	8.926	8.920	(0.923)	4758188	100.000	104.40
67	1,3,5-Trimethyl Benzene	105	9.005	9.005	(0.931)	5446341	100.000	105.26
68	1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	537721	100.000	104.01
69	Trans-1,4-Dichloro 2-Butene	53	9.033	9.027	(0.934)	686387	100.000	109.44
70	4-Chloro Toluene	91	9.078	9.072	(0.939)	4919486	100.000	103.70
71	T-Butyl Benzene	119	9.276	9.276	(0.959)	4895282	100.000	106.51
72	1,2,4-Trimethylbenzene	105	9.344	9.344	(0.966)	5340614	100.000	105.56
73	S-Butyl Benzene	105	9.440	9.440	(0.976)	6684191	100.000	101.16
74	4-Isopropyl Toluene	119	9.588	9.587	(0.991)	5654077	100.000	105.63
75	1,3-Dichlorobenzene	146	9.599	9.599	(0.992)	3012769	100.000	99.885
* 76	d4-1,4-Dichlorobenzene	152	9.672	9.672	(1.000)	1447038	50.0000	
77	1,4-Dichlorobenzene	146	9.689	9.689	(1.002)	3107728	100.000	99.608
78	N-Butyl Benzene	91	9.972	9.972	(1.031)	5406257	100.000	107.63
$ 79	d4-1,2-Dichlorobenzene	152	10.057	10.057	(1.040)	1293292	50.0000	49.001
80	1,2-Dichlorobenzene	146	10.063	10.068	(1.040)	2918814	100.000	99.235
81	1,2-Dibromo 3-Chloropropane	75	10.815	10.815	(1.118)	355029	100.000	103.15
82	Hexachloro 1,3-Butadiene	225	11.494	11.505	(1.188)	1395873	100.000	98.764
83	1,2,4-Trichlorobenzene	180	11.483	11.488	(1.187)	2217824	100.000	101.00
84	Naphthalene	128	11.794	11.805	(1.219)	4886257	100.000	100.83
85	1,2,3-Trichlorobenzene	180	11.975	11.986	(1.238)	2134912	100.000	98.066

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 1000627.d
Lab Smp Id: IC0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 27-JUN-2013
Calibration Time: 15:48
Client Smp ID: VSTD100
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1756133	8.83
35 1,4-Difluorobenze	2656709	1328354	5313418	2890240	8.79
52 d5-Chlorobenzene	2557235	1278618	5114470	2761179	7.98
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1447038	5.29

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.67	0.25
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.23
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

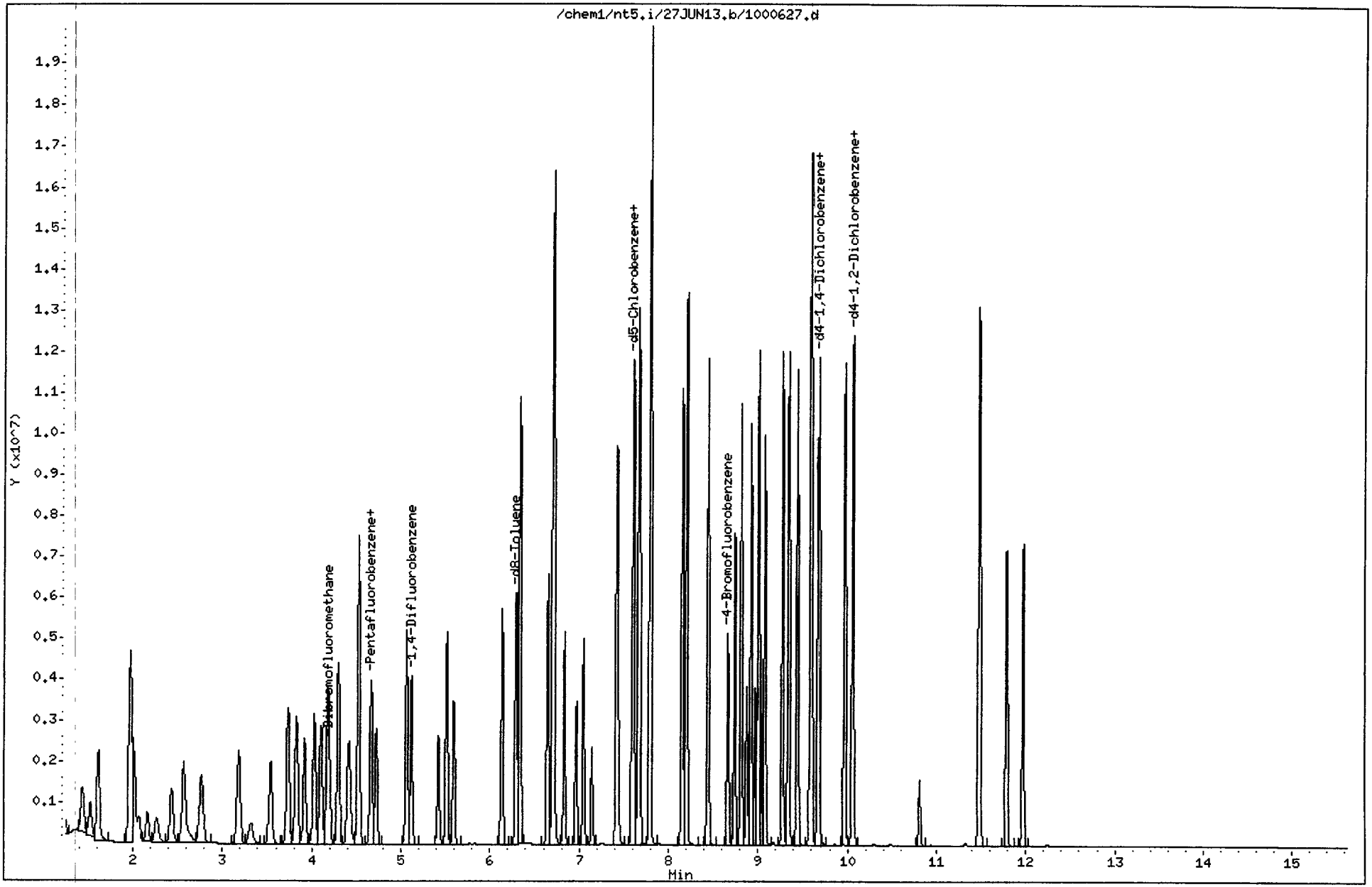
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/27JUN13.b/1000627.d
Date : 27-JUN-2013 11:55
Client ID: VSTD100
Sample Info: IC0627,5,5,0

Column phase: RTXVMS

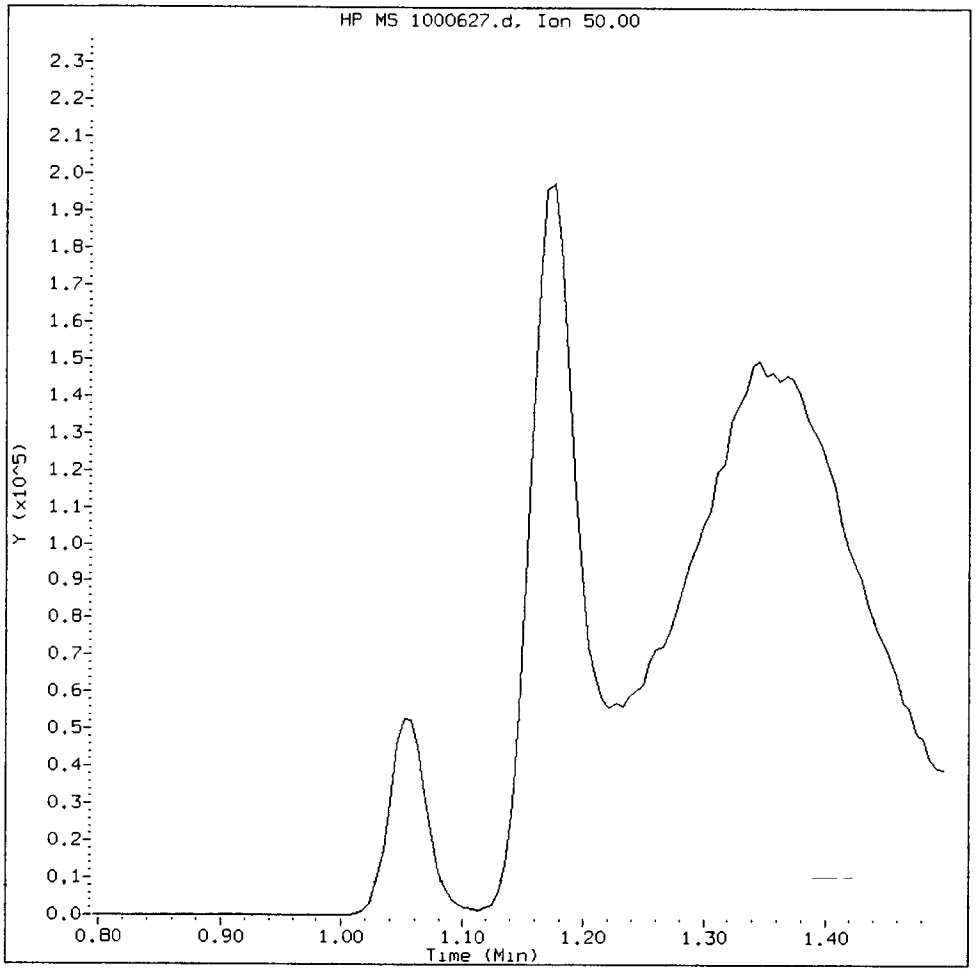
Instrument: nt5.i

Operator: PB
Column diameter: 0.18



IC0627, /chem1/nt5.i/27JUN13.b/1000627.d

Chloromethane Amount: 99.00 Area: 2073708



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14/14

CO-ELUTION SUMMARY FOR FILE - 1000627.d

Lab ID: IC0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/1500627.d
Lab Smp Id: IC0627 Client Smp ID: VSTD150
Inj Date : 27-JUN-2013 11:31
Operator : PB Inst ID: nt5.i
Smp Info : IC0627,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/27JUN13.b/V0121012S.m
Meth Date : 28-Jun-2013 12:58 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:31 Cal File: 1500627.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.045	1.028	(0.224)	1486529	150.000	147.33
2 Chloromethane	50	1.159	1.147	(0.249)	3068673	150.000	148.25(M)
3 Vinyl Chloride	62	1.215	1.198	(0.261)	2709239	150.000	145.33
4 Bromomethane	94	1.419	1.407	(0.304)	1435368	150.000	134.34
5 Chloroethane	64	1.509	1.492	(0.324)	1559284	150.000	137.49
6 Trichlorofluoromethane	101	1.600	1.583	(0.343)	3184163	150.000	154.10
7 1,1-Dichloroethene	96	1.956	1.945	(0.420)	1798095	150.000	146.60
8 Carbon Disulfide	76	1.956	1.945	(0.420)	6176688	150.000	140.63
9 112Trichloro122Trifluoroethane	101	1.996	1.990	(0.428)	1726393	150.000	145.29
10 Iodomethane	142	2.058	2.047	(0.442)	1585554	150.000	161.22
11 Bromoethane	108	2.154	2.143	(0.462)	1081004	150.000	131.95
12 Acrolein	56	2.262	2.301	(0.485)	1539423	750.000	811.84
13 Methylene Chloride	84	2.420	2.420	(0.519)	1387460	150.000	91.104
14 Acetone	43	2.595	2.725	(0.557)	1613252	750.000	559.01(T)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.556	2.561	(0.548)	1564391	150.000	128.28
	16 Methyl tert butyl ether	73	2.743	2.725	(0.588)	3972245	150.000	105.67
	17 1,1-Dichloroethane	63	3.161	3.172	(0.678)	2080414	150.000	74.607
	18 Acrylonitrile	53	3.303	3.336	(0.709)	900756	150.000	143.85
	19 Vinyl Acetate	43	3.529	3.517	(0.757)	5751052	150.000	152.80
	20 Cis-1,2-Dichloroethene	96	3.716	3.721	(0.797)	2468226	150.000	154.69
	22 2,2-Dichloropropane	77	3.812	3.817	(0.818)	3604338	150.000	155.72
	23 Bromochloromethane	128	3.908	3.908	(0.839)	1069386	150.000	153.44
	24 Chloroform	83	4.015	4.010	(0.862)	3882812	150.000	153.05
	25 Carbon Tetrachloride	117	4.089	4.094	(0.800)	3134154	150.000	159.79
$	27 Dibromofluoromethane	111	4.185	4.179	(0.898)	840507	50.0000	50.302
	26 1,1,1-Trichloroethane	97	4.162	4.168	(0.893)	3631498	150.000	156.25
	28 1,1-Dichloropropene	75	4.281	4.287	(0.837)	3434799	150.000	152.10
	29 2-Butanone	72	4.428	4.428	(0.950)	1594765	750.000	798.83
	30 Benzene	78	4.519	4.519	(0.884)	8796575	150.000	141.34
*	31 Pentafluorobenzene	168	4.660	4.654	(1.000)	1735360	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.649	(0.999)	938897	50.0000	49.447
	33 1,2-Dichloroethane	62	4.717	4.711	(0.923)	3012559	150.000	149.19
	34 Trichloroethene	95	5.056	5.056	(0.989)	2446738	150.000	155.64
*	35 1,4-Difluorobenzene	114	5.113	5.107	(1.000)	2861897	50.0000	
	37 Dibromomethane	93	5.418	5.412	(1.060)	1317786	150.000	153.65
	38 1,2-Dichloropropane	63	5.509	5.503	(1.077)	2707977	150.000	153.35
	39 Bromodichloromethane	83	5.588	5.582	(1.093)	2981699	150.000	152.50
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.120	(1.198)	418882	150.000	152.35
	41 Cis 1,3-dichloropropene	75	6.137	6.131	(1.200)	3791169	150.000	156.09
$	42 d8-Toluene	98	6.289	6.289	(1.230)	3535375	50.0000	49.836
	43 Toluene	92	6.335	6.329	(1.239)	5612952	150.000	142.57
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	2484626	150.000	156.39
	45 4-Methyl-2-Pentanone	58	6.719	6.702	(1.314)	5594545	750.000	750.99
	46 Trans 1,3-Dichloropropene	75	6.702	6.697	(1.311)	3422409	150.000	153.72
	47 1,1,2-Trichloroethane	97	6.832	6.827	(1.336)	1925491	150.000	150.03
	48 Chlorodibromomethane	129	6.968	6.962	(0.917)	2194615	150.000	157.58
	49 1,3-Dichloropropane	76	7.053	7.042	(0.928)	3474226	150.000	155.66
	50 1,2-Dibromoethane	107	7.144	7.138	(1.397)	1920792	150.000	153.75
	51 2-Hexanone	43	7.426	7.415	(0.978)	9352060	750.000	803.70
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2697287	50.0000	
	53 Chlorobenzene	112	7.613	7.607	(1.002)	5557397	150.000	144.09
	54 Ethyl Benzene	91	7.670	7.658	(1.010)	8848677	150.000	134.94
	55 1,1,1,2-Tetrachloroethane	131	7.687	7.675	(1.012)	2164446	150.000	154.85
	56 m,p-xylene	106	7.805	7.794	(1.028)	6927171	300.000	281.40
	57 o-Xylene	106	8.162	8.156	(1.074)	3869571	150.000	159.27
	58 Styrene	104	8.207	8.201	(1.080)	5922891	150.000	148.77
	59 Bromoform	173	8.201	8.196	(0.847)	1539628	150.000	159.99
	60 Isopropyl Benzene	105	8.445	8.445	(0.873)	8338276	150.000	145.08
$	62 4-Bromofluorobenzene	95	8.665	8.665	(1.141)	1434977	50.0000	49.986
	63 Bromobenzene	156	8.745	8.739	(0.904)	2462347	150.000	155.81
	64 N-Propyl Benzene	91	8.818	8.812	(0.911)	9294839	150.000	134.25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.880	8.869	(0.918)	2544523	150.000	159.76
66	2-Chloro Toluene	91	8.926	8.920	(0.922)	6565851	150.000	150.45
67	1,3,5-Trimethyl Benzene	105	9.010	9.005	(0.931)	7376823	150.000	148.89
68	1,2,3-Trichloropropane	110	8.976	8.971	(0.928)	793367	150.000	160.26
69	Trans-1,4-Dichloro 2-Butene	53	9.039	9.027	(0.934)	986436	150.000	164.26
70	4-Chloro Toluene	91	9.078	9.072	(0.938)	6806424	150.000	149.84
71	T-Butyl Benzene	119	9.282	9.276	(0.959)	6738214	150.000	153.12
72	1,2,4-Trimethylbenzene	105	9.350	9.344	(0.966)	7229161	150.000	149.23
73	S-Butyl Benzene	105	9.446	9.440	(0.976)	8796592	150.000	139.03
74	4-Isopropyl Toluene	119	9.593	9.587	(0.991)	7532969	150.000	146.97
75	1,3-Dichlorobenzene	146	9.604	9.599	(0.992)	4210107	150.000	145.77
* 76	d4-1,4-Dichlorobenzene	152	9.678	9.672	(1.000)	1385568	50.0000	
77	1,4-Dichlorobenzene	146	9.689	9.689	(1.001)	4394229	150.000	147.09
78	N-Butyl Benzene	91	9.978	9.972	(1.031)	7312144	150.000	152.03
$ 79	d4-1,2-Dichlorobenzene	152	10.057	10.057	(1.039)	1257494	50.0000	49.758
80	1,2-Dichlorobenzene	146	10.068	10.068	(1.040)	4149683	150.000	147.34
81	1,2-Dibromo 3-Chloropropane	75	10.821	10.815	(1.118)	540651	150.000	164.06
82	Hexachloro 1,3-Butadiene	225	11.494	11.505	(1.188)	2070946	150.000	153.03
83	1,2,4-Trichlorobenzene	180	11.482	11.488	(1.186)	3324193	150.000	158.10
84	Naphthalene	128	11.799	11.805	(1.219)	6906472	150.000	148.83
85	1,2,3-Trichlorobenzene	180	11.980	11.986	(1.238)	3234820	150.000	155.18

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 1500627.d
Lab Smp Id: IC0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 27-JUN-2013
Calibration Time: 15:48
Client Smp ID: VSTD150
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1735360	7.55
35 1,4-Difluorobenze	2656709	1328354	5313418	2861897	7.72
52 d5-Chlorobenzene	2557235	1278618	5114470	2697287	5.48
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1385568	0.82

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.66	0.12
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.68	0.06

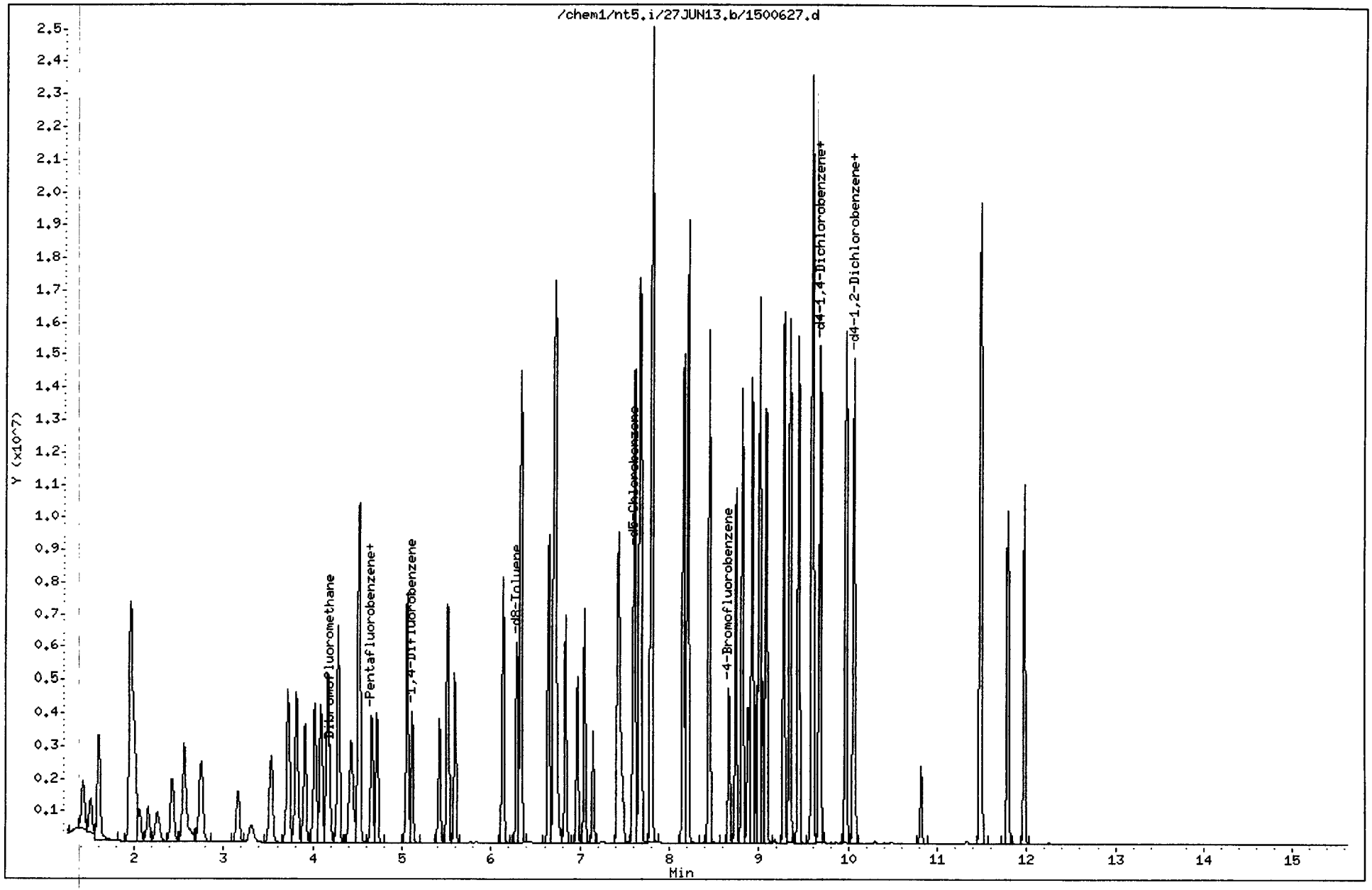
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/27JUN13.b/1500627.d
Date : 27-JUN-2013 11:31
Client ID: VSTD150
Sample Info: IC0627,5,5,0

Instrument: nt5.i

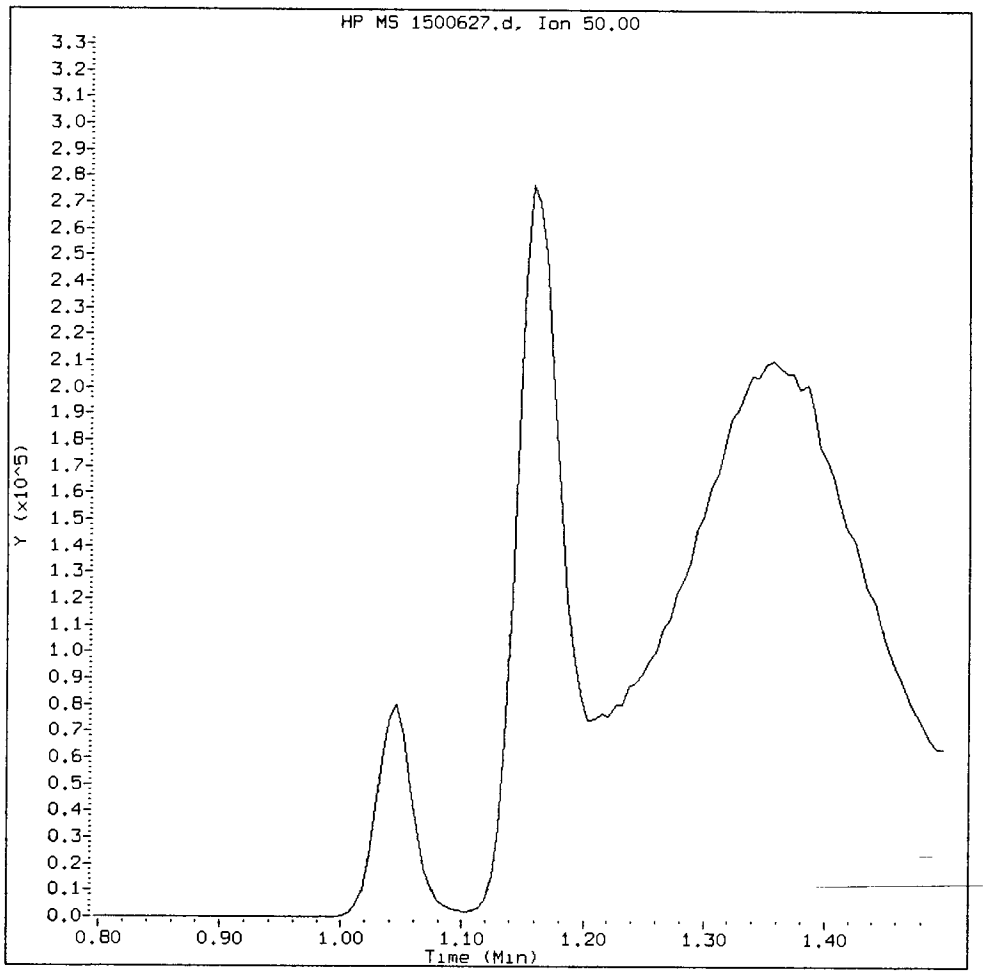
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0627, /chem1/nt5.i/27JUN13.b/1500627.d

Chloromethane Amount: 148.25 Area: 3068673



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/27/13

CO-ELUTION SUMMARY FOR FILE - 1500627.d

Lab ID: IC0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/2000627.d
Lab Smp Id: IC0627 Client Smp ID: VSTD200
Inj Date : 27-JUN-2013 11:07
Operator : PB Inst ID: nt5.i
Smp Info : IC0627,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 12:58 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.034	1.028	(0.222)	2093219	200.000	217.20
2 Chloromethane	50	1.153	1.147	(0.248)	3795104	200.000	191.97(M)
3 Vinyl Chloride	62	1.204	1.198	(0.259)	3482947	200.000	195.62
4 Bromomethane	94	1.407	1.407	(0.303)	1733972	200.000	169.92
5 Chloroethane	64	1.498	1.492	(0.322)	1831968	200.000	169.13
6 Trichlorofluoromethane	101	1.588	1.583	(0.342)	4100544	200.000	207.78
7 1,1-Dichloroethene	96	1.939	1.945	(0.417)	2195173	200.000	187.39
8 Carbon Disulfide	76	1.945	1.945	(0.418)	7321053	200.000	174.52
9 112Trichloro122Trifluoroethane	101	1.984	1.990	(0.427)	2167865	200.000	191.02
10 Iodomethane	142	2.047	2.047	(0.440)	2223937	200.000	236.77
11 Bromoethane	108	2.143	2.143	(0.461)	1328041	200.000	169.72
12 Acrolein	56	2.245	2.301	(0.483)	1872275	1000.00	1033.8
13 Methylene Chloride	84	2.409	2.420	(0.518)	1704517	200.000	117.18
14 Acetone	43	2.584	2.725	(0.556)	2012544	1000.00	730.15(T)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.545	2.561	(0.547)	2012817	200.000	172.81
	16 Methyl tert butyl ether	73	2.731	2.725	(0.587)	4809456	200.000	133.95
	17 1,1-Dichloroethane	63	3.144	3.172	(0.676)	2489845	200.000	93.487
	18 Acrylonitrile	53	3.297	3.336	(0.709)	404866	200.000	67.698
	19 Vinyl Acetate	43	3.512	3.517	(0.755)	6692695	200.000	186.17
	20 Cis-1,2-Dichloroethene	96	3.704	3.721	(0.797)	3033194	200.000	199.03
	22 2,2-Dichloropropane	77	3.795	3.817	(0.816)	4641125	200.000	209.94
	23 Bromochloromethane	128	3.897	3.908	(0.838)	1335621	200.000	200.65
	24 Chloroform	83	4.010	4.010	(0.862)	4882826	200.000	201.51
	25 Carbon Tetrachloride	117	4.072	4.094	(0.797)	4012321	200.000	213.90
$	27 Dibromofluoromethane	111	4.179	4.179	(0.899)	793513	50.0000	49.722
	26 1,1,1-Trichloroethane	97	4.151	4.168	(0.893)	4588179	200.000	206.69
	28 1,1-Dichloropropene	75	4.270	4.287	(0.836)	4276268	200.000	198.00
	29 2-Butanone	72	4.434	4.428	(0.954)	1972614	1000.00	1034.5
	30 Benzene	78	4.507	4.519	(0.883)	10353898	200.000	173.96
*	31 Pentafluorobenzene	168	4.649	4.654	(1.000)	1657456	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.649	(1.000)	909790	50.0000	50.166
	33 1,2-Dichloroethane	62	4.711	4.711	(0.922)	3753758	200.000	194.39
	34 Trichloroethene	95	5.051	5.056	(0.989)	3068340	200.000	204.09
*	35 1,4-Difluorobenzene	114	5.107	5.107	(1.000)	2736925	50.0000	
	37 Dibromomethane	93	5.413	5.412	(1.060)	1631155	200.000	198.87
	38 1,2-Dichloropropane	63	5.509	5.503	(1.079)	3268060	200.000	193.51
	39 Bromodichloromethane	83	5.588	5.582	(1.094)	3673538	200.000	196.47
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.120	(1.199)	505167	200.000	192.13
	41 Cis 1,3-dichloropropene	75	6.131	6.131	(1.200)	4548268	200.000	195.81
$	42 d8-Toluene	98	6.289	6.289	(1.232)	3346949	50.0000	49.335
	43 Toluene	92	6.335	6.329	(1.240)	6681831	200.000	177.47
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	3108329	200.000	207.71
	45 4-Methyl-2-Pentanone	58	6.725	6.702	(1.317)	6863512	1000.00	963.40
	46 Trans 1,3-Dichloropropene	75	6.702	6.697	(1.312)	4167292	200.000	195.72
	47 1,1,2-Trichloroethane	97	6.838	6.827	(1.339)	2350400	200.000	191.50
	48 Chlorodibromomethane	129	6.968	6.962	(0.917)	2705570	200.000	206.24
	49 1,3-Dichloropropane	76	7.053	7.042	(0.928)	4180624	200.000	198.85
	50 1,2-Dibromoethane	107	7.144	7.138	(1.399)	2352561	200.000	196.90
	51 2-Hexanone	43	7.432	7.415	(0.978)	9439201	1000.00	861.18
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2540726	50.0000	
	53 Chlorobenzene	112	7.613	7.607	(1.002)	6582041	200.000	181.18
	54 Ethyl Benzene	91	7.670	7.658	(1.010)	10256637	200.000	166.05
	55 1,1,1,2-Tetrachloroethane	131	7.687	7.675	(1.012)	2651213	200.000	201.36
	56 m,p-xylene	106	7.805	7.794	(1.028)	8136341	400.000	350.88
	57 o-Xylene	106	8.162	8.156	(1.074)	4696459	200.000	205.21
	58 Styrene	104	8.213	8.201	(1.081)	6914550	200.000	184.38
	59 Bromoform	173	8.207	8.196	(0.848)	1916551	200.000	208.33
	60 Isopropyl Benzene	105	8.450	8.445	(0.873)	9558130	200.000	173.97
$	62 4-Bromofluorobenzene	95	8.665	8.665	(1.141)	1351092	50.0000	49.964
	63 Bromobenzene	156	8.744	8.739	(0.904)	3027319	200.000	200.39
	64 N-Propyl Benzene	91	8.818	8.812	(0.911)	10690846	200.000	161.52

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.897	8.869	(0.919)	3171371	200.000	208.29
66	2-Chloro Toluene	91	8.931	8.920	(0.923)	7745027	200.000	185.65
67	1,3,5-Trimethyl Benzene	105	9.016	9.005	(0.932)	8570388	200.000	180.95
68	1,2,3-Trichloropropane	110	8.982	8.971	(0.928)	1000946	200.000	211.50
69	Trans-1,4-Dichloro 2-Butene	53	9.044	9.027	(0.935)	1306537	200.000	227.58
70	4-Chloro Toluene	91	9.084	9.072	(0.939)	8230881	200.000	189.54
71	T-Butyl Benzene	119	9.282	9.276	(0.959)	7983108	200.000	189.76
72	1,2,4-Trimethylbenzene	105	9.350	9.344	(0.966)	8446834	200.000	182.39
73	S-Butyl Benzene	105	9.452	9.440	(0.977)	10102191	200.000	167.02
74	4-Isopropyl Toluene	119	9.599	9.587	(0.992)	8780182	200.000	179.19
75	1,3-Dichlorobenzene	146	9.610	9.599	(0.993)	5104346	200.000	184.88
* 76	d4-1,4-Dichlorobenzene	152	9.678	9.672	(1.000)	1324580	50.0000	
77	1,4-Dichlorobenzene	146	9.695	9.689	(1.002)	5408844	200.000	189.39
78	N-Butyl Benzene	91	9.978	9.972	(1.031)	8733315	200.000	189.94
$ 79	d4-1,2-Dichlorobenzene	152	10.063	10.057	(1.040)	1215480	50.0000	50.310
80	1,2-Dichlorobenzene	146	10.074	10.068	(1.041)	5214012	200.000	193.66
81	1,2-Dibromo 3-Chloropropane	75	10.826	10.815	(1.119)	711501	200.000	225.84
82	Hexachloro 1,3-Butadiene	225	11.505	11.505	(1.189)	2691233	200.000	208.02
83	1,2,4-Trichlorobenzene	180	11.494	11.488	(1.188)	4250934	200.000	211.48
84	Naphthalene	128	11.805	11.805	(1.220)	8259508	200.000	186.19
85	1,2,3-Trichlorobenzene	180	11.986	11.986	(1.238)	4105475	200.000	206.02

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 2000627.d
Lab Smp Id: IC0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 27-JUN-2013
Calibration Time: 15:48
Client Smp ID: VSTD200
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1657456	2.72
35 1,4-Difluorobenze	2656709	1328354	5313418	2736925	3.02
52 d5-Chlorobenzene	2557235	1278618	5114470	2540726	-0.65
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1324580	-3.62

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.65	-0.12
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.00
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.68	0.06

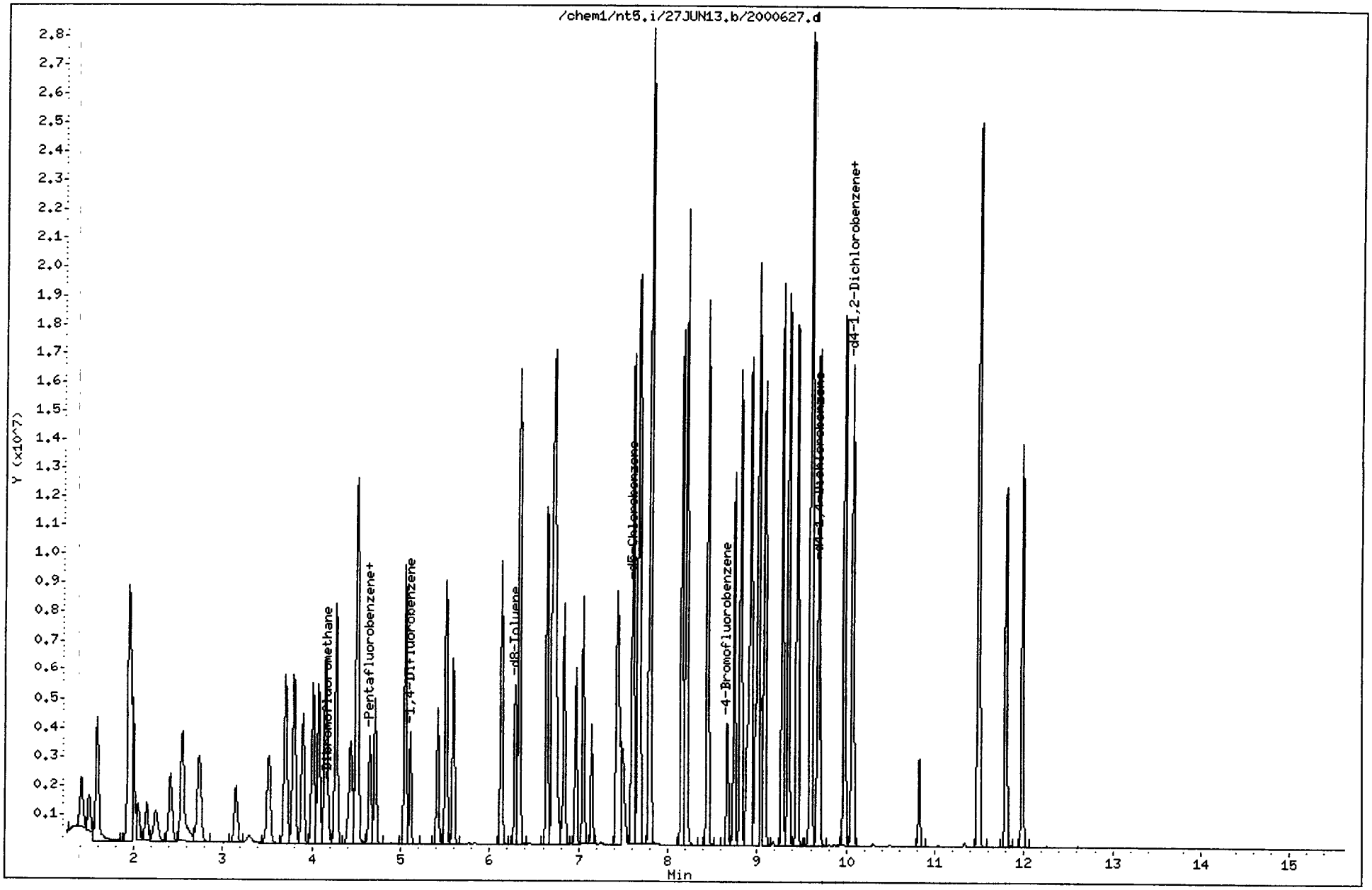
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/27JUN13.b/2000627.d
Date : 27-JUN-2013 11:07
Client ID: VSTD200
Sample Info: IC0627,5,5,0

Column phase: RTXVMS

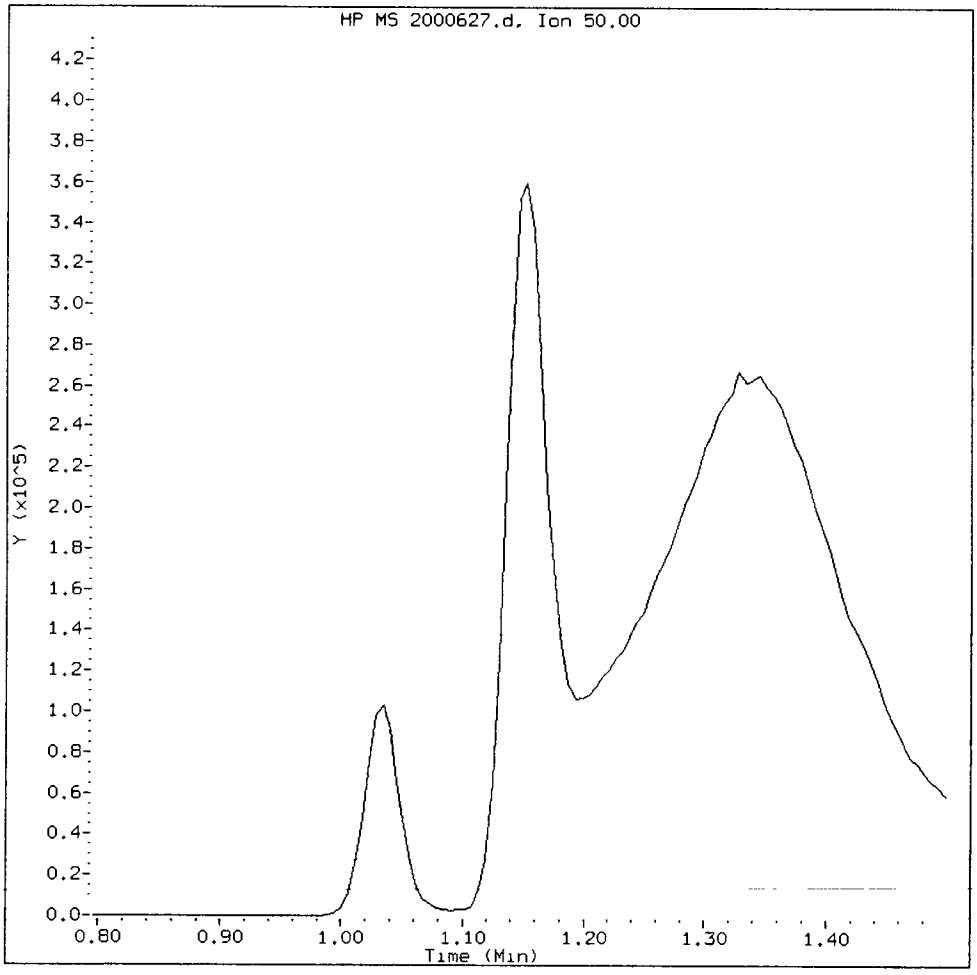
Instrument: nt5.i

Operator: PB
Column diameter: 0.18



IC0627, /chem1/nt5.i/27JUN13.b/2000627.d

Chloromethane Amount: 191.97 Area: 3795104



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

CO-ELUTION SUMMARY FOR FILE - 2000627.d

Lab ID: IC0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/icv0627.d
Lab Smp Id: ICV0627 Client Smp ID: ICV0627
Inj Date : 27-JUN-2013 17:22
Operator : PB Inst ID: nt5.i
Smp Info : ICV0627,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 12:58 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	1.045	1.028	(0.224)	486523	51.9097	51.910
2 Chloromethane	50	1.164	1.147	(0.250)	935727	48.6677	48.668(M)
3 Vinyl Chloride	62	1.215	1.198	(0.260)	929175	53.6606	53.661
4 Bromomethane	94	1.419	1.407	(0.304)	465307	46.8845	46.885
5 Chloroethane	64	1.509	1.492	(0.323)	563312	53.4731	53.473
6 Trichlorofluoromethane	101	1.600	1.583	(0.343)	979368	51.0269	51.027
7 1,1-Dichloroethene	96	1.956	1.945	(0.419)	513665	45.0874	45.087
8 Carbon Disulfide	76	1.962	1.945	(0.420)	1819863	44.6072	44.607
9 112Trichloro122Trifluoroethane	101	2.001	1.990	(0.429)	501622	45.4481	45.448
10 Iodomethane	142	2.058	2.047	(0.441)	477550	52.2769	52.277
11 Bromoethane	108	2.154	2.143	(0.462)	323763	42.5443	42.544
12 Acrolein	56	2.256	2.301	(0.484)	444734	252.496	252.50
13 Methylene Chloride	84	2.426	2.420	(0.520)	506304	35.7904	35.790
14 Acetone	43	2.590	2.725	(0.555)	626730	233.796	233.80(MH)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.567	2.561	(0.550)	618570	54.6082	54.608(Q)
	16 Methyl tert butyl ether	73	2.754	2.725	(0.590)	1969531	56.4041	56.404
	17 1,1-Dichloroethane	63	3.184	3.172	(0.682)	1427593	55.1155	55.115
	18 Acrylonitrile	53	3.302	3.336	(0.708)	315875	54.3090	54.309
	19 Vinyl Acetate	43	3.529	3.517	(0.756)	1775764	50.7910	50.791
	20 Cis-1,2-Dichloroethene	96	3.732	3.721	(0.800)	739825	49.9171	49.917
	22 2,2-Dichloropropane	77	3.829	3.817	(0.821)	1100339	51.1787	51.179
	23 Bromochloromethane	128	3.919	3.908	(0.840)	320839	49.5607	49.561
	24 Chloroform	83	4.021	4.010	(0.862)	1201183	50.9708	50.971
	25 Carbon Tetrachloride	117	4.106	4.094	(0.802)	943725	51.7144	51.714
$	27 Dibromofluoromethane	111	4.191	4.179	(0.898)	787137	50.7149	50.715
	26 1,1,1-Trichloroethane	97	4.174	4.168	(0.895)	1088934	50.4406	50.441
	28 1,1-Dichloropropene	75	4.298	4.287	(0.840)	1045965	49.7828	49.783
	29 2-Butanone	72	4.389	4.428	(0.941)	445511	240.247	240.25(Q)
	30 Benzene	78	4.524	4.519	(0.884)	2978232	51.4355	51.435
*	31 Pentafluorobenzene	168	4.666	4.654	(1.000)	1611945	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.649	(0.999)	885317	50.1947	50.195
	33 1,2-Dichloroethane	62	4.717	4.711	(0.922)	928170	49.4064	49.406
	34 Trichloroethene	95	5.062	5.056	(0.989)	739948	50.5907	50.591
*	35 1,4-Difluorobenzene	114	5.118	5.107	(1.000)	2662626	50.0000	
	37 Dibromomethane	93	5.418	5.412	(1.059)	395162	49.5229	49.523
	38 1,2-Dichloropropane	63	5.509	5.503	(1.076)	824560	50.1871	50.187
	39 Bromodichloromethane	83	5.588	5.582	(1.092)	915194	50.3125	50.313
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.120	(1.196)	146016	57.0825	57.083
	41 Cis 1,3-dichloropropene	75	6.131	6.131	(1.198)	1178903	52.1699	52.170
$	42 d8-Toluene	98	6.289	6.289	(1.229)	3270546	49.5535	49.554
	43 Toluene	92	6.335	6.329	(1.238)	1867771	50.9912	50.991(Q)
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	782321	51.9279	51.928
	45 4-Methyl-2-Pentanone	58	6.702	6.702	(1.309)	1744561	251.708	251.71(Q)
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.308)	1066184	51.4717	51.472
	47 1,1,2-Trichloroethane	97	6.827	6.827	(1.334)	588678	49.3010	49.301
	48 Chlorodibromomethane	129	6.962	6.962	(0.917)	669042	50.6598	50.660
	49 1,3-Dichloropropane	76	7.047	7.042	(0.928)	1086801	51.3493	51.349
	50 1,2-Dibromoethane	107	7.138	7.138	(1.395)	578549	49.7744	49.774
	51 2-Hexanone	43	7.415	7.415	(0.976)	2820567	255.615	255.62
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2557796	50.0000	
	53 Chlorobenzene	112	7.607	7.607	(1.001)	1877415	51.3327	51.333
	54 Ethyl Benzene	91	7.658	7.658	(1.008)	3374079	54.2597	54.260
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	671048	50.6255	50.626
	56 m,p-xylene	106	7.794	7.794	(1.026)	2548552	109.174	109.17(Q)
	57 o-Xylene	106	8.156	8.156	(1.074)	1240894	53.8592	53.859(Q)
	58 Styrene	104	8.201	8.201	(1.080)	2070121	54.8329	54.833
	59 Bromoform	173	8.196	8.196	(0.847)	469071	48.7200	48.720
	60 Isopropyl Benzene	105	8.445	8.445	(0.873)	3192362	55.5203	55.520
$	62 4-Bromofluorobenzene	95	8.665	8.665	(1.141)	1372033	50.4002	50.400
	63 Bromobenzene	156	8.739	8.739	(0.903)	787670	49.8193	49.819
	64 N-Propyl Benzene	91	8.812	8.812	(0.911)	3785725	54.6525	54.653

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	65 1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	756006	47.4445	47.445
	66 2-Chloro Toluene	91	8.920	8.920	(0.922)	2310273	52.9144	52.914
	67 1,3,5-Trimethyl Benzene	105	8.999	9.005	(0.930)	2710338	54.6787	54.679
	68 1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	234390	47.3247	47.325
	69 Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	286498	47.6844	47.684
	70 4-Chloro Toluene	91	9.073	9.072	(0.938)	2422271	53.3005	53.301
	71 T-Butyl Benzene	119	9.276	9.276	(0.959)	2384543	54.1604	54.160
	72 1,2,4-Trimethylbenzene	105	9.338	9.344	(0.965)	2681649	55.3298	55.330
	73 S-Butyl Benzene	105	9.440	9.440	(0.976)	3497974	55.2596	55.260
	74 4-Isopropyl Toluene	119	9.582	9.587	(0.991)	2915191	56.8497	56.850
	75 1,3-Dichlorobenzene	146	9.599	9.599	(0.992)	1493558	51.6900	51.690
*	76 d4-1,4-Dichlorobenzene	152	9.672	9.672	(1.000)	1386219	50.0000	(Q)
	77 1,4-Dichlorobenzene	146	9.683	9.689	(1.001)	1520220	50.8634	50.863
	78 N-Butyl Benzene	91	9.966	9.972	(1.030)	2769417	57.5521	57.552
$	79 d4-1,2-Dichlorobenzene	152	10.051	10.057	(1.039)	1246672	49.3070	49.307(Q)
	80 1,2-Dichlorobenzene	146	10.062	10.068	(1.040)	1410008	50.0410	50.041
	81 1,2-Dibromo 3-Chloropropane	75	10.809	10.815	(1.118)	149394	45.3110	45.311
	82 Hexachloro 1,3-Butadiene	225	11.488	11.505	(1.188)	681551	50.3385	50.339
	83 1,2,4-Trichlorobenzene	180	11.477	11.488	(1.187)	1083836	51.5234	51.523
	84 Naphthalene	128	11.788	11.805	(1.219)	2162911	46.5886	46.589
	85 1,2,3-Trichlorobenzene	180	11.969	11.986	(1.237)	1002493	48.0695	48.069

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: icv0627.d
Lab Smp Id: ICV0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 27-JUN-2013
Calibration Time: 15:48
Client Smp ID: ICV0627
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1611945	-0.10
35 1,4-Difluorobenze	2656709	1328354	5313418	2662626	0.22
52 d5-Chlorobenzene	2557235	1278618	5114470	2557796	0.02
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1386219	0.86

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.67	0.24
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.22
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: ICV0627
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Client SDG: 27JUN13
Fraction: VOA
Client Smp ID: ICV0627
Operator: PB
SampleType: LCS
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1	Dichlorodifluorome	50.000	51.910	103.82	53-148
2	Chloromethane	50.000	48.668	97.34	64-125
3	Vinyl Chloride	50.000	53.661	107.32	63-137
4	Bromomethane	50.000	46.885	93.77	57-136
5	Chloroethane	50.000	53.473	106.95	64-131
6	Trichlorofluoromet	50.000	51.027	102.05	69-132
12	Acrolein	250.00	252.50	101.00	54-137
9	112Trichloro122Tri	50.000	45.448	90.90	74-130
14	Acetone	250.00	233.80	93.52	60-131
7	1,1-Dichloroethene	50.000	45.087	90.17	75-126
11	Bromoethane	50.000	42.544	85.09	76-126
10	Iodomethane	50.000	52.277	104.55	65-139
13	Methylene Chloride	50.000	35.790	71.58	70-123
8	Carbon Disulfide	50.000	44.607	89.21	71-129
18	Acrylonitrile	50.000	54.309	108.62	67-125
15	Trans-1,2-Dichloro	50.000	54.608	109.22	80-120
19	Vinyl Acetate	50.000	50.791	101.58	60-136
17	1,1-Dichloroethane	50.000	55.115	110.23	80-120
29	2-Butanone	250.00	240.25	96.10	70-120
22	2,2-Dichloropropan	50.000	51.179	102.36	74-123
20	Cis-1,2-Dichloroet	50.000	49.917	99.83	80-120
24	Chloroform	50.000	50.971	101.94	80-120
23	Bromochloromethane	50.000	49.561	99.12	80-120
26	1,1,1-Trichloroeth	50.000	50.441	100.88	77-121
28	1,1-Dichloropropen	50.000	49.783	99.57	80-120
25	Carbon Tetrachlori	50.000	51.714	103.43	77-122
33	1,2-Dichloroethane	50.000	49.406	98.81	76-120
30	Benzene	50.000	51.435	102.87	80-120
34	Trichloroethene	50.000	50.591	101.18	80-120
38	1,2-Dichloropropan	50.000	50.187	100.37	80-120
39	Bromodichlorometha	50.000	50.313	100.63	77-121
37	Dibromomethane	50.000	49.523	99.05	80-120
40	2-Chloroethyl Viny	50.000	57.083	114.17	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	251.71	100.68	67-120
41 Cis 1,3-dichloropr	50.000	52.170	104.34	74-120
43 Toluene	50.000	50.991	101.98	80-120
46 Trans 1,3-Dichloro	50.000	51.472	102.94	65-120
51 2-Hexanone	250.00	255.62	102.25	65-130
47 1,1,2-Trichloroeth	50.000	49.301	98.60	80-120
49 1,3-Dichloropropan	50.000	51.349	102.70	80-120
44 Tetrachloroethene	50.000	51.928	103.86	80-121
48 Chlorodibromometha	50.000	50.660	101.32	64-120
50 1,2-Dibromoethane	50.000	49.774	99.55	75-120
53 Chlorobenzene	50.000	51.333	102.67	80-120
55 1,1,1,2-Tetrachlor	50.000	50.626	101.25	69-121
54 Ethyl Benzene	50.000	54.260	108.52	80-127
56 m,p-xylene	100.00	109.17	109.17	80-125
57 o-Xylene	50.000	53.859	107.72	78-120
58 Styrene	50.000	54.833	109.67	80-123
60 Isopropyl Benzene	50.000	55.520	111.04	80-127
59 Bromoform	50.000	48.720	97.44	60-120
65 1,1,2,2-Tetrachlor	50.000	47.445	94.89	74-120
68 1,2,3-Trichloropro	50.000	47.325	94.65	72-121
69 Trans-1,4-Dichloro	50.000	47.684	95.37	65-126
64 N-Propyl Benzene	50.000	54.653	109.31	80-132
63 Bromobenzene	50.000	49.819	99.64	80-120
67 1,3,5-Trimethyl Be	50.000	54.679	109.36	80-125
66 2-Chloro Toluene	50.000	52.914	105.83	80-125
70 4-Chloro Toluene	50.000	53.301	106.60	80-127
71 T-Butyl Benzene	50.000	54.160	108.32	87-122
72 1,2,4-Trimethylben	50.000	55.330	110.66	80-126
73 S-Butyl Benzene	50.000	55.260	110.52	80-134
74 4-Isopropyl Toluen	50.000	56.850	113.70	80-131
75 1,3-Dichlorobenzen	50.000	51.690	103.38	80-120
77 1,4-Dichlorobenzen	50.000	50.863	101.73	80-120
78 N-Butyl Benzene	50.000	57.552	115.10	80-138
80 1,2-Dichlorobenzen	50.000	50.041	100.08	80-120
81 1,2-Dibromo 3-Chlo	50.000	45.311	90.62	59-120
83 1,2,4-Trichloroben	50.000	51.523	103.05	78-130
82 Hexachloro 1,3-But	50.000	50.339	100.68	76-129
84 Naphthalene	50.000	46.589	93.18	66-120
85 1,2,3-Trichloroben	50.000	48.069	96.14	73-123

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	50.715	101.43	70-130

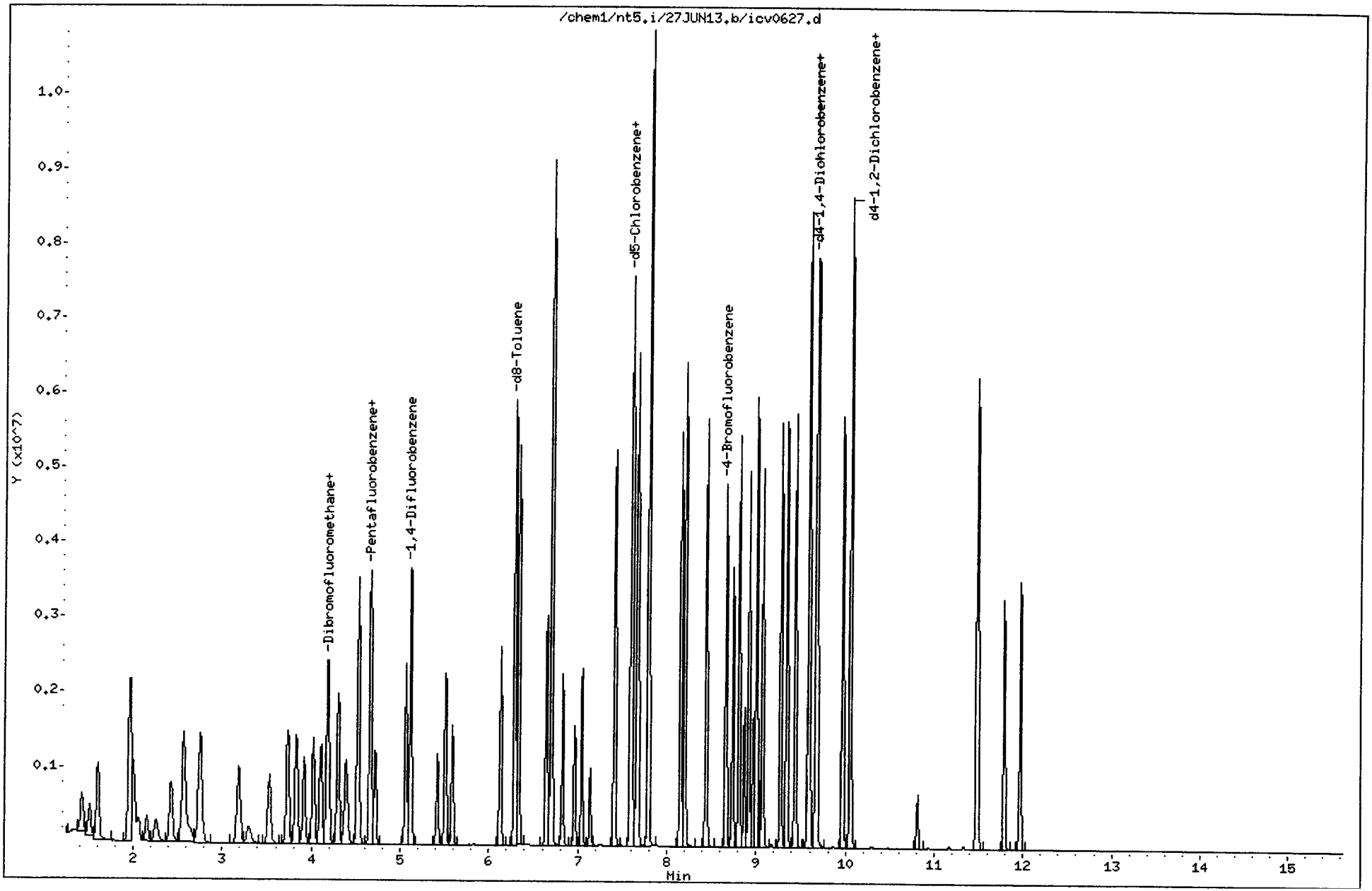
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	50.195	100.39	80-149
$ 42 d8-Toluene	50.000	49.554	99.11	77-120
$ 62 4-Bromofluorobenze	50.000	50.400	100.80	80-120
$ 79 d4-1,2-Dichloroben	50.000	49.307	98.61	80-120

Data File: /chem1/nt5.i/27JUN13.b/icv0627.d
Date : 27-JUN-2013 17:22
Client ID: ICV0627
Sample Info: ICV0627,5,5,0

Column phase: RTXVMS

Instrument: nt5.i

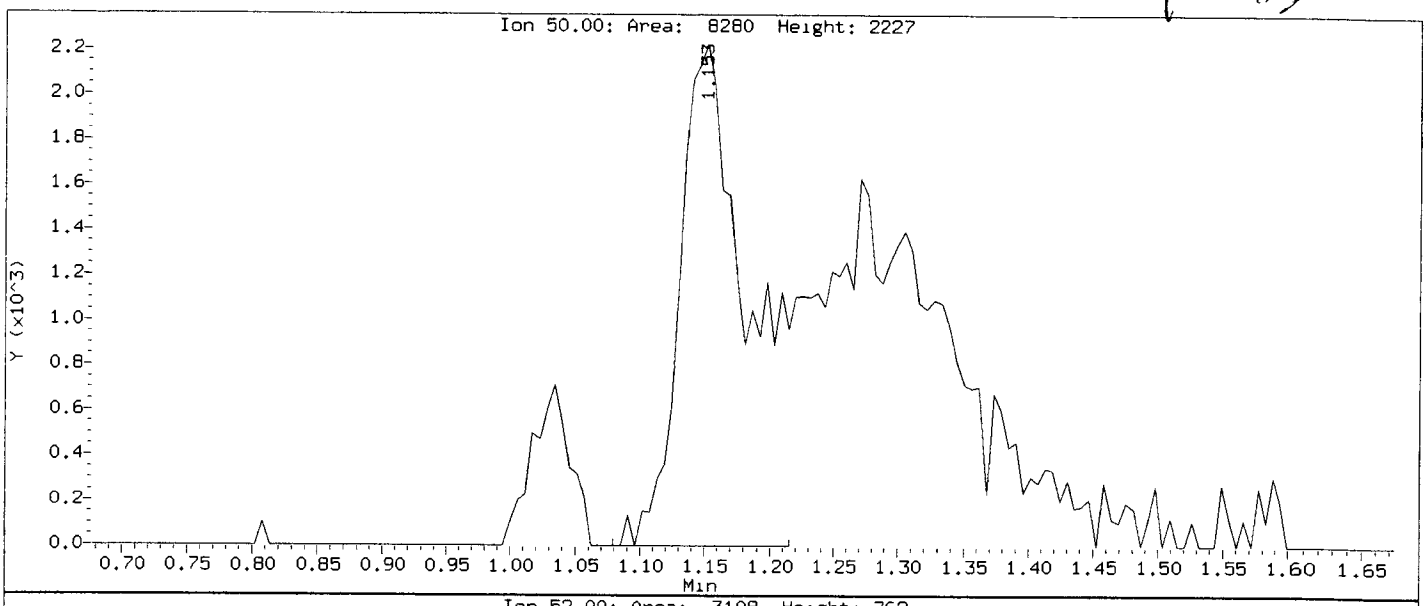
Operator: PB
Column diameter: 0.18

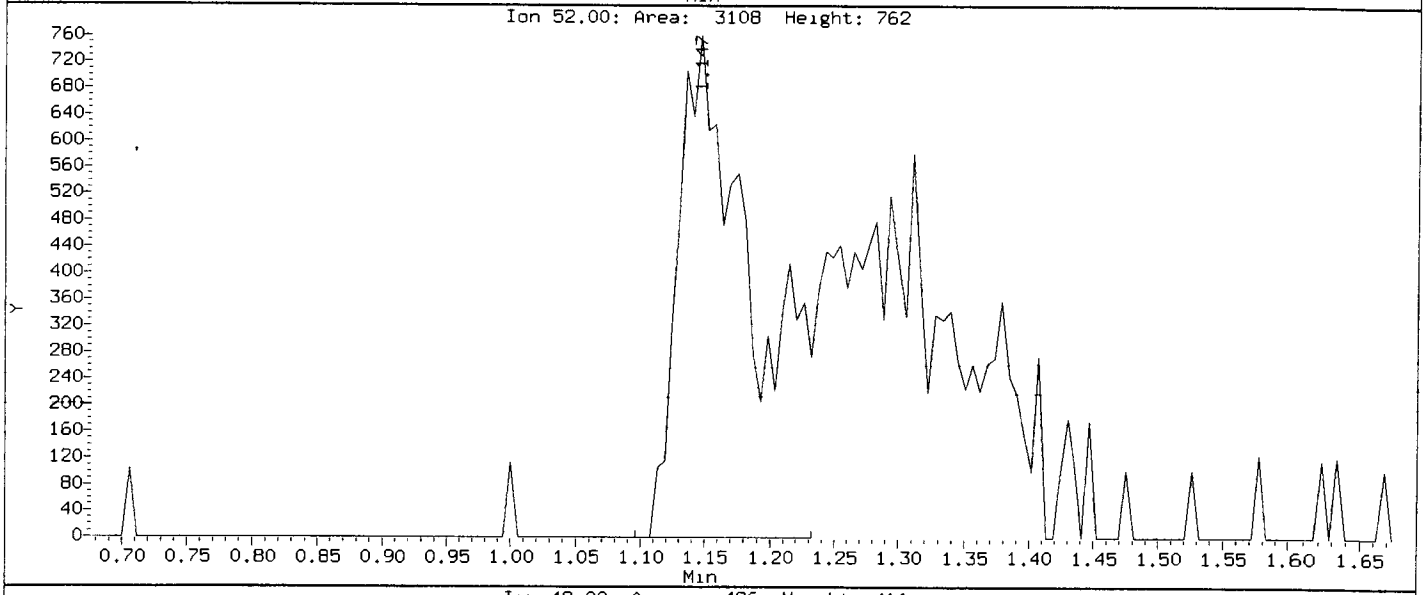


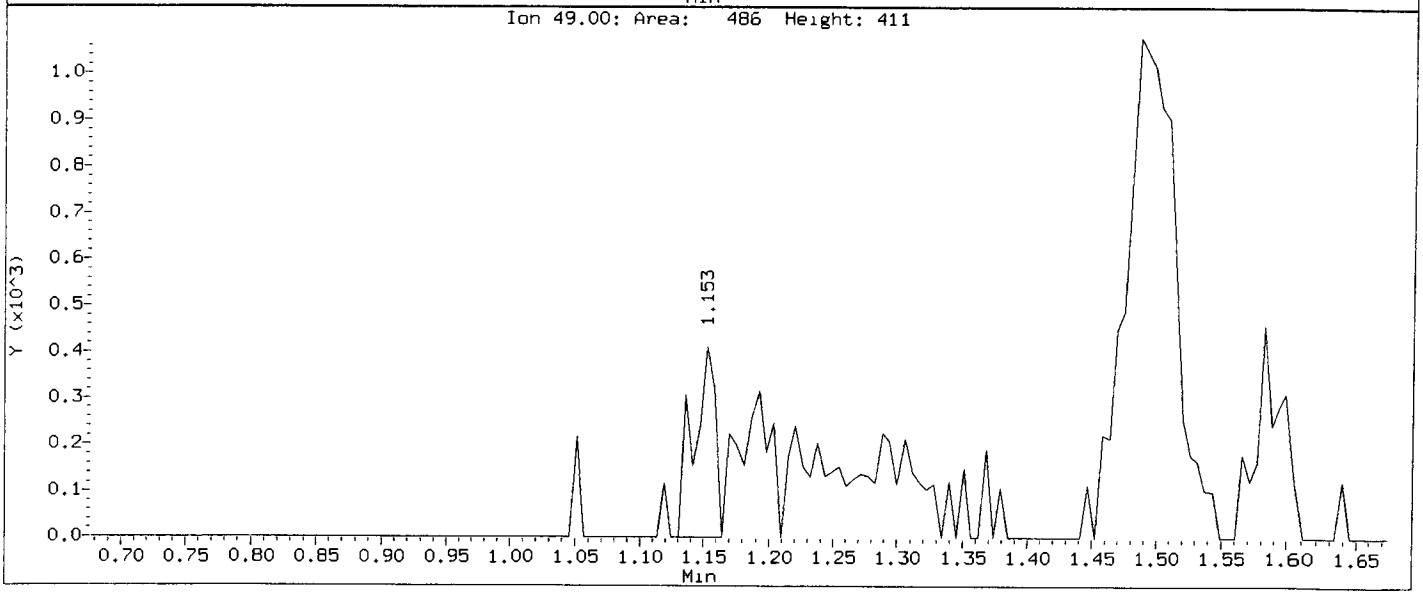
Data File: /chem1/nt5.1/27JUN13.b/0010627.d
Injection Date: 27-JUN-2013 10:43
Instrument: nt5.1
Client Sample ID: VSTD1

Compound: Chloromethane
CAS Number:

7/4/13



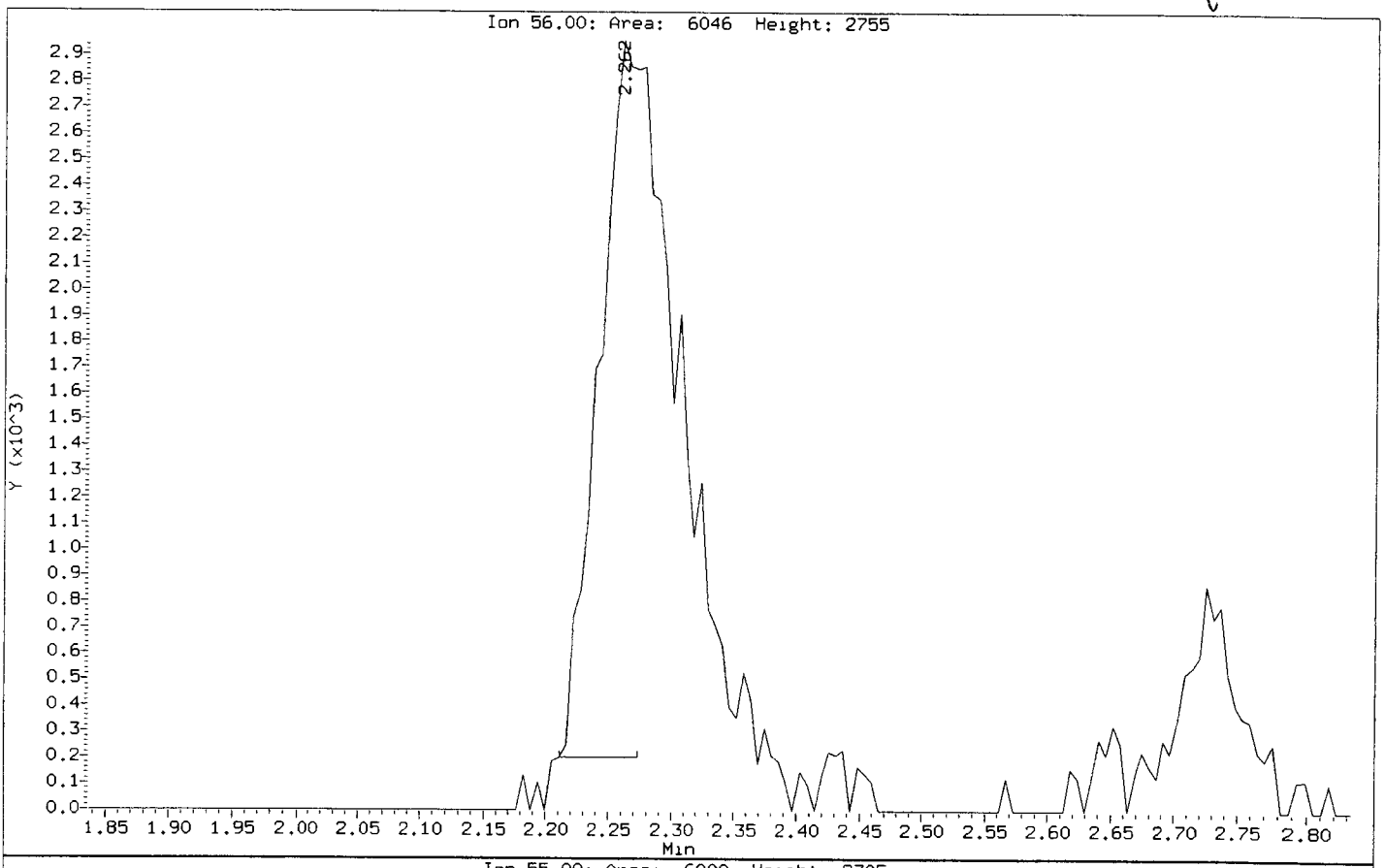


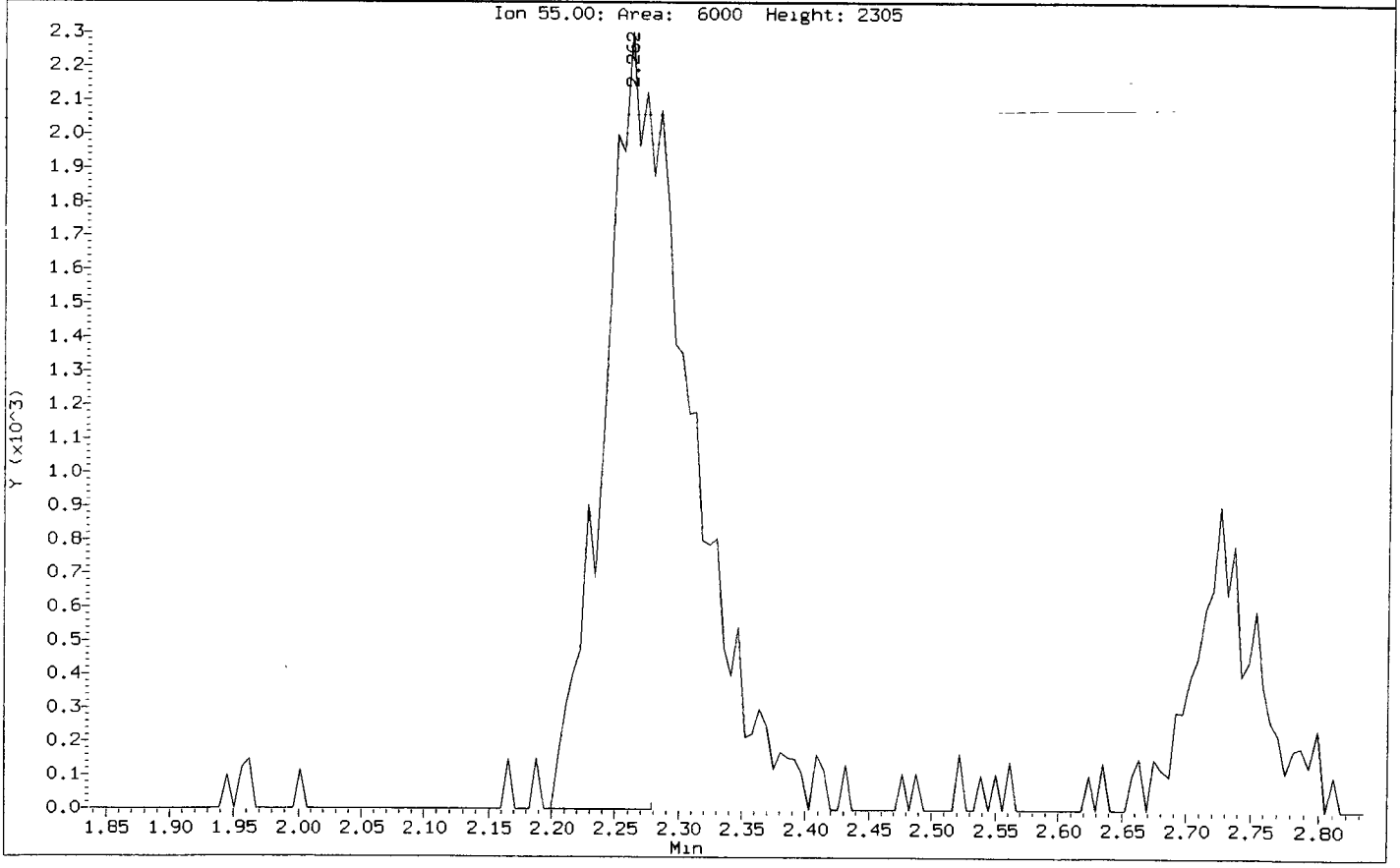


WOT: 89273

Data File: /chem1/nt5.1/27JUN13.b/0010627.d
Injection Date: 27-JUN-2013 10:43
Instrument: nt5.1
Client Sample ID: VSTD1

Compound: Acrolein
CAS Number:

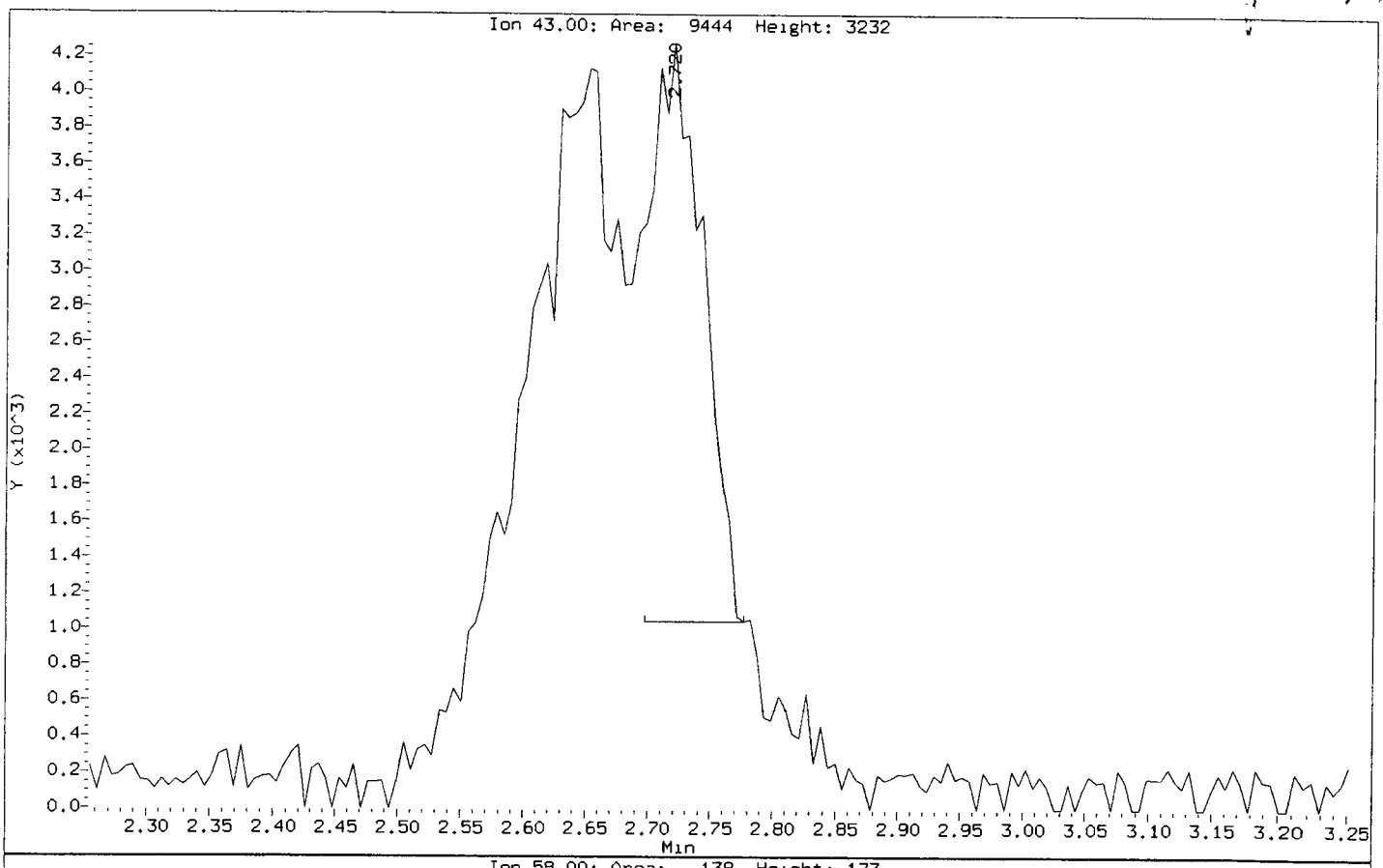


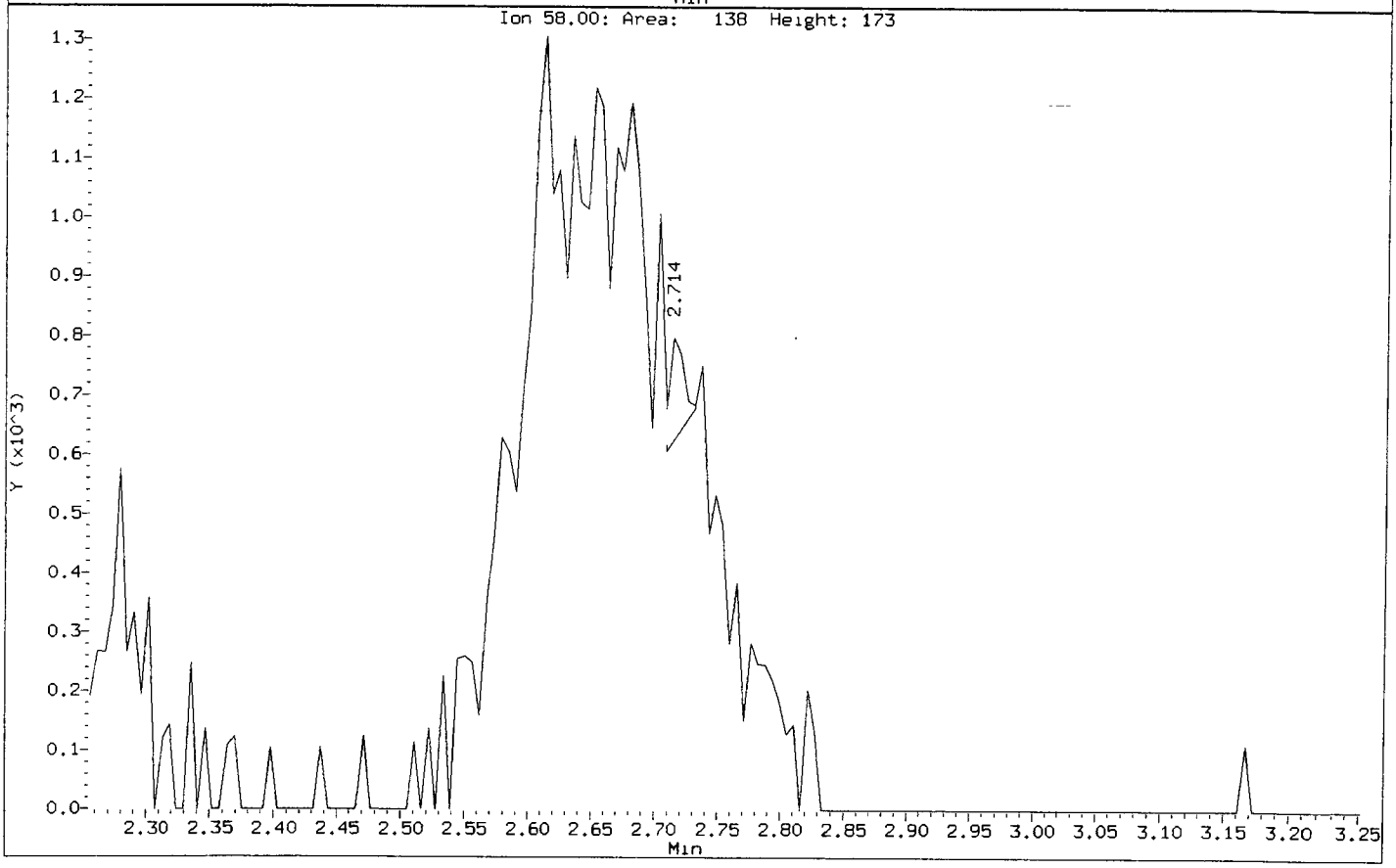


Data File: /chem1/nt5.i/27JUN13.b/0010627.d
Injection Date: 27-JUN-2013 10:43
Instrument: nt5.i
Client Sample ID: VSTD1

Compound: Acetone
CAS Number:

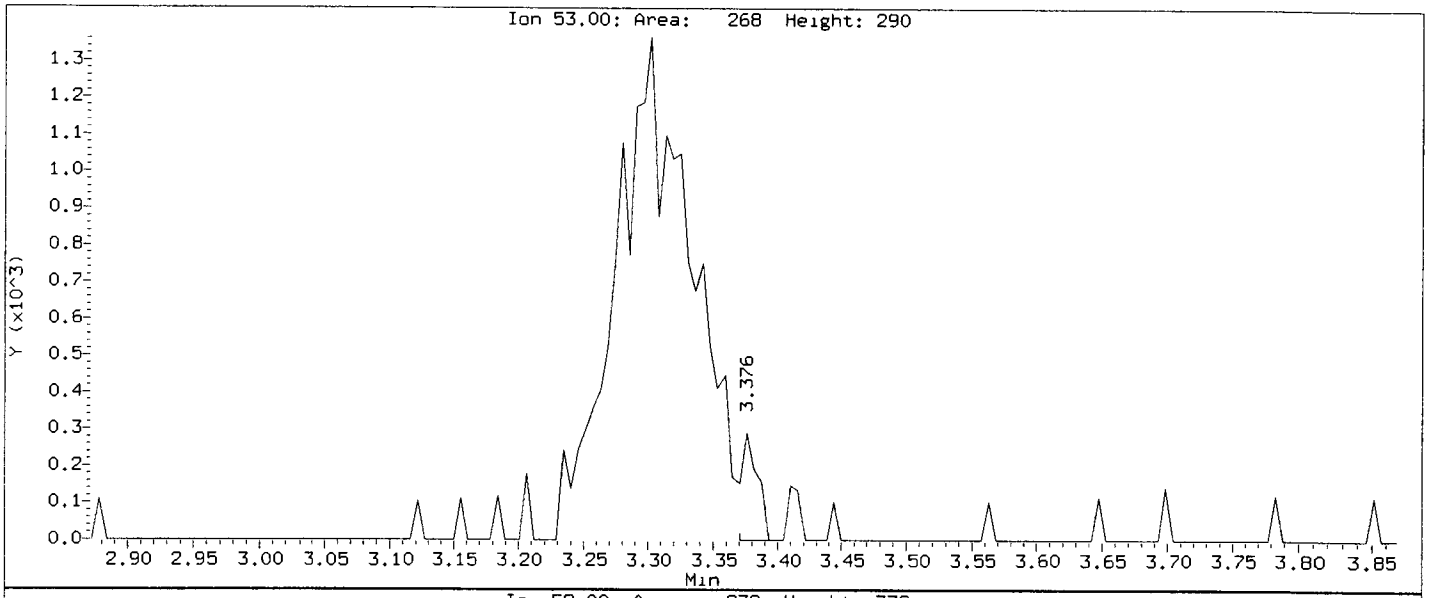
7/6/13

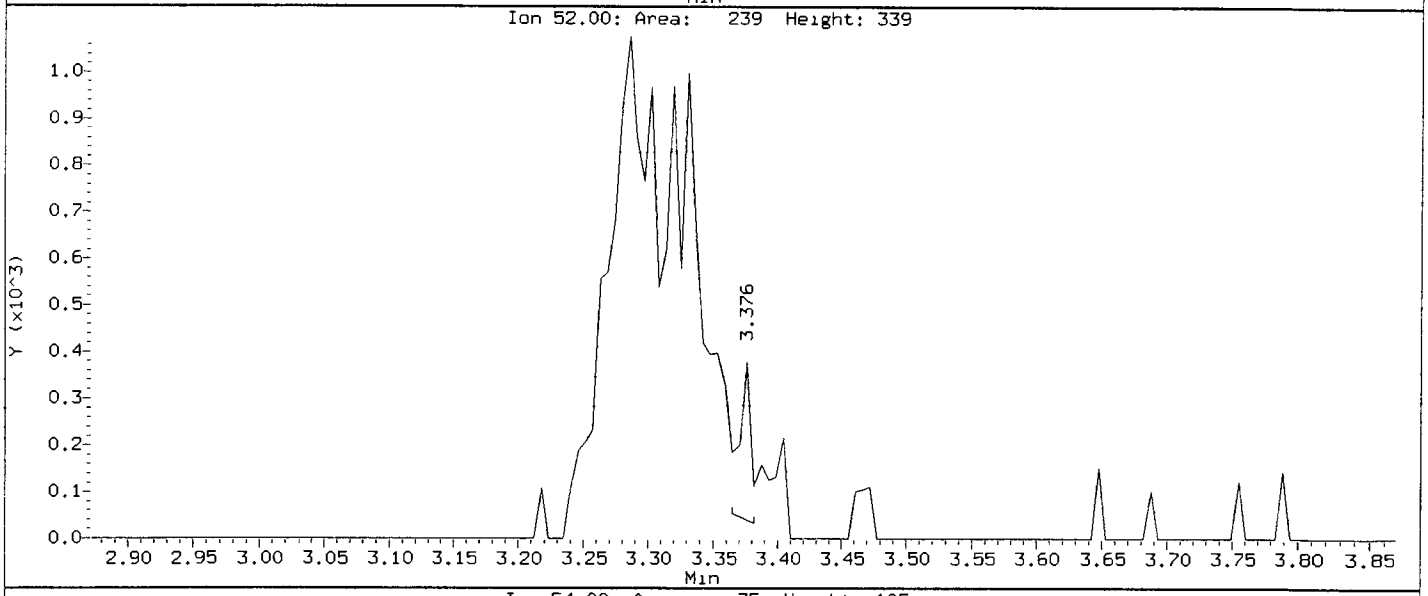


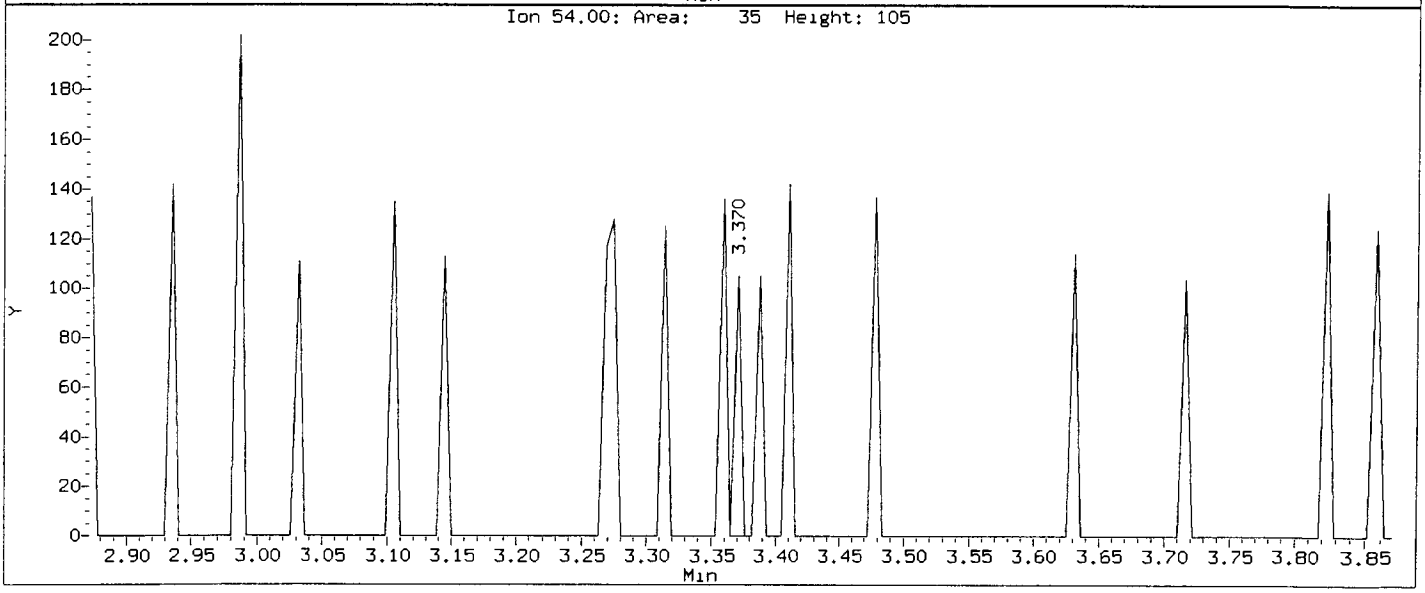


Data File: /chem1/nt5.i/27JUN13.b/0010627.d
Injection Date: 27-JUN-2013 10:43
Instrument: nt5.i
Client Sample ID: VSTD1

Compound: Acrylonitrile
CAS Number:

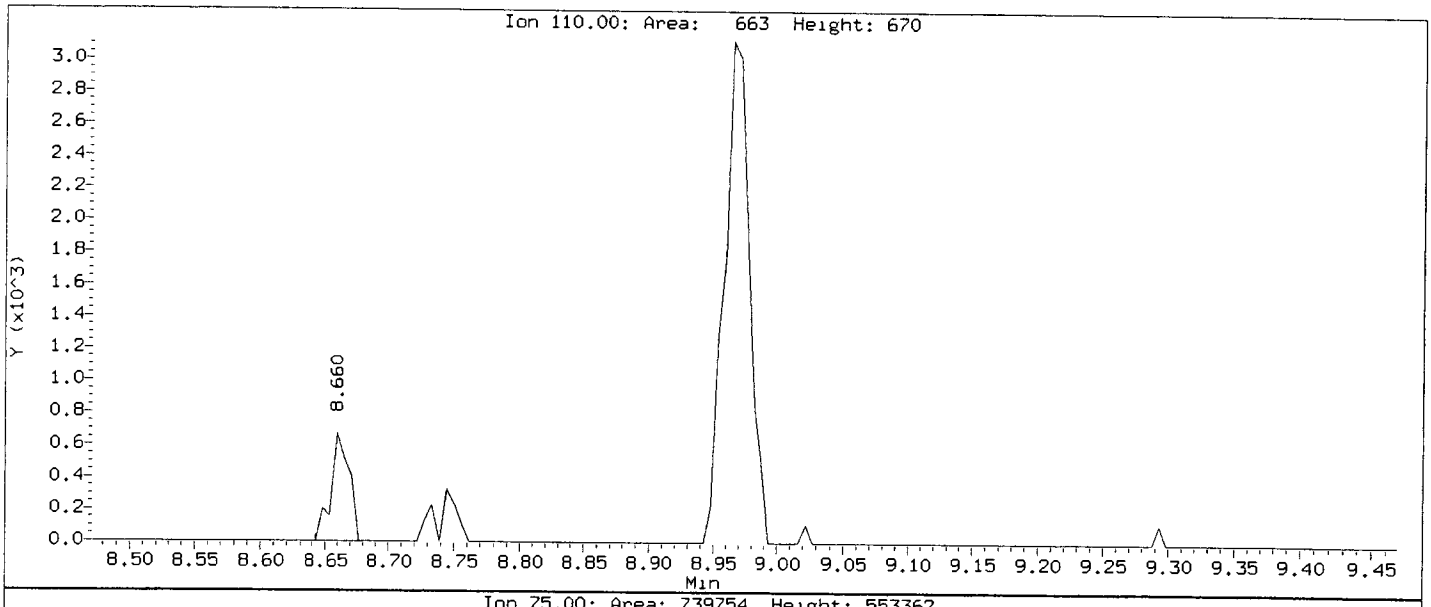


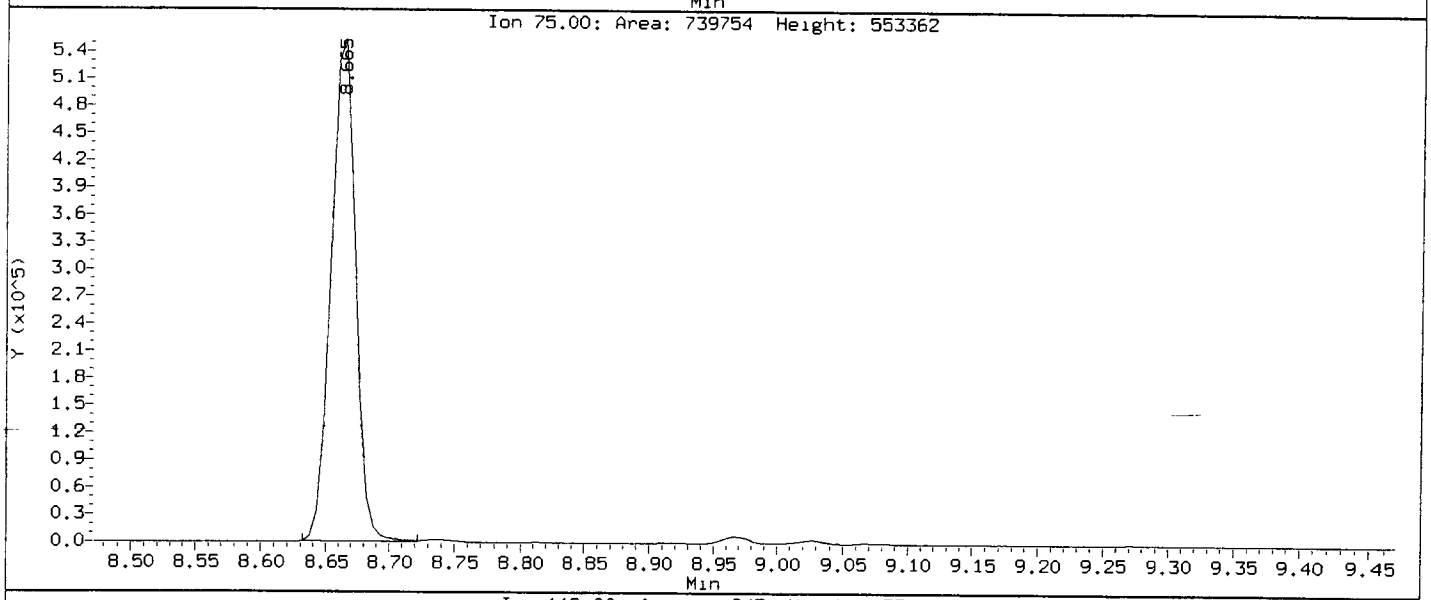


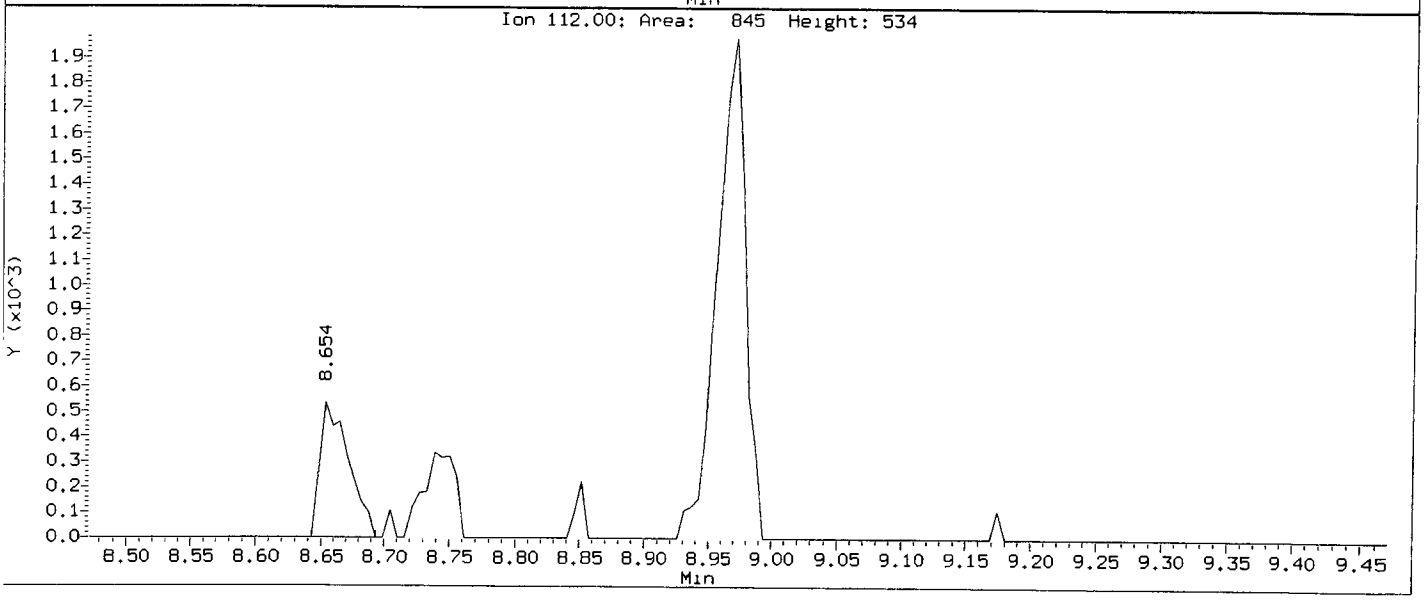


Data File: /chem1/nt5.i/27JUN13.b/0010627.d
Injection Date: 27-JUN-2013 10:43
Instrument: nt5.i
Client Sample ID: VSTD1

Compound: 1,2,3-Trichloropropane
CAS Number:



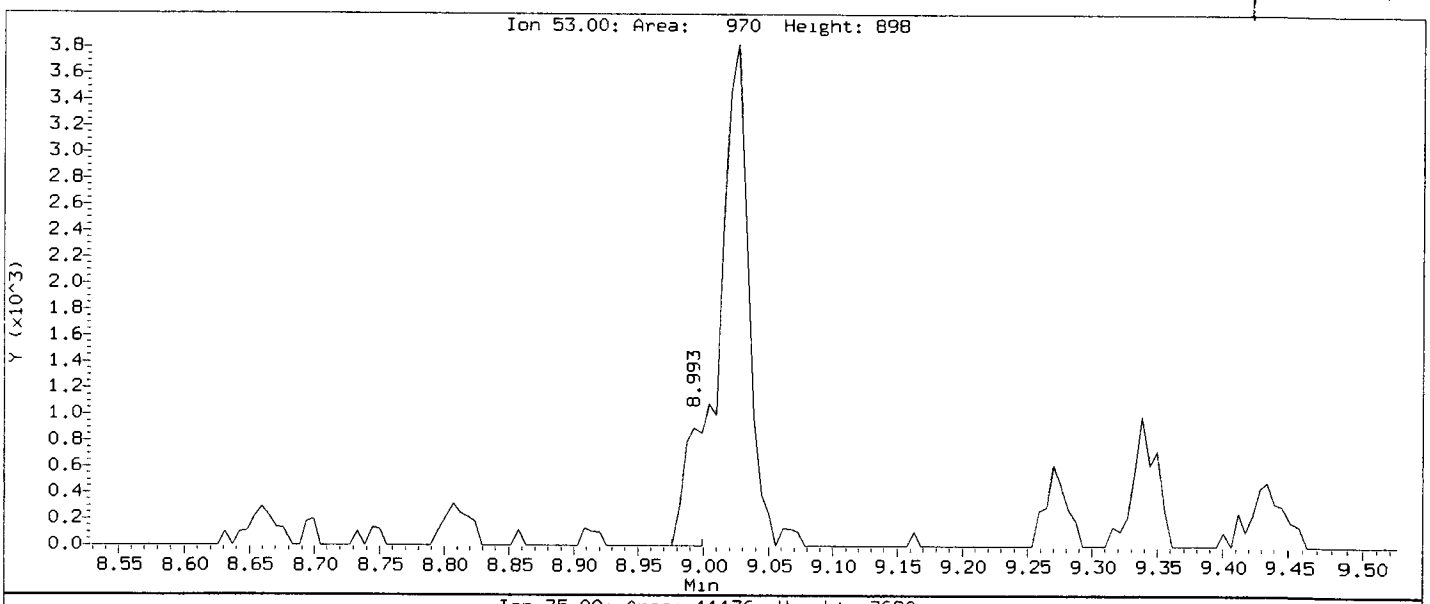


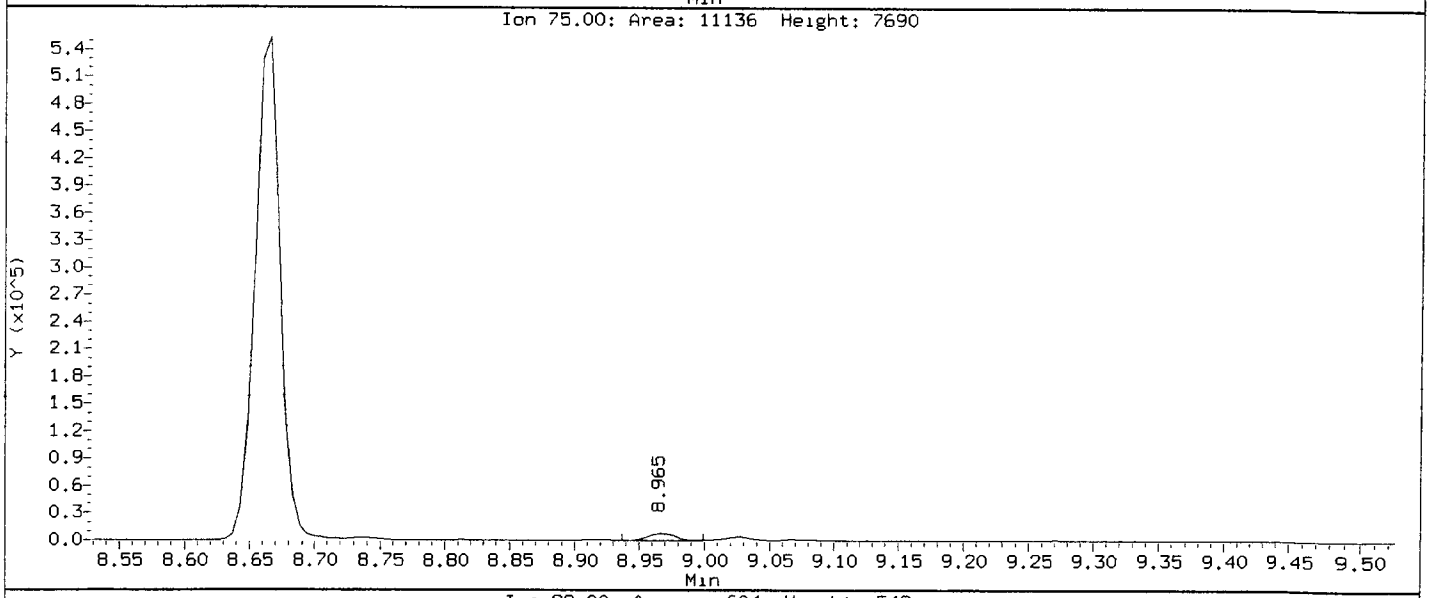


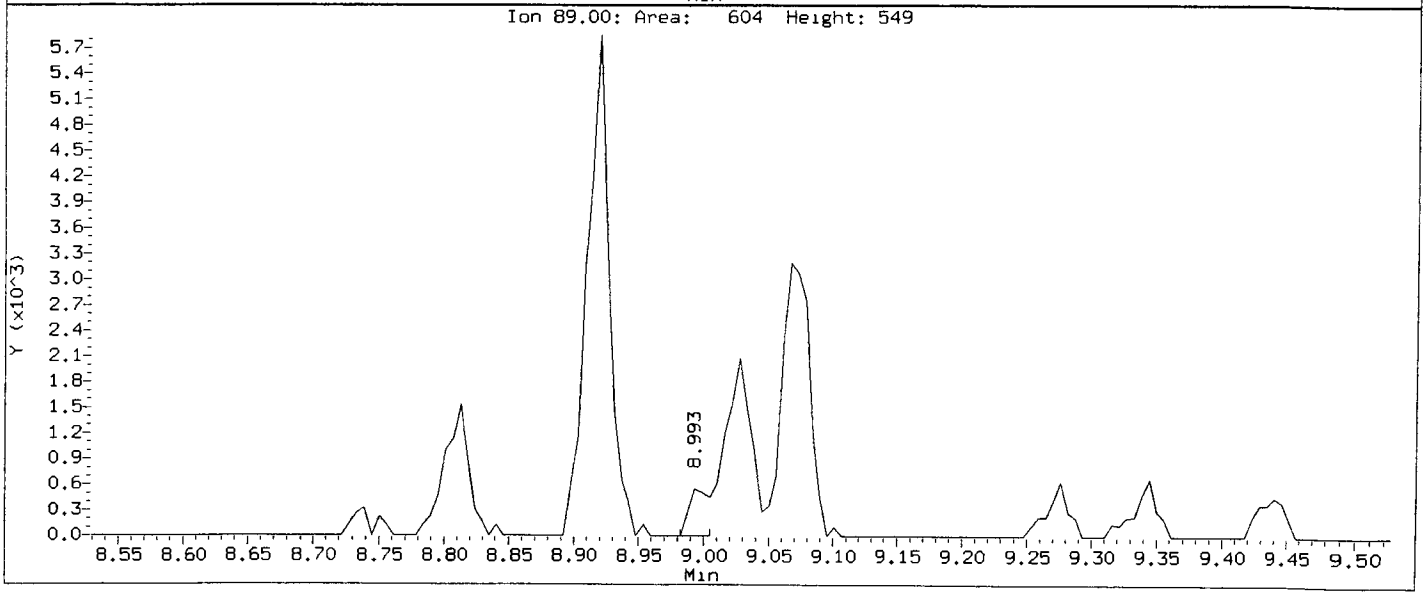
WQT : 8827

Data File: /chem1/nt5.1/27JUN13.b/0010627.d
Injection Date: 27-JUN-2013 10:43
Instrument: nt5.1
Client Sample ID: VSTD1

Compound: Trans-1,4-Dichloro 2-Butene
CAS Number:



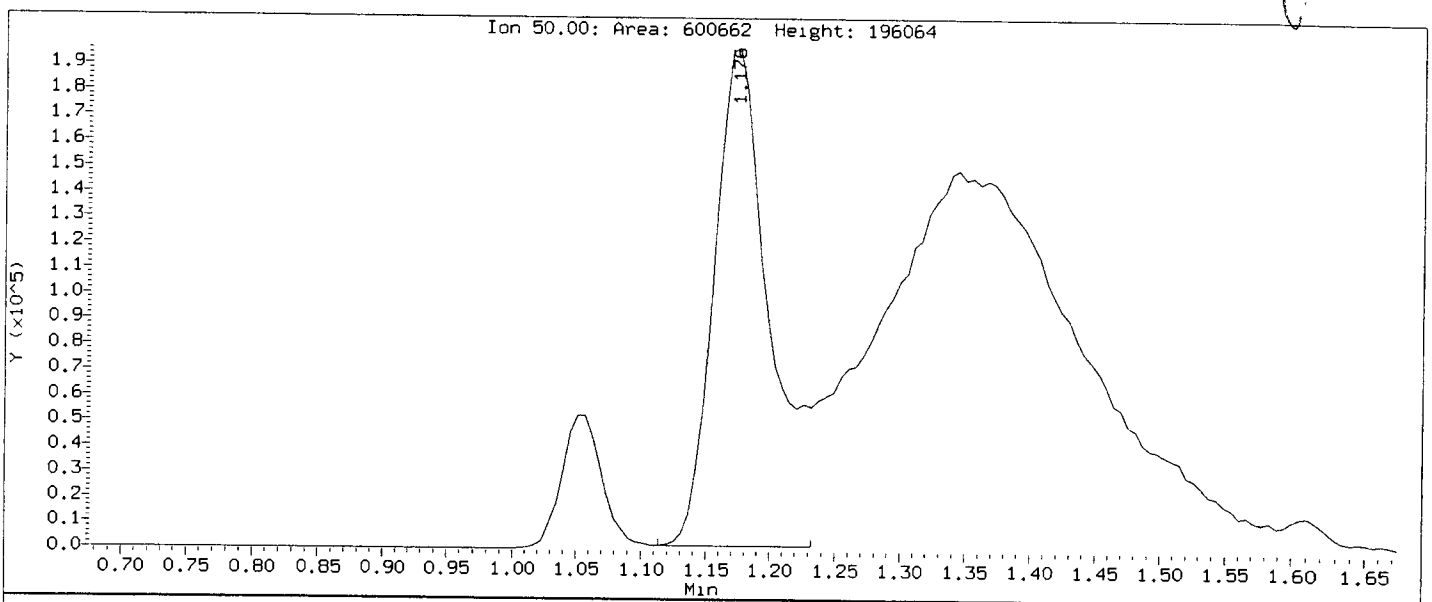


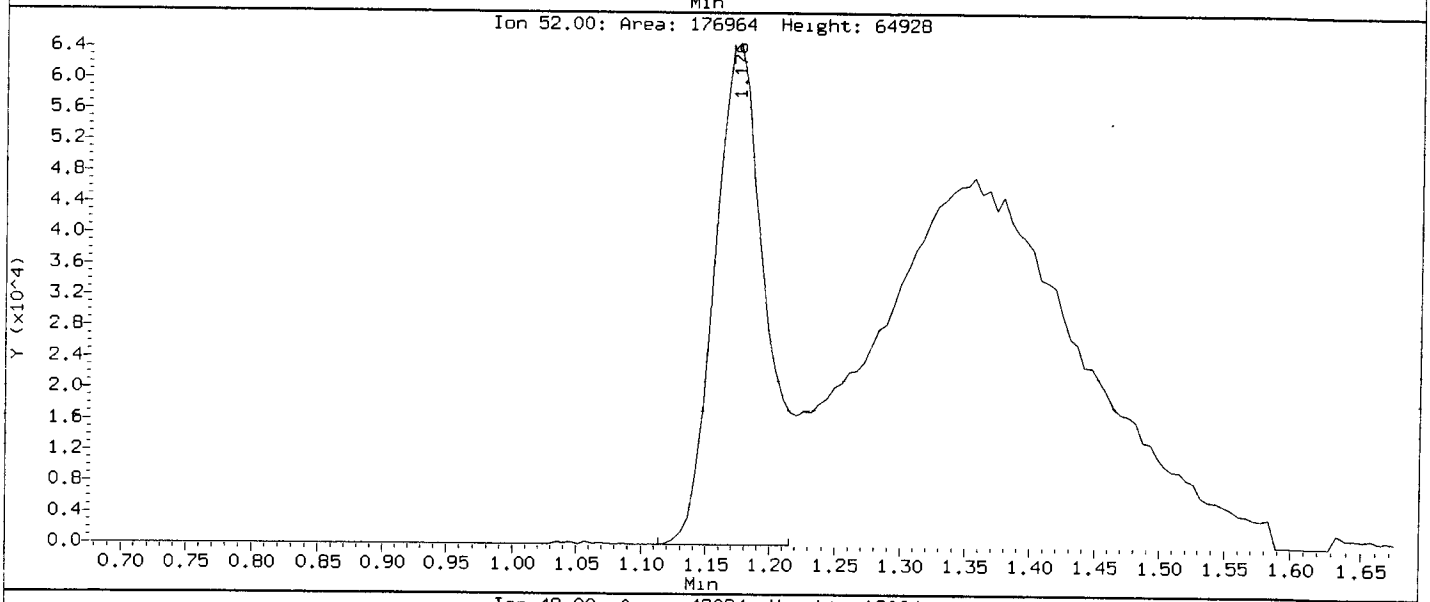


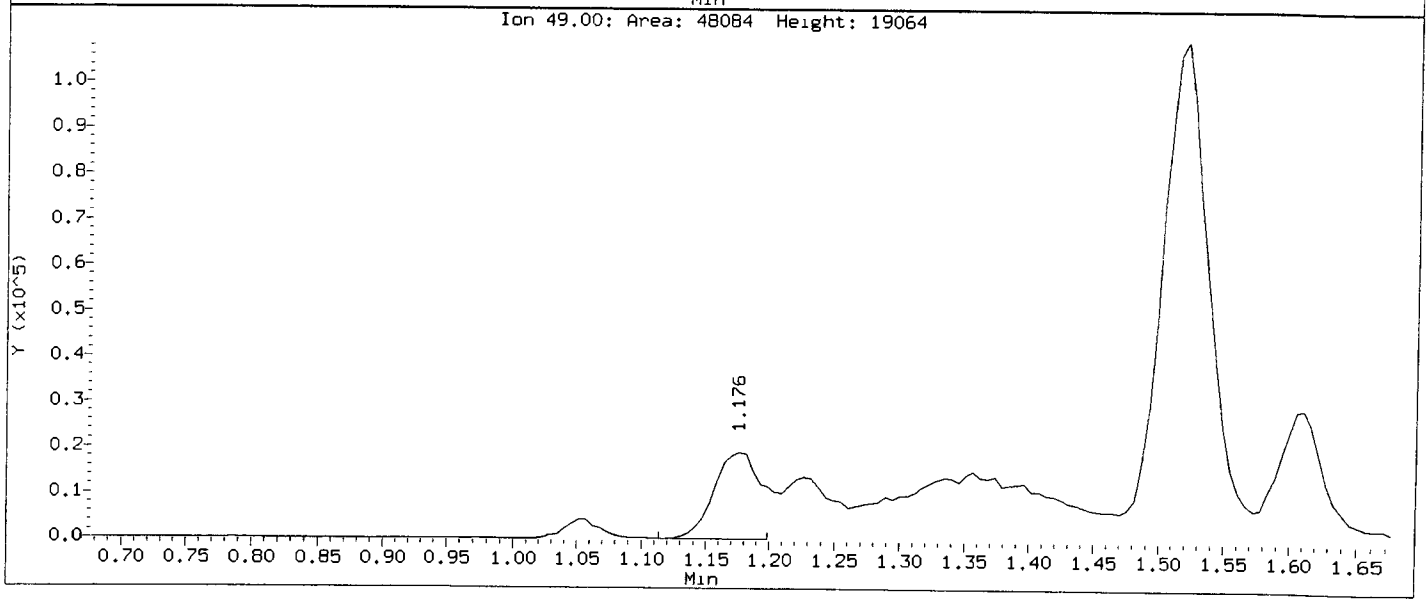
WV67 : 06276

Data File: /chem1/nt5.i/27JUN13.b/1000627.d
Injection Date: 27-JUN-2013 11:55
Instrument: nt5.i
Client Sample ID: VSTD100

Compound: Chloromethane
CAS Number:

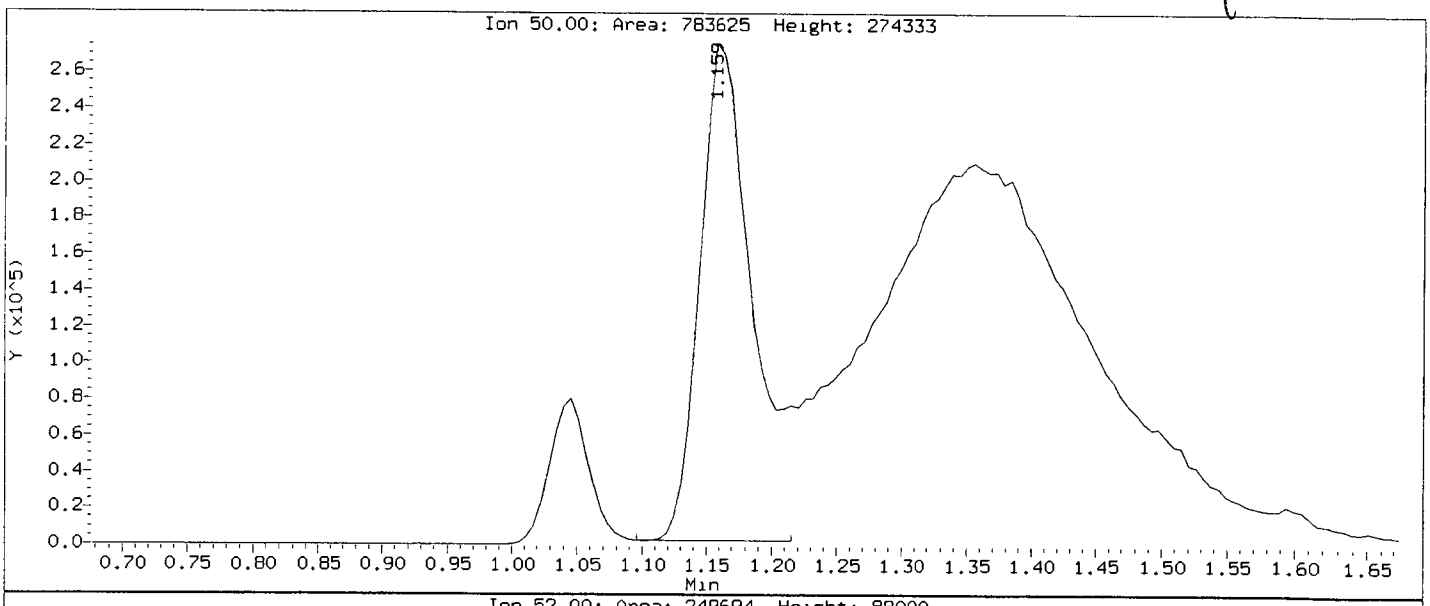


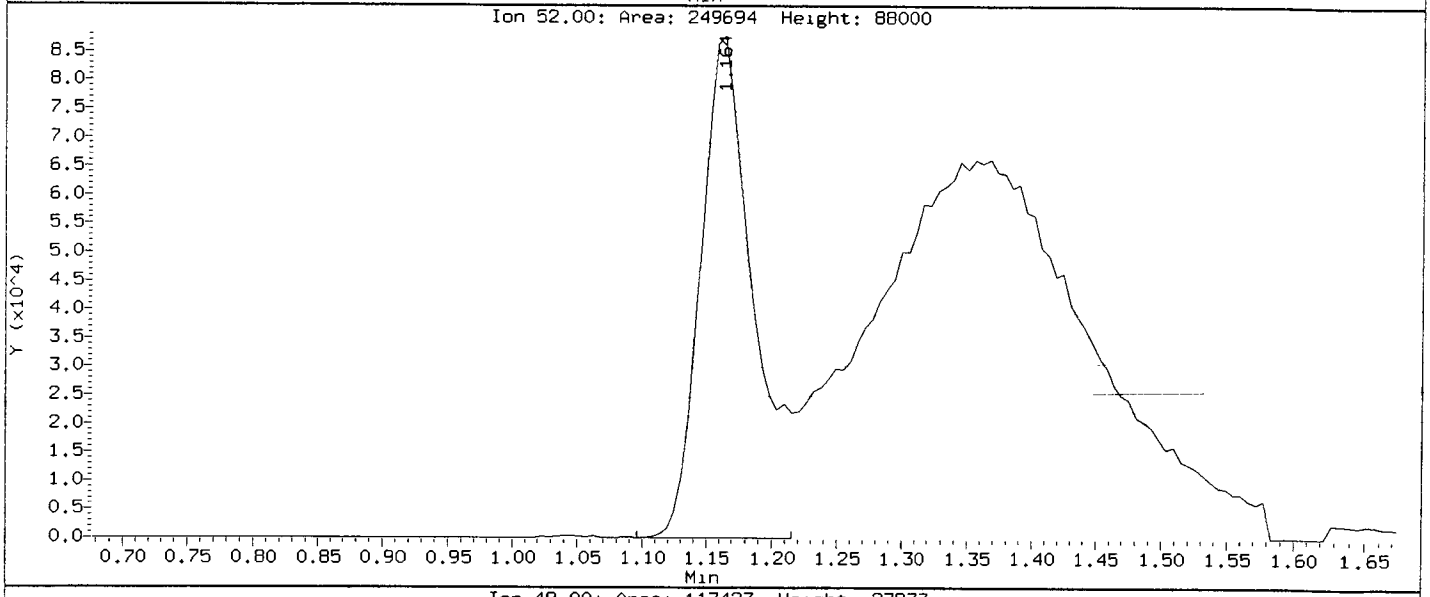


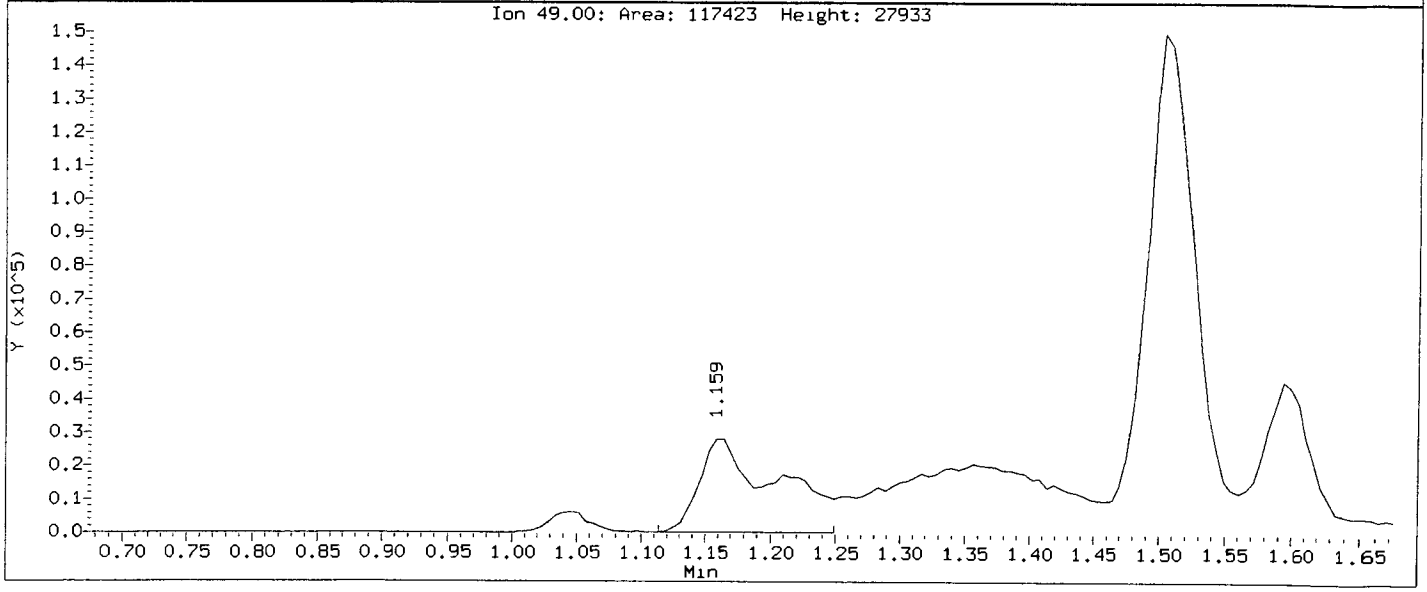


Data File: /chem1/nt5.i/27JUN13.b/1500627.d
Injection Date: 27-JUN-2013 11:31
Instrument: nt5.i
Client Sample ID: VSTD150

Compound: Chloromethane
CAS Number:

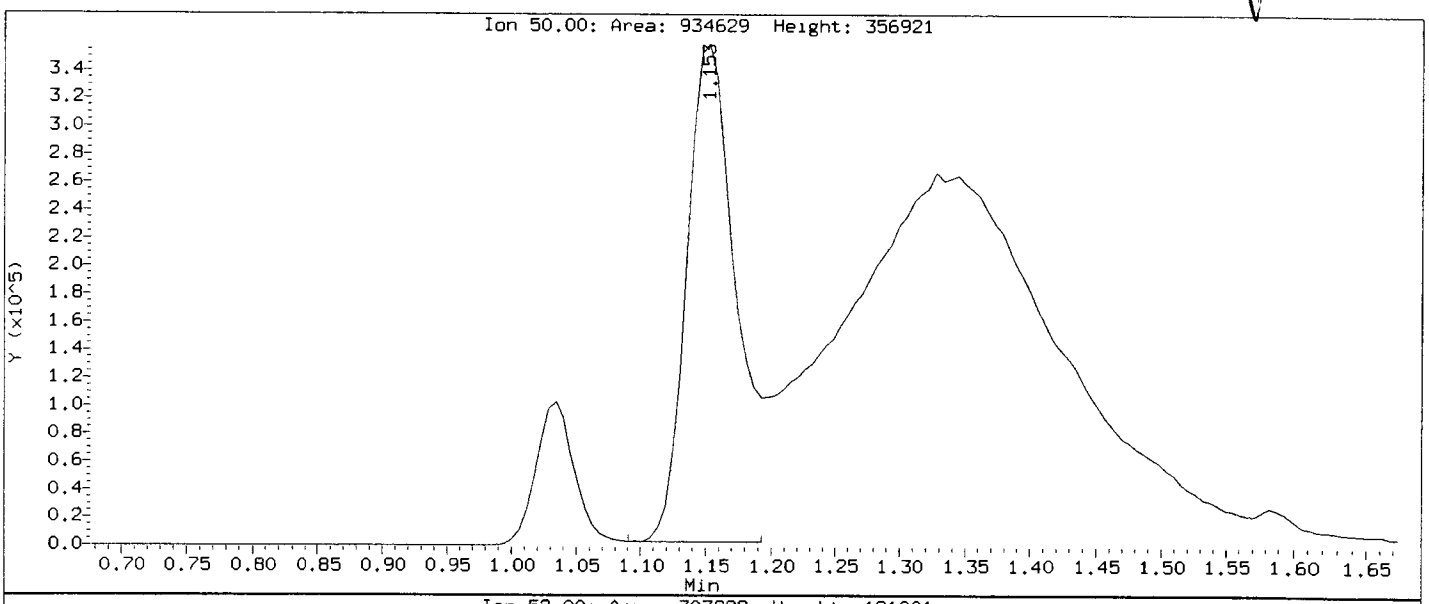


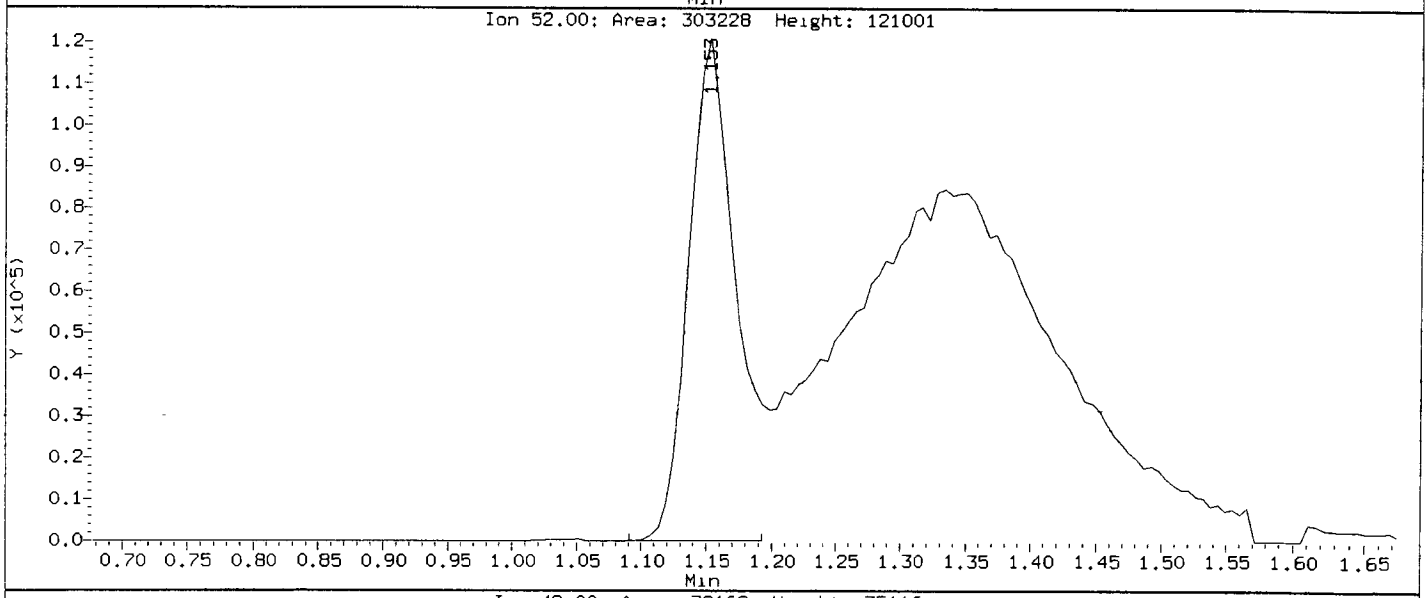


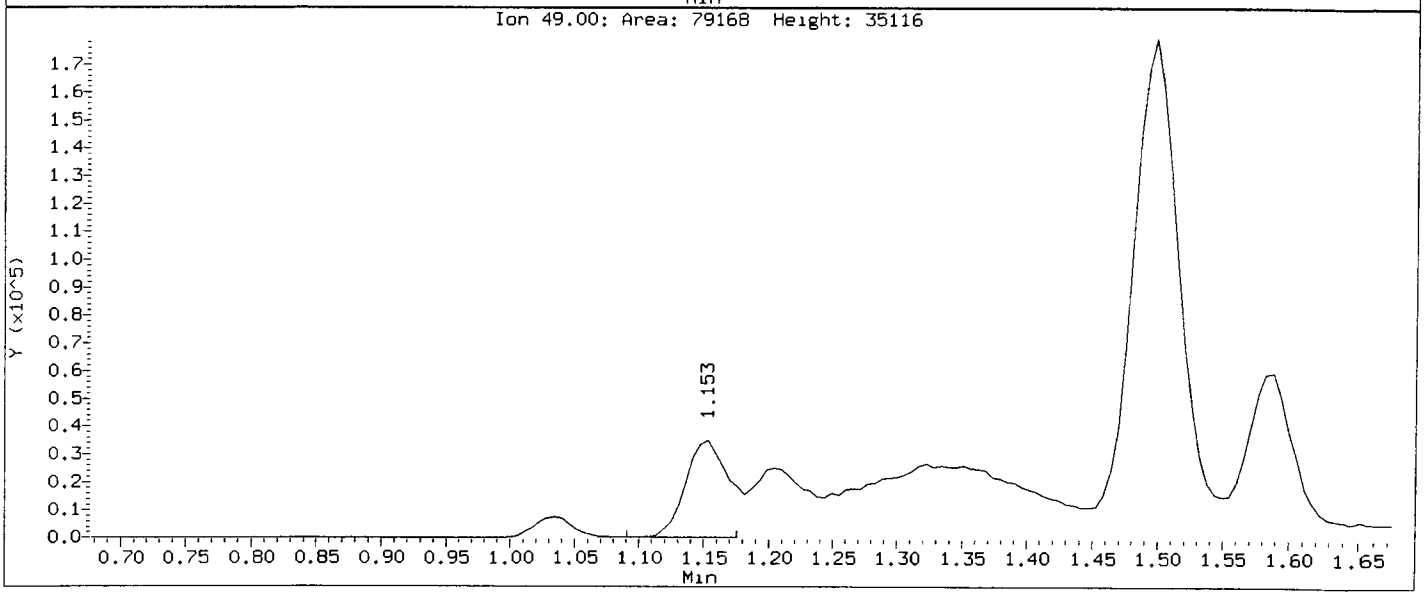


Data File: /chem1/nt5.i/27JUN13.b/2000627.d
Injection Date: 27-JUN-2013 11:07
Instrument: nt5.i
Client Sample ID: VSTD200

Compound: Chloromethane
CAS Number:



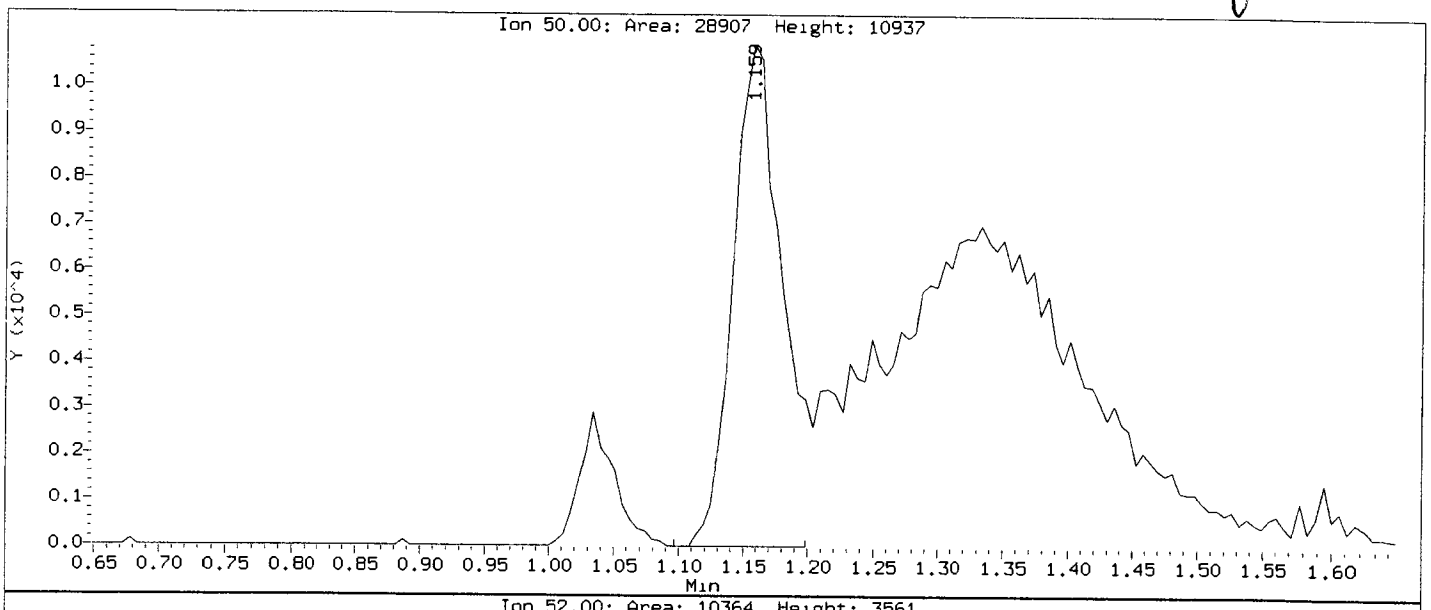


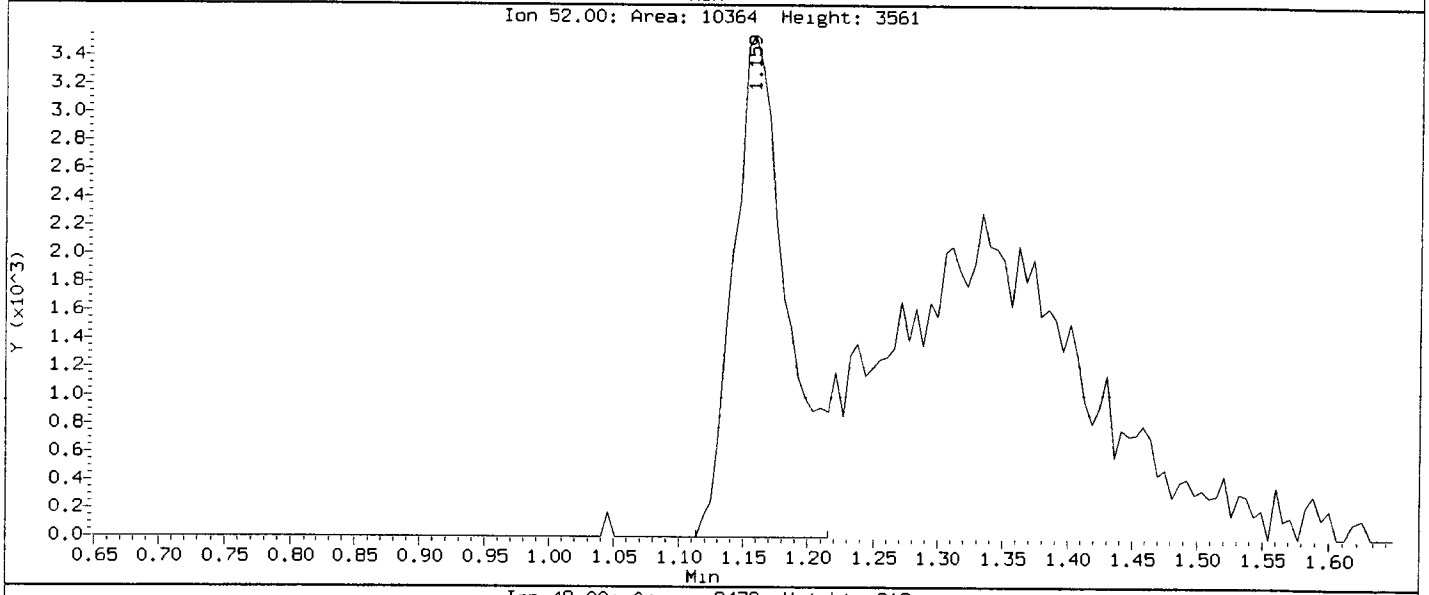


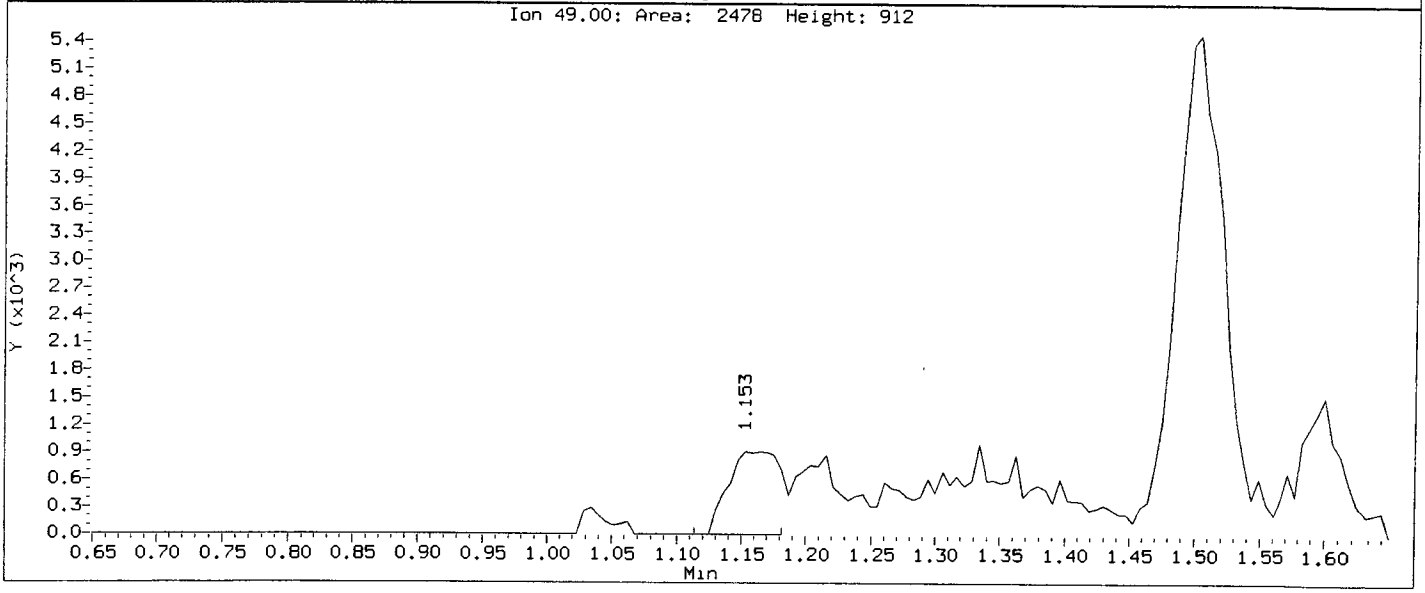
WV67:08281

Data File: /chem1/nt5.i/27JUN13.b/0050627.d
Injection Date: 27-JUN-2013 13:07
Instrument: nt5.i
Client Sample ID: VSTD5

Compound: Chloromethane
CAS Number:

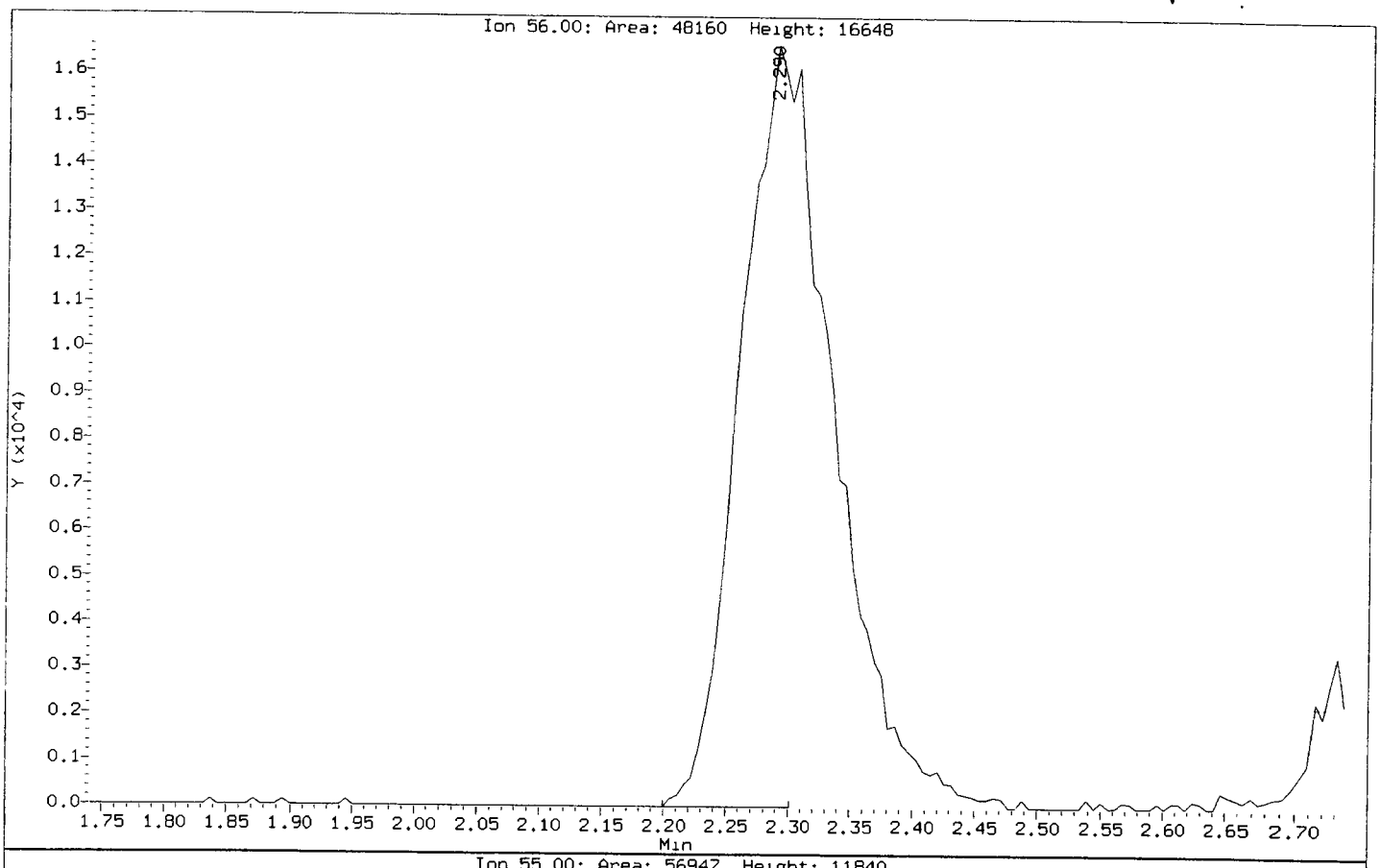


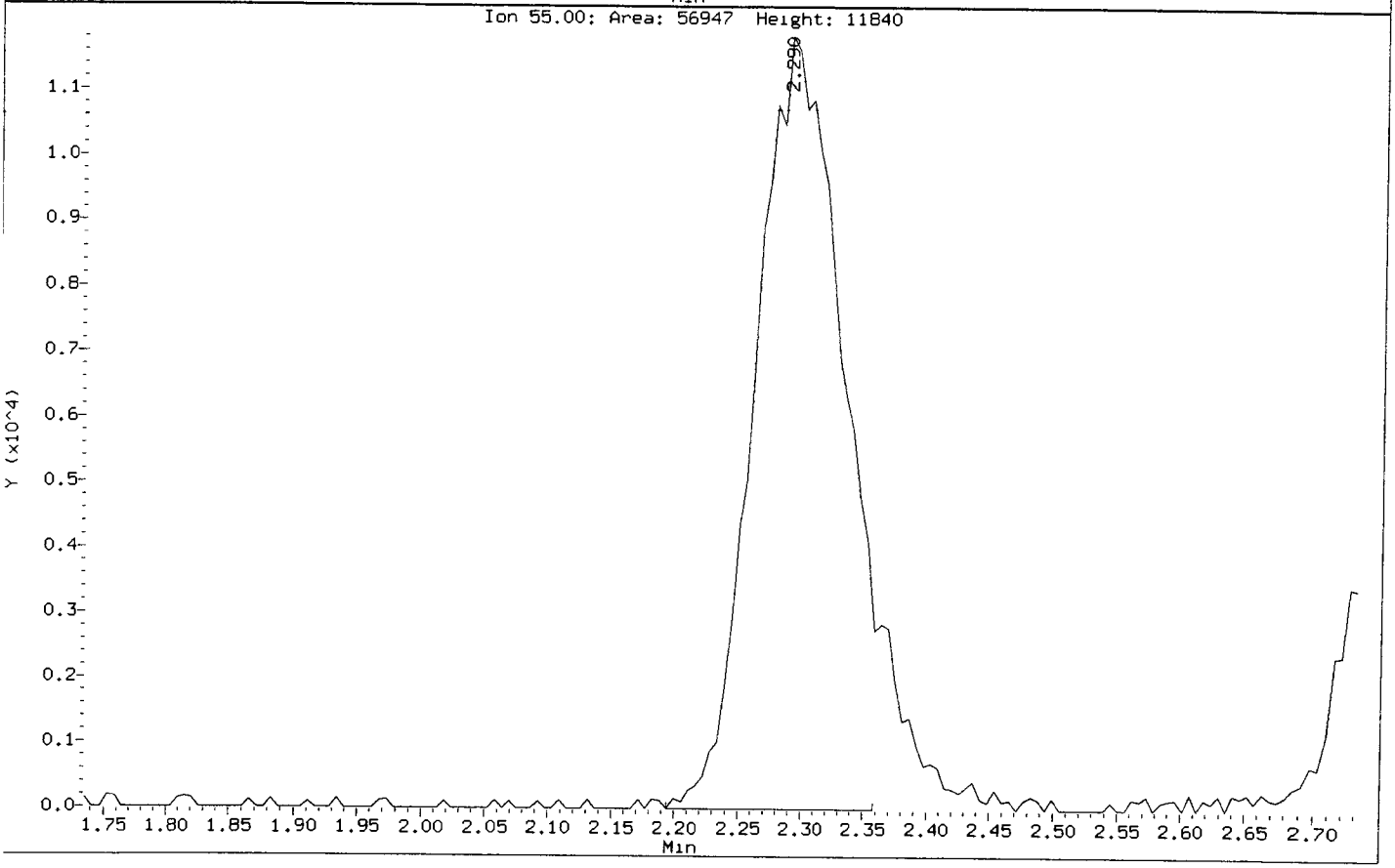




Data File: /chem1/nt5.i/27JUN13.b/0050627.d
Injection Date: 27-JUN-2013 13:07
Instrument: nt5.i
Client Sample ID: VSTD5

Compound: Acrolein
CAS Number:

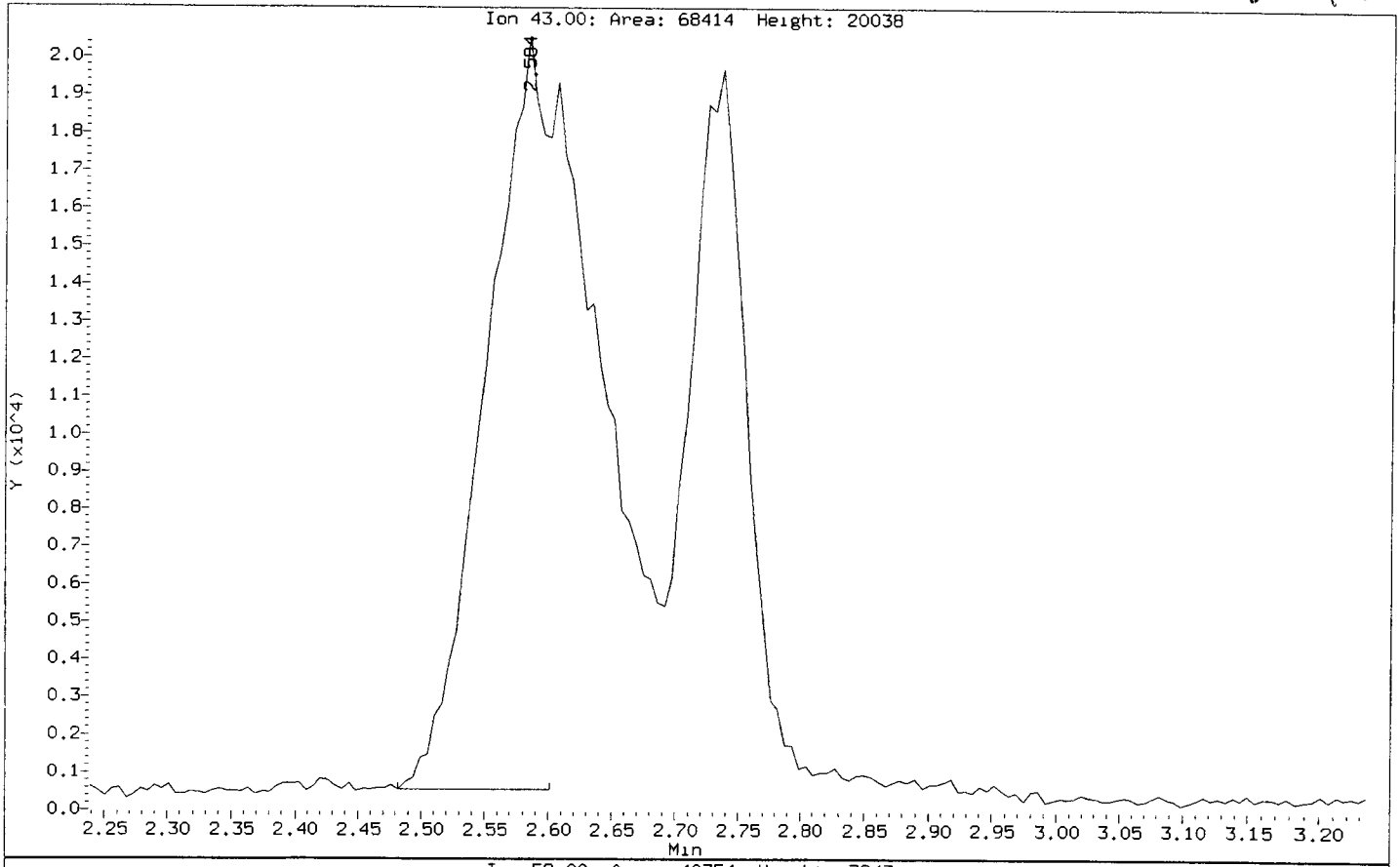


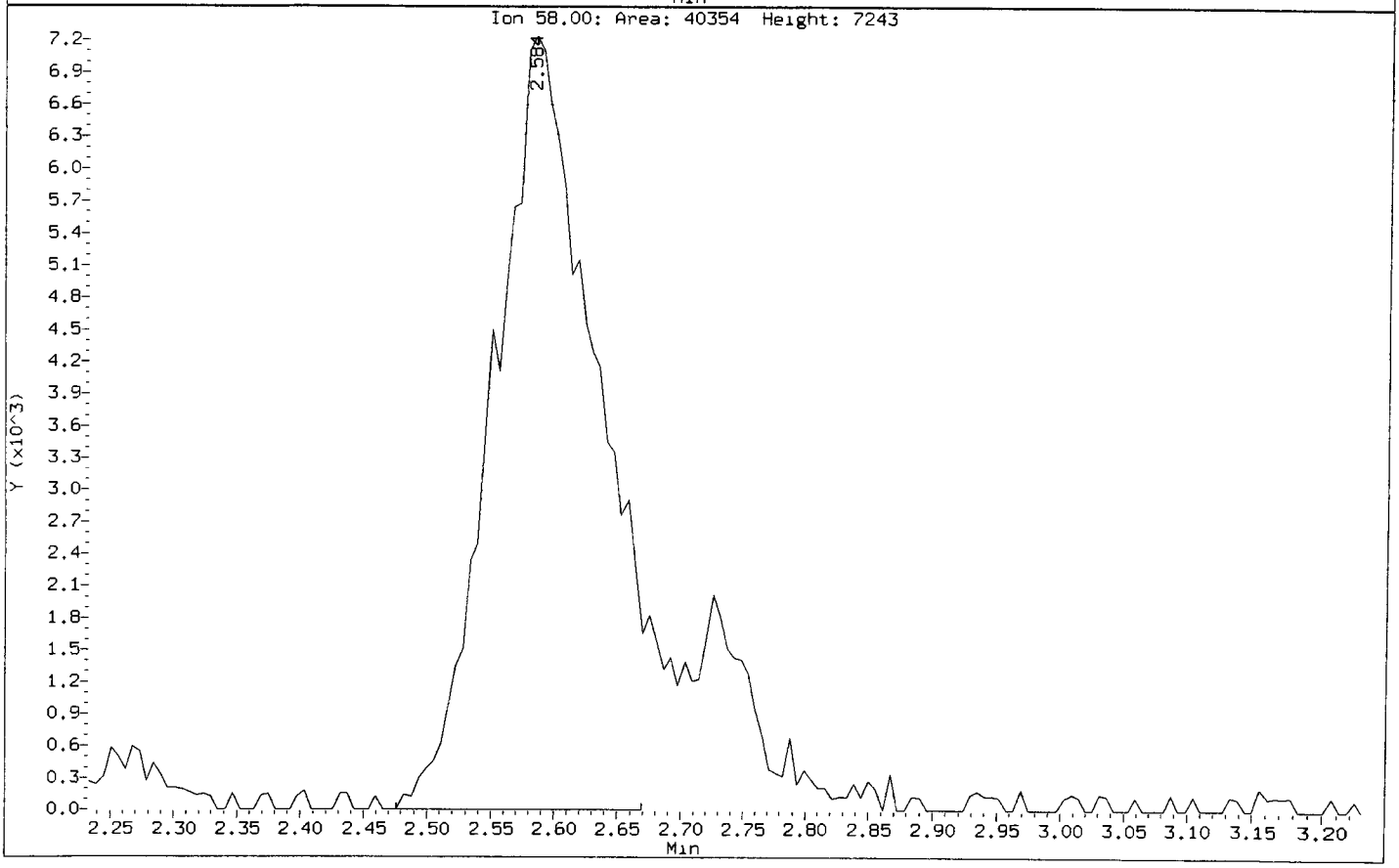


Data File: /chem1/nt5.i/27JUN13.b/0100627.d
Injection Date: 27-JUN-2013 12:43
Instrument: nt5.i
Client Sample ID: VSTD10

Compound: Acetone
CAS Number:

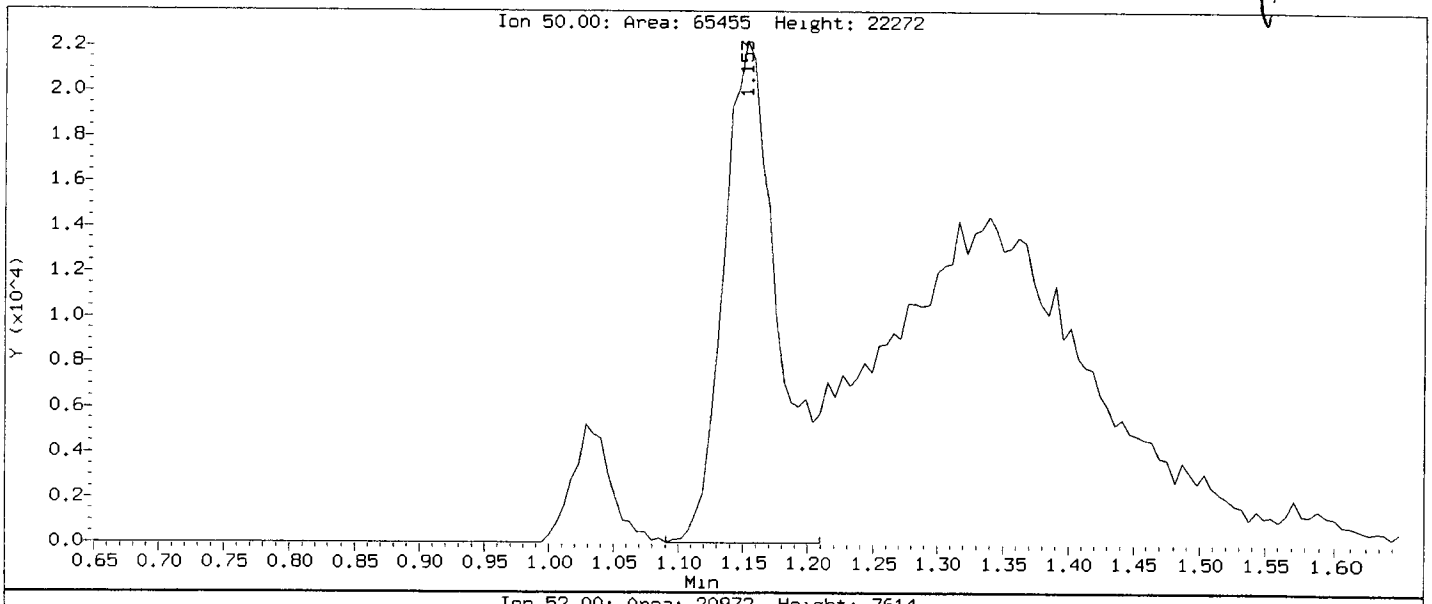
1 6/14

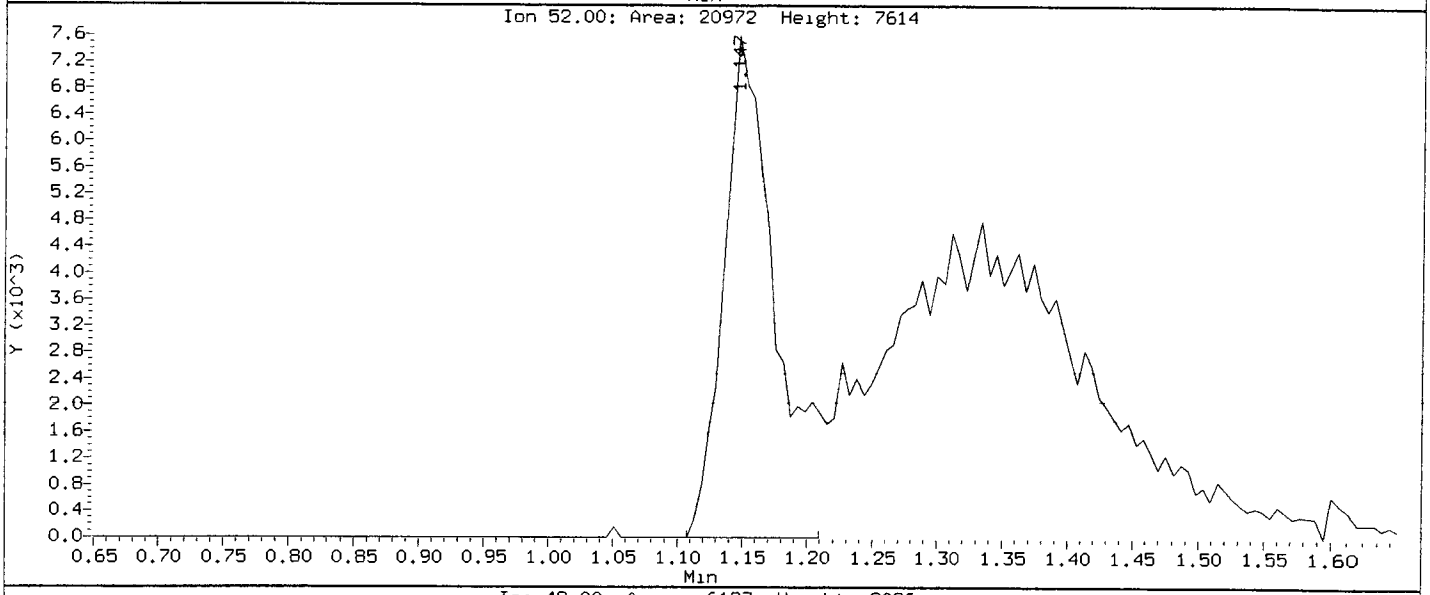


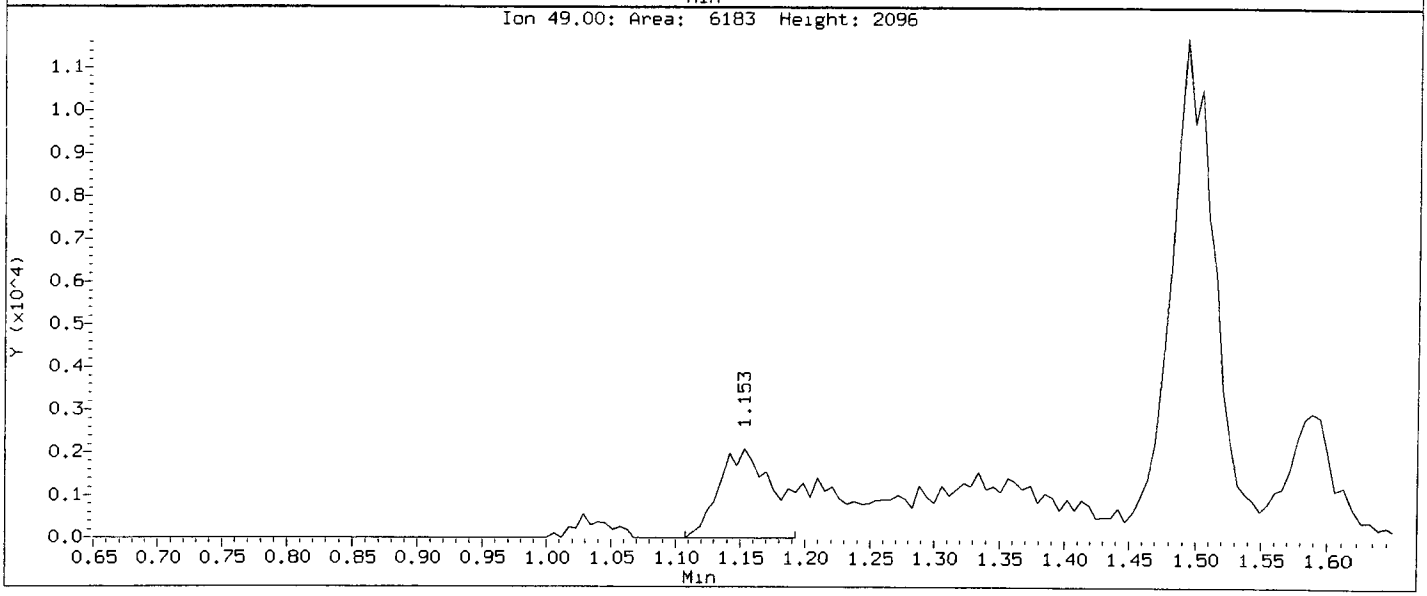


Data File: /chem1/nt5.i/27JUN13.b/0100627.d
Injection Date: 27-JUN-2013 12:43
Instrument: nt5.i
Client Sample ID: VSTD10

Compound: Chloromethane
CAS Number:

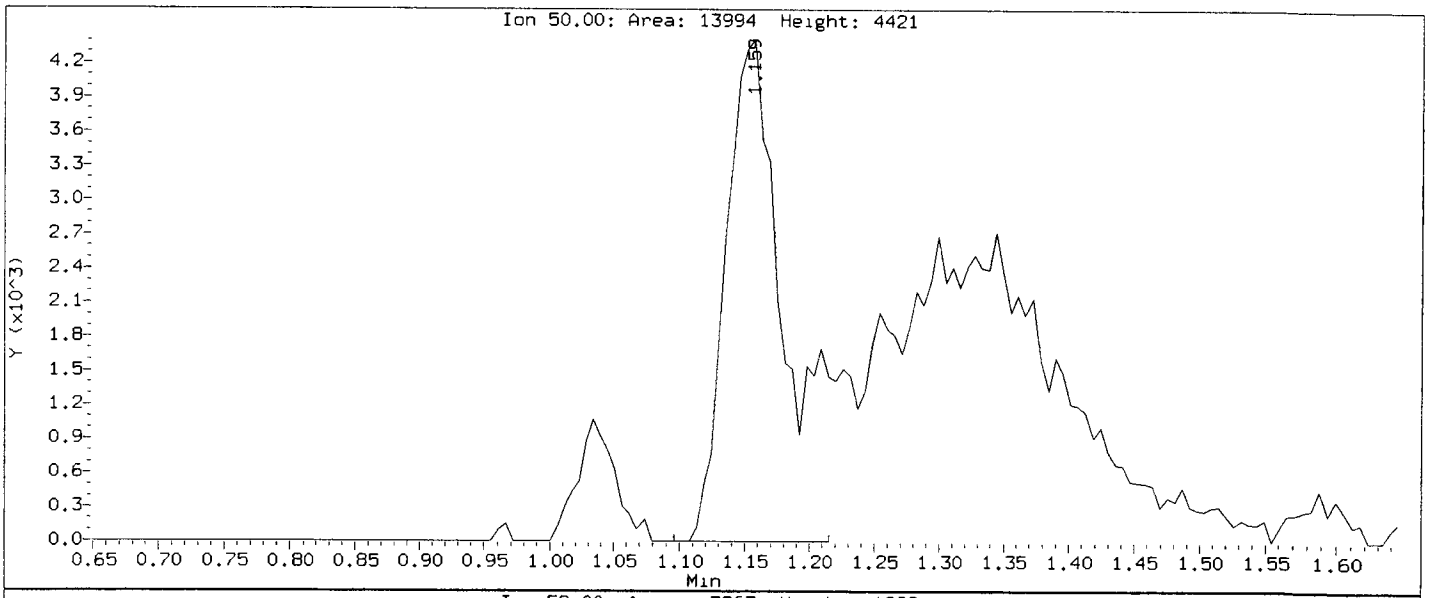


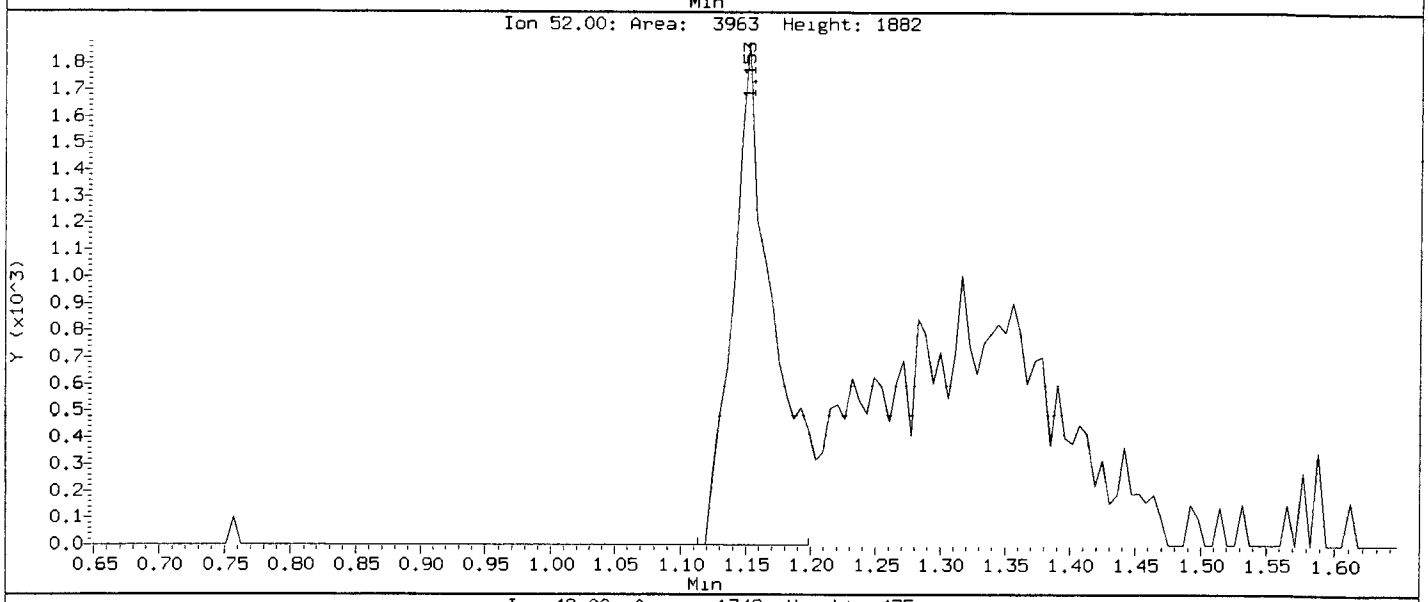


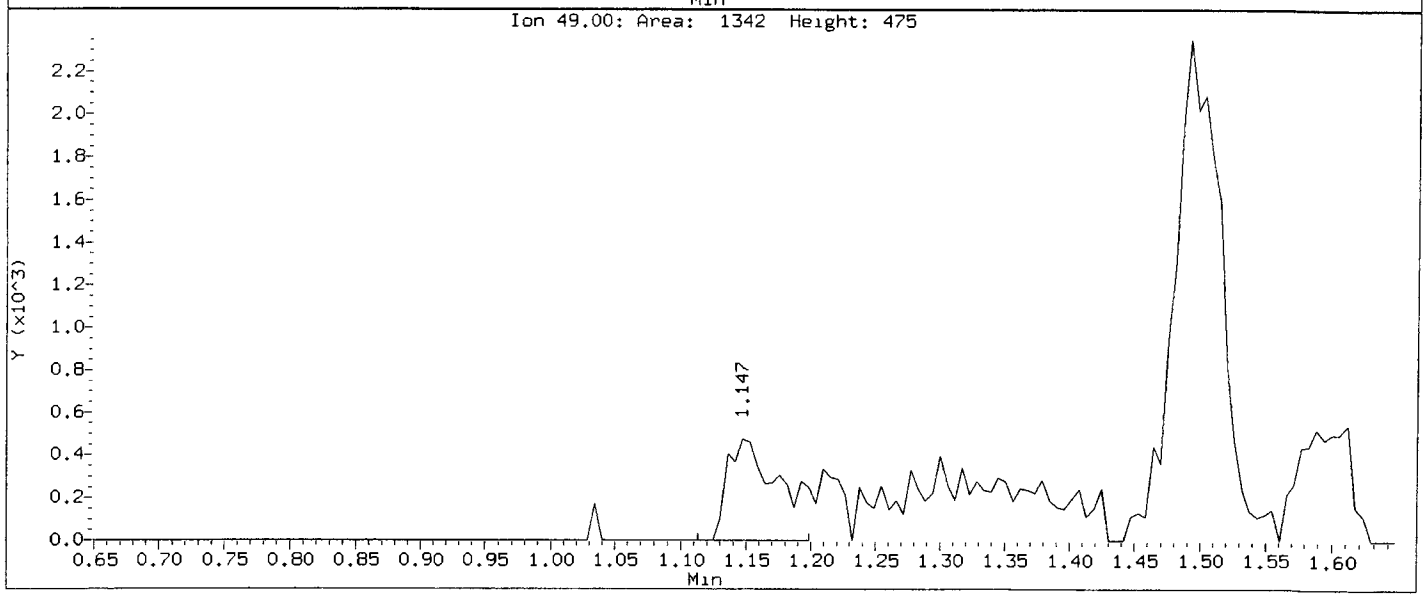


Data File: /chem1/nt5.i/27JUN13.b/0020627.d
Injection Date: 27-JUN-2013 13:30
Instrument: nt5.i
Client Sample ID: VSTD2

Compound: Chloromethane
CAS Number:

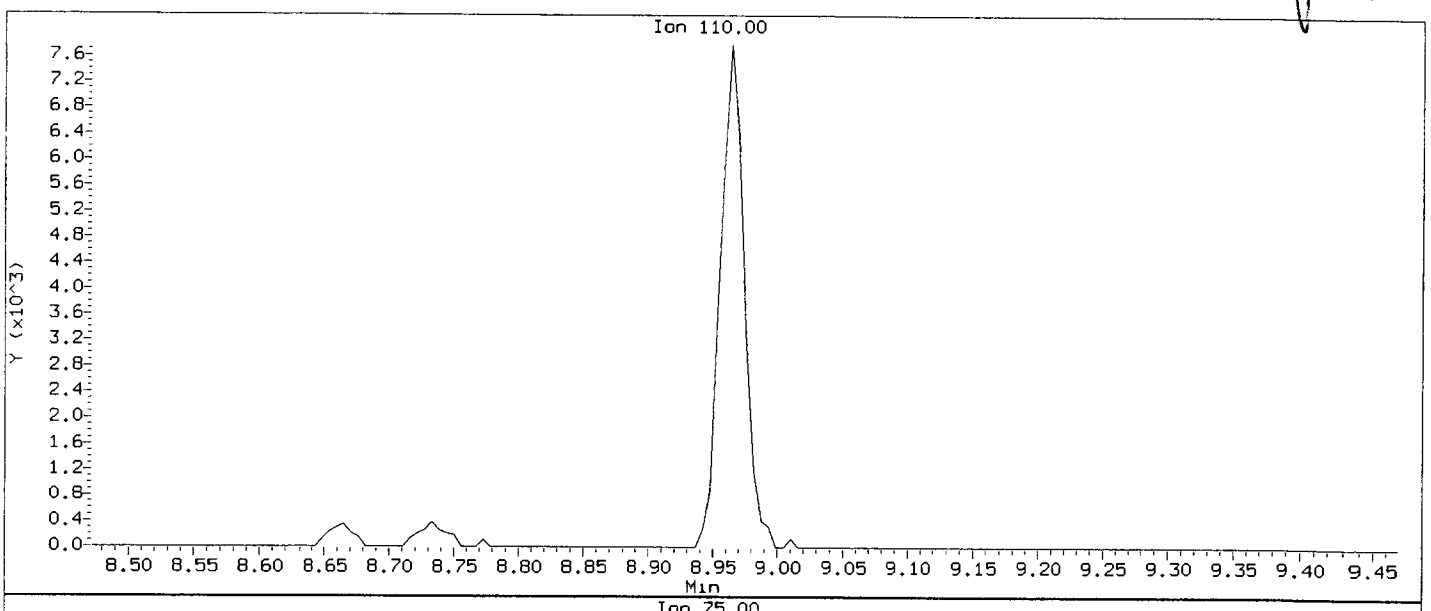


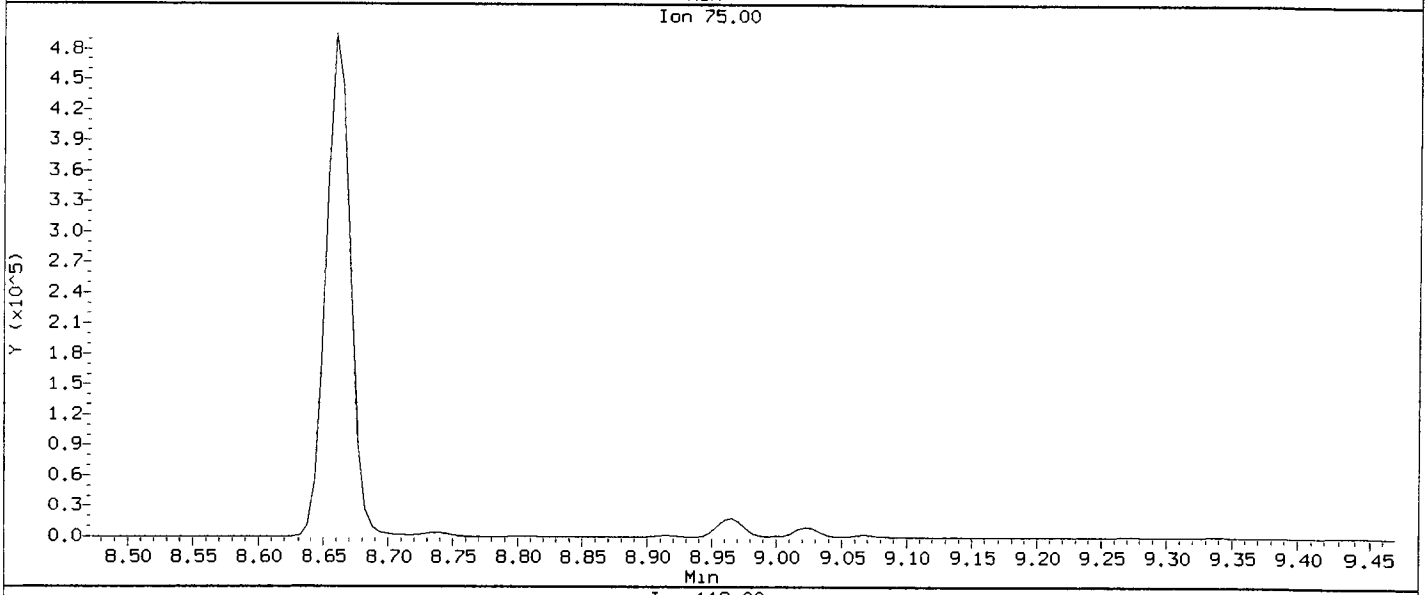


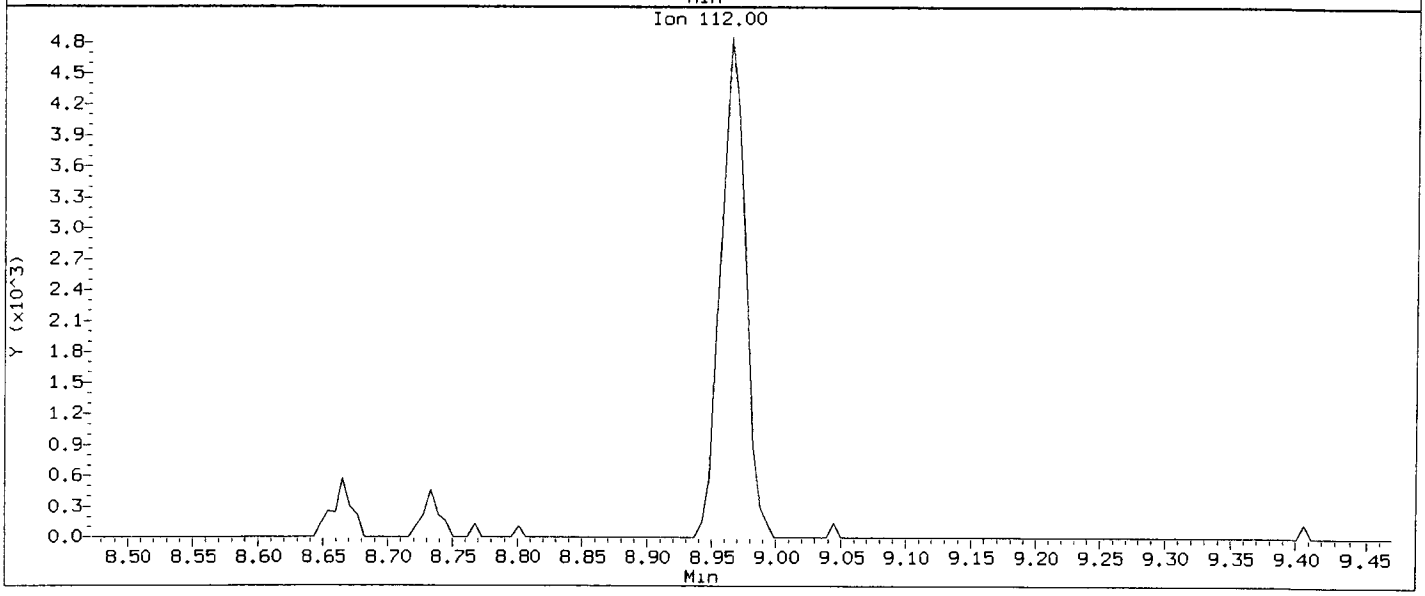


Data File: /chem1/nt5.1/27JUN13.b/0020627.d
Injection Date: 27-JUN-2013 13:30
Instrument: nt5.1
Client Sample ID: VSTD2

Compound: 1,2,3-Trichloropropane
CAS Number:

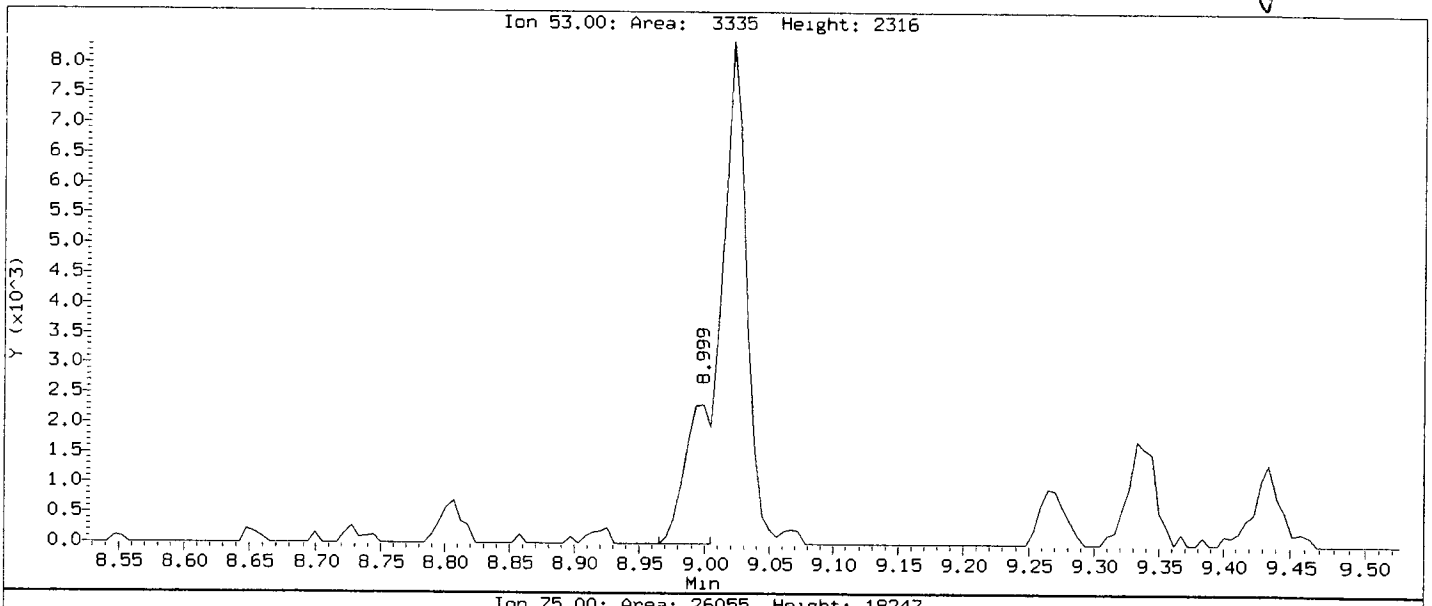


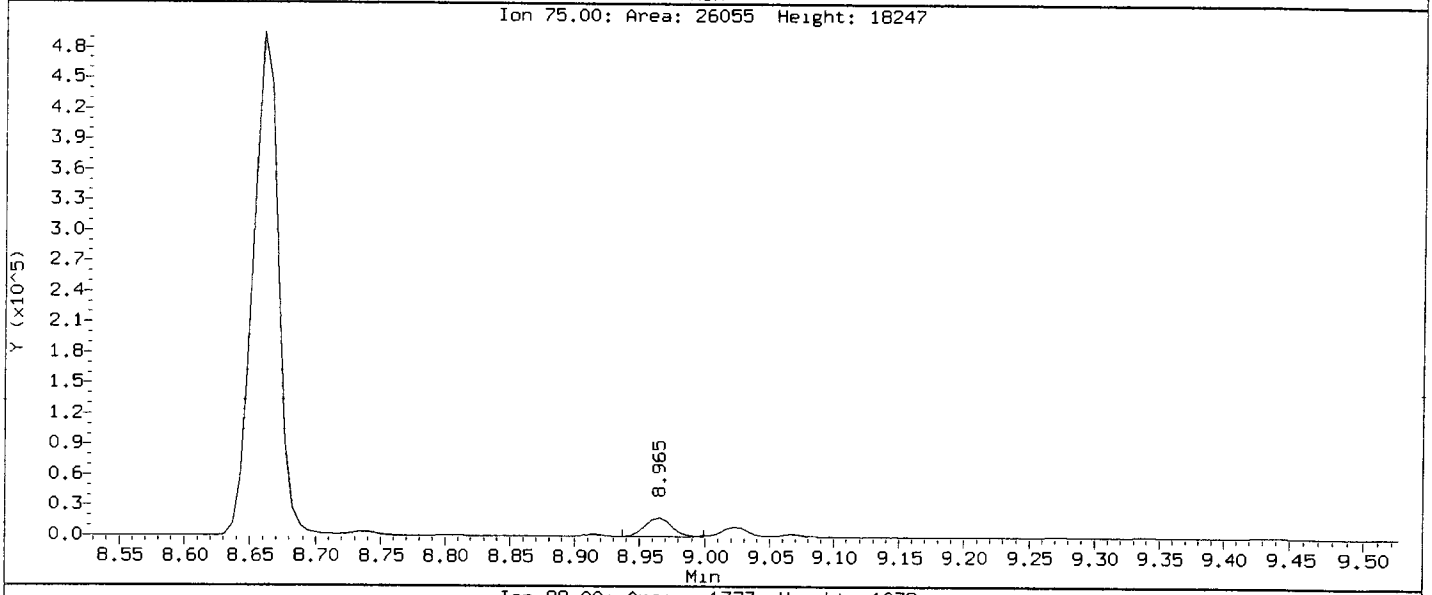


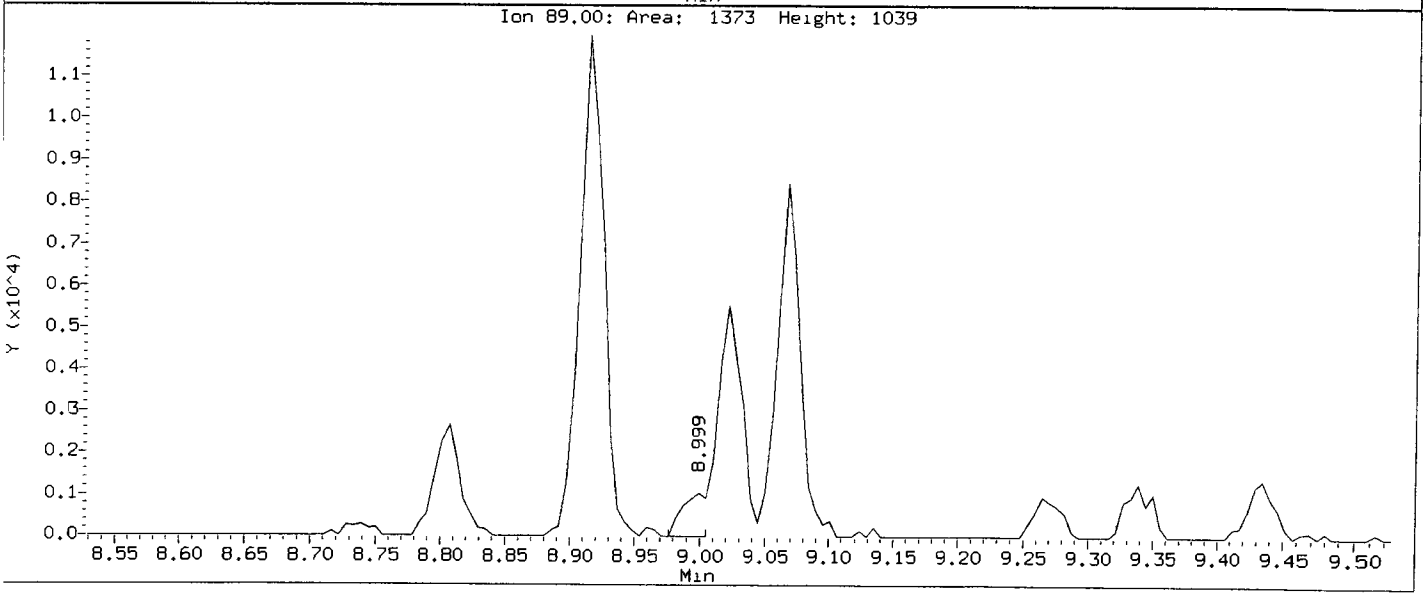


Data File: /chem1/nt5.i/27JUN13.b/0020627.d
Injection Date: 27-JUN-2013 13:30
Instrument: nt5.i
Client Sample ID: VSTD2

Compound: Trans-1,4-Dichloro 2-Butene
CAS Number:







WVST : 00266

Volatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WV67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Analyst Notes / Data Review Checklist

ARI WORK Order: WV67 Client ID: SAIC

METHOD: **NW-TPH**(Gas) **8021B**(BTEX) **NW-VPH**(VPH) **8260C**(VOA) **8260C**(SIM VOA) **524.3**(VOA) **RSK-175**(MEE)

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 PID-1 PID-2 PID-3 FID-6

Purge Volume (mL) 5 Curve Date: 6/27/13 Analysis Start Date: 6/27/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
PH ≤ 2.0 / 5035 Preserved?	NA / Y / N / ✓	Method Blank In Control?	Y / N / ✓
BFB Tune Meets Criteria?	NA / Y / N / ✓	Surrogate Recovery in Control?	Y / N / ✓
Internal STD within 50-200%?	NA / Y / N / ✓ Y+N	LCS / LCSD Recovery Met?	Y / N / ✓
CCAL Meets %D	Y / N / ✓	LCS / LCSD RPD ≤30%?	NA / ___
ICAL Q flag applied?	NA / Y / N / ✓	MS / MSD Recovery Met?	NA / Y / N / MA
CCAL Q Flag applied	NA / Y / N / ✓	MS / MSD RPD ≤30%?	NA / MA
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / ✓
~~Integration Summary?~~	Y / N / ✓	Special Analysis Request?	Y / N / ✓

Bubbles/Headspace: None SM (≤ 2mm •) PB (2-4mm ●) LG (> 4mm) Head Space

Detail problems, corrective actions and/or other pertinent information below:

6/27/13 - samples A, B, C - IS/SS out in 1st and 2nd runs (soapy matrix)
- both runs reported
6/27 - MB - DCM @ 3.00 µg/kg
- reran on B - E flag for toluene
6/29 - MB - DCM @ 2.37 µg/kg } B flagged in samples
- reran med level on 6/28/13
- all three runs reported due to discrepancy

(Review 1)Analyst: [signature] **Date:** 6/29/13

(Review 2)Reviewer: [signature] **Date:** 6/28/13

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-5 Serial No.:GC=US10228086, MS=US10462818

Date: 6/27b Analysis: SVOC Analyst: [illegible]

GC Program: VOA Column No: 93891 Column Type: [illegible]

Instrument Tune (.U or .CT.): PAT EM Voltage: 1494

Inj. Vol: 5 Calibration File: BFB0627 Curve Date: 6/27b

IS/SS	Ical/Ccal	LCS/ICV
D000647	D000585	D000597
D000644		

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt5.i/27JUN13.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF							
1	1658	bfb0627x.d	BFB0627	BFB0627			1							
2	1746	cc0627.d	CC0627	VSTD50			1	4.67	1620528	5.12	2667896	7.60	2557700	9.67 1358370
3	1930	lcs0627.d	LCS0627	LCS0627			1	4.67	1473161	5.11	2440245	7.60	2335287	9.67 1219894
4	2005	lcs0627a.d	LCS0627	LCC0627			1	4.66	1561743	5.11	2584151	7.60	2491123	9.67 1341563
5	2053	mb0627.d	MB0627	MB0627			1	4.67	1528018	5.12	2529819	7.60	2494290	9.67 1323306
6	2140	wv67d.d	WV67D	UP-TB-01-20130626-W		LL2	1	4.67	1523627	5.12	2521626	7.60	2507425	9.67 1330016
7	2204	wv67a.d	WV67A	UP-CB-B8-20130626-S			1	4.66	1223518	5.11	2004618	7.59	1390109	9.67 349584
8	2228	wv67b.d	WV67B	UP-MHF-165-20130626			1	4.67	1489276	5.11	2446781	7.59	1895964	9.67 581282
9	2252	wv67c.d	WV67C	UP-CB-A6-20130626-S			1	4.67	1475877	5.12	2347847	7.60	1652442	9.67 317209
10	2316	wv78a.d	WV78A	RC-14(20-20.5)			1	4.68	1678327	5.12	2755320	7.60	2749317	9.67 1489122
11	2340	wv78b.d	WV78B	BP-5(20.0-20.75)			1	4.68	1693144	5.12	2797393	7.60	2818418	9.67 1555872
12	0004	wv78c.d	WV78C	BP-3(18.5-19)			1	4.66	1713714	5.11	2812553	7.59	2717770	9.67 1311747
13	0028	wv78d.d	WV78D	BP-2(10-11.5)			1	4.67	1680411	5.12	2793749	7.60	2815082	9.67 1541312
14	0052	wv78e.d	WV78E	Trip Blanks		2 LL2	1	4.66	1651980	5.11	2717167	7.59	2741813	9.67 1462284
15	0116	wu70a.d	WU70A	LF-QC-TB-20130619-W		2 LL	1	4.67	1682143	5.12	2783621	7.60	2779448	9.67 1510132
16	0140	wu70b.d	WU70B	LF-TP-001-20130619-			1	4.67	965746	5.12	1645347	7.60	1669959	9.67 857768
17	0204	wu93a.d	WU93A	B101-S-2 5-5			1	4.67	1655238	5.12	2760357	7.60	2780403	9.67 1531783
18	0227	wu93b.d	WU93B	B101-S-5 5			1	4.67	1633537	5.12	2739564	7.60	2768343	9.67 1504601
19	0251	wu93c.d	WU93C	B101-S-10-13			1	4.67	1593465	5.12	2679003	7.60	2733156	9.67 1490322
20	0315	wu93d.d	WU93D	B102-S-5-10			1	4.68	1560110	5.12	2626565	7.60	2655825	9.67 1450825
21	0339	wv02a.d	WV02A	B104-S-5-10			1	4.66	1575023	5.11	2675658	7.59	2706781	9.67 1465067
22	0403	wv67a2.d	WV67A	UP-CB-B8-20130626-S			1	4.67	1389159	5.12	2283262	7.60	1933608	9.67 673495
23	0427	wv67b2.d	WV67B	UP-MHF-165-20130626			1	4.66	1387314	5.11	2314220	7.59	1678117	9.67 522337
24	0451	wv67c2.d	WV67C	UP-CB-A6-20130626-S			1	4.67	1393353	5.12	2310682	7.60	1485534	9.67 310157

Maintenan

6/28/14

Maintenance Verification (Identify ICal or CCal that demonstrates the instrument is in control):

Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt5.i/27JUN13.b

ARI Job No.: BFB0 Method: bfb8260.m Instrument: nt5.i Date: 27-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1658	bfb0627x.d	BFB0627	BFB0627	1	NO MANUAL INTEGRATION
1746	cc0627.d	CC0627	VSTD50	1	Chloromethane, Acetone,
1930	lcs0627.d	LCS0627	LCS0627	1	Chloromethane, Acetone,
2005	lcs0627a.d	LCS0627	LCC0627	1	Chloromethane,
2053	mb0627.d	MB0627	MB0627	1	NO MANUAL INTEGRATION
2140	wv67d.d	WV67D	UP-TB-01-2	1	NO MANUAL INTEGRATION
2204	wv67a.d	WV67A	UP-CB-B8-2	1	NO MANUAL INTEGRATION
2228	wv67b.d	WV67B	UP-MHF-165	1	NO MANUAL INTEGRATION
2252	wv67c.d	WV67C	UP-CB-A6-2	1	NO MANUAL INTEGRATION
2316	wv78a.d	WV78A	RC-14(20-2	1	Acetone,
2340	wv78b.d	WV78B	BP-5(20.0-	1	NO MANUAL INTEGRATION
0004	wv78c.d	WV78C	BP-3(18.5-	1	NO MANUAL INTEGRATION
0028	wv78d.d	WV78D	BP-2(10-11	1	NO MANUAL INTEGRATION
0052	wv78e.d	WV78E	Trip Blank	1	NO MANUAL INTEGRATION
0403	wv67a2.d	WV67A	UP-CB-B8-2	1	Methylene Chloride,
0427	wv67b2.d	WV67B	UP-MHF-165	1	NO MANUAL INTEGRATION
0451	wv67c2.d	WV67C	UP-CB-A6-2	1	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt5.i/27JUN13.b

Instrument: nt5.i Date: 27-JUN-2013 Method: VO121012S.m

INITIAL CAL: 27-JUN-2013

Compound	%RSD or R^2
Iodomethane	27.8

CONTINUING CAL: 27-JUN-2013

Compound	%D
Acrolein	85.4
Iodomethane	43.7
Acrylonitrile	-23.8

Data File: /chem1/nt5.i/27JUN13.b/bfb0627x.d

Date : 27-JUN-2013 16:58

Client ID: BFB0627

Instrument: nt5.i

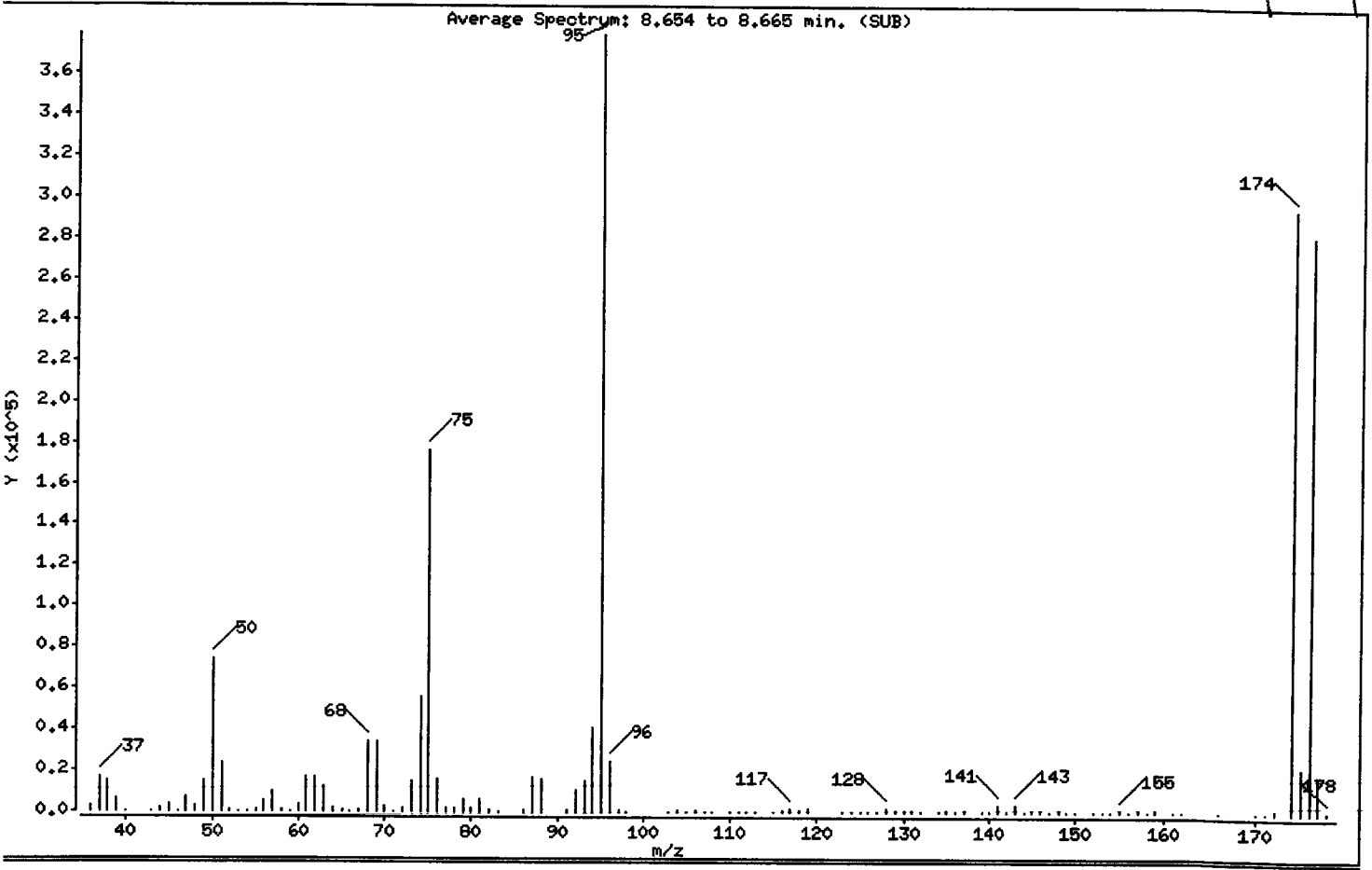
Sample Info: BFB0627,BFB0627,,1,27JUN13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	19.55
75	30.00 - 66.00% of mass 95	46.54
96	5.00 - 9.00% of mass 95	6.54
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 101.00% of mass 95	77.69
175	4.00 - 9.00% of mass 174	5.70 (7.33)
176	95.00 - 101.00% of mass 174	74.22 (95.53)
177	5.00 - 9.00% of mass 176	4.94 (6.66)

Data File: /chem1/nt5.i/27JUN13.b/bfb0627x.d

Date : 27-JUN-2013 16:58

Client ID: BFB0627

Instrument: nt5.i

Sample Info: BFB0627,BFB0627,,1,27JUN13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0627x.d

Spectrum: Average Spectrum: 8.654 to 8.665 min. (SUB)

Location of Maximum: 95.00

Number of points: 117

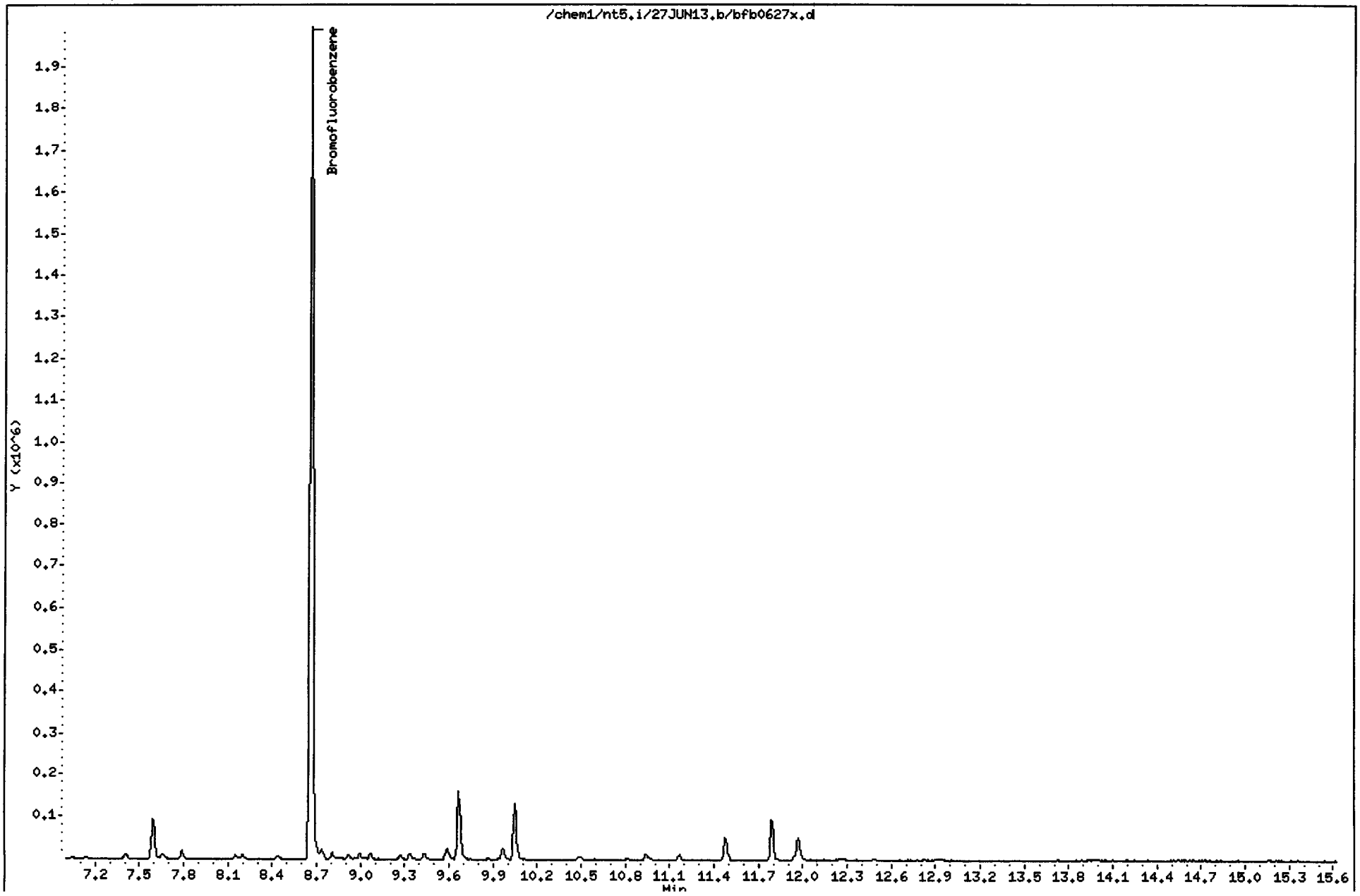
m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	3047	68.00	34216	106.00	1072	143.00	3664
37.00	16464	69.00	34096	107.00	388	144.00	179
38.00	14818	70.00	2437	108.00	47	145.00	437
39.00	6257	71.00	135	110.00	141	146.00	515
40.00	21	72.00	1725	111.00	204	147.00	218
43.00	209	73.00	14592	112.00	123	148.00	812
44.00	1694	74.00	56184	113.00	215	149.00	201
45.00	3266	75.00	176512	115.00	361	150.00	339
46.00	407	76.00	15529	116.00	1118	152.00	162
47.00	6733	77.00	2171	117.00	1902	153.00	378
48.00	2261	78.00	1415	118.00	977	154.00	157
49.00	15106	79.00	6255	119.00	1340	155.00	819
50.00	74160	80.00	1929	123.00	42	156.00	100
51.00	23472	81.00	6339	124.00	171	157.00	801
52.00	971	82.00	1162	125.00	91	158.00	34
53.00	102	83.00	223	126.00	113	159.00	504
54.00	48	86.00	516	127.00	168	161.00	406
55.00	846	87.00	16520	128.00	1341	162.00	34
56.00	4843	88.00	15418	129.00	466	166.00	33
57.00	9251	91.00	939	130.00	1241	170.00	48
58.00	475	92.00	10095	131.00	491	171.00	307
59.00	54	93.00	14548	132.00	42	172.00	1580
60.00	3152	94.00	41384	134.00	158	174.00	294720
61.00	16568	95.00	379328	135.00	474	175.00	21608
62.00	16344	96.00	24808	136.00	48	176.00	281536
63.00	12191	97.00	805	137.00	530	177.00	18744
64.00	1374	98.00	45	139.00	137	178.00	517
65.00	1181	103.00	131	140.00	285		
66.00	189	104.00	1120	141.00	3068		
67.00	890	105.00	405	142.00	382		

Data File: /chem1/nt5.i/27JUN13.b/bfb0627x.d
Date : 27-JUN-2013 16:58
Client ID: BFB0627
Sample Info: BFB0627,BFB0627,,1,27JUN13,,

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/cc0627.d
Lab Smp Id: CC0627 Client Smp ID: VSTD50
Inj Date : 27-JUN-2013 17:46
Operator : PB Inst ID: nt5.i
Smp Info : CC0627,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 07:28 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.057	1.057	(0.226)	482667	50.0000	51.226
2 Chloromethane	50	1.176	1.176	(0.252)	940104	50.0000	48.636(M)
3 Vinyl Chloride	62	1.226	1.226	(0.263)	906642	50.0000	52.082
4 Bromomethane	94	1.436	1.436	(0.307)	462414	50.0000	46.346
5 Chloroethane	64	1.521	1.521	(0.326)	552866	50.0000	52.204
6 Trichlorofluoromethane	101	1.611	1.611	(0.345)	969716	50.0000	50.256
7 1,1-Dichloroethene	96	1.973	1.973	(0.422)	645640	50.0000	56.371
8 Carbon Disulfide	76	1.979	1.979	(0.424)	2317563	50.0000	56.506
9 112Trichloro122Trifluoroethane	101	2.018	2.018	(0.432)	641359	50.0000	57.801
10 Iodomethane	142	2.075	2.075	(0.444)	659727	50.0000	71.837
11 Bromoethane	108	2.171	2.171	(0.465)	447582	50.0000	58.503
12 Acrolein	56	2.313	2.313	(0.495)	820623	250.000	463.44
13 Methylene Chloride	84	2.454	2.454	(0.525)	644167	50.0000	45.295
14 Acetone	43	2.742	2.742	(0.587)	647949	250.000	240.43(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
15 Trans-1,2-Dichloroethene	96	2.590	2.590	(0.554)	637862	50.0000	56.013
16 Methyl tert butyl ether	73	2.754	2.754	(0.589)	1803028	50.0000	51.362
17 1,1-Dichloroethane	63	3.201	3.201	(0.685)	1119157	50.0000	42.979
18 Acrylonitrile	53	3.348	3.348	(0.717)	222709	50.0000	38.088
19 Vinyl Acetate	43	3.540	3.540	(0.758)	1740734	50.0000	49.525
20 Cis-1,2-Dichloroethene	96	3.744	3.744	(0.801)	733333	50.0000	49.217
22 2,2-Dichloropropane	77	3.840	3.840	(0.822)	1070484	50.0000	49.526
23 Bromochloromethane	128	3.930	3.930	(0.841)	313235	50.0000	48.130
24 Chloroform	83	4.027	4.027	(0.862)	1137023	50.0000	47.993
25 Carbon Tetrachloride	117	4.117	4.117	(0.804)	883220	50.0000	48.303
27 Dibromofluoromethane	111	4.196	4.196	(0.898)	733220	50.0000	46.991
26 1,1,1-Trichloroethane	97	4.185	4.185	(0.896)	1045595	50.0000	48.177
28 1,1-Dichloropropene	75	4.304	4.304	(0.841)	1047523	50.0000	49.758
29 2-Butanone	72	4.434	4.434	(0.949)	449108	250.000	240.90
30 Benzene	78	4.530	4.530	(0.885)	2932432	50.0000	50.544
31 Pentafluorobenzene	168	4.671	4.671	(1.000)	1620528	50.0000	
32 d4-1,2-Dichloroethane	65	4.666	4.666	(0.999)	883514	50.0000	49.827
33 1,2-Dichloroethane	62	4.728	4.728	(0.924)	907041	50.0000	48.186
34 Trichloroethene	95	5.067	5.067	(0.990)	731279	50.0000	49.899
35 1,4-Difluorobenzene	114	5.118	5.118	(1.000)	2667896	50.0000	
37 Dibromomethane	93	5.424	5.424	(1.060)	389113	50.0000	48.668
38 1,2-Dichloropropane	63	5.514	5.514	(1.077)	806933	50.0000	49.017
39 Bromodichloromethane	83	5.588	5.588	(1.092)	896506	50.0000	49.188
40 2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.197)	147483	50.0000	57.542
41 Cis 1,3-dichloropropene	75	6.137	6.137	(1.199)	1147815	50.0000	50.694
42 d8-Toluene	98	6.295	6.295	(1.230)	3286020	50.0000	49.690
43 Toluene	92	6.335	6.335	(1.238)	1833541	50.0000	49.958
44 Tetrachloroethene	166	6.646	6.646	(0.875)	764804	50.0000	50.767
45 4-Methyl-2-Pentanone	58	6.708	6.708	(1.311)	1745972	250.000	251.41
46 Trans 1,3-Dichloropropene	75	6.702	6.702	(1.309)	1036301	50.0000	49.930
47 1,1,2-Trichloroethane	97	6.827	6.827	(1.334)	574427	50.0000	48.013
48 Chlorodibromomethane	129	6.963	6.963	(0.917)	654222	50.0000	49.539
49 1,3-Dichloropropane	76	7.047	7.047	(0.928)	1059980	50.0000	50.084
50 1,2-Dibromoethane	107	7.144	7.144	(1.396)	576255	50.0000	49.479
51 2-Hexanone	43	7.421	7.421	(0.977)	2832502	250.000	256.71
52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2557700	50.0000	
53 Chlorobenzene	112	7.613	7.613	(1.002)	1843158	50.0000	50.398
54 Ethyl Benzene	91	7.664	7.664	(1.009)	3319106	50.0000	53.378
55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	658235	50.0000	49.661
56 m,p-xylene	106	7.794	7.794	(1.026)	2491452	100.000	106.73
57 o-Xylene	106	8.156	8.156	(1.074)	1208943	50.0000	52.474
58 Styrene	104	8.201	8.201	(1.080)	2034085	50.0000	53.880
59 Bromoform	173	8.196	8.196	(0.847)	458925	50.0000	48.643
60 Isopropyl Benzene	105	8.445	8.445	(0.873)	3136263	50.0000	55.663
62 4-Bromofluorobenzene	95	8.665	8.665	(1.141)	1368844	50.0000	50.285
63 Bromobenzene	156	8.739	8.739	(0.903)	763432	50.0000	49.276
64 N-Propyl Benzene	91	8.812	8.812	(0.911)	3691590	50.0000	54.386

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	750248	50.0000	48.048
66	2-Chloro Toluene	91	8.920	8.920	(0.922)	2263333	50.0000	52.902
67	1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.930)	2641115	50.0000	54.375
68	1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	236092	50.0000	48.646
69	Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	279066	50.0000	47.400
70	4-Chloro Toluene	91	9.073	9.073	(0.938)	2353830	50.0000	52.856
71	T-Butyl Benzene	119	9.276	9.276	(0.959)	2335076	50.0000	54.124
72	1,2,4-Trimethylbenzene	105	9.338	9.338	(0.965)	2599489	50.0000	54.734
73	S-Butyl Benzene	105	9.440	9.440	(0.976)	3414232	50.0000	55.042
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	2825285	50.0000	56.226
75	1,3-Dichlorobenzene	146	9.599	9.599	(0.992)	1441652	50.0000	50.917
* 76	d4-1,4-Dichlorobenzene	152	9.672	9.672	(1.000)	1358370	50.0000	
77	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	1471030	50.0000	50.227
78	N-Butyl Benzene	91	9.966	9.966	(1.030)	2671184	50.0000	56.649
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.039)	1230583	50.0000	49.668
80	1,2-Dichlorobenzene	146	10.062	10.062	(1.040)	1362295	50.0000	49.339
81	1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	145583	50.0000	45.060
82	Hexachloro 1,3-Butadiene	225	11.488	11.488	(1.188)	634932	50.0000	47.857
83	1,2,4-Trichlorobenzene	180	11.477	11.477	(1.187)	1016993	50.0000	49.337
84	Naphthalene	128	11.788	11.788	(1.219)	2086353	50.0000	45.861
85	1,2,3-Trichlorobenzene	180	11.969	11.969	(1.237)	947013	50.0000	46.340

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: cc0627.d
Lab Smp Id: CC0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 27-JUN-2013
Calibration Time: 15:48
Client Smp ID: VSTD50
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1620528	0.43
35 1,4-Difluorobenze	2656709	1328354	5313418	2667896	0.42
52 d5-Chlorobenzene	2557235	1278618	5114470	2557700	0.02
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1358370	-1.16

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.67	0.37
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.22
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

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

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i
Lab File ID: cc0627.d
Analysis Type: SOIL
Lab Sample ID: CC0627
Method: /chem1/nt5.i/27JUN13.b/VO121012S.m

Injection Date: 27-JUN-2013 17:46
Init. Cal. Date(s): 27-JUN-2013 27-JUN-2013
Init. Cal. Times: 10:43 15:48
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
1 Dichlorodifluoromethane	0.29072	0.29785	0.29785	0.100	2.45103	20.00000	Averaged	
2 Chloromethane	0.59639	0.58012	0.58012	0.100	-2.72731	20.00000	Averaged	
3 Vinyl Chloride	0.53711	0.55947	0.55947	0.100	4.16390	20.00000	Averaged	
4 Bromomethane	0.30784	0.28535	0.28535	0.100	-7.30748	20.00000	Averaged	
5 Chloroethane	0.32676	0.34116	0.34116	0.100	4.40702	20.00000	Averaged	
6 Trichlorofluoromethane	0.59534	0.59840	0.59840	0.100	0.51293	20.00000	Averaged	
7 1,1-Dichloroethene	0.35338	0.39841	0.39841	0.100	12.74289	20.00000	Averaged	
8 Carbon Disulfide	1.26547	1.43013	1.43013	0.010	13.01131	20.00000	Averaged	
9 112Trichloro122Trifluoroeth	0.34236	0.39577	0.39577	0.010	15.60171	20.00000	Averaged	
10 Iodomethane	0.28335	0.40711	0.40711	0.010	43.67414	20.00000	Averaged	<-
11 Bromoethane	0.23605	0.27620	0.27620	0.100	17.00660	20.00000	Averaged	
12 Acrolein	0.05463	0.10128	0.10128	0.000	85.37482	20.00000	Averaged	<-
13 Methylene Chloride	45.29467	50.00000	0.39750	0.010	-9.41065	20.00000	Linear	
14 Acetone	0.08315	0.07997	0.07997	0.001	-3.82739	20.00000	Averaged	
15 Trans-1,2-Dichloroethene	0.35136	0.39361	0.39361	0.010	12.02608	20.00000	Averaged	
16 Methyl tert butyl ether	1.08311	1.11262	1.11262	0.100	2.72447	20.00000	Averaged	
17 1,1-Dichloroethane	0.80343	0.69061	0.69061	0.100	-14.04246	20.00000	Averaged	
18 Acrylonitrile	0.18041	0.13743	0.13743	0.001	-23.82407	20.00000	Averaged	<-
19 Vinyl Acetate	1.08447	1.07418	1.07418	0.010	-0.94922	20.00000	Averaged	
20 Cis-1,2-Dichloroethene	0.45973	0.45253	0.45253	0.010	-1.56607	20.00000	Averaged	
22 2,2-Dichloropropane	0.66689	0.66058	0.66058	0.010	-0.94731	20.00000	Averaged	
23 Bromochloromethane	0.20080	0.19329	0.19329	0.050	-3.74036	20.00000	Averaged	
24 Chloroform	0.73098	0.70164	0.70164	0.100	-4.01452	20.00000	Averaged	
25 Carbon Tetrachloride	0.34268	0.33105	0.33105	0.100	-3.39355	20.00000	Averaged	
$ 27 Dibromofluoromethane	0.48143	0.45246	0.45246	0.100	-6.01838	20.00000	Averaged	
26 1,1,1-Trichloroethane	0.66964	0.64522	0.64522	0.100	-3.64686	20.00000	Averaged	
28 1,1-Dichloropropene	0.39455	0.39264	0.39264	0.010	-0.48308	20.00000	Averaged	
29 2-Butanone	0.05752	0.05543	0.05543	0.001	-3.63855	20.00000	Averaged	
30 Benzene	1.08732	1.09916	1.09916	0.100	1.08887	20.00000	Averaged	
$ 32 d4-1,2-Dichloroethane	0.54709	0.54520	0.54520	0.010	-0.34560	20.00000	Averaged	
33 1,2-Dichloroethane	0.35278	0.33998	0.33998	0.100	-3.62728	20.00000	Averaged	
34 Trichloroethene	0.27466	0.27410	0.27410	0.100	-0.20158	20.00000	Averaged	
37 Dibromomethane	0.14984	0.14585	0.14585	0.010	-2.66308	20.00000	Averaged	
38 1,2-Dichloropropane	0.30852	0.30246	0.30246	0.100	-1.96551	20.00000	Averaged	
39 Bromodichloromethane	0.34158	0.33603	0.33603	0.100	-1.62443	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i
Lab File ID: cc0627.d
Analysis Type: SOIL
Lab Sample ID: CC0627
Method: /chem1/nt5.i/27JUN13.b/VO121012S.m

Injection Date: 27-JUN-2013 17:46
Init. Cal. Date(s): 27-JUN-2013 27-JUN-2013
Init. Cal. Times: 10:43 15:48
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
40 2-Chloroethyl Vinyl Ether	0.04803	0.05528	0.05528	0.000	15.08425	20.00000	Averaged
41 Cis 1,3-dichloropropene	0.42434	0.43023	0.43023	0.100	1.38758	20.00000	Averaged
$ 42 d8-Toluene	1.23938	1.23169	1.23169	0.010	-0.62071	20.00000	Averaged
43 Toluene	0.68784	0.68726	0.68726	0.100	-0.08430	20.00000	Averaged
44 Tetrachloroethene	0.29450	0.29902	0.29902	0.100	1.53409	20.00000	Averaged
45 4-Methyl-2-Pentanone	0.13015	0.13089	0.13089	0.000	0.56561	20.00000	Averaged
46 Trans 1,3-Dichloropropene	0.38898	0.38843	0.38843	0.010	-0.13947	20.00000	Averaged
47 1,1,2-Trichloroethane	0.22422	0.21531	0.21531	0.100	-3.97499	20.00000	Averaged
48 Chlorodibromomethane	0.25816	0.25579	0.25579	0.100	-0.92103	20.00000	Averaged
49 1,3-Dichloropropane	0.41373	0.41443	0.41443	0.100	0.16785	20.00000	Averaged
50 1,2-Dibromoethane	0.21827	0.21600	0.21600	0.010	-1.04177	20.00000	Averaged
51 2-Hexanone	0.21570	0.22149	0.22149	0.010	2.68250	20.00000	Averaged
53 Chlorobenzene	0.71494	0.72063	0.72063	0.300	0.79583	20.00000	Averaged
54 Ethyl Benzene	1.21558	1.29769	1.29769	0.100	6.75525	20.00000	Averaged
55 1,1,1,2-Tetrachloroethane	0.25911	0.25735	0.25735	0.010	-0.67852	20.00000	Averaged
56 m,p-xylene	0.45633	0.48705	0.48705	0.100	6.73217	20.00000	Averaged
57 o-Xylene	0.45038	0.47267	0.47267	0.100	4.94885	20.00000	Averaged
58 Styrene	0.73800	0.79528	0.79528	0.100	7.76083	20.00000	Averaged
59 Bromoform	0.34727	0.33785	0.33785	0.100	-2.71319	20.00000	Averaged
60 Isopropyl Benzene	2.07395	2.30884	2.30884	0.010	11.32591	20.00000	Averaged
$ 62 4-Bromofluorobenzene	0.53215	0.53519	0.53519	0.200	0.56982	20.00000	Averaged
63 Bromobenzene	0.57028	0.56202	0.56202	0.010	-1.44747	20.00000	Averaged
64 N-Propyl Benzene	2.49849	2.71766	2.71766	0.010	8.77237	20.00000	Averaged
65 1,1,2,2-Tetrachloroethane	0.57475	0.55231	0.55231	0.300	-3.90303	20.00000	Averaged
66 2-Chloro Toluene	1.57481	1.66621	1.66621	0.010	5.80414	20.00000	Averaged
67 1,3,5-Trimethyl Benzene	1.78790	1.94433	1.94433	0.010	8.74921	20.00000	Averaged
68 1,2,3-Trichloropropane	0.17864	0.17381	0.17381	0.010	-2.70876	20.00000	Averaged
69 Trans-1,4-Dichloro 2-Butene	0.21671	0.20544	0.20544	0.001	-5.20071	20.00000	Averaged
70 4-Chloro Toluene	1.63919	1.73283	1.73283	0.010	5.71277	20.00000	Averaged
71 T-Butyl Benzene	1.58804	1.71903	1.71903	0.010	8.24846	20.00000	Averaged
72 1,2,4-Trimethylbenzene	1.74816	1.91368	1.91368	0.010	9.46850	20.00000	Averaged
73 S-Butyl Benzene	2.28322	2.51348	2.51348	0.010	10.08495	20.00000	Averaged
74 4-Isopropyl Toluene	1.84960	2.07991	2.07991	0.010	12.45191	20.00000	Averaged
75 1,3-Dichlorobenzene	1.04221	1.06131	1.06131	0.100	1.83303	20.00000	Averaged
77 1,4-Dichlorobenzene	1.07805	1.08294	1.08294	0.100	0.45326	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i
Lab File ID: cc0627.d
Analysis Type: SOIL
Lab Sample ID: CC0627
Method: /chem1/nt5.i/27JUN13.b/VO121012S.m

Injection Date: 27-JUN-2013 17:46
Init. Cal. Date(s): 27-JUN-2013 27-JUN-2013
Init. Cal. Times: 10:43 15:48
Quant Type: ISTD

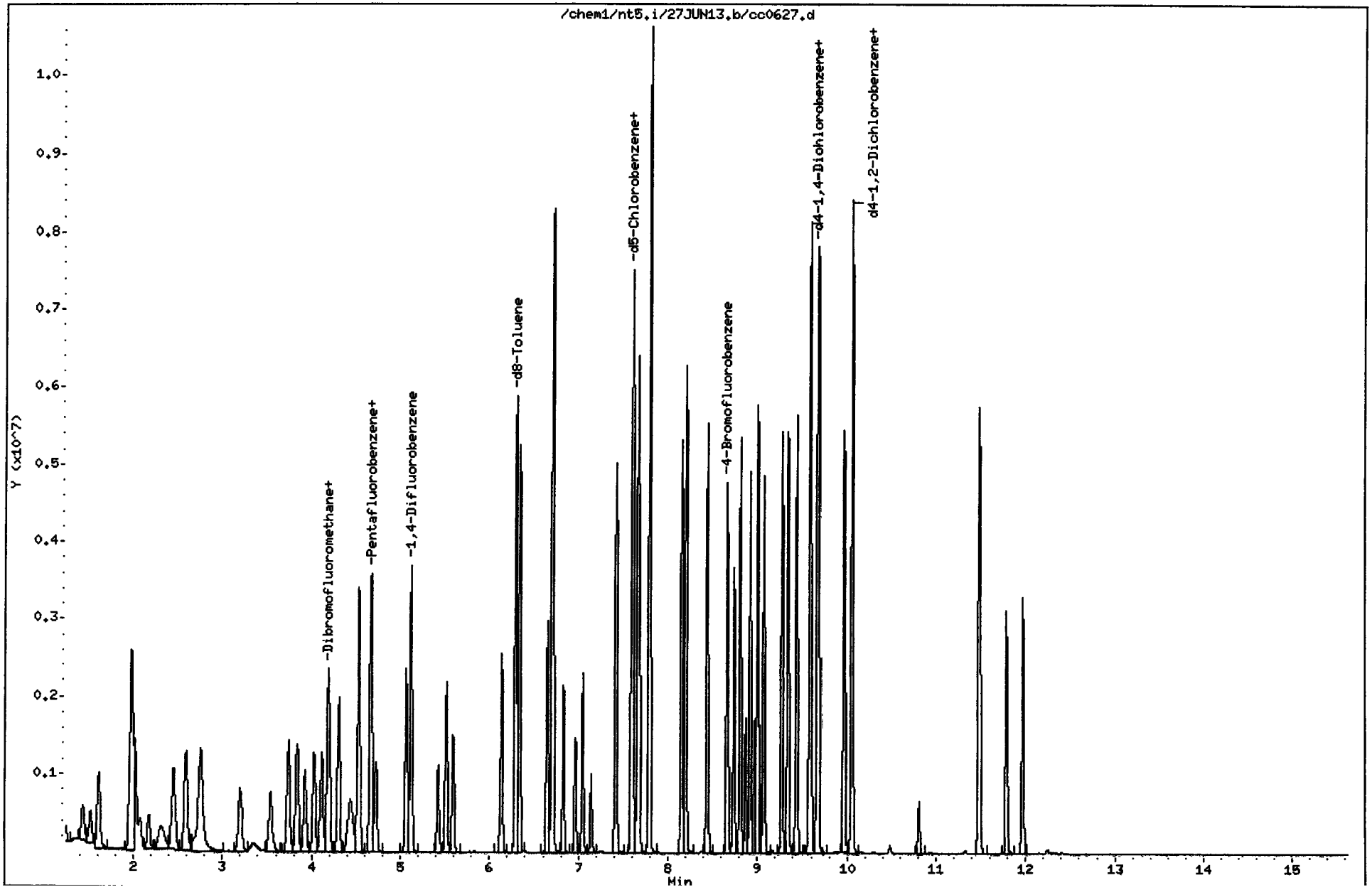
COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
78 N-Butyl Benzene	1.73566	1.96646	1.96646	0.010	13.29742	20.00000	Averaged
$ 79 d4-1,2-Dichlorobenzene	0.91197	0.90593	0.90593	0.010	-0.66308	20.00000	Averaged
80 1,2-Dichlorobenzene	1.01633	1.00289	1.00289	0.100	-1.32222	20.00000	Averaged
81 1,2-Dibromo 3-Chloropropane	0.11892	0.10717	0.10717	0.010	-9.87915	20.00000	Averaged
82 Hexachloro 1,3-Butadiene	0.48836	0.46742	0.46742	0.010	-4.28653	20.00000	Averaged
83 1,2,4-Trichlorobenzene	0.75875	0.74869	0.74869	0.010	-1.32596	20.00000	Averaged
84 Naphthalene	1.67455	1.53592	1.53592	0.010	-8.27815	20.00000	Averaged
85 1,2,3-Trichlorobenzene	0.75223	0.69717	0.69717	0.010	-7.31962	20.00000	Averaged

Data File: /chem1/nt5.i/27JUN13.b/cc0627.d
Date : 27-JUN-2013 17:46
Client ID: VSTD50
Sample Info: CC0627,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/lcs0627.d
Lab Smp Id: LCS0627 Client Smp ID: LCS0627
Inj Date : 27-JUN-2013 19:30
Operator : PB Inst ID: nt5.i
Smp Info : LCS0627,5,5,0
Misc Info : 13-13659
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 11:09 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	1.045	1.057	(0.224)	482507	56.3312	56.331
2 Chloromethane	50	1.164	1.176	(0.250)	902574	51.3658	51.366(QM)
3 Vinyl Chloride	62	1.215	1.226	(0.260)	907169	57.3252	57.325
4 Bromomethane	94	1.419	1.436	(0.304)	450794	49.7013	49.701
5 Chloroethane	64	1.504	1.521	(0.322)	545946	56.7069	56.707
6 Trichlorofluoromethane	101	1.600	1.611	(0.343)	977177	55.7092	55.709
7 1,1-Dichloroethene	96	1.962	1.973	(0.420)	606384	58.2402	58.240
8 Carbon Disulfide	76	1.962	1.979	(0.420)	2159709	57.9245	57.924
9 112Trichloro122Trifluoroethane	101	2.001	2.018	(0.429)	594213	58.9090	58.909
10 Iodomethane	142	2.058	2.075	(0.441)	593520	71.0929	71.093(R)
11 Bromoethane	108	2.154	2.171	(0.462)	374385	53.8310	53.831
12 Acrolein	56	2.273	2.313	(0.487)	531310	330.066	330.07
13 Methylene Chloride	84	2.431	2.454	(0.521)	508565	39.3370	39.337(Q)
14 Acetone	43	2.618	2.742	(0.561)	559307	228.301	228.30(QM)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.567	2.590	(0.550)	528846	51.0855	51.086
	16 Methyl tert butyl ether	73	2.743	2.754	(0.588)	1634636	51.2234	51.223
	17 1,1-Dichloroethane	63	3.178	3.201	(0.681)	1345746	56.8503	56.850
	18 Acrylonitrile	53	3.308	3.348	(0.709)	276966	52.1054	52.105
	19 Vinyl Acetate	43	3.529	3.540	(0.756)	1648871	51.6046	51.605
	20 Cis-1,2-Dichloroethene	96	3.727	3.744	(0.799)	723734	53.4317	53.432
	22 2,2-Dichloropropane	77	3.823	3.840	(0.819)	1092096	55.5806	55.581
	23 Bromochloromethane	128	3.919	3.930	(0.840)	306005	51.7224	51.722
	24 Chloroform	83	4.015	4.027	(0.861)	1159782	53.8504	53.850
	25 Carbon Tetrachloride	117	4.106	4.117	(0.803)	940256	56.2197	56.220
$	27 Dibromofluoromethane	111	4.185	4.196	(0.897)	732677	51.6532	51.653
	26 1,1,1-Trichloroethane	97	4.174	4.185	(0.895)	1088180	55.1543	55.154
	28 1,1-Dichloropropene	75	4.293	4.304	(0.840)	1043526	54.1929	54.193
	29 2-Butanone	72	4.400	4.434	(0.943)	401170	236.716	236.72
	30 Benzene	78	4.524	4.530	(0.885)	2924508	55.1104	55.110
*	31 Pentafluorobenzene	168	4.666	4.671	(1.000)	1473161	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.666	(0.998)	826006	51.2439	51.244
	33 1,2-Dichloroethane	62	4.717	4.728	(0.923)	884357	51.3642	51.364
	34 Trichloroethene	95	5.062	5.067	(0.990)	731638	54.5811	54.581
*	35 1,4-Difluorobenzene	114	5.113	5.118	(1.000)	2440245	50.0000	
	37 Dibromomethane	93	5.418	5.424	(1.060)	374957	51.2730	51.273
	38 1,2-Dichloropropane	63	5.509	5.514	(1.077)	799783	53.1152	53.115
	39 Bromodichloromethane	83	5.588	5.588	(1.093)	884832	53.0763	53.076
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.125	(1.197)	141166	60.2157	60.216
	41 Cis 1,3-dichloropropene	75	6.131	6.137	(1.199)	1128039	54.4681	54.468
$	42 d8-Toluene	98	6.289	6.295	(1.230)	3012917	49.8102	49.810
	43 Toluene	92	6.335	6.335	(1.239)	1830999	54.5427	54.543
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	776678	56.4654	56.465
	45 4-Methyl-2-Pentanone	58	6.702	6.708	(1.311)	1606255	252.873	252.87
	46 Trans 1,3-Dichloropropene	75	6.697	6.702	(1.310)	1009179	53.1596	53.160
	47 1,1,2-Trichloroethane	97	6.827	6.827	(1.335)	556506	50.8540	50.854
	48 Chlorodibromomethane	129	6.963	6.963	(0.917)	637267	52.8515	52.851
	49 1,3-Dichloropropane	76	7.047	7.047	(0.928)	1024769	53.0318	53.032
	50 1,2-Dibromoethane	107	7.138	7.144	(1.396)	548646	51.5033	51.503
	51 2-Hexanone	43	7.415	7.421	(0.976)	2580881	256.179	256.18
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2335287	50.0000	
	53 Chlorobenzene	112	7.607	7.613	(1.001)	1827910	54.7412	54.741
	54 Ethyl Benzene	91	7.658	7.664	(1.008)	3322531	58.5216	58.522
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	649483	53.6672	53.667
	56 m,p-xylene	106	7.794	7.794	(1.026)	2479986	116.359	116.36
	57 o-Xylene	106	8.156	8.156	(1.074)	1205697	57.3178	57.318
	58 Styrene	104	8.201	8.201	(1.080)	2014715	58.4500	58.450
	59 Bromoform	173	8.196	8.196	(0.847)	435781	51.4336	51.434
	60 Isopropyl Benzene	105	8.445	8.445	(0.873)	3121720	61.6941	61.694
$	62 4-Bromofluorobenzene	95	8.665	8.665	(1.141)	1239650	49.8761	49.876
	63 Bromobenzene	156	8.739	8.739	(0.903)	751862	54.0383	54.038
	64 N-Propyl Benzene	91	8.812	8.812	(0.911)	3710799	60.8749	60.875

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	708136	50.4995	50.500
66	2-Chloro Toluene	91	8.920	8.920	(0.922)	2261655	58.8636	58.864
67	1,3,5-Trimethyl Benzene	105	9.005	8.999	(0.931)	2641738	60.5612	60.561
68	1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	217141	49.8196	49.820
69	Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	268008	50.6888	50.689
70	4-Chloro Toluene	91	9.073	9.073	(0.938)	2358198	58.9656	58.966
71	T-Butyl Benzene	119	9.276	9.276	(0.959)	2333920	60.2383	60.238
72	1,2,4-Trimethylbenzene	105	9.344	9.338	(0.966)	2596908	60.8869	60.887
73	S-Butyl Benzene	105	9.440	9.440	(0.976)	3414109	61.2884	61.288
74	4-Isopropyl Toluene	119	9.587	9.582	(0.991)	2849357	63.1419	63.142
75	1,3-Dichlorobenzene	146	9.599	9.599	(0.992)	1437760	56.5432	56.543
* 76	d4-1,4-Dichlorobenzene	152	9.672	9.672	(1.000)	1219894	50.0000	
77	1,4-Dichlorobenzene	146	9.684	9.683	(1.001)	1460287	55.5196	55.520
78	N-Butyl Benzene	91	9.972	9.966	(1.031)	2691791	63.5658	63.566
$ 79	d4-1,2-Dichlorobenzene	152	10.057	10.051	(1.040)	1114892	50.1070	50.107
80	1,2-Dichlorobenzene	146	10.063	10.062	(1.040)	1348829	54.3965	54.397
81	1,2-Dibromo 3-Chloropropane	75	10.815	10.809	(1.118)	135119	46.5690	46.569
82	Hexachloro 1,3-Butadiene	225	11.499	11.488	(1.189)	646543	54.2637	54.264
83	1,2,4-Trichlorobenzene	180	11.488	11.477	(1.188)	1012541	54.6970	54.697
84	Naphthalene	128	11.799	11.788	(1.220)	2001370	48.9867	48.987
85	1,2,3-Trichlorobenzene	180	11.980	11.969	(1.239)	931479	50.7541	50.754

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: lcs0627.d
Lab Smp Id: LCS0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13659

Calibration Date: 27-JUN-2013
Calibration Time: 17:46
Client Smp ID: LCS0627
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1473161	-8.70
35 1,4-Difluorobenze	2656709	1328354	5313418	2440245	-8.15
52 d5-Chlorobenzene	2557235	1278618	5114470	2335287	-8.68
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1219894	-11.24

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	-0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Client SDG: 27JUN13
Sample Matrix: SOLID
Fraction: VOA
Lab Smp Id: LCS0627
Client Smp ID: LCS0627
Level: LOW
Operator: PB
Data Type: MS DATA
SampleType: LCS
SpikeList File: all.spk
Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13659

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1 Dichlorodifluorome	50.000	56.331	112.66	53-148
2 Chloromethane	50.000	51.366	102.73	64-125
3 Vinyl Chloride	50.000	57.325	114.65	63-137
4 Bromomethane	50.000	49.701	99.40	57-136
5 Chloroethane	50.000	56.707	113.41	64-131
6 Trichlorofluoromet	50.000	55.709	111.42	69-132
12 Acrolein	250.00	330.07	132.03	54-137
9 112Trichloro122Tri	50.000	58.909	117.82	74-130
14 Acetone	250.00	228.30	91.32	60-131
7 1,1-Dichloroethene	50.000	58.240	116.48	75-126
11 Bromoethane	50.000	53.831	107.66	76-126
10 Iodomethane	50.000	71.093	142.19*	65-139
13 Methylene Chloride	50.000	39.337	78.67	70-123
8 Carbon Disulfide	50.000	57.924	115.85	71-129
18 Acrylonitrile	50.000	52.105	104.21	67-125
15 Trans-1,2-Dichloro	50.000	51.086	102.17	80-120
19 Vinyl Acetate	50.000	51.605	103.21	60-136
17 1,1-Dichloroethane	50.000	56.850	113.70	80-120
29 2-Butanone	250.00	236.72	94.69	70-120
22 2,2-Dichloropropan	50.000	55.581	111.16	74-123
20 Cis-1,2-Dichloroet	50.000	53.432	106.86	80-120
24 Chloroform	50.000	53.850	107.70	80-120
23 Bromochloromethane	50.000	51.722	103.44	80-120
26 1,1,1-Trichloroeth	50.000	55.154	110.31	77-121
28 1,1-Dichloropropen	50.000	54.193	108.39	80-120
25 Carbon Tetrachlori	50.000	56.220	112.44	77-122
33 1,2-Dichloroethane	50.000	51.364	102.73	76-120
30 Benzene	50.000	55.110	110.22	80-120
34 Trichloroethene	50.000	54.581	109.16	80-120
38 1,2-Dichloropropan	50.000	53.115	106.23	80-120
39 Bromodichlorometha	50.000	53.076	106.15	77-121
37 Dibromomethane	50.000	51.273	102.55	80-120
40 2-Chloroethyl Viny	50.000	60.216	120.43	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	252.87	101.15	67-120
41 Cis 1,3-dichloropr	50.000	54.468	108.94	74-120
43 Toluene	50.000	54.543	109.09	80-120
46 Trans 1,3-Dichloro	50.000	53.160	106.32	65-120
51 2-Hexanone	250.00	256.18	102.47	65-130
47 1,1,2-Trichloroeth	50.000	50.854	101.71	80-120
49 1,3-Dichloropropan	50.000	53.032	106.06	80-120
44 Tetrachloroethene	50.000	56.465	112.93	80-121
48 Chlorodibromometha	50.000	52.851	105.70	64-120
50 1,2-Dibromoethane	50.000	51.503	103.01	75-120
53 Chlorobenzene	50.000	54.741	109.48	80-120
55 1,1,1,2-Tetrachlor	50.000	53.667	107.33	69-121
54 Ethyl Benzene	50.000	58.522	117.04	80-127
56 m,p-xylene	100.00	116.36	116.36	80-125
57 o-Xylene	50.000	57.318	114.64	78-120
58 Styrene	50.000	58.450	116.90	80-123
60 Isopropyl Benzene	50.000	61.694	123.39	80-127
59 Bromoform	50.000	51.434	102.87	60-120
65 1,1,2,2-Tetrachlor	50.000	50.500	101.00	74-120
68 1,2,3-Trichloropro	50.000	49.820	99.64	72-121
69 Trans-1,4-Dichloro	50.000	50.689	101.38	65-126
64 N-Propyl Benzene	50.000	60.875	121.75	80-132
63 Bromobenzene	50.000	54.038	108.08	80-120
67 1,3,5-Trimethyl Be	50.000	60.561	121.12	80-125
66 2-Chloro Toluene	50.000	58.864	117.73	80-125
70 4-Chloro Toluene	50.000	58.966	117.93	80-127
71 T-Butyl Benzene	50.000	60.238	120.48	87-122
72 1,2,4-Trimethylben	50.000	60.887	121.77	80-126
73 S-Butyl Benzene	50.000	61.288	122.58	80-134
74 4-Isopropyl Toluen	50.000	63.142	126.28	80-131
75 1,3-Dichlorobenzen	50.000	56.543	113.09	80-120
77 1,4-Dichlorobenzen	50.000	55.520	111.04	80-120
78 N-Butyl Benzene	50.000	63.566	127.13	80-138
80 1,2-Dichlorobenzen	50.000	54.397	108.79	80-120
81 1,2-Dibromo 3-Chlo	50.000	46.569	93.14	59-120
83 1,2,4-Trichloroben	50.000	54.697	109.39	78-130
82 Hexachloro 1,3-But	50.000	54.264	108.53	76-129
84 Naphthalene	50.000	48.987	97.97	66-120
85 1,2,3-Trichloroben	50.000	50.754	101.51	73-123

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	51.653	103.31	70-130

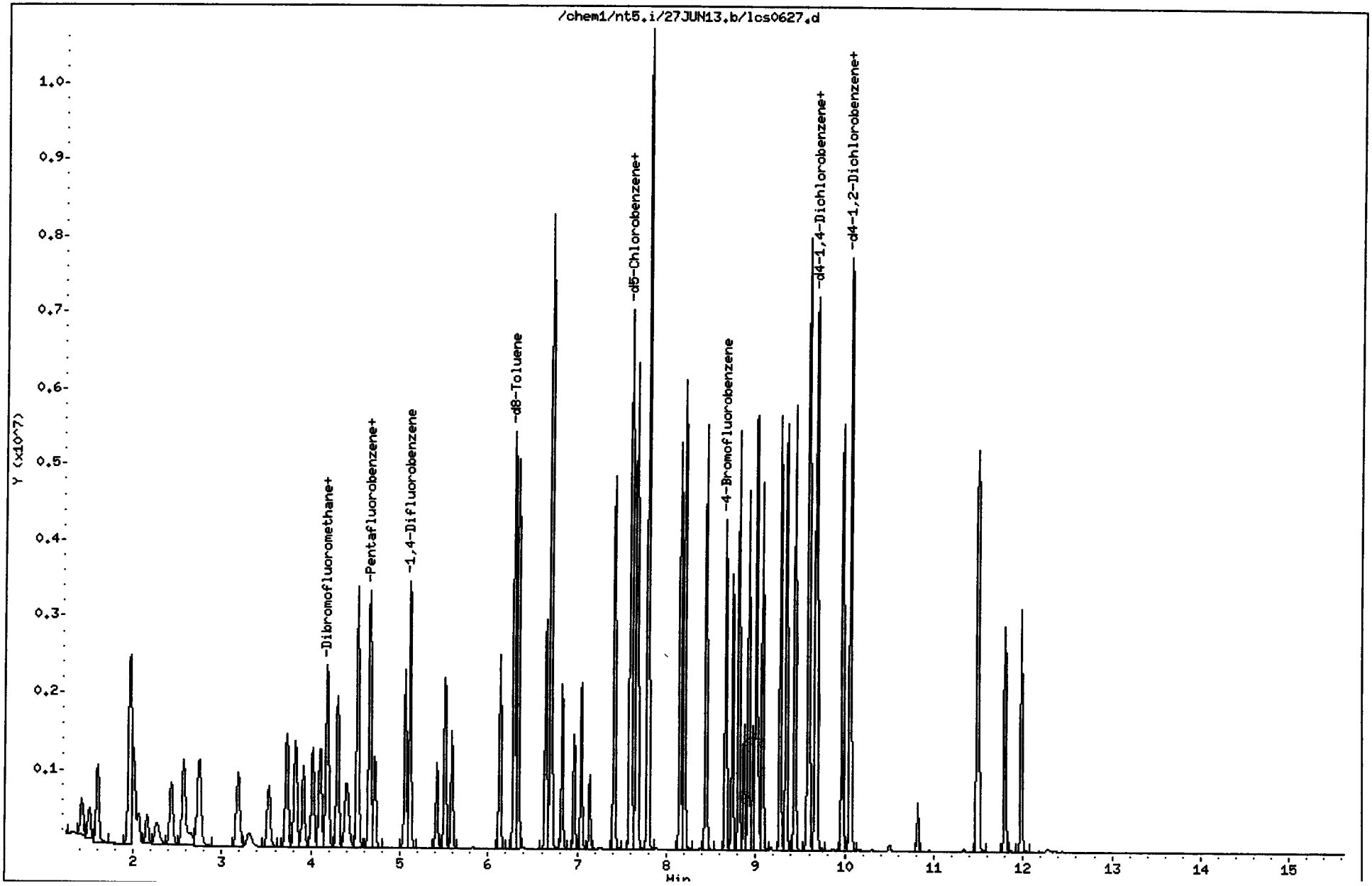
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	51.244	102.49	80-149
$ 42 d8-Toluene	50.000	49.810	99.62	77-120
$ 62 4-Bromofluorobenze	50.000	49.876	99.75	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.107	100.21	80-120

Data File: /chem1/nt5.i/27JUN13.b/lcs0627.d
Date : 27-JUN-2013 19:30
Client ID: LCS0627
Sample Info: LCS0627,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - lcs0627.d

Lab ID: LCS0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/lcs0627a.d
Lab Smp Id: LCS0627 Client Smp ID: LCC0627
Inj Date : 27-JUN-2013 20:05
Operator : PB Inst ID: nt5.i
Smp Info : LCS0627,5,5,0
Misc Info : 13-13659
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 11:09 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	1.040	1.057	(0.223)	484805	53.3891	53.389
2 Chloromethane	50	1.159	1.176	(0.249)	945338	50.7480	50.748(QM)
3 Vinyl Chloride	62	1.210	1.226	(0.260)	908552	54.1562	54.156
4 Bromomethane	94	1.413	1.436	(0.303)	453707	47.1852	47.185
5 Chloroethane	64	1.504	1.521	(0.323)	534981	52.4162	52.416
6 Trichlorofluoromethane	101	1.594	1.611	(0.342)	952850	51.2412	51.241
7 1,1-Dichloroethene	96	1.951	1.973	(0.419)	574708	52.0670	52.067
8 Carbon Disulfide	76	1.956	1.979	(0.420)	2063698	52.2100	52.210
9 112Trichloro122Trifluoroethane	101	1.996	2.018	(0.428)	553099	51.7229	51.723
10 Iodomethane	142	2.052	2.075	(0.440)	557186	62.9552	62.955
11 Bromoethane	108	2.149	2.171	(0.461)	356491	48.3508	48.351
12 Acrolein	56	2.262	2.313	(0.485)	522326	306.081	306.08
13 Methylene Chloride	84	2.426	2.454	(0.521)	504365	36.7994	36.799(Q)
14 Acetone	43	2.737	2.742	(0.587)	431152	166.008	166.01(Q)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.562	2.590	(0.550)	520338	47.4127	47.413
	16 Methyl tert butyl ether	73	2.737	2.754	(0.587)	1756140	51.9096	51.910
	17 1,1-Dichloroethane	63	3.178	3.201	(0.682)	1367379	54.4877	54.488
	18 Acrylonitrile	53	3.297	3.348	(0.707)	294196	52.2076	52.208
	19 Vinyl Acetate	43	3.523	3.540	(0.756)	1704730	50.3267	50.327
	20 Cis-1,2-Dichloroethene	96	3.727	3.744	(0.800)	732674	51.0236	51.024
	22 2,2-Dichloropropane	77	3.823	3.840	(0.820)	1068336	51.2874	51.287
	23 Bromochloromethane	128	3.914	3.930	(0.840)	314778	50.1875	50.187
	24 Chloroform	83	4.015	4.027	(0.862)	1175620	51.4897	51.490
	25 Carbon Tetrachloride	117	4.100	4.117	(0.802)	914148	51.6149	51.615
$	27 Dibromofluoromethane	111	4.185	4.196	(0.898)	768140	51.0818	51.082
	26 1,1,1-Trichloroethane	97	4.174	4.185	(0.896)	1073877	51.3421	51.342
	28 1,1-Dichloropropene	75	4.293	4.304	(0.840)	1014196	49.7366	49.737
	29 2-Butanone	72	4.389	4.434	(0.942)	418845	233.127	233.13
	30 Benzene	78	4.519	4.530	(0.884)	2903110	51.6607	51.661
*	31 Pentafluorobenzene	168	4.660	4.671	(1.000)	1561743	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.666	(0.999)	857853	50.2011	50.201
	33 1,2-Dichloroethane	62	4.711	4.728	(0.921)	902034	49.4733	49.473
	34 Trichloroethene	95	5.056	5.067	(0.989)	716763	50.4937	50.494
*	35 1,4-Difluorobenzene	114	5.113	5.118	(1.000)	2584151	50.0000	
	37 Dibromomethane	93	5.413	5.424	(1.059)	383933	49.5768	49.577
	38 1,2-Dichloropropane	63	5.509	5.514	(1.077)	802102	50.3028	50.303
	39 Bromodichloromethane	83	5.582	5.588	(1.092)	898249	50.8806	50.881
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.125	(1.197)	147867	59.5616	59.562
	41 Cis 1,3-dichloropropene	75	6.131	6.137	(1.199)	1145024	52.2094	52.209
$	42 d8-Toluene	98	6.289	6.295	(1.230)	3189604	49.7947	49.795
	43 Toluene	92	6.329	6.335	(1.238)	1811820	50.9658	50.966
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	751116	51.1910	51.191
	45 4-Methyl-2-Pentanone	58	6.702	6.708	(1.311)	1660158	246.804	246.80
	46 Trans 1,3-Dichloropropene	75	6.697	6.702	(1.310)	1034833	51.4753	51.475
	47 1,1,2-Trichloroethane	97	6.827	6.827	(1.335)	568047	49.0179	49.018
	48 Chlorodibromomethane	129	6.963	6.963	(0.917)	651080	50.6192	50.619
	49 1,3-Dichloropropane	76	7.048	7.047	(0.928)	1051287	51.0007	51.001
	50 1,2-Dibromoethane	107	7.138	7.144	(1.396)	561306	49.7574	49.757
	51 2-Hexanone	43	7.415	7.421	(0.976)	2664562	247.940	247.94
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2491123	50.0000	
	53 Chlorobenzene	112	7.608	7.613	(1.001)	1819546	51.0820	51.082
	54 Ethyl Benzene	91	7.658	7.664	(1.008)	3264248	53.8984	53.898
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	657714	50.9476	50.948
	56 m,p-xylene	106	7.794	7.794	(1.026)	2451104	107.810	107.81
	57 o-Xylene	106	8.156	8.156	(1.074)	1200282	53.4909	53.491
	58 Styrene	104	8.202	8.201	(1.080)	2006436	54.5684	54.568
	59 Bromoform	173	8.196	8.196	(0.847)	448812	48.1675	48.167
	60 Isopropyl Benzene	105	8.445	8.445	(0.873)	3076335	55.2834	55.283
$	62 4-Bromofluorobenzene	95	8.665	8.665	(1.141)	1339107	50.5072	50.507
	63 Bromobenzene	156	8.739	8.739	(0.903)	758060	49.5425	49.543
	64 N-Propyl Benzene	91	8.812	8.812	(0.911)	3619808	53.9968	53.997

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
65 1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	731812	47.4549	47.455
66 2-Chloro Toluene	91	8.920	8.920	(0.922)	2226480	52.6926	52.693
67 1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.930)	2605455	54.3124	54.312
68 1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	227663	47.4965	47.497
69 Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	274488	47.2061	47.206
70 4-Chloro Toluene	91	9.073	9.073	(0.938)	2318751	52.7210	52.721
71 T-Butyl Benzene	119	9.276	9.276	(0.959)	2307801	54.1622	54.162
72 1,2,4-Trimethylbenzene	105	9.344	9.338	(0.966)	2571857	54.8309	54.831
73 S-Butyl Benzene	105	9.440	9.440	(0.976)	3350948	54.6990	54.699
74 4-Isopropyl Toluene	119	9.587	9.582	(0.991)	2776478	55.9469	55.947
75 1,3-Dichlorobenzene	146	9.599	9.599	(0.992)	1424160	50.9289	50.929
* 76 d4-1,4-Dichlorobenzene	152	9.672	9.672	(1.000)	1341563	50.0000	
77 1,4-Dichlorobenzene	146	9.684	9.683	(1.001)	1459439	50.4551	50.455
78 N-Butyl Benzene	91	9.972	9.966	(1.031)	2611368	56.0740	56.074
$ 79 d4-1,2-Dichlorobenzene	152	10.057	10.051	(1.040)	1209651	49.4353	49.435
80 1,2-Dichlorobenzene	146	10.063	10.062	(1.040)	1354693	49.6782	49.678
81 1,2-Dibromo 3-Chloropropane	75	10.815	10.809	(1.118)	146908	46.0402	46.040
82 Hexachloro 1,3-Butadiene	225	11.499	11.488	(1.189)	643989	49.1475	49.147
83 1,2,4-Trichlorobenzene	180	11.483	11.477	(1.187)	1015887	49.9008	49.901
84 Naphthalene	128	11.799	11.788	(1.220)	2137472	47.5732	47.573
85 1,2,3-Trichlorobenzene	180	11.980	11.969	(1.239)	958717	47.5006	47.501

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: lcs0627a.d
Lab Smp Id: LCS0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13659

Calibration Date: 27-JUN-2013
Calibration Time: 17:46
Client Smp ID: LCC0627
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1561743	-3.21
35 1,4-Difluorobenze	2656709	1328354	5313418	2584151	-2.73
52 d5-Chlorobenzene	2557235	1278618	5114470	2491123	-2.59
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1341563	-2.39

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.24
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 27JUN13
Sample Matrix: SOLID Fraction: VOA
Lab Smp Id: LCS0627 Client Smp ID: LCC0627
Level: LOW Operator: PB
Data Type: MS DATA SampleType: LCSD
SpikeList File: all.spk Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13659

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1 Dichlorodifluorome	50.000	53.389	106.78	53-148
2 Chloromethane	50.000	50.748	101.50	64-125
3 Vinyl Chloride	50.000	54.156	108.31	63-137
4 Bromomethane	50.000	47.185	94.37	57-136
5 Chloroethane	50.000	52.416	104.83	64-131
6 Trichlorofluoromet	50.000	51.241	102.48	69-132
12 Acrolein	250.00	306.08	122.43	54-137
9 112Trichloro122Tri	50.000	51.723	103.45	74-130
14 Acetone	250.00	166.01	66.40	60-131
7 1,1-Dichloroethene	50.000	52.067	104.13	75-126
11 Bromoethane	50.000	48.351	96.70	76-126
10 Iodomethane	50.000	62.955	125.91	65-139
13 Methylene Chloride	50.000	36.799	73.60	70-123
8 Carbon Disulfide	50.000	52.210	104.42	71-129
18 Acrylonitrile	50.000	52.208	104.42	67-125
15 Trans-1,2-Dichloro	50.000	47.413	94.83	80-120
19 Vinyl Acetate	50.000	50.327	100.65	60-136
17 1,1-Dichloroethane	50.000	54.488	108.98	80-120
29 2-Butanone	250.00	233.13	93.25	70-120
22 2,2-Dichloropropan	50.000	51.287	102.57	74-123
20 Cis-1,2-Dichloroet	50.000	51.024	102.05	80-120
24 Chloroform	50.000	51.490	102.98	80-120
23 Bromochloromethane	50.000	50.187	100.37	80-120
26 1,1,1-Trichloroeth	50.000	51.342	102.68	77-121
28 1,1-Dichloropropen	50.000	49.737	99.47	80-120
25 Carbon Tetrachlori	50.000	51.615	103.23	77-122
33 1,2-Dichloroethane	50.000	49.473	98.95	76-120
30 Benzene	50.000	51.661	103.32	80-120
34 Trichloroethene	50.000	50.494	100.99	80-120
38 1,2-Dichloropropan	50.000	50.303	100.61	80-120
39 Bromodichlorometha	50.000	50.881	101.76	77-121
37 Dibromomethane	50.000	49.577	99.15	80-120
40 2-Chloroethyl Viny	50.000	59.562	119.12	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	246.80	98.72	67-120
41 Cis 1,3-dichloropr	50.000	52.209	104.42	74-120
43 Toluene	50.000	50.966	101.93	80-120
46 Trans 1,3-Dichloro	50.000	51.475	102.95	65-120
51 2-Hexanone	250.00	247.94	99.18	65-130
47 1,1,2-Trichloroeth	50.000	49.018	98.04	80-120
49 1,3-Dichloropropan	50.000	51.001	102.00	80-120
44 Tetrachloroethene	50.000	51.191	102.38	80-121
48 Chlorodibromometha	50.000	50.619	101.24	64-120
50 1,2-Dibromoethane	50.000	49.757	99.51	75-120
53 Chlorobenzene	50.000	51.082	102.16	80-120
55 1,1,1,2-Tetrachlor	50.000	50.948	101.90	69-121
54 Ethyl Benzene	50.000	53.898	107.80	80-127
56 m,p-xylene	100.00	107.81	107.81	80-125
57 o-Xylene	50.000	53.491	106.98	78-120
58 Styrene	50.000	54.568	109.14	80-123
60 Isopropyl Benzene	50.000	55.283	110.57	80-127
59 Bromoform	50.000	48.167	96.33	60-120
65 1,1,2,2-Tetrachlor	50.000	47.455	94.91	74-120
68 1,2,3-Trichloropro	50.000	47.497	94.99	72-121
69 Trans-1,4-Dichloro	50.000	47.206	94.41	65-126
64 N-Propyl Benzene	50.000	53.997	107.99	80-132
63 Bromobenzene	50.000	49.543	99.09	80-120
67 1,3,5-Trimethyl Be	50.000	54.312	108.62	80-125
66 2-Chloro Toluene	50.000	52.693	105.39	80-125
70 4-Chloro Toluene	50.000	52.721	105.44	80-127
71 T-Butyl Benzene	50.000	54.162	108.32	87-122
72 1,2,4-Trimethylben	50.000	54.831	109.66	80-126
73 S-Butyl Benzene	50.000	54.699	109.40	80-134
74 4-Isopropyl Toluen	50.000	55.947	111.89	80-131
75 1,3-Dichlorobenzen	50.000	50.929	101.86	80-120
77 1,4-Dichlorobenzen	50.000	50.455	100.91	80-120
78 N-Butyl Benzene	50.000	56.074	112.15	80-138
80 1,2-Dichlorobenzen	50.000	49.678	99.36	80-120
81 1,2-Dibromo 3-Chlo	50.000	46.040	92.08	59-120
83 1,2,4-Trichloroben	50.000	49.901	99.80	78-130
82 Hexachloro 1,3-But	50.000	49.147	98.29	76-129
84 Naphthalene	50.000	47.573	95.15	66-120
85 1,2,3-Trichloroben	50.000	47.501	95.00	73-123

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	51.082	102.16	70-130

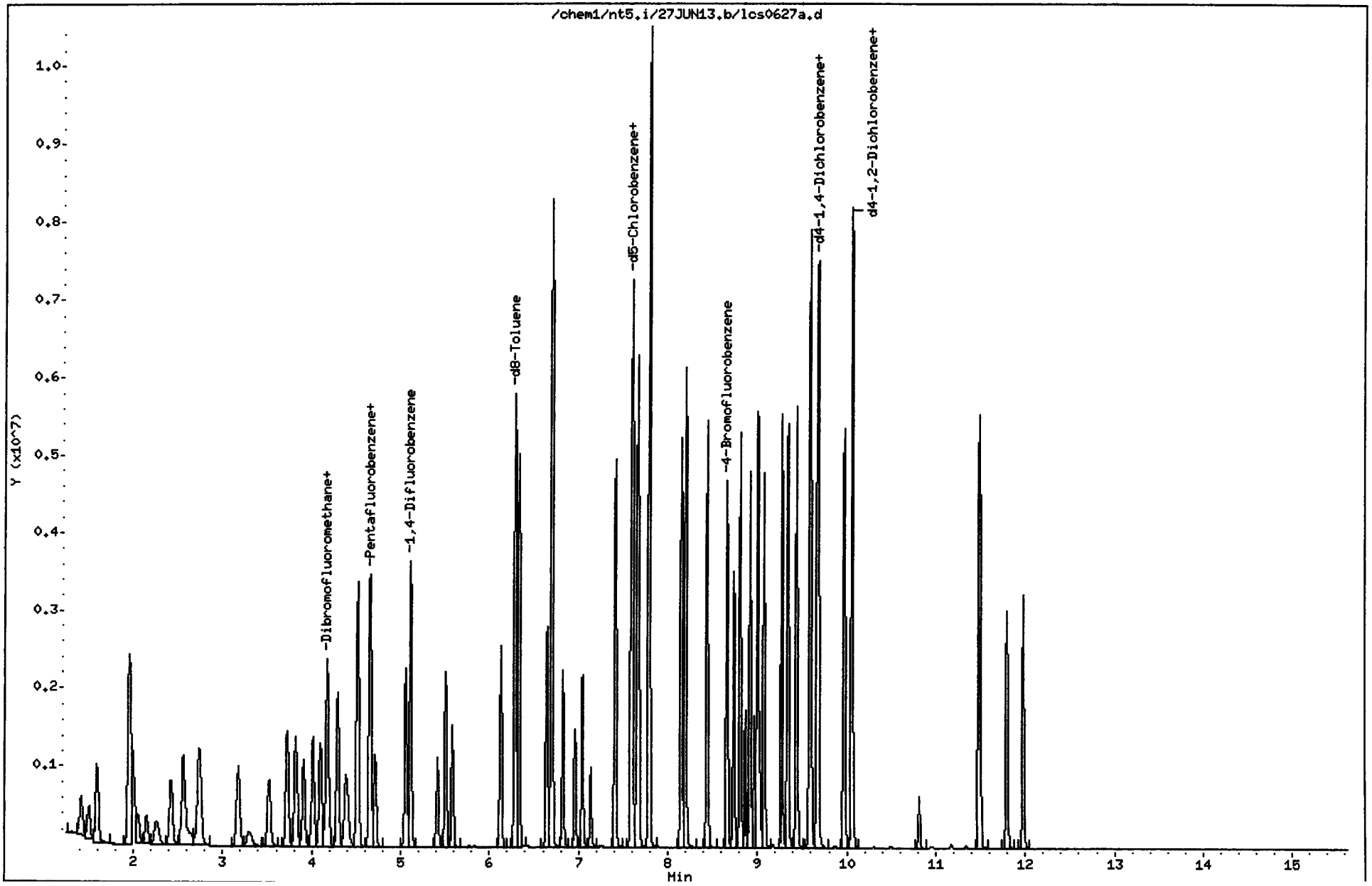
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	50.201	100.40	80-149
$ 42 d8-Toluene	50.000	49.795	99.59	77-120
$ 62 4-Bromofluorobenze	50.000	50.507	101.01	80-120
$ 79 d4-1,2-Dichloroben	50.000	49.435	98.87	80-120

Data File: /chem1/nt5.i/27JUN13.b/lcs0627a.d
Date : 27-JUN-2013 20:05
Client ID: LCC0627
Sample Info: LCS0627,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - lcs0627a.d

Lab ID: LCS0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/mb0627.d
Lab Smp Id: MB0627 Client Smp ID: MB0627
Inj Date : 27-JUN-2013 20:53
Operator : PB Inst ID: nt5.i
Smp Info : MB0627,5,5,0
Misc Info : 13-13659
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 11:09 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
1	Dichlorodifluoromethane	85	Compound Not Detected.					
2	Chloromethane	50	Compound Not Detected.					
3	Vinyl Chloride	62	Compound Not Detected.					
4	Bromomethane	94	Compound Not Detected.					
5	Chloroethane	64	Compound Not Detected.					
6	Trichlorofluoromethane	101	Compound Not Detected.					
7	1,1-Dichloroethene	96	Compound Not Detected.					
8	Carbon Disulfide	76	Compound Not Detected.					
9	112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10	Iodomethane	142	Compound Not Detected.					
11	Bromoethane	108	Compound Not Detected.					
12	Acrolein	56	Compound Not Detected.					
13	Methylene Chloride	84	2.454	2.454	(0.525)	44282	3.30220	3.302
14	Acetone	43	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
15 Trans-1,2-Dichloroethene	96	Compound Not Detected.					
16 Methyl tert butyl ether	73	Compound Not Detected.					
17 1,1-Dichloroethane	63	Compound Not Detected.					
18 Acrylonitrile	53	Compound Not Detected.					
19 Vinyl Acetate	43	Compound Not Detected.					
20 Cis-1,2-Dichloroethene	96	Compound Not Detected.					
22 2,2-Dichloropropane	77	Compound Not Detected.					
23 Bromochloromethane	128	Compound Not Detected.					
24 Chloroform	83	Compound Not Detected.					
25 Carbon Tetrachloride	117	Compound Not Detected.					
27 Dibromofluoromethane	111	4.196	4.196	(0.898)	755184	51.3286	51.329
26 1,1,1-Trichloroethane	97	Compound Not Detected.					
28 1,1-Dichloropropene	75	Compound Not Detected.					
29 2-Butanone	72	Compound Not Detected.					
30 Benzene	78	Compound Not Detected.					
31 Pentafluorobenzene	168	4.671	4.671	(1.000)	1528018	50.0000	
32 d4-1,2-Dichloroethane	65	4.666	4.666	(0.999)	856260	51.2138	51.214
33 1,2-Dichloroethane	62	Compound Not Detected.					
34 Trichloroethene	95	Compound Not Detected.					
35 1,4-Difluorobenzene	114	5.124	5.118	(1.000)	2529819	50.0000	
37 Dibromomethane	93	Compound Not Detected.					
38 1,2-Dichloropropane	63	Compound Not Detected.					
39 Bromodichloromethane	83	Compound Not Detected.					
40 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
41 Cis 1,3-dichloropropene	75	Compound Not Detected.					
42 d8-Toluene	98	6.295	6.295	(1.229)	3144627	50.1469	50.147
43 Toluene	92	Compound Not Detected.					
44 Tetrachloroethene	166	Compound Not Detected.					
45 4-Methyl-2-Pentanone	58	Compound Not Detected.					
46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
47 1,1,2-Trichloroethane	97	Compound Not Detected.					
48 Chlorodibromomethane	129	Compound Not Detected.					
49 1,3-Dichloropropane	76	Compound Not Detected.					
50 1,2-Dibromoethane	107	Compound Not Detected.					
51 2-Hexanone	43	Compound Not Detected.					
52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2494290	50.0000	
53 Chlorobenzene	112	Compound Not Detected.					
54 Ethyl Benzene	91	Compound Not Detected.					
55 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
56 m,p-xylene	106	Compound Not Detected.					
57 o-Xylene	106	Compound Not Detected.					
58 Styrene	104	Compound Not Detected.					
59 Bromoform	173	Compound Not Detected.					
60 Isopropyl Benzene	105	Compound Not Detected.					
62 4-Bromofluorobenzene	95	8.665	8.665	(1.141)	1325404	49.9269	49.927
63 Bromobenzene	156	Compound Not Detected.					
64 N-Propyl Benzene	91	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
66 2-Chloro Toluene	91	Compound Not Detected.					
67 1,3,5-Trimethyl Benzene	105	Compound Not Detected.					
68 1,2,3-Trichloropropane	110	Compound Not Detected.					
69 Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
70 4-Chloro Toluene	91	Compound Not Detected.					
71 T-Butyl Benzene	119	Compound Not Detected.					
72 1,2,4-Trimethylbenzene	105	Compound Not Detected.					
73 S-Butyl Benzene	105	Compound Not Detected.					
74 4-Isopropyl Toluene	119	Compound Not Detected.					
75 1,3-Dichlorobenzene	146	Compound Not Detected.					
76 d4-1,4-Dichlorobenzene	152	9.666	9.672	(1.000)	1323306	50.0000	
77 1,4-Dichlorobenzene	146	Compound Not Detected.					
78 N-Butyl Benzene	91	Compound Not Detected.					
79 d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1213917	50.2940	50.294
80 1,2-Dichlorobenzene	146	Compound Not Detected.					
81 1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82 Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83 1,2,4-Trichlorobenzene	180	11.477	11.477	(1.187)	14256	0.70992	0.7099
84 Naphthalene	128	11.788	11.788	(1.219)	62233	1.40421	1.404
85 1,2,3-Trichlorobenzene	180	11.969	11.969	(1.238)	15472	0.77715	0.7772

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: mb0627.d
Lab Smp Id: MB0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13659

Calibration Date: 27-JUN-2013
Calibration Time: 17:46
Client Smp ID: MB0627
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1528018	-5.30
35 1,4-Difluorobenze	2656709	1328354	5313418	2529819	-4.78
52 d5-Chlorobenzene	2557235	1278618	5114470	2494290	-2.46
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1323306	-3.71

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	0.00
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: MB0627
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13659

Client SDG: 27JUN13
Fraction: VOA
Client Smp ID: MB0627
Operator: PB
SampleType: BLANK
Quant Type: ISTD

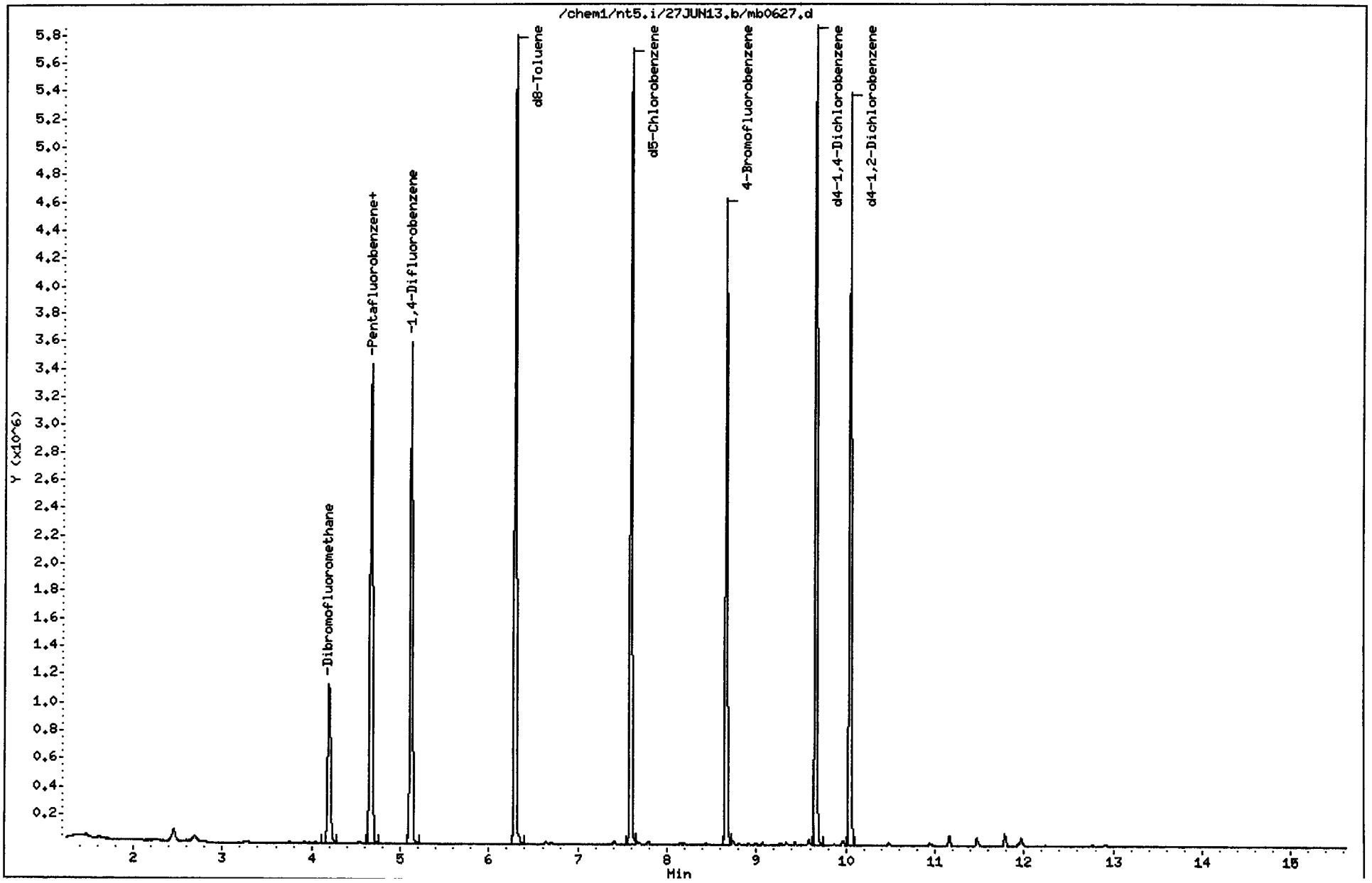
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	51.329	102.66	70-130
$ 32 d4-1,2-Dichloroeth	50.000	51.214	102.43	80-149
$ 42 d8-Toluene	50.000	50.147	100.29	77-120
$ 62 4-Bromofluorobenze	50.000	49.927	99.85	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.294	100.59	80-120

Data File: /chem1/nt5.i/27JUN13.b/mb0627.d
Date : 27-JUN-2013 20:53
Client ID: MB0627
Sample Info: MB0627,5,5,0

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB
Column diameter: 0.18



CO-ELUTION SUMMARY FOR FILE - mb0627.d

Lab ID: MB0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt5.i/27JUN13.b/mb0627.d

Date : 27-JUN-2013 20:53

Client ID: MB0627

Instrument: nt5.i

Sample Info: MB0627,5,5,0

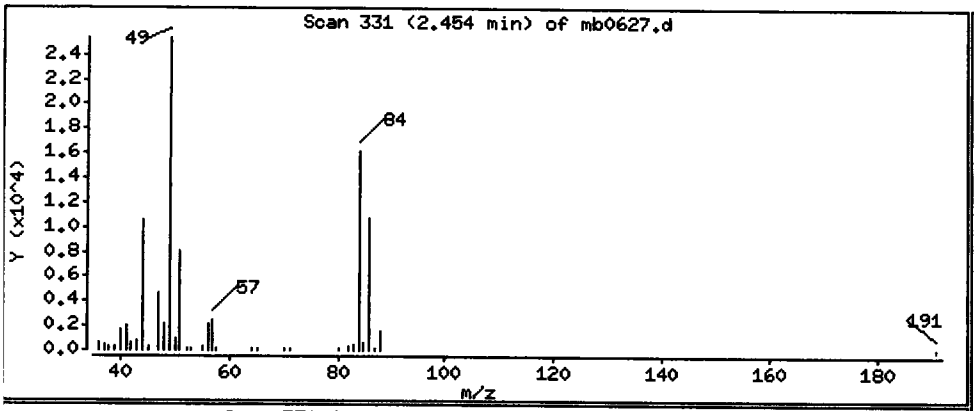
Operator: PB

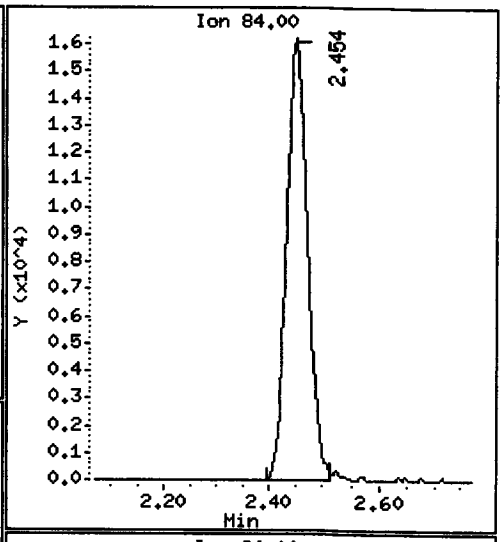
Column phase: RTXVMS

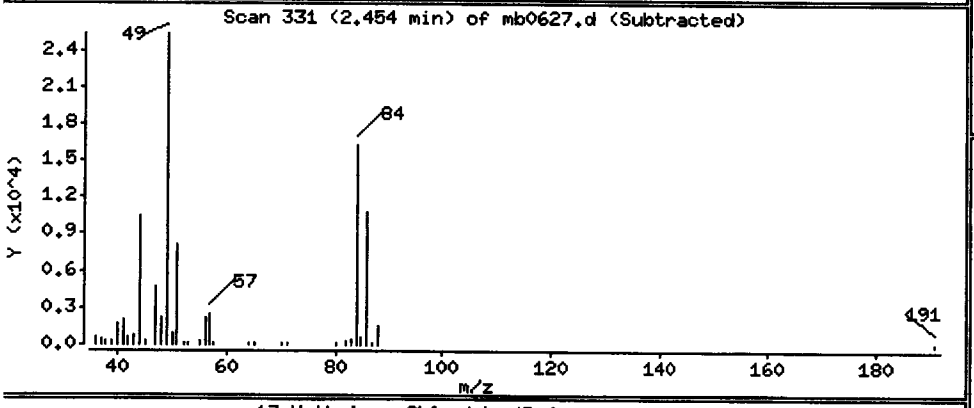
Column diameter: 0.18

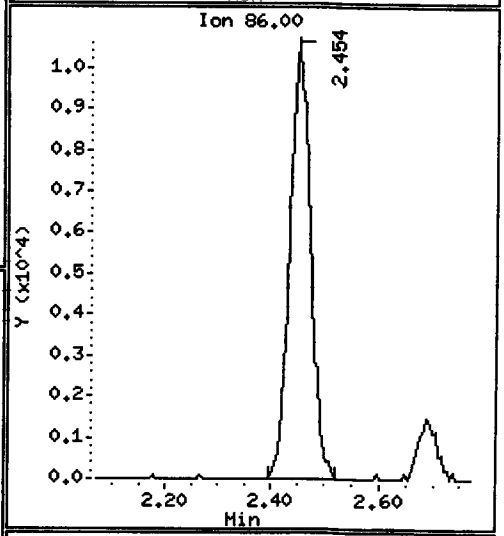
13 Methylene Chloride

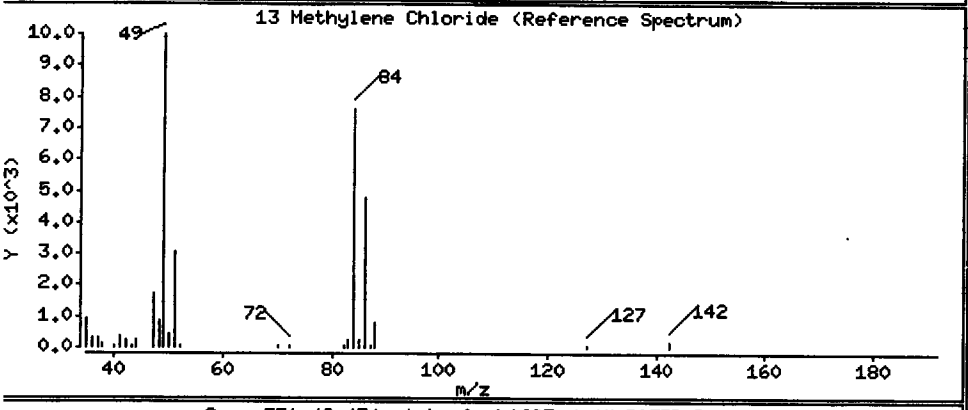
Concentration: 3.302 ug/Kg

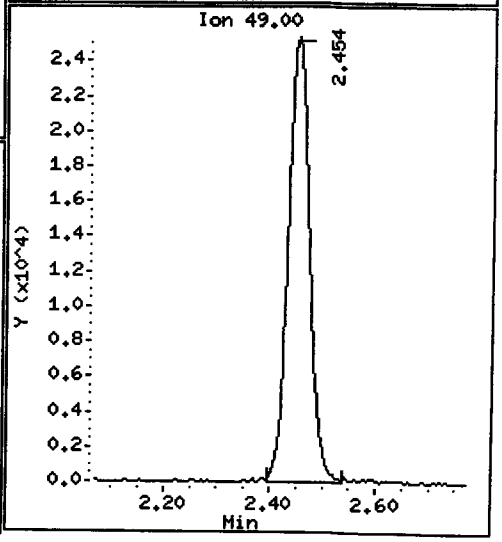


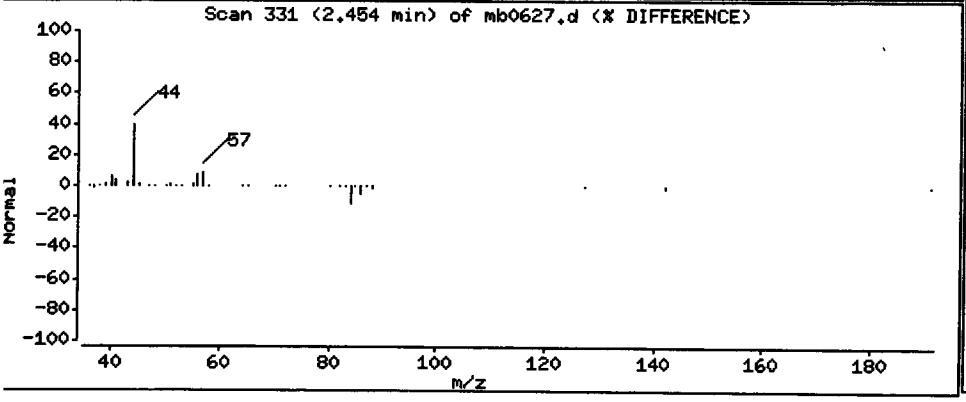












Data File: /chem1/nt5.i/27JUN13.b/mb0627.d

Date : 27-JUN-2013 20:53

Client ID: MB0627

Instrument: nt5.i

Sample Info: MB0627,5,5,0

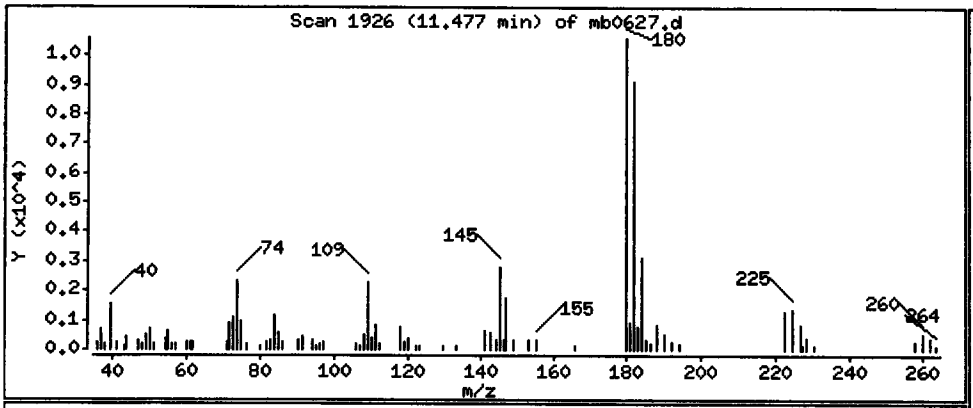
Operator: PB

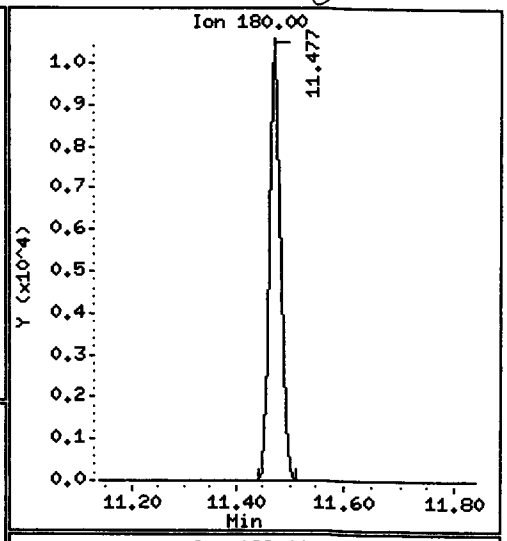
Column phase: RTXVMS

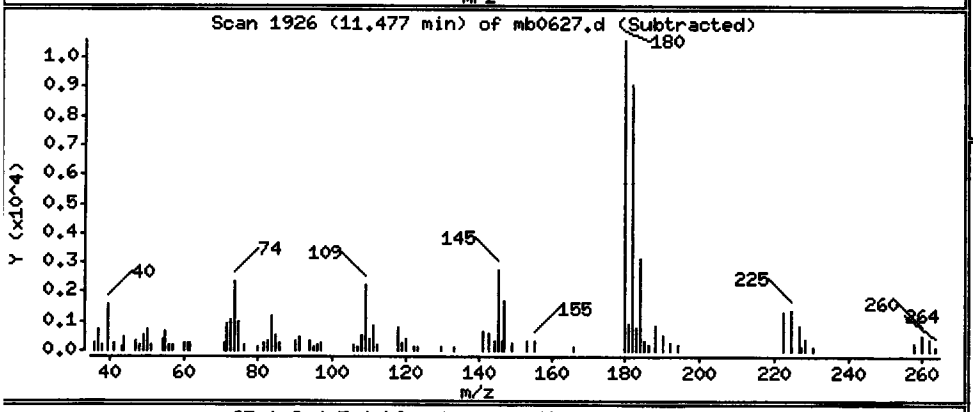
Column diameter: 0.18

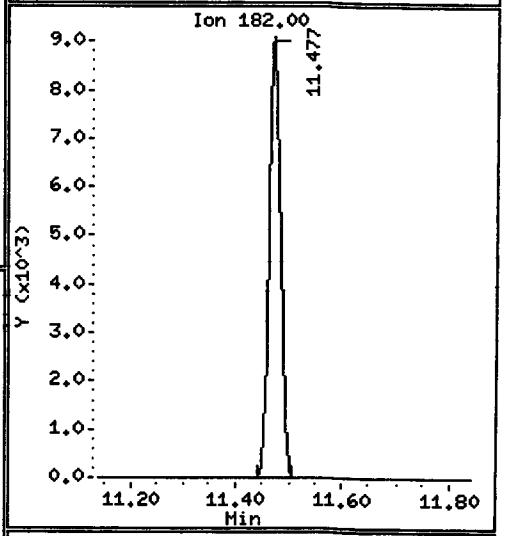
83 1,2,4-Trichlorobenzene

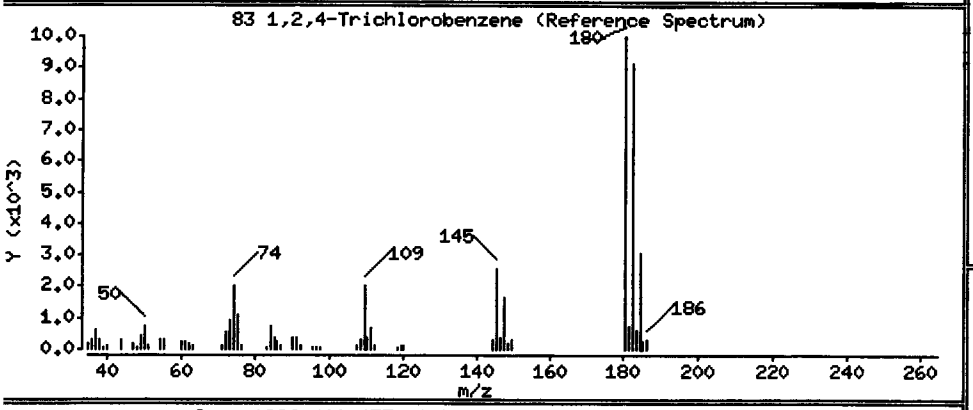
Concentration: 0.7099 ug/Kg

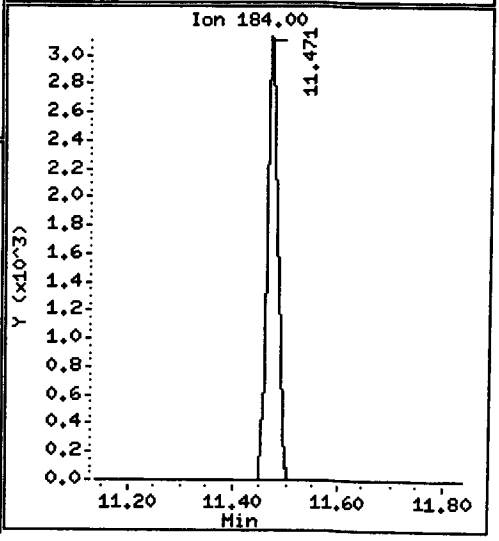


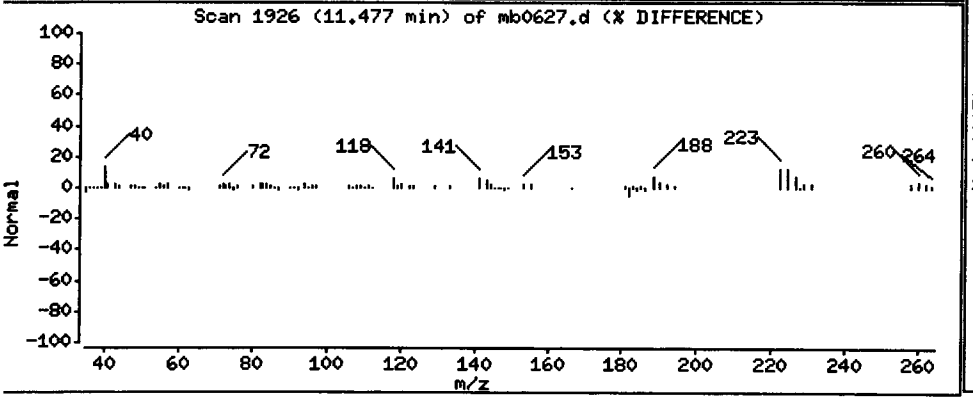












Data File: /chem1/nt5.i/27JUN13.b/mb0627.d

Date : 27-JUN-2013 20:53

Client ID: MB0627

Instrument: nt5.i

Sample Info: MB0627,5,5,0

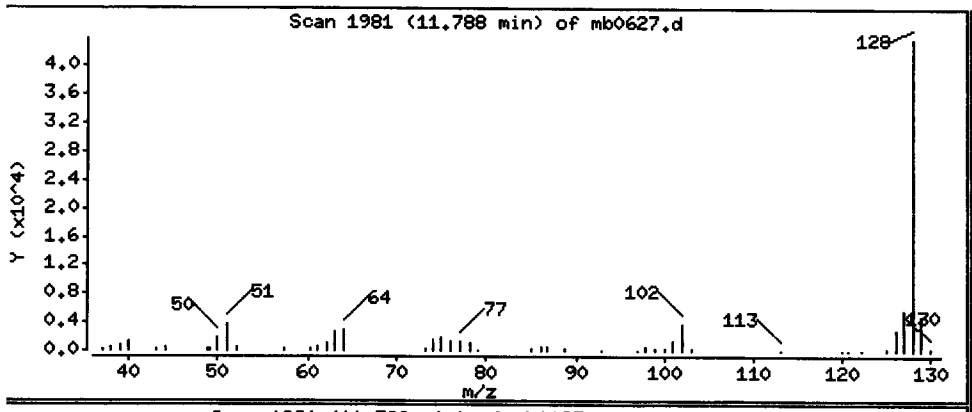
Operator: PB

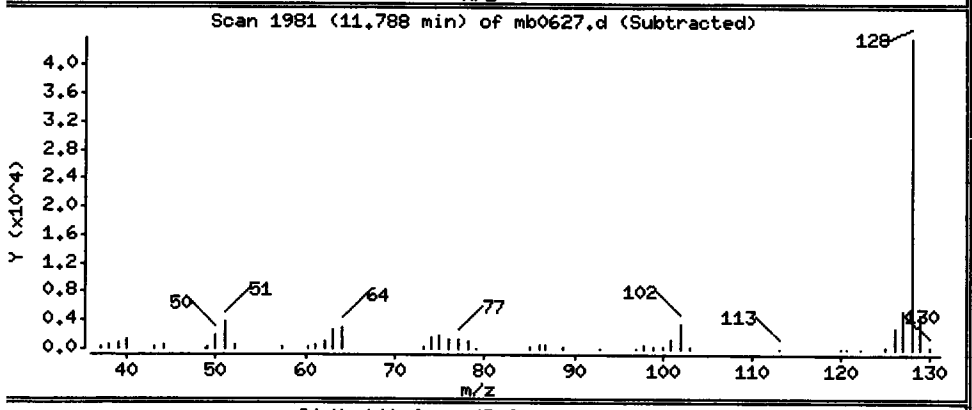
Column phase: RTXVMS

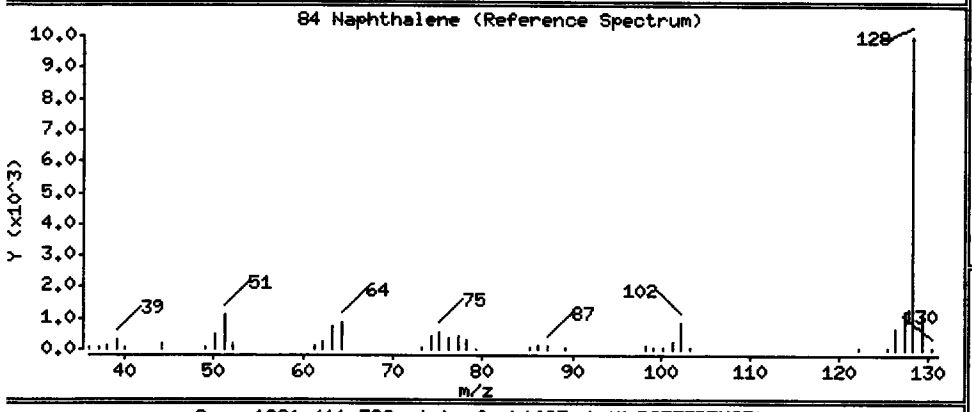
Column diameter: 0.18

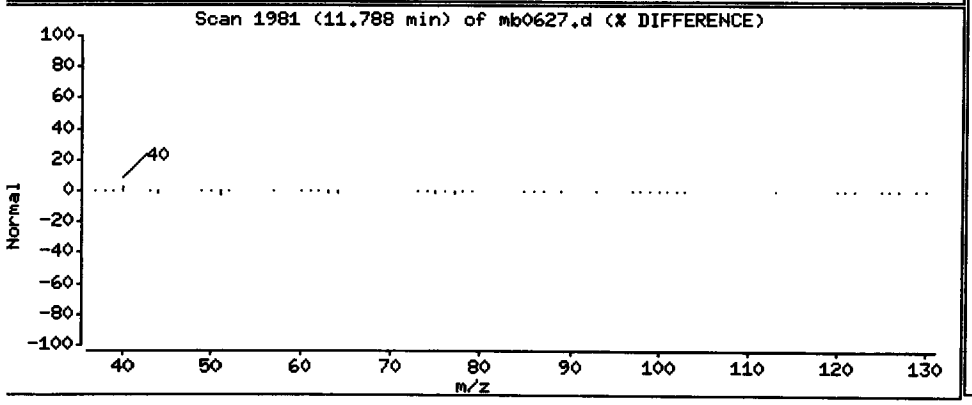
84 Naphthalene

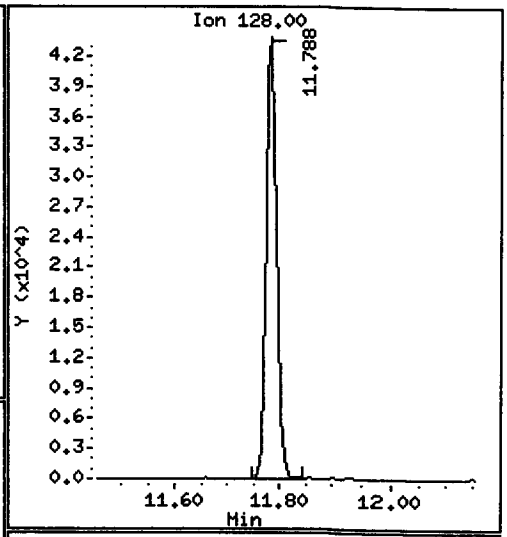
Concentration: 1.404 ug/Kg

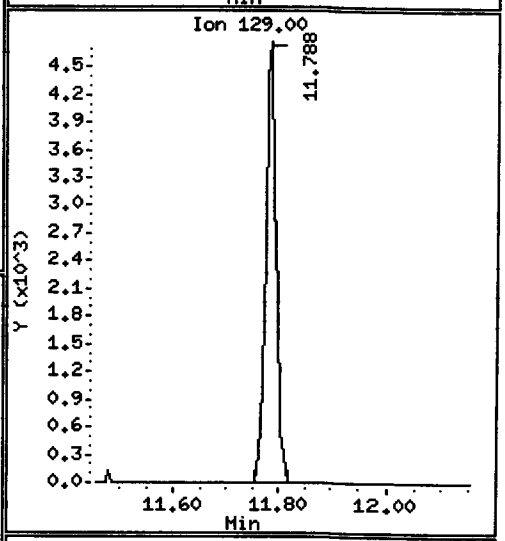


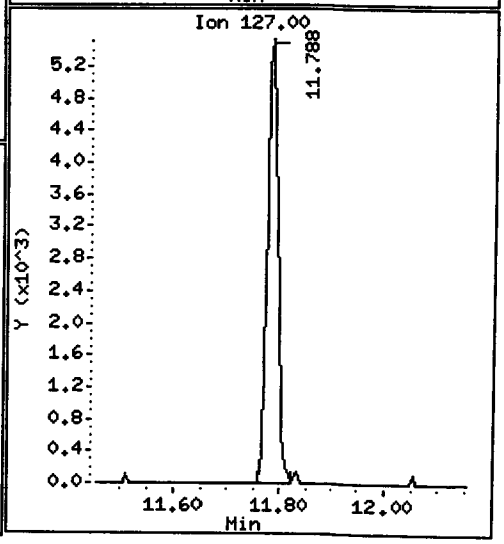












Data File: /chem1/nt5.i/27JUN13.b/mb0627.d

Date : 27-JUN-2013 20:53

Client ID: MB0627

Instrument: nt5.i

Sample Info: MB0627,5,5,0

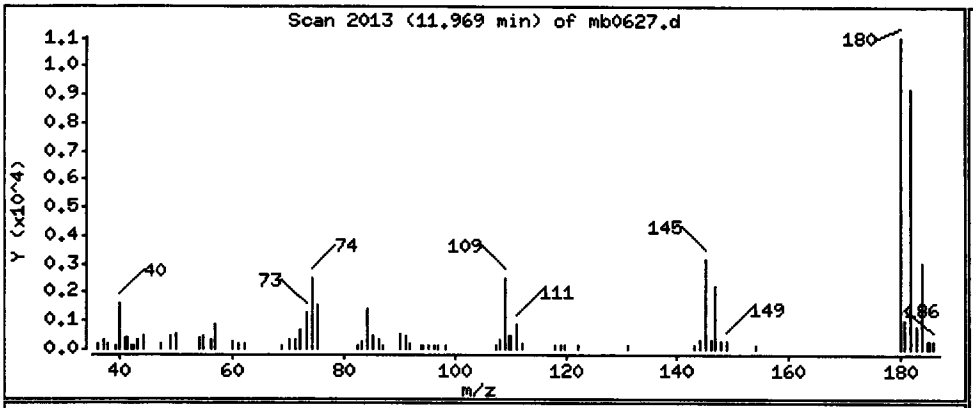
Operator: PB

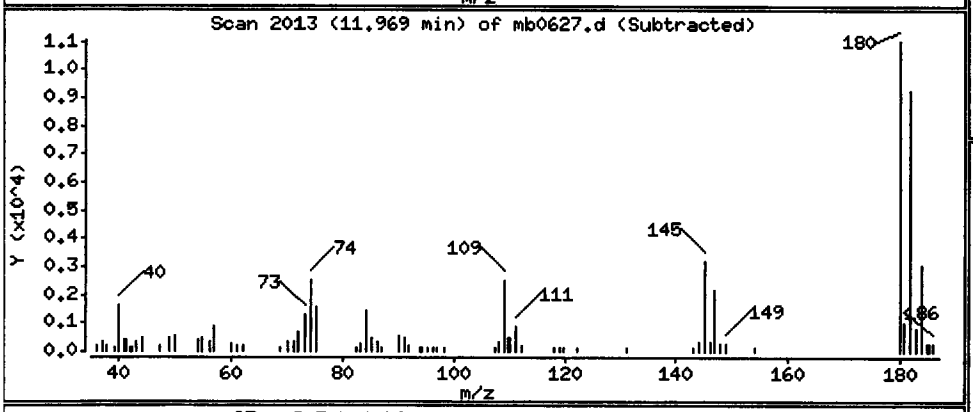
Column phase: RTXVMS

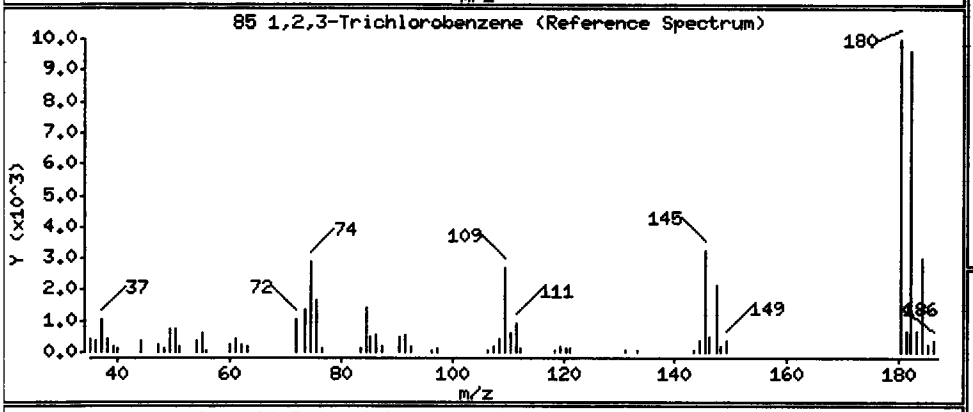
Column diameter: 0.18

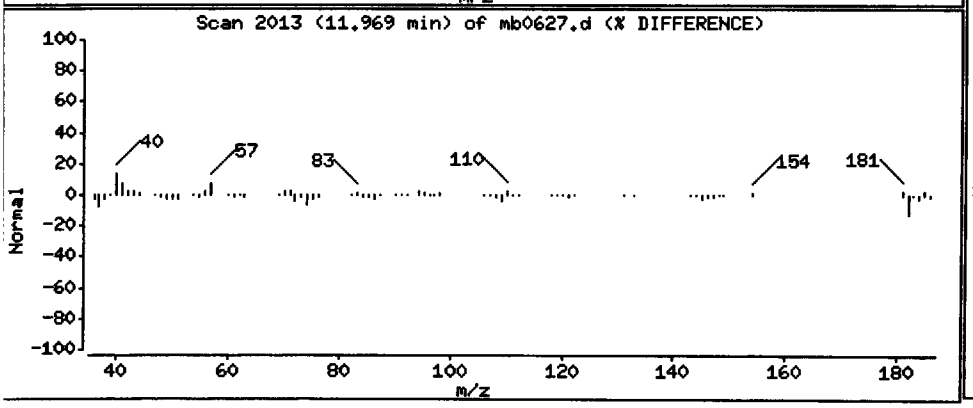
85 1,2,3-Trichlorobenzene

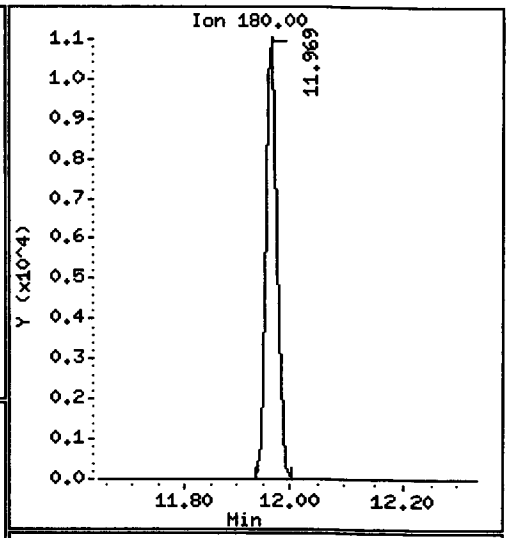
Concentration: 0.7772 ug/Kg

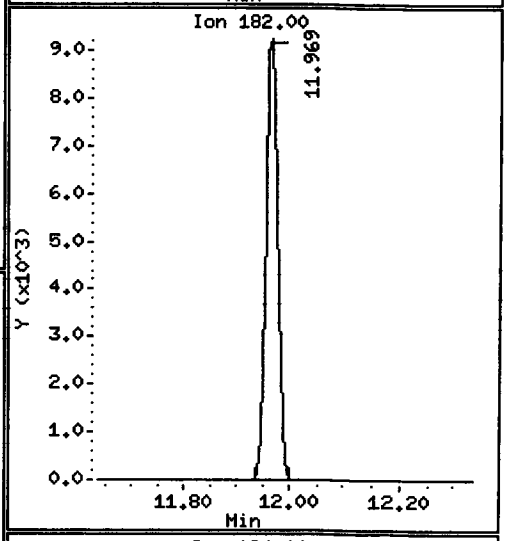


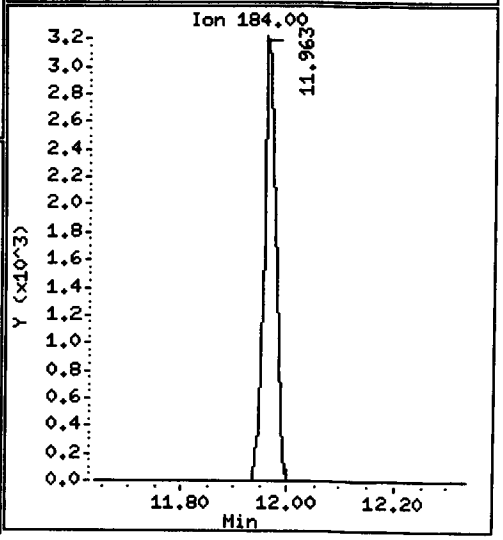












Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/wv67d.d
Lab Smp Id: WV67D Client Smp ID: UP-TB-01-20130626-W
Inj Date : 27-JUN-2013 21:40
Operator : PB Inst ID: nt5.i
Smp Info : WV67D,5,5,0
Misc Info : 13-13660
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 11:09 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	0.00000	Purge Volume (mL)
Sa	0.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/L)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	Compound Not Detected.					
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	Compound Not Detected.					
9 112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10 Iodomethane	142	Compound Not Detected.					
11 Bromoethane	108	Compound Not Detected.					
12 Acrolein	56	Compound Not Detected.					
13 Methylene Chloride	84	2.431	2.454	(0.521)	17169	1.28402	1.284
14 Acetone	43	Compound Not Detected.					
15 Trans-1,2-Dichloroethene	96	Compound Not Detected.					

TB LCS
NT Patrick 6/28/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/L)
	16 Methyl tert butyl ether	73	Compound Not Detected.					
	17 1,1-Dichloroethane	63	Compound Not Detected.					
	18 Acrylonitrile	53	Compound Not Detected.					
	19 Vinyl Acetate	43	Compound Not Detected.					
	20 Cis-1,2-Dichloroethene	96	Compound Not Detected.					
	22 2,2-Dichloropropane	77	Compound Not Detected.					
	23 Bromochloromethane	128	Compound Not Detected.					
	24 Chloroform	83	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.185	4.196	(0.897)	754719	51.4448	51.445
	26 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 1,1-Dichloropropene	75	Compound Not Detected.					
	29 2-Butanone	72	Compound Not Detected.					
	30 Benzene	78	Compound Not Detected.					
*	31 Pentafluorobenzene	168	4.666	4.671	(1.000)	1523627	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.654	4.666	(0.998)	860543	51.6183	51.618
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.118	5.118	(1.000)	2521626	50.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	40 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	41 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	42 d8-Toluene	98	6.289	6.295	(1.229)	3139315	50.2249	50.225
	43 Toluene	92	Compound Not Detected.					
	44 Tetrachloroethene	166	Compound Not Detected.					
	45 4-Methyl-2-Pentanone	58	Compound Not Detected.					
	46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47 1,1,2-Trichloroethane	97	Compound Not Detected.					
	48 Chlorodibromomethane	129	Compound Not Detected.					
	49 1,3-Dichloropropane	76	Compound Not Detected.					
	50 1,2-Dibromoethane	107	Compound Not Detected.					
	51 2-Hexanone	43	Compound Not Detected.					
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2507425	50.0000	
	53 Chlorobenzene	112	Compound Not Detected.					
	54 Ethyl Benzene	91	Compound Not Detected.					
	55 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56 m,p-xylene	106	Compound Not Detected.					
	57 o-Xylene	106	Compound Not Detected.					
	58 Styrene	104	Compound Not Detected.					
	59 Bromoform	173	Compound Not Detected.					
	60 Isopropyl Benzene	105	Compound Not Detected.					
$	62 4-Bromofluorobenzene	95	8.660	8.665	(1.140)	1323769	49.6041	49.604
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	Compound Not Detected.					
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/L)
66	2-Chloro Toluene	91	Compound Not Detected.					
67	1,3,5-Trimethyl Benzene	105	Compound Not Detected.					
68	1,2,3-Trichloropropane	110	Compound Not Detected.					
69	Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
70	4-Chloro Toluene	91	Compound Not Detected.					
71	T-Butyl Benzene	119	Compound Not Detected.					
72	1,2,4-Trimethylbenzene	105	Compound Not Detected.					
73	S-Butyl Benzene	105	Compound Not Detected.					
74	4-Isopropyl Toluene	119	Compound Not Detected.					
75	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 76	d4-1,4-Dichlorobenzene	152	9.666	9.672	(1.000)	1330016	50.0000	
77	1,4-Dichlorobenzene	146	Compound Not Detected.					
78	N-Butyl Benzene	91	Compound Not Detected.					
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1215152	50.0912	50.091
80	1,2-Dichlorobenzene	146	Compound Not Detected.					
81	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
84	Naphthalene	128	Compound Not Detected.					
85	1,2,3-Trichlorobenzene	180	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: wv67d.d
Lab Smp Id: WV67D
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13660

Calibration Date: 27-JUN-2013
Calibration Time: 17:46
Client Smp ID: UP-TB-01-20130626-W
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1523627	-5.58
35 1,4-Difluorobenze	2656709	1328354	5313418	2521626	-5.08
52 d5-Chlorobenzene	2557235	1278618	5114470	2507425	-1.95
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1330016	-3.23

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	-0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.00
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WV67D
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13660

Client SDG: WV67
Fraction: VOA
Client Smp ID: UP-TB-01-20130626-W
Operator: PB
SampleType: SAMPLE
Quant Type: ISTD

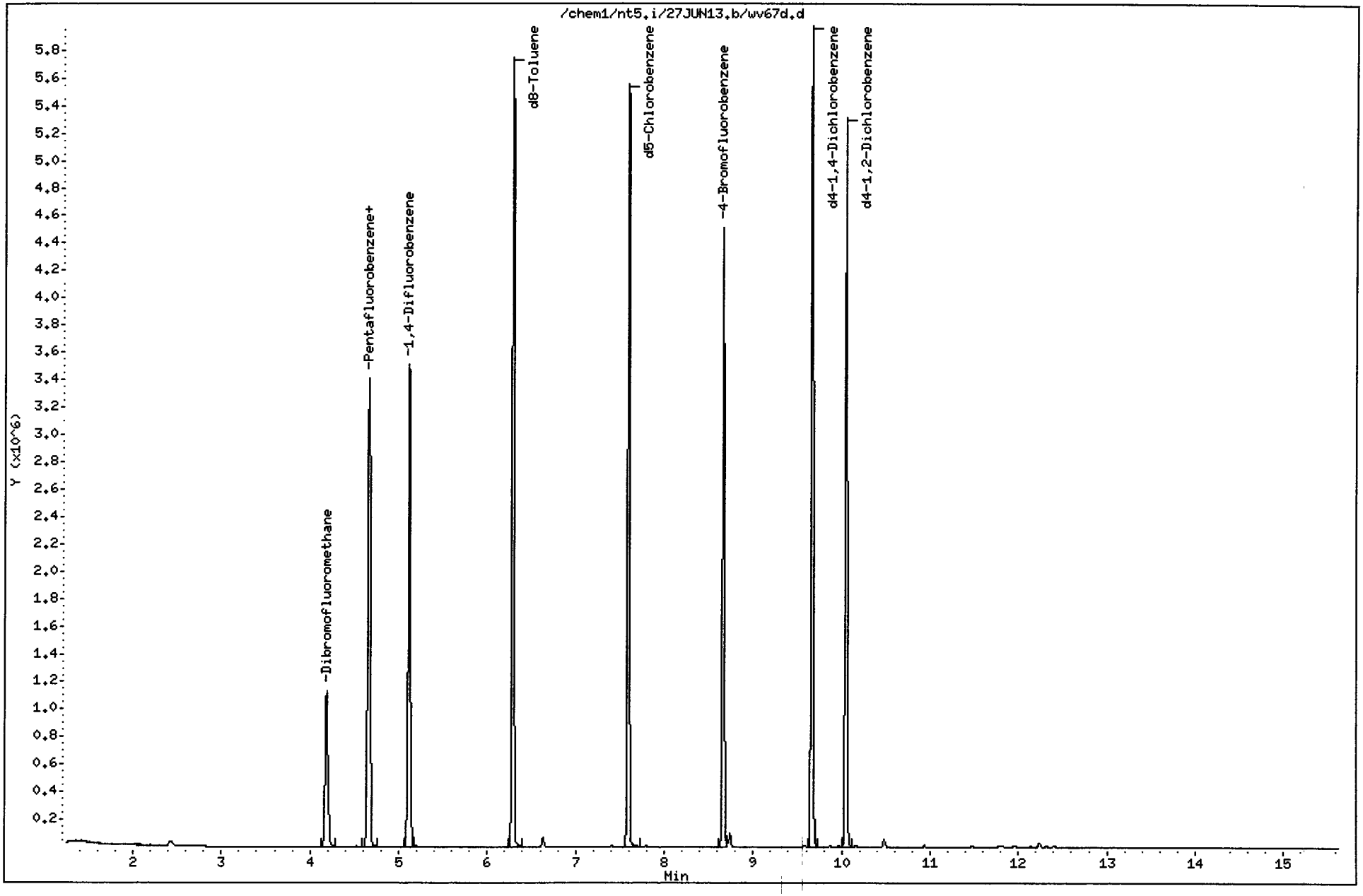
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	51.445	102.89	30-160
$ 32 d4-1,2-Dichloroeth	50.000	51.618	103.24	75-152
$ 42 d8-Toluene	50.000	50.225	100.45	82-115
$ 62 4-Bromofluorobenze	50.000	49.604	99.21	71-120
$ 79 d4-1,2-Dichloroben	50.000	50.091	100.18	80-121

Data File: /chem1/nt5.i/27JUN13.b/wv67d.d
Date : 27-JUN-2013 21:40
Client ID: UP-TB-01-20130626-W
Sample Info: WV67D,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Data File: /chem1/nt5.i/27JUN13.b/wv67d.d

Date : 27-JUN-2013 21:40

Client ID: UP-TB-01-20130626-W

Instrument: nt5.i

Sample Info: WV67D,5,5,0

Operator: PB

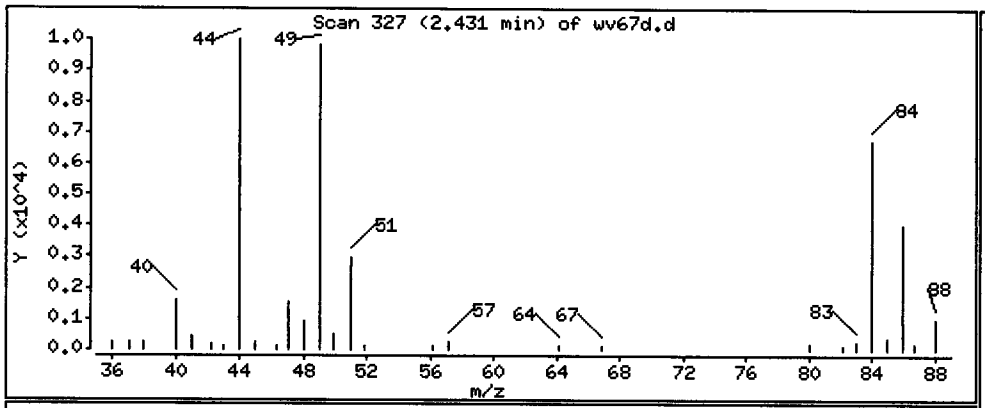
Column phase: RTXVMS

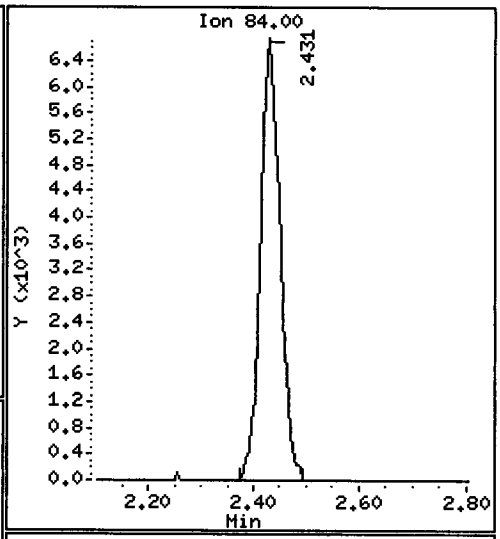
Column diameter: 0.18

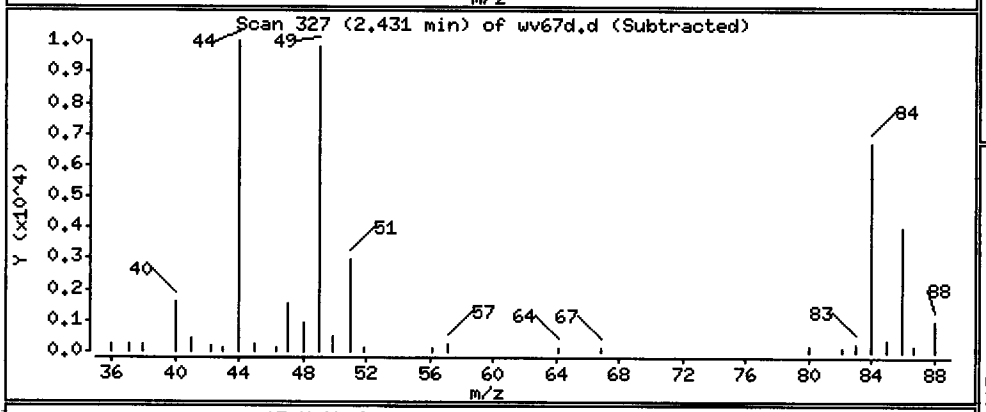
13 Methylene Chloride

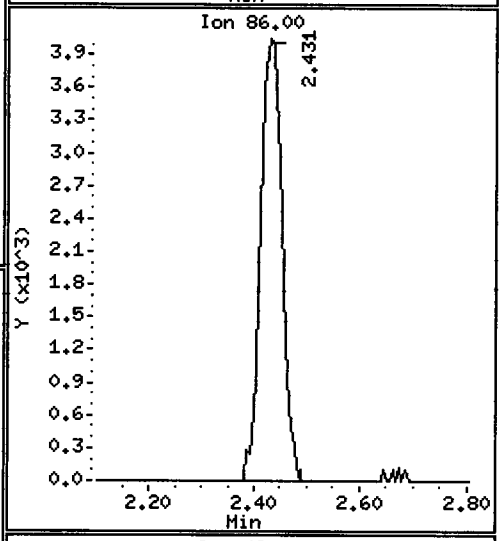
Concentration: 1.284 ug/L

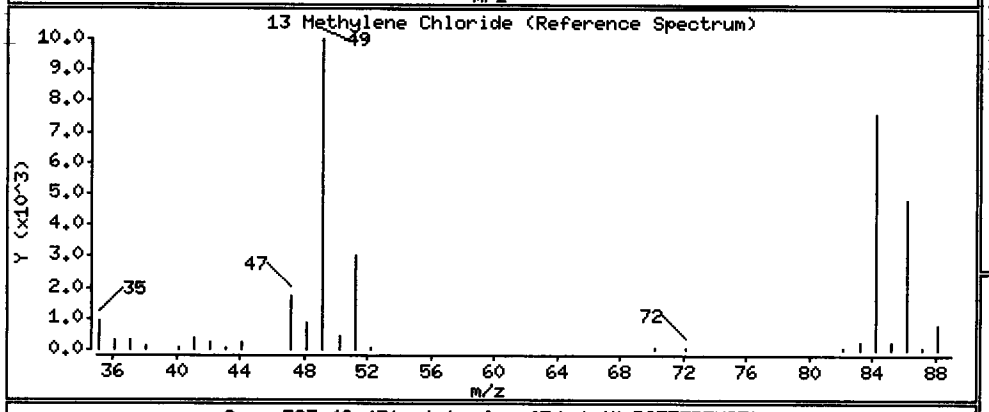
DB ICAL NOT Reported SRB 6/28/13

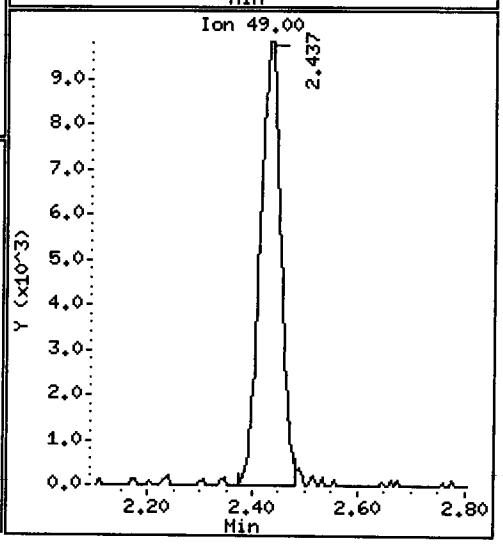


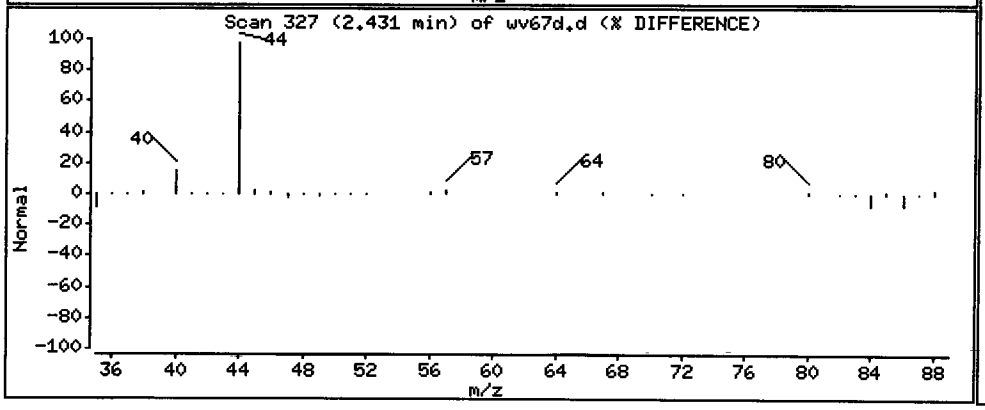












CO-ELUTION SUMMARY FOR FILE - wv67d.d

Lab ID: WV67D, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/wv67a.d
Lab Smp Id: WV67A Client Smp ID: UP-CB-B8-20130626-S
Inj Date : 27-JUN-2013 22:04
Operator : PB Inst ID: nt5.i
Smp Info : WV67A,5,14.13,0
Misc Info : 13-13657
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 11:09 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	14.13000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	Compound Not Detected.					
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	1.956	1.979	(0.420)	1002349	32.3687	11.454
9 112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10 Iodomethane	142	Compound Not Detected.					
11 Bromoethane	108	Compound Not Detected.					
12 Acrolein	56	Compound Not Detected.					
13 Methylene Chloride	84	2.431	2.454	(0.522)	18878	1.75813	0.6221
14 Acetone	43	Compound Not Detected.					

JB LCS Not Reported JB 6/28/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
15	Trans-1,2-Dichloroethene	96	Compound Not Detected.					
16	Methyl tert butyl ether	73	Compound Not Detected.					
17	1,1-Dichloroethane	63	Compound Not Detected.					
18	Acrylonitrile	53	Compound Not Detected.					
19	Vinyl Acetate	43	Compound Not Detected.					
20	Cis-1,2-Dichloroethene	96	3.727	3.744	(0.800)	11965	1.06359	0.3764
22	2,2-Dichloropropane	77	Compound Not Detected.					
23	Bromochloromethane	128	Compound Not Detected.					
24	Chloroform	83	Compound Not Detected.					
25	Carbon Tetrachloride	117	Compound Not Detected.					
$ 27	Dibromofluoromethane	111	4.179	4.196	(0.897)	642629	54.5488	19.302
26	1,1,1-Trichloroethane	97	Compound Not Detected.					
28	1,1-Dichloropropene	75	Compound Not Detected.					
29	2-Butanone	72	4.383	4.434	(0.941)	74516	52.9405	18.733(Q)
30	Benzene	78	4.524	4.530	(0.885)	279531	6.41228	2.269
* 31	Pentafluorobenzene	168	4.660	4.671	(1.000)	1223518	50.0000	
$ 32	d4-1,2-Dichloroethane	65	4.654	4.666	(0.999)	731483	54.6391	19.334
33	1,2-Dichloroethane	62	Compound Not Detected.					
34	Trichloroethene	95	Compound Not Detected.					
* 35	1,4-Difluorobenzene	114	5.113	5.118	(1.000)	2004618	50.0000	
37	Dibromomethane	93	Compound Not Detected.					
38	1,2-Dichloropropane	63	Compound Not Detected.					
39	Bromodichloromethane	83	Compound Not Detected.					
40	2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
41	Cis 1,3-dichloropropene	75	Compound Not Detected.					
$ 42	d8-Toluene	98	6.289	6.295	(1.230)	2198644	44.2474	15.657
43	Toluene	92	6.329	6.335	(1.238)	663378	24.0553	8.512
44	Tetrachloroethene	166	Compound Not Detected.					
45	4-Methyl-2-Pentanone	58	6.697	6.708	(1.310)	163157	31.2676	11.064(Q)
46	Trans 1,3-Dichloropropene	75	Compound Not Detected.					
47	1,1,2-Trichloroethane	97	Compound Not Detected.					
48	Chlorodibromomethane	129	Compound Not Detected.					
49	1,3-Dichloropropane	76	Compound Not Detected.					
50	1,2-Dibromoethane	107	Compound Not Detected.					
51	2-Hexanone	43	Compound Not Detected.					
* 52	d5-Chlorobenzene	117	7.590	7.596	(1.000)	1390109	50.0000	
53	Chlorobenzene	112	Compound Not Detected.					
54	Ethyl Benzene	91	7.658	7.664	(1.009)	921526	27.2676	9.649
55	1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
56	m,p-xylene	106	7.788	7.794	(1.026)	615609	48.5231	17.170
57	o-Xylene	106	8.150	8.156	(1.074)	450289	35.9612	12.725
58	Styrene	104	8.201	8.201	(1.080)	58594	2.85572	1.011
59	Bromoform	173	Compound Not Detected.					
60	Isopropyl Benzene	105	8.439	8.445	(0.873)	115667	7.97682	2.823
$ 62	4-Bromofluorobenzene	95	8.660	8.665	(1.141)	534252	36.1103	12.778(R)
63	Bromobenzene	156	Compound Not Detected.					
64	N-Propyl Benzene	91	8.807	8.812	(0.911)	125085	7.16056	2.534
65	1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
66	2-Chloro Toluene	91	Compound Not Detected.					
67	1,3,5-Trimethyl Benzene	105	8.993	8.999	(0.930)	458916	36.7120	12.991
68	1,2,3-Trichloropropane	110	Compound Not Detected.					
69	Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
70	4-Chloro Toluene	91	Compound Not Detected.					
71	T-Butyl Benzene	119	Compound Not Detected.					
72	1,2,4-Trimethylbenzene	105	9.338	9.338	(0.966)	726947	59.4758	21.046
73	S-Butyl Benzene	105	9.435	9.440	(0.976)	102206	6.40247	2.266(Q)
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	222091	17.1740	6.077
75	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 76	d4-1,4-Dichlorobenzene	152	9.666	9.672	(1.000)	349584	50.0000	
77	1,4-Dichlorobenzene	146	9.678	9.683	(1.001)	131915	17.5014	6.193
78	N-Butyl Benzene	91	Compound Not Detected.					
$ 79	d4-1,2-Dichlorobenzene	152	10.045	10.051	(1.039)	301367	47.2642	16.725
80	1,2-Dichlorobenzene	146	Compound Not Detected.					
81	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
84	Naphthalene	128	11.788	11.788	(1.219)	172127	14.7018	5.202
85	1,2,3-Trichlorobenzene	180	Compound Not Detected.					

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: wv67a.d
Lab Smp Id: WV67A
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13657

Calibration Date: 27-JUN-2013
Calibration Time: 17:46
Client Smp ID: UP-CB-B8-20130626-S
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1223518	-24.17
35 1,4-Difluorobenze	2656709	1328354	5313418	2004618	-24.55
52 d5-Chlorobenzene	2557235	1278618	5114470	1390109	-45.64
76 d4-1,4-Dichlorobe	1374359	687180	2748718	349584	-74.56

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.24
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.08
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WV67A
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13657

Client SDG: WV67
Fraction: VOA
Client Smp ID: UP-CB-B8-20130626-S
Operator: PB
SampleType: SAMPLE
Quant Type: ISTD

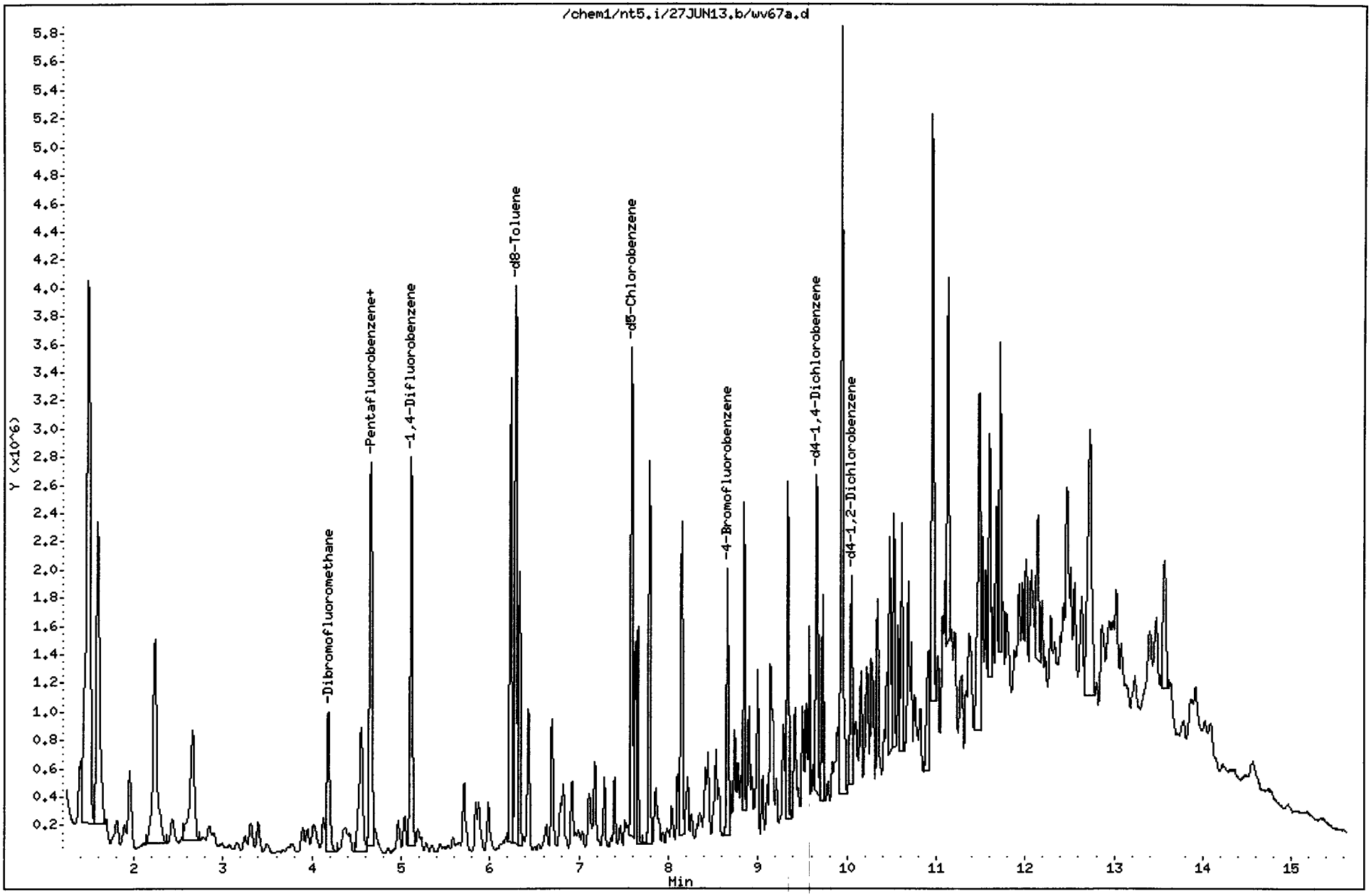
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	54.549	109.10	70-130
$ 32 d4-1,2-Dichloroeth	50.000	54.639	109.28	80-149
$ 42 d8-Toluene	50.000	44.247	88.49	77-120
$ 62 4-Bromofluorobenze	50.000	36.110	72.22*	80-120
$ 79 d4-1,2-Dichloroben	50.000	47.264	94.53	80-120

Data File: /chem1/nt5.i/27JUN13.b/wv67a.d
Date : 27-JUN-2013 22:04
Client ID: UP-CB-B8-20130626-S
Sample Info: WV67A,5,14.13,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Data File: /chem1/nt5.i/27JUN13.b/wv67a.d

Date : 27-JUN-2013 22:04

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,14.13,0

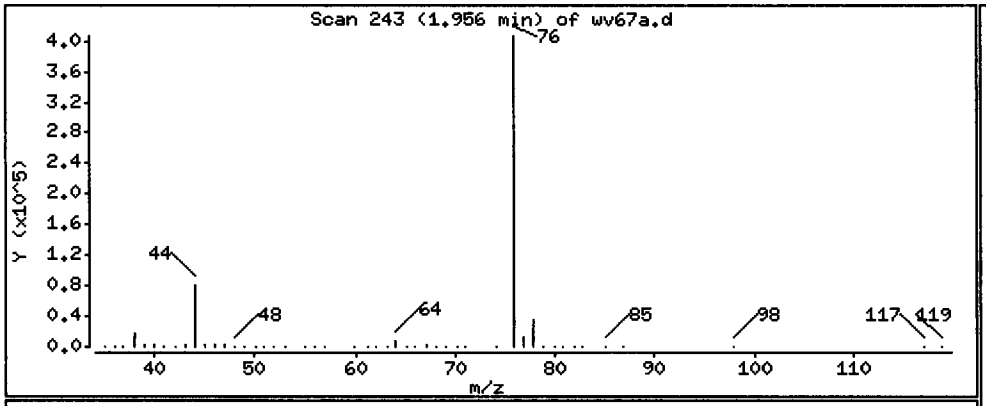
Operator: PB

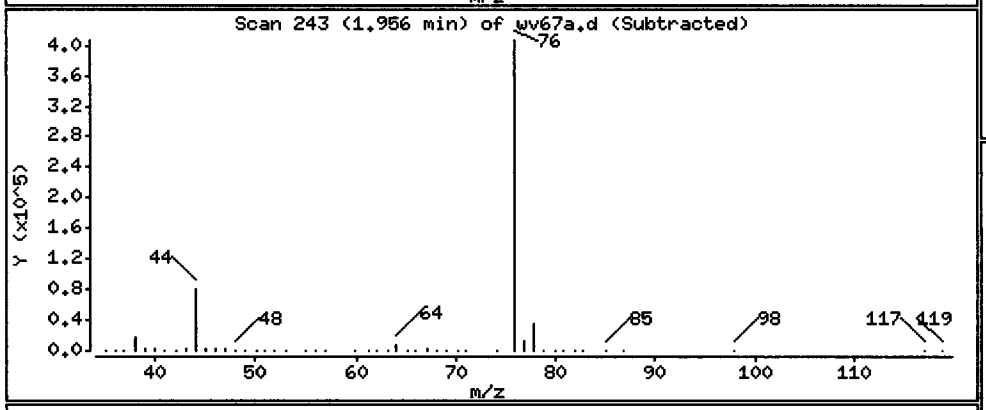
Column phase: RTXVMS

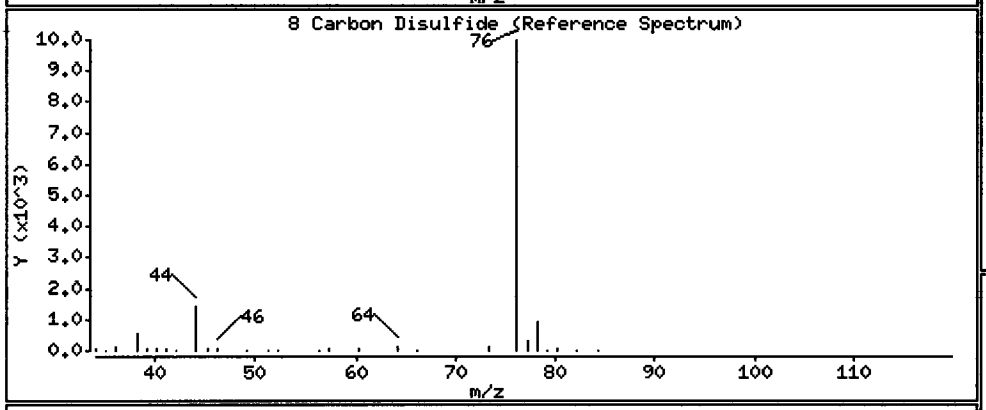
Column diameter: 0.18

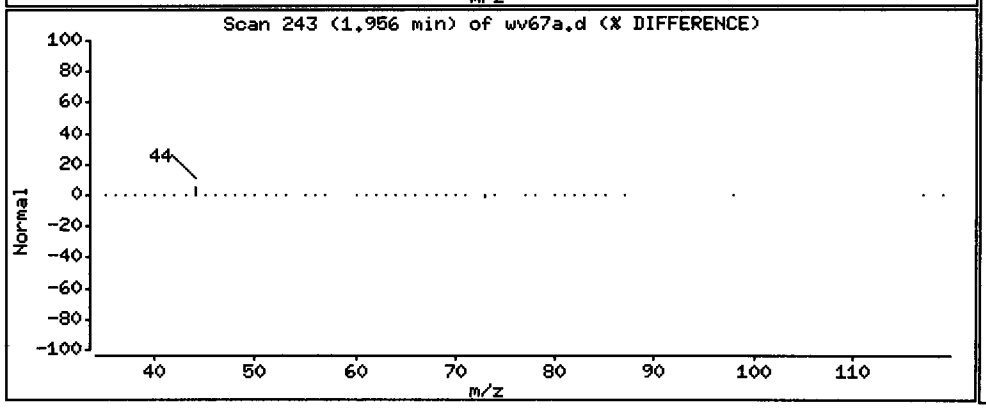
8 Carbon Disulfide

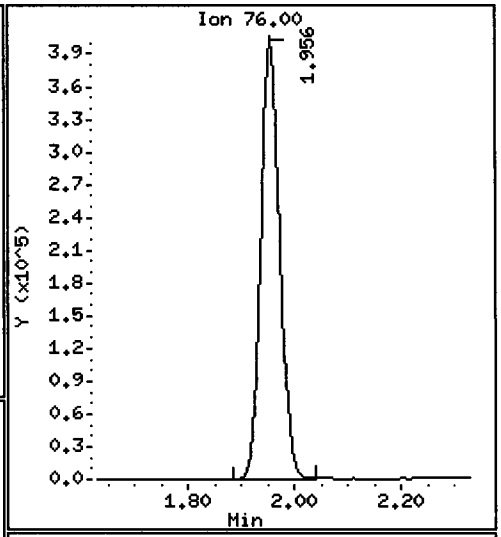
Concentration: 11.454 ug/Kg

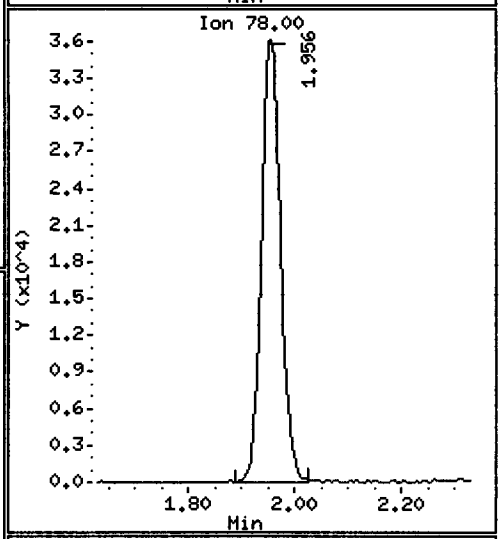


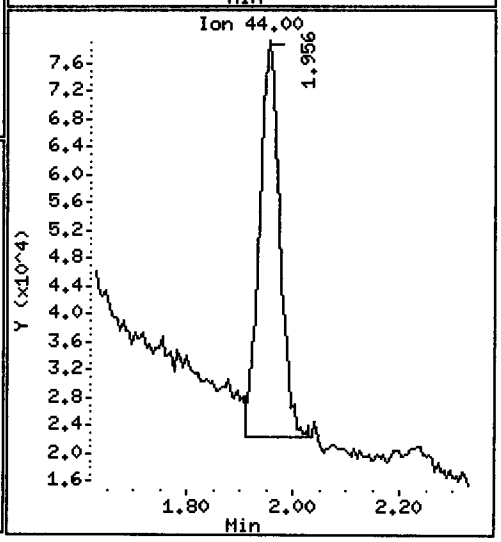












Data File: /chem1/nt5.i/27JUN13.b/wv67a.d

Date : 27-JUN-2013 22:04

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,14.13,0

Operator: PB

Column phase: RTXVMS

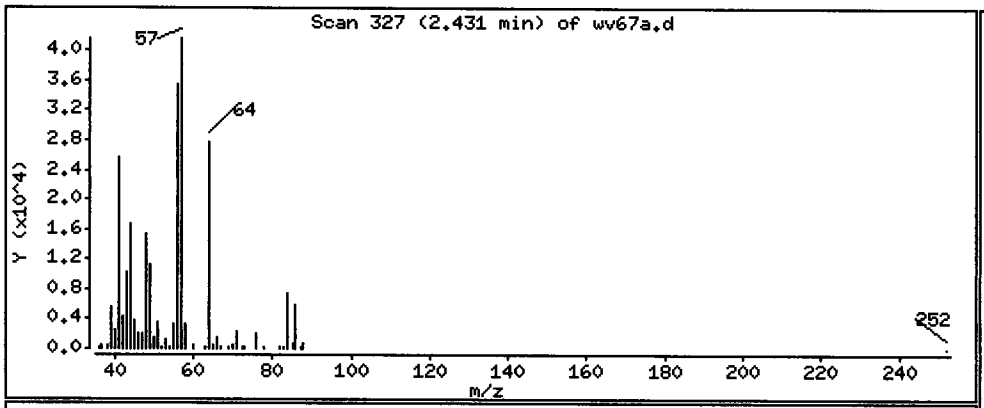
Column diameter: 0.18

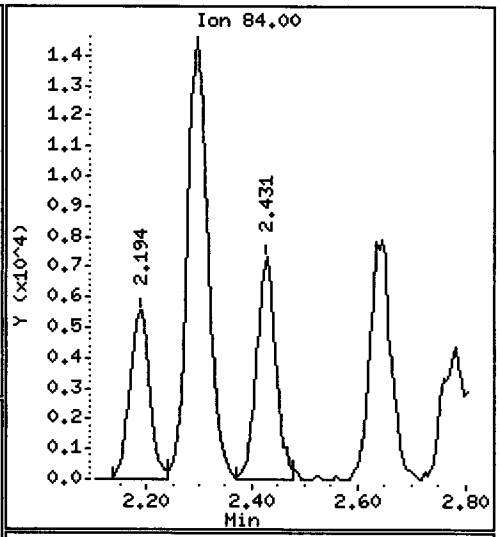
13 Methylene Chloride

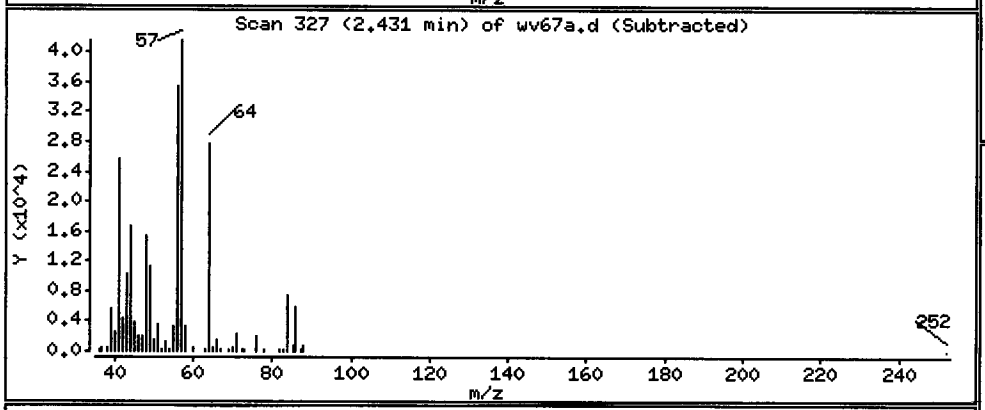
Concentration: 0.6221 ug/Kg

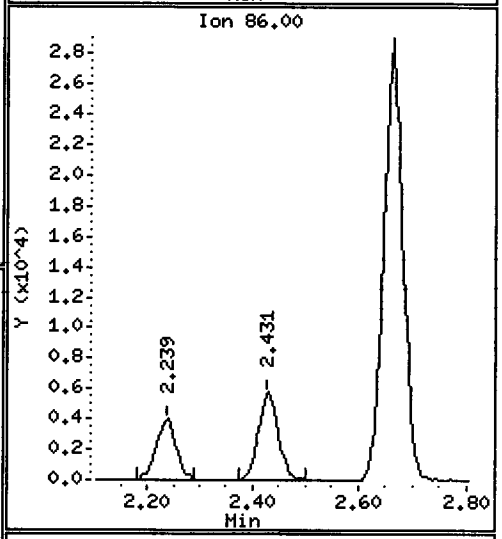
(B) Conf

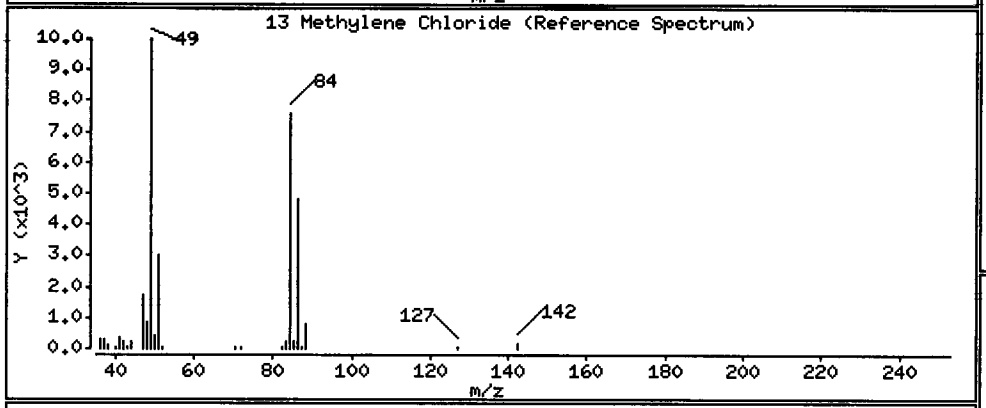
NOT Requested 6/5 6/28/13

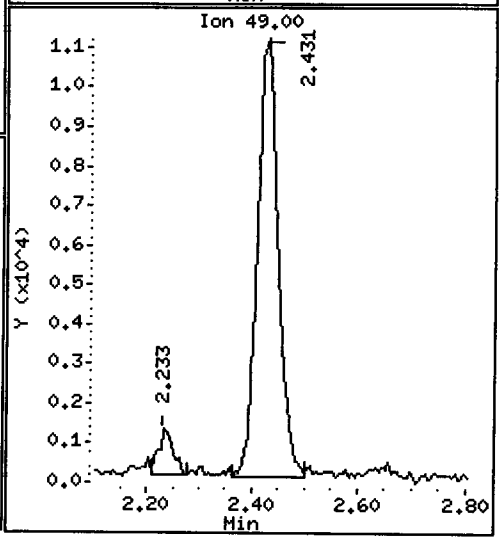


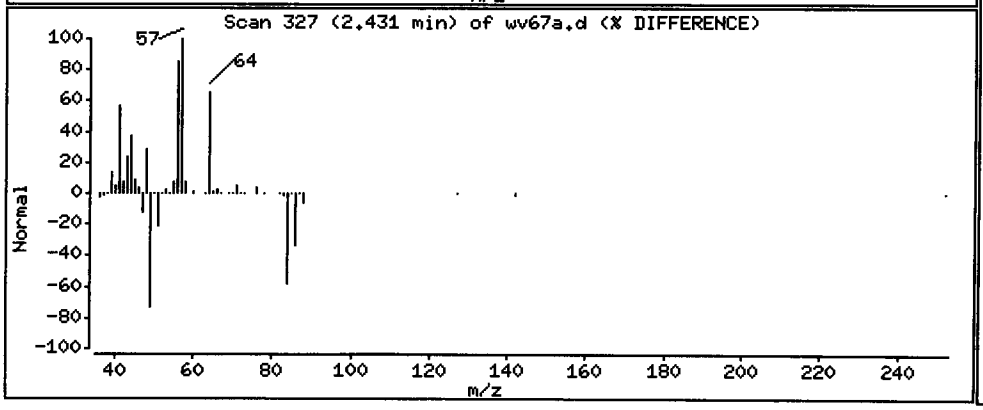












Data File: /chem1/nt5.i/27JUN13.b/wv67a.d

Date : 27-JUN-2013 22:04

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,14,13,0

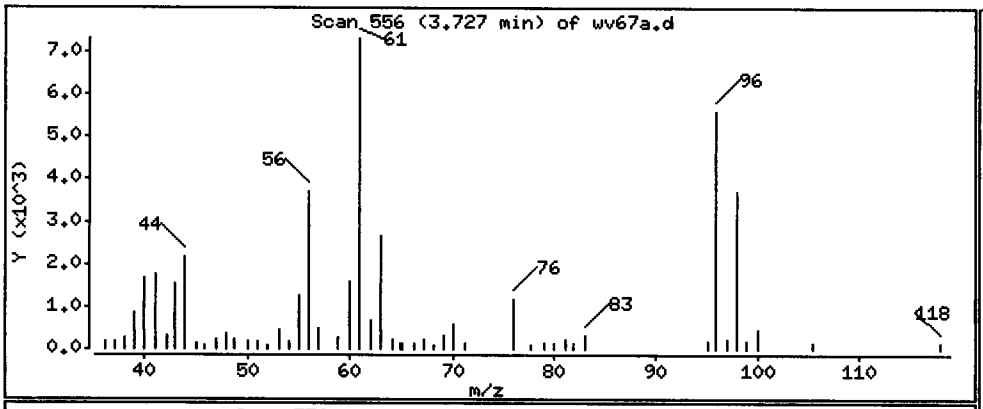
Operator: PB

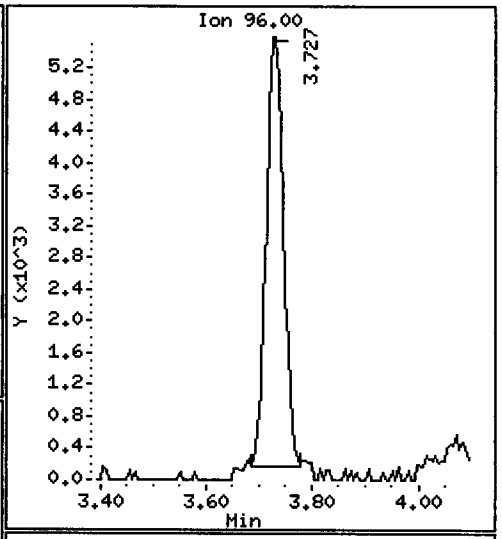
Column phase: RTXVMS

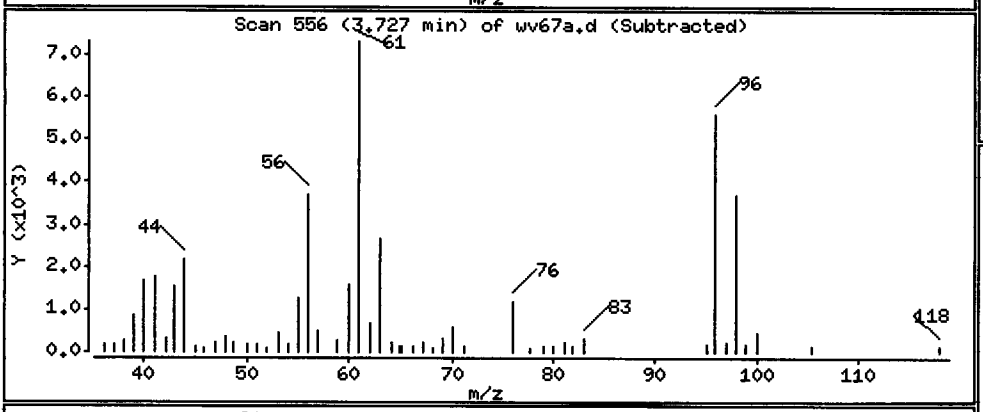
Column diameter: 0.18

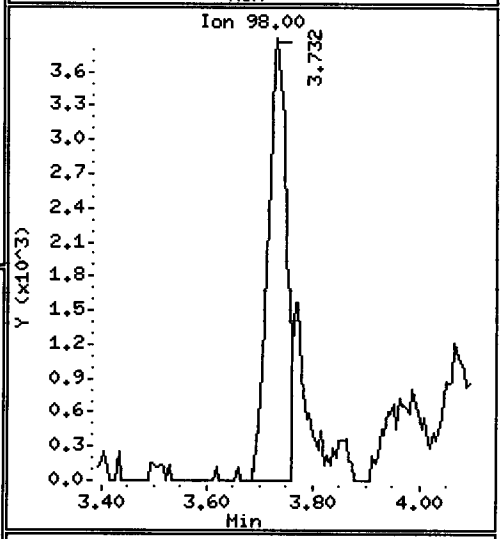
20 Cis-1,2-Dichloroethene

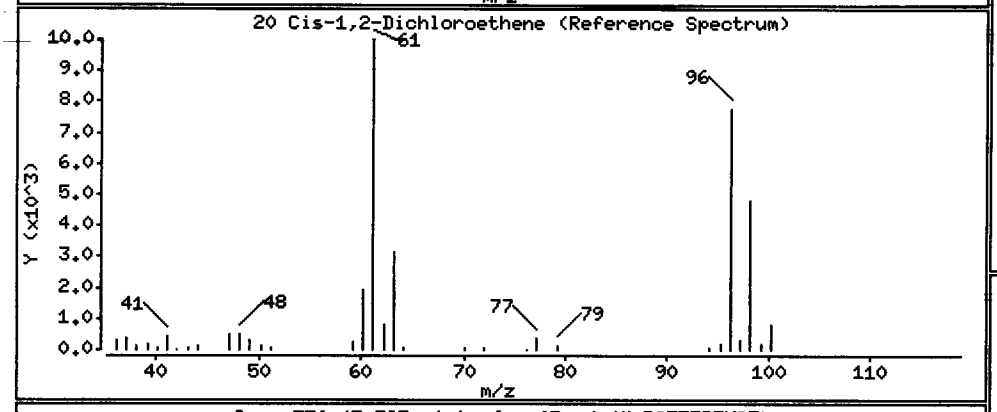
Concentration: 0.3764 ug/Kg

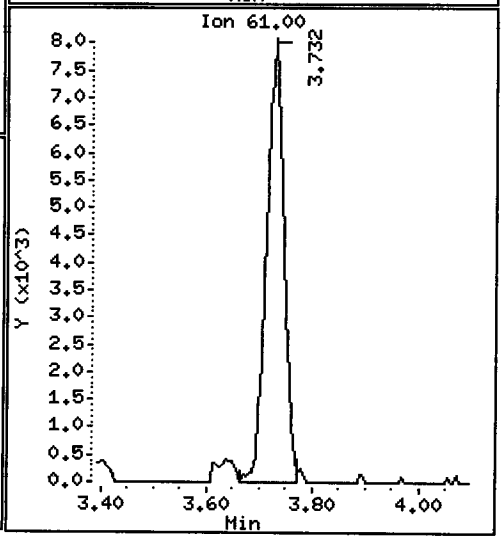


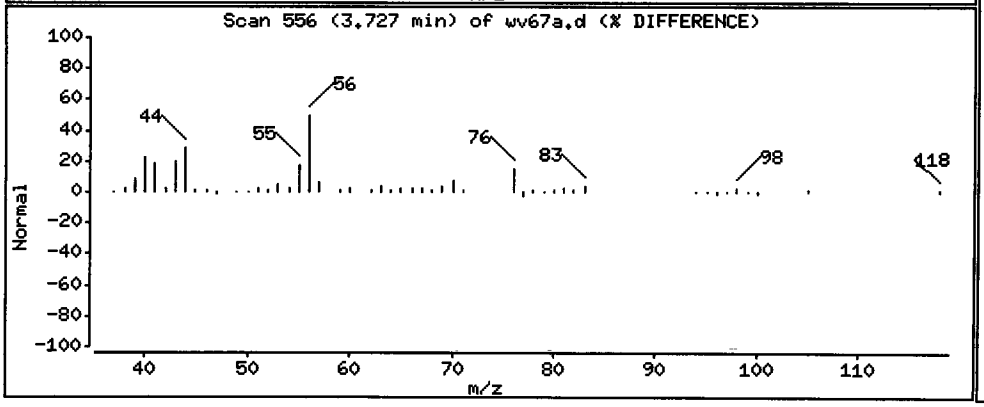












Data File: /chem1/nt5.i/27JUN13.b/wv67a.d

Date : 27-JUN-2013 22:04

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,14,13,0

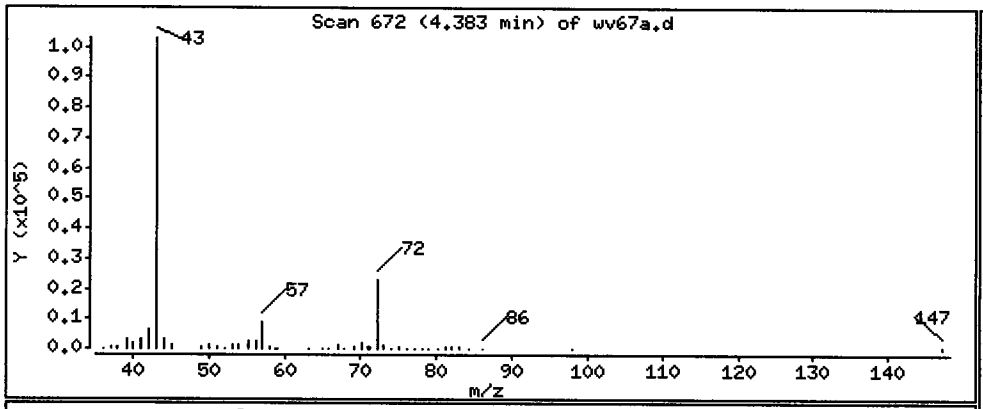
Operator: PB

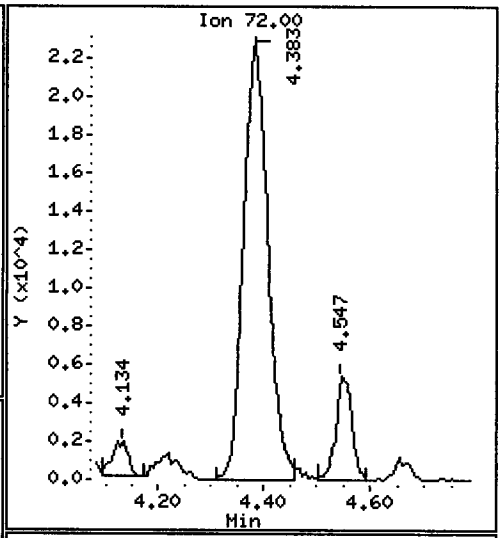
Column phase: RTXVMS

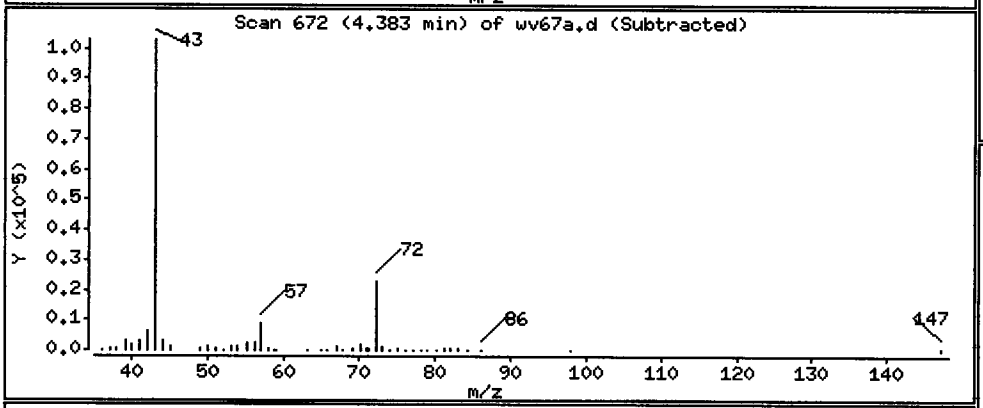
Column diameter: 0.18

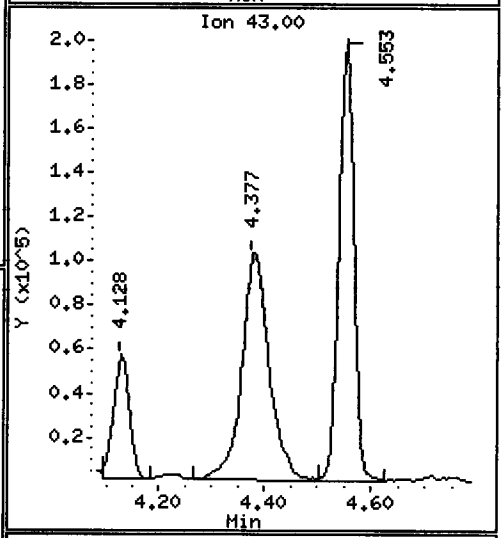
29 2-Butanone

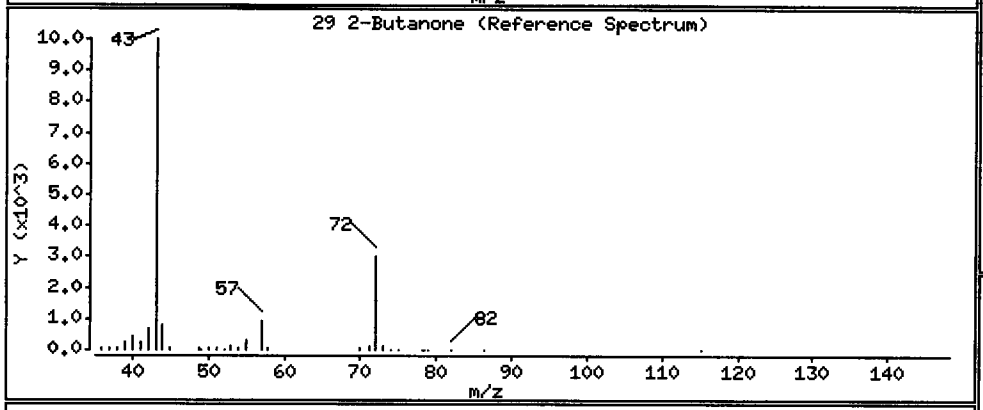
Concentration: 18.733 ug/Kg

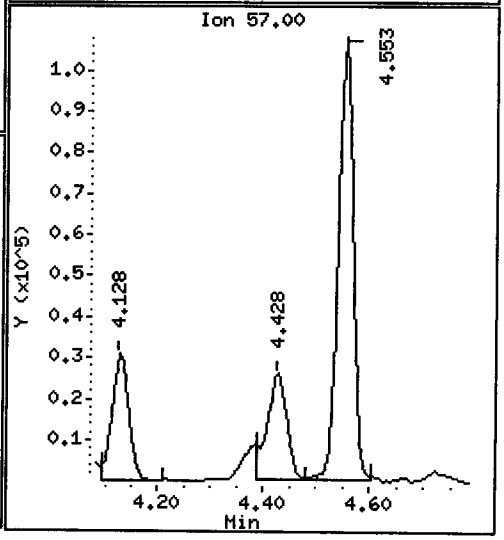


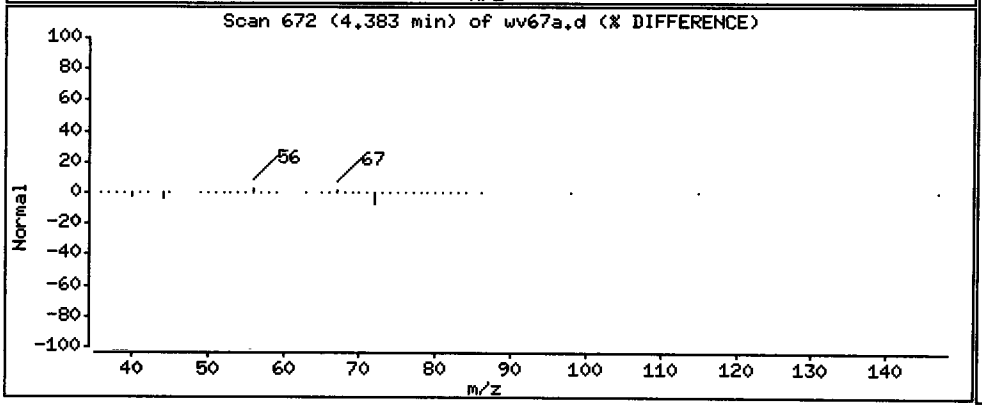












Data File: /chem1/nt5.i/27JUN13.b/wv67a.d

Date : 27-JUN-2013 22:04

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,14.13,0

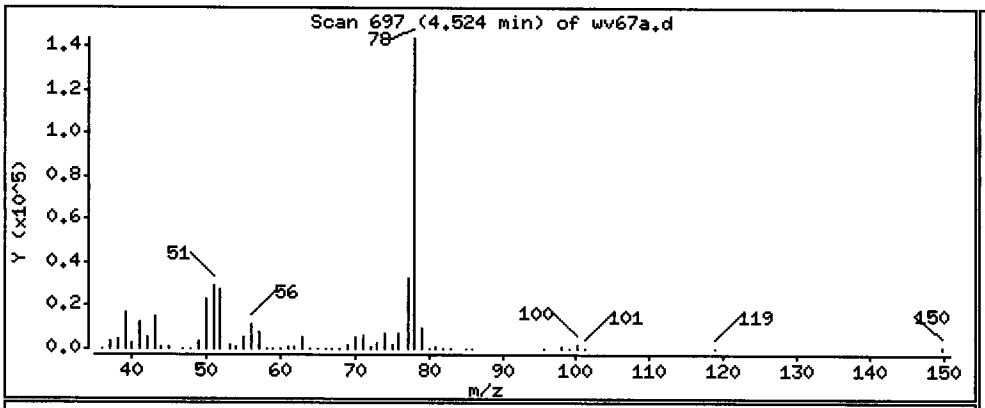
Operator: PB

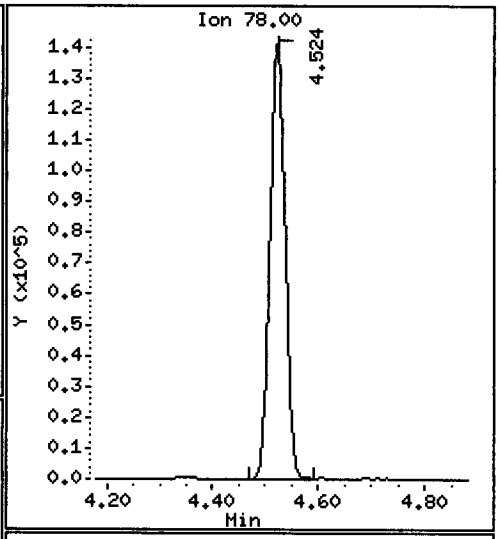
Column phase: RTXVMS

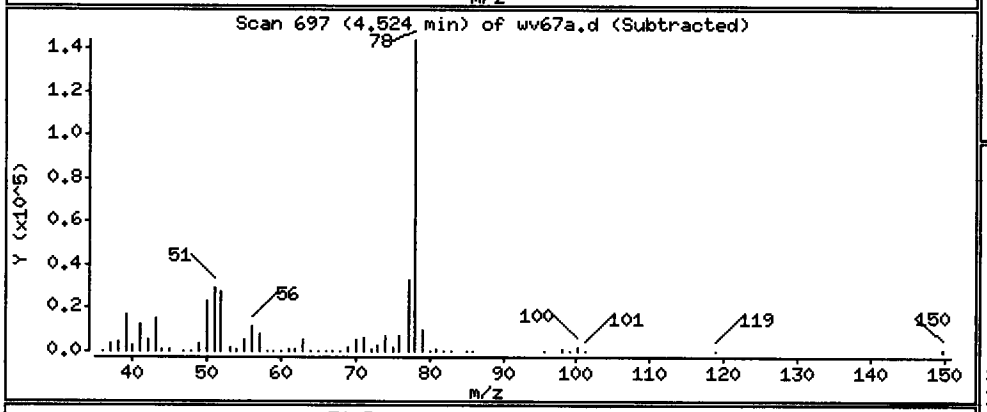
Column diameter: 0.18

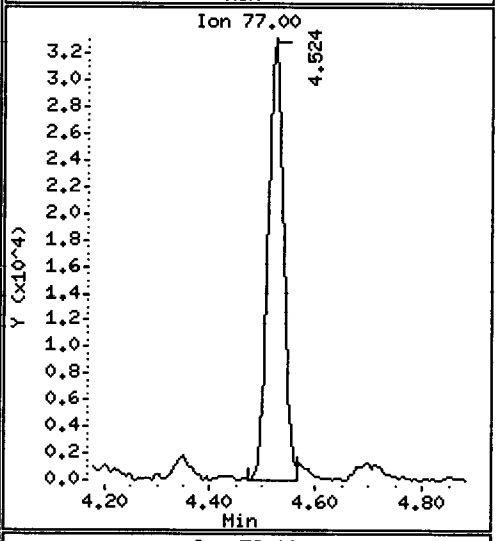
30 Benzene

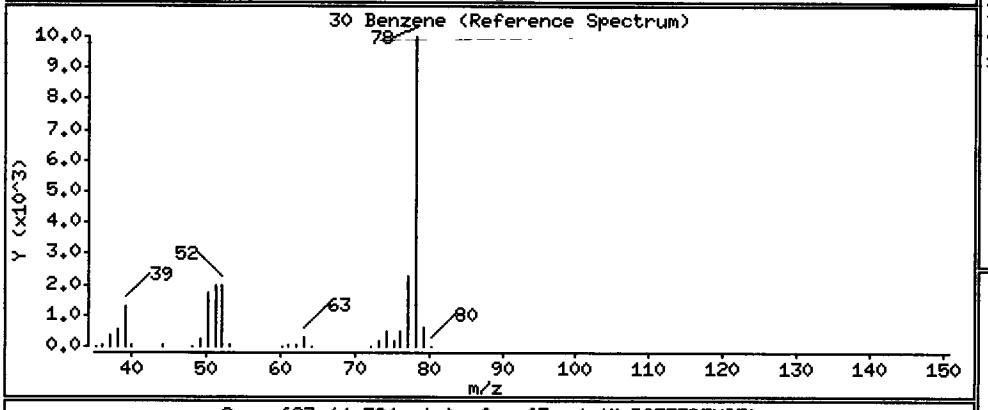
Concentration: 2.269 ug/Kg

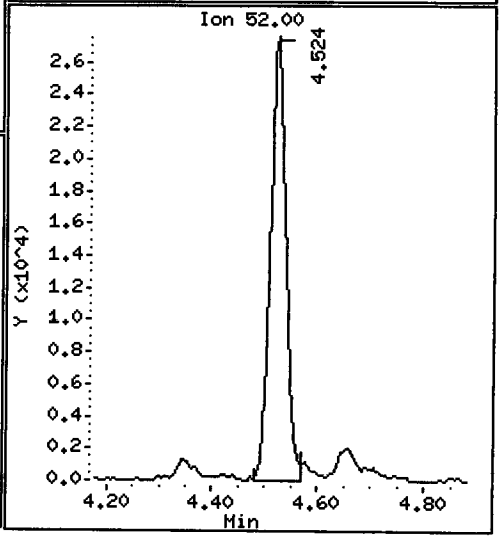


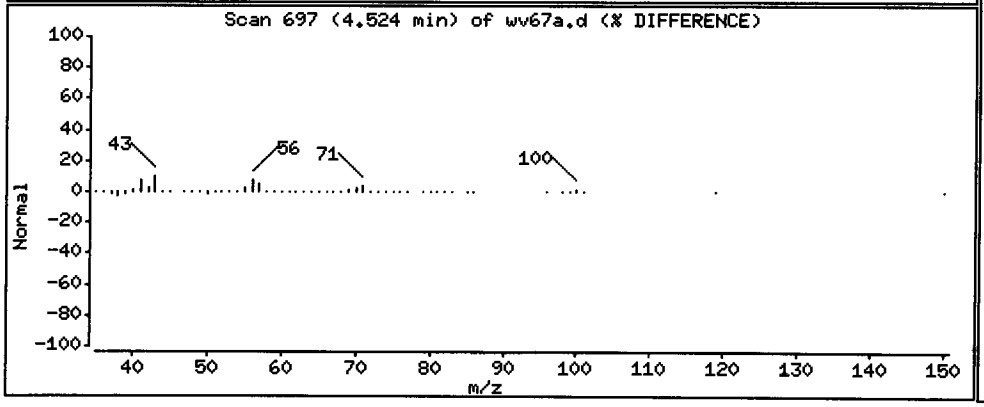












Data File: /chem1/nt5.i/27JUN13.b/wv67a.d

Date : 27-JUN-2013 22:04

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,14,13,0

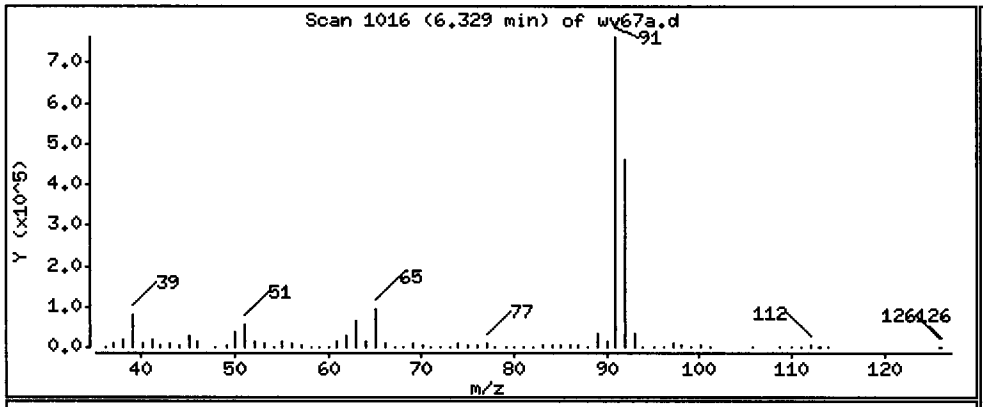
Operator: PB

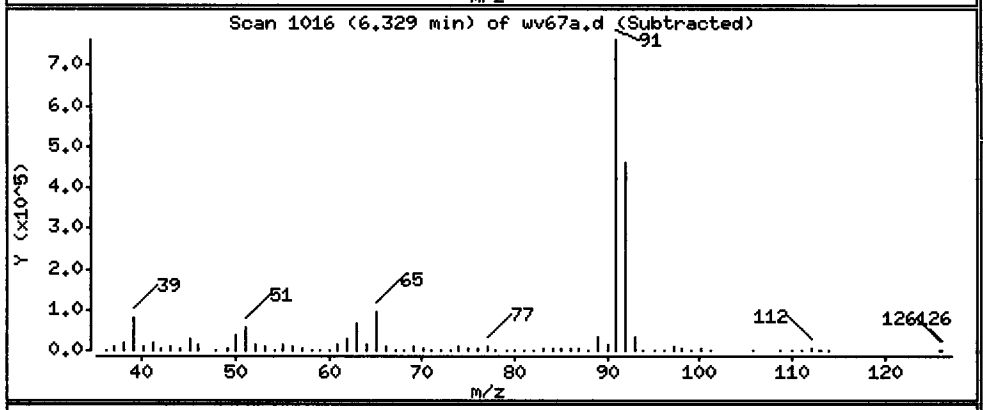
Column phase: RTXVMS

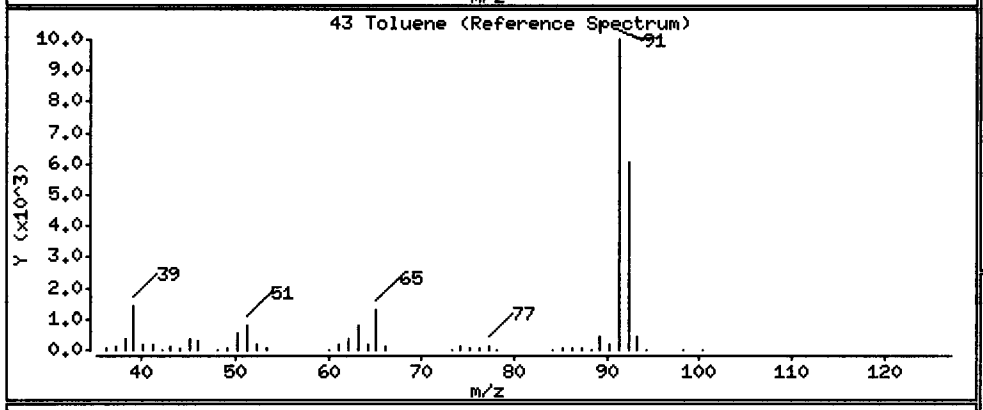
Column diameter: 0.18

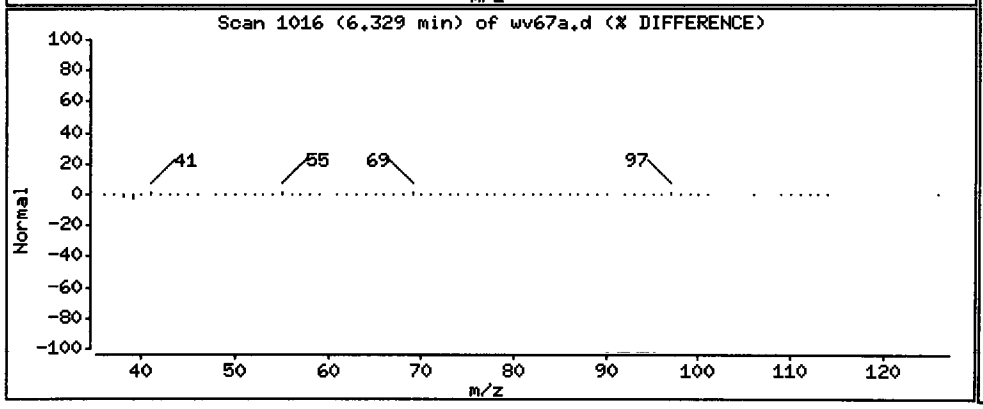
43 Toluene

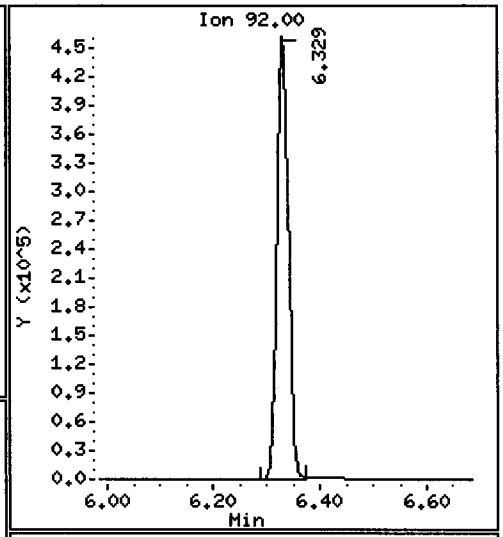
Concentration: 8.512 ug/Kg

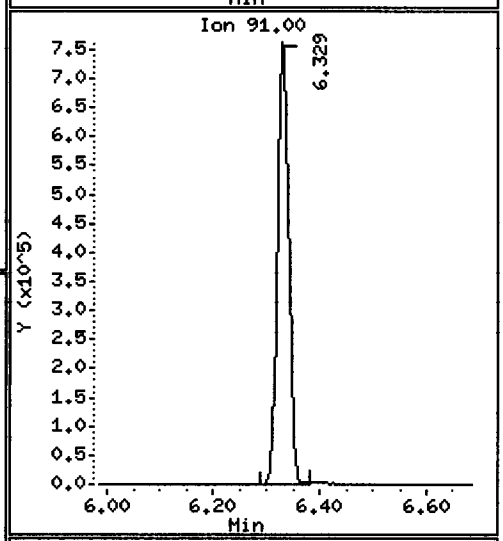


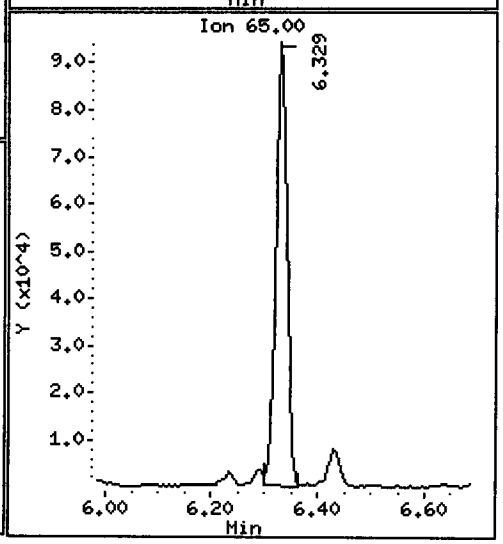












Data File: /chem1/nt5.i/27JUN13.b/wv67a.d

Date : 27-JUN-2013 22:04

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,14,13,0

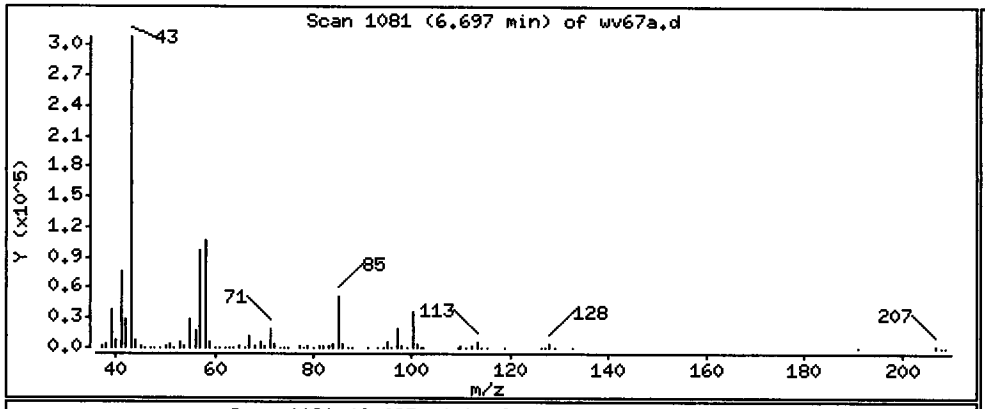
Operator: PB

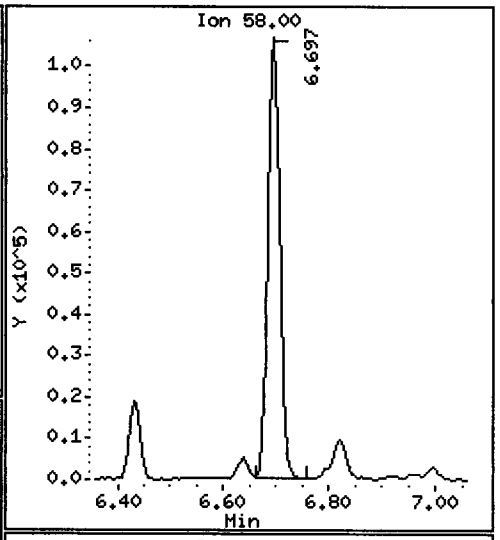
Column phase: RTXVMS

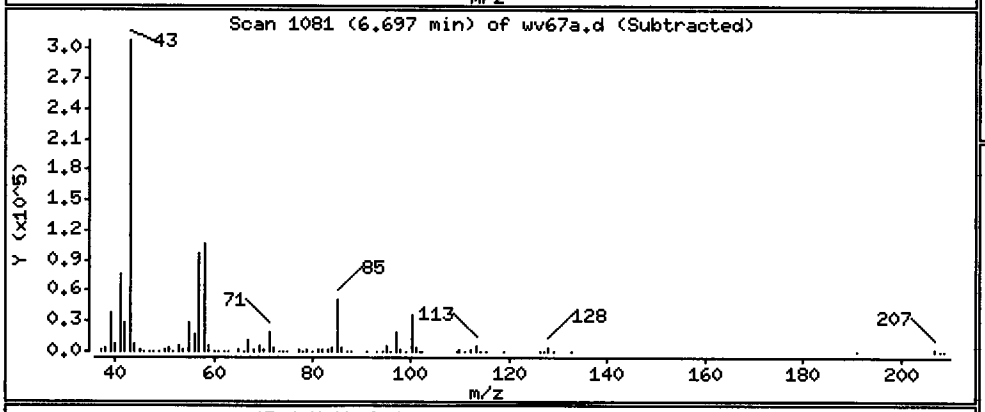
Column diameter: 0.18

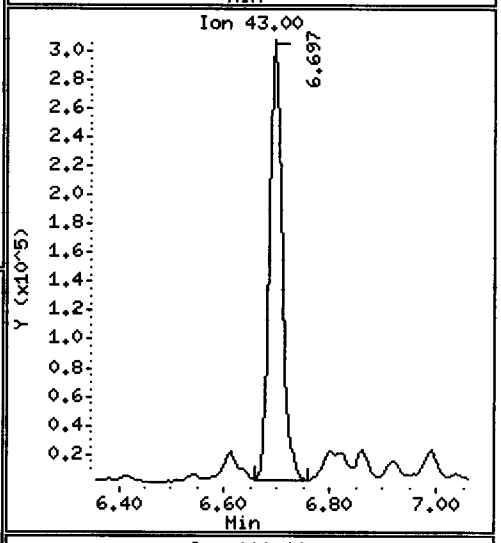
45 4-Methyl-2-Pentanone

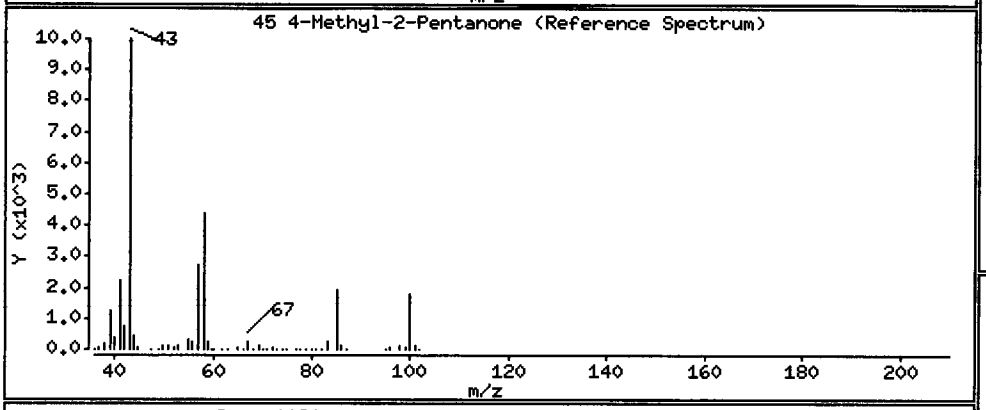
Concentration: 11.064 ug/Kg

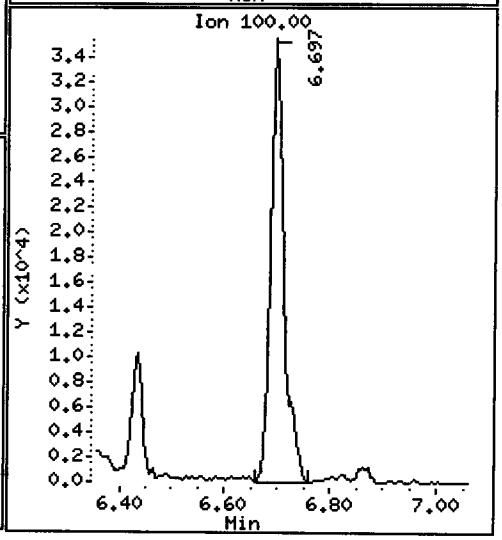


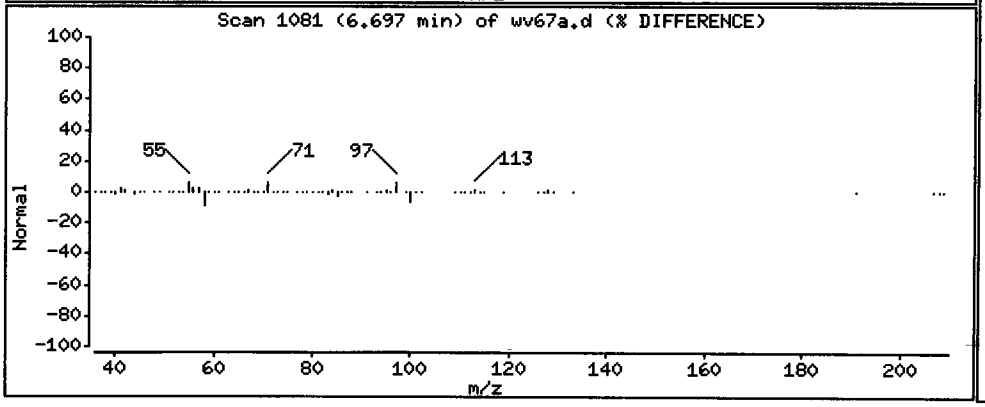












Data File: /chem1/nt5.i/27JUN13.b/wv67a.d

Date : 27-JUN-2013 22:04

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,14.13,0

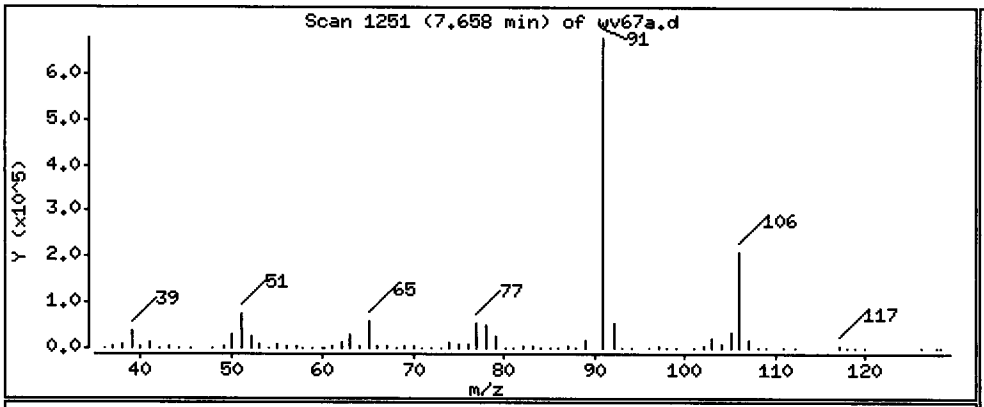
Operator: PB

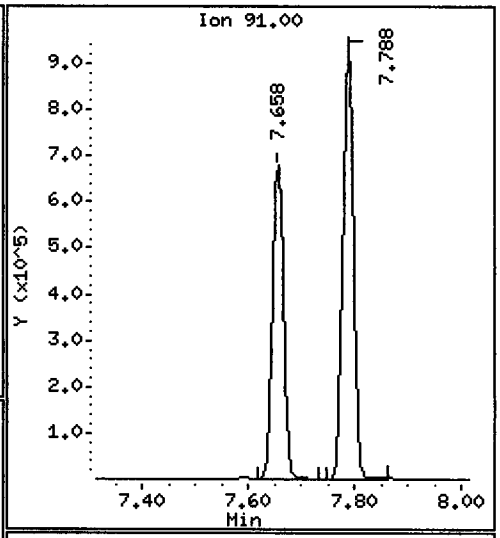
Column phase: RTXVMS

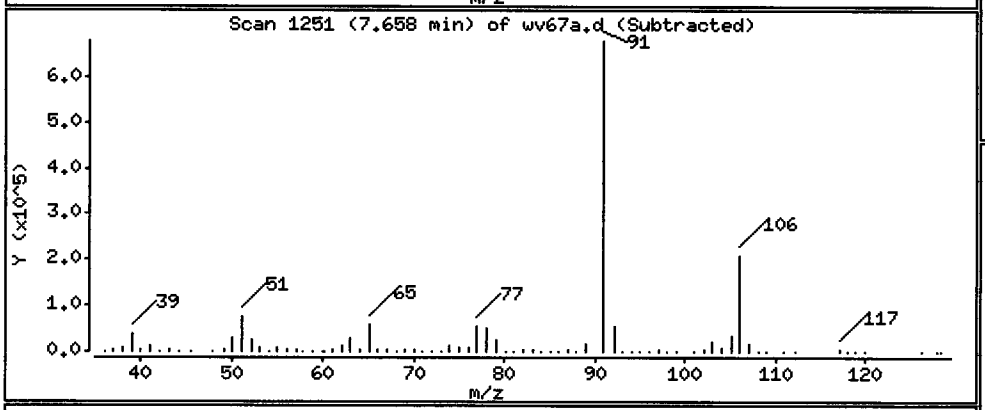
Column diameter: 0.18

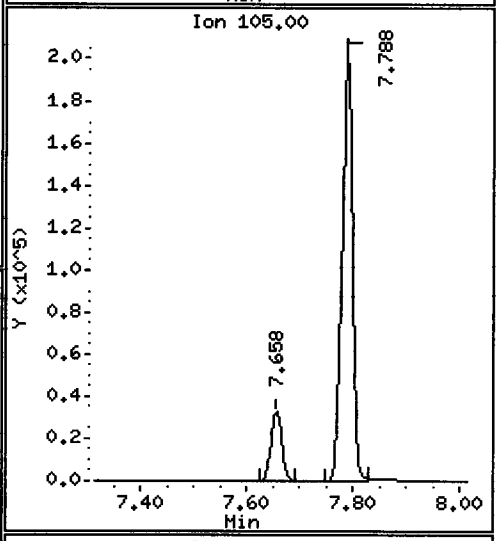
54 Ethyl Benzene

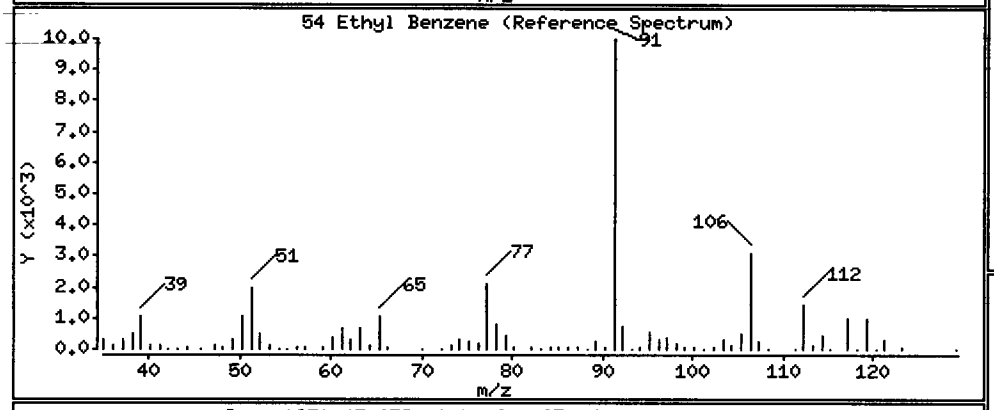
Concentration: 9.649 ug/Kg

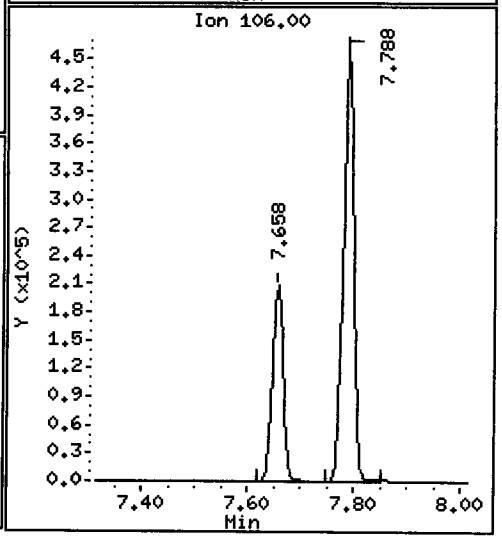


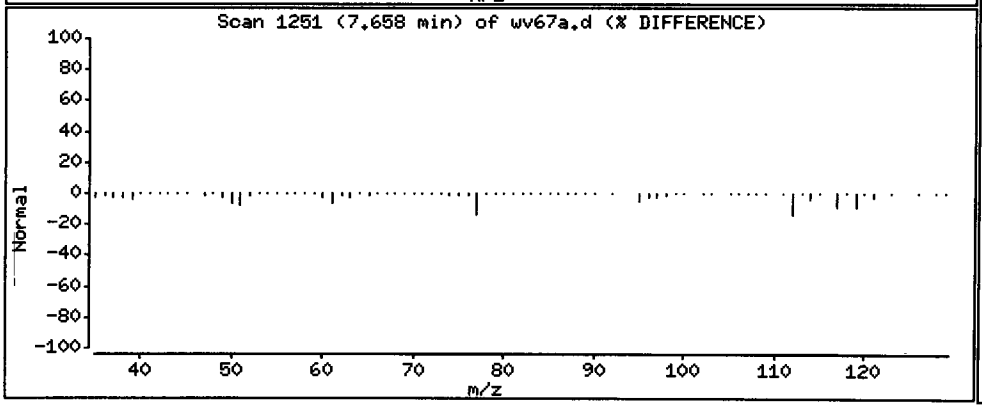












Data File: /chem1/nt5.i/27JUN13.b/wv67a.d

Date : 27-JUN-2013 22:04

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,14.13,0

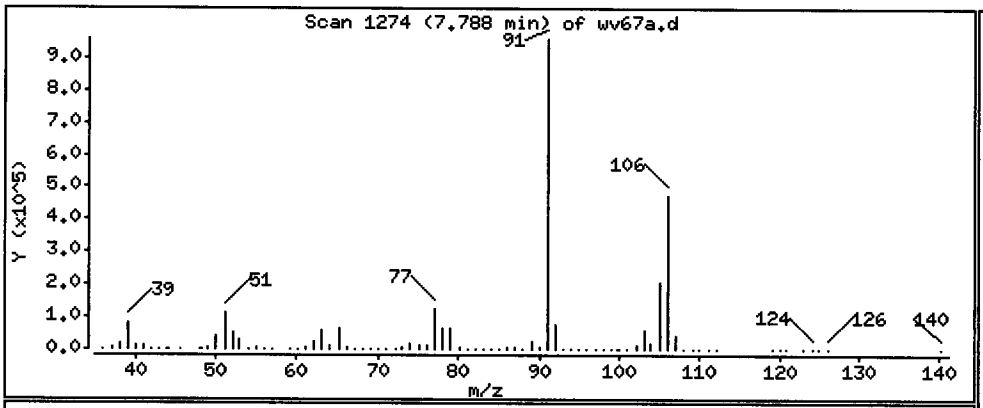
Operator: PB

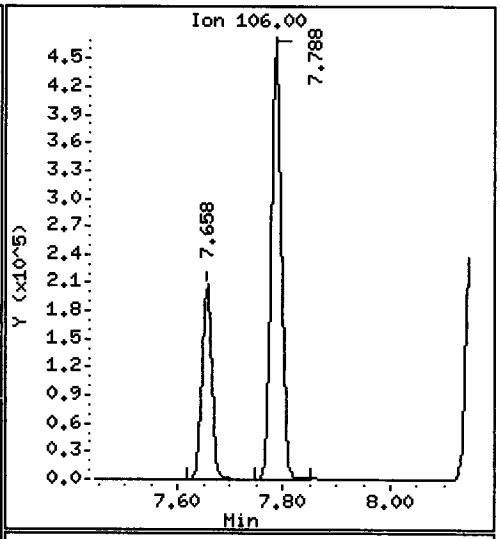
Column phase: RTXVMS

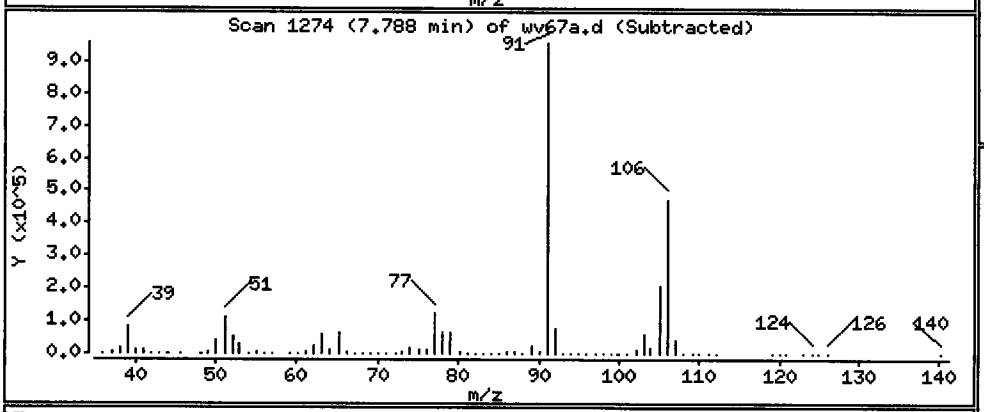
Column diameter: 0.18

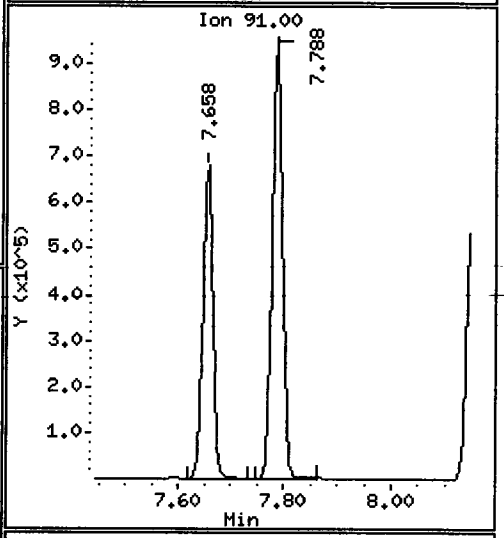
56 m,p-xylene

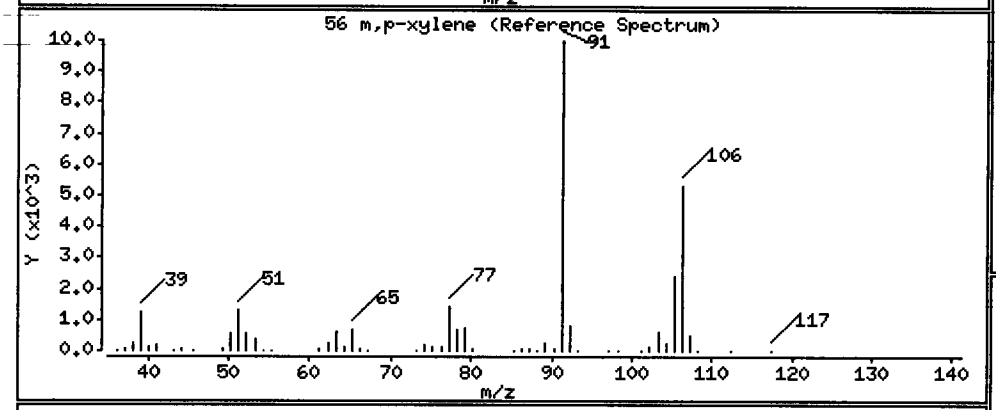
Concentration: 17.170 ug/Kg

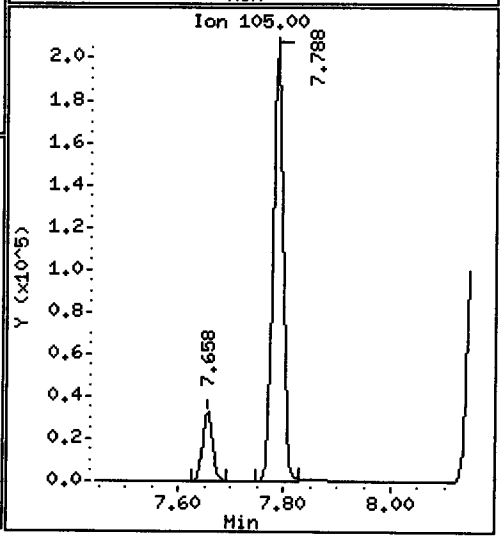


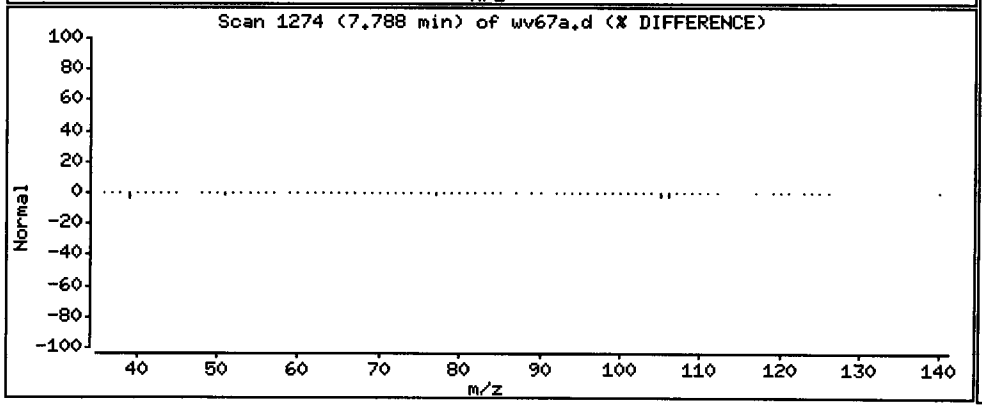












Data File: /chem1/nt5.i/27JUN13.b/wv67a.d

Date : 27-JUN-2013 22:04

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,14.13,0

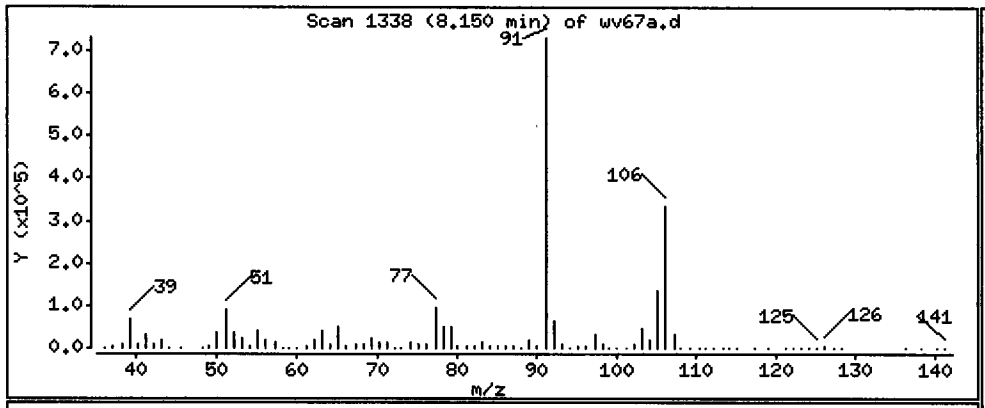
Operator: PB

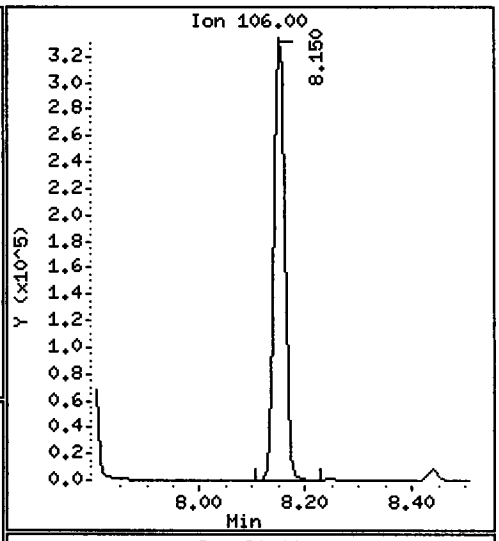
Column phase: RTXVMS

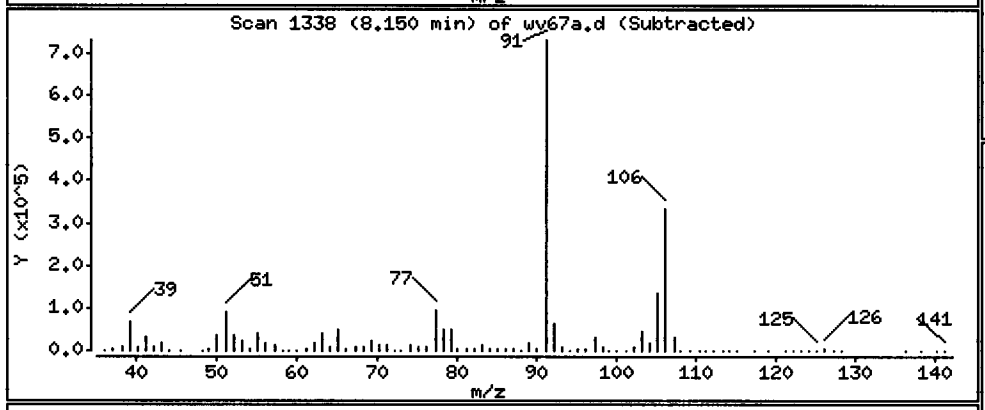
Column diameter: 0.18

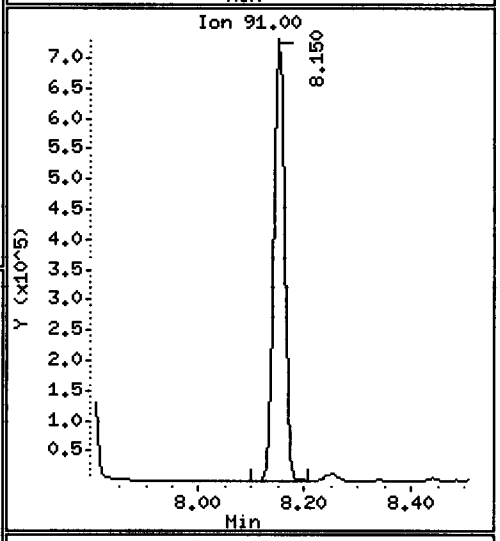
57 o-Xylene

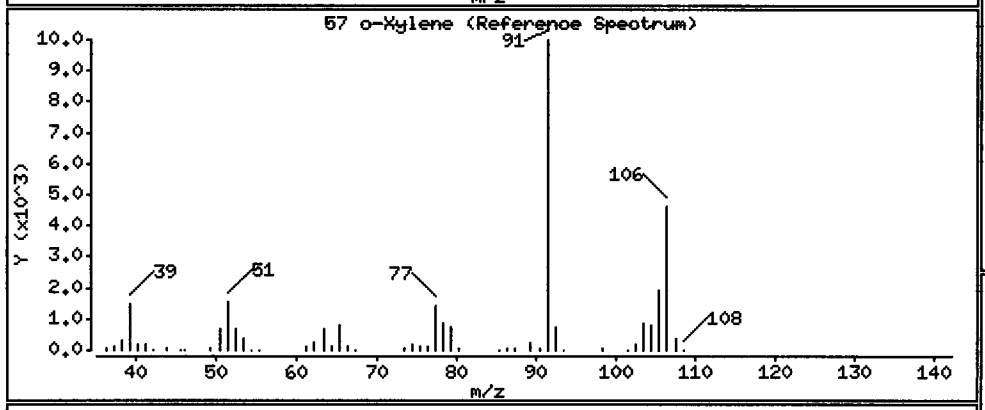
Concentration: 12.725 ug/Kg

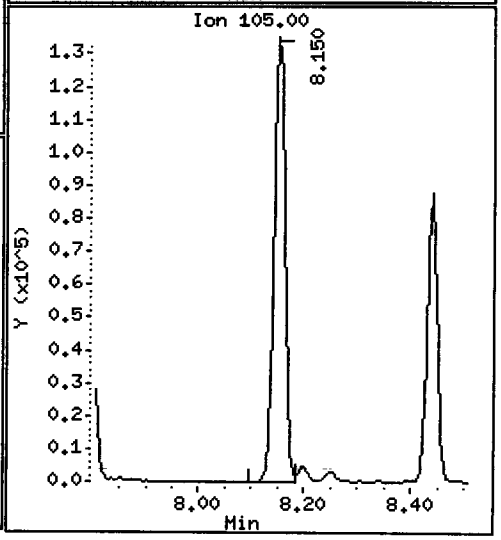


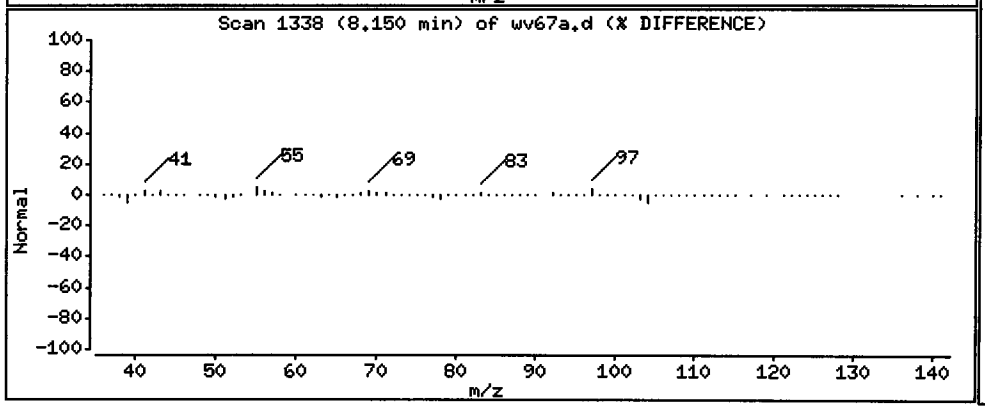












Data File: /chem1/nt5.i/27JUN13.b/wv67a.d

Date : 27-JUN-2013 22:04

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,14.13,0

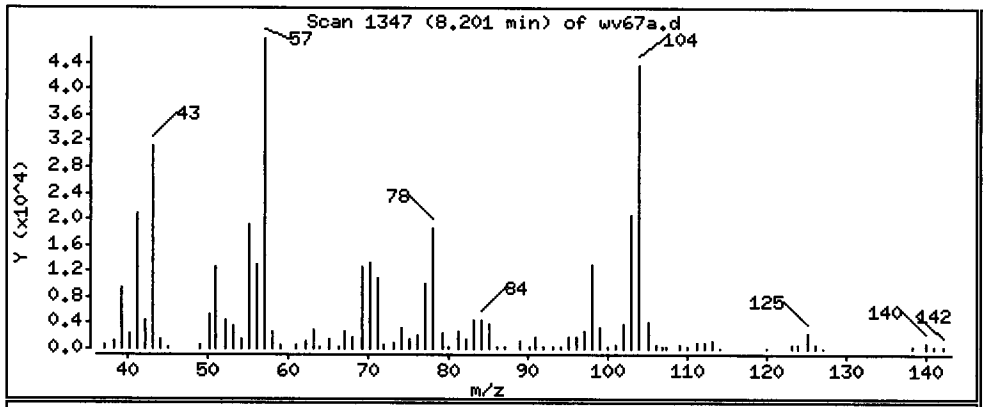
Operator: PB

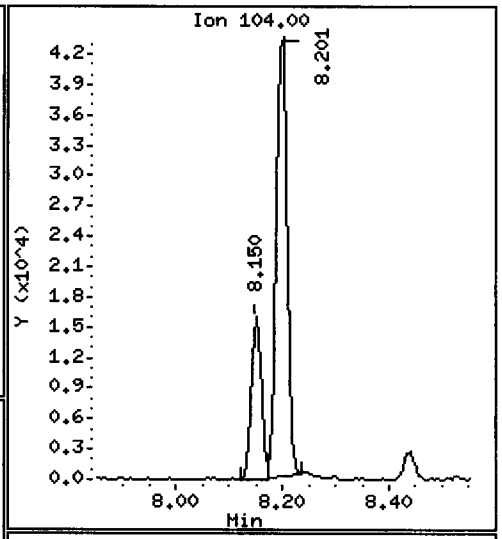
Column phase: RTXVMS

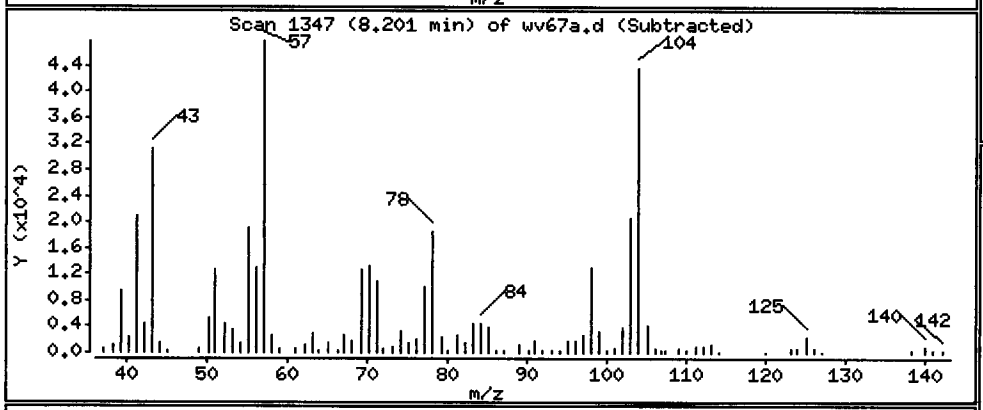
Column diameter: 0.18

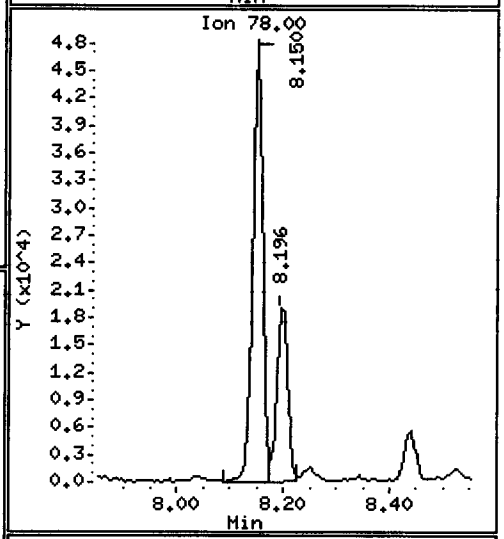
58 Styrene

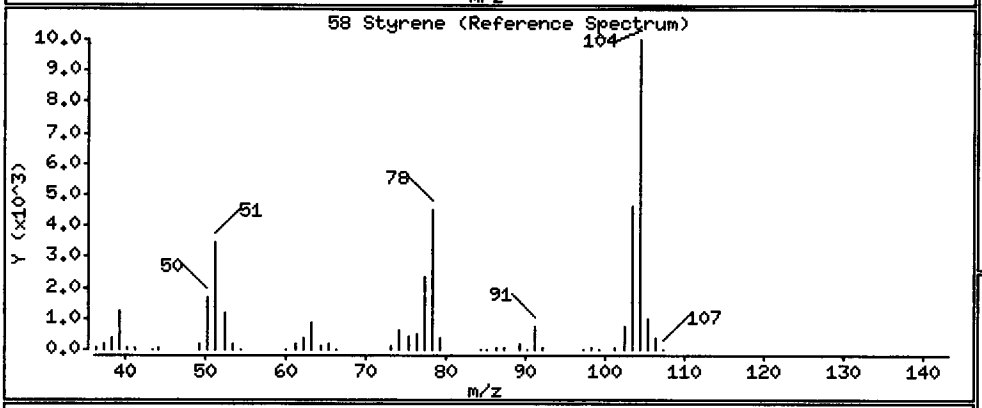
Concentration: 1.011 ug/Kg

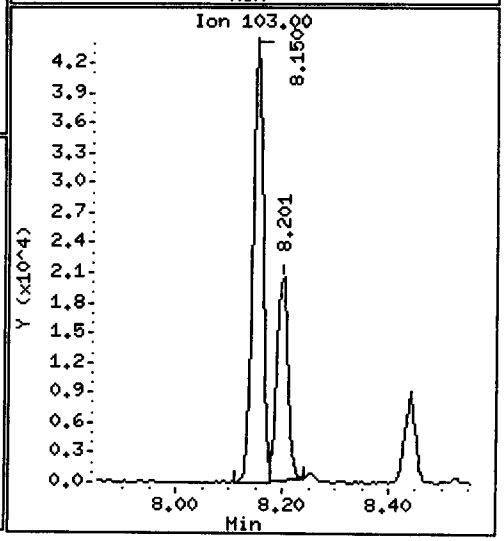


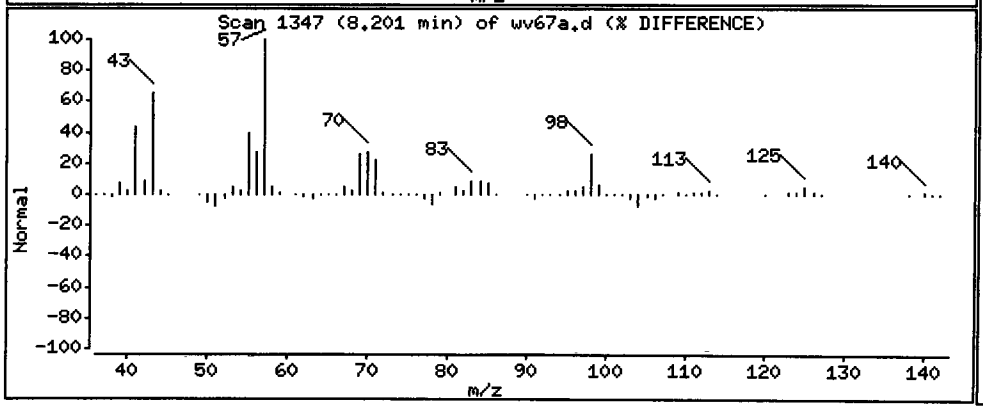












Data File: /chem1/nt5.i/27JUN13.b/wv67a.d

Date : 27-JUN-2013 22:04

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,14.13,0

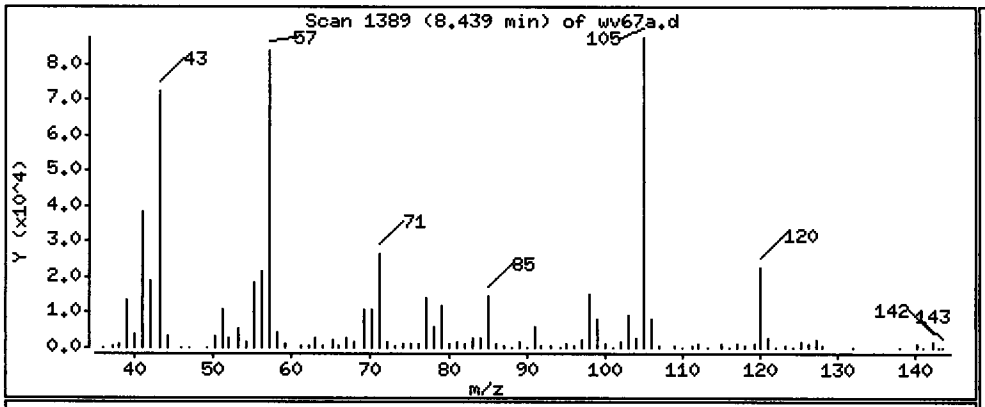
Operator: PB

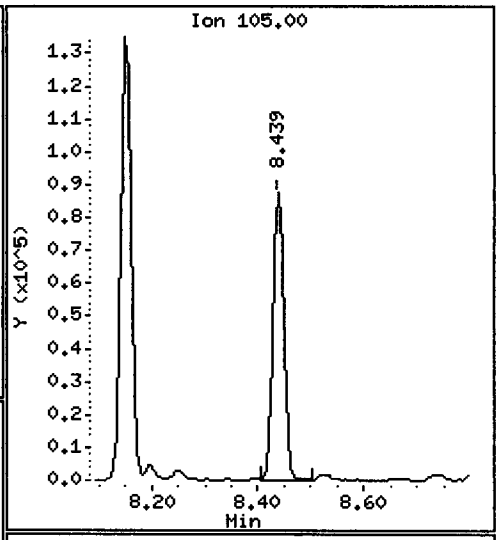
Column phase: RTXVMS

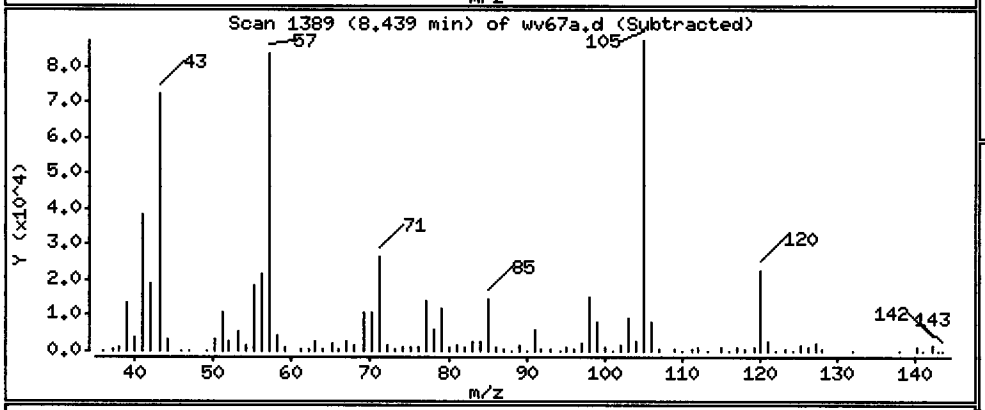
Column diameter: 0.18

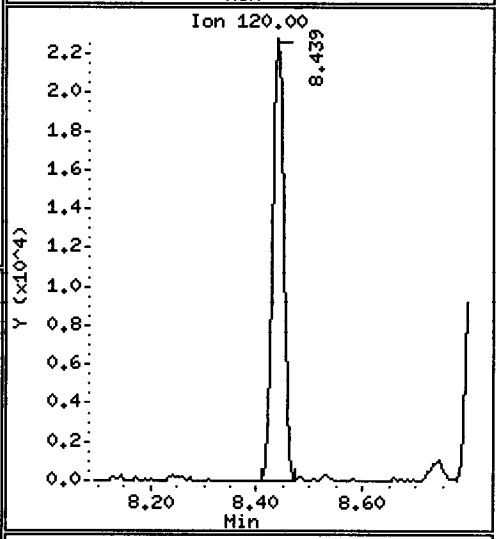
60 Isopropyl Benzene

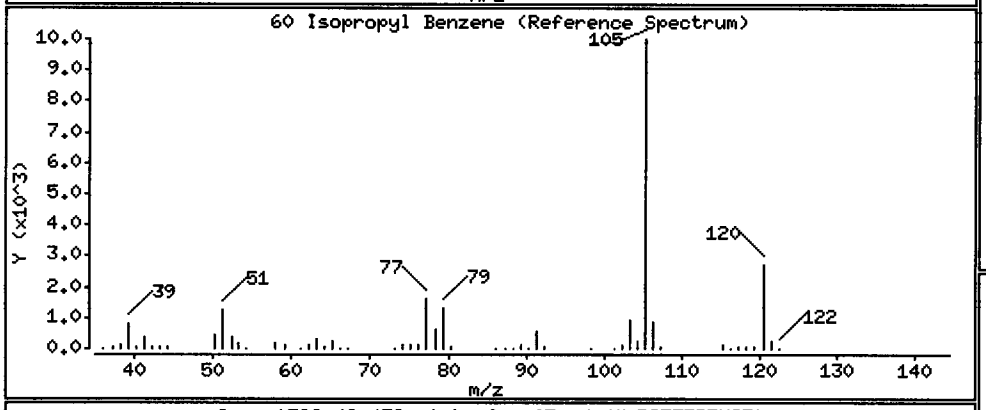
Concentration: 2.823 ug/Kg

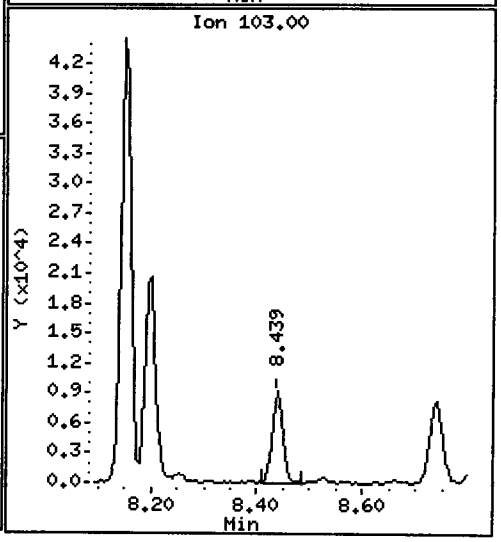


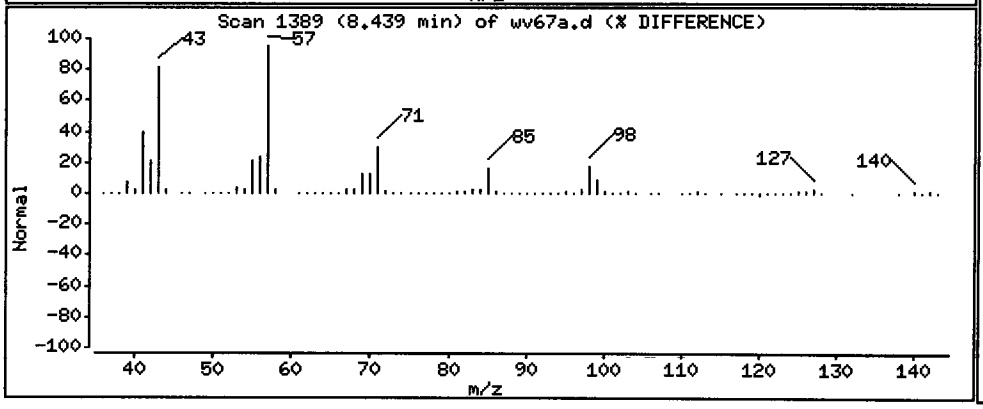












Data File: /chem1/nt5.i/27JUN13.b/wv67a.d

Date : 27-JUN-2013 22:04

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,14,13,0

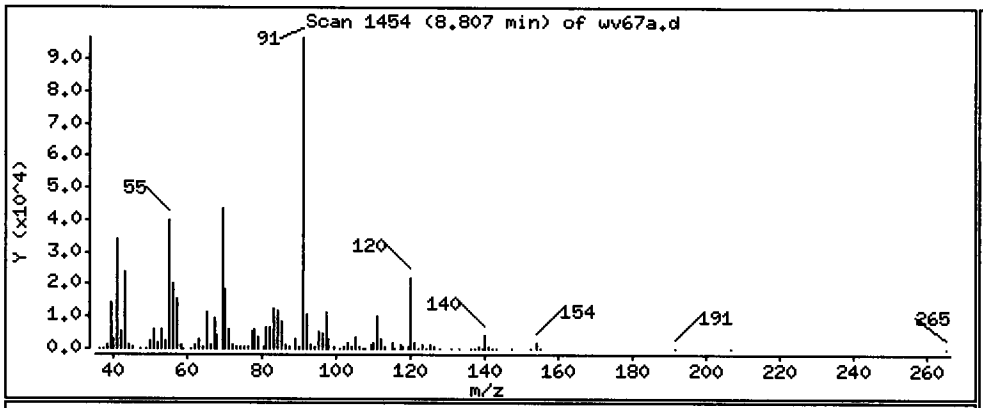
Operator: PB

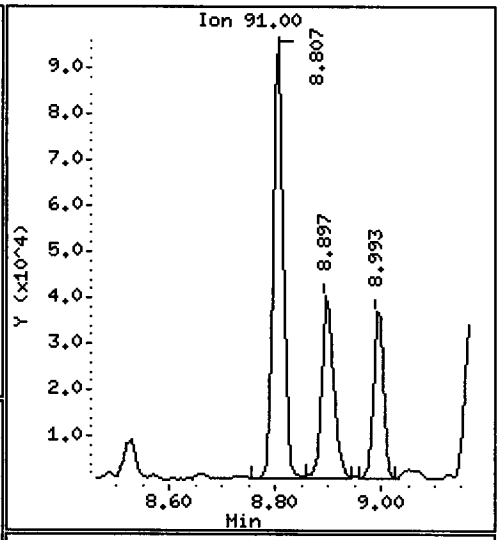
Column phase: RTXVMS

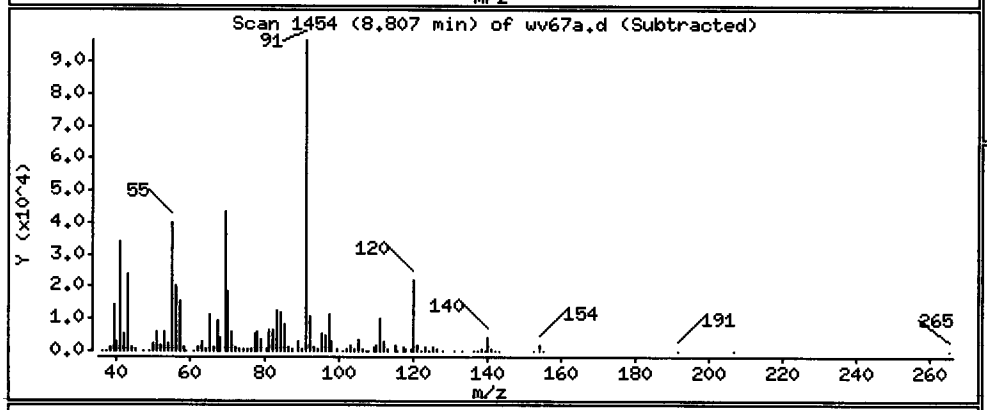
Column diameter: 0.18

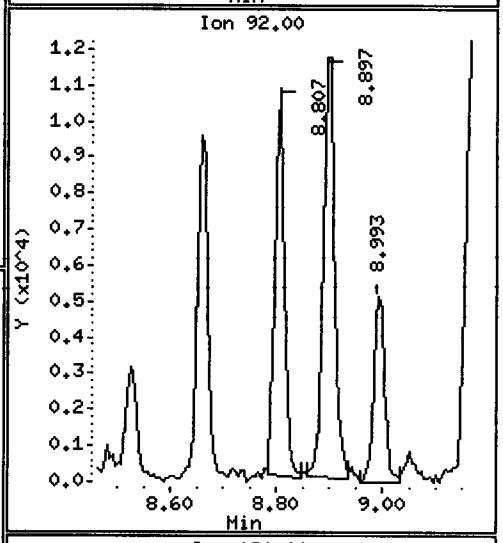
64 N-Propyl Benzene

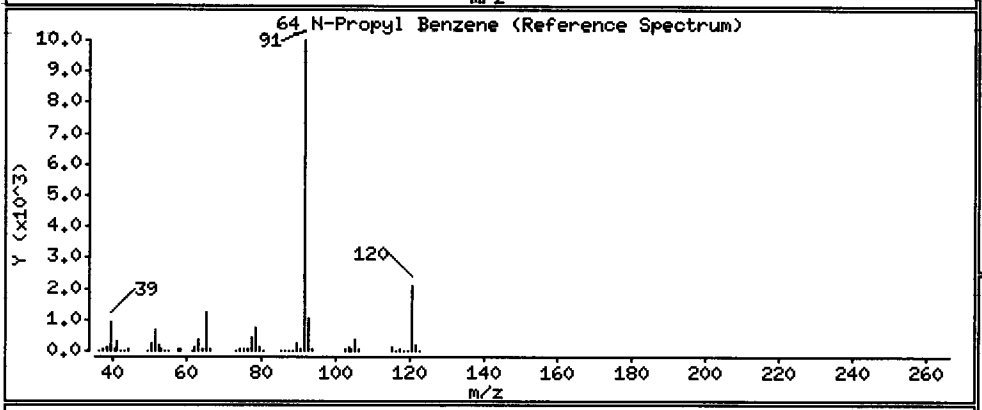
Concentration: 2.534 ug/Kg

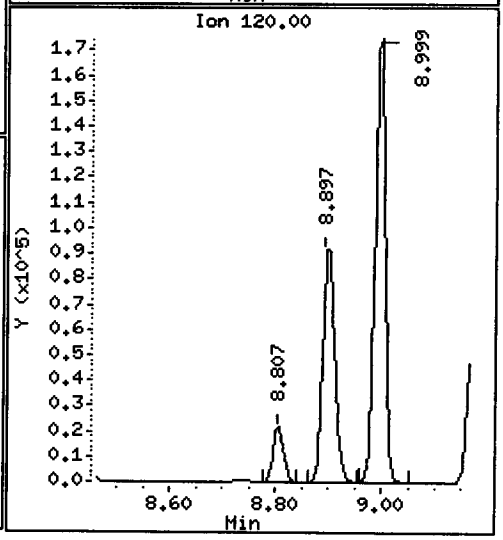


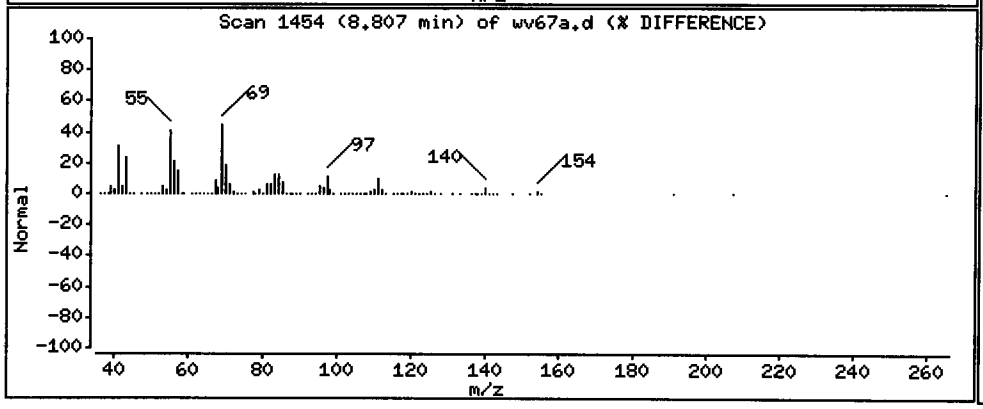












Data File: /chem1/nt5.i/27JUN13.b/wv67a.d

Date : 27-JUN-2013 22:04

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,14,13,0

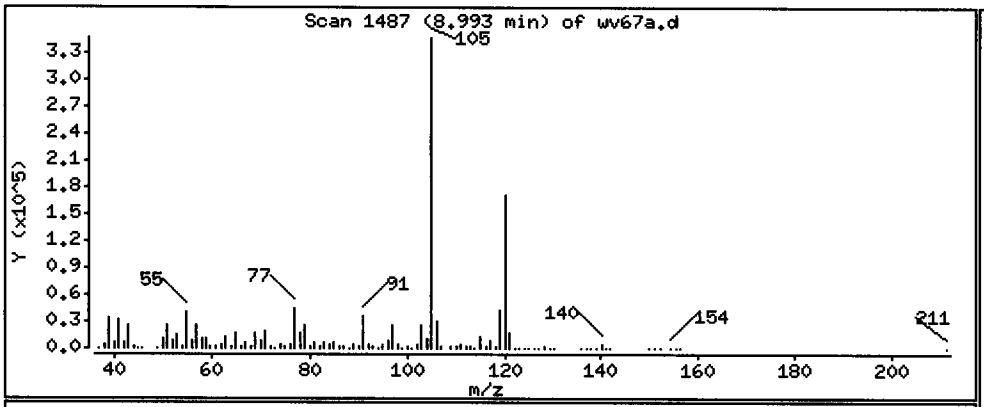
Operator: PB

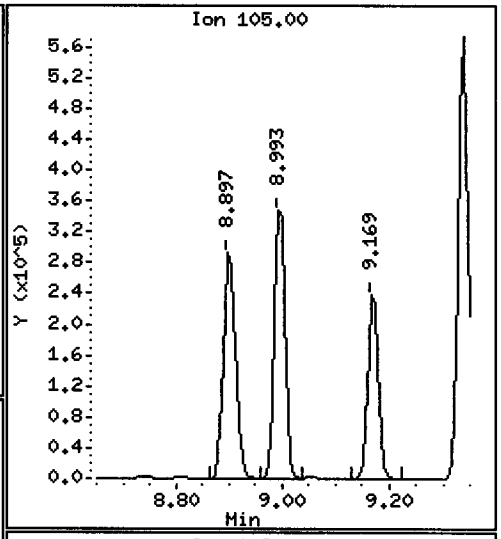
Column phase: RTXVMS

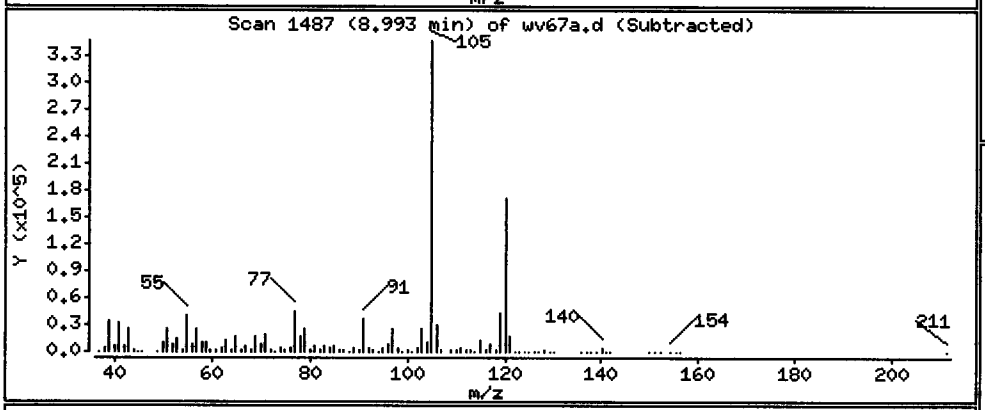
Column diameter: 0.18

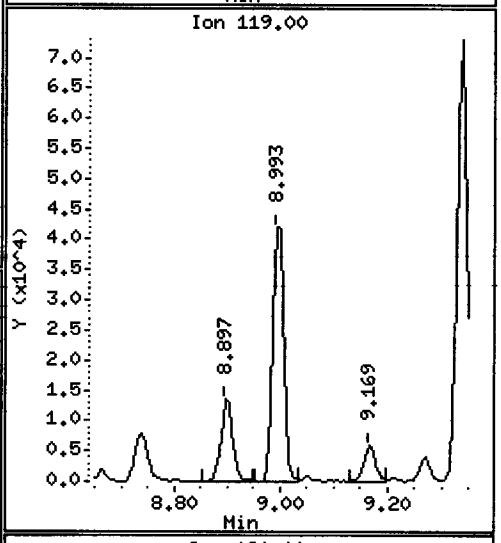
67 1,3,5-Trimethyl Benzene

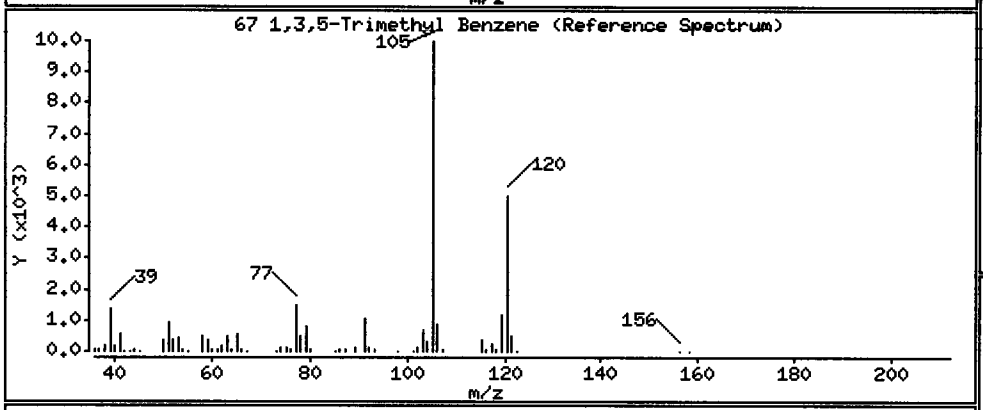
Concentration: 12.991 ug/Kg

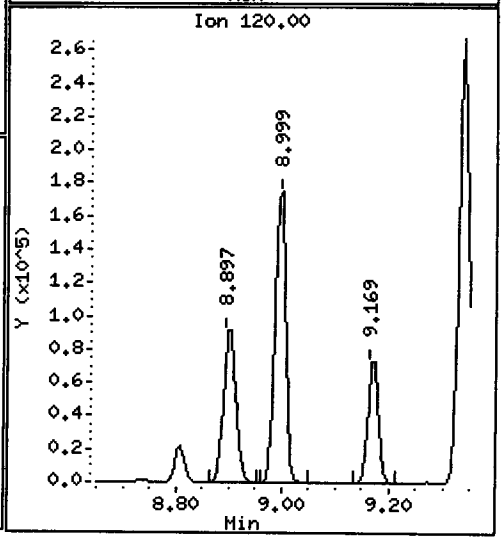


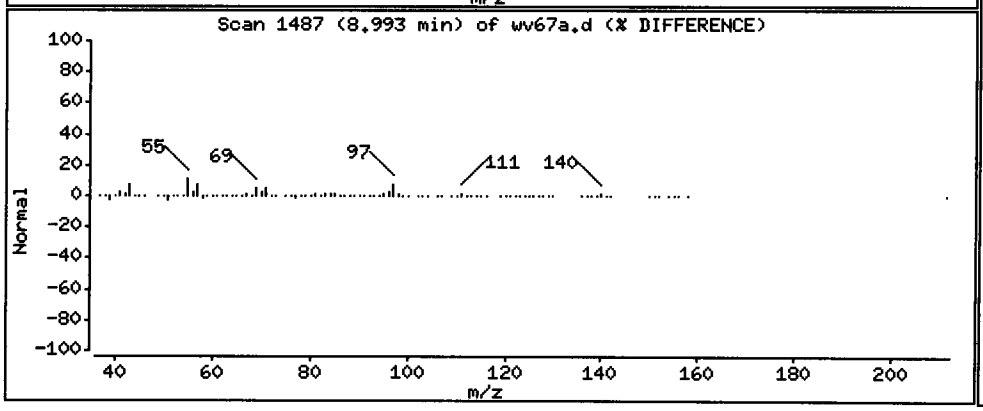












Data File: /chem1/nt5.i/27JUN13.b/wv67a.d

Date : 27-JUN-2013 22:04

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,14,13,0

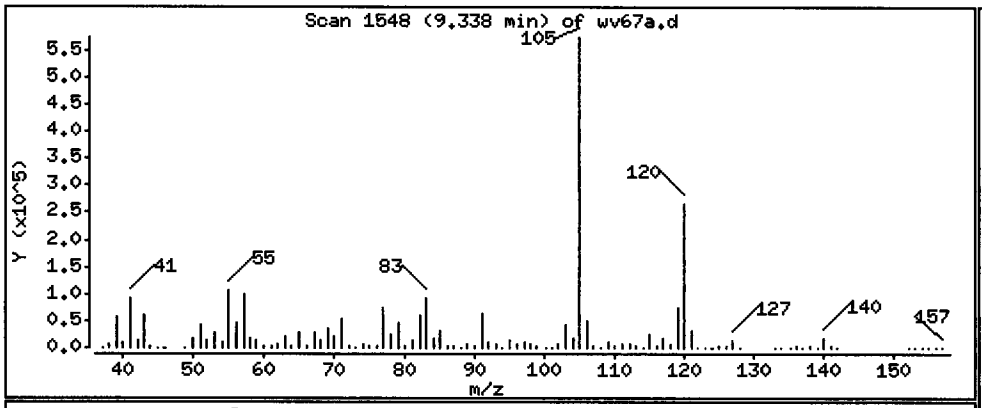
Operator: PB

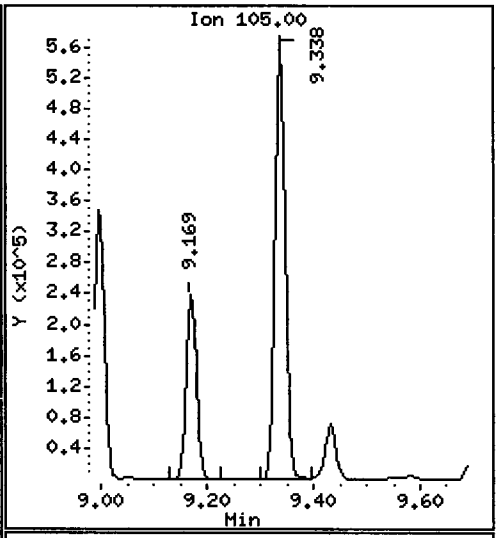
Column phase: RTXVMS

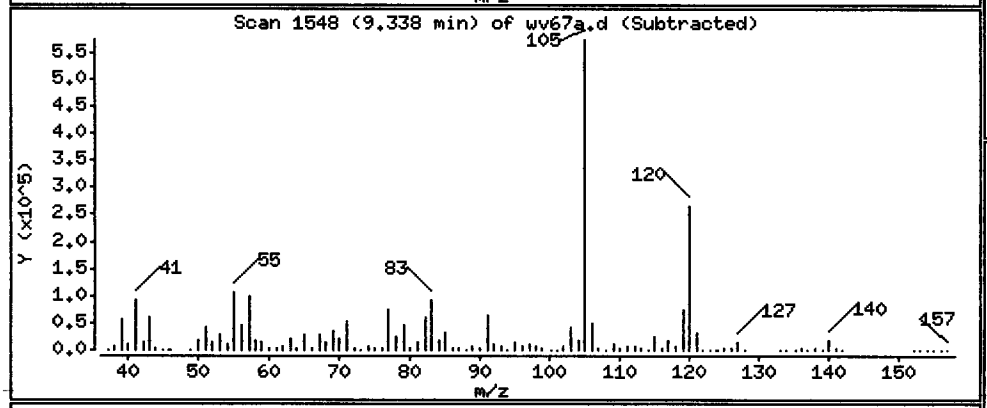
Column diameter: 0.18

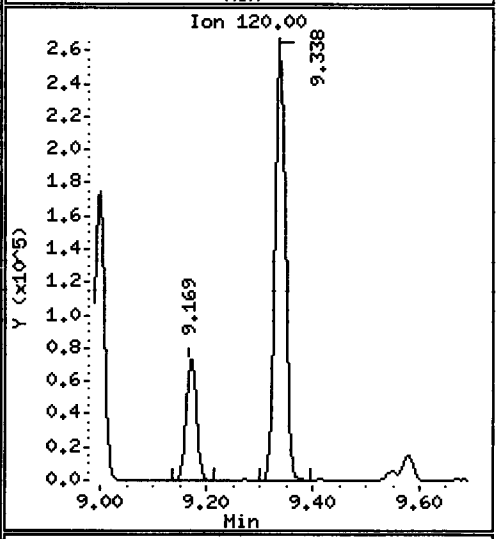
72 1,2,4-Trimethylbenzene

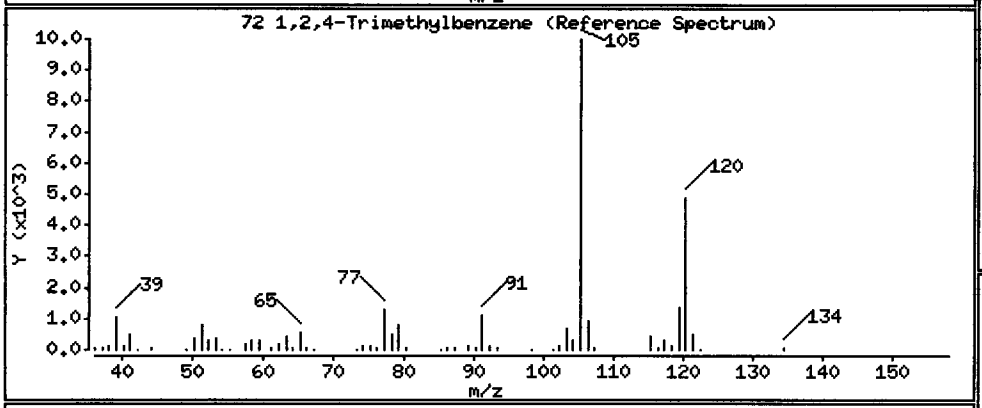
Concentration: 21.046 ug/Kg

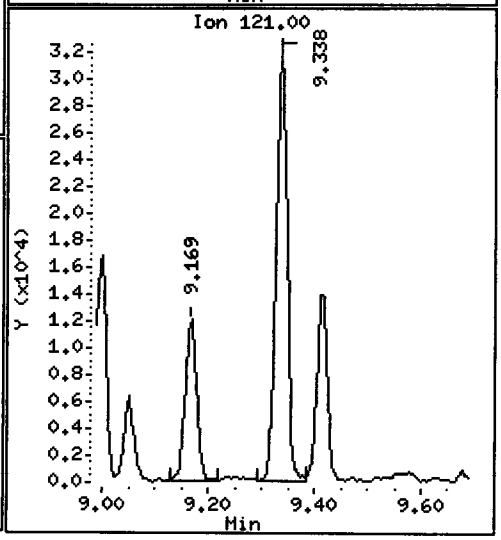


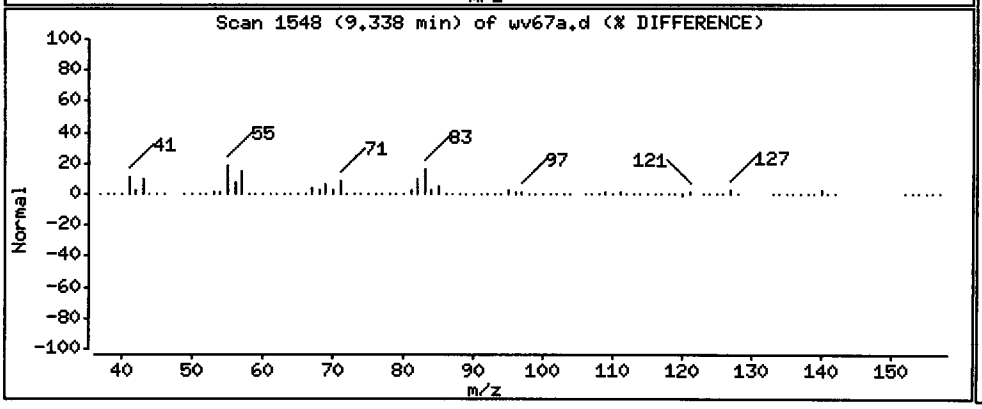












Data File: /chem1/nt5.i/27JUN13.b/wv67a.d

Date : 27-JUN-2013 22:04

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,14.13,0

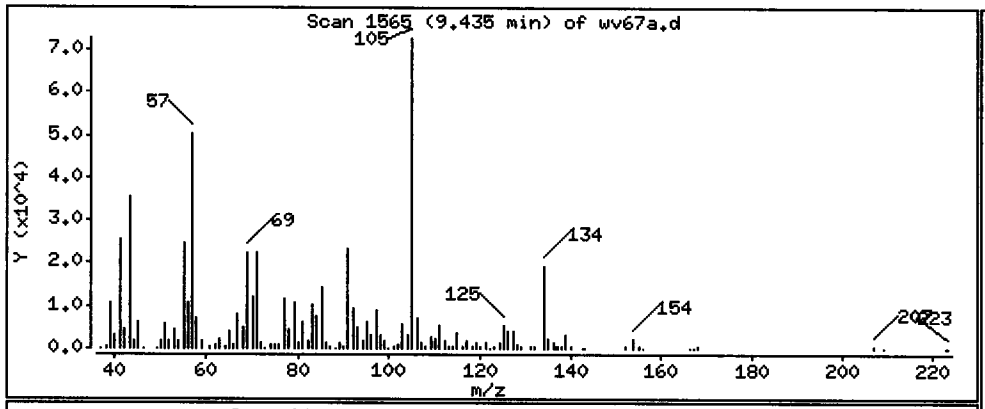
Operator: PB

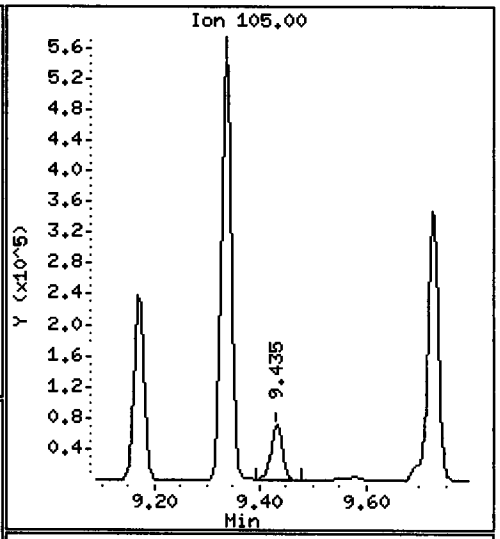
Column phase: RTXVMS

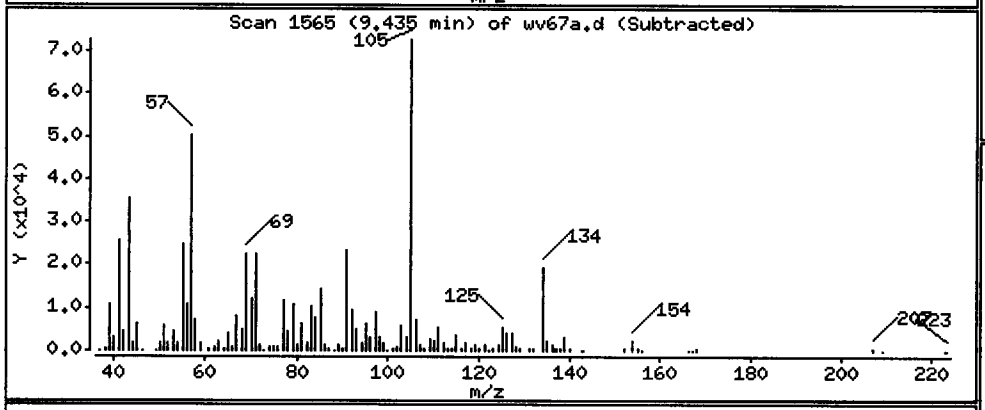
Column diameter: 0.18

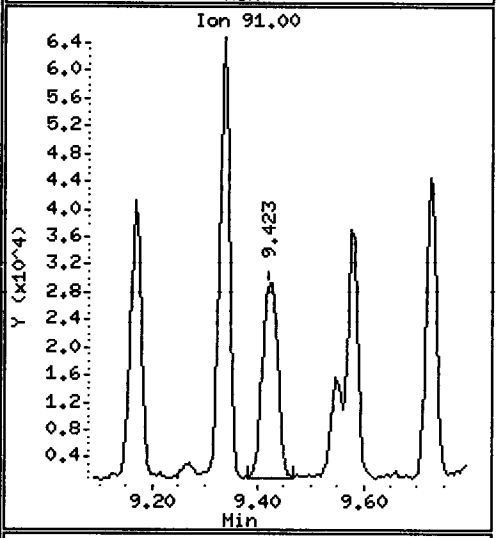
73 S-Butyl Benzene

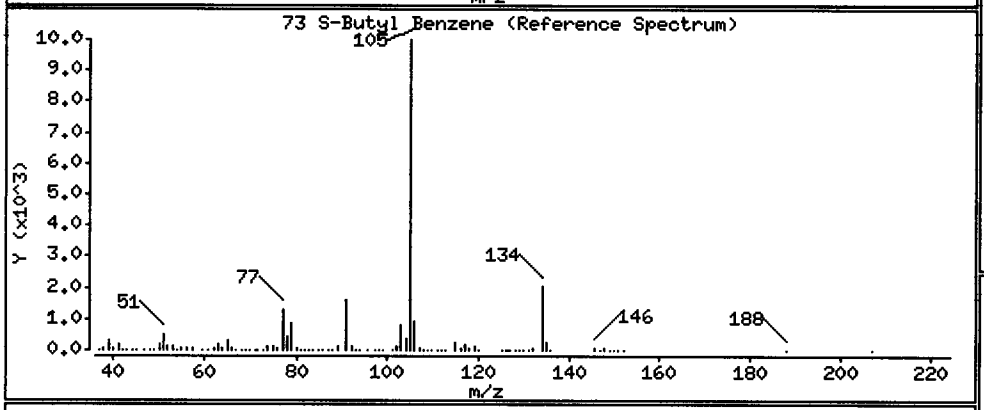
Concentration: 2.266 ug/Kg

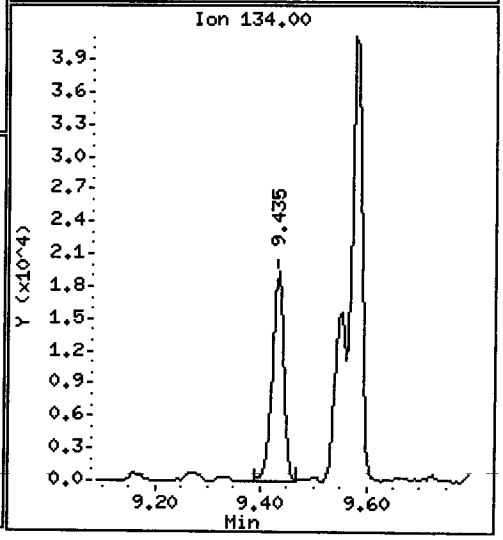


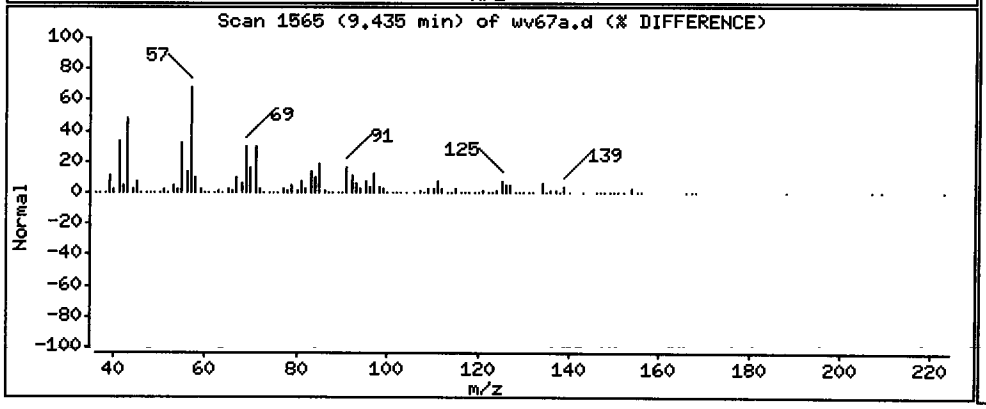












Data File: /chem1/nt5.i/27JUN13.b/wv67a.d

Date : 27-JUN-2013 22:04

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,14.13,0

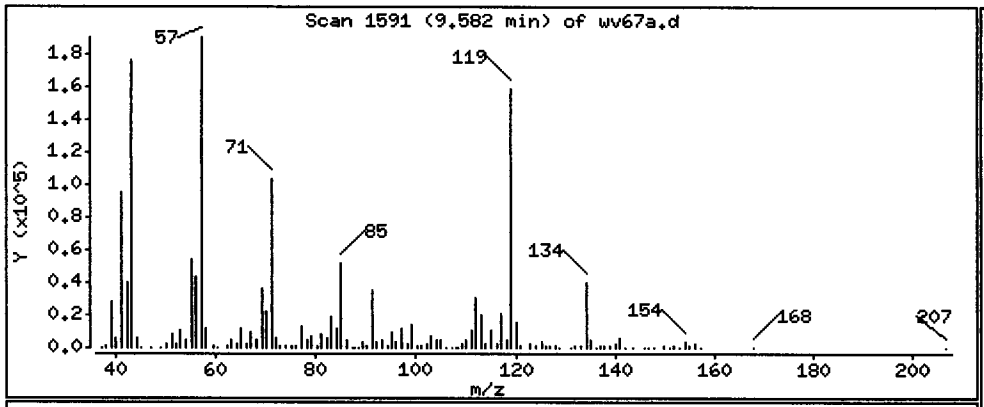
Operator: PB

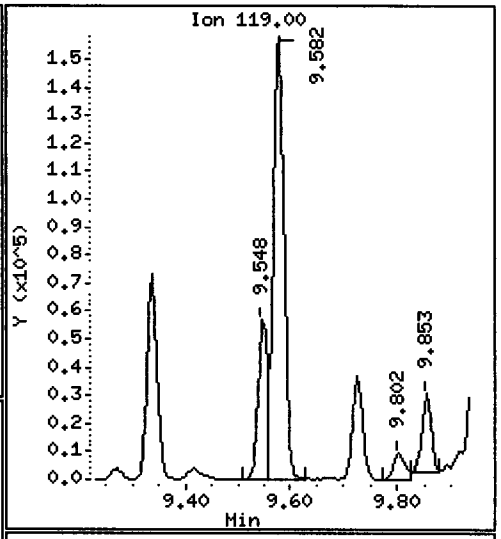
Column phase: RTXVMS

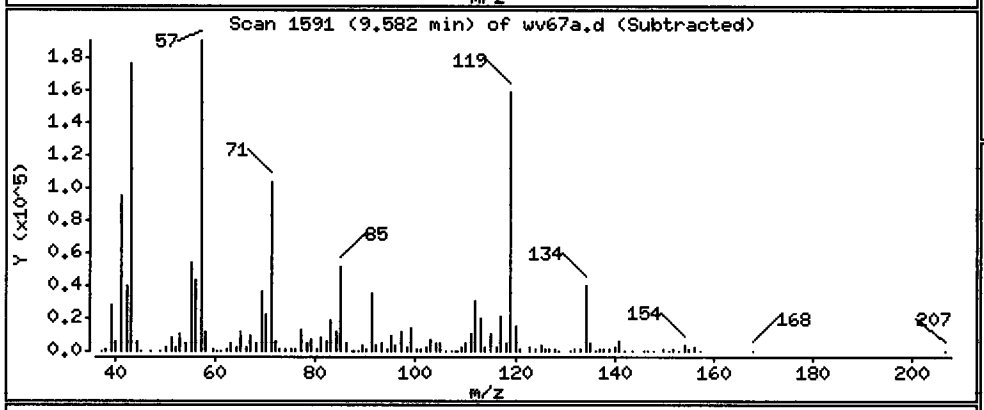
Column diameter: 0.18

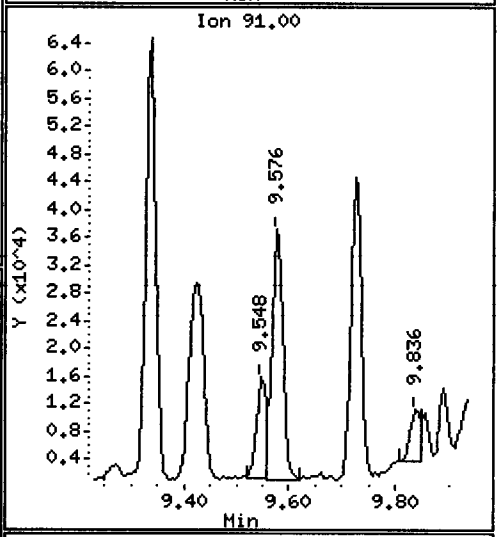
74 4-Isopropyl Toluene

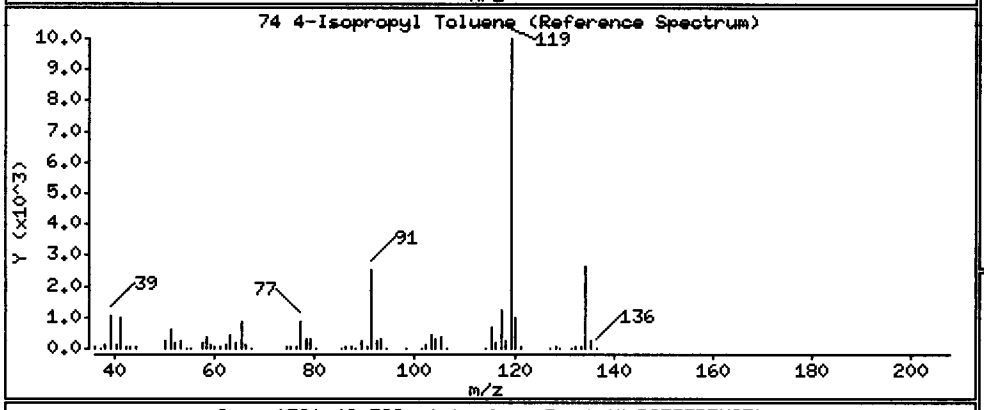
Concentration: 6.077 ug/Kg

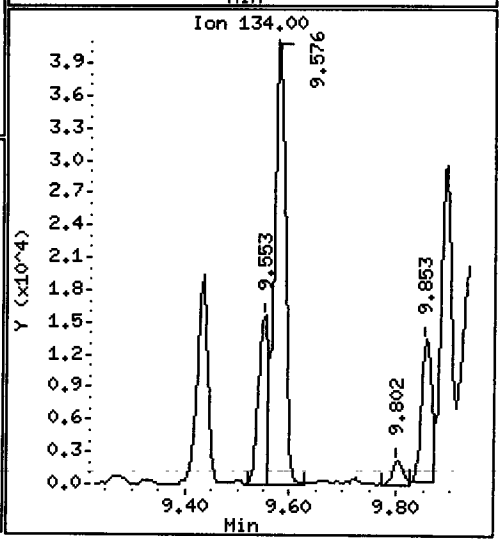


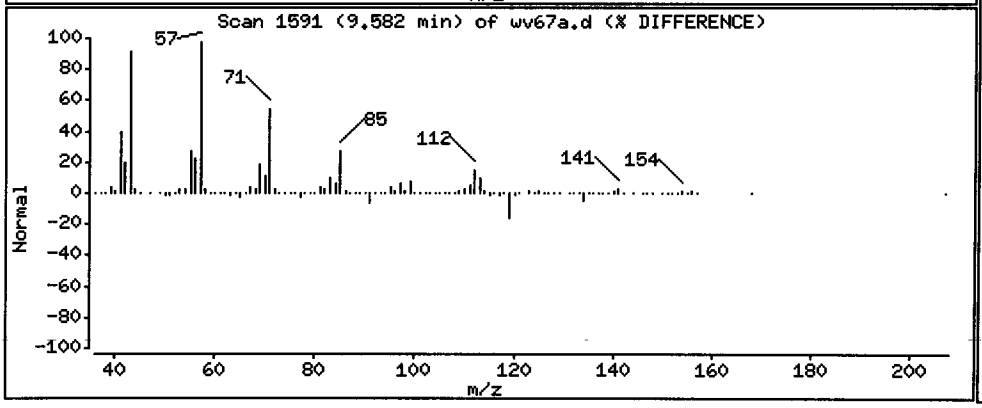












Data File: /chem1/nt5.i/27JUN13.b/wv67a.d

Date : 27-JUN-2013 22:04

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,14.13,0

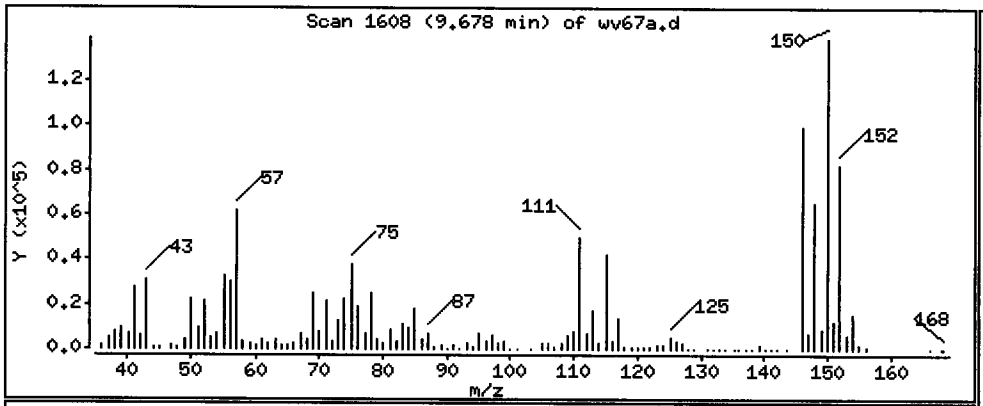
Operator: PB

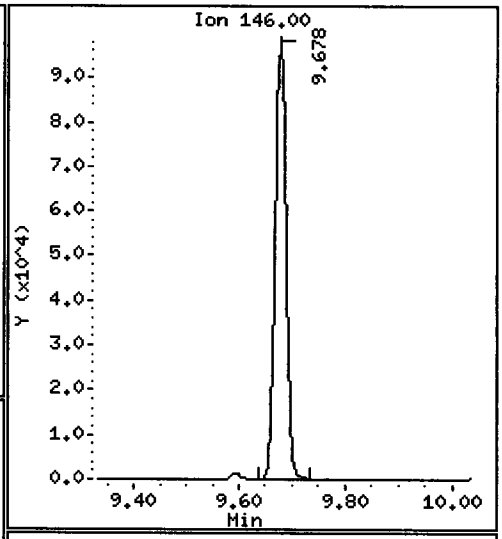
Column phase: RTXVMS

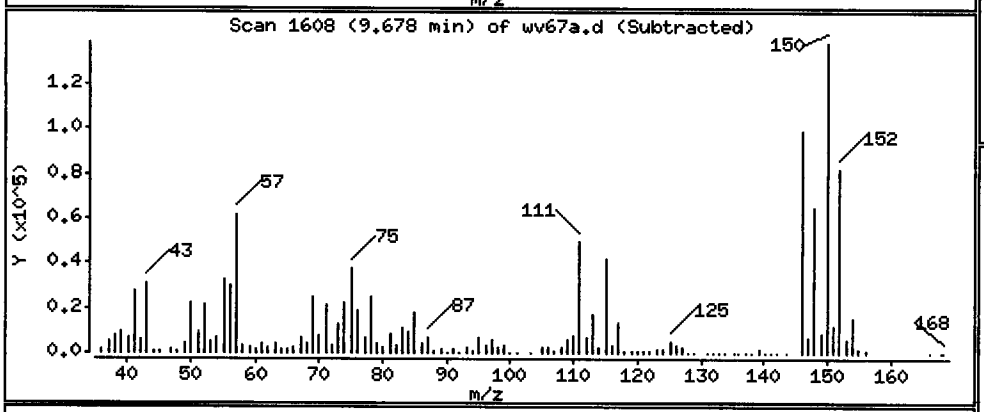
Column diameter: 0.18

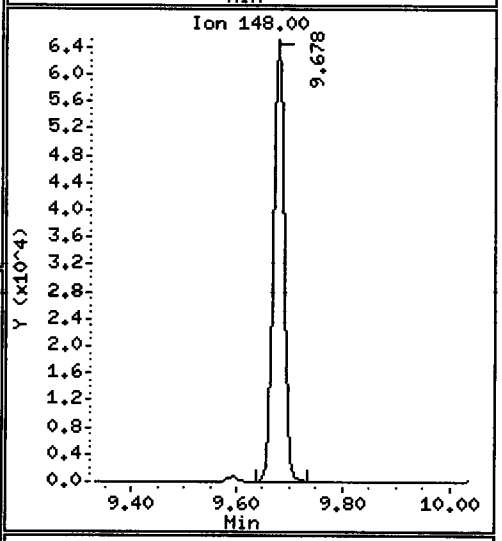
77 1,4-Dichlorobenzene

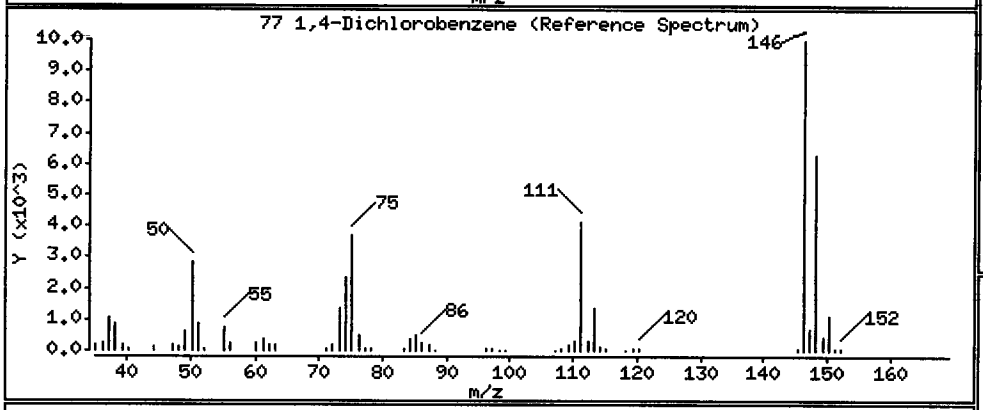
Concentration: 6.193 ug/Kg

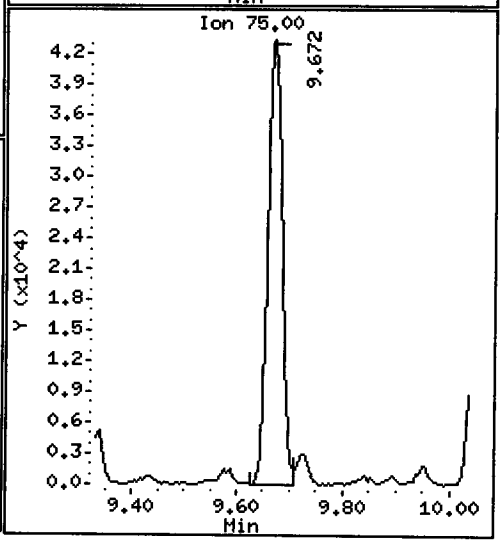


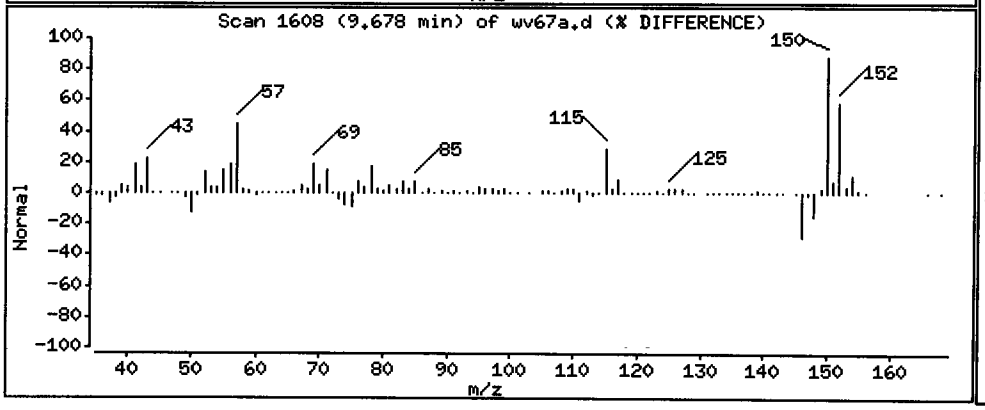












Data File: /chem1/nt5.i/27JUN13.b/wv67a.d

Date : 27-JUN-2013 22:04

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,14.13,0

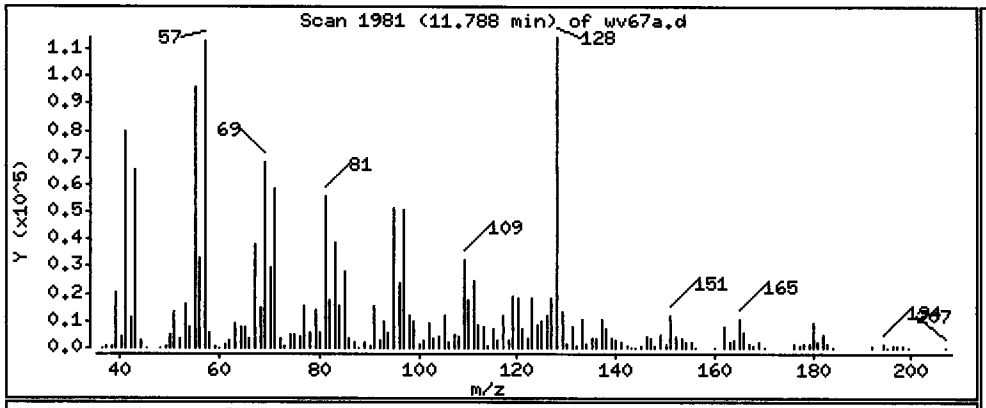
Operator: PB

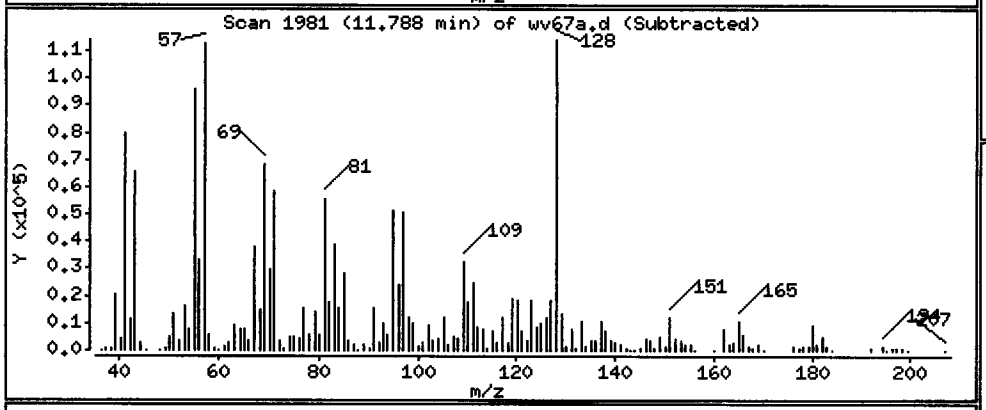
Column phase: RTXVMS

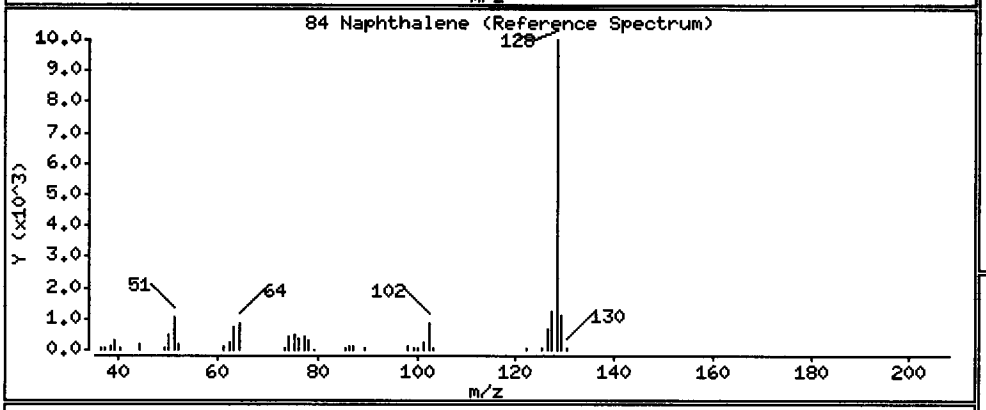
Column diameter: 0.18

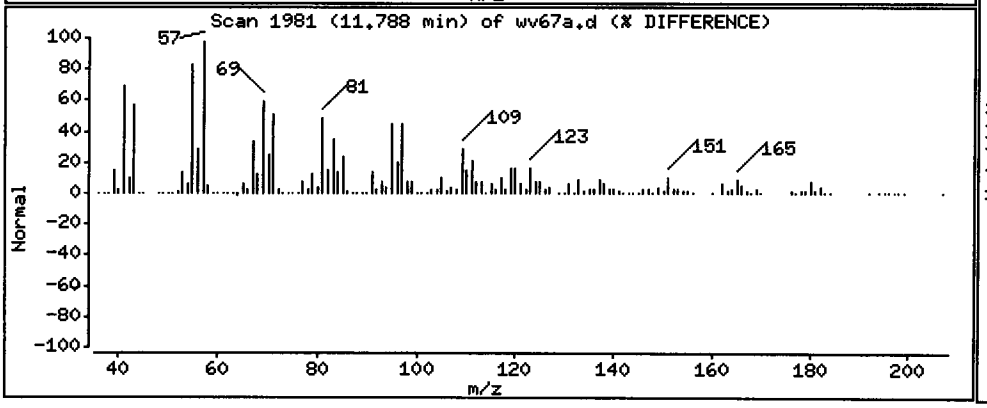
84 Naphthalene

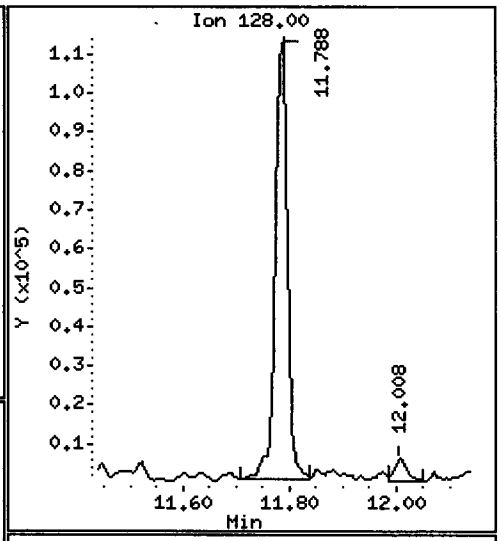
Concentration: 5.202 ug/Kg

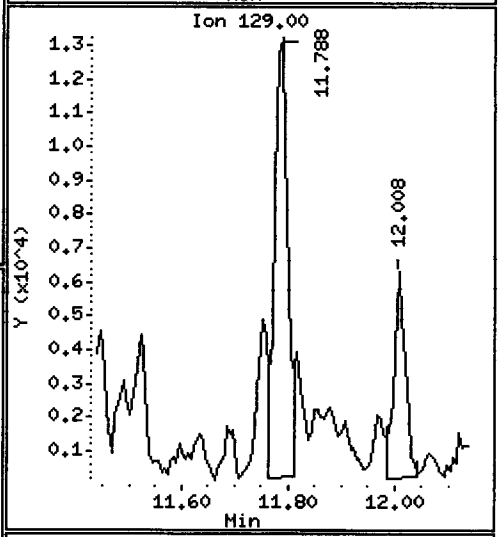


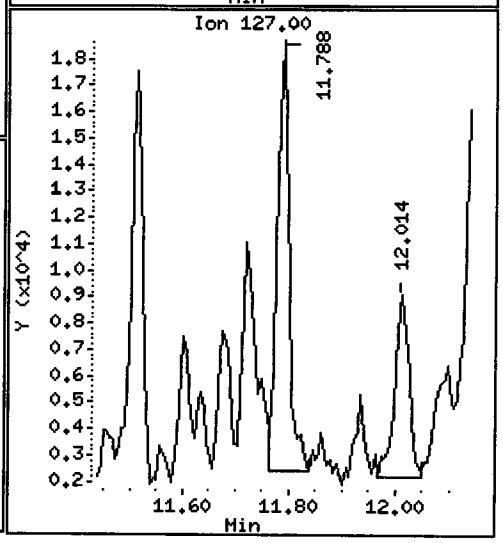












CO-ELUTION SUMMARY FOR FILE - wv67a.d

Lab ID: WV67A, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/wv67b.d
Lab Smp Id: WV67B Client Smp ID: UP-MHF-165-20130626
Inj Date : 27-JUN-2013 22:28
Operator : PB Inst ID: nt5.i
Smp Info : WV67B,5,9.77,0
Misc Info : 13-13658
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 11:09 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	9.77000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	Compound Not Detected.					
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	1.956	1.979	(0.419)	410218	10.8832	5.570
9 112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10 Iodomethane	142	Compound Not Detected.					
11 Bromoethane	108	Compound Not Detected.					
12 Acrolein	56	Compound Not Detected.					
13 Methylene Chloride	84	2.426	2.454	(0.520)	16221	1.24110	0.6352
14 Acetone	43	Compound Not Detected.					

J B LRL NOT Reported 6/28/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	Compound Not Detected.					
	16 Methyl tert butyl ether	73	Compound Not Detected.					
	17 1,1-Dichloroethane	63	Compound Not Detected.					
	18 Acrylonitrile	53	Compound Not Detected.					
	19 Vinyl Acetate	43	Compound Not Detected.					
	20 Cis-1,2-Dichloroethene	96	Compound Not Detected.					
	22 2,2-Dichloropropane	77	Compound Not Detected.					
	23 Bromochloromethane	128	Compound Not Detected.					
	24 Chloroform	83	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.185	4.196	(0.897)	760822	53.0570	27.153
	26 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 1,1-Dichloropropene	75	Compound Not Detected.					
	29 2-Butanone	72	4.389	4.434	(0.941)	50888	29.7022	15.201(Q)
	30 Benzene	78	4.524	4.530	(0.885)	79414	1.49251	0.7638
*	31 Pentafluorobenzene	168	4.666	4.671	(1.000)	1489276	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.654	4.666	(0.998)	848821	52.0895	26.658
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.113	5.118	(1.000)	2446781	50.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	40 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	41 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	42 d8-Toluene	98	6.289	6.295	(1.230)	2798572	46.1430	23.615
	43 Toluene	92	6.329	6.335	(1.238)	502931	14.9415	7.647
	44 Tetrachloroethene	166	Compound Not Detected.					
	45 4-Methyl-2-Pentanone	58	6.697	6.708	(1.310)	191571	30.0785	15.393(Q)
	46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47 1,1,2-Trichloroethane	97	Compound Not Detected.					
	48 Chlorodibromomethane	129	Compound Not Detected.					
	49 1,3-Dichloropropane	76	Compound Not Detected.					
	50 1,2-Dibromoethane	107	Compound Not Detected.					
	51 2-Hexanone	43	Compound Not Detected.					
*	52 d5-Chlorobenzene	117	7.590	7.596	(1.000)	1895964	50.0000	
	53 Chlorobenzene	112	Compound Not Detected.					
	54 Ethyl Benzene	91	7.658	7.664	(1.009)	138605	3.00702	1.539
	55 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56 m,p-xylene	106	7.788	7.794	(1.026)	75836	4.38266	2.243
	57 o-Xylene	106	8.150	8.156	(1.074)	67439	3.94887	2.021
	58 Styrene	104	8.201	8.201	(1.080)	14746	0.52693	0.2697
	59 Bromoform	173	Compound Not Detected.					
	60 Isopropyl Benzene	105	8.439	8.445	(0.873)	31810	1.31932	0.6752
$	62 4-Bromofluorobenzene	95	8.660	8.665	(1.141)	798869	39.5894	20.261(R)
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	8.807	8.812	(0.911)	46499	1.60085	0.8193
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
66	2-Chloro Toluene	91	Compound Not Detected.					
67	1,3,5-Trimethyl Benzene	105	8.993	8.999	(0.930)	58798	2.82880	1.448
68	1,2,3-Trichloropropane	110	Compound Not Detected.					
69	Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
70	4-Chloro Toluene	91	Compound Not Detected.					
71	T-Butyl Benzene	119	Compound Not Detected.					
72	1,2,4-Trimethylbenzene	105	9.338	9.338	(0.966)	162434	7.99244	4.090
73	S-Butyl Benzene	105	9.434	9.440	(0.976)	40933	1.54209	0.7892 (Q)
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	54799	2.54846	1.304
75	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 76	d4-1,4-Dichlorobenzene	152	9.666	9.672	(1.000)	581282	50.0000	
77	1,4-Dichlorobenzene	146	Compound Not Detected.					
78	N-Butyl Benzene	91	9.961	9.966	(1.030)	46485	2.30372	1.179 (Q)
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	509789	48.0830	24.607
80	1,2-Dichlorobenzene	146	Compound Not Detected.					
81	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
84	Naphthalene	128	11.788	11.788	(1.219)	77228	3.96699	2.030
85	1,2,3-Trichlorobenzene	180	Compound Not Detected.					

J B LW NOT Reported BB 6/28/13

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: wv67b.d
Lab Smp Id: WV67B
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13658

Calibration Date: 27-JUN-2013
Calibration Time: 17:46
Client Smp ID: UP-MHF-165-20130626
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
31 Pentafluorobenzen	1613586	806793	3227172	1489276	-7.70	
35 1,4-Difluorobenze	2656709	1328354	5313418	2446781	-7.90	
52 d5-Chlorobenzene	2557235	1278618	5114470	1895964	-25.86	
76 d4-1,4-Dichlorobe	1374359	687180	2748718	581282	-57.71	<-

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	-0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.08
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WV67B
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13658

Client SDG: WV67
Fraction: VOA
Client Smp ID: UP-MHF-165-20130626
Operator: PB
SampleType: SAMPLE
Quant Type: ISTD

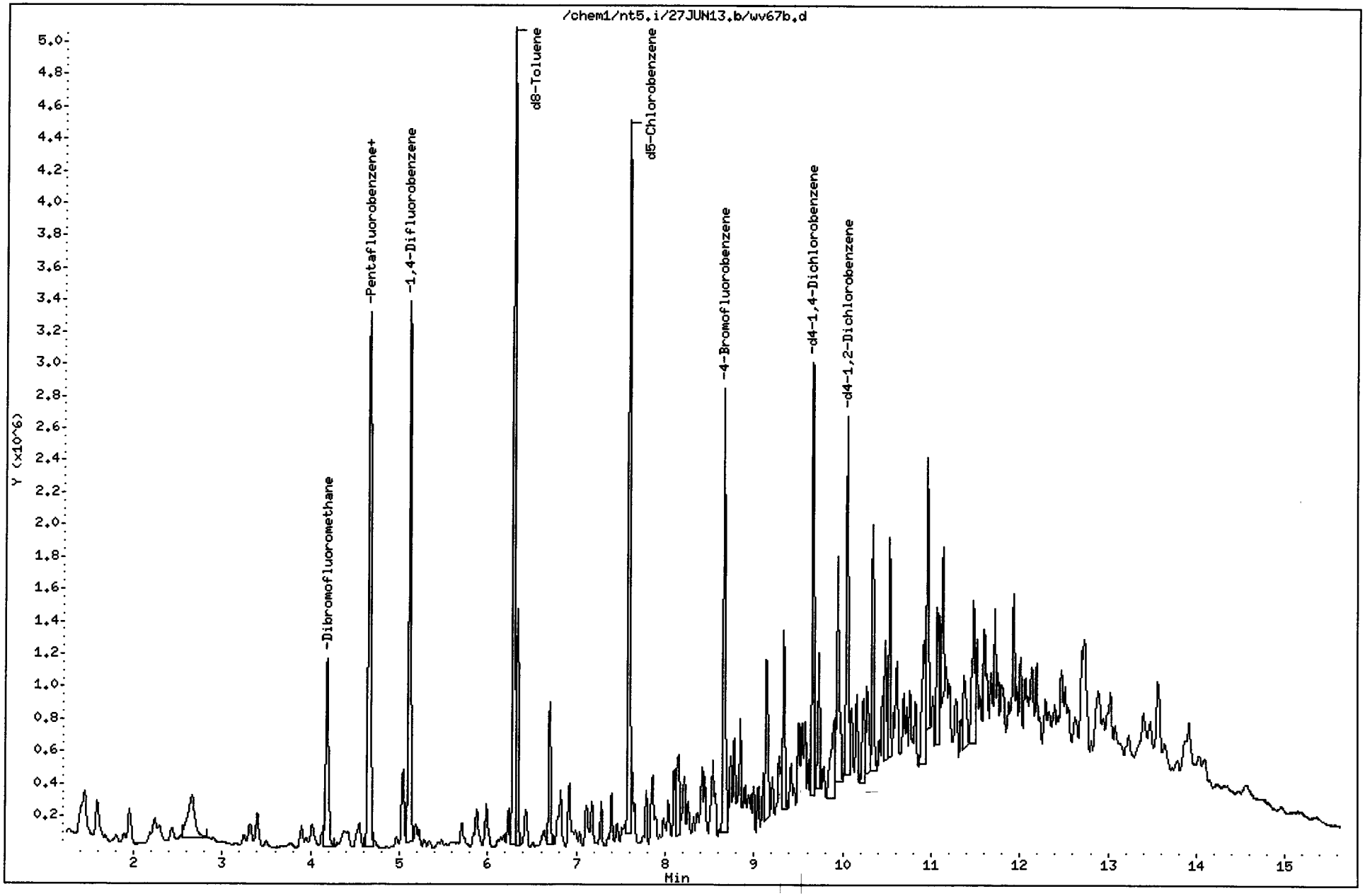
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	53.057	106.11	70-130
$ 32 d4-1,2-Dichloroeth	50.000	52.090	104.18	80-149
$ 42 d8-Toluene	50.000	46.143	92.29	77-120
$ 62 4-Bromofluorobenze	50.000	39.589	79.18*	80-120
$ 79 d4-1,2-Dichloroben	50.000	48.083	96.17	80-120

Data File: /chem1/nt5.i/27JUN13.b/wv67b.d
Date : 27-JUN-2013 22:28
Client ID: UP-MHF-165-20130626
Sample Info: WV67B,5,9.77,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Data File: /chem1/nt5.i/27JUN13.b/wv67b.d

Date : 27-JUN-2013 22:28

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,9.77,0

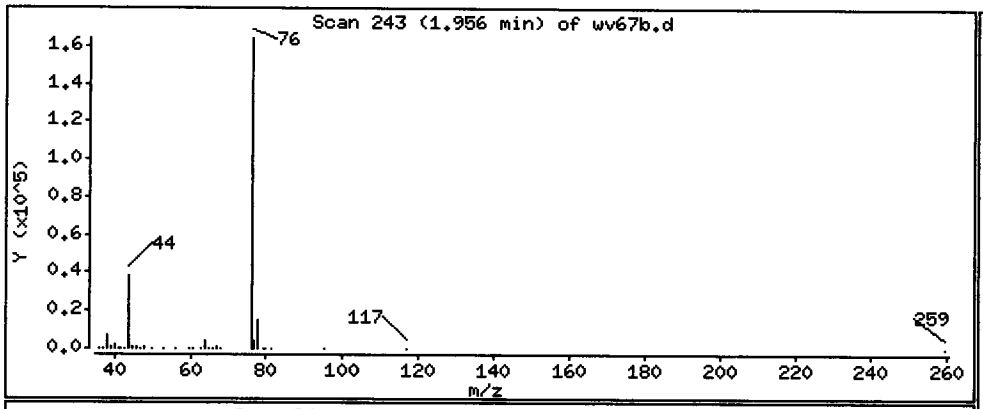
Operator: PB

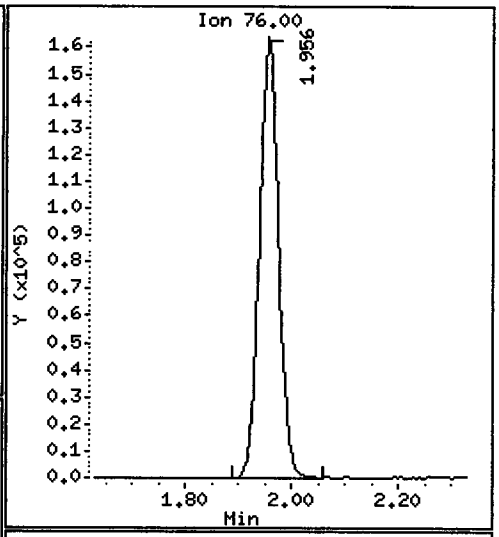
Column phase: RTXVMS

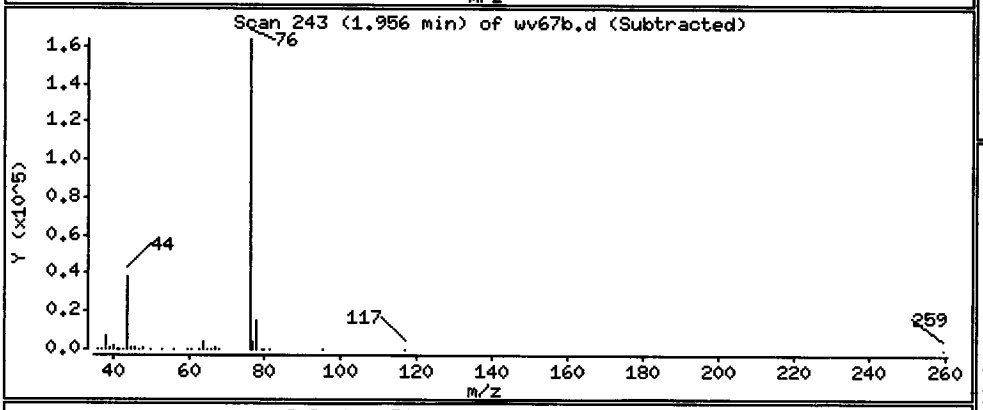
Column diameter: 0.18

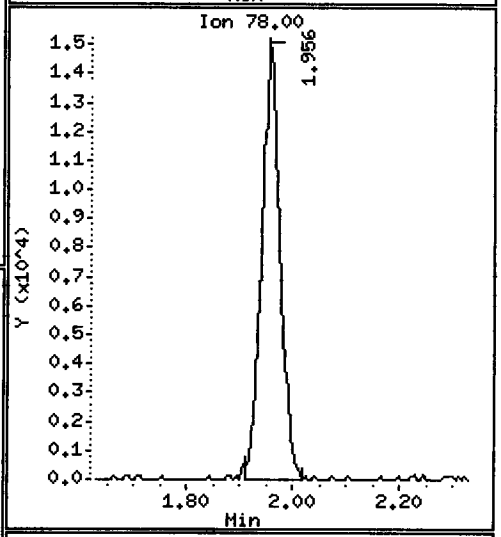
8 Carbon Disulfide

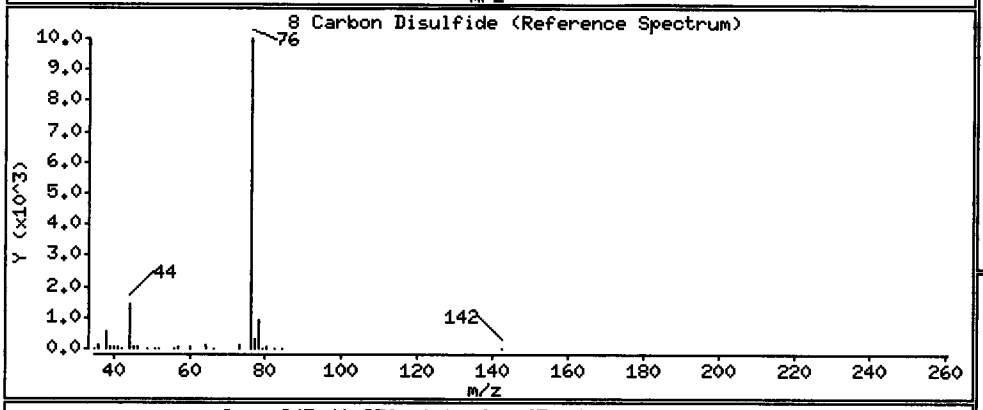
Concentration: 5.570 ug/Kg

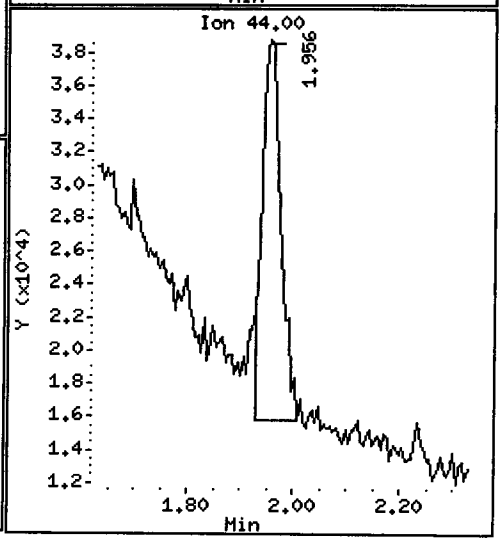


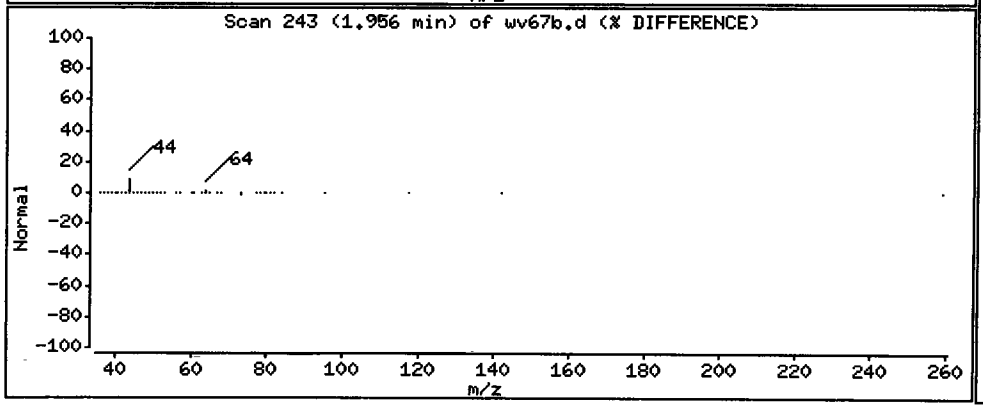












Data File: /chem1/nt5.i/27JUN13.b/wv67b.d

Date : 27-JUN-2013 22:28

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,9.77,0

Operator: PB

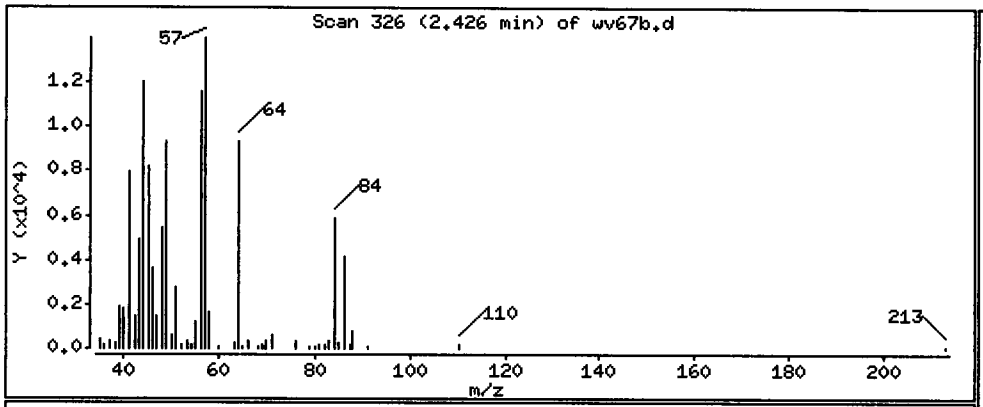
Column phase: RTXVMS

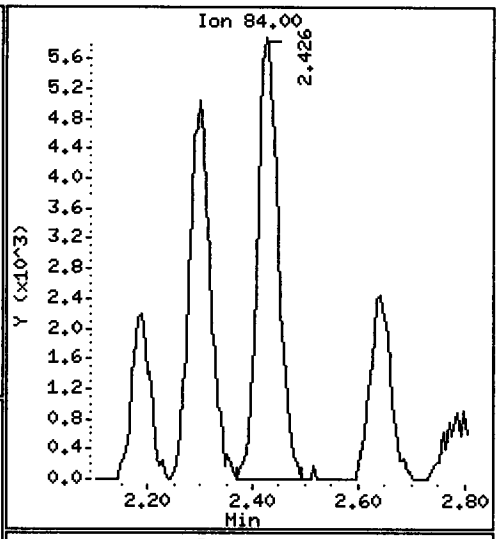
Column diameter: 0.18

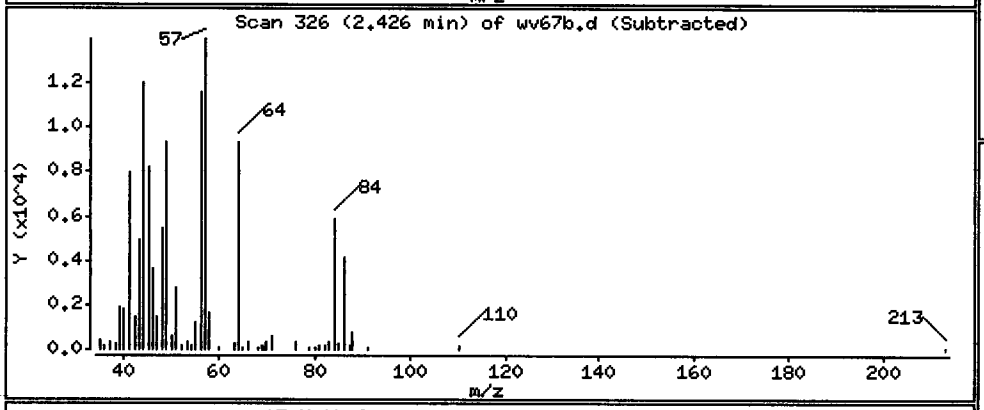
13 Methylene Chloride

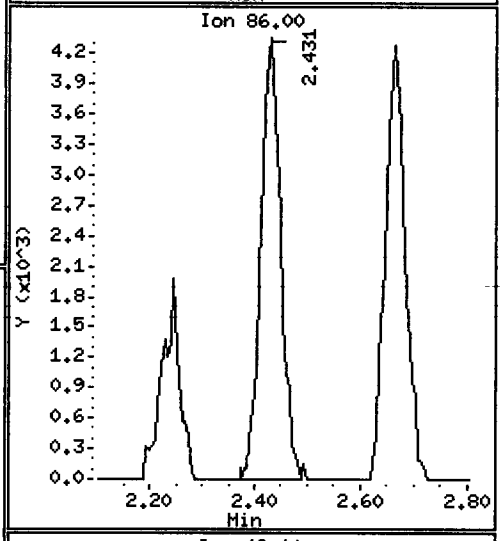
Concentration: 0.6352 ug/Kg

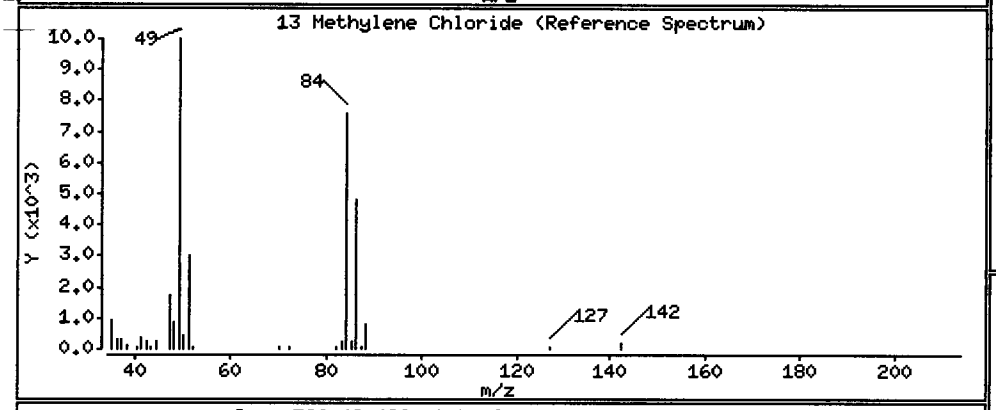
JB 2RL
NT Reporter
6/28/13

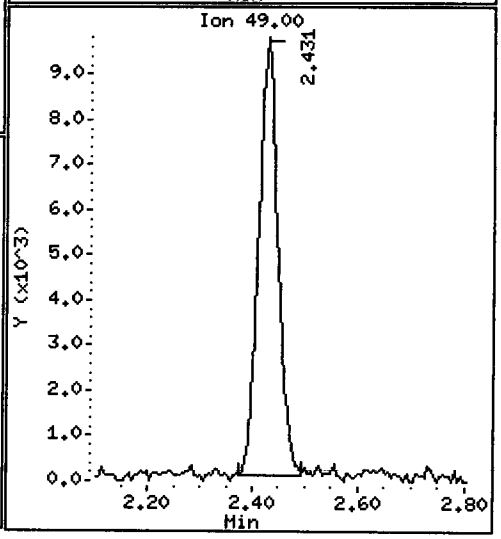


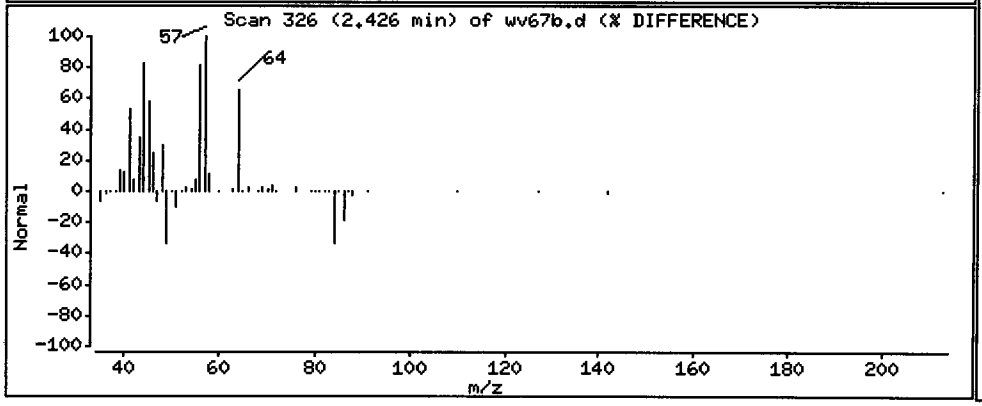












Data File: /chem1/nt5.i/27JUN13.b/wv67b.d

Date : 27-JUN-2013 22:28

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,9.77,0

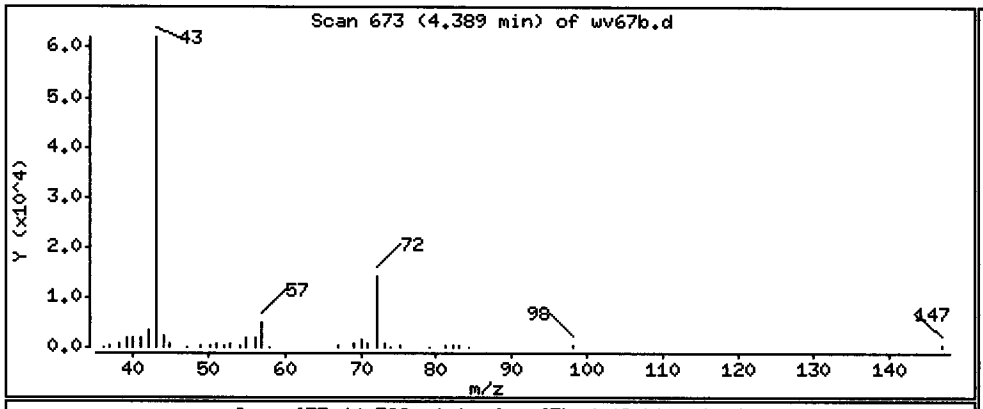
Operator: PB

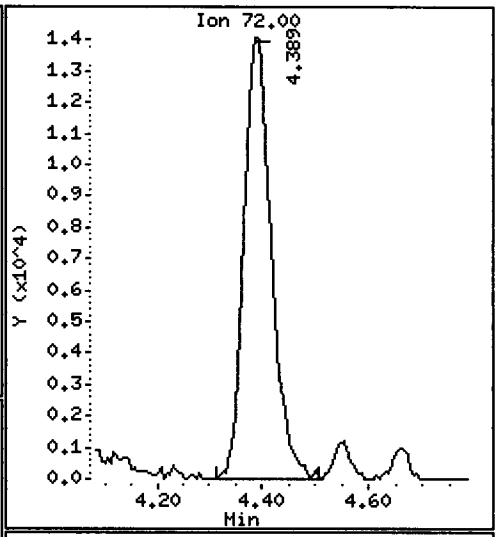
Column phase: RTXVMS

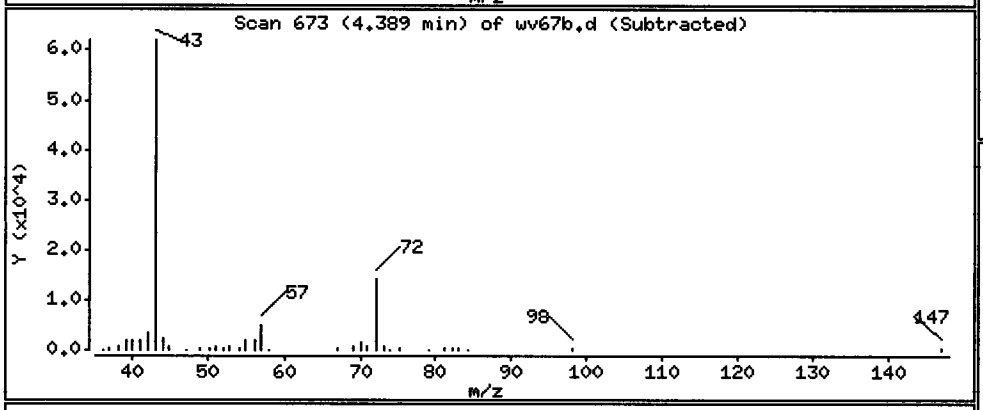
Column diameter: 0.18

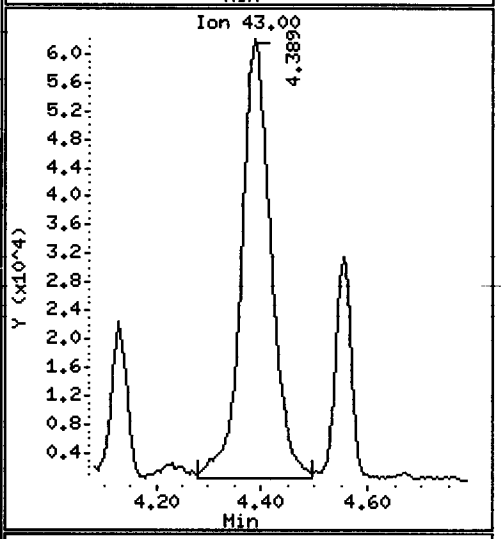
29 2-Butanone

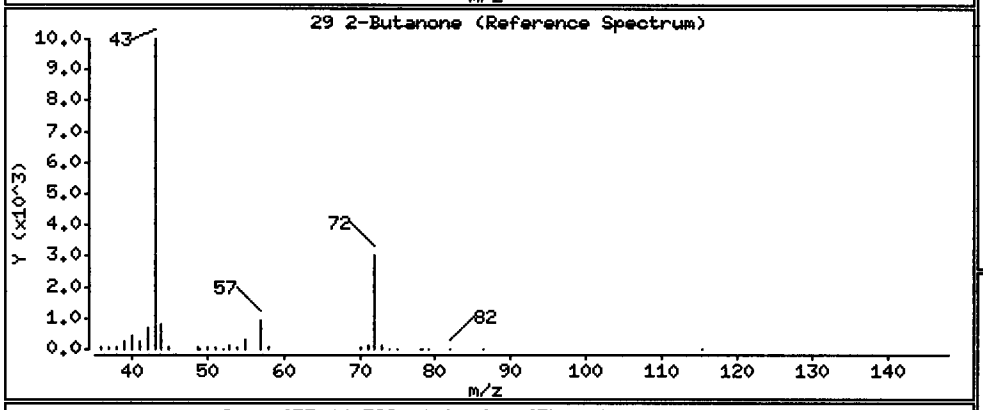
Concentration: 15.201 ug/Kg

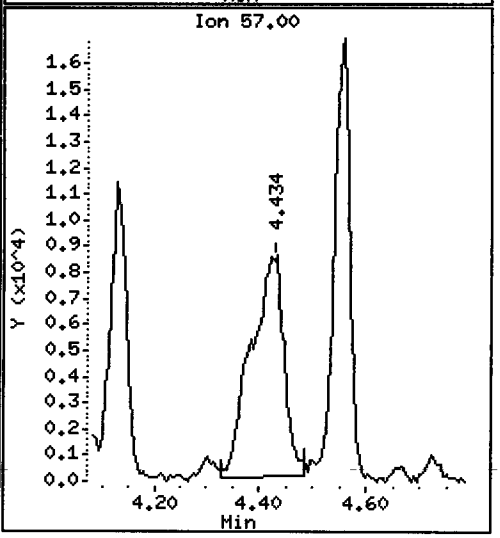


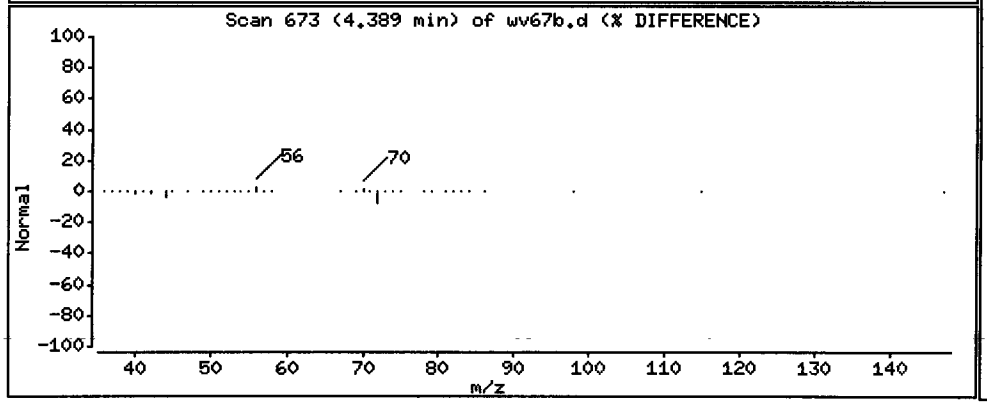












Data File: /chem1/nt5.i/27JUN13.b/wv67b.d

Date : 27-JUN-2013 22:28

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,9.77,0

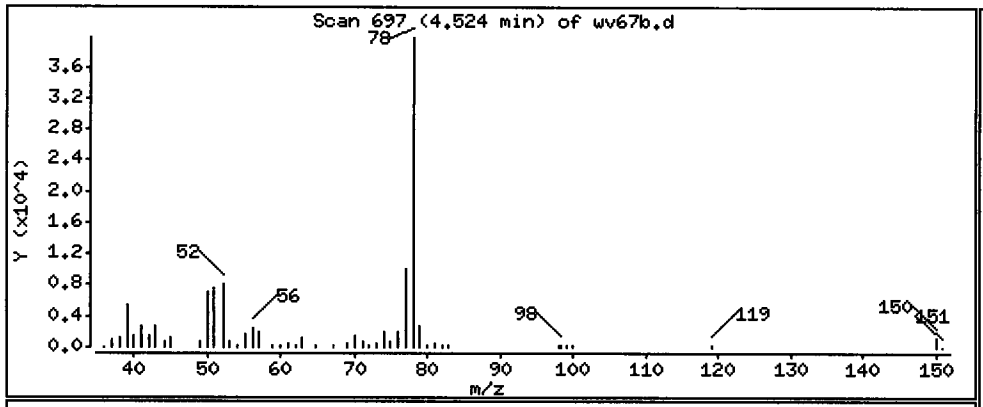
Operator: PB

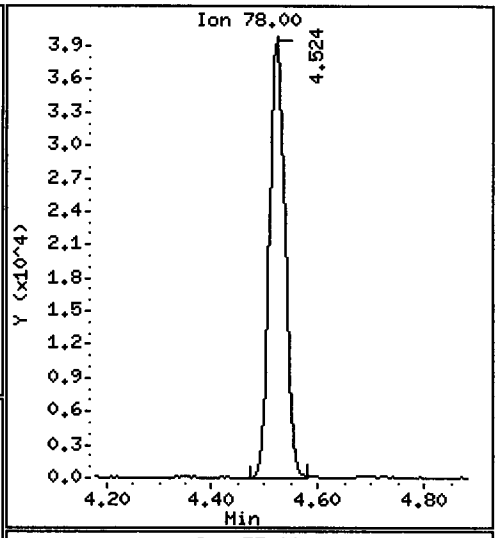
Column phase: RTXVMS

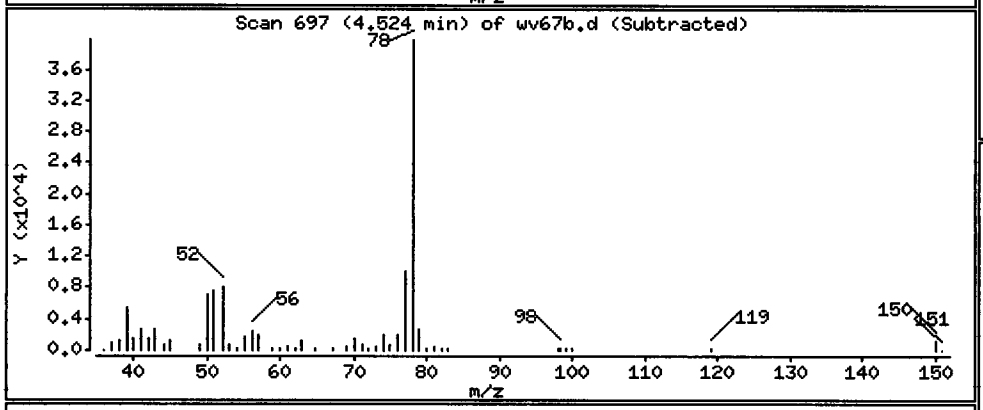
Column diameter: 0.18

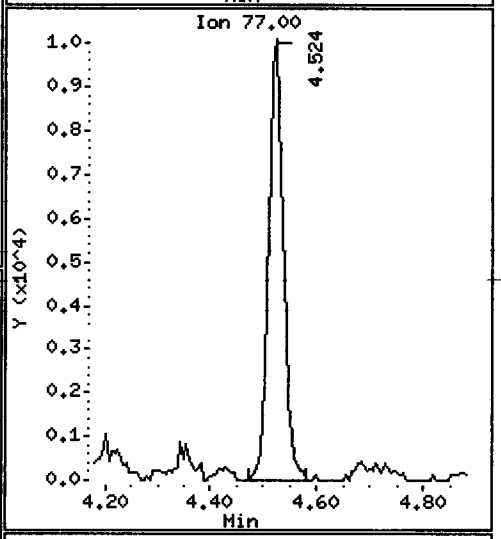
30 Benzene

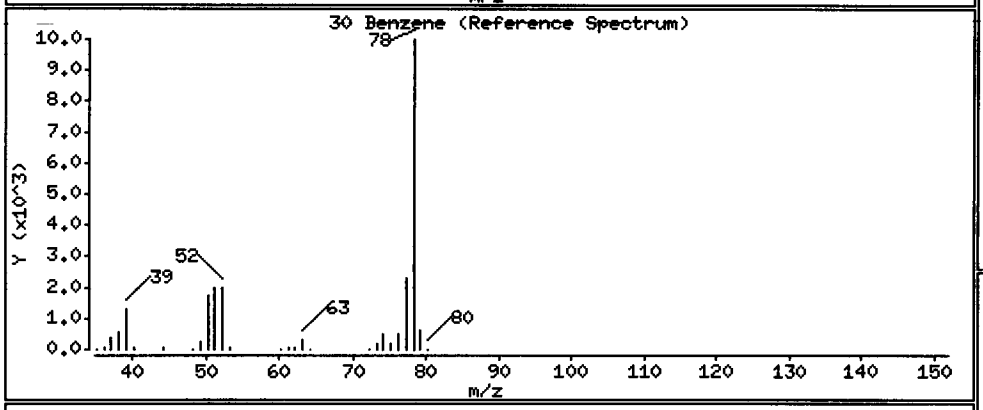
Concentration: 0.7638 ug/Kg

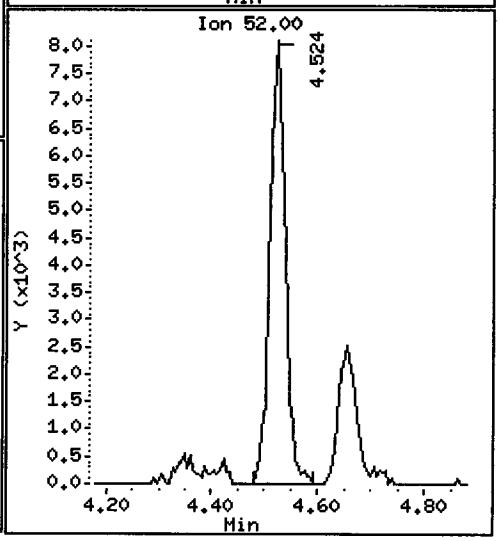


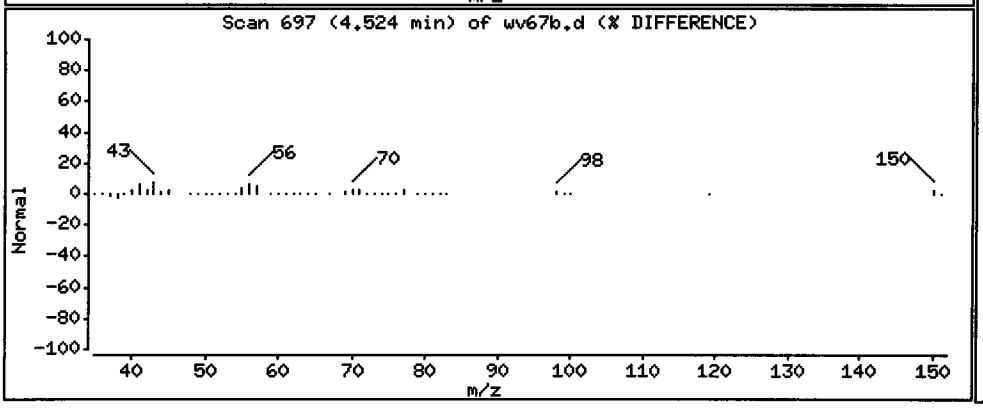












Data File: /chem1/nt5.i/27JUN13.b/wv67b.d

Date : 27-JUN-2013 22:28

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,9.77,0

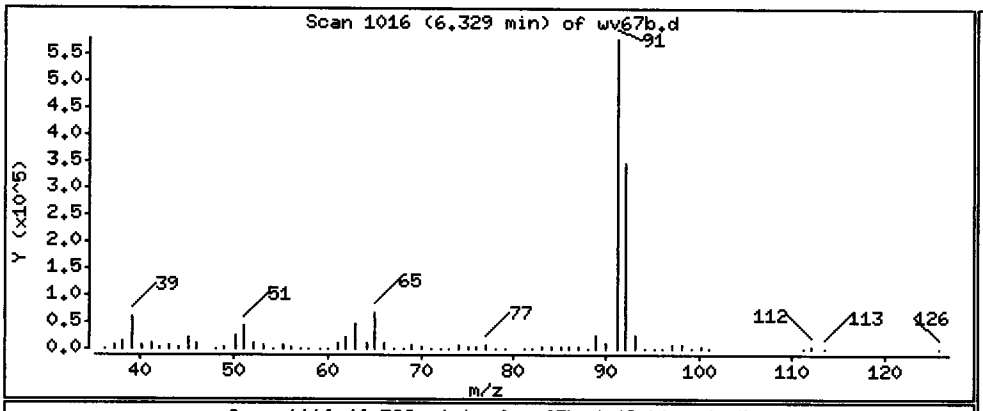
Operator: PB

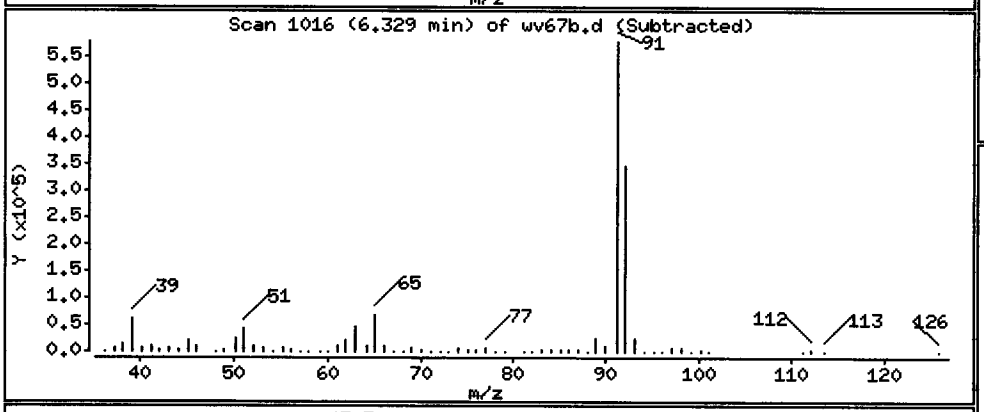
Column phase: RTXVMS

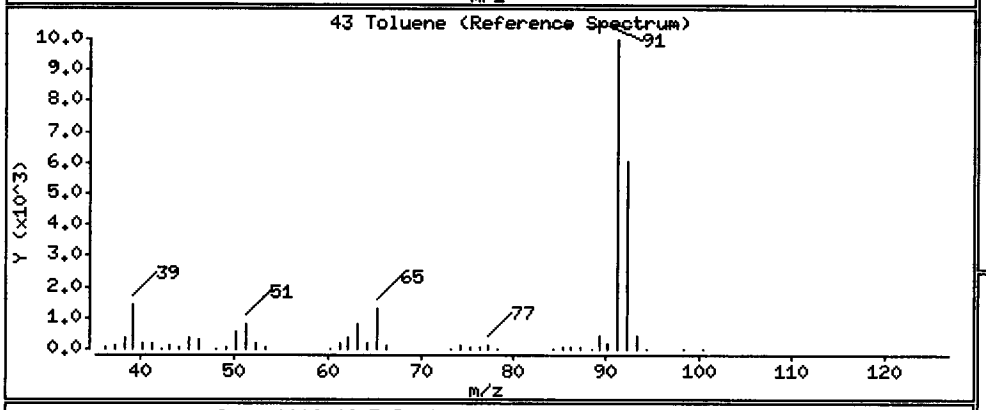
Column diameter: 0.18

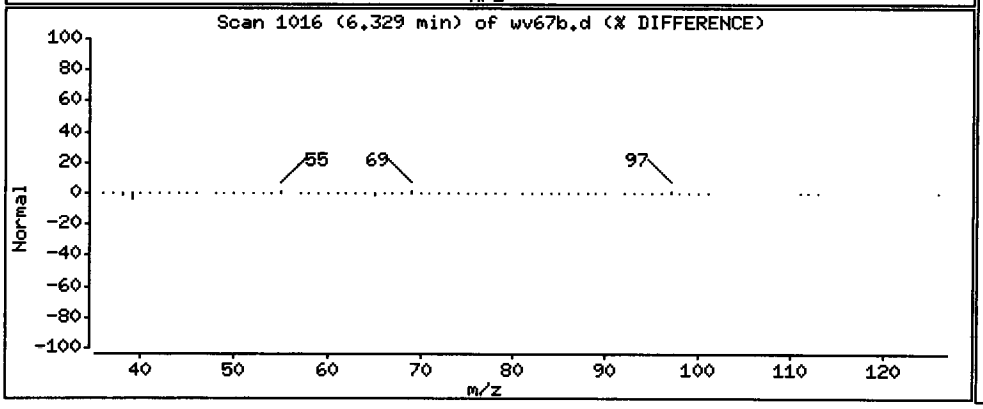
43 Toluene

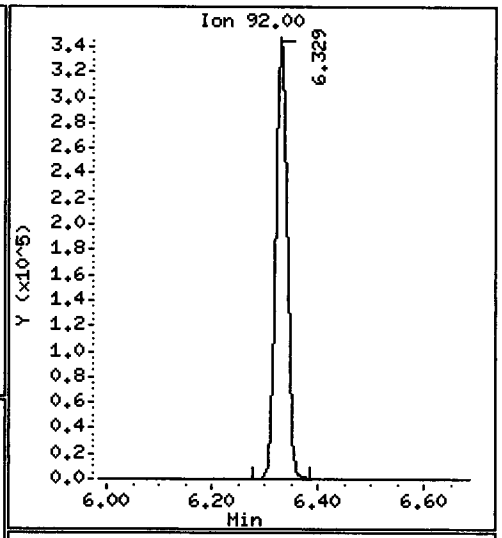
Concentration: 7.647 ug/Kg

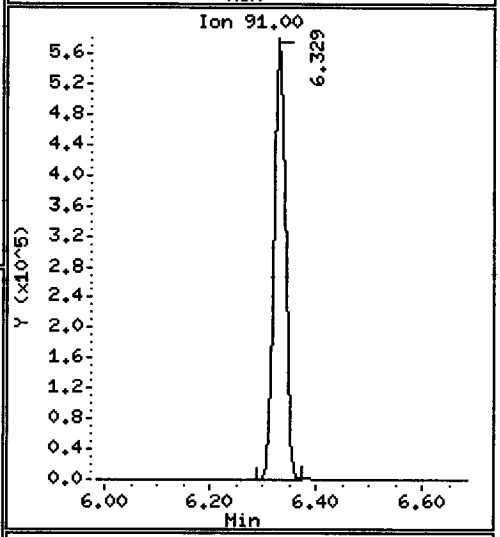


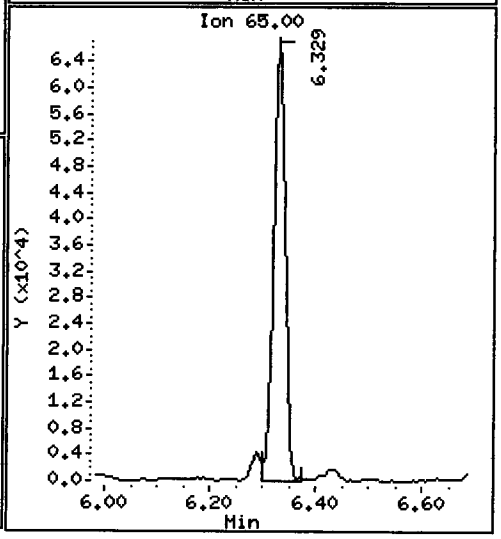












Data File: /chem1/nt5.i/27JUN13.b/wv67b.d

Date : 27-JUN-2013 22:28

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,9.77,0

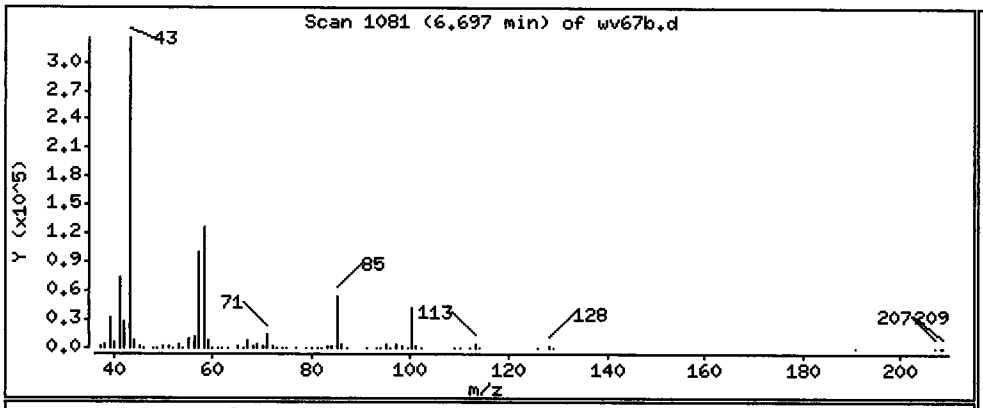
Operator: PB

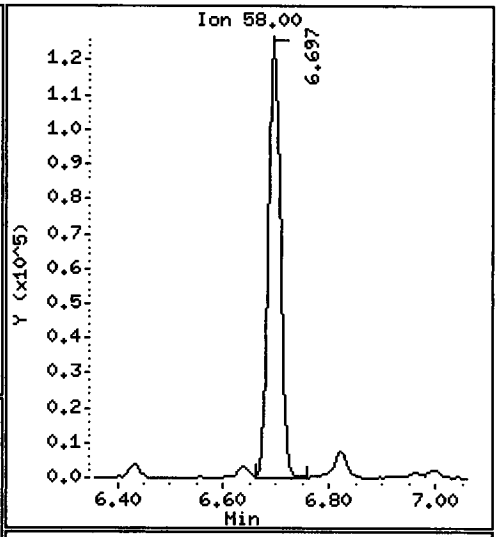
Column phase: RTXVMS

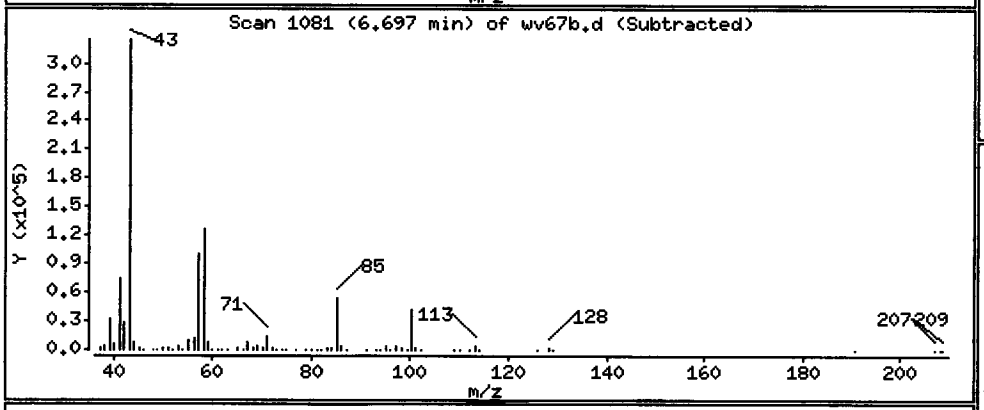
Column diameter: 0.18

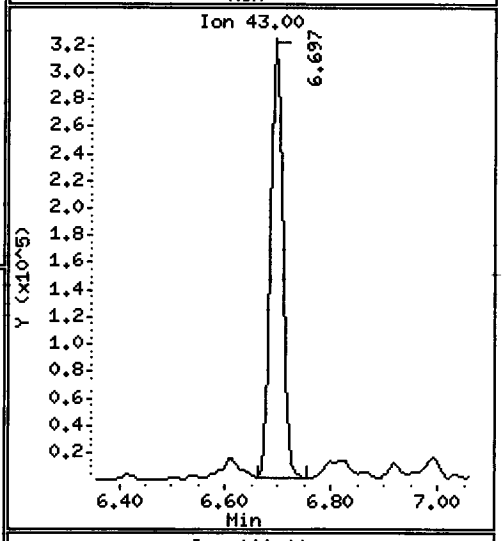
45 4-Methyl-2-Pentanone

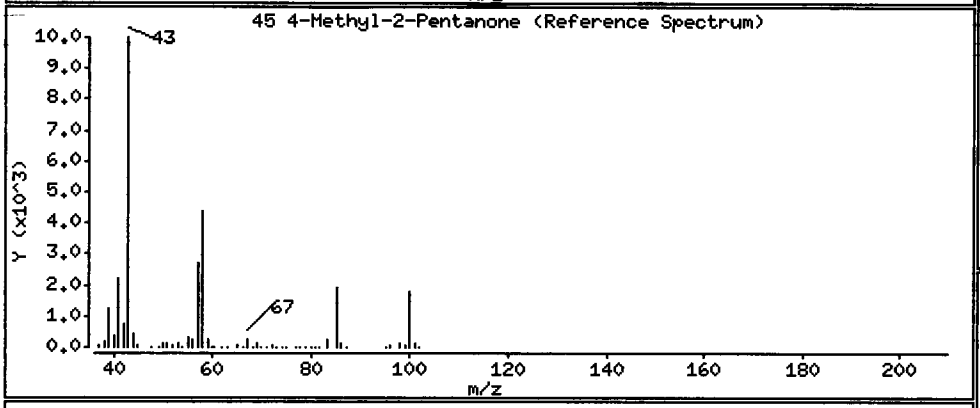
Concentration: 15.393 ug/Kg

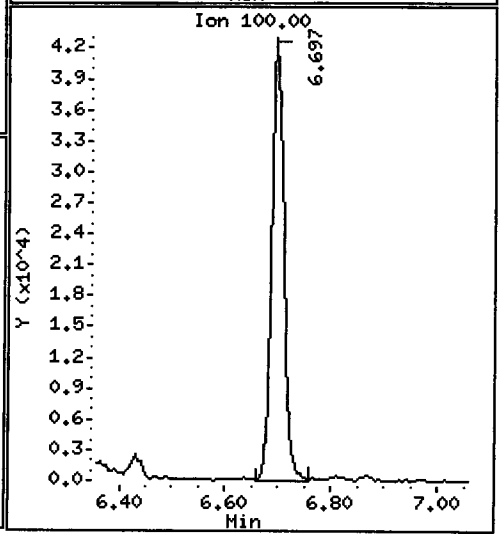


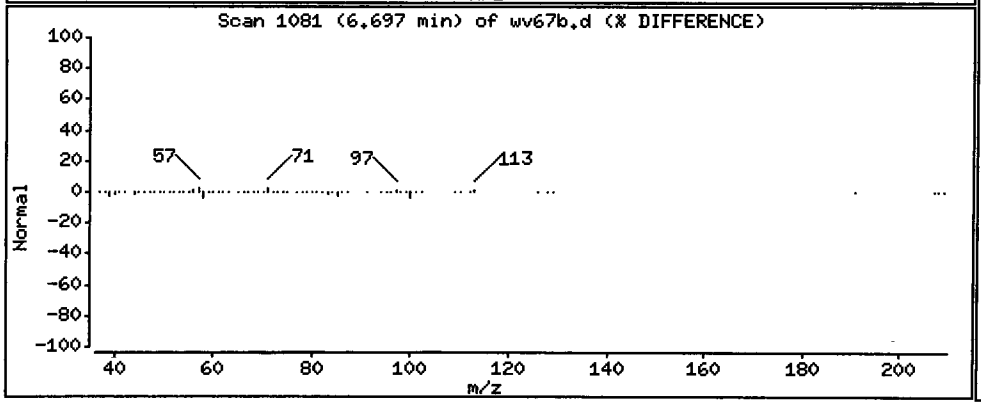












Data File: /chem1/nt5.i/27JUN13.b/wv67b.d

Date : 27-JUN-2013 22:28

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,9.77,0

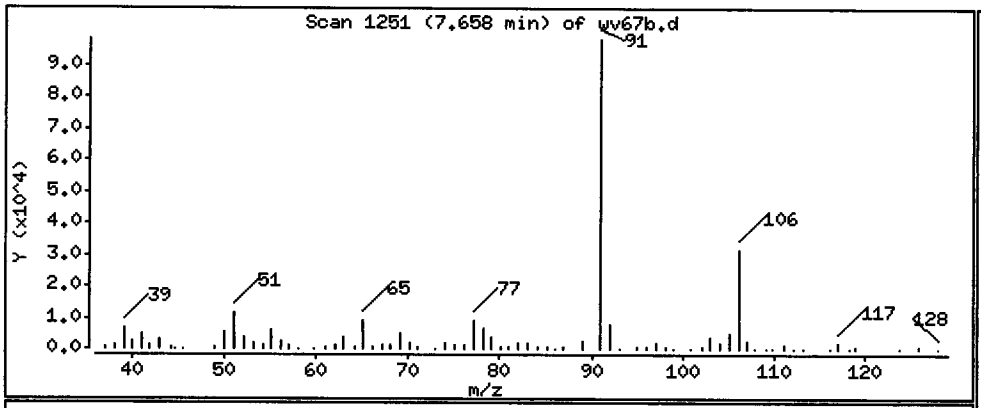
Operator: PB

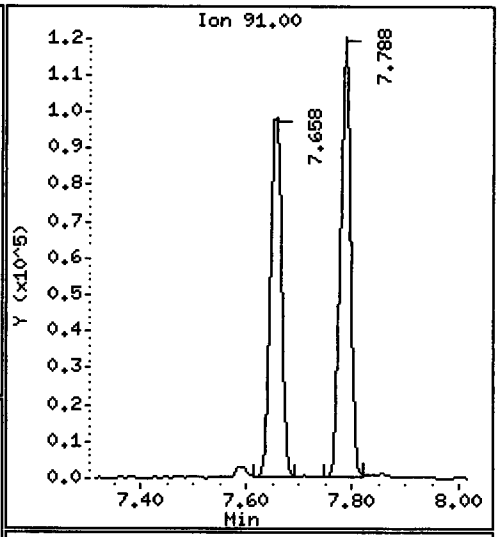
Column phase: RTXVMS

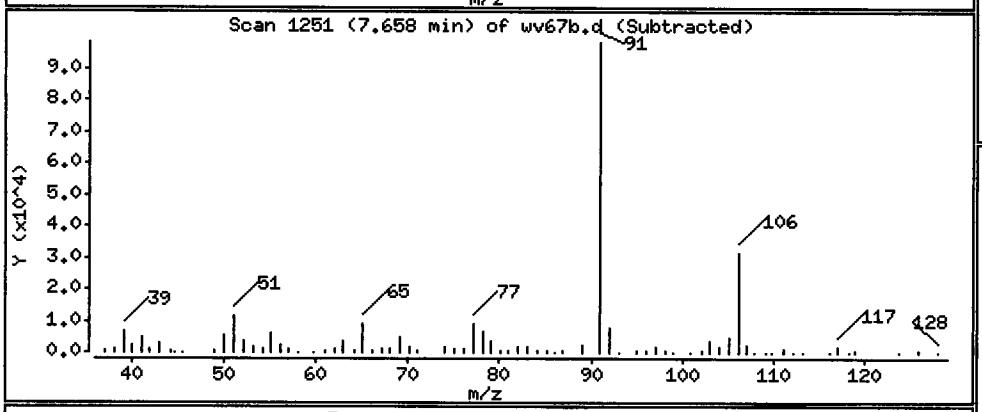
Column diameter: 0.18

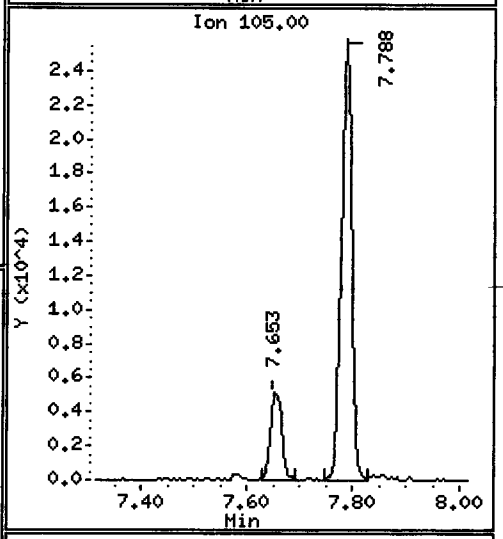
54 Ethyl Benzene

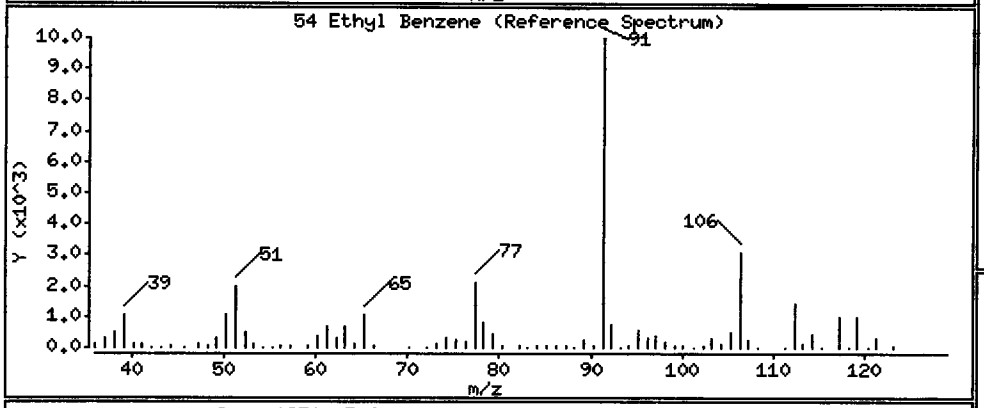
Concentration: 1.539 ug/Kg

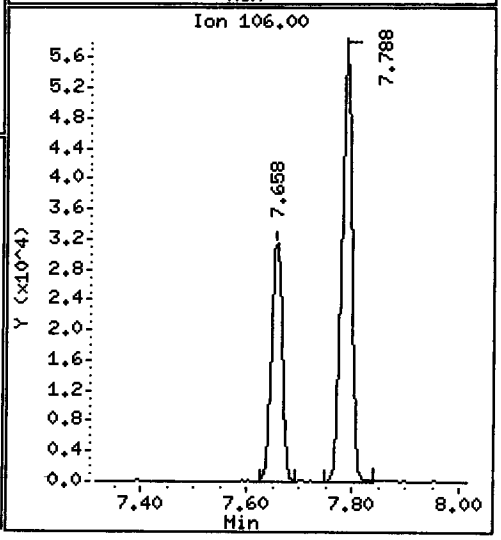


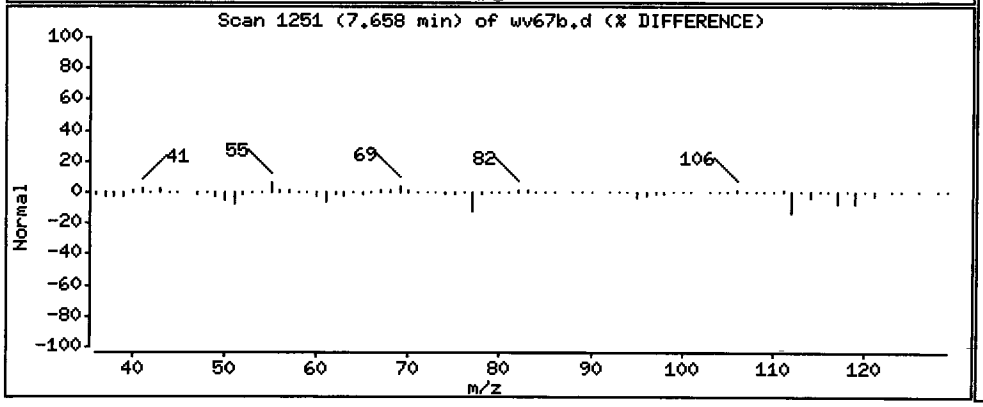












Data File: /chem1/nt5.i/27JUN13.b/wv67b.d

Date : 27-JUN-2013 22:28

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,9.77,0

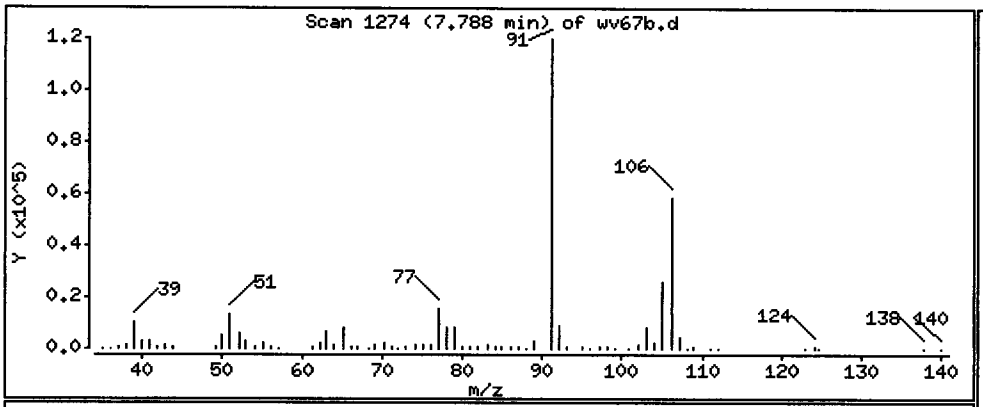
Operator: PB

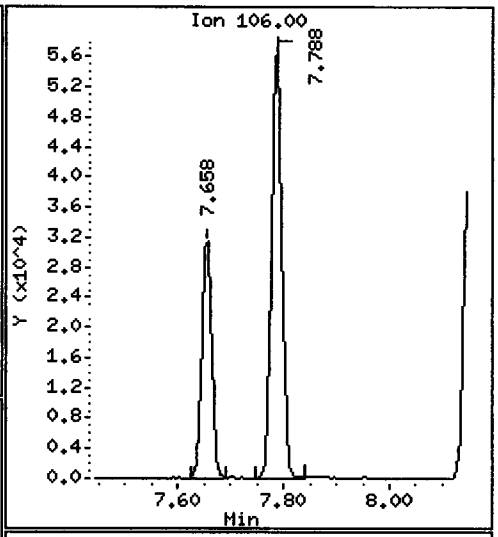
Column phase: RTXVMS

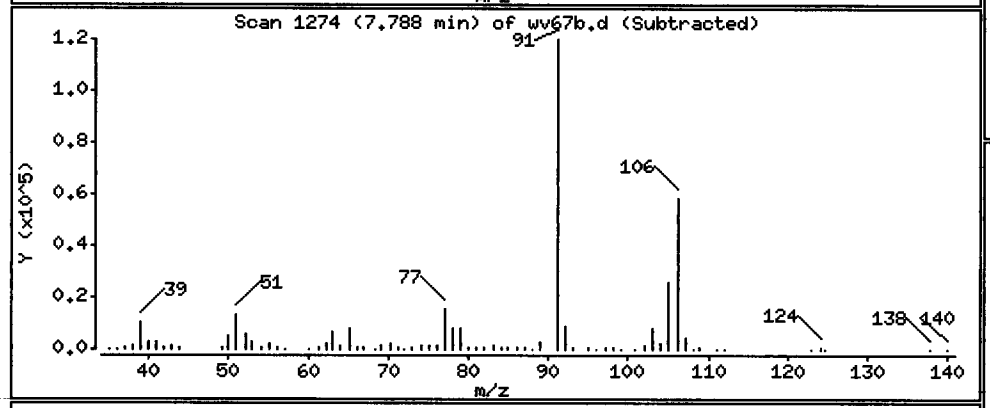
Column diameter: 0.18

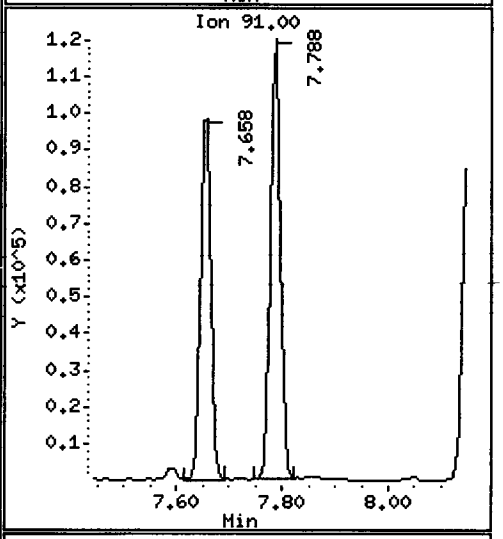
56 m,p-xylene

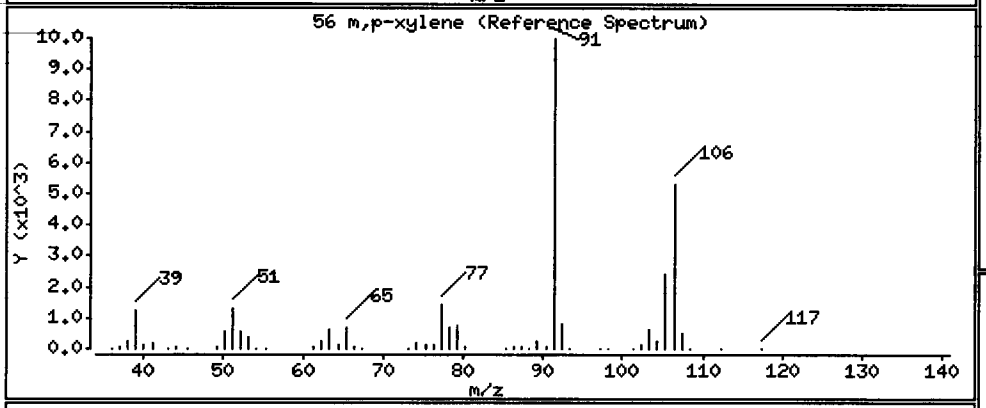
Concentration: 2.243 ug/Kg

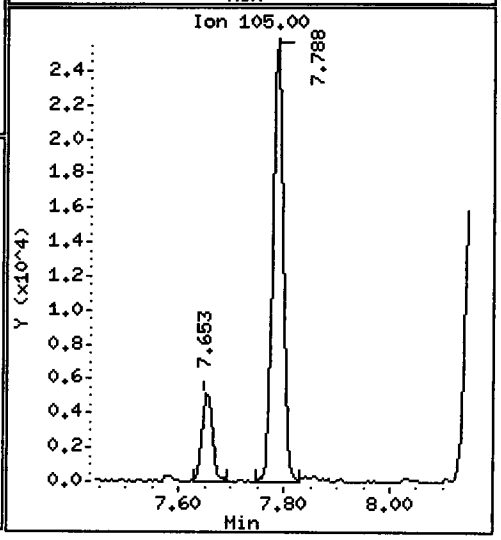


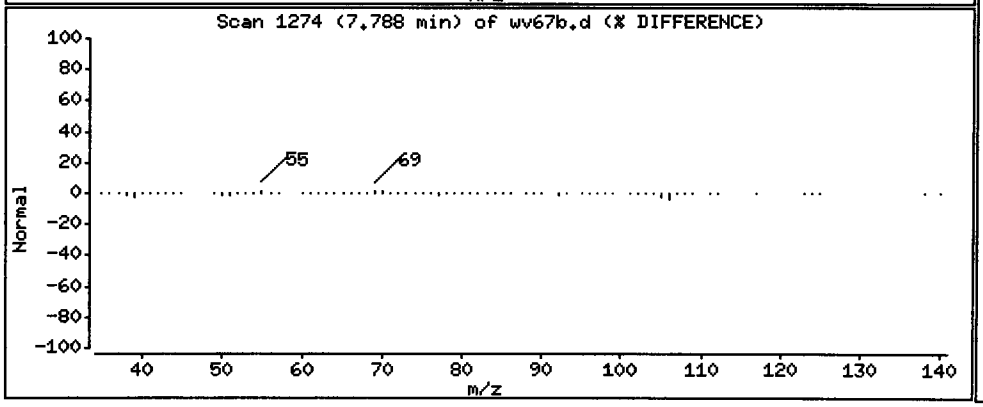












Data File: /chem1/nt5.i/27JUN13.b/wv67b.d

Date : 27-JUN-2013 22:28

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,9.77,0

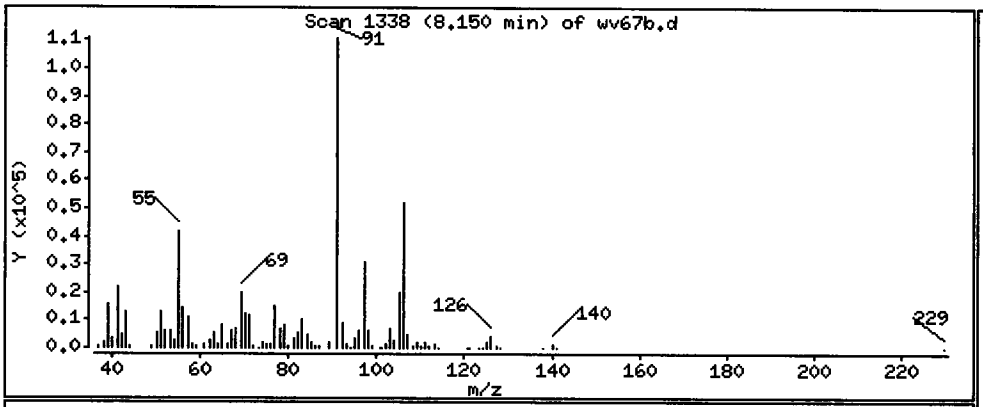
Operator: PB

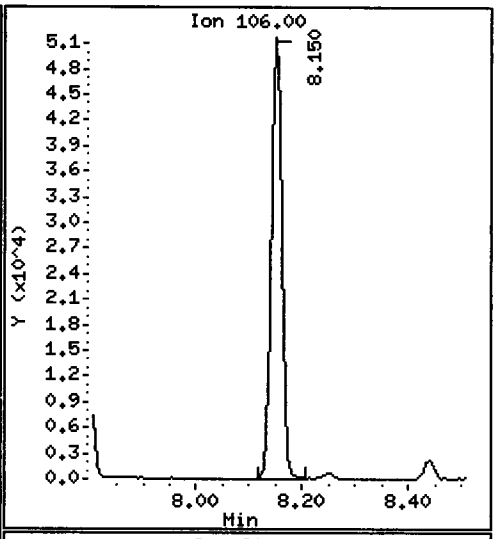
Column phase: RTXVMS

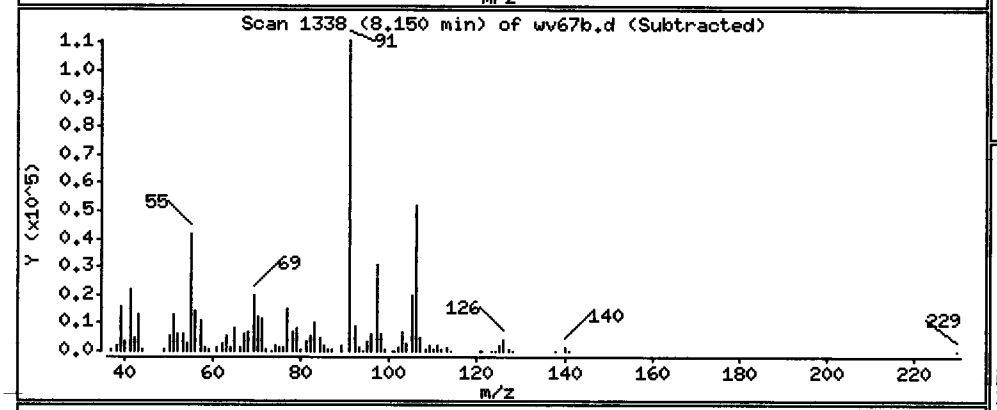
Column diameter: 0.18

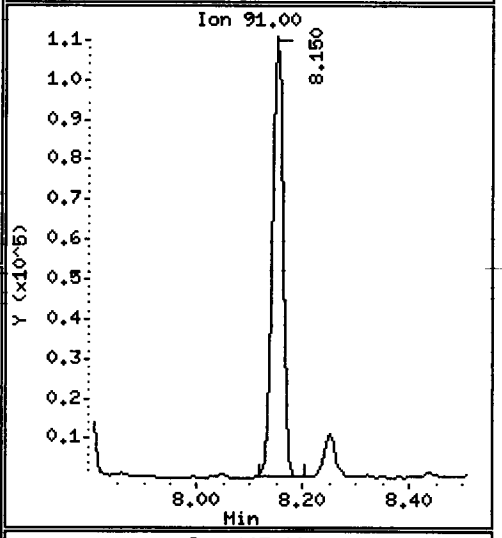
57 o-Xylene

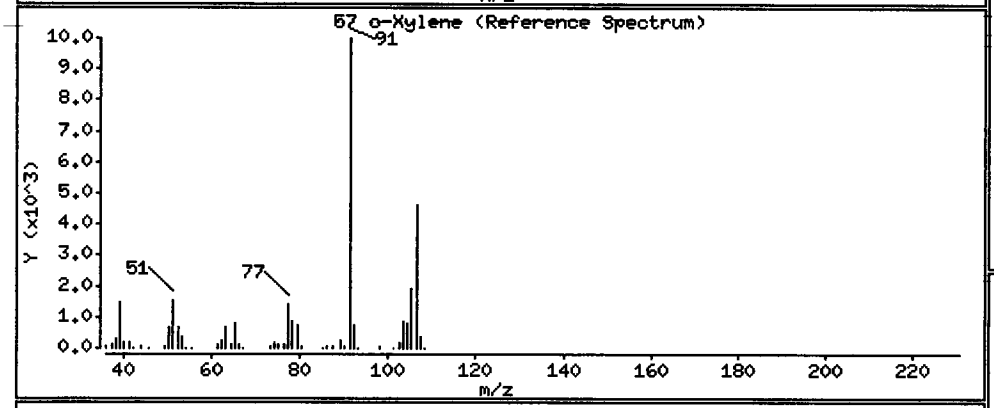
Concentration: 2.021 ug/Kg

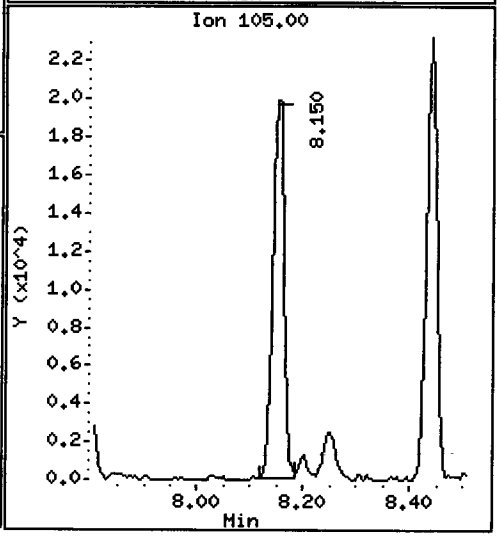


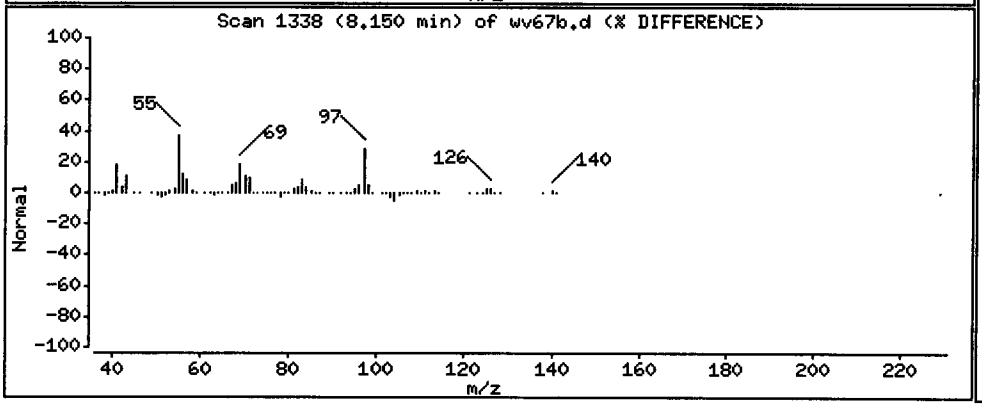












Data File: /chem1/nt5.i/27JUN13.b/wv67b.d

Date : 27-JUN-2013 22:28

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,9.77,0

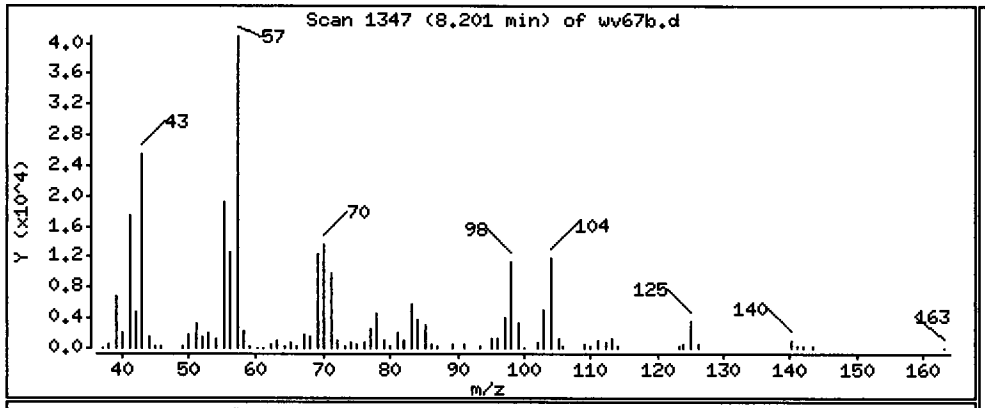
Operator: PB

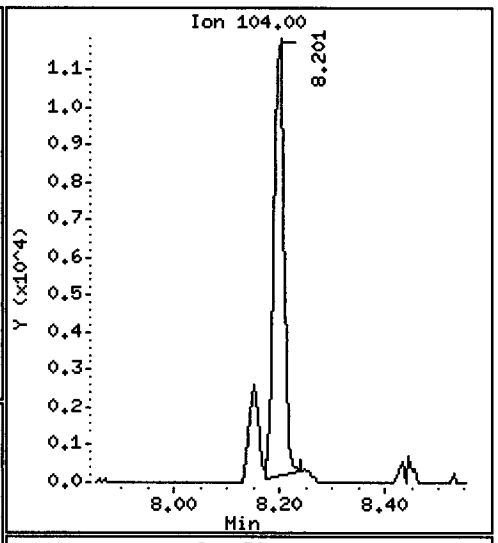
Column phase: RTXVMS

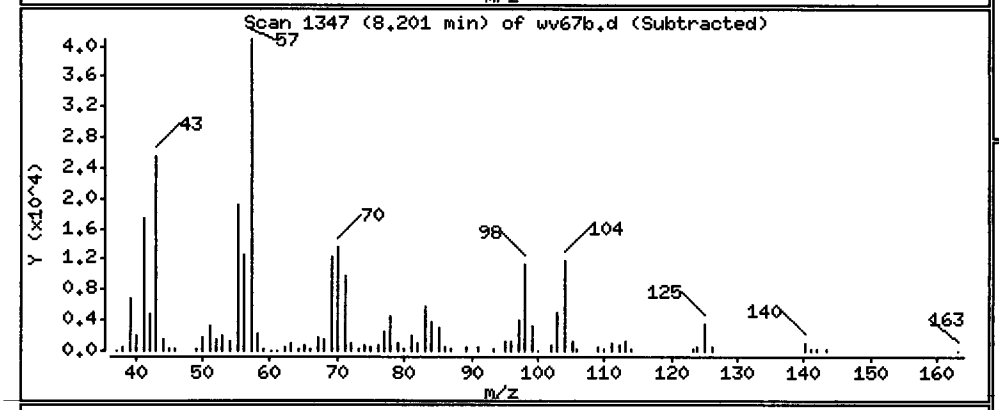
Column diameter: 0.18

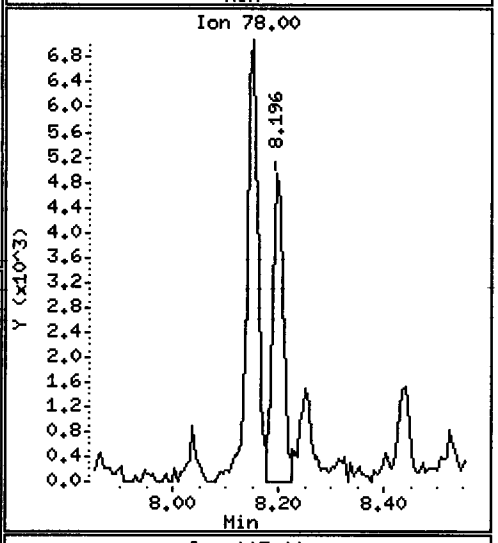
58 Styrene

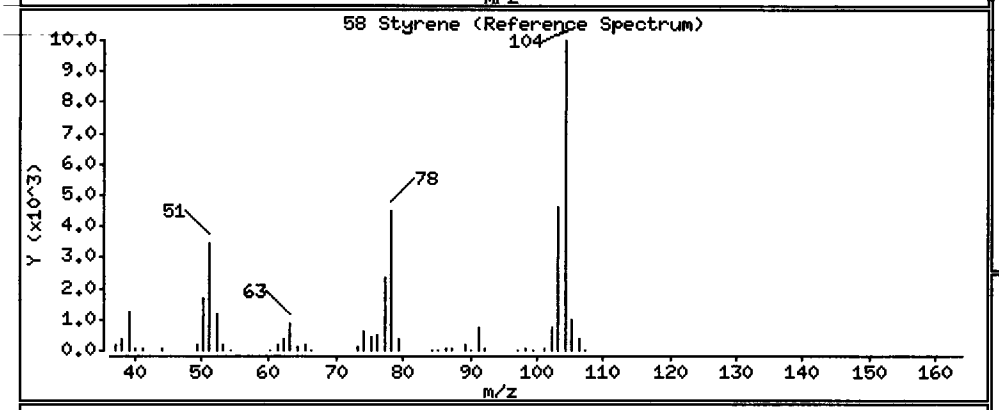
Concentration: 0.2697 ug/Kg

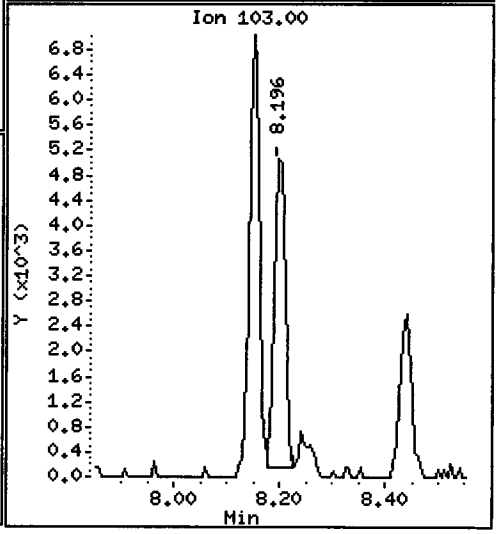


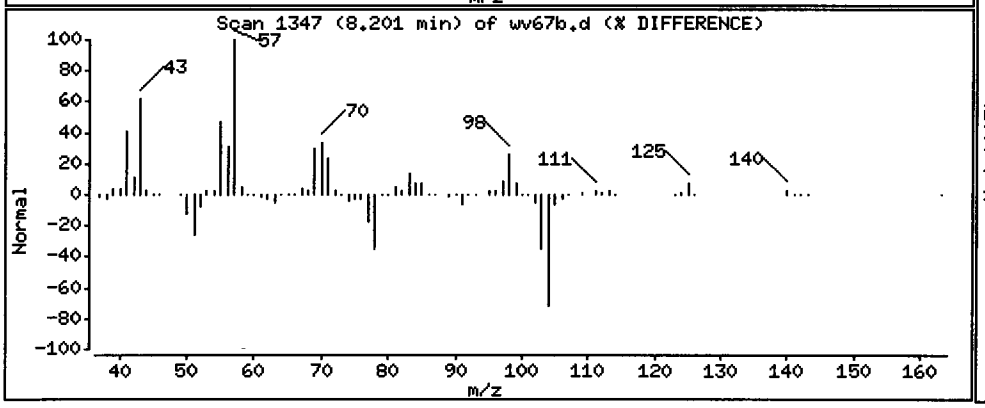












Data File: /chem1/nt5.i/27JUN13.b/wv67b.d

Date : 27-JUN-2013 22:28

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,9.77,0

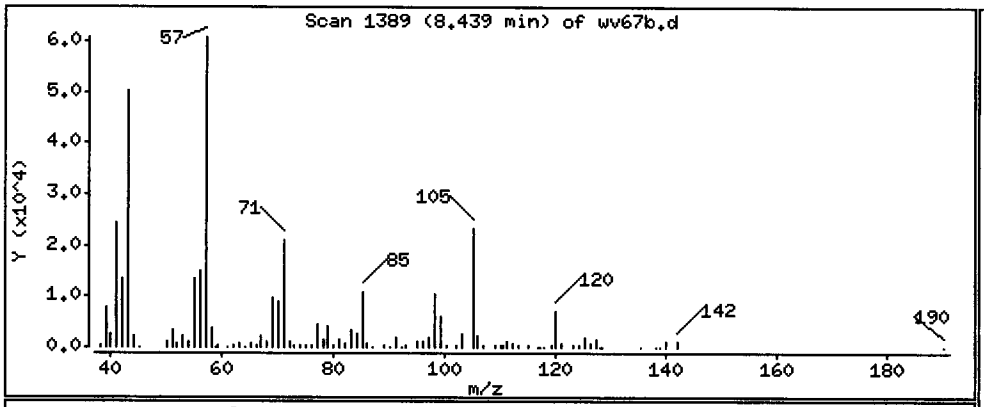
Operator: PB

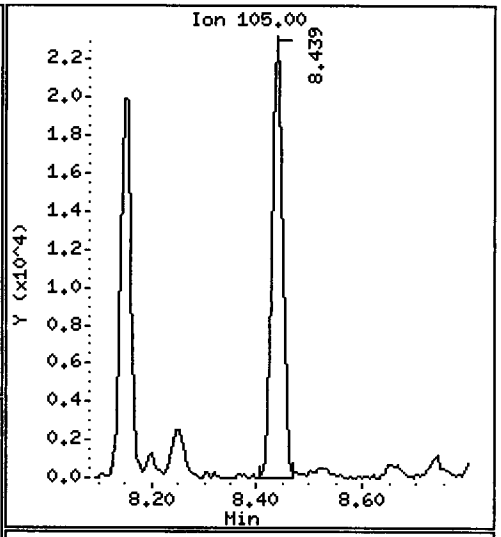
Column phase: RTXVMS

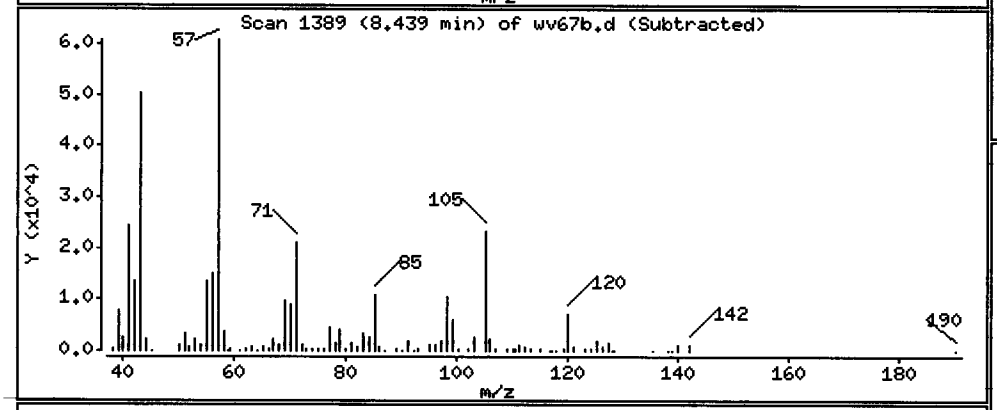
Column diameter: 0.18

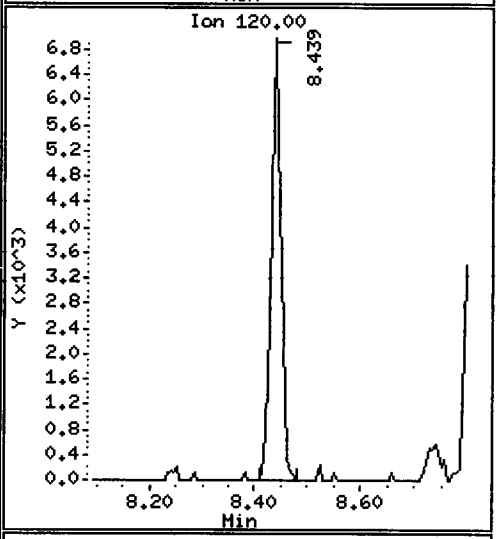
60 Isopropyl Benzene

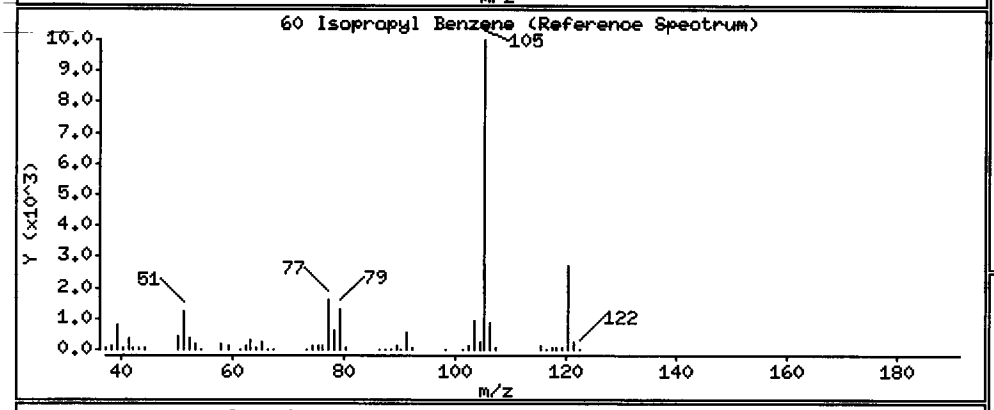
Concentration: 0.6752 ug/Kg

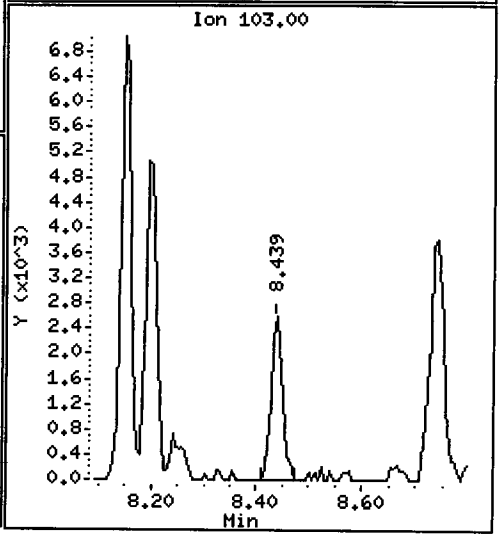


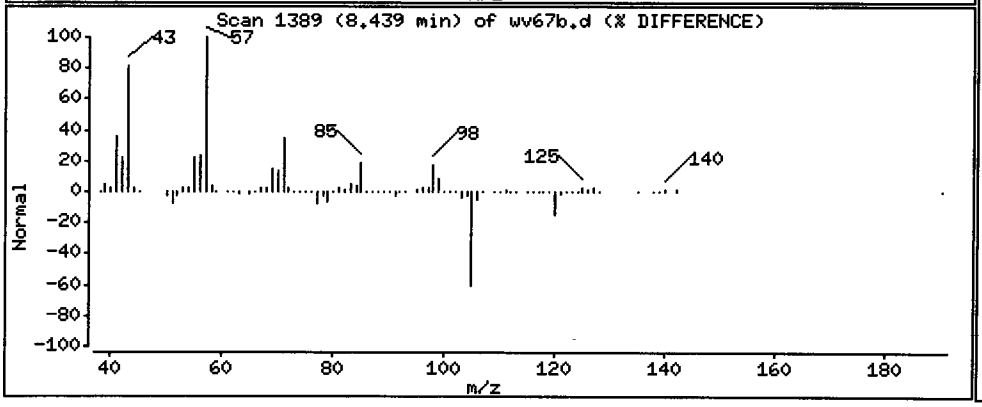












Data File: /chem1/nt5.i/27JUN13.b/wv67b.d

Date : 27-JUN-2013 22:28

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,9.77,0

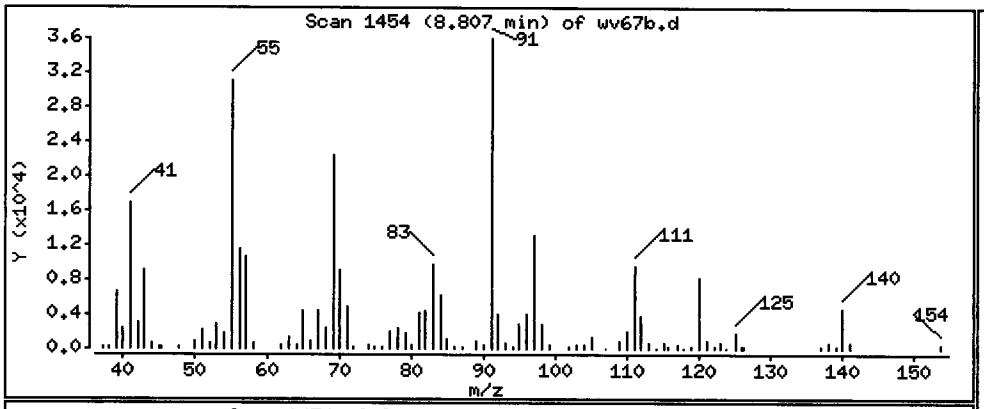
Operator: PB

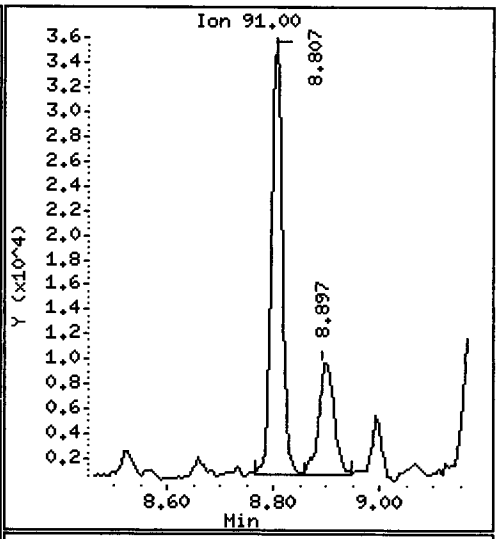
Column phase: RTXVMS

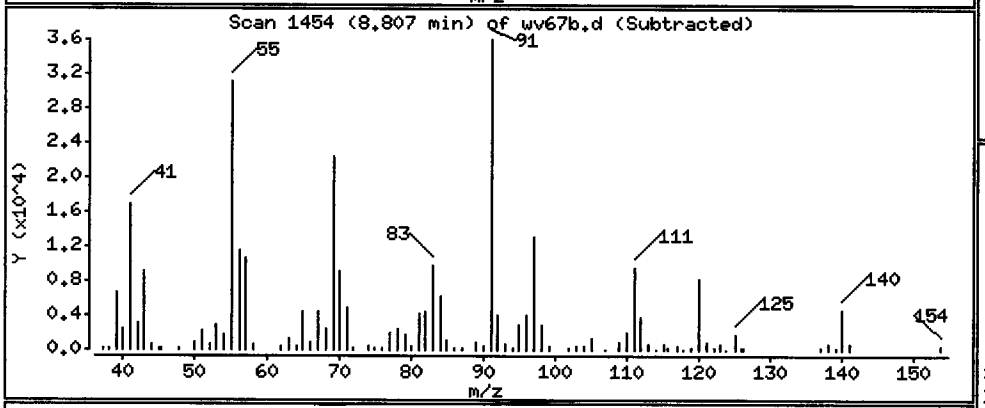
Column diameter: 0.18

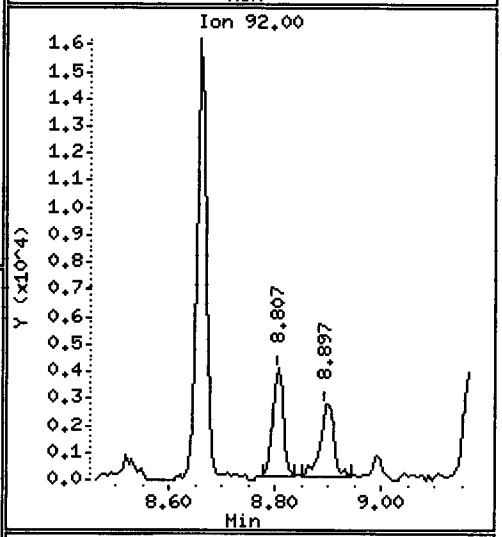
64 N-Propyl Benzene

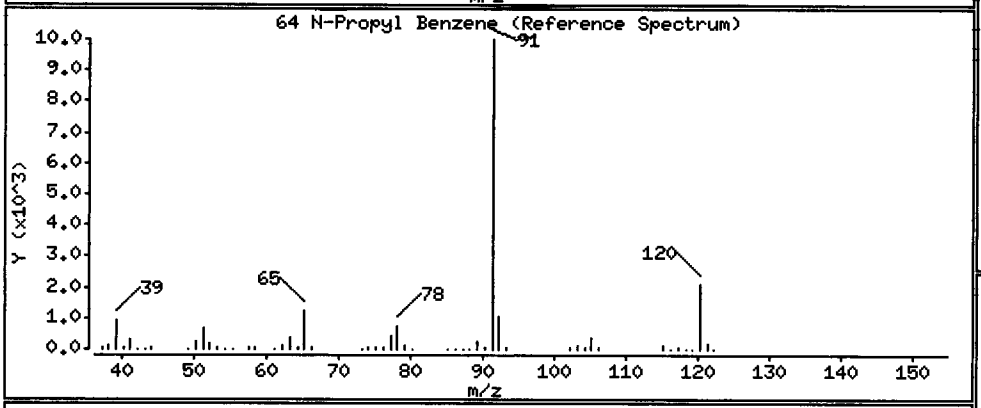
Concentration: 0.8193 ug/Kg

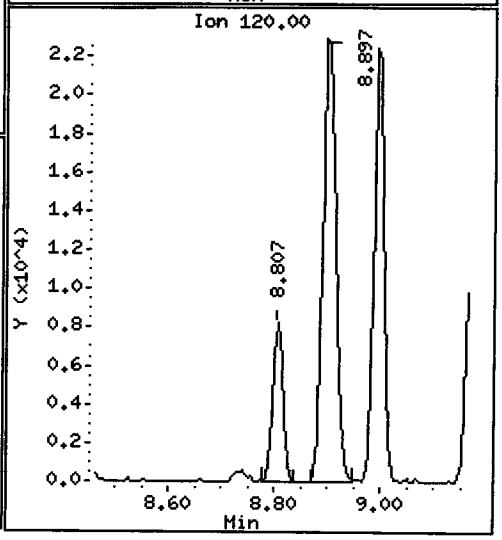


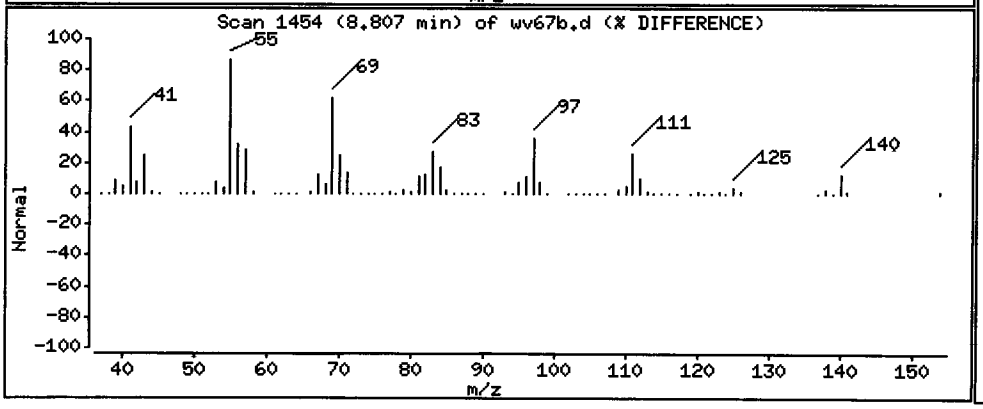












Data File: /chem1/nt5.i/27JUN13.b/wv67b.d

Date : 27-JUN-2013 22:28

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,9.77,0

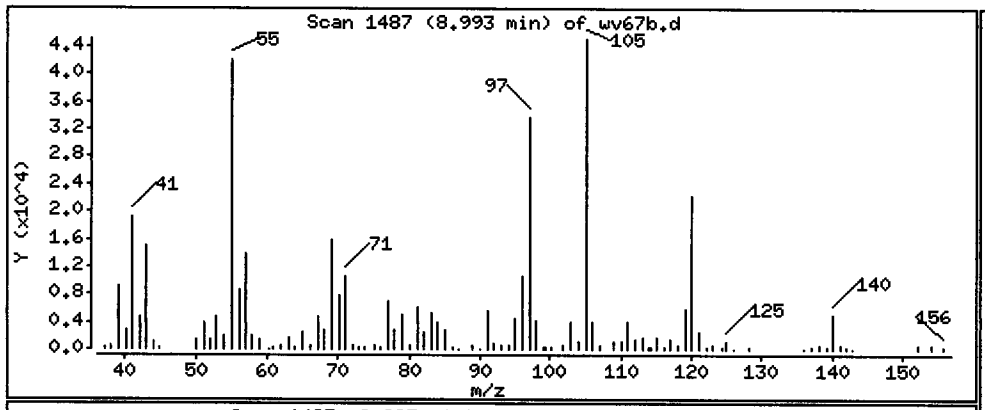
Operator: PB

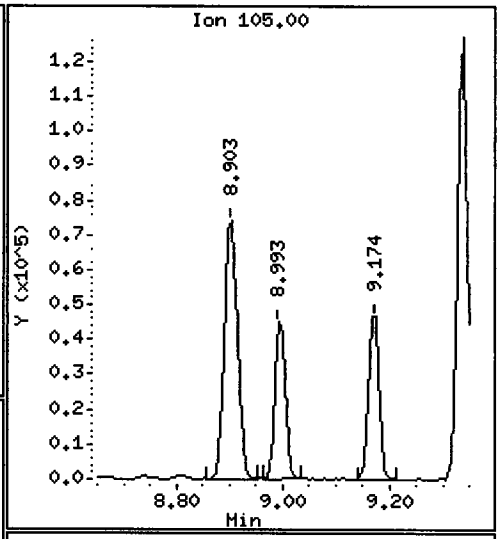
Column phase: RTXVMS

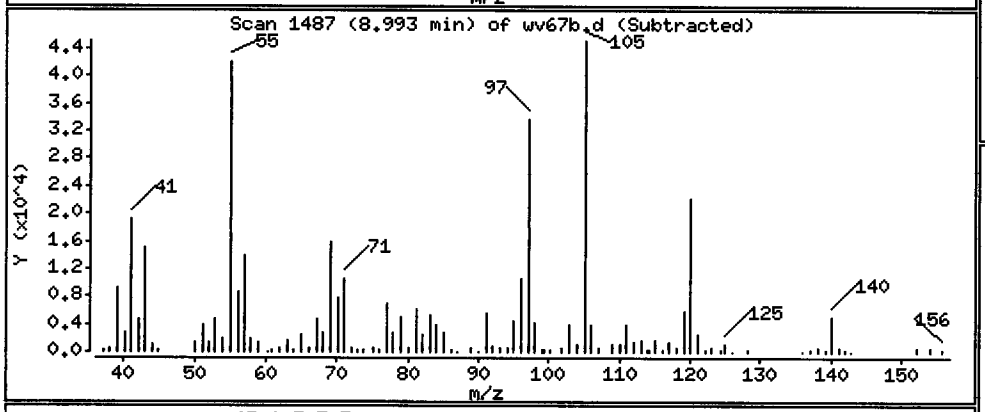
Column diameter: 0.18

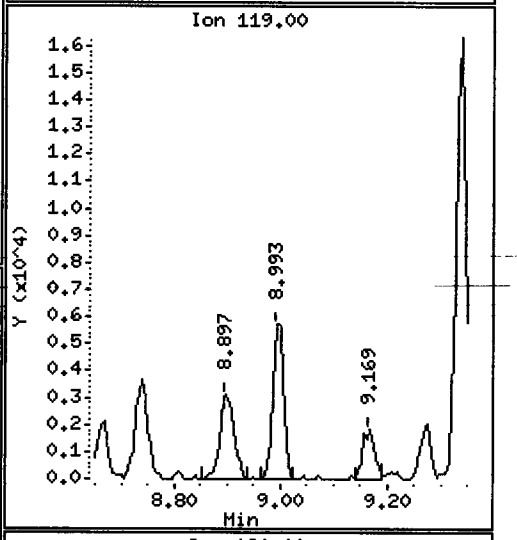
67 1,3,5-Trimethyl Benzene

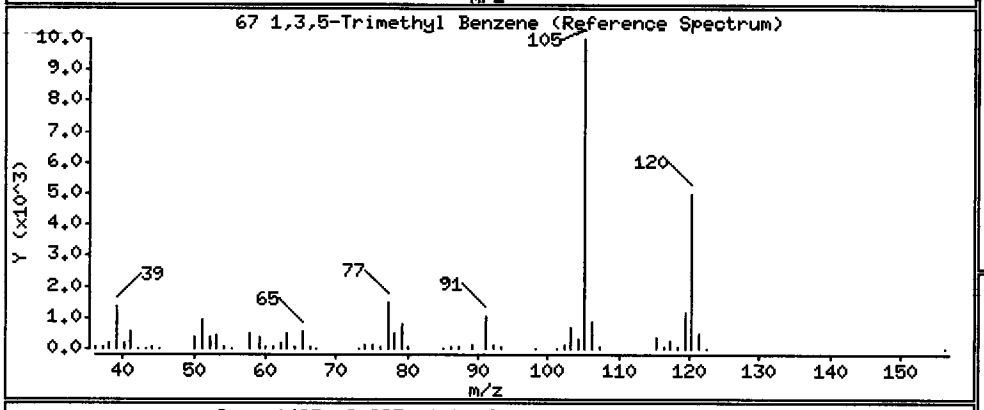
Concentration: 1.448 ug/Kg

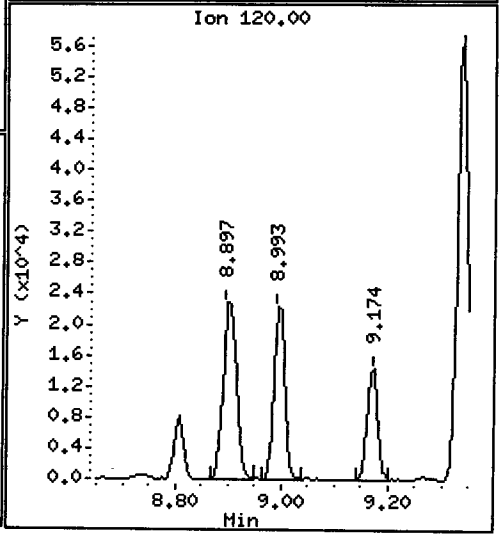


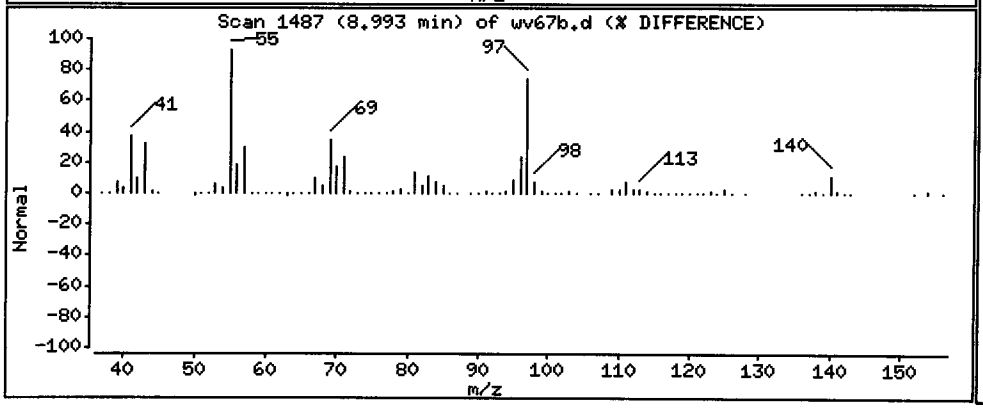












Data File: /chem1/nt5.i/27JUN13.b/wv67b.d

Date : 27-JUN-2013 22:28

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,9.77,0

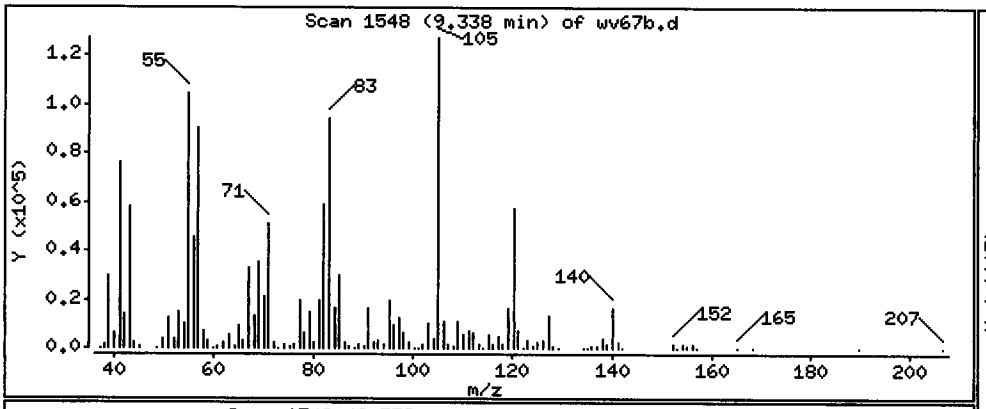
Operator: PB

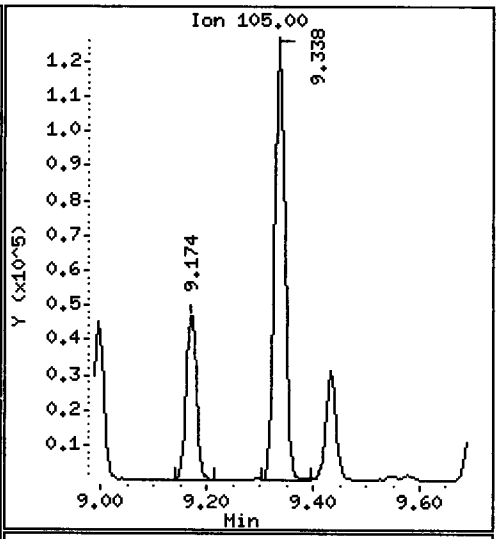
Column phase: RTXVMS

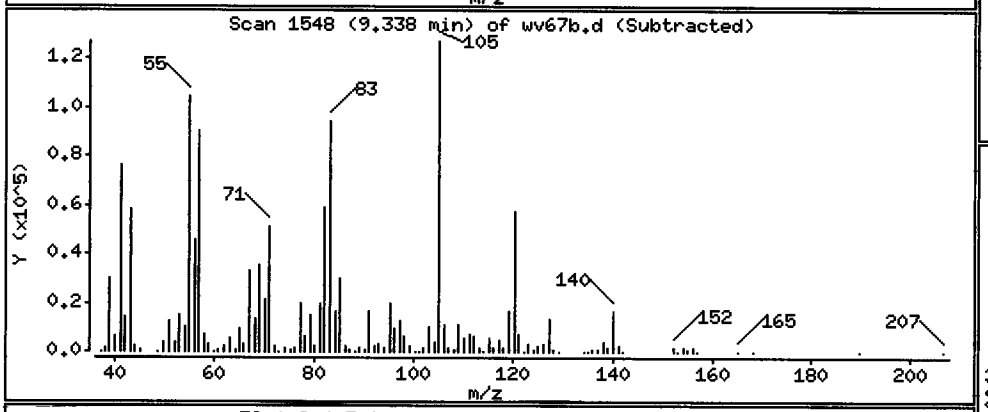
Column diameter: 0.18

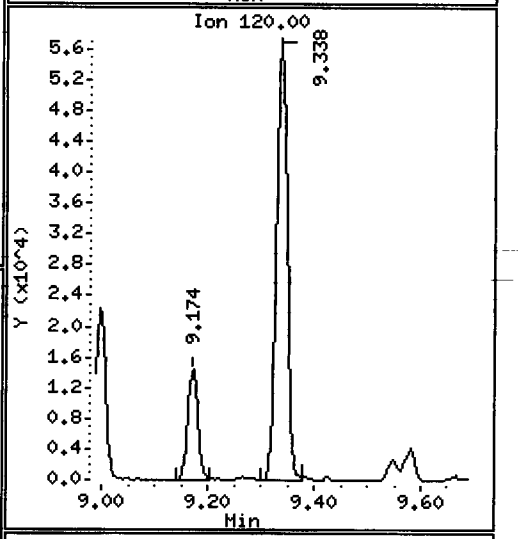
72 1,2,4-Trimethylbenzene

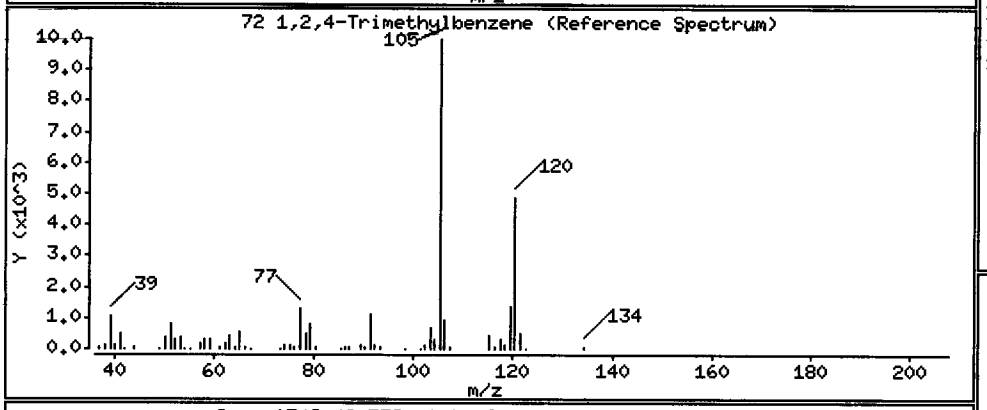
Concentration: 4.090 ug/Kg

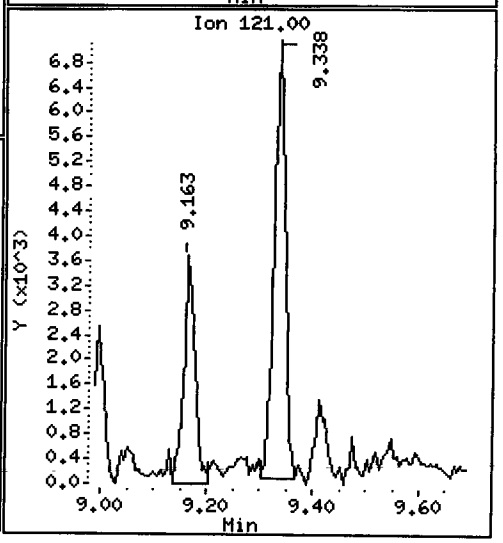


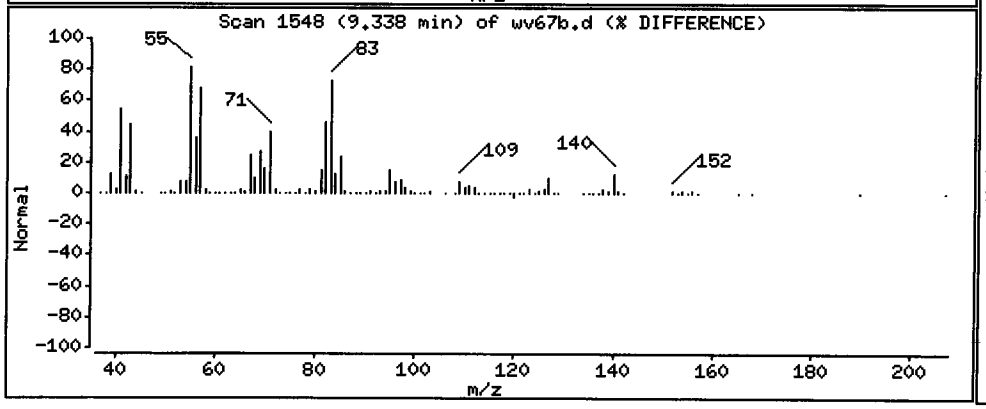












Data File: /chem1/nt5.i/27JUN13.b/wv67b.d

Date : 27-JUN-2013 22:28

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,9.77,0

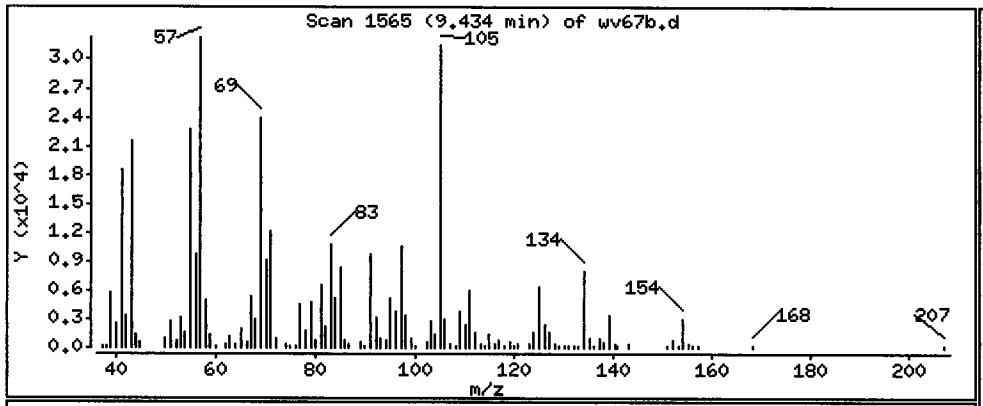
Operator: PB

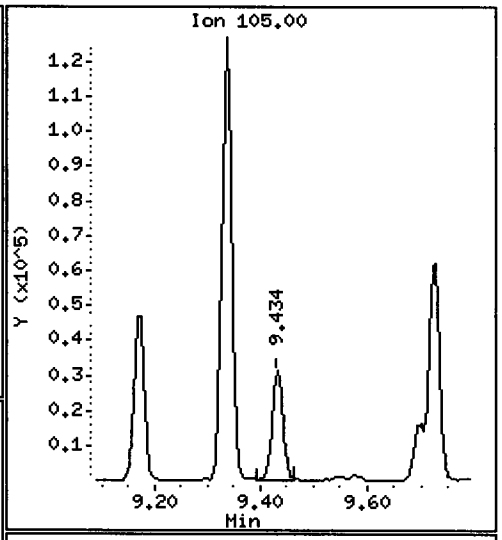
Column phase: RTXVMS

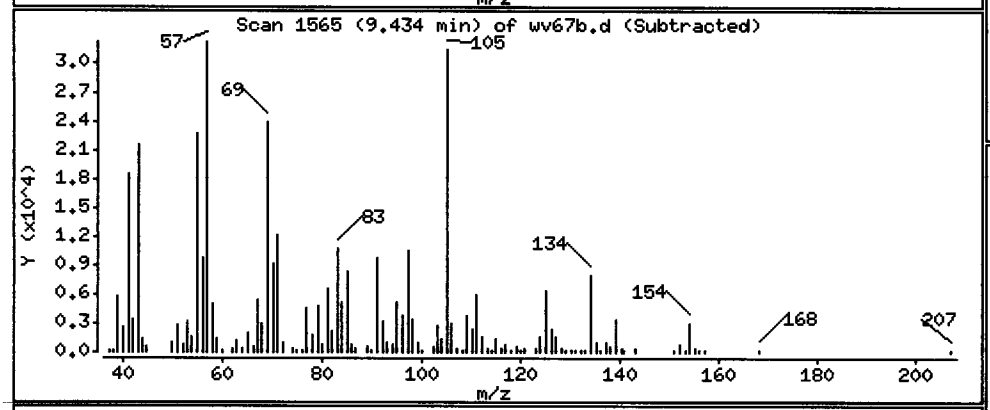
Column diameter: 0.18

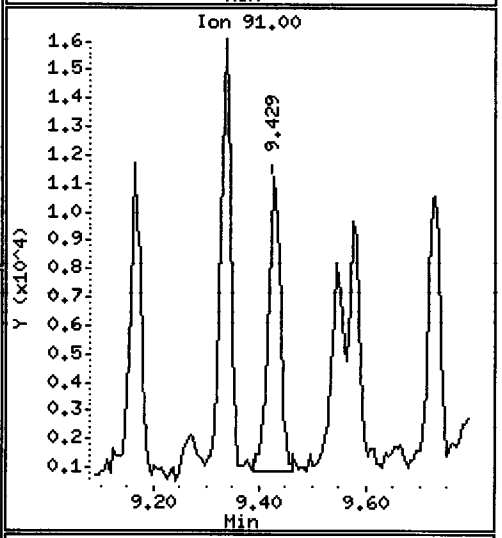
73 S-Butyl Benzene

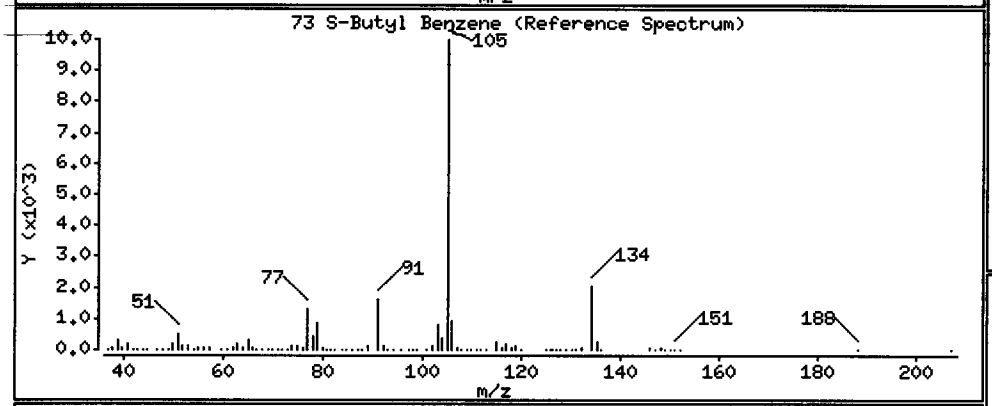
Concentration: 0.7892 ug/Kg

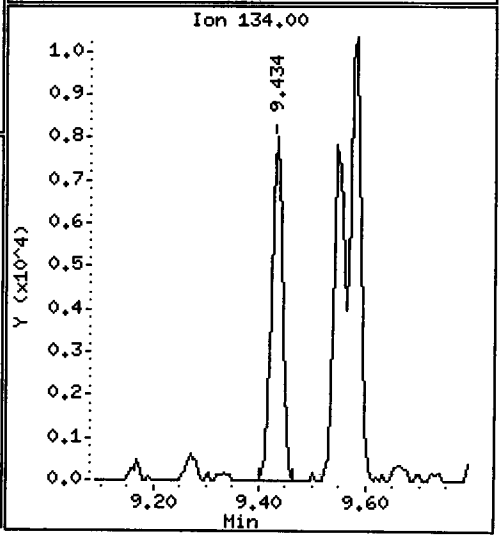


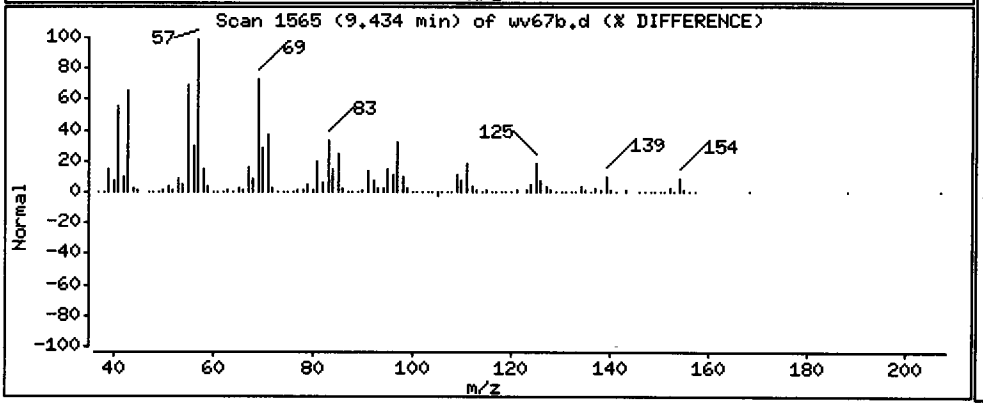












Data File: /chem1/nt5.i/27JUN13.b/wv67b.d

Date : 27-JUN-2013 22:28

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,9.77,0

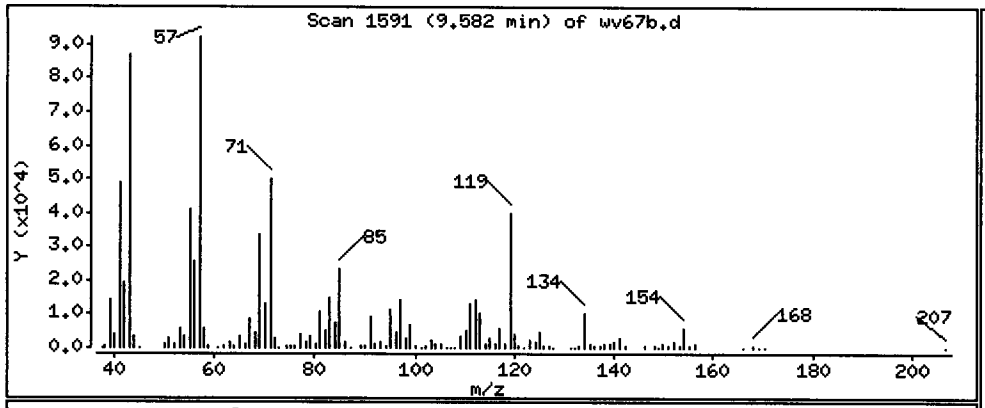
Operator: PB

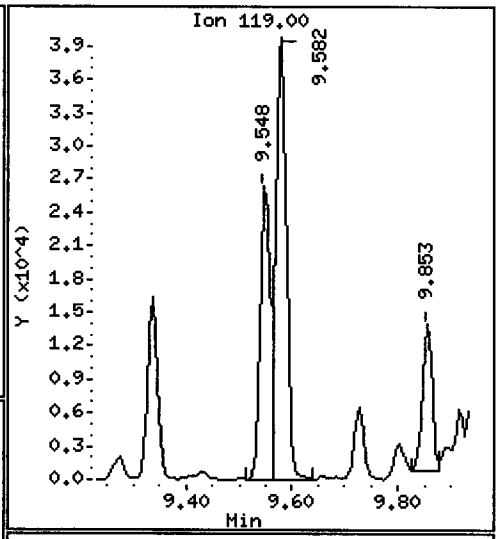
Column phase: RTXVMS

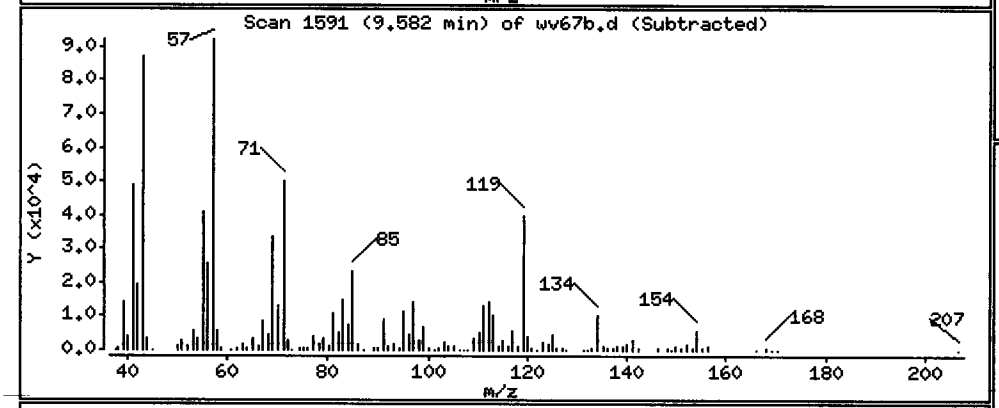
Column diameter: 0.18

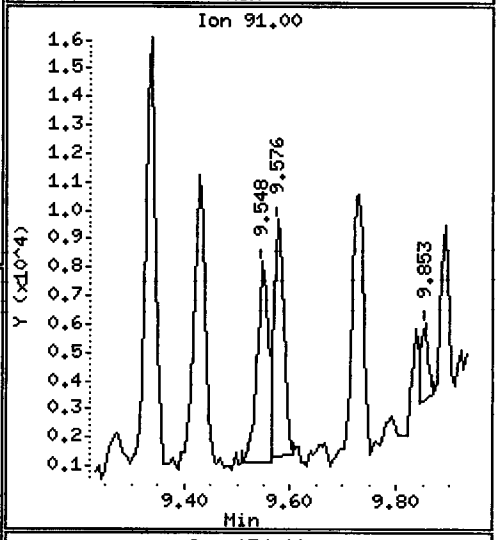
74 4-Isopropyl Toluene

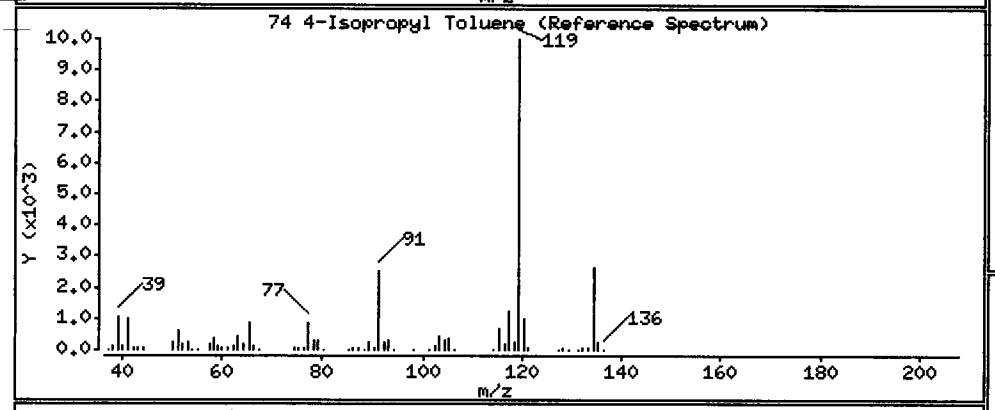
Concentration: 1.304 ug/Kg

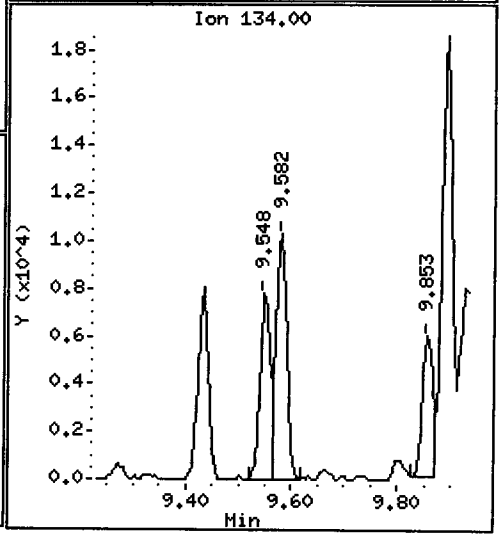


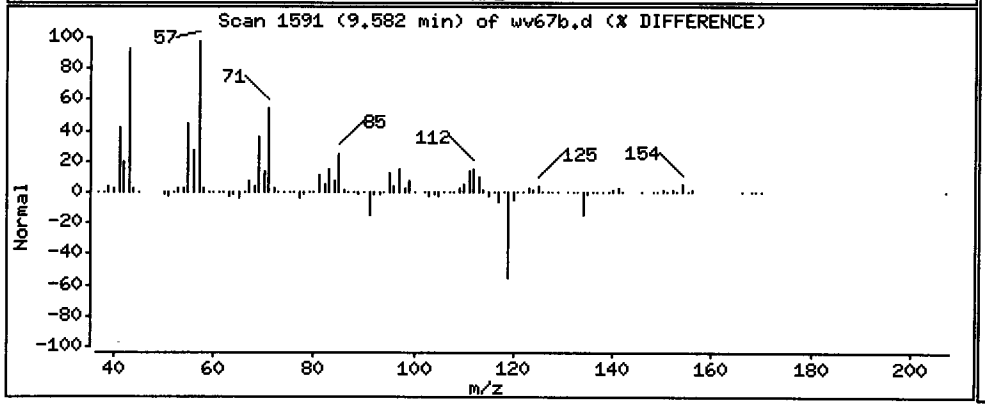












Data File: /chem1/nt5.i/27JUN13.b/wv67b.d

Date : 27-JUN-2013 22:28

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,9.77,0

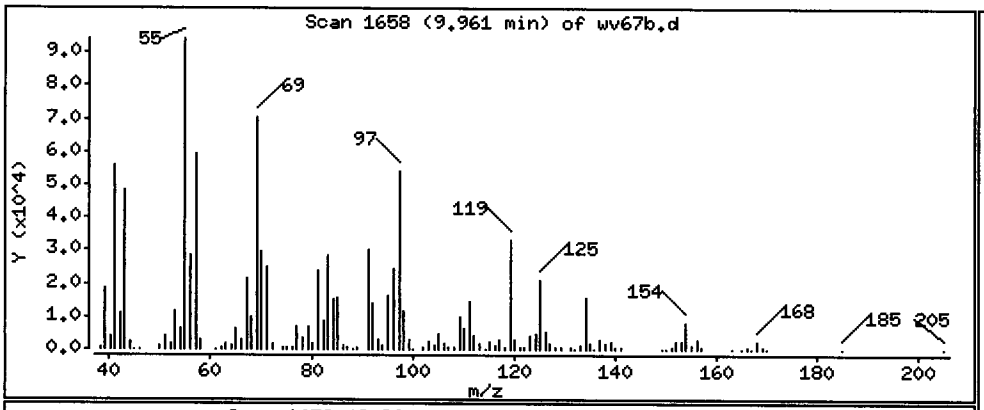
Operator: PB

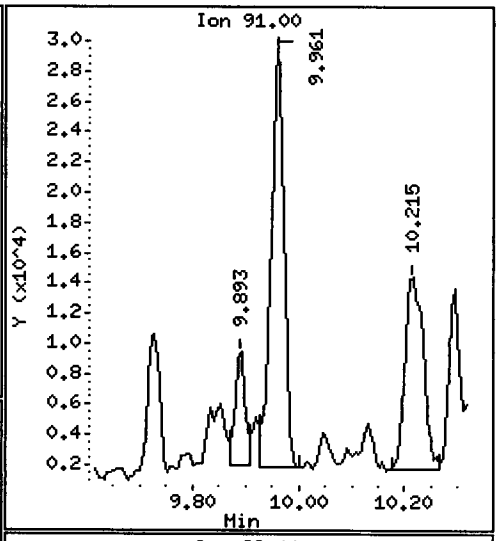
Column phase: RTXVMS

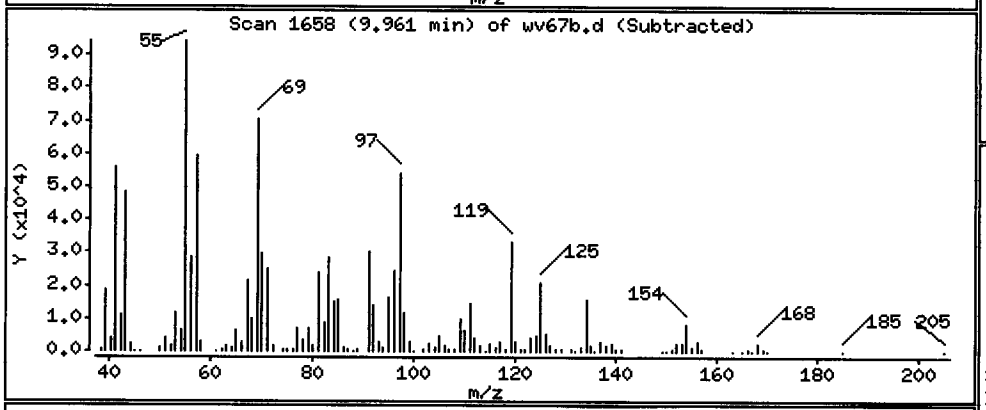
Column diameter: 0.18

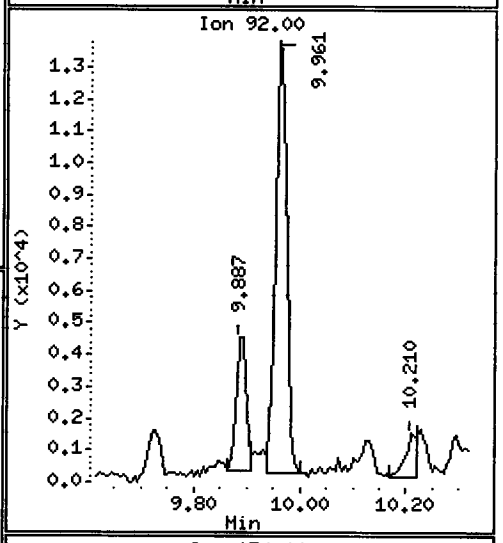
78 N-Butyl Benzene

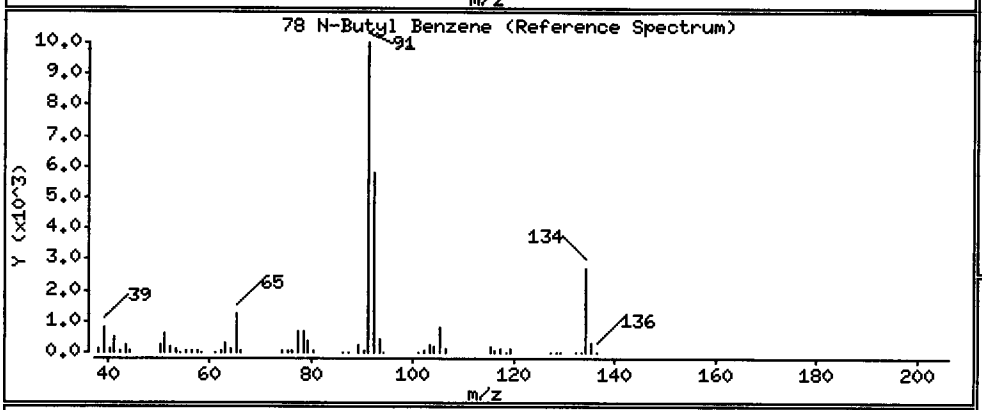
Concentration: 1.179 ug/Kg

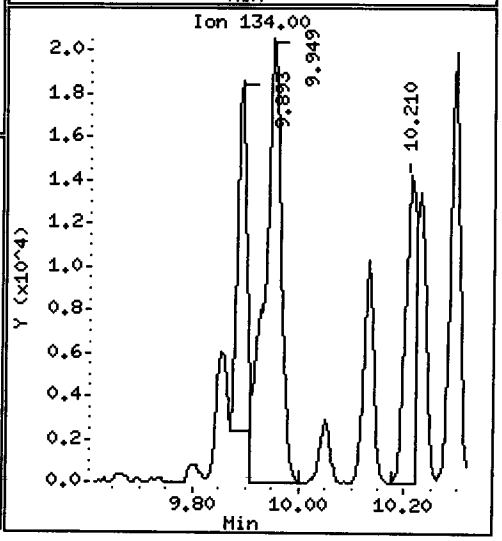


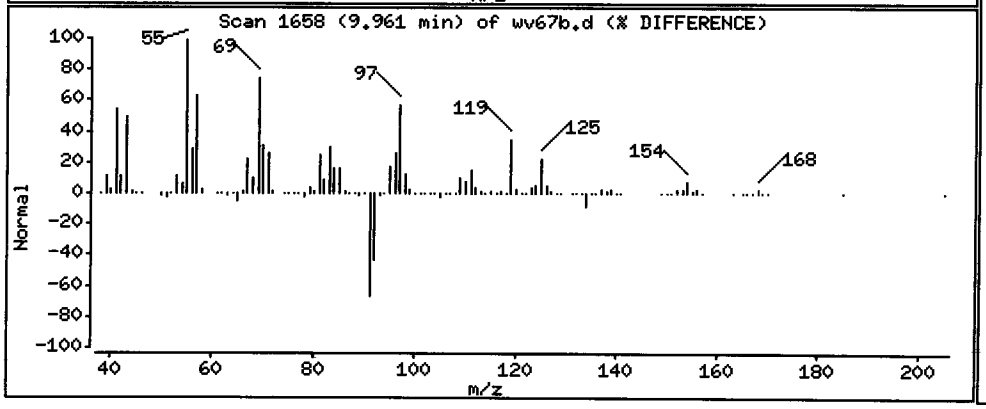












Data File: /chem1/nt5.i/27JUN13.b/wv67b.d

Date : 27-JUN-2013 22:28

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,9.77,0

Operator: PB

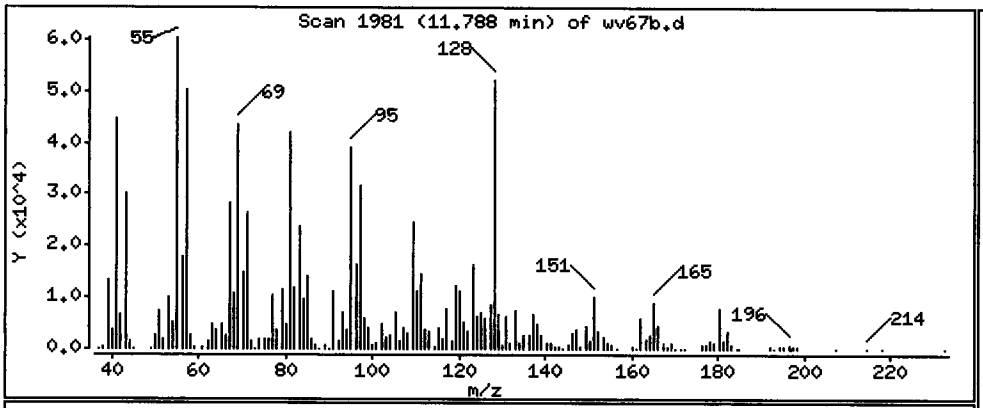
Column phase: RTXVMS

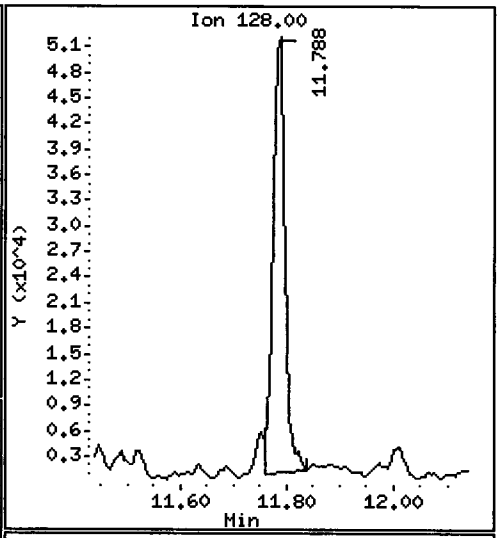
Column diameter: 0.18

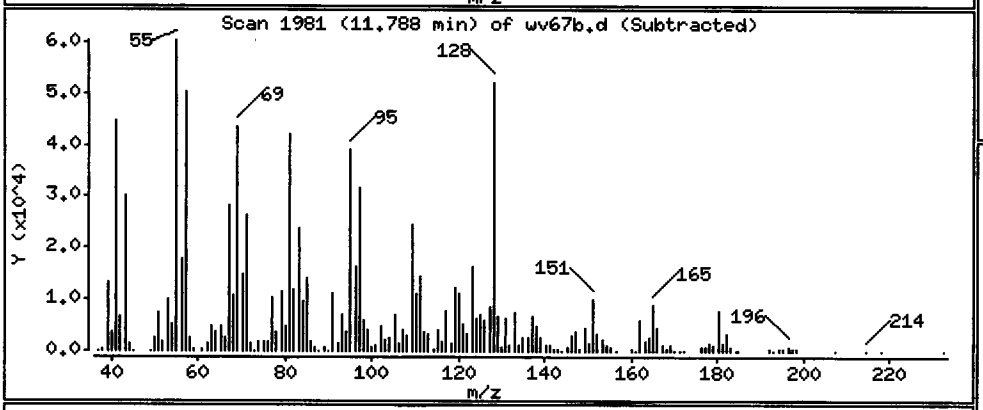
JB LMI not replicated 6/26/13

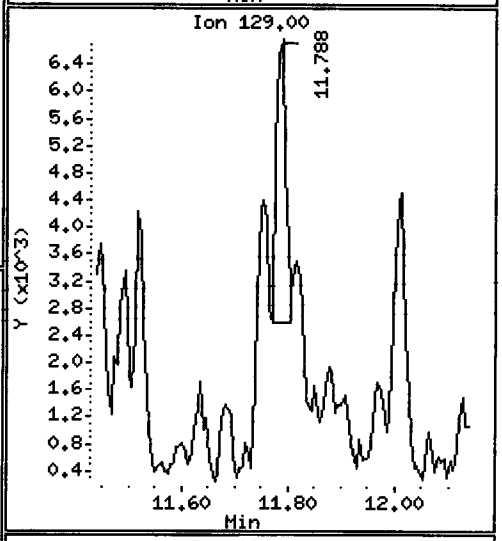
84 Naphthalene

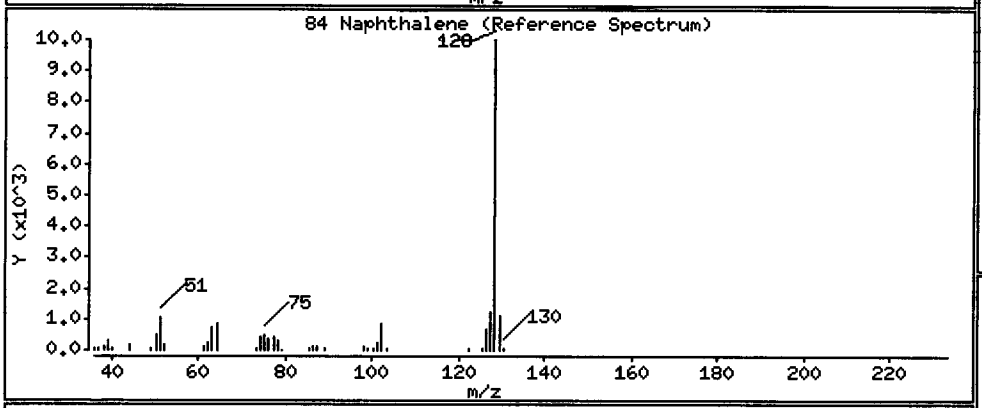
Concentration: 2.030 ug/Kg

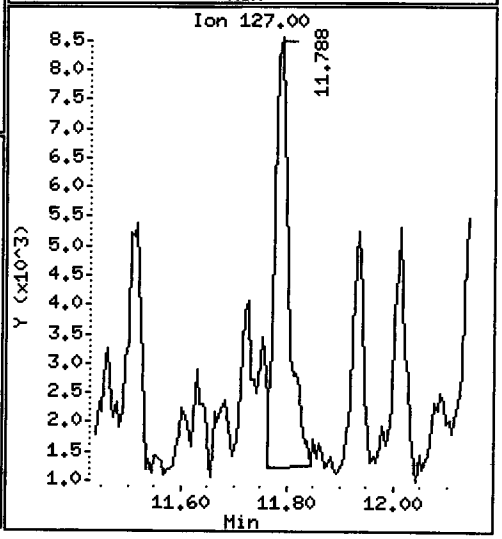


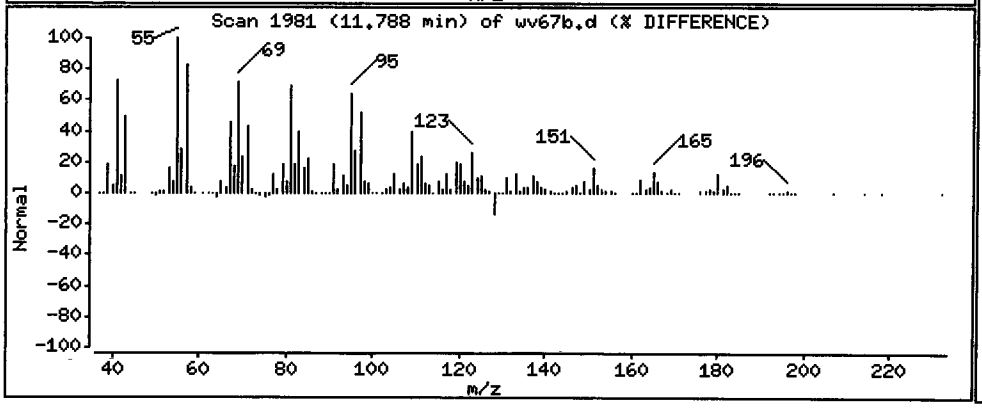












CO-ELUTION SUMMARY FOR FILE - wv67b.d

Lab ID: WV67B, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/wv67c.d
Lab Smp Id: WV67C Client Smp ID: UP-CB-A6-20130626-S
Inj Date : 27-JUN-2013 22:52
Operator : PB Inst ID: nt5.i
Smp Info : WV67C,5,9.19,0
Misc Info : 13-13659
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 11:09 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	9.19000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	1.600	1.611	(0.343)	70434	4.00808	2.181
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	1.968	1.979	(0.422)	667944	17.8816	9.729
9 112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10 Iodomethane	142	2.058	2.075	(0.441)	7074	0.84878	0.4602
11 Bromoethane	108	Compound Not Detected.					
12 Acrolein	56	Compound Not Detected.					
13 Methylene Chloride	84	2.431	2.454	(0.521)	19523	1.50731	0.8201(Q)
14 Acetone	43	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	Compound Not Detected.					
	16 Methyl tert butyl ether	73	Compound Not Detected.					
	17 1,1-Dichloroethane	63	Compound Not Detected.					
	18 Acrylonitrile	53	Compound Not Detected.					
	19 Vinyl Acetate	43	Compound Not Detected.					
	20 Cis-1,2-Dichloroethene	96	Compound Not Detected.					
	22 2,2-Dichloropropane	77	Compound Not Detected.					
	23 Bromochloromethane	128	Compound Not Detected.					
	24 Chloroform	83	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.191	4.196	(0.898)	733397	51.6088	28.079
	26 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 1,1-Dichloropropene	75	Compound Not Detected.					
	29 2-Butanone	72	4.377	4.434	(0.938)	75973	44.7464	24.345(Q)
	30 Benzene	78	4.530	4.530	(0.885)	237105	4.64393	2.527
*	31 Pentafluorobenzene	168	4.666	4.671	(1.000)	1475877	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.666	(0.999)	799326	49.4975	26.930
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	5.068	5.067	(0.990)	7975	0.61836	0.3364
*	35 1,4-Difluorobenzene	114	5.118	5.118	(1.000)	2347847	50.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	40 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	41 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	42 d8-Toluene	98	6.295	6.295	(1.230)	2623625	45.0813	24.527
	43 Toluene	92	6.335	6.335	(1.238)	1671386	51.7475	28.154
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	20537	2.11005	1.148
	45 4-Methyl-2-Pentanone	58	Compound Not Detected.					
	46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47 1,1,2-Trichloroethane	97	Compound Not Detected.					
	48 Chlorodibromomethane	129	Compound Not Detected.					
	49 1,3-Dichloropropane	76	Compound Not Detected.					
	50 1,2-Dibromoethane	107	Compound Not Detected.					
	51 2-Hexanone	43	Compound Not Detected.					
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	1652442	50.0000	
	53 Chlorobenzene	112	Compound Not Detected.					
	54 Ethyl Benzene	91	7.658	7.664	(1.008)	3211799	79.9484	43.498
	55 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56 m,p-xylene	106	7.788	7.794	(1.025)	437033	28.9788	15.766
	57 o-Xylene	106	8.151	8.156	(1.073)	280868	18.8698	10.266
	58 Styrene	104	8.201	8.201	(1.080)	326739	13.3963	7.289
	59 Bromoform	173	Compound Not Detected.					
	60 Isopropyl Benzene	105	8.439	8.445	(0.873)	533940	40.5806	22.079
$	62 4-Bromofluorobenzene	95	8.660	8.665	(1.140)	597512	33.9746	18.485(R)
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	8.807	8.812	(0.911)	336588	21.2347	11.553
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
66	2-Chloro Toluene	91	Compound Not Detected.					
67	1,3,5-Trimethyl Benzene	105	8.993	8.999	(0.930)	157393	13.8761	7.550
68	1,2,3-Trichloropropane	110	Compound Not Detected.					
69	Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
70	4-Chloro Toluene	91	Compound Not Detected.					
71	T-Butyl Benzene	119	9.271	9.276	(0.959)	8134	0.80736	0.4393
72	1,2,4-Trimethylbenzene	105	9.338	9.338	(0.966)	308130	27.7829	15.116
73	S-Butyl Benzene	105	9.435	9.440	(0.976)	138764	9.57975	5.212
74	4-Isopropyl Toluene	119	9.576	9.582	(0.991)	75448	6.42976	3.498
75	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 76	d4-1,4-Dichlorobenzene	152	9.667	9.672	(1.000)	317209	50.0000	
77	1,4-Dichlorobenzene	146	9.678	9.683	(1.001)	7810	1.14192	0.6213 (Ø)
78	N-Butyl Benzene	91	9.961	9.966	(1.030)	73206	6.64822	3.617 (Q)
$ 79	d4-1,2-Dichlorobenzene	152	10.046	10.051	(1.039)	268946	46.4844	25.291
80	1,2-Dichlorobenzene	146	Compound Not Detected.					
81	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
84	Naphthalene	128	11.782	11.788	(1.219)	58312	5.48890	2.986
85	1,2,3-Trichlorobenzene	180	Compound Not Detected.					

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: wv67c.d
Lab Smp Id: WV67C
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13659

Calibration Date: 27-JUN-2013
Calibration Time: 17:46
Client Smp ID: UP-CB-A6-20130626-S
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1475877	-8.53
35 1,4-Difluorobenze	2656709	1328354	5313418	2347847	-11.63
52 d5-Chlorobenzene	2557235	1278618	5114470	1652442	-35.38
76 d4-1,4-Dichlorobe	1374359	687180	2748718	317209	-76.92

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	-0.12
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.00
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WV67C
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13659

Client SDG: WV67
Fraction: VOA
Client Smp ID: UP-CB-A6-20130626-S
Operator: PB
SampleType: SAMPLE
Quant Type: ISTD

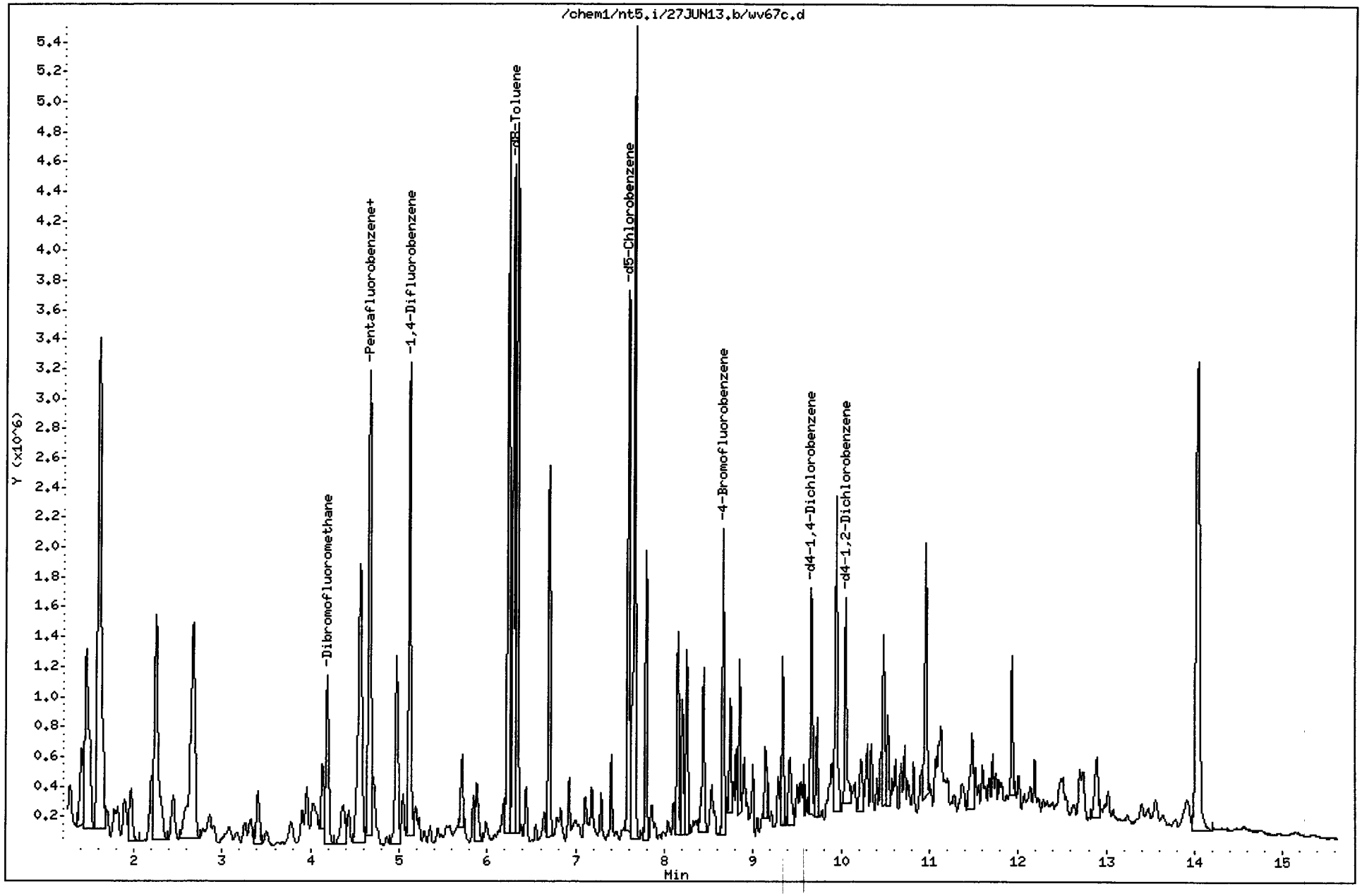
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	51.609	103.22	70-130
$ 32 d4-1,2-Dichloroeth	50.000	49.498	99.00	80-149
$ 42 d8-Toluene	50.000	45.081	90.16	77-120
$ 62 4-Bromofluorobenze	50.000	33.975	67.95*	80-120
$ 79 d4-1,2-Dichloroben	50.000	46.484	92.97	80-120

Data File: /chem1/nt5.i/27JUN13.b/wv67c.d
Date : 27-JUN-2013 22:52
Client ID: UP-CB-A6-20130626-S
Sample Info: WV67C,5,9,19,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9,19,0

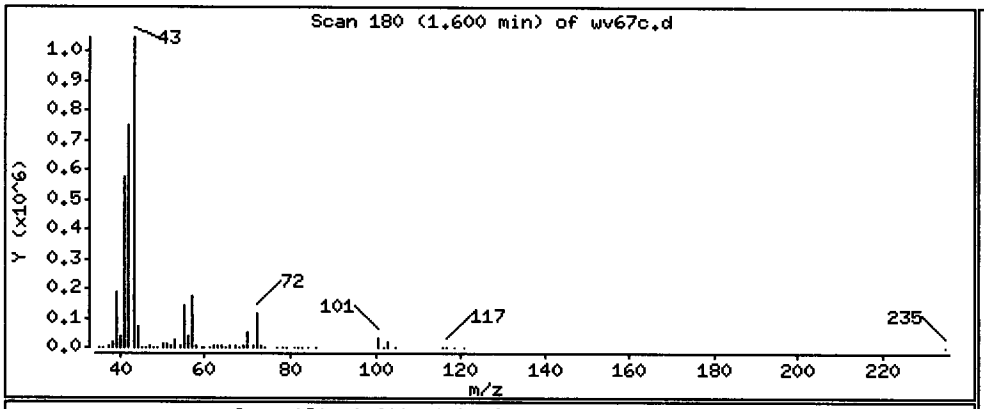
Operator: PB

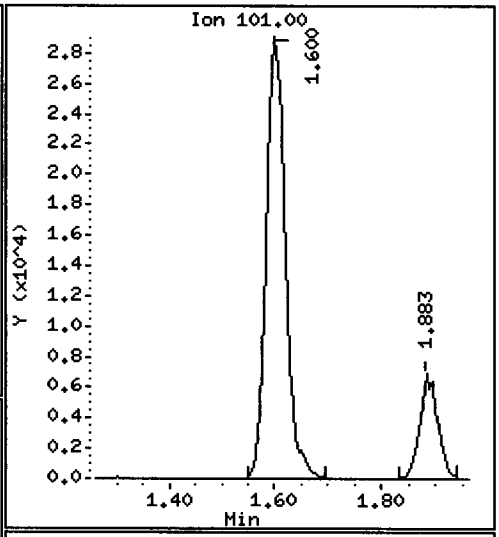
Column phase: RTXVMS

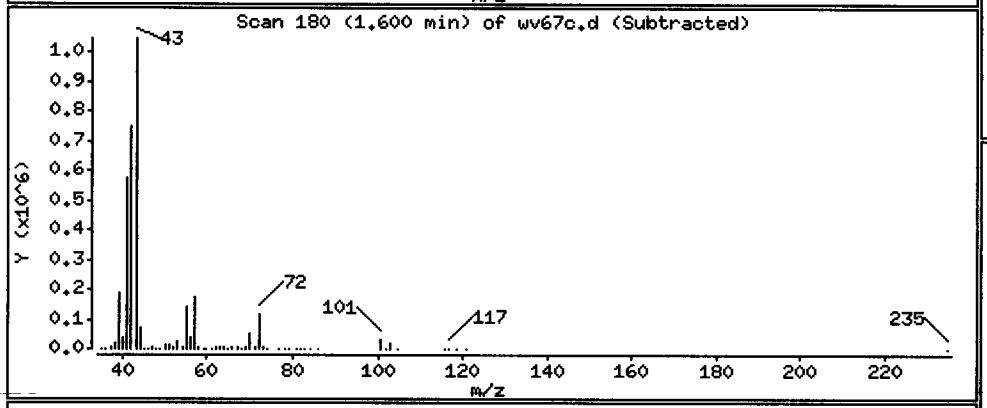
Column diameter: 0.18

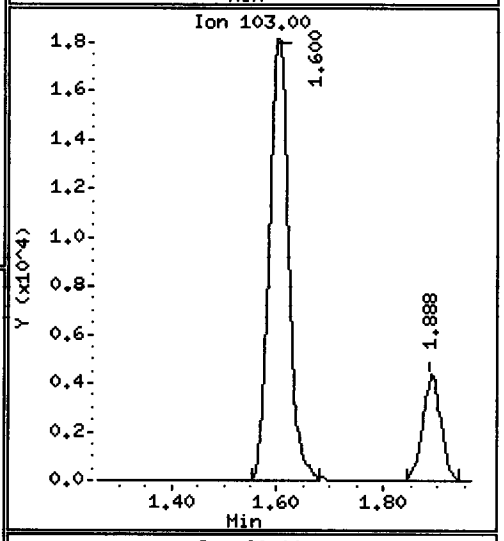
6 Trichlorofluoromethane

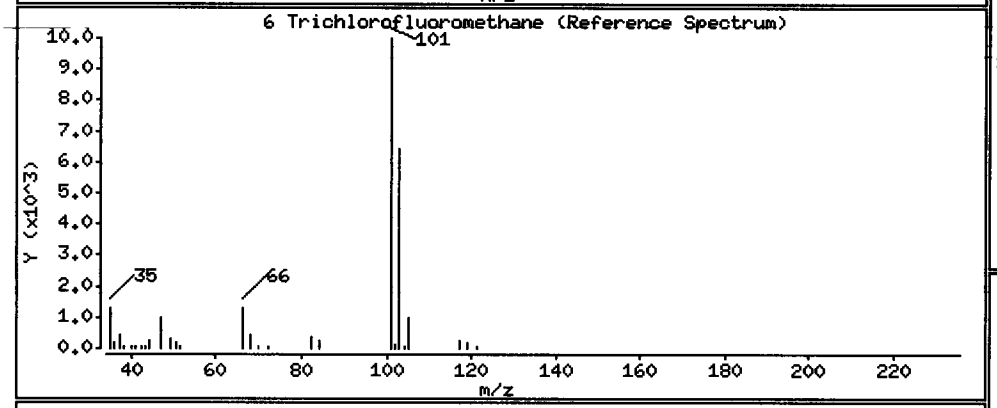
Concentration: 2.181 ug/Kg

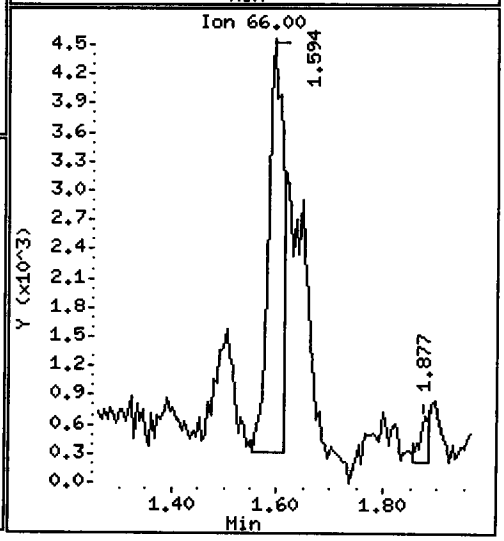


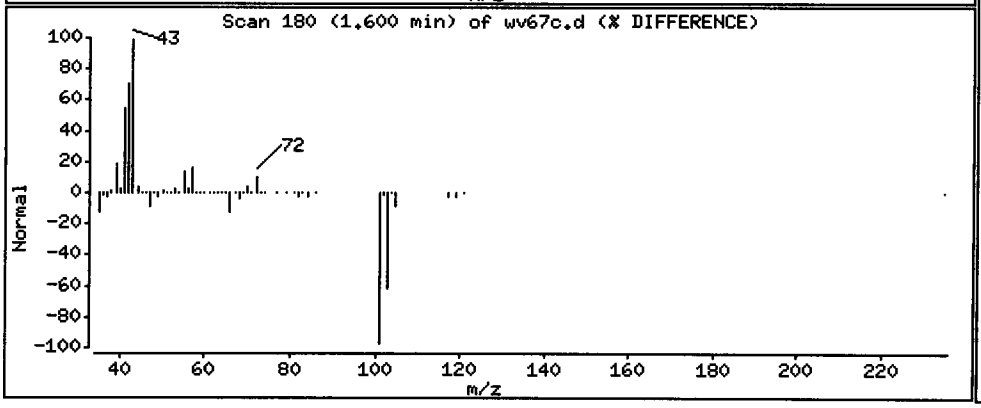












Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9.19,0

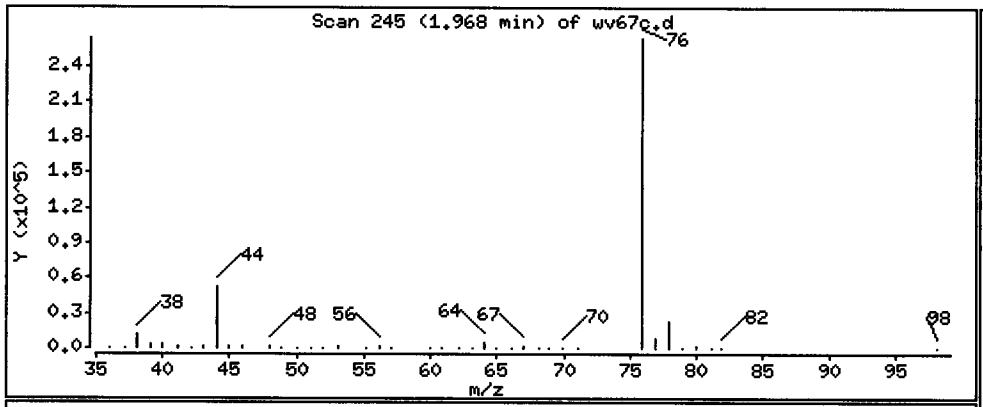
Operator: PB

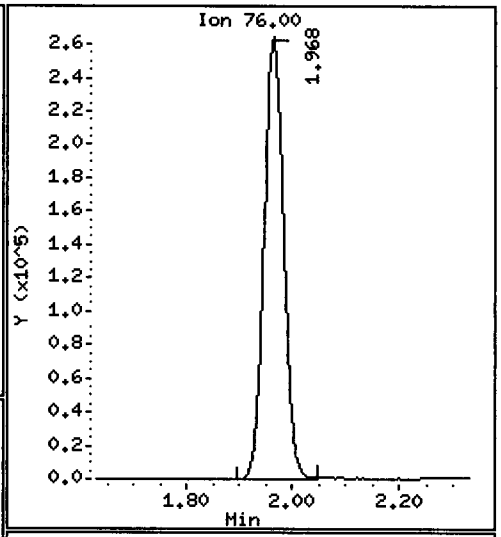
Column phase: RTXVMS

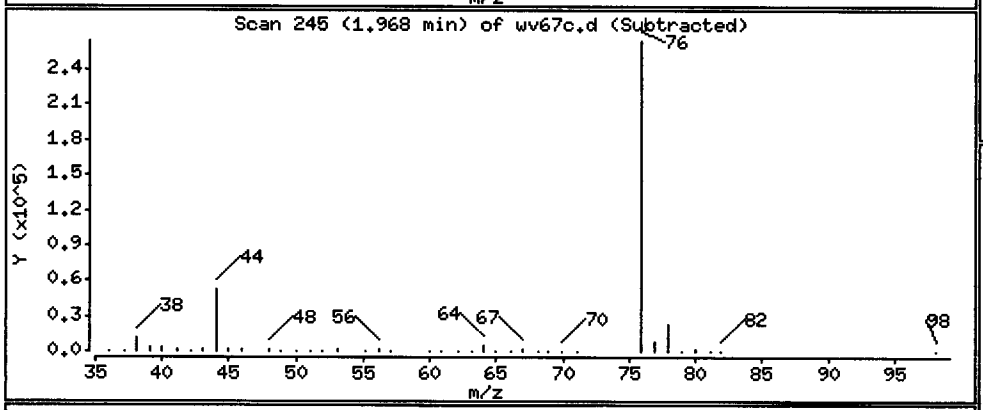
Column diameter: 0.18

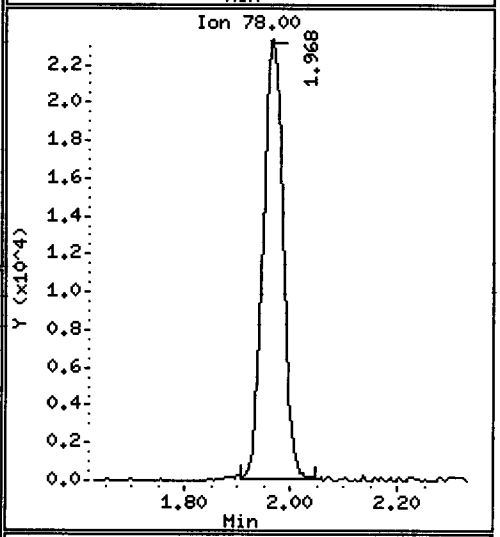
8 Carbon Disulfide

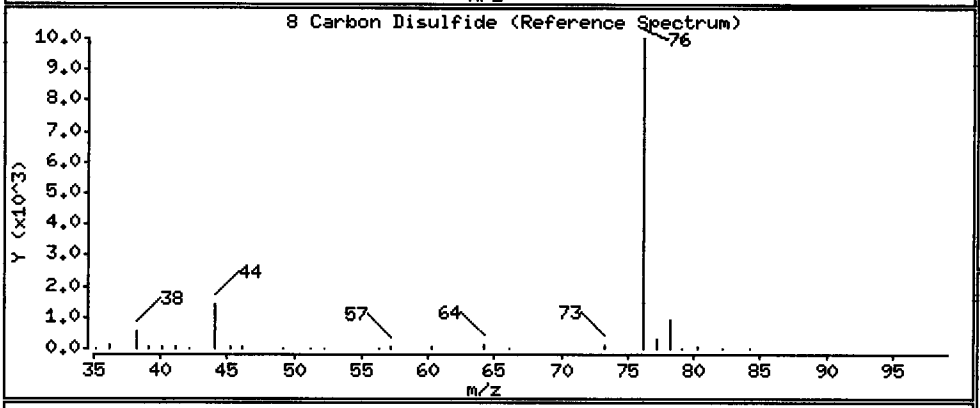
Concentration: 9.729 ug/Kg

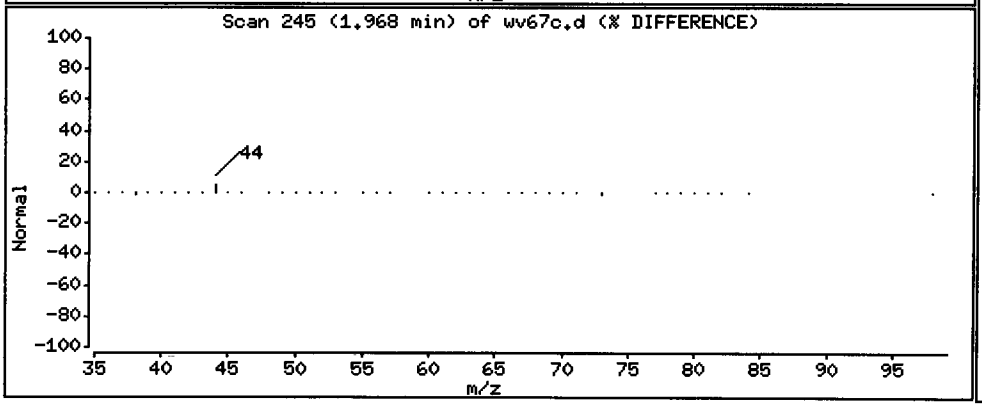


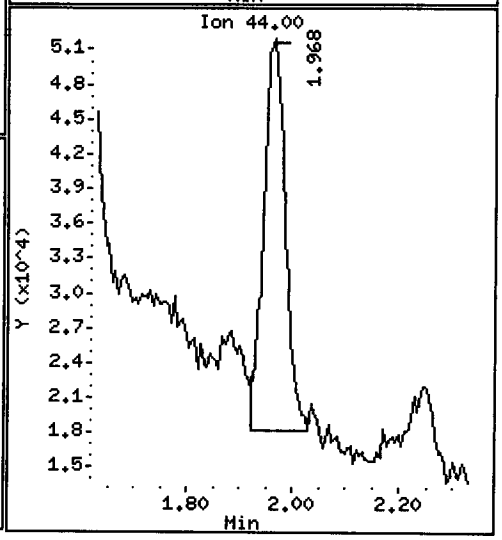












Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9.19,0

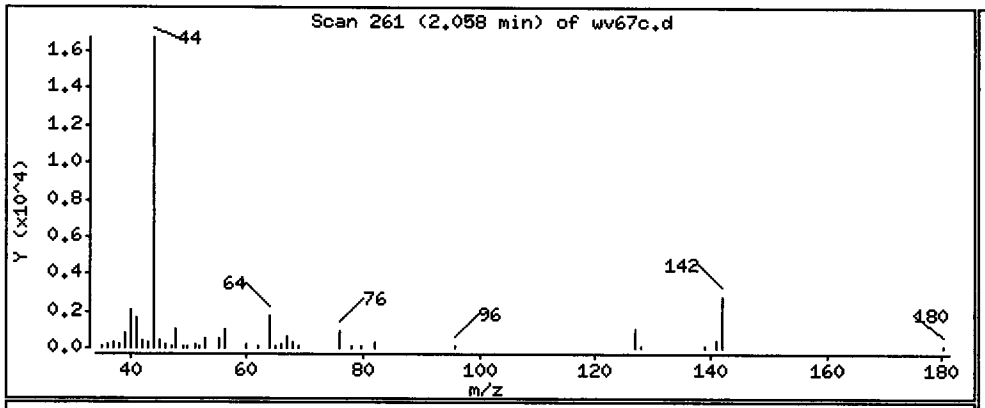
Operator: PB

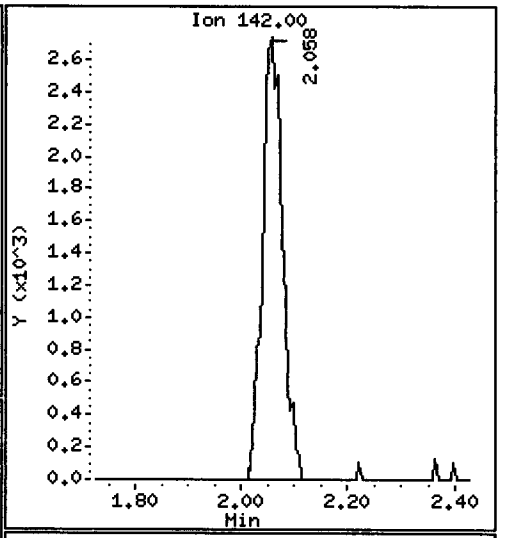
Column phase: RTXVMS

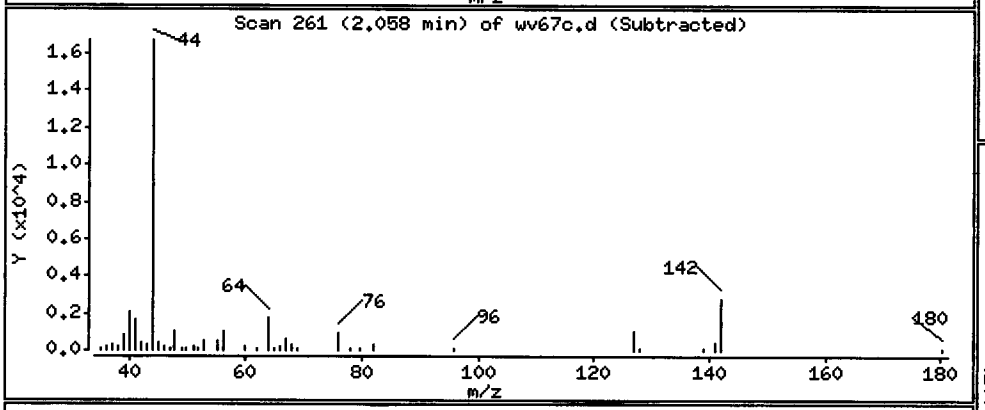
Column diameter: 0.18

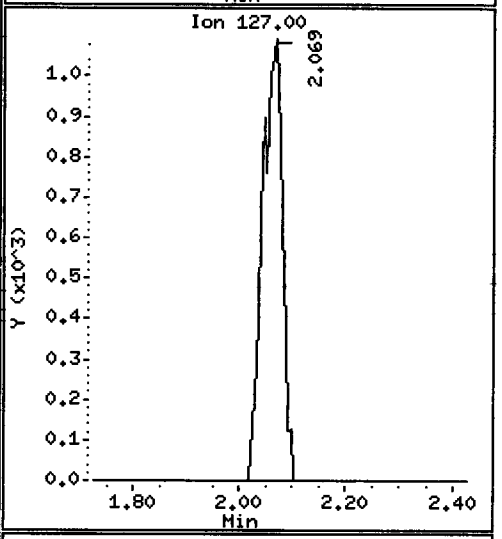
10 Iodomethane

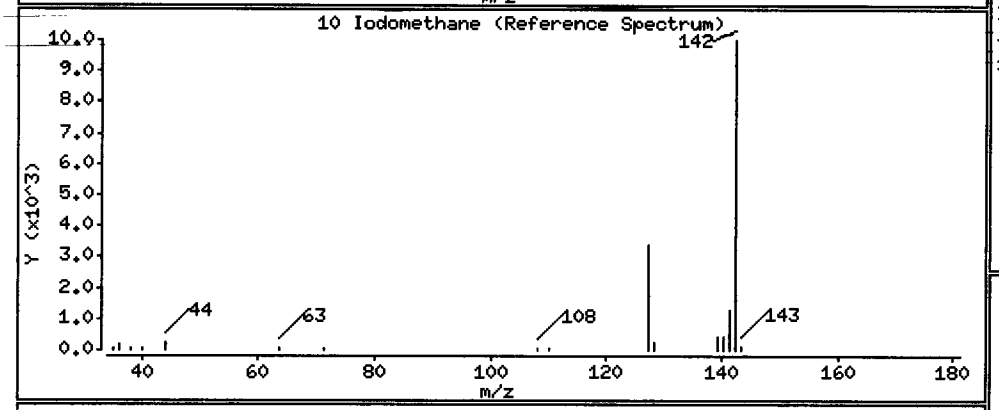
Concentration: 0.4602 ug/Kg

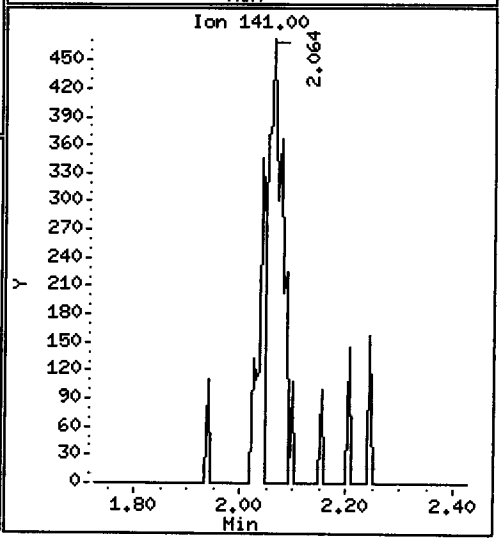


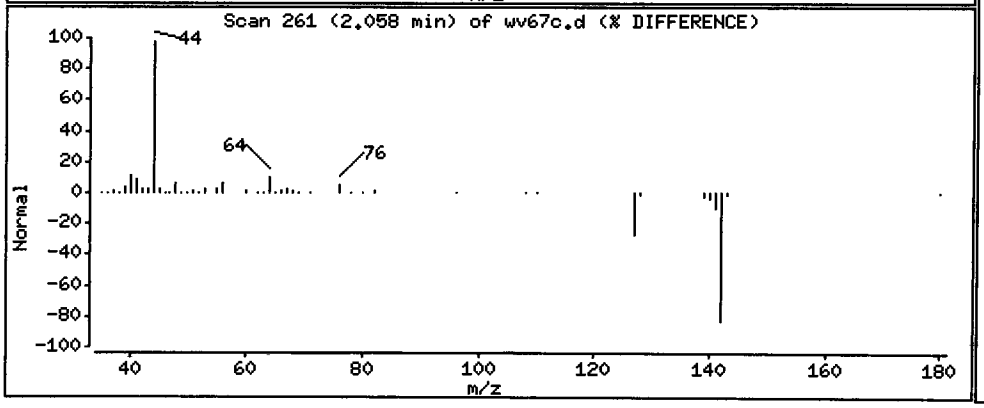












Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9.19,0

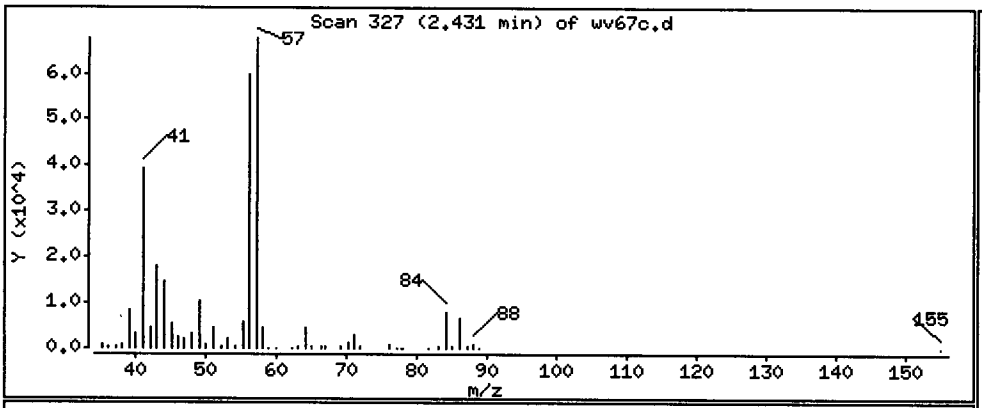
Operator: PB

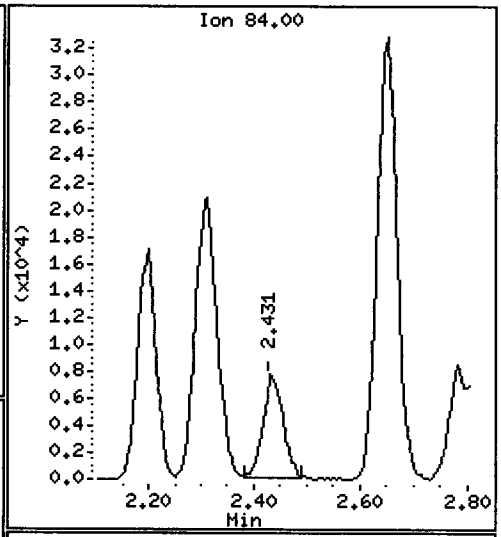
Column phase: RTXVMS

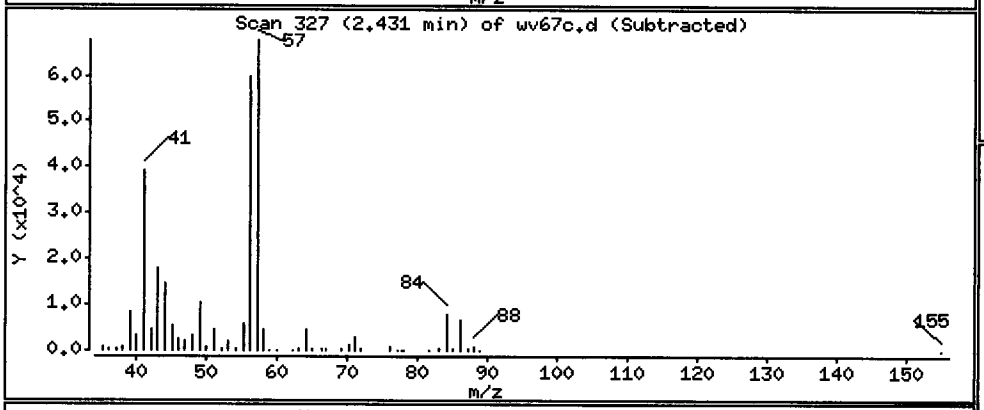
Column diameter: 0.18

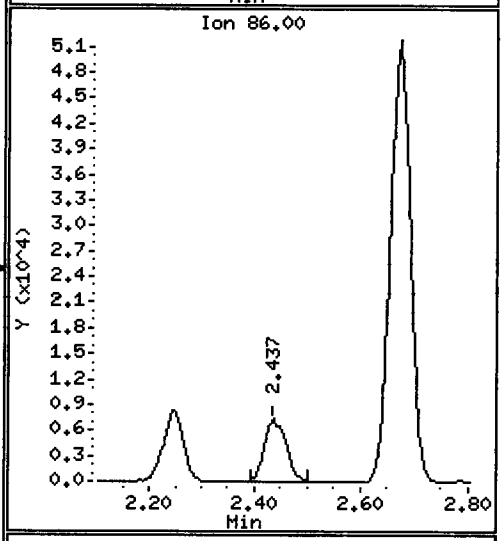
13 Methylene Chloride

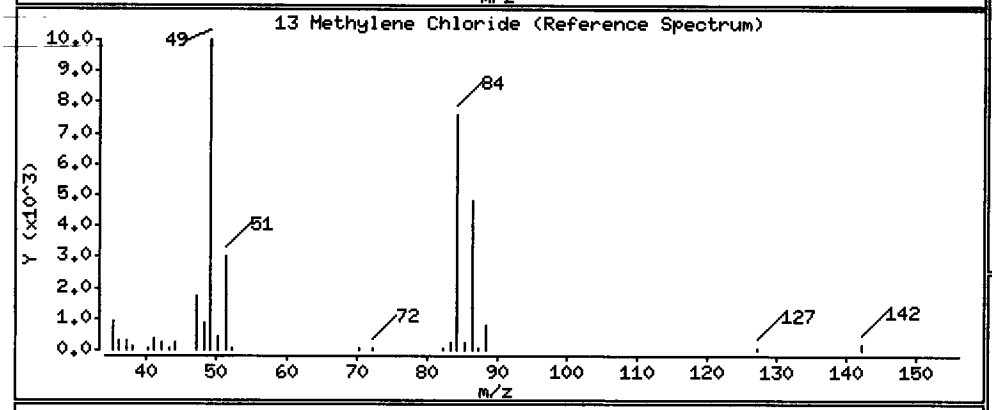
Concentration: 0.8201 ug/Kg

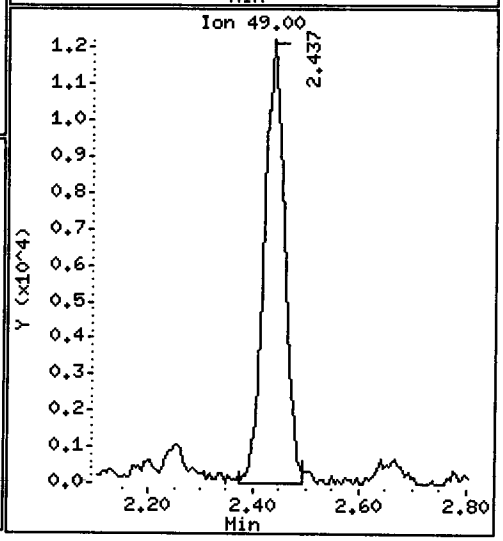


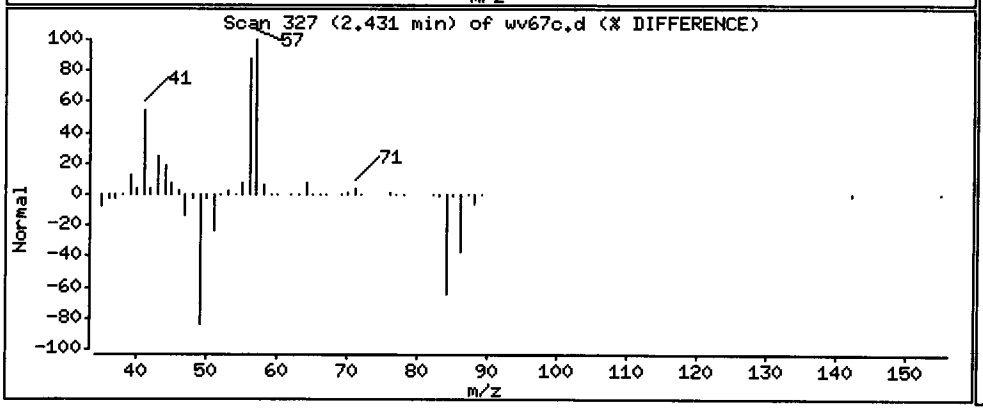












Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9,19,0

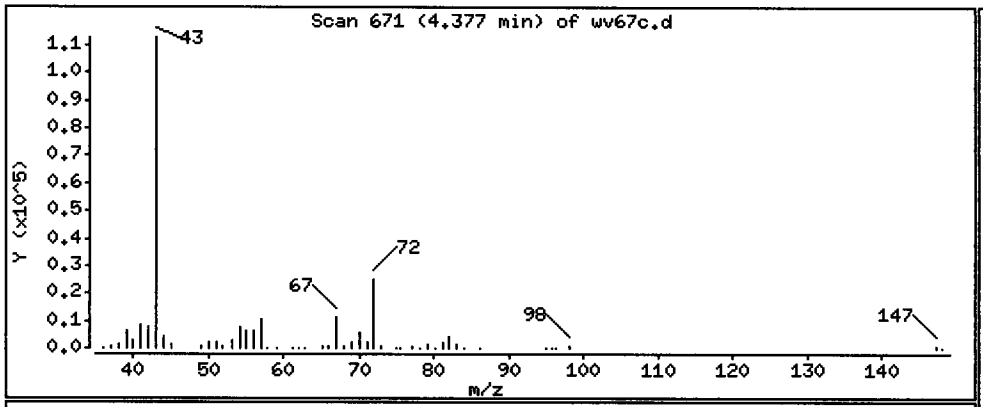
Operator: PB

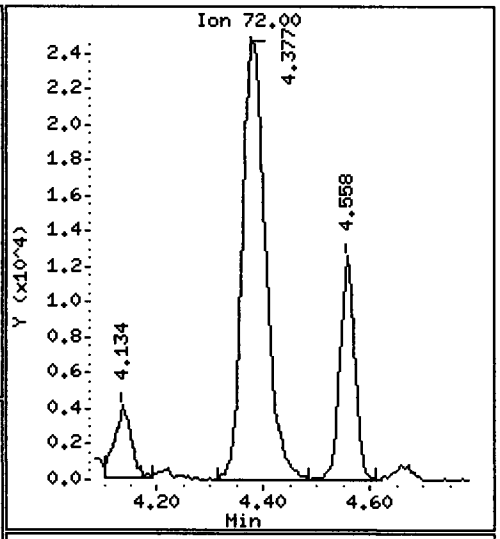
Column phase: RTXVMS

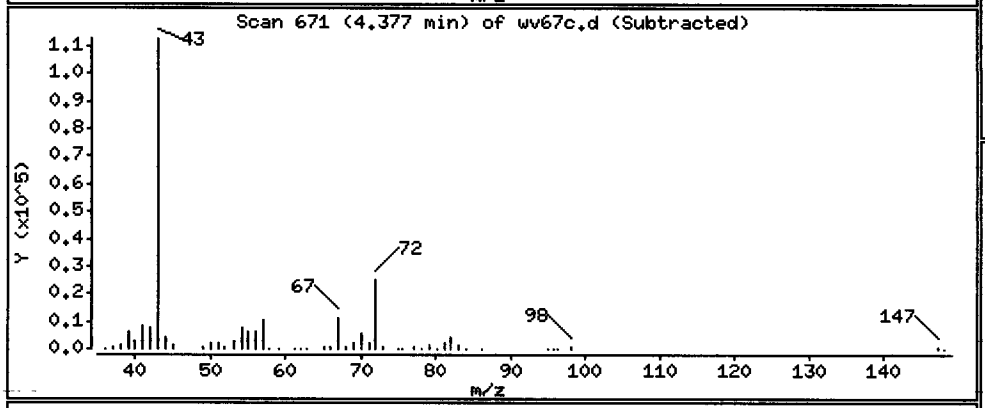
Column diameter: 0.18

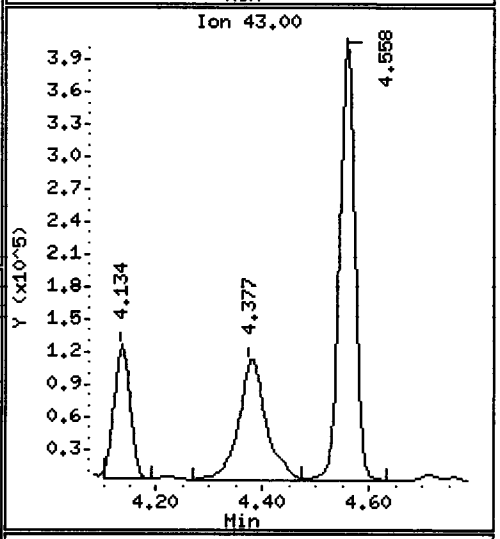
29 2-Butanone

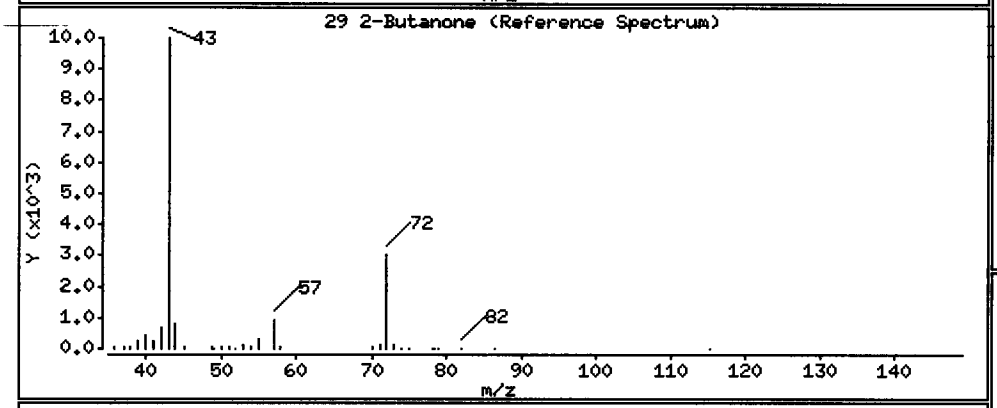
Concentration: 24.345 ug/Kg

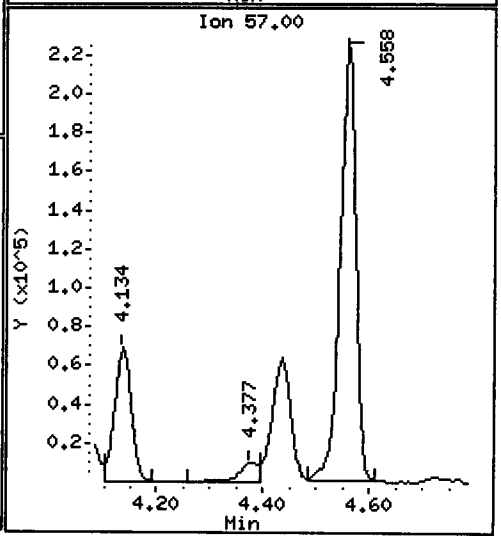


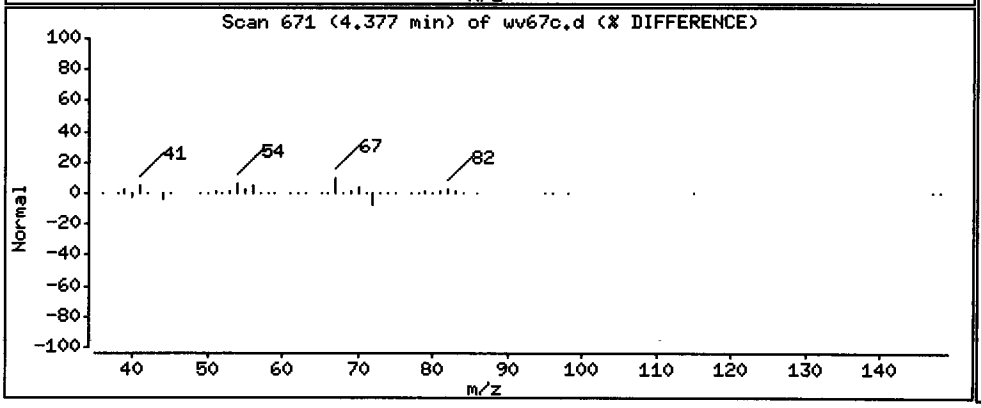












Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9.19,0

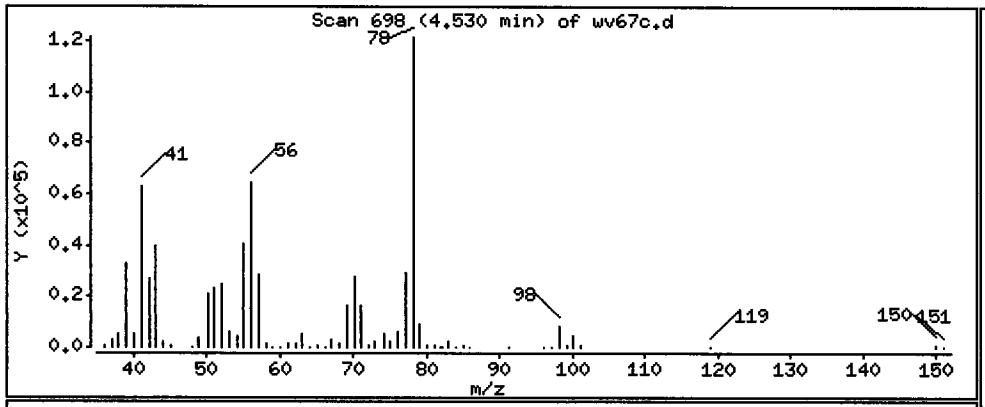
Operator: PB

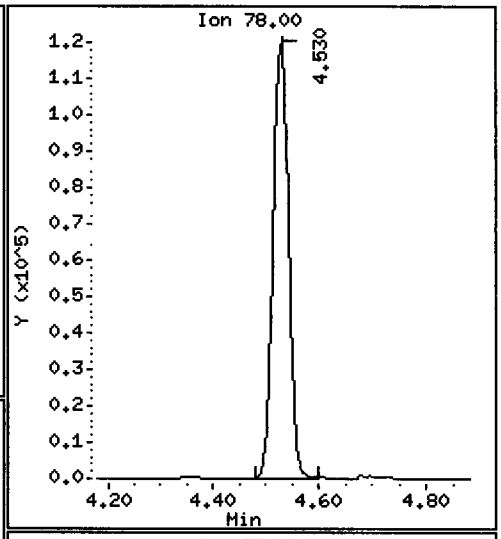
Column phase: RTXVMS

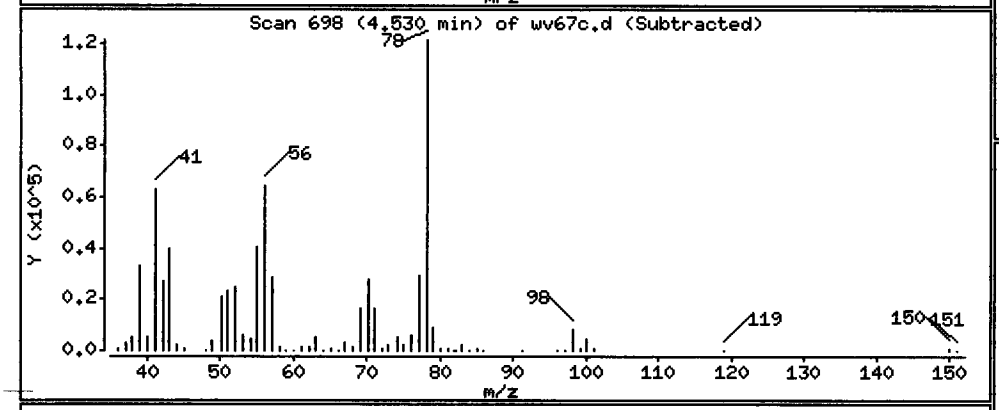
Column diameter: 0.18

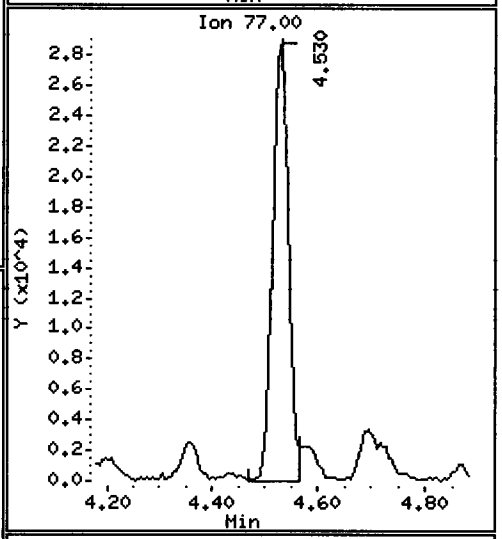
30 Benzene

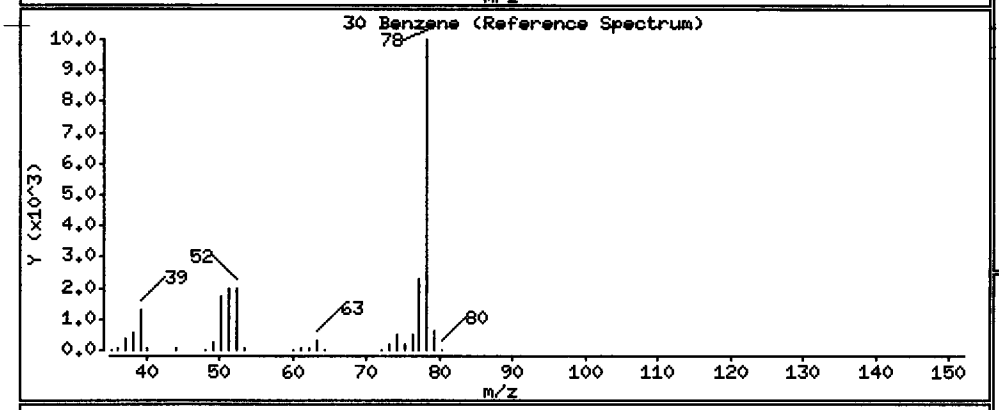
Concentration: 2.527 ug/Kg

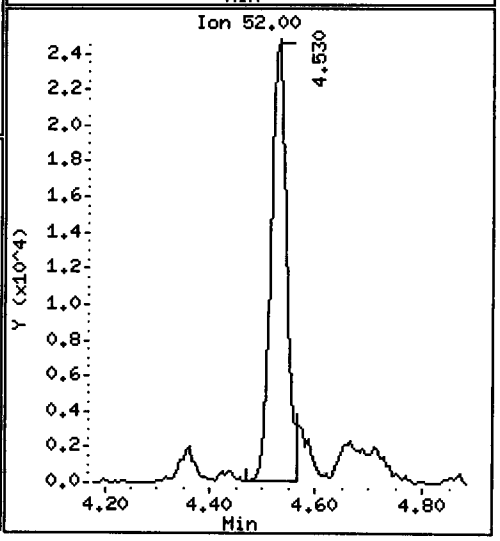


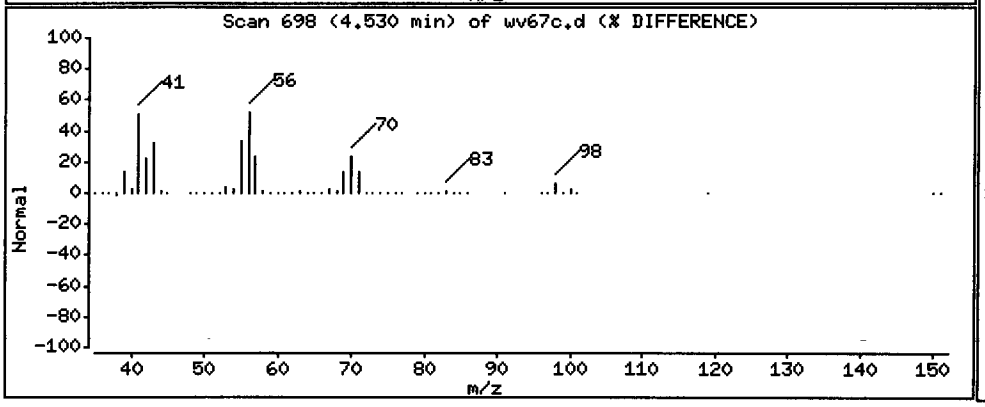












WV67 : 8/8/13

Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9,19,0

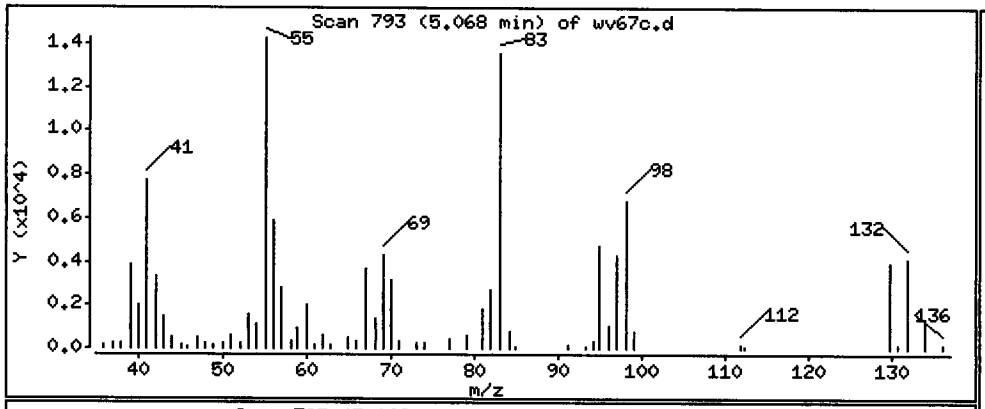
Operator: PB

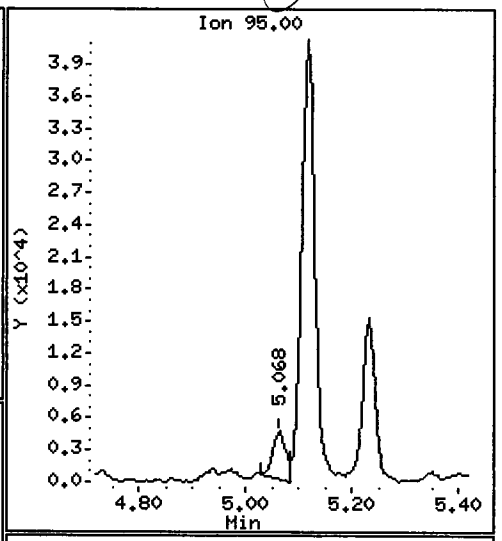
Column phase: RTXVMS

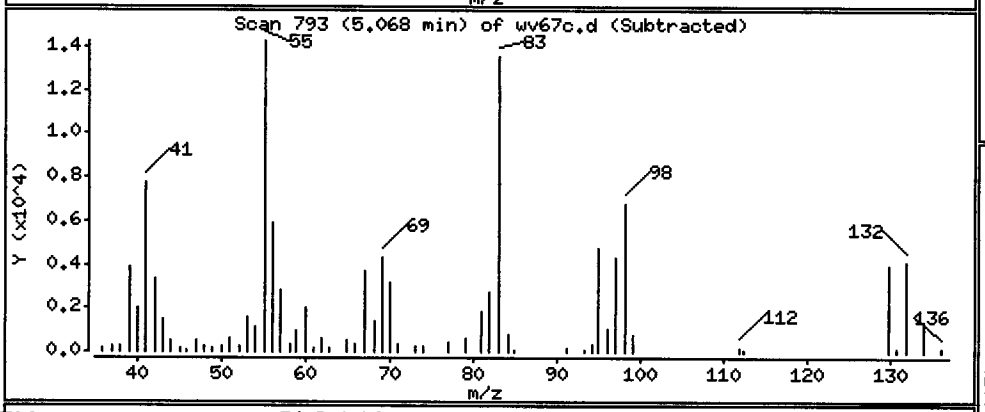
Column diameter: 0.18

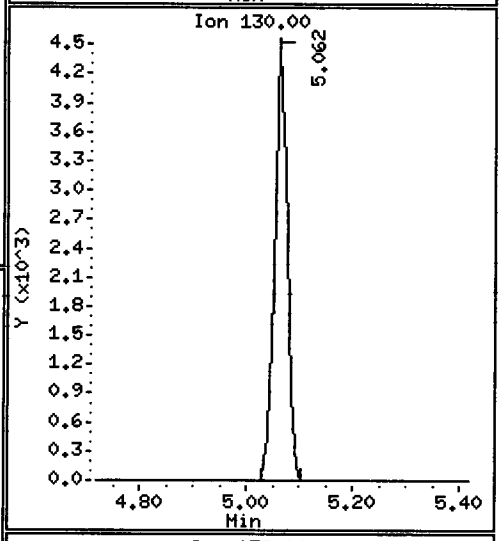
34 Trichloroethene

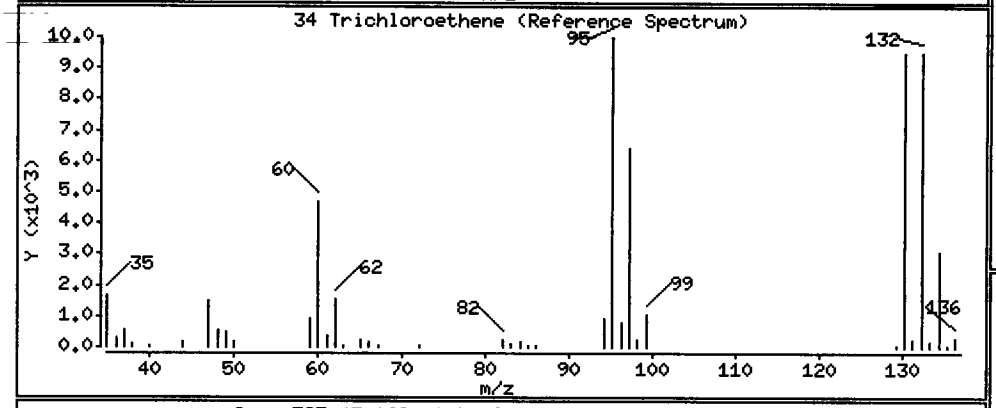
Concentration: 0.3364 ug/Kg

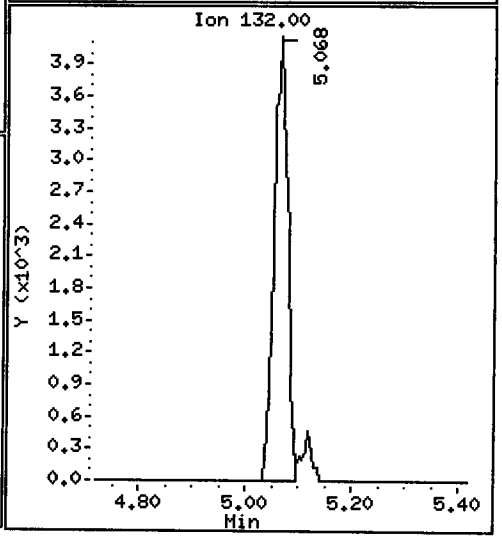


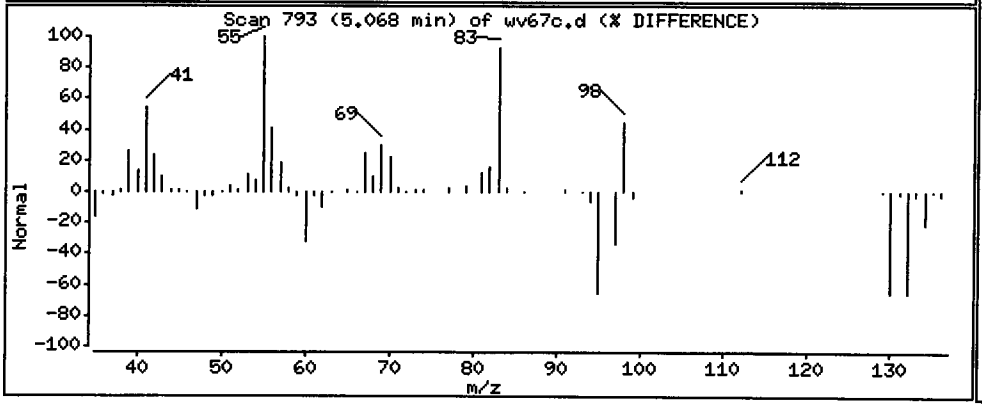












Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9.19,0

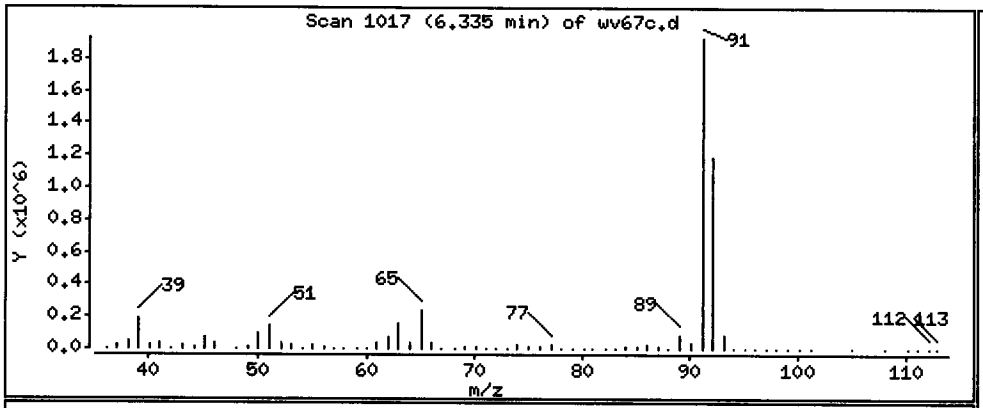
Operator: PB

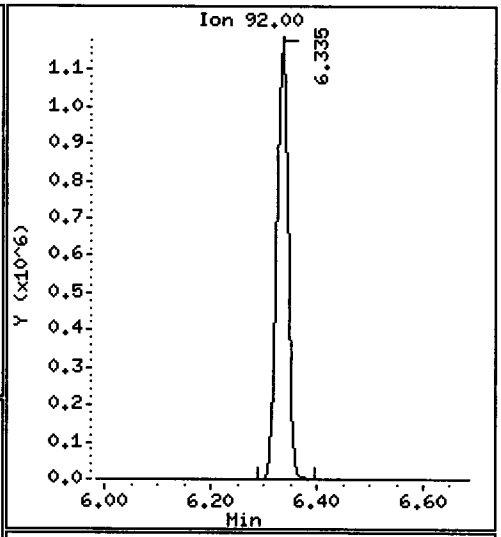
Column phase: RTXVMS

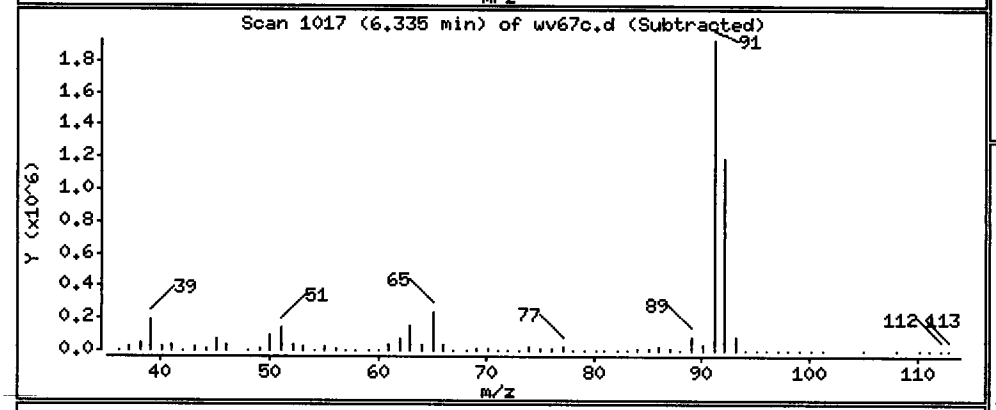
Column diameter: 0.18

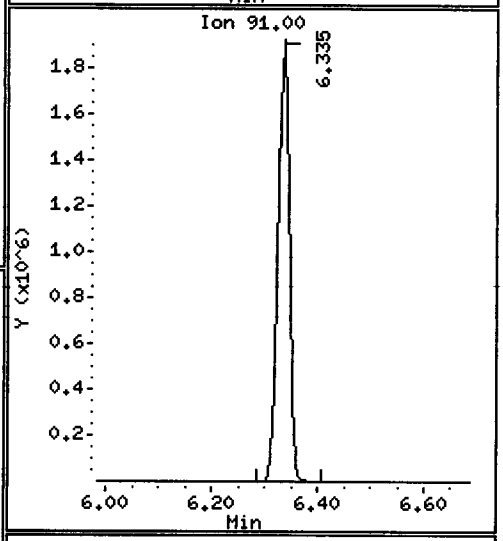
43 Toluene

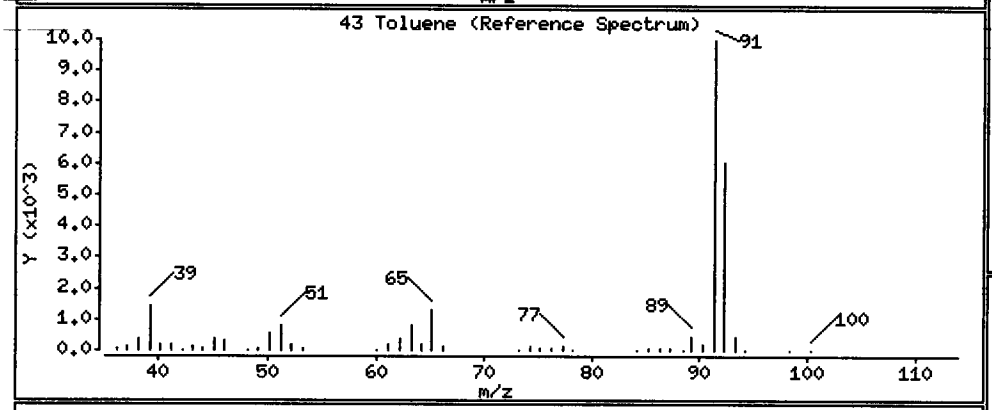
Concentration: 28.154 ug/Kg

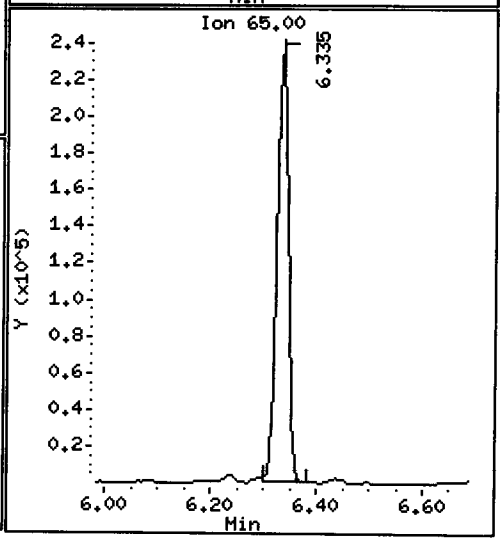


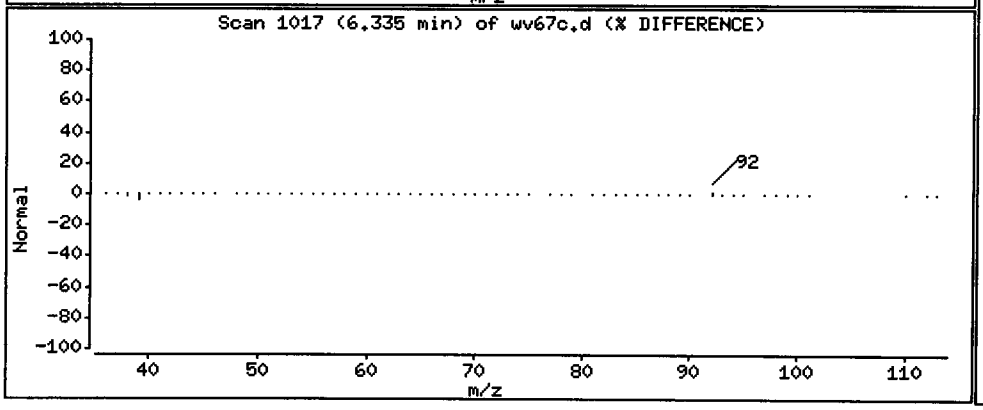












Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9.19,0

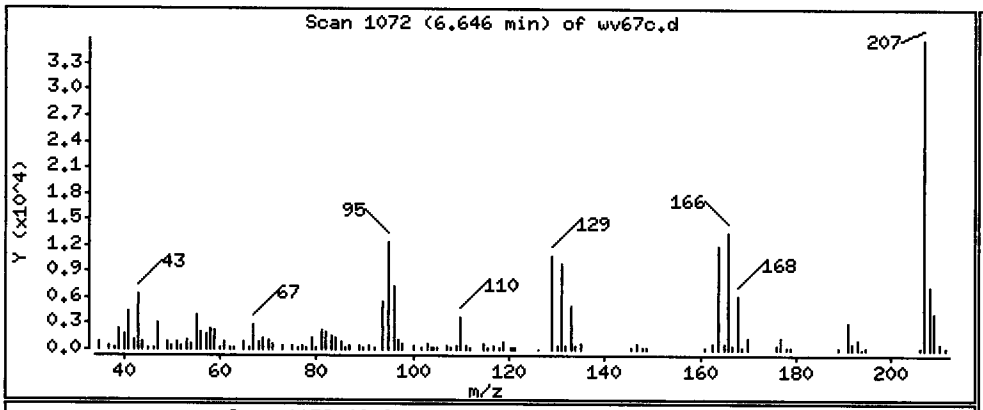
Operator: PB

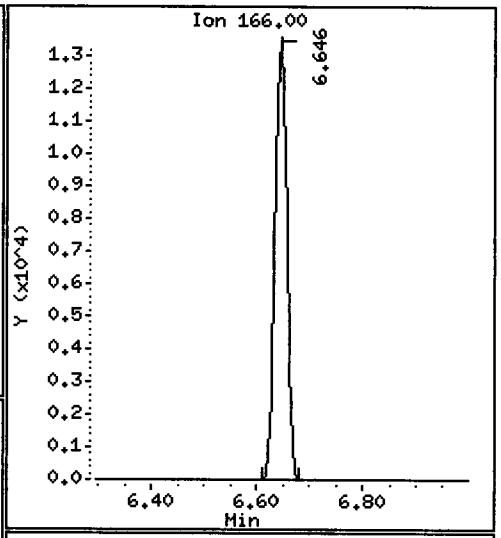
Column phase: RTXVMS

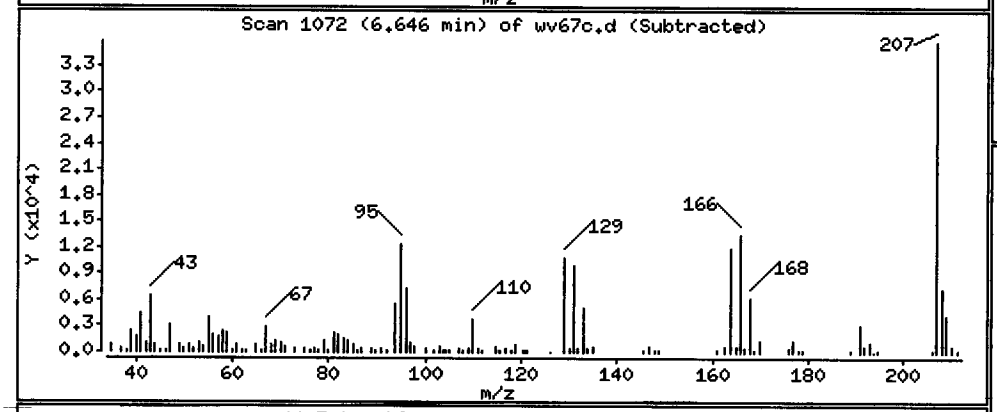
Column diameter: 0.18

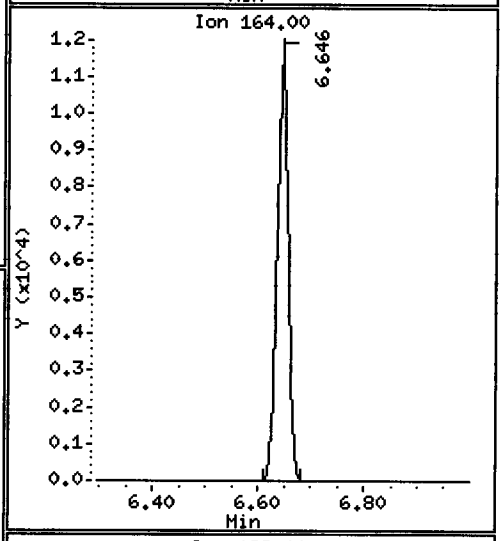
44 Tetrachloroethene

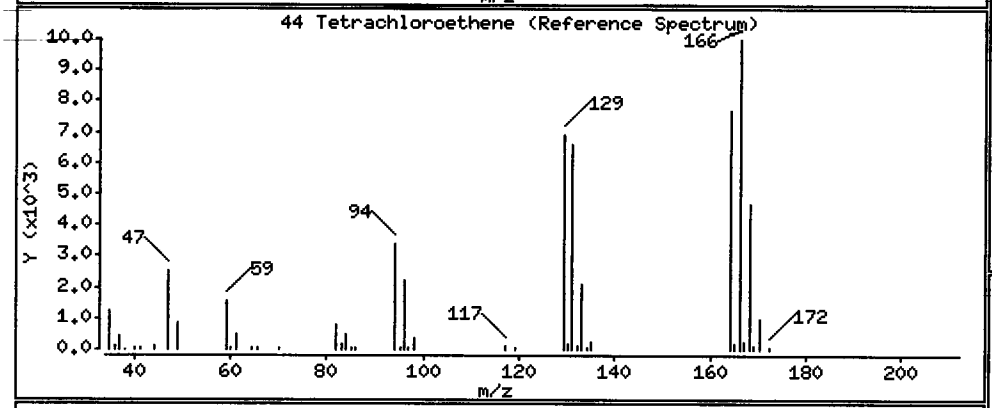
Concentration: 1.148 ug/Kg

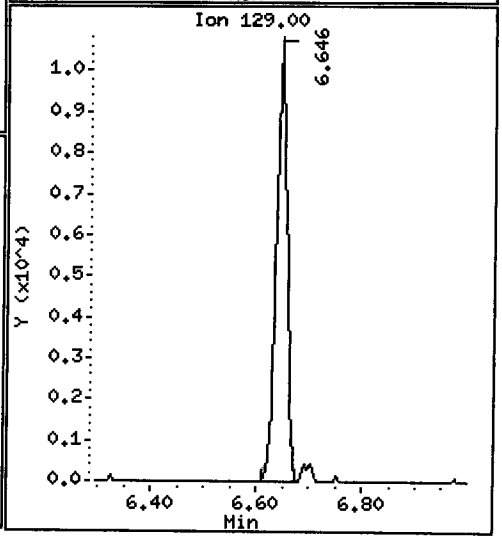


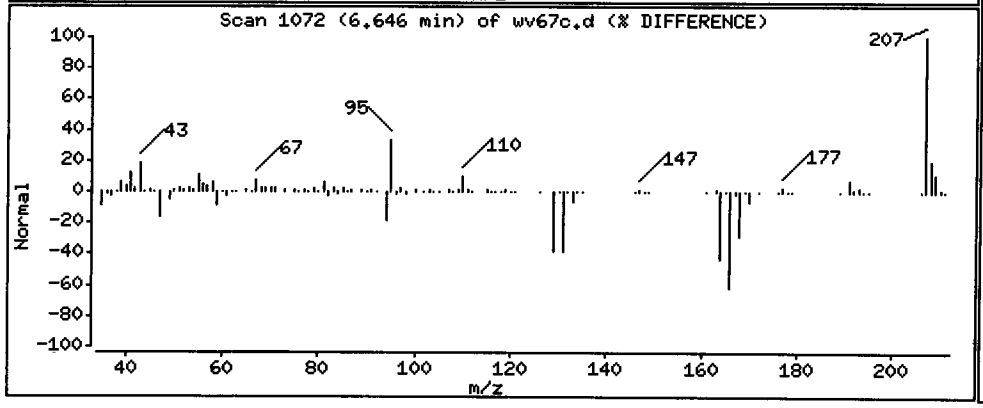












Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9,19,0

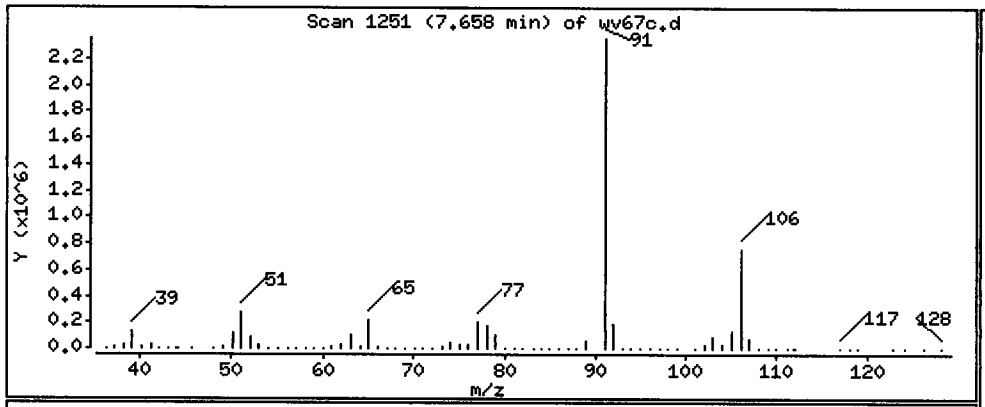
Operator: PB

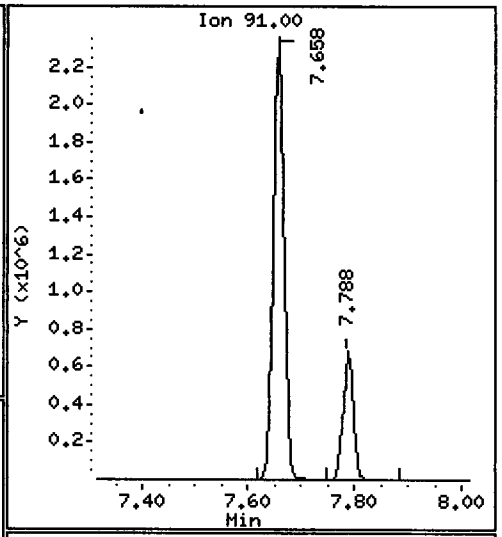
Column phase: RTXVMS

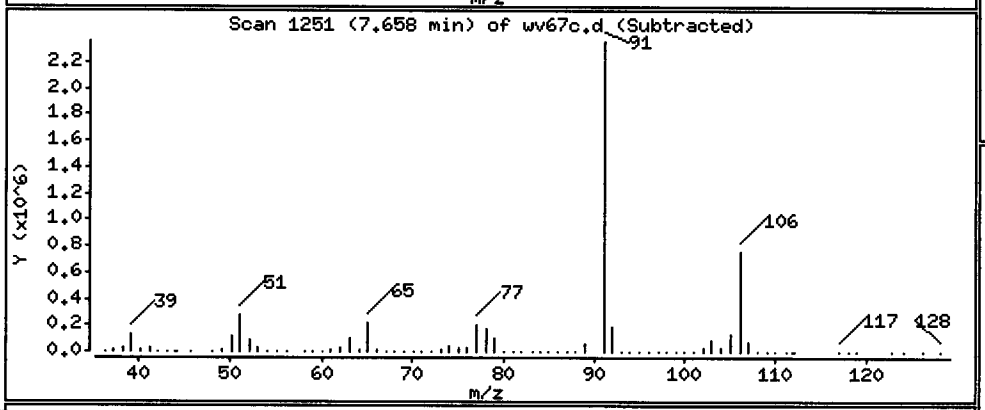
Column diameter: 0.18

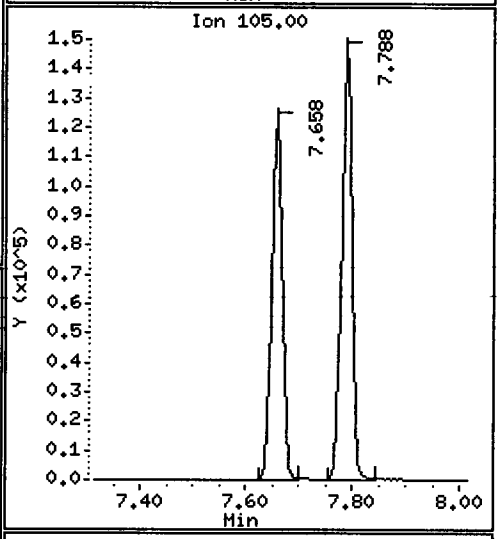
54 Ethyl Benzene

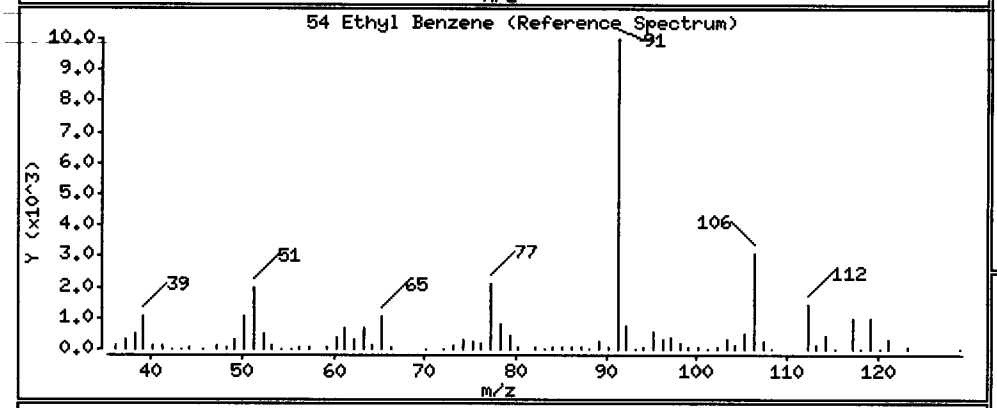
Concentration: 43.498 ug/Kg

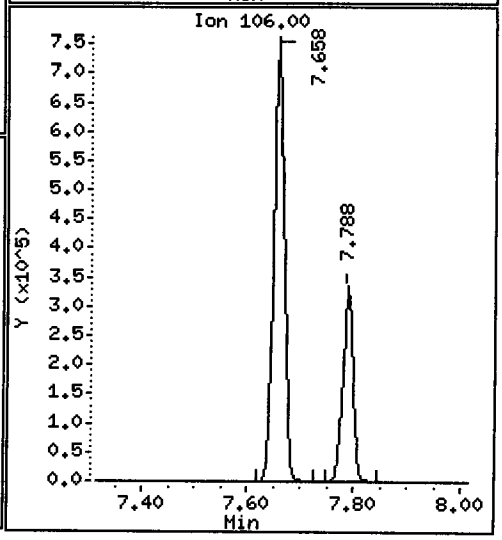


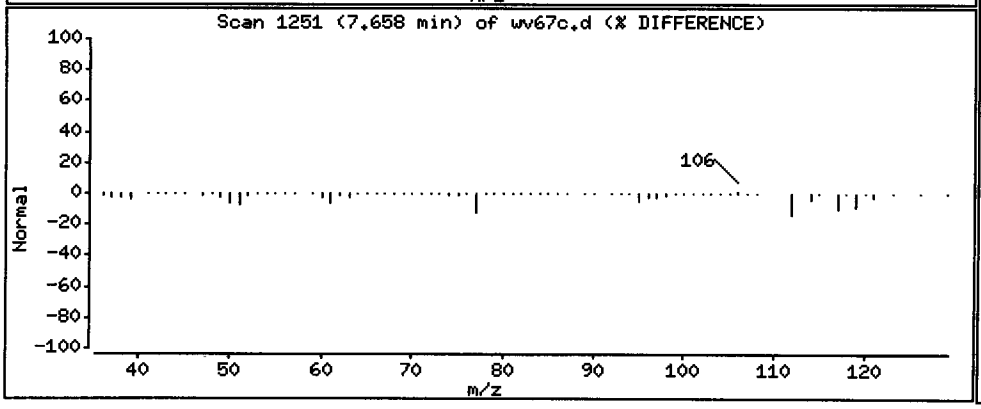












Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9.19,0

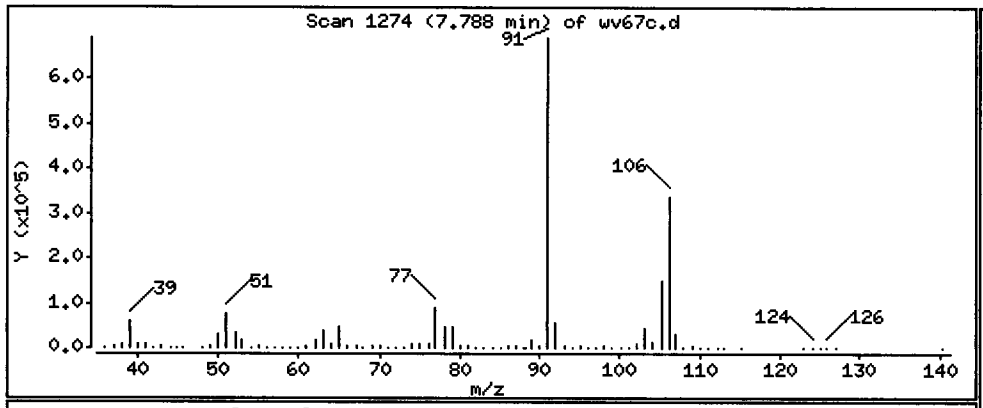
Operator: PB

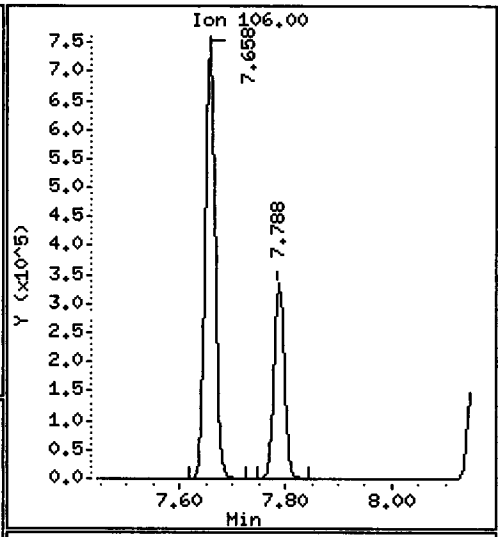
Column phase: RTXVMS

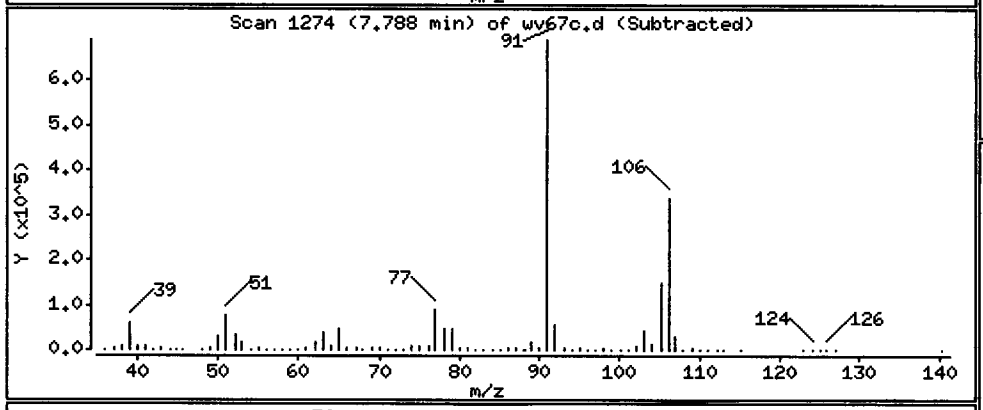
Column diameter: 0.18

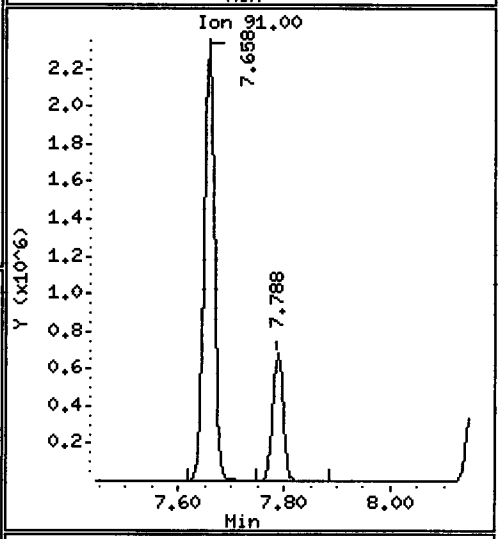
56 m,p-xylene

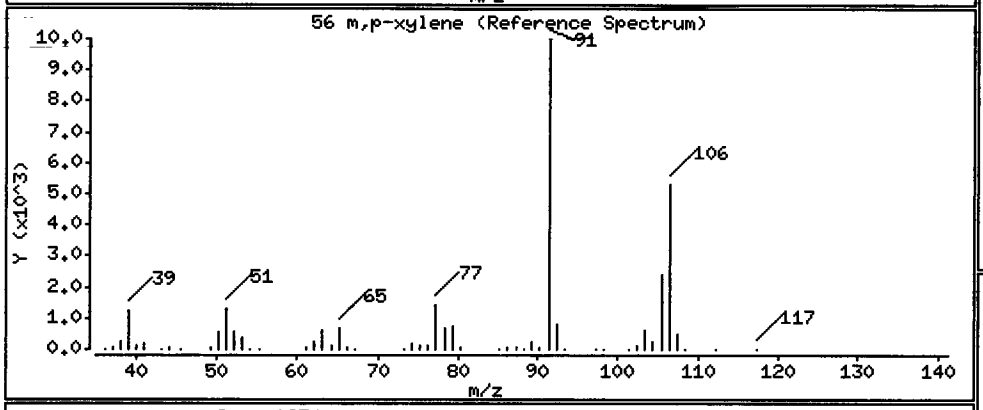
Concentration: 15.766 ug/Kg

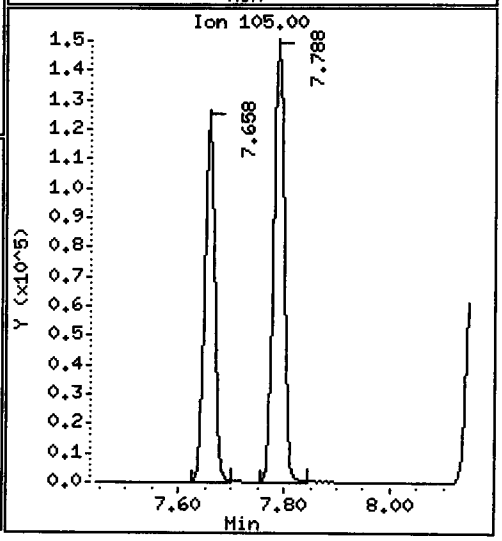


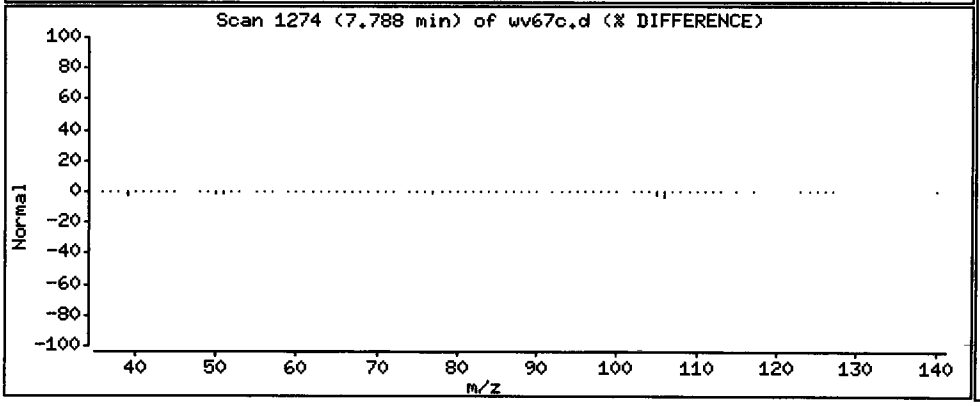












Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9,19,0

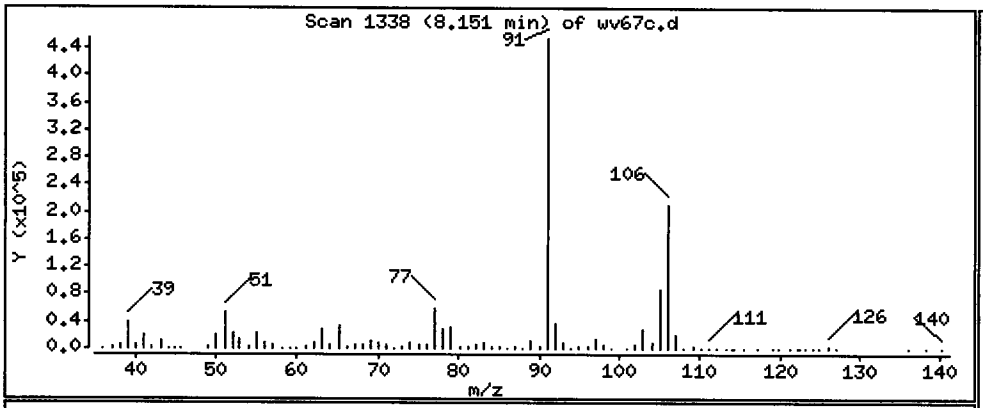
Operator: PB

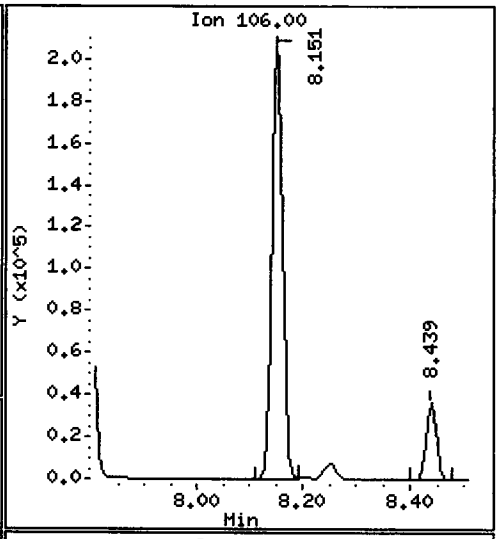
Column phase: RTXVMS

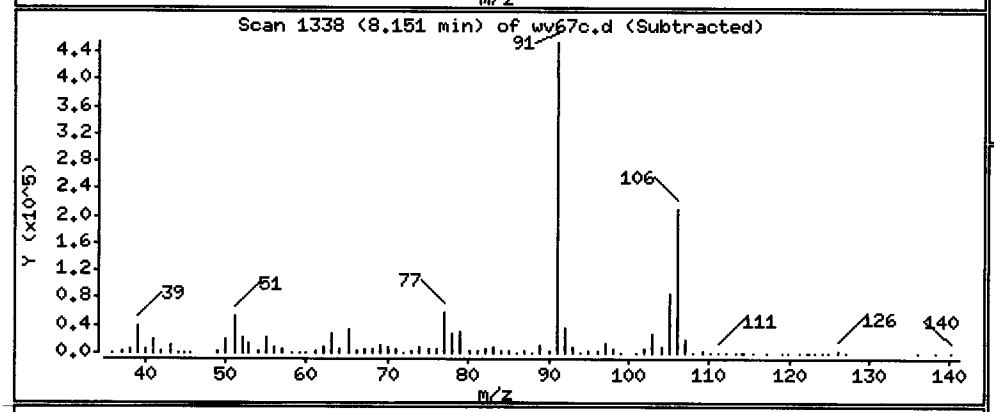
Column diameter: 0.18

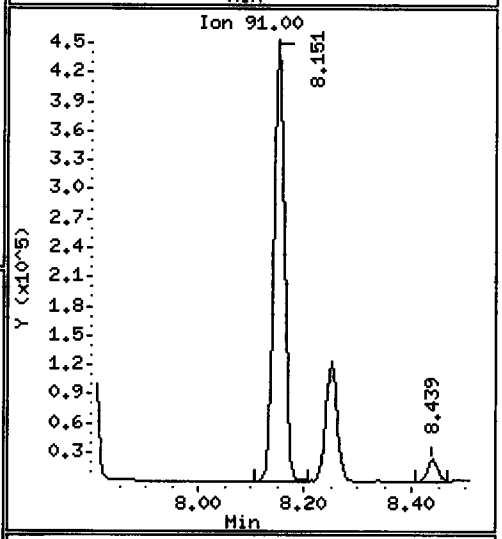
57 o-Xylene

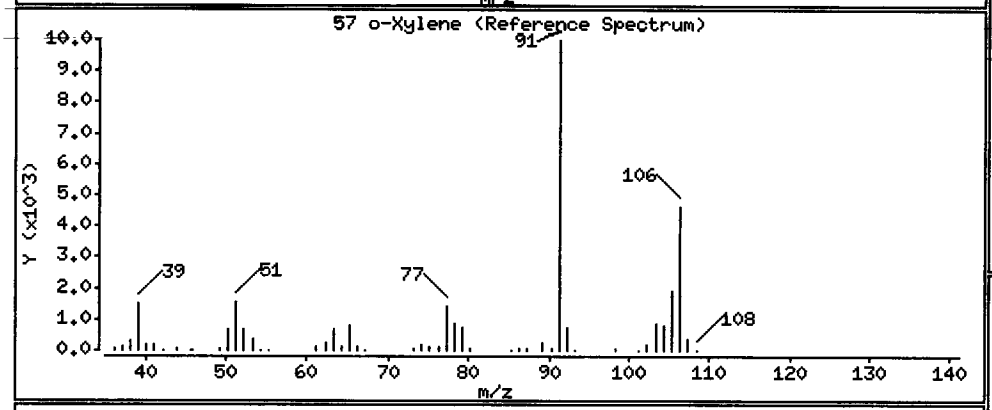
Concentration: 10.266 ug/Kg

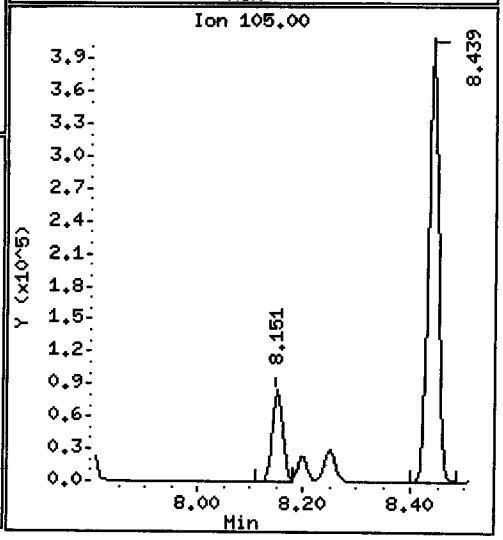


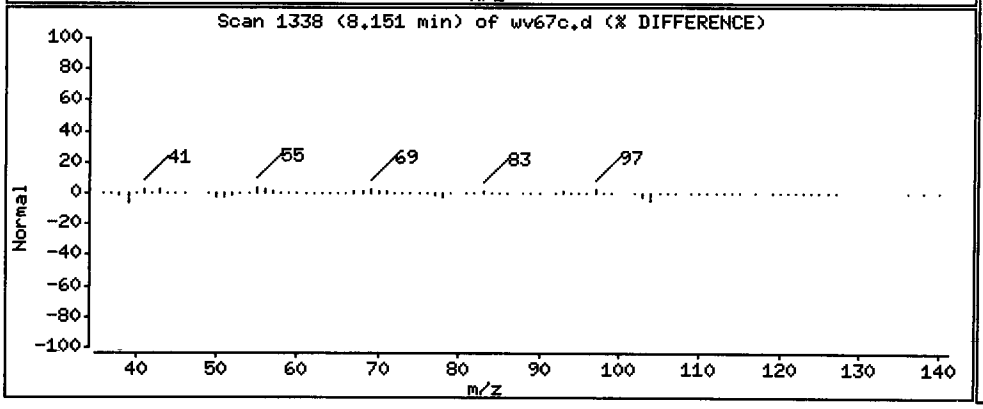












Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9,19,0

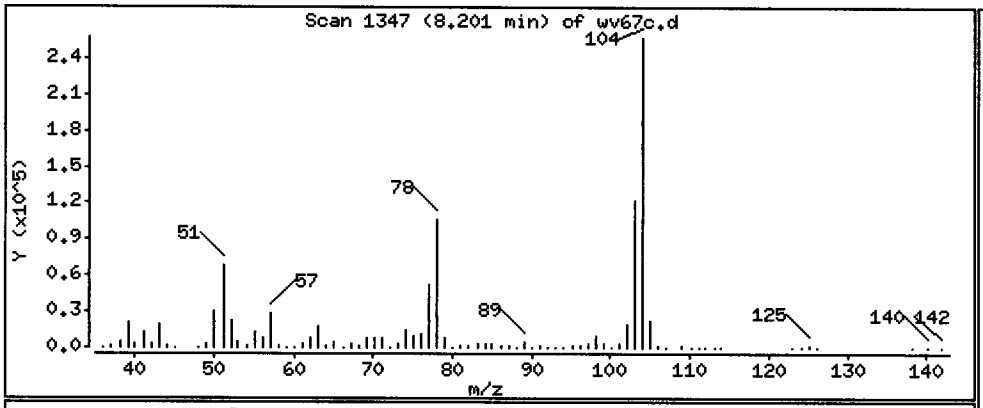
Operator: PB

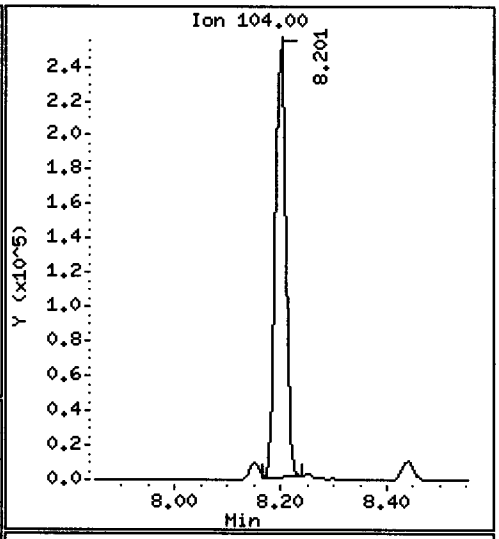
Column phase: RTXVMS

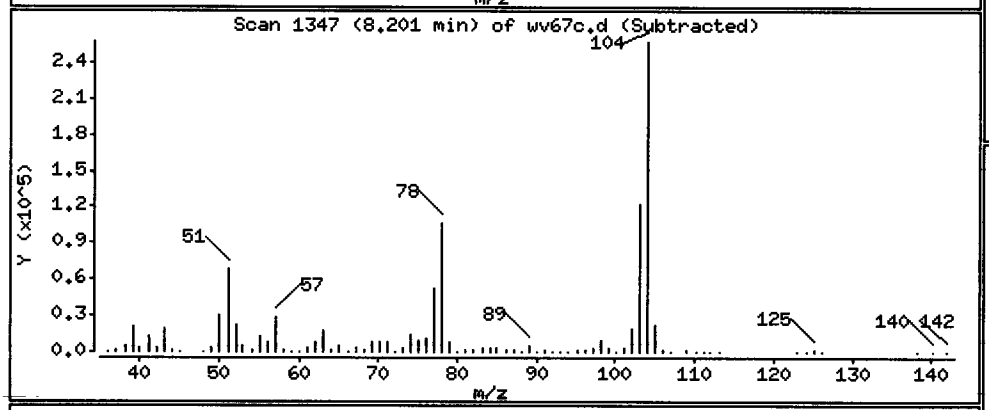
Column diameter: 0.18

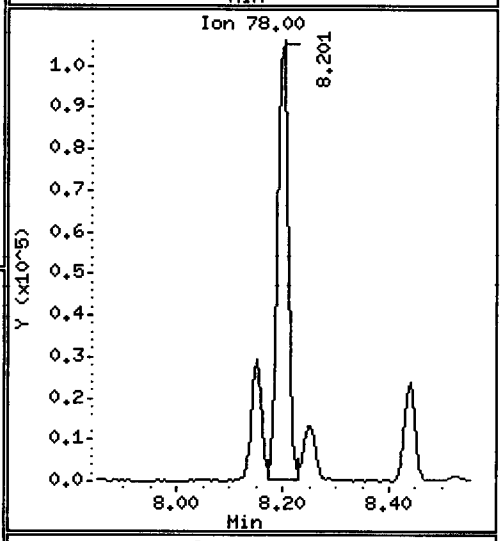
58 Styrene

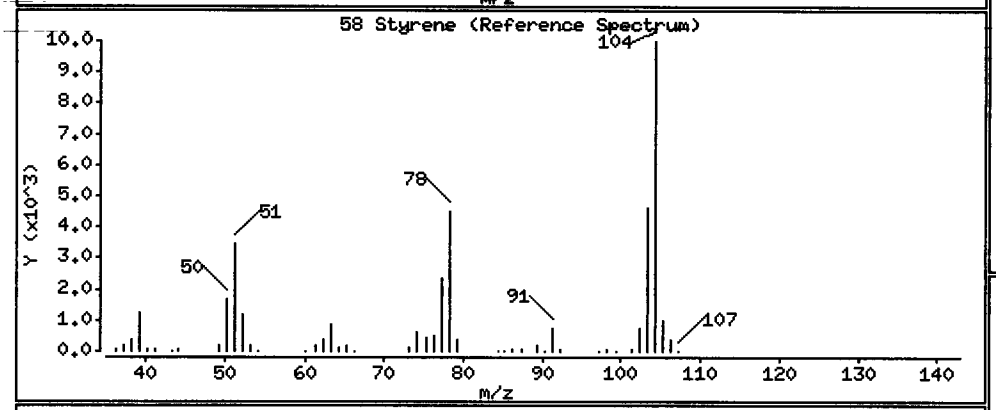
Concentration: 7.289 ug/Kg

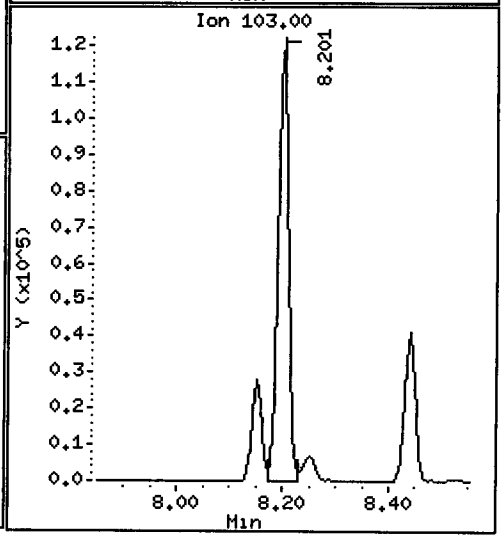


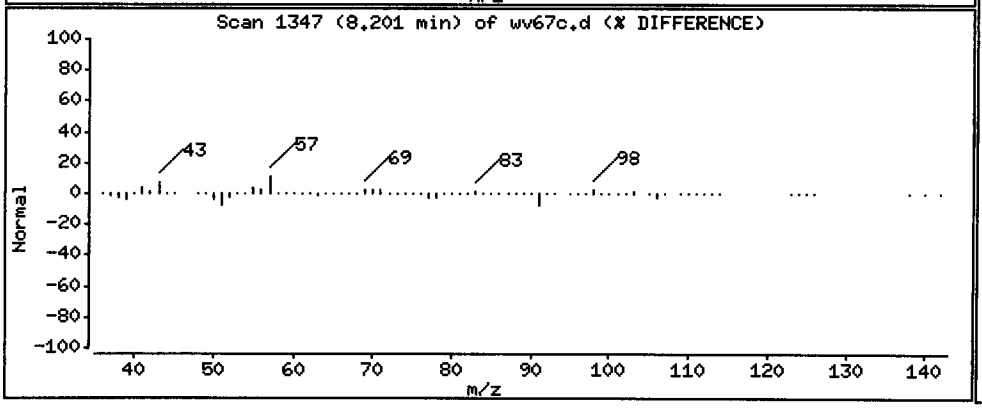












Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9.19,0

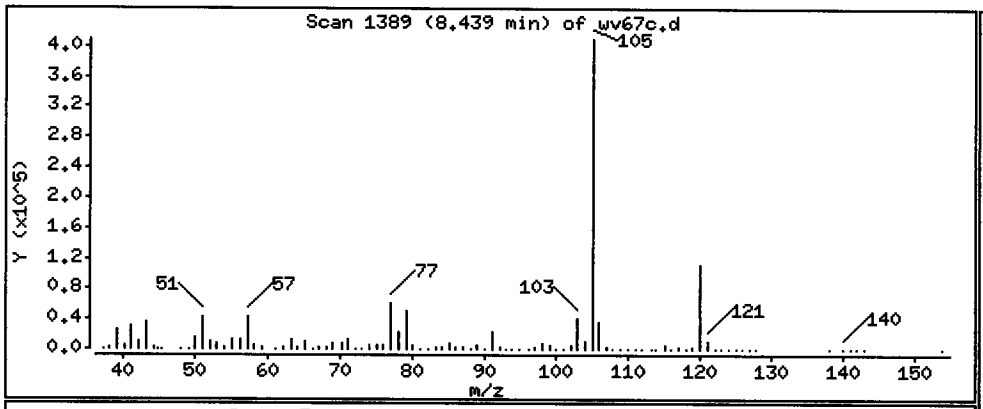
Operator: PB

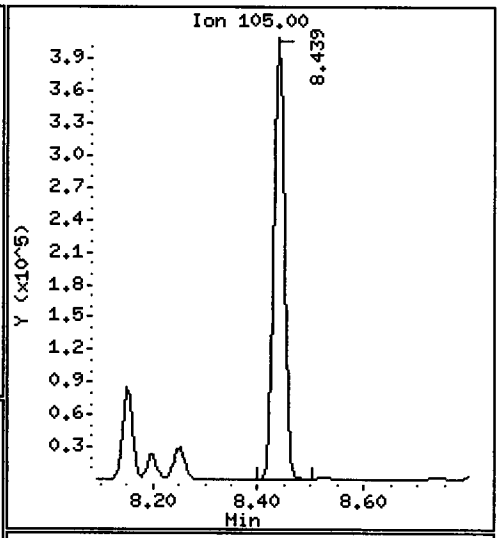
Column phase: RTXVMS

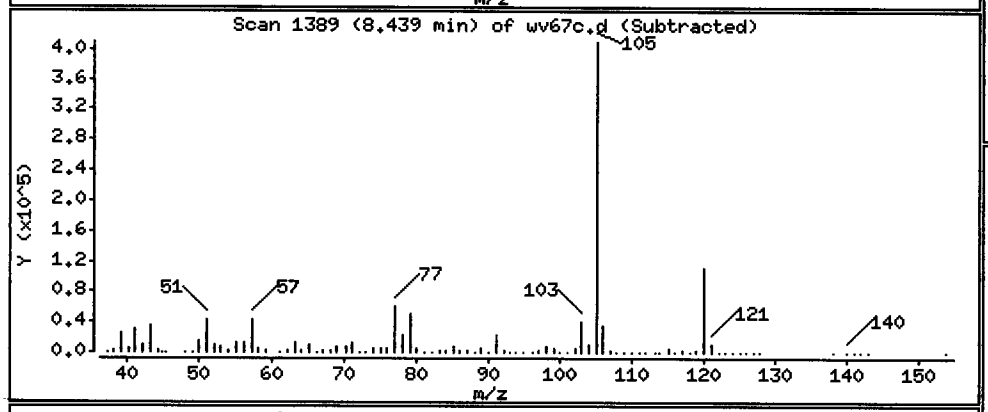
Column diameter: 0.18

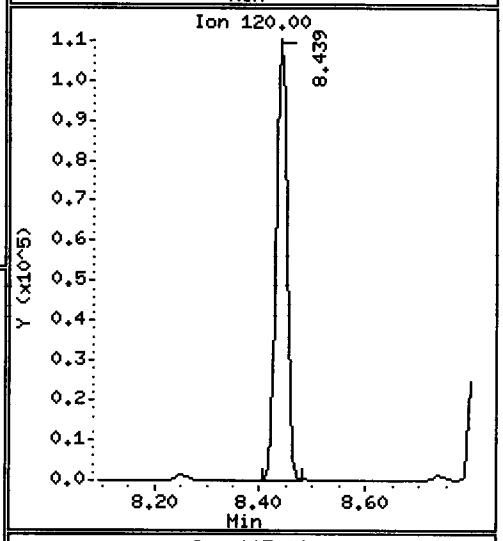
60 Isopropyl Benzene

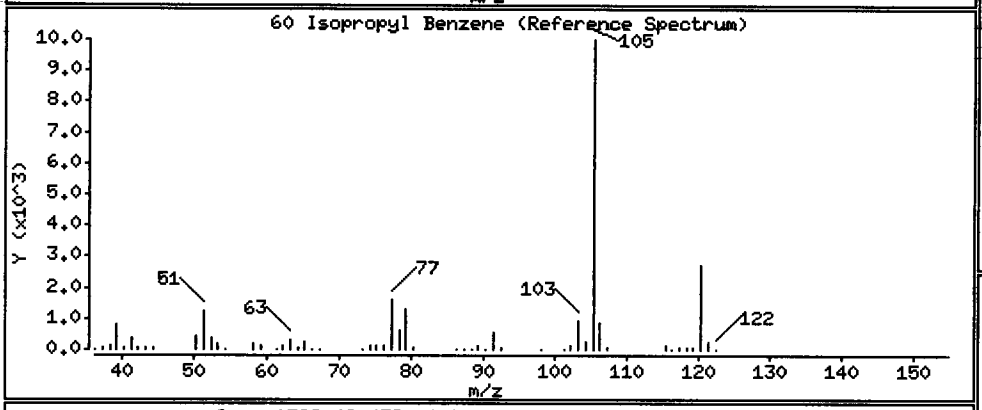
Concentration: 22.079 ug/Kg

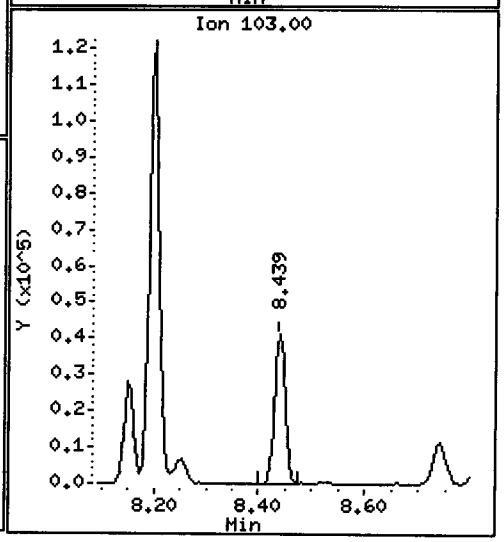


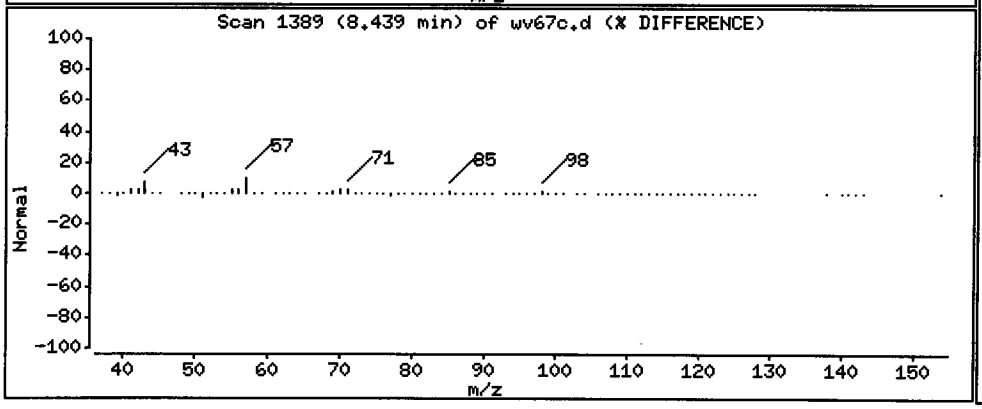












Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9.19,0

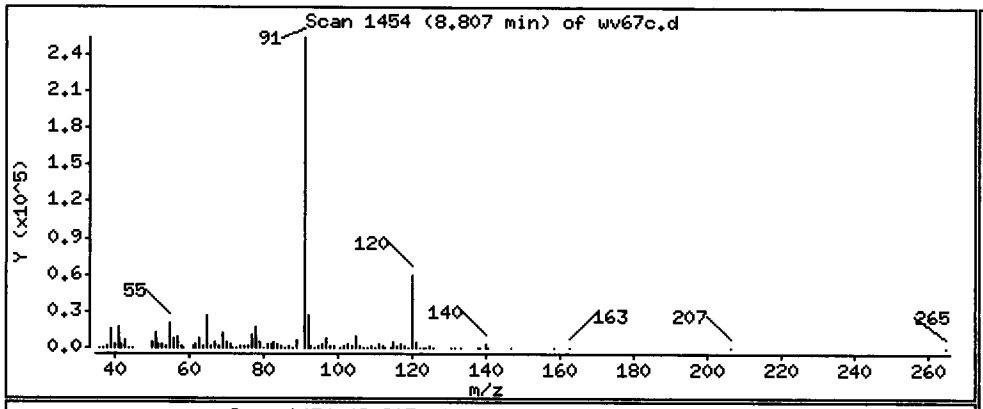
Operator: PB

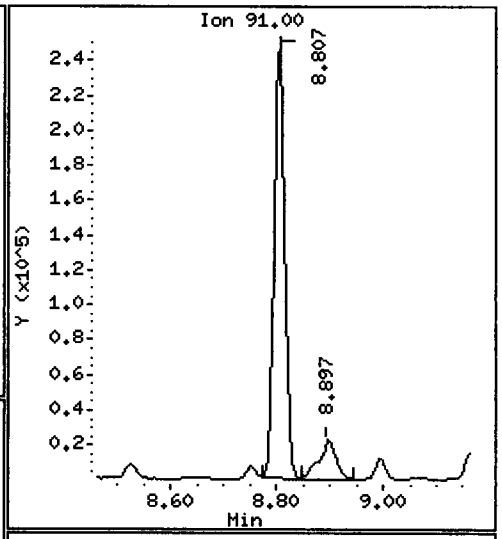
Column phase: RTXVMS

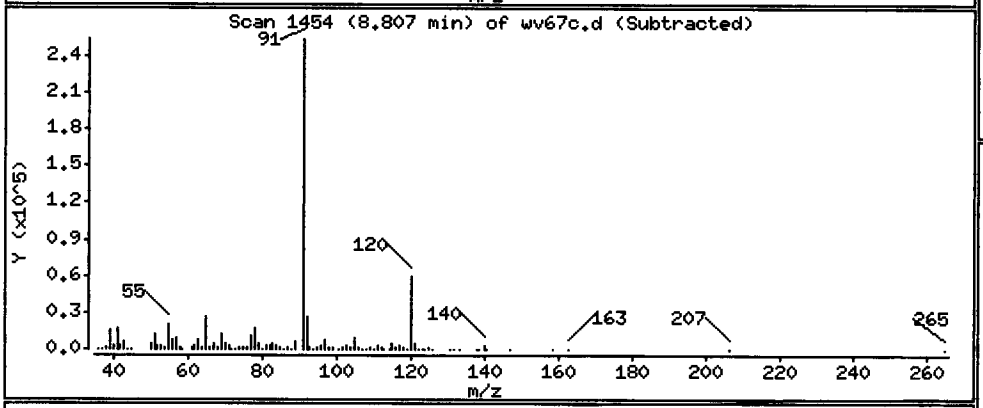
Column diameter: 0.18

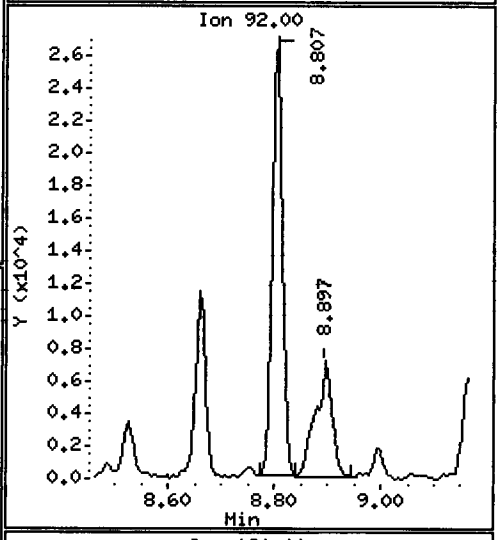
64 N-Propyl Benzene

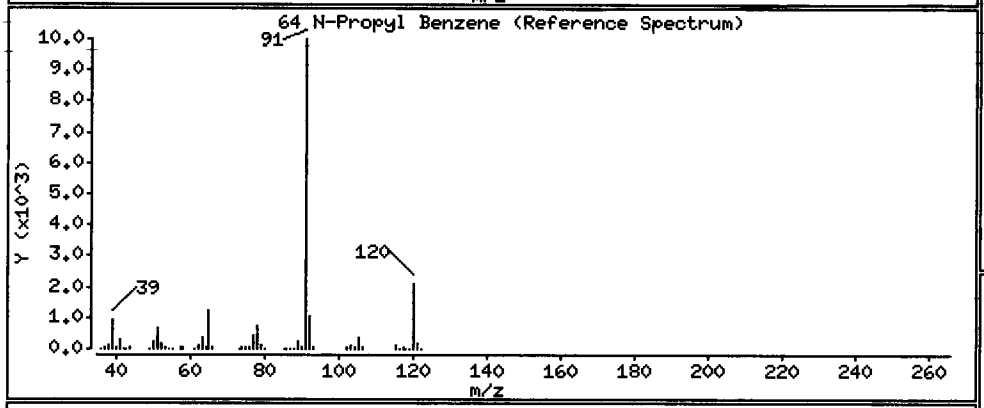
Concentration: 11.553 ug/Kg

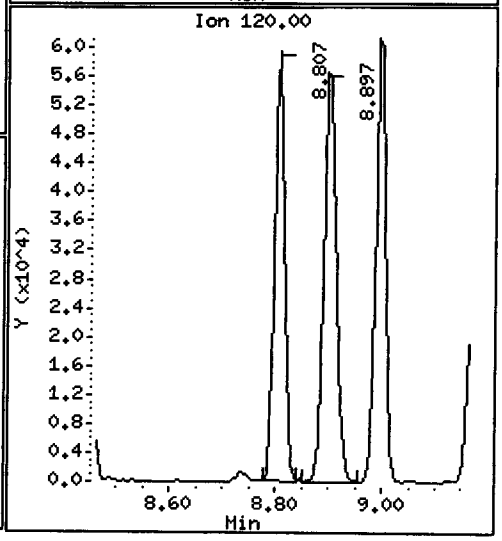


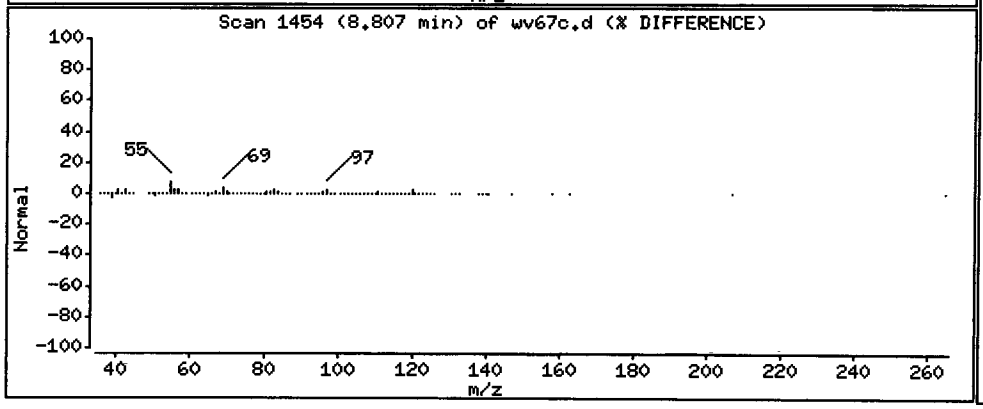












Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9.19,0

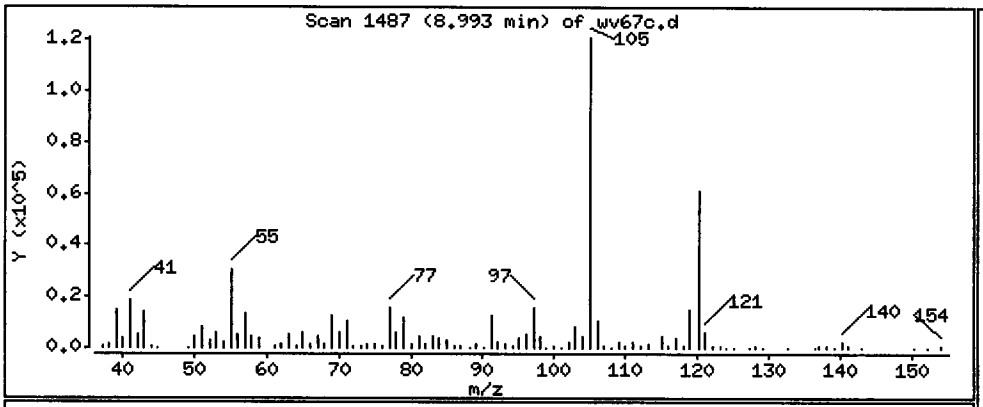
Operator: PB

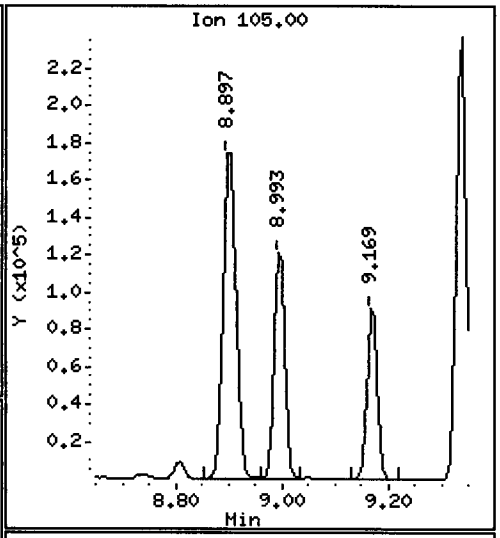
Column phase: RTXVMS

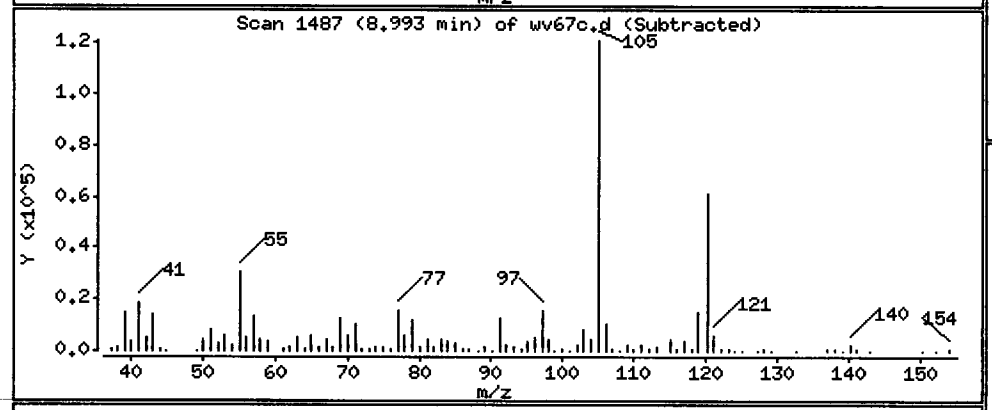
Column diameter: 0.18

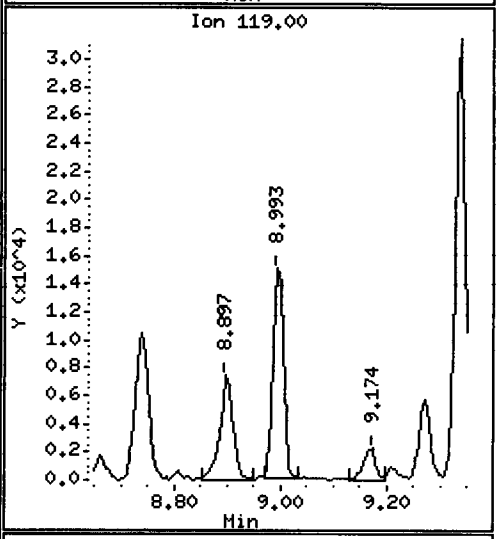
67 1,3,5-Trimethyl Benzene

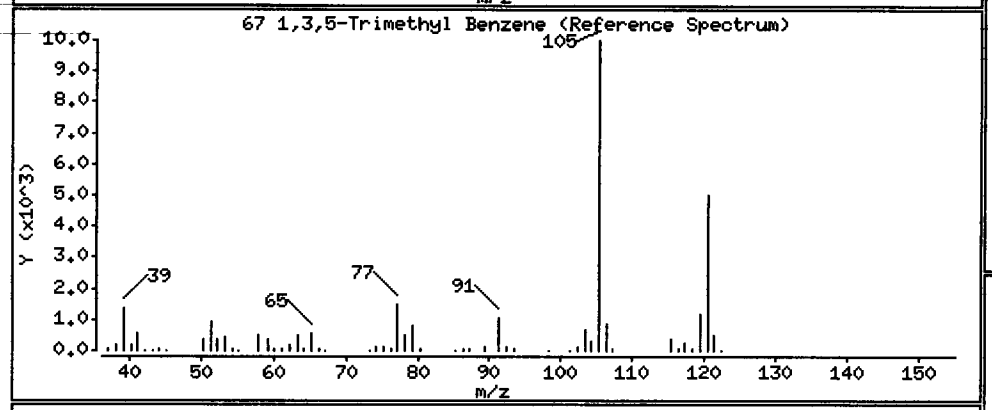
Concentration: 7.550 ug/Kg

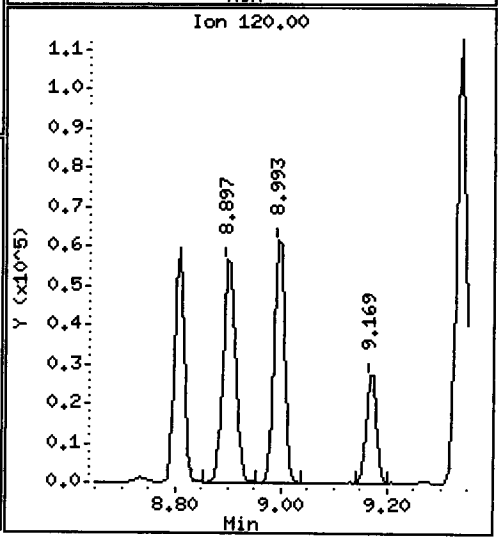


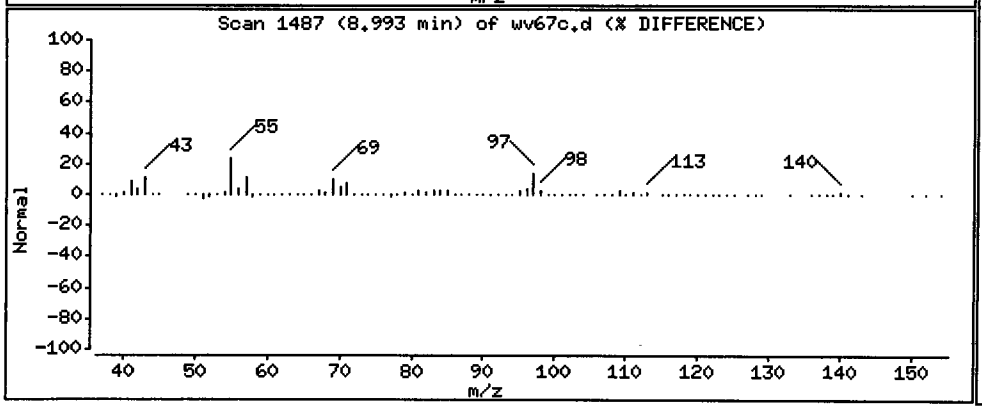












Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9.19,0

Operator: PB

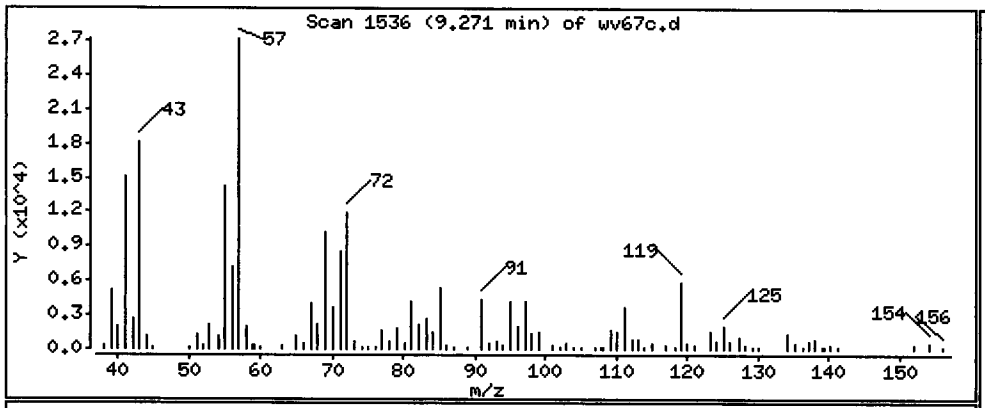
Column phase: RTXVMS

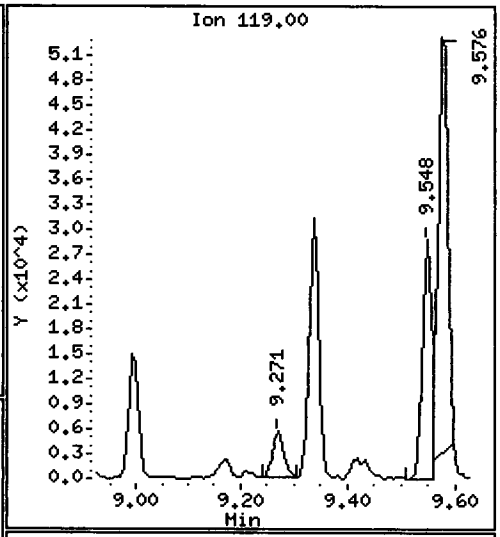
Column diameter: 0.18

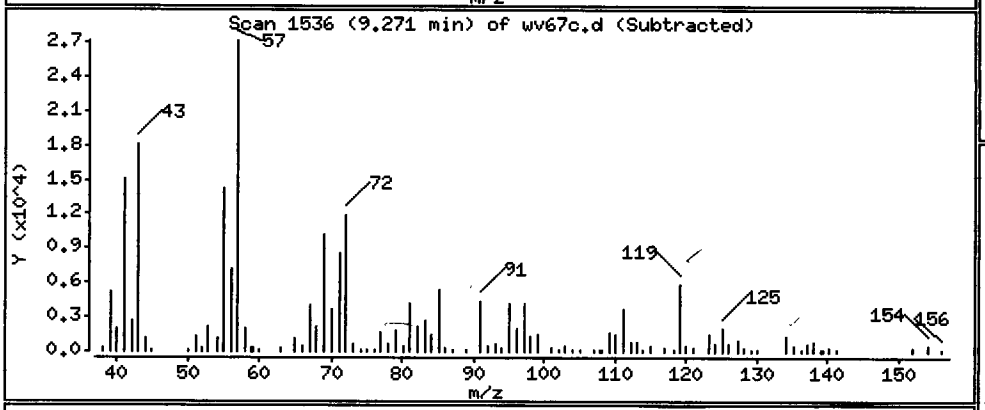
CRL NOT reported
JWR 6/20/13

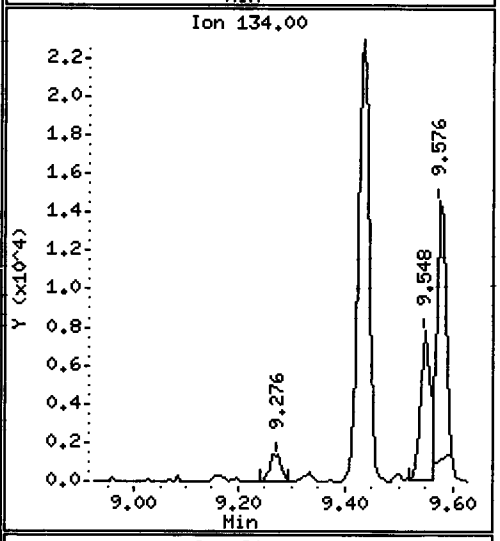
71 T-Butyl Benzene

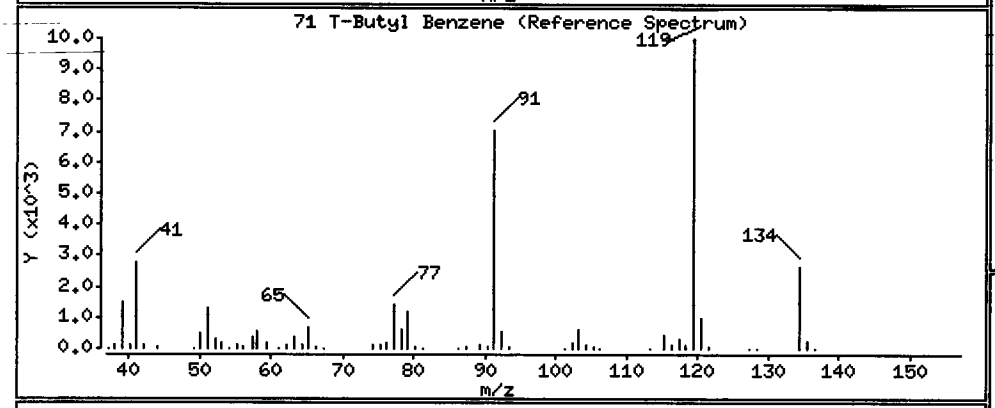
Concentration: 0.4393 ug/Kg

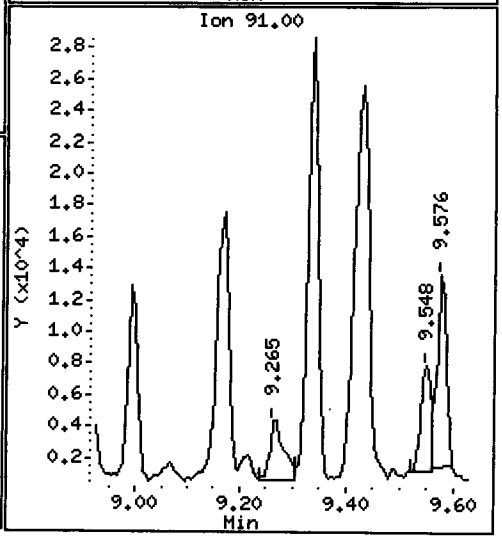


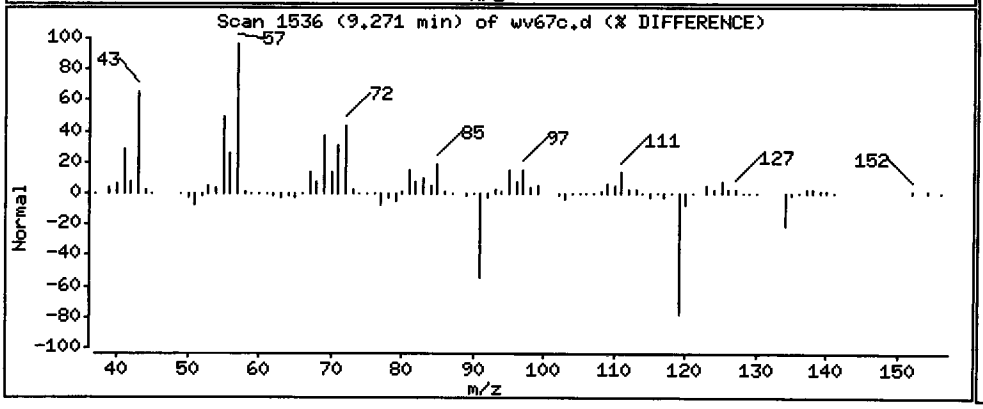












Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9,19,0

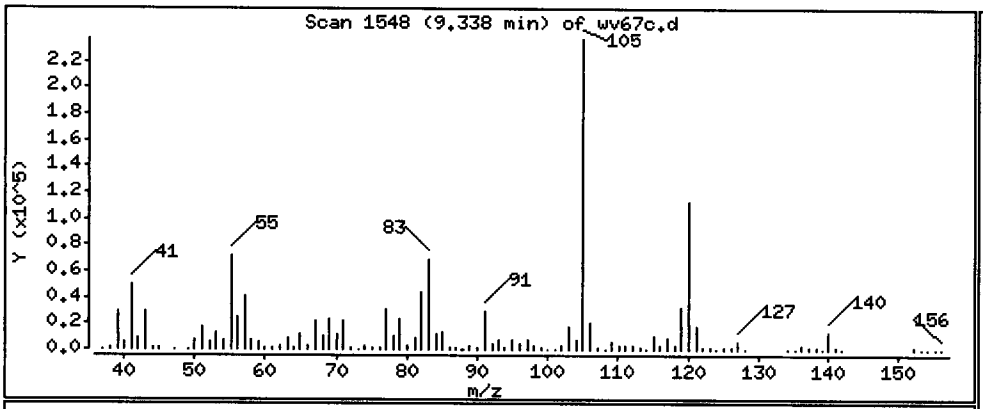
Operator: PB

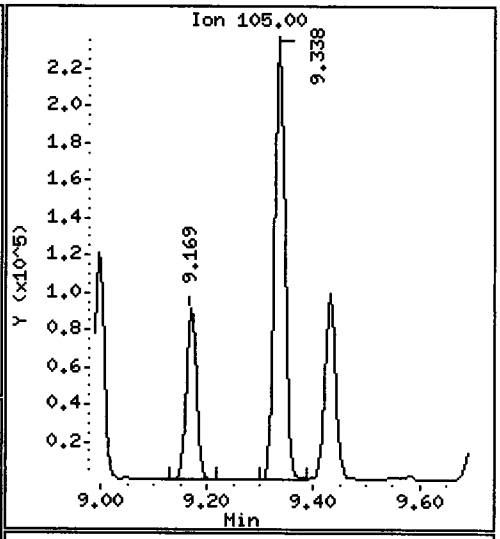
Column phase: RTXVMS

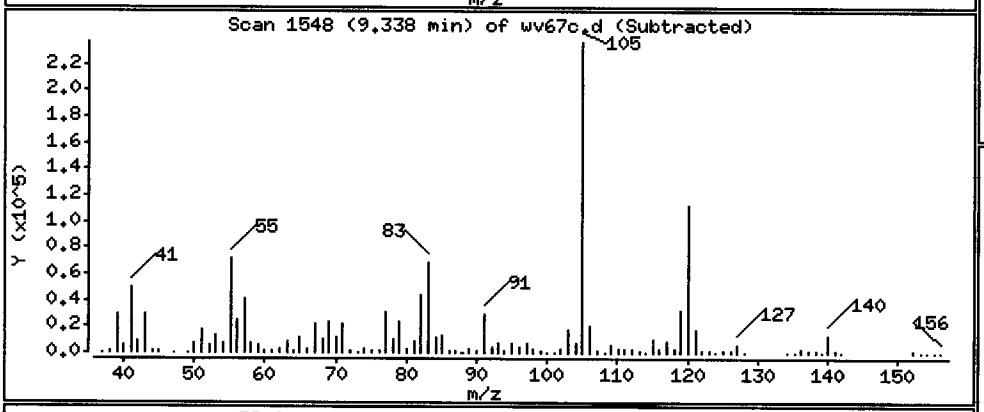
Column diameter: 0.18

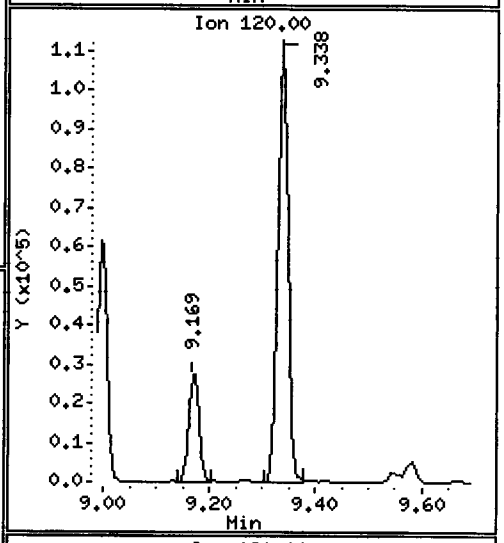
72 1,2,4-Trimethylbenzene

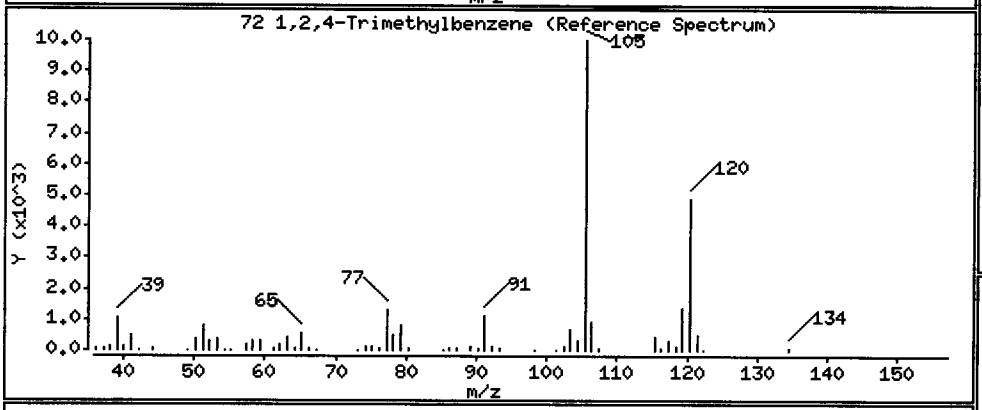
Concentration: 15.116 ug/Kg

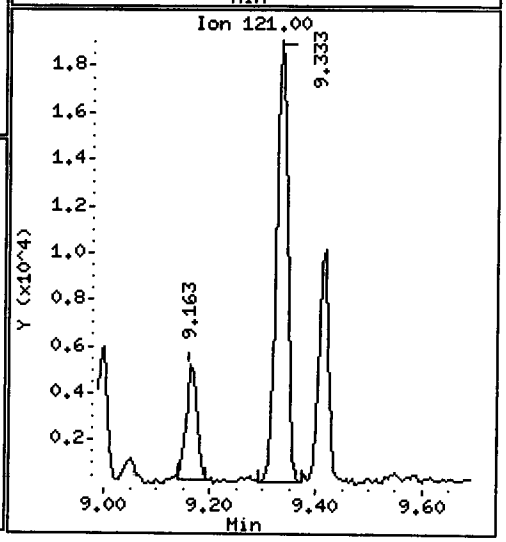


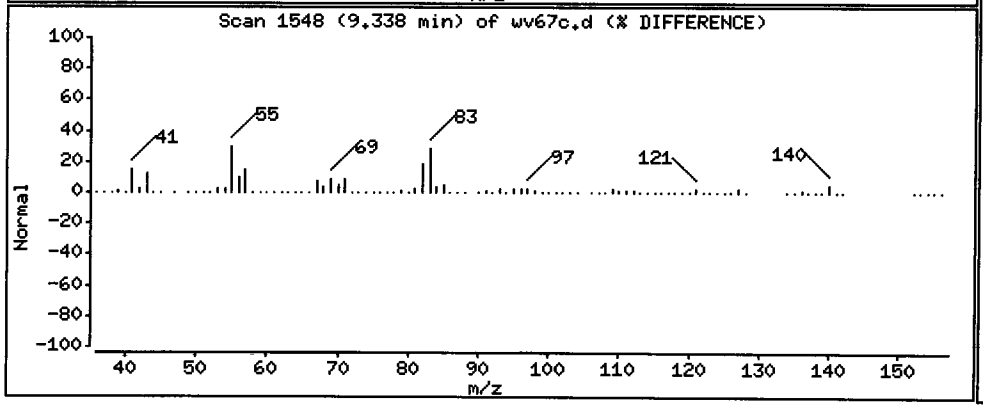












Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9.19,0

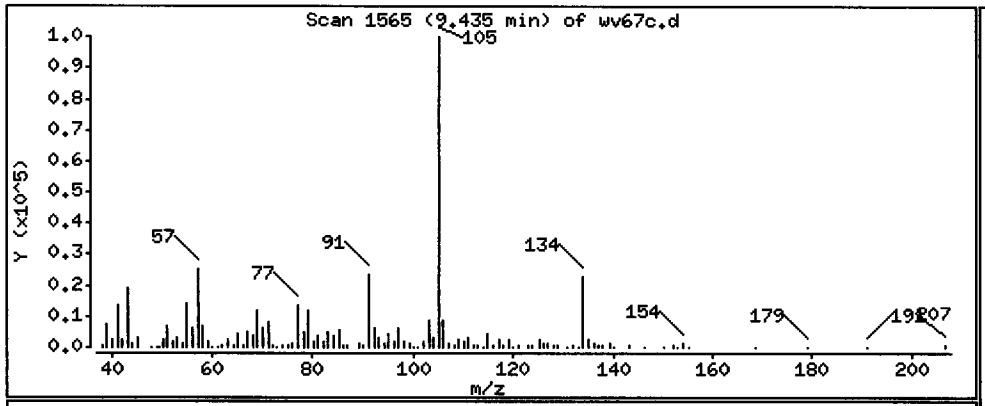
Operator: PB

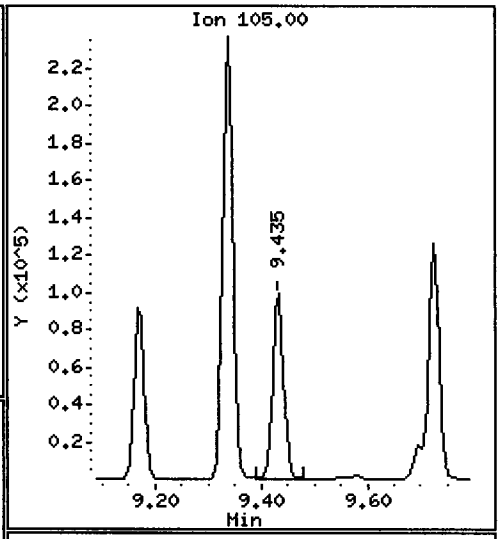
Column phase: RTXVMS

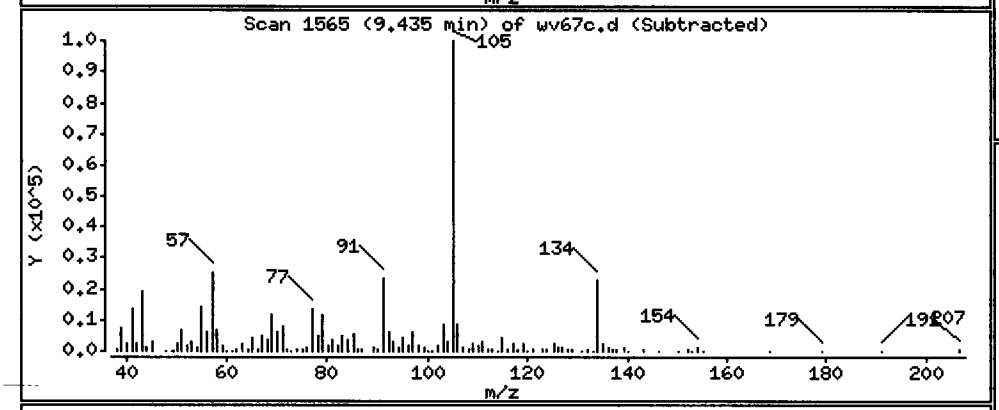
Column diameter: 0.18

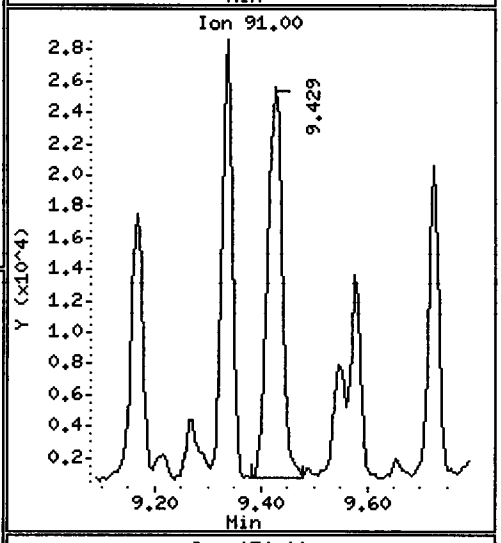
73 S-Butyl Benzene

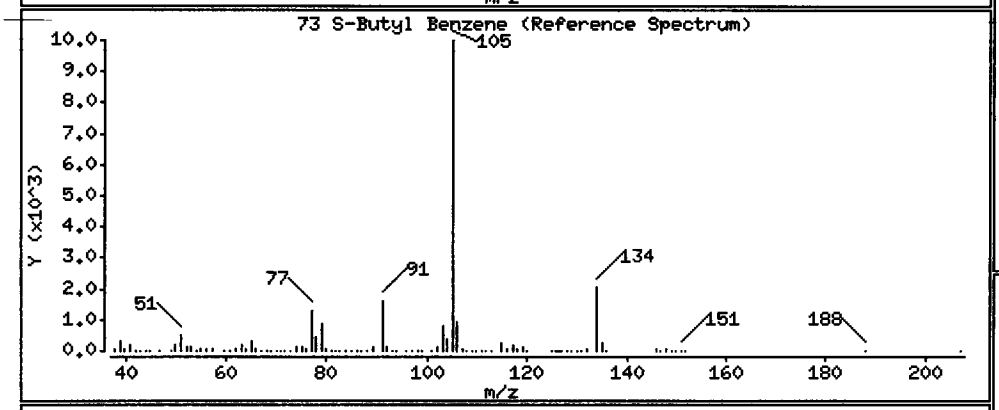
Concentration: 5.212 ug/Kg

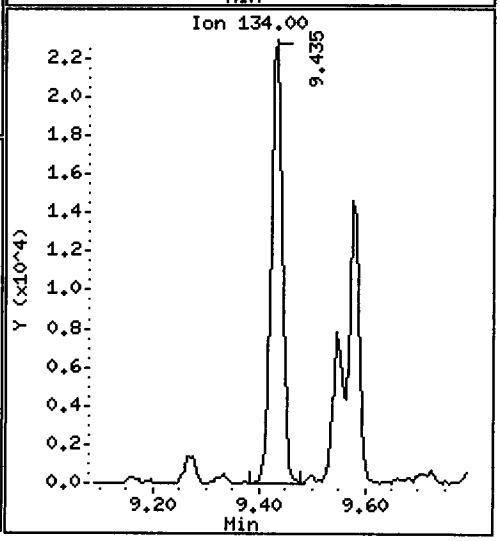


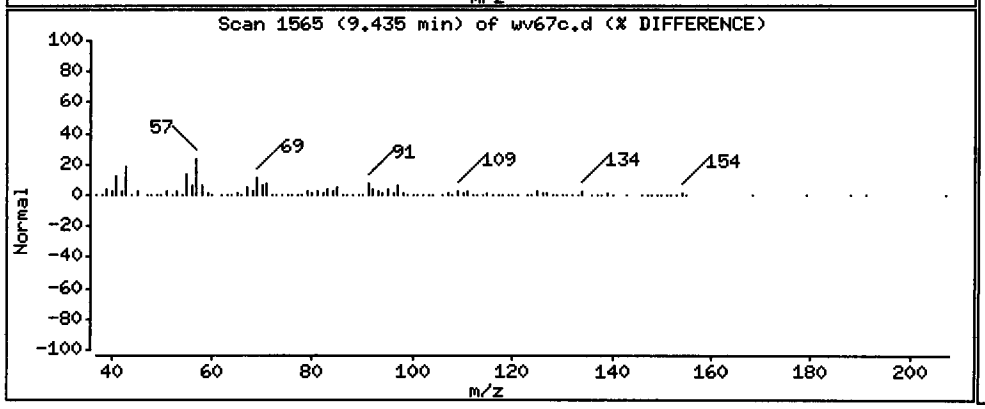












Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9.19,0

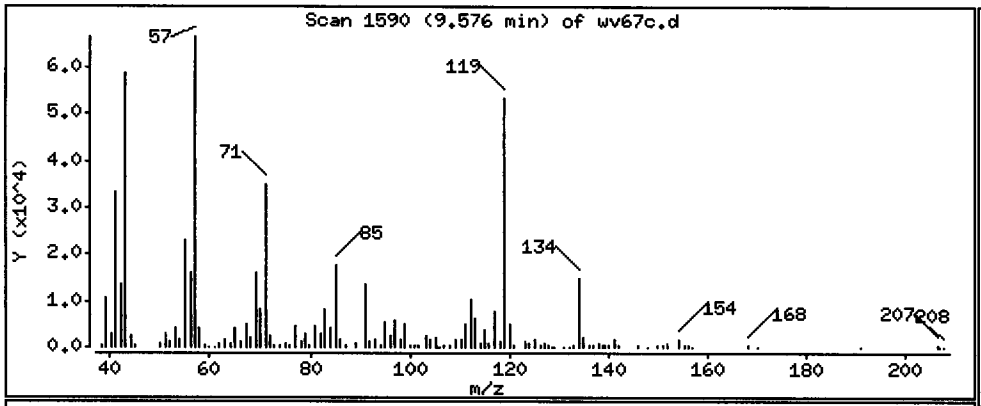
Operator: PB

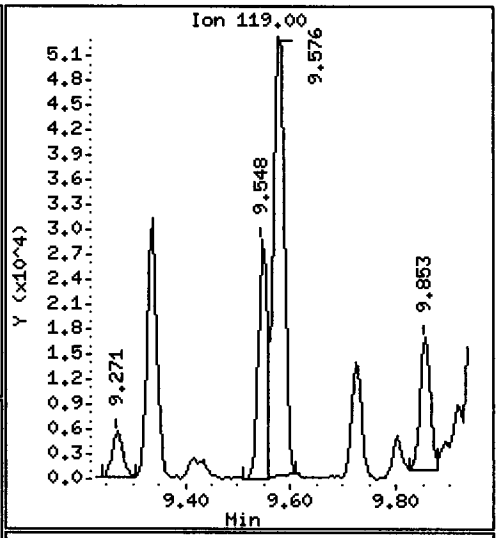
Column phase: RTXVMS

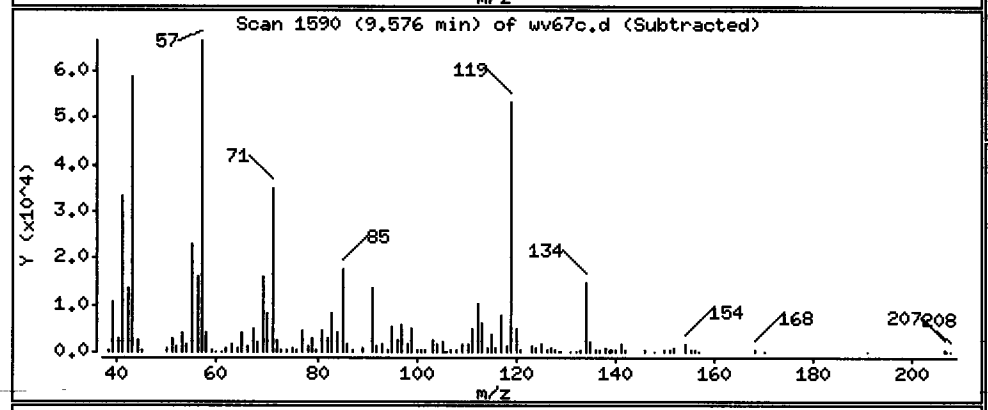
Column diameter: 0.18

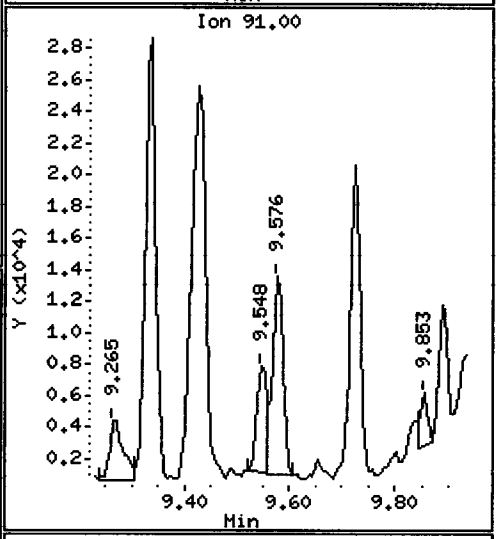
74 4-Isopropyl Toluene

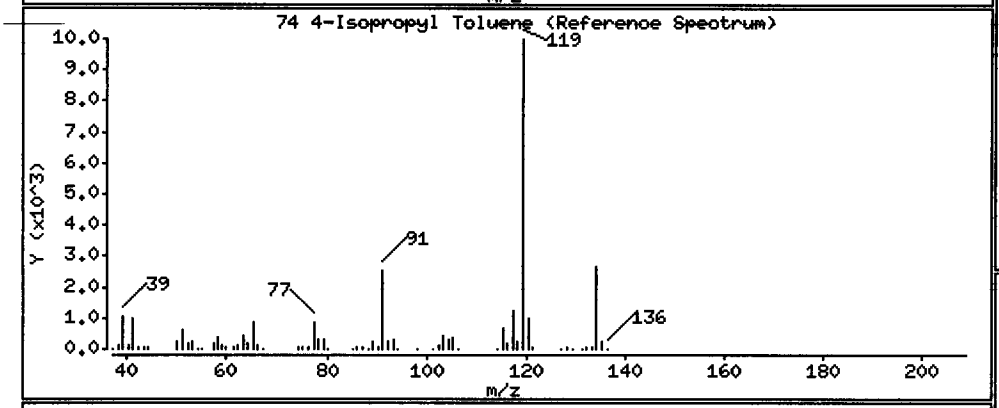
Concentration: 3.498 ug/Kg

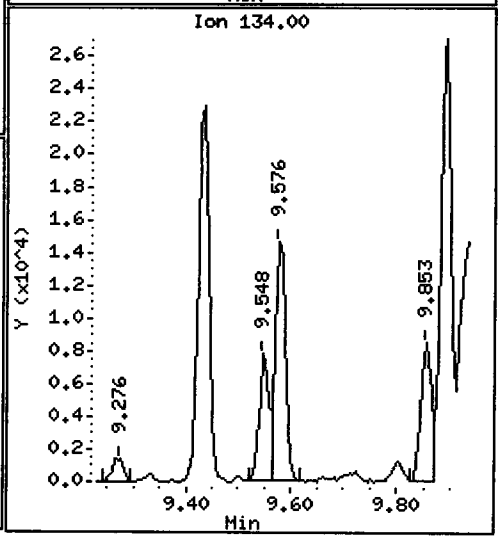


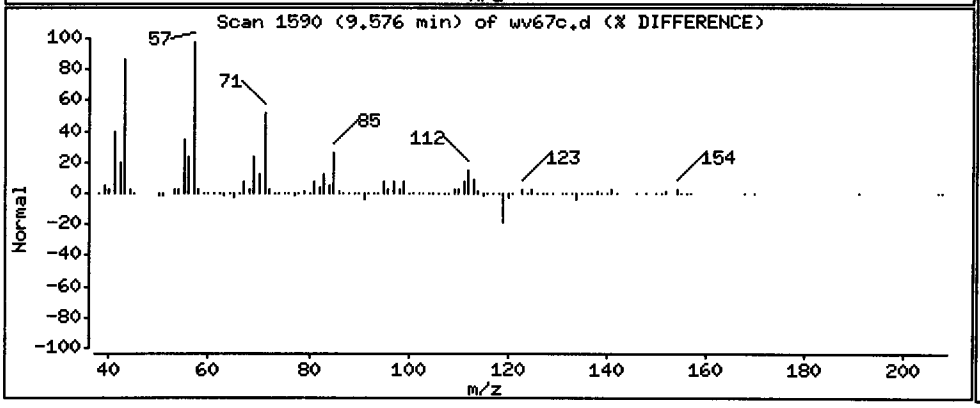












Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9.19,0

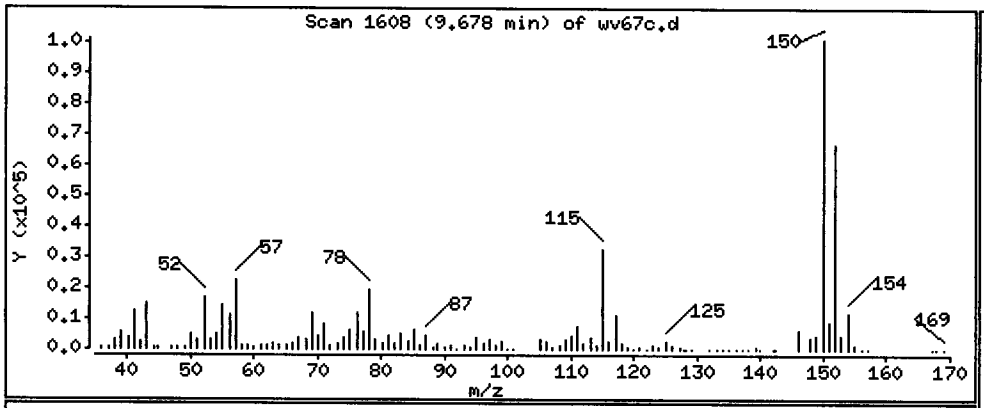
Operator: PB

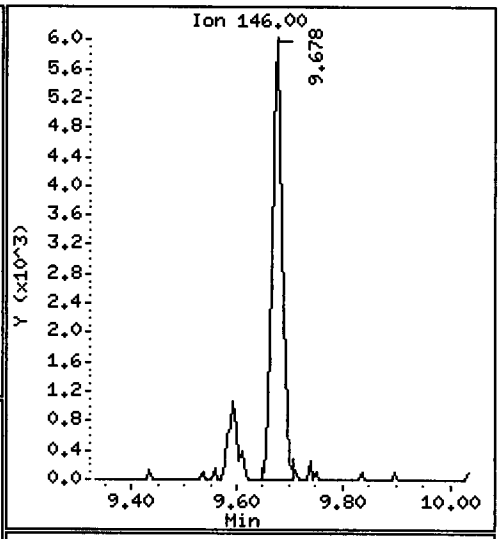
Column phase: RTXVMS

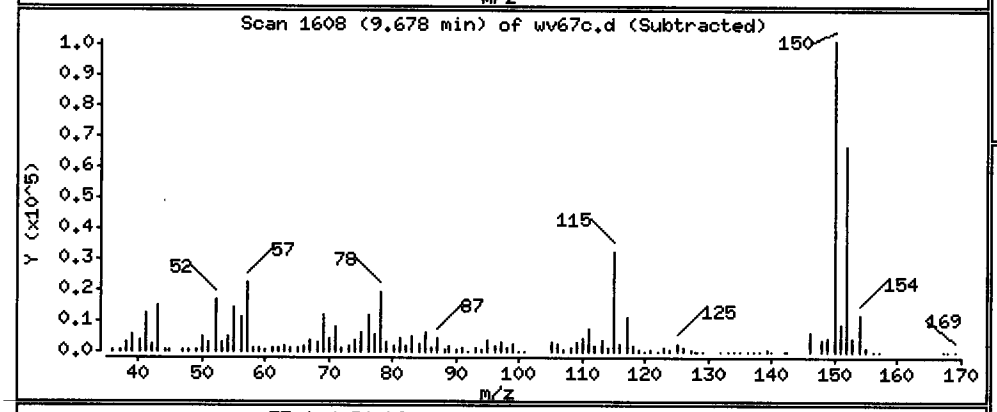
Column diameter: 0.18

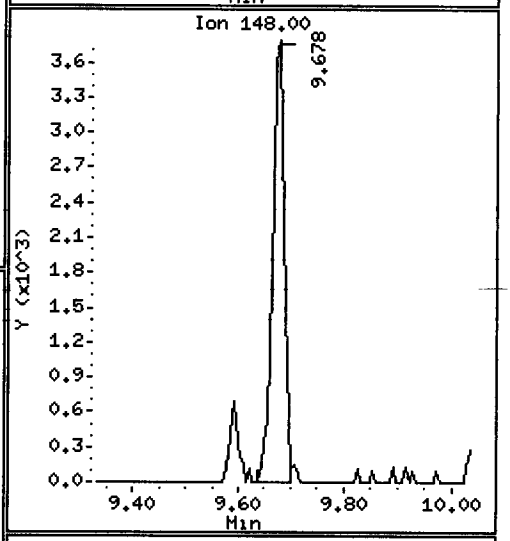
77 1,4-Dichlorobenzene

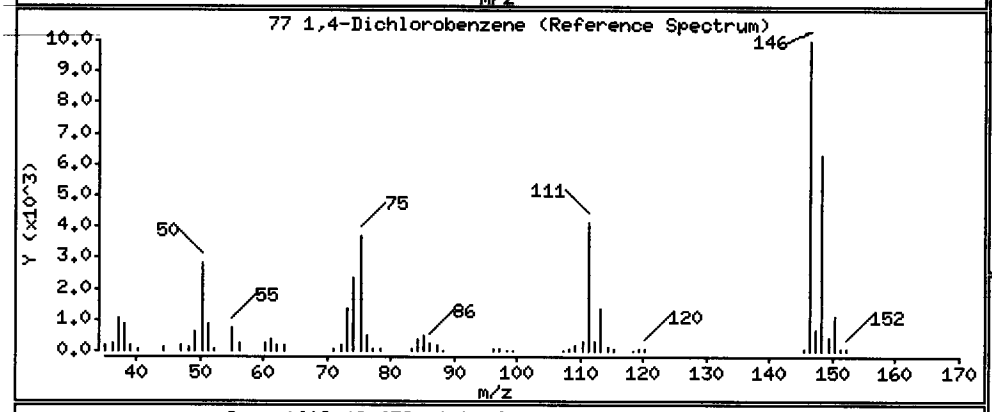
Concentration: 0.6213 ug/Kg

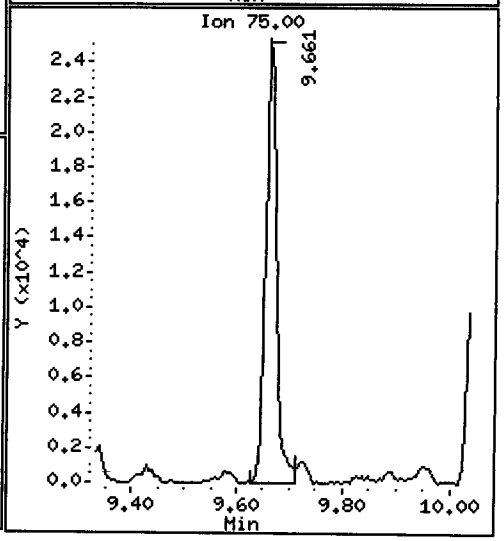


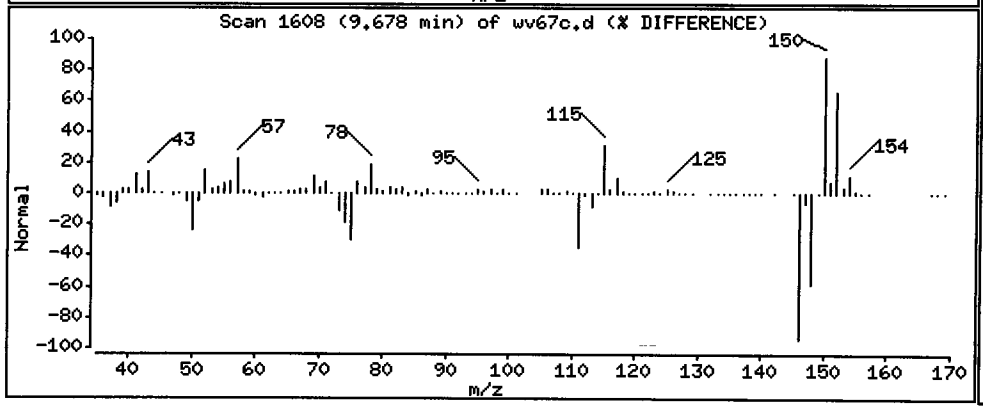












Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9.19,0

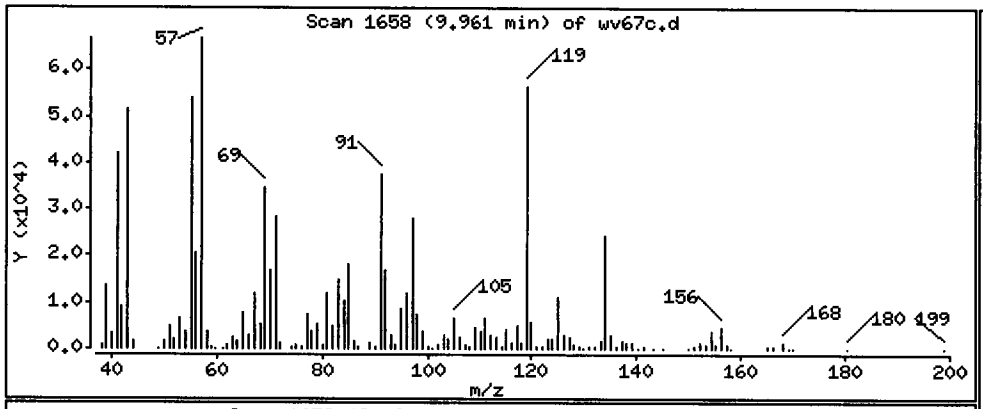
Operator: PB

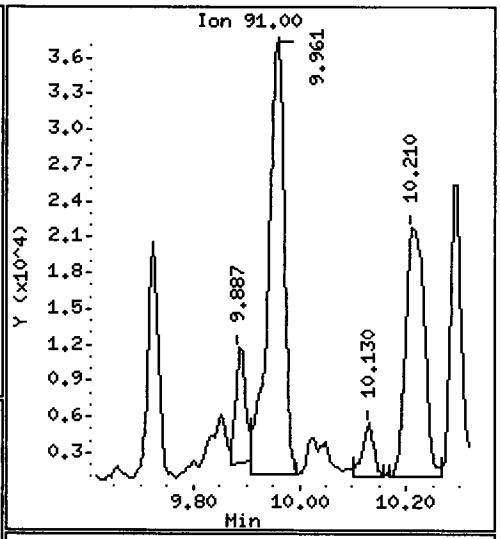
Column phase: RTXVMS

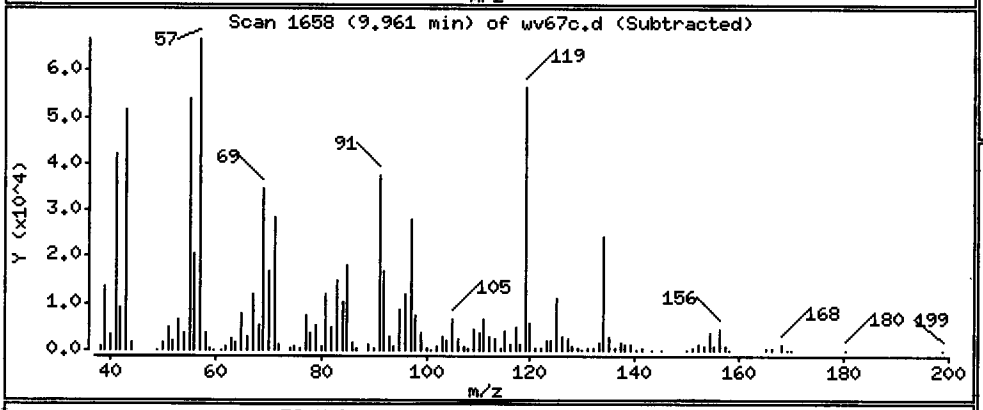
Column diameter: 0.18

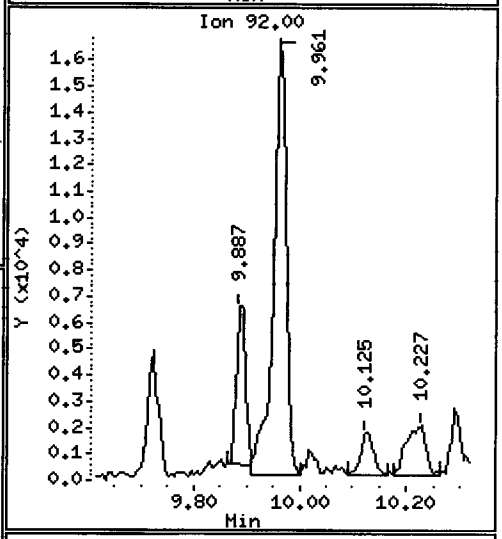
78 N-Butyl Benzene

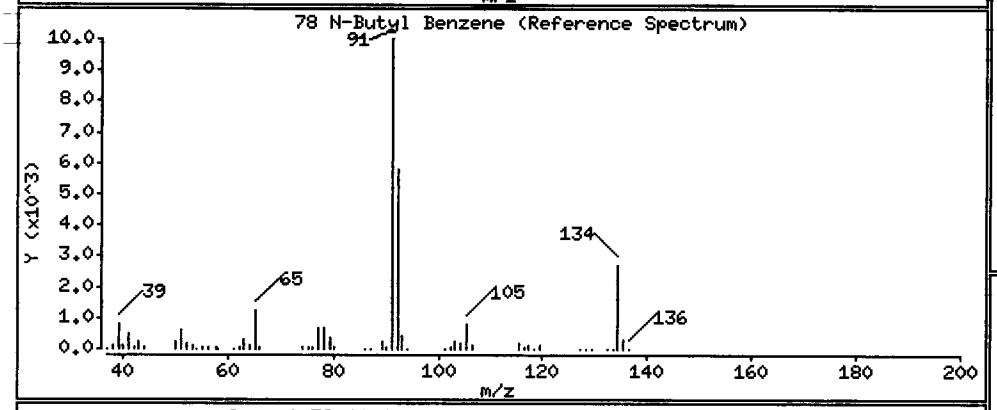
Concentration: 3.617 ug/Kg

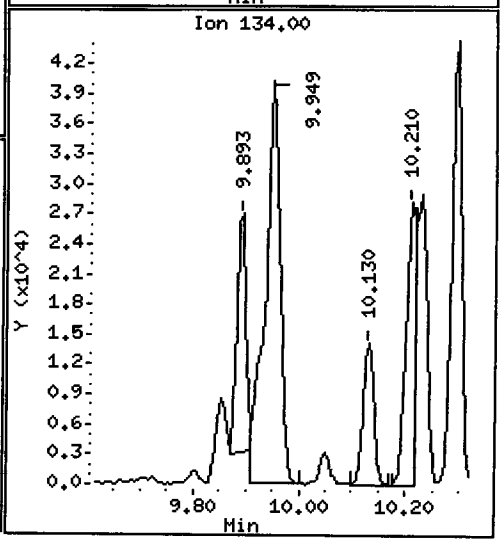


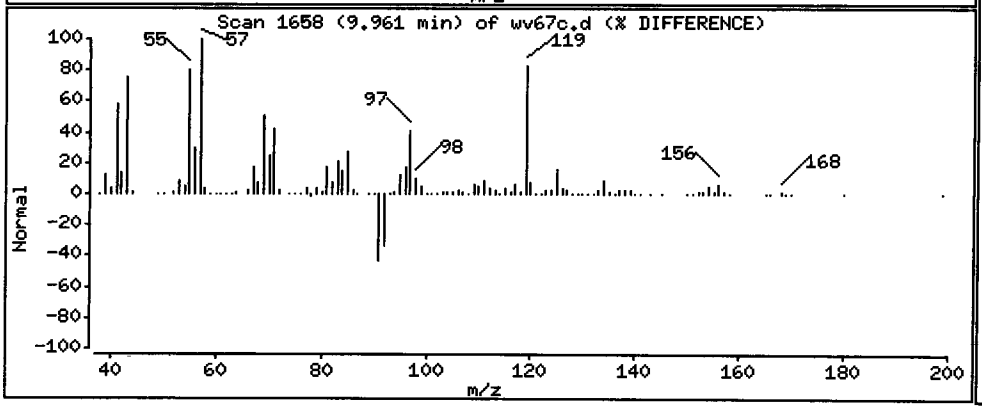












Data File: /chem1/nt5.i/27JUN13.b/wv67c.d

Date : 27-JUN-2013 22:52

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,9.19,0

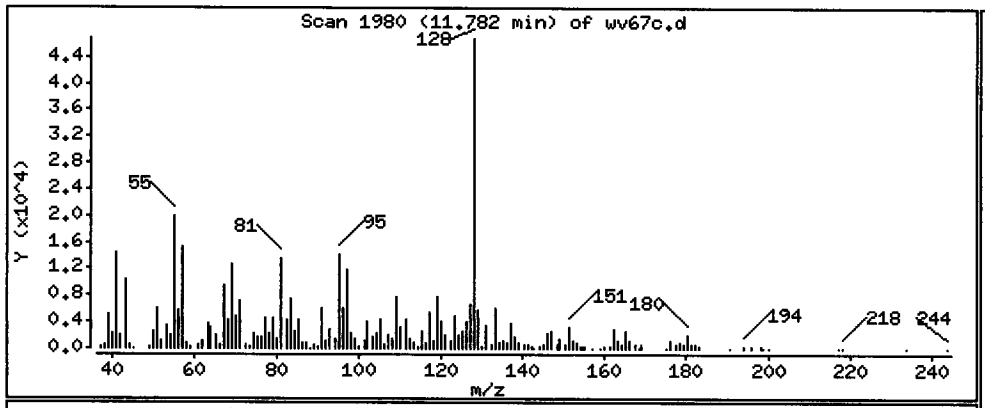
Operator: PB

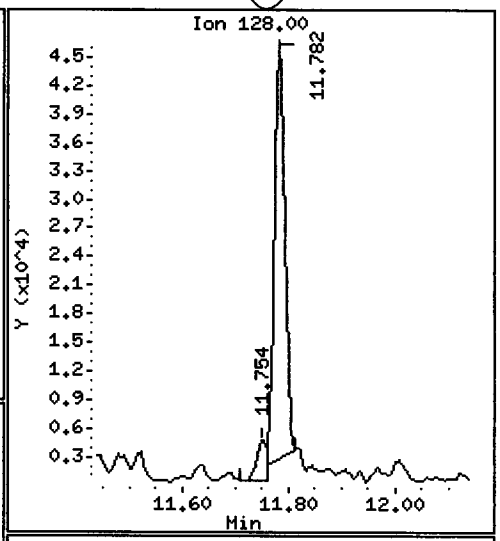
Column phase: RTXVMS

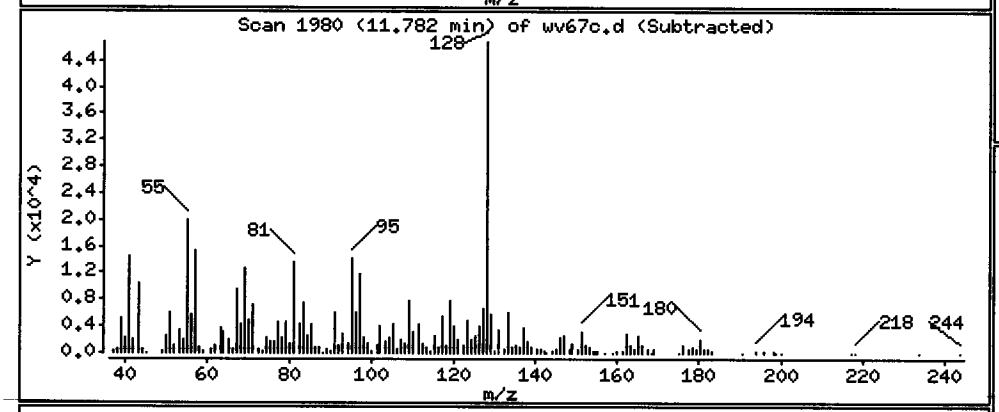
Column diameter: 0.18

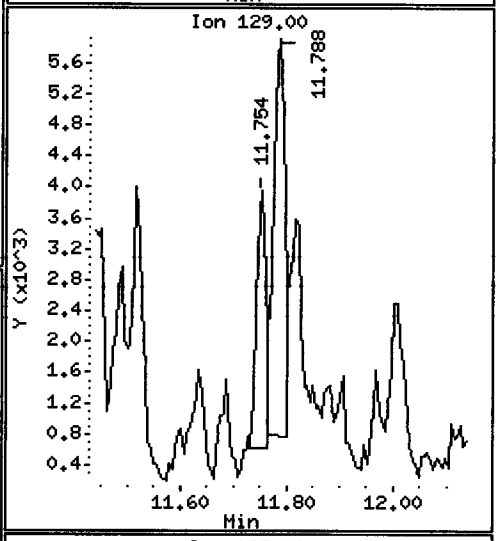
84 Naphthalene

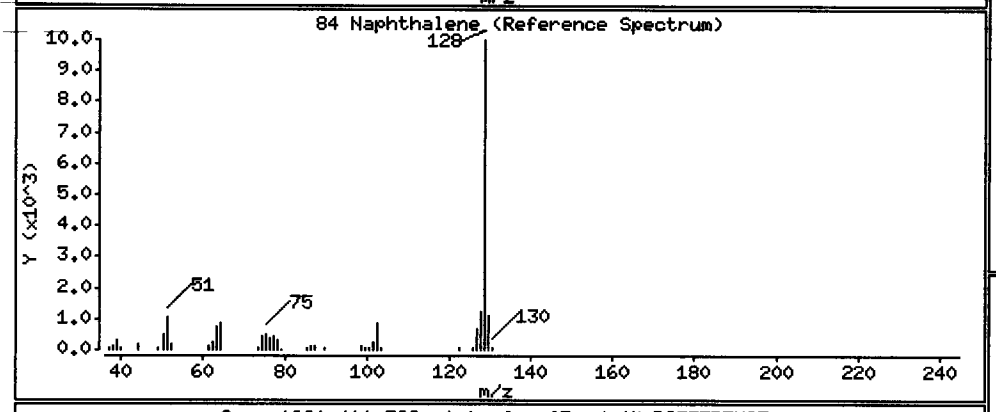
Concentration: 2.986 ug/Kg

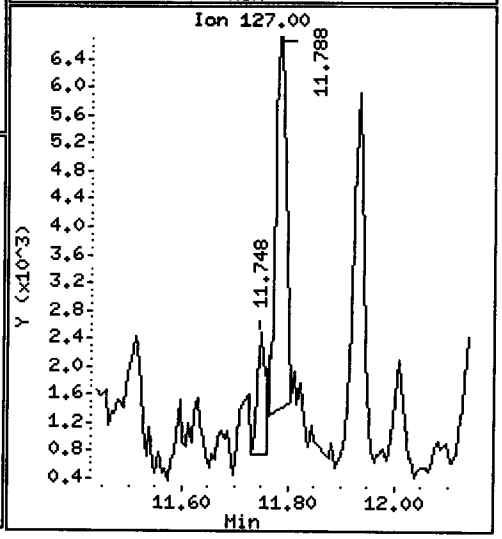


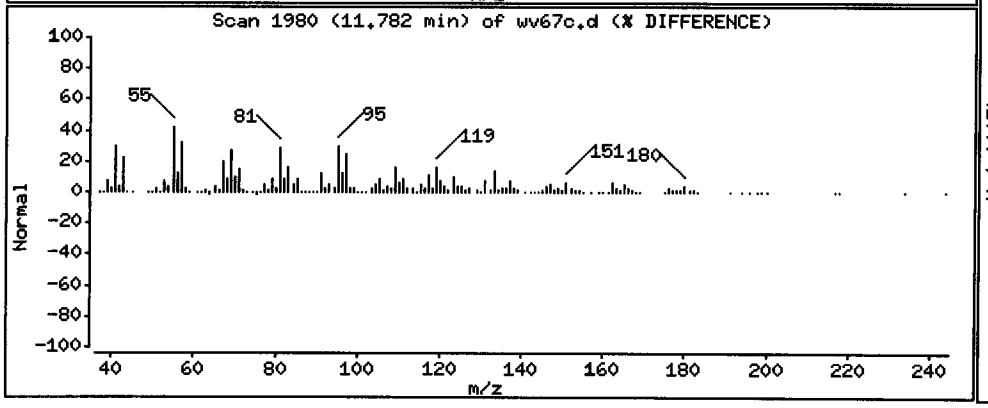












CO-ELUTION SUMMARY FOR FILE - wv67c.d

Lab ID: WV67C, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/wv67a2.d
Lab Smp Id: WV67A Client Smp ID: UP-CB-B8-20130626-S
Inj Date : 28-JUN-2013 04:03
Operator : PB Inst ID: nt5.i
Smp Info : WV67A,5,8.38,0
Misc Info : 13-13657
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 11:09 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	8.38000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	1.617	1.611	(0.346)	100964	6.23879	3.722
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	1.979	1.979	(0.424)	630635	18.3326	10.938
9 112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10 Iodomethane	142	Compound Not Detected.					
11 Bromoethane	108	Compound Not Detected.					
12 Acrolein	56	Compound Not Detected.					
13 Methylene Chloride	84	2.454	2.454	(0.525)	17525	1.46924	0.8766(M)
14 Acetone	43	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	Compound Not Detected.					
	16 Methyl tert butyl ether	73	Compound Not Detected.					
	17 1,1-Dichloroethane	63	Compound Not Detected.					
	18 Acrylonitrile	53	Compound Not Detected.					
	19 Vinyl Acetate	43	Compound Not Detected.					
	20 Cis-1,2-Dichloroethene	96	3.744	3.744	(0.801)	6899	0.55206	0.3294 (Q)
	22 2,2-Dichloropropane	77	Compound Not Detected.					
	23 Bromochloromethane	128	Compound Not Detected.					
	24 Chloroform	83	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.196	4.196	(0.898)	712647	54.4552	32.491
	26 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 1,1-Dichloropropene	75	Compound Not Detected.					
	29 2-Butanone	72	4.394	4.434	(0.941)	79496	50.8422	20.335 (Q)
	30 Benzene	78	4.536	4.530	(0.885)	155154	3.12480	1.864
*	31 Pentafluorobenzene	168	4.671	4.671	(1.000)	1359159	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.666	(0.999)	801241	53.8769	32.146
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.124	5.118	(1.000)	2283262	50.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	40 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	41 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	42 d8-Toluene	98	6.295	6.295	(1.229)	2721340	48.0830	28.689
	43 Toluene	92	6.340	6.335	(1.237)	7199819	229.218	136.76 (Q)
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	6738	0.59262	0.3530
	45 4-Methyl-2-Pentanone	58	6.697	6.708	(1.307)	200314	33.7036	20.110 (Q)
	46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47 1,1,2-Trichloroethane	97	Compound Not Detected.					
	48 Chlorodibromomethane	129	Compound Not Detected.					
	49 1,3-Dichloropropane	76	Compound Not Detected.					
	50 1,2-Dibromoethane	107	Compound Not Detected.					
	51 2-Hexanone	43	Compound Not Detected.					
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	1933608	50.0000	
	53 Chlorobenzene	112	Compound Not Detected.					
	54 Ethyl Benzene	91	7.658	7.664	(1.008)	762307	16.2162	9.676
	55 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56 m,p-xylene	106	7.788	7.794	(1.025)	415489	23.5442	14.048
	57 o-Xylene	106	8.150	8.156	(1.073)	242170	13.9041	8.296
	58 Styrene	104	8.201	8.201	(1.080)	105816	3.70761	2.212
	59 Bromoform	173	Compound Not Detected.					
	60 Isopropyl Benzene	105	8.439	8.445	(0.873)	68626	2.45655	1.466
$	62 4-Bromofluorobenzene	95	8.660	8.665	(1.140)	879143	42.7193	25.489
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	8.807	8.812	(0.911)	88676	2.63490	1.572
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
66	2-Chloro Toluene	91	Compound Not Detected.					
67	1,3,5-Trimethyl Benzene	105	8.993	8.999	(0.930)	167915	6.97240	4.160
68	1,2,3-Trichloropropane	110	Compound Not Detected.					
69	Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
70	4-Chloro Toluene	91	Compound Not Detected.					
71	T-Butyl Benzene	119	Compound Not Detected.					
72	1,2,4-Trimethylbenzene	105	9.338	9.338	(0.966)	393962	16.7305	9.982
73	S-Butyl Benzene	105	9.435	9.440	(0.976)	97551	3.17191	1.893 (Q)
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	240103	9.63731	5.750
75	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 76	d4-1,4-Dichlorobenzene	152	9.666	9.672	(1.000)	673495	50.0000	
77	1,4-Dichlorobenzene	146	9.678	9.683	(1.001)	16413	1.13028	0.6744 (Q)
78	N-Butyl Benzene	91	Compound Not Detected.					
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	587194	47.8008	28.521
80	1,2-Dichlorobenzene	146	Compound Not Detected.					
81	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
84	Naphthalene	128	11.788	11.788	(1.219)	302666	13.4185	8.006
85	1,2,3-Trichlorobenzene	180	Compound Not Detected.					

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: wv67a2.d
Lab Smp Id: WV67A
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13657

Calibration Date: 27-JUN-2013
Calibration Time: 17:46
Client Smp ID: UP-CB-B8-20130626-S
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1359159	-15.77
35 1,4-Difluorobenze	2656709	1328354	5313418	2283262	-14.06
52 d5-Chlorobenzene	2557235	1278618	5114470	1933608	-24.39
76 d4-1,4-Dichlorobe	1374359	687180	2748718	673495	-51.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	0.00
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WV67A
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13657

Client SDG: WV67
Fraction: VOA
Client Smp ID: UP-CB-B8-20130626-S
Operator: PB
SampleType: SAMPLE
Quant Type: ISTD

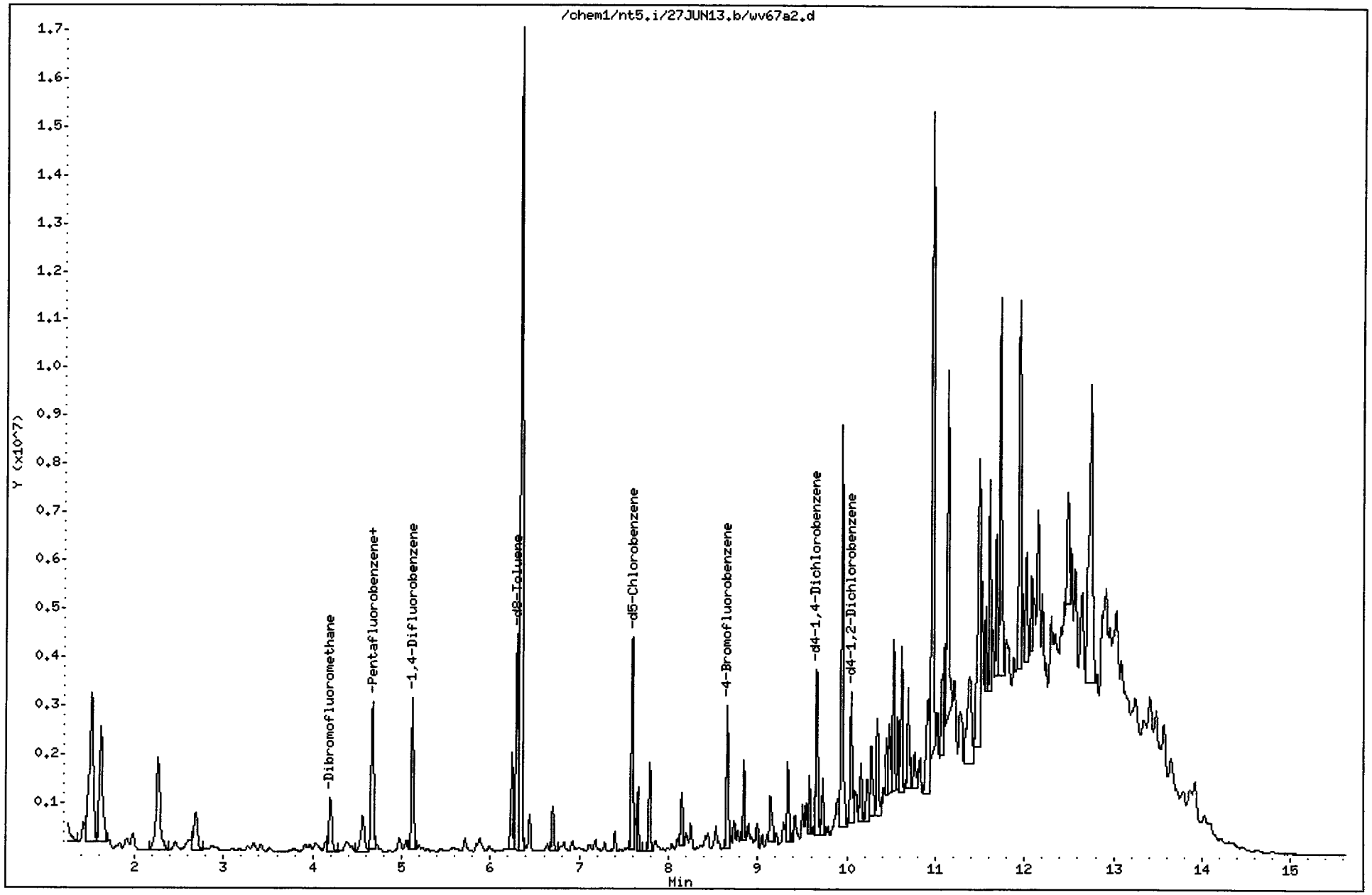
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	54.455	108.91	70-130
$ 32 d4-1,2-Dichloroeth	50.000	53.877	107.75	80-149
$ 42 d8-Toluene	50.000	48.083	96.17	77-120
$ 62 4-Bromofluorobenze	50.000	42.719	85.44	80-120
$ 79 d4-1,2-Dichloroben	50.000	47.801	95.60	80-120

Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d
Date : 28-JUN-2013 04:03
Client ID: UP-CB-B8-20130626-S
Sample Info: WV67A,5,8.38,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d

Date : 28-JUN-2013 04:03

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,8.38,0

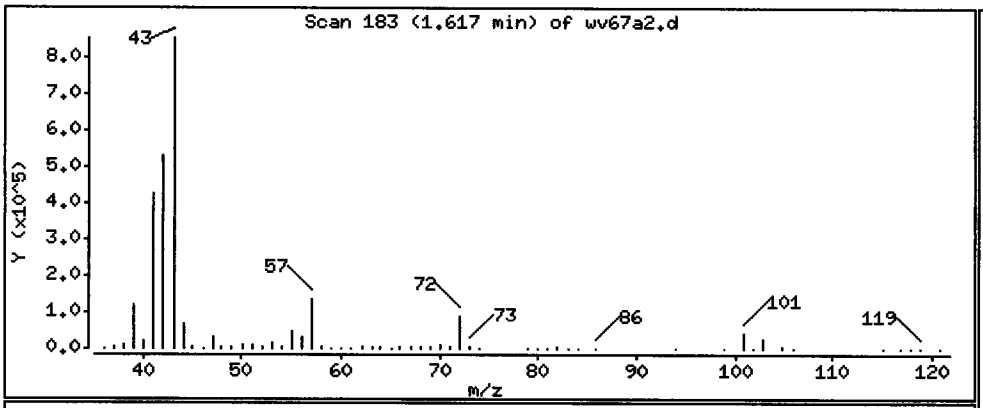
Operator: PB

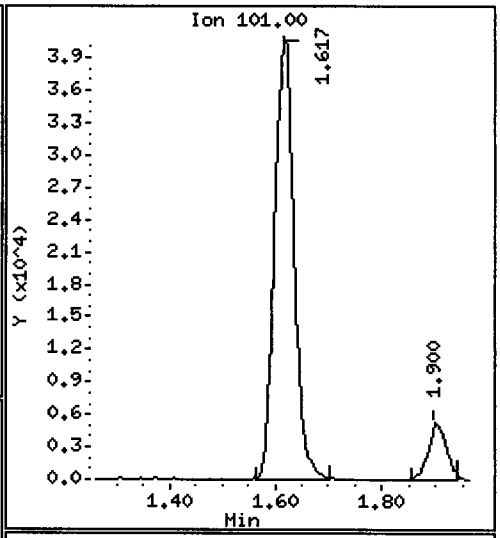
Column phase: RTXVMS

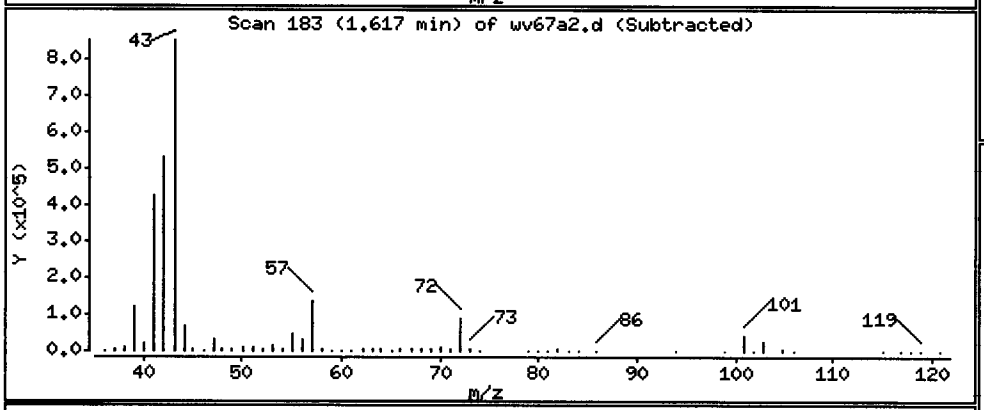
Column diameter: 0.18

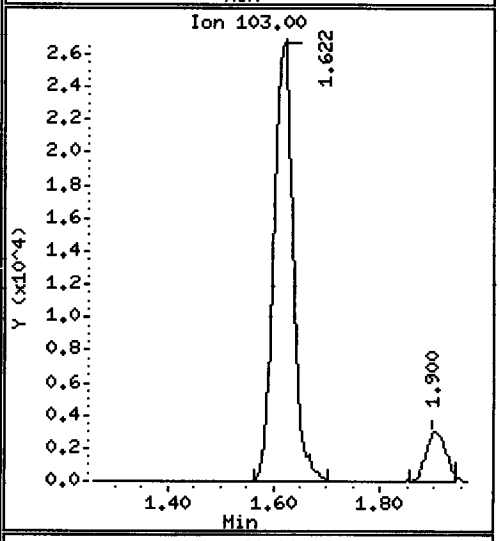
6 Trichlorofluoromethane

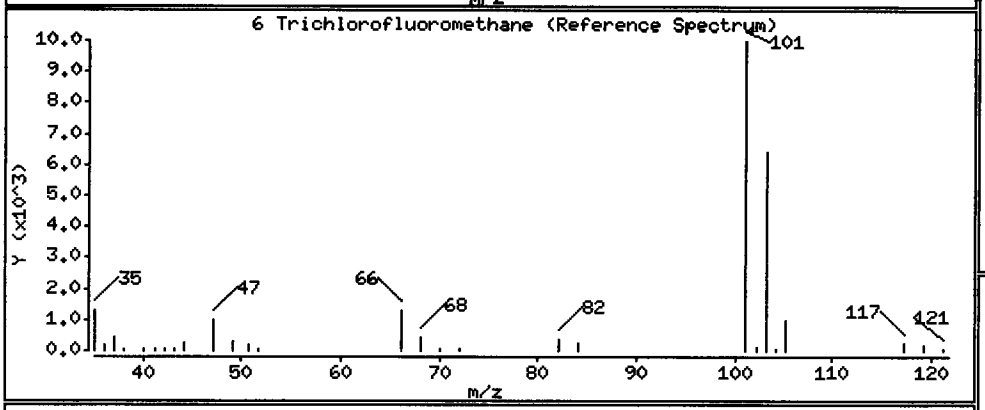
Concentration: 3.722 ug/Kg

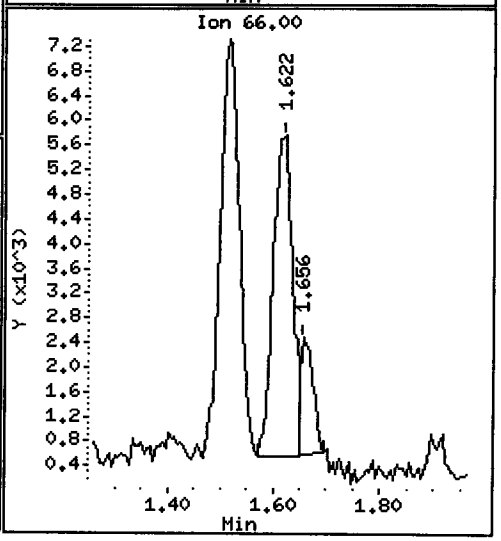


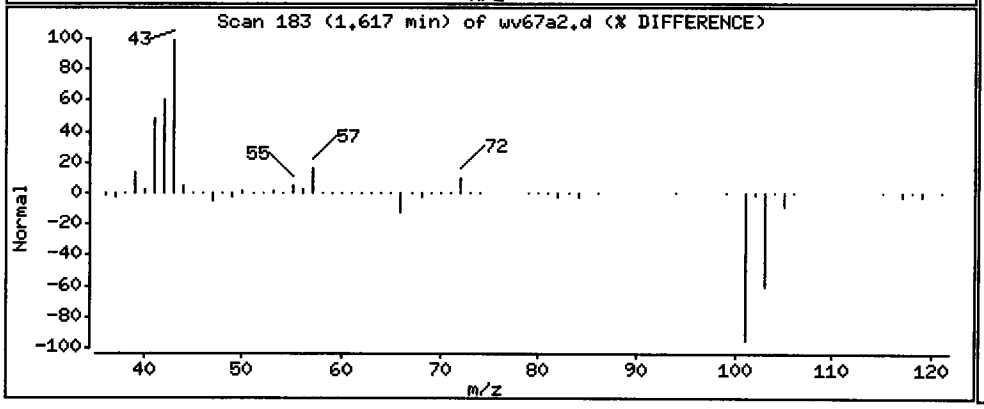












Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d

Date : 28-JUN-2013 04:03

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,8.38,0

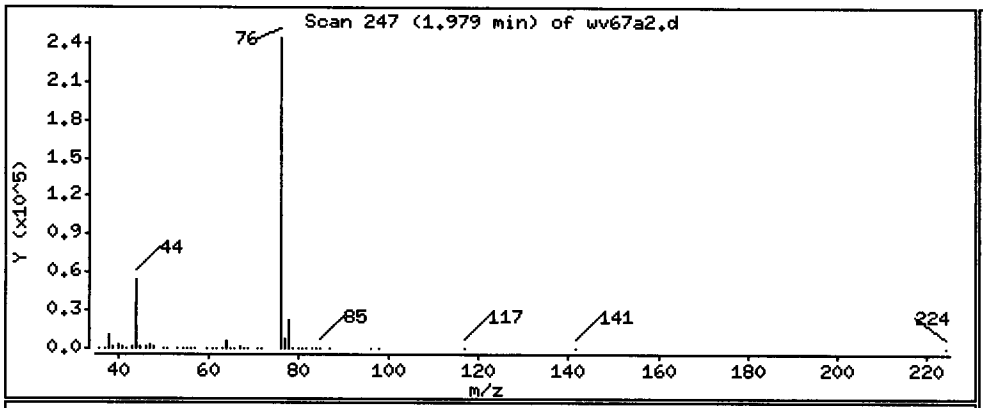
Operator: PB

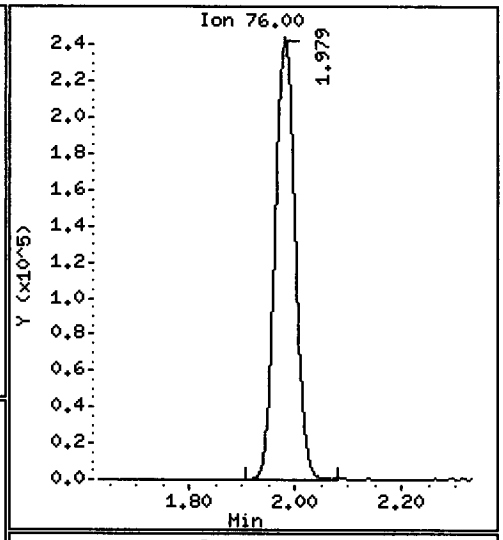
Column phase: RTXVMS

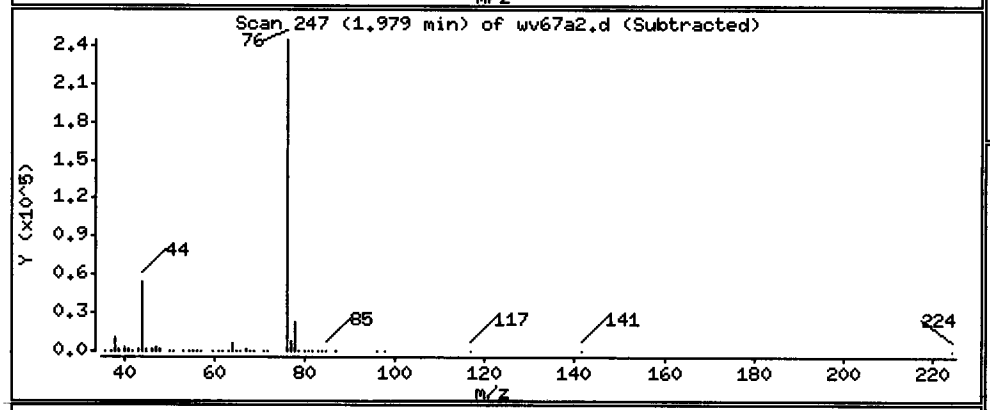
Column diameter: 0.18

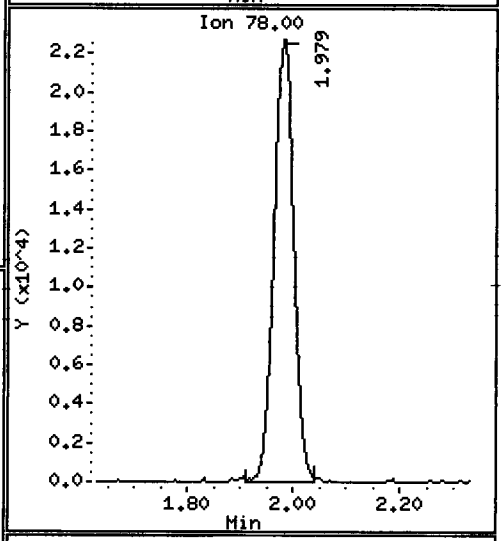
8 Carbon Disulfide

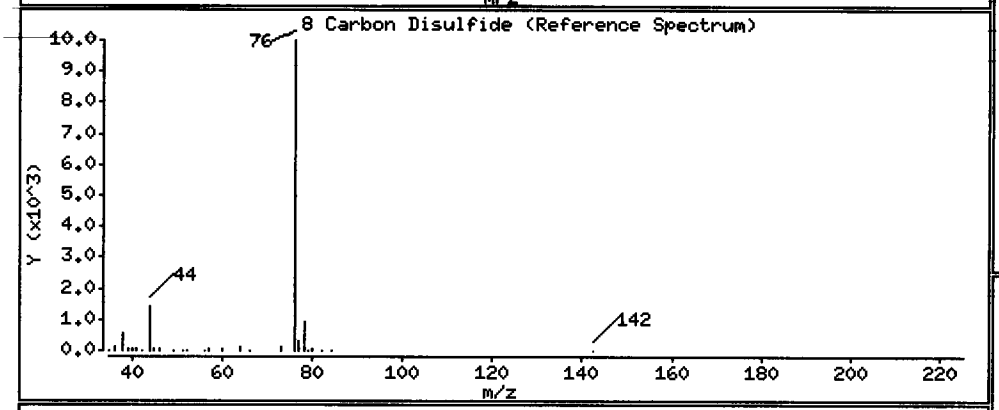
Concentration: 10.938 ug/Kg

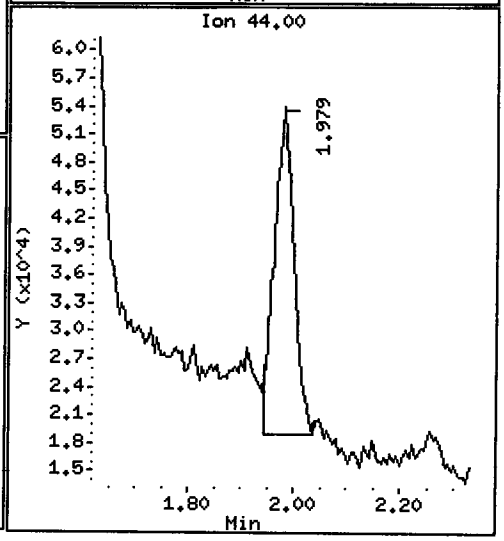


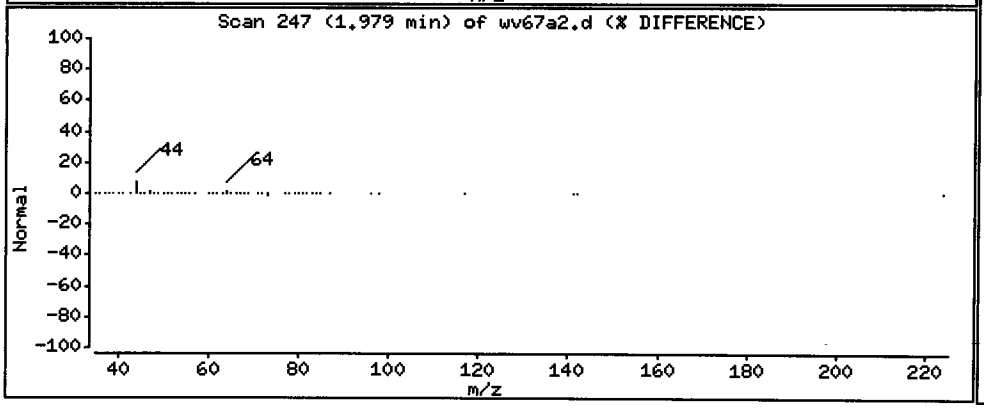












Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d

Date : 28-JUN-2013 04:03

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,8.38,0

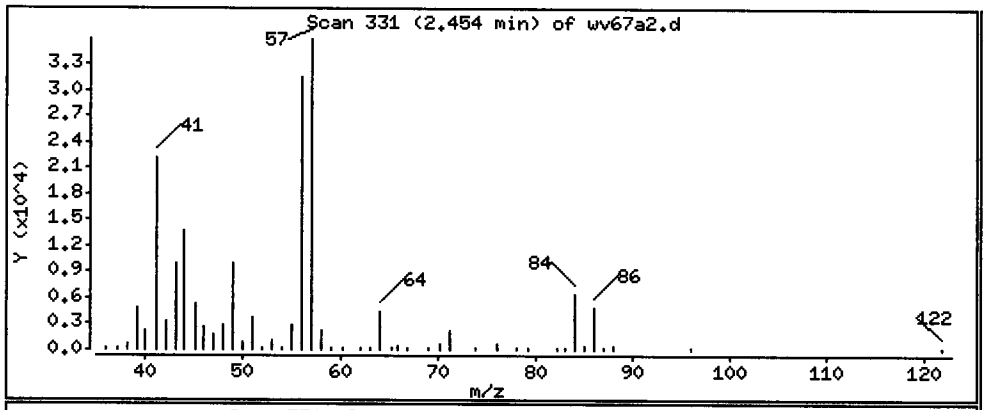
Operator: PB

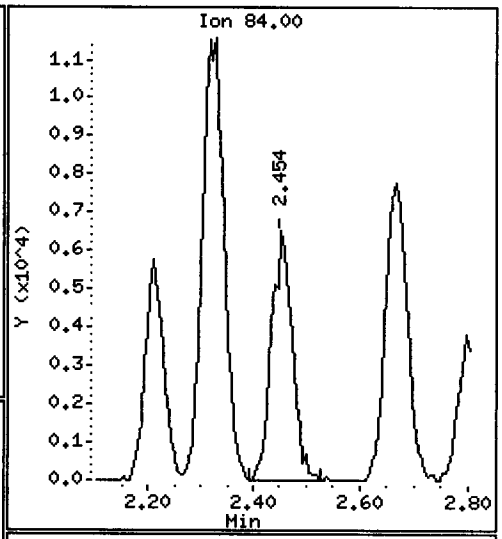
Column phase: RTXVMS

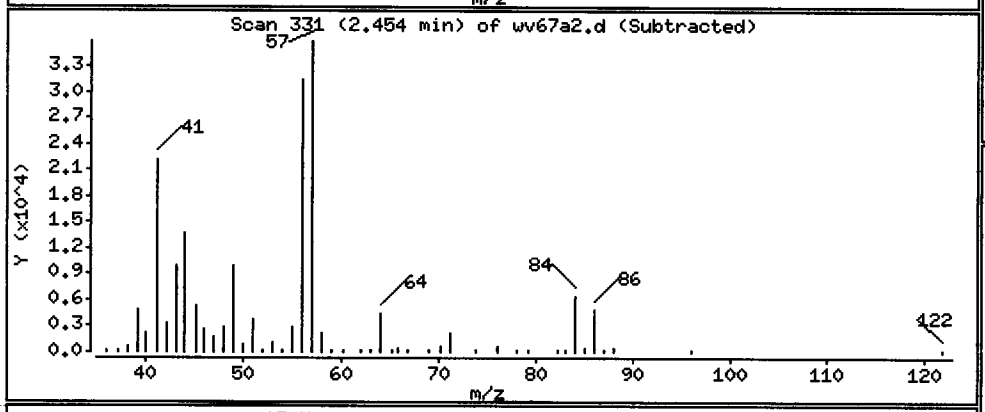
Column diameter: 0.18

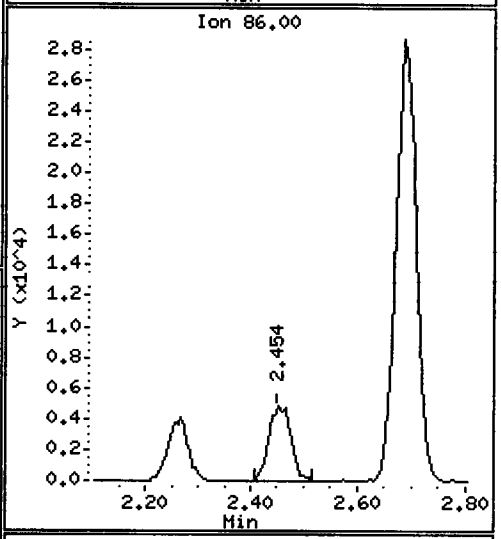
13 Methylene Chloride

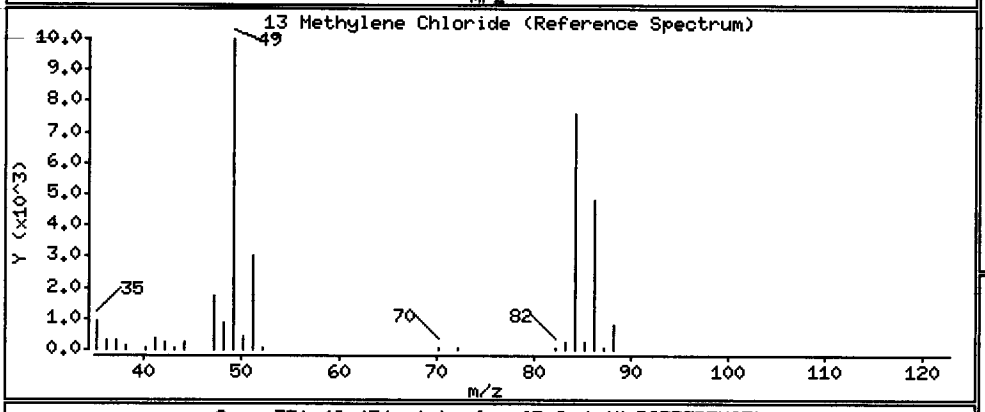
Concentration: 0.8766 ug/Kg

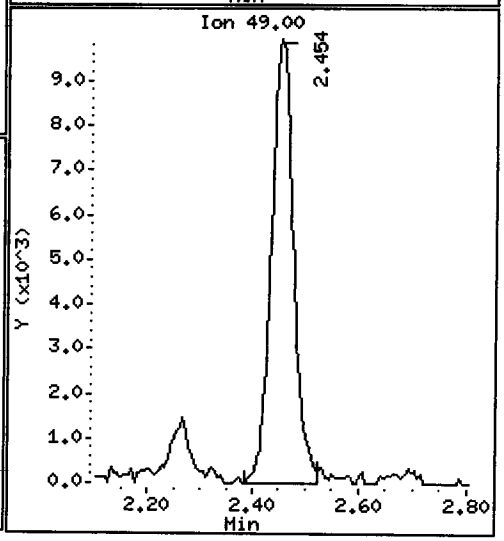


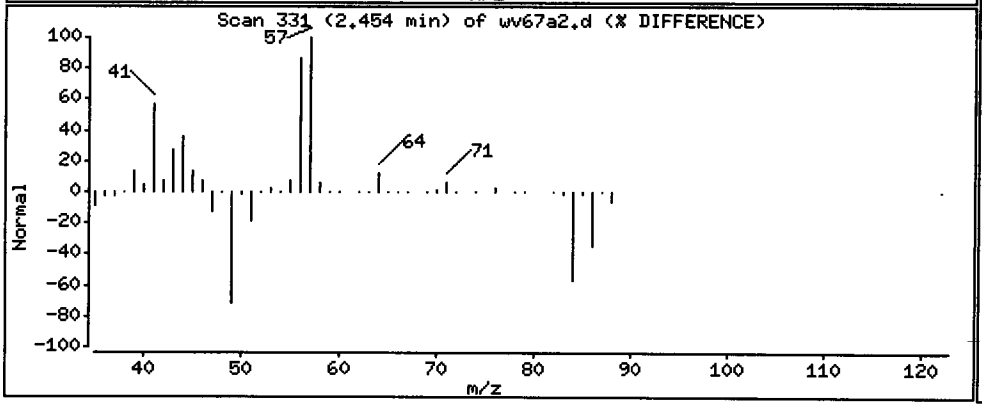












Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d

Date : 28-JUN-2013 04:03

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,8.38,0

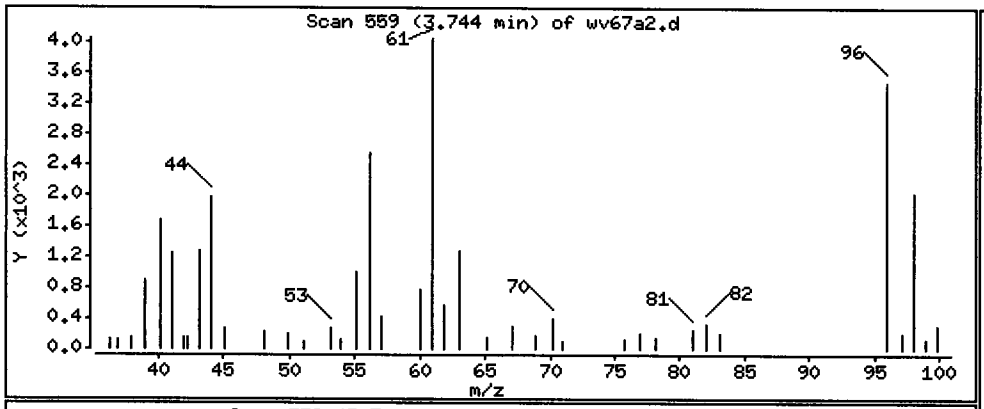
Operator: PB

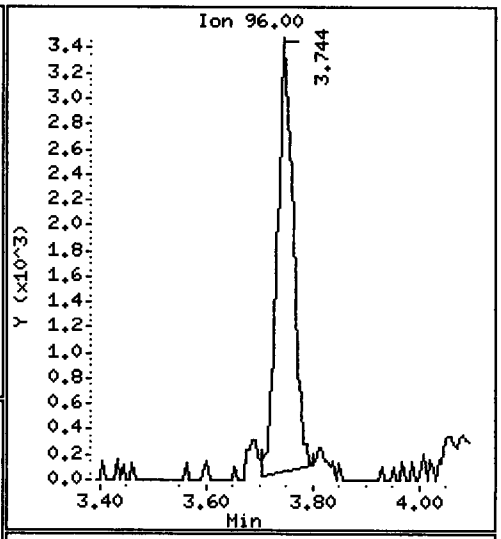
Column phase: RTXVMS

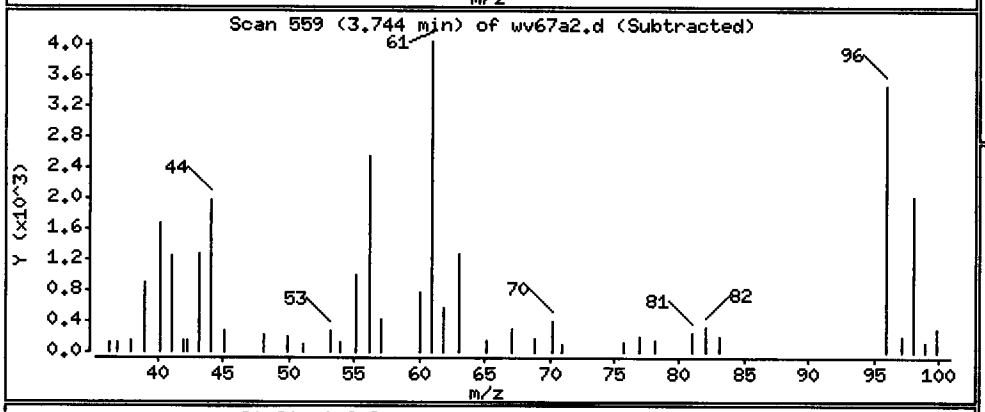
Column diameter: 0.18

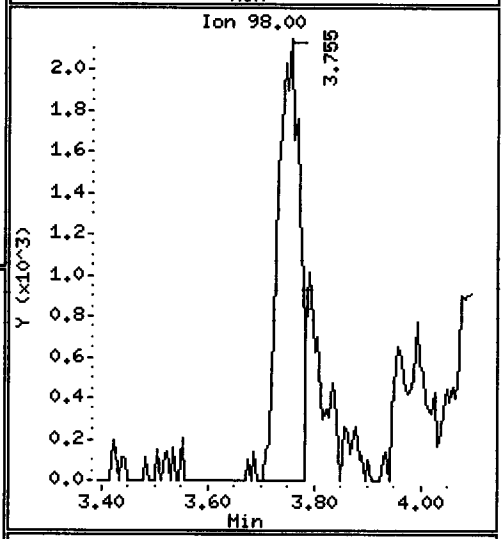
20 Cis-1,2-Dichloroethene

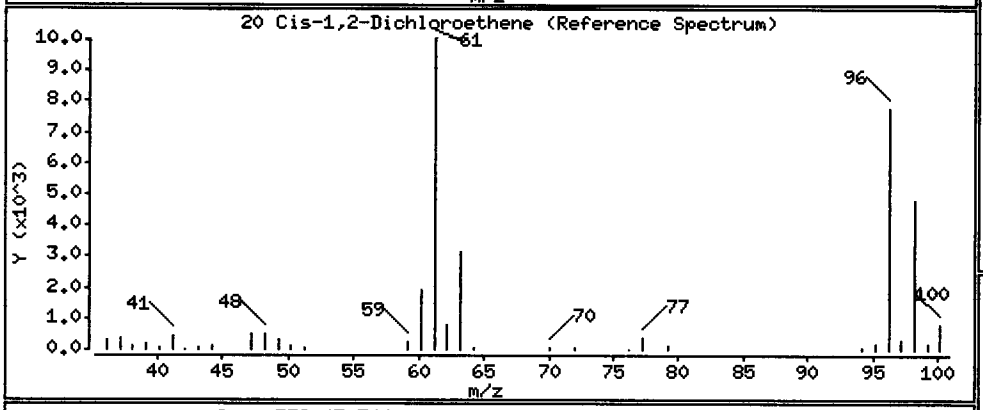
Concentration: 0.3294 ug/Kg

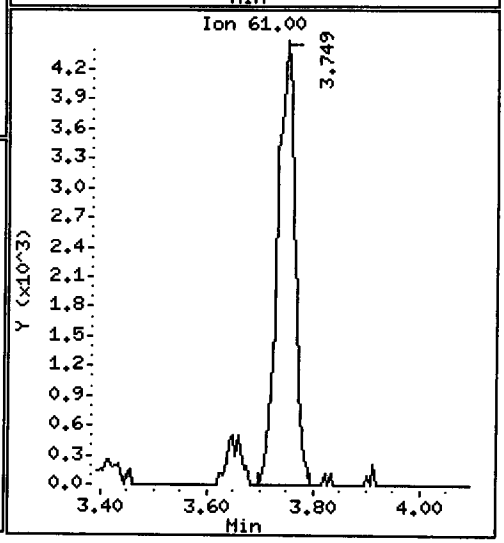


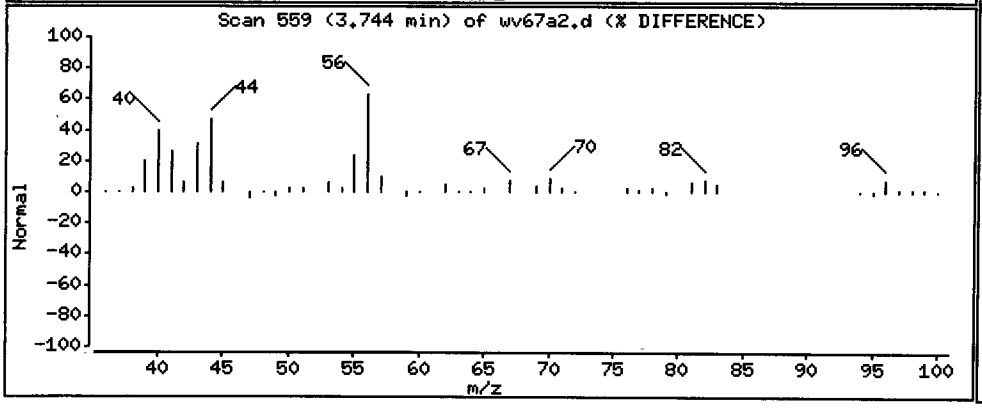












Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d

Date : 28-JUN-2013 04:03

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,8.38,0

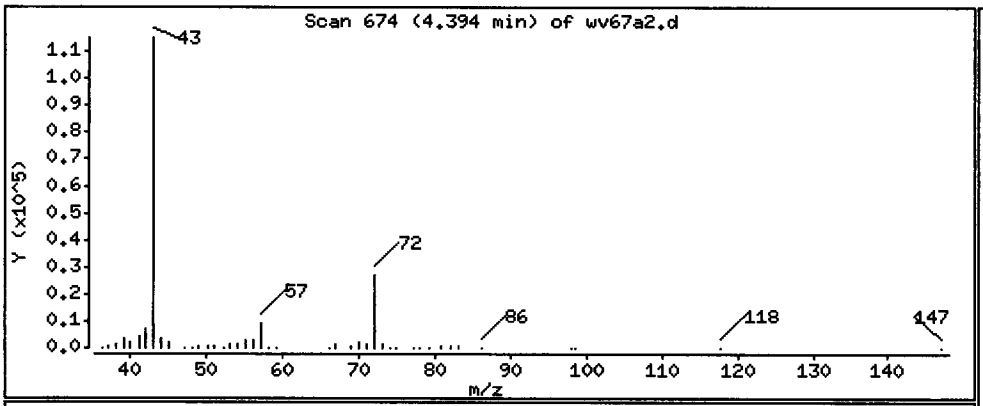
Operator: PB

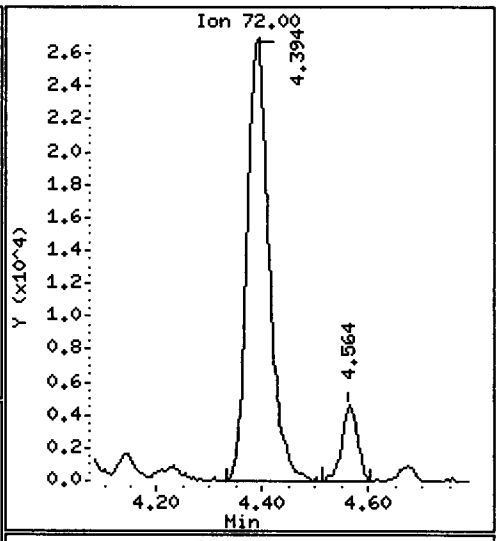
Column phase: RTXVMS

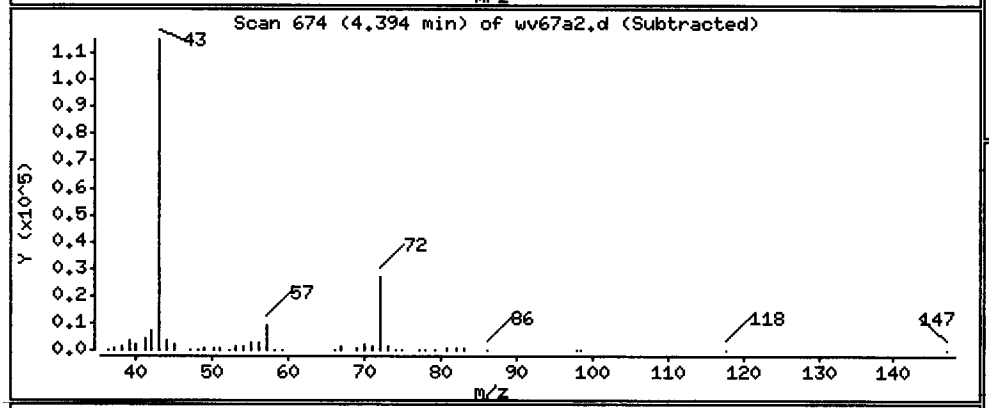
Column diameter: 0.18

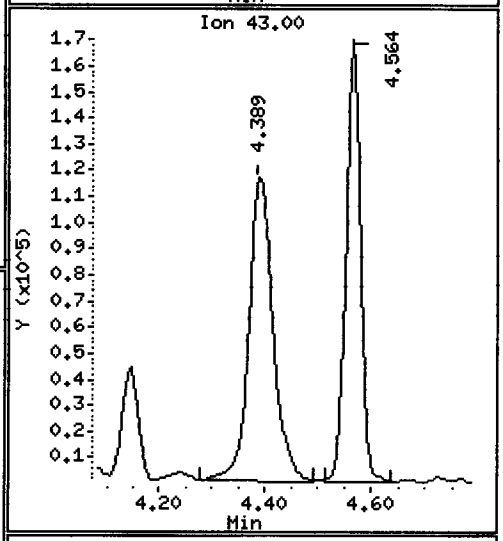
29 2-Butanone

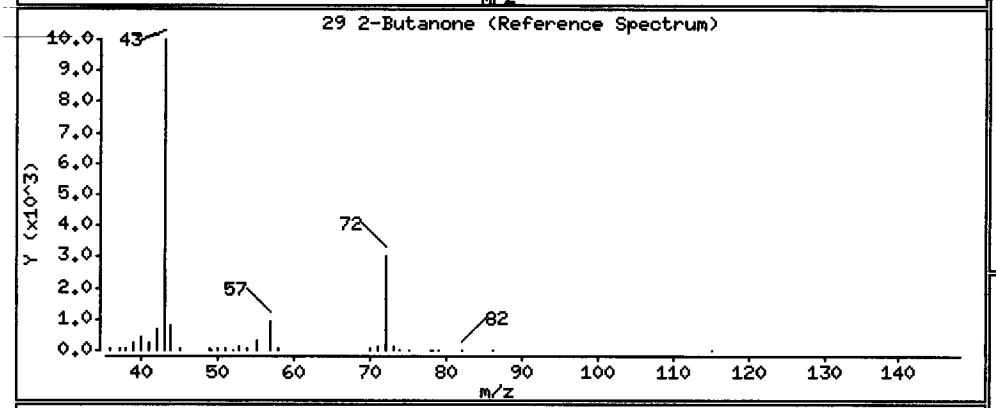
Concentration: 30.335 ug/Kg

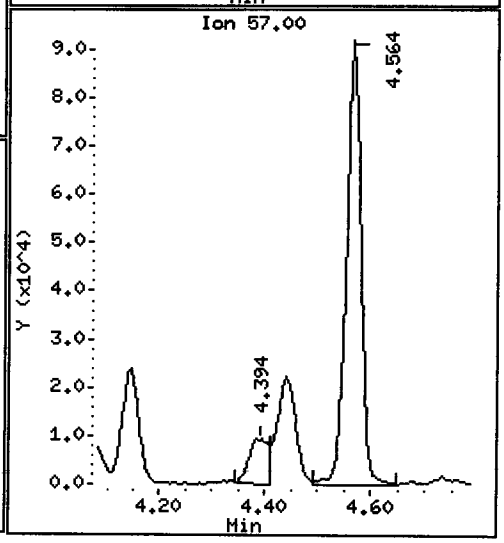


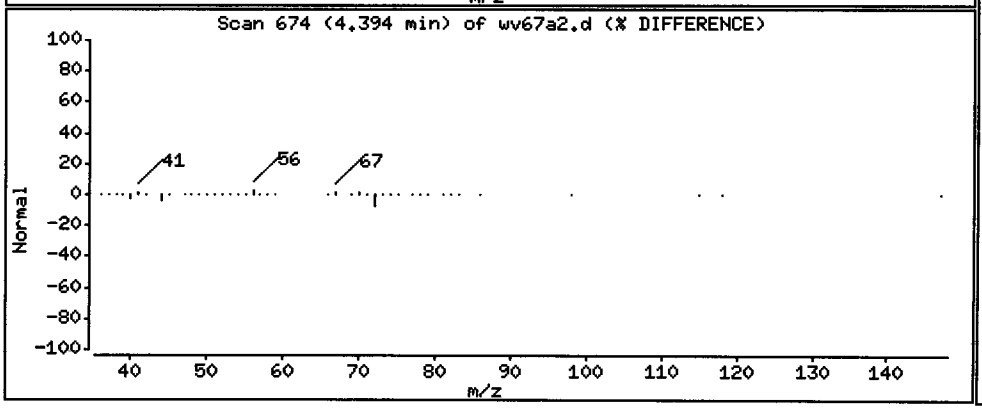












Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d

Date : 28-JUN-2013 04:03

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,8.38,0

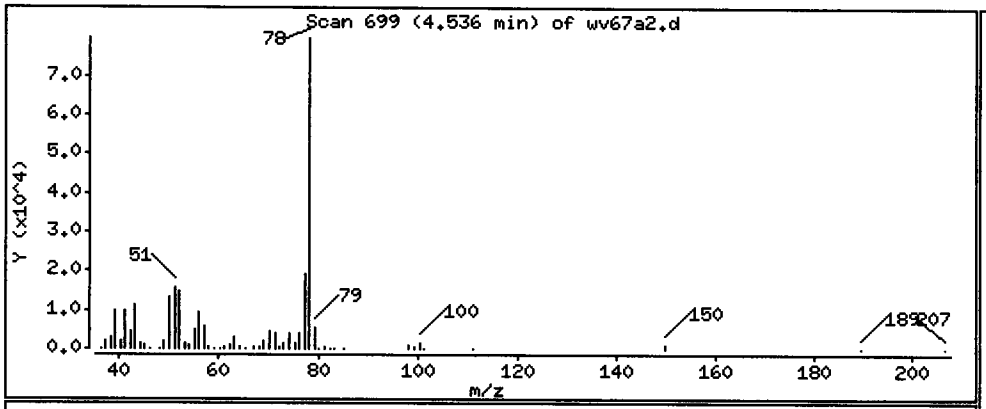
Operator: PB

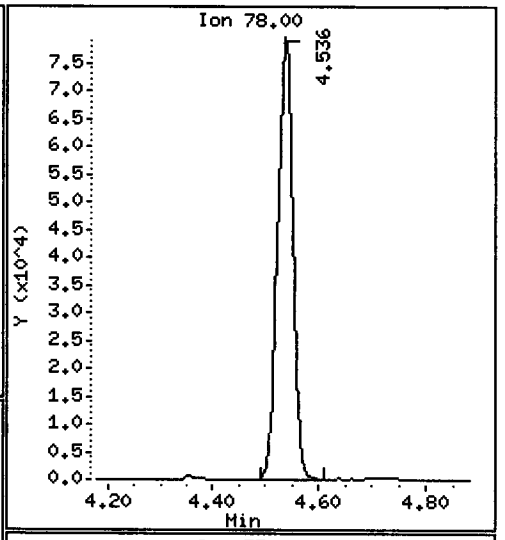
Column phase: RTXVMS

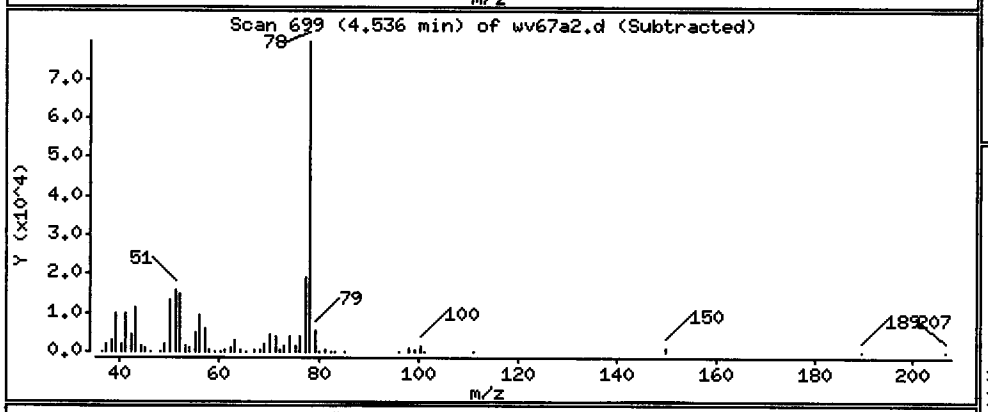
Column diameter: 0.18

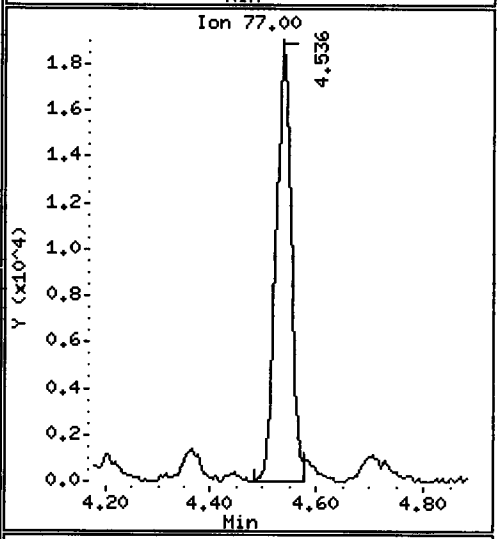
30 Benzene

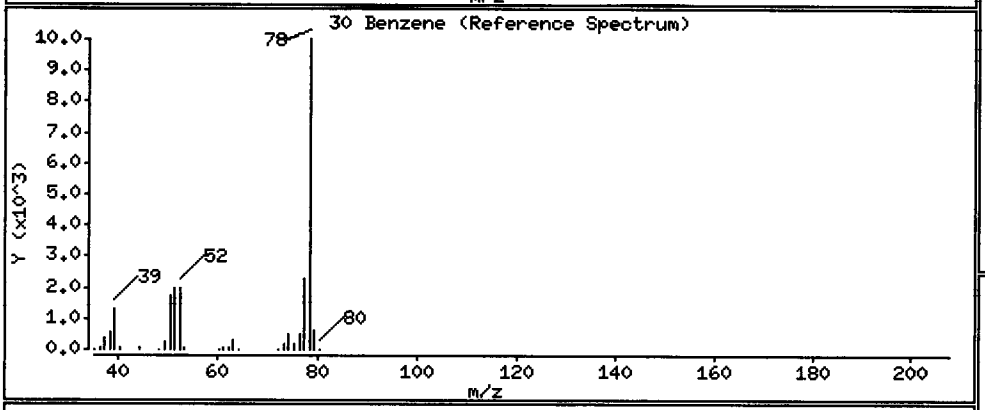
Concentration: 1.864 ug/Kg

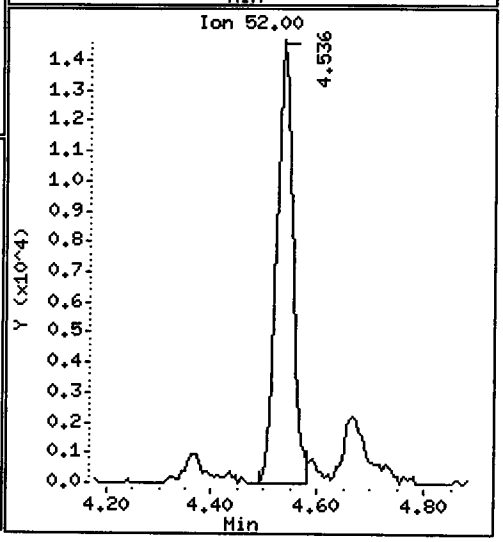


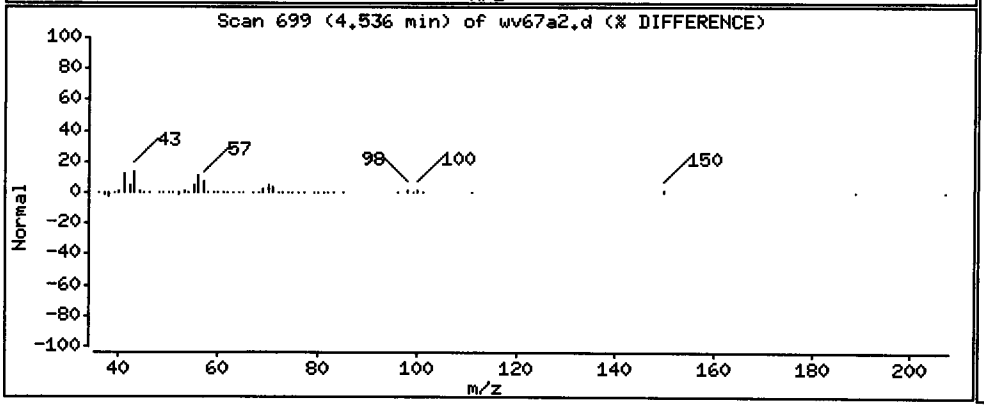












Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d

Date : 28-JUN-2013 04:03

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,8.38,0

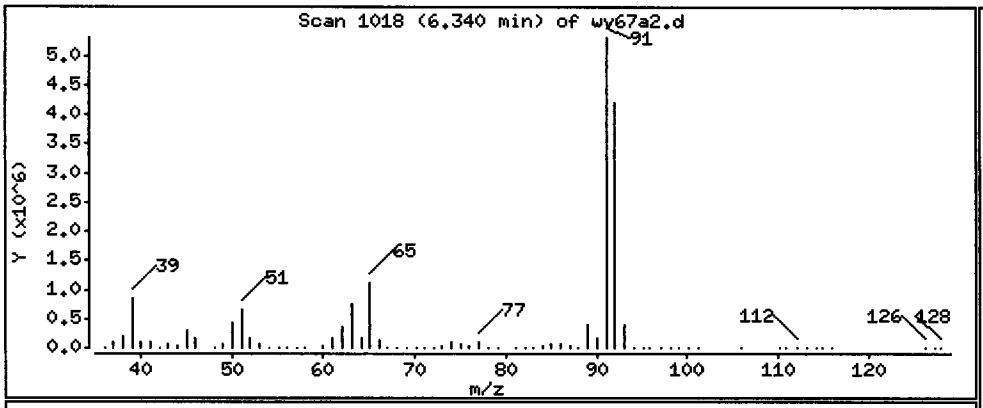
Operator: PB

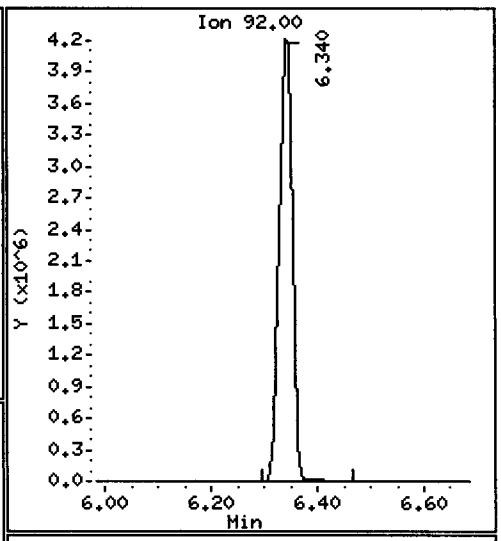
Column phase: RTXVMS

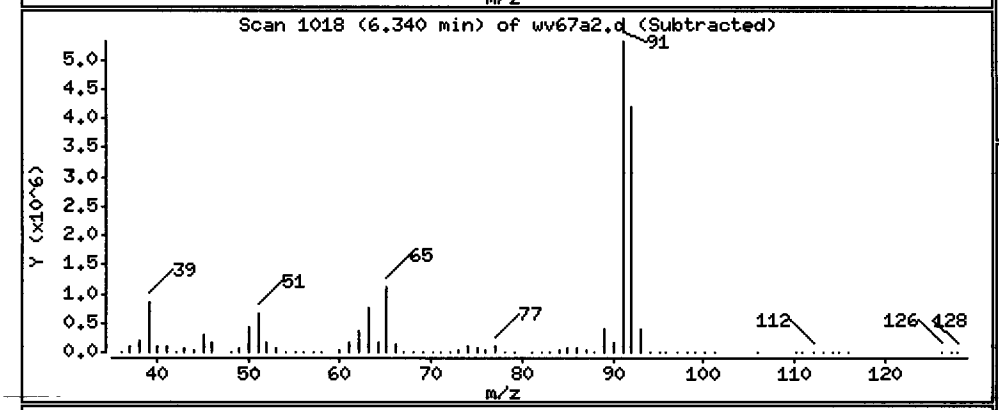
Column diameter: 0.18

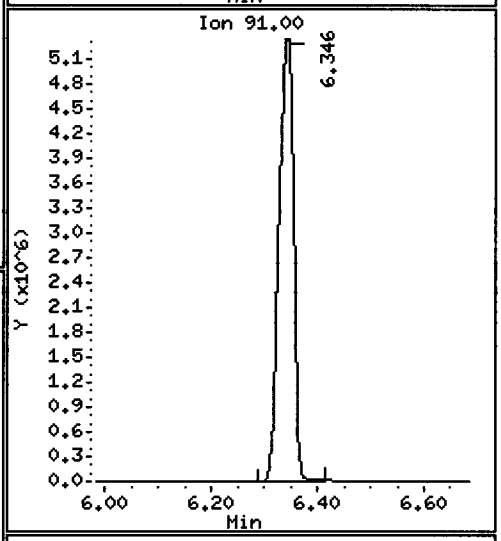
43 Toluene

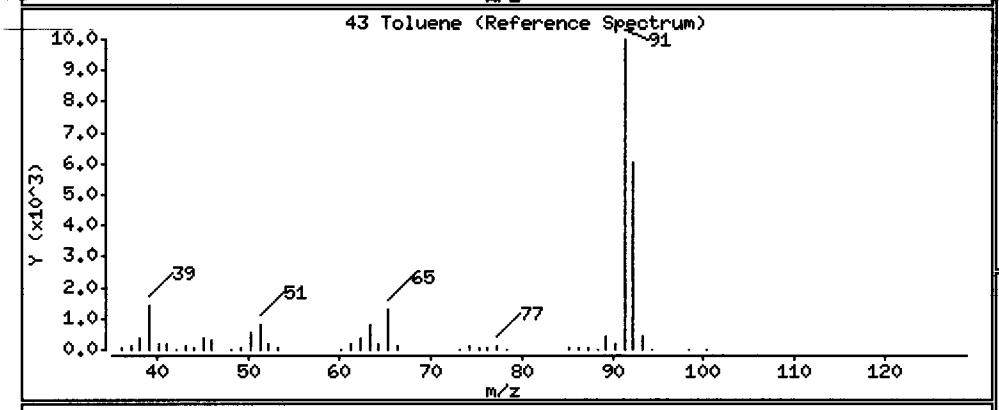
Concentration: 136.76 ug/Kg

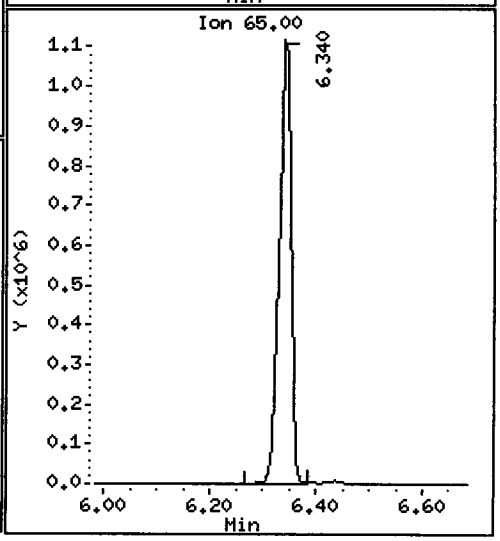


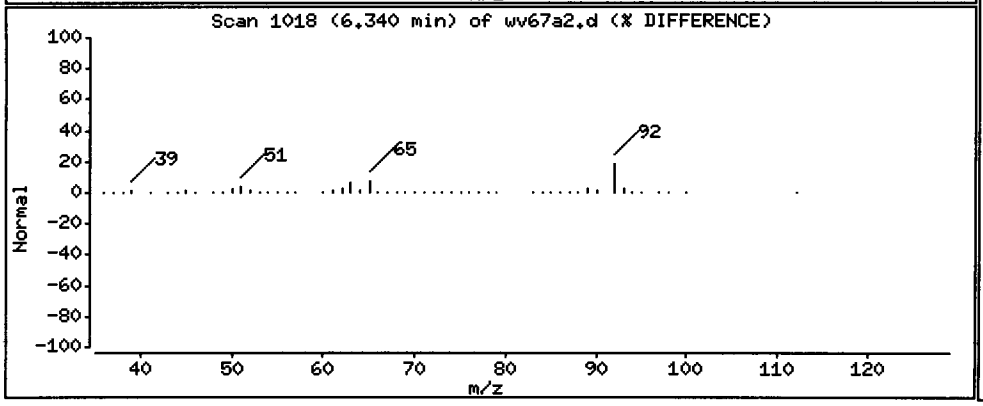












WV67 : 86435

Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d

Date : 28-JUN-2013 04:03

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,8.38,0

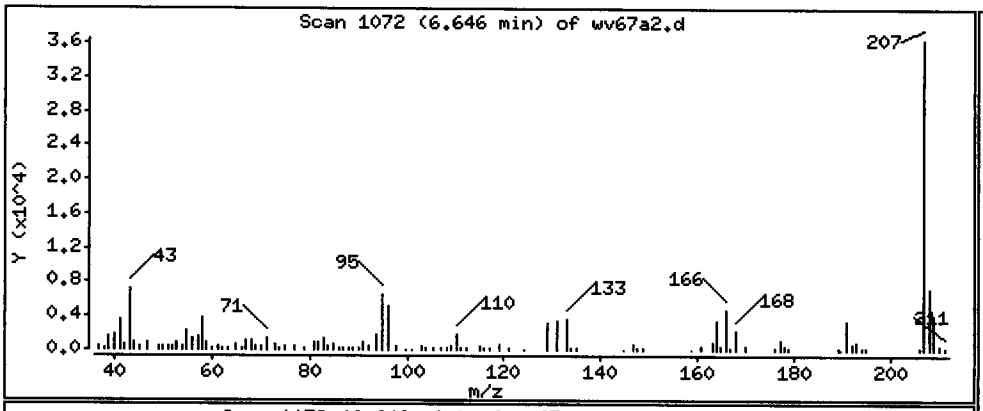
Operator: PB

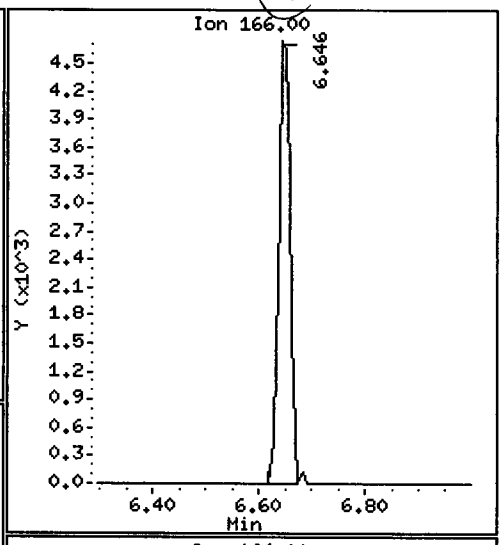
Column phase: RTXVMS

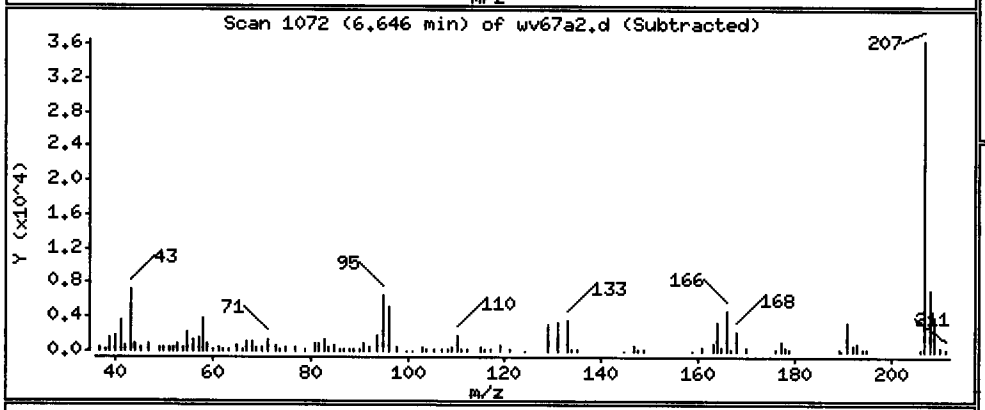
Column diameter: 0.18

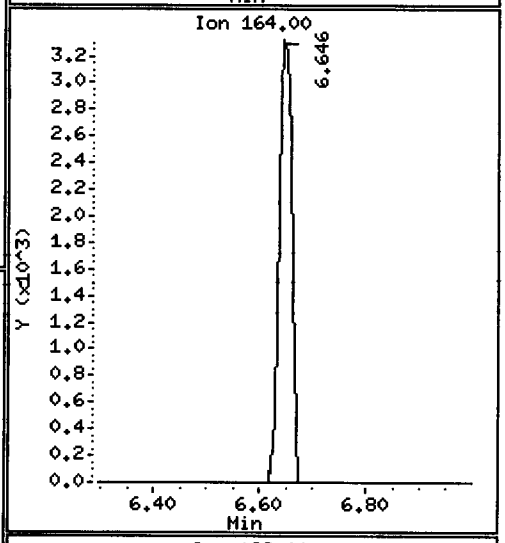
44 Tetrachloroethene

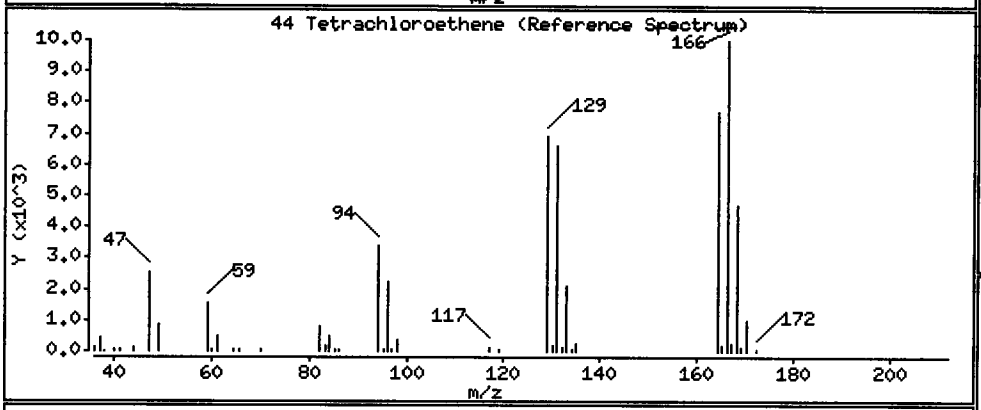
Concentration: 0.3530 ug/Kg

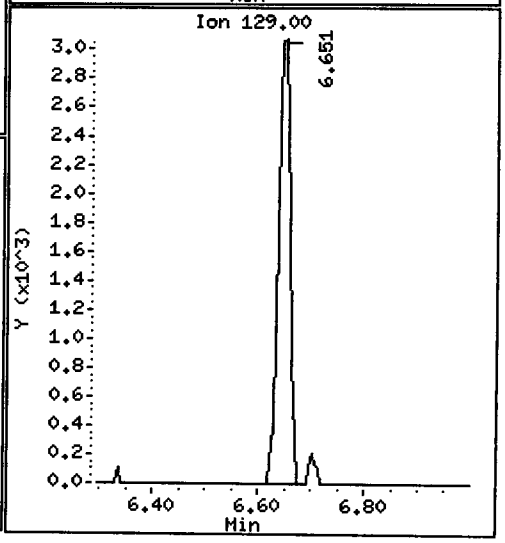


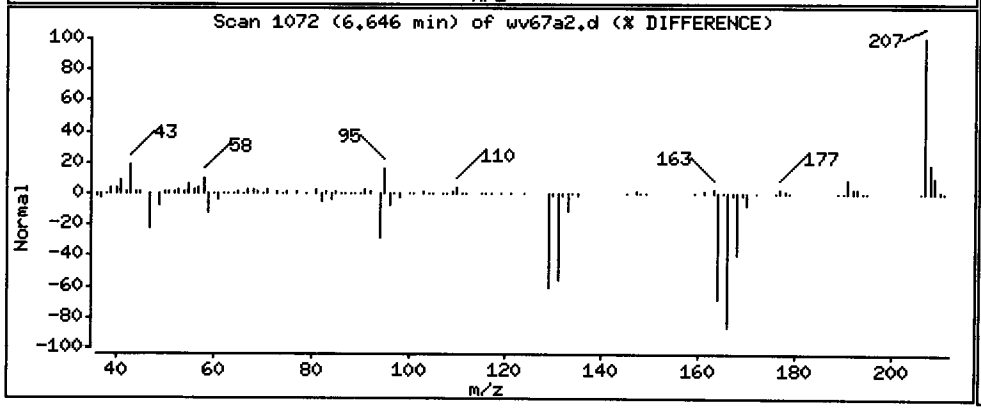












Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d

Date : 28-JUN-2013 04:03

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,8.38,0

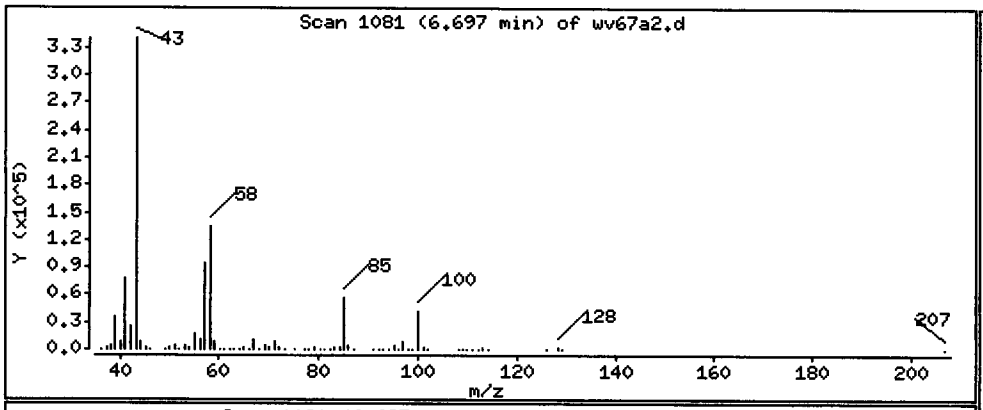
Operator: PB

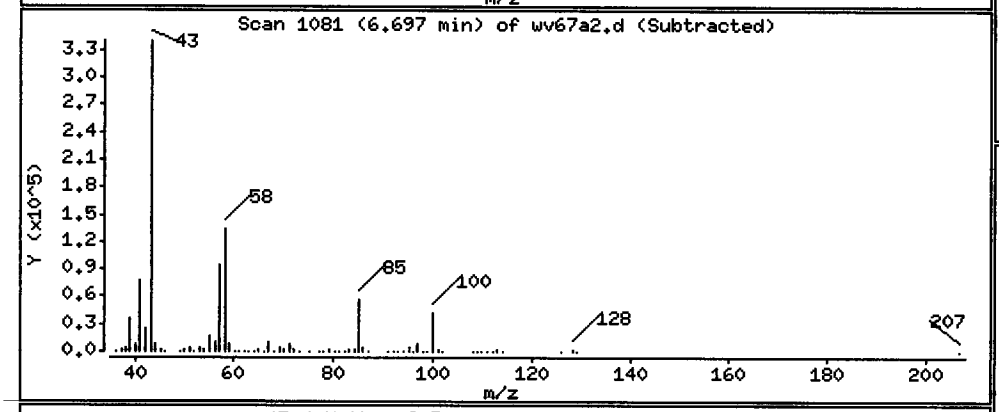
Column phase: RTXVMS

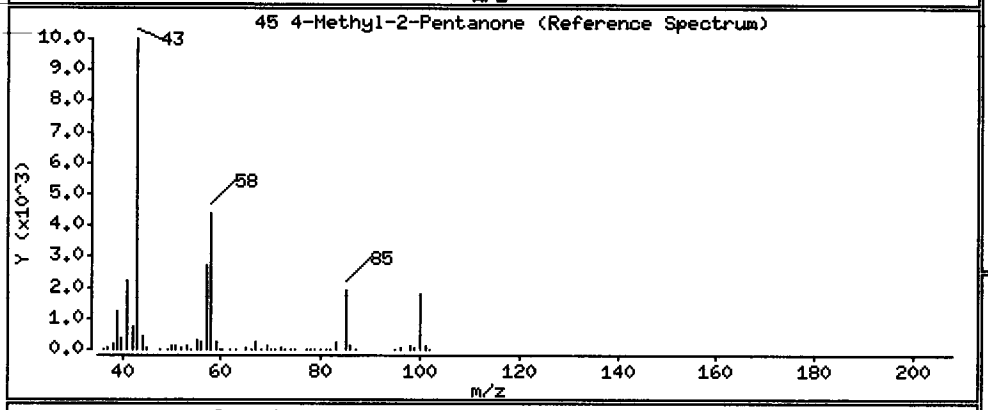
Column diameter: 0.18

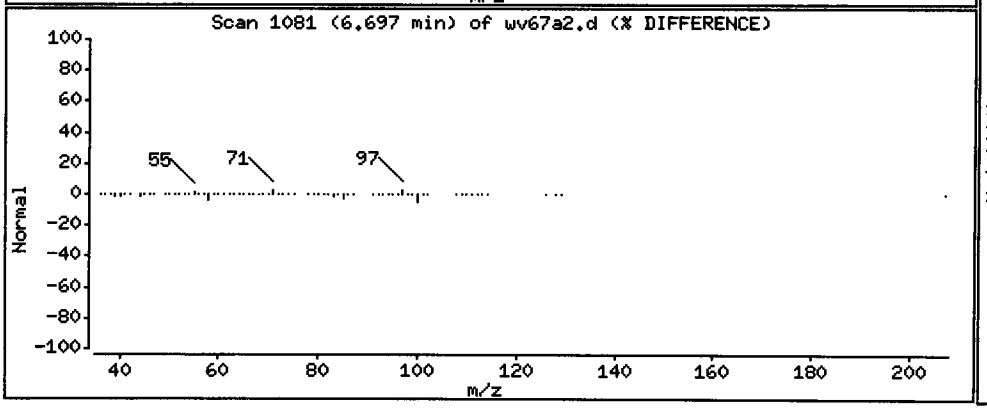
45 4-Methyl-2-Pentanone

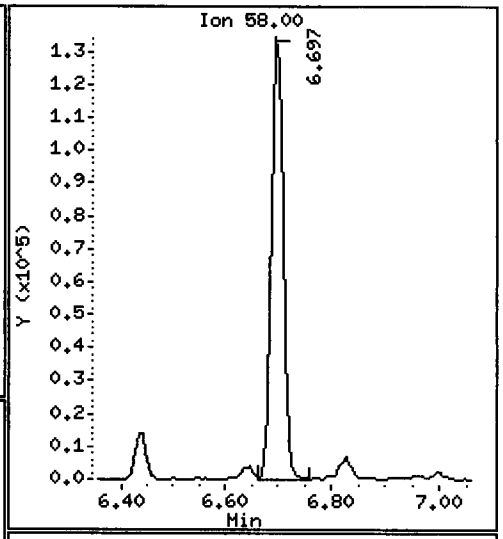
Concentration: 20.110 ug/Kg

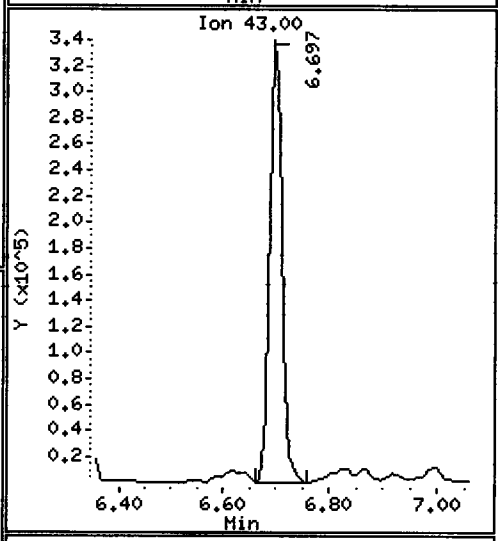


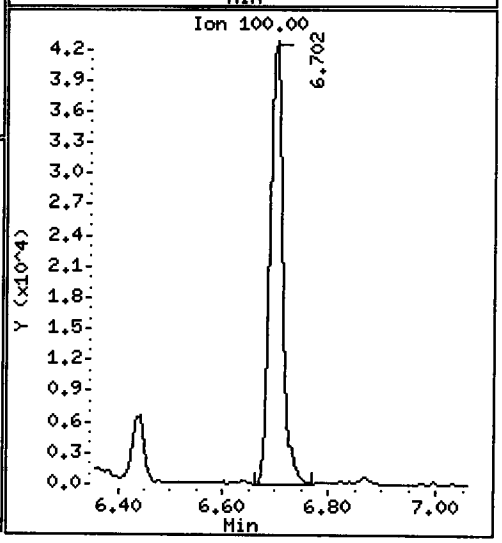












Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d

Date : 28-JUN-2013 04:03

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,8.38,0

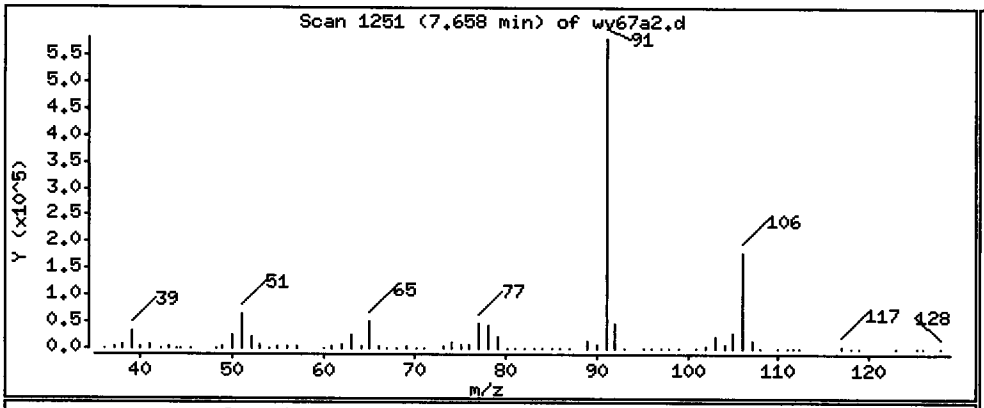
Operator: PB

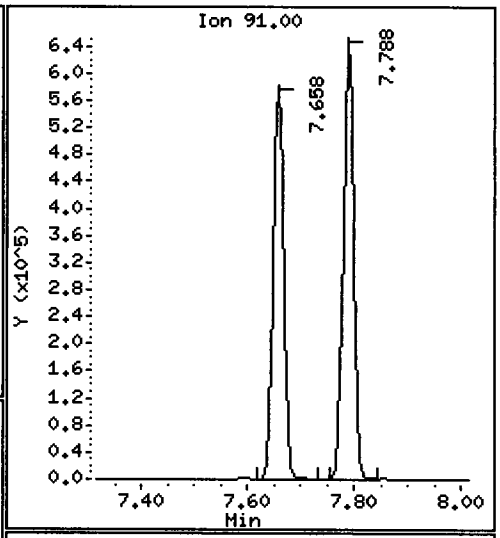
Column phase: RTXVMS

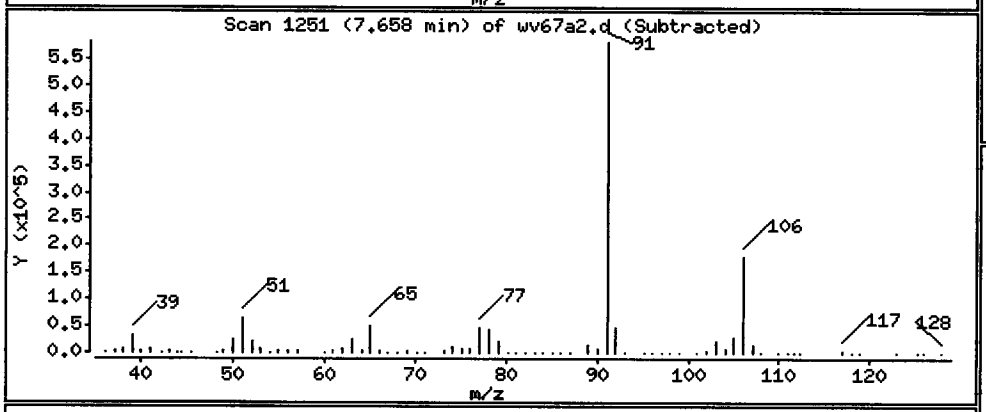
Column diameter: 0.18

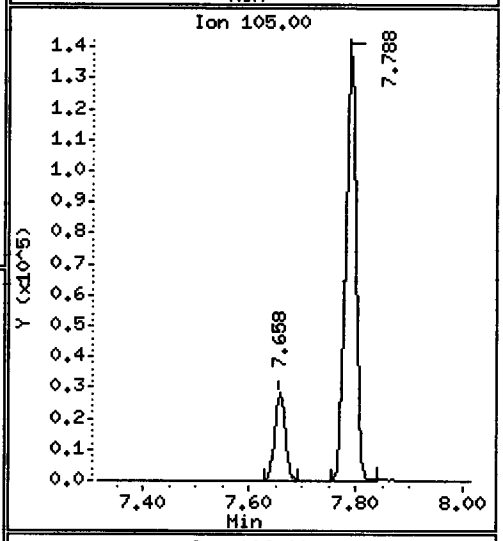
54 Ethyl Benzene

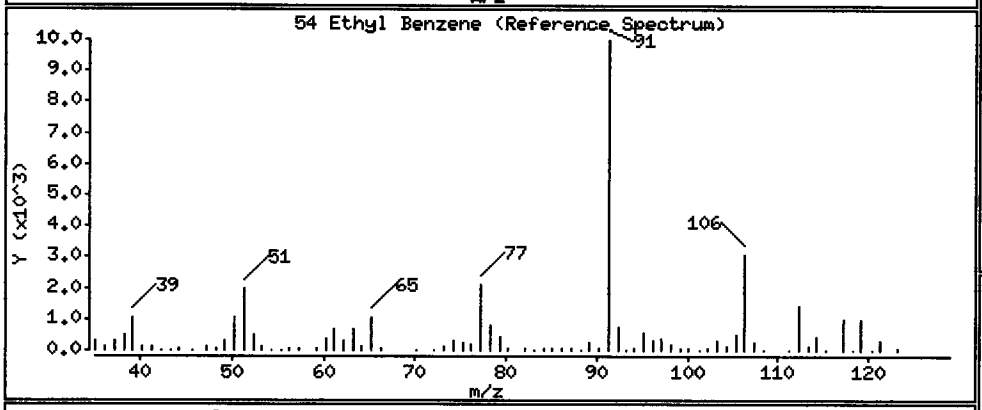
Concentration: 9.676 ug/Kg

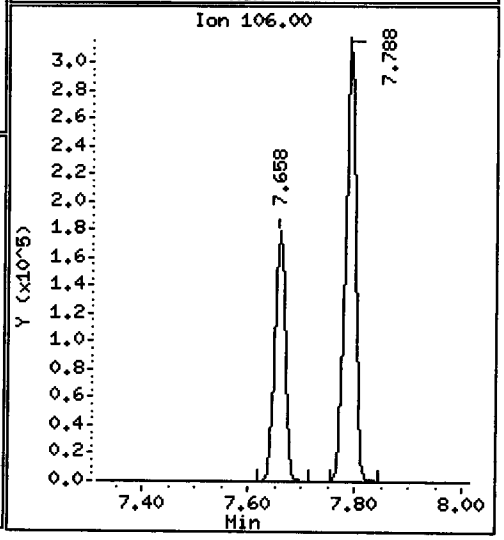


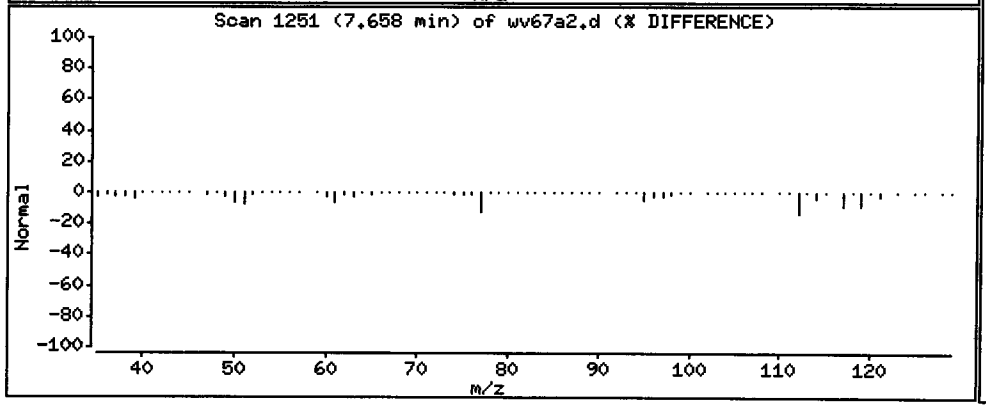












Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d

Date : 28-JUN-2013 04:03

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,8.38,0

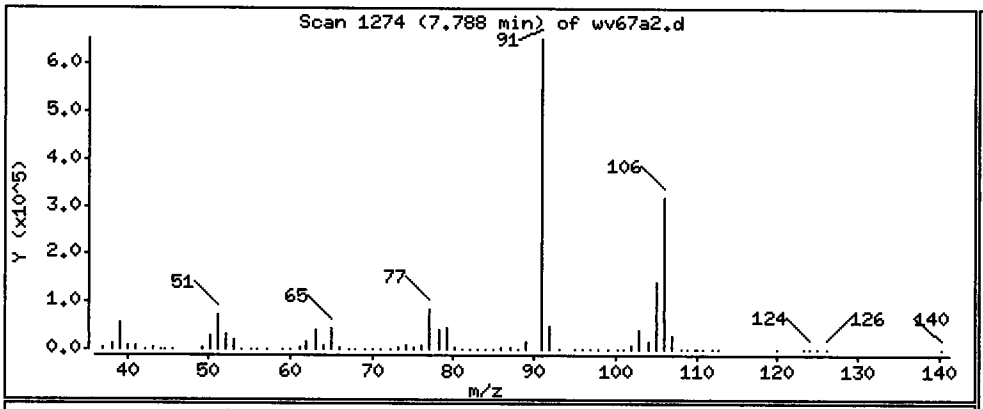
Operator: PB

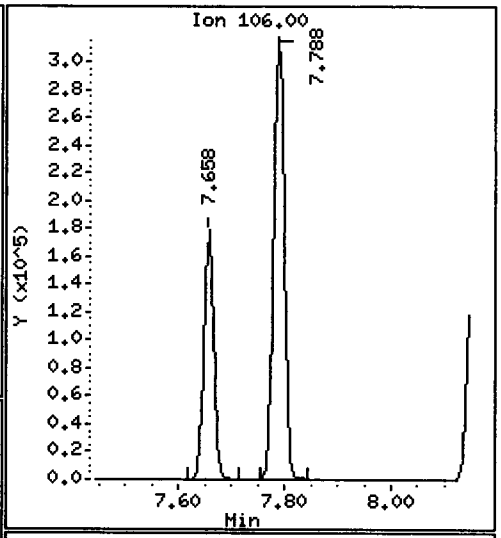
Column phase: RTXVMS

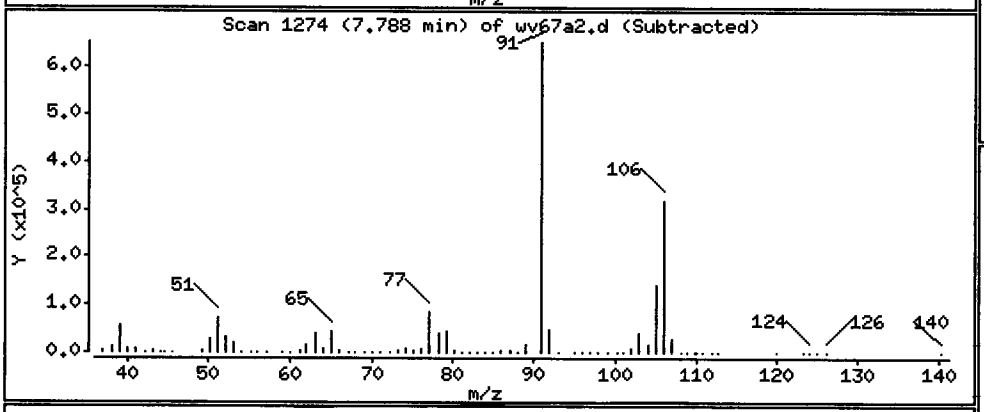
Column diameter: 0.18

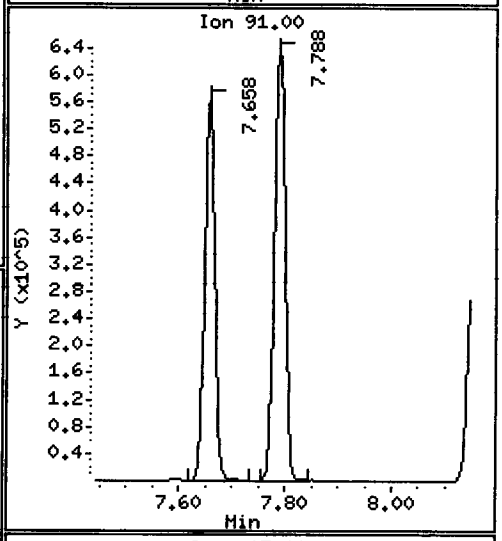
56 m,p-xylene

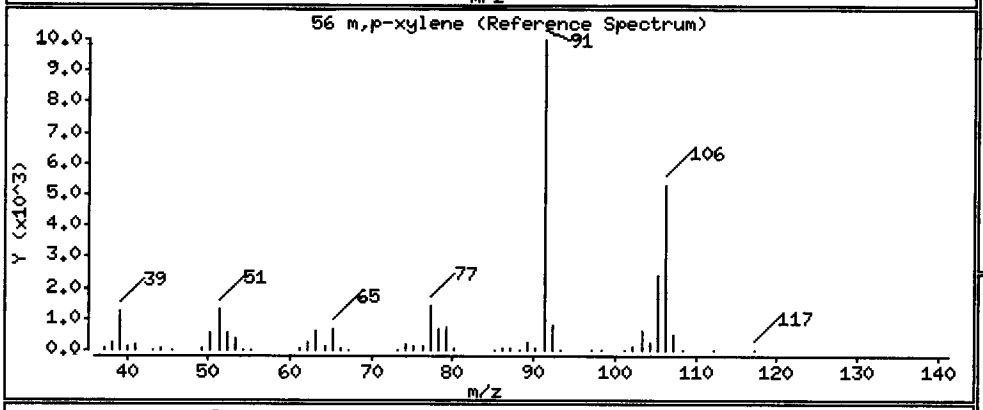
Concentration: 14.048 ug/Kg

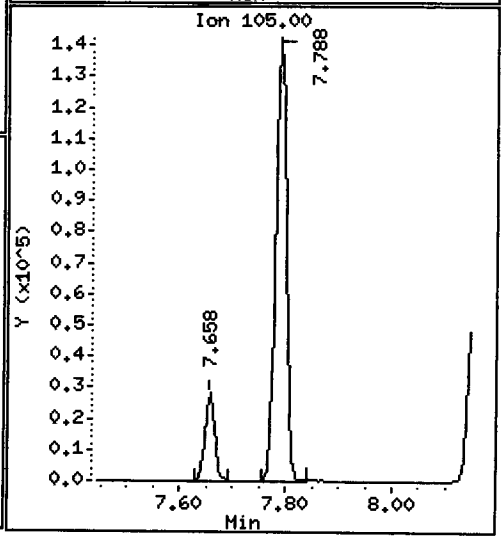


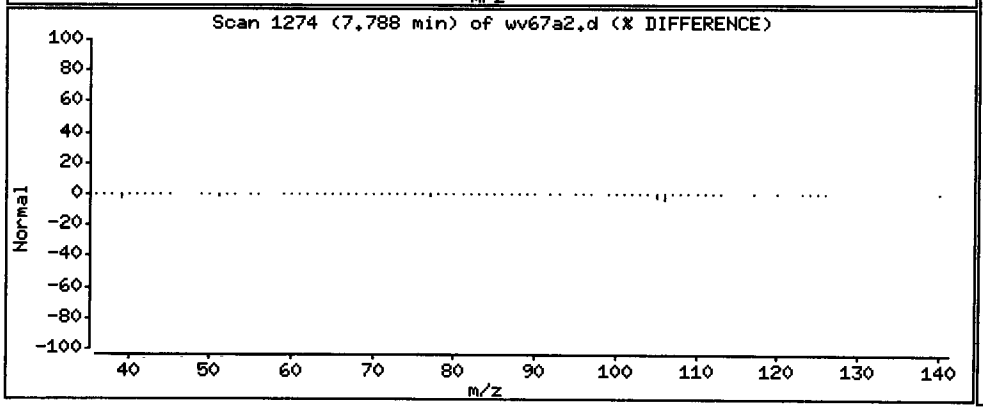












Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d

Date : 28-JUN-2013 04:03

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,8.38,0

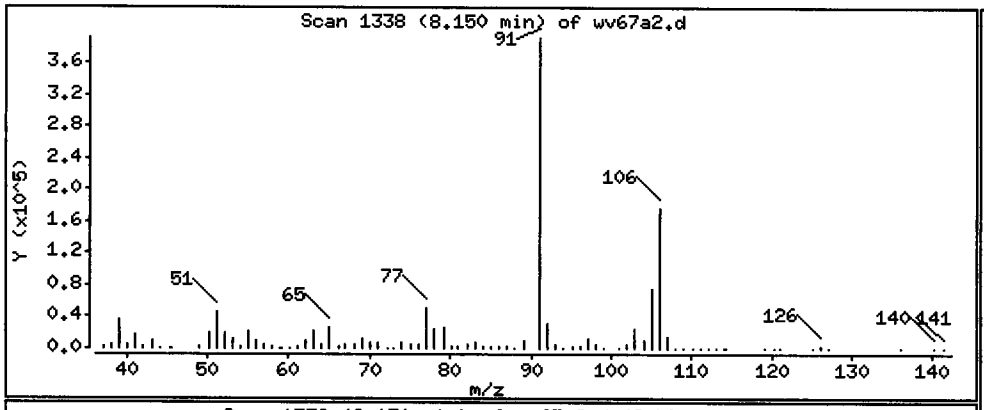
Operator: PB

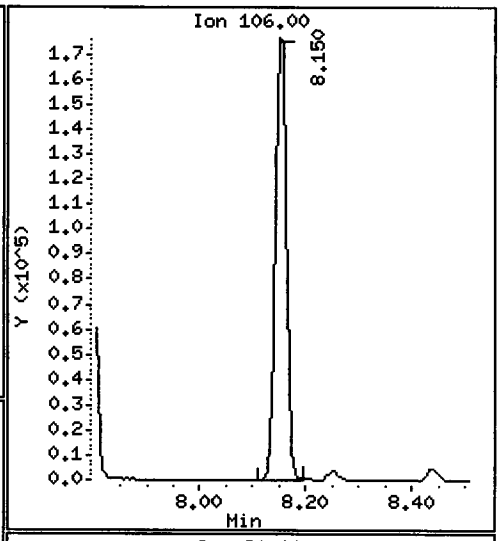
Column phase: RTXVMS

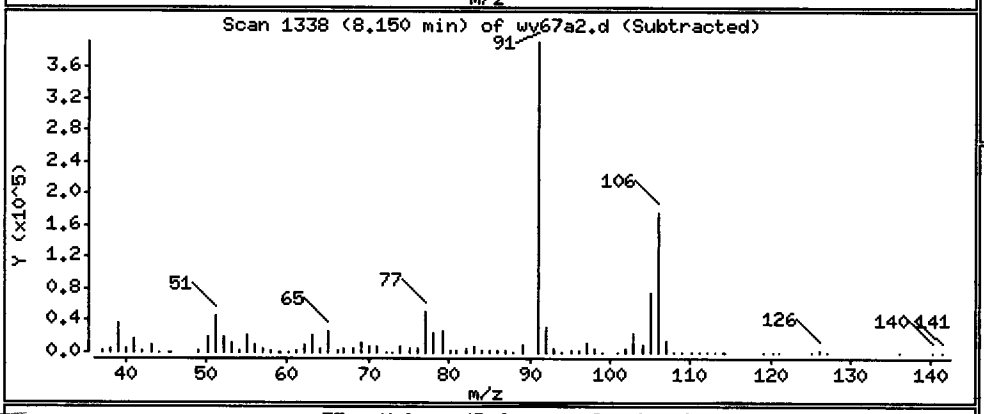
Column diameter: 0.18

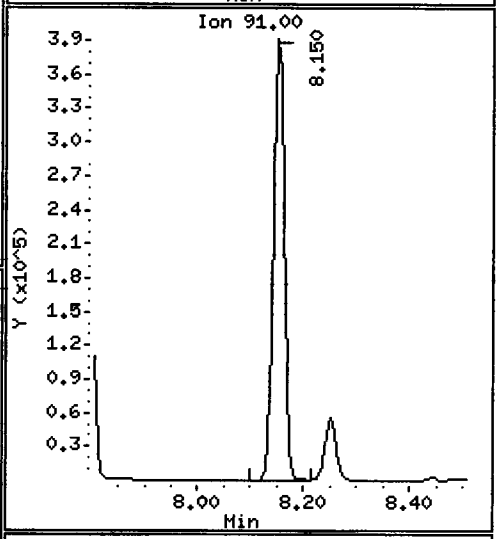
57 o-Xylene

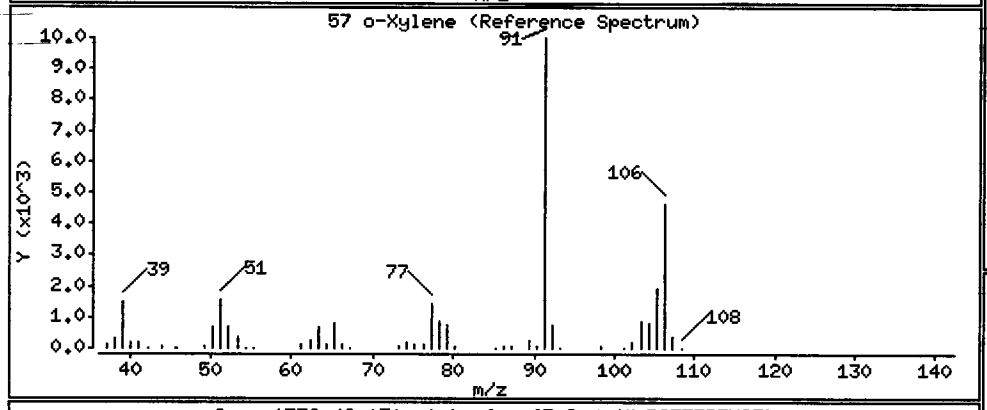
Concentration: 8.296 ug/Kg

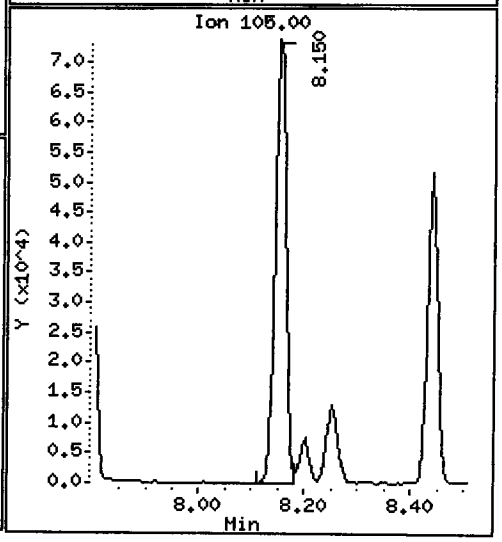


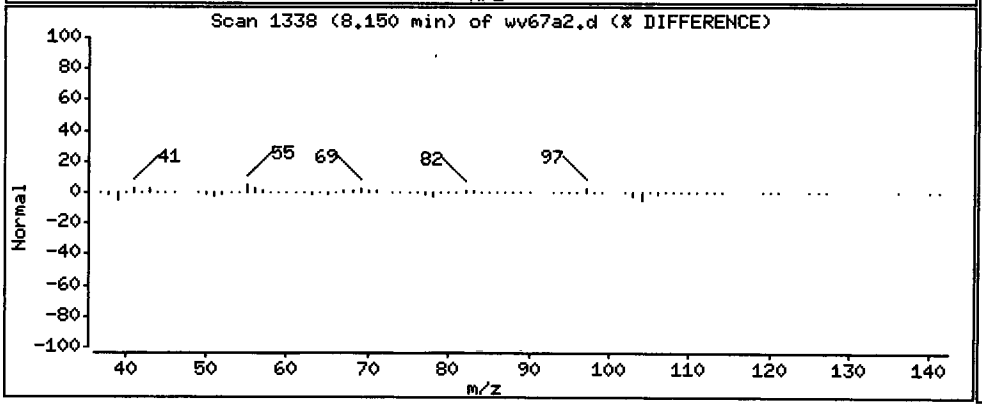












Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d

Date : 28-JUN-2013 04:03

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,8.38,0

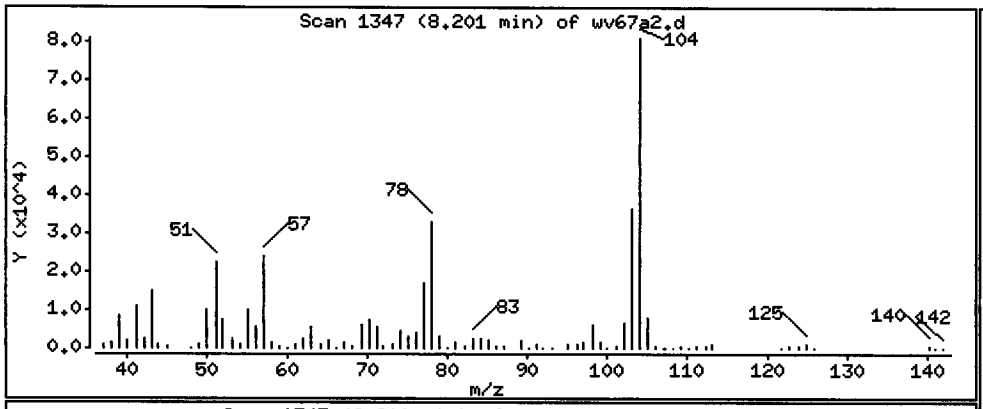
Operator: PB

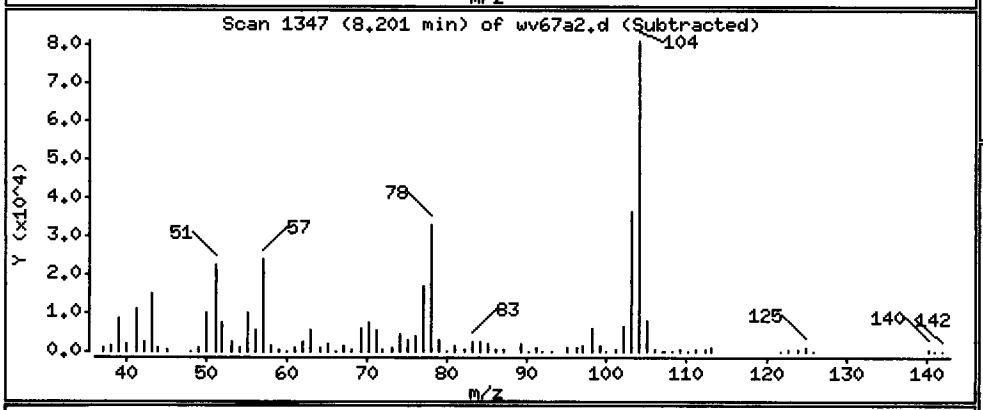
Column phase: RTXVMS

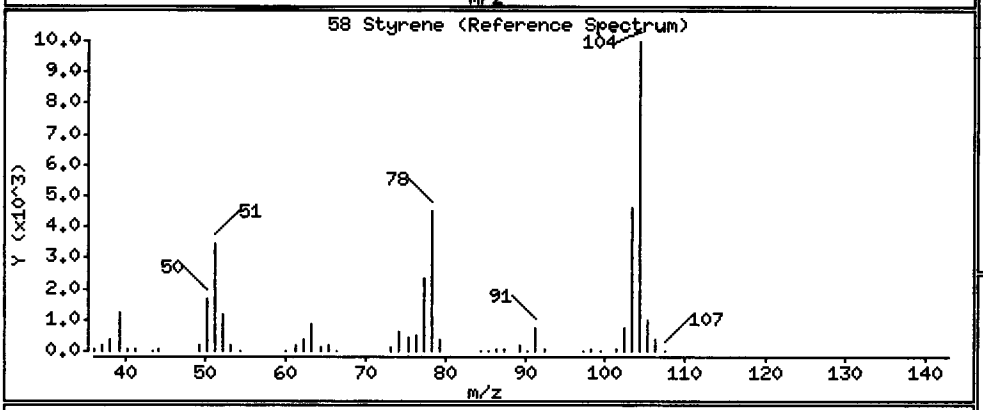
Column diameter: 0.18

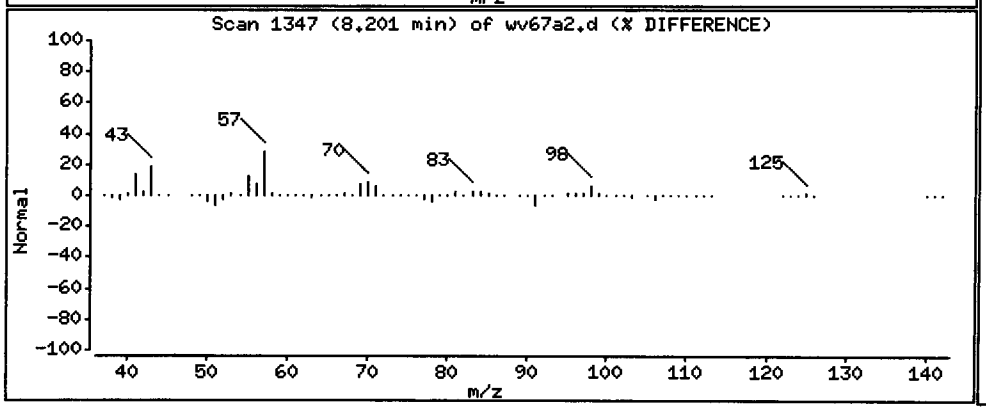
58 Styrene

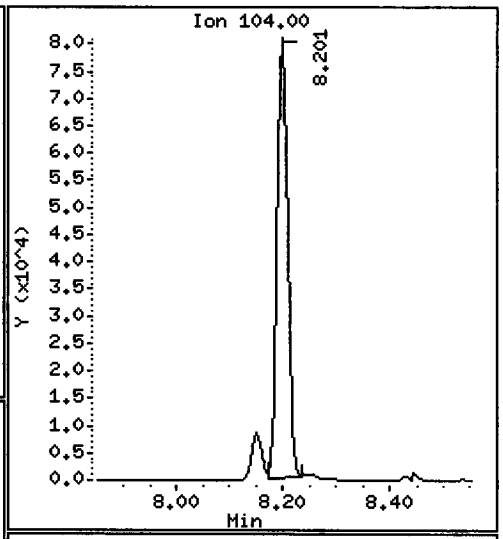
Concentration: 2.212 ug/Kg

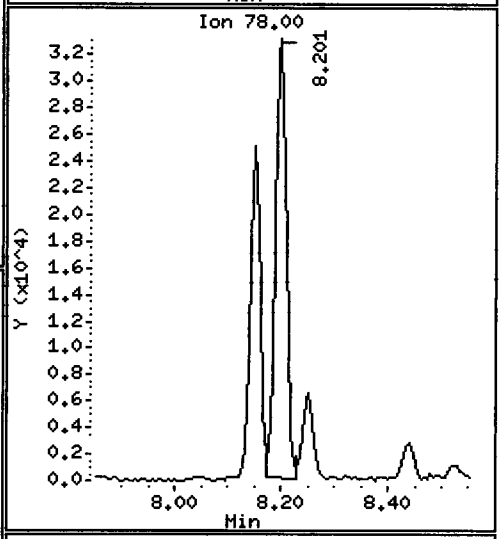


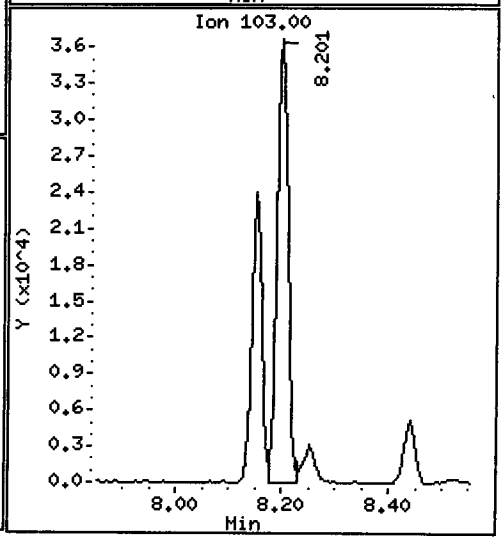












Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d

Date : 28-JUN-2013 04:03

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,8.38,0

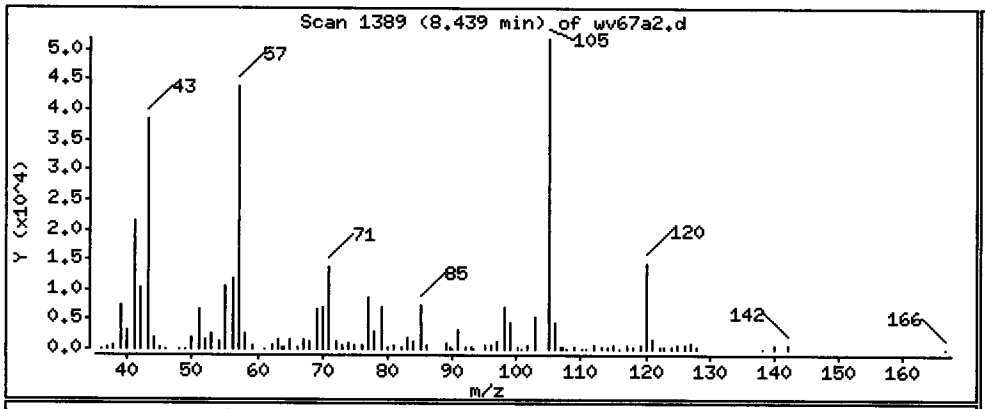
Operator: PB

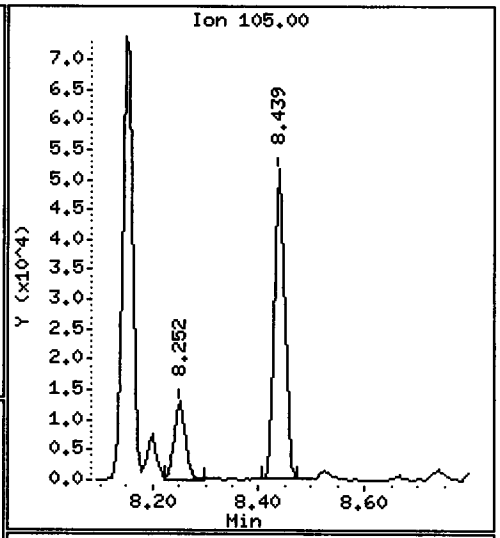
Column phase: RTXVMS

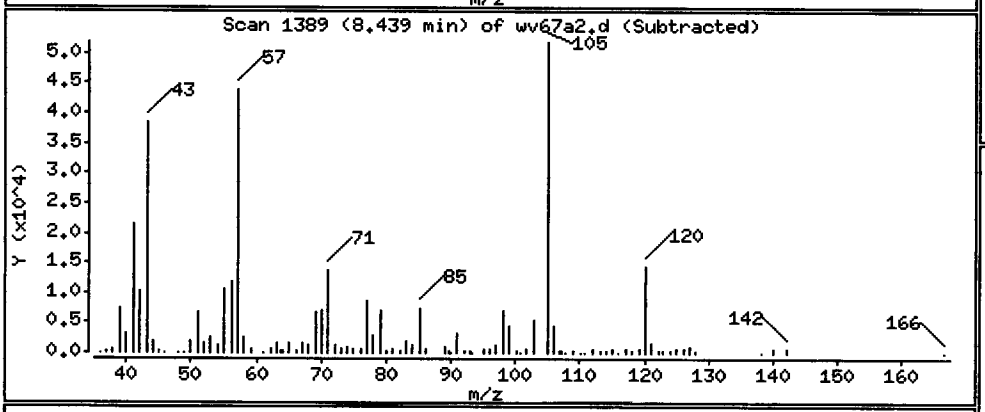
Column diameter: 0.18

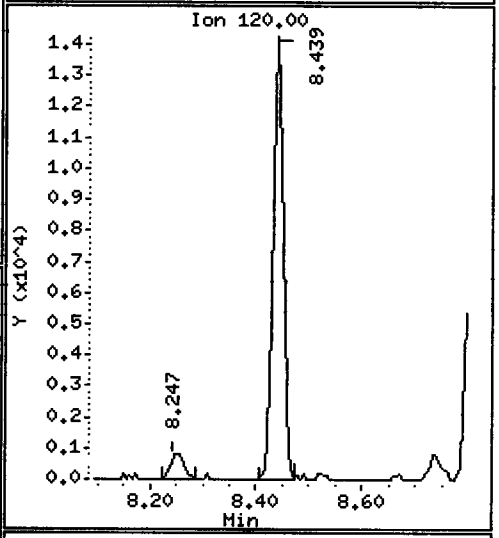
60 Isopropyl Benzene

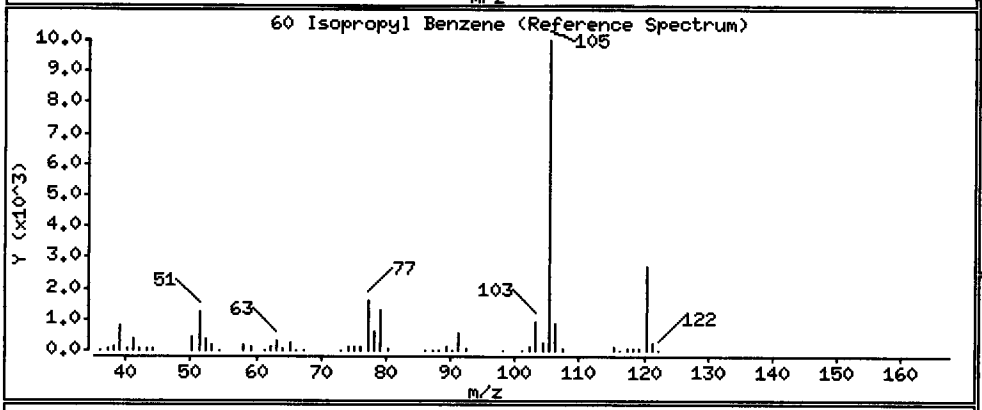
Concentration: 1.466 ug/Kg

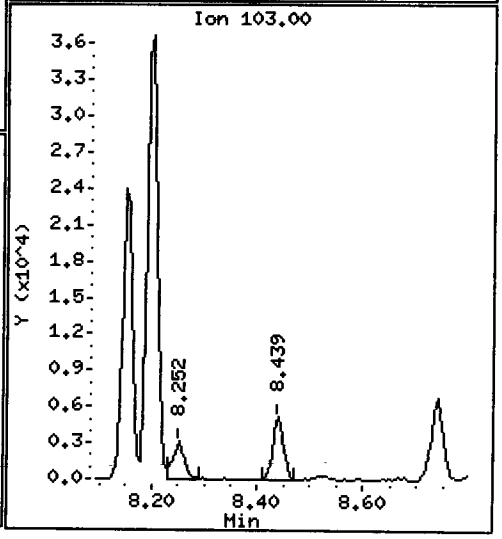


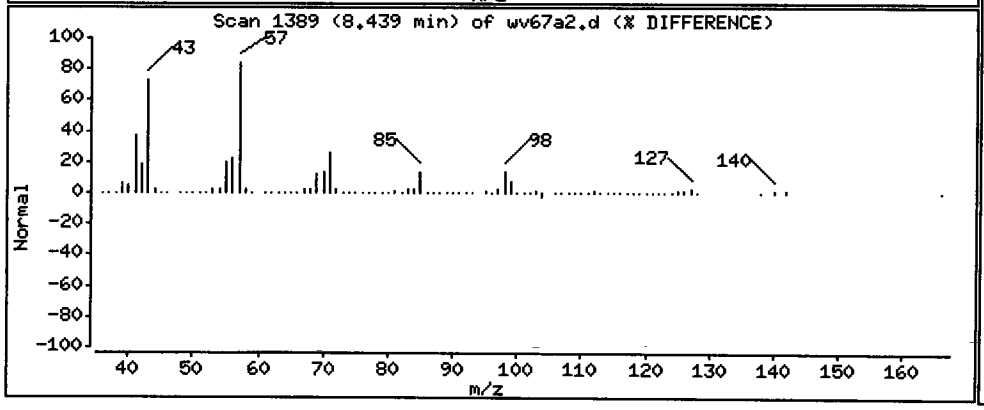












Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d

Date : 28-JUN-2013 04:03

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,8.38,0

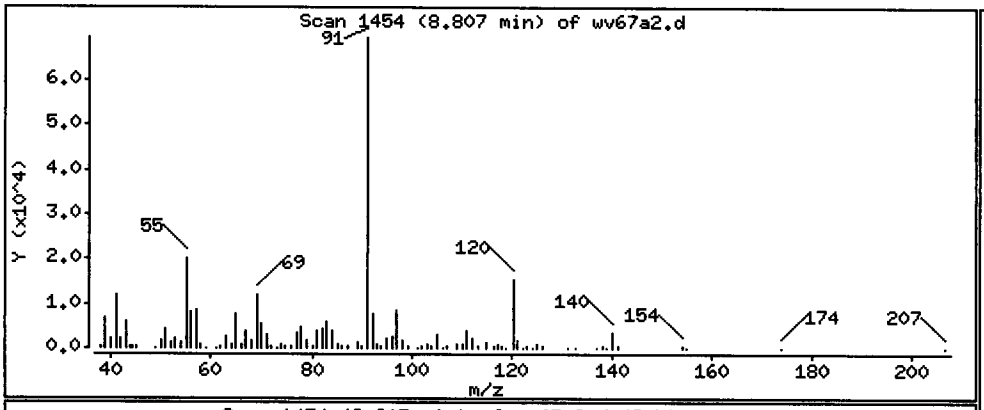
Operator: PB

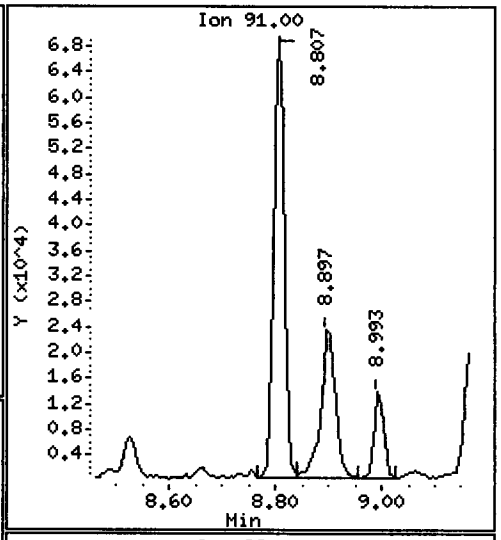
Column phase: RTXVMS

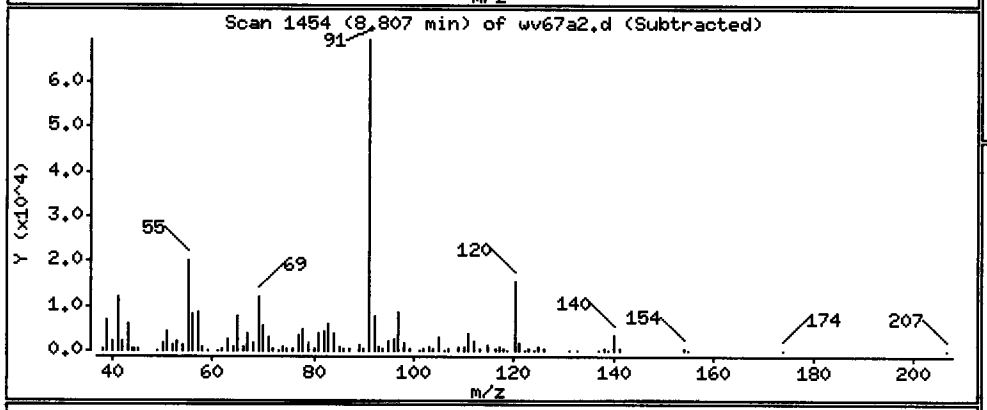
Column diameter: 0.18

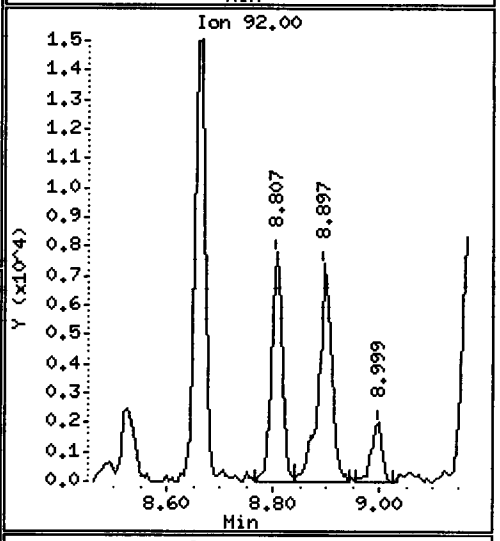
64 N-Propyl Benzene

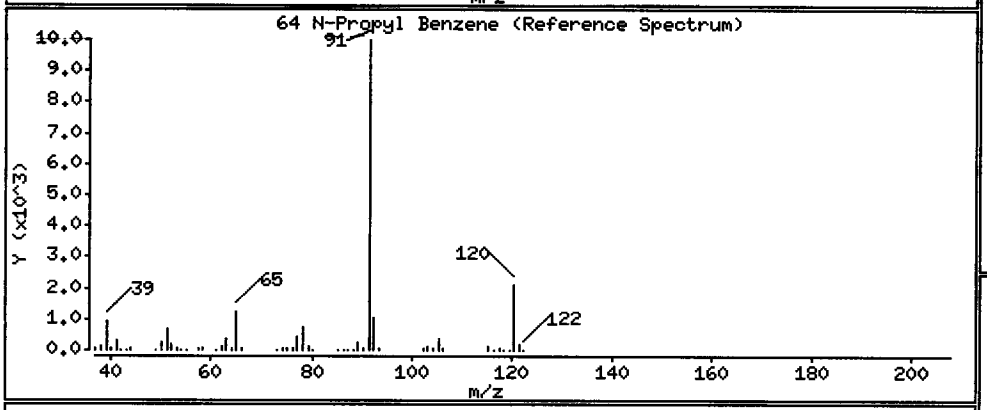
Concentration: 1.572 ug/Kg

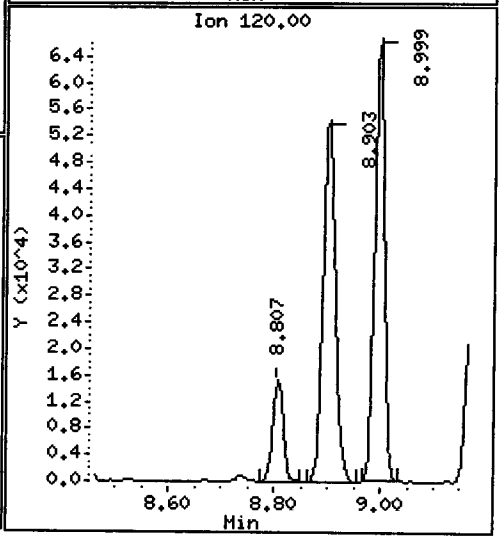


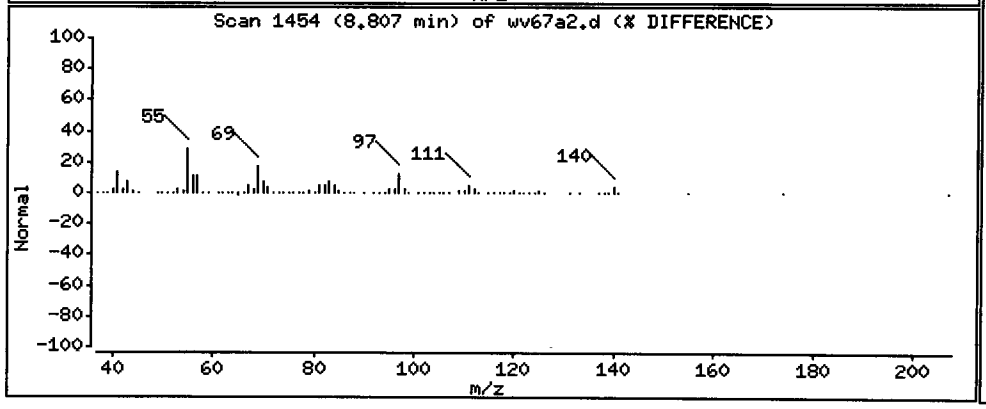












Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d

Date : 28-JUN-2013 04:03

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,8.38,0

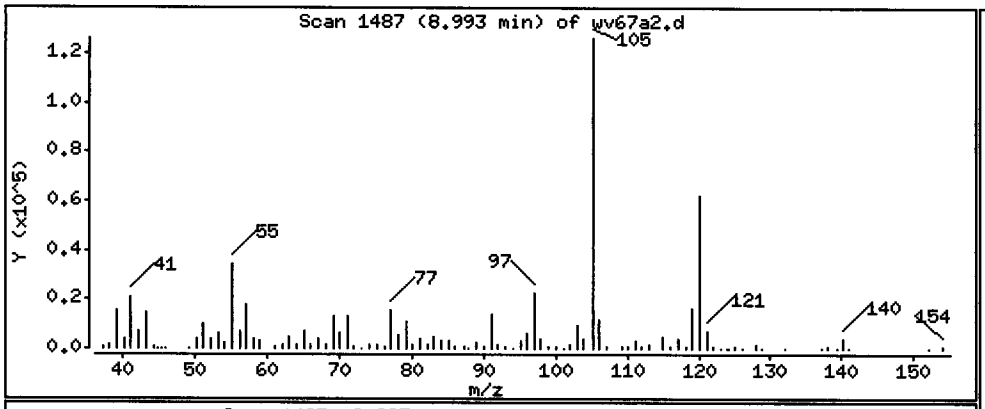
Operator: PB

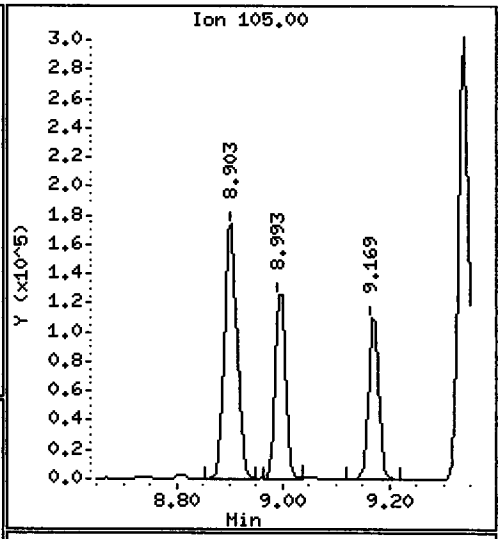
Column phase: RTXVMS

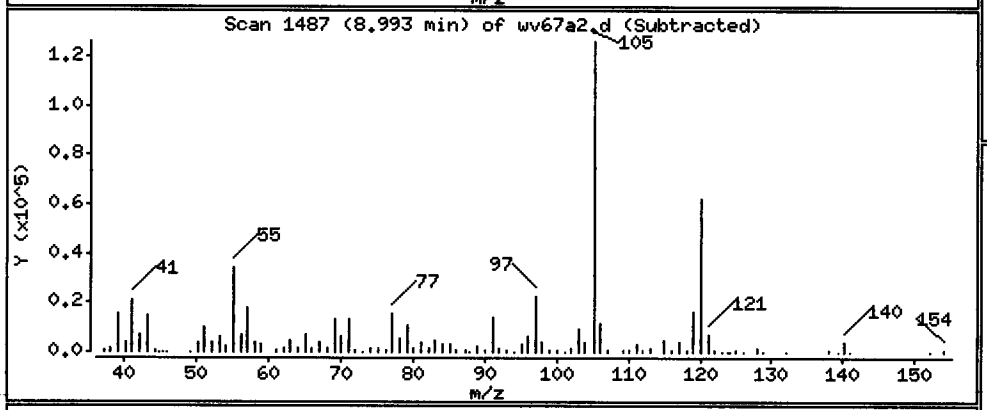
Column diameter: 0.18

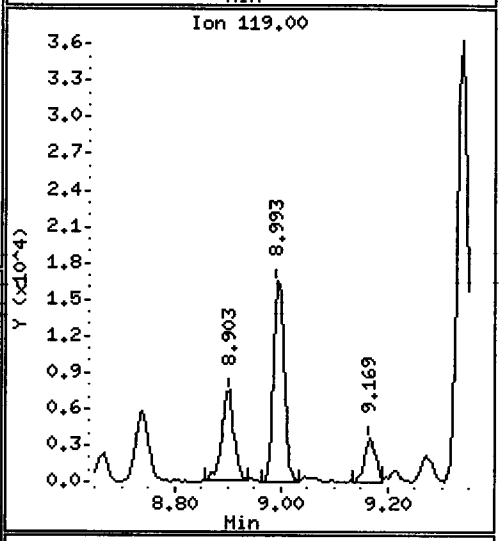
67 1,3,5-Trimethyl Benzene

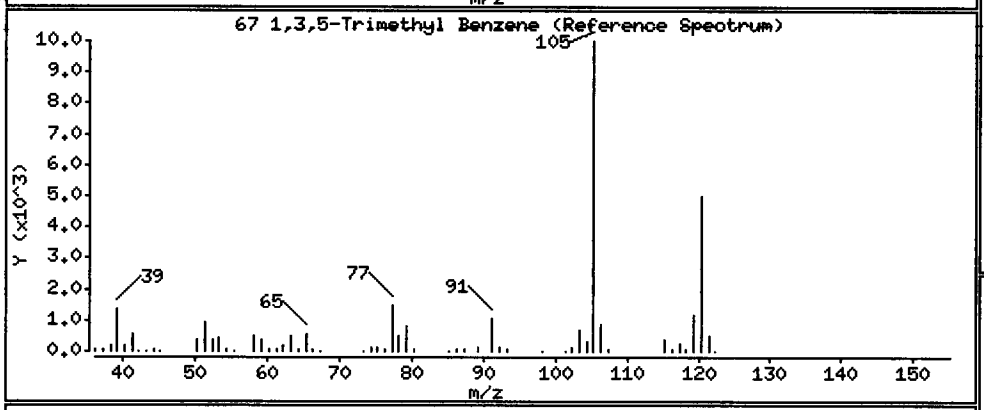
Concentration: 4.160 ug/Kg

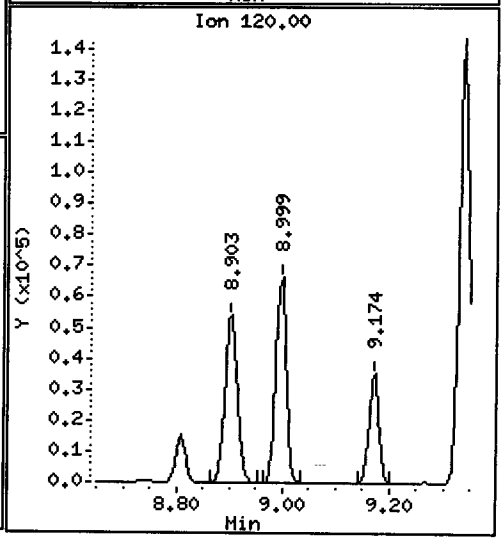


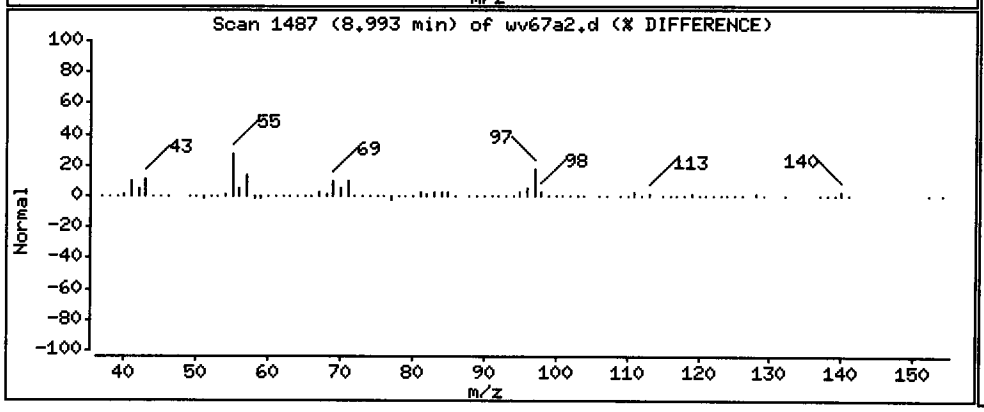












Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d

Date : 28-JUN-2013 04:03

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,8.38,0

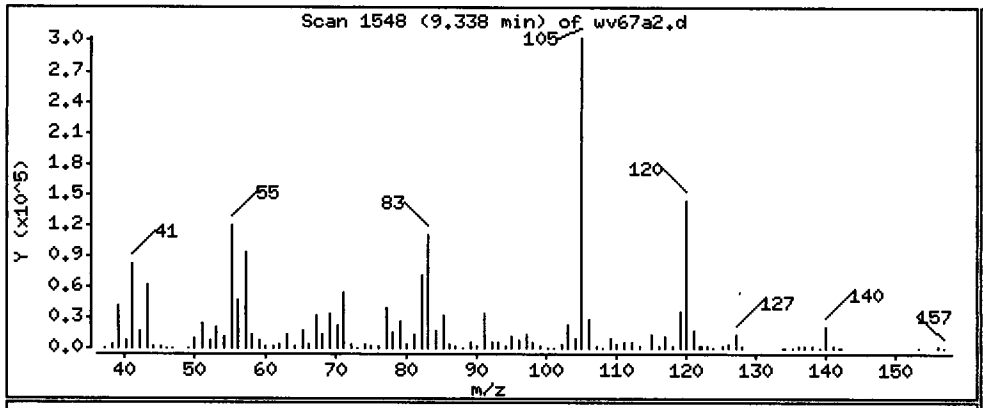
Operator: PB

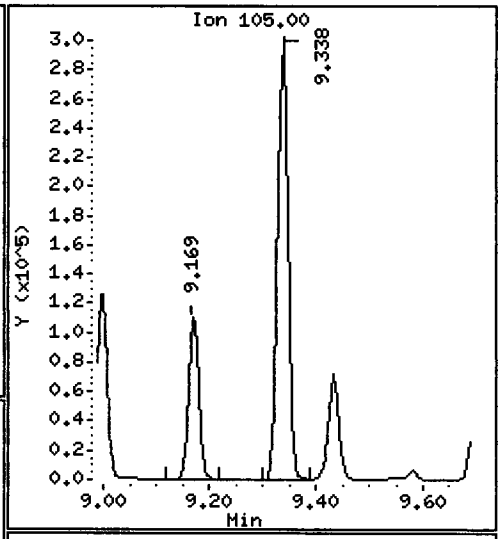
Column phase: RTXVMS

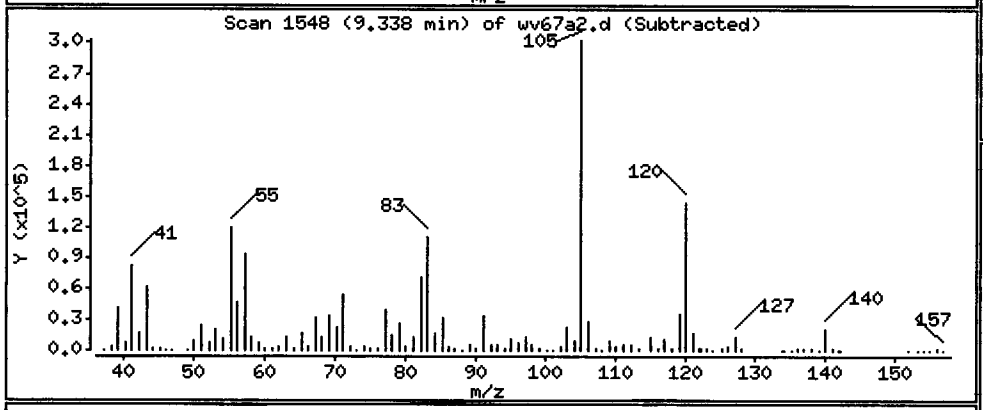
Column diameter: 0.18

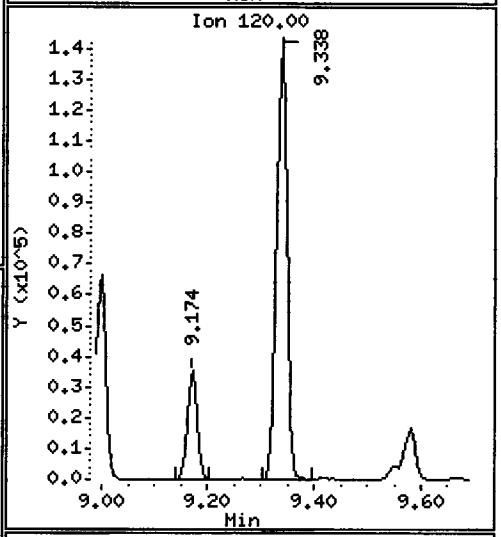
72 1,2,4-Trimethylbenzene

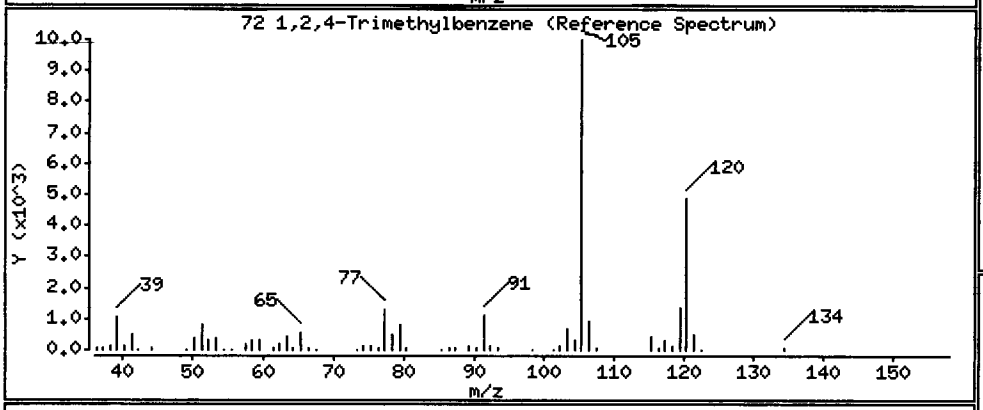
Concentration: 9.982 ug/Kg

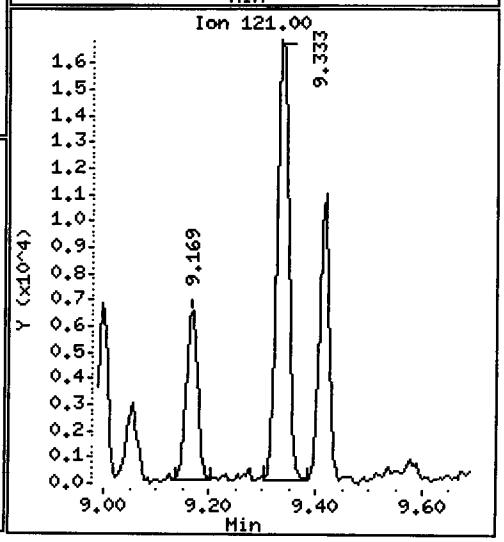


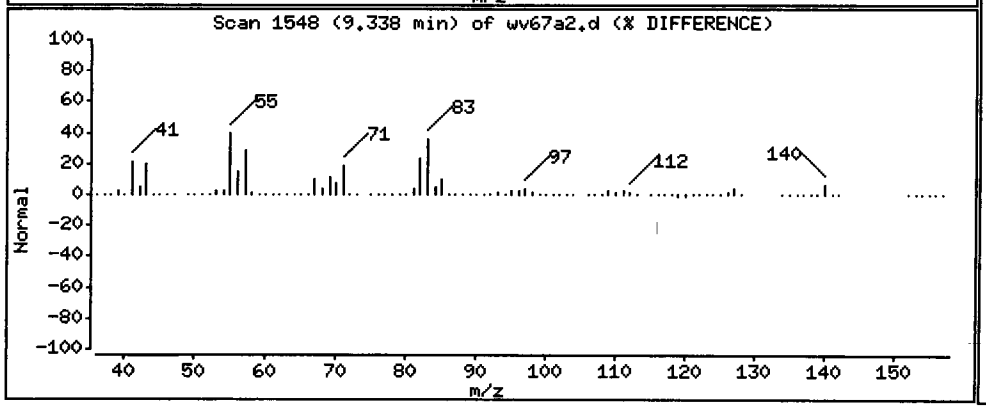












Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d

Date : 28-JUN-2013 04:03

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,8.38,0

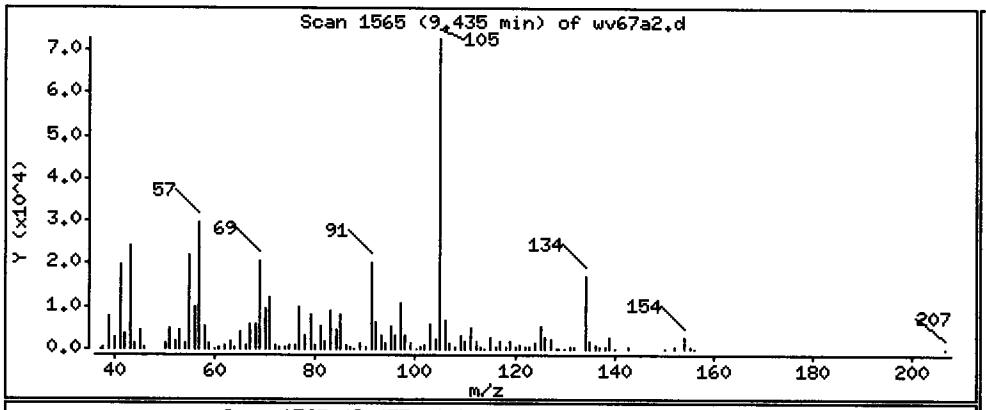
Operator: PB

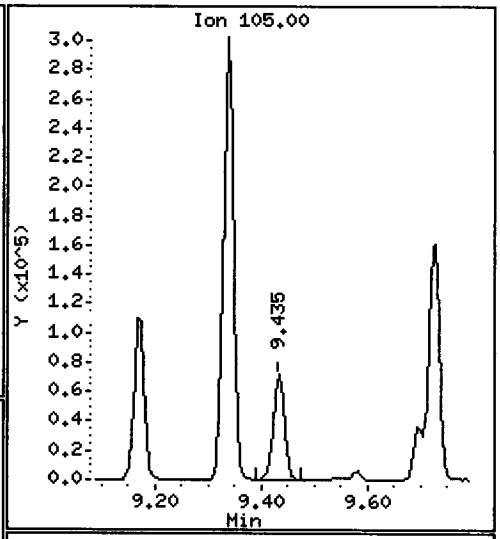
Column phase: RTXVMS

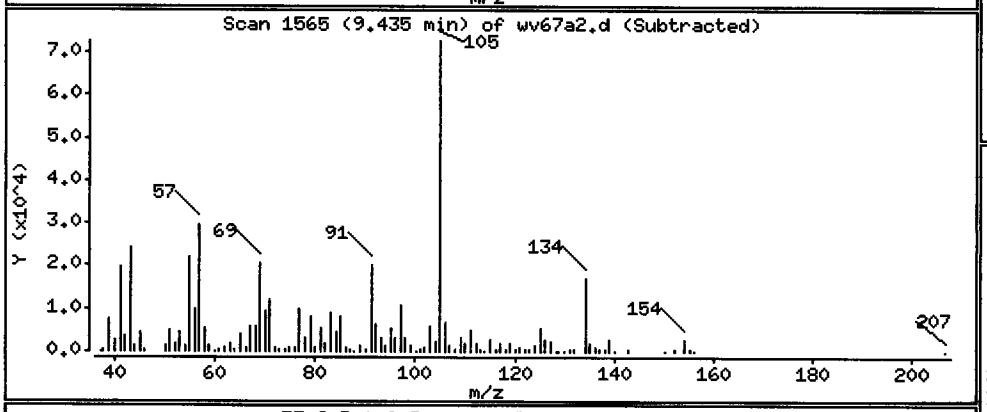
Column diameter: 0.18

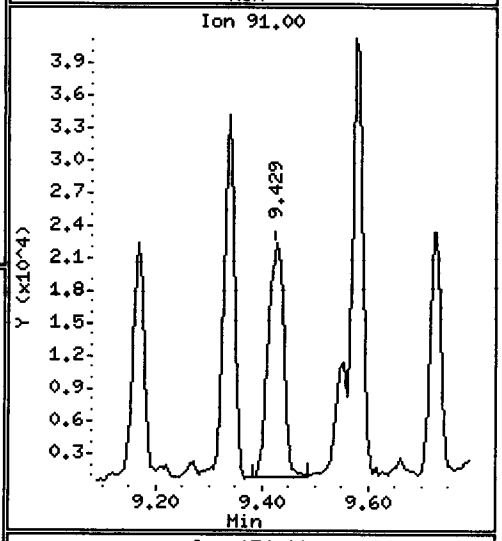
73 S-Butyl Benzene

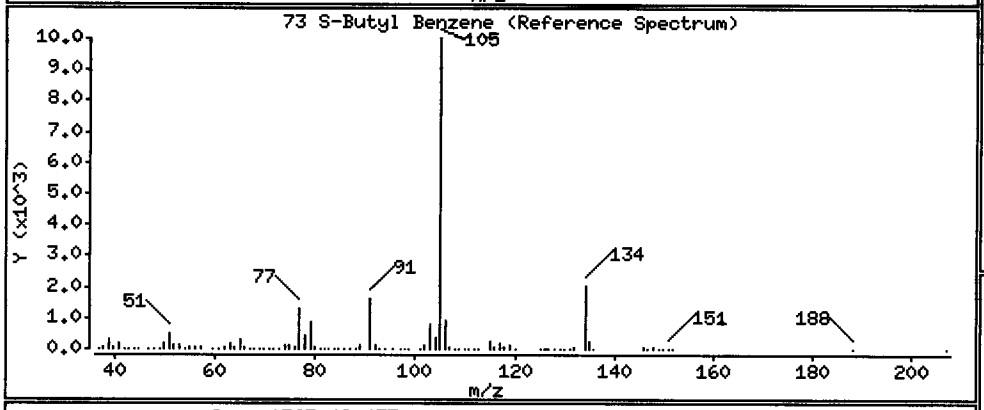
Concentration: 1.893 ug/Kg

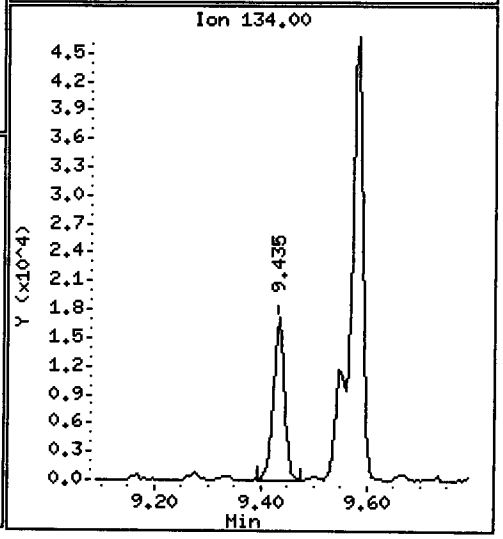


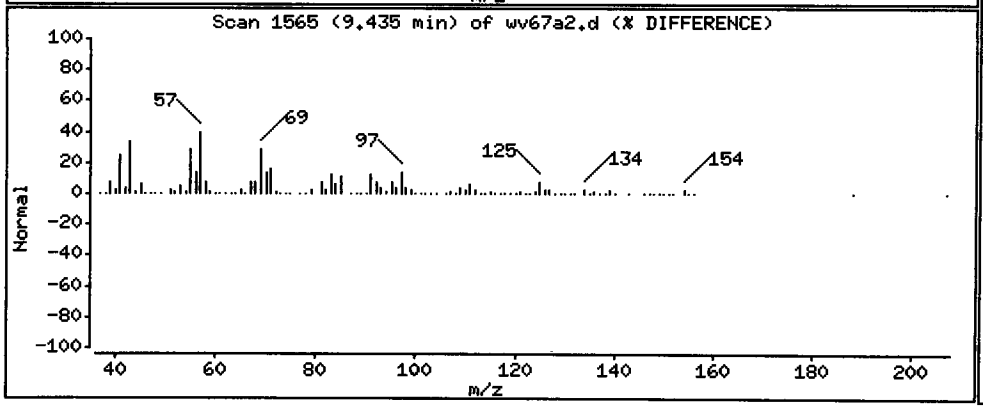












Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d

Date : 28-JUN-2013 04:03

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,8.38,0

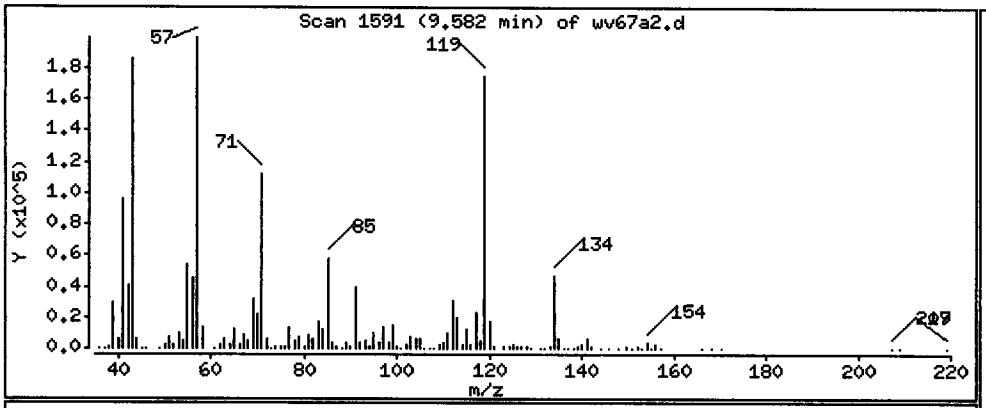
Operator: PB

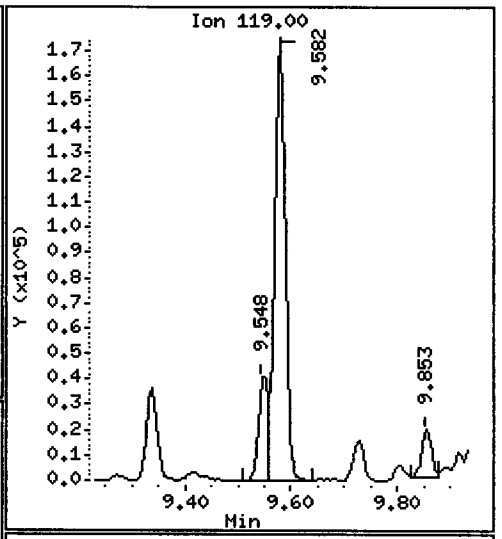
Column phase: RTXVMS

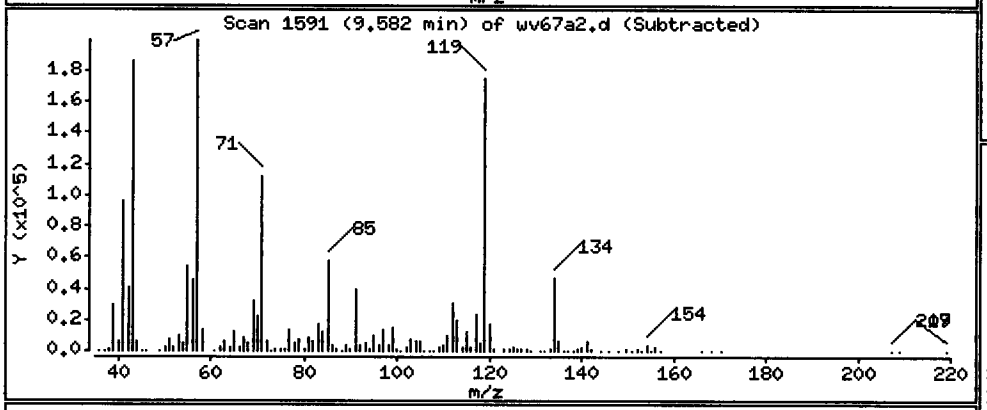
Column diameter: 0.18

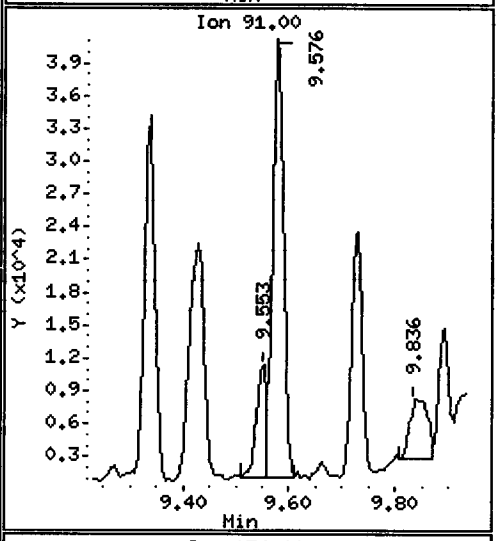
74 4-Isopropyl Toluene

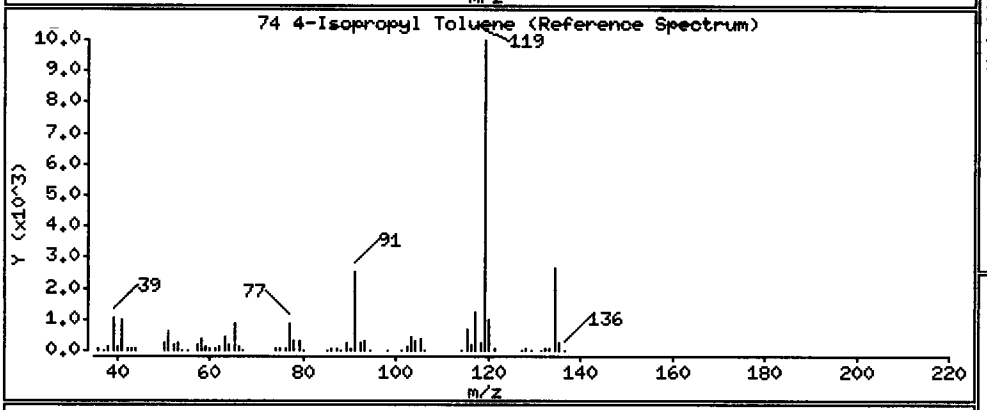
Concentration: 5.750 ug/Kg

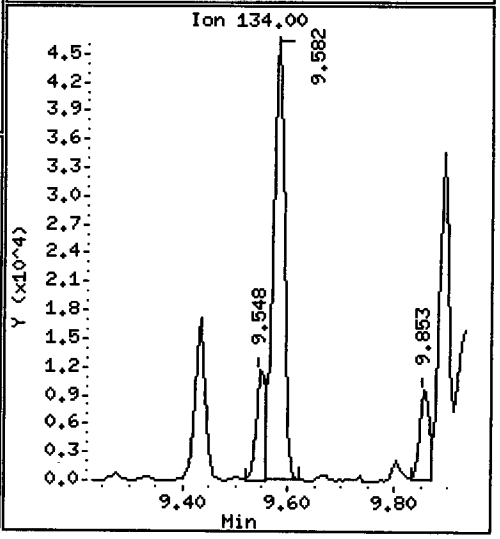


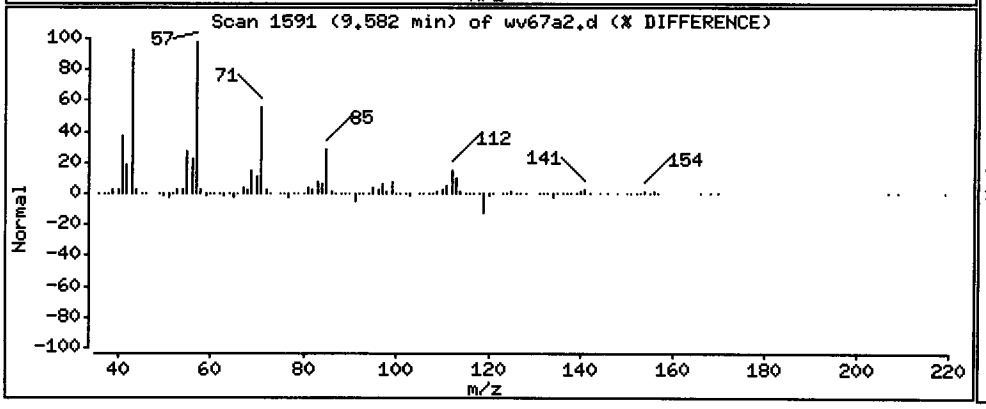












WV67-8BLK

Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d

Date : 28-JUN-2013 04:03

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,8.38,0

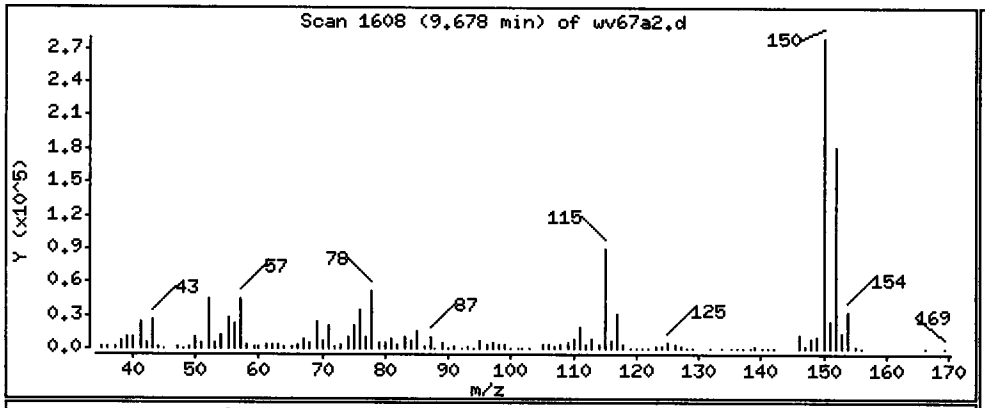
Operator: PB

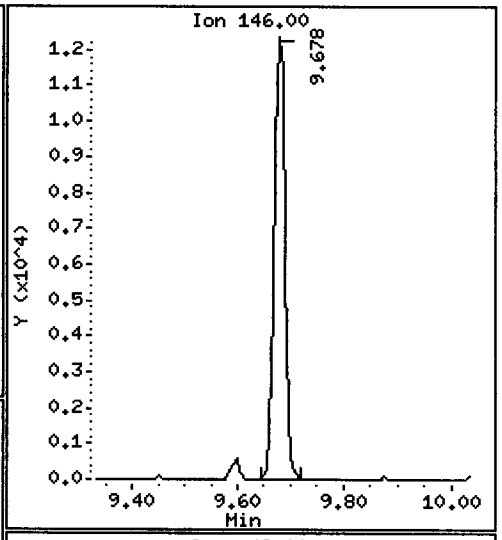
Column phase: RTXVMS

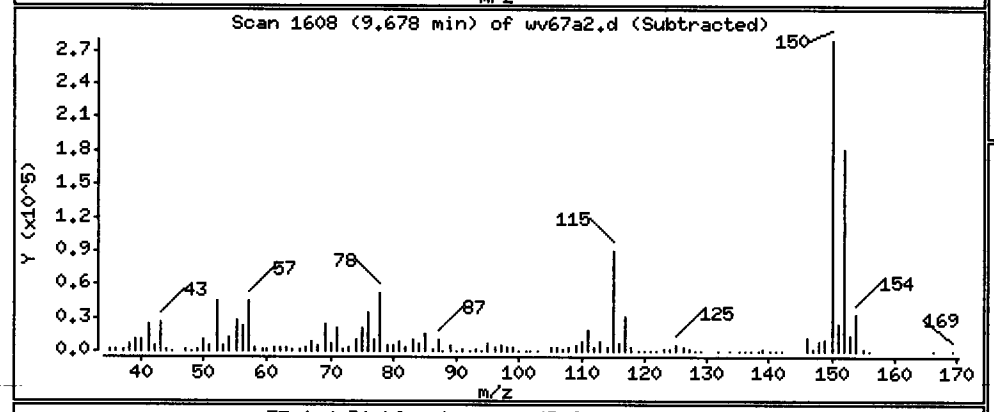
Column diameter: 0.18

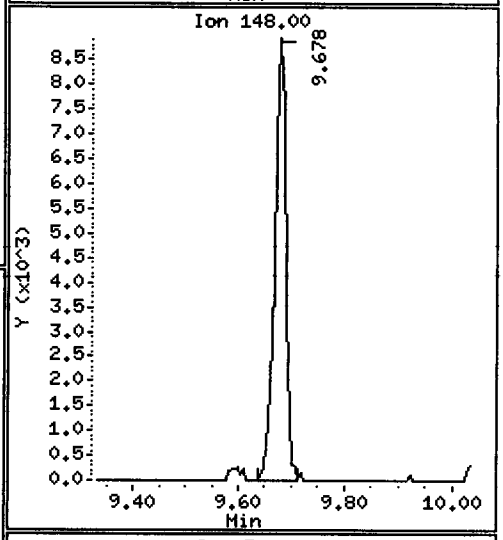
77 1,4-Dichlorobenzene

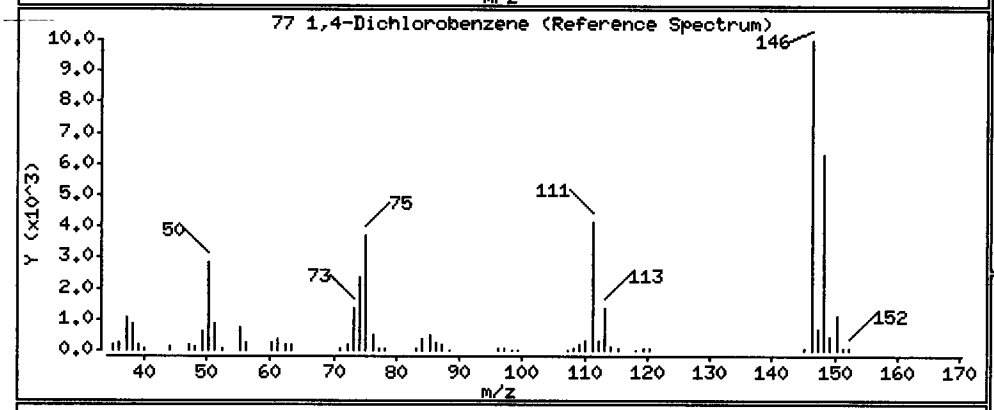
Concentration: 0.6744 ug/Kg

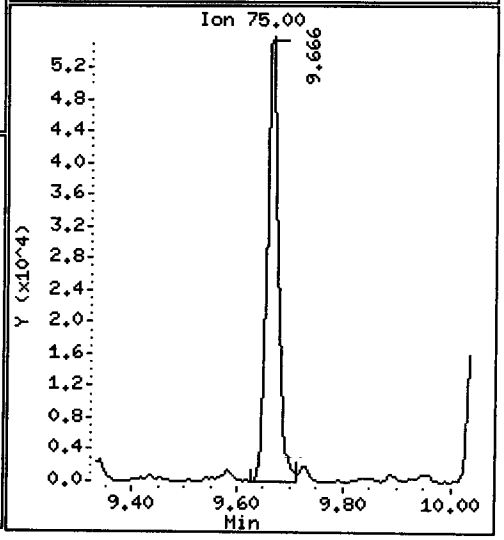


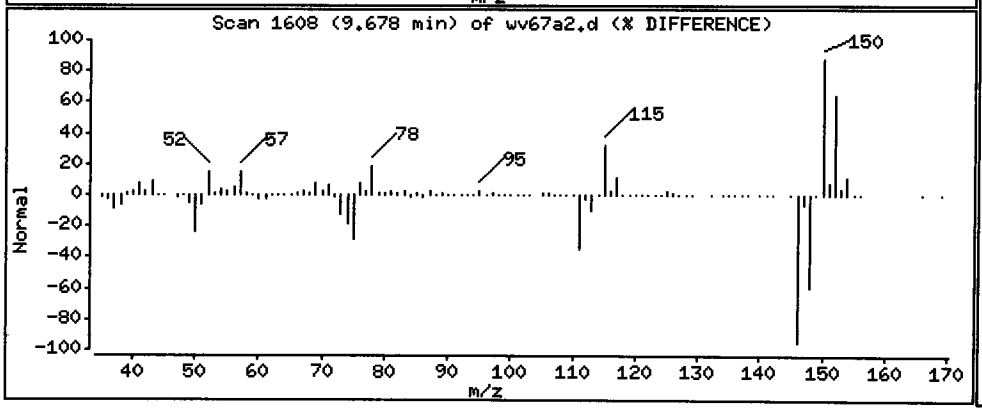












Data File: /chem1/nt5.i/27JUN13.b/wv67a2.d

Date : 28-JUN-2013 04:03

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,8.38,0

Operator: PB

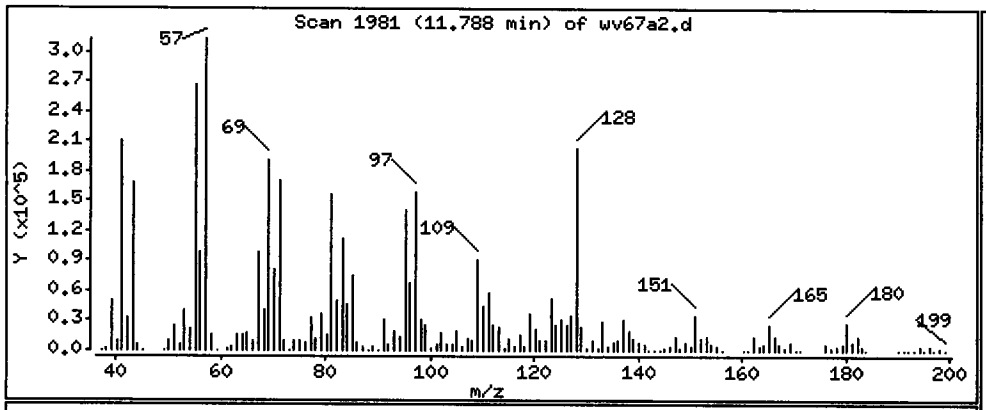
Column phase: RTXVMS

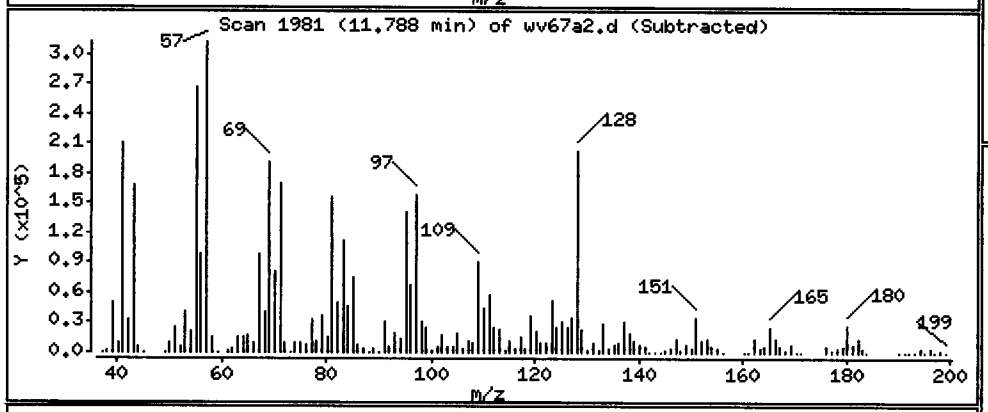
Column diameter: 0.18

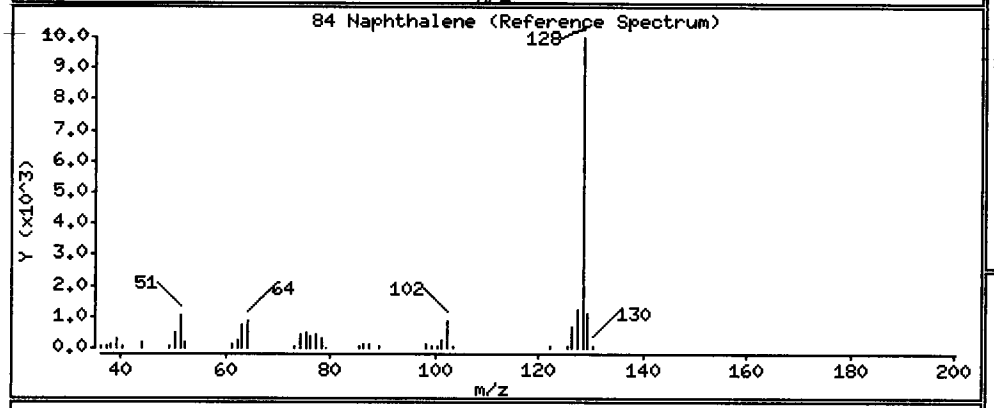
84 Naphthalene

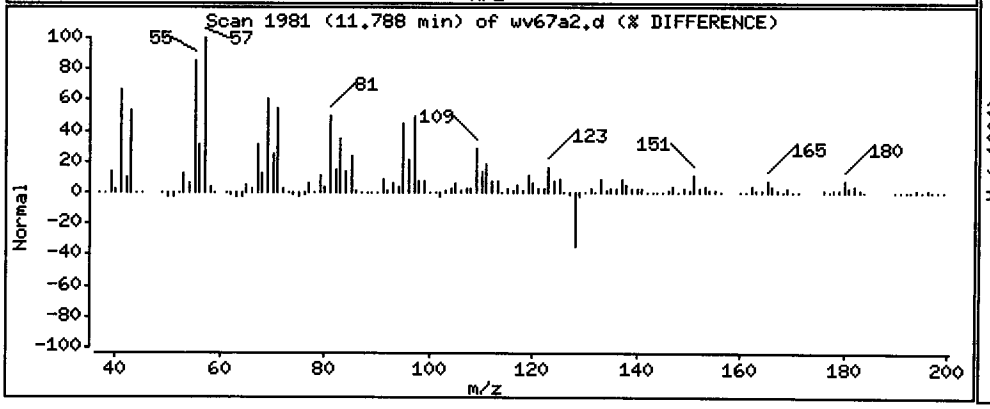
Concentration: 8.006 ug/Kg

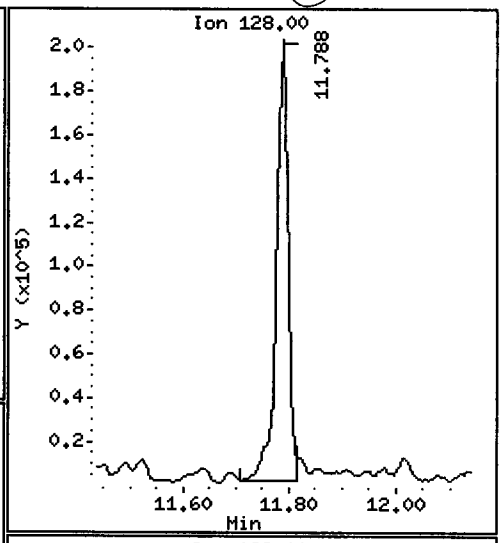
(B)

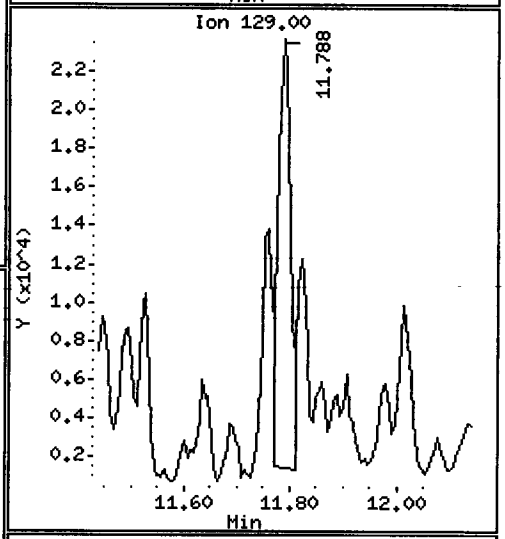


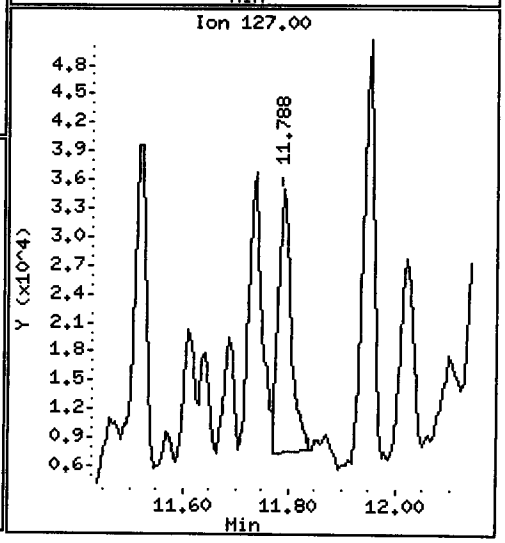












WV67 : 8BHS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/wv67b2.d
Lab Smp Id: WV67B Client Smp ID: UP-MHF-165-20130626
Inj Date : 28-JUN-2013 04:27
Operator : PB Inst ID: nt5.i
Smp Info : WV67B,5,11.11,0
Misc Info : 13-13658
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 11:09 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

6/28/13 DC

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	11.11000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	Compound Not Detected.					
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	1.956	1.979	(0.420)	321995	9.17046	4.127
9 112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10 Iodomethane	142	Compound Not Detected.					
11 Bromoethane	108	Compound Not Detected.					
12 Acrolein	56	Compound Not Detected.					
13 Methylene Chloride	84	2.426	2.454	(0.520)	24473	2.01010	0.9046
14 Acetone	43	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	Compound Not Detected.					
	16 Methyl tert butyl ether	73	Compound Not Detected.					
	17 1,1-Dichloroethane	63	Compound Not Detected.					
	18 Acrylonitrile	53	Compound Not Detected.					
	19 Vinyl Acetate	43	Compound Not Detected.					
	20 Cis-1,2-Dichloroethene	96	3.727	3.744	(0.800)	9547	0.74845	0.3368
	22 2,2-Dichloropropane	77	Compound Not Detected.					
	23 Bromochloromethane	128	Compound Not Detected.					
	24 Chloroform	83	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.179	4.196	(0.897)	714362	53.4784	24.068
	26 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 1,1-Dichloropropene	75	Compound Not Detected.					
	29 2-Butanone	72	4.377	4.434	(0.939)	57741	36.1792	16.282(Q)
	30 Benzene	78	4.524	4.530	(0.885)	76852	1.52709	0.6873
*	31 Pentafluorobenzene	168	4.660	4.671	(1.000)	1387314	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.654	4.666	(0.999)	786900	51.8387	23.330
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.113	5.118	(1.000)	2314220	50.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	40 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	41 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	42 d8-Toluene	98	6.289	6.295	(1.230)	2603569	45.3867	20.426
	43 Toluene	92	6.329	6.335	(1.238)	746814	23.4579	10.557
	44 Tetrachloroethene	166	Compound Not Detected.					
	45 4-Methyl-2-Pentanone	58	6.697	6.708	(1.310)	379124	62.9358	28.324(Q)
	46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47 1,1,2-Trichloroethane	97	Compound Not Detected.					
	48 Chlorodibromomethane	129	Compound Not Detected.					
	49 1,3-Dichloropropane	76	Compound Not Detected.					
	50 1,2-Dibromoethane	107	Compound Not Detected.					
	51 2-Hexanone	43	Compound Not Detected.					
*	52 d5-Chlorobenzene	117	7.590	7.596	(1.000)	1678117	50.0000	
	53 Chlorobenzene	112	Compound Not Detected.					
	54 Ethyl Benzene	91	7.658	7.664	(1.009)	110393	2.70587	1.218
	55 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56 m,p-xylene	106	7.788	7.794	(1.026)	68218	4.45419	2.005
	57 o-Xylene	106	8.150	8.156	(1.074)	57440	3.80000	1.710
	58 Styrene	104	8.196	8.201	(1.080)	34236	1.38220	0.6221
	59 Bromoform	173	Compound Not Detected.					
	60 Isopropyl Benzene	105	8.439	8.445	(0.873)	26624	1.22884	0.5530
$	62 4-Bromofluorobenzene	95	8.660	8.665	(1.141)	710220	39.7653	17.896(R)
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	8.807	8.812	(0.911)	42530	1.62944	0.7333
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
66	2-Chloro Toluene	91	Compound Not Detected.					
67	1,3,5-Trimethyl Benzene	105	8.993	8.999	(0.930)	48300	2.58597	1.164
68	1,2,3-Trichloropropane	110	Compound Not Detected.					
69	Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
70	4-Chloro Toluene	91	Compound Not Detected.					
71	T-Butyl Benzene	119	Compound Not Detected.					
72	1,2,4-Trimethylbenzene	105	9.338	9.338	(0.966)	134358	7.35702	3.311
73	S-Butyl Benzene	105	9.435	9.440	(0.976)	62486	2.61972	1.179(Q)
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	72754	3.76529	1.695
75	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 76	d4-1,4-Dichlorobenzene	152	9.666	9.672	(1.000)	522337	50.0000	
77	1,4-Dichlorobenzene	146	Compound Not Detected.					
78	N-Butyl Benzene	91	9.961	9.966	(1.030)	57830	3.18938	1.435(Q)
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	439981	46.1818	20.784
80	1,2-Dichlorobenzene	146	Compound Not Detected.					
81	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
84	Naphthalene	128	11.788	11.788	(1.219)	40508	2.31560	1.042
85	1,2,3-Trichlorobenzene	180	Compound Not Detected.					

J B LPA
NOT Reported
BS 6/28/13

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: wv67b2.d
Lab Smp Id: WV67B
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13658

Calibration Date: 27-JUN-2013
Calibration Time: 17:46
Client Smp ID: UP-MHF-165-20130626
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1387314	-14.02
35 1,4-Difluorobenze	2656709	1328354	5313418	2314220	-12.89
52 d5-Chlorobenzene	2557235	1278618	5114470	1678117	-34.38
76 d4-1,4-Dichlorobe	1374359	687180	2748718	522337	-61.99

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.24
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.08
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WV67B
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13658

Client SDG: WV67
Fraction: VOA
Client Smp ID: UP-MHF-165-20130626
Operator: PB
SampleType: SAMPLE
Quant Type: ISTD

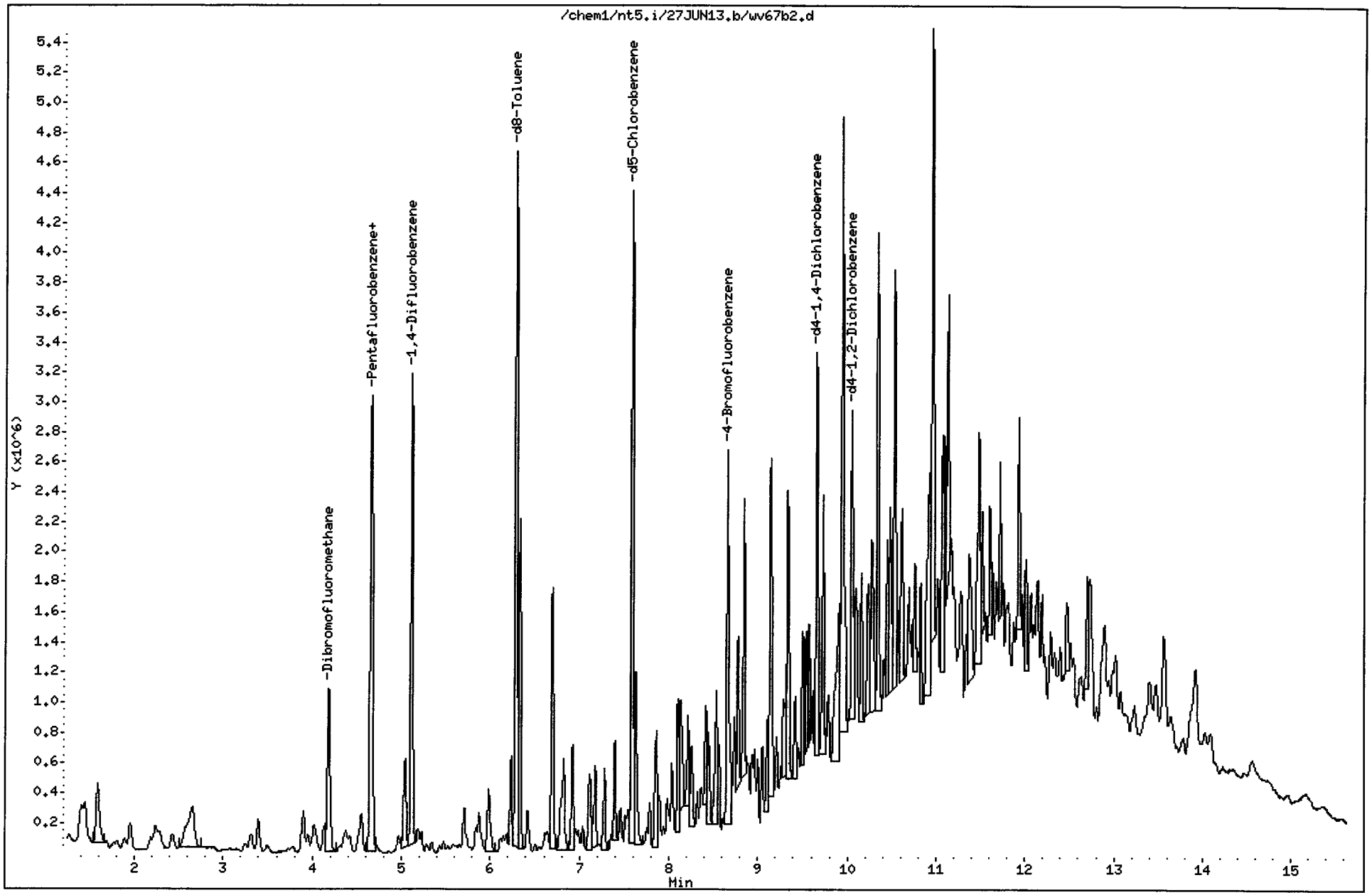
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	53.478	106.96	70-130
$ 32 d4-1,2-Dichloroeth	50.000	51.839	103.68	80-149
$ 42 d8-Toluene	50.000	45.387	90.77	77-120
$ 62 4-Bromofluorobenze	50.000	39.765	79.53*	80-120
$ 79 d4-1,2-Dichloroben	50.000	46.182	92.36	80-120

Data File: /chem1/nt5.i/27JUN13.b/wv67b2.d
Date : 28-JUN-2013 04:27
Client ID: UP-MHF-165-20130626
Sample Info: WV67B,5,11,11,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Data File: /chem1/nt5.i/27JUN13.b/wv67b2.d

Date : 28-JUN-2013 04:27

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,11.11,0

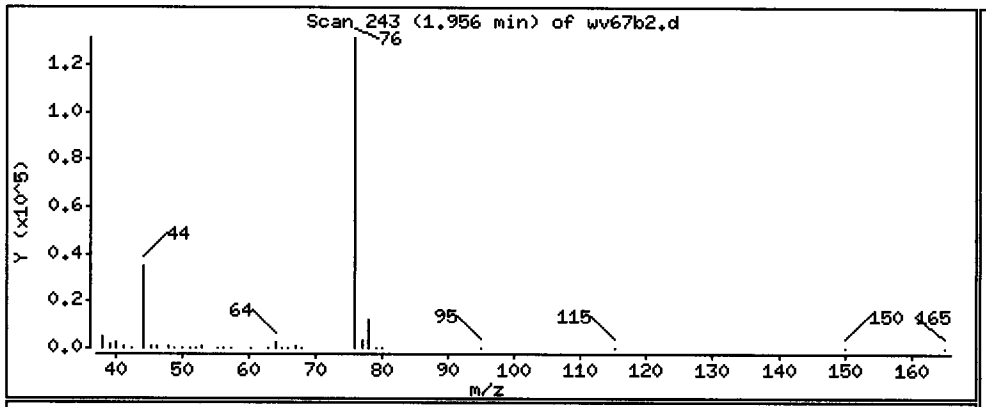
Operator: PB

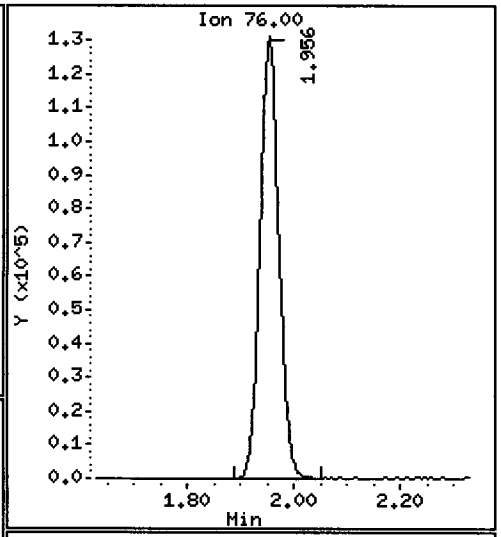
Column phase: RTXVMS

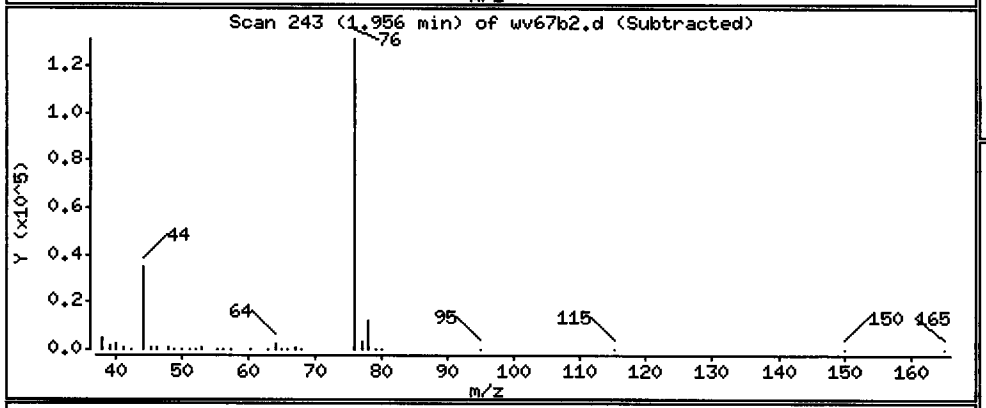
Column diameter: 0.18

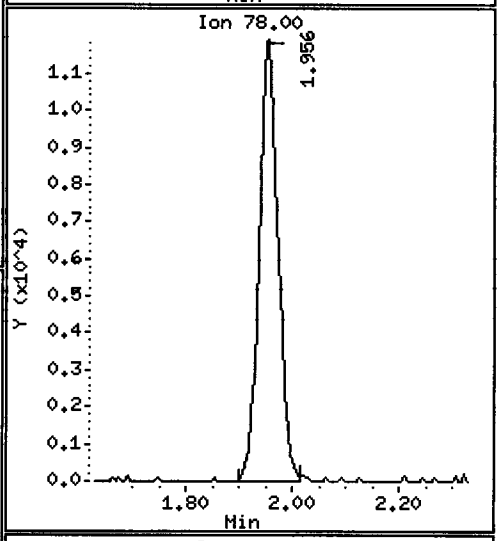
8 Carbon Disulfide

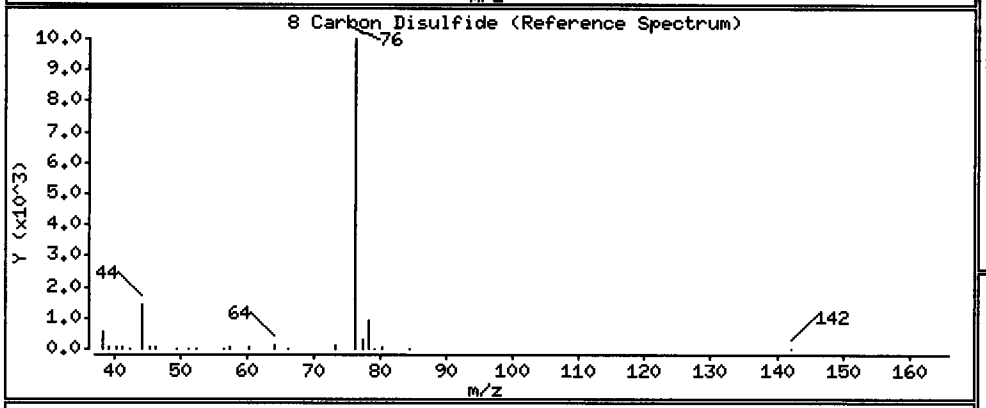
Concentration: 4.127 ug/Kg

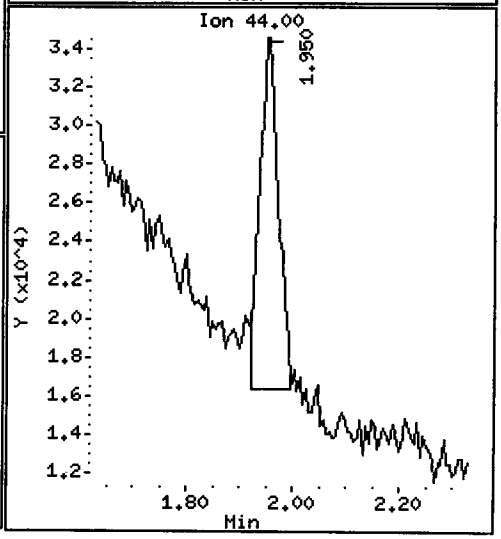


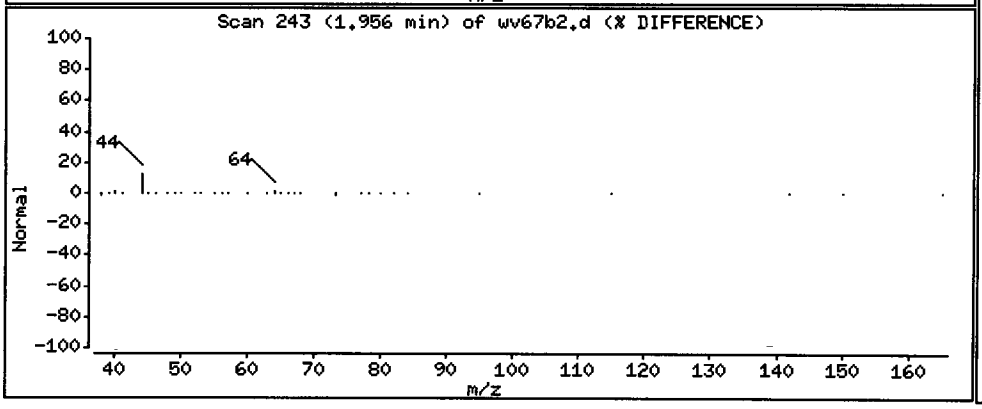












Data File: /chem1/nt5.i/27JUN13.b/wv67b2.d

Date : 28-JUN-2013 04:27

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,11.11,0

Operator: PB

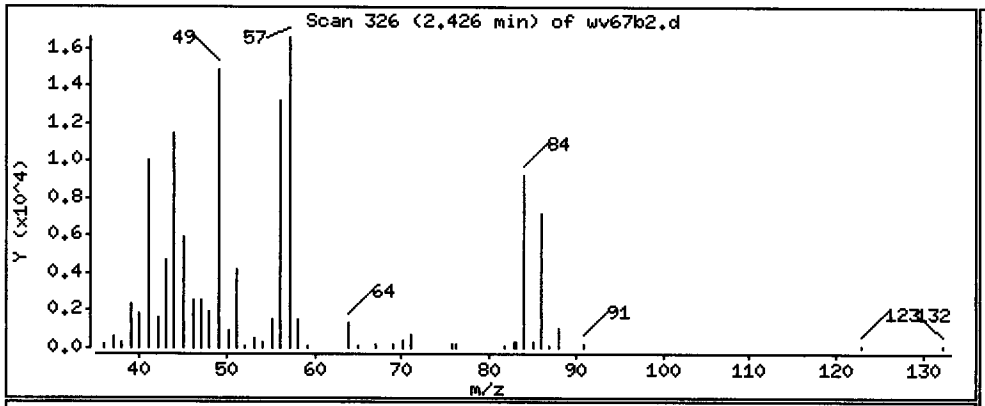
Column phase: RTXVMS

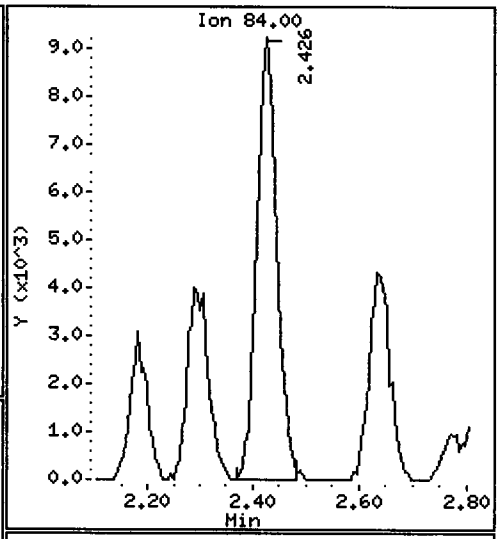
Column diameter: 0.18

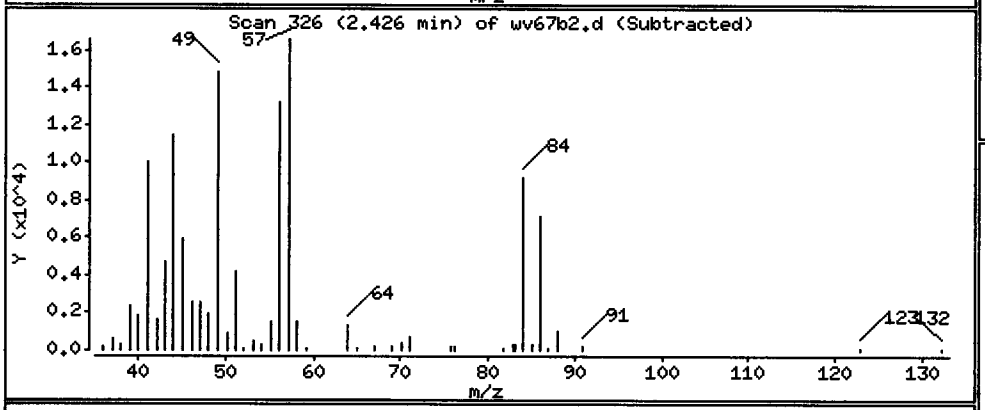
13 Methylene Chloride

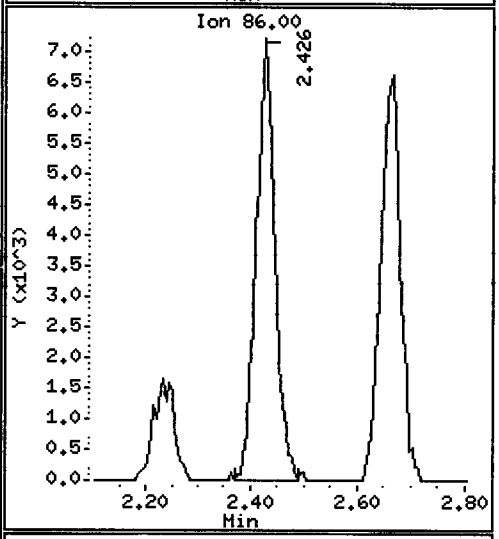
Concentration: 0.9046 ug/Kg

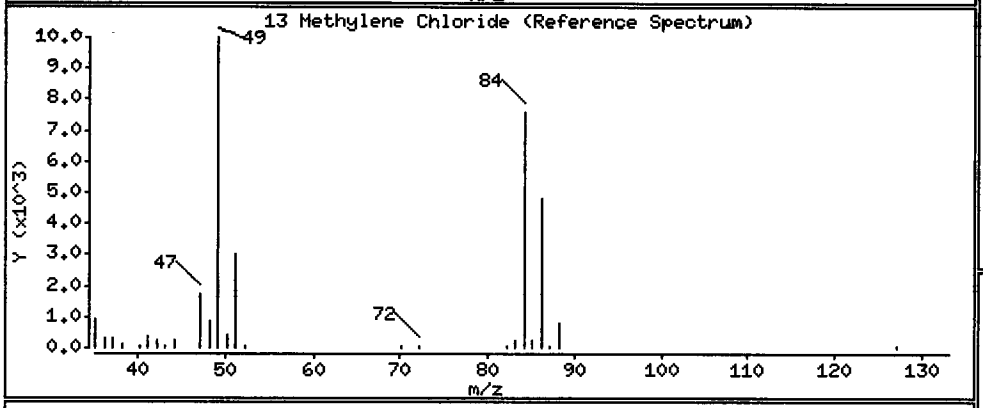
B

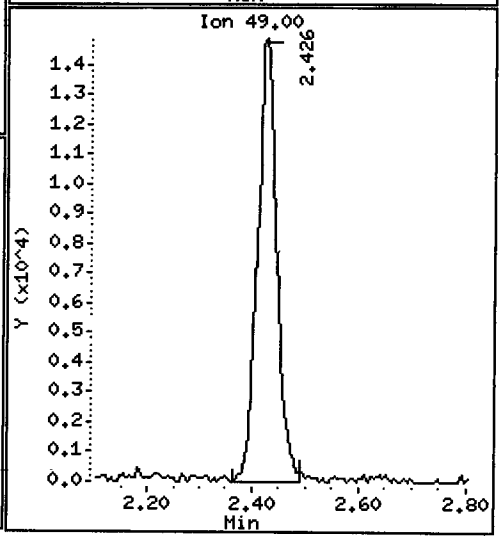


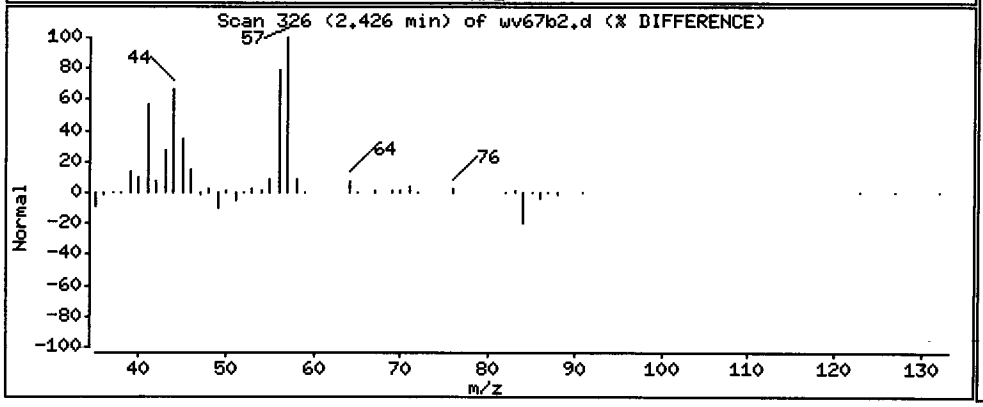












WV67-B8107

Data File: /chem1/nt5.i/27JUN13.b/wv67b2.d

Date : 28-JUN-2013 04:27

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,11.11,0

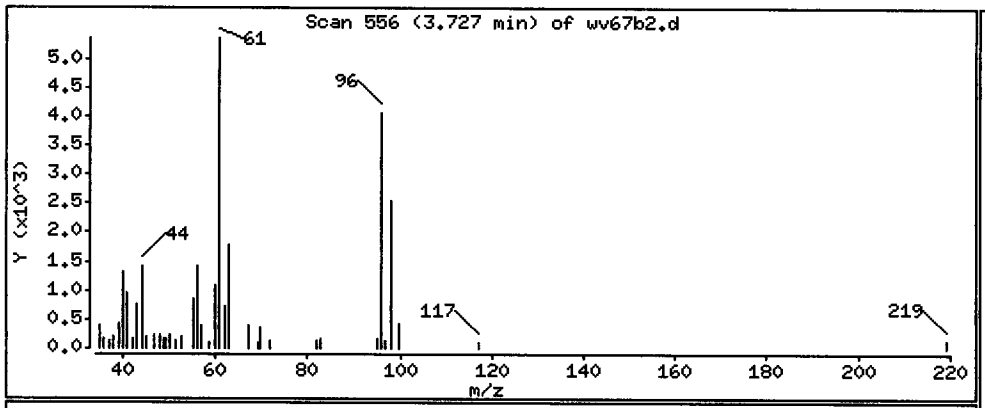
Operator: PB

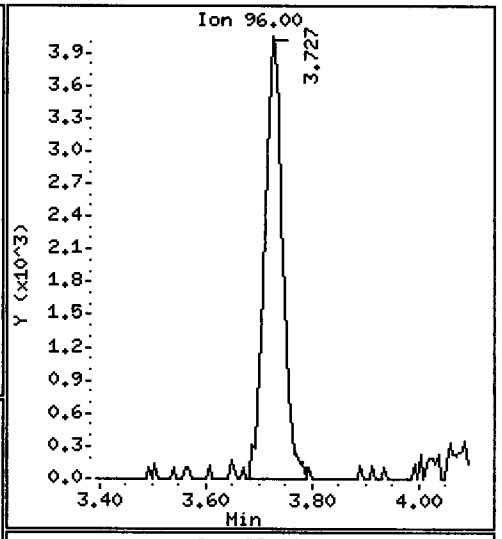
Column phase: RTXVMS

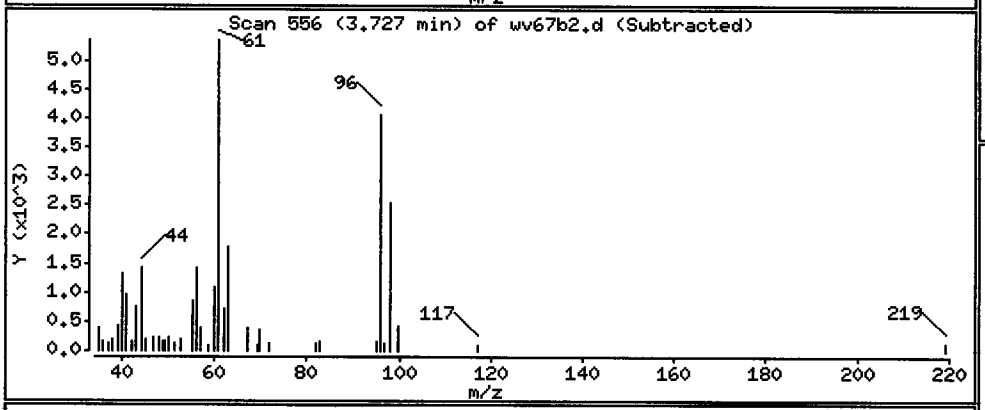
Column diameter: 0.18

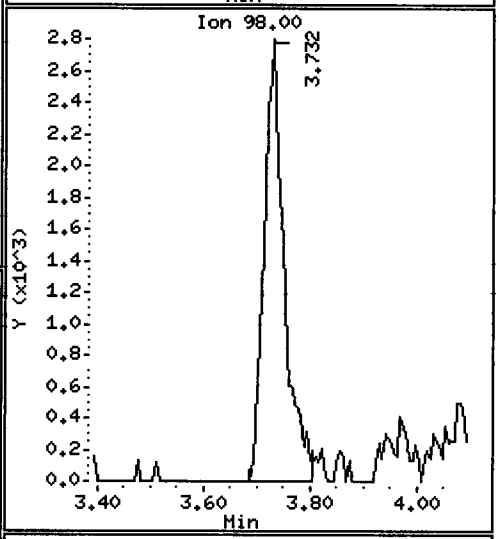
20 Cis-1,2-Dichloroethene

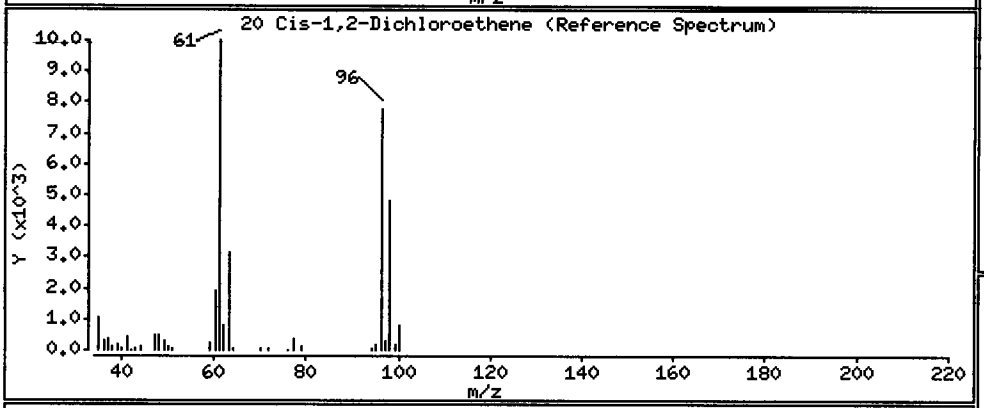
Concentration: 0.3368 ug/Kg

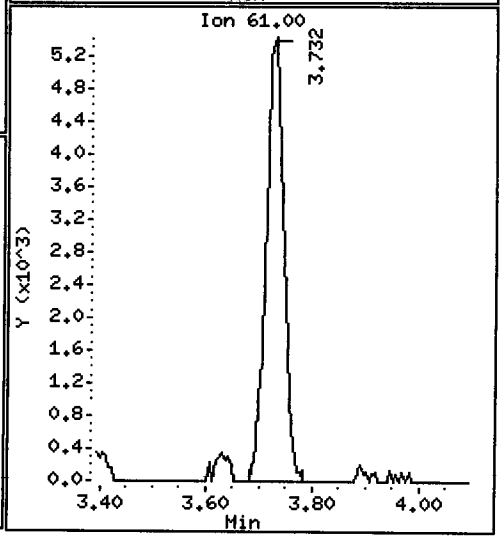


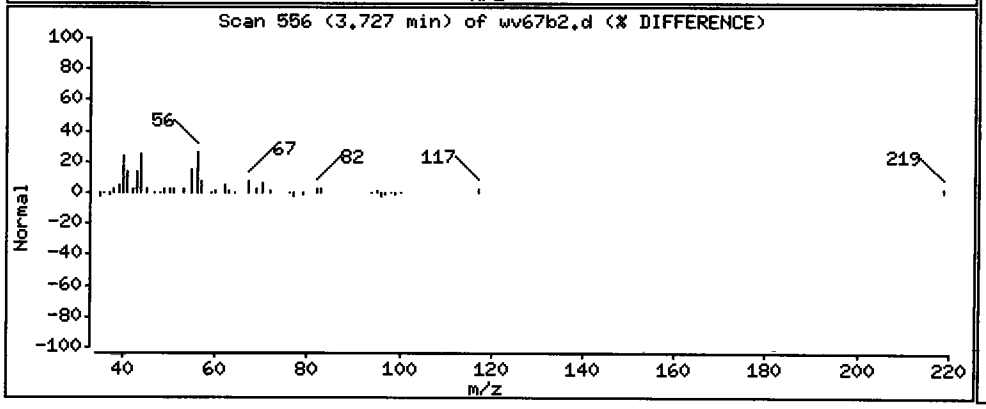












Data File: /chem1/nt5.i/27JUN13.b/wv67b2.d

Date : 28-JUN-2013 04:27

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,11,11,0

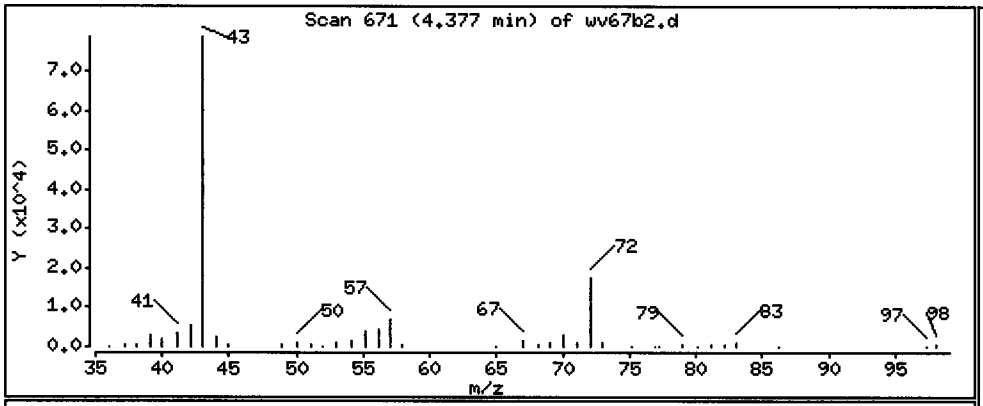
Operator: PB

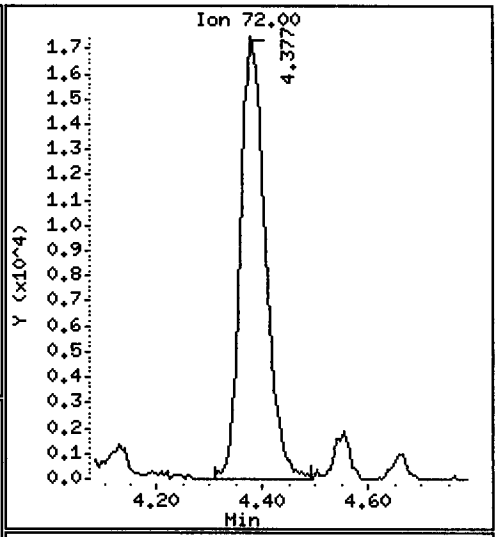
Column phase: RTXVMS

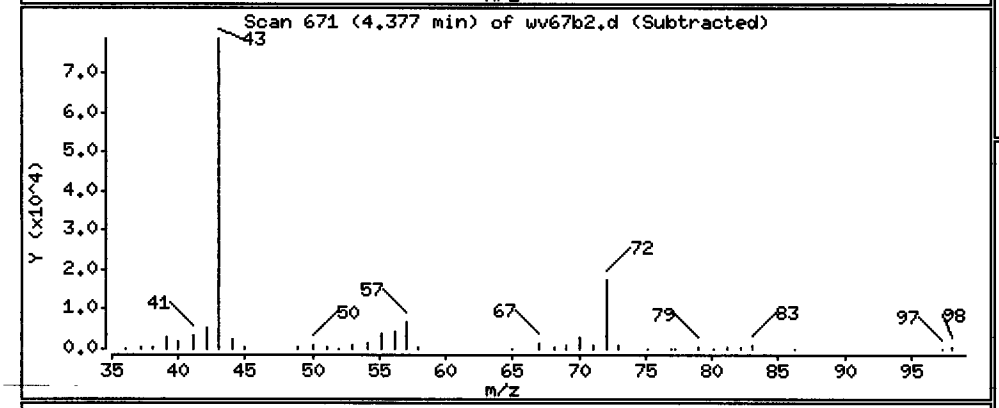
Column diameter: 0.18

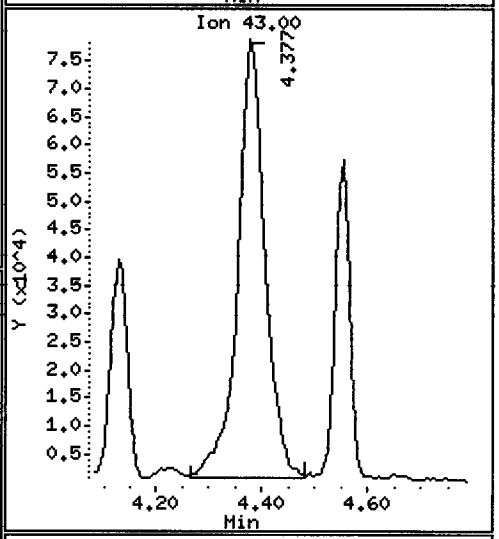
29 2-Butanone

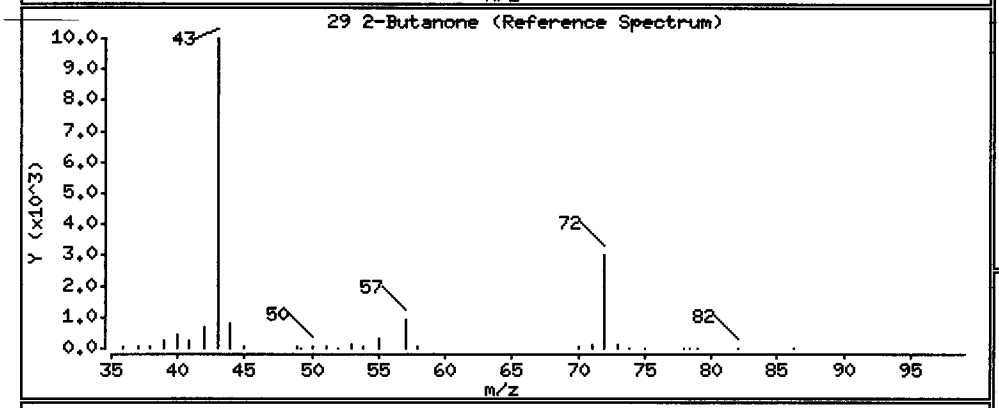
Concentration: 16.282 ug/Kg

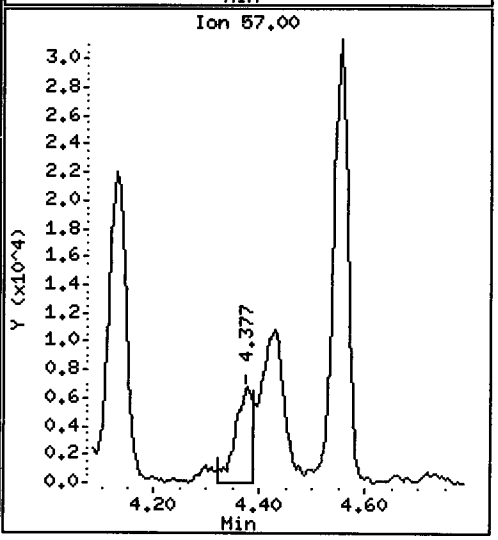


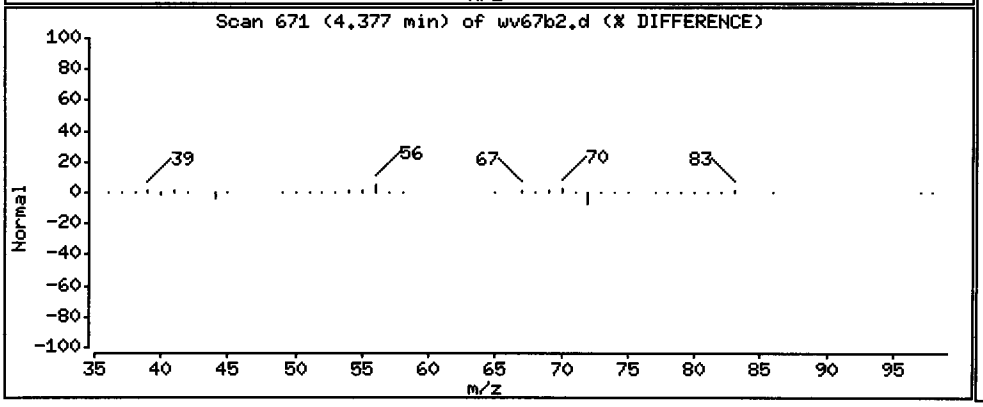












Data File: /chem1/nt5.i/27JUN13.b/wv67b2.d

Date : 28-JUN-2013 04:27

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,11.11,0

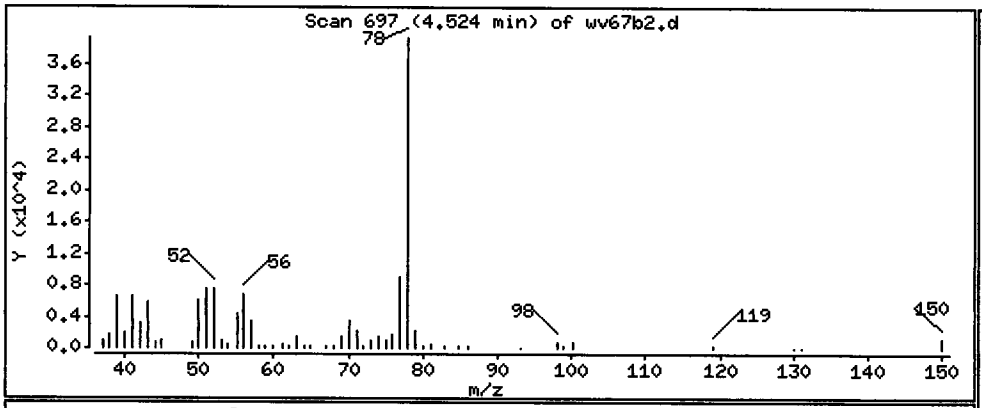
Operator: PB

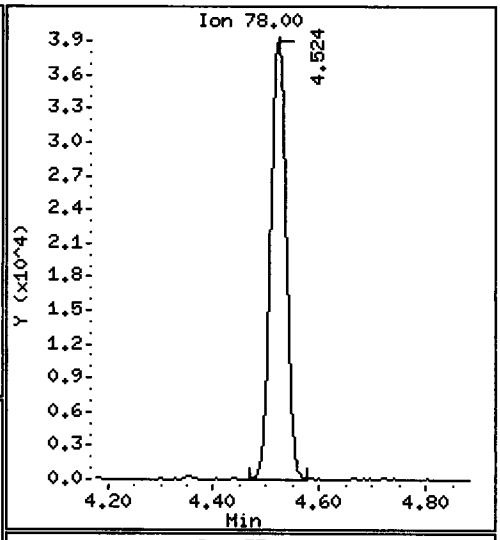
Column phase: RTXVMS

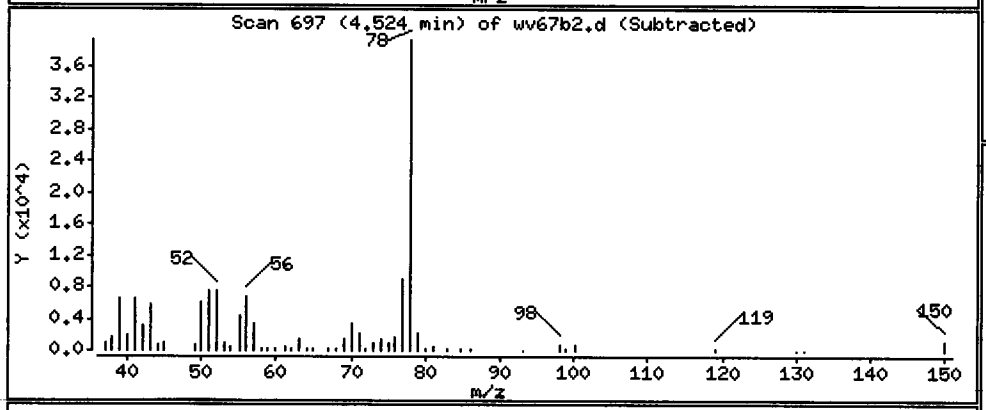
Column diameter: 0.18

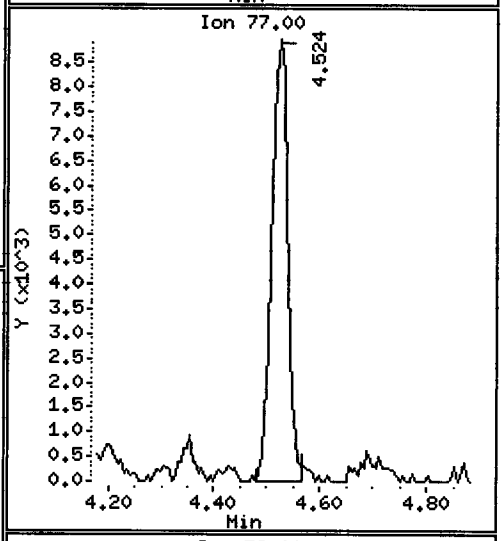
30 Benzene

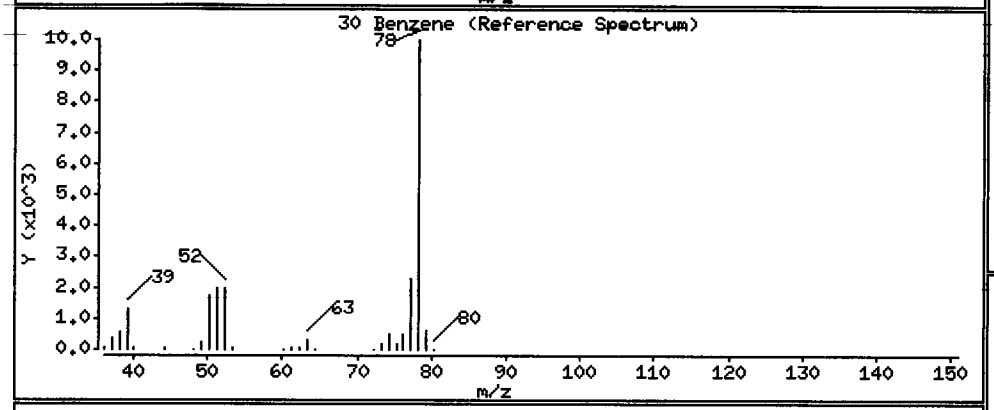
Concentration: 0.6873 ug/Kg

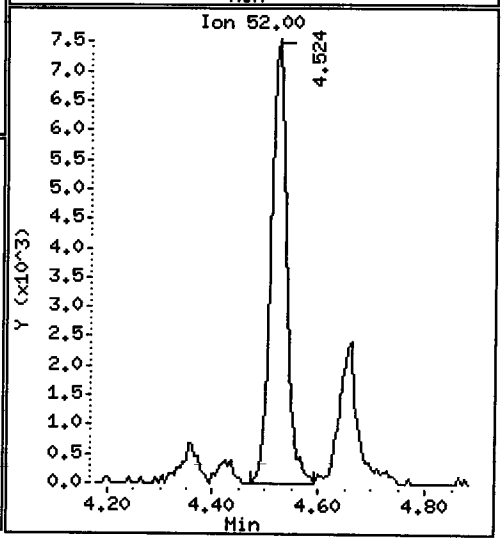


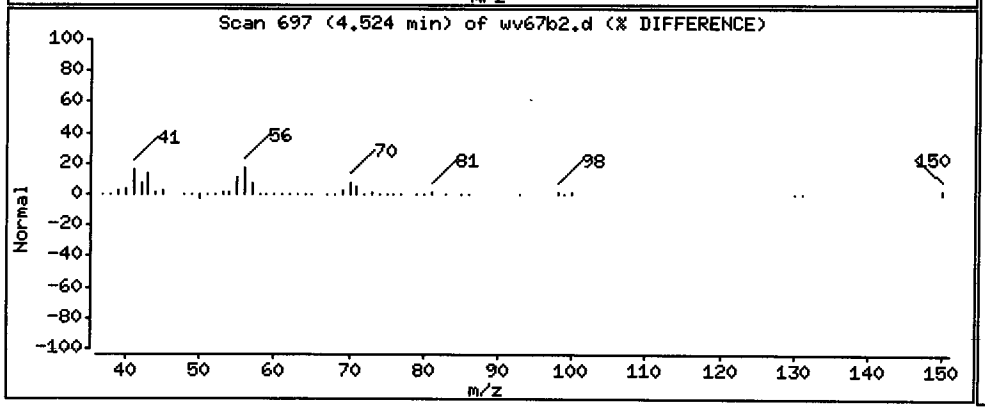












Data File: /chem1/nt5.i/27JUN13.b/wv67b2.d

Date : 28-JUN-2013 04:27

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,11.11,0

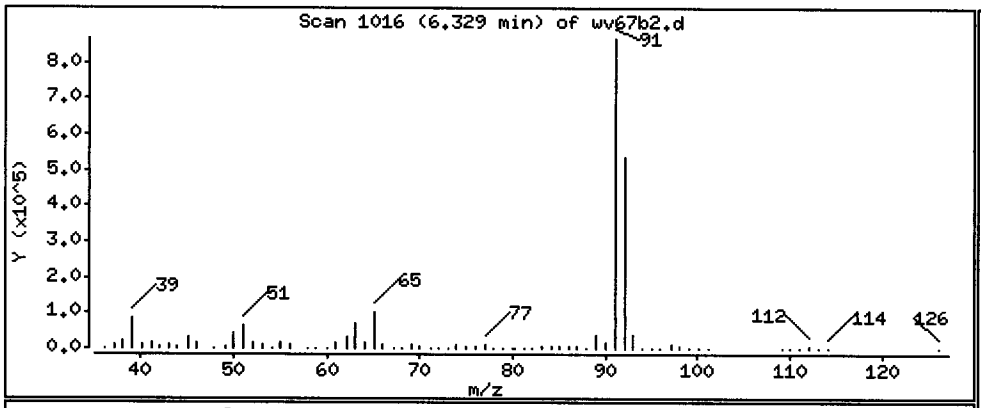
Operator: PB

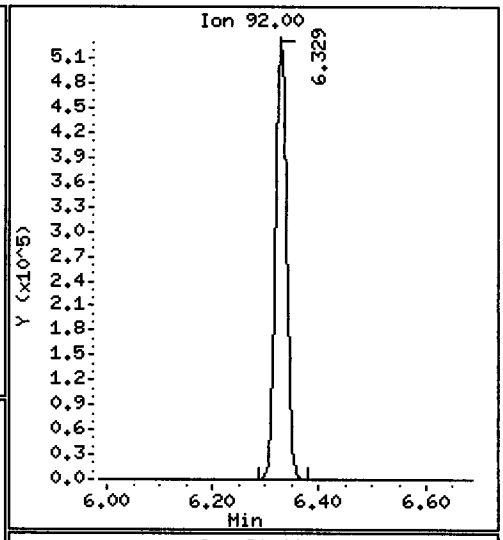
Column phase: RTXVMS

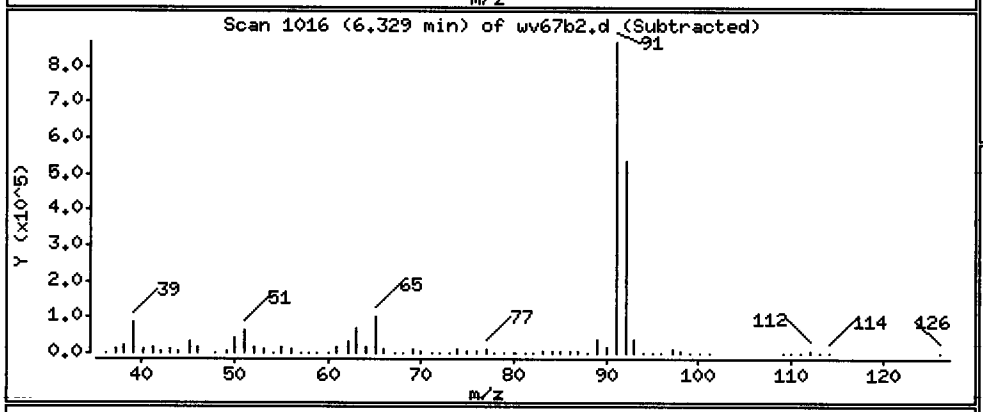
Column diameter: 0.18

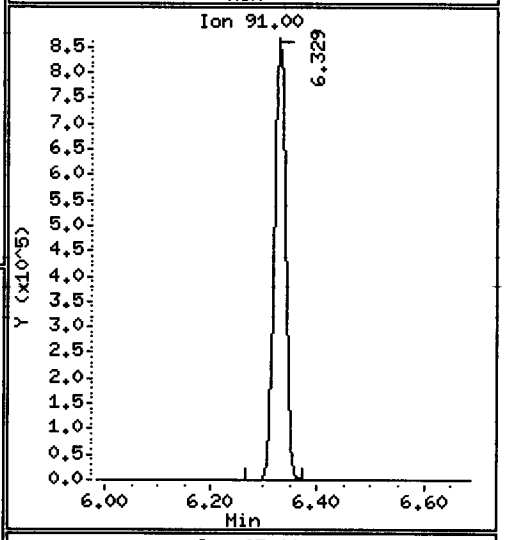
43 Toluene

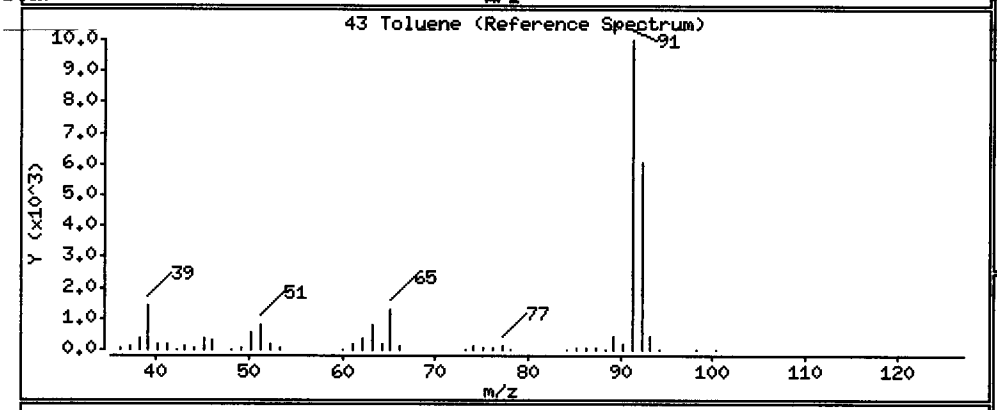
Concentration: 10.557 ug/Kg

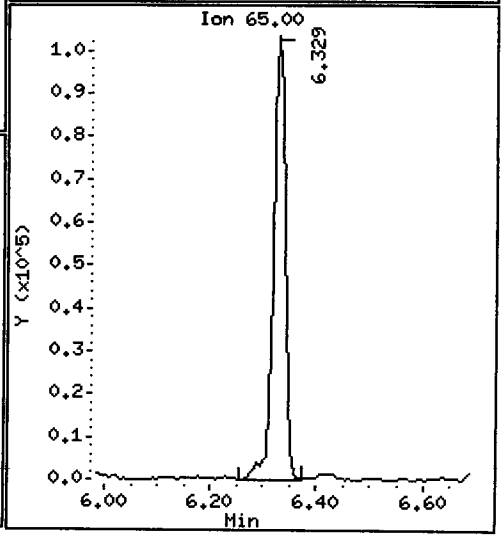


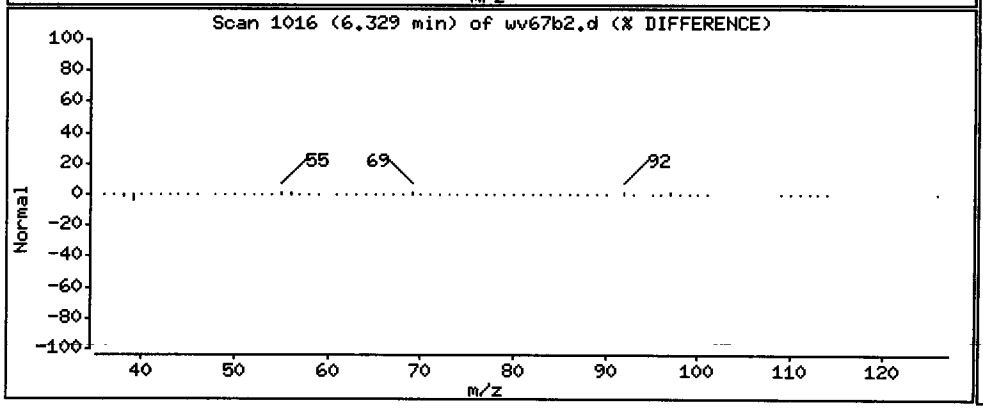












Data File: /chem1/nt5.i/27JUN13.b/wv67b2.d

Date : 28-JUN-2013 04:27

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,11.11,0

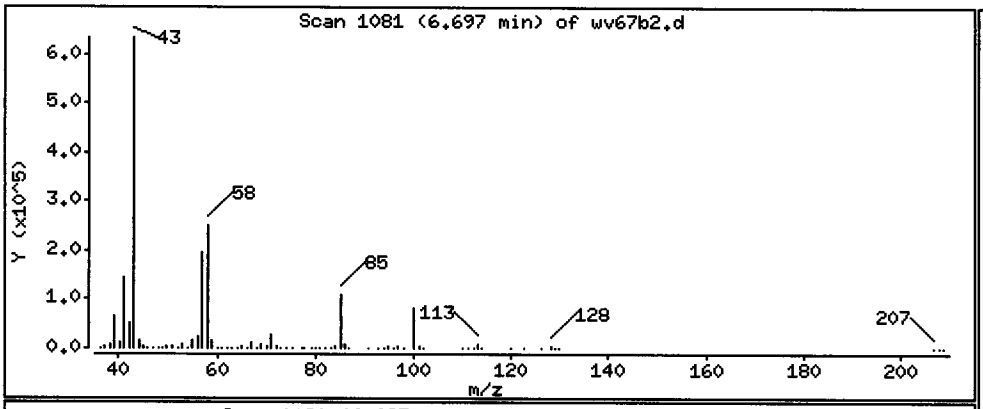
Operator: PB

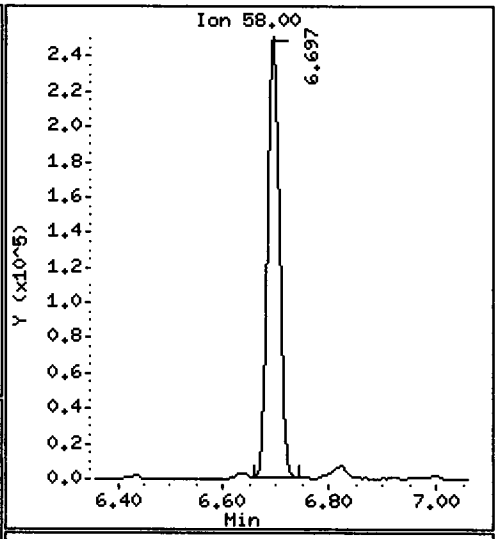
Column phase: RTXVMS

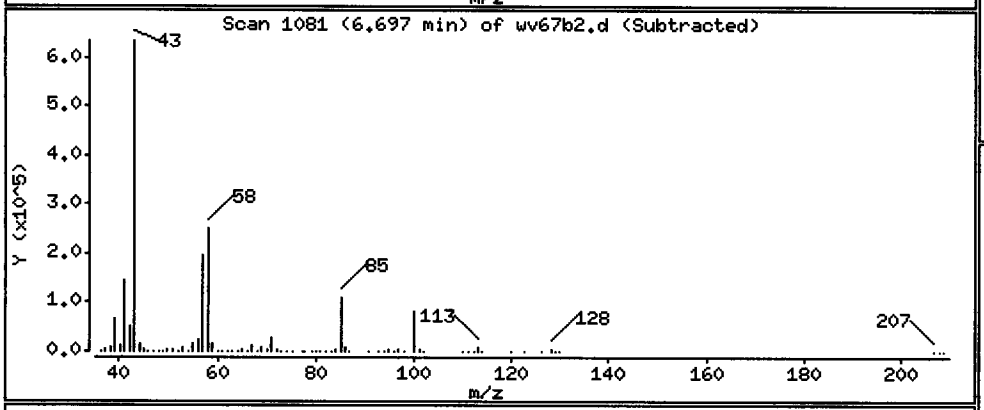
Column diameter: 0.18

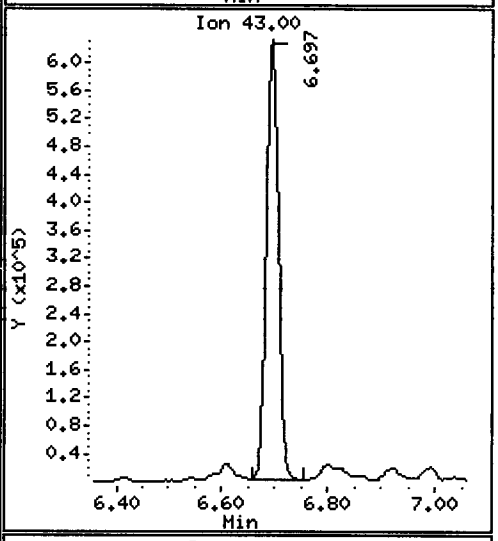
45 4-Methyl-2-Pentanone

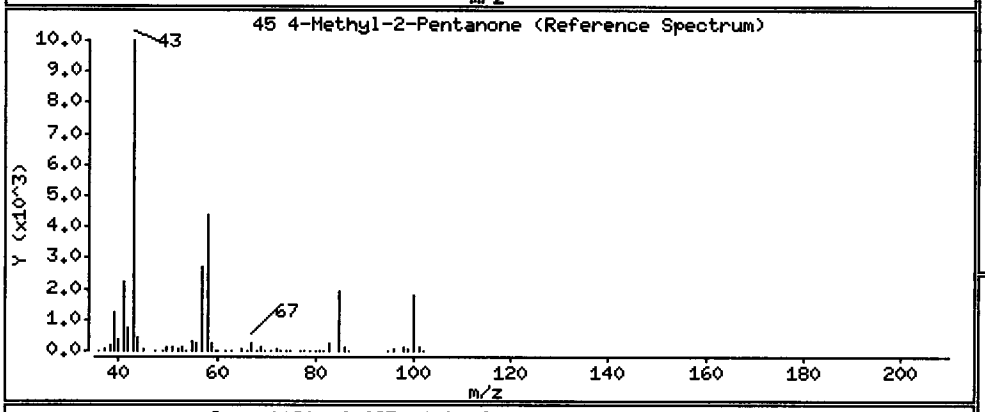
Concentration: 28.324 ug/Kg

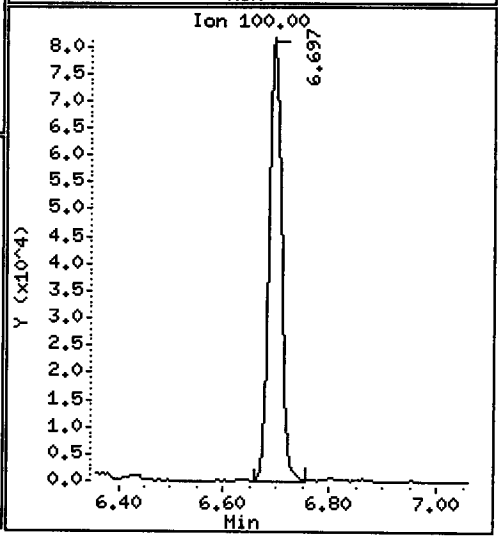


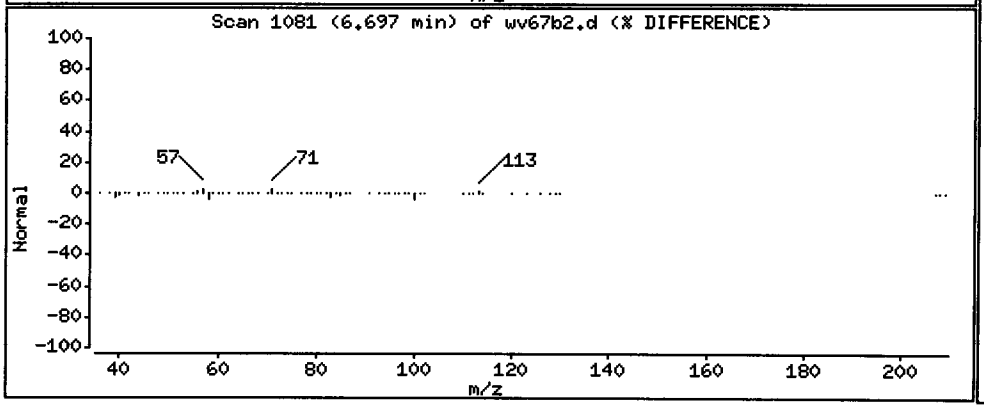












Data File: /chem1/nt5.i/27JUN13.b/wv67b2.d

Date : 28-JUN-2013 04:27

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,11,11,0

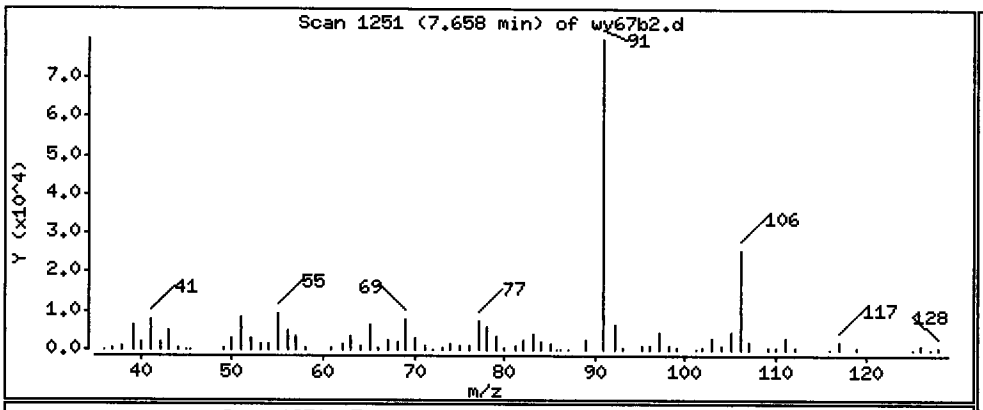
Operator: PB

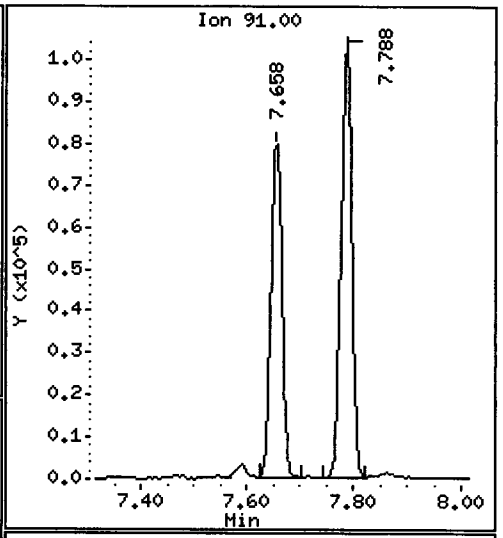
Column phase: RTXVMS

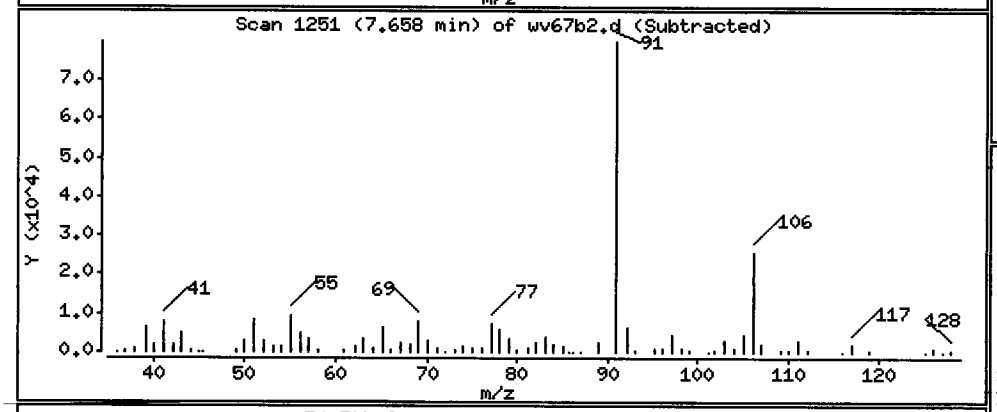
Column diameter: 0.18

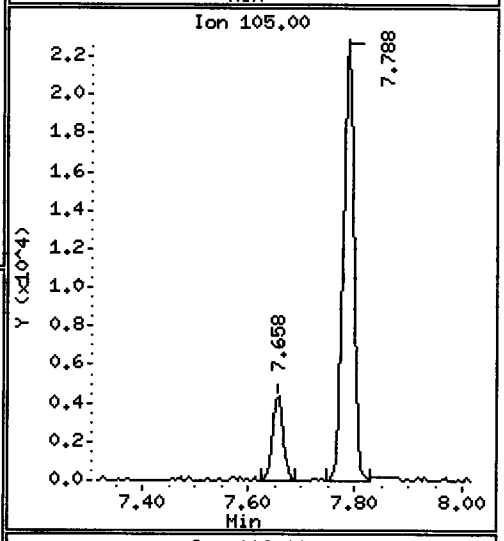
54 Ethyl Benzene

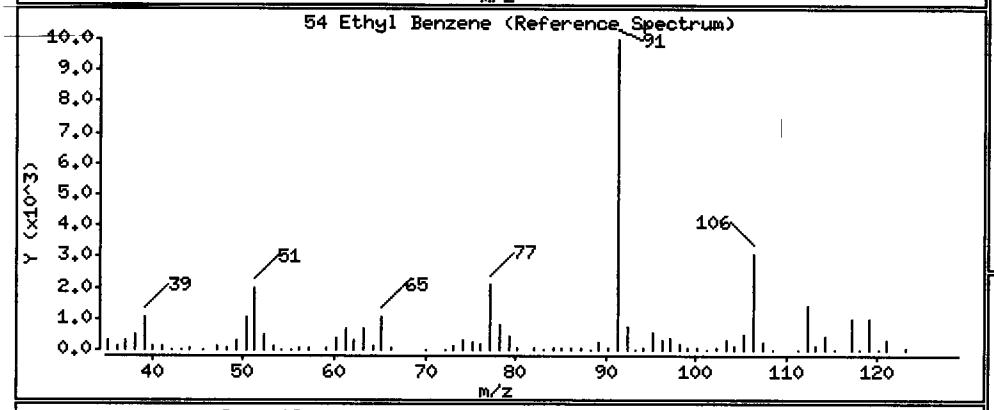
Concentration: 1.218 ug/Kg

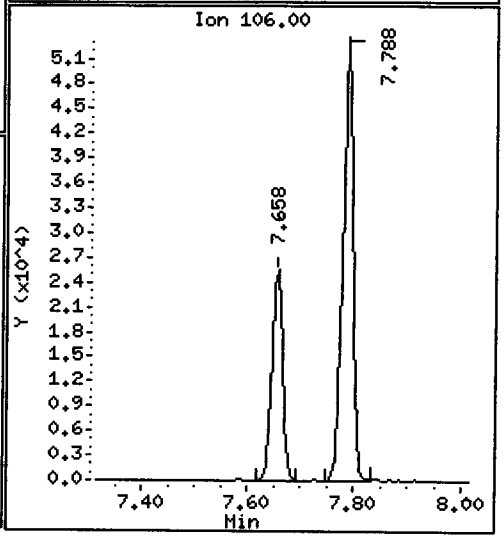


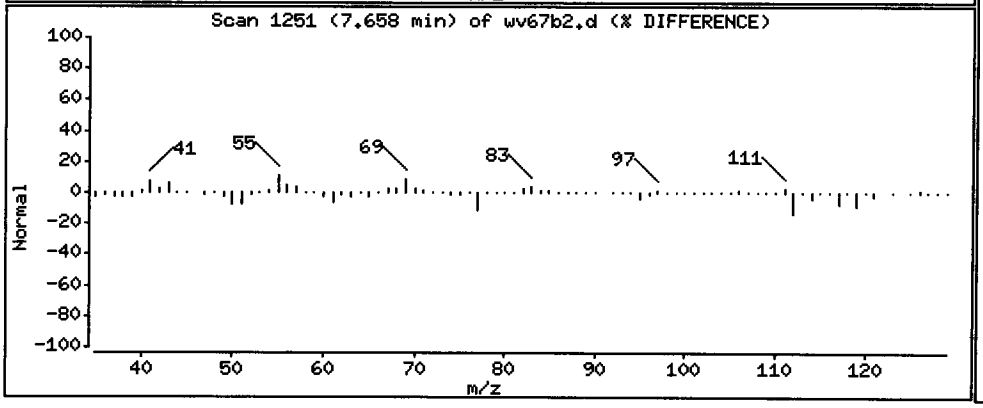












Data File: /chem1/nt5.i/27JUN13.b/wv67b2.d

Date : 28-JUN-2013 04:27

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,11.11,0

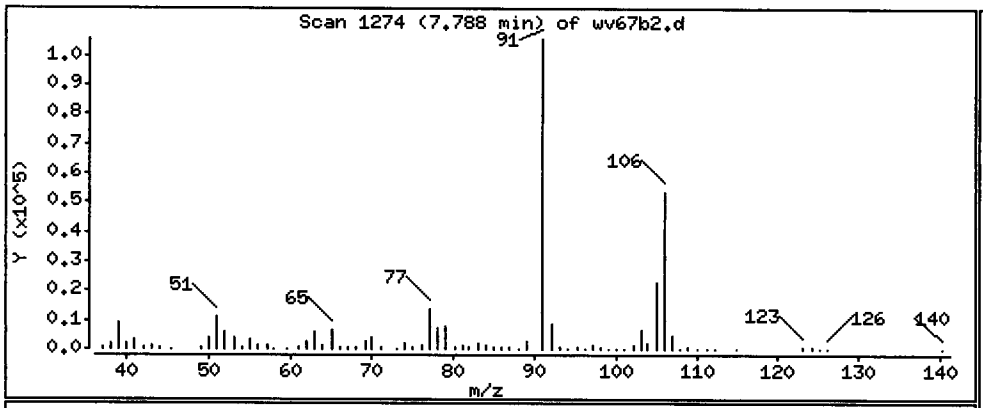
Operator: PB

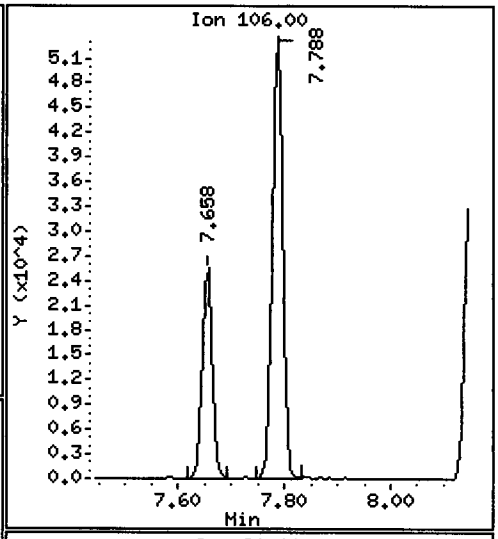
Column phase: RTXVMS

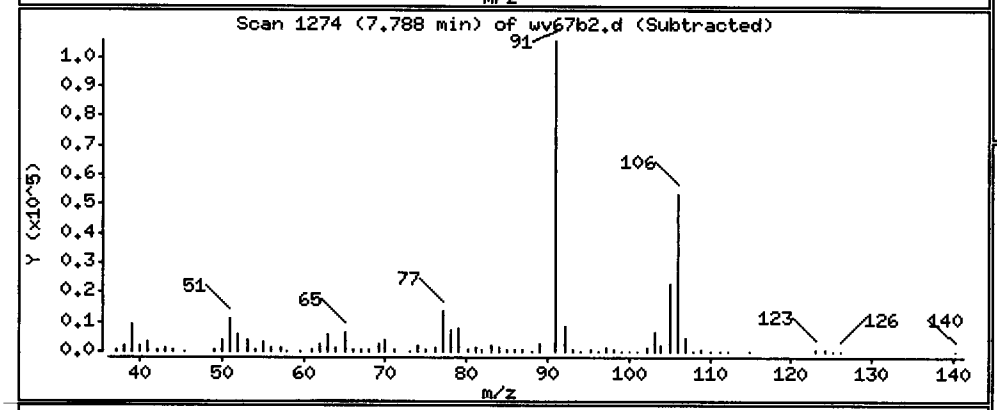
Column diameter: 0.18

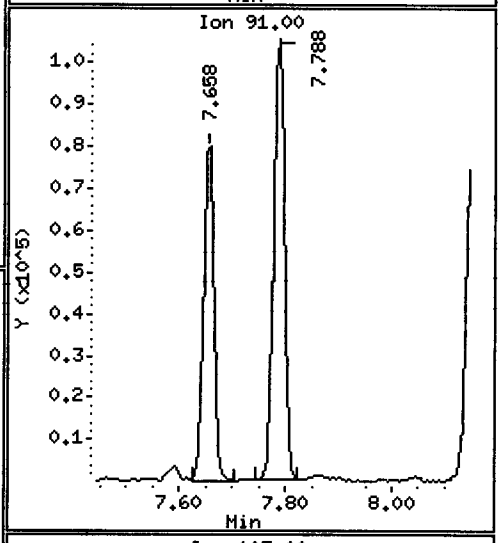
56 m,p-xylene

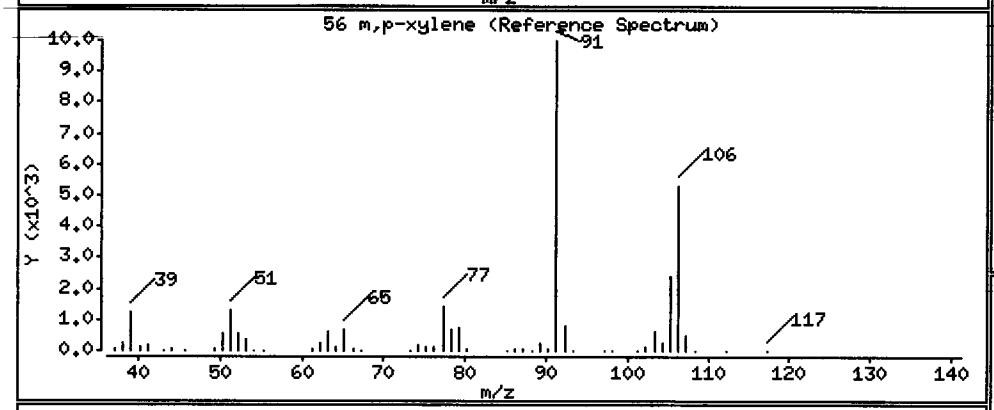
Concentration: 2.005 ug/Kg

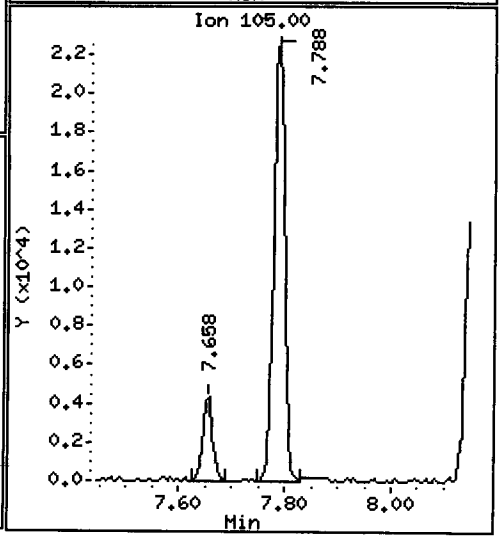


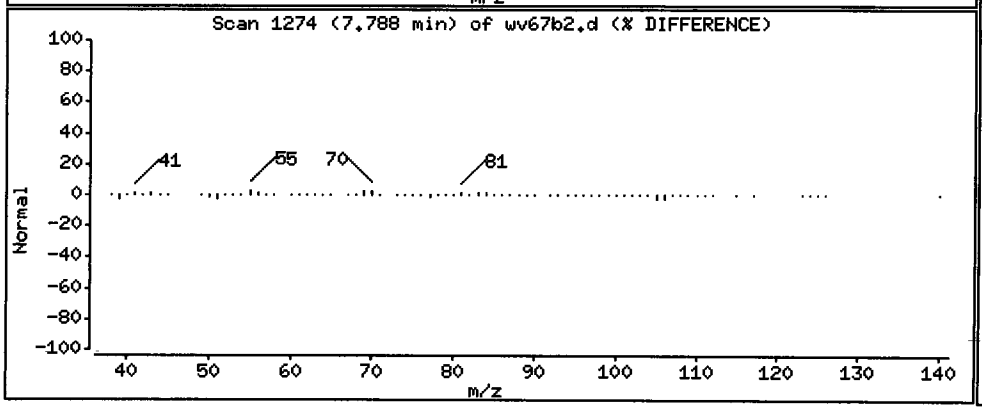












Data File: /chem1/nt5.i/27JUN13.b/wv67b2.d

Date : 28-JUN-2013 04:27

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,11.11,0

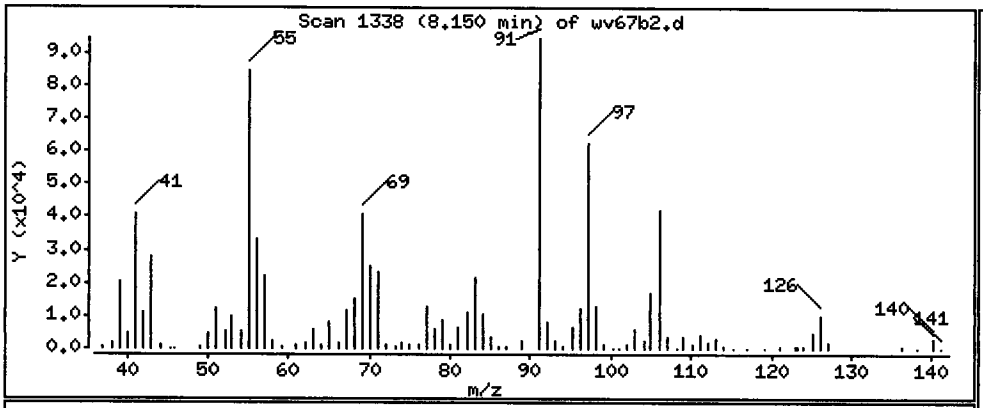
Operator: PB

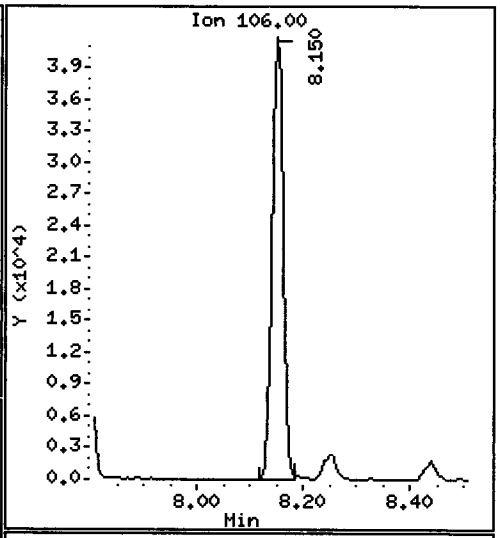
Column phase: RTXVMS

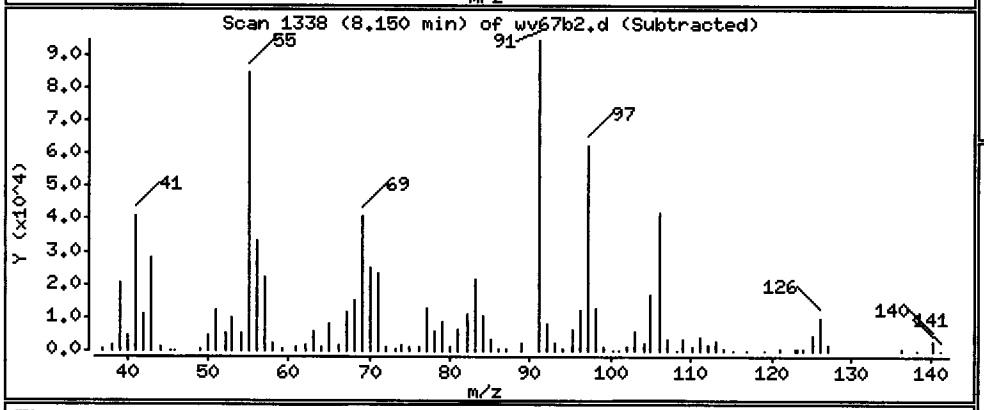
Column diameter: 0.18

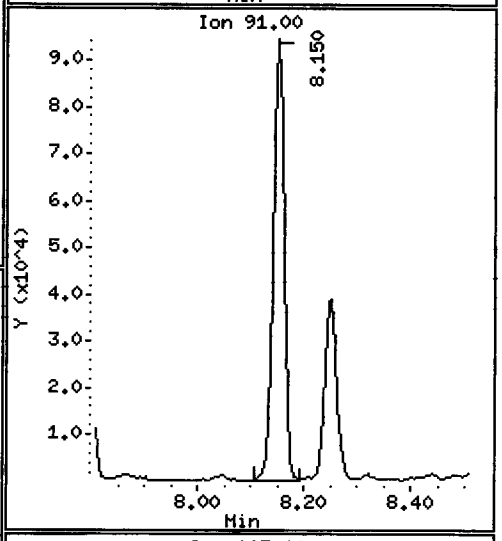
57 o-Xylene

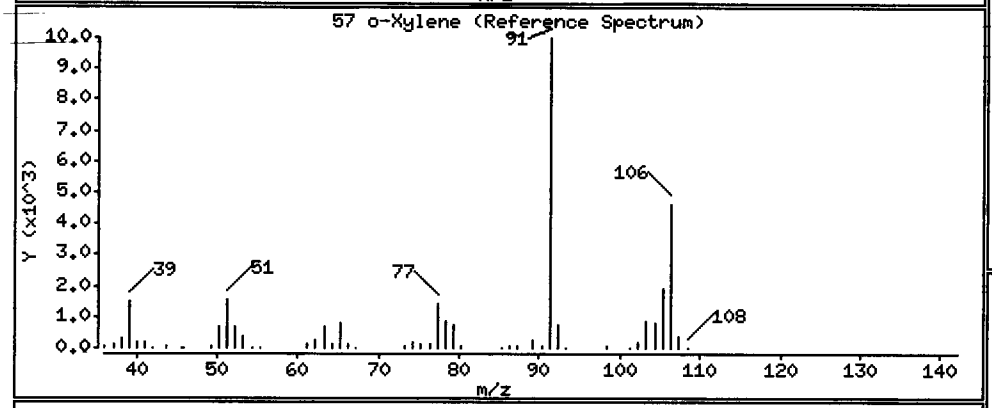
Concentration: 1.710 ug/Kg

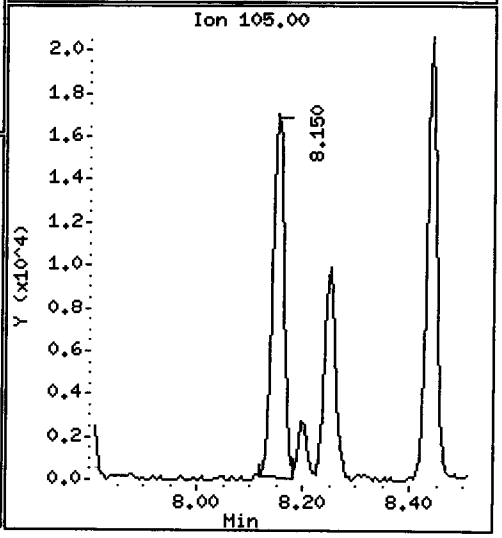


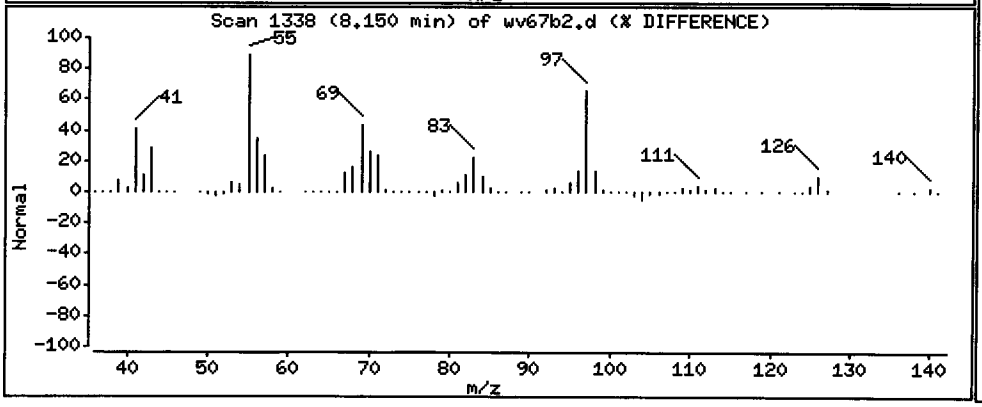












WV67:8B4B

Data File: /chem1/nt5.i/27JUN13.b/wv67b2.d

Date : 28-JUN-2013 04:27

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,11.11,0

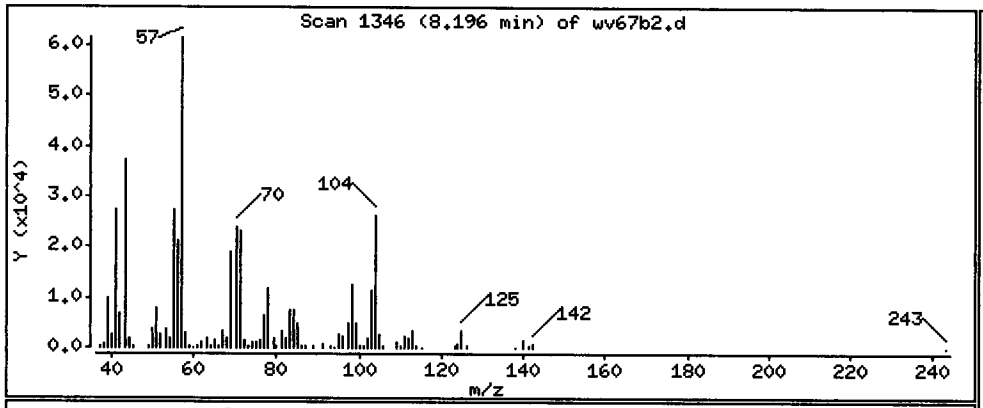
Operator: PB

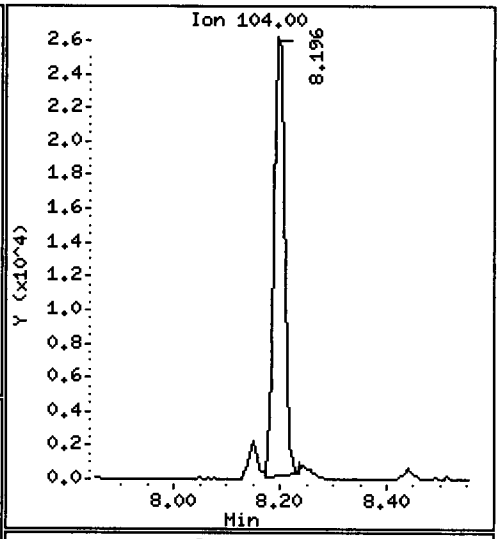
Column phase: RTXVMS

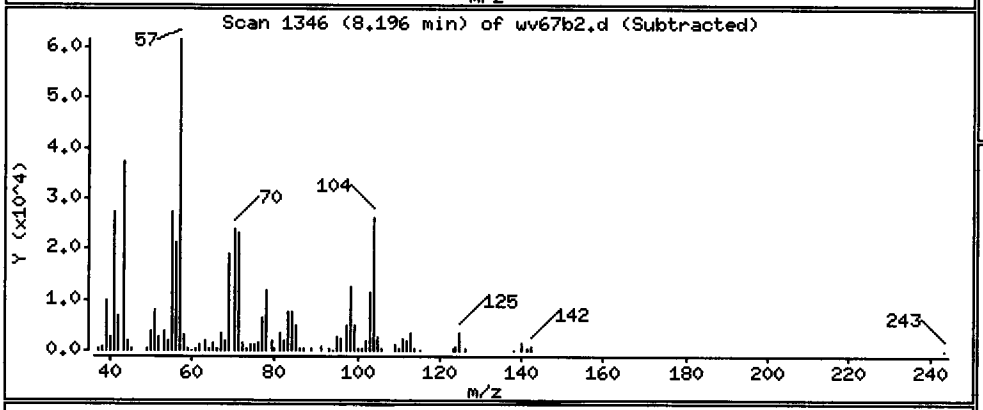
Column diameter: 0.18

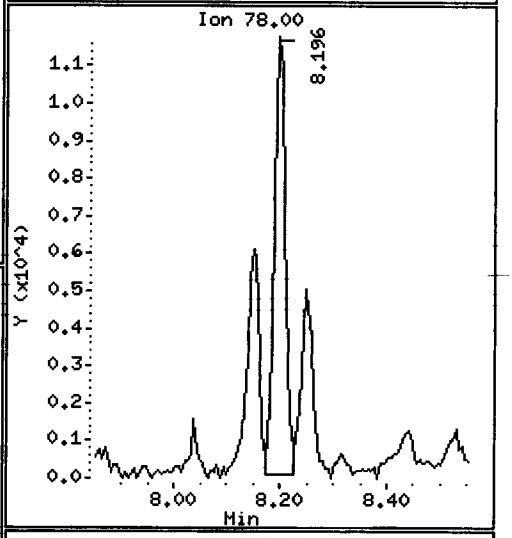
58 Styrene

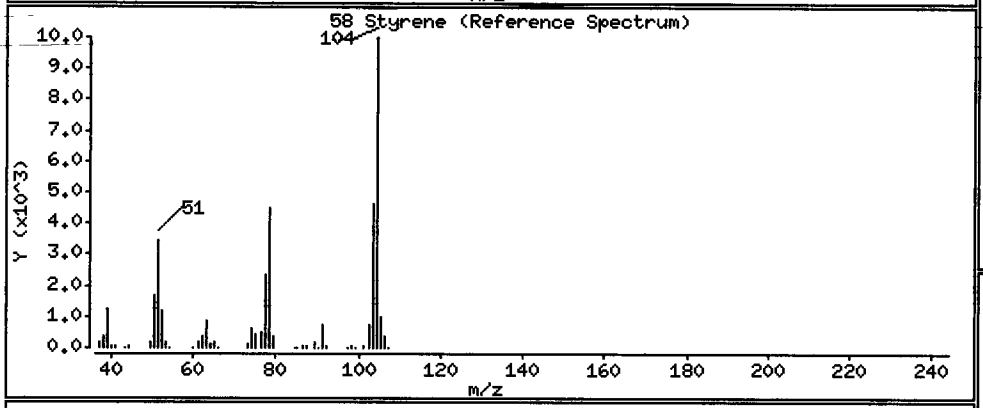
Concentration: 0.6221 ug/Kg

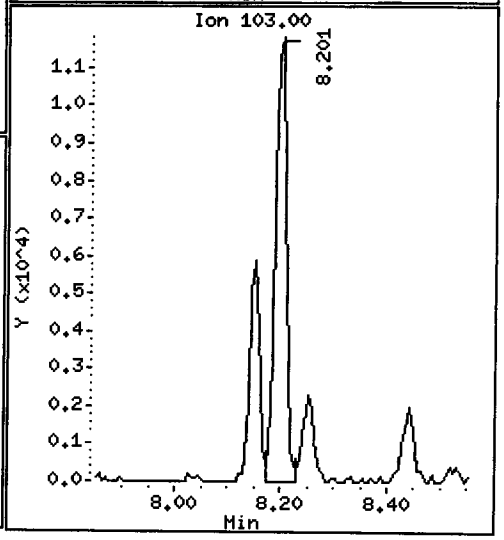


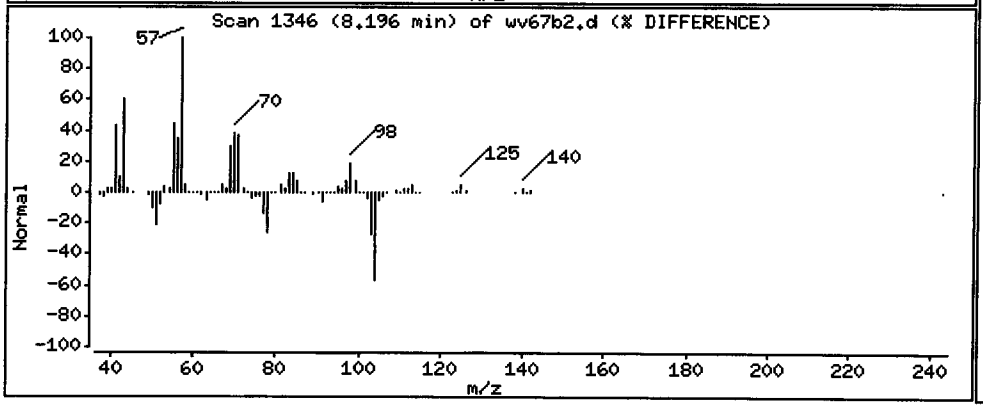












Data File: /chem1/nt5.i/27JUN13.b/wv67b2.d

Date : 28-JUN-2013 04:27

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,11.11,0

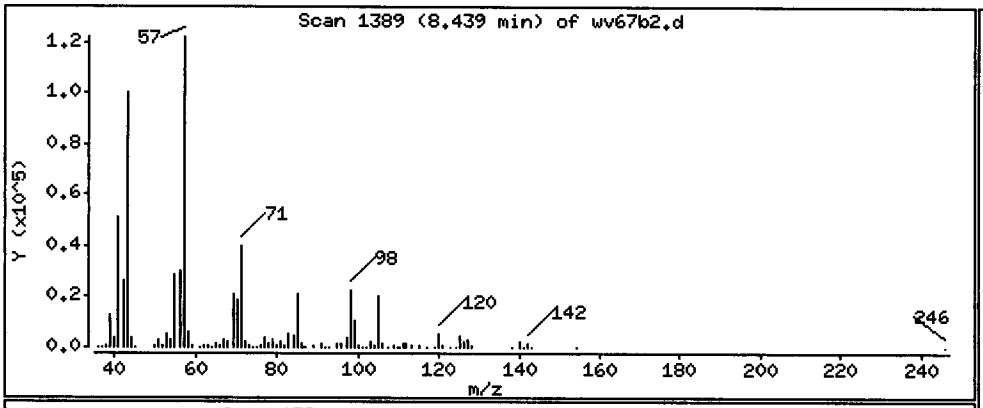
Operator: PB

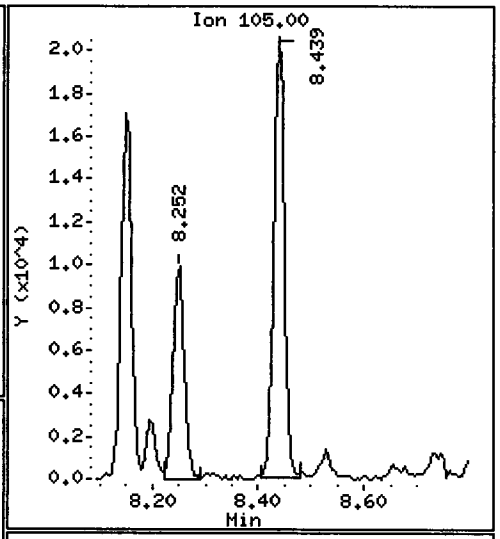
Column phase: RTXVMS

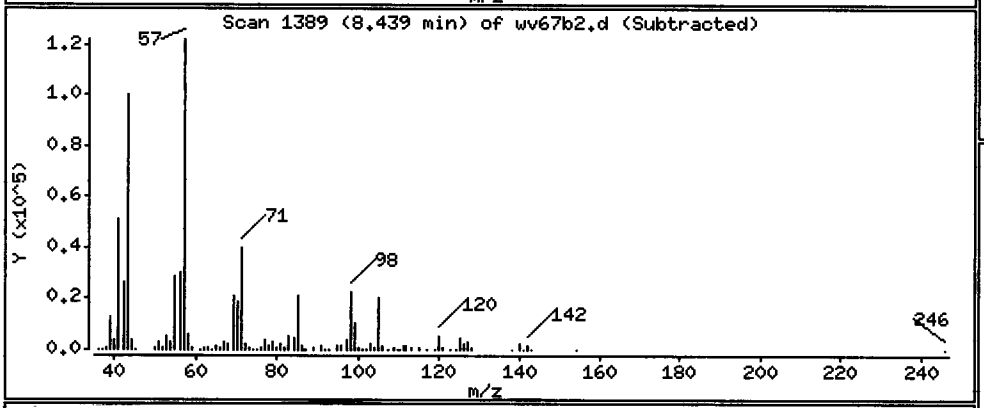
Column diameter: 0.18

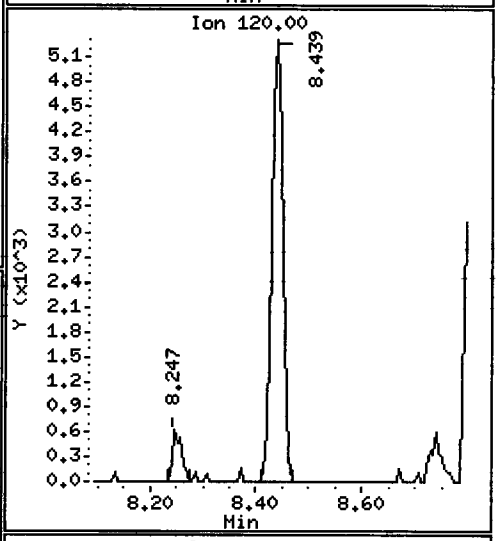
60 Isopropyl Benzene

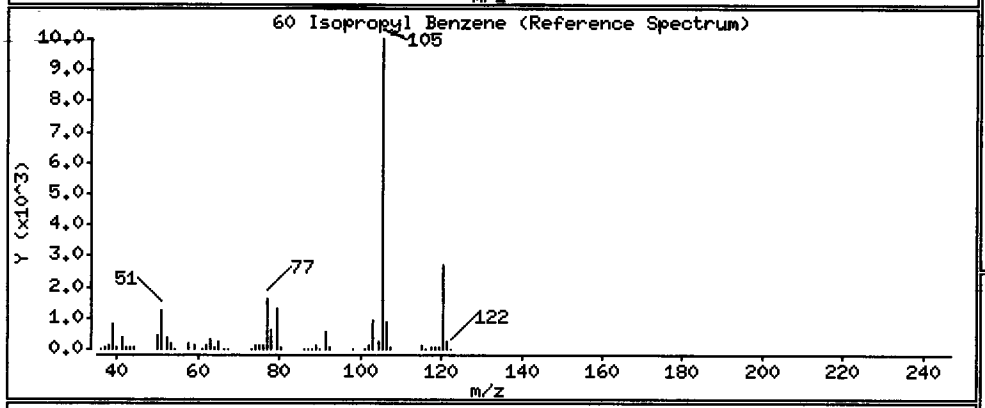
Concentration: 0.5530 ug/Kg

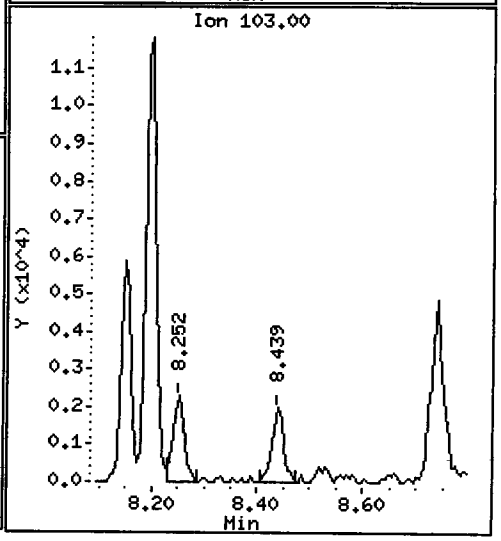


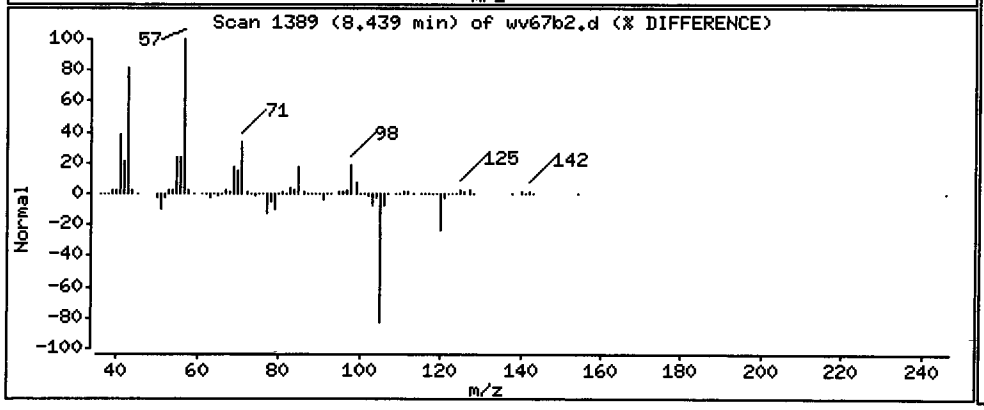












Data File: /chem1/nt5.i/27JUN13.b/wv67b2.d

Date : 28-JUN-2013 04:27

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,11.11,0

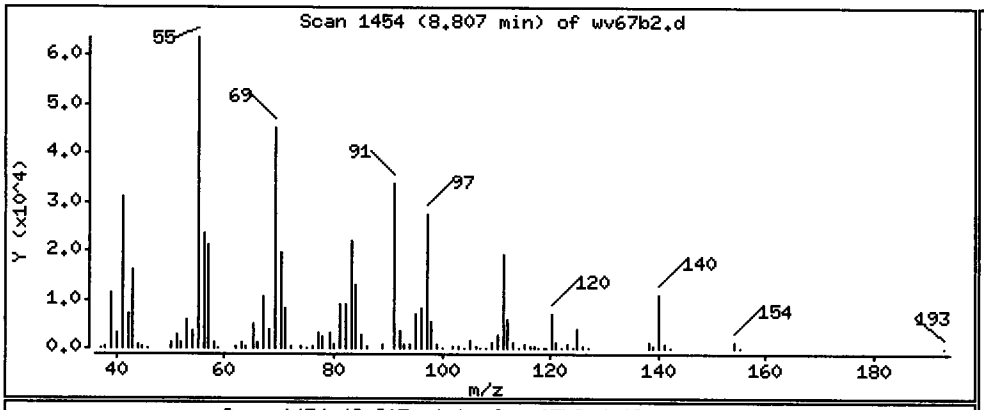
Operator: PB

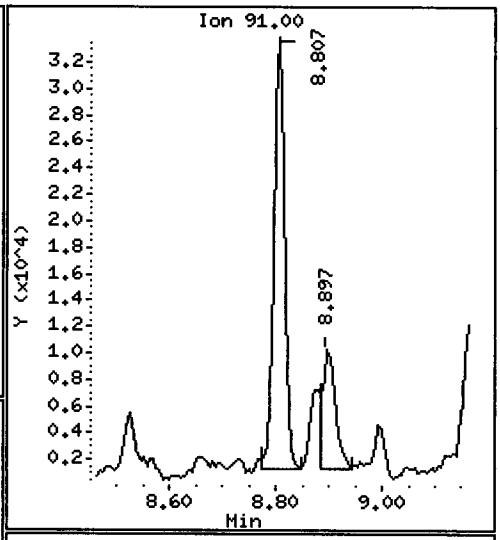
Column phase: RTXVMS

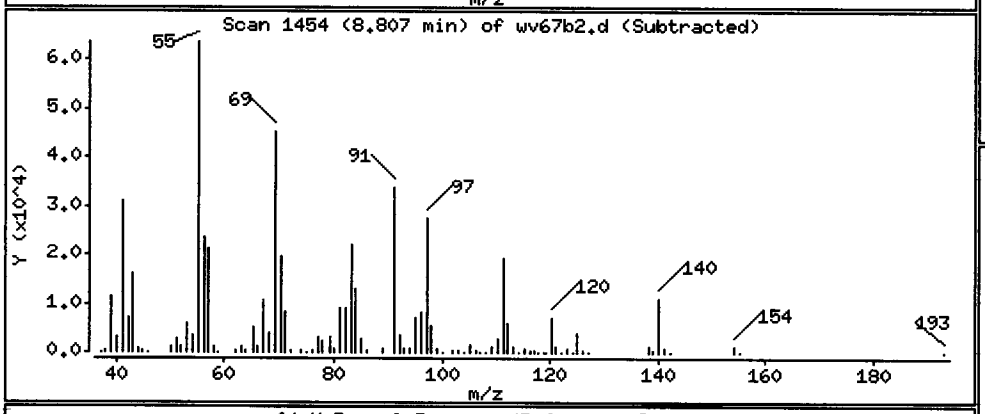
Column diameter: 0.18

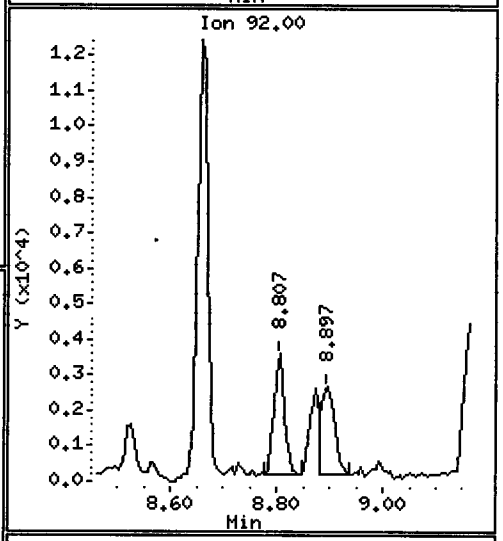
64 N-Propyl Benzene

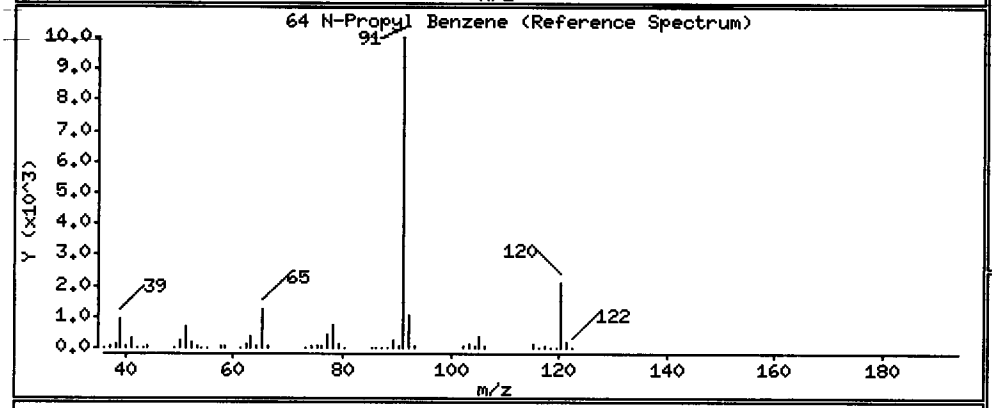
Concentration: 0.7333 ug/Kg

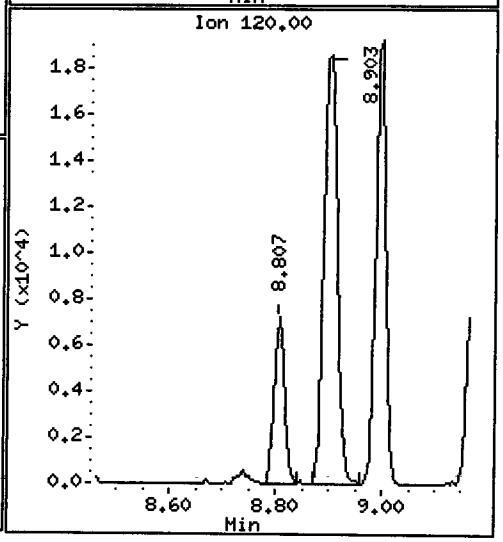


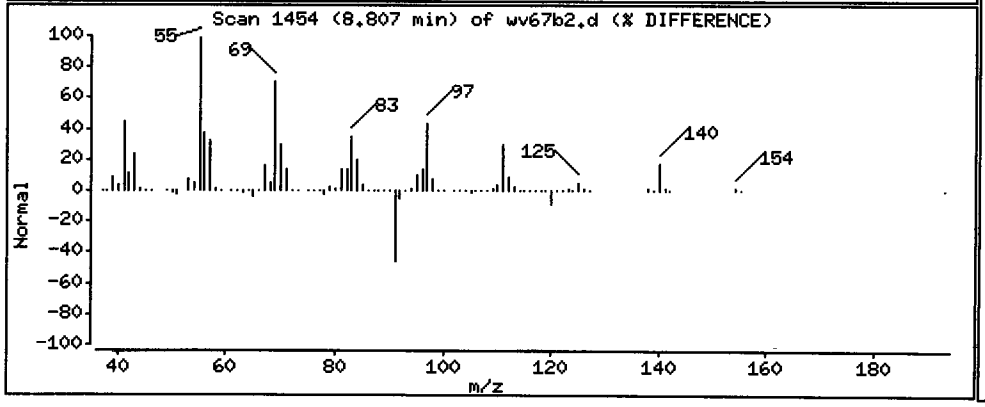












Data File: /chem1/nt5.i/27JUN13.b/wv67b2.d

Date : 28-JUN-2013 04:27

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,11,11,0

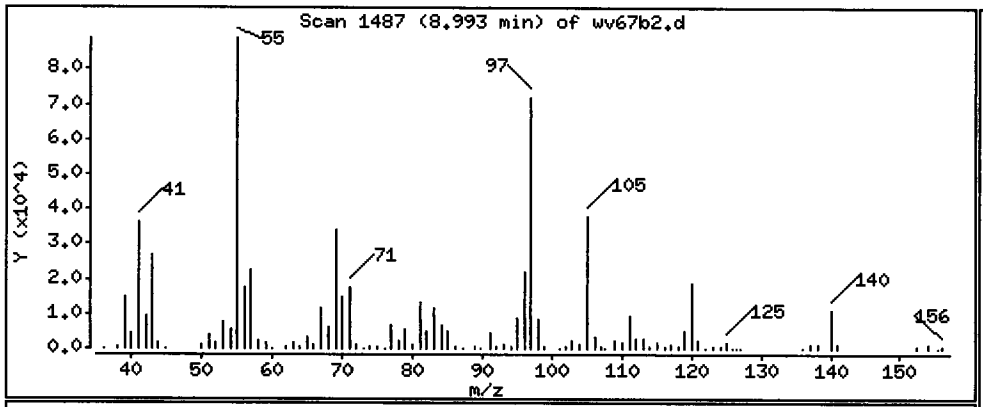
Operator: PB

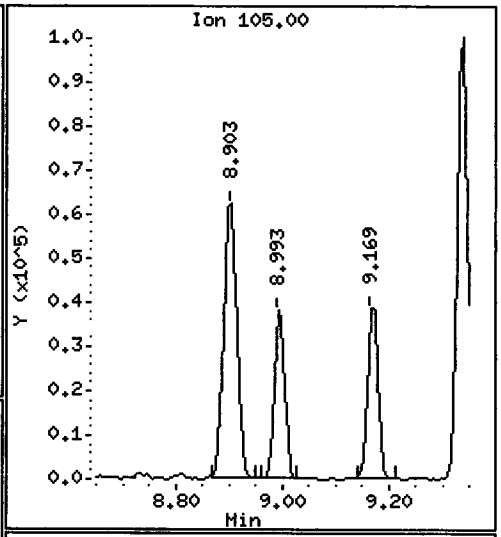
Column phase: RTXVMS

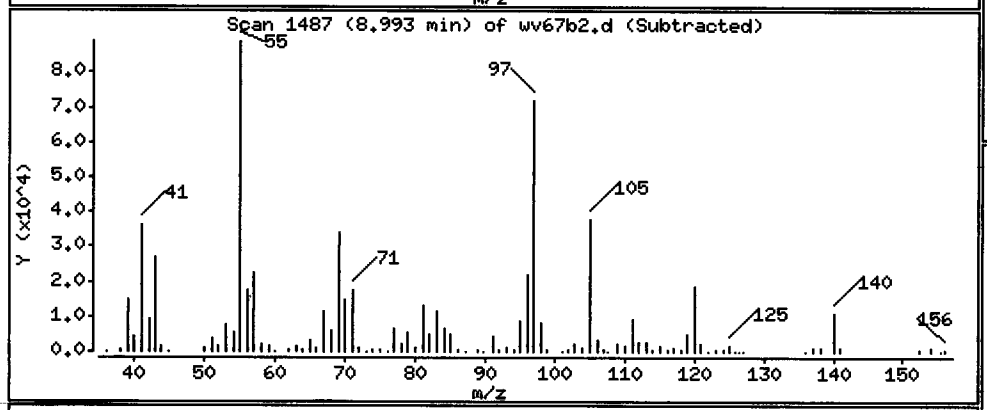
Column diameter: 0.18

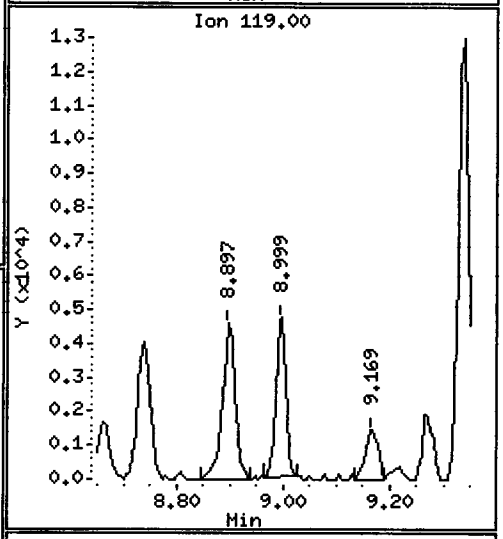
67 1,3,5-Trimethyl Benzene

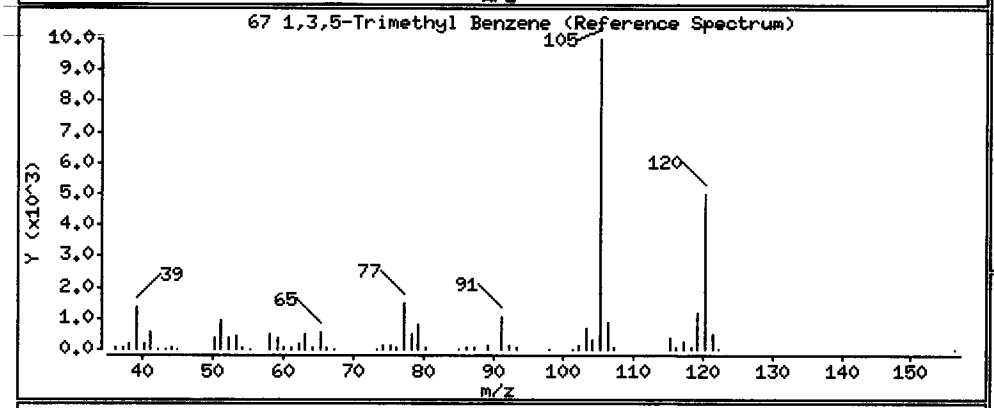
Concentration: 1.164 ug/Kg

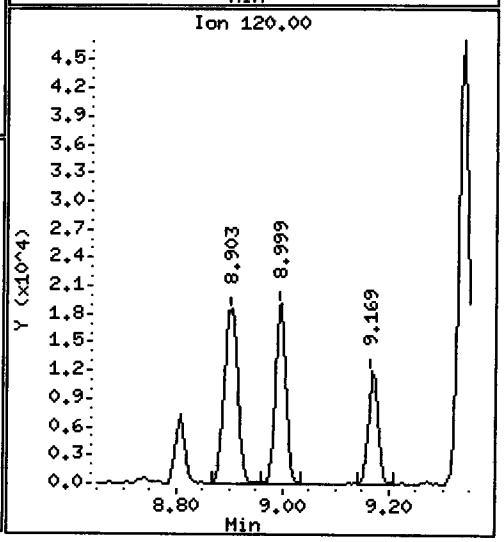


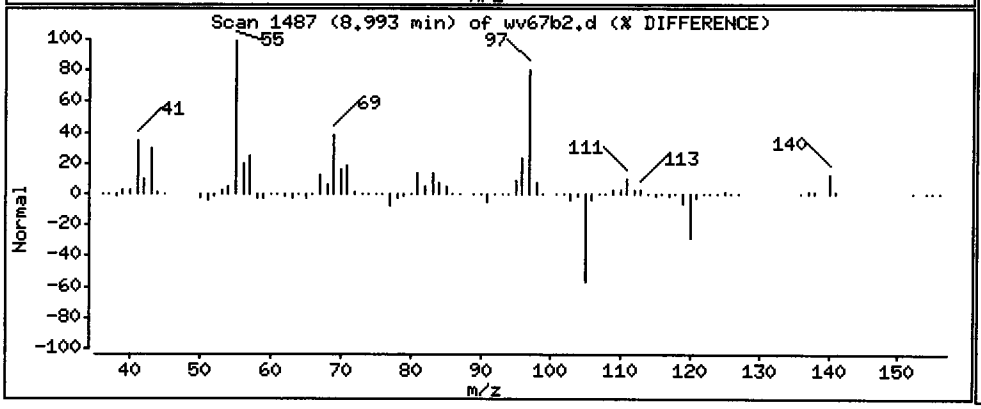












Data File: /chem1/nt5.i/27JUN13.b/wv67b2.d

Date : 28-JUN-2013 04:27

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,11.11,0

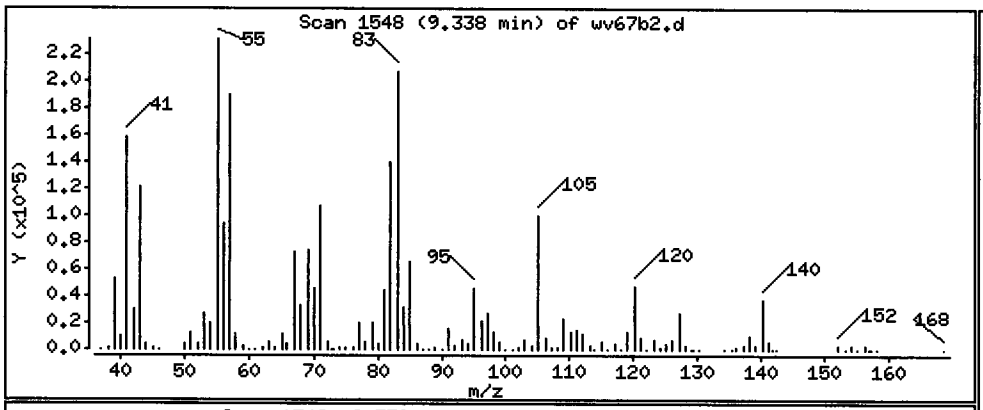
Operator: PB

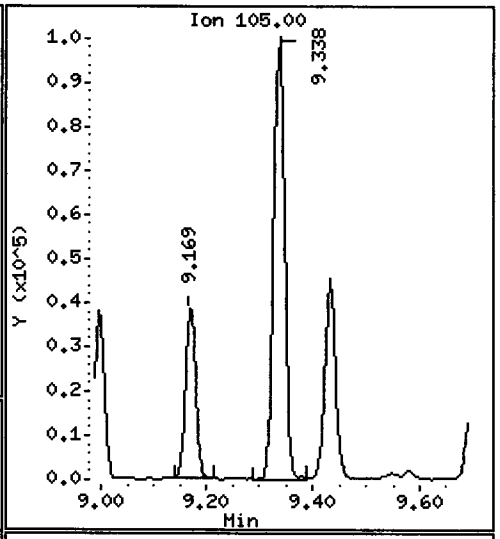
Column phase: RTXVMS

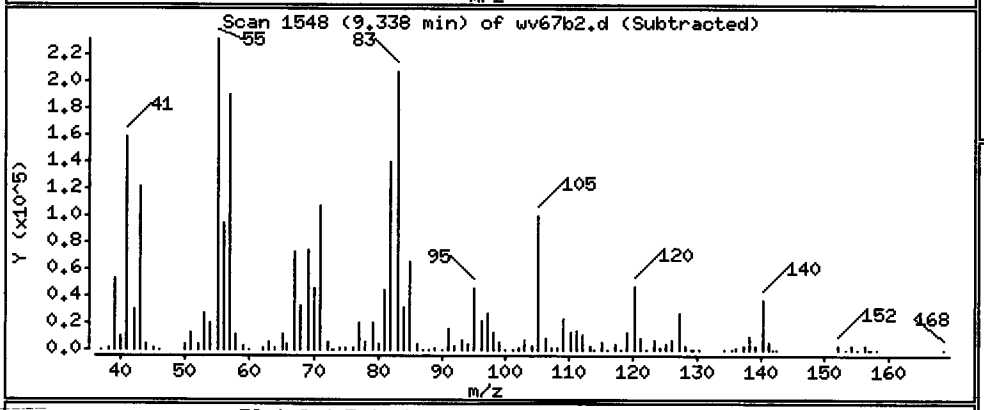
Column diameter: 0.18

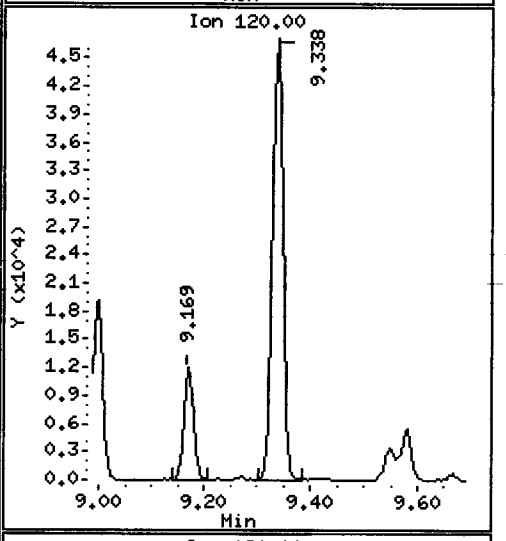
72 1,2,4-Trimethylbenzene

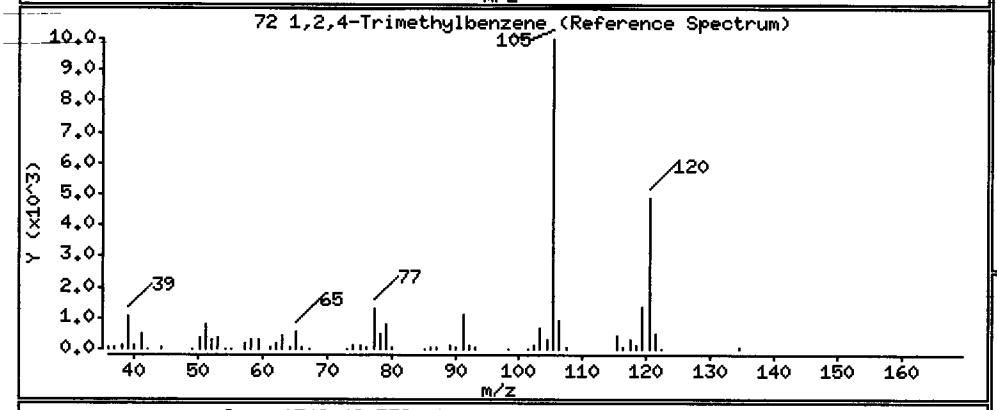
Concentration: 3.311 ug/Kg

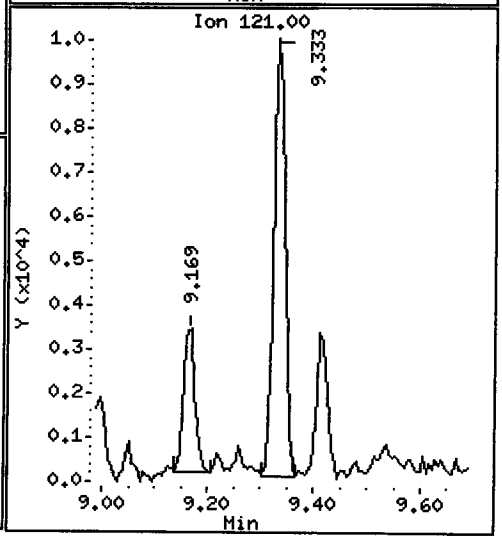


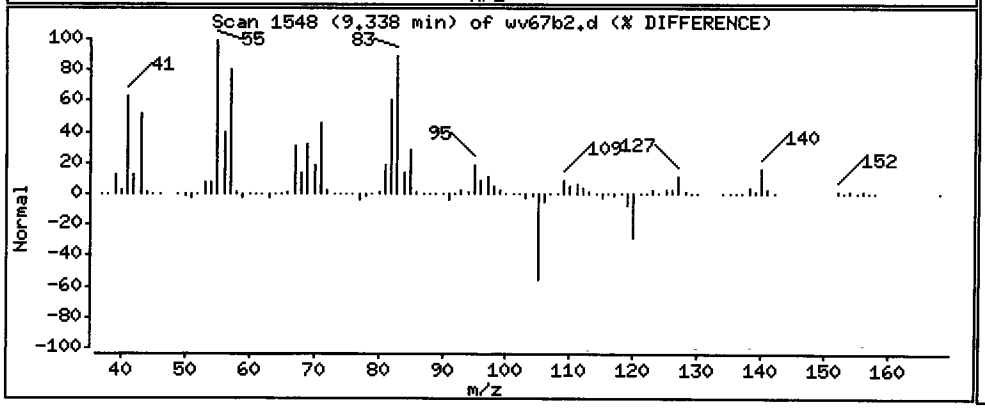












Data File: /chem1/nt5.i/27JUN13.b/wv67b2.d

Date : 28-JUN-2013 04:27

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,11.11,0

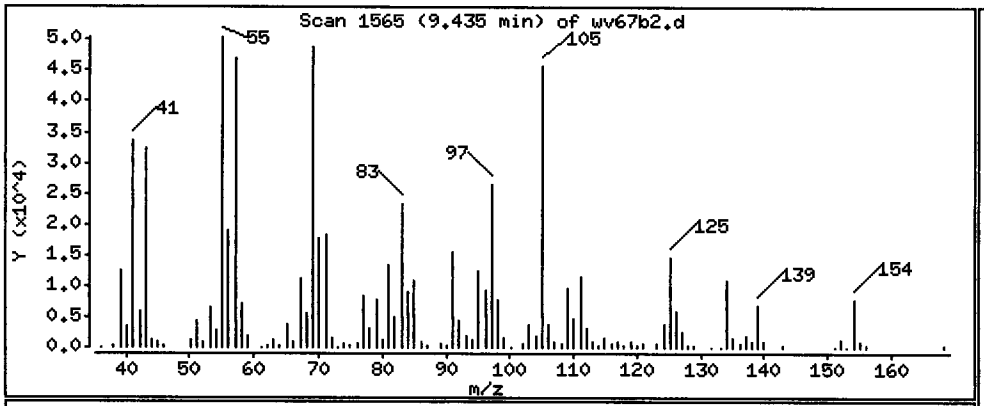
Operator: PB

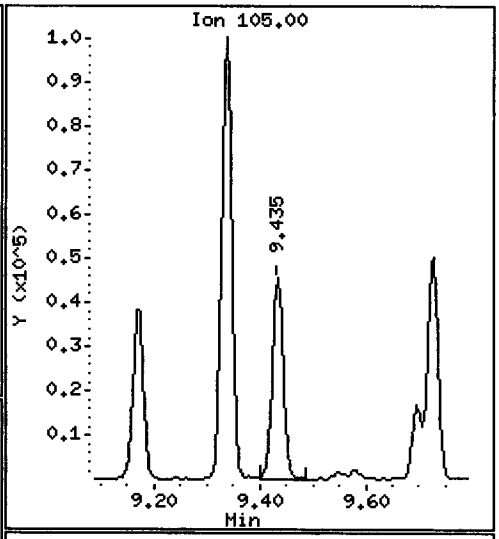
Column phase: RTXVMS

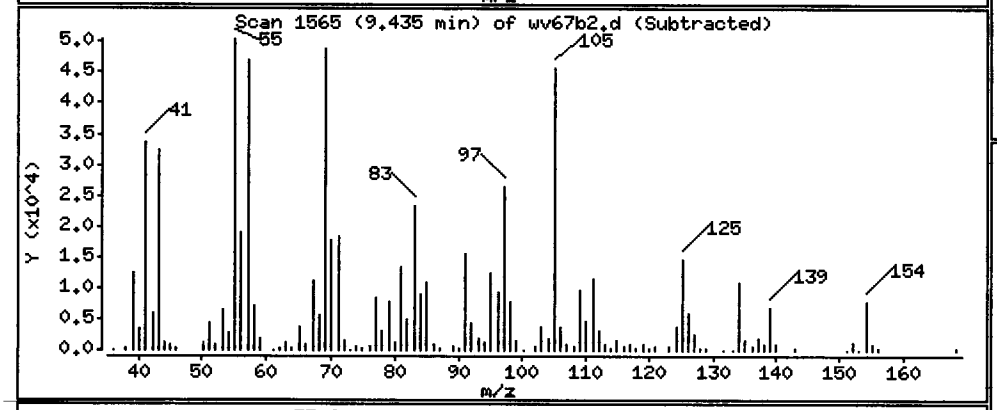
Column diameter: 0.18

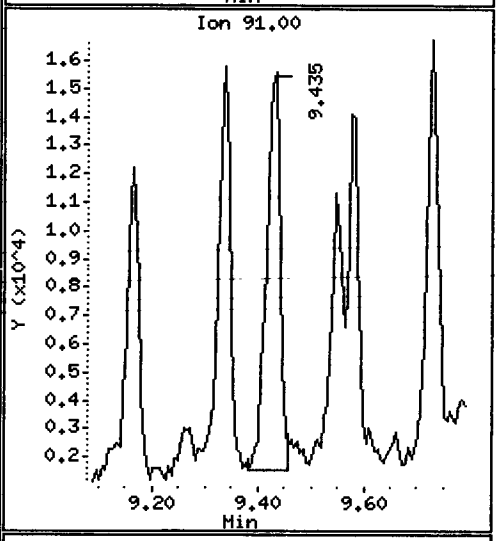
73 S-Butyl Benzene

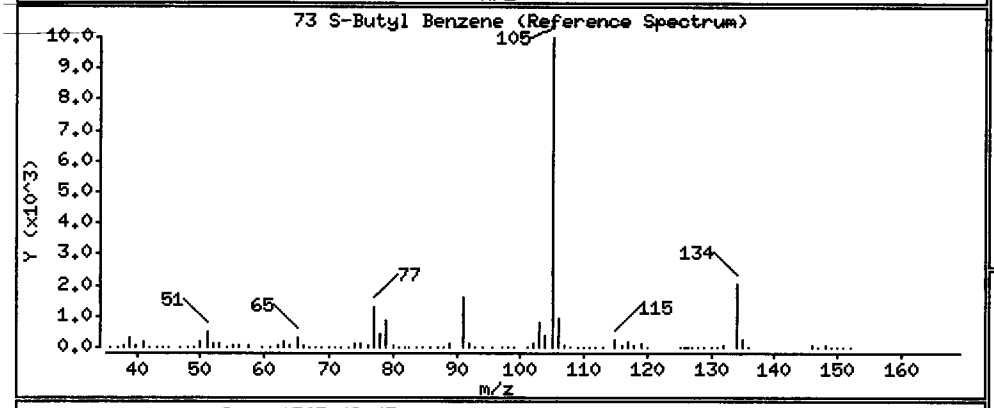
Concentration: 1.179 ug/Kg

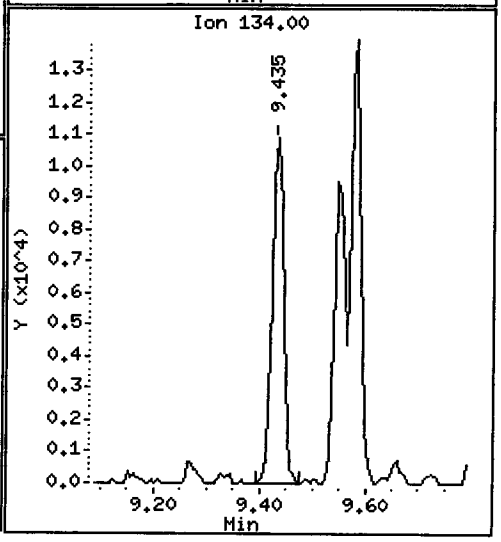


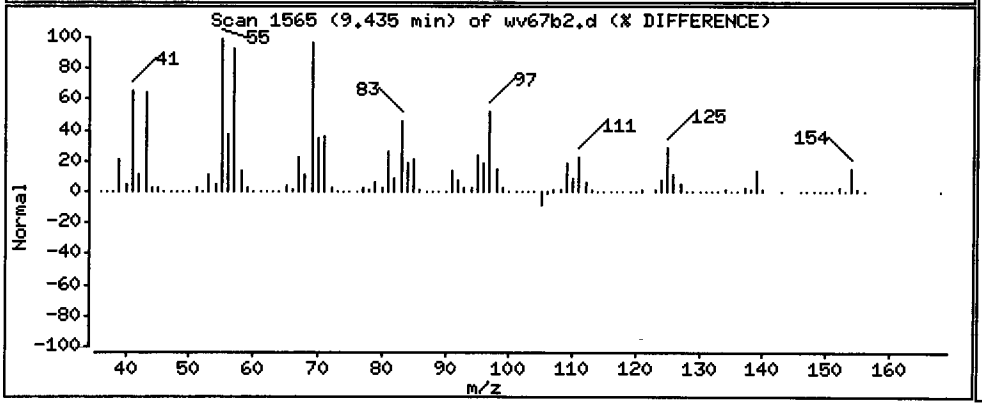












Data File: /chem1/nt5.i/27JUN13.b/wv67b2.d

Date : 28-JUN-2013 04:27

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,11.11,0

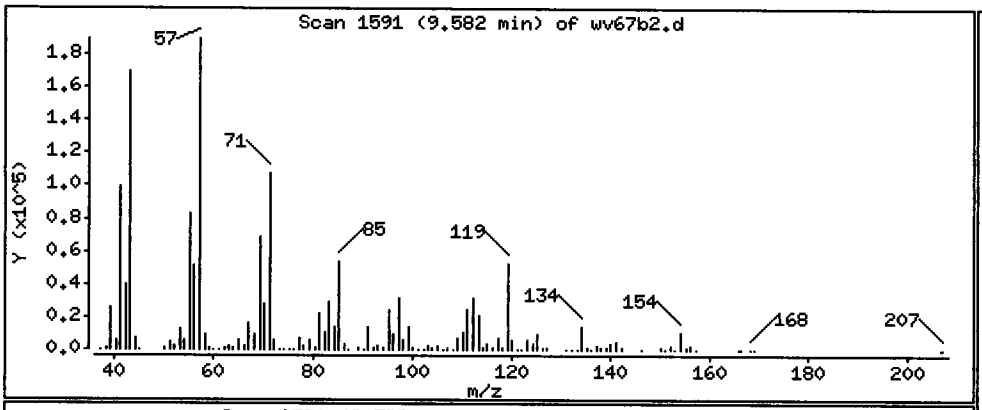
Operator: PB

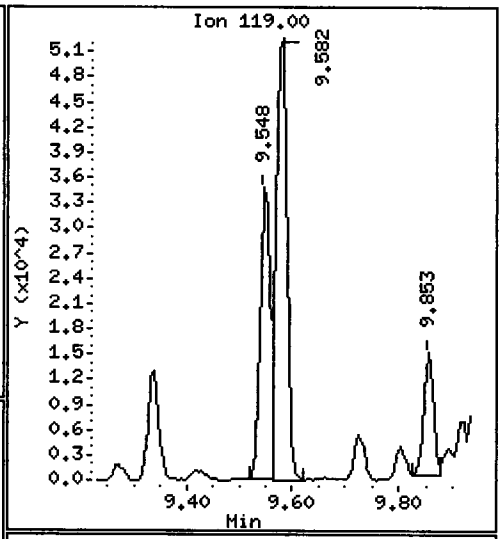
Column phase: RTXVMS

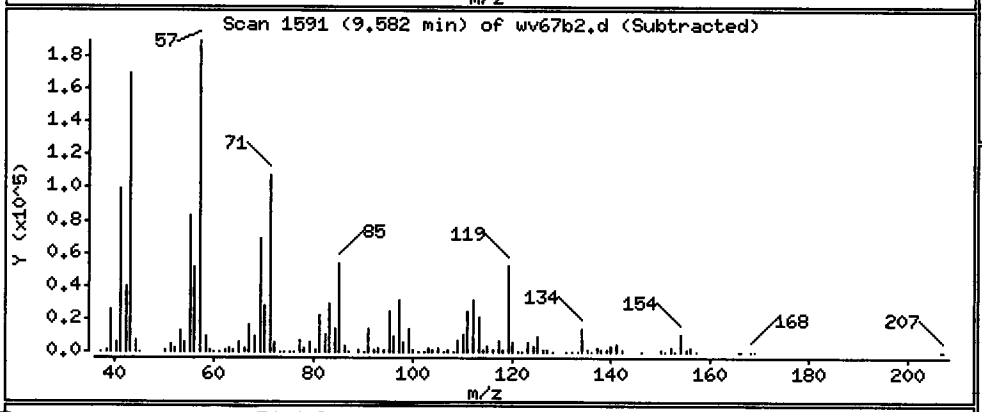
Column diameter: 0.18

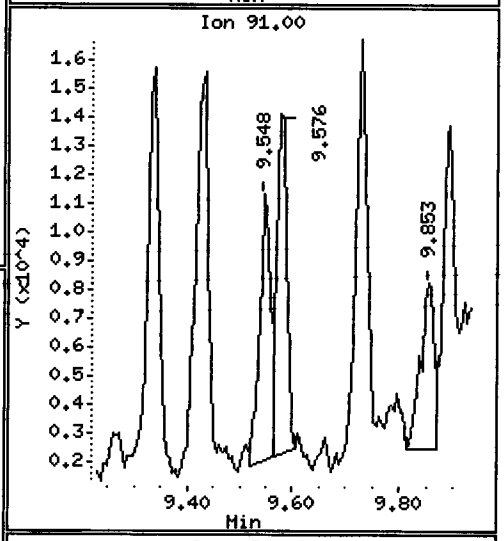
74 4-Isopropyl Toluene

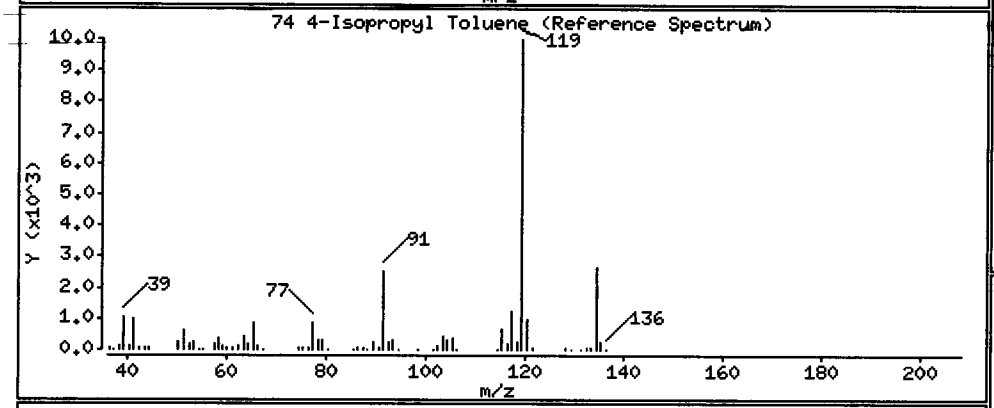
Concentration: 1.695 ug/Kg

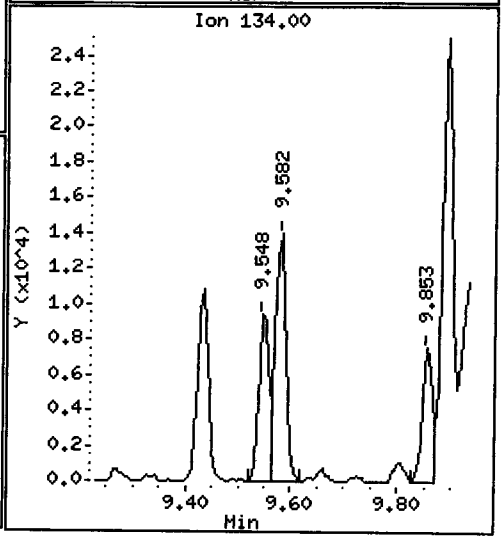


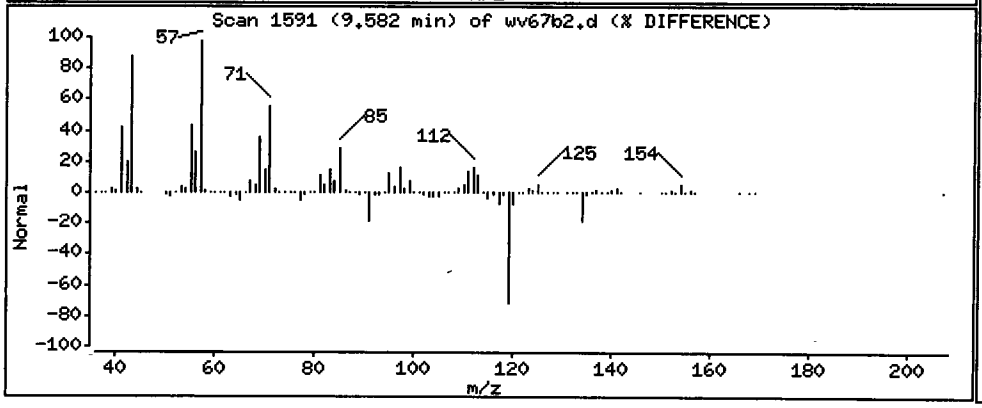












Data File: /chem1/nt5.i/27JUN13.b/wv67b2.d

Date : 28-JUN-2013 04:27

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,11.11,0

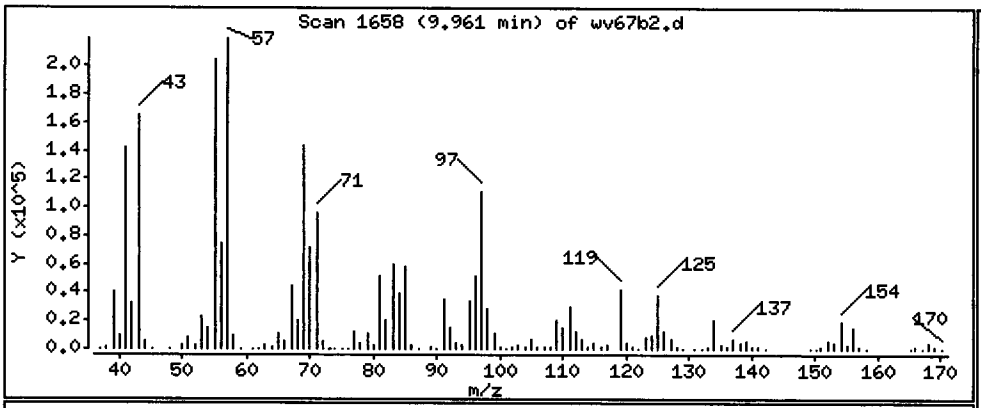
Operator: PB

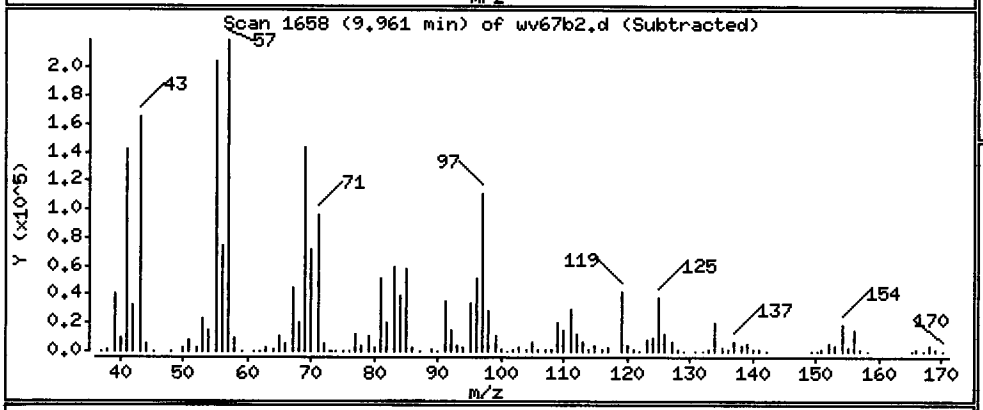
Column phase: RTXVMS

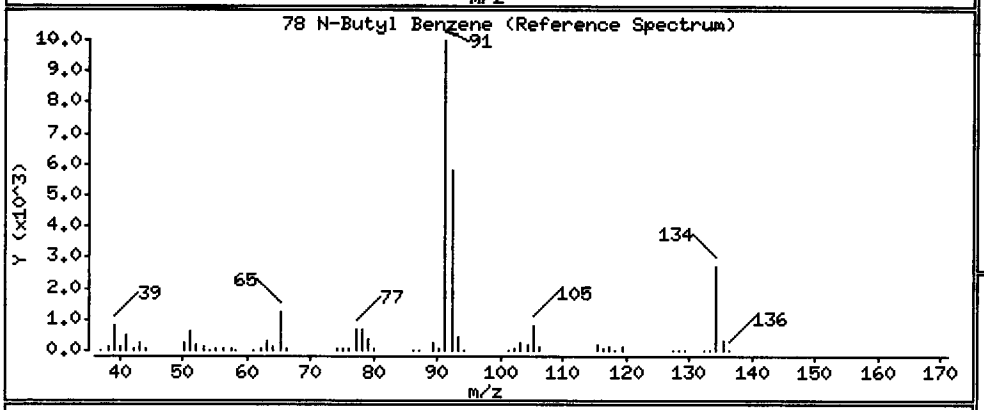
Column diameter: 0.18

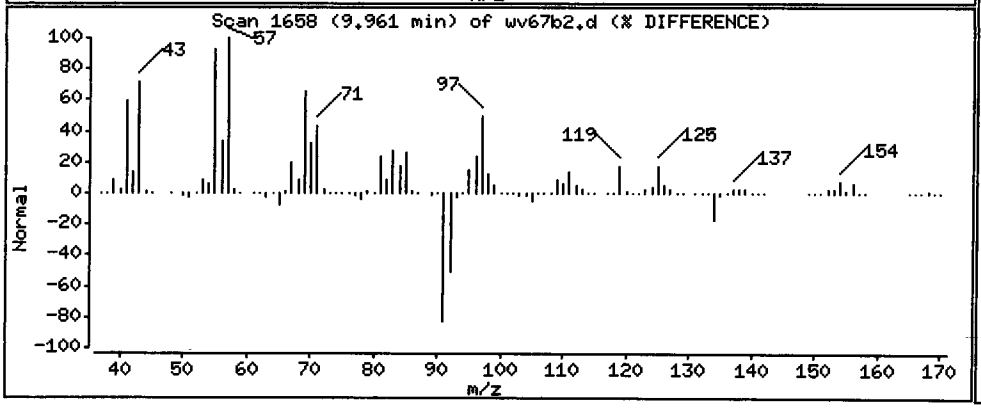
78 N-Butyl Benzene

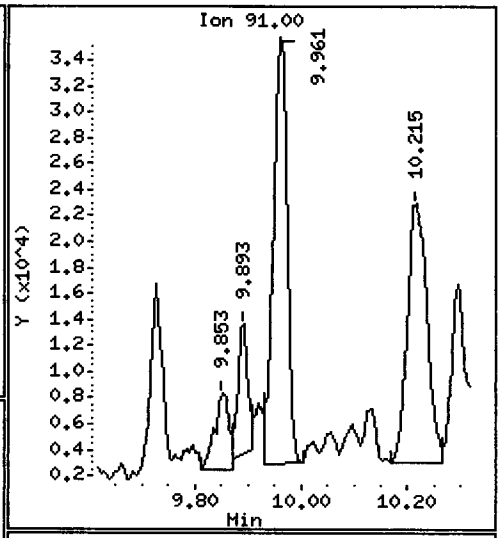
Concentration: 1.435 ug/Kg

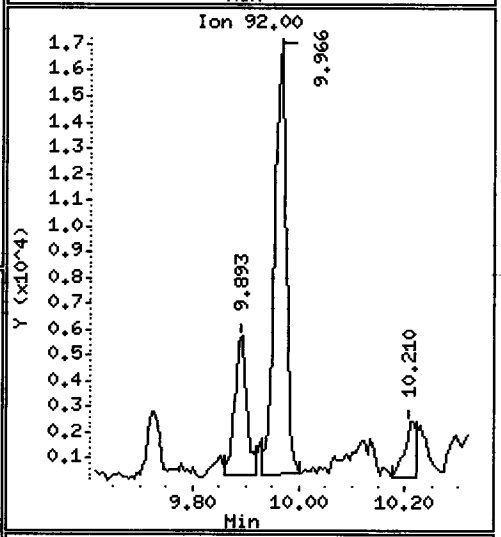


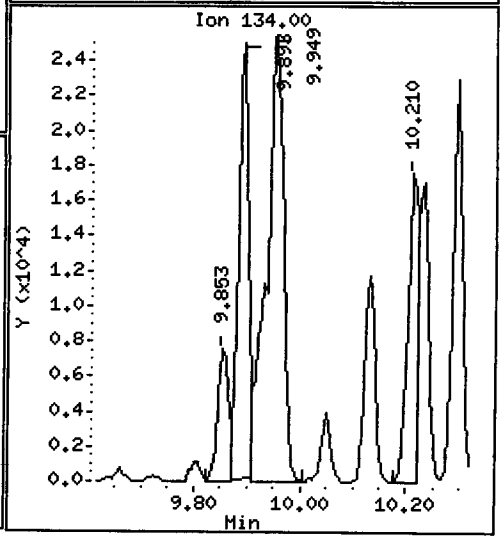












Data File: /chem1/nt5.i/27JUN13.b/wv67b2.d

Date : 28-JUN-2013 04:27

Client ID: UP-MHF-165-20130626

Instrument: nt5.i

Sample Info: WV67B,5,11.11,0

Operator: PB

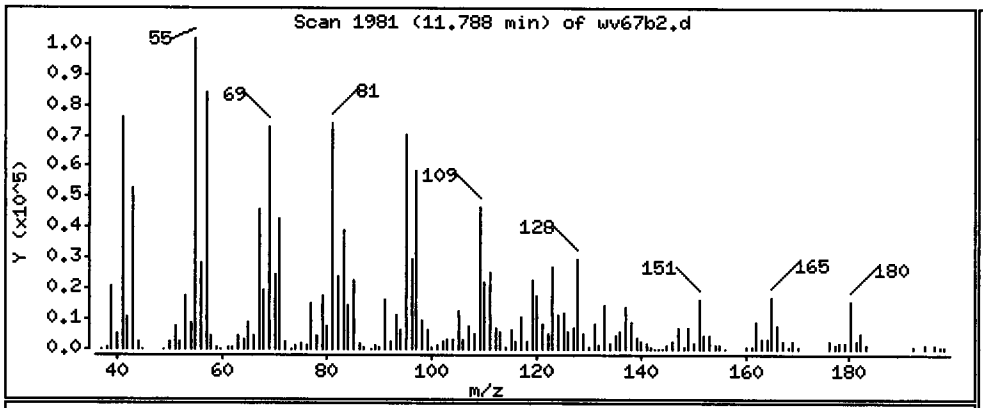
Column phase: RTXVMS

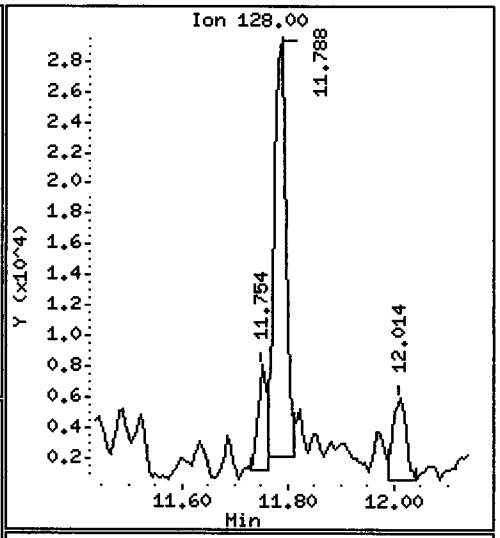
Column diameter: 0.18

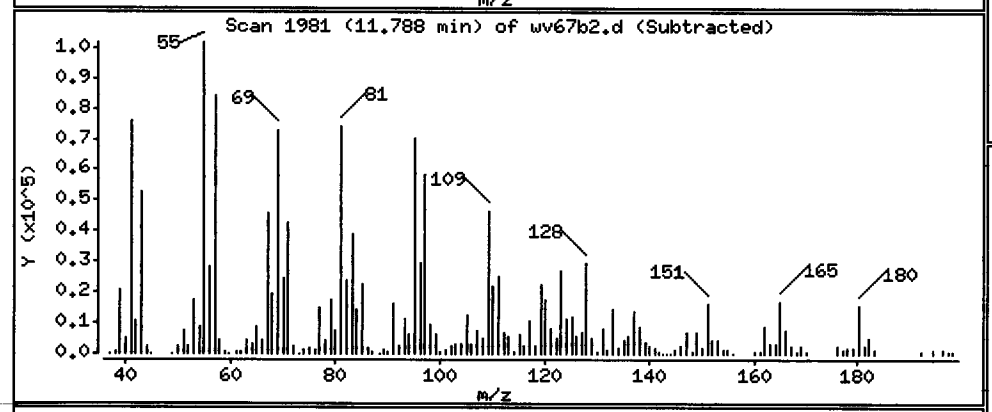
JPL
Not Reported
6/28/13

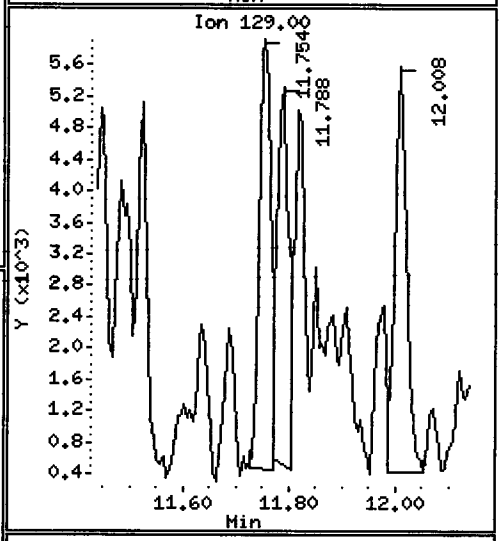
84 Naphthalene

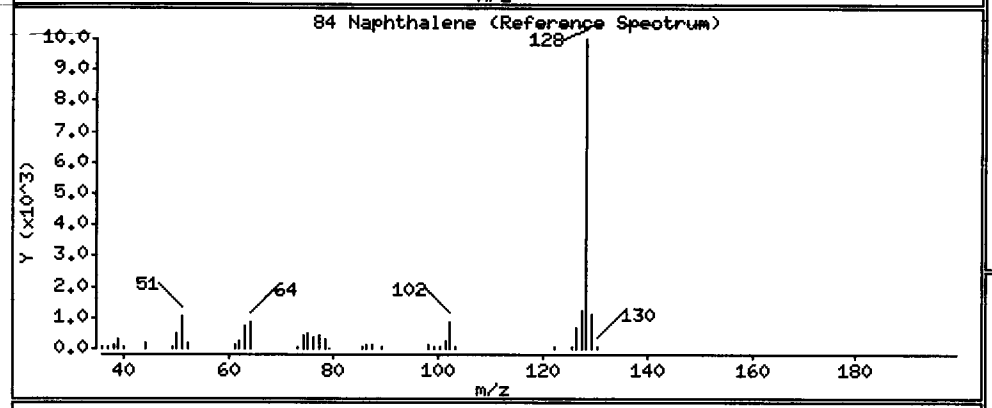
Concentration: 1.042 ug/Kg

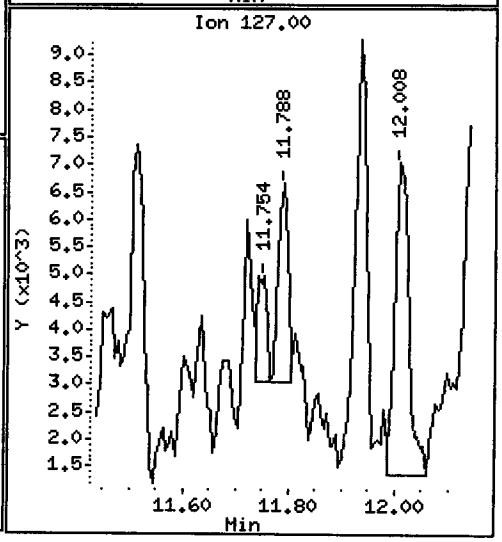


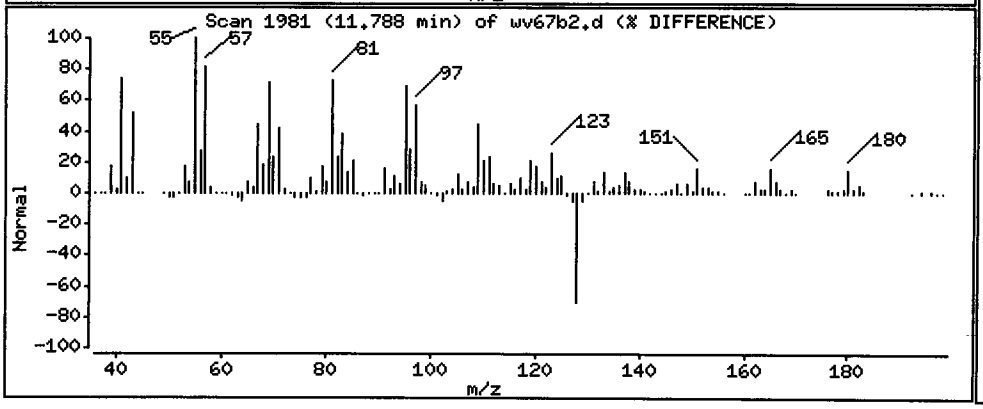












WV67 : 8 of 14

CO-ELUTION SUMMARY FOR FILE - wv67b2.d

Lab ID: WV67B, Method: VO121012S.m, Instrument: nt5.i, Date: 28-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/wv67c2.d
Lab Smp Id: WV67C Client Smp ID: UP-CB-A6-20130626-S
Inj Date : 28-JUN-2013 04:51
Operator : PB Inst ID: nt5.i
Smp Info : WV67C,5,7.73,0
Misc Info : 13-13659
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 11:09 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	7.73000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	1.617	1.611	(0.346)	28498	1.71774	1.111
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	1.979	1.979	(0.424)	432962	12.2774	7.941
9 112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10 Iodomethane	142	Compound Not Detected.					
11 Bromoethane	108	Compound Not Detected.					
12 Acrolein	56	Compound Not Detected.					
13 Methylene Chloride	84	2.454	2.454	(0.525)	24217	1.98045	1.281
14 Acetone	43	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	Compound Not Detected.					
	16 Methyl tert butyl ether	73	Compound Not Detected.					
	17 1,1-Dichloroethane	63	Compound Not Detected.					
	18 Acrylonitrile	53	Compound Not Detected.					
	19 Vinyl Acetate	43	Compound Not Detected.					
	20 Cis-1,2-Dichloroethene	96	Compound Not Detected.					
	22 2,2-Dichloropropane	77	Compound Not Detected.					
	23 Bromochloromethane	128	Compound Not Detected.					
	24 Chloroform	83	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.196	4.196	(0.898)	741593	55.2764	35.754
	26 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 1,1-Dichloropropene	75	Compound Not Detected.					
	29 2-Butanone	72	4.400	4.434	(0.942)	92325	57.5980	37.256(Q)
	30 Benzene	78	4.536	4.530	(0.885)	150886	3.00278	1.942
*	31 Pentafluorobenzene	168	4.671	4.671	(1.000)	1393353	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.666	(0.999)	826129	54.1871	35.050
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.124	5.118	(1.000)	2310682	50.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	40 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	41 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	42 d8-Toluene	98	6.295	6.295	(1.229)	2476052	43.2299	27.962
	43 Toluene	92	6.335	6.335	(1.236)	1139366	35.8431	23.184
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	11240	1.28459	0.8309
	45 4-Methyl-2-Pentanone	58	6.697	6.708	(1.307)	577749	96.0550	62.131
	46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47 1,1,2-Trichloroethane	97	Compound Not Detected.					
	48 Chlorodibromomethane	129	Compound Not Detected.					
	49 1,3-Dichloropropane	76	Compound Not Detected.					
	50 1,2-Dibromoethane	107	Compound Not Detected.					
	51 2-Hexanone	43	Compound Not Detected.					
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	1485534	50.0000	
	53 Chlorobenzene	112	Compound Not Detected.					
	54 Ethyl Benzene	91	7.658	7.664	(1.008)	652598	18.0697	11.688
	55 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56 m,p-xylene	106	7.788	7.794	(1.025)	237523	17.5192	11.332
	57 o-Xylene	106	8.150	8.156	(1.073)	164829	12.3181	7.968
	58 Styrene	104	8.201	8.201	(1.080)	110473	5.03831	3.259
	59 Bromoform	173	Compound Not Detected.					
	60 Isopropyl Benzene	105	8.439	8.445	(0.873)	73765	5.73377	3.709
$	62 4-Bromofluorobenzene	95	8.660	8.665	(1.140)	502997	31.8138	20.578(R)
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	8.807	8.812	(0.911)	65194	4.20648	2.721
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
66	2-Chloro Toluene	91	Compound Not Detected.					
67	1,3,5-Trimethyl Benzene	105	8.993	8.999	(0.930)	112975	10.1866	6.589
68	1,2,3-Trichloropropane	110	Compound Not Detected.					
69	Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
70	4-Chloro Toluene	91	Compound Not Detected.					
71	T-Butyl Benzene	119	Compound Not Detected.					
72	1,2,4-Trimethylbenzene	105	9.338	9.338	(0.966)	250994	23.1457	14.971
73	S-Butyl Benzene	105	9.435	9.440	(0.976)	78852	5.56742	3.601(Q)
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	89066	7.76288	5.021
75	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 76	d4-1,4-Dichlorobenzene	152	9.666	9.672	(1.000)	310157	50.0000	
77	1,4-Dichlorobenzene	146	9.678	9.683	(1.001)	7053	1.05469	0.6822(Q)
78	N-Butyl Benzene	91	9.961	9.966	(1.030)	48405	4.49586	2.908(Q)
$ 79	d4-1,2-Dichlorobenzene	152	10.045	10.051	(1.039)	263050	46.4991	30.077
80	1,2-Dichlorobenzene	146	Compound Not Detected.					
81	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
84	Naphthalene	128	11.782	11.788	(1.219)	71833	6.91537	4.473
85	1,2,3-Trichlorobenzene	180	Compound Not Detected.					

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: wv67c2.d
Lab Smp Id: WV67C
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13659

Calibration Date: 27-JUN-2013
Calibration Time: 17:46
Client Smp ID: UP-CB-A6-20130626-S
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1393353	-13.65
35 1,4-Difluorobenze	2656709	1328354	5313418	2310682	-13.02
52 d5-Chlorobenzene	2557235	1278618	5114470	1485534	-41.91
76 d4-1,4-Dichlorobe	1374359	687180	2748718	310157	-77.43

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.67	0.00
35 1,4-Difluorobenze	5.12	4.62	5.62	5.12	0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WV67C
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13659

Client SDG: WV67
Fraction: VOA
Client Smp ID: UP-CB-A6-20130626-S
Operator: PB
SampleType: SAMPLE
Quant Type: ISTD

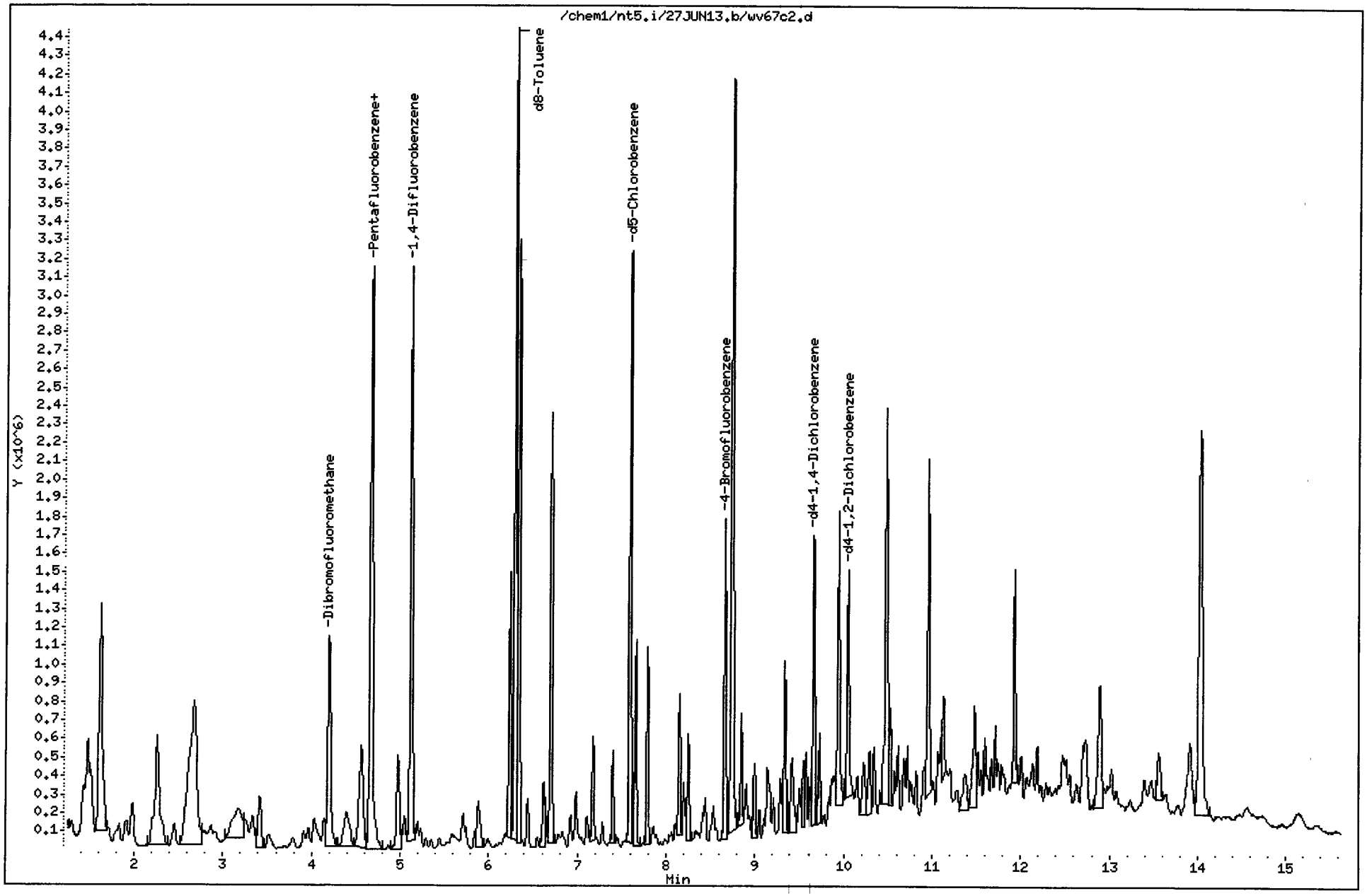
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	55.276	110.55	70-130
$ 32 d4-1,2-Dichloroeth	50.000	54.187	108.37	80-149
$ 42 d8-Toluene	50.000	43.230	86.46	77-120
$ 62 4-Bromofluorobenze	50.000	31.814	63.63*	80-120
$ 79 d4-1,2-Dichloroben	50.000	46.499	93.00	80-120

Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d
Date : 28-JUN-2013 04:51
Client ID: UP-CB-A6-20130626-S
Sample Info: WV67C,5,7.73,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d

Date : 28-JUN-2013 04:51

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,7.73,0

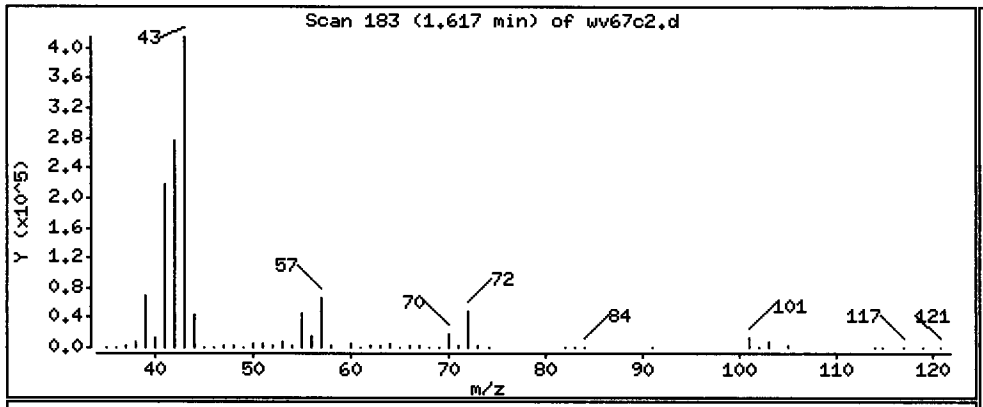
Operator: PB

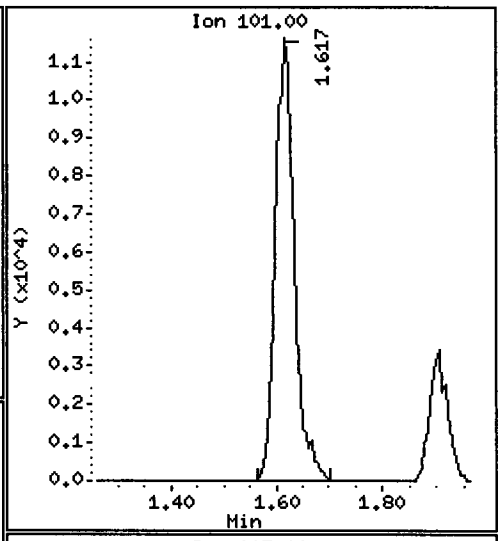
Column phase: RTXVMS

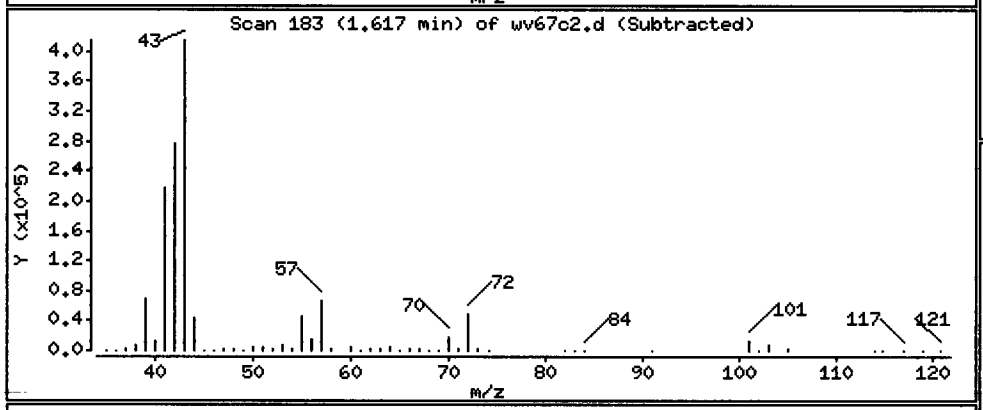
Column diameter: 0.18

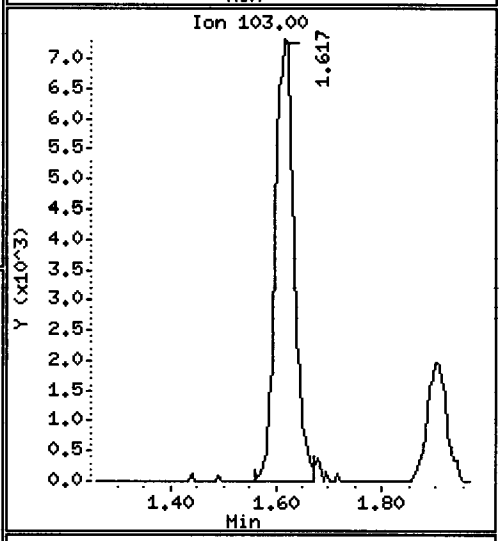
6 Trichlorofluoromethane

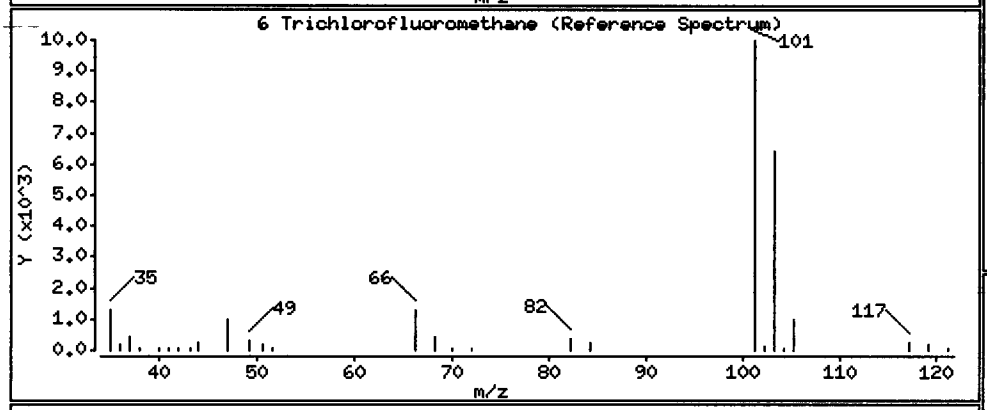
Concentration: 1.111 ug/Kg

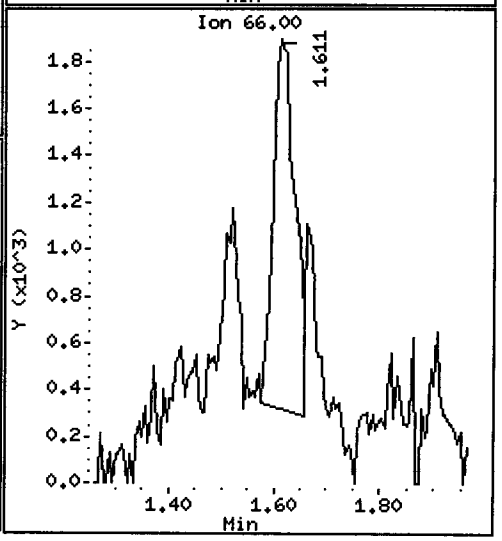


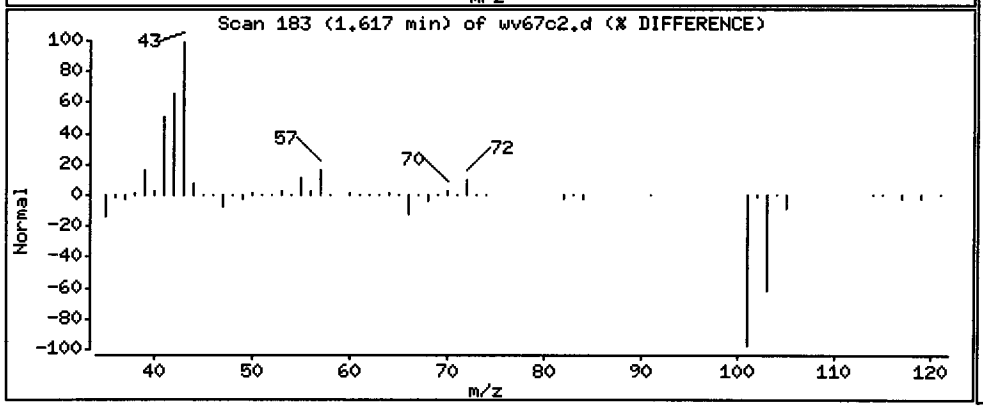












Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d

Date : 28-JUN-2013 04:51

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,7.73,0

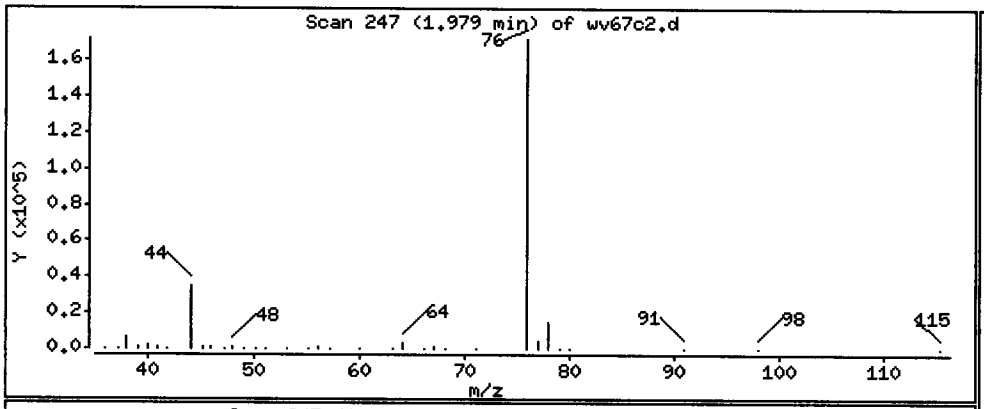
Operator: PB

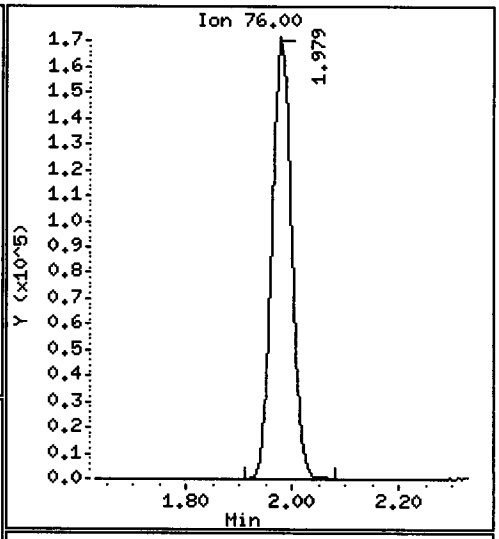
Column phase: RTXVMS

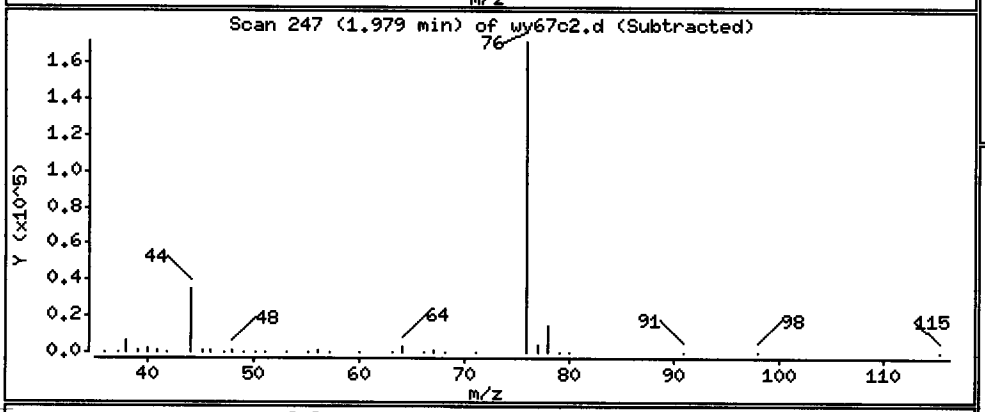
Column diameter: 0.18

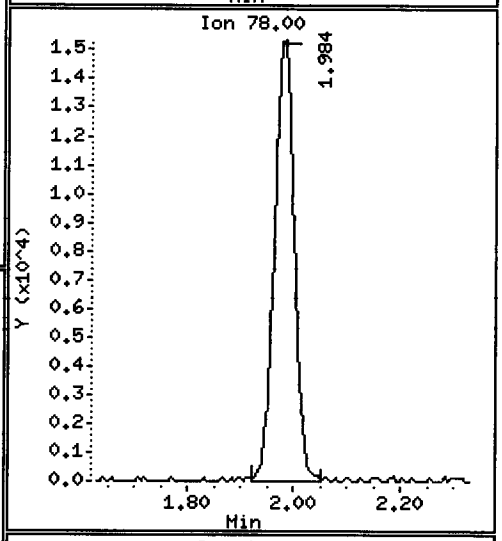
8 Carbon Disulfide

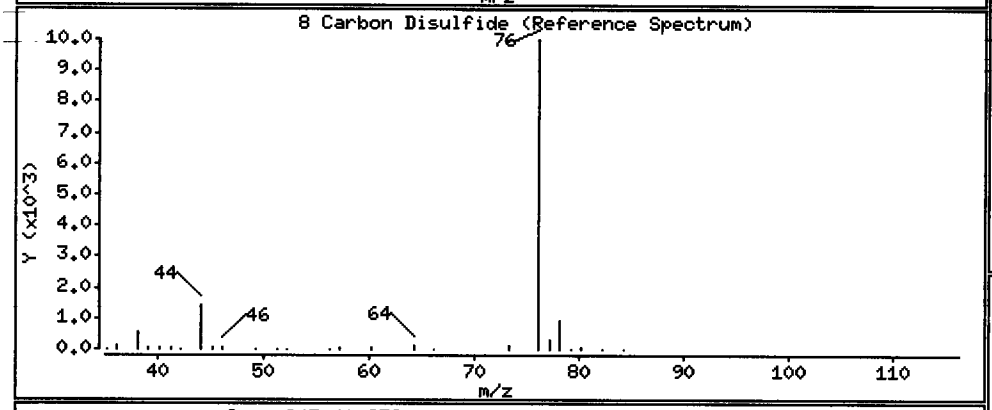
Concentration: 7.941 ug/Kg

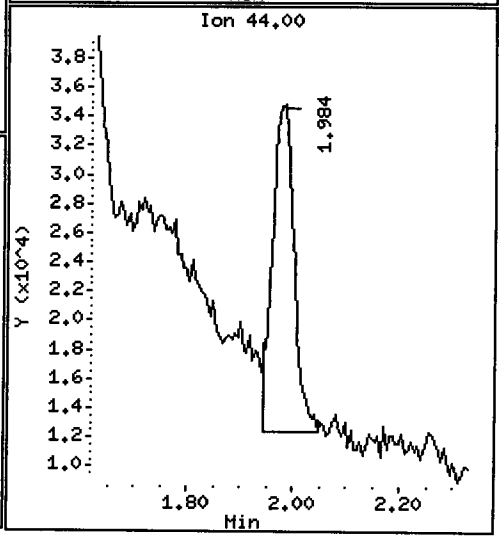


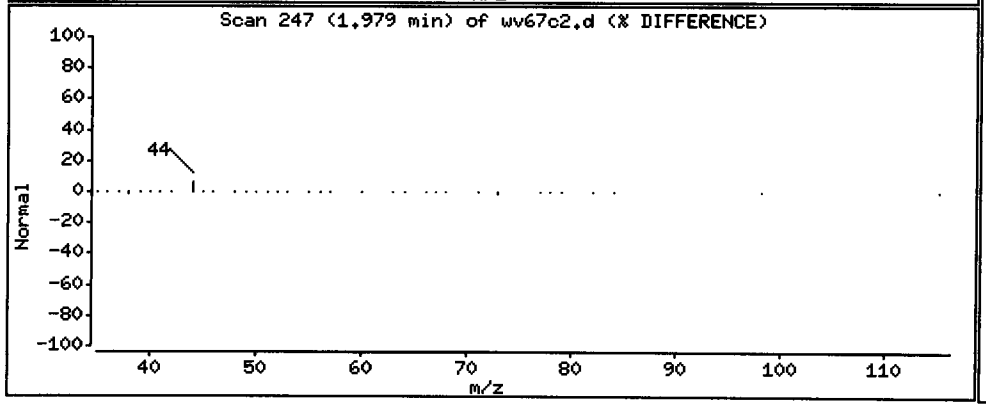












Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d

Date : 28-JUN-2013 04:51

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,7.73,0

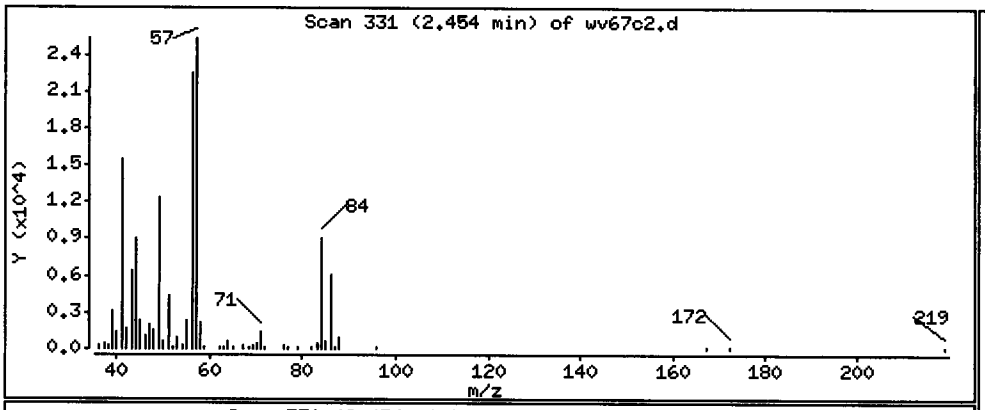
Operator: PB

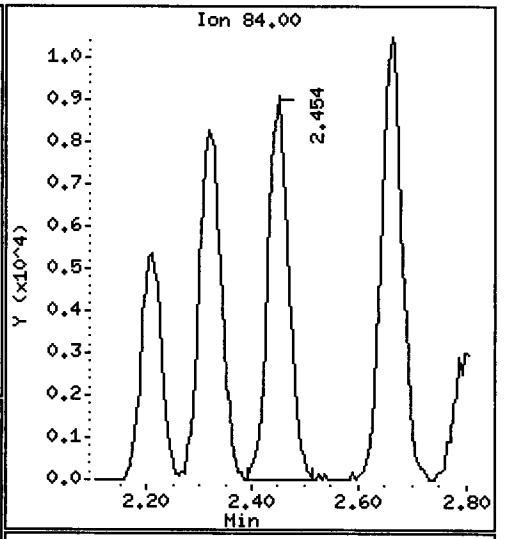
Column phase: RTXVMS

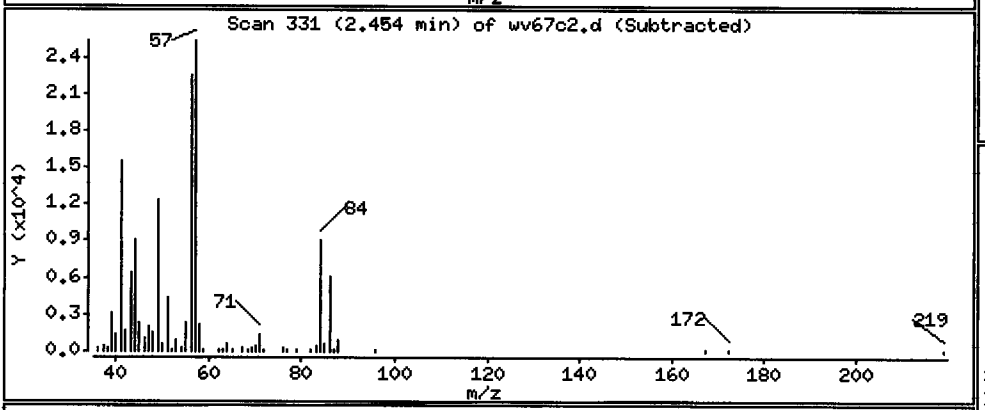
Column diameter: 0.18

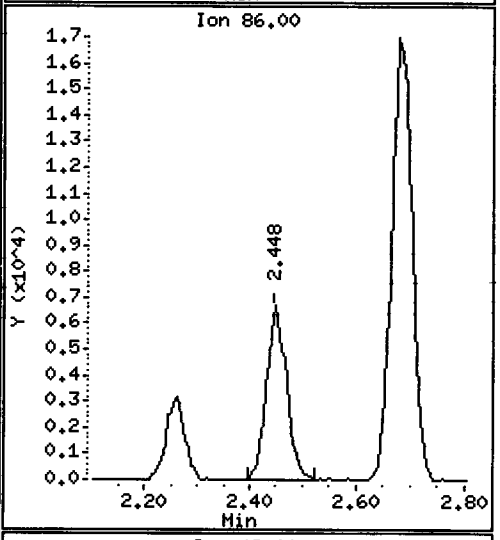
13 Methylene Chloride

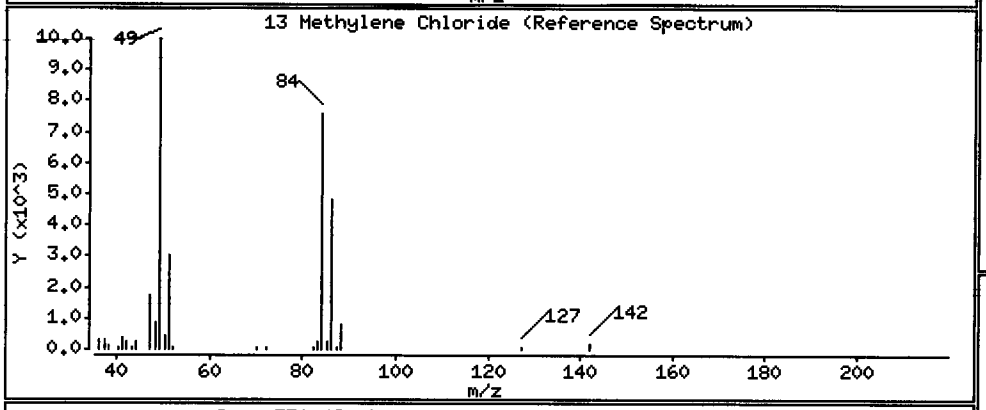
Concentration: 1.281 ug/Kg

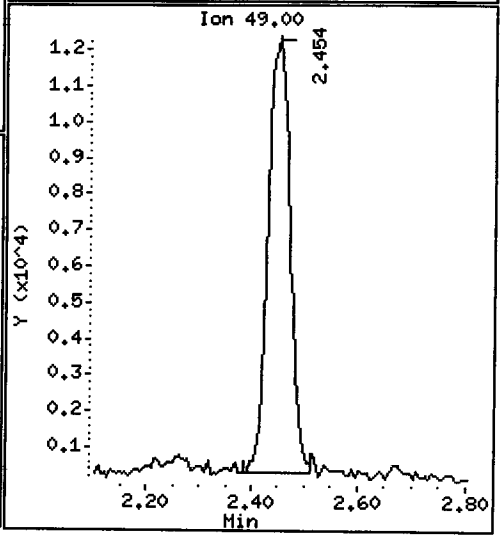


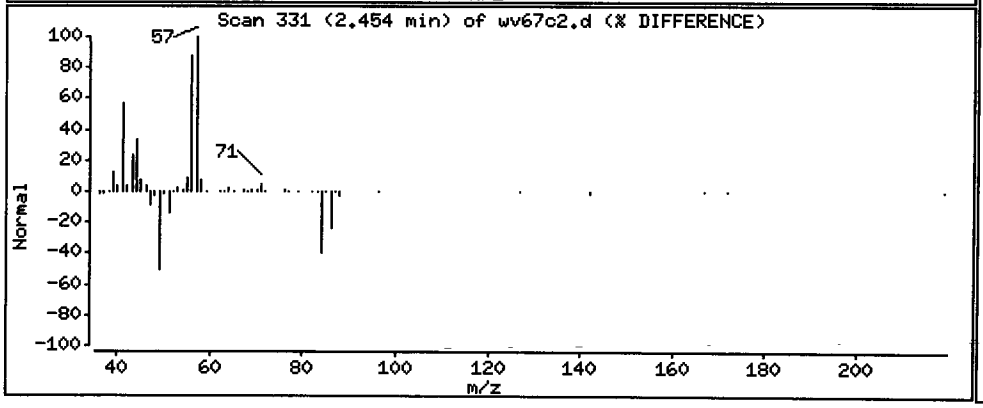












Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d

Date : 28-JUN-2013 04:51

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,7.73,0

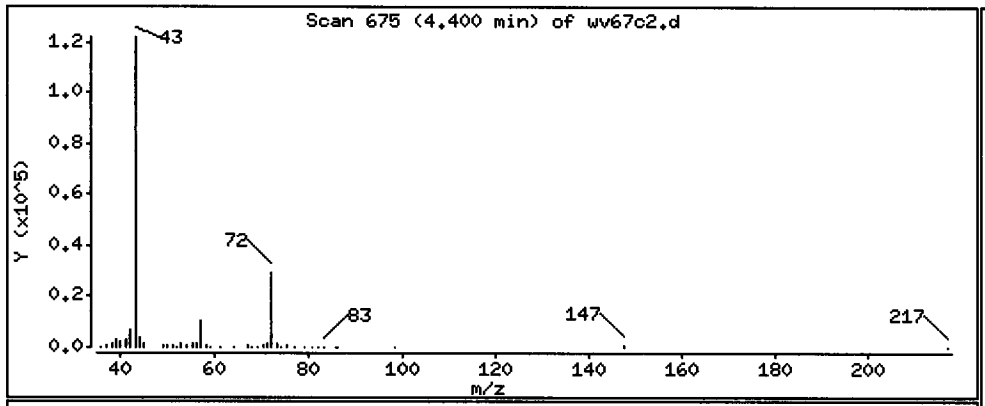
Operator: PB

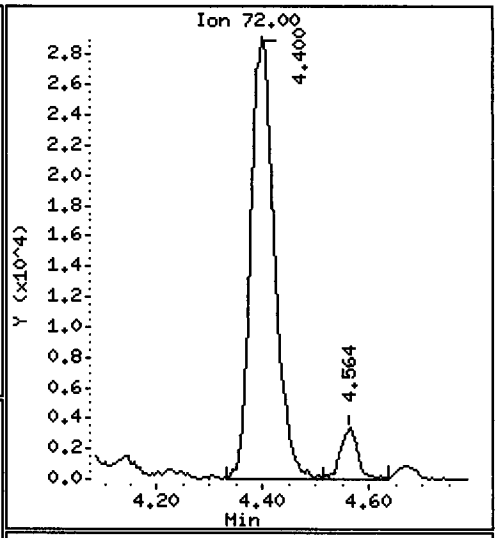
Column phase: RTXVMS

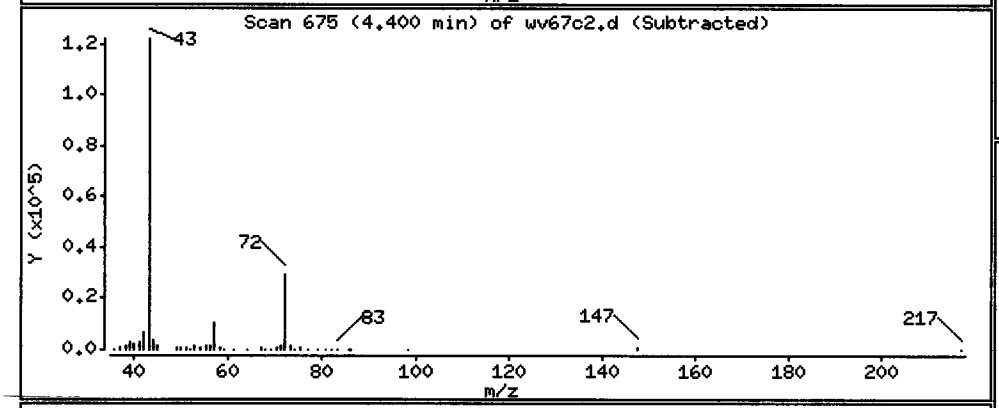
Column diameter: 0.18

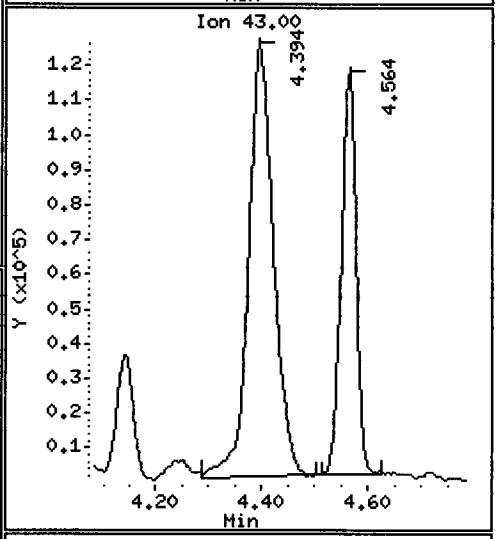
29 2-Butanone

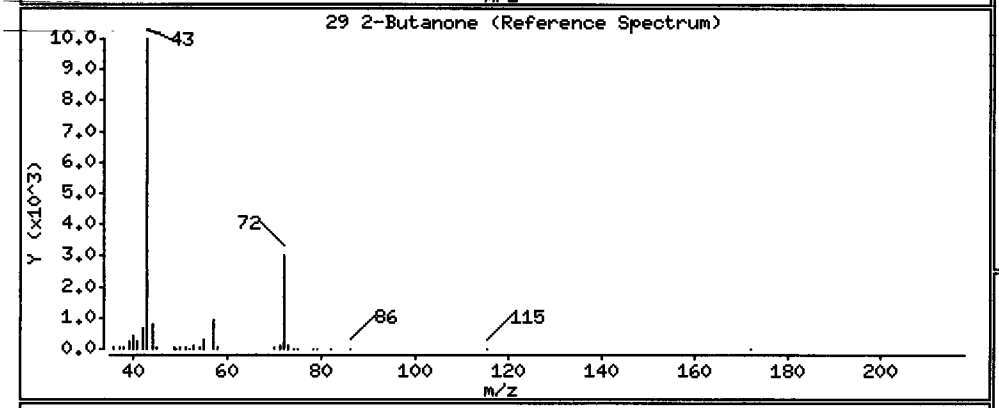
Concentration: 37.256 ug/Kg

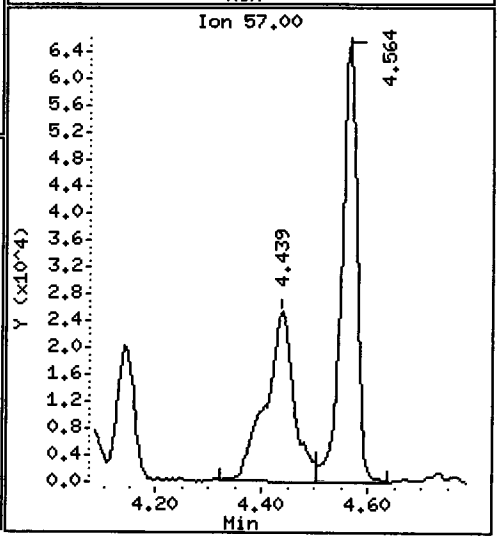


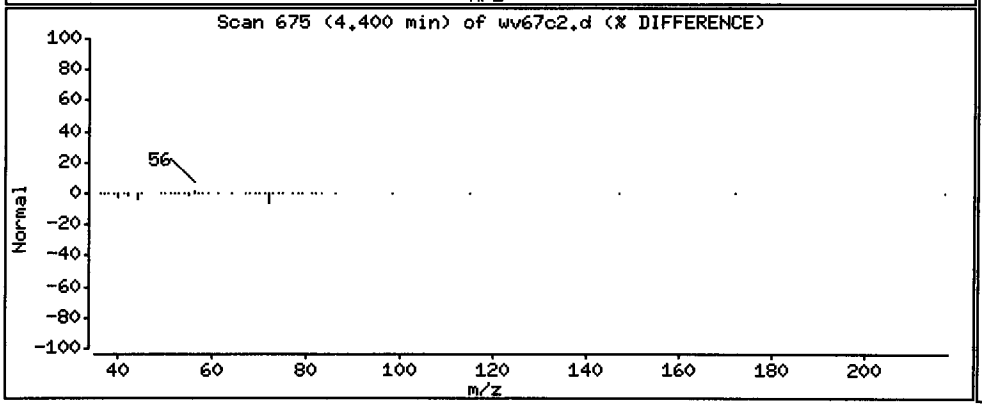












Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d

Date : 28-JUN-2013 04:51

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,7.73,0

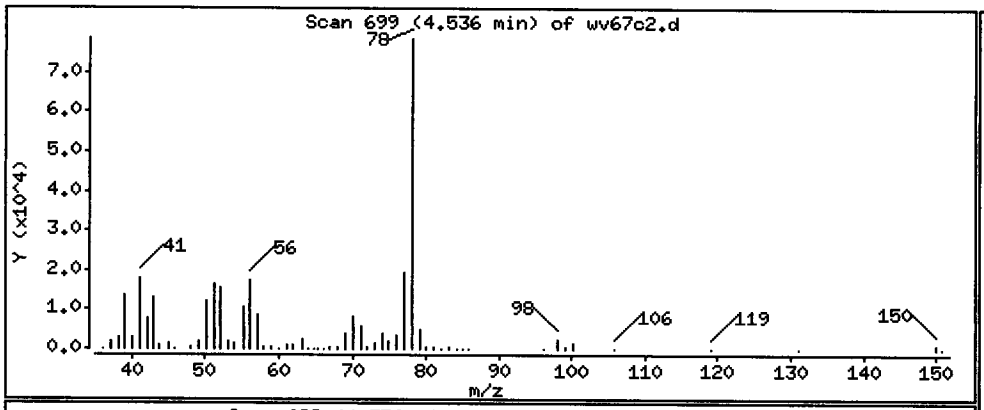
Operator: PB

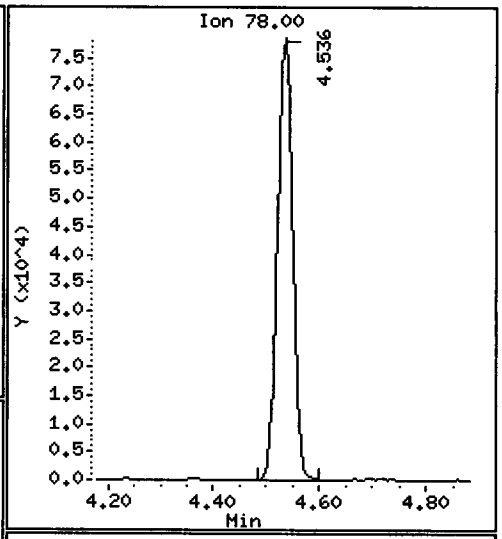
Column phase: RTXVMS

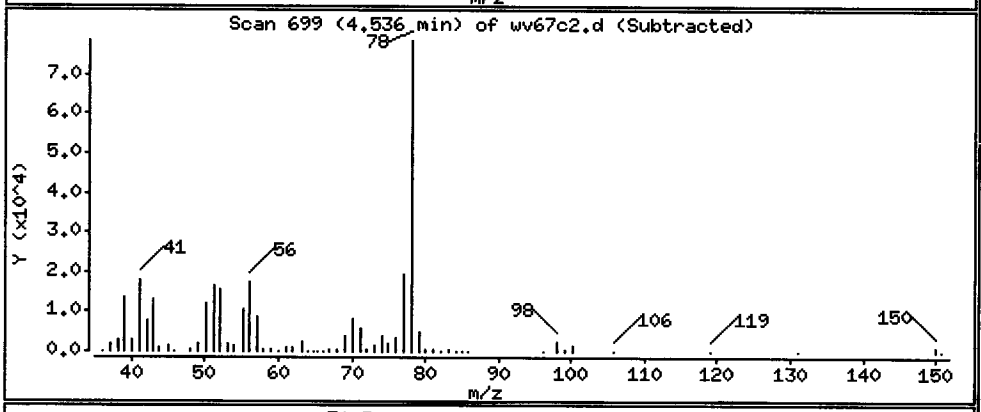
Column diameter: 0.18

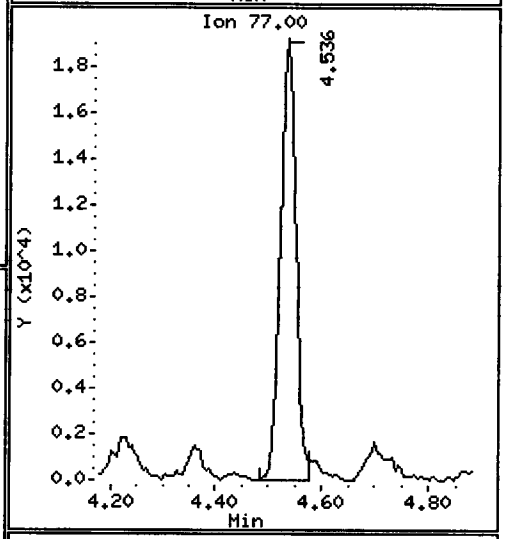
30 Benzene

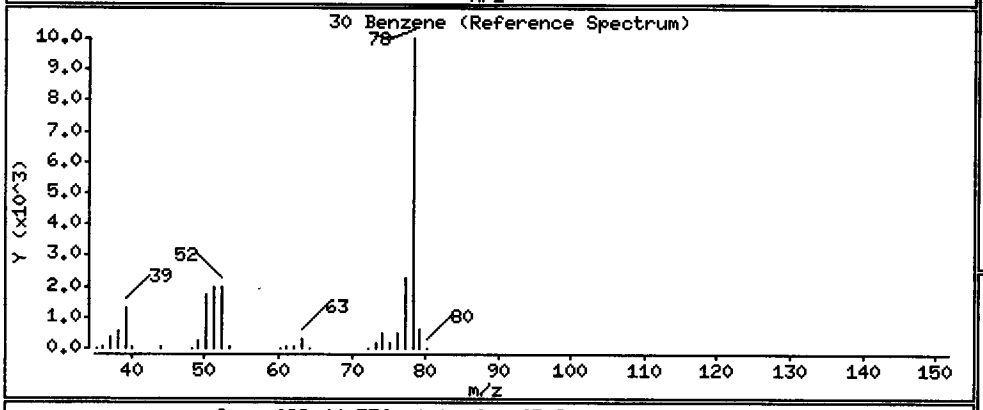
Concentration: 1.942 ug/Kg

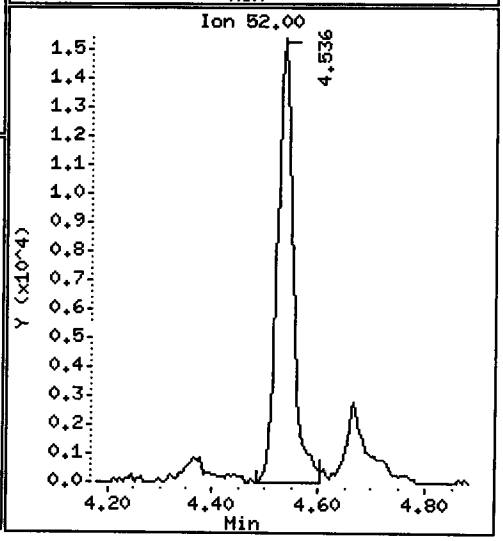


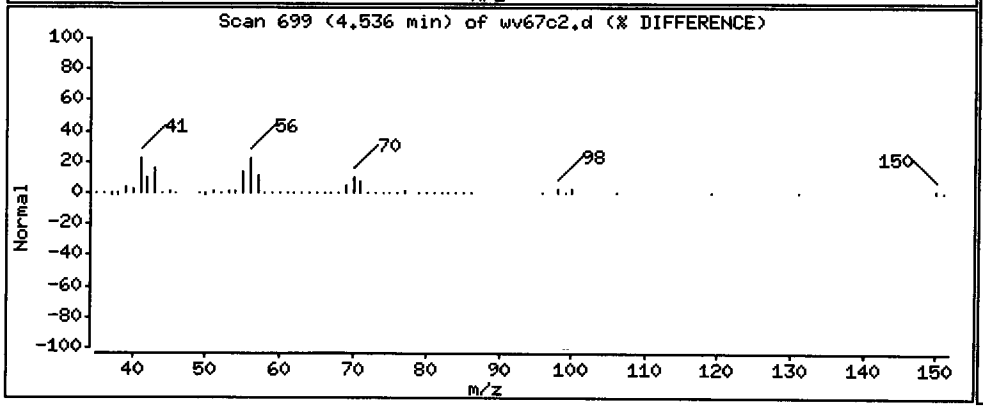












Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d

Date : 28-JUN-2013 04:51

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,7.73,0

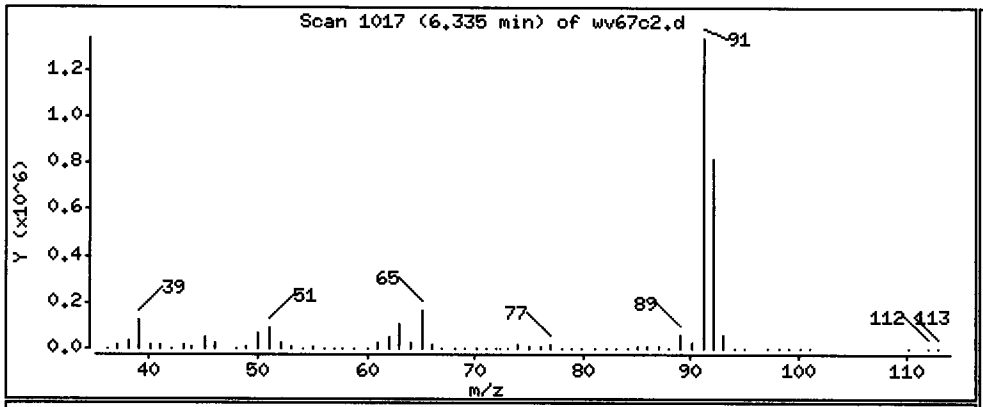
Operator: PB

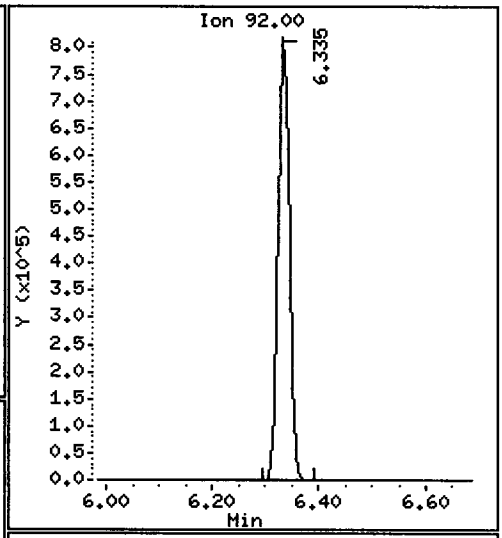
Column phase: RTXVMS

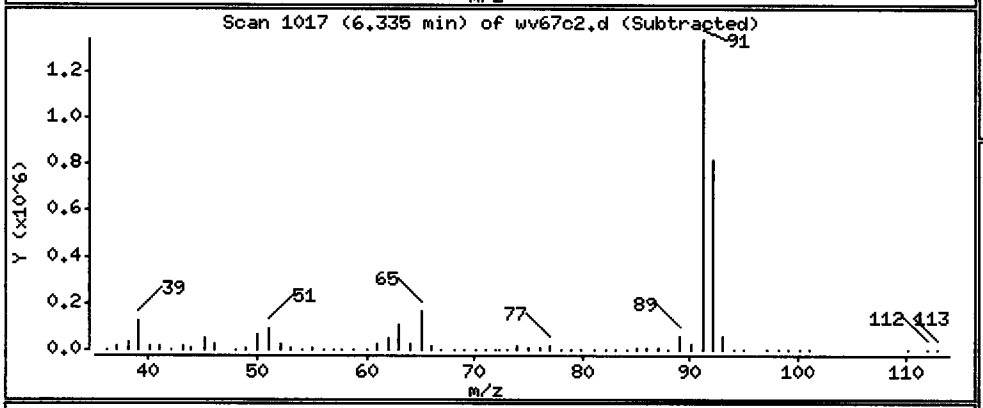
Column diameter: 0.18

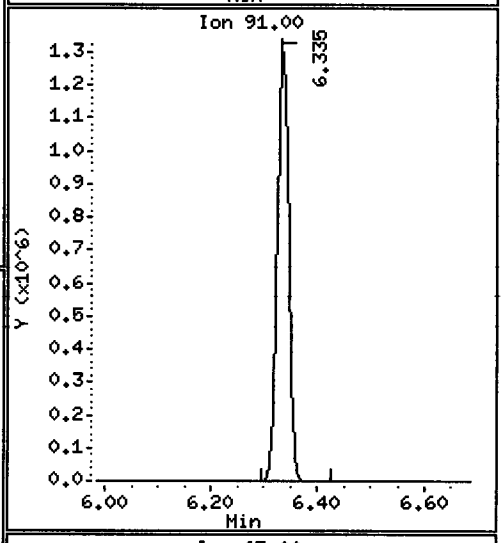
43 Toluene

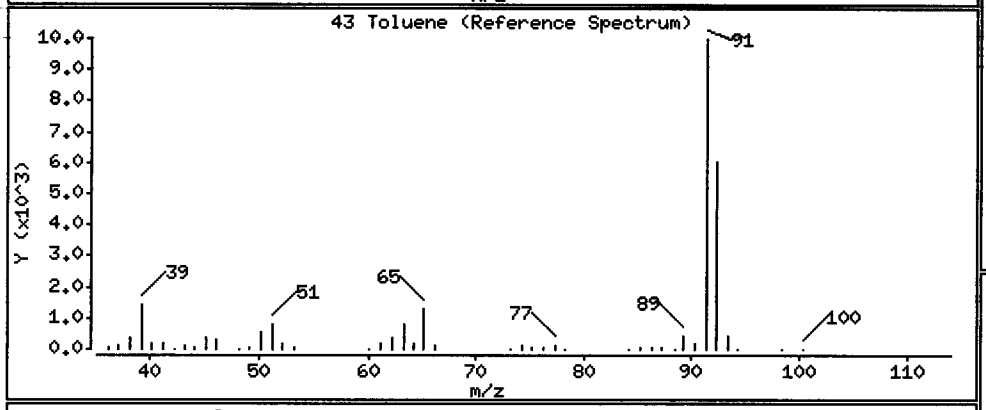
Concentration: 23.184 ug/Kg

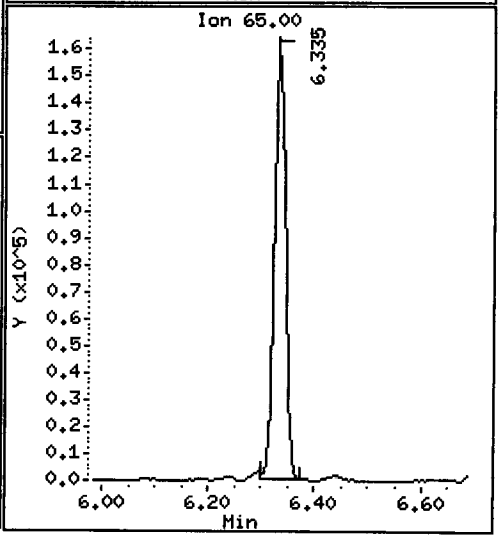


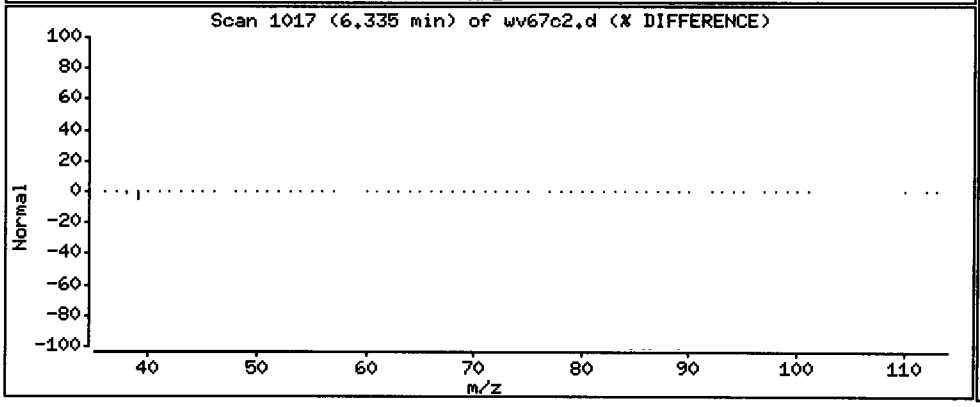












Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d

Date : 28-JUN-2013 04:51

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,7.73,0

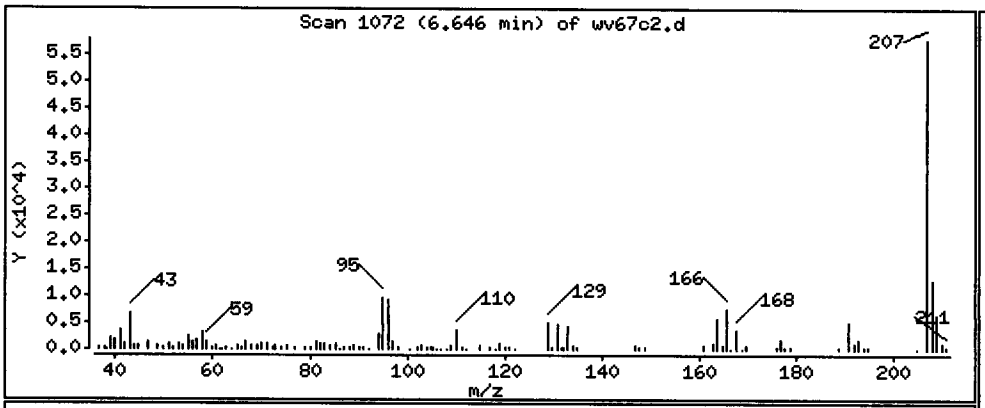
Operator: PB

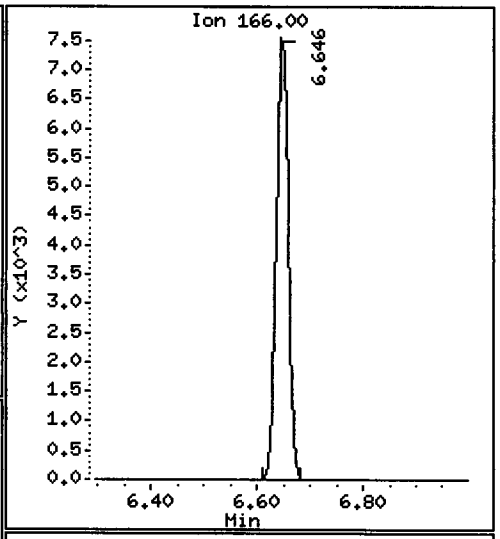
Column phase: RTXVMS

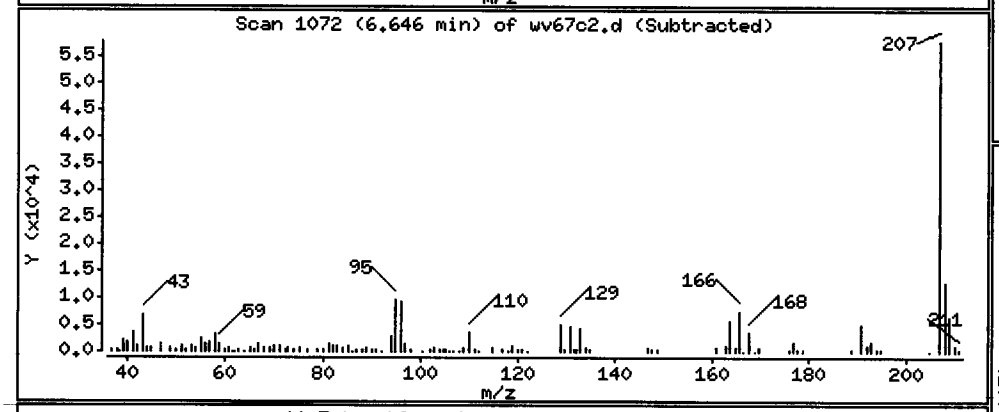
Column diameter: 0.18

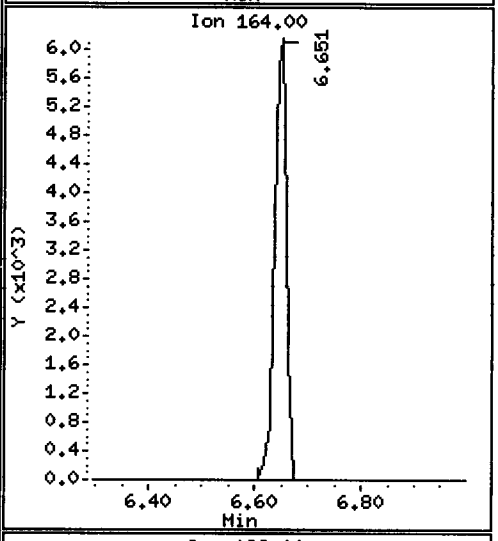
44 Tetrachloroethene

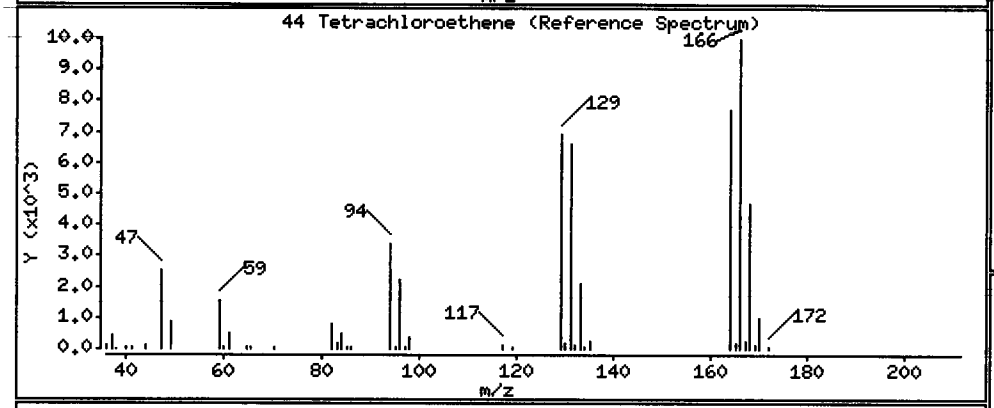
Concentration: 0.8309 ug/Kg

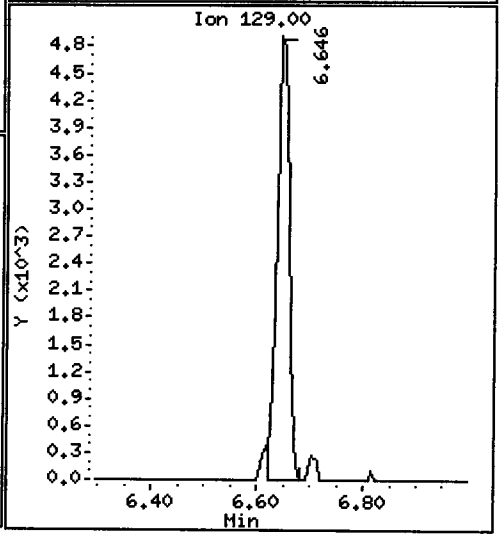


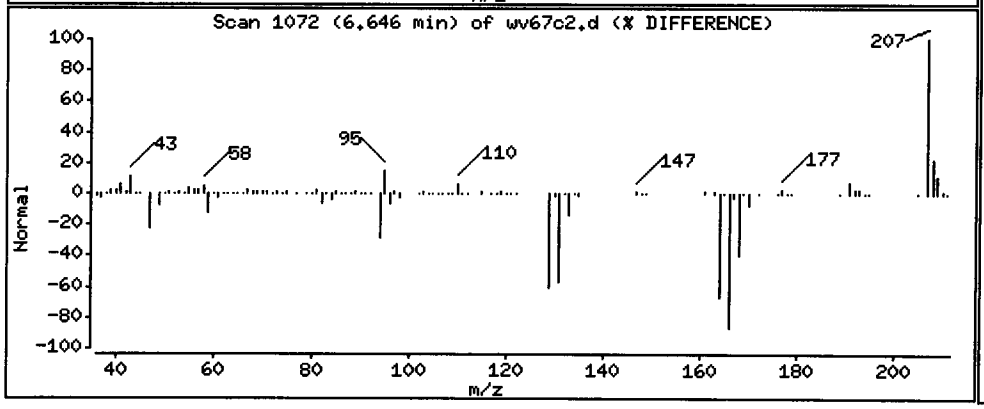












Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d

Date : 28-JUN-2013 04:51

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,7.73,0

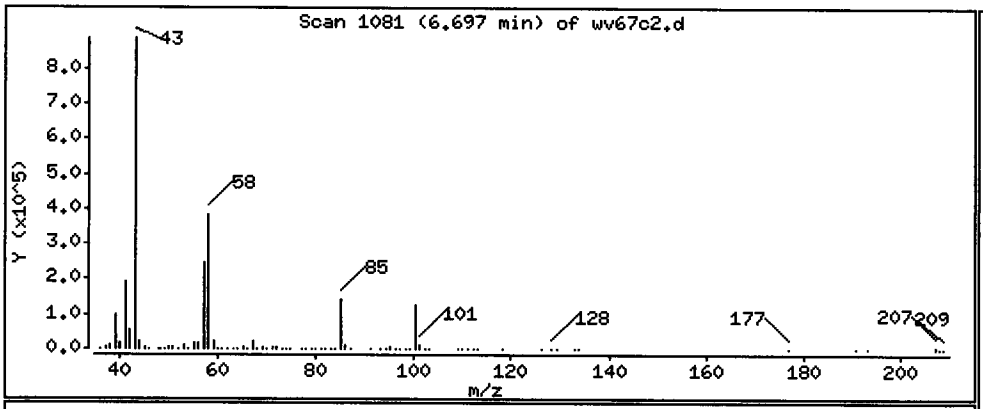
Operator: PB

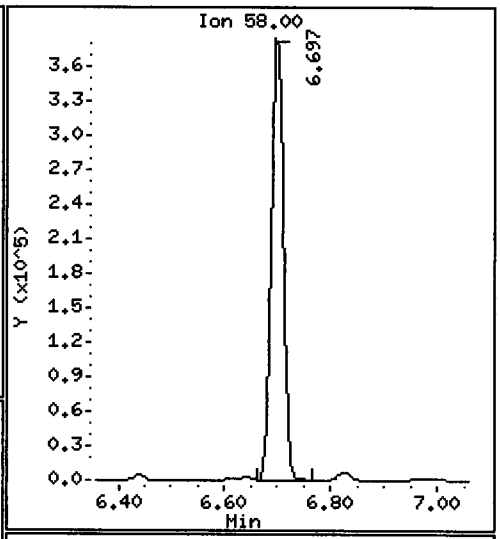
Column phase: RTXVMS

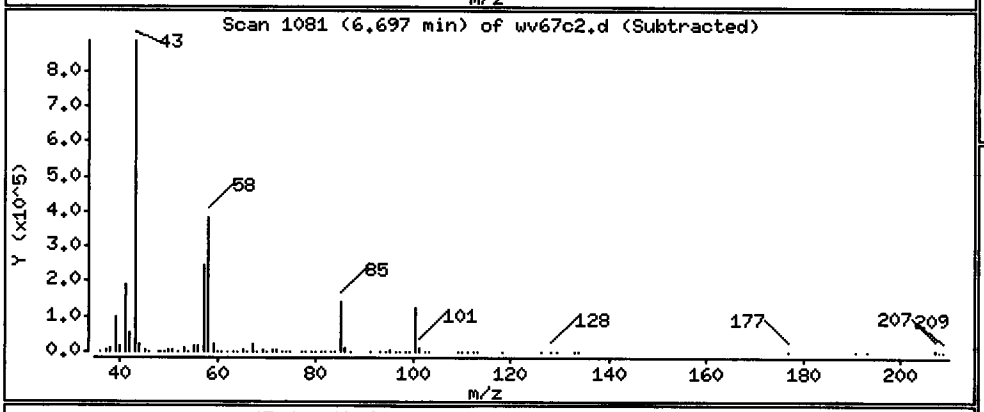
Column diameter: 0.18

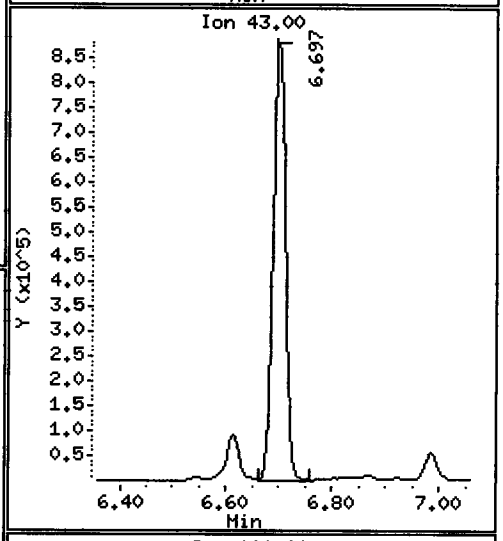
45 4-Methyl-2-Pentanone

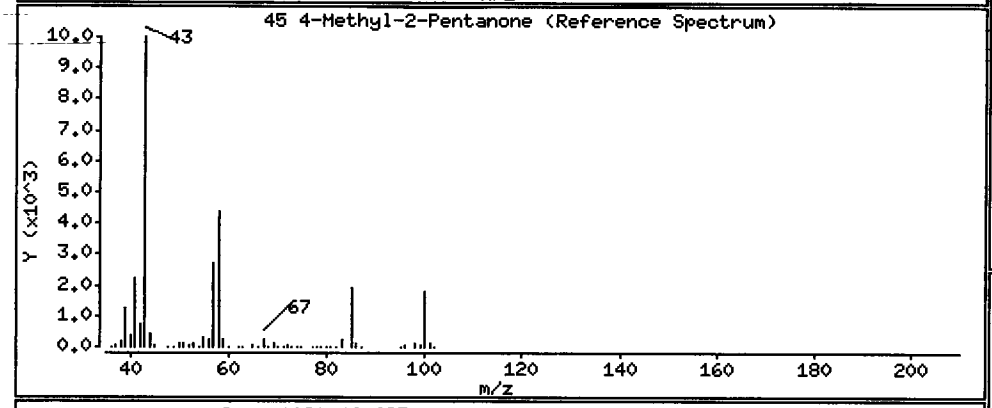
Concentration: 62.131 ug/Kg

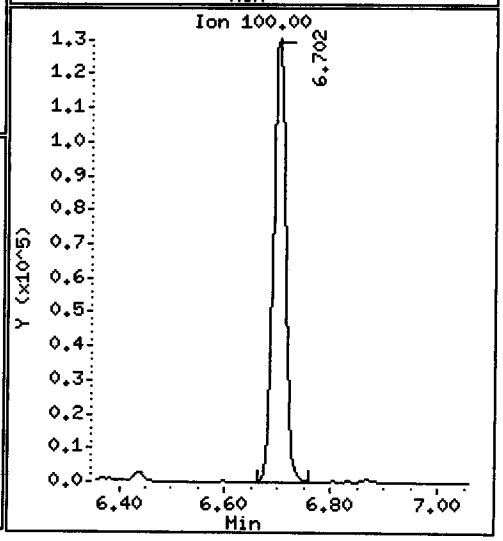


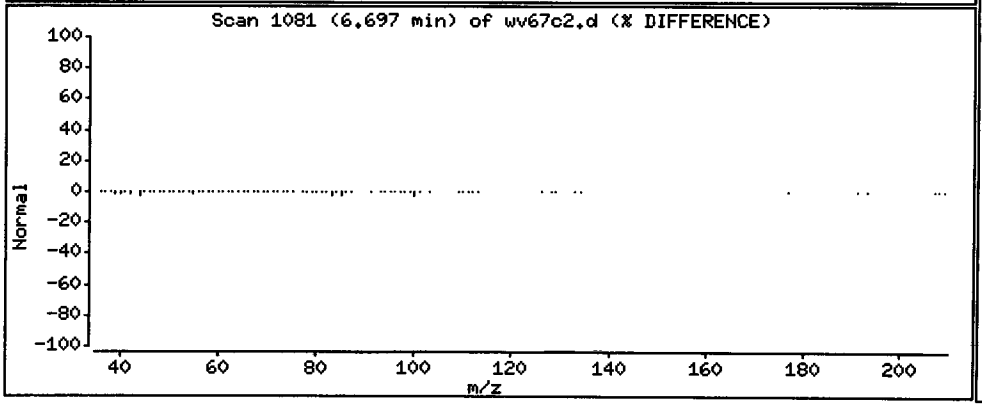












Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d

Date : 28-JUN-2013 04:51

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,7.73,0

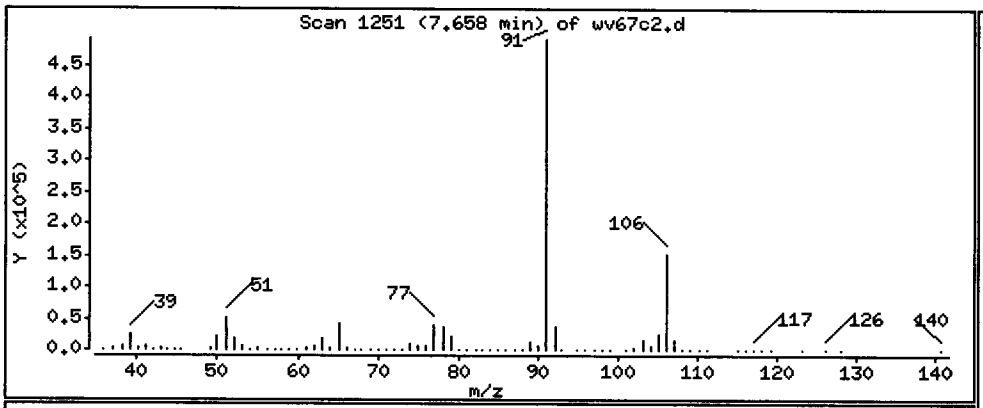
Operator: PB

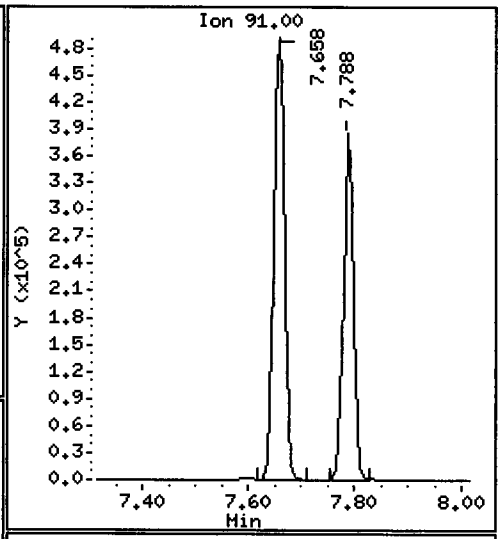
Column phase: RTXVMS

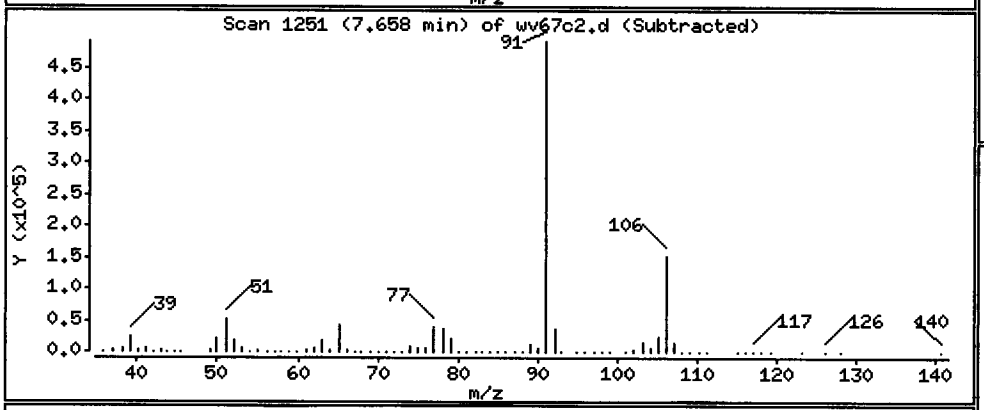
Column diameter: 0.18

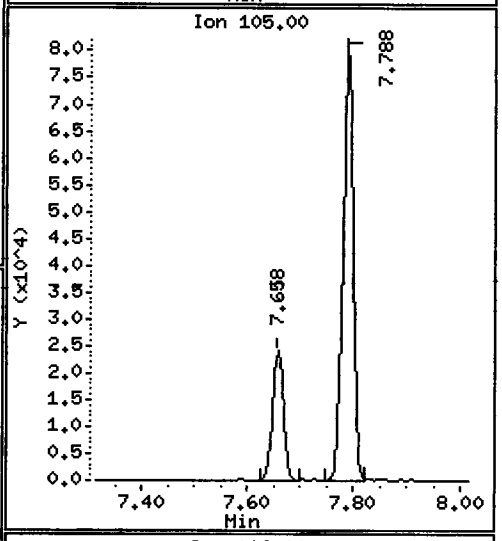
54 Ethyl Benzene

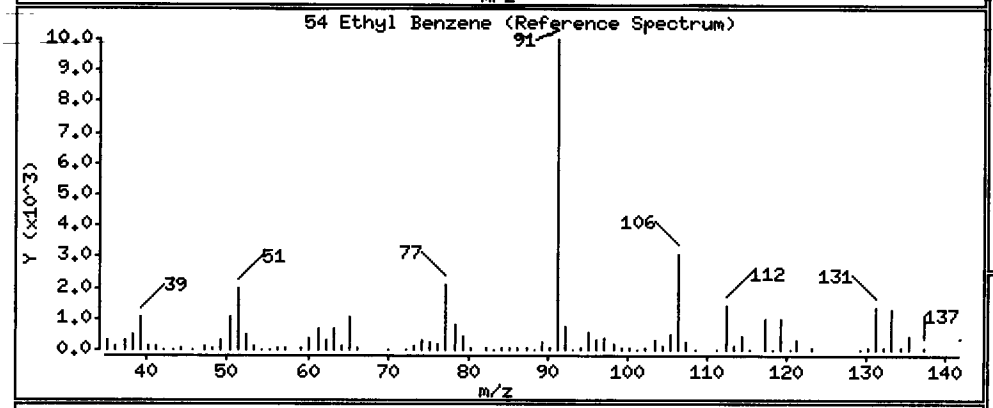
Concentration: 11.688 ug/Kg

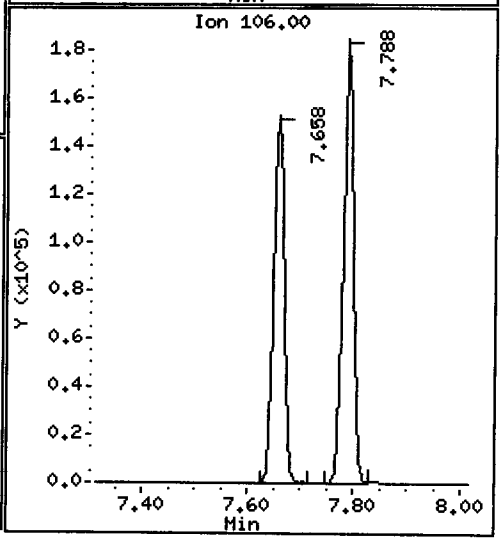


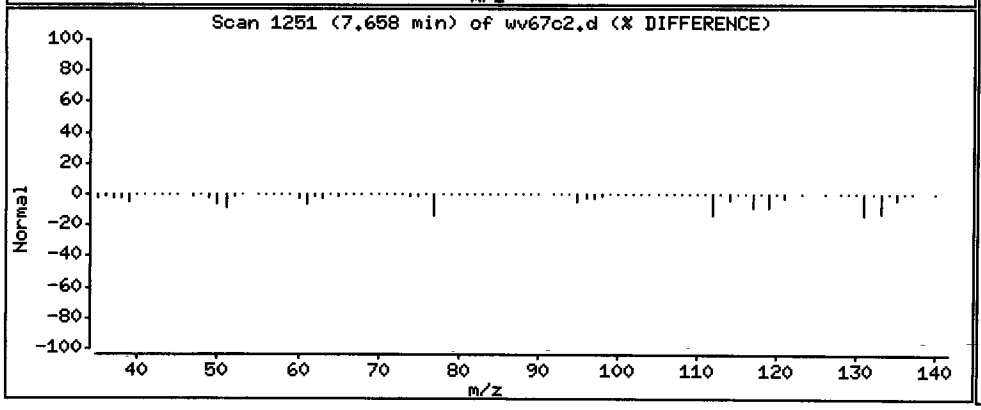












Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d

Date : 28-JUN-2013 04:51

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,7.73,0

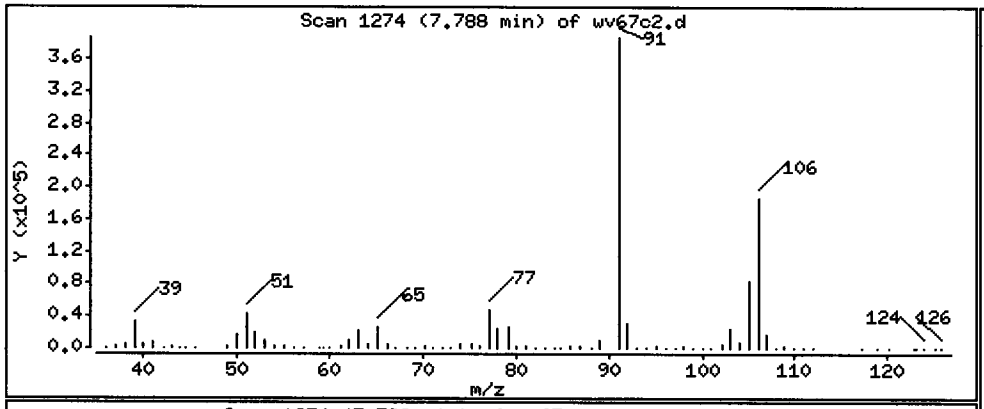
Operator: PB

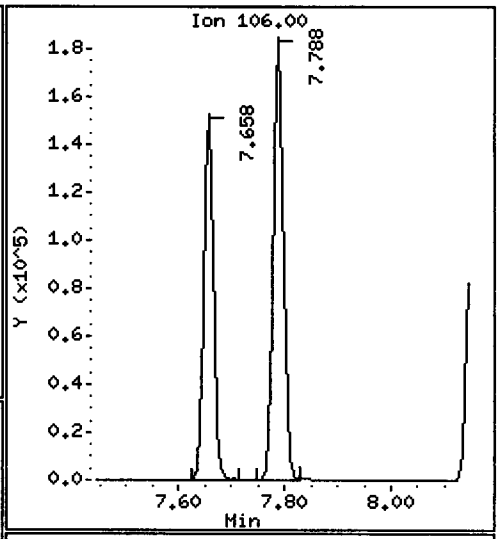
Column phase: RTXVMS

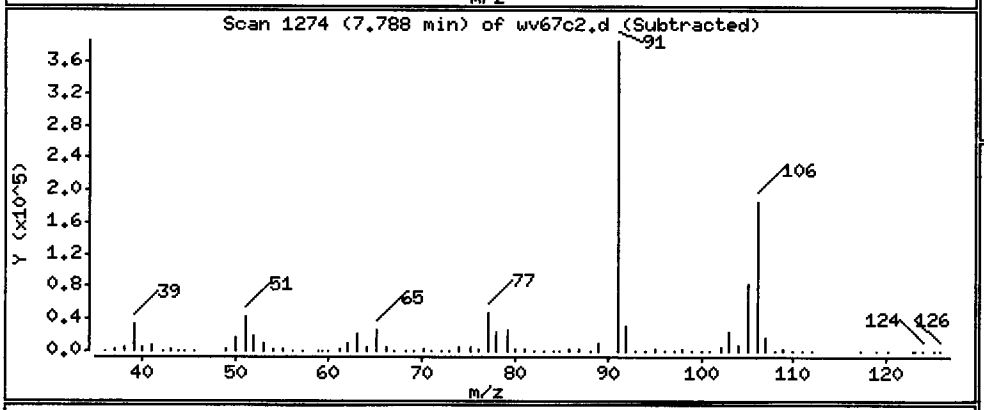
Column diameter: 0.18

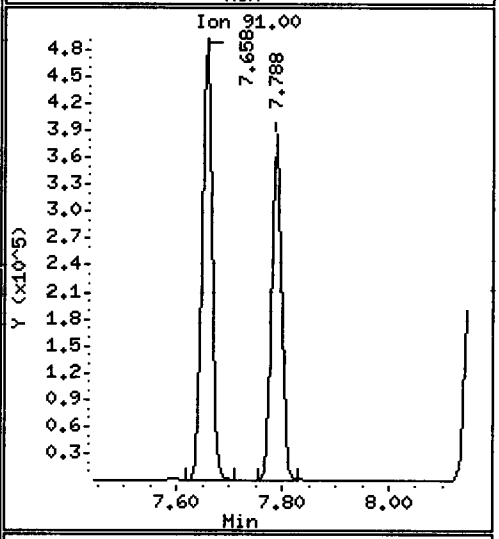
56 m,p-xylene

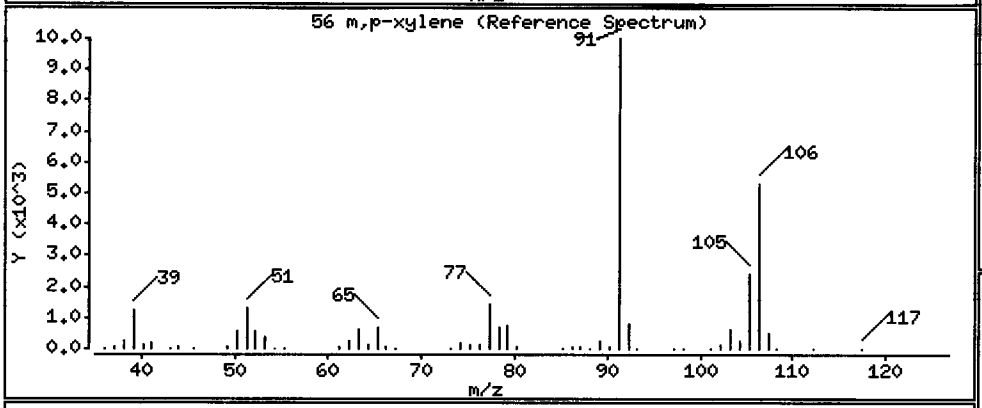
Concentration: 11.332 ug/Kg

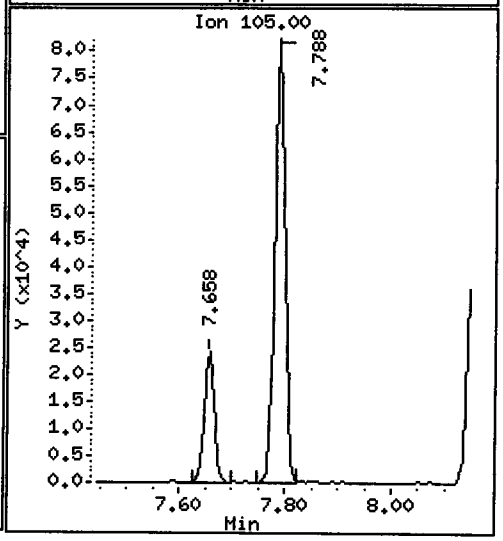


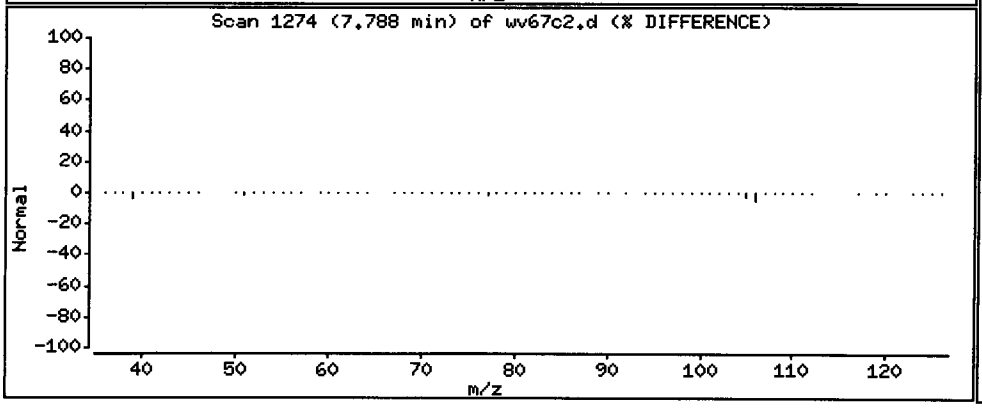












Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d

Date : 28-JUN-2013 04:51

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,7,73,0

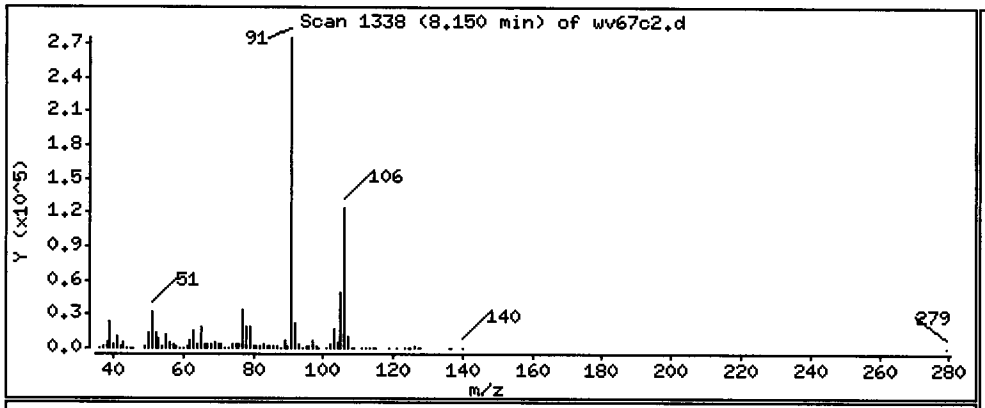
Operator: PB

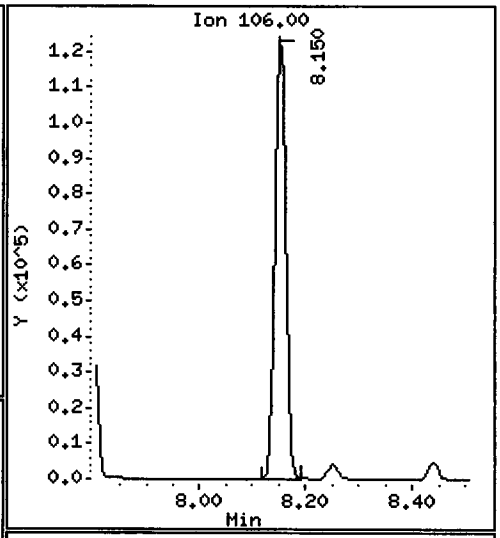
Column phase: RTXVMS

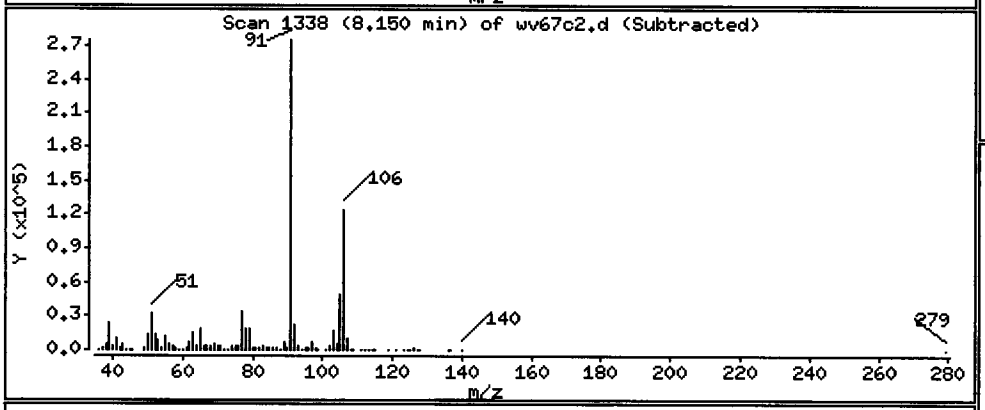
Column diameter: 0.18

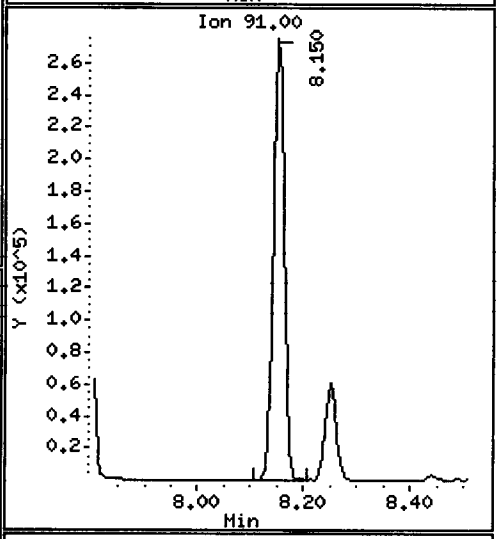
57 o-Xylene

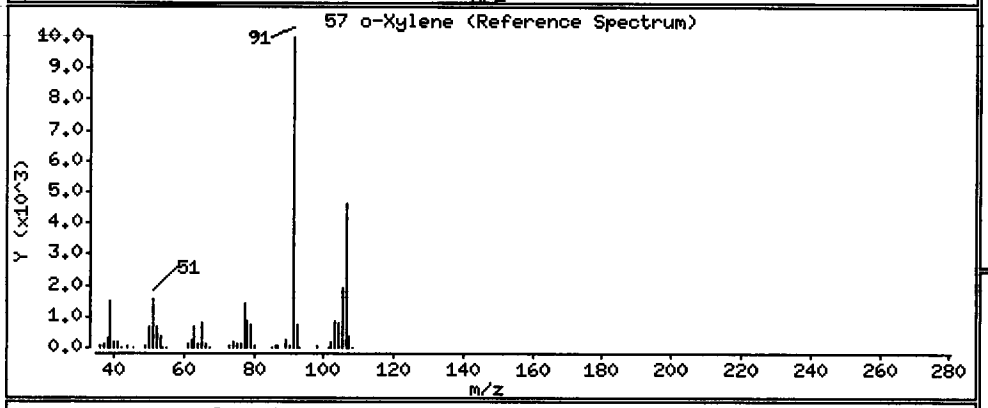
Concentration: 7.968 ug/Kg

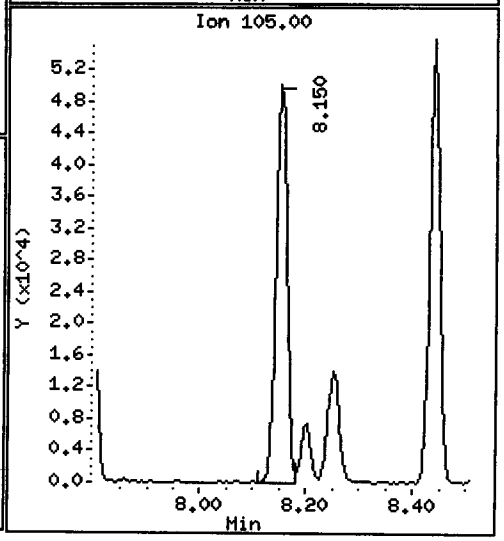


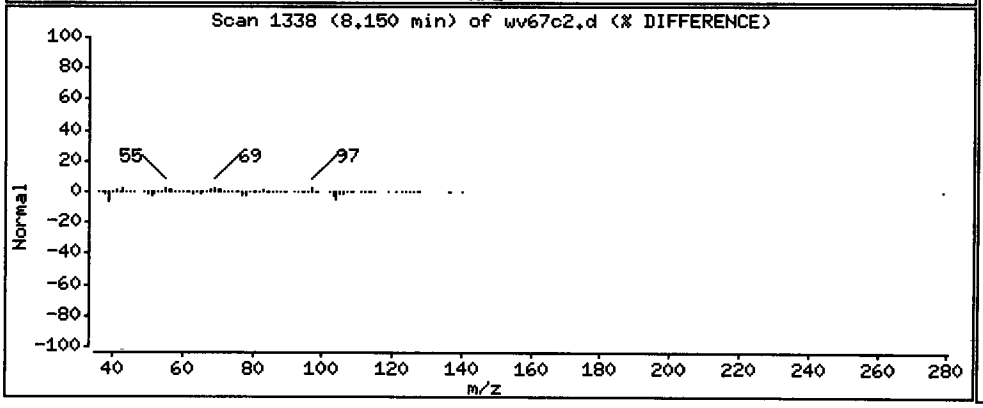












Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d

Date : 28-JUN-2013 04:51

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,7.73,0

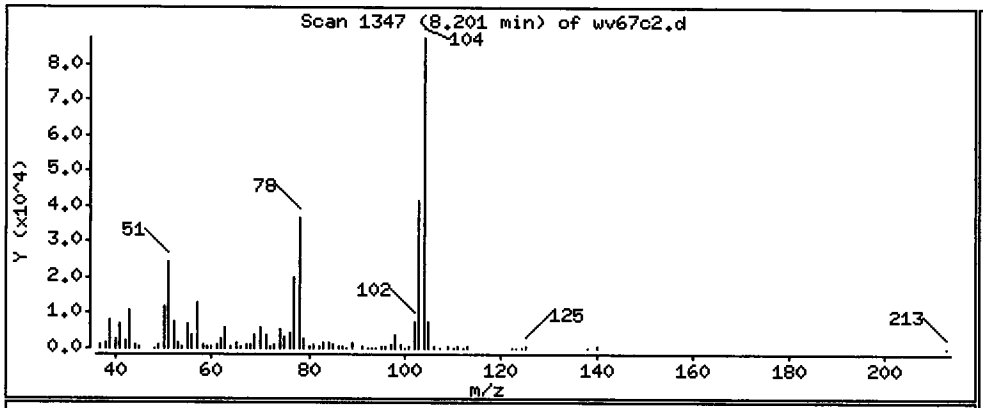
Operator: PB

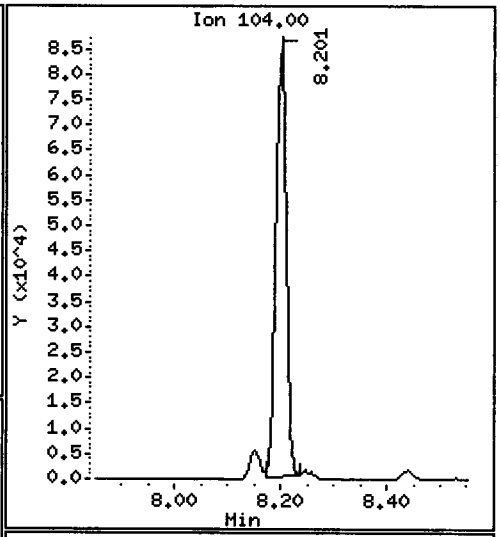
Column phase: RTXVMS

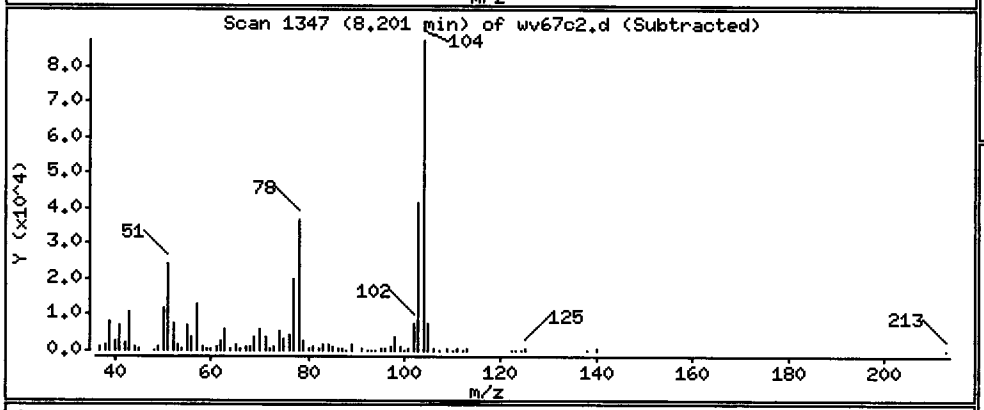
Column diameter: 0.18

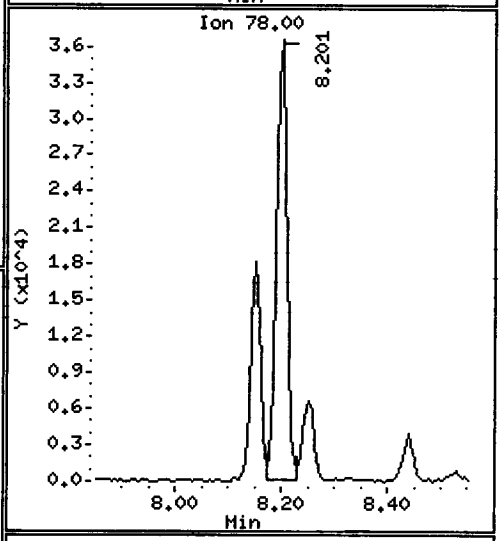
58 Styrene

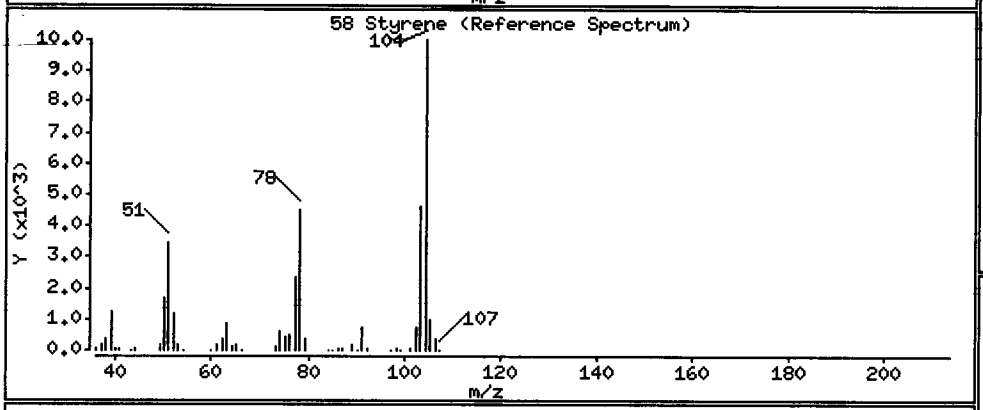
Concentration: 3.259 ug/Kg

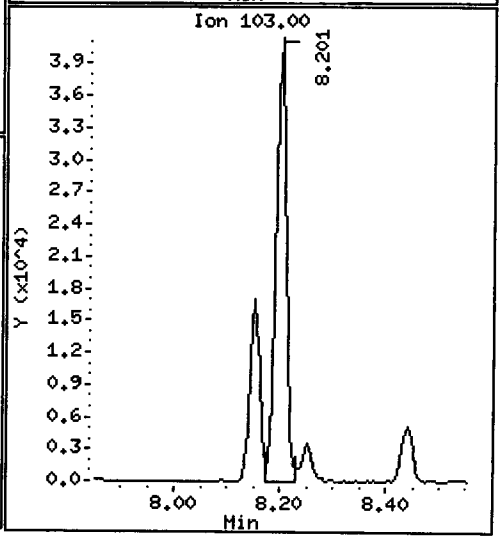


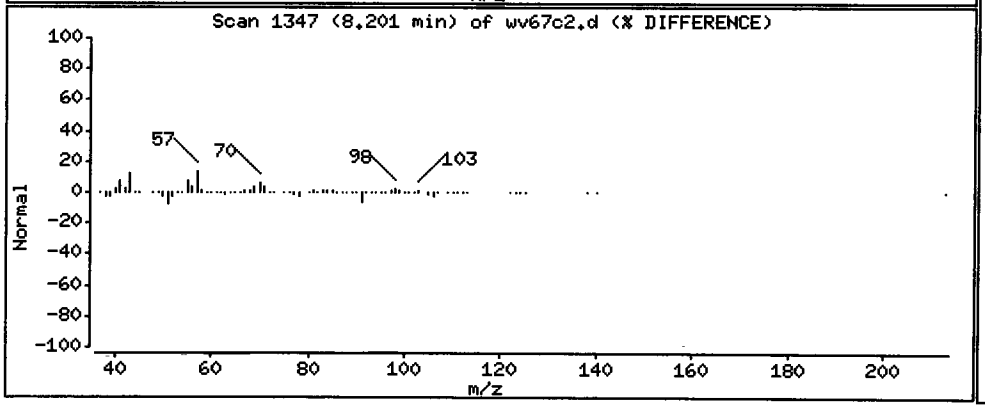












Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d

Date : 28-JUN-2013 04:51

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,7.73,0

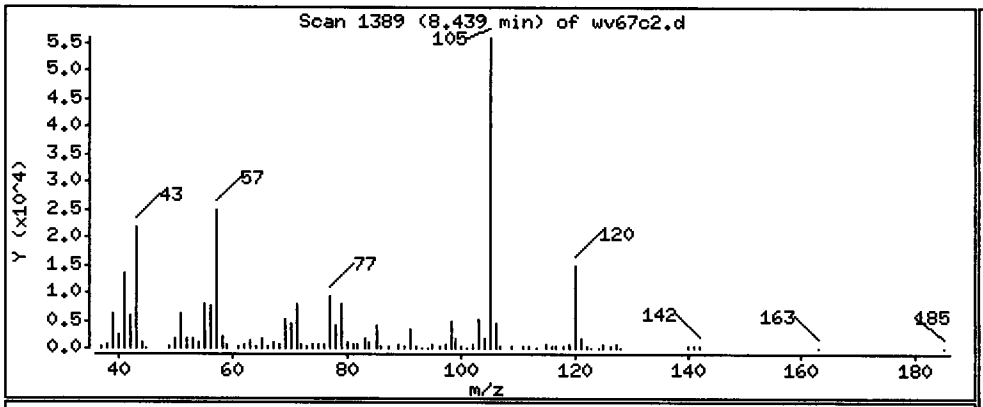
Operator: PB

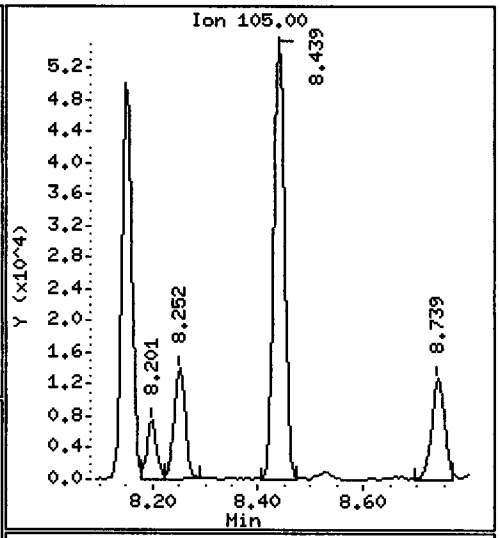
Column phase: RTXVMS

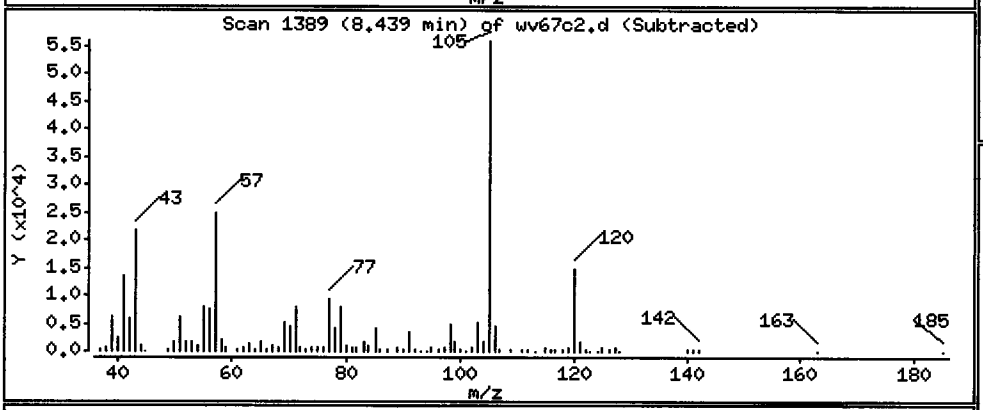
Column diameter: 0.18

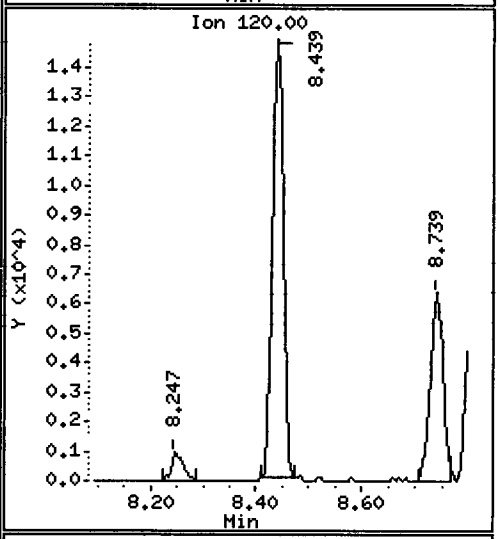
60 Isopropyl Benzene

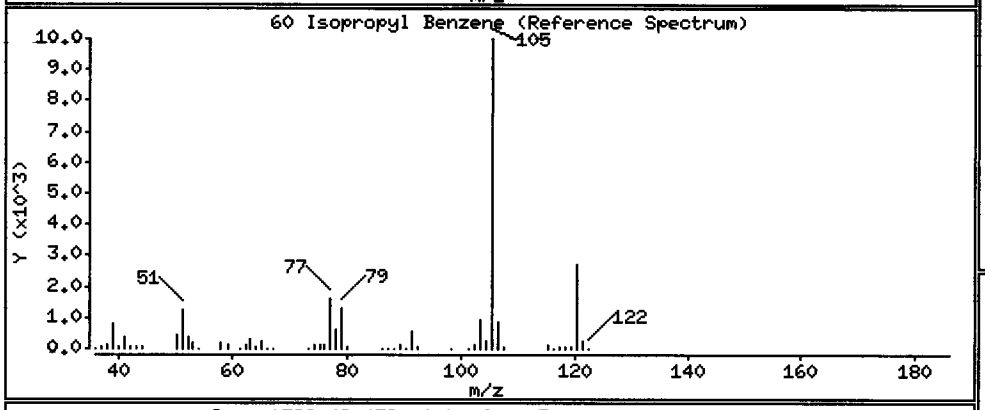
Concentration: 3.709 ug/Kg

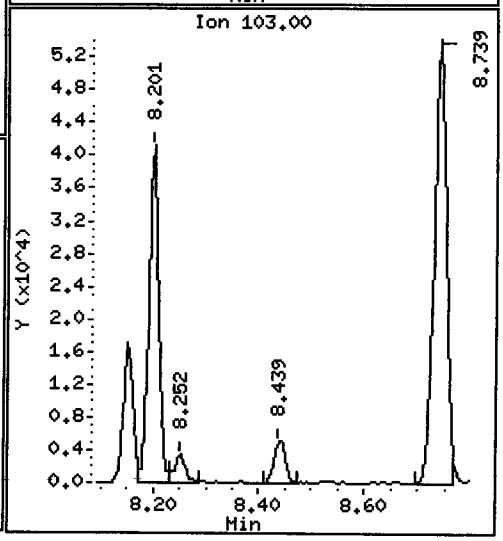


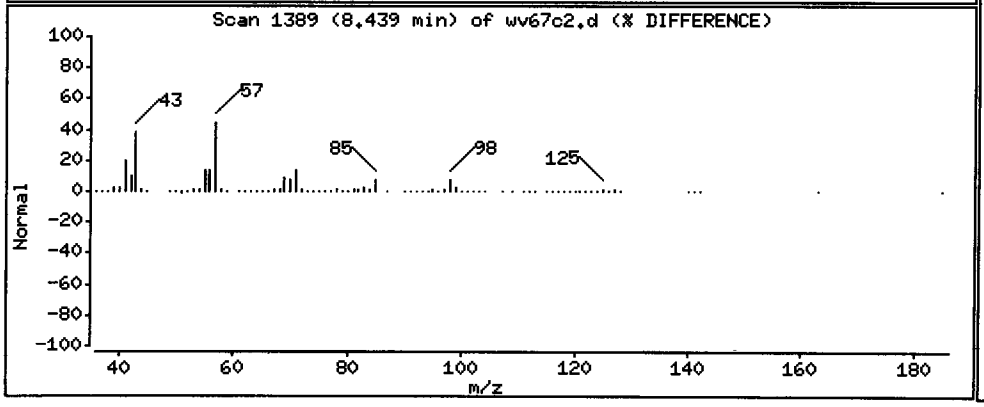












WV67 0613

Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d

Date : 28-JUN-2013 04:51

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,7.73,0

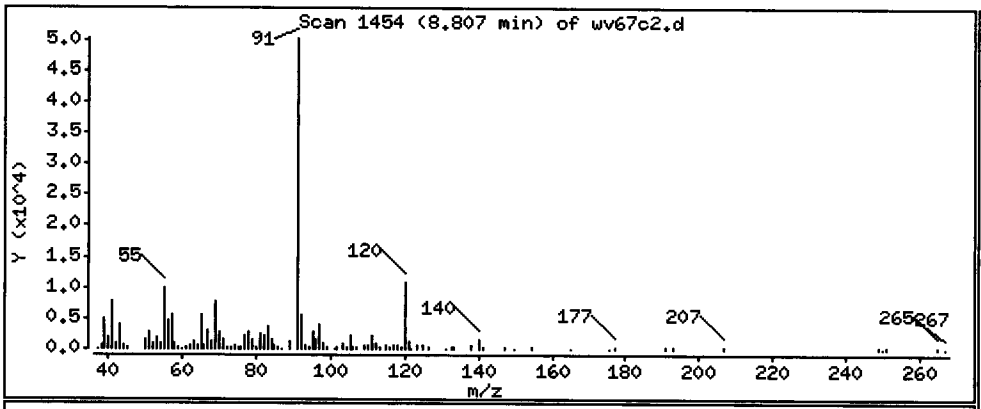
Operator: PB

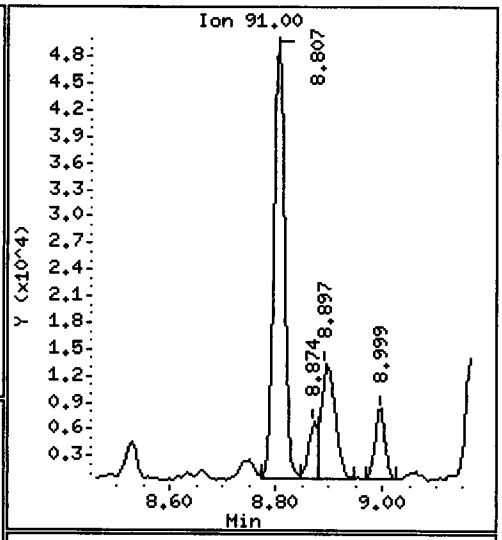
Column phase: RTXVMS

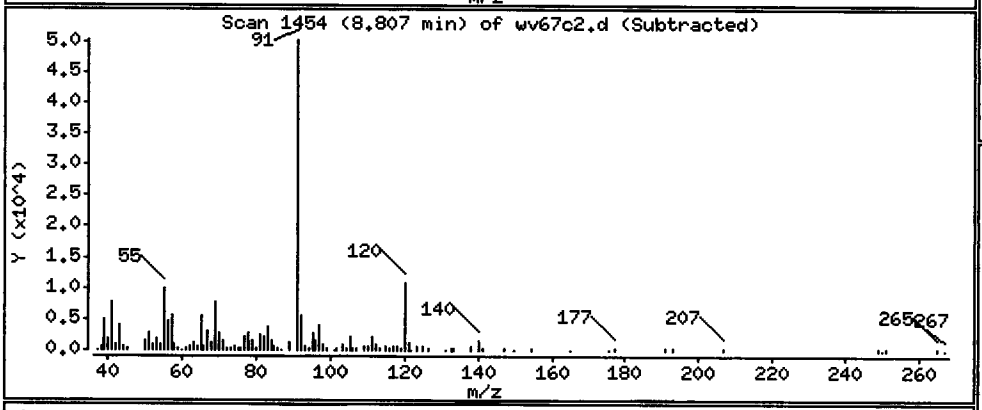
Column diameter: 0.18

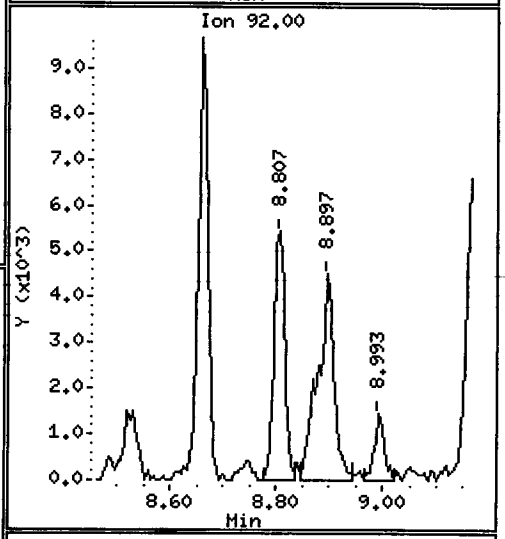
64 N-Propyl Benzene

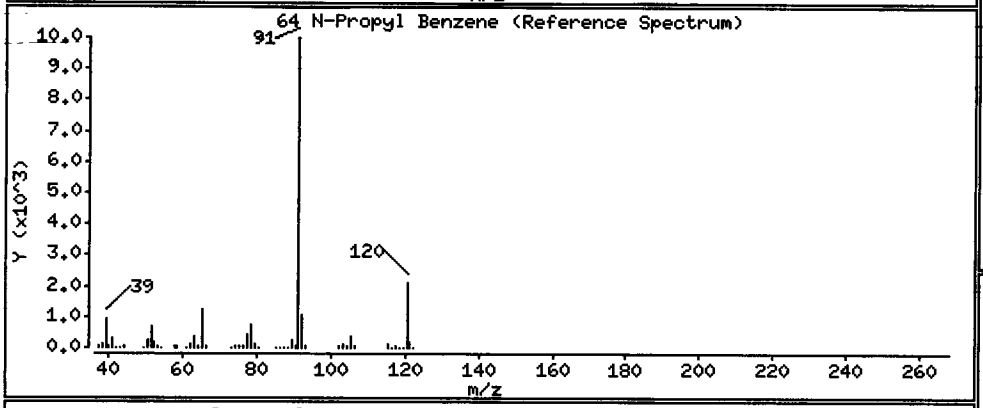
Concentration: 2.721 ug/Kg

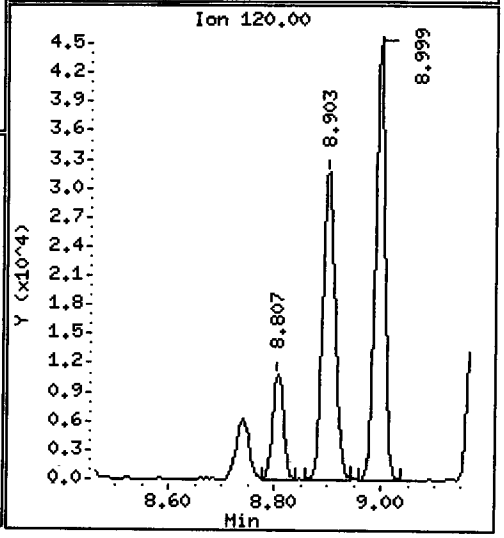


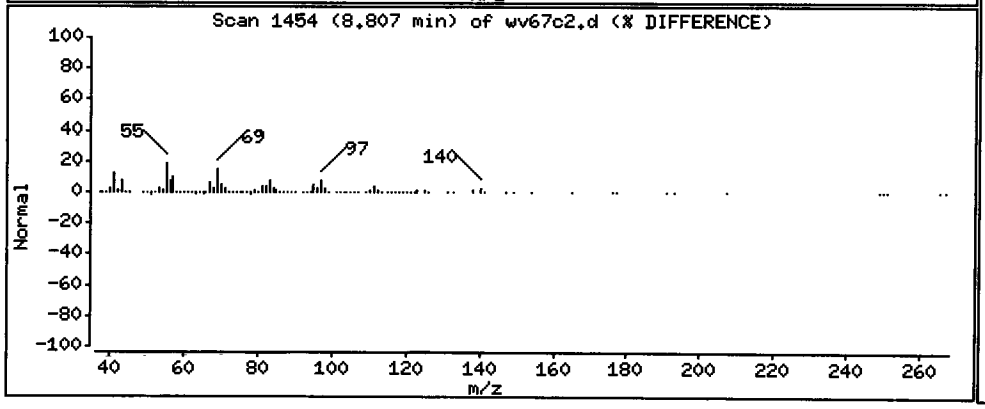












Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d

Date : 28-JUN-2013 04:51

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,7.73,0

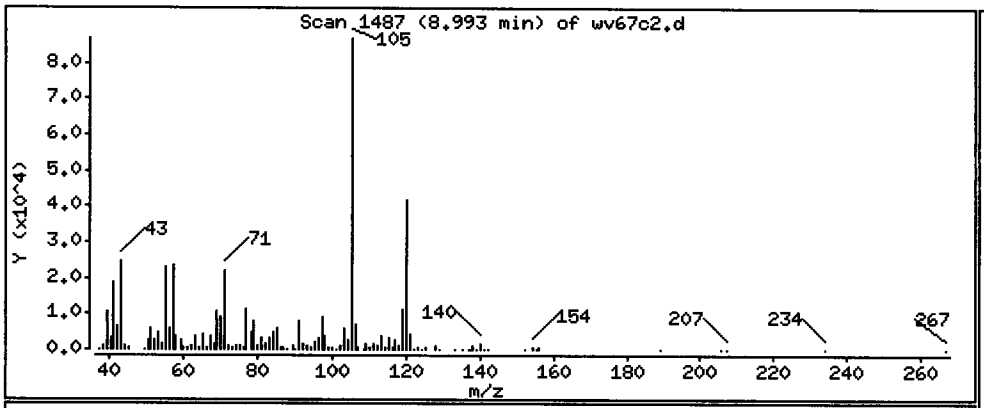
Operator: PB

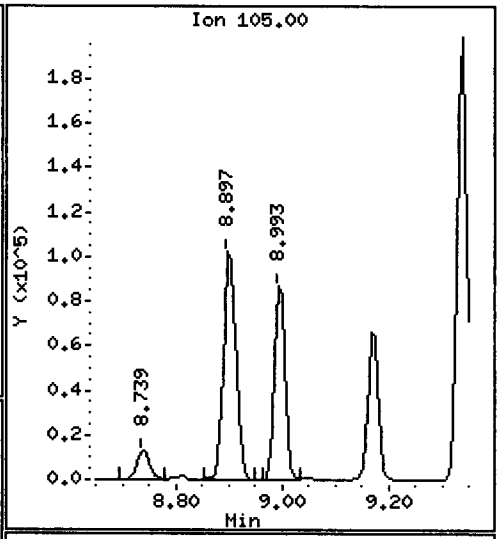
Column phase: RTXVMS

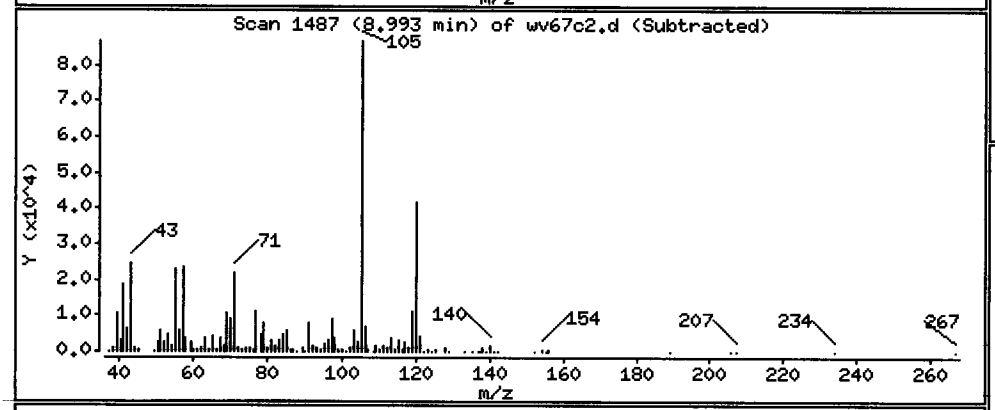
Column diameter: 0.18

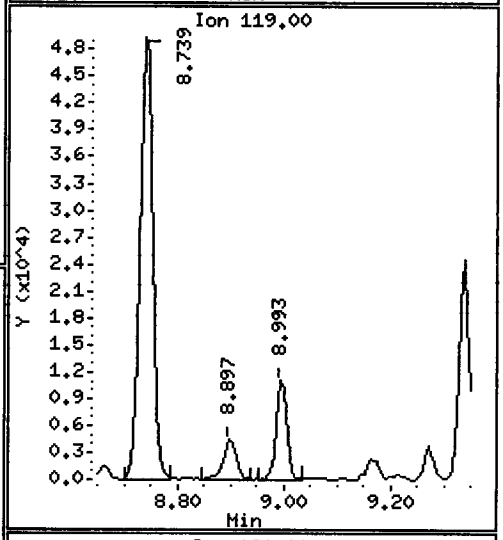
67 1,3,5-Trimethyl Benzene

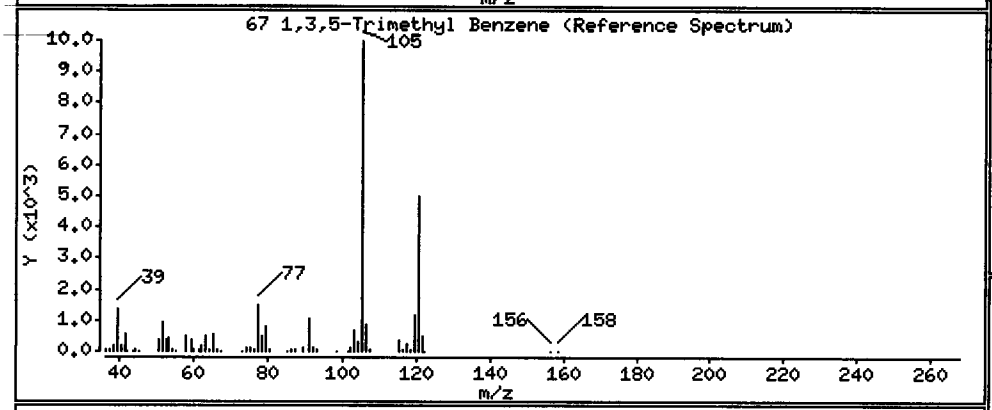
Concentration: 6.589 ug/Kg

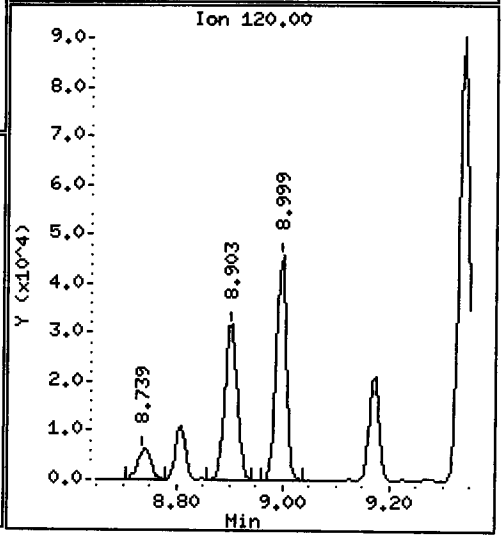


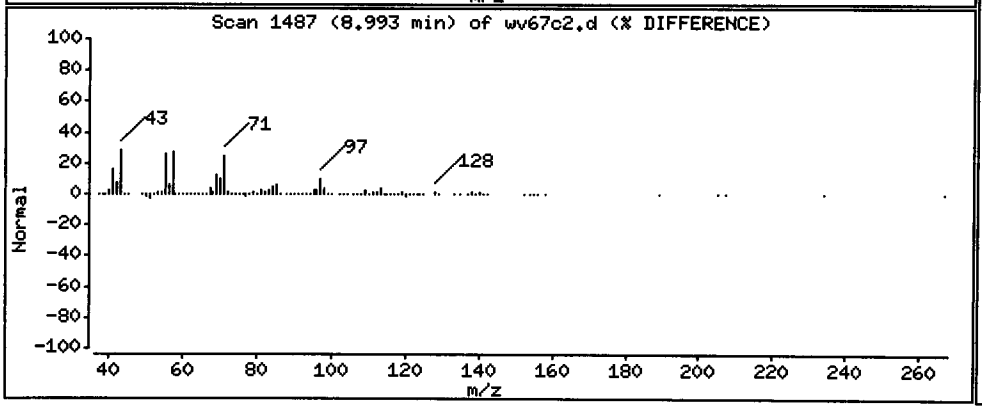












Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d

Date : 28-JUN-2013 04:51

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,7.73,0

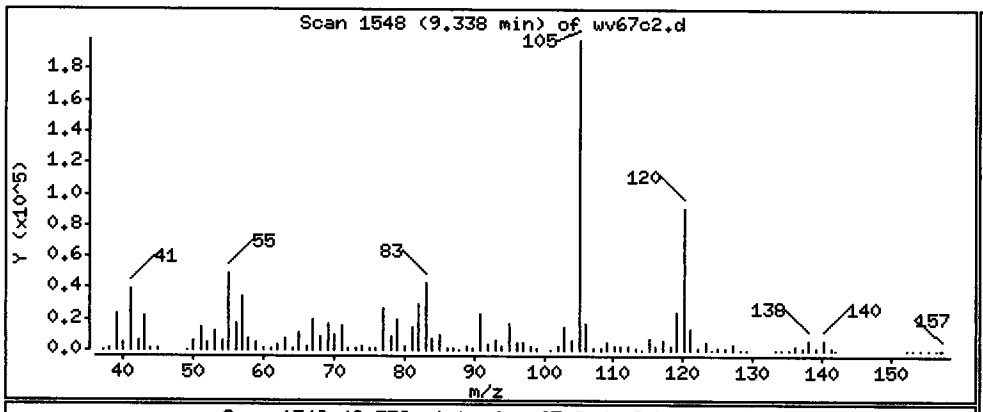
Operator: PB

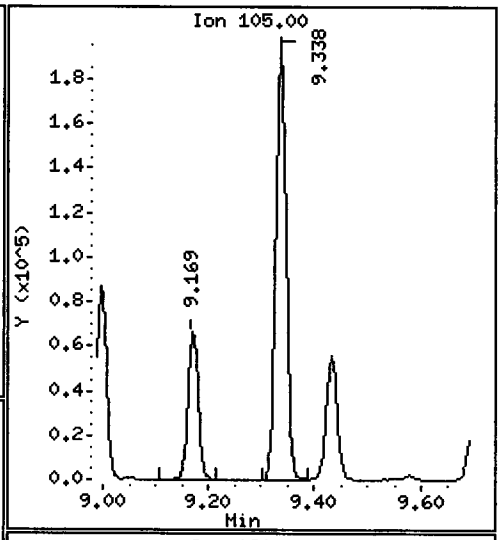
Column phase: RTXVMS

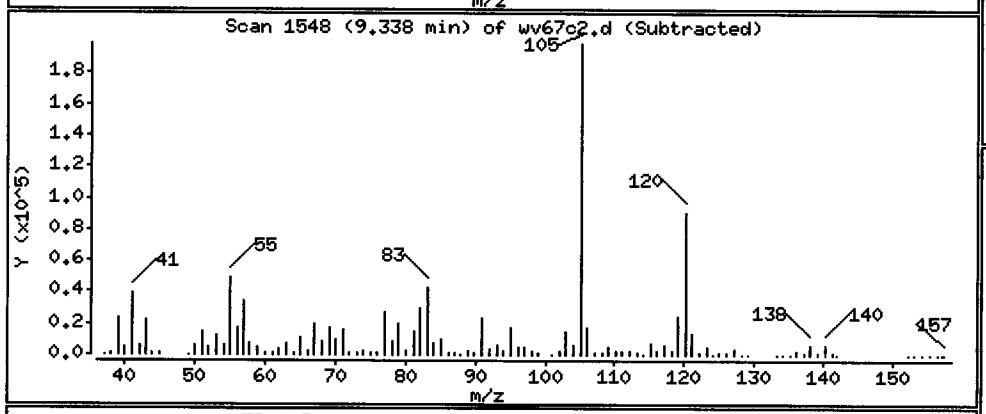
Column diameter: 0.18

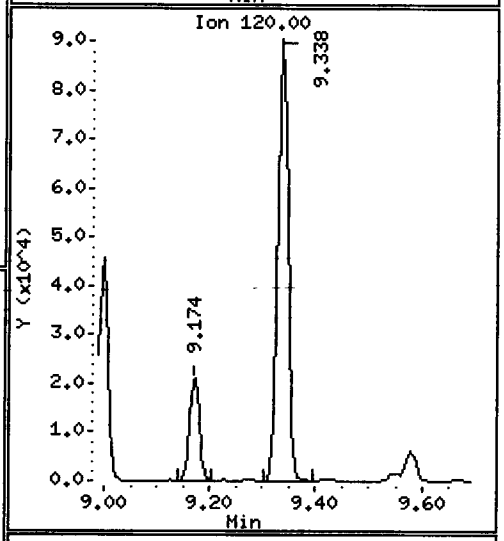
72 1,2,4-Trimethylbenzene

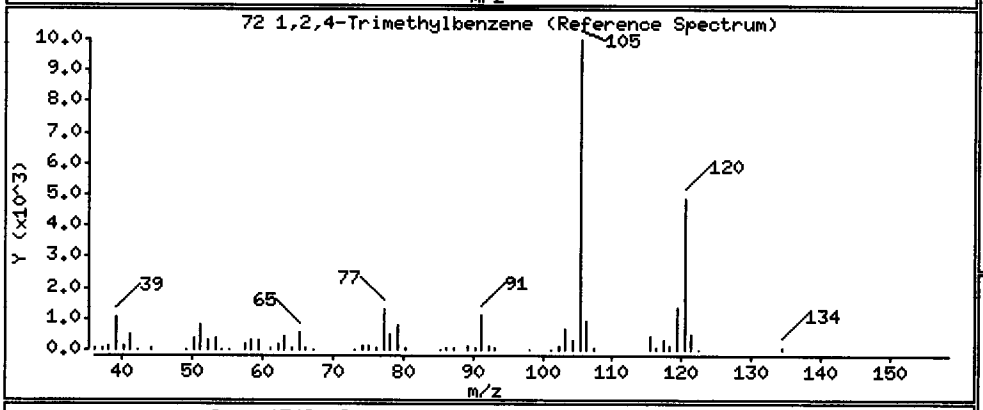
Concentration: 14.971 ug/Kg

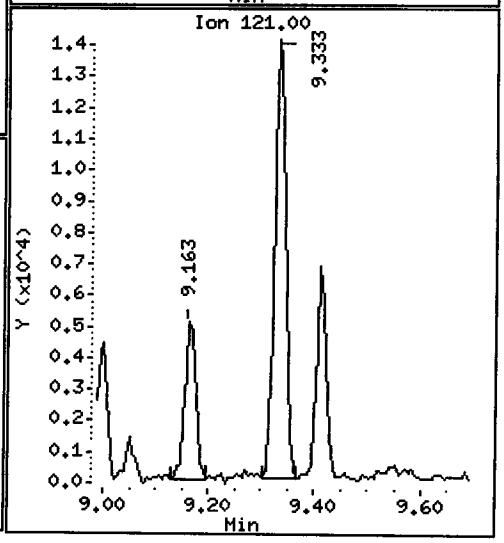


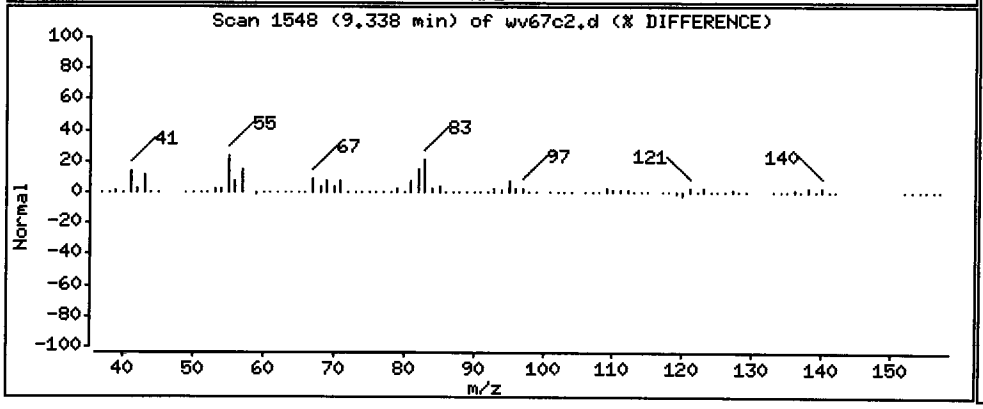












Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d

Date : 28-JUN-2013 04:51

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,7.73,0

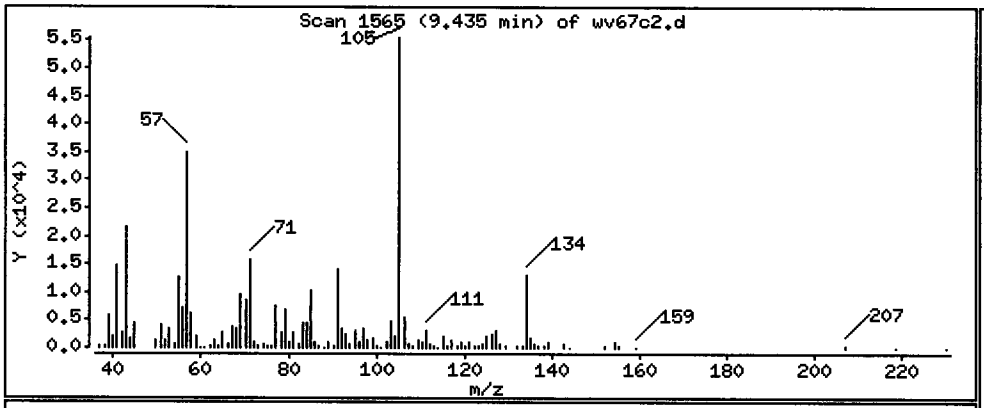
Operator: PB

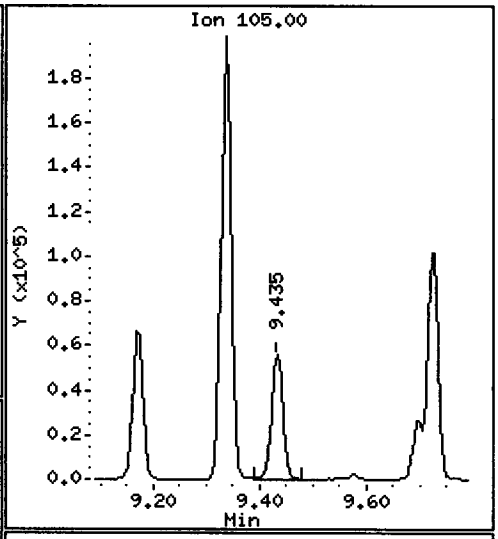
Column phase: RTXVMS

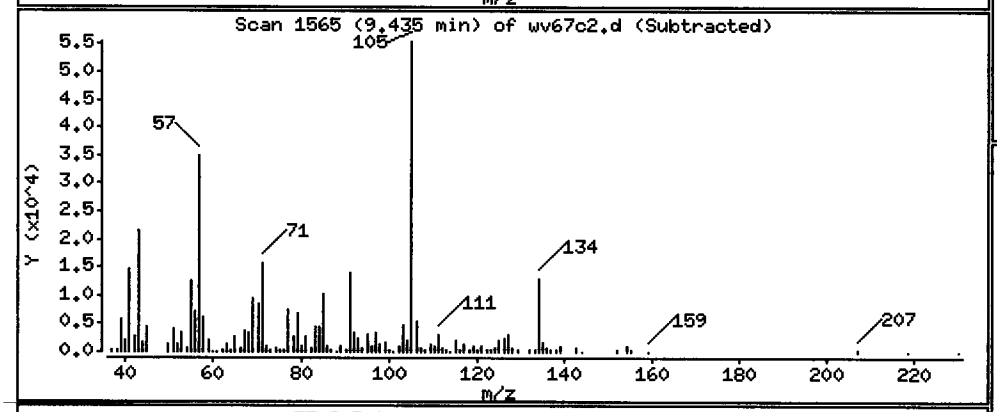
Column diameter: 0.18

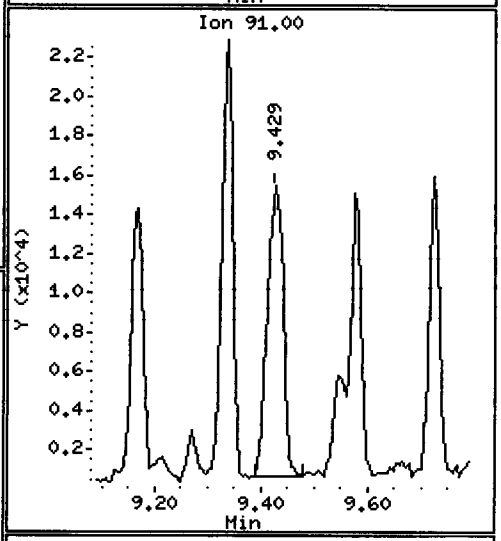
73 S-Butyl Benzene

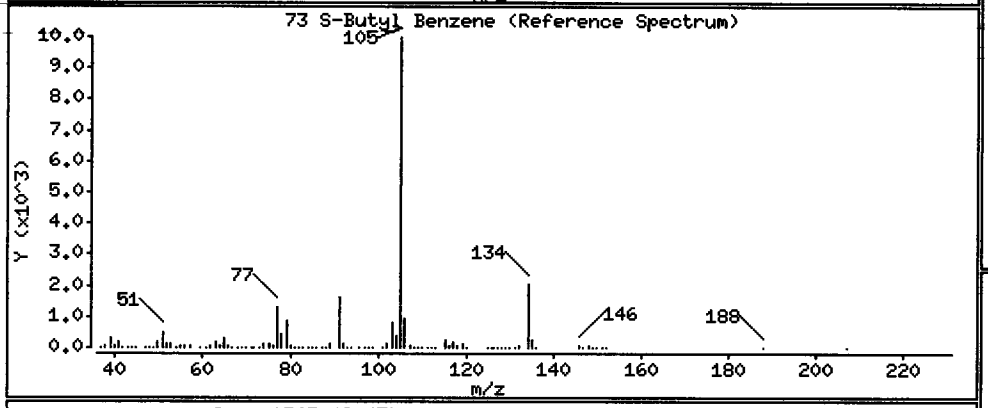
Concentration: 3.601 ug/Kg

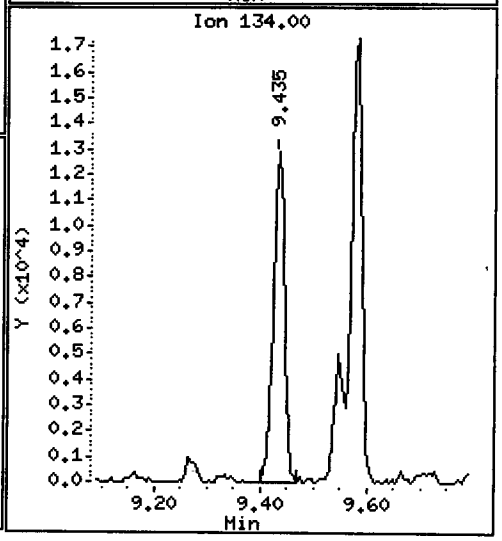


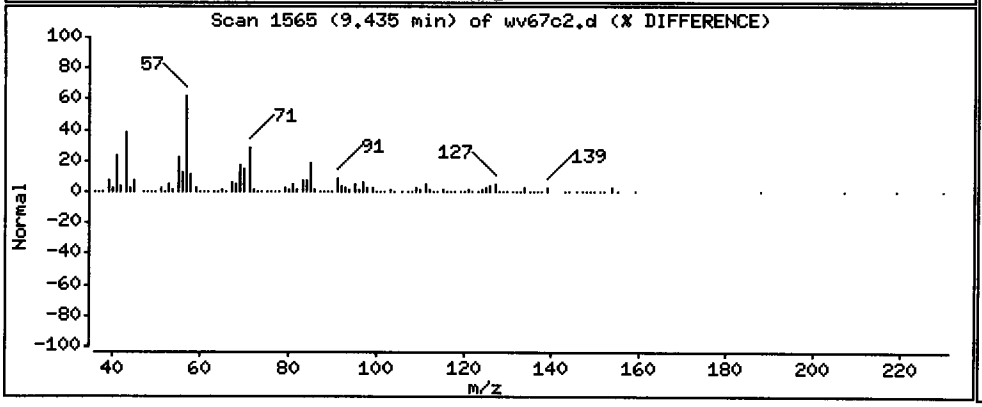












Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d

Date : 28-JUN-2013 04:51

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,7.73,0

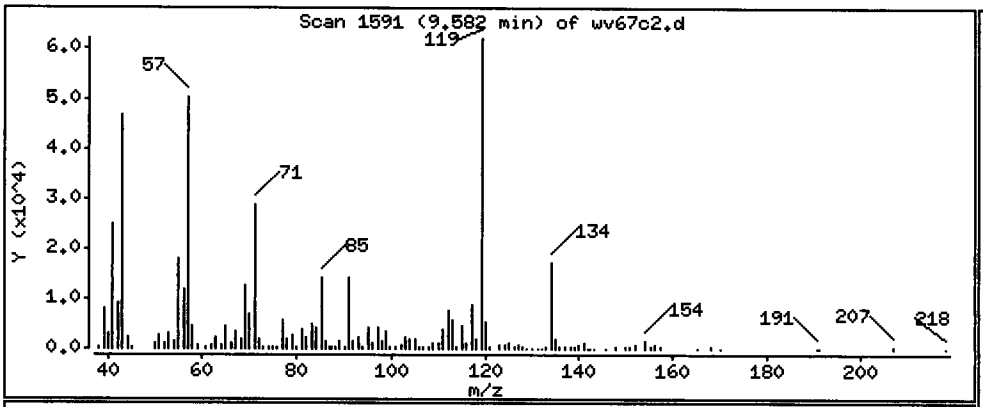
Operator: PB

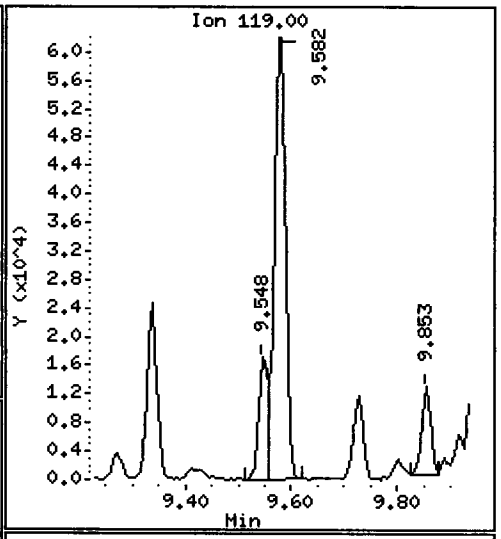
Column phase: RTXVMS

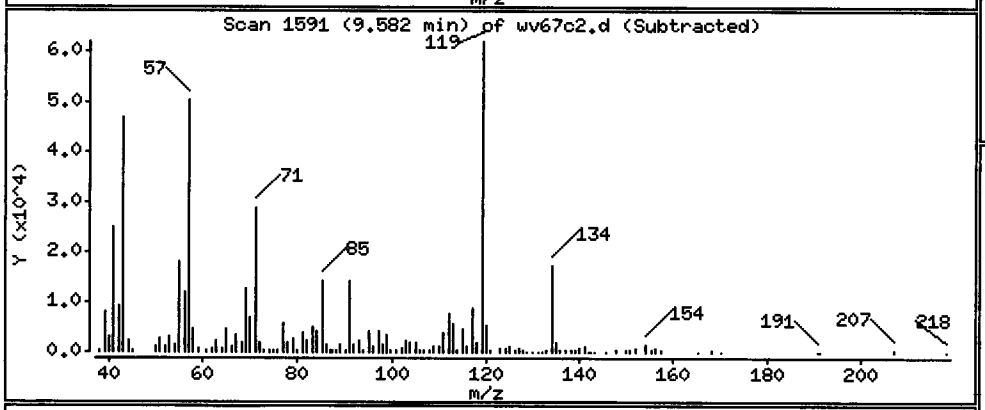
Column diameter: 0.18

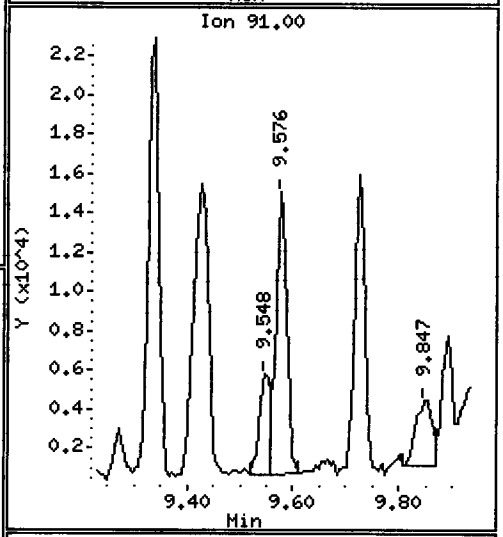
74 4-Isopropyl Toluene

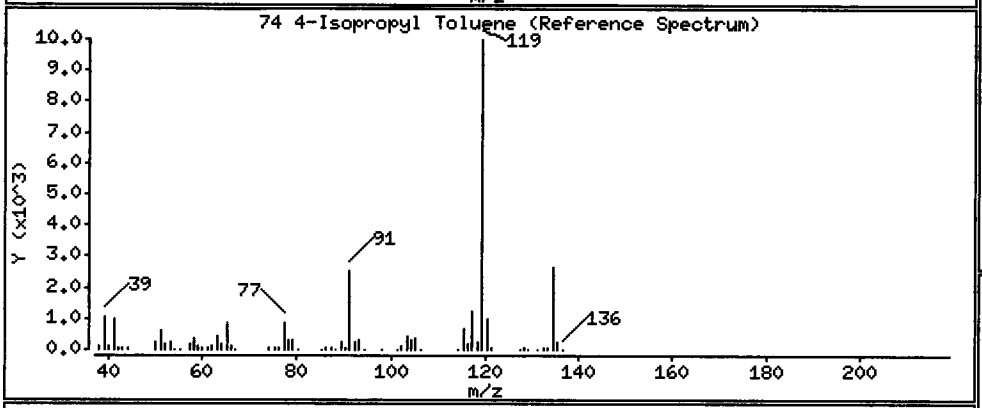
Concentration: 5.021 ug/Kg

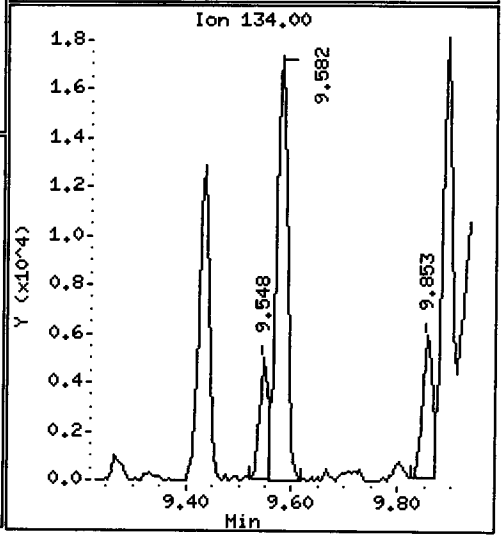


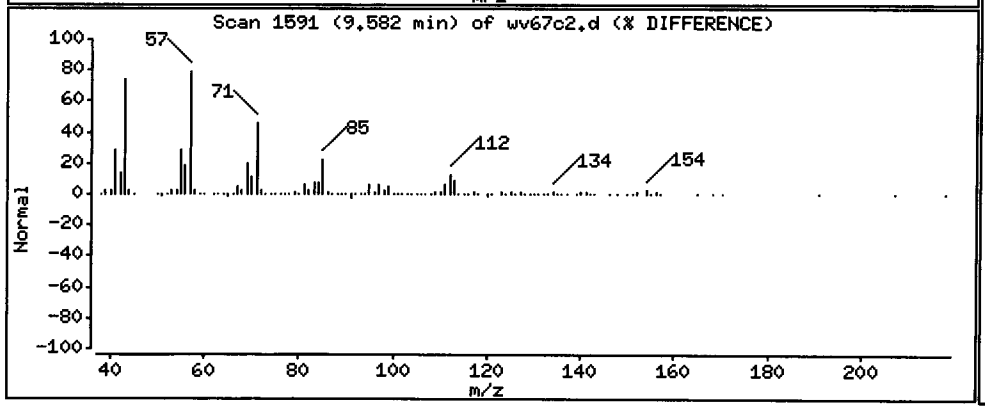












WV67 : 06-09

Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d

Date : 28-JUN-2013 04:51

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,7.73,0

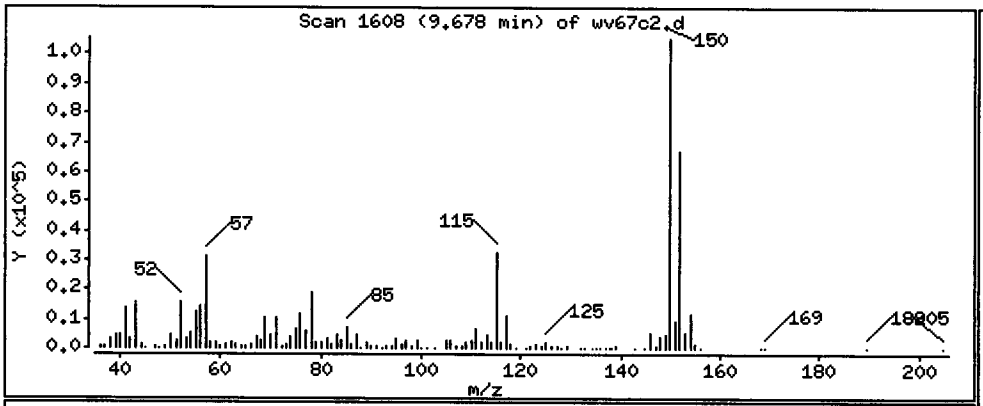
Operator: PB

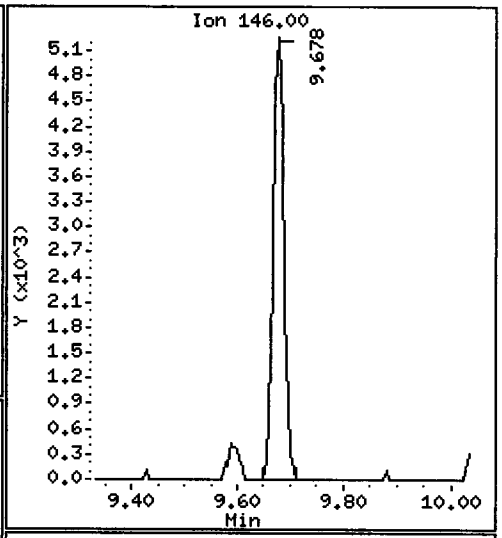
Column phase: RTXVMS

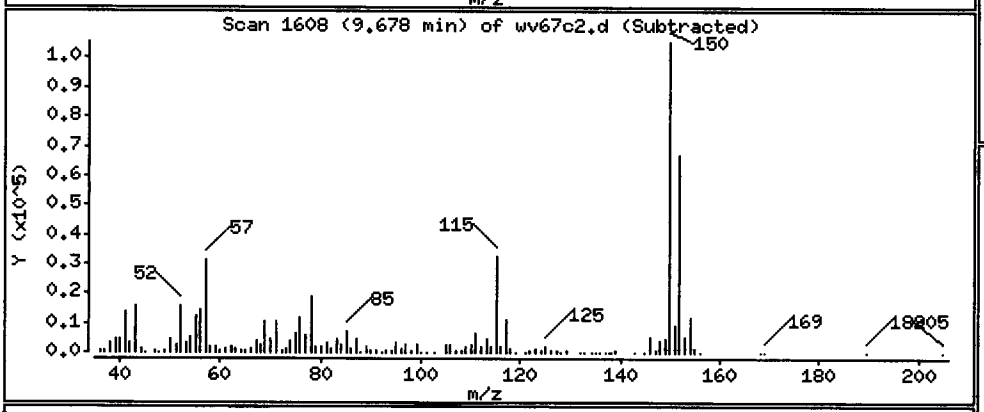
Column diameter: 0.18

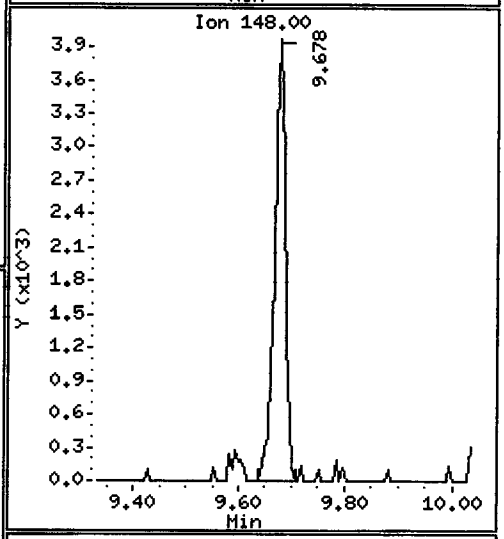
77 1,4-Dichlorobenzene

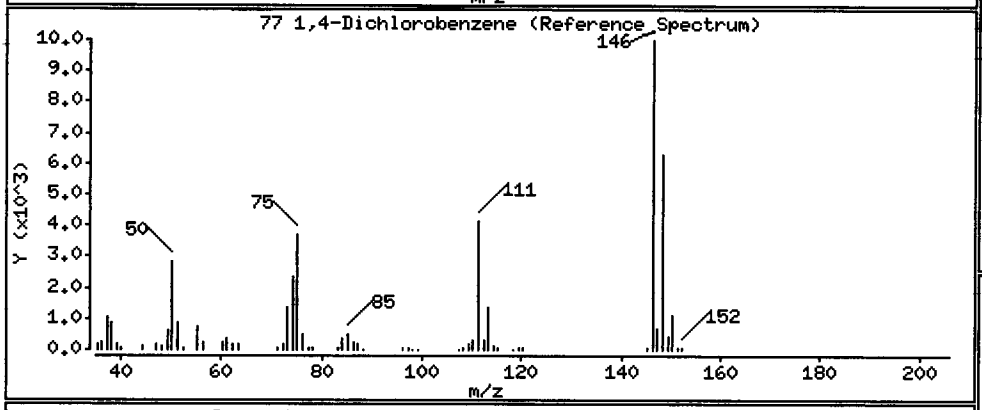
Concentration: 0.6822 ug/Kg

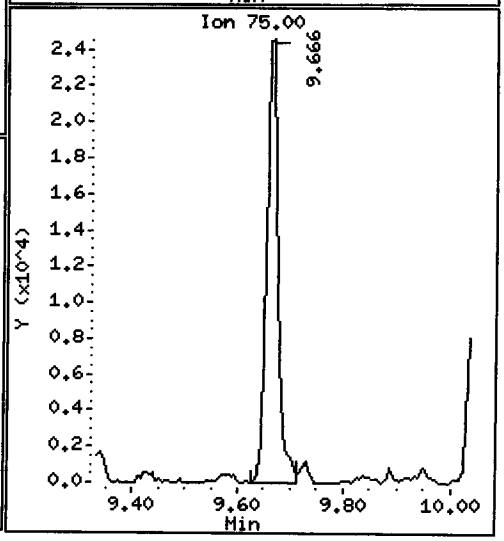


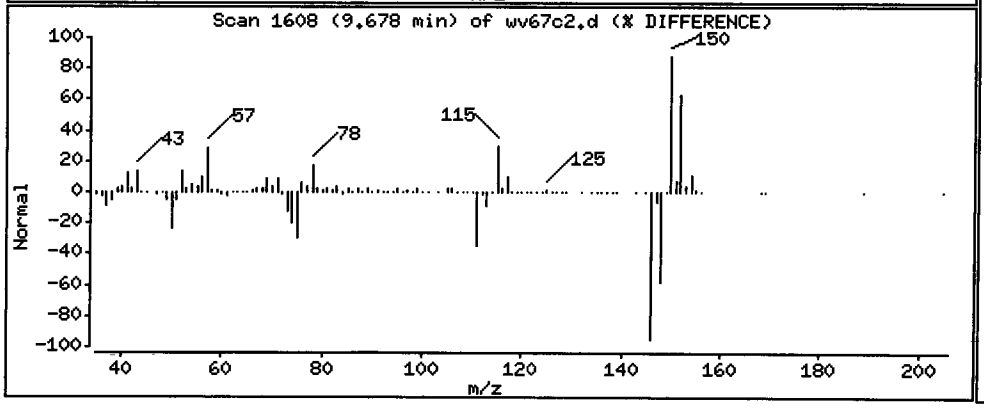












Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d

Date : 28-JUN-2013 04:51

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,7.73,0

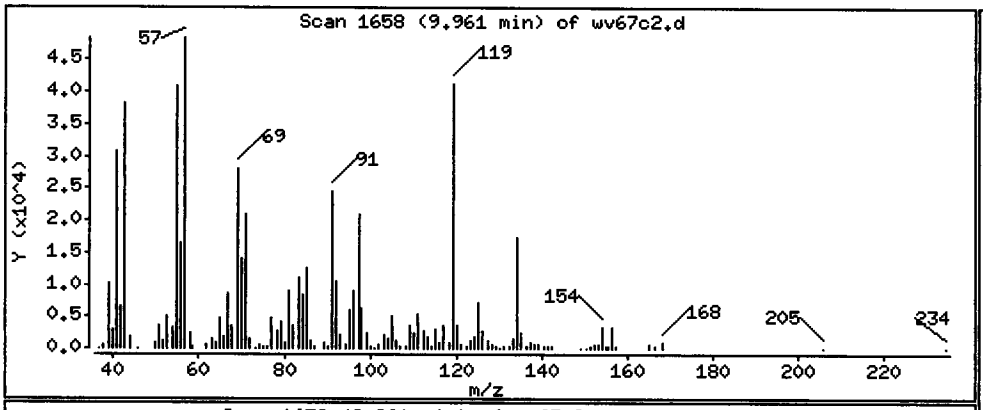
Operator: PB

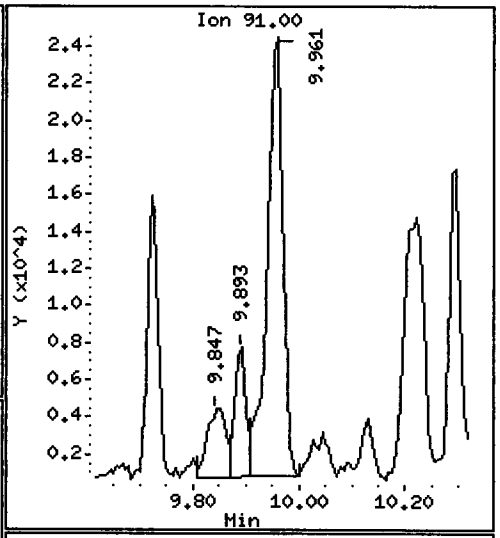
Column phase: RTXVMS

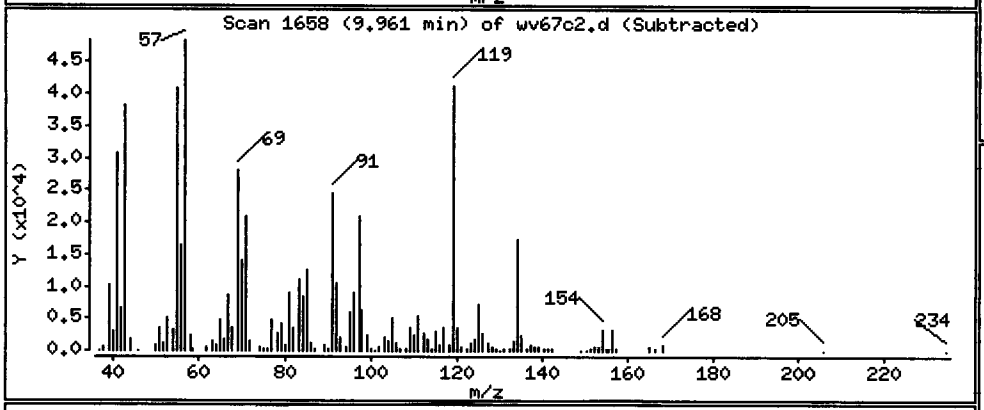
Column diameter: 0.18

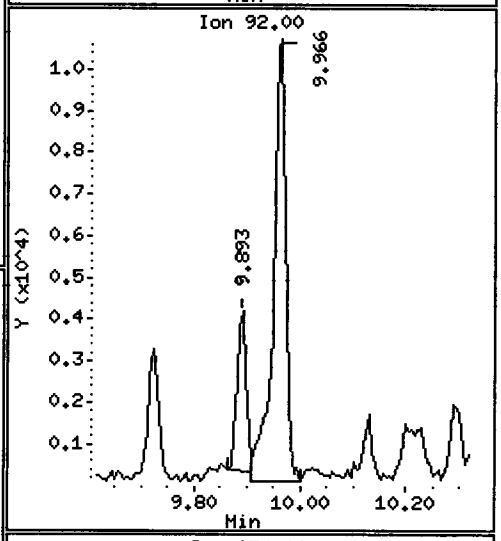
78 N-Butyl Benzene

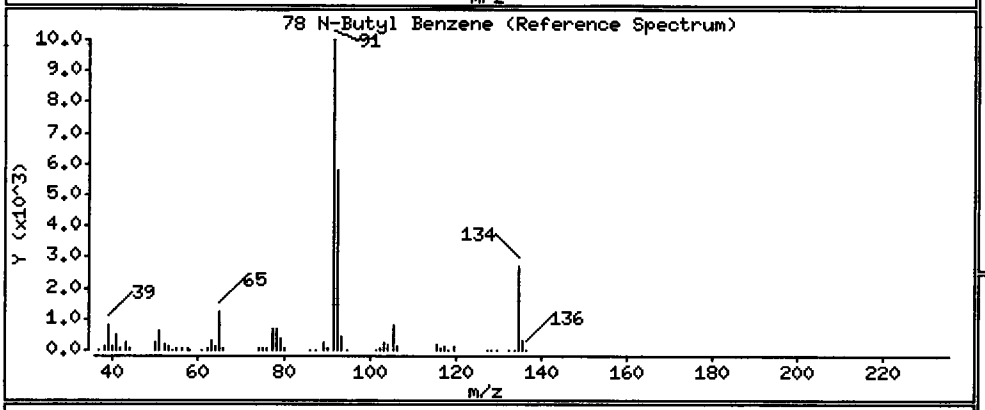
Concentration: 2.908 ug/Kg

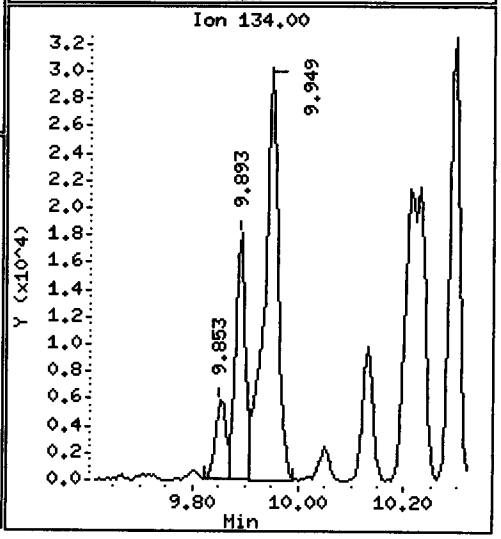


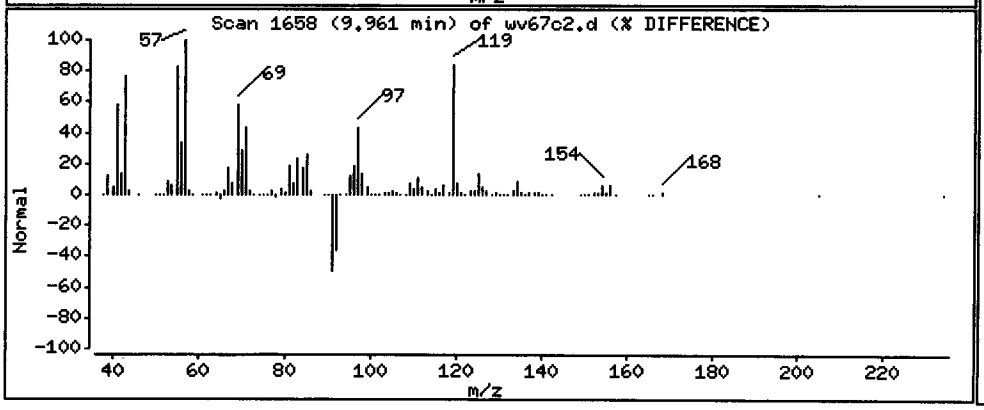












Data File: /chem1/nt5.i/27JUN13.b/wv67c2.d

Date : 28-JUN-2013 04:51

Client ID: UP-CB-A6-20130626-S

Instrument: nt5.i

Sample Info: WV67C,5,7.73,0

Operator: PB

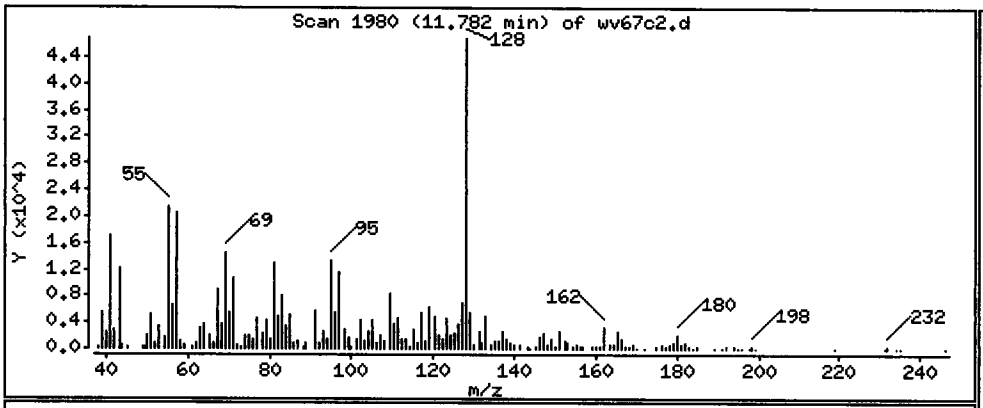
Column phase: RTXVMS

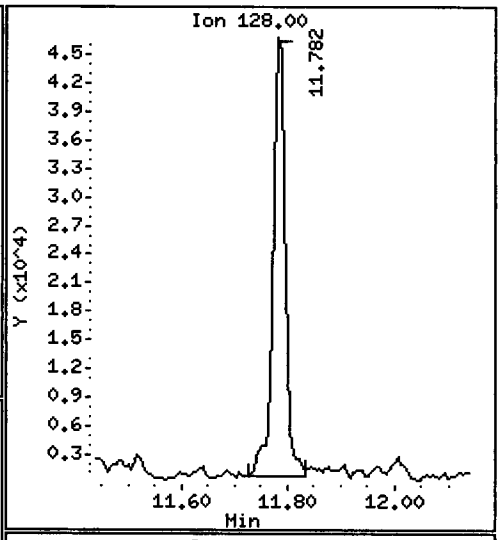
Column diameter: 0.18

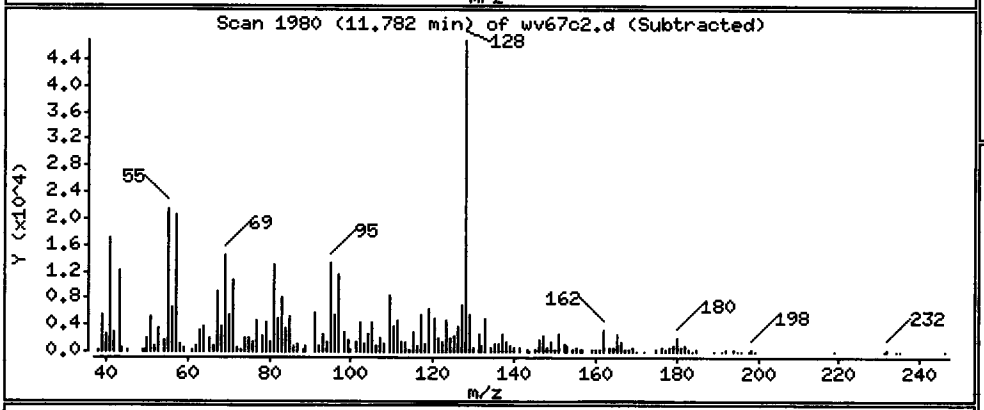
(B)

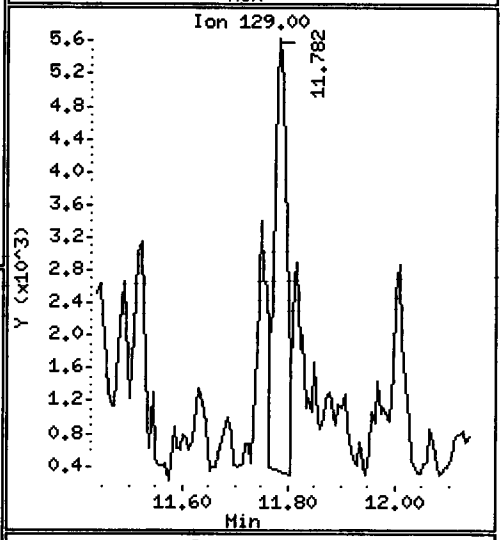
84 Naphthalene

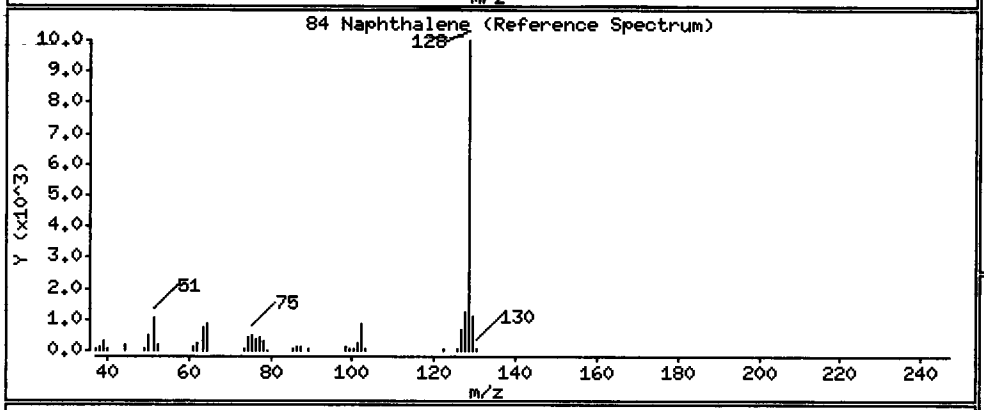
Concentration: 4.473 ug/Kg

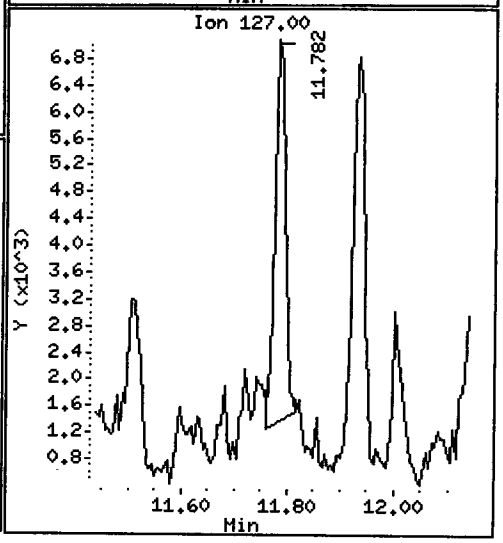


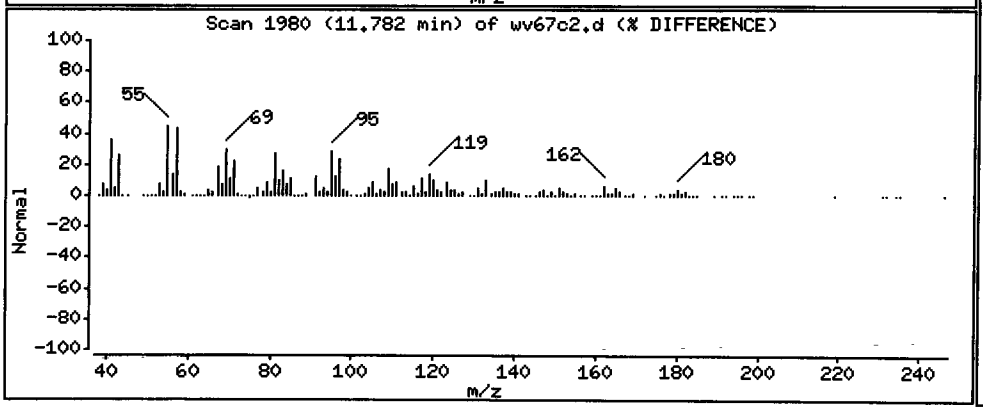












WV67 : 005812

CO-ELUTION SUMMARY FOR FILE - wv67c2.d

Lab ID: WV67C, Method: VO121012S.m, Instrument: nt5.i, Date: 28-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt5.i/28JUN13.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF								
1	0803	bfb0628.d	BFB0628	BFB0628			1								
2	0836	cc0628.d	CC0628	VSTD50			1	4.65	1610106	5.11	2743379	7.60	2682175	9.67	1452035
3	0916	lcs0628.d	LCS0628	LCS0628			1	4.67	1638718	5.12	2789415	7.60	2734604	9.67	1483504
4	0940	lcs0628a.d	LCS0628	LCS0628			1	4.66	1602728	5.11	2745419	7.60	2678861	9.67	1432480
5	1004	mb0628.d	MB0628	MB0628			1	4.66	1625273	5.11	2772718	7.59	2788806	9.67	1516209
6	1126	wv67a3.d	WV67A	UP-CB-B8-20130626-S			1	4.66	1593406	5.11	2724789	7.60	2724311	9.67	1455919
7	1043	wv67b3.d	WV67B	UP-MHF-165-20130626			1	4.65	1642490	5.10	2819202	7.59	2793662	9.67	1461331

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt5.i/28JUN13.b

ARI Job No.: BFB0 Method: bfb8260.m Instrument: nt5.i Date: 28-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0803	bfb0628.d	BFB0628	BFB0628	1	NO MANUAL INTEGRATION
0836	cc0628.d	CC0628	VSTD50	1	Chloromethane,
0916	lcs0628.d	LCS0628	LCS0628	1	Chloromethane,
0940	lcs0628a.d	LCS0628	LCS0628	1	Chloromethane,
1004	mb0628.d	MB0628	MB0628	1	NO MANUAL INTEGRATION
1126	wv67a3.d	WV67A	UP-CB-B8-2	1	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt5.i/28JUN13.b

Instrument: nt5.i Date: 28-JUN-2013 Method: VO121012S.m

INITIAL CAL: 27-JUN-2013

Compound	%RSD or R^2
Iodomethane	27.8

CONTINUING CAL: 28-JUN-2013

Compound	%D
Bromomethane	-29.0
Acrolein	24.9
Methylene Chloride	-24.3
2-Chloroethyl Vinyl Ether	31.3

Data File: /chem1/nt5.i/28JUN13.b/bfb0628.d

Date : 28-JUN-2013 08:03

Client ID: BFB0628

Instrument: nt5.i

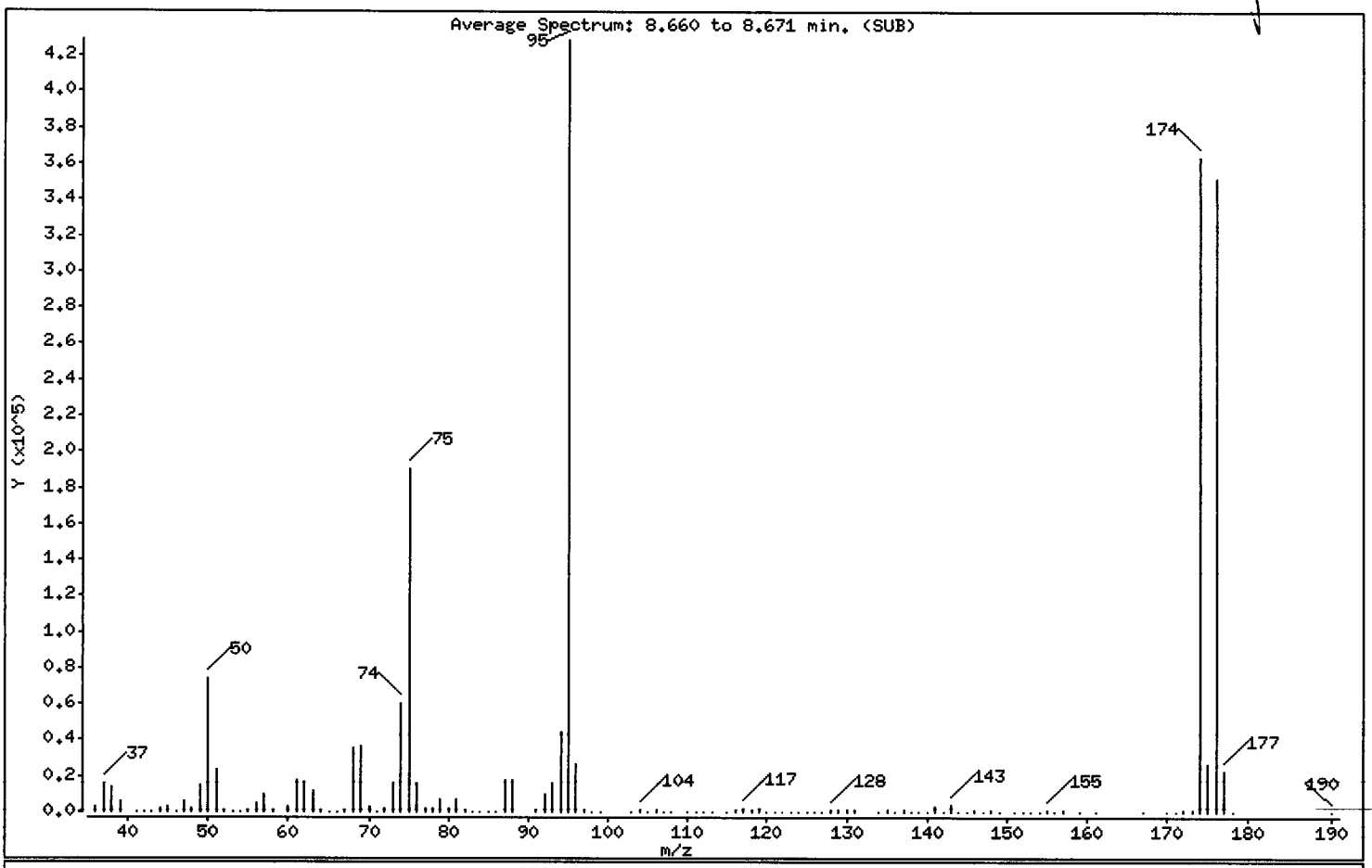
Sample Info: BFB0628,BFB0628,,1,28JUN13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	17.35
75	30.00 - 66.00% of mass 95	44.31
96	5.00 - 9.00% of mass 95	6.27
173	Less than 2.00% of mass 174	0.21 (0.24)
174	50.00 - 101.00% of mass 95	84.76
175	4.00 - 9.00% of mass 174	6.14 (7.24)
176	95.00 - 101.00% of mass 174	82.15 (96.91)
177	5.00 - 9.00% of mass 176	5.39 (6.57)

Data File: /chem1/nt5.i/28JUN13.b/bfb0628.d

Date : 28-JUN-2013 08:03

Client ID: BFB0628

Instrument: nt5.i

Sample Info: BFB0628,BFB0628,,1,28JUN13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0628.d

Spectrum: Average Spectrum: 8.660 to 8.671 min. (SUB)

Location of Maximum: 95.00

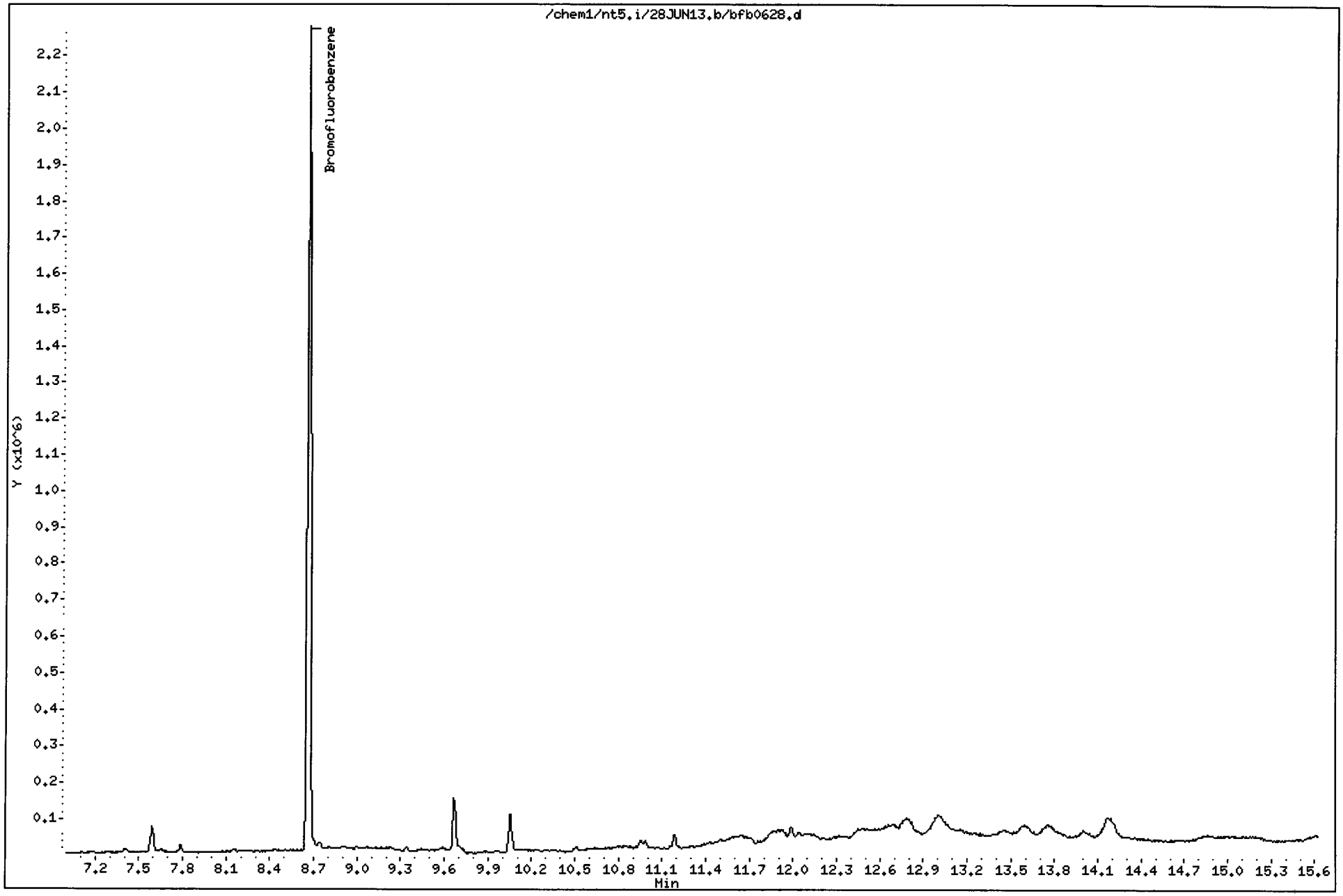
Number of points: 123

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2872	69.00	36288	105.00	189	140.00	269
37.00	16096	70.00	2743	106.00	1150	141.00	3071
38.00	14130	71.00	164	107.00	353	142.00	361
39.00	6041	72.00	1991	108.00	36	143.00	3493
41.00	116	73.00	15652	110.00	226	144.00	279
42.00	139	74.00	60112	111.00	242	145.00	315
43.00	231	75.00	190080	112.00	183	146.00	725
44.00	1647	76.00	16071	113.00	151	147.00	297
45.00	3184	77.00	2273	115.00	219	148.00	1019
46.00	61	78.00	1656	116.00	961	149.00	346
47.00	5849	79.00	6481	117.00	1806	151.00	105
48.00	2405	80.00	1768	118.00	1109	152.00	174
49.00	14935	81.00	6440	119.00	1806	153.00	373
50.00	74456	82.00	1283	120.00	150	154.00	293
51.00	23832	83.00	225	121.00	76	155.00	991
52.00	1135	84.00	88	122.00	43	156.00	139
53.00	100	85.00	78	123.00	86	157.00	674
54.00	110	86.00	286	124.00	257	159.00	433
55.00	881	87.00	18160	125.00	56	161.00	422
56.00	5219	88.00	17624	126.00	177	167.00	39
57.00	9531	91.00	1049	127.00	133	170.00	37
58.00	585	92.00	10220	128.00	1313	171.00	161
60.00	3070	93.00	16099	129.00	612	172.00	642
61.00	17536	94.00	44536	130.00	1287	173.00	881
62.00	16808	95.00	429056	131.00	614	174.00	363712
63.00	12254	96.00	26888	134.00	167	175.00	26336
64.00	1149	97.00	1006	135.00	595	176.00	352448
65.00	461	98.00	151	136.00	90	177.00	23144
66.00	100	99.00	35	137.00	656	178.00	449
67.00	820	103.00	244	138.00	75	190.00	41
68.00	35552	104.00	1259	139.00	173		

Data File: /chem1/nt5.i/28JUN13.b/bfb0628.d
Date : 28-JUN-2013 08:03
Client ID: BFB0628
Sample Info: BFB0628,BFB0628,,1,28JUN13,,

Instrument: nt5.i
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/28JUN13.b/cc0628.d
Lab Smp Id: CC0628 Client Smp ID: VSTD50
Inj Date : 28-JUN-2013 08:36
Operator : PB Inst ID: nt5.i
Smp Info : CC0628,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/28JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 08:53 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.029	1.029	(0.221)	455459	50.0000	48.651
2 Chloromethane	50	1.153	1.153	(0.248)	810410	50.0000	42.198(M)
3 Vinyl Chloride	62	1.198	1.198	(0.257)	860985	50.0000	49.779
4 Bromomethane	94	1.402	1.402	(0.301)	351701	50.0000	35.478
5 Chloroethane	64	1.492	1.492	(0.321)	549291	50.0000	52.202
6 Trichlorofluoromethane	101	1.583	1.583	(0.340)	928637	50.0000	48.439
7 1,1-Dichloroethene	96	1.939	1.939	(0.417)	600931	50.0000	52.807
8 Carbon Disulfide	76	1.945	1.945	(0.418)	2150376	50.0000	52.769
9 112Trichloro122Trifluoroethane	101	1.985	1.985	(0.426)	584035	50.0000	52.975
10 Iodomethane	142	2.041	2.041	(0.439)	526718	50.0000	57.725
11 Bromoethane	108	2.137	2.137	(0.459)	381246	50.0000	50.155
12 Acrolein	56	2.250	2.250	(0.483)	549347	250.000	312.25
13 Methylene Chloride	84	2.415	2.415	(0.519)	535129	50.0000	37.871
14 Acetone	43	2.601	2.601	(0.559)	626976	250.000	234.16(H)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.550	2.550	(0.548)	534564	50.0000	47.246
	16 Methyl tert butyl ether	73	2.726	2.726	(0.586)	1725694	50.0000	49.477
	17 1,1-Dichloroethane	63	3.161	3.161	(0.679)	1334558	50.0000	51.583
	18 Acrylonitrile	53	3.286	3.286	(0.706)	291789	50.0000	50.225
	19 Vinyl Acetate	43	3.512	3.512	(0.754)	1693568	50.0000	48.495
	20 Cis-1,2-Dichloroethene	96	3.716	3.716	(0.798)	747875	50.0000	50.518
	22 2,2-Dichloropropane	77	3.812	3.812	(0.819)	1057134	50.0000	49.225
	23 Bromochloromethane	128	3.902	3.902	(0.838)	356576	50.0000	55.144
	24 Chloroform	83	4.004	4.004	(0.860)	1177162	50.0000	50.009
	25 Carbon Tetrachloride	117	4.095	4.095	(0.802)	902538	50.0000	48.002
$	27 Dibromofluoromethane	111	4.174	4.174	(0.897)	818783	50.0000	52.814
	26 1,1,1-Trichloroethane	97	4.163	4.163	(0.894)	1065395	50.0000	49.407
	28 1,1-Dichloropropene	75	4.287	4.287	(0.839)	1026253	50.0000	47.407
	29 2-Butanone	72	4.383	4.383	(0.942)	447723	250.000	241.72
	30 Benzene	78	4.513	4.513	(0.884)	2976067	50.0000	49.885
*	31 Pentafluorobenzene	168	4.655	4.655	(1.000)	1610106	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.649	(0.999)	887384	50.0000	50.369
	33 1,2-Dichloroethane	62	4.706	4.706	(0.921)	896415	50.0000	46.312
	34 Trichloroethene	95	5.051	5.051	(0.989)	734908	50.0000	48.767
*	35 1,4-Difluorobenzene	114	5.107	5.107	(1.000)	2743379	50.0000	
	37 Dibromomethane	93	5.413	5.413	(1.060)	394599	50.0000	47.997
	38 1,2-Dichloropropane	63	5.503	5.503	(1.078)	820909	50.0000	48.494
	39 Bromodichloromethane	83	5.582	5.582	(1.093)	912071	50.0000	48.665
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.120	(1.198)	172968	50.0000	65.629
	41 Cis 1,3-dichloropropene	75	6.125	6.125	(1.199)	1197406	50.0000	51.429
$	42 d8-Toluene	98	6.284	6.284	(1.230)	3409891	50.0000	50.144
	43 Toluene	92	6.329	6.329	(1.239)	1876357	50.0000	49.718
	44 Tetrachloroethene	166	6.640	6.640	(0.874)	777603	50.0000	49.221
	45 4-Methyl-2-Pentanone	58	6.697	6.697	(1.311)	1735335	250.000	243.01
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.311)	1075588	50.0000	50.397
	47 1,1,2-Trichloroethane	97	6.821	6.821	(1.336)	603230	50.0000	49.033
	48 Chlorodibromomethane	129	6.957	6.957	(0.916)	682797	50.0000	49.304
	49 1,3-Dichloropropane	76	7.042	7.042	(0.927)	1100147	50.0000	49.569
	50 1,2-Dibromoethane	107	7.138	7.138	(1.398)	598380	50.0000	49.965
	51 2-Hexanone	43	7.410	7.410	(0.975)	2733528	250.000	236.24
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2682175	50.0000	
	53 Chlorobenzene	112	7.608	7.608	(1.001)	1888581	50.0000	49.243
	54 Ethyl Benzene	91	7.658	7.658	(1.008)	3361726	50.0000	51.554
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	683951	50.0000	49.206
	56 m,p-xylene	106	7.789	7.789	(1.025)	2536200	100.000	103.61
	57 o-Xylene	106	8.156	8.156	(1.074)	1248002	50.0000	51.656
	58 Styrene	104	8.202	8.202	(1.080)	2105083	50.0000	53.173
	59 Bromoform	173	8.196	8.196	(0.847)	485824	50.0000	48.173
	60 Isopropyl Benzene	105	8.439	8.439	(0.872)	3178688	50.0000	52.777
$	62 4-Bromofluorobenzene	95	8.665	8.665	(1.141)	1434140	50.0000	50.239
	63 Bromobenzene	156	8.739	8.739	(0.903)	794865	50.0000	47.996
	64 N-Propyl Benzene	91	8.807	8.807	(0.910)	3727940	50.0000	51.379

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	778452	50.0000	46.639
66	2-Chloro Toluene	91	8.920	8.920	(0.922)	2299266	50.0000	50.275
67	1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.930)	2696334	50.0000	51.931
68	1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	238188	50.0000	45.912
69	Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	259187	50.0000	41.183
70	4-Chloro Toluene	91	9.073	9.073	(0.938)	2394905	50.0000	50.310
71	T-Butyl Benzene	119	9.276	9.276	(0.959)	2372269	50.0000	51.439
72	1,2,4-Trimethylbenzene	105	9.344	9.344	(0.966)	2669999	50.0000	52.592
73	S-Butyl Benzene	105	9.440	9.440	(0.976)	3456837	50.0000	52.134
74	4-Isopropyl Toluene	119	9.588	9.588	(0.991)	2899159	50.0000	53.974
75	1,3-Dichlorobenzene	146	9.599	9.599	(0.992)	1481695	50.0000	48.955
* 76	d4-1,4-Dichlorobenzene	152	9.672	9.672	(1.000)	1452035	50.0000	
77	1,4-Dichlorobenzene	146	9.684	9.684	(1.001)	1519071	50.0000	48.521
78	N-Butyl Benzene	91	9.972	9.972	(1.031)	2758461	50.0000	54.726
$ 79	d4-1,2-Dichlorobenzene	152	10.057	10.057	(1.040)	1318300	50.0000	49.777
80	1,2-Dichlorobenzene	146	10.063	10.063	(1.040)	1409371	50.0000	47.751
81	1,2-Dibromo 3-Chloropropane	75	10.815	10.815	(1.118)	149793	50.0000	43.373
82	Hexachloro 1,3-Butadiene	225	11.500	11.500	(1.189)	689661	50.0000	48.629
83	1,2,4-Trichlorobenzene	180	11.483	11.483	(1.187)	1105909	50.0000	50.190
84	Naphthalene	128	11.799	11.799	(1.220)	2392198	50.0000	49.192
85	1,2,3-Trichlorobenzene	180	11.980	11.980	(1.239)	1047233	50.0000	47.939

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: cc0628.d
Lab Smp Id: CC0628
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/28JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 28-JUN-2013
Calibration Time: 08:36
Client Smp ID: VSTD50
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1610106	-0.22
35 1,4-Difluorobenze	2656709	1328354	5313418	2743379	3.26
52 d5-Chlorobenzene	2557235	1278618	5114470	2682175	4.89
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1452035	5.65

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.65	0.00
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.00
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

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

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i Injection Date: 28-JUN-2013 08:36
Lab File ID: cc0628.d Init. Cal. Date(s): 27-JUN-2013 27-JUN-2013
Analysis Type: SOIL Init. Cal. Times: 10:43 15:48
Lab Sample ID: CC0628 Quant Type: ISTD
Method: /chem1/nt5.i/28JUN13.b/VO121012S.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
1 Dichlorodifluoromethane	0.29072	0.28288	0.28288	0.100	-2.69838	20.00000	Averaged	
2 Chloromethane	0.59639	0.50333	0.50333	0.100	-15.60399	20.00000	Averaged	
3 Vinyl Chloride	0.53711	0.53474	0.53474	0.100	-0.44134	20.00000	Averaged	
4 Bromomethane	0.30784	0.21843	0.21843	0.100	-29.04396	20.00000	Averaged	<-
5 Chloroethane	0.32676	0.34115	0.34115	0.100	4.40334	20.00000	Averaged	
6 Trichlorofluoromethane	0.59534	0.57676	0.57676	0.100	-3.12194	20.00000	Averaged	
7 1,1-Dichloroethene	0.35338	0.37322	0.37322	0.100	5.61496	20.00000	Averaged	
8 Carbon Disulfide	1.26547	1.33555	1.33555	0.010	5.53751	20.00000	Averaged	
9 112Trichloro122Trifluoroeth	0.34236	0.36273	0.36273	0.010	5.95074	20.00000	Averaged	
10 Iodomethane	0.28335	0.32713	0.32713	0.010	15.45017	20.00000	Averaged	
11 Bromoethane	0.23605	0.23678	0.23678	0.100	0.31021	20.00000	Averaged	
12 Acrolein	0.05463	0.06824	0.06824	0.000	24.89812	20.00000	Averaged	<-
13 Methylene Chloride	37.87121	50.00000	0.33236	0.010	-24.25757	20.00000	Linear	<-
14 Acetone	0.08315	0.07788	0.07788	0.001	-6.33797	20.00000	Averaged	
15 Trans-1,2-Dichloroethene	0.35136	0.33201	0.33201	0.010	-5.50819	20.00000	Averaged	
16 Methyl tert butyl ether	1.08311	1.07179	1.07179	0.100	-1.04510	20.00000	Averaged	
17 1,1-Dichloroethane	0.80343	0.82886	0.82886	0.100	3.16502	20.00000	Averaged	
18 Acrylonitrile	0.18041	0.18122	0.18122	0.001	0.45024	20.00000	Averaged	
19 Vinyl Acetate	1.08447	1.05184	1.05184	0.010	-3.00927	20.00000	Averaged	
20 Cis-1,2-Dichloroethene	0.45973	0.46449	0.46449	0.010	1.03566	20.00000	Averaged	
22 2,2-Dichloropropane	0.66689	0.65656	0.65656	0.010	-1.54943	20.00000	Averaged	
23 Bromochloromethane	0.20080	0.22146	0.22146	0.050	10.28797	20.00000	Averaged	
24 Chloroform	0.73098	0.73111	0.73111	0.100	0.01718	20.00000	Averaged	
25 Carbon Tetrachloride	0.34268	0.32899	0.32899	0.100	-3.99678	20.00000	Averaged	
$ 27 Dibromofluoromethane	0.48143	0.50853	0.50853	0.100	5.62811	20.00000	Averaged	
26 1,1,1-Trichloroethane	0.66964	0.66169	0.66169	0.100	-1.18677	20.00000	Averaged	
28 1,1-Dichloropropene	0.39455	0.37408	0.37408	0.010	-5.18634	20.00000	Averaged	
29 2-Butanone	0.05752	0.05561	0.05561	0.001	-3.31390	20.00000	Averaged	
30 Benzene	1.08732	1.08482	1.08482	0.100	-0.22972	20.00000	Averaged	
$ 32 d4-1,2-Dichloroethane	0.54709	0.55113	0.55113	0.010	0.73878	20.00000	Averaged	
33 1,2-Dichloroethane	0.35278	0.32676	0.32676	0.100	-7.37688	20.00000	Averaged	
34 Trichloroethene	0.27466	0.26788	0.26788	0.100	-2.46587	20.00000	Averaged	
37 Dibromomethane	0.14984	0.14384	0.14384	0.010	-4.00670	20.00000	Averaged	
38 1,2-Dichloropropane	0.30852	0.29923	0.29923	0.100	-3.01166	20.00000	Averaged	
39 Bromodichloromethane	0.34158	0.33246	0.33246	0.100	-2.67021	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i Injection Date: 28-JUN-2013 08:36
Lab File ID: cc0628.d Init. Cal. Date(s): 27-JUN-2013 27-JUN-2013
Analysis Type: SOIL Init. Cal. Times: 10:43 15:48
Lab Sample ID: CC0628 Quant Type: ISTD
Method: /chem1/nt5.i/28JUN13.b/VO121012S.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
40 2-Chloroethyl Vinyl Ether	0.04803	0.06305	0.06305	0.000	31.25709	20.00000	Averaged	<-
41 Cis 1,3-dichloropropene	0.42434	0.43647	0.43647	0.100	2.85783	20.00000	Averaged	
$ 42 d8-Toluene	1.23938	1.24295	1.24295	0.010	0.28807	20.00000	Averaged	
43 Toluene	0.68784	0.68396	0.68396	0.100	-0.56446	20.00000	Averaged	
44 Tetrachloroethene	0.29450	0.28992	0.28992	0.100	-1.55761	20.00000	Averaged	
45 4-Methyl-2-Pentanone	0.13015	0.12651	0.12651	0.000	-2.79723	20.00000	Averaged	
46 Trans 1,3-Dichloropropene	0.38898	0.39207	0.39207	0.010	0.79454	20.00000	Averaged	
47 1,1,2-Trichloroethane	0.22422	0.21989	0.21989	0.100	-1.93466	20.00000	Averaged	
48 Chlorodibromomethane	0.25816	0.25457	0.25457	0.100	-1.39239	20.00000	Averaged	
49 1,3-Dichloropropane	0.41373	0.41017	0.41017	0.100	-0.86114	20.00000	Averaged	
50 1,2-Dibromoethane	0.21827	0.21812	0.21812	0.010	-0.06966	20.00000	Averaged	
51 2-Hexanone	0.21570	0.20383	0.20383	0.010	-5.50426	20.00000	Averaged	
53 Chlorobenzene	0.71494	0.70412	0.70412	0.300	-1.51318	20.00000	Averaged	
54 Ethyl Benzene	1.21558	1.25336	1.25336	0.100	3.10814	20.00000	Averaged	
55 1,1,1,2-Tetrachloroethane	0.25911	0.25500	0.25500	0.010	-1.58763	20.00000	Averaged	
56 m,p-xylene	0.45633	0.47279	0.47279	0.100	3.60693	20.00000	Averaged	
57 o-Xylene	0.45038	0.46529	0.46529	0.100	3.31173	20.00000	Averaged	
58 Styrene	0.73800	0.78484	0.78484	0.100	6.34658	20.00000	Averaged	
59 Bromoform	0.34727	0.33458	0.33458	0.100	-3.65433	20.00000	Averaged	
60 Isopropyl Benzene	2.07395	2.18913	2.18913	0.010	5.55351	20.00000	Averaged	
$ 62 4-Bromofluorobenzene	0.53215	0.53469	0.53469	0.200	0.47726	20.00000	Averaged	
63 Bromobenzene	0.57028	0.54741	0.54741	0.010	-4.00872	20.00000	Averaged	
64 N-Propyl Benzene	2.49849	2.56739	2.56739	0.010	2.75785	20.00000	Averaged	
65 1,1,2,2-Tetrachloroethane	0.57475	0.53611	0.53611	0.300	-6.72233	20.00000	Averaged	
66 2-Chloro Toluene	1.57481	1.58348	1.58348	0.010	0.55054	20.00000	Averaged	
67 1,3,5-Trimethyl Benzene	1.78790	1.85693	1.85693	0.010	3.86124	20.00000	Averaged	
68 1,2,3-Trichloropropane	0.17864	0.16404	0.16404	0.010	-8.17660	20.00000	Averaged	
69 Trans-1,4-Dichloro 2-Butene	0.21671	0.17850	0.17850	0.001	-17.63317	20.00000	Averaged	
70 4-Chloro Toluene	1.63919	1.64934	1.64934	0.010	0.61939	20.00000	Averaged	
71 T-Butyl Benzene	1.58804	1.63375	1.63375	0.010	2.87874	20.00000	Averaged	
72 1,2,4-Trimethylbenzene	1.74816	1.83880	1.83880	0.010	5.18487	20.00000	Averaged	
73 S-Butyl Benzene	2.28322	2.38068	2.38068	0.010	4.26891	20.00000	Averaged	
74 4-Isopropyl Toluene	1.84960	1.99662	1.99662	0.010	7.94875	20.00000	Averaged	
75 1,3-Dichlorobenzene	1.04221	1.02043	1.02043	0.100	-2.08978	20.00000	Averaged	
77 1,4-Dichlorobenzene	1.07805	1.04617	1.04617	0.100	-2.95759	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i Injection Date: 28-JUN-2013 08:36
Lab File ID: cc0628.d Init. Cal. Date(s): 27-JUN-2013 27-JUN-2013
Analysis Type: SOIL Init. Cal. Times: 10:43 15:48
Lab Sample ID: CC0628 Quant Type: ISTD
Method: /chem1/nt5.i/28JUN13.b/VO121012S.m

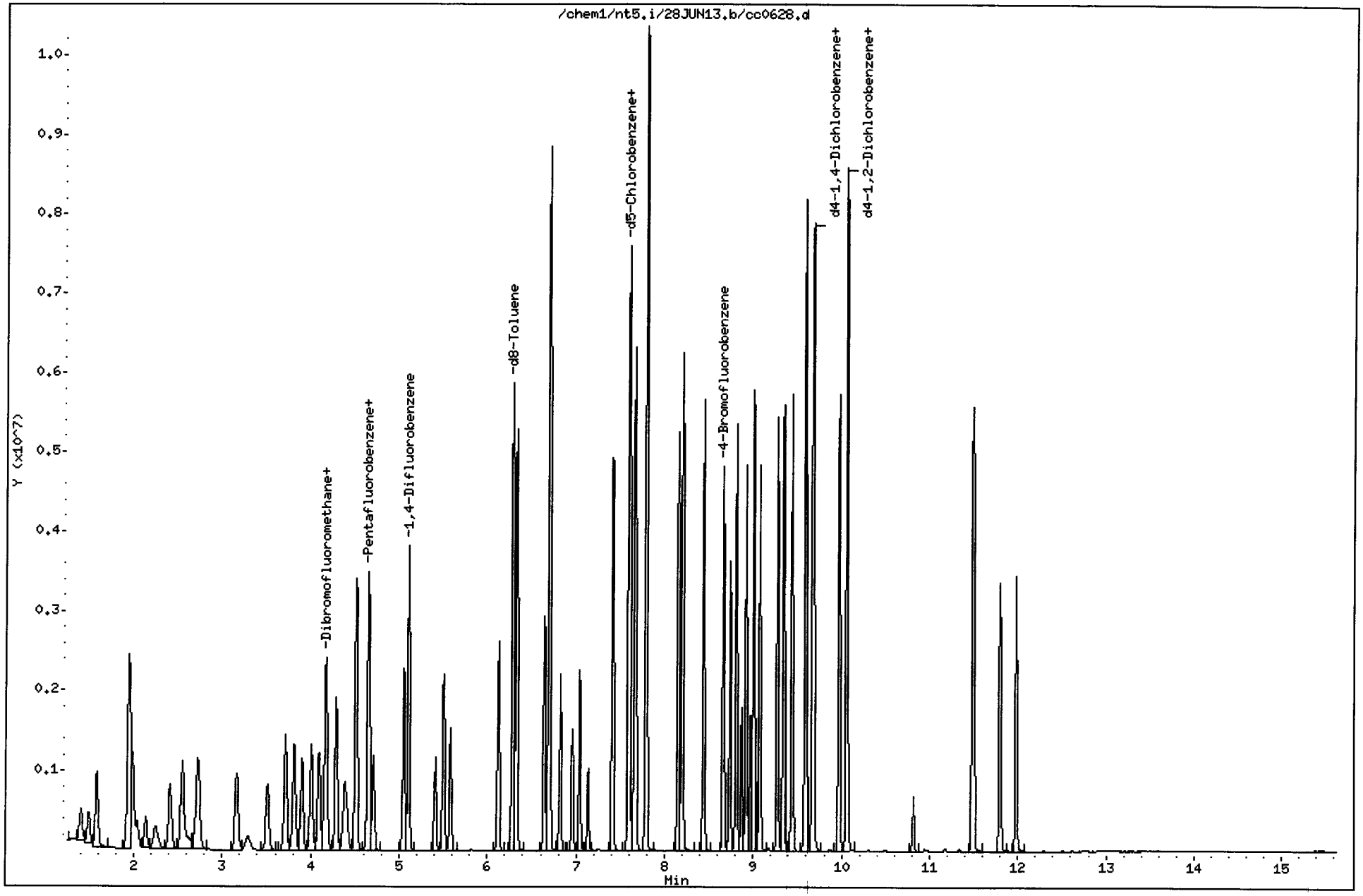
COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
78 N-Butyl Benzene	1.73566	1.89972	1.89972	0.010	9.45209	20.00000	Averaged
$ 79 d4-1,2-Dichlorobenzene	0.91197	0.90790	0.90790	0.010	-0.44685	20.00000	Averaged
80 1,2-Dichlorobenzene	1.01633	0.97062	0.97062	0.100	-4.49755	20.00000	Averaged
81 1,2-Dibromo 3-Chloropropane	0.11892	0.10316	0.10316	0.010	-13.25446	20.00000	Averaged
82 Hexachloro 1,3-Butadiene	0.48836	0.47496	0.47496	0.010	-2.74263	20.00000	Averaged
83 1,2,4-Trichlorobenzene	0.75875	0.76163	0.76163	0.010	0.37957	20.00000	Averaged
84 Naphthalene	1.67455	1.64748	1.64748	0.010	-1.61630	20.00000	Averaged
85 1,2,3-Trichlorobenzene	0.75223	0.72122	0.72122	0.010	-4.12262	20.00000	Averaged

Data File: /chem1/nt5.i/28JUN13.b/cc0628.d
Date : 28-JUN-2013 08:36
Client ID: VSTD50
Sample Info: CC0628,5,5,0

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB
Column diameter: 0.18



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8260C

Data file : /chem1/nt5.i/28JUN13.b/lcs0628.d
Lab Smp Id: LCS0628 Client Smp ID: LCS0628
Inj Date : 28-JUN-2013 09:16
Operator : PB Inst ID: nt5.i
Smp Info : LCS0628,5,5,0
Misc Info : 13-13657
Comment :
Method : /chem1/nt5.i/28JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 14:30 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	1.057	1.029	(0.226)	438128	45.9824	45.982
2 Chloromethane	50	1.176	1.153	(0.252)	786509	40.2384	40.238(QM)
3 Vinyl Chloride	62	1.227	1.198	(0.263)	800196	45.4569	45.457
4 Bromomethane	94	1.430	1.402	(0.306)	350986	34.7877	34.788
5 Chloroethane	64	1.521	1.492	(0.326)	532148	49.6895	49.689
6 Trichlorofluoromethane	101	1.611	1.583	(0.345)	904842	46.3738	46.374
7 1,1-Dichloroethene	96	1.968	1.939	(0.421)	550665	47.5454	47.545
8 Carbon Disulfide	76	1.973	1.945	(0.422)	1957784	47.2039	47.204
9 112Trichloro122Trifluoroethane	101	2.019	1.985	(0.432)	532299	47.4396	47.440
10 Iodomethane	142	2.069	2.041	(0.443)	515650	55.5254	55.525
11 Bromoethane	108	2.166	2.137	(0.464)	348385	45.0318	45.032
12 Acrolein	56	2.273	2.250	(0.487)	475031	265.290	265.29
13 Methylene Chloride	84	2.437	2.415	(0.522)	495265	34.4381	34.438(R)
14 Acetone	43	2.624	2.601	(0.562)	715465	262.537	262.54

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.579	2.550	(0.552)	521163	45.2573	45.257
	16 Methyl tert butyl ether	73	2.760	2.726	(0.591)	1868077	52.6246	52.625
	17 1,1-Dichloroethane	63	3.189	3.161	(0.683)	1347402	51.1697	51.170
	18 Acrylonitrile	53	3.314	3.286	(0.709)	296677	50.1749	50.175
	19 Vinyl Acetate	43	3.535	3.512	(0.757)	1663484	46.8022	46.802
	20 Cis-1,2-Dichloroethene	96	3.738	3.716	(0.800)	737738	48.9630	48.963
	22 2,2-Dichloropropane	77	3.834	3.812	(0.821)	1046119	47.8619	47.862
	23 Bromochloromethane	128	3.925	3.902	(0.840)	344236	52.3061	52.306
	24 Chloroform	83	4.027	4.004	(0.862)	1164266	48.5972	48.597
	25 Carbon Tetrachloride	117	4.112	4.095	(0.803)	879444	46.0014	46.001
$	27 Dibromofluoromethane	111	4.191	4.174	(0.897)	832056	52.7331	52.733
	26 1,1,1-Trichloroethane	97	4.179	4.163	(0.895)	1041079	47.4360	47.436
	28 1,1-Dichloropropene	75	4.298	4.287	(0.840)	1010976	45.9304	45.930
	29 2-Butanone	72	4.394	4.383	(0.941)	445960	236.560	236.56
	30 Benzene	78	4.530	4.513	(0.885)	2931858	48.3330	48.333
*	31 Pentafluorobenzene	168	4.672	4.655	(1.000)	1638718	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.649	(0.998)	890418	49.6592	49.659
	33 1,2-Dichloroethane	62	4.723	4.706	(0.923)	883315	44.8816	44.882
	34 Trichloroethene	95	5.062	5.051	(0.989)	721797	47.1066	47.107
*	35 1,4-Difluorobenzene	114	5.119	5.107	(1.000)	2789415	50.0000	
	37 Dibromomethane	93	5.418	5.413	(1.059)	392444	46.9467	46.947
	38 1,2-Dichloropropane	63	5.514	5.503	(1.077)	807303	46.9033	46.903
	39 Bromodichloromethane	83	5.588	5.582	(1.092)	901888	47.3274	47.327
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.120	(1.196)	169310	63.1804	63.180
	41 Cis 1,3-dichloropropene	75	6.137	6.125	(1.199)	1182841	49.9649	49.965
$	42 d8-Toluene	98	6.295	6.284	(1.230)	3487029	50.4321	50.432
	43 Toluene	92	6.335	6.329	(1.238)	1856702	48.3850	48.385
	44 Tetrachloroethene	166	6.646	6.640	(0.875)	779483	48.3942	48.394
	45 4-Methyl-2-Pentanone	58	6.702	6.697	(1.309)	1701576	234.347	234.35
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.308)	1060950	48.8910	48.891
	47 1,1,2-Trichloroethane	97	6.827	6.821	(1.334)	592282	47.3482	47.348
	48 Chlorodibromomethane	129	6.963	6.957	(0.917)	673412	47.6938	47.694
	49 1,3-Dichloropropane	76	7.048	7.042	(0.928)	1089186	48.1347	48.135
	50 1,2-Dibromoethane	107	7.138	7.138	(1.395)	588170	48.3021	48.302
	51 2-Hexanone	43	7.415	7.410	(0.976)	2665722	225.962	225.96
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2734604	50.0000	
	53 Chlorobenzene	112	7.613	7.608	(1.002)	1879294	48.0618	48.062
	54 Ethyl Benzene	91	7.658	7.658	(1.008)	3332773	50.1302	50.130
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	673290	47.5105	47.510
	56 m,p-xylene	106	7.794	7.789	(1.026)	2520379	100.987	100.99
	57 o-Xylene	106	8.156	8.156	(1.074)	1241344	50.3952	50.395
	58 Styrene	104	8.202	8.202	(1.080)	2095849	51.9251	51.925
	59 Bromoform	173	8.196	8.196	(0.847)	480065	46.5920	46.592
	60 Isopropyl Benzene	105	8.445	8.439	(0.873)	3153847	51.2535	51.254
$	62 4-Bromofluorobenzene	95	8.665	8.665	(1.141)	1463533	50.2853	50.285
	63 Bromobenzene	156	8.739	8.739	(0.903)	792846	46.8582	46.858
	64 N-Propyl Benzene	91	8.812	8.807	(0.911)	3706636	50.0017	50.002

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	767042	44.9804	44.980
66	2-Chloro Toluene	91	8.920	8.920	(0.922)	2286161	48.9283	48.928
67	1,3,5-Trimethyl Benzene	105	9.005	8.999	(0.931)	2679347	50.5088	50.509
68	1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	231055	43.5920	43.592
69	Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	264534	41.1414	41.141
70	4-Chloro Toluene	91	9.073	9.073	(0.938)	2387001	49.0800	49.080
71	T-Butyl Benzene	119	9.276	9.276	(0.959)	2336098	49.5805	49.581
72	1,2,4-Trimethylbenzene	105	9.344	9.344	(0.966)	2652372	51.1370	51.137
73	S-Butyl Benzene	105	9.440	9.440	(0.976)	3433486	50.6838	50.684
74	4-Isopropyl Toluene	119	9.587	9.588	(0.991)	2896145	52.7745	52.775
75	1,3-Dichlorobenzene	146	9.599	9.599	(0.992)	1483252	47.9670	47.967
* 76	d4-1,4-Dichlorobenzene	152	9.672	9.672	(1.000)	1483504	50.0000	
77	1,4-Dichlorobenzene	146	9.684	9.684	(1.001)	1516960	47.4259	47.426
78	N-Butyl Benzene	91	9.972	9.972	(1.031)	2769652	53.7825	53.782
$ 79	d4-1,2-Dichlorobenzene	152	10.057	10.057	(1.040)	1336189	49.3818	49.382
80	1,2-Dichlorobenzene	146	10.063	10.063	(1.040)	1416160	46.9634	46.963
81	1,2-Dibromo 3-Chloropropane	75	10.815	10.815	(1.118)	144105	40.8407	40.841
82	Hexachloro 1,3-Butadiene	225	11.499	11.500	(1.189)	674851	46.5750	46.575
83	1,2,4-Trichlorobenzene	180	11.488	11.483	(1.188)	1111927	49.3925	49.392
84	Naphthalene	128	11.799	11.799	(1.220)	2353447	47.3684	47.368
85	1,2,3-Trichlorobenzene	180	11.980	11.980	(1.239)	1034365	46.3452	46.345

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: lcs0628.d
Lab Smp Id: LCS0628
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/28JUN13.b/VO121012S.m
Misc Info: 13-13657

Calibration Date: 28-JUN-2013
Calibration Time: 08:36
Client Smp ID: LCS0628
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1638718	1.56
35 1,4-Difluorobenze	2656709	1328354	5313418	2789415	5.00
52 d5-Chlorobenzene	2557235	1278618	5114470	2734604	6.94
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1483504	7.94

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.67	0.36
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.22
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: LCS0628
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/28JUN13.b/VO121012S.m
Misc Info: 13-13657

Client SDG: 28JUN13
Fraction: VOA
Client Smp ID: LCS0628
Operator: PB
SampleType: LCS
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1	Dichlorodifluorome	50.000	45.982	91.96	53-148
2	Chloromethane	50.000	40.238	80.48	64-125
3	Vinyl Chloride	50.000	45.457	90.91	63-137
4	Bromomethane	50.000	34.788	69.58	57-136
5	Chloroethane	50.000	49.689	99.38	64-131
6	Trichlorofluoromet	50.000	46.374	92.75	69-132
12	Acrolein	250.00	265.29	106.12	54-137
9	112Trichloro122Tri	50.000	47.440	94.88	74-130
14	Acetone	250.00	262.54	105.01	60-131
7	1,1-Dichloroethene	50.000	47.545	95.09	75-126
11	Bromoethane	50.000	45.032	90.06	76-126
10	Iodomethane	50.000	55.525	111.05	65-139
13	Methylene Chloride	50.000	34.438	68.88*	70-123
8	Carbon Disulfide	50.000	47.204	94.41	71-129
18	Acrylonitrile	50.000	50.175	100.35	67-125
15	Trans-1,2-Dichloro	50.000	45.257	90.51	80-120
19	Vinyl Acetate	50.000	46.802	93.60	60-136
17	1,1-Dichloroethane	50.000	51.170	102.34	80-120
29	2-Butanone	250.00	236.56	94.62	70-120
22	2,2-Dichloropropan	50.000	47.862	95.72	74-123
20	Cis-1,2-Dichloroet	50.000	48.963	97.93	80-120
24	Chloroform	50.000	48.597	97.19	80-120
23	Bromochloromethane	50.000	52.306	104.61	80-120
26	1,1,1-Trichloroeth	50.000	47.436	94.87	77-121
28	1,1-Dichloropropen	50.000	45.930	91.86	80-120
25	Carbon Tetrachlori	50.000	46.001	92.00	77-122
33	1,2-Dichloroethane	50.000	44.882	89.76	76-120
30	Benzene	50.000	48.333	96.67	80-120
34	Trichloroethene	50.000	47.107	94.21	80-120
38	1,2-Dichloropropan	50.000	46.903	93.81	80-120
39	Bromodichlorometha	50.000	47.327	94.65	77-121
37	Dibromomethane	50.000	46.947	93.89	80-120
40	2-Chloroethyl Viny	50.000	63.180	126.36	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	234.35	93.74	67-120
41 Cis 1,3-dichloropr	50.000	49.965	99.93	74-120
43 Toluene	50.000	48.385	96.77	80-120
46 Trans 1,3-Dichloro	50.000	48.891	97.78	65-120
51 2-Hexanone	250.00	225.96	90.38	65-130
47 1,1,2-Trichloroeth	50.000	47.348	94.70	80-120
49 1,3-Dichloropropan	50.000	48.135	96.27	80-120
44 Tetrachloroethene	50.000	48.394	96.79	80-121
48 Chlorodibromometha	50.000	47.694	95.39	64-120
50 1,2-Dibromoethane	50.000	48.302	96.60	75-120
53 Chlorobenzene	50.000	48.062	96.12	80-120
55 1,1,1,2-Tetrachlor	50.000	47.510	95.02	69-121
54 Ethyl Benzene	50.000	50.130	100.26	80-127
56 m,p-xylene	100.00	100.99	100.99	80-125
57 o-Xylene	50.000	50.395	100.79	78-120
58 Styrene	50.000	51.925	103.85	80-123
60 Isopropyl Benzene	50.000	51.254	102.51	80-127
59 Bromoform	50.000	46.592	93.18	60-120
65 1,1,2,2-Tetrachlor	50.000	44.980	89.96	74-120
68 1,2,3-Trichloropro	50.000	43.592	87.18	72-121
69 Trans-1,4-Dichloro	50.000	41.141	82.28	65-126
64 N-Propyl Benzene	50.000	50.002	100.00	80-132
63 Bromobenzene	50.000	46.858	93.72	80-120
67 1,3,5-Trimethyl Be	50.000	50.509	101.02	80-125
66 2-Chloro Toluene	50.000	48.928	97.86	80-125
70 4-Chloro Toluene	50.000	49.080	98.16	80-127
71 T-Butyl Benzene	50.000	49.581	99.16	87-122
72 1,2,4-Trimethylben	50.000	51.137	102.27	80-126
73 S-Butyl Benzene	50.000	50.684	101.37	80-134
74 4-Isopropyl Toluen	50.000	52.775	105.55	80-131
75 1,3-Dichlorobenzen	50.000	47.967	95.93	80-120
77 1,4-Dichlorobenzen	50.000	47.426	94.85	80-120
78 N-Butyl Benzene	50.000	53.782	107.56	80-138
80 1,2-Dichlorobenzen	50.000	46.963	93.93	80-120
81 1,2-Dibromo 3-Chlo	50.000	40.841	81.68	59-120
83 1,2,4-Trichloroben	50.000	49.392	98.78	78-130
82 Hexachloro 1,3-But	50.000	46.575	93.15	76-129
84 Naphthalene	50.000	47.368	94.74	66-120
85 1,2,3-Trichloroben	50.000	46.345	92.69	73-123

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	52.733	105.47	70-130

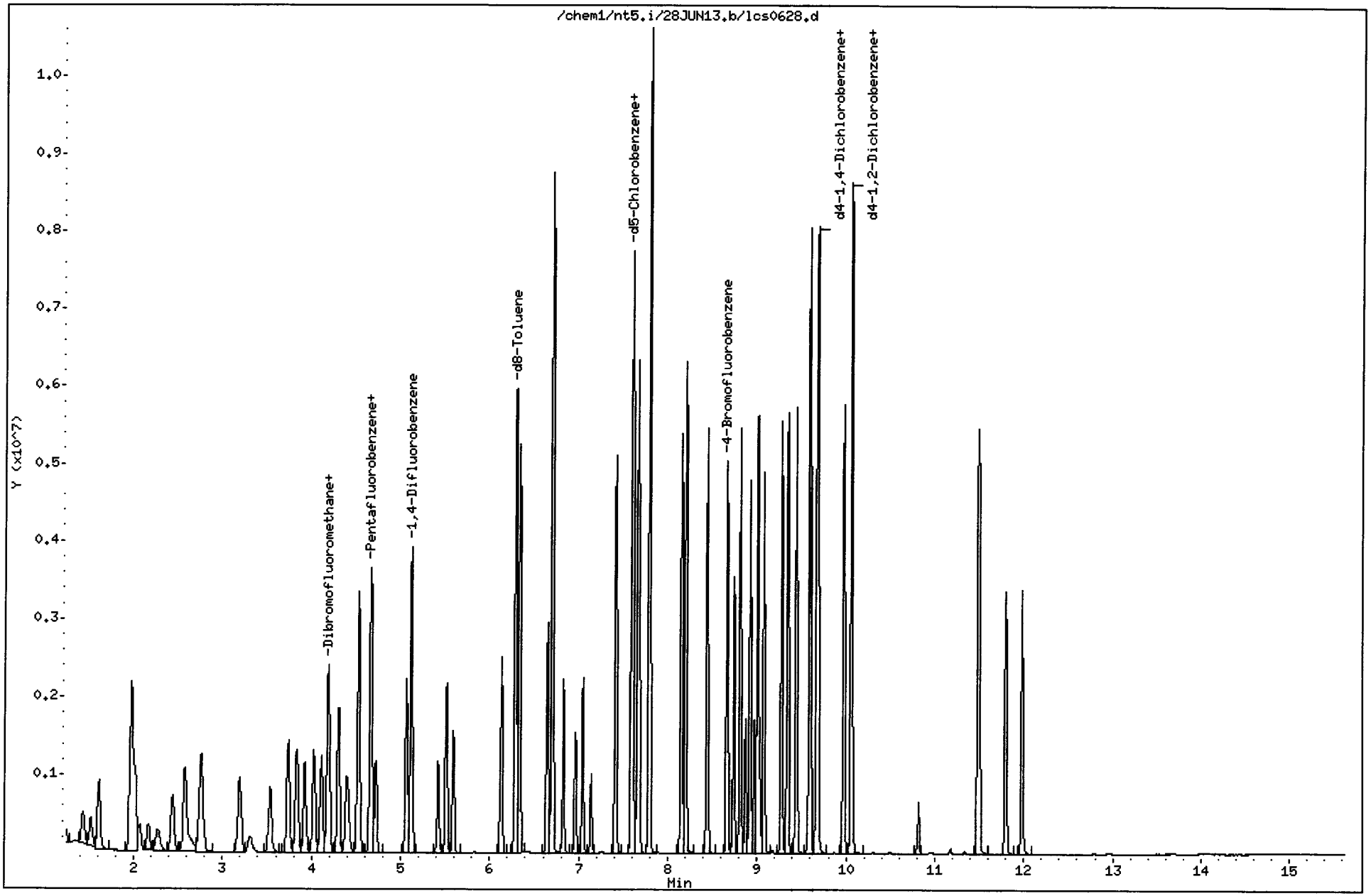
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	49.659	99.32	80-149
$ 42 d8-Toluene	50.000	50.432	100.86	77-120
$ 62 4-Bromofluorobenze	50.000	50.285	100.57	80-120
$ 79 d4-1,2-Dichloroben	50.000	49.382	98.76	80-120

Data File: /chem1/nt5.i/28JUN13.b/lcs0628.d
Date : 28-JUN-2013 09:16
Client ID: LCS0628
Sample Info: LCS0628,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - lcs0628.d

Lab ID: LCS0628, Method: VO121012S.m, Instrument: nt5.i, Date: 28-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/28JUN13.b/lcs0628a.d
Lab Smp Id: LCS0628 Client Smp ID: LCS0628
Inj Date : 28-JUN-2013 09:40
Operator : PB Inst ID: nt5.i
Smp Info : LCS0628,5,5,0
Misc Info : 13-13657
Comment :
Method : /chem1/nt5.i/28JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 14:30 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	1.034	1.029	(0.222)	500173	53.6730	53.673
2 Chloromethane	50	1.153	1.153	(0.247)	831621	43.5018	43.502(QM)
3 Vinyl Chloride	62	1.198	1.198	(0.257)	864202	50.1953	50.195
4 Bromomethane	94	1.408	1.402	(0.302)	393795	39.9071	39.907
5 Chloroethane	64	1.492	1.492	(0.320)	577255	55.1118	55.112
6 Trichlorofluoromethane	101	1.589	1.583	(0.341)	934134	48.9501	48.950
7 1,1-Dichloroethene	96	1.939	1.939	(0.416)	490224	43.2773	43.277
8 Carbon Disulfide	76	1.945	1.945	(0.417)	1724752	42.5191	42.519
9 112Trichloro122Trifluoroethane	101	1.984	1.985	(0.426)	466269	42.4880	42.488
10 Iodomethane	142	2.041	2.041	(0.438)	472532	52.0250	52.025
11 Bromoethane	108	2.137	2.137	(0.459)	324239	42.8519	42.852
12 Acrolein	56	2.239	2.250	(0.480)	413899	236.341	236.34
13 Methylene Chloride	84	2.414	2.415	(0.518)	638553	45.3986	45.399
14 Acetone	43	2.567	2.601	(0.551)	1028271	385.794	385.79(R)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.550	2.550	(0.547)	690911	61.3453	61.345(R)
	16 Methyl tert butyl ether	73	2.743	2.726	(0.588)	2082858	59.9926	59.993
	17 1,1-Dichloroethane	63	3.172	3.161	(0.681)	1413507	54.8855	54.886
	18 Acrylonitrile	53	3.280	3.286	(0.704)	306174	52.9438	52.944
	19 Vinyl Acetate	43	3.512	3.512	(0.754)	1730094	49.7693	49.769
	20 Cis-1,2-Dichloroethene	96	3.721	3.716	(0.798)	762595	51.7493	51.749
	22 2,2-Dichloropropane	77	3.817	3.812	(0.819)	1083506	50.6855	50.686
	23 Bromochloromethane	128	3.908	3.902	(0.839)	332773	51.6998	51.700
	24 Chloroform	83	4.010	4.004	(0.860)	1204654	51.4121	51.412
	25 Carbon Tetrachloride	117	4.095	4.095	(0.802)	920961	48.9450	48.945
$	27 Dibromofluoromethane	111	4.179	4.174	(0.897)	823535	53.3651	53.365
	26 1,1,1-Trichloroethane	97	4.168	4.163	(0.894)	1083310	50.4687	50.469
	28 1,1-Dichloropropene	75	4.287	4.287	(0.839)	1053728	48.6398	48.640
	29 2-Butanone	72	4.372	4.383	(0.938)	460263	249.629	249.63
	30 Benzene	78	4.519	4.513	(0.885)	3044912	51.0012	51.001
*	31 Pentafluorobenzene	168	4.660	4.655	(1.000)	1602728	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.649	(0.998)	887768	50.6232	50.623
	33 1,2-Dichloroethane	62	4.711	4.706	(0.922)	911742	47.0684	47.068
	34 Trichloroethene	95	5.056	5.051	(0.990)	753316	49.9514	49.951
*	35 1,4-Difluorobenzene	114	5.107	5.107	(1.000)	2745419	50.0000	
	37 Dibromomethane	93	5.413	5.413	(1.060)	403689	49.0658	49.066
	38 1,2-Dichloropropane	63	5.503	5.503	(1.078)	836754	49.3935	49.393
	39 Bromodichloromethane	83	5.582	5.582	(1.093)	922901	49.2062	49.206
	40 2-Chloroethyl Vinyl Ether	63	6.114	6.120	(1.197)	176545	66.9360	66.936
	41 Cis 1,3-dichloropropene	75	6.131	6.125	(1.200)	1215606	52.1718	52.172
$	42 d8-Toluene	98	6.289	6.284	(1.231)	3422333	50.2896	50.290
	43 Toluene	92	6.329	6.329	(1.239)	1915138	50.7076	50.708
	44 Tetrachloroethene	166	6.646	6.640	(0.875)	793320	50.2782	50.278
	45 4-Methyl-2-Pentanone	58	6.697	6.697	(1.311)	1759460	246.202	246.20
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.311)	1095382	51.2866	51.287
	47 1,1,2-Trichloroethane	97	6.827	6.821	(1.337)	613401	49.8224	49.822
	48 Chlorodibromomethane	129	6.963	6.957	(0.917)	693883	50.1663	50.166
	49 1,3-Dichloropropane	76	7.042	7.042	(0.927)	1118821	50.4732	50.473
	50 1,2-Dibromoethane	107	7.138	7.138	(1.398)	605170	50.4946	50.495
	51 2-Hexanone	43	7.409	7.410	(0.975)	2762434	239.033	239.03
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2678861	50.0000	
	53 Chlorobenzene	112	7.607	7.608	(1.001)	1929339	50.3684	50.368
	54 Ethyl Benzene	91	7.658	7.658	(1.008)	3424188	52.5769	52.577
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	691114	49.7830	49.783
	56 m,p-xylene	106	7.794	7.789	(1.026)	2588225	105.863	105.86
	57 o-Xylene	106	8.156	8.156	(1.074)	1281920	53.1254	53.125
	58 Styrene	104	8.201	8.202	(1.080)	2137830	54.0673	54.067
	59 Bromoform	173	8.196	8.196	(0.848)	492599	49.5114	49.511
	60 Isopropyl Benzene	105	8.439	8.439	(0.873)	3238630	54.5060	54.506
$	62 4-Bromofluorobenzene	95	8.660	8.665	(1.140)	1436919	50.3982	50.398
	63 Bromobenzene	156	8.739	8.739	(0.904)	811901	49.6935	49.694
	64 N-Propyl Benzene	91	8.807	8.807	(0.911)	3784486	52.8703	52.870

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	65 1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	794290	48.2374	48.237
	66 2-Chloro Toluene	91	8.920	8.920	(0.923)	2337708	51.8136	51.814
	67 1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.931)	2736415	53.4220	53.422
	68 1,2,3-Trichloropropane	110	8.965	8.971	(0.927)	240393	46.9693	46.969
	69 Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.934)	291731	46.9873	46.987
	70 4-Chloro Toluene	91	9.073	9.073	(0.939)	2443626	52.0339	52.034
	71 T-Butyl Benzene	119	9.271	9.276	(0.959)	2404074	52.8406	52.841
	72 1,2,4-Trimethylbenzene	105	9.338	9.344	(0.966)	2700000	53.9094	53.909
	73 S-Butyl Benzene	105	9.435	9.440	(0.976)	3500429	53.5126	53.513
	74 4-Isopropyl Toluene	119	9.582	9.588	(0.991)	2931498	55.3215	55.321
	75 1,3-Dichlorobenzene	146	9.599	9.599	(0.993)	1514807	50.7324	50.732
*	76 d4-1,4-Dichlorobenzene	152	9.667	9.672	(1.000)	1432480	50.0000	
	77 1,4-Dichlorobenzene	146	9.684	9.684	(1.002)	1548280	50.1293	50.129
	78 N-Butyl Benzene	91	9.966	9.972	(1.031)	2778282	55.8717	55.872
$	79 d4-1,2-Dichlorobenzene	152	10.051	10.057	(1.040)	1305582	49.9693	49.969
	80 1,2-Dichlorobenzene	146	10.063	10.063	(1.041)	1444980	49.6260	49.626
	81 1,2-Dibromo 3-Chloropropane	75	10.809	10.815	(1.118)	150398	44.1424	44.142
	82 Hexachloro 1,3-Butadiene	225	11.488	11.500	(1.188)	681863	48.7352	48.735
	83 1,2,4-Trichlorobenzene	180	11.477	11.483	(1.187)	1121616	51.5975	51.597
	84 Naphthalene	128	11.788	11.799	(1.219)	2458330	51.2418	51.242
	85 1,2,3-Trichlorobenzene	180	11.975	11.980	(1.239)	1068031	49.5582	49.558

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: lcs0628a.d
Lab Smp Id: LCS0628
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/28JUN13.b/VO121012S.m
Misc Info: 13-13657

Calibration Date: 28-JUN-2013
Calibration Time: 08:36
Client Smp ID: LCS0628
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1602728	-0.67
35 1,4-Difluorobenze	2656709	1328354	5313418	2745419	3.34
52 d5-Chlorobenzene	2557235	1278618	5114470	2678861	4.76
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1432480	4.23

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.66	0.12
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.00
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: LCS0628
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/28JUN13.b/VO121012S.m
Misc Info: 13-13657

Client SDG: 28JUN13
Fraction: VOA
Client Smp ID: LCS0628
Operator: PB
SampleType: LCSD
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1 Dichlorodifluorome	50.000	53.673	107.35	53-148
2 Chloromethane	50.000	43.502	87.00	64-125
3 Vinyl Chloride	50.000	50.195	100.39	63-137
4 Bromomethane	50.000	39.907	79.81	57-136
5 Chloroethane	50.000	55.112	110.22	64-131
6 Trichlorofluoromet	50.000	48.950	97.90	69-132
12 Acrolein	250.00	236.34	94.54	54-137
9 112Trichloro122Tri	50.000	42.488	84.98	74-130
14 Acetone	250.00	385.79	154.32*	60-131
7 1,1-Dichloroethene	50.000	43.277	86.55	75-126
11 Bromoethane	50.000	42.852	85.70	76-126
10 Iodomethane	50.000	52.025	104.05	65-139
13 Methylene Chloride	50.000	45.399	90.80	70-123
8 Carbon Disulfide	50.000	42.519	85.04	71-129
18 Acrylonitrile	50.000	52.944	105.89	67-125
15 Trans-1,2-Dichloro	50.000	61.345	122.69*	80-120
19 Vinyl Acetate	50.000	49.769	99.54	60-136
17 1,1-Dichloroethane	50.000	54.886	109.77	80-120
29 2-Butanone	250.00	249.63	99.85	70-120
22 2,2-Dichloropropan	50.000	50.686	101.37	74-123
20 Cis-1,2-Dichloroet	50.000	51.749	103.50	80-120
24 Chloroform	50.000	51.412	102.82	80-120
23 Bromochloromethane	50.000	51.700	103.40	80-120
26 1,1,1-Trichloroeth	50.000	50.469	100.94	77-121
28 1,1-Dichloropropen	50.000	48.640	97.28	80-120
25 Carbon Tetrachlori	50.000	48.945	97.89	77-122
33 1,2-Dichloroethane	50.000	47.068	94.14	76-120
30 Benzene	50.000	51.001	102.00	80-120
34 Trichloroethene	50.000	49.951	99.90	80-120
38 1,2-Dichloropropan	50.000	49.393	98.79	80-120
39 Bromodichlorometha	50.000	49.206	98.41	77-121
37 Dibromomethane	50.000	49.066	98.13	80-120
40 2-Chloroethyl Viny	50.000	66.936	133.87	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	246.20	98.48	67-120
41 Cis 1,3-dichloropr	50.000	52.172	104.34	74-120
43 Toluene	50.000	50.708	101.42	80-120
46 Trans 1,3-Dichloro	50.000	51.287	102.57	65-120
51 2-Hexanone	250.00	239.03	95.61	65-130
47 1,1,2-Trichloroeth	50.000	49.822	99.64	80-120
49 1,3-Dichloropropan	50.000	50.473	100.95	80-120
44 Tetrachloroethene	50.000	50.278	100.56	80-121
48 Chlorodibromometha	50.000	50.166	100.33	64-120
50 1,2-Dibromoethane	50.000	50.495	100.99	75-120
53 Chlorobenzene	50.000	50.368	100.74	80-120
55 1,1,1,2-Tetrachlor	50.000	49.783	99.57	69-121
54 Ethyl Benzene	50.000	52.577	105.15	80-127
56 m,p-xylene	100.00	105.86	105.86	80-125
57 o-Xylene	50.000	53.125	106.25	78-120
58 Styrene	50.000	54.067	108.13	80-123
60 Isopropyl Benzene	50.000	54.506	109.01	80-127
59 Bromoform	50.000	49.511	99.02	60-120
65 1,1,2,2-Tetrachlor	50.000	48.237	96.47	74-120
68 1,2,3-Trichloropro	50.000	46.969	93.94	72-121
69 Trans-1,4-Dichloro	50.000	46.987	93.97	65-126
64 N-Propyl Benzene	50.000	52.870	105.74	80-132
63 Bromobenzene	50.000	49.694	99.39	80-120
67 1,3,5-Trimethyl Be	50.000	53.422	106.84	80-125
66 2-Chloro Toluene	50.000	51.814	103.63	80-125
70 4-Chloro Toluene	50.000	52.034	104.07	80-127
71 T-Butyl Benzene	50.000	52.841	105.68	87-122
72 1,2,4-Trimethylben	50.000	53.909	107.82	80-126
73 S-Butyl Benzene	50.000	53.513	107.03	80-134
74 4-Isopropyl Toluen	50.000	55.321	110.64	80-131
75 1,3-Dichlorobenzen	50.000	50.732	101.46	80-120
77 1,4-Dichlorobenzen	50.000	50.129	100.26	80-120
78 N-Butyl Benzene	50.000	55.872	111.74	80-138
80 1,2-Dichlorobenzen	50.000	49.626	99.25	80-120
81 1,2-Dibromo 3-Chlo	50.000	44.142	88.28	59-120
83 1,2,4-Trichloroben	50.000	51.597	103.19	78-130
82 Hexachloro 1,3-But	50.000	48.735	97.47	76-129
84 Naphthalene	50.000	51.242	102.48	66-120
85 1,2,3-Trichloroben	50.000	49.558	99.12	73-123

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	53.365	106.73	70-130

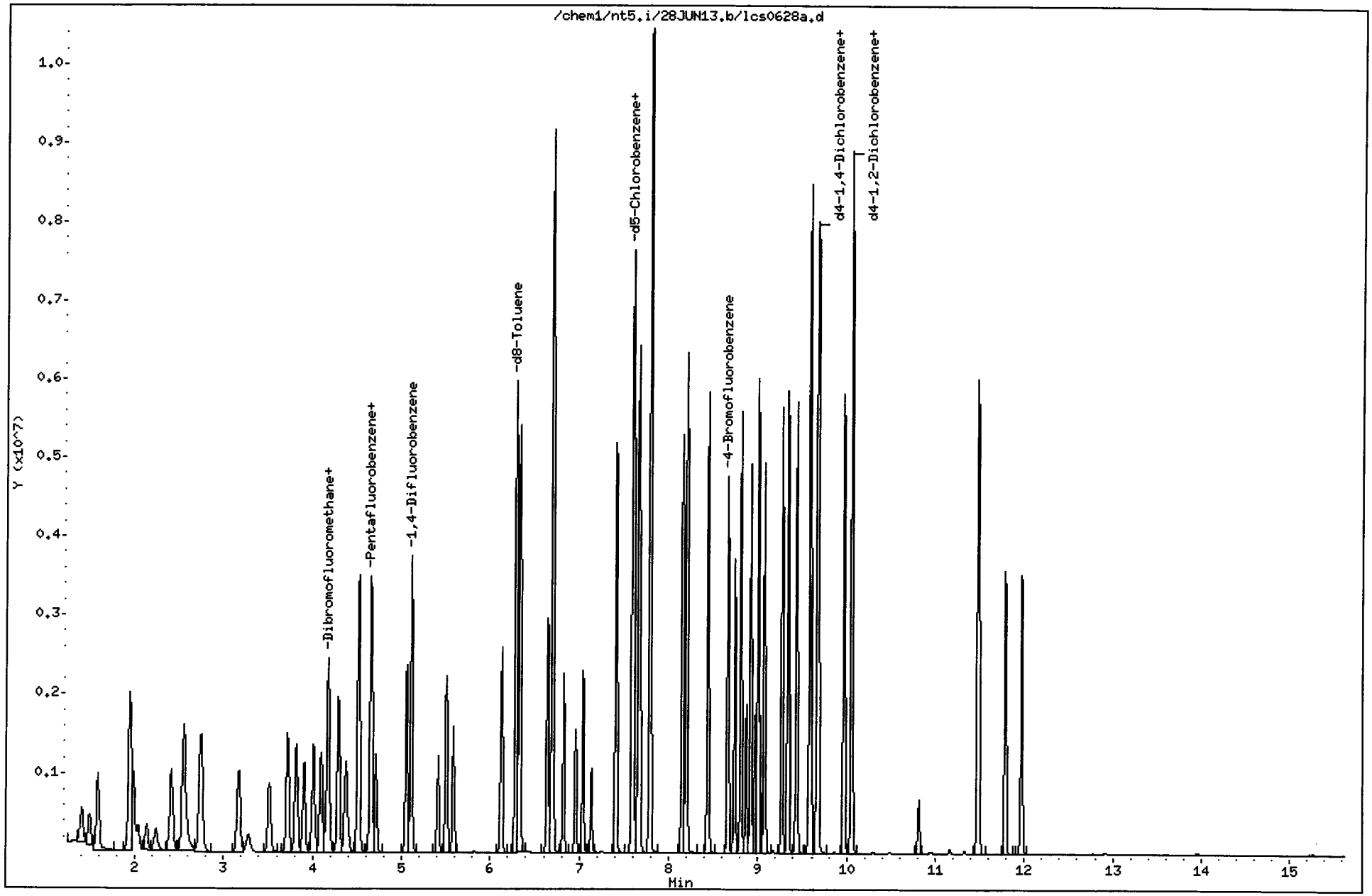
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	50.623	101.25	80-149
$ 42 d8-Toluene	50.000	50.290	100.58	77-120
$ 62 4-Bromofluorobenze	50.000	50.398	100.80	80-120
$ 79 d4-1,2-Dichloroben	50.000	49.969	99.94	80-120

Data File: /chem1/nt5.i/28JUN13.b/lcs0628a.d
Date : 28-JUN-2013 09:40
Client ID: LCS0628
Sample Info: LCS0628,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - lcs0628a.d

Lab ID: LCS0628, Method: VO121012S.m, Instrument: nt5.i, Date: 28-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/28JUN13.b/mb0628.d
Lab Smp Id: MB0628 Client Smp ID: MB0628
Inj Date : 28-JUN-2013 10:04
Operator : PB Inst ID: nt5.i
Smp Info : MB0628,5,5,0
Misc Info : 13-13657
Comment :
Method : /chem1/nt5.i/28JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 14:30 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	Compound Not Detected.					
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	Compound Not Detected.					
9 112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10 Iodomethane	142	Compound Not Detected.					
11 Bromoethane	108	Compound Not Detected.					
12 Acrolein	56	Compound Not Detected.					
13 Methylene Chloride	84	2.426	2.415	(0.520)	33753	2.36642	2.366(Q)
14 Acetone	43	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	Compound Not Detected.					
	16 Methyl tert butyl ether	73	Compound Not Detected.					
	17 1,1-Dichloroethane	63	Compound Not Detected.					
	18 Acrylonitrile	53	Compound Not Detected.					
	19 Vinyl Acetate	43	Compound Not Detected.					
	20 Cis-1,2-Dichloroethene	96	Compound Not Detected.					
	22 2,2-Dichloropropane	77	Compound Not Detected.					
	23 Bromochloromethane	128	Compound Not Detected.					
	24 Chloroform	83	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.179	4.174	(0.897)	827639	52.8871	52.887
	26 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 1,1-Dichloropropene	75	Compound Not Detected.					
	29 2-Butanone	72	Compound Not Detected.					
	30 Benzene	78	Compound Not Detected.					
*	31 Pentafluorobenzene	168	4.660	4.655	(1.000)	1625273	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.649	(0.998)	887041	49.8801	49.880
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.113	5.107	(1.000)	2772718	50.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	40 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	41 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	42 d8-Toluene	98	6.289	6.284	(1.230)	3463327	50.3909	50.391
	43 Toluene	92	Compound Not Detected.					
	44 Tetrachloroethene	166	Compound Not Detected.					
	45 4-Methyl-2-Pentanone	58	Compound Not Detected.					
	46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47 1,1,2-Trichloroethane	97	Compound Not Detected.					
	48 Chlorodibromomethane	129	Compound Not Detected.					
	49 1,3-Dichloropropane	76	Compound Not Detected.					
	50 1,2-Dibromoethane	107	Compound Not Detected.					
	51 2-Hexanone	43	Compound Not Detected.					
*	52 d5-Chlorobenzene	117	7.590	7.596	(1.000)	2788806	50.0000	
	53 Chlorobenzene	112	Compound Not Detected.					
	54 Ethyl Benzene	91	Compound Not Detected.					
	55 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56 m,p-xylene	106	Compound Not Detected.					
	57 o-Xylene	106	Compound Not Detected.					
	58 Styrene	104	Compound Not Detected.					
	59 Bromoform	173	Compound Not Detected.					
	60 Isopropyl Benzene	105	Compound Not Detected.					
$	62 4-Bromofluorobenzene	95	8.660	8.665	(1.141)	1485994	50.0648	50.065
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
66	2-Chloro Toluene	91	Compound Not Detected.					
67	1,3,5-Trimethyl Benzene	105	Compound Not Detected.					
68	1,2,3-Trichloropropane	110	Compound Not Detected.					
69	Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
70	4-Chloro Toluene	91	Compound Not Detected.					
71	T-Butyl Benzene	119	Compound Not Detected.					
72	1,2,4-Trimethylbenzene	105	Compound Not Detected.					
73	S-Butyl Benzene	105	Compound Not Detected.					
74	4-Isopropyl Toluene	119	Compound Not Detected.					
75	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 76	d4-1,4-Dichlorobenzene	152	9.666	9.672	(1.000)	1516209	50.0000	
77	1,4-Dichlorobenzene	146	Compound Not Detected.					
78	N-Butyl Benzene	91	Compound Not Detected.					
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.057	(1.040)	1388695	50.2153	50.215
80	1,2-Dichlorobenzene	146	Compound Not Detected.					
81	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83	1,2,4-Trichlorobenzene	180	11.477	11.483	(1.187)	12887	0.56010	0.5601
84	Naphthalene	128	11.788	11.799	(1.219)	56014	1.10309	1.103
85	1,2,3-Trichlorobenzene	180	11.969	11.980	(1.238)	13509	0.59222	0.5922

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: mb0628.d
Lab Smp Id: MB0628
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/28JUN13.b/VO121012S.m
Misc Info: 13-13657

Calibration Date: 28-JUN-2013
Calibration Time: 08:36
Client Smp ID: MB0628
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1625273	0.72
35 1,4-Difluorobenze	2656709	1328354	5313418	2772718	4.37
52 d5-Chlorobenzene	2557235	1278618	5114470	2788806	9.06
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1516209	10.32

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.66	0.12
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.08
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: MB0628
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/28JUN13.b/VO121012S.m
Misc Info: 13-13657

Client SDG: 28JUN13
Fraction: VOA
Client Smp ID: MB0628
Operator: PB
SampleType: BLANK
Quant Type: ISTD

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	52.887	105.77	70-130
$ 32 d4-1,2-Dichloroeth	50.000	49.880	99.76	80-149
$ 42 d8-Toluene	50.000	50.391	100.78	77-120
$ 62 4-Bromofluorobenze	50.000	50.065	100.13	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.215	100.43	80-120

Data File: /chem1/nt5.i/28JUN13.b/mb0628.d

Date : 28-JUN-2013 10:04

Client ID: MB0628

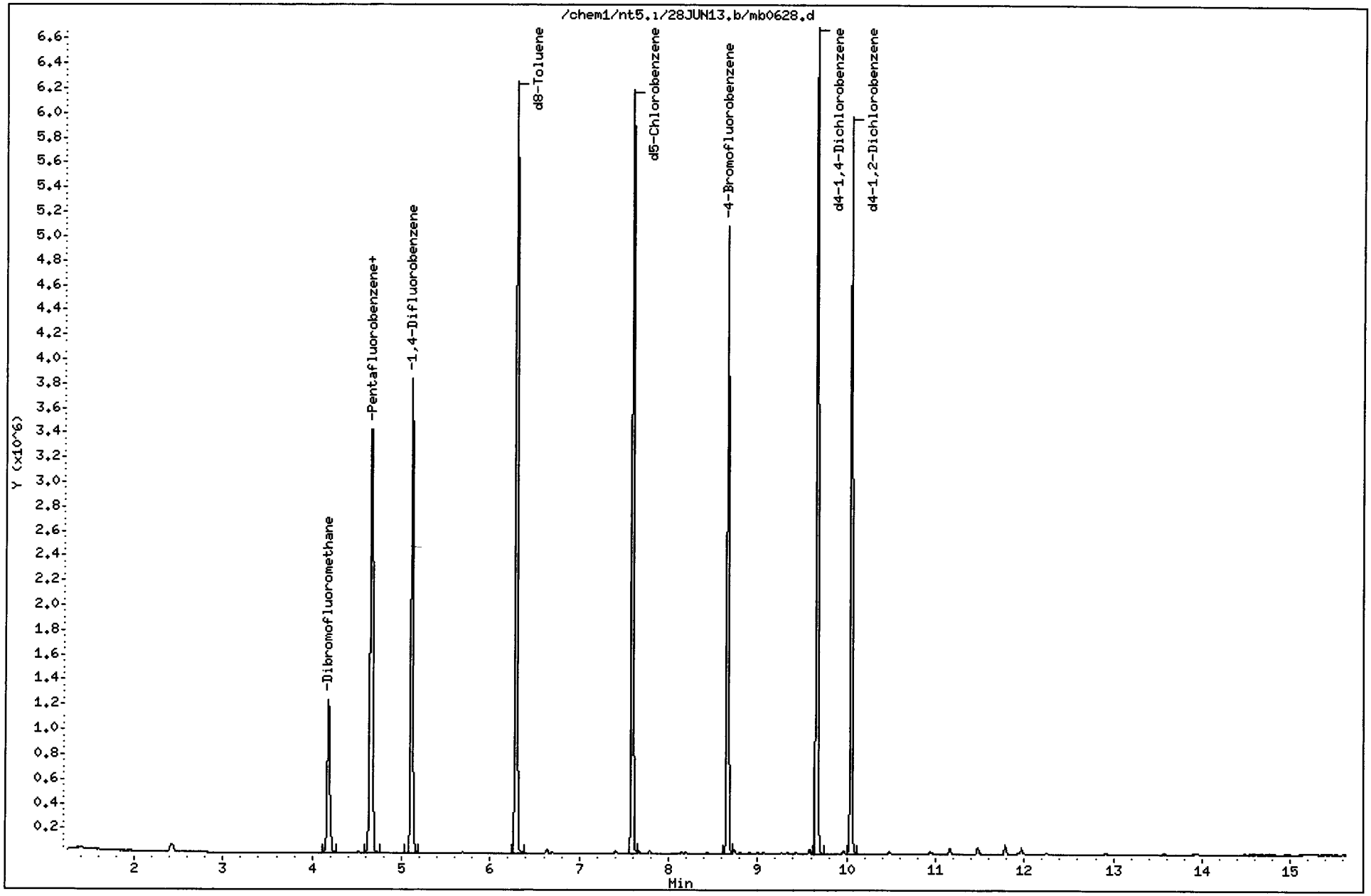
Sample Info: MB0628,5,5,0

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB

Column diameter: 0.18



CO-ELUTION SUMMARY FOR FILE - mb0628.d

Lab ID: MB0628, Method: VO121012S.m, Instrument: nt5.i, Date: 28-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt5.i/28JUN13.b/mb0628.d

Date : 28-JUN-2013 10:04

Client ID: MB0628

Instrument: nt5.i

Sample Info: MB0628,5,5,0

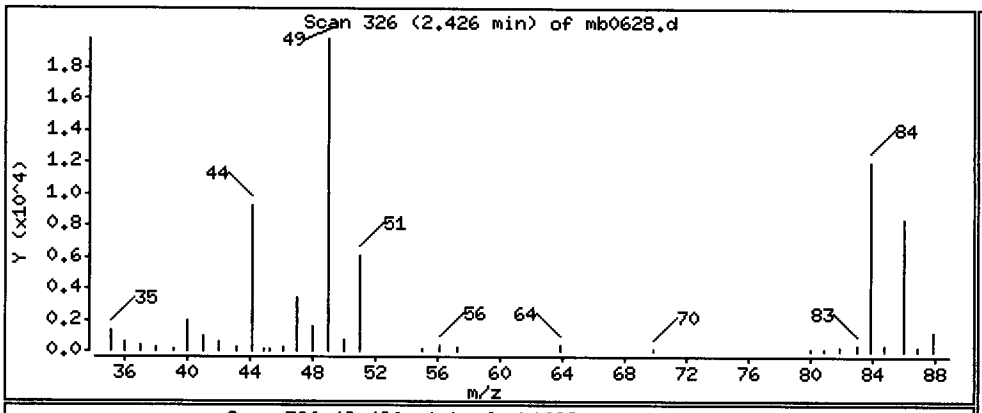
Operator: PB

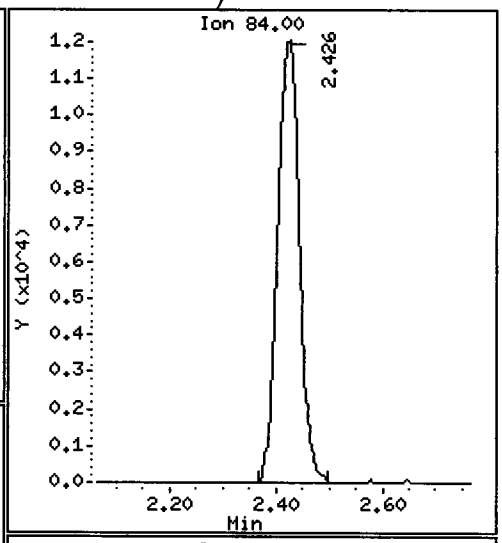
Column phase: RTXVMS

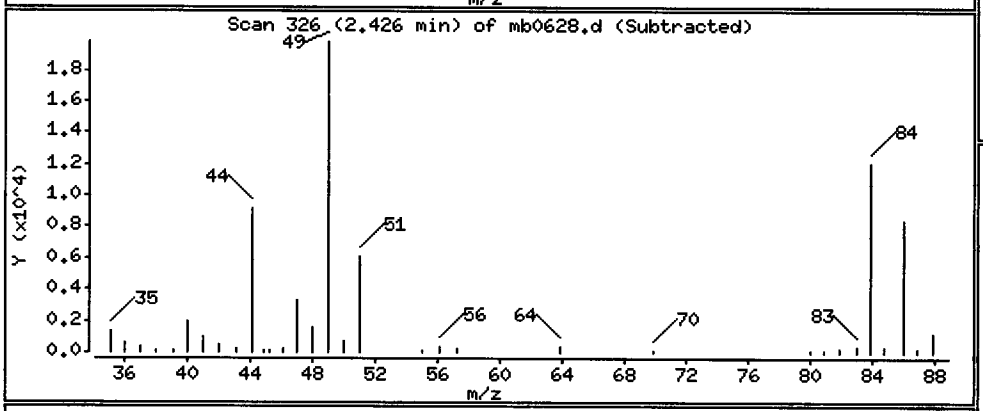
Column diameter: 0.18

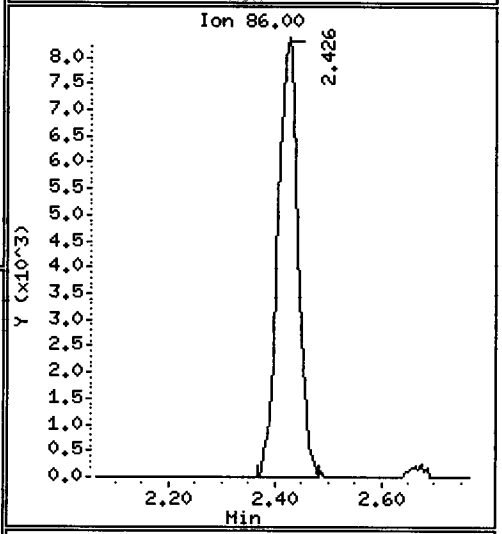
13 Methylene Chloride

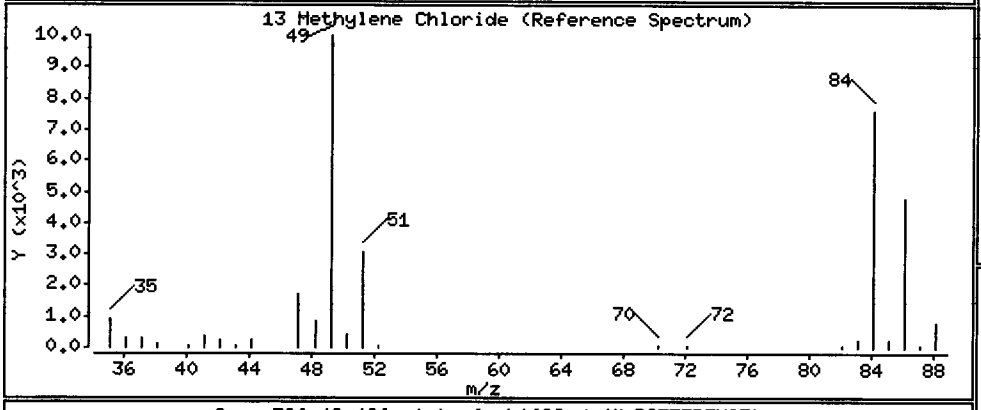
Concentration: 2.366 ug/Kg

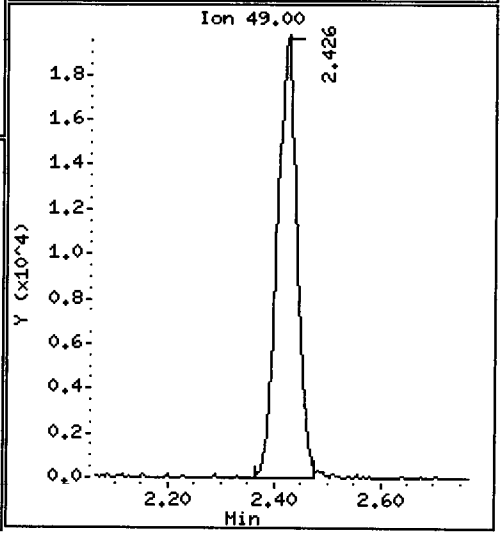


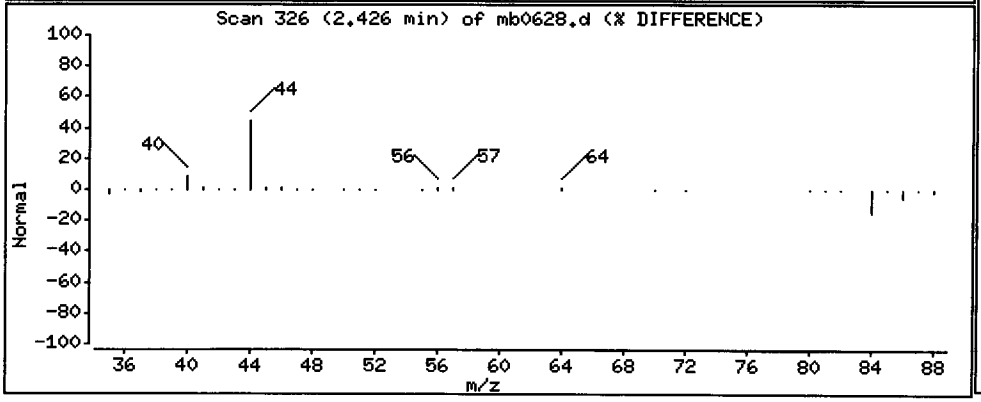












Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/28JUN13.b/wv67a3.d
Lab Smp Id: WV67A
Client Smp ID: UP-CB-B8-20130626-S
Inj Date : 28-JUN-2013 11:26
Operator : PB
Inst ID: nt5.i
Smp Info : WV67A,5,13.083,1,100UL
Misc Info : 13-13657
Comment :
Method : /chem1/nt5.i/28JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 14:31 patrickb
Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07
Cal File: 2000627.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

6/28/13

IRE

Concentration Formula: Amt * DF * Uf * 1/(Ws * (100 - M)/100) * CpndVariable

M	0.00000	% Moisture (not decanted)
Uf	1.00000	ng unit correction factor
Ws	5.00000	Weight of sample extracted (g)

Cpnd Variable

Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
1	Dichlorodifluoromethane	85	Compound Not Detected.					
2	Chloromethane	50	Compound Not Detected.					
3	Vinyl Chloride	62	Compound Not Detected.					
4	Bromomethane	94	Compound Not Detected.					
5	Chloroethane	64	Compound Not Detected.					
6	Trichlorofluoromethane	101	1.611	1.583	(0.346)	23174	1.22146	0.2443
7	1,1-Dichloroethene	96	Compound Not Detected.					
8	Carbon Disulfide	76	Compound Not Detected.					
9	112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10	Iodomethane	142	2.075	2.041	(0.445)	5300	0.58694	0.1174
11	Bromoethane	108	Compound Not Detected.					
12	Acrolein	56	Compound Not Detected.					
13	Methylene Chloride	84	2.443	2.415	(0.524)	30807	2.20307	0.4406
14	Acetone	43	2.669	2.601	(0.573)	26822	10.1221	2.024(Q)
15	Trans-1,2-Dichloroethene	96	Compound Not Detected.					
16	Methyl tert butyl ether	73	Compound Not Detected.					
17	1,1-Dichloroethane	63	Compound Not Detected.					
18	Acrylonitrile	53	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
	19 Vinyl Acetate	43	Compound Not Detected.					
	20 Cis-1,2-Dichloroethene	96	Compound Not Detected.					
	22 2,2-Dichloropropane	77	Compound Not Detected.					
	23 Bromochloromethane	128	Compound Not Detected.					
	24 Chloroform	83	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.191	4.174	(0.899)	809081	52.7352	10.547
	26 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 1,1-Dichloropropene	75	Compound Not Detected.					
	29 2-Butanone	72	Compound Not Detected.					
	30 Benzene	78	Compound Not Detected.					
*	31 Pentafluorobenzene	168	4.660	4.655	(1.000)	1593406	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.649	(1.000)	873079	50.0768	10.015
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.113	5.107	(1.000)	2724789	50.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	40 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	41 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	42 d8-Toluene	98	6.289	6.284	(1.230)	3405809	50.4257	10.085
	43 Toluene	92	6.329	6.329	(1.238)	42117	1.12359	0.2247
	44 Tetrachloroethene	166	Compound Not Detected.					
	45 4-Methyl-2-Pentanone	58	Compound Not Detected.					
	46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47 1,1,2-Trichloroethane	97	Compound Not Detected.					
	48 Chlorodibromomethane	129	Compound Not Detected.					
	49 1,3-Dichloropropane	76	Compound Not Detected.					
	50 1,2-Dibromoethane	107	Compound Not Detected.					
	51 2-Hexanone	43	Compound Not Detected.					
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2724311	50.0000	
	53 Chlorobenzene	112	Compound Not Detected.					
	54 Ethyl Benzene	91	Compound Not Detected.					
	55 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56 m,p-xylene	106	7.788	7.789	(1.025)	13822	0.58591	0.1112(Q)
	57 o-Xylene	106	Compound Not Detected.					
	58 Styrene	104	Compound Not Detected.					
	59 Bromoform	173	Compound Not Detected.					
	60 Isopropyl Benzene	105	Compound Not Detected.					
$	62 4-Bromofluorobenzene	95	8.665	8.665	(1.141)	1444953	49.8345	9.967
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	Compound Not Detected.					
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
	66 2-Chloro Toluene	91	Compound Not Detected.					
	67 1,3,5-Trimethyl Benzene	105	Compound Not Detected.					
	68 1,2,3-Trichloropropane	110	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
69	Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
70	4-Chloro Toluene	91	Compound Not Detected.					
71	T-Butyl Benzene	119	Compound Not Detected.					
72	1,2,4-Trimethylbenzene	105	Compound Not Detected.					
73	S-Butyl Benzene	105	Compound Not Detected.					
74	4-Isopropyl Toluene	119	Compound Not Detected.					
75	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 76	d4-1,4-Dichlorobenzene	152	9.666	9.672	(1.000)	1455919	50.0000	
77	1,4-Dichlorobenzene	146	Compound Not Detected.					
78	N-Butyl Benzene	91	Compound Not Detected.					
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.057	(1.040)	1325015	49.8967	9.979
80	1,2-Dichlorobenzene	146	Compound Not Detected.					
81	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
84	Naphthalene	128	11.799	11.799	(1.221)	25989	0.53300	0.1066
85	1,2,3-Trichlorobenzene	180	Compound Not Detected.					

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: wv67a3.d
Lab Smp Id: WV67A
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/28JUN13.b/VO121012S.m
Misc Info: 13-13657

Calibration Date: 28-JUN-2013
Calibration Time: 08:36
Client Smp ID: UP-CB-B8-20130626-S
Level: MED
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	1613586	806793	3227172	1593406	-1.25
35 1,4-Difluorobenze	2656709	1328354	5313418	2724789	2.56
52 d5-Chlorobenzene	2557235	1278618	5114470	2724311	6.53
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1455919	5.93

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.66	0.12
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

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

WV67 : 06JUN13

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WV67A
Level: MED
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/28JUN13.b/VO121012S.m
Misc Info: 13-13657

Client SDG: WV67
Fraction: VOA
Client Smp ID: UP-CB-B8-20130626-S
Operator: PB
SampleType: SAMPLE
Quant Type: ISTD

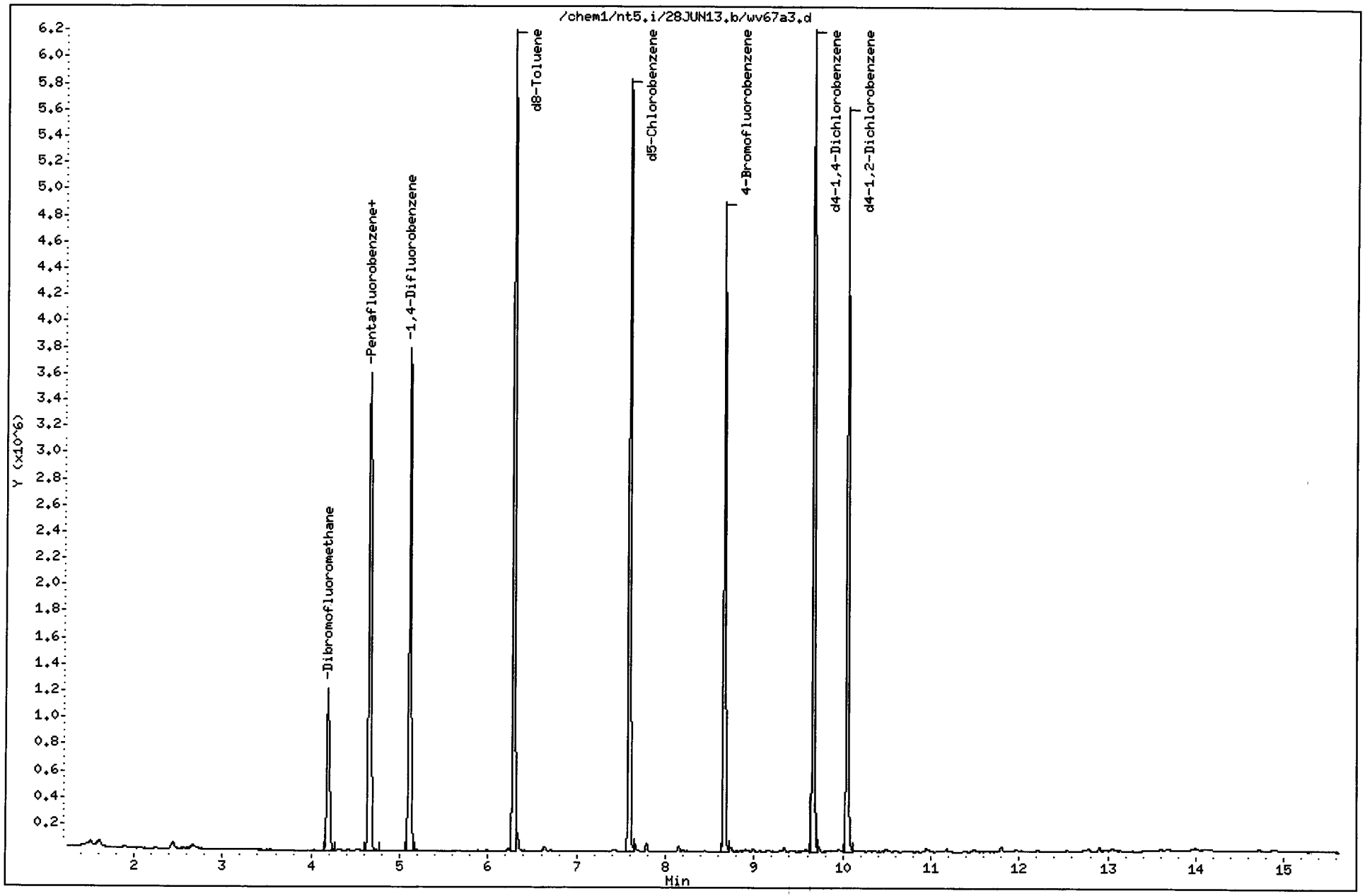
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	52.735	105.47	70-130
$ 32 d4-1,2-Dichloroeth	50.000	50.077	100.15	80-149
$ 42 d8-Toluene	50.000	50.426	100.85	77-120
$ 62 4-Bromofluorobenze	50.000	49.835	99.67	80-120
$ 79 d4-1,2-Dichloroben	50.000	49.897	99.79	80-120

Data File: /chem1/nt5.i/28JUN13.b/wv67a3.d
Date : 28-JUN-2013 11:26
Client ID: UP-CB-B8-20130626-S
Sample Info: WV67A,5,13.083,1,100UL

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Data File: /chem1/nt5.i/28JUN13.b/wv67a3.d

Date : 28-JUN-2013 11:26

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,13,083,1,100UL

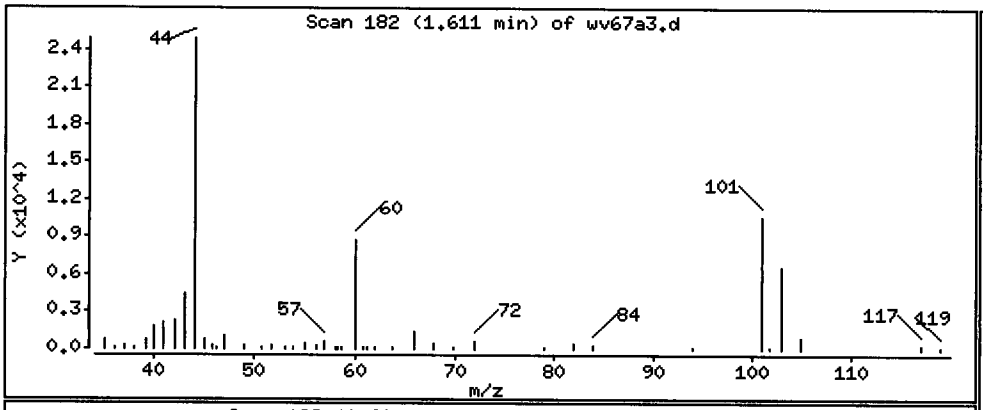
Operator: PB

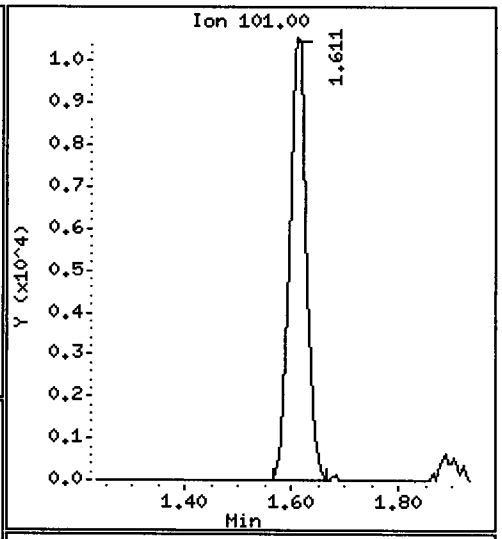
Column phase: RTXVMS

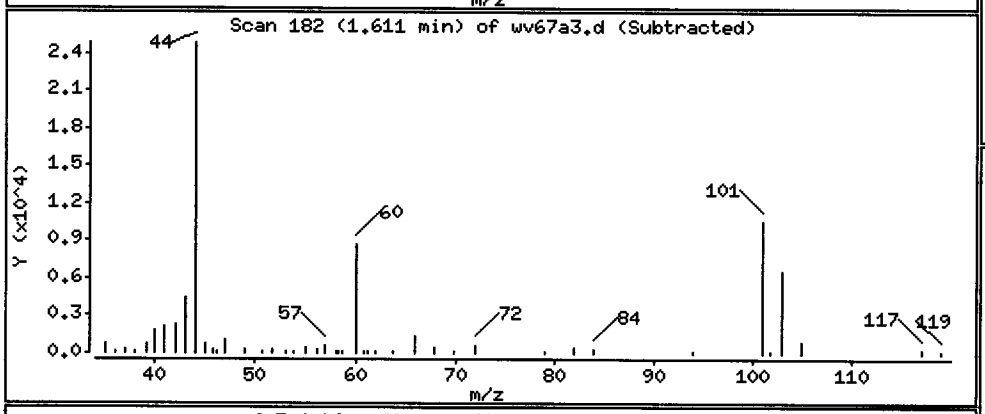
Column diameter: 0.18

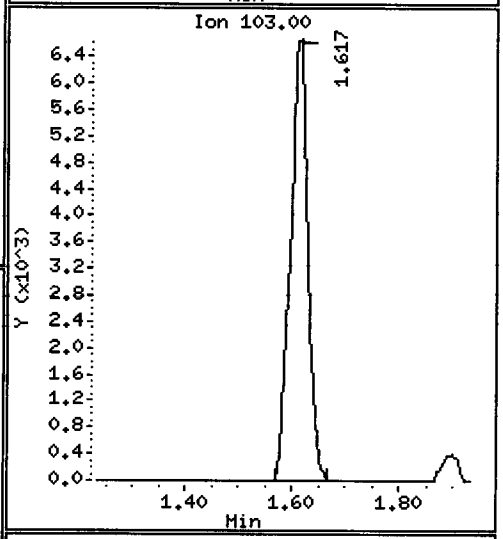
6 Trichlorofluoromethane

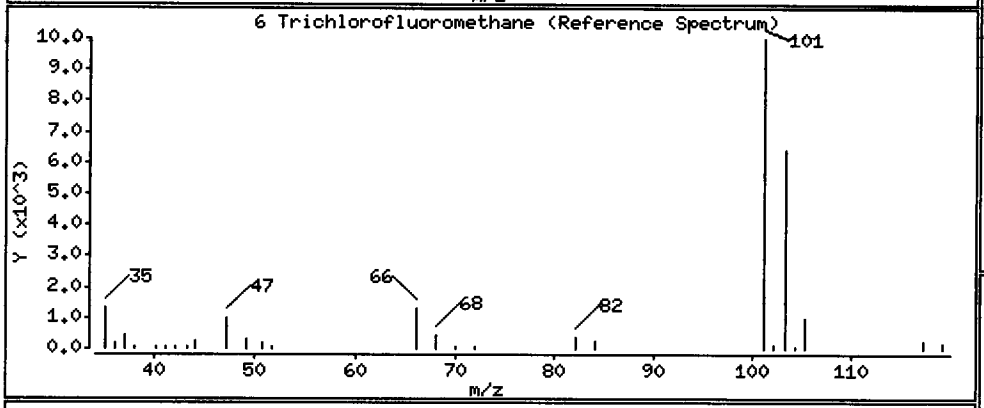
Concentration: 0.2443 ug/Kg

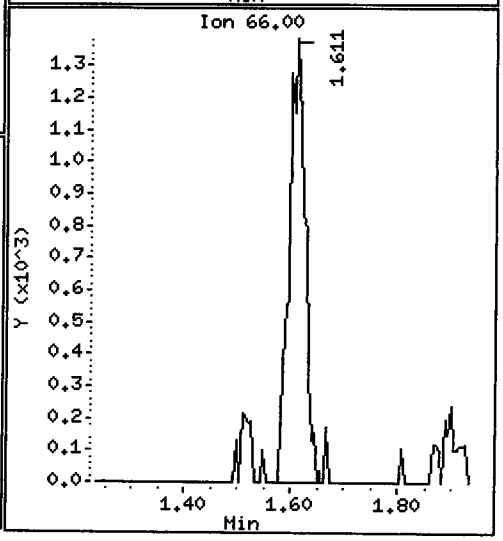


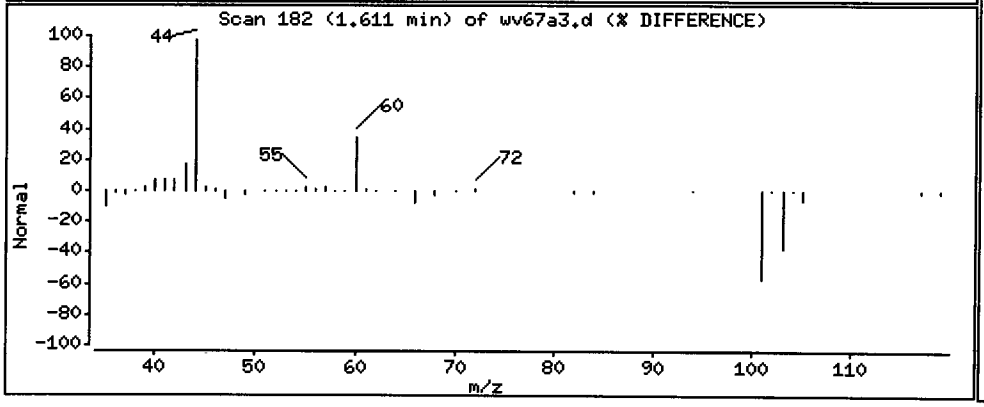












Data File: /chem1/nt5.i/28JUN13.b/wv67a3.d

Date : 28-JUN-2013 11:26

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,13,083,1,100UL

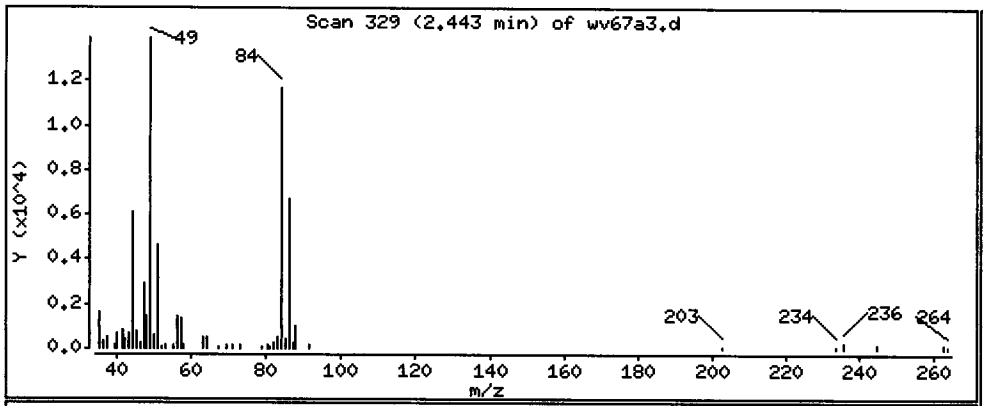
Operator: PB

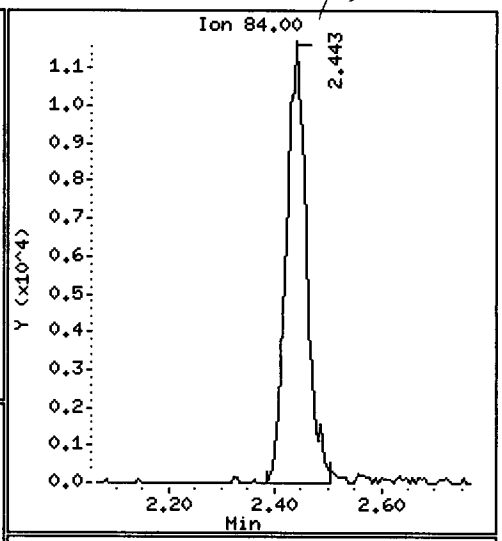
Column phase: RTXVMS

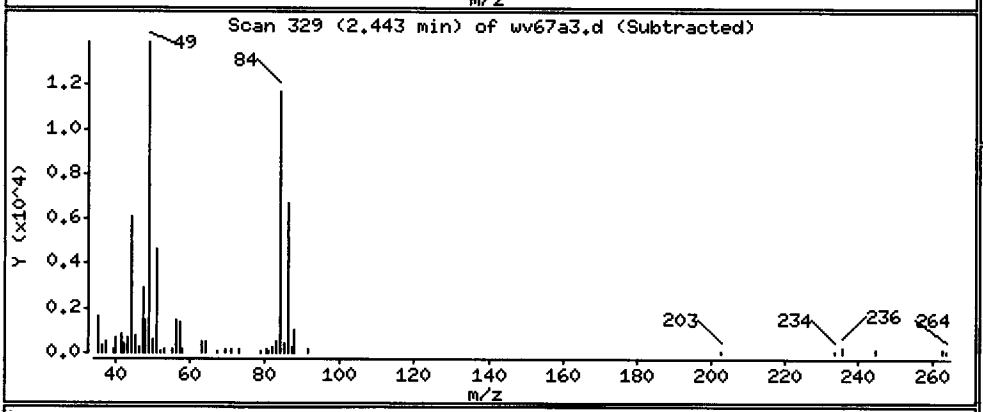
Column diameter: 0.18

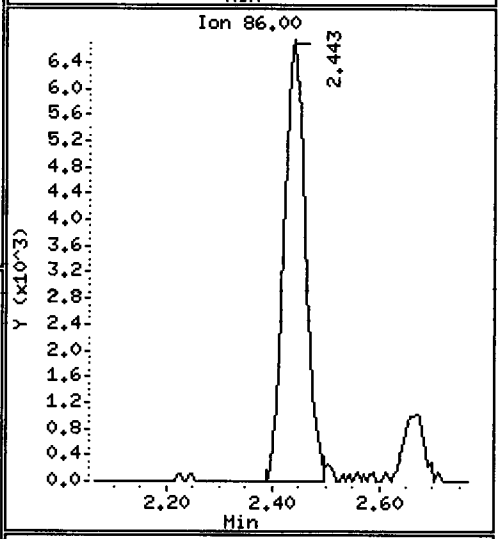
13 Methylene Chloride

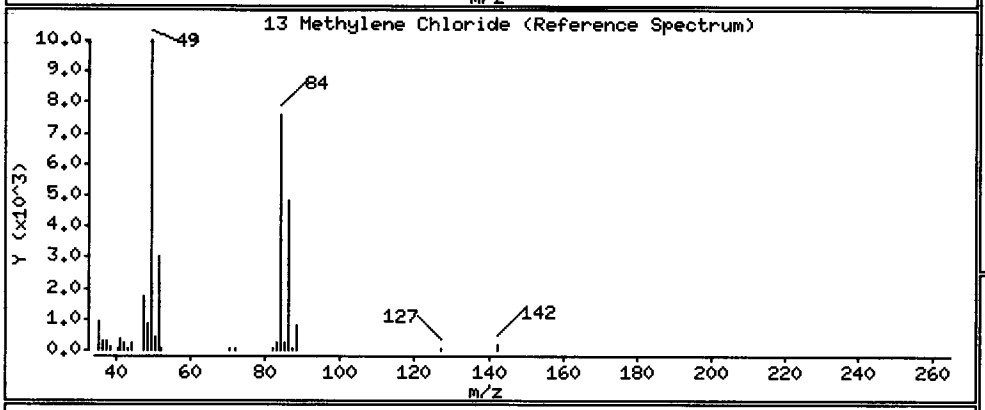
Concentration: 0.4406 ug/Kg

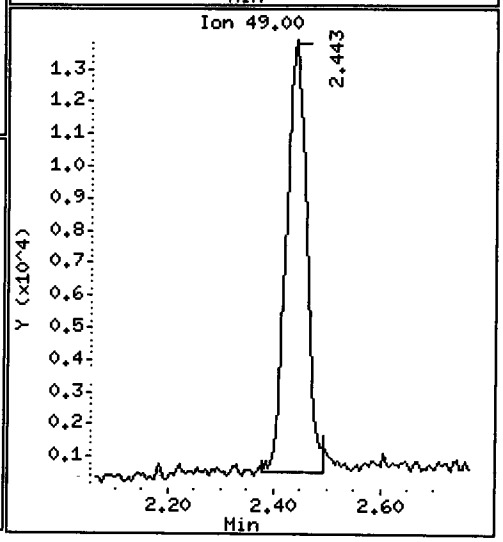


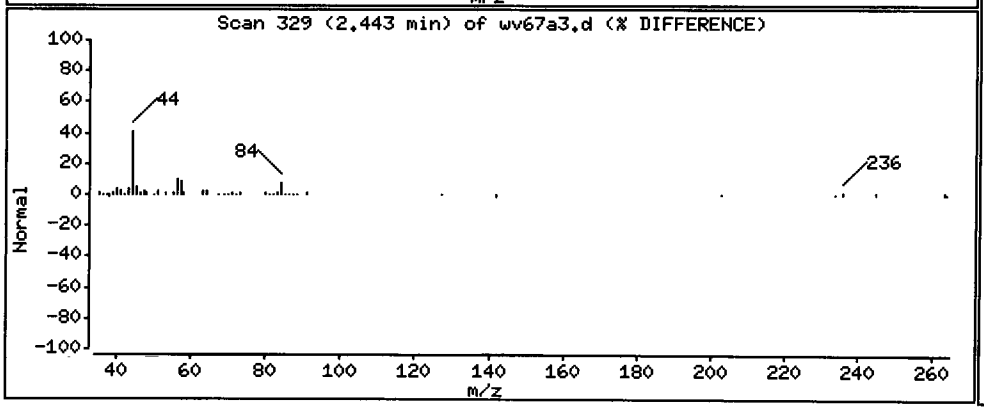












Data File: /chem1/nt5.i/28JUN13.b/wv67a3.d

Date : 28-JUN-2013 11:26

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,13.083,1,100UL

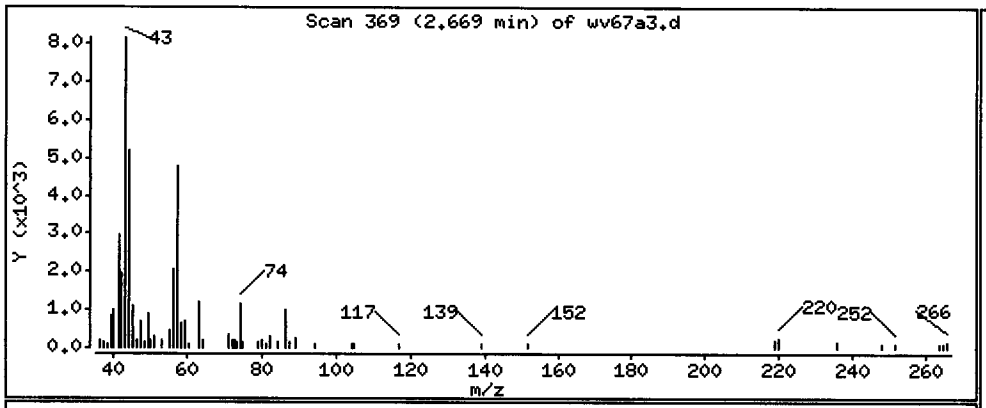
Operator: PB

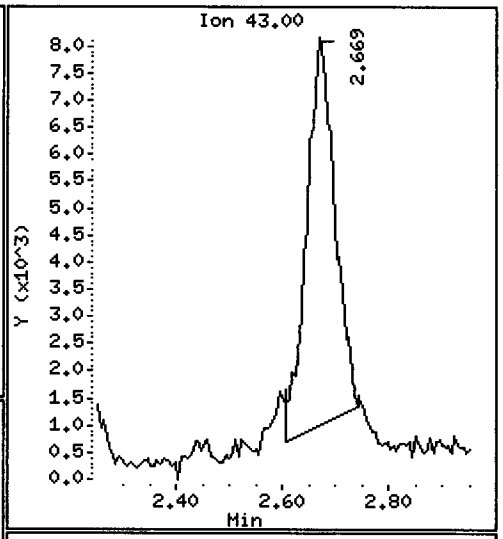
Column phase: RTXVMS

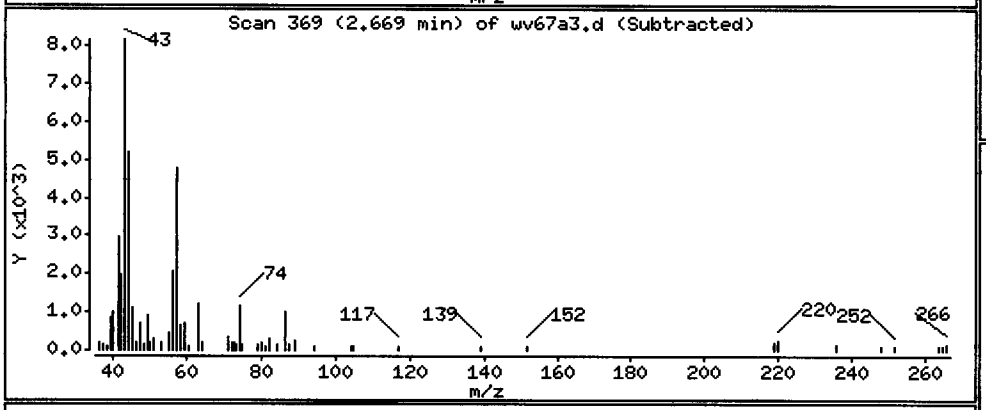
Column diameter: 0.18

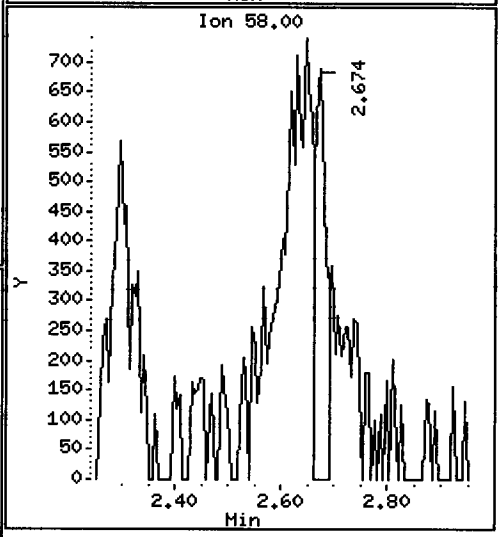
14 Acetone

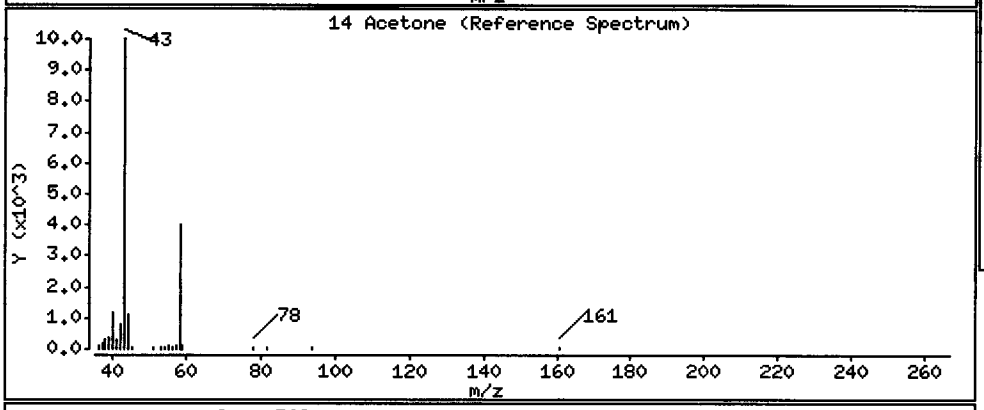
Concentration: 2.024 ug/Kg

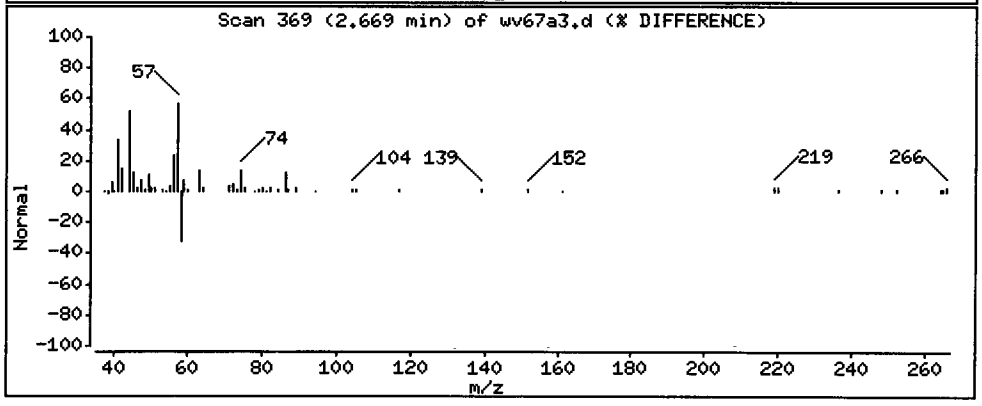












Data File: /chem1/nt5.i/28JUN13.b/wv67a3.d

Date : 28-JUN-2013 11:26

Client ID: UP-CB-B8-20130626-S

Instrument: nt5.i

Sample Info: WV67A,5,13.083,1,100UL

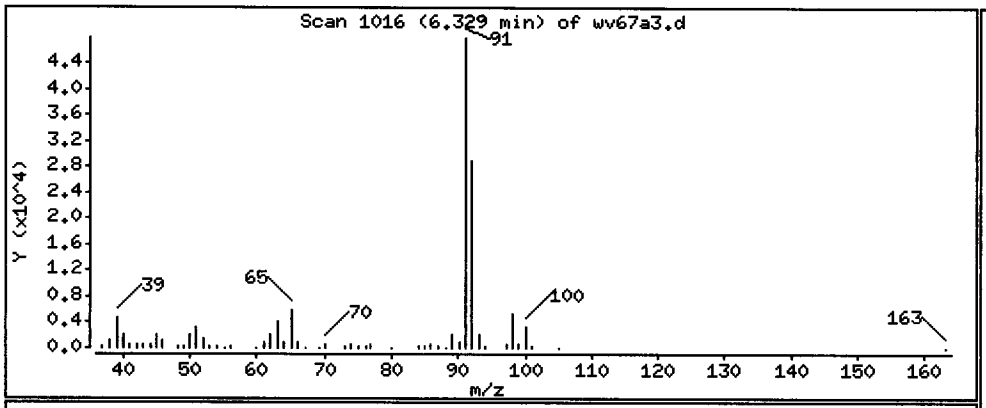
Operator: PB

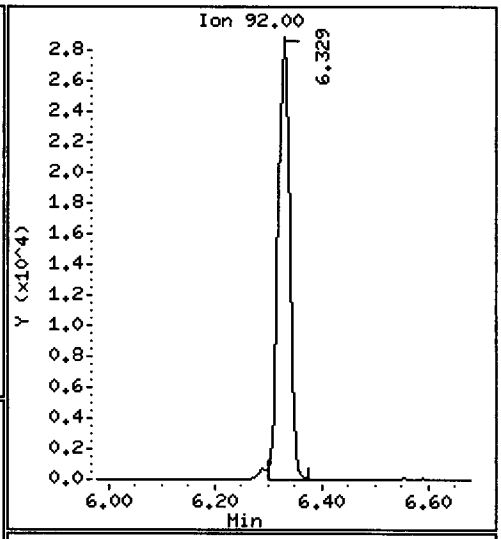
Column phase: RTXVMS

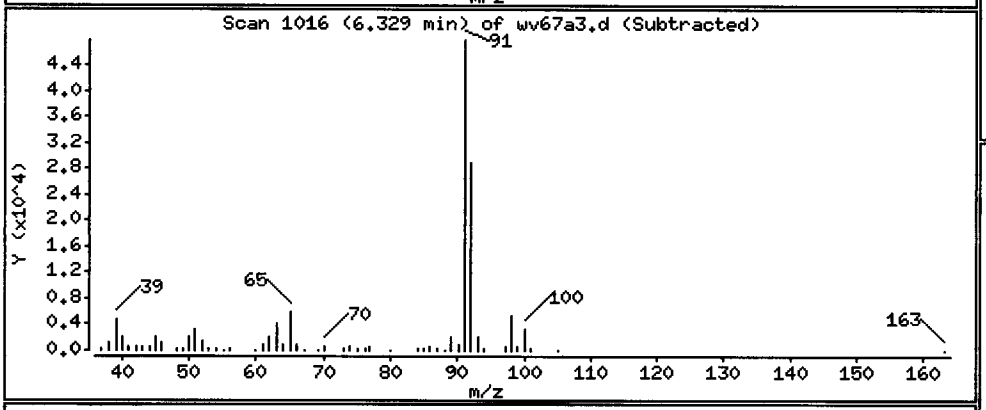
Column diameter: 0.18

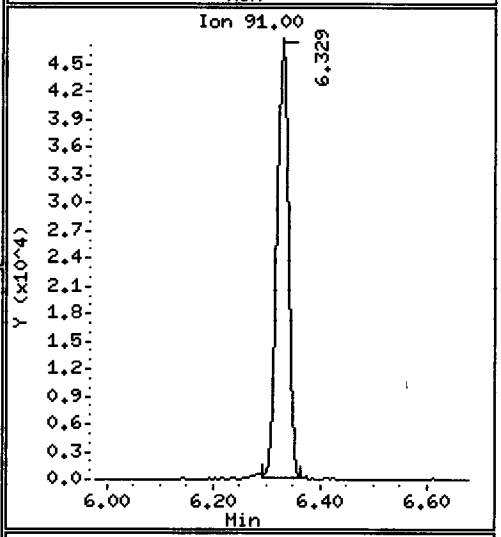
43 Toluene

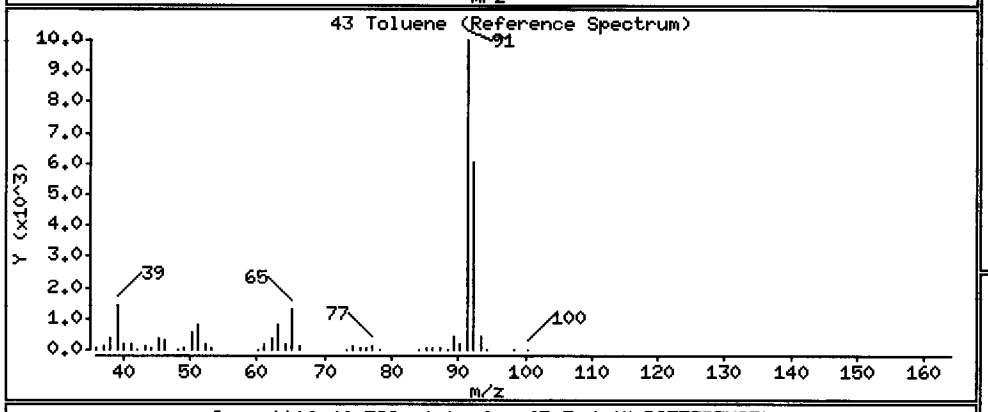
Concentration: 0.2247 ug/Kg

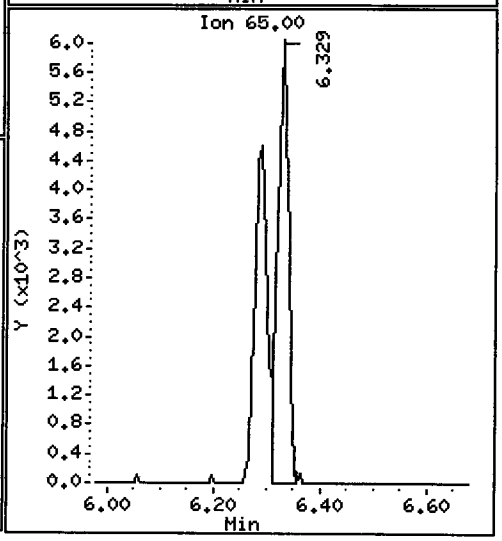


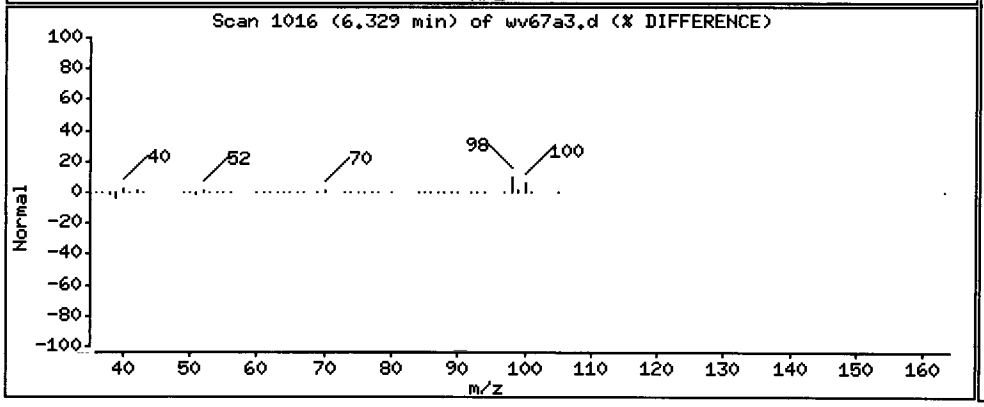












CO-ELUTION SUMMARY FOR FILE - wv67a3.d

Lab ID: WV67A, Method: VO121012S.m, Instrument: nt5.i, Date: 28-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WV67

Incorporated
Analytical Chemists and
Consultants

(8270D) BAN –Water
Separatory Funnel (3510C) (SOP # 3311S)

Preparation Test BAN # 1 (BANWSI) In-House (1.0-5.0ppb)
ARI Job No(s) WV67 Page 1 of 1 Batch set up by: TH

Bottle #	Extraction Requirements	Volume Extracted	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	WV67 MBW	500mL	0.5mL	0.5mL		WW 6/26/13
	SBW	500mL	0.5mL	0.5mL		
	SBW Dup	500mL	0.5mL	0.5mL		
7	E ~~QLS~~	500mL	0.5mL	0.5mL		
		~~500mL~~	~~0.5mL~~	~~0.5mL~~		
		500mL	0.5mL	0.5mL		Analyst/Date
		500mL	0.5mL	0.5mL		KD 80-85°C (1) 2 3 4 5 6
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		YC 6/26/13
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		Analyst/Date
		500mL	0.5mL	0.5mL		TurboVap 1 (2) 3
		500mL	0.5mL	0.5mL		WW 6/26/13
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
Analyst/Date	AC 6-26-13	WW 6/26/13	WW 6/26/13	Reviewed By WW 6/26/13		Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (2093-4)	100/150µg/mL	125µL	7/2/13	AC	WW
Full List Spike (Freezer)	7 (2065-5)	100µg/mL	125µL	1/29/14	AC	WW
Base Spike	56 (2065-2)	200µg/mL	125µL	7/31/13	AC	WW
~~Benzidine Spike~~	~~39 ( )~~	~~500µg/mL~~	~~125µL~~			
Acid Spike	38 (B000697)	100/200µg/mL	125µL	12/18/13	AC	WW
~~QLS Spike (Freezer)~~	~~14 ( )~~	~~10-100µg/mL~~	~~50µL~~			
Extraction Time:	1835					

SPECIAL INSTRUCTIONS: 1. Add surr/spk. 2. Adjust Acid (pH <2) using 1:1 Sulfuric Acid. (1/4 pipet for blanks & 1/2 pipet for samples). Verify pH! 3. Extract 1X 60mL DCM, Plus 2X 30mL DCM. 4. Adjust Basic (pH >12) using 1 pipet 10 N Sodium Hydroxide solution. Verify pH! 5. Extract 1X 60mL DCM, Plus 2X 30mL DCM.
5. Pour Acid Fraction first into KD then Basic Fraction into Acid. 6. KD to 5mL at 80°. 7. TurboVap to 0.5mL.
8. Vial in DCM.

A. Archive (Y) N

Reagent and Solutions Identification

(8270D) BAN –Water
Separatory Funnel (3510C) (SOP # 3311S)

ARI Job No(s) WVI7

(8270D) BAN Aqueous:	Analyst/Date
Separatory Funnel Station: Methylene Chloride: (I# 8277) 1:1 Sulfuric Acid/DI H20: (H# 1889) 10 N Sodium Hydroxide: (H# 0449) Anhydrous Sodium Sulfate: (I# 8185 + jar date 6-8-13)	Sep. Funnel AC 6-26-13
KD Station: Methylene Chloride: (I# 8276)	KD YC 6/26/13
Vialing Station: Methylene Chloride: (I# 8279)	Vialing MW 6/26/13

WV67 : 68557

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WV67 Client ID: SAIC

Parameter: 8270 SVOA Client Project: NPDES SAMPLING SUPPORT

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color= Extn	HC 6-26-13
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)= Ref 2.0-9 E = 10% (acid shake) removed	HC 6-26-13
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

3056F

Revision 009
08/14/12

WV67:06556

Semivolatile Raw Data
Initial Calibration

ARI Job ID: WV67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS,SVOA Initial Calibration Notes

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date(s): 6/28/13 Internal Standard ID B000785 Expiration 6/26/14

DFTPP Tune Meets Criteria?	YES / NO	Minimum Response Factors Met/	YES / NO
DDT Breakdown <20%?	YES / NO	ICV Exceeding ±20%?	YES / NO
Peak Tailing Factor ≤2?	YES / NO	ICV Exceeding ±30%?	YES / NO
ICal Meets %RSD & r^2 Criteria?	YES / NO	Linear Fits Used?	YES / NO
Q flag applied?	YES / NO	Quadratic Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Calibration Points Dropped?	YES / NO
Spectral Library Updated?	YES / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Ultra	2063-2	8/31/13	Supelco	2054-1	8/13/13
↓	2044-1	12/31/13	↓	2047-1	12/31/13
↓	2044-1	12/5/13	↓	2068-1	12/5/13
in house stock	2061-1	12/5/13	in house stock	2061-1	12/5/13
Cambridge	19831	1/23/14	Cambridge	19831	1/23/14
spex & Restek	2027-2	10/5/13	Aldrich	2058-2	7/2/13
Aldrich	2058-2	7/2/13			

Detail problems, corrective actions and/or other pertinent information below:

Quadratic curve fit: 4,6-Dinitro-2-methylphenol & 2,4-Dinitrophenol - compound. Benzidine & 2,4,6-Tribromophenol out of QC limits. - (new column, no source & new split line).

Analyst: _____ **Date:** 6/28/13

Reviewer: _____ **Date:** 6/28/13

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 28-JUN-2013 10:39
End Cal Date : 28-JUN-2013 14:05
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130628.b/SW846062813.m
Cal Date : 28-Jun-2013 15:28 jianqing
Curve Type : Average

Calibration File Names:
Level 1: /chem2/nt6.i/20130628.b/06281302.d
Level 2: /chem2/nt6.i/20130628.b/06281303.d
Level 3: /chem2/nt6.i/20130628.b/06281304.d
Level 4: /chem2/nt6.i/20130628.b/06281301.d
Level 5: /chem2/nt6.i/20130628.b/06281305.d
Level 6: /chem2/nt6.i/20130628.b/06281306.d
Level 7: /chem2/nt6.i/20130628.b/06281307.d

EZ 06/28/13

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	80.000 Level 7	RRF	% RSD
186 Carbaryl	+++++	0.45282	0.45814	0.60119	0.63174	0.68102	+++++	0.56498	18.400
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Cal Date : 28-Jun-2013 15:28 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7							
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
177 p-Benzoquinone	0.12958	0.15969	0.18803	0.19954	0.21453	0.22685		
	0.21408						0.19033	18.205
168 Pentachlorobenzene	0.44378	0.39549	0.43185	0.44619	0.42115	0.40389		
	0.35146						0.41340	8.051
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130628.b/SW846062813.m
Cal Date : 28-Jun-2013 15:28 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7							
135 2,3,5,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
136 2,3,4,5-tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
133 Butylatedhydroxytoluene	0.74795	0.70058	0.75026	0.77062	0.66280	0.59959		
	0.49367						0.67507	14.751
132 3,6-Dimethylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

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Integrator : HP RTE
Method file : /chem2/nt6.i/20130628.b/SW846062813.m
Cal Date : 28-Jun-2013 15:28 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7							
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
144 alpha-Terpineol	0.24452	0.23894	0.27065	0.22789	0.23023	0.22866		
	0.20226						0.23474	8.803
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
123 Acetophenone	1.87318	1.73266	1.82865	1.96532	1.91764	1.90632		
	1.88924						1.87329	3.992
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
143 1,4-Dioxane	0.54045	0.51544	0.53548	0.55994	0.57900	0.59513		
	0.62686						0.56461	6.816
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
120 2,3,4,6-Tetrachlorophenol	0.20666	0.22866	0.22771	0.26132	0.26417	0.26343		
	0.24538						0.24247	9.168

Analytical Resources, Inc.

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Integrator : HP RTE
Method file : /chem2/nt6.i/20130628.b/SW846062813.m
Cal Date : 28-Jun-2013 15:28 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	80.000 Level 7	RRF	% RSD
178 2-Benzyl-4-Chlorophenol	0.16050	0.16611	0.18016	0.20179	0.21035	0.22390	0.21985	0.19467	13.228
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
118 Triphenyl Phosphate	0.18592	0.18326	0.19713	0.21249	0.21473	0.22383	0.20213	0.20278	7.473
117 Butyl Diphenyl Phosphate	0.17850	0.17837	0.18629	0.19482	0.19836	0.20171	0.19578	0.19055	4.992
116 Dibutyl Phenyl Phosphate	0.54664	0.56328	0.62507	0.66992	0.71112	0.76462	0.73826	0.65984	12.861
115 Tributyl Phosphate	0.85154	0.88362	0.92174	0.84984	0.93330	0.96770	0.88160	0.89848	4.898
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
113 Diphenyl Oxide	0.72468	0.70470	0.79380	0.82740	0.86860	0.86358	0.78189	0.79495	8.029
112 Biphenyl	1.23363	1.21232	1.57493	1.38845	1.31257	1.24846	1.01038	1.28296	13.507

Analytical Resources, Inc.

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Integrator : HP RTE
Method file : /chem2/nt6.i/20130628.b/SW846062813.m
Cal Date : 28-Jun-2013 15:28 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7							
111 Azobenzene (1,2-DP-Hydrazine)	0.05072	0.04909	0.04965	0.05088	0.05237	0.05647		
	0.05521						0.05206	5.397
110 Tetrachloroguaiacol	0.08882	0.10220	0.10444	0.09569	0.10102	0.09918		
	0.08681						0.09688	6.997
109 3,4,5-Trichloroguaiacol	0.10547	0.12803	0.13206	0.12761	0.13307	0.13603		
	0.11493						0.12531	8.831
181 3,4,6-Trichloroguaiacol	0.35113	0.34143	0.33061	0.33193	0.34076	0.33324		
	0.30926						0.33405	3.908
108 4,5,6-Trichloroguaiacol	0.14588	0.14453	0.15179	0.16851	0.16961	0.17374		
	0.16453						0.15980	7.578
184 3,4-Dichloroguaiacol	0.36526	0.37685	0.39911	0.41673	0.45242	0.46010		
	0.45724						0.41825	9.428
107 4,5-Dichloroguaiacol	0.20773	0.21413	0.22818	0.24927	0.27890	0.29319		
	0.28509						0.25093	14.067
182 4,6-Dichloroguaiacol	0.45457	0.47134	0.47656	0.52221	0.55347	0.58903		
	0.57027						0.51964	10.229
185 4-Chloroguaiacol	0.09963	0.09776	0.11273	0.10144	0.10977	0.11412		
	0.11122						0.10667	6.389

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 28-JUN-2013 10:39
End Cal Date : 28-JUN-2013 14:05
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130628.b/SW846062813.m
Cal Date : 28-Jun-2013 15:28 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	80.000 Level 7	RRF	% RSD
106 Guaiacol	1.16201	1.14290	1.23842	1.32578	1.31227	1.26721	1.16742	1.23086	6.072
105 1-methylnaphthalene	0.50501	0.49674	0.60780	0.56947	0.59234	0.58355	0.50220	0.55102	8.696
151 1,2,4,5-Tetrachlorobenzene	0.47222	0.47234	0.51036	0.58211	0.58423	0.57719	0.54631	0.53496	9.354
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 28-JUN-2013 10:39
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130628.b/SW846062813.m
Cal Date : 28-Jun-2013 15:28 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7							
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
3 Phenol	1.77528	1.76932	1.69766	1.93196	1.81144	1.92978		
	1.70453						1.80285	5.333
4 Bis(2-Chloroethyl)ether	1.41464	1.30311	1.39182	1.49028	1.47498	1.47509		
	1.43311						1.42615	4.561
6 2-Chlorophenol	1.31216	1.30650	1.24796	1.48136	1.45662	1.49908		
	1.37074						1.38206	7.103
7 1,3-Dichlorobenzene	1.61785	1.63165	1.64592	1.79802	1.76868	1.76049		
	1.61851						1.69159	4.734
9 1,4-Dichlorobenzene	1.66478	1.58099	1.67488	1.82715	1.84144	1.72565		
	1.60261						1.70250	5.985
11 Benzyl alcohol	0.84191	0.79666	0.85788	0.94095	0.99059	1.03256		
	1.00705						0.92394	9.952
12 1,2-Dichlorobenzene	1.54974	1.49019	1.57539	1.75991	1.69928	1.64602		
	1.56908						1.61280	5.802
13 2-Methylphenol	1.22911	1.22932	1.16490	1.40636	1.37272	1.40377		
	1.28622						1.29891	7.426

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130628.b/SW846062813.m
Cal Date : 28-Jun-2013 15:28 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7							
14 2,2'-oxybis(1-Chloropropane)	2.83770	2.54021	2.55794	2.56539	2.39840	2.25952		
	2.04751						2.45809	10.290
15 4-Methylphenol	1.25785	1.28949	1.23813	1.52013	1.45325	1.46422		
	1.32541						1.36407	8.280
16 N-Nitroso-di-n-propylamine	0.98968	0.90316	0.94397	0.97840	0.92715	0.91525		
	0.90919						0.93812	3.646
17 Hexachloroethane	0.56500	0.51445	0.56347	0.56206	0.56362	0.53580		
	0.51311						0.54536	4.374
19 Nitrobenzene	0.35720	0.34895	0.40927	0.36278	0.34854	0.32579		
	0.30701						0.35136	9.114
20 Isophorone	0.58506	0.56109	0.65927	0.60551	0.59640	0.58741		
	0.58703						0.59740	5.101
21 2-Nitrophenol	0.15453	0.17464	0.19548	0.20897	0.21139	0.22191		
	0.21189						0.19697	12.261
22 2,4-Dimethylphenol	0.30566	0.30340	0.33191	0.33676	0.33233	0.33698		
	0.31090						0.32256	4.703
23 Bis(2-Chloroethoxy)methane	0.45798	0.44052	0.52587	0.48226	0.47497	0.46587		
	0.44517						0.47038	6.102

Analytical Resources, Inc.

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Integrator : HP RTE
Method file : /chem2/nt6.i/20130628.b/SW846062813.m
Cal Date : 28-Jun-2013 15:28 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7							
24 Benzoic acid	+++++	0.17158	0.22015	0.22236	0.27546	0.28943		
	0.28779						0.24446	19.405
25 2,4-Dichlorophenol	0.26602	0.27873	0.31093	0.34807	0.34096	0.34223		
	0.31069						0.31395	10.281
26 1,2,4-Trichlorobenzene	0.35384	0.39296	0.41101	0.38631	0.38426	0.37697		
	0.35306						0.37977	5.489
28 Naphthalene	1.01243	0.99946	1.15268	1.10265	1.03073	0.94554		
	0.82530						1.00983	10.523
29 4-Chloroaniline	0.38899	0.37904	0.45966	0.35413	0.35916	0.36728		
	0.31311						0.37448	11.920
30 Hexachlorobutadiene	0.18376	0.16620	0.20792	0.18061	0.17858	0.16963		
	0.14973						0.17663	10.156
31 4-Chloro-3-methylphenol	0.24420	0.26211	0.28148	0.29291	0.28884	0.29140		
	0.26905						0.27571	6.573
32 2-Methylnaphthalene	0.51062	0.49465	0.61598	0.56998	0.58748	0.58191		
	0.50567						0.55233	8.656
33 Hexachlorocyclopentadiene	+++++	0.24791	0.30940	0.37104	0.36630	0.36561		
	0.35131						0.33526	14.442

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130628.b/SW846062813.m
Cal Date : 28-Jun-2013 15:28 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7							
34 2,4,6-Trichlorophenol	0.28627	0.30813	0.31668	0.37050	0.37568	0.37999		
	0.36209						0.34276	11.099
35 2,4,5-Trichlorophenol	0.31471	0.32433	0.32767	0.38086	0.37915	0.38672		
	0.35641						0.35284	8.610
37 2-Chloronaphthalene	1.17986	1.12638	1.47665	1.30594	1.19866	1.10690		
	0.98530						1.19710	13.133
38 2-Nitroaniline	0.22796	0.23088	0.26130	0.26608	0.28171	0.29182		
	0.26461						0.26062	9.155
39 Dimethylphthalate	1.18184	1.11095	1.22233	1.31932	1.31661	1.31070		
	1.32734						1.25558	6.776
40 Acenaphthylene	1.56786	1.51734	1.70175	1.76589	1.65374	1.57232		
	1.45811						1.60529	6.696
41 2,6-Dinitrotoluene	0.20925	0.24772	0.29074	0.30536	0.29413	0.28031		
	0.27264						0.27145	12.170
43 3-Nitroaniline	0.23966	0.24897	0.27648	0.25013	0.26271	0.25049		
	0.22919						0.25109	6.074
44 Acenaphthene	1.03887	0.97316	1.09505	1.22634	1.16215	1.14746		
	1.07282						1.10226	7.647

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 28-JUN-2013 10:39
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130628.b/SW846062813.m
Cal Date : 28-Jun-2013 15:28 jianqing
Curve Type : Average

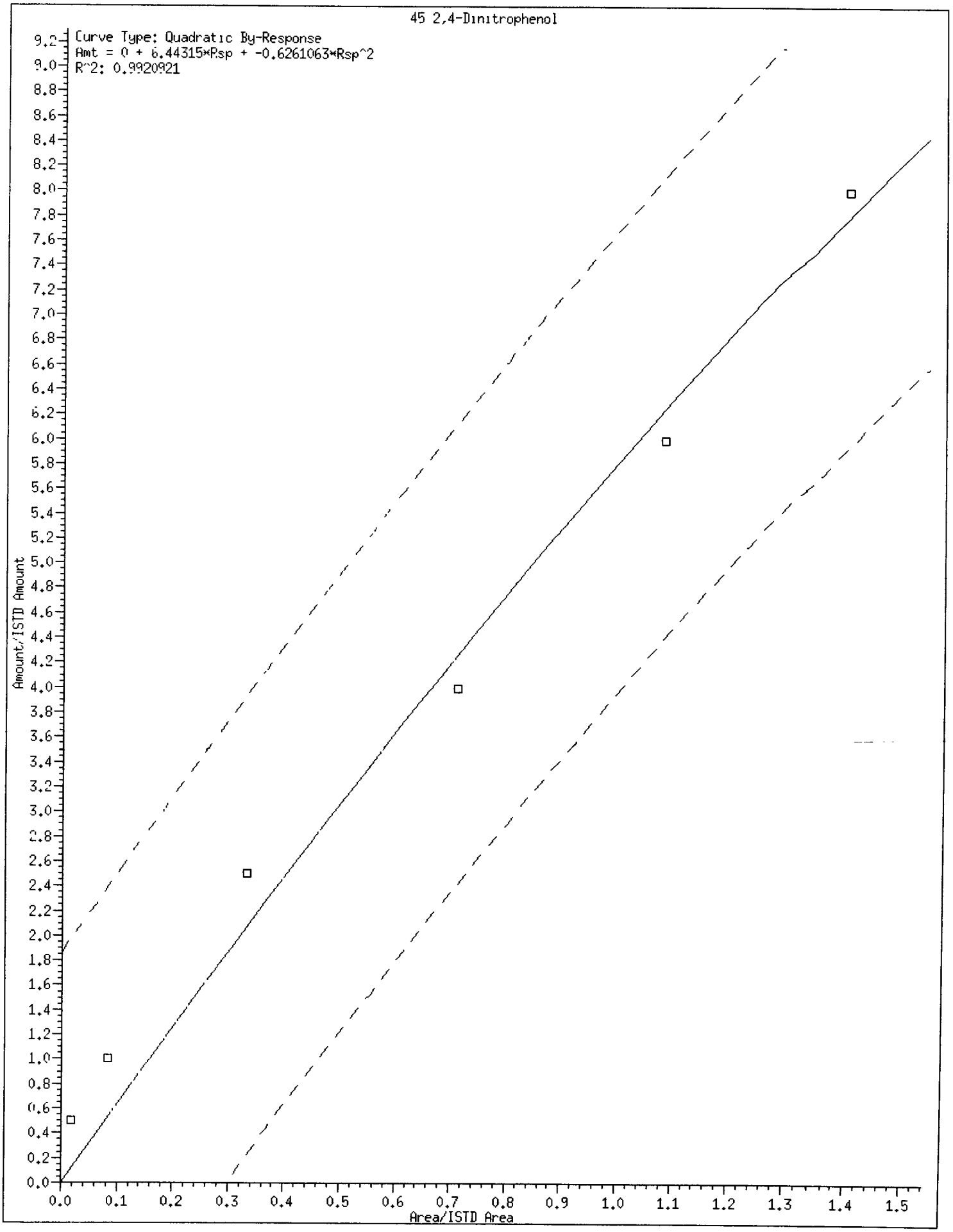
Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD	
	80.000 Level 7								
45 2,4-Dinitrophenol	+++++	0.03701	0.08318	0.13241	0.17742	0.18103			
	0.17529						0.13106	45.453	<-
46 Dibenzofuran	1.27883	1.16931	1.27709	1.33362	1.40708	1.37145			
	1.19447						1.29026	6.803	
47 4-Nitrophenol	0.05257	0.07282	0.07597	0.09126	0.08638	0.08838			
	0.08425						0.07880	16.912	
48 2,4-Dinitrotoluene	0.25180	0.29944	0.33823	0.36109	0.35560	0.35435			
	0.35280						0.33047	12.260	
49 Fluorene	1.13942	1.11737	1.24473	1.31292	1.15463	1.03652			
	0.88842						1.12772	12.252	
50 Diethylphthalate	1.19489	1.07013	1.13780	1.11297	1.00865	0.95176			
	0.83650						1.04467	11.712	
51 4-Chlorophenyl-phenylether	0.59298	0.55780	0.61912	0.60301	0.52005	0.45515			
	0.37800						0.53230	16.588	
52 4-Nitroaniline	0.22643	0.22217	0.21615	0.19621	0.22902	0.24439			
	0.23454						0.22413	6.803	
53 4,6-Dinitro-2-methylphenol	+++++	0.08064	0.10891	0.14339	0.16595	0.18103			
	0.17072						0.14177	27.829	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 28-JUN-2013 10:39
End Cal Date : 28-JUN-2013 14:05
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130628.b/SW846062813.m
Cal Date : 28-Jun-2013 15:11 jianqing

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	80 Level 7										
39 Dimethylphthalate	1.18184	1.11095	1.22233	1.31932	1.31661	1.31070					
	1.32734						AVRG		1.25558		6.77647
40 Acenaphthylene	1.56786	1.51734	1.70175	1.76589	1.65374	1.57232					
	1.45811						AVRG		1.60529		6.69628
41 2,6-Dinitrotoluene	0.20925	0.24772	0.29074	0.30536	0.29413	0.28031					
	0.27264						AVRG		0.27145		12.17028
43 3-Nitroaniline	0.23966	0.24897	0.27648	0.25013	0.26271	0.25049					
	0.22919						AVRG		0.25109		6.07373
44 Acenaphthene	1.03887	0.97316	1.09505	1.22634	1.16215	1.14746					
	1.07282						AVRG		1.10226		7.64689
45 2,4-Dinitrophenol	+++++	19350	83226	320237	687693	891287					
	1298390						QUAD	0.000e+00	6.44315	-0.62611	0.99209
46 Dibenzofuran	1.27883	1.16931	1.27709	1.33362	1.40708	1.37145					
	1.19447						AVRG		1.29026		6.80292

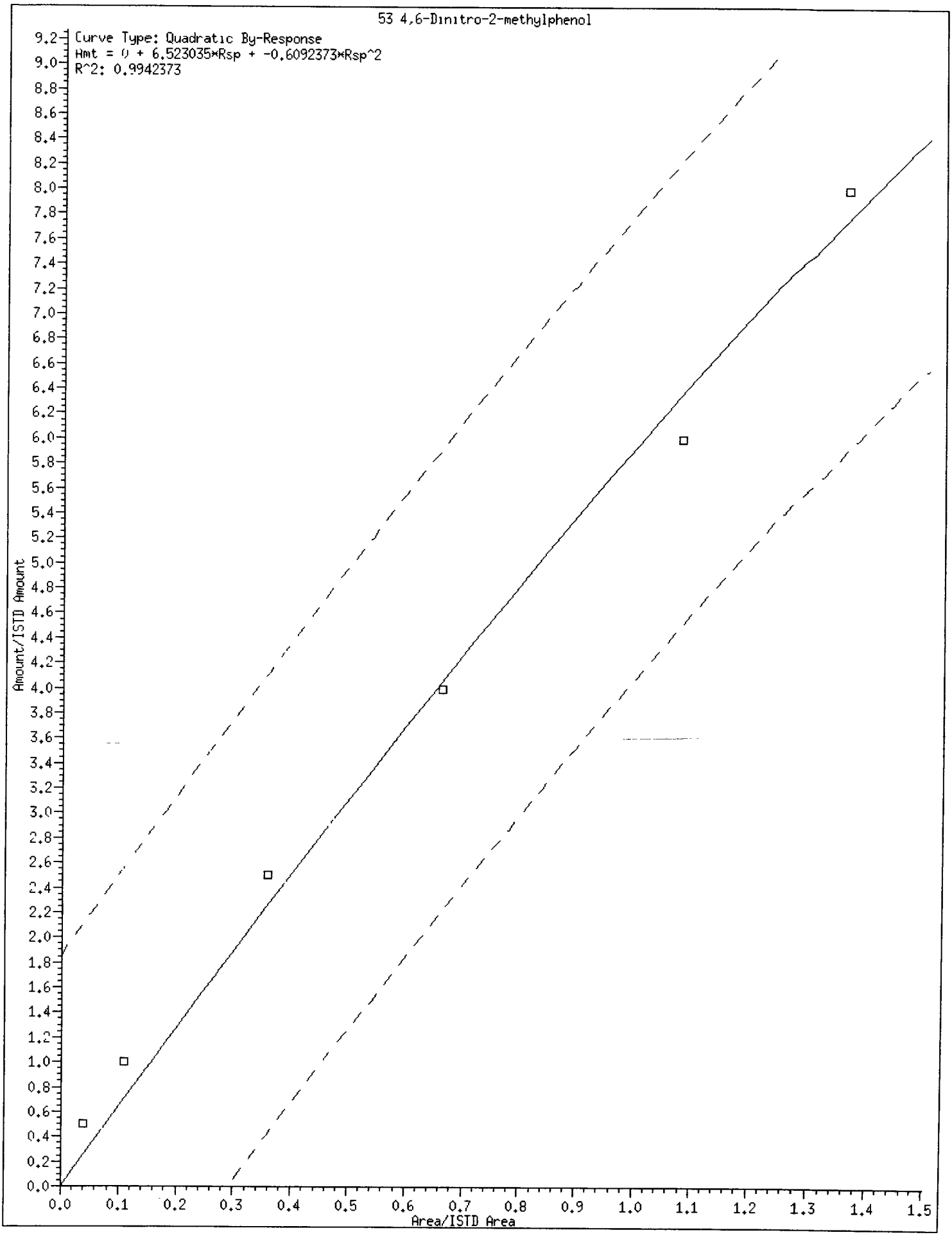

45 2,4-Dinitrophenol
Curve Type: Quadratic By-Response
Amt = 0 + 6.44315*Rsp + -0.6261063*Rsp^2
R^2: 0.9920921
Amount/ISTD Amount
Area/ISTD Area

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 28-JUN-2013 10:39
End Cal Date : 28-JUN-2013 14:05
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130628.b/SW846062813.m
Cal Date : 28-Jun-2013 15:11 jianqing

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	 m1	 m2	%RSD or R^2
	80 Level 7										
47 4-Nitrophenol	0.05257	0.07282	0.07597	0.09126	0.08638	0.08838					
	0.08425						AVRG		0.07880		16.91238
48 2,4-Dinitrotoluene	0.25180	0.29944	0.33823	0.36109	0.35560	0.35435					
	0.35280						AVRG		0.33047		12.26024
49 Fluorene	1.13942	1.11737	1.24473	1.31292	1.15463	1.03652					
	0.88842						AVRG		1.12772		12.25196
50 Diethylphthalate	1.19489	1.07013	1.13780	1.11297	1.00865	0.95176					
	0.83650						AVRG		1.04467		11.71162
51 4-Chlorophenyl-phenylether	0.59298	0.55780	0.61912	0.60301	0.52005	0.45515					
	0.37800						AVRG		0.53230		16.58774
52 4-Nitroaniline	0.22643	0.22217	0.21615	0.19621	0.22902	0.24439					
	0.23454						AVRG		0.22413		6.80311
53 4,6-Dinitro-2-methylphenol	+++++	60300	156584	487590	878594	1153837					
	1628691						QUAD	0.000e+00	6.52304	-0.60924	0.99424


53 4,6-Dinitro-2-methylphenol
Curve Type: Quadratic By-Response
Amt = 0 + 6.523035*Rsp + -0.6092373*Rsp^2
R^2: 0.9942373
Amount/ISTD Amount
Area/ISTD Area

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 28-JUN-2013 10:39
End Cal Date : 28-JUN-2013 14:05
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130628.b/SW846062813.m
Cal Date : 28-Jun-2013 15:28 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	80.000 Level 7	RRF	% RSD
54 N-Nitrosodiphenylamine	0.54303	0.52889	0.57753	0.65776	0.66559	0.68377	0.61637	0.61042	10.136
56 4-Bromophenyl-phenylether	0.21835	0.20335	0.22743	0.27094	0.24597	0.24869	0.23283	0.23537	9.404
57 Hexachlorobenzene	0.27821	0.25155	0.26194	0.26460	0.24963	0.25086	0.22183	0.25409	6.876
58 Pentachlorophenol	+++++	0.09637	0.10357	0.12982	0.14176	0.15069	0.14431	0.12775	17.747
60 Phenanthrene	1.06725	1.01770	1.14322	1.26212	1.22178	1.19815	1.15457	1.15211	7.469
61 Anthracene	1.04053	1.03658	1.14870	1.26925	1.22365	1.18979	1.07405	1.14036	8.100
62 Carbazole	1.00528	0.97758	1.04323	1.08104	1.08210	1.14672	1.09724	1.06189	5.421
63 Di-n-butylphthalate	1.25881	1.26211	1.37392	1.52004	1.50807	1.45132	1.35160	1.38941	7.769
64 Fluoranthene	1.03370	1.05094	1.17376	1.36593	1.29348	1.27434	1.15795	1.19287	10.480

Analytical Resources, Inc.

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Cal Date : 28-Jun-2013 15:28 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7							
65 Pyrene	1.16966	1.11537	1.22096	1.38185	1.32274	1.29462		
	1.24916						1.25062	7.306
67 Butylbenzylphthalate	0.56553	0.53378	0.57849	0.65199	0.65043	0.66305		
	0.64924						0.61321	8.541
68 Benzo(a)anthracene	1.16260	1.12011	1.23856	1.27610	1.15139	1.06177		
	0.99837						1.14413	8.393
70 3,3'-Dichlorobenzidine	0.39074	0.38734	0.43510	0.39312	0.35919	0.33057		
	0.24895						0.36357	16.480
71 Chrysene	1.00531	0.96907	1.08734	1.22806	1.13877	1.09832		
	1.00749						1.07634	8.380
72 bis(2-Ethylhexyl)phthalate	0.56011	0.53306	0.57346	0.63104	0.59915	0.59168		
	0.59418						0.58324	5.366
73 Di-n-octylphthalate	1.27572	1.14258	1.14787	1.11253	1.03559	0.99463		
	0.94058						1.09279	10.261
74 Benzo(b)fluoranthene	0.93652	0.94919	1.09539	1.30413	1.20643	1.25899		
	1.16213						1.13040	12.777
75 Benzo(k)fluoranthene	0.93719	1.02795	1.11908	1.25408	1.20274	1.12513		
	0.81541						1.06880	14.352

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Cal Date : 28-Jun-2013 15:28 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	80.000 Level 7	RRF	% RSD	
76 Benzo(a)pyrene	0.82656	0.82892	0.95920	1.12262	1.06567	1.07259	0.94393	0.97421	12.154	
78 Indeno(1,2,3-cd)pyrene	1.04255	1.09004	1.23425	1.39361	1.33717	1.34994	1.20110	1.23552	10.859	
79 Dibenzo(a,h)anthracene	0.83860	0.89647	1.02055	1.19468	1.11097	1.07649	0.88632	1.00344	13.252	
80 Benzo(g,h,i)perylene	0.90704	0.91132	1.00912	1.19740	1.21187	1.29994	1.22795	1.10923	14.669	
90 N-Nitrosodimethylamine	0.86659	0.90901	0.93088	1.00820	0.95329	0.93228	1.02506	0.94647	5.829	
91 Aniline	1.96157	1.82118	1.88545	1.85963	1.76933	1.86244	1.64728	1.82956	5.441	
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
93 Benzidine	+++++	0.30655	0.25105	0.16112	0.16224	0.20510	0.16235	0.20807	28.796	<-
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 28-JUN-2013 10:39
End Cal Date : 28-JUN-2013 14:05
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130628.b/SW846062813.m
Cal Date : 28-Jun-2013 15:28 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7							
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
98 Retene	0.45359	0.45120	0.48583	0.53169	0.51967	0.52234		
	0.47415						0.49121	6.830
99 Perylene	0.76238	0.69931	0.78397	0.88271	0.90848	0.96435		
	0.82730						0.83264	11.042
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
103 Pyridine	1.32939	1.36383	1.37493	1.34705	1.42075	1.43262		
	1.62377						1.41319	7.081
187 Total Benzofluoranthenes	0.89945	0.93278	1.05032	1.21039	1.13259	1.11547		
	0.92334						1.03776	11.685
188 2,6-Dichlorophenol	+++++	0.97993	0.98424	1.36103	1.37308	1.35972		
	1.21030						1.21138	15.475

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 28-JUN-2013 10:39
End Cal Date : 28-JUN-2013 14:05
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130628.b/SW846062813.m
Cal Date : 28-Jun-2013 15:28 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD	
	80.000 Level 7								
189 N-Nitrosomethylethylamine	+++++	0.49078	0.48358	0.34828	0.38212	0.39251			
	0.38941						0.41445	14.126	
$ 1 2-Fluorophenol	1.30169	1.26147	1.13895	1.20211	1.42698	1.42829			
	+++++						1.29325	9.104	
$ 137 d8-1,4-Dioxane	0.53043	0.50361	0.55439	0.55350	0.56172	0.58427			
	0.61469						0.55752	6.412	
$ 2 Phenol-d5	1.56366	1.58186	1.43417	1.59941	1.69610	1.66266			
	+++++						1.58964	5.743	
$ 5 2-Chlorophenol-d4	1.34597	1.33280	1.20868	1.36132	1.52490	1.54050			
	+++++						1.38570	9.108	
$ 10 1,2-Dichlorobenzene-d4	0.91892	0.87694	0.81815	0.95108	1.07105	1.04112			
	+++++						0.94621	10.198	
$ 18 Nitrobenzene-d5	0.31791	0.31866	0.32403	0.30597	0.34741	0.31099			
	+++++						0.32083	4.512	
$ 36 2-Fluorobiphenyl	1.17364	1.13360	1.09530	1.22684	1.34078	1.29268			
	+++++						1.21047	7.797	
$ 55 2,4,6-Tribromophenol	+++++	+++++	0.01562	0.02443	0.11877	0.10671			
	+++++						0.06638	81.158	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 28-JUN-2013 10:39
End Cal Date : 28-JUN-2013 14:05
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130628.b/SW846062813.m
Cal Date : 28-Jun-2013 15:28 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	80.000 Level 7	RRF	% RSD
$ 66 Terphenyl-d14	0.71230	0.67461	0.62657	0.74321	0.79851	0.78239	+++++	0.72293	9.048
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 28-JUN-2013 10:39
End Cal Date : 28-JUN-2013 14:05
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130628.b/SW846062813.m
Cal Date : 28-Jun-2013 15:11 jianqing

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Batch File: /chem2/nt6.i/20130628.b
Inst ID: nt6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	06281301	06281302	06281303	06281304	06281305	06281306	06281307
INJ.DATE:	28-JUN-2013	28-JUN-2013	28-JUN-2013	28-JUN-2013	28-JUN-2013	28-JUN-2013	28-JUN-2013
INJ.TIME:	10:39	11:13	11:48	12:22	12:56	13:31	14:05

06/28/13

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.648	6.642	6.641	6.647	6.648	6.650	6.663	6.648	3.648-9.648	6.648	0.007
186 Carbaryl	16.663	16.667	16.667	16.672	16.689	16.696	16.704	16.663	13.663-19.663	16.680	0.017
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.225	5.225-11.225	+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.363	11.363-17.363	+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.531	15.531-21.531	+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.634	13.634-19.634	+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.609	14.609-20.609	+++++	+++++
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.863	13.863-19.863	+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.605	17.605-23.605	+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.015	14.015-20.015	+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.609	14.609-20.609	+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.562	14.562-20.562	+++++	+++++
177 p-Benzoquinone	7.294	7.293	7.293	7.293	7.294	7.296	7.304	7.294	4.294-10.294	7.295	0.004
168 Pentachlorobenzene	13.848	13.852	13.852	13.857	13.864	13.871	13.878	13.848	10.848-16.848	13.860	0.011
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.212	44.212-50.212	+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.746	44.746-50.746	+++++	+++++
147 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.216	45.216-51.216	+++++	+++++

Reviewer 1 _____ Date: _____
Reviewer 2 _____ Date: 6/28/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Batch File: /chem2/nt6.i/20130628.b
Inst ID: nt6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
148 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.281	44.281-50.281	+++++	+++++
149 TCMX	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.387	40.387-46.387	+++++	+++++
150 DCBP	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.989	47.989-53.989	+++++	+++++
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	67.733	64.733-70.733	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.067	62.067-68.067	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.917	46.917-52.917	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.871	10.871-16.871	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.317	36.317-42.317	+++++	+++++
$ 137 d8-1,4-Dioxane	3.337	3.341	3.330	3.330	3.326	3.322	3.367	3.337	0.337-6.337	3.336	0.015
* 134 Di-n-octylphthalate-d4	21.272	21.287	21.287	21.292	21.293	21.295	21.297	21.272	18.272-24.272	21.289	0.008
133 Butylatedhydroxytoluen	13.640	13.649	13.649	13.649	13.661	13.662	13.665	13.640	10.640-16.640	13.654	0.009
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.450	62.450-68.450	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	64.400	61.400-67.400	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	62.100	59.100-65.100	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.912	51.912-57.912	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.212	51.212-57.212	+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	57.650	54.650-60.650	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.750	53.750-59.750	+++++	+++++
144 alpha-Terpineol	10.675	10.674	10.674	10.679	10.686	10.693	10.701	10.675	7.675-13.675	10.683	0.010
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.166	49.166-55.166	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Batch File: /chem2/nt6.i/20130628.b
Inst ID: nt6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.617	47.617-53.617	+++++	+++++
123 Acetophenone	9.276	9.275	9.275	9.280	9.287	9.293	9.301	9.276	6.276-12.276	9.284	0.010
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.467	40.467-46.467	+++++	+++++
143 1,4-Dioxane	3.401	3.405	3.399	3.399	3.390	3.386	3.431	3.401	0.401-6.401	3.402	0.015
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.500	51.500-57.500	+++++	+++++
120 2,3,4,6-Tetrachlorophe	14.078	14.092	14.092	14.092	14.099	14.100	14.108	14.078	11.078-17.078	14.095	0.010
178 2-Benzyl-4-Chloropheno	16.615	16.619	16.619	16.624	16.641	16.643	16.656	16.615	13.615-19.615	16.631	0.016
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.069	44.069-50.069	+++++	+++++
118 Triphenyl Phosphate	19.691	19.700	19.700	19.700	19.707	19.714	19.716	19.691	16.691-22.691	19.704	0.009
117 Butyl Diphenyl Phospha	18.078	18.087	18.093	18.092	18.099	18.106	18.109	18.078	15.078-21.078	18.095	0.011
116 Dibutyl Phenyl Phospha	16.390	16.394	16.394	16.399	16.406	16.408	16.410	16.390	13.390-19.390	16.400	0.008
115 Tributyl Phosphate	14.649	14.648	14.653	14.653	14.676	14.683	14.696	14.649	11.649-17.649	14.665	0.019
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.950	45.950-51.950	+++++	+++++
113 Diphenyl Oxide	12.737	12.746	12.746	12.746	12.753	12.754	12.762	12.737	9.737-15.737	12.749	0.008
112 Biphenyl	12.550	12.559	12.559	12.564	12.566	12.568	12.570	12.550	9.550-15.550	12.562	0.007
111 Azobenzene (1,2-DP-Hyd	16.615	16.619	16.619	16.624	16.636	16.643	16.656	16.615	13.615-19.615	16.630	0.015
110 Tetrachloroguaiacol	15.808	15.818	15.817	15.817	15.829	15.836	15.844	15.808	12.808-18.808	15.824	0.013
109 3,4,5-Trichloroguaiaco	14.297	14.306	14.306	14.306	14.313	14.319	14.327	14.297	11.297-17.297	14.310	0.010
181 3,4,6-Trichloroguaiaco	14.174	14.183	14.183	14.183	14.190	14.197	14.204	14.174	11.174-17.174	14.188	0.010
108 4,5,6-Trichloroguaiaco	15.205	15.214	15.214	15.214	15.221	15.227	15.230	15.205	12.205-18.205	15.218	0.009
184 3,4-Dichloroguaiacol	12.630	12.640	12.639	12.639	12.646	12.653	12.655	12.630	9.630-15.630	12.643	0.009
107 4,5-Dichloroguaiacol	13.410	13.409	13.414	13.414	13.426	13.433	13.441	13.410	10.410-16.410	13.421	0.012
182 4,6-Dichloroguaiacol	13.410	13.409	13.414	13.414	13.426	13.433	13.441	13.410	10.410-16.410	13.421	0.012
185 4-Chloroguaiacol	11.535	11.545	11.545	11.544	11.551	11.553	11.560	11.535	8.535-14.535	11.548	0.008

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Batch File: /chem2/nt6.i/20130628.b
Inst ID: nt6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
106 Guaiacol	9.532	9.536	9.536	9.536	9.543	9.550	9.558	9.532	6.532-12.532	9.542	0.009
105 1-methylnaphthalene	11.952	11.956	11.961	11.961	11.968	11.969	11.972	11.952	8.952-14.952	11.963	0.007
151 1,2,4,5-Tetrachloroben	12.117	12.121	12.127	12.127	12.128	12.135	12.137	12.117	9.117-15.117	12.127	0.007
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.943	27.943-33.943	+++++	+++++
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.442	20.442-26.442	+++++	+++++
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.968	18.968-24.968	+++++	+++++
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.466	20.466-26.466	+++++	+++++
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.866	19.866-25.866	+++++	+++++
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.413	20.413-26.413	+++++	+++++
158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.952	21.952-27.952	+++++	+++++
159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.721	18.721-24.721	+++++	+++++
160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.159	15.159-21.159	+++++	+++++
161 1,2,3-Trichloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	36.246	33.246-39.246	+++++	+++++
162 1,2,3,4-Tetrachloronap	+++++	+++++	+++++	+++++	+++++	+++++	+++++	37.506	34.506-40.506	+++++	+++++
163 1,2,3,5,8-Pentachloron	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.893	35.893-41.893	+++++	+++++
164 1,2,3,4,6,7-Hexachloro	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.681	36.681-42.681	+++++	+++++
165 1,2,3,4,5,6,7-Heptachl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	41.123	38.123-44.123	+++++	+++++
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.253	39.253-45.253	+++++	+++++
167 2,2',4,4',5-Pentabromo	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.033	39.033-45.033	+++++	+++++
$ 2 Phenol-d5	8.133	8.121	8.126	8.126	8.144	8.145	8.148	8.133	5.133-11.133	8.135	0.011
3 Phenol	8.149	8.142	8.142	8.147	8.160	8.166	8.174	8.149	5.149-11.149	8.155	0.012
4 Bis(2-Chloroethyl)ethe	8.250	8.249	8.249	8.249	8.256	8.263	8.265	8.250	5.250-11.250	8.254	0.007
$ 5 2-Chlorophenol-d4	8.293	8.292	8.292	8.292	8.299	8.300	8.308	8.293	5.293-11.293	8.296	0.006

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Batch File: /chem2/nt6.i/20130628.b
Inst ID: nt6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	6 2-Chlorophenol	8.315	8.313	8.313	8.318	8.325	8.327	8.334	8.315	5.315-11.315	8.321	0.008
	7 1,3-Dichlorobenzene	8.534	8.538	8.538	8.537	8.539	8.540	8.548	8.534	5.534-11.534	8.539	0.004
*	8 1,4-Dichlorobenzene-d4	8.592	8.596	8.596	8.596	8.598	8.599	8.601	8.592	5.592-11.592	8.597	0.003
	9 1,4-Dichlorobenzene	8.619	8.618	8.623	8.623	8.624	8.626	8.628	8.619	5.619-11.619	8.623	0.004
$	10 1,2-Dichlorobenzene-d4	8.891	8.895	8.895	8.895	8.902	8.898	8.901	8.891	5.891-11.891	8.897	0.004
	11 Benzyl alcohol	8.859	8.853	8.853	8.858	8.870	8.871	8.885	8.859	5.859-11.859	8.864	0.012
	12 1,2-Dichlorobenzene	8.913	8.917	8.917	8.917	8.918	8.920	8.927	8.913	5.913-11.913	8.918	0.004
	13 2-Methylphenol	9.078	9.072	9.077	9.077	9.089	9.090	9.104	9.078	6.078-12.078	9.084	0.011
	14 2,2'-oxybis(1-Chloropr	9.110	9.114	9.114	9.114	9.121	9.123	9.125	9.110	6.110-12.110	9.117	0.005
	15 4-Methylphenol	9.308	9.301	9.301	9.306	9.319	9.325	9.333	9.308	6.308-12.308	9.314	0.012
	16 N-Nitroso-di-n-propyla	9.335	9.323	9.328	9.328	9.345	9.352	9.365	9.335	6.335-12.335	9.339	0.015
	17 Hexachloroethane	9.399	9.403	9.403	9.403	9.410	9.406	9.413	9.399	6.399-12.399	9.405	0.005
$	18 Nitrobenzene-d5	9.516	9.515	9.515	9.520	9.527	9.528	+++++	9.516	6.516-12.516	9.520	0.006
	19 Nitrobenzene	9.548	9.542	9.542	9.547	9.559	9.560	9.568	9.548	6.548-12.548	9.552	0.010
	20 Isophorone	9.922	9.916	9.916	9.921	9.933	9.945	9.958	9.922	6.922-12.922	9.930	0.016
	21 2-Nitrophenol	10.056	10.060	10.060	10.059	10.066	10.068	10.076	10.056	7.056-13.056	10.064	0.007
	22 2,4-Dimethylphenol	10.141	10.140	10.145	10.145	10.157	10.159	10.172	10.141	7.141-13.141	10.151	0.012
	23 Bis(2-Chloroethoxy)met	10.296	10.295	10.295	10.300	10.307	10.308	10.316	10.296	7.296-13.296	10.302	0.008
	24 Benzoic acid	10.382	10.241	10.284	10.316	10.435	10.468	10.514	10.382	7.382-13.382	10.377	0.101
	25 2,4-Dichlorophenol	10.435	10.434	10.434	10.439	10.446	10.452	10.460	10.435	7.435-13.435	10.443	0.010
	26 1,2,4-Trichlorobenzene	10.569	10.573	10.572	10.578	10.579	10.581	10.588	10.569	7.569-13.569	10.577	0.007
*	27 Naphthalene-d8	10.633	10.637	10.637	10.636	10.643	10.645	10.647	10.633	7.633-13.633	10.640	0.005
	28 Naphthalene	10.665	10.663	10.669	10.668	10.675	10.677	10.685	10.665	7.665-13.665	10.672	0.008
	29 4-Chloroaniline	10.793	10.797	10.797	10.797	10.809	10.810	10.818	10.793	7.793-13.793	10.803	0.009

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Batch File: /chem2/nt6.i/20130628.b
Inst ID: nt6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	30 Hexachlorobutadiene	10.969	10.979	10.978	10.978	10.980	10.981	10.984	10.969	7.969-13.969	10.978	0.005
	31 4-Chloro-3-methylpheno	11.583	11.587	11.587	11.587	11.594	11.601	11.609	11.583	8.583-14.583	11.593	0.009
	32 2-Methylnaphthalene	11.776	11.785	11.785	11.785	11.792	11.793	11.801	11.776	8.776-14.776	11.788	0.008
	33 Hexachlorocyclopentadi	12.155	12.164	12.164	12.164	12.166	12.167	12.169	12.155	9.155-15.155	12.164	0.005
	34 2,4,6-Trichlorophenol	12.283	12.292	12.292	12.292	12.299	12.300	12.308	12.283	9.283-15.283	12.295	0.008
	35 2,4,5-Trichlorophenol	12.342	12.351	12.351	12.351	12.358	12.359	12.367	12.342	9.342-15.342	12.354	0.008
$	36 2-Fluorobiphenyl	12.411	12.421	12.421	12.420	12.427	12.429	12.431	12.411	9.411-15.411	12.423	0.007
	37 2-Chloronaphthalene	12.561	12.565	12.565	12.570	12.582	12.584	12.591	12.561	9.561-15.561	12.574	0.012
	38 2-Nitroaniline	12.785	12.789	12.789	12.794	12.801	12.808	12.816	12.785	9.785-15.785	12.797	0.011
	39 Dimethylphthalate	13.148	13.147	13.147	13.152	13.164	13.171	13.184	13.148	10.148-16.148	13.159	0.015
	40 Acenaphthylene	13.244	13.248	13.248	13.253	13.260	13.262	13.264	13.244	10.244-16.244	13.254	0.008
	41 2,6-Dinitrotoluene	13.244	13.248	13.248	13.253	13.266	13.273	13.280	13.244	10.244-16.244	13.259	0.014
*	42 Acenaphthene-d10	13.495	13.505	13.505	13.504	13.511	13.513	13.515	13.495	10.495-16.495	13.507	0.007
	43 3-Nitroaniline	13.463	13.462	13.467	13.467	13.485	13.492	13.499	13.463	10.463-16.463	13.476	0.015
	44 Acenaphthene	13.549	13.553	13.553	13.553	13.565	13.566	13.574	13.549	10.549-16.549	13.559	0.009
	45 2,4-Dinitrophenol	13.629	+++++	13.633	13.633	13.650	13.652	13.681	13.629	10.629-16.629	13.646	0.020
	46 Dibenzofuran	13.805	13.809	13.815	13.814	13.827	13.828	13.841	13.805	10.805-16.805	13.820	0.013
	47 4-Nitrophenol	13.752	13.767	13.756	13.756	13.768	13.775	13.788	13.752	10.752-16.752	13.766	0.013
	48 2,4-Dinitrotoluene	13.875	13.879	13.879	13.884	13.896	13.903	13.916	13.875	10.875-16.875	13.890	0.015
	49 Fluorene	14.366	14.370	14.370	14.375	14.382	14.383	14.397	14.366	11.366-17.366	14.378	0.011
	50 Diethylphthalate	14.297	14.301	14.301	14.306	14.318	14.325	14.332	14.297	11.297-17.297	14.311	0.014
	51 4-Chlorophenyl-phenyle	14.377	14.381	14.386	14.386	14.393	14.399	14.407	14.377	11.377-17.377	14.390	0.011
	52 4-Nitroaniline	14.462	14.461	14.461	14.466	14.489	14.501	14.514	14.462	11.462-17.462	14.479	0.022
	53 4,6-Dinitro-2-methylph	14.537	14.536	14.536	14.541	14.564	14.570	14.589	14.537	11.537-17.537	14.553	0.021

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Batch File: /chem2/nt6.i/20130628.b
Inst ID: nt6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	54 N-Nitrosodiphenylamine	14.580	14.584	14.584	14.589	14.601	14.608	14.616	14.580	11.580-17.580	14.594	0.014
$	55 2,4,6-Tribromophenol	14.783	+++++	14.797	14.813	14.804	14.811	14.813	14.783	11.783-17.783	14.803	0.012
	56 4-Bromophenyl-phenylet	15.162	15.171	15.171	15.171	15.178	15.179	15.187	15.162	12.162-18.162	15.174	0.008
	57 Hexachlorobenzene	15.392	15.401	15.401	15.406	15.413	15.414	15.422	15.392	12.392-18.392	15.407	0.010
	58 Pentachlorophenol	15.685	15.705	15.695	15.694	15.701	15.708	15.716	15.685	12.685-18.685	15.701	0.010
*	59 Phenanthrene-d10	15.878	15.887	15.887	15.887	15.894	15.900	15.903	15.878	12.878-18.878	15.891	0.009
	60 Phenanthrene	15.915	15.919	15.924	15.924	15.936	15.938	15.945	15.915	12.915-18.915	15.929	0.011
	61 Anthracene	15.990	15.994	15.994	15.999	16.006	16.012	16.020	15.990	12.990-18.990	16.002	0.011
	62 Carbazole	16.257	16.266	16.266	16.271	16.278	16.285	16.293	16.257	13.257-19.257	16.274	0.012
	63 Di-n-butylphthalate	16.946	16.955	16.955	16.955	16.962	16.963	16.971	16.946	13.946-19.946	16.958	0.008
	64 Fluoranthene	17.854	17.863	17.863	17.863	17.875	17.882	17.884	17.854	14.854-20.854	17.869	0.011
	65 Pyrene	18.217	18.221	18.226	18.226	18.238	18.240	18.247	18.217	15.217-21.217	18.231	0.011
$	66 Terphenyl-d14	18.500	18.515	18.515	18.514	18.527	18.528	18.520	18.500	15.500-21.500	18.517	0.009
	67 Butylbenzylphthalate	19.371	19.375	19.380	19.380	19.387	19.393	19.401	19.371	16.371-22.371	19.384	0.011
	68 Benzo(a)anthracene	20.172	20.176	20.181	20.181	20.193	20.200	20.208	20.172	17.172-23.172	20.187	0.013
*	69 Chrysene-d12	20.198	20.203	20.208	20.208	20.220	20.221	20.229	20.198	17.198-23.198	20.212	0.011
	70 3,3'-Dichlorobenzidine	20.161	20.170	20.176	20.175	20.182	20.184	20.192	20.161	17.161-23.161	20.177	0.010
	71 Chrysene	20.241	20.245	20.245	20.245	20.263	20.269	20.277	20.241	17.241-23.241	20.255	0.014
	72 bis(2-Ethylhexyl)phtha	20.343	20.357	20.357	20.357	20.364	20.365	20.368	20.343	17.343-23.343	20.359	0.008
	73 Di-n-octylphthalate	21.288	21.297	21.297	21.297	21.309	21.305	21.319	21.288	18.288-24.288	21.302	0.010
	74 Benzo(b)fluoranthene	21.827	21.832	21.831	21.837	21.849	21.856	21.869	21.827	18.827-24.827	21.843	0.015
	75 Benzo(k)fluoranthene	21.860	21.864	21.863	21.869	21.886	21.888	21.906	21.860	18.860-24.860	21.876	0.017
	76 Benzo(a)pyrene	22.276	22.286	22.285	22.285	22.303	22.310	22.323	22.276	19.276-25.276	22.295	0.017
*	77 Perylene-d12	22.356	22.371	22.371	22.376	22.383	22.384	22.392	22.356	19.356-25.356	22.376	0.012

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Batch File: /chem2/nt6.i/20130628.b
Inst ID: nt6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
78 Indeno(1,2,3-cd)pyrene	24.092	24.096	24.101	24.107	24.130	24.131	24.155	24.092	21.092-27.092	24.116	0.023
79 Dibenzo(a,h)anthracene	24.113	24.118	24.117	24.123	24.156	24.163	24.192	24.113	21.113-27.113	24.140	0.030
80 Benzo(g,h,i)perylene	24.589	24.582	24.587	24.598	24.632	24.644	24.667	24.589	21.589-27.589	24.614	0.033
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	51.633	48.633-54.633	+++++	+++++
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	63.533	60.533-66.533	+++++	+++++
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	60.273	57.273-63.273	+++++	+++++
$ 88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	78.600	75.600-81.600	+++++	+++++
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.841	47.841-53.841	+++++	+++++
90 N-Nitrosodimethylamine	4.186	4.174	4.179	4.179	4.181	4.182	4.227	4.186	1.186-7.186	4.187	0.018
91 Aniline	8.144	8.148	8.142	8.147	8.154	8.156	8.158	8.144	5.144-11.144	8.150	0.006
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
93 Benzidine	18.089	18.098	18.098	18.098	18.105	18.112	18.114	18.089	15.089-21.089	18.102	0.009
$ 95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.075	49.075-55.075	+++++	+++++
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.250	46.250-52.250	+++++	+++++
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	61.202	58.202-64.202	+++++	+++++
98 Retene	18.756	18.766	18.771	18.771	18.778	18.785	18.787	18.756	15.756-21.756	18.773	0.011
99 Perylene	22.399	22.403	22.408	22.408	22.426	22.427	22.440	22.399	19.399-25.399	22.416	0.015
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.074	19.074-25.074	+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.255	19.255-25.255	+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.369	18.369-24.369	+++++	+++++
103 Pyridine	4.154	4.179	4.158	4.152	4.143	4.139	4.190	4.154	1.154-7.154	4.159	0.019
187 Total Benzofluoranthen	21.860	21.832	21.831	21.869	21.886	21.888	21.906	21.860	18.860-24.860	21.867	0.029
188 2,6-Dichlorophenol	10.804	10.808	10.807	10.813	10.820	10.826	10.834	10.804	7.804-13.804	10.816	0.011
189 N-Nitrosomethylethylam	5.847	5.856	5.846	5.851	5.847	5.848	5.862	5.847	2.847-8.847	5.851	0.006

Data File: /chem2/nt6.1.'20130628.b/tune.b/06281301.d

Date : 28-JUN-2013 10:39

Client ID: DFTPP0628

Instrument: nt6.1

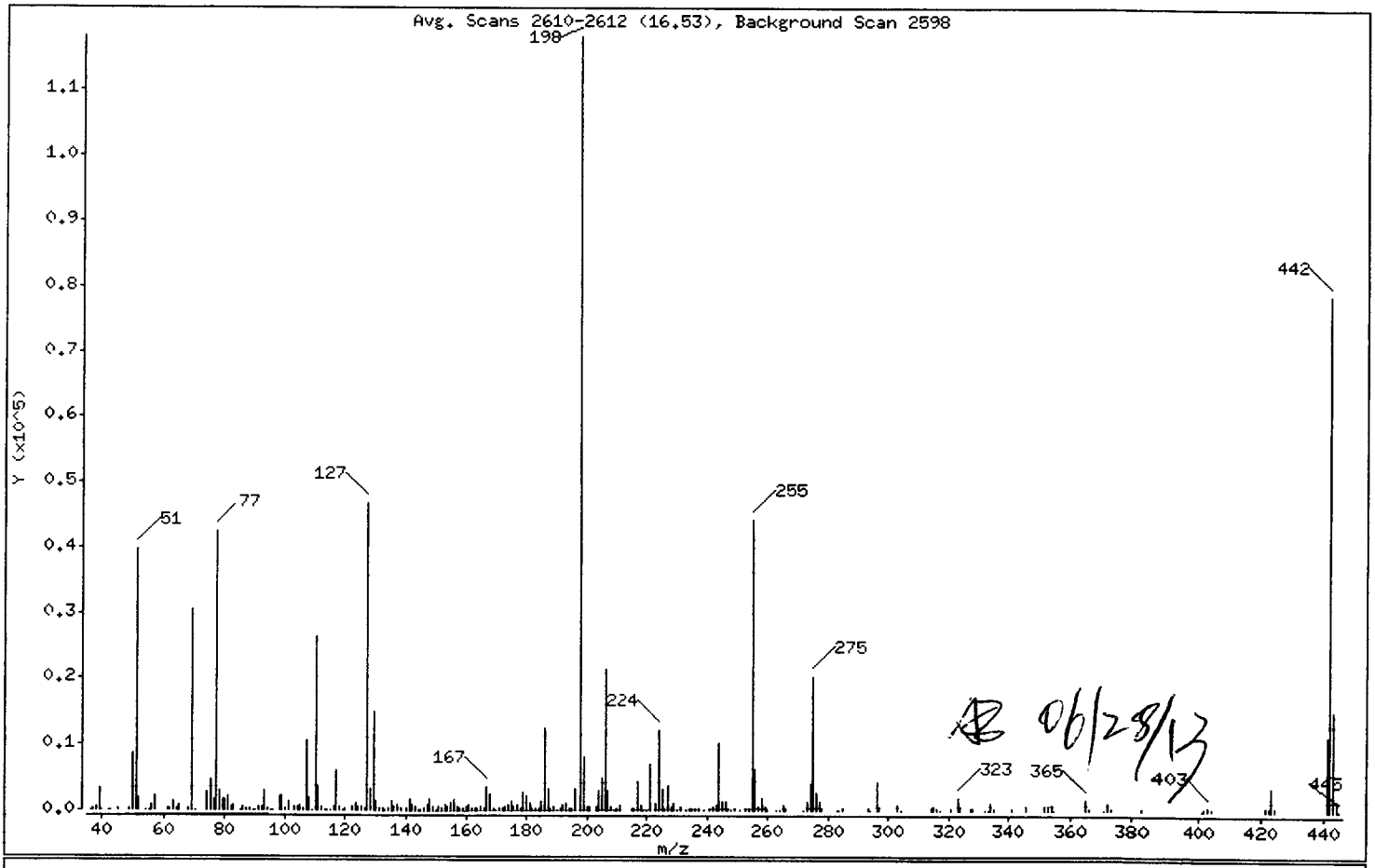
Sample Info: DFTPP0628

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

1 dftpp



06/28/13

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	33.49
68	Less than 2.00% of mass 69	0.30 (1.15)
69	Mass 69 relative abundance	25.72
70	Less than 2.00% of mass 69	0.10 (0.39)
127	10.00 - 80.00% of mass 198	39.56
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.84
275	10.00 - 60.00% of mass 198	17.33
365	Greater than 1.00% of mass 198	1.47
441	0.01 - 24.00% of mass 442	9.68 (14.53)
442	50.00 - 200.00% of mass 198	66.62
443	15.00 - 24.00% of mass 442	12.87 (19.32)

Data File: /chem2/nt6.1/20130628.b/tune.b/06281301.d

Date : 28-JUN-2013 10:39

Client ID: DFTPP0628

Instrument: nt6.1

Sample Info: DFTPP0628

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

Data File: 06281301.d

Spectrum: Avg. Scans 2610-2612 (16.53), Background Scan 2598

Location of Maximum: 198.00

Number of points: 257

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	10	115.00	31	182.00	141	258.00	1944
37.00	275	116.00	510	183.00	253	259.00	408
38.00	557	117.00	6030	184.00	247	260.00	53
39.00	3269	118.00	545	185.00	1271	263.00	61
40.00	96	119.00	83	186.00	12587	264.00	53
42.00	4	120.00	232	187.00	3353	265.00	724
43.00	38	122.00	468	188.00	319	266.00	175
45.00	138	123.00	1061	189.00	519	272.00	108
49.00	159	124.00	496	190.00	116	273.00	1491
50.00	8761	125.00	447	191.00	287	274.00	4201
51.00	39616	126.00	179	192.00	786	275.00	20504
52.00	1831	127.00	46792	193.00	1025	276.00	2623
53.00	46	128.00	3384	194.00	253	277.00	1287
54.00	60	129.00	15046	195.00	224	278.00	178
55.00	113	130.00	1415	196.00	3140	283.00	123
56.00	916	131.00	404	198.00	118288	284.00	52
57.00	2256	132.00	266	199.00	8086	285.00	306
61.00	356	133.00	55	200.00	574	293.00	364
62.00	306	134.00	402	201.00	629	294.00	52
63.00	1393	135.00	1297	203.00	562	296.00	4403
64.00	241	136.00	592	204.00	2857	297.00	642
65.00	690	137.00	864	205.00	4941	303.00	775
68.00	349	138.00	327	206.00	21504	304.00	78
69.00	30424	140.00	288	207.00	2947	314.00	228
70.00	119	141.00	1639	208.00	626	315.00	489
74.00	2620	142.00	702	209.00	64	316.00	389
75.00	4644	143.00	497	210.00	160	317.00	50
76.00	1692	144.00	34	211.00	882	321.00	145
77.00	42512	145.00	86	215.00	184	323.00	1900
78.00	2977	146.00	304	216.00	339	324.00	437
79.00	1577	147.00	817	217.00	4471	327.00	390
80.00	1501	148.00	1726	218.00	903	328.00	168
81.00	2230	149.00	460	219.00	108	332.00	117
82.00	521	150.00	14	220.00	69	333.00	132
83.00	684	151.00	527	221.00	7084	334.00	1218

Data File: /chem2/nt6.i/20130628.b/tune.b/06281301.d

Date : 28-JUN-2013 10:39

Client ID: DFTPP0628

Instrument: nt6.i

Sample Info: DFTPP0628

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

Data File: 06281301.d

Spectrum: Avg. Scans 2610-2612 (16,53), Background Scan 2598

Location of Maximum: 198.00

Number of points: 257

m/z	Y	m/z	Y	m/z	Y	m/z	Y
84.00	35	152.00	187	223.00	1199	335.00	396
85.00	84	153.00	712	224.00	12368	341.00	307
86.00	666	154.00	520	225.00	3181	346.00	658
87.00	240	155.00	1058	226.00	395	352.00	618
88.00	199	156.00	1700	227.00	3724	353.00	466
89.00	112	157.00	491	228.00	592	354.00	714
90.00	82	158.00	335	229.00	1042	355.00	134
91.00	493	159.00	202	230.00	63	365.00	1734
92.00	542	160.00	488	231.00	508	366.00	307
93.00	2886	161.00	904	233.00	77	371.00	128
94.00	259	162.00	281	234.00	273	372.00	966
95.00	54	163.00	186	235.00	321	373.00	314
96.00	83	164.00	146	236.00	279	383.00	284
97.00	14	165.00	564	237.00	378	391.00	127
98.00	2309	166.00	389	239.00	73	401.00	57
99.00	2252	167.00	3509	241.00	283	402.00	366
100.00	258	168.00	2443	242.00	670	403.00	612
101.00	1313	169.00	365	243.00	764	404.00	146
103.00	543	170.00	133	244.00	10327	421.00	546
104.00	667	171.00	178	245.00	1415	422.00	503
105.00	696	172.00	287	246.00	1379	423.00	3470
106.00	175	173.00	422	247.00	362	424.00	679
107.00	10493	174.00	812	248.00	53	441.00	11448
108.00	1916	175.00	1489	249.00	346	442.00	78808
109.00	116	176.00	530	251.00	57	443.00	15225
110.00	26304	177.00	761	253.00	153	444.00	1408
111.00	3457	178.00	181	254.00	227	445.00	57
112.00	559	179.00	2755	255.00	44368		
113.00	27	180.00	2171	256.00	6289		
114.00	119	181.00	1186	257.00	530		

Data File: /chem2/nt6.i/20130628.b/tune.b/06281301.d

Date : 28-JUN-2013 10:39

Client ID: DFTPP0628

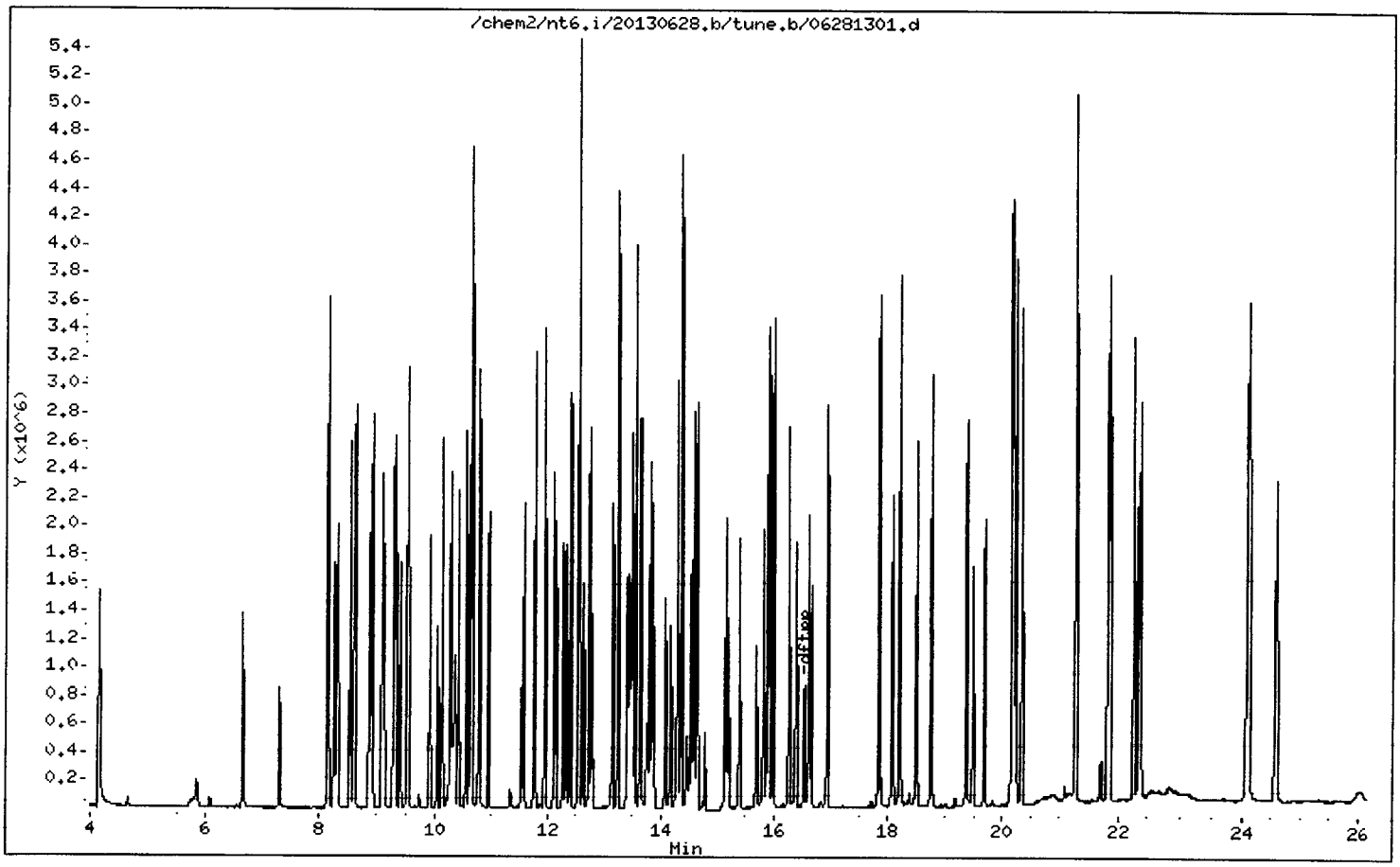
Instrument: nt6.i

Sample Info: DFTPP0628

Operator: JZ

Column phase: ZB-5ms1

Column diameter: 0.32



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem2/nt6.i/20130628.b/ddt.b/06281301.d ARI ID: DDT0628
Method: /chem2/nt6.i/20130628.b/ddt.b/sw846ddt.m Misc: 13-
Analysis Date: 28-JUN-2013 10:39 Instrument: nt6.i

COMPOUND	RT	AREA
Pentachlorophenol	15.685	224886
Benzidine	18.089	275340
4,4'-DDE	----	----
4,4'-DDD	19.002	6220
4,4'-DDT	19.477	561889

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(0 + 6220) * 100}{(0 + 6220 + 561889)}$$

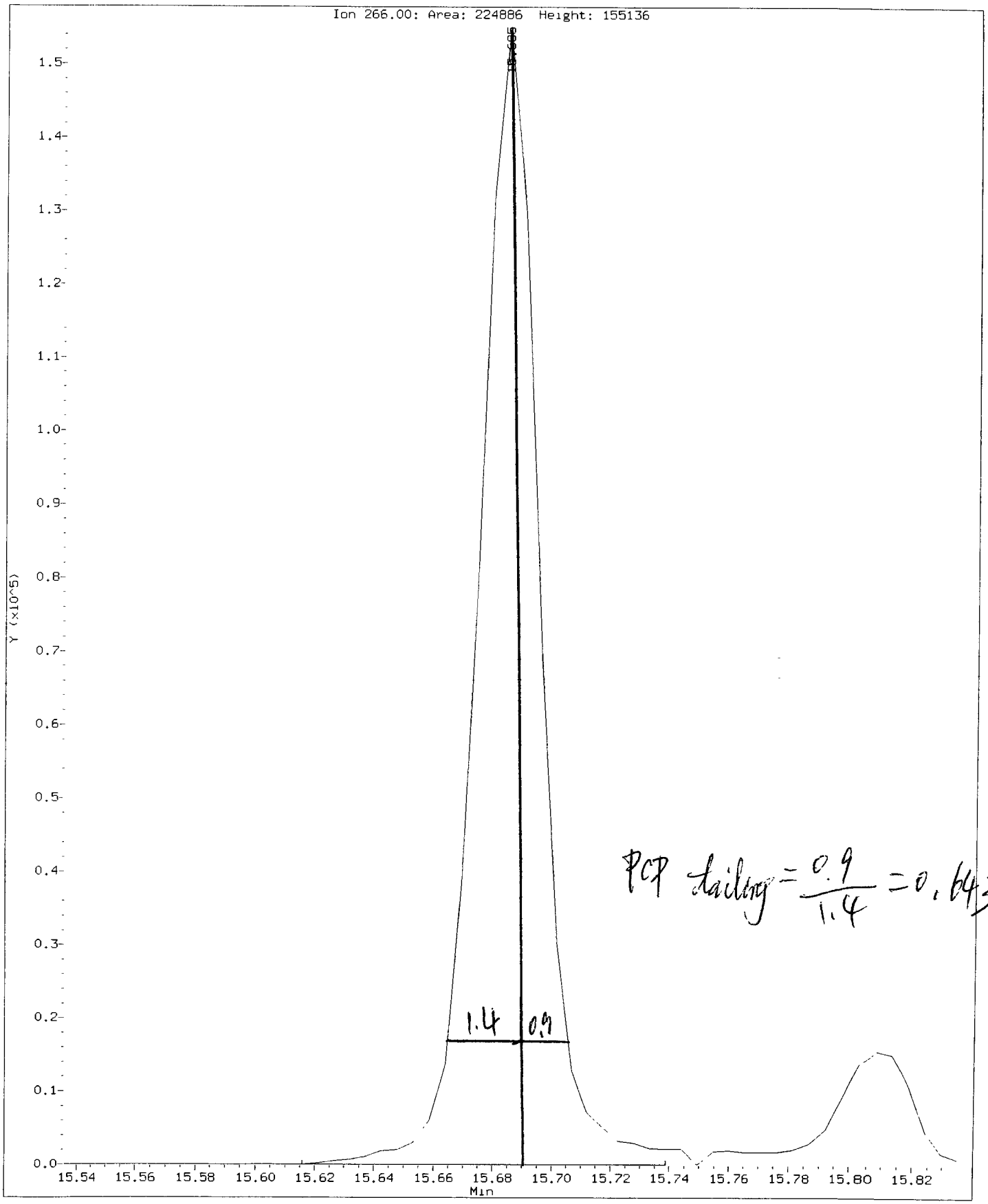
DDT Percent Breakdown = 1.1 %

ok

D 06/28/13

Data File: /chem2/nt6.1/20130628.b/ddt.b/06281301.d
Injection Date: 28-JUN-2013 10:39
Instrument: nt6.1
Client Sample ID: DDT0628

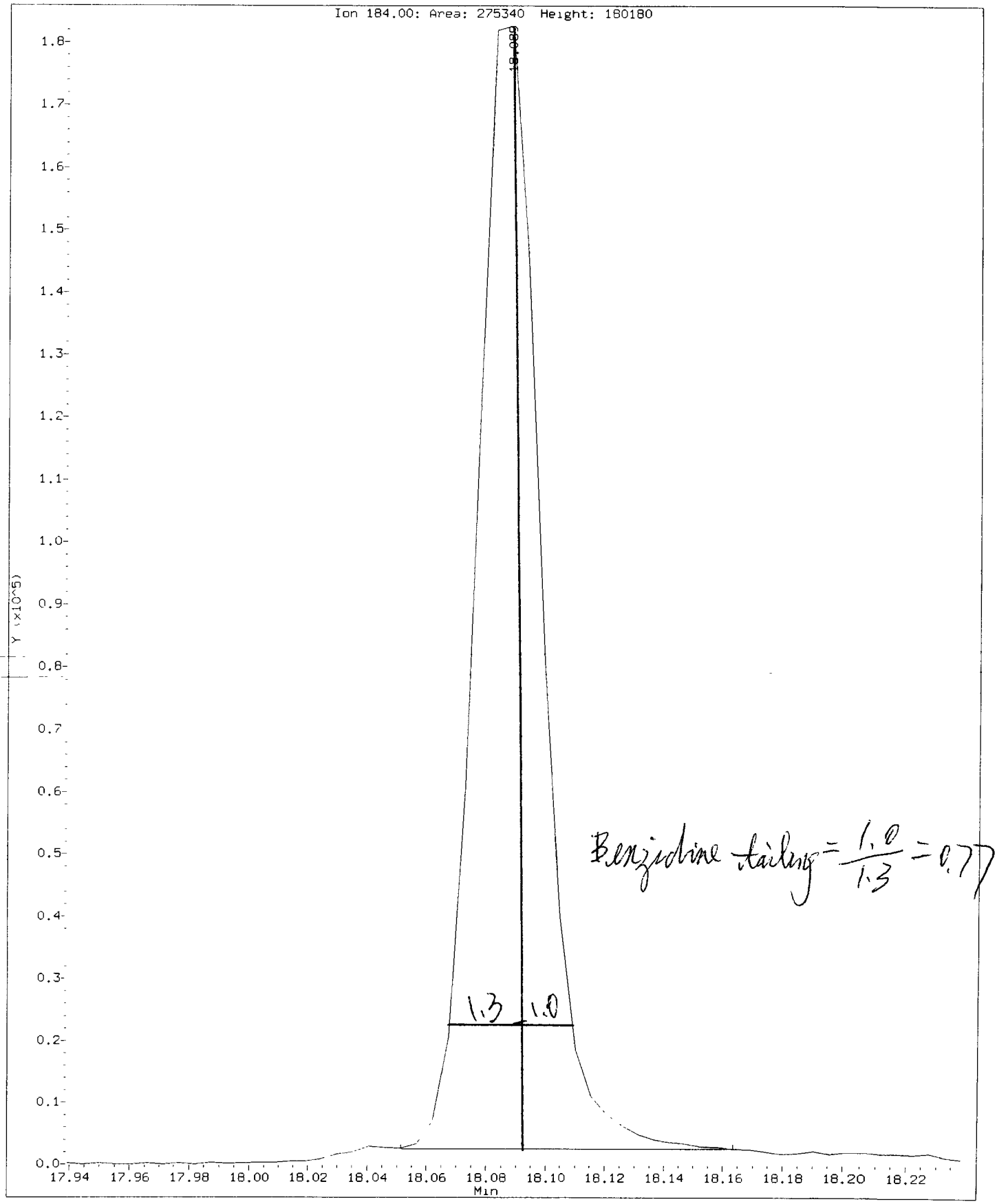
Compound: Pentachlorophenol
CAS Number: 87-86-5



PCP tailing = $\frac{0.9}{1.4} = 0.643$

Data File: /chem2/nt6.1/20130628.b/ddt.b/06281301.d
Injection Date: 28-JUN-2013 10:39
Instrument: nt6.1
Client Sample ID: DDT0628

Compound: Benzidine
CAS Number:



Benzidine tailing = $\frac{1.0}{1.3} = 0.77$

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130628.b/06281302.d
Lab Smp Id: IC10628 Client Smp ID: IC10628
Inj Date : 28-JUN-2013 11:13
Operator : JZ Inst ID: nt6.i
Smp Info : IC10628,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130628.b/SW846062813.m
Meth Date : 28-Jun-2013 15:13 jianqing Quant Type: ISTD
Cal Date : 28-JUN-2013 11:13 Cal File: 06281302.d
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

06/28/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.642	6.648	(0.773)	32337	1.00000	1.007
$	2 Phenol-d5	99	8.121	8.133	(0.945)	38845	1.00000	0.9837
	3 Phenol	94	8.142	8.149	(0.947)	44102	1.00000	0.9847
$	5 2-Chlorophenol-d4	132	8.292	8.293	(0.965)	33437	1.00000	0.9713
	4 Bis(2-Chloroethyl)ether	93	8.249	8.250	(0.960)	35143	1.00000	0.9919
	6 2-Chlorophenol	128	8.313	8.315	(0.967)	32597	1.00000	0.9494
	7 1,3-Dichlorobenzene	146	8.538	8.534	(0.993)	40191	1.00000	0.9564
*	8 1,4-Dichlorobenzene-d4	152	8.596	8.592	(1.000)	496846	20.0000	
	9 1,4-Dichlorobenzene	146	8.618	8.619	(1.002)	41357	1.00000	0.9778
$	10 1,2-Dichlorobenzene-d4	152	8.895	8.891	(1.035)	22828	1.00000	0.9712 (M)
	12 1,2-Dichlorobenzene	146	8.917	8.913	(1.037)	38499	1.00000	0.9609
	11 Benzyl alcohol	108	8.853	8.859	(1.030)	20915	1.00000	0.9112
	14 2,2'-oxybis(1-Chloropropane)	45	9.114	9.110	(1.060)	70495	1.00000	1.154
	13 2-Methylphenol	108	9.072	9.078	(1.055)	30534	1.00000	0.9463
	17 Hexachloroethane	117	9.403	9.399	(1.094)	14036	1.00000	1.036
	16 N-Nitroso-di-n-propylamine	70	9.323	9.335	(1.085)	24586	1.00000	1.055
	15 4-Methylphenol	108	9.301	9.308	(1.082)	31248	1.00000	0.9221
$	18 Nitrobenzene-d5	82	9.515	9.516	(0.895)	28813	1.00000	0.9909
	19 Nitrobenzene	77	9.542	9.548	(0.897)	32374	1.00000	1.017
	20 Isophorone	82	9.916	9.922	(0.932)	53025	1.00000	0.9793
	21 2-Nitrophenol	139	10.060	10.056	(0.946)	14005	1.00000	0.7845
	22 2,4-Dimethylphenol	107	10.140	10.141	(0.953)	27703	1.00000	0.9476
	23 Bis(2-Chloroethoxy)methane	93	10.295	10.296	(0.968)	41508	1.00000	0.9736
	24 Benzoic acid	105	10.241	10.382	(0.963)	14713	2.00000	0.6641 (MH)
	25 2,4-Dichlorophenol	162	10.434	10.435	(0.981)	24110	1.00000	0.8473
	26 1,2,4-Trichlorobenzene	180	10.573	10.569	(0.994)	32069	1.00000	0.9317
*	27 Naphthalene-d8	136	10.637	10.633	(1.000)	1812643	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.663	10.665	(1.002)	91759	1.00000	0.9729
	29 4-Chloroaniline	127	10.797	10.793	(1.015)	35255	1.00000	1.011
	30 Hexachlorobutadiene	225	10.979	10.969	(1.032)	16655	1.00000	1.040
	31 4-Chloro-3-methylphenol	107	11.587	11.583	(1.089)	22132	1.00000	0.8857
	32 2-Methylnaphthalene	141	11.785	11.776	(1.108)	46279	1.00000	0.9245
	33 Hexachlorocyclopentadiene	237	12.164	12.155	(0.901)	11447	1.00000	0.6281
	34 2,4,6-Trichlorophenol	196	12.292	12.283	(0.910)	15562	1.00000	0.8352
	35 2,4,5-Trichlorophenol	196	12.351	12.342	(0.915)	17108	1.00000	0.8920
$	36 2-Fluorobiphenyl	172	12.421	12.411	(0.920)	63800	1.00000	0.9696
	37 2-Chloronaphthalene	162	12.565	12.561	(0.930)	64138	1.00000	0.9856
	38 2-Nitroaniline	65	12.789	12.785	(0.947)	12392	1.00000	0.8747
	39 Dimethylphthalate	163	13.147	13.148	(0.974)	64246	1.00000	0.9413
	40 Acenaphthylene	152	13.248	13.244	(0.981)	85230	1.00000	0.9767
	41 2,6-Dinitrotoluene	165	13.248	13.244	(0.981)	11375	1.00000	0.7709
*	42 Acenaphthene-d10	164	13.505	13.495	(1.000)	1087216	20.0000	
	43 3-Nitroaniline	138	13.462	13.463	(0.997)	13028	1.00000	0.9545
	44 Acenaphthene	153	13.553	13.549	(1.004)	56474	1.00000	0.9425
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	13.809	13.805	(1.023)	69518	1.00000	0.9911
	47 4-Nitrophenol	109	13.767	13.752	(1.019)	2858	1.00000	0.6672
	48 2,4-Dinitrotoluene	165	13.879	13.875	(1.028)	13688	1.00000	0.7619
	50 Diethylphthalate	149	14.301	14.297	(1.059)	64955	1.00000	1.144
	49 Fluorene	166	14.370	14.366	(1.064)	61940	1.00000	1.010
	51 4-Chlorophenyl-phenylether	204	14.381	14.377	(1.065)	32235	1.00000	1.114
	52 4-Nitroaniline	138	14.461	14.462	(1.071)	12309	1.00000	1.010
	53 4,6-Dinitro-2-methylphenol	198	14.536	14.537	(0.915)	2384	2.00000	0.2043
	54 N-Nitrosodiphenylamine	169	14.584	14.580	(0.918)	44690	1.00000	0.8896
$	55 2,4,6-Tribromophenol	330	Compound Not Detected.					
	56 4-Bromophenyl-phenylether	248	15.171	15.162	(0.955)	17970	1.00000	0.9277
	57 Hexachlorobenzene	284	15.401	15.392	(0.969)	22896	1.00000	1.095
	58 Pentachlorophenol	266	15.705	15.685	(0.989)	4470	1.00000	0.4252
*	59 Phenanthrene-d10	188	15.887	15.878	(1.000)	1645950	20.0000	
	60 Phenanthrene	178	15.919	15.915	(1.002)	87832	1.00000	0.9267
	61 Anthracene	178	15.994	15.990	(1.007)	85633	1.00000	0.9037
	62 Carbazole	167	16.266	16.257	(1.024)	82732	1.00000	0.9467
	63 Di-n-butylphthalate	149	16.955	16.946	(1.067)	103597	1.00000	0.9019
	64 Fluoranthene	202	17.863	17.854	(1.124)	85071	1.00000	0.8666
	65 Pyrene	202	18.221	18.217	(0.902)	91311	1.00000	0.9353
$	66 Terphenyl-d14	244	18.515	18.500	(0.916)	55607	1.00000	0.9853
	67 Butylbenzylphthalate	149	19.375	19.371	(0.959)	44149	1.00000	0.9222
	68 Benzo(a)anthracene	228	20.176	20.172	(0.999)	90760	1.00000	1.016
*	69 Chrysene-d12	240	20.203	20.198	(1.000)	1561328	20.0000	
	70 3,3'-Dichlorobenzidine	252	20.170	20.161	(0.998)	30504	1.00000	1.075
	71 Chrysene	228	20.245	20.241	(1.002)	78481	1.00000	0.9340
	72 bis(2-Ethylhexyl)phthalate	149	20.357	20.343	(0.956)	61967	1.00000	0.9603
*	134 Di-n-octylphthalate-d4	153	21.287	21.272	(1.000)	2212687	20.0000	
	73 Di-n-octylphthalate	149	21.297	21.288	(1.000)	141138	1.00000	1.167

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	21.832	21.827	(0.976)	78468	1.00000	0.8285
75	Benzo(k)fluoranthene	252	21.864	21.860	(0.977)	78524	1.00000	0.8769
187	Total Benzofluoranthenes	252	21.832	21.860	(0.976)	150724	2.00000	1.733
76	Benzo(a)pyrene	252	22.286	22.276	(0.996)	69255	1.00000	0.8484
* 77	Perylene-d12	264	22.371	22.356	(1.000)	1675737	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	24.096	24.092	(1.077)	87352	1.00000	0.8438
79	Dibenzo(a,h)anthracene	278	24.118	24.113	(1.078)	70264	1.00000	0.8357
80	Benzo(g,h,i)perylene	276	24.582	24.589	(1.099)	75998	1.00000	0.8177
90	N-Nitrosodimethylamine	74	4.174	4.186	(0.486)	21528	1.00000	0.9156
103	Pyridine	79	4.179	4.154	(0.486)	33025	1.00000	0.9407
91	Aniline	93	8.148	8.144	(0.948)	48730	1.00000	1.072
105	1-methylnaphthalene	141	11.956	11.952	(1.124)	45770	1.00000	0.9165
93	Benzidine	184	18.098	18.089	(0.896)	36731	1.00000	2.261
111	Azobenzene (1,2-DP-Hydrazine)	77	16.619	16.615	(1.046)	4174	1.00000	0.9743
143	1,4-Dioxane	88	3.405	3.401	(0.396)	13426	1.00000	0.9572
$ 137	d8-1,4-Dioxane	96	3.341	3.337	(0.389)	13177	1.00000	0.9514
144	alpha-Terpineol	59	10.674	10.675	(1.004)	22161	1.00000	1.042
177	p-Benzoquinone	82	7.293	7.294	(0.848)	3219	1.00000	0.6808
98	Retene	219	18.766	18.756	(0.929)	35410	1.00000	0.9234
99	Perylene	252	22.403	22.399	(1.001)	63877	1.00000	0.9156
133	Butylatedhydroxytoluene	205	13.649	13.640	(1.011)	40659	1.00000	1.108
115	Tributyl Phosphate	99	14.648	14.649	(0.922)	70080	1.00000	0.9478
116	Dibutyl Phenyl Phosphate	175	16.394	16.390	(1.032)	44987	1.00000	0.8284
117	Butyl Diphenyl Phosphate	94	18.087	18.078	(0.895)	13935	1.00000	0.9368
118	Triphenyl Phosphate	326	19.700	19.691	(0.975)	14514	1.00000	0.9168
123	Acetophenone	105	9.275	9.276	(1.079)	46534	1.00000	0.9999
168	Pentachlorobenzene	250	13.852	13.848	(1.026)	24124	1.00000	1.073
113	Diphenyl Oxide	170	12.746	12.737	(0.944)	39394	1.00000	0.9116
112	Biphenyl	154	12.559	12.550	(0.930)	67061	1.00000	0.9615
120	2,3,4,6-Tetrachlorophenol	232	14.092	14.078	(1.044)	11234	1.00000	0.8523
151	1,2,4,5-Tetrachlorobenzene	216	12.121	12.117	(0.898)	25670	1.00000	0.8827
110	Tetrachloroguaiacol	247	15.818	15.808	(0.996)	14619	2.00000	1.834
109	3,4,5-Trichloroguaiacol	213	14.306	14.297	(0.900)	8680	1.00000	0.8417
181	3,4,6-Trichloroguaiacol	211	14.183	14.174	(1.650)	8723	1.00000	1.051
108	4,5,6-Trichloroguaiacol	213	15.214	15.205	(1.127)	7930	1.00000	0.9129
184	3,4-Dichloroguaiacol	192	12.640	12.630	(1.470)	9074	1.00000	0.8733
107	4,5-Dichloroguaiacol	192	13.409	13.410	(0.993)	22585	2.00000	1.656
182	4,6-Dichloroguaiacol	192	13.409	13.410	(1.560)	22585	2.00000	1.750
185	4-Chloroguaiacol	115	11.545	11.535	(1.085)	4515	0.50000	0.4670
186	Carbaryl	144	16.667	16.663	(1.049)	32806	1.00000	0.7056
178	2-Benzyl-4-Chlorophenol	218	16.619	16.615	(1.046)	13209	1.00000	0.8245
106	Guaiacol	124	9.536	9.532	(1.109)	28867	1.00000	0.9441
188	2,6-Dichlorophenol	162	10.808	10.804	(1.257)	28168	2.00000	0.9360
189	N-Nitrosomethylethylamine	88	5.856	5.847	(0.681)	9111	2.00000	0.8849

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 06281302.d
Lab Smp Id: IC10628
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Misc Info: 13-

Calibration Date: 28-JUN-2013
Calibration Time: 10:39
Client Smp ID: IC10628
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	461788	230894	923576	496846	7.59
27 Naphthalene-d8	1684670	842335	3369340	1812643	7.60
42 Acenaphthene-d10	967427	483714	1934854	1087216	12.38
59 Phenanthrene-d10	1360143	680072	2720286	1645950	21.01
69 Chrysene-d12	1402665	701332	2805330	1561328	11.31
134 Di-n-octylphthala	2121193	1060596	4242386	2212687	4.31
77 Perylene-d12	1443992	721996	2887984	1675737	16.05

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.59	8.09	9.09	8.60	0.05
27 Naphthalene-d8	10.63	10.13	11.13	10.64	0.04
42 Acenaphthene-d10	13.50	13.00	14.00	13.50	0.07
59 Phenanthrene-d10	15.88	15.38	16.38	15.89	0.06
69 Chrysene-d12	20.20	19.70	20.70	20.20	0.02
134 Di-n-octylphthala	21.27	20.77	21.77	21.29	0.07
77 Perylene-d12	22.36	21.86	22.86	22.37	0.07

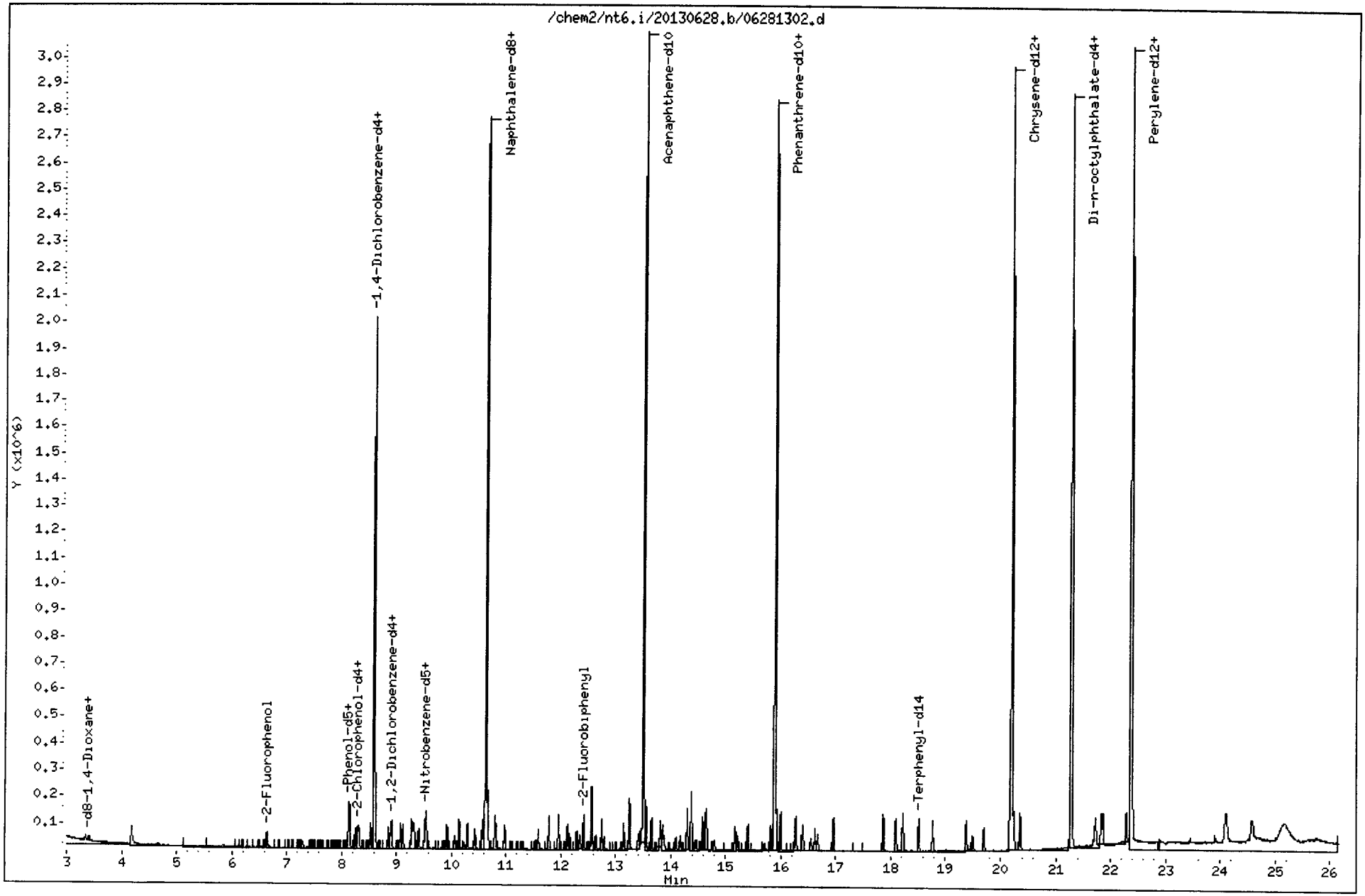
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130628.b/06281302.d
Date : 28-JUN-2013 11:13
Client ID: IC10628
Sample Info: IC10628,

Instrument: nt6.i

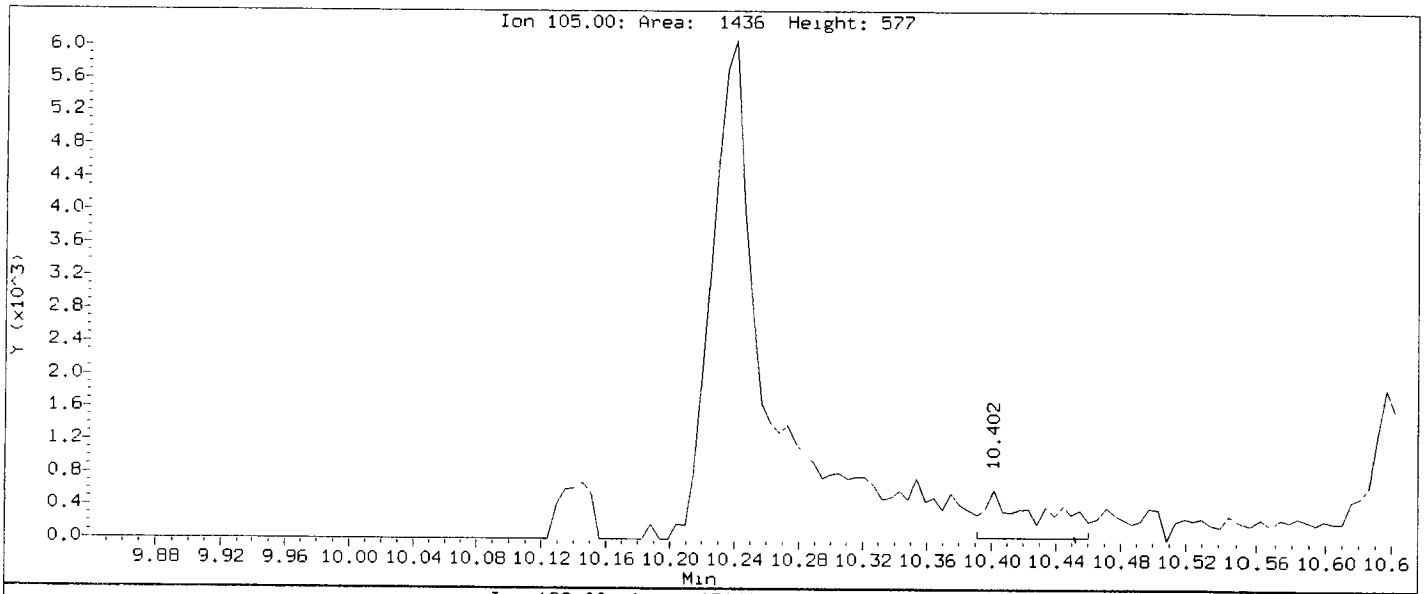
Operator: JZ
Column diameter: 0.32

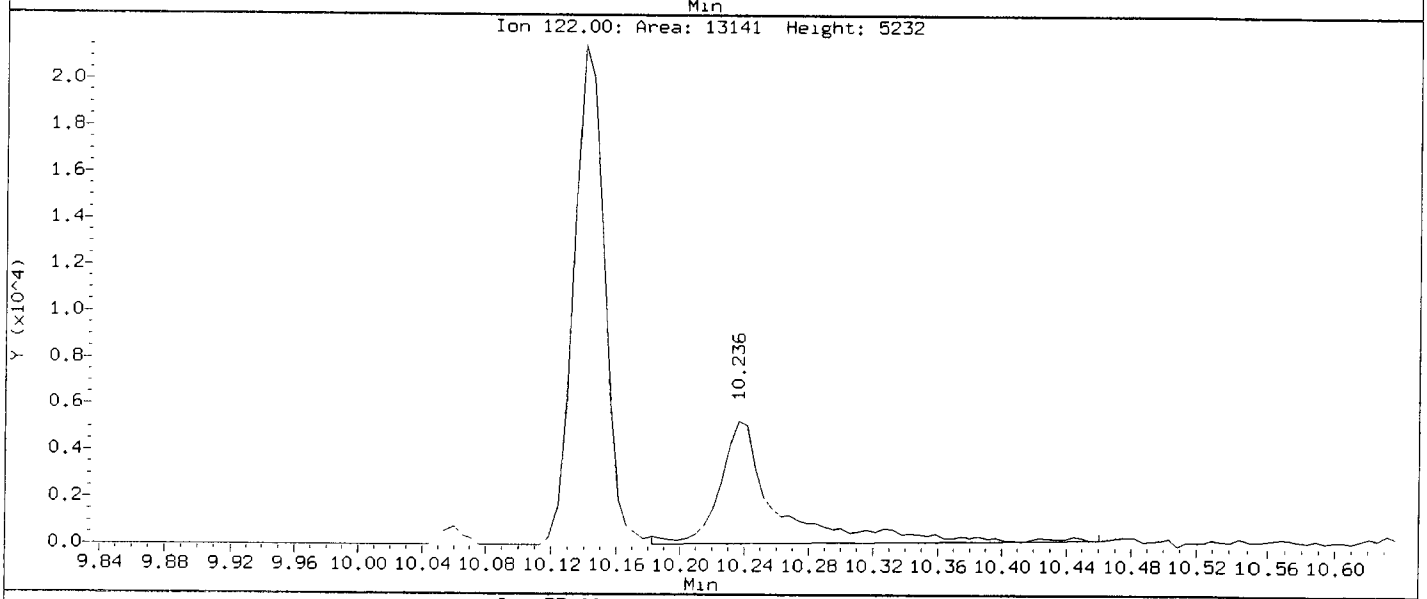
Column phase: ZB-5ms1

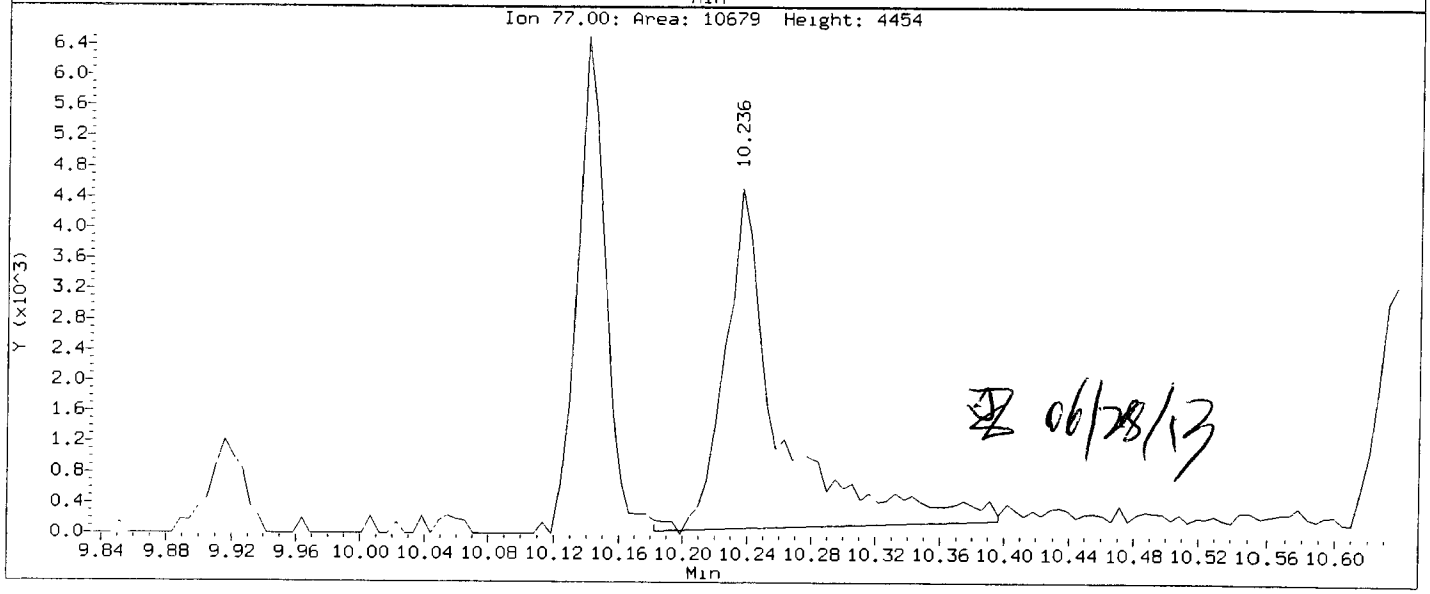


Data File: /chem2/nt6.1/20130628A.b/06281302.d
Injection Date: 28-JUN-2013 11:13
Instrument: nt6.1
Client Sample ID: IC10628

Compound: Benzoic acid
CAS Number: 65-85-0





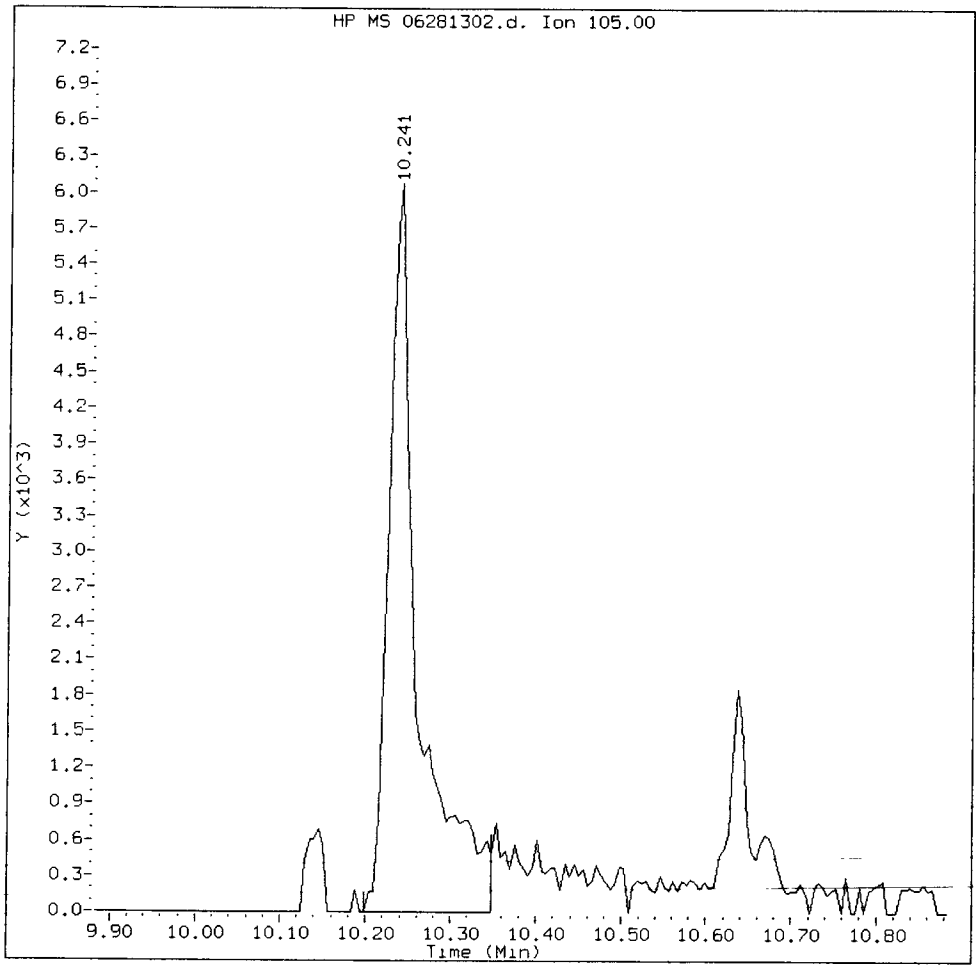


06/28/13

WQT-0681

IC10628, /chem2/nt6.i/20130628.b/06281302.d

Benzoic acid Amount: 0.66 Area: 14713



MANUAL INTEGRATION for Benzoic acid

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

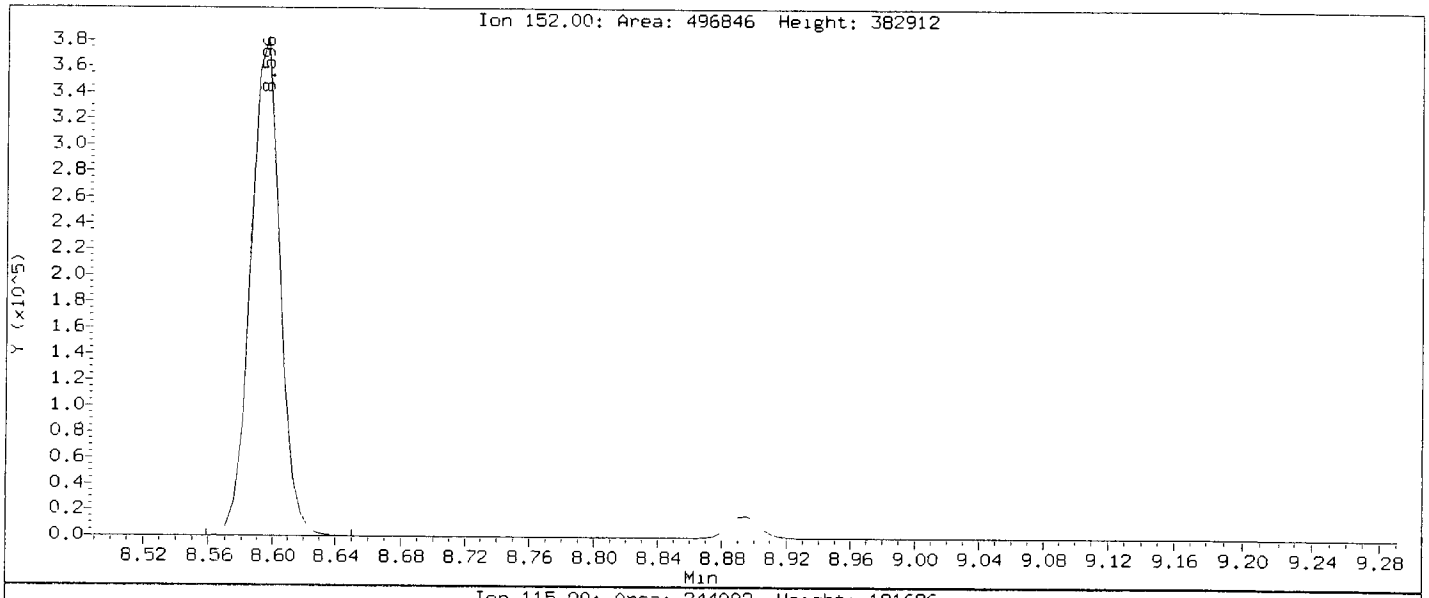
5. Other _____

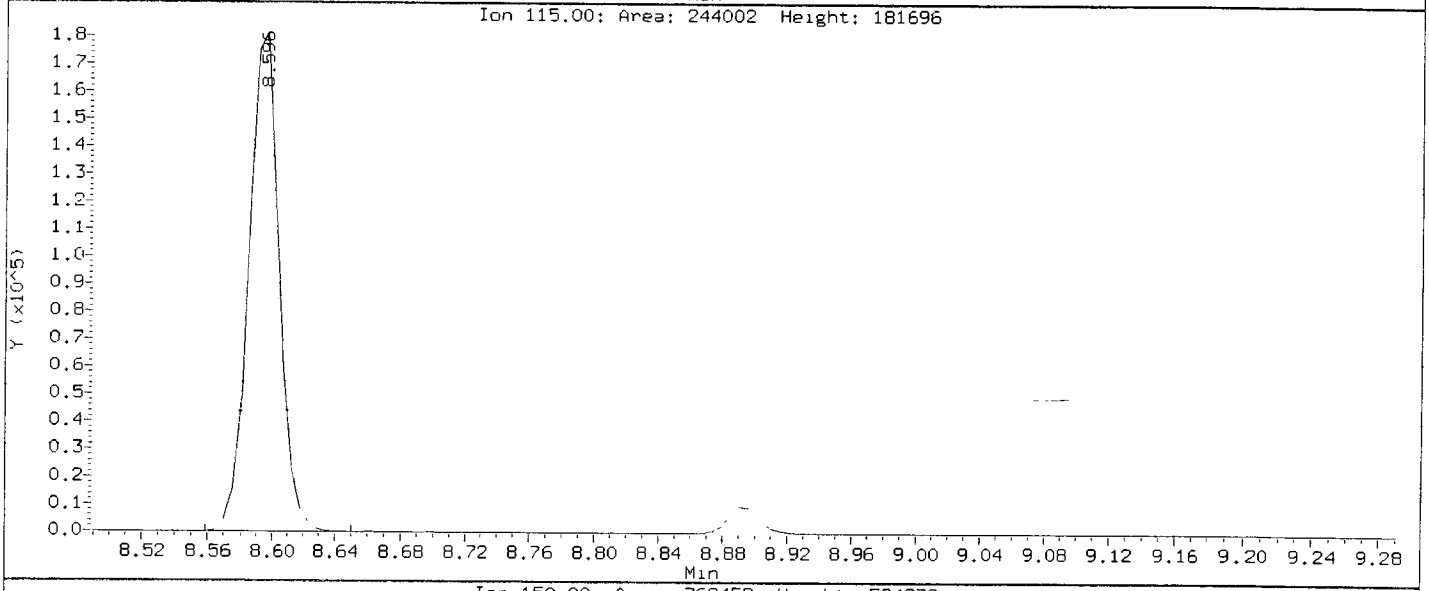
Analyst: _____ Date: 06/28/13

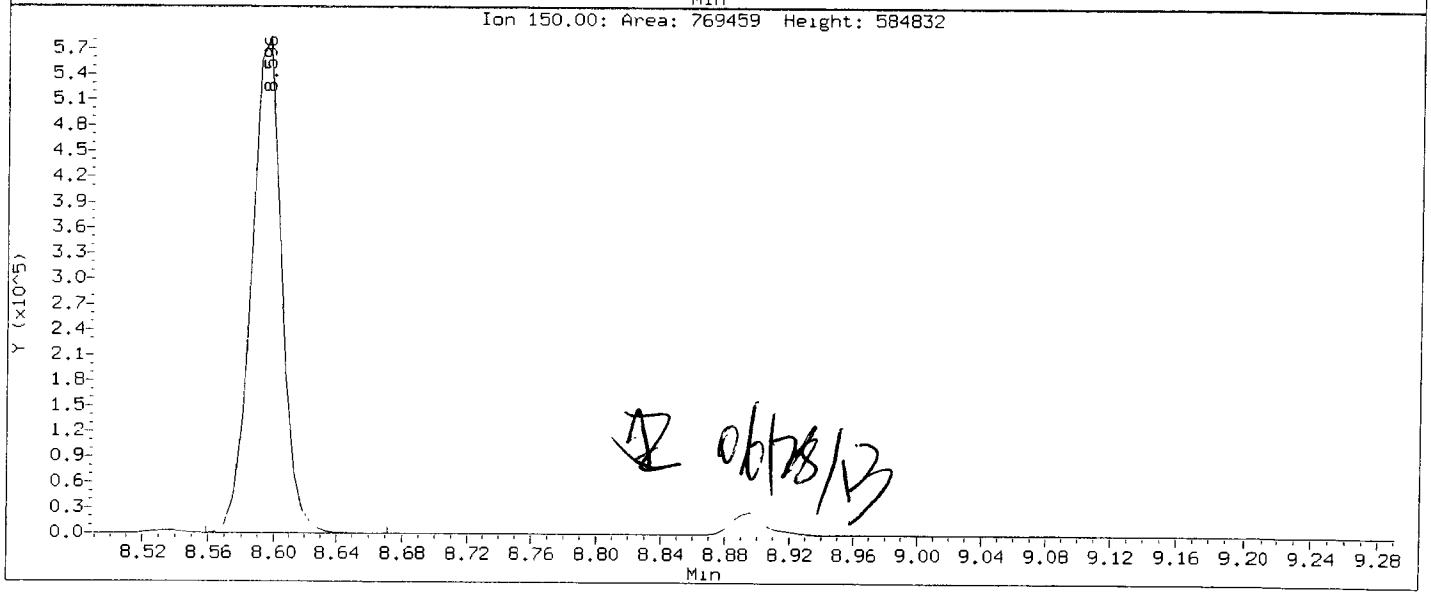
WO# 20626

Data File: /chem2/nt6.1/20130628.b/06281302.d
Injection Date: 28-JUN-2013 11:13
Instrument: nt6.1
Client Sample ID: IC10628

Compound: 1,2-Dichlorobenzene-d4
CAS Number: 2199-69-1





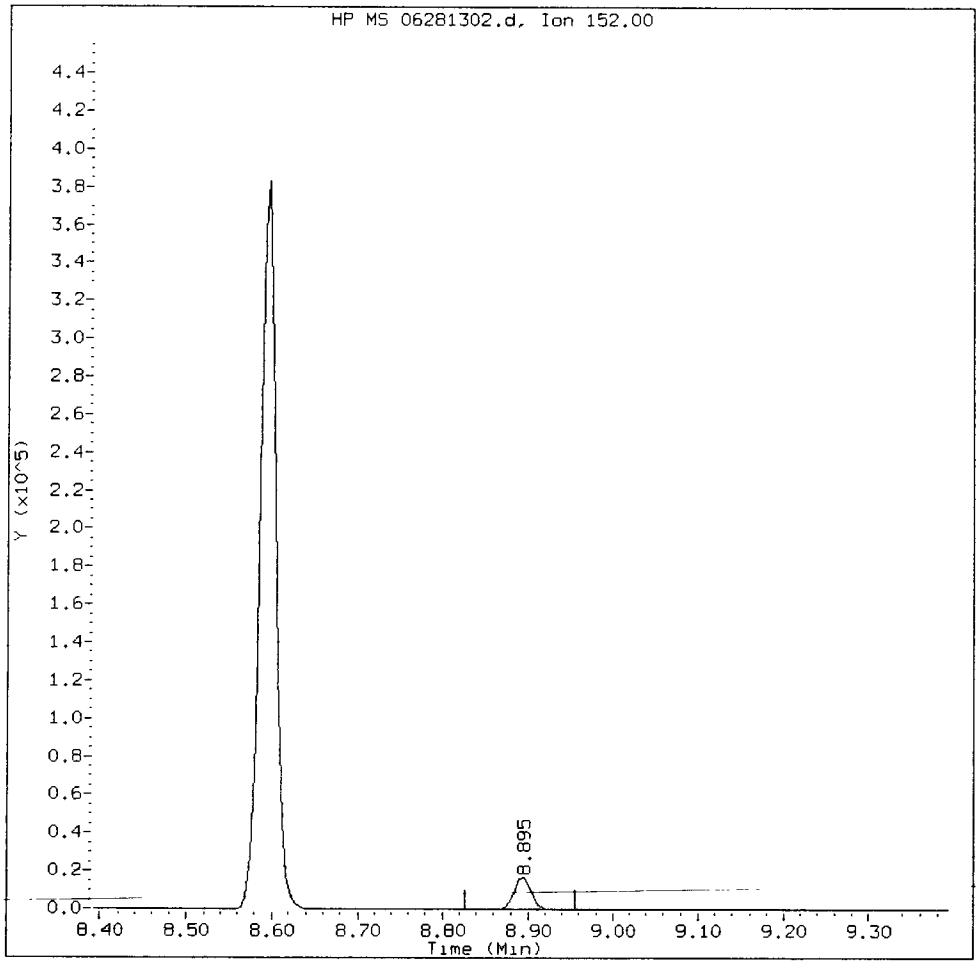


06/28/13

WQT : 88687

IC10628, /chem2/nt6.i/20130628.b/06281302.d

1,2-Dichlorobenzene-d4 Amount: 0.97 Area: 22828



MANUAL INTEGRATION for 1,2-Dichlorobenzene-d4

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 06/28/13

WGT 88618

CO-ELUTION SUMMARY FOR FILE - 06281302.d

Lab ID: IC10628, Method: SW846062813.m, Instrument: nt6.i, Date: 28-JUN-2013

RT	CO-ELUTION COMPOUNDS
13.248	Acenaphthylene and 2,6-Dinitrotoluene

checked OK

06/28/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130628.b/06281303.d
Lab Smp Id: IC50628 Client Smp ID: IC50628
Inj Date : 28-JUN-2013 11:48
Operator : JZ Inst ID: nt6.i
Smp Info : IC50628,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130628.b/SW846062813.m
Meth Date : 28-Jun-2013 15:13 jianqing Quant Type: ISTD
Cal Date : 28-JUN-2013 11:48 Cal File: 06281303.d
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

AMOUNTS

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$ 1 2-Fluorophenol	112	6.641	6.648	(0.773)	149811	5.00000	4.877
$ 2 Phenol-d5	99	8.126	8.133	(0.945)	187861	5.00000	4.976
3 Phenol	94	8.142	8.149	(0.947)	210123	5.00000	4.907
$ 5 2-Chlorophenol-d4	132	8.292	8.293	(0.965)	158283	5.00000	4.809
4 Bis(2-Chloroethyl)ether	93	8.249	8.250	(0.960)	154757	5.00000	4.569
6 2-Chlorophenol	128	8.313	8.315	(0.967)	155159	5.00000	4.727
7 1,3-Dichlorobenzene	146	8.538	8.534	(0.993)	193774	5.00000	4.823
* 8 1,4-Dichlorobenzene-d4	152	8.596	8.592	(1.000)	475038	20.0000	
9 1,4-Dichlorobenzene	146	8.623	8.619	(1.003)	187757	5.00000	4.643
$ 10 1,2-Dichlorobenzene-d4	152	8.895	8.891	(1.035)	104145	5.00000	4.634
12 1,2-Dichlorobenzene	146	8.917	8.913	(1.037)	176974	5.00000	4.620
11 Benzyl alcohol	108	8.853	8.859	(1.030)	94611	5.00000	4.311
14 2,2'-oxybis(1-Chloropropane)	45	9.114	9.110	(1.060)	301674	5.00000	5.167
13 2-Methylphenol	108	9.077	9.078	(1.056)	145993	5.00000	4.732
17 Hexachloroethane	117	9.403	9.399	(1.094)	61096	5.00000	4.717
16 N-Nitroso-di-n-propylamine	70	9.328	9.335	(1.085)	107259	5.00000	4.814
15 4-Methylphenol	108	9.301	9.308	(1.082)	153139	5.00000	4.727
$ 18 Nitrobenzene-d5	82	9.515	9.516	(0.895)	137363	5.00000	4.966
19 Nitrobenzene	77	9.542	9.548	(0.897)	150423	5.00000	4.966
20 Isophorone	82	9.916	9.922	(0.932)	241868	5.00000	4.696
21 2-Nitrophenol	139	10.060	10.056	(0.946)	75281	5.00000	4.433
22 2,4-Dimethylphenol	107	10.145	10.141	(0.954)	130785	5.00000	4.703
23 Bis(2-Chloroethoxy)methane	93	10.295	10.296	(0.968)	189894	5.00000	4.683
24 Benzoic acid	105	10.284	10.382	(0.967)	147924	10.0000	7.019
25 2,4-Dichlorophenol	162	10.434	10.435	(0.981)	120151	5.00000	4.439
26 1,2,4-Trichlorobenzene	180	10.572	10.569	(0.994)	169395	5.00000	5.174
* 27 Naphthalene-d8	136	10.637	10.633	(1.000)	1724283	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.669	10.665	(1.003)	430836	5.00000	4.802
	29 4-Chloroaniline	127	10.797	10.793	(1.015)	163391	5.00000	4.926
	30 Hexachlorobutadiene	225	10.978	10.969	(1.032)	71645	5.00000	4.705
	31 4-Chloro-3-methylphenol	107	11.587	11.583	(1.089)	112988	5.00000	4.753
	32 2-Methylnaphthalene	141	11.785	11.776	(1.108)	213231	5.00000	4.478
	33 Hexachlorocyclopentadiene	237	12.164	12.155	(0.901)	64807	5.00000	3.697
	34 2,4,6-Trichlorophenol	196	12.292	12.283	(0.910)	80548	5.00000	4.495
	35 2,4,5-Trichlorophenol	196	12.351	12.342	(0.915)	84783	5.00000	4.596
$	36 2-Fluorobiphenyl	172	12.421	12.411	(0.920)	296337	5.00000	4.682
	37 2-Chloronaphthalene	162	12.565	12.561	(0.930)	294449	5.00000	4.705
	38 2-Nitroaniline	65	12.789	12.785	(0.947)	60355	5.00000	4.429
	39 Dimethylphthalate	163	13.147	13.148	(0.974)	290415	5.00000	4.424
	40 Acenaphthylene	152	13.248	13.244	(0.981)	396650	5.00000	4.726
	41 2,6-Dinitrotoluene	165	13.248	13.244	(0.981)	64757	5.00000	4.563
*	42 Acenaphthene-d10	164	13.505	13.495	(1.000)	1045649	20.0000	
	43 3-Nitroaniline	138	13.467	13.463	(0.997)	65085	5.00000	4.958
	44 Acenaphthene	153	13.553	13.549	(1.004)	254396	5.00000	4.414
	45 2,4-Dinitrophenol	184	13.633	13.629	(1.009)	19350	10.0000	2.824
	46 Dibenzofuran	168	13.815	13.805	(1.023)	305673	5.00000	4.531
	47 4-Nitrophenol	109	13.756	13.752	(1.019)	19035	5.00000	4.620
	48 2,4-Dinitrotoluene	165	13.879	13.875	(1.028)	78278	5.00000	4.531
	50 Diethylphthalate	149	14.301	14.297	(1.059)	279746	5.00000	5.122
	49 Fluorene	166	14.370	14.366	(1.064)	292095	5.00000	4.954
	51 4-Chlorophenyl-phenylether	204	14.386	14.377	(1.065)	145816	5.00000	5.240
	52 4-Nitroaniline	138	14.461	14.462	(1.071)	58079	5.00000	4.956
	53 4,6-Dinitro-2-methylphenol	198	14.536	14.537	(0.915)	60300	10.0000	5.688
	54 N-Nitrosodiphenylamine	169	14.584	14.580	(0.918)	197753	5.00000	4.332
$	55 2,4,6-Tribromophenol	330	14.797	14.783	(1.096)	2711	5.00000	0.7510
	56 4-Bromophenyl-phenylether	248	15.171	15.162	(0.955)	76032	5.00000	4.320
	57 Hexachlorobenzene	284	15.401	15.392	(0.969)	94056	5.00000	4.950
	58 Pentachlorophenol	266	15.695	15.685	(0.988)	36034	5.00000	3.772
*	59 Phenanthrene-d10	188	15.887	15.878	(1.000)	1495598	20.0000	
	60 Phenanthrene	178	15.924	15.915	(1.002)	380518	5.00000	4.418
	61 Anthracene	178	15.994	15.990	(1.007)	387577	5.00000	4.501
	62 Carbazole	167	16.266	16.257	(1.024)	365517	5.00000	4.603
	63 Di-n-butylphthalate	149	16.955	16.946	(1.067)	471904	5.00000	4.521
	64 Fluoranthene	202	17.863	17.854	(1.124)	392947	5.00000	4.405
	65 Pyrene	202	18.226	18.217	(0.902)	414596	5.00000	4.459
$	66 Terphenyl-d14	244	18.515	18.500	(0.916)	250762	5.00000	4.666
	67 Butylbenzylphthalate	149	19.380	19.371	(0.959)	198411	5.00000	4.352
	68 Benzo(a)anthracene	228	20.181	20.172	(0.999)	416358	5.00000	4.895
*	69 Chrysene-d12	240	20.208	20.198	(1.000)	1486847	20.0000	
	70 3,3'-Dichlorobenzidine	252	20.176	20.161	(0.998)	143980	5.00000	5.327
	71 Chrysene	228	20.245	20.241	(1.002)	360214	5.00000	4.502
	72 bis(2-Ethylhexyl)phthalate	149	20.357	20.343	(0.956)	276423	5.00000	4.570
*	134 Di-n-octylphthalate-d4	153	21.287	21.272	(1.000)	2074242	20.0000	
	73 Di-n-octylphthalate	149	21.297	21.288	(1.000)	592498	5.00000	5.228

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	
74	Benzo(b)fluoranthene	252	21.831	21.827	(0.976)	362153	5.00000	4.198	
75	Benzo(k)fluoranthene	252	21.863	21.860	(0.977)	392201	5.00000	4.809	
187	Total Benzofluoranthenes	252	21.831	21.860	(0.976)	711787	10.0000	8.988	(M)
76	Benzo(a)pyrene	252	22.285	22.276	(0.996)	316265	5.00000	4.254	
* 77	Perylene-d12	264	22.371	22.356	(1.000)	1526155	20.0000		
78	Indeno(1,2,3-cd)pyrene	276	24.101	24.092	(1.077)	415891	5.00000	4.411	
79	Dibenzo(a,h)anthracene	278	24.117	24.113	(1.078)	342037	5.00000	4.467	
80	Benzo(g,h,i)perylene	276	24.587	24.589	(1.099)	347703	5.00000	4.108	
90	N-Nitrosodimethylamine	74	4.179	4.186	(0.486)	107953	5.00000	4.802	
103	Pyridine	79	4.158	4.154	(0.484)	161968	5.00000	4.825	
91	Aniline	93	8.142	8.144	(0.947)	216282	5.00000	4.977	
105	1-methylnaphthalene	141	11.961	11.952	(1.125)	214131	5.00000	4.508	
93	Benzidine	184	18.098	18.089	(0.896)	113949	5.00000	7.367	
111	Azobenzene (1,2-DP-Hydrazine)	77	16.619	16.615	(1.046)	18353	5.00000	4.715	
143	1,4-Dioxane	88	3.399	3.401	(0.395)	61213	5.00000	4.565	
$ 137	d8-1,4-Dioxane	96	3.330	3.337	(0.387)	59809	5.00000	4.517	
144	alpha-Terpineol	59	10.674	10.675	(1.004)	103002	5.00000	5.090	
177	p-Benzoquinone	82	7.293	7.294	(0.848)	18965	5.00000	4.195	
98	Retene	219	18.771	18.756	(0.929)	167717	5.00000	4.593	
99	Perylene	252	22.408	22.399	(1.002)	266813	5.00000	4.199	
133	Butylatedhydroxytoluene	205	13.649	13.640	(1.011)	183141	5.00000	5.189	
115	Tributyl Phosphate	99	14.653	14.649	(0.922)	330386	5.00000	4.917	
116	Dibutyl Phenyl Phosphate	175	16.394	16.390	(1.032)	210609	5.00000	4.268	
117	Butyl Diphenyl Phosphate	94	18.093	18.078	(0.895)	66301	5.00000	4.680	
118	Triphenyl Phosphate	326	19.700	19.691	(0.975)	68120	5.00000	4.519	
123	Acetophenone	105	9.275	9.276	(1.079)	205770	5.00000	4.625	
168	Pentachlorobenzene	250	13.852	13.848	(1.026)	103385	5.00000	4.783	
113	Diphenyl Oxide	170	12.746	12.737	(0.944)	184216	5.00000	4.432	
112	Biphenyl	154	12.559	12.550	(0.930)	316914	5.00000	4.725	
120	2,3,4,6-Tetrachlorophenol	232	14.092	14.078	(1.044)	59775	5.00000	4.715	
151	1,2,4,5-Tetrachlorobenzene	216	12.127	12.117	(0.898)	123476	5.00000	4.415	
110	Tetrachloroguaiacol	247	15.817	15.808	(0.996)	76427	10.0000	10.55	
109	3,4,5-Trichloroguaiacol	213	14.306	14.297	(0.900)	47871	5.00000	5.108	
181	3,4,6-Trichloroguaiacol	211	14.183	14.174	(1.650)	40548	5.00000	5.110	
108	4,5,6-Trichloroguaiacol	213	15.214	15.205	(1.127)	37783	5.00000	4.522	
184	3,4-Dichloroguaiacol	192	12.639	12.630	(1.470)	44755	5.00000	4.505	
107	4,5-Dichloroguaiacol	192	13.414	13.410	(0.993)	111952	10.0000	8.534	
182	4,6-Dichloroguaiacol	192	13.414	13.410	(1.560)	111952	10.0000	9.071	
185	4-Chloroguaiacol	115	11.545	11.535	(1.085)	21070	2.50000	2.291	
186	Carbaryl	144	16.667	16.663	(1.049)	169309	5.00000	4.007	
178	2-Benzyl-4-Chlorophenol	218	16.619	16.615	(1.046)	62109	5.00000	4.267	
106	Guaiacol	124	9.536	9.532	(1.109)	135730	5.00000	4.643	
188	2,6-Dichlorophenol	162	10.807	10.804	(1.257)	116376	5.00000	4.045	
189	N-Nitrosomethylethylamine	88	5.846	5.847	(0.680)	58285	5.00000	5.921	

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 06281303.d
Lab Smp Id: IC50628
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Misc Info: 13-

Calibration Date: 28-JUN-2013
Calibration Time: 10:39
Client Smp ID: IC50628
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	461788	230894	923576	475038	2.87
27 Naphthalene-d8	1684670	842335	3369340	1724283	2.35
42 Acenaphthene-d10	967427	483714	1934854	1045649	8.09
59 Phenanthrene-d10	1360143	680072	2720286	1495598	9.96
69 Chrysene-d12	1402665	701332	2805330	1486847	6.00
134 Di-n-octylphthala	2121193	1060596	4242386	2074242	-2.21
77 Perylene-d12	1443992	721996	2887984	1526155	5.69

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.59	8.09	9.09	8.60	0.05
27 Naphthalene-d8	10.63	10.13	11.13	10.64	0.04
42 Acenaphthene-d10	13.50	13.00	14.00	13.50	0.07
59 Phenanthrene-d10	15.88	15.38	16.38	15.89	0.06
69 Chrysene-d12	20.20	19.70	20.70	20.21	0.05
134 Di-n-octylphthala	21.27	20.77	21.77	21.29	0.07
77 Perylene-d12	22.36	21.86	22.86	22.37	0.07

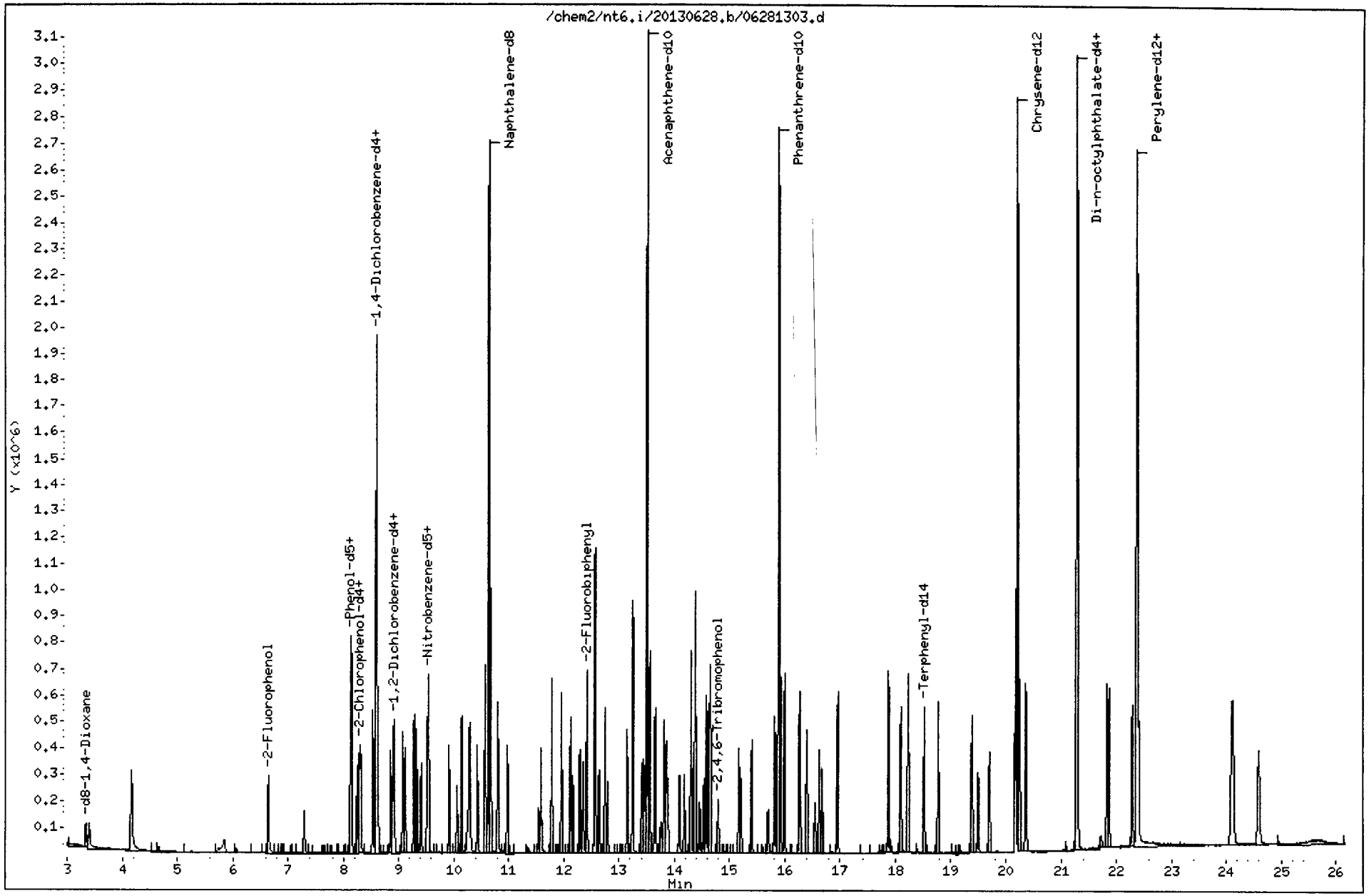
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130628.b/06281303.d
Date : 28-JUN-2013 11:48
Client ID: IC50628
Sample Info: IC50628,

Instrument: nt6.i

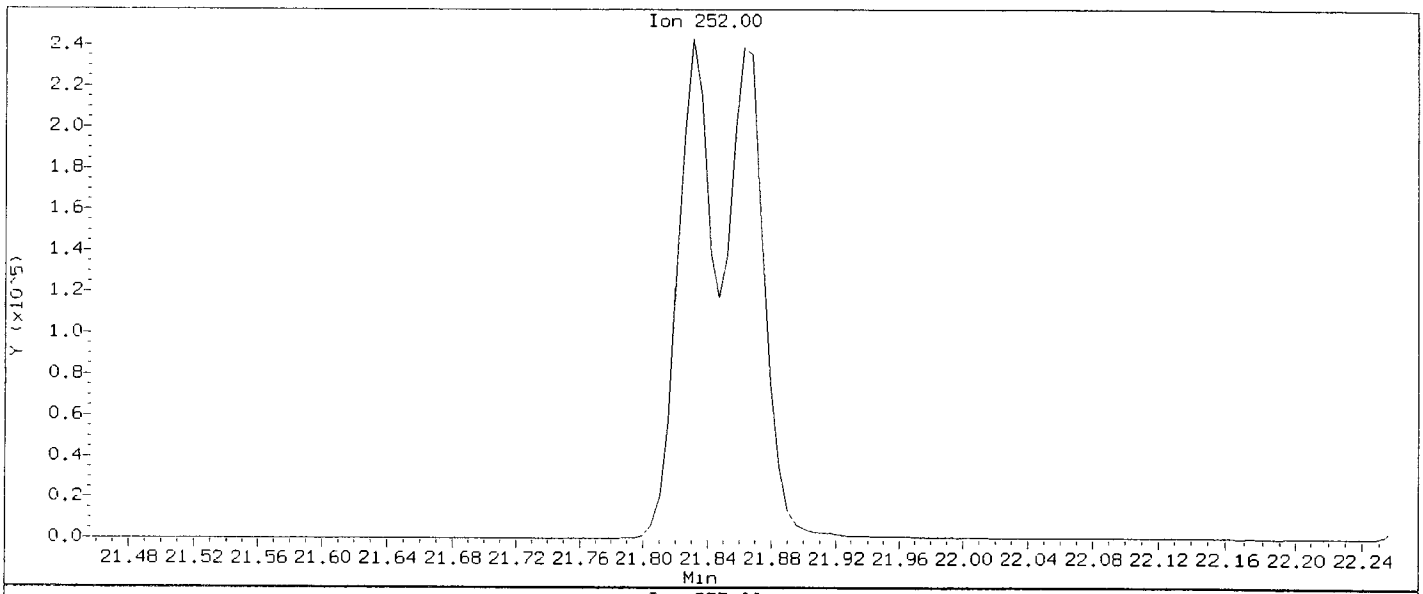
Operator: JZ
Column diameter: 0.32

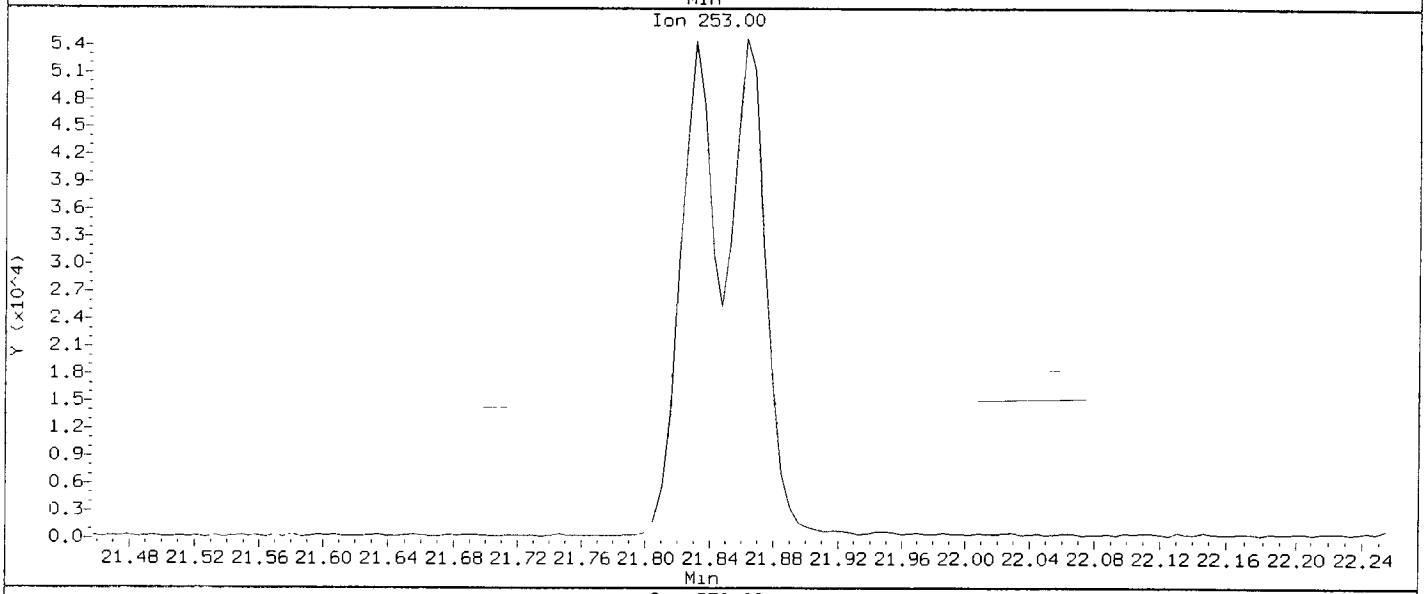
Column phase: ZB-5msi

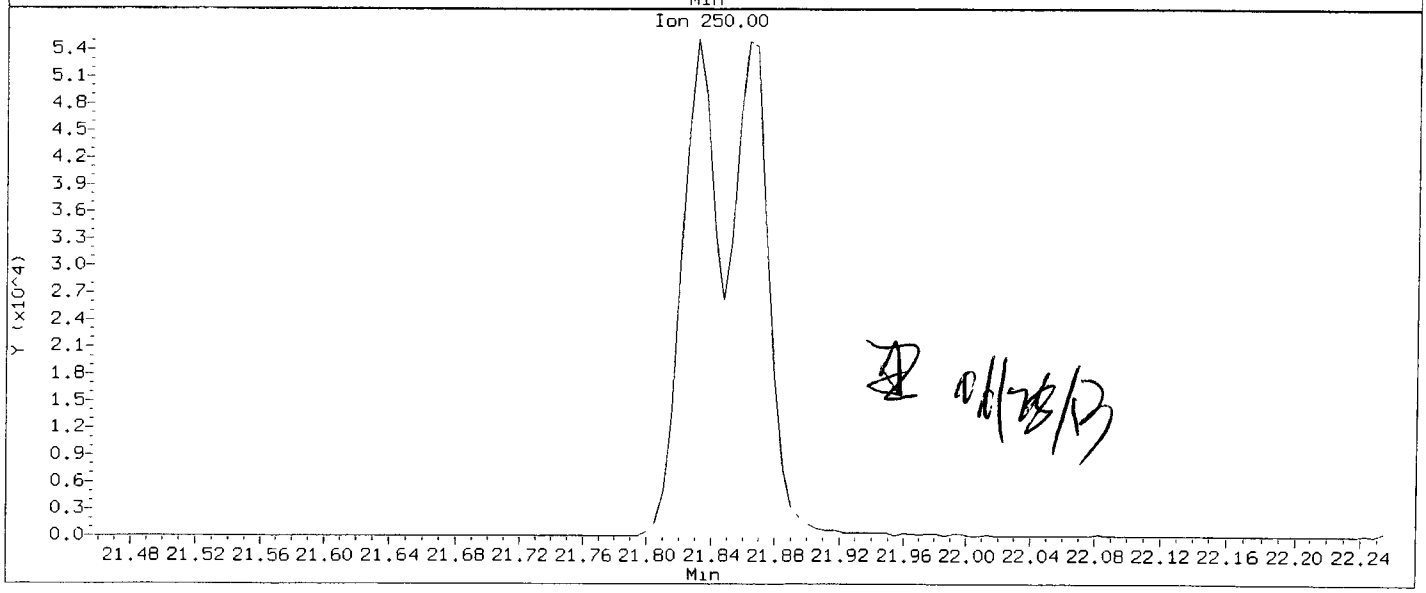


Data File: /chem2/nt6.1/20130628.b/06281303.d
Injection Date: 28-JUN-2013 11:48
Instrument: nt6.1
Client Sample ID: IC50628

Compound: Total Benzofluoranthenes
CAS Number:



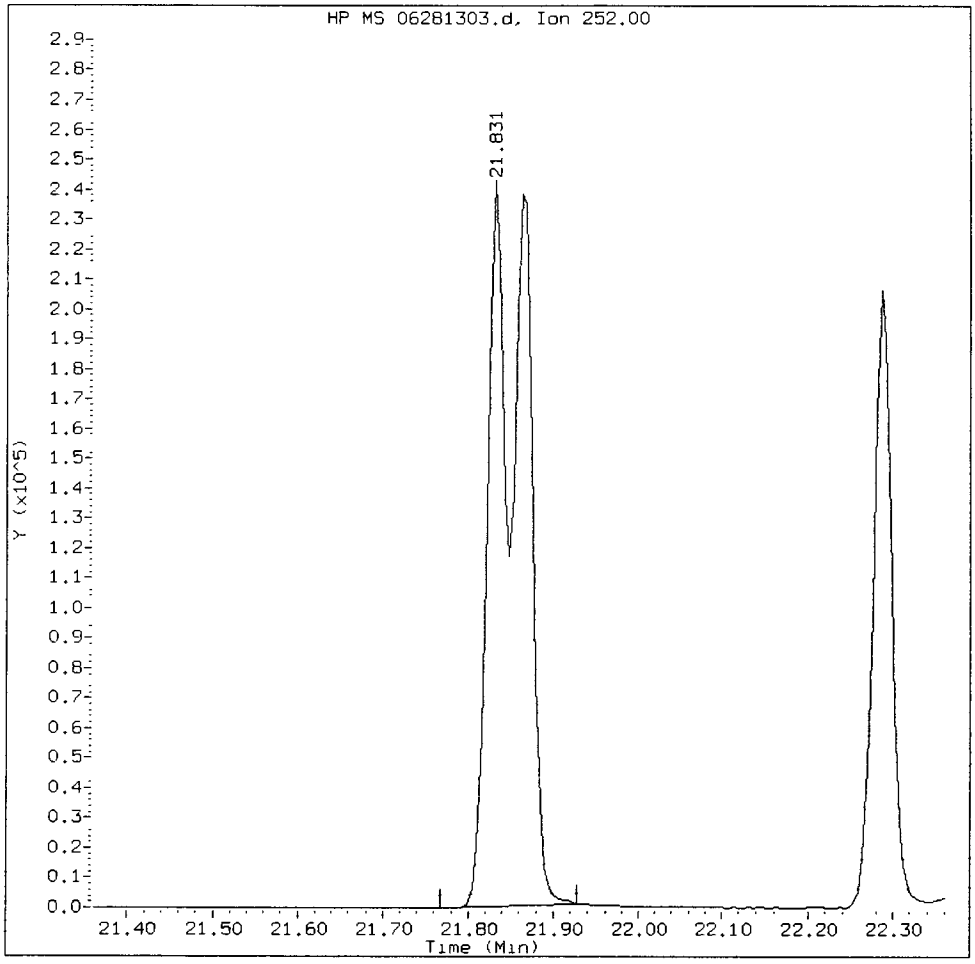




WV67:00516

IC50628, /chem2/nt6.i/20130628.b/06281303.d

Total Benzofluoranthenes Amount: 8.99 Area: 711787



MANUAL INTEGRATION for Total Benzofluoranthenes

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 06/28/13

CO-ELUTION SUMMARY FOR FILE - 06281303.d

Lab ID: IC50628, Method: SW846062813.m, Instrument: nt6.i, Date: 28-JUN-2013

RT	CO-ELUTION COMPOUNDS
13.248	Acenaphthylene and 2,6-Dinitrotoluene

checked ok

ok 07/28/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130628.b/06281304.d
Lab Smp Id: IC100628 Client Smp ID: IC100628
Inj Date : 28-JUN-2013 12:22
Operator : JZ Inst ID: nt6.i
Smp Info : IC100628,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130628.b/SW846062813.m
Meth Date : 28-Jun-2013 15:13 jianqing Quant Type: ISTD
Cal Date : 28-JUN-2013 12:22 Cal File: 06281304.d
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

R 06/28/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.647	6.648	(0.773)	272811	10.0000	8.807
$	2 Phenol-d5	99	8.126	8.133	(0.945)	343524	10.0000	9.022
	3 Phenol	94	8.147	8.149	(0.948)	406637	10.0000	9.417
$	5 2-Chlorophenol-d4	132	8.292	8.293	(0.965)	289512	10.0000	8.723
	4 Bis(2-Chloroethyl)ether	93	8.249	8.250	(0.960)	333380	10.0000	9.759
	6 2-Chlorophenol	128	8.318	8.315	(0.968)	298922	10.0000	9.030
	7 1,3-Dichlorobenzene	146	8.537	8.534	(0.993)	394245	10.0000	9.730
*	8 1,4-Dichlorobenzene-d4	152	8.596	8.592	(1.000)	479056	20.0000	
	9 1,4-Dichlorobenzene	146	8.623	8.619	(1.003)	401181	10.0000	9.838
$	10 1,2-Dichlorobenzene-d4	152	8.895	8.891	(1.035)	195971	10.0000	8.647
	12 1,2-Dichlorobenzene	146	8.917	8.913	(1.037)	377349	10.0000	9.768
	11 Benzyl alcohol	108	8.858	8.859	(1.030)	205486	10.0000	9.285
	14 2,2'-oxybis(1-Chloropropane)	45	9.114	9.110	(1.060)	612698	10.0000	10.41
	13 2-Methylphenol	108	9.077	9.078	(1.056)	279027	10.0000	8.968
	17 Hexachloroethane	117	9.403	9.399	(1.094)	134967	10.0000	10.33
	16 N-Nitroso-di-n-propylamine	70	9.328	9.335	(1.085)	226107	10.0000	10.06
	15 4-Methylphenol	108	9.306	9.308	(1.083)	296567	10.0000	9.077
$	18 Nitrobenzene-d5	82	9.520	9.516	(0.895)	248413	10.0000	10.10
	19 Nitrobenzene	77	9.547	9.548	(0.898)	313754	10.0000	11.65
	20 Isophorone	82	9.921	9.922	(0.933)	505411	10.0000	11.04
	21 2-Nitrophenol	139	10.059	10.056	(0.946)	149858	10.0000	9.924
	22 2,4-Dimethylphenol	107	10.145	10.141	(0.954)	254450	10.0000	10.29
	23 Bis(2-Chloroethoxy)methane	93	10.300	10.296	(0.968)	403147	10.0000	11.18
	24 Benzoic acid	105	10.316	10.382	(0.970)	337549	20.0000	18.01
	25 2,4-Dichlorophenol	162	10.439	10.435	(0.981)	238365	10.0000	9.904
	26 1,2,4-Trichlorobenzene	180	10.578	10.569	(0.994)	315093	10.0000	10.82
*	27 Naphthalene-d8	136	10.636	10.633	(1.000)	1533253	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
28	Naphthalene	128	10.668	10.665	(1.003)	883677	10.0000	11.08
29	4-Chloroaniline	127	10.797	10.793	(1.015)	352390	10.0000	11.95
30	Hexachlorobutadiene	225	10.978	10.969	(1.032)	159394	10.0000	11.77
31	4-Chloro-3-methylphenol	107	11.587	11.583	(1.089)	215793	10.0000	10.21
32	2-Methylnaphthalene	141	11.785	11.776	(1.108)	472224	10.0000	11.15
33	Hexachlorocyclopentadiene	237	12.164	12.155	(0.901)	154776	10.0000	9.228
34	2,4,6-Trichlorophenol	196	12.292	12.283	(0.910)	158422	10.0000	9.239
35	2,4,5-Trichlorophenol	196	12.351	12.342	(0.915)	163920	10.0000	9.287
$ 36	2-Fluorobiphenyl	172	12.420	12.411	(0.920)	547928	10.0000	9.049
37	2-Chloronaphthalene	162	12.570	12.561	(0.931)	738699	10.0000	12.34
38	2-Nitroaniline	65	12.794	12.785	(0.947)	130714	10.0000	10.03
39	Dimethylphthalate	163	13.152	13.148	(0.974)	611473	10.0000	9.735
40	Acenaphthylene	152	13.253	13.244	(0.981)	851308	10.0000	10.60
41	2,6-Dinitrotoluene	165	13.253	13.244	(0.981)	145446	10.0000	10.71
* 42	Acenaphthene-d10	164	13.504	13.495	(1.000)	1000507	20.0000	
43	3-Nitroaniline	138	13.467	13.463	(0.997)	138309	10.0000	11.01
44	Acenaphthene	153	13.553	13.549	(1.004)	547805	10.0000	9.935
45	2,4-Dinitrophenol	184	13.633	13.629	(1.009)	83226	20.0000	12.69
46	Dibenzofuran	168	13.814	13.805	(1.023)	638871	10.0000	9.898
47	4-Nitrophenol	109	13.756	13.752	(1.019)	38005	10.0000	9.641
48	2,4-Dinitrotoluene	165	13.884	13.875	(1.028)	169203	10.0000	10.23
50	Diethylphthalate	149	14.306	14.297	(1.059)	569189	10.0000	10.89
49	Fluorene	166	14.375	14.366	(1.064)	622681	10.0000	11.04
51	4-Chlorophenyl-phenylether	204	14.386	14.377	(1.065)	309716	10.0000	11.63
52	4-Nitroaniline	138	14.466	14.462	(1.071)	108129	10.0000	9.644
53	4,6-Dinitro-2-methylphenol	198	14.541	14.537	(0.915)	156584	20.0000	15.36
54	N-Nitrosodiphenylamine	169	14.589	14.580	(0.918)	415156	10.0000	9.461
$ 55	2,4,6-Tribromophenol	330	14.813	14.783	(1.097)	7813	10.0000	2.247
56	4-Bromophenyl-phenylether	248	15.171	15.162	(0.955)	163490	10.0000	9.663
57	Hexachlorobenzene	284	15.406	15.392	(0.970)	188299	10.0000	10.31
58	Pentachlorophenol	266	15.694	15.685	(0.988)	74450	10.0000	8.107
* 59	Phenanthrene-d10	188	15.887	15.878	(1.000)	1437700	20.0000	
60	Phenanthrene	178	15.924	15.915	(1.002)	821801	10.0000	9.926
61	Anthracene	178	15.999	15.990	(1.007)	825742	10.0000	9.976
62	Carbazole	167	16.271	16.257	(1.024)	749929	10.0000	9.824
63	Di-n-butylphthalate	149	16.955	16.946	(1.067)	987642	10.0000	9.844
64	Fluoranthene	202	17.863	17.854	(1.124)	843754	10.0000	9.840
65	Pyrene	202	18.226	18.217	(0.902)	905780	10.0000	9.763
$ 66	Terphenyl-d14	244	18.514	18.500	(0.916)	464828	10.0000	8.667
67	Butylbenzylphthalate	149	19.380	19.371	(0.959)	429157	10.0000	9.434
68	Benzo(a)anthracene	228	20.181	20.172	(0.999)	918835	10.0000	10.83
* 69	Chrysene-d12	240	20.208	20.198	(1.000)	1483719	20.0000	
70	3,3'-Dichlorobenzidine	252	20.175	20.161	(0.998)	322785	10.0000	11.97
71	Chrysene	228	20.245	20.241	(1.002)	806651	10.0000	10.10
72	bis(2-Ethylhexyl)phthalate	149	20.357	20.343	(0.956)	611321	10.0000	9.832
* 134	Di-n-octylphthalate-d4	153	21.292	21.272	(1.000)	2132043	20.0000	
73	Di-n-octylphthalate	149	21.297	21.288	(1.000)	1223656	10.0000	10.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	21.837	21.827	(0.976)	850248	10.0000	9.690
75	Benzo(k)fluoranthene	252	21.869	21.860	(0.977)	868640	10.0000	10.47
187	Total Benzofluoranthenes	252	21.869	21.860	(0.977)	1630526	20.0000	20.24
76	Benzo(a)pyrene	252	22.285	22.276	(0.996)	744541	10.0000	9.846
* 77	Perylene-d12	264	22.376	22.356	(1.000)	1552415	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	24.107	24.092	(1.077)	958033	10.0000	9.990
79	Dibenzo(a,h)anthracene	278	24.123	24.113	(1.078)	792156	10.0000	10.17
80	Benzo(g,h,i)perylene	276	24.598	24.589	(1.099)	783289	10.0000	9.097
90	N-Nitrosodimethylamine	74	4.179	4.186	(0.486)	222973	10.0000	9.835
103	Pyridine	79	4.152	4.154	(0.483)	329334	10.0000	9.729
91	Aniline	93	8.147	8.144	(0.948)	451619	10.0000	10.31
105	1-methylnaphthalene	141	11.961	11.952	(1.125)	465958	10.0000	11.03
93	Benzidine	184	18.098	18.089	(0.896)	186241	10.0000	12.07
111	Azobenzene (1,2-DP-Hydrazine)	77	16.624	16.615	(1.046)	35693	10.0000	9.538
143	1,4-Dioxane	88	3.399	3.401	(0.395)	128263	10.0000	9.484
$ 137	d8-1,4-Dioxane	96	3.330	3.337	(0.387)	132791	10.0000	9.944
144	alpha-Terpineol	59	10.679	10.675	(1.004)	207490	10.0000	11.53
177	p-Benzoquinone	82	7.293	7.294	(0.848)	45038	10.0000	9.879
98	Retene	219	18.771	18.756	(0.929)	360415	10.0000	9.890
99	Perylene	252	22.408	22.399	(1.001)	608521	10.0000	9.415
133	Butylatedhydroxytoluene	205	13.649	13.640	(1.011)	375320	10.0000	11.11
115	Tributyl Phosphate	99	14.653	14.649	(0.922)	662595	10.0000	10.26
116	Dibutyl Phenyl Phosphate	175	16.399	16.390	(1.032)	449328	10.0000	9.473
117	Butyl Diphenyl Phosphate	94	18.092	18.078	(0.895)	138204	10.0000	9.777
118	Triphenyl Phosphate	326	19.700	19.691	(0.975)	146243	10.0000	9.721
123	Acetophenone	105	9.280	9.276	(1.080)	438012	10.0000	9.762
168	Pentachlorobenzene	250	13.857	13.848	(1.026)	216033	10.0000	10.45
113	Diphenyl Oxide	170	12.746	12.737	(0.944)	397100	10.0000	9.986
112	Biphenyl	154	12.564	12.550	(0.930)	787866	10.0000	12.28
120	2,3,4,6-Tetrachlorophenol	232	14.092	14.078	(1.044)	113912	10.0000	9.391
151	1,2,4,5-Tetrachlorobenzene	216	12.127	12.117	(0.898)	255310	10.0000	9.540
110	Tetrachloroguaiacol	247	15.817	15.808	(0.996)	150151	20.0000	21.56
109	3,4,5-Trichloroguaiacol	213	14.306	14.297	(0.900)	94930	10.0000	10.54
181	3,4,6-Trichloroguaiacol	211	14.183	14.174	(1.650)	79191	10.0000	9.897
108	4,5,6-Trichloroguaiacol	213	15.214	15.205	(1.127)	75932	10.0000	9.499
184	3,4-Dichloroguaiacol	192	12.639	12.630	(1.470)	95598	10.0000	9.542
107	4,5-Dichloroguaiacol	192	13.414	13.410	(0.993)	228299	20.0000	18.19
182	4,6-Dichloroguaiacol	192	13.414	13.410	(1.560)	228299	20.0000	18.34
185	4-Chloroguaiacol	115	11.544	11.535	(1.085)	43210	5.00000	5.284
186	Carbaryl	144	16.672	16.663	(1.049)	329334	10.0000	8.109
178	2-Benzyl-4-Chlorophenol	218	16.624	16.615	(1.046)	129511	10.0000	9.255
106	Guaiacol	124	9.536	9.532	(1.109)	296636	10.0000	10.06
188	2,6-Dichlorophenol	162	10.813	10.804	(1.258)	235754	10.0000	8.125
189	N-Nitrosomethylethylamine	88	5.851	5.847	(0.681)	115831	10.0000	11.67

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 06281304.d
Lab Smp Id: IC100628
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Misc Info: 13-

Calibration Date: 28-JUN-2013
Calibration Time: 10:39
Client Smp ID: IC100628
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	461788	230894	923576	479056	3.74
27 Naphthalene-d8	1684670	842335	3369340	1533253	-8.99
42 Acenaphthene-d10	967427	483714	1934854	1000507	3.42
59 Phenanthrene-d10	1360143	680072	2720286	1437700	5.70
69 Chrysene-d12	1402665	701332	2805330	1483719	5.78
134 Di-n-octylphthala	2121193	1060596	4242386	2132043	0.51
77 Perylene-d12	1443992	721996	2887984	1552415	7.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.59	8.09	9.09	8.60	0.04
27 Naphthalene-d8	10.63	10.13	11.13	10.64	0.04
42 Acenaphthene-d10	13.50	13.00	14.00	13.50	0.07
59 Phenanthrene-d10	15.88	15.38	16.38	15.89	0.06
69 Chrysene-d12	20.20	19.70	20.70	20.21	0.04
134 Di-n-octylphthala	21.27	20.77	21.77	21.29	0.09
77 Perylene-d12	22.36	21.86	22.86	22.38	0.09

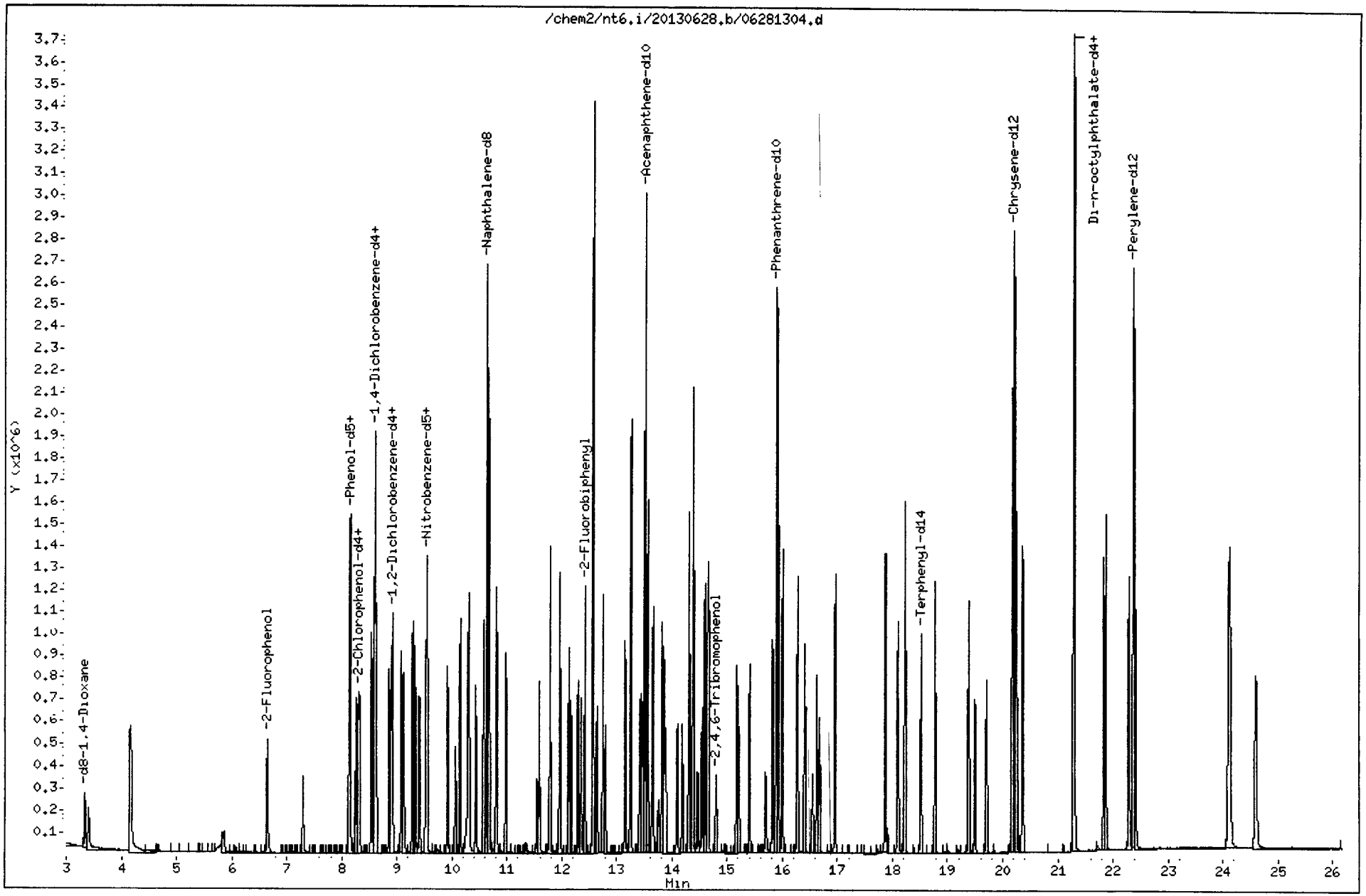
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130628.b/06281304.d
Date : 28-JUN-2013 12:22
Client ID: IC100628
Sample Info: IC100628,

Column phase: ZB-5msi

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 06281304.d

Lab ID: IC100628, Method: SW846062813.m, Instrument: nt6.i, Date: 28-JUN-2013

RT	CO-ELUTION COMPOUNDS
13.253	Acenaphthylene and 2,6-Dinitrotoluene

checked ok

06/28/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130628.b/06281301.d
Lab Smp Id: IC250628 Client Smp ID: IC250628
Inj Date : 28-JUN-2013 10:39
Operator : JZ Inst ID: nt6.i
Smp Info : IC250628,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130628.b/SW846062813.m
Meth Date : 28-Jun-2013 15:13 jianqing Quant Type: ISTD
Cal Date : 28-JUN-2013 14:05 Cal File: 06281307.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

06/28/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.648	6.648	(0.774)	693899	25.0000	23.24
$	2 Phenol-d5	99	8.133	8.133	(0.947)	923236	25.0000	25.15
	3 Phenol	94	8.149	8.149	(0.948)	1115193	25.0000	26.79
$	5 2-Chlorophenol-d4	132	8.293	8.293	(0.965)	785803	25.0000	24.56
	4 Bis(2-Chloroethyl)ether	93	8.250	8.250	(0.960)	860244	25.0000	26.12
	6 2-Chlorophenol	128	8.315	8.315	(0.968)	855095	25.0000	26.80
	7 1,3-Dichlorobenzene	146	8.534	8.534	(0.993)	1037879	25.0000	26.57
*	8 1,4-Dichlorobenzene-d4	152	8.592	8.592	(1.000)	461788	20.0000	
	9 1,4-Dichlorobenzene	146	8.619	8.619	(1.003)	1054693	25.0000	26.83
$	10 1,2-Dichlorobenzene-d4	152	8.891	8.891	(1.035)	548996	25.0000	25.13
	12 1,2-Dichlorobenzene	146	8.913	8.913	(1.037)	1015883	25.0000	27.28
	11 Benzyl alcohol	108	8.859	8.859	(1.031)	543152	25.0000	25.46
	14 2,2'-oxybis(1-Chloropropane)	45	9.110	9.110	(1.060)	1480831	25.0000	26.09
	13 2-Methylphenol	108	9.078	9.078	(1.057)	811800	25.0000	27.07
	17 Hexachloroethane	117	9.399	9.399	(1.094)	324442	25.0000	25.77
	16 N-Nitroso-di-n-propylamine	70	9.335	9.335	(1.086)	564767	25.0000	26.07
	15 4-Methylphenol	108	9.308	9.308	(1.083)	877471	25.0000	27.86
$	18 Nitrobenzene-d5	82	9.516	9.516	(0.895)	644315	25.0000	23.84
	19 Nitrobenzene	77	9.548	9.548	(0.898)	763961	25.0000	25.81
	20 Isophorone	82	9.922	9.922	(0.933)	1275115	25.0000	25.34
	21 2-Nitrophenol	139	10.056	10.056	(0.946)	440067	25.0000	26.52
	22 2,4-Dimethylphenol	107	10.141	10.141	(0.954)	709159	25.0000	26.10
	23 Bis(2-Chloroethoxy)methane	93	10.296	10.296	(0.968)	1015552	25.0000	25.63
	24 Benzoic acid	105	10.382	10.382	(0.976)	936497	50.0000	45.48
	25 2,4-Dichlorophenol	162	10.435	10.435	(0.981)	732978	25.0000	27.72
	26 1,2,4-Trichlorobenzene	180	10.569	10.569	(0.994)	813513	25.0000	25.43
*	27 Naphthalene-d8	136	10.633	10.633	(1.000)	1684670	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.665	10.665	(1.003)	2322004	25.0000	26.49
	29 4-Chloroaniline	127	10.793	10.793	(1.015)	745739	25.0000	23.01
	30 Hexachlorobutadiene	225	10.969	10.969	(1.032)	380332	25.0000	25.56
	31 4-Chloro-3-methylphenol	107	11.583	11.583	(1.089)	616823	25.0000	26.56
	32 2-Methylnaphthalene	141	11.776	11.776	(1.107)	1200276	25.0000	25.80
	33 Hexachlorocyclopentadiene	237	12.155	12.155	(0.901)	448693	25.0000	27.67
	34 2,4,6-Trichlorophenol	196	12.283	12.283	(0.910)	448044	25.0000	27.02
	35 2,4,5-Trichlorophenol	196	12.342	12.342	(0.914)	460567	25.0000	26.99
$	36 2-Fluorobiphenyl	172	12.411	12.411	(0.920)	1483601	25.0000	25.34
	37 2-Chloronaphthalene	162	12.561	12.561	(0.931)	1579251	25.0000	27.27
	38 2-Nitroaniline	65	12.785	12.785	(0.947)	321763	25.0000	25.52
	39 Dimethylphthalate	163	13.148	13.148	(0.974)	1595427	25.0000	26.27
	40 Acenaphthylene	152	13.244	13.244	(0.981)	2135463	25.0000	27.50
	41 2,6-Dinitrotoluene	165	13.244	13.244	(0.981)	369264	25.0000	28.12
*	42 Acenaphthene-d10	164	13.495	13.495	(1.000)	967427	20.0000	
	43 3-Nitroaniline	138	13.463	13.463	(0.998)	302480	25.0000	24.90
	44 Acenaphthene	153	13.549	13.549	(1.004)	1482988	25.0000	27.81
	45 2,4-Dinitrophenol	184	13.629	13.629	(1.010)	320237	50.0000	41.28
	46 Dibenzofuran	168	13.805	13.805	(1.023)	1612723	25.0000	25.84
	47 4-Nitrophenol	109	13.752	13.752	(1.019)	110363	25.0000	28.95
	48 2,4-Dinitrotoluene	165	13.875	13.875	(1.028)	436656	25.0000	27.32
	50 Diethylphthalate	149	14.297	14.297	(1.059)	1345895	25.0000	26.63
	49 Fluorene	166	14.366	14.366	(1.064)	1587688	25.0000	29.11
	51 4-Chlorophenyl-phenylether	204	14.377	14.377	(1.065)	729205	25.0000	28.32
	52 4-Nitroaniline	138	14.462	14.462	(1.072)	237272	25.0000	21.89
	53 4,6-Dinitro-2-methylphenol	198	14.537	14.537	(0.916)	487590	50.0000	45.20
	54 N-Nitrosodiphenylamine	169	14.580	14.580	(0.918)	1118309	25.0000	26.94
$	55 2,4,6-Tribromophenol	330	14.783	14.783	(1.095)	29546	25.0000	9.201
	56 4-Bromophenyl-phenylether	248	15.162	15.162	(0.955)	460653	25.0000	28.78
	57 Hexachlorobenzene	284	15.392	15.392	(0.969)	449869	25.0000	26.03
	58 Pentachlorophenol	266	15.685	15.685	(0.988)	220722	25.0000	25.40
*	59 Phenanthrene-d10	188	15.878	15.878	(1.000)	1360143	20.0000	
	60 Phenanthrene	178	15.915	15.915	(1.002)	2145828	25.0000	27.40
	61 Anthracene	178	15.990	15.990	(1.007)	2157953	25.0000	27.56
	62 Carbazole	167	16.257	16.257	(1.024)	1837957	25.0000	25.45
	63 Di-n-butylphthalate	149	16.946	16.946	(1.067)	2584332	25.0000	27.23
	64 Fluoranthene	202	17.854	17.854	(1.124)	2322332	25.0000	28.63
	65 Pyrene	202	18.217	18.217	(0.902)	2422841	25.0000	27.62
$	66 Terphenyl-d14	244	18.500	18.500	(0.916)	1303100	25.0000	25.70
	67 Butylbenzylphthalate	149	19.371	19.371	(0.959)	1143155	25.0000	26.58
	68 Benzo(a)anthracene	228	20.172	20.172	(0.999)	2237433	25.0000	27.88
*	69 Chrysene-d12	240	20.198	20.198	(1.000)	1402665	20.0000	
	70 3,3'-Dichlorobenzidine	252	20.161	20.161	(0.998)	689275	25.0000	27.03
	71 Chrysene	228	20.241	20.241	(1.002)	2153192	25.0000	28.52
	72 bis(2-Ethylhexyl)phthalate	149	20.343	20.343	(0.956)	1673194	25.0000	27.05
*	134 Di-n-octylphthalate-d4	153	21.272	21.272	(1.000)	2121193	20.0000	
	73 Di-n-octylphthalate	149	21.288	21.288	(1.001)	2949868	25.0000	25.45

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	21.827	21.827	(0.976)	2353935	25.0000	28.84
75	Benzo(k)fluoranthene	252	21.860	21.860	(0.978)	2263598	25.0000	29.33
187	Total Benzofluoranthenes	252	21.860	21.860	(0.978)	4369493	50.0000	58.32
76	Benzo(a)pyrene	252	22.276	22.276	(0.996)	2026315	25.0000	28.81
* 77	Perylene-d12	264	22.356	22.356	(1.000)	1443992	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	24.092	24.092	(1.078)	2515451	25.0000	28.20
79	Dibenzo(a,h)anthracene	278	24.113	24.113	(1.079)	2156387	25.0000	29.76
80	Benzo(g,h,i)perylene	276	24.589	24.589	(1.100)	2161294	25.0000	26.99
90	N-Nitrosodimethylamine	74	4.186	4.186	(0.487)	581969	25.0000	26.63
103	Pyridine	79	4.154	4.154	(0.483)	777565	25.0000	23.83
91	Aniline	93	8.144	8.144	(0.948)	1073442	25.0000	25.41
105	1-methylnaphthalene	141	11.952	11.952	(1.124)	1199207	25.0000	25.84
93	Benzidine	184	18.089	18.089	(0.896)	282488	25.0000	18.54
111	Azobenzene (1,2-DP-Hydrazine)	77	16.615	16.615	(1.046)	86501	25.0000	24.43
143	1,4-Dioxane	88	3.401	3.401	(0.396)	323217	25.0000	24.79
$ 137	d8-1,4-Dioxane	96	3.337	3.337	(0.388)	319500	25.0000	24.82
144	alpha-Terpineol	59	10.675	10.675	(1.004)	479906	25.0000	24.27
177	p-Benzoquinone	82	7.294	7.294	(0.849)	115180	25.0000	26.21
98	Retene	219	18.756	18.756	(0.929)	932225	25.0000	27.06
99	Perylene	252	22.399	22.399	(1.002)	1593291	25.0000	26.50
133	Butylatedhydroxytoluene	205	13.640	13.640	(1.011)	931904	25.0000	28.54
115	Tributyl Phosphate	99	14.649	14.649	(0.923)	1444876	25.0000	23.65
116	Dibutyl Phenyl Phosphate	175	16.390	16.390	(1.032)	1138992	25.0000	25.38
117	Butyl Diphenyl Phosphate	94	18.078	18.078	(0.895)	341578	25.0000	25.56
118	Triphenyl Phosphate	326	19.691	19.691	(0.975)	372559	25.0000	26.20
123	Acetophenone	105	9.276	9.276	(1.080)	1134451	25.0000	26.23
168	Pentachlorobenzene	250	13.848	13.848	(1.026)	539567	25.0000	26.98
113	Diphenyl Oxide	170	12.737	12.737	(0.944)	1000563	25.0000	26.02
112	Biphenyl	154	12.550	12.550	(0.930)	1679028	25.0000	27.06
120	2,3,4,6-Tetrachlorophenol	232	14.078	14.078	(1.043)	316005	25.0000	26.94
151	1,2,4,5-Tetrachlorobenzene	216	12.117	12.117	(0.898)	703932	25.0000	27.20
110	Tetrachloroguaiacol	247	15.808	15.808	(0.996)	325389	50.0000	49.39
109	3,4,5-Trichloroguaiacol	213	14.297	14.297	(0.900)	216958	25.0000	25.46
181	3,4,6-Trichloroguaiacol	211	14.174	14.174	(1.650)	191599	25.0000	24.84
108	4,5,6-Trichloroguaiacol	213	15.205	15.205	(1.127)	203772	25.0000	26.36
184	3,4-Dichloroguaiacol	192	12.630	12.630	(1.470)	240551	25.0000	24.91
107	4,5-Dichloroguaiacol	192	13.410	13.410	(0.994)	602880	50.0000	49.67
182	4,6-Dichloroguaiacol	192	13.410	13.410	(1.561)	602880	50.0000	50.25
185	4-Chloroguaiacol	115	11.535	11.535	(1.085)	106813	12.5000	11.89
186	Carbaryl	144	16.663	16.663	(1.049)	1022131	25.0000	26.60
178	2-Benzyl-4-Chlorophenol	218	16.615	16.615	(1.046)	343074	25.0000	25.91
106	Guaiacol	124	9.532	9.532	(1.109)	765287	25 0000	26.93
188	2,6-Dichlorophenol	162	10.804	10.804	(1.257)	785636	25.0000	28.09
189	N-Nitrosomethylethylamine	88	5.847	5.847	(0.680)	201042	25.0000	21.01

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 06281301.d
Lab Smp Id: IC250628
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Misc Info: 13-

Calibration Date: 28-JUN-2013
Calibration Time: 10:39
Client Smp ID: IC250628
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	461788	230894	923576	461788	0.00
27 Naphthalene-d8	1684670	842335	3369340	1684670	0.00
42 Acenaphthene-d10	967427	483714	1934854	967427	0.00
59 Phenanthrene-d10	1360143	680072	2720286	1360143	0.00
69 Chrysene-d12	1402665	701332	2805330	1402665	0.00
134 Di-n-octylphthala	2121193	1060596	4242386	2121193	0.00
77 Perylene-d12	1443992	721996	2887984	1443992	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.59	8.09	9.09	8.59	0.00
27 Naphthalene-d8	10.63	10.13	11.13	10.63	0.00
42 Acenaphthene-d10	13.50	13.00	14.00	13.50	0.00
59 Phenanthrene-d10	15.88	15.38	16.38	15.88	0.00
69 Chrysene-d12	20.20	19.70	20.70	20.20	0.00
134 Di-n-octylphthala	21.27	20.77	21.77	21.27	0.00
77 Perylene-d12	22.36	21.86	22.86	22.36	0.00

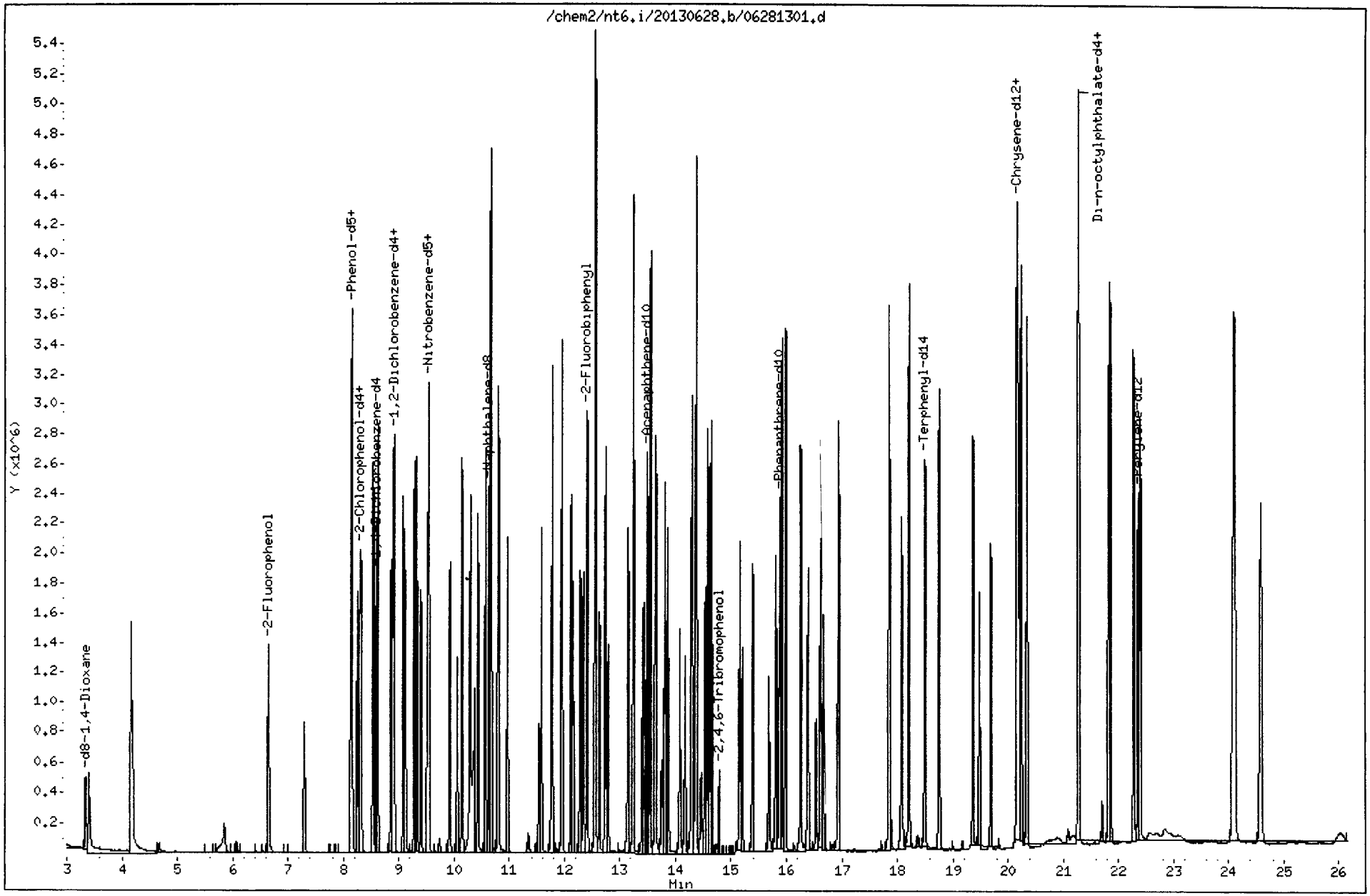
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130628.b/06281301.d
Date : 28-JUN-2013 10:39
Client ID: IC250628
Sample Info: IC250628,

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - 06281301.d

Lab ID: IC250628, Method: SW846062813.m, Instrument: nt6.i, Date: 28-JUN-2013

RT	CO-ELUTION COMPOUNDS
13.244	Acenaphthylene and 2,6-Dinitrotoluene

checked ok

06/28/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130628.b/06281305.d
Lab Smp Id: IC400628 Client Smp ID: IC400628
Inj Date : 28-JUN-2013 12:56
Operator : JZ Inst ID: nt6.i
Smp Info : IC400628,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130628.b/SW846062813.m
Meth Date : 28-Jun-2013 15:13 jianqing Quant Type: ISTD
Cal Date : 28-JUN-2013 12:56 Cal File: 06281305.d
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.648	6.648	(0.773)	1359417	40.0000	44.14
$	2 Phenol-d5	99	8.144	8.133	(0.947)	1615797	40.0000	42.68
	3 Phenol	94	8.160	8.149	(0.949)	1725669	40.0000	40.19
$	5 2-Chlorophenol-d4	132	8.299	8.293	(0.965)	1452695	40.0000	44.02
	4 Bis(2-Chloroethyl)ether	93	8.256	8.250	(0.960)	1405145	40.0000	41.37
	6 2-Chlorophenol	128	8.325	8.315	(0.968)	1387649	40.0000	42.16
	7 1,3-Dichlorobenzene	146	8.539	8.534	(0.993)	1684935	40.0000	41.82
*	8 1,4-Dichlorobenzene-d4	152	8.598	8.592	(1.000)	476326	20.0000	
	9 1,4-Dichlorobenzene	146	8.624	8.619	(1.003)	1754247	40.0000	43.26
$	10 1,2-Dichlorobenzene-d4	152	8.902	8.891	(1.035)	1020335	40.0000	45.28
	12 1,2-Dichlorobenzene	146	8.918	8.913	(1.037)	1618821	40.0000	42.14
	11 Benzyl alcohol	108	8.870	8.859	(1.032)	943684	40.0000	42.89
	14 2,2'-oxybis(1-Chloropropane)	45	9.121	9.110	(1.061)	2284841	40.0000	39.03
	13 2-Methylphenol	108	9.089	9.078	(1.057)	1307726	40.0000	42.27
	17 Hexachloroethane	117	9.410	9.399	(1.094)	536937	40.0000	41.34
	16 N-Nitroso-di-n-propylamine	70	9.345	9.335	(1.087)	883248	40.0000	39.53
	15 4-Methylphenol	108	9.319	9.308	(1.084)	1384443	40.0000	42.62
$	18 Nitrobenzene-d5	82	9.527	9.516	(0.895)	1180591	40.0000	43.31
	19 Nitrobenzene	77	9.559	9.548	(0.898)	1184437	40.0000	39.68
	20 Isophorone	82	9.933	9.922	(0.933)	2026725	40.0000	39.93
	21 2-Nitrophenol	139	10.066	10.056	(0.946)	718375	40.0000	42.93
	22 2,4-Dimethylphenol	107	10.157	10.141	(0.954)	1129336	40.0000	41.21
	23 Bis(2-Chloroethoxy)methane	93	10.307	10.296	(0.968)	1614095	40.0000	40.39
	24 Benzoic acid	105	10.435	10.382	(0.980)	1872199	80.0000	90.15
	25 2,4-Dichlorophenol	162	10.446	10.435	(0.981)	1158665	40.0000	43.44
	26 1,2,4-Trichlorobenzene	180	10.579	10.569	(0.994)	1305828	40.0000	40.47
*	27 Naphthalene-d8	136	10.643	10.633	(1.000)	1699140	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.675	10.665	(1.003)	3502713	40.0000	39.62
	29 4-Chloroaniline	127	10.809	10.793	(1.016)	1220517	40.0000	37.34
	30 Hexachlorobutadiene	225	10.980	10.969	(1.032)	606867	40.0000	40.44
	31 4-Chloro-3-methylphenol	107	11.594	11.583	(1.089)	981572	40.0000	41.90
	32 2-Methylnaphthalene	141	11.792	11.776	(1.108)	1996414	40.0000	42.55
	33 Hexachlorocyclopentadiene	237	12.166	12.155	(0.900)	709904	40.0000	43.70
	34 2,4,6-Trichlorophenol	196	12.299	12.283	(0.910)	728075	40.0000	43.84
	35 2,4,5-Trichlorophenol	196	12.358	12.342	(0.915)	734800	40.0000	42.98
$	36 2-Fluorobiphenyl	172	12.427	12.411	(0.920)	2598456	40.0000	44.31
	37 2-Chloronaphthalene	162	12.582	12.561	(0.931)	2323022	40.0000	40.05
	38 2-Nitroaniline	65	12.801	12.785	(0.947)	545954	40.0000	43.24
	39 Dimethylphthalate	163	13.164	13.148	(0.974)	2551615	40.0000	41.94
	40 Acenaphthylene	152	13.260	13.244	(0.981)	3204975	40.0000	41.21
	41 2,6-Dinitrotoluene	165	13.266	13.244	(0.982)	570035	40.0000	43.34
*	42 Acenaphthene-d10	164	13.511	13.495	(1.000)	969011	20.0000	
	43 3-Nitroaniline	138	13.485	13.463	(0.998)	509129	40.0000	41.85
	44 Acenaphthene	153	13.565	13.549	(1.004)	2252266	40.0000	42.17
	45 2,4-Dinitrophenol	184	13.650	13.629	(1.010)	687693	80.0000	108.3
	46 Dibenzofuran	168	13.827	13.805	(1.023)	2726957	40.0000	43.62
	47 4-Nitrophenol	109	13.768	13.752	(1.019)	167397	40.0000	43.84
	48 2,4-Dinitrotoluene	165	13.896	13.875	(1.028)	689151	40.0000	43.04
	50 Diethylphthalate	149	14.318	14.297	(1.060)	1954777	40.0000	38.62
	49 Fluorene	166	14.382	14.366	(1.064)	2237696	40.0000	40.95
	51 4-Chlorophenyl-phenylether	204	14.393	14.377	(1.065)	1007867	40.0000	39.08
	52 4-Nitroaniline	138	14.489	14.462	(1.072)	443840	40.0000	40.87
	53 4,6-Dinitro-2-methylphenol	198	14.564	14.537	(0.916)	878594	80.0000	93.64
	54 N-Nitrosodiphenylamine	169	14.601	14.580	(0.919)	1761868	40.0000	43.61
$	55 2,4,6-Tribromophenol	330	14.804	14.783	(1.096)	230180	40.0000	48.39
	56 4-Bromophenyl-phenylether	248	15.178	15.162	(0.955)	651095	40.0000	41.80
	57 Hexachlorobenzene	284	15.413	15.392	(0.970)	660782	40.0000	39.30
	58 Pentachlorophenol	266	15.701	15.685	(0.988)	375253	40.0000	44.39
*	59 Phenanthrene-d10	188	15.894	15.878	(1.000)	1323545	20.0000	
	60 Phenanthrene	178	15.936	15.915	(1.003)	3234168	40.0000	42.43
	61 Anthracene	178	16.006	15.990	(1.007)	3239112	40.0000	42.51
	62 Carbazole	167	16.278	16.257	(1.024)	2864415	40.0000	40.76
	63 Di-n-butylphthalate	149	16.962	16.946	(1.067)	3991985	40.0000	43.22
	64 Fluoranthene	202	17.875	17.854	(1.125)	3423958	40.0000	43.37
	65 Pyrene	202	18.238	18.217	(0.902)	3617197	40.0000	42.31
$	66 Terphenyl-d14	244	18.527	18.500	(0.916)	2183628	40.0000	44.18
	67 Butylbenzylphthalate	149	19.387	19.371	(0.959)	1778674	40.0000	42.43
	68 Benzo(a)anthracene	228	20.193	20.172	(0.999)	3148628	40.0000	40.25
*	69 Chrysene-d12	240	20.220	20.198	(1.000)	1367316	20.0000	
	70 3,3'-Dichlorobenzidine	252	20.182	20.161	(0.998)	982254	40.0000	39.52
	71 Chrysene	228	20.263	20.241	(1.002)	3114115	40.0000	42.32
	72 bis(2-Ethylhexyl)phthalate	149	20.364	20.343	(0.956)	2491447	40.0000	41.09
*	134 Di-n-octylphthalate-d4	153	21.293	21.272	(1.000)	2079141	20.0000	
	73 Di-n-octylphthalate	149	21.309	21.288	(1.001)	4306270	40.0000	37.91

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	21.849	21.827	(0.976)	3425115	40.0000	42.69
	75 Benzo(k)fluoranthene	252	21.886	21.860	(0.978)	3414645	40.0000	45.01
	187 Total Benzofluoranthenes	252	21.886	21.860	(0.978)	6430985	80.0000	87.31
	76 Benzo(a)pyrene	252	22.303	22.276	(0.996)	3025494	40.0000	43.76
*	77 Perylene-d12	264	22.383	22.356	(1.000)	1419527	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	24.130	24.092	(1.078)	3796299	40.0000	43.29
	79 Dibenzo(a,h)anthracene	278	24.156	24.113	(1.079)	3154097	40.0000	44.29
	80 Benzo(g,h,i)perylene	276	24.632	24.589	(1.100)	3440567	40.0000	43.70
	90 N-Nitrosodimethylamine	74	4.181	4.186	(0.486)	908155	40.0000	40.29
	103 Pyridine	79	4.143	4.154	(0.482)	1353480	40.0000	40.21
	91 Aniline	93	8.154	8.144	(0.948)	1685558	40.0000	38.68
	105 1-methylnaphthalene	141	11.968	11.952	(1.124)	2012940	40.0000	43.00
	93 Benzidine	184	18.105	18.089	(0.895)	443678	40.0000	31.19
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.636	16.615	(1.047)	138635	40.0000	40.24
	143 1,4-Dioxane	88	3.390	3.401	(0.394)	551582	40.0000	41.02
$	137 d8-1,4-Dioxane	96	3.326	3.337	(0.387)	535126	40.0000	40.30
	144 alpha-Terpineol	59	10.686	10.675	(1.004)	782383	40.0000	39.23
	177 p-Benzoquinone	82	7.294	7.294	(0.848)	204375	40.0000	45.09
	98 Retene	219	18.778	18.756	(0.929)	1421093	40.0000	42.32
	99 Perylene	252	22.426	22.399	(1.002)	2579231	40.0000	43.64
	133 Butylatedhydroxytoluene	205	13.661	13.640	(1.011)	1284516	40.0000	39.27
	115 Tributyl Phosphate	99	14.676	14.649	(0.923)	2470518	40.0000	41.55
	116 Dibutyl Phenyl Phosphate	175	16.406	16.390	(1.032)	1882400	40.0000	43.11
	117 Butyl Diphenyl Phosphate	94	18.099	18.078	(0.895)	542437	40.0000	41.64
	118 Triphenyl Phosphate	326	19.707	19.691	(0.975)	587213	40.0000	42.36
	123 Acetophenone	105	9.287	9.276	(1.080)	1826842	40.0000	40.95
	168 Pentachlorobenzene	250	13.864	13.848	(1.026)	816204	40.0000	40.75
	113 Diphenyl Oxide	170	12.753	12.737	(0.944)	1683364	40.0000	43.71
	112 Biphenyl	154	12.566	12.550	(0.930)	2543794	40.0000	40.92
	120 2,3,4,6-Tetrachlorophenol	232	14.099	14.078	(1.043)	511966	40.0000	43.58
	151 1,2,4,5-Tetrachlorobenzene	216	12.128	12.117	(0.898)	1132246	40.0000	43.68
	110 Tetrachloroguaiacol	247	15.829	15.808	(0.996)	534823	80.0000	83.42
	109 3,4,5-Trichloroguaiacol	213	14.313	14.297	(0.901)	352236	40.0000	42.47
	181 3,4,6-Trichloroguaiacol	211	14.190	14.174	(1.650)	324628	40.0000	40.80
	108 4,5,6-Trichloroguaiacol	213	15.221	15.205	(1.126)	328705	40.0000	42.46
	184 3,4-Dichloroguaiacol	192	12.646	12.630	(1.471)	431003	40.0000	43.27
	107 4,5-Dichloroguaiacol	192	13.426	13.410	(0.994)	1081013	80.0000	88.92
	182 4,6-Dichloroguaiacol	192	13.426	13.410	(1.562)	1054523	80.0000	85.21
	185 4-Chloroguaiacol	115	11.551	11.535	(1.085)	186507	20.0000	20.58
	186 Carbaryl	144	16.689	16.663	(1.050)	1672268	40.0000	44.73
	178 2-Benzyl-4-Chlorophenol	218	16.641	16.615	(1.047)	556813	40.0000	43.22
	106 Guaiacol	124	9.543	9.532	(1.110)	1250141	40.0000	42.65
	188 2,6-Dichlorophenol	162	10.820	10.804	(1.258)	1308064	40.0000	45.34
	189 N-Nitrosomethylethylamine	88	5.847	5.847	(0.680)	364023	40.0000	36.88

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 06281305.d
Lab Smp Id: IC400628
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Misc Info: 13-

Calibration Date: 28-JUN-2013
Calibration Time: 10:39
Client Smp ID: IC400628
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	461788	230894	923576	476326	3.15
27 Naphthalene-d8	1684670	842335	3369340	1699140	0.86
42 Acenaphthene-d10	967427	483714	1934854	969011	0.16
59 Phenanthrene-d10	1360143	680072	2720286	1323545	-2.69
69 Chrysene-d12	1402665	701332	2805330	1367316	-2.52
134 Di-n-octylphthala	2121193	1060596	4242386	2079141	-1.98
77 Perylene-d12	1443992	721996	2887984	1419527	-1.69

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.59	8.09	9.09	8.60	0.06
27 Naphthalene-d8	10.63	10.13	11.13	10.64	0.10
42 Acenaphthene-d10	13.50	13.00	14.00	13.51	0.12
59 Phenanthrene-d10	15.88	15.38	16.38	15.89	0.10
69 Chrysene-d12	20.20	19.70	20.70	20.22	0.11
134 Di-n-octylphthala	21.27	20.77	21.77	21.29	0.10
77 Perylene-d12	22.36	21.86	22.86	22.38	0.12

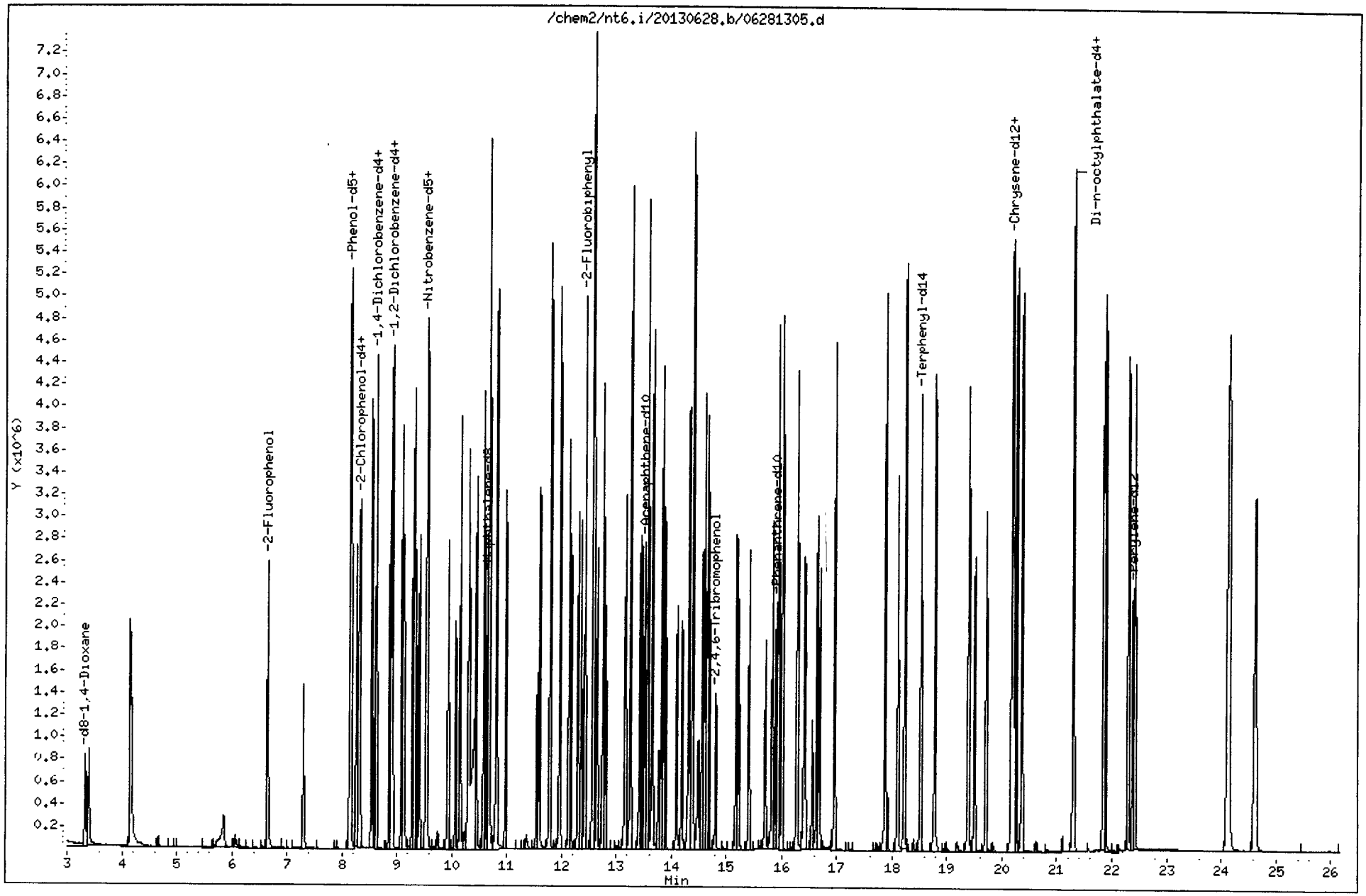
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130628.b/06281305.d
Date : 28-JUN-2013 12:56
Client ID: IC400628
Sample Info: IC400628,

Column phase: ZB-5ms1

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 06281305.d

Lab ID: IC400628, Method: SW846062813.m, Instrument: nt6.i, Date: 28-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130628.b/06281306.d
Lab Smp Id: IC600628 Client Smp ID: IC600628
Inj Date : 28-JUN-2013 13:31
Operator : JZ Inst ID: nt6.i
Smp Info : IC600628,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130628.b/SW846062813.m
Meth Date : 28-Jun-2013 15:13 jianqing Quant Type: ISTD
Cal Date : 28-JUN-2013 13:31 Cal File: 06281306.d
Als bottle: 6 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

06/28/13

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$ 1 2-Fluorophenol	112	6.650	6.648	(0.773)	1750053	60.0000	66.27
$ 2 Phenol-d5	99	8.145	8.133	(0.947)	2037224	60.0000	62.76
3 Phenol	94	8.166	8.149	(0.950)	2364528	60.0000	64.22
$ 5 2-Chlorophenol-d4	132	8.300	8.293	(0.965)	1887549	60.0000	66.70
4 Bis(2-Chloroethyl)ether	93	8.263	8.250	(0.961)	1807394	60.0000	62.06
6 2-Chlorophenol	128	8.327	8.315	(0.968)	1836797	60.0000	65.08
7 1,3-Dichlorobenzene	146	8.540	8.534	(0.993)	2157100	60.0000	62.44
* 8 1,4-Dichlorobenzene-d4	152	8.599	8.592	(1.000)	408427	20.0000	
9 1,4-Dichlorobenzene	146	8.626	8.619	(1.003)	2114408	60.0000	60.82
$ 10 1,2-Dichlorobenzene-d4	152	8.898	8.891	(1.035)	1275670	60.0000	66.02
12 1,2-Dichlorobenzene	146	8.920	8.913	(1.037)	2016834	60.0000	61.24
11 Benzyl alcohol	108	8.871	8.859	(1.032)	1265172	60.0000	67.05
14 2,2'-oxybis(1-Chloropropane)	45	9.123	9.110	(1.061)	2768542	60.0000	55.15
13 2-Methylphenol	108	9.090	9.078	(1.057)	1720011	60.0000	64.84
17 Hexachloroethane	117	9.406	9.399	(1.094)	656505	60.0000	58.95
16 N-Nitroso-di-n-propylamine	70	9.352	9.335	(1.088)	1121441	60.0000	58.54
15 4-Methylphenol	108	9.325	9.308	(1.084)	1794085	60.0000	64.41
$ 18 Nitrobenzene-d5	82	9.528	9.516	(0.895)	1369145	60.0000	58.16
19 Nitrobenzene	77	9.560	9.548	(0.898)	1434275	60.0000	55.63
20 Isophorone	82	9.945	9.922	(0.934)	2586071	60.0000	59.00
21 2-Nitrophenol	139	10.068	10.056	(0.946)	976965	60.0000	67.60
22 2,4-Dimethylphenol	107	10.159	10.141	(0.954)	1483558	60.0000	62.68
23 Bis(2-Chloroethoxy)methane	93	10.308	10.296	(0.968)	2051006	60.0000	59.43
24 Benzoic acid	105	10.468	10.382	(0.983)	2548449	120.000	142.1
25 2,4-Dichlorophenol	162	10.452	10.435	(0.982)	1506680	60.0000	65.41
26 1,2,4-Trichlorobenzene	180	10.581	10.569	(0.994)	1659613	60.0000	59.56
* 27 Naphthalene-d8	136	10.645	10.633	(1.000)	1467502	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.677	10.665	(1.003)	4162767	60.0000	54.52
	29 4-Chloroaniline	127	10.810	10.793	(1.016)	1616938	60.0000	57.28
	30 Hexachlorobutadiene	225	10.981	10.969	(1.032)	746794	60.0000	57.62
	31 4-Chloro-3-methylphenol	107	11.601	11.583	(1.090)	1282901	60.0000	63.41
	32 2-Methylnaphthalene	141	11.793	11.776	(1.108)	2561865	60.0000	63.21
	33 Hexachlorocyclopentadiene	237	12.167	12.155	(0.900)	900009	60.0000	65.43
	34 2,4,6-Trichlorophenol	196	12.300	12.283	(0.910)	935406	60.0000	66.52
	35 2,4,5-Trichlorophenol	196	12.359	12.342	(0.915)	951968	60.0000	65.76
$	36 2-Fluorobiphenyl	172	12.429	12.411	(0.920)	3182140	60.0000	64.07
	37 2-Chloronaphthalene	162	12.584	12.561	(0.931)	2724813	60.0000	55.48
	38 2-Nitroaniline	65	12.808	12.785	(0.948)	718363	60.0000	67.18
	39 Dimethylphthalate	163	13.171	13.148	(0.975)	3226493	60.0000	62.63
	40 Acenaphthylene	152	13.262	13.244	(0.981)	3870511	60.0000	58.77
	41 2,6-Dinitrotoluene	165	13.273	13.244	(0.982)	690029	60.0000	61.96
*	42 Acenaphthene-d10	164	13.513	13.495	(1.000)	820554	20.0000	
	43 3-Nitroaniline	138	13.492	13.463	(0.998)	616623	60.0000	59.86
	44 Acenaphthene	153	13.566	13.549	(1.004)	2824664	60.0000	62.46
	45 2,4-Dinitrophenol	184	13.652	13.629	(1.010)	891287	120.000	165.8
	46 Dibenzofuran	168	13.828	13.805	(1.023)	3376047	60.0000	63.78
	47 4-Nitrophenol	109	13.775	13.752	(1.019)	217566	60.0000	67.29
	48 2,4-Dinitrotoluene	165	13.903	13.875	(1.029)	872300	60.0000	64.34
	50 Diethylphthalate	149	14.325	14.297	(1.060)	2342917	60.0000	54.66
	49 Fluorene	166	14.383	14.366	(1.064)	2551555	60.0000	55.15
	51 4-Chlorophenyl-phenylether	204	14.399	14.377	(1.066)	1120436	60.0000	51.30
	52 4-Nitroaniline	138	14.501	14.462	(1.073)	601597	60.0000	65.42
	53 4,6-Dinitro-2-methylphenol	198	14.570	14.537	(0.916)	1153837	120.000	153.2
	54 N-Nitrosodiphenylamine	169	14.608	14.580	(0.919)	2179138	60.0000	67.21
$	55 2,4,6-Tribromophenol	330	14.811	14.783	(1.096)	262683	60.0000	55.54
	56 4-Bromophenyl-phenylether	248	15.179	15.162	(0.955)	792566	60.0000	63.40
	57 Hexachlorobenzene	284	15.414	15.392	(0.969)	799463	60.0000	59.24
	58 Pentachlorophenol	266	15.708	15.685	(0.988)	480239	60.0000	70.77
*	59 Phenanthrene-d10	188	15.900	15.878	(1.000)	1062308	20.0000	
	60 Phenanthrene	178	15.938	15.915	(1.002)	3818414	60.0000	62.42
	61 Anthracene	178	16.012	15.990	(1.007)	3791783	60.0000	62.00
	62 Carbazole	167	16.285	16.257	(1.024)	3654525	60.0000	64.79
	63 Di-n-butylphthalate	149	16.963	16.946	(1.067)	4625258	60.0000	62.39
	64 Fluoranthene	202	17.882	17.854	(1.125)	4061232	60.0000	64.10
	65 Pyrene	202	18.240	18.217	(0.902)	4252874	60.0000	62.11
$	66 Terphenyl-d14	244	18.528	18.500	(0.916)	2570201	60.0000	64.93
	67 Butylbenzylphthalate	149	19.393	19.371	(0.959)	2178138	60.0000	64.88
	68 Benzo(a)anthracene	228	20.200	20.172	(0.999)	3487979	60.0000	55.68
*	69 Chrysene-d12	240	20.221	20.198	(1.000)	1095016	20.0000	
	70 3,3'-Dichlorobenzidine	252	20.184	20.161	(0.998)	1085930	60.0000	54.55
	71 Chrysene	228	20.269	20.241	(1.002)	3608044	60.0000	61.23
	72 bis(2-Ethylhexyl)phthalate	149	20.365	20.343	(0.956)	3000558	60.0000	60.87
*	134 Di-n-octylphthalate-d4	153	21.295	21.272	(1.000)	1690422	20.0000	
	73 Di-n-octylphthalate	149	21.305	21.288	(1.000)	5044034	60.0000	54.61

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	21.856	21.827	(0.976)	4220249	60.0000	66.83
	75 Benzo(k)fluoranthene	252	21.888	21.860	(0.978)	3771548	60.0000	63.16
	187 Total Benzofluoranthenes	252	21.888	21.860	(0.978)	7478320	120.000	129.0
	76 Benzo(a)pyrene	252	22.310	22.276	(0.997)	3595436	60.0000	66.06
*	77 Perylene-d12	264	22.384	22.356	(1.000)	1117365	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	24.131	24.092	(1.078)	4525111	60.0000	65.56
	79 Dibenzo(a,h)anthracene	278	24.163	24.113	(1.079)	3608483	60.0000	64.37
	80 Benzo(g,h,i)perylene	276	24.644	24.589	(1.101)	4357525	60.0000	70.32
	90 N-Nitrosodimethylamine	74	4.182	4.186	(0.486)	1142306	60.0000	59.10
	103 Pyridine	79	4.139	4.154	(0.481)	1755360	60.0000	60.82 (H)
	91 Aniline	93	8.156	8.144	(0.948)	2282018	60.0000	61.08
	105 1-methylnaphthalene	141	11.969	11.952	(1.124)	2569081	60.0000	63.54
	93 Benzidine	184	18.112	18.089	(0.896)	673766	60.0000	59.14
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.643	16.615	(1.047)	179973	60.0000	65.09
	143 1,4-Dioxane	88	3.386	3.401	(0.394)	729200	60.0000	63.24
$	137 d8-1,4-Dioxane	96	3.322	3.337	(0.386)	715900	60.0000	62.88
	144 alpha-Terpineol	59	10.693	10.675	(1.004)	1006698	60.0000	58.45
	177 p-Benzoquinone	82	7.296	7.294	(0.848)	277959	60.0000	71.51
	98 Retene	219	18.785	18.756	(0.929)	1715905	60.0000	63.80
	99 Perylene	252	22.427	22.399	(1.002)	3232598	60.0000	69.49
	133 Butylatedhydroxytoluene	205	13.662	13.640	(1.011)	1476000	60.0000	53.29
	115 Tributyl Phosphate	99	14.683	14.649	(0.923)	3083985	60.0000	64.62
	116 Dibutyl Phenyl Phosphate	175	16.408	16.390	(1.032)	2436798	60.0000	69.53
	117 Butyl Diphenyl Phosphate	94	18.106	18.078	(0.895)	662636	60.0000	63.52
	118 Triphenyl Phosphate	326	19.714	19.691	(0.975)	735282	60.0000	66.23
	123 Acetophenone	105	9.293	9.276	(1.081)	2335779	60.0000	61.06
	168 Pentachlorobenzene	250	13.871	13.848	(1.026)	994231	60.0000	58.62
	113 Diphenyl Oxide	170	12.754	12.737	(0.944)	2125834	60.0000	65.18
	112 Biphenyl	154	12.568	12.550	(0.930)	3073281	60.0000	58.39
	120 2,3,4,6-Tetrachlorophenol	232	14.100	14.078	(1.043)	648474	60.0000	65.19
	151 1,2,4,5-Tetrachlorobenzene	216	12.135	12.117	(0.898)	1420853	60.0000	64.74
	110 Tetrachloroguaiacol	247	15.836	15.808	(0.996)	632138	120.000	122.8
	109 3,4,5-Trichloroguaiacol	213	14.319	14.297	(0.901)	433519	60.0000	65.13
	181 3,4,6-Trichloroguaiacol	211	14.197	14.174	(1.651)	408308	60.0000	59.85
	108 4,5,6-Trichloroguaiacol	213	15.227	15.205	(1.127)	427685	60.0000	65.23
	184 3,4-Dichloroguaiacol	192	12.653	12.630	(1.471)	563749	60.0000	66.00
	107 4,5-Dichloroguaiacol	192	13.433	13.410	(0.994)	1443447	120.000	140.2
	182 4,6-Dichloroguaiacol	192	13.433	13.410	(1.562)	1443447	120.000	136.0
	185 4-Chloroguaiacol	115	11.553	11.535	(1.085)	251200	30.0000	32.10
	186 Carbaryl	144	16.696	16.663	(1.050)	2170371	60.0000	72.32
	178 2-Benzyl-4-Chlorophenol	218	16.643	16.615	(1.047)	713564	60.0000	69.01
	106 Guaiacol	124	9.550	9.532	(1.111)	1552694	60.0000	61.77
	188 2,6-Dichlorophenol	162	10.826	10.804	(1.259)	1666033	60.0000	67.35
	189 N-Nitrosomethylethylamine	88	5.848	5.847	(0.680)	480940	60.0000	56.82

QC Flag Legend

H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 06281306.d
Lab Smp Id: IC600628
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Misc Info: 13-

Calibration Date: 28-JUN-2013
Calibration Time: 10:39
Client Smp ID: IC600628
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	461788	230894	923576	408427	-11.56
27 Naphthalene-d8	1684670	842335	3369340	1467502	-12.89
42 Acenaphthene-d10	967427	483714	1934854	820554	-15.18
59 Phenanthrene-d10	1360143	680072	2720286	1062308	-21.90
69 Chrysene-d12	1402665	701332	2805330	1095016	-21.93
134 Di-n-octylphthala	2121193	1060596	4242386	1690422	-20.31
77 Perylene-d12	1443992	721996	2887984	1117365	-22.62

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.59	8.09	9.09	8.60	0.08
27 Naphthalene-d8	10.63	10.13	11.13	10.64	0.11
42 Acenaphthene-d10	13.50	13.00	14.00	13.51	0.13
59 Phenanthrene-d10	15.88	15.38	16.38	15.90	0.14
69 Chrysene-d12	20.20	19.70	20.70	20.22	0.11
134 Di-n-octylphthala	21.27	20.77	21.77	21.29	0.11
77 Perylene-d12	22.36	21.86	22.86	22.38	0.13

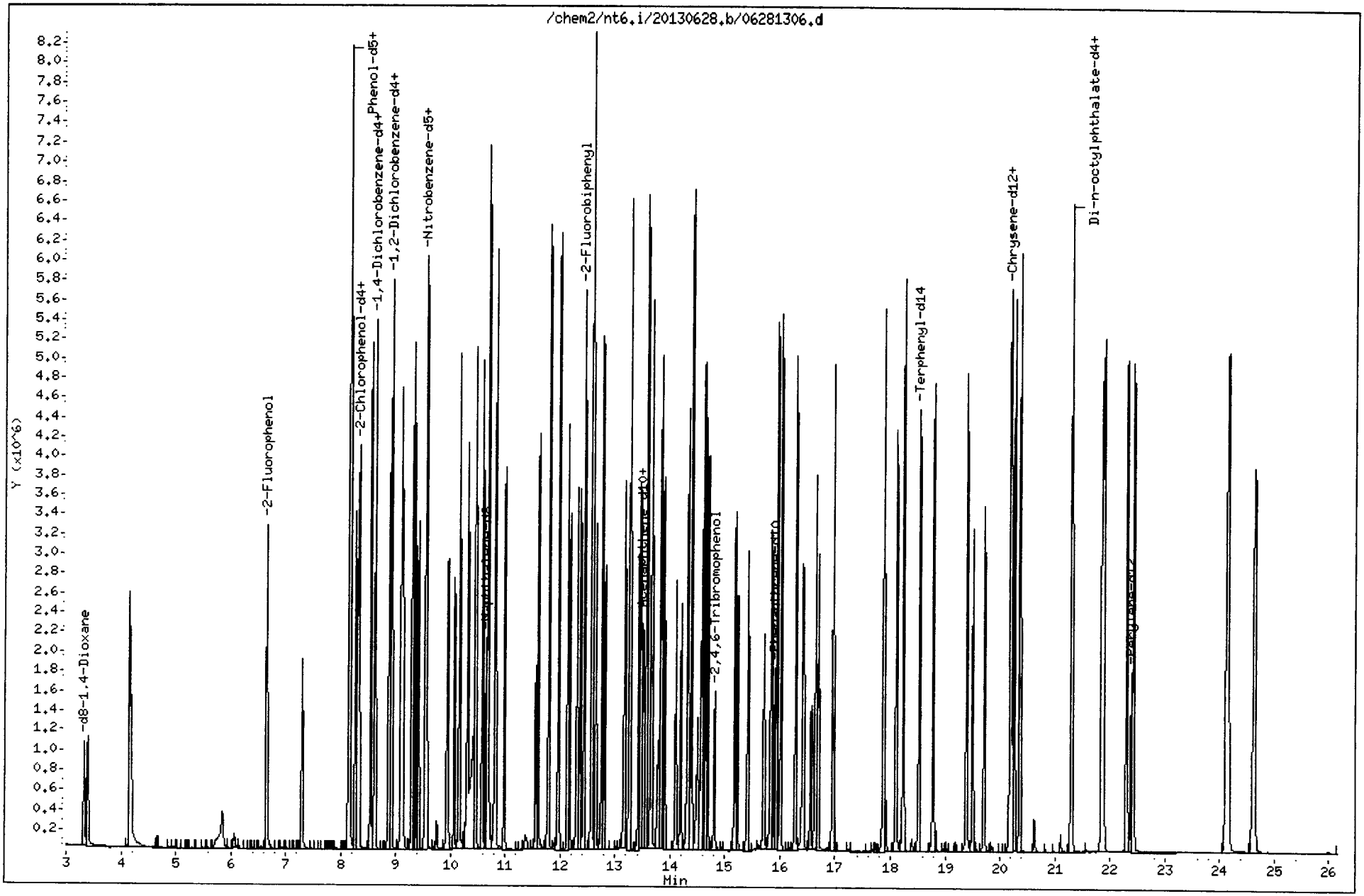
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130628.b/06281306.d
Date : 28-JUN-2013 13:31
Client ID: IC600628
Sample Info: IC600628,

Column phase: ZB-5msi

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 06281306.d

Lab ID: IC600628, Method: SW846062813.m, Instrument: nt6.i, Date: 28-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130628.b/06281307.d
Lab Smp Id: IC800628 Client Smp ID: IC800628
Inj Date : 28-JUN-2013 14:05
Operator : JZ Inst ID: nt6.i
Smp Info : IC800628,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130628.b/SW846062813.m
Meth Date : 28-Jun-2013 15:13 jianqing Quant Type: ISTD
Cal Date : 28-JUN-2013 14:05 Cal File: 06281307.d
Als bottle: 7 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

06/28/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.663	6.648	(0.775)	95723	80.0000	3.198
$	2 Phenol-d5	99	8.148	8.133	(0.947)	133217	80.0000	3.621
	3 Phenol	94	8.174	8.149	(0.950)	3155879	80.0000	75.64
$	5 2-Chlorophenol-d4	132	8.308	8.293	(0.966)	110035	80.0000	3.431
	4 Bis(2-Chloroethyl)ether	93	8.265	8.250	(0.961)	2653347	80.0000	80.39
	6 2-Chlorophenol	128	8.334	8.315	(0.969)	2537874	80.0000	79.34
	7 1,3-Dichlorobenzene	146	8.548	8.534	(0.994)	2996608	80.0000	76.54
*	8 1,4-Dichlorobenzene-d4	152	8.601	8.592	(1.000)	462866	20.0000	
	9 1,4-Dichlorobenzene	146	8.628	8.619	(1.003)	2967173	80.0000	75.31
$	10 1,2-Dichlorobenzene-d4	152	8.901	8.891	(1.035)	79095	80.0000	3.612
	12 1,2-Dichlorobenzene	146	8.927	8.913	(1.038)	2905094	80.0000	77.83
	11 Benzyl alcohol	108	8.885	8.859	(1.033)	1864512	80.0000	87.20
	14 2,2'-oxybis(1-Chloropropane)	45	9.125	9.110	(1.061)	3790887	80.0000	66.64
	13 2-Methylphenol	108	9.104	9.078	(1.058)	2381381	80.0000	79.22
	17 Hexachloroethane	117	9.413	9.399	(1.094)	949997	80.0000	75.27
	16 N-Nitroso-di-n-propylamine	70	9.365	9.335	(1.089)	1683339	80.0000	77.53
	15 4-Methylphenol	108	9.333	9.308	(1.085)	2453941	80.0000	77.73
$	18 Nitrobenzene-d5	82	Compound Not Detected.					
	19 Nitrobenzene	77	9.568	9.548	(0.899)	2083952	80.0000	69.90
	20 Isophorone	82	9.958	9.922	(0.935)	3984794	80.0000	78.61
	21 2-Nitrophenol	139	10.076	10.056	(0.946)	1438336	80.0000	86.06
	22 2,4-Dimethylphenol	107	10.172	10.141	(0.955)	2110405	80.0000	77.11
	23 Bis(2-Chloroethoxy)methane	93	10.316	10.296	(0.969)	3021822	80.0000	75.71
	24 Benzoic acid	105	10.514	10.382	(0.987)	3907025	160.000	188.4
	25 2,4-Dichlorophenol	162	10.460	10.435	(0.982)	2108995	80.0000	79.17
	26 1,2,4-Trichlorobenzene	180	10.588	10.569	(0.994)	2396546	80.0000	74.37
*	27 Naphthalene-d8	136	10.647	10.633	(1.000)	1697001	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.685	10.665	(1.004)	5602172	80.0000	63.45
	29 4-Chloroaniline	127	10.818	10.793	(1.016)	2125374	80.0000	65.11
	30 Hexachlorobutadiene	225	10.984	10.969	(1.032)	1016345	80.0000	67.81
	31 4-Chloro-3-methylphenol	107	11.609	11.583	(1.090)	1826285	80.0000	78.07
	32 2-Methylnaphthalene	141	11.801	11.776	(1.108)	3432482	80.0000	73.24
	33 Hexachlorocyclopentadiene	237	12.169	12.155	(0.900)	1301070	80.0000	83.83
	34 2,4,6-Trichlorophenol	196	12.308	12.283	(0.911)	1341008	80.0000	84.51
	35 2,4,5-Trichlorophenol	196	12.367	12.342	(0.915)	1319961	80.0000	80.81
$	36 2-Fluorobiphenyl	172	12.431	12.411	(0.920)	163166	80.0000	2.912
	37 2-Chloronaphthalene	162	12.591	12.561	(0.932)	3649057	80.0000	65.85
	38 2-Nitroaniline	65	12.816	12.785	(0.948)	979999	80.0000	81.23
	39 Dimethylphthalate	163	13.184	13.148	(0.975)	4915810	80.0000	84.57
	40 Acenaphthylene	152	13.264	13.244	(0.981)	5400121	80.0000	72.67
	41 2,6-Dinitrotoluene	165	13.280	13.244	(0.983)	1009707	80.0000	80.35
*	42 Acenaphthene-d10	164	13.515	13.495	(1.000)	925875	20.0000	
	43 3-Nitroaniline	138	13.499	13.463	(0.999)	848809	80.0000	73.02
	44 Acenaphthene	153	13.574	13.549	(1.004)	3973181	80.0000	77.86
	45 2,4-Dinitrophenol	184	13.681	13.629	(1.012)	1298390	160.000	214.0
	46 Dibenzofuran	168	13.841	13.805	(1.024)	4423713	80.0000	74.06
	47 4-Nitrophenol	109	13.788	13.752	(1.020)	312003	80.0000	85.52
	48 2,4-Dinitrotoluene	165	13.916	13.875	(1.030)	1306580	80.0000	85.40
	50 Diethylphthalate	149	14.332	14.297	(1.060)	3097994	80.0000	64.06
	49 Fluorene	166	14.397	14.366	(1.065)	3290252	80.0000	63.02
	51 4-Chlorophenyl-phenylether	204	14.407	14.377	(1.066)	1399939	80.0000	56.81
	52 4-Nitroaniline	138	14.514	14.462	(1.074)	868612	80.0000	83.72
	53 4,6-Dinitro-2-methylphenol	198	14.589	14.537	(0.917)	1628691	160.000	192.7
	54 N-Nitrosodiphenylamine	169	14.616	14.580	(0.919)	2940204	80.0000	80.78
$	55 2,4,6-Tribromophenol	330	14.813	14.783	(1.096)	5100	80.0000	1.590
	56 4-Bromophenyl-phenylether	248	15.187	15.162	(0.955)	1110621	80.0000	79.14
	57 Hexachlorobenzene	284	15.422	15.392	(0.970)	1058171	80.0000	69.84
	58 Pentachlorophenol	266	15.716	15.685	(0.988)	688386	80.0000	90.37
*	59 Phenanthrene-d10	188	15.903	15.878	(1.000)	1192539	20.0000	
	60 Phenanthrene	178	15.945	15.915	(1.003)	5507473	80.0000	80.20
	61 Anthracene	178	16.020	15.990	(1.007)	5123369	80.0000	74.62
	62 Carbazole	167	16.293	16.257	(1.025)	5234025	80.0000	82.66
	63 Di-n-butylphthalate	149	16.971	16.946	(1.067)	6447322	80.0000	77.47
	64 Fluoranthene	202	17.884	17.854	(1.125)	5523591	80.0000	77.66
	65 Pyrene	202	18.247	18.217	(0.902)	5878362	80.0000	79.91
$	66 Terphenyl-d14	244	18.520	18.500	(0.916)	142432	80.0000	3.349
	67 Butylbenzylphthalate	149	19.401	19.371	(0.959)	3055233	80.0000	84.70
	68 Benzo(a)anthracene	228	20.208	20.172	(0.999)	4698186	80.0000	69.81
*	69 Chrysene-d12	240	20.229	20.198	(1.000)	1176464	20.0000	
	70 3,3'-Dichlorobenzidine	252	20.192	20.161	(0.998)	1171512	80.0000	54.78
	71 Chrysene	228	20.277	20.241	(1.002)	4741111	80.0000	74.88
	72 bis(2-Ethylhexyl)phthalate	149	20.368	20.343	(0.956)	4181718	80.0000	81.50
*	134 Di-n-octylphthalate-d4	153	21.297	21.272	(1.000)	1759436	20.0000	
	73 Di-n-octylphthalate	149	21.319	21.288	(1.001)	6619563	80.0000	68.86

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	21.869	21.827	(0.977)	5972423	80.0000	82.25
	75 Benzo(k)fluoranthene	252	21.906	21.860	(0.978)	4190557	80.0000	61.03
	187 Total Benzofluoranthenes	252	21.906	21.860	(0.978)	9490497	160.000	142.4
	76 Benzo(a)pyrene	252	22.323	22.276	(0.997)	4851068	80.0000	77.51
*	77 Perylene-d12	264	22.392	22.356	(1.000)	1284805	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	24.155	24.092	(1.079)	6172697	80.0000	77.77
	79 Dibenzo(a,h)anthracene	278	24.192	24.113	(1.080)	4554990	80.0000	70.66
	80 Benzo(g,h,i)perylene	276	24.667	24.589	(1.102)	6310691	80.0000	88.56
	90 N-Nitrosodimethylamine	74	4.227	4.186	(0.491)	1897863	80.0000	86.64
	103 Pyridine	79	4.190	4.154	(0.487)	3006346	80.0000	91.92
	91 Aniline	93	8.158	8.144	(0.948)	3049882	80.0000	72.03
	105 1-methylnaphthalene	141	11.972	11.952	(1.124)	3408951	80.0000	72.91
	93 Benzidine	184	18.114	18.089	(0.895)	763992	80.0000	62.42
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.656	16.615	(1.047)	263382	80.0000	84.85
	143 1,4-Dioxane	88	3.431	3.401	(0.399)	1160601	80.0000	88.82
$	137 d8-1,4-Dioxane	96	3.367	3.337	(0.391)	1138084	80.0000	88.20
	144 alpha-Terpineol	59	10.701	10.675	(1.005)	1372953	80.0000	68.93
	177 p-Benzoquinone	82	7.304	7.294	(0.849)	396354	80.0000	89.98
	98 Retene	219	18.787	18.756	(0.929)	2231259	80.0000	77.22
	99 Perylene	252	22.440	22.399	(1.002)	4251695	80.0000	79.49
	133 Butylatedhydroxytoluene	205	13.665	13.640	(1.011)	1828319	80.0000	58.50
	115 Tributyl Phosphate	99	14.696	14.649	(0.924)	4205375	80.0000	78.50
	116 Dibutyl Phenyl Phosphate	175	16.410	16.390	(1.032)	3521628	80.0000	89.51
	117 Butyl Diphenyl Phosphate	94	18.109	18.078	(0.895)	921324	80.0000	82.20
	118 Triphenyl Phosphate	326	19.716	19.691	(0.975)	951203	80.0000	79.74
	123 Acetophenone	105	9.301	9.276	(1.081)	3497863	80.0000	80.68
	168 Pentachlorobenzene	250	13.878	13.848	(1.027)	1301618	80.0000	68.01
	113 Diphenyl Oxide	170	12.762	12.737	(0.944)	2895746	80.0000	78.69
	112 Biphenyl	154	12.570	12.550	(0.930)	3741959	80.0000	63.00
	120 2,3,4,6-Tetrachlorophenol	232	14.108	14.078	(1.044)	908759	80.0000	80.96
	151 1,2,4,5-Tetrachlorobenzene	216	12.137	12.117	(0.898)	2023253	80.0000	81.70
	110 Tetrachloroguaiacol	247	15.844	15.808	(0.996)	828191	160.000	143.4
	109 3,4,5-Trichloroguaiacol	213	14.327	14.297	(0.901)	548215	80.0000	73.37
	181 3,4,6-Trichloroguaiacol	211	14.204	14.174	(1.651)	572591	80.0000	74.06
	108 4,5,6-Trichloroguaiacol	213	15.230	15.205	(1.127)	609355	80.0000	82.37
	184 3,4-Dichloroguaiacol	192	12.655	12.630	(1.471)	846558	80.0000	87.46
	107 4,5-Dichloroguaiacol	192	13.441	13.410	(0.994)	2111681	160.000	181.8
	182 4,6-Dichloroguaiacol	192	13.441	13.410	(1.563)	2111681	160.000	175.6
	185 4-Chloroguaiacol	115	11.560	11.535	(1.086)	377467	40.0000	41.71
	186 Carbaryl	144	16.704	16.663	(1.050)	3305202	80.0000	98.11
	178 2-Benzyl-4-Chlorophenol	218	16.656	16.615	(1.047)	1048719	80.0000	90.35
	106 Guaiacol	124	9.558	9.532	(1.111)	2161437	80.0000	75.88
	188 2,6-Dichlorophenol	162	10.834	10.804	(1.260)	2240823	80.0000	79.93
	189 N-Nitrosomethylethylamine	88	5.862	5.847	(0.681)	720975	80.0000	75.17

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 06281307.d
Lab Smp Id: IC800628
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Misc Info: 13-

Calibration Date: 28-JUN-2013
Calibration Time: 10:39
Client Smp ID: IC800628
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	461788	230894	923576	462866	0.23
27 Naphthalene-d8	1684670	842335	3369340	1697001	0.73
42 Acenaphthene-d10	967427	483714	1934854	925875	-4.30
59 Phenanthrene-d10	1360143	680072	2720286	1192539	-12.32
69 Chrysene-d12	1402665	701332	2805330	1176464	-16.13
134 Di-n-octylphthala	2121193	1060596	4242386	1759436	-17.05
77 Perylene-d12	1443992	721996	2887984	1284805	-11.02

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.59	8.09	9.09	8.60	0.11
27 Naphthalene-d8	10.63	10.13	11.13	10.65	0.14
42 Acenaphthene-d10	13.50	13.00	14.00	13.52	0.15
59 Phenanthrene-d10	15.88	15.38	16.38	15.90	0.16
69 Chrysene-d12	20.20	19.70	20.70	20.23	0.15
134 Di-n-octylphthala	21.27	20.77	21.77	21.30	0.12
77 Perylene-d12	22.36	21.86	22.86	22.39	0.16

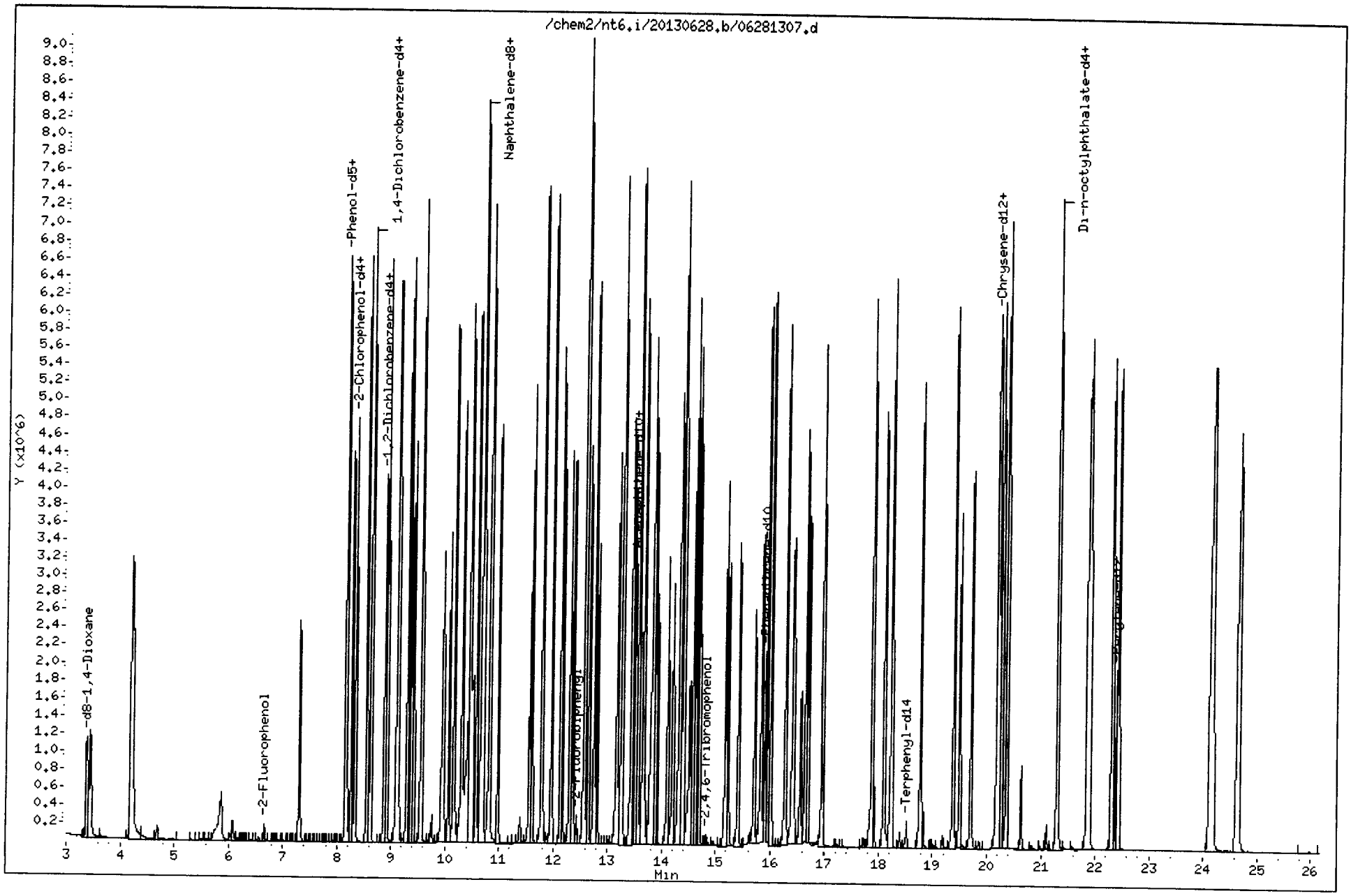
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130628.b/06281307.d
Date : 28-JUN-2013 14:05
Client ID: IC800628
Sample Info: IC800628,

Column phase: ZB-5ms1

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 06281307.d

Lab ID: IC800628, Method: SW846062813.m, Instrument: nt6.i, Date: 28-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WV67

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WV67 Client ID: SAIC

METHOD: **8270D**(SIM-SVOA) **KRONE**(Butyl Tins) **8270D**(SVOA) **8270D**(OP-Pest)

Instrument: NT-4 (NT-6) NT-8 NT-10 NT11 NT12

Curve Date: 6/28/13 Analysis Start Date: 6/28/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
DFTPP Tune met Criteria?	(Y) / N / ____	Internal Standard within 50-200%?	(Y) / N / ____
DDT Breakdown <20%?	(Y) / N / ____	Retention Times within Windows?	(Y) / N / ____
Peak Tailing Factor ≤2?	(Y) / N / ____	Method Blank in Control?	(Y) / N / ____
CCAL Meets %D?	(Y) / (N) ____	LCS / LCSD Recovery in Control?	(Y) / N / ____
ICAL Q Flag applied?	(NA) / Y / N / ____	LCS / LCSD RPD ≤ 30%?	(NA) / ____
CCAL Q flag applied?	(NA) / Y / N / ____	MS / MSD Recovery in Control?	(NA) / Y / N / ____
Surrogate Recovery met?	(Y) / (N) ____	MS / MSD RPD ≤ 30%?	(NA) / ____
Manual Integrations?	(Y) / N / ____	Samples Diluted?	(Y) / N / ____
Integration Summary?	(Y) / N / ____	Special Analysis Request?	Y / (N) / ____

Detail problems, corrective actions and/or other pertinent information below.

Sample E + MB/LCS + Dilution for Sample E.

Sample E 1X: Due to matrix effect. IS, Naphthalene-d8, recovery out of qc limit @ low bias

Dilution 3X: OK.

(Review 1) Analyst: _____ **Date:** 06/28/13

(Review 2) Reviewer: _____ **Date:** 6/28/13

Analytical Resources Inc.: Organics Instrument Log
NT-6 Serial No.:GC=US00036167, MS=US81221575

Date: 6/28/13 Analysis: 8270D Analyst: AB

GC Program: ~~8270_ULNOV~~ Column No: 23417 Column Type: ZB-5MSi

Instrument Tune (.U or .CT.): 0628f3 130628 EM Voltage: 1765

Calibration File: 06281301 Curve Date: 6/28/13 Injection Vol.: 1µl

IS/SS	Ical/Ccal	LCS/ICV
B000781	~~2053-2~~, ~~2054-1~~	~~2056-1~~, ~~2057-1~~
	~~2055-1~~, ~~2061-1~~	~~2058-1~~, ~~2061-1~~
	~~T803~~, ~~2027-2~~	T803, ~~2058-2~~
	~~2058-2~~	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem2/nt6.i/20130628.b

	Time	Filename	LabID	ClientId	DF															
1	1039	06281301.d	IC250628	IC250628	1	8.59	461788	10.63	1684670	13.50	967427	15.88	1360143	20.20	1402665	22.36	1443992	21.27	2121193
2	1113	06281302.d	IC10628	IC10628	1	8.60	496846	10.64	1812643	13.50	1087216	15.89	1645950	20.20	1561328	22.37	1675737	21.29	2212687
3	1148	06281303.d	IC50628	IC50628	1	8.60	475038	10.64	1724283	13.50	1045649	15.89	1495598	20.21	1486847	22.37	1526155	21.29	2074242
4	1222	06281304.d	IC100628	IC100628	1	8.60	479056	10.64	1533253	13.50	1000507	15.89	1437700	20.21	1483719	22.38	1552415	21.29	2132043
5	1256	06281305.d	IC400628	IC400628	1	8.60	476326	10.64	1699140	13.51	969011	15.89	1323545	20.22	1367316	22.38	1419527	21.29	2079141
6	1331	06281306.d	IC600628	IC600628	1	8.60	408427	10.64	1467502	13.51	820554	15.90	1062308	20.22	1095016	22.38	1117365	21.29	1690422
7	1405	06281307.d	IC800628	IC800628	1	8.60	462866	10.65	1697001	13.52	925875	15.90	1192539	20.23	1176464	22.39	1284805	21.30	1759436
8	1439	06281308.d	WV67LCSW1	WV67LCSW1	1	8.60	472193	10.64	1671598	13.51	941643	15.89	1272040	20.21	1309736	21.29	2035846	22.38	1398310
9	1514	06281309.d	WV67MBW1	WV67MBW1	1	8.60	461181	10.64	1711497	13.50	1019256	15.89	1556980	20.21	1431842	21.29	1951431	22.38	1554548
10	1548	06281310.d	WV67E	UP-CB-B8-201	1	8.60	441245	10.64	856098	13.52	1018520	15.90	1559376	20.21	1453945	21.29	2057957	22.38	1668571
11	1641	06281311.d	WV67E	UP-CB-B8-201	3	8.60	590258	10.64	2133315	13.51	1359406	15.89	2015286	20.21	1885961	21.29	2639926	22.38	2049533

E 15 min.

6/28/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/nt6.i/20130628.b

ARI Job No.: IC25 Method: SW846062813.m Instrument: nt6.i Date: 28-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1039	06281301.d	IC250628	IC250628	1	NO MANUAL INTEGRATION
1439	06281308.d	WV67LCSW1	WV67LCSW1	1	NO MANUAL INTEGRATION
1514	06281309.d	WV67MBW1	WV67MBW1	1	NO MANUAL INTEGRATION
1548	06281310.d	WV67E	UP-CB-B8-2	1	2-Methylphenol, 4-Methylphenol, Benzoic acid, Pentachlorophenol, 2-Fluorophenol, Phenol-d5,
1641	06281311.d	WV67E	UP-CB-B8-2	3	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem2/nt6.i/20130628.b

Instrument: nt6.i Date: 28-JUN-2013 Method: SW846062813.m

INITIAL CAL: 28-JUN-2013

Compound	%RSD or R^2
Benzidine	28.8
2,4,6-Tribromophenol	81.2

CONTINUING CAL: 28-JUN-2013

Compound	%D
Benzidine	-22.6
2,4,6-Tribromophenol	-63.2

nTC

06/28/13

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i
Lab File ID: 06281301.d
Analysis Type:
Lab Sample ID: IC250628
Method: /chem2/nt6.i/20130628.b/SW846062813.m

Injection Date: 28-JUN-2013 10:39
Init. Cal. Date(s): 28-JUN-2013 28-JUN-2013
Init. Cal. Times: 10:39 14:05
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 2-Fluorophenol	1.29325	1.20211	1.20211	0.010	-7.04732	20.00000	Averaged
$ 2 Phenol-d5	1.58964	1.59941	1.59941	0.010	0.61436	20.00000	Averaged
3 Phenol	1.80285	1.93196	1.93196	0.010	7.16114	20.00000	Averaged
$ 5 2-Chlorophenol-d4	1.38570	1.36132	1.36132	0.010	-1.75888	20.00000	Averaged
4 Bis(2-Chloroethyl)ether	1.42615	1.49028	1.49028	0.010	4.49714	20.00000	Averaged
6 2-Chlorophenol	1.38206	1.48136	1.48136	0.010	7.18521	20.00000	Averaged
7 1,3-Dichlorobenzene	1.69159	1.79802	1.79802	0.010	6.29171	20.00000	Averaged
9 1,4-Dichlorobenzene	1.70250	1.82715	1.82715	0.010	7.32148	20.00000	Averaged
$ 10 1,2-Dichlorobenzene-d4	0.94621	0.95108	0.95108	0.010	0.51453	20.00000	Averaged
12 1,2-Dichlorobenzene	1.61280	1.75991	1.75991	0.010	9.12157	20.00000	Averaged
11 Benzyl alcohol	0.92394	0.94095	0.94095	0.010	1.84130	20.00000	Averaged
14 2,2'-oxybis(1-Chloropropane	2.45809	2.56539	2.56539	0.010	4.36486	20.00000	Averaged
13 2-Methylphenol	1.29891	1.40636	1.40636	0.010	8.27196	20.00000	Averaged
17 Hexachloroethane	0.54536	0.56206	0.56206	0.010	3.06268	20.00000	Averaged
16 N-Nitroso-di-n-propylamine	0.93812	0.97840	0.97840	0.005	4.29429	20.00000	Averaged
15 4-Methylphenol	1.36407	1.52013	1.52013	0.010	11.44069	20.00000	Averaged
$ 18 Nitrobenzene-d5	0.32083	0.30597	0.30597	0.010	-4.63232	20.00000	Averaged
19 Nitrobenzene	0.35136	0.36278	0.36278	0.010	3.25036	20.00000	Averaged
20 Isophorone	0.59740	0.60551	0.60551	0.010	1.35913	20.00000	Averaged
21 2-Nitrophenol	0.19697	0.20897	0.20897	0.010	6.09293	20.00000	Averaged
22 2,4-Dimethylphenol	0.32256	0.33676	0.33676	0.010	4.40115	20.00000	Averaged
23 Bis(2-Chloroethoxy)methane	0.47038	0.48226	0.48226	0.010	2.52517	20.00000	Averaged
24 Benzoic acid	0.24446	0.22236	0.22236	0.010	-9.04204	20.00000	Averaged
25 2,4-Dichlorophenol	0.31395	0.34807	0.34807	0.010	10.86900	20.00000	Averaged
26 1,2,4-Trichlorobenzene	0.37977	0.38631	0.38631	0.010	1.72206	20.00000	Averaged
28 Naphthalene	1.00983	1.10265	1.10265	0.010	9.19186	20.00000	Averaged
29 4-Chloroaniline	0.37448	0.35413	0.35413	0.010	-5.43433	20.00000	Averaged
30 Hexachlorobutadiene	0.17663	0.18061	0.18061	0.010	2.25089	20.00000	Averaged
31 4-Chloro-3-methylphenol	0.27571	0.29291	0.29291	0.010	6.23754	20.00000	Averaged
32 2-Methylnaphthalene	0.55233	0.56998	0.56998	0.010	3.19534	20.00000	Averaged
33 Hexachlorocyclopentadiene	0.33526	0.37104	0.37104	0.010	10.67194	20.00000	Averaged
34 2,4,6-Trichlorophenol	0.34276	0.37050	0.37050	0.010	8.09297	20.00000	Averaged
35 2,4,5-Trichlorophenol	0.35284	0.38086	0.38086	0.010	7.94248	20.00000	Averaged
$ 36 2-Fluorobiphenyl	1.21047	1.22684	1.22684	0.010	1.35231	20.00000	Averaged
37 2-Chloronaphthalene	1.19710	1.30594	1.30594	0.010	9.09217	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i
Lab File ID: 06281301.d
Analysis Type:
Lab Sample ID: IC250628
Method: /chem2/nt6.i/20130628.b/SW846062813.m

Injection Date: 28-JUN-2013 10:39
Init. Cal. Date(s): 28-JUN-2013 28-JUN-2013
Init. Cal. Times: 10:39 14:05
Quant Type: ISTD

AB 06/28/13

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
38 2-Nitroaniline	0.26062	0.26608	0.26608	0.010	2.09324	20.00000	Averaged	
39 Dimethylphthalate	1.25558	1.31932	1.31932	0.010	5.07596	20.00000	Averaged	
40 Acenaphthylene	1.60529	1.76589	1.76589	0.010	10.00475	20.00000	Averaged	
41 2,6-Dinitrotoluene	0.27145	0.30536	0.30536	0.010	12.49126	20.00000	Averaged	
43 3-Nitroaniline	0.25109	0.25013	0.25013	0.010	-0.38166	20.00000	Averaged	
44 Acenaphthene	1.10226	1.22634	1.22634	0.010	11.25604	20.00000	Averaged	
45 2,4-Dinitrophenol	41.28404	50.00000	0.13241	0.010	-17.43191	20.00000	Quadratic	
46 Dibenzofuran	1.29026	1.33362	1.33362	0.010	3.36005	20.00000	Averaged	
47 4-Nitrophenol	0.07880	0.09126	0.09126	0.010	15.81033	20.00000	Averaged	
48 2,4-Dinitrotoluene	0.33047	0.36109	0.36109	0.010	9.26368	20.00000	Averaged	
50 Diethylphthalate	1.04467	1.11297	1.11297	0.010	6.53765	20.00000	Averaged	
49 Fluorene	1.12772	1.31292	1.31292	0.010	16.42265	20.00000	Averaged	
51 4-Chlorophenyl-phenylether	0.53230	0.60301	0.60301	0.010	13.28260	20.00000	Averaged	
52 4-Nitroaniline	0.22413	0.19621	0.19621	0.010	-12.45732	20.00000	Averaged	
53 4,6-Dinitro-2-methylphenol	45.20225	50.00000	0.14339	0.010	-9.59550	20.00000	Quadratic	
54 N-Nitrosodiphenylamine	0.61042	0.65776	0.65776	0.010	7.75508	20.00000	Averaged	
$ 55 2,4,6-Tribromophenol	0.06638	0.02443	0.02443	0.010	-63.19428	20.00000	Averaged	<-
56 4-Bromophenyl-phenylether	0.23537	0.27094	0.27094	0.010	15.11570	20.00000	Averaged	
57 Hexachlorobenzene	0.25409	0.26460	0.26460	0.010	4.13703	20.00000	Averaged	
58 Pentachlorophenol	0.12775	0.12982	0.12982	0.010	1.61904	20.00000	Averaged	
60 Phenanthrene	1.15211	1.26212	1.26212	0.010	9.54824	20.00000	Averaged	
61 Anthracene	1.14036	1.26925	1.26925	0.010	11.30221	20.00000	Averaged	
62 Carbazole	1.06189	1.08104	1.08104	0.010	1.80355	20.00000	Averaged	
63 Di-n-butylphthalate	1.38941	1.52004	1.52004	0.010	9.40156	20.00000	Averaged	
64 Fluoranthene	1.19287	1.36593	1.36593	0.010	14.50803	20.00000	Averaged	
65 Pyrene	1.25062	1.38185	1.38185	0.010	10.49311	20.00000	Averaged	
$ 66 Terphenyl-d14	0.72293	0.74321	0.74321	0.010	2.80516	20.00000	Averaged	
67 Butylbenzylphthalate	0.61321	0.65199	0.65199	0.010	6.32344	20.00000	Averaged	
68 Benzo(a)anthracene	1.14413	1.27610	1.27610	0.010	11.53495	20.00000	Averaged	
70 3,3'-Dichlorobenzidine	0.36357	0.39312	0.39312	0.010	8.12736	20.00000	Averaged	
71 Chrysene	1.07634	1.22806	1.22806	0.010	14.09605	20.00000	Averaged	
72 bis(2-Ethylhexyl)phthalate	0.58324	0.63104	0.63104	0.010	8.19541	20.00000	Averaged	
73 Di-n-octylphthalate	1.09279	1.11253	1.11253	0.010	1.80693	20.00000	Averaged	
74 Benzo(b)fluoranthene	1.13040	1.30413	1.30413	0.010	15.36906	20.00000	Averaged	
75 Benzo(k)fluoranthene	1.06880	1.25408	1.25408	0.010	17.33556	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i
Lab File ID: 06281301.d
Analysis Type:
Lab Sample ID: IC250628
Method: /chem2/nt6.i/20130628.b/SW846062813.m

Injection Date: 28-JUN-2013 10:39
Init. Cal. Date(s): 28-JUN-2013 28-JUN-2013
Init. Cal. Times: 10:39 14:05
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
187 Total Benzofluoranthenes	1.03776	1.21039	1.21039	0.010	16.63472	20.00000	Averaged	
76 Benzo(a)pyrene	0.97421	1.12262	1.12262	0.010	15.23325	20.00000	Averaged	
78 Indeno(1,2,3-cd)pyrene	1.23552	1.39361	1.39361	0.010	12.79529	20.00000	Averaged	
79 Dibenzo(a,h)anthracene	1.00344	1.19468	1.19468	0.010	19.05866	20.00000	Averaged	
80 Benzo(g,h,i)perylene	1.10923	1.19740	1.19740	0.010	7.94830	20.00000	Averaged	
90 N-Nitrosodimethylamine	0.94647	1.00820	1.00820	0.010	6.52192	20.00000	Averaged	
103 Pyridine	1.41319	1.34705	1.34705	0.010	-4.68014	20.00000	Averaged	
91 Aniline	1.82956	1.85963	1.85963	0.010	1.64366	20.00000	Averaged	
105 1-methylnaphthalene	0.55102	0.56947	0.56947	0.010	3.34865	20.00000	Averaged	
93 Benzidine	0.20807	0.16112	0.16112	0.005	-22.56613	20.00000	Averaged	<-
111 Azobenzene (1,2-DP-Hydrazin	0.05206	0.05088	0.05088	0.010	-2.26421	20.00000	Averaged	
143 1,4-Dioxane	0.56461	0.55994	0.55994	0.010	-0.82759	20.00000	Averaged	
$ 137 d8-1,4-Dioxane	0.55752	0.55350	0.55350	0.010	-0.72036	20.00000	Averaged	
144 alpha-Terpineol	0.23474	0.22789	0.22789	0.010	-2.91573	20.00000	Averaged	
177 p-Benzoquinone	0.19033	0.19954	0.19954	0.010	4.83862	20.00000	Averaged	
98 Retene	0.49121	0.53169	0.53169	0.010	8.24099	20.00000	Averaged	
99 Perylene	0.83264	0.88271	0.88271	0.010	6.01356	20.00000	Averaged	
133 Butylatedhydroxytoluene	0.67507	0.77062	0.77062	0.010	14.15503	20.00000	Averaged	
115 Tributyl Phosphate	0.89848	0.84984	0.84984	0.010	-5.41361	20.00000	Averaged	
116 Dibutyl Phenyl Phosphate	0.65984	0.66992	0.66992	0.010	1.52766	20.00000	Averaged	
117 Butyl Diphenyl Phosphate	0.19055	0.19482	0.19482	0.010	2.24041	20.00000	Averaged	
118 Triphenyl Phosphate	0.20278	0.21249	0.21249	0.010	4.78471	20.00000	Averaged	
123 Acetophenone	1.87329	1.96532	1.96532	0.010	4.91291	20.00000	Averaged	
168 Pentachlorobenzene	0.41340	0.44619	0.44619	0.010	7.93143	20.00000	Averaged	
113 Diphenyl Oxide	0.79495	0.82740	0.82740	0.010	4.08235	20.00000	Averaged	
112 Biphenyl	1.28296	1.38845	1.38845	0.010	8.22203	20.00000	Averaged	
120 2,3,4,6-Tetrachlorophenol	0.24247	0.26132	0.26132	0.010	7.77056	20.00000	Averaged	
151 1,2,4,5-Tetrachlorobenzene	0.53496	0.58211	0.58211	0.010	8.81212	20.00000	Averaged	
110 Tetrachloroguaiacol	0.09688	0.09569	0.09569	0.010	-1.22550	20.00000	Averaged	
109 3,4,5-Trichloroguaiacol	0.12531	0.12761	0.12761	0.010	1.83207	20.00000	Averaged	
181 3,4,6-Trichloroguaiacol	0.33405	0.33193	0.33193	0.010	-0.63664	20.00000	Averaged	
108 4,5,6-Trichloroguaiacol	0.15980	0.16851	0.16851	0.010	5.44956	20.00000	Averaged	
184 3,4-Dichloroguaiacol	0.41825	0.41673	0.41673	0.010	-0.36236	20.00000	Averaged	
107 4,5-Dichloroguaiacol	0.25093	0.24927	0.24927	0.010	-0.65983	20.00000	Averaged	
182 4,6-Dichloroguaiacol	0.51964	0.52221	0.52221	0.010	0.49617	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i
Lab File ID: 06281301.d
Analysis Type:
Lab Sample ID: IC250628
Method: /chem2/nt6.i/20130628.b/SW846062813.m

Injection Date: 28-JUN-2013 10:39
Init. Cal. Date(s): 28-JUN-2013 28-JUN-2013
Init. Cal. Times: 10:39 14:05
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
185 4-Chloroguaiacol	0.10667	0.10144	0.10144	0.010	-4.89485	20.00000	Averaged
186 Carbaryl	0.56498	0.60119	0.60119	0.010	6.40868	20.00000	Averaged
178 2-Benzyl-4-Chlorophenol	0.19467	0.20179	0.20179	0.010	3.65757	20.00000	Averaged
106 Guaiacol	1.23086	1.32578	1.32578	0.010	7.71177	20.00000	Averaged
188 2,6-Dichlorophenol	1.21138	1.36103	1.36103	0.010	12.35369	20.00000	Averaged
189 N-Nitrosomethylethylamine	0.41445	0.34828	0.34828	0.010	-15.96411	20.00000	Averaged

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130628.b/06281301.d
Lab Smp Id: IC250628 Client Smp ID: IC250628
Inj Date : 28-JUN-2013 10:39
Operator : JZ Inst ID: nt6.i
Smp Info : IC250628,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130628.b/SW846062813.m
Meth Date : 28-Jun-2013 15:40 jianqing Quant Type: ISTD
Cal Date : 28-JUN-2013 14:05 Cal File: 06281307.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

06/28/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.648	6.648	(0.774)	693899	25.0000	23.24
$	2 Phenol-d5	99	8.133	8.133	(0.947)	923236	25.0000	25.15
	3 Phenol	94	8.149	8.149	(0.948)	1115193	25.0000	26.79
$	5 2-Chlorophenol-d4	132	8.293	8.293	(0.965)	785803	25.0000	24.56
	4 Bis(2-Chloroethyl)ether	93	8.250	8.250	(0.960)	860244	25.0000	26.12
	6 2-Chlorophenol	128	8.315	8.315	(0.968)	855095	25.0000	26.80
	7 1,3-Dichlorobenzene	146	8.534	8.534	(0.993)	1037879	25.0000	26.57
*	8 1,4-Dichlorobenzene-d4	152	8.592	8.592	(1.000)	461788	20.0000	
	9 1,4-Dichlorobenzene	146	8.619	8.619	(1.003)	1054693	25.0000	26.83
$	10 1,2-Dichlorobenzene-d4	152	8.891	8.891	(1.035)	548996	25.0000	25.13
	12 1,2-Dichlorobenzene	146	8.913	8.913	(1.037)	1015883	25.0000	27.28
	11 Benzyl alcohol	108	8.859	8.859	(1.031)	543152	25.0000	25.46
	14 2,2'-oxybis(1-Chloropropane)	45	9.110	9.110	(1.060)	1480831	25.0000	26.09
	13 2-Methylphenol	108	9.078	9.078	(1.057)	811800	25.0000	27.07
	17 Hexachloroethane	117	9.399	9.399	(1.094)	324442	25.0000	25.77
	16 N-Nitroso-di-n-propylamine	70	9.335	9.335	(1.086)	564767	25.0000	26.07
	15 4-Methylphenol	108	9.308	9.308	(1.083)	877471	25.0000	27.86
$	18 Nitrobenzene-d5	82	9.516	9.516	(0.895)	644315	25.0000	23.84
	19 Nitrobenzene	77	9.548	9.548	(0.898)	763961	25.0000	25.81
	20 Isophorone	82	9.922	9.922	(0.933)	1275115	25.0000	25.34
	21 2-Nitrophenol	139	10.056	10.056	(0.946)	440067	25.0000	26.52
	22 2,4-Dimethylphenol	107	10.141	10.141	(0.954)	709159	25.0000	26.10
	23 Bis(2-Chloroethoxy)methane	93	10.296	10.296	(0.968)	1015552	25.0000	25.63
	24 Benzoic acid	105	10.382	10.382	(0.976)	936497	50.0000	45.48
	25 2,4-Dichlorophenol	162	10.435	10.435	(0.981)	732978	25.0000	27.72
	26 1,2,4-Trichlorobenzene	180	10.569	10.569	(0.994)	813513	25.0000	25.43
*	27 Naphthalene-d8	136	10.633	10.633	(1.000)	1684670	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.665	10.665	(1.003)	2322004	25.0000	27.30
	29 4-Chloroaniline	127	10.793	10.793	(1.015)	745739	25.0000	23.64
	30 Hexachlorobutadiene	225	10.969	10.969	(1.032)	380332	25.0000	25.56
	31 4-Chloro-3-methylphenol	107	11.583	11.583	(1.089)	616823	25.0000	26.56
	32 2-Methylnaphthalene	141	11.776	11.776	(1.107)	1200276	25.0000	25.80
	33 Hexachlorocyclopentadiene	237	12.155	12.155	(0.901)	448693	25.0000	27.67
	34 2,4,6-Trichlorophenol	196	12.283	12.283	(0.910)	448044	25.0000	27.02
	35 2,4,5-Trichlorophenol	196	12.342	12.342	(0.914)	460567	25.0000	26.99
$	36 2-Fluorobiphenyl	172	12.411	12.411	(0.920)	1483601	25.0000	25.34
	37 2-Chloronaphthalene	162	12.561	12.561	(0.931)	1579251	25.0000	27.27
	38 2-Nitroaniline	65	12.785	12.785	(0.947)	321763	25.0000	25.52
	39 Dimethylphthalate	163	13.148	13.148	(0.974)	1595427	25.0000	26.27
	40 Acenaphthylene	152	13.244	13.244	(0.981)	2135463	25.0000	27.50
	41 2,6-Dinitrotoluene	165	13.244	13.244	(0.981)	369264	25.0000	28.12
*	42 Acenaphthene-d10	164	13.495	13.495	(1.000)	967427	20.0000	
	43 3-Nitroaniline	138	13.463	13.463	(0.998)	302480	25.0000	24.90
	44 Acenaphthene	153	13.549	13.549	(1.004)	1482988	25.0000	27.81
	45 2,4-Dinitrophenol	184	13.629	13.629	(1.010)	320237	50.0000	41.28
	46 Dibenzofuran	168	13.805	13.805	(1.023)	1612723	25.0000	25.84
	47 4-Nitrophenol	109	13.752	13.752	(1.019)	110363	25.0000	28.95
	48 2,4-Dinitrotoluene	165	13.875	13.875	(1.028)	436656	25.0000	27.32
	50 Diethylphthalate	149	14.297	14.297	(1.059)	1345895	25.0000	26.63
	49 Fluorene	166	14.366	14.366	(1.064)	1587688	25.0000	29.11
	51 4-Chlorophenyl-phenylether	204	14.377	14.377	(1.065)	729205	25.0000	28.32
	52 4-Nitroaniline	138	14.462	14.462	(1.072)	237272	25.0000	21.89
	53 4,6-Dinitro-2-methylphenol	198	14.537	14.537	(0.916)	487590	50.0000	45.20
	54 N-Nitrosodiphenylamine	169	14.580	14.580	(0.918)	1118309	25.0000	26.94
$	55 2,4,6-Tribromophenol	330	14.783	14.783	(1.095)	29546	25.0000	9.201
	56 4-Bromophenyl-phenylether	248	15.162	15.162	(0.955)	460653	25.0000	28.78
	57 Hexachlorobenzene	284	15.392	15.392	(0.969)	449869	25.0000	26.03
	58 Pentachlorophenol	266	15.685	15.685	(0.988)	220722	25.0000	25.40
*	59 Phenanthrene-d10	188	15.878	15.878	(1.000)	1360143	20.0000	
	60 Phenanthrene	178	15.915	15.915	(1.002)	2145828	25.0000	27.39
	61 Anthracene	178	15.990	15.990	(1.007)	2157953	25.0000	27.83
	62 Carbazole	167	16.257	16.257	(1.024)	1837957	25.0000	25.45
	63 Di-n-butylphthalate	149	16.946	16.946	(1.067)	2584332	25.0000	27.35
	64 Fluoranthene	202	17.854	17.854	(1.124)	2322332	25.0000	28.63
	65 Pyrene	202	18.217	18.217	(0.902)	2422841	25.0000	27.62
$	66 Terphenyl-d14	244	18.500	18.500	(0.916)	1303100	25.0000	25.70
	67 Butylbenzylphthalate	149	19.371	19.371	(0.959)	1143155	25.0000	26.58
	68 Benzo(a)anthracene	228	20.172	20.172	(0.999)	2237433	25.0000	27.88
*	69 Chrysene-d12	240	20.198	20.198	(1.000)	1402665	20.0000	
	70 3,3'-Dichlorobenzidine	252	20.161	20.161	(0.998)	689275	25.0000	27.03
	71 Chrysene	228	20.241	20.241	(1.002)	2153192	25.0000	28.52
	72 bis(2-Ethylhexyl)phthalate	149	20.343	20.343	(0.956)	1673194	25.0000	27.05
*	134 Di-n-octylphthalate-d4	153	21.272	21.272	(1.000)	2121193	20.0000	
	73 Di-n-octylphthalate	149	21.288	21.288	(1.001)	2949868	25.0000	25.45

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	21.827	21.827	(0.976)	2353935	25.0000	28.84
75	Benzo(k)fluoranthene	252	21.860	21.860	(0.978)	2263598	25.0000	29.33
187	Total Benzofluoranthenes	252	21.860	21.860	(0.978)	4369493	50.0000	58.32
76	Benzo(a)pyrene	252	22.276	22.276	(0.996)	2026315	25.0000	28.81
* 77	Perylene-d12	264	22.356	22.356	(1.000)	1443992	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	24.092	24.092	(1.078)	2515451	25.0000	28.20
79	Dibenzo(a,h)anthracene	278	24.113	24.113	(1.079)	2156387	25.0000	29.76
80	Benzo(g,h,i)perylene	276	24.589	24.589	(1.100)	2161294	25.0000	26.99
90	N-Nitrosodimethylamine	74	4.186	4.186	(0.487)	581969	25.0000	26.63
103	Pyridine	79	4.154	4.154	(0.483)	777565	25.0000	23.83
91	Aniline	93	8.144	8.144	(0.948)	1073442	25.0000	25.41
105	1-methylnaphthalene	141	11.952	11.952	(1.124)	1199207	25.0000	25.84
93	Benzidine	184	18.089	18.089	(0.896)	282488	25.0000	19.36
111	Azobenzene (1,2-DP-Hydrazine)	77	16.615	16.615	(1.046)	86501	25.0000	24.43
143	1,4-Dioxane	88	3.401	3.401	(0.396)	323217	25.0000	24.79
$ 137	d8-1,4-Dioxane	96	3.337	3.337	(0.388)	319500	25.0000	24.82
144	alpha-Terpineol	59	10.675	10.675	(1.004)	479906	25.0000	24.27
177	p-Benzoquinone	82	7.294	7.294	(0.849)	115180	25.0000	26.21
98	Retene	219	18.756	18.756	(0.929)	932225	25.0000	27.06
99	Perylene	252	22.399	22.399	(1.002)	1593291	25.0000	26.50
133	Butylatedhydroxytoluene	205	13.640	13.640	(1.011)	931904	25.0000	28.54
115	Tributyl Phosphate	99	14.649	14.649	(0.923)	1444876	25.0000	23.65
116	Dibutyl Phenyl Phosphate	175	16.390	16.390	(1.032)	1138992	25.0000	25.38
117	Butyl Diphenyl Phosphate	94	18.078	18.078	(0.895)	341578	25.0000	25.56
118	Triphenyl Phosphate	326	19.691	19.691	(0.975)	372559	25.0000	26.20
123	Acetophenone	105	9.276	9.276	(1.080)	1134451	25.0000	26.23
168	Pentachlorobenzene	250	13.848	13.848	(1.026)	539567	25.0000	26.98
113	Diphenyl Oxide	170	12.737	12.737	(0.944)	1000563	25.0000	26.02
112	Biphenyl	154	12.550	12.550	(0.930)	1679028	25.0000	27.06
120	2,3,4,6-Tetrachlorophenol	232	14.078	14.078	(1.043)	316005	25.0000	26.94
151	1,2,4,5-Tetrachlorobenzene	216	12.117	12.117	(0.898)	703932	25.0000	27.20
110	Tetrachloroguaiacol	247	15.808	15.808	(0.996)	325389	50.0000	49.39
109	3,4,5-Trichloroguaiacol	213	14.297	14.297	(0.900)	216958	25.0000	25.46
181	3,4,6-Trichloroguaiacol	211	14.174	14.174	(1.650)	191599	25.0000	24.84
108	4,5,6-Trichloroguaiacol	213	15.205	15.205	(1.127)	203772	25.0000	26.36
184	3,4-Dichloroguaiacol	192	12.630	12.630	(1.470)	240551	25.0000	24.91
107	4,5-Dichloroguaiacol	192	13.410	13.410	(0.994)	602880	50.0000	49.67
182	4,6-Dichloroguaiacol	192	13.410	13.410	(1.561)	602880	50.0000	50.25
185	4-Chloroguaiacol	115	11.535	11.535	(1.085)	106813	12.5000	11.89
186	Carbaryl	144	16.663	16.663	(1.049)	1022131	25.0000	26.60
178	2-Benzyl-4-Chlorophenol	218	16.615	16.615	(1.046)	343074	25.0000	25.91
106	Guaiacol	124	9.532	9.532	(1.109)	765287	25.0000	26.93
188	2,6-Dichlorophenol	162	10.804	10.804	(1.257)	785636	25.0000	28.09
189	N-Nitrosomethylethylamine	88	5.847	5.847	(0.680)	201042	25.0000	21.01

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 06281301.d
Lab Smp Id: IC250628
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Misc Info: 13-

Calibration Date: 28-JUN-2013
Calibration Time: 10:39
Client Smp ID: IC250628
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	461788	230894	923576	461788	0.00
27 Naphthalene-d8	1684670	842335	3369340	1684670	0.00
42 Acenaphthene-d10	967427	483714	1934854	967427	0.00
59 Phenanthrene-d10	1360143	680072	2720286	1360143	0.00
69 Chrysene-d12	1402665	701332	2805330	1402665	0.00
134 Di-n-octylphthala	2121193	1060596	4242386	2121193	0.00
77 Perylene-d12	1443992	721996	2887984	1443992	0.00

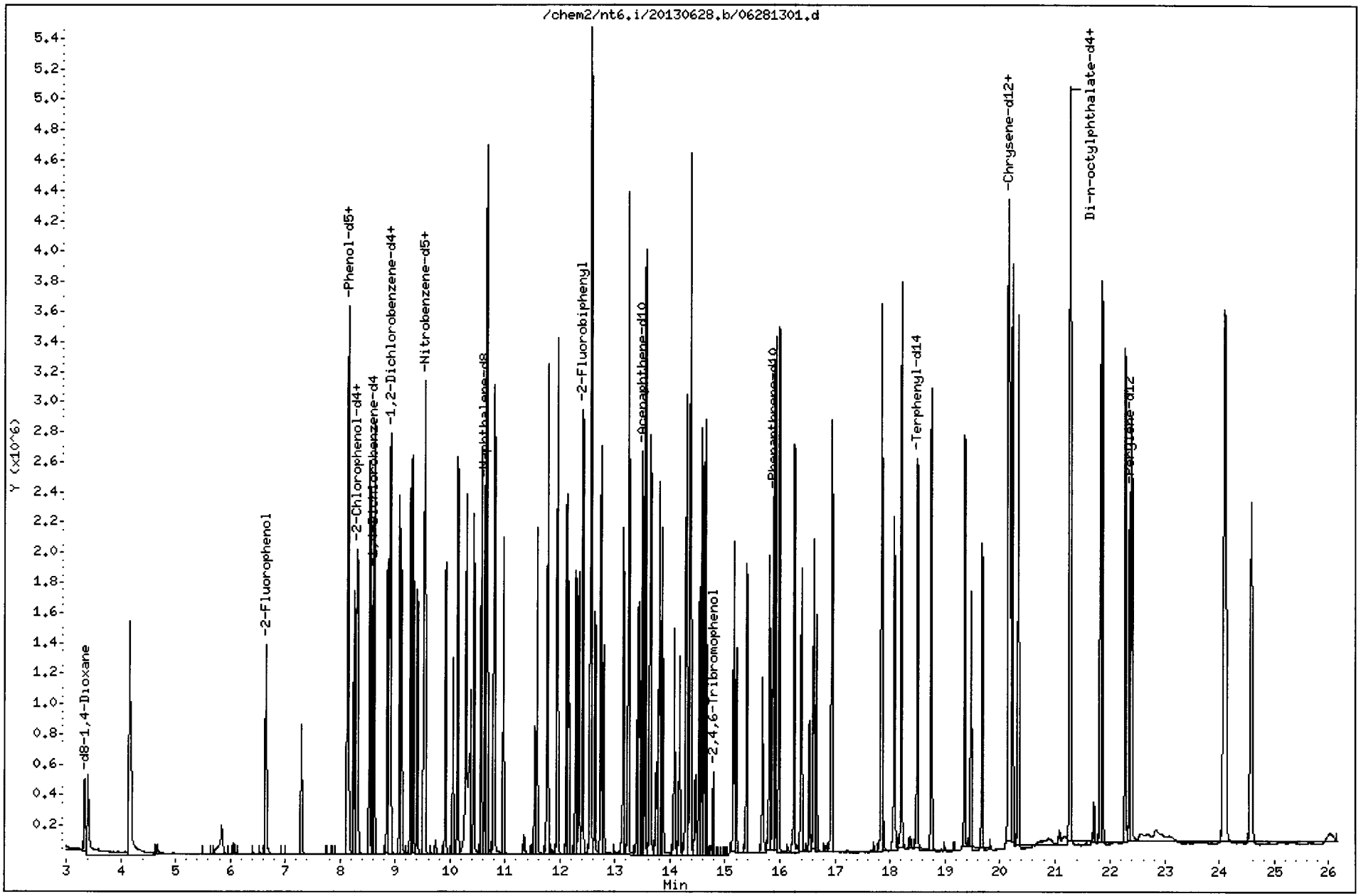
		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.59	8.09	9.09	8.59	0.00
27 Naphthalene-d8	10.63	10.13	11.13	10.63	0.00
42 Acenaphthene-d10	13.50	13.00	14.00	13.50	0.00
59 Phenanthrene-d10	15.88	15.38	16.38	15.88	0.00
69 Chrysene-d12	20.20	19.70	20.70	20.20	0.00
134 Di-n-octylphthala	21.27	20.77	21.77	21.27	0.00
77 Perylene-d12	22.36	21.86	22.86	22.36	0.00

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

Data File: /chem2/nt6.i/20130628.b/06281301.d
Date : 28-JUN-2013 10:39
Client ID: IC250628
Sample Info: IC250628,

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - 06281301.d

Lab ID: IC250628, Method: SW846062813.m, Instrument: nt6.i, Date: 28-JUN-2013

RT	CO-ELUTION COMPOUNDS
13.244	Acenaphthylene and 2,6-Dinitrotoluene

Data File: /chem2/nt6.i/20130628.b/tune.b/06281301.d

Date : 28-JUN-2013 10:39

Client ID: DFTPP0628

Instrument: nt6.i

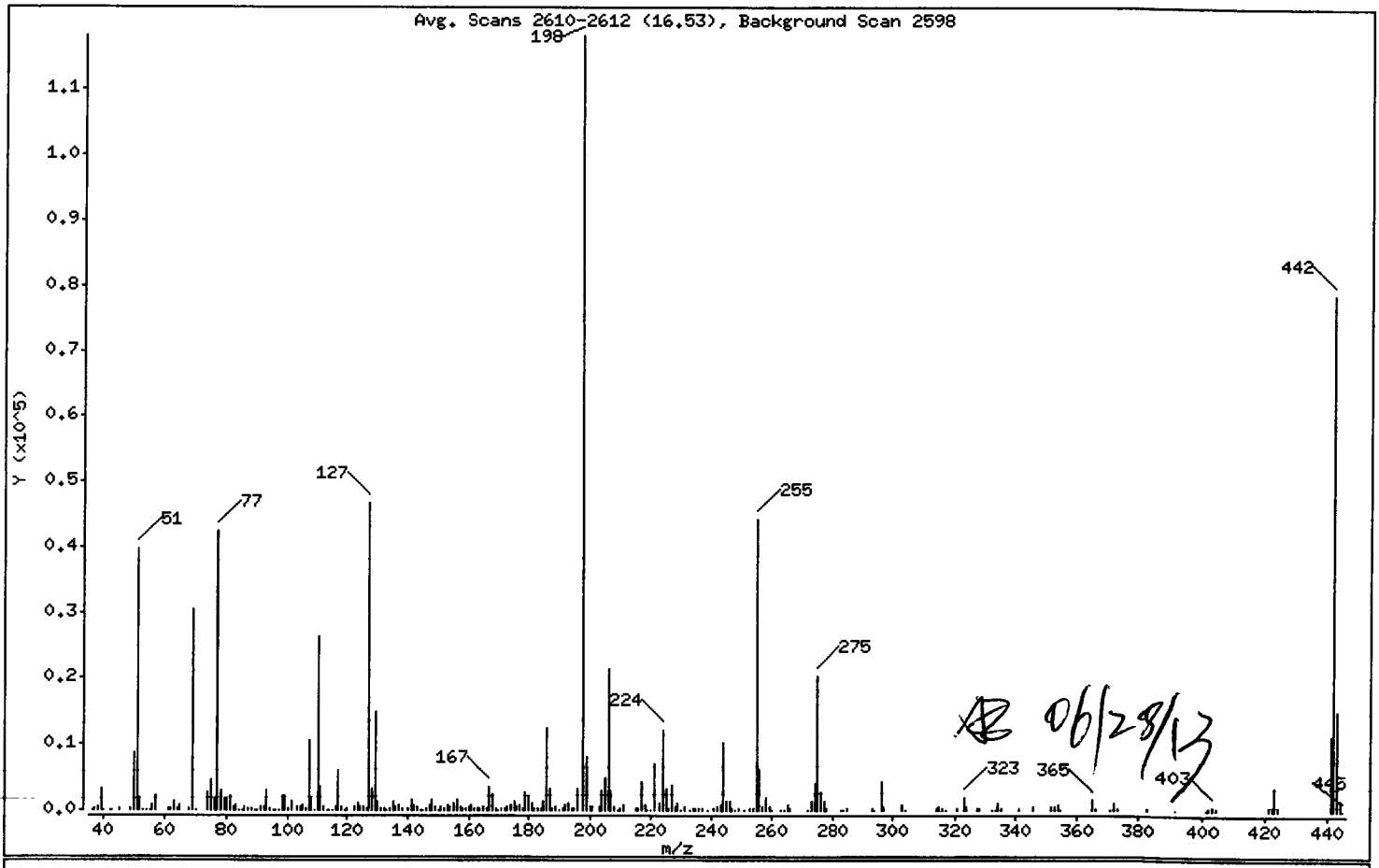
Sample Info: DFTPP0628

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	33.49
68	Less than 2.00% of mass 69	0.30 (1.15)
69	Mass 69 relative abundance	25.72
70	Less than 2.00% of mass 69	0.10 (0.39)
127	10.00 - 80.00% of mass 198	39.56
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.84
275	10.00 - 60.00% of mass 198	17.33
365	Greater than 1.00% of mass 198	1.47
441	0.01 - 24.00% of mass 442	9.68 (14.53)
442	50.00 - 200.00% of mass 198	66.62
443	15.00 - 24.00% of mass 442	12.87 (19.32)

Data File: /chem2/nt6.i/20130628.b/tune.b/06281301.d

Date : 28-JUN-2013 10:39

Client ID: DFTPP0628 Instrument: nt6.i

Sample Info: DFTPP0628

Operator: JZ

Column phase: ZB-5msi Column diameter: 0.32

Data File: 06281301.d

Spectrum: Avg. Scans 2610-2612 (16.53), Background Scan 2598

Location of Maximum: 198.00

Number of points: 257

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	10	115.00	31	182.00	141	258.00	1944
37.00	275	116.00	510	183.00	253	259.00	408
38.00	557	117.00	6030	184.00	247	260.00	53
39.00	3269	118.00	545	185.00	1271	263.00	61
40.00	96	119.00	83	186.00	12587	264.00	53
42.00	4	120.00	232	187.00	3353	265.00	724
43.00	38	122.00	468	188.00	319	266.00	175
45.00	138	123.00	1061	189.00	519	272.00	108
49.00	159	124.00	496	190.00	116	273.00	1491
50.00	8761	125.00	447	191.00	287	274.00	4201
51.00	39616	126.00	179	192.00	786	275.00	20504
52.00	1831	127.00	46792	193.00	1025	276.00	2623
53.00	46	128.00	3384	194.00	253	277.00	1287
54.00	60	129.00	15046	195.00	224	278.00	178
55.00	113	130.00	1415	196.00	3140	283.00	123
56.00	916	131.00	404	198.00	118288	284.00	52
57.00	2256	132.00	266	199.00	8086	285.00	306
61.00	356	133.00	55	200.00	574	293.00	364
62.00	306	134.00	402	201.00	629	294.00	52
63.00	1393	135.00	1297	203.00	562	296.00	4403
64.00	241	136.00	592	204.00	2857	297.00	642
65.00	690	137.00	864	205.00	4941	303.00	775
68.00	349	138.00	327	206.00	21504	304.00	78
69.00	30424	140.00	288	207.00	2947	314.00	228
70.00	119	141.00	1639	208.00	626	315.00	489
74.00	2620	142.00	702	209.00	64	316.00	389
75.00	4644	143.00	497	210.00	160	317.00	50
76.00	1692	144.00	34	211.00	882	321.00	145
77.00	42512	145.00	86	215.00	184	323.00	1900
78.00	2977	146.00	304	216.00	339	324.00	437
79.00	1577	147.00	817	217.00	4471	327.00	390
80.00	1501	148.00	1726	218.00	903	328.00	168
81.00	2230	149.00	460	219.00	108	332.00	117
82.00	521	150.00	14	220.00	69	333.00	132
83.00	684	151.00	527	221.00	7084	334.00	1218

Data File: /chem2/nt6.i/20130628.b/tune.b/06281301.d

Date : 28-JUN-2013 10:39

Client ID: DFTPP0628

Instrument: nt6.i

Sample Info: DFTPP0628

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

Data File: 06281301.d
Spectrum: Avg. Scans 2610-2612 (16.53), Background Scan 2598
Location of Maximum: 198.00
Number of points: 257

m/z	Y	m/z	Y	m/z	Y	m/z	Y
84.00	35	152.00	187	223.00	1199	335.00	396
85.00	84	153.00	712	224.00	12368	341.00	307
86.00	666	154.00	520	225.00	3181	346.00	658
87.00	240	155.00	1058	226.00	395	352.00	618
88.00	199	156.00	1700	227.00	3724	353.00	466
89.00	112	157.00	491	228.00	592	354.00	714
90.00	82	158.00	335	229.00	1042	355.00	134
91.00	493	159.00	202	230.00	63	365.00	1734
92.00	542	160.00	488	231.00	508	366.00	307
93.00	2886	161.00	904	233.00	77	371.00	128
94.00	259	162.00	281	234.00	273	372.00	966
95.00	54	163.00	186	235.00	321	373.00	314
96.00	83	164.00	146	236.00	279	383.00	284
97.00	14	165.00	564	237.00	378	391.00	127
98.00	2309	166.00	389	239.00	73	401.00	57
99.00	2252	167.00	3509	241.00	283	402.00	366
100.00	258	168.00	2443	242.00	670	403.00	612
101.00	1313	169.00	365	243.00	764	404.00	146
103.00	543	170.00	133	244.00	10327	421.00	546
104.00	667	171.00	178	245.00	1415	422.00	503
105.00	696	172.00	287	246.00	1379	423.00	3470
106.00	175	173.00	422	247.00	362	424.00	679
107.00	10493	174.00	812	248.00	53	441.00	11448
108.00	1916	175.00	1489	249.00	346	442.00	78808
109.00	116	176.00	530	251.00	57	443.00	15225
110.00	26304	177.00	761	253.00	153	444.00	1408
111.00	3457	178.00	181	254.00	227	445.00	57
112.00	559	179.00	2755	255.00	44368		
113.00	27	180.00	2171	256.00	6289		
114.00	119	181.00	1186	257.00	530		

Data File: /chem2/nt6.i/20130628.b/tune.b/06281301.d

Date : 28-JUN-2013 10:39

Client ID: DFTPP0628

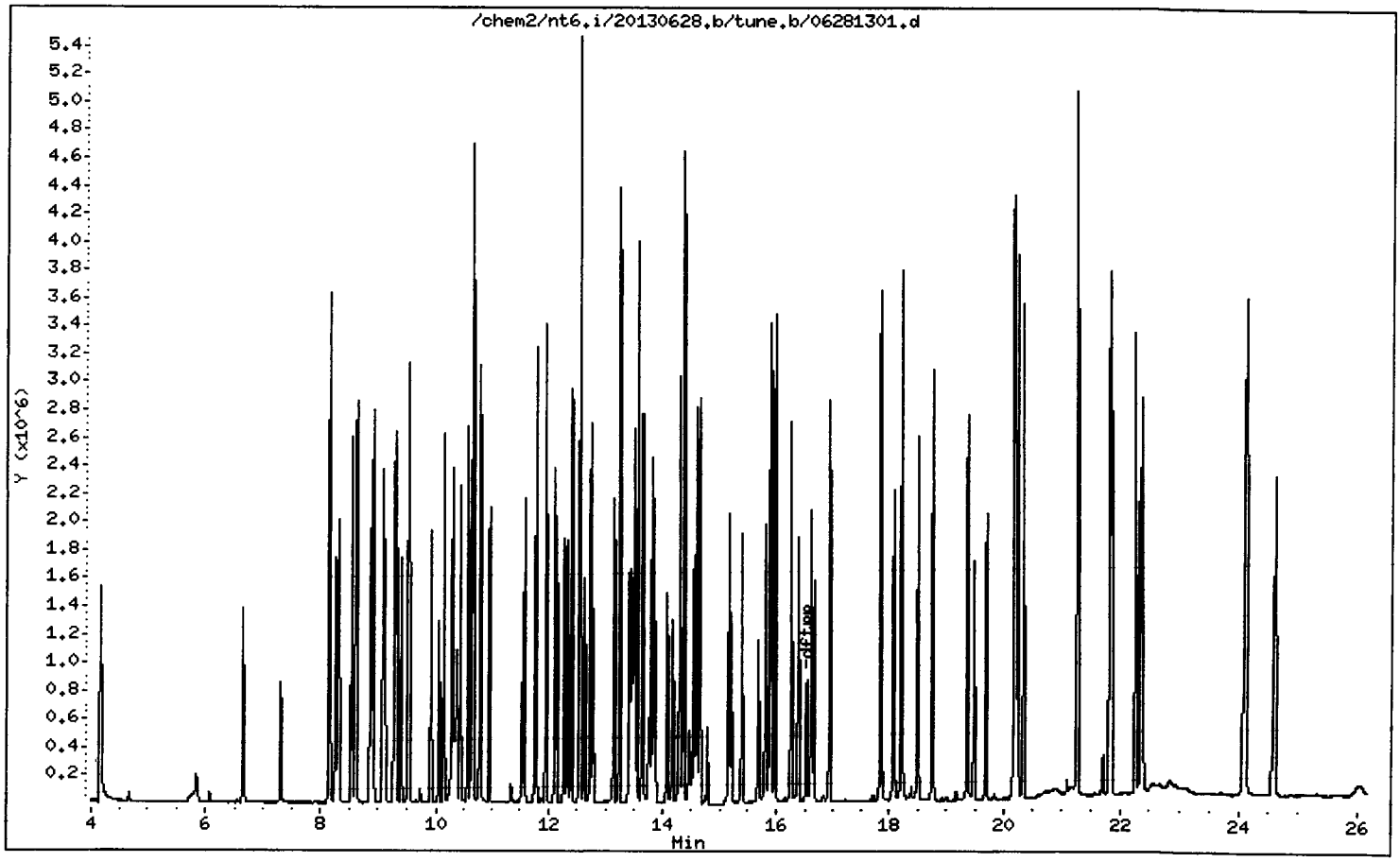
Instrument: nt6.i

Sample Info: DFTPP0628

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem2/nt6.i/20130628.b/ddt.b/06281301.d ARI ID: DDT0628
Method: /chem2/nt6.i/20130628.b/ddt.b/sw846ddt.m Misc: 13-
Analysis Date: 28-JUN-2013 10:39 Instrument: nt6.i

COMPOUND	RT	AREA
Pentachlorophenol	15.685	224886
Benzidine	18.089	275340
4,4'-DDE	----	----
4,4'-DDD	19.002	6220
4,4'-DDT	19.477	561889

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(0 + 6220) * 100}{(0 + 6220 + 561889)}$$

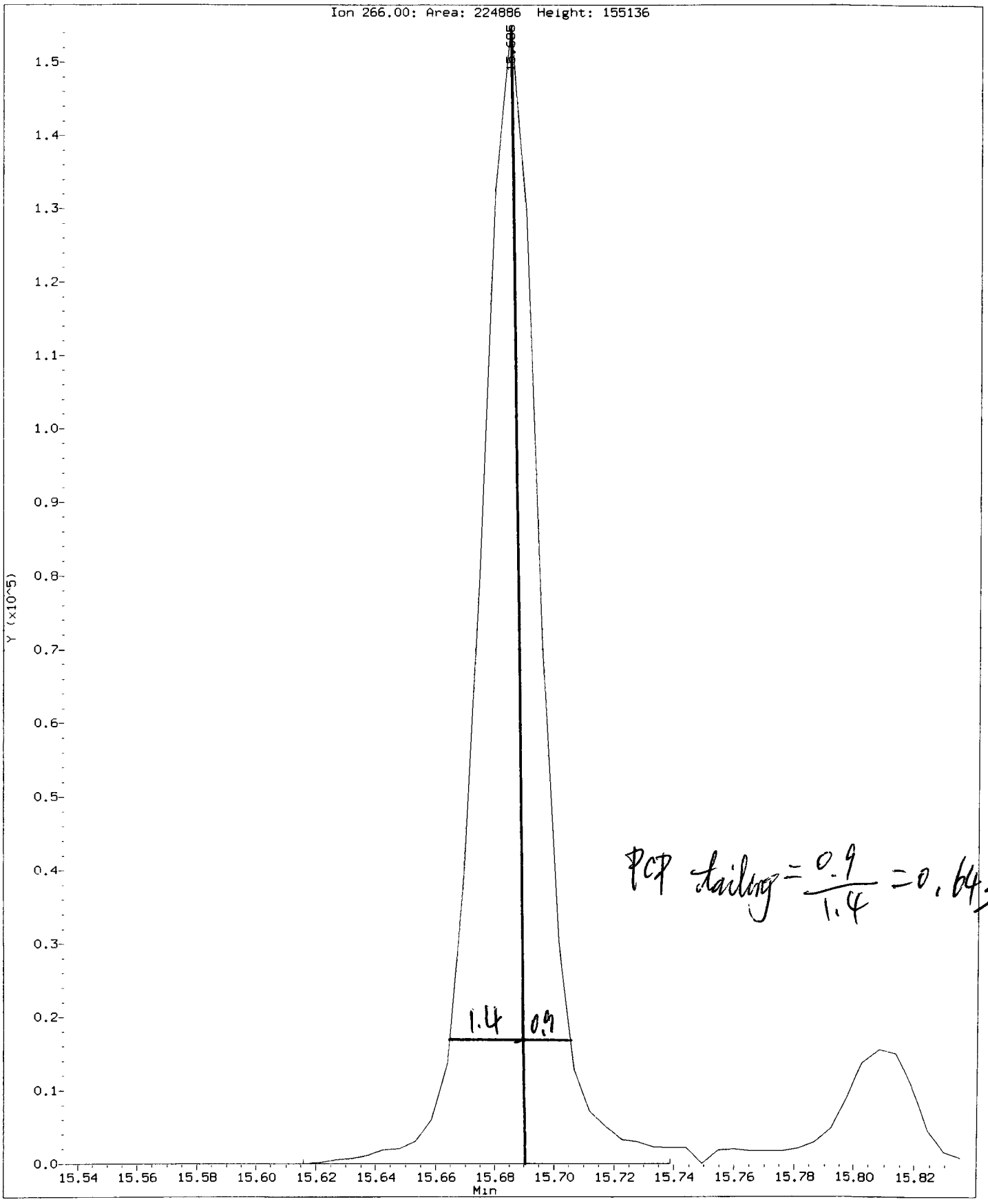
DDT Percent Breakdown = 1.1 %

0/2

R 06/28/13

Data File: /chem2/nt6.1/20130628.b/ddt.b/06281301.d
Injection Date: 28-JUN-2013 10:39
Instrument: nt6.1
Client Sample ID: DDT0628

Compound: Pentachlorophenol
CAS Number: 87-86-5

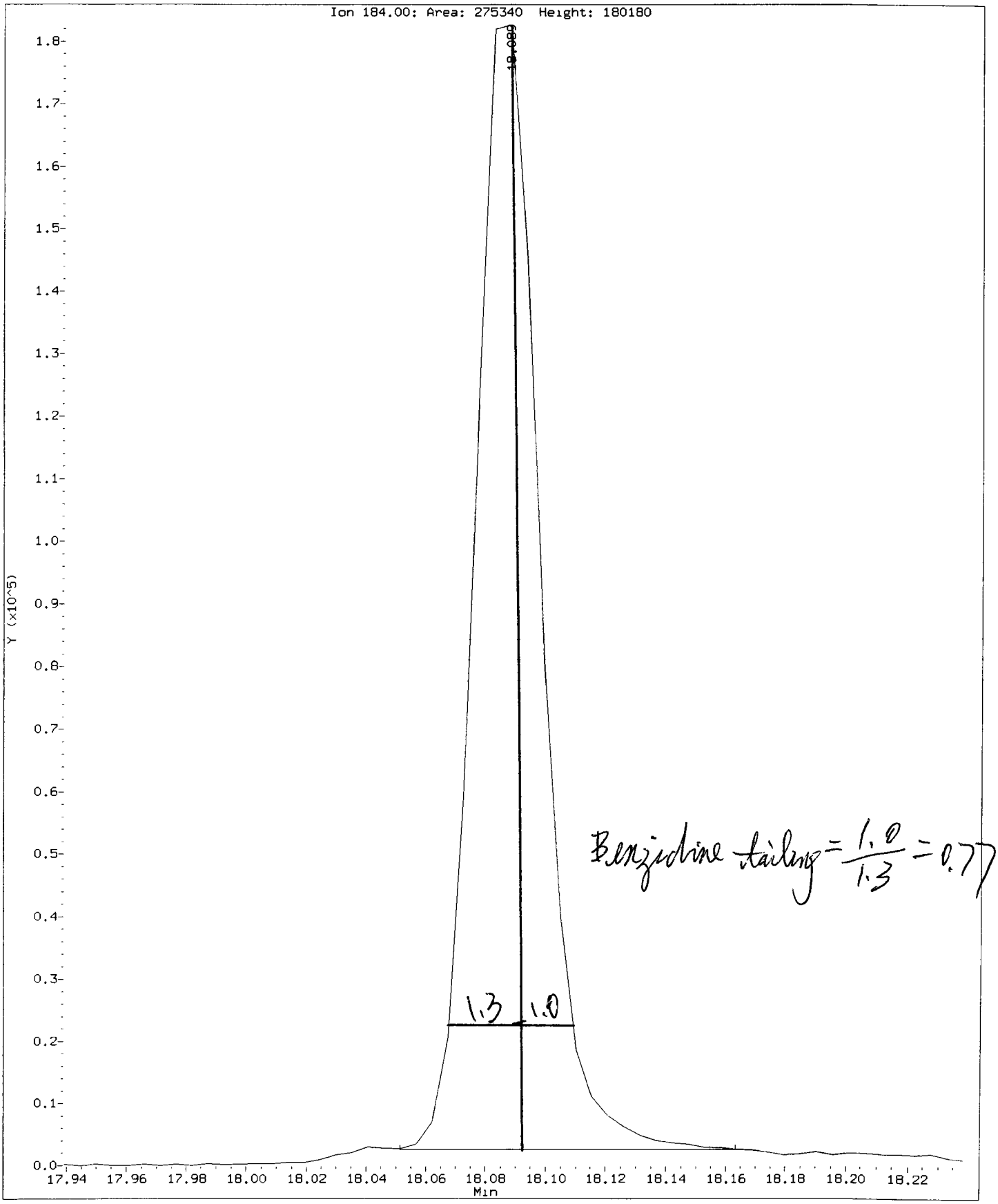


PCP tailing = $\frac{0.9}{1.4}$ = 0.643

WET 0628

Data File: /chem2/nt6.i/20130628.b/ddt.b/06281301.d
Injection Date: 28-JUN-2013 10:39
Instrument: nt6.i
Client Sample ID: DDT0628

Compound: Benzidine
CAS Number:



WGT : 29071

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130628.b/06281308.d
Lab Smp Id: WV67LCSW1 Client Smp ID: WV67LCSW1
Inj Date : 28-JUN-2013 14:39
Operator : JZ Inst ID: nt6.i
Smp Info : WV67LCSW1
Misc Info : 13-13661
Comment : 1ul Injection
Method : /chem2/nt6.i/20130628.b/SW846062813.m
Meth Date : 28-Jun-2013 16:05 jianqing Quant Type: ISTD
Cal Date : 28-JUN-2013 14:05 Cal File: 06281307.d
Als bottle: 8 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPAtclpMBLCS.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable 06/28/13

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
$ 1	2-Fluorophenol	112	6.643	6.648	(0.773)	631816	20.6928	20.69
$ 2	Phenol-d5	99	8.133	8.133	(0.946)	572970	15.2666	15.27
3	Phenol	94	8.149	8.149	(0.948)	599767	14.0907	14.09
$ 5	2-Chlorophenol-d4	132	8.293	8.293	(0.965)	1010771	30.8955	30.90
4	Bis(2-Chloroethyl)ether	93	8.256	8.250	(0.960)	606988	18.0271	18.03
6	2-Chlorophenol	128	8.320	8.315	(0.968)	646892	19.8251	19.83
7	1,3-Dichlorobenzene	146	8.539	8.534	(0.993)	575729	14.4156	14.42
* 8	1,4-Dichlorobenzene-d4	152	8.598	8.592	(1.000)	472193	20.0000	
9	1,4-Dichlorobenzene	146	8.624	8.619	(1.003)	606111	15.0791	15.08
$ 10	1,2-Dichlorobenzene-d4	152	8.897	8.891	(1.035)	408275	18.2758	18.28
12	1,2-Dichlorobenzene	146	8.918	8.913	(1.037)	581353	15.2676	15.27
11	Benzyl alcohol	108	8.865	8.859	(1.031)	459962	21.0857	21.09
14	2,2'-oxybis(1-Chloropropane)	45	9.116	9.110	(1.060)	1063617	18.3272	18.33
13	2-Methylphenol	108	9.078	9.078	(1.056)	562981	18.3579	18.36
17	Hexachloroethane	117	9.404	9.399	(1.094)	185980	14.4442	14.44
16	N-Nitroso-di-n-propylamine	70	9.340	9.335	(1.086)	430259	19.4260	19.43

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)	
	15 4-Methylphenol	108	9.313	9.308	(1.083)	1168203	36.2738	36.27	
$	18 Nitrobenzene-d5	82	9.522	9.516	(0.895)	554099	20.6640	20.66	
	19 Nitrobenzene	77	9.548	9.548	(0.897)	549554	18.7134	18.71	
	20 Isophorone	82	9.938	9.922	(0.934)	1053370	21.0968	21.10	
	21 2-Nitrophenol	139	10.066	10.056	(0.946)	346695	21.0590	21.06	
	22 2,4-Dimethylphenol	107	10.157	10.141	(0.954)	1522368	56.4682	56.47	
	23 Bis(2-Chloroethoxy)methane	93	10.301	10.296	(0.968)	747522	19.0141	19.01	
	24 Benzoic acid	105	10.387	10.382	(0.976)	996158	48.7546	48.75	
	25 2,4-Dichlorophenol	162	10.446	10.435	(0.981)	1613889	61.5058	61.51	
	26 1,2,4-Trichlorobenzene	180	10.579	10.569	(0.994)	495216	15.6016	15.60	
*	27 Naphthalene-d8	136	10.643	10.633	(1.000)	1671598	20.0000		
	28 Naphthalene	128	10.670	10.665	(1.002)	1625417	19.2582	19.26	
	29 4-Chloroaniline	127	10.809	10.793	(1.016)	2341954	74.8252	74.83	
	30 Hexachlorobutadiene	225	10.980	10.969	(1.032)	217646	14.7427	14.74	
	31 4-Chloro-3-methylphenol	107	11.594	11.583	(1.089)	1450108	62.9275	62.93	
	32 2-Methylnaphthalene	141	11.786	11.776	(1.107)	961354	20.8250	20.83	
	33 Hexachlorocyclopentadiene	237	12.165	12.155	(0.900)	748058	47.3910	47.39	
	34 2,4,6-Trichlorophenol	196	12.299	12.283	(0.910)	1054725	65.3564	65.36	
	35 2,4,5-Trichlorophenol	196	12.358	12.342	(0.915)	1100591	66.2518	66.25	
$	36 2-Fluorobiphenyl	172	12.427	12.411	(0.920)	1284070	22.5308	22.53	
	37 2-Chloronaphthalene	162	12.577	12.561	(0.931)	1108213	19.6624	19.66	
	38 2-Nitroaniline	65	12.806	12.785	(0.948)	895109	72.9472	72.95	
	39 Dimethylphthalate	163	13.164	13.148	(0.974)	1286452	21.7617	21.76	
	40 Acenaphthylene	152	13.255	13.244	(0.981)	1685731	22.3038	22.30	
	41 2,6-Dinitrotoluene	165	13.266	13.244	(0.982)	849866	66.4973	66.50	
*	42 Acenaphthene-d10	164	13.511	13.495	(1.000)	941643	20.0000		
	43 3-Nitroaniline	138	13.490	13.463	(0.998)	1107994	93.7242	93.72	
	44 Acenaphthene	153	13.565	13.549	(1.004)	1152039	22.1986	22.20	
	45 2,4-Dinitrophenol	184	13.650	13.629	(1.010)	773308	97.3813	97.38	
	46 Dibenzofuran	168	13.821	13.805	(1.023)	1393132	22.9328	22.93	
	47 4-Nitrophenol	109	13.762	13.752	(1.019)	132203	35.6317	35.63	
	48 2,4-Dinitrotoluene	165	13.901	13.875	(1.029)	1023442	65.7766	65.78	
	50 Diethylphthalate	149	14.318	14.297	(1.060)	1125648	22.8858	22.89	
	49 Fluorene	166	14.382	14.366	(1.064)	1284016	24.1833	24.18	
	51 4-Chlorophenyl-phenylether	204	14.393	14.377	(1.065)	548731	21.8950	21.90	
	52 4-Nitroaniline	138	14.499	14.462	(1.073)	846165	80.1863	80.19	
	53 4,6-Dinitro-2-methylphenol	198	14.563	14.537	(0.916)	1028230	97.4940	97.49	
	54 N-Nitrosodiphenylamine	169	14.596	14.580	(0.918)	864117	22.2573	22.26	
$	55 2,4,6-Tribromophenol	330	14.799	14.783	(1.095)	9534	3.05045	3.050(R)	Q
	56 4-Bromophenyl-phenylether	248	15.172	15.162	(0.955)	300628	20.0823	20.08	
	57 Hexachlorobenzene	284	15.407	15.392	(0.969)	303321	18.7692	18.77	
	58 Pentachlorophenol	266	15.701	15.685	(0.988)	574168	70.6630	70.66	
*	59 Phenanthrene-d10	188	15.893	15.878	(1.000)	1272040	20.0000		
	60 Phenanthrene	178	15.931	15.915	(1.002)	1745935	23.8266	23.83	
	61 Anthracene	178	16.006	15.990	(1.007)	1674478	23.0869	23.09	
	62 Carbazole	167	16.278	16.257	(1.024)	1556071	23.0399	23.04	
	63 Di-n-butylphthalate	149	16.962	16.946	(1.067)	2041643	23.1036	23.10	

06/28/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
	64 Fluoranthene	202	17.870	17.854	(1.124)	1930579	25.4462	25.45
	65 Pyrene	202	18.233	18.217	(0.902)	2031829	24.8089	24.81
$	66 Terphenyl-d14	244	18.521	18.500	(0.916)	1240861	26.2102	26.21
	67 Butylbenzylphthalate	149	19.386	19.371	(0.959)	888565	22.1270	22.13
	68 Benzo(a)anthracene	228	20.193	20.172	(0.999)	1573138	20.9961	21.00
*	69 Chrysene-d12	240	20.214	20.198	(1.000)	1309736	20.0000	
	70 3,3'-Dichlorobenzidine	252	20.182	20.161	(0.998)	1550528	65.1228	65.12
	71 Chrysene	228	20.257	20.241	(1.002)	1668510	23.6716	23.67
	72 bis(2-Ethylhexyl)phthalate	149	20.364	20.343	(0.956)	1315683	22.1610	22.16
*	134 Di-n-octylphthalate-d4	153	21.293	21.272	(1.000)	2035846	20.0000	
	73 Di-n-octylphthalate	149	21.304	21.288	(1.000)	2389868	21.4844	21.48
	74 Benzo(b)fluoranthene	252	21.843	21.827	(0.976)	1864978	23.5977	23.60
	75 Benzo(k)fluoranthene	252	21.875	21.860	(0.978)	1891149	25.3080	25.31
	76 Benzo(a)pyrene	252	22.292	22.276	(0.996)	1658060	24.3429	24.34
*	77 Perylene-d12	264	22.377	22.356	(1.000)	1398310	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	24.119	24.092	(1.078)	2000012	23.1531	23.15
	79 Dibenzo(a,h)anthracene	278	24.135	24.113	(1.079)	1470771	20.9643	20.96
	80 Benzo(g,h,i)perylene	276	24.610	24.589	(1.100)	1569325	20.2356	20.24
	90 N-Nitrosodimethylamine	74	4.186	4.186	(0.487)	868647	38.8728	38.87
	91 Aniline	93	8.154	8.144	(0.948)	2446576	56.6400	56.64
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	4.143	4.154	(0.482)	1227424	36.7878	36.79
	105 1-methylnaphthalene	141	11.962	11.952	(1.124)	989838	21.4930	21.49
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	14.099	14.078	(1.043)	268117	23.3105	23.31
	151 1,2,4,5-Tetrachlorobenzene	216	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	21.875	21.860	(0.978)	3558501	49.0451	49.05

NRC

NRC

NRC

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

R 06/28/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 06281308.d
Lab Smp Id: WV67LCSW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Misc Info: 13-13661

Calibration Date: 28-JUN-2013
Calibration Time: 10:39
Client Smp ID: WV67LCSW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	461788	230894	923576	472193	2.25
27 Naphthalene-d8	1684670	842335	3369340	1671598	-0.78
42 Acenaphthene-d10	967427	483714	1934854	941643	-2.67
59 Phenanthrene-d10	1360143	680072	2720286	1272040	-6.48
69 Chrysene-d12	1402665	701332	2805330	1309736	-6.63
134 Di-n-octylphthala	2121193	1060596	4242386	2035846	-4.02
77 Perylene-d12	1443992	721996	2887984	1398310	-3.16

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.59	8.09	9.09	8.60	0.06
27 Naphthalene-d8	10.63	10.13	11.13	10.64	0.10
42 Acenaphthene-d10	13.50	13.00	14.00	13.51	0.12
59 Phenanthrene-d10	15.88	15.38	16.38	15.89	0.10
69 Chrysene-d12	20.20	19.70	20.70	20.21	0.08
134 Di-n-octylphthala	21.27	20.77	21.77	21.29	0.10
77 Perylene-d12	22.36	21.86	22.86	22.38	0.09

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Client SDG: WV67
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WV67LCSW1
Client Smp ID: WV67LCSW1
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: LCS
SpikeList File: SEPAtclpLCS.spk
Quant Type: ISTD
Sublist File: SEPAtclpMBLCS.sub
Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Misc Info: 13-13661

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
3 Phenol	25.00	14.09	56.36	16-100
4 Bis(2-Chloroethyl)	25.00	18.03	72.11	41-112
6 2-Chlorophenol	25.00	19.83	79.30	43-111
7 1,3-Dichlorobenzen	25.00	14.42	57.66	32-100
9 1,4-Dichlorobenzen	25.00	15.08	60.32	32-100
11 Benzyl alcohol	25.00	21.09	84.34	22-100
12 1,2-Dichlorobenzen	25.00	15.27	61.07	34-100
13 2-Methylphenol	25.00	18.36	73.43	36-110
14 2,2'-oxybis(1-Chlo	25.00	18.33	73.31	29-118
15 4-Methylphenol	50.00	36.27	72.55	38-104
16 N-Nitroso-di-n-pro	25.00	19.43	77.70	38-115
17 Hexachloroethane	25.00	14.44	57.78	24-100
19 Nitrobenzene	25.00	18.71	74.85	45-106
20 Isophorone	25.00	21.10	84.39	55-119
21 2-Nitrophenol	25.00	21.06	84.24	46-118
22 2,4-Dimethylphenol	75.00	56.47	75.29	28-105
23 Bis(2-Chloroethoxy	25.00	19.01	76.06	44-118
24 Benzoic acid	137.5	48.75	35.46	11-100
25 2,4-Dichlorophenol	75.00	61.51	82.01	43-121
26 1,2,4-Trichloroben	25.00	15.60	62.41	35-100
28 Naphthalene	25.00	19.26	77.03	36-111
29 4-Chloroaniline	75.00	74.83	99.77	10-174
30 Hexachlorobutadien	25.00	14.74	58.97	24-100
31 4-Chloro-3-methylp	75.00	62.93	83.90	45-122
32 2-Methylnaphthalen	25.00	20.83	83.30	45-103
33 Hexachlorocyclopen	75.00	47.39	63.19	23-108
34 2,4,6-Trichlorophe	75.00	65.36	87.14	48-122
35 2,4,5-Trichlorophe	75.00	66.25	88.34	48-122
37 2-Chloronaphthalen	25.00	19.66	78.65	39-118
38 2-Nitroaniline	75.00	72.95	97.26	48-118
39 Dimethylphthalate	25.00	21.76	87.05	50-120
40 Acenaphthylene	25.00	22.30	89.22	50-119
41 2,6-Dinitrotoluene	75.00	66.50	88.66	48-133

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
43 3-Nitroaniline	75.00	93.72	124.97	54-140
44 Acenaphthene	25.00	22.20	88.79	41-120
45 2,4-Dinitrophenol	137.5	97.38	70.82	23-176
46 Dibenzofuran	25.00	22.93	91.73	51-114
47 4-Nitrophenol	75.00	35.63	47.51	13-100
48 2,4-Dinitrotoluene	75.00	65.78	87.70	51-134
49 Fluorene	25.00	24.18	96.73	50-120
50 Diethylphthalate	25.00	22.89	91.54	48-122
51 4-Chlorophenyl-phe	25.00	21.90	87.58	50-118
52 4-Nitroaniline	75.00	80.19	106.92	42-136
53 4,6-Dinitro-2-meth	137.5	97.49	70.90	32-121
54 N-Nitrosodiphenyla	25.00	22.26	89.03	58-141
56 4-Bromophenyl-phen	25.00	20.08	80.33	50-122
57 Hexachlorobenzene	25.00	18.77	75.08	47-125
58 Pentachlorophenol	75.00	70.66	94.22	35-130
60 Phenanthrene	25.00	23.83	95.31	49-120
61 Anthracene	25.00	23.09	92.35	53-116
62 Carbazole	25.00	23.04	92.16	57-122
63 Di-n-butylphthalat	25.00	23.10	92.41	57-121
64 Fluoranthene	25.00	25.45	101.78	56-119
65 Pyrene	25.00	24.81	99.24	37-143
67 Butylbenzylphthala	25.00	22.13	88.51	34-152
68 Benzo(a)anthracene	25.00	21.00	83.98	49-129
70 3,3'-Dichlorobenzi	75.00	65.12	86.83	50-128
71 Chrysene	25.00	23.67	94.69	45-128
72 bis(2-Ethylhexyl)p	25.00	22.16	88.64	57-133
73 Di-n-octylphthalat	25.00	21.48	85.94	52-120
74 Benzo(b)fluoranthe	25.00	23.60	94.39	50-126
75 Benzo(k)fluoranthe	25.00	25.31	101.23	49-126
76 Benzo(a)pyrene	25.00	24.34	97.37	46-109
78 Indeno(1,2,3-cd)py	25.00	23.15	92.61	34-136
79 Dibenzo(a,h)anthra	25.00	20.96	83.86	41-134
80 Benzo(g,h,i)peryle	25.00	20.24	80.94	41-133
91 Aniline	75.00	56.64	75.52	28-126
111 Azobenzene (1,2-D	25.00	0.000	NC *	55-119
105 1-methylnaphthalen	25.00	21.49	85.97	43-115
90 N-Nitrosodimethyla	75.00	38.87	51.83	31-100
103 Pyridine	75.00	36.79	49.05	25-100
120 2,3,4,6-Tetrachlor	25.00	23.31	93.24	30-160
151 1,2,4,5-Tetrachlo	25.00	0.000	NC *	30-160
187 Total Benzofluoran	50.00	49.05	98.09	30-160

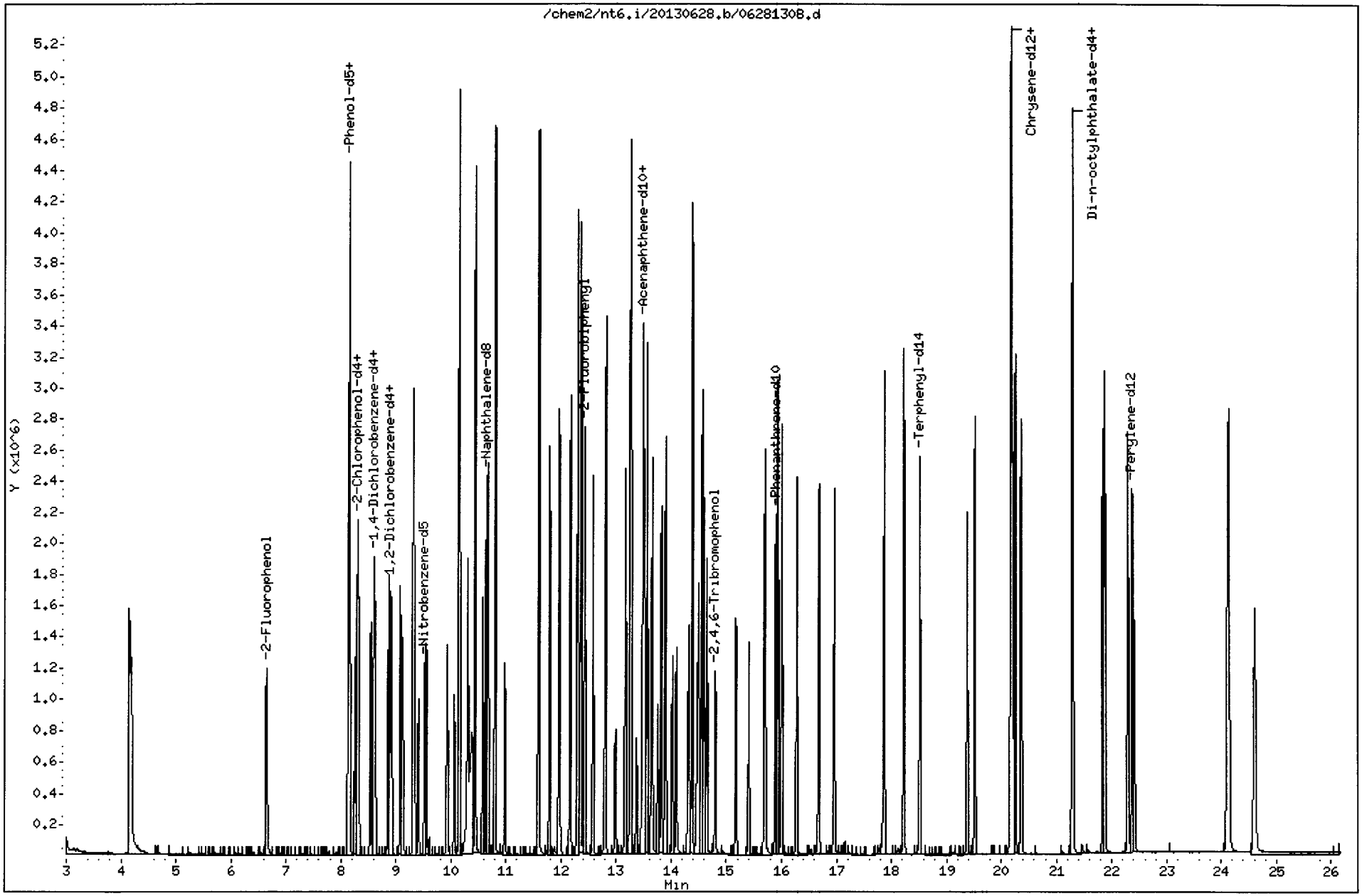
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	20.69	55.18	30-120

07/28/13

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 2 Phenol-d5	37.50	15.27	40.71	20-120
$ 5 2-Chlorophenol-d4	37.50	30.90	82.39	49-120
$ 10 1,2-Dichlorobenzen	25.00	18.28	73.10	40-120
$ 18 Nitrobenzene-d5	25.00	20.66	82.66	46-120
$ 36 2-Fluorobiphenyl	25.00	22.53	90.12	50-120
$ 55 2,4,6-Tribromophen	37.50	3.050	8.13*	55-124
$ 66 Terphenyl-d14	25.00	26.21	104.84	57-120

Data File: /chem2/nt6.i/20130628.b/06281308.d
Date : 28-JUN-2013 14:39
Client ID: WV67LCSW1
Sample Info: WV67LCSW1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 06281308.d

Lab ID: WV67LCSW1, Method: SW846062813.m, Instrument: nt6.i, Date: 28-JUN-201

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130628.b/06281309.d
Lab Smp Id: WV67MBW1 Client Smp ID: WV67MBW1
Inj Date : 28-JUN-2013 15:14
Operator : JZ Inst ID: nt6.i
Smp Info : WV67MBW1
Misc Info : 13-13661
Comment : 1ul Injection
Method : /chem2/nt6.i/20130628.b/SW846062813.m
Meth Date : 28-Jun-2013 16:05 jianqing Quant Type: ISTD
Cal Date : 28-JUN-2013 14:05 Cal File: 06281307.d
Als bottle: 9 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPAtclpMBLCS.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	6.641	6.648	(0.773)	680267	22.8116	22.81
$ 2	Phenol-d5	99	8.126	8.133	(0.945)	555526	15.1552	15.16
3	Phenol	94	Compound Not Detected.					
$ 5	2-Chlorophenol-d4	132	8.292	8.293	(0.965)	1047613	32.7862	32.79
4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
6	2-Chlorophenol	128	Compound Not Detected.					
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	8.596	8.592	(1.000)	461181	20.0000	
9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10	1,2-Dichlorobenzene-d4	152	8.895	8.891	(1.035)	429989	19.7074	19.71
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	108	Compound Not Detected.					
14	2,2'-oxybis(1-Chloropropane)	45	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					
17	Hexachloroethane	117	Compound Not Detected.					
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	9.515	9.516	(0.895)	566169	20.6219	20.62
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.636	10.633	(1.000)	1711497	20.0000	
	28 Naphthalene	128	Compound Not Detected.					
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	141	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	12.420	12.411	(0.920)	1329337	21.5490	21.55
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	13.504	13.495	(1.000)	1019256	20.0000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	14.797	14.783	(1.096)	135890	40.1679	40.17
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	15.887	15.878	(1.000)	1556980	20.0000	
	60 Phenanthrene	178	Compound Not Detected.					
	61 Anthracene	178	Compound Not Detected.					
	62 Carbazole	167	Compound Not Detected.					
	63 Di-n-butylphthalate	149	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	64 Fluoranthene	202	Compound Not Detected.					
	65 Pyrene	202	Compound Not Detected.					
$	66 Terphenyl-d14	244	18.520	18.500	(0.916)	1428333	27.5972	27.60
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	20.207	20.198	(1.000)	1431842	20.0000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	Compound Not Detected.					
	72 bis(2-Ethylhexyl)phthalate	149	Compound Not Detected.					
*	134 Di-n-octylphthalate-d4	153	21.286	21.272	(1.000)	1951431	20.0000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	74 Benzo(b)fluoranthene	252	Compound Not Detected.					
	75 Benzo(k)fluoranthene	252	Compound Not Detected.					
	76 Benzo(a)pyrene	252	Compound Not Detected.					
*	77 Perylene-d12	264	22.376	22.356	(1.000)	1554548	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	141	Compound Not Detected.					
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					
	151 1,2,4,5-Tetrachlorobenzene	216	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 06281309.d
Lab Smp Id: WV67MBW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Misc Info: 13-13661

Calibration Date: 28-JUN-2013
Calibration Time: 10:39
Client Smp ID: WV67MBW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	461788	230894	923576	461181	-0.13
27 Naphthalene-d8	1684670	842335	3369340	1711497	1.59
42 Acenaphthene-d10	967427	483714	1934854	1019256	5.36
59 Phenanthrene-d10	1360143	680072	2720286	1556980	14.47
69 Chrysene-d12	1402665	701332	2805330	1431842	2.08
134 Di-n-octylphthala	2121193	1060596	4242386	1951431	-8.00
77 Perylene-d12	1443992	721996	2887984	1554548	7.66

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.59	8.09	9.09	8.60	0.04
27 Naphthalene-d8	10.63	10.13	11.13	10.64	0.03
42 Acenaphthene-d10	13.50	13.00	14.00	13.50	0.07
59 Phenanthrene-d10	15.88	15.38	16.38	15.89	0.06
69 Chrysene-d12	20.20	19.70	20.70	20.21	0.04
134 Di-n-octylphthala	21.27	20.77	21.77	21.29	0.07
77 Perylene-d12	22.36	21.86	22.86	22.38	0.09

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

Analytical Resources, Inc.

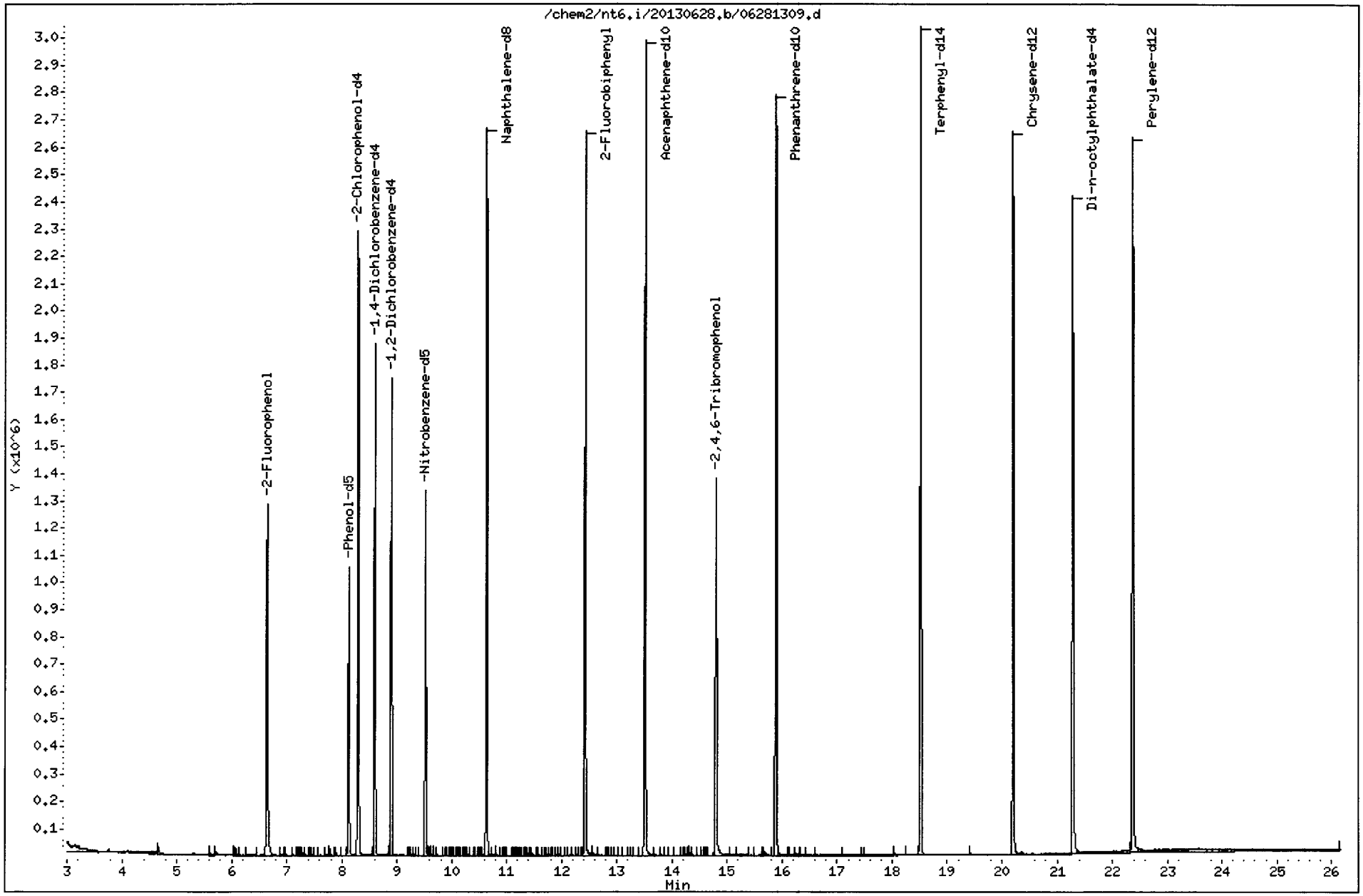
RECOVERY REPORT

Client Name: SAIC
Client SDG: WV67
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WV67MBW1
Client Smp ID: WV67MBW1
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: BLANK
SpikeList File: SEPAtclpLCS.spk
Quant Type: ISTD
Sublist File: SEPAtclpMBLCS.sub
Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Misc Info: 13-13661

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	22.81	60.83	30-120
$ 2 Phenol-d5	37.50	15.16	40.41	20-120
$ 5 2-Chlorophenol-d4	37.50	32.79	87.43	49-120
$ 10 1,2-Dichlorobenzen	25.00	19.71	78.83	40-120
$ 18 Nitrobenzene-d5	25.00	20.62	82.49	46-120
$ 36 2-Fluorobiphenyl	25.00	21.55	86.20	50-120
$ 55 2,4,6-Tribromophen	37.50	40.17	107.11	55-124
$ 66 Terphenyl-d14	25.00	27.60	110.39	57-120

Data File: /chem2/nt6.i/20130628.b/06281309.d
Date : 28-JUN-2013 15:14
Client ID: WV67MBW1
Sample Info: WV67MBW1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 06281309.d

Lab ID: WV67MBW1, Method: SW846062813.m, Instrument: nt6.i, Date: 28-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130628.b/06281310.d
Lab Smp Id: WV67E Client Smp ID: UP-CB-B8-20130626-W
Inj Date : 28-JUN-2013 15:48
Operator : JZ Inst ID: nt6.i
Smp Info : WV67E
Misc Info : 13-13661
Comment : 1ul Injection
Method : /chem2/nt6.i/20130628.b/SW846062813.m
Meth Date : 28-Jun-2013 16:35 jianqing Quant Type: ISTD
Cal Date : 28-JUN-2013 14:05 Cal File: 06281307.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPAtclp.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
$ 1	2-Fluorophenol	112	6.705	6.648	(0.780)	541448	18.9769	18.98(M)
$ 2	Phenol-d5	99	8.196	8.133	(0.953)	475880	13.5690	13.57(M)
3	Phenol	94	8.217	8.149	(0.956)	204446	5.14007	5.140
$ 5	2-Chlorophenol-d4	132	8.313	8.293	(0.967)	884197	28.9222	28.92
4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
6	2-Chlorophenol	128	Compound Not Detected.					
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	8.596	8.592	(1.000)	441245	20.0000	
9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10	1,2-Dichlorobenzene-d4	152	8.895	8.891	(1.035)	361888	17.3355	17.34
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	108	8.879	8.859	(1.033)	40381	1.98099	1.981
14	2,2'-oxybis(1-Chloropropane)	45	Compound Not Detected.					
13	2-Methylphenol	108	9.141	9.078	(1.063)	40644	1.41829	1.418(M)
17	Hexachloroethane	117	Compound Not Detected.					
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	15 4-Methylphenol	108	9.403	9.308	(1.094)	121318	4.03124	4.031(MH)
$	18 Nitrobenzene-d5	82	9.520	9.516	(0.895)	482970	36.0098	36.01(R)
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	10.540	10.382	(0.990)	1156443	113.158	113.2(M)
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.642	10.633	(1.000)	836098	20.0000	
	28 Naphthalene	128	Compound Not Detected.					
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	141	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	12.426	12.411	(0.919)	1191275	19.3249	19.32
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	13.163	13.148	(0.974)	67083	1.04913	1.049
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	13.521	13.495	(1.000)	1018520	20.0000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	14.316	14.297	(1.059)	44405	0.83467	0.8347
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	14.819	14.783	(1.096)	266420	78.8083	78.81(R)
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	15.743	15.685	(0.990)	7085	0.71128	0.7113(MH)
*	59 Phenanthrene-d10	188	15.903	15.878	(1.000)	1559376	20.0000	
	60 Phenanthrene	178	Compound Not Detected.					
	61 Anthracene	178	Compound Not Detected.					
	62 Carbazole	167	Compound Not Detected.					
	63 Di-n-butylphthalate	149	16.966	16.946	(1.067)	88384	0.81587	0.8159
	64 Fluoranthene	202	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
	65 Pyrene	202	Compound Not Detected.					
$	66 Terphenyl-d14	244	18.525	18.500	(0.916)	1175775	22.3721	22.37
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	20.213	20.198	(1.000)	1453945	20.0000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	Compound Not Detected.					
	72 bis(2-Ethylhexyl)phthalate	149	20.368	20.343	(0.957)	865709	14.4251	14.43
*	134 Di-n-octylphthalate-d4	153	21.292	21.272	(1.000)	2057957	20.0000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	74 Benzo(b)fluoranthene	252	Compound Not Detected.					
	75 Benzo(k)fluoranthene	252	Compound Not Detected.					
	76 Benzo(a)pyrene	252	Compound Not Detected.					
*	77 Perylene-d12	264	22.381	22.356	(1.000)	1668571	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	141	Compound Not Detected.					
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					
	151 1,2,4,5-Tetrachlorobenzene	216	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 06281310.d
Lab Smp Id: WV67E
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Misc Info: 13-13661

Calibration Date: 28-JUN-2013
Calibration Time: 10:39
Client Smp ID: UP-CB-B8-2013062
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	461788	230894	923576	441245	-4.45
27 Naphthalene-d8	1684670	842335	3369340	836098	-50.37 <-
42 Acenaphthene-d10	967427	483714	1934854	1018520	5.28
59 Phenanthrene-d10	1360143	680072	2720286	1559376	14.65
69 Chrysene-d12	1402665	701332	2805330	1453945	3.66
134 Di-n-octylphthala	2121193	1060596	4242386	2057957	-2.98
77 Perylene-d12	1443992	721996	2887984	1668571	15.55

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.59	8.09	9.09	8.60	0.05
27 Naphthalene-d8	10.63	10.13	11.13	10.64	0.09
42 Acenaphthene-d10	13.50	13.00	14.00	13.52	0.19
59 Phenanthrene-d10	15.88	15.38	16.38	15.90	0.16
69 Chrysene-d12	20.20	19.70	20.70	20.21	0.07
134 Di-n-octylphthala	21.27	20.77	21.77	21.29	0.09
77 Perylene-d12	22.36	21.86	22.86	22.38	0.11

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

Analytical Resources, Inc.

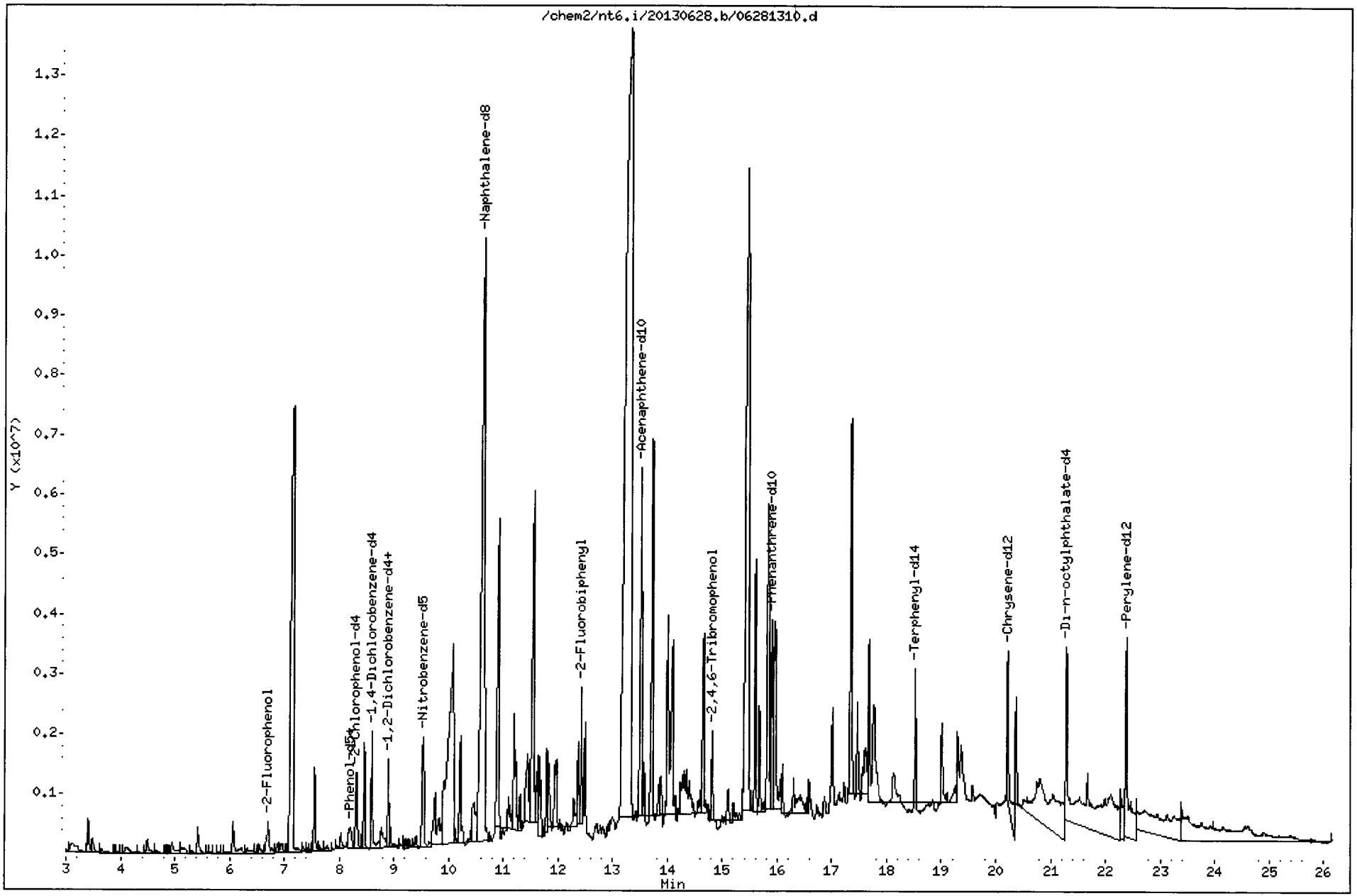
RECOVERY REPORT

Client Name: SAIC
Client SDG: WV67
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WV67E
Client Smp ID: UP-CB-B8-20130626-W
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: SEPAtclpLCS.spk
Quant Type: ISTD
Sublist File: SEPAtclp.sub
Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Misc Info: 13-13661

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	18.98	50.61	21-120
$ 2 Phenol-d5	37.50	13.57	36.18	12-1200
$ 5 2-Chlorophenol-d4	37.50	28.92	77.13	33-120
$ 10 1,2-Dichlorobenzen	25.00	17.34	69.34	33-120
$ 18 Nitrobenzene-d5	25.00	36.01	144.04*	38-120
$ 36 2-Fluorobiphenyl	25.00	19.32	77.30	40-120
$ 55 2,4,6-Tribromophen	37.50	78.81	210.16*	37-126
$ 66 Terphenyl-d14	25.00	22.37	89.49	39-120

Data File: /chem2/nt6.i/20130628.b/06281310.d
Date : 28-JUN-2013 15:48
Client ID: UP-CB-B8-20130626-W
Sample Info: WV67E
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



Data File: /chem2/nt6.i/20130628.b/06281310.d

Date : 28-JUN-2013 15:48

Client ID: UP-CB-B8-20130626-W

Instrument: nt6.i

Sample Info: WV67E

Volume Injected (uL): 1.0

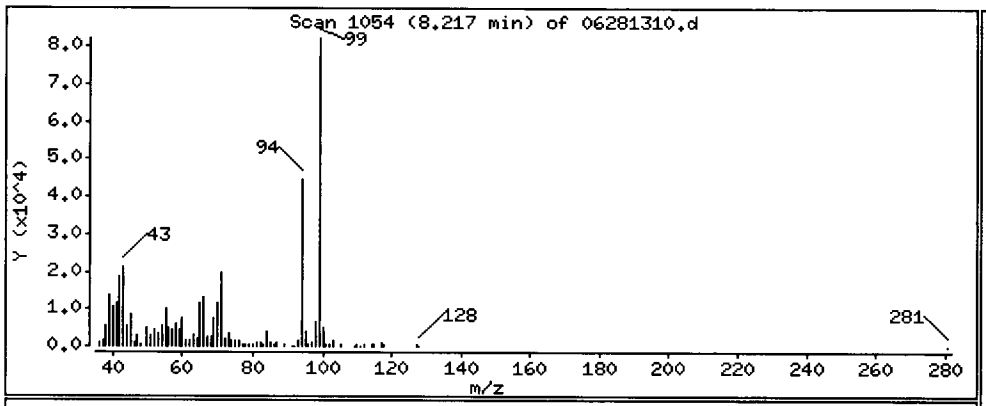
Operator: JZ

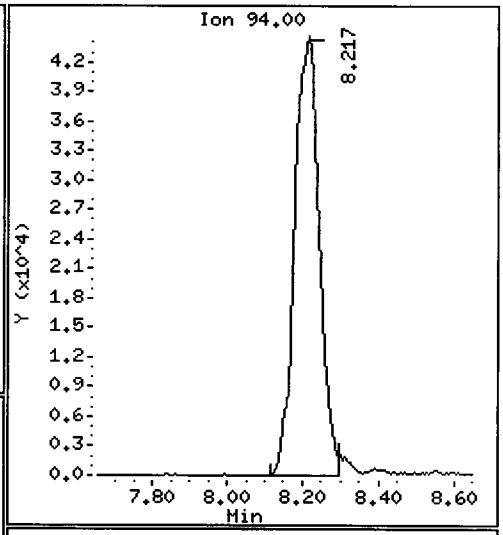
Column phase: ZB-5msi

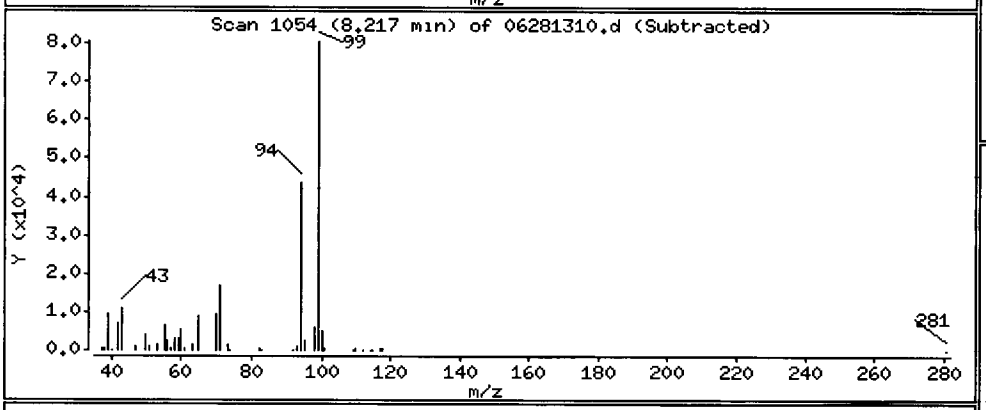
Column diameter: 0.32

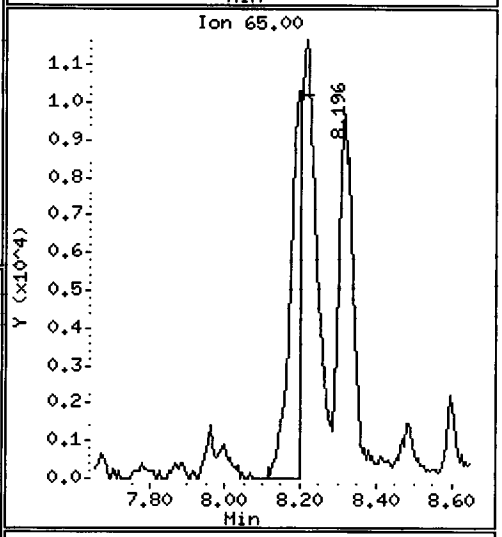
3 Phenol

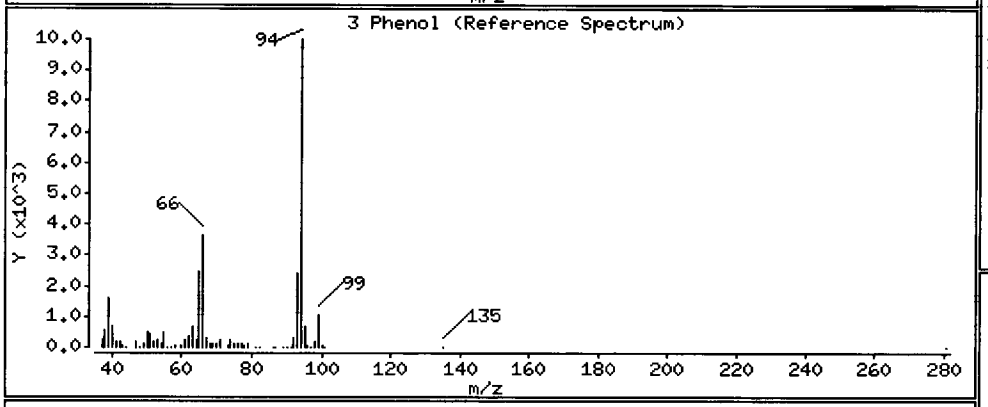
Concentration: 5.140 ug/L

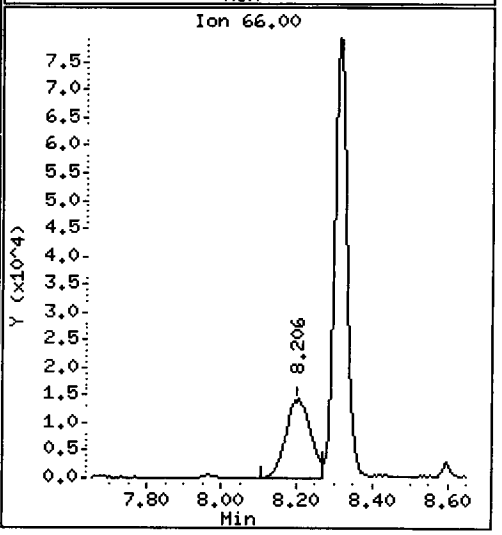


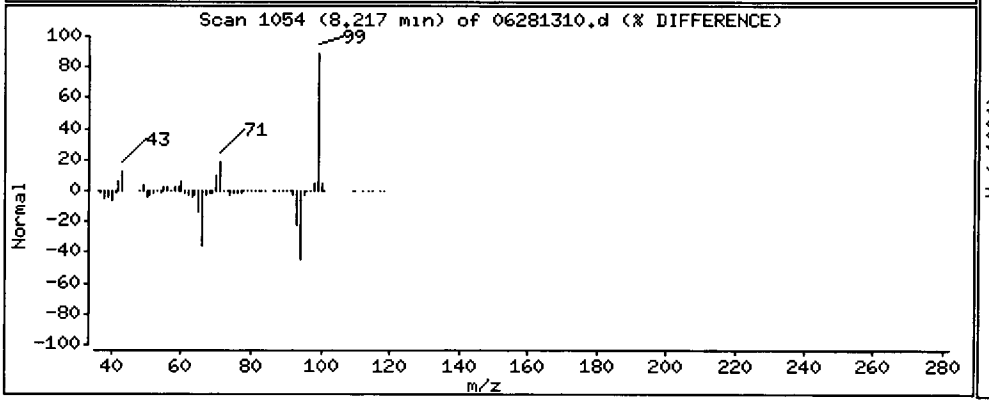












Data File: /chem2/nt6.i/20130628.b/06281310.d

Date : 28-JUN-2013 15:48

Client ID: UP-CB-B8-20130626-W

Instrument: nt6.i

Sample Info: WV67E

Volume Injected (uL): 1.0

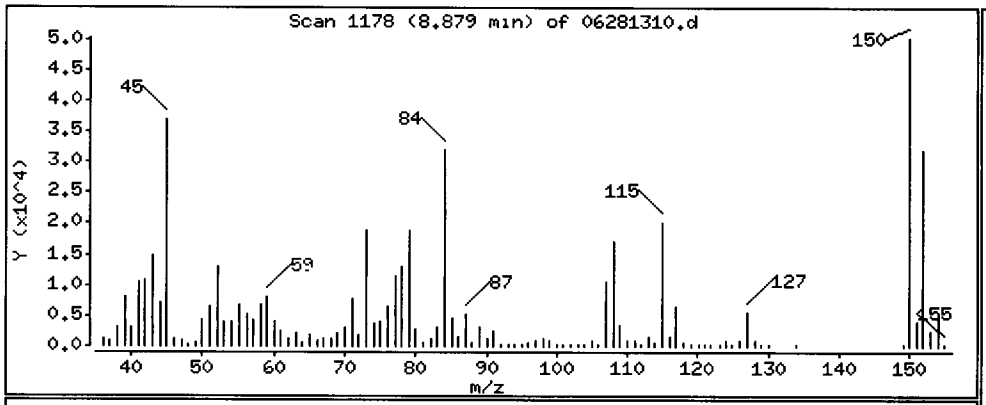
Operator: JZ

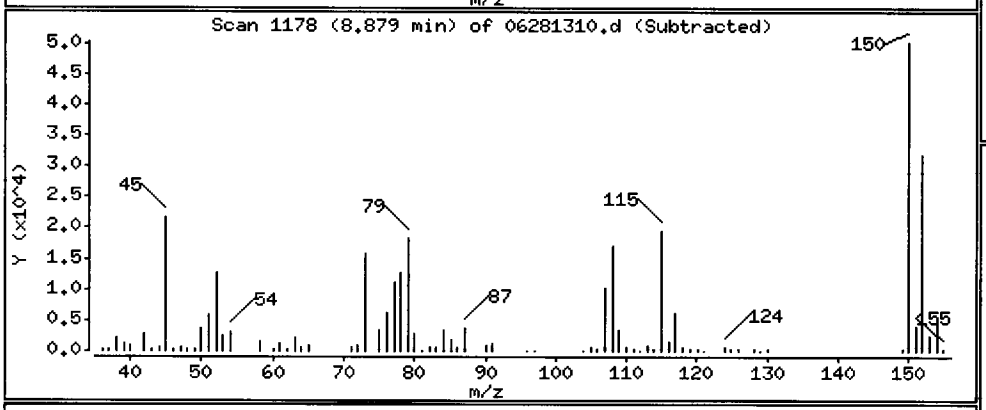
Column phase: ZB-5ms1

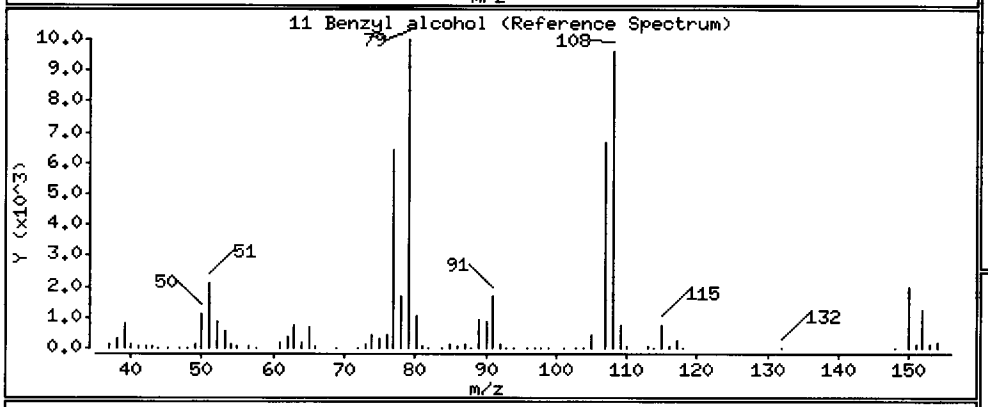
Column diameter: 0.32

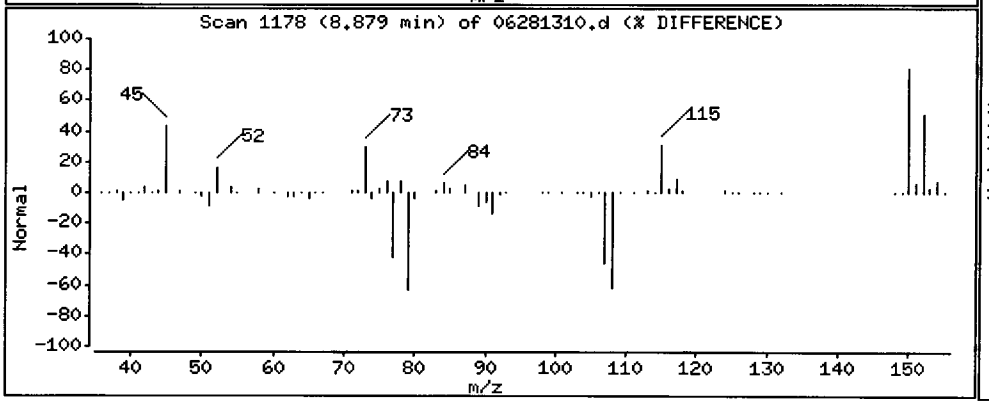
11 Benzyl alcohol

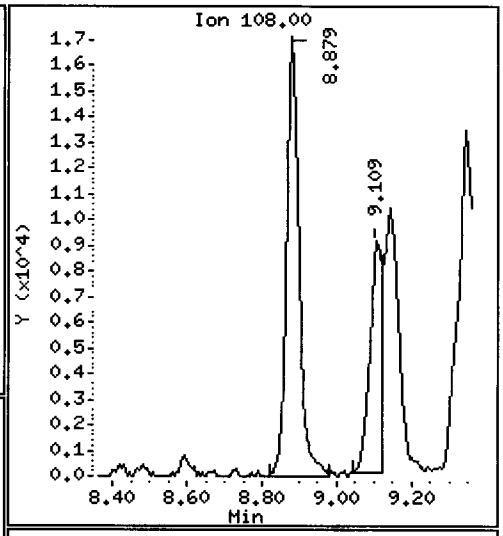
Concentration: 1.981 ug/L

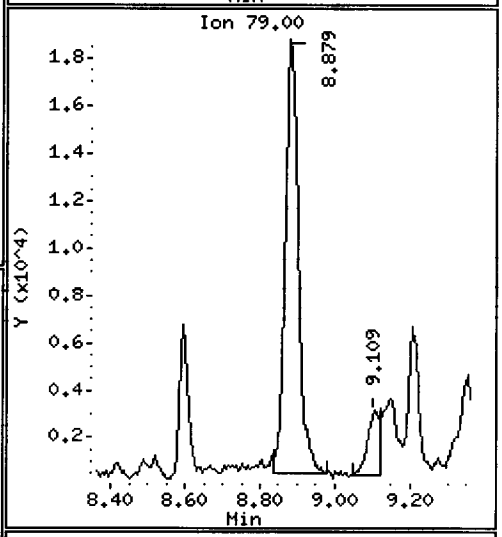


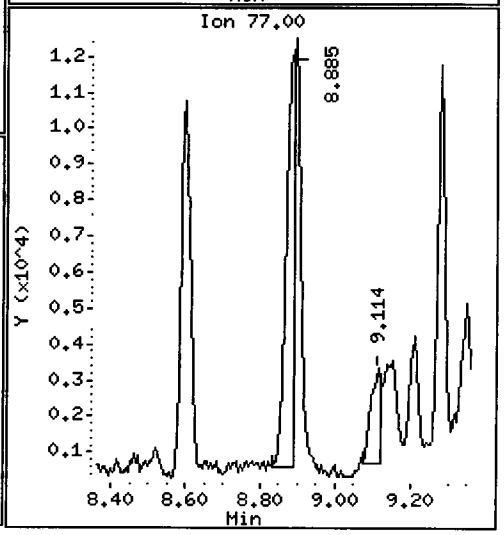






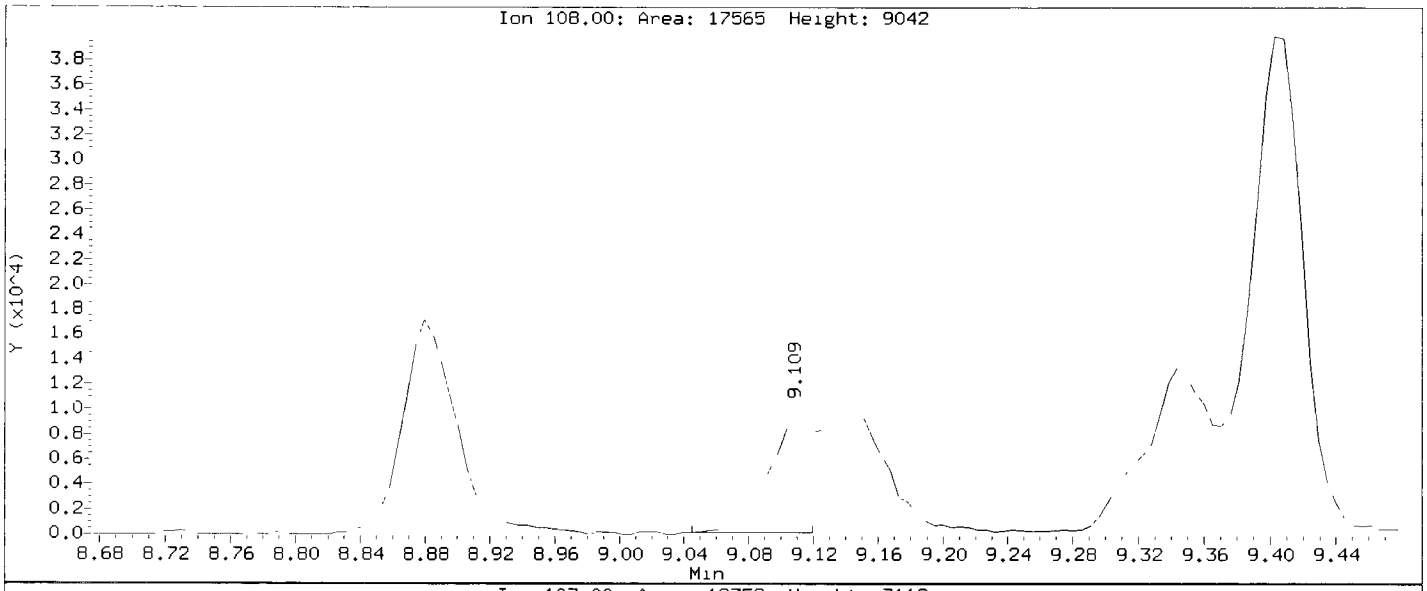


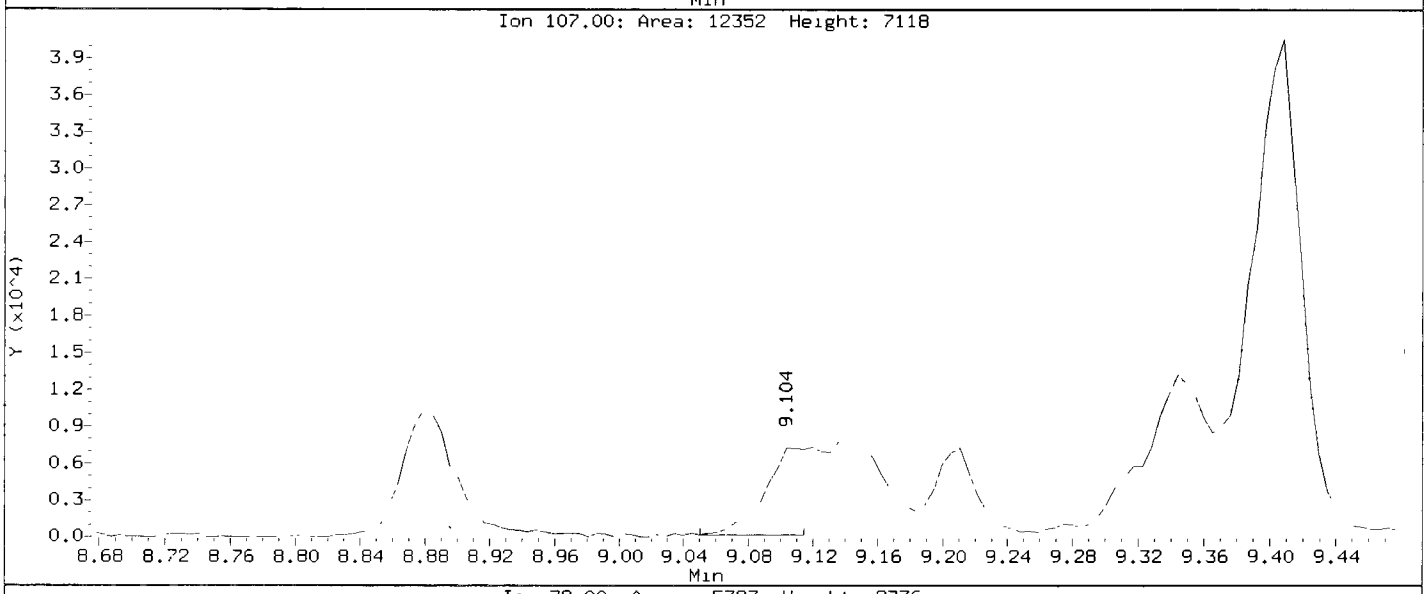


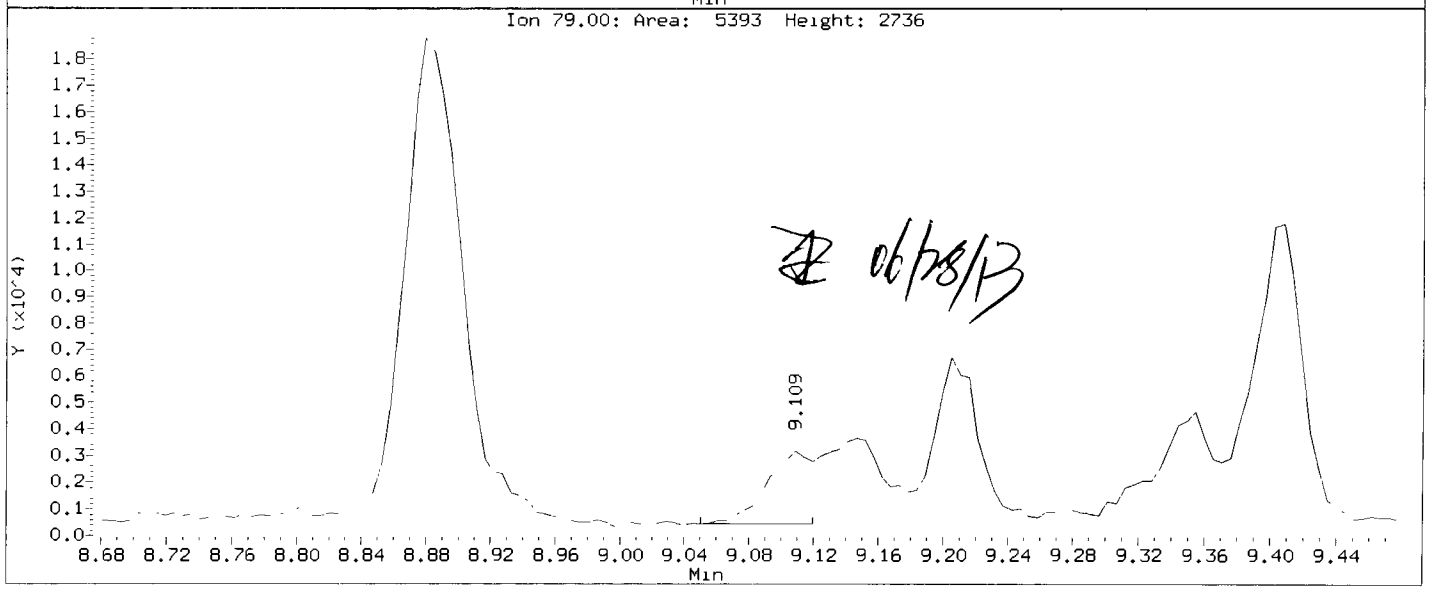


Data File: /chem2/nt6.1/20130628.b/06281310.d
Injection Date: 28-JUN-2013 15:48
Instrument: nt6.1
Client Sample ID: UP-CB-B8-20130626-W

Compound: 2-Methylphenol
CAS Number: 95-48-7





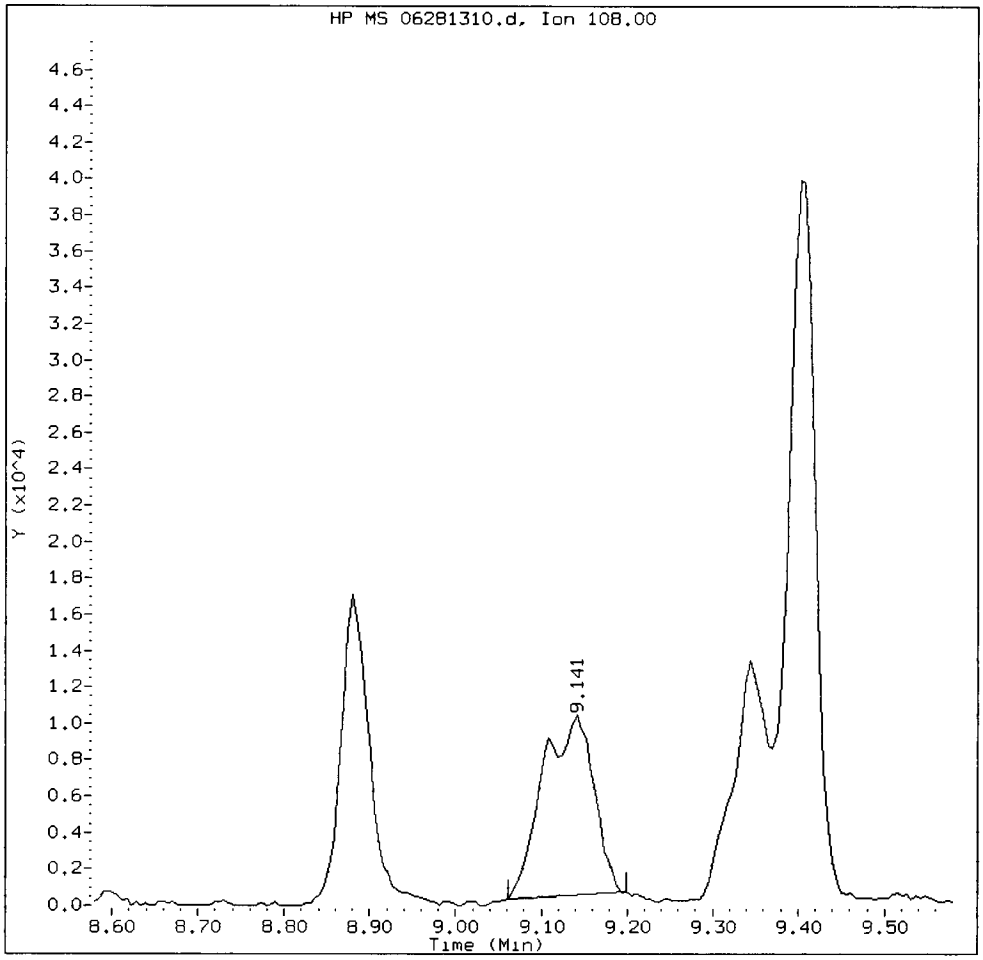


06/28/13

WYST : 00656

WV67E, /chem2/nt6.i/20130628.b/06281310.d

2-Methylphenol Amount: 1.42 Area: 40644



MANUAL INTEGRATION for 2-Methylphenol

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 06/28/13

Data File: /chem2/nt6.i/20130628.b/06281310.d

Date : 28-JUN-2013 15:48

Client ID: UP-CB-B8-20130626-W

Instrument: nt6.i

Sample Info: WV67E

Volume Injected (uL): 1.0

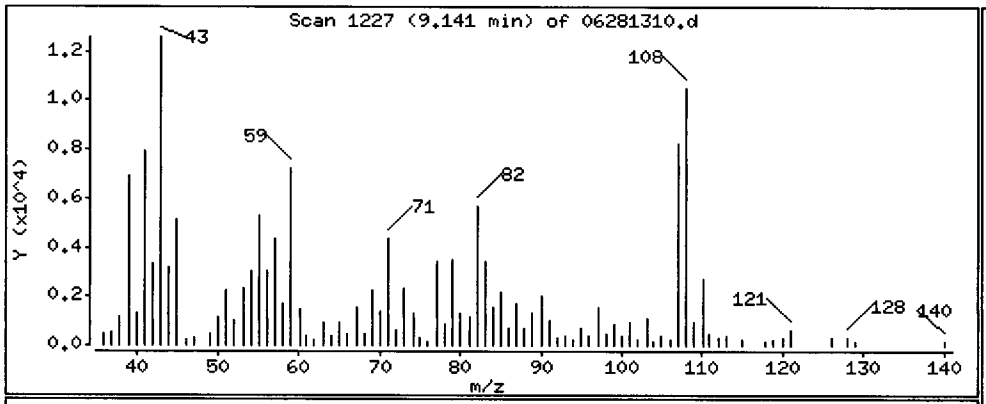
Operator: JZ

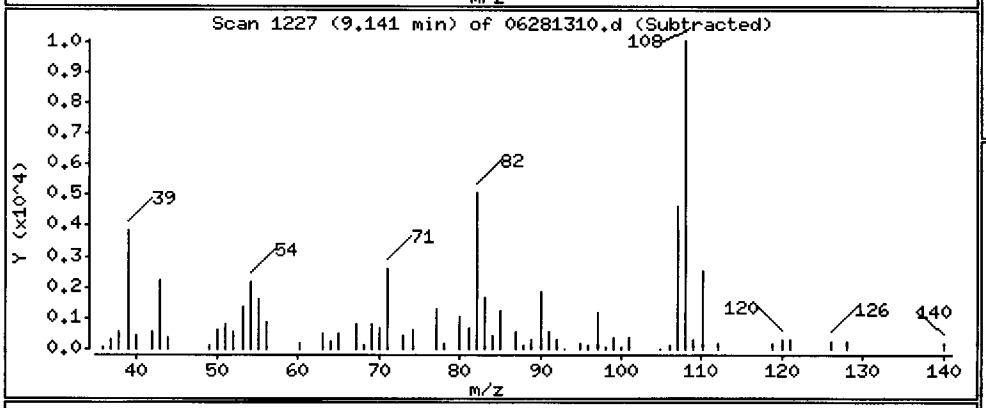
Column phase: ZB-5msi

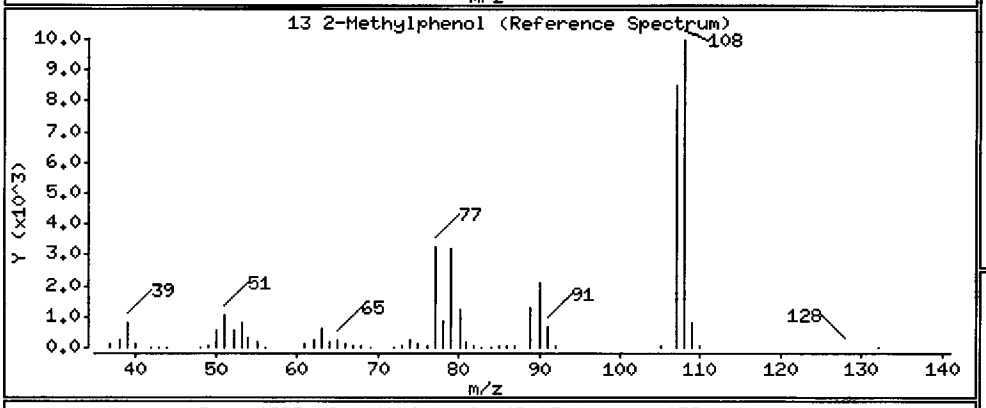
Column diameter: 0.32

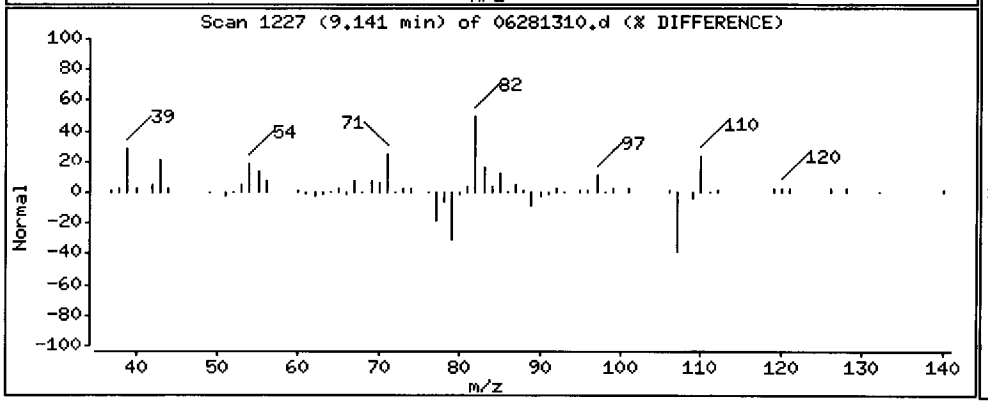
13 2-Methylphenol

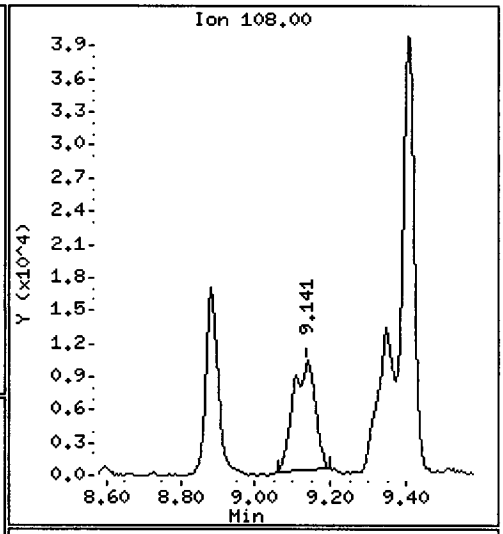
Concentration: 1.418 ug/L

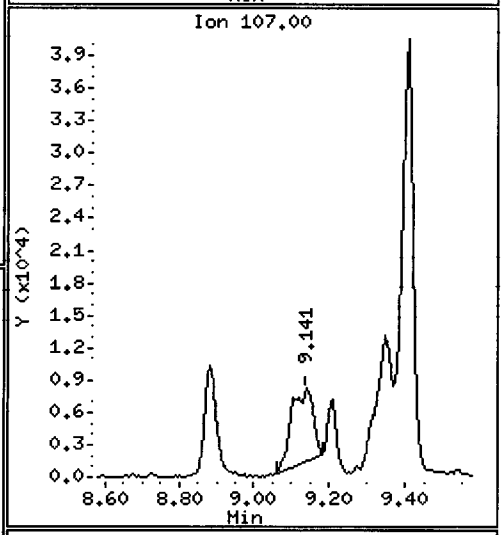


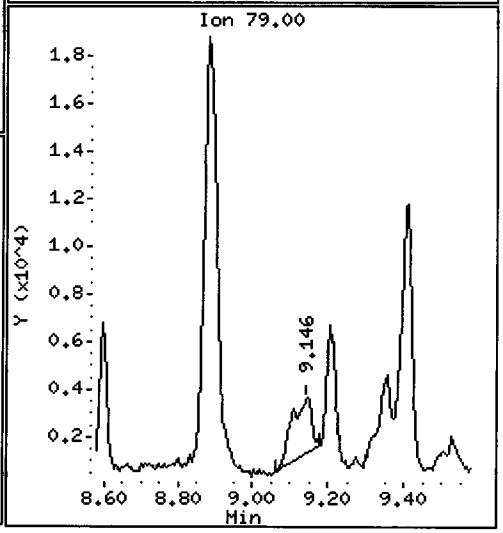






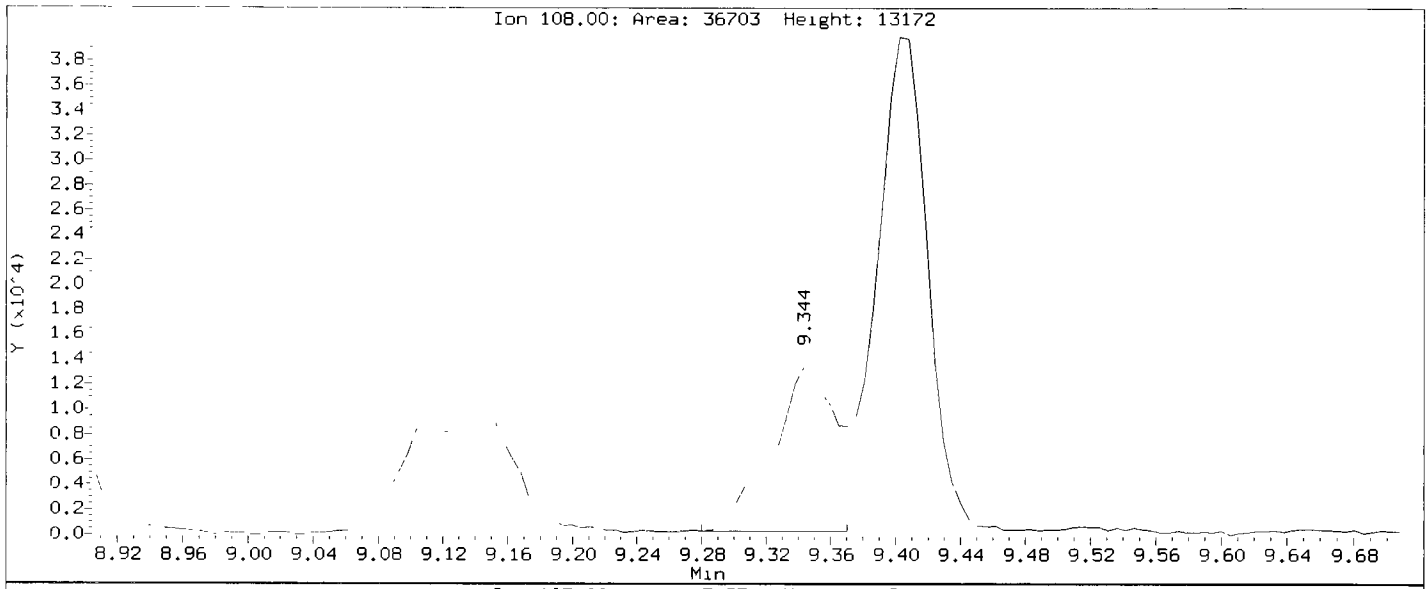


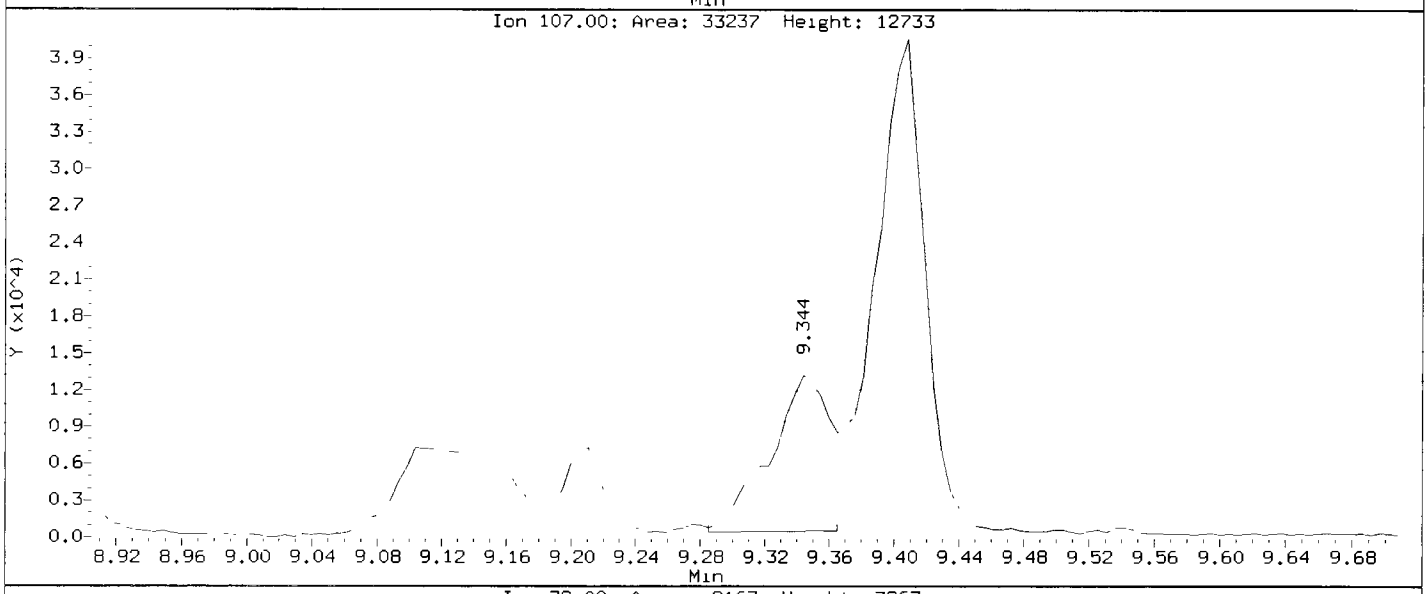


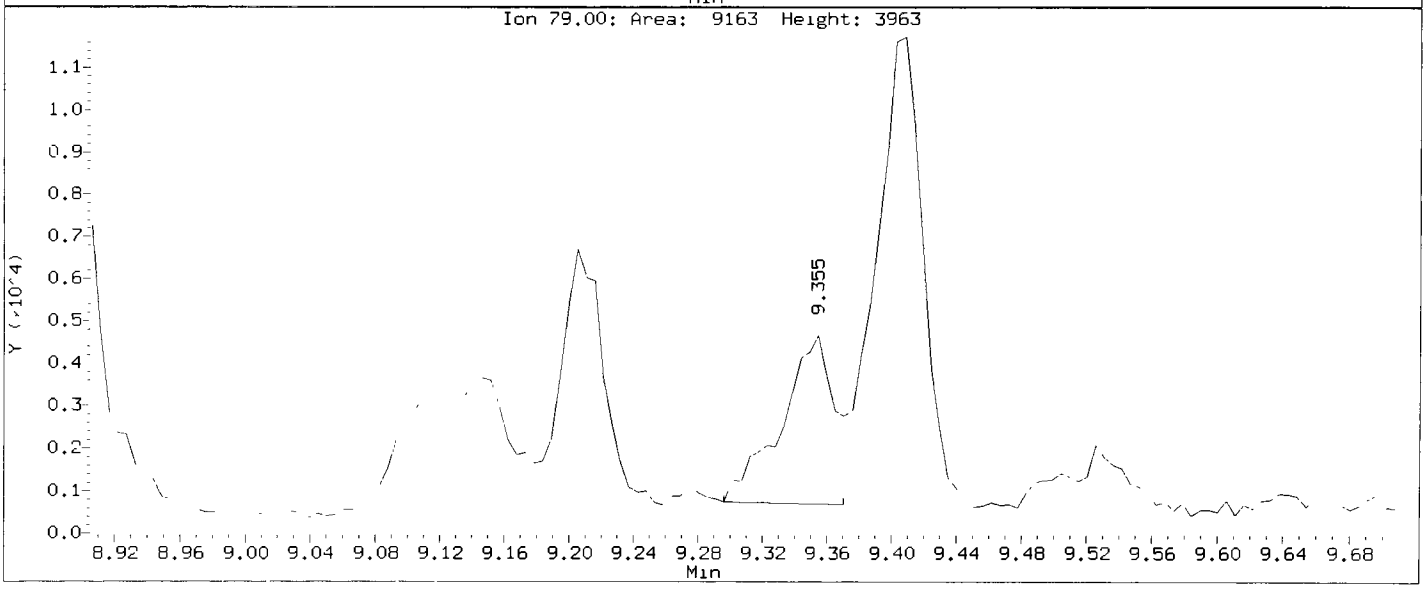


Data File: /chem2/nt6.1/20130628.b/06281310.d
Injection Date: 28-JUN-2013 15:48
Instrument: nt6.1
Client Sample ID: UP-CB-B8-20130626-W

Compound: 4-Methylphenol
CAS Number: 106-44-5



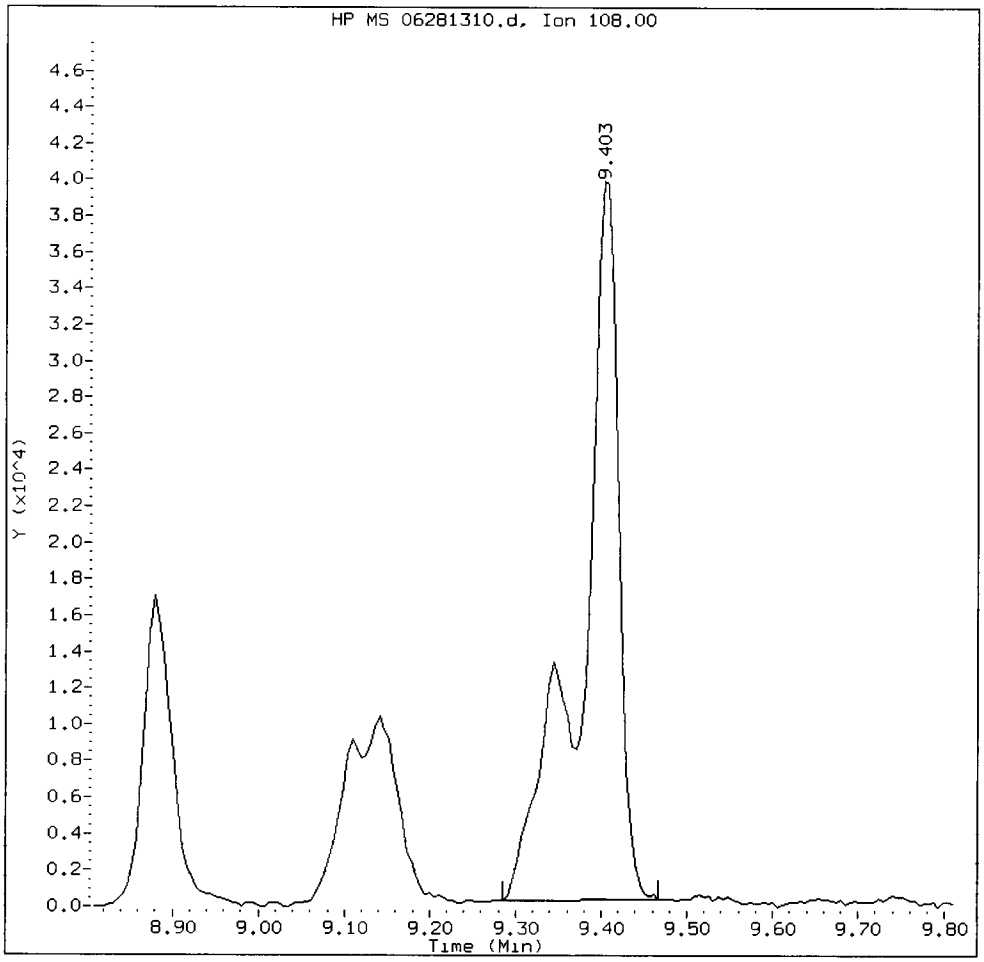




WBT: 88699

WV67E, /chem2/nt6.i/20130628.b/06281310.d

4-Methylphenol Amount: 4.03 Area: 121318



MANUAL INTEGRATION for 4-Methylphenol

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 06/28/13

Data File: /chem2/nt6.i/20130628.b/06281310.d

Date : 28-JUN-2013 15:48

Client ID: UP-CB-B8-20130626-W

Instrument: nt6.i

Sample Info: WV67E

Volume Injected (uL): 1.0

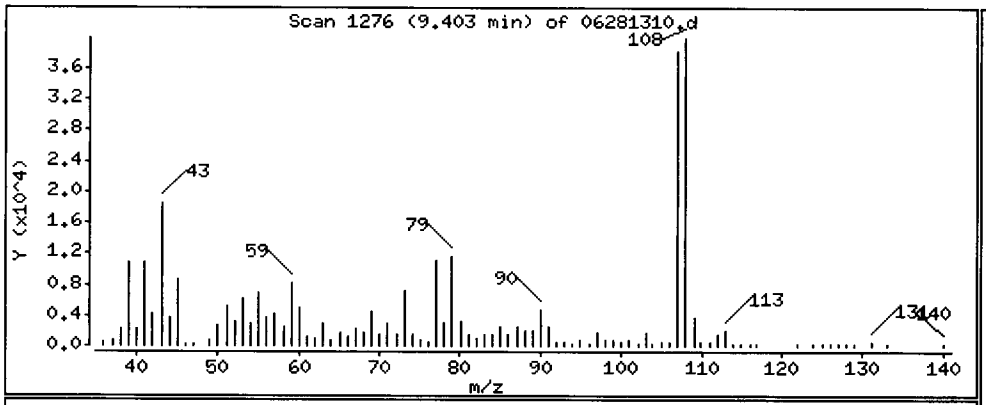
Operator: JZ

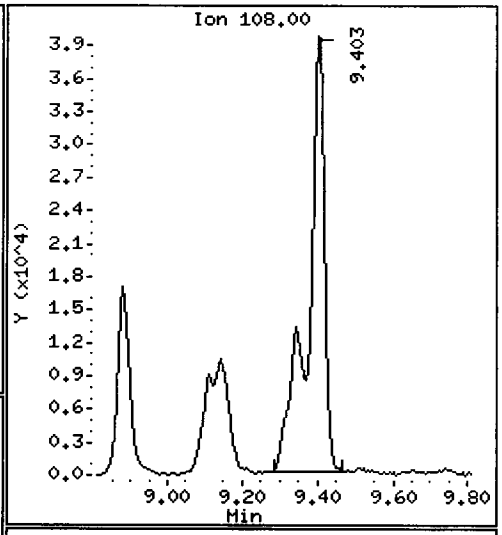
Column phase: ZB-5msi

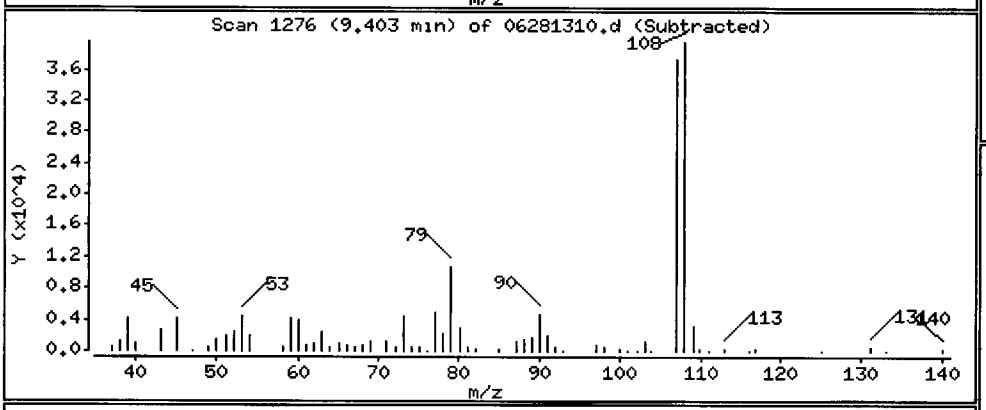
Column diameter: 0.32

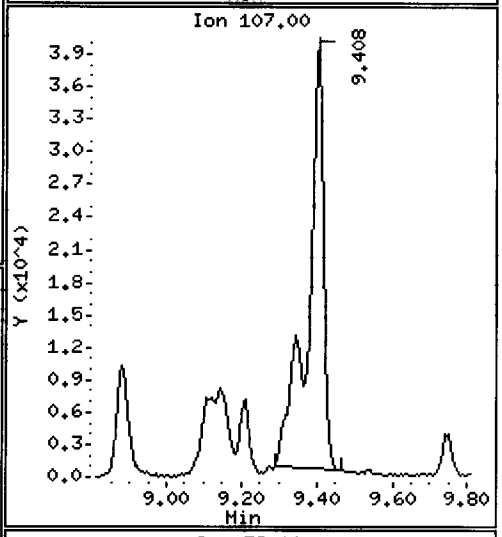
15 4-Methylphenol

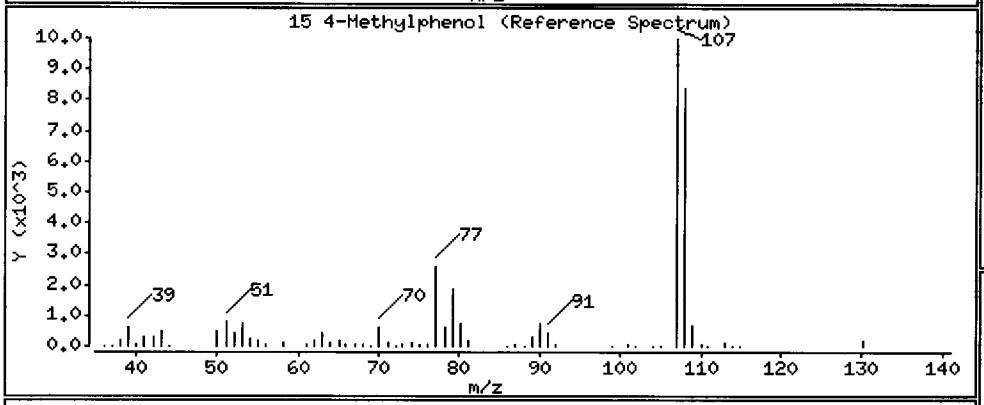
Concentration: 4.031 ug/L

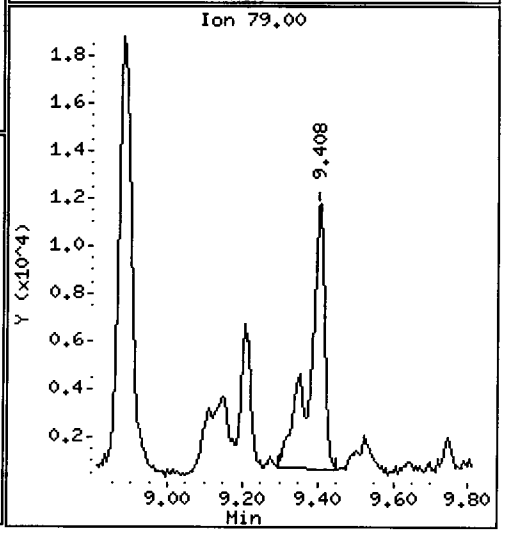


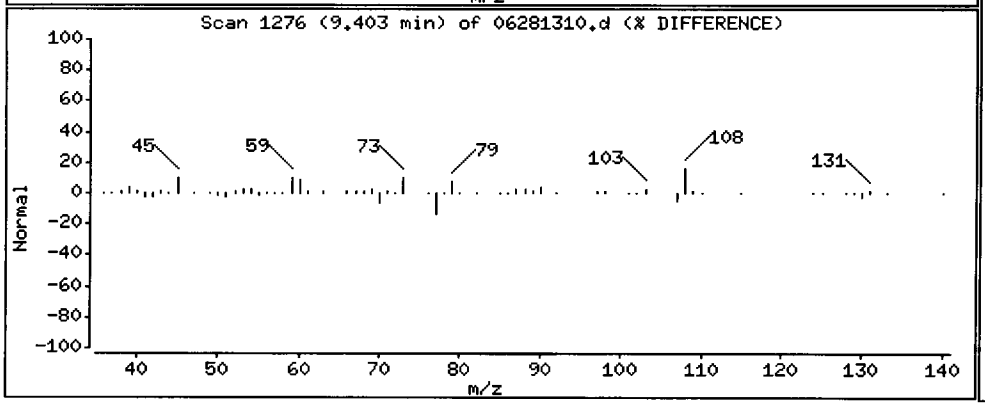






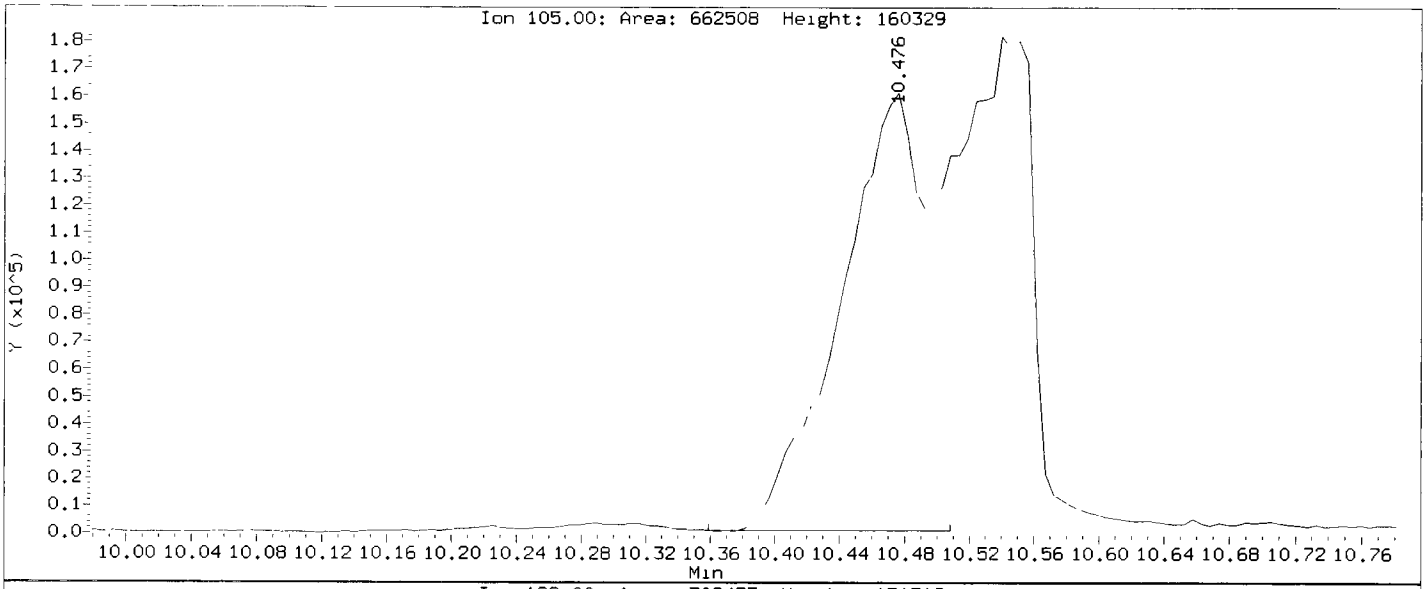


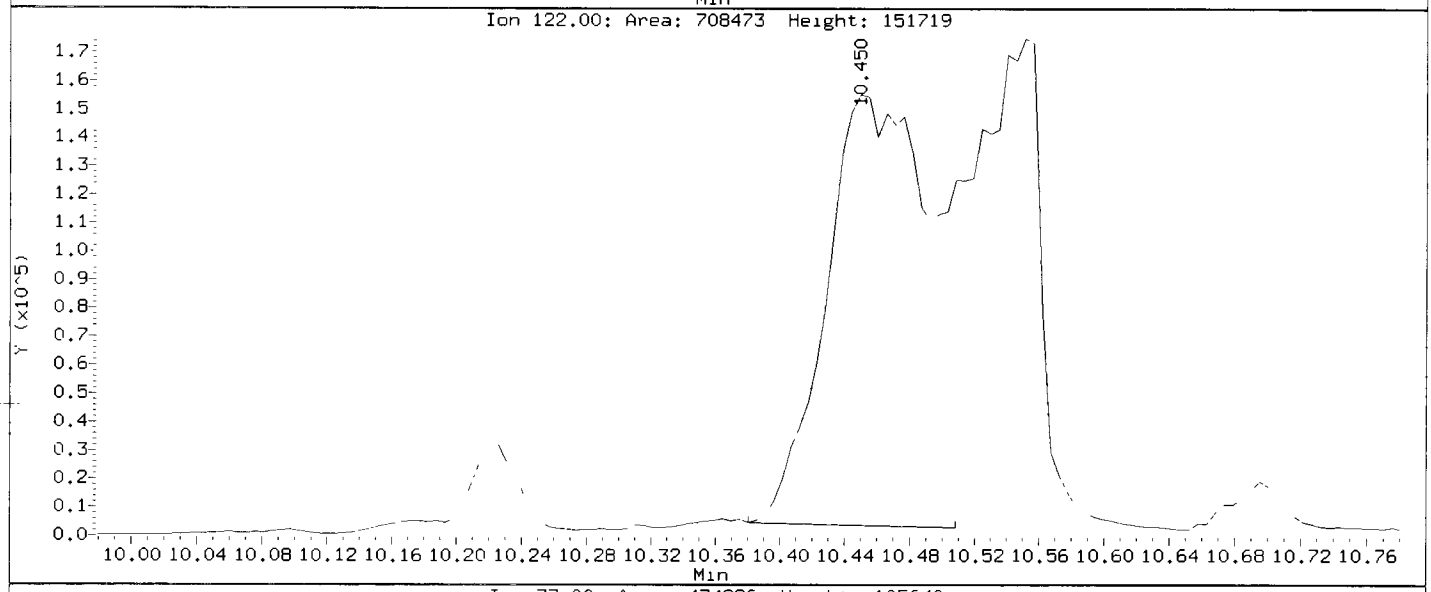


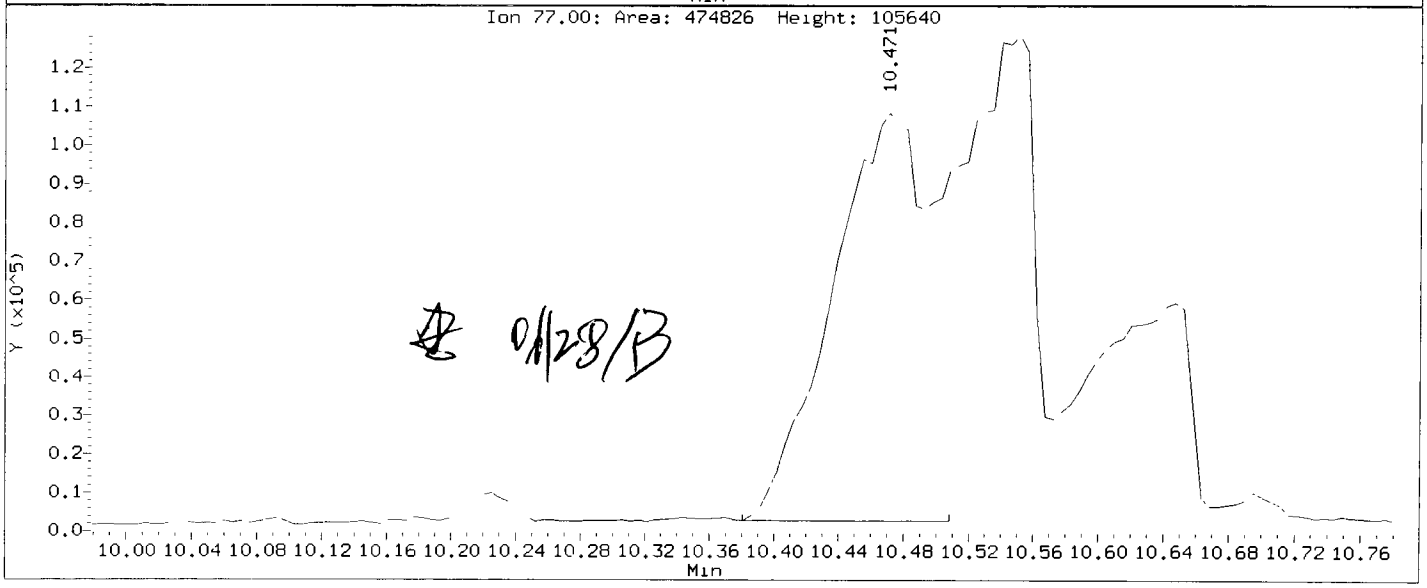


Data File: /chem2/nt6.1/20130628.b/06281310.d
Injection Date: 28-JUN-2013 15:48
Instrument: nt6.1
Client Sample ID: UP-CB-B8-20130626-W

Compound: Benzoic acid
CAS Number: 65-85-0





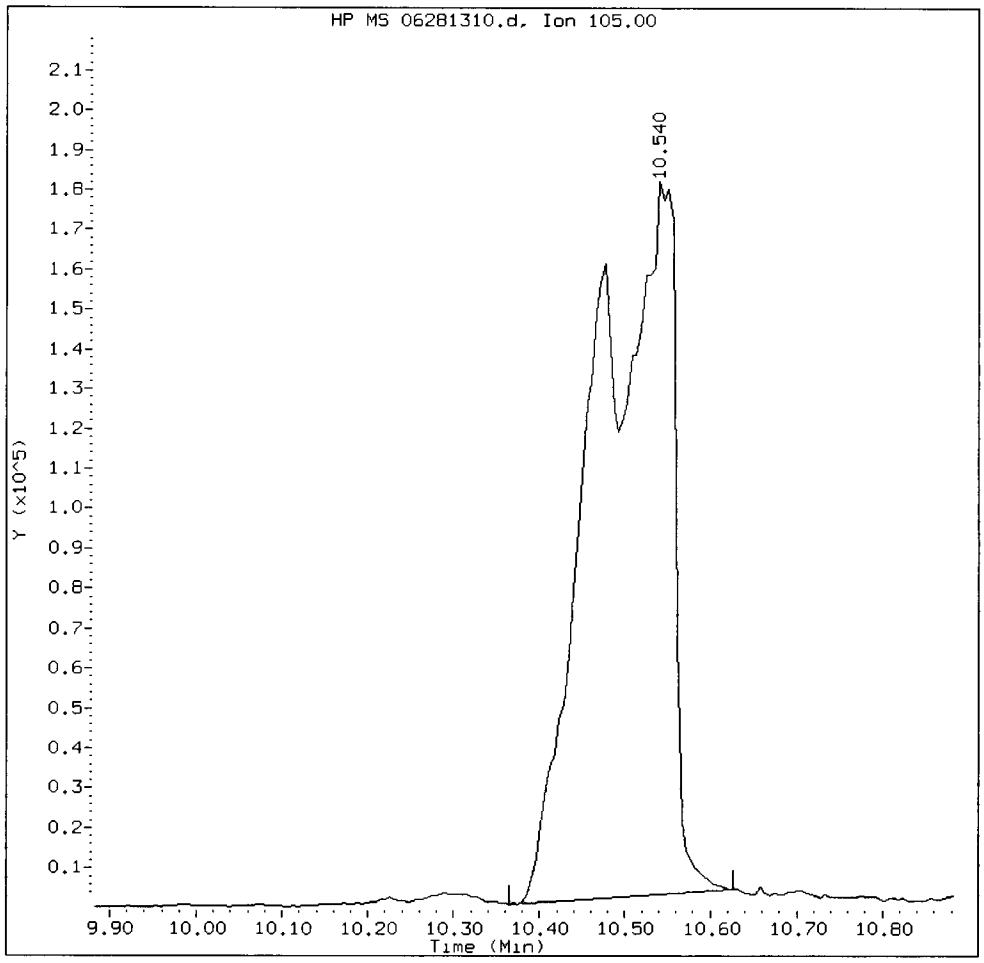


0/1/28/B

WGT : 08782

WV67E, /chem2/nt6.i/20130628.b/06281310.d

Benzoic acid Amount: 113.16 Area: 1156443



MANUAL INTEGRATION for Benzoic acid

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 06/28/13

Data File: /chem2/nt6.i/20130628.b/06281310.d

Date : 28-JUN-2013 15:48

Client ID: UP-CB-B8-20130626-W

Instrument: nt6.i

Sample Info: WV67E

Volume Injected (uL): 1.0

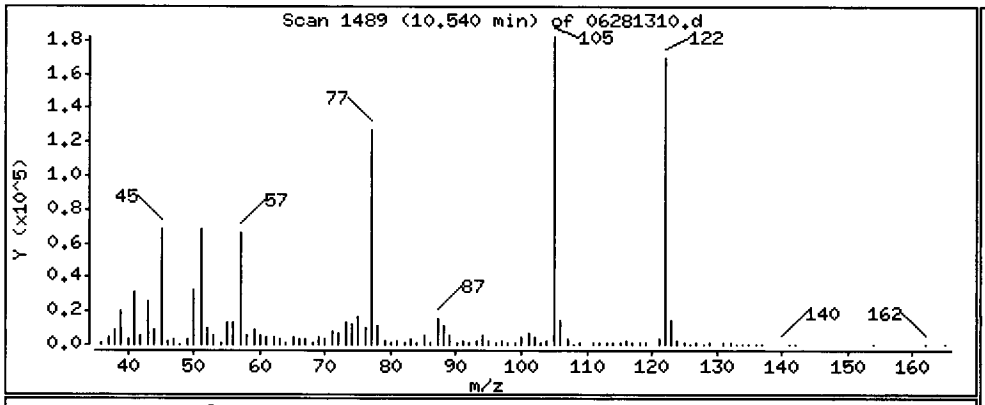
Operator: JZ

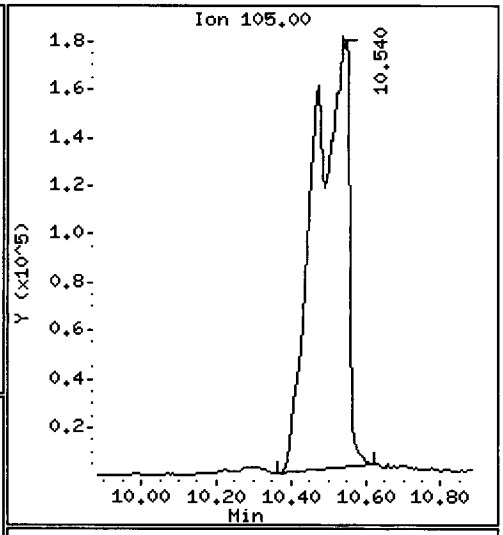
Column phase: ZB-5msi

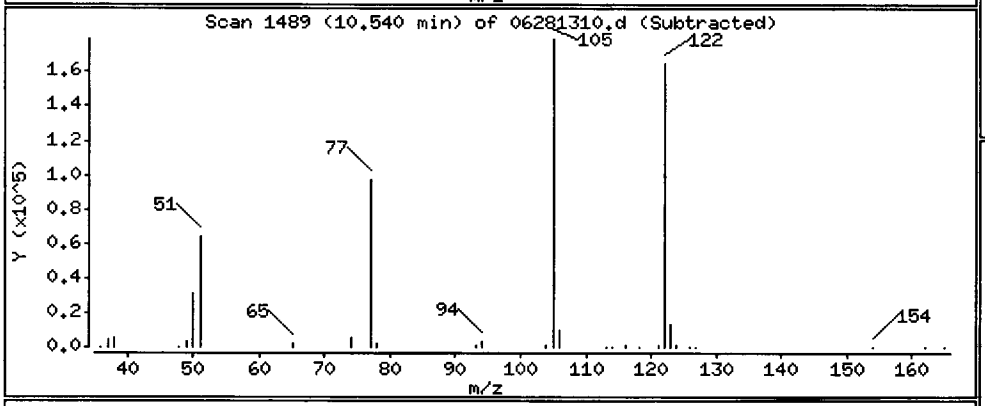
Column diameter: 0.32

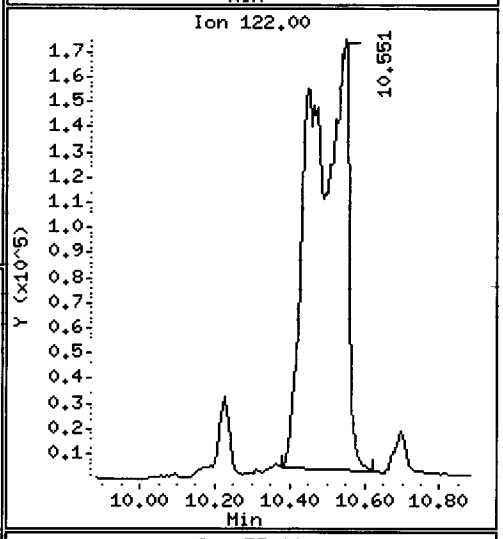
24 Benzoic acid

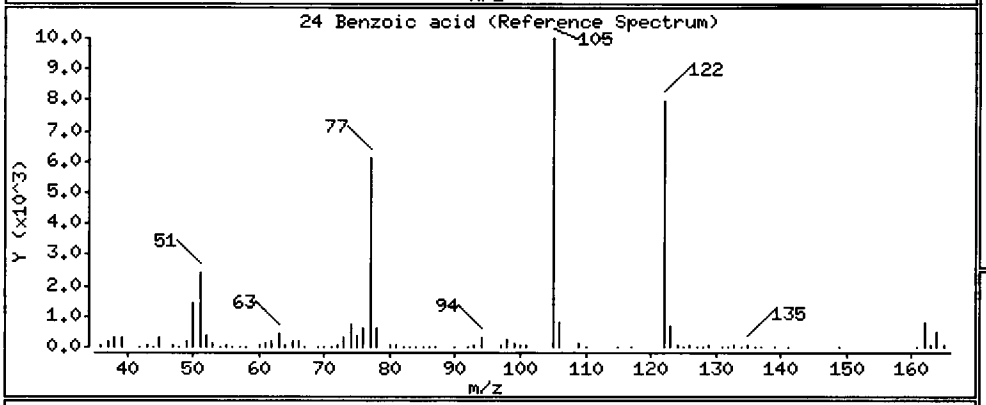
Concentration: 113.2 ug/L

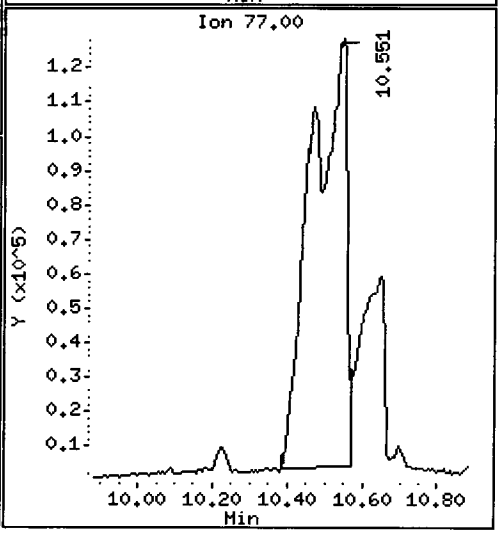


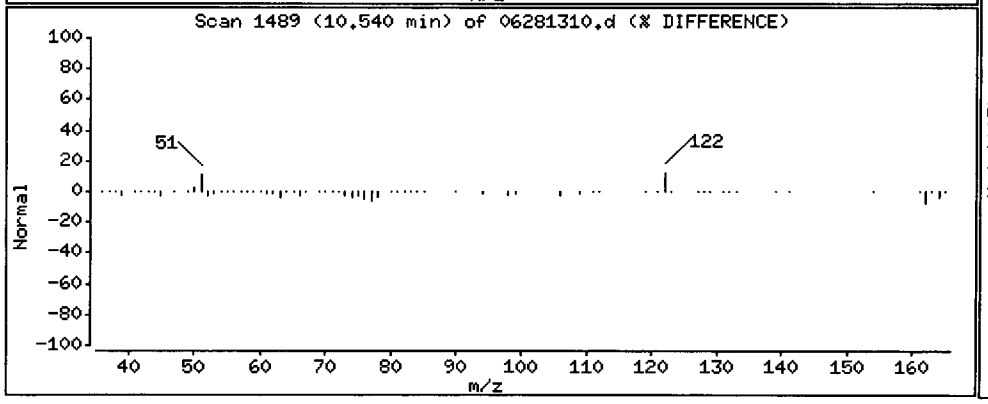












Data File: /chem2/nt6.i/20130628.b/06281310.d

Date : 28-JUN-2013 15:48

Client ID: UP-CB-B8-20130626-W

Instrument: nt6.i

Sample Info: WV67E

Volume Injected (uL): 1.0

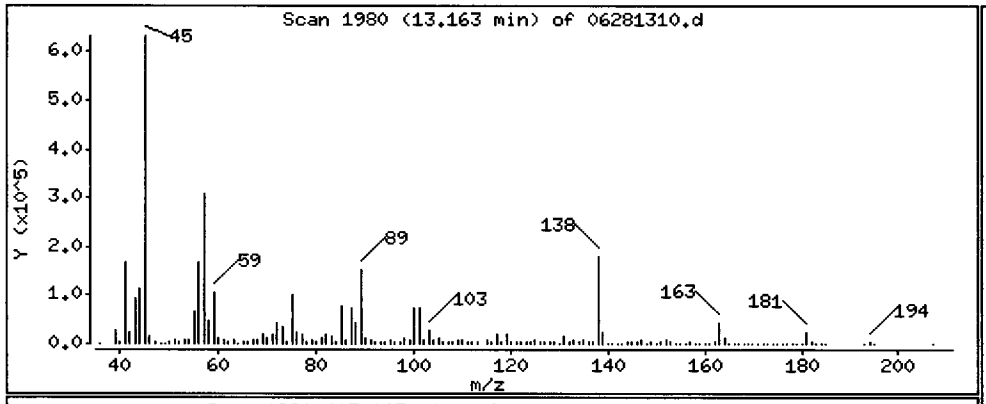
Operator: JZ

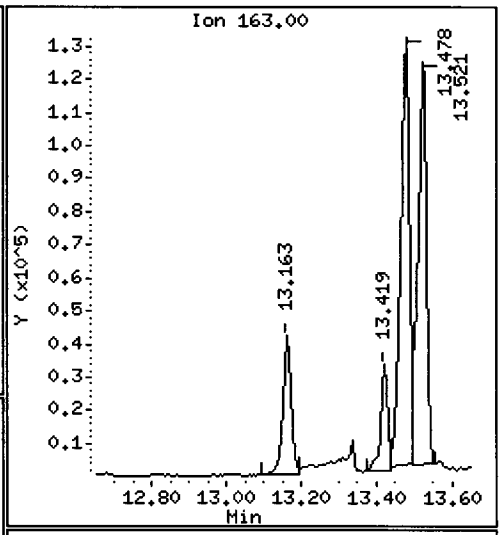
Column phase: ZB-5msi

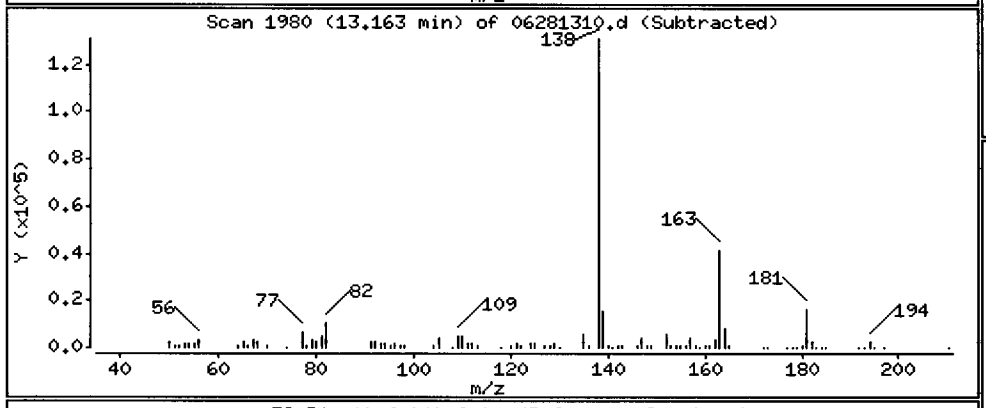
Column diameter: 0.32

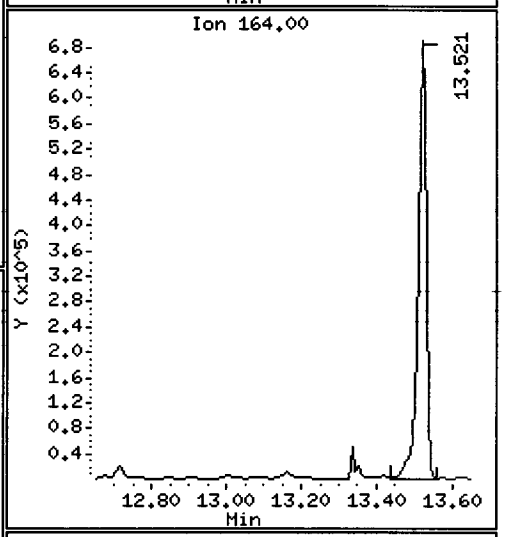
39 Dimethylphthalate

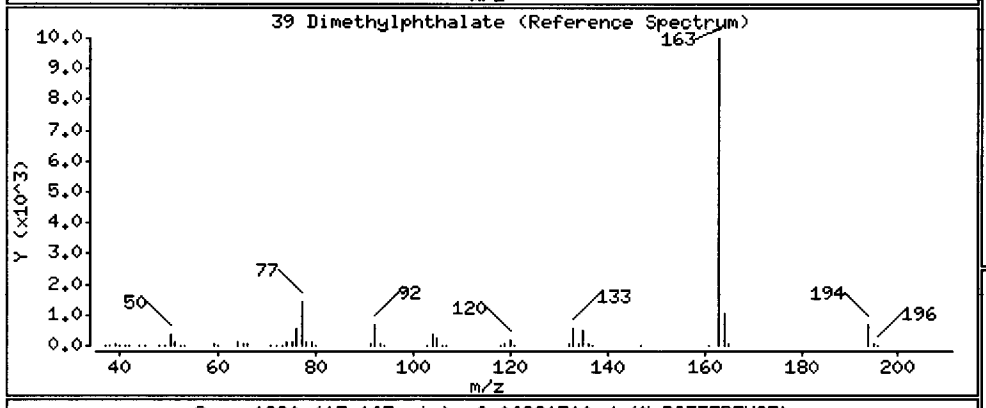
Concentration: 1.049 ug/L

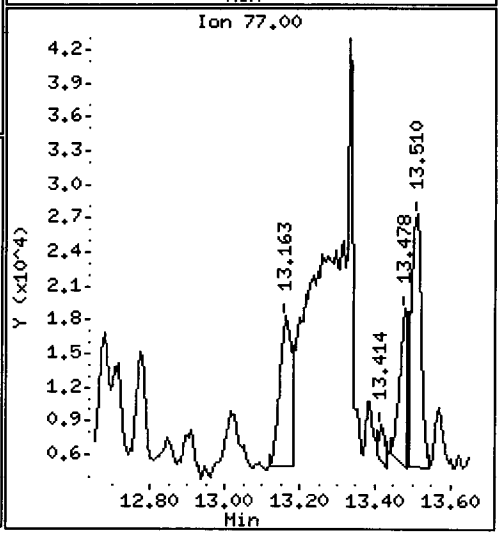


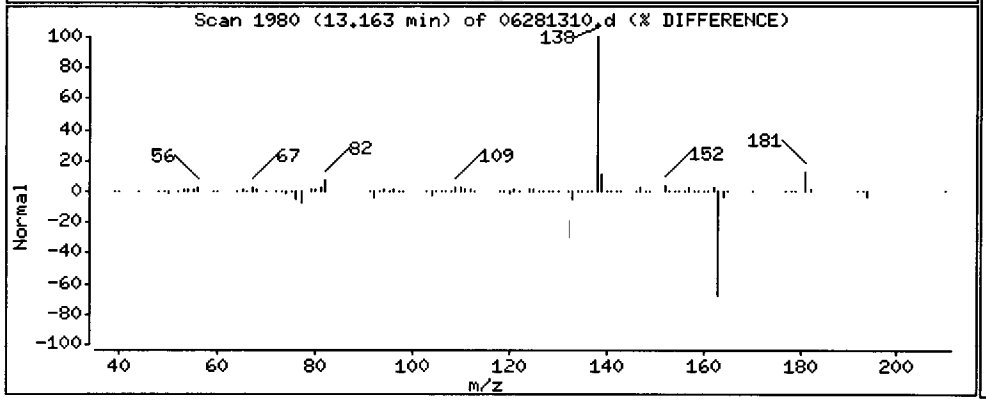












Data File: /chem2/nt6.i/20130628.b/06281310.d

Date : 28-JUN-2013 15:48

Client ID: UP-CB-B8-20130626-W

Instrument: nt6.i

Sample Info: WV67E

Volume Injected (uL): 1.0

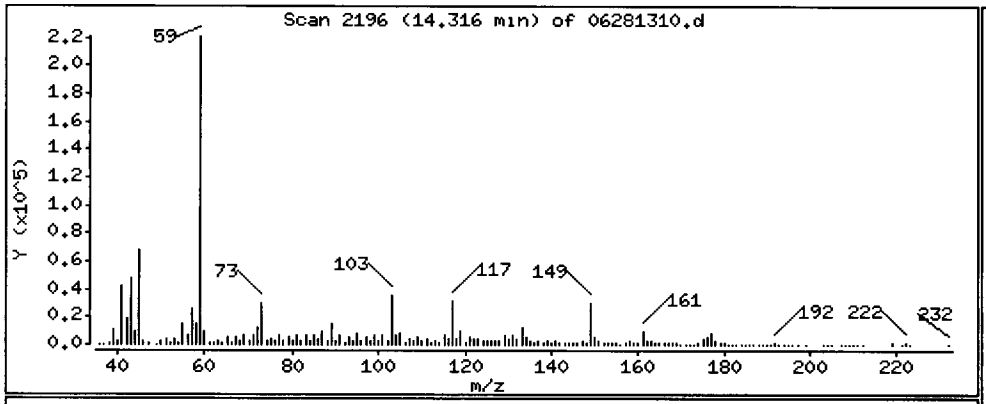
Operator: JZ

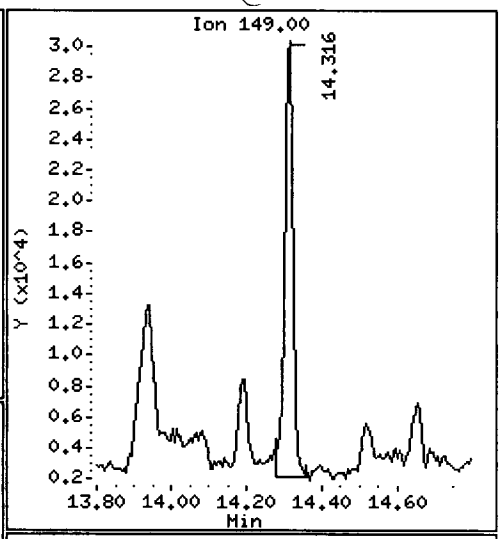
Column phase: ZB-5msi

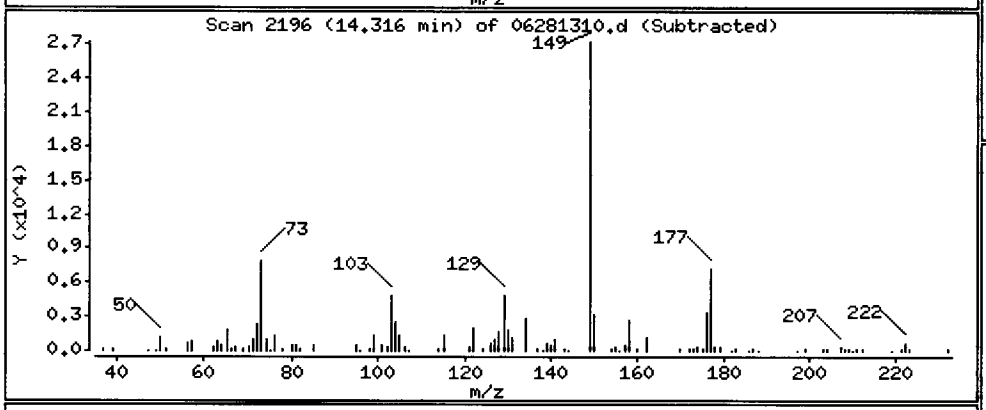
Column diameter: 0.32

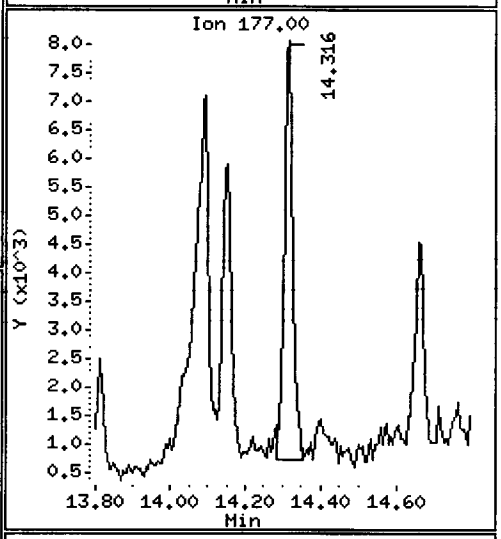
50 Diethylphthalate

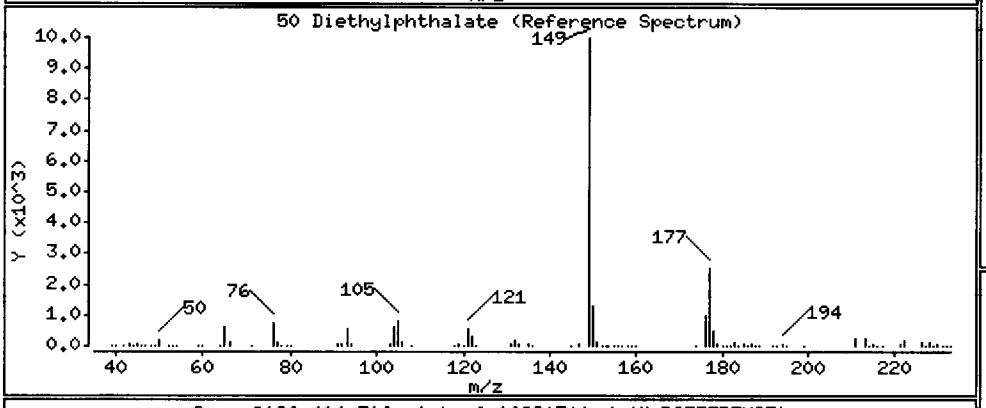
Concentration: 0.8347 ug/L

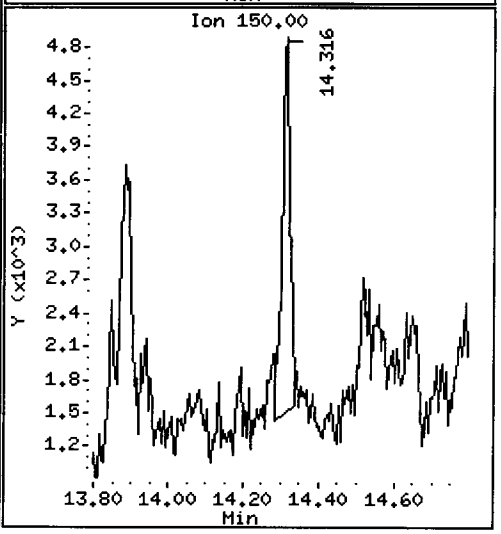


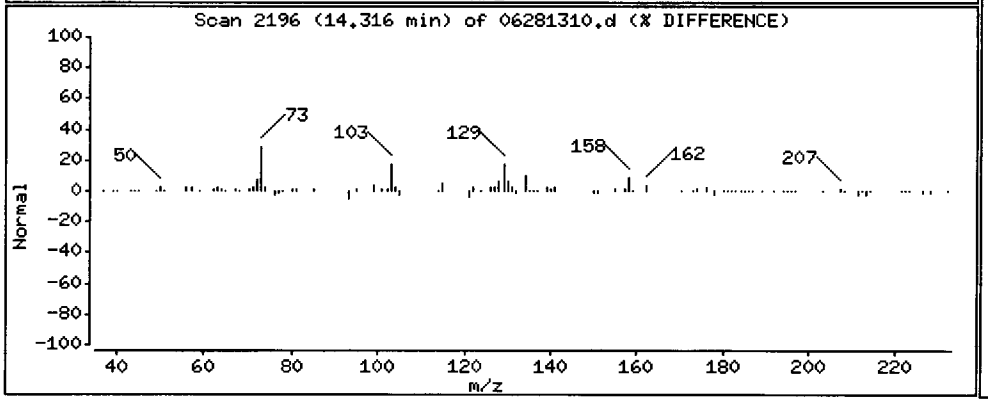






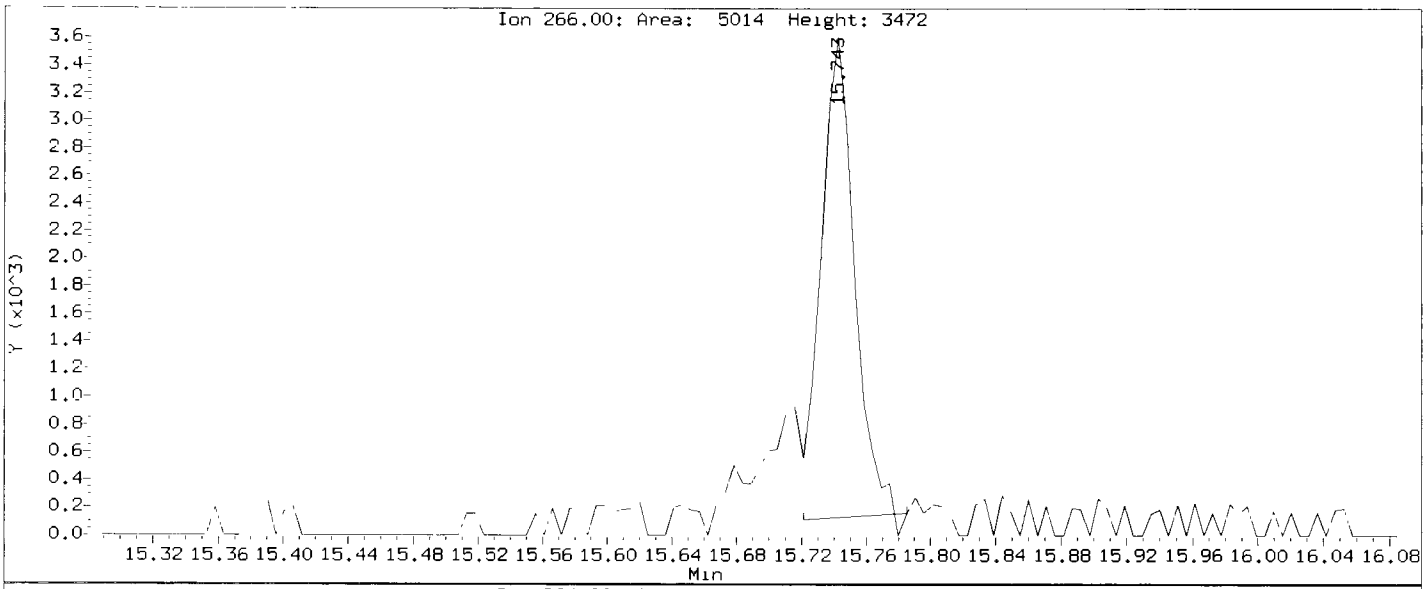


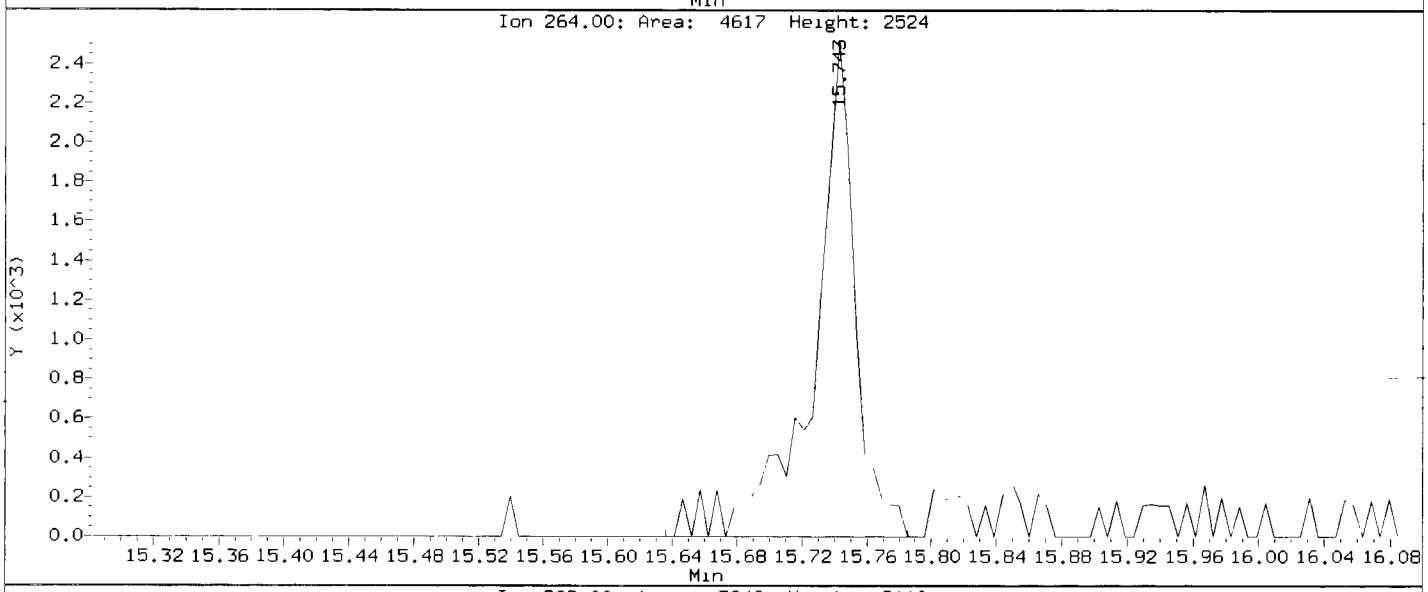


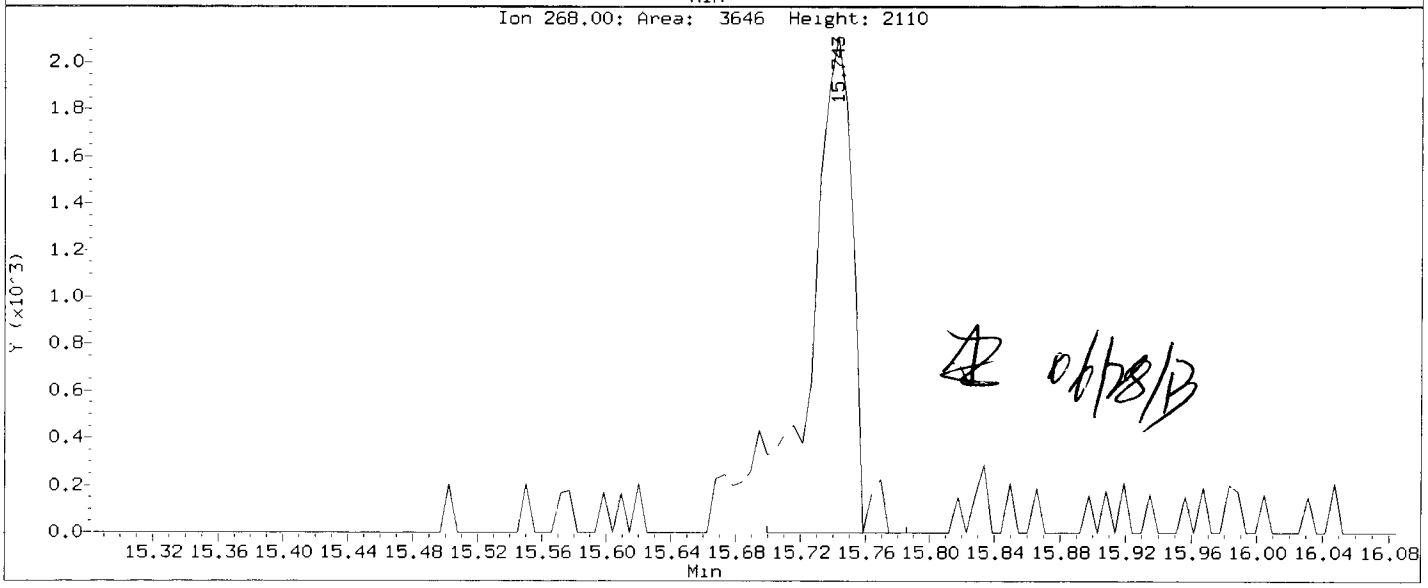


Data File: /chem2/nt6.1/20130628.b/06281310.d
Injection Date: 28-JUN-2013 15:48
Instrument: nt6.1
Client Sample ID: UP-CB-B8-20130626-W

Compound: Pentachlorophenol
CAS Number: 87-86-5



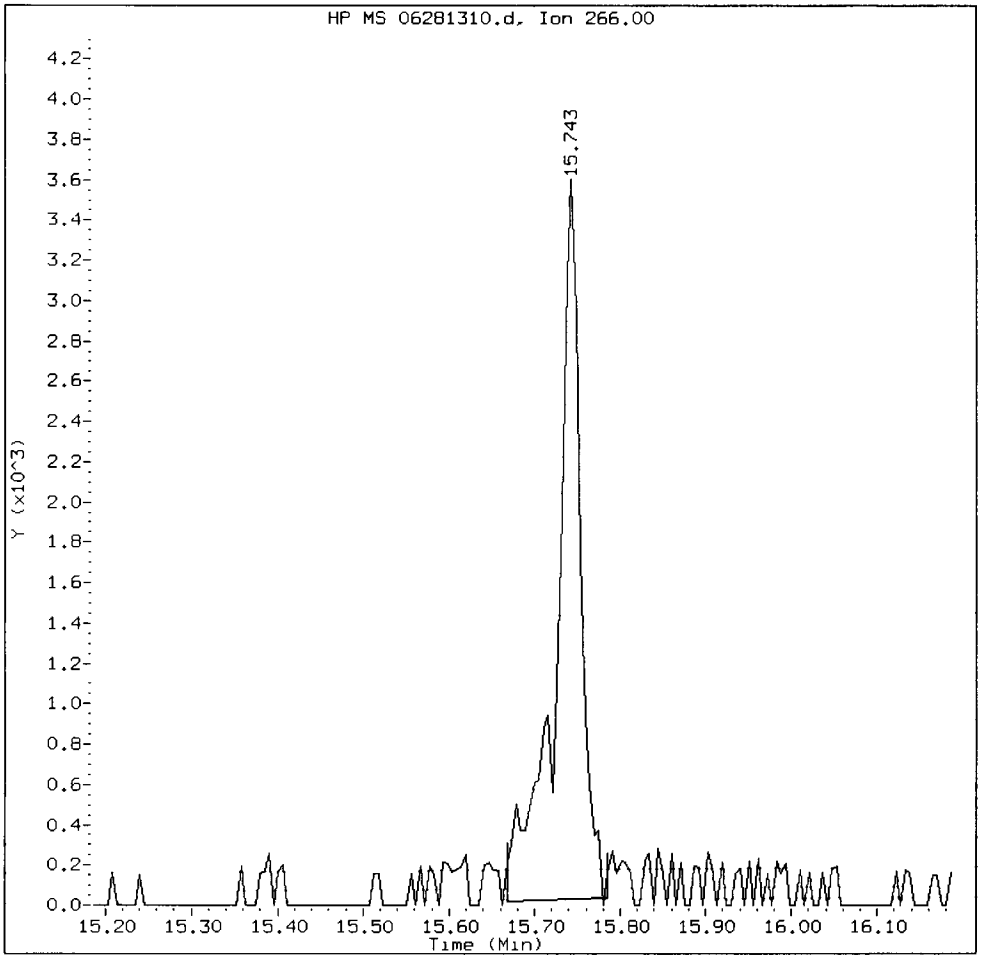




06/28/13

WV67E, /chem2/nt6.i/20130628.b/06281310.d

Pentachlorophenol Amount: 0.71 Area: 7085



MANUAL INTEGRATION for Pentachlorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 06/28/13

Data File: /chem2/nt6.i/20130628.b/06281310.d

Date : 28-JUN-2013 15:48

Client ID: UP-CB-B8-20130626-W

Instrument: nt6.i

Sample Info: WV67E

Volume Injected (uL): 1.0

Operator: JZ

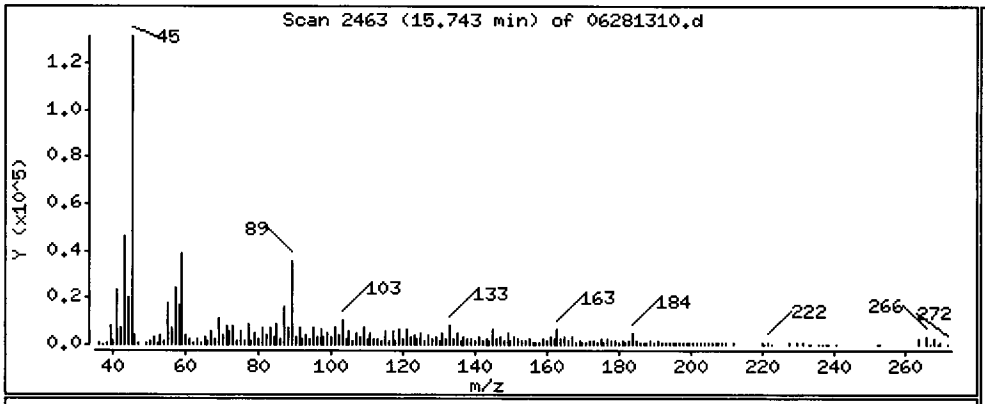
Column phase: ZB-5msi

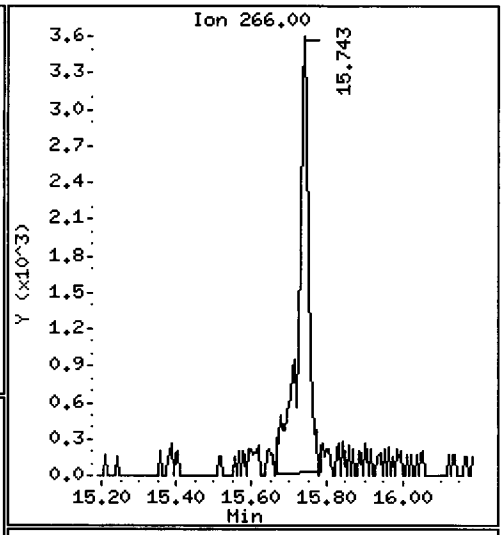
Column diameter: 0.32

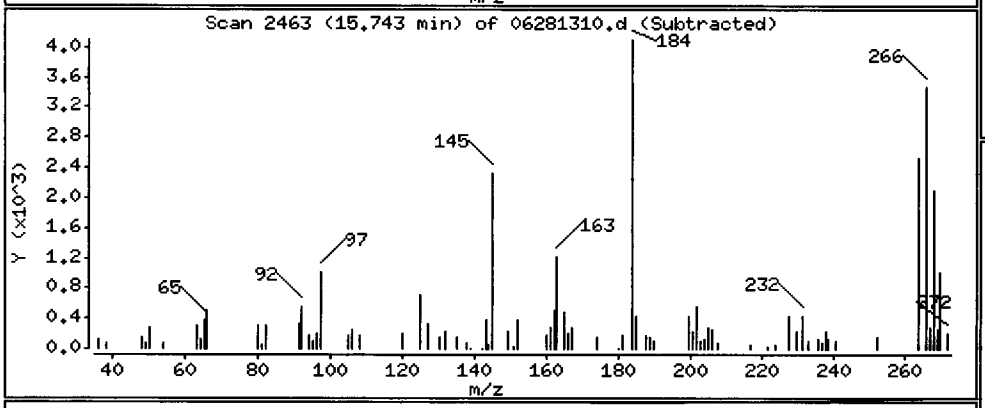
58 Pentachlorophenol

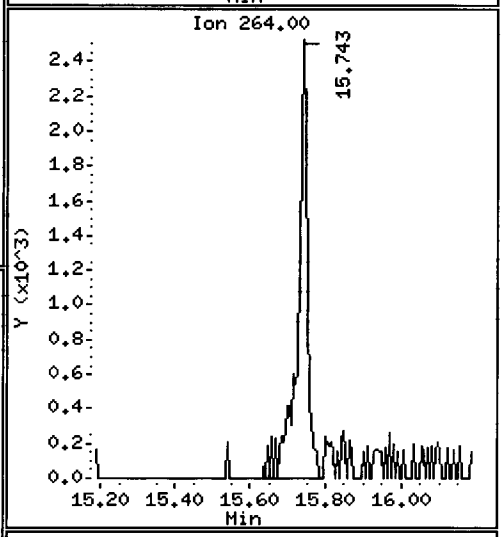
Concentration: 0.7113 ug/L

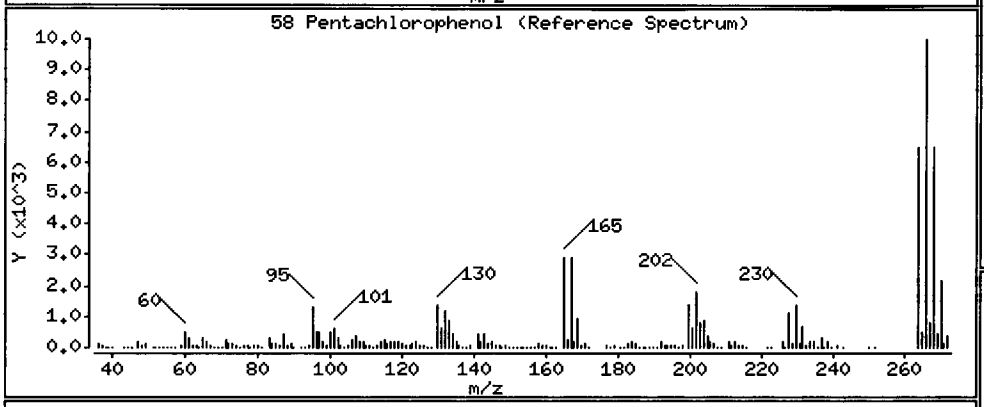
LmDL

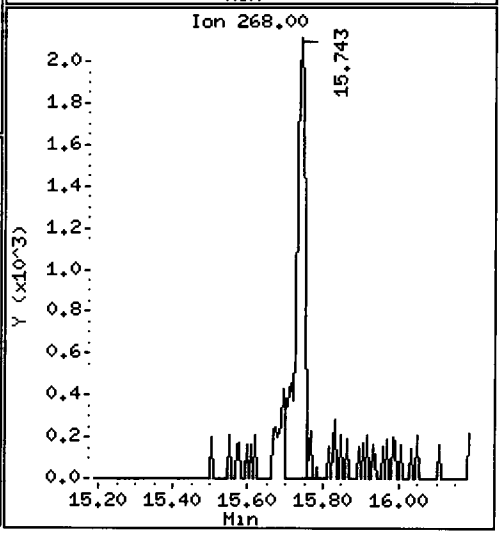


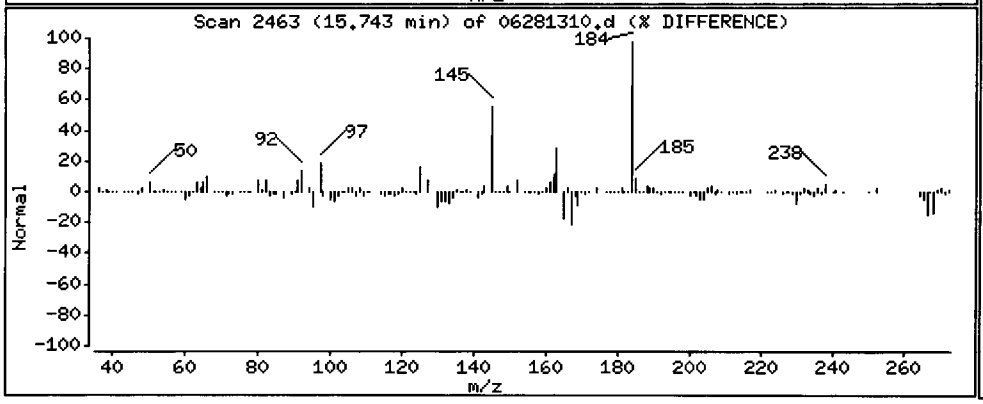












Data File: /chem2/nt6.i/20130628.b/06281310.d

Date : 28-JUN-2013 15:48

Client ID: UP-CB-B8-20130626-W

Instrument: nt6.i

Sample Info: WV67E

Volume Injected (uL): 1.0

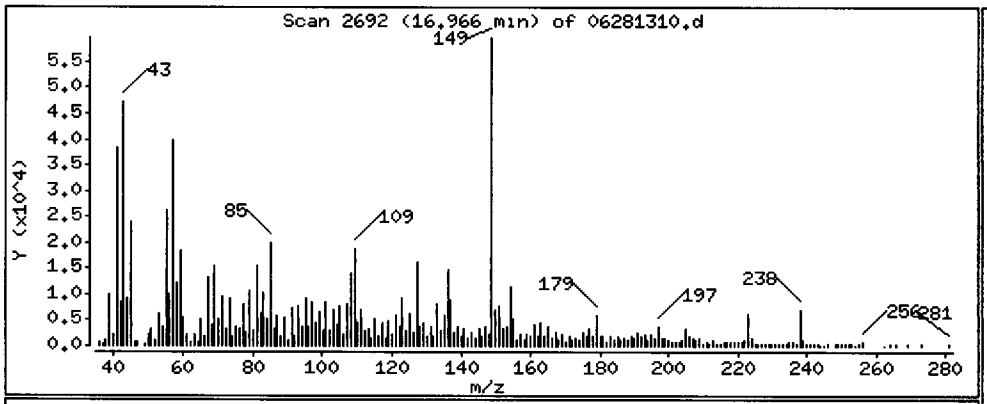
Operator: JZ

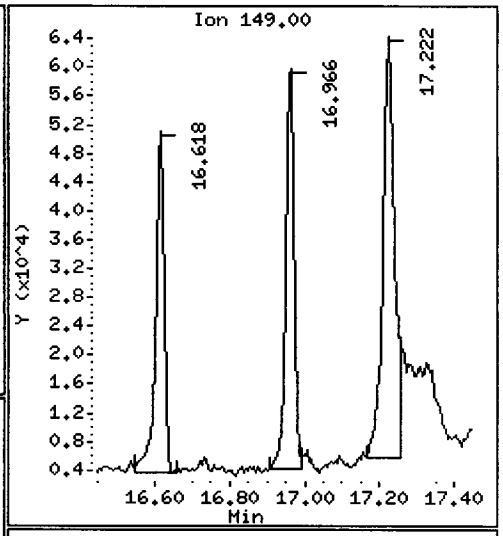
Column phase: ZB-5ms1

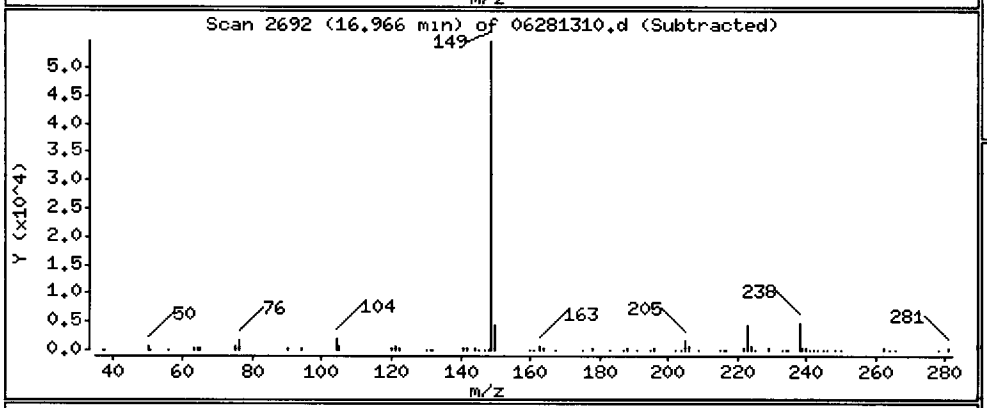
Column diameter: 0.32

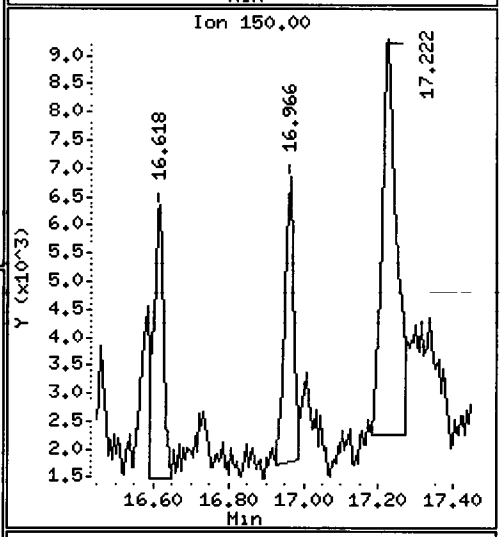
63 Di-n-butylphthalate

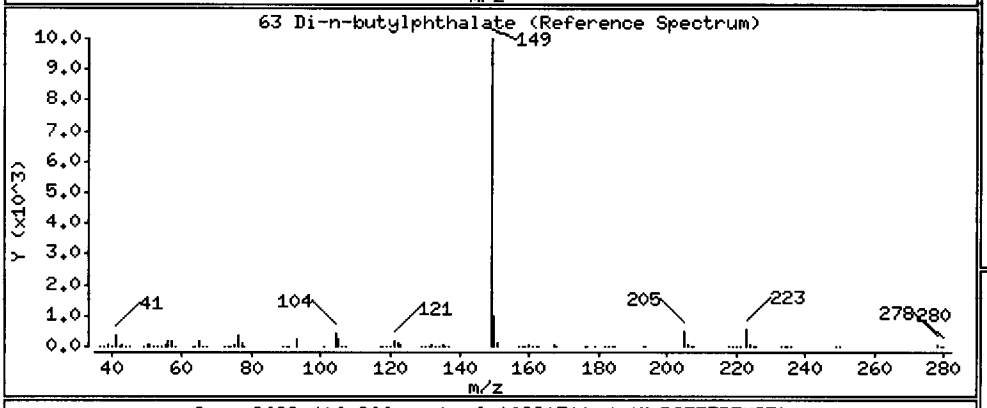
Concentration: 0.8159 ug/L

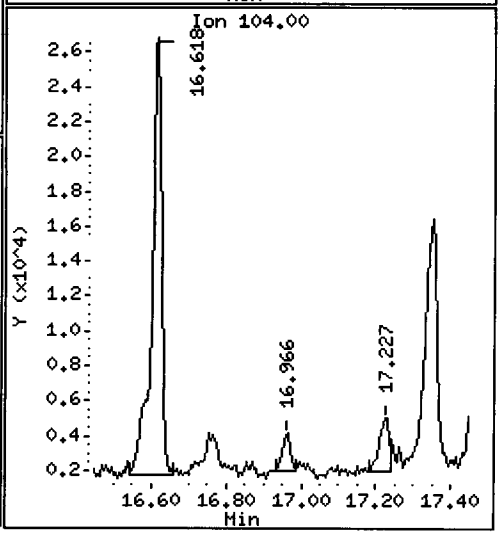


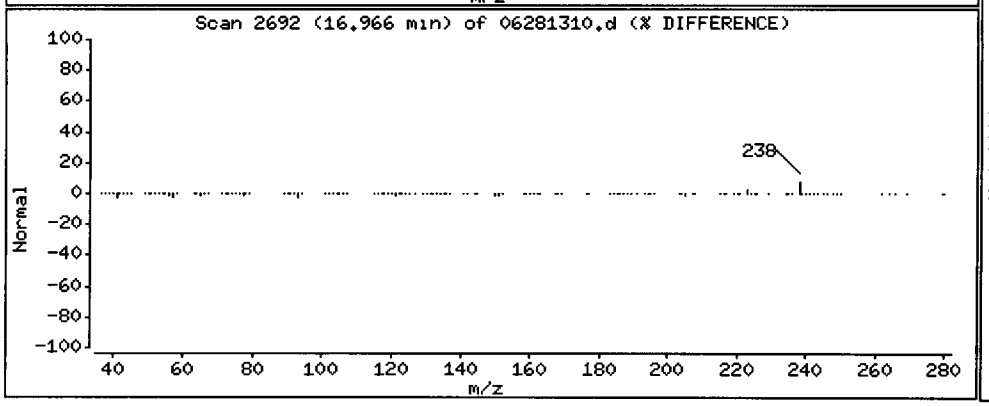












Data File: /chem2/nt6.i/20130628.b/06281310.d

Date : 28-JUN-2013 15:48

Client ID: UP-CB-B8-20130626-W

Instrument: nt6.i

Sample Info: WV67E

Volume Injected (uL): 1.0

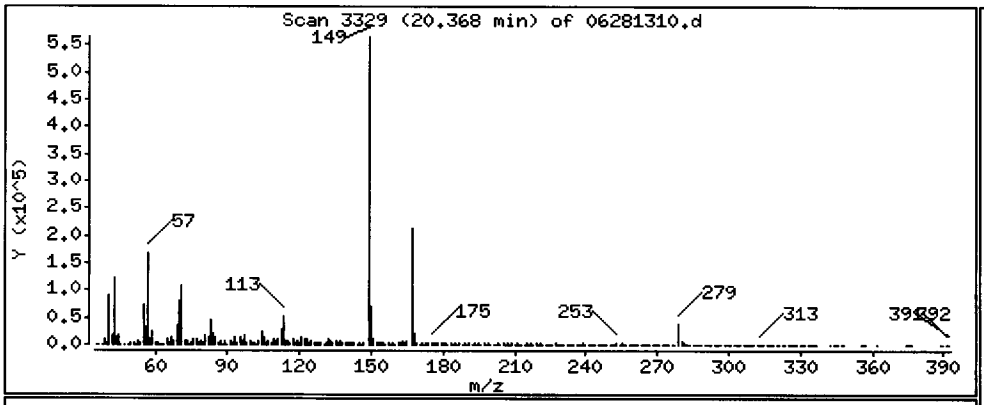
Operator: JZ

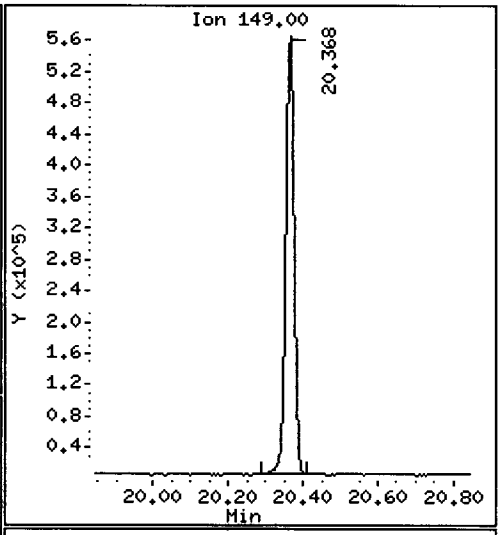
Column phase: ZB-5msi

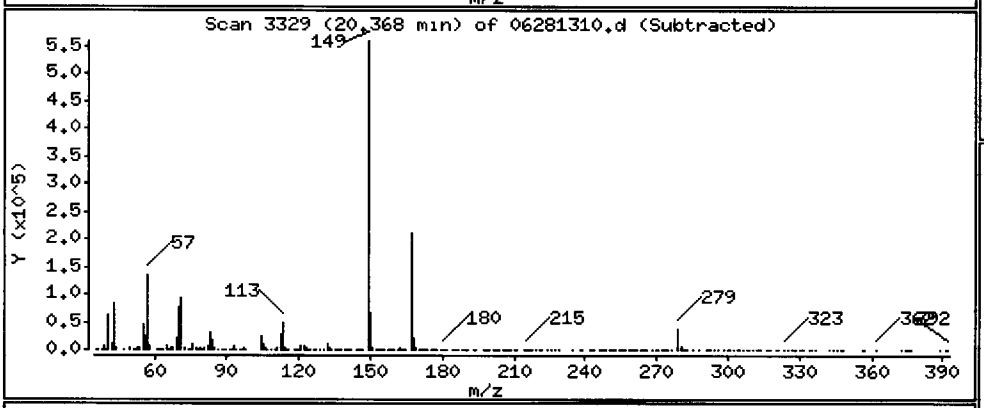
Column diameter: 0.32

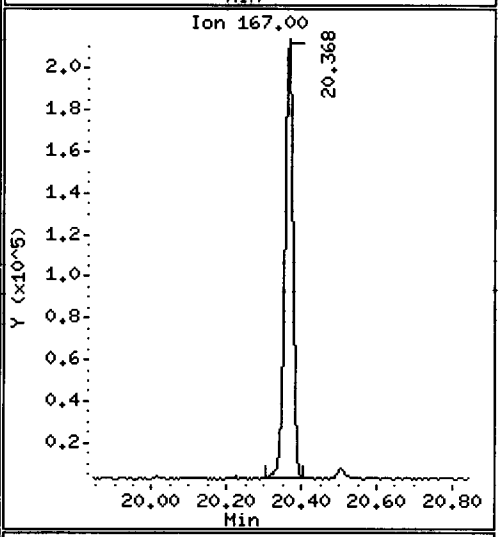
72 bis(2-Ethylhexyl)phthalate

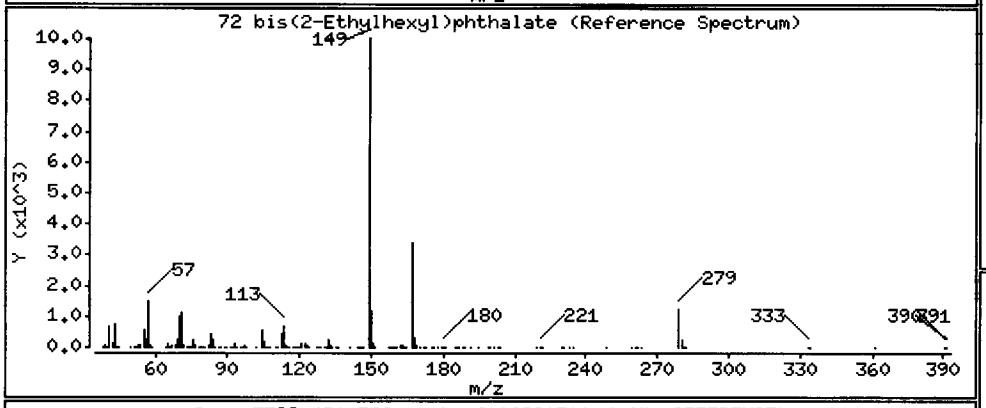
Concentration: 14.43 ug/L

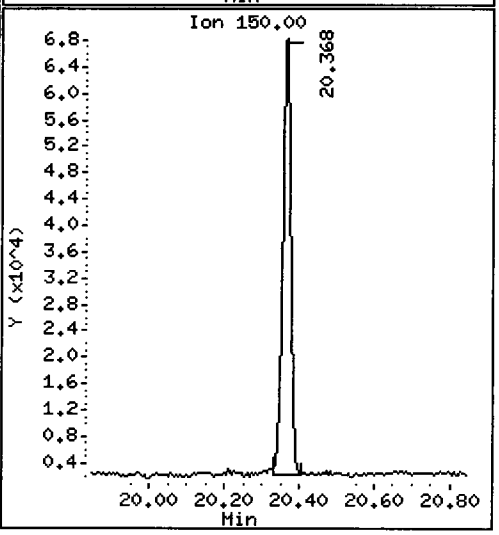


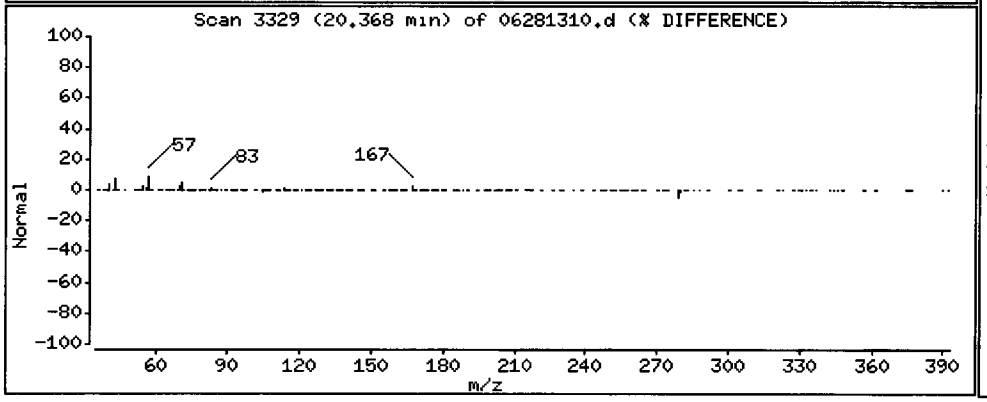






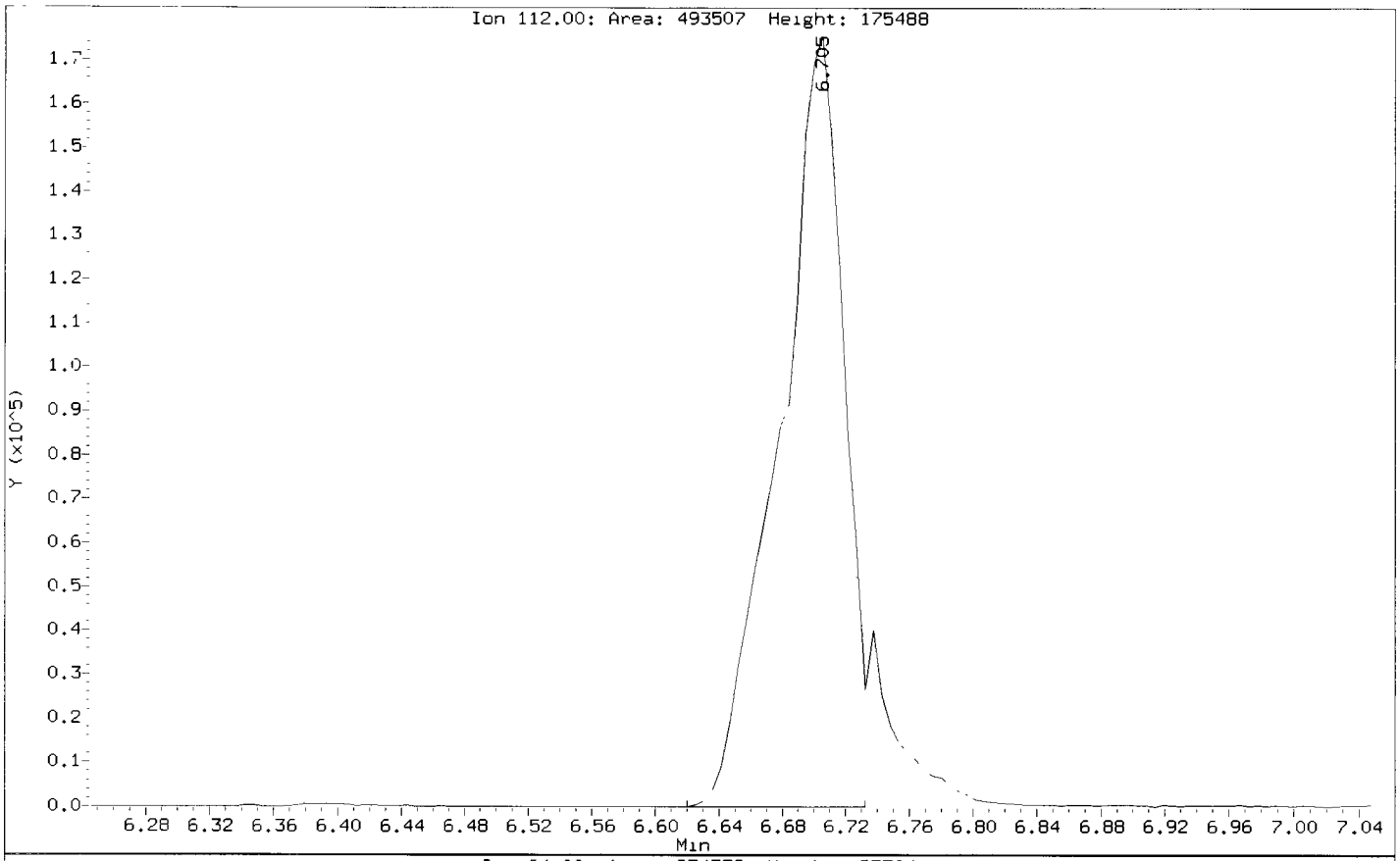


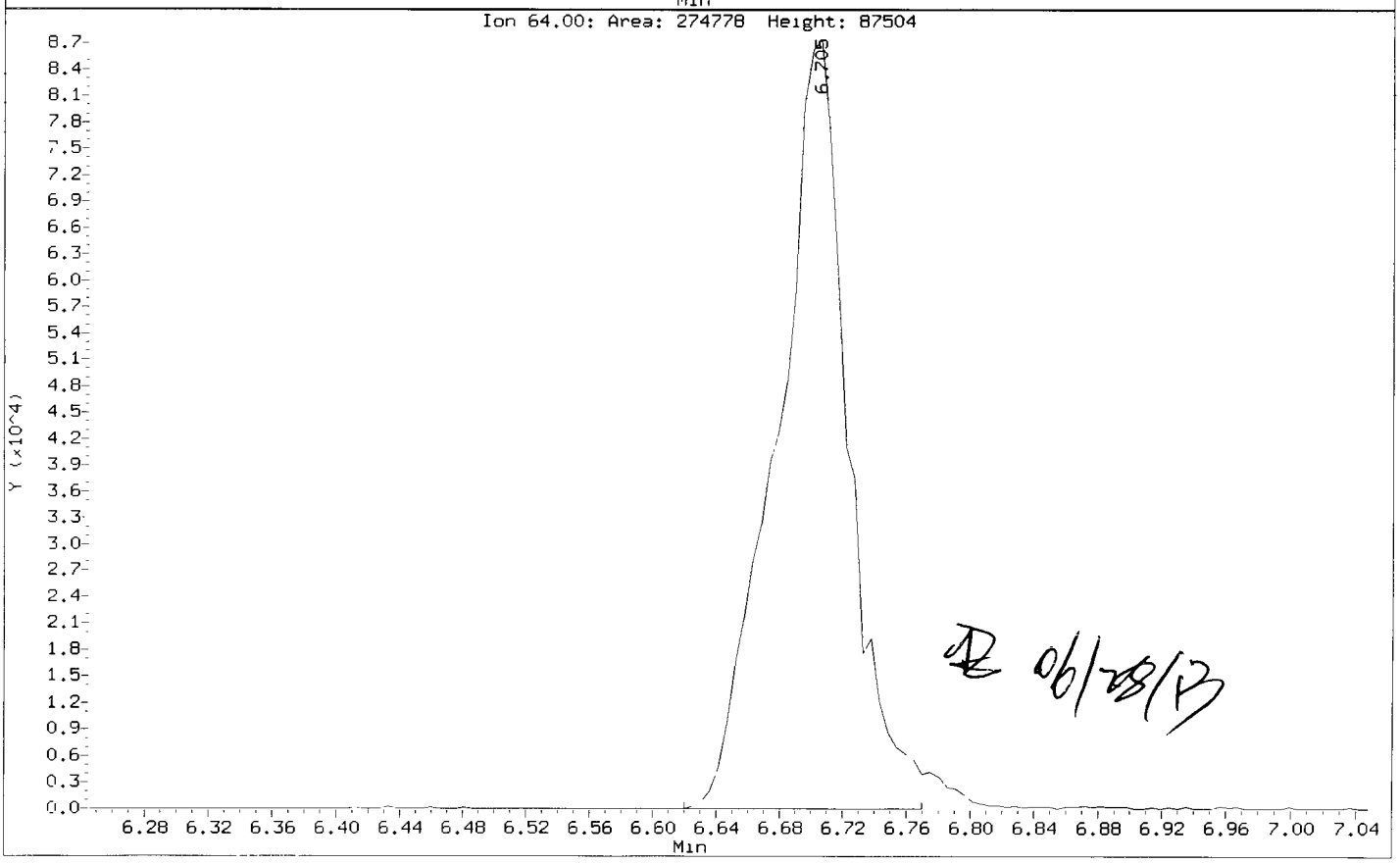




Data File: /chem2/nt6.1/20130628.b/06281310.d
Injection Date: 28-JUN-2013 15:48
Instrument: nt6.1
Client Sample ID: UP-CB-B8-20130626-W

Compound: 2-Fluorophenol
CAS Number: 367-12-4



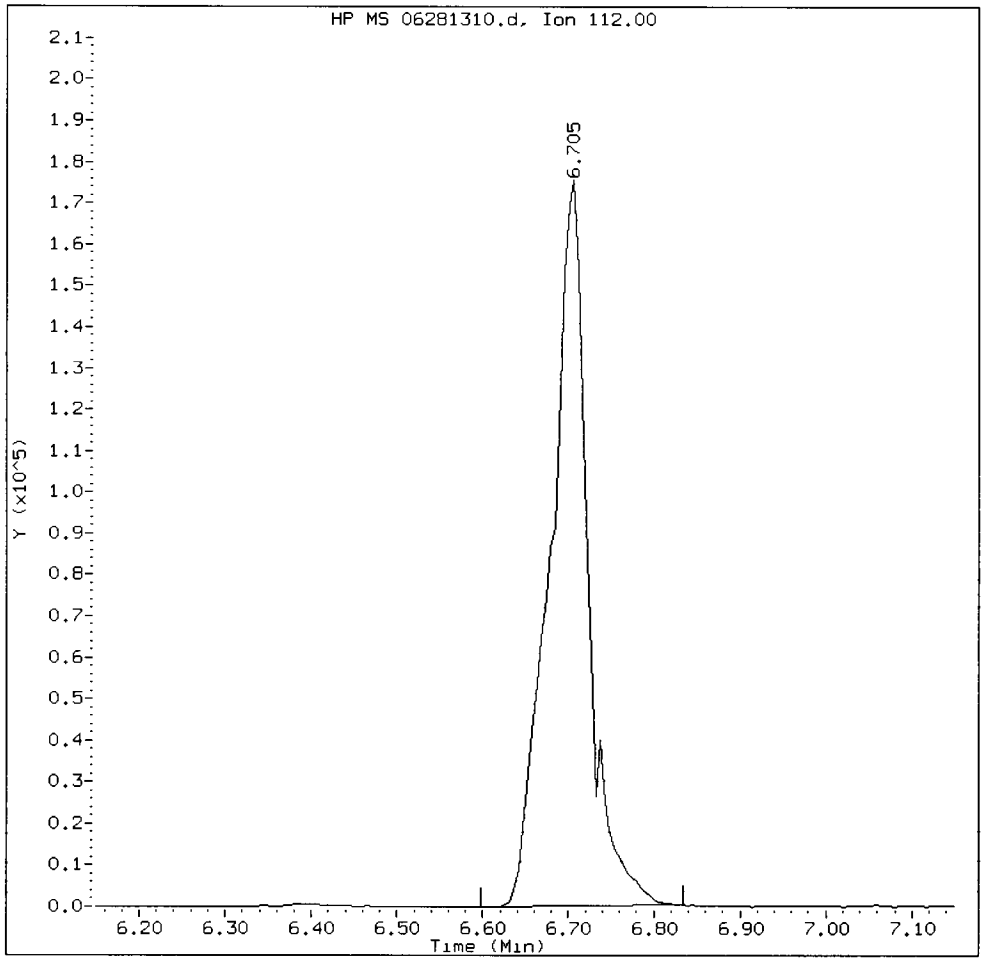


06/28/13

WV07:09712

WV67E, /chem2/nt6.i/20130628.b/06281310.d

2-Fluorophenol Amount: 18.98 Area: 541448



MANUAL INTEGRATION for 2-Fluorophenol

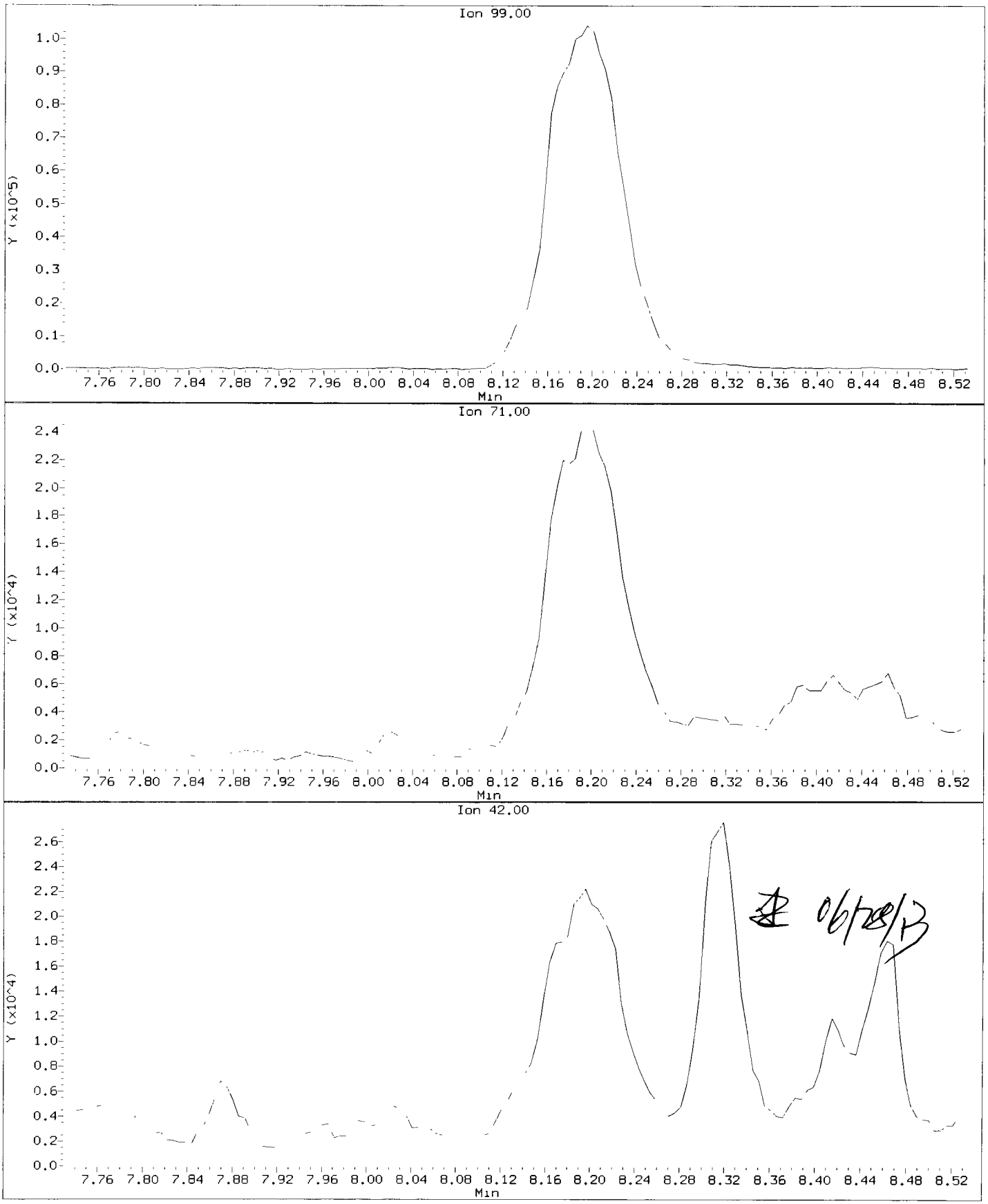
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 06/28/13

Data File: /chem2/nt6.1/20130628.b/06281310.d
Injection Date: 28-JUN-2013 15:48
Instrument: nt6.1
Client Sample ID: UP-CB-B8-20130626-W

Compound: Phenol-d5
CAS Number:

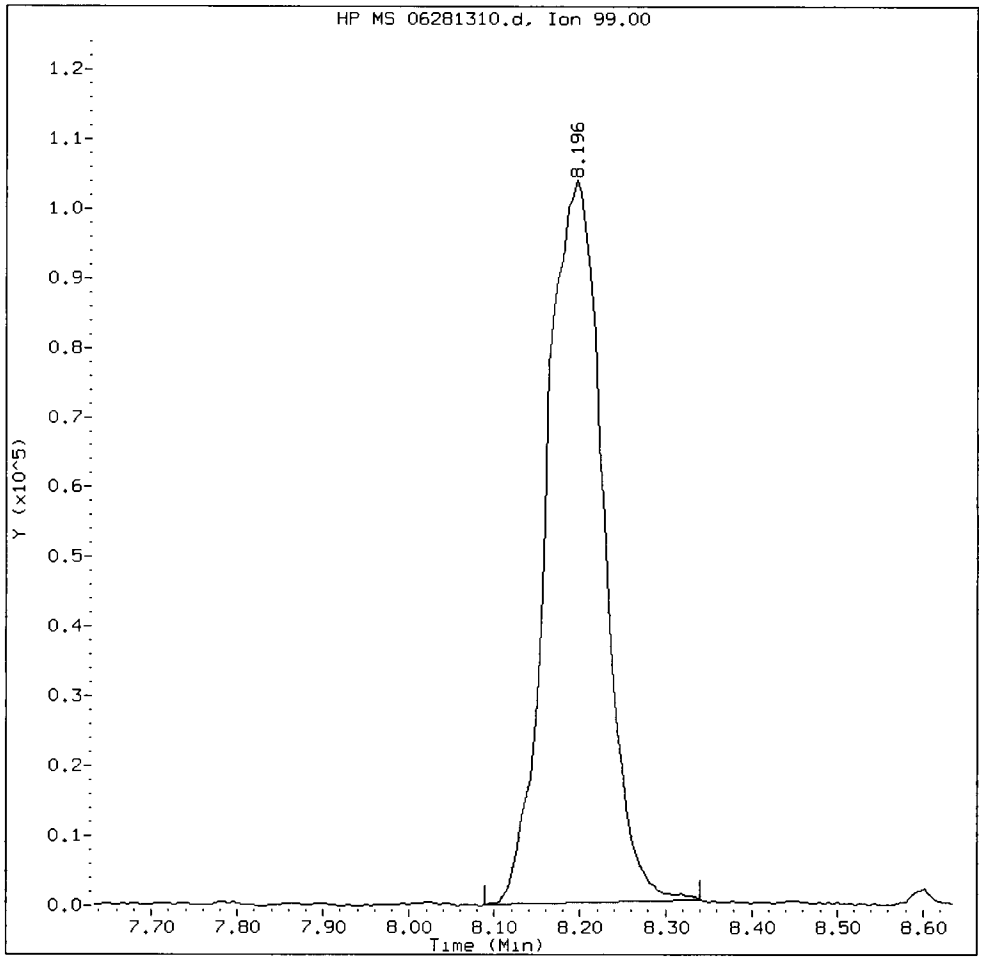


06/28/13

WGT : 09714

WV67E, /chem2/nt6.i/20130628.b/06281310.d

Phenol-d5 Amount: 13.57 Area: 475880



MANUAL INTEGRATION for Phenol-d5

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 06/28/13

CO-ELUTION SUMMARY FOR FILE - 06281310.d

Lab ID: WV67E, Method: SW846062813.m, Instrument: nt6.i, Date: 28-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130628.b/06281311.d
Lab Smp Id: WV67E Client Smp ID: UP-CB-B8-20130626-W
Inj Date : 28-JUN-2013 16:41
Operator : JZ Inst ID: nt6.i
Smp Info : WV67E,3
Misc Info : 13-13661
Comment : 1ul Injection
Method : /chem2/nt6.i/20130628.b/SW846062813.m
Meth Date : 28-Jun-2013 16:35 jianqing Quant Type: ISTD
Cal Date : 28-JUN-2013 14:05 Cal File: 06281307.d
Als bottle: 11
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: SEPAtclp.sub
Target Version: 3.50

AZ 06/28/13

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
$	1	2-Fluorophenol	112	6.660	6.648	(0.775)	195882	5.13217	15.40
$	2	Phenol-d5	99	8.150	8.133	(0.948)	180068	3.83817	11.51
	3	Phenol	94	8.172	8.149	(0.950)	77013	1.44741	4.342
$	5	2-Chlorophenol-d4	132	8.305	8.293	(0.966)	315767	7.72124	23.16
	4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6	2-Chlorophenol	128	Compound Not Detected.					
	7	1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8	1,4-Dichlorobenzene-d4	152	8.599	8.592	(1.000)	590258	20.0000	
	9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10	1,2-Dichlorobenzene-d4	152	8.898	8.891	(1.035)	127901	4.58009	13.74
	12	1,2-Dichlorobenzene	146	Compound Not Detected.					
	11	Benzyl alcohol	108	8.866	8.859	(1.031)	13886	0.50924	1.528
	14	2,2'-oxybis(1-Chloropropane)	45	Compound Not Detected.					
	13	2-Methylphenol	108	Compound Not Detected.					
	17	Hexachloroethane	117	Compound Not Detected.					
	16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
	15 4-Methylphenol	108	9.347	9.308	(1.087)	48380	1.20176	3.605
$	18 Nitrobenzene-d5	82	9.518	9.516	(0.895)	181808	5.31271	15.94
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	10.191	10.141	(0.958)	26358	0.76608	2.298
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	10.410	10.382	(0.978)	361892	13.8785	41.64
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.639	10.633	(1.000)	2133315	20.0000	
	28 Naphthalene	128	Compound Not Detected.					
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	141	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	12.423	12.411	(0.919)	418219	5.08311	15.25
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	13.513	13.495	(1.000)	1359406	20.0000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	14.805	14.783	(1.096)	79115	17.5341	52.60(R)
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	15.895	15.878	(1.000)	2015286	20.0000	
	60 Phenanthrene	178	Compound Not Detected.					
	61 Anthracene	178	Compound Not Detected.					
	62 Carbazole	167	Compound Not Detected.					
	63 Di-n-butylphthalate	149	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	64 Fluoranthene	202	Compound Not Detected.					
	65 Pyrene	202	Compound Not Detected.					
$	66 Terphenyl-d14	244	18.523	18.500	(0.916)	409071	6.00063	18.00
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	20.210	20.198	(1.000)	1885961	20.0000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	Compound Not Detected.					
	72 bis(2-Ethylhexyl)phthalate	149	20.365	20.343	(0.956)	299112	3.88530	11.66
*	134 Di-n-octylphthalate-d4	153	21.295	21.272	(1.000)	2639926	20.0000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	74 Benzo(b)fluoranthene	252	Compound Not Detected.					
	75 Benzo(k)fluoranthene	252	Compound Not Detected.					
	76 Benzo(a)pyrene	252	Compound Not Detected.					
*	77 Perylene-d12	264	22.384	22.356	(1.000)	2049533	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	141	Compound Not Detected.					
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					
	151 1,2,4,5-Tetrachlorobenzene	216	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 06281311.d
Lab Smp Id: WV67E
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Misc Info: 13-13661

Calibration Date: 28-JUN-2013
Calibration Time: 10:39
Client Smp ID: UP-CB-B8-2013062
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	461788	230894	923576	590258	27.82
27 Naphthalene-d8	1684670	842335	3369340	2133315	26.63
42 Acenaphthene-d10	967427	483714	1934854	1359406	40.52
59 Phenanthrene-d10	1360143	680072	2720286	2015286	48.17
69 Chrysene-d12	1402665	701332	2805330	1885961	34.46
134 Di-n-octylphthala	2121193	1060596	4242386	2639926	24.45
77 Perylene-d12	1443992	721996	2887984	2049533	41.94

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.59	8.09	9.09	8.60	0.08
27 Naphthalene-d8	10.63	10.13	11.13	10.64	0.06
42 Acenaphthene-d10	13.50	13.00	14.00	13.51	0.13
59 Phenanthrene-d10	15.88	15.38	16.38	15.89	0.11
69 Chrysene-d12	20.20	19.70	20.70	20.21	0.06
134 Di-n-octylphthala	21.27	20.77	21.77	21.29	0.11
77 Perylene-d12	22.36	21.86	22.86	22.38	0.13

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

Analytical Resources, Inc.

RECOVERY REPORT

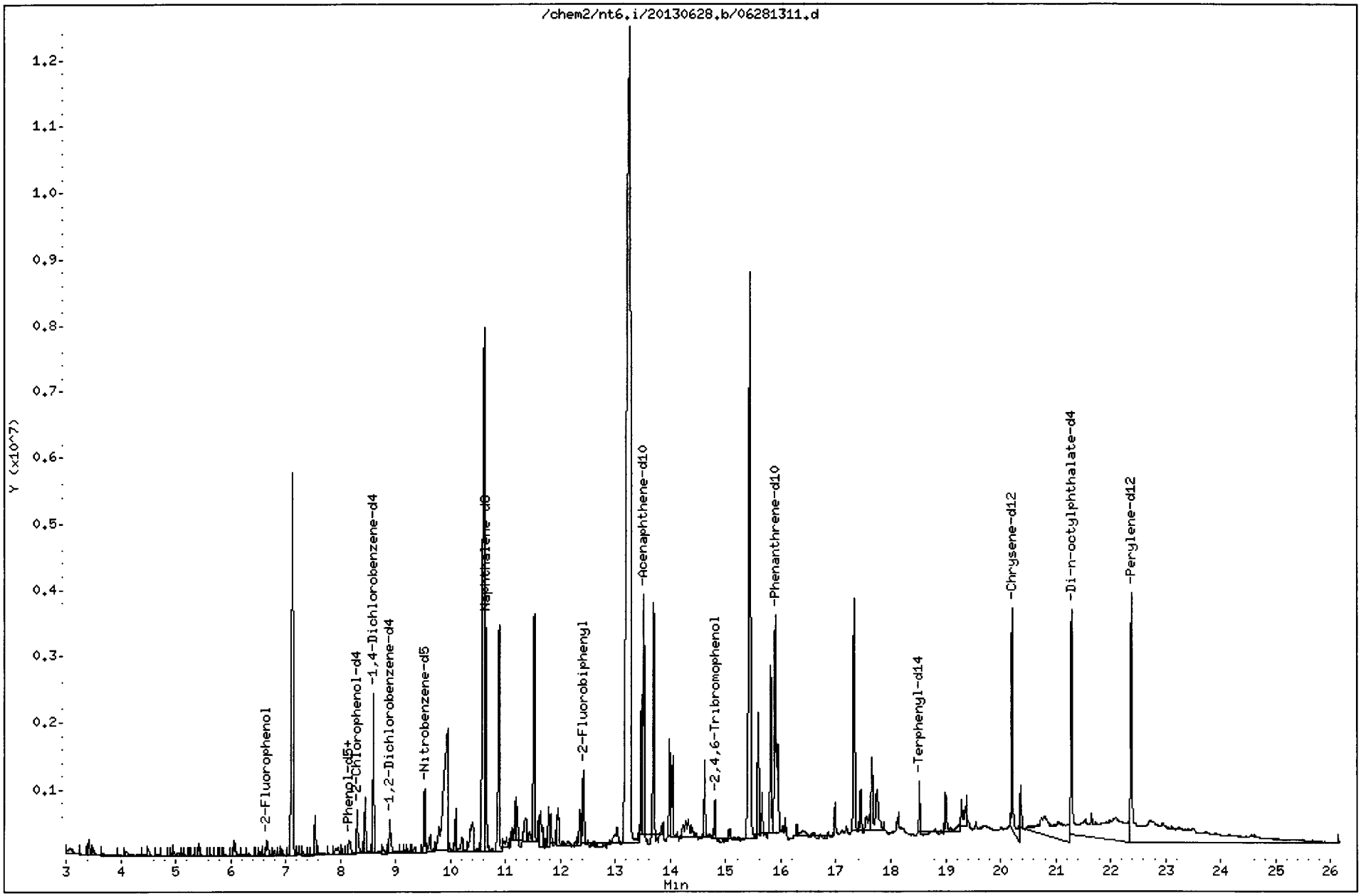
Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WV67E
Level: LOW
Data Type: MS DATA
SpikeList File: SEPAtclpLCS.spk
Sublist File: SEPAtclp.sub
Method File: /chem2/nt6.i/20130628.b/SW846062813.m
Misc Info: 13-13661

Client SDG: WV67
Fraction: SV
Client Smp ID: UP-CB-B8-20130626-W
Operator: JZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	15.40	41.06	21-120
$ 2 Phenol-d5	37.50	11.51	30.71	12-1200
$ 5 2-Chlorophenol-d4	37.50	23.16	61.77	33-120
$ 10 1,2-Dichlorobenzen	25.00	13.74	54.96	33-120
$ 18 Nitrobenzene-d5	25.00	15.94	63.75	38-120
$ 36 2-Fluorobiphenyl	25.00	15.25	61.00	40-120
$ 55 2,4,6-Tribromophen	37.50	52.60	140.27*	37-126
$ 66 Terphenyl-d14	25.00	18.00	72.01	39-120

Data File: /chem2/nt6.i/20130628.b/06281311.d
Date : 28-JUN-2013 16:41
Client ID: UP-CB-B8-20130626-W
Sample Info: WV67E,3
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



Data File: /chem2/nt6.i/20130628.b/06281311.d

Date : 28-JUN-2013 16:41

Client ID: UP-CB-B8-20130626-W

Instrument: nt6.i

Sample Info: WV67E,3

Volume Injected (uL): 1.0

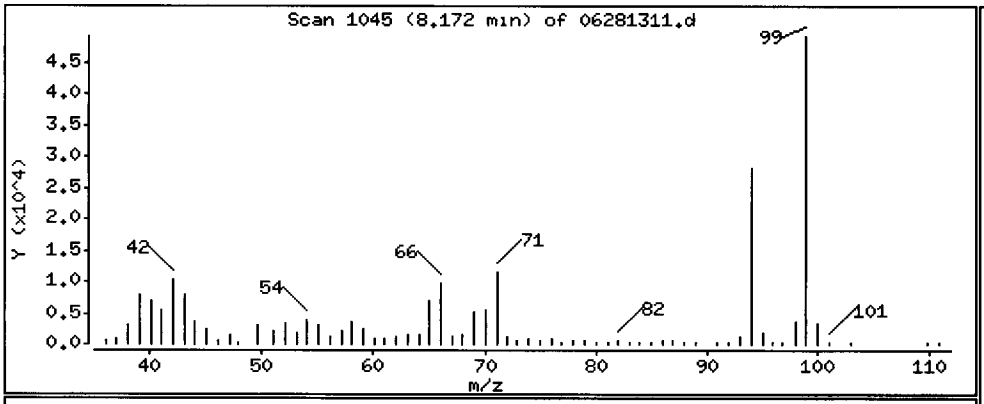
Operator: JZ

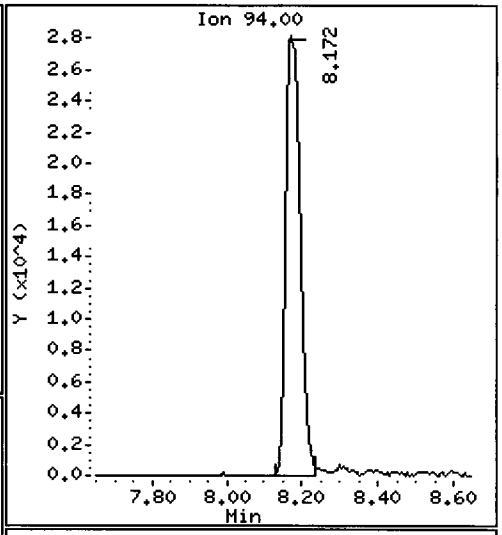
Column phase: ZB-5ms1

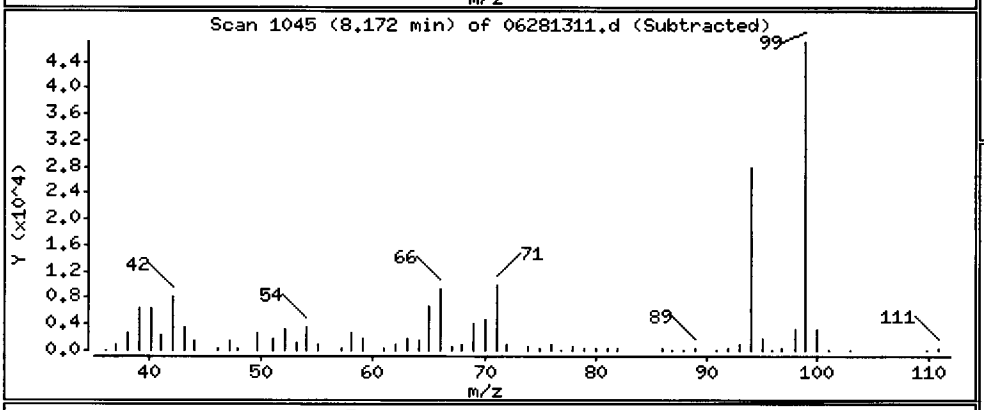
Column diameter: 0.32

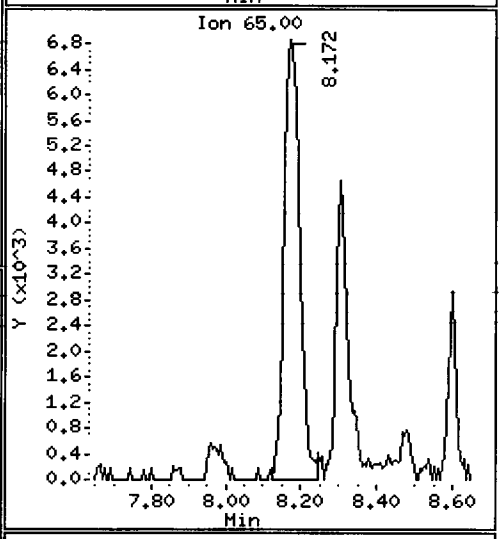
3 Phenol

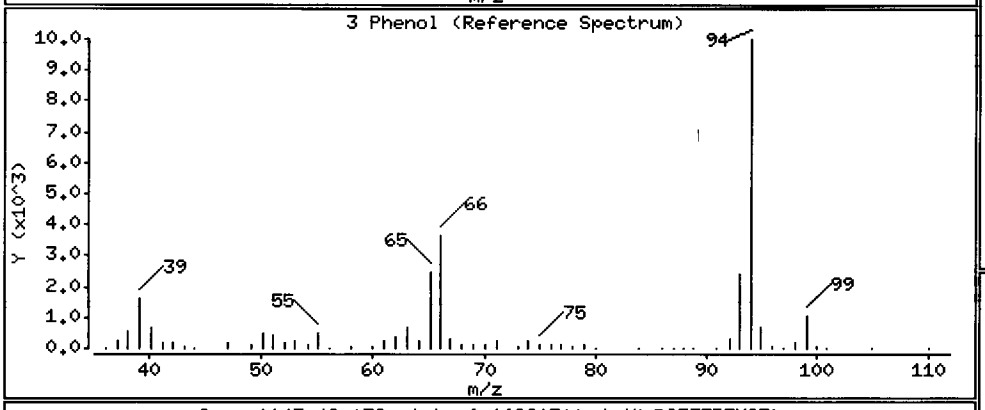
Concentration: 4.342 ug/L

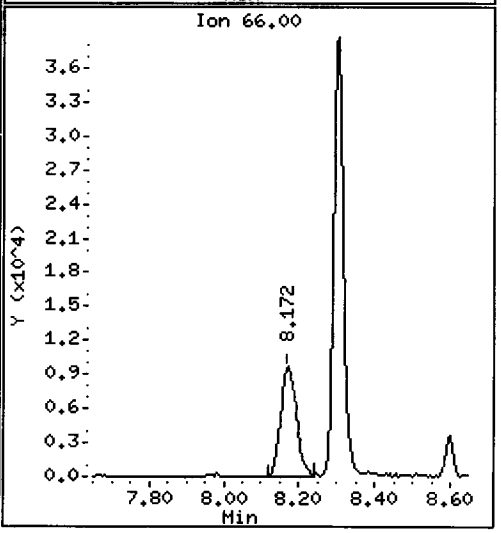


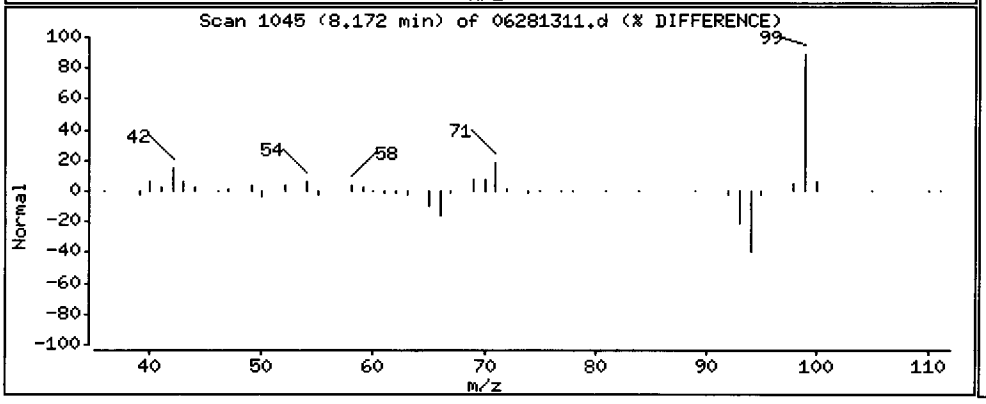












Data File: /chem2/nt6.i/20130628.b/06281311.d

Date : 28-JUN-2013 16:41

Client ID: UP-CB-B8-20130626-W

Instrument: nt6.i

Sample Info: WV67E,3

Volume Injected (uL): 1.0

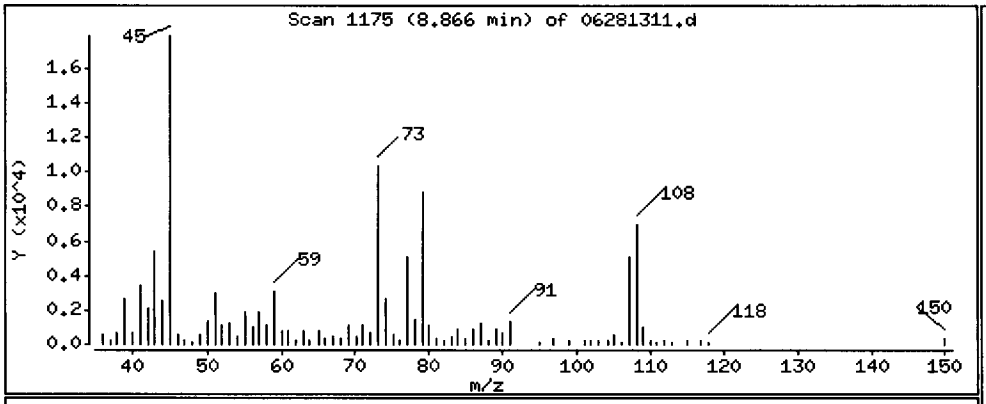
Operator: JZ

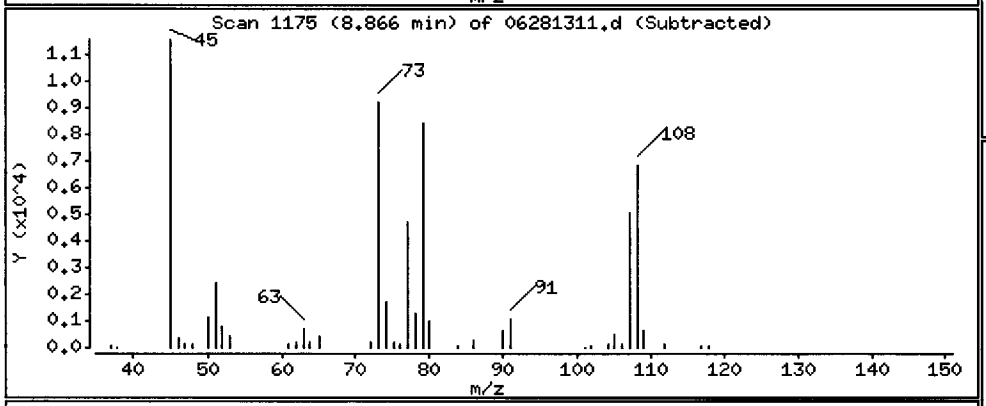
Column phase: ZB-5msi

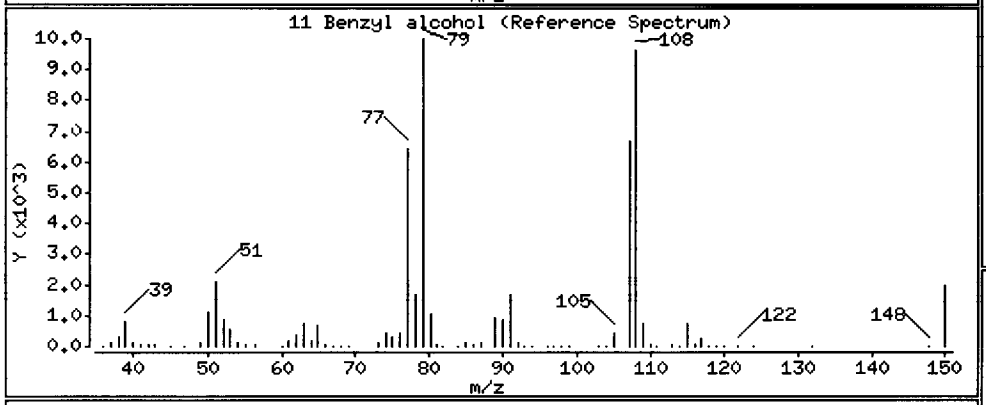
Column diameter: 0.32

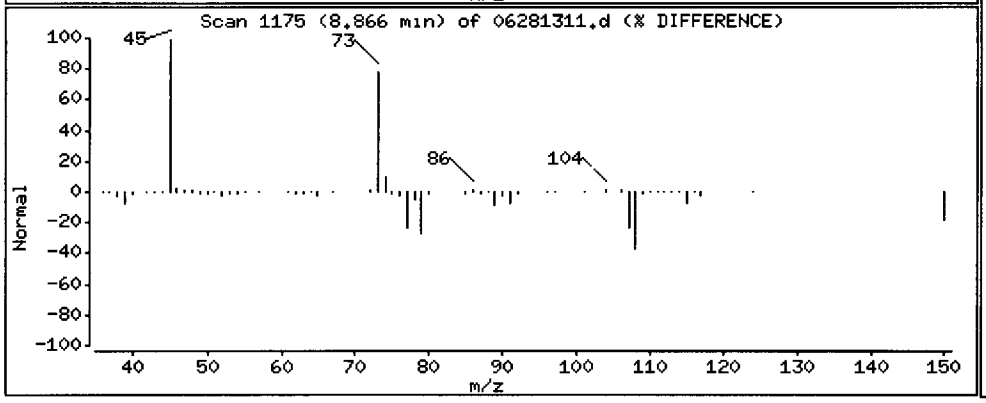
11 Benzyl alcohol

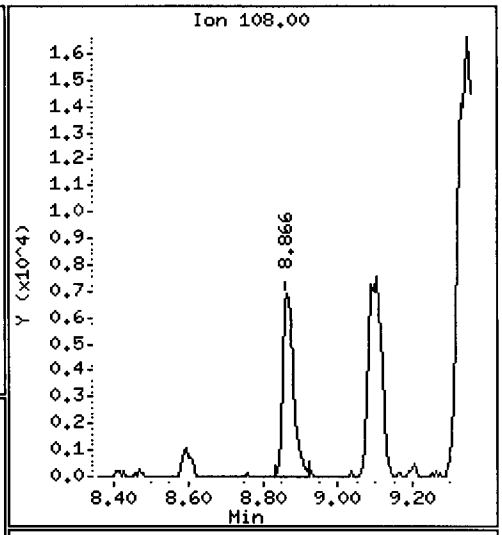
Concentration: 1.528 ug/L

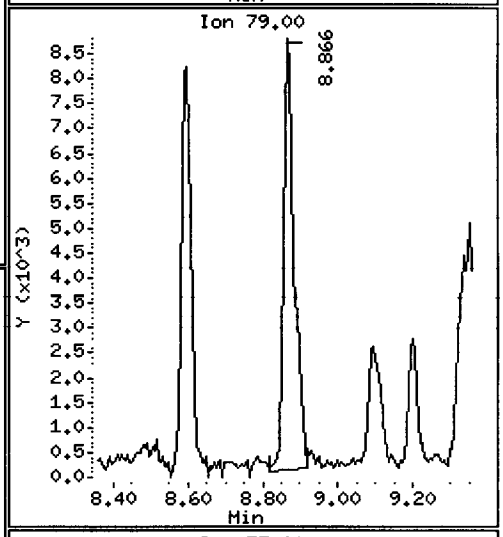


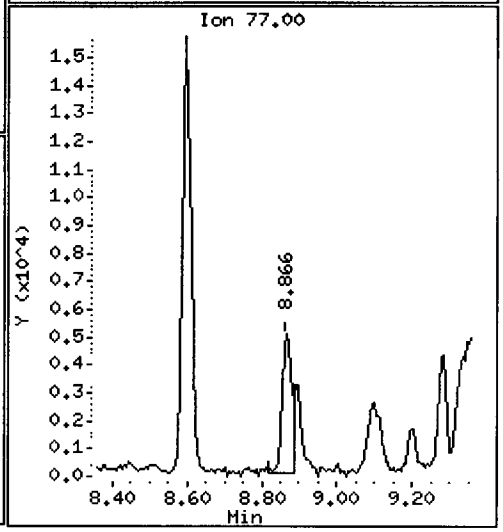












Data File: /chem2/nt6.i/20130628.b/06281311.d

Date : 28-JUN-2013 16:41

Client ID: UP-CB-B8-20130626-W

Instrument: nt6.i

Sample Info: WV67E,3

Volume Injected (uL): 1.0

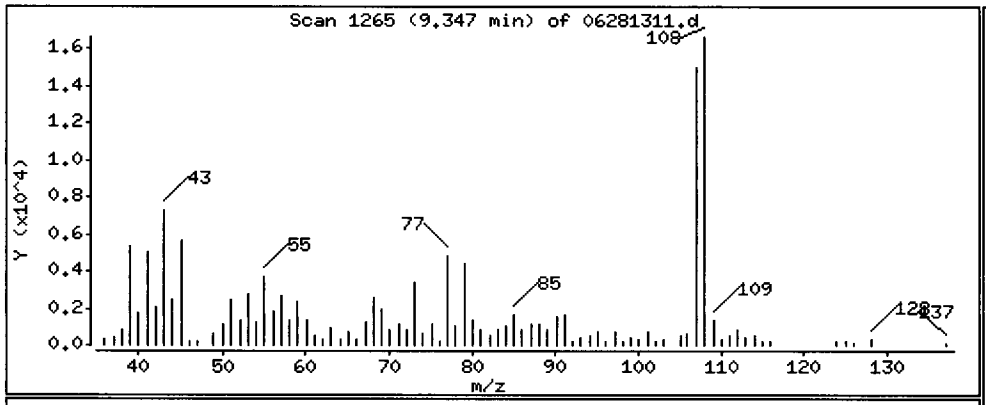
Operator: JZ

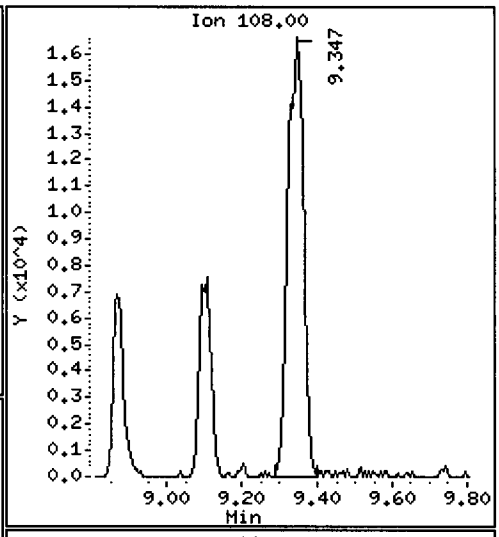
Column phase: ZB-5ms1

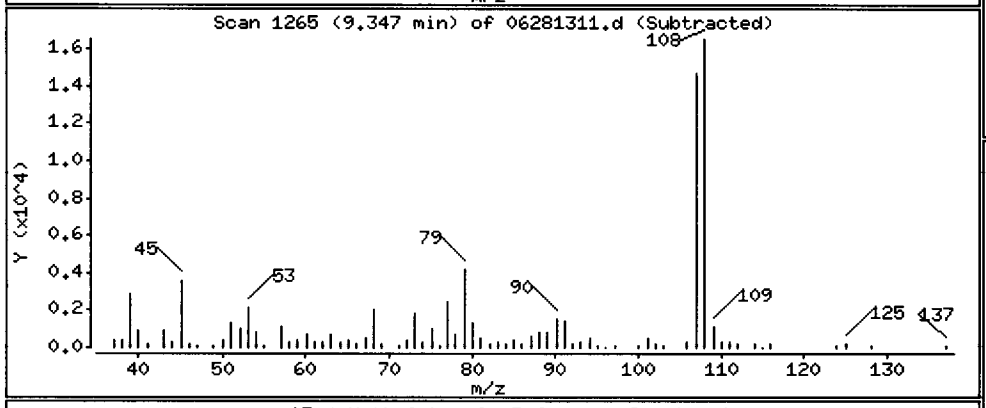
Column diameter: 0.32

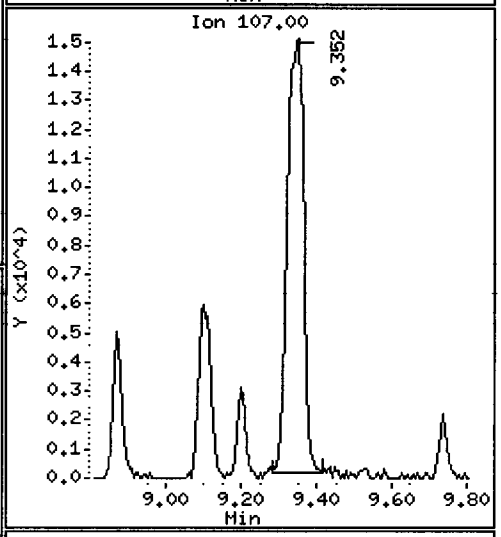
15 4-Methylphenol

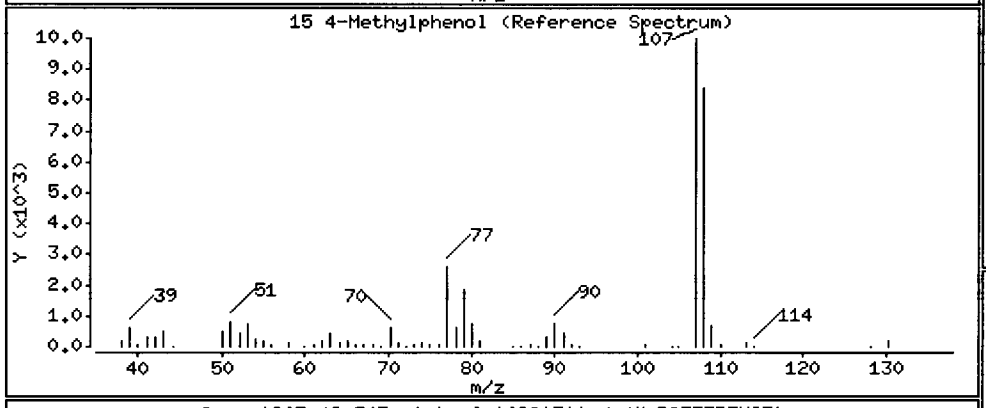
Concentration: 3.605 ug/L

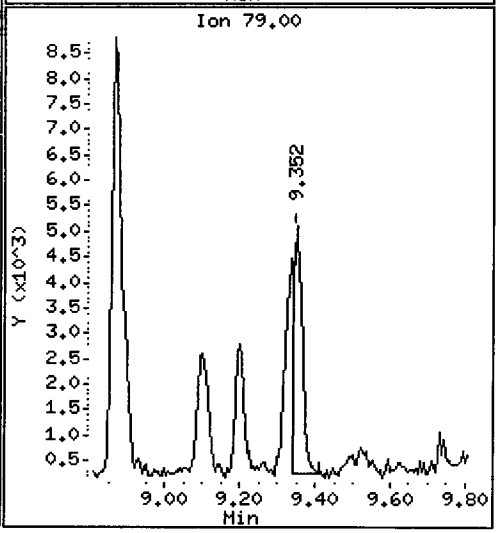


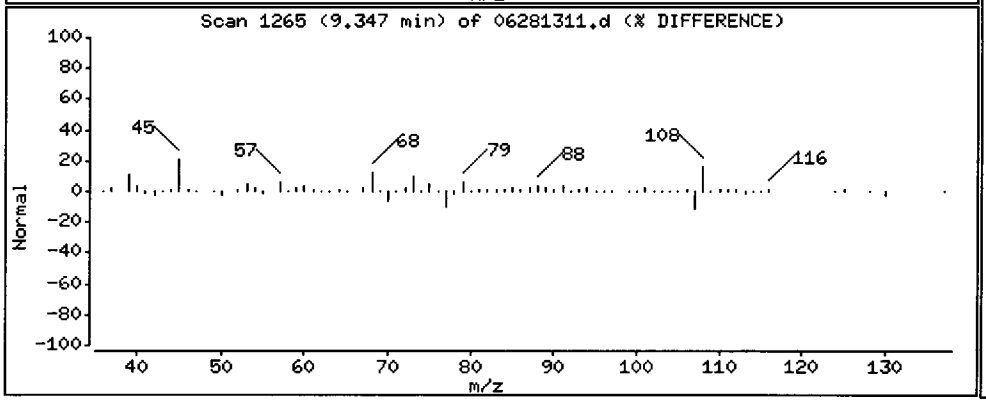












Data File: /chem2/nt6.i/20130628.b/06281311.d

Date : 28-JUN-2013 16:41

Client ID: UP-CB-B8-20130626-W

Instrument: nt6.i

Sample Info: WV67E,3

Volume Injected (uL): 1.0

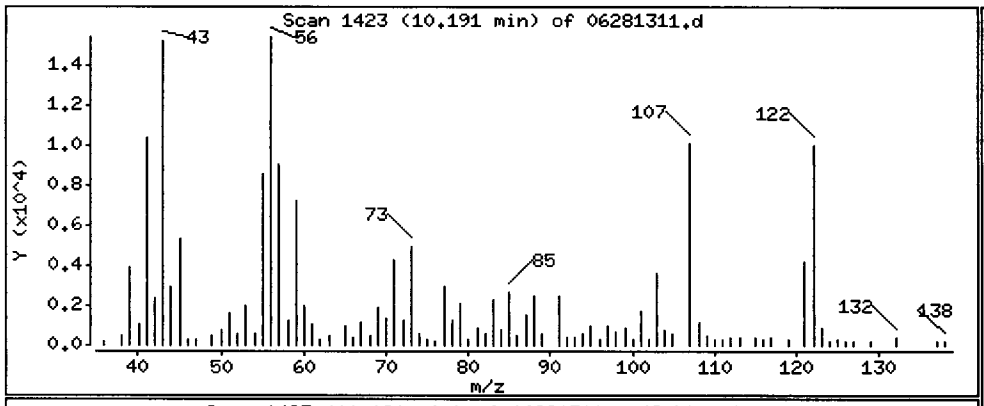
Operator: JZ

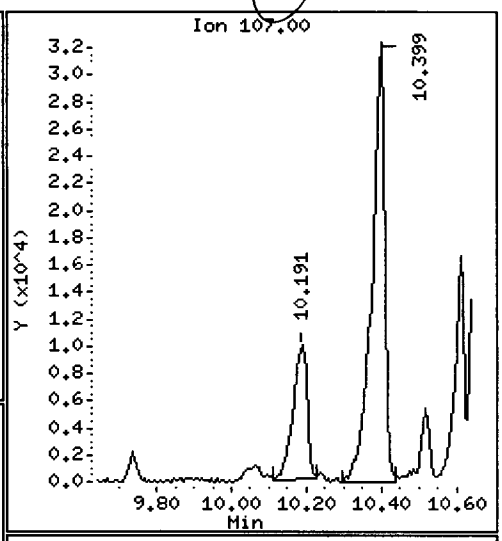
Column phase: ZB-5ms1

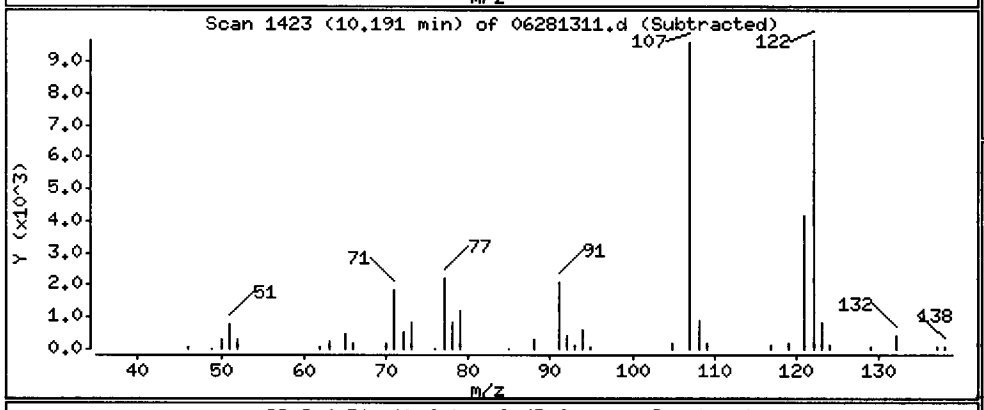
Column diameter: 0.32

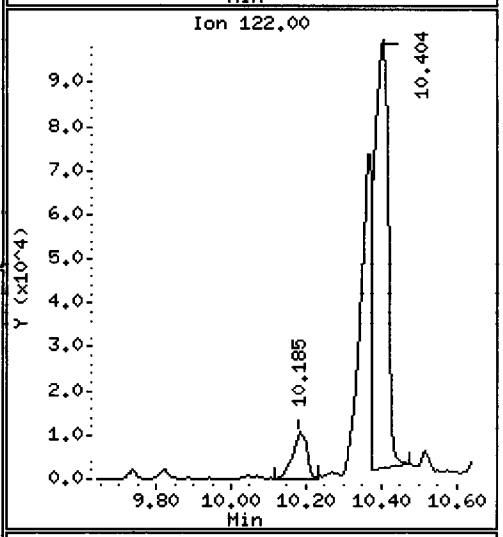
22 2,4-Dimethylphenol

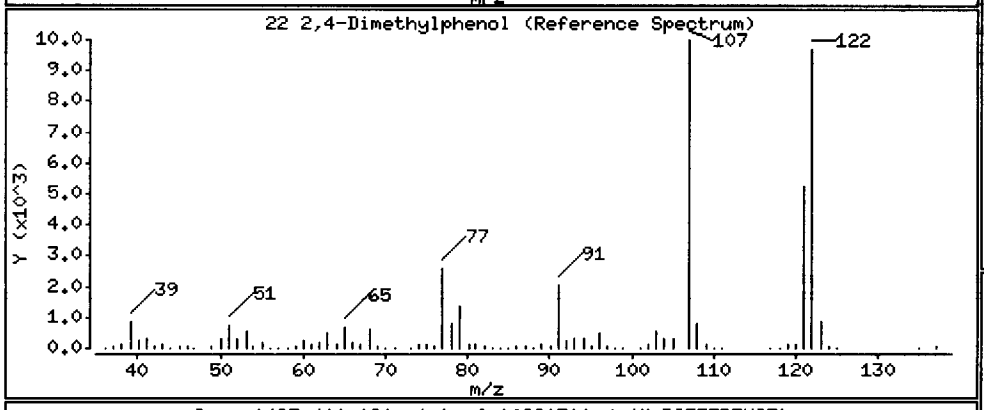
Concentration: 2.298 ug/L

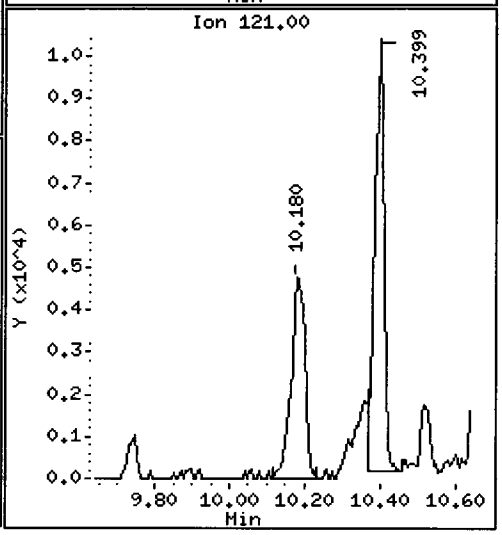


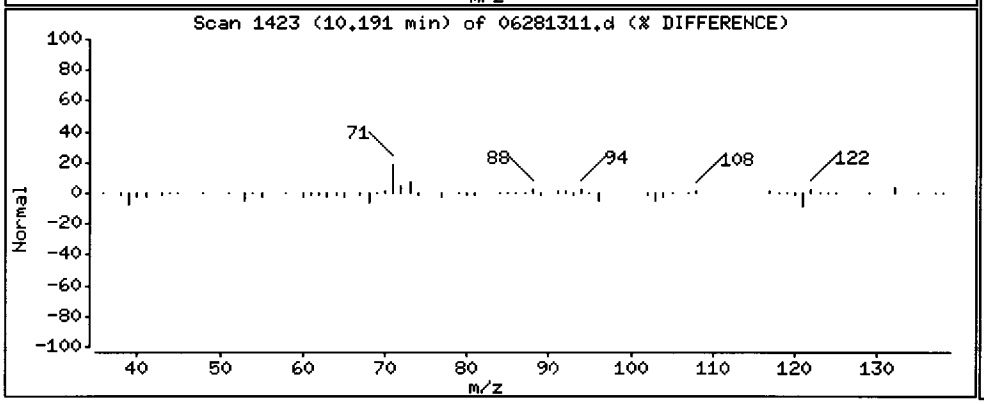












Data File: /chem2/nt6.i/20130628.b/06281311.d

Date : 28-JUN-2013 16:41

Client ID: UP-CB-B8-20130626-W

Instrument: nt6.i

Sample Info: WV67E,3

Volume Injected (uL): 1.0

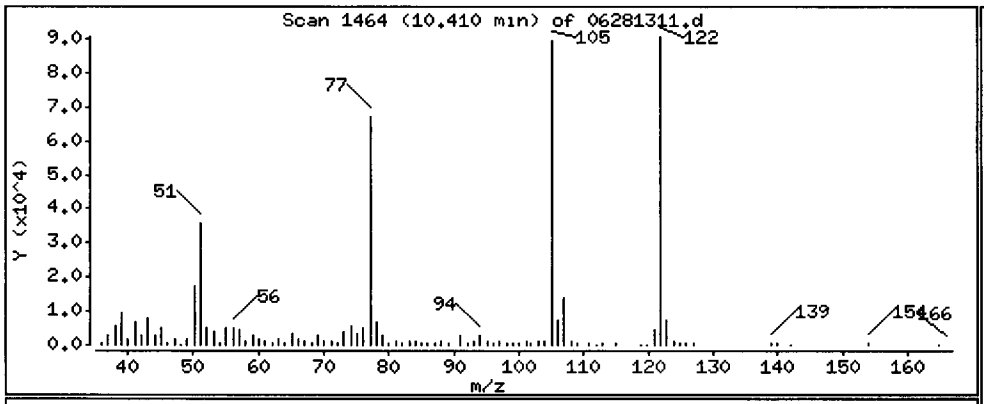
Operator: JZ

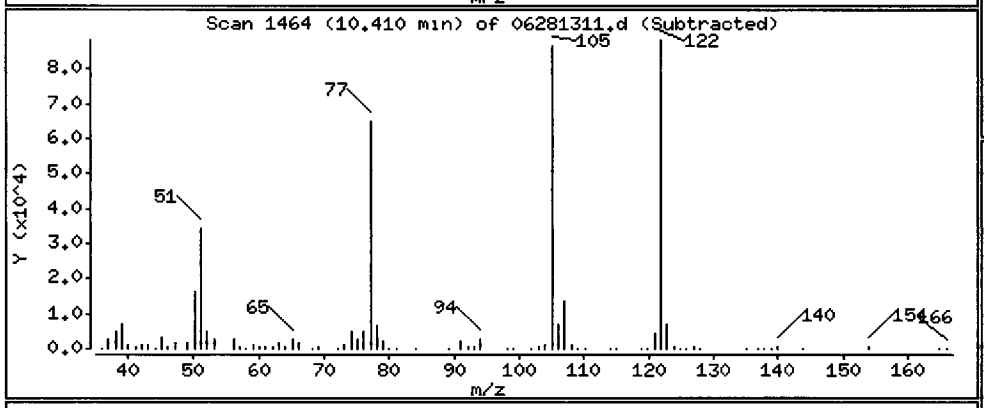
Column phase: ZB-5ms1

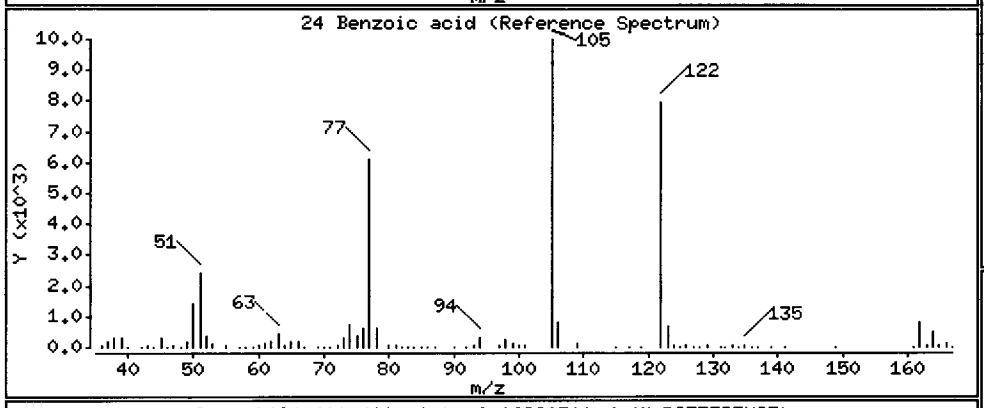
Column diameter: 0.32

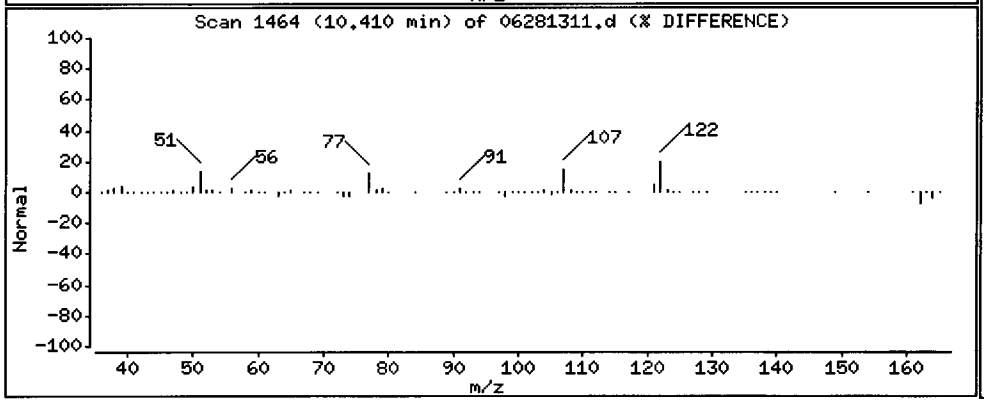
24 Benzoic acid

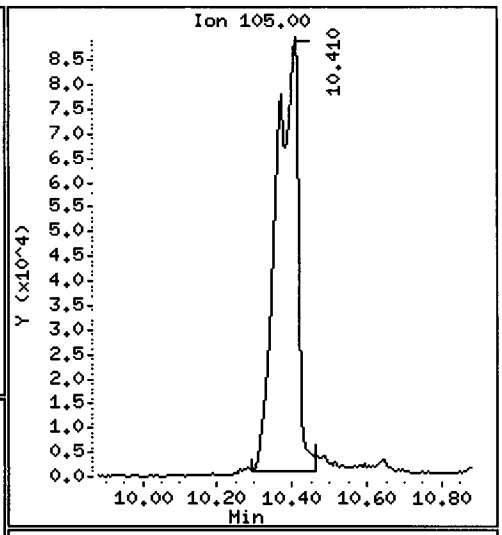
Concentration: 41.64 ug/L

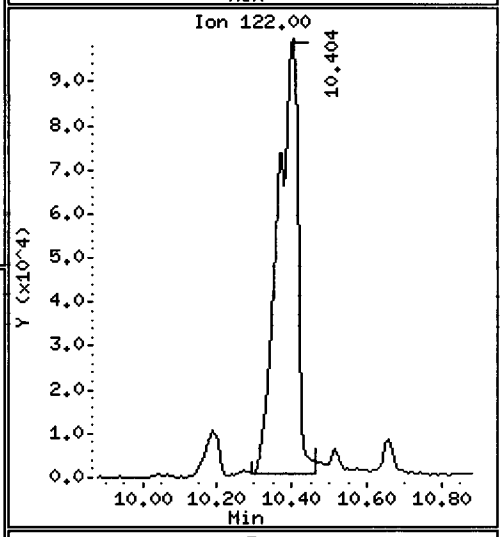


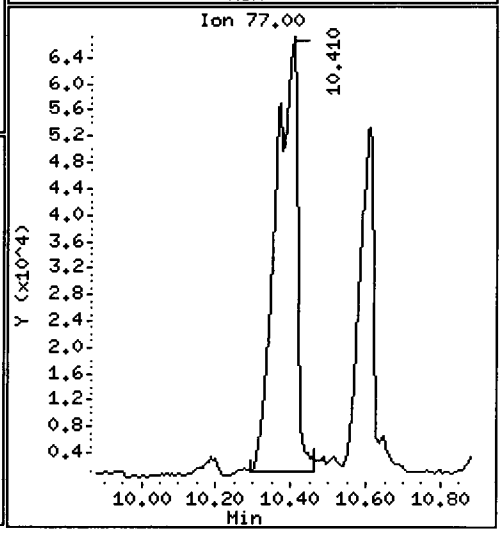












Data File: /chem2/nt6.i/20130628.b/06281311.d

Date : 28-JUN-2013 16:41

Client ID: UP-CB-B8-20130626-W

Instrument: nt6.i

Sample Info: WV67E,3

Volume Injected (uL): 1.0

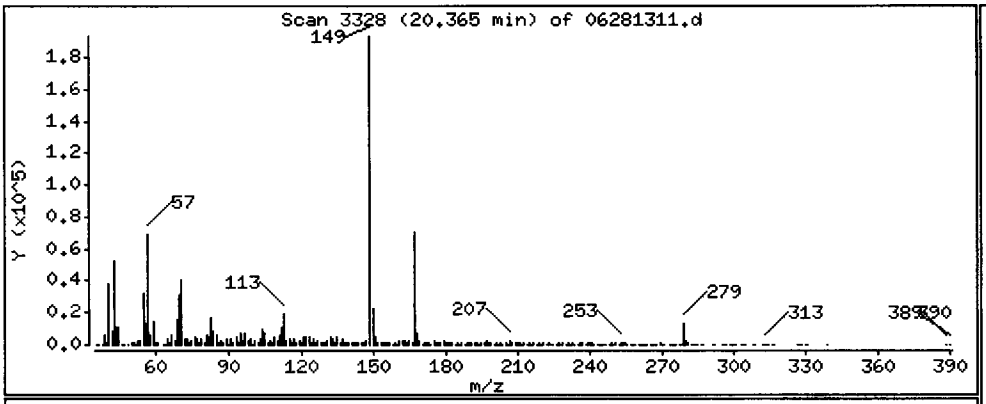
Operator: JZ

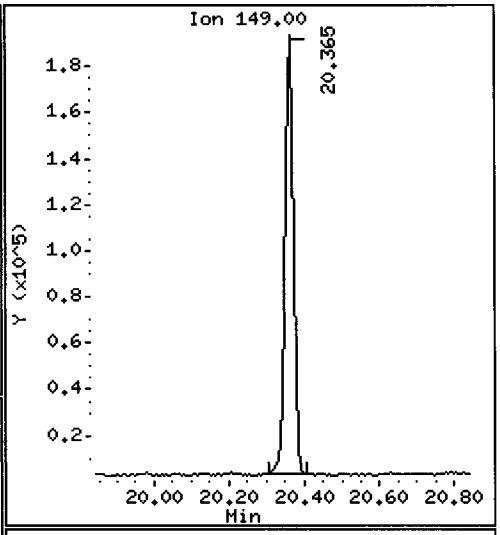
Column phase: ZB-5msi

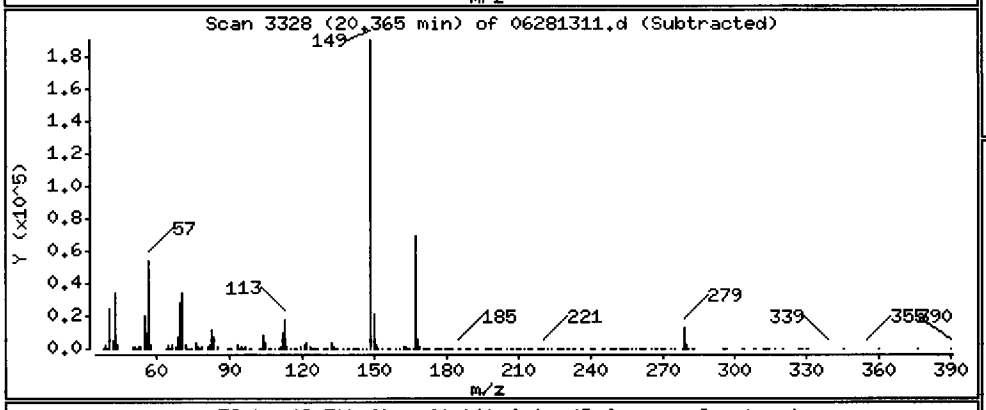
Column diameter: 0.32

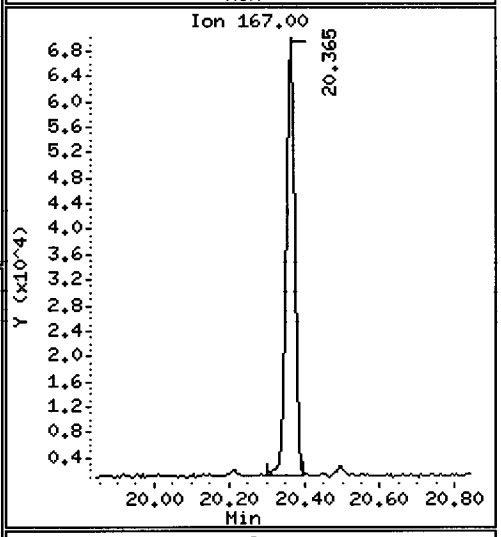
72 bis(2-Ethylhexyl)phthalate

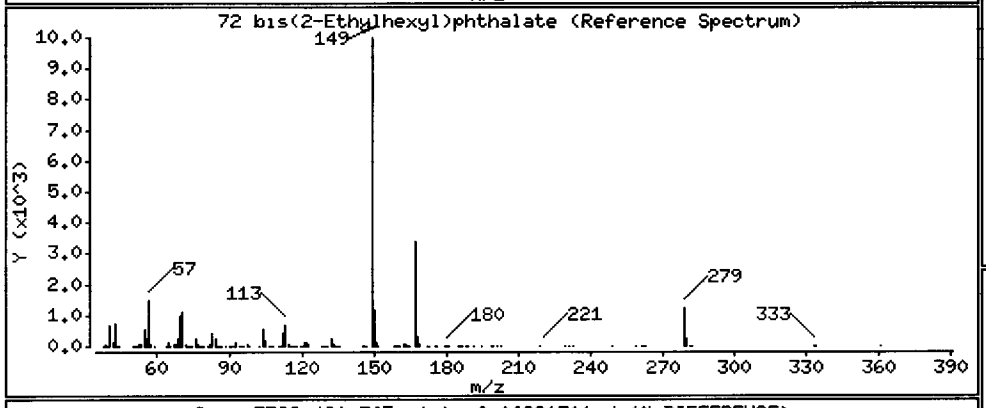
Concentration: 11.66 ug/L

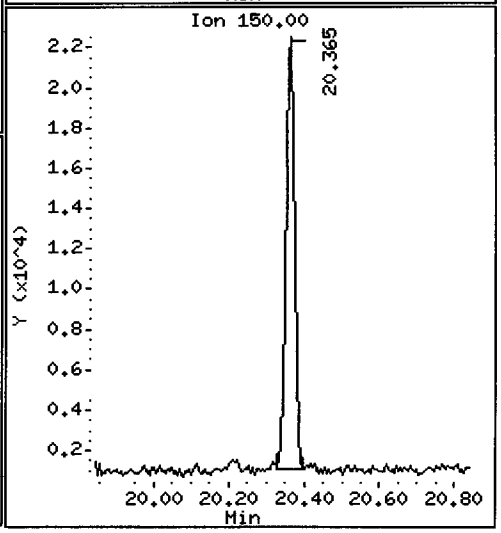


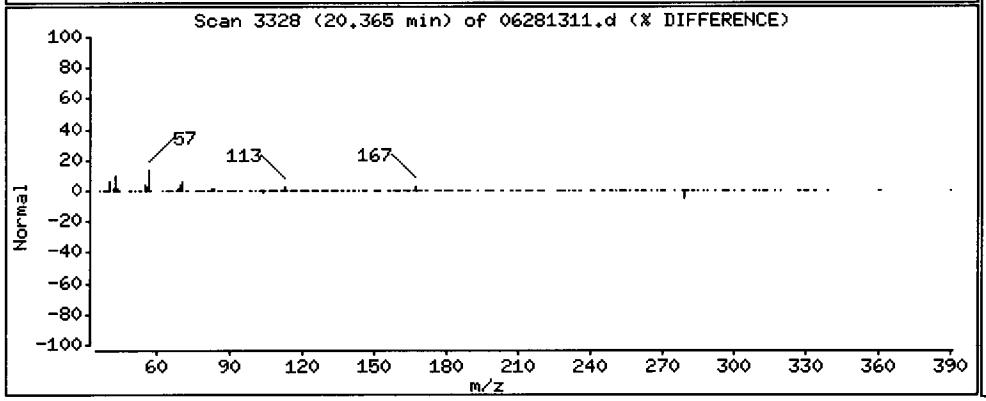












CO-ELUTION SUMMARY FOR FILE - 06281311.d

Lab ID: WV67E, Method: SW846062813.m, Instrument: nt6.i, Date: 28-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

SIM PAH Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WV67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8270D) SIM PNA-Water
Separatory Funnel (3510C) (SOP # 3311S)

Preparation Test SIM PNA L-L # 6 (SPNALWSL) Low Level (0.01ppb)

ARI Job No(s) WV67 Page 1 of 1 Batch set up by: TH

Bottle #	Extraction Requirements	Volume Extracted	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	WV67 MBW	500mL	0.5mL	0.5mL		ww 6/24/13
	SBW	500mL	0.5mL	0.5mL		
	SBW Dup.	500mL	0.5mL	0.5mL		
5	E ~~QLS~~	500mL	0.5mL	0.5mL		Analyst/Date
		500mL	0.5mL	0.5mL		KD 80°C 1 2 3 4 5 6
		500mL	0.5mL	0.5mL		ww/YC 6/26/13
		500mL	0.5mL	0.5mL		Analyst/Date
		500mL	0.5mL	0.5mL		TurboVap 1 2 3 Pre-Silica Gel Shakeout
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		Analyst/Date
		500mL	0.5mL	0.5mL		(REQ) Silica Gel Clean Shakeout (1:1)
		500mL	0.5mL	0.5mL		ww 6/26/13
		500mL	0.5mL	0.5mL		Analyst/Date
		500mL	0.5mL	0.5mL		TurboVap 1 2 3 Post Silica Gel Shakeout
		500mL	0.5mL	0.5mL		ww 6/26/13
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
Analyst/Date	ww 6/26/13	ww 6/26/13	ww 6/26/13	Reviewed By, ww 6/26/13		Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	I (B000346)	1.5/7.5µg/mL	100µL	2/21/14	AC	ww
Spike	18 (2077-2)	1.5/7.5µg/mL	100µL	10/13/13	AC	ww
~~QLS Spike~~	~~2 ( )~~	~~0.1µg/mL~~	~~50µL~~			
Extraction Time: 18:35						

SPECIAL INSTRUCTIONS: Note: LOW LEVEL SIM PNA'S MUST BE COMPLETED WITHIN 48HRS!
1. USE ONLY NON-SCRATCHED GLASSWARE. 2. Rinse all glassware with Low Level DCM. 3. Extract 3X with 30mL Low Level DCM. 4. KD (no drying column) at 80°. (Thoroughly rinse Snyder Columns with Low Level DCM)! 5. TurboVap below 10mL. 6. Silica Gel Clean-up Shakeout=REQUIRED. (Scintillation vial shakeout): Add 1g of Silica Gel. Vortex for 1min. Pass thru turbo drying column with glass wool and sodium sulfate plug and Low Level DCM. 7. TurboVap. 8. Vial in Low Level DCM. (Pre-clean vialing syringes thoroughly)! 9. Post screen extracts with any color.

A. Archive (Y) N

13661

WV67 : 20731

Organic Extractions
Reagent and Solutions Identification

(8270D)Low Level SIM PNA-Water
Separatory Funnel (3510C) (SOP # 3311S)

ARI Job No(s) WV67

(8270D) Low Level SIM PNA Aqueous:	Analyst/Date
Separatory Funnel Station: Low Level Methylene Chloride: (I# 863) Anhydrous Sodium Sulfate: (I# 8185 + jar date 6/3/13)	Sep. Funnel WW 6/26/13
KD Station: Low Level Methylene Chloride: (I# 8214)	KD WW 6/26/13
Vialing Station: Low Level Methylene Chloride: (I# 5214) 0% Silica Gel 35035 Neutral Glass wool: (I# 7095 + jar date 5/13) Anhydrous Sodium Sulfate: (I# 8185 + jar date 2/13)	Vialing WW 6/26/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WV67 Client ID: SAIC

Parameter: LL SIM PNA Client Project: NPDES SAMPLING SUPPORT

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color= Extra	tc 6-26-13
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☒ Emulsions (%)= E~2% separated and added to bulk	ww 6/26/13
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

SIM PAH Raw Data
Initial Calibration

ARI Job ID: WV67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS,SVOA Initial Calibration Notes

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 (NT11) NT12

Curve Date(s): 6.12.13 Internal Standard ID B000331 Expiration 7.3.13

DFTPP Tune Meets Criteria?	(YES) / NO	Minimum Response Factors Met/	(YES) / NO
DDT Breakdown <20%?	(YES) / NO	ICV Exceeding ±20%?	YES / (NO)
Peak Tailing Factor ≤2?	YES / (NO)[1]	ICV Exceeding ±30%?	YES / (NO)
ICal Meets %RSD & r^2 Criteria?	(YES) / NO	Linear Fits Used?	YES / (NO)
Q flag applied?	YES / (NO)	Quadratic Fits Used?	YES / (NO)
Manual Integrations for ICal?	YES / (NO)	Calibration Points Dropped?	YES / (NO)
Spectral Library Updated?	YES / (NO)		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Supelco	B000365	8/31/13	Absolute	B000604	2/26/14

Detail problems, corrective actions and/or other pertinent information below:

(1) pcp @ 2.41, does not affect curve, benzidine <2

Analyst: VD **Date:** 6.13.12

Reviewer: _____ **Date:** _____

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt11.i/20130612.b/lowsim.m
Batch File: /chem3/nt11.i/20130612.b
Inst ID: nt11.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	ic0612a	ic0612b	ic0612c	ic0612d	ic0612e	ic0612f
INJ.DATE:	12-JUN-2013	12-JUN-2013	12-JUN-2013	12-JUN-2013	12-JUN-2013	12-JUN-2013
INJ.TIME:	15:46	16:15	16:44	17:13	17:42	18:11

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	4 Naphthalene-d8	5.976	5.976	5.976	5.976	5.976	5.976	5.976	5.726-6.226	5.976	0.000
	5 Naphthalene	6.018	6.018	6.018	6.018	6.018	6.018	6.018	5.768-6.268	6.018	0.000
$	6 2-Methylnaphthalene-d1	6.953	6.953	6.953	6.953	6.953	6.953	6.953	6.703-7.203	6.953	0.000
	7 2-Methylnaphthalene	7.006	7.006	7.006	7.005	7.006	7.006	7.006	6.756-7.256	7.006	0.000
	8 1-Methylnaphthalene	7.247	7.247	7.247	7.247	7.247	7.247	7.247	6.997-7.497	7.247	0.000
	10 Acenaphthylene	8.784	8.784	8.784	8.784	8.784	8.784	8.784	8.534-9.034	8.784	0.000
*	11 Acenaphthene-d10	8.939	8.939	8.939	8.939	8.939	8.939	8.939	8.689-9.189	8.939	0.000
	12 Acenaphthene	8.995	8.994	8.995	8.994	8.995	8.995	8.995	8.745-9.245	8.995	0.000
	14 Dibenzofuran	9.205	9.205	9.205	9.205	9.205	9.205	9.205	8.955-9.455	9.205	0.000
	15 Fluorene	9.825	9.814	9.825	9.814	9.814	9.814	9.825	9.575-10.075	9.818	0.006
$	16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	12.499	12.249-12.749	+++++	+++++
	17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	13.381	13.131-13.631	+++++	+++++
*	18 Phenanthrene-d10	11.574	11.574	11.574	11.574	11.574	11.574	11.574	11.324-11.824	11.574	0.000
	19 Phenanthrene	11.619	11.618	11.618	11.618	11.618	11.619	11.619	11.369-11.869	11.618	0.000
	20 Anthracene	11.674	11.674	11.674	11.674	11.674	11.674	11.674	11.424-11.924	11.674	0.000
	22 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	14.533	14.283-14.783	+++++	+++++
$	23 Fluoranthene-d10	13.657	13.657	13.657	13.657	13.657	13.657	13.657	13.407-13.907	13.657	0.000

Reviewer 1 WD Date: 6.13.13
Reviewer 2 _____ Date: _____

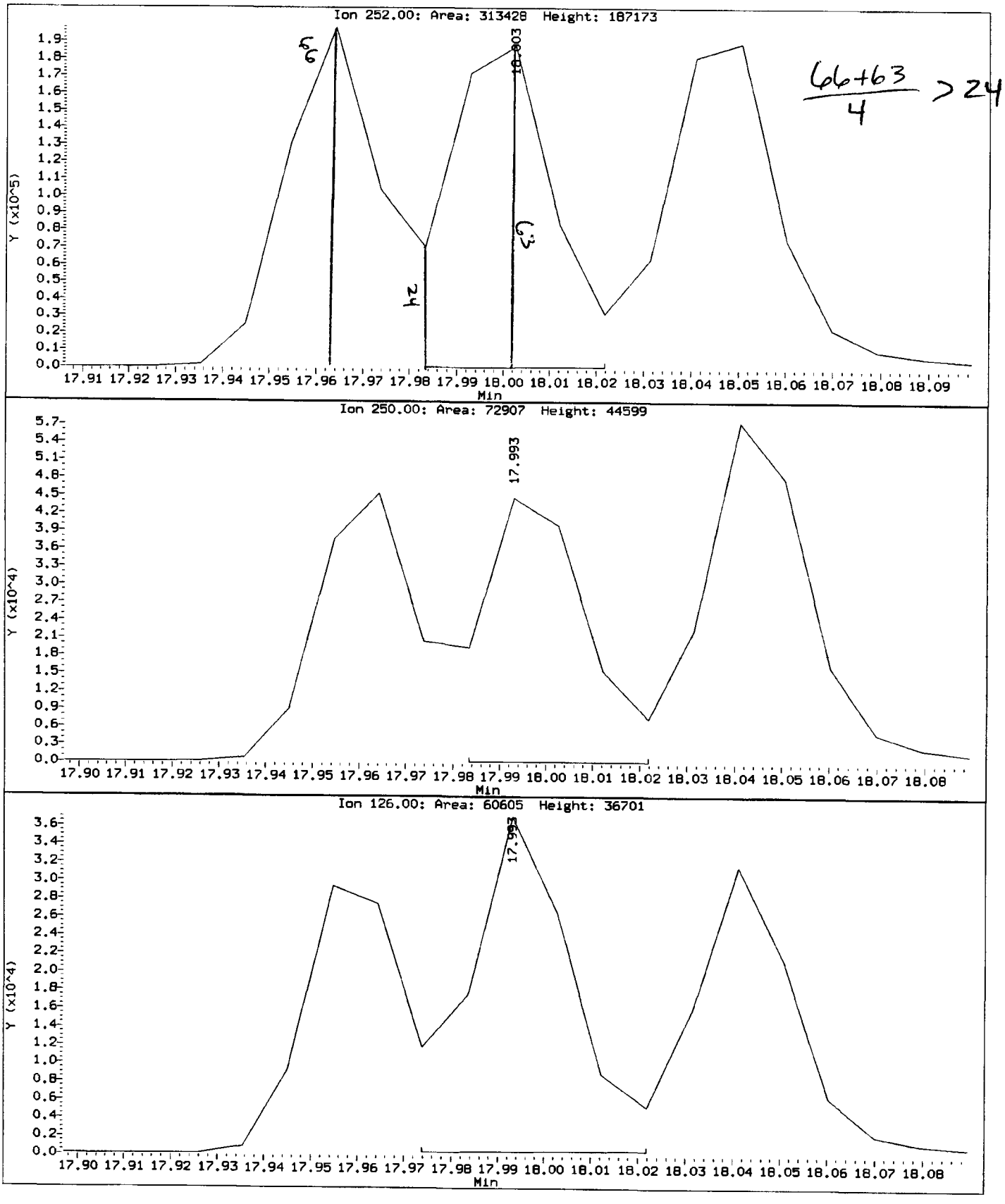
Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt11.i/20130612.b/lowsim.m
Batch File: /chem3/nt11.i/20130612.b
Inst ID: nt11.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	24 Fluoranthene	13.686	13.686	13.686	13.686	13.686	13.686	13.686	13.436-13.936	13.686	0.000
	25 Pyrene	14.166	14.166	14.166	14.166	14.166	14.166	14.166	13.916-14.416	14.166	0.000
	28 Benzo(a)anthracene	16.184	16.184	16.184	16.184	16.184	16.184	16.184	15.934-16.434	16.184	0.000
*	29 Chrysene-d12	16.275	16.275	16.275	16.275	16.275	16.275	16.275	16.025-16.525	16.275	0.000
	30 Chrysene	16.325	16.325	16.325	16.317	16.317	16.317	16.325	16.075-16.575	16.321	0.005
	44 Benzo(b)fluoranthene	17.964	17.964	17.964	17.964	17.964	17.964	17.964	17.714-18.214	17.964	0.000
	45 Benzo(k)fluoranthene	18.003	18.002	18.003	18.002	18.003	18.003	18.003	17.753-18.253	18.003	0.000
	46 Benzo(j)fluoranthene	18.051	18.051	18.041	18.050	18.051	18.051	18.051	17.801-18.301	18.049	0.004
	34 Benzo(a)pyrene	18.637	18.637	18.637	18.636	18.646	18.637	18.637	18.387-18.887	18.638	0.004
*	35 Perylene-d12	18.810	18.810	18.810	18.809	18.810	18.810	18.810	18.560-19.060	18.810	0.000
$	36 Dibenzo(a,h)anthracene	20.764	20.764	20.764	20.764	20.764	20.764	20.764	20.514-21.014	20.764	0.000
	37 Indeno(1,2,3-cd)pyrene	20.853	20.852	20.853	20.852	20.852	20.853	20.853	20.603-21.103	20.853	0.000
	38 Dibenzo(a,h)anthracene	20.853	20.852	20.853	20.852	20.852	20.853	20.853	20.603-21.103	20.853	0.000
	39 Benzo(g,h,i)perylene	21.705	21.705	21.705	21.705	21.705	21.705	21.705	21.455-21.955	21.705	0.000
	47 Perylene	18.858	18.858	18.858	18.857	18.858	18.858	18.858	18.608-19.108	18.858	0.000

Data File: /chem3/nt11.i/20130612.b/ic0612a.d
Injection Date: 12-JUN-2013 15:46
Instrument: nt11.i
Client Sample ID:

Compound: Benzo(k)fluoranthene
CAS Number:



MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/nt11.i/20130612.b

ARI Job No.: DFTP Method: DF8270.m Instrument: nt11.i Date: 12-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1530	df0612.d	DFTPP 10		1	NO MANUAL INTEGRATION
1546	ic0612a.d	SIM 250		1	NO MANUAL INTEGRATION
1615	ic0612b.d	SIM 1000		1	NO MANUAL INTEGRATION
1644	ic0612c.d	SIM 10		1	NO MANUAL INTEGRATION
1713	ic0612d.d	SIM 500		1	NO MANUAL INTEGRATION
1742	ic0612e.d	SIM 50		1	NO MANUAL INTEGRATION
1811	ic0612f.d	SIM 100		1	NO MANUAL INTEGRATION
1840	icv0612.d	SIM ICV 250		1	NO MANUAL INTEGRATION

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-JUN-2013 15:46
End Cal Date : 12-JUN-2013 18:11
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt11.i/20130612.b/lowsim.m
Cal Date : 13-Jun-2013 07:54 van
Curve Type : Average

Calibration File Names:
Level 1: /chem3/nt11.i/20130612.b/ic0612c.d
Level 2: /chem3/nt11.i/20130612.b/ic0612e.d
Level 3: /chem3/nt11.i/20130612.b/ic0612f.d
Level 4: /chem3/nt11.i/20130612.b/ic0612a.d
Level 5: /chem3/nt11.i/20130612.b/ic0612d.d
Level 6: /chem3/nt11.i/20130612.b/ic0612b.d

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
5 Naphthalene	1.16989	0.96702	1.04281	0.97447	0.94208	0.84064	0.98949	11.119
7 2-Methylnaphthalene	0.63775	0.54076	0.62888	0.62446	0.62142	0.57589	0.60486	6.302
8 1-Methylnaphthalene	0.66699	0.58111	0.64363	0.63051	0.61904	0.58189	0.62053	5.508
10 Acenaphthylene	1.76894	1.40820	1.56430	1.58061	1.53542	1.40020	1.54294	8.769
12 Acenaphthene	1.23101	0.97262	1.08724	1.03825	1.01007	0.92952	1.04479	10.150
14 Dibenzofuran	1.86109	1.42983	1.64384	1.55936	1.47403	1.32806	1.54937	12.079
15 Fluorene	1.26835	1.01052	1.11725	1.12104	1.09066	1.02298	1.10513	8.386
17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Phenanthrene	1.40759	1.05545	1.20763	1.10458	1.07282	0.95585	1.13398	13.819
20 Anthracene	1.01637	0.80550	0.98411	1.00522	1.01506	0.94007	0.96105	8.465
22 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Fluoranthene	1.50563	0.99003	1.29305	1.18559	1.17961	1.07225	1.20436	14.991
25 Pyrene	2.13320	1.31920	1.62487	1.44922	1.44369	1.31145	1.54694	19.973
28 Benzo(a)anthracene	1.53812	1.12278	1.32759	1.27131	1.23230	1.15993	1.27534	11.643
30 Chrysene	1.83513	1.30545	1.52828	1.40239	1.36000	1.22691	1.44303	15.030
44 Benzo(b)fluoranthene	1.71529	1.32468	1.56040	1.50222	1.48182	1.41058	1.49916	8.903
45 Benzo(k)fluoranthene	1.69626	1.36791	1.60368	1.53982	1.56413	1.47499	1.54113	7.277
46 Benzo(j)fluoranthene	1.92766	1.63731	1.85451	1.68910	1.73152	1.56169	1.73363	7.871
34 Benzo(a)pyrene	1.38490	1.08598	1.27956	1.26037	1.25970	1.20595	1.24608	7.865
37 Indeno(1,2,3-cd)pyrene	1.77776	1.41015	1.69251	1.70815	1.71870	1.63473	1.65700	7.808
38 Dibenzo(a,h)anthracene	1.24924	1.09776	1.28353	1.33306	1.35280	1.29584	1.26870	7.204

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-JUN-2013 15:46
End Cal Date : 12-JUN-2013 18:11
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt11.i/20130612.b/lowsim.m
Cal Date : 13-Jun-2013 07:54 van
Curve Type : Average

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
39 Benzo(g,h,i)perylene	1.76267	1.33262	1.51341	1.46320	1.45288	1.36720	1.48200	10.298
47 Perylene	1.66509	1.35702	1.51043	1.44489	1.45472	1.35641	1.46476	7.847
$ 6 2-Methylnaphthalene-d10	0.64779	0.56610	0.62727	0.61674	0.60873	0.57157	0.60637	5.267
$ 16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 23 Fluoranthene-d10	1.12679	0.89411	1.08067	1.06043	1.05562	0.97969	1.03288	8.038
$ 36 Dibenzo(a,h)anthracene-d14	1.09892	0.93564	1.12074	1.15799	1.16643	1.12637	1.10102	7.697

Analytical Resources Inc.: Organics Instrument Log

NT-11 Serial No.:GC=US10140004, MS=US10481502

Date: 6·12·13 Analysis: low sim PNA Analyst: VB

GC Program: lowsim Column No: 14123 Column Type: Rx:-175,1ms

Instrument Tune (.U or .CT.): 130612.U EM Voltage: 1376

Calibration File: df0612 Curve Date: 6·12·13 Injection Vol.: 2 ul

IS/SS	Ical/Ccal	LCS/ICV
B000331	B000365	B000604

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt11.i/20130612.b

	Time	Filename	LabID	ClientId	DF									
1	1530	df0612.d	DFTPP 10		1	NO ISTDS FOUND								
2	1546	ic0612a.d	SIM 250		1	5.98	270479	8.94	156669	11.57	244223	16.28	194330	18.81	162839
3	1615	ic0612b.d	SIM 1000		1	5.98	276093	8.94	167665	11.57	257108	16.28	206699	18.81	165050
4	1644	ic0612c.d	SIM 10		1	5.98	274965	8.94	144109	11.57	226217	16.28	170364	18.81	141830
5	1713	ic0612d.d	SIM 500		1	5.98	260937	8.94	154444	11.57	234858	16.28	187693	18.81	151727
6	1742	ic0612e.d	SIM 50		1	5.98	259532	8.94	142929	11.57	221343	16.28	164927	18.81	134445
7	1811	ic0612f.d	SIM 100		1	5.98	257480	8.94	144249	11.57	223110	16.28	173838	18.81	142749
8	1840	icv0612.d	SIM ICV 250		1	5.98	253751	8.94	144883	11.57	222056	16.28	171640	18.81	141089
9	1908	ws97mb.d	WS97MBW1	WS97MBW1	1	5.98	270075	8.94	147902	11.57	250461	16.28	176331	18.81	141530
10	1937	ws97sb.d	WS97LCSW1	WS97LCSW1	1	5.98	269794	8.94	156461	11.57	251349	16.28	187674	18.81	148361
11	2006	ws97sbd.d	WS97LCSDW1	WS97LCSDW1	1	5.98	283697	8.94	162216	11.57	264618	16.28	202470	18.81	163502
12	2035	ws97qls1.d	WS97QLS1		1	5.98	281917	8.94	155174	11.57	260223	16.28	188681	18.81	153279
13	2104	ws97a.d	WS97A	LS431-W-0606	1	5.98	277360	8.94	161197	11.57	261000	16.28	191821	18.81	159393
14	2133	wt15a.d	WT15A	LTST-W-LSIV-	1	5.98	272670	8.94	160643	11.57	266115	16.28	198864	18.81	172365
15	2202	ws90a.d	WS90A	CL-MH-SPS-20	1	5.98	285000	8.94	167156	11.57	275580	16.28	207520	18.81	177021
16	2231	ws90b.d	WS90B	CL-VT-EFF-20	1	5.98	284887	8.94	168729	11.57	276129	16.28	208482	18.81	178659
17	2300	ws90c.d	WS90C	QC-EB-02-201	1	5.98	294815	8.94	178304	11.57	280260	16.28	211800	18.81	177489
18	2329	ws90d.d	WS90D	QC-EB-03-201	1	5.98	288239	8.94	173065	11.57	272368	16.27	203221	18.81	170713

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks in StarLIMS

VB 6.13.13

WY57 : 00742

Q-FLAG SUMMARY FOR DATABATCH - /chem3/nt11.i/20130612.b

Instrument: nt11.i Date: 12-JUN-2013 Method: lowsim.m

INITIAL CAL: 12-JUN-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 12-JUN-2013

Compound	%D
NO Q-FLAGS	

Data File: /chem3/nt11.i/20130612.b/df0612.d

Date : 12-JUN-2013 15:30

Client ID:

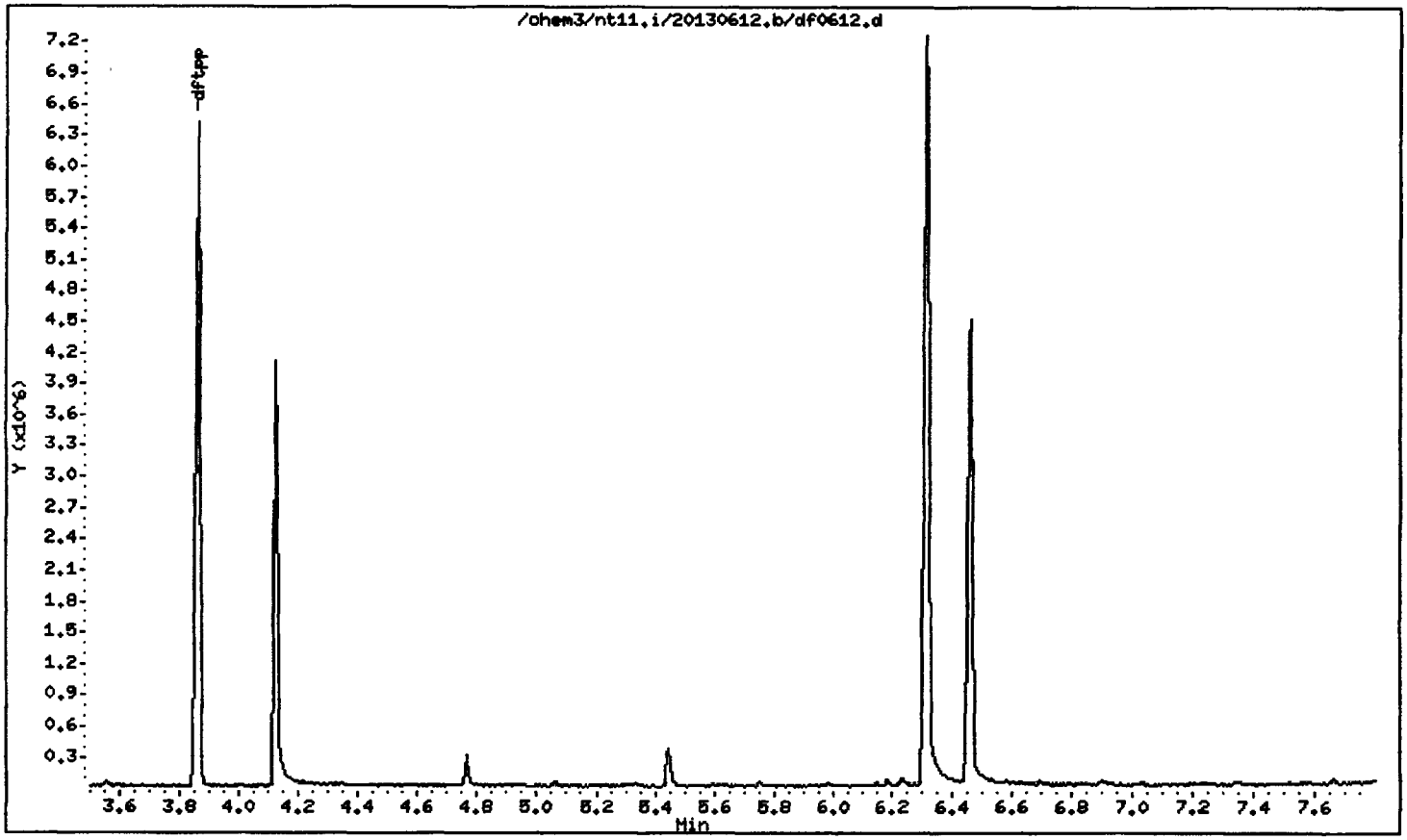
Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25



Data File: /chem3/nt11.i/20130612.b/df0612.d

Date : 12-JUN-2013 15:30

Client ID:

Instrument: nt11.i

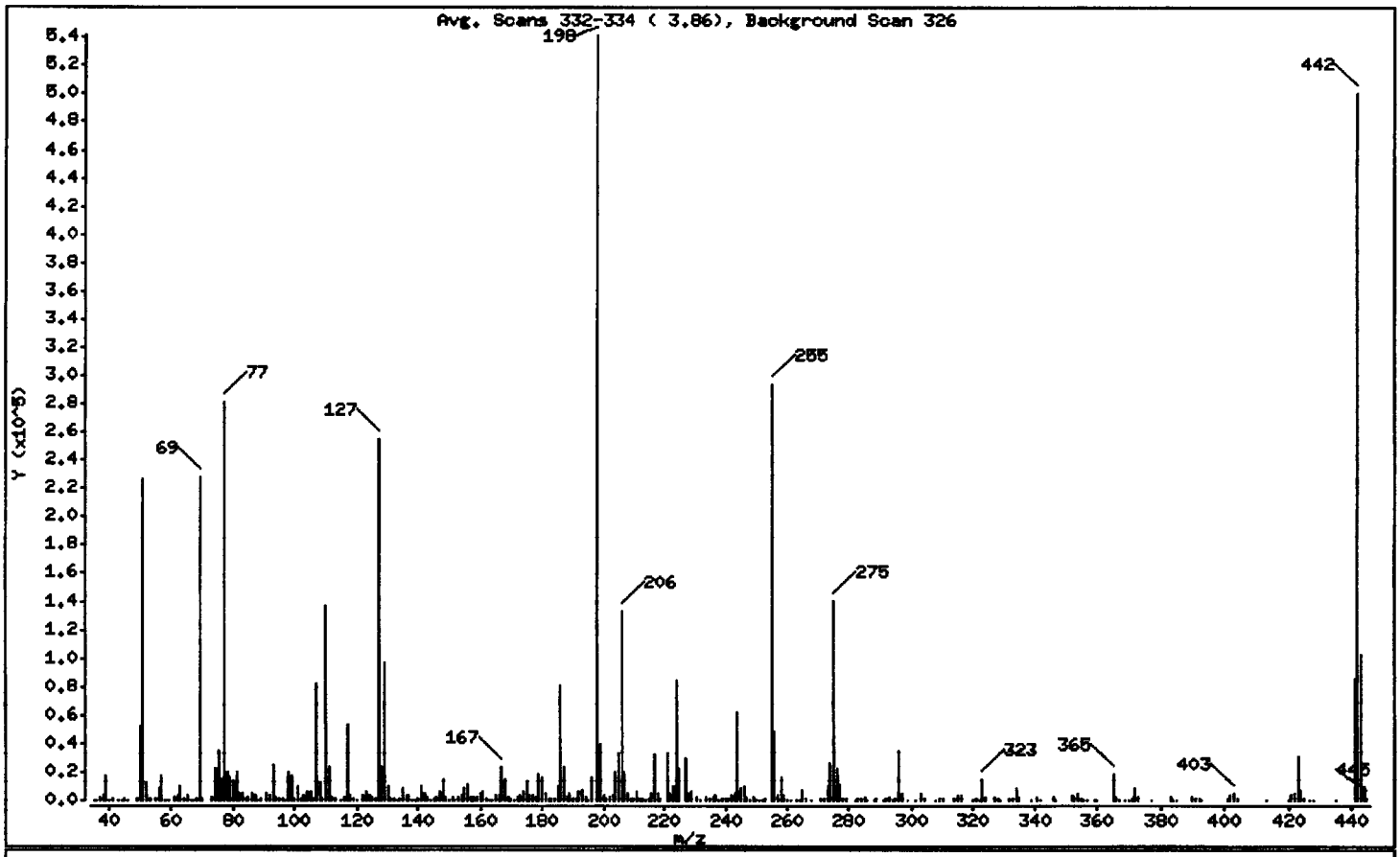
Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	41.83
68	Less than 2.00% of mass 69	0.33 (0.78)
69	Mass 69 relative abundance	42.09
70	Less than 2.00% of mass 69	0.26 (0.62)
127	10.00 - 80.00% of mass 198	47.10
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	7.33
275	10.00 - 60.00% of mass 198	28.96
365	Greater than 1.00% of mass 198	3.37
441	0.01 - 24.00% of mass 442	15.93 (17.26)
442	50.00 - 200.00% of mass 198	92.32
443	15.00 - 24.00% of mass 442	19.09 (20.67)

Data File: /chem3/nt11.i/20130612.b/df0612.d

Date : 12-JUN-2013 15:30

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

Data File: df0612.d
Spectrum: Avg. Scans 332-334 (3.86), Background Scan 326
Location of Maximum: 198.00
Number of points: 309

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	499	123.00	6563	202.00	2318	293.00	2932
36.00	174	124.00	4081	203.00	3146	294.00	381
37.00	1873	125.00	2603	204.00	19832	295.00	799
38.00	3737	126.00	830	205.00	33080	296.00	34720
39.00	17296	127.00	255104	206.00	132608	297.00	5594
40.00	450	128.00	23104	207.00	20112	299.00	209
41.00	1540	129.00	97560	208.00	4745	301.00	508
43.00	230	130.00	9378	209.00	1216	303.00	4743
44.00	488	131.00	1373	210.00	1409	304.00	678
45.00	734	132.00	926	211.00	6434	308.00	390
46.00	169	133.00	528	212.00	1471	309.00	717
49.00	1562	134.00	1816	213.00	719	310.00	894
50.00	52168	135.00	8598	214.00	189	314.00	1576
51.00	226496	136.00	3677	215.00	1070	315.00	4016
52.00	12912	137.00	3885	216.00	4500	316.00	3651
53.00	664	138.00	452	217.00	31912	320.00	606
55.00	1149	139.00	433	218.00	5594	321.00	1501
56.00	8160	140.00	831	219.00	658	322.00	214
57.00	17880	141.00	10321	221.00	33424	323.00	14945
58.00	441	142.00	5109	222.00	4536	324.00	2932
59.00	226	143.00	2294	223.00	10371	327.00	2760
61.00	2144	144.00	449	224.00	85280	328.00	900
62.00	3456	145.00	988	225.00	22872	329.00	166
63.00	9520	146.00	2427	227.00	29944	332.00	1231
64.00	1697	147.00	6617	228.00	4744	333.00	764
65.00	4237	148.00	15170	229.00	6575	334.00	8469
66.00	204	149.00	2757	231.00	2376	335.00	2370
67.00	288	150.00	607	232.00	289	339.00	172
68.00	1788	151.00	1875	234.00	2244	341.00	2369
69.00	227968	152.00	196	235.00	1554	342.00	481
70.00	1406	153.00	2586	236.00	1895	346.00	2807
73.00	2667	154.00	3342	237.00	3386	347.00	509
74.00	22672	155.00	8343	238.00	405	352.00	3910
75.00	34880	156.00	10947	239.00	1210	353.00	3039
76.00	15409	157.00	2763	240.00	639	354.00	4983

Data File: /chem3/nt11.i/20130612.b/df0612.d

Date : 12-JUN-2013 15:30

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

Data File: df0612.d
Spectrum: Avg. Scans 332-334 (3.86), Background Scan 326
Location of Maximum: 198.00
Number of points: 309

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	281472	158.00	2497	241.00	1425	355.00	1532
78.00	20304	159.00	2166	242.00	3447	356.00	180
79.00	16093	160.00	4539	243.00	4787	357.00	223
80.00	13874	161.00	6565	244.00	61728	359.00	234
81.00	20016	162.00	1412	245.00	8518	360.00	195
82.00	4608	163.00	422	246.00	9452	365.00	18256
83.00	4815	164.00	476	247.00	2216	366.00	3105
84.00	1144	165.00	4090	248.00	452	367.00	205
85.00	2529	166.00	3544	249.00	2856	369.00	194
86.00	4798	167.00	24152	250.00	277	370.00	180
87.00	3180	168.00	14871	251.00	615	371.00	1240
88.00	383	169.00	2560	252.00	188	372.00	8150
89.00	626	170.00	968	253.00	1285	373.00	2175
91.00	4498	171.00	194	255.00	293760	377.00	441
92.00	3906	172.00	2960	256.00	47984	383.00	2682
93.00	25504	173.00	3233	257.00	4136	384.00	422
94.00	2843	174.00	6324	258.00	15825	385.00	241
95.00	1100	175.00	13305	259.00	3121	390.00	2375
96.00	1387	176.00	3291	260.00	319	391.00	1056
97.00	338	177.00	3656	261.00	529	392.00	649
98.00	19808	178.00	1968	263.00	447	393.00	360
99.00	16904	179.00	18152	264.00	268	401.00	1012
100.00	1411	180.00	15951	265.00	7719	402.00	3720
101.00	9360	181.00	5374	266.00	1279	403.00	4996
102.00	1457	182.00	1113	268.00	217	404.00	1133
103.00	3196	183.00	1108	271.00	1420	413.00	578
104.00	5932	184.00	1093	272.00	1531	420.00	231
105.00	6462	185.00	9650	273.00	9428	421.00	4210
106.00	660	186.00	81496	274.00	26608	422.00	4397
107.00	81784	187.00	23240	275.00	140608	423.00	31280
108.00	12454	188.00	2080	276.00	21928	424.00	7293
109.00	1104	189.00	4530	277.00	10813	425.00	666
110.00	136512	190.00	640	278.00	1706	427.00	173
111.00	23176	191.00	1743	279.00	924	428.00	231
112.00	2451	192.00	6298	282.00	181	435.00	178

Data File: /chem3/nt11.i/20130612.b/df0612.d

Date : 12-JUN-2013 15:30

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

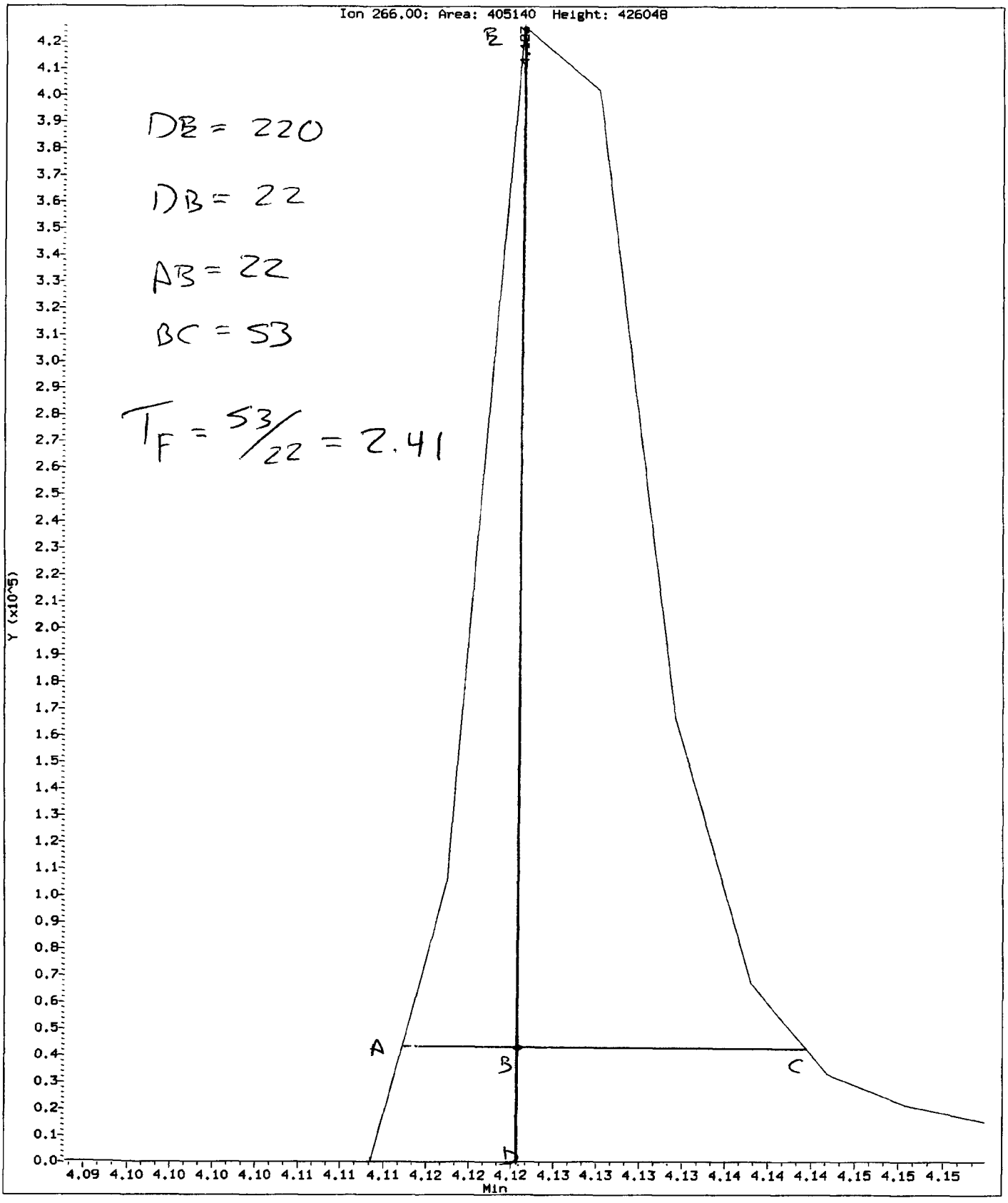
Column diameter: 0.25

Data File: df0612.d
Spectrum: Avg. Scans 332-334 (3.86), Background Scan 326
Location of Maximum: 198.00
Number of points: 309

m/z	Y	m/z	Y	m/z	Y	m/z	Y
113.00	1324	193.00	8060	283.00	1500	441.00	86304
115.00	319	194.00	2069	284.00	929	442.00	500032
116.00	3067	195.00	608	285.00	2392	443.00	103376
117.00	53528	196.00	16552	286.00	503	444.00	10288
118.00	3547	198.00	541632	288.00	173	445.00	855
119.00	906	199.00	39696	289.00	993		
120.00	412	200.00	3879	291.00	461		
122.00	3953	201.00	1246	292.00	806		

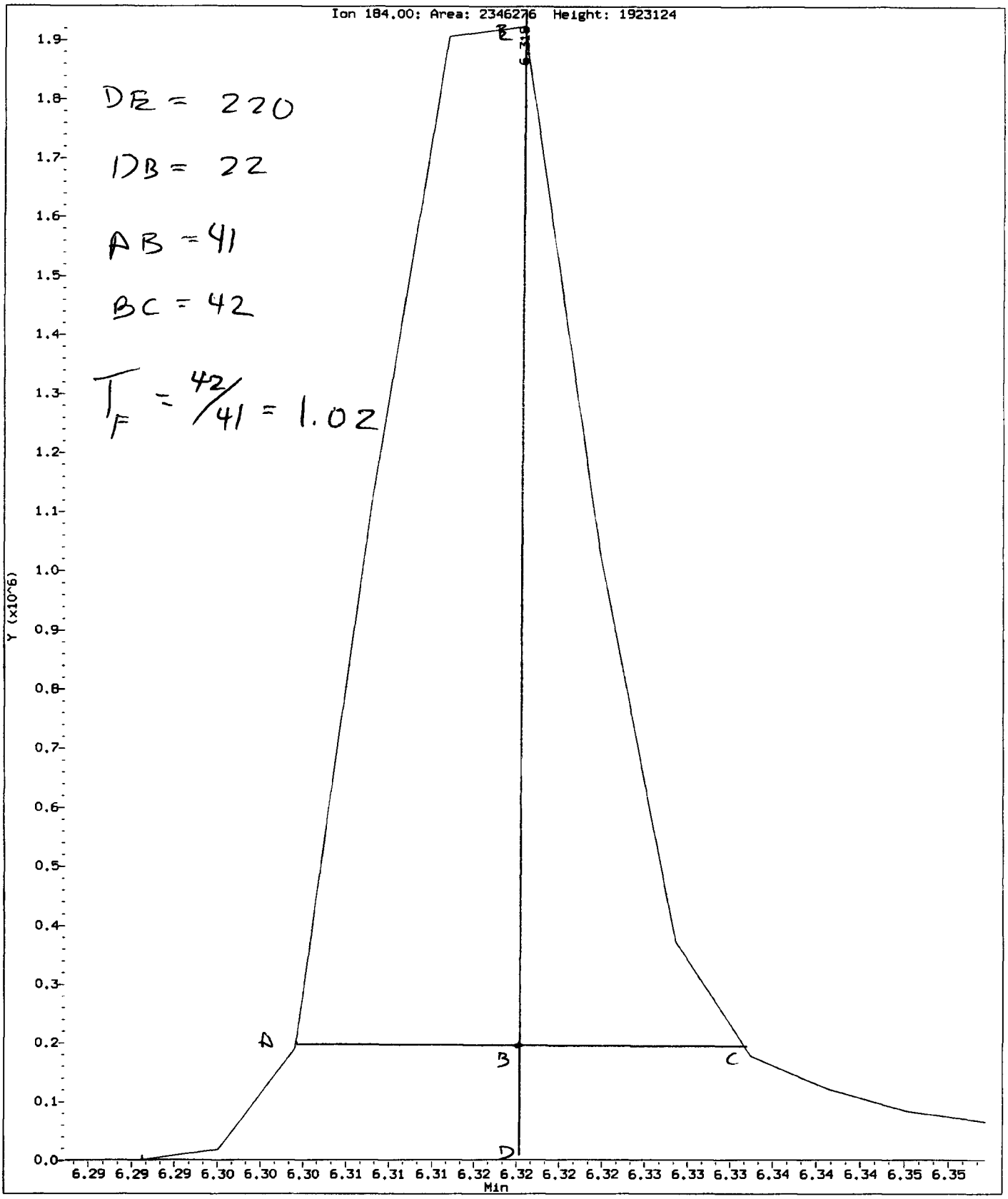
Data File: /chem3/nt11.i/20130612.b/DDT.b/df0612.d
Injection Date: 12-JUN-2013 15:30
Instrument: nt11.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem3/nt11.i/20130612.b/DDT.b/df0612.d
Injection Date: 12-JUN-2013 15:30
Instrument: nt11.i
Client Sample ID:

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem3/nt11.i/20130612.b/DDT.b/df0612.d ARI ID: DFTPP 10
Method: /chem3/nt11.i/20130612.b/DDT.b/sw846ddt.m Misc:
Analysis Date: 12-JUN-2013 15:30 Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	4.123	405140
Benzidine	6.318	2346276
4,4'-DDE	5.758	4247
4,4'-DDD	6.238	11300
4,4'-DDT	6.463	624089

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(\ 4247 + 11300) * 100}{(\ 4247 + 11300 + 624089)}$$

DDT Percent Breakdown = 2.4 %

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130612.b/ic0612a.d
Lab Smp Id: SIM 250
Inj Date : 12-JUN-2013 15:46
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 250
Misc Info :
Comment :
Method : /chem3/nt11.i/20130612.b/lowsim.m
Meth Date : 13-Jun-2013 07:55 van Quant Type: ISTD
Cal Date : 12-JUN-2013 15:46 Cal File: ic0612a.d
Als bottle: 2 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	270479	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	329467	250.000	250
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	208519	250.000	250
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	211130	250.000	250
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	213175	250.000	250
	10 Acenaphthylene	152	8.784	8.784	(0.983)	309540	250.000	250
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	156669	200.000	
	12 Acenaphthene	153	8.995	8.995	(1.006)	203327	250.000	250
	14 Dibenzofuran	168	9.205	9.205	(1.030)	305380	250.000	250
	15 Fluorene	166	9.825	9.814	(1.099)	219540	250.000	250
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	244223	200.000	
	19 Phenanthrene	178	11.619	11.619	(1.004)	337204	250.000	250
	20 Anthracene	178	11.674	11.674	(1.009)	306873	250.000	250
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	323728	250.000	250
	24 Fluoranthene	202	13.686	13.686	(1.182)	361936	250.000	250
	25 Pyrene	202	14.166	14.166	(0.870)	352034	250.000	250
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	308816	250.000	250
*	29 Chrysene-d12	240	16.275	16.275	(1.000)	194330	200.000	
	30 Chrysene	228	16.325	16.317	(1.003)	340659	250.000	250
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	305774	250.000	250
	45 Benzo(k)fluoranthene	252	18.003	18.003	(0.957)	313428	250.000	250
	46 Benzo(j)fluoranthene	252	18.051	18.051	(0.960)	343814	250.000	250
	34 Benzo(a)pyrene	252	18.637	18.637	(0.991)	256547	250.000	250
*	35 Perylene-d12	264	18.810	18.810	(1.000)	162839	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.853	20.853	(1.109)	347692	250.000	250
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	235708	250.000	250
	38 Dibenzo(a,h)anthracene	278	20.853	20.853	(1.109)	271342	250.000	250

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
39 Benzo(g,h,i)perylene	276	21.705	21.705	(1.154)	297833	250.000	250
47 Perylene	252	18.858	18.858	(1.003)	294106	250.000	250

6-13-13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0612a.d
Lab Smp Id: SIM 250
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info:

Calibration Date: 12-JUN-2013
Calibration Time: 15:46

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	270479	0.00
11 Acenaphthene-d10	156669	78334	313338	156669	0.00
18 Phenanthrene-d10	244223	122112	488446	244223	0.00
29 Chrysene-d12	194330	97165	388660	194330	0.00
35 Perylene-d12	162839	81420	325678	162839	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	0.00

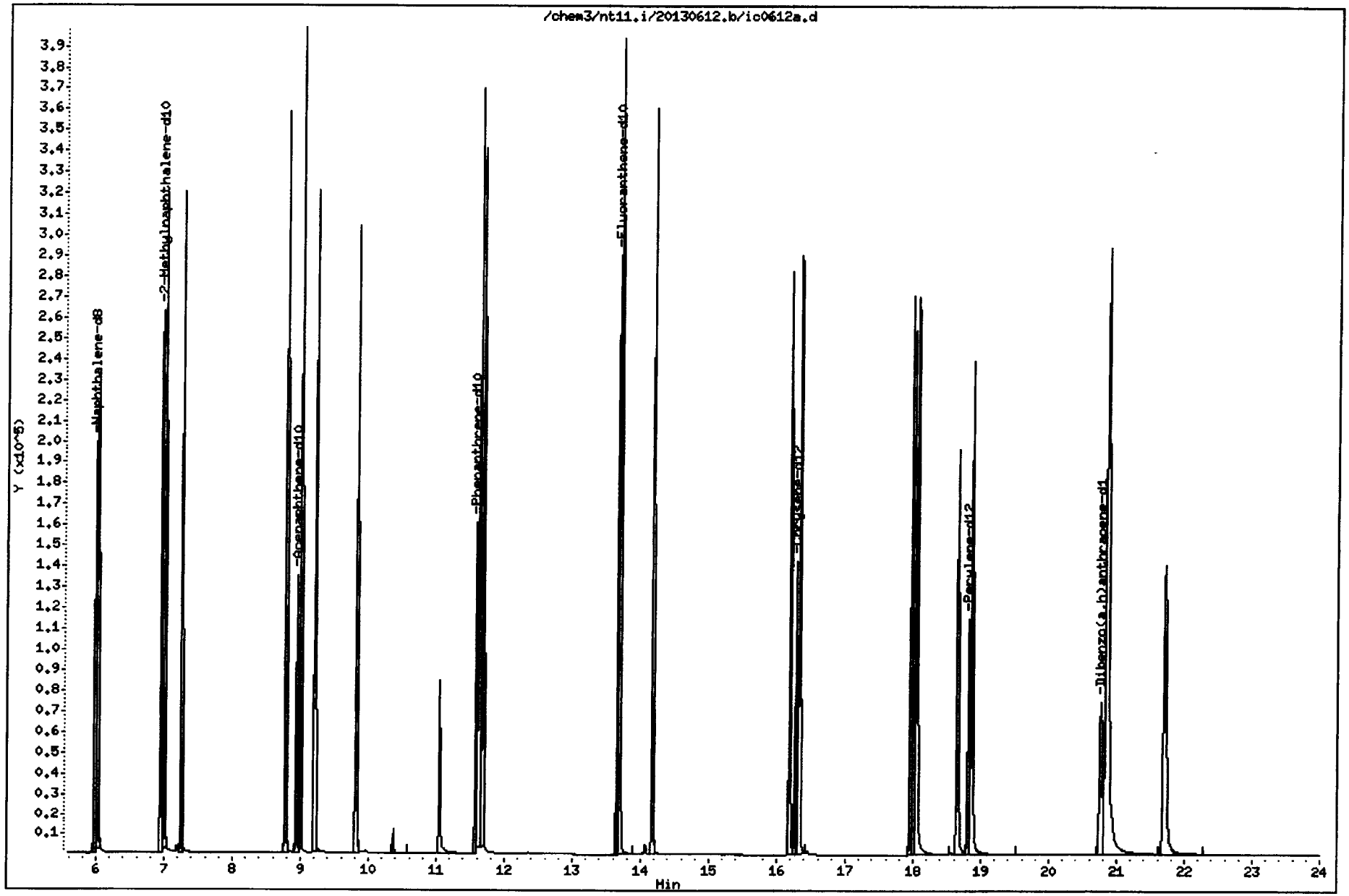
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20130612.b/ic0612a.d
Date : 12-JUN-2013 15:46
Client ID:
Sample Info: SIM 250

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: Rxi-17Sil MS



CO-ELUTION SUMMARY FOR FILE - ic0612a.d

Lab ID: SIM 250, Method: lowsim.m, Instrument: nt11.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS
20.853	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.853	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130612.b/ic0612b.d
Lab Smp Id: SIM 1000
Inj Date : 12-JUN-2013 16:15
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 1000
Misc Info :
Comment :
Method : /chem3/nt11.i/20130612.b/lowsim.m
Meth Date : 13-Jun-2013 07:55 van Quant Type: ISTD
Cal Date : 12-JUN-2013 16:15 Cal File: ic0612b.d
Als bottle: 3 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	276093	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	1160470	1000.00	926
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	789027	1000.00	962
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	794999	1000.00	960
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	803274	1000.00	960
	10 Acenaphthylene	152	8.784	8.784	(0.983)	1173819	1000.00	939
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	167665	200.000	
	12 Acenaphthene	153	8.994	8.995	(1.006)	779241	1000.00	945
	14 Dibenzofuran	168	9.205	9.205	(1.030)	1113350	1000.00	920
	15 Fluorene	166	9.814	9.814	(1.098)	857589	1000.00	954
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	257108	200.000	
	19 Phenanthrene	178	11.618	11.619	(1.004)	1228781	1000.00	928
	20 Anthracene	178	11.674	11.674	(1.009)	1208500	1000.00	967
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	1259425	1000.00	960
	24 Fluoranthene	202	13.686	13.686	(1.182)	1378418	1000.00	950
	25 Pyrene	202	14.166	14.166	(0.870)	1355377	1000.00	950
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	1198777	1000.00	954
*	29 Chrysene-d12	240	16.275	16.275	(1.000)	206699	200.000	
	30 Chrysene	228	16.325	16.317	(1.003)	1268006	1000.00	933
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	1164078	1000.00	969
	45 Benzo(k)fluoranthene	252	18.002	18.003	(0.957)	1217237	1000.00	978
	46 Benzo(j)fluoranthene	252	18.051	18.051	(0.960)	1288788	1000.00	961
	34 Benzo(a)pyrene	252	18.637	18.637	(0.991)	995214	1000.00	978
*	35 Perylene-d12	264	18.810	18.810	(1.000)	165050	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.852	20.853	(1.109)	1349060	1000.00	978
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	929539	1000.00	986
	38 Dibenzo(a,h)anthracene	278	20.852	20.853	(1.109)	1069391	1000.00	986

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
39 Benzo(g,h,i)perylene	276	21.705	21.705	(1.154)	1128284	1000.00	966
47 Perylene	252	18.858	18.858	(1.003)	1119380	1000.00	968

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0612b.d
Lab Smp Id: SIM 1000
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info:

Calibration Date: 12-JUN-2013
Calibration Time: 15:46

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	276093	2.08
11 Acenaphthene-d10	156669	78334	313338	167665	7.02
18 Phenanthrene-d10	244223	122112	488446	257108	5.28
29 Chrysene-d12	194330	97165	388660	206699	6.36
35 Perylene-d12	162839	81420	325678	165050	1.36

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	0.00

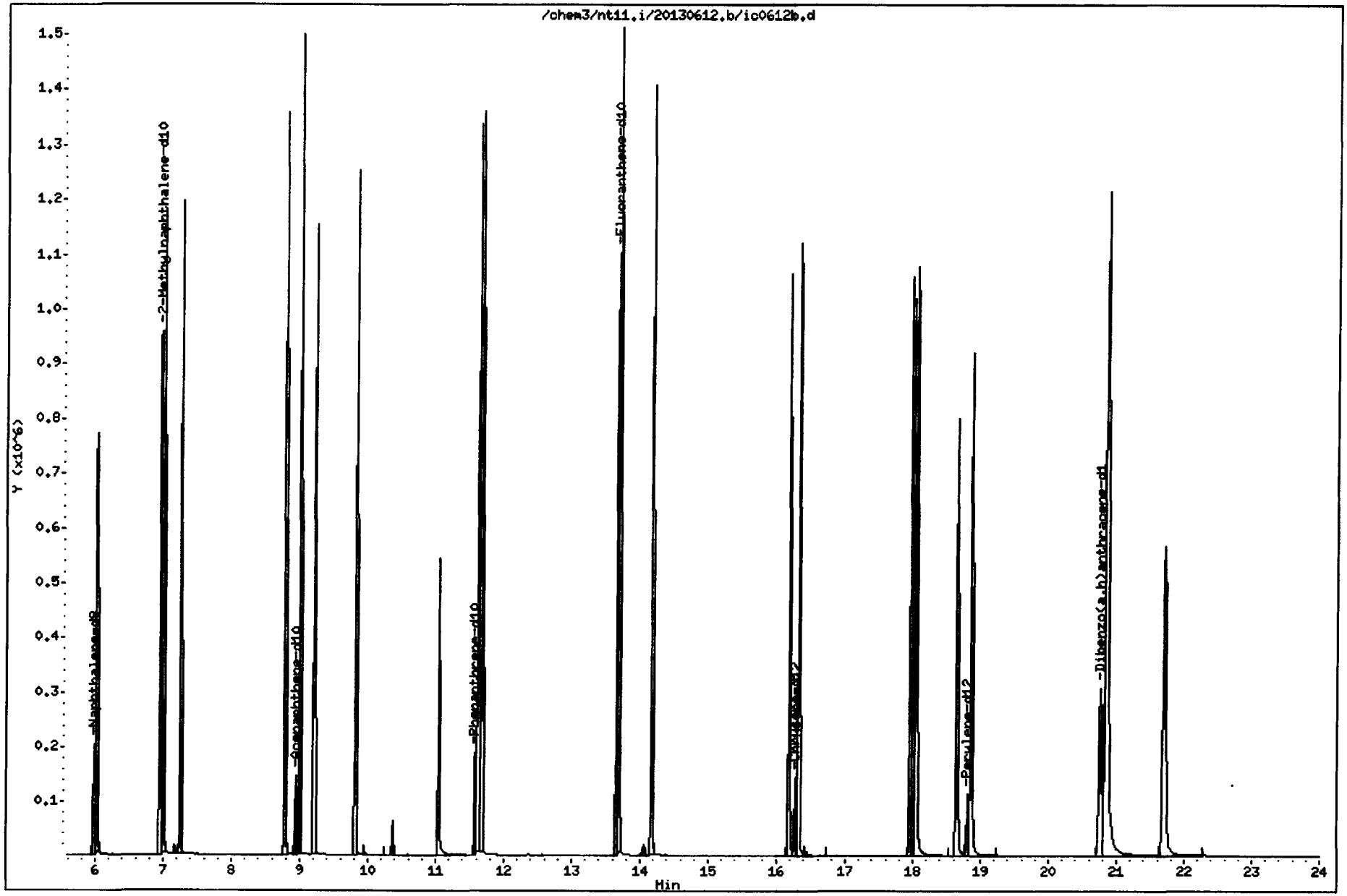
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20130612.b/ic0612b.d
Date : 12-JUN-2013 16:15
Client ID:
Sample Info: SIM 1000

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: Rxi-17Sil MS



CO-ELUTION SUMMARY FOR FILE - ic0612b.d

Lab ID: SIM 1000, Method: lowsim.m, Instrument: nt11.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS
20.852	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.852	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130612.b/ic0612c.d
Lab Smp Id: SIM 10
Inj Date : 12-JUN-2013 16:44
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 10
Misc Info :
Comment :
Method : /chem3/nt11.i/20130612.b/lowsim.m
Meth Date : 13-Jun-2013 07:55 van Quant Type: ISTD
Cal Date : 12-JUN-2013 16:44 Cal File: ic0612c.d
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	274965	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	16084	10.0000	11.8
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	8906	10.0000	10.6
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	8768	10.0000	10.4
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	9170	10.0000	10.6
	10 Acenaphthylene	152	8.784	8.784	(0.983)	12746	10.0000	11.2
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	144109	200.000	
	12 Acenaphthene	153	8.995	8.995	(1.006)	8870	10.0000	11.5
	14 Dibensofuran	168	9.205	9.205	(1.030)	13410	10.0000	11.8
	15 Fluorene	166	9.825	9.814	(1.099)	9139	10.0000	11.2
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	226217	200.000	
	19 Phenanthrene	178	11.618	11.619	(1.004)	15921	10.0000	12.2
	20 Anthracene	178	11.674	11.674	(1.009)	11496	10.0000	10.3
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	12745	10.0000	10.7
	24 Fluoranthene	202	13.686	13.686	(1.182)	17030	10.0000	12.0
	25 Pyrene	202	14.166	14.166	(0.870)	18171	10.0000	13.1
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	13102	10.0000	11.6
*	29 Chrysene-d12	240	16.275	16.275	(1.000)	170364	200.000	
	30 Chrysene	228	16.325	16.317	(1.003)	15632	10.0000	12.3
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	12164	10.0000	11.1
	45 Benzo(k)fluoranthene	252	18.003	18.003	(0.957)	12029	10.0000	10.8
	46 Benzo(j)fluoranthene	252	18.041	18.051	(0.959)	13670	10.0000	11.2
	34 Benzo(a)pyrene	252	18.637	18.637	(0.991)	9821	10.0000	10.8
*	35 Perylene-d12	264	18.810	18.810	(1.000)	141830	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.853	20.853	(1.109)	12607	10.0000	10.4
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	7793	10.0000	9.74
	38 Dibenzo(a,h)anthracene	278	20.853	20.853	(1.109)	8859	10.0000	9.66

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
39 Benzo(g,h,i)perylene	276	21.705	21.705	(1.154)	12500	10.0000	11.5
47 Perylene	252	18.858	18.858	(1.003)	11808	10.0000	11.2

4
6.13.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0612c.d
Lab Smp Id: SIM 10
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info:

Calibration Date: 12-JUN-2013
Calibration Time: 15:46
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	274965	1.66
11 Acenaphthene-d10	156669	78334	313338	144109	-8.02
18 Phenanthrene-d10	244223	122112	488446	226217	-7.37
29 Chrysene-d12	194330	97165	388660	170364	-12.33
35 Perylene-d12	162839	81420	325678	141830	-12.90

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	0.00

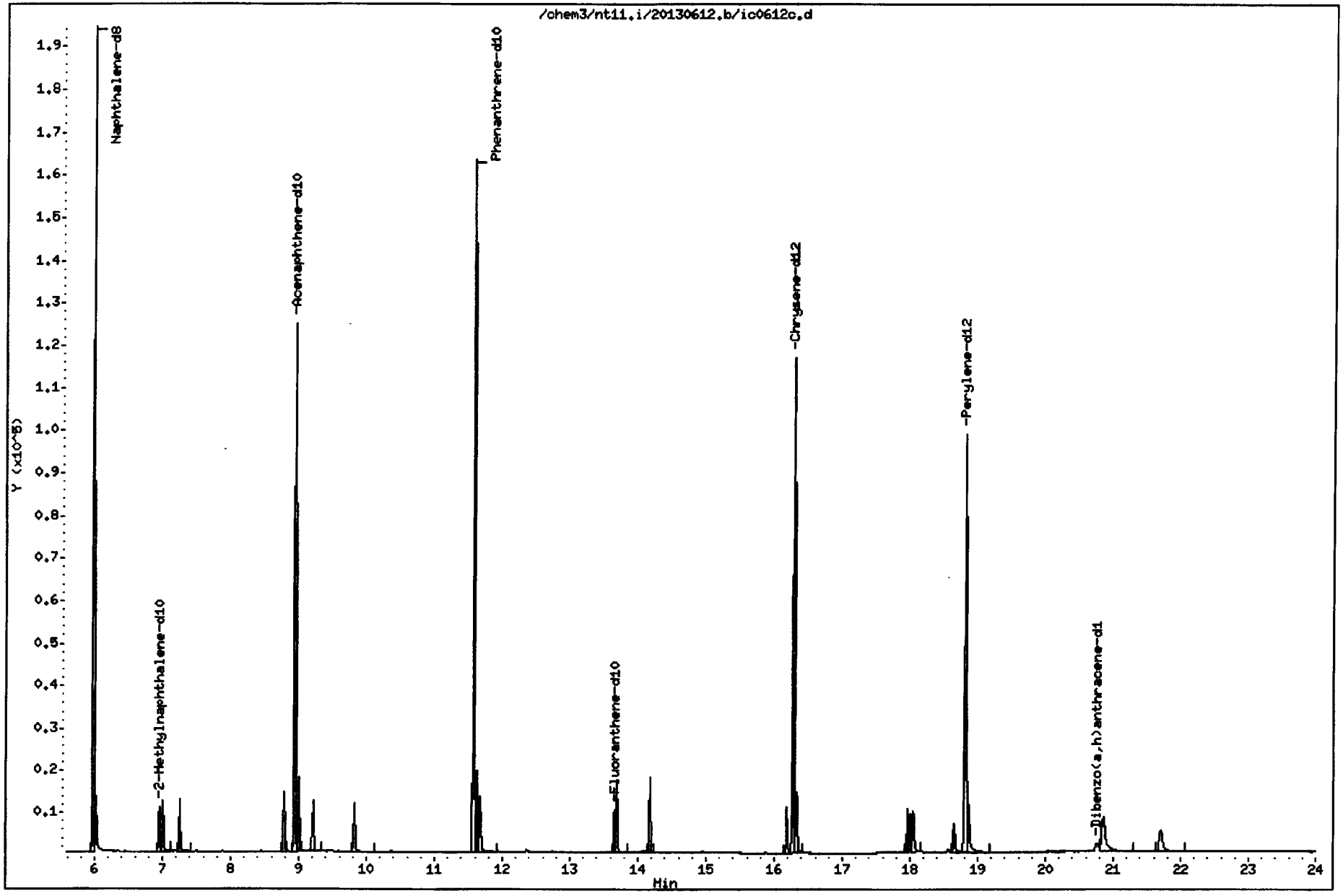
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20130612.b/ic0612c.d
Date : 12-JUN-2013 16:44
Client ID:
Sample Info: SIM 10

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: Rxi-17Sil MS



CO-ELUTION SUMMARY FOR FILE - ic0612c.d

Lab ID: SIM 10, Method: lowsim.m, Instrument: nt11.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS
20.853	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.853	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130612.b/ic0612d.d
Lab Smp Id: SIM 500
Inj Date : 12-JUN-2013 17:13
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 500
Misc Info :
Comment :
Method : /chem3/nt11.i/20130612.b/lowsim.m
Meth Date : 13-Jun-2013 07:55 van Quant Type: ISTD
Cal Date : 12-JUN-2013 17:13 Cal File: ic0612d.d
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	260937	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	614559	500.000	480
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	397102	500.000	498
	7 2-Methylnaphthalene	142	7.005	7.006	(1.172)	405376	500.000	505
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	403824	500.000	496
	10 Acenaphthylene	152	8.784	8.784	(0.983)	592841	500.000	489
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	154444	200.000	
	12 Acenaphthene	153	8.994	8.995	(1.006)	389998	500.000	480
	14 Dibenzofuran	168	9.205	9.205	(1.030)	569137	500.000	474
	15 Fluorene	166	9.814	9.814	(1.098)	421113	500.000	484
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	234858	200.000	
	19 Phenanthrene	178	11.618	11.619	(1.004)	629900	500.000	473
	20 Anthracene	178	11.674	11.674	(1.009)	595986	500.000	510
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	619800	500.000	500
	24 Fluoranthene	202	13.686	13.686	(1.182)	692602	500.000	477
	25 Pyrene	202	14.166	14.166	(0.870)	677428	500.000	456
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	578235	500.000	474
*	29 Chrysene-d12	240	16.275	16.275	(1.000)	187693	200.000	
	30 Chrysene	228	16.317	16.317	(1.003)	638154	500.000	467
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	562080	500.000	485
	45 Benzo(k)fluoranthene	252	18.002	18.003	(0.957)	593300	500.000	499
	46 Benzo(j)fluoranthene	252	18.050	18.051	(0.960)	656795	500.000	501
	34 Benzo(a)pyrene	252	18.636	18.637	(0.991)	477826	500.000	493
*	35 Perylene-d12	264	18.809	18.810	(1.000)	151727	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.852	20.853	(1.109)	651934	500.000	503
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	442449	500.000	513
	38 Dibenzo(a,h)anthracene	278	20.852	20.853	(1.109)	513139	500.000	517

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
39 Benzo(g,h,i)perylene	276	21.705	21.705	(1.154)	551101	500.000	481
47 Perylene	252	18.857	18.858	(1.003)	551799	500.000	491

6-13-13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0612d.d
Lab Smp Id: SIM 500
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info:

Calibration Date: 12-JUN-2013
Calibration Time: 15:46

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	260937	-3.53
11 Acenaphthene-d10	156669	78334	313338	154444	-1.42
18 Phenanthrene-d10	244223	122112	488446	234858	-3.83
29 Chrysene-d12	194330	97165	388660	187693	-3.42
35 Perylene-d12	162839	81420	325678	151727	-6.82

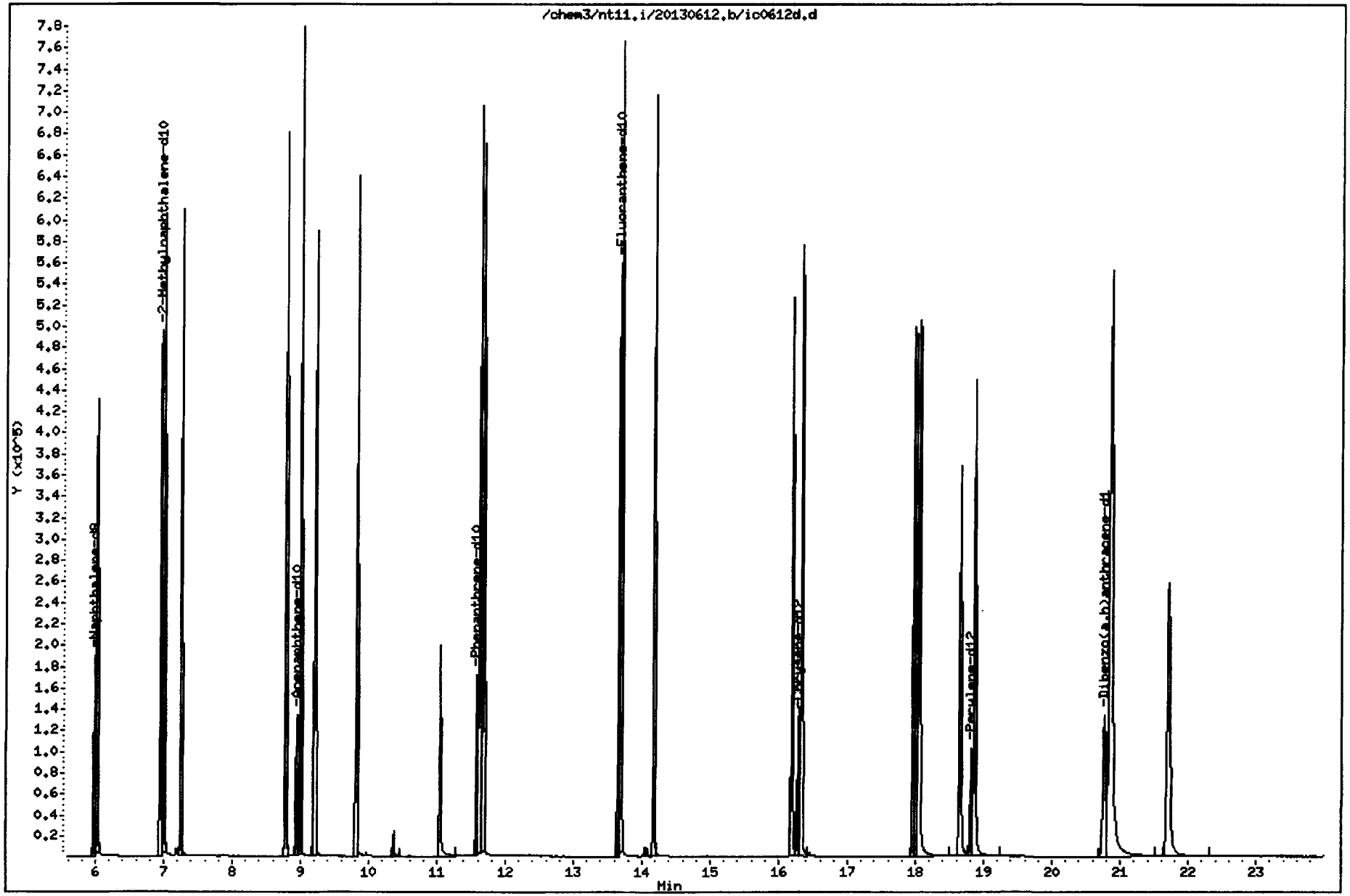
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	-0.01
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	0.00

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

Data File: /chem3/nt11.i/20130612.b/ic0612d.d
Date : 12-JUN-2013 17:13
Client ID:
Sample Info: SIM 500

Instrument: nt11.i
Operator: VTS
Column diameter: 0.25

Column phase: Rxi-17Sil MS



CO-ELUTION SUMMARY FOR FILE - ic0612d.d

Lab ID: SIM 500, Method: lowsim.m, Instrument: nt11.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS
20.852	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.852	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130612.b/ic0612e.d
Lab Smp Id: SIM 50
Inj Date : 12-JUN-2013 17:42
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 50
Misc Info :
Comment :
Method : /chem3/nt11.i/20130612.b/lowsim.m
Meth Date : 13-Jun-2013 07:55 van Quant Type: ISTD
Cal Date : 12-JUN-2013 17:42 Cal File: ic0612e.d
Als bottle: 6 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	259532	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	62743	50.0000	49.4
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	36730	50.0000	47.0
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	35086	50.0000	45.1
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	37704	50.0000	47.2
	10 Acenaphthylene	152	8.784	8.784	(0.983)	50318	50.0000	45.8
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	142929	200.000	
	12 Acenaphthene	153	8.995	8.995	(1.006)	34754	50.0000	46.9
	14 Dibenzofuran	168	9.205	9.205	(1.030)	51091	50.0000	46.7
	15 Fluorene	166	9.814	9.814	(1.098)	36108	50.0000	45.8
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	221343	200.000	
	19 Phenanthrene	178	11.618	11.619	(1.004)	58404	50.0000	47.1
	20 Anthracene	178	11.674	11.674	(1.009)	44573	50.0000	42.1
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	49476	50.0000	43.7
	24 Fluoranthene	202	13.686	13.686	(1.182)	54784	50.0000	41.7
	25 Pyrene	202	14.166	14.166	(0.870)	54393	50.0000	43.1
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	46294	50.0000	44.4
*	29 Chrysene-d12	240	16.275	16.275	(1.000)	164927	200.000	
	30 Chrysene	228	16.317	16.317	(1.003)	53826	50.0000	45.8
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	44524	50.0000	44.5
	45 Benzo(k)fluoranthene	252	18.003	18.003	(0.957)	45977	50.0000	44.7
	46 Benzo(j)fluoranthene	252	18.051	18.051	(0.960)	55032	50.0000	47.9
	34 Benzo(a)pyrene	252	18.646	18.637	(0.991)	36501	50.0000	43.8
*	35 Perylene-d12	264	18.810	18.810	(1.000)	134445	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.852	20.853	(1.109)	47397	50.0000	42.7
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	31448	50.0000	42.6
	38 Dibenzo(a,h)anthracene	278	20.852	20.853	(1.109)	36897	50.0000	43.4

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
39 Benzo(g,h,i)perylene	276	21.705	21.705	(1.154)	44791	50.0000	45.2
47 Perylene	252	18.858	18.858	(1.003)	45611	50.0000	46.6

6.13.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0612e.d
Lab Smp Id: SIM 50
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info:

Calibration Date: 12-JUN-2013
Calibration Time: 15:46

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	259532	-4.05
11 Acenaphthene-d10	156669	78334	313338	142929	-8.77
18 Phenanthrene-d10	244223	122112	488446	221343	-9.37
29 Chrysene-d12	194330	97165	388660	164927	-15.13
35 Perylene-d12	162839	81420	325678	134445	-17.44

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	0.00

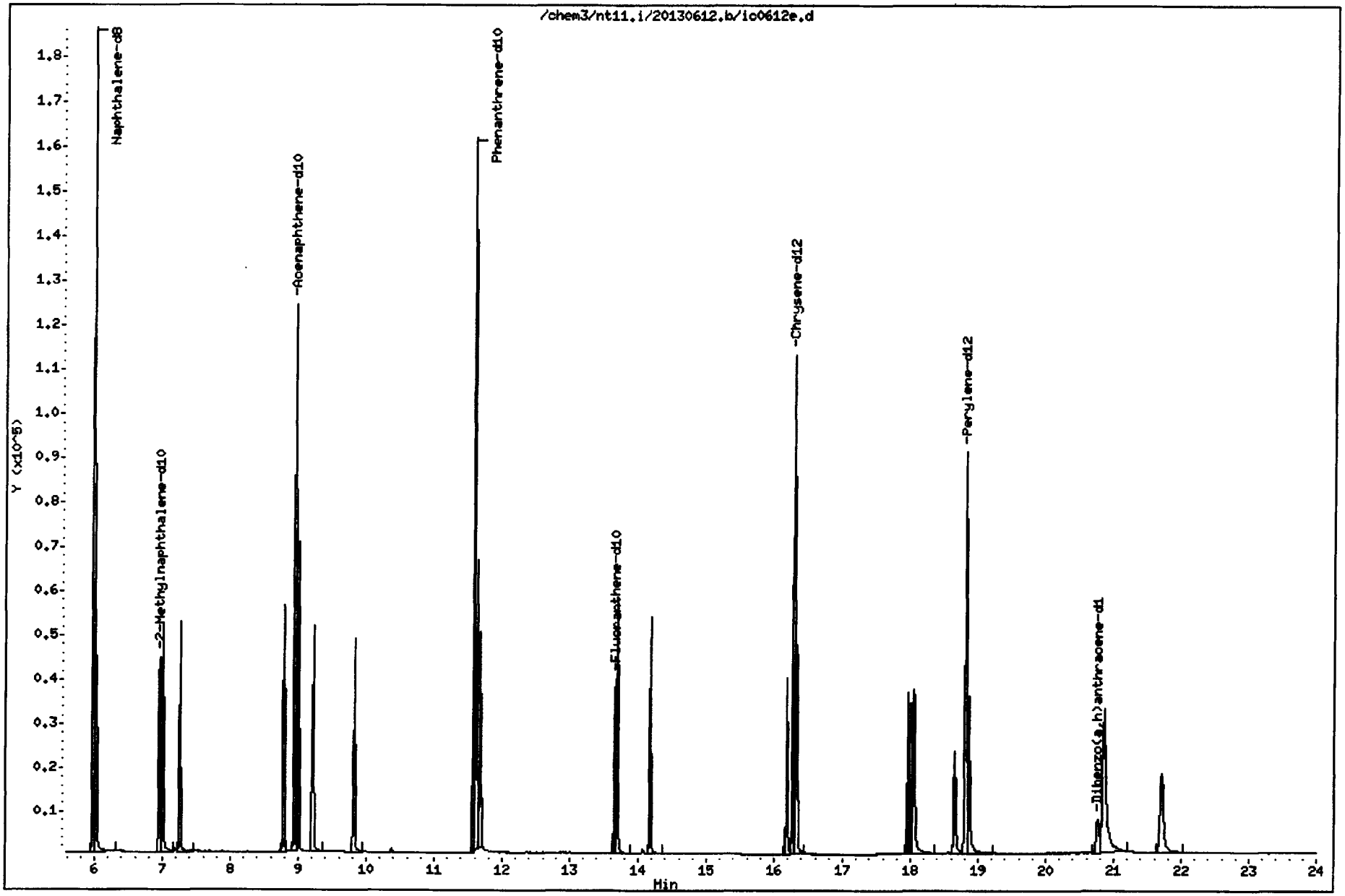
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20130612.b/ic0612e.d
Date : 12-JUN-2013 17:42
Client ID:
Sample Info: SIM 50

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: Rxi-17Sil MS



CO-ELUTION SUMMARY FOR FILE - ic0612e.d

Lab ID: SIM 50, Method: lowsim.m, Instrument: nt11.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS
20.852	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.852	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130612.b/ic0612f.d
Lab Smp Id: SIM 100
Inj Date : 12-JUN-2013 18:11
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 100
Misc Info :
Comment :
Method : /chem3/nt11.i/20130612.b/lowsim.m
Meth Date : 13-Jun-2013 07:55 van Quant Type: ISTD
Cal Date : 12-JUN-2013 18:11 Cal File: ic0612f.d
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	257480	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	134252	100.000	105
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	80755	100.000	103
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	80962	100.000	104
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	82861	100.000	104
	10 Acenaphthylene	152	8.784	8.784	(0.983)	112824	100.000	101
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	144249	200.000	
	12 Acenaphthene	153	8.995	8.995	(1.006)	78417	100.000	104
	14 Dibenzofuran	168	9.205	9.205	(1.030)	118561	100.000	106
	15 Fluorene	166	9.814	9.814	(1.098)	80581	100.000	101
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	223110	200.000	
	19 Phenanthrene	178	11.619	11.619	(1.004)	134717	100.000	106
	20 Anthracene	178	11.674	11.674	(1.009)	109782	100.000	102
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	120554	100.000	105
	24 Fluoranthene	202	13.686	13.686	(1.182)	144246	100.000	107
	25 Pyrene	202	14.166	14.166	(0.870)	141232	100.000	105
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	115393	100.000	104
*	29 Chrysene-d12	240	16.275	16.275	(1.000)	173838	200.000	
	30 Chrysene	228	16.317	16.317	(1.003)	132837	100.000	106
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	111373	100.000	104
	45 Benzo(k)fluoranthene	252	18.003	18.003	(0.957)	114462	100.000	104
	46 Benzo(j)fluoranthene	252	18.051	18.051	(0.960)	132365	100.000	107
	34 Benzo(a)pyrene	252	18.637	18.637	(0.991)	91328	100.000	103
*	35 Perylene-d12	264	18.810	18.810	(1.000)	142749	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.853	20.853	(1.109)	120802	100.000	102
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	79992	100.000	102
	38 Dibenzo(a,h)anthracene	278	20.853	20.853	(1.109)	91611	100.000	101

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
39 Benzo(g,h,i)perylene	276	21.705	21.705	(1.154)	108019	100.000	102
47 Perylene	252	18.858	18.858	(1.003)	107806	100.000	103

6.13.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0612f.d
Lab Smp Id: SIM 100
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info:

Calibration Date: 12-JUN-2013
Calibration Time: 15:46

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	257480	-4.81
11 Acenaphthene-d10	156669	78334	313338	144249	-7.93
18 Phenanthrene-d10	244223	122112	488446	223110	-8.64
29 Chrysene-d12	194330	97165	388660	173838	-10.54
35 Perylene-d12	162839	81420	325678	142749	-12.34

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	0.00

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

Data File: /chem3/nt11.i/20130612.b/ic0612f.d

Date : 12-JUN-2013 18:11

Client ID:

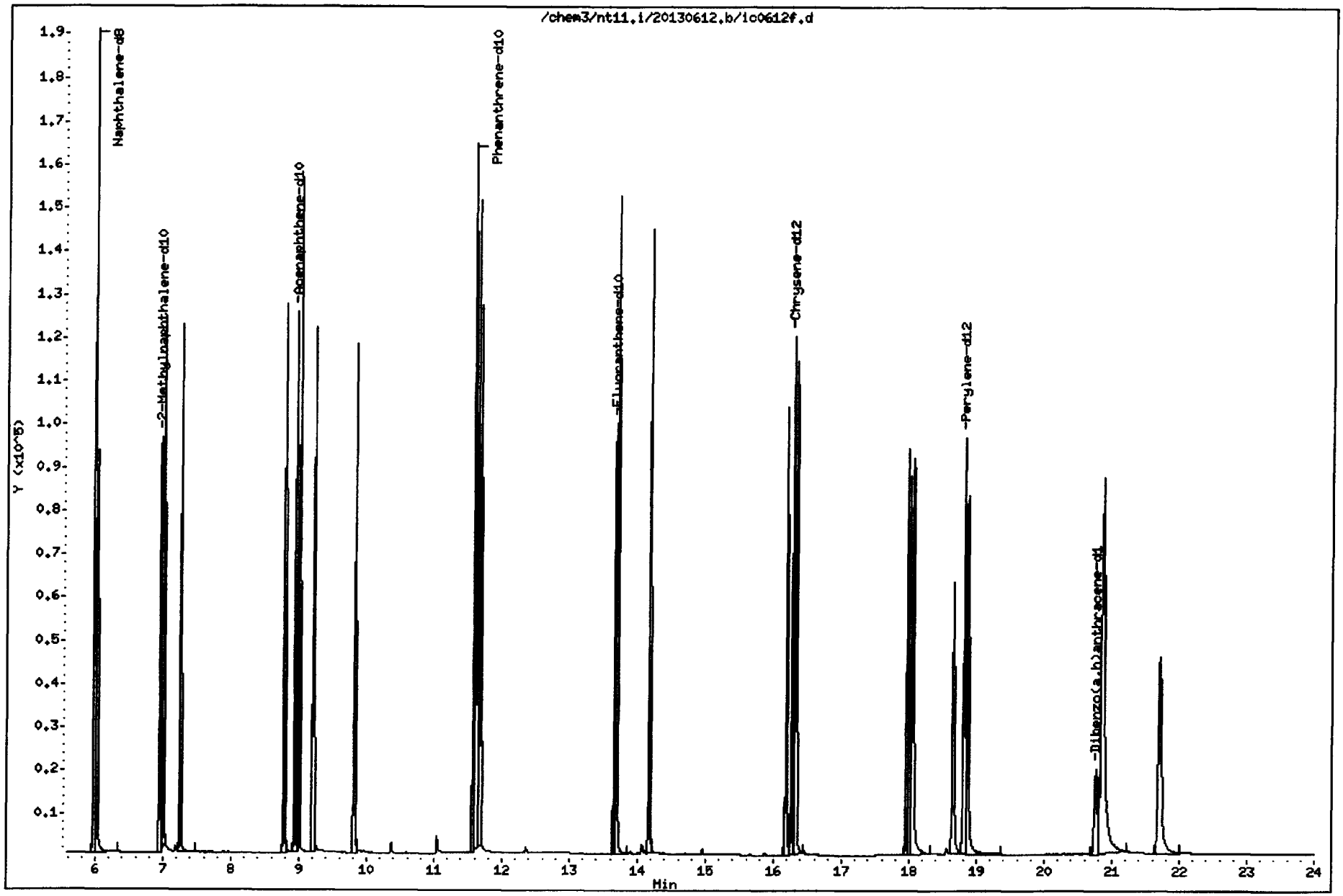
Sample Info: SIM 100

Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: VTS

Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0612f.d

Lab ID: SIM 100, Method: lowsim.m, Instrument: nt11.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS
20.853	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.853	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130612.b/icv0612.d
Lab Smp Id: SIM ICV 250
Inj Date : 12-JUN-2013 18:40
Operator : VTS Inst ID: nt11.i
Smp Info : SIM ICV 250
Misc Info :
Comment :
Method : /chem3/nt11.i/20130612.b/lowsim.m
Meth Date : 13-Jun-2013 07:55 van Quant Type: ISTD
Cal Date : 12-JUN-2013 18:11 Cal File: ic0612f.d
Als bottle: 8 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/mL)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	253751	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	306561	244.191	244(R)
$	6 2-Methylnaphthalene-d10	152	Compound Not Detected.					
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	196157	255.606	256(R)
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	189095	240.182	240(R)
	10 Acenaphthylene	152	8.784	8.784	(0.983)	274559	245.640	246(R)
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	144883	200.000	
	12 Acenaphthene	153	8.995	8.995	(1.006)	187975	248.362	248(R)
	14 Dibenzofuran	168	9.205	9.205	(1.030)	275111	245.113	245(R)
	15 Fluorene	166	9.814	9.814	(1.098)	194315	242.720	243
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	222056	200.000	
	19 Phenanthrene	178	11.619	11.619	(1.004)	301890	239.778	240
	20 Anthracene	178	11.674	11.674	(1.009)	257168	241.011	241
$	23 Fluoranthene-d10	212	Compound Not Detected.					
	24 Fluoranthene	202	13.686	13.686	(1.182)	277764	207.724	208
	25 Pyrene	202	14.167	14.166	(0.870)	298425	224.788	225
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	253770	231.861	232
*	29 Chrysene-d12	240	16.276	16.275	(1.000)	171640	200.000	
	30 Chrysene	228	16.317	16.317	(1.003)	295925	238.956	239
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	249497	235.914	236
	45 Benzo(k)fluoranthene	252	18.003	18.003	(0.957)	288539	265.401	265
	46 Benzo(j)fluoranthene	252	Compound Not Detected.					
	34 Benzo(a)pyrene	252	18.637	18.637	(0.991)	243375	276.865	277(R)
*	35 Perylene-d12	264	18.810	18.810	(1.000)	141089	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.853	20.853	(1.109)	277866	237.711	238
$	36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/mL)
38 Dibenzo(a,h)anthracene	278	20.853	20.853	(1.109)	215637	240.935	241
39 Benzo(g,h,i)perylene	276	21.706	21.705	(1.154)	249141	238.306	238
47 Perylene	252	18.858	18.858	(1.003)	252597	244.455	244

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

VD
6-13-13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: icv0612.d
Lab Smp Id: SIM ICV 250
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info:

Calibration Date: 12-JUN-2013
Calibration Time: 15:46

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	253751	-6.18
11 Acenaphthene-d10	156669	78334	313338	144883	-7.52
18 Phenanthrene-d10	244223	122112	488446	222056	-9.08
29 Chrysene-d12	194330	97165	388660	171640	-11.68
35 Perylene-d12	162839	81420	325678	141089	-13.36

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: NONE
Lab Smp Id: SIM ICV 250
Level:
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info:

Client SDG:
Fraction: SV

Operator: VTS
SampleType: LCS
Quant Type: ISTD

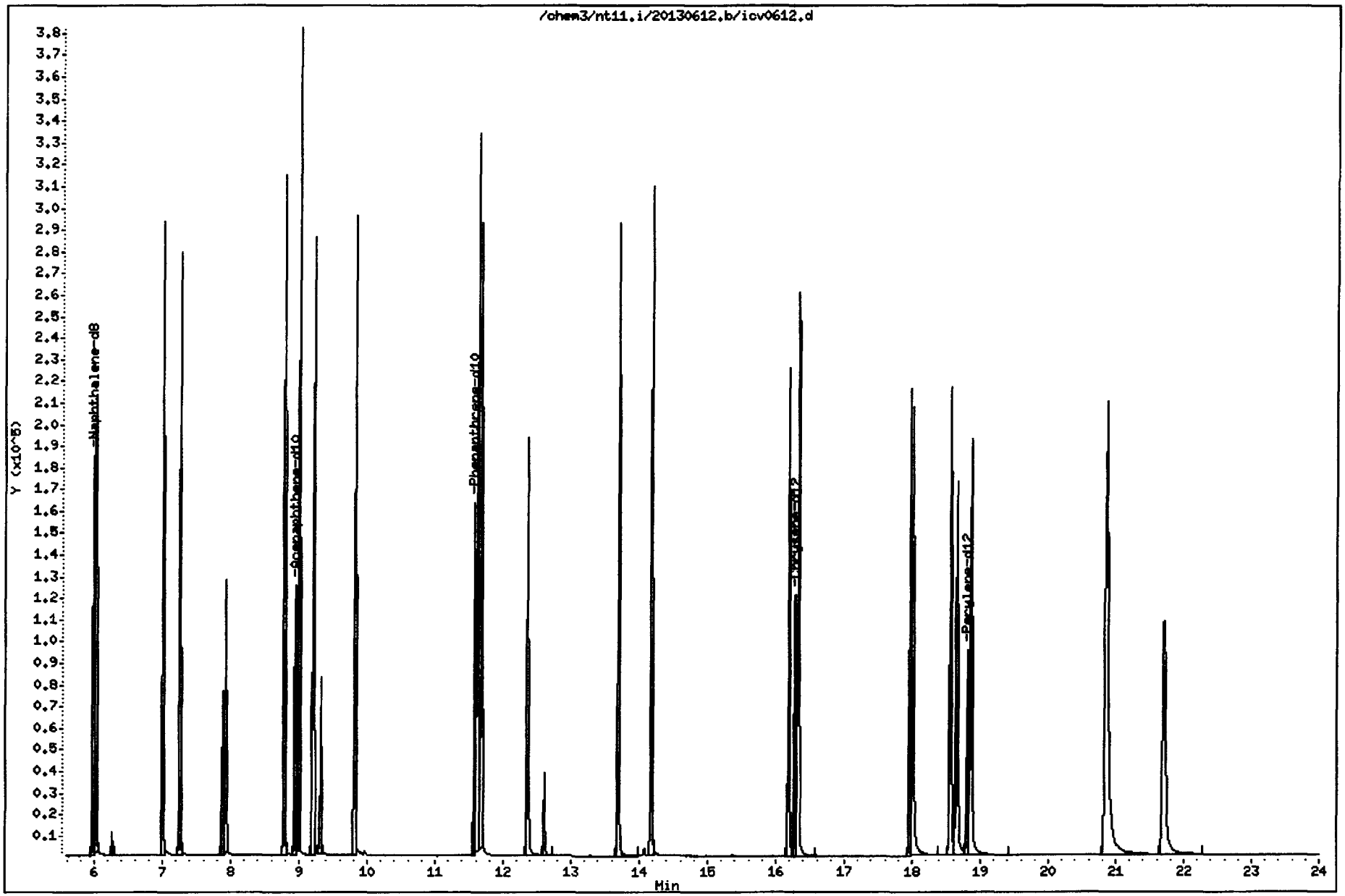
	SPIKE COMPOUND	AMOUNT ADDED ng/mL	AMOUNT RECOVERED ng/mL	% RECOVERED	LIMITS
5	Naphthalene	249	244	98.07*	80-120
7	2-Methylnaphthalen	249	256	102.65*	
8	1-methylnaphthalen	249	240	96.46*	
10	Acenaphthylene	249	246	98.65*	
12	Acenaphthene	249	248	99.74*	
14	Dibenzofuran	249	245	98.44*	
15	Fluorene	249	243	97.48	
19	Phenanthrene	249	240	96.30	
20	Anthracene	249	241	96.79	
24	Fluoranthene	249	208	83.42	
25	Pyrene	249	225	90.28	
28	Benzo(a)anthracene	249	232	93.12	
30	Chrysene	249	239	95.97	
44	Benzo(b)fluoranthe	249	236	94.74	
45	Benzo(k)fluoranthe	249	265	106.59	
46	Benzo(j)fluoranth	249	0.00	*	
34	Benzo(a)pyrene	249	277	111.19*	
37	Indeno(1,2,3-cd)py	249	238	95.47	
38	Dibenzo(a,h)anthra	249	241	96.76	
39	Benzo(g,h,i)peryle	249	238	95.71	
47	Perylene	249	244	98.17	

	SURROGATE COMPOUND	AMOUNT ADDED ng/mL	AMOUNT RECOVERED ng/mL	% RECOVERED	LIMITS
$ 6	2-Methylnaphthale	0.150	0.00	*	
$ 23	Fluoranthene-d10	0.150	0.00	*	
$ 36	Dibenzo(a,h)anthr	0.150	0.00	*	

Data File: /chem3/nt11.i/20130612.b/icv0612.d
Date : 12-JUN-2013 18:40
Client ID:
Sample Info: SIM ICV 250

Instrument: nt11.i
Operator: VTS
Column diameter: 0.25

Column phase: Rxi-17Sil MS



CO-ELUTION SUMMARY FOR FILE - icv0612.d

Lab ID: SIM ICV 250, Method: lowsim.m, Instrument: nt11.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS
20.853	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.853	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

SIM PAH Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WV67

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WV67 Client ID: SPIC

METHOD: **8270D**(SIM-SVOA) **KRONE**(Butyl Tins) **8270D**(SVOA) **8270D**(OP-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 6.12.13 Analysis Start Date: 6.27.13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
DFTPP Tune met Criteria?	Y / N / ✓	Internal Standard within 50-200%?	Y / N / ✓
DDT Breakdown <20%?	Y / N / ✓	Retention Times within Windows?	Y / N / ✓
Peak Tailing Factor ≤2?	Y / N / ✓	Method Blank in Control?	Y / N / ✓
CCAL Meets %D?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / ✓
ICAL Q Flag applied?	Y / N /	LCS / LCSD RPD ≤ 30%?	NA /
CCAL Q flag applied?	Y / N /	~~MS / MSD Recovery in Control?~~	~~Y / N /~~
Surrogate Recovery met?	Y / N / ✓	MS / MSD RPD ≤ 30%?	NA /
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N /
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N /

Detail problems, corrective actions and/or other pertinent information below.

Level IV package

(Review 1) Analyst: VD **Date:** 6.27.13

(Review 2) Reviewer: [signature] **Date:** 6/27

Analytical Resources Inc.: Organics Instrument Log

NT-11 Serial No.:GC=US10140004, MS=US10481502

Date: 6·27·13 Analysis: 10W Sim PNP Analyst: VTB

GC Program: 10WSim Column No: 14/23 Column Type: Rx; -175, Tms

Instrument Tune (.U or .CT.): 130612.U EM Voltage: 1376

Calibration File: DF0627 Curve Date: 6·12·13 Injection Vol.: 2 uL

IS/SS	Ical/Ccal	LCS/ICV
B000331	B000365	

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt11.i/20130627.b

	Time	Filename	LabID	ClientId	DF								
1	0836	df0627.d	DFTPP 10		1	NO ISTDS FOUND							
2	0851	cc0627.d	SIM 250		1	5.98	237573	8.94	132905	11.57	212117	16.28	186989	18.81	156312
3	0928	wv67mb.d	WV67MBW1	WV67MBW1	1	5.98	255392	8.94	137669	11.59	233543	16.28	176483	18.81	143197
4	0956	wv67sb.d	WV67LCSW1	WV67LCSW1	1	5.98	254238	8.94	146619	11.57	247127	16.28	199109	18.81	161406
5	1024	wv67sbd.d	WV67LCSDW1	WV67LCSDW1	1	5.98	259041	8.94	149098	11.57	247991	16.28	199703	18.81	160493
6	1051	wv67e.d	WV67E	UP-CB-B8-201	1	5.98	348287	8.94	178029	11.57	262667	16.28	207505	18.81	211837
7	1125	wv22mb.d	WV22MBW1	WV22MBW1	1	5.98	268817	8.94	151653	11.59	252728	16.28	205691	18.81	181856
8	1152	wv22sb.d	WV22LCSW1	WV22LCSW1	1	5.98	251625	8.94	146199	11.57	240262	16.27	204604	18.81	175413
9	1220	wv22sbd.d	WV22LCSDW1	WV22LCSDW1	1	5.98	256700	8.94	147393	11.57	243018	16.27	205719	18.81	174337
10	1247	wv22qls1.d	WV22QLS1		1	5.98	250273	8.94	140615	11.57	239504	16.27	186808	18.81	158722
11	1314	wv22a.d	WV22A	JOR-EF-13240	1	5.98	256459	8.94	156028	11.57	255334	16.28	205712	18.81	181454

6.27.13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/nt11.i/20130627.b

ARI Job No.: SIM Method: lowsim.m Instrument: nt11.i Date: 27-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0851	cc0627.d	SIM 250		1	NO MANUAL INTEGRATION
0836	df0627.d	DFTPP 10		1	NO MANUAL INTEGRATION
1051	wv67e.d	WV67E	UP-CB-B8-2	1	Fluorene,
0928	wv67mb.d	WV67MBW1	WV67MBW1	1	NO MANUAL INTEGRATION
0956	wv67sb.d	WV67LCSW1	WV67LCSW1	1	NO MANUAL INTEGRATION
1024	wv67sbd.d	WV67LCSDW1	WV67LCSDW1	1	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem3/nt11.i/20130627.b

Instrument: nt11.i Date: 27-JUN-2013 Method: lowsim.m

INITIAL CAL: 12-JUN-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 27-JUN-2013

Compound	%D
NO Q-FLAGS	

Data File: /chem3/nt11.i/20130627.b/df0627.d

Date : 27-JUN-2013 08:36

Client ID:

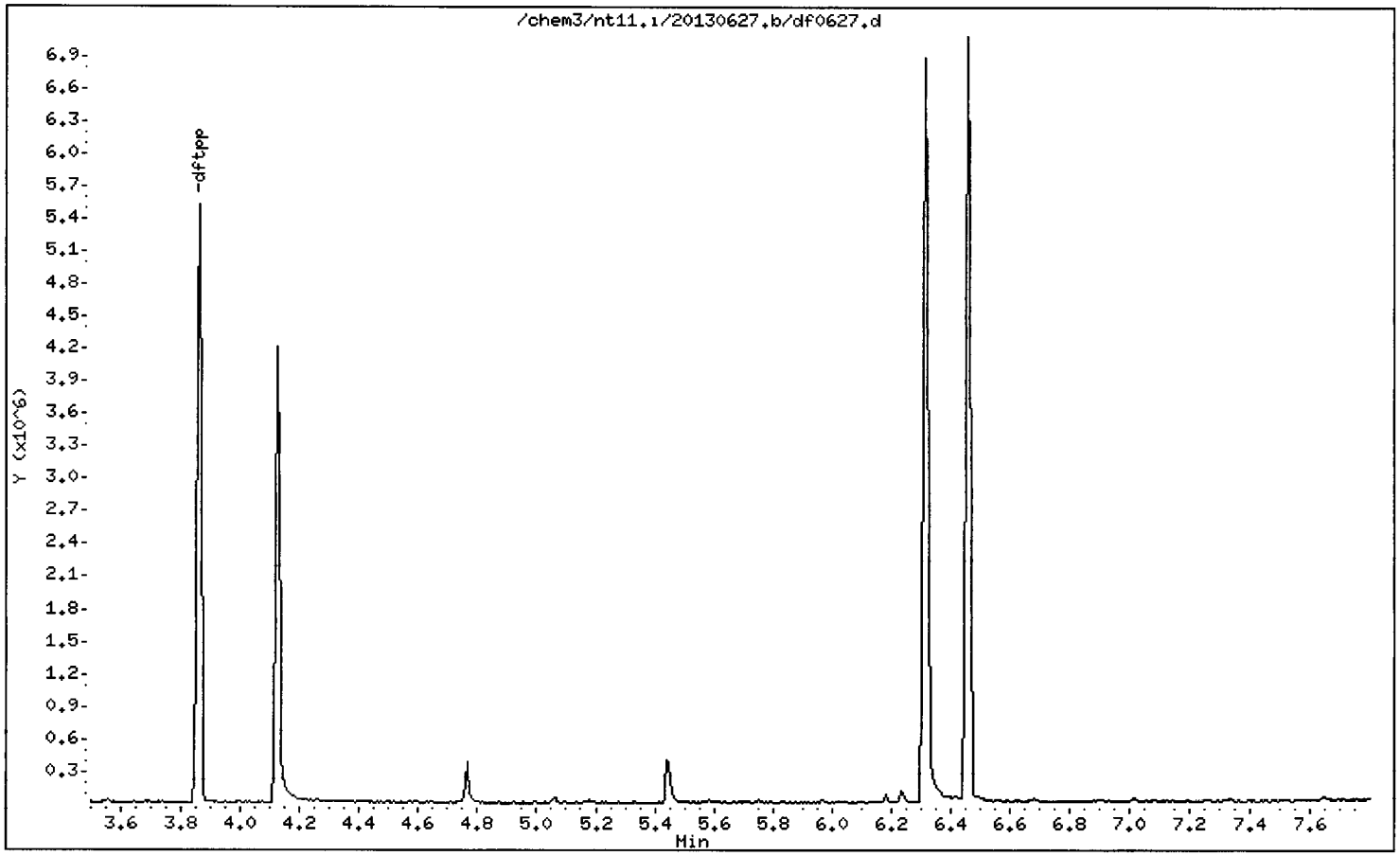
Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25



Data File: /chem3/nt11.i/20130627.b/df0627.d

Date : 27-JUN-2013 08:36

Client ID:

Instrument: nt11.i

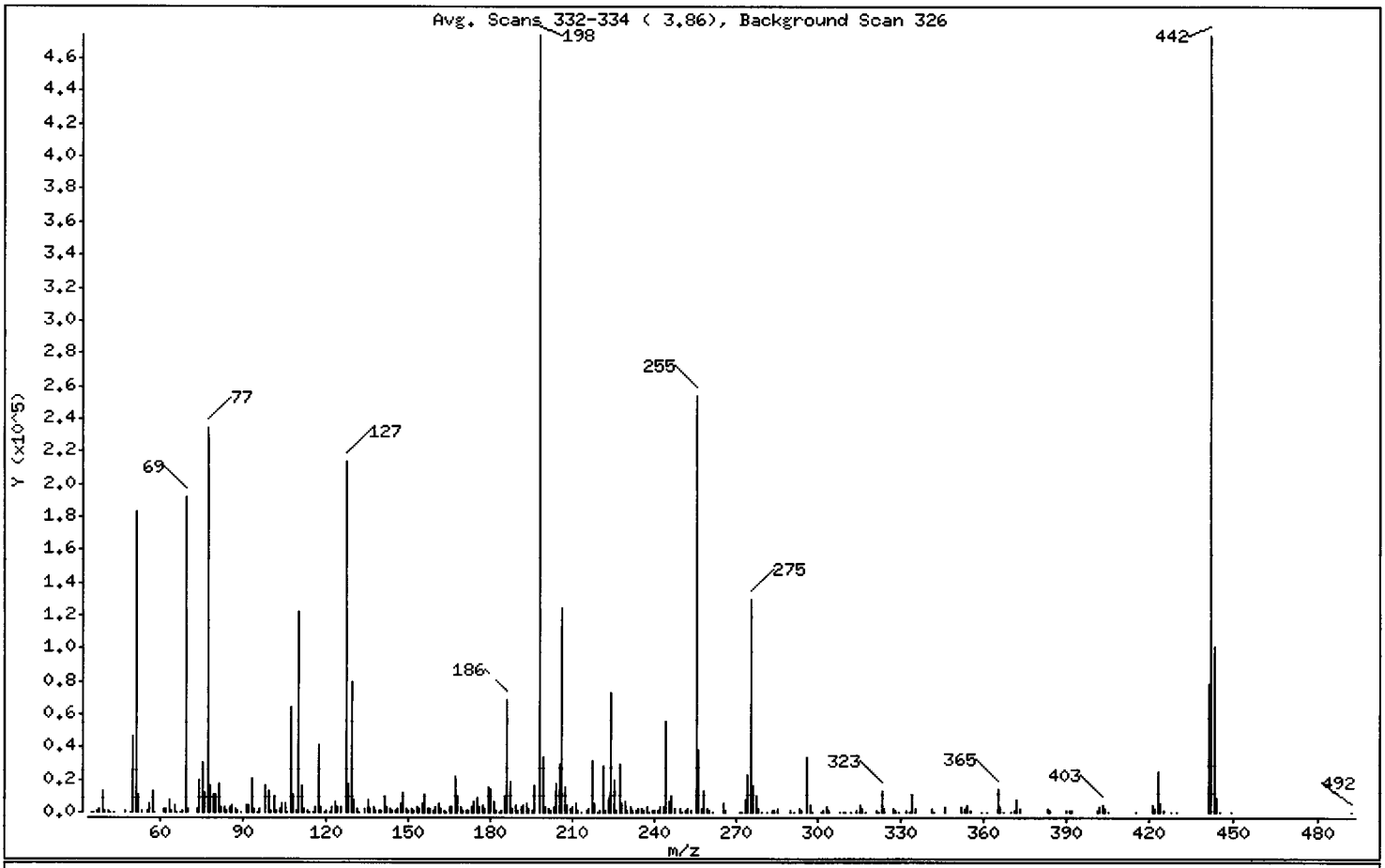
Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	38.60
68	Less than 2.00% of mass 69	0.12 (0.31)
69	Mass 69 relative abundance	40.39
70	Less than 2.00% of mass 69	0.45 (1.12)
127	10.00 - 80.00% of mass 198	44.99
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	7.06
275	10.00 - 60.00% of mass 198	27.28
365	Greater than 1.00% of mass 198	3.09
441	0.01 - 24.00% of mass 442	16.45 (16.46)
442	50.00 - 200.00% of mass 198	99.97
443	15.00 - 24.00% of mass 442	21.35 (21.36)

Data File: /chem3/nt11.i/20130627.b/df0627.d

Date : 27-JUN-2013 08:36

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

Data File: df0627.d

Spectrum: Avg. Scans 332-334 (3.86), Background Scan 326

Location of Maximum: 198.00

Number of points: 296

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	193	121.00	294	199.00	33504	290.00	568
36.00	221	122.00	3203	200.00	3692	291.00	208
37.00	1137	123.00	6794	201.00	2126	293.00	2242
38.00	2188	124.00	2743	202.00	806	294.00	964
39.00	12689	125.00	2825	203.00	3255	296.00	33776
40.00	1492	127.00	213376	204.00	17680	297.00	4383
41.00	749	128.00	17288	205.00	29064	298.00	318
42.00	195	129.00	79496	206.00	124208	301.00	285
43.00	171	130.00	7389	207.00	15572	302.00	552
47.00	741	131.00	1852	208.00	4651	303.00	3219
49.00	312	132.00	353	209.00	1645	304.00	1062
50.00	47360	134.00	1938	210.00	2966	308.00	268
51.00	183040	135.00	7281	211.00	5052	309.00	328
52.00	11214	136.00	2146	212.00	1012	310.00	321
53.00	590	137.00	2929	213.00	290	312.00	423
55.00	1254	138.00	686	215.00	1265	314.00	1420
56.00	4974	139.00	826	216.00	2364	315.00	4790
57.00	12962	140.00	739	217.00	31120	316.00	2282
58.00	512	141.00	9786	218.00	5000	317.00	171
61.00	1851	142.00	3574	219.00	519	321.00	1593
62.00	2287	143.00	2405	220.00	1039	322.00	351
63.00	7444	144.00	905	221.00	27912	323.00	13030
64.00	734	145.00	717	222.00	861	324.00	2137
65.00	4401	146.00	2031	223.00	8280	327.00	2451
66.00	169	147.00	5340	224.00	73064	328.00	1350
67.00	194	148.00	12155	225.00	19336	329.00	449
68.00	592	149.00	2271	226.00	1290	332.00	1399
69.00	191552	150.00	660	227.00	29776	333.00	461
70.00	2146	151.00	1654	228.00	5389	334.00	10791
73.00	2615	152.00	867	229.00	6244	335.00	2107
74.00	19776	153.00	2892	230.00	780	341.00	2129
75.00	30672	154.00	2660	231.00	2782	342.00	382
76.00	11561	155.00	5763	232.00	980	346.00	2734
77.00	234432	156.00	11295	233.00	604	352.00	3653
78.00	16520	157.00	1679	234.00	1906	353.00	2000

Data File: /chem3/nt11.i/20130627.b/df0627.d

Date : 27-JUN-2013 08:36

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rx1-17sil ms

Column diameter: 0.25

Data File: df0627.d
Spectrum: Avg. Scans 332-334 (3.86), Background Scan 326
Location of Maximum: 198.00
Number of points: 296

m/z	Y	m/z	Y	m/z	Y	m/z	Y
79.00	10739	158.00	1923	235.00	1856	354.00	4173
80.00	10864	159.00	1432	236.00	1523	355.00	1176
81.00	17088	160.00	2748	237.00	3533	359.00	389
82.00	3207	161.00	5385	238.00	172	361.00	276
83.00	3488	162.00	1711	239.00	764	365.00	14640
84.00	842	163.00	707	240.00	705	366.00	3777
85.00	3332	164.00	397	241.00	1627	367.00	260
86.00	4185	165.00	3197	242.00	3014	370.00	180
87.00	1800	166.00	3351	243.00	3542	371.00	1312
88.00	571	167.00	21712	244.00	55344	372.00	8132
89.00	183	168.00	10076	245.00	7080	373.00	2409
91.00	4069	169.00	3480	246.00	9686	383.00	1854
92.00	3941	170.00	1284	247.00	1771	384.00	1023
93.00	21112	171.00	1260	249.00	2522	390.00	1152
94.00	1646	172.00	1632	250.00	447	391.00	1128
95.00	434	173.00	3372	251.00	767	392.00	717
96.00	2120	174.00	6213	252.00	1655	401.00	578
98.00	16472	175.00	8388	253.00	1450	402.00	3112
99.00	13028	176.00	2989	255.00	254464	403.00	4430
100.00	990	177.00	4400	256.00	38504	404.00	2235
101.00	9688	178.00	1893	257.00	2605	405.00	174
102.00	664	179.00	14957	258.00	13423	415.00	241
103.00	2318	180.00	14175	259.00	2260	421.00	4575
104.00	5149	181.00	6200	260.00	582	422.00	1744
105.00	5374	182.00	1328	261.00	465	423.00	25200
106.00	457	183.00	320	265.00	4948	424.00	4927
107.00	64128	184.00	1064	266.00	900	425.00	1320
108.00	11159	185.00	9410	271.00	230	428.00	249
109.00	566	186.00	68728	272.00	367	430.00	237
110.00	122160	187.00	18448	273.00	8049	441.00	78032
111.00	16480	188.00	1783	274.00	22920	442.00	474112
112.00	1858	189.00	4128	275.00	129400	443.00	101264
113.00	1020	190.00	785	276.00	16792	444.00	8567
114.00	239	191.00	2842	277.00	10278	445.00	391
115.00	238	192.00	4137	278.00	1924	449.00	171

Data File: /chem3/nt11.i/20130627.b/df0627.d

Date : 27-JUN-2013 08:36

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

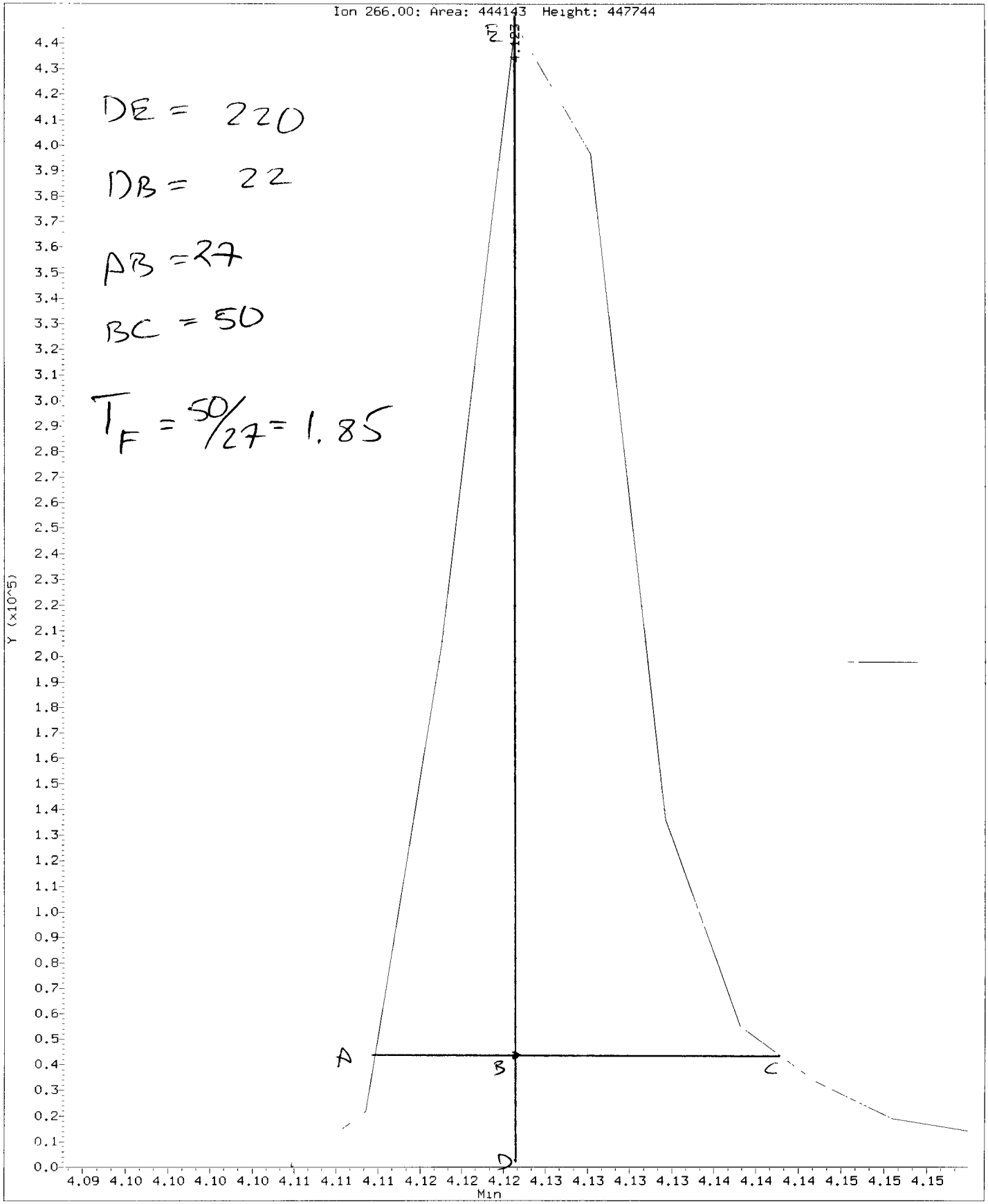
Column diameter: 0.25

Data File: df0627.d
Spectrum: Avg. Scans 332-334 (3.86), Background Scan 326
Location of Maximum: 198.00
Number of points: 296

m/z	Y	m/z	Y	m/z	Y	m/z	Y
116.00	3146	193.00	5940	279.00	371	492.00	187
117.00	41688	194.00	1952	281.00	167		
118.00	3484	195.00	660	283.00	1145		
119.00	241	196.00	15898	284.00	1021		
120.00	704	198.00	474304	285.00	2605		

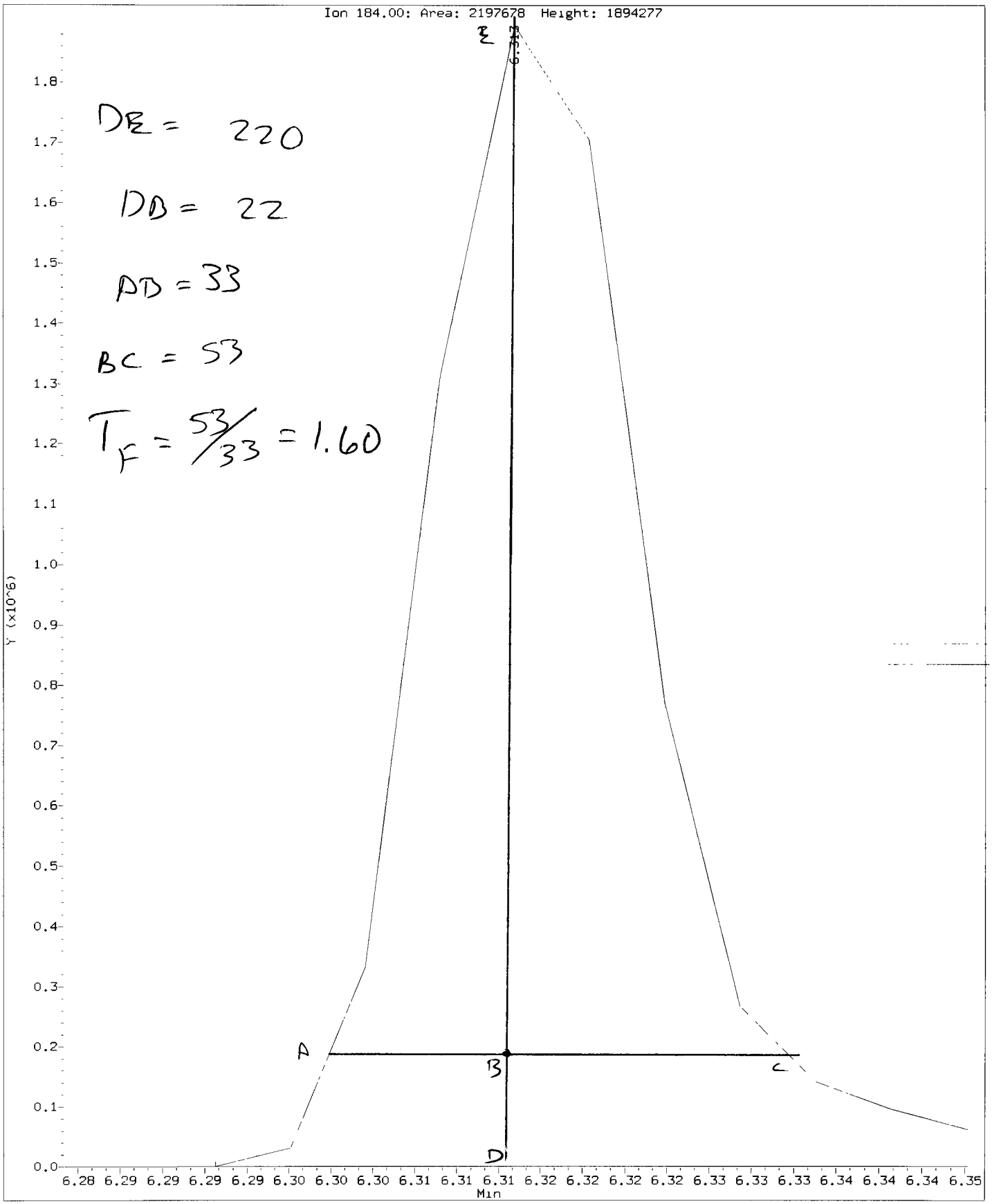
Data File: /chem3/nt11.i/20130627.b/DDT.b/df0627.d
Injection Date: 27-JUN-2013 08:36
Instrument: nt11.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem3/nt11.i/20130627.b/DDT.b/df0627.d
Injection Date: 27-JUN-2013 08:36
Instrument: nt11.i
Client Sample ID:

Compound: Benzidine
CAS Number:



WST: 00759

Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem3/nt11.i/20130627.b/DDT.b/df0627.d
Method: /chem3/nt11.i/20130627.b/DDT.b/sw846ddt.m
Analysis Date: 27-JUN-2013 08:36

ARI ID: DFTPP 10
Misc:
Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	4.123	444143
Benzidine	6.313	2197678
4,4'-DDE	5.752	3080
4,4'-DDD	6.238	19763
4,4'-DDT	6.457	1048967

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(\ 3080 + 19763) * 100}{(\ 3080 + 19763 + 1048967)}$$

DDT Percent Breakdown = 2.1 %

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130627.b/cc0627.d
Lab Smp Id: SIM 250
Inj Date : 27-JUN-2013 08:51
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 250
Misc Info :
Comment :
Method : /chem3/nt11.i/20130627.b/lowsim.m
Meth Date : 27-Jun-2013 09:18 van Quant Type: ISTD
Cal Date : 12-JUN-2013 18:11 Cal File: ic0612f.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	237573	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	283495	250.000	241
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	178751	250.000	248
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	181390	250.000	252
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	181949	250.000	247
	10 Acenaphthylene	152	8.784	8.784	(0.983)	257225	250.000	251
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	132905	200.000	
	12 Acenaphthene	153	8.995	8.995	(1.006)	172361	250.000	248
	14 Dibenzofuran	168	9.205	9.205	(1.030)	260555	250.000	253
	15 Fluorene	166	9.825	9.825	(1.099)	186755	250.000	254
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	212117	200.000	
	19 Phenanthrene	178	11.619	11.619	(1.004)	295229	250.000	245
	20 Anthracene	178	11.674	11.674	(1.009)	267604	250.000	263
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	306584	250.000	280
	24 Fluoranthene	202	13.686	13.686	(1.182)	336689	250.000	264
	25 Pyrene	202	14.167	14.167	(0.870)	327491	250.000	226
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	296612	250.000	249
*	29 Chrysene-d12	240	16.276	16.276	(1.000)	186989	200.000	
	30 Chrysene	228	16.325	16.325	(1.003)	322388	250.000	239
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	280861	250.000	240
	45 Benzo(k)fluoranthene	252	18.003	18.003	(0.957)	300391	250.000	249
	46 Benzo(j)fluoranthene	252	18.041	18.041	(0.959)	348378	250.000	257
	34 Benzo(a)pyrene	252	18.637	18.637	(0.991)	241302	250.000	248
*	35 Perylene-d12	264	18.810	18.810	(1.000)	156312	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.853	20.853	(1.109)	318834	250.000	246
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	217489	250.000	253

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
38 Dibenzo(a,h)anthracene	278	20.853	20.853	(1.109)	250294	250.000	252
39 Benzo(g,h,i)perylene	276	21.706	21.706	(1.154)	278342	250.000	240
47 Perylene	252	18.858	18.858	(1.003)	278544	250.000	243

6.27.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: cc0627.d
Lab Smp Id: SIM 250
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130627.b/lowsim.m
Misc Info:

Calibration Date: 27-JUN-2013
Calibration Time: 08:51

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	237573	-12.17
11 Acenaphthene-d10	156669	78334	313338	132905	-15.17
18 Phenanthrene-d10	244223	122112	488446	212117	-13.15
29 Chrysene-d12	194330	97165	388660	186989	-3.78
35 Perylene-d12	162839	81420	325678	156312	-4.01

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	0.00

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

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt11.i Injection Date: 27-JUN-2013 08:51
Lab File ID: cc0627.d Init. Cal. Date(s): 12-JUN-2013 12-JUN-2013
Analysis Type: Init. Cal. Times: 15:46 18:11
Lab Sample ID: SIM 250 Quant Type: ISTD
Method: /chem3/nt11.i/20130627.b/lowsim.m

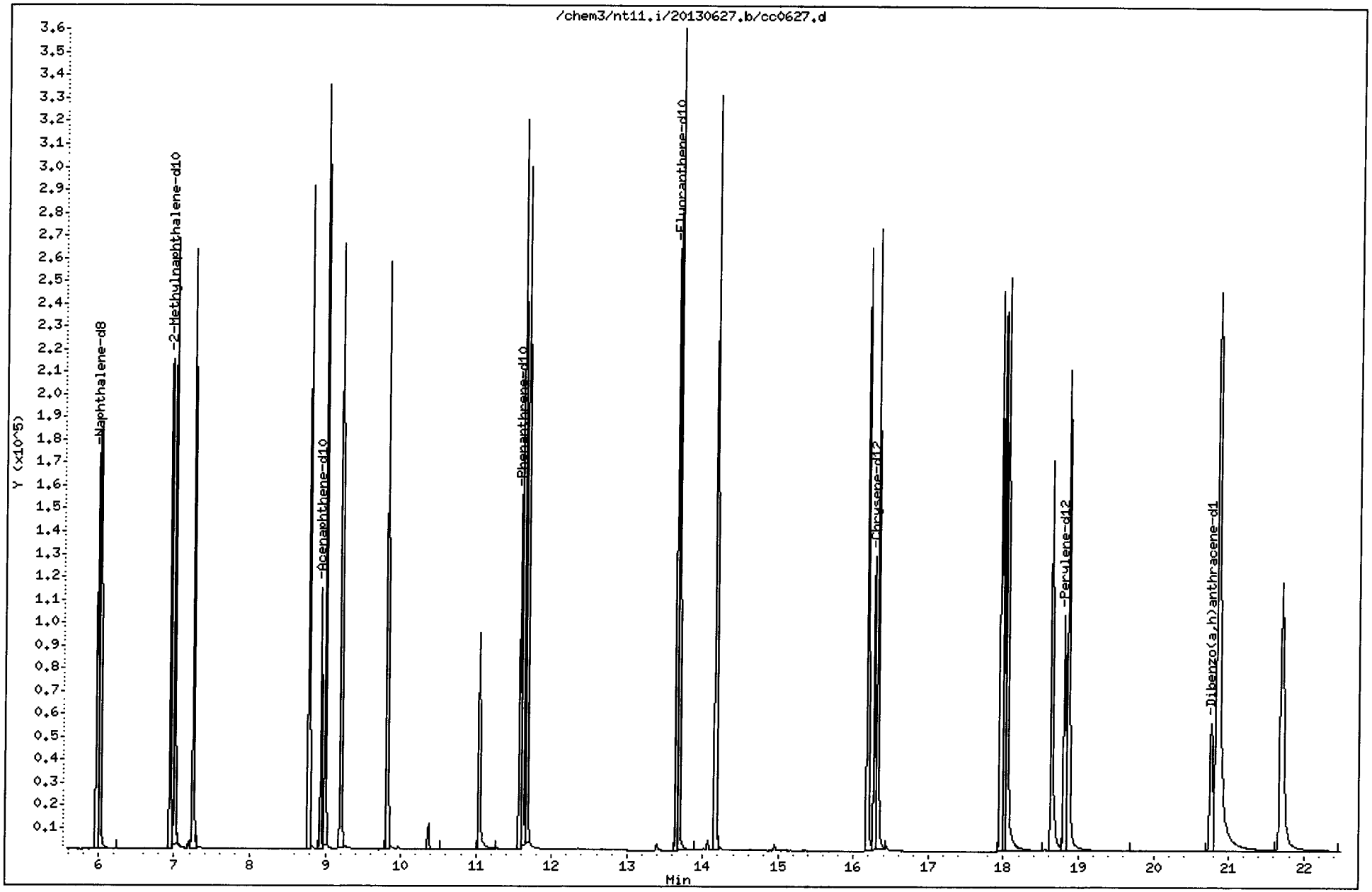
COMPOUND	RRF / AMOUNT	RF250	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
5 Naphthalene	0.98949	0.95464	0.010	-3.52205	20.00000	Averaged
$ 6 2-Methylnaphthalene-d10	0.60637	0.60192	0.010	-0.73300	20.00000	Averaged
7 2-Methylnaphthalene	0.60486	0.61081	0.010	0.98350	20.00000	Averaged
8 1-Methylnaphthalene	0.62053	0.61269	0.010	-1.26291	20.00000	Averaged
10 Acenaphthylene	1.54294	1.54832	0.010	0.34876	20.00000	Averaged
12 Acenaphthene	1.04479	1.03750	0.010	-0.69758	20.00000	Averaged
14 Dibenzofuran	1.54937	1.56837	0.010	1.22630	20.00000	Averaged
15 Fluorene	1.10513	1.12414	0.010	1.72029	20.00000	Averaged
19 Phenanthrene	1.13398	1.11346	0.010	-1.81028	20.00000	Averaged
20 Anthracene	0.96105	1.00927	0.010	5.01683	20.00000	Averaged
$ 23 Fluoranthene-d10	1.03288	1.15628	0.200	11.94691	20.00000	Averaged
24 Fluoranthene	1.20436	1.26982	0.010	5.43538	20.00000	Averaged
25 Pyrene	1.54694	1.40112	0.010	-9.42657	20.00000	Averaged
28 Benzo(a)anthracene	1.27534	1.26901	0.010	-0.49634	20.00000	Averaged
30 Chrysene	1.44303	1.37928	0.010	-4.41742	20.00000	Averaged
44 Benzo(b)fluoranthene	1.49916	1.43744	0.200	-4.11733	20.00000	Averaged
45 Benzo(k)fluoranthene	1.54113	1.53739	0.200	-0.24255	20.00000	Averaged
46 Benzo(j)fluoranthene	1.73363	1.78299	0.200	2.84694	20.00000	Averaged
34 Benzo(a)pyrene	1.24608	1.23498	0.010	-0.89064	20.00000	Averaged
37 Indeno(1,2,3-cd)pyrene	1.65700	1.63178	0.010	-1.52206	20.00000	Averaged
$ 36 Dibenzo(a,h)anthracene-d14	1.10102	1.11310	0.010	1.09769	20.00000	Averaged
38 Dibenzo(a,h)anthracene	1.26870	1.28100	0.010	0.96925	20.00000	Averaged
39 Benzo(g,h,i)perylene	1.48200	1.42454	0.010	-3.87674	20.00000	Averaged
47 Perylene	1.46476	1.42558	0.200	-2.67466	20.00000	Averaged

Data File: /chem3/nt11.i/20130627.b/cc0627.d
Date : 27-JUN-2013 08:51
Client ID:
Sample Info: SIM 250

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: Rxi-17Sil MS



CO-ELUTION SUMMARY FOR FILE - cc0627.d

Lab ID: SIM 250, Method: lowsim.m, Instrument: nt11.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS
20.853	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.853	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130627.b/wv67mb.d
Lab Smp Id: WV67MBW1 Client Smp ID: WV67MBW1
Inj Date : 27-JUN-2013 09:28
Operator : VTS Inst ID: nt11.i
Smp Info : WV67MBW1
Misc Info : 13-13661
Comment :
Method : /chem3/nt11.i/20130627.b/lowsim.m
Meth Date : 27-Jun-2013 09:32 van Quant Type: ISTD
Cal Date : 12-JUN-2013 18:11 Cal File: ic0612f.d
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	255392	200.000	
	5 Naphthalene	128	Compound Not Detected.					
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	170996	220.838	221
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	137669	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	11.585	11.574	(1.000)	233543	200.000	
	19 Phenanthrene	178	Compound Not Detected.					
	20 Anthracene	178	Compound Not Detected.					
$	23 Fluoranthene-d10	212	13.657	13.657	(1.179)	309490	256.601	257
	24 Fluoranthene	202	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	25 Pyrene	202	Compound Not Detected.					
	28 Benzo(a)anthracene	228	Compound Not Detected.					
*	29 Chrysene-d12	240	16.276	16.276	(1.000)	176483	200.000	
	30 Chrysene	228	Compound Not Detected.					
	44 Benzo(b)fluoranthene	252	Compound Not Detected.					
	45 Benzo(k)fluoranthene	252	Compound Not Detected.					
	46 Benzo(j)fluoranthene	252	Compound Not Detected.					
	34 Benzo(a)pyrene	252	Compound Not Detected.					
*	35 Perylene-d12	264	18.810	18.810	(1.000)	143197	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	194466	246.687	247
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	47 Perylene	252	Compound Not Detected.					

6-27-13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wv67mb.d
Lab Smp Id: WV67MBW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130627.b/lowsim.m
Misc Info: 13-13661

Calibration Date: 27-JUN-2013
Calibration Time: 08:51
Client Smp ID: WV67MBW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	255392	-5.58
11 Acenaphthene-d10	156669	78334	313338	137669	-12.13
18 Phenanthrene-d10	244223	122112	488446	233543	-4.37
29 Chrysene-d12	194330	97165	388660	176483	-9.18
35 Perylene-d12	162839	81420	325678	143197	-12.06

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.59	0.10
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

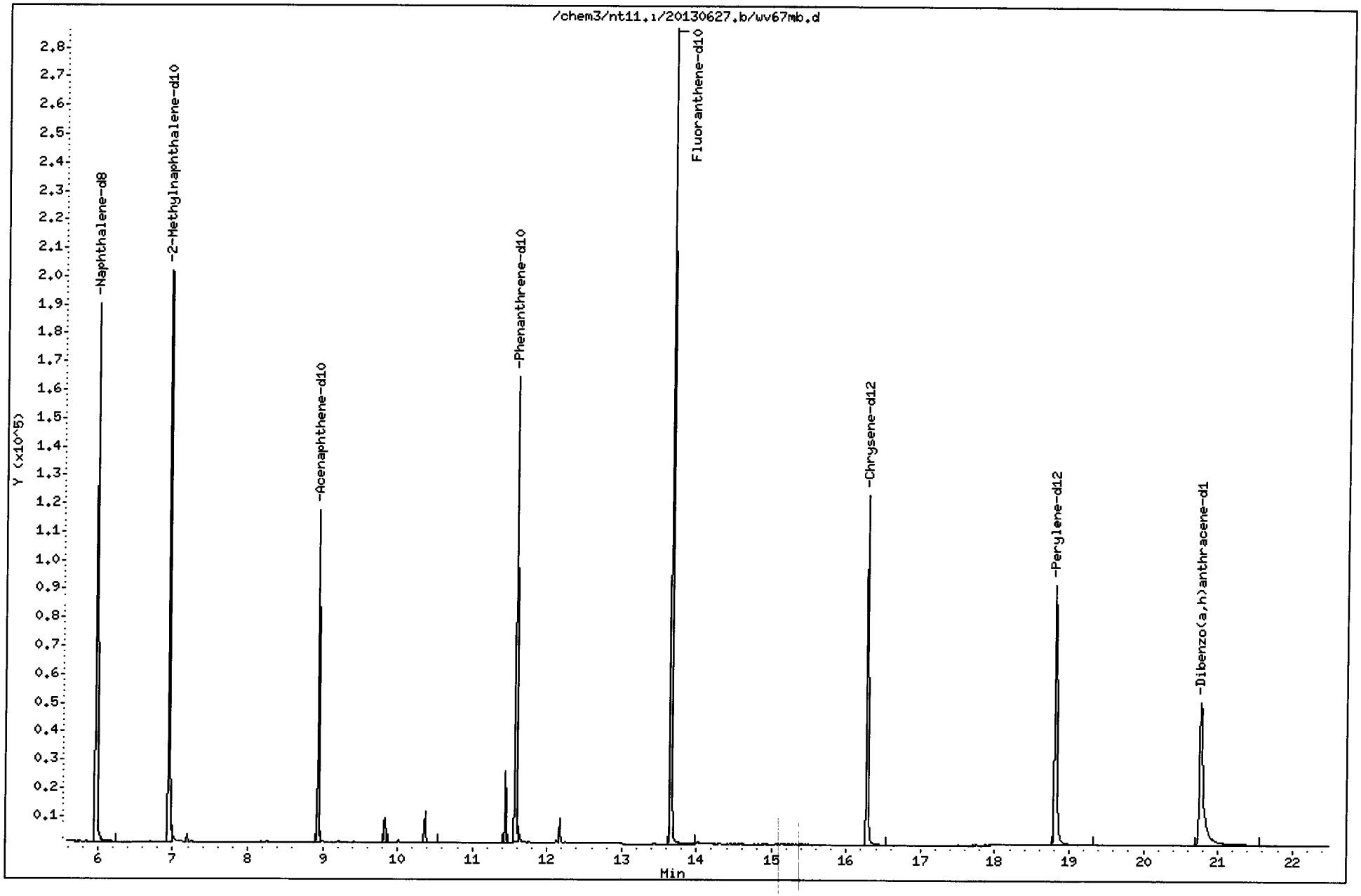
Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WV67MBW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130627.b/lowsim.m
Misc Info: 13-13661

Client SDG: WV67
Fraction: SV
Client Smp ID: WV67MBW1
Operator: VTS
SampleType: BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	221	73.61	35-94
$ 23 Fluoranthene-d10	300	257	85.53	30-160
$ 36 Dibenzo(a,h)anthra	300	247	82.23	26-115

Data File: /chem3/nt11.i/20130627.b/wv67mb.d
Date : 27-JUN-2013 09:28
Client ID: WV67MBW1
Sample Info: WV67MBW1
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: VTS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wv67mb.d

Lab ID: WV67MBW1, Method: lowsim.m, Instrument: nt11.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130627.b/wv67sb.d
Lab Smp Id: WV67LCSW1 Client Smp ID: WV67LCSW1
Inj Date : 27-JUN-2013 09:56
Operator : VTS Inst ID: nt11.i
Smp Info : WV67LCSW1
Misc Info : 13-13661
Comment :
Method : /chem3/nt11.i/20130627.b/lowsim.m
Meth Date : 27-Jun-2013 09:32 van Quant Type: ISTD
Cal Date : 12-JUN-2013 18:11 Cal File: ic0612f.d
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	254238	200.000	
	5 Naphthalene	128	6.008	6.018	(1.005)	283043	225.026	225
$	6 2-Methylnaphthalene-d10	152	6.943	6.953	(1.162)	182773	237.119	237
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	177836	231.289	231
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	178314	226.055	226
	10 Acenaphthylene	152	8.784	8.784	(0.983)	265460	234.687	235
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	146619	200.000	
	12 Acenaphthene	153	8.995	8.995	(1.006)	174205	227.443	227
	14 Dibenzofuran	168	9.205	9.205	(1.030)	268527	236.414	236
	15 Fluorene	166	9.814	9.825	(1.098)	198633	245.176	245
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	247127	200.000	
	19 Phenanthrene	178	11.618	11.619	(1.004)	321659	229.561	230
	20 Anthracene	178	11.674	11.674	(1.009)	273954	230.696	231
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	324793	254.487	254
	24 Fluoranthene	202	13.686	13.686	(1.182)	348555	234.220	234

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	25 Pyrene	202	14.166	14.167	(0.870)	334309	217.077	217
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	300791	236.908	237
*	29 Chrysene-d12	240	16.275	16.276	(1.000)	199109	200.000	
	30 Chrysene	228	16.317	16.325	(1.003)	335107	233.264	233
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	290033	239.722	240
	45 Benzo(k)fluoranthene	252	18.003	18.003	(0.957)	304723	245.006	245
	46 Benzo(j)fluoranthene	252	18.041	18.041	(0.959)	356743	254.982	255
	34 Benzo(a)pyrene	252	18.637	18.637	(0.991)	215434	214.230	214
*	35 Perylene-d12	264	18.810	18.810	(1.000)	161406	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.853	20.853	(1.109)	321340	240.299	240
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	213921	240.752	241
	38 Dibenzo(a,h)anthracene	278	20.853	20.853	(1.109)	242635	236.976	237
	39 Benzo(g,h,i)perylene	276	21.705	21.706	(1.154)	281548	235.405	235
	47 Perylene	252	18.858	18.858	(1.003)	253779	214.684	215

6/27/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wv67sb.d
Lab Smp Id: WV67LCSW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130627.b/lowsim.m
Misc Info: 13-13661

Calibration Date: 27-JUN-2013
Calibration Time: 08:51
Client Smp ID: WV67LCSW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	254238	-6.00
11 Acenaphthene-d10	156669	78334	313338	146619	-6.41
18 Phenanthrene-d10	244223	122112	488446	247127	1.19
29 Chrysene-d12	194330	97165	388660	199109	2.46
35 Perylene-d12	162839	81420	325678	161406	-0.88

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WV67LCSW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130627.b/lowsim.m
Misc Info: 13-13661

Client SDG: WV67
Fraction: SV
Client Smp ID: WV67LCSW1
Operator: VTS
SampleType: LCS
Quant Type: ISTD

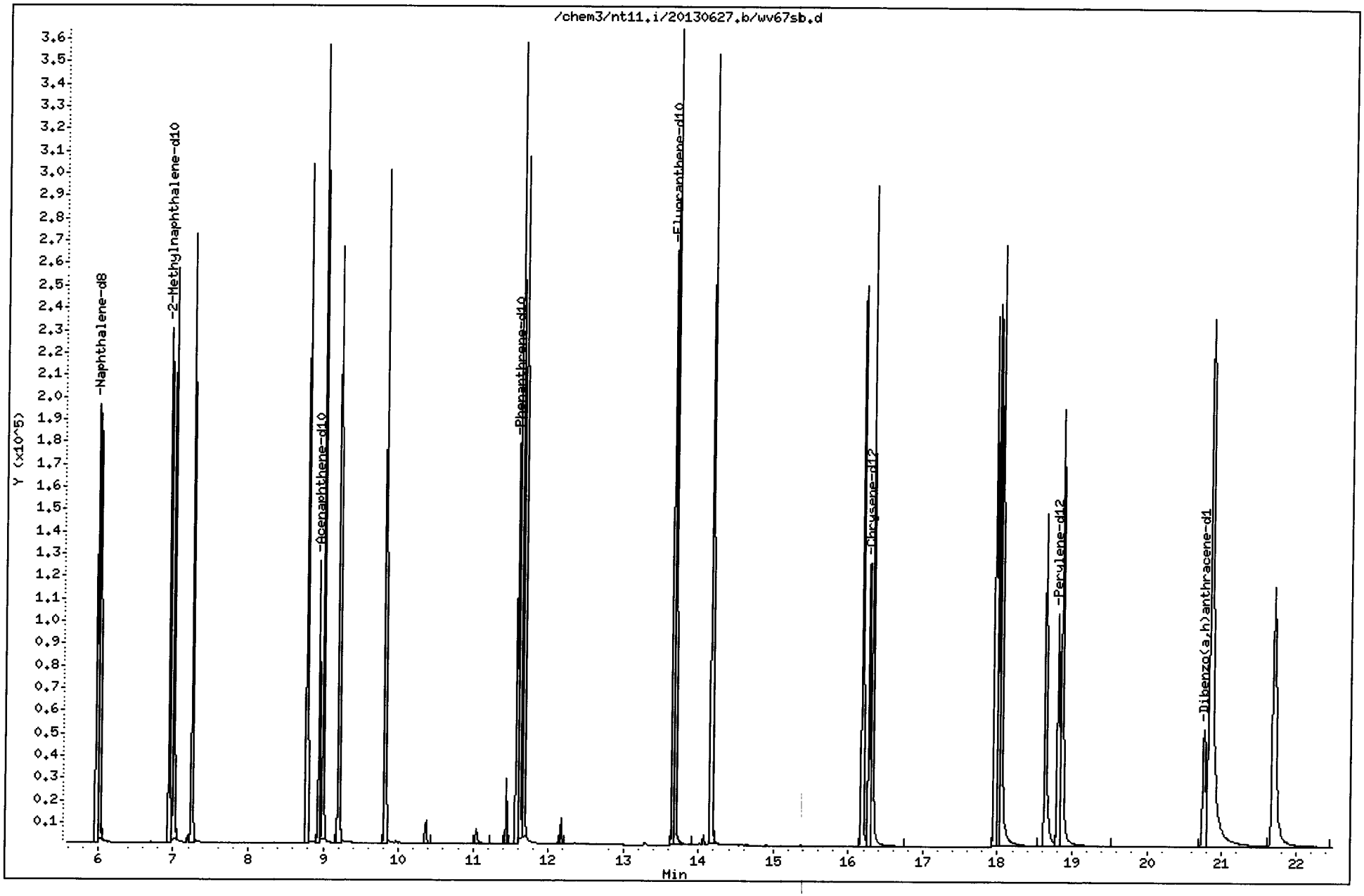
SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	225	75.01	37-90
7 2-Methylnaphthalen	300	231	77.10	39-90
8 1-methylnaphthalen	300	226	75.35	38-95
10 Acenaphthylene	300	235	78.23	35-95
12 Acenaphthene	300	227	75.81	38-94
14 Dibenzofuran	300	236	78.80	36-94
15 Fluorene	300	245	81.73	41-102
19 Phenanthrene	300	230	76.52	41-101
20 Anthracene	300	231	76.90	28-101
24 Fluoranthene	300	234	78.07	49-114
25 Pyrene	300	217	72.36	42-114
28 Benzo(a)anthracene	300	237	78.97	42-111
30 Chrysene	300	233	77.75	46-106
44 Benzo(b)fluoranthe	300	240	79.91	30-160
45 Benzo(k)fluoranthe	300	245	81.67	30-160
46 Benzo(j)fluoranthe	300	255	84.99	30-160
34 Benzo(a)pyrene	300	214	71.41	20-99
37 Indeno(1,2,3-cd)py	300	240	80.10	32-113
38 Dibenzo(a,h)anthra	300	237	78.99	30-113
39 Benzo(g,h,i)peryle	300	235	78.47	27-113
47 Perylene	300	215	71.56	30-160

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	237	79.04	35-94
$ 23 Fluoranthene-d10	300	254	84.83	30-160
$ 36 Dibenzo(a,h)anthra	300	241	80.25	26-115

Data File: /chem3/nt11.i/20130627.b/wv67sb.d
Date : 27-JUN-2013 09:56
Client ID: WV67LCSW1
Sample Info: WV67LCSW1
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wv67sb.d

Lab ID: WV67LCSW1, Method: lowsim.m, Instrument: nt11.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS
20.853	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.853	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130627.b/wv67sbd.d
Lab Smp Id: WV67LCSDW1 Client Smp ID: WV67LCSDW1
Inj Date : 27-JUN-2013 10:24
Operator : VTS Inst ID: nt11.i
Smp Info : WV67LCSDW1
Misc Info : 13-13661
Comment :
Method : /chem3/nt11.i/20130627.b/lowsim.m
Meth Date : 27-Jun-2013 09:32 van Quant Type: ISTD
Cal Date : 12-JUN-2013 18:11 Cal File: ic0612f.d
Als bottle: 5 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	259041	200.000	
	5 Naphthalene	128	6.008	6.018	(1.005)	290416	226.607	227
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	187377	238.585	239
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	182269	232.659	233
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	185394	230.673	231
	10 Acenaphthylene	152	8.784	8.784	(0.983)	276703	240.559	241
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	149098	200.000	
	12 Acenaphthene	153	8.994	8.995	(1.006)	179966	231.058	231
	14 Dibenzofuran	168	9.205	9.205	(1.030)	277815	240.524	241
	15 Fluorene	166	9.814	9.825	(1.098)	204960	248.779	249
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	247991	200.000	
	19 Phenanthrene	178	11.618	11.619	(1.004)	324591	230.847	231
	20 Anthracene	178	11.674	11.674	(1.009)	271855	228.130	228
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	317733	248.087	248
	24 Fluoranthene	202	13.686	13.686	(1.182)	356153	238.492	238

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
25 Pyrene	202	14.166	14.167	(0.870)	340596	220.502	221
28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	300487	235.964	236
* 29 Chrysene-d12	240	16.275	16.276	(1.000)	199703	200.000	
30 Chrysene	228	16.317	16.325	(1.003)	339928	235.916	236
44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	285268	237.125	237
45 Benzo(k)fluoranthene	252	18.002	18.003	(0.957)	302665	244.735	245
46 Benzo(j)fluoranthene	252	18.051	18.041	(0.960)	356073	255.950	256
34 Benzo(a)pyrene	252	18.637	18.637	(0.991)	208802	208.816	209
* 35 Perylene-d12	264	18.810	18.810	(1.000)	160493	200.000	
37 Indeno(1,2,3-cd)pyrene	276	20.852	20.853	(1.109)	313548	235.806	236
$ 36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	193460	218.963	219
38 Dibenzo(a,h)anthracene	278	20.852	20.853	(1.109)	219134	215.240	215
39 Benzo(g,h,i)perylene	276	21.705	21.706	(1.154)	279511	235.031	235
47 Perylene	252	18.858	18.858	(1.003)	244787	208.255	208

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wv67sbd.d
Lab Smp Id: WV67LCSDW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130627.b/lowsim.m
Misc Info: 13-13661

Calibration Date: 27-JUN-2013
Calibration Time: 08:51
Client Smp ID: WV67LCSDW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	259041	-4.23
11 Acenaphthene-d10	156669	78334	313338	149098	-4.83
18 Phenanthrene-d10	244223	122112	488446	247991	1.54
29 Chrysene-d12	194330	97165	388660	199703	2.76
35 Perylene-d12	162839	81420	325678	160493	-1.44

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WV67LCSDW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130627.b/lowsim.m
Misc Info: 13-13661

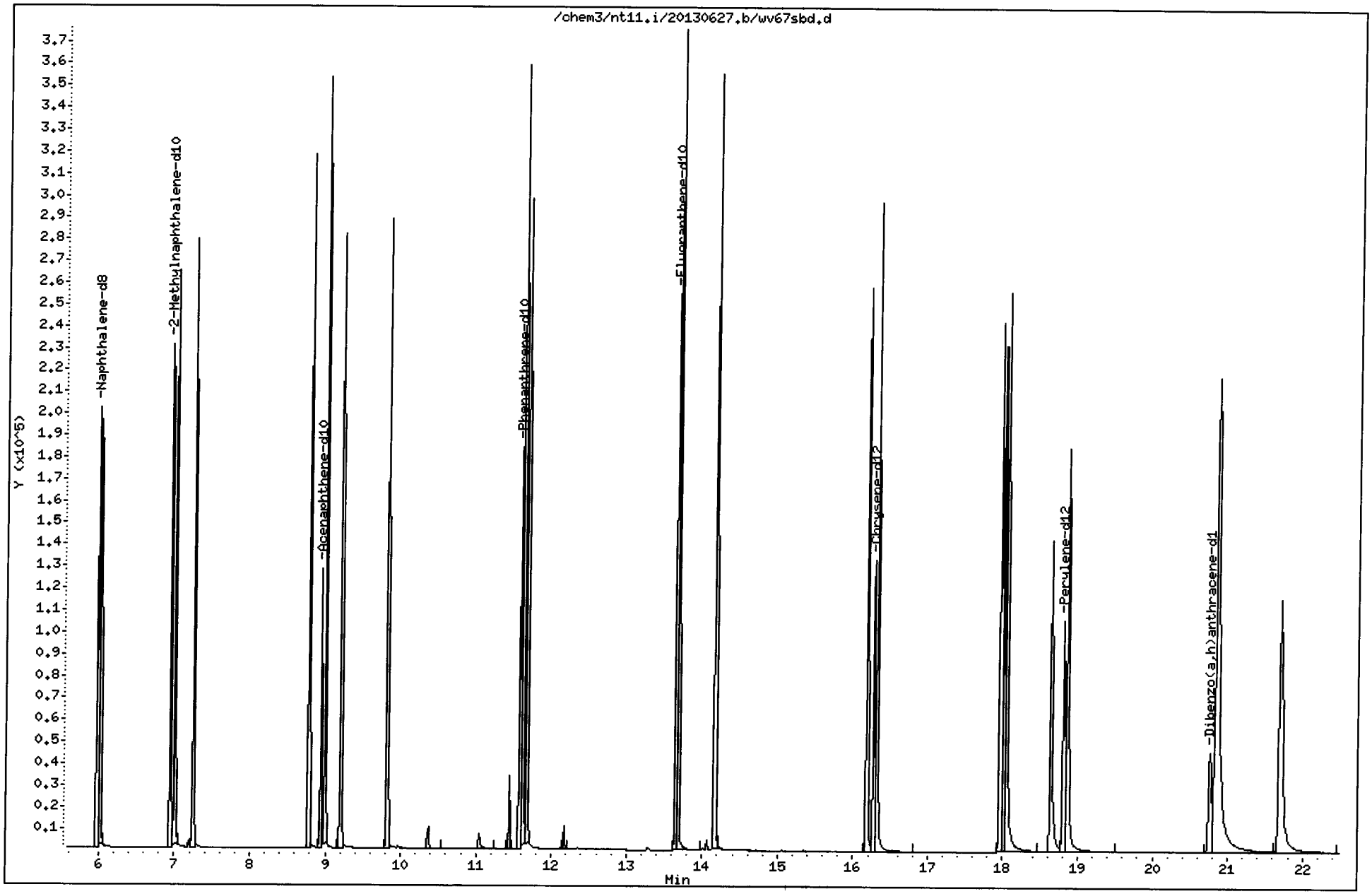
Client SDG: WV67
Fraction: SV
Client Smp ID: WV67LCSDW1
Operator: VTS
SampleType: LCSD
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	227	75.54	37-90
7 2-Methylnaphthalen	300	233	77.55	39-90
8 1-methylnaphthalen	300	231	76.89	38-95
10 Acenaphthylene	300	241	80.19	35-95
12 Acenaphthene	300	231	77.02	38-94
14 Dibenzofuran	300	241	80.17	36-94
15 Fluorene	300	249	82.93	41-102
19 Phenanthrene	300	231	76.95	41-101
20 Anthracene	300	228	76.04	28-101
24 Fluoranthene	300	238	79.50	49-114
25 Pyrene	300	221	73.50	42-114
28 Benzo(a)anthracene	300	236	78.65	42-111
30 Chrysene	300	236	78.64	46-106
44 Benzo(b)fluoranthe	300	237	79.04	30-160
45 Benzo(k)fluoranthe	300	245	81.58	30-160
46 Benzo(j)fluoranthe	300	256	85.32	30-160
34 Benzo(a)pyrene	300	209	69.61	20-99
37 Indeno(1,2,3-cd)py	300	236	78.60	32-113
38 Dibenzo(a,h)anthra	300	215	71.75	30-113
39 Benzo(g,h,i)peryle	300	235	78.34	27-113
47 Perylene	300	208	69.42	30-160

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	239	79.53	35-94
$ 23 Fluoranthene-d10	300	248	82.70	30-160
$ 36 Dibenzo(a,h)anthra	300	219	72.99	26-115

Data File: /chem3/nt11.i/20130627.b/wv67sbd.d
Date : 27-JUN-2013 10:24
Client ID: WV67LCSDW1
Sample Info: WV67LCSDW1
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: VTS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wv67sbd.d

Lab ID: WV67LCSDW1, Method: lowsim.m, Instrument: nt11.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS
20.852	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.852	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130627.b/wv67e.d
Lab Smp Id: WV67E Client Smp ID: UP-CB-B8-20130626-W
Inj Date : 27-JUN-2013 10:51
Operator : VTS Inst ID: nt11.i
Smp Info : WV67E
Misc Info : 13-13661
Comment :
Method : /chem3/nt11.i/20130627.b/lowsim.m
Meth Date : 27-Jun-2013 09:32 van Quant Type: ISTD
Cal Date : 12-JUN-2013 18:11 Cal File: ic0612f.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	348287	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	29455	17.0939	17.1
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	159928	151.454	151
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	13121	12.4567	12.5
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	8205	7.59294	7.59
	10 Acenaphthylene	152	8.784	8.784	(0.983)	9844	7.16739	7.17
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	178029	200.000	
	12 Acenaphthene	153	8.995	8.995	(1.006)	16371	17.6030	17.6
	14 Dibenzofuran	168	9.205	9.205	(1.030)	17090	12.3916	12.4
	15 Fluorene	166	9.825	9.825	(1.099)	27017	27.4646	27.5(M)
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	262667	200.000	
	19 Phenanthrene	178	11.619	11.619	(1.004)	124356	83.4995	83.5
	20 Anthracene	178	11.674	11.674	(1.009)	30867	24.4552	24.5
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	294936	217.421	217
	24 Fluoranthene	202	13.686	13.686	(1.182)	233488	147.616	148

J (104 NO FIT)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	25 Pyrene	202	14.167	14.167	(0.870)	213891	133.266	133
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	73255	55.3623	55.4
*	29 Chrysene-d12	240	16.276	16.276	(1.000)	207505	200.000	
	30 Chrysene	228	16.325	16.325	(1.003)	112939	75.4346	75.4
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	48749	30.7005	30.7
	45 Benzo(k)fluoranthene	252	18.003	18.003	(0.957)	27136	16.6240	16.6
	46 Benzo(j)fluoranthene	252	18.051	18.041	(0.960)	23018	12.5354	12.5
	34 Benzo(a)pyrene	252	18.646	18.637	(0.991)	34262	25.9595	26.0
*	35 Perylene-d12	264	18.810	18.810	(1.000)	211837	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.864	20.853	(1.109)	19052	10.8554	10.9
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	204173	175.078	175
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	21.706	21.706	(1.154)	34919	22.2455	22.2
	47 Perylene	252	18.858	18.858	(1.003)	9427	6.07625	6.08

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wv67e.d
Lab Smp Id: WV67E
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130627.b/lowsim.m
Misc Info: 13-13661

Calibration Date: 27-JUN-2013
Calibration Time: 08:51
Client Smp ID: UP-CB-B8-20130626-W
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	348287	28.77
11 Acenaphthene-d10	156669	78334	313338	178029	13.63
18 Phenanthrene-d10	244223	122112	488446	262667	7.55
29 Chrysene-d12	194330	97165	388660	207505	6.78
35 Perylene-d12	162839	81420	325678	211837	30.09

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WV67E
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130627.b/lowsim.m
Misc Info: 13-13661

Client SDG: WV67
Fraction: SV
Client Smp ID: UP-CB-B8-20130626-W
Operator: VTS
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	151	50.48	35-94
$ 23 Fluoranthene-d10	300	217	72.47	30-160
$ 36 Dibenzo(a,h)anthra	300	175	58.36	26-115

Data File: /chem3/nt11.i/20130627.b/wv67e.d

Date : 27-JUN-2013 10:51

Client ID: UP-CB-B8-20130626-W

Sample Info: WV67E

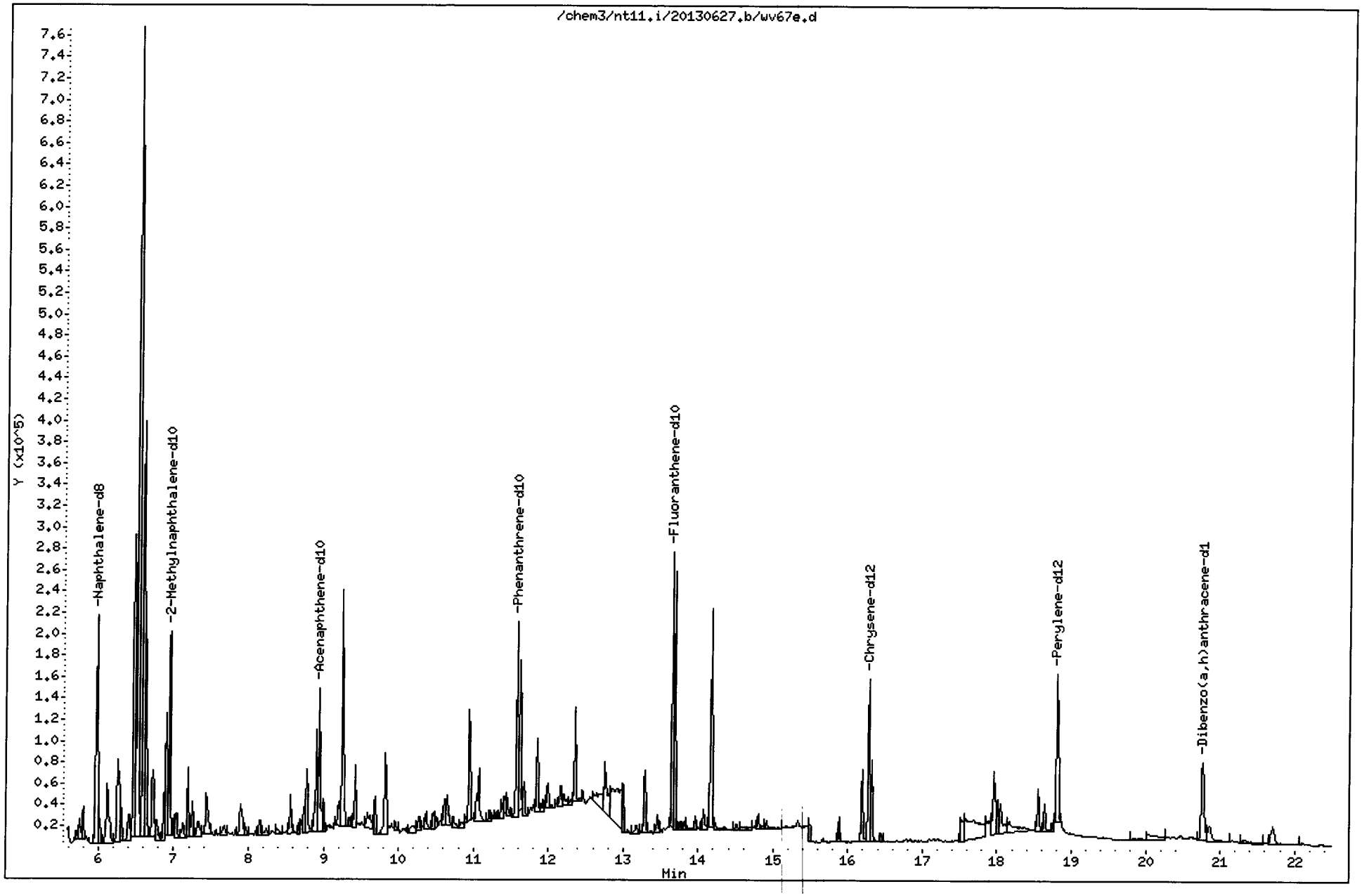
Volume Injected (uL): 2.0

Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: VTS

Column diameter: 0.25



Data File: /chem3/nt11.i/20130627.b/wv67e.d

Date : 27-JUN-2013 10:51

Client ID: UP-CB-B8-20130626-W

Instrument: nt11.i

Sample Info: WV67E

Volume Injected (uL): 2.0

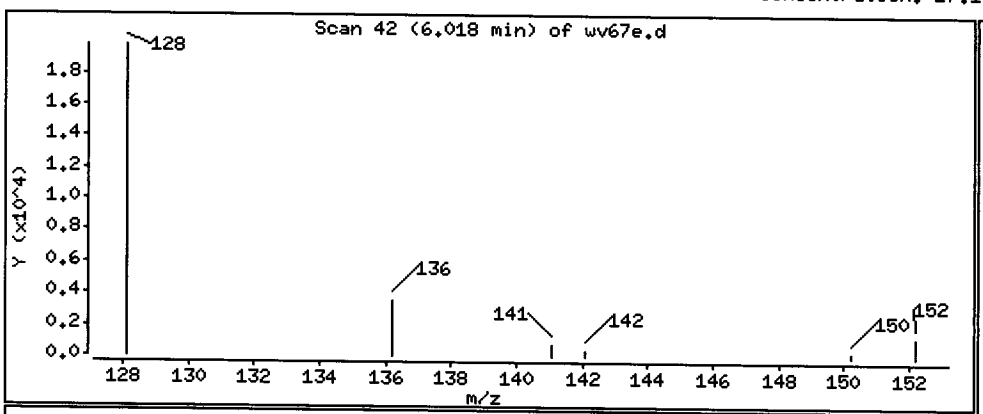
Operator: VTS

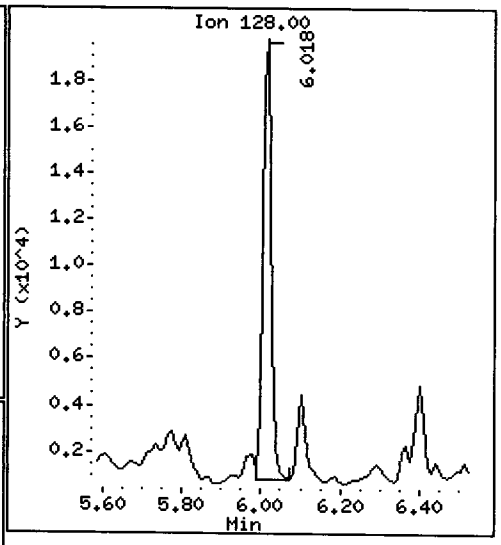
Column phase: Rxi-17Sil MS

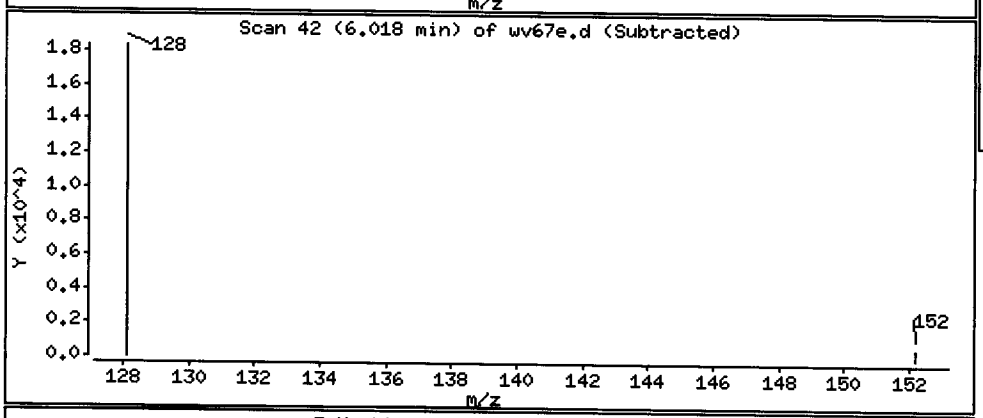
Column diameter: 0.25

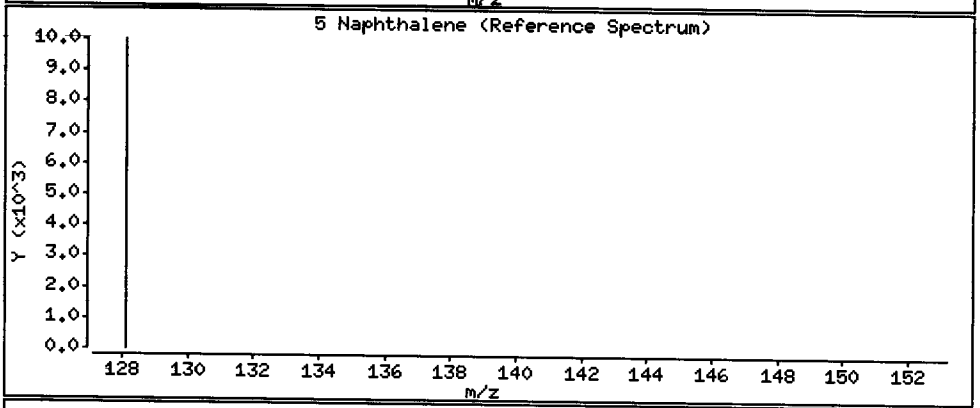
5 Naphthalene

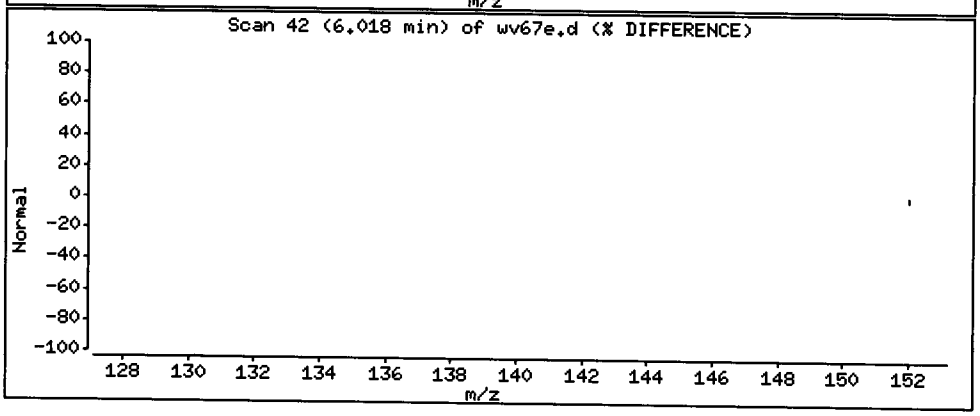
Concentration: 17.1 ug/L











Data File: /chem3/nt11.i/20130627.b/wv67e.d

Date : 27-JUN-2013 10:51

Client ID: UP-CB-B8-20130626-W

Instrument: nt11.i

Sample Info: WV67E

Volume Injected (uL): 2.0

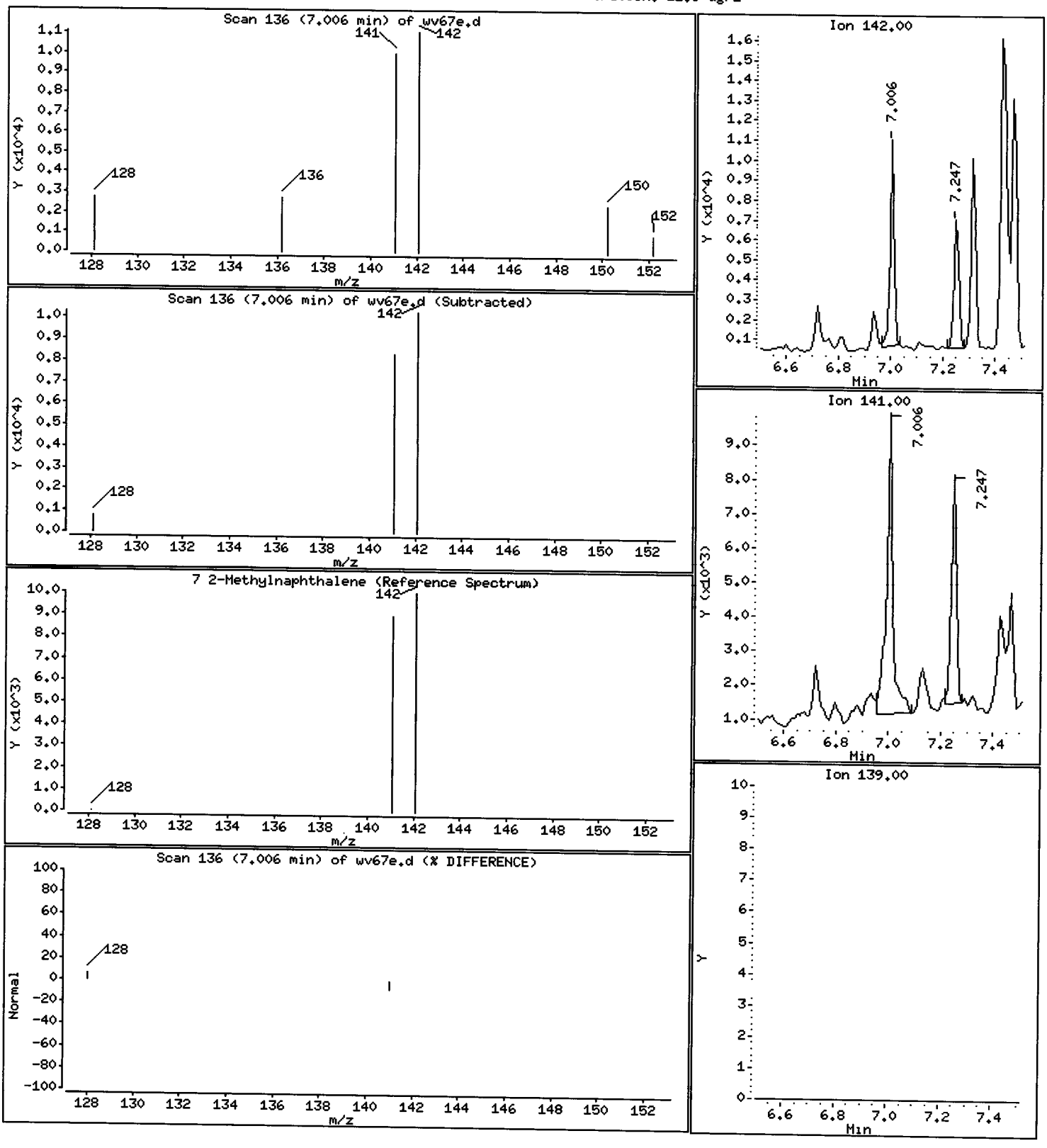
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

7 2-Methylnaphthalene

Concentration: 12.5 ug/L



Data File: /chem3/nt11.i/20130627.b/wv67e.d

Date : 27-JUN-2013 10:51

Client ID: UP-CB-B8-20130626-W

Instrument: nt11.i

Sample Info: WV67E

Volume Injected (uL): 2.0

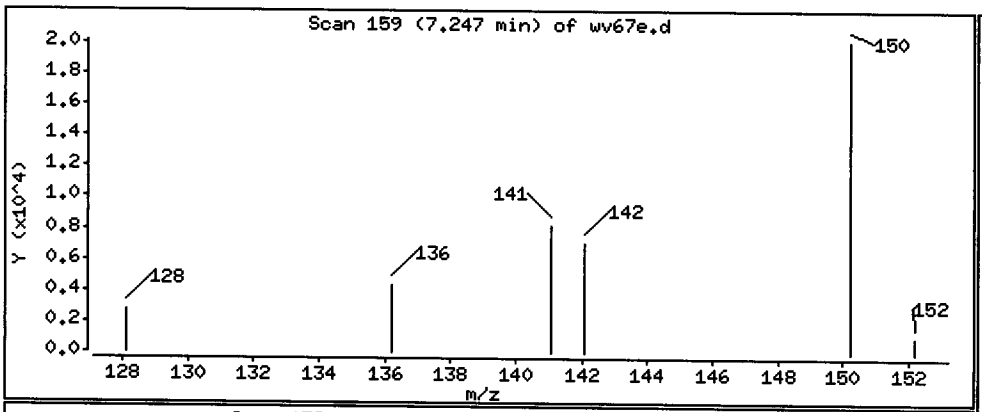
Operator: VTS

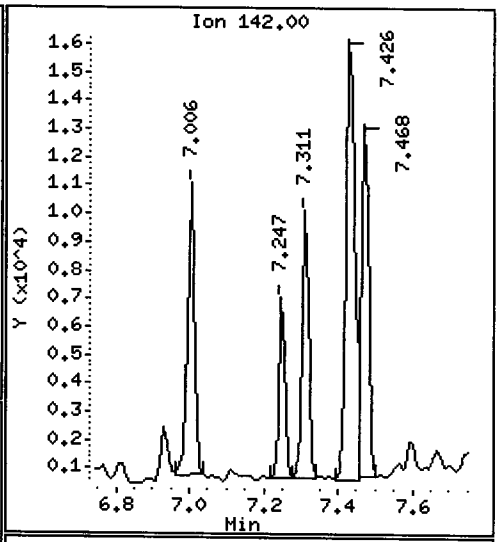
Column phase: Rxi-17Sil MS

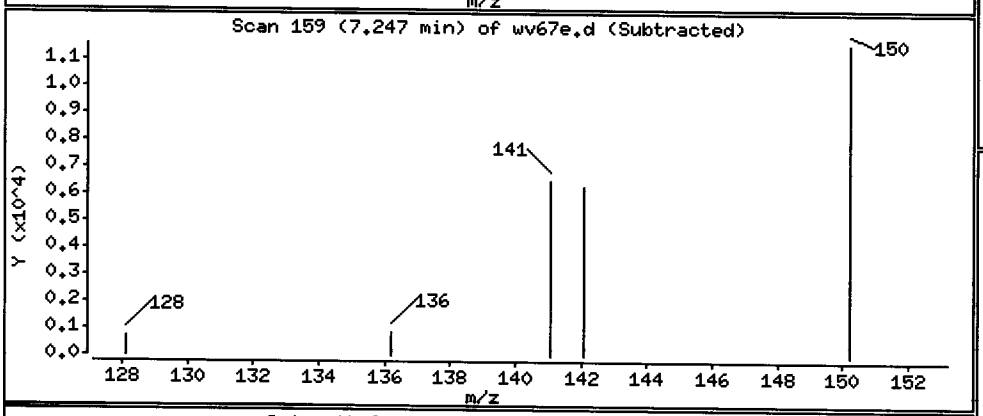
Column diameter: 0.25

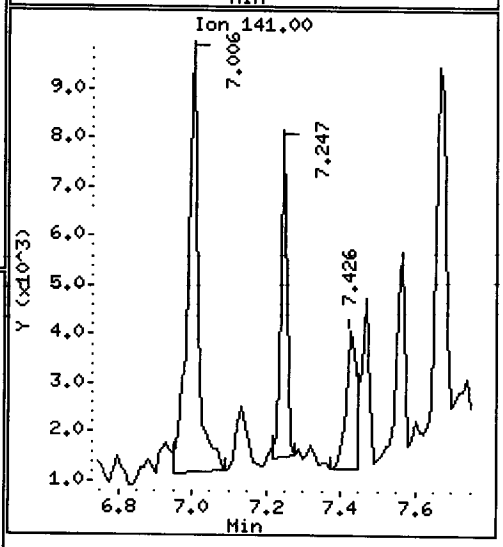
8 1-methylnaphthalene

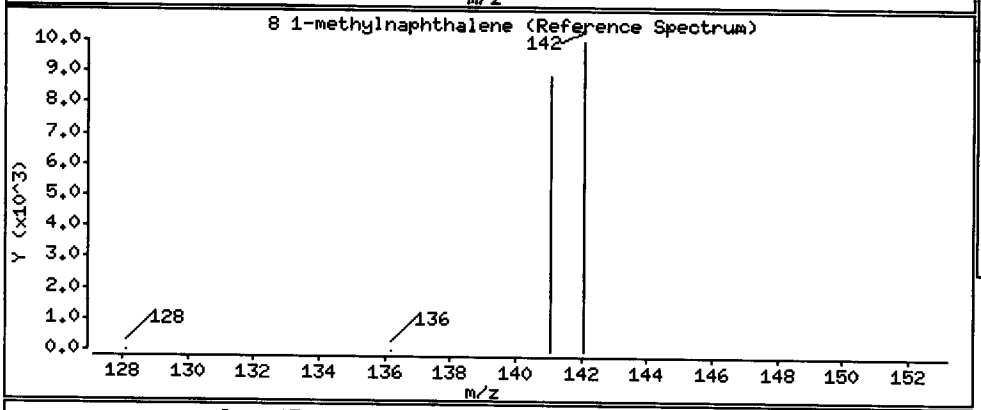
Concentration: 7.59 ug/L

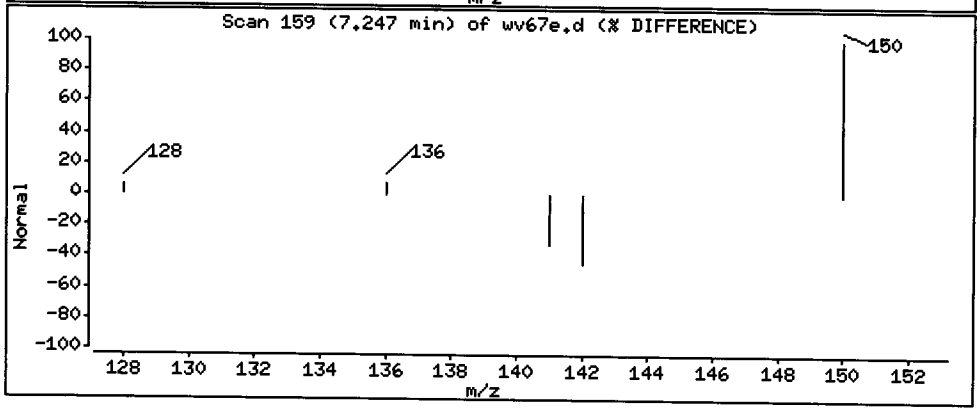












Data File: /chem3/nt11.i/20130627.b/wv67e.d

Date : 27-JUN-2013 10:51

Client ID: UP-CB-B8-20130626-W

Instrument: nt11.i

Sample Info: WV67E

Volume Injected (uL): 2.0

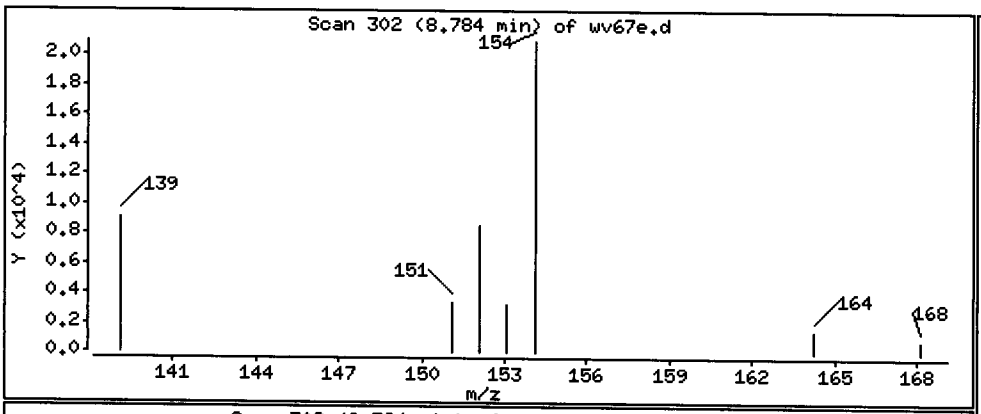
Operator: VTS

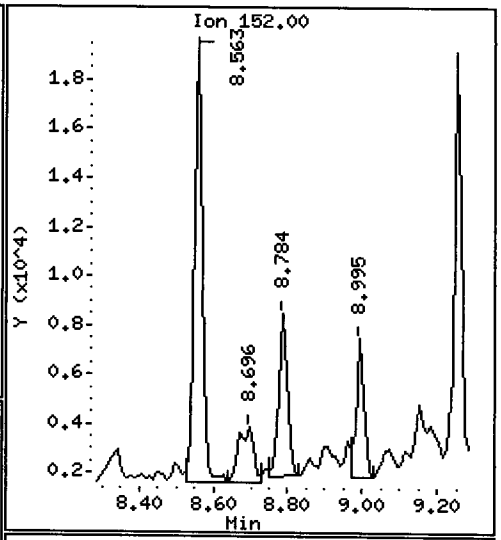
Column phase: Rxi-17Sil MS

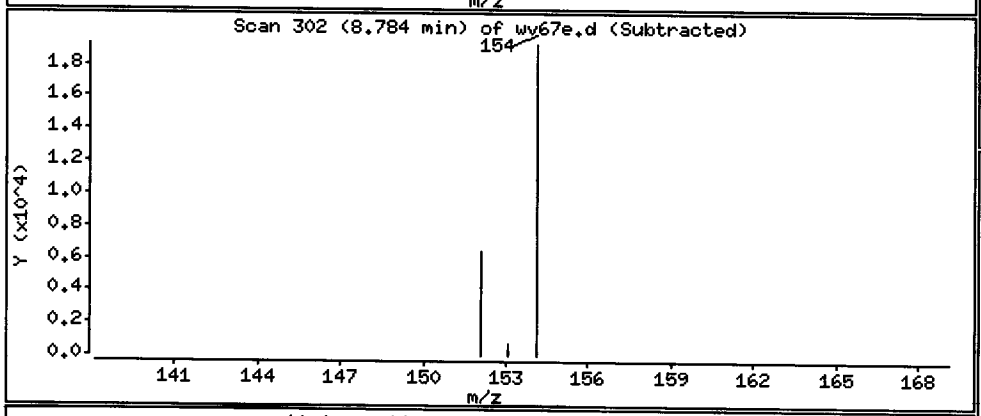
Column diameter: 0.25

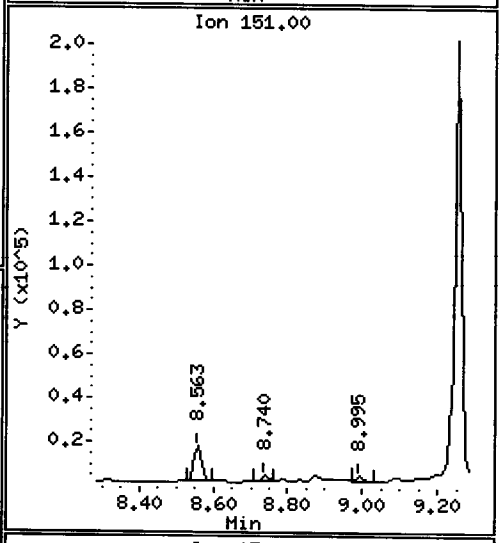
10 Acenaphthylene

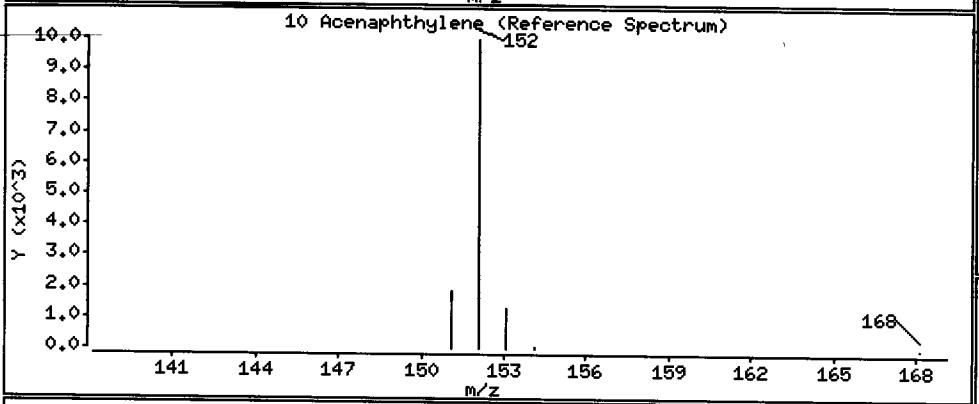
Concentration: 7.17 ug/L

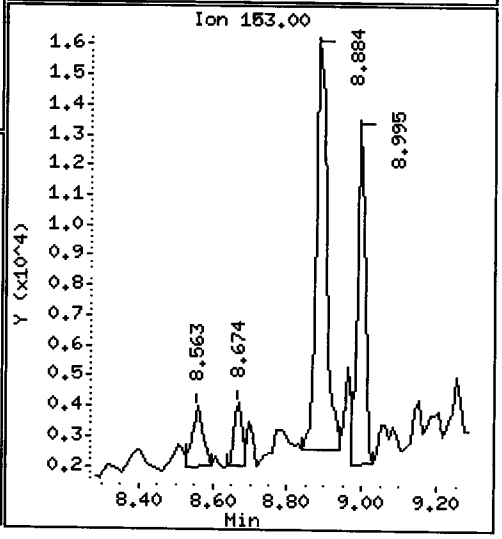


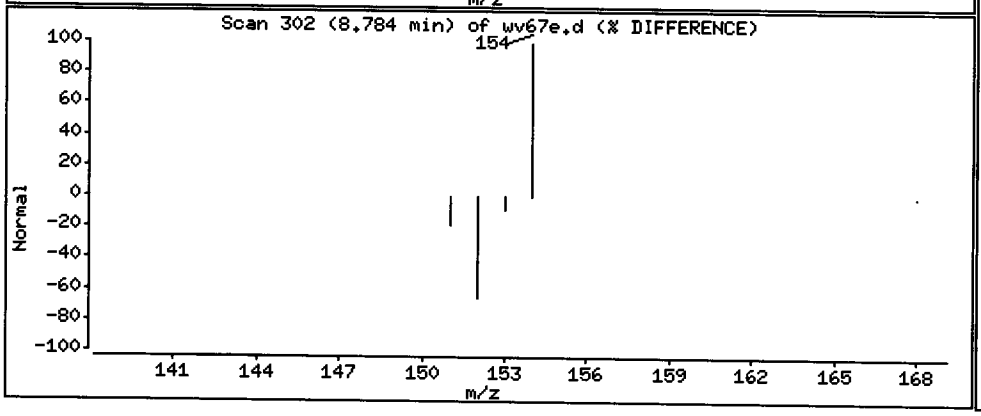












Data File: /chem3/nt11.i/20130627.b/wv67e.d

Date : 27-JUN-2013 10:51

Client ID: UP-CB-B8-20130626-W

Instrument: nt11.i

Sample Info: WV67E

Volume Injected (uL): 2.0

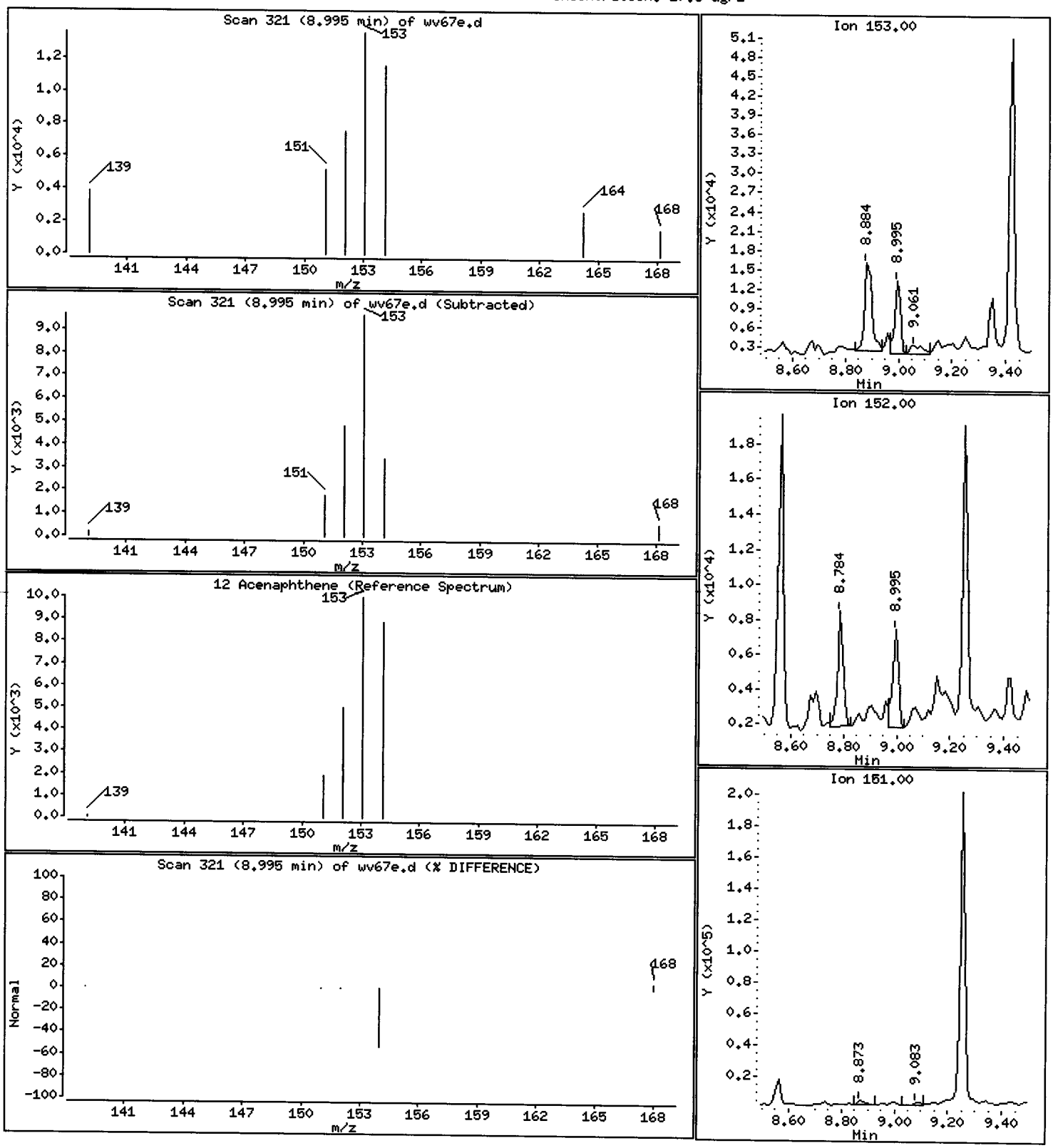
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

12 Acenaphthene

Concentration: 17.6 ug/L



Data File: /chem3/nt11.i/20130627.b/wv67e.d

Date : 27-JUN-2013 10:51

Client ID: UP-CB-B8-20130626-W

Instrument: nt11.i

Sample Info: WV67E

Volume Injected (uL): 2.0

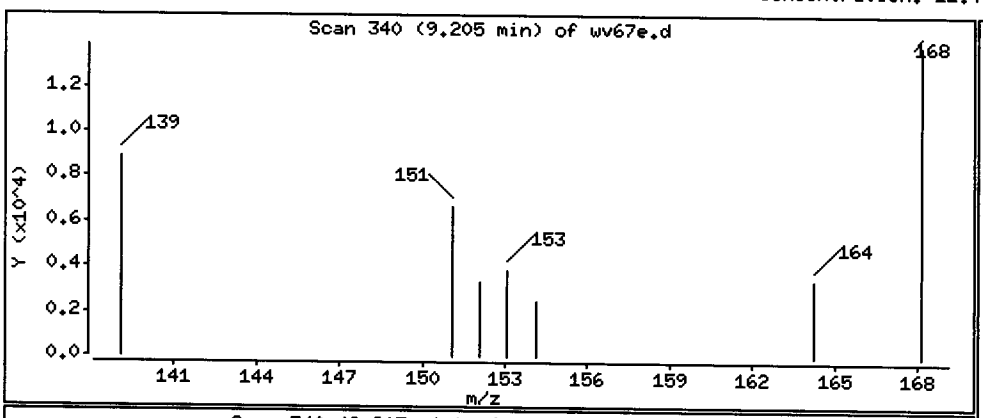
Operator: VTS

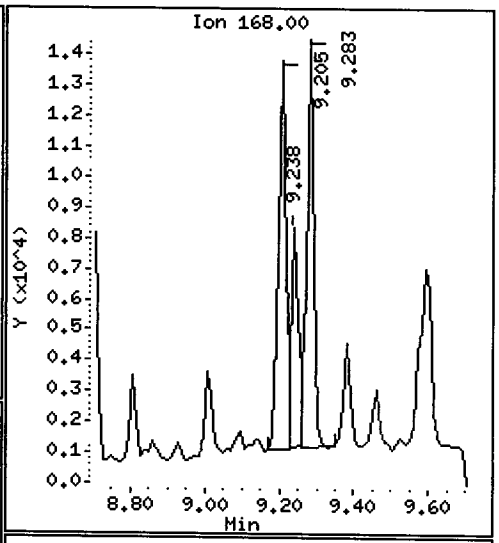
Column phase: Rxi-17Sil MS

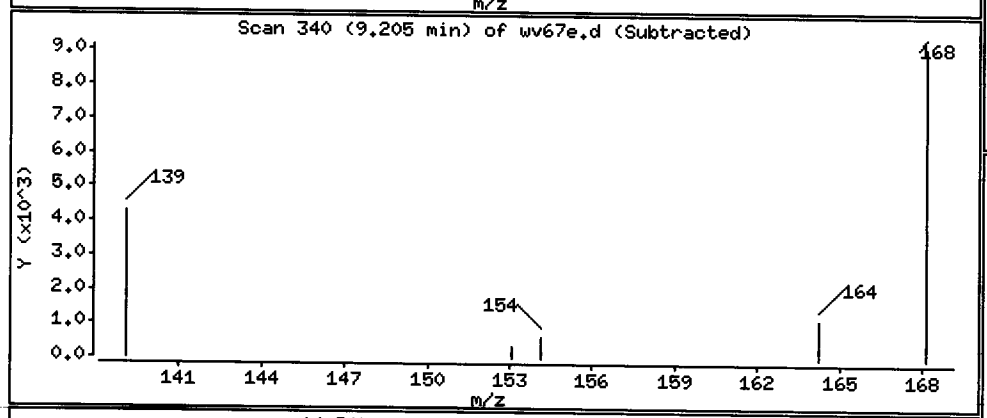
Column diameter: 0.25

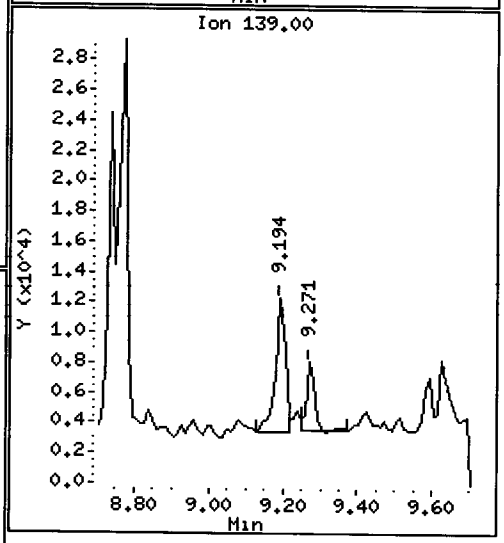
14 Dibenzofuran

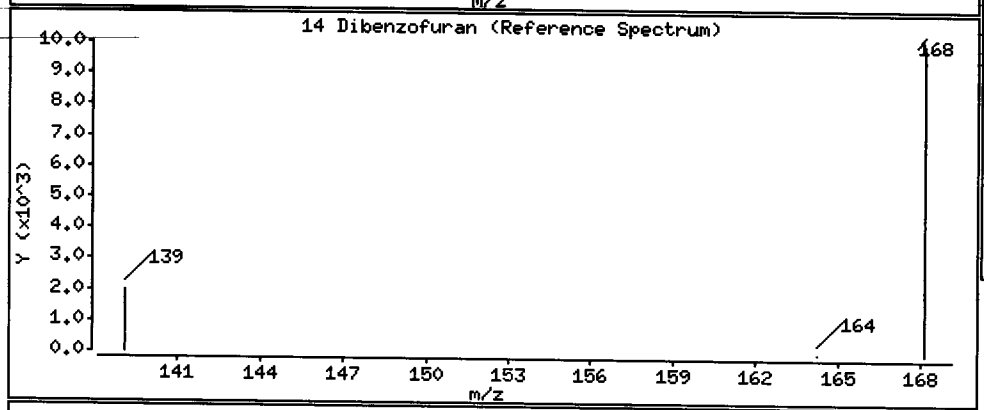
Concentration: 12.4 ug/L

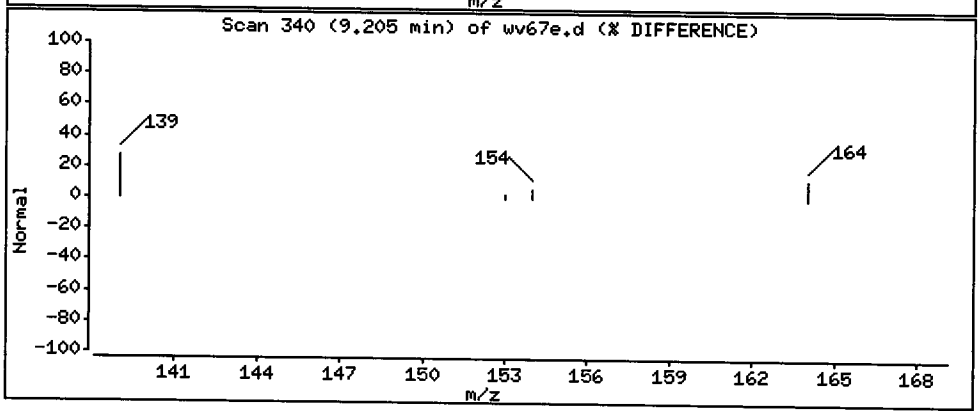












Data File: /chem3/nt11.i/20130627.b/wv67e.d

Date : 27-JUN-2013 10:51

Client ID: UP-CB-B8-20130626-W

Instrument: nt11.i

Sample Info: WV67E

Volume Injected (uL): 2.0

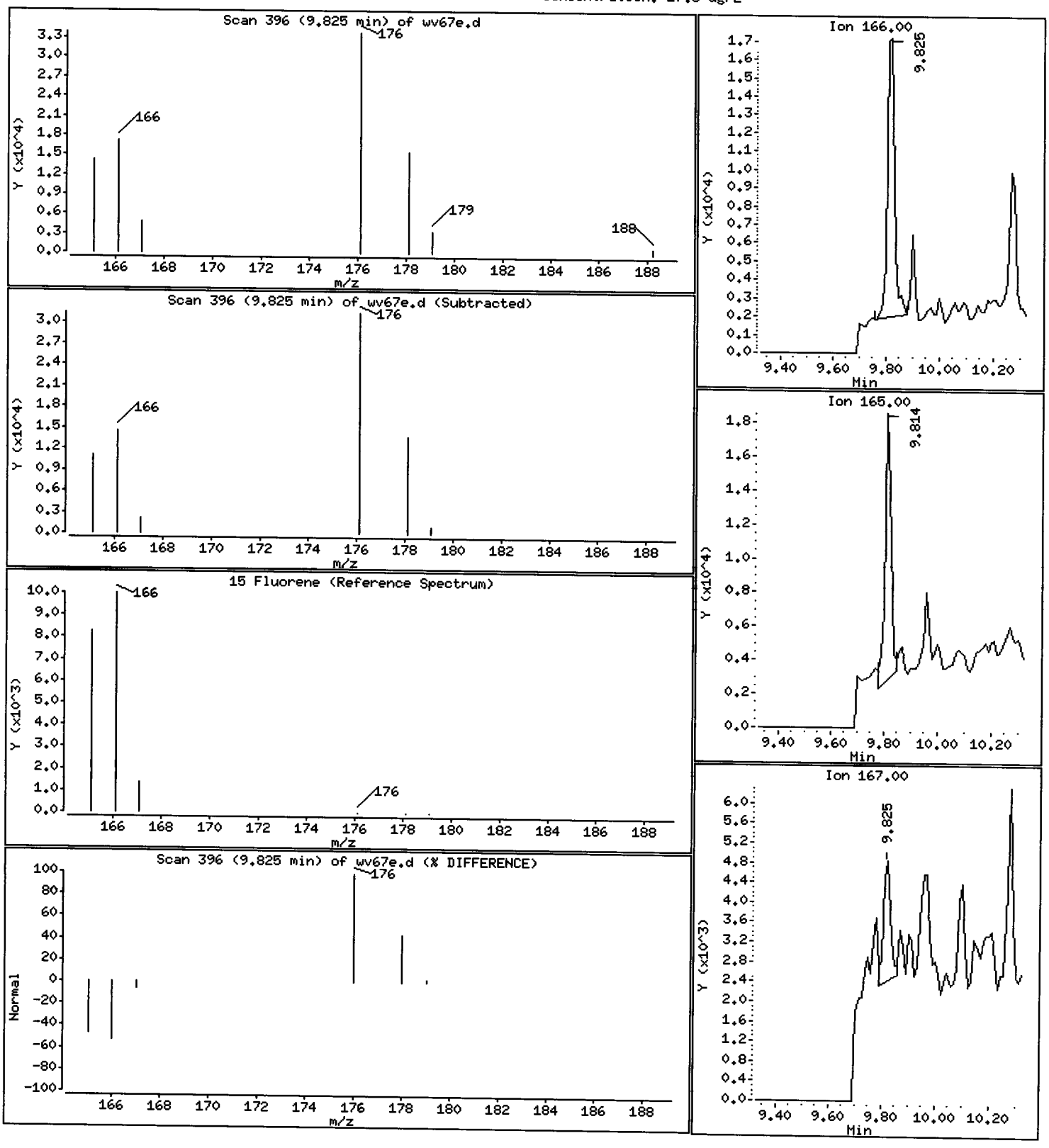
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

15 Fluorene

Concentration: 27.5 ug/L



Data File: /chem3/nt11.i/20130627.b/wv67e.d

Date : 27-JUN-2013 10:51

Client ID: UP-CB-B8-20130626-W

Instrument: nt11.i

Sample Info: WV67E

Volume Injected (uL): 2.0

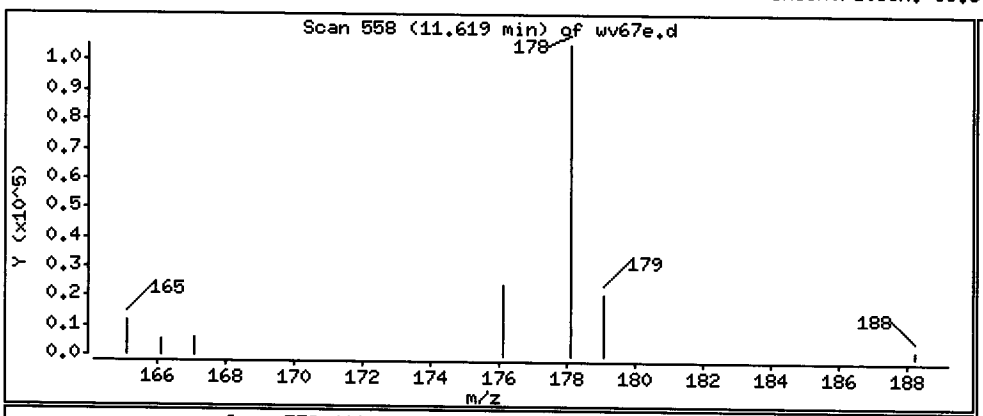
Operator: VTS

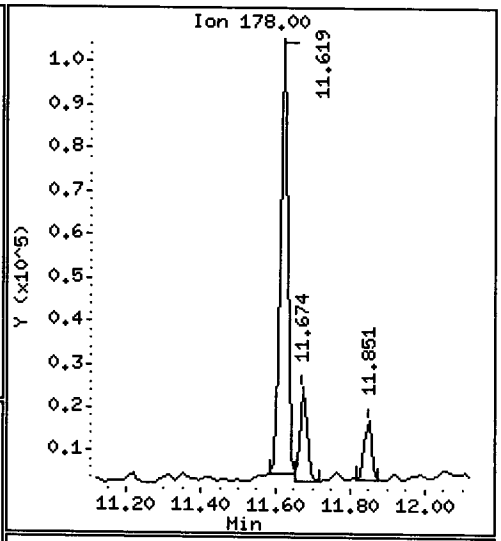
Column phase: Rxi-17Sil MS

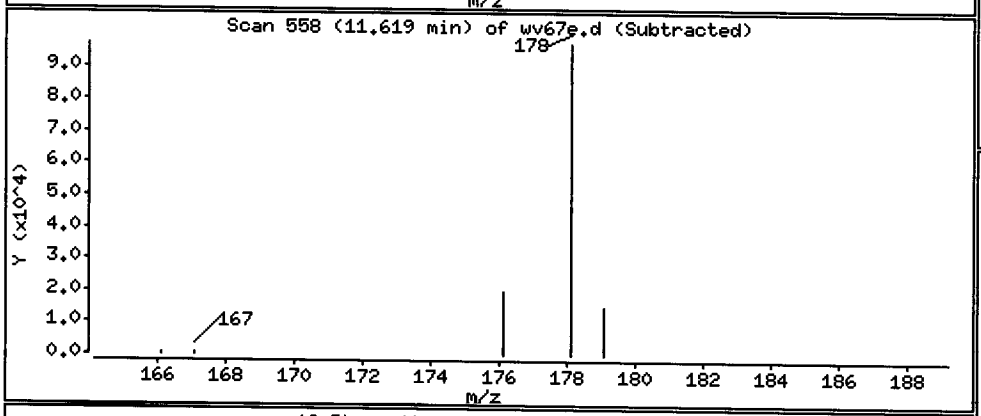
Column diameter: 0.25

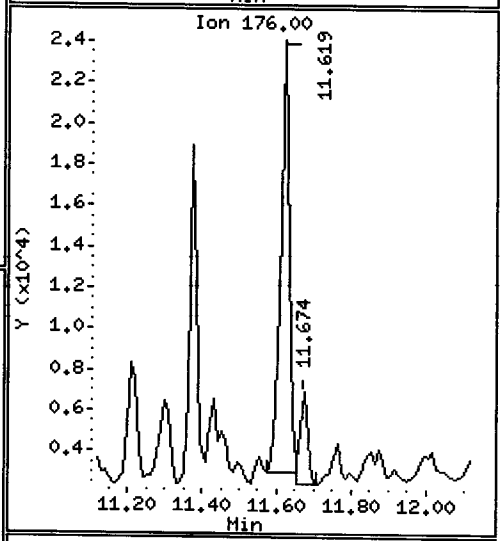
19 Phenanthrene

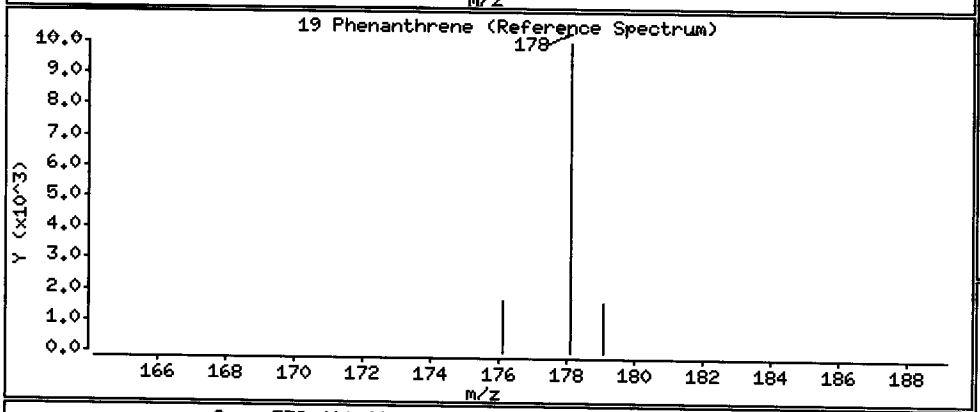
Concentration: 83.5 ug/L

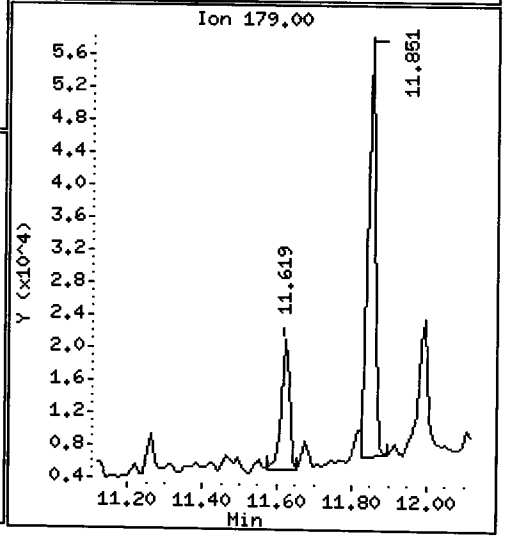


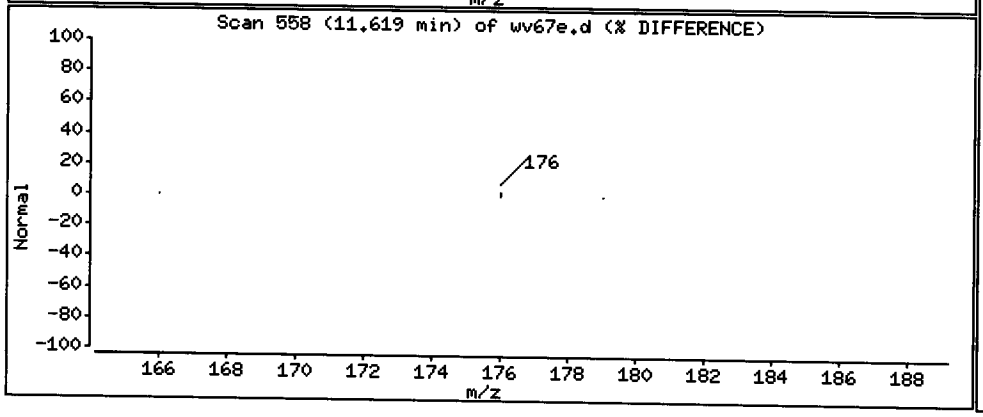












Data File: /chem3/nt11.i/20130627.b/wv67e.d

Date : 27-JUN-2013 10:51

Client ID: UP-CB-B8-20130626-W

Instrument: nt11.i

Sample Info: WV67E

Volume Injected (uL): 2.0

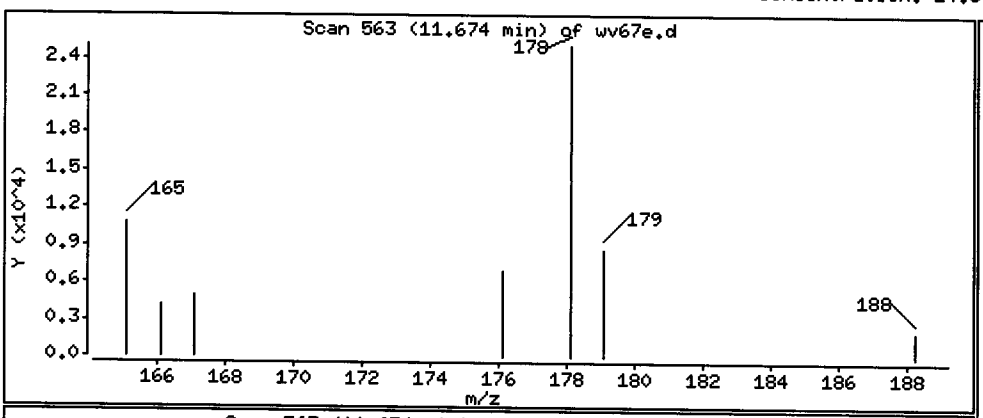
Operator: VTS

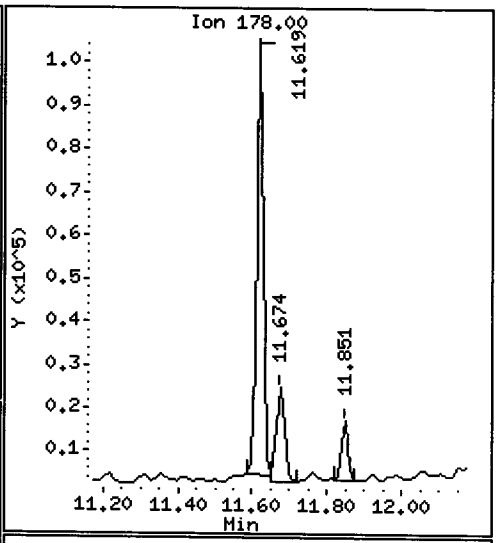
Column phase: Rxi-17Sil MS

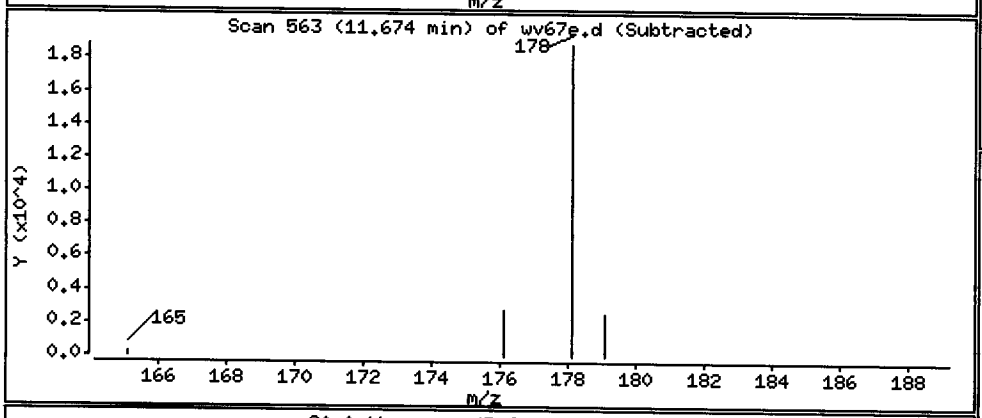
Column diameter: 0.25

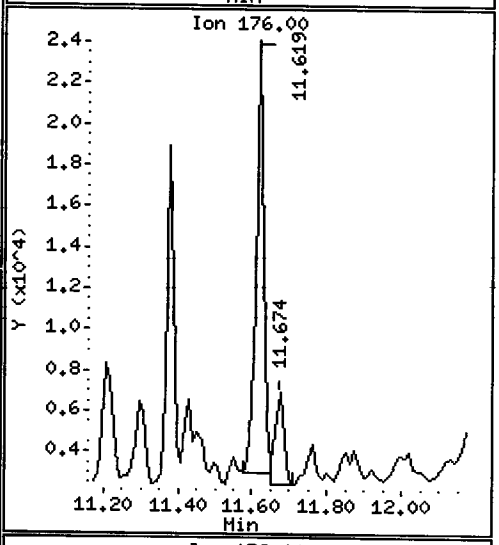
20 Anthracene

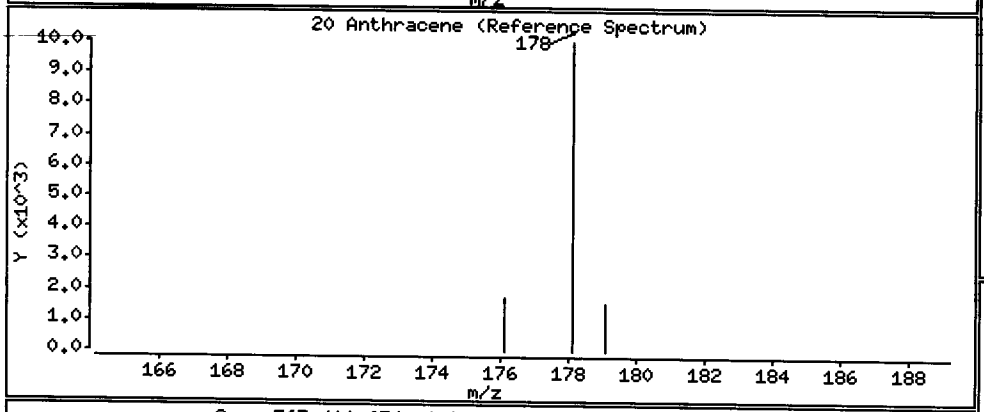
Concentration: 24.5 ug/L

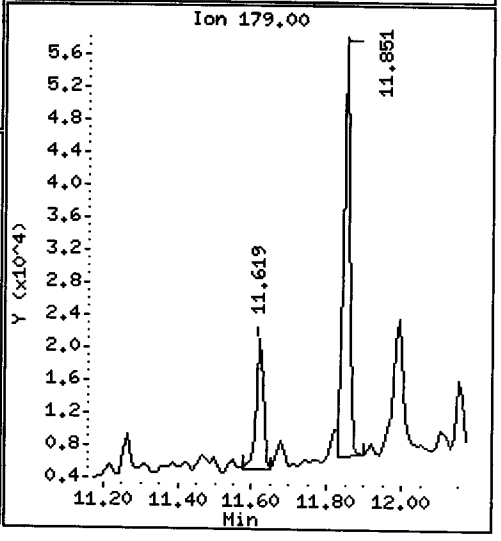


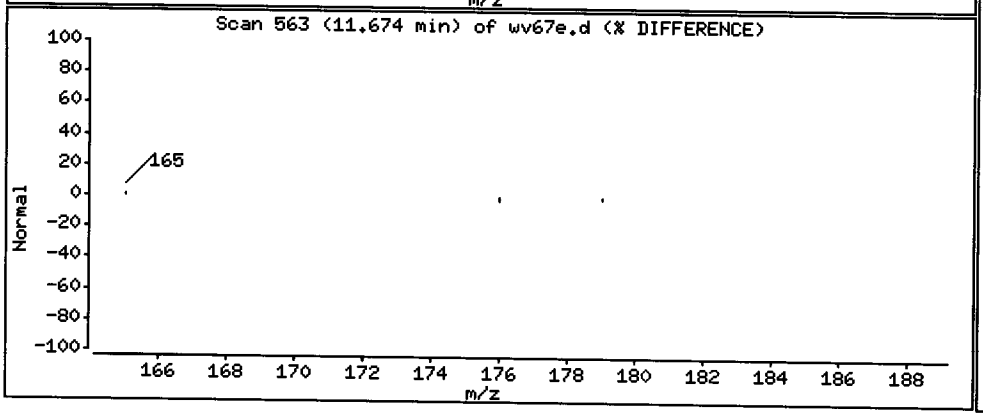












Data File: /chem3/nt11.i/20130627.b/wv67e.d

Date : 27-JUN-2013 10:51

Client ID: UP-CB-B8-20130626-W

Instrument: nt11.i

Sample Info: WV67E

Volume Injected (uL): 2.0

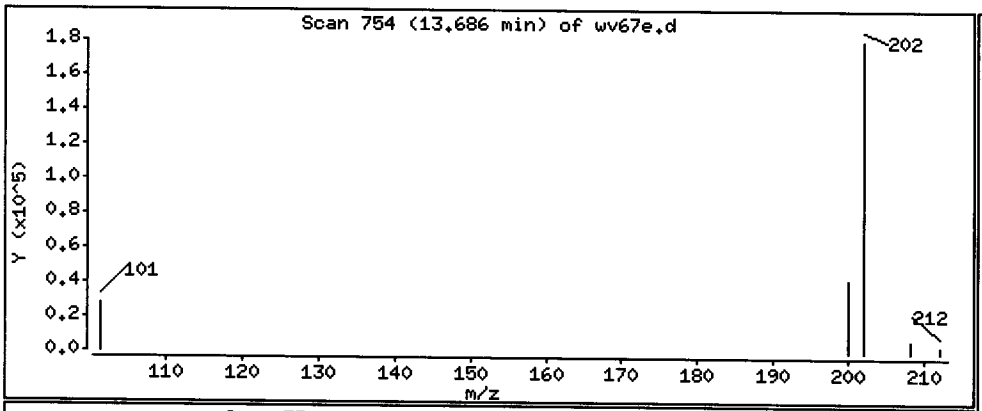
Operator: VTS

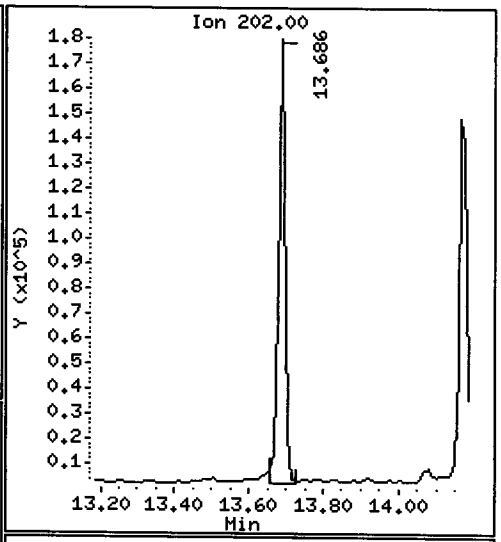
Column phase: Rxi-17Sil MS

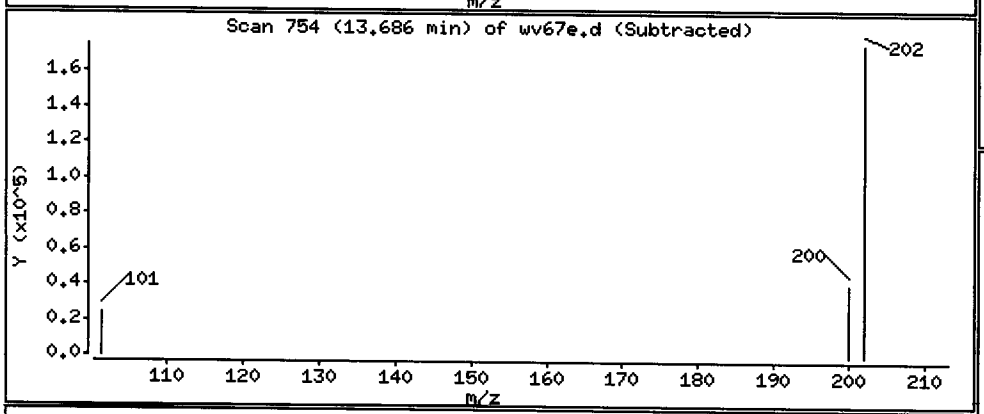
Column diameter: 0.25

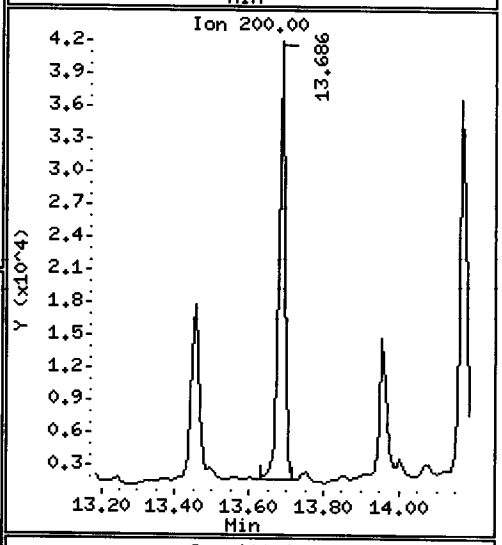
24 Fluoranthene

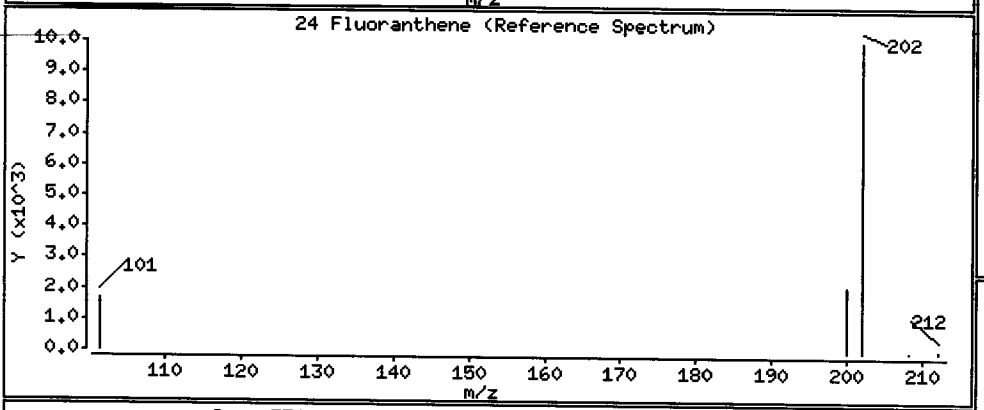
Concentration: 148 ug/L

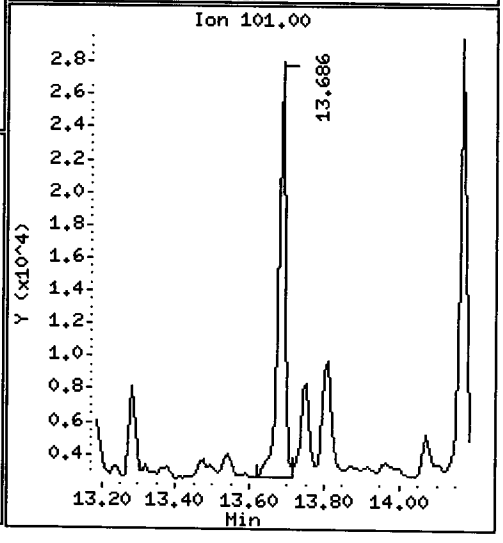


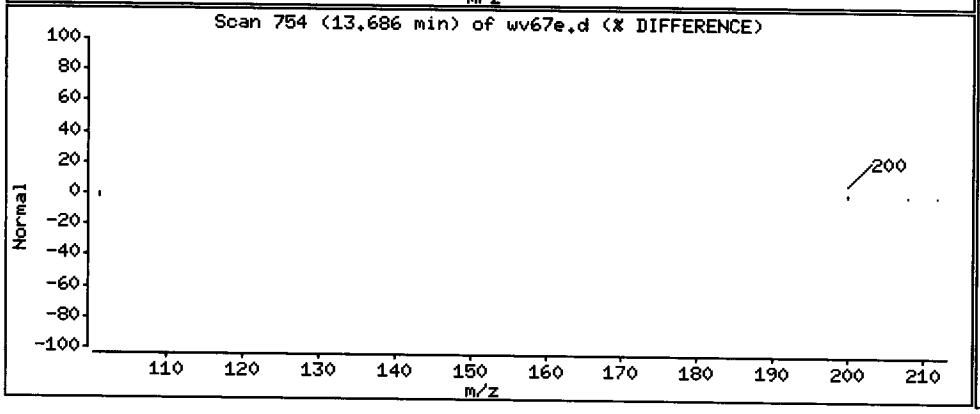












Data File: /chem3/nt11.i/20130627.b/wv67e.d

Date : 27-JUN-2013 10:51

Client ID: UP-CB-B8-20130626-W

Instrument: nt11.i

Sample Info: WV67E

Volume Injected (uL): 2.0

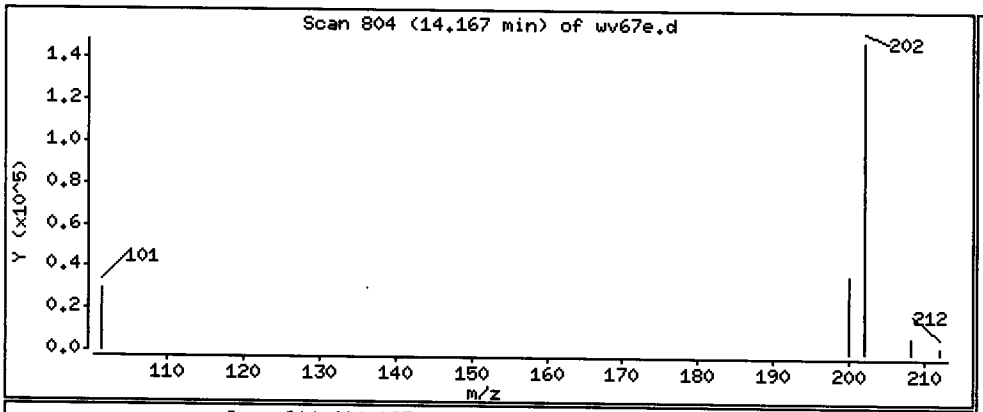
Operator: VTS

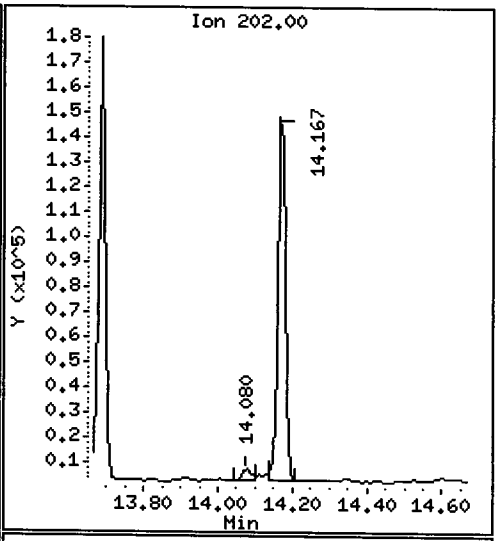
Column phase: Rxi-17Sil MS

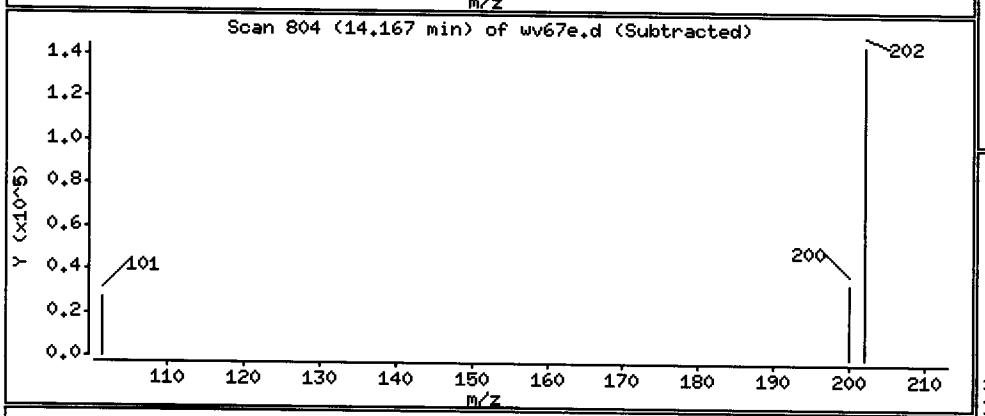
Column diameter: 0.25

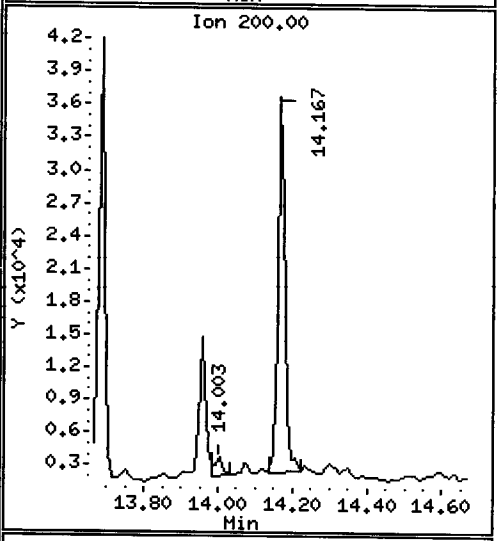
25 Pyrene

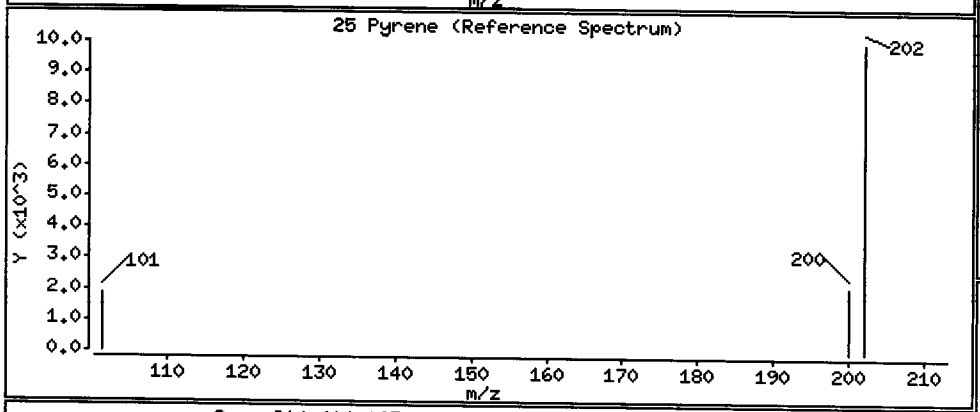
Concentration: 133 ug/L

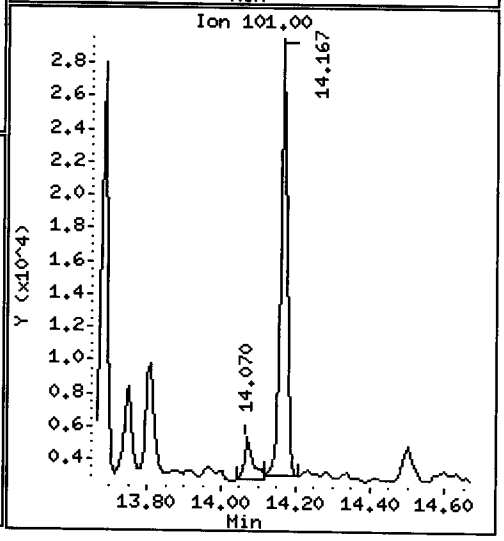


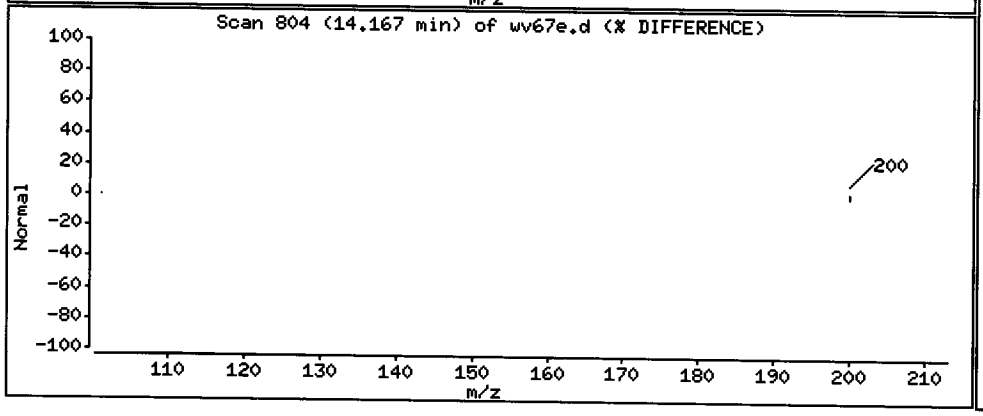












Data File: /chem3/nt11.i/20130627.b/wv67e.d

Date : 27-JUN-2013 10:51

Client ID: UP-CB-B8-20130626-W

Instrument: nt11.i

Sample Info: WV67E

Volume Injected (uL): 2.0

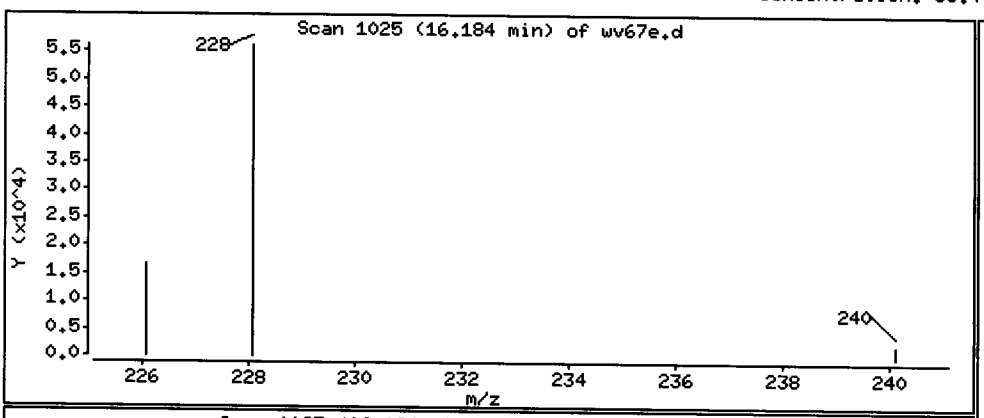
Operator: VTS

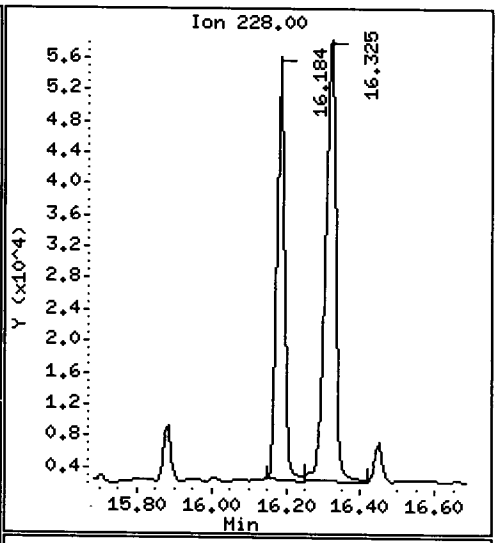
Column phase: Rxi-17Sil MS

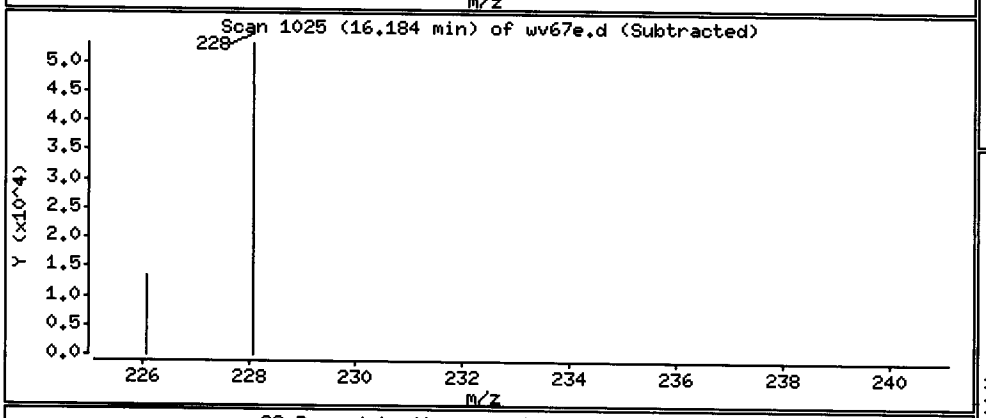
Column diameter: 0.25

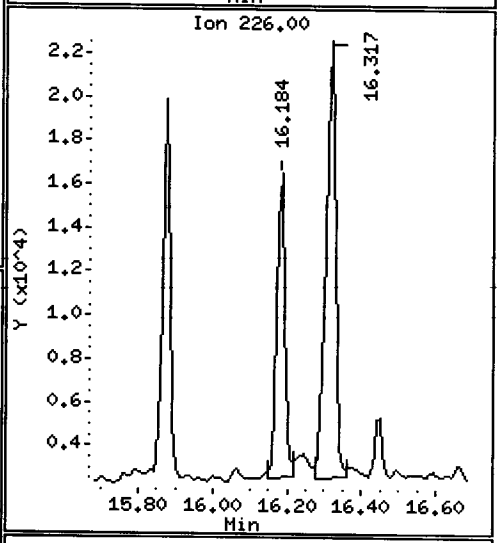
28 Benzo(a)anthracene

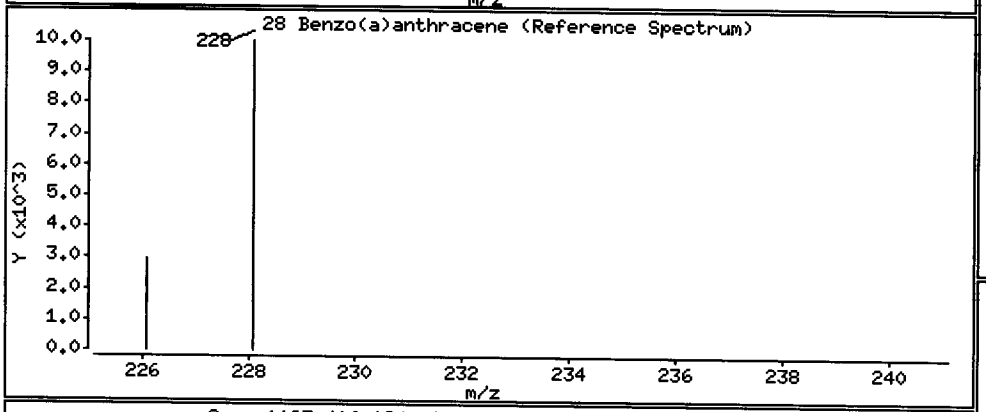
Concentration: 55.4 ug/L

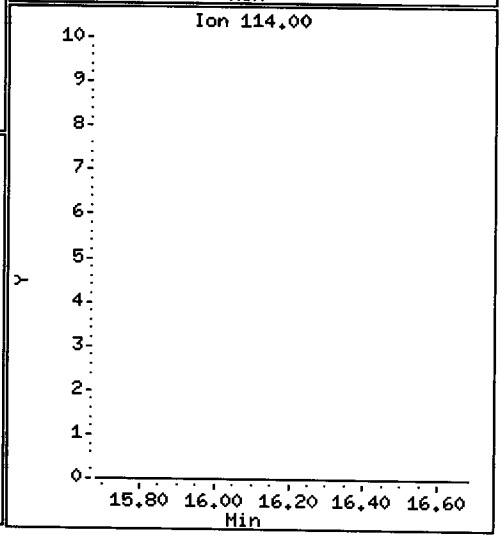


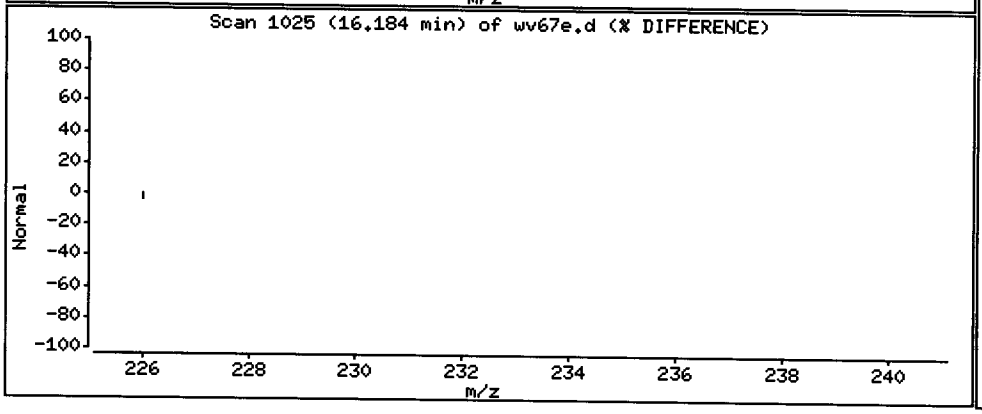












Data File: /chem3/nt11.i/20130627.b/wv67e.d

Date : 27-JUN-2013 10:51

Client ID: UP-CB-B8-20130626-W

Instrument: nt11.i

Sample Info: WV67E

Volume Injected (uL): 2.0

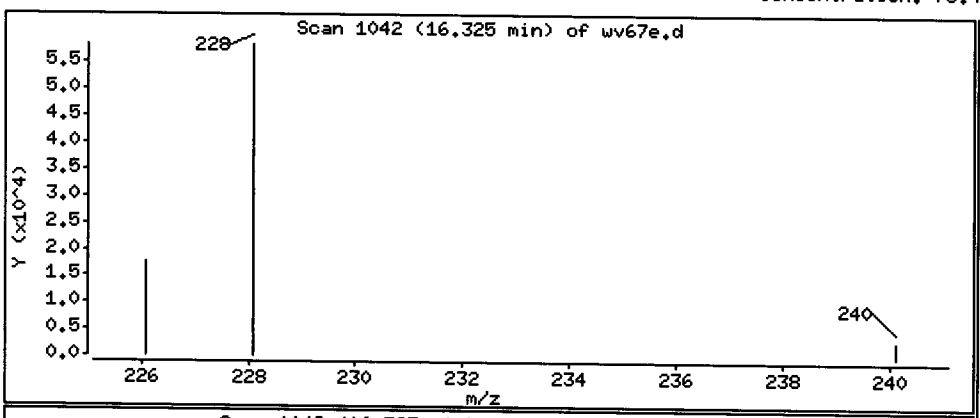
Operator: VTS

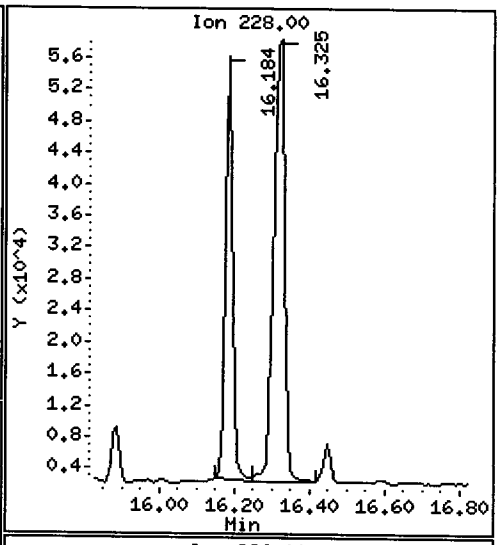
Column phase: Rxi-17Sil MS

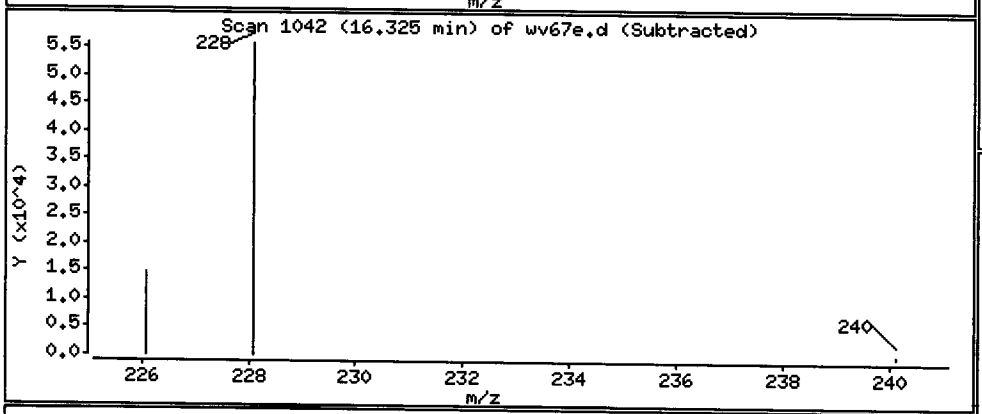
Column diameter: 0.25

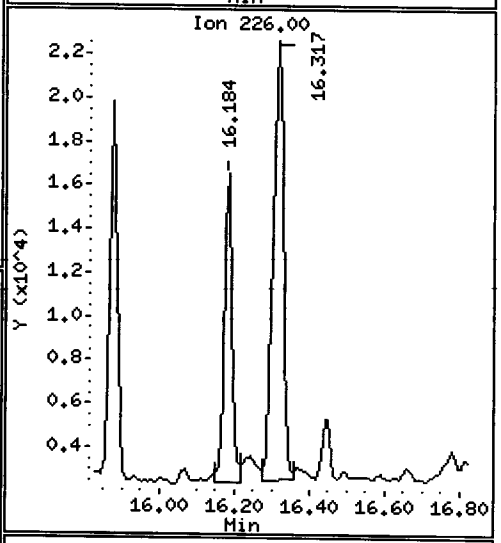
30 Chrysene

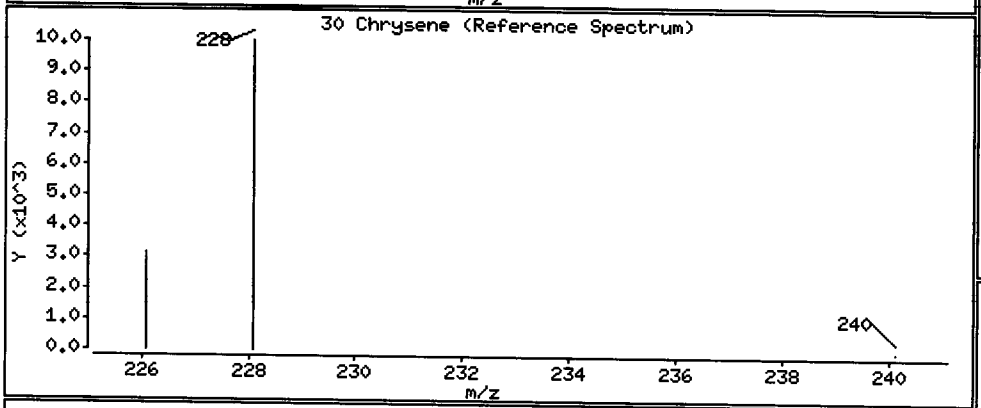
Concentration: 75.4 ug/L

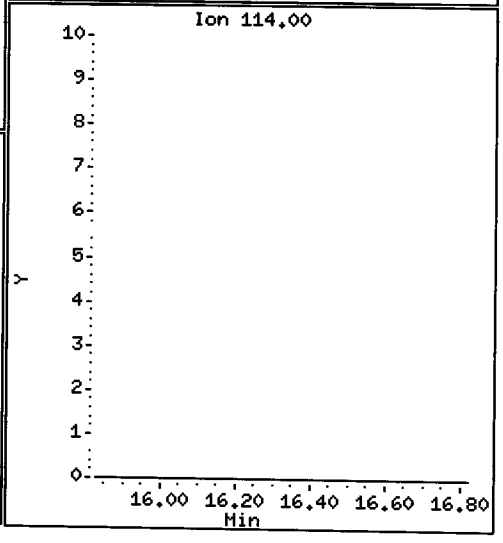


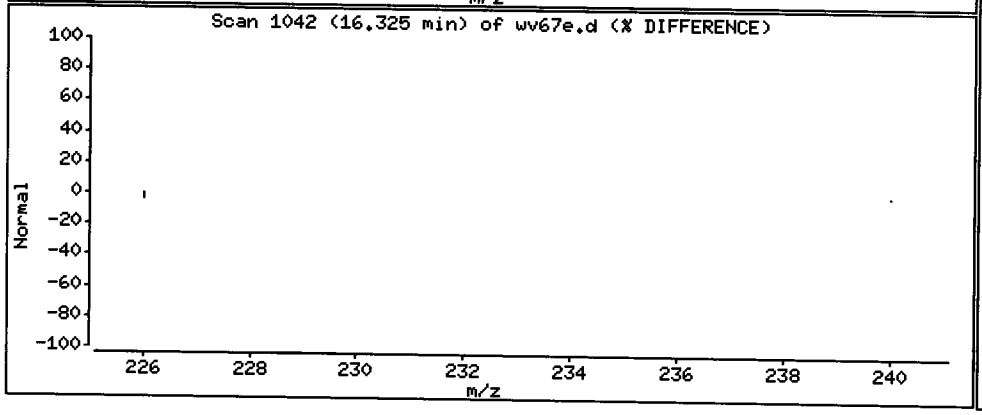












Data File: /chem3/nt11.i/20130627.b/wv67e.d

Date : 27-JUN-2013 10:51

Client ID: UP-CB-B8-20130626-W

Instrument: nt11.i

Sample Info: WV67E

Volume Injected (uL): 2.0

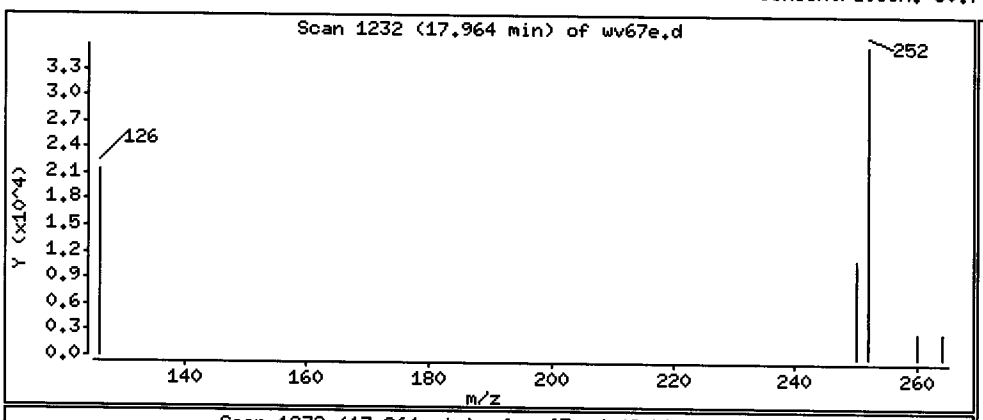
Operator: VTS

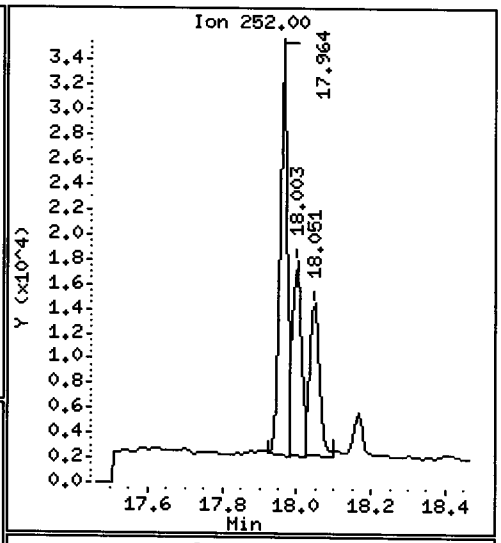
Column phase: Rxi-17Sil MS

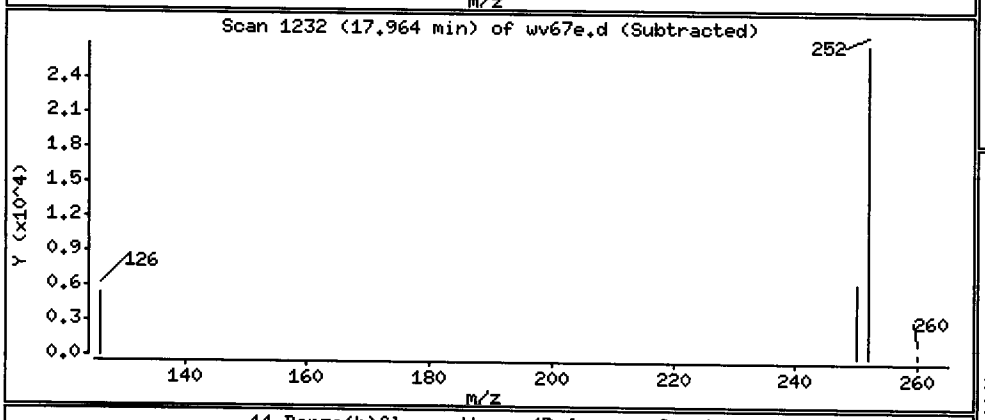
Column diameter: 0.25

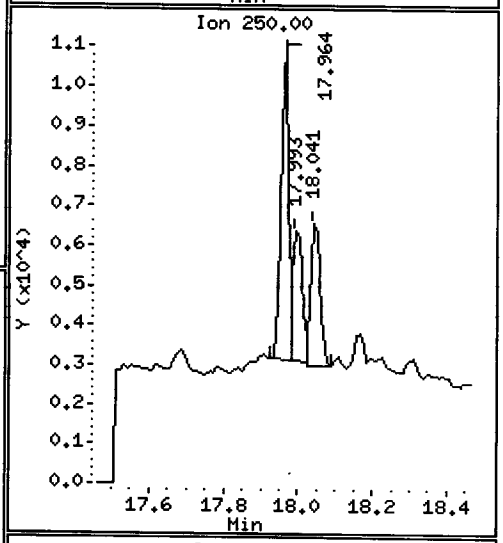
44 Benzo(b)fluoranthene

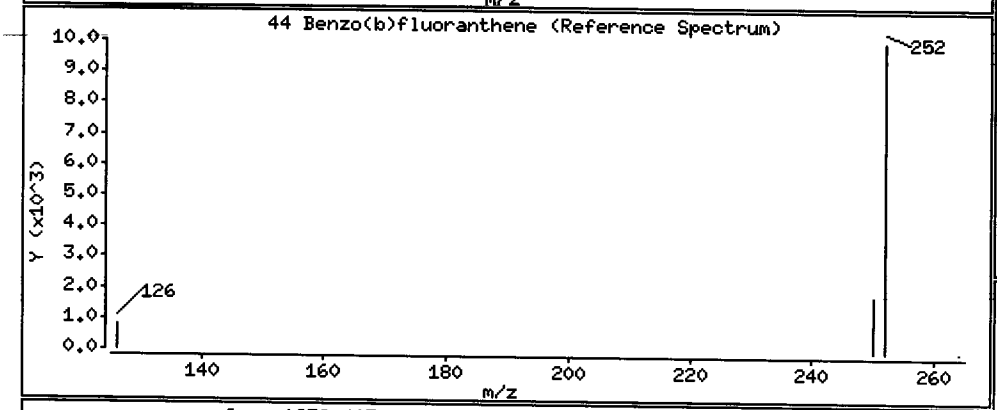
Concentration: 30.7 ug/L

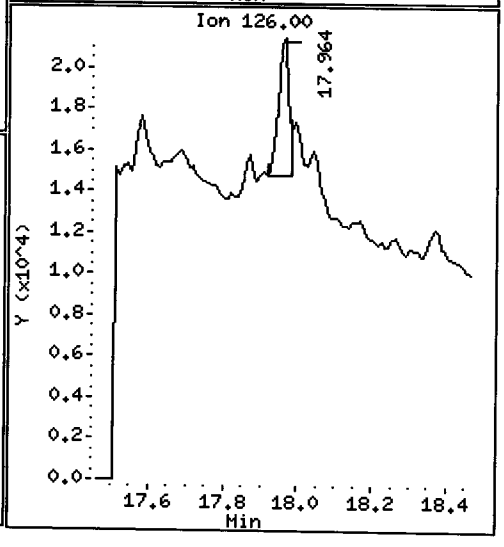


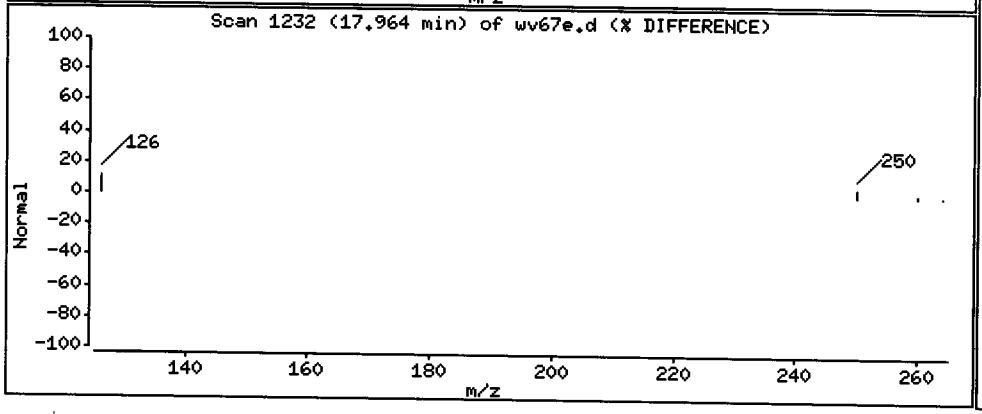












Data File: /chem3/nt11.i/20130627.b/wv67e.d

Date : 27-JUN-2013 10:51

Client ID: UP-CB-B8-20130626-W

Instrument: nt11.i

Sample Info: WV67E

Volume Injected (uL): 2.0

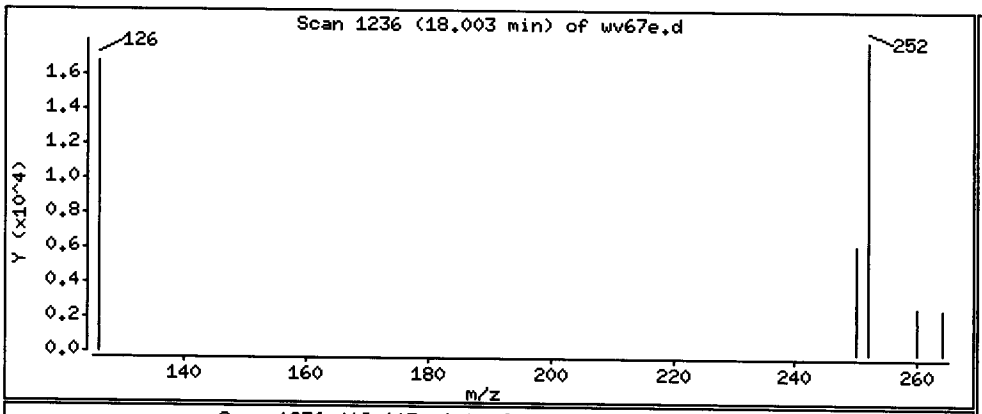
Operator: VTS

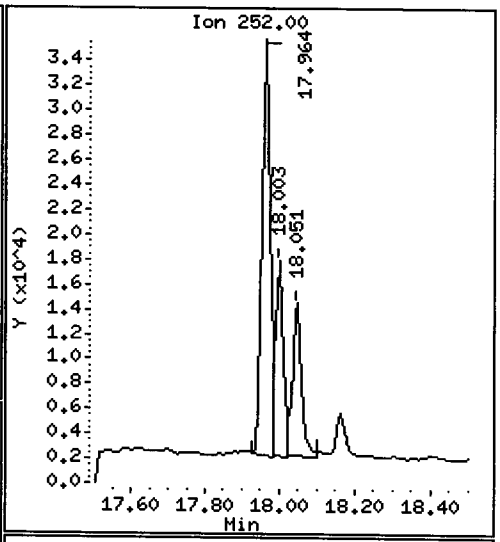
Column phase: Rxi-17Sil MS

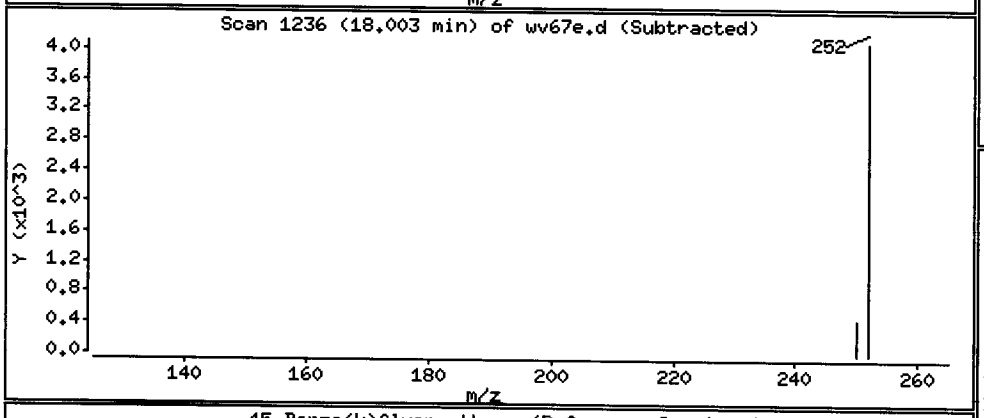
Column diameter: 0.25

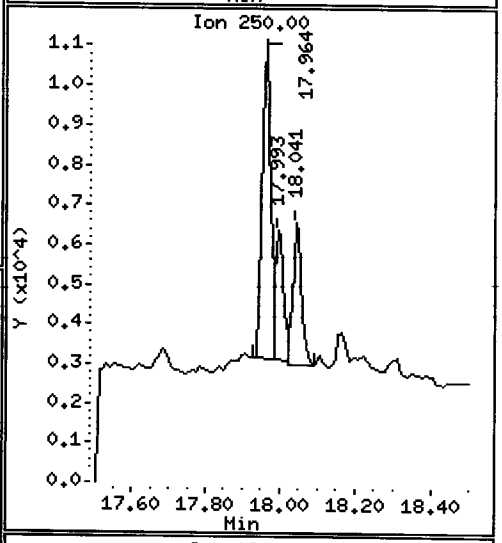
45 Benzo(k)fluoranthene

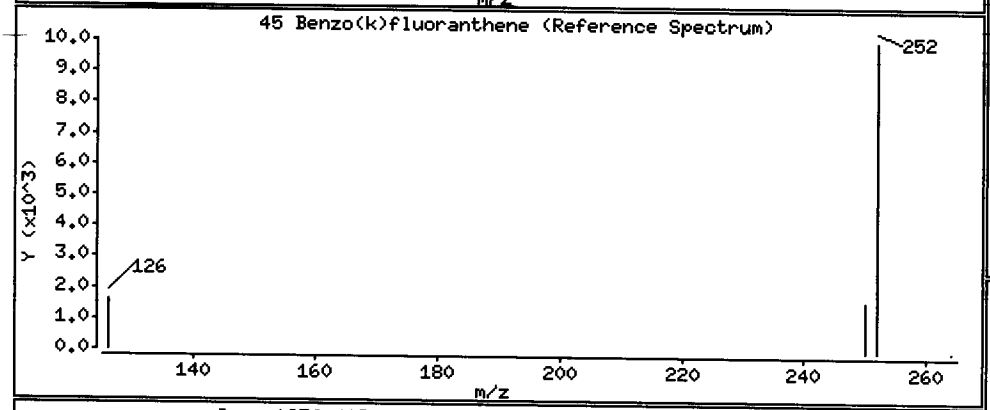
Concentration: 16.6 ug/L

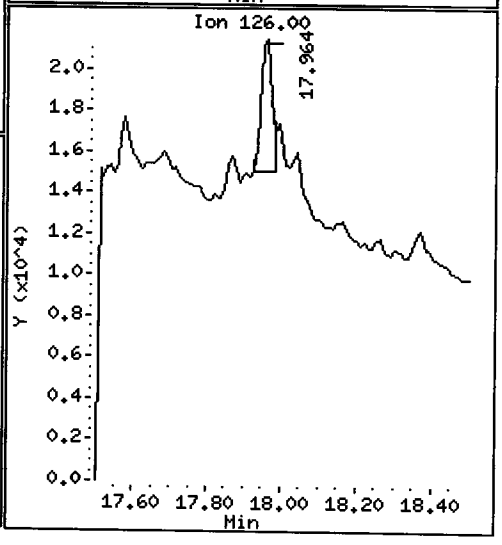


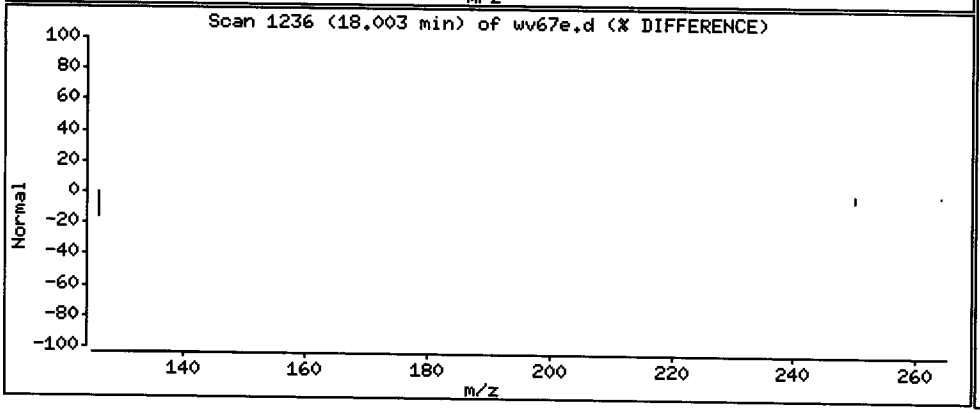












Data File: /chem3/nt11.i/20130627.b/wv67e.d

Date : 27-JUN-2013 10:51

Client ID: UP-CB-B8-20130626-W

Instrument: nt11.i

Sample Info: WV67E

Volume Injected (uL): 2.0

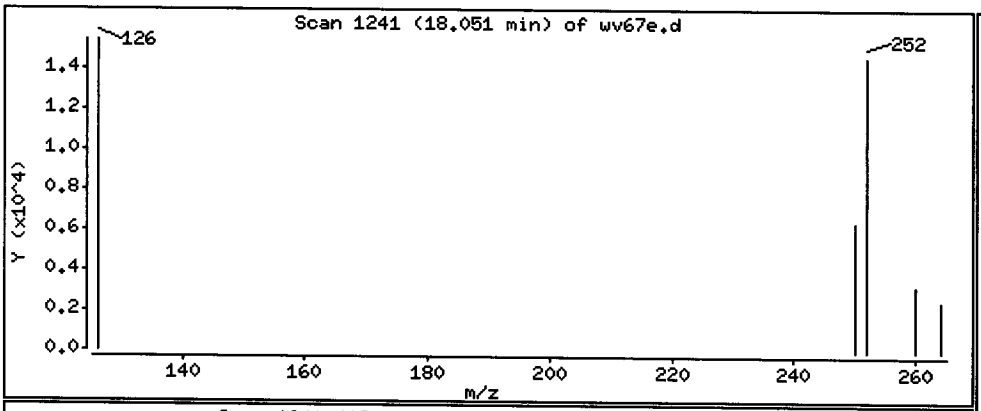
Operator: VTS

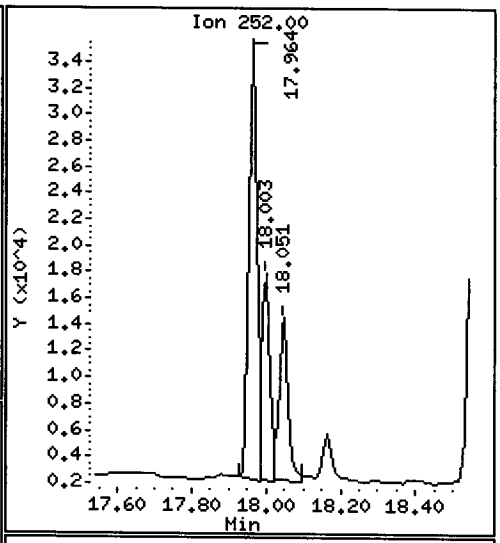
Column phase: Rxi-17Sil MS

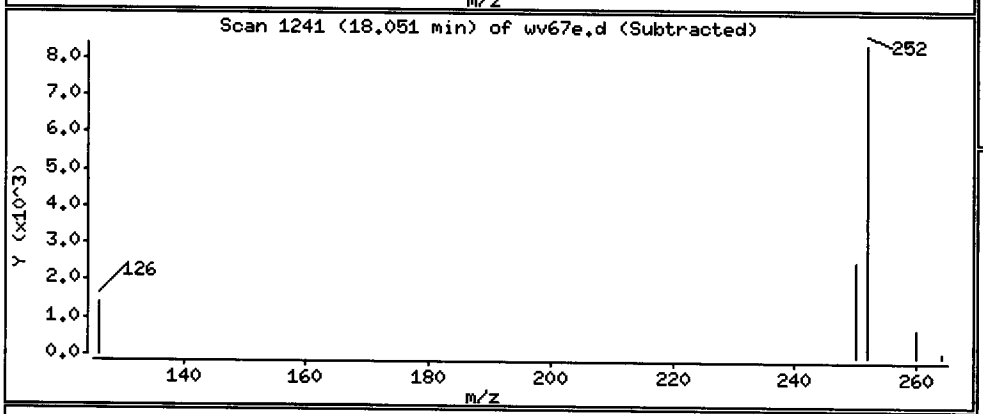
Column diameter: 0.25

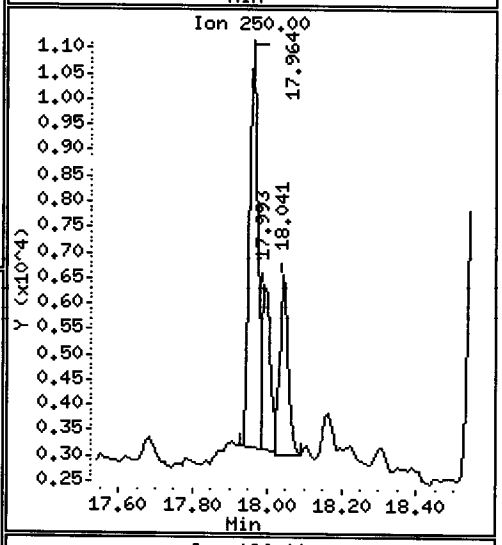
46 Benzo(j)fluoranthene

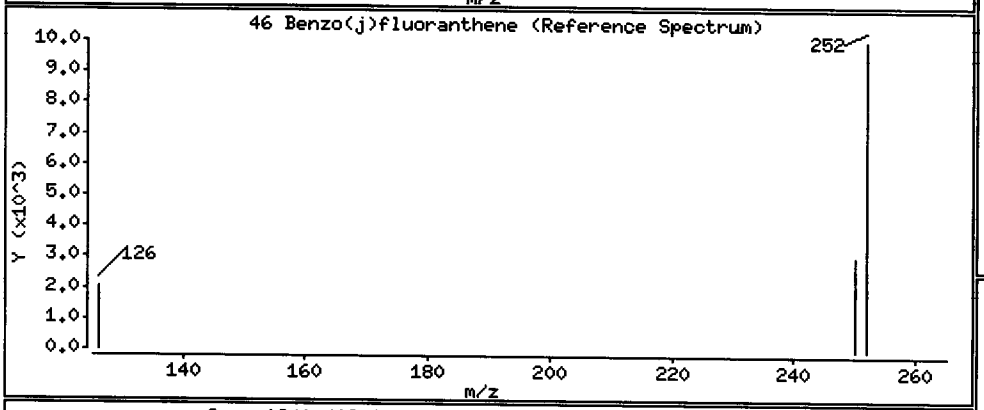
Concentration: 12.5 ug/L

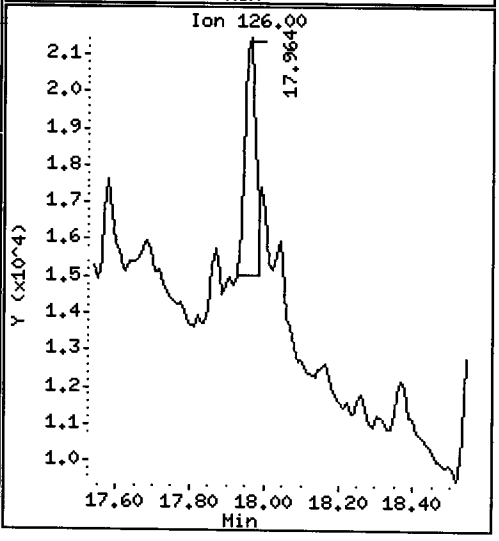


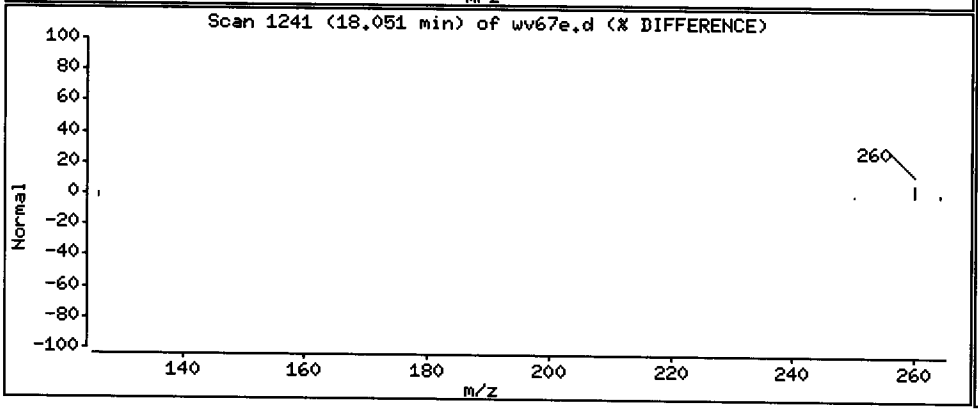












Data File: /chem3/nt11.i/20130627.b/wv67e.d

Date : 27-JUN-2013 10:51

Client ID: UP-CB-B8-20130626-W

Instrument: nt11.i

Sample Info: WV67E

Volume Injected (uL): 2.0

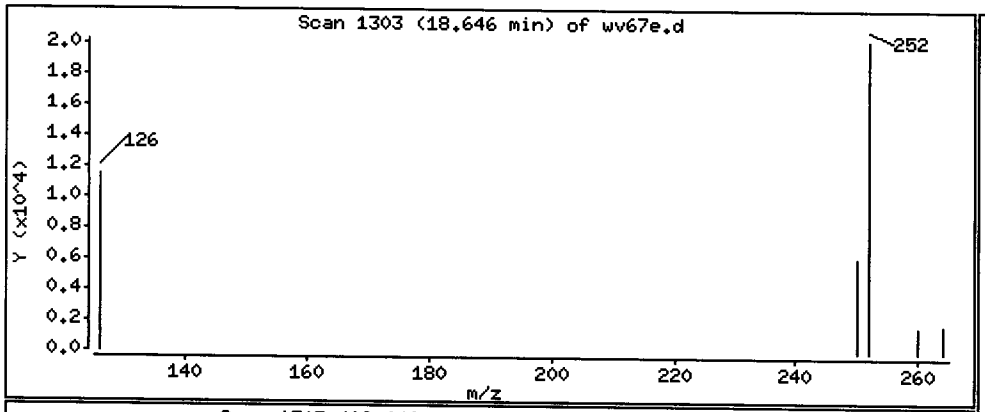
Operator: VTS

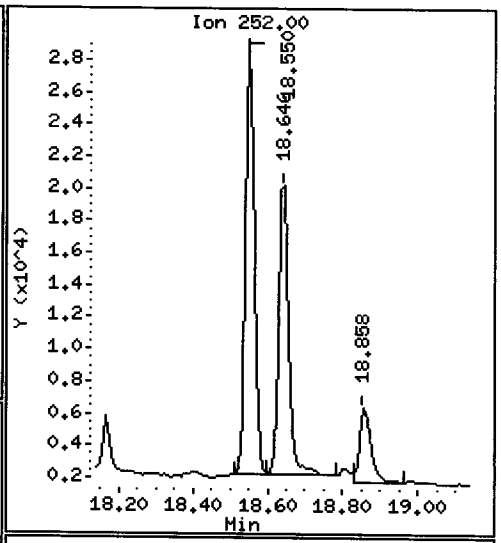
Column phase: Rx1-17Sil MS

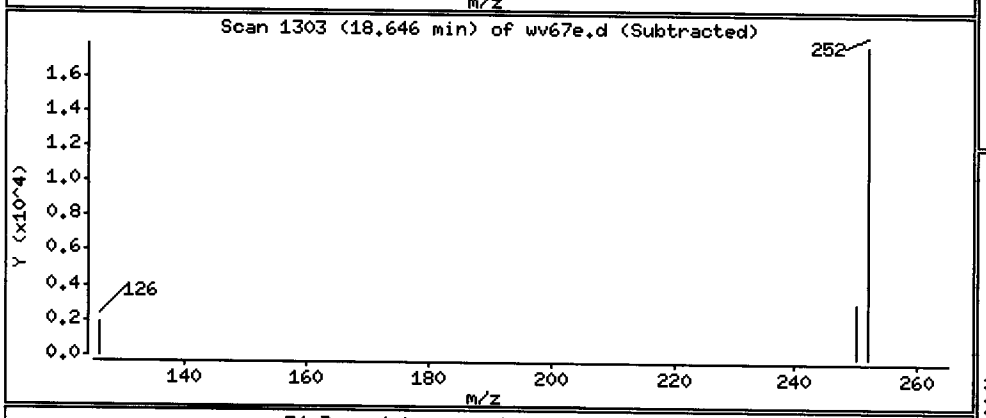
Column diameter: 0.25

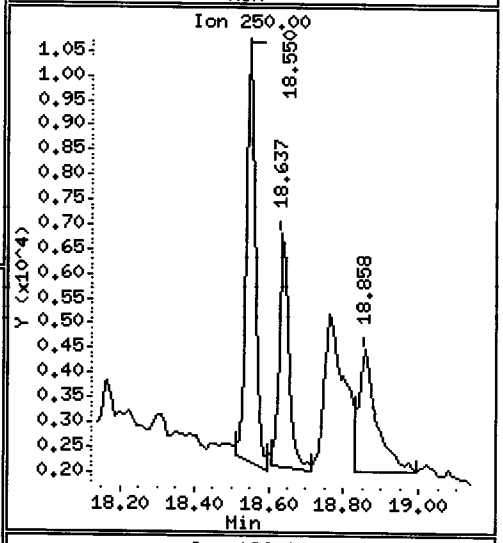
34 Benzo(a)pyrene

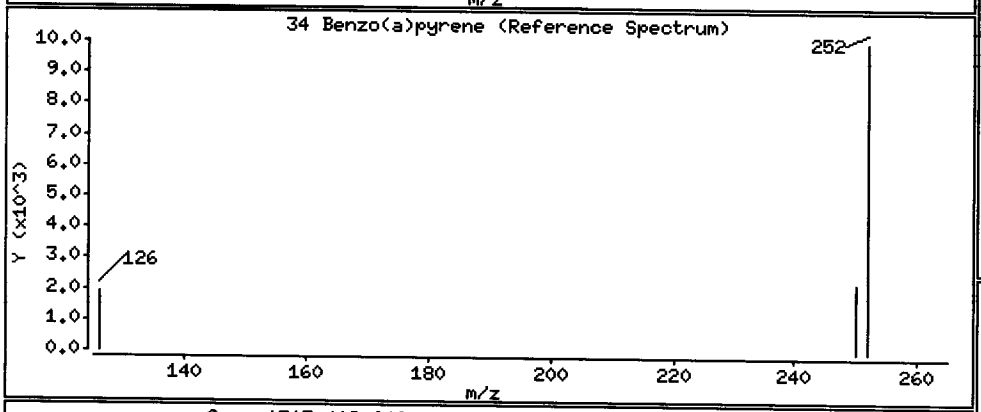
Concentration: 26.0 ug/L

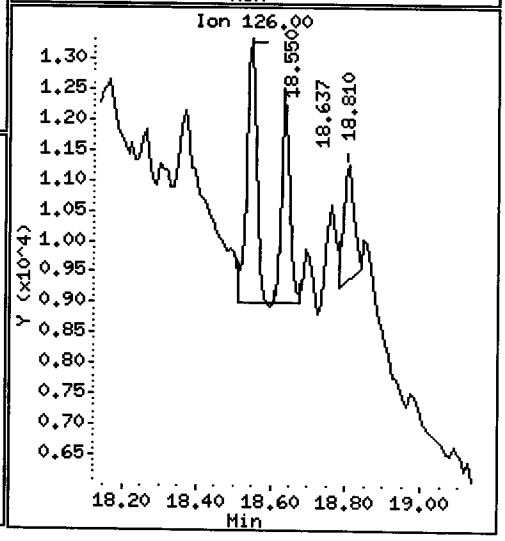


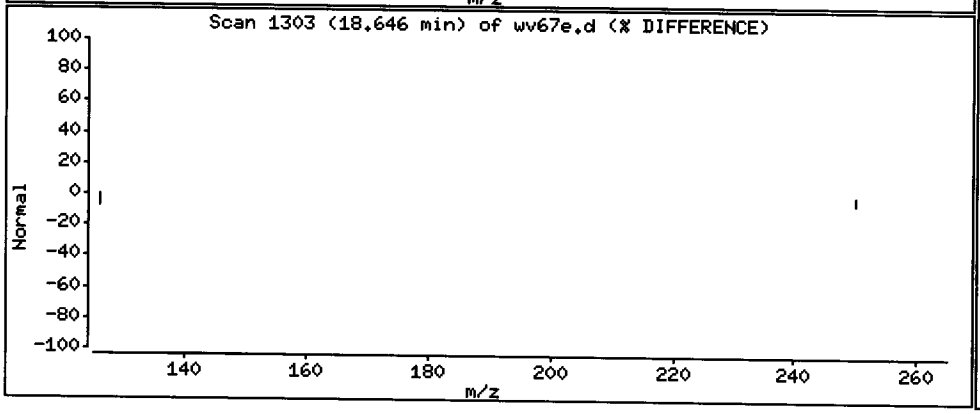












WV67 : 86646

Data File: /chem3/nt11.i/20130627.b/wv67e.d

Date : 27-JUN-2013 10:51

Client ID: UP-CB-B8-20130626-W

Instrument: nt11.i

Sample Info: WV67E

Volume Injected (uL): 2.0

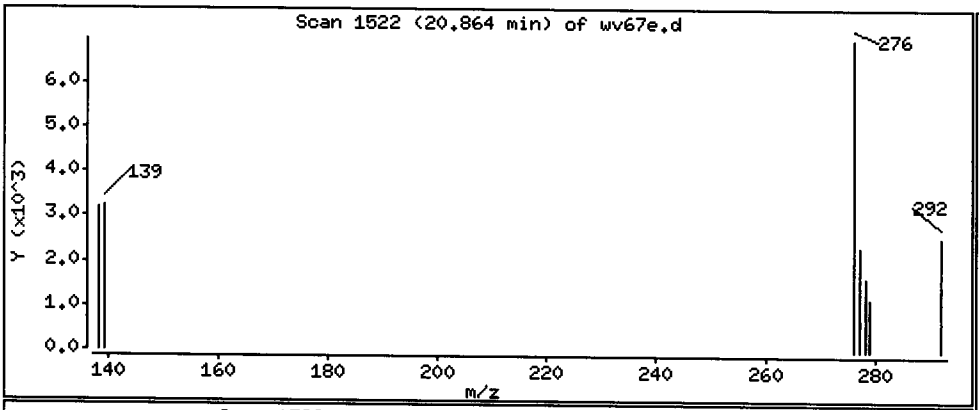
Operator: VTS

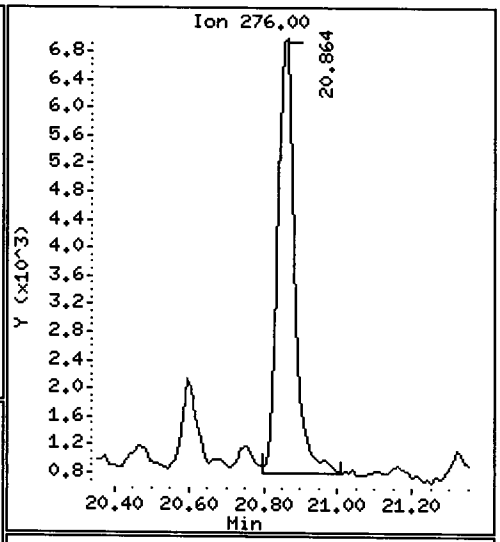
Column phase: Rxi-17Sil MS

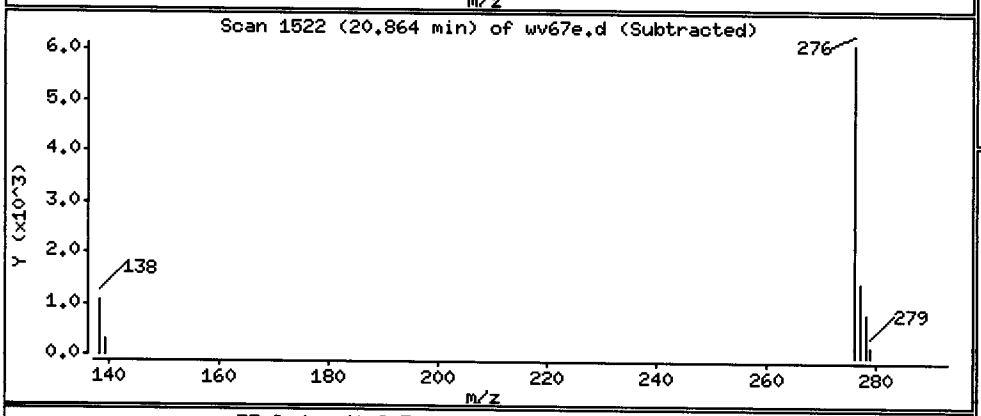
Column diameter: 0.25

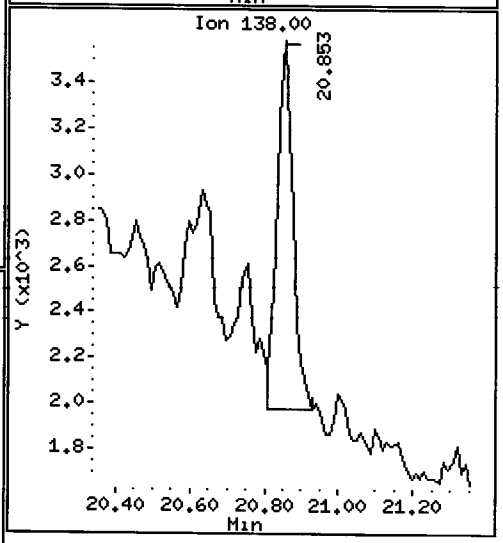
37 Indeno(1,2,3-cd)pyrene

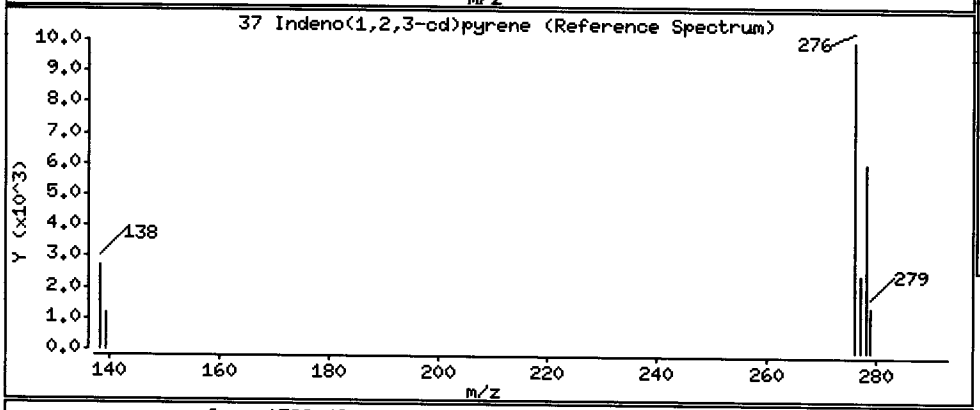
Concentration: 10.9 ug/L

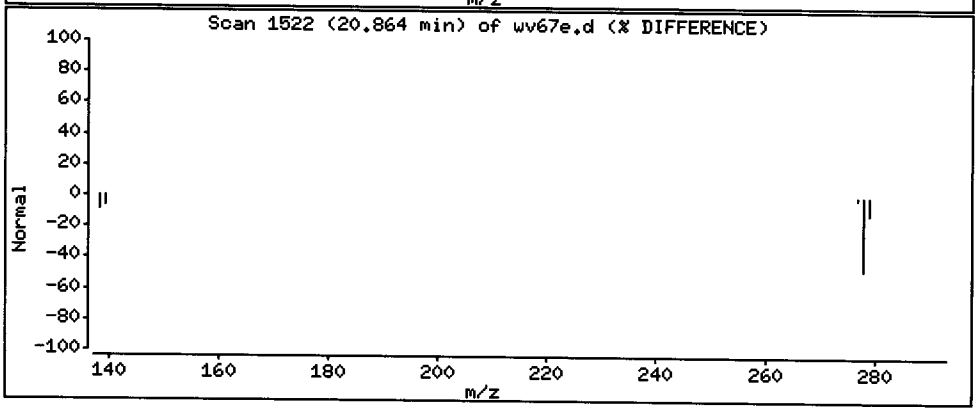












WV67:B8B-T

Data File: /chem3/nt11.i/20130627.b/wv67e.d

Date : 27-JUN-2013 10:51

Client ID: UP-CB-B8-20130626-W

Instrument: nt11.i

Sample Info: WV67E

Volume Injected (uL): 2.0

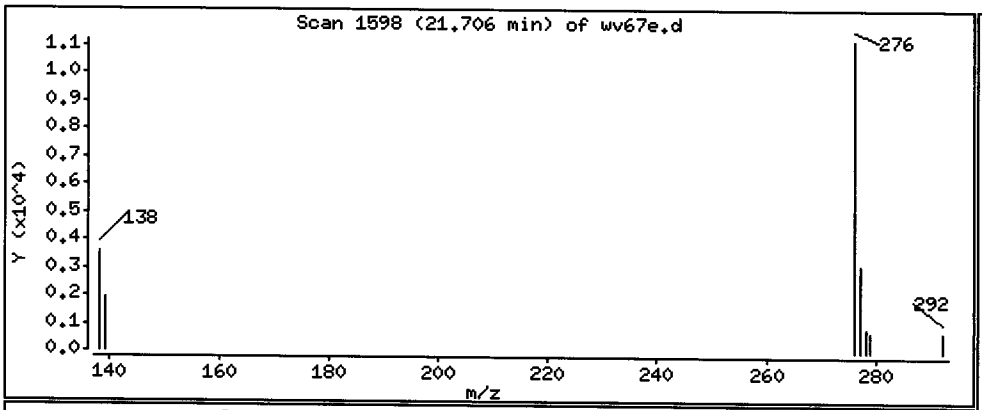
Operator: VTS

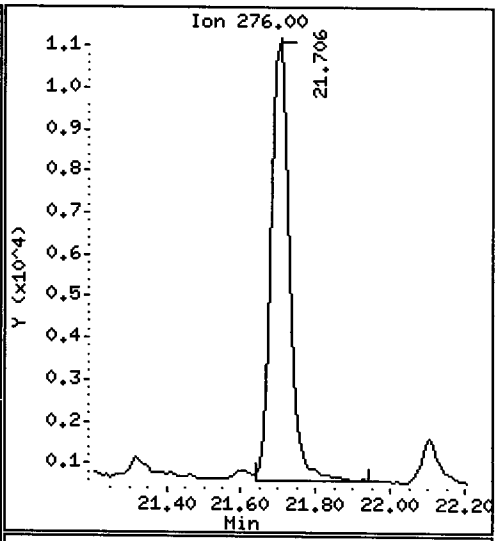
Column phase: Rxi-17Sil MS

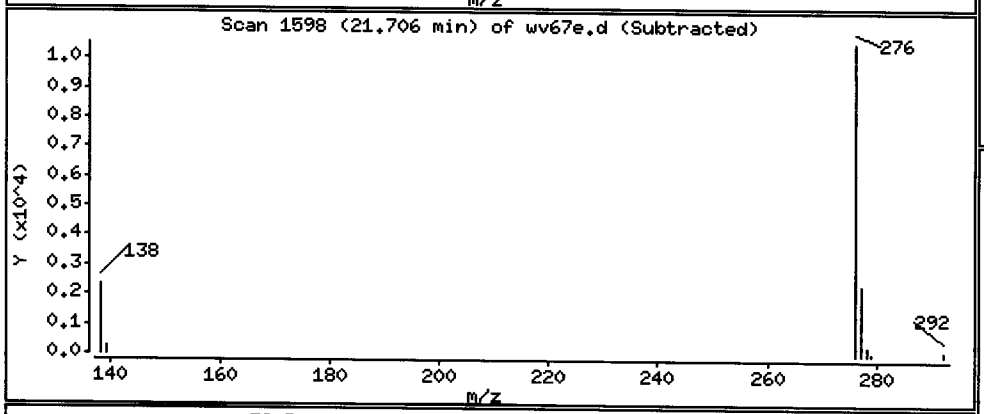
Column diameter: 0.25

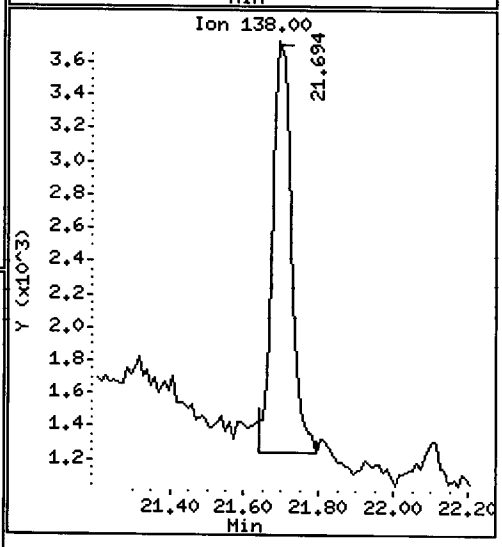
39 Benzo(g,h,i)perylene

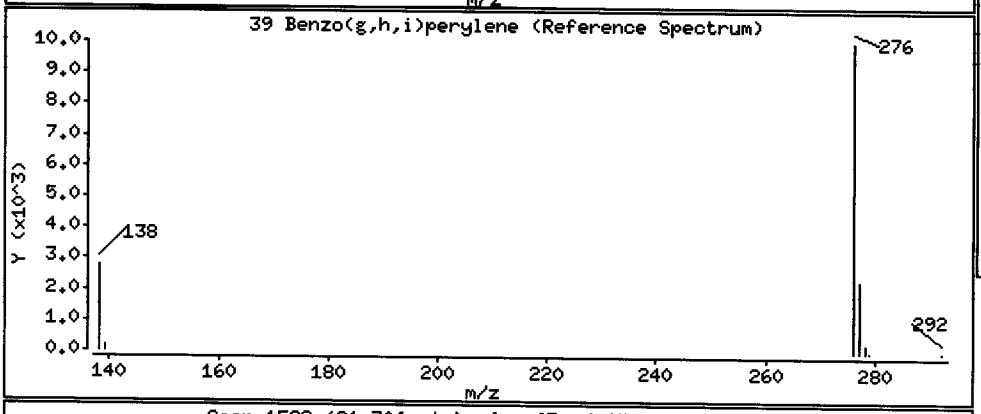
Concentration: 22.2 ug/L

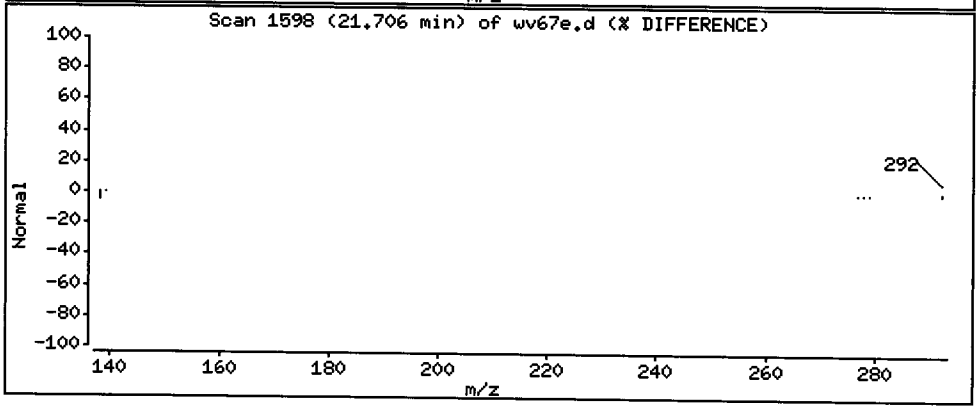






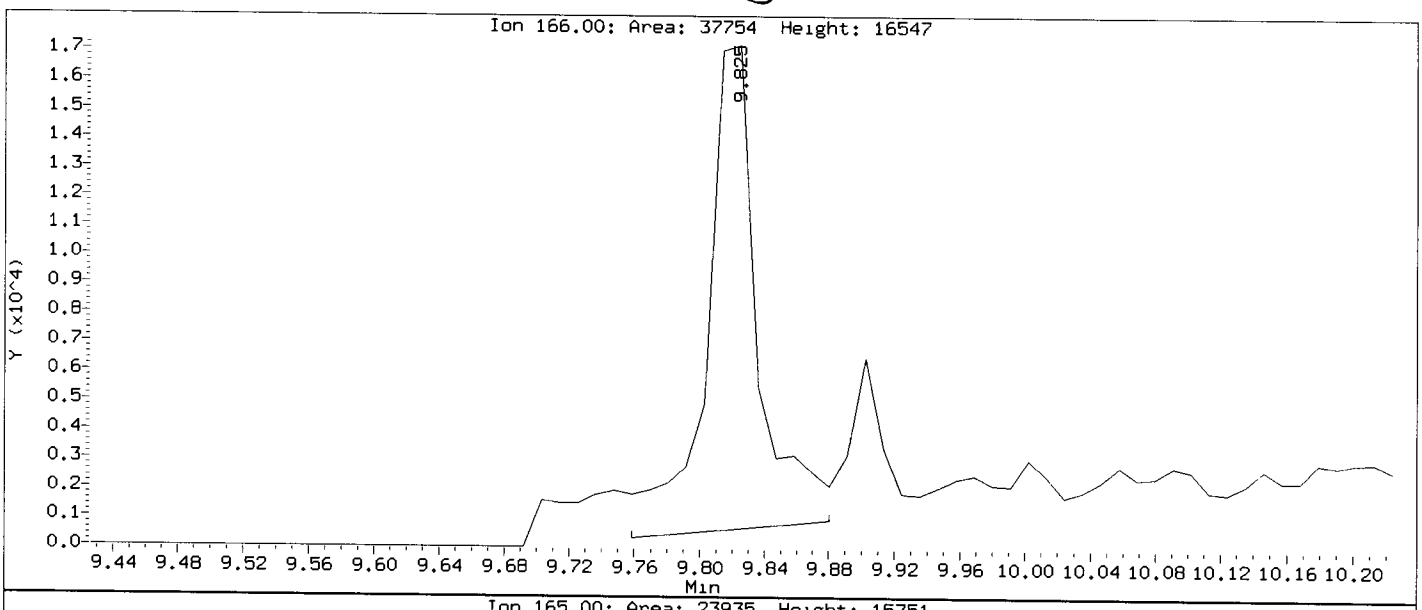


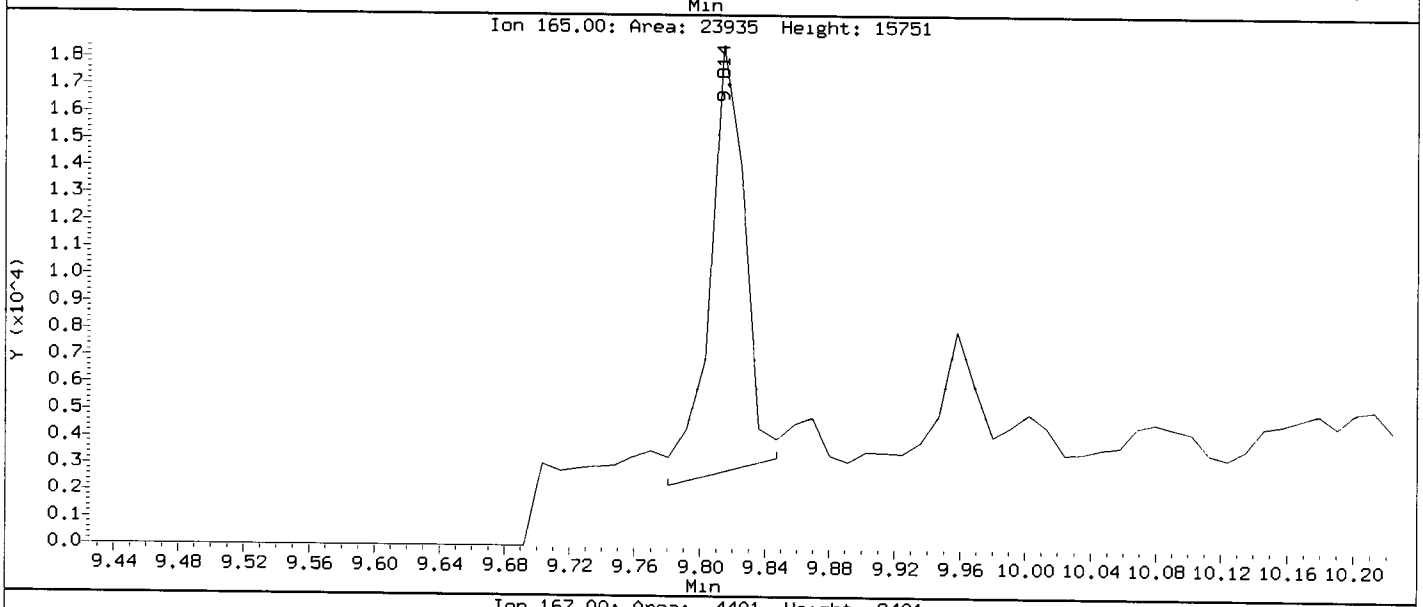


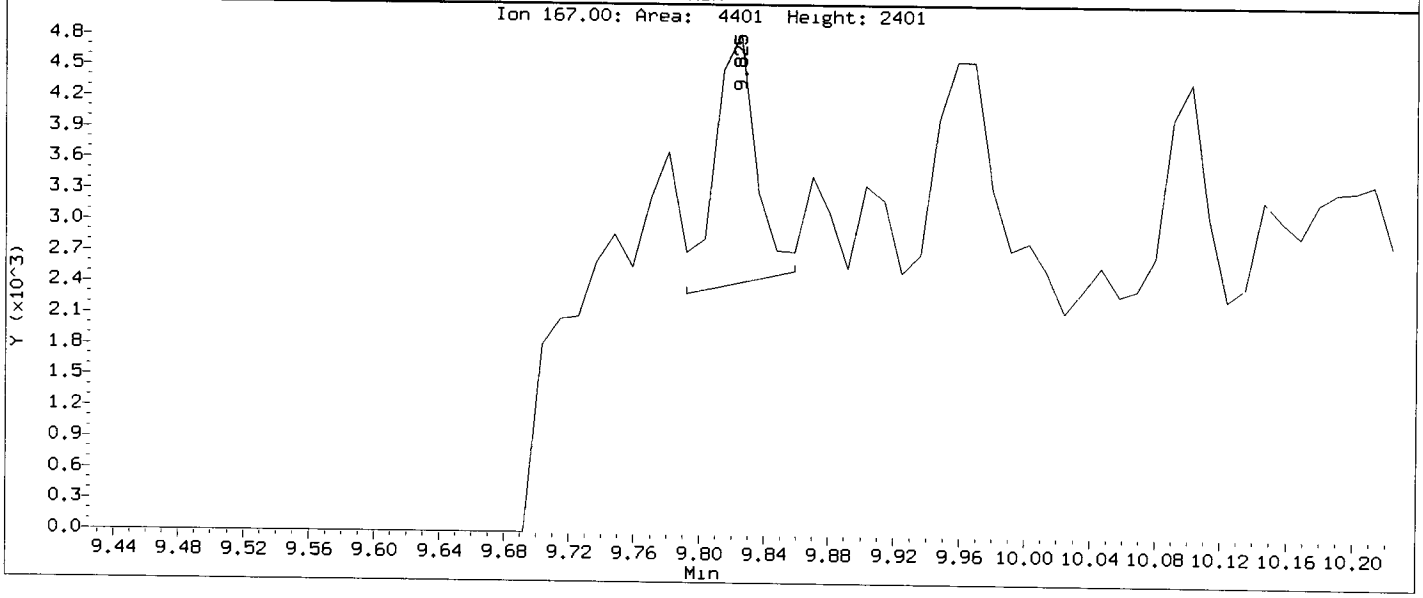


Data File: /chem3/nt11.1/20130627.b/wv67e.d
Injection Date: 27-JUN-2013 10:51
Instrument: nt11.1
Client Sample ID: UP-CB-B8-20130626-W

Compound: Fluorene
CAS Number:



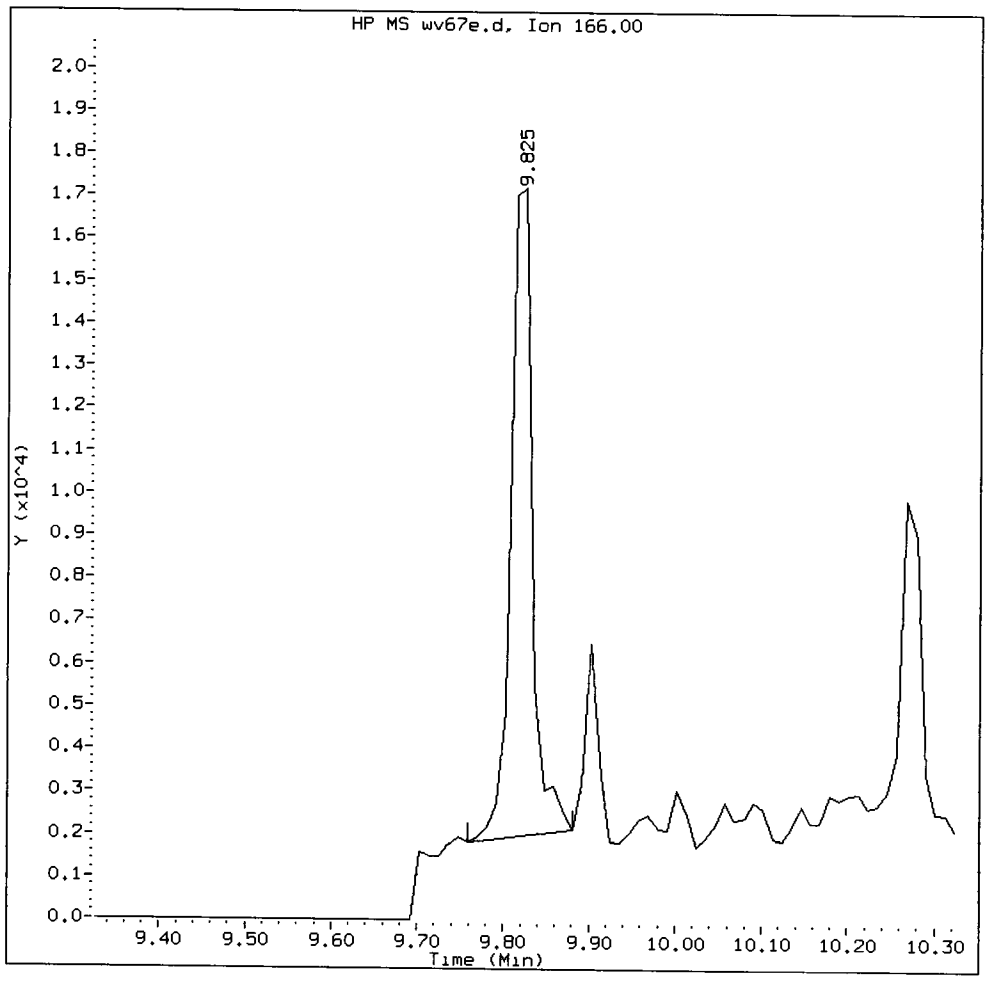




WV67.0604

WV67E, /chem3/nt11.i/20130627.b/wv67e.d

Fluorene Amount: 27.46 Area: 27017



MANUAL INTEGRATION for Fluorene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VJ Date: 6-27-13

CO-ELUTION SUMMARY FOR FILE - wv67e.d

Lab ID: WV67E, Method: lowsim.m, Instrument: nt11.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Pesticide Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WV67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8081B) Pest – Water
Separatory Funnel (3510C) (SOP # 3311S)

Preparation Test Pest # 1(PESWSI) In-House (0.05-0.1ppb)

ARI Job No(s) WV67 Page 1 of 1 Batch set up by: TH

Bottle #	ARI Sample I.D.	Volume Extracted	(Opt/REQ) Acid Clean (5mL)	(Opt/REQ) Sulfur Clean 4.5mL+0.5mL (5mL) Ethyl Acetate? 1 2 3	(Opt) Silica Gel Clean (1:5) Any Color	Final Effective Volume	Volume to Lab	Comment	Verify Client ID / Analyst/Date
	WV67 MBW	500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		Analyst/Date
	SBW	500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		Verify pH is 5-9
	SBW Dup.	500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		AC 6-26-13
	E ~~QLS~~	500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		Analyst/Date
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		KD 80-85°C
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		Hexane Exchange (2 X 20mL) 100°C 1 2 3 4 5 6
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		YC 6/26/13 Analyst/Date
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		TurboVap 1 2 3 Pre-Cleanups (4mL=10mL Hexane Exchange)
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		TH 6/26/13 Analyst/Date
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		TurboVap 1 2 3 Post Cleanups
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
Analyst/Date AC 6-26-13				TH ~~AC~~ 6-26-13		TH 6/26/13	TH 6/26/13	Reviewed by/ Date TH 6/23/13	Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N (B000151)	2µg/mL	100µL	4/30/2014	AC	WW
Spike (Freezer)	3 (B000650)	0.5/1/5µg/mL	200µL	12/9/13	AC	WW
~~QLS Spike (Freezer)~~	~~10 ( )~~	~~0.25-2.5µg/mL~~	~~50µL~~			
Extraction Time: 8:35						

SPECIAL INSTRUCTIONS: 1. Verify pH is 5-9 2. Adjust pH (if necessary=Analyst Notes). 3. Add Surr/Spike. 4. Add 30mL DCM to 500mL sample bottle and perform a bottle rinse. 5. Extract 3X with 30mL DCM. 6. KD (NO Drying Column) at 80-85°C. 7. Exchange (2 X with 20mL) Hexane at 100°C. 8. TurboVap to 4mL=10mL Hexane Exchange. 9. TurboVap. 10. Clean-ups? (Any color after Acid or Sulfur Clean=REQ SPE. 11. TurboVap (if Silica Clean). 12. Vial with Hexane. (Note: Ethyl Acetate is needed to recover Endrin Aldehyde in Sulfur Clean, if No Acid Clean).

A. Archive (Y) N

Reagent and Solutions Identification

(8081B) Pest – Water
Separatory Funnel (3510C) (SOP # 3311S)

ARI Job No(s) WV67

(8081B) Pest Aqueous:	Analyst/Date
Separatory Funnel Station:	Sep. Funnel
Methylene Chloride: (I# 8279)	AC 6-26-13
Anhydrous Sodium Sulfate: (I# 8185 + jar date 6-2-13)	
KD Station:	KD
Methylene Chloride: (I# 8279)	YL 6/26/13
Hexane: (I# 8281)	
Vialing Station:	Vialing
Hexane: (I# 8281)	TH 6/26/13
Concentrated Sulfuric Acid: (I# N/A)	
Ethyl Acetate: (I# 6079)	
Tetrabutylammonium hydrogensulfate (TBAS): (H# 170)	
Sodium Sulfite: (I# 7704)	
Silica Gel (SPE) Darts: (I# NA)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WV67 Client ID: SAIC

Parameter: PEST Client Project: NPDES SAMPLING SUPPORT

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)= E = 30% (reported)	AC 6-26-13
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

Pesticide Raw Data
Initial Calibration

ARI Job ID: WV67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 06/19/13 Internal Standard ID 2506-1 Expiration 07/26/13

Endrin/DDT Breakdown <15%? YES / NO / NA
ICal Meets %RSD & r^2 Criteria YES / NO
Manual Integrations for ICal? YES / NO
Minimum Response S/N Met YES / NO

ICV Exceeding ±20%? YES / NO
ICV Exceeding ±30%? YES / NO
Linear Fits Used? YES / NO
Quadratic Fits Used? YES / NO
Calibration Points Dropped? YES NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
DS	B370	08/29/13	INDA ICV	2023-1	05/16/13
IB	1982-2	05/16/13	WND ICV	2064-1	01/17/14
INDA	B339	12/10/13	HCB/HCBD	1836-2	05/28/12
Toxaphene	B558	05/29/14			
WND	B559	07/27/13			

Restek

Detail problems, corrective actions and/or other pertinent information below:

Analyst: JK **Date:** 06/24/13

Reviewer: VD **Date:** 6/25/13

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 06/19/13 Analysis: Pest Analyst: JR

Column 1 Serial No.: 1085624 Column Type: CLP1

Column 2 Serial No.: 109 4709 Column Type: CLP2

GC Method: Pest ICal Date: 2µL ~~ug/mL~~

IS	Ical/Ccal	ICV
2006-1	B339	2083-1
	B559	2064-1
	B959	1836-2
	B370	

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID
1	19-JUN-2013 17:21	0619a010.d	1	IB
2	19-JUN-2013 17:39	0619a011.d	1	DS
3	19-JUN-2013 17:57	0619a012.d	1	INDAE
4	19-JUN-2013 18:14	0619a013.d	1	INDAA
5	19-JUN-2013 18:32	0619a014.d	1	INDAB
6	19-JUN-2013 18:50	0619a015.d	1	INDAC
7	19-JUN-2013 19:08	0619a016.d	1	INDAD
8	19-JUN-2013 19:26	0619a017.d	1	INDAF
9	19-JUN-2013 19:44	0619a018.d	1	INDAG
10	19-JUN-2013 20:01	0619a019.d	1	INDA ICV
11	19-JUN-2013 20:19	0619a020.d	1	HCB/HCBD
12	19-JUN-2013 23:17	0619a030.d	1	TOXAPHENE
13	19-JUN-2013 20:55	0619a022.d	1	WNDE
14	19-JUN-2013 21:13	0619a023.d	1	WNDA
15	19-JUN-2013 21:30	0619a024.d	1	WNDB
16	19-JUN-2013 21:48	0619a025.d	1	WNDC
17	19-JUN-2013 22:06	0619a026.d	1	WNDD
18	19-JUN-2013 22:24	0619a027.d	1	WNDF
19	19-JUN-2013 22:42	0619a028.d	1	WNDG
20	19-JUN-2013 22:59	0619a029.d	1	WND ICV
21	19-JUN-2013 23:35	0619a031.d	1	TECHCHLOR
22	19-JUN-2013 23:53	0619a032.d	1	TECH ICV
23	20-JUN-2013 00:10	0619a033.d	1	DS
24	20-JUN-2013 00:28	0619a034.d	1	INDAE#1
25	20-JUN-2013 00:46	0619a035.d	1	WNDE#1
26	20-JUN-2013 01:04	0619a036.d	1	WT36MBS1
27	20-JUN-2013 01:22	0619a037.d	1	WT36LCS1
28	20-JUN-2013 01:40	0619a038.d	1	WT36LCSDS
29	20-JUN-2013 01:57	0619a039.d	1	WT36A
30	20-JUN-2013 02:15	0619a040.d	1	WS91A
31	20-JUN-2013 02:33	0619a041.d	1	WS91AMS
32	20-JUN-2013 02:51	0619a042.d	1	WS91AMSD
33	20-JUN-2013 03:09	0619a043.d	1	WT53MBW1
34	20-JUN-2013 03:26	0619a044.d	1	WT53LCSW1
35	20-JUN-2013 03:44	0619a045.d	1	WT53LCSDW
36	20-JUN-2013 04:02	0619a046.d	1	DS
37	20-JUN-2013 04:20	0619a047.d	1	INDAE#2
38	20-JUN-2013 04:38	0619a048.d	1	WNDE#2
39	20-JUN-2013 04:55	0619a049.d	1	WT53QLS
40	20-JUN-2013 05:13	0619a050.d	1	WT53A
41	20-JUN-2013 05:31	0619a051.d	1	WT53B
42	20-JUN-2013 05:49	0619a052.d	1	WT53C
43	20-JUN-2013 06:07	0619a053.d	1	WT53D
44	20-JUN-2013 06:24	0619a054.d	1	WT53E
45	20-JUN-2013 06:42	0619a055.d	1	WT07MBW1
46	20-JUN-2013 07:00	0619a056.d	1	WT07LCSW1
47	20-JUN-2013 07:18	0619a057.d	1	WT07LCSDW
48	20-JUN-2013 07:36	0619a058.d	1	WT07QLS
49	20-JUN-2013 07:53	0619a059.d	1	DS
50	20-JUN-2013 08:11	0619a060.d	1	INDAE#3
51	20-JUN-2013 08:29	0619a061.d	1	WNDE#3
52	20-JUN-2013 08:47	0619a062.d	1	WT07A
53	20-JUN-2013 09:05	0619a063.d	1	WT07B
54	20-JUN-2013 09:23	0619a064.d	1	WS90MBW1
55	20-JUN-2013 09:41	0619a065.d	1	WS90LCSS1
56	20-JUN-2013 09:59	0619a066.d	1	WS90LCSDS1
57	20-JUN-2013 10:16	0619a067.d	1	WS90QLS
58	20-JUN-2013 10:34	0619a068.d	1	WS90A
59	20-JUN-2013 10:52	0619a069.d	1	WS90B
60	20-JUN-2013 11:11	0619a070.d	1	DS
61	20-JUN-2013 11:28	0619a071.d	1	INDAE#4
62	20-JUN-2013 11:46	0619a072.d	1	WNDE#4

JR 06/25/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130619PEST.b/ical-1.b

ARI Job No.: IB Method: PEST0619.m Instrument: ecd6.i Date: 19-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1721	0619a010.d	IB		1	NO MANUAL INTEGRATION
1739	0619a011.d	DS		1	NO MANUAL INTEGRATION
1757	0619a012.d	INDAE		1	NO MANUAL INTEGRATION
1814	0619a013.d	INDAA		1	NO MANUAL INTEGRATION
1832	0619a014.d	INDAB		1	NO MANUAL INTEGRATION
1850	0619a015.d	INDAC		1	NO MANUAL INTEGRATION
1908	0619a016.d	INDAD		1	NO MANUAL INTEGRATION
1926	0619a017.d	INDAF		1	NO MANUAL INTEGRATION
1944	0619a018.d	INDAG		1	NO MANUAL INTEGRATION
2001	0619a019.d	INDA ICV		1	NO MANUAL INTEGRATION
2019	0619a020.d	HCB/HCBD ICV		1	NO MANUAL INTEGRATION
2317	0619a030.d	TOXAPHENE		1	NO MANUAL INTEGRATION
2055	0619a022.d	WNDE		1	NO MANUAL INTEGRATION
2113	0619a023.d	WNDA		1	NO MANUAL INTEGRATION
2130	0619a024.d	WNDB		1	NO MANUAL INTEGRATION
2148	0619a025.d	WNDC		1	NO MANUAL INTEGRATION
2206	0619a026.d	WNDD		1	NO MANUAL INTEGRATION
2224	0619a027.d	WNDF		1	NO MANUAL INTEGRATION
2242	0619a028.d	WNDG		1	NO MANUAL INTEGRATION
2259	0619a029.d	WND ICV		1	NO MANUAL INTEGRATION

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a023.d
Level 2: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a024.d
Level 3: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a025.d
Level 4: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a026.d
Level 5: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a030.d
Level 6: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a027.d
Level 7: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a028.d
Level 8: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a030.d

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
1 Hexachlorobutadiene	1.90255	1.82746	1.72475	1.80538	1.63952	1.70403		
	1.70205	+++++					1.75796	5.148
3 Hexachlorobenzene	1.48607	1.38489	1.25065	1.29219	1.15823	1.18938		
	1.17400	+++++					1.27649	9.523
4 alpha-BHC	1.54387	1.55472	1.51023	1.66746	1.57221	1.68013		
	1.70242	+++++					1.60443	4.784
5 gamma-BHC (Lindane)	1.43893	1.45162	1.38660	1.51406	1.41885	1.50915		
	1.52105	+++++					1.46289	3.596
6 beta-BHC	0.72267	0.69399	0.62885	0.65445	0.59777	0.61724		
	0.61539	+++++					0.64719	7.088
7 delta-BHC	1.31076	1.33767	1.29222	1.44170	1.36734	1.47377		
	1.50098	+++++					1.38921	5.957

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Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
8 Heptachlor	1.46111	1.44992	1.37073	1.46029	1.33959	1.38629		
	1.35896	+++++					1.40384	3.694
9 Aldrin	1.38090	1.38032	1.30360	1.42040	1.31018	1.37139		
	1.35489	+++++					1.36024	3.048
38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Heptachlor epoxide b	1.37134	1.33627	1.22935	1.30893	1.18548	1.21388		
	1.18211	+++++					1.26105	6.081
12 gamma-Chlordane	1.34452	1.32741	1.23423	1.33704	1.23398	1.29746		
	1.29333	+++++					1.29542	3.551
13 alpha-Chlordane	1.35279	1.31541	1.21079	1.29571	1.18577	1.23709		
	1.22879	+++++					1.26091	4.844
14 Endosulfan I	1.29513	1.26141	1.15224	1.22045	1.10253	1.12302		
	1.09618	+++++					1.17871	6.801
15 4,4'-DDE	1.01389	0.98313	0.90492	0.95484	0.88046	0.93369		
	0.96207	+++++					0.94757	4.806

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Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
16 Dieldrin	1.28716	1.29785	1.22354	1.30837	1.19093	1.21674		
	1.19385	+++++					1.24549	4.066
17 Endrin	1.26711	1.27002	1.20537	1.25522	1.15780	1.15955		
	1.12413	+++++					1.20560	4.958
18 4,4'-DDD	1.20014	1.19876	1.14202	1.17837	1.10056	1.13288		
	1.10599	+++++					1.15125	3.621
19 Endosulfan II	1.28259	1.26594	1.19796	1.24319	1.13952	1.14153		
	1.10718	+++++					1.19684	5.775
20 4,4'-DDT	1.15079	1.15997	1.10760	1.17386	1.09155	1.13724		
	1.12168	+++++					1.13467	2.595
21 Endrin aldehyde	1.02599	1.01548	0.94464	0.98095	0.88920	0.89428		
	0.87136	+++++					0.94598	6.675
22 Methoxychlor	0.60895	0.59288	0.53434	0.53623	0.48400	0.49787		
	0.50489	+++++					0.53702	8.891
23 Endosulfan sulfate	1.12427	1.11725	1.04391	1.08924	0.99727	1.02307		
	1.00241	+++++					1.05677	5.047
24 Endrin ketone	1.47123	1.40999	1.29907	1.33968	1.20839	1.24100		
	1.21628	+++++					1.31223	7.673

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Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
26 Aroclor-1016(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
27 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

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Target Version : 3.50
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Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
28 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
29 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

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Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(6)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
30 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
31 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

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Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
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Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
32 Aroclor-1260(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
33 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

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Start Cal Date : 19-JUN-2013 17:57
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
34 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

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Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
35 Toxaphene(1)	+++++	+++++	+++++	+++++	0.05135	+++++		
	+++++	0.05135					0.05135	0.000
(2)	+++++	+++++	+++++	+++++	0.03543	+++++		
	+++++	+++++					0.03543	0.000
(3)	+++++	+++++	+++++	+++++	0.05845	+++++		
	+++++	+++++					0.05845	0.000
(4)	+++++	+++++	+++++	+++++	0.05954	+++++		
	+++++	+++++					0.05954	0.000
(5)	+++++	+++++	+++++	+++++	0.03954	+++++		
	+++++	+++++					0.03954	0.000
(6)	+++++	+++++	+++++	+++++	0.03356	+++++		
	+++++	+++++					0.03356	0.000
39 2,4-DDE	0.87274	0.86308	0.83381	0.82491	0.81805	0.80267		
	0.74462	+++++					0.82284	5.152
40 2,4-DDD	0.77761	0.77575	0.74597	0.74361	0.73419	0.72905		
	0.68555	+++++					0.74168	4.206
41 2,4-DDT	0.88597	0.88005	0.86843	0.85814	0.85985	0.84955		
	0.80325	+++++					0.85789	3.174

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
43 Oxychlordane	1.15065	1.13104	1.11190	1.08121	1.07576	1.03688		
	0.95359	+++++					1.07729	6.160
44 trans-Nonachlor	1.35198	1.34250	1.32180	1.31589	1.32536	1.33307		
	1.26444	+++++					1.32215	2.140
45 cis-Nonachlor	1.49934	1.50007	1.44006	1.44337	1.45793	1.46723		
	1.40485	+++++					1.45898	2.327
46 Mirex	0.98377	0.93549	0.90240	0.86728	0.86159	0.86043		
	0.82136	+++++					0.89033	6.139
47 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
59 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
48 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
49 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
50 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
51 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
55 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
56 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
60 Kepone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
61 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
$ 2 Tetrachloro-m-xylene	1.15603	1.13307	1.06647	1.12441	1.02482	1.05901		
	1.04003	+++++					1.08626	4.688
$ 25 Decachlorobiphenyl	1.13367	1.09978	0.99247	1.01808	0.91736	0.94702		
	0.93976	+++++					1.00688	8.224

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a023.d
Level 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a024.d
Level 3: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a025.d
Level 4: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a026.d
Level 5: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a030.d
Level 6: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a027.d
Level 7: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a028.d
Level 8: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a030.d/0619a030.cdf

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
1 Hexachlorobutadiene	1.77542	1.77383	1.66890	1.76599	1.56096	1.58663		
	1.45961	+++++					1.65591	7.511
3 Hexachlorobenzene	1.90014	1.75831	1.56896	1.61188	1.42856	1.42008		
	1.34315	+++++					1.57587	12.689
4 alpha-BHC	1.89067	1.95848	1.86011	2.02052	1.85761	1.92559		
	1.86606	+++++					1.91129	3.192
5 gamma-BHC (Lindane)	1.71793	1.72173	1.63161	1.77057	1.62732	1.68032		
	1.68059	+++++					1.69001	3.036
6 beta-BHC	1.05921	0.95999	0.81135	0.80846	0.72028	0.73231		
	0.70444	+++++					0.82800	16.171
7 delta-BHC	1.64820	1.66251	1.57188	1.72634	1.59922	1.65937		
	1.66482	+++++					1.64748	3.028

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
8 Heptachlor	1.93228	1.79619	1.66661	1.72620	1.52645	1.48015		
	1.34701	+++++					1.63927	12.258
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
9 Aldrin	1.83405	1.66591	1.53672	1.62235	1.44396	1.43019		
	1.33013	+++++					1.55190	10.956
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Heptachlor epoxide b	1.81675	1.63979	1.40438	1.43813	1.26288	1.22389		
	1.11487	+++++					1.41439	17.374
12 gamma-Chlordane	1.82983	1.64233	1.46128	1.50701	1.34625	1.35044		
	1.28248	+++++					1.48852	12.951
13 alpha-Chlordane	1.60468	1.49416	1.35051	1.40092	1.25024	1.25659		
	1.19492	+++++					1.36457	10.765
14 Endosulfan I	1.51918	1.41686	1.27203	1.32343	1.17177	1.14586		
	1.04761	+++++					1.27096	12.890
15 4,4'-DDE	1.53674	1.45951	1.32415	1.36063	1.17900	1.14945		
	1.02941	+++++					1.29127	13.988

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
16 Dieldrin	1.59950	1.45277	1.32593	1.35123	1.15396	1.10181		
	0.99360	+++++					1.28269	16.499
17 Endrin	1.90141	1.86720	1.72775	1.74870	1.52078	1.45639		
	1.32506	+++++					1.64961	13.234
18 4,4'-DDD	2.10942	1.99577	1.81214	1.84639	1.60315	1.58015		
	1.48408	+++++					1.77587	12.988
19 Endosulfan II	1.97192	1.91679	1.77518	1.83122	1.58158	1.56461		
	1.45551	+++++					1.72812	11.340
20 4,4'-DDT	1.74714	1.69628	1.59021	1.63006	1.43826	1.47388		
	1.43879	+++++					1.57352	8.000
21 Endrin aldehyde	1.58468	1.51144	1.33959	1.35940	1.19370	1.18610		
	1.11175	+++++					1.32666	13.257
22 Endosulfan sulfate	1.73214	1.64211	1.47745	1.51465	1.34424	1.33317		
	1.25492	+++++					1.47124	11.811
23 Methoxychlor	0.73051	0.70763	0.62021	0.60272	0.52386	0.51201		
	0.40225	+++++					0.58560	19.746
24 Endrin ketone	1.63883	1.60020	1.48325	1.53566	1.34995	1.36416		
	1.32073	+++++					1.47040	8.684

Analytical Resources, Inc.

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Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
26 Aroclor-1016(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
27 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
28 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
29 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
30 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
31 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

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Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
32 Aroclor-1260 (1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
33 Aroclor-1262 (1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
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Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
34 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
35 Toxaphene(1)	+++++	+++++	+++++	+++++	0.05597	+++++		
	+++++	+++++					0.05597	0.000

Analytical Resources, Inc.

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Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	0.08258	+++++		
	+++++	+++++					0.08258	0.000
(3)	+++++	+++++	+++++	+++++	0.09061	+++++		
	+++++	+++++					0.09061	0.000
(4)	+++++	+++++	+++++	+++++	0.06531	+++++		
	+++++	+++++					0.06531	0.000
(5)	+++++	+++++	+++++	+++++	0.08305	+++++		
	+++++	+++++					0.08305	0.000
38 2,4-DDE	0.80626	0.82048	0.79847	0.78354	0.75300	0.69902		
	0.61137	+++++					0.75316	9.901
39 2,4-DDD	1.13292	1.14334	1.11231	1.09801	1.08138	1.03514		
	0.92519	+++++					1.07547	7.001
40 2,4-DDT	1.20070	1.21618	1.21055	1.20015	1.18944	1.14928		
	1.03688	+++++					1.17188	5.412
41 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
42 Oxychlordane	1.05303	1.08292	1.07870	1.07429	1.05167	1.01445		
	0.94342	+++++					1.04264	4.756

Analytical Resources, Inc.

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Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
43 trans-Nonachlor	1.98806	2.04006	2.05919	2.05043	2.00581	1.96863		
	1.70892	+++++					1.97444	6.167
44 cis-Nonachlor	2.06223	2.12219	2.13854	2.12945	2.10040	2.07532		
	1.76577	+++++					2.05627	6.378
45 Mirex	1.11651	1.05520	0.99593	0.98159	0.96129	0.94571		
	0.90853	+++++					0.99497	7.061
46 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
56 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
57 Kepone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
58 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 2 Tetrachloro-m-xylene	1.53064	1.48891	1.36733	1.41327	1.22546	1.18954		
	1.04722	+++++					1.32319	13.239
$ 25 Decachlorobiphenyl	1.47476	1.42068	1.29648	1.32353	1.16810	1.19962		
	1.16903	+++++					1.29317	9.469

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-1.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0619a022	0619a023	0619a024	0619a025	0619a026	0619a027	0619a028
INJ.DATE:	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013
INJ.TIME:	20:55	21:13	21:30	21:48	22:06	22:24	22:42

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.312	2.262-2.362	+++++	+++++
*	54 1Bromo-2nitrobenzene	3.131	3.131	3.130	3.131	3.131	3.130	3.130	3.130	3.080-3.180	3.131	0.000
*	58 Hexabromobiphenyl	8.927	8.927	8.927	8.926	8.928	8.927	8.927	8.927	8.877-8.977	8.927	0.000
$	2 Tetrachloro-m-xylene	3.800	3.800	3.800	3.800	3.800	3.799	3.799	3.799	3.749-3.849	3.800	0.000
	3 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.140	4.090-4.190	+++++	+++++
	4 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.286	4.236-4.336	+++++	+++++
	5 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.569	4.519-4.619	+++++	+++++
	6 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.644	4.594-4.694	+++++	+++++
	7 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.813	4.763-4.863	+++++	+++++
	8 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.015	4.965-5.065	+++++	+++++
	9 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.307	5.257-5.357	+++++	+++++
	38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.577-13.677	+++++	+++++
	10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.819-10.919	+++++	+++++
	11 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.883	5.832-5.933	+++++	+++++
	12 gamma-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.002	5.952-6.052	+++++	+++++
	13 alpha-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.126	6.076-6.176	+++++	+++++
	14 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.260	6.210-6.310	+++++	+++++

Reviewer 1 _____ Date: 06/24/13 06/25/13

Reviewer 2 _____ Date: 6/25/13

CC0554 1 DAA

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-1.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	15 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.184	6.134-6.234	+++++	+++++
	16 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.483	6.433-6.533	+++++	+++++
	17 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.701	6.651-6.751	+++++	+++++
	18 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.740	6.690-6.790	+++++	+++++
	19 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.906	6.856-6.956	+++++	+++++
	20 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.998	6.948-7.048	+++++	+++++
	21 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.284	7.234-7.334	+++++	+++++
	22 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.424	7.374-7.474	+++++	+++++
	23 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.674	7.624-7.724	+++++	+++++
	24 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.930	7.880-7.980	+++++	+++++
$	25 Decachlorobiphenyl	8.777	8.777	8.777	8.776	8.777	8.776	8.777	8.777	8.727-8.827	8.777	0.000
	26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.831-4.931	+++++	+++++
	28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.309-5.409	+++++	+++++
	29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.368-4.468	+++++	+++++
	31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.207-5.307	+++++	+++++
	32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	5.995-6.095	+++++	+++++
	33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.251-8.351	+++++	+++++
	34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.209-11.309	+++++	+++++
	35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.958	6.908-7.008	+++++	+++++
	39 2,4-DDE	5.862	5.863	5.863	5.863	5.863	5.861	5.861	5.861	5.811-5.911	5.862	0.001

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-1.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	6.349	6.350	6.350	6.350	6.350	6.348	6.348	6.348	6.298-6.398	6.349	0.001
41 2,4-DDT	6.587	6.587	6.587	6.588	6.588	6.587	6.587	6.587	6.537-6.637	6.588	0.000
42 Hexachloroethane	1.758	1.758	1.758	1.759	1.758	1.756	1.758	1.758	1.708-1.808	1.758	0.001
43 Oxychlordane	5.787	5.787	5.787	5.787	5.788	5.787	5.787	5.787	5.737-5.837	5.787	0.000
44 trans-Nonachlor	6.110	6.110	6.110	6.110	6.111	6.110	6.110	6.110	6.060-6.160	6.110	0.000
45 cis-Nonachlor	6.726	6.726	6.727	6.727	6.727	6.726	6.727	6.727	6.677-6.777	6.726	0.000
46 Mirex	7.601	7.601	7.600	7.601	7.601	7.601	7.601	7.601	7.551-7.651	7.601	0.000
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.106-20.206	+++++	+++++
59 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.935	4.885-4.985	+++++	+++++
48 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.269-6.369	+++++	+++++
49 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.886-9.986	+++++	+++++
50 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.841-11.941	+++++	+++++
51 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.777-14.877	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.700-9.800	+++++	+++++
55 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.057-9.157	+++++	+++++
56 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.201-10.301	+++++	+++++
60 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.581	6.531-6.631	+++++	+++++
61 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.903-7.003	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-1.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0619a012	0619a013	0619a014	0619a015	0619a016	0619a017	0619a018
INJ.DATE:	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013
INJ.TIME:	17:57	18:14	18:32	18:50	19:08	19:26	19:44

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	2.311	2.310	2.311	2.311	2.310	2.311	2.312	2.312	2.262-2.362	2.311	0.001
*	54 1Bromo-2nitrobenzene	3.130	3.130	3.131	3.130	3.130	3.130	3.131	3.130	3.080-3.180	3.130	0.000
*	58 Hexabromobiphenyl	8.927	8.927	8.927	8.926	8.927	8.927	8.927	8.927	8.877-8.977	8.927	0.000
$	2 Tetrachloro-m-xylene	3.799	3.799	3.800	3.799	3.799	3.799	3.799	3.799	3.749-3.849	3.799	0.000
	3 Hexachlorobenzene	4.140	4.141	4.141	4.141	4.140	4.140	4.140	4.140	4.090-4.190	4.140	0.001
	4 alpha-BHC	4.286	4.286	4.286	4.286	4.286	4.286	4.286	4.286	4.236-4.336	4.286	0.000
	5 gamma-BHC (Lindane)	4.569	4.568	4.569	4.568	4.568	4.569	4.569	4.569	4.519-4.619	4.569	0.000
	6 beta-BHC	4.645	4.646	4.646	4.645	4.645	4.644	4.644	4.644	4.594-4.694	4.645	0.001
	7 delta-BHC	4.814	4.815	4.815	4.815	4.814	4.814	4.813	4.813	4.763-4.863	4.814	0.001
	8 Heptachlor	5.014	5.014	5.015	5.014	5.014	5.015	5.015	5.015	4.965-5.065	5.014	0.000
	9 Aldrin	5.307	5.307	5.307	5.307	5.306	5.307	5.307	5.307	5.257-5.357	5.307	0.000
	38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.577-13.677	+++++	+++++
	10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.819-10.919	+++++	+++++
	11 Heptachlor epoxide b	5.882	5.882	5.883	5.882	5.881	5.882	5.883	5.883	5.832-5.933	5.882	0.000
	12 gamma-Chlordane	6.002	6.002	6.002	6.002	6.001	6.002	6.002	6.002	5.952-6.052	6.002	0.000
	13 alpha-Chlordane	6.126	6.127	6.126	6.126	6.126	6.126	6.126	6.126	6.076-6.176	6.126	0.000
	14 Endosulfan I	6.260	6.259	6.259	6.259	6.259	6.259	6.260	6.260	6.210-6.310	6.259	0.000

Reviewer 1 VJ Date: 06/25/13
Reviewer 2 Date: 6/25/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-1.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	15 4,4'-DDE	6.183	6.184	6.183	6.182	6.182	6.184	6.184	6.184	6.134-6.234	6.183	0.001
	16 Dieldrin	6.482	6.482	6.482	6.482	6.482	6.482	6.483	6.483	6.433-6.533	6.482	0.000
	17 Endrin	6.701	6.701	6.700	6.700	6.700	6.700	6.701	6.701	6.651-6.751	6.700	0.000
	18 4,4'-DDD	6.741	6.743	6.743	6.742	6.741	6.740	6.740	6.740	6.690-6.790	6.741	0.001
	19 Endosulfan II	6.906	6.907	6.907	6.906	6.906	6.906	6.906	6.906	6.856-6.956	6.906	0.000
	20 4,4'-DDT	6.999	7.000	7.000	6.999	6.999	6.998	6.998	6.998	6.948-7.048	6.999	0.001
	21 Endrin aldehyde	7.284	7.284	7.284	7.283	7.283	7.283	7.284	7.284	7.234-7.334	7.284	0.000
	22 Methoxychlor	7.425	7.425	7.425	7.424	7.424	7.424	7.424	7.424	7.374-7.474	7.425	0.000
	23 Endosulfan sulfate	7.674	7.675	7.674	7.674	7.674	7.674	7.674	7.674	7.624-7.724	7.674	0.000
	24 Endrin ketone	7.930	7.929	7.930	7.929	7.929	7.929	7.930	7.930	7.880-7.980	7.929	0.000
$	25 Decachlorobiphenyl	8.777	8.777	8.777	8.776	8.777	8.777	8.777	8.777	8.727-8.827	8.777	0.000
	26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.831-4.931	+++++	+++++
	28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.309-5.409	+++++	+++++
	29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.368-4.468	+++++	+++++
	31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.207-5.307	+++++	+++++
	32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	5.995-6.095	+++++	+++++
	33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.251-8.351	+++++	+++++
	34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.209-11.309	+++++	+++++
	35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.958	6.908-7.008	+++++	+++++
	39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.861	5.811-5.911	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-1.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.348	6.298-6.398	+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6 587	6.537-6.637	+++++	+++++
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.758	1.708-1.808	+++++	+++++
43 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.787	5.737-5.837	+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.110	6.060-6.160	+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.727	6.677-6.777	+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.601	7.551-7.651	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.106-20.206	+++++	+++++
59 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.935	4.885-4.985	+++++	+++++
48 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.269-6.369	+++++	+++++
49 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.886-9.986	+++++	+++++
50 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.841-11.941	+++++	+++++
51 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.777-14.877	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.700-9.800	+++++	+++++
55 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.057-9.157	+++++	+++++
56 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.201-10.301	+++++	+++++
60 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.581	6.531-6.631	+++++	+++++
61 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.903-7.003	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-2.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0619a012	0619a013	0619a014	0619a015	0619a016	0619a017	0619a018
INJ.DATE:	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013
INJ.TIME:	17:57	18:14	18:32	18:50	19:08	19:26	19:44

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	2.467	2.467	2.468	2.467	2.467	2.468	2.469	2.469	2.419-2.519	2.468	0.001
* 52 1Bromo-2nitrobenzene	3.300	3.300	3.300	3.299	3.299	3.300	3.300	3.299	3.249-3.349	3.300	0.000
* 55 Hexabromobiphenyl	10.289	10.288	10.289	10.289	10.289	10.289	10.289	10.288	10.238-10.338	10.289	0.000
$ 2 Tetrachloro-m-xylene	4.127	4.127	4.127	4.127	4.126	4.127	4.128	4.128	4.079-4.178	4.127	0.001
3 Hexachlorobenzene	4.586	4.586	4.587	4.586	4.586	4.586	4.586	4.586	4.536-4.636	4.586	0.000
4 alpha-BHC	4.709	4.709	4.709	4.709	4.708	4.709	4.710	4.710	4.660-4.760	4.709	0.001
5 gamma-BHC (Lindane)	5.066	5.065	5.065	5.065	5.065	5.066	5.066	5.066	5.016-5.116	5.065	0.000
6 beta-BHC	5.138	5.139	5.139	5.139	5.138	5.138	5.138	5.138	5.088-5.188	5.138	0.001
7 delta-BHC	5.449	5.450	5.450	5.449	5.449	5.450	5.450	5.450	5.400-5.500	5.450	0.000
8 Heptachlor	5.529	5.528	5.529	5.528	5.528	5.529	5.529	5.529	5.479-5.579	5.529	0.001
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.538-14.638	+++++	+++++
9 Aldrin	5.867	5.866	5.867	5.866	5.866	5.867	5.867	5.867	5.817-5.917	5.867	0.001
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.630-12.730	+++++	+++++
11 Heptachlor epoxide b	6.422	6.421	6.421	6.420	6.420	6.421	6.422	6.422	6.372-6.472	6.421	0.001
12 gamma-Chlordane	6.604	6.604	6.604	6.603	6.603	6.604	6.604	6.604	6.554-6.654	6.604	0.000
13 alpha-Chlordane	6.742	6.741	6.742	6.741	6.741	6.742	6.742	6.742	6.692-6.792	6.741	0.001
14 Endosulfan I	6.809	6.808	6.809	6.808	6.808	6.808	6.809	6.809	6.759-6.859	6.808	0.000

Reviewer 1 _____ Date: 06/25/13
Reviewer 2 _____ Date: 6/25/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-2.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
15	4,4'-DDE	6.868	6.869	6.869	6.868	6.868	6.869	6.870	6.870	6.820-6.920	6.869	0.001
16	Dieldrin	7.066	7.066	7.065	7.065	7.066	7.067	7.067	7.067	7.017-7.117	7.066	0.001
17	Endrin	7.355	7.355	7.355	7.355	7.355	7.356	7.356	7.356	7.306-7.406	7.355	0.001
18	4,4'-DDD	7.407	7.408	7.407	7.407	7.407	7.406	7.407	7.407	7.357-7.457	7.407	0.001
19	Endosulfan II	7.544	7.544	7.544	7.544	7.544	7.545	7.545	7.545	7.495-7.595	7.544	0.001
20	4,4'-DDT	7.695	7.694	7.694	7.694	7.694	7.694	7.694	7.694	7.644-7.744	7.694	0.000
21	Endrin aldehyde	7.842	7.841	7.841	7.841	7.841	7.842	7.843	7.843	7.793-7.893	7.842	0.000
22	Endosulfan sulfate	8.087	8.087	8.086	8.087	8.087	8.087	8.087	8.087	8.037-8.137	8.087	0.000
23	Methoxychlor	8.277	8.277	8.277	8.277	8.277	8.277	8.282	8.282	8.232-8.332	8.278	0.002
24	Endrin ketone	8.578	8.577	8.577	8.577	8.577	8.578	8.578	8.578	8.528-8.628	8.577	0.001
$ 25	Decachlorobiphenyl	9.725	9.724	9.725	9.724	9.725	9.724	9.725	9.725	9.675-9.775	9.724	0.000
26	Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.130-4.230	+++++	+++++
27	Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.001-5.101	+++++	+++++
28	Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.121-5.221	+++++	+++++
29	Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.920-5.020	+++++	+++++
30	Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.235-5.335	+++++	+++++
31	Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.918-6.018	+++++	+++++
32	Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.717-6.817	+++++	+++++
33	Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.664-9.764	+++++	+++++
34	Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.741-11.841	+++++	+++++
35	Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.291	7.241-7.341	+++++	+++++
38	2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.580	6.530-6.630	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-2.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
39 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.065	7.015-7.115	+++++	+++++
40 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.353	7.303-7.403	+++++	+++++
41 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.726	1.676-1.776	+++++	+++++
42 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.332	6.282-6.382	+++++	+++++
43 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.690	6.640-6.740	+++++	+++++
44 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.415	7.365-7.465	+++++	+++++
45 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.564	8.514-8.614	+++++	+++++
46 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.449-21.549	+++++	+++++
56 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.378	5.328-5.428	+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.821-4.921	+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.590-6.690	+++++	+++++
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.065-8.165	+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.236-11.336	+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.477-6.577	+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.292-6.392	+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.791-6.891	+++++	+++++
57 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.286-7.386	+++++	+++++
58 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.695-7.795	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-2.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0619a022	0619a023	0619a024	0619a025	0619a026	0619a027	0619a028
INJ.DATE:	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013
INJ.TIME:	20:55	21:13	21:30	21:48	22:06	22:24	22:42

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.469	2.419-2.519	+++++	+++++
*	52 1Bromo-2nitrobenzene	3.300	3.300	3.300	3.300	3.300	3.300	3.299	3.299	3.249-3.349	3.300	0.000
*	55 Hexabromobiphenyl	10.289	10.289	10.289	10.288	10.290	10.289	10.288	10.288	10.238-10.338	10.289	0.000
$	2 Tetrachloro-m-xylene	4.127	4.126	4.127	4.127	4.127	4.127	4.127	4.128	4.079-4.178	4.127	0.000
	3 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.586	4.536-4.636	+++++	+++++
	4 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.710	4.660-4.760	+++++	+++++
	5 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.066	5.016-5.116	+++++	+++++
	6 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.138	5.088-5.188	+++++	+++++
	7 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.450	5.400-5.500	+++++	+++++
	8 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.529	5.479-5.579	+++++	+++++
	37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.538-14.638	+++++	+++++
	9 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.867	5.817-5.917	+++++	+++++
	10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.630-12.730	+++++	+++++
	11 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.422	6.372-6.472	+++++	+++++
	12 gamma-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.604	6.554-6.654	+++++	+++++
	13 alpha-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.742	6.692-6.792	+++++	+++++
	14 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.809	6.759-6.859	+++++	+++++

Reviewer 1 JR Date: 06/25/13
Reviewer 2 D Date: 6/25/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-2.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	15 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.870	6.820-6.920	+++++	+++++
	16 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.067	7.017-7.117	+++++	+++++
	17 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.356	7.306-7.406	+++++	+++++
	18 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.407	7.357-7.457	+++++	+++++
	19 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.545	7.495-7.595	+++++	+++++
	20 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.694	7.644-7.744	+++++	+++++
	21 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.843	7.793-7.893	+++++	+++++
	22 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.087	8.037-8.137	+++++	+++++
	23 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.282	8.232-8.332	+++++	+++++
	24 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.578	8.528-8.628	+++++	+++++
$	25 Decachlorobiphenyl	9.725	9.725	9.725	9.724	9.725	9.725	9.724	9.725	9.675-9.775	9.725	0.000
	26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.130-4.230	+++++	+++++
	27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.001-5.101	+++++	+++++
	28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.121-5.221	+++++	+++++
	29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.920-5.020	+++++	+++++
	30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.235-5.335	+++++	+++++
	31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.918-6.018	+++++	+++++
	32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.717-6.817	+++++	+++++
	33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.664-9.764	+++++	+++++
	34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.741-11.841	+++++	+++++
	35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.291	7.241-7.341	+++++	+++++
	38 2,4-DDE	6.580	6.580	6.580	6.580	6.581	6.580	6.580	6.580	6.530-6.630	6.580	0.000

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-2.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
39 2,4-DDD	7.065	7.065	7.065	7.066	7.066	7.065	7.065	7.065	7.015-7.115	7.065	0.000
40 2,4-DDT	7.352	7.352	7.352	7.352	7.352	7.352	7.353	7.353	7.303-7.403	7.352	0.000
41 Hexachloroethane	1.727	1.726	1.727	1.727	1.726	1.726	1.726	1.726	1.676-1.776	1.727	0.000
42 Oxychlordane	6.331	6.331	6.331	6.331	6.332	6.332	6.332	6.332	6.282-6.382	6.331	0.001
43 trans-Nonachlor	6.688	6.688	6.687	6.688	6.689	6.688	6.690	6.690	6.640-6.740	6.688	0.001
44 cis-Nonachlor	7.412	7.411	7.412	7.412	7.413	7.412	7.415	7.415	7.365-7.465	7.412	0.001
45 Mirex	8.564	8.564	8.564	8.563	8.565	8.565	8.564	8.564	8.514-8.614	8.564	0.000
46 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.449-21.549	+++++	+++++
56 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.378	5.328-5.428	+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.821-4.921	+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.590-6.690	+++++	+++++
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.065-8.165	+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.236-11.336	+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.477-6.577	+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.292-6.392	+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.791-6.891	+++++	+++++
57 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.286-7.386	+++++	+++++
58 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.695-7.795	+++++	+++++

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a010.d ARI ID: IB
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a010.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 17:21
Compound Sublist: wpest Report Date: 06/25/2013 09:50
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.131	-0.001	5445201	3.300	0.000	27743026	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.272	-0.014	1237	4.712	0.002	5841	0.0113	0.0088	25.0	alpha-BHC
----			5.142	0.003	6031	0.0000	0.0210	---	beta-BHC
4.809	-0.005	1463	5.464	0.014	13614	0.0155	0.0238	42.5*	delta-BHC
----			5.068	0.001	9540	0.0000	0.0163	---	gamma-BHC (Lindane)
----			5.545	0.015	13162	0.0000	0.0232	---	Heptachlor
5.324	0.017	1263	5.852	-0.015	17483	0.0136	0.0325	81.7*	Aldrin
5.892	0.010	3416	6.400	-0.022	27268	0.0398	0.0556	33.1	Heptachlor epoxide b
6.299	0.039	1341	6.782	-0.027	5404	0.0167	0.0123	30.7	Endosulfan I
6.464	-0.018	5067	7.109	0.042	9944	0.0598	0.0224	91.1*	Dieldrin
6.180	-0.004	2407	6.869	-0.001	3466	0.0373	0.0077	131.3*	4,4'-DDE
6.667	-0.034	3562	7.373	0.017	23753	0.0502	0.0729	36.9	Endrin
6.913	0.007	2185	7.551	0.006	5567	0.0310	0.0163	62.1*	Endosulfan II
6.763	0.023	2946	----			0.0434	0.0000	---	4,4'-DDD
7.675	0.001	1856	8.088	0.001	2732	0.0298	0.0094	104.2*	Endosulfan sulfate
6.979	-0.019	7544	7.708	0.013	39804	0.1129	0.1280	12.6	4,4'-DDT
7.383	-0.041	1252	8.259	-0.023	37348	0.0396	0.3227	156.3*	Methoxychlor
7.926	-0.004	15142	8.585	0.007	30994	0.1959	0.1066	59.0*	Endrin ketone
7.303	0.019	3898	7.834	-0.008	11414	0.0700	0.0435	46.6*	Endrin aldehyde
5.988	-0.014	2452	6.626	0.021	24027	0.0278	0.0465	50.4*	gamma-Chlordane
6.127	0.000	4338	6.744	0.002	3096	0.0505	0.0065	154.2*	alpha-Chlordane
2.312	0.000	3453	2.469	-0.001	3790	0.0289	0.0066	125.5*	Hexachlorobutadiene
4.139	0.000	39886	4.583	-0.003	14742	0.4591	0.0270	177.8*	Hexachlorobenzene
5.755	-0.031	1280	6.335	0.003	10455	0.0202	0.0289	35.6	Oxychlordane
----			6.571	-0.009	7079	0.0000	0.0271	---	2,4-DDE
----			6.687	-0.004	4941	0.0000	0.0127	---	trans-Nonachlor
6.335	-0.014	2519	7.045	-0.019	15599	0.0577	0.0734	24.0	2,4-DDD
6.587	0.000	1121	----			0.0222	0.0000	---	2,4-DDT
6.717	-0.010	8796	7.412	-0.003	4224	0.1024	0.0104	163.1*	cis-Nonachlor
7.576	-0.024	8765	8.535	-0.029	217054	0.1671	1.1037	147.4*	Mirex
8.927	0.000	4712338	10.289	0.001	15811694	80.0000	80.0000	0.0	Hexabromobiphenyl
1.757	-0.001	3388	1.727	0.001	198727	0.0000	0.0000	---	Hexachloroethane
6.562	-0.019	2192	7.316	-0.020	7938	0.0000	0.0000	---	Kepone
3.800	0.000	2775489	4.127	-0.001	17285223	37.5388	37.6693	0.3	Tetrachloro-m-xylen
8.777	0.000	2204810	9.726	0.001	9380530	37.1748	36.7014	1.3	Decachlorobiphenyl

06/25/13

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	93.8	94.2	93.8~	130- 0
Decachlorobiphenyl	92.9	91.8	91.8~	130- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

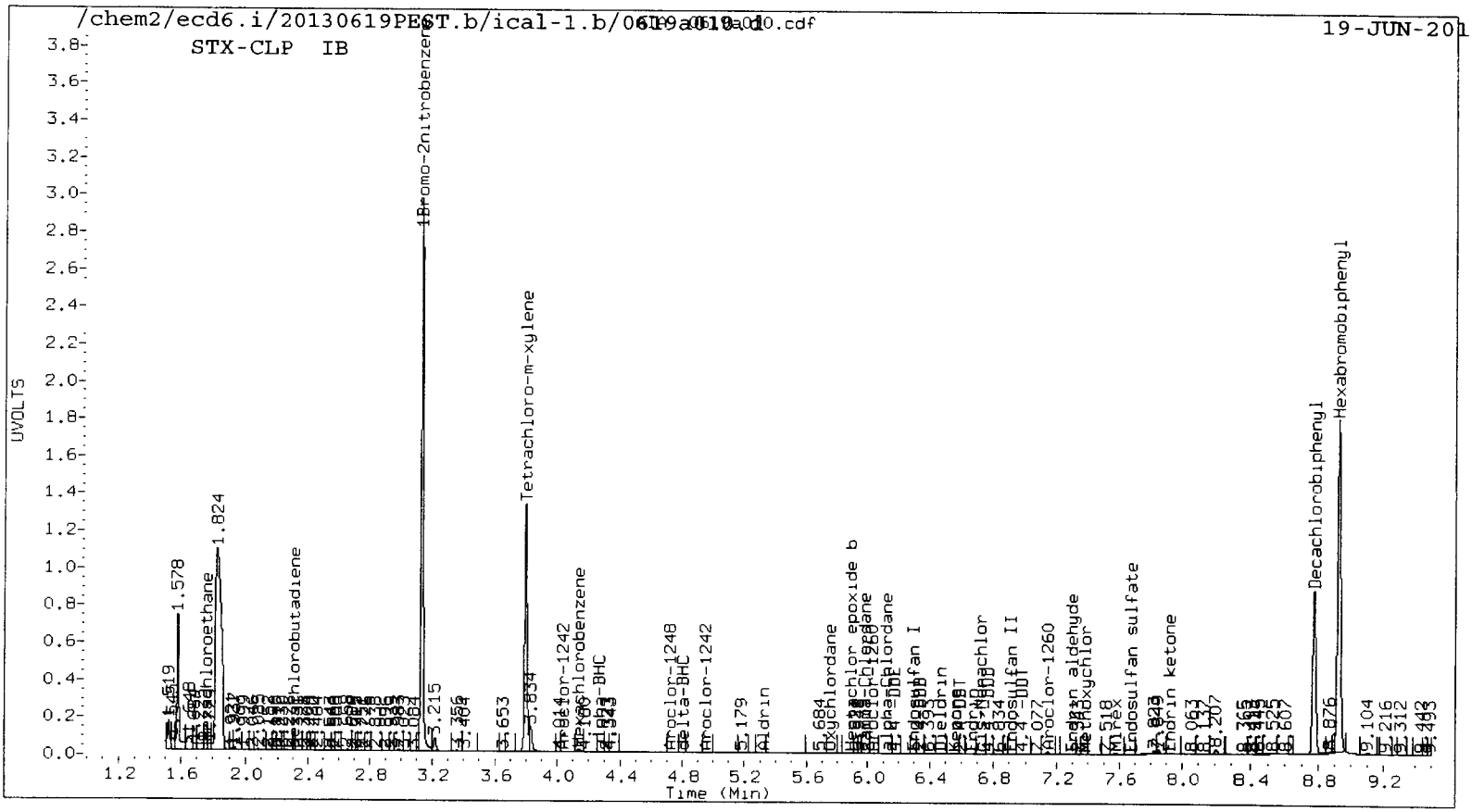
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5445201	-2.6
Hexabromobiphenyl	4870538	4712338	-3.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	27743026	-2.0
Hexabromobiphenyl	16454599	15811694	-3.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.979	0.020	7544	2.5	1	7.316	0.025	7938	0.7
Toxaphene	2	---			0.000	2	7.586	-0.029	150016	9.2
Toxaphene	3	7.303	0.035	3898	1.1	3	7.834	-0.012	11414	0.6
Toxaphene	4	7.576	-0.016	8765	2.5	4	8.317	0.003	5589	0.4
Toxaphene	5	7.675	0.043	1856	0.8	5	8.352	-0.001	1996	0.1
Toxaphene	6	7.926	0.012	15142	7.7	NS	---			----
Total STX-CLPAve (5 peaks): 2.916						Total CLP2Ave (5 peaks): 2.220				RPD = 27
Corrected Ave (4 peaks): 1.731						Corrected Ave (4 peaks): 0.477				RPD = 114*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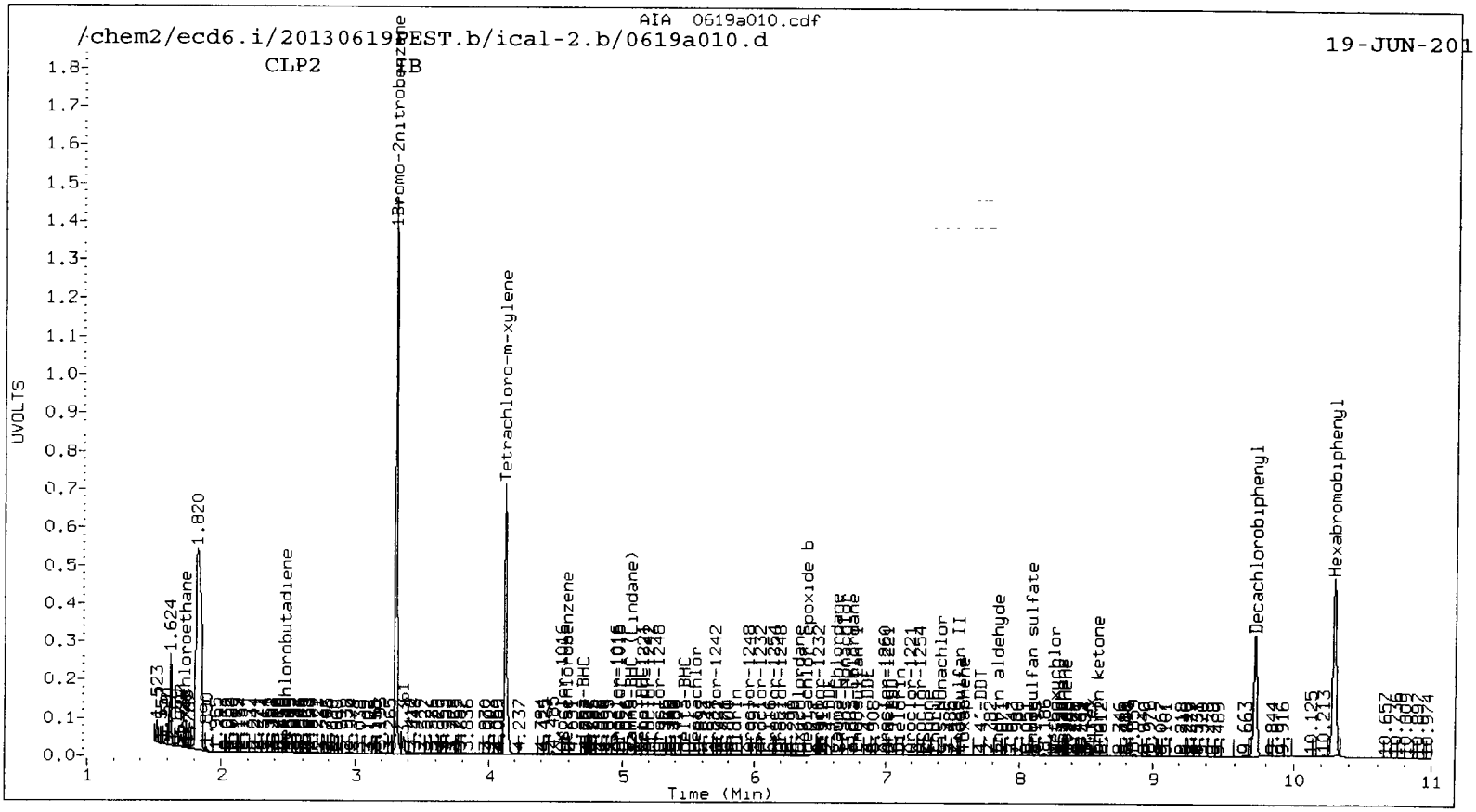
0619a010.cdf
19-JUN-201
STX-CLP IB
UVOLTS
Time (Min)
1.578
1.824
Hexachloroethane
Hexachlorobutadiene
1.Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
Heptachlor-1248
Delta-BHC
Aroclor-1242
5.179
Aldrin
Oxychlordane
Heptachlor epoxide b
Chlordane
Endosulfan I
Dieldrin
Endrin
Endosulfan II
Aroclor-1260
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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19-JUN-201
CLP2
UVOLTS
Time (Min)
1.820
1.624
Hexachloroethane
Hexachlorobutadiene
1.Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
Heptachlor-1248
Delta-BHC
Aroclor-1242
4.237
Aldrin
Oxychlordane
Heptachlor epoxide b
Chlordane
Endosulfan I
Dieldrin
Endrin
Endosulfan II
Aroclor-1260
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.: 20130619PEST

Analysis Date: 19-JUN-2013 17:39 Init. Calib. Date: 19-JUN-2013

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.186	95936
Endrin	6.701	6813037
4,4'-DDD	6.742	278389
4,4'-DDT	7.000	6738589
Endrin ketone	7.930	275869
Endrin aldehyde	7.284	115494

DDT Percent Breakdown = 5.3 %
((95936+278389) * 100)/(95936+278389+6738589)

Endrin Percent Breakdown = 5.4 %
((115494+275869) * 100)/(115494+275869+6813037)

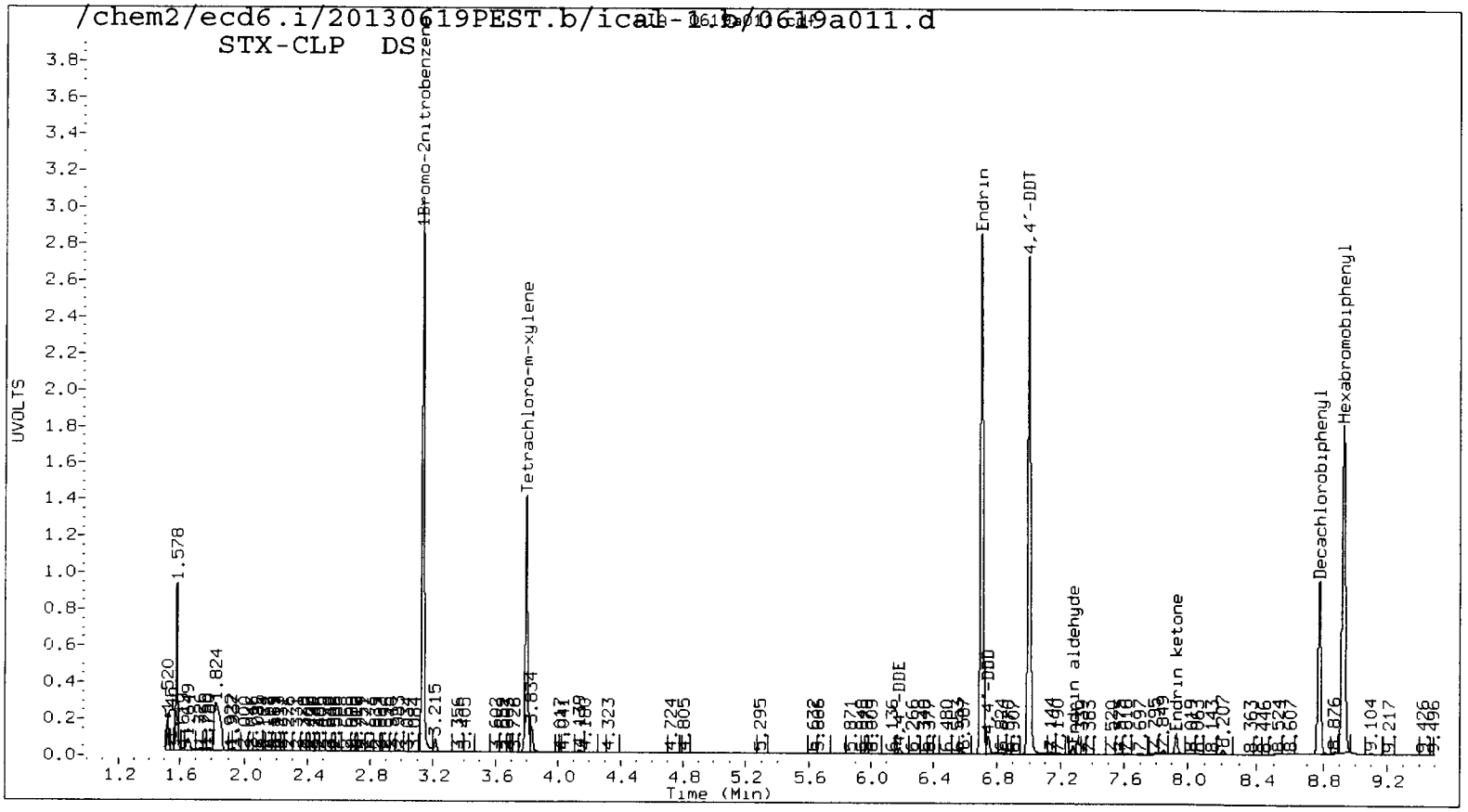
GC Column: STX-CLP2 ID: 0.53(mm)

06/25/13

COMPOUND	RT	AREA
4,4'-DDE	6.869	489895
Endrin	7.356	27988972
4,4'-DDD	7.407	1891401
4,4'-DDT	7.695	28478839
Endrin ketone	8.578	1018617
Endrin aldehyde	7.842	619288

DDT Percent Breakdown = 7.7 %
((489895+1891401) * 100)/(489895+1891401+28478839)

Endrin Percent Breakdown = 5.5 %
((619288+1018617) * 100)/(619288+1018617+27988972)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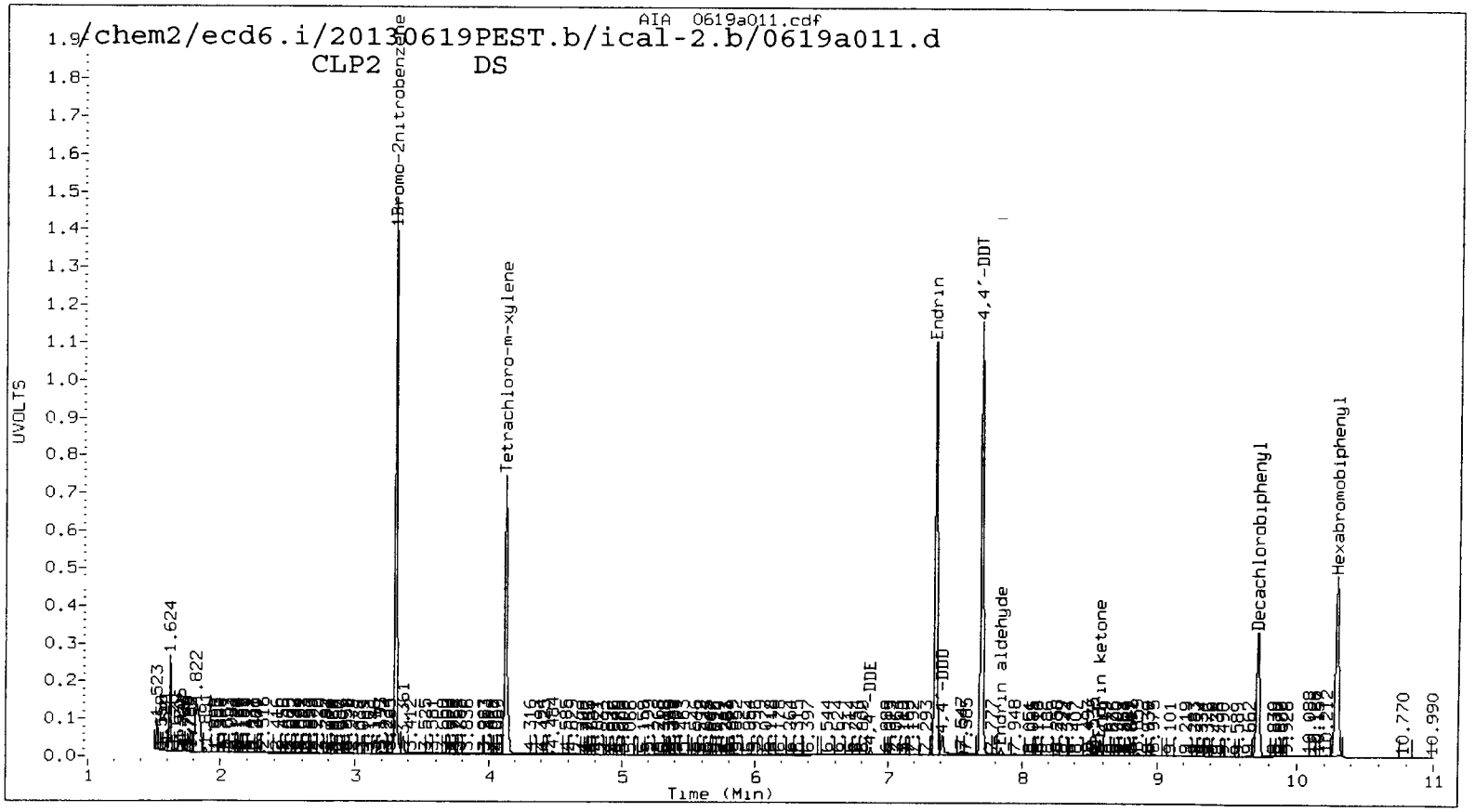
STX-CLP DS
UVOLTS
Time (Min)
1.578
3.215
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 DS
UVOLTS
Time (Min)
1.624
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a012.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a012.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 17:57
Compound Sublist: INDA Report Date: 06/25/2013 09:50
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.001	5590801	3.300	0.000	28320361	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	2197479	4.709	-0.001	13152047	19.5983	19.4383	0.8	alpha-BHC
4.645	0.001	835510	5.138	0.000	5099619	18.4728	17.3979	6.0	beta-BHC
4.814	0.001	1911138	5.449	-0.001	11322606	19.6853	19.4141	1.4	delta-BHC
4.569	0.000	1983131	5.066	-0.001	11521601	19.3979	19.2581	0.7	gamma-BHC (Lindane)
5.014	0.000	1872342	5.529	-0.001	10807405	19.0846	18.6236	2.4	Heptachlor
5.307	0.000	1831236	5.867	0.000	10223350	19.2639	18.6089	3.5	Aldrin
5.882	0.000	1656941	6.422	0.000	8941275	18.8014	17.8576	5.1	Heptachlor epoxide b
6.260	0.000	1541002	6.809	0.000	8296243	18.7074	18.4391	1.4	Endosulfan I
6.482	0.000	3329129	7.066	-0.001	16340234	38.2478	35.9857	6.1	Dieldrin
6.183	-0.001	2461228	6.868	-0.002	16694923	37.1669	36.5223	1.7	4,4'-DDE
6.701	0.000	2819551	7.355	-0.001	12511920	38.4140	36.8761	4.1	Endrin
6.906	0.001	2775029	7.544	-0.001	13012156	38.0841	36.6083	4.0	Endosulfan II
6.741	0.001	2680166	7.407	0.000	13189613	38.2390	36.1096	5.7	4,4'-DDD
7.674	0.000	2428615	8.087	0.000	11059493	37.7476	36.5472	3.2	Endosulfan sulfate
6.999	0.001	2658216	7.695	0.000	11832997	38.4799	36.5617	5.1	4,4'-DDT
7.425	0.000	5893323	8.277	-0.005	21549834	180.2526	178.9147	0.7	Methoxychlor
7.930	0.000	2942761	8.578	-0.001	11106420	36.8347	36.7234	0.3	Endrin ketone
7.284	0.000	2165447	7.842	-0.001	9820893	37.5991	35.9909	4.4	Endrin aldehyde
6.002	0.000	1724732	6.604	0.000	9531588	19.0513	18.0885	5.2	gamma-Chlordane
6.126	0.000	1657348	6.742	0.000	8851820	18.8082	18.3243	2.6	alpha-Chlordane
2.311	-0.001	2291552	2.467	-0.002	11051717	18.6525	18.8532	1.1	Hexachlorobutadiene
4.140	0.001	1618855	4.586	0.000	10114339	18.1471	18.1305	0.1	Hexachlorobenzene
8.927	0.000	4870538	10.289	0.001	16454599	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	2864775	4.127	-0.002	17352669	37.7374	37.0454	1.9	Tetrachloro-m-xylen
8.777	-0.001	2234017	9.725	0.000	9610334	36.4437	36.1314	0.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	94.3	92.6	92.6~	115- 0
Decachlorobiphenyl	91.1	90.3	90.3~	115- 0

WVST : 02920

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

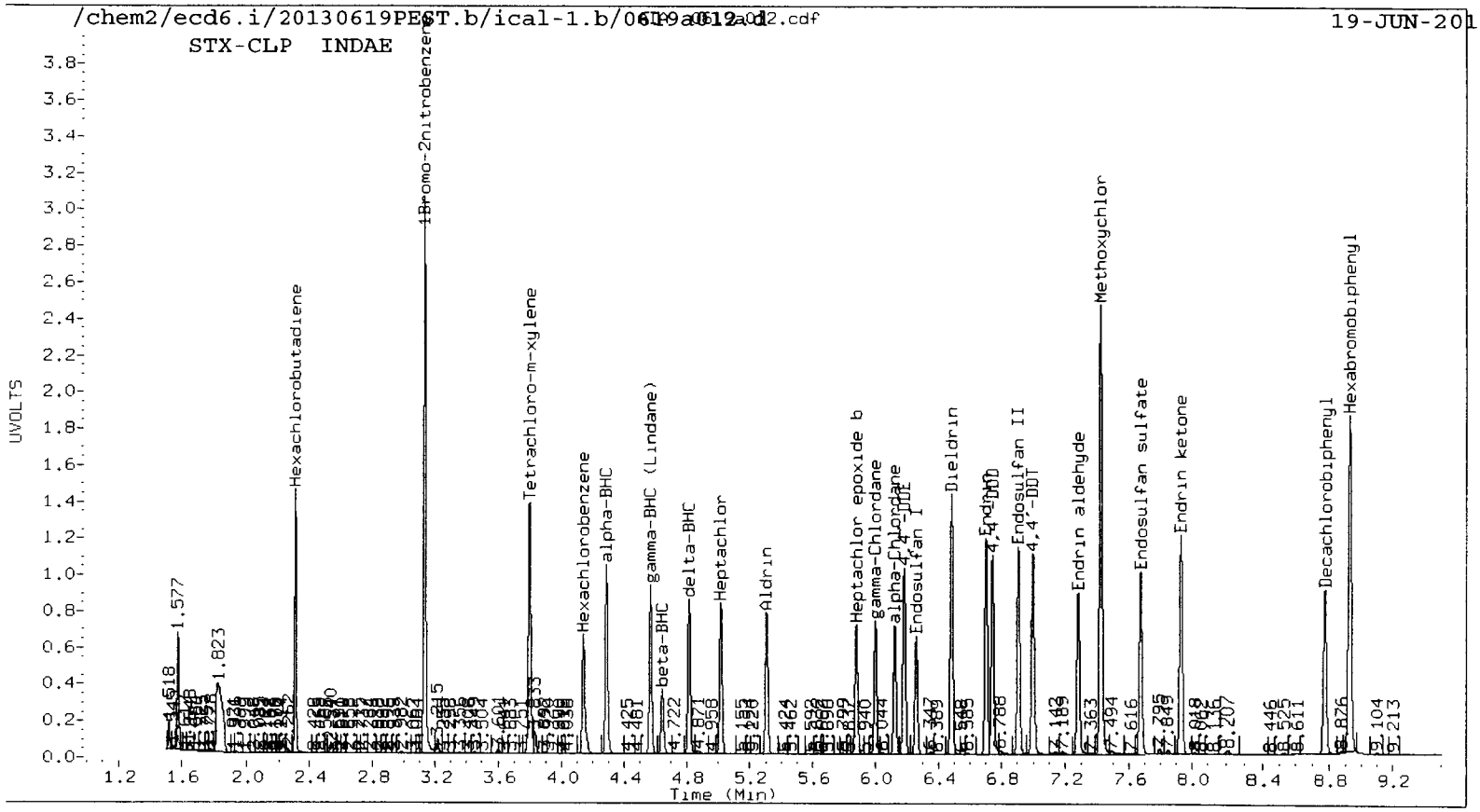
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5590801	0.0
Hexabromobiphenyl	4870538	4870538	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28320361	0.0
Hexabromobiphenyl	16454599	16454599	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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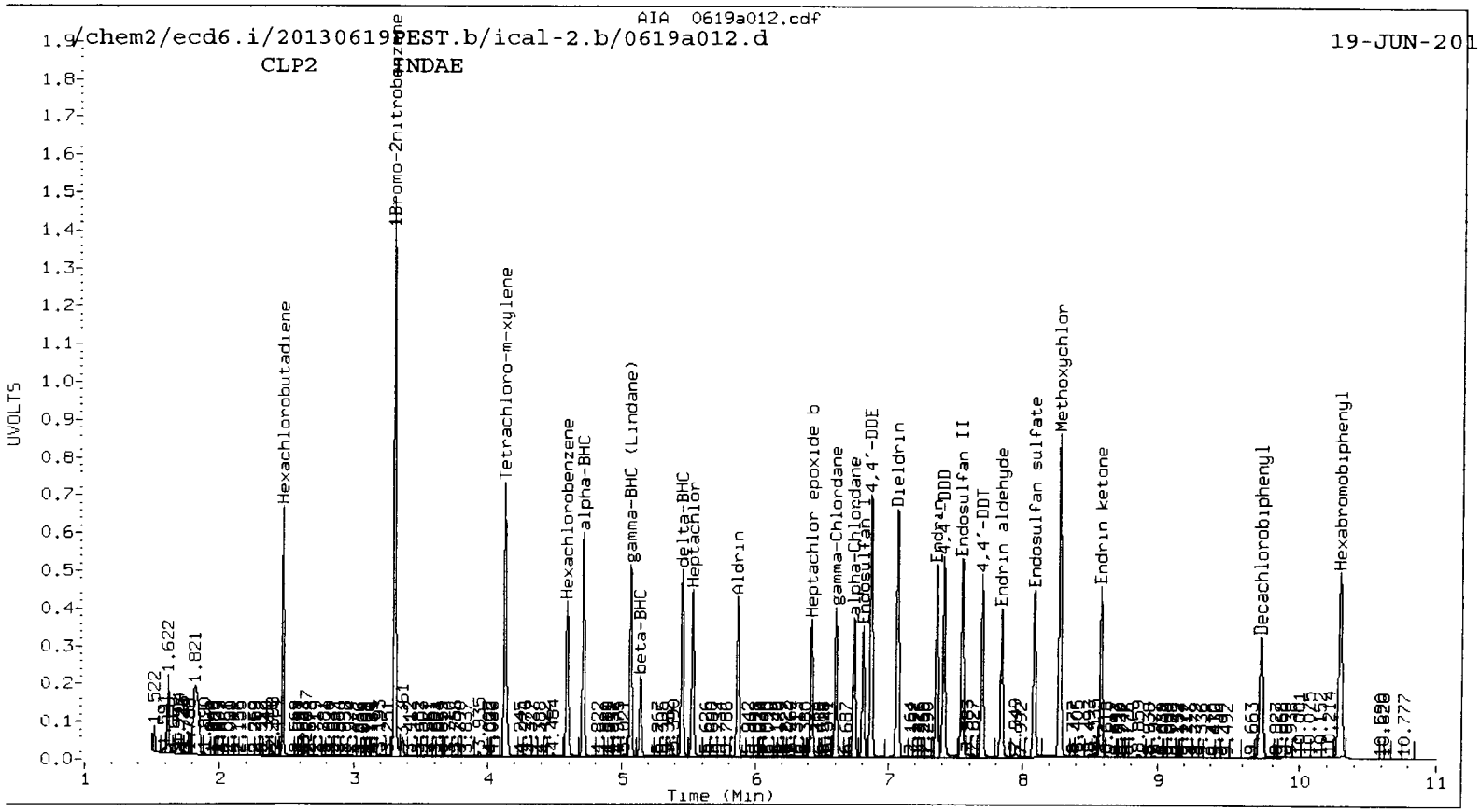
19-JUN-201
STX-CLP INDAE
UWOLTS
Time (Min)
1.577
1.823
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0619a012.cdf
19-JUN-201
CLP2 INDAE
UWOLTS
Time (Min)
1.622
1.821
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

EXOT : 00052

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a013.d ARI ID: INDAA
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a013.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 18:14
Compound Sublist: INDA Report Date: 06/25/2013 09:50
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.001	5443407	3.300	0.000	27626455	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	131311	4.709	-0.001	816134	1.2028	1.2365	2.8	alpha-BHC
4.646	0.002	61465	5.139	0.001	457221	1.3958	1.5990	13.6	beta-BHC
4.815	0.002	111484	5.450	0.000	711469	1.1794	1.2506	5.9	delta-BHC
4.568	0.000	122386	5.065	-0.001	741566	1.2295	1.2706	3.3	gamma-BHC (Lindane)
5.014	-0.001	124272	5.528	-0.001	834093	1.3010	1.4734	12.4	Heptachlor
5.307	0.000	117450	5.866	-0.001	791691	1.2690	1.4773	15.2	Aldrin
5.882	0.000	116637	6.421	-0.001	784226	1.3593	1.6056	16.6	Heptachlor epoxide b
6.259	-0.001	110155	6.808	-0.001	655773	1.3735	1.4941	8.4	Endosulfan I
6.482	-0.001	218954	7.066	-0.002	1380894	2.5836	3.1175	18.7	Dieldrin
6.184	0.000	172469	6.869	-0.001	1326712	2.6750	2.9753	10.6	4,4'-DDE
6.701	0.000	188353	7.355	-0.001	955890	2.6276	2.8816	9.2	Endrin
6.907	0.001	190654	7.544	-0.001	991338	2.6791	2.8527	6.3	Endosulfan II
6.743	0.003	178398	7.408	0.001	1060462	2.6062	2.9696	13.0	4,4'-DDD
7.675	0.000	167119	8.087	-0.001	870793	2.6597	2.9433	10.1	Endosulfan sulfate
7.000	0.002	171062	7.694	0.000	878337	2.5355	2.7759	9.0	4,4'-DDT
7.425	0.001	452591	8.277	-0.005	1836243	14.1742	15.5933	9.5	Methoxychlor
7.929	0.000	218694	8.577	-0.001	823887	2.8029	2.7864	0.6	Endrin ketone
7.284	0.001	152510	7.841	-0.001	796663	2.7114	2.9862	9.6	Endrin aldehyde
6.002	0.000	114356	6.604	-0.001	789869	1.2974	1.5366	16.9	gamma-Chlordane
6.127	0.000	115059	6.741	-0.001	692681	1.3411	1.4699	9.2	alpha-Chlordane
2.310	-0.002	161818	2.467	-0.002	766383	1.3528	1.3402	0.9	Hexachlorobutadiene
4.141	0.001	126395	4.586	0.000	820221	1.4552	1.5072	3.5	Hexachlorobenzene
8.927	-0.001	4756712	10.288	0.000	16087272	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	196648	4.127	-0.002	1321445	2.6606	2.8919	8.3	Tetrachloro-m-xylene
8.777	-0.001	168517	9.724	-0.001	741403	2.8148	2.8511	1.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	6.7	7.2	6.7~	115- 0
Decachlorobiphenyl	7.0	7.1	7.0~	115- 0

WY67:

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

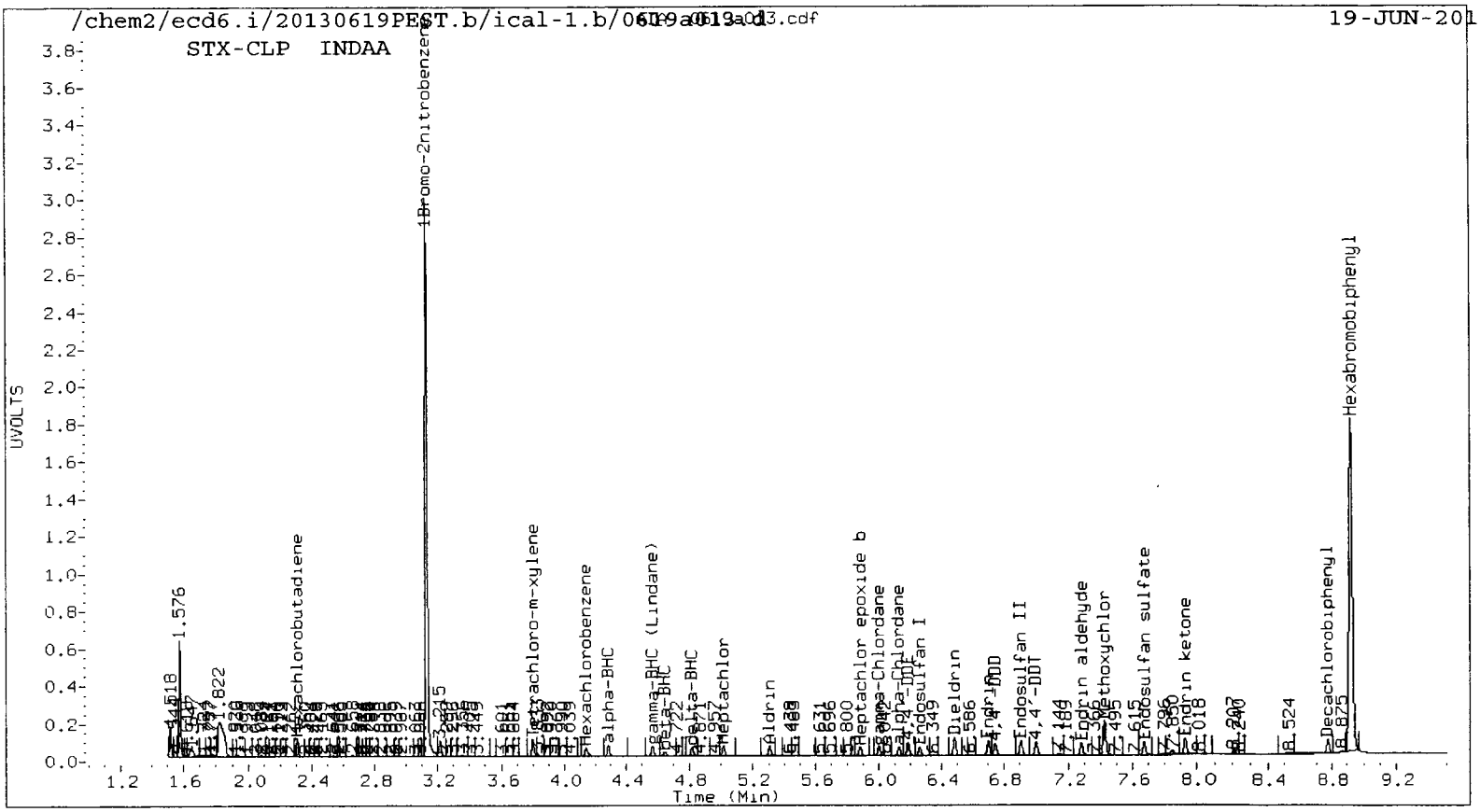
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5443407	-2.6
Hexabromobiphenyl	4870538	4756712	-2.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	27626455	-2.5
Hexabromobiphenyl	16454599	16087272	-2.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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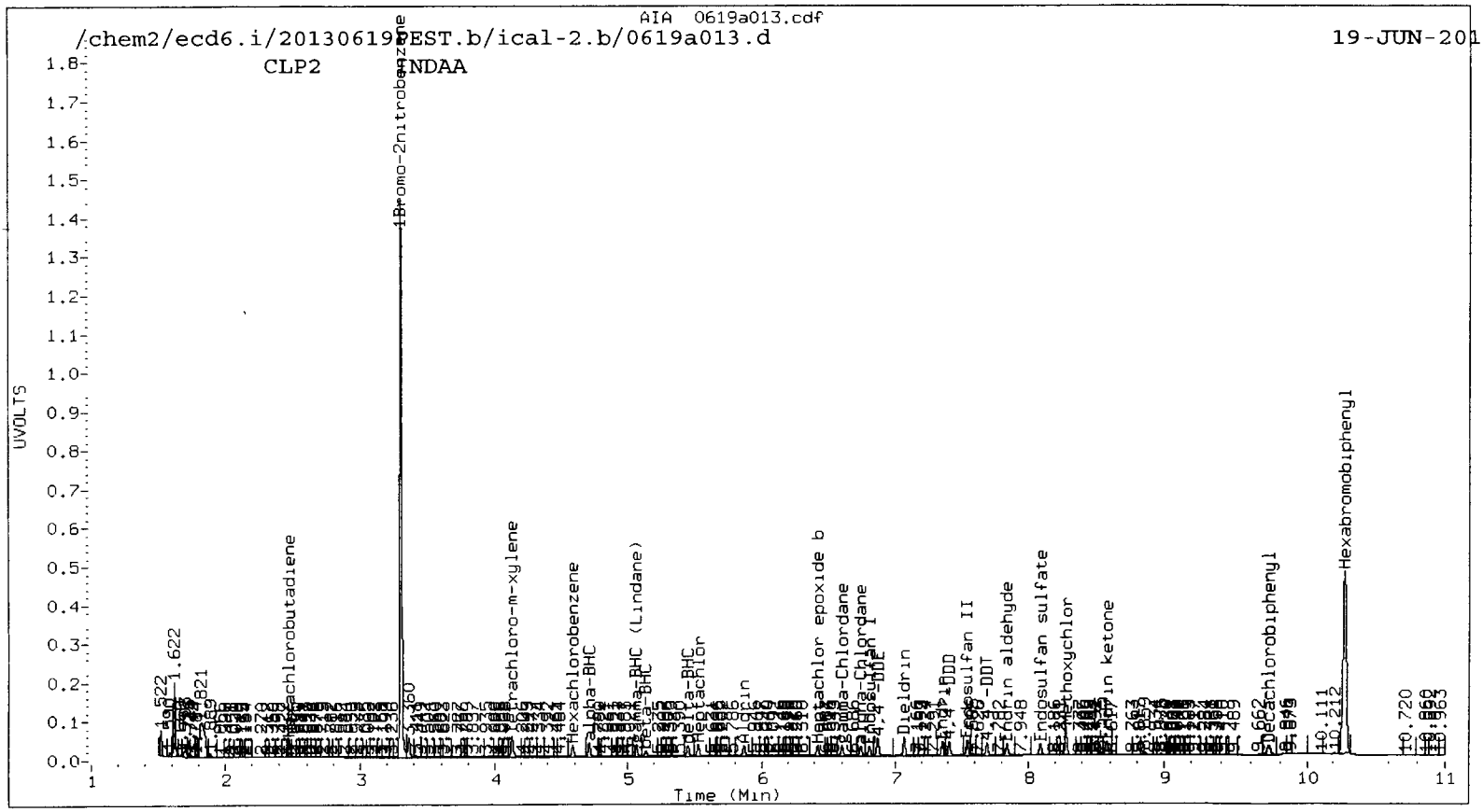
19-JUN-201
STX-CLP INDAA
UVOLTS
Time (Min)
1.576
1.822
Bromo-2nitrobenzene
Hexachlorobutadiene
Pentachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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19-JUN-201
CLP2 INDAA
UVOLTS
Time (Min)
1.622
Bromo-2nitrobenzene
Hexachlorobutadiene
Pentachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a014.d ARI ID: INDAB
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a014.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 18:32
Compound Sublist: INDA Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.131	-0.001	5578569	3.300	0.001	28124817	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	271034	4.709	-0.001	1721306	2.4225	2.5617	5.6	alpha-BHC
4.646	0.002	120984	5.139	0.001	843735	2.6808	2.8985	7.8	beta-BHC
4.815	0.002	233196	5.450	0.000	1461179	2.4073	2.5228	4.7	delta-BHC
4.569	0.000	253061	5.065	-0.001	1513233	2.4807	2.5469	2.6	gamma-BHC (Lindane)
5.015	0.000	252765	5.529	-0.001	1578669	2.5821	2.7393	5.9	Heptachlor
5.307	0.000	240632	5.867	-0.001	1464165	2.5369	2.6837	5.6	Aldrin
5.883	0.000	232952	6.421	-0.001	1441216	2.6491	2.8984	9.0	Heptachlor epoxide b
6.259	0.000	219902	6.809	0.000	1245281	2.6754	2.7870	4.1	Endosulfan I
6.482	0.000	452509	7.065	-0.002	2553673	5.2102	5.6630	8.3	Dieldrin
6.183	-0.001	342779	6.869	-0.001	2565531	5.1876	5.6514	8.6	4,4'-DDE
6.700	-0.001	387178	7.355	-0.001	1913011	5.2672	5.6595	7.2	Endrin
6.907	0.001	385932	7.544	-0.001	1963811	5.2886	5.5459	4.7	Endosulfan II
6.743	0.003	365453	7.407	0.001	2044731	5.2064	5.6191	7.6	4,4'-DDD
7.674	0.000	340604	8.086	-0.001	1682393	5.2861	5.5807	5.4	Endosulfan sulfate
7.000	0.002	353629	7.694	0.000	1737896	5.1115	5.3901	5.3	4,4'-DDT
7.425	0.001	903724	8.277	-0.005	3624930	27.6004	30.2095	9.0	Methoxychlor
7.930	0.000	429848	8.577	-0.001	1639454	5.3725	5.4414	1.3	Endrin ketone
7.284	0.000	309578	7.841	-0.001	1548519	5.3673	5.6964	5.9	Endrin aldehyde
6.002	0.000	231407	6.604	-0.001	1443449	2.5617	2.7583	7.4	gamma-Chlordane
6.126	0.000	229315	6.742	0.000	1313218	2.6081	2.7374	4.8	alpha-Chlordane
2.311	-0.001	318581	2.468	-0.002	1559023	2.5988	2.6780	3.0	Hexachlorobutadiene
4.141	0.002	241429	4.587	0.000	1545377	2.7123	2.7894	2.8	Hexachlorobenzene
8.927	0.000	4877747	10.289	0.001	16392538	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.001	395058	4.127	-0.001	2617199	5.2155	5.6262	7.6	Tetrachloro-m-xylene
8.777	-0.001	335277	9.725	0.000	1455538	5.4613	5.4930	0.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	13.0	14.1	13.0~	115- 0
Decachlorobiphenyl	13.7	13.7	13.7~	115- 0

WYBT : 00926

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

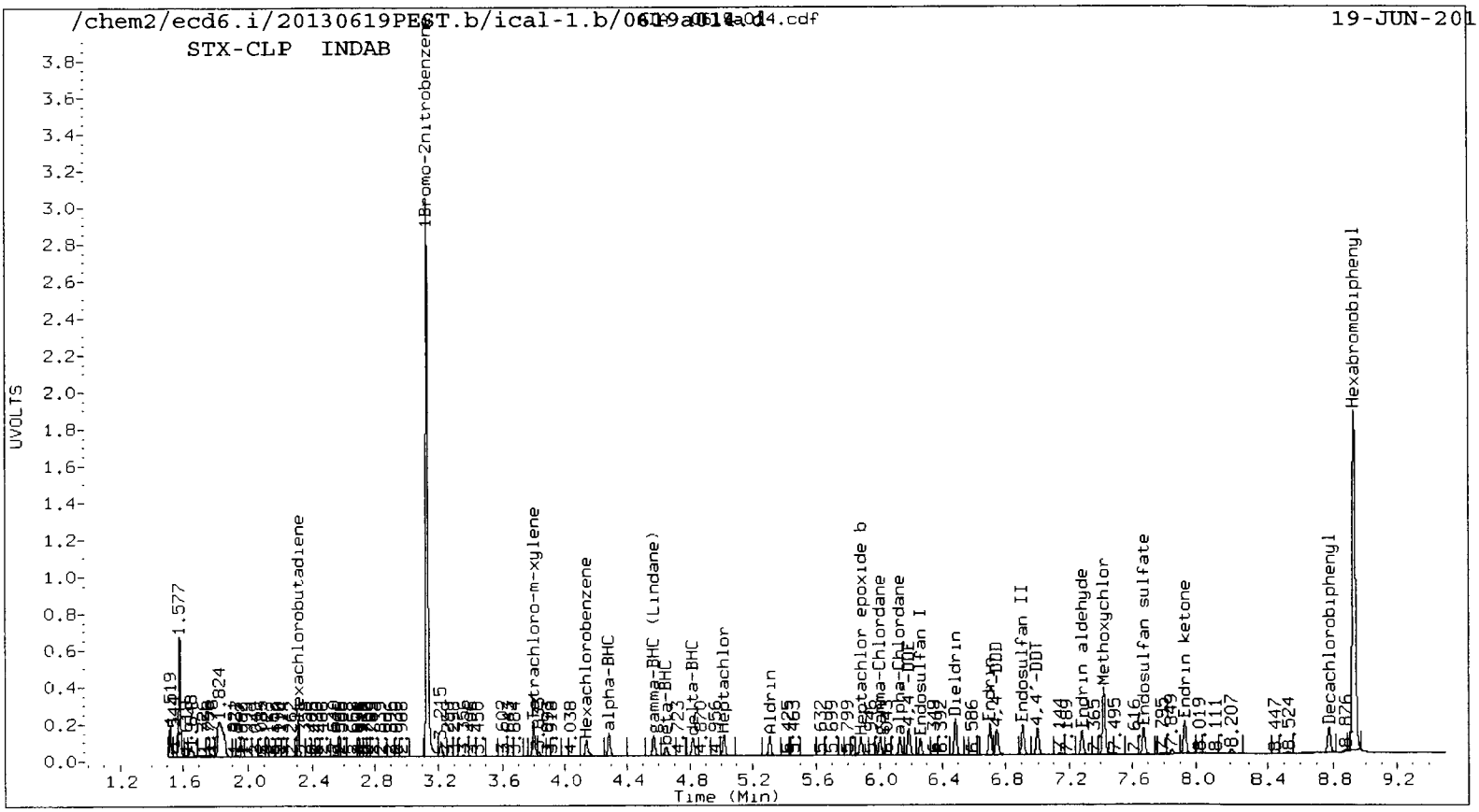
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5578569	-0.2
Hexabromobiphenyl	4870538	4877747	0.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28124817	-0.7
Hexabromobiphenyl	16454599	16392538	-0.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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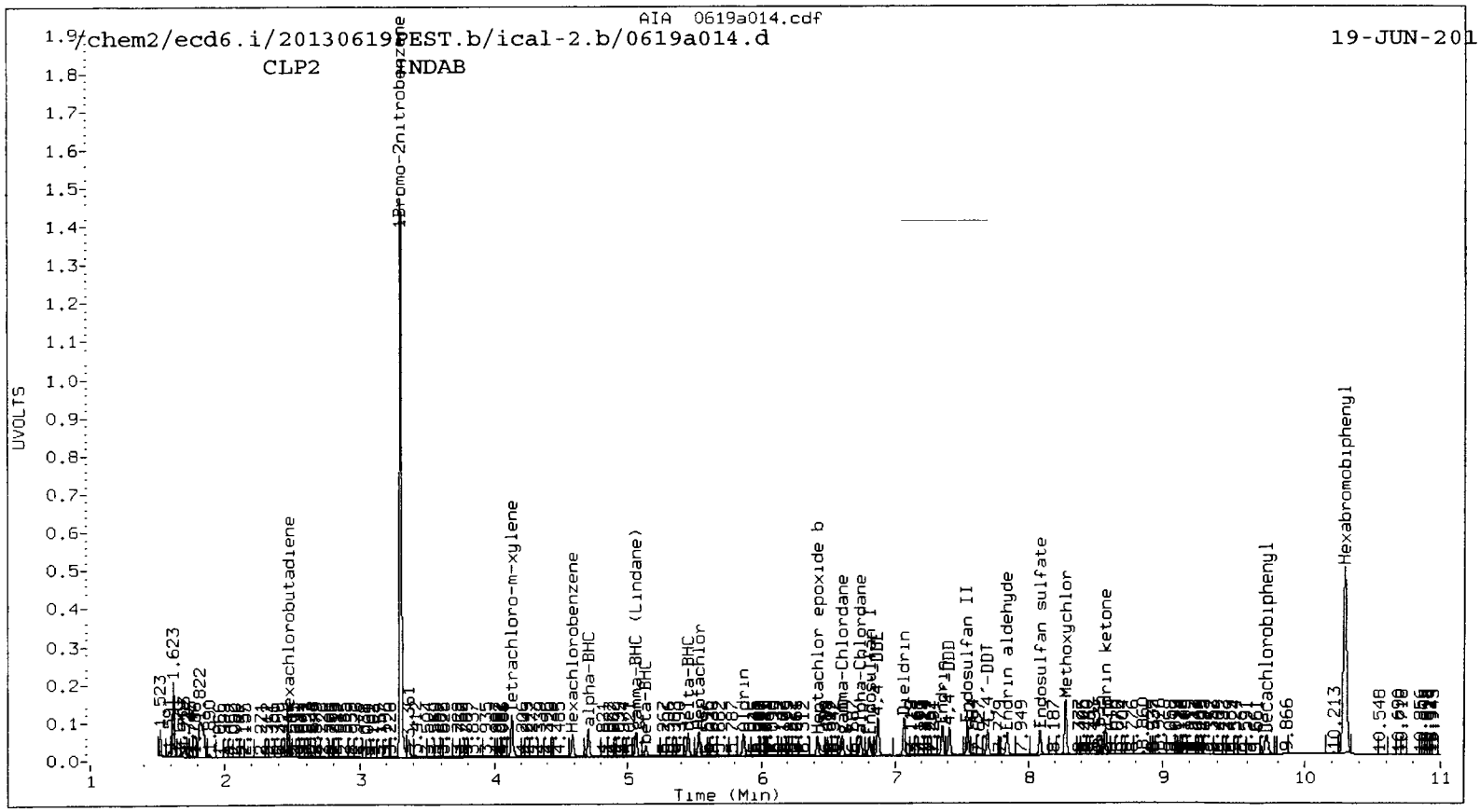
0619a014.cdf
19-JUN-201
STX-CLP INDAB
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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19-JUN-201
CLP2 INDAB
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a015.d ARI ID: INDAC
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a015.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 18:50
Compound Sublist: INDA Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.001	5651084	3.299	0.000	28473248	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	533404	4.709	-0.001	3310204	4.7064	4.8661	3.3	alpha-BHC
4.645	0.001	222104	5.139	0.000	1443860	4.8583	4.8994	0.8	beta-BHC
4.815	0.001	456403	5.449	-0.001	2797279	4.6509	4.7706	2.5	delta-BHC
4.568	0.000	489737	5.065	-0.001	2903570	4.7392	4.8272	1.8	gamma-BHC (Lindane)
5.014	-0.001	484132	5.528	-0.001	2965857	4.8821	5.0834	4.0	Heptachlor
5.307	-0.001	460422	5.866	-0.001	2734717	4.7918	4.9511	3.3	Aldrin
5.882	-0.001	434196	6.420	-0.002	2499209	4.8743	4.9646	1.8	Heptachlor epoxide b
6.259	-0.001	406962	6.808	-0.001	2263684	4.8877	5.0042	2.4	Endosulfan I
6.482	-0.001	864291	7.065	-0.002	4719193	9.8238	10.3371	5.1	Dieldrin
6.182	-0.002	639222	6.868	-0.002	4712850	9.5499	10.2546	7.1	4,4'-DDE
6.700	-0.001	739889	7.355	-0.002	3566322	9.9981	10.4737	4.6	Endrin
6.906	0.000	735342	7.544	-0.002	3664235	10.0093	10.2723	2.6	Endosulfan II
6.742	0.002	701003	7.407	0.000	3740522	9.9198	10.2042	2.8	4,4'-DDD
7.674	-0.001	640784	8.087	-0.001	3049684	9.8783	10.0422	1.6	Endosulfan sulfate
6.999	0.001	679878	7.694	0.000	3282418	9.7614	10.1061	3.5	4,4'-DDT
7.424	0.000	1639957	8.277	-0.005	6401010	49.7500	52.9550	6.2	Methoxychlor
7.929	0.000	797409	8.577	-0.002	3061655	9.8997	10.0874	1.9	Endrin ketone
7.283	0.000	579846	7.841	-0.001	2765107	9.9858	10.0974	1.1	Endrin aldehyde
6.002	-0.001	435922	6.603	-0.001	2600459	4.7638	4.9085	3.0	gamma-Chlordane
6.126	-0.001	427644	6.741	-0.002	2403332	4.8013	4.9485	3.0	alpha-Chlordane
2.311	-0.001	609169	2.467	-0.002	2969940	4.9055	5.0392	2.7	Hexachlorobutadiene
4.141	0.001	441722	4.586	0.000	2792079	4.8988	4.9781	1.6	Hexachlorobenzene
8.926	-0.001	4910634	10.289	0.000	16513179	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	753339	4.127	-0.002	4866543	9.8178	10.3336	5.1	Tetrachloro-m-xylene
8.776	-0.001	609208	9.724	-0.001	2676119	9.8569	10.0256	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	24.5	25.8	24.5~	115- 0
Decachlorobiphenyl	24.6	25.1	24.6~	115- 0

WV67:09999

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

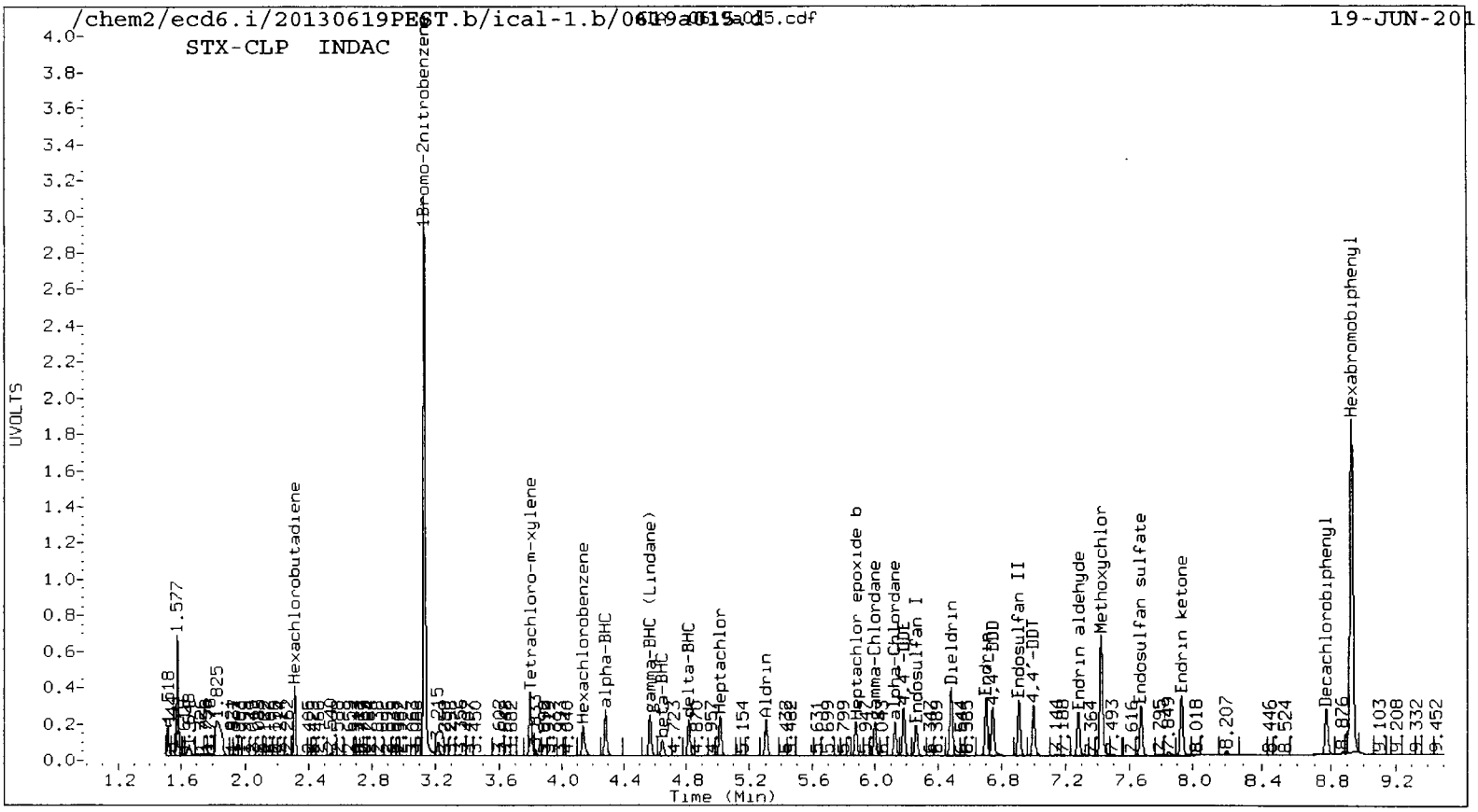
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5651084	1.1
Hexabromobiphenyl	4870538	4910634	0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28473248	0.5
Hexabromobiphenyl	16454599	16513179	0.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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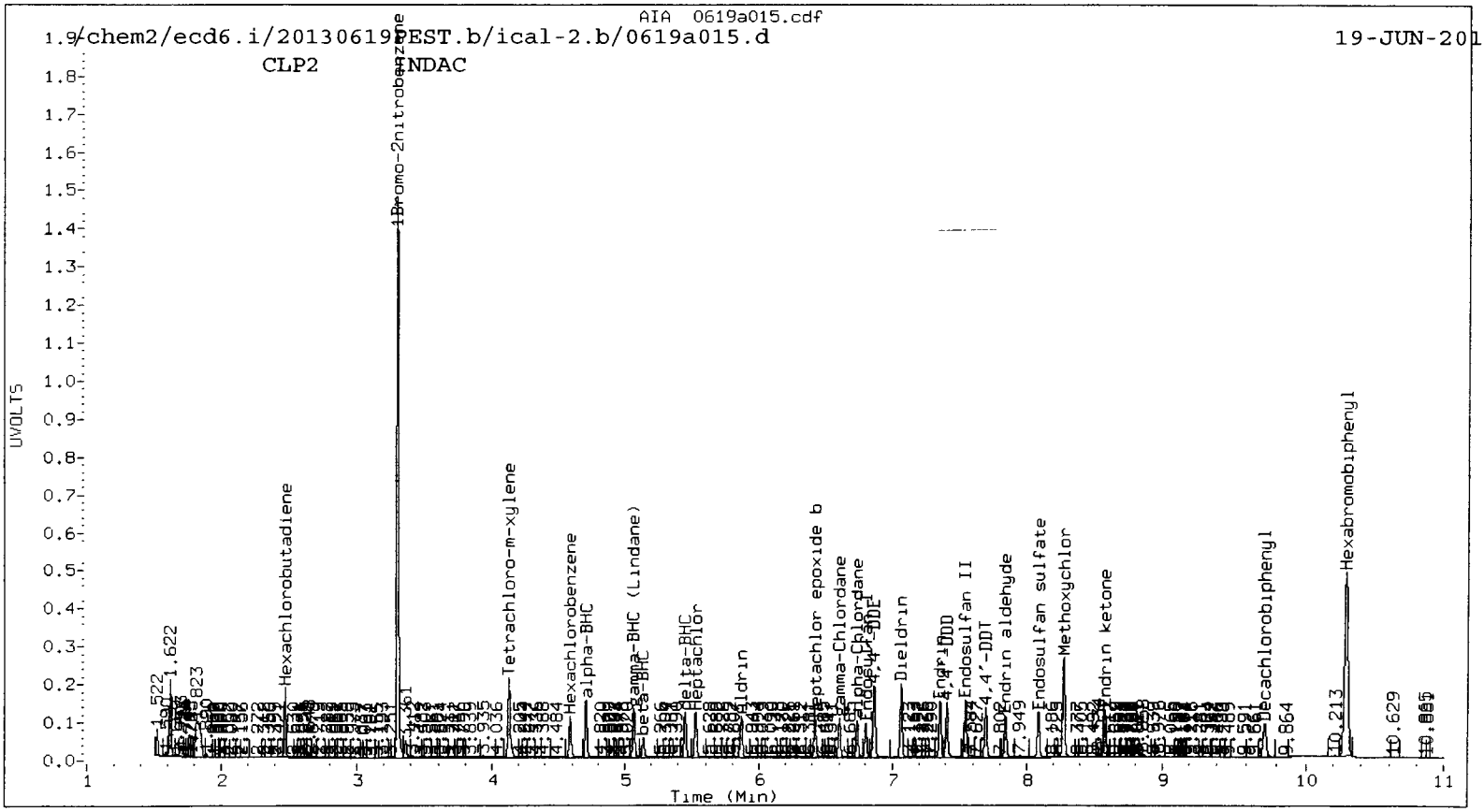
19-JUN-201
STX-CLP INDAC
UVOLTS
Time (Min)
1.577
Hexachlorobutadiene
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDE
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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19-JUN-201
CLP2 INDAC
UVOLTS
Time (Min)
1.622
Hexachlorobutadiene
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDE
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a016.d ARI ID: INDAD
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a016.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 19:08
Compound Sublist: INDA Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.002	5597417	3.299	0.000	28402073	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	-0.001	1166684	4.708	-0.002	7173359	10.3928	10.5715	1.7	alpha-BHC
4.645	0.001	457904	5.138	0.000	2870240	10.1121	9.7639	3.5	beta-BHC
4.814	0.000	1008727	5.449	-0.001	6128970	10.3779	10.4787	1.0	delta-BHC
4.568	0.000	1059355	5.065	-0.002	6285992	10.3498	10.4767	1.2	gamma-BHC (Lindane)
5.014	-0.001	1021731	5.528	-0.001	6128452	10.4021	10.5303	1.2	Heptachlor
5.306	-0.001	993823	5.866	-0.002	5759762	10.4423	10.4540	0.1	Aldrin
5.881	-0.001	915825	6.420	-0.002	5105747	10.3796	10.1679	2.1	Heptachlor epoxide b
6.259	-0.001	853922	6.808	-0.001	4698518	10.3541	10.4128	0.6	Endosulfan I
6.482	-0.001	1830874	7.066	-0.002	9594439	21.0097	21.0688	0.3	Dieldrin
6.182	-0.002	1336155	6.868	-0.002	9661210	20.1534	21.0743	4.5	4,4'-DDE
6.700	-0.001	1543295	7.355	-0.001	7307158	20.8231	21.2013	1.8	Endrin
6.906	0.000	1528510	7.544	-0.001	7652018	20.7745	21.1933	2.0	Endosulfan II
6.741	0.001	1448815	7.407	0.000	7715403	20.4712	20.7942	1.6	4,4'-DDD
7.674	0.000	1339229	8.087	-0.001	6329186	20.6145	20.5902	0.1	Endosulfan sulfate
6.999	0.000	1443267	7.694	-0.001	6811436	20.6908	20.7187	0.1	4,4'-DDT
7.424	0.000	3296480	8.277	-0.005	12592818	99.8523	102.9243	3.0	Methoxychlor
7.929	0.000	1647140	8.577	-0.001	6416942	20.4182	20.8876	2.3	Endrin ketone
7.283	0.000	1206079	7.841	-0.001	5680432	20.7392	20.4935	1.2	Endrin aldehyde
6.001	-0.001	935499	6.603	-0.001	5350283	10.3213	10.1242	1.9	gamma-Chlordane
6.126	-0.001	906578	6.741	-0.001	4973613	10.2760	10.2663	0.1	alpha-Chlordane
2.310	-0.002	1263182	2.467	-0.002	6269724	10.2697	10.6648	3.8	Hexachlorobutadiene
4.140	0.000	904118	4.586	-0.001	5722607	10.1230	10.2285	1.0	Hexachlorobenzene
8.927	0.000	4918023	10.289	0.001	16714534	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	1573454	4.126	-0.002	10034915	20.7024	21.3614	3.1	Tetrachloro-m-xylen
8.777	-0.001	1251738	9.725	0.000	5530544	20.2226	20.4695	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	51.8	53.4	51.8~	115- 0
Decachlorobiphenyl	50.6	51.2	50.6~	115- 0

~ Indicates recovery outside QC Limits

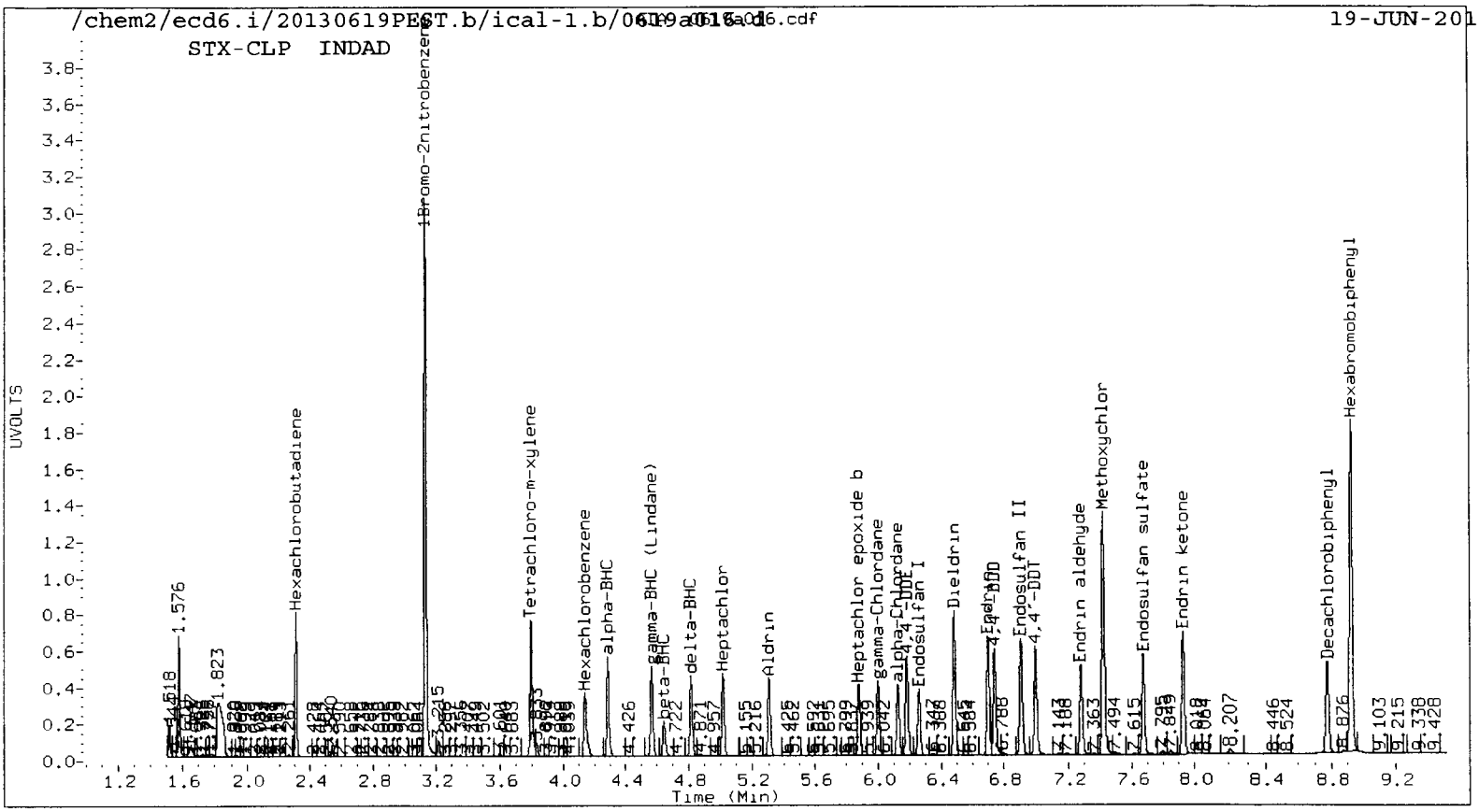
INTERNAL STANDARD SUMMARY

	Column 1 Standard Area*	Sample Area	%D
Standard Cpnd			
Bromo-Nitrobenzene	5590801	5597417	0.1
Hexabromobiphenyl	4870538	4918023	1.0

	Column 2 Standard Area*	Sample Area	%D
Standard Cpnd			
Bromo-Nitrobenzene	28320361	28402073	0.3
Hexabromobiphenyl	16454599	16714534	1.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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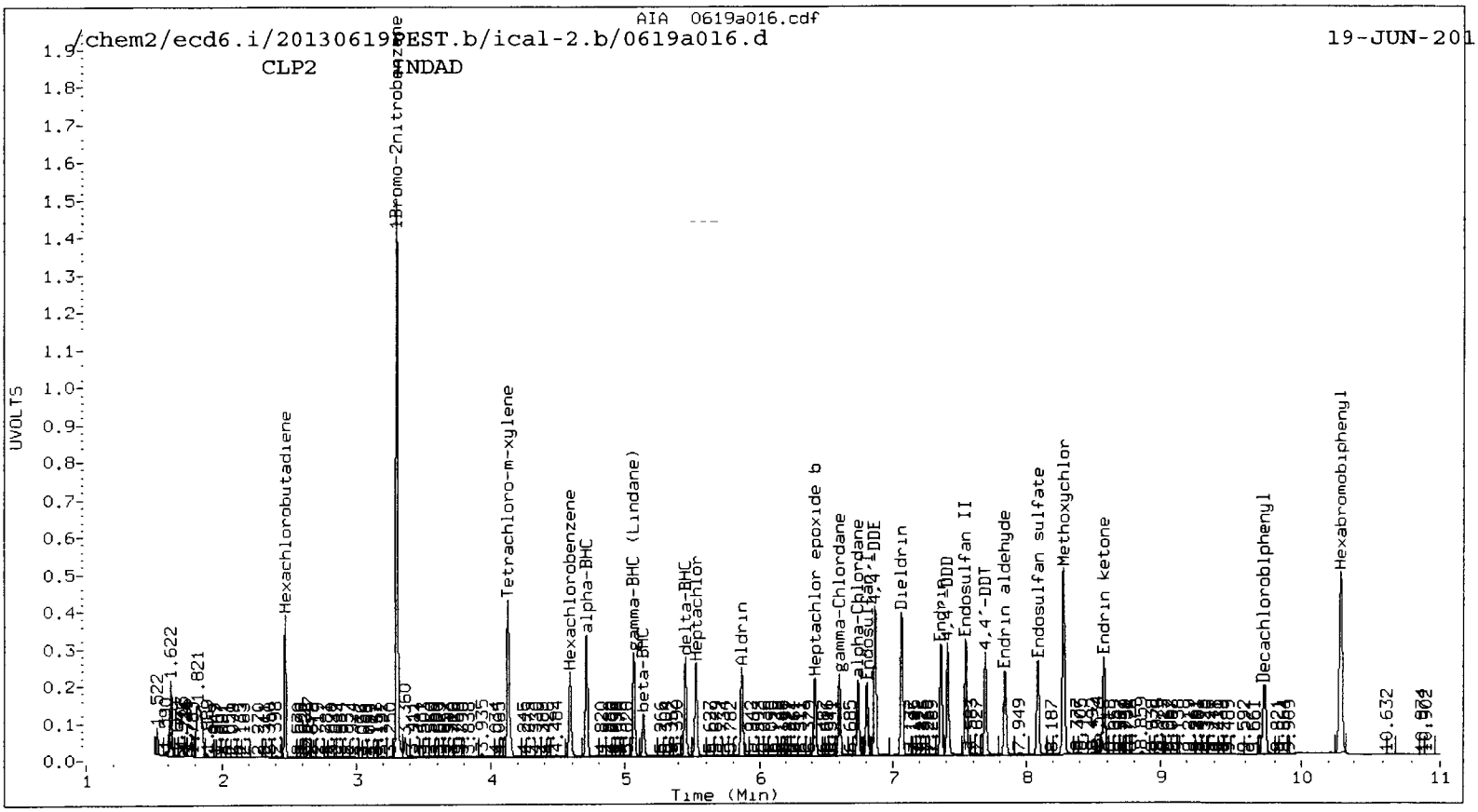
0619a016.cdf
19-JUN-201
STX-CLP INDAD
UVOLTS
Time (Min)
1.576
1.823
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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19-JUN-201
CLP2 INDAD
UVOLTS
Time (Min)
1.622
1.821
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a017.d ARI ID: INDAF
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a017.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 19:26
Compound Sublist: INDA Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.001	5751246	3.300	0.000	29146657	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	4831430	4.709	-0.001	28062312	41.8872	40.2993	3.9	alpha-BHC
4.644	0.000	1774946	5.138	-0.001	10672180	38.1486	35.3770	7.5	beta-BHC
4.814	0.000	4238006	5.450	0.000	24182583	42.4349	40.2888	5.2	delta-BHC
4.569	0.000	4339740	5.066	-0.001	24487912	41.2647	39.7707	3.7	gamma-BHC (Lindane)
5.015	0.000	3986440	5.529	0.000	21570666	39.4998	36.1173	8.9	Heptachlor
5.307	0.000	3943610	5.867	-0.001	20842596	40.3280	36.8629	9.0	Aldrin
5.882	0.000	3490657	6.421	-0.001	17836183	38.5037	34.6127	10.6	Heptachlor epoxide
6.259	0.000	3229378	6.808	-0.001	16698987	38.1102	36.0627	5.5	Endosulfan I
6.482	0.000	6997753	7.067	0.000	32113961	78.1531	68.7187	12.8	Dieldrin
6.184	-0.001	5369897	6.869	-0.001	33502698	78.8284	71.2136	10.2	4,4'-DDE
6.700	-0.001	5893266	7.356	-0.001	25263950	76.9443	70.6293	8.6	Endrin
6.906	0.000	5801680	7.545	-0.001	27141373	76.3028	72.4309	5.2	Endosulfan II
6.740	0.000	5757700	7.406	0.000	27410859	78.7235	71.1830	10.1	4,4'-DDD
7.674	0.000	5199603	8.087	-0.001	23126577	77.4483	72.4924	6.6	Endosulfan sulfate
6.998	0.000	5779869	7.694	0.000	25567397	80.1811	74.9342	6.8	4,4'-DDT
7.424	0.000	12651909	8.277	-0.004	44409139	370.8413	349.7334	5.9	Methoxychlor
7.929	0.000	6307219	8.578	-0.001	23664020	75.6572	74.2197	1.9	Endrin ketone
7.283	0.000	4545058	7.842	-0.001	20575239	75.6274	71.5236	5.6	Endrin aldehyde
6.002	0.000	3731013	6.604	0.000	19680475	40.0629	36.2896	9.9	gamma-Chlordane
6.126	0.000	3557417	6.742	-0.001	18312770	39.2446	36.8348	6.3	alpha-Chlordane
2.311	-0.001	4900160	2.468	-0.001	23122415	38.7729	38.3265	1.2	Hexachlorobutadiene
4.140	0.000	3420199	4.586	0.000	20695310	37.2703	36.0457	3.3	Hexachlorobenzene
8.927	0.000	5082371	10.289	0.001	17347014	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	6090602	4.127	-0.002	34671082	77.9926	71.9193	8.1	Tetrachloro-m-xylen
8.777	-0.001	4813124	9.724	-0.001	20809777	75.2444	74.2124	1.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13
06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	195.0	179.8	179.8~	115- 0
Decachlorobiphenyl	188.1	185.5	185.5~	115- 0

~ Indicates recovery outside QC Limits

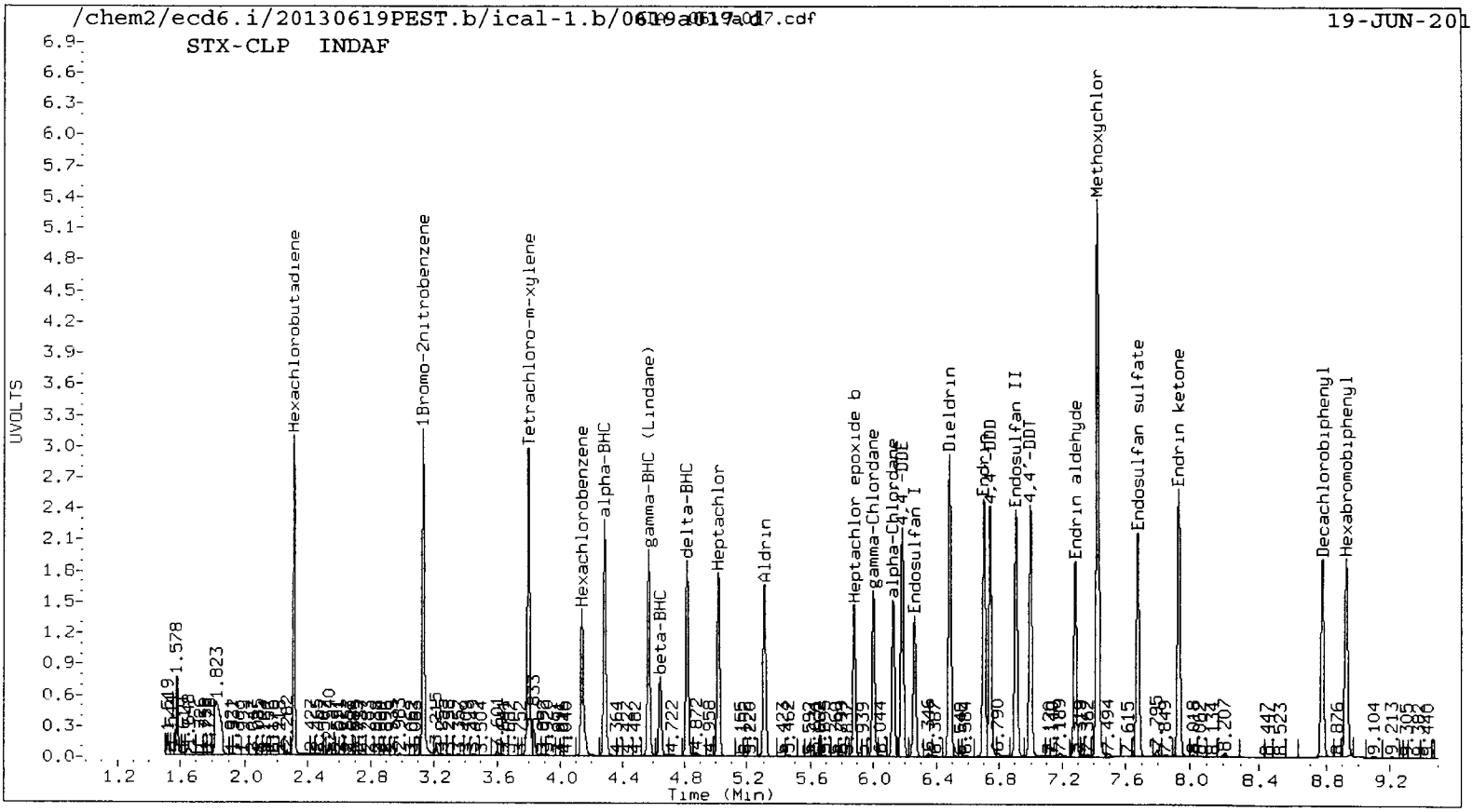
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	%D
Bromo-Nitrobenzene	5590801	5751246	2.9
Hexabromobiphenyl	4870538	5082371	4.3

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	%D
Bromo-Nitrobenzene	28320361	29146657	2.9
Hexabromobiphenyl	16454599	17347014	5.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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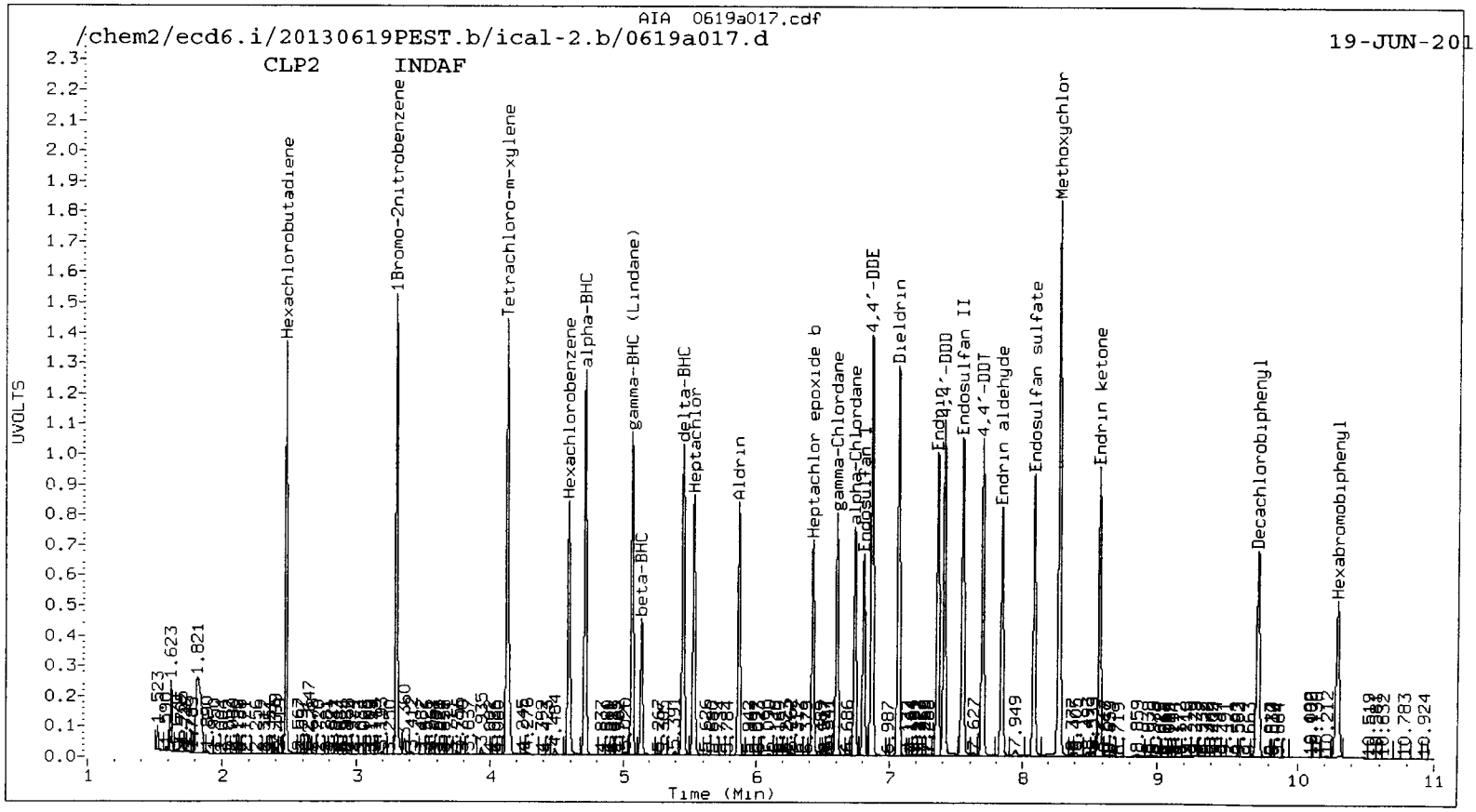
19-JUN-201
STX-CLP INDAF
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a017.cdf
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19-JUN-201
CLP2 INDAF
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a018.d ARI ID: INDAG
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a018.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Injection Date: 19-JUN-2013 19:44
Compound Sublist: INDA
Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul
Matrix: NONE
Operator: ar
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.131	-0.001	5601251	3.300	0.001	28311756	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	9535674	4.710	0.000	52831349	84.8857	78.1067	8.3	alpha-BHC
4.644	0.000	3446963	5.138	0.000	19944043	76.0689	68.0618	11.1	beta-BHC
4.813	0.000	8407388	5.450	0.000	47133896	86.4369	80.8420	6.7	delta-BHC
4.569	0.000	8519760	5.066	0.000	47580501	83.1801	79.5541	4.5	gamma-BHC (Lindane)
5.015	0.000	7611890	5.529	0.000	38136107	77.4425	65.7370	16.4	Heptachlor
5.307	0.000	7589069	5.867	0.000	37658349	79.6852	68.5679	15.0	Aldrin
5.883	0.000	6621317	6.422	0.000	31564056	74.9924	63.0591	17.3	Heptachlor epoxide
6.260	0.000	6139988	6.809	0.000	29659615	74.3988	65.9410	12.1	Endosulfan I
6.483	0.000	13374054	7.067	0.000	56261276	153.3655	123.9403	21.2	Dieldrin
6.184	0.000	10777552	6.870	0.000	58288946	162.4477	127.5532	24.1	4,4'-DDE
6.701	0.000	11315372	7.356	0.000	45268029	149.1881	128.5208	14.9	Endrin
6.906	0.000	11144702	7.545	0.000	49724483	148.0130	134.7600	9.4	Endosulfan II
6.740	0.000	11132759	7.407	0.000	50700725	153.7104	133.7107	13.9	4,4'-DDD
7.674	0.000	10090121	8.087	0.000	42871891	151.7690	136.4747	10.6	Endosulfan sulfat
6.998	0.000	11290652	7.694	0.000	49153383	158.1677	146.3004	7.8	4,4'-DDT
7.424	0.000	25410659	8.282	0.000	68710958	752.1298	549.5270	31.1	Methoxychlor
7.930	0.000	12242959	8.578	0.000	45120219	148.3008	143.7144	3.1	Endrin ketone
7.284	0.000	8770972	7.843	0.000	37980609	147.3779	134.0802	9.4	Endrin aldehyde
6.002	0.000	7244242	6.604	0.000	36309167	79.8704	68.9264	14.7	gamma-Chlordane
6.126	0.000	6882735	6.742	0.000	33830196	77.9620	70.0537	10.7	alpha-Chlordane
2.312	0.000	9533617	2.469	0.000	41324182	77.4557	70.5167	9.4	Hexachlorobutadiene
4.140	0.000	6575895	4.586	0.000	38026898	73.5771	68.1858	7.6	Hexachlorobenzene
8.927	0.000	5032937	10.289	0.001	17081518	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	11650961	4.128	0.000	59297060	153.1904	126.6289	19.0	Tetrachloro-m-xyl
8.777	0.000	9459476	9.725	0.000	39937738	149.3341	144.6407	3.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	383.0	316.6	316.6~	115- 0
Decachlorobiphenyl	373.3	361.6	361.6~	115- 0

WV67:00918

~ Indicates recovery outside QC Limits

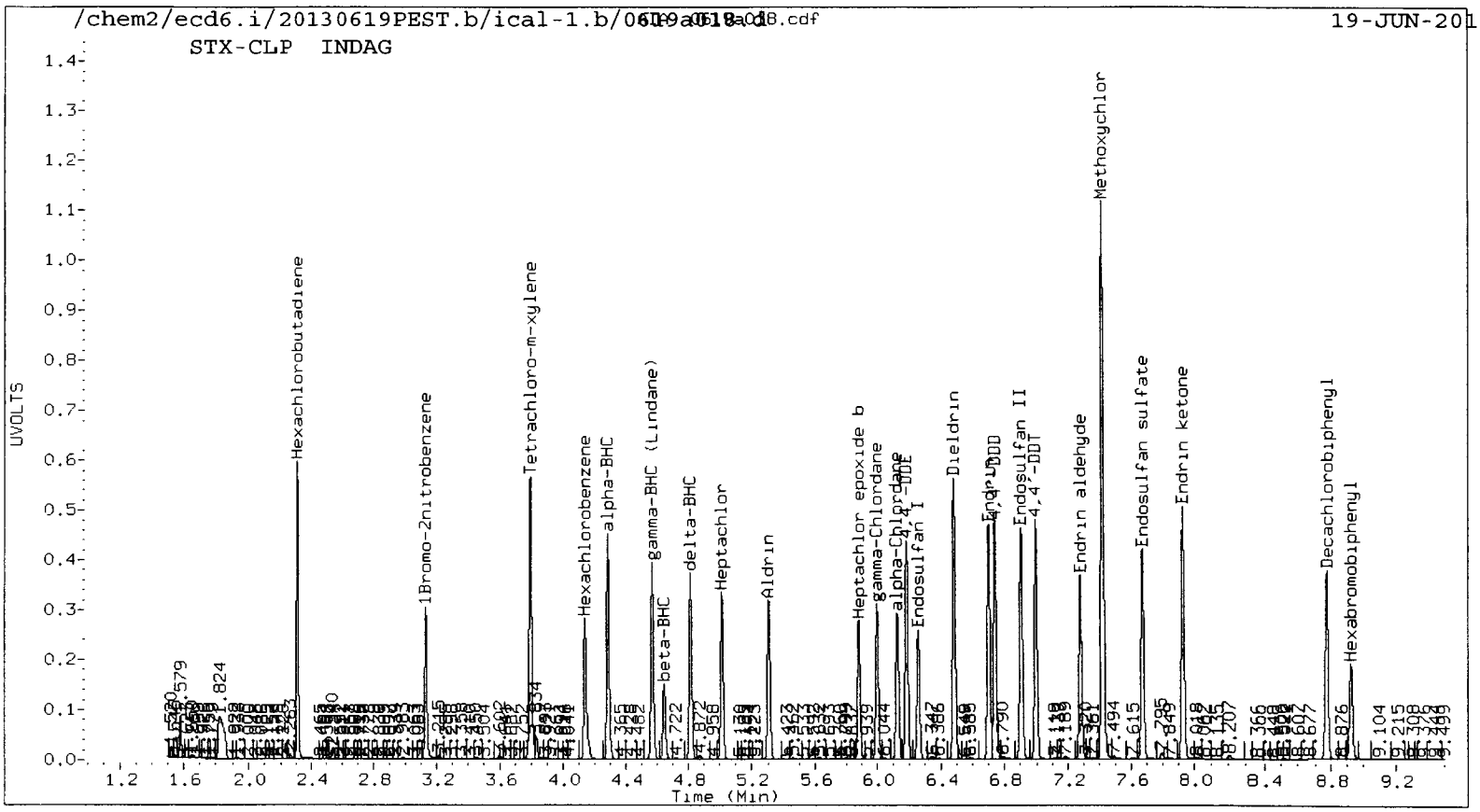
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	%D
Bromo-Nitrobenzene	5590801	5601251	0.2
Hexabromobiphenyl	4870538	5032937	3.3

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	%D
Bromo-Nitrobenzene	28320361	28311756	0.0
Hexabromobiphenyl	16454599	17081518	3.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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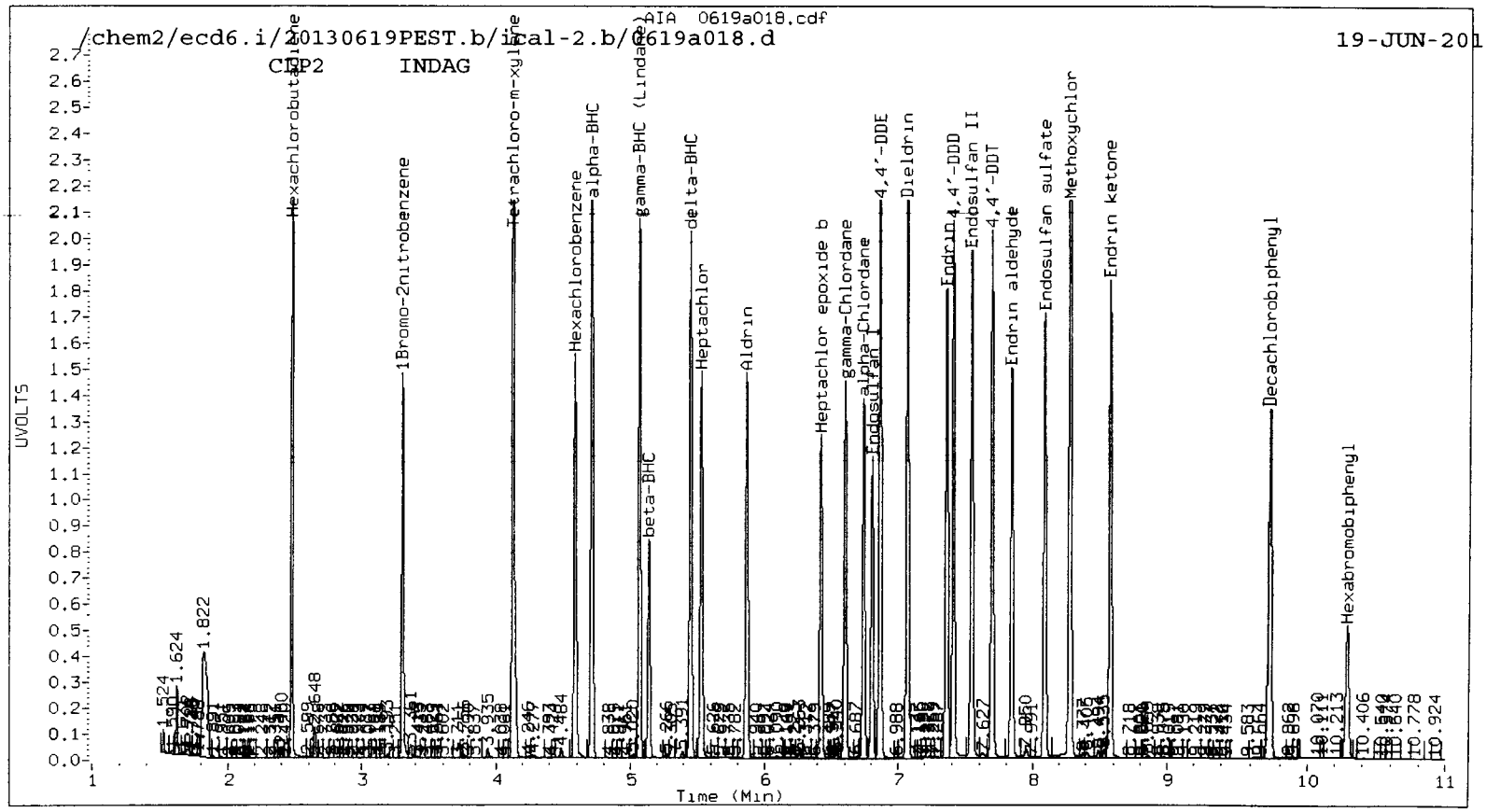
19-JUN-201
STX-CLP INDAG
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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19-JUN-201
CLP2 INDAG
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a019.d ARI ID: INDA ICV
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a019.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 20:01
Compound Sublist: INDA Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.001	5662321	3.300	0.000	28347211	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	4855154	4.710	0.000	27588708	42.7540	40.7366	4.8	alpha-BHC
4.645	0.001	1822898	5.139	0.000	10652715	39.7945	36.3084	9.2	beta-BHC
4.814	0.001	4184696	5.450	0.000	23785579	42.5591	40.7450	4.4	delta-BHC
4.569	0.000	4344523	5.066	0.000	24367918	41.9589	40.6919	3.1	gamma-BHC (Lindane)
5.015	0.000	3968184	5.530	0.000	21193899	39.9364	36.4872	9.0	Heptachlor
5.307	0.000	4065594	5.867	-0.001	21069990	42.2283	38.3160	9.7	Aldrin
5.882	0.000	3520931	6.422	0.000	17669895	39.4476	35.2570	11.2	Heptachlor epoxide
6.260	0.000	3339914	6.809	0.000	16390864	40.0336	36.3956	9.5	Endosulfan I
6.482	0.000	3635982	7.067	-0.001	17715883	41.2455	38.9783	5.7	Dieldrin
6.186	0.001	3446918	6.870	0.000	17845149	51.3943	39.0016	27.4	4,4'-DDE
6.701	0.000	3061363	7.356	0.000	13742736	40.4364	38.9338	3.8	Endrin
6.907	0.001	2960864	7.545	0.000	14554305	39.3951	39.3599	0.1	Endosulfan II
6.742	0.002	2998582	7.408	0.001	14669806	41.4771	38.6054	7.2	4,4'-DDD
7.675	0.000	2678851	8.087	0.000	12153450	40.3671	38.6057	4.5	Endosulfan sulfate
6.999	0.001	2896942	7.695	0.000	13011033	40.6566	38.6434	5.1	4,4'-DDT
7.425	0.001	1399039	8.277	-0.005	5503814	41.4857	43.9237	5.7	Methoxychlor
7.930	0.000	3140634	8.578	0.000	12066382	38.1124	38.3511	0.6	Endrin ketone
7.284	0.000	2303678	7.842	-0.001	10586002	38.7792	37.2912	3.9	Endrin aldehyde
6.002	0.000	3758964	6.605	0.000	19267024	40.9970	36.5292	11.5	gamma-Chlordane
6.126	0.000	3606097	6.742	0.000	18191702	40.4064	37.6232	7.1	alpha-Chlordane
2.294	-0.017	4300	2.454	-0.016	8293	0.0346	0.0141	83.9*	Hexachlorobutadiene
4.139	-0.001	47437	4.597	0.011	15351	0.5250	0.0275	180.1*	Hexachlorobenzene
8.927	0.000	5023768	10.289	0.000	17118059	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	3012987	4.127	-0.002	18593722	39.1884	39.6573	1.2	Tetrachloro-m-xylen
8.777	0.000	2476257	9.725	0.000	10738704	39.1633	38.8089	0.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	98.0	99.1	98.0~	115- 0
Decachlorobiphenyl	97.9	97.0	97.0~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

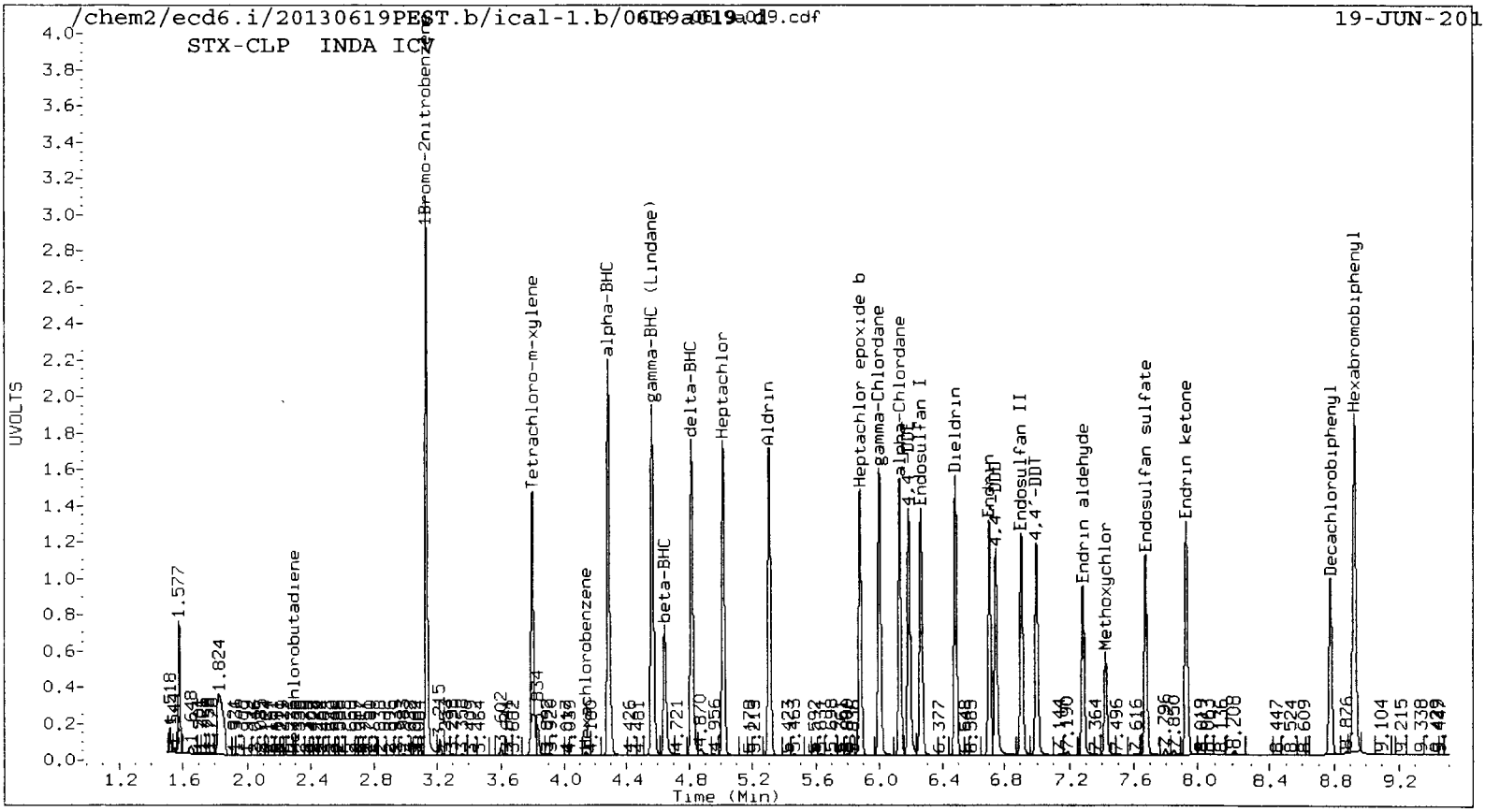
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5662321	1.3
Hexabromobiphenyl	4870538	5023768	3.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28347211	0.1
Hexabromobiphenyl	16454599	17118059	4.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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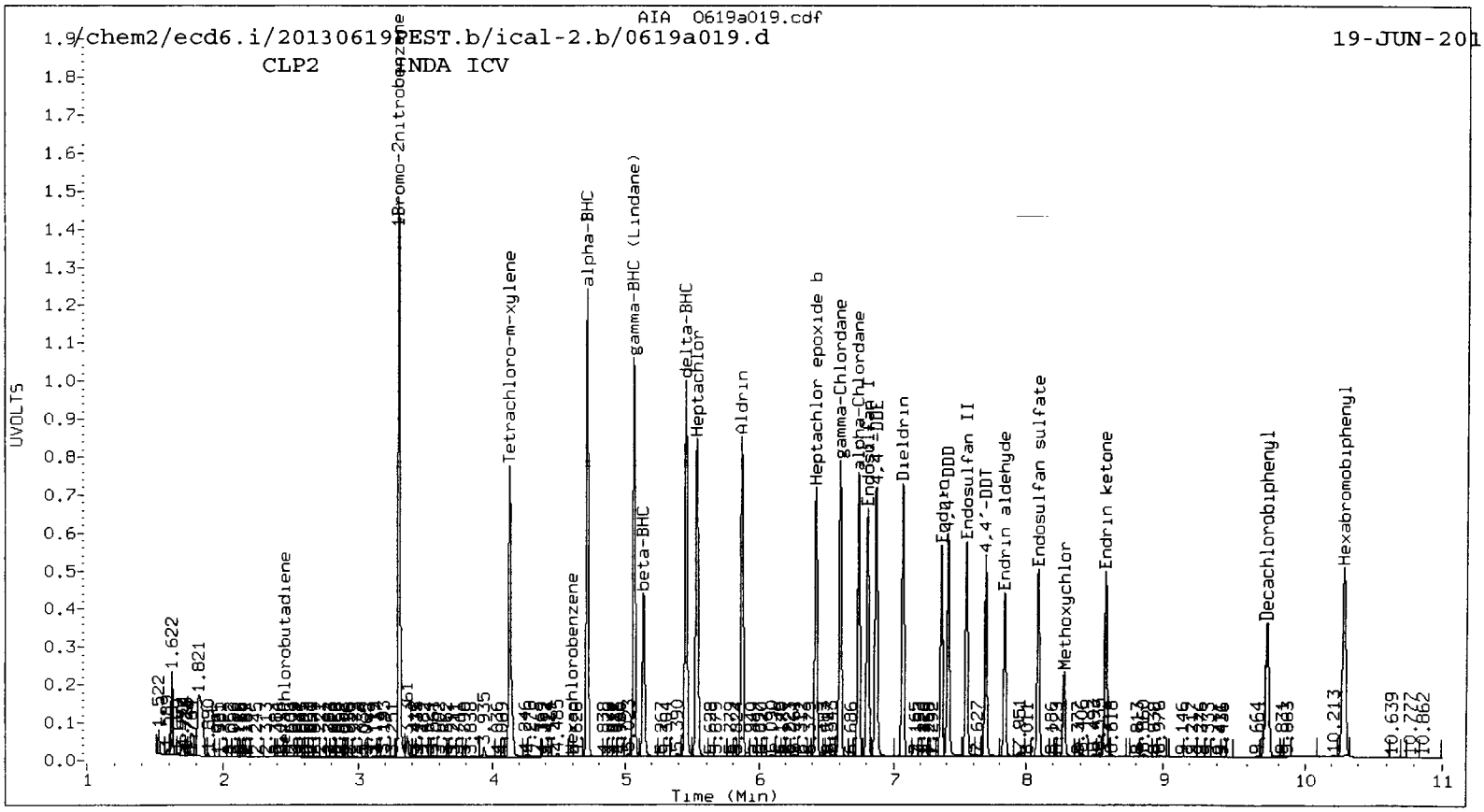
19-JUN-201
STX-CLP INDA ICV
UVOLTS
Time (Min)
1.577
1.824
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Pentachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
Endrin
4,4'-DDT
Endosulfan II
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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19-JUN-201
CLP2 INDA ICV
UVOLTS
Time (Min)
1.622
1.821
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Pentachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
Endrin
4,4'-DDT
Endosulfan II
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a020.d ARI ID: HCB/HCBD ICV
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a020.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 20:19
Compound Sublist: wpest Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.131	-0.001	5825856	3.300	0.000	29136306	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.270	-0.016	15741	----			0.1347	0.0000	---	alpha-BHC
4.638	-0.006	6185	5.153	0.015	34366	0.1312	0.1140	14.1	beta-BHC
4.807	-0.007	7827	5.460	0.010	55686	0.0774	0.0928	18.1	delta-BHC
4.568	-0.001	6365	5.039	-0.027	48784	0.0597	0.0793	28.1	gamma-BHC (Lindane)
5.011	-0.004	3542	5.532	0.003	24053	0.0346	0.0403	15.1	Heptachlor
5.321	0.014	5699	5.852	-0.016	197176	0.0575	0.3489	143.4*	Aldrin
5.889	0.006	6810	6.421	-0.001	28673	0.0742	0.0557	28.5	Heptachlor epoxide b
6.261	0.001	2191	6.806	-0.004	50626	0.0255	0.1094	124.3*	Endosulfan I
6.470	-0.013	6721	7.043	-0.024	10216	0.0741	0.0219	108.9*	Dieldrin
6.184	-0.001	7689	6.868	-0.002	52897	0.1114	0.1125	0.9	4,4'-DDE
6.664	-0.038	4458	7.355	-0.001	17421	0.0557	0.0477	15.5	Endrin
6.907	0.001	3007	7.523	-0.022	46924	0.0379	0.1227	105.6*	Endosulfan II
6.736	-0.004	11288	7.408	0.001	34975	0.1478	0.0890	49.7*	4,4'-DDD
7.676	0.001	2737	8.087	0.000	30094	0.0390	0.0924	81.2*	Endosulfan sulfate
6.996	-0.002	4564	7.702	0.008	61753	0.0606	0.1773	98.1*	4,4'-DDT
7.429	0.004	2297	8.277	-0.004	19064	0.0645	0.1471	78.1*	Methoxychlor
7.924	-0.005	12452	8.574	-0.004	24754	0.1430	0.0761	61.1*	Endrin ketone
7.285	0.001	3329	7.841	-0.001	51003	0.0530	0.1737	106.4*	Endrin aldehyde
5.977	-0.025	27144	6.612	0.007	182548	0.2877	0.3367	15.7	gamma-Chlordane
6.121	-0.005	10392	6.743	0.001	26109	0.1132	0.0525	73.2*	alpha-Chlordane
2.311	-0.001	5901418	2.469	-0.001	26560599	46.0975	44.0411	4.6	Hexachlorobutadiene
4.139	-0.001	3444301	4.585	-0.001	18722188	37.0522	32.6206	12.7	Hexachlorobenzene
5.786	-0.001	2264	6.329	-0.003	59974	0.0317	0.1579	133.2*	Oxychlordane
----			6.572	-0.008	30438	0.0000	0.1110	---	2,4-DDE
----			6.685	-0.005	39610	0.0000	0.0906	---	trans-Nonachlor
6.347	-0.001	4676	7.062	-0.003	27477	0.0950	0.1154	19.4	2,4-DDD
6.587	0.000	5399	7.371	0.018	18445	0.0949	0.0711	28.6	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.597	-0.004	2451	8.534	-0.030	243505	0.0415	1.1056	185.5*	Mirex
8.926	-0.001	5307615	10.289	0.000	17708234	80.0000	80.0000	0.0	Hexabromobiphenyl
1.759	0.001	2077	1.727	0.001	136283	0.0000	0.0000	---	Hexachloroethane
6.553	-0.028	5051	7.331	-0.006	21984	0.0000	0.0000	---	Kepone
3.799	0.000	3282589	4.126	-0.002	18514400	41.4965	38.4186	7.7	Tetrachloro-m-xylen
8.776	-0.001	2787558	9.725	0.000	11737142	41.7290	41.0035	1.8	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

JR 06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	103.7	96.0	96.0~	130- 0
Decachlorobiphenyl	104.3	102.5	102.5~	130- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

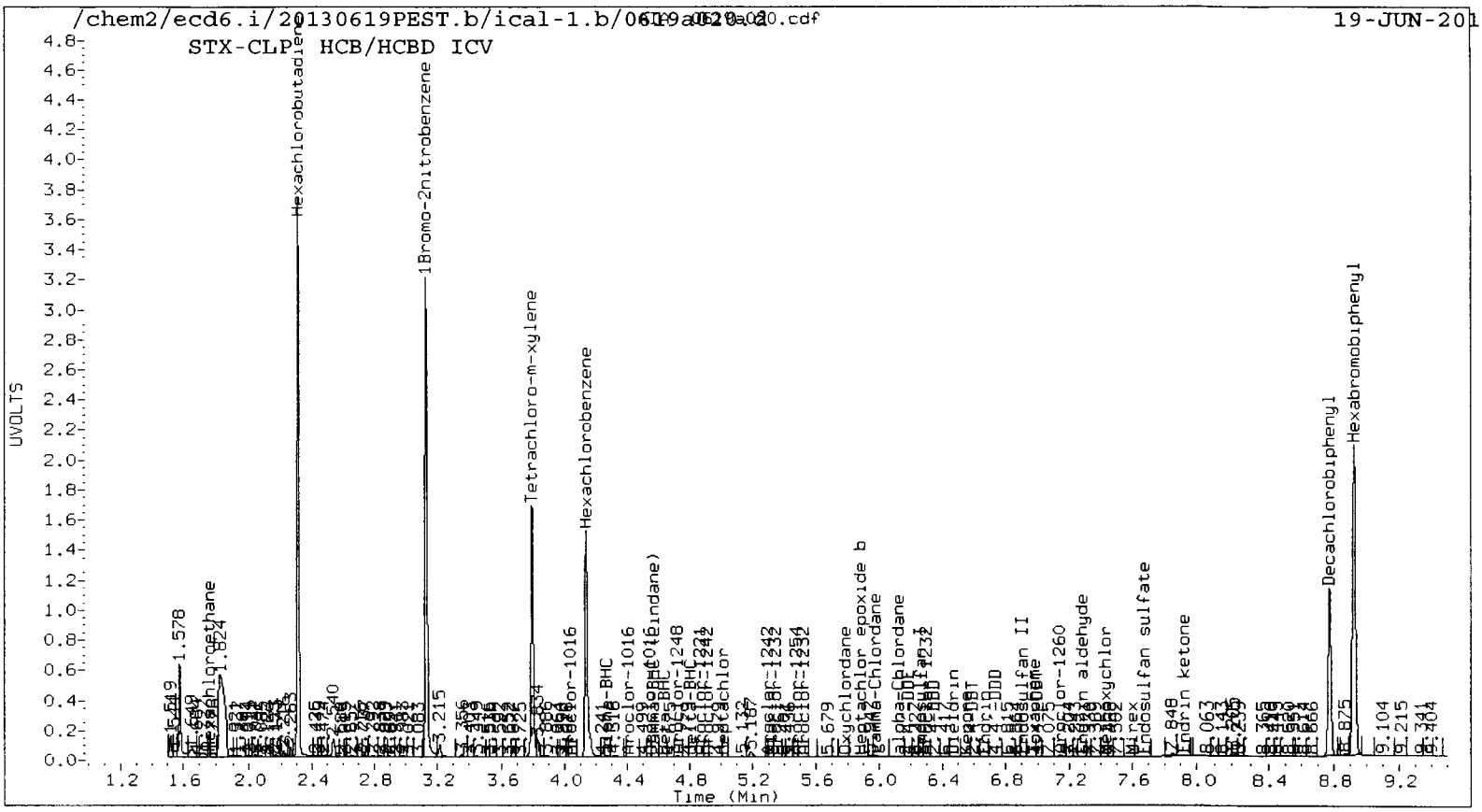
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5825856	4.2
Hexabromobiphenyl	4870538	5307615	9.0

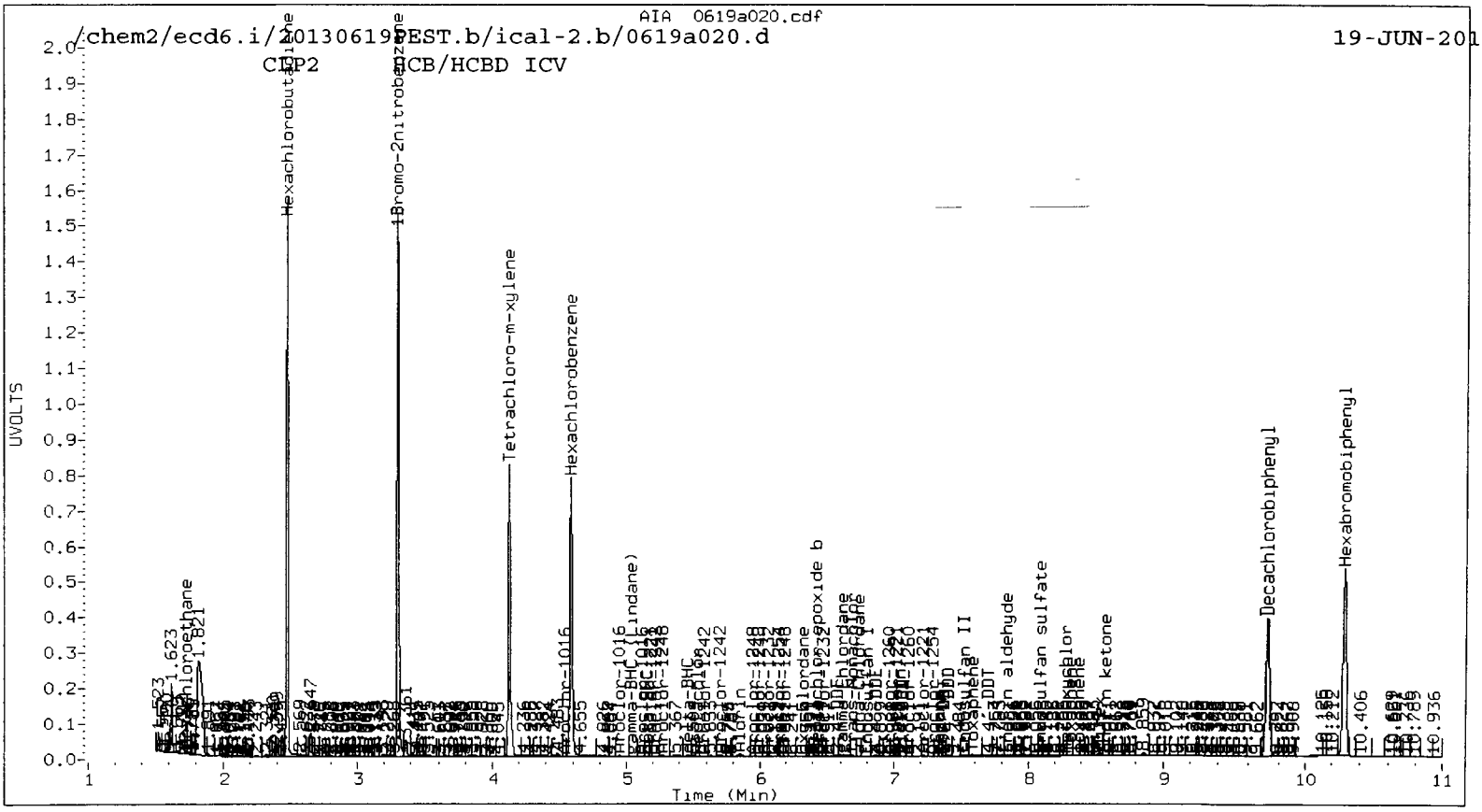
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29136306	2.9
Hexabromobiphenyl	16454599	17708234	7.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.977	0.019	5656	1.7	1	7.285	-0.006	21029	1.7
Toxaphene	2	6.996	-0.013	4564	1.9	2	7.584	-0.031	161753	8.8
Toxaphene	3	7.285	0.018	3329	0.9	3	7.841	-0.005	51003	2.5
Toxaphene	4	7.597	0.004	2451	0.6	4	8.313	-0.001	27940	1.9
Toxaphene	5	---			0.000	5	8.374	0.022	31267	1.7
Toxaphene	6	7.924	0.011	12452	5.6	NS	---			----
Total STX-CLPAve (5 peaks): 2.135						Total CLP2Ave (5 peaks): 3.345				RPD = 44*
Corrected Ave (4 peaks): 1.270						Corrected Ave (4 peaks): 1.968				RPD = 43*





Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a030.d ARI ID: TOXAPHENE
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a030.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 23:17
Compound Sublist: TOXAPH Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.132	0.000	6058478	3.301	0.001	29930668	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.927	0.000	5799142	10.289	0.000	19105364	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.001	2712292	4.127	-0.001	16671590	32.9707	33.6765	2.1	Tetrachloro-m-xylen
8.777	0.000	2659985	9.724	0.000	11618435	36.4442	37.6206	3.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	82.4	84.2	82.4~	150- 0
Decachlorobiphenyl	91.1	94.1	91.1~	150- 0

~ Indicates recovery outside QC Limits

6/25/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6058478	8.4
Hexabromobiphenyl	4870538	5799142	19.1

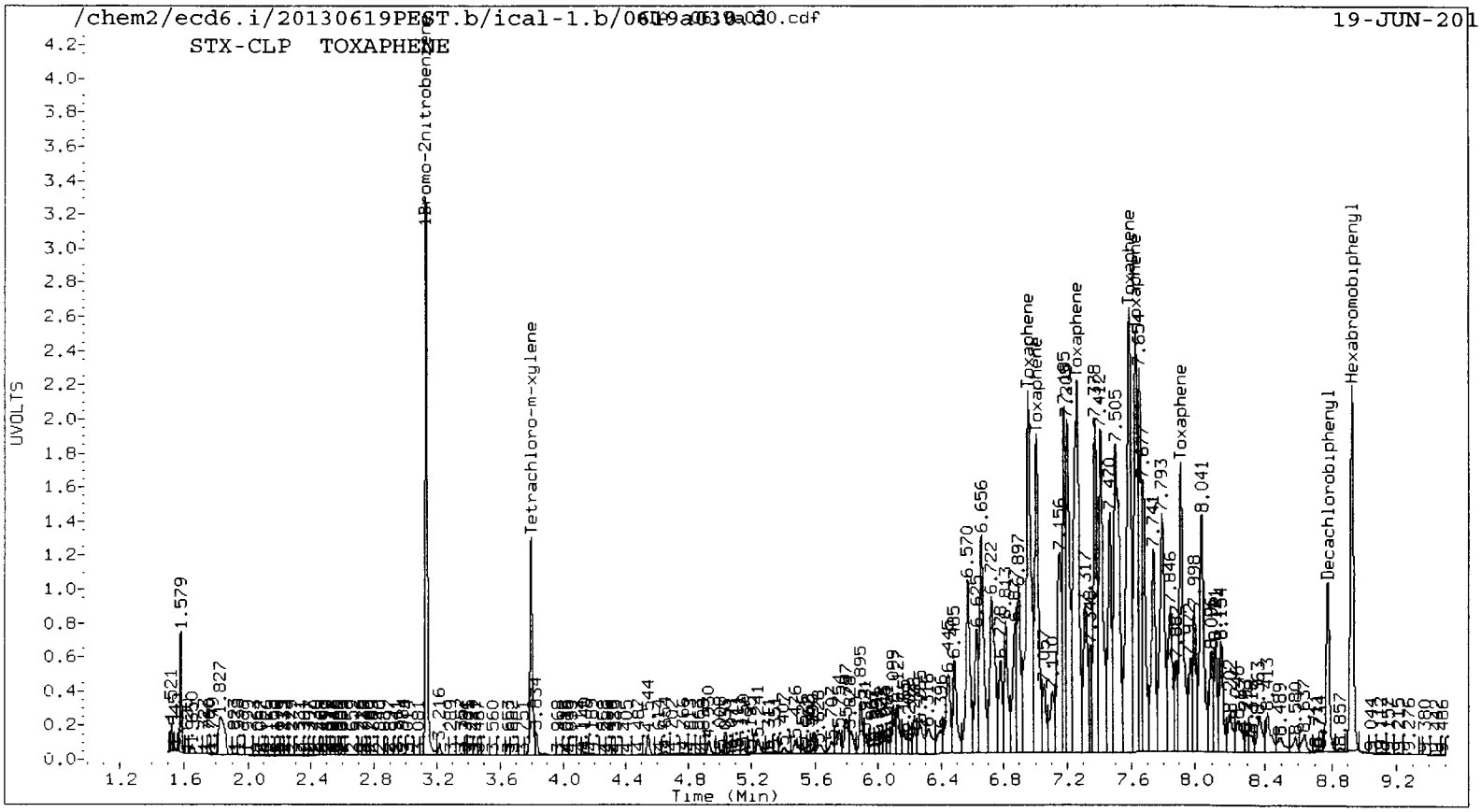
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29930668	5.7
Hexabromobiphenyl	16454599	19105364	16.1

WV67:09327

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.958	0.000	9305172	2500.0	1	7.291	0.000	33416871	2500.0
Toxaphene	2	7.010	0.000	6420857	2500.0	2	7.615	0.000	49303313	2500.0
Toxaphene	3	7.267	0.000	10593063	2500.0	3	7.846	0.000	54099773	2500.0
Toxaphene	4	7.593	0.000	10790117	2500.0	4	8.314	0.000	38993888	2500.0
Toxaphene	5	7.632	0.000	7165051	2500.0	5	8.353	0.000	49587064	2500.0
Toxaphene	6	7.913	0.000	6082441	2500.0	NS	---			----
Total STX-CLPAve (6 peaks): 2500.000						Total CLP2Ave (5 peaks): 2500.000				RPD = 0
Corrected Ave (6 peaks): 2500.000						Corrected Ave (5 peaks): 2500.000				RPD = 0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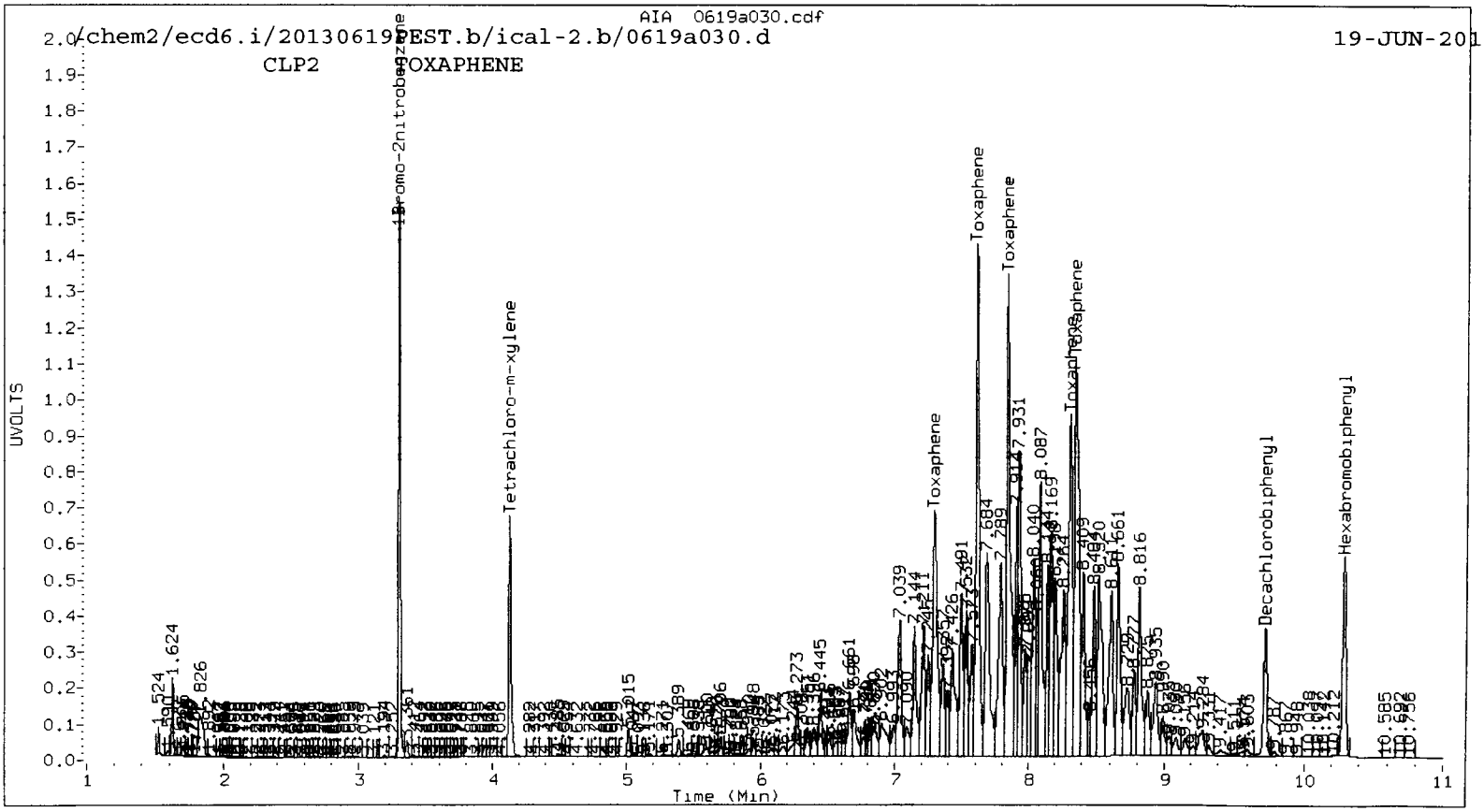
19-JUN-201
STX-CLP TOXAPHENE
UVOLTS
Time (Min)
Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl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19-JUN-201
CLP2 TOXAPHENE
UVOLTS
Time (Min)
Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a022.d ARI ID: WNDE
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a022.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 20:55
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.758	0.001	1274	1.727	0.001	146749	0.0000	0.0000	---	Hexachloroethane
3.131	-0.001	5981300	3.300	0.000	29422294	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	2908033	6.331	-0.001	15471323	39.9432	40.3466	1.0	Oxychlordane
5.862	0.001	2211390	6.580	0.000	11077550	39.7672	39.9916	0.6	2,4-DDE
6.110	0.000	3582762	6.688	-0.002	18301689	40.0972	40.6354	1.3	trans-Nonachlor
6.349	0.001	1984688	7.065	0.000	9866849	39.5962	40.2197	1.6	2,4-DDD
6.587	0.000	2324382	7.352	-0.001	10852842	40.0914	40.5992	1.3	2,4-DDT
6.726	0.000	3941134	7.412	-0.003	19164808	39.9713	40.8584	2.2	cis-Nonachlor
7.601	0.000	2329092	8.564	-0.001	8771162	38.7089	38.6461	0.2	Mirex
8.927	0.000	5406477	10.289	0.001	18248706	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.000	3055226	4.127	-0.002	18478701	37.6186	37.9718	0.9	Tetrachloro-m-xylen
8.777	0.000	2538730	9.725	0.000	10820368	37.3092	36.6812	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	94.0	94.9	94.0~	150- 0
Decachlorobiphenyl	93.3	91.7	91.7~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

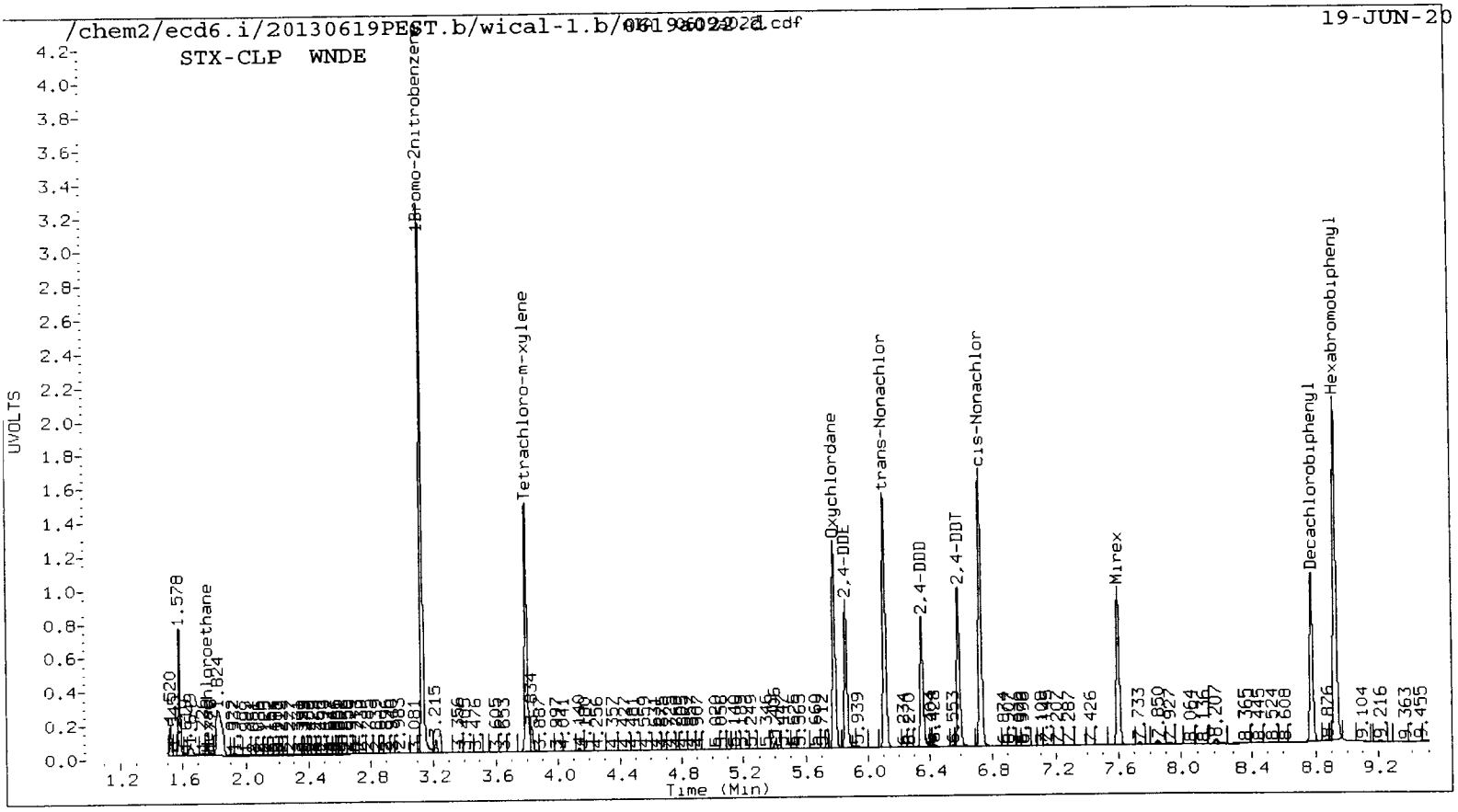
	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5981300	7.0
Hexabromobiphenyl	4870538	5406477	11.0

WV6T:00330

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29422294	3.9
Hexabromobiphenyl	16454599	18248706	10.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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19-JUN-20
STX-CLP WNDE
UVOLTS
Time (Min)
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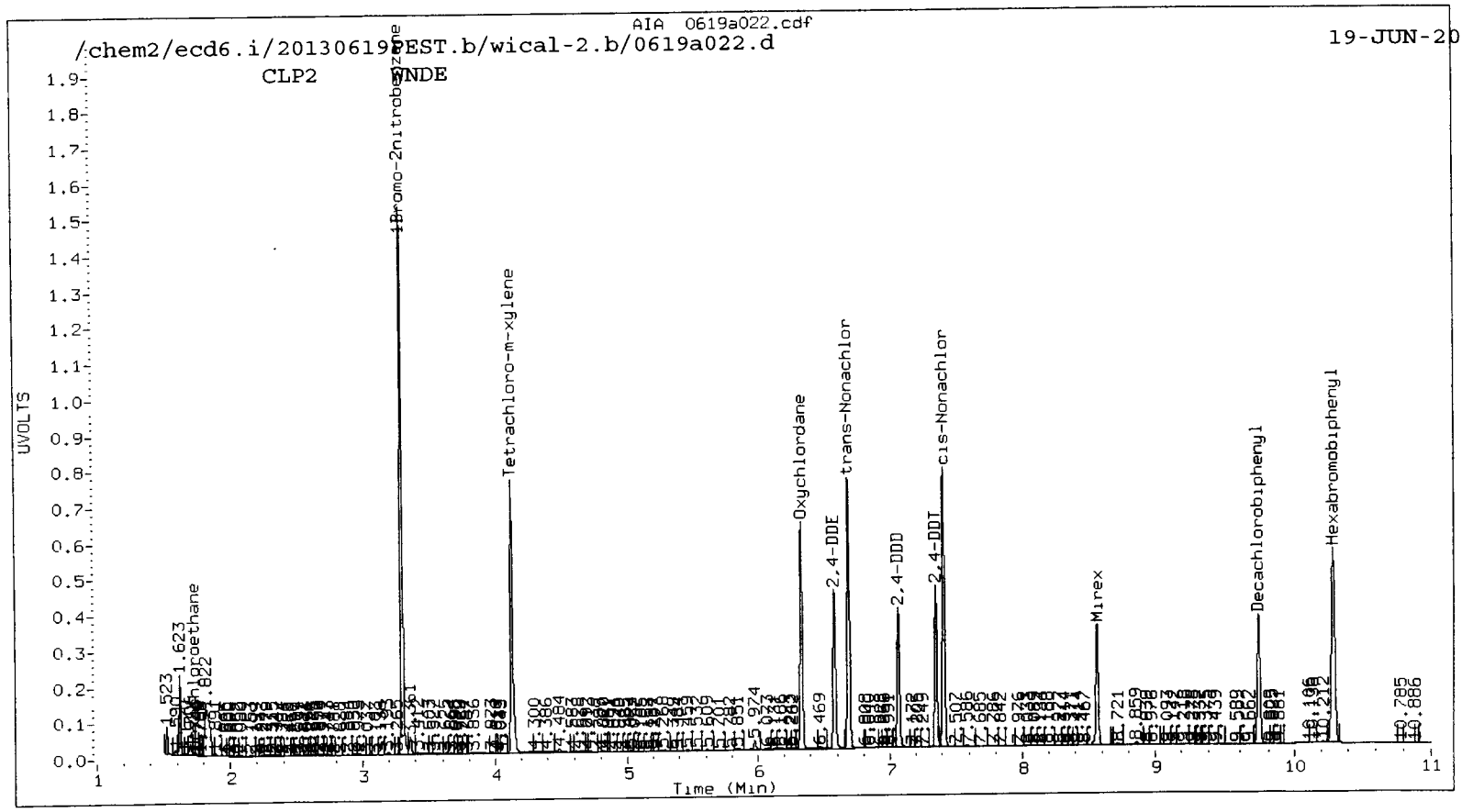
1-Bromo-2-nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl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19-JUN-20
CLP2 WNDE
UVOLTS
Time (Min)
1.623
1-Bromo-2-nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a023.d ARI ID: WNDA
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a023.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 21:13
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.758	0.001	735	1.726	0.000	123087	0.0000	0.0000	---	Hexachloroethane
3.131	-0.001	5831093	3.300	0.001	28731894	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	186864	6.331	-0.002	945490	2.6702	2.5249	5.6	Oxychlordane
5.863	0.001	141733	6.580	0.000	723920	2.6516	2.6763	0.9	2,4-DDE
6.110	-0.001	219560	6.688	-0.002	1094437	2.5564	2.5172	1.5	trans-Nonachlor
6.350	0.002	126284	7.065	0.000	623677	2.6211	2.6335	0.5	2,4-DDD
6.587	0.000	143881	7.352	-0.001	660992	2.5818	2.5615	0.8	2,4-DDT
6.726	-0.001	243492	7.411	-0.004	1135268	2.5692	2.5072	2.4	cis-Nonachlor
7.601	0.000	159764	8.564	-0.001	614646	2.7624	2.8054	1.5	Mirex
8.927	-0.001	5196778	10.289	0.001	17616180	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.001	185150	4.126	-0.002	1188081	2.3385	2.5000	6.7	Tetrachloro-m-xylene
8.777	-0.001	172900	9.725	0.000	734360	2.6435	2.5789	2.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	5.8	6.3	5.8~	150- 0
Decachlorobiphenyl	6.6	6.4	6.4~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

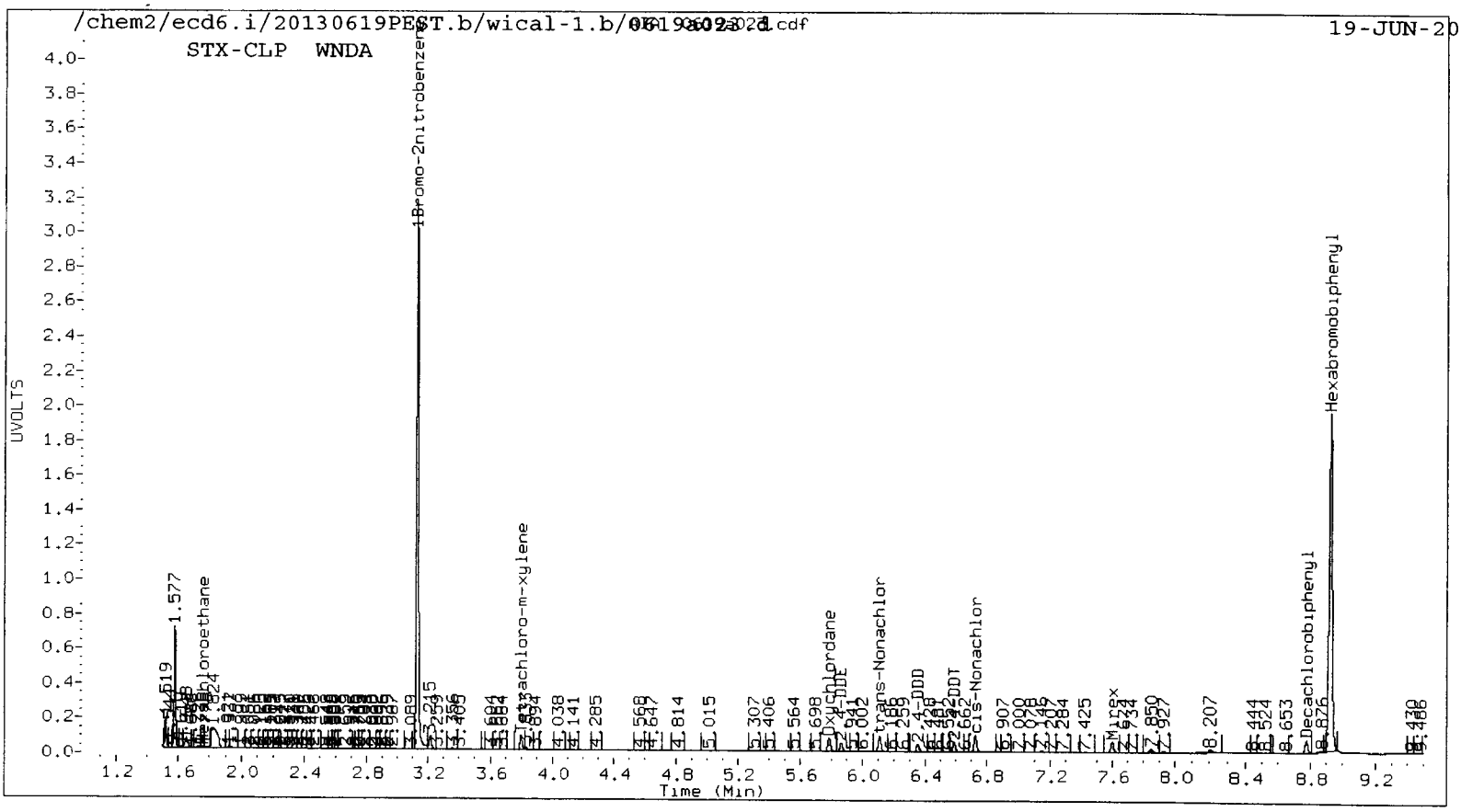
	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5831093	4.3
Hexabromobiphenyl	4870538	5196778	6.7

WVST : 00333

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28731894	1.5
Hexabromobiphenyl	16454599	17616180	7.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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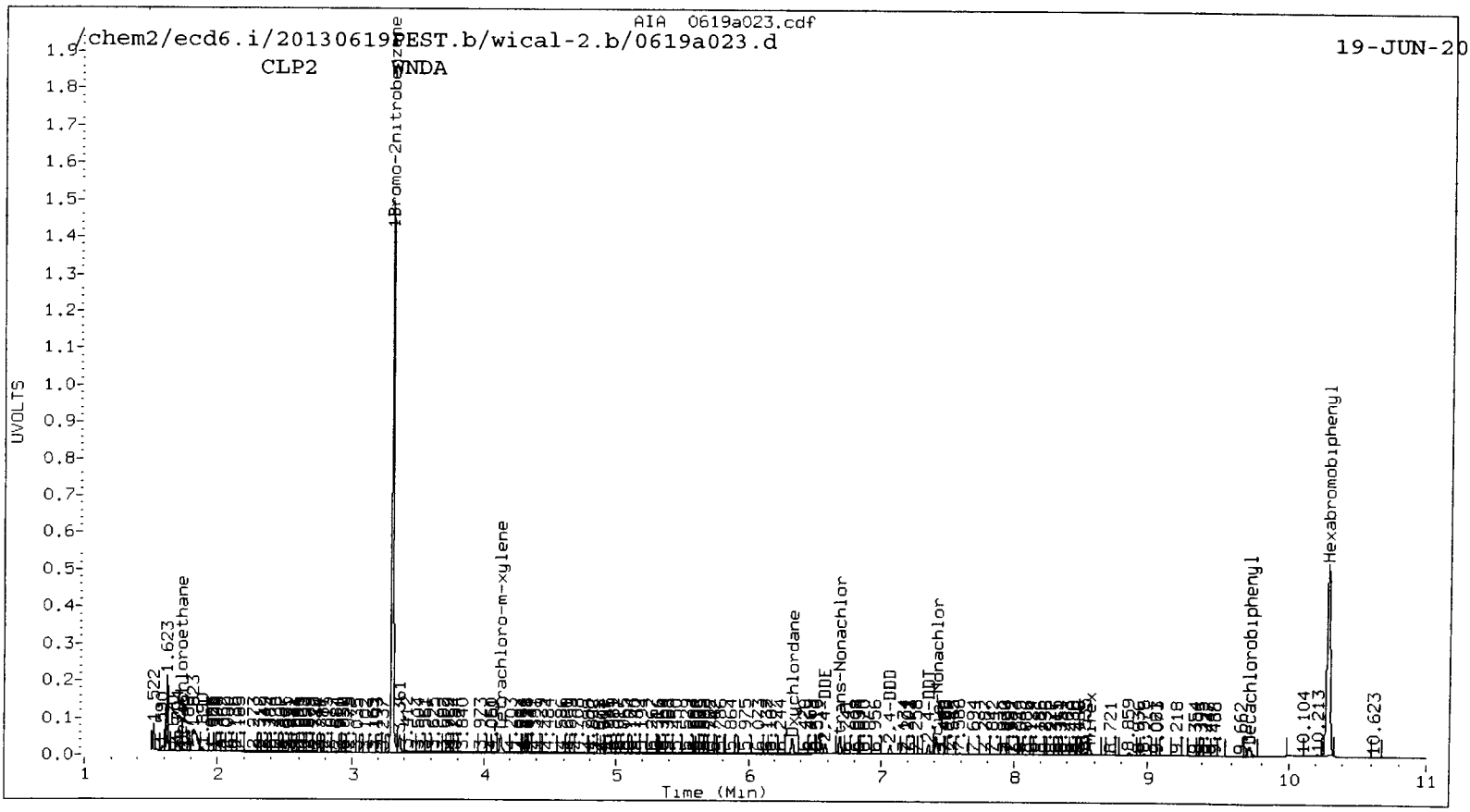
STX-CLP WNDA
1Bromo-2nitrobenzene
1.577
Hexachloroethane
Pentachloro-m-xylene
Dieldrin
Oxychlordane
4,4'-DDE
trans-Nonachlor
4,4'-DDD
4,4'-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)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19-JUN-20
CLP2 WNDA
1Bromo-2nitrobenzene
1.623
Hexachloroethane
Pentachloro-m-xylene
Oxychlordane
4,4'-DDE
trans-Nonachlor
4,4'-DDD
4,4'-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a024.d ARI ID: WNDB
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a024.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 21:30
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.758	0.000	821	1.727	0.001	125733	0.0000	0.0000	---	Hexachloroethane
3.130	-0.001	5811438	3.300	0.000	28704362	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	370207	6.331	-0.002	1942777	5.2495	5.1931	1.1	Oxychlordane
5.863	0.001	282499	6.580	0.000	1471963	5.2445	5.4469	3.8	2,4-DDE
6.110	-0.001	439420	6.687	-0.003	2255304	5.0770	5.1662	1.7	trans-Nonachlor
6.350	0.002	253914	7.065	0.001	1263973	5.2297	5.3155	1.6	2,4-DDD
6.587	0.000	288053	7.352	-0.001	1344496	5.1291	5.1890	1.2	2,4-DDT
6.727	0.000	490995	7.412	-0.004	2346101	5.1408	5.1603	0.4	cis-Nonachlor
7.600	0.000	306200	8.564	0.000	1166537	5.2536	5.3027	0.9	Mirex
8.927	0.000	5237048	10.289	0.001	17688146	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.000	369366	4.127	-0.002	2455096	4.6809	5.1712	10.0	Tetrachloro-m-xylene
8.777	0.000	341718	9.725	0.000	1439576	5.1844	5.0348	2.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	11.7	12.9	11.7~	150- 0
Decachlorobiphenyl	13.0	12.6	12.6~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

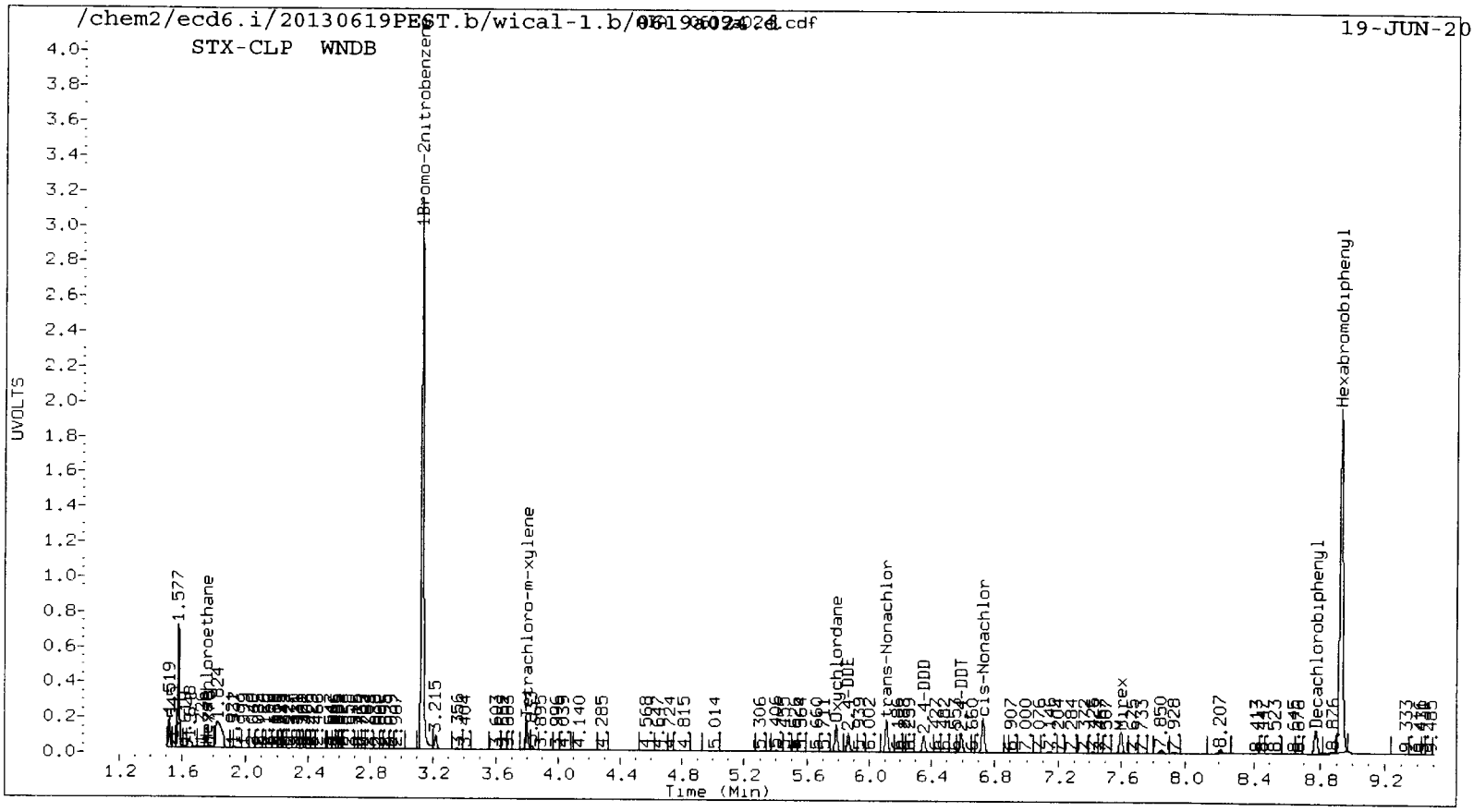
	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5811438	3.9
Hexabromobiphenyl	4870538	5237048	7.5

WV67:00936

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28704362	1.4
Hexabromobiphenyl	16454599	17688146	7.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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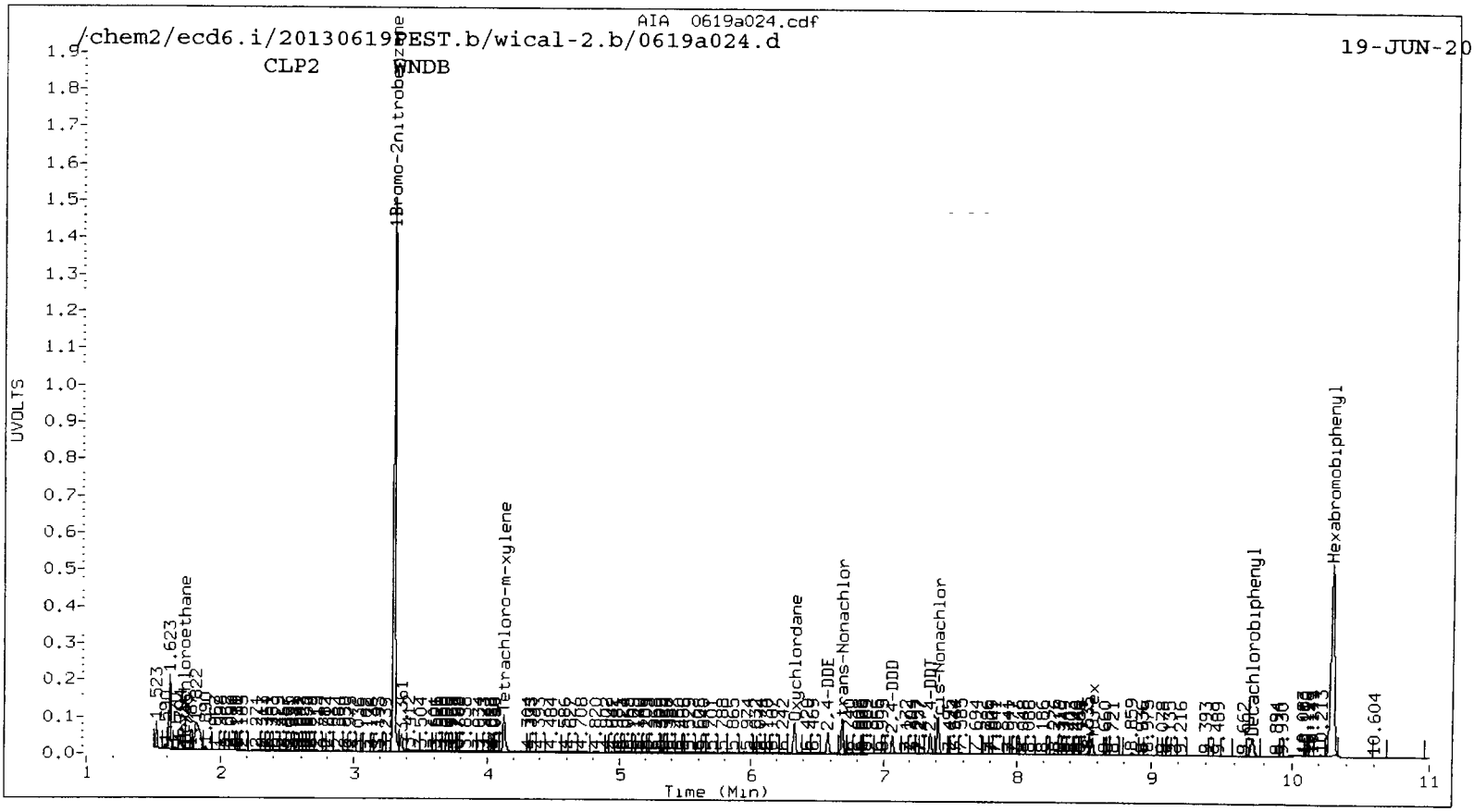
STX-CLP WNDB
19-JUN-20
UVOLTS
Time (Min)
1.577
3.215
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
4,4'-DDE
trans-Nonachlor
2,4'-DDD
4,4'-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 WNDB
19-JUN-20
UVOLTS
Time (Min)
1.623
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
4,4'-DDE
trans-Nonachlor
2,4'-DDD
4,4'-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
10.604

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a025.d ARI ID: WNDC
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a025.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 21:48
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.759	0.001	791	1.727	0.001	131582	0.0000	0.0000	---	Hexachloroethane
3.131	-0.001	5920700	3.300	0.001	29296978	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	743037	6.331	-0.001	3950329	10.3213	10.3459	0.2	Oxychlordane
5.863	0.001	557203	6.580	0.000	2924113	10.1333	10.6016	4.5	2,4-DDE
6.110	0.000	883302	6.688	-0.002	4661405	9.9973	10.4292	4.2	trans-Nonachlor
6.350	0.002	498501	7.066	0.001	2517945	10.0579	10.3425	2.8	2,4-DDD
6.588	0.001	580337	7.352	0.000	2740346	10.1229	10.3300	2.0	2,4-DDT
6.727	0.000	962333	7.412	-0.003	4841041	9.8703	10.4001	5.2	cis-Nonachlor
7.601	0.000	603038	8.563	-0.001	2254506	10.1356	10.0097	1.2	Mirex
8.926	-0.001	5346075	10.288	0.000	18109694	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.001	744789	4.127	-0.001	4872540	9.2644	10.0554	8.2	Tetrachloro-m-xylene
8.776	-0.001	647176	9.724	-0.001	2804700	9.6184	9.5810	0.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	23.2	25.1	23.2~	150- 0
Decachlorobiphenyl	24.0	24.0	24.0~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

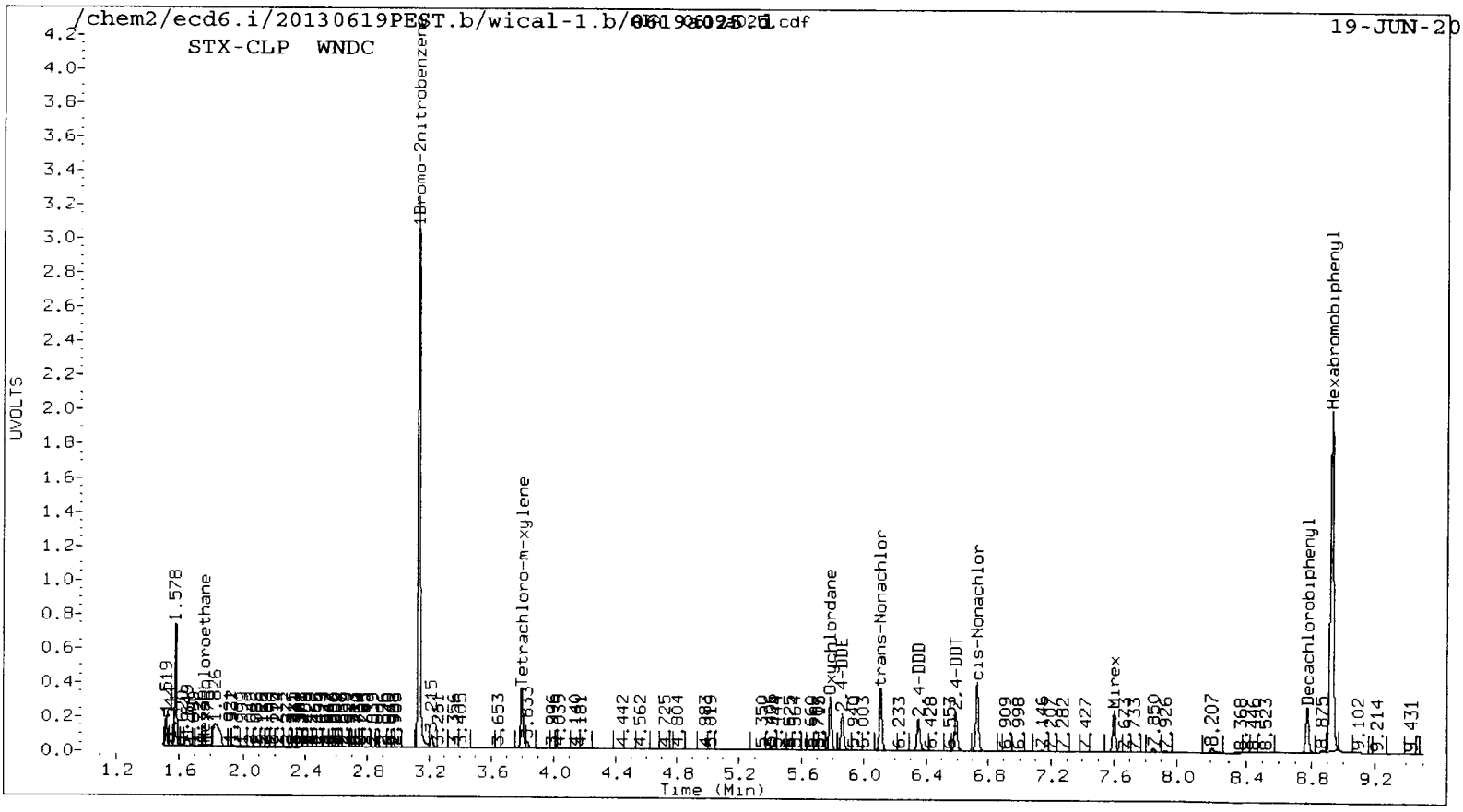
	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5920700	5.9
Hexabromobiphenyl	4870538	5346075	9.8

WV67:09939

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29296978	3.4
Hexabromobiphenyl	16454599	18109694	10.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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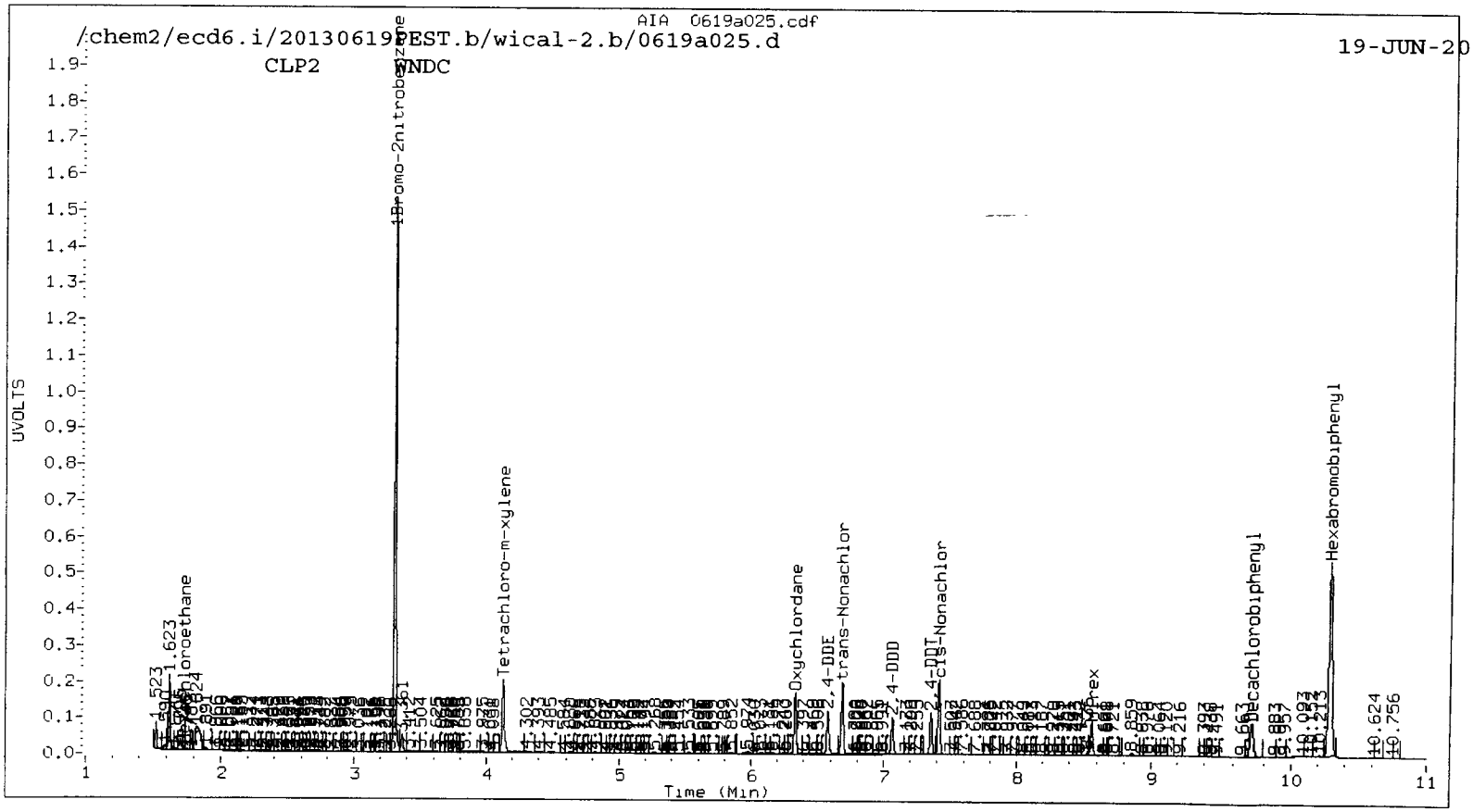
STX-CLP WNDC
19-JUN-20
UVOLTS
Time (Min)
1.578
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
4-DDE
trans-Nonachlor
4-DDD
4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl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/chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a025.d
CLP2 WNDC
19-JUN-20
UVOLTS
Time (Min)
1.623
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
4-DDE
trans-Nonachlor
4-DDD
4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a026.d ARI ID: WNDD
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a026.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 22:06
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.758	0.001	1046	1.726	0.001	140170	0.0000	0.0000	---	Hexachloroethane
3.131	-0.001	5825954	3.300	0.001	28828761	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.788	0.001	1417285	6.332	-0.001	7742609	20.0729	20.6071	2.6	Oxychlordane
5.863	0.001	1081320	6.581	0.001	5647091	20.0504	20.8065	3.7	2,4-DDE
6.111	0.000	1724901	6.689	-0.002	9125838	19.9053	20.7697	4.3	trans-Nonachlor
6.350	0.002	974743	7.066	0.001	4886930	20.0521	20.4193	1.8	2,4-DDD
6.588	0.001	1124874	7.352	0.000	5341498	20.0058	20.4824	2.4	2,4-DDT
6.727	0.000	1892006	7.413	-0.003	9477549	19.7860	20.7118	4.6	cis-Nonachlor
7.601	0.000	1136859	8.565	0.000	4368778	19.4823	19.7312	1.3	Mirex
8.928	0.000	5243309	10.290	0.001	17802786	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.001	1458232	4.127	-0.001	9366030	18.4338	19.6425	6.3	Tetrachloro-m-xylene
8.777	0.000	1240181	9.725	0.000	5343942	18.7929	18.5698	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	46.1	49.1	46.1~	150- 0
Decachlorobiphenyl	47.0	46.4	46.4~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

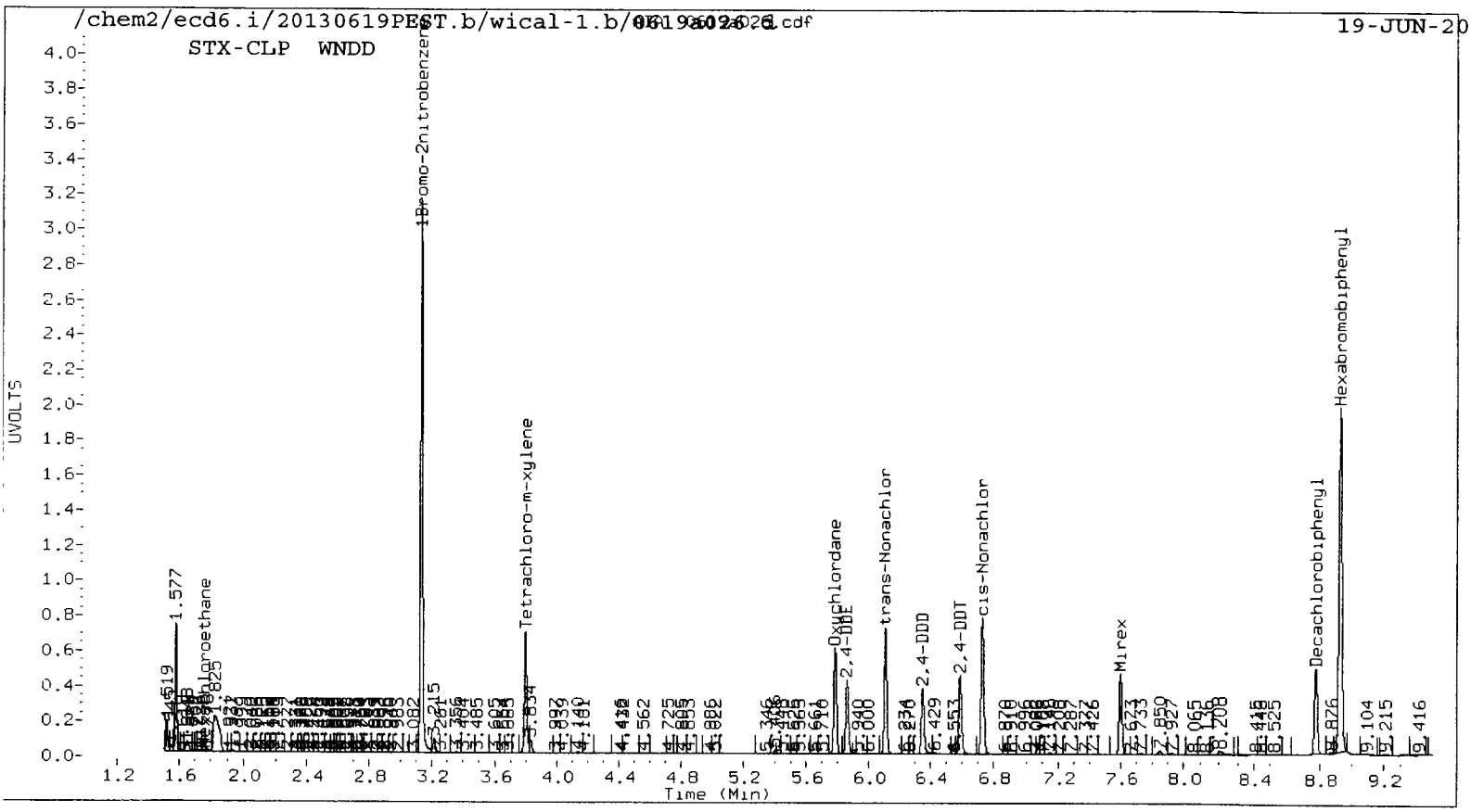
	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5825954	4.2
Hexabromobiphenyl	4870538	5243309	7.7

WV67:00342

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28828761	1.8
Hexabromobiphenyl	16454599	17802786	8.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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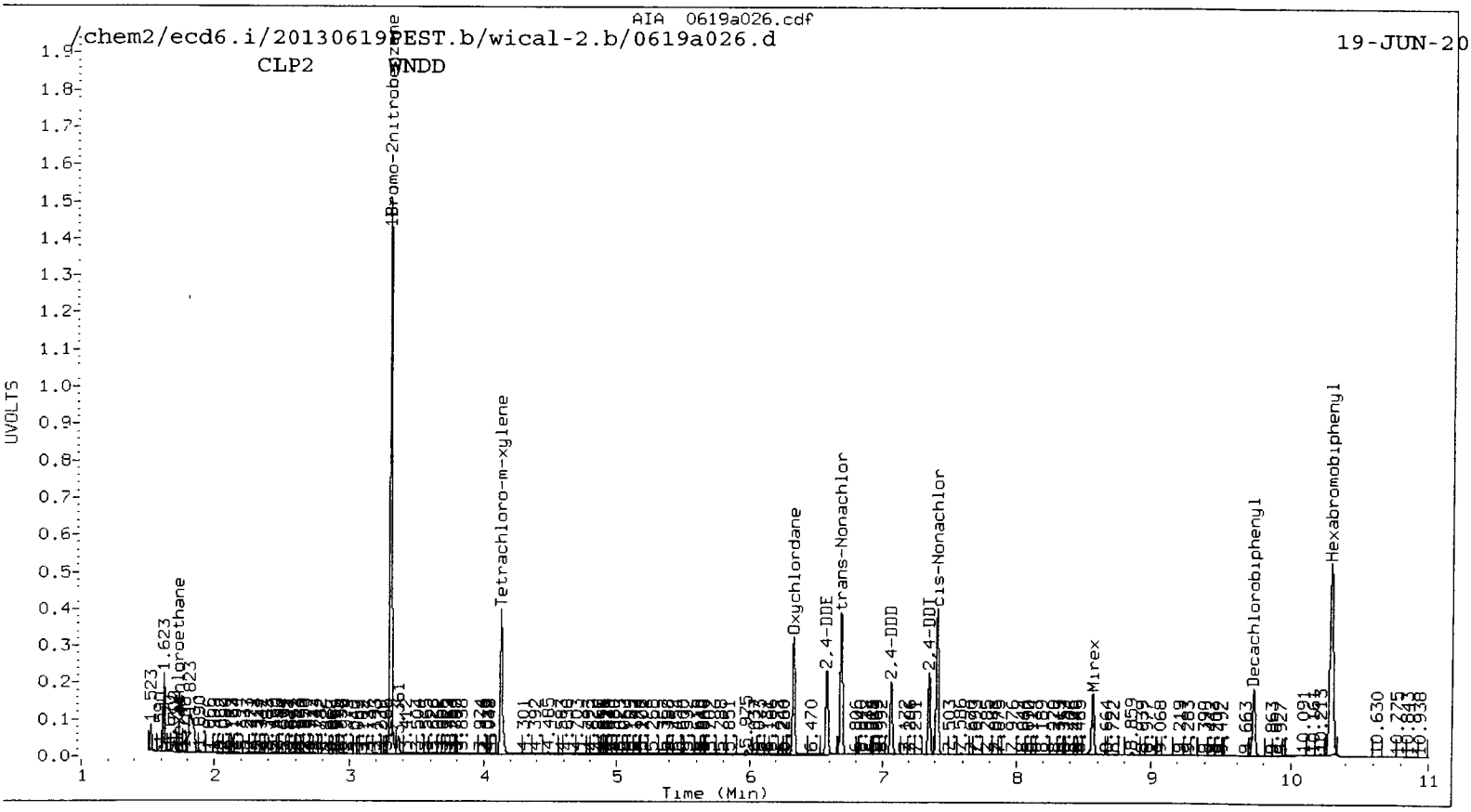
19-JUN-20
STX-CLP WNDD
UVOLTS
Time (Min)
1.577
Hexachloroethane
1-Bromo-2-nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a026.cdf
/chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a026.d
19-JUN-20
CLP2 WNDD
UVOLTS
Time (Min)
1.623
Hexachloroethane
1-Bromo-2-nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a027.d ARI ID: WNDF
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a027.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 22:24
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.756	-0.001	1746	1.726	0.000	191313	0.0000	0.0000	---	Hexachloroethane
3.130	-0.001	5852777	3.300	0.000	28874628	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	5496120	6.332	-0.001	29291826	76.9993	77.8369	1.1	Oxychlordane
5.861	0.000	4254664	6.580	-0.001	20183802	78.0390	74.2485	5.0	2,4-DDE
6.110	0.000	7066116	6.688	-0.002	35122691	80.6611	79.7644	1.1	trans-Nonachlor
6.348	0.000	3864434	7.065	0.000	18468214	78.6383	77.0003	2.1	2,4-DDD
6.587	0.000	4503164	7.352	-0.001	20504517	79.2224	78.4569	1.0	2,4-DDT
6.726	0.000	7777229	7.412	-0.003	37026269	80.4524	80.7412	0.4	cis-Nonachlor
7.601	0.000	4560804	8.565	0.000	16872664	77.3130	76.0396	1.7	Mirex
8.927	0.000	5300626	10.289	0.000	17841215	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	6041881	4.127	-0.002	34519068	76.0265	72.2785	5.1	Tetrachloro-m-xylen
8.776	-0.001	5004883	9.725	0.000	21145178	75.0205	73.3197	2.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	190.1	180.7	180.7~	150- 0
Decachlorobiphenyl	187.6	183.3	183.3~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5852777	4.7
Hexabromobiphenyl	4870538	5300626	8.8

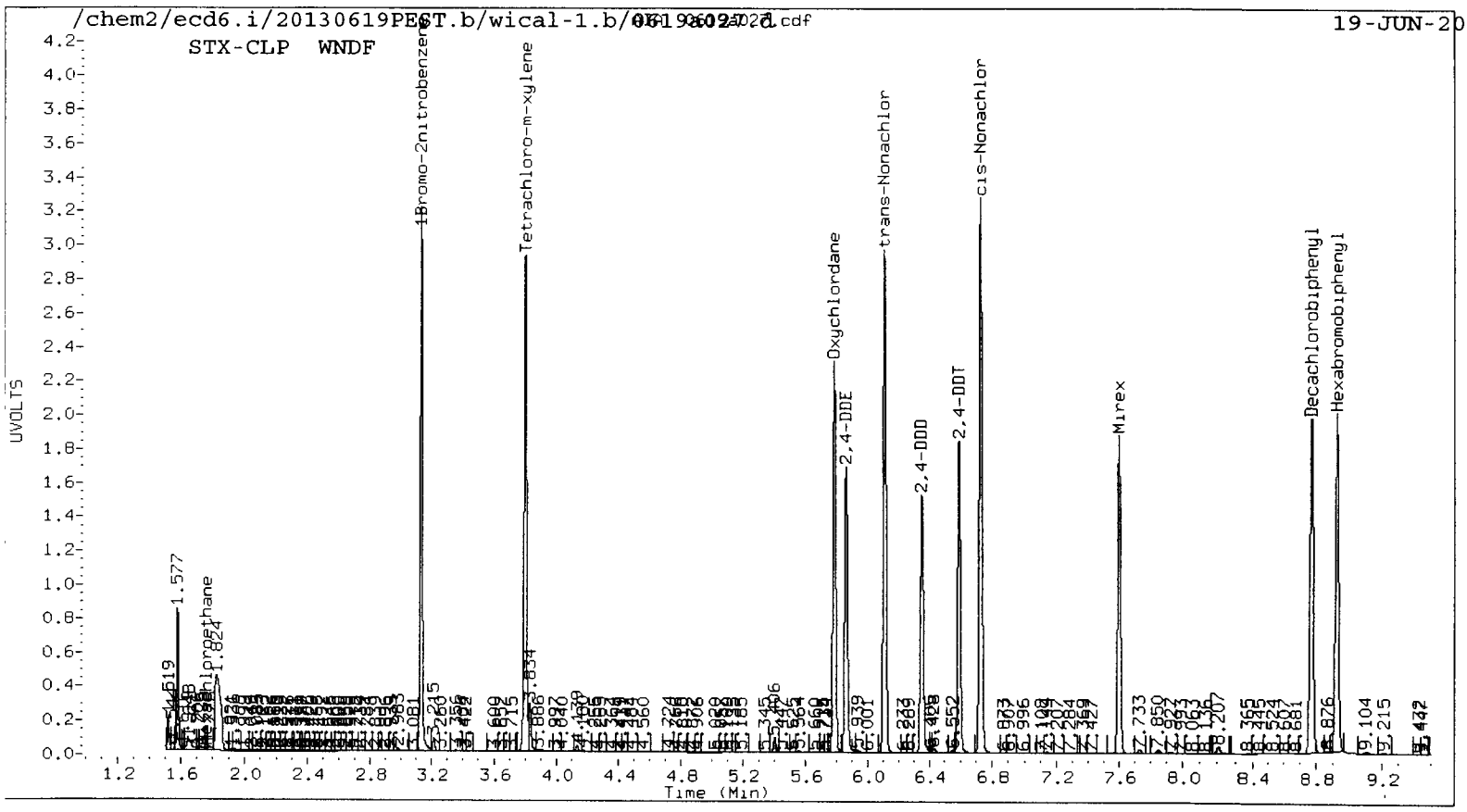
WV6T:08945

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28874628	2.0
Hexabromobiphenyl	16454599	17841215	8.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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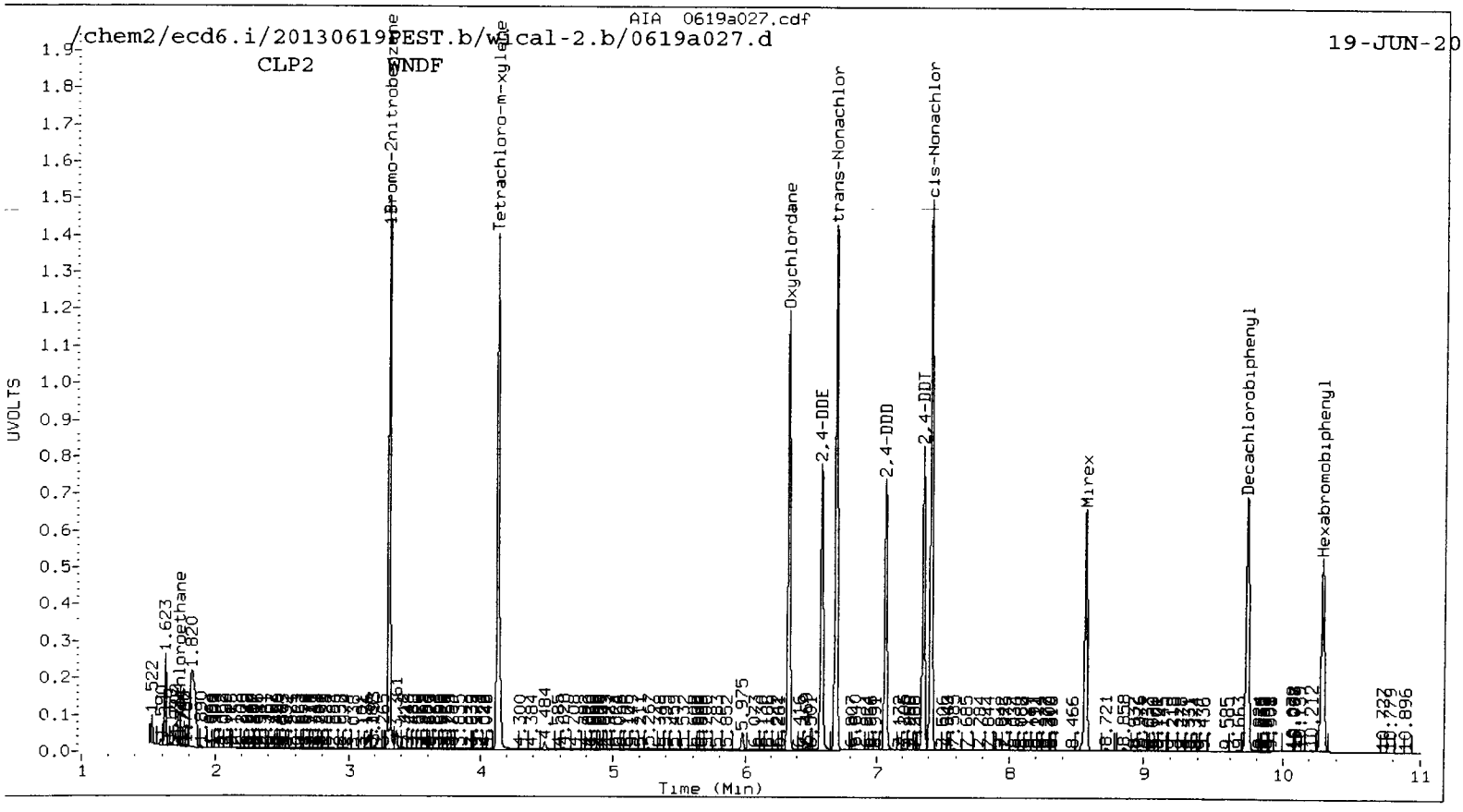
19-JUN-20
STX-CLP WNDF
UVOLTS
Time (Min)
1.577
1.824
3.215
3.834
4.939
5.001
6.233
6.408
6.552
7.733
9.104
9.215
Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a027.cdf
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19-JUN-20
CLP2 WNDF
UVOLTS
Time (Min)
1.522
1.623
1.820
5.975
8.466
8.721
9.585
10.212
10.732
10.896
Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a028.d ARI ID: WNDG
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a028.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 22:42
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.758	0.000	2172	1.726	0.000	459344	0.0000	0.0000	---	Hexachloroethane
3.130	-0.001	5777001	3.299	0.000	28352573	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	10041452	6.332	0.000	53496498	141.6274	144.7734	2.2	Oxychlordane
5.861	0.000	7841014	6.580	0.000	34667644	144.7901	129.8772	10.9	2,4-DDE
6.110	0.000	13314783	6.690	0.000	60674113	153.0163	138.4836	10.0	trans-Nonachlor
6.348	0.000	7219024	7.065	0.000	32848121	147.8928	137.6422	7.2	2,4-DDD
6.587	0.000	8458360	7.353	0.000	36813655	149.8087	141.5676	5.7	2,4-DDT
6.727	0.000	14793375	7.415	0.000	62692268	154.0642	137.3955	11.4	cis-Nonachlor
7.601	0.000	8649046	8.564	0.000	32256718	147.6044	146.0999	1.0	Mirex
8.927	0.000	5265103	10.288	0.000	17752152	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	11433536	4.127	-0.002	59324331	145.7582	126.5048	14.1	Tetrachloro-m-xyl
8.777	-0.001	9543559	9.724	0.000	40008772	144.0181	139.4241	3.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	364.4	316.3	316.3~	150- 0
Decachlorobiphenyl	360.0	348.6	348.6~	150- 0

~ Indicates recovery outside QC Limits

06/25/13

INTERNAL STANDARD SUMMARY

	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5777001	3.3
Hexabromobiphenyl	4870538	5265103	8.1

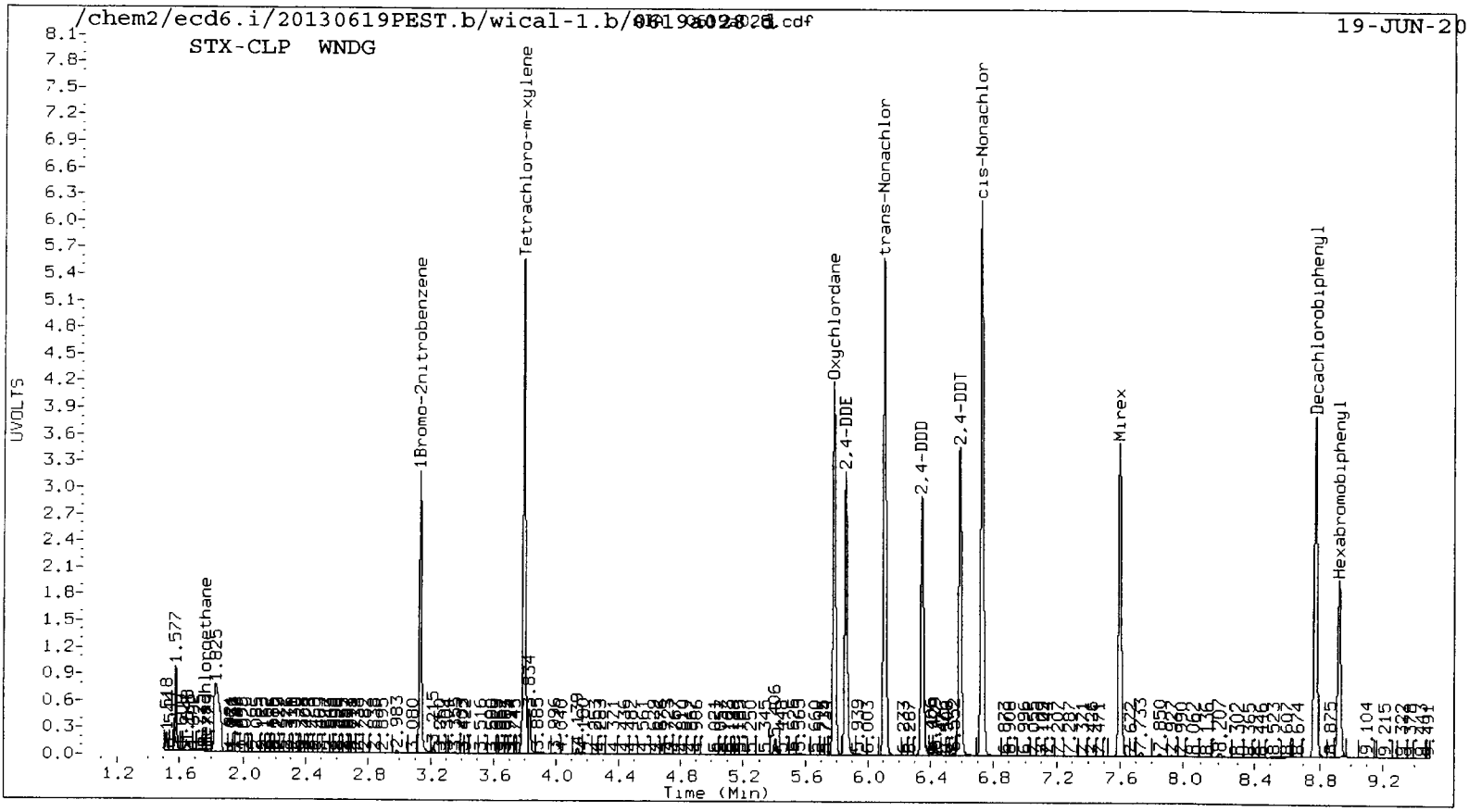
WV67:00346

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28352573	0.1
Hexabromobiphenyl	16454599	17752152	7.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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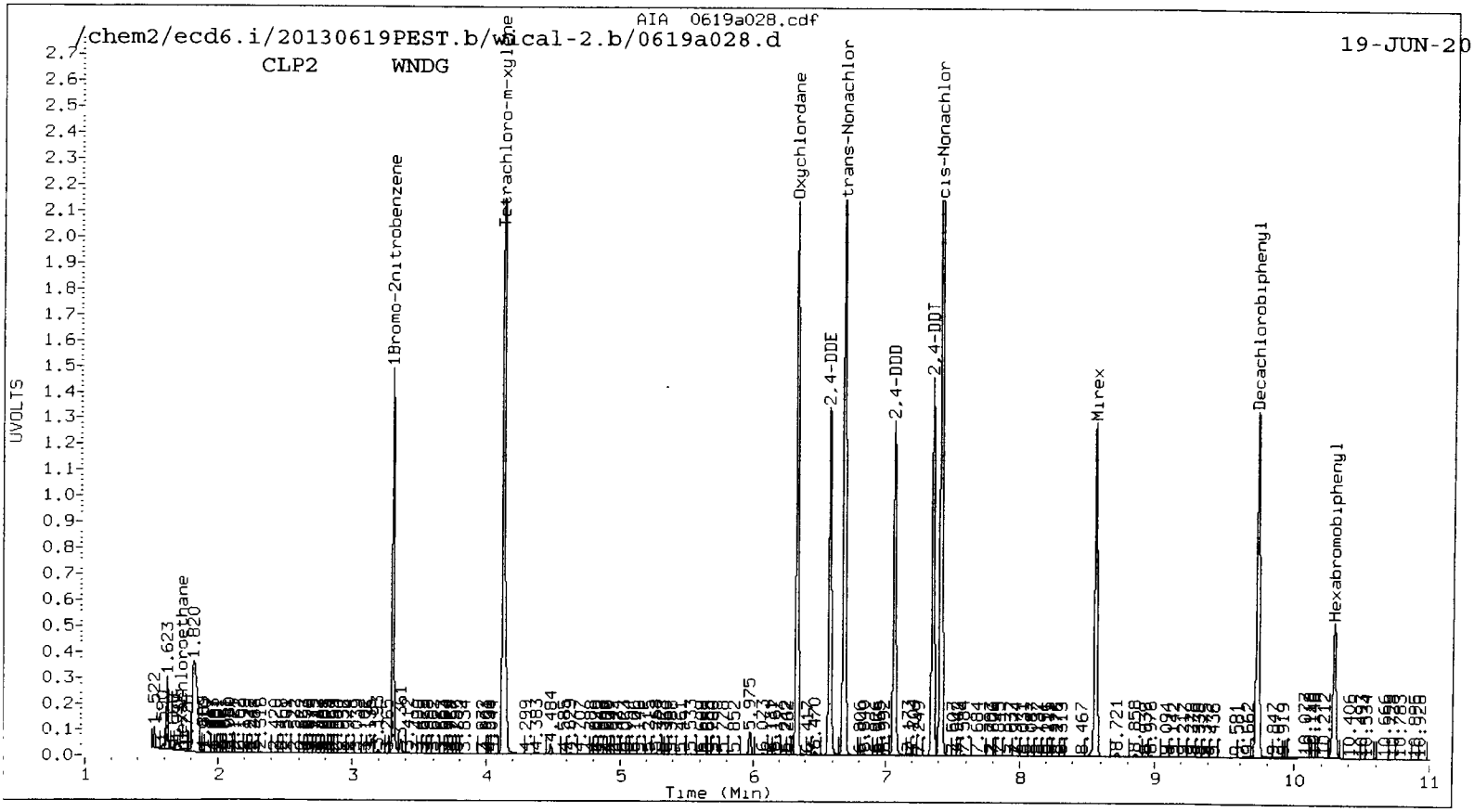
19-JUN-20
STX-CLP WNDG
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl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19-JUN-20
CLP2 WNDG
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a029.d ARI ID: WND ICV
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a029.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 22:59
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.758	0.001	826	1.726	0.000	153413	0.0000	0.0000	---	Hexachloroethane
3.130	-0.001	5841693	3.299	0.000	28922276	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	3597148	6.331	-0.001	17914975	49.2350	47.5269	3.5	Oxychlordane
5.861	-0.001	2932889	6.580	0.000	14207629	52.5566	52.1783	0.7	2,4-DDE
6.110	-0.001	4035811	6.688	-0.002	19905533	45.0090	44.7751	0.5	trans-Nonachlor
6.348	0.000	2687997	7.064	0.000	12861642	53.4395	53.1136	0.6	2,4-DDD
6.587	0.000	3215633	7.353	0.000	14586359	55.2691	55.2803	0.0	2,4-DDT
6.726	0.000	4401299	7.413	-0.002	20968088	44.4816	45.2883	1.8	cis-Nonachlor
7.598	-0.002	1170	8.574	0.010	45639	0.0194	0.2037	165.3*	Mirex
8.926	-0.001	5425526	10.289	0.000	18012862	80.0000	80.0000	0.0	Hexabromobiphenyl
3.797	-0.002	17239	4.129	0.001	47453	0.2173	0.0992	74.6*	Tetrachloro-m-xylene
8.780	0.003	7350	9.727	0.003	5151	0.1076	0.0177	143.5*	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower Limits
Tetrachloro-m-xylene	0.5	0.2	0.2~ 150- 0
Decachlorobiphenyl	0.3	0.0	0.0~ 150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

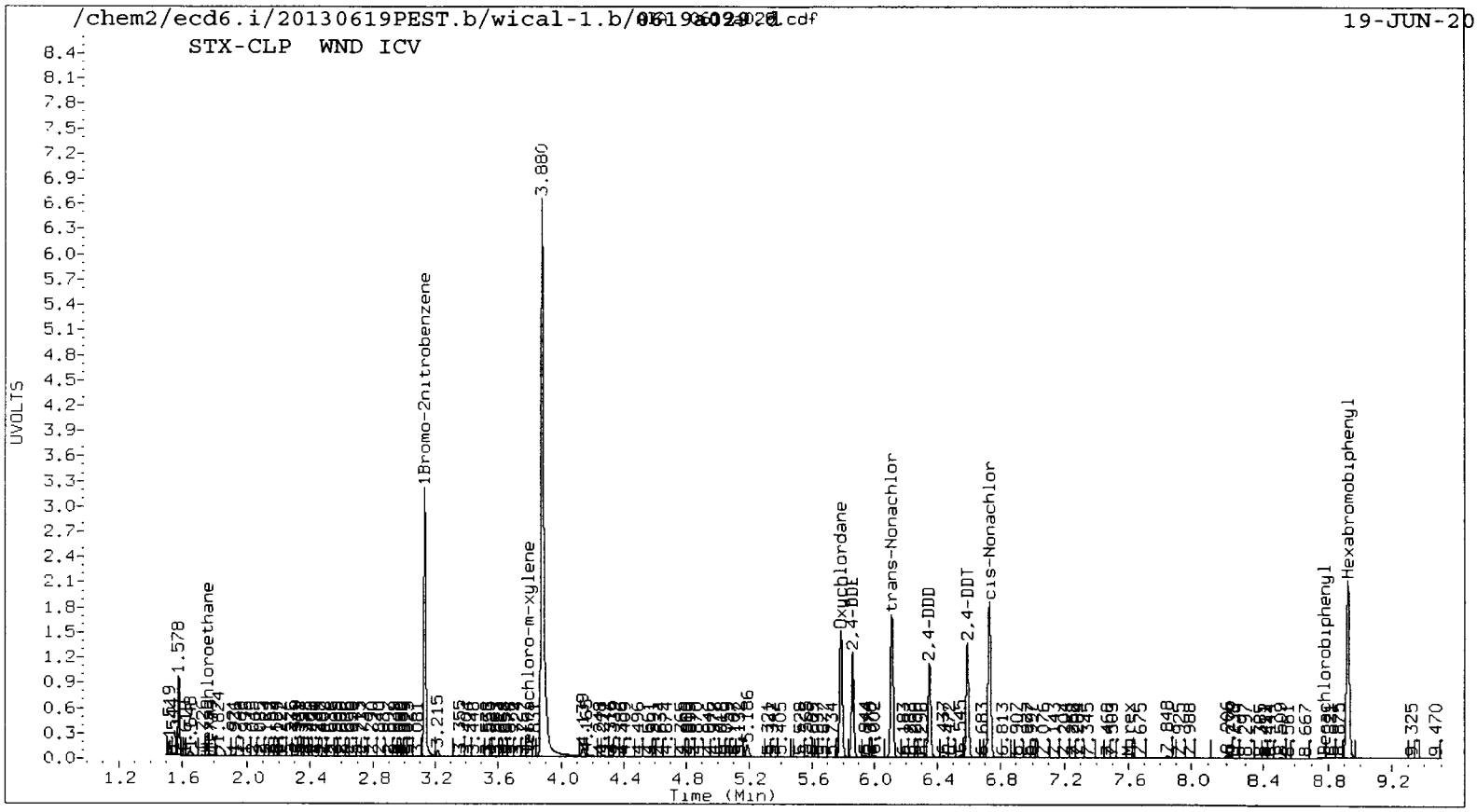
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5841693	4.5
Hexabromobiphenyl	4870538	5425526	11.4

WB7:09951

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28922276	2.1
Hexabromobiphenyl	16454599	18012862	9.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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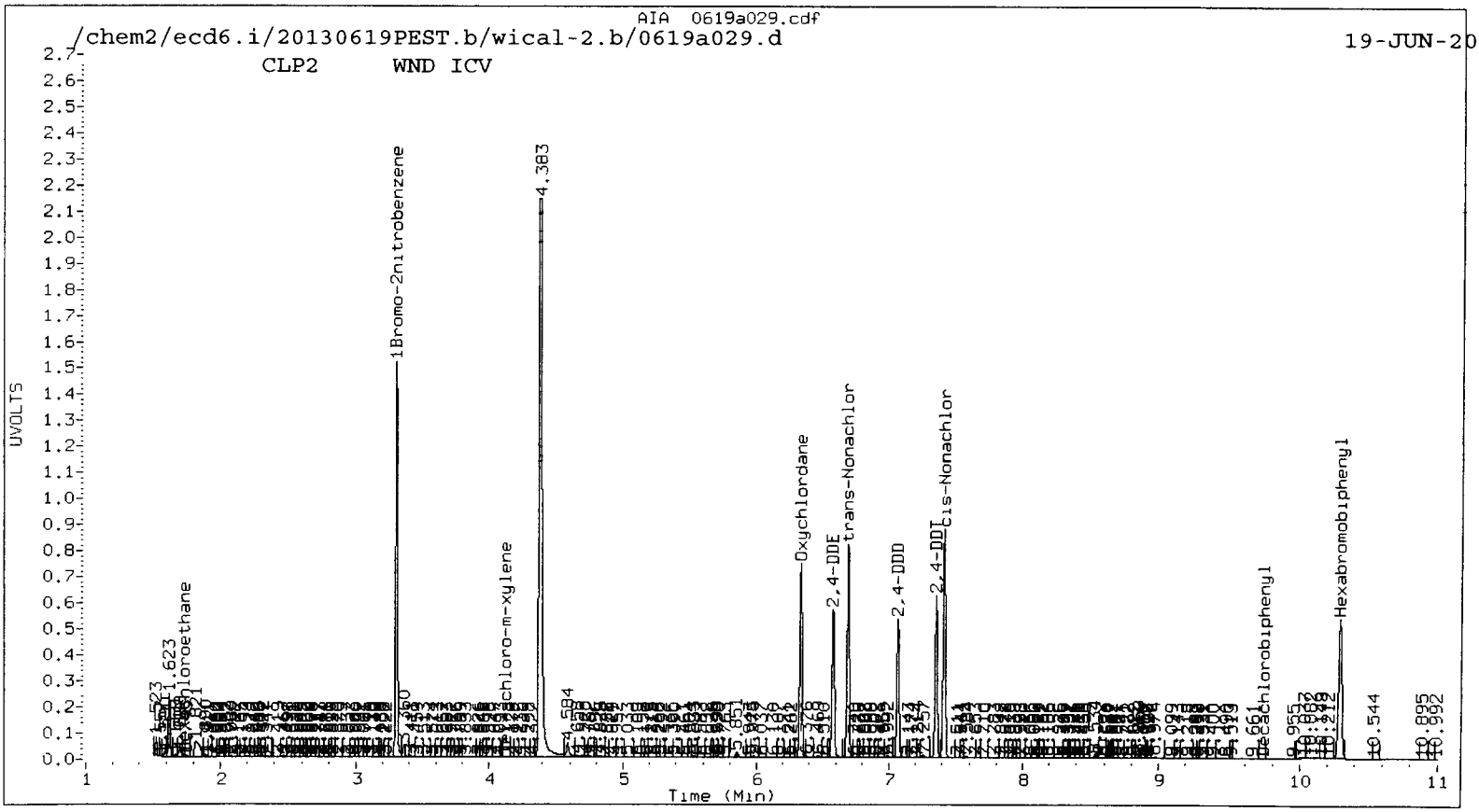
STX-CLP WND ICV
UVOLTS
Time (Min)
1.578
1Bromo-2nitrobenzene
3.215
3.880
chloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Hexabromobiphenyl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19-JUN-20
CLP2 WND ICV
UVOLTS
Time (Min)
1.623
1Bromo-2nitrobenzene
4.383
chloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Hexabromobiphenyl

Pesticide Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WV67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WV67 Client ID: SAIC

METHOD: ~~**8082A**(PCB)~~ **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 **ECD-6** ECD-7 ECD-8

Curve Date: 06/19/13 Analysis Start Date: 06/27/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / Y / N / ✓	Method Blank in Control?	Y / N / ✓
Retention times within Windows?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / NA
CCAL met %D Criteria?	Y / N / ✓	LCS / LCSD RPD ≤30%?	NA / NA
Surrogate Recovery in Control?	Y / N / ✓	MS / MSD Recovery in Control?	Y / N / NA
Internal STD. within 50-200%?	NA / Y / N / ✓	MS / MSD RPD ≤30%?	NA / NA
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / ✓
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ✓

Detail problems, corrective actions and/or other pertinent information below

- LCS/LCSD: 1660 Aroclor spike used.
- Reported as is per PM
- Sample will be re-logged and re-extracted.

(Review 1) Analyst: YZ **Date:** 6/28/13

(Review 2) Reviewer: [signature] **Date:** 6/28/13

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 6/27/13 Analysis: Pest Analyst: VB

Column 1 Serial No.: 10856241 Column Type: CC1

Column 2 Serial No.: 109 4709 Column Type: CC2

GC Method: Pest ICal Date: 06/19/13

IS	Ical/Ccal	ICV
2000-1	B339	
	B559	
	B370	

Document All Maintenance Tasks In StarLIMS

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130619PEST.b/0627-1.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	27-JUN-2013 15:36	0627a005.d	1	DS	
2	27-JUN-2013 15:54	0627a006.d	1	INDAE	
3	27-JUN-2013 16:12	0627a007.d	1	TOXAPH	
4	27-JUN-2013 16:29	0627a008.d	1	WV67MBW1	WV67MBW1
5	27-JUN-2013 16:47	0627a009.d	1	WV67LCSW1	WV67LCSW1
6	27-JUN-2013 17:05	0627a010.d	1	WV67LCSDW1	WV67LCSDW1
7	27-JUN-2013 17:23	0627a011.d	1	WV67E	UP-CB-B8-20130626-W
8	27-JUN-2013 17:41	0627a012.d	1	DS	
9	27-JUN-2013 17:58	0627a013.d	1	INDAE	
10	27-JUN-2013 18:16	0627a014.d	1	TOXAPH	
11	27-JUN-2013 18:34	0627a015.d	100	WT81A	AM-VT-INF-20130612-
12	27-JUN-2013 18:52	0627a016.d	100	WT81B	AM-SF4-EFF-20130612
13	27-JUN-2013 19:10	0627a017.d	100	WT81C	AM-FD-01-20130612-S
14	27-JUN-2013 19:27	0627a018.d	1	DS	
15	27-JUN-2013 19:45	0627a019.d	1	INDAE	
16	27-JUN-2013 20:03	0627a020.d	1	TOXAPH	

VB 6/28/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

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Data file 2: /chem2/ecd6.i/20130619PEST.b/0627-2.b/0627a006.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 27-JUN-2013 15:54
Report Date: 06/28/2013 12:10
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.125	-0.007	6716702	3.300	0.001	27503611	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.278	-0.008	3064911	4.710	0.000	13684941	22.7525	20.8265	8.8	alpha-BHC
4.637	-0.007	1137017	5.141	0.003	5083696	20.9250	17.8586	15.8	beta-BHC
4.806	-0.007	2605260	5.452	0.002	11631744	22.3367	20.5365	8.4	delta-BHC
4.560	-0.008	2737243	5.067	0.001	11972409	22.2861	20.6059	7.8	gamma-BHC (Lindane)
5.005	-0.010	2572309	5.530	0.001	10793898	21.8242	19.1526	13.0	Heptachlor
5.297	-0.010	2587146	5.868	0.001	10517621	22.6537	19.7131	13.9	Aldrin
5.870	-0.012	2302559	6.423	0.001	9178557	21.7477	18.8758	14.1	Heptachlor epoxide b
6.247	-0.013	2133320	6.810	0.001	8477166	21.5568	19.4007	10.5	Endosulfan I
6.469	-0.014	4635778	7.067	0.000	16888087	44.3319	38.2966	14.6	Dieldrin
6.171	-0.013	3485390	6.870	0.000	17067736	43.8101	38.4466	13.0	4,4'-DDE
6.687	-0.014	3861719	7.357	0.001	12967134	41.4226	44.0782	6.2	Endrin
6.893	-0.013	3928876	7.546	0.001	14035889	42.4513	45.5437	7.0	Endosulfan II
6.728	-0.012	3730056	7.409	0.002	13709841	41.8993	43.2895	3.3	4,4'-DDD
7.658	-0.016	3391634	8.088	0.001	11210321	41.5037	42.7263	2.9	Endosulfan sulfate
6.984	-0.014	3708193	7.695	0.001	12357845	42.2623	44.0385	4.1	4,4'-DDT
7.410	-0.014	7875153	8.278	-0.004	19682467	189.6388	188.4692	0.6	Methoxychlor
7.913	-0.016	4226865	8.578	0.000	11177945	41.6550	42.6274	2.3	Endrin ketone
7.269	-0.015	3055198	7.843	0.000	10583396	41.7653	44.7328	6.9	Endrin aldehyde
5.990	-0.012	2435653	6.606	0.001	9548312	22.3943	18.6583	18.2	gamma-Chlordane
6.114	-0.013	2321563	6.743	0.001	8895538	21.9296	18.9616	14.5	alpha-Chlordane
2.305	-0.007	3173845	2.467	-0.002	11578394	21.5035	20.3382	5.6	Hexachlorobutadiene
4.133	-0.007	2236396	4.588	0.002	11255113	20.8673	20.7745	0.4	Hexachlorobenzene
8.908	-0.019	6186287	10.288	-0.001	14266865	80.0000	80.0000	0.0	Hexabromobiphenyl
3.793	-0.006	3969408	4.128	0.000	19039598	43.5236	41.8538	3.9	Tetrachloro-m-xylen
8.757	-0.020	3132653	9.725	0.000	9121777	40.2342	39.5535	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	108.8	104.6	104.6~	115- 0
Decachlorobiphenyl	100.6	98.9	98.9~	115- 0

~ Indicates recovery outside QC Limits

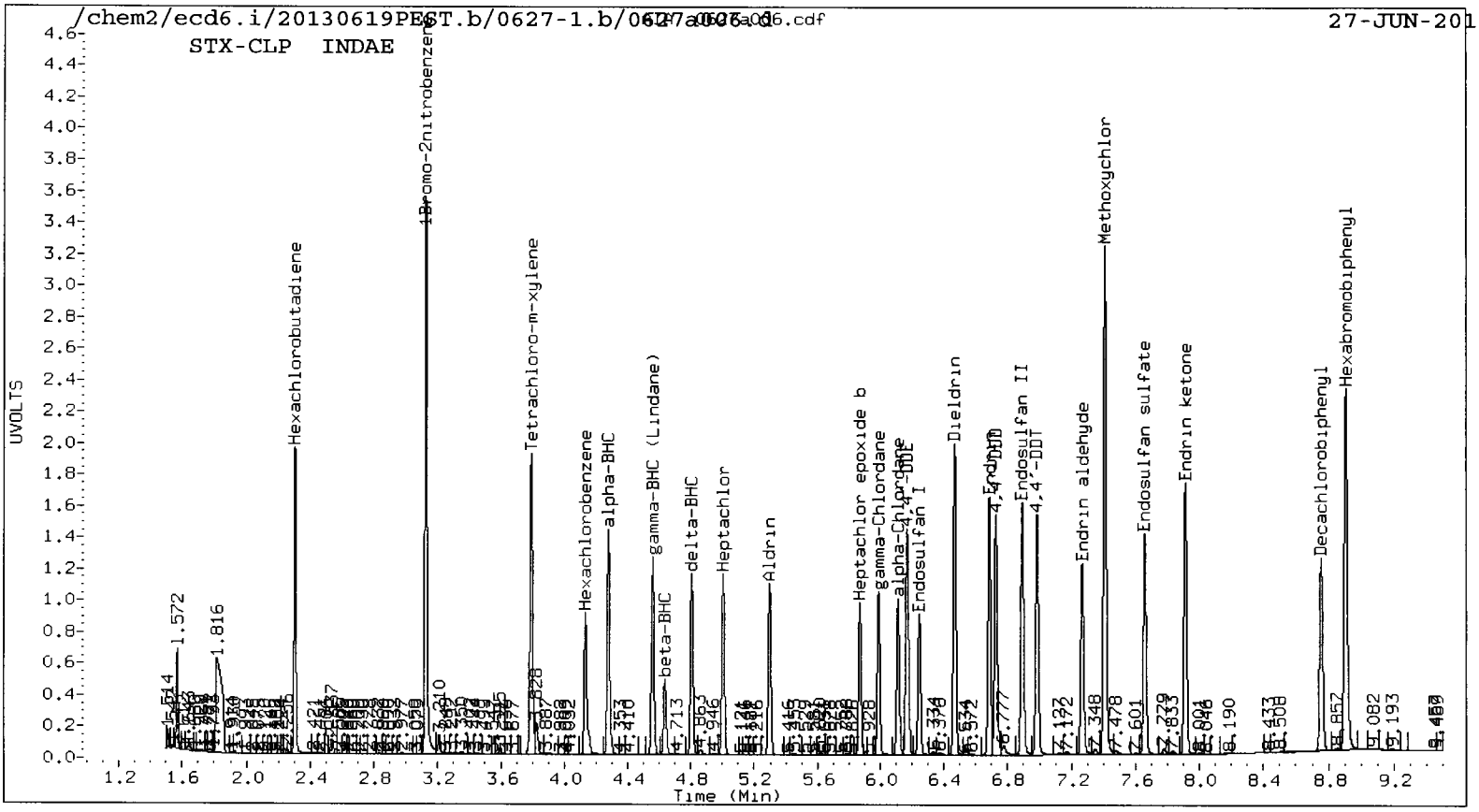
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	5590801	6716702	20.1
Hexabromobiphenyl	4870538	6186287	27.0

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	28320361	27503611	-2.9
Hexabromobiphenyl	16454599	14266865	-13.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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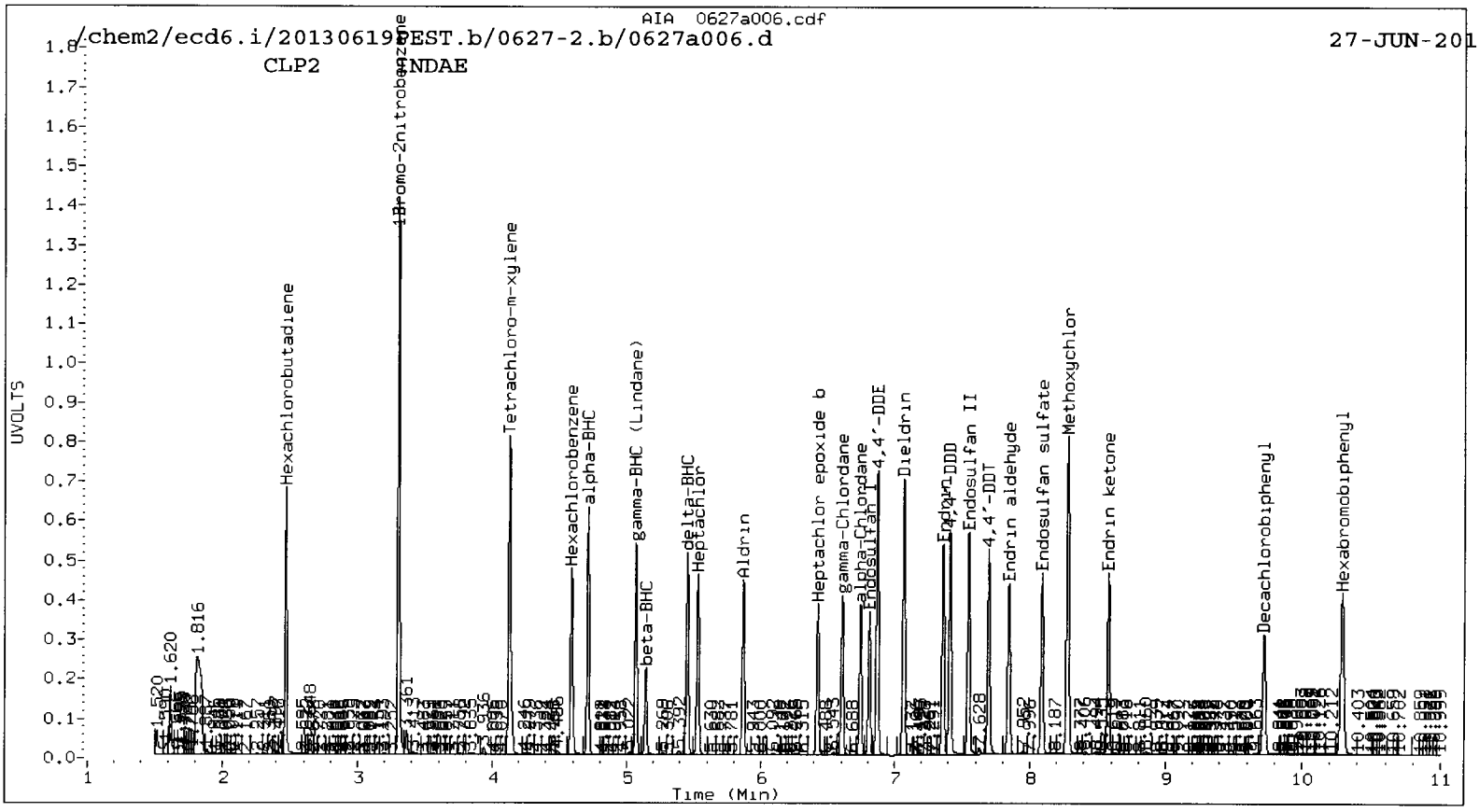
27-JUN-201
STX-CLP INDAE
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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27-JUN-201
CLP2 INDAE
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 6/28/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0627-1.b/0627a007.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130619PEST.b/0627-2.b/0627a007.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 27-JUN-2013 16:12
Compound Sublist: TOXAPH Report Date: 06/28/2013 12:10
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.124	-0.007	6884179	3.301	0.001	28637360	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.908	-0.020	6535923	10.288	0.000	14844952	80.0000	80.0000	0.0	Hexabromobiphenyl
3.793	-0.006	2791646	4.129	0.001	14402504	29.8650	30.4069	1.8	Tetrachloro-m-xylen
8.757	-0.020	2585269	9.724	0.000	7361315	31.4277	30.6768	2.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	74.7	76.0	74.7~	150- 0
Decachlorobiphenyl	78.6	76.7	76.7~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6884179	23.1
Hexabromobiphenyl	4870538	6535923	34.2

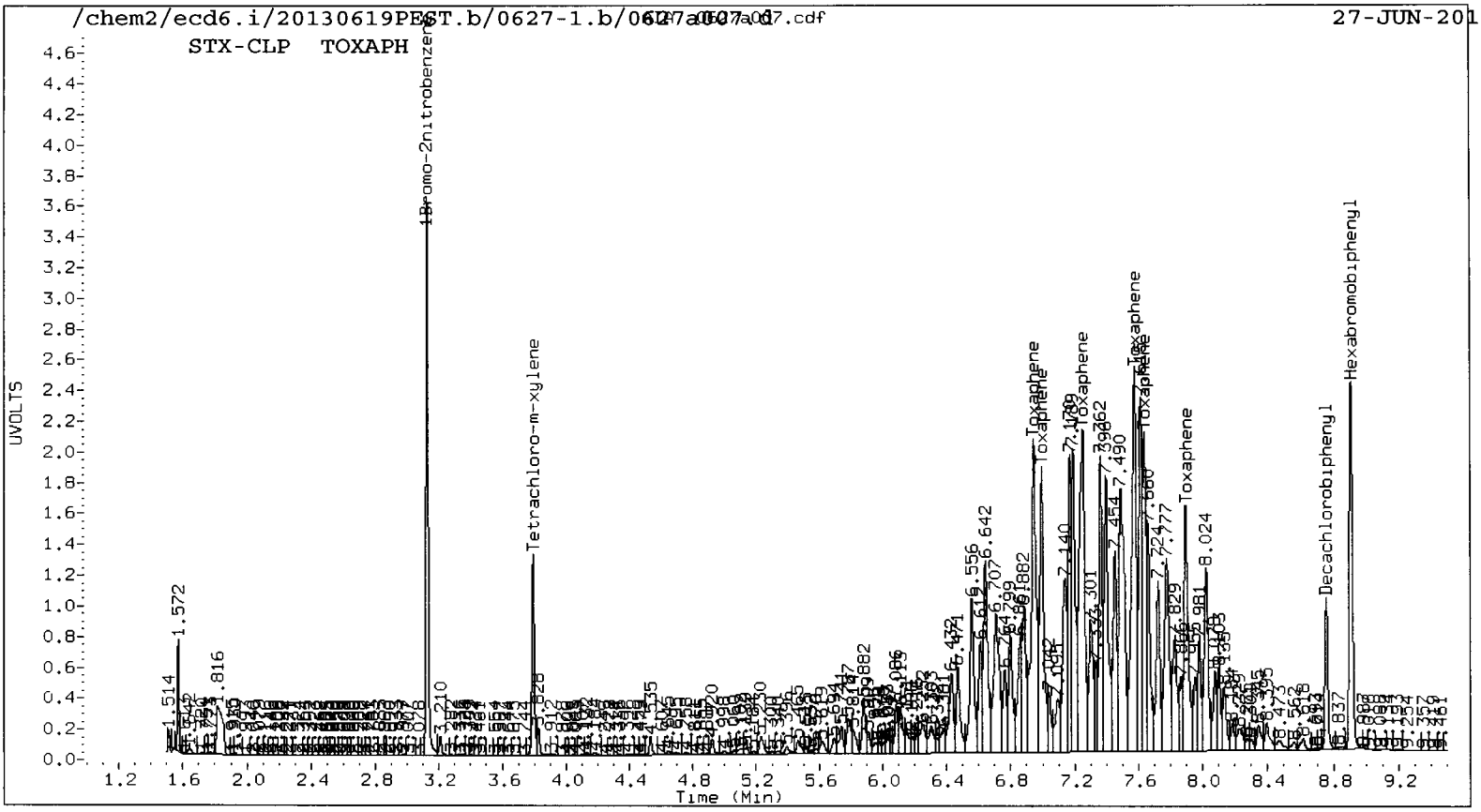
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28637360	1.1
Hexabromobiphenyl	16454599	14844952	-9.8

WVGT : 20356

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.944	-0.014	8986992	2142.3	1	7.292	0.001	24947775	2402.1	
Toxaphene	2	6.995	-0.015	6580728	2273.4	2	7.617	0.001	36493984	2381.6	
Toxaphene	3	7.252	-0.015	10172009	2130.0	3	7.847	0.001	39556947	2352.6	
Toxaphene	4	7.577	-0.016	10243369	2105.8	4	8.314	0.001	25723905	2122.5	
Toxaphene	5	7.638	0.006	5477378	1695.7	5	8.354	0.001	32551967	2112.2	
Toxaphene	6	7.896	-0.017	5650516	2060.7	NS	---			----	
Total STX-CLPAve (6 peaks): 2067.984						Total CLP2Ave (5 peaks): 2274.178				RPD = 9	
Corrected Ave (6 peaks): 2067.984						Corrected Ave (5 peaks): 2274.178				RPD = 9	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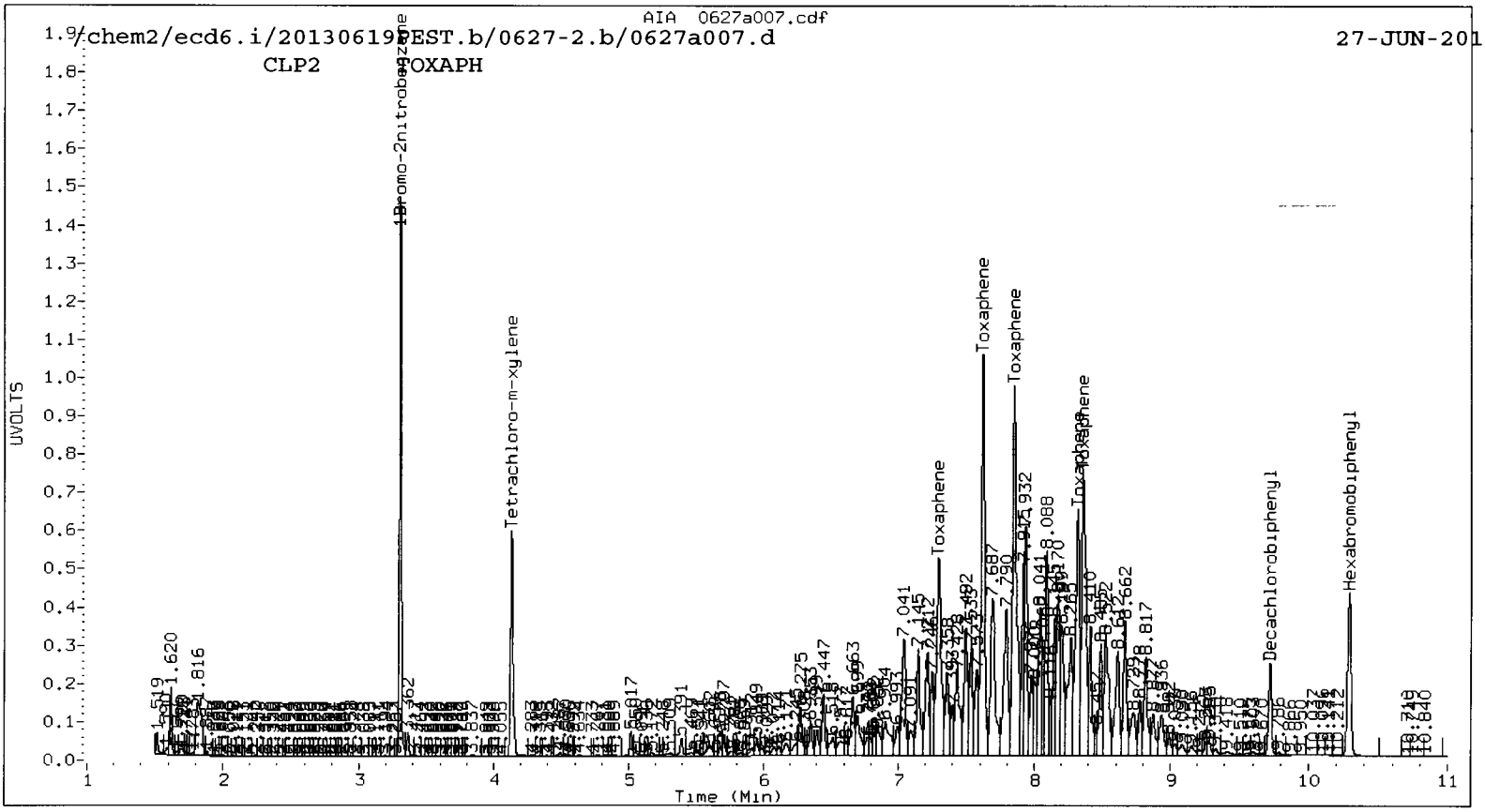
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl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27-JUN-201
CLP2 TOXAPH
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 6/29/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0627-1.b/0627a008.d ARI ID: WV67MBW1
Data file 2: /chem2/ecd6.i/20130619PEST.b/0627-2.b/0627a008.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 27-JUN-2013 16:29
Compound Sublist: wpest Report Date: 06/28/2013 12:10
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.124	-0.007	6088456	3.301	0.001	25739849	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.264	-0.022	2412	4.716	0.006	17226	0.0198	0.0280	34.6	alpha-BHC
4.663	0.019	1260	5.161	0.023	23598	0.0256	0.0886	110.3*	beta-BHC
4.796	-0.017	9716	5.464	0.014	17879	0.0919	0.0337	92.6*	delta-BHC
4.564	-0.004	3494	5.047	-0.019	32754	0.0314	0.0602	63.0*	gamma-BHC (Lindane)
4.995	-0.020	6236	5.543	0.013	41499	0.0584	0.0787	29.6	Heptachlor
5.313	0.006	7155	5.844	-0.024	306525	0.0691	0.6139	159.5*	Aldrin
5.878	-0.005	5738	6.383	-0.039	143021	0.0598	0.3143	136.1*	Heptachlor epoxide b
6.240	-0.019	2944	6.776	-0.033	10911	0.0328	0.0267	20.6	Endosulfan I
6.450	-0.033	9971	7.107	0.040	8301	0.1052	0.0201	135.8*	Dieldrin
6.167	-0.017	4274	6.869	-0.001	6212	0.0593	0.0150	119.4*	4,4'-DDE
6.653	-0.048	3433	7.374	0.017	31318	0.0409	0.1144	94.6*	Endrin
6.909	0.003	1056	7.526	-0.019	36918	0.0127	0.1287	164.1*	Endosulfan II
6.749	0.009	6296	7.410	0.003	2304	0.0786	0.0078	163.8*	4,4'-DDD
----			8.117	0.029	9693	0.0000	0.0397	---	Endosulfan sulfate
6.963	-0.035	14524	7.688	-0.007	11202	0.1840	0.0429	124.4*	4,4'-DDT
7.451	0.027	1570	8.259	-0.023	50834	0.0420	0.5229	170.2*	Methoxychlor
7.910	-0.019	12179	8.587	0.009	26368	0.1334	0.1080	21.0	Endrin ketone
7.288	0.005	6991	7.834	-0.008	10141	0.1062	0.0460	79.0*	Endrin aldehyde
5.967	-0.036	4945	6.623	0.019	36476	0.0502	0.0762	41.2*	gamma-Chlordane
6.110	-0.017	6253	6.755	0.013	7497	0.0652	0.0171	116.9*	alpha-Chlordane
2.310	-0.002	2646	2.475	0.006	40644	0.0198	0.0763	117.6*	Hexachlorobutadiene
4.132	-0.008	53206	4.585	-0.001	57458	0.5477	0.1133	131.4*	Hexachlorobenzene
5.773	-0.014	15682	6.299	-0.033	7555	0.2092	0.0225	161.1*	Oxychlordane
5.823	-0.039	2118	6.572	-0.008	23162	0.0870	0.0956	88.4*	2,4-DDE
----			6.679	-0.011	13102	0.0000	0.0400	---	trans-Nonachlor
6.321	-0.027	5288	7.046	-0.018	8815	0.1025	0.0494	70.0*	2,4-DDD
6.589	0.001	1409	----			0.0236	0.0000	---	2,4-DDT
6.701	-0.025	13492	----			0.1329	0.0000	---	cis-Nonachlor
7.559	-0.042	10458	8.535	-0.029	29238	0.1688	0.1770	4.7	Mirex
8.907	-0.020	5566355	10.288	0.000	13281981	80.0000	80.0000	0.0	Hexabromobiphenyl
1.751	-0.007	1276	1.737	0.011	571098	0.0000	0.0000	---	Hexachloroethane
6.546	-0.035	2265	7.319	-0.017	8844	0.0000	0.0000	---	Kepone
3.793	-0.006	2082126	4.129	0.000	10635207	25.1857	24.9808	0.8	Tetrachloro-m-xylen
8.757	-0.020	1991847	9.724	-0.001	6064299	28.4314	28.2456	0.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	63.0	62.5	62.5~	130- 0
Decachlorobiphenyl	71.1	70.6	70.6~	130- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

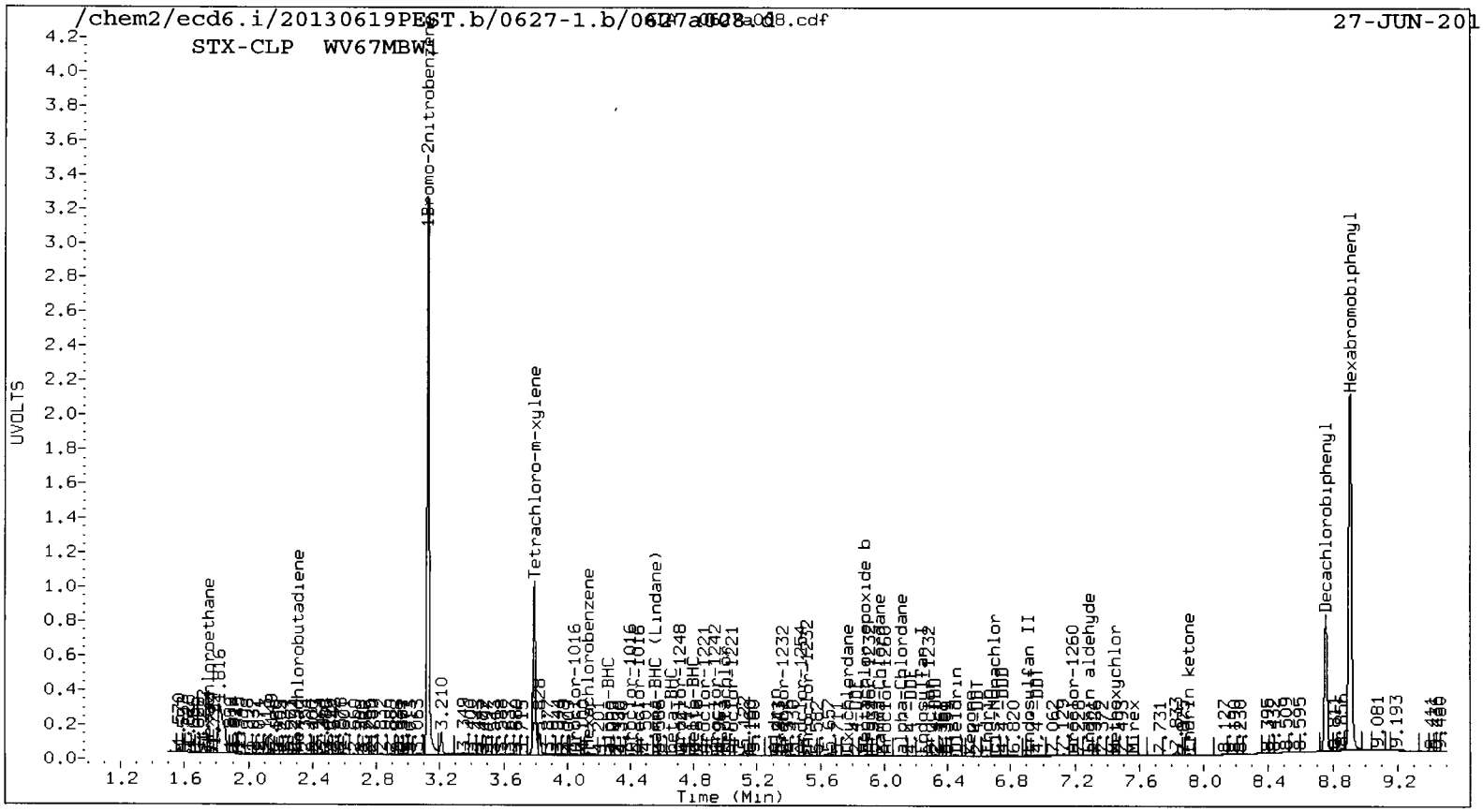
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6088456	8.9
Hexabromobiphenyl	4870538	5566355	14.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	25739849	-9.1
Hexabromobiphenyl	16454599	13281981	-19.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.963	0.005	14524	4.1	1	7.319	0.028	8844	1.0
Toxaphene	2	---			0.000	2	7.630	0.014	7244	0.5
Toxaphene	3	7.288	0.021	6991	1.7	3	7.834	-0.012	10141	0.7
Toxaphene	4	7.559	-0.033	10458	2.5	4	8.319	0.005	13580	1.3
Toxaphene	5	---			0.000	5	8.370	0.017	13493	1.0
Toxaphene	6	7.910	-0.003	12179	5.2	NS	---			----
Total STX-CLPAve (4 peaks): 3.381						Total CLP2Ave (5 peaks): 0.877				RPD = 118*
Corrected Ave (4 peaks): 3.381						Corrected Ave (5 peaks): 0.877				RPD = 118*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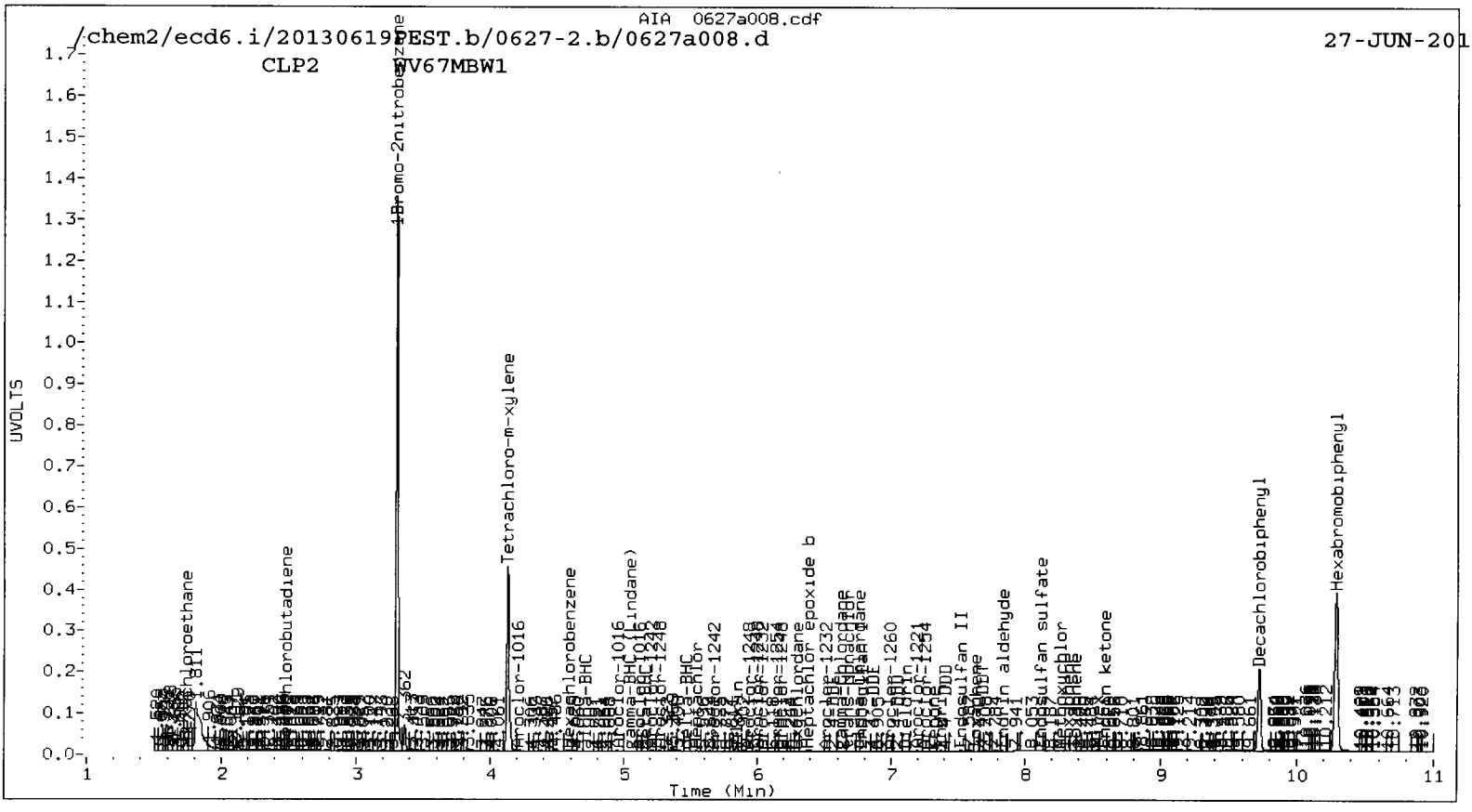
27-JUN-201
STX-CLP WV67MBW1
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexabromobiphenyl
Decachlorobiphenyl
3.210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27-JUN-201
CLP2 WV67MBW1
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexabromobiphenyl
Decachlorobiphenyl

1660 SPK not used.

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YE 6/28/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0627-1.b/0627a009.d ARI ID: WV76LCSW1
Data file 2: /chem2/ecd6.i/20130619PEST.b/0627-2.b/0627a009.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 27-JUN-2013 16:47
Compound Sublist: wpest Report Date: 06/28/2013 12:10
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.124	-0.007	6226610	3.301	0.002	26650891	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.286	0.000	1902	4.748	0.038	18957	0.0152	0.0298	64.6*	alpha-BHC
4.646	0.002	72741	5.162	0.024	3091583	1.4441	11.2080	154.3*	beta-BHC
4.794	-0.019	1914899	5.408	-0.042	13198445	17.7100	24.0481	30.4	delta-BHC
4.563	-0.006	614389	5.065	-0.001	1111578	5.3960	1.9744	92.8*	gamma-BHC (Lindane)
4.994	-0.021	1337792	5.542	0.012	8698533	12.2436	15.9285	26.2	Heptachlor
5.311	0.004	1554973	5.901	0.034	44951	14.6874	0.0869	197.6*	Aldrin
5.859	-0.023	168245	6.401	-0.021	5167948	1.7142	10.9680	145.9*	Heptachlor epoxide b
6.283	0.023	690009	6.793	-0.016	27626	7.5212	0.0652	196.6*	Endosulfan I
6.449	-0.033	3038374	7.105	0.038	3566321	31.3429	8.3460	115.9*	Dieldrin
6.166	-0.018	773950	6.851	-0.019	199976	10.4940	0.4649	183.0*	4,4'-DDE
----			7.373	0.017	13762956	0.0000	47.7961	---	Endrin
6.910	0.005	159516	7.552	0.007	2772039	1.8329	9.1894	133.5*	Endosulfan II
6.748	0.008	832755	----			9.9477	0.0000	---	4,4'-DDD
7.666	-0.009	21239	8.116	0.029	4610155	0.2764	17.9512	193.9*	Endosulfan sulfate
6.962	-0.037	5374206	7.688	-0.007	5905574	65.1354	21.5007	100.7*	4,4'-DDT
7.415	-0.010	126978	8.259	-0.023	18314772	3.2517	179.1692	192.9*	Methoxychlor
7.944	0.015	8252	8.587	0.008	11939985	0.0865	46.5191	199.3*	Endrin ketone
7.287	0.003	2614440	7.832	-0.010	4807182	38.0073	20.7583	58.7*	Endrin aldehyde
----			6.630	0.026	429351	0.0000	0.8658	---	gamma-Chlordane
6.129	0.003	54535	6.755	0.013	5417	0.5557	0.0119	191.6*	alpha-Chlordane
2.303	-0.009	9517	2.455	-0.014	152316	0.0696	0.2761	119.5*	Hexachlorobutadiene
4.099	-0.040	1054395	4.571	-0.015	4332449	10.6127	8.2526	25.0	Hexachlorobenzene
5.737	-0.049	231016	6.357	0.025	1148281	2.9491	3.3059	11.4	Oxychlordane
5.812	-0.050	11685	6.572	-0.009	4843445	0.1953	19.3038	196.0*	2,4-DDE
6.083	-0.027	7085	6.676	-0.014	366042	0.0737	1.0621	174.0*	trans-Nonachlor
6.320	-0.028	1440733	7.045	-0.019	5950194	26.7141	31.6953	17.1	2,4-DDD
6.590	0.003	98843	----			1.5845	0.0000	---	2,4-DDT
6.700	-0.026	4688174	----			44.1903	0.0000	---	cis-Nonachlor
7.596	-0.004	327563	8.525	-0.039	417409	5.0596	2.4033	71.2*	Mirex
8.907	-0.020	5817251	10.288	0.000	13964574	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.751	-0.006	1044	1.737	0.011	668699	0.0000	0.0000	---	Hexachloroethane
6.543	-0.038	440937	7.316	-0.020	2700265	0.0000	0.0000	---	Kepone
3.793	-0.006	2382174	4.129	0.000	11802561	28.1758	26.7751	5.1	Tetrachloro-m-xylen
8.757	-0.020	1952083	9.724	0.000	6333868	26.6621	28.0592	5.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	70.4	66.9	66.9~	130- 0
Decachlorobiphenyl	66.7	70.1	66.7~	130- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

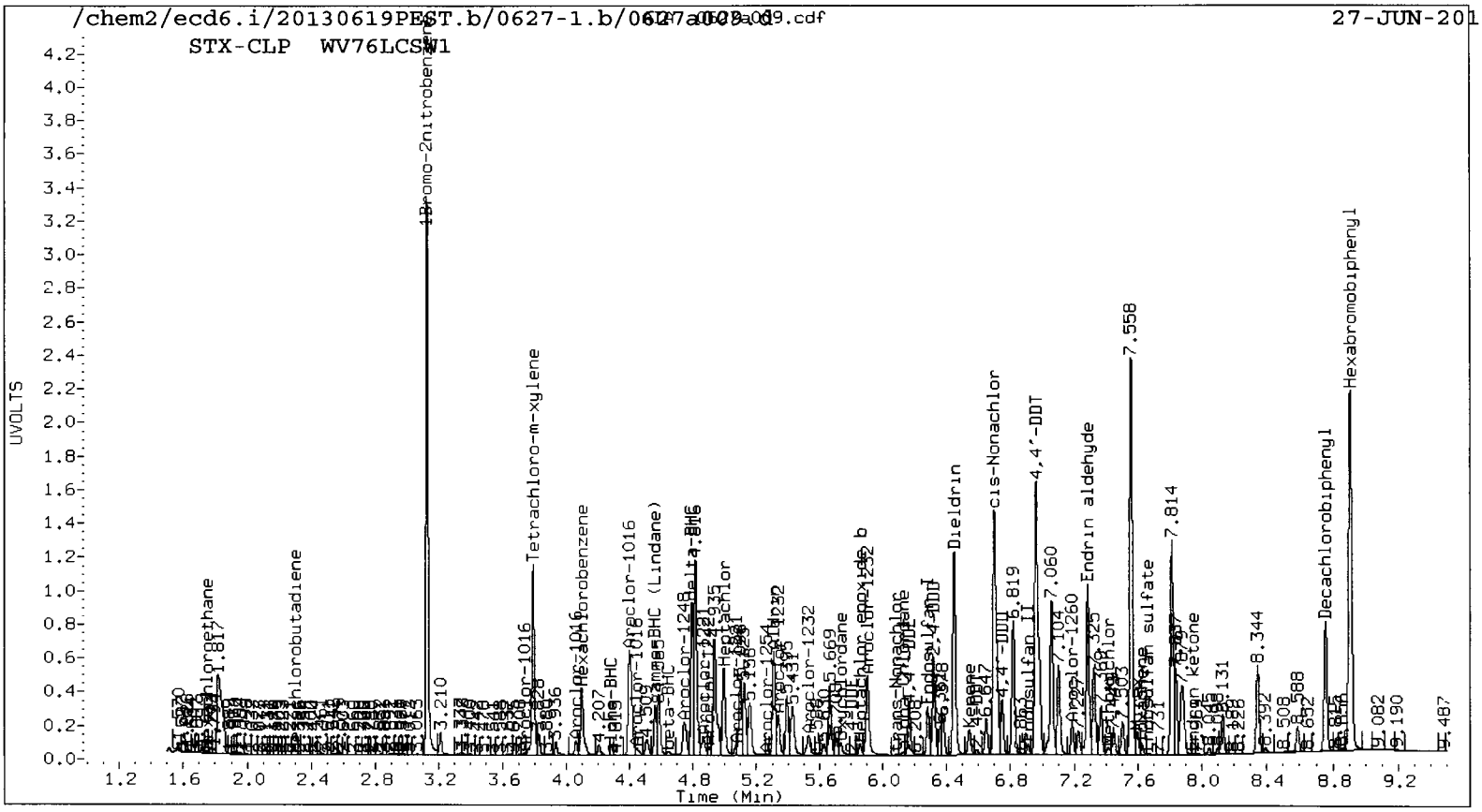
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6226610	11.4
Hexabromobiphenyl	4870538	5817251	19.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	26650891	-5.9
Hexabromobiphenyl	16454599	13964574	-15.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.962	0.003	5374206	1439.4	1	7.316	0.025	2700265	276.4
Toxaphene	2	---			0.000	2	7.629	0.014	1726788	119.8
Toxaphene	3	7.287	0.020	2614440	615.1	3	7.832	-0.014	4807182	303.9
Toxaphene	4	7.596	0.004	327563	75.7	4	8.321	0.008	571513	50.1
Toxaphene	5	7.626	-0.006	144120	50.1	5	---			0.0
Toxaphene	6	7.944	0.031	8252	3.4	NS	---			----
Total STX-CLPAve (5 peaks): 436.729						Total CLP2Ave (4 peaks): 187.557				RPD = 80*
Corrected Ave (4 peaks): 186.066						Corrected Ave (4 peaks): 187.557				RPD = 1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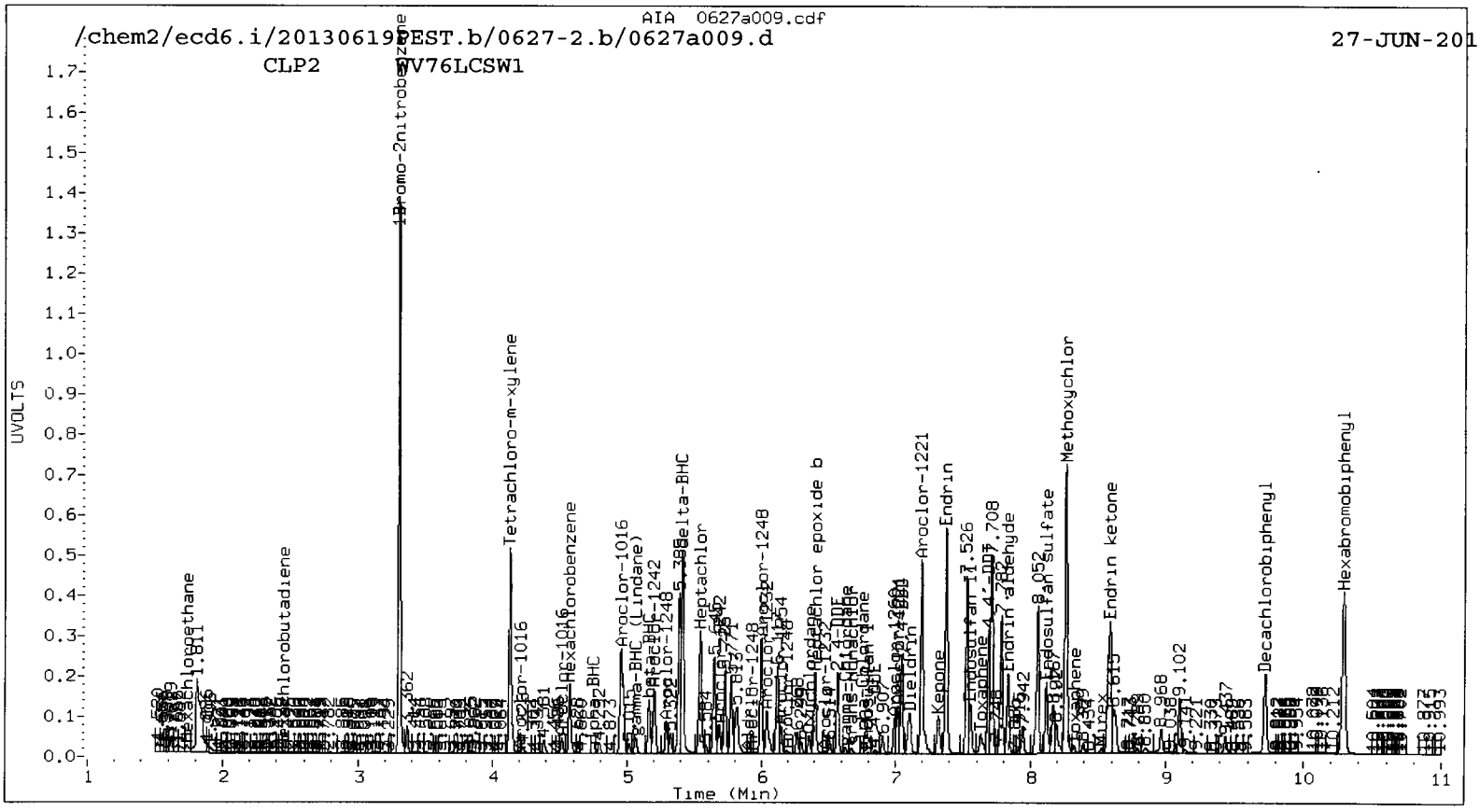
STX-CLP WV76LCSW1
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobutadiene
Hexachlorobenzene
Aroclor-1016
Aroclor-1248
Aroclor-1260
Aroclor-1232
Aroclor-1254
Aroclor-1221
Heptachlor
Delta-BHC
Gamma-BHC (Lindane)
Alpha-BHC
Beta-BHC
Dieldrin
Endrin
Endrin aldehyde
Endrin ketone
Endosulfan I
Endosulfan II
Endosulfan sulfate
4,4'-DDT
4,4'-DDE
4,4'-DDD
Methoxychlor
Kepone
cis-Nonachlor
trans-Nonachlor
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl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27-JUN-201
CLP2 WV76LCSW1
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobutadiene
Hexachlorobenzene
Aroclor-1016
Aroclor-1248
Aroclor-1260
Aroclor-1232
Aroclor-1254
Aroclor-1221
Heptachlor
Delta-BHC
Gamma-BHC (Lindane)
Alpha-BHC
Beta-BHC
Dieldrin
Endrin
Endrin aldehyde
Endrin ketone
Endosulfan I
Endosulfan II
Endosulfan sulfate
4,4'-DDT
4,4'-DDE
4,4'-DDD
Methoxychlor
Kepone
cis-Nonachlor
trans-Nonachlor
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/0627-1.b/0627a010.d ARI ID: WV67LCSDW1
Data file 2: /chem2/ecd6.i/20130619PEST.b/0627-2.b/0627a010.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 27-JUN-2013 17:05
Compound Sublist: wpest Report Date: 06/28/2013 12:10
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

6/28/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.124	-0.007	6586791	3.300	0.001	27710254	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.329	0.043	3628	4.747	0.037	21054	0.0275	0.0318	14.6	alpha-BHC
4.645	0.001	69509	5.161	0.023	3035022	1.3045	10.5823	156.1*	beta-BHC
4.794	-0.019	1909224	5.408	-0.042	12974985	16.6919	22.7372	30.7	delta-BHC
4.562	-0.006	605674	5.065	-0.001	1081665	5.0285	1.8478	92.5*	gamma-BHC (Lindane)
4.993	-0.022	1327186	5.541	0.011	8615202	11.4823	15.1728	27.7	Heptachlor
5.310	0.003	1559247	5.900	0.033	71687	13.9224	0.1334	196.2*	Aldrin
5.859	-0.024	167979	6.401	-0.021	5174148	1.6179	10.5614	146.9*	Heptachlor epoxide b
6.283	0.023	696406	6.793	-0.016	24788	7.1758	0.0563	196.9*	Endosulfan I
6.449	-0.033	3089602	7.104	0.037	3604886	30.1286	8.1137	115.1*	Dieldrin
6.166	-0.018	782219	6.851	-0.020	200664	10.0261	0.4486	182.9*	4,4'-DDE
----			7.373	0.017	14019351	0.0000	45.2617	---	Endrin
6.910	0.004	161810	7.552	0.007	2823539	1.7594	8.7017	132.7*	Endosulfan II
6.748	0.008	848798	----			9.5947	0.0000	---	4,4'-DDD
7.667	-0.007	19083	8.116	0.028	4755837	0.2350	17.2158	194.6*	Endosulfan sulfate
6.962	-0.036	5490977	7.688	-0.007	6098441	62.9759	20.6410	101.3*	4,4'-DDT
7.414	-0.010	127877	8.259	-0.023	18895817	3.0988	171.8499	192.9*	Methoxychlor
7.945	0.015	8346	8.586	0.008	12282128	0.0828	44.4860	199.3*	Endrin ketone
7.287	0.003	2668043	7.832	-0.011	4920263	36.7031	19.7520	60.1*	Endrin aldehyde
----			6.630	0.025	428868	0.0000	0.8318	---	gamma-Chlordane
6.129	0.003	52774	6.754	0.012	4612	0.5083	0.0098	192.5*	alpha-Chlordane
2.304	-0.008	8277	2.455	-0.014	144850	0.0572	0.2525	126.1*	Hexachlorobutadiene
4.099	-0.041	1041332	4.571	-0.015	4242482	9.9081	7.7723	24.2	Hexachlorobenzene
5.737	-0.050	231356	6.357	0.025	1135156	2.7948	3.1432	11.7	Oxychlordane
5.906	0.045	1381735	6.571	-0.009	4886303	21.8526	18.7301	15.4	2,4-DDE
6.082	-0.028	6011	6.676	-0.015	362718	0.0592	0.9784	177.2*	trans-Nonachlor
6.320	-0.028	1461198	7.045	-0.020	6025856	25.6383	29.8404	15.1	2,4-DDD
6.590	0.003	98915	----			1.5005	0.0000	---	2,4-DDT
6.700	-0.027	4774508	----			42.5867	0.0000	---	cis-Nonachlor
7.596	-0.005	335170	8.525	-0.040	427466	4.8990	2.2881	72.7*	Mirex
8.907	-0.020	6147462	10.288	-0.001	15021244	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.751	-0.006	1441	1.737	0.011	256613	0.0000	0.0000	---	Hexachloroethane
6.543	-0.038	445966	7.315	-0.021	2745876	0.0000	0.0000	---	Kepone
3.792	-0.007	2320828	4.128	0.000	11324406	25.9492	24.7082	4.9	Tetrachloro-m-xylen
8.757	-0.021	1934827	9.724	-0.001	6424181	25.0069	26.4573	5.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	64.9	61.8	61.8~	130- 0
Decachlorobiphenyl	62.5	66.1	62.5~	130- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

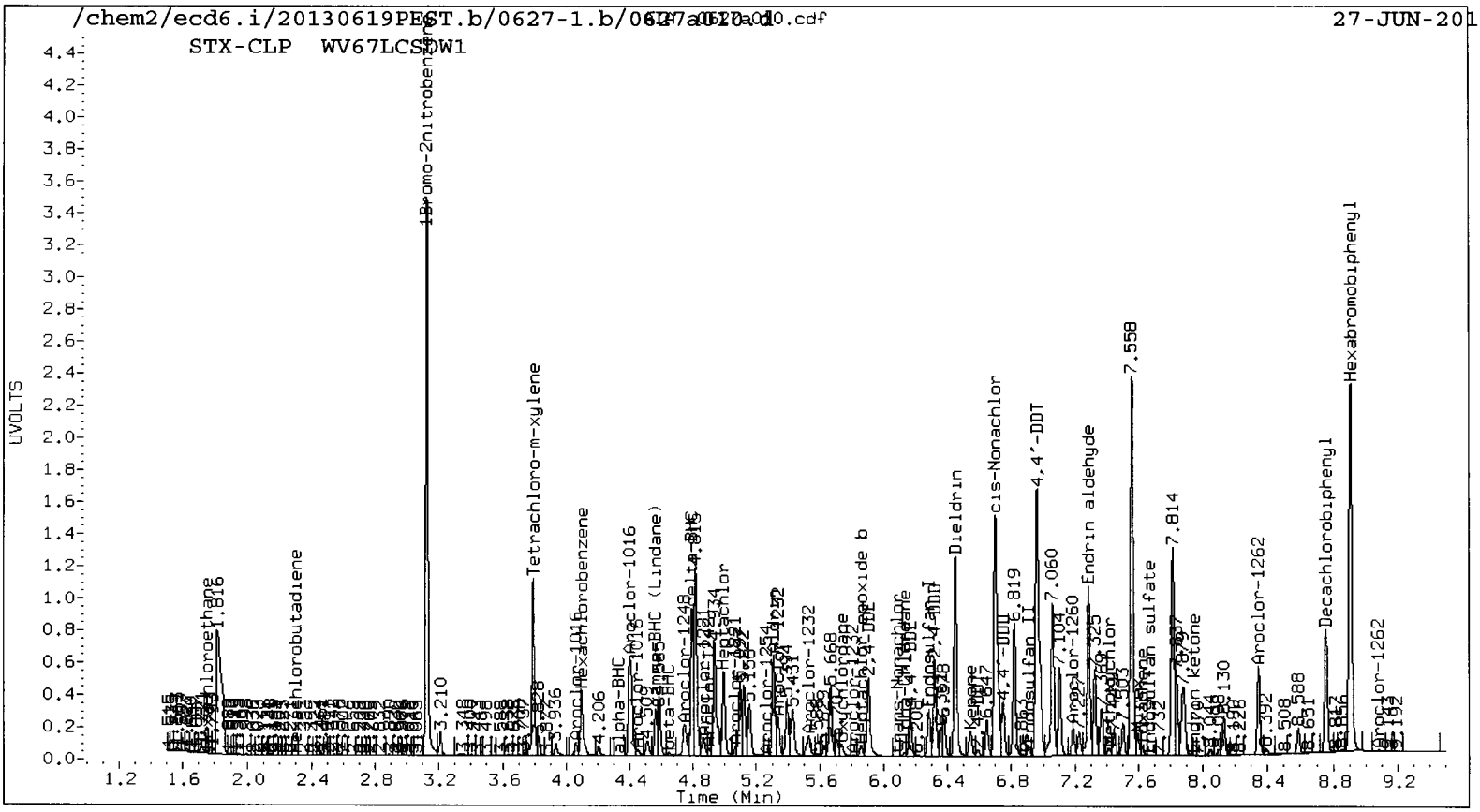
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6586791	17.8
Hexabromobiphenyl	4870538	6147462	26.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	27710254	-2.2
Hexabromobiphenyl	16454599	15021244	-8.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.962	0.003	5490977	1391.7	1	7.315	0.024	2745876	261.3
Toxaphene	2	---			0.000	2	7.629	0.013	1766114	113.9
Toxaphene	3	7.287	0.020	2668043	594.0	3	7.832	-0.014	4920263	289.2
Toxaphene	4	7.596	0.003	335170	73.3	4	8.321	0.007	595544	48.6
Toxaphene	5	7.626	-0.006	147845	48.7	5	---			0.0
Toxaphene	6	7.945	0.032	8346	3.2	NS	---			----
Total STX-CLPAve (5 peaks): 422.161						Total CLP2Ave (4 peaks): 178.233				RPD = 81*
Corrected Ave (4 peaks): 179.786						Corrected Ave (4 peaks): 178.233				RPD = 1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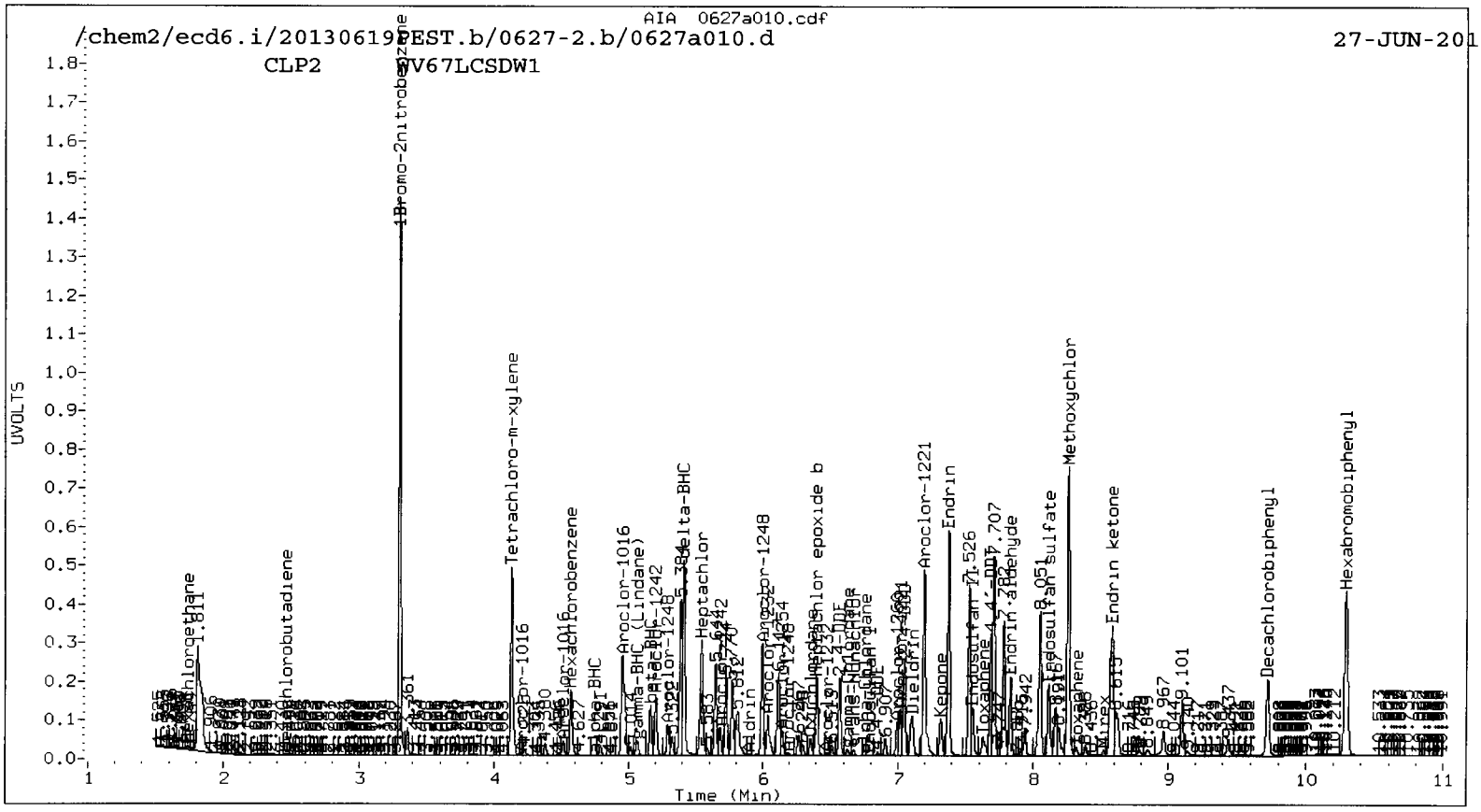
STX-CLP WV67LCSDW1
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobutadiene
Hexachloroethane
Hexachlorobenzene
Aroclor-1016
Aroclor-1016
Alpha-BHC
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1254
Aroclor-1260
Dieldrin
cis-Nonachlor
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Endrin ketone
Aroclor-1262
Decachlorobiphenyl
Hexabromobiphenyl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27-JUN-201
CLP2 WV67LCSDW1
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobutadiene
Hexachloroethane
Hexachlorobenzene
Aroclor-1016
Aroclor-1016
Alpha-BHC
Aroclor-1016
Aroclor-1248
Aroclor-1232
Aroclor-1254
Aroclor-1260
Dieldrin
Aroclor-1221
Endrin
Methoxychlor
Endosulfan sulfate
Endrin ketone
Endrin aldehyde
Aroclor-1262
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/0627-1.b/0627a011.d ARI ID: WV67E YB 6/28/13
Data file 2: /chem2/ecd6.i/20130619PEST.b/0627-2.b/0627a011.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 27-JUN-2013 17:23
Compound Sublist: wpest Report Date: 06/28/2013 12:41
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.123	-0.008	6067558	3.300	0.000	21858598	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.263	-0.023	57872	4.705	-0.005	486741	0.4756	0.9321	64.9*	alpha-BHC
4.664	0.020	339408	5.121	-0.017	87664	6.9145	0.3875	178.8*	beta-BHC
4.818	0.004	53128	5.430	-0.020	218838	0.5042	0.4862	3.7	delta-BHC
4.534	-0.035	159375	5.059	-0.007	375263	1.4364	0.8127	55.5*	gamma-BHC (Lindane)
5.003	-0.012	154900	5.575	0.045	628313	1.4548	1.4028	3.6	Heptachlor
5.293	-0.014	28164	5.844	-0.023	652904	0.2730	1.5398	139.8*	Aldrin
5.896	0.013	101011	6.436	0.014	223596	1.0561	0.5786	58.4*	Heptachlor epoxide b
6.240	-0.020	816168	6.816	0.007	1781333	9.1295	5.1296 Y	56.1*	Endosulfan I RTs, RPD
6.470	-0.012	106058	7.105	0.037	101266	1.1227	0.2889	118.1*	Dieldrin
6.168	-0.016	82811	6.882	0.012	264544	1.1523	0.7498	42.3*	4,4'-DDE
6.657	-0.044	37651	7.354	-0.002	55471	0.4208	0.2481	51.7*	Endrin
6.888	-0.018	11543	7.533	-0.012	97441	0.1300	0.4160	104.8*	Endosulfan II
6.720	-0.020	603652	7.395	-0.012	210339	7.0654	0.8738	156.0*	4,4'-DDD
7.672	-0.002	606772	8.083	-0.004	1085544	7.7369	5.4431	34.8	Endosulfan sulfate
6.996	-0.002	32899	7.666	-0.028	948582	0.3907	4.4472	167.7*	4,4'-DDT
7.389	-0.036	51088	8.282	0.000	307353	1.2819	3.8719	100.5*	Methoxychlor
7.913	-0.016	41048	8.587	0.009	485130	0.4215	2.4339	141.0*	Endrin ketone
7.238	-0.046	66914	7.855	0.013	133863	0.9531	0.7444	24.6	Endrin aldehyde
5.981	-0.021	15510	6.609	0.004	113675	0.1579	0.2795	55.6*	gamma-Chlordane
6.125	-0.001	13382	6.749	0.007	7952	0.1399	0.0213	147.1*	alpha-Chlordane
2.289	-0.023	26755	2.482	0.012	236956	0.2007	0.5237	89.2*	Hexachlorobutadiene
4.126	-0.013	189123	4.607	0.020	163241	1.9535	0.3791	135.0*	Hexachlorobenzene
5.772	-0.015	25603	6.318	-0.014	866862	0.3202	3.0429	161.9*	Oxychlordane
5.843	-0.019	7276	6.586	0.006	24570	0.1192	0.1194	0.2	2,4-DDE
----			6.696	0.006	260161	0.0000	0.9720	---	trans-Nonachlor
6.369	0.021	306306	7.059	-0.006	211640	5.5650	1.4517	117.2*	2,4-DDD
6.586	-0.001	18916	7.368	0.016	20584	0.2971	0.1296	78.5*	2,4-DDT
----			7.451	0.035	192131	0.0000	0.6893	---	cis-Nonachlor
7.583	-0.018	324086	8.566	0.002	284276	4.9049	2.1077	79.8*	Mirex
8.905	-0.022	5937024	10.287	-0.001	10844374	80.0000	80.0000	0.0	Hexabromobiphenyl
1.752	-0.006	2191	1.745	0.019	515386	0.0000	0.0000	---	Hexachloroethane
6.561	-0.020	28021	7.314	-0.022	149328	0.0000	0.0000	---	Kepone
3.791	-0.008	2124499	4.128	-0.001	7530323	25.7868	20.8285	21.3	Tetrachloro-m-xylene
8.756	-0.021	1967135	9.724	-0.001	5470766	26.3256	31.2088	17.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	64.5	52.1	52.1~	130- 0
Decachlorobiphenyl	65.8	78.0	65.8~	130- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6067558	8.5
Hexabromobiphenyl	4870538	5937024	21.9

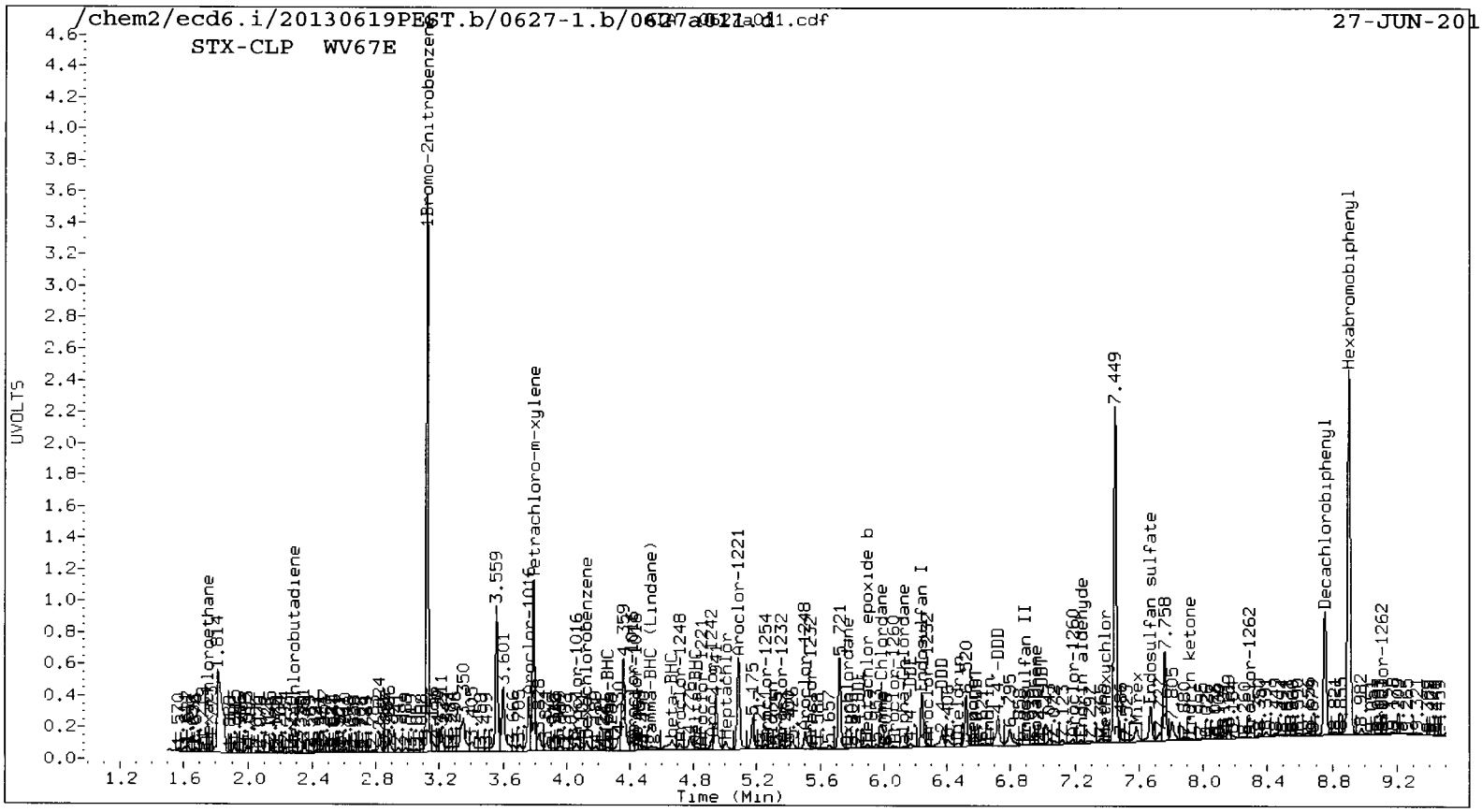
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	21858598	-22.8
Hexabromobiphenyl	16454599	10844374	-34.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.959	0.000	17854	4.7	1	7.314	0.023	149328	19.7
Toxaphene	2	6.996	-0.014	32899	12.5	2	---			0.0
Toxaphene	3	7.238	-0.029	66914	15.4	3	7.855	0.009	133863	10.9
Toxaphene	4	7.583	-0.010	324086	73.3	4	8.343	0.029	167675	18.9
Toxaphene	5	7.672	0.040	606772	206.8	5	---			0.0
Toxaphene	6	7.913	0.000	41048	16.5	NS	---			----
Total STX-CLPAve (6 peaks): 54.874						Total CLP2Ave (3 peaks): 16.506				RPD = 108*
Corrected Ave (5 peaks): 24.489						Corrected Ave (3 peaks): 16.506				RPD = 39

WV67:00973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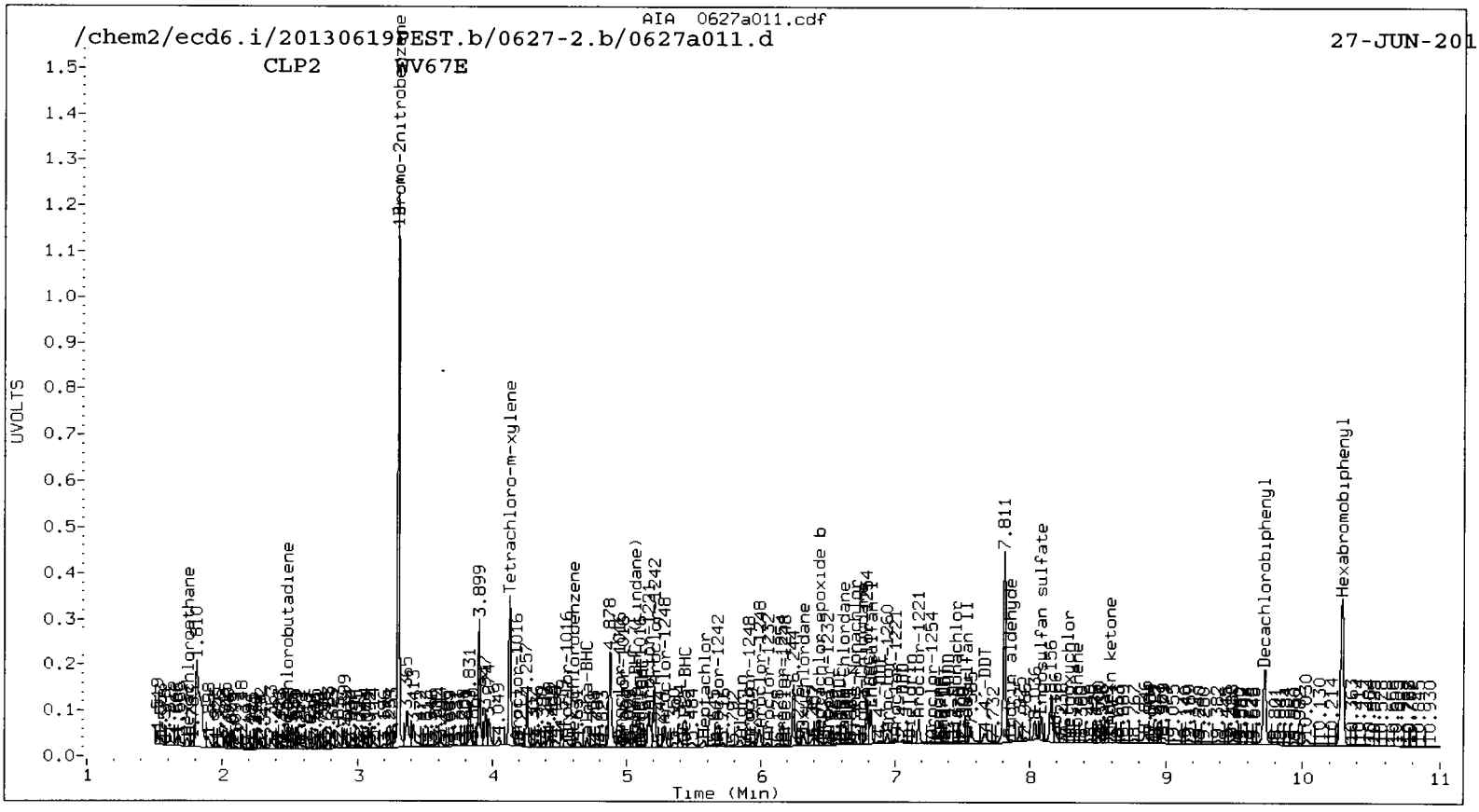
27-JUN-201
STX-CLP WV67E
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexabromobiphenyl
Decachlorobiphenyl
7.449
3.559
1.814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27-JUN-201
CLP2 WV67E
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexabromobiphenyl
Decachlorobiphenyl
7.811
3.899
1.817

00974

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 6/28/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0627-1.b/0627a013.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130619PEST.b/0627-2.b/0627a013.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Injection Date: 27-JUN-2013 17:58
Compound Sublist: INDA
Report Date: 06/28/2013 12:11
Instrument, Inj. Vol.: ecd6.i, 1ul
Matrix: NONE
Operator: ar
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.124	-0.007	6715782	3.300	0.001	28121646	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.278	-0.008	3049503	4.711	0.000	13615940	22.6413	20.2661	11.1	alpha-BHC
4.636	-0.008	1129977	5.141	0.003	5065252	20.7983	17.4027	17.8	beta-BHC
4.806	-0.008	2611593	5.452	0.002	11665185	22.3940	20.1429	10.6	delta-BHC
4.560	-0.009	2725144	5.067	0.001	11950911	22.1906	20.1169	9.8	gamma-BHC (Lindane)
5.005	-0.010	2565026	5.530	0.001	10778358	21.7654	18.7048	15.1	Heptachlor
5.296	-0.011	2560012	5.868	0.001	10255039	22.4192	18.7985	17.6	Aldrin
5.870	-0.013	2280662	6.422	0.000	8810807	21.5438	17.7213	19.5	Heptachlor epoxide b
6.246	-0.014	2112882	6.810	0.001	8021449	21.3532	17.9543	17.3	Endosulfan I
6.469	-0.014	4579429	7.068	0.000	16036664	43.7990	35.5667	20.7	Dieldrin
6.170	-0.014	3484574	6.870	0.000	16120910	43.8058	35.5157	20.9	4,4'-DDE
6.686	-0.015	3883404	7.357	0.000	12314259	41.6098	42.1168	1.2	Endrin
6.892	-0.014	3865132	7.546	0.001	13159929	41.7171	42.9645	2.9	Endosulfan II
6.727	-0.013	3689575	7.409	0.002	12790259	41.3995	40.6347	1.9	4,4'-DDD
7.658	-0.016	3365699	8.088	0.001	10844815	41.1415	41.5879	1.1	Endosulfan sulfate
6.984	-0.014	3671620	7.696	0.001	11622344	41.7999	41.6726	0.3	4,4'-DDT
7.409	-0.015	8079245	8.278	-0.004	20257908	194.3416	195.1744	0.4	Methoxychlor
7.913	-0.017	4182960	8.579	0.001	10911819	41.1774	41.8689	1.7	Endrin ketone
7.269	-0.015	3015242	7.843	0.001	9966015	41.1742	42.3828	2.9	Endrin aldehyde
5.990	-0.012	2401557	6.606	0.002	9076466	22.0838	17.3465	24.0	gamma-Chlordane
6.113	-0.013	2283231	6.743	0.001	8397529	21.5705	17.5067	20.8	alpha-Chlordane
2.305	-0.007	3147754	2.467	-0.003	11763777	21.3297	20.2097	5.4	Hexachlorobutadiene
4.133	-0.007	2214500	4.588	0.002	11196829	20.6658	20.2127	2.2	Hexachlorobenzene
8.908	-0.019	6193033	10.288	0.000	14179509	80.0000	80.0000	0.0	Hexabromobiphenyl
3.792	-0.007	3944201	4.128	0.000	18984086	43.2531	40.8146	5.8	Tetrachloro-m-xylen
8.757	-0.020	3128142	9.725	0.000	9167940	40.1325	39.9985	0.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	108.1	102.0	102.0~	115- 0
Decachlorobiphenyl	100.3	100.0	100.0~	115- 0

~ Indicates recovery outside QC Limits

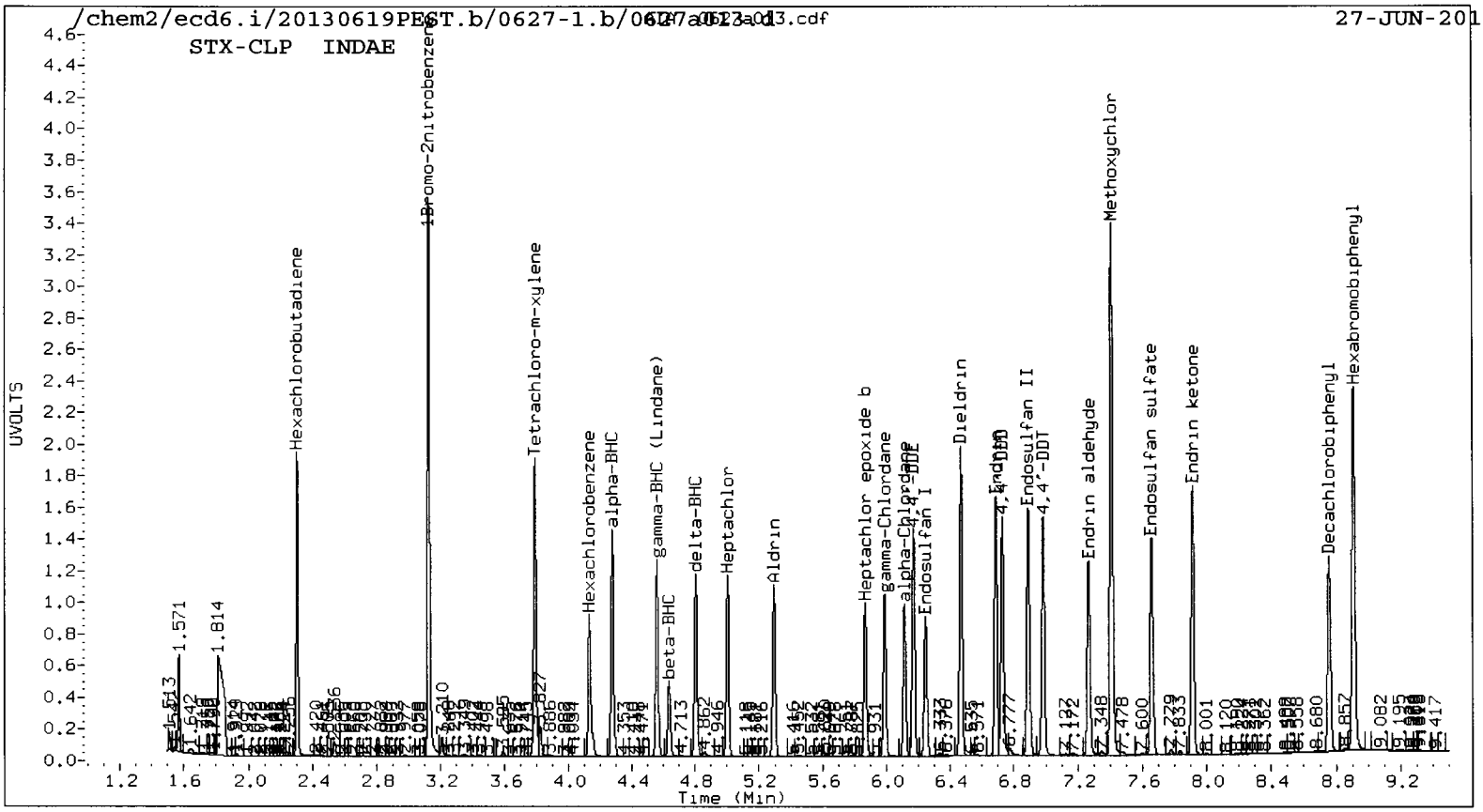
INTERNAL STANDARD SUMMARY

	Column 1 Standard Area*	Sample Area	%D
Standard Cpnd			
Bromo-Nitrobenzene	5590801	6715782	20.1
Hexabromobiphenyl	4870538	6193033	27.2

	Column 2 Standard Area*	Sample Area	%D
Standard Cpnd			
Bromo-Nitrobenzene	28320361	28121646	-0.7
Hexabromobiphenyl	16454599	14179509	-13.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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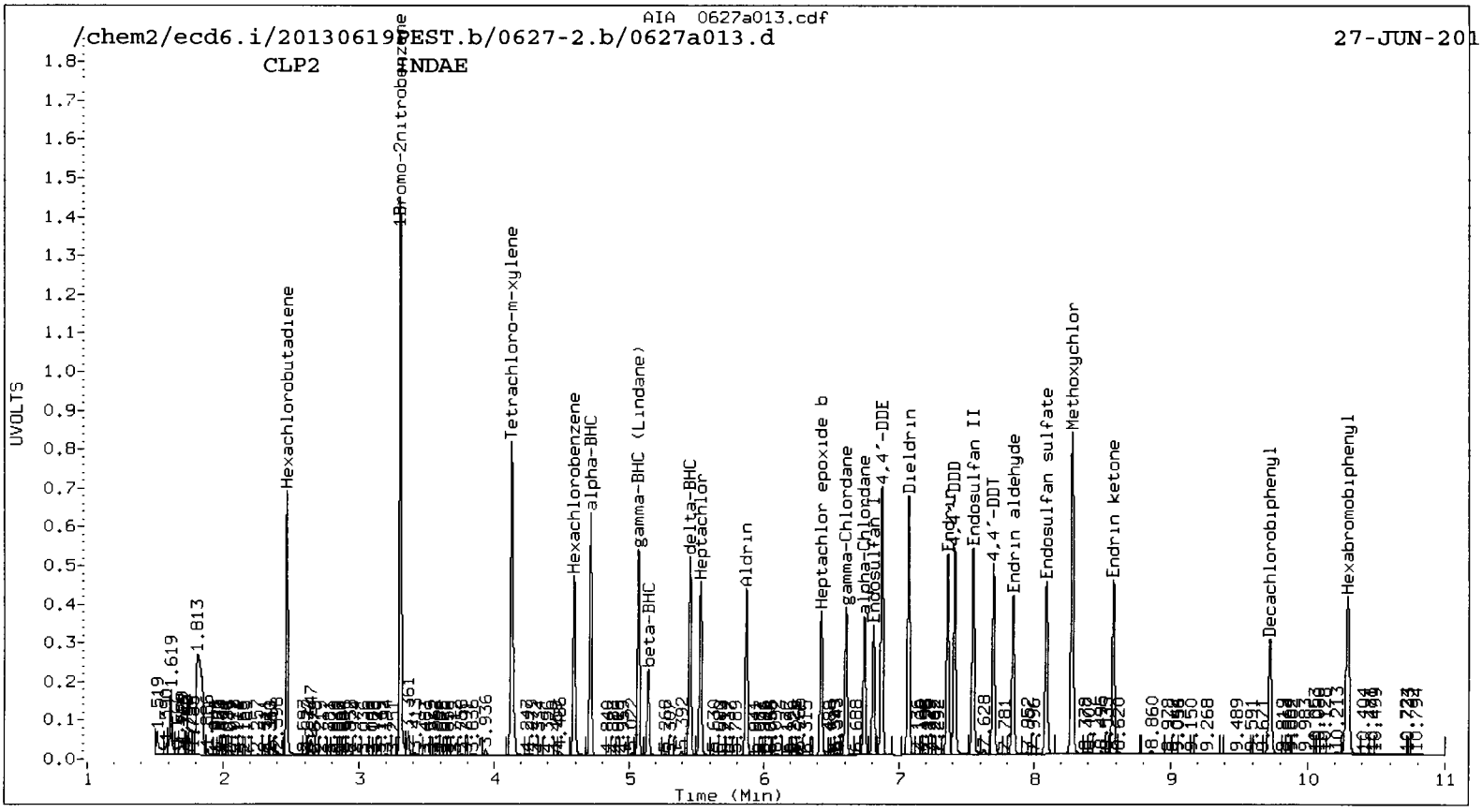
27-JUN-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.571
1.814
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDE
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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27-JUN-201
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UVOLTS
Time (Min)
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1.619
1.813
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 6/28/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0627-1.b/0627a014.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130619PEST.b/0627-2.b/0627a014.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 27-JUN-2013 18:16
Compound Sublist: TOXAPH Report Date: 06/28/2013 12:11
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.125	-0.007	6878588	3.301	0.001	29135804	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.908	-0.019	6507625	10.289	0.000	15486641	80.0000	80.0000	0.0	Hexabromobiphenyl
3.794	-0.006	2778236	4.129	0.000	14570678	29.7457	30.2357	1.6	Tetrachloro-m-xylen
8.757	-0.020	2563464	9.725	0.001	7791590	31.2981	31.1245	0.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	74.4	75.6	74.4~	150- 0
Decachlorobiphenyl	78.2	77.8	77.8~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6878588	23.0
Hexabromobiphenyl	4870538	6507625	33.6

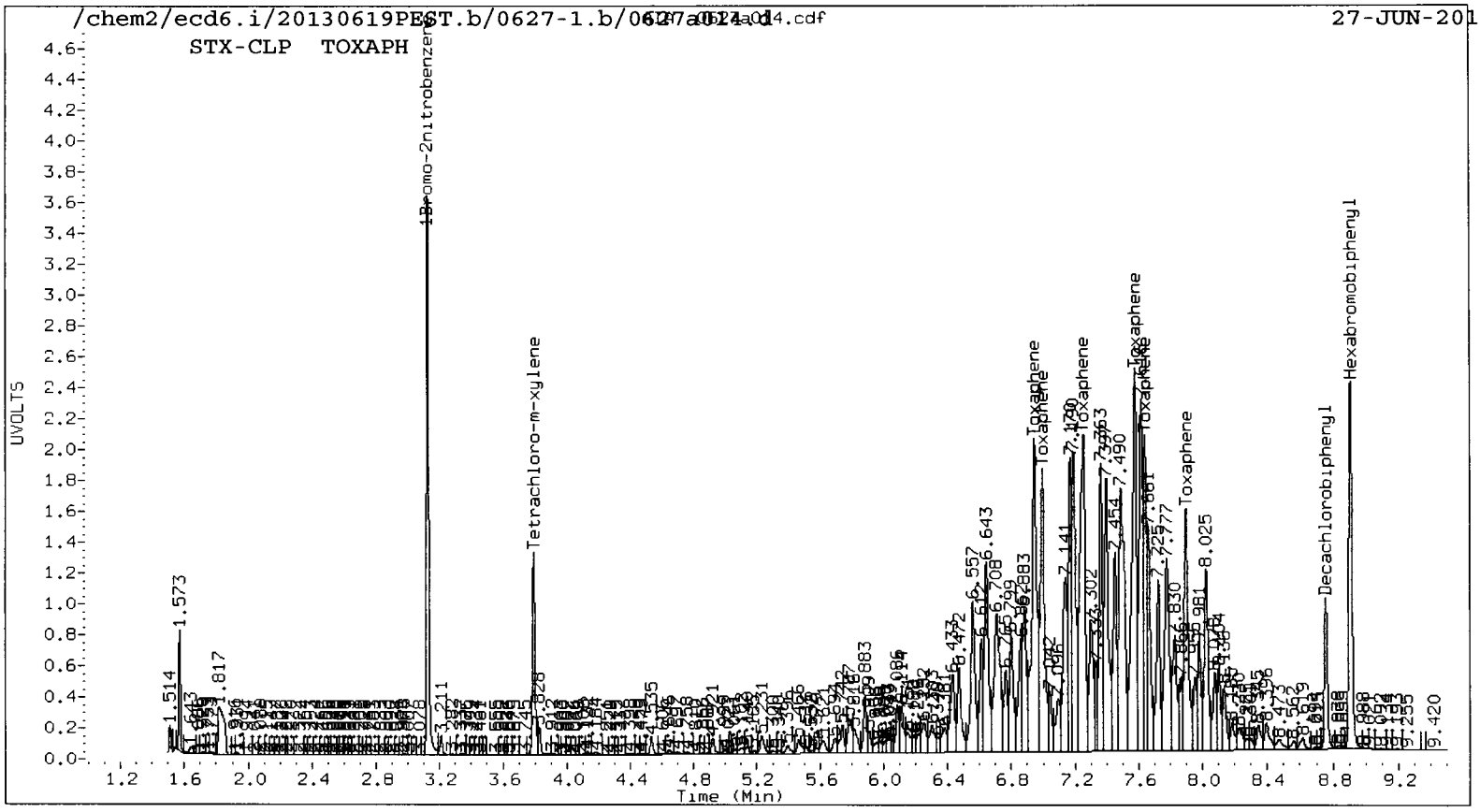
Column 2

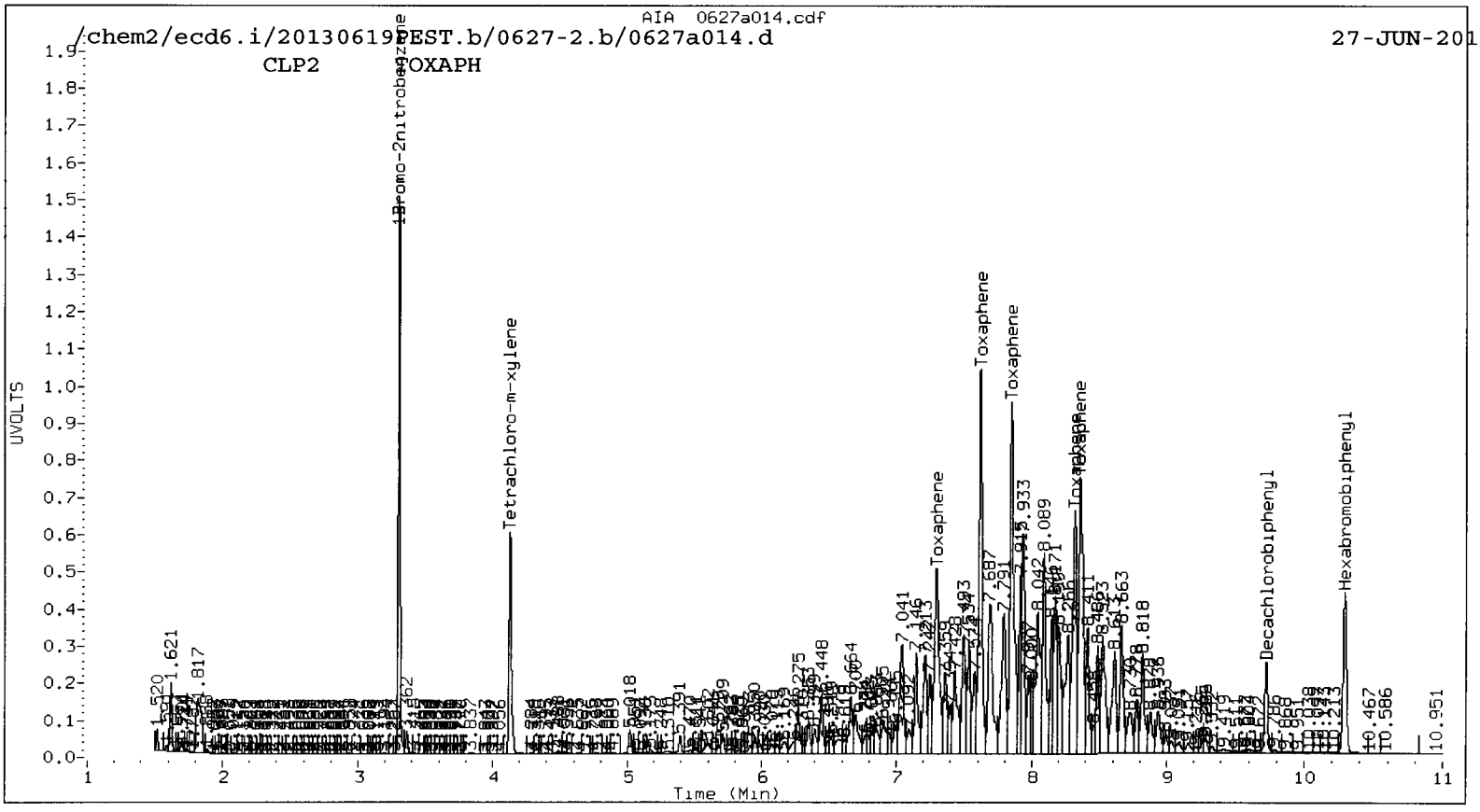
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29135804	2.9
Hexabromobiphenyl	16454599	15486641	-5.9

WGT.0078

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.945	-0.014	8831614	2114.4	1	7.293	0.002	24347476	2247.1	
Toxaphene	2	6.996	-0.014	6514247	2260.2	2	7.618	0.003	35867671	2243.7	
Toxaphene	3	7.252	-0.015	10022847	2107.9	3	7.848	0.002	38648295	2203.3	
Toxaphene	4	7.577	-0.015	10021467	2069.1	4	8.315	0.002	26118305	2065.8	
Toxaphene	5	7.638	0.006	5460479	1697.8	5	8.355	0.002	32992094	2052.0	
Toxaphene	6	7.897	-0.017	5532997	2026.6	NS	---			----	
Total STX-CLPAve (6 peaks): 2046.018						Total CLP2Ave (5 peaks): 2162.384				RPD = 6	
Corrected Ave (6 peaks): 2046.018						Corrected Ave (5 peaks): 2162.384				RPD = 6	


/chem2/ecd6.i/20130619PEST.b/0627-1.b/0627a014.d
27-JUN-201
STX-CLP TOXAPH
UVOLTS
Time (Min)
1.573
1.514
1.817
Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
9.420


AIA 0627a014.cdf
/chem2/ecd6.i/20130619PEST.b/0627-2.b/0627a014.d
27-JUN-201
CLP2 TOXAPH
UVOLTS
Time (Min)
1.621
1.817
Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
10.467
10.586
10.951

TPHG Raw Data
Preparation Log

ARI Job ID: WV67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Method 5035 Extraction Bench Sheet

(8260B, 8260B-SIM, 8021, NWTPH-Gx, AK-101, TPH-G, VPH, TCLP-ZHE)

ARI Project No. ~~WW08~~ WW70, ~~WW00~~ WV04, WV67 — Client ID — Prep/Extraction Date 6/27/13 — MeOH Lot No. — Analyst PC

~~WW08~~ PC 6/28/13 — ~~WW00~~ PC 6/28/13

	Lab ID	Vial No.	Preservative: $NaHSO_3$	Preservative: CH_3OH	Preservative: Lot #	Method 5035 Sample Weight: Vial Weight (g)	Tare (from vial) (g)	Sample Weight (g)	Extract Volume (mL)	MeOH Split Volume (µL)	Comments
1	WV67A	3		X	DE695	39,56	28,183	11,377	5	900	
2	B	3				36,10	28,146	7,594			
3	C	3				33,90	28,112	5,788			
4	WV70B	1				38,52	28,137	10,383			
5	WV04A	1				40,47	28,140	12,33			
6	B	1				40,96	28,183	12,777			
7	C	1				35,72	28,115	7,605			
8	D	1				39,15	28,164	10,986			
9	E	1				40,99	28,158	12,832			
10	F	1				39,06	28,141	10,919			
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											

Balance ID: 4005006 PT120

70606 : LGAM

TPHG Raw Data
Initial Calibration Notes and Raw Data

ARI Job ID: WV67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Initial Calibration Notes

ARI SOP: ~~404S~~(Gas) ~~410S~~(BTEX) ~~430S~~(VPH) **700S**(8260C) **703S**(SIM) **706S**(524.3) **710S**(RSK-175)

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 (PID-1) PID-2 PID-3 FID-6

Curve Date(s): 5/22/13 Surrogate ~~Internal~~ Standard ID VW795-2 **Expiration** 8/13/13 DAH 5/22/13

BFB Tune Meets Criteria?	(N/A) YES / NO	**ICV Exceeding ±20%?**	YES / (NO)
ICal Meets %RSD & r^2 Criteria?	(YES) / NO	**ICV Exceeding ±30%?**	YES / (NO)
Q flag applied?	YES / (NO)	**Linear Fits Used?**	YES / (NO)
Manual Integrations for ICal?	(YES) / NO	**Quadratic Fits Used?**	YES / (NO)
Spectral Library Updated?	YES / (NO)	**Calibration Points Dropped?**	(YES) / NO DAH 5/22
Minimum Response Factors Met	(YES) / NO	**Purge Volume (mL)** 0.25 level on FID side for o-xylene	5mL

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Restek	VW795-2	8/13/13	Vitra	B000435	11/22/13
Restek	B000332	11/13/13			

Detail problems, corrective actions and/or other pertinent information below:

Calibration for BTEX and surrogates. Surrogates calibrated with BTEX to avoid hydrocarbon interference.

Dropped 0.25 part for o-xylene on the FID side.

Analyst: DAH **Date:** 5/22/13

Reviewer: [signature] **Date:** 5/23/13

Analytical Resources Inc.: Organics Instrument Log

PID-1 Serial No.: 2750A-17141

Date: 5/22/13 Analysis: BTEX/NWTPH-G Analyst: DMH

Column 1 Serial No.: 821726 Column Type: RTX502.2

Column 2 Serial No.: Column Type:

GC Method: BETX ICal Date: 10/23/13, 5/22/13 Injection Volume: 5 mL

IS	Ical/Ccal	ICV
VW795-2, B000434	B000332 B000432 B000433	B000435 (ICV) B000332 (LCS)
DMH 5/23/13	DMH 5/23/13	DMH 5/23/13

Document All Maintenance Tasks in StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/pid1.i/20130522-1.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF			
1	0833	0522a001.d	RINSE				1			
2	0902	0522a002.d	BCAL0.25	BCAL0.25			1			
3	0930	0522a003.d	BCAL0.5	BCAL0.5			1			
4	0958	0522a004.d	BCAL1	BCAL1			1			
5	1027	0522a005.d	BCAL5	BCAL5			1			
6	1056	0522a006.d	BCAL25	BCAL25			1			
7	1125	0522a007.d	BCAL50	BCAL50			1			
8	1155	0522a008.d	BCAL100	BCAL100			1			
9	1224	0522a009.d	BCAL200	BCAL200			1			
10	1253	0522a010.d	ICV25	ICV25			1			
11	1339	0522a011.d	RT/BCAL 1				1			
12	1408	0522a012.d	GCAL 1				1			
13	1437	0522a013.d	LCS0522	LCS0522			1			
14	1506	0522a014.d	LCSD0522	LCSD0522			1			
15	1543	0522a015.d	MB0522				1			
16	1612	0522a016.d	WQ46F	A2-F6-S-6	2	Soil	1			
17	1641	0522a017.d	WQ46G	A2-F7-S-6	1		1			
18	1711	0522a018.d	WQ46H	A2-F8-S-6	3		1			
19	1740	0522a019.d	WQ46I	A2-F9-S-6	1		1			
20	1809	0522a020.d	WQ46J	A2-F10-S-6	2		1			
21	1838	0522a021.d	WQ46K	A2-F11-S-6	2		1			
22	1907	0522a022.d	WQ46L	A2-F12-S-6	1		1			
23	1937	0522a023.d	BCAL 2	OK			1			
24	2006	0522a024.d	GCAL 2	OK			1			
25	2035	0522a025.d	WQ46M	A2-F13-S-6	1	Soil	1			
26	2104	0522a026.d	WQ46N	A2-F14-S-6	3		1			
27	2133	0522a027.d	WQ46O	A2-F15-S-6	2		1			
28	2203	0522a028.d	WQ46P	A2-F16-S-6	3		1			
29	2232	0522a029.d	WQ46Q	A2-F17-S-6	2		1			
30	2301	0522a030.d	WQ46R	A2-F18-S-6	3		1			
31	2330	0522a031.d	WQ46S	A2-F19-S-6	1		1			
32	2359	0522a032.d	WQ46T	A2-F20-S-6	1		1			
33	0029	0522a033.d	WQ38A	MW-R1	1	≤2	1			
34	0058	0522a034.d	WQ49F	GTEP-GW-Q2-TB	1		1			
35	0127	0522a035.d	BCAL 3	OK			1			
36	0156	0522a036.d	GCAL 3	OK			1			
37	0225	0522a037.d	WQ48A	GTEP-8-GW-Q2-7-17	2	≤2	1	Rerun		
38	0255	0522a038.d	WQ49B	GTEP-38-GW-Q2-7-17	2		1			
39	0324	0522a039.d	WQ49C	GTEP-GW-Q2-EB	1		1			
40	0353	0522a040.d	GCAL 4 *	Low			1			

DMH 5/23/13

* File 40 (GCAL 4 failed low, but GCAL 1 (file 3 on the following day) ran within 24 hours of the retention time standard and closed the bracket with a passing recovery.

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks in StarLIMS

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20130522-1.b/FID.m
Batch File: /chem3/pid1.i/20130522-1.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09
FILENAME:	0522a002	0522a003	0522a004	0522a005	0522a006	0522a007	0522a008	0522a009	0522a010
INJ.DATE:	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013
INJ.TIME:	09:02	09:30	09:58	10:27	10:56	11:25	11:55	12:24	12:53

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.492	0.422-0.562	+++++	+++++
2	WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.937	0.867-1.007	+++++	+++++
3	AK101	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.251	1.181-1.321	+++++	+++++
4	8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.539	1.469-1.609	+++++	+++++
5	2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.278	4.208-4.348	+++++	+++++
6	MTBE	4.530	4.540	4.538	4.539	4.537	4.537	4.539	4.538	4.539	4.530	4.460-4.600	4.537	0.003
7	nC6	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.777	4.707-4.847	+++++	+++++
8	nC7	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.820	6.750-6.890	+++++	+++++
9	BENZENE	7.007	7.015	7.010	7.012	7.012	7.012	7.014	7.014	7.013	7.007	6.937-7.077	7.012	0.002
$ 10	TFT(Surr)	7.849	7.848	7.848	7.848	7.848	7.848	7.849	7.848	7.849	7.849	7.779-7.919	7.848	0.001
11	nC8	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.481	9.411-9.551	+++++	+++++
12	Toluene	9.877	9.875	9.873	9.873	9.874	9.873	9.875	9.877	9.874	9.877	9.807-9.947	9.875	0.001
13	nC9	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.404	12.334-12.474	+++++	+++++
14	ETHYLBENZENE	12.763	12.766	12.766	12.764	12.765	12.765	12.767	12.770	12.766	12.763	12.693-12.833	12.766	0.002
15	M/P-XYLENE	12.927	12.929	12.924	12.925	12.926	12.927	12.930	12.935	12.927	12.927	12.857-12.997	12.928	0.003
16	O-XYLENE	13.863	13.873	13.873	13.874	13.874	13.873	13.876	13.879	13.875	13.863	13.793-13.933	13.873	0.004
17	nC10-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.205	15.135-15.275	+++++	+++++

Reviewer 1 _____ Date: 5/22/13
Reviewer 2 _____ Date: 5/23/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20130522-1.b/FID.m
Batch File: /chem3/pid1.i/20130522-1.b
Inst ID: pid1.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 18 BB(Surr)	15.383	15.382	15.383	15.382	15.382	15.382	15.382	15.383	15.383	15.383	15.313-15.453	15.383	0.001
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
20 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.106	16.036-16.176	+++++	+++++
21 nc11	+++++	+++++	16.702	16.701	16.701	16.701	16.702	16.704	16.701	16.702	16.632-16.772	16.702	0.001
22 nC12-Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.798	17.728-17.868	+++++	+++++
23 nC13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.602	18.532-18.672	+++++	+++++
24 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.800	18.730-18.870	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20130522-2.b/PIDB.m
Batch File: /chem3/pid1.i/20130522-2.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09
FILENAME:	0522a002	0522a003	0522a004	0522a005	0522a006	0522a007	0522a008	0522a009	0522a010
INJ.DATE:	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013
INJ.TIME:	09:02	09:30	09:58	10:27	10:56	11:25	11:55	12:24	12:53

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 MTBE	4.550	4.550	4.543	4.547	4.545	4.545	4.547	4.545	4.546	4.550	4.500-4.600	4.546	0.002
	2 Benzene	7.017	7.020	7.020	7.020	7.020	7.020	7.022	7.021	7.021	7.017	6.967-7.067	7.020	0.001
$	3 TFT(Surr)	7.856	7.856	7.857	7.857	7.856	7.856	7.857	7.856	7.857	7.856	7.806-7.906	7.856	0.001
	4 Toluene	9.883	9.883	9.883	9.883	9.882	9.883	9.884	9.885	9.883	9.883	9.833-9.933	9.883	0.001
	5 Ethylbenzene	12.773	12.773	12.773	12.774	12.774	12.774	12.776	12.778	12.774	12.773	12.723-12.823	12.774	0.002
	6 M/P-Xylene	12.933	12.937	12.934	12.935	12.935	12.936	12.938	12.943	12.936	12.933	12.883-12.983	12.936	0.003
	7 O-Xylene	13.883	13.883	13.883	13.883	13.883	13.883	13.884	13.888	13.884	13.883	13.853-13.913	13.884	0.002
$	8 BB(Surr)	15.390	15.390	15.390	15.390	15.390	15.391	15.390	15.391	15.390	15.390	15.340-15.440	15.390	0.000

Reviewer 1 _____ Date: 5/22/13
Reviewer 2 _____ Date: 5/23/13

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20130522-1.b

ARI Job No.: BCAL Method: FID.m Instrument: pid1.i Date: 22-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0902	0522a002.d	BCAL0.25	BCAL0.25	1	Toluene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE, BB(Surr),
0930	0522a003.d	BCAL0.5	BCAL0.5	1	O-XYLENE,
0958	0522a004.d	BCAL1	BCAL1	1	Toluene, BENZENE, O-XYLENE, BB(Surr),
1027	0522a005.d	BCAL5	BCAL5	1	NO MANUAL INTEGRATION
1056	0522a006.d	BCAL25	BCAL25	1	NO MANUAL INTEGRATION
1125	0522a007.d	BCAL50	BCAL50	1	NO MANUAL INTEGRATION
1155	0522a008.d	BCAL100	BCAL100	1	NO MANUAL INTEGRATION
1224	0522a009.d	BCAL200	BCAL200	1	NO MANUAL INTEGRATION
1253	0522a010.d	ICV25	ICV25	1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20130522-2.b

ARI Job No.: BCAL Method: PIDB.m Instrument: pid1.i Date: 22-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0902	0522a002.d	BCAL0.25	BCAL0.25	1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, MTBE, BB(Surr),
0930	0522a003.d	BCAL0.5	BCAL0.5	1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, MTBE,
0958	0522a004.d	BCAL1	BCAL1	1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1027	0522a005.d	BCAL5	BCAL5	1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1056	0522a006.d	BCAL25	BCAL25	1	Toluene,
1125	0522a007.d	BCAL50	BCAL50	1	Toluene, BB(Surr),
1155	0522a008.d	BCAL100	BCAL100	1	NO MANUAL INTEGRATION
1224	0522a009.d	BCAL200	BCAL200	1	NO MANUAL INTEGRATION
1253	0522a010.d	ICV25	ICV25	1	NO MANUAL INTEGRATION

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 13:39
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-1.b/FID.m
Cal Date : 22-May-2013 16:19 lanih
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20130522-1.b/0522a011.d
Level 2: /chem3/pid1.i/20130522-1.b/0522a002.d
Level 3: /chem3/pid1.i/20130522-1.b/0522a003.d
Level 4: /chem3/pid1.i/20130522-1.b/0522a004.d
Level 5: /chem3/pid1.i/20130522-1.b/0522a005.d
Level 6: /chem3/pid1.i/20130522-1.b/0522a006.d
Level 7: /chem3/pid1.i/20130522-1.b/0522a007.d
Level 8: /chem3/pid1.i/20130522-1.b/0522a008.d
Level 9: /chem3/pid1.i/20130522-1.b/0522a009.d

Compound	0.000e+00 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	5.000 Level 5	25.000 Level 6	RRF	% RSD
	50.000 Level 7	100.000 Level 8	200.000 Level 9					
1 NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
2 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
3 AK101	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
4 8015GAS	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
5 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 13:39
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-1.b/FID.m
Cal Date : 22-May-2013 16:19 lanih
Curve Type : Average

Compound	0.000e+00 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	5.000 Level 5	25.000 Level 6	RRF	% RSD
	50.000 Level 7	100.000 Level 8	200.000 Level 9					
6 MTBE	+++++	856	1054	902	840	811		
	781	770	744				845	11.680
7 nC6	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
8 nC7	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
9 BENZENE	+++++	1540	1502	1560	1515	1464		
	1399	1370	1331				1460	5.764
11 nC8	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
12 Toluene	+++++	1480	1582	1694	1476	1414		
	1358	1315	1283				1450	9.565
13 nC9	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
14 ETHYLBENZENE	+++++	124	124	115	113	107		
	103	98.66000	96.17500				110	9.723
15 M/P-XYLENE	+++++	1384	1378	1288	1350	1266		
	1216	1168	1151				1275	7.170

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 13:39
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-1.b/FID.m
Cal Date : 22-May-2013 16:19 lanih
Curve Type : Average

Compound	0.000e+00 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	5.000 Level 5	25.000 Level 6	RRF	% RSD
	50.000 Level 7	100.000 Level 8	200.000 Level 9					
16 O-XYLENE	+++++	+++++	972	1265	1407	1326		
	1277	1226	1204				1239	10.946
17 nC10-Decane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
20 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
21 nc11	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
22 nC12-Dodecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
23 nC13	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
24 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
$ 10 TFT(Surr)	+++++	30.63636	30.95455	30.54545	29.88060	29.37000		
	28.75188	28.18539	28.40000				29.59053	3.634
$ 18 BB(Surr)	+++++	20.63636	20.13636	20.50000	19.88060	19.80000		
	19.51128	19.17978	19.32000				19.87055	2.668

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 13:39
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-1.b/FID.m
Cal Date : 22-May-2013 16:19 lanih
Curve Type : Average

Compound	0.000e+00 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	5.000 Level 5	25.000 Level 6	RRF	% RSD	
	50.000 Level 7	100.000 Level 8	200.000 Level 9						
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 13:39
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-1.b/FID.m
Cal Date : 22-May-2013 16:19 lanih
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 9.57176
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 12:24
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-2.b/PIDB.m
Cal Date : 22-May-2013 15:25 lanih
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20130522-2.b/0522a002.d
Level 2: /chem3/pid1.i/20130522-2.b/0522a003.d
Level 3: /chem3/pid1.i/20130522-2.b/0522a004.d
Level 4: /chem3/pid1.i/20130522-2.b/0522a005.d
Level 5: /chem3/pid1.i/20130522-2.b/0522a006.d
Level 6: /chem3/pid1.i/20130522-2.b/0522a007.d
Level 7: /chem3/pid1.i/20130522-2.b/0522a008.d
Level 8: /chem3/pid1.i/20130522-2.b/0522a009.d

Compound	0.25000 Level 1	0.50000 Level 2	1.000 Level 3	5.000 Level 4	25.000 Level 5	50.000 Level 6	RRF	% RSD
	100.000 Level 7	200.000 Level 8						
1 MTBE	96.00000	76.00000	73.00000	88.80000	92.28000	90.78000		
	91.10000	89.51500					87.18438	9.361
2 Benzene	184	228	222	232	236	233		
	233	231					225	7.569
4 Toluene	176	178	195	204	210	206		
	207	209					198	6.985
5 Ethylbenzene	132	130	163	173	179	177		
	176	176					163	12.557
6 M/P-Xylene	156	167	172	185	191	189		
	188	191					180	7.306
7 O-Xylene	96.00000	122	143	149	157	156		
	155	159					142	15.542

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 12:24
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-2.b/PIDB.m
Cal Date : 22-May-2013 15:25 lanih
Curve Type : Average

Compound	0.25000 Level 1	0.50000 Level 2	1.000 Level 3	5.000 Level 4	25.000 Level 5	50.000 Level 6	RRF	% RSD
	100.000 Level 7	200.000 Level 8						
$ 3 TFT(Surr)	31.81818	32.40909	32.47727	32.23881	32.41000	32.24812		
	32.00562	32.27000					32.23464	0.691
$ 8 BB(Surr)	68.18182	69.86364	72.43182	71.70149	73.47000	73.45113		
	73.66854	75.61500					72.29793	3.258

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 12:24
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-2.b/PIDB.m
Cal Date : 22-May-2013 15:25 lanih
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 7.90855
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

XAH 5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a002.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a002.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL0.25
Client ID: BCAL0.25
Injection Date: 22-MAY-2013 09:02
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.000	337	4257	11.4	TFT(Surr)
15.383	0.000	227	1854	11.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.78 to 17.90)	358114	1959	0.005 M
8015C 2MP-TMB	(4.18 to 16.21)	723723	2559	0.004 M
AK101 nC6-nC10	(4.68 to 15.11)	582885	2345	0.004 M
NWTPHG Tol-Nap	(9.78 to 18.90)	375093	1959	0.005 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	350	10.9	TFT(Surr)
15.390	-0.001	750	10.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.017	-0.005	46	0.20N	Benzene
9.883	-0.001	44	0.22N	Toluene
12.773	-0.005	33	0.20N	Ethylbenzene
12.933	-0.010	78	0.43N	M/P-Xylene
13.883	-0.005	24	0.17N	O-Xylene
4.550	0.005	24	0.28N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a002.d
Lab Smp Id: BCAL0.25 Client Smp ID: BCAL0.25
Inj Date : 22-MAY-2013 09:02
Operator : LH Inst ID: pid1.i
Smp Info : BCAL0.25
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 09:02 Cal File: 0522a002.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
6	MTBE	4.530	4.538	-0.008	214	0.25000	0.253 (M)
9	BENZENE	7.007	7.014	-0.007	385	0.25000	0.264 (M)
$ 10	TFT(Surr)	7.849	7.848	0.001	337	11.0000	11.39
12	Toluene	9.877	9.877	0.000	370	0.25000	0.255 (M)
14	ETHYLBENZENE	12.763	12.770	-0.007	31	0.25000	0.282 (M)
15	M/P-XYLENE	12.927	12.935	-0.008	692	0.50000	0.543 (M)
16	O-XYLENE	13.863	13.879	-0.016	547	0.25000	0.403 (M)
$ 18	BB(Surr)	15.383	15.383	0.000	227	11.0000	11.42 (M)

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem3/pid1.i/20130522-1.b/0522a002.d

Date : 22-MAY-2013 09:02

Client ID: BCAL0.25

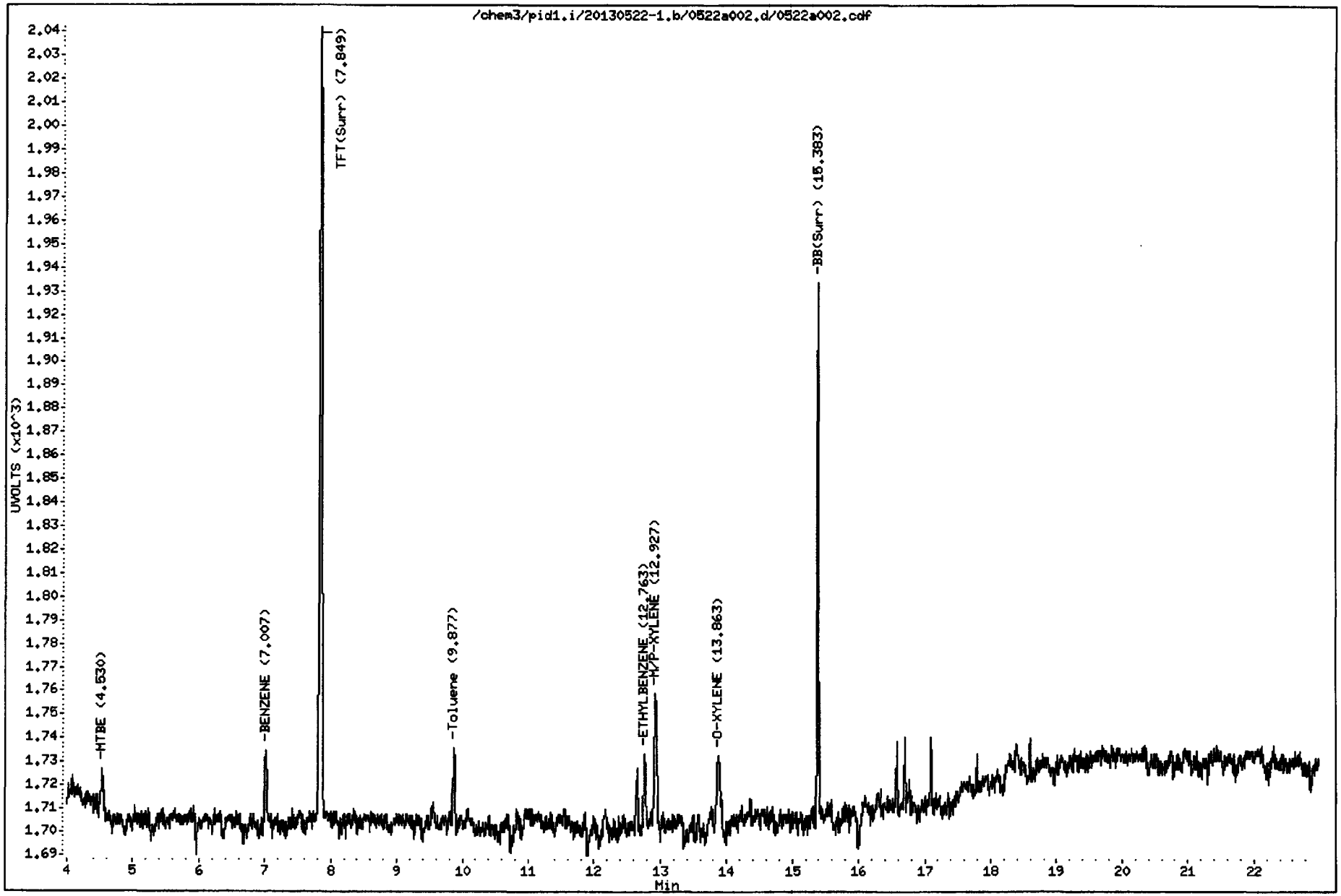
Sample Info: BCAL0.25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a002.d

Date : 22-MAY-2013 09:02

Client ID: BCAL0.25

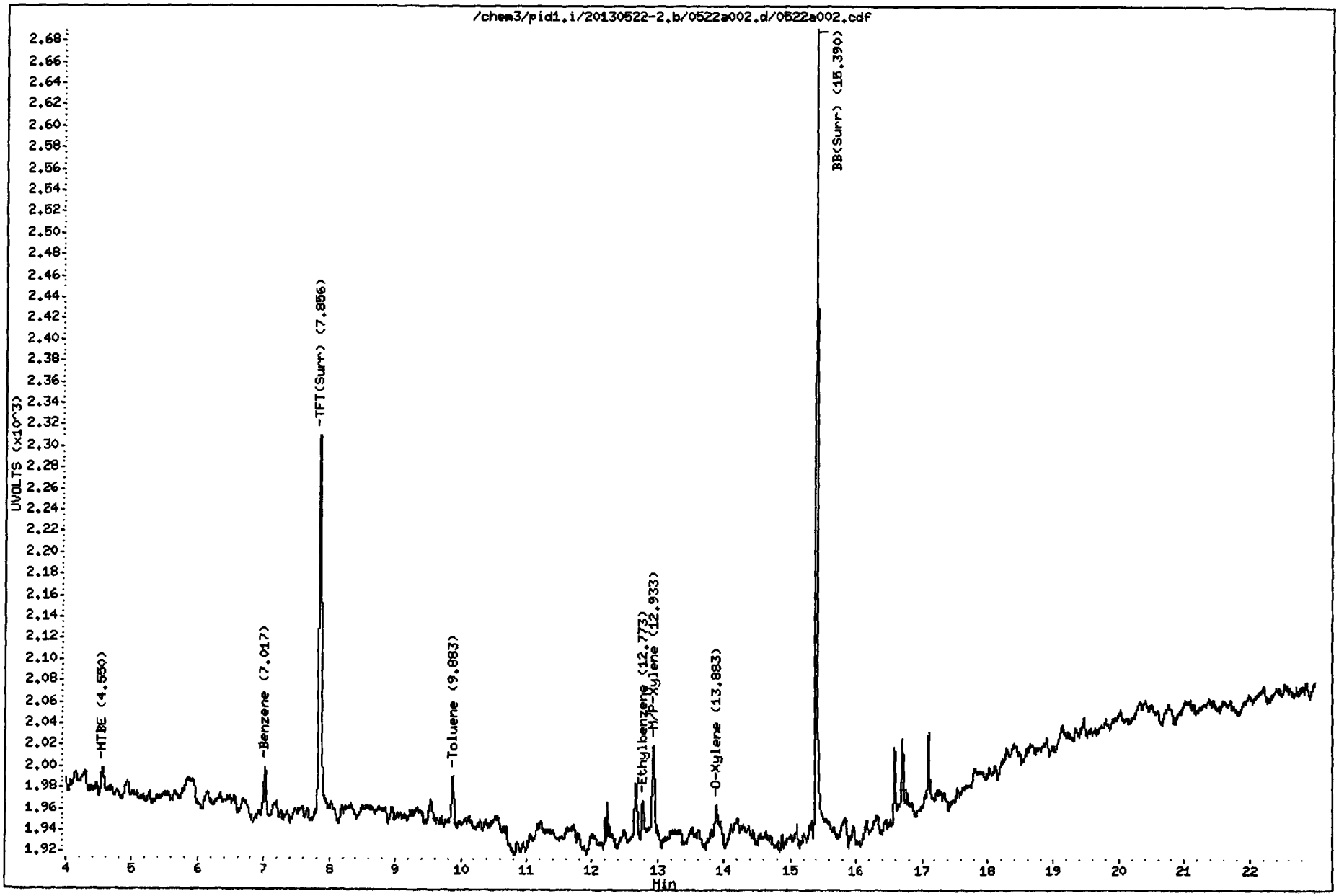
Sample Info: BCAL0.25

Column phase: RTX 502-2 PID

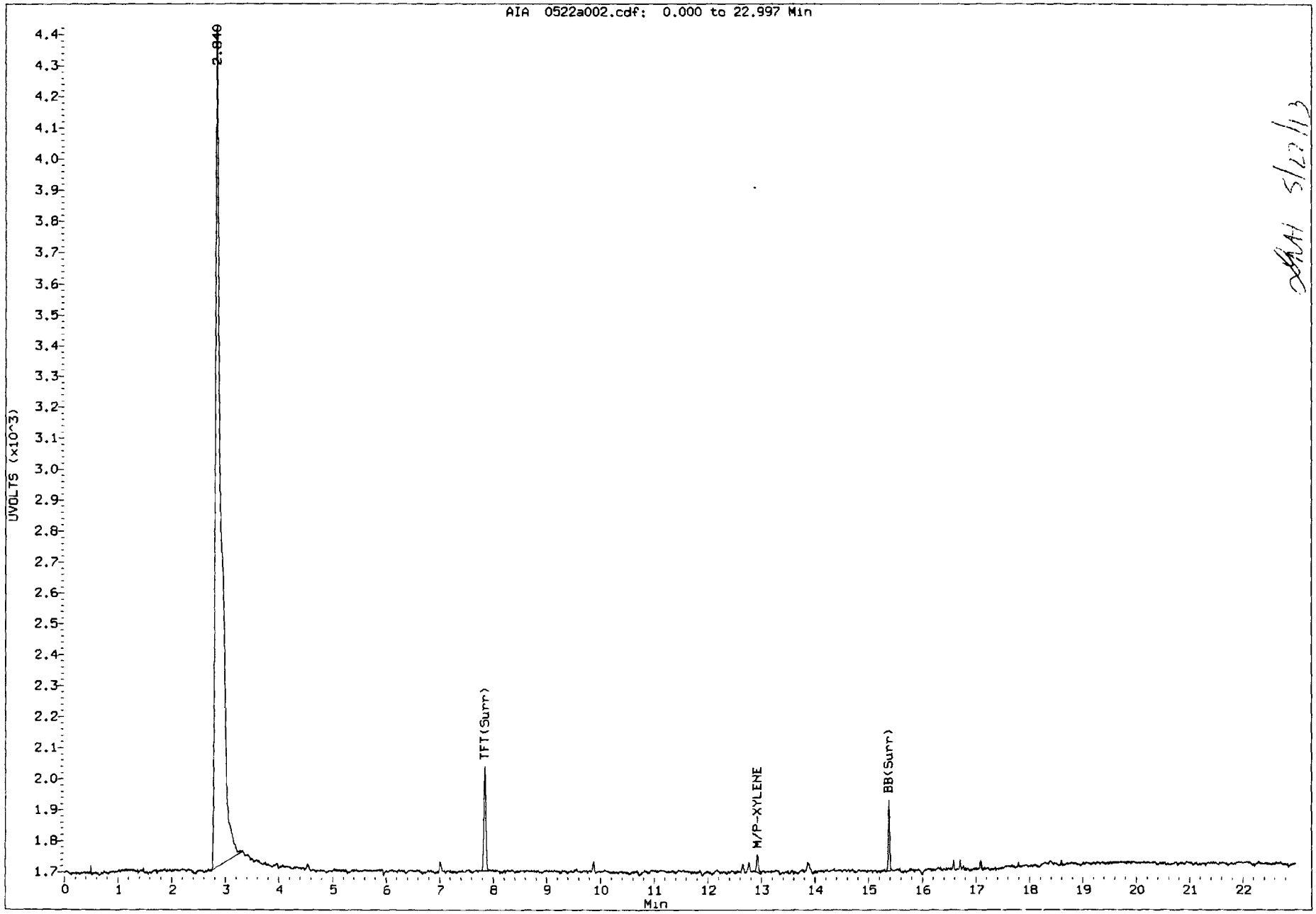
Instrument: pid1.i

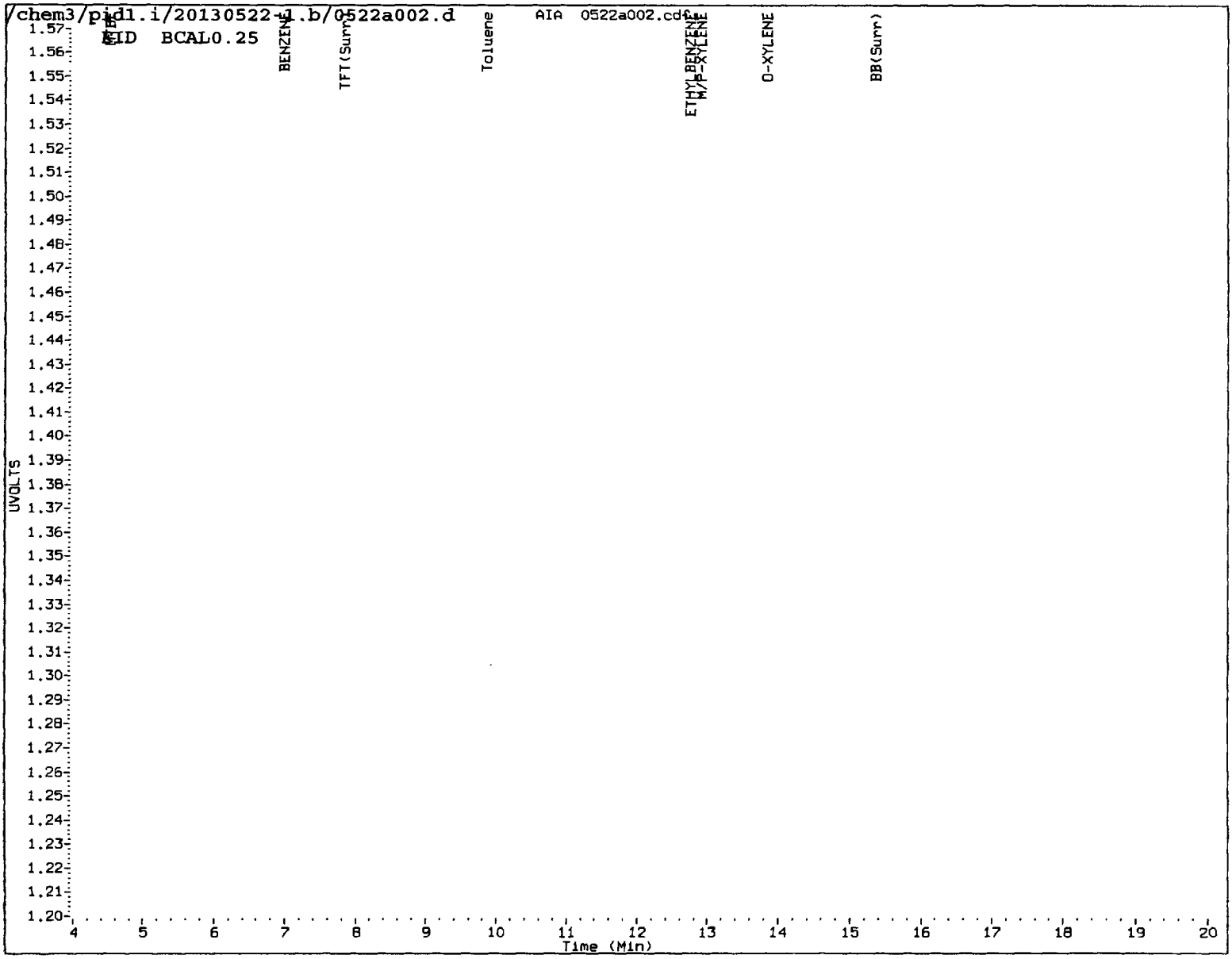
Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-1.b/0522a002.d/0522a002.cdf
Injection Date: 22-MAY-2013 09:02
Instrument: pid1.i
Client Sample ID: BCAL0.25





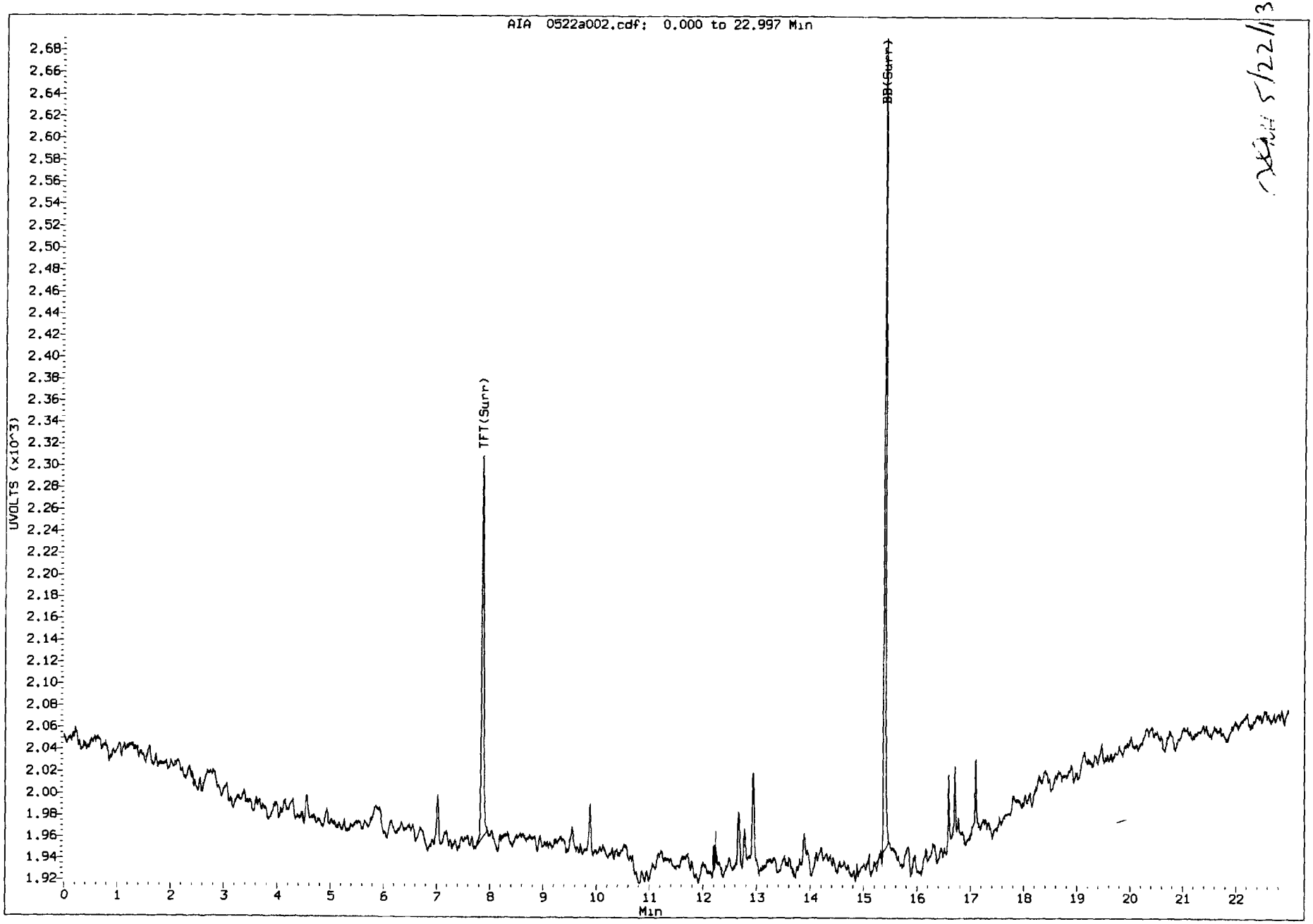
MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

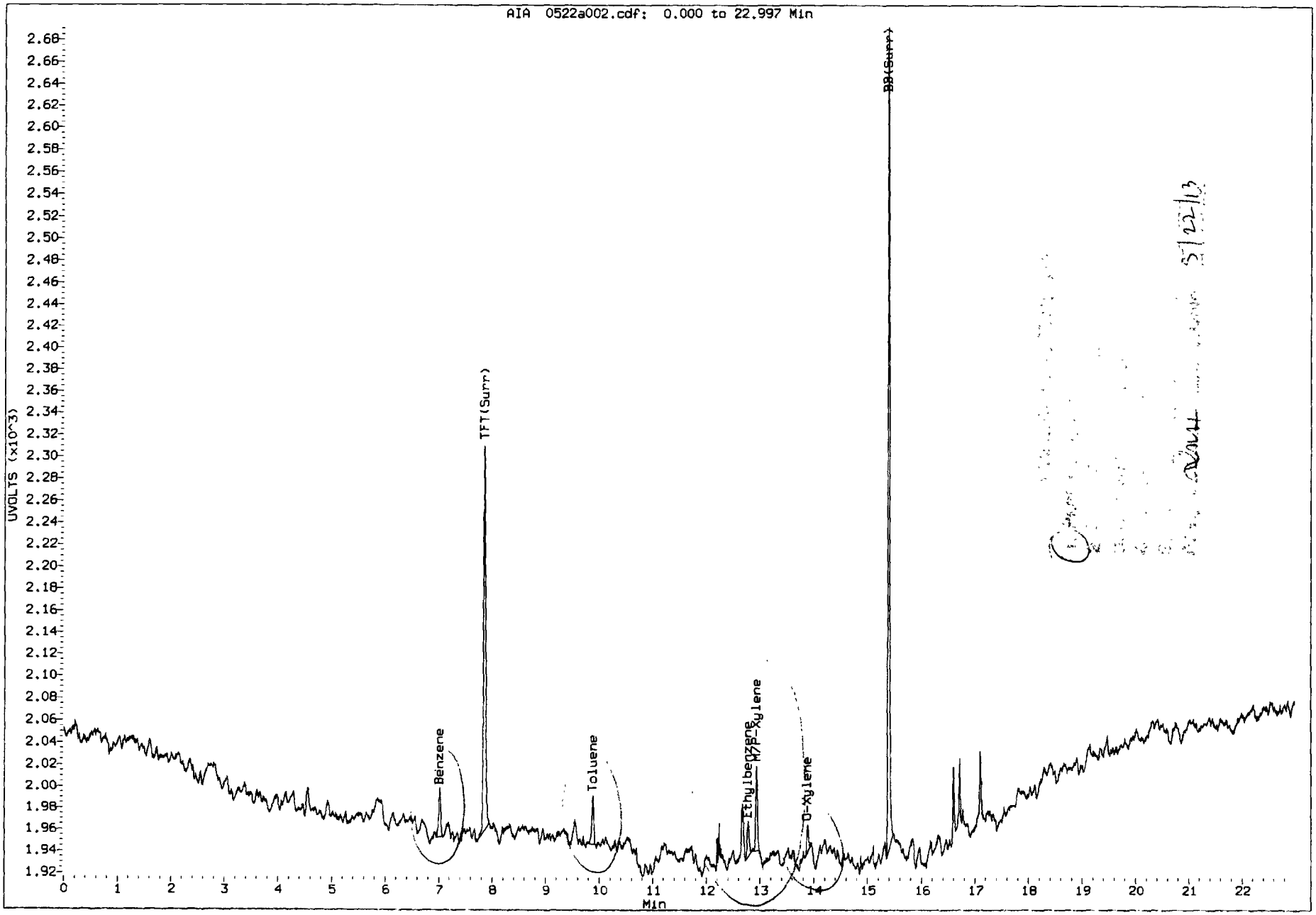
5. Other _____

Analyst: [signature] **Date:** 5/22/13

Data File: /chem3/pid1.i/20130522-2.b/0522a002.d/0522a002.cdf
Injection Date: 22-MAY-2013 09:02
Instrument: pid1.i
Client Sample ID: BCAL0.25



Data File: /chem3/pid1.i/20130522-2.b/0522a002.d/0522a002.cdf
Injection Date: 22-MAY-2013 09:02
Instrument: pid1.i
Client Sample ID: BCAL0.25



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a003.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a003.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL0.5
Client ID: BCAL0.5
Injection Date: 22-MAY-2013 09:30
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	681	8701	23.0	TFT(Surr)
15.382	0.000	443	3756	22.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.78 to 17.90)	358114	4249	0.012 M
8015C 2MP-TMB	(4.18 to 16.21)	723723	5527	0.008 M
AK101 nC6-nC10	(4.68 to 15.11)	582885	4999	0.009 M
NWTPHG Tol-Nap	(9.78 to 18.90)	375093	4249	0.011 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	713	22.1	TFT(Surr)
15.390	-0.001	1537	21.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	-0.001	114	0.51N	Benzene
9.883	-0.001	89	0.45N	Toluene
12.773	-0.005	65	0.40N	Ethylbenzene
12.937	-0.007	167	0.93N	M/P-Xylene
13.883	-0.005	61	0.43N	O-Xylene
4.550	0.005	38	0.44N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a003.d
Lab Smp Id: BCAL0.5 Client Smp ID: BCAL0.5
Inj Date : 22-MAY-2013 09:30
Operator : LH Inst ID: pid1.i
Smp Info : BCAL0.5
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 09:30 Cal File: 0522a003.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
6	MTBE	4.540	4.540	0.000	527	0.50000	0.624
9	BENZENE	7.015	7.015	0.000	751	0.50000	0.514
$ 10	TFT(Surr)	7.848	7.848	0.000	681	22.0000	23.01
12	Toluene	9.875	9.875	0.000	791	0.50000	0.545
14	ETHYLBENZENE	12.766	12.766	0.000	62	0.50000	0.563
15	M/P-XYLENE	12.929	12.929	0.000	1378	1.00000	1.08
16	O-XYLENE	13.873	13.873	0.000	486	0.50000	0.358(M)
$ 18	BB(Surr)	15.382	15.382	0.000	443	22.0000	22.29

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem3/pid1.i/20130522-1.b/0522a003.d

Date : 22-MAY-2013 09:30

Client ID: BCAL0.5

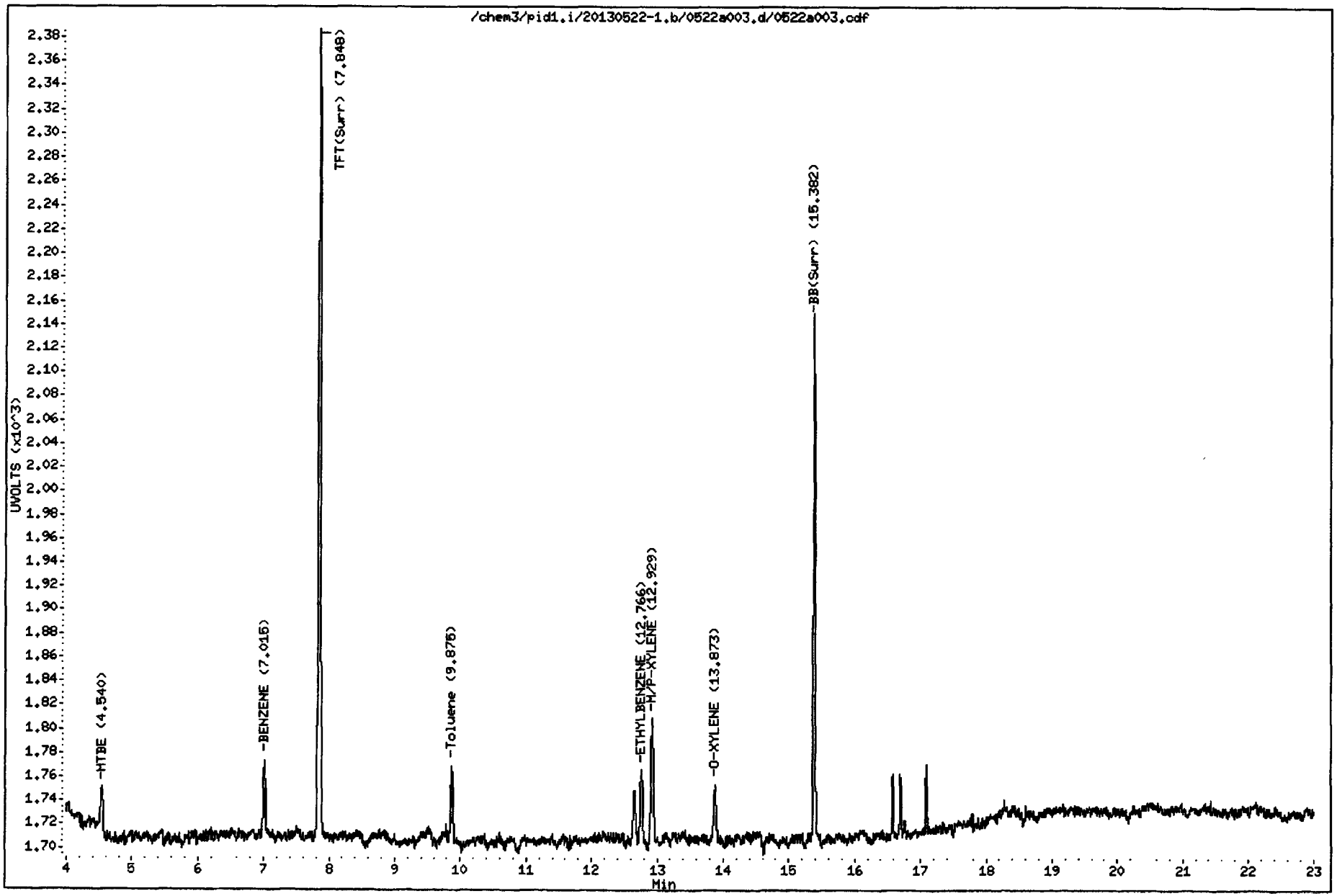
Sample Info: BCAL0.5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a003.d

Date : 22-MAY-2013 09:30

Client ID: BCAL0.5

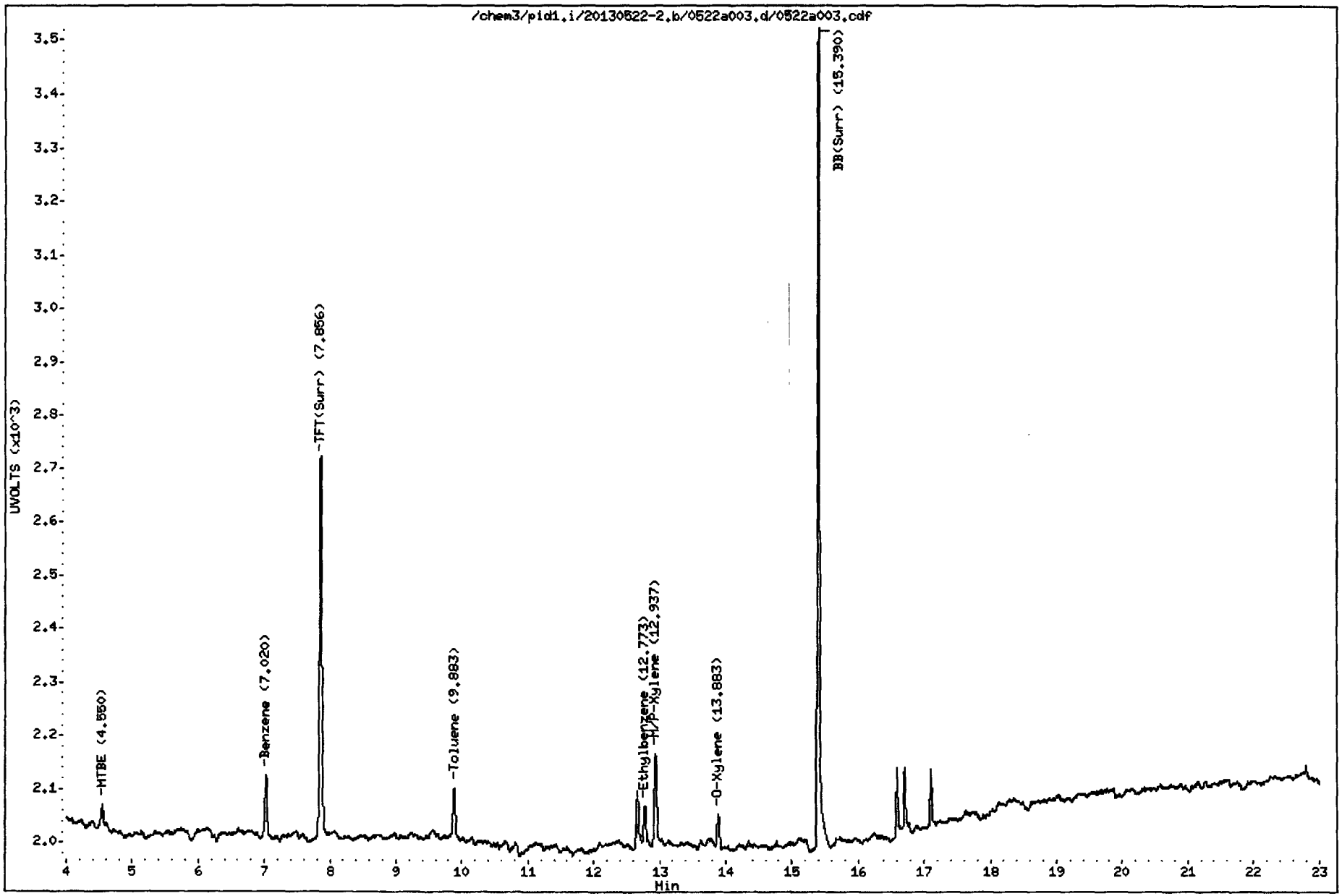
Sample Info: BCAL0.5

Column phase: RTX 502-2 PID

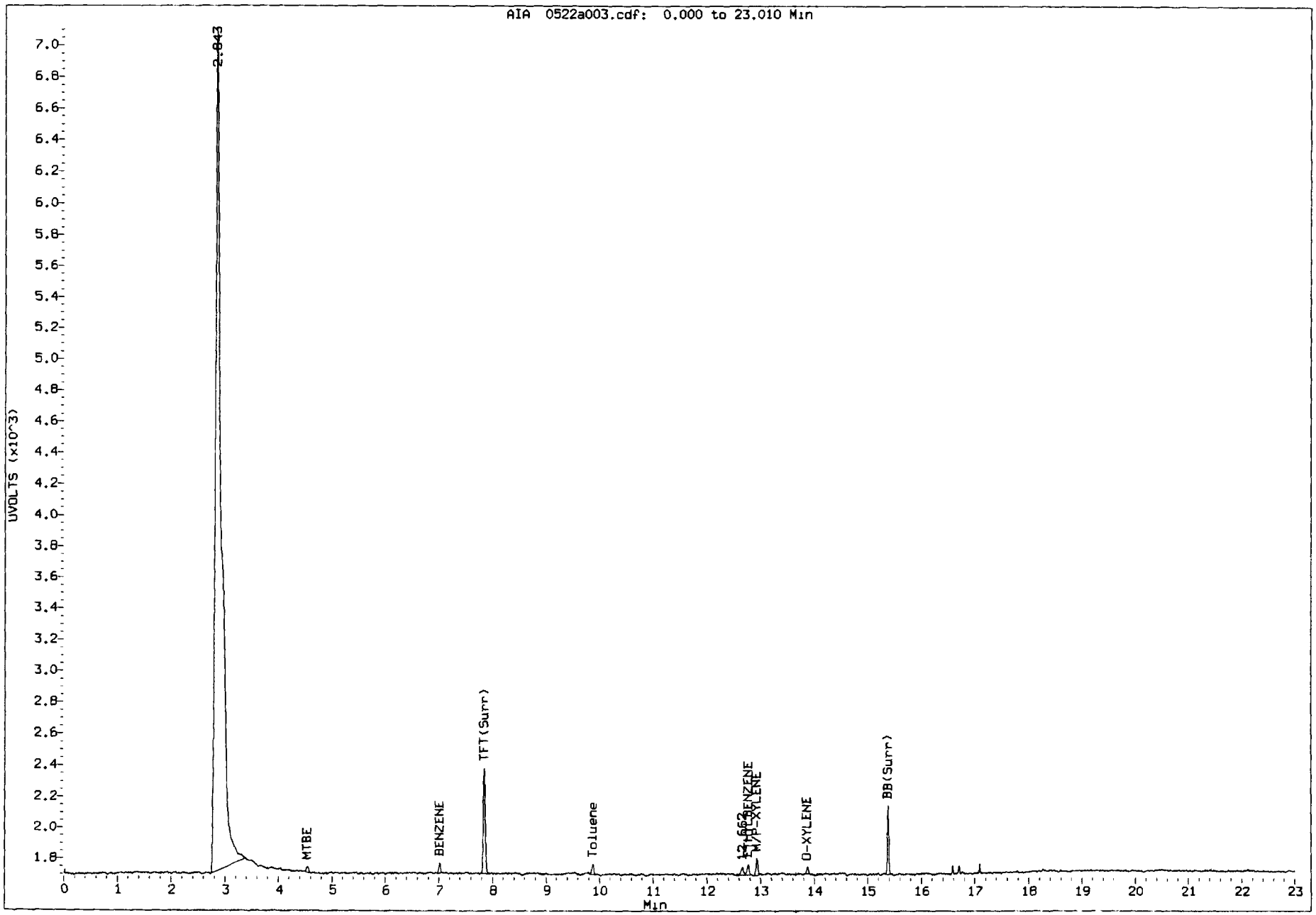
Instrument: pid1.i

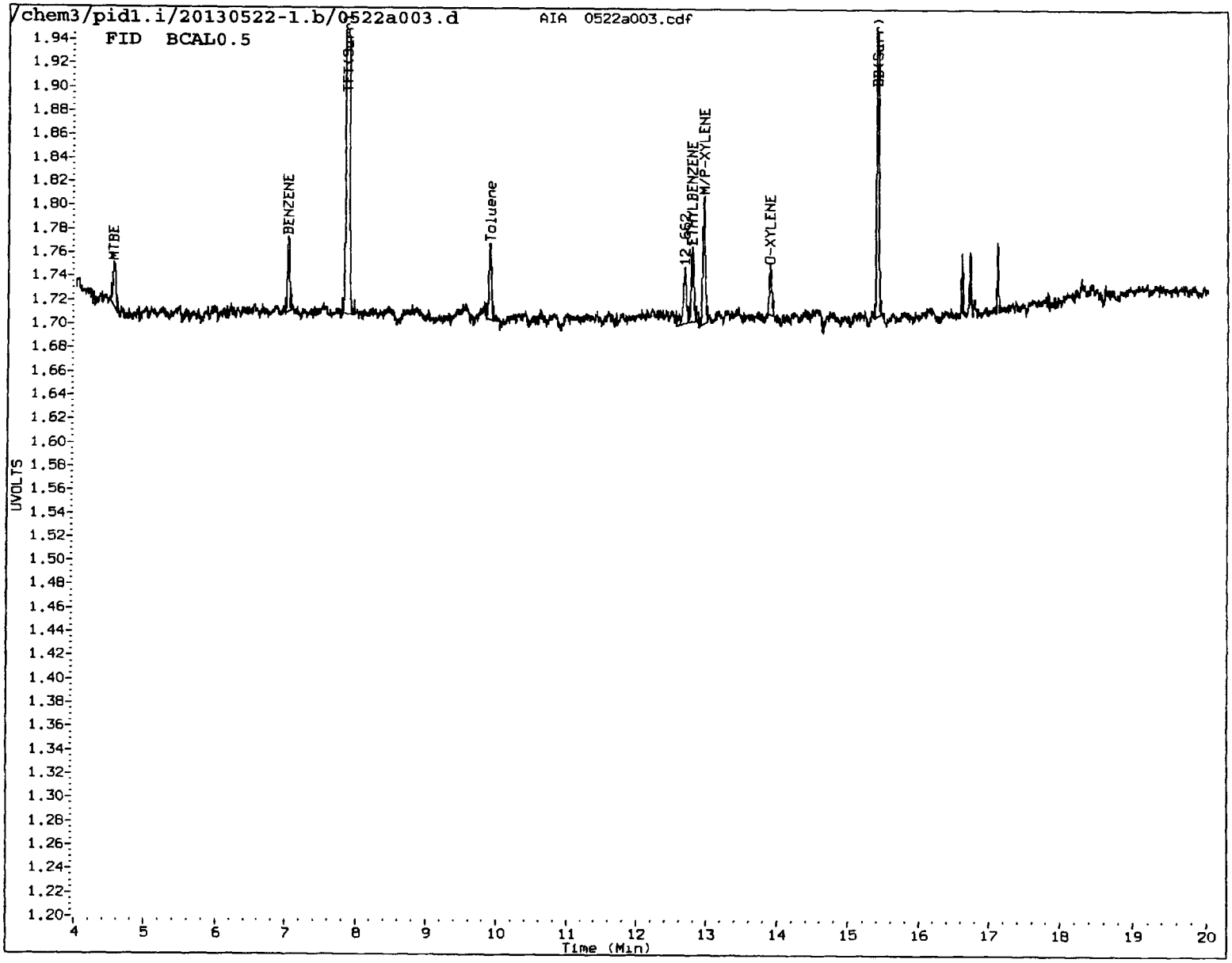
Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-1.b/0522a003.d/0522a003.cdf
Injection Date: 22-MAY-2013 09:30
Instrument: pid1.i
Client Sample ID: BCAL0.5





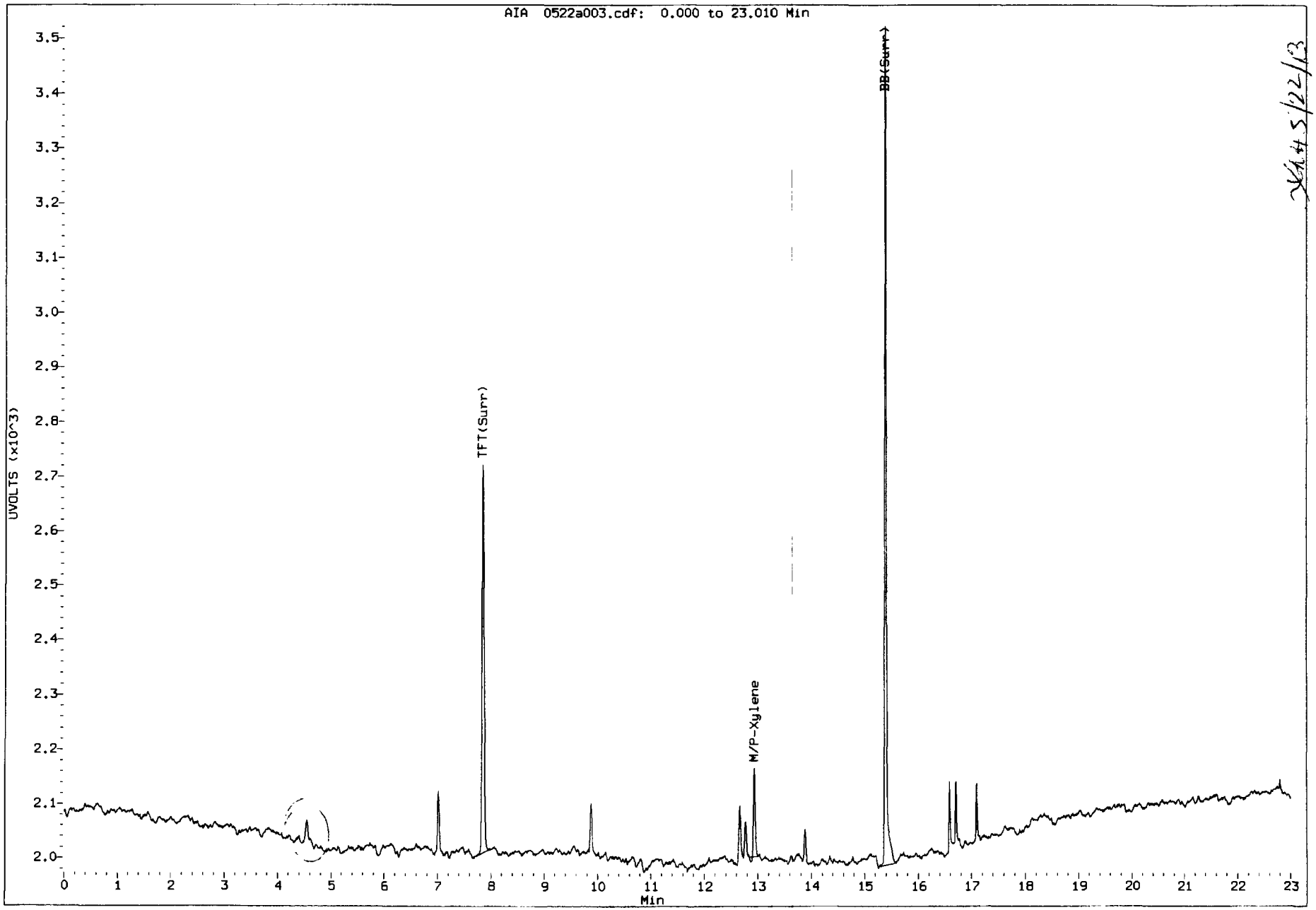
MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

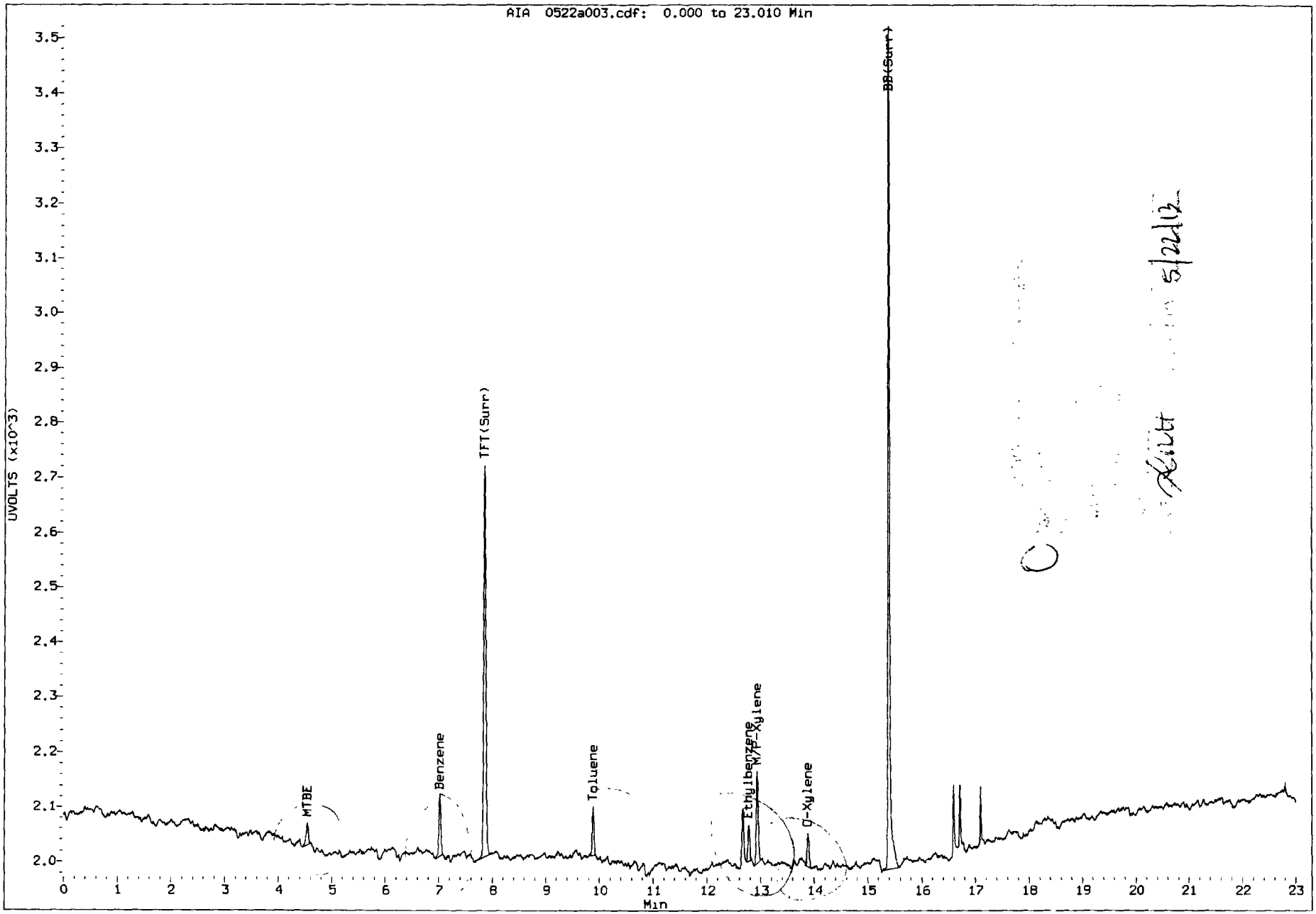
Analyst: _____ Date: 5/22/13

Data File: /chem3/pid1.i/20130522-2.b/0522a003.d/0522a003.cdf
Injection Date: 22-MAY-2013 09:30
Instrument: pid1.i
Client Sample ID: BCAL0.5



5/22/13

Data File: /chem3/pid1.i/20130522-2.b/0522a003.d/0522a003.cdf
Injection Date: 22-MAY-2013 09:30
Instrument: pid1.i
Client Sample ID: BCAL0.5



2nd: 5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a004.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a004.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL1
Client ID: BCAL1
Injection Date: 22-MAY-2013 09:58
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	1344	17101	45.4	TFT(Surr)
15.383	0.000	902	7548	45.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	10157	0.028 M
8015C 2MP-TMB	(4.18 to 16.21)	723723	10606	0.015 M
AK101 nC6-nC10	(4.68 to 15.11)	582885	9703	0.017 M
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	10157	0.027 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	1429	44.3	TFT(Surr)
15.390	-0.001	3187	44.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	-0.001	222	0.99N	Benzene
9.883	-0.001	195	0.98N	Toluene
12.773	-0.006	163	1.00	Ethylbenzene
12.934	-0.009	345	1.92	M/P-Xylene
13.883	-0.005	143	1.01N	O-Xylene
4.543	-0.002	73	0.84N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a004.d
Lab Smp Id: BCAL1 Client Smp ID: BCAL1
Inj Date : 22-MAY-2013 09:58
Operator : LH Inst ID: pid1.i
Smp Info : BCAL1
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 09:58 Cal File: 0522a004.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	6 MTBE	4.538	4.538	0.000	902	1.00000	1.07
	9 BENZENE	7.010	7.010	0.000	1560	1.00000	1.07(M)
$	10 TFT(Surr)	7.848	7.848	0.000	1344	44.0000	45.42
	12 Toluene	9.873	9.873	0.000	1694	1.00000	1.17(M)
	14 ETHYLBENZENE	12.766	12.766	0.000	115	1.00000	1.04
	15 M/P-XYLENE	12.924	12.924	0.000	2576	2.00000	2.02
	16 O-XYLENE	13.873	13.873	0.000	1265	1.00000	0.932(M)
$	18 BB(Surr)	15.383	15.383	0.000	902	44.0000	45.39(M)
	21 nc11	16.702	16.702	0.000	106	1.00000	

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem3/pid1.i/20130522-1.b/0522a004.d

Date : 22-MAY-2013 09:58

Client ID: BCAL1

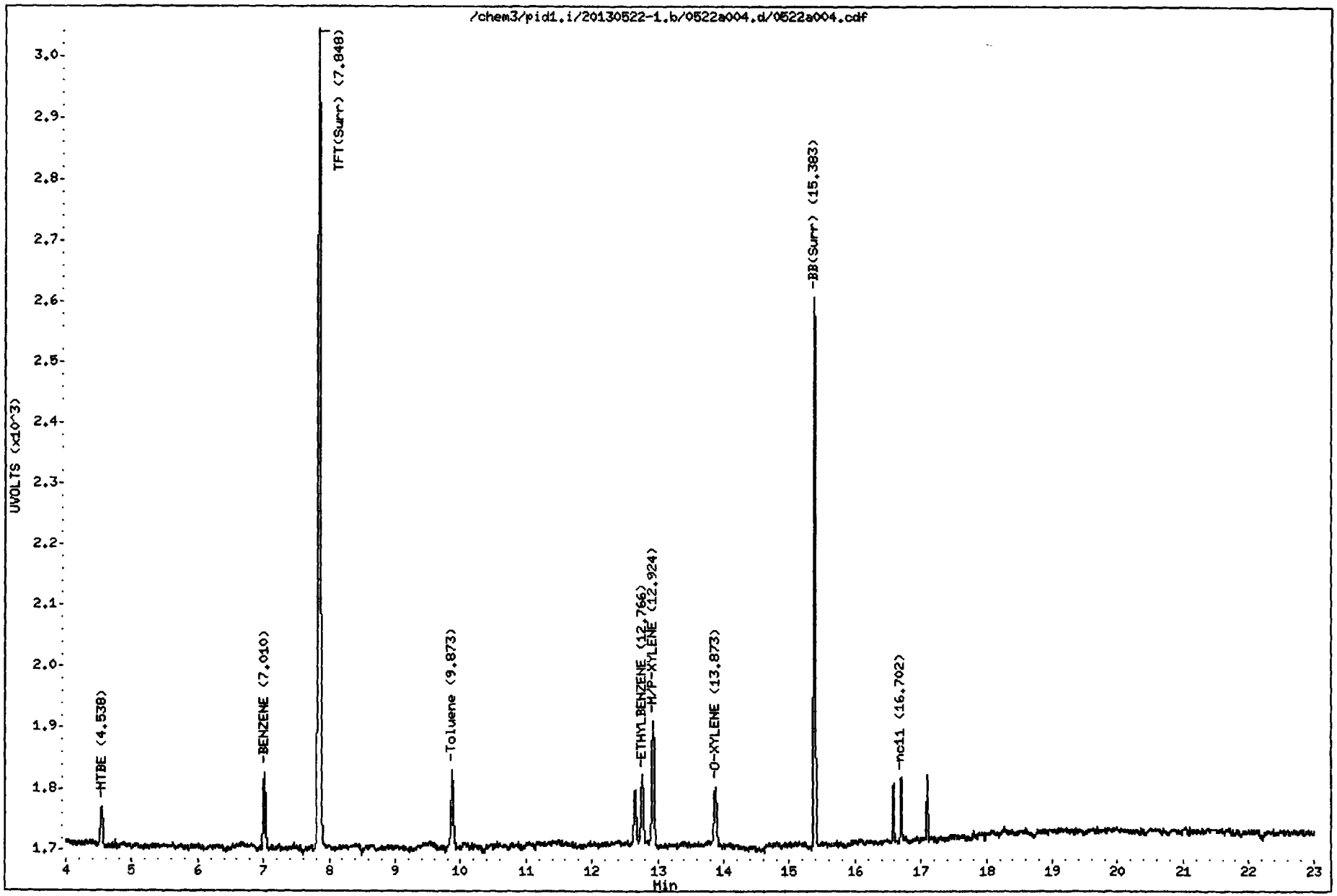
Sample Info: BCAL1

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a004.d

Date : 22-MAY-2013 09:58

Client ID: BCAL1

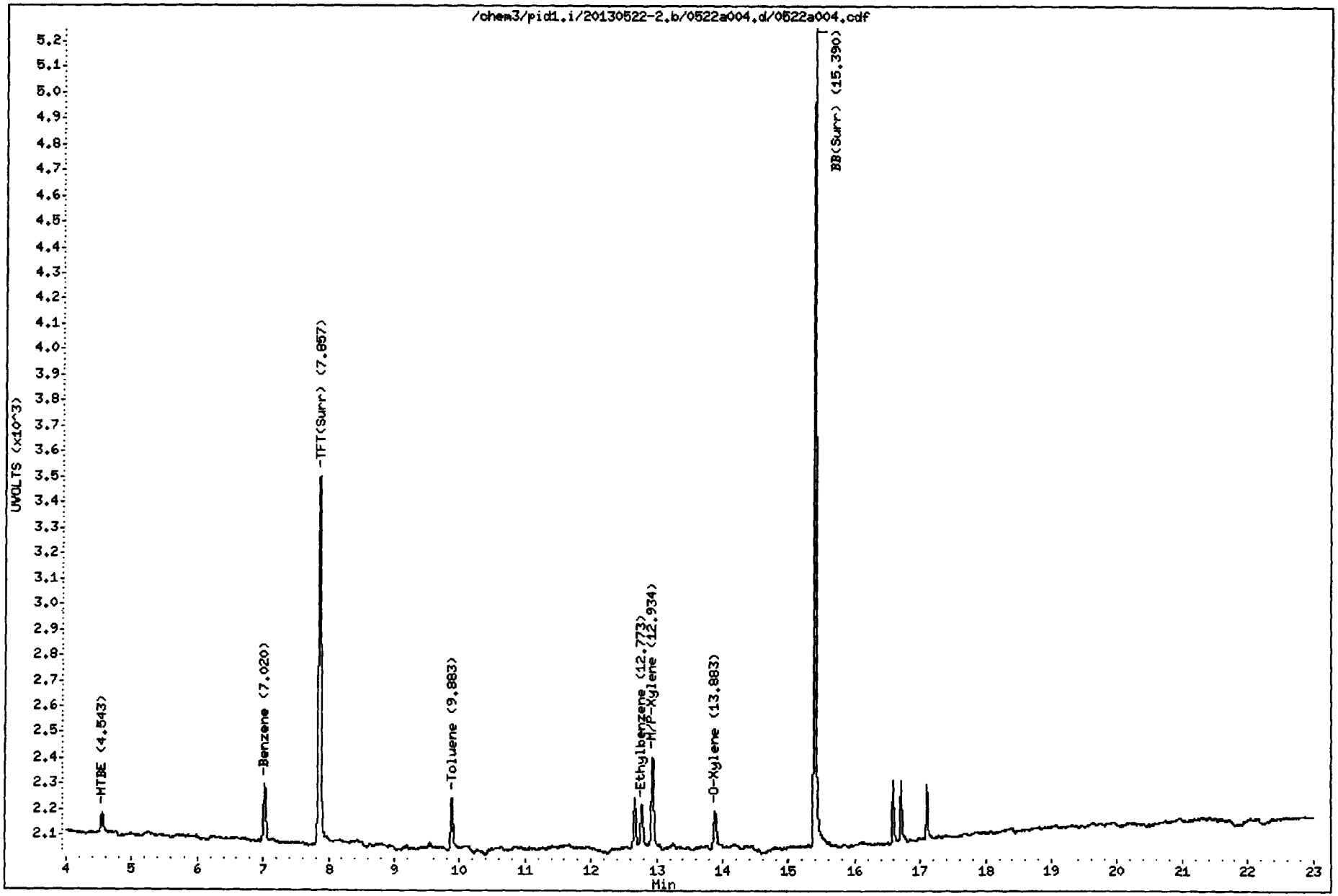
Sample Info: BCAL1

Column phase: RTX 502-2 PID

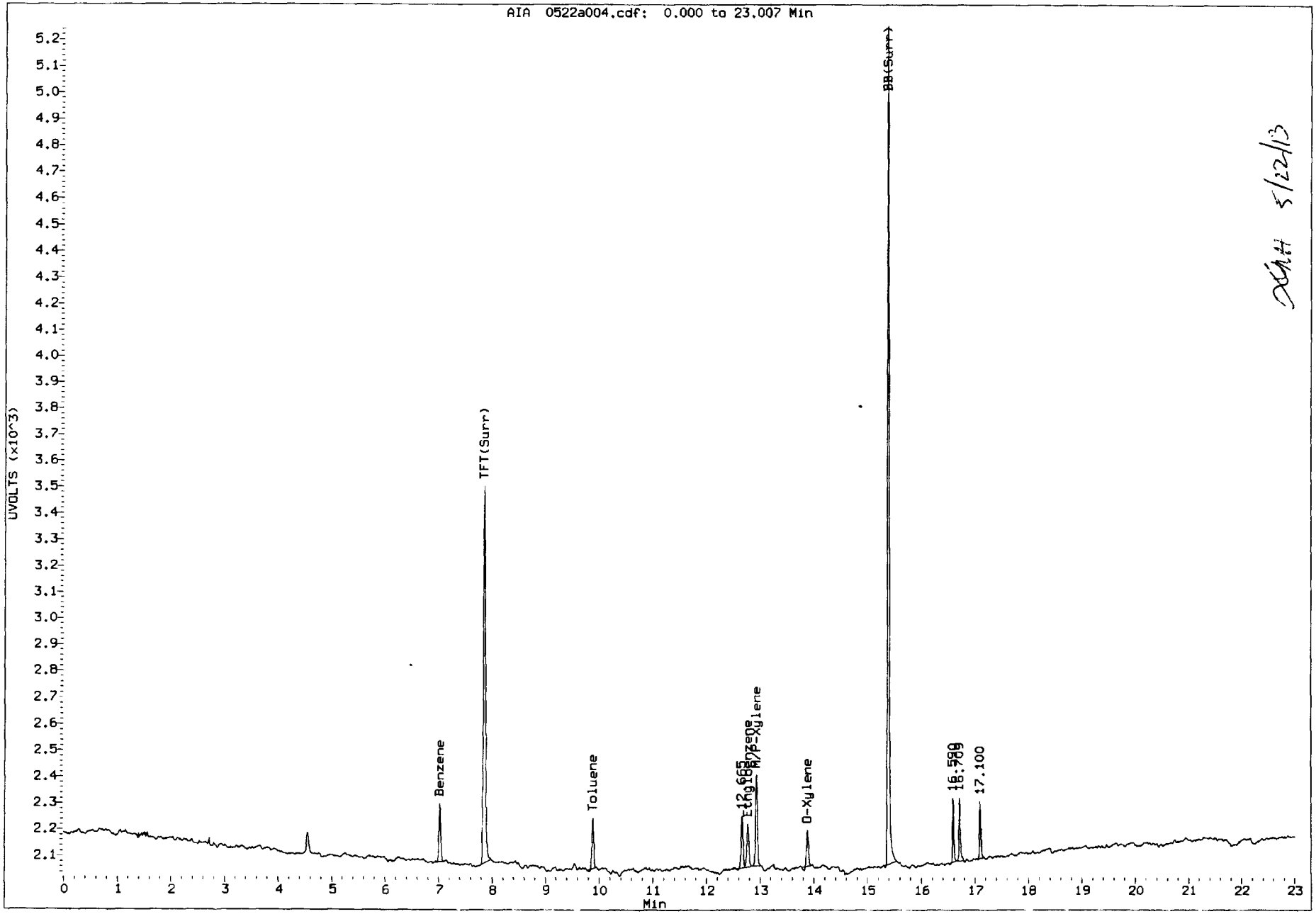
Instrument: pid1.i

Operator: LH

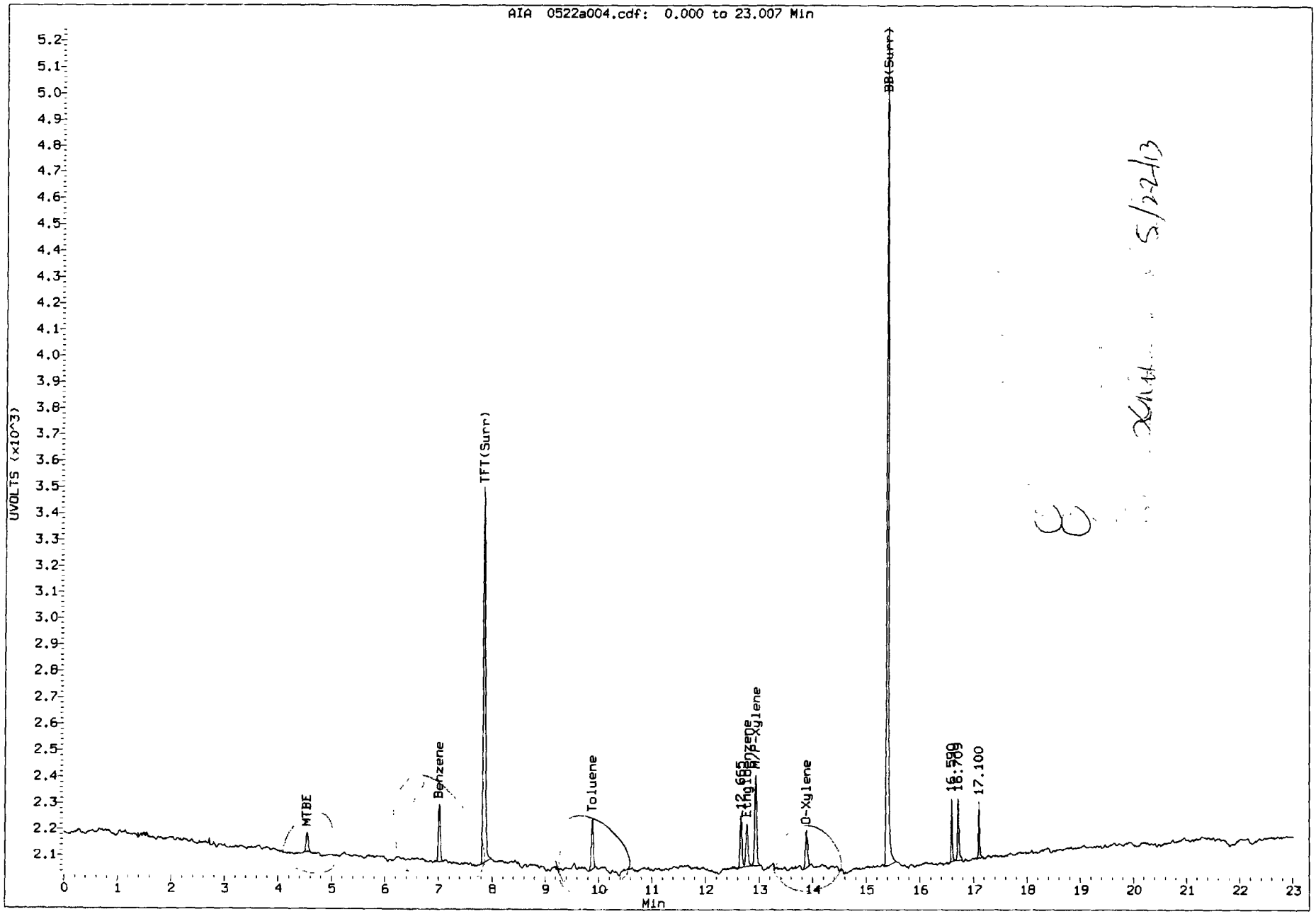
Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a004.d/0522a004.cdf
Injection Date: 22-MAY-2013 09:58
Instrument: pid1.i
Client Sample ID: BCAL1

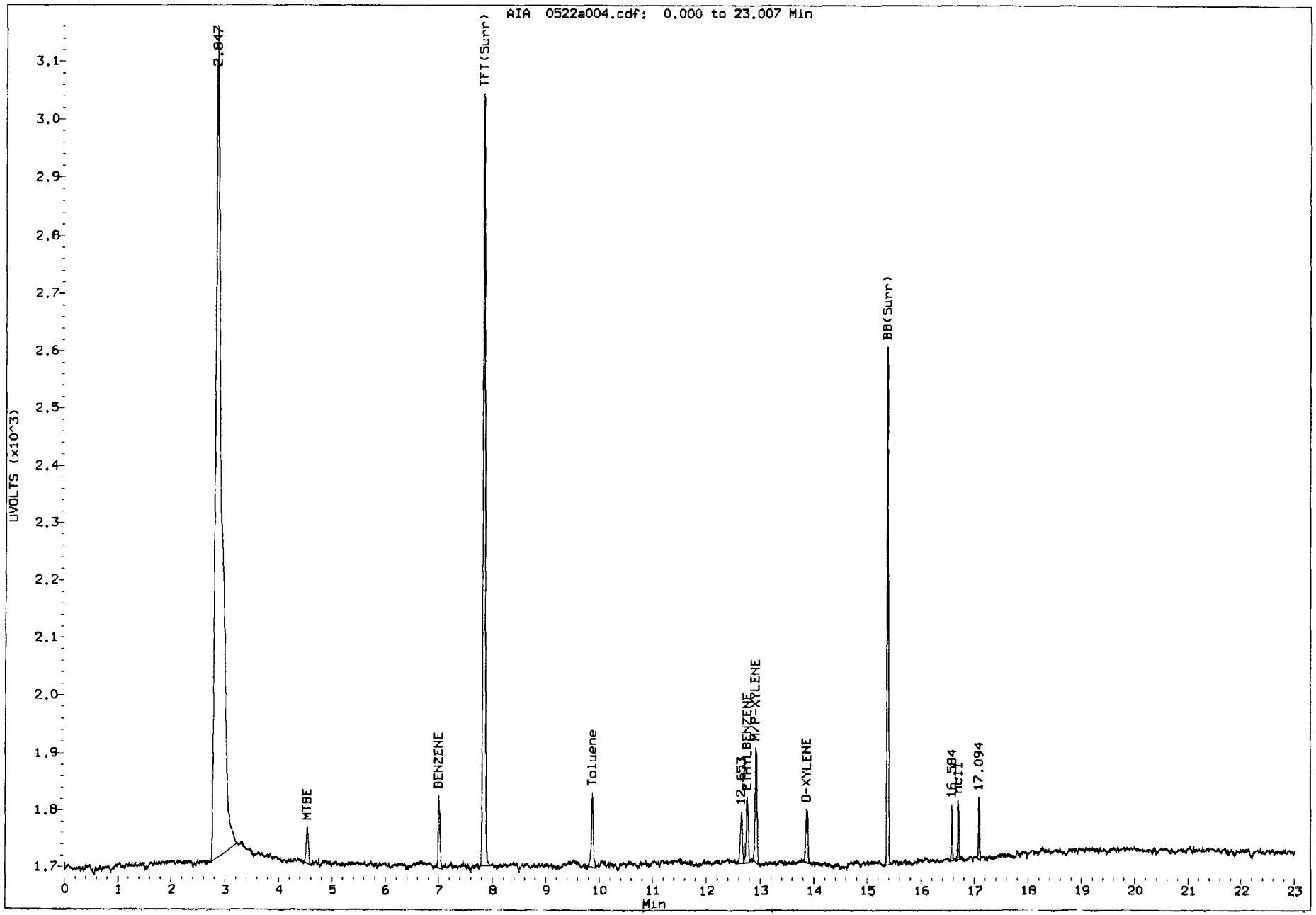


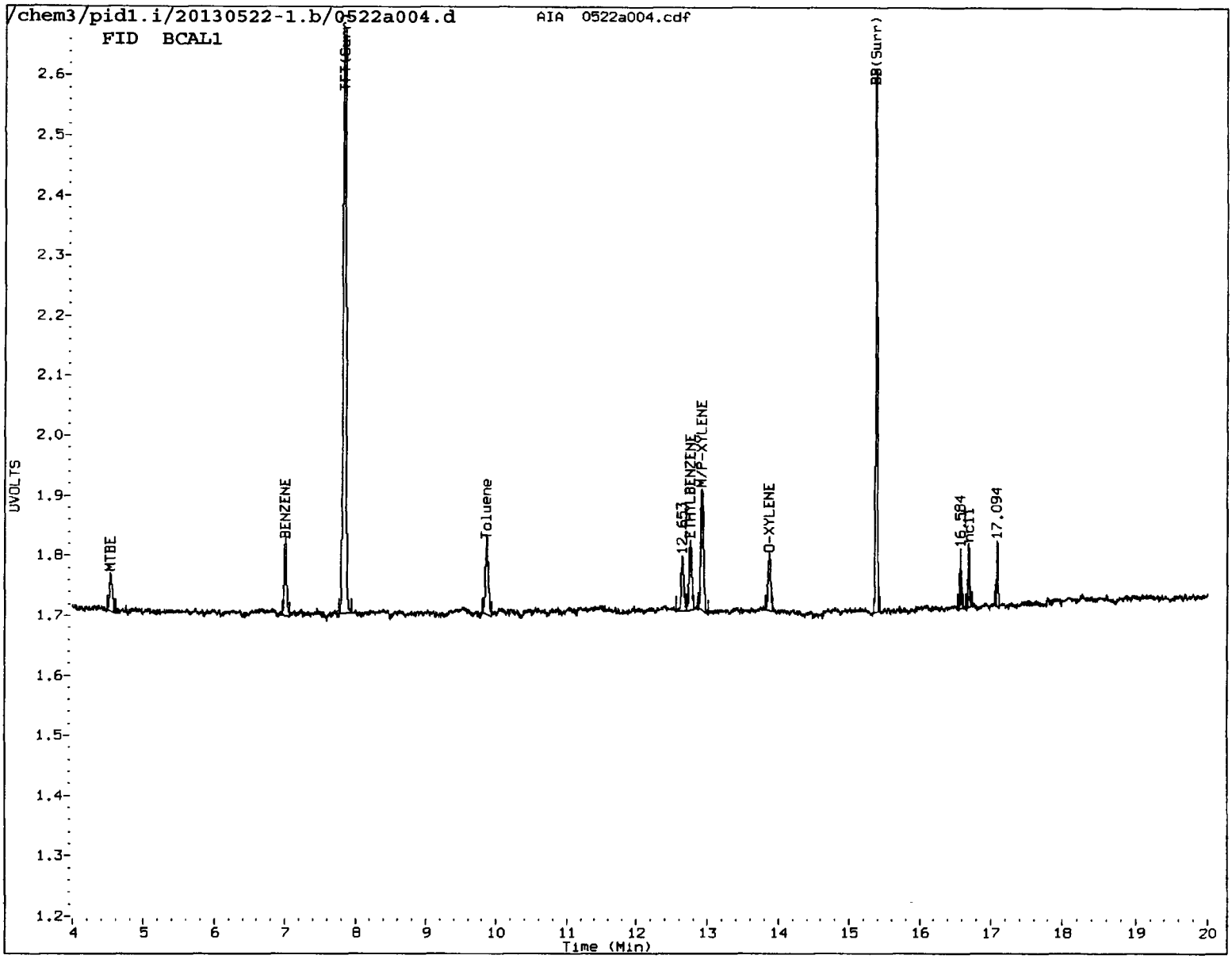
Data File: /chem3/pid1.i/20130522-2.b/0522a004.d/0522a004.cdf
Injection Date: 22-MAY-2013 09:58
Instrument: pid1.i
Client Sample ID: BCAL1



5/22/13

Data File: /chem3/pid1.i/20130522-1.b/0522a004.d/0522a004.cdf
Injection Date: 22-MAY-2013 09:58
Instrument: pid1.i
Client Sample ID: BCAL1





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a005.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a005.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL5
Client ID: BCAL5
Injection Date: 22-MAY-2013 10:27
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	2002	25277	67.7	TFT(Surr)
15.382	0.000	1332	11311	67.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	49856	0.139
8015C 2MP-TMB	(4.18 to 16.21)	723723	51726	0.071
AK101 nC6-nC10	(4.68 to 15.11)	582885	47527	0.082
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	49856	0.133

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	2160	67.0	TFT(Surr)
15.390	-0.001	4804	66.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	-0.001	1158	5.15N	Benzene
9.883	-0.001	1018	5.14N	Toluene
12.774	-0.004	864	5.29	Ethylbenzene
12.935	-0.009	1851	10.29	M/P-Xylene
13.883	-0.005	747	5.26N	O-Xylene
4.547	0.002	444	5.09N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a005.d
Lab Smp Id: BCAL5 Client Smp ID: BCAL5
Inj Date : 22-MAY-2013 10:27
Operator : LH Inst ID: pid1.i
Smp Info : BCAL5
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 10:27 Cal File: 0522a005.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
6	MTBE	4.539	4.539	0.000	4199	5.00000	4.97
9	BENZENE	7.012	7.012	0.000	7573	5.00000	5.19
$ 10	TFT(Surr)	7.848	7.848	0.000	2002	67.0000	67.66
12	Toluene	9.873	9.873	0.000	7382	5.00000	5.09
14	ETHYLBENZENE	12.764	12.764	0.000	564	5.00000	5.12
15	M/P-XYLENE	12.925	12.925	0.000	13495	10.0000	10.58
16	O-XYLENE	13.874	13.874	0.000	7033	5.00000	5.18
$ 18	BB(Surr)	15.382	15.382	0.000	1332	67.0000	67.03
21	nc11	16.701	16.701	0.000	533	5.00000	

Data File: /chem3/pid1.i/20130522-1.b/0522a005.d

Date : 22-MAY-2013 10:27

Client ID: BCAL5

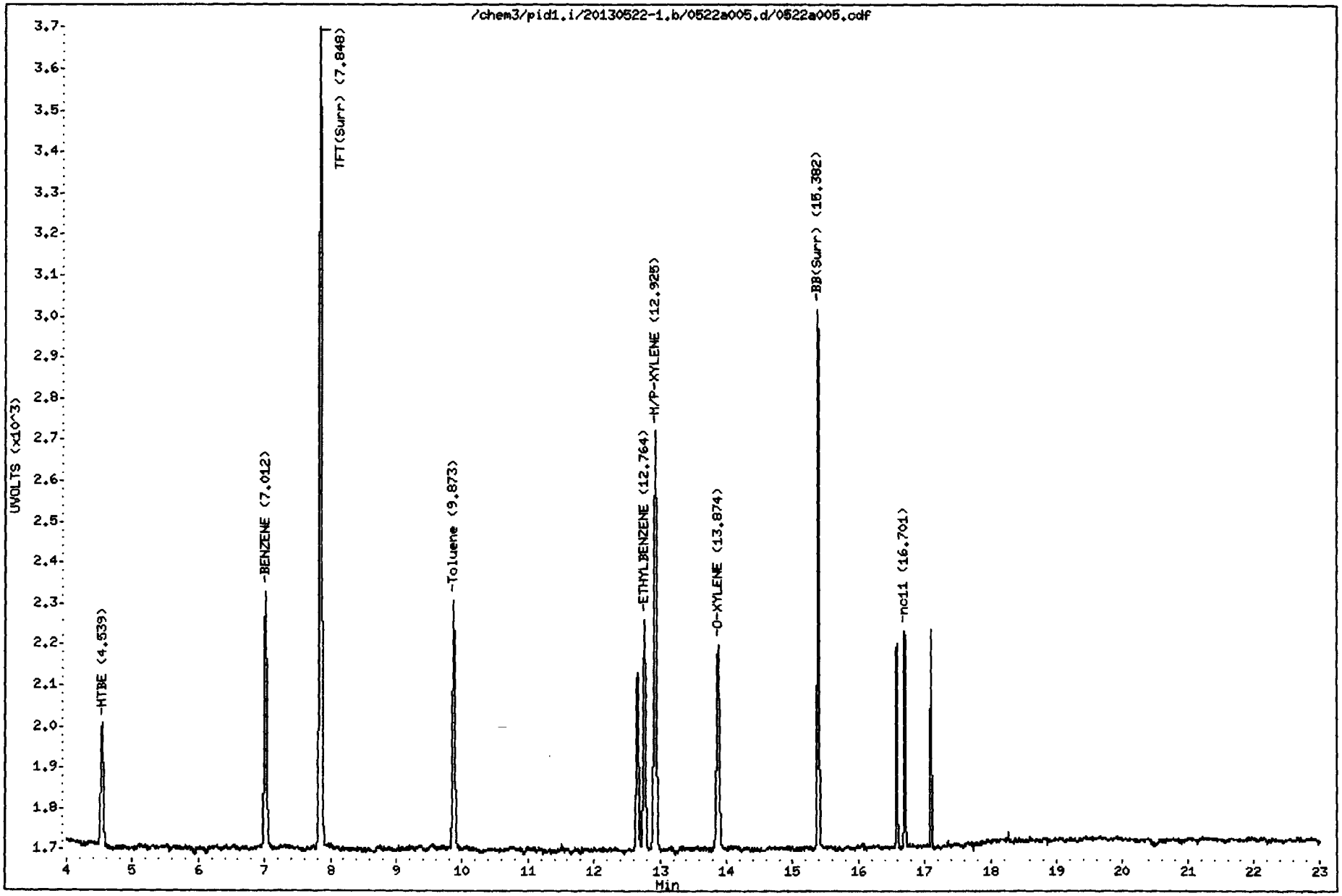
Sample Info: BCAL5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a005.d

Date : 22-MAY-2013 10:27

Client ID: BCAL5

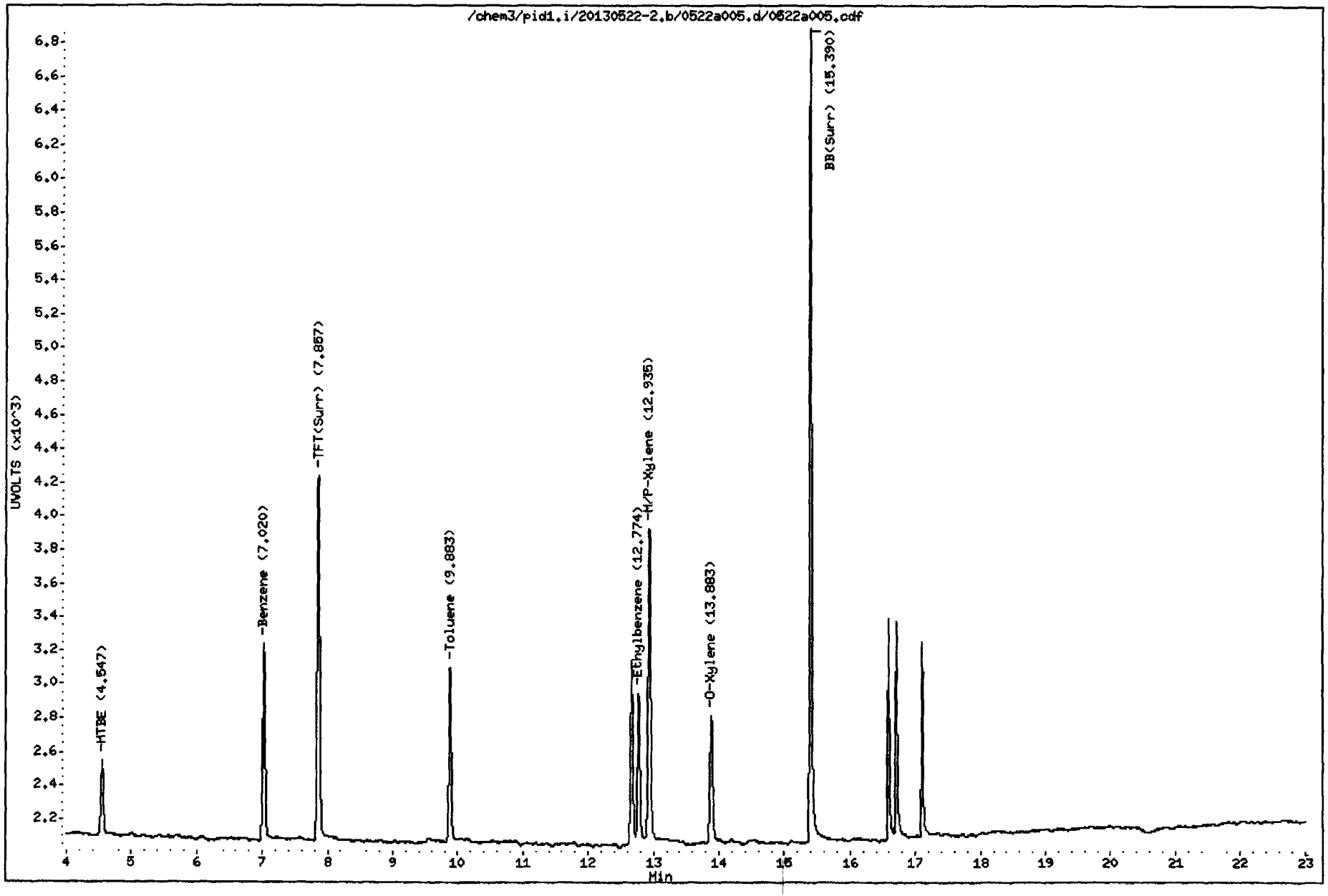
Sample Info: BCAL5

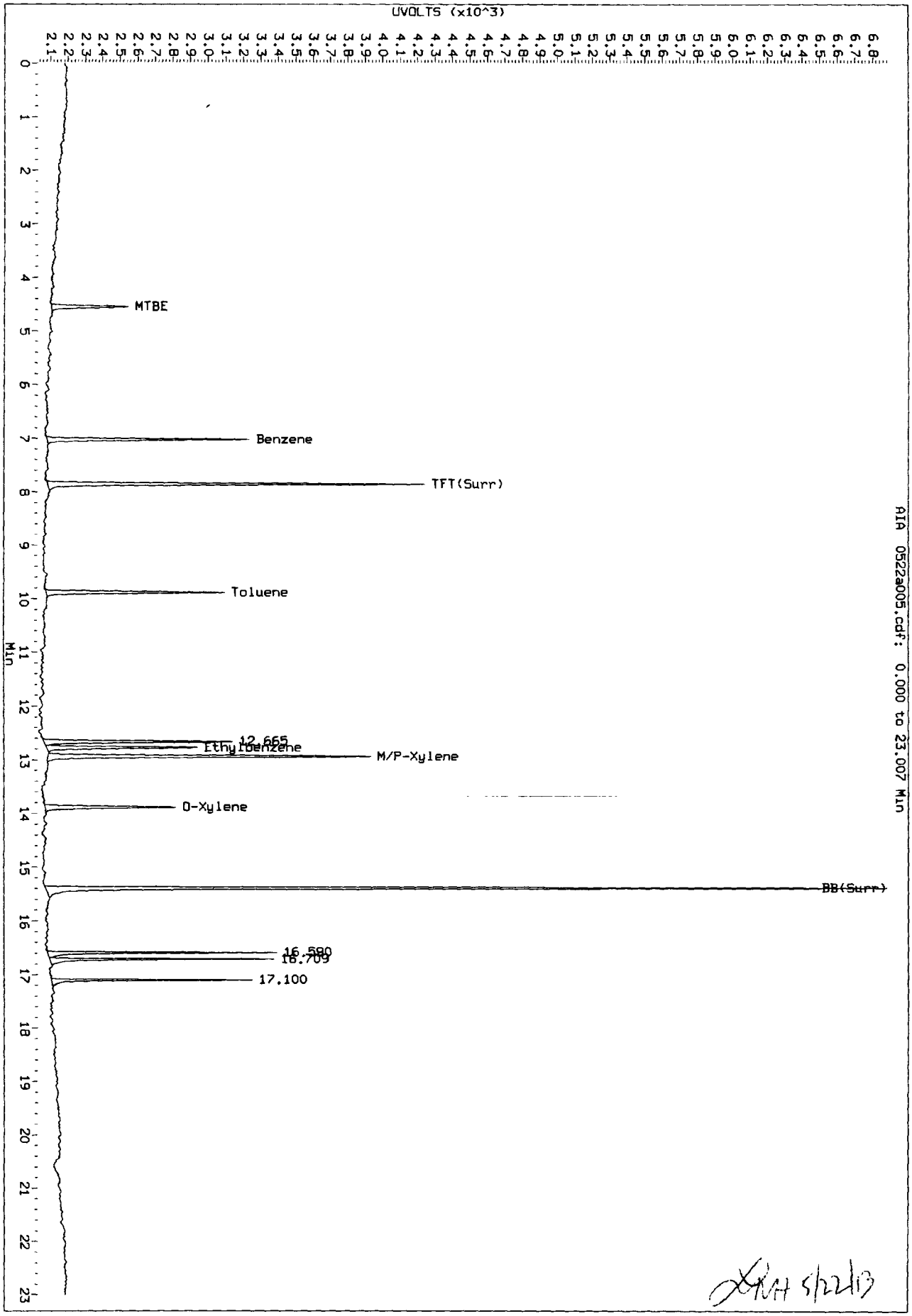
Column phase: RTX 502-2 PID

Instrument: pid1.i

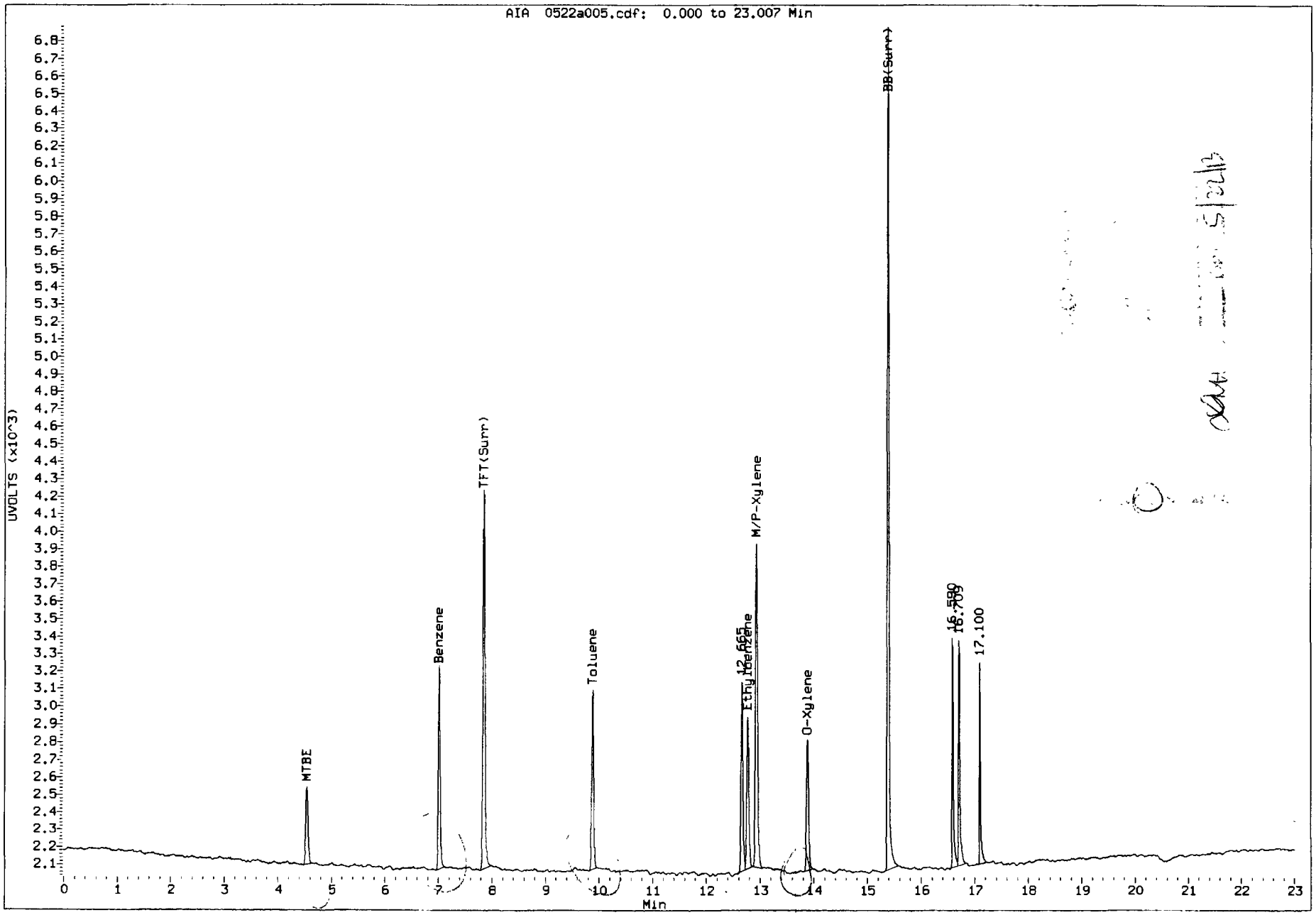
Operator: LH

Column diameter: 0.18




Data File: /chem3/pid1.i/20130522-2.b/0522a005.d/0522a005.cdf
Injection Date: 22-MAY-2013 10:27
Instrument: pid1.i
Client Sample ID: BCAL5
UVOLTS (x10^3)
Min
MTBE
Benzene
TFT(Surr)
Toluene
12.665
Ethylbenzene
M/P-Xylene
O-Xylene
BB(Surr)
16.580
16.709
17.100
AIA 0522a005.cdf: 0.000 to 23.007 Min
5/22/13

Data File: /chem3/pid1.i/20130522-2.b/0522a005.d/0522a005.cdf
Injection Date: 22-MAY-2013 10:27
Instrument: pid1.i
Client Sample ID: BCAL5



Analytical Resources Inc.
BETX/Gas Quantitation Report

5/22/13

Data file 1: /chem3/pid1.i/20130522-1.b/0522a006.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a006.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL25
Client ID: BCAL25
Injection Date: 22-MAY-2013 10:56
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	2937	37310	99.3	TFT(Surr)
15.382	0.000	1980	16732	99.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	236762	0.661
8015C 2MP-TMB	(4.18 to 16.21)	723723	245764	0.340
AK101 nC6-nC10	(4.68 to 15.11)	582885	225487	0.387
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	236762	0.631

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	3241	100.5	TFT(Surr)
15.390	-0.001	7347	101.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	-0.002	5901	26.25	Benzene
9.883	-0.001	5241	26.45N	Toluene
12.774	-0.005	4467	27.36	Ethylbenzene
12.935	-0.008	9545	53.05	M/P-Xylene
13.883	-0.005	3914	27.56	O-Xylene
4.545	0.000	2307	26.46	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a006.d
Lab Smp Id: BCAL25 Client Smp ID: BCAL25
Inj Date : 22-MAY-2013 10:56
Operator : LH Inst ID: pid1.i
Smp Info : BCAL25
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 10:56 Cal File: 0522a006.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
	6 MTBE	4.537	4.537	0.000	20276	25.0000	24.00
	9 BENZENE	7.012	7.012	0.000	36593	25.0000	25.06
$	10 TFT(Surr)	7.848	7.848	0.000	2937	100.000	99.25
	12 Toluene	9.874	9.874	0.000	35345	25.0000	24.37
	14 ETHYLBENZENE	12.765	12.765	0.000	2679	25.0000	24.33
	15 M/P-XYLENE	12.926	12.926	0.000	63276	50.0000	49.63
	16 O-XYLENE	13.874	13.874	0.000	33141	25.0000	24.40
$	18 BB(Surr)	15.382	15.382	0.000	1980	100.000	99.64
	21 nc11	16.701	16.701	0.000	2617	25.0000	

Data File: /chem3/pid1.i/20130522-1.b/0522a006.d

Date : 22-MAY-2013 10:56

Client ID: BCAL25

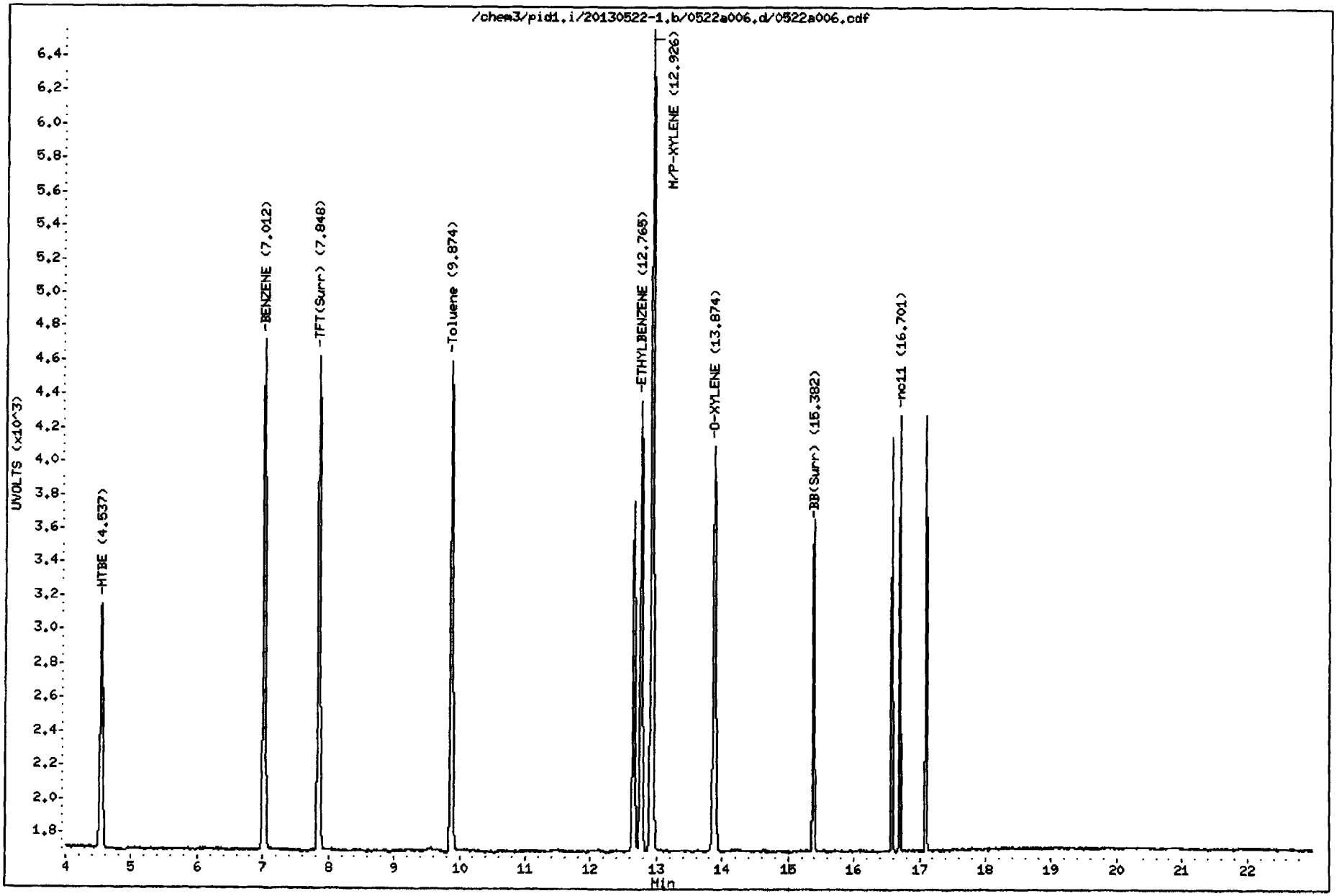
Sample Info: BCAL25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a006.d

Date : 22-MAY-2013 10:56

Client ID: BCAL25

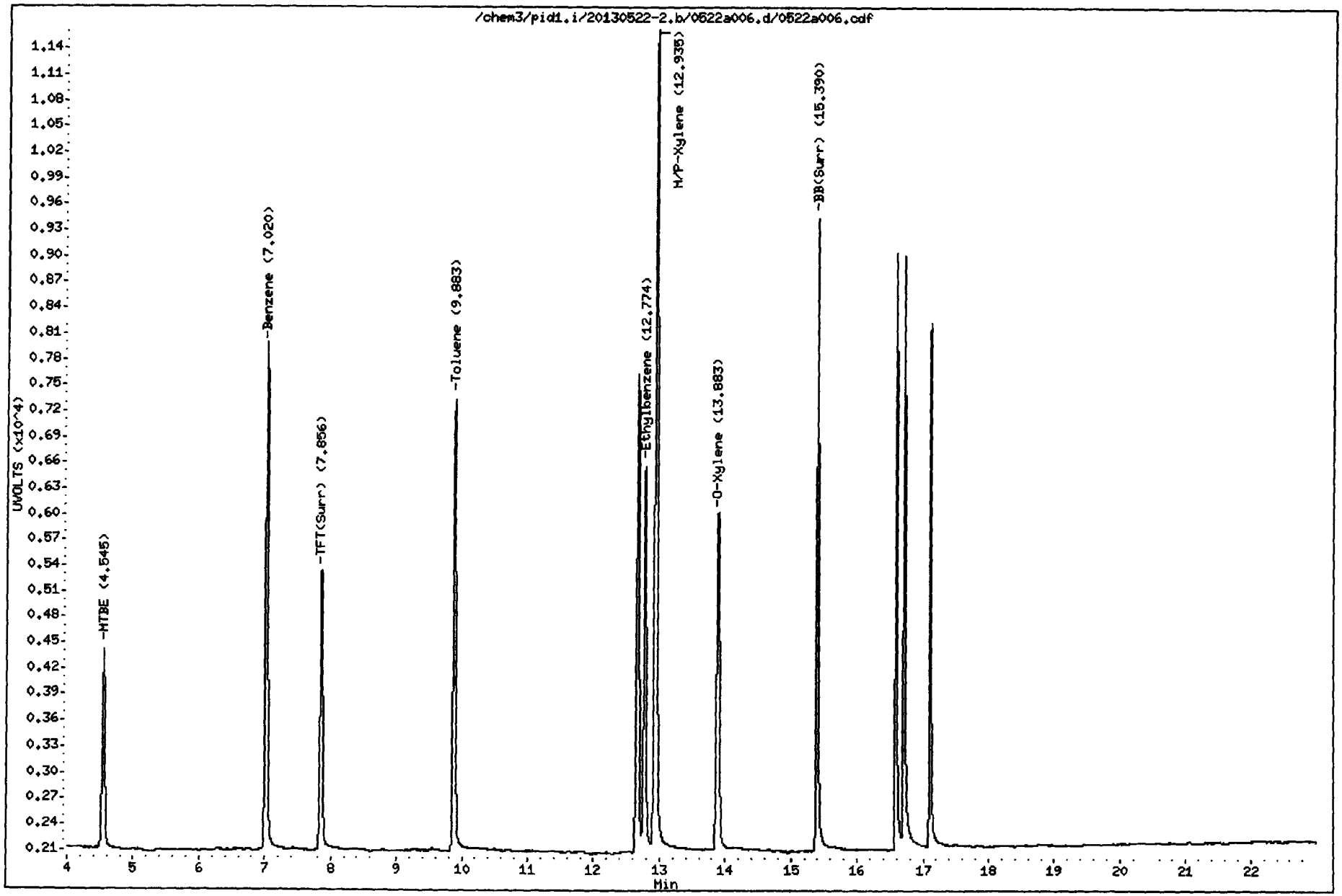
Sample Info: BCAL25

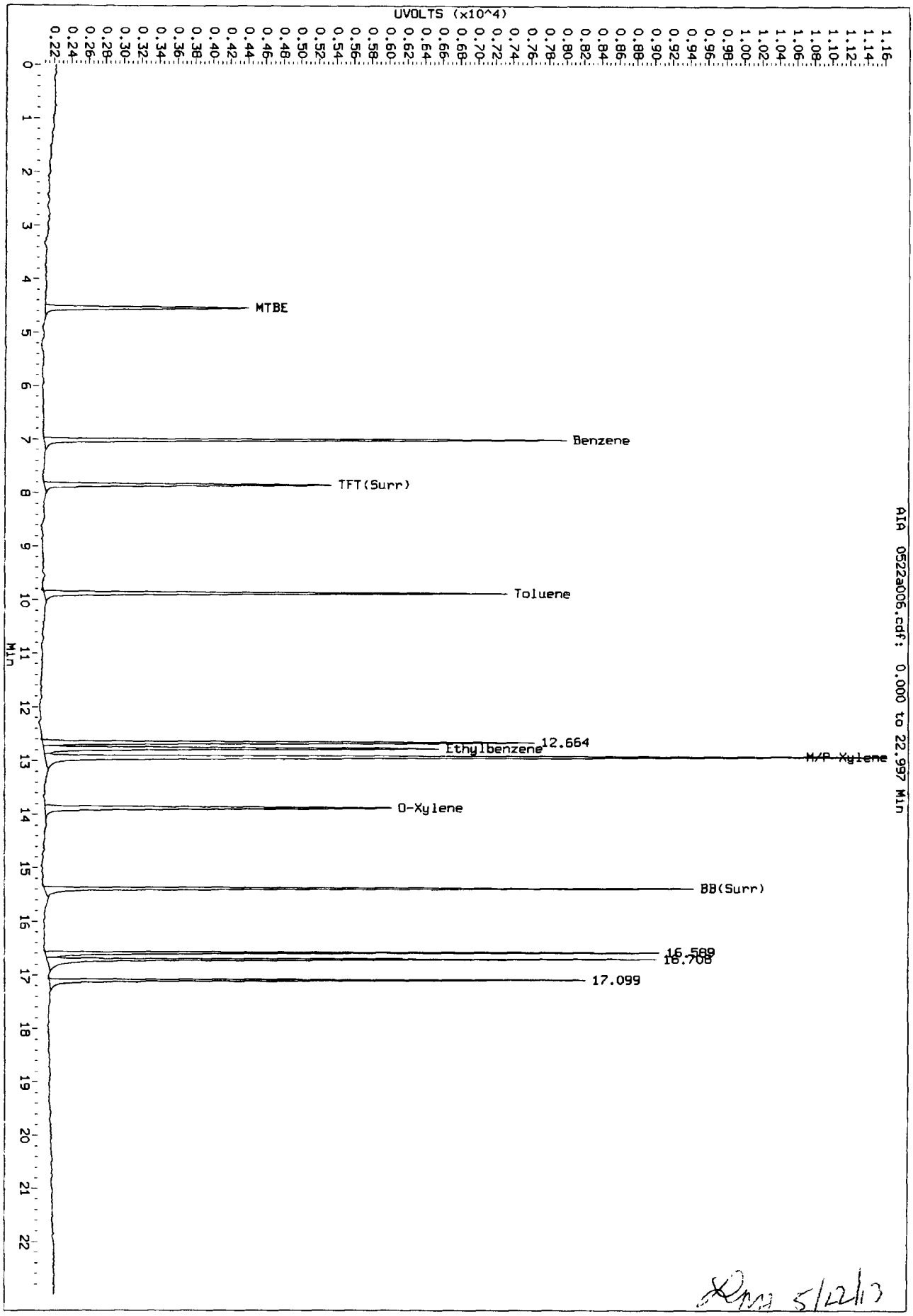
Column phase: RTX 502-2 PID

Instrument: pid1.i

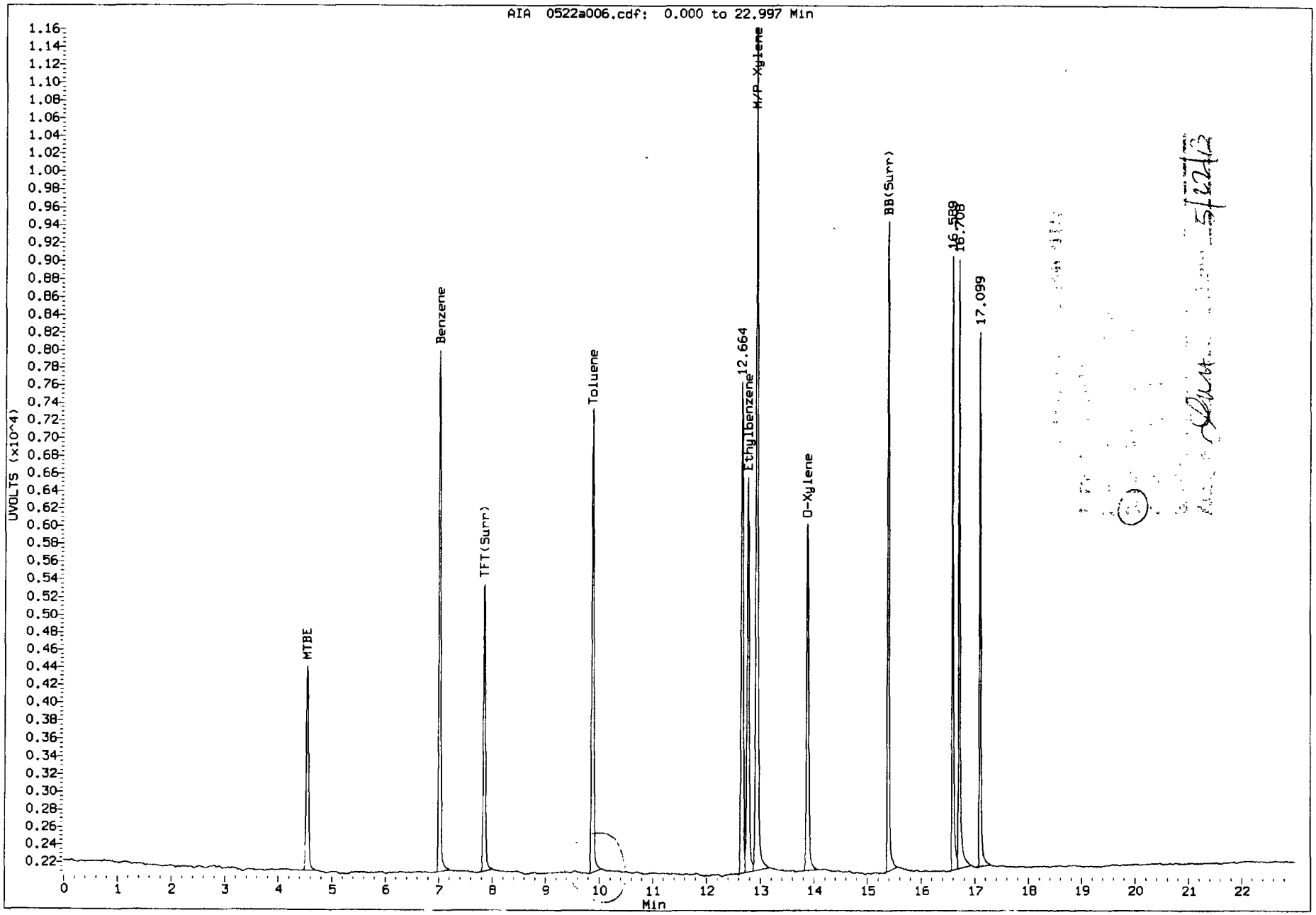
Operator: LH

Column diameter: 0.18




Data File: /chem3/pid1.i/20130522-2.b/0522a006.d/0522a006.cdf
Injection Date: 22-MAY-2013 10:56
Instrument: pid1.i
Client Sample ID: BCAL25
UVOLTS (x10^4)
Min
AIA 0522a006.cdf: 0.000 to 22.997 Min
MTBE
Benzene
TFT(Surr)
Toluene
12.664
Ethylbenzene
M/P Xylene
O-Xylene
BB(Surr)
16.589
16.708
17.099
5/22/13

Data File: /chem3/pid1.i/20130522-2.b/0522a006.d/0522a006.cdf
Injection Date: 22-MAY-2013 10:56
Instrument: pid1.i
Client Sample ID: BCAL25



Analytical Resources Inc.
BETX/Gas Quantitation Report

5/22/13

Data file 1: /chem3/pid1.i/20130522-1.b/0522a007.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a007.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL50
Client ID: BCAL50
Injection Date: 22-MAY-2013 11:25
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	3824	48740	129.2	TFT(Surr)
15.382	0.000	2595	21730	130.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	455449	1.272
8015C 2MP-TMB	(4.18 to 16.21)	723723	472875	0.653
AK101 nC6-nC10	(4.68 to 15.11)	582885	433822	0.744
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	455449	1.214

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	4289	133.1	TFT(Surr)
15.390	-0.001	9769	135.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	-0.001	11655	51.84	Benzene
9.883	-0.001	10315	52.06N	Toluene
12.774	-0.004	8873	54.35	Ethylbenzene
12.936	-0.007	18906	105.07	M/P-Xylene
13.883	-0.005	7783	54.81	O-Xylene
4.545	0.000	4539	52.06	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a007.d
Lab Smp Id: BCAL50 Client Smp ID: BCAL50
Inj Date : 22-MAY-2013 11:25
Operator : LH Inst ID: pid1.i
Smp Info : BCAL50
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 11:25 Cal File: 0522a007.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	6 MTBE	4.537	4.537	0.000	39052	50.0000	46.23
	9 BENZENE	7.012	7.012	0.000	69936	50.0000	47.90
$	10 TFT(Surr)	7.848	7.848	0.000	3824	133.000	129.2
	12 Toluene	9.873	9.873	0.000	67882	50.0000	46.81
	14 ETHYLBENZENE	12.765	12.765	0.000	5148	50.0000	46.76
	15 M/P-XYLENE	12.927	12.927	0.000	121551	100.000	95.33
	16 O-XYLENE	13.873	13.873	0.000	63859	50.0000	47.02
$	18 BB(Surr)	15.382	15.382	0.000	2595	133.000	130.6
	21 nc11	16.701	16.701	0.000	4942	50.0000	

Data File: /chem3/pid1.i/20130522-1.b/0522a007.d

Page 1

Date : 22-MAY-2013 11:25

Client ID: BCAL50

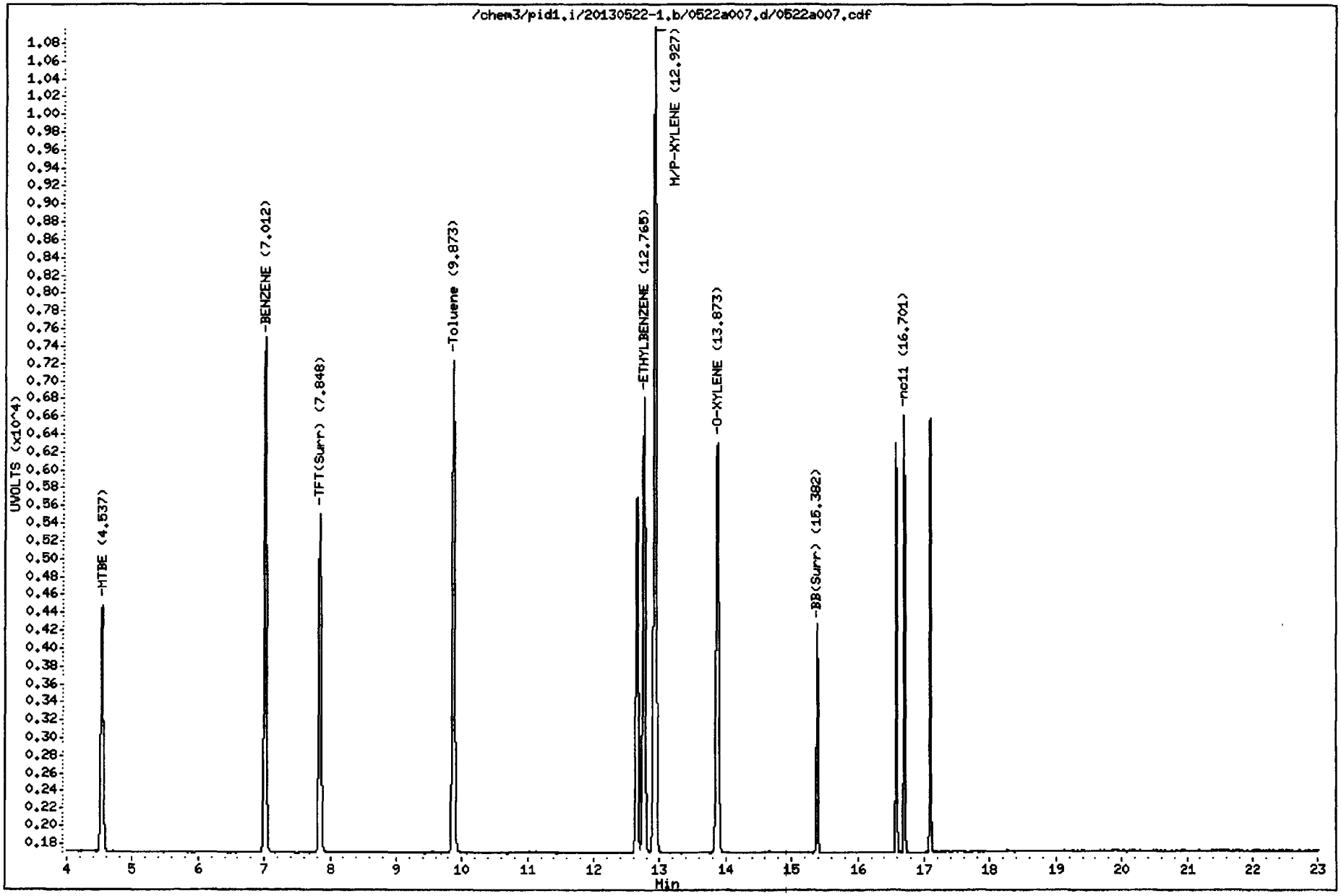
Instrument: pid1.i

Sample Info: BCAL50

Operator: LH

Column phase: RTX 502-2 FID

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a007.d

Date : 22-MAY-2013 11:25

Client ID: BCAL50

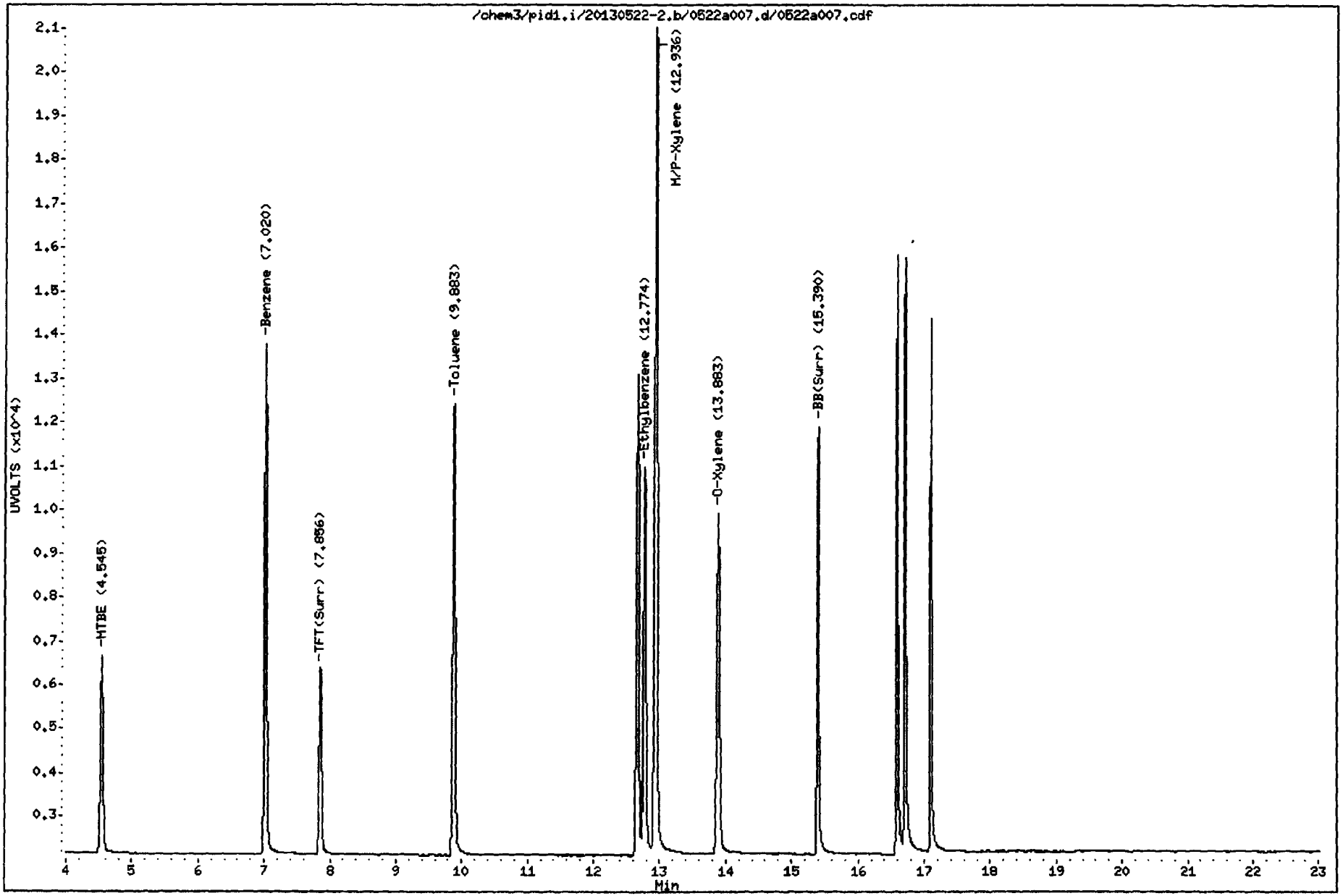
Sample Info: BCAL50

Column phase: RTX 502-2 PID

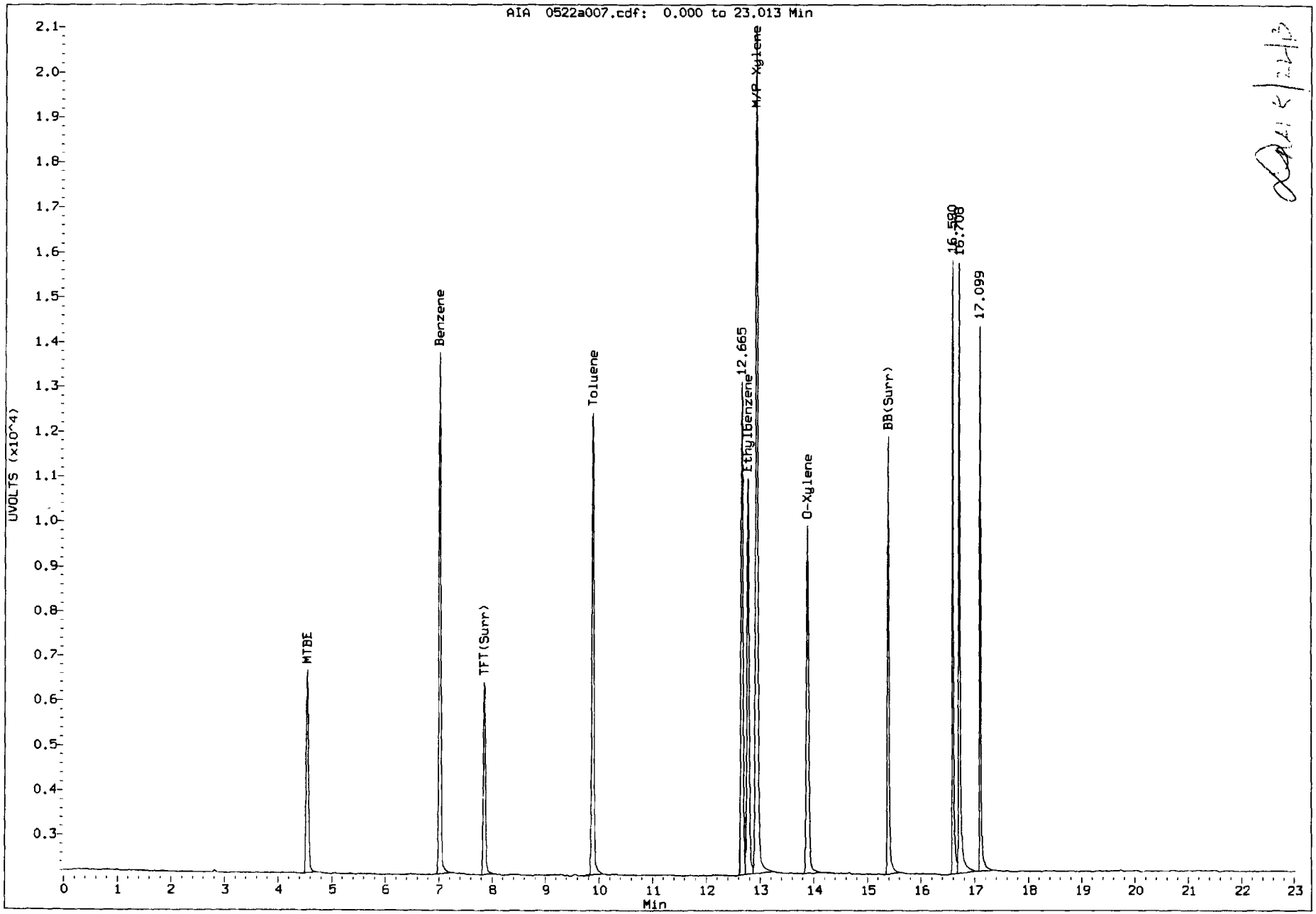
Instrument: pid1.i

Operator: LH

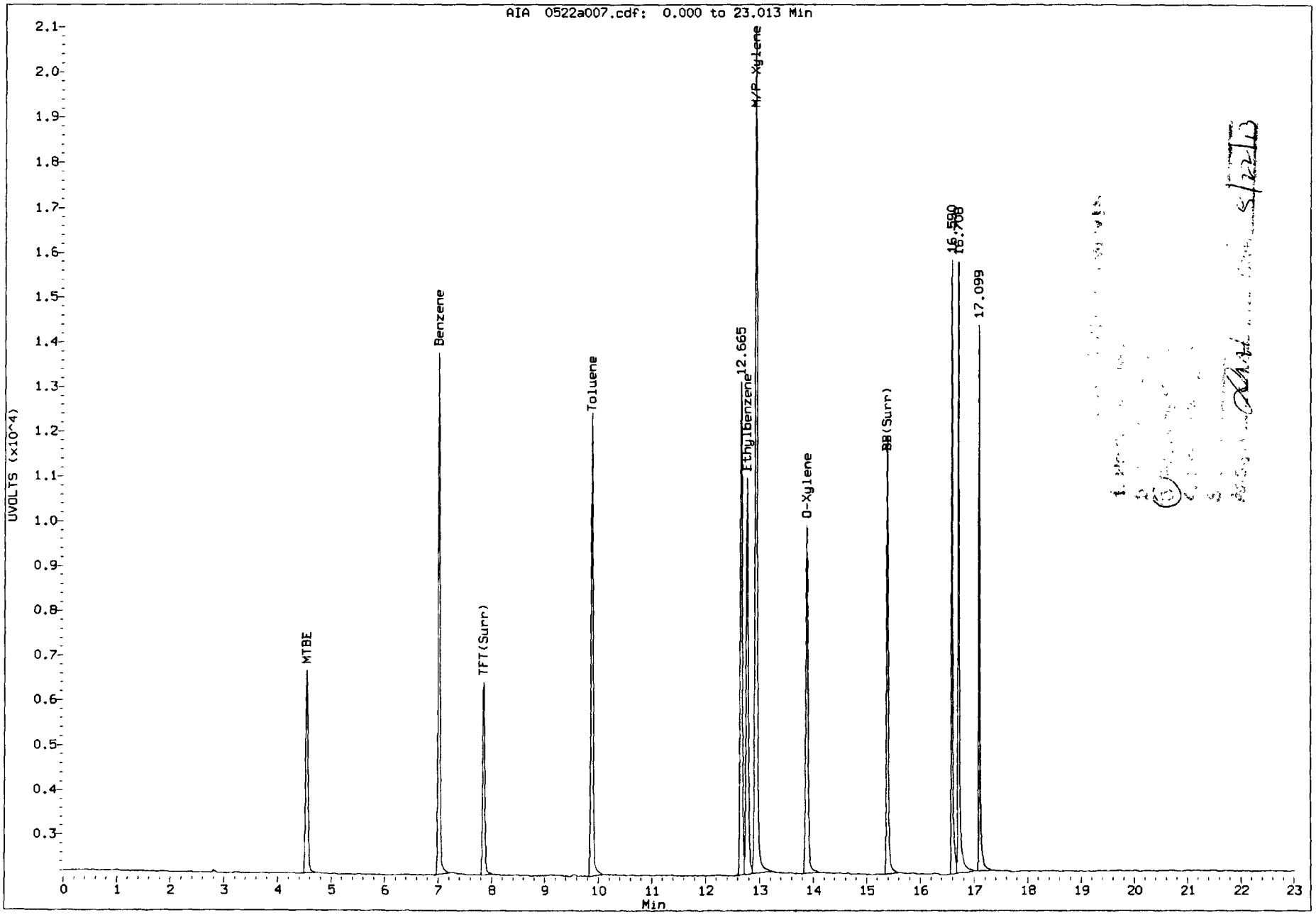
Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a007.d/0522a007.cdf
Injection Date: 22-MAY-2013 11:25
Instrument: pid1.i
Client Sample ID: BCAL50



Data File: /chem3/pid1.i/20130522-2.b/0522a007.d/0522a007.cdf
Injection Date: 22-MAY-2013 11:25
Instrument: pid1.i
Client Sample ID: BCAL50



XRH 5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a008.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a008.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL100
Client ID: BCAL100
Injection Date: 22-MAY-2013 11:55
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.000	5017	64017	169.5	TFT(Surr)
15.382	0.000	3414	28686	171.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.78 to 17.90)	358114	875862	2.446
8015C 2MP-TMB	(4.18 to 16.21)	723723	914919	1.264
AK101 nC6-nC10	(4.68 to 15.11)	582885	837947	1.438
NWTPHG Tol-Nap	(9.78 to 18.90)	375093	875862	2.335

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	5697	176.7	TFT(Surr)
15.390	0.000	13113	181.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.022	0.000	23264	103.47	Benzene
9.884	-0.001	20740	104.68	Toluene
12.776	-0.003	17573	107.64	Ethylbenzene
12.938	-0.005	37670	209.35	M/P-Xylene
13.884	-0.004	15483	109.03	O-Xylene
4.547	0.001	9110	104.49	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a008.d
Lab Smp Id: BCAL100 Client Smp ID: BCAL100
Inj Date : 22-MAY-2013 11:55
Operator : LH Inst ID: pid1.i
Smp Info : BCAL100
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 11:55 Cal File: 0522a008.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	6 MTBE	4.539	4.539	0.000	76970	100.000	91.12
	9 BENZENE	7.014	7.014	0.000	137016	100.000	93.84
$	10 TFT(Surr)	7.849	7.849	0.000	5017	178.000	169.5
	12 Toluene	9.875	9.875	0.000	131470	100.000	90.66
	14 ETHYLBENZENE	12.767	12.767	0.000	9866	100.000	89.61
	15 M/P-XYLENE	12.930	12.930	0.000	233700	200.000	183.3
	16 O-XYLENE	13.876	13.876	0.000	122598	100.000	90.28
$	18 BB(Surr)	15.382	15.382	0.000	3414	178.000	171.8
	21 nc11	16.702	16.702	0.000	9535	100.000	

Data File: /chem3/pid1.i/20130522-1.b/0522a008.d

Date : 22-MAY-2013 11:55

Client ID: BCAL100

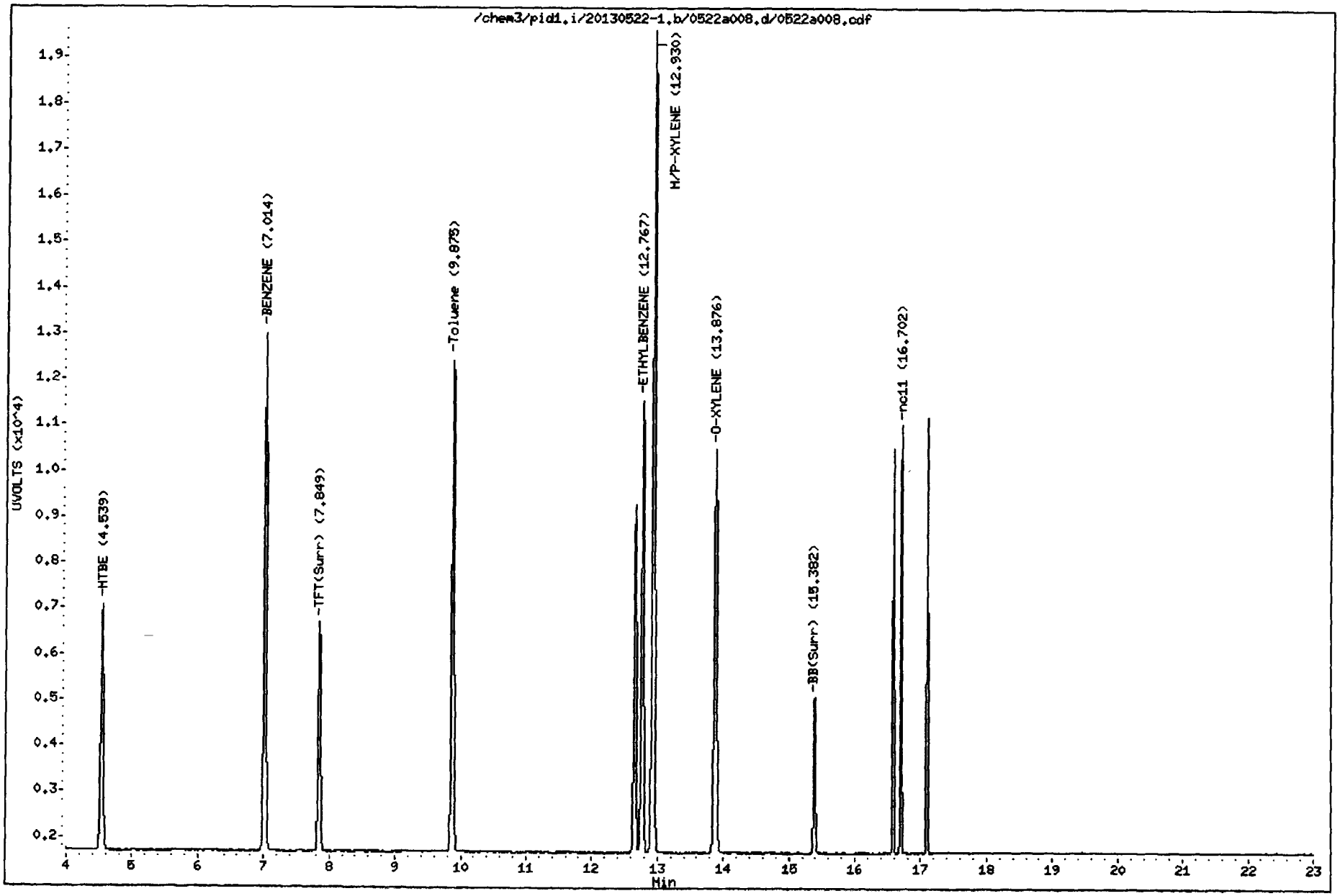
Sample Info: BCAL100

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a008.d

Page 1

Date : 22-MAY-2013 11:55

Client ID: BCAL100

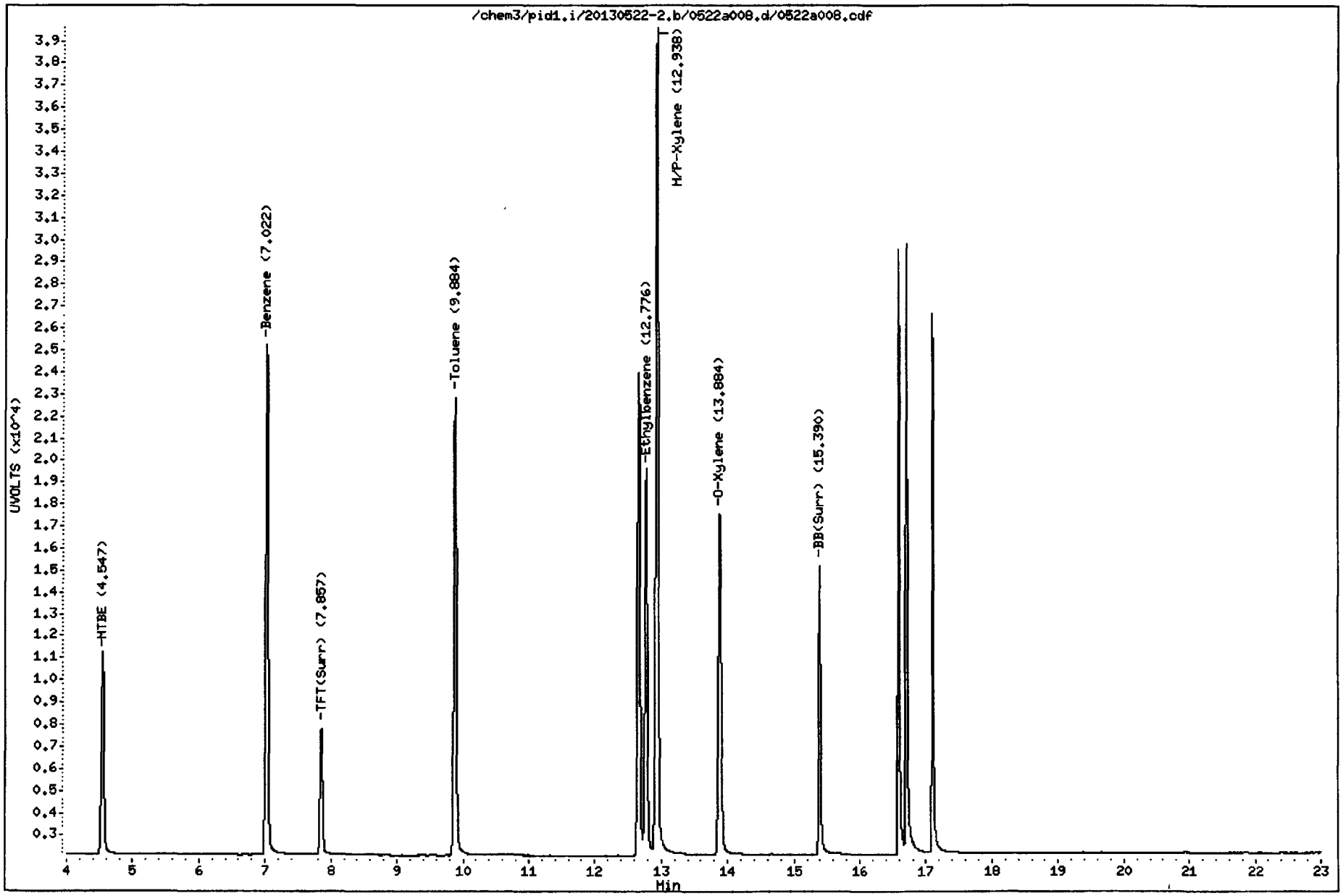
Instrument: pid1.i

Sample Info: BCAL100

Operator: LH

Column phase: RTX 502-2 PID

Column diameter: 0.18



XMH 5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a009.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a009.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL200
Client ID: BCAL200
Injection Date: 22-MAY-2013 12:24
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	5680	72811	192.0	TFT(Surr)
15.383	0.000	3864	32720	194.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.78 to 17.90)	358114	1723795	4.814
8015C 2MP-TMB	(4.18 to 16.21)	723723	1791026	2.475
AK101 nC6-nC10	(4.68 to 15.11)	582885	1642170	2.817
NWTPHG Tol-Nap	(9.78 to 18.90)	375093	1723795	4.596

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	6454	200.2	TFT(Surr)
15.391	0.000	15123	209.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.021	0.000	46248	205.70	Benzene
9.885	0.000	41824	211.09	Toluene
12.778	0.000	35277	216.08	Ethylbenzene
12.943	0.000	76231	423.66	M/P-Xylene
13.888	0.000	31715	223.34	O-Xylene
4.545	0.000	17903	205.35	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a009.d
Lab Smp Id: BCAL200 Client Smp ID: BCAL200
Inj Date : 22-MAY-2013 12:24
Operator : LH Inst ID: pid1.i
Smp Info : BCAL200
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 12:24 Cal File: 0522a009.d
Als bottle: 1 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	6 MTBE	4.538	4.538	0.000	148855	200.000	176.2
	9 BENZENE	7.014	7.014	0.000	266241	200.000	182.4
$	10 TFT(Surr)	7.848	7.848	0.000	5680	200.000	192.0
	12 Toluene	9.877	9.877	0.000	256545	200.000	176.9
	14 ETHYLBENZENE	12.770	12.770	0.000	19235	200.000	174.7
	15 M/P-XYLENE	12.935	12.935	0.000	460498	400.000	361.2
	16 O-XYLENE	13.879	13.879	0.000	240735	200.000	177.3
$	18 BB(Surr)	15.383	15.383	0.000	3864	200.000	194.4
	21 nc11	16.704	16.704	0.000	18792	200.000	

Data File: /chem3/pid1.i/20130522-1.b/0522a009.d

Date : 22-MAY-2013 12:24

Client ID: BCAL200

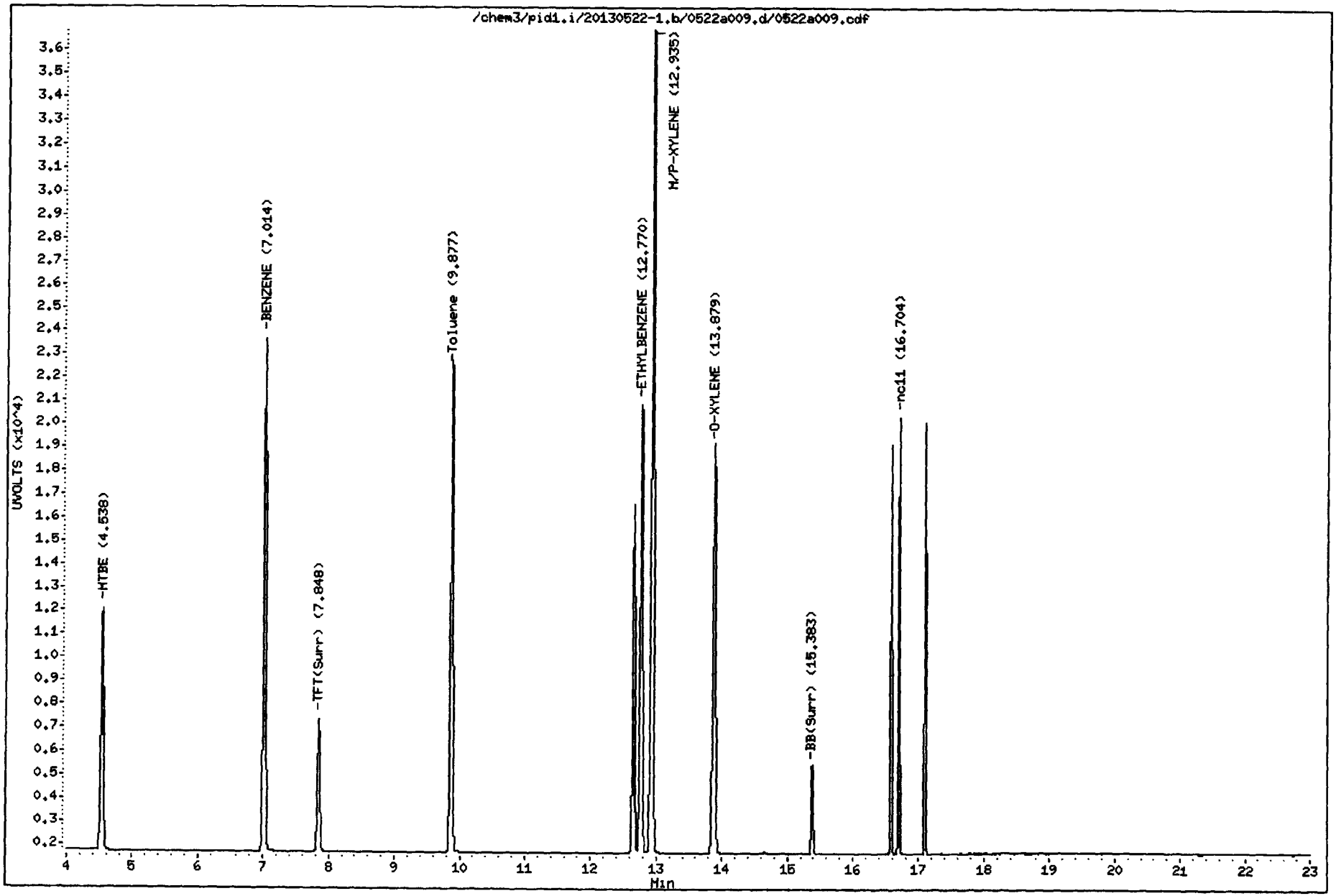
Sample Info: BCAL200

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a009.d

Date : 22-MAY-2013 12:24

Client ID: BCAL200

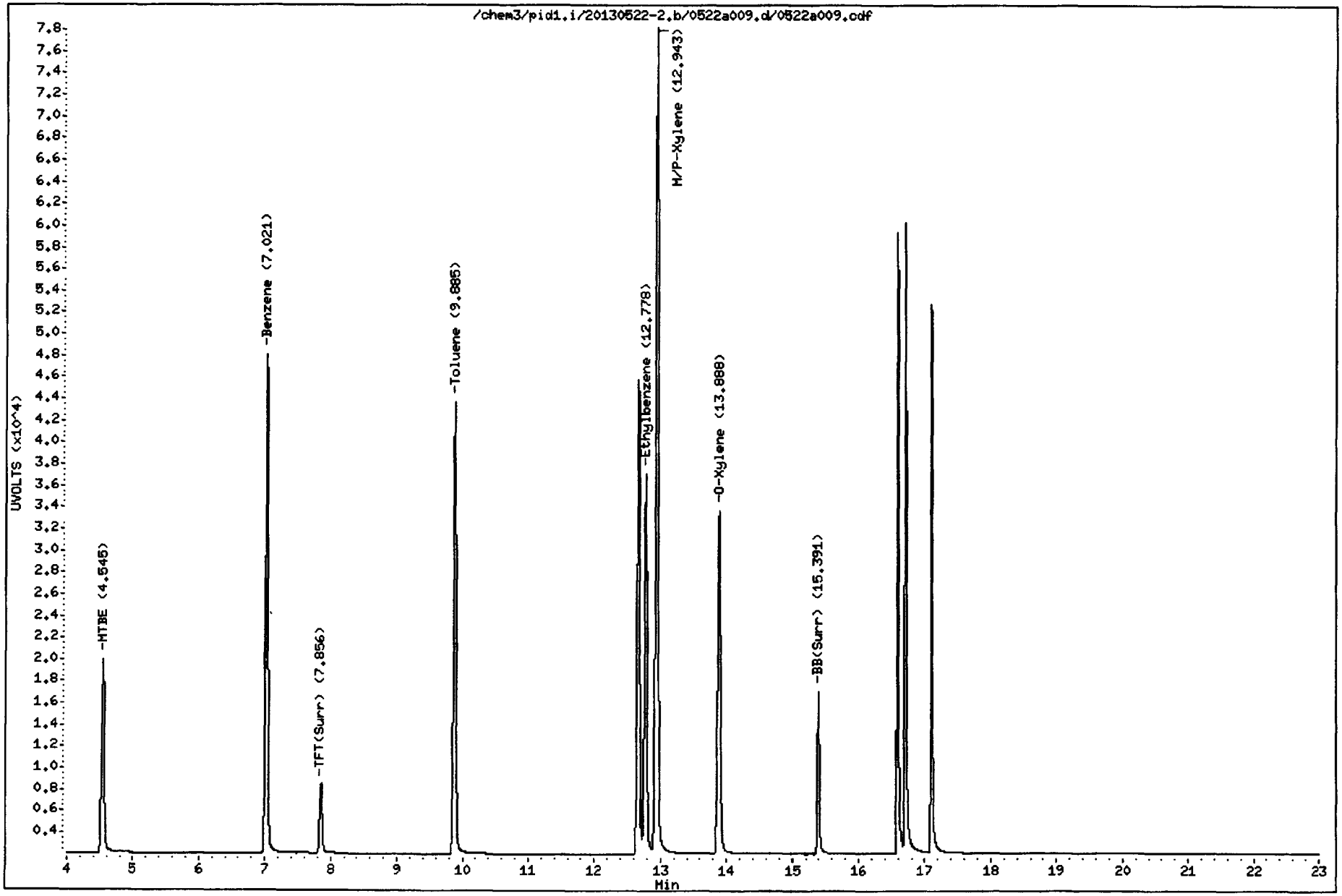
Sample Info: BCAL200

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

5/22/13

Data file 1: /chem3/pid1.i/20130522-1.b/0522a010.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a010.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: ICV25
Client ID: ICV25
Injection Date: 22-MAY-2013 12:53
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.001	2850	36275	96.3	TFT(Surr)
15.383	0.000	1968	16393	99.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.78 to 17.90)	358114	224528	0.627
8015C 2MP-TMB	(4.18 to 16.21)	723723	231562	0.320
AK101 nC6-nC10	(4.68 to 15.11)	582885	212642	0.365
NWTPHG Tol-Nap	(9.78 to 18.90)	375093	224528	0.599

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.857	0.001	3153	97.8	TFT(Surr)
15.390	-0.001	7281	100.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.021	-0.001	5554	24.70	Benzene
9.883	-0.002	4945	24.96	Toluene
12.774	-0.004	4229	25.90	Ethylbenzene
12.936	-0.008	9045	50.27	M/P-Xylene
13.884	-0.004	3733	26.29	O-Xylene
4.546	0.001	2105	24.14	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a010.d
Lab Smp Id: ICV25 Client Smp ID: ICV25
Inj Date : 22-MAY-2013 12:53
Operator : LH Inst ID: pid1.i
Smp Info : ICV25
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 16:19 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 12:24 Cal File: 0522a009.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	6 MTBE	4.539	4.538	0.001	18919	22.3965	22.40
	9 BENZENE	7.013	7.014	-0.001	34225	23.4410	23.44
$	10 TFT(Surr)	7.849	7.848	0.001	2850	96.3146	96.31
	12 Toluene	9.874	9.877	-0.003	33117	22.8368	22.84
	14 ETHYLBENZENE	12.766	12.770	-0.004	2520	22.8895	22.89
	15 M/P-XYLENE	12.927	12.935	-0.008	59723	46.8403	46.84
	16 O-XYLENE	13.875	13.879	-0.004	31159	25.1396	25.14
$	18 BB(Surr)	15.383	15.383	0.000	1968	99.0411	99.04
	21 nc11	16.701	16.704	-0.003	2482		

Data File: /chem3/pid1.i/20130522-1.b/0522a010.d

Date : 22-MAY-2013 12:53

Client ID: ICV25

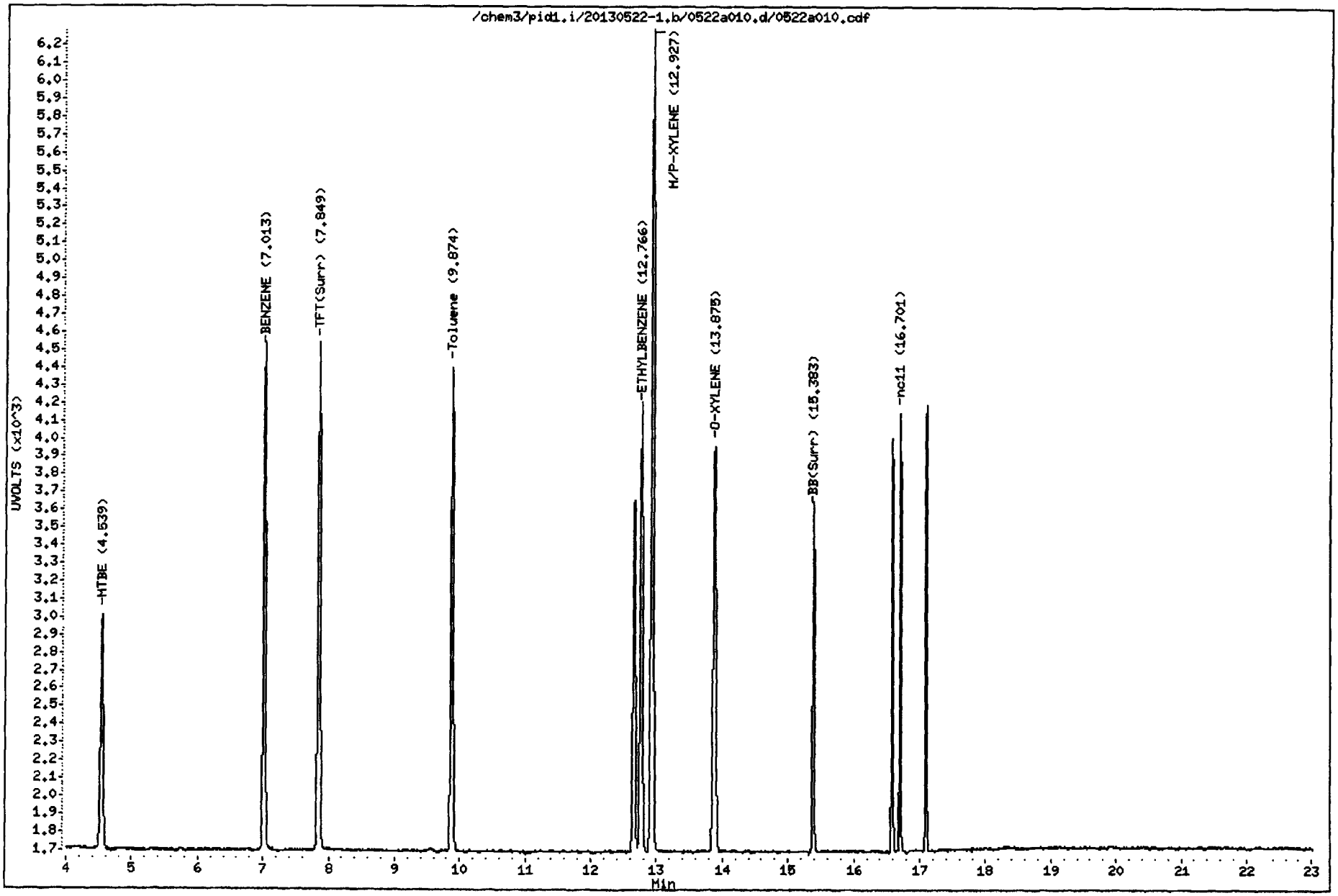
Sample Info: ICV25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a010.d

Date : 22-MAY-2013 12:53

Client ID: ICV25

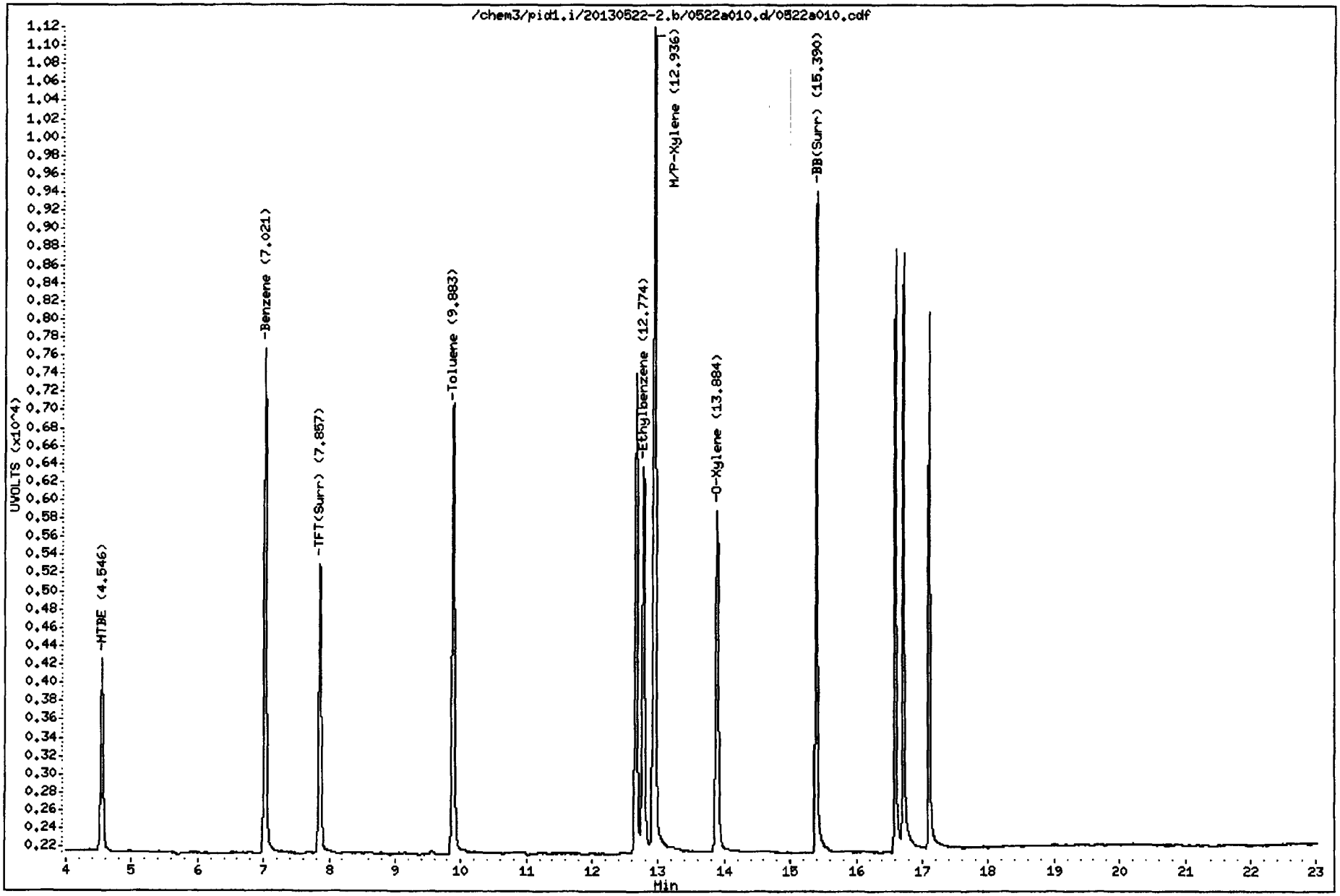
Sample Info: ICV25

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Initial Calibration Notes

ARI SOP: **404S**(Gas) **410S**(BTEX) **430S**(VPH) **700S**(8260C) **703S**(SIM) **706S**(524.3) **710S**(RSK-175)

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 **PID-1** PID-2 PID-3 FID-6

Curve Date(s): 10/23/12 Internal Standard ID N/A Expiration N/A

BFB Tune Meets Criteria?	N/A YES / NO	ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria?	YES / NO	ICV Exceeding ±30%?	YES / NO
Q flag applied?	YES / NO	Linear Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Quadratic Fits Used?	YES / NO
Spectral Library Updated?	N/A YES / NO	Calibration Points Dropped?	YES / NO
Minimum Response Factors Met	N/A YES / NO	Purge Volume (mL)	5

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Restek	VW758-3	2/1/13	Ultra Scientific	VWX65-1	3/13/12
SPEX	VW254-1	2/2/12	SPEX	VW765-5	3/27/12

Detail problems, corrective actions and/or other pertinent information below:

MI's for peaks not found, baseline corrections.
TFT inflated on high pt of gas curve due to hydrocarbon interference.
MTBE @ 0.25 & 0.5 pts of BETX curve dropped & low pt FIDconfirmation dropped as well for MTBE

Analyst: JW **Date:** 10/25/12

Reviewer: [signature] **Date:** 10/26/12

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-OCT-2012 17:50
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-2.b/PIDB.m
Cal Date : 24-Oct-2012 10:09 jonw
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20121023-2.b/1023a011.d
Level 2: /chem3/pid1.i/20121023-2.b/1023a010.d
Level 3: /chem3/pid1.i/20121023-2.b/1023a009.d
Level 4: /chem3/pid1.i/20121023-2.b/1023a008.d
Level 5: /chem3/pid1.i/20121023-2.b/1023a007.d
Level 6: /chem3/pid1.i/20121023-2.b/1023a006.d
Level 7: /chem3/pid1.i/20121023-2.b/1023a005.d
Level 8: /chem3/pid1.i/20121023-2.b/1023a004.d

Compound	0.25000 Level 1	0.50000 Level 2	1.000 Level 3	5.000 Level 4	25.000 Level 5	50.000 Level 6	RRF	% RSD
	100.000 Level 7	200.000 Level 8						
1 MTBE	+++++	+++++	72.00000	75.40000	71.84000	72.14000		
	72.39000	68.24000					72.00167	3.161
2 Benzene	228	254	260	255	246	248		
	247	246					248	3.847
4 Toluene	256	234	210	224	220	219		
	220	216					225	6.342
5 Ethylbenzene	192	200	198	201	196	198		
	199	193					197	1.663
6 M/P-Xylene	216	208	212	220	215	217		
	218	215					215	1.653
7 O-Xylene	160	158	168	171	172	171		
	173	170					168	3.365

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-OCT-2012 17:50
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-2.b/PIDB.m
Cal Date : 24-Oct-2012 10:09 jonw
Curve Type : Average

Compound	0.25000 Level 1	0.50000 Level 2	1.000 Level 3	5.000 Level 4	25.000 Level 5	50.000 Level 6	RRF	% RSD
	100.000 Level 7	200.000 Level 8						
$ 3 TFT(Surr)	38.86364	37.09091	+++++	37.55224	37.30000	36.97744		
	38.10674	39.27500					37.88085	2.372
$ 8 BB(Surr)	81.36364	78.68182	+++++	80.38806	80.55000	80.24060		
	82.00562	79.97000					80.45710	1.310

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-OCT-2012 17:50
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-2.b/PIDB.m
Cal Date : 24-Oct-2012 10:09 jonw
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 2.96423
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20121023-1.b/1023a011.d/1023a011.cdf
Level 2: /chem3/pid1.i/20121023-1.b/1023a010.d/1023a010.cdf
Level 3: /chem3/pid1.i/20121023-1.b/1023a009.d/1023a009.cdf
Level 4: /chem3/pid1.i/20121023-1.b/1023a008.d/1023a008.cdf
Level 5: /chem3/pid1.i/20121023-1.b/1023a007.d/1023a007.cdf
Level 6: /chem3/pid1.i/20121023-1.b/1023a006.d/1023a006.cdf
Level 7: /chem3/pid1.i/20121023-1.b/1023a005.d/1023a005.cdf
Level 8: /chem3/pid1.i/20121023-1.b/1023a004.d/1023a004.cdf

Compound	0.000e+00 Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	RRF	% RSD	
1 NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
2 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
3 AK101	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
4 8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
5 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
6 MTBE	+++++	472	600	610	595	575	561	509	560	9.173	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Compound	0.000e+00 Level 1	0.000e+00 Level 2	0.000e+00 Level 3	0.000e+00 Level 4	0.000e+00 Level 5	0.000e+00 Level 6	0.000e+00 Level 7	0.000e+00 Level 8	RRF	% RSD	
7 nC6	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	<-
8 nC7	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	<-
9 BENZENE	1572	1618	1515	1498	1392	1352	1307	1232	1436	9.456	
11 nC8	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	<-
12 Toluene	1464	1522	1397	1472	1356	1326	1283	1207	1378	7.690	
13 nC9	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	<-
14 ETHYLBENZENE	132	126	121	118	109	107	103	95.88000	114	10.830	
15 M/P-XYLENE	1612	1580	1476	1417	1290	1260	1226	1156	1377	12.313	
16 O-XYLENE	1504	1538	1492	1414	1330	1289	1249	1171	1373	9.739	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Compound	0.000e+00 Level 1	0.000e+00 Level 2	0.000e+00 Level 3	0.000e+00 Level 4	0.000e+00 Level 5	0.000e+00 Level 6	0.000e+00 Level 7	0.000e+00 Level 8	RRF	% RSD	
17 nC10-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
20 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
21 nc11	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
22 nC12-Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
23 nC13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
24 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$ 10 TFT(Surr)	33.31818	31.81818	+++++	31.61194	31.34000	30.78195	30.91573	30.69500	31.49728	2.884	
$ 18 BB(Surr)	22.00000	20.54545	+++++	20.70149	20.31000	19.83459	19.84270	18.93000	20.30918	4.677	
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 10.58832
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a004.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a004.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 200
Client ID:
Injection Date: 23-OCT-2012 17:50
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.000	6139	78345	194.1	TFT(Surr)
15.390	0.003	3786	32155	185.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	1708650	4.771 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	1708791	2.361 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	1600978	2.747 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	1713577	4.568 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.896	0.003	7855	207.4	TFT(Surr)
15.397	0.003	15994	198.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.078	0.001	49204	198.42	Benzene
9.910	0.003	43241	192.19N	Toluene
12.793	0.006	38665	196.10	Ethylbenzene
12.957	0.014	85891	399.48	M/P-Xylene
13.900	0.010	34089	203.10N	O-Xylene
4.650	-0.003	13648	189.55	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a004.d

Date : 23-OCT-2012 17:50

Client ID:

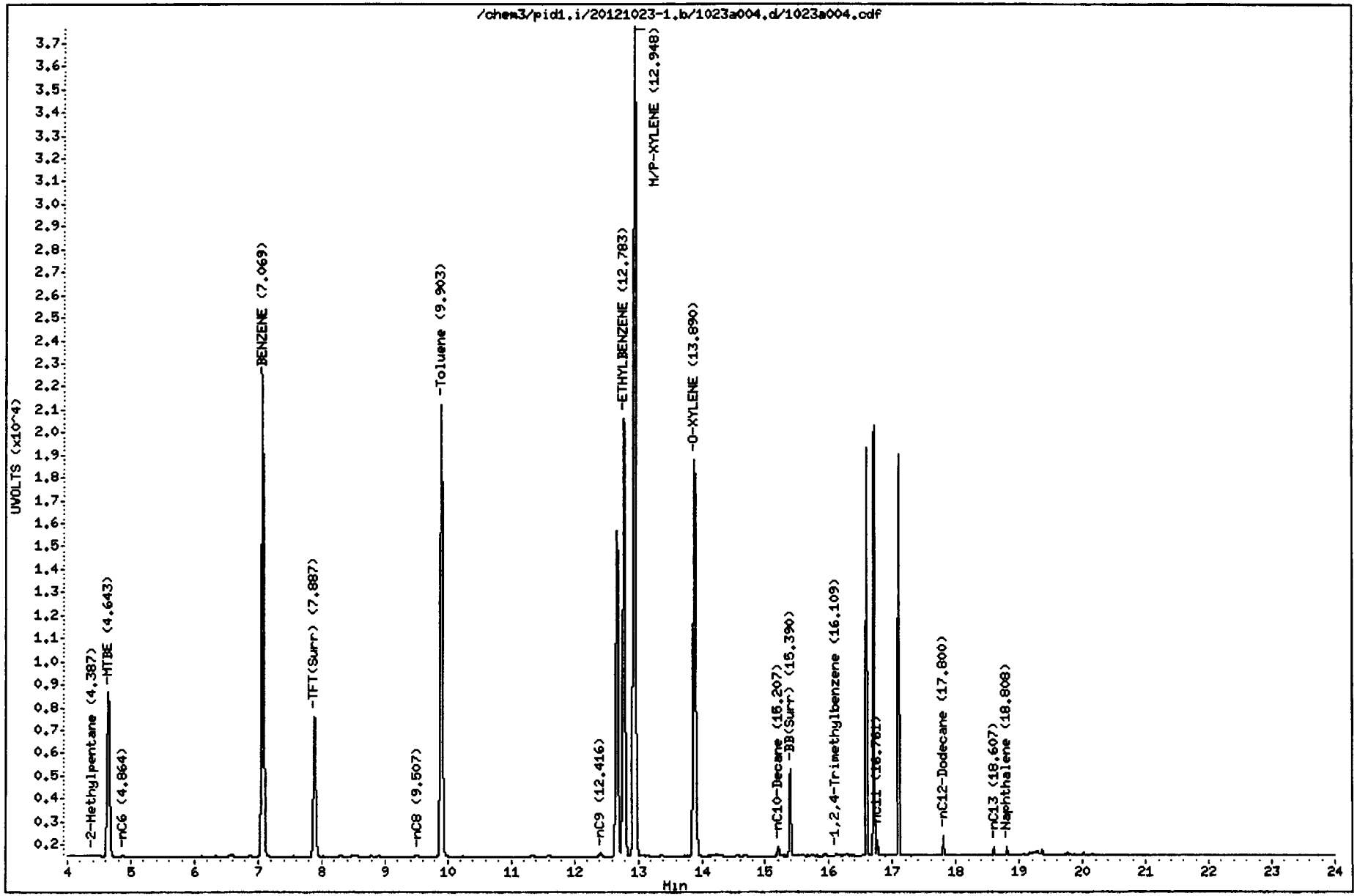
Sample Info: B 200

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a004.d

Date : 23-OCT-2012 17:50

Client ID:

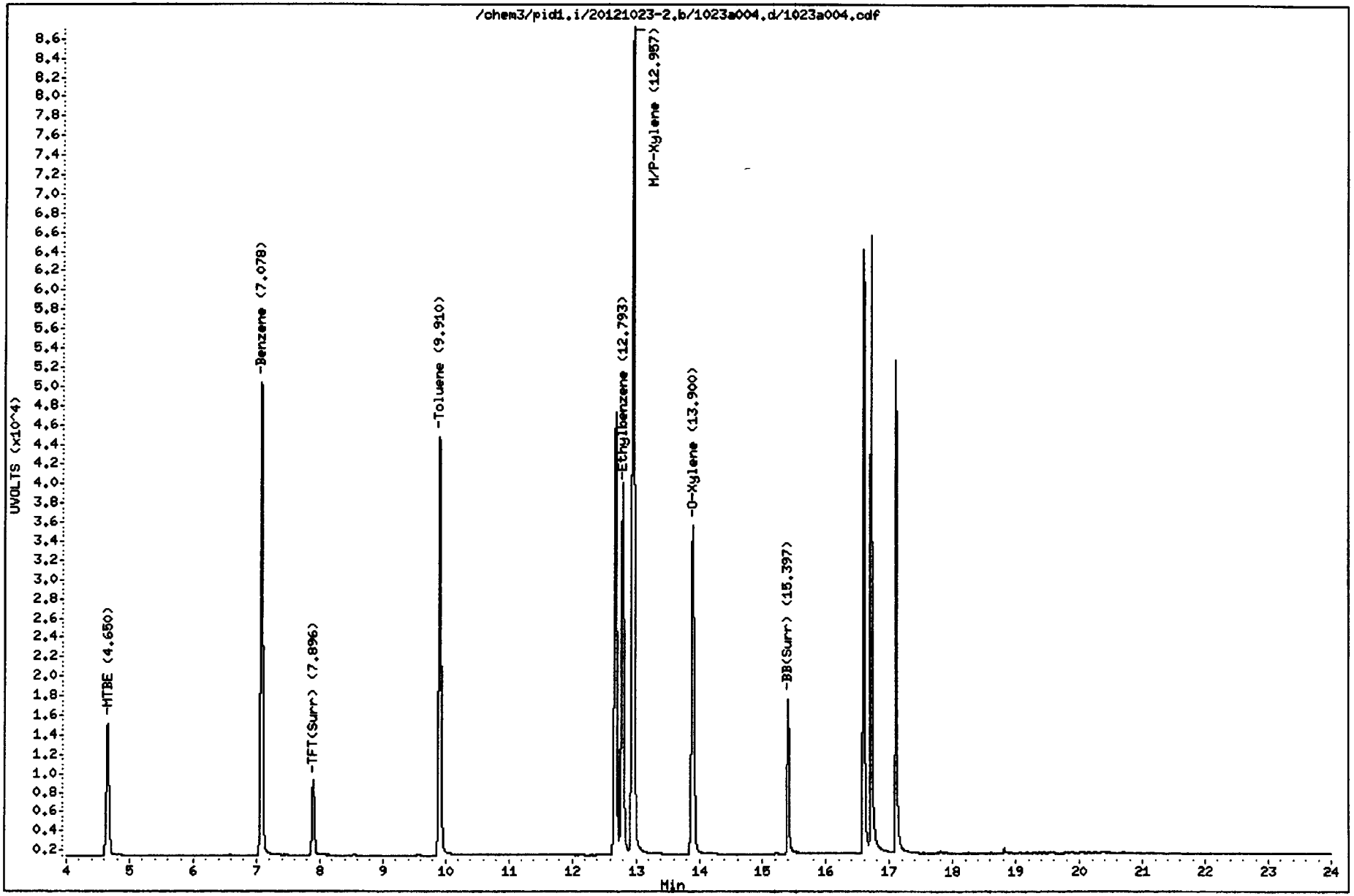
Sample Info: B 200

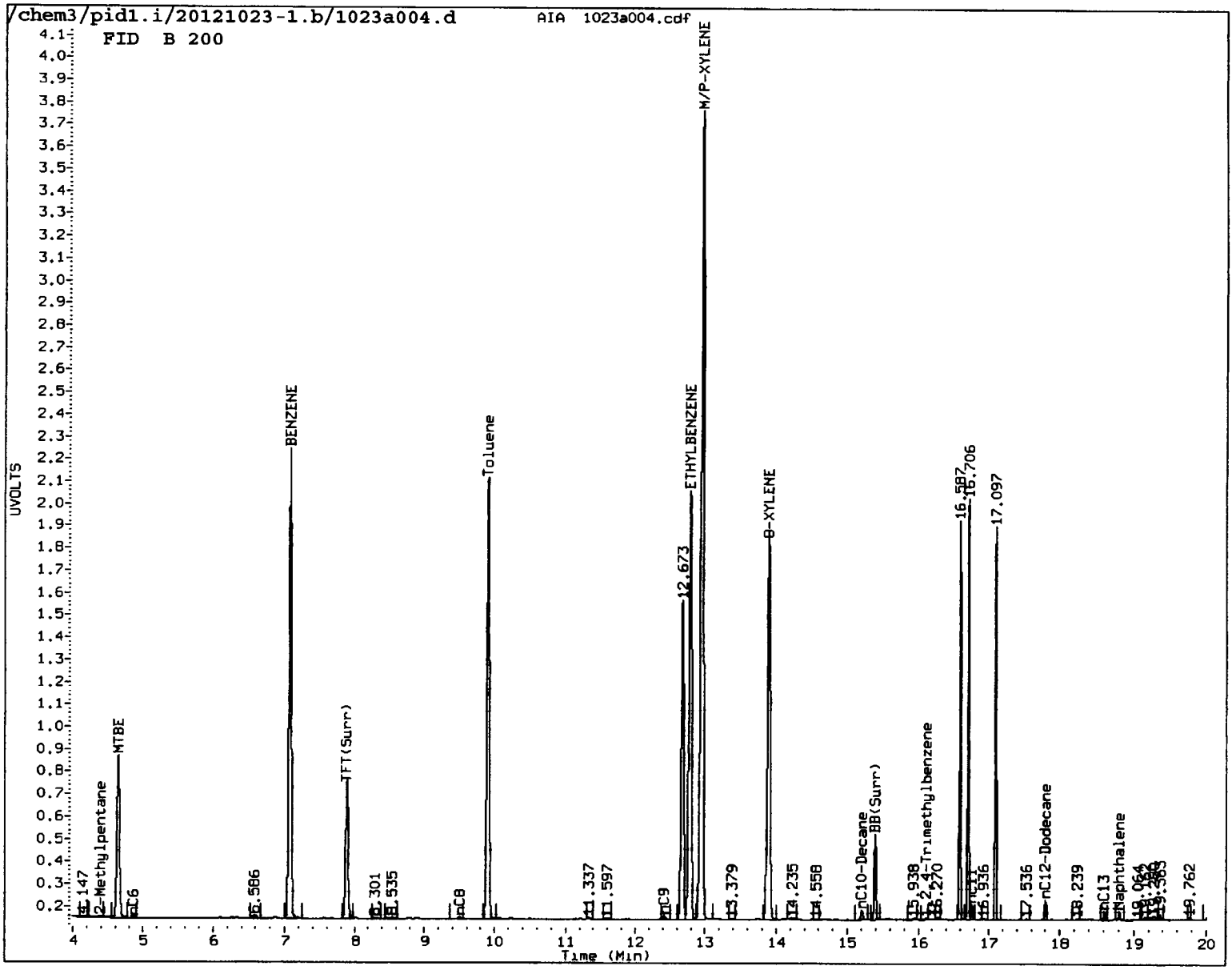
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

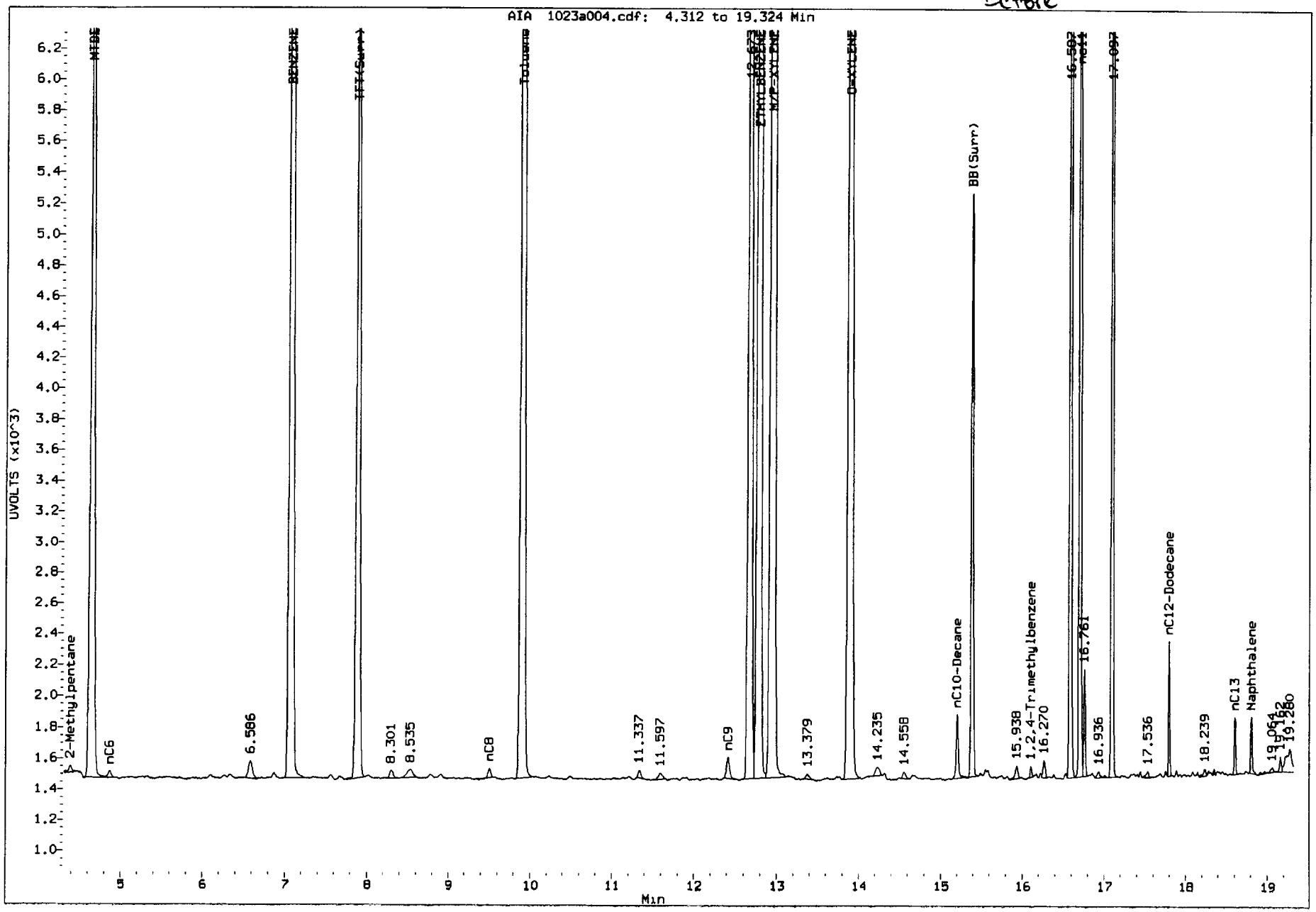
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

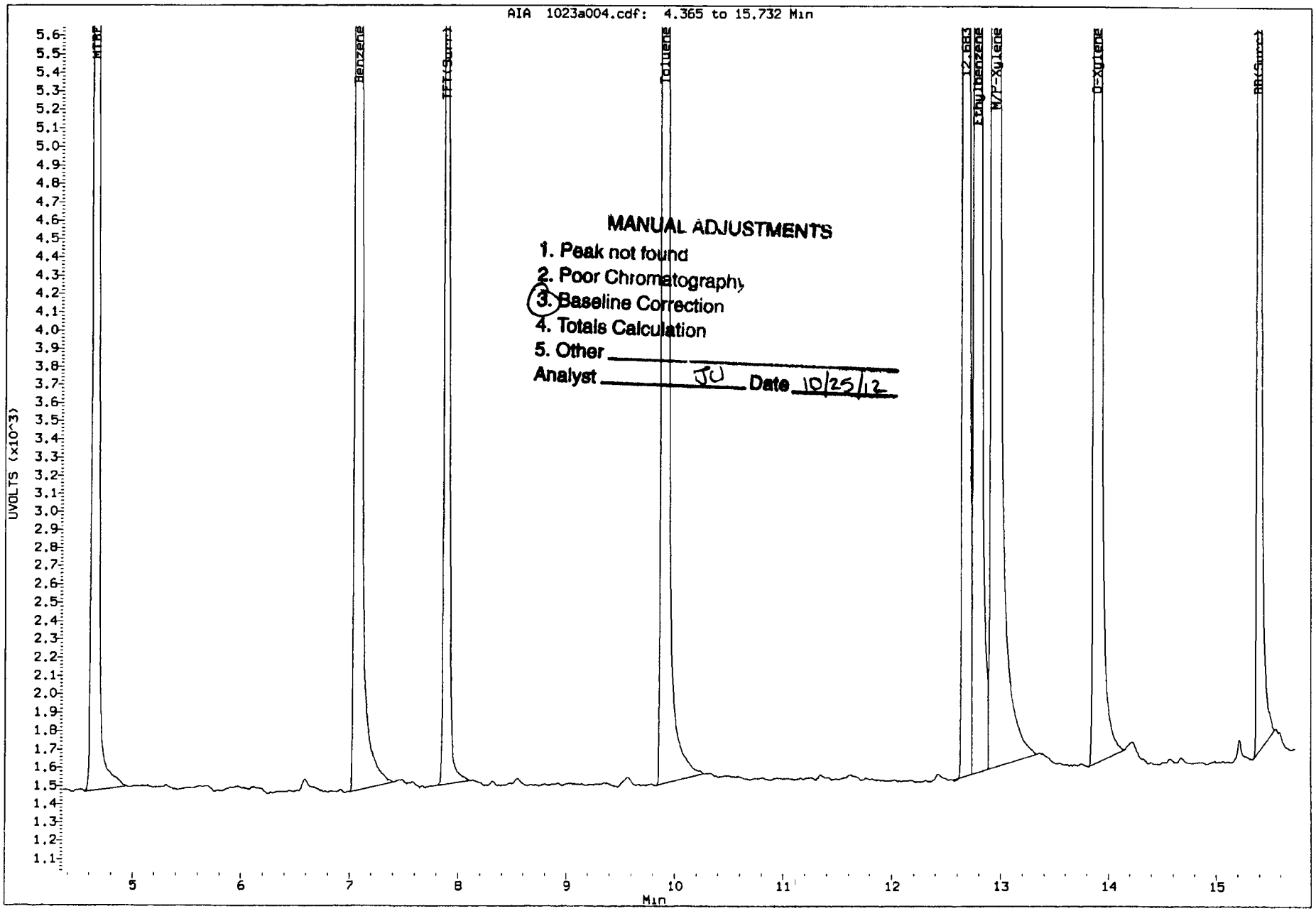
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.i
Client Sample ID:

Before

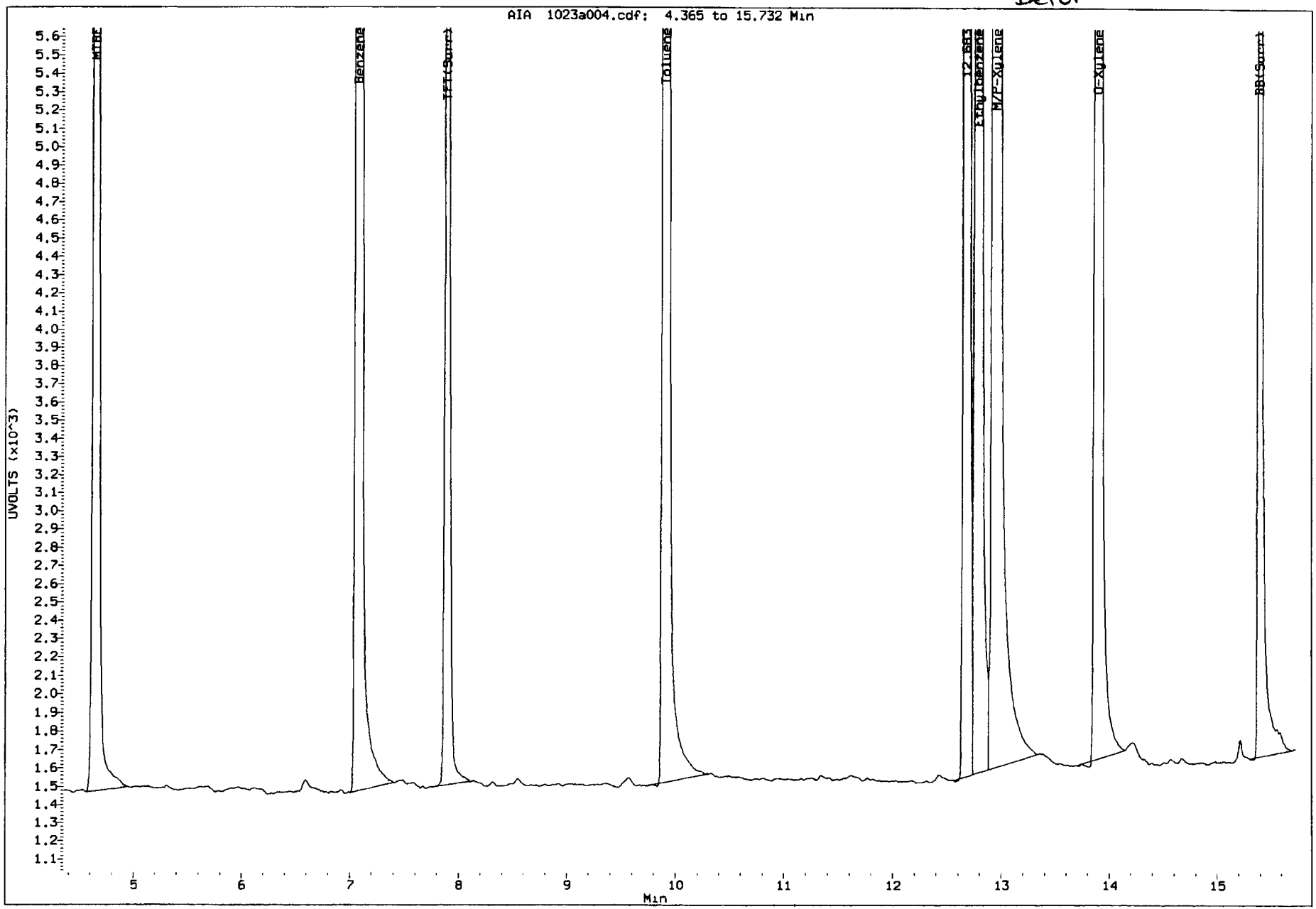


Data File: /chem3/pid1.i/20121023-2.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a005.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a005.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 100
Client ID:
Injection Date: 23-OCT-2012 18:20
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	5503	70111	174.0	TFT(Surr)
15.387	0.000	3532	29720	173.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	905684	2.529 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	901622	1.246 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	845537	1.451 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	906863	2.418 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.890	-0.003	6783	179.1	TFT(Surr)
15.393	0.000	14597	181.4	BB(Surr)

SW8021 (PID)

JW 10/25/12

RT	Shift	Response	Amount	Compound
7.073	-0.003	24688	99.56N	Benzene
9.903	-0.003	22030	97.92N	Toluene
12.785	-0.002	19930	101.08	Ethylbenzene
12.948	0.004	43574	202.66	M/P-Xylene
13.893	0.003	17274	102.92N	O-Xylene
4.650	-0.003	7239	100.54N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a005.d

Date : 23-OCT-2012 18:20

Client ID:

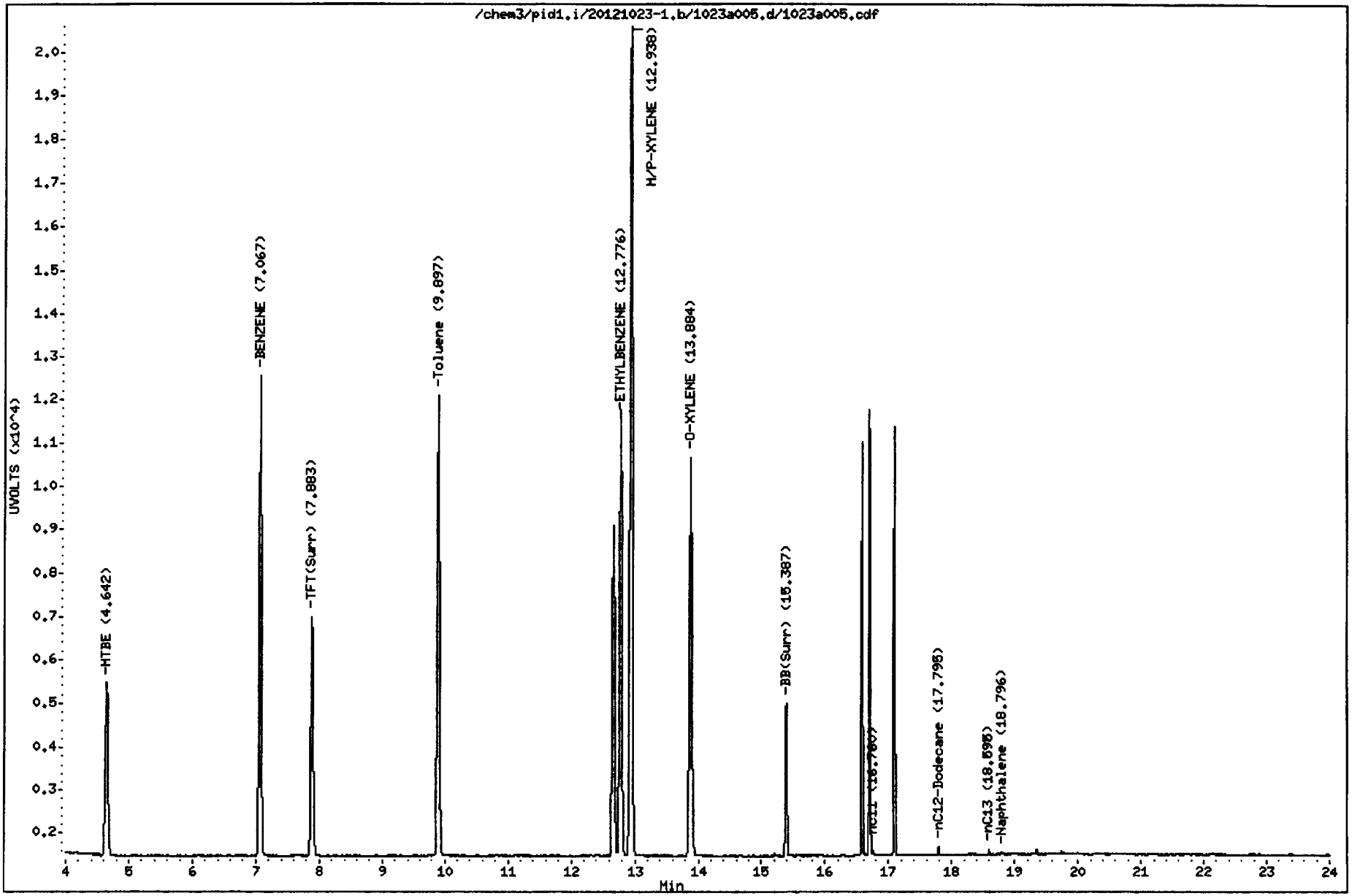
Sample Info: B 100

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a005.d

Date : 23-OCT-2012 18:20

Client ID:

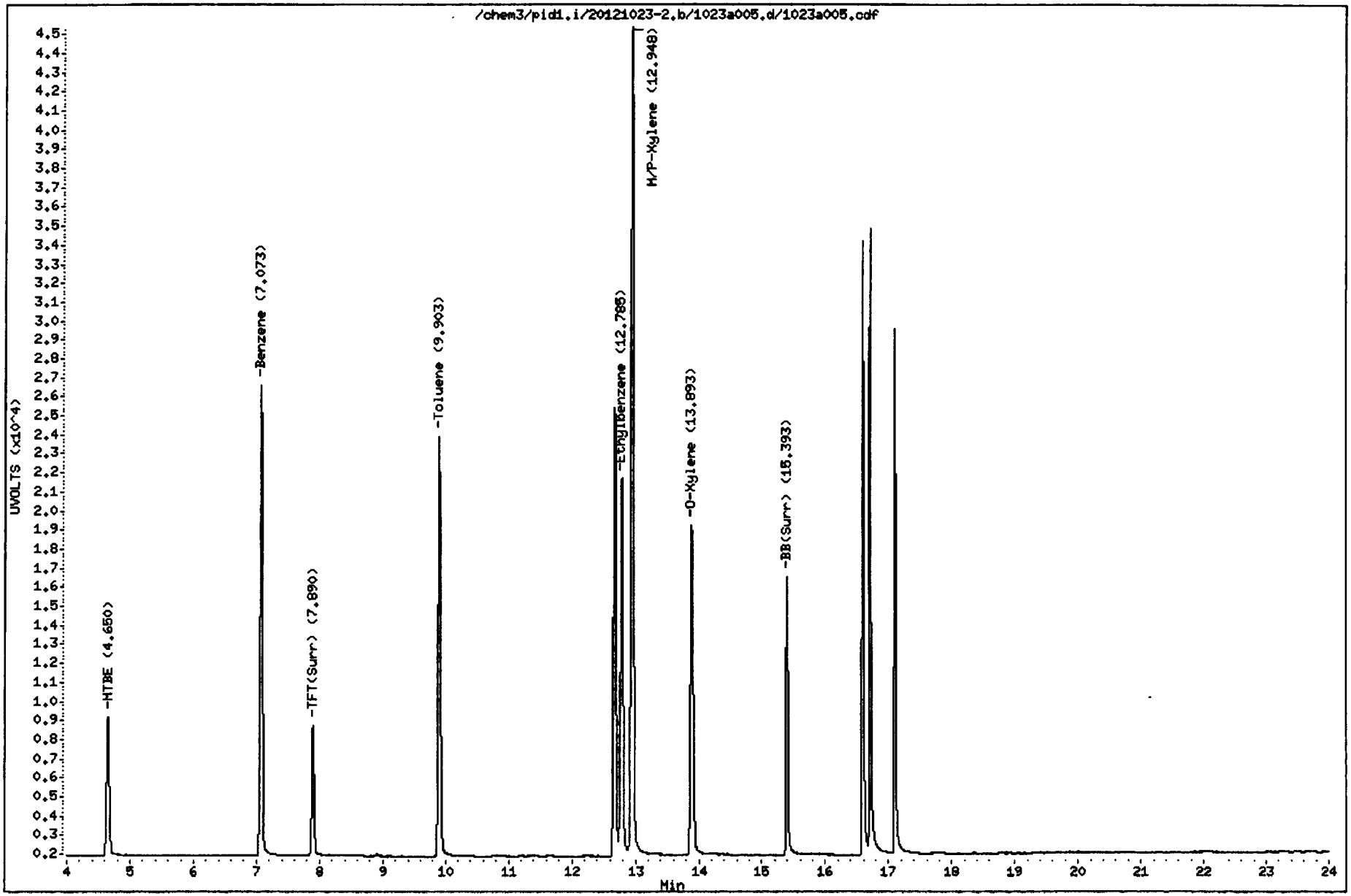
Sample Info: B 100

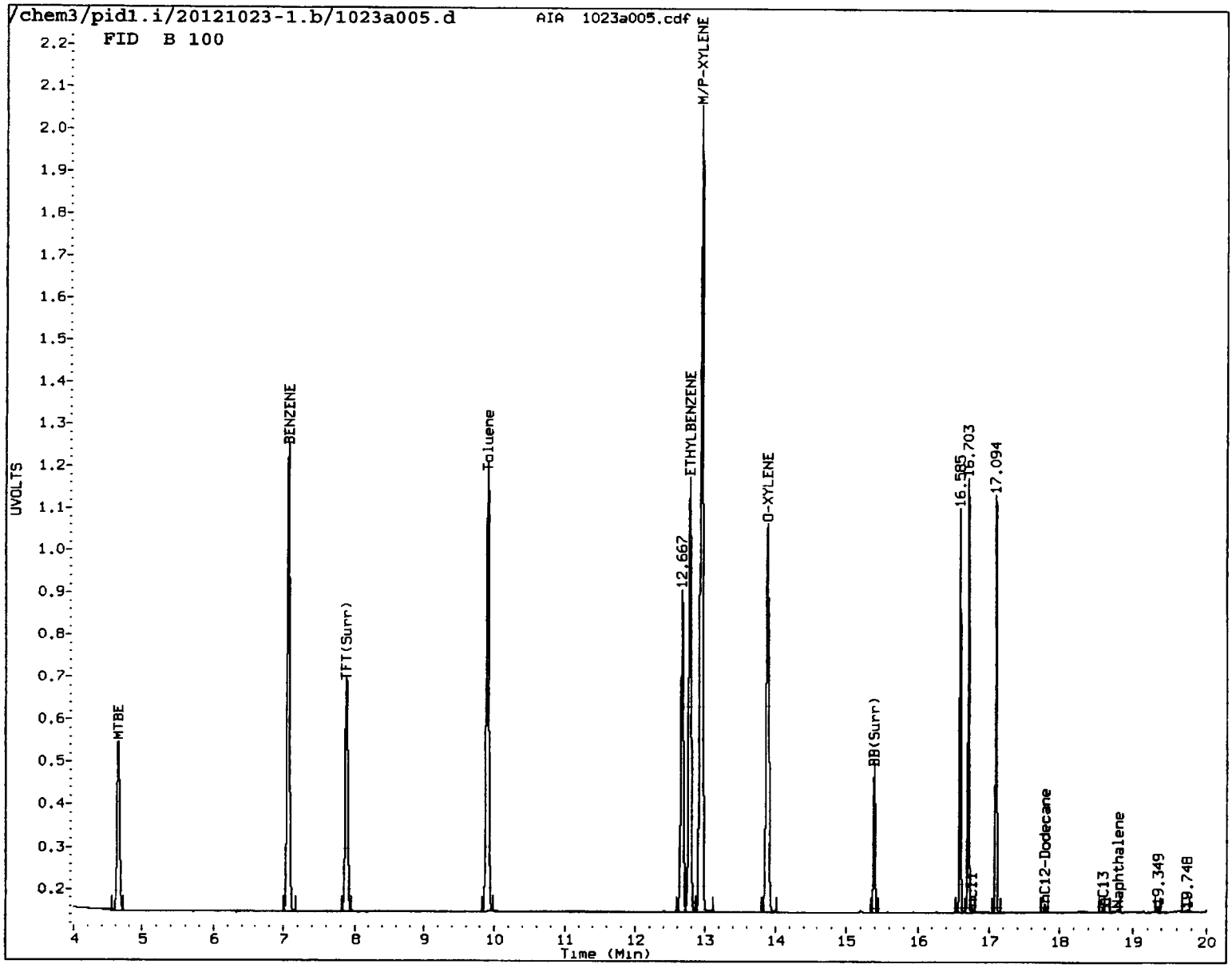
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

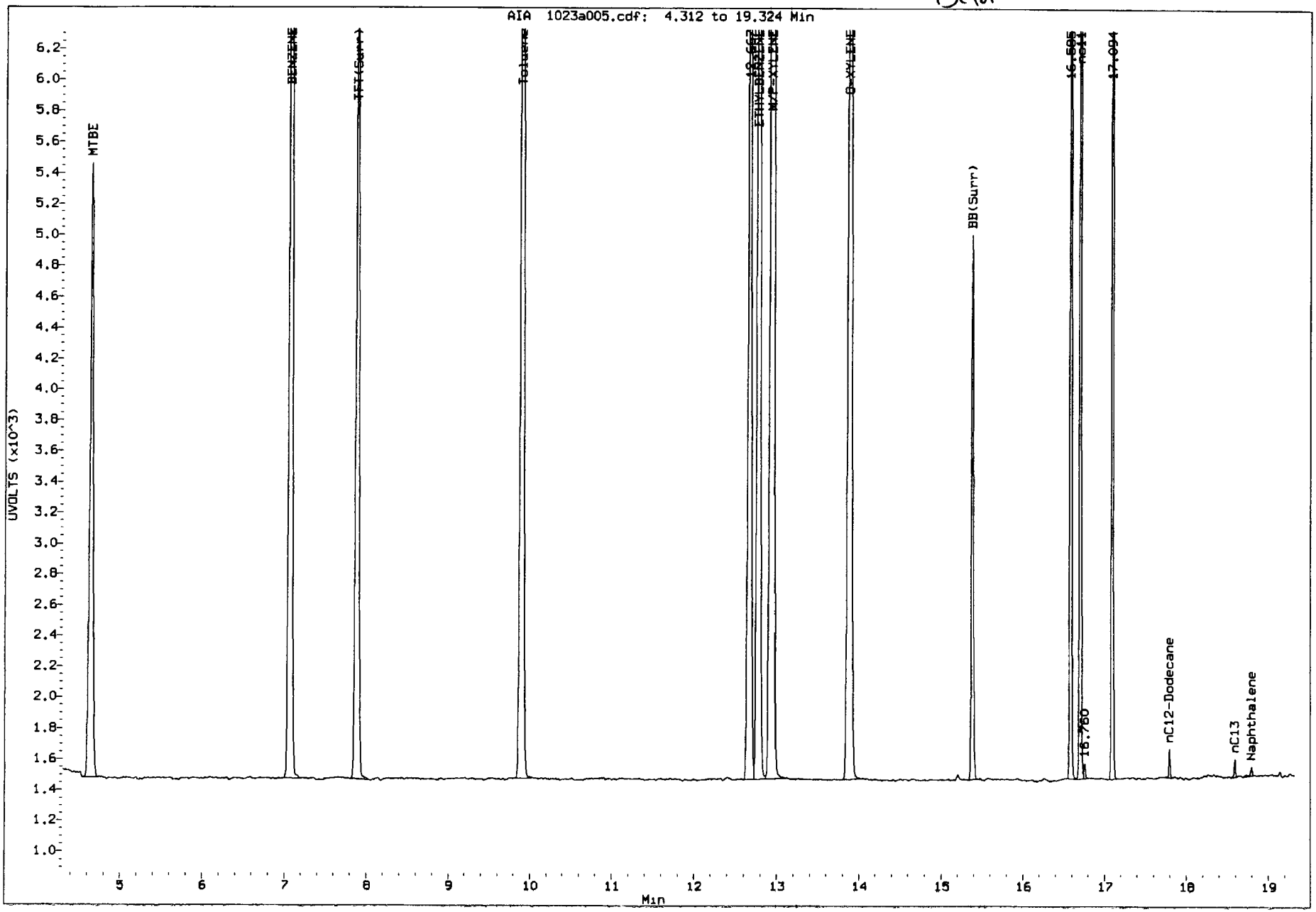
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

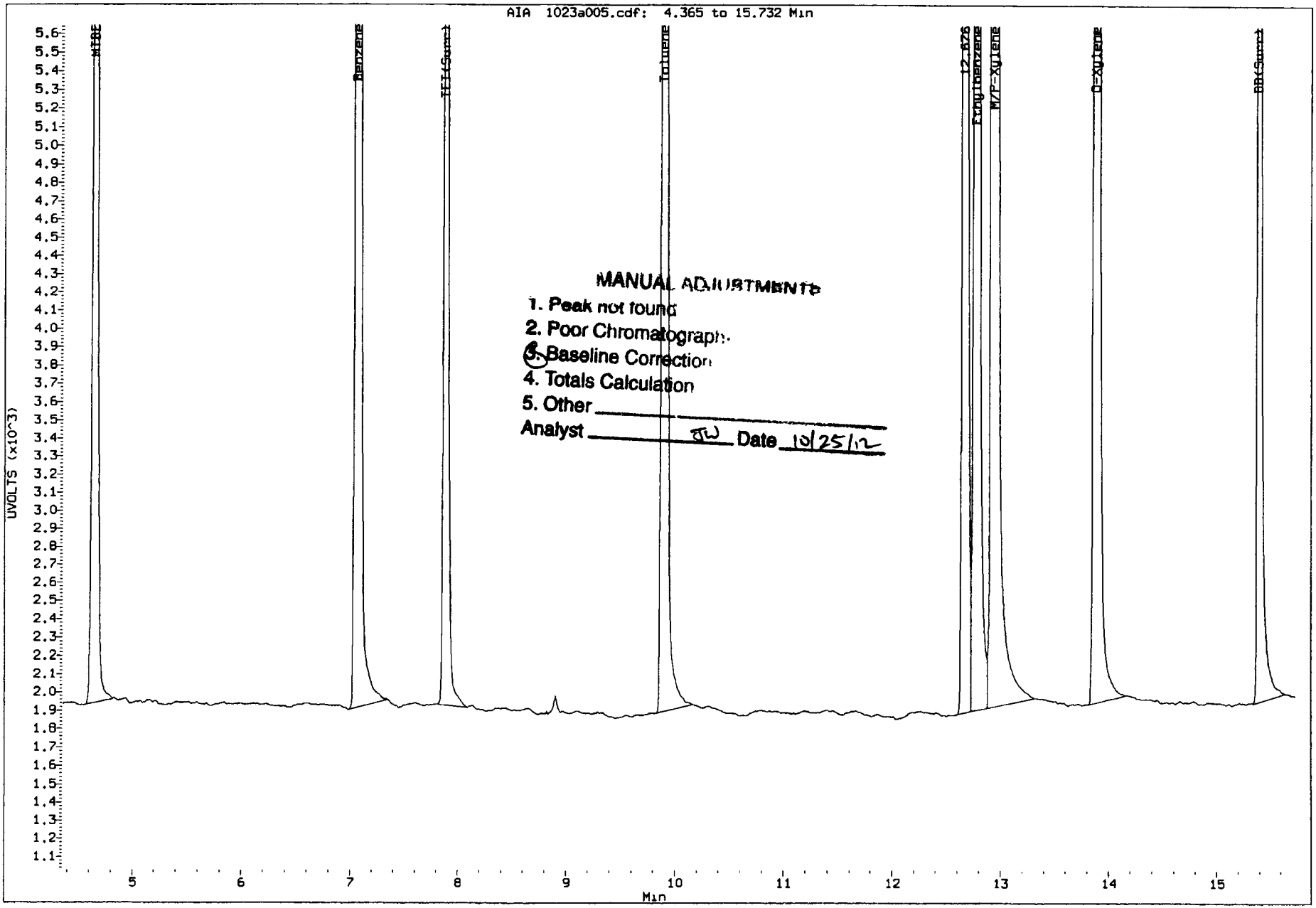
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a005.d/1023a005.cdf
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.i
Client Sample ID:

Before

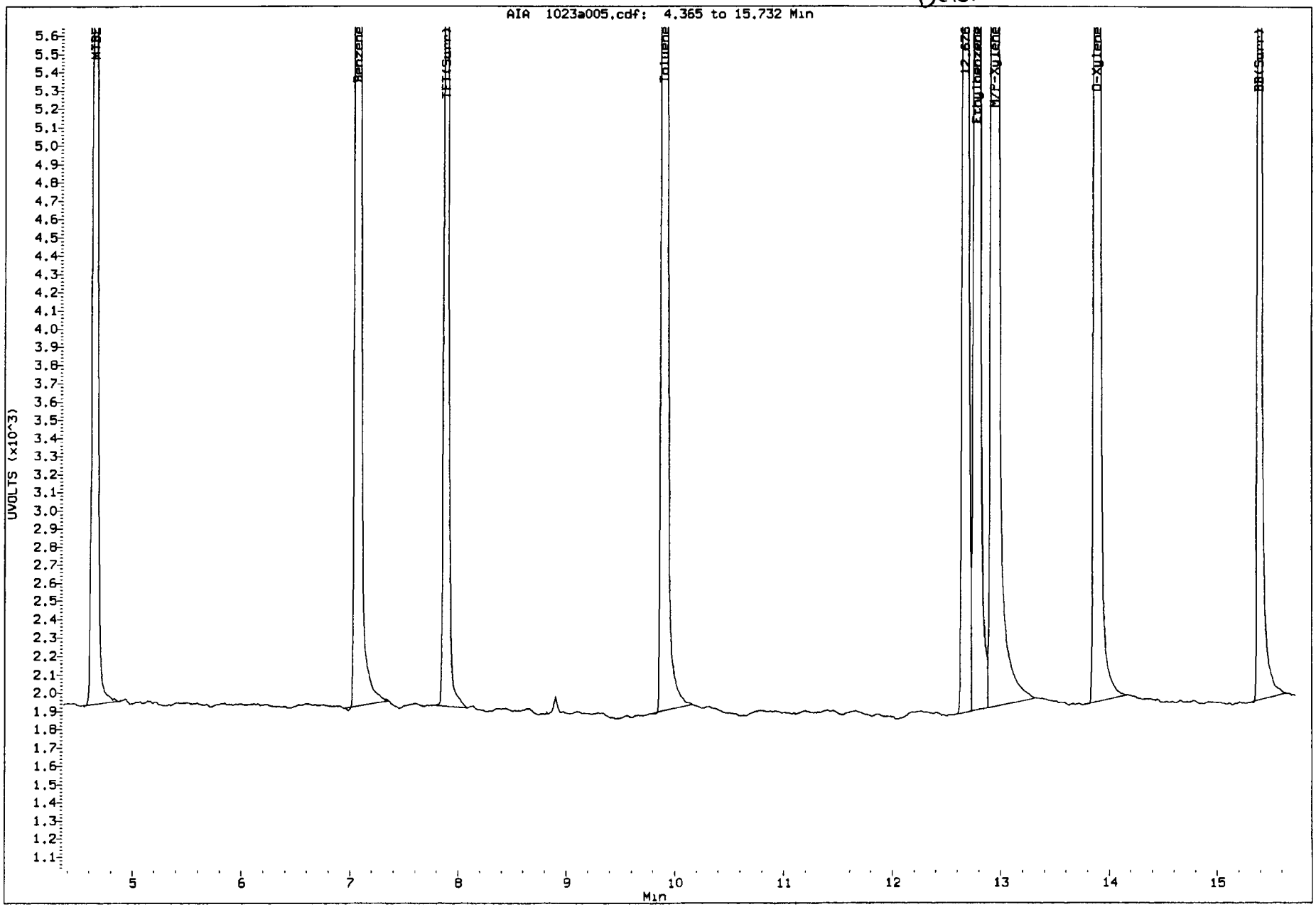


Data File: /chem3/pid1.i/20121023-2.b/1023a005.d/1023a005.cdf
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a005.d/1023a005.cdf
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a006.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a006.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 50
Client ID:
Injection Date: 23-OCT-2012 18:49
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	4094	52140	129.5	TFT(Surr)
15.387	0.000	2638	22027	129.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	466249	1.302 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	465082	0.643 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	436325	0.749 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	466249	1.243 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	4918	129.8	TFT(Surr)
15.393	0.000	10672	132.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	12380	49.92	Benzene
9.903	-0.003	10965	48.74N	Toluene
12.784	-0.003	9886	50.14	Ethylbenzene
12.946	0.002	21661	100.75	M/P-Xylene
13.890	0.000	8535	50.85N	O-Xylene
4.653	0.000	3607	50.10N	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a006.d

Date : 23-OCT-2012 18:49

Client ID:

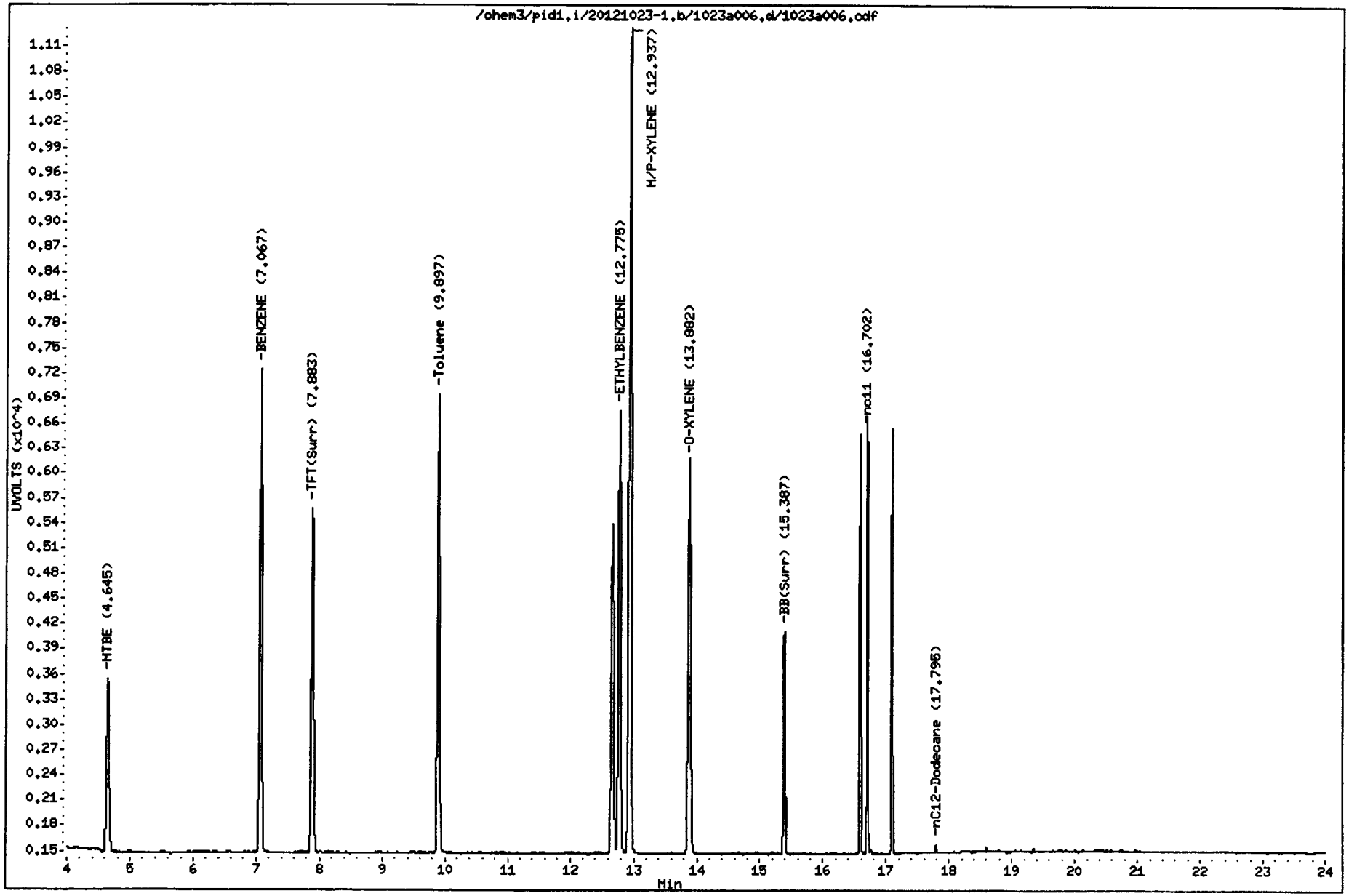
Sample Info: B 50

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a006.d

Date : 23-OCT-2012 18:49

Client ID:

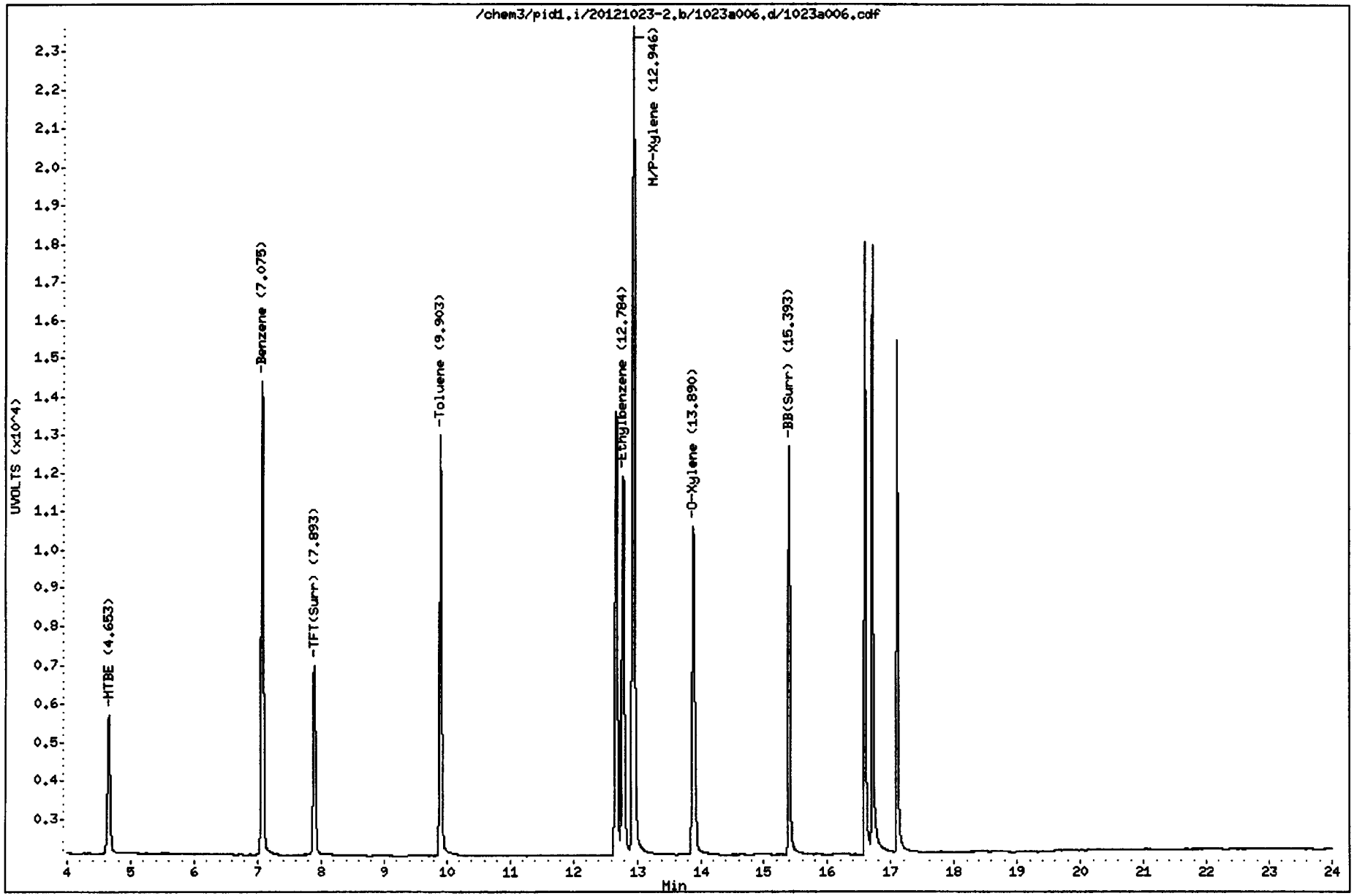
Sample Info: B 50

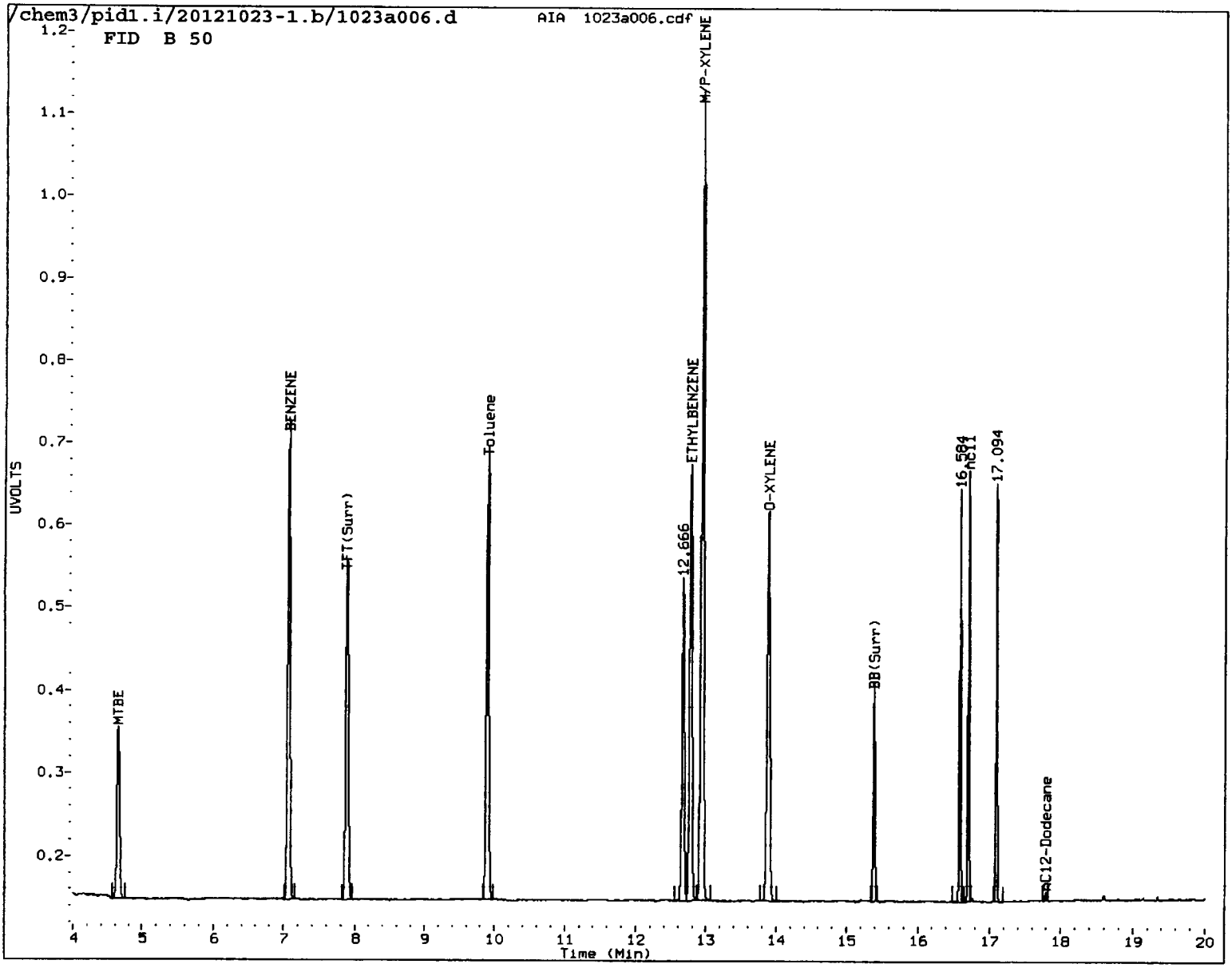
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

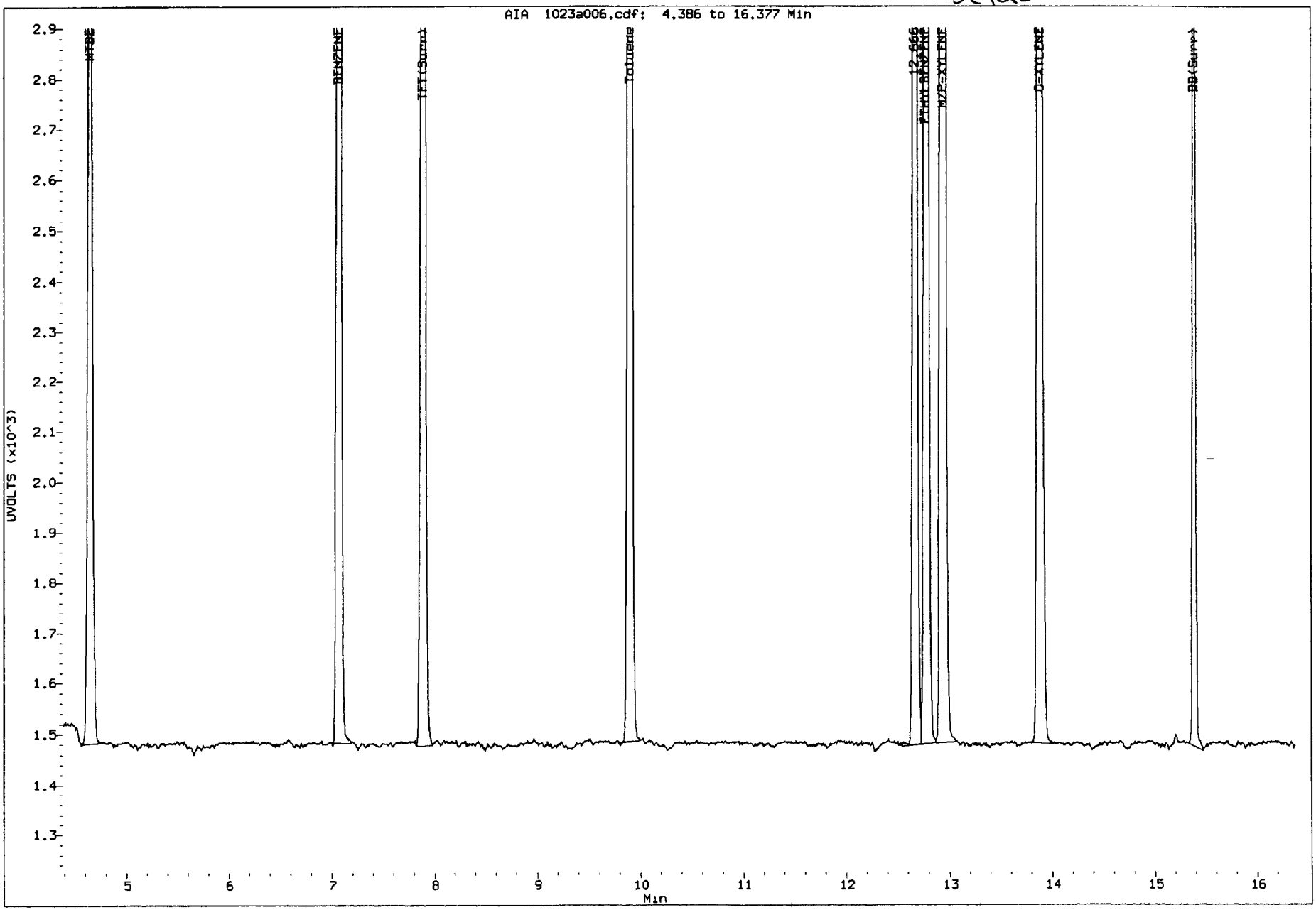
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

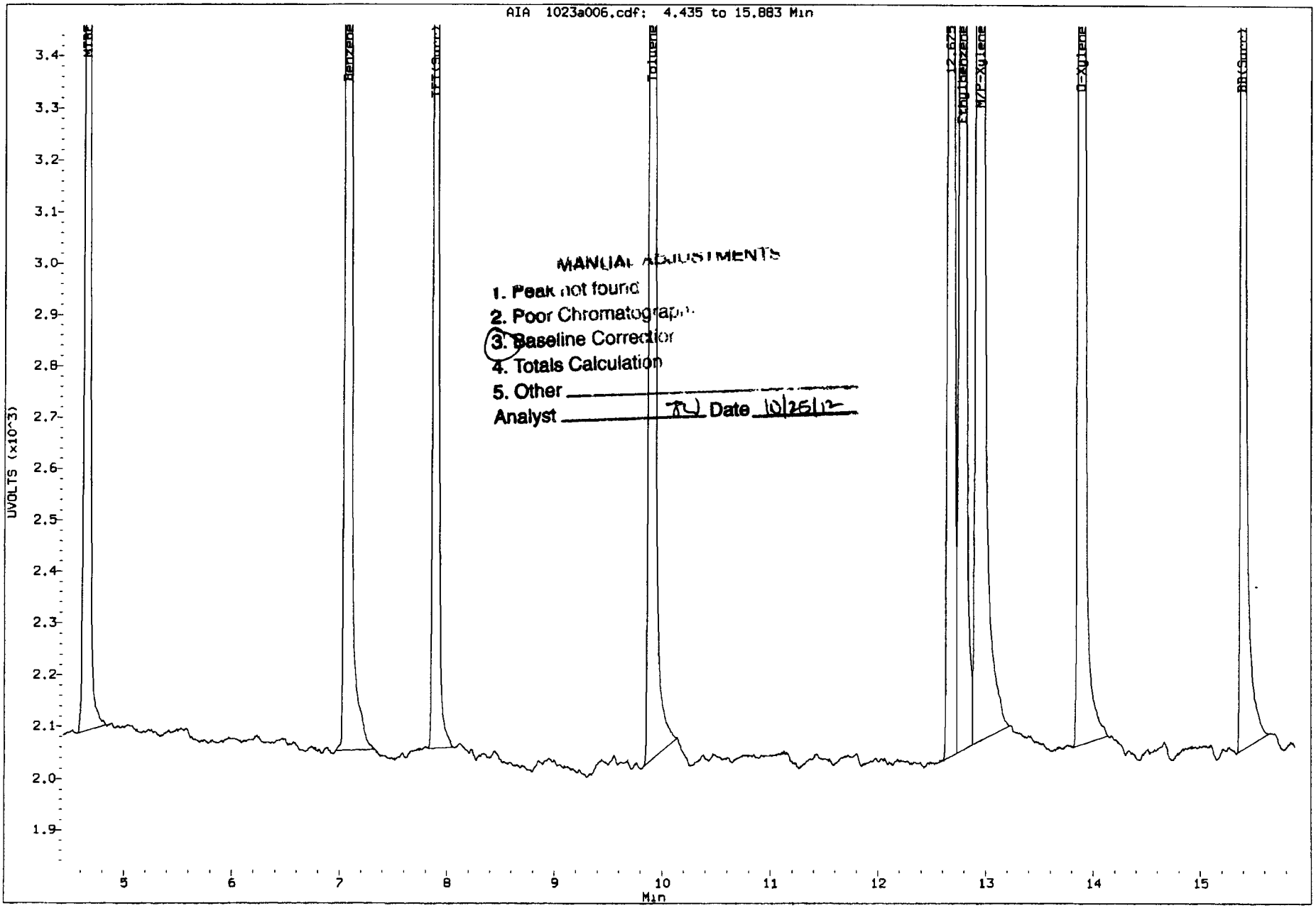
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.i
Client Sample ID:

Before

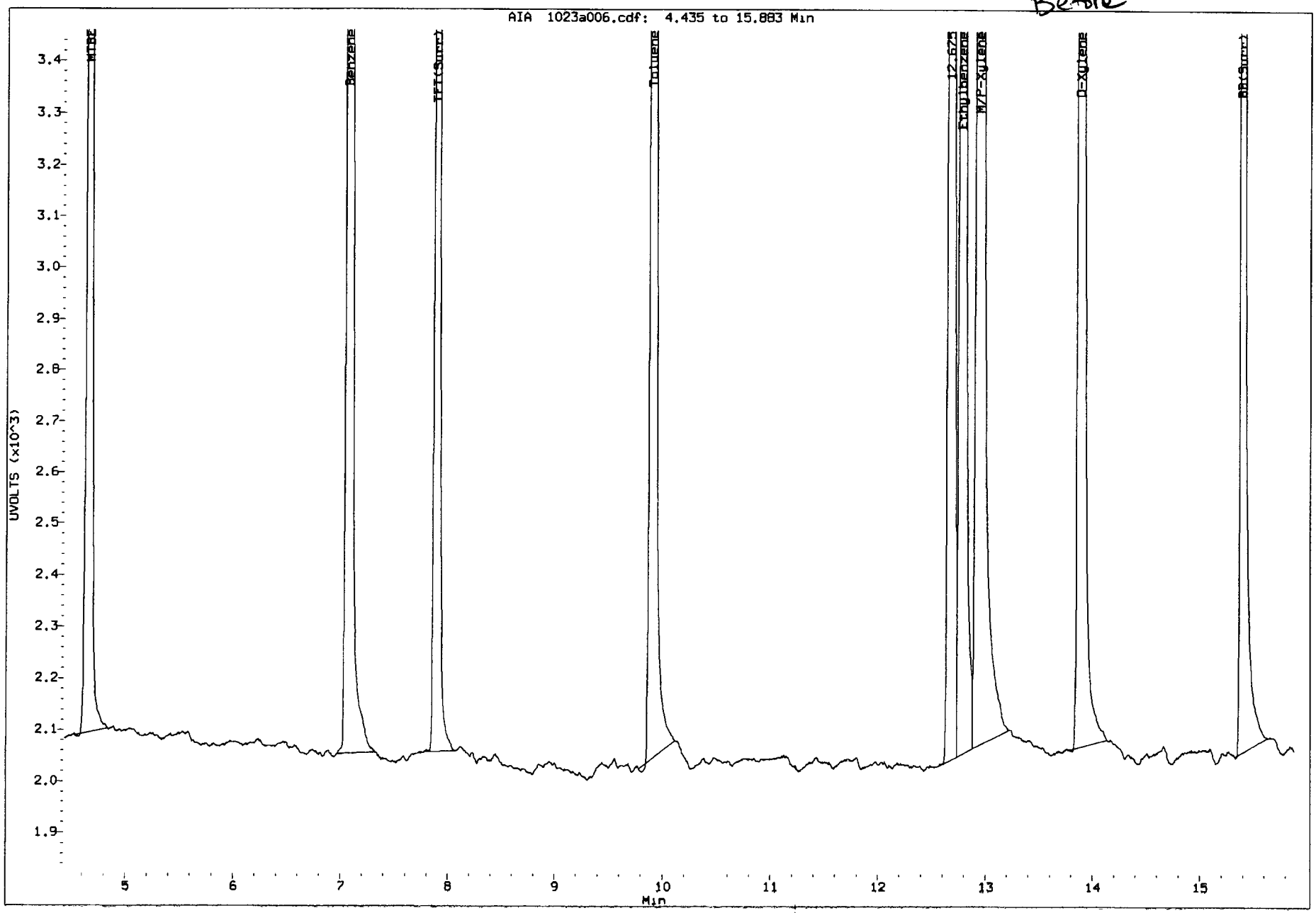


Data File: /chem3/pid1.i/20121023-2.b/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a007.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a007.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 25
Client ID:
Injection Date: 23-OCT-2012 19:18
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.000	3134	40267	99.2	TFT(Surr)
15.387	0.000	2031	17131	99.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	239603	0.669 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	238961	0.330 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	224080	0.384 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	239603	0.639 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3730	98.5	TFT(Surr)
15.397	0.003	8055	100.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.077	0.000	6159	24.84N	Benzene
9.907	0.000	5498	24.44N	Toluene
12.785	-0.002	4891	24.81	Ethylbenzene
12.946	0.003	10737	49.94	M/P-Xylene
13.893	0.003	4292	25.57N	O-Xylene
4.653	0.000	1796	24.94N	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a007.d

Date : 23-OCT-2012 19:18

Client ID:

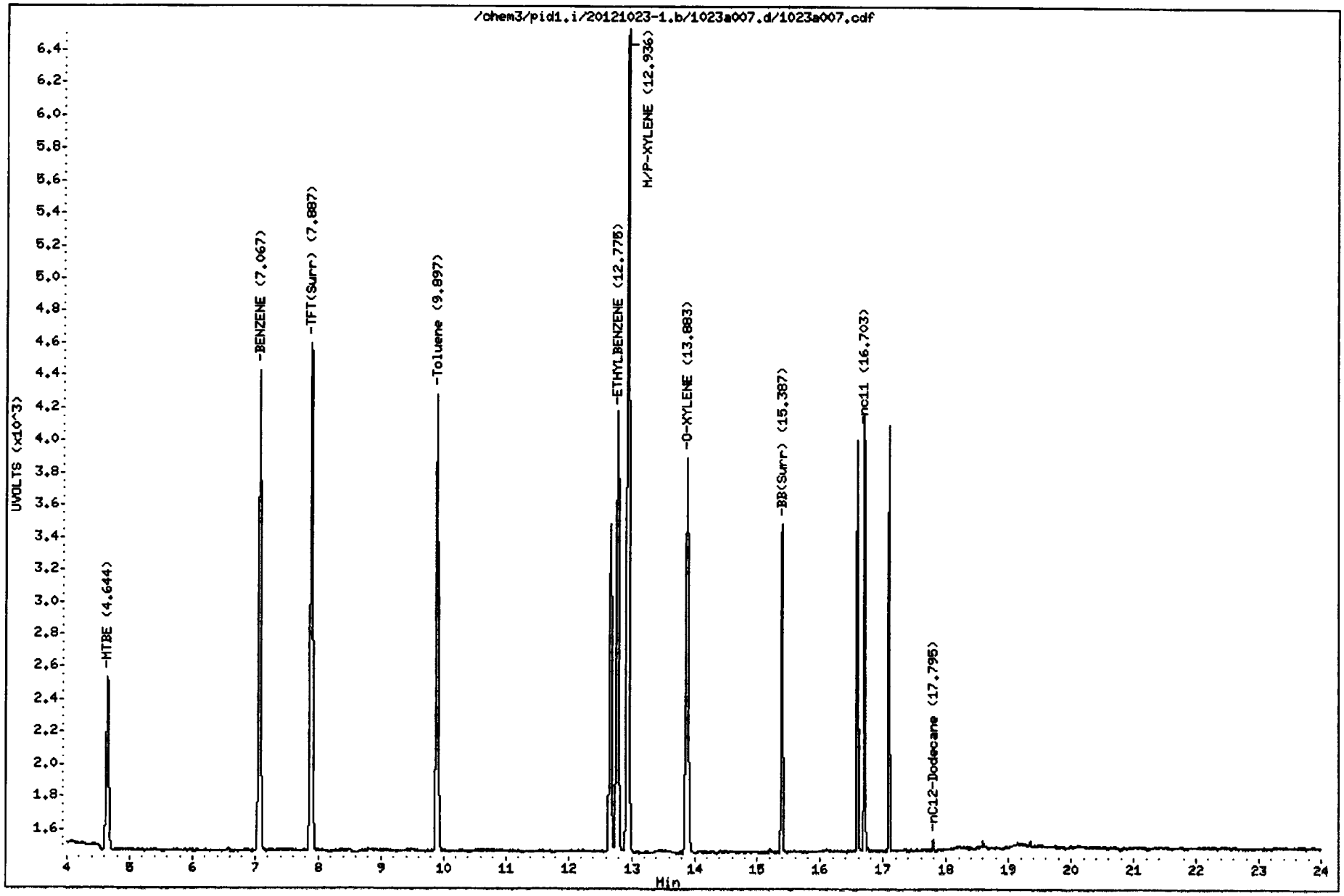
Sample Info: B 25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

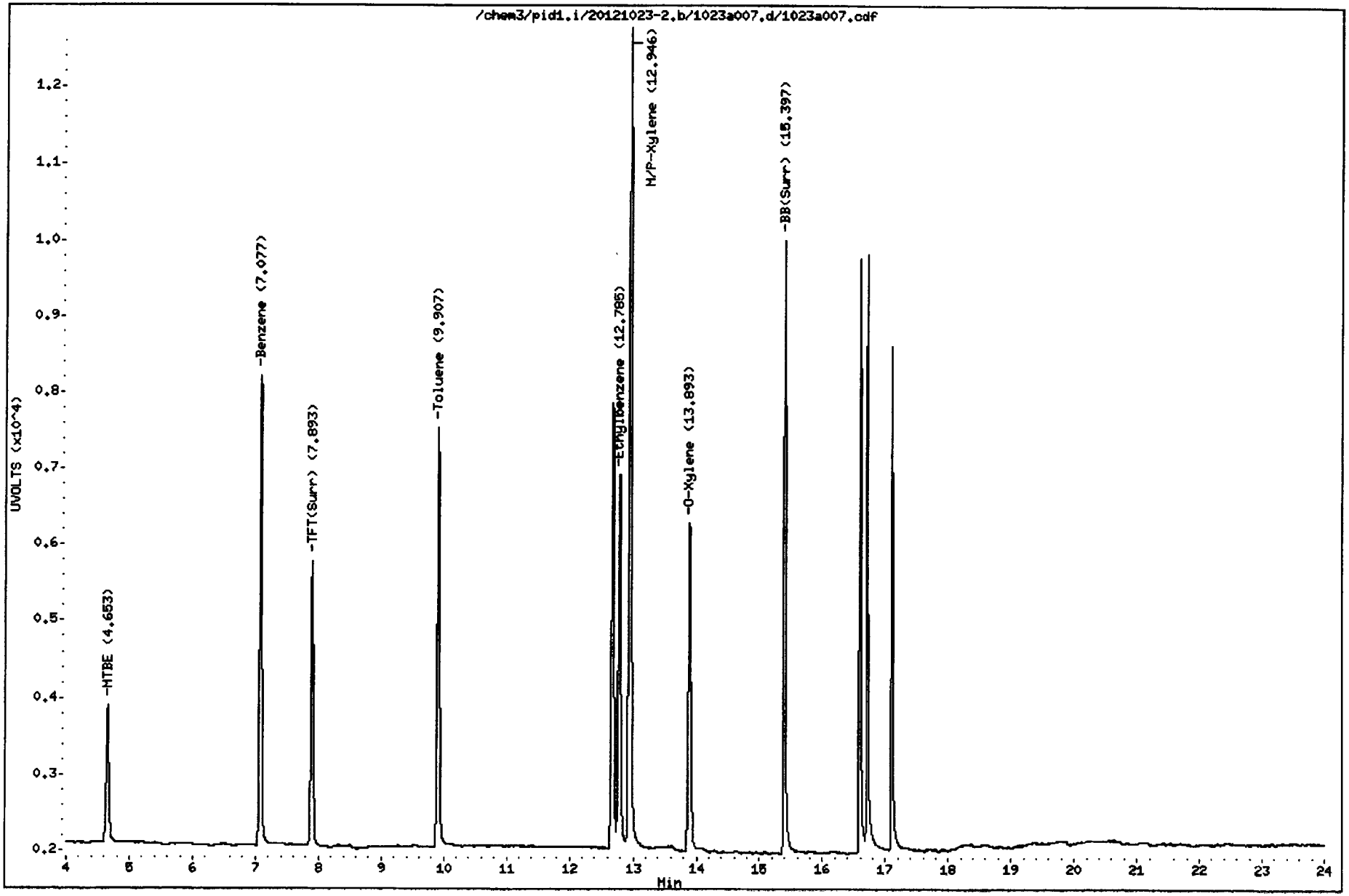


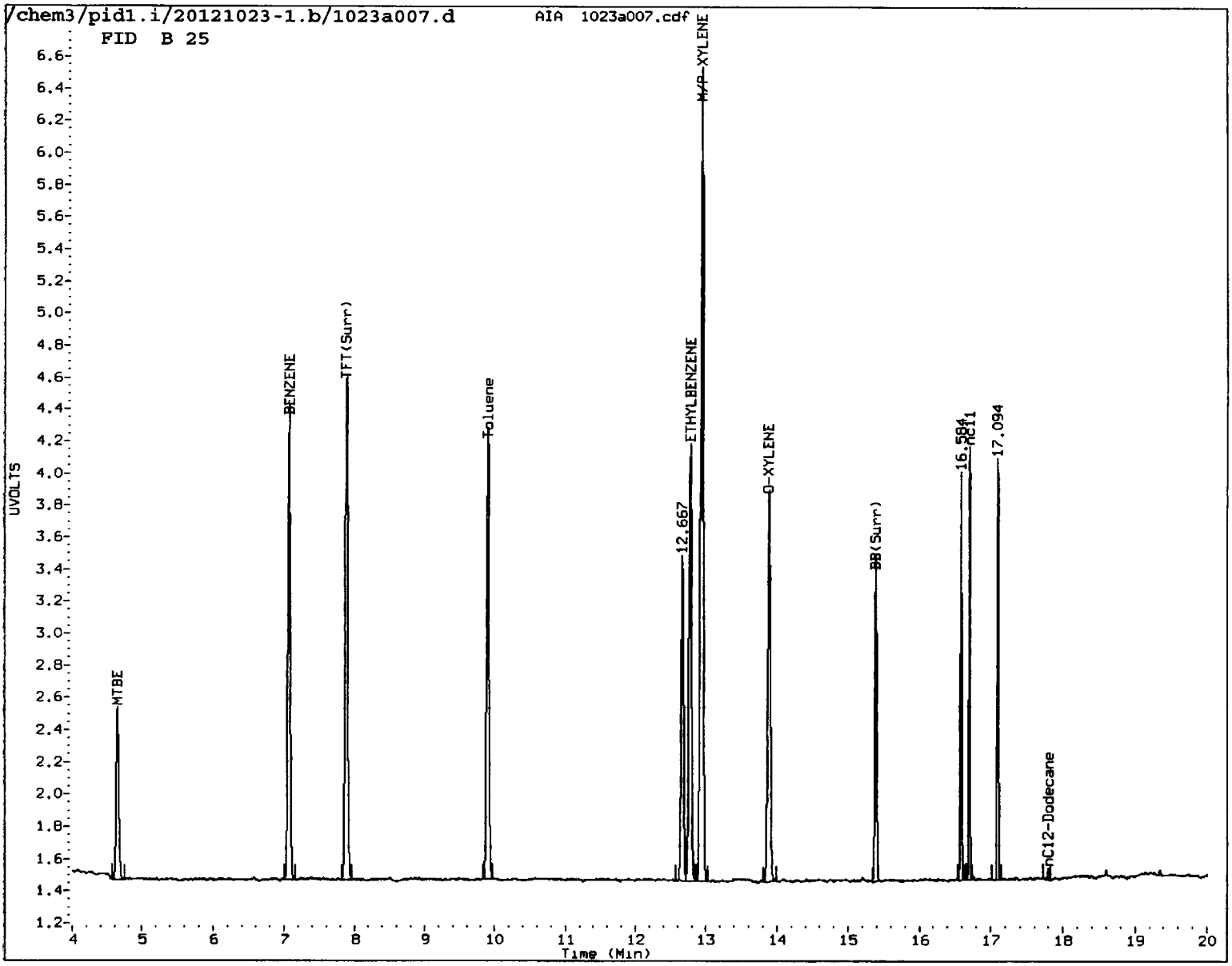
Data File: /chem3/pid1.i/20121023-2.b/1023a007.d
Date : 23-OCT-2012 19:18
Client ID:
Sample Info: B 25

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18





MANUAL INTEGRATION

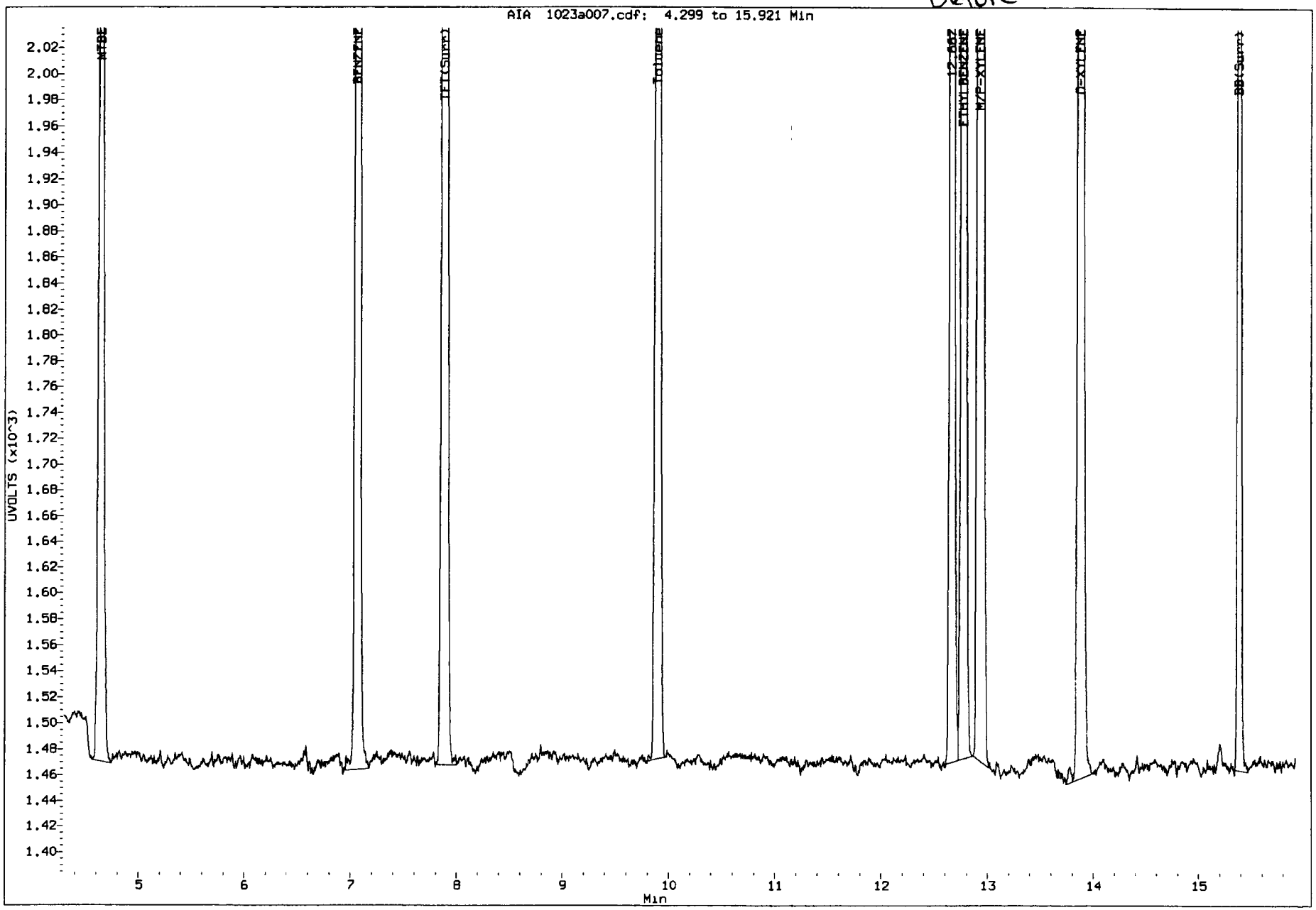
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

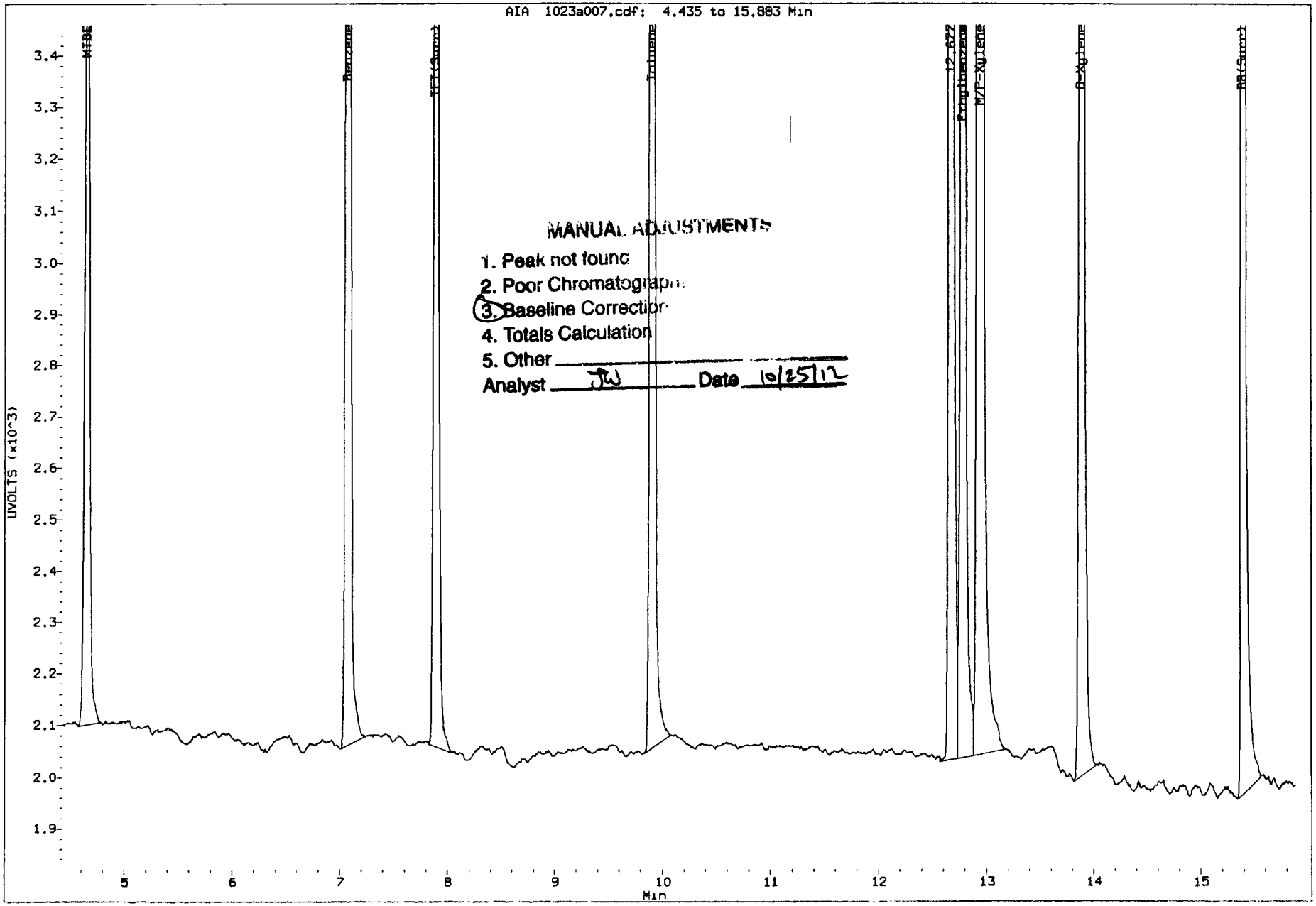
Analyst: JU Date: 10/25/12

Data File: /chem3/pid1.1/20121023-1.b/1023a007.d/1023a007.cdf
Injection Date: 23-OCT-2012 19:18
Instrument: pid1.1
Client Sample ID:

Before

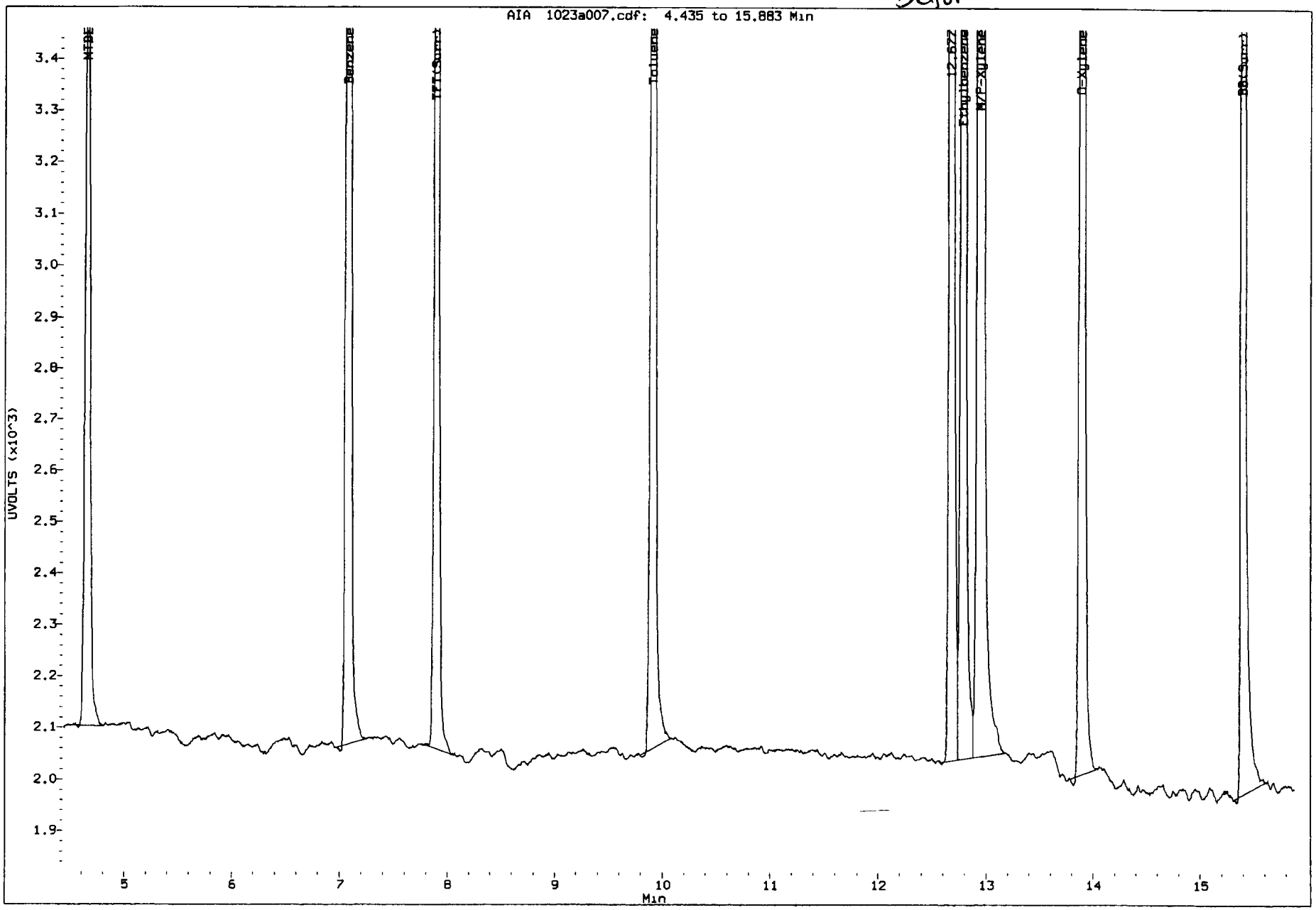


Data File: /chem3/pid1.i/20121023-2.b/1023a007.d/1023a007.cdf
Injection Date: 23-OCT-2012 19:18
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a007.d/1023a007.cdf
Injection Date: 23-OCT-2012 19:18
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a008.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a008.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 5
Client ID:
Injection Date: 23-OCT-2012 19:47
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	2118	27080	67.0	TFT(Surr)
15.387	0.000	1387	11721	68.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	52469	0.147 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	51824	0.072 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	48775	0.084 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	52469	0.140 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.890	-0.003	2516	66.4	TFT(Surr)
15.393	0.000	5386	66.9	BB(Surr)

JW 10/25/12

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.003	1275	5.14N	Benzene
9.903	-0.003	1121	4.98N	Toluene
12.785	-0.002	1007	5.11	Ethylbenzene
12.945	0.002	2196	10.21	M/P-Xylene
13.893	0.003	856	5.10N	O-Xylene
4.647	-0.007	377	5.24N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a008.d

Date : 23-OCT-2012 19:47

Client ID:

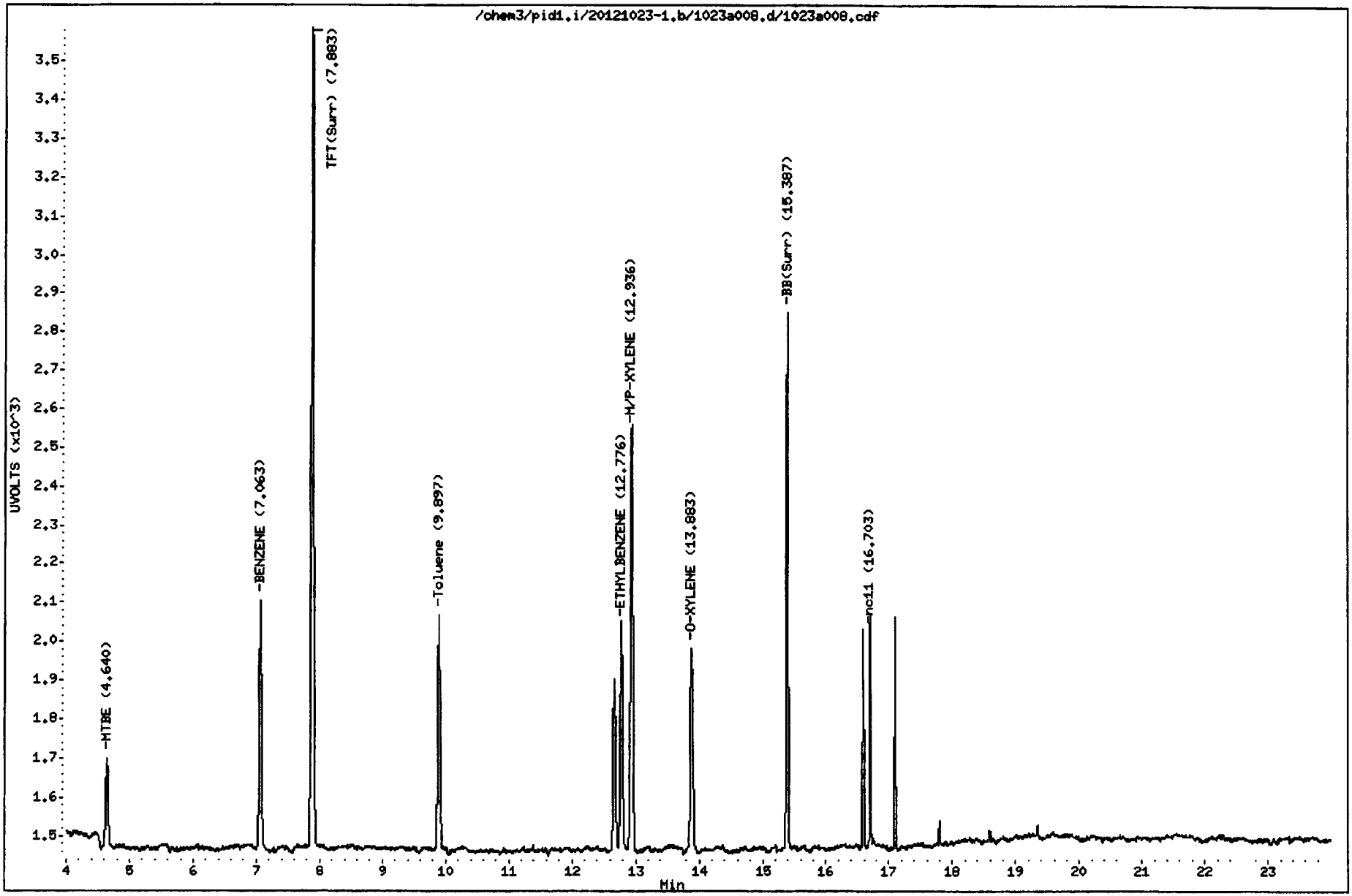
Sample Info: B 5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a008.d

Date : 23-OCT-2012 19:47

Client ID:

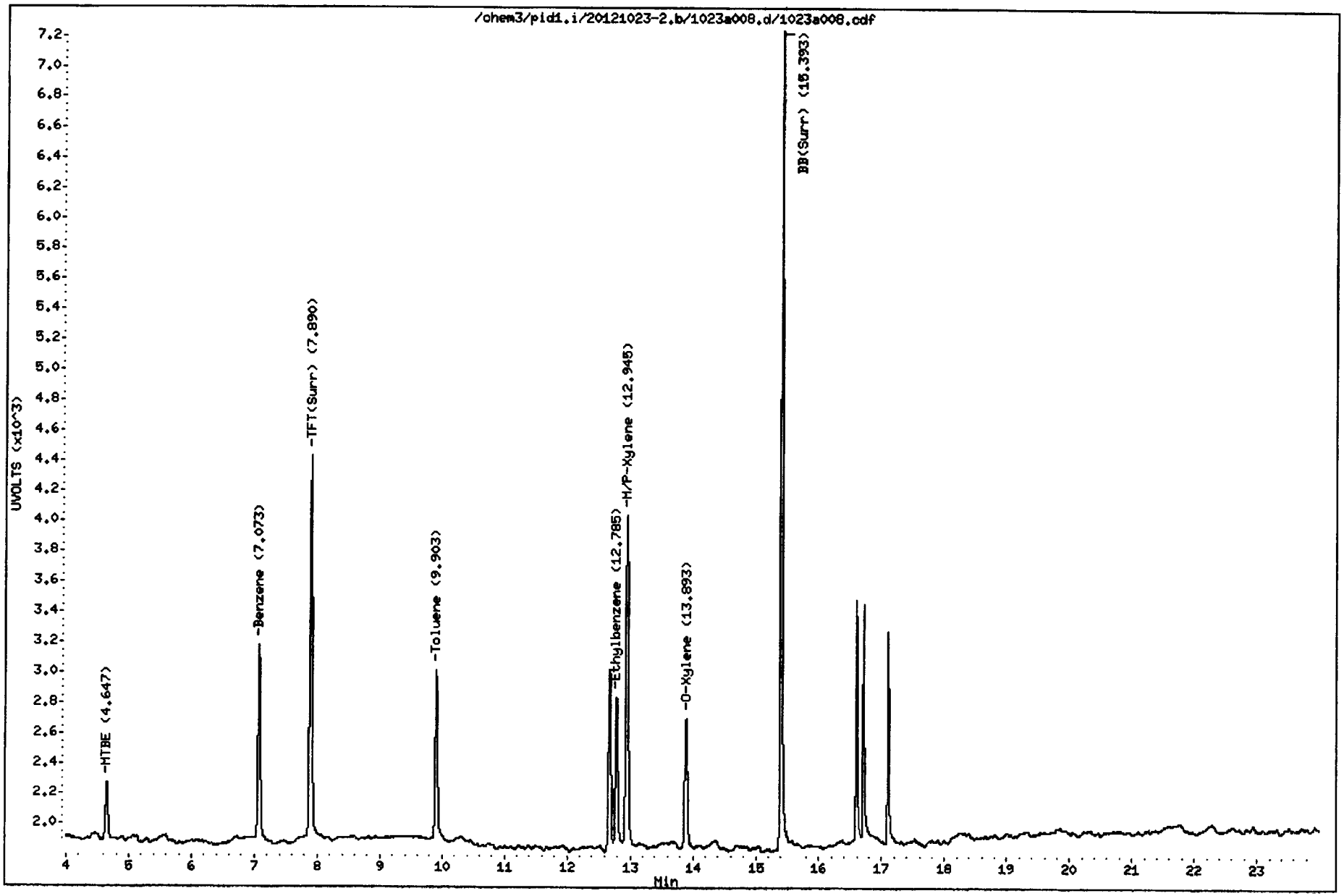
Sample Info: B 5

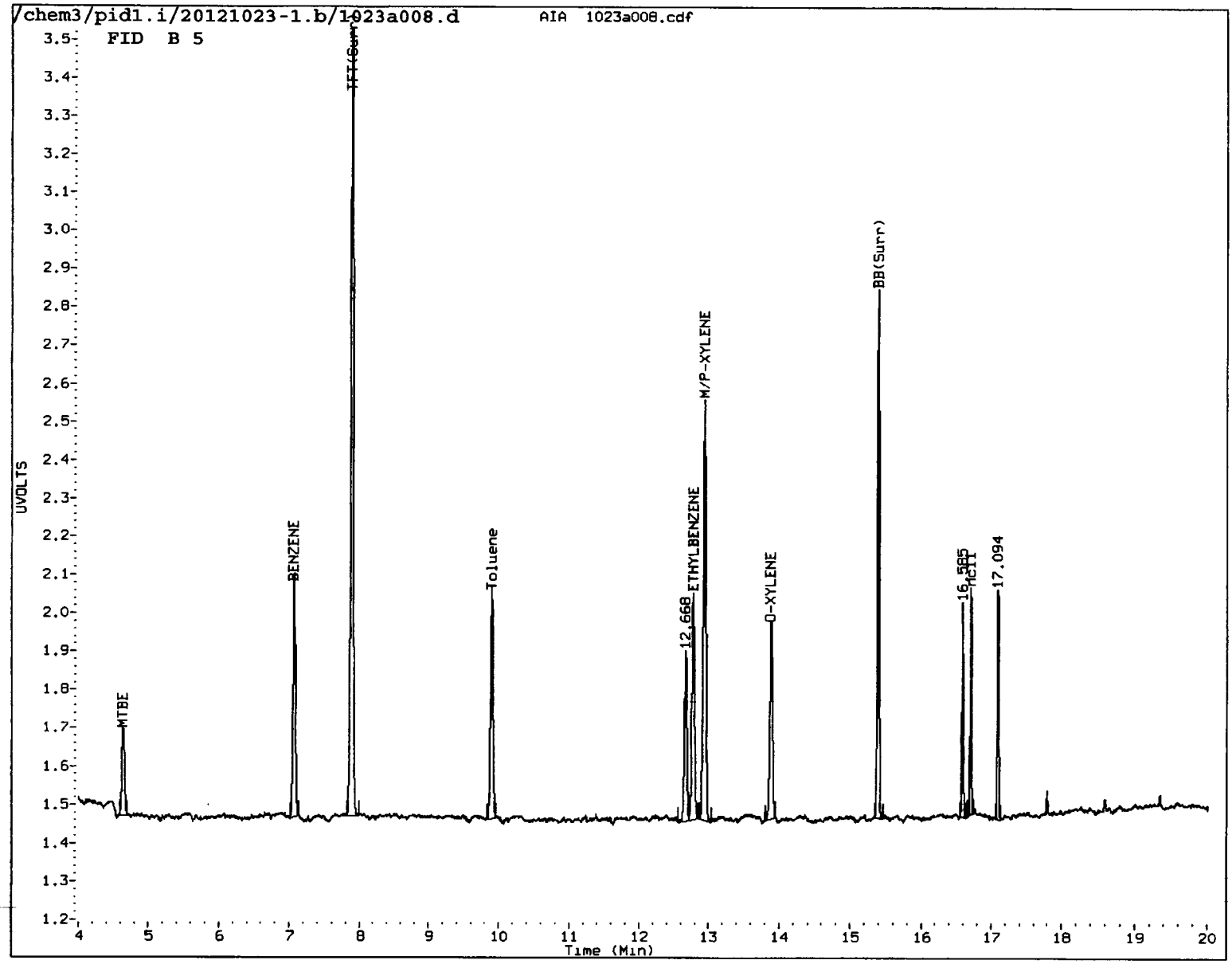
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

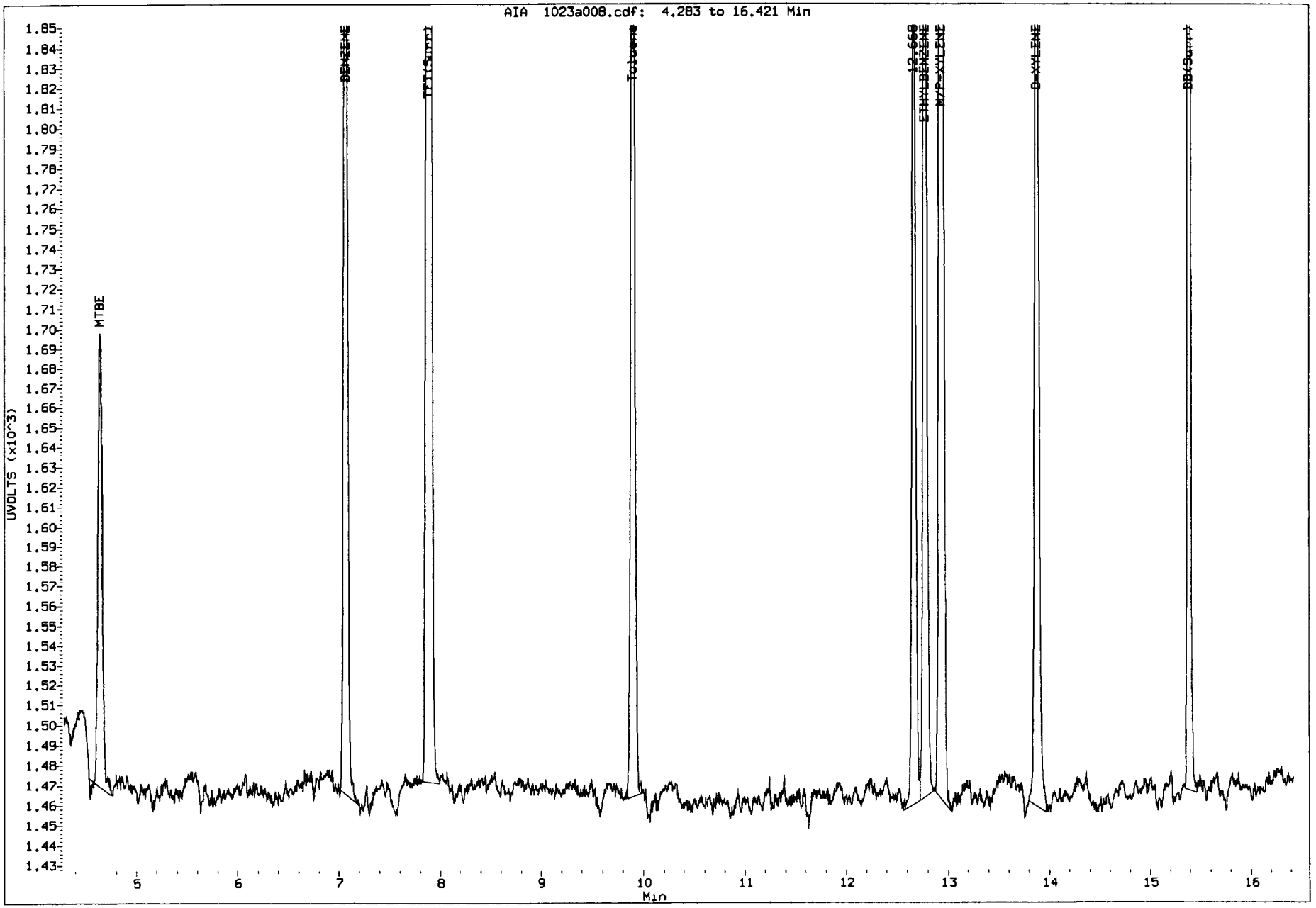
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

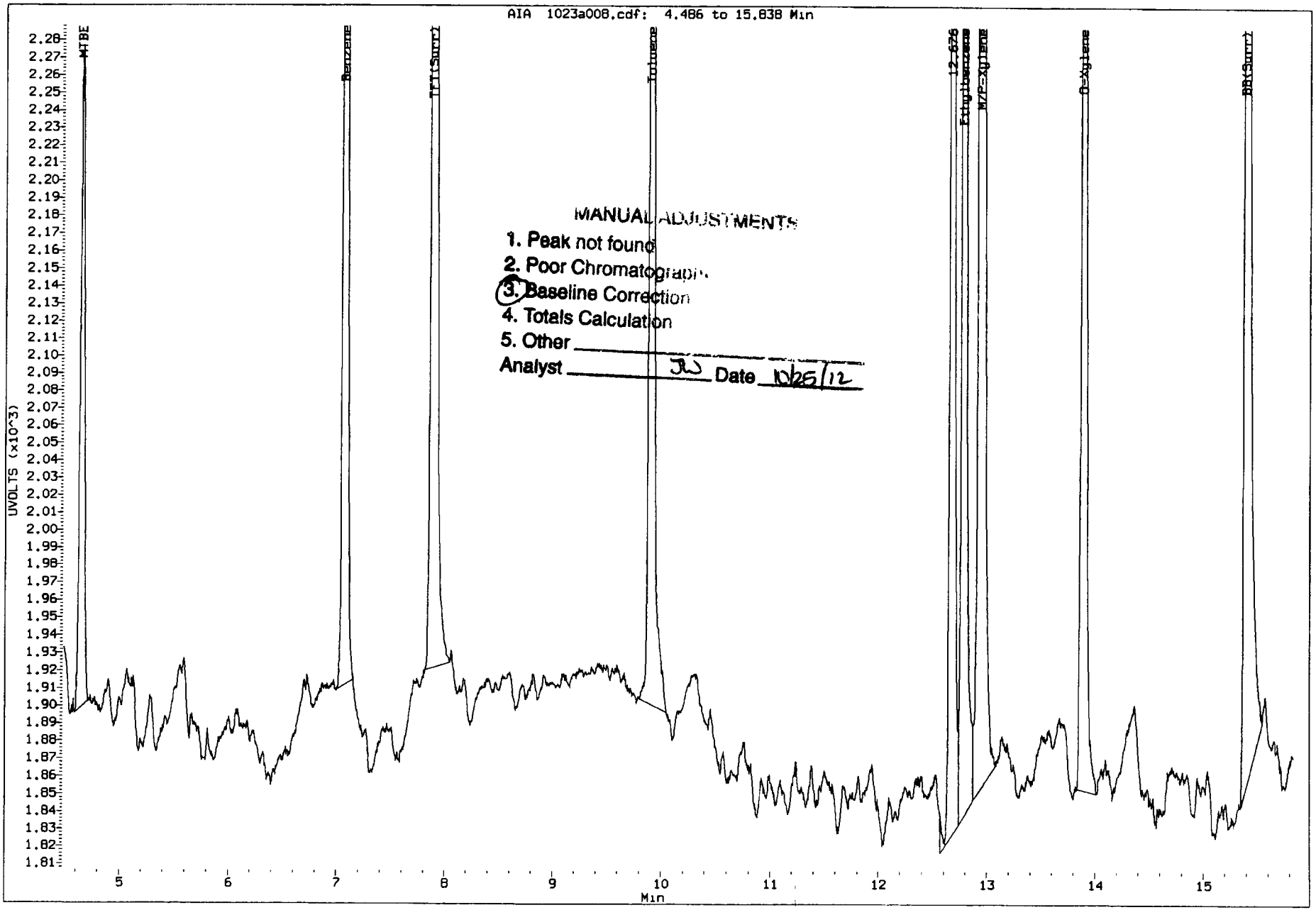
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.1/20121023-1.b/1023a008.d/1023a008.cdf
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.1
Client Sample ID:

Before

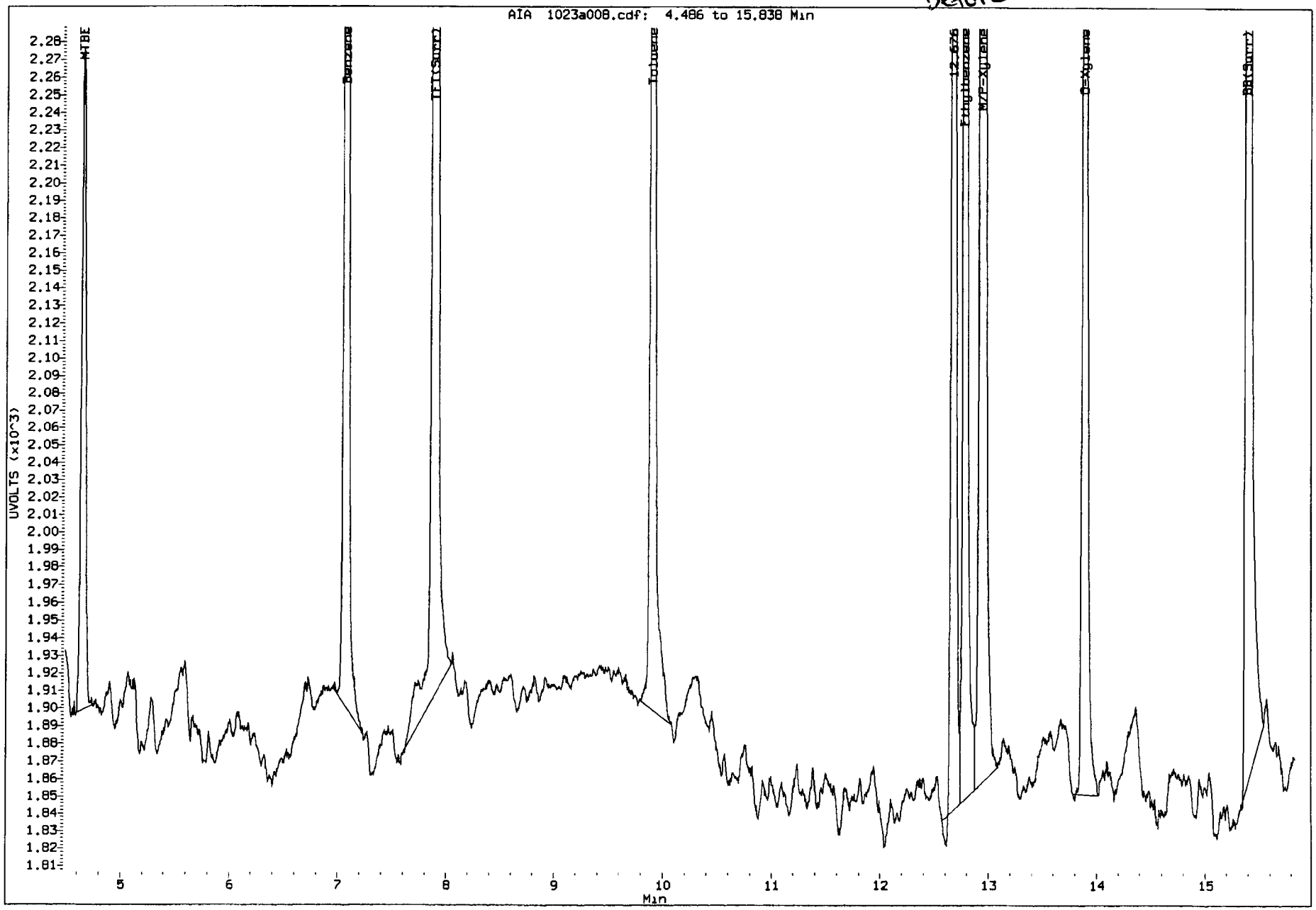


Data File: /chem3/pid1.i/20121023-2.b/1023a008.d/1023a008.cdf
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a008.d/1023a008.cdf
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a009.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a009.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 1
Client ID:
Injection Date: 23-OCT-2012 20:16
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	2094	27117	66.3	TFT(Surr)
15.387	0.000	1385	11445	68.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	10704	0.030 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	10312	0.014 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	9711	0.017 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	10704	0.029 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	2495	65.9	TFT(Surr)
15.393	0.000	5333	66.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.003	260	1.05N	Benzene
9.907	0.000	210	0.93N	Toluene
12.785	-0.001	198	1.00	Ethylbenzene
12.946	0.002	425	1.98	M/P-Xylene
13.893	0.003	168	1.00N	O-Xylene
4.647	-0.007	72	1.00N	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a009.d

Date : 23-OCT-2012 20:16

Client ID:

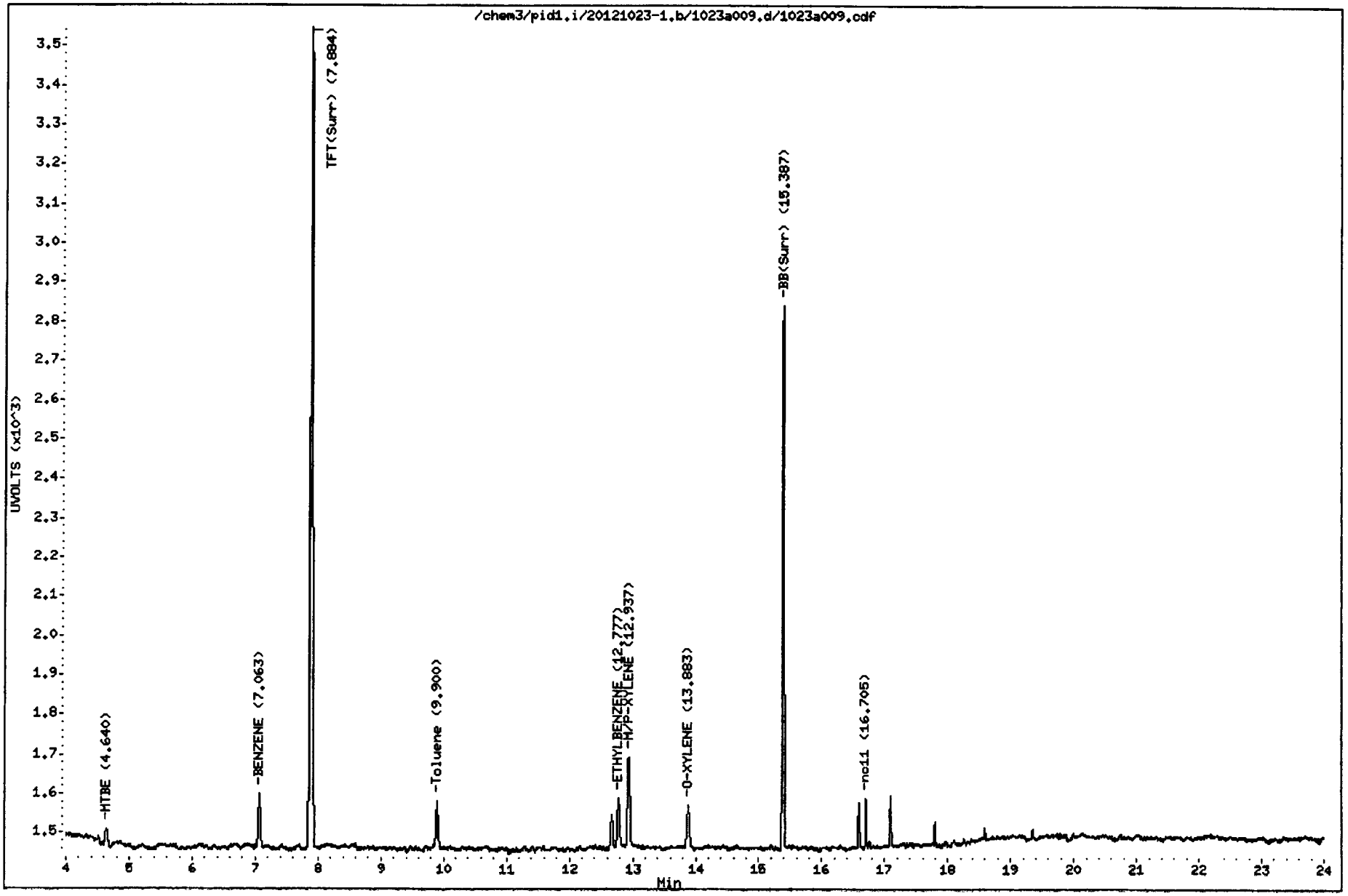
Sample Info: B 1

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a009.d

Page 1

Date : 23-OCT-2012 20:16

Client ID:

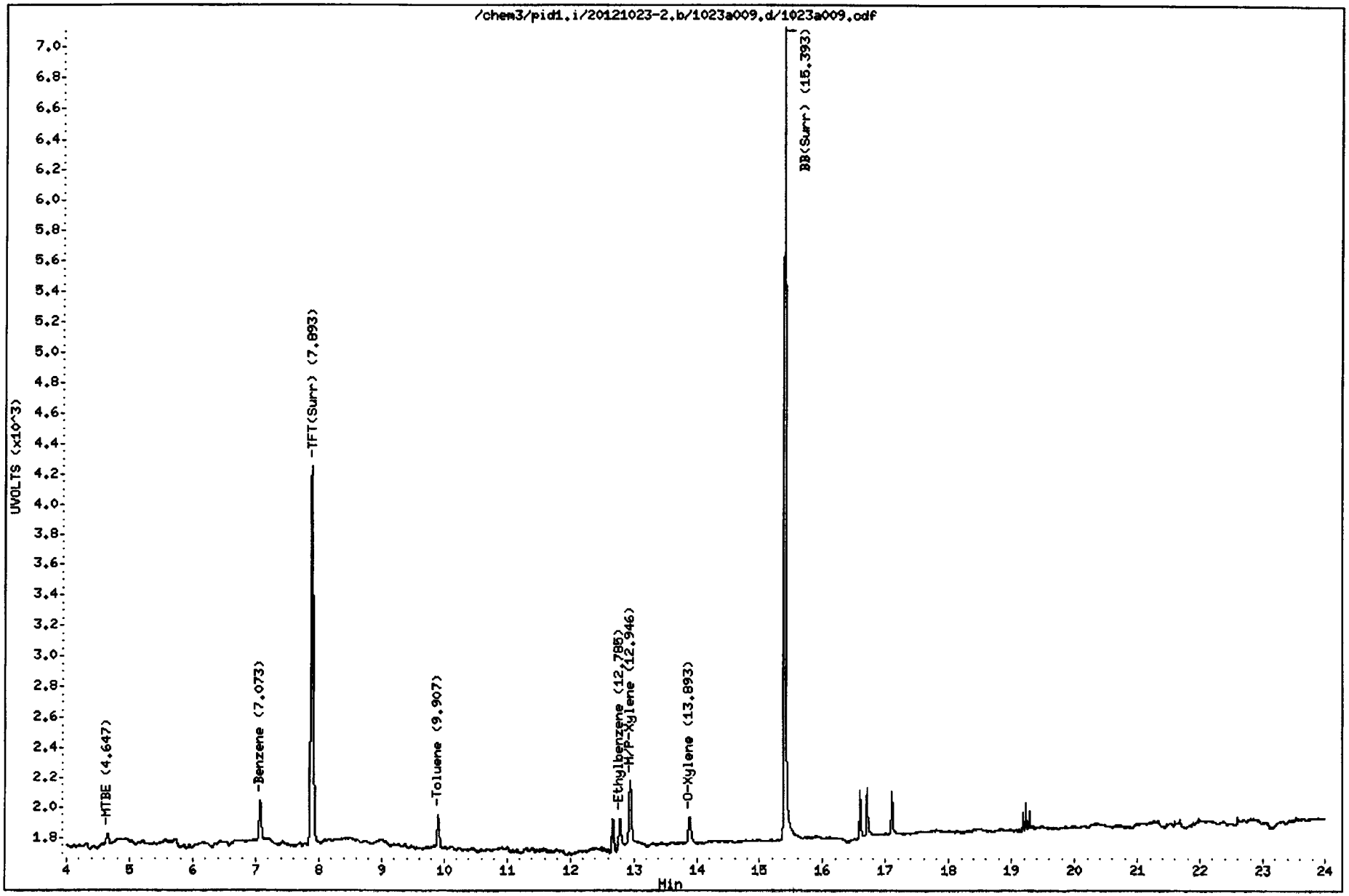
Instrument: pid1.i

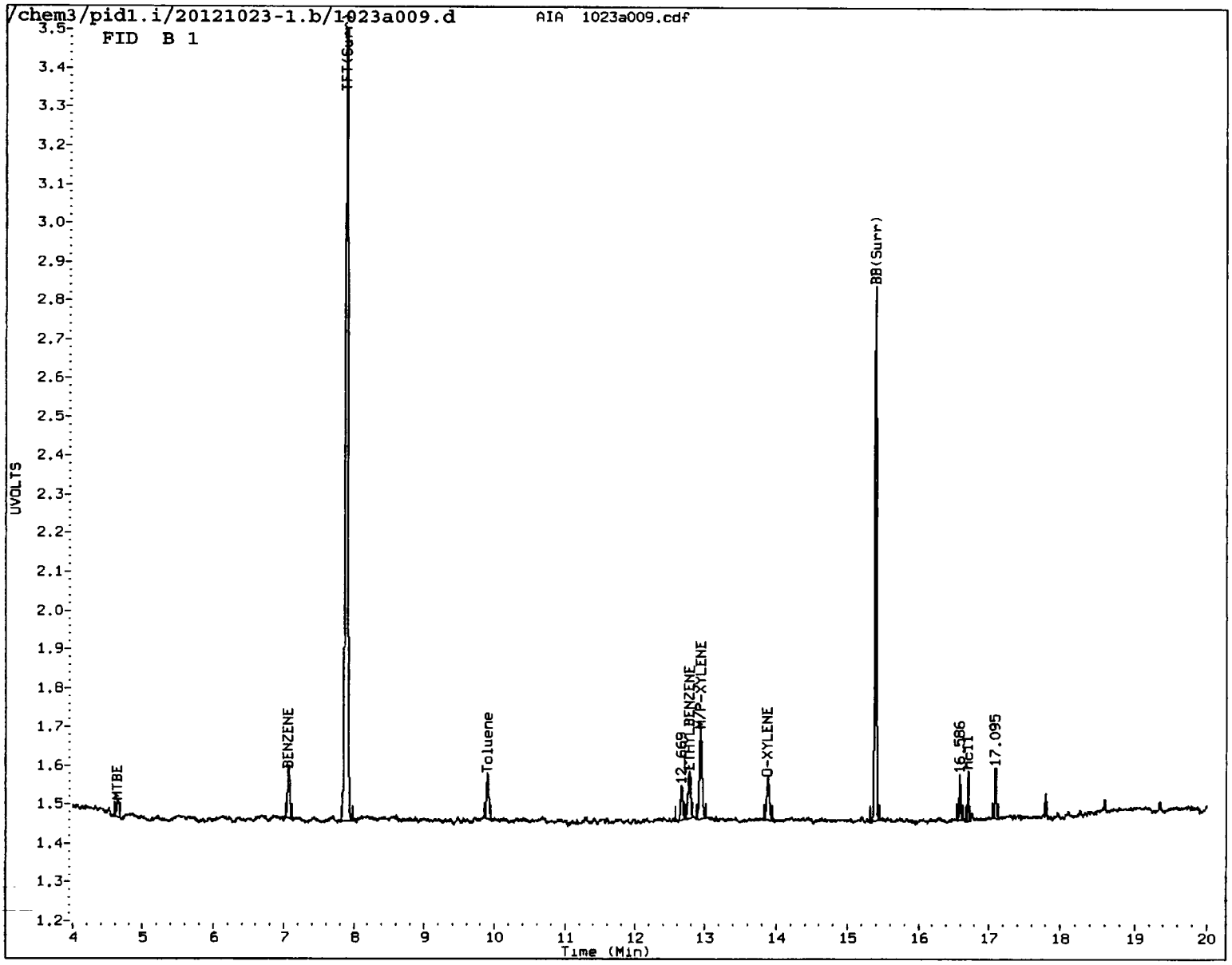
Sample Info: B 1

Operator: PC/JW

Column phase: RTX 502-2 PID

Column diameter: 0.18





MANUAL INTEGRATION

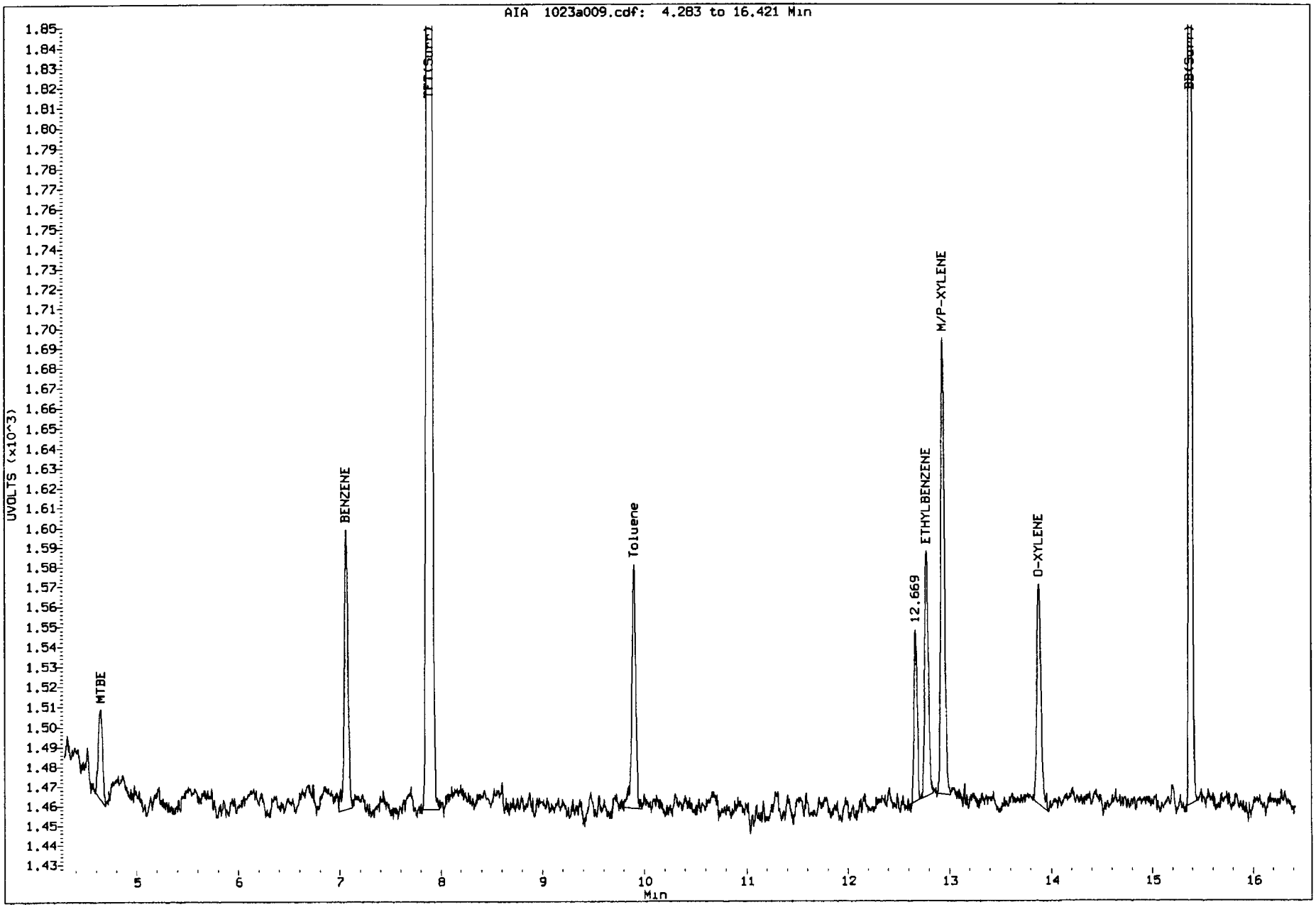
(1) Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

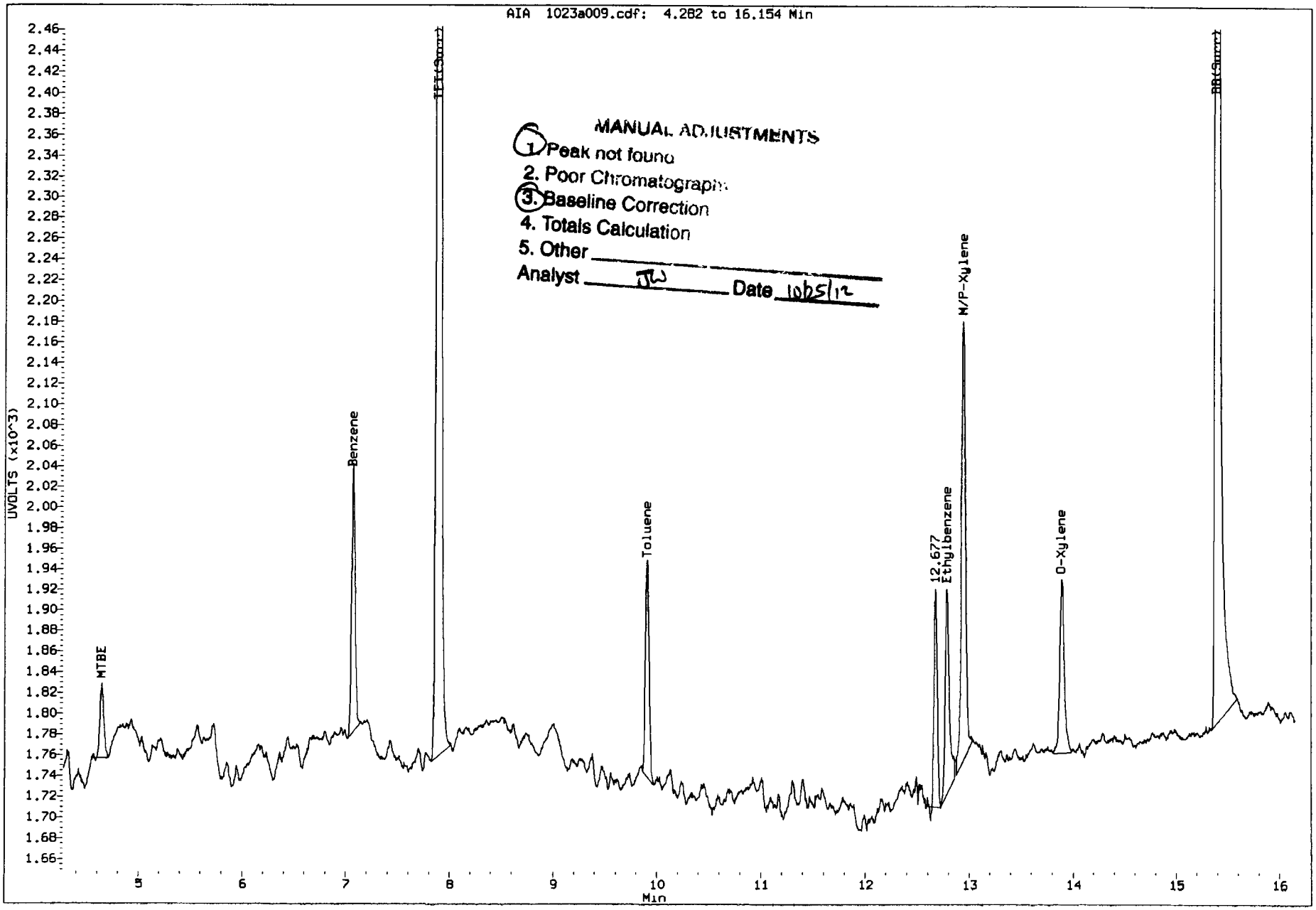
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.i
Client Sample ID:

Before



Data File: /chem3/pid1.i/20121023-2.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.i
Client Sample ID:



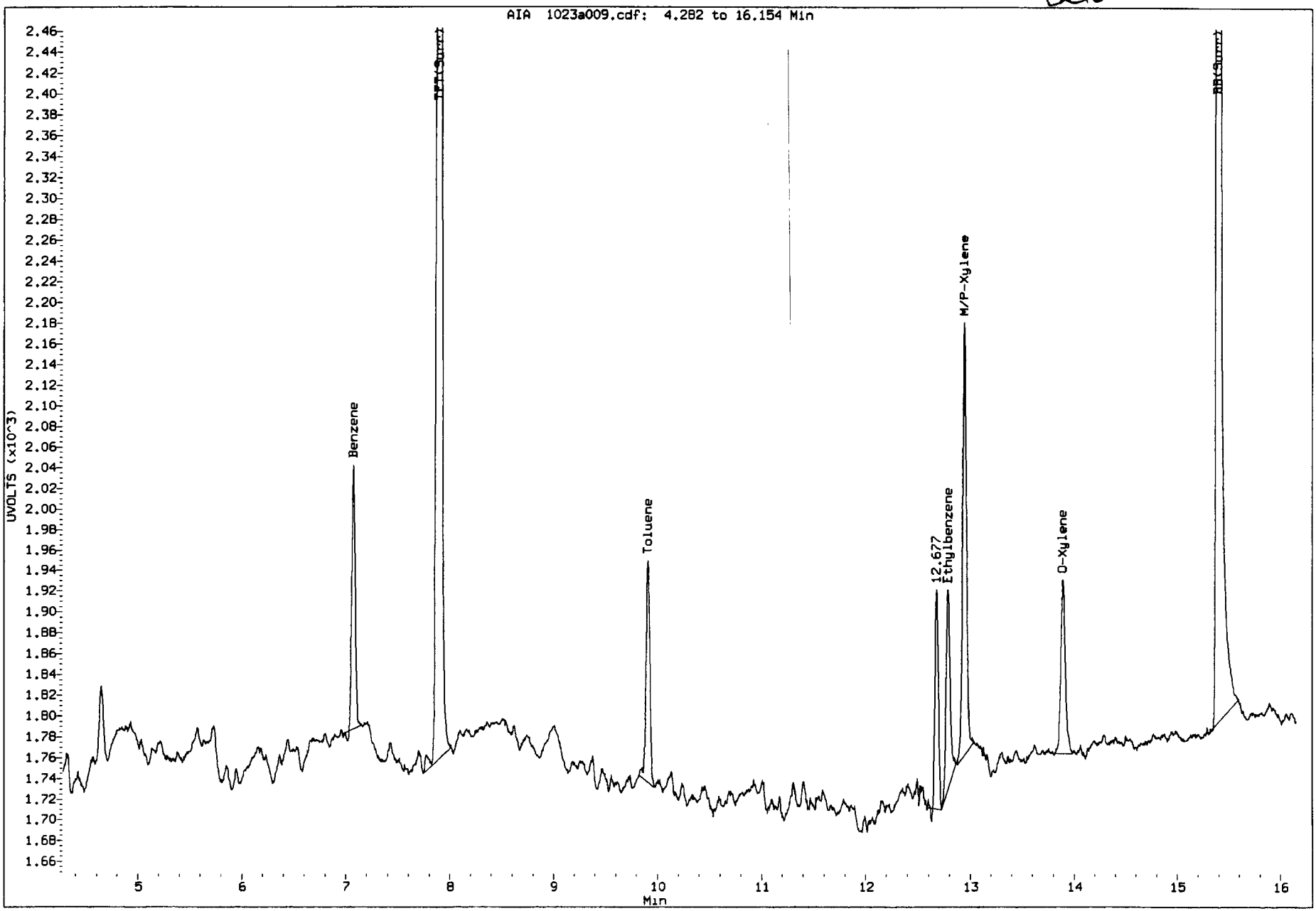
MANUAL ADJUSTMENTS

1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other _____

Analyst JW Date 10/25/12

Data File: /chem3/pid1.i/20121023-2.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a010.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a010.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 0.5
Client ID:
Injection Date: 23-OCT-2012 20:45
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	1400	18008	44.4	TFT(Surr)
15.387	0.000	904	7688	44.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	6242	0.017 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	5520	0.008 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	5284	0.009 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	8749	0.023 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	1632	43.1	TFT(Surr)
15.393	0.000	3462	43.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.003	127	0.51N	Benzene
9.907	0.000	117	0.52N	Toluene
12.783	-0.003	100	0.51N	Ethylbenzene
12.947	0.003	208	0.97N	M/P-Xylene
13.893	0.003	79	0.47N	O-Xylene
4.653	0.000	32	0.44N	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a010.d

Date : 23-OCT-2012 20:45

Client ID:

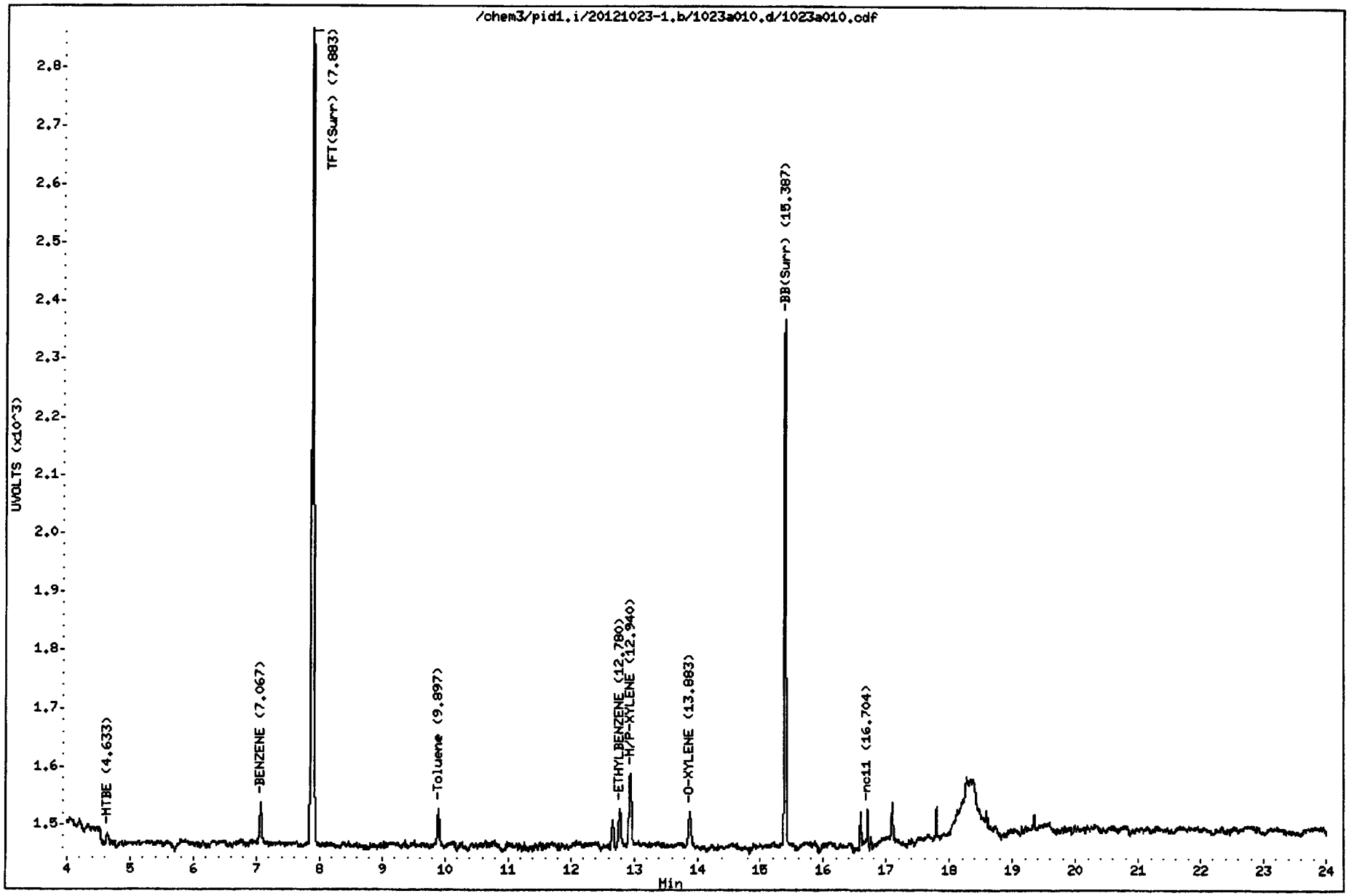
Sample Info: B 0.5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /ohem3/pid1.i/20121023-2.b/1023a010.d

Date : 23-OCT-2012 20:45

Client ID:

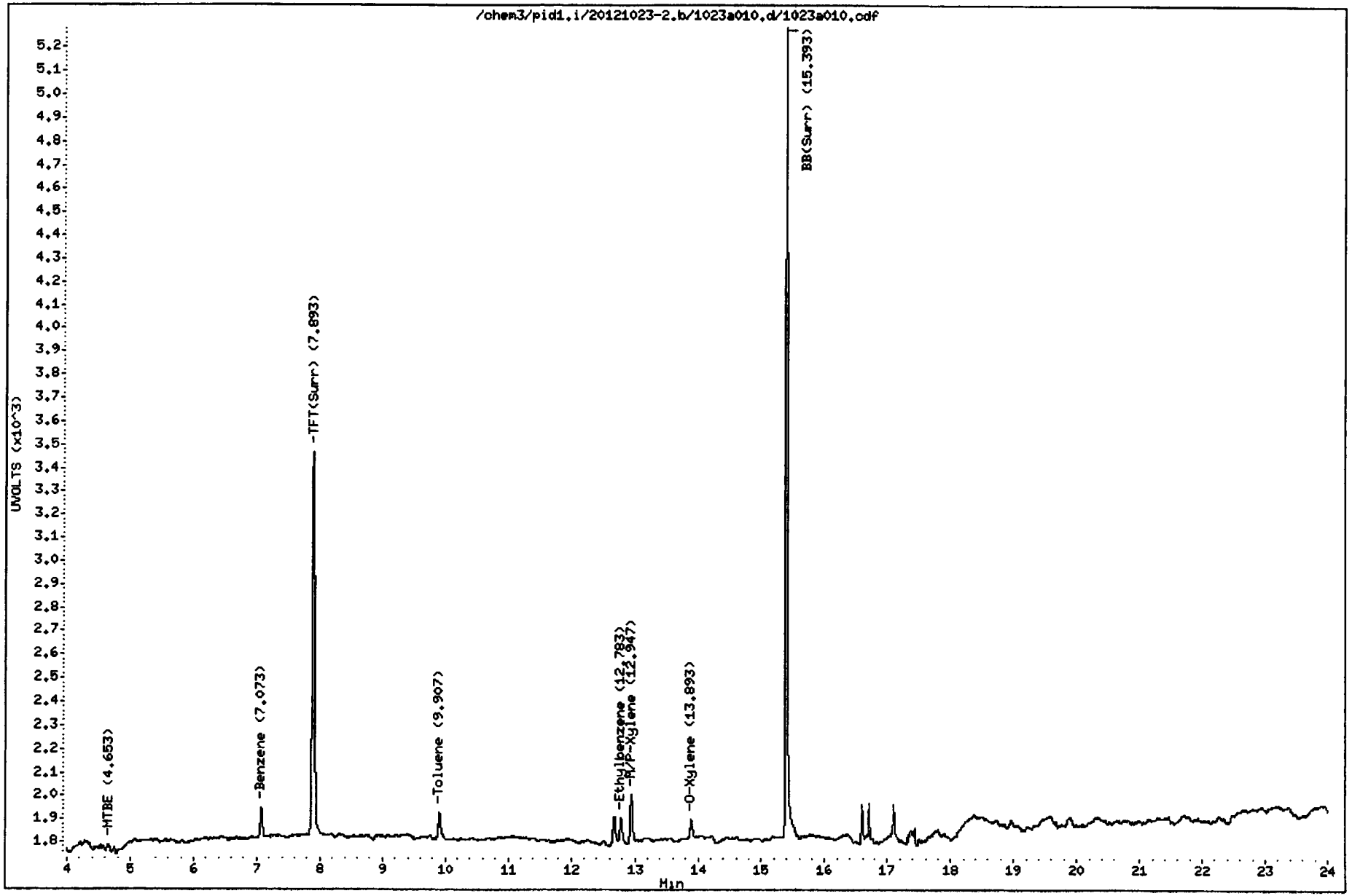
Sample Info: B 0.5

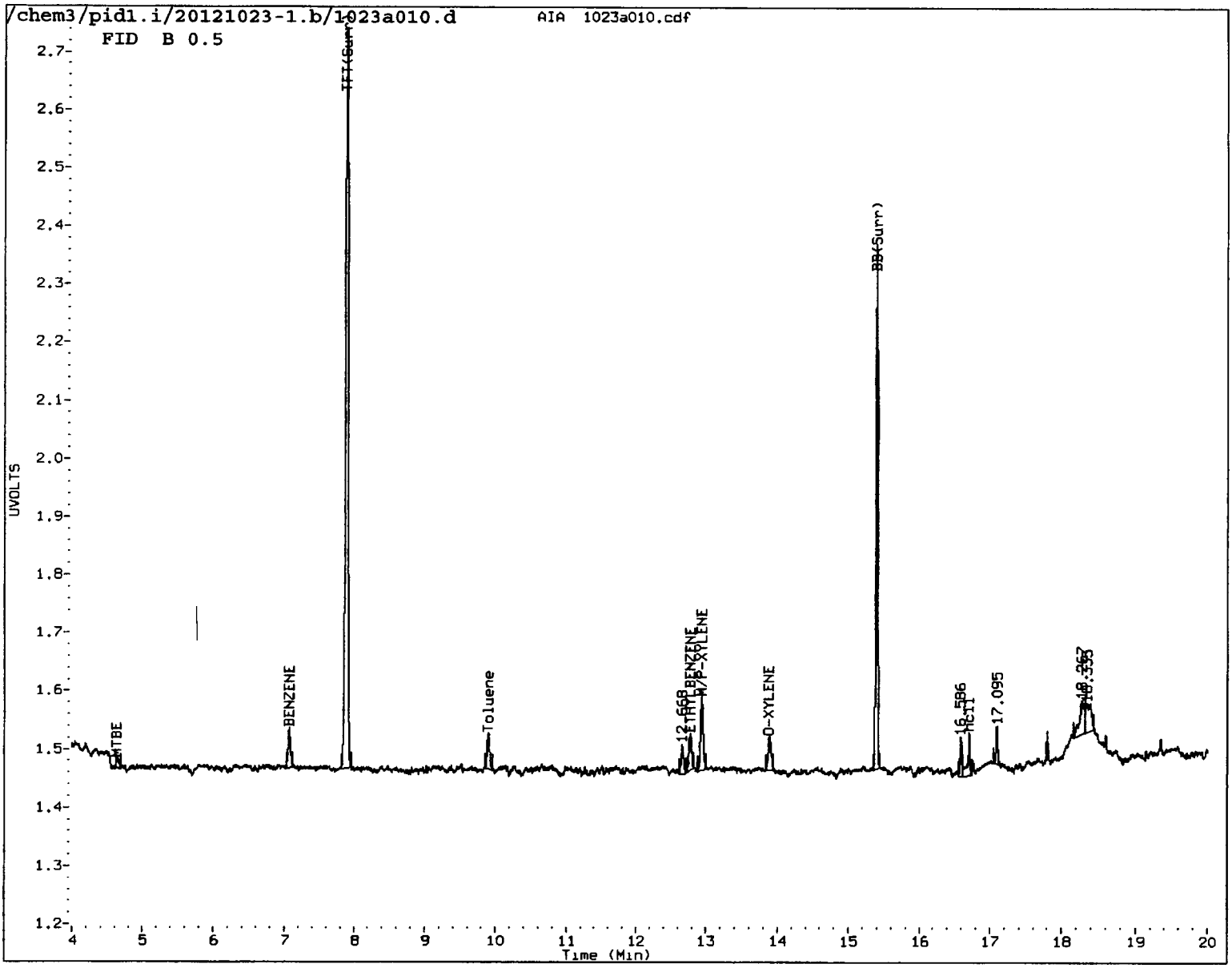
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

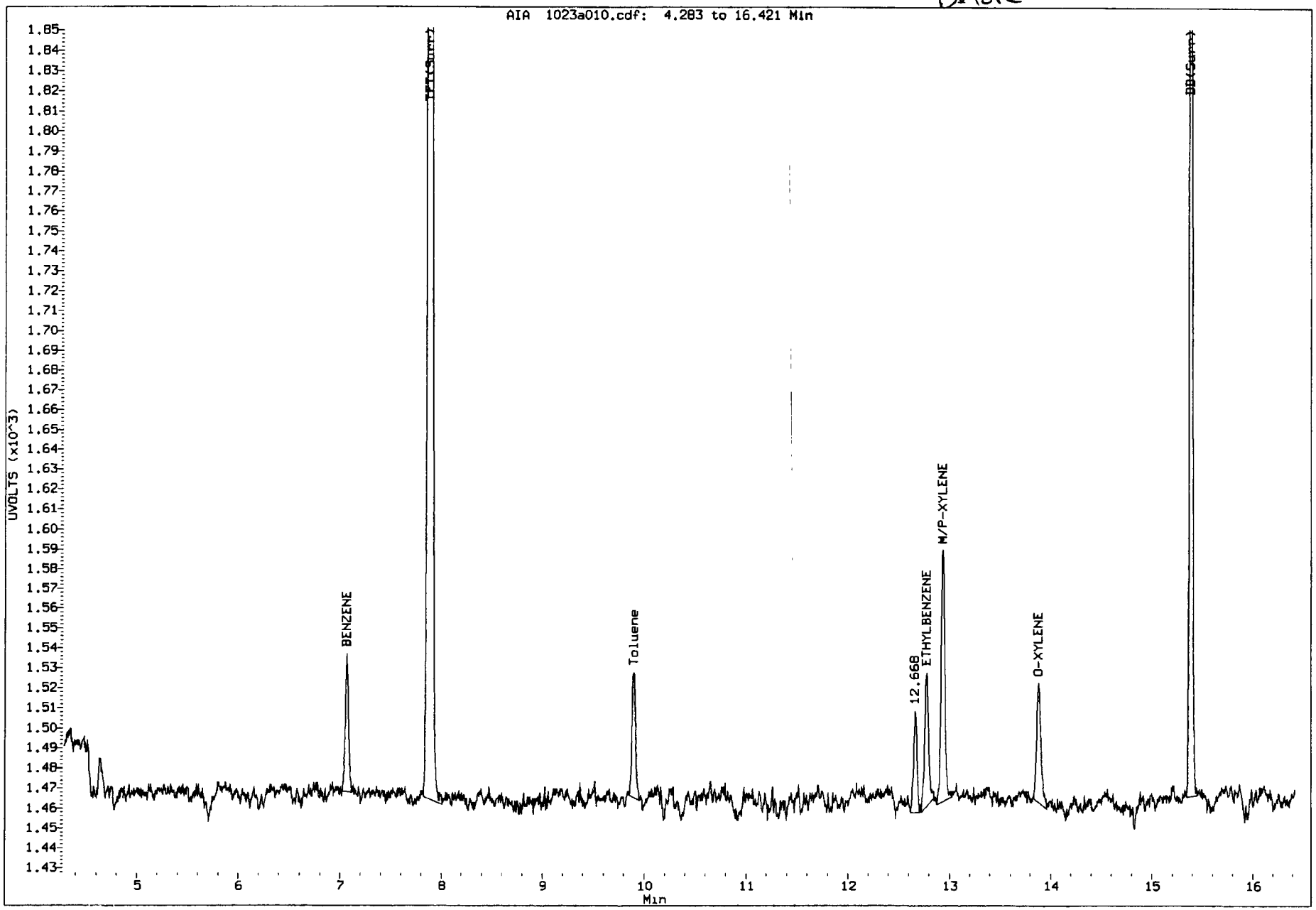
5. Other _____

Analyst: JW Date: 10/25/12

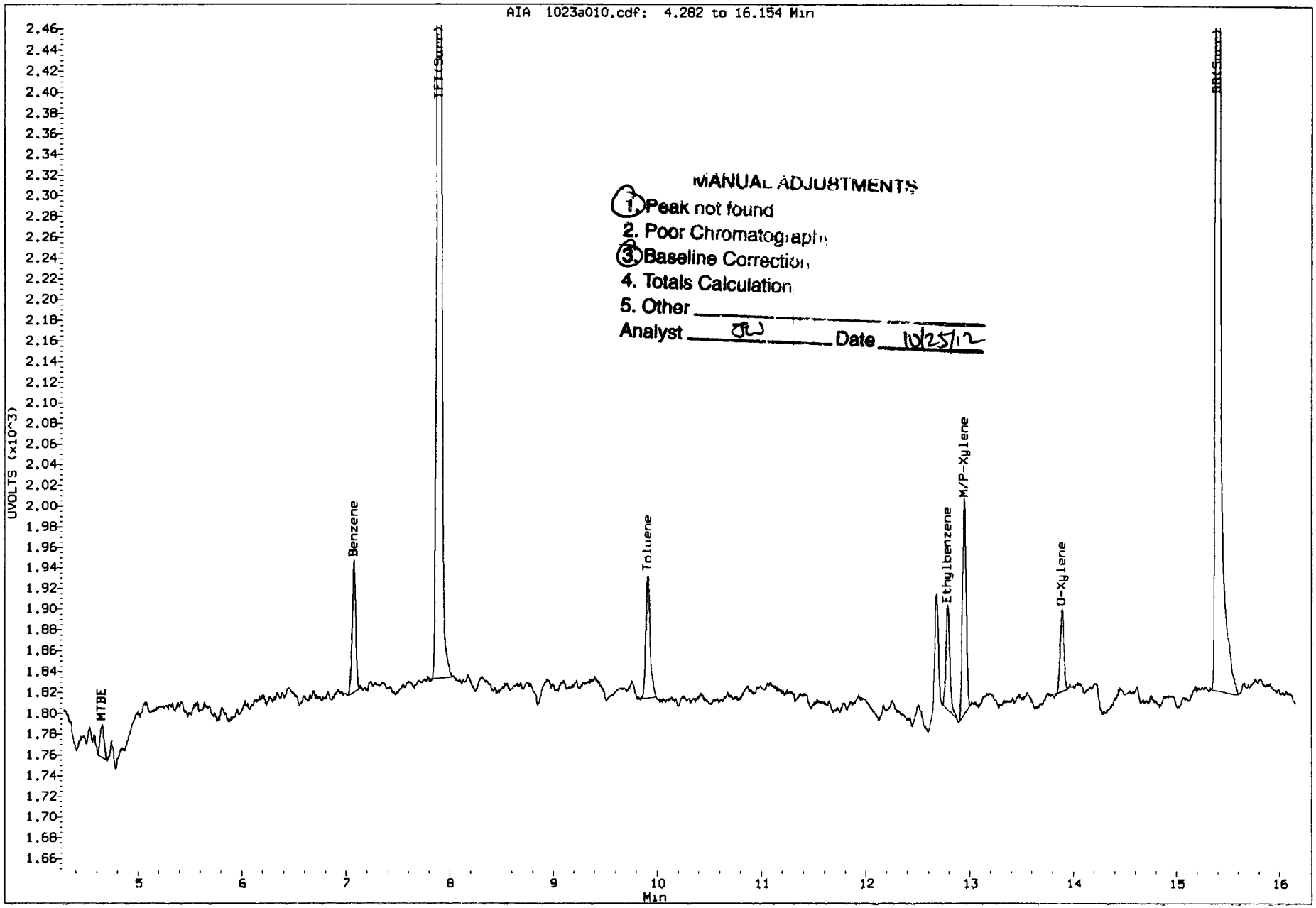
SV07:01180

Data File: /chem3/pid1.i/20121023-1.b/1023a010.d/1023a010.cdf
Injection Date: 23-OCT-2012 20:45
Instrument: pid1.i
Client Sample ID:

Before



Data File: /chem3/pid1.1/20121023-2.b/1023a010.d/1023a010.cdf
Injection Date: 23-OCT-2012 20:45
Instrument: pid1.1
Client Sample ID:

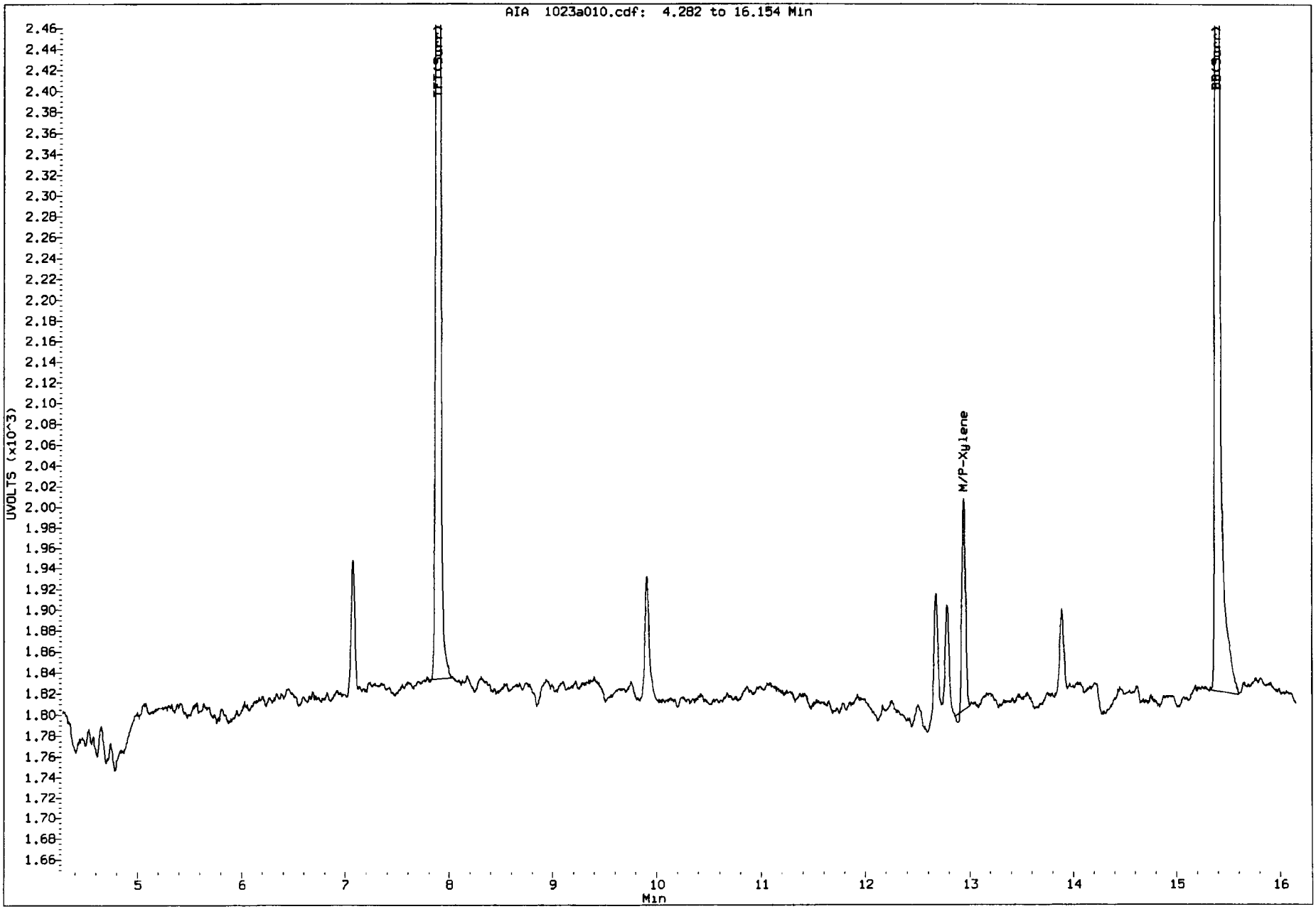


MANUAL ADJUSTMENTS

1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other _____

Analyst JW Date 10/25/12

Data File: /chem3/pid1.i/20121023-2.b/1023a010.d/1023a010.cdf
Injection Date: 23-OCT-2012 20:45
Instrument: pid1.i
Client Sample ID:



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a011.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a011.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 0.25
Client ID:
Injection Date: 23-OCT-2012 21:15
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.000	733	9325	23.3	TFT(Surr)
15.387	0.000	484	4042	23.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	2310	0.006 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	2530	0.003 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	2276	0.004 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	2718	0.007 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	855	22.6	TFT(Surr)
15.393	0.000	1790	22.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.077	0.000	57	0.23N	Benzene
9.907	0.000	64	0.28N	Toluene
12.787	0.000	48	0.24N	Ethylbenzene
12.943	0.000	108	0.50N	M/P-Xylene
13.890	0.000	40	0.24N	O-Xylene
ND	---	---	---	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a011.d

Date : 23-OCT-2012 21:15

Client ID:

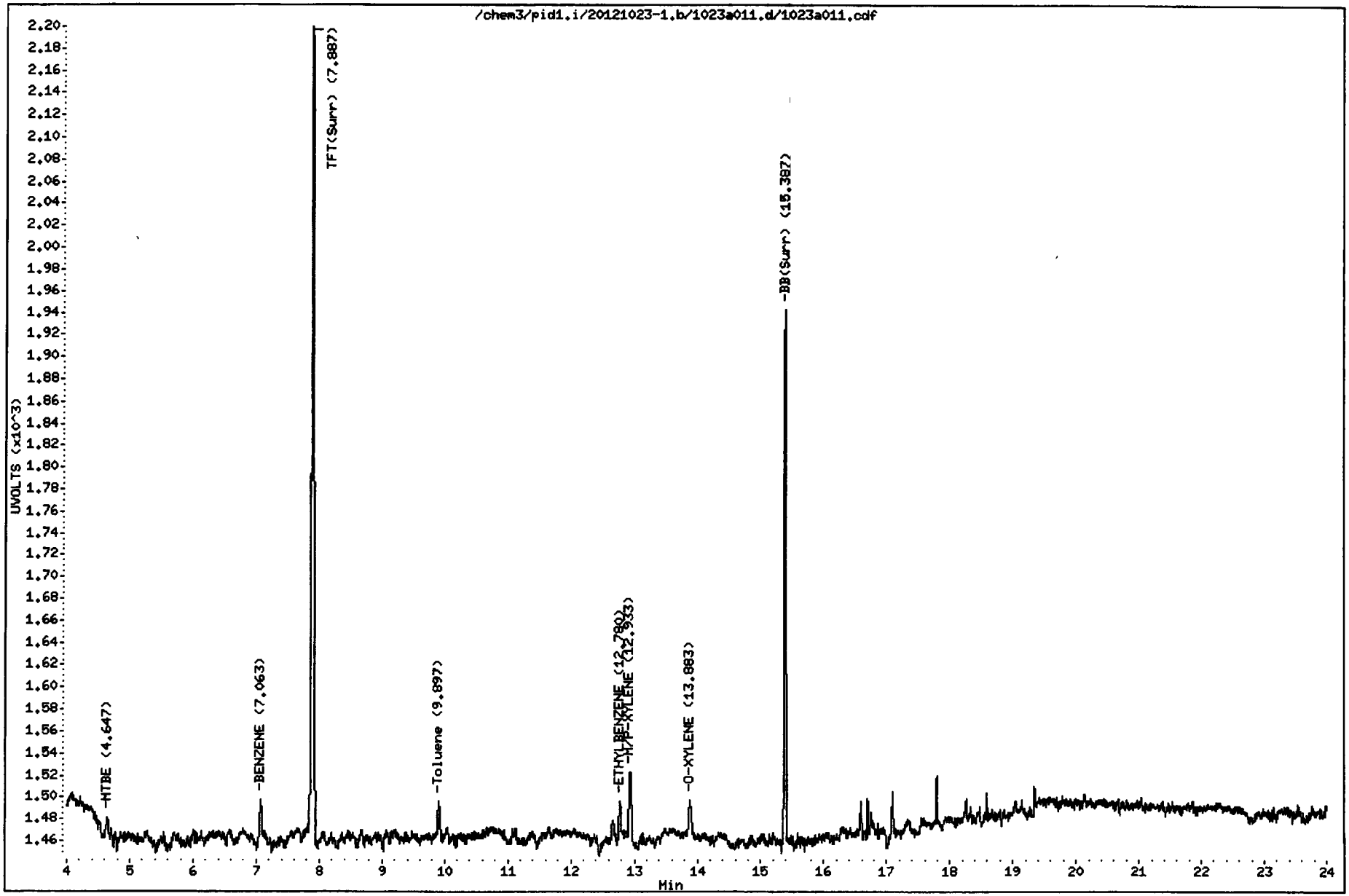
Sample Info: B 0.25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a011.d

Date : 23-OCT-2012 21:15

Client ID:

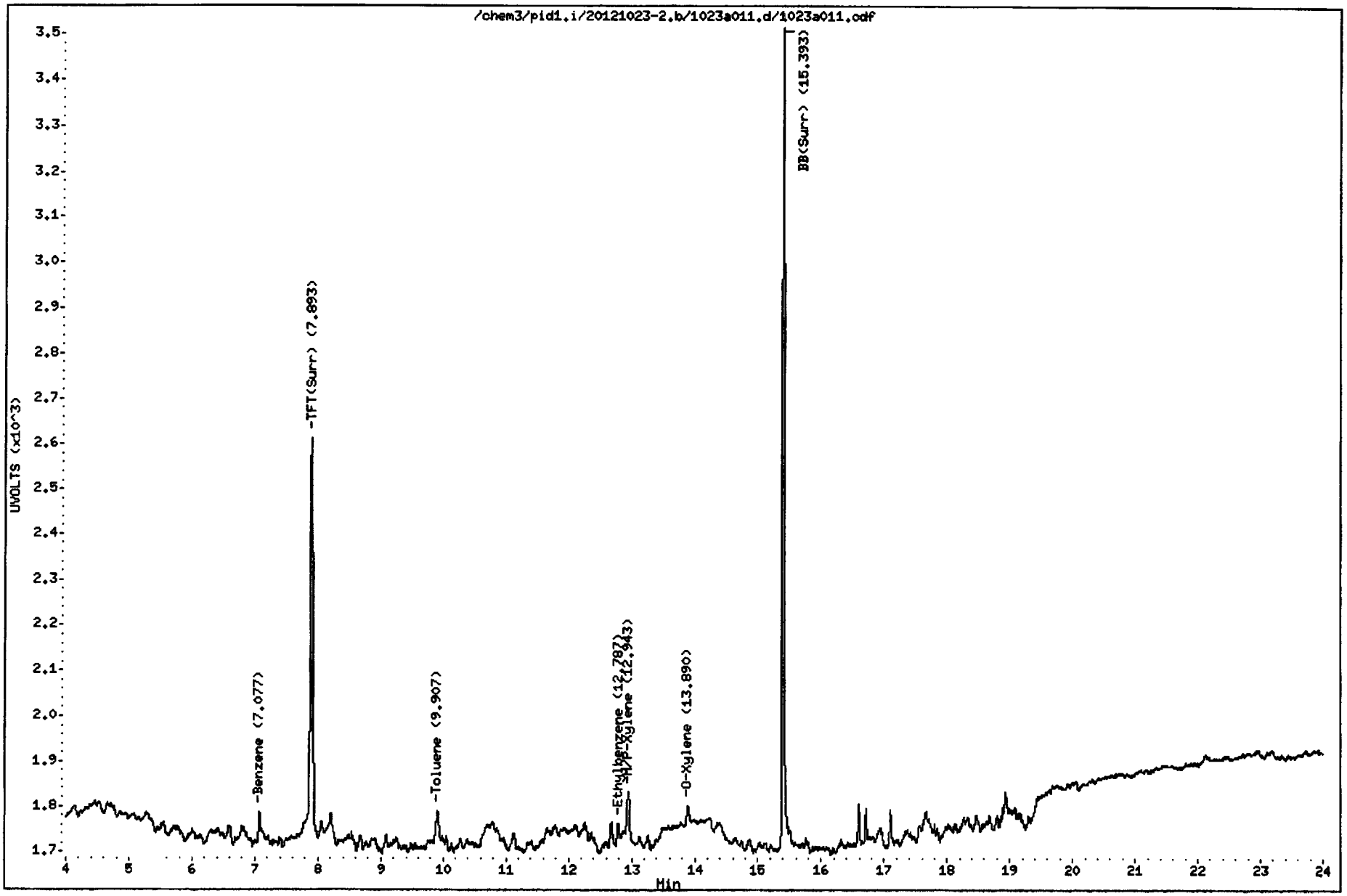
Sample Info: B 0.25

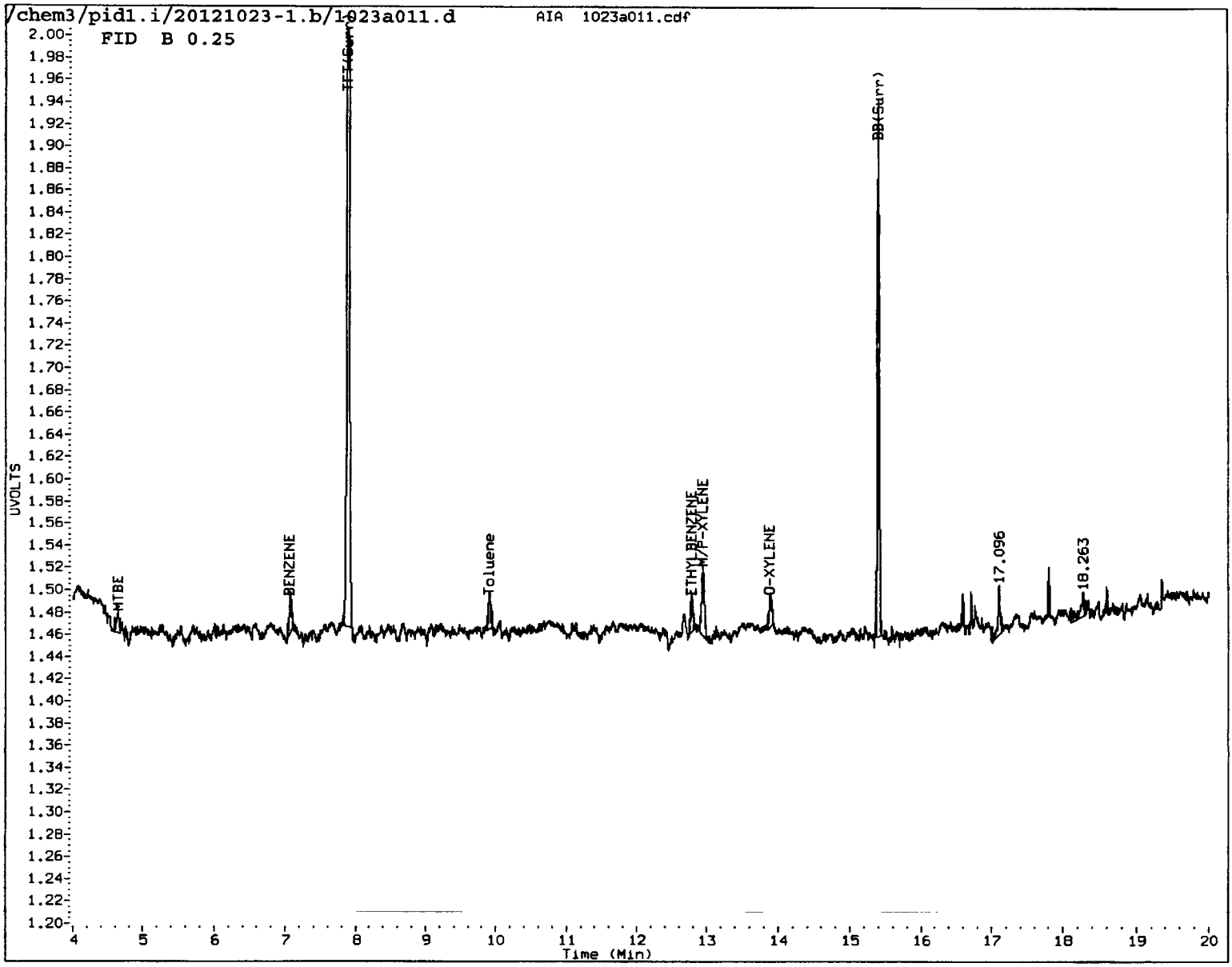
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

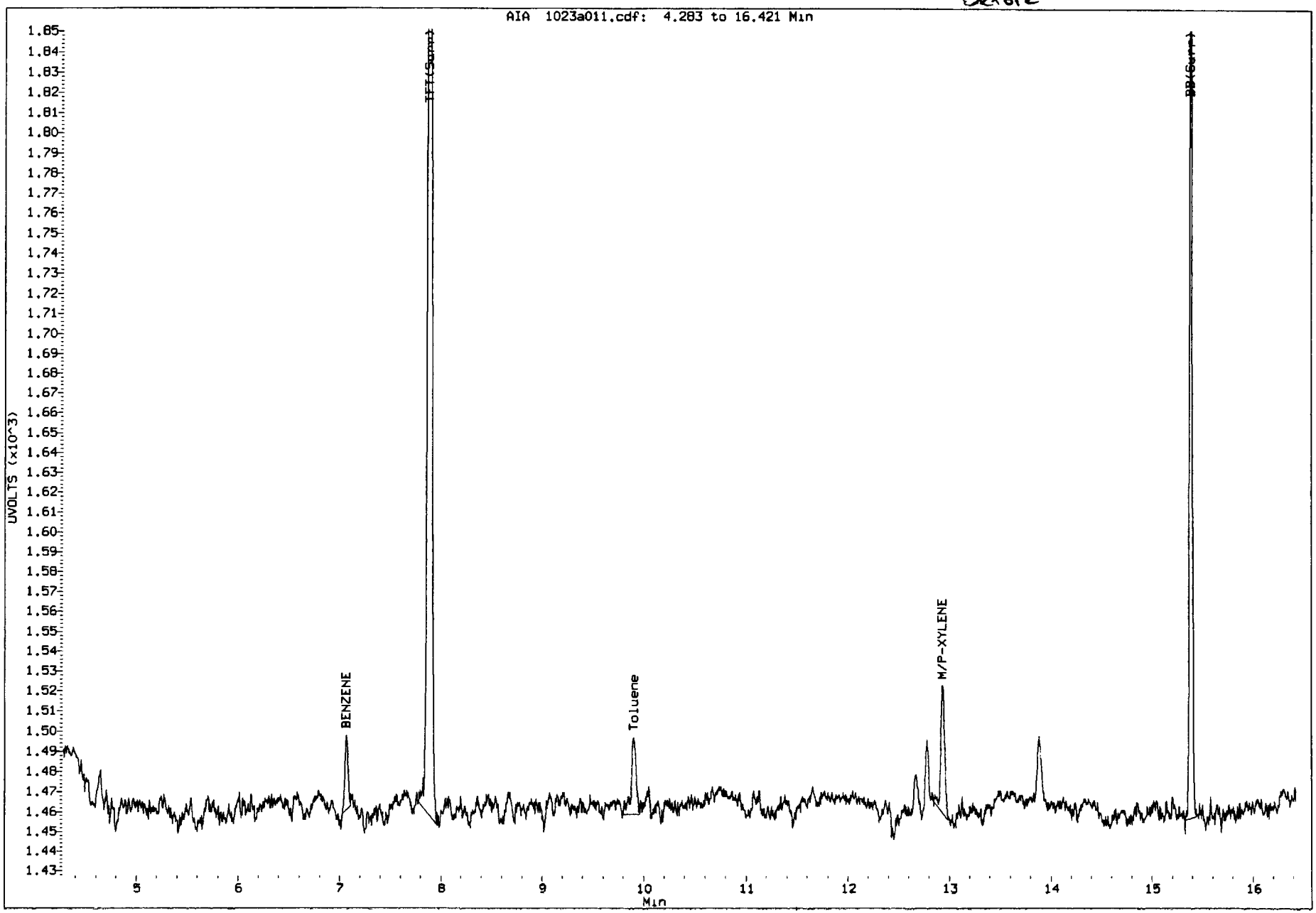
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

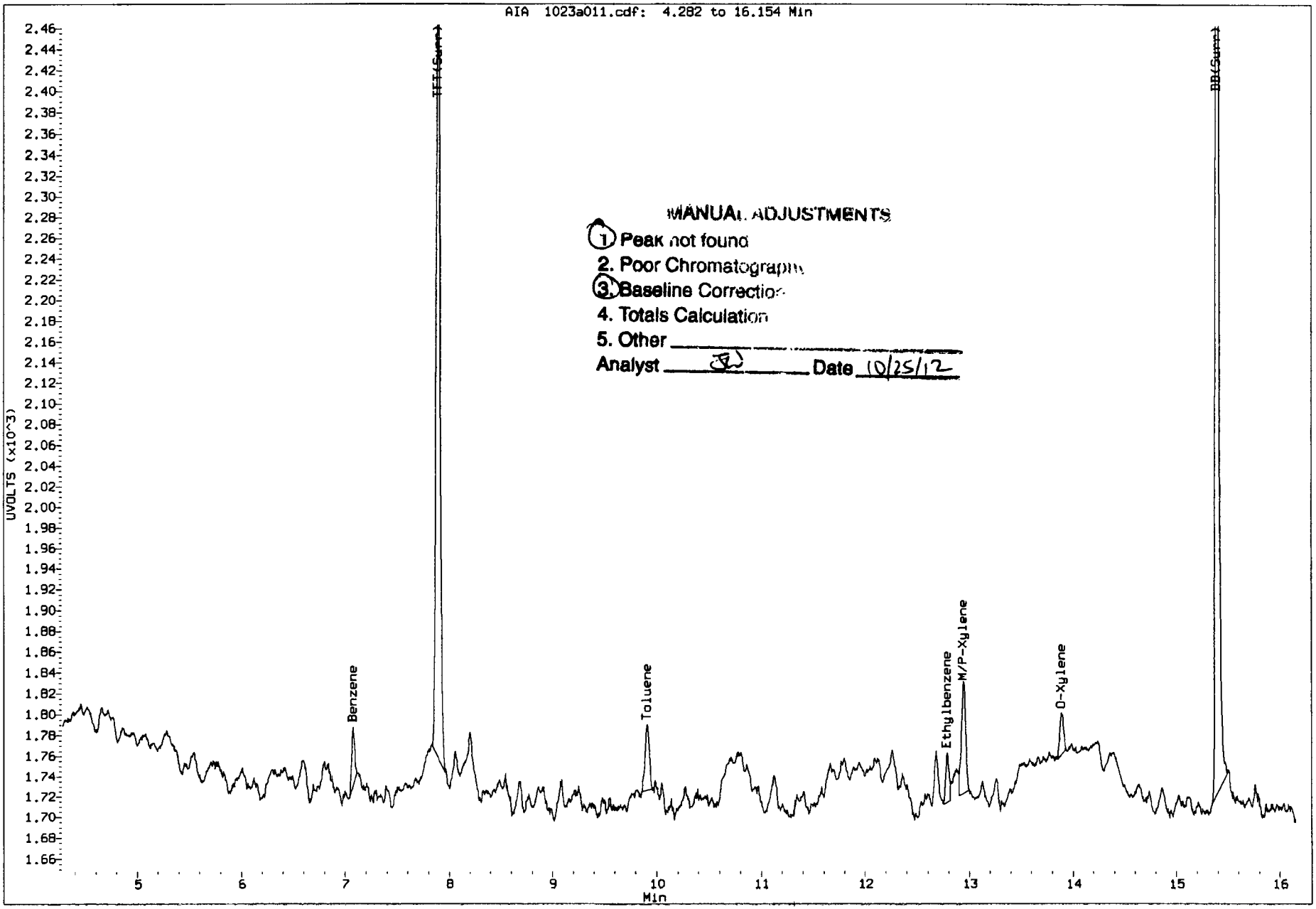
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.1/20121023-1.b/1023a011.d/1023a011.cdf
Injection Date: 23-OCT-2012 21:15
Instrument: pid1.1
Client Sample ID:

Before

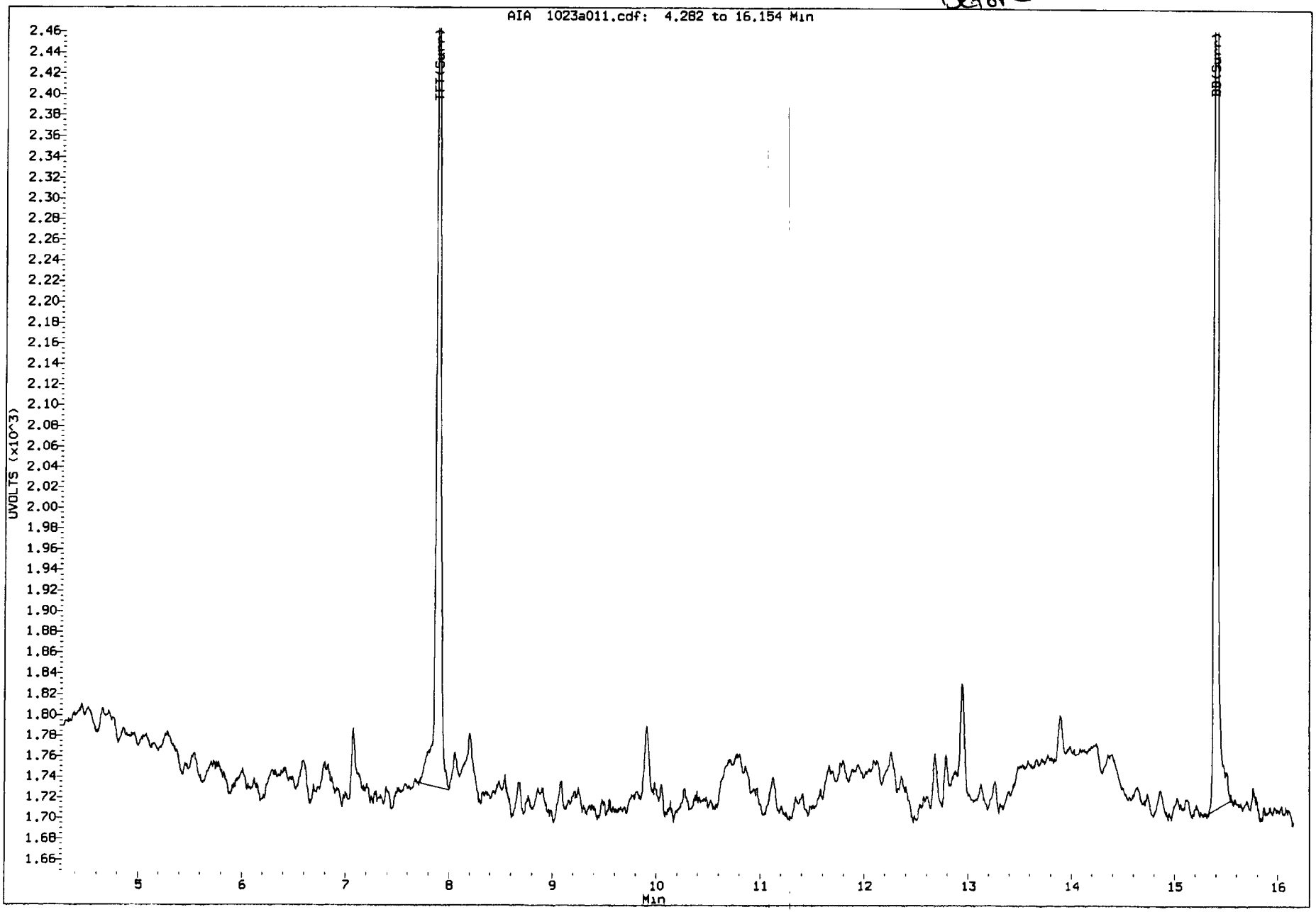


Data File: /chem3/pid1.i/20121023-2.b/1023a011.d/1023a011.cdf
Injection Date: 23-OCT-2012 21:15
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20121023-2.b/1023a011.d/1023a011.cdf
Injection Date: 23-OCT-2012 21:15
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a012.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a012.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: BICV
Client ID:
Injection Date: 23-OCT-2012 21:44
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	2989	38262	94.9	TFT(Surr)
15.387	0.000	1972	16638	97.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	256090	0.715
8015C 2MP-TMB	(4.29 to 16.21)	723723	256713	0.355
AK101 nC6-nC10	(4.76 to 15.11)	582885	241615	0.415
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	256090	0.683

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.892	-0.001	3638	96.0	TFT(Surr)
15.395	0.002	7931	98.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.004	6699	27.01	Benzene
9.905	-0.001	5955	26.47	Toluene
12.785	-0.002	5351	27.14	Ethylbenzene
12.946	0.003	11682	54.33	M/P-Xylene
13.894	0.004	4726	28.16	O-Xylene
4.646	-0.008	1898	26.36	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a012.d

Date : 23-OCT-2012 21:44

Client ID:

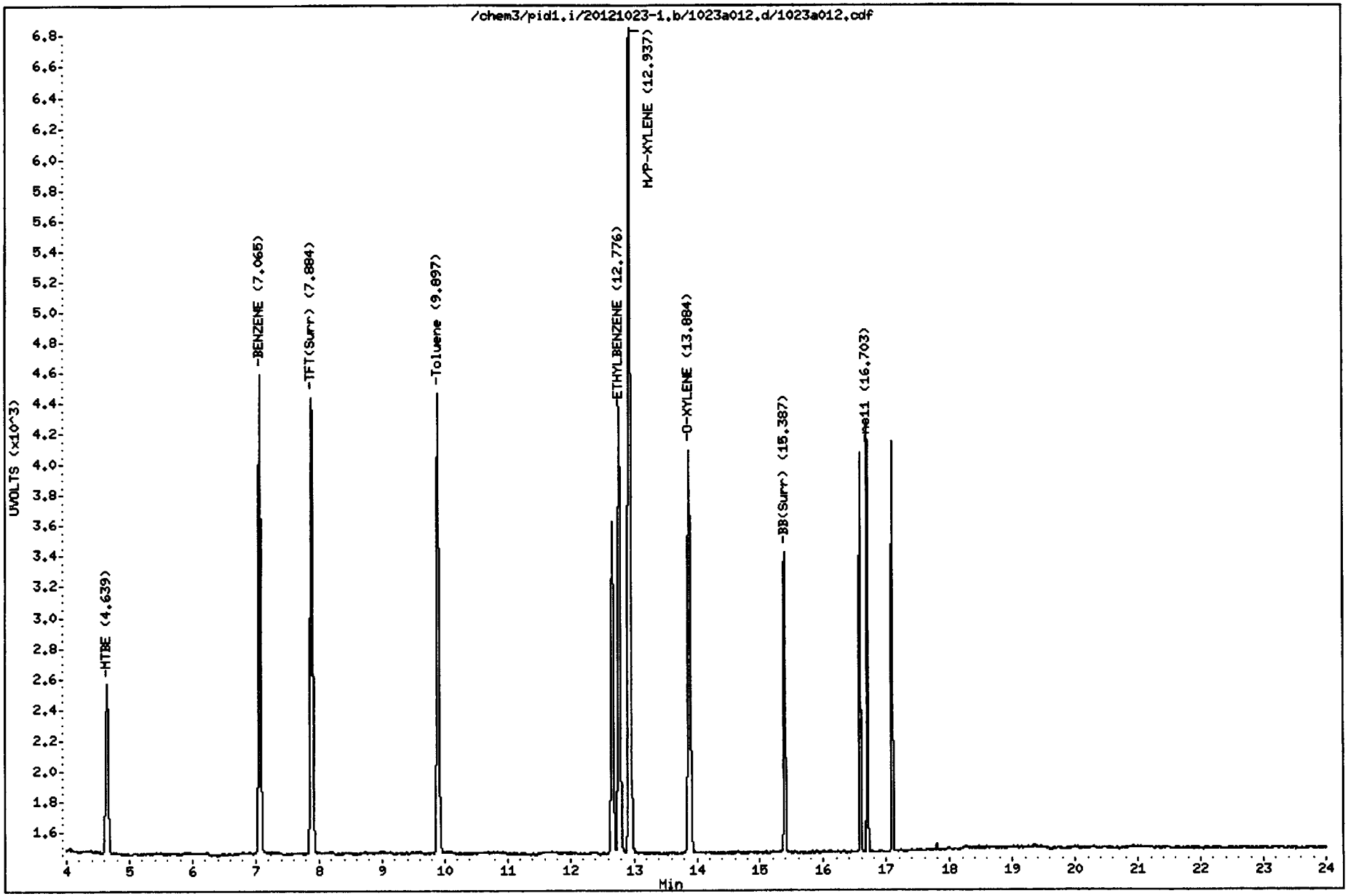
Sample Info: BICV

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a012.d

Date : 23-OCT-2012 21:44

Client ID:

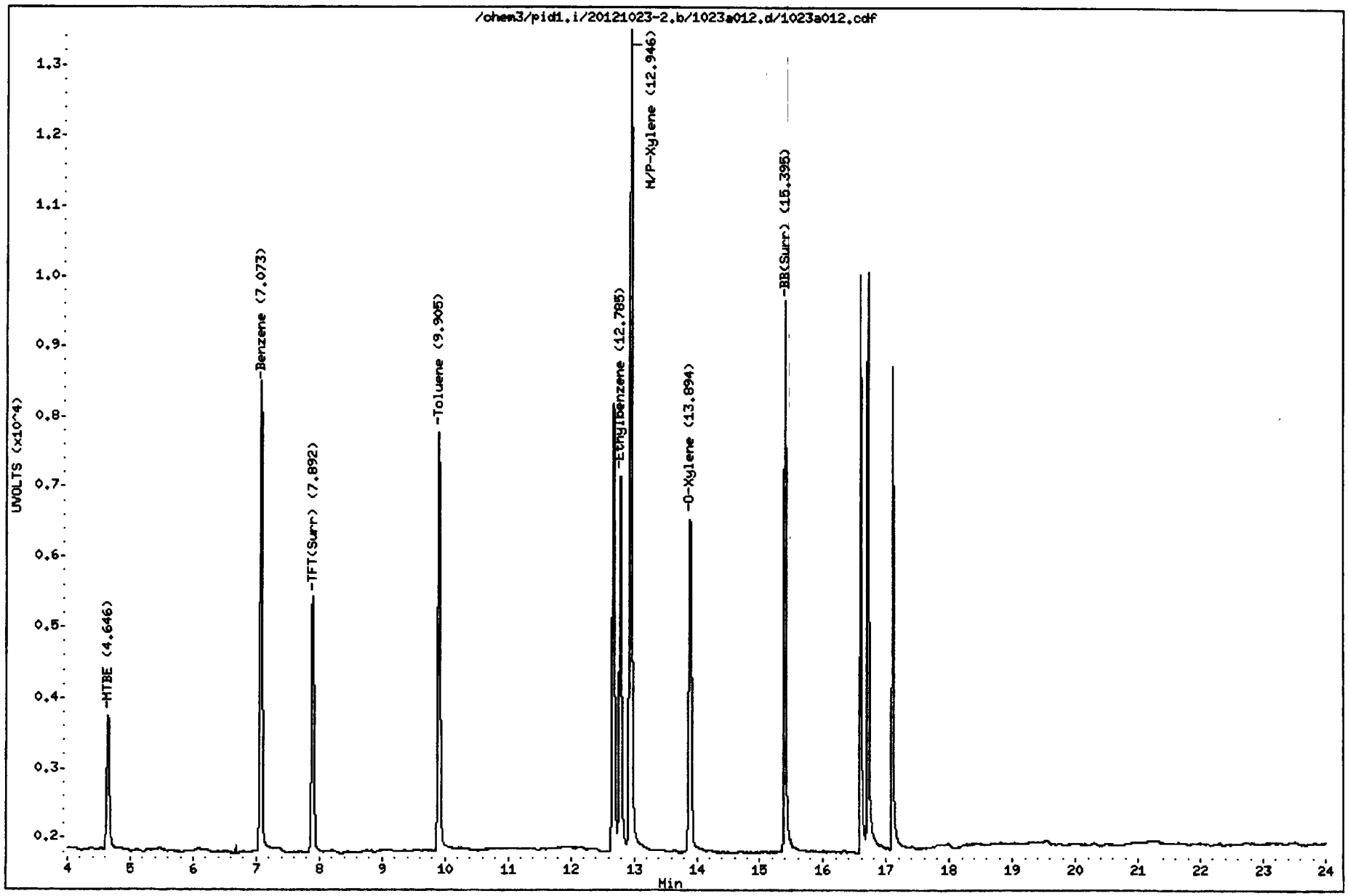
Sample Info: BICV

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	1023a004	1023a005	1023a006	1023a007	1023a008	1023a009	1023a010	1023a011
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012
INJ.TIME:	17:50	18:20	18:49	19:18	19:47	20:16	20:45	21:15

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.492	0.422-0.562	+++++	+++++
	2 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.937	0.867-1.007	+++++	+++++
	3 AK101	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.251	1.181-1.321	+++++	+++++
	4 8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.539	1.469-1.609	+++++	+++++
	5 2-Methylpentane	4.387	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.387	4.317-4.457	4.387	0.000
	6 MTBE	4.643	4.642	4.645	4.644	4.640	4.640	4.633	4.647	4.643	4.573-4.713	4.642	0.004
	7 nC6	4.864	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.864	4.794-4.934	4.864	0.000
	8 nC7	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.864	6.794-6.934	+++++	+++++
	9 BENZENE	7.069	7.067	7.067	7.067	7.063	7.063	7.067	7.063	7.069	6.999-7.139	7.066	0.002
$	10 TFT(Surr)	7.887	7.883	7.883	7.887	7.883	7.884	7.883	7.887	7.887	7.817-7.957	7.885	0.002
	11 nC8	9.507	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.507	9.437-9.577	9.507	0.000
	12 Toluene	9.903	9.897	9.897	9.897	9.897	9.900	9.897	9.897	9.903	9.833-9.973	9.898	0.002
	13 nC9	12.416	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.416	12.346-12.486	12.416	0.000
	14 ETHYLBENZENE	12.783	12.776	12.775	12.775	12.776	12.777	12.780	12.780	12.783	12.713-12.853	12.778	0.003
	15 M/P-XYLENE	12.948	12.938	12.937	12.936	12.936	12.937	12.940	12.933	12.948	12.878-13.018	12.938	0.004
	16 O-XYLENE	13.890	13.884	13.882	13.883	13.883	13.883	13.883	13.883	13.890	13.820-13.960	13.884	0.002
	17 nC10-Decane	15.207	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.207	15.137-15.277	15.207	0.000

Reviewer 1 _____ Date: 10/25/12

Reviewer 2 _____ Date: 10/26/12

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 18 BB(Surr)	15.390	15.387	15.387	15.387	15.387	15.387	15.387	15.387	15.390	15.320-15.460	15.387	0.001
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
20 1,2,4-Trimethylbenzene	16.109	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.109	16.039-16.179	16.109	0.000
21 nc11	16.761	16.760	16.702	16.703	16.703	16.705	16.704	+++++	16.761	16.691-16.831	16.720	0.028
22 nC12-Dodecane	17.800	17.795	17.795	17.795	+++++	+++++	+++++	+++++	17.800	17.730-17.870	17.796	0.003
23 nC13	18.607	18.595	+++++	+++++	+++++	+++++	+++++	+++++	18.607	18.537-18.677	18.601	0.008
24 Naphthalene	18.808	18.796	+++++	+++++	+++++	+++++	+++++	+++++	18.808	18.738-18.878	18.802	0.009

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-2.b/PIDB.m
Batch File: /chem3/pid1.i/20121023-2.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	1023a004	1023a005	1023a006	1023a007	1023a008	1023a009	1023a010	1023a011
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012
INJ.TIME:	17:50	18:20	18:49	19:18	19:47	20:16	20:45	21:15

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 MTBE	4.650	4.650	4.653	4.653	4.647	4.647	4.653	+++++	4.650	4.600-4.700	4.651	0.003
	2 Benzene	7.078	7.073	7.075	7.077	7.073	7.073	7.073	7.077	7.078	7.028-7.128	7.075	0.002
$	3 TFT(Surr)	7.896	7.890	7.893	7.893	7.890	7.893	7.893	7.893	7.896	7.846-7.946	7.893	0.002
	4 Toluene	9.910	9.903	9.903	9.907	9.903	9.907	9.907	9.907	9.910	9.860-9.960	9.906	0.002
	5 Ethylbenzene	12.793	12.785	12.784	12.785	12.785	12.785	12.783	12.787	12.793	12.743-12.843	12.786	0.003
	6 M/P-Xylene	12.957	12.948	12.946	12.946	12.945	12.946	12.947	12.943	12.957	12.908-13.008	12.947	0.004
	7 O-Xylene	13.900	13.893	13.890	13.893	13.893	13.893	13.893	13.890	13.900	13.870-13.930	13.893	0.003
$	8 BB(Surr)	15.397	15.393	15.393	15.397	15.393	15.393	15.393	15.393	15.397	15.347-15.447	15.394	0.002

Reviewer 1 JW Date: 10/25/12
Reviewer 2 Date: 10/24/12

6a
GAS INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: 20121023-1

Instrument/Det: PID1.I/RTX 502-2 FID Project:

Calibration Date: 23-OCT-2012 SDG No.: 20121023-1

Gas Range	RF1 0.1	RF2 0.25	RF3 1.0	RF4 2.5	RF5 5.0	RF6 10	Ave RF	%RSD
WA Gas	371020	379456	358654	339293	340260	360001	358114	4.5
AK Gas	579135	648986	585010	543304	542244	598628	582885	6.8
NW Gas	394025	395072	376837	353939	355113	375572	375093	4.8
Cal Gas	761375	793504	721427	674216	671666	730795	725497	6.6
8015Gas	742770	796044	725276	674926	670493	732827	723723	6.4

Surrogates Rel. Rec.	RF1 22	RF2 44	RF3 67	RF4 100	RF5 133	RF6 178	Ave RF	%RSD

<- Indicates %RSD outside limits
Surrogate areas are not included in RF calculation.

Quant Ranges :
WA Gas Toluene - nC12
AK Gas nC6 - nC10
NW Gas Toluene - Naphthalene
Cal Gas nC6 - nC12
8015 Gas 2-Methylpentane - 1,2,4-Trimethylbenzene

Calibration Files	Analysis Time
1023a013.d	23-OCT-2012 22:13
1023a014.d	23-OCT-2012 22:42
1023a015.d	23-OCT-2012 23:11
1023a016.d	23-OCT-2012 23:40
1023a017.d	24-OCT-2012 00:10
1023a018.d	24-OCT-2012 00:39

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a002.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a002.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: RT1023+BCAL1
Client ID:
Injection Date: 23-OCT-2012 10:10
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	3182	41284	101.0	TFT(Surr)
15.387	0.000	2019	16909	99.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	475541	1.328
8015C 2MP-TMB	(4.29 to 16.21)	723723	578928	0.800
AK101 nC6-nC10	(4.76 to 15.11)	582885	402341	0.690
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	504301	1.344

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.892	-0.002	3856	101.8	TFT(Surr)
15.394	0.001	8138	101.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.074	-0.003	6292	25.37	Benzene
9.904	-0.002	5539	24.62	Toluene
12.784	-0.002	4977	25.24	Ethylbenzene
12.945	0.002	10971	51.03	M/P-Xylene
13.892	0.002	4338	25.85	O-Xylene
4.650	-0.003	1700	23.61	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a002.d

Date : 23-OCT-2012 10:10

Client ID:

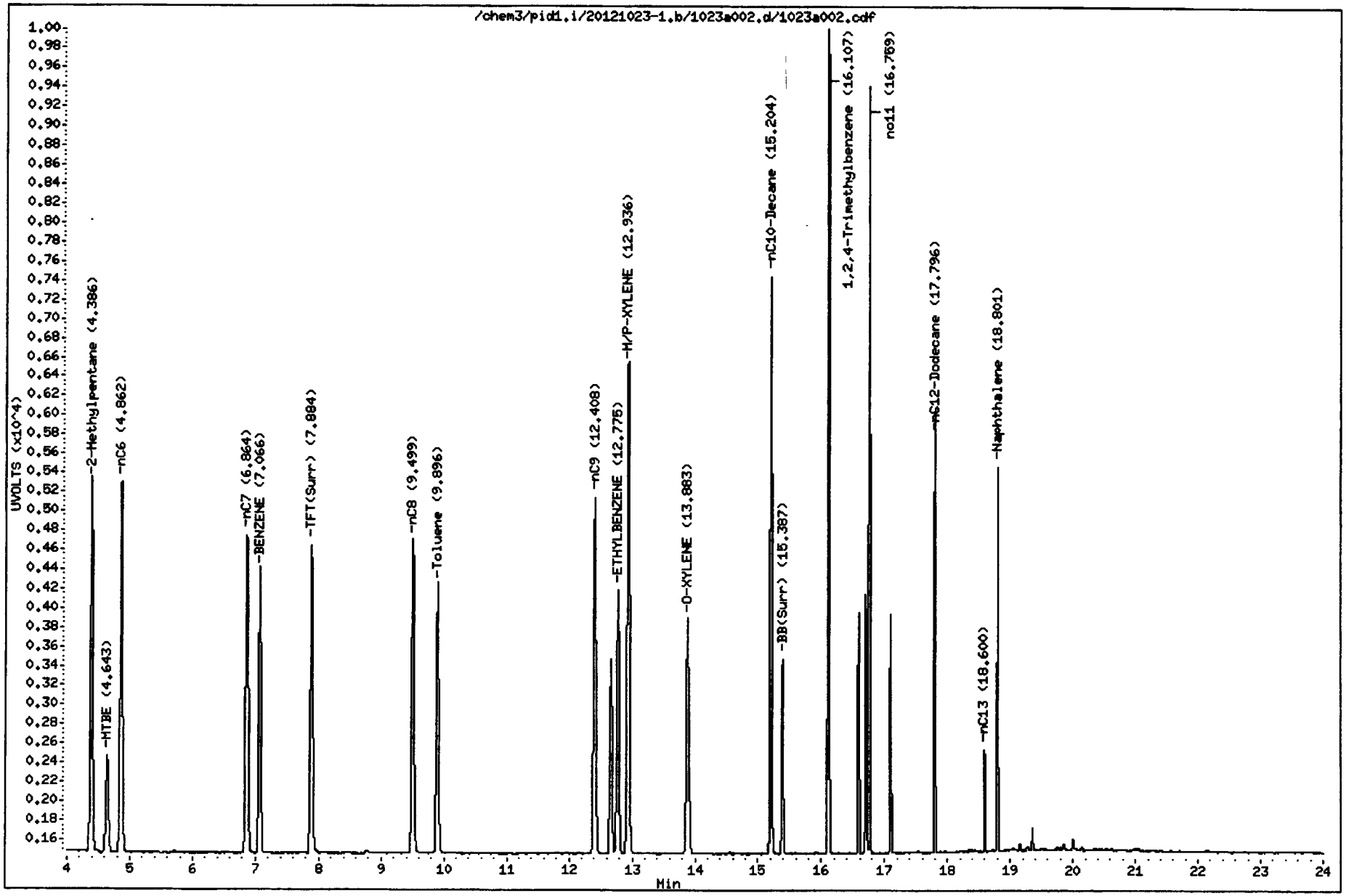
Sample Info: RT1023+BCAL1

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a002.d

Date : 23-OCT-2012 10:10

Client ID:

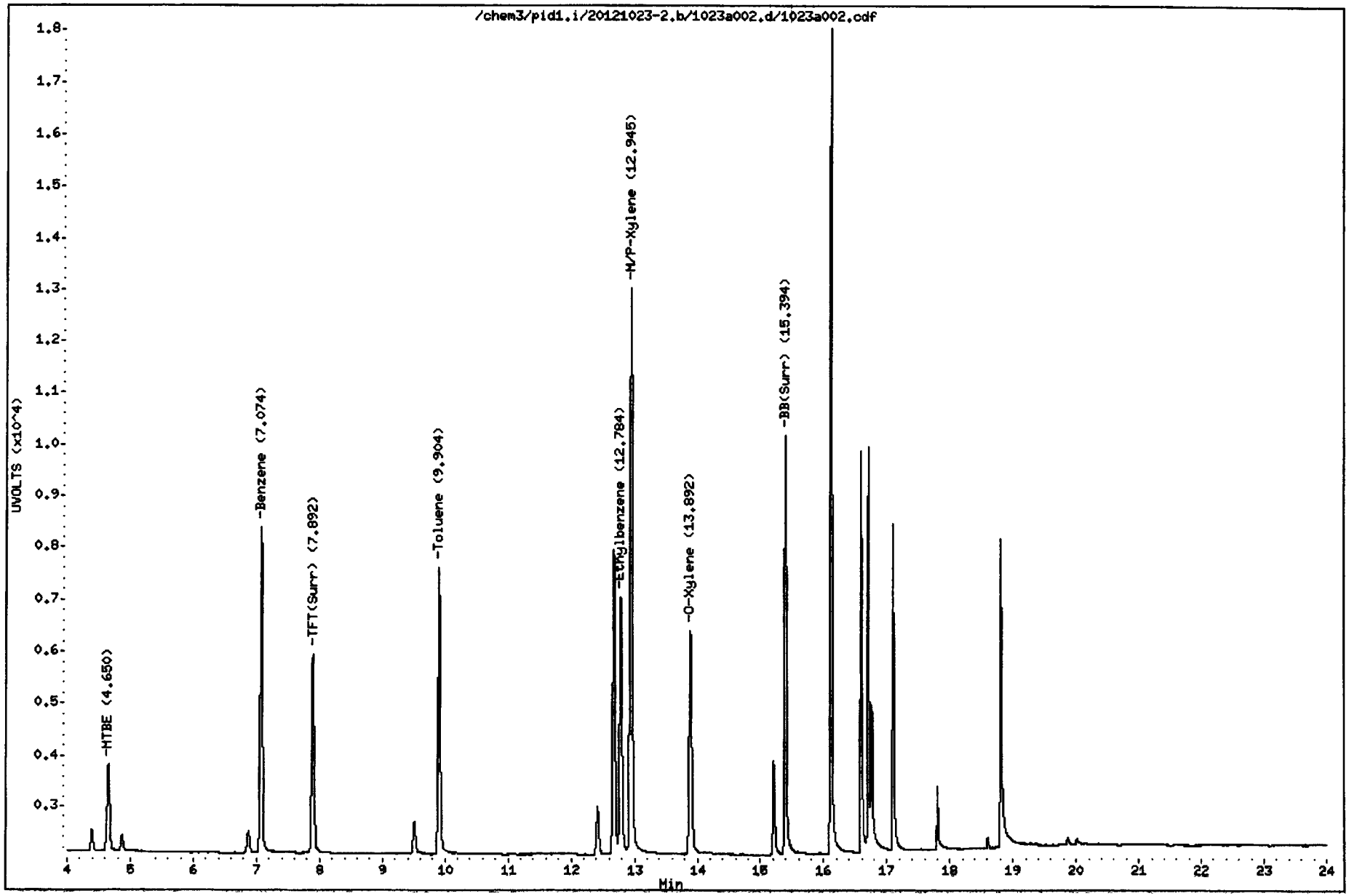
Sample Info: RT1023+BCAL1

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a013.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a013.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 0.10
Client ID:
Injection Date: 23-OCT-2012 22:13
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.885	-0.002	2950	38720	93.7	TFT(Surr)
15.387	0.000	1950	16606	96.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	37102	0.104 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	74277	0.103 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	57914	0.099 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	39402	0.105 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3536	93.3	TFT(Surr)
15.395	0.001	7790	96.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.907	0.000	902	4.01	Toluene
12.785	-0.001	223	1.13	Ethylbenzene
12.948	0.005	914	4.25	M/P-Xylene
13.893	0.003	346	2.06	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a013.d

Date : 23-OCT-2012 22:13

Client ID:

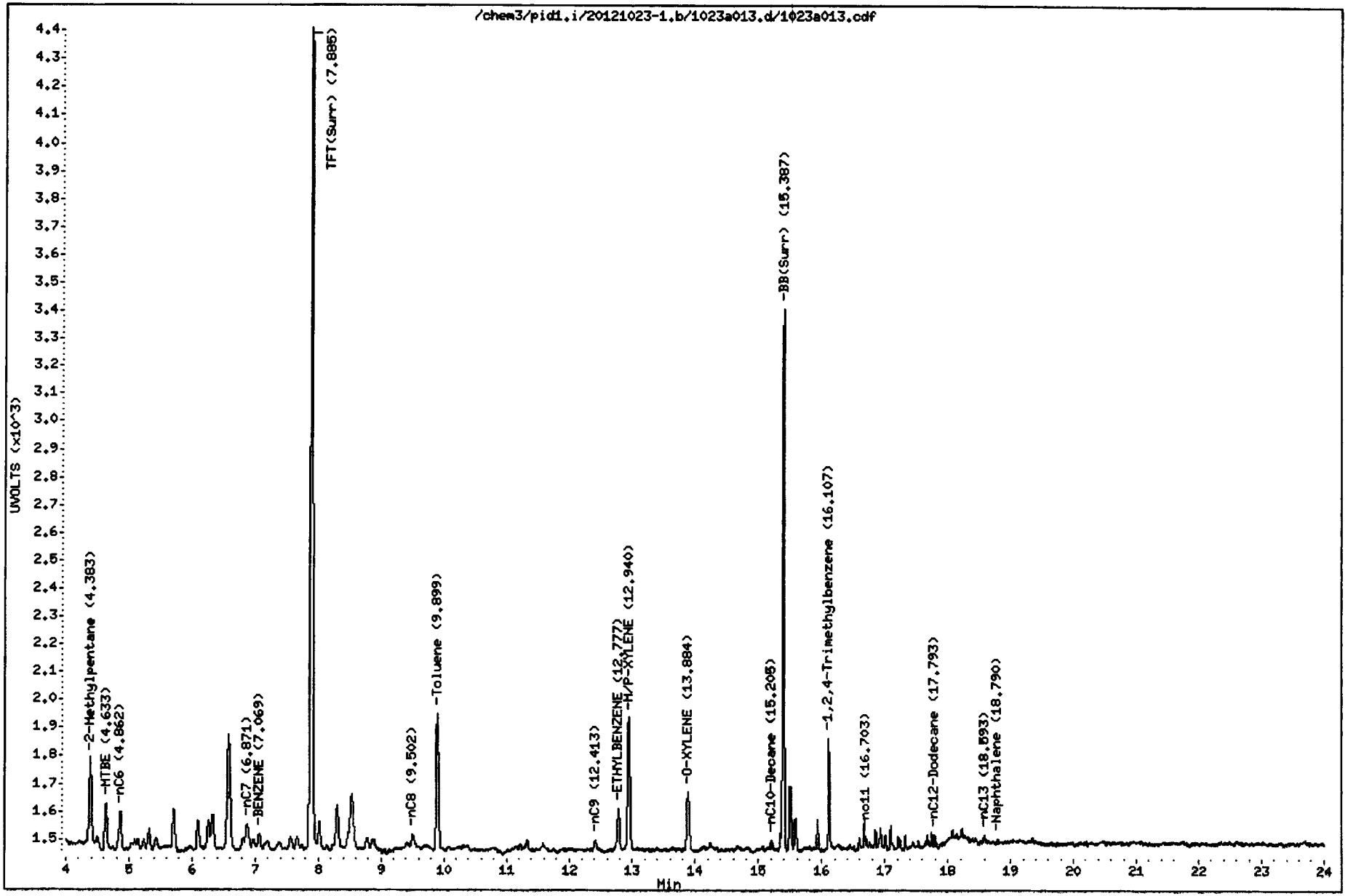
Sample Info: G 0.10

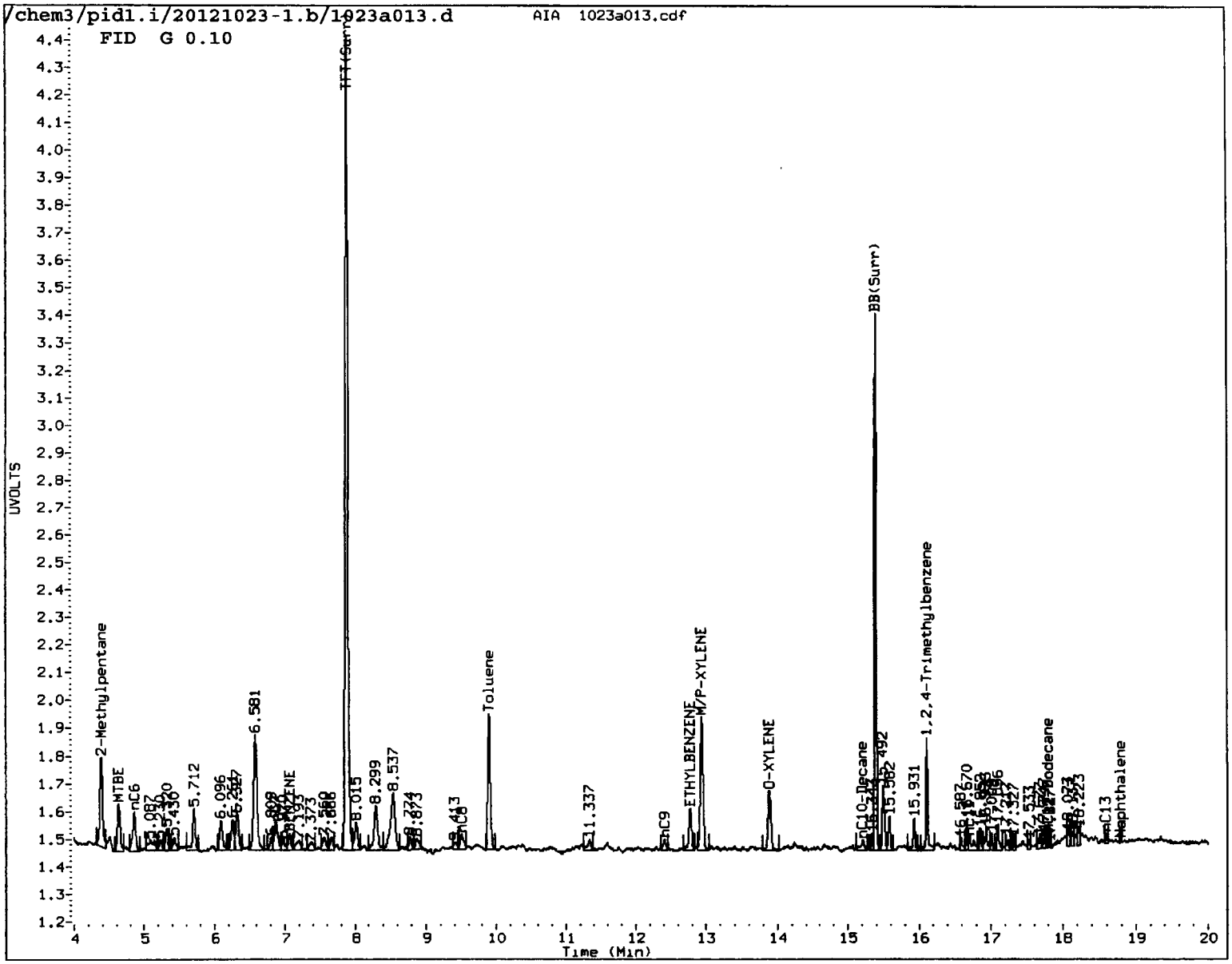
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

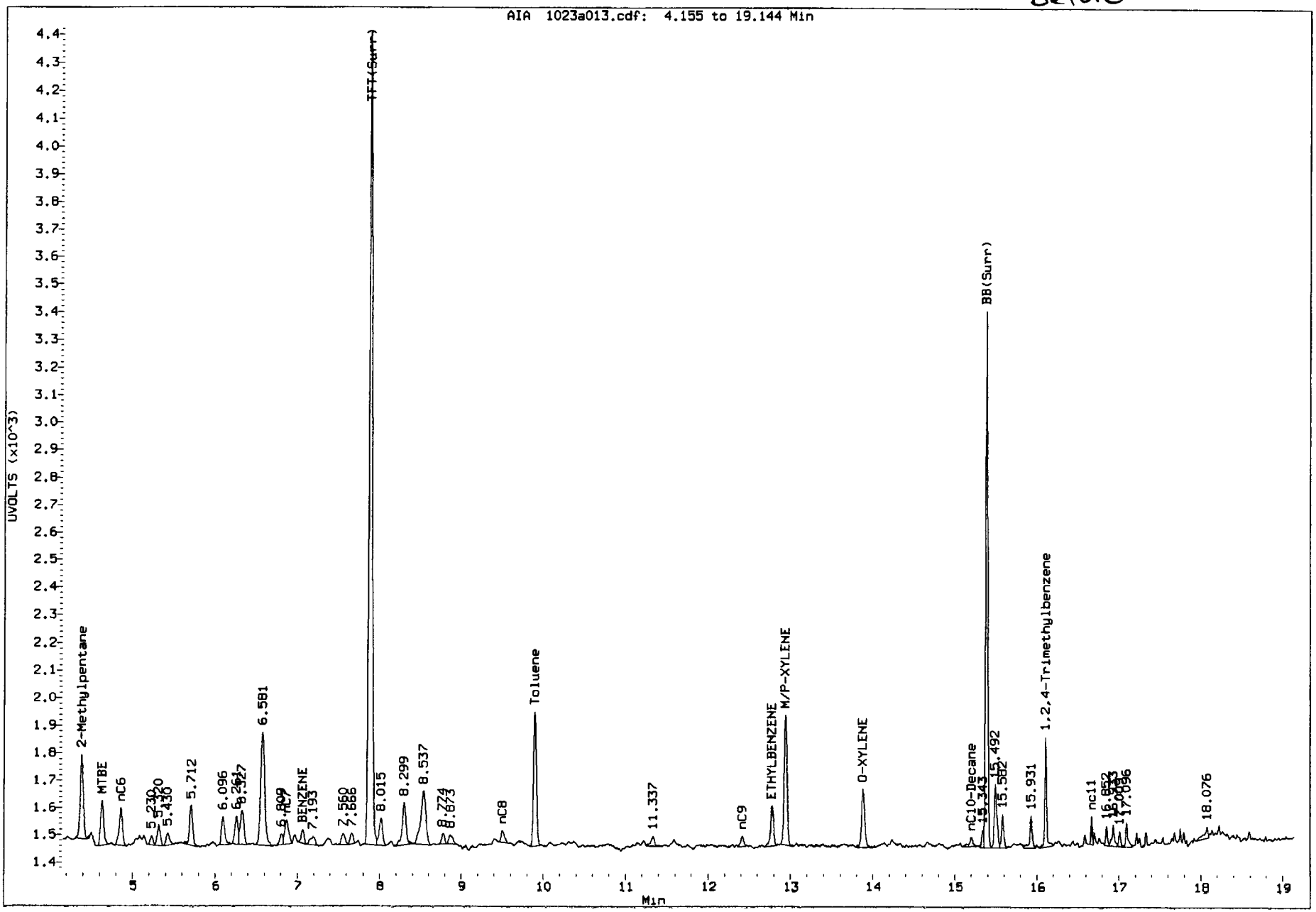
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a013.d/1023a013.cdf
Injection Date: 23-OCT-2012 22:13
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a014.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a014.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 0.25
Client ID:
Injection Date: 23-OCT-2012 22:42
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.886	-0.001	2975	39690	94.5	TFT(Surr)
15.388	0.001	1944	16963	95.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	94864	0.265 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	199011	0.275 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	162246	0.278 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	98768	0.263 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.000	3597	95.0	TFT(Surr)
15.396	0.002	7867	97.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	225	0.91	Benzene
9.906	0.000	2188	9.72	Toluene
12.786	-0.001	548	2.78	Ethylbenzene
12.948	0.005	2183	10.15	M/P-Xylene
13.894	0.004	795	4.74	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a014.d

Date : 23-OCT-2012 22:42

Client ID:

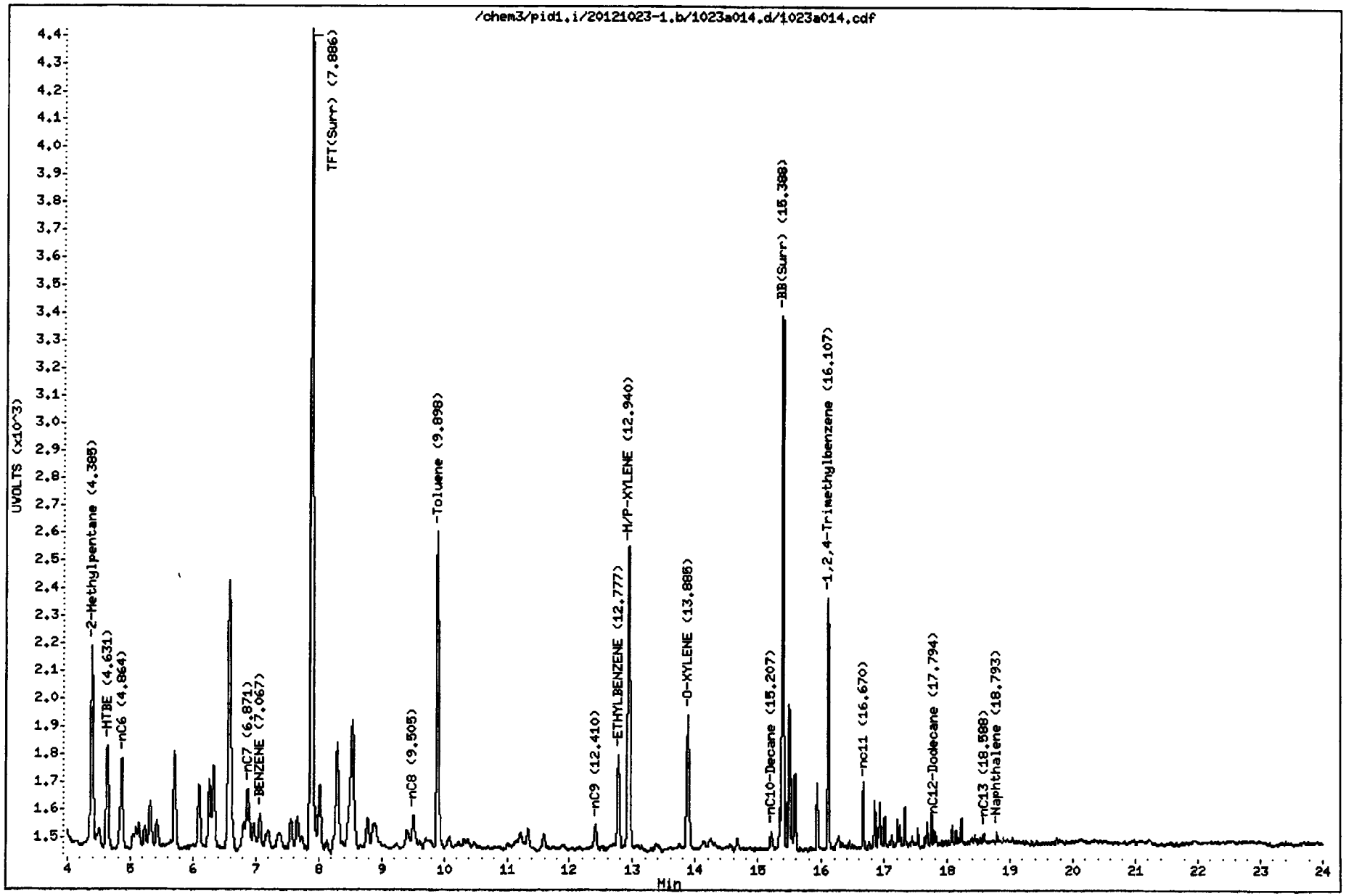
Sample Info: G 0.25

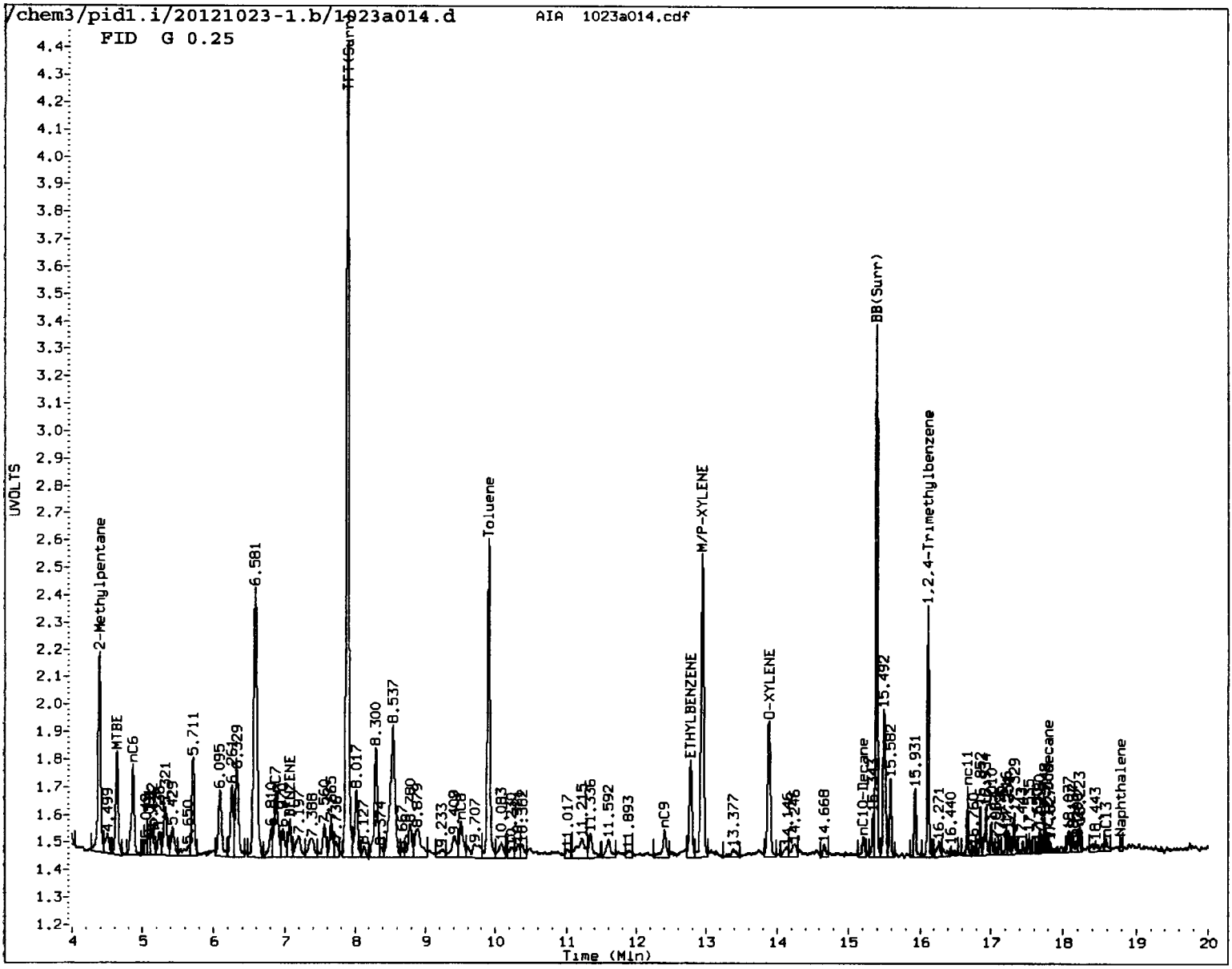
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

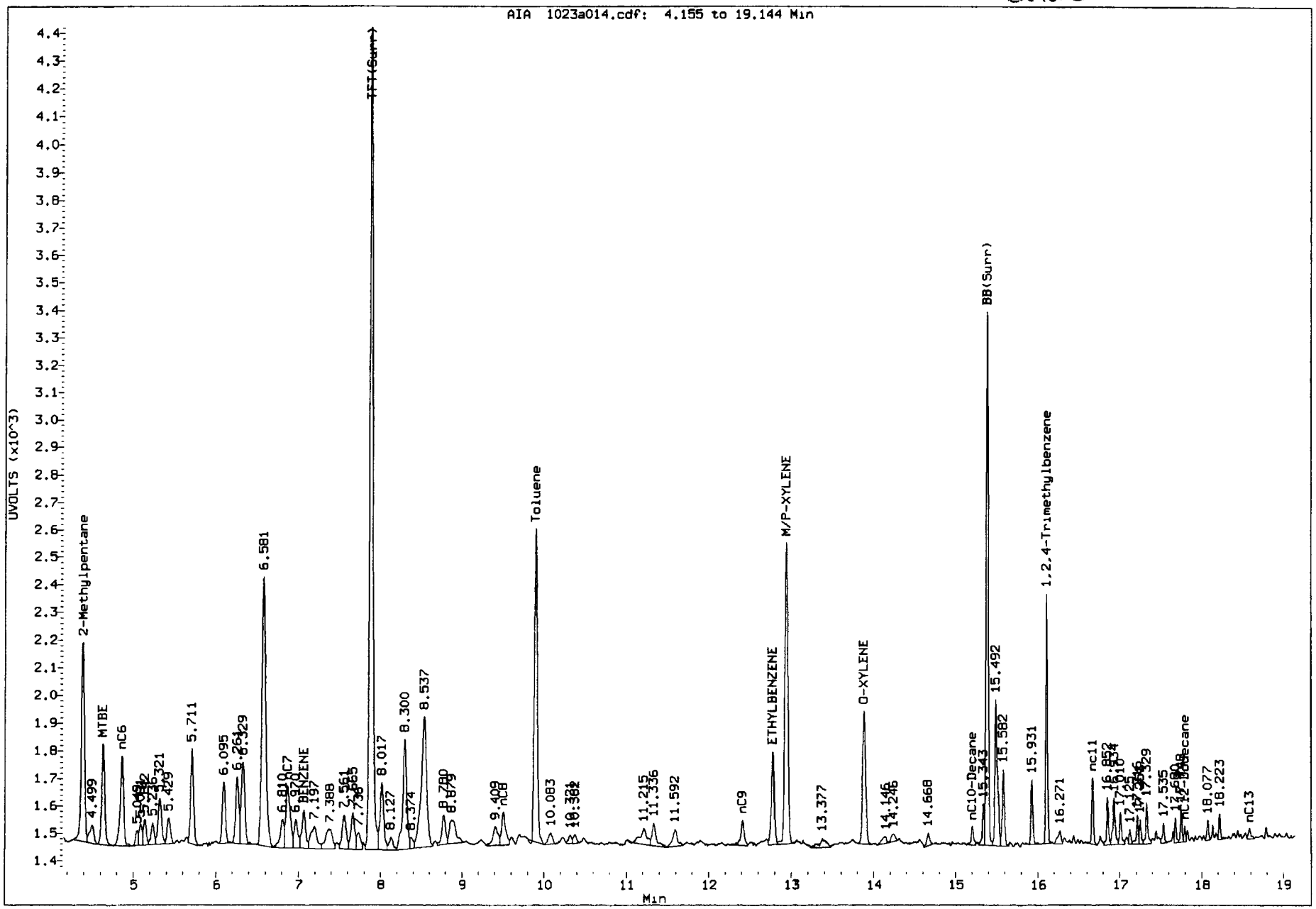
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a014.d/1023a014.cdf
Injection Date: 23-OCT-2012 22:42
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a015.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a015.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 1.0
Client ID:
Injection Date: 23-OCT-2012 23:11
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.886	-0.001	3079	44718	97.8	TFT(Surr)
15.387	0.000	1964	17721	96.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	358654	1.002 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	725276	1.002 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	585010	1.004 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	376837	1.005 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.001	3709	97.9	TFT(Surr)
15.395	0.002	7881	98.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	965	3.89	Benzene
9.906	0.000	9089	40.40	Toluene
12.786	-0.001	2253	11.43	Ethylbenzene
12.949	0.006	9128	42.45	M/P-Xylene
13.894	0.004	3286	19.58	O-Xylene
4.635	-0.019	211	2.93	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a015.d

Date : 23-OCT-2012 23:11

Client ID:

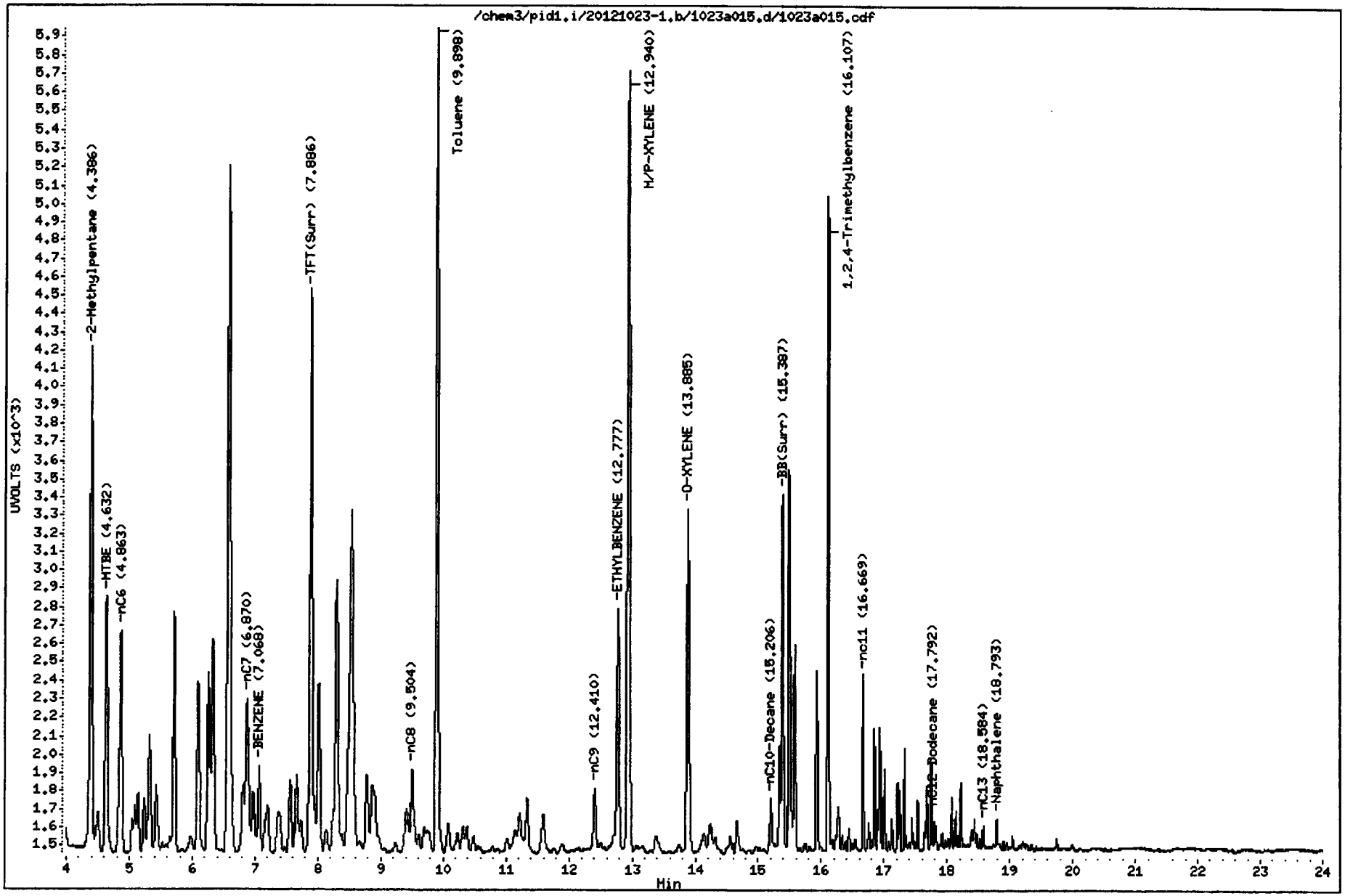
Sample Info: C 1.0

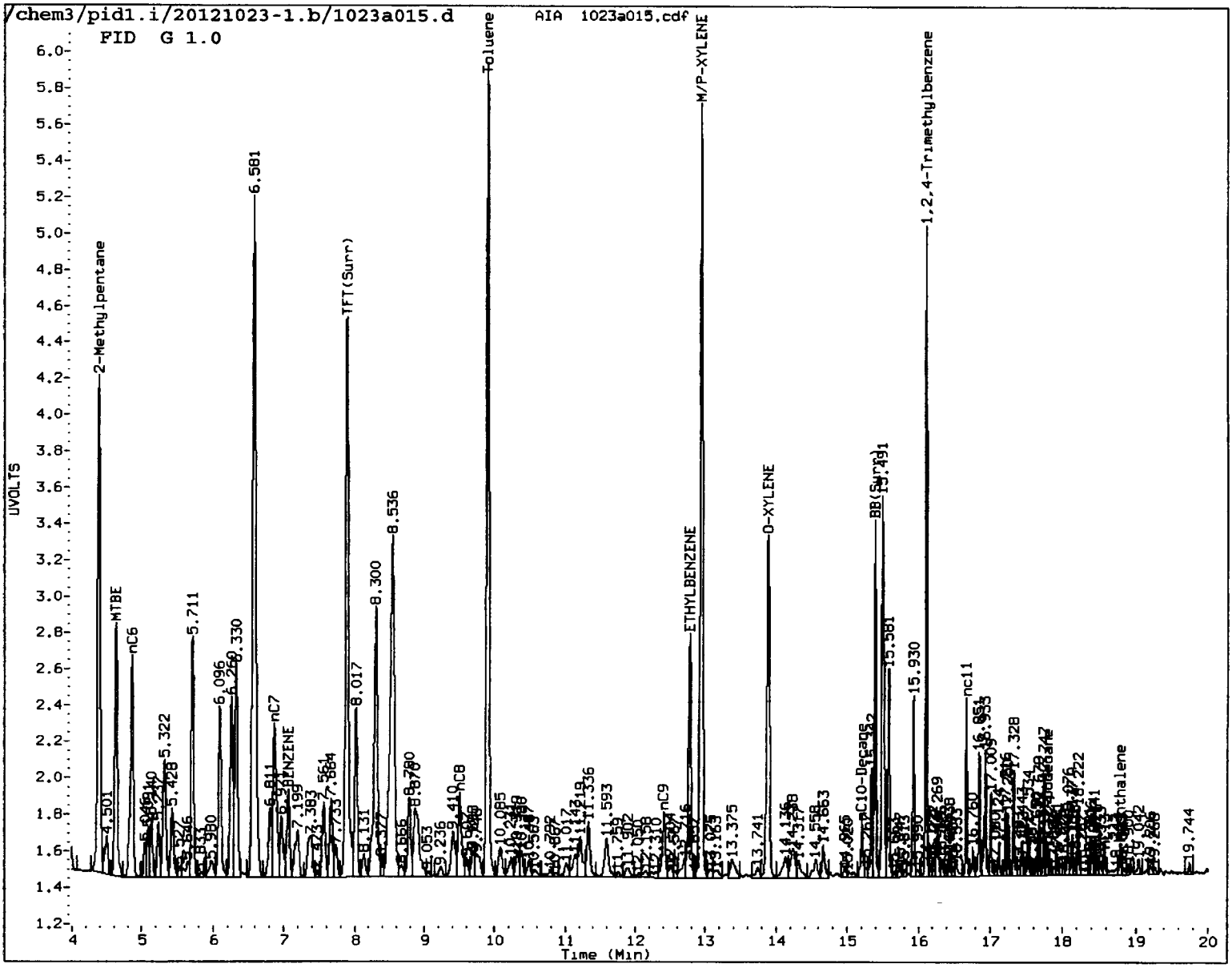
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



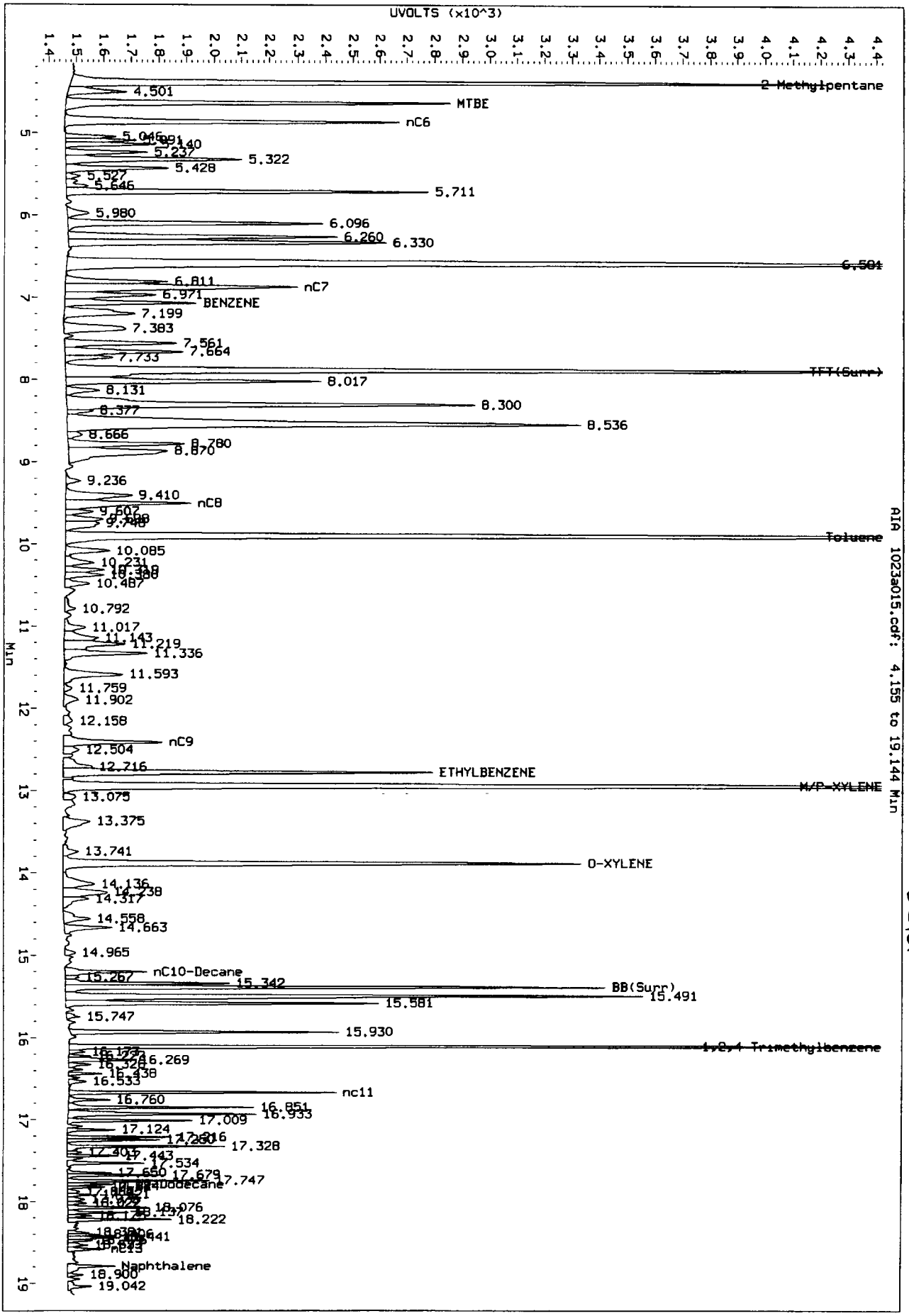


MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: BW Date: 10/25/12


Data File: /chem3/pid1.i/20121023-1.b/1023a015.d/1023a015.cdf
Injection Date: 23-OCT-2012 23:11
Instrument: pid1.i
Client Sample ID:
UVOLTS (x10^3)
Min
AIA 1023a015.cdf: 4.155 to 19.144 Min
2 Methylpentane
4.501
MTBE
nC6
5.322
5.428
5.711
5.980
6.096
6.330
6.501
nC7
BENZENE
7.199
7.383
7.561
7.664
7.733
TFT(Surr)
8.017
8.131
8.300
8.377
8.536
8.666
8.780
8.870
9.236
9.410
nC8
Toluene
10.085
10.231
10.487
10.792
11.017
11.143
11.219
11.336
11.593
11.759
11.902
12.158
nC9
12.504
12.716
ETHYLBENZENE
M/P-XYLENE
13.075
13.375
13.741
O-XYLENE
14.136
14.517
14.558
14.663
14.965
15.267
nC10-Decane
15.342
BB(Surr)
15.491
15.581
15.747
15.930
1,2,4 Trimethylbenzene
16.269
16.533
nc11
16.760
16.851
16.933
17.009
17.124
17.328
17.534
17.650
17.679
17.747
Dodecane
18.076
18.222
Naphthalene
18.900
19.042

Before

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a016.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a016.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 2.5
Client ID:
Injection Date: 23-OCT-2012 23:40
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.885	-0.002	3238	46993	102.8	TFT(Surr)
15.387	0.000	2003	18605	98.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	848232	2.369
8015C 2MP-TMB	(4.29 to 16.21)	723723	1687315	2.331
AK101 nC6-nC10	(4.76 to 15.11)	582885	1358261	2.330
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	884847	2.359

JW 10/25/12

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3774	99.6	TFT(Surr)
15.395	0.002	8059	100.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	2255	9.09	Benzene
9.907	0.000	21750	96.67	Toluene
12.785	-0.001	5424	27.51	Ethylbenzene
12.950	0.007	21923	101.96	M/P-Xylene
13.894	0.004	7944	47.33	O-Xylene
4.635	-0.018	486	6.75	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a016.d

Date : 23-OCT-2012 23:40

Client ID:

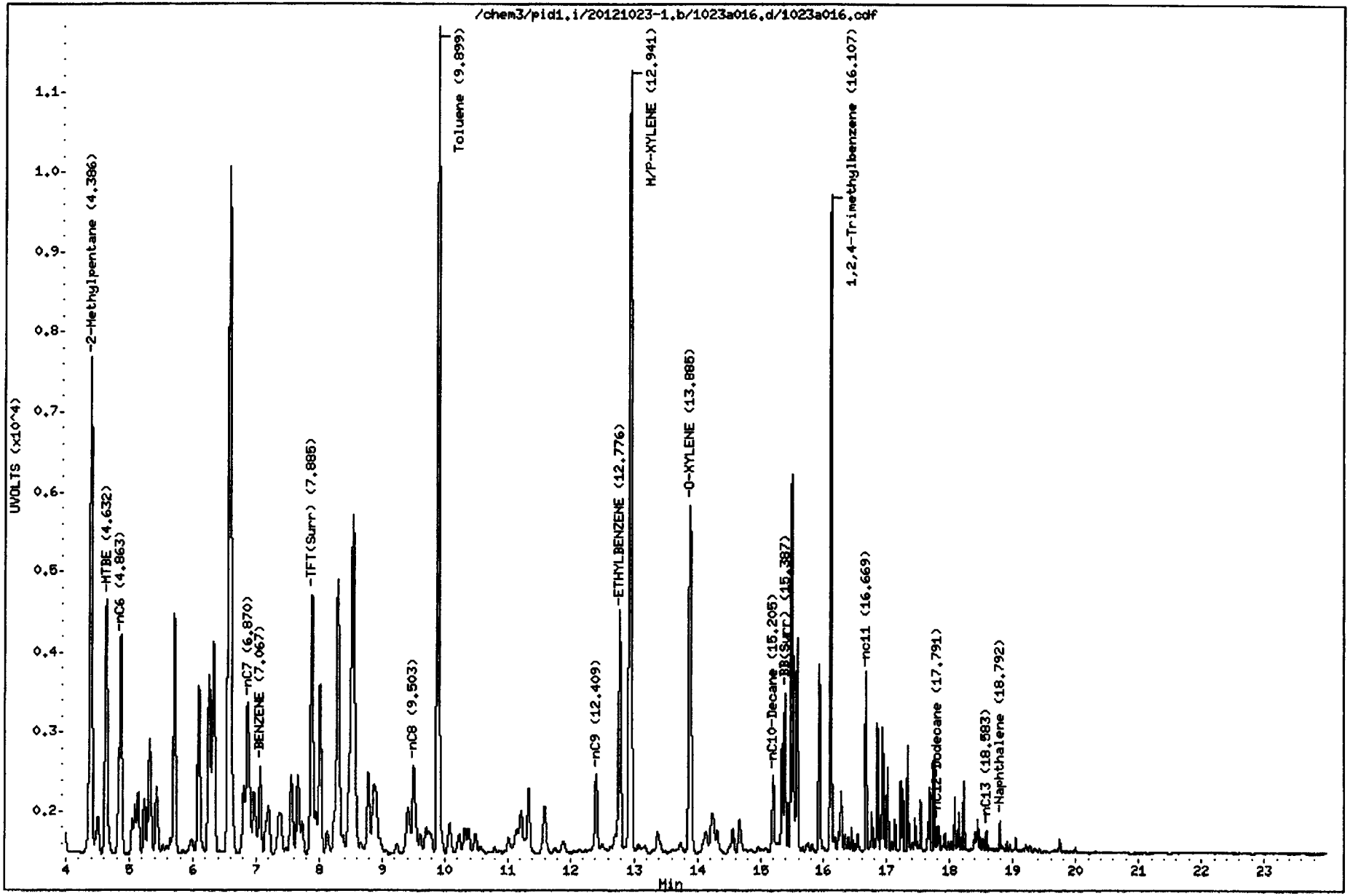
Sample Info: G 2.5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a017.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a017.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 5.0
Client ID:
Injection Date: 24-OCT-2012 00:10
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	3585	55360	113.8	TFT(Surr)
15.387	0.000	2115	18935	104.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	1701302	4.751
8015C 2MP-TMB	(4.29 to 16.21)	723723	3352467	4.632
AK101 nC6-nC10	(4.76 to 15.11)	582885	2711219	4.651
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	1775567	4.734

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.892	-0.001	4011	105.9	TFT(Surr)
15.395	0.001	8350	103.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.001	4431	17.87	Benzene
9.908	0.002	42408	188.49	Toluene
12.786	-0.001	10851	55.03	Ethylbenzene
12.952	0.009	43539	202.50	M/P-Xylene
13.895	0.005	15788	94.06	O-Xylene
4.636	-0.018	966	13.42	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a017.d

Date : 24-OCT-2012 00:10

Client ID:

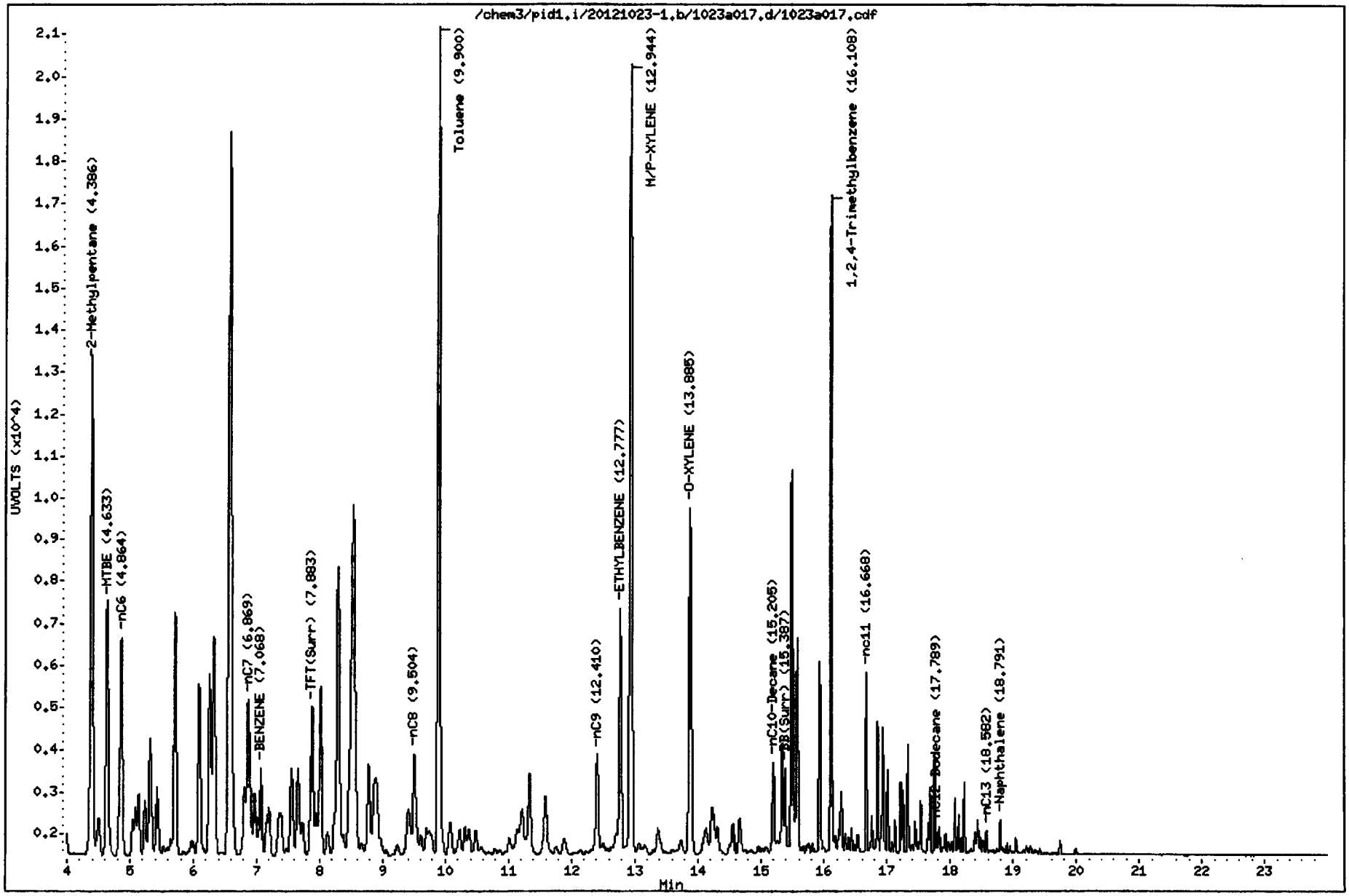
Sample Info: G 5.0

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a018.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a018.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 10
Client ID:
Injection Date: 24-OCT-2012 00:39
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.880	-0.007	4738	79062	150.4	TFT(Surr)
15.388	0.001	2439	22291	120.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	3600012	10.053
8015C 2MP-TMB	(4.29 to 16.21)	723723	7328267	10.126
AK101 nC6-nC10	(4.76 to 15.11)	582885	5986278	10.270
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	3755718	10.013

JW 10/25/12

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.891	-0.003	4903	129.4	TFT(Surr)
15.395	0.002	9209	114.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.076	-0.001	9254	37.32	Benzene
9.912	0.005	88764	394.52	Toluene
12.789	0.002	22870	115.99	Ethylbenzene
12.958	0.015	90897	422.77	M/P-Xylene
13.898	0.008	33138	197.43	O-Xylene
4.636	-0.017	2050	28.47	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a018.d

Date : 24-OCT-2012 00:39

Client ID:

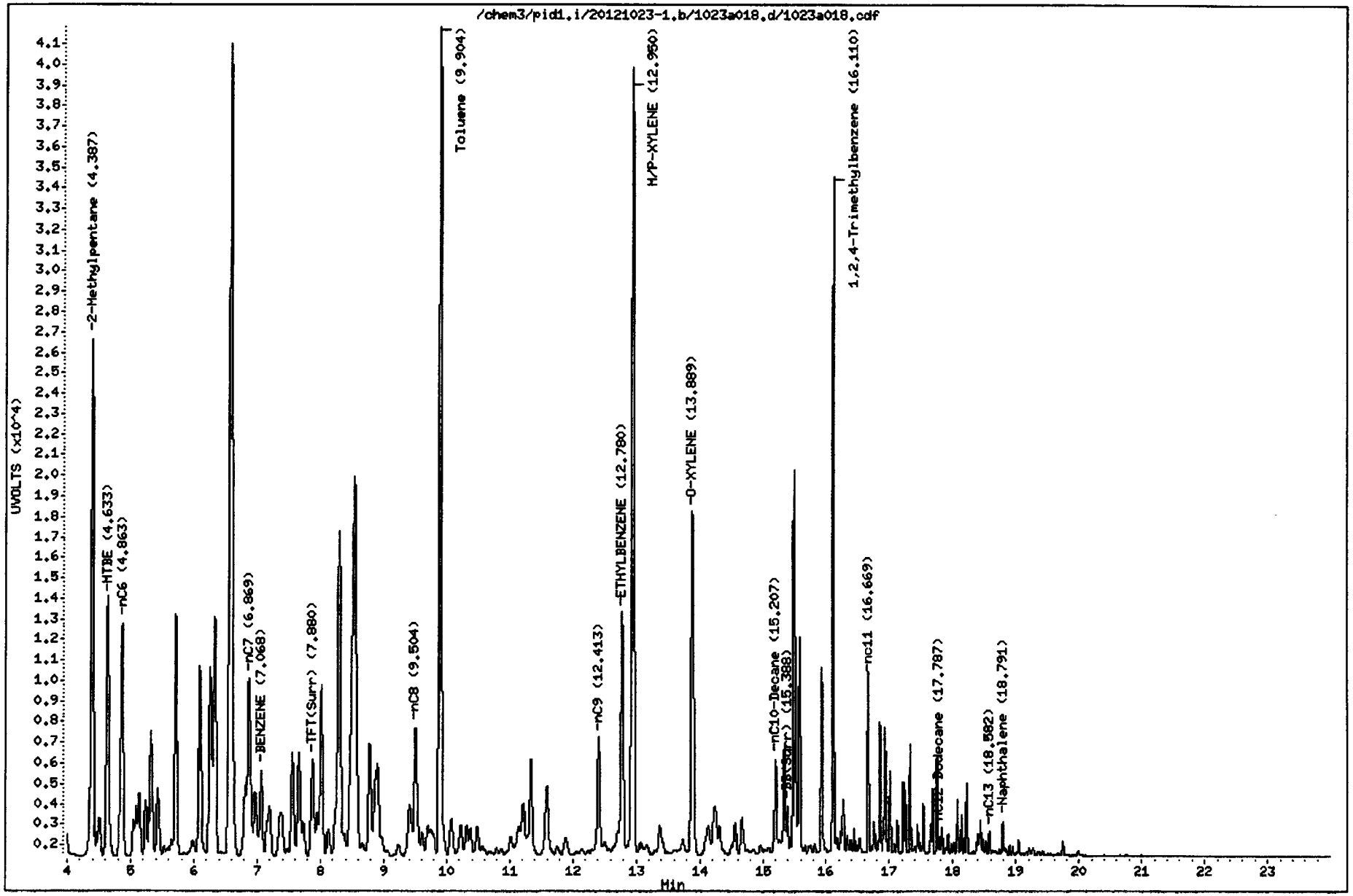
Sample Info: G 10

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a019.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a019.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: GICV
Client ID:
Injection Date: 24-OCT-2012 01:08
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	3250	47497	103.2	TFT(Surr)
15.387	0.000	2019	19039	99.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	917898	2.563
8015C 2MP-TMB	(4.29 to 16.21)	723723	1759198	2.431
AK101 nC6-nC10	(4.76 to 15.11)	582885	1408754	2.417
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	972996	2.594

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3791	100.1	TFT(Surr)
15.395	0.002	8074	100.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	2306	9.30	Benzene
9.907	0.000	22198	98.66	Toluene
12.785	-0.001	5582	28.31	Ethylbenzene
12.950	0.007	22656	105.37	M/P-Xylene
13.894	0.004	8207	48.90	O-Xylene
4.635	-0.019	542	7.53	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a019.d

Date : 24-OCT-2012 01:08

Client ID:

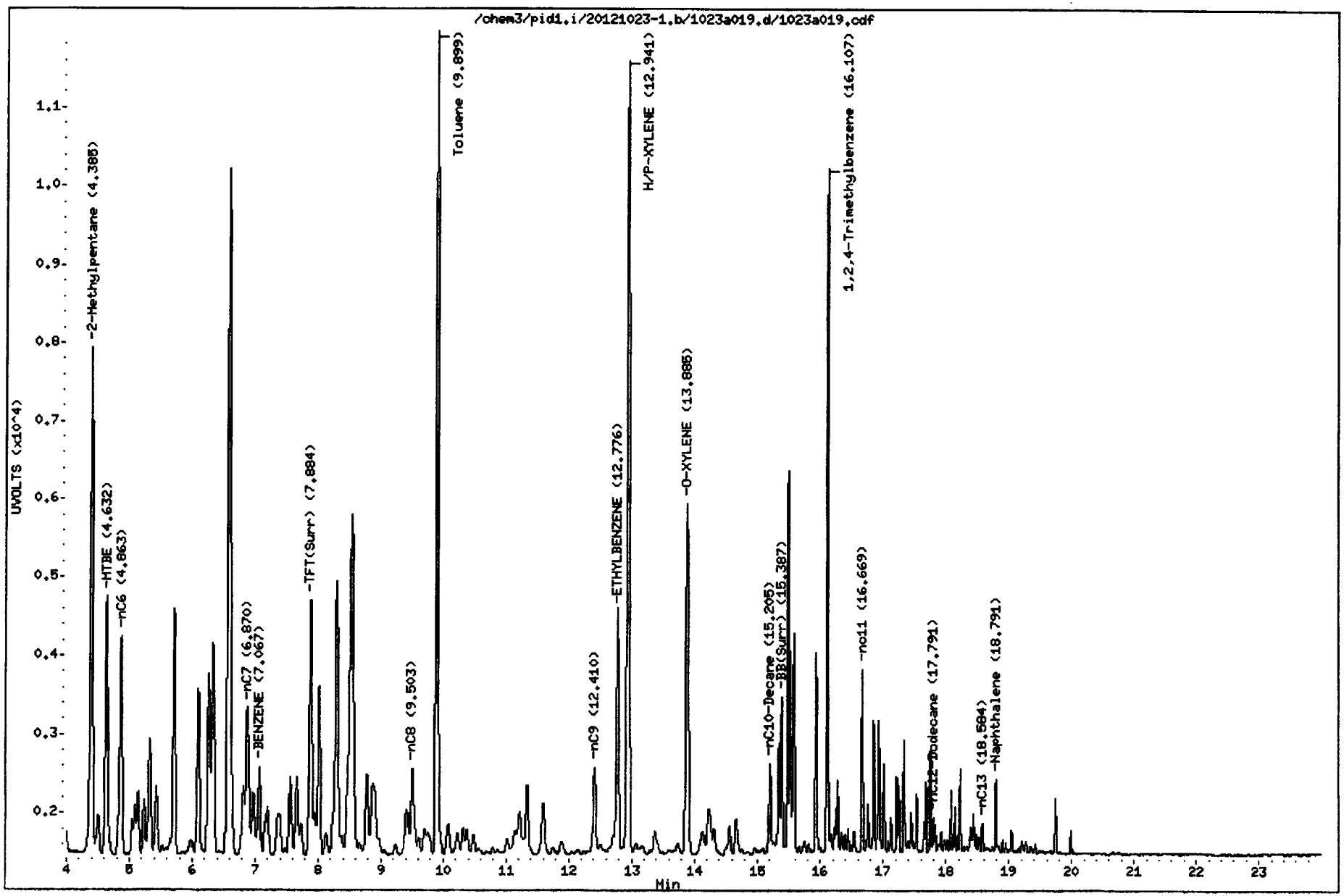
Sample Info: CICV

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	1023a013	1023a014	1023a015	1023a016	1023a017	1023a018
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	24-OCT-2012	24-OCT-2012
INJ.TIME:	22:13	22:42	23:11	23:40	00:10	00:39

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++	0.492	0.422-0.562	+++++	+++++
2	WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	0.937	0.867-1.007	+++++	+++++
3	AK101	+++++	+++++	+++++	+++++	+++++	+++++	1.251	1.181-1.321	+++++	+++++
4	8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	1.539	1.469-1.609	+++++	+++++
5	2-Methylpentane	4.383	4.385	4.386	4.386	4.386	4.387	4.387	4.317-4.457	4.385	0.001
6	MTBE	4.633	4.631	4.632	4.632	4.633	4.633	4.647	4.577-4.717	4.632	0.001
7	nC6	4.862	4.864	4.863	4.863	4.864	4.863	4.864	4.794-4.934	4.863	0.001
8	nC7	6.871	6.871	6.870	6.870	6.869	6.869	6.864	6.794-6.934	6.870	0.001
9	BENZENE	7.069	7.067	7.068	7.067	7.068	7.068	7.063	6.993-7.133	7.068	0.001
$ 10	TFT(Surr)	7.885	7.886	7.886	7.885	7.883	7.880	7.887	7.817-7.957	7.884	0.002
11	nC8	9.502	9.505	9.504	9.503	9.504	9.504	9.507	9.437-9.577	9.504	0.001
12	Toluene	9.899	9.898	9.898	9.899	9.900	9.904	9.897	9.827-9.967	9.900	0.002
13	nC9	12.413	12.410	12.410	12.409	12.410	12.413	12.416	12.346-12.486	12.411	0.002
14	ETHYLBENZENE	12.777	12.777	12.777	12.776	12.777	12.780	12.780	12.710-12.850	12.777	0.001
15	M/P-XYLENE	12.940	12.940	12.940	12.941	12.944	12.950	12.933	12.863-13.003	12.942	0.004
16	O-XYLENE	13.884	13.885	13.885	13.885	13.885	13.889	13.883	13.813-13.953	13.885	0.002
17	nC10-Decane	15.205	15.207	15.206	15.205	15.205	15.207	15.207	15.137-15.277	15.206	0.001

Reviewer 1 _____ Date: 10/25/12
Reviewer 2 _____ Date: 10/25/12

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 18 BB(Surr)	15.387	15.388	15.387	15.387	15.387	15.388	15.387	15.317-15.457	15.387	0.000
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
20 1,2,4-Trimethylbenzene	16.107	16.107	16.107	16.107	16.108	16.110	16.109	16.039-16.179	16.108	0.001
21 nc11	16.703	16.670	16.669	16.669	16.668	16.669	16.704	16.634-16.774	16.675	0.014
22 nC12-Dodecane	17.793	17.794	17.792	17.791	17.789	17.787	17.795	17.725-17.865	17.791	0.003
23 nC13	18.593	18.588	18.584	18.583	18.582	18.582	18.595	18.525-18.665	18.585	0.004
24 Naphthalene	18.790	18.793	18.793	18.792	18.791	18.791	18.796	18.726-18.866	18.792	0.001

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-2.b/PIDB.m
Batch File: /chem3/pid1.i/20121023-2.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	1023a013	1023a014	1023a015	1023a016	1023a017	1023a018
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	24-OCT-2012	24-OCT-2012
INJ.TIME:	22:13	22:42	23:11	23:40	00:10	00:39

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 MTBE	+++++	+++++	4.635	4.635	4.636	4.636	4.653	4.603-4.703	4.635	0.001
	2 Benzene	+++++	7.075	7.075	7.075	7.075	7.076	7.077	7.027-7.127	7.075	0.000
$	3 TFT(Surr)	7.893	7.894	7.894	7.893	7.892	7.891	7.893	7.843-7.943	7.893	0.001
	4 Toluene	9.907	9.906	9.906	9.907	9.908	9.912	9.907	9.857-9.957	9.908	0.002
	5 Ethylbenzene	12.785	12.786	12.786	12.785	12.786	12.789	12.787	12.737-12.837	12.786	0.001
	6 M/P-Xylene	12.948	12.948	12.949	12.950	12.952	12.958	12.943	12.893-12.993	12.951	0.004
	7 O-Xylene	13.893	13.894	13.894	13.894	13.895	13.898	13.890	13.860-13.920	13.895	0.002
$	8 BB(Surr)	15.395	15.396	15.395	15.395	15.395	15.395	15.393	15.343-15.443	15.395	0.000

Reviewer 1 _____ Date: 10/25/12

Reviewer 2 _____ Date: 10/26/12

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20121023-1.b

ARI Job No.: RINS Method: FID.m Instrument: pid1.i Date: 23-OCT-2012

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0941	1023a001.d	RINSE		1	NO MANUAL INTEGRATION
1010	1023a002.d	RT1023+BCAL1		1	NO MANUAL INTEGRATION
1039	1023a003.d	GCAL1		1	NO MANUAL INTEGRATION
1750	1023a004.d	B	200	1	Toluene, O-XYLENE, TFT(Surr), BB(Surr),
1820	1023a005.d	B	100	1	Toluene, BENZENE, TFT(Surr), BB(Surr),
1849	1023a006.d	B	50	1	Toluene, BENZENE, TFT(Surr), BB(Surr),
1918	1023a007.d	B	25	1	Toluene, BENZENE, O-XYLENE, TFT(Surr), BB(Surr),
1947	1023a008.d	B	5	1	Toluene, MTBE, BENZENE, O-XYLENE,
2016	1023a009.d	B	1	1	Toluene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE,
2045	1023a010.d	B	0.5	1	Toluene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE, TFT(Surr), BB(Surr),
2115	1023a011.d	B	0.25	1	Toluene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE, TFT(Surr), BB(Surr),
2144	1023a012.d	BICV		1	NO MANUAL INTEGRATION
2213	1023a013.d	G	0.10	1	nC12-Dodecane, Naphthalene, nc11, nC13,
2242	1023a014.d	G	0.25	1	Naphthalene,
2311	1023a015.d	G	1.0	1	Naphthalene,
2340	1023a016.d	G	2.5	1	NO MANUAL INTEGRATION
0010	1023a017.d	G	5.0	1	NO MANUAL INTEGRATION
0039	1023a018.d	G	10	1	NO MANUAL INTEGRATION
0108	1023a019.d	GICV		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20121023-2.b

ARI Job No.: RINS Method: PIDB.m Instrument: pid1.i Date: 23-OCT-2012

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0941	1023a001.d	RINSE		1	NO MANUAL INTEGRATION
1010	1023a002.d	RT1023+BCAL1		1	NO MANUAL INTEGRATION
1039	1023a003.d	GCAL1		1	NO MANUAL INTEGRATION
1750	1023a004.d	B 200		1	Toluene, O-Xylene, BB(Surr),
1820	1023a005.d	B 100		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1849	1023a006.d	B 50		1	Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1918	1023a007.d	B 25		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1947	1023a008.d	B 5		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
2016	1023a009.d	B 1		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
2045	1023a010.d	B 0.5		1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
2115	1023a011.d	B 0.25		1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, TFT(Surr), BB(Surr),
2144	1023a012.d	BICV		1	NO MANUAL INTEGRATION
2213	1023a013.d	G 0.10		1	NO MANUAL INTEGRATION
2242	1023a014.d	G 0.25		1	NO MANUAL INTEGRATION
2311	1023a015.d	G 1.0		1	NO MANUAL INTEGRATION
2340	1023a016.d	G 2.5		1	NO MANUAL INTEGRATION
0010	1023a017.d	G 5.0		1	NO MANUAL INTEGRATION
0039	1023a018.d	G 10		1	NO MANUAL INTEGRATION
0108	1023a019.d	GICV		1	NO MANUAL INTEGRATION

TPHG Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WV67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Analyst Notes / Data Review Checklist

ARI WORK Order: WV67 Client ID: SAIC

METHOD: **NW-TPH**(Gas) **8021B**(BTEX) **NW-VPH**(VPH) **8260C**(VOA) **8260C**(SIM VOA) **524.3**(VOA) **RSK-175**(MEE)

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 (PID-1) PID-2 PID-3 FID-6

Purge Volume (mL) 5 Curve Date: 10/23/12, 5/22/13 Analysis Start Date: 6/27/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
PH ≤ 2.0 / 5035 Preserved?	NA / (Y) / N / ✓	Method Blank In Control?	(Y) / N / ✓
BFB Tune Meets Criteria?	(NA) / Y / N / ✓	Surrogate Recovery in Control?	(Y) / N / ✓
Internal STD within 50-200%?	(NA) / Y / N / ✓	LCS / LCSD Recovery Met?	(Y) / N / ✓
CCAL Meets %D	(Y) / N / ✓	LCS / LCSD RPD ≤30%?	NA / 4%
ICAL Q flag applied?	NA / Y / (N) / ✓	MS / MSD Recovery Met?	(NA) / Y / N / NA
CCAL Q Flag applied	NA / Y / (N) / ✓	MS / MSD RPD ≤30%?	NA / NA
Manual Integrations?	(Y) / N / ✓	Samples Diluted?	Y / (N) / ✓
Integration Summary?	(Y) / N / ✓	Special Analysis Request?	Y / (N) / ✓

Bubbles/Headspace: (None) SM (≤ 2mm •) PB (2-4mm ●) LG (> 4mm) Head Space

Detail problems, corrective actions and/or other pertinent information below:

No QC volume provided.
Standing water in TS jars, TS values approximate

(Review 1)Analyst: VC **Date:** 6/28/13

(Review 2)Reviewer: [signature] **Date:** 6/28/13

Analytical Resources Inc.: Organics Instrument Log

PID-1 Serial No.: 2750A-17141

Date: 6/27/13 Analysis: NWTPH-G/BTEX Analyst: PC

Column 1 Serial No.: 821726 Column Type: RTX502.2

Column 2 Serial No.: — Column Type: —

GC Method: BTX ICal Date: 10/23/12, 5/22/13 Injection Volume: ~~2.5~~ 5
PC 6/28/13

IS	Ical/Ccal	ICV
B000856	VW791-2	B000206
	B000332	
	B000206	

Document All Maintenance Tasks In StarLIMS

	Time	Filename	LabID	ClientID	Vial#	pH	DF
1	0857	0627a001.d	RINSE				1
2	0926	0627a002.d	RT0626+BCAL				1
3	0955	0627a003.d	GCAL 1				1
4	1100	0627a004 d	LCS0627				1
5	1129	0627a005.d	LCSD0627				1
6	1158	0627a006.d	MB0627				1
7	1320	0627a007.d	WV67D	UP-TB-01-20130626-W	12		1
8	1349	0627a008.d	WU70A	LF-QC-TB-20130619-W	11		1
9	1418	0627a009.d	WV68C	Trip Blanks	10		1
10	1447	0627a010.d	WV67A	UP-CB-B8-20130626-S			1
11	1517	0627a011.d	WV67E	UP-MW-165-20130626			1
12	1546	0627a012.d	WV67C	UP-CB-A6-20130626-S			1
13	1615	0627a013 d	BCAL 2				1
14	1644	0627a014.d	GCAL 2				1
15	1714	0627a015.d	WV68A	RC-3(GW)	3	12	1
16	1743	0627a016 d	WV68B	RC-6(GW)	4		1
17	1812	0627a017.d	WU70B	LF-TP-001-20130619-			1
18	1841	0627a018 d	WV04A	ARR-1			1
19	1910	0627a019.d	WV04B	ARR-2			1
20	1939	0627a020.d	WV04C	ARR-3			1
21	2009	0627a021 d	WV04D	ARR-4			1
22	2038	0627a022.d	WV04E	ARR-5			1
23	2107	0627a023.d	WV04F	ARR-6			1
24	2136	0627a024 d	BCAL 3				1
25	2205	0627a025.d	GCAL 3				1

PC 6/28/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20130627-1.b

ARI Job No.: RT06 Method: FID.m Instrument: pid1.i Date: 27-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0926	0627a002.d	RT0626+BCAL		1	NO MANUAL INTEGRATION
0955	0627a003.d	GCAL 1		1	NO MANUAL INTEGRATION
1100	0627a004.d	LCS0627		1	NO MANUAL INTEGRATION
1129	0627a005.d	LCSD0627		1	NO MANUAL INTEGRATION
1158	0627a006.d	MB0627		1	NO MANUAL INTEGRATION
1320	0627a007.d	WV67D	UP-TB-01-2	1	NO MANUAL INTEGRATION
1447	0627a010.d	WV67A	UP-CB-B8-2	1	NO MANUAL INTEGRATION
1517	0627a011.d	WV67B	UP-MHF-165	1	NO MANUAL INTEGRATION
1546	0627a012.d	WV67C	UP-CB-A6-2	1	NO MANUAL INTEGRATION
1644	0627a014.d	GCAL 2		1	NO MANUAL INTEGRATION

6/18/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130627-1.b/0627a002.d
Data file 2: /chem3/pid1.i/20130627-2.b/0627a002.d
Method: /chem3/pid1.i/20130627-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: RT0626+BCAL
Client ID:
Injection Date: 27-JUN-2013 09:26
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.839	0.000	3242	40194	109.6	TFT(Surr)
15.378	0.000	1872	16366	94.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	430636	1.203
8015C 2MP-TMB	(4.17 to 16.20)	723723	479196	0.662
AK101 nC6-nC10	(4.67 to 15.10)	582885	342296	0.587
NWTPHG Tol-Nap	(9.76 to 18.90)	375093	468782	1.250

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.846	0.000	3575	110.9	TFT(Surr)
15.385	0.000	7337	101.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.014	0.000	5627	25.03	Benzene
9.873	0.000	5167	26.08	Toluene
12.766	0.000	4360	26.71	Ethylbenzene
12.926	0.000	9342	51.92	M/P-Xylene
13.873	0.000	3844	27.07	O-Xylene
4.546	0.000	2060	23.63	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130627-1.b/0627a002.d

Date : 27-JUN-2013 09:26

Client ID:

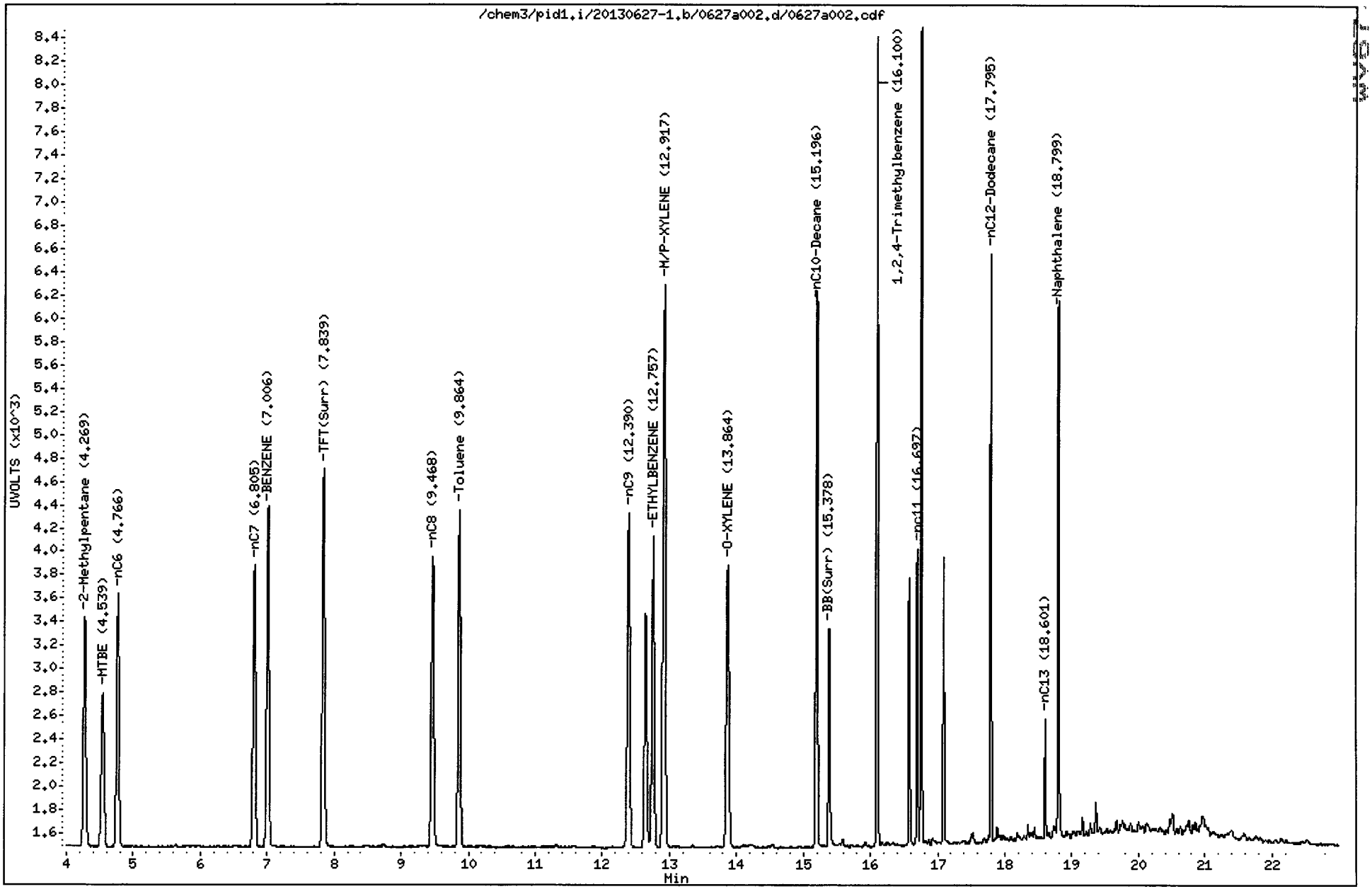
Sample Info: RT0626+BCAL

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



PC 6/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130627-1.b/0627a003.d
Data file 2: /chem3/pid1.i/20130627-2.b/0627a003.d
Method: /chem3/pid1.i/20130627-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: GCAL 1
Client ID:
Injection Date: 27-JUN-2013 09:55
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.837	-0.001	3455	48018	116.8	TFT(Surr)
15.378	-0.001	1981	18654	99.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	812266	2.268 M
8015C 2MP-TMB	(4.17 to 16.20)	723723	1535314	2.121 M
AK101 nC6-nC10	(4.67 to 15.10)	582885	1249470	2.144 M
NWTPHG Tol-Nap	(9.76 to 18.90)	375093	872234	2.325 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.846	0.000	3665	113.7	TFT(Surr)
15.385	0.001	7493	103.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.014	0.000	1898	8.44	Benzene
9.874	0.001	19138	96.59	Toluene
12.766	0.000	4572	28.00	Ethylbenzene
12.930	0.004	18433	102.44	M/P-Xylene
13.875	0.002	6626	46.66	O-Xylene
4.530	-0.017	279	3.20	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130627-1.b/0627a003.d

Date : 27-JUN-2013 09:55

Client ID:

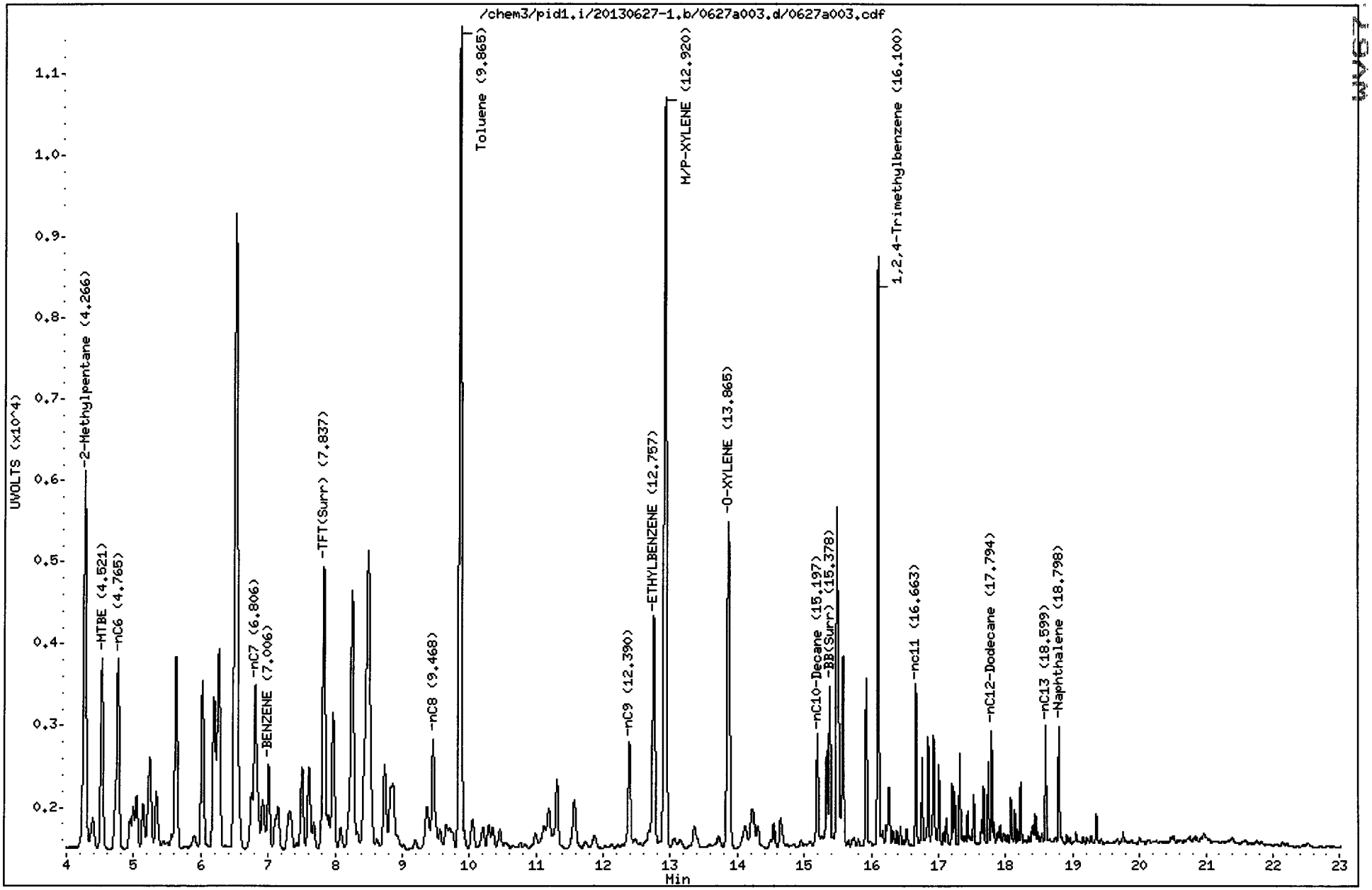
Sample Info: GCAL 1

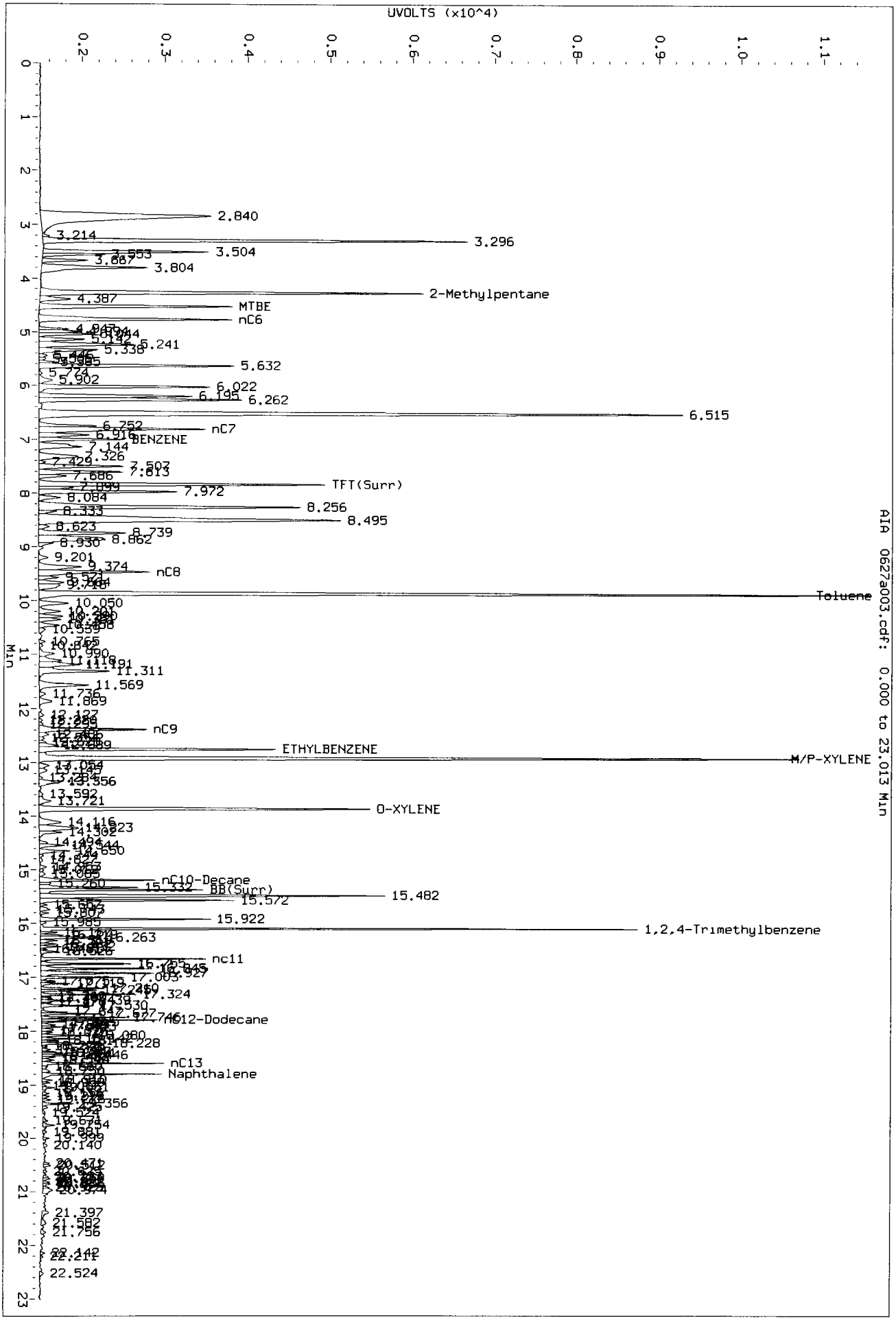
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

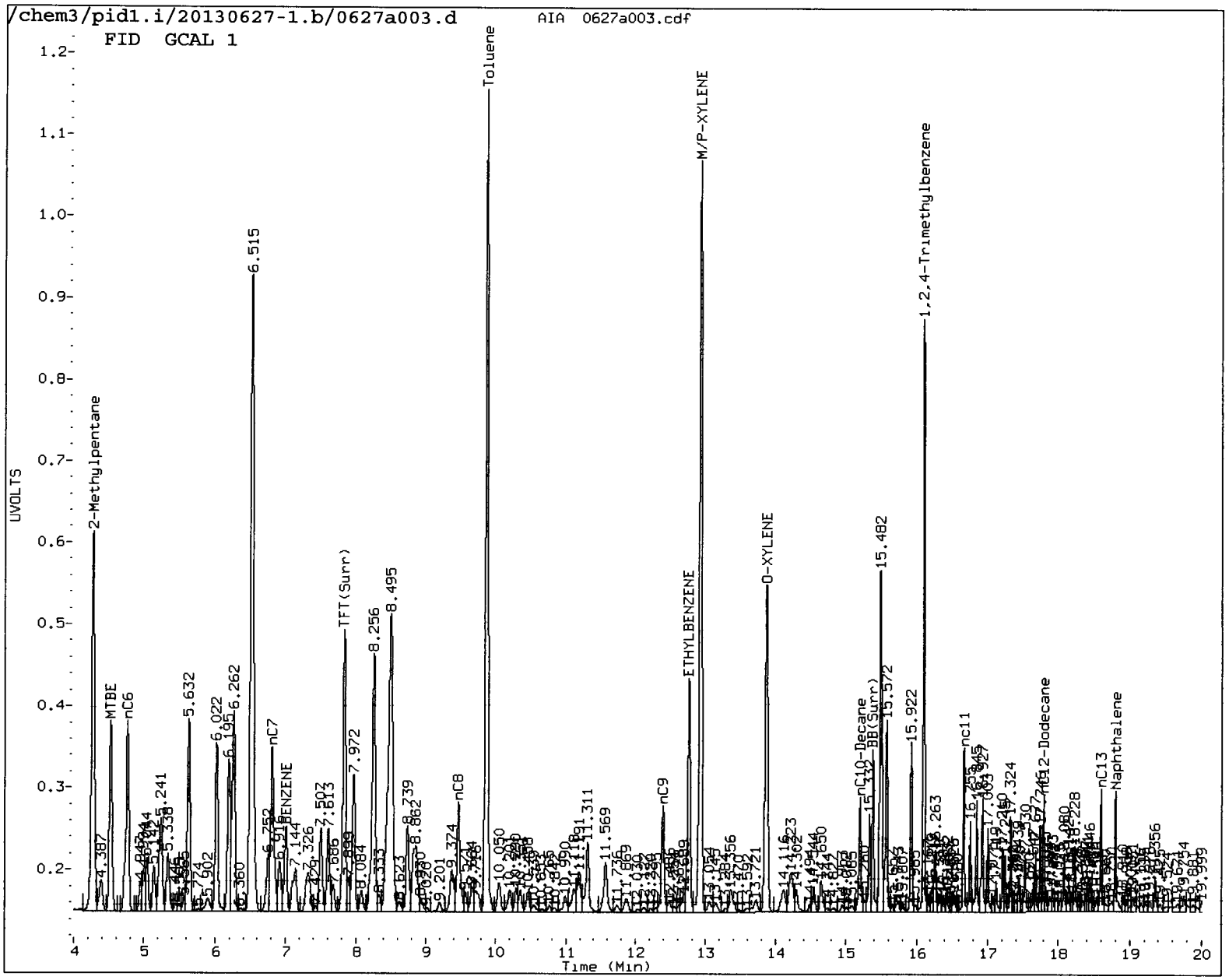
Column diameter: 0.18





Data File: /chem3/pid1.i/20130627-1.b/0627a003.d/0627a003.cdf
Injection Date: 27-JUN-2013 09:55
Instrument: pid1.i
Client Sample ID:

6/28/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: KC Date: 6/28/13

RC
6/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130627-1.b/0627a004.d
Data file 2: /chem3/pid1.i/20130627-2.b/0627a004.d
Method: /chem3/pid1.i/20130627-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: LCS0627
Client ID:
Injection Date: 27-JUN-2013 11:00
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	0.002	3475	48362	117.4	TFT(Surr)
15.379	0.001	1997	18572	100.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	403512	1.127 M
8015C 2MP-TMB	(4.17 to 16.20)	723723	802396	1.109 M
AK101 nC6-nC10	(4.67 to 15.10)	582885	650328	1.116 M
NWTPHG Tol-Nap	(9.76 to 18.90)	375093	437302	1.166 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.848	0.002	3854	119.6	TFT(Surr)
15.387	0.002	7751	107.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.016	0.002	907	4.03	Benzene
9.876	0.003	8986	45.35	Toluene
12.768	0.002	2127	13.03	Ethylbenzene
12.931	0.005	8540	47.46	M/P-Xylene
13.877	0.004	3089	21.75	O-Xylene
4.530	-0.017	172	1.97	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130627-1.b/0627a004.d

Date : 27-JUN-2013 11:00

Client ID:

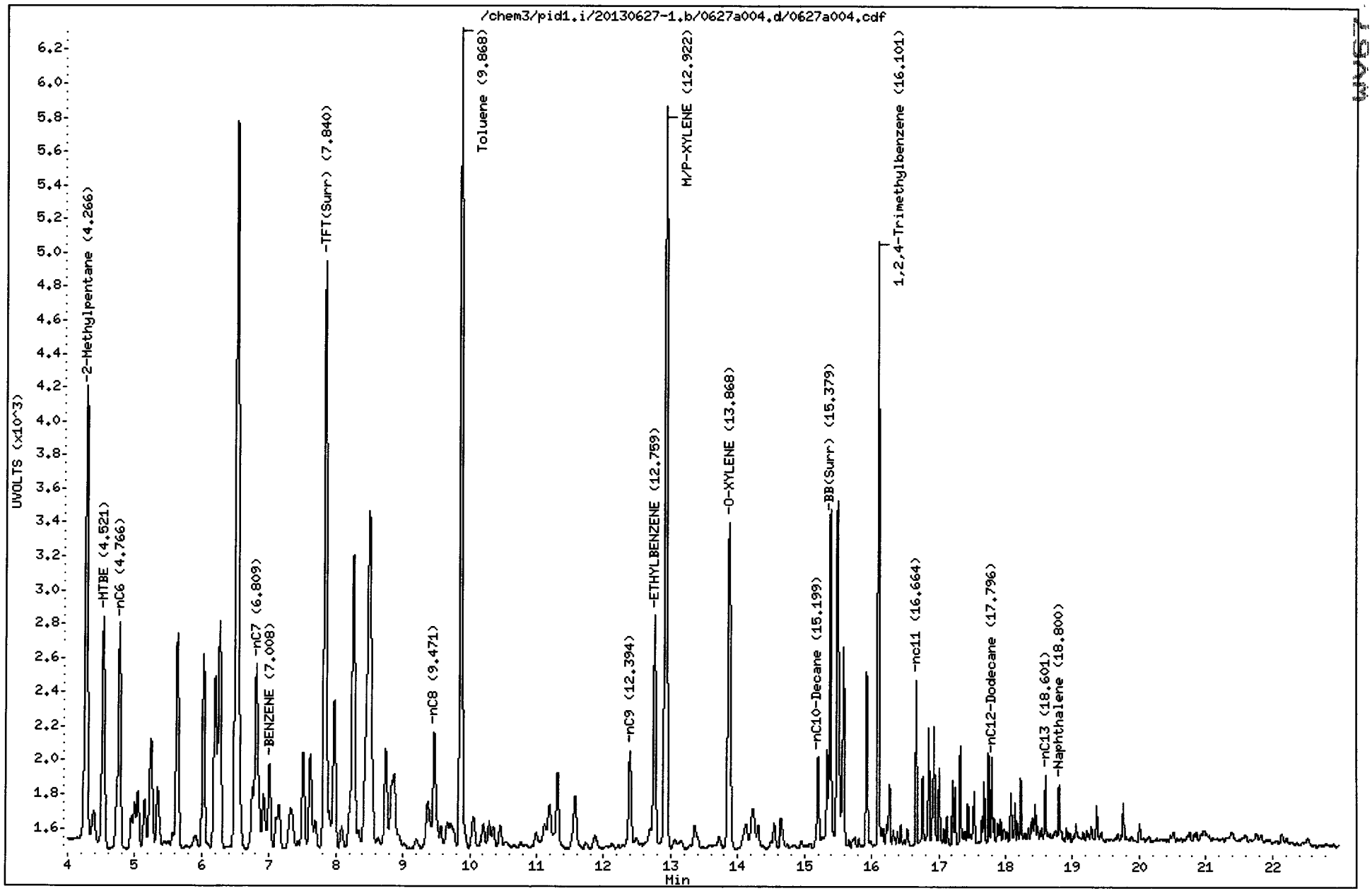
Sample Info: LCS0627

Column phase: RTX 502-2 FID

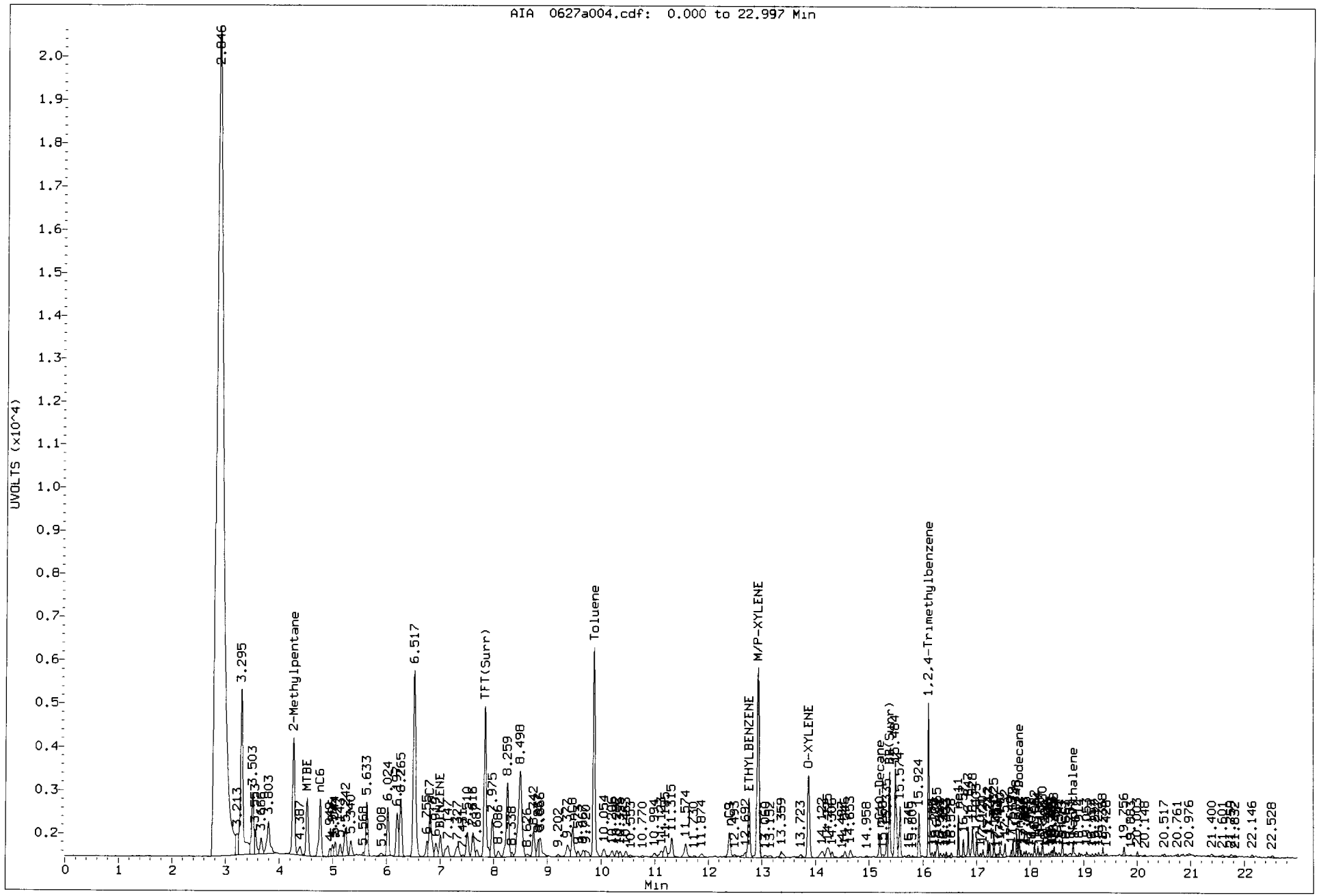
Instrument: pid1.i

Operator: PC

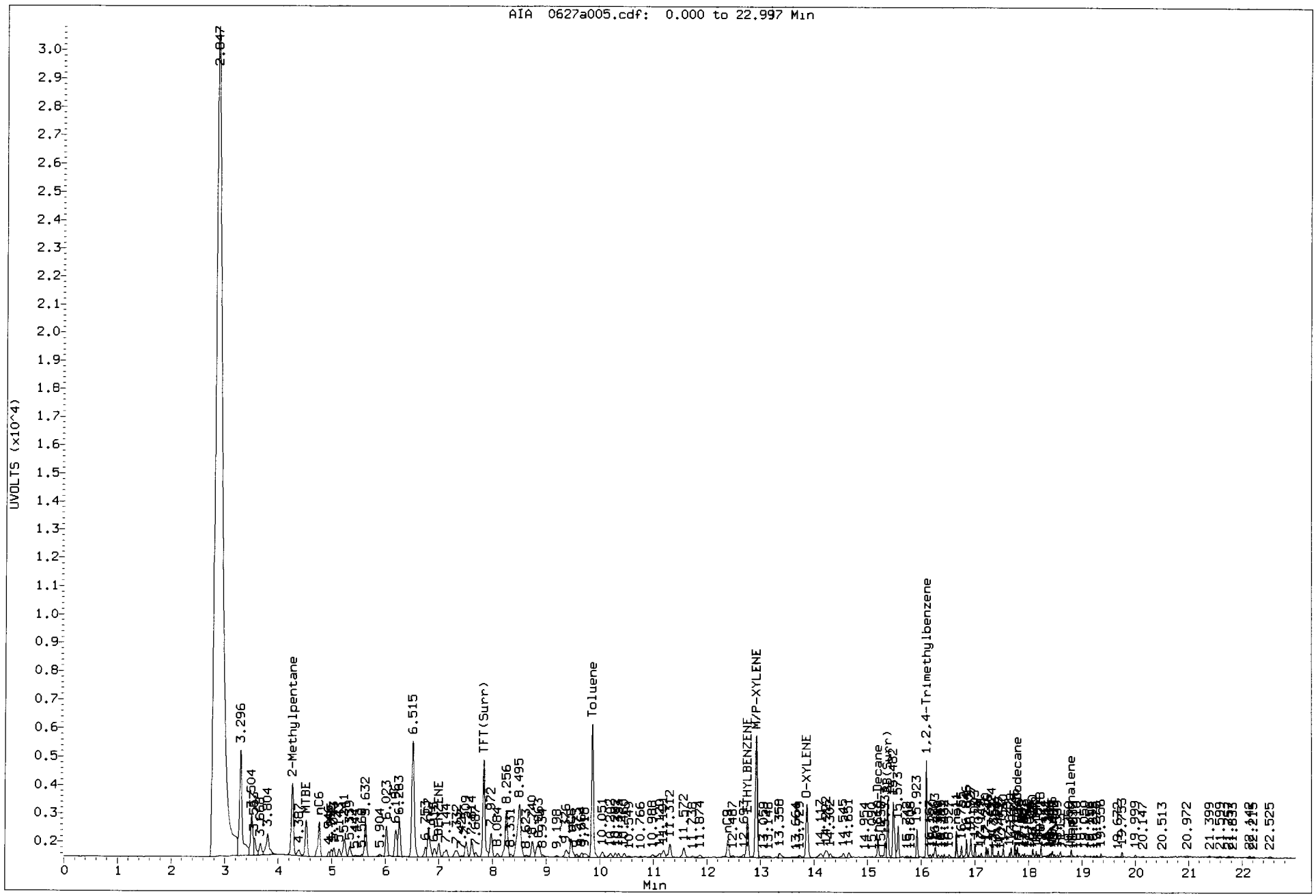
Column diameter: 0.18

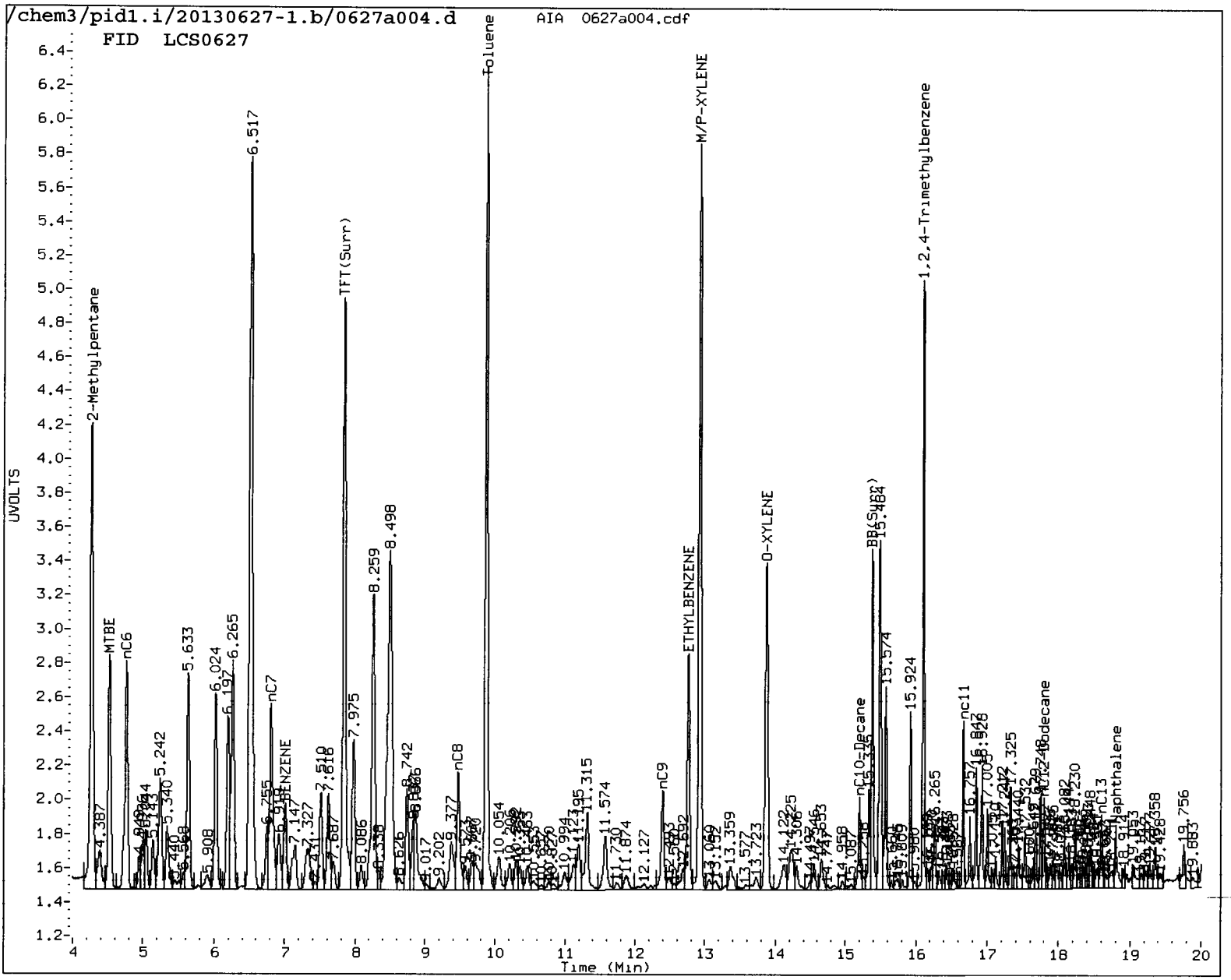


Data File: /chem3/pid1.i/20130627-1.b/0627a004.d/0627a004.cdf
Injection Date: 27-JUN-2013 11:00
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20130627-1.b/0627a005.d/0627a005.cdf
Injection Date: 27-JUN-2013 11:29
Instrument: pid1.i
Client Sample ID:





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/28/13

WDT 6116

MC 6/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130627-1.b/0627a005.d
Data file 2: /chem3/pid1.i/20130627-2.b/0627a005.d
Method: /chem3/pid1.i/20130627-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: LCSD0627
Client ID:
Injection Date: 27-JUN-2013 11:29
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.838	-0.001	3433	47656	116.0	TFT(Surr)
15.378	0.000	2034	18278	102.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	389910	1.089 M
8015C 2MP-TMB	(4.17 to 16.20)	723723	776329	1.073 M
AK101 nC6-nC10	(4.67 to 15.10)	582885	628996	1.079 M
NWTPHG Tol-Nap	(9.76 to 18.90)	375093	413732	1.103 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.846	0.000	3736	115.9	TFT(Surr)
15.385	0.000	7670	106.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.013	0.000	879	3.91	Benzene
9.873	0.000	8619	43.50	Toluene
12.766	0.000	2059	12.61	Ethylbenzene
12.929	0.003	8259	45.90	M/P-Xylene
13.874	0.001	2954	20.80	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130627-1.b/0627a005.d

Date : 27-JUN-2013 11:29

Client ID:

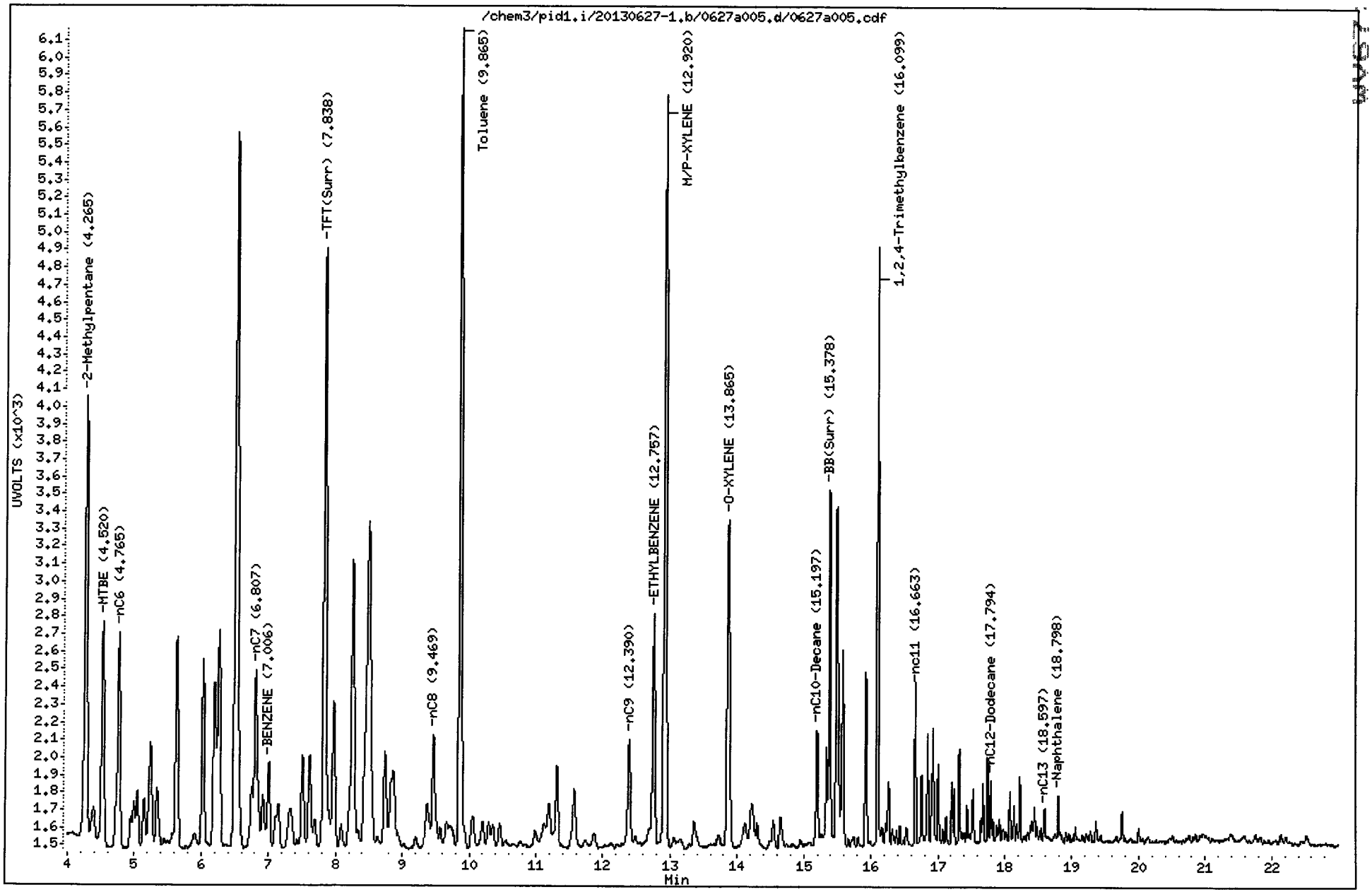
Sample Info: LCSD0627

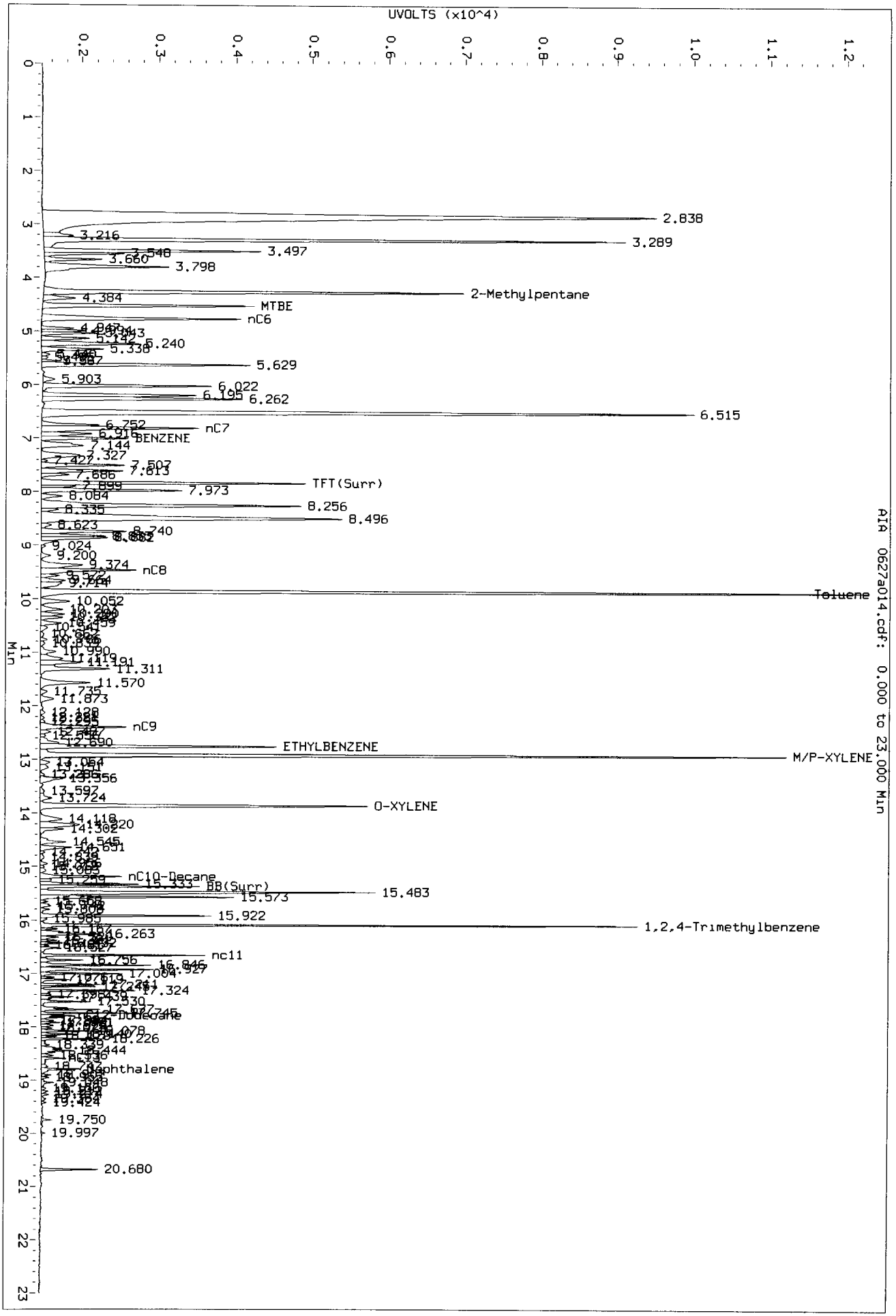
Instrument: pid1.i

Operator: PC

Column phase: RTX 502-2 FID

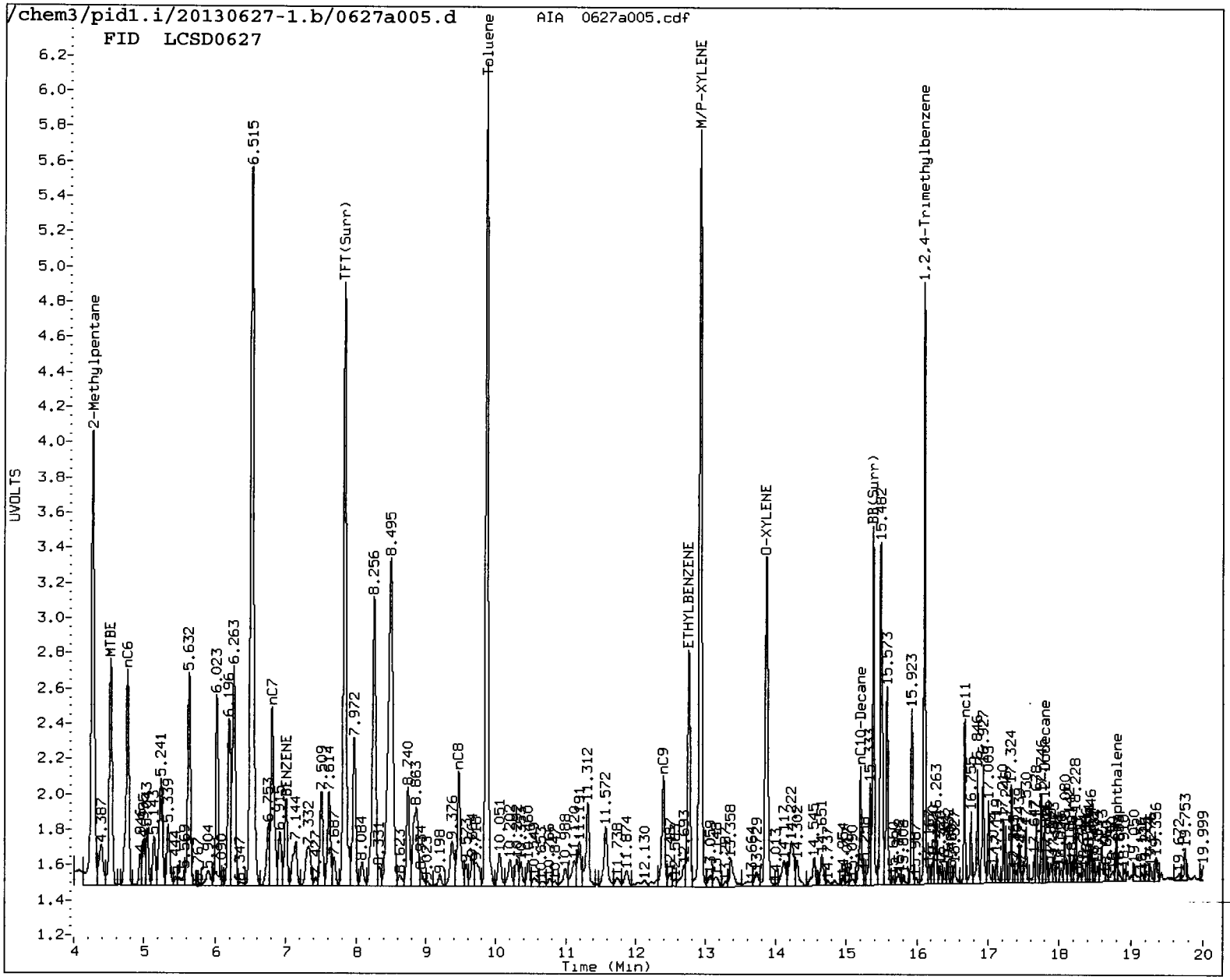
Column diameter: 0.18





Data File: /chem3/pid1..1/20130627-1.b/0627a014.d/0627a014.cdf
Injection Date: 27-JUN-2013 16:44
Instrument: pid1.1
Client Sample ID:

RC 6/28/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JC Date: 6/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

NC 6/28/13

Data file 1: /chem3/pid1.i/20130627-1.b/0627a006.d
Data file 2: /chem3/pid1.i/20130627-2.b/0627a006.d
Method: /chem3/pid1.i/20130627-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: MB0627
Client ID:
Injection Date: 27-JUN-2013 11:58
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	0.001	3179	39513	107.4	TFT(Surr)
15.377	-0.001	1993	16415	100.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	10786	0.030
8015C 2MP-TMB	(4.17 to 16.20)	723723	12984	0.018
AK101 nC6-nC10	(4.67 to 15.10)	582885	10130	0.017
NWTPHG Tol-Nap	(9.76 to 18.90)	375093	12269	0.033

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.847	0.001	3464	107.5	TFT(Surr)
15.385	0.000	7335	101.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130627-1.b/0627a006.d

Date : 27-JUN-2013 11:58

Client ID:

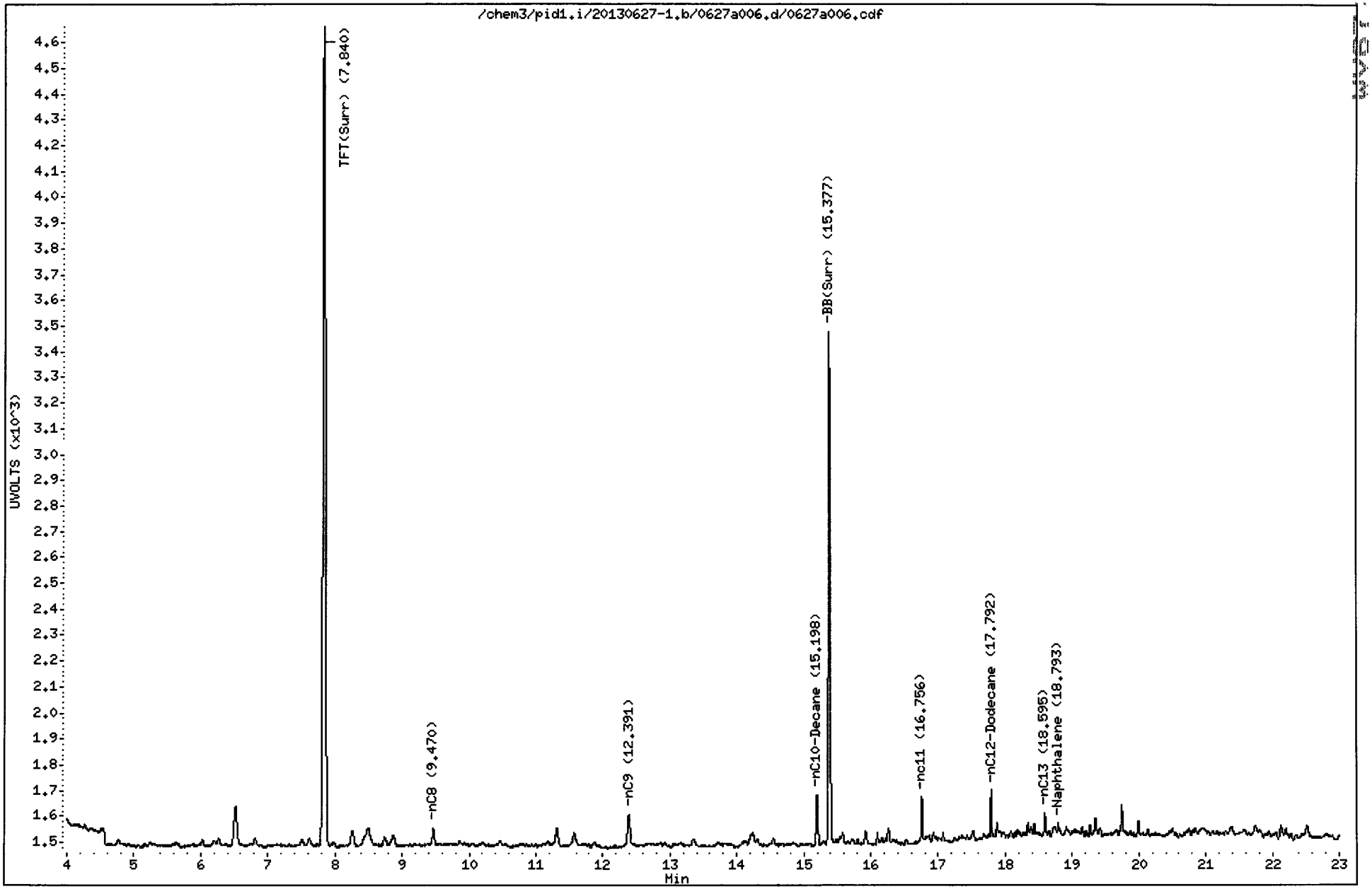
Sample Info: MB0627

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



PC
6/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130627-1.b/0627a007.d
Data file 2: /chem3/pid1.i/20130627-2.b/0627a007.d
Method: /chem3/pid1.i/20130627-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: WV67D
Client ID: UP-TB-01-20130626-W
Injection Date: 27-JUN-2013 13:20
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.841	0.002	3223	39983	108.9	TFT(Surr)
15.379	0.001	1886	16909	94.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	2263	0.006
8015C 2MP-TMB	(4.17 to 16.20)	723723	966	0.001
AK101 nC6-nC10	(4.67 to 15.10)	582885	442	0.001
NWTPHG Tol-Nap	(9.76 to 18.90)	375093	2897	0.008

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.849	0.003	3588	111.3	TFT(Surr)
15.387	0.002	7354	101.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130627-1.b/0627a007.d

Date : 27-JUN-2013 13:20

Client ID: UP-TB-01-20130626-W

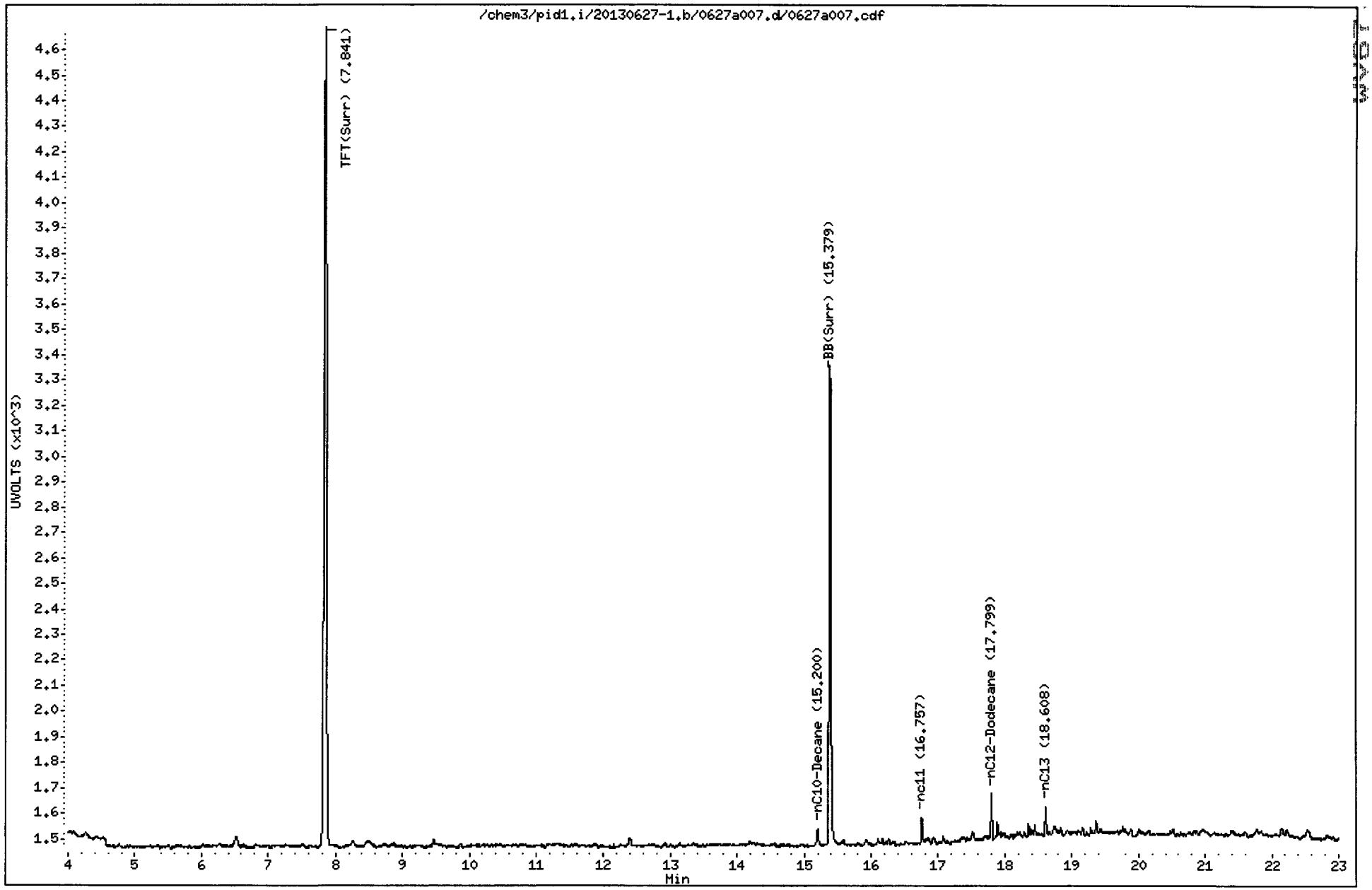
Sample Info: WV67D

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



6/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130627-1.b/0627a010.d
Data file 2: /chem3/pid1.i/20130627-2.b/0627a010.d
Method: /chem3/pid1.i/20130627-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: WV67A
Client ID: UP-CB-B8-20130626-S
Injection Date: 27-JUN-2013 14:47
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.839	0.000	3031	37514	102.4	TFT(Surr)
15.377	-0.001	1913	15792	96.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	8702	0.024
8015C 2MP-TMB	(4.17 to 16.20)	723723	8090	0.011
AK101 nC6-nC10	(4.67 to 15.10)	582885	6455	0.011
NWTPHG Tol-Nap	(9.76 to 18.90)	375093	8702	0.023

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.847	0.000	3296	102.3	TFT(Surr)
15.385	0.000	6999	96.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.873	0.000	587	2.96	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130627-1.b/0627a010.d

Date : 27-JUN-2013 14:47

Client ID: UP-CB-B8-20130626-S

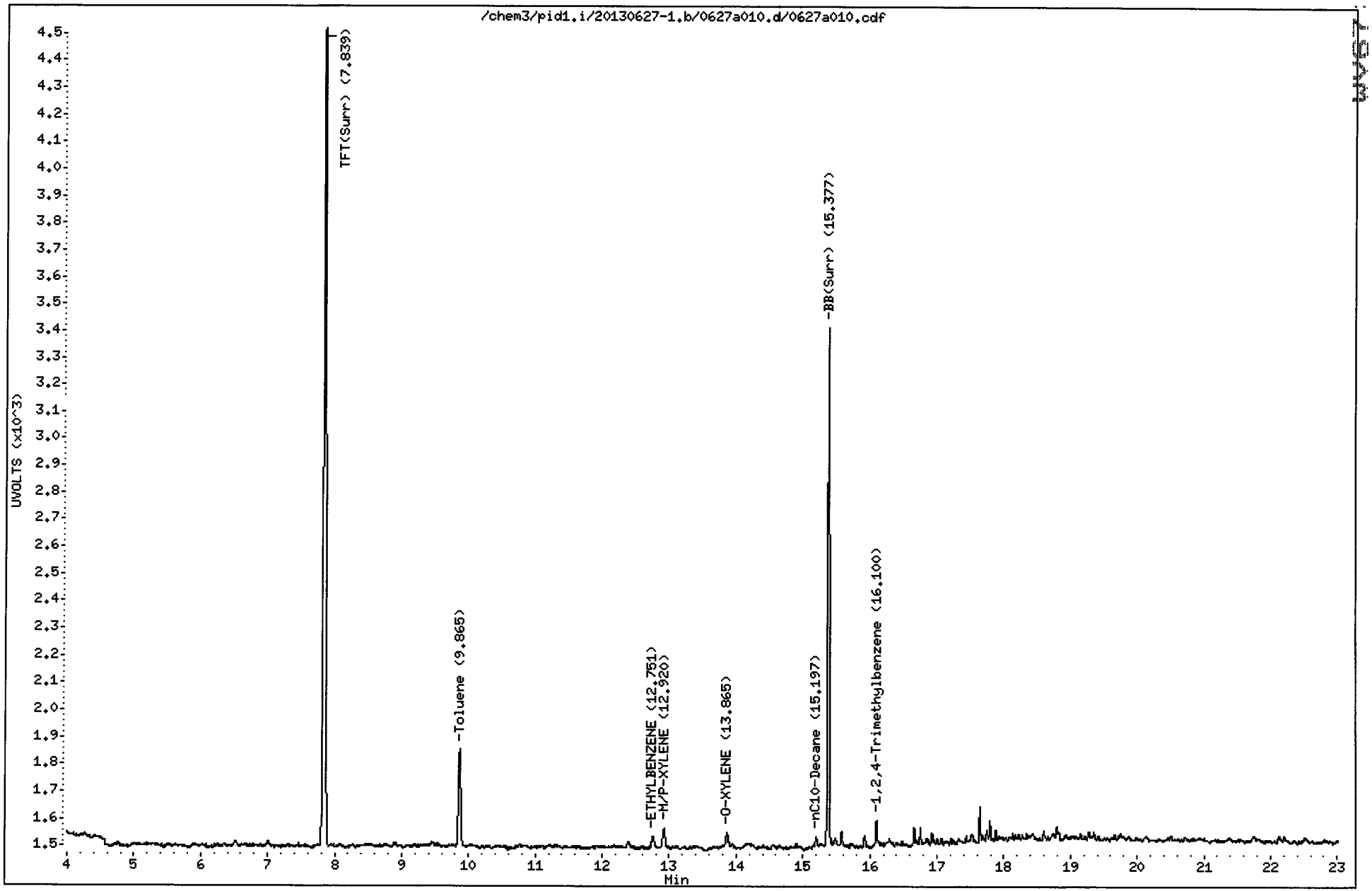
Sample Info: WV67A

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



HC 6/18/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130627-1.b/0627a011.d
Data file 2: /chem3/pid1.i/20130627-2.b/0627a011.d
Method: /chem3/pid1.i/20130627-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: WV67B
Client ID: UP-MHF-165-20130626
Injection Date: 27-JUN-2013 15:17
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.839	0.000	3076	38130	104.0	TFT(Surr)
15.377	-0.001	1965	16246	98.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	2982	0.008
8015C 2MP-TMB	(4.17 to 16.20)	723723	1184	0.002
AK101 nC6-nC10	(4.67 to 15.10)	582885	685	0.001
NWTPHG Tol-Nap	(9.76 to 18.90)	375093	3490	0.009

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.847	0.000	3352	104.0	TFT(Surr)
15.385	0.000	7173	99.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130627-1.b/0627a011.d

Date : 27-JUN-2013 15:17

Client ID: UP-MHF-165-20130626

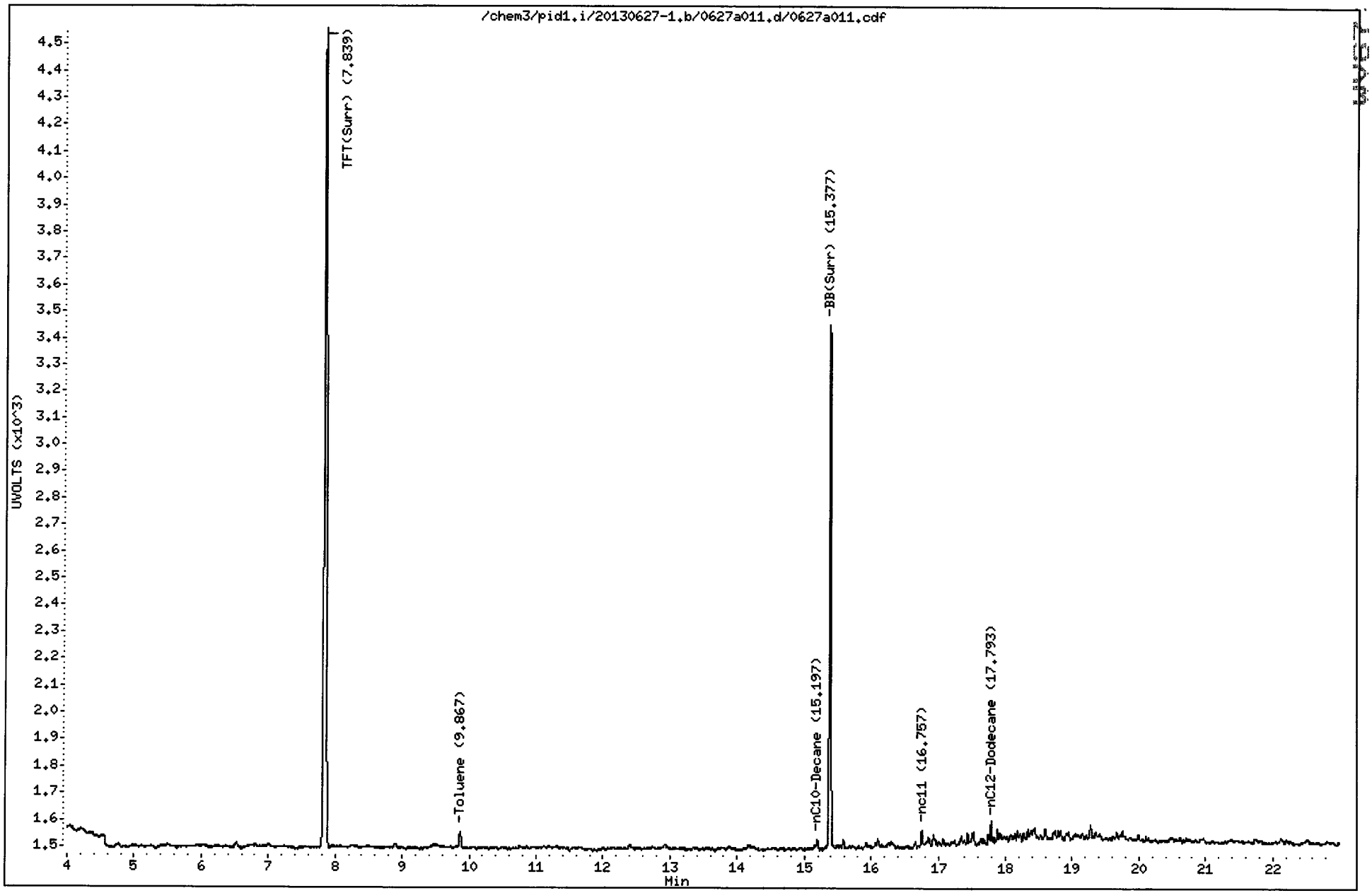
Sample Info: WV67B

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130627-1.b/0627a012.d
Data file 2: /chem3/pid1.i/20130627-2.b/0627a012.d
Method: /chem3/pid1.i/20130627-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: WV67C
Client ID: UP-CB-A6-20130626-S
Injection Date: 27-JUN-2013 15:46
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.838	0.000	3040	37661	102.7	TFT(Surr)
15.377	-0.001	1963	16311	98.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	11461	0.032
8015C 2MP-TMB	(4.17 to 16.20)	723723	6725	0.009
AK101 nC6-nC10	(4.67 to 15.10)	582885	5687	0.010
NWTPHG Tol-Nap	(9.76 to 18.90)	375093	12743	0.034

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.847	0.000	3339	103.6	TFT(Surr)
15.385	0.000	7128	98.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.873	0.001	259	1.31	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130627-1.b/0627a012.d

Date : 27-JUN-2013 15:46

Client ID: UP-CB-A6-20130626-S

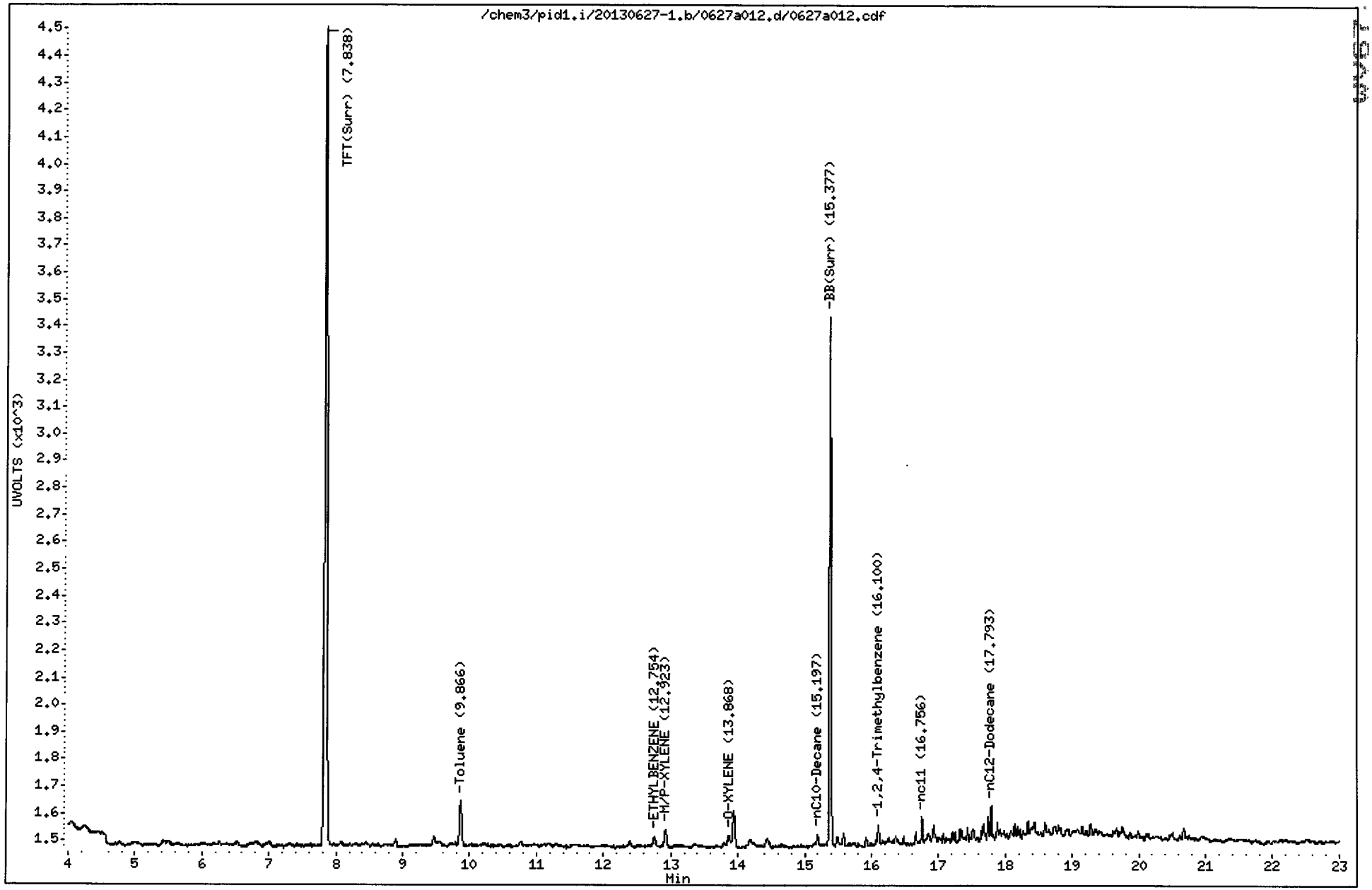
Sample Info: WV67C

Instrument: pid1.i

Operator: PC

Column phase: RTX 502-2 FID

Column diameter: 0.18



MC
6/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130627-1.b/0627a014.d
Data file 2: /chem3/pid1.i/20130627-2.b/0627a014.d
Method: /chem3/pid1.i/20130627-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: GCAL 2
Client ID:
Injection Date: 27-JUN-2013 16:44
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.837	-0.001	3439	48060	116.2	TFT(Surr)
15.378	-0.001	2076	19084	104.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	841220	2.349 M
8015C 2MP-TMB	(4.17 to 16.20)	723723	1647674	2.277 M
AK101 nC6-nC10	(4.67 to 15.10)	582885	1336304	2.293 M
NWTPHG Tol-Nap	(9.76 to 18.90)	375093	884486	2.358 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.846	0.000	3664	113.7	TFT(Surr)
15.385	0.000	7611	105.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.013	-0.001	2100	9.34	Benzene
9.874	0.001	20505	103.49	Toluene
12.766	0.000	4998	30.61	Ethylbenzene
12.930	0.004	19776	109.91	M/P-Xylene
13.874	0.001	7110	50.07	O-Xylene
4.527	-0.020	331	3.80	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130627-1.b/0627a014.d

Date : 27-JUN-2013 16:44

Client ID:

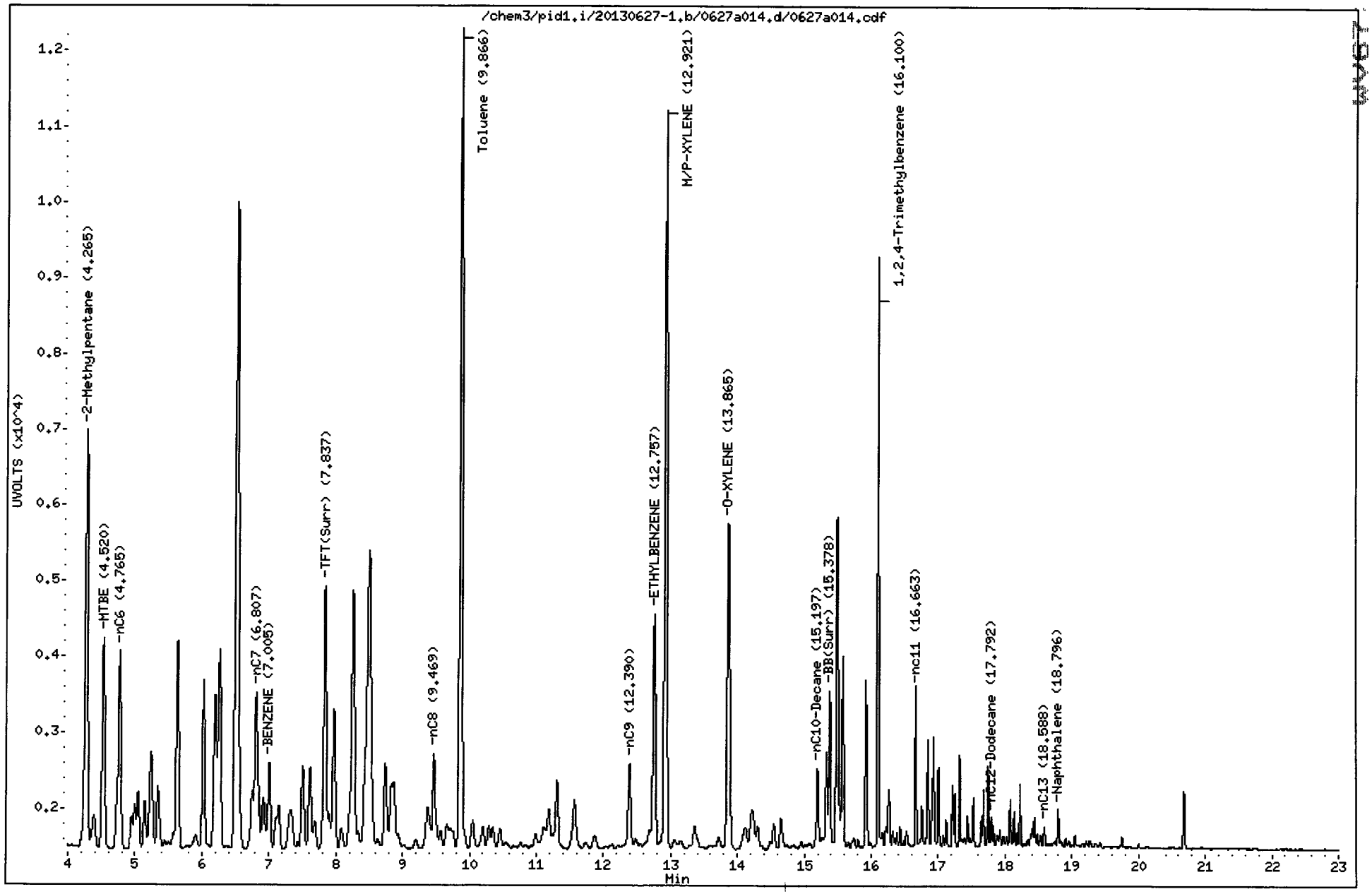
Sample Info: GCAL 2

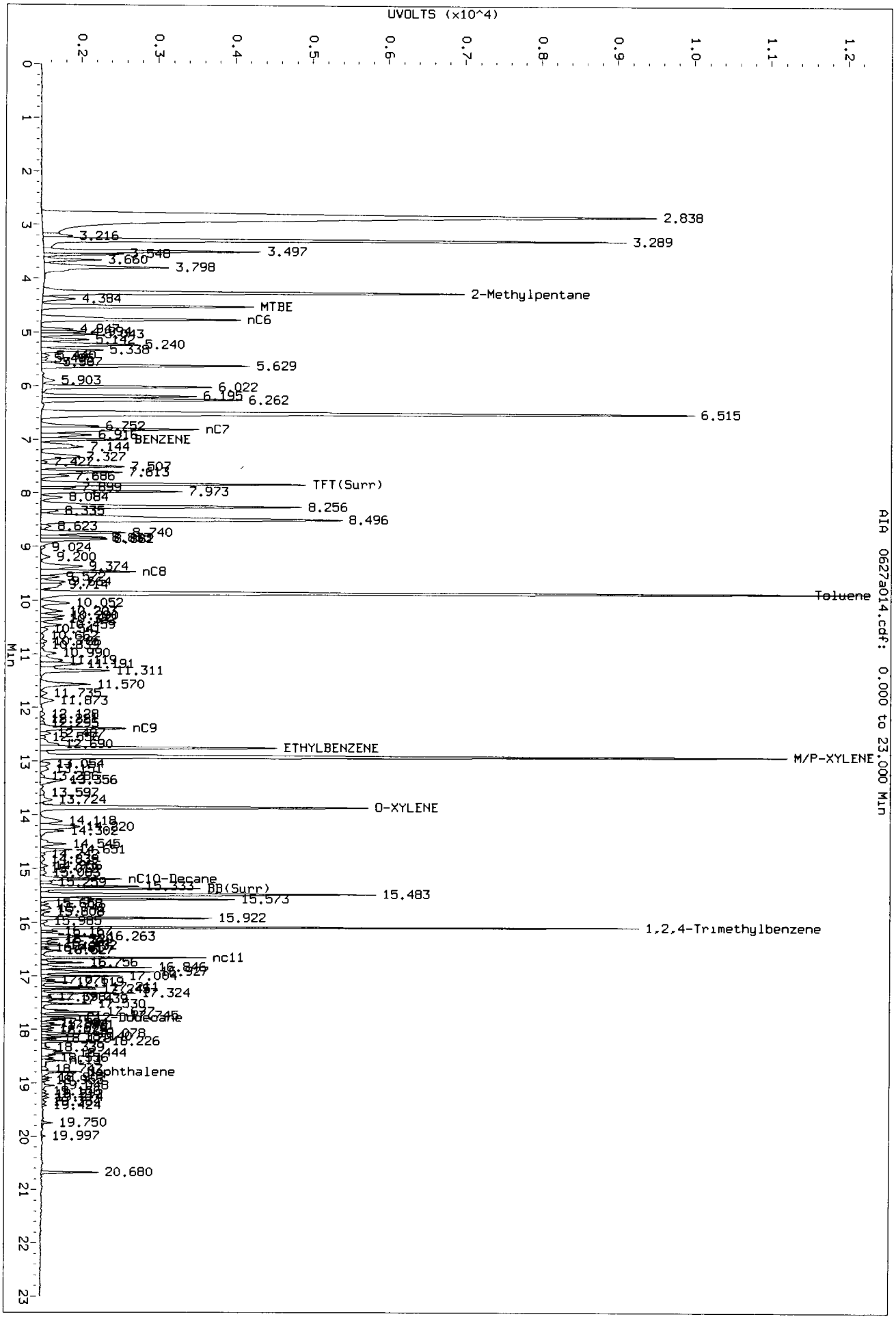
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

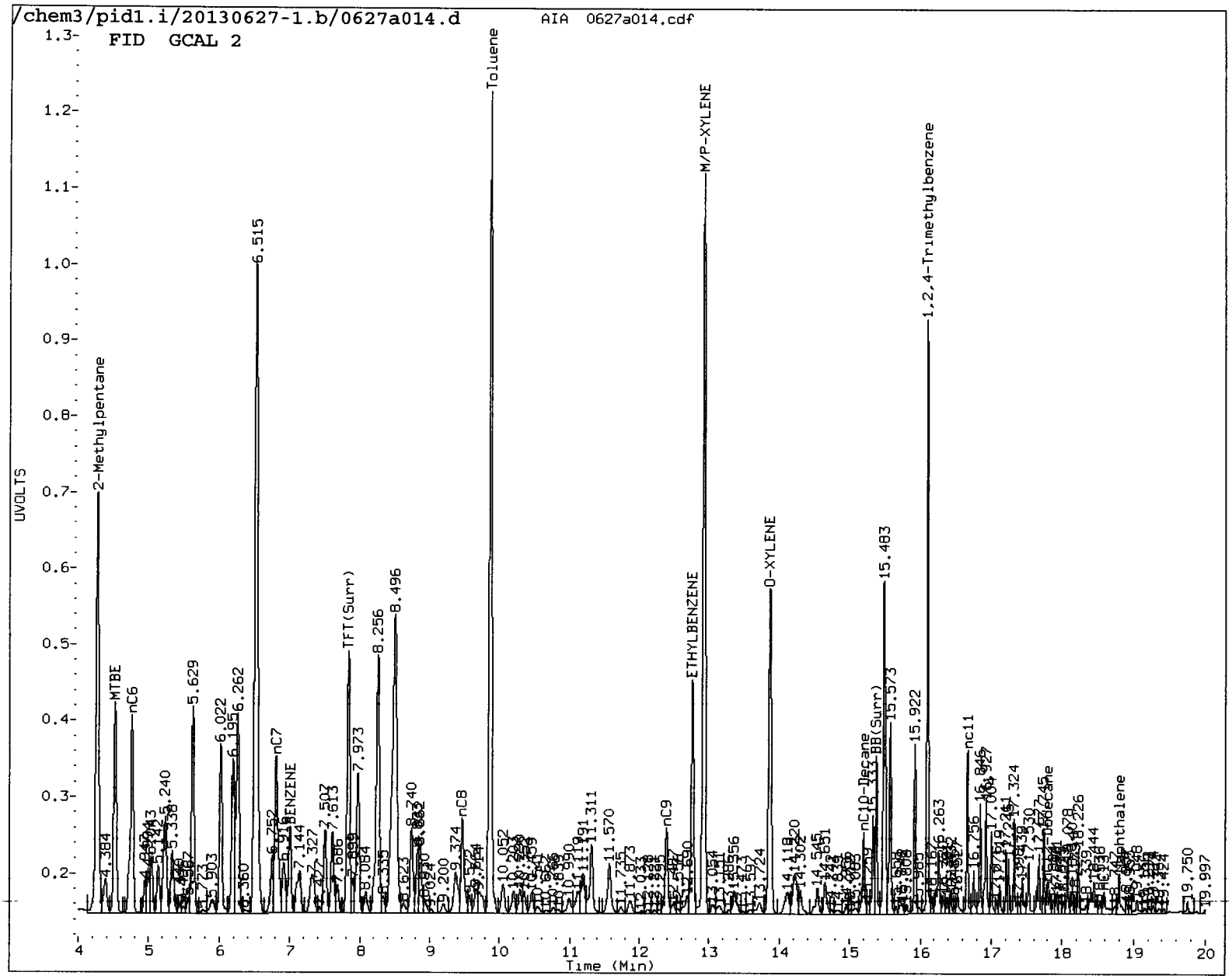
Column diameter: 0.18





Data File: /chem3/pid1.i/20130627-1.b/0627a014.d/0627a014.cdf
Injection Date: 27-JUN-2013 16:44
Instrument: pid1.i
Client Sample ID:

M
6/28/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YC Date: 6/28/13

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: WV67

Analytical Resources, Incorporated
Analytical Chemists and Consultants

pH Logbook

Meter ID: Accumet AR60

① 6-26-13 ②

Calibration

Date:	6-26-13		Buffer	Source	Lot #	pH	Temp.
Time:	9:20		2.00	Ricca	1211549	2.00	19.9
Analyst:	⑥		4.00	Fisher	130035	4.00	19.9
			7.00	Ricca	1211266	7.02	20.0
			10.00	Fisher	126248	10.05	20.0
			12.00	Ricca	1212048	11.96	20.1
			Verification	Fisher	124864	7.04	20.2

Sample pH

Analyst Initials	Time	Sample ID	1	2	3	4	Temperature
⑥	9:46	ICV	7.04	7.04			20.2
		WU38 · A2	~~6.62~~	①~~6.63~~	6.30	6.31	①~~20.2~~ 19.9
		↓ B2	7.05	7.05			20.0
		WU42 A1	6.60	6.60			20.0
		↓ or A1	6.59	6.60			20.1
		↓ B1	6.62	6.63			20.2
		CCV	7.03	7.03			20.5
APD	1535	ICV	7.00	7.00			22.6
		WU61A1	6.69	6.91	6.97	6.97	21.8
		WU61A1dup	6.97	6.98			21.8
		CCV	7.02	7.02			22.7
APD	19:05	~~ICV~~CCV	7.05	7.05			22.9
		WU67E1	6.45	6.46			23.6
		E1 dup	6.53	6.54			23.6
		CCV	7.06	7.06			23.2
		CCV					

W
6-27-13

ALKALINITY BENCHSHEET methods: **SM 2320 B-97** Date/Time: 6/27/13 1230

pH meter verification **pH meter ID:** **ACCUMET AR60** **Buret ID:** **01G30627** Analyst: APD

Buffer pH **7.00** **pH Probe ID :** **AR60**

Measured pH 7.07 *Calibration OK* **Acid ARI ID:** 10092C

Standardization of acid titrant ***(titration to pH 4.5)***

ARI ID: *00139-10*

grams Na2CO3 =	**0.6279**	*to*	**250**	*ml DI*
Normality Na2CO3 =	0.0474			
Assumed Acid Normality =	**0.02**			
Standardized Acid Normality=	0.0186	***OK!***		

BLANK		STANDARD TITRATION			Partitioning Calculations (T=Total, P=Phenolphthalein)			
BLANK	ml ACID	ml Na2CO3	ml ACID	N H2SO4	*Obs*	*HCO3*	*CO3*	*OH*
1	0.02	**5**	12.77	0.019	*P =0*	T	0	0
2	0.00	**5**	12.73	0.019	*P< 0.5T*	T - 2P	2P	0
3	0.01	**5**	12.72	0.019	*P= 0.5T*	0	2P	0
AVERAGE	0.01			0.019	*P> 0.5T*	0	2(T - P)	2P - T
					P =T	0	0	T

Calibration Verification Standard (second source sodium carbonate solution)

ARI ID: *00139-11* *mg/L CaCO3*

grams Na2CO3 =	**0.6283**	*grams in*	**250**	*mL =*	*2371*	
dilution:	**5.0**	*mL to*	**100**	*CVS =*	**118.6**	
DQL Std (2ppm)	*dilute*	**0.084**	*mL stock to 100 mL DI =*		**2.0**	

Laboratory Control Standard (LCS)

Source: *ERA #P213-506* *mg/L CaCO3* **32.10**

SAMPLE DATA

Alk (mg/L CaCO3 = [(mL acid X Nacid) X 50,000] / mL sample *(shaded cells are calculated, make no entries)*

low level = {((2 X mL4.5)-mL4.2] X Nacid) X 50,000} / mL sample

Sample Number	Sample ID	Initial pH	Volume (ml)	TEMP (C)	ml H2SO4 pH=8.3	ml H2SO4 pH =4.5	ml H2SO4 pH=4.2	ALK (mg CaCO3/l) Phenolph	ALK (mg CaCO3/l) TOT HIGH	ALK (mg CaCO3/l) TOT LOW	Partitioning (mg/l CaCO3) HCO3	Partitioning (mg/l CaCO3) CO3	Partitioning (mg/l CaCO3) OH	(mg/l) FREE CO2
ICV		10.32	100	22.6	6.25	12.84	13.04	58.2	119.4		*100.7% OK!*			
ICB		4.88	100	22.6	0.00	0.04	0.16	0.0		-0.7	-0.7	0.0	0.0	-19.6
DQL Std (2ppm)		8.20	100	22.7	0.00	0.27	0.38	0.0		1.5				
LCS		8.80	50	20.2	0.76	1.73	1.81	14.1	32.2		*100.3% OK!*			
WV67		6.51	100	19.4	0.00	3.64	0.00	0.0	33.9		33.9	0.0	0.0	20.9
WV67 dup		6.54	100	19.8	0.00	3.72	0.00	0.0	34.6		34.6	0.0	0.0	20.0
RPD =									*2.2%*		*2.2%*			*4.7%*
WU63 A3		7.38	100	19.1	0.00	20.33	0.00	0.0	189.2		189.2	0.0	0.0	15.8
WU63 B3		7.53	100	19.2	0.00	24.65	0.00	0.0	229.4		229.4	0.0	0.0	13.5
WU63 C3		7.60	100	19.8	0.00	24.31	0.00	0.0	226.3		226.3	0.0	0.0	11.4
WU63 D3		7.79	100	19.8	0.00	21.03	0.00	0.0	195.7		195.7	0.0	0.0	6.3
WU63 E3		7.26	100	20.20	0.00	23.5	0.00	0.0	218.3		218.3	0.0	0.0	24.0
CCV		10.40	100	22.4	6.21	12.83	13.07	57.8	119.3		*100.6% OK!*		0.0	0.0

ALKALINITY BENCHSHEET methods: **SM 2320 B-97**

Date/Time: 6/27/13 1230

pH meter verification **pH meter ID:** **ACCUMET AR60** **Buret ID:** 01G30627

Analyst: ARD

Buffer pH 7.00 **pH Probe ID :** AR60

Measured pH 7.07 *must agree within 0.1 pH un* **Acid ARI ID:**

Standardization of acid titrant ***(titration to pH 4.5)***

ARI ID: 00139-10

grams Na2CO3 = 0.6279 *to* 250 *ml DI*

Normality Na2CO3 =

Assumed Acid Normality = 0.02

Standardized Acid Normality=

BLANK		STANDARD TITRATION		
BLANK	ml ACID	ml Na2CO3	ml ACID	N H2SO4
1	0.02	5	12.77	
2	0.00	5	12.73	
3	0.01	5	12.72	
AVERAGE				

Partitioning Calculations

T=Total, P=Phenolphthalein

Obs	HCO3	CO3	OH
P =0	T	0	0
P< 0.5T	T - 2P	2P	0
P= 0.5T	0	2P	0
P> 0.5T	0	2(T - P)	2P - T
P =T	0	0	T

Calibration Verification Standard (second source sodium carbonate solution)

ARI ID: 00139-11

grams Na2CO3 = 0.6283 *grams in* 250 *mL =* ####### *mg/L CaCO3*

dilution: 5.0 *mL to* 100 *CVS =* #######

DQL Std (2ppm) *dilute* 0.084 *mL stock to 100 mL DI =*

Laboratory Control Standard (LCS)

Source: ERA# P213-506 *mg/L CaCO3* 32.1

SAMPLE DATA

Alk (mg/L CaCO3 = [{mL acid X Nacid) X 50,000] / mL sample

low level = {{{(2 X mL4.5)-mL4.2] X Nacid) X 50,000} / mL sample

(shaded cells are calculated, make no entries)

Sample Number	Sample ID	Initial pH	Volume (ml)	TEMP (C)	ml H2SO4 pH=8.3	ml H2SO4 pH =4.5	ml H2SO4 pH=4.2	ALK (mg CaCO3/l) Phenolph	ALK (mg CaCO3/l) TOT HIGH	ALK (mg CaCO3/l) TOT LOW	Partitioning (mg/l CaCO3) HCO3	Partitioning (mg/l CaCO3) CO3	Partitioning (mg/l CaCO3) OH	(mg/l) FREE CO2
ICV		10.32	100	22.6	6.25	12.84	13.04							
ICB		4.88	100	22.6	0	0.04	0.16							
DQL Std (2ppm)		8.20	100	22.7	0	0.27	0.38							
LCS		8.60	~~100~~50	20.2	0.76	1.73	1.81							
WV67E2		6.51	100	19.4	0	3.64	0							
12 dup		6.54	100	19.8	0	3.72	0							
WV 63 A3		7.38	100	19.1	0	20.33	0							
WV 63 B3		7.53	100	19.2	0	24.66	0							
WV 63 C3		7.60	100	19.8	0	24.31	0							
D3		7.79	100	19.8	0	21.03	0							
E3		7.26	100	20.2	0	23.45	0							
CCV		10.40	100	22.4	6.21	12.83	13.07							
CCV														

6-27-13

TOTAL SUSPENDED SOLIDS / VOLATILE SUSPENDED SOLIDS (TSS / TVSS)

Methods : SM 2540 D-97, 2540 E-97

DATE: 6/27/2013

ANALYST: RR

Instrumentation

Drying Ovens: 12

Muffle Furnace:

Analytical Balance: 1123230597

make no entries to shaded cells
they are calculated !!

TSS (mg/l) calculated as:
Final dry wt (mg) = (minimum Dry Wt - Tare Wt)*1000
TSS = [(Final Dry Wt)/ ml Sample] * 1000
if dy wt < 1mg, TSS = <1mg / mL sample * 1000
with "<" flag

Loss on ignition (LOI) = TVSS (mg/L) calculated as:
LOI (mg) = Dry wt(mg) -((min ash wt - tare wt) * 1000)
TVSS (mg/L) = LOI / mL sample * 1000
if LOI <1mg, TVSS = <1mg / mL sample * 1000
with "<" flag

LCS source: *Cellulose, MP Biomedicals Lot# **6399J***

0.05 grams to 1000 mL = **50** ***mg/L TSS***

SAMPLE ID	DISH #	filtered (mL)	TARE WT (grams)	DRY WT 104C (grams) 1	2	3	4	DryWT (mg)	TSS (mg/L)	ASH WT 550C (grams) 1	2	3	4	LOI (mg)	TVSS (mg/l)
Cal Weight ID			CV-02	CV-02	CV-02	CV-02	CV-02			CV-02	CV-02	CV-02	CV-02		
Date & Time		6/27/2013 14:20		6/27/13 16:30	6/27/13 17:55										
Cal Wt (g) 10.0000				10.0000 *Cal OK!*	10.0000 *Cal OK!*										
record weights to 4 places															
BLANK		1000	0.1271	0.1273	0.1273	STOP		0.2	<1						
LCS # 617-10		1000	0.1268	0.1772	0.1771	STOP		50.3	50.3	100.6%	% Recovery				
WV55 A7		915	0.1282	0.1300	0.1300	STOP		1.8	2.0						
WV55 B7		915	0.1253	0.1270	0.1270	STOP		1.7	1.9						
WV55 C6		910	0.1279	0.1306	0.1306	STOP		2.7	3.0						
WV55 D6		940	0.1245	0.1246	0.1245	STOP		0.0	< 1.1						
WV55 E7		890	0.1276	0.1310	0.1310	STOP		3.4	3.8						
WV55 F7		915	0.1231	0.1522	0.1521	STOP		29.0	31.7						
WV56 A2		50	0.1287	0.2163	0.2163	STOP		87.6	1752.0						
WV56 A2 dup		50	0.1236	0.2166	0.2166	STOP		93.0	1860.0						
								RPD =	*6.0%*					*RPD =*	*NA*
WV67		630	0.1256	0.1446	0.1446	STOP		19.0	30.2						

SOP TSS-1.9A1

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOTAL SUSPENDED (TSS) / TOTAL VOLATILE SUSPENDED SOLID(TVSS) BENCHSHEET

Analyst:	RL	Date/Time:	6/27/13 14:20	Oven #:	012	Muffle Furnace:	62790918520	Balance:	1123230597

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TSS (mg/L) calculated as:
Final Dry Weight (mg) = (Min Dry Weight – Tare Weight) * 1000
TSS = (Final Dry Weight) / (mL Sample) * 1000
If dry wt < 1 mg / mL sample * 1000 use "<" flag

Loss on Ignition (LOI) = TVSS (mg / L) is calculated as:
LOI (mg / L) = Dry Weight (mg) – [(Minimum Ash Weight – Tare Weight) * 1000]
TVSS (mg / L) = LOI / mL sample * 1,000
If LOI < 1 mg, TVSS = < 1 mg / mL sample * 1000 use "<" flag

LCS (Cellulose from MP Biochemicals) Lot # **6399J** 0.0500 Gram to 1000 mL = **50 mg / L TSS**

Cal Weight ID	CV-02	CV-02	CV-02	CV-02	CV-02			CV-02	CV-02		
Date & Time:		—	6/27/13 16:50	6/27/13 17:55							
Cal Weight (10.0000g):		—	10.0000	10.0000							

Sample ID	Dish #	Filtered mL	Tare	Dry Weight 104°C (grams) 1	2	3	Dry Wt mg	TSS	Ash Weight 550°C 1	2	LOI - mg	TVSS mg/L
BLANK	P5520	1000	0.1271	0.1273	0.1273							
LCS # 6017-10	P5521	1000	0.1268	0.1772	0.1771							
WV55 A7	P5522	915	0.1282	0.1306	0.1300							
B7	P5523	915	0.1253	0.1270	0.1270							
C6	P5524	910	0.1279	0.1306	0.1306							
D6	P5525	940	0.1245	0.1246	0.1245							
E7	P5526	890	0.1276	0.1310	0.1310							
F7	P5527	915	0.1231	0.1522	0.1521							
WV56 A2	P5528	50	0.1287	0.2163	0.2163							
↓ DUP	P5529	50	0.1236	0.2166	0.2166							
WV67 E3	P5530	630	0.1256	0.1446	0.1446							

RL 6/27/13

6054F

Amount Summary

Sequence Details

Name	**JUNE2713CDE**	*Calibration.*	**MAY2313RR**	**ARI # 616-02**
Directory	**Instrument Data\2013 DATA\JUNE 2013**	*Calibration exp*	**7/23/2013**	
Data Vault	**ChromeleonLocal**	*Queue Start.*	**6/27/2013 15:40**	
No of Injections	**21.000**	*User*	**CDE**	

By Component

		ERA 130312	ERA 210312	ERA 490412	ERA 370911	ERA 240312	ERA 220912	ERA 030112
Name	Dilution	Amount n a Fluoride	Amount n a Chloride	Amount n a Nitrite	Amount n a Bromide	Amount n a Sulfate	Amount n a Nitrate	Amount n a Phosphate
RINSE	1 0	n a	n a	n.a	n a	n a	n a	n a
ICV	1 0	2 888	2 867	2 889	2 912	2.874	2 840	2 935
%R=		**96.3%**	**95.6%**	**96.3%**	**97.1%**	**95.8%**	**94.7%**	**97.8%**
ICB	1 0	n a.	n a.	n.a	n a.	n a	n a	n a
LOW	1 0	0 084	0 093	0 072	0 078	0 085	n a	0 077
WV67 E1	20 0	n a	80.367	n a	n.a	66.327	n a	n.a
WV67 E1 dup	20.0	n.a	81.064	n a	n a	66.922	n a	n.a
%RPD=		**#VALUE!**	**0.86%**			**0.89%**	**#VALUE!**	
WV67 E1 ms	50 0	n.a.	171.166	n a	n.a	160.157	n a	n.a
%R=		**#VALUE!**	**90.8%**	**#VALUE!**	**#VALUE!**	**93.8%**	**#VALUE!**	**#VALUE!**
SPK=	**0.05**	**Ml/each of 10,000ppm Cl and SO4 Stk. to**		***5.0***	***mLsample=***	***100.00 ppm***		
WT29 K2	100 0	n.a.	n a.	n a	n.a.	292.941	n a	n a
WT27 A1	2 0	0 030	0 222	n.a	n a.	4.990	n a.	n a
WT27 A1 dup	2 0	0 027	0 208	n a	n a	4.940	n a	n a
%RPD=		**8.78%**	**6.31%**			**1.02%**	**#VALUE!**	
WT27 A1 ms	5 0	4 827	4 905	4 780	4 447	9 451	4 933	4 498
%R=		**95.9%**	**93.7%**	**#VALUE!**	**#VALUE!**	**89.2%**	**#VALUE!**	**#VALUE!**
SPK=	**0.025**	***mL 200ppm Int. to***		***1.0***	***mLsample=***	***5.00 ppm***		
WT27 B1	2.0	0.039	0 209	n a	n.a	5.467	n a	n a.
WT27 C1	2 0	0 036	0 202	n.a.	n a	6.139	n.a	n.a
CCV	1 0	2 912	2 888	2 913	2 920	2 891	2 855	2.956
%R=		**97.1%**	**96.3%**	**97.1%**	**97.3%**	**96.4%**	**95.2%**	**98.5%**
CCB	1 0	n.a	n a	n a	n a	n a	n.a	n.a
WT27 D1	2 0	0 029	0 177	n a	n a	5.411	n a	n a.
WT27 E1	2 0	0 028	0 172	n a	n a	5.515	n.a.	n a
WT27 F2	2 0	0 025	0 174	n a	n a	5.689	n a.	n.a
CCV	1 0	2 913	2 875	2.905	2 913	2.883	2 848	2.946
%R=		**97.1%**	**95.8%**	**96.8%**	**97.1%**	**96.1%**	**94.9%**	**98.2%**
CCB	1 0	n a	n a	n a	n.a	n.a	n a	n a
STOP	1 0	n a	n a	n.a	n a	n a	n a	n.a

WDT : 02154

Sequence Overview

Sequence Details

Name:	**JUNE2713CDE**	*Queue Start.*	**2013-06-27T15:40:52-**
Directory:	**Instrument Data\2013 DATA\JUNE 2013**	*Created By:*	**pat**
Data Vault:	**ChromeleonLocal**		
No. of Injections:	**21**		

Injection Details

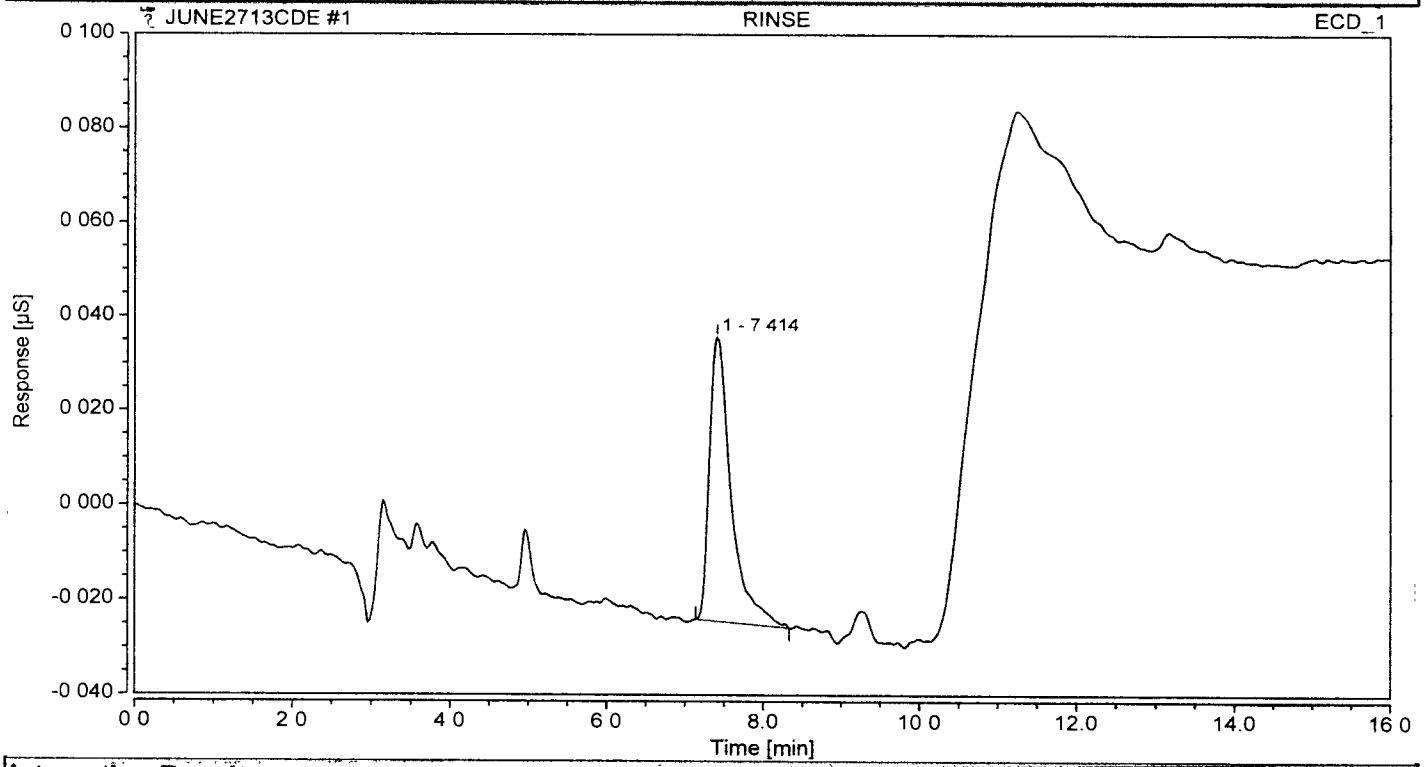
No.	Injection Name	Position	Type	Level	Dilution	Inject Time
1	RINSE	1	Unknown		1.0	27/Jun/13 15:40:52
2	ICV	2	Check Standard	06	1.0	27/Jun/13 15:59:51
3	ICB	3	Blank		1.0	27/Jun/13 16:19:04
4	LOW	4	Unknown		1.0	27/Jun/13 16:38:22
5	WV67 E1	5	Unknown		20.0	27/Jun/13 16:57:47
6	WV67 E1 dup	6	Unknown		20.0	27/Jun/13 17:17:15
7	WV67 E1 ms	7	Unknown		50.0	27/Jun/13 17:36:48
8	WT29 K2	8	Unknown		100.0	27/Jun/13 17:56:27
9	WT27 A1	9	Unknown		2.0	27/Jun/13 18:16:11
10	WT27 A1 dup	10	Unknown		2.0	27/Jun/13 18:36:03
11	WT27 A1 ms	11	Unknown		5.0	27/Jun/13 18:55:58
12	WT27 B1	12	Unknown		2.0	27/Jun/13 19:16:00
13	WT27 C1	13	Unknown		2.0	27/Jun/13 19:36:06
14	CCV	2	Check Standard	06	1.0	27/Jun/13 19:56:18
15	CCB	3	Blank		1.0	27/Jun/13 20:16:54
16	WT27 D1	14	Unknown		2.0	27/Jun/13 20:37:37
17	WT27 E1	15	Unknown		2.0	27/Jun/13 20:58:06
18	WT27 F2	16	Unknown		2.0	27/Jun/13 21:18:41
19	CCV	2	Check Standard	06	1.0	27/Jun/13 21:39:20
20	CCB	3	Blank		1.0	27/Jun/13 22:00:46
21	STOP	1	Unknown		1.0	27/Jun/13 22:22:22

Chromatogram and Results

Injection Details

Injection Name	*RINSE*	Inject Number	1
Vial Number.	*1*	User.	pat
Injection Type	*Unknown*	Sequence:	JUNE2713CDE
Dilution Factor	*1 0*		
Instrument Method	*INSTRMETH*		
Processing Method.	*processmethodat*		
Injection Date/Time	*27/06/13 15.40*		

Chromatogram



Integration Results

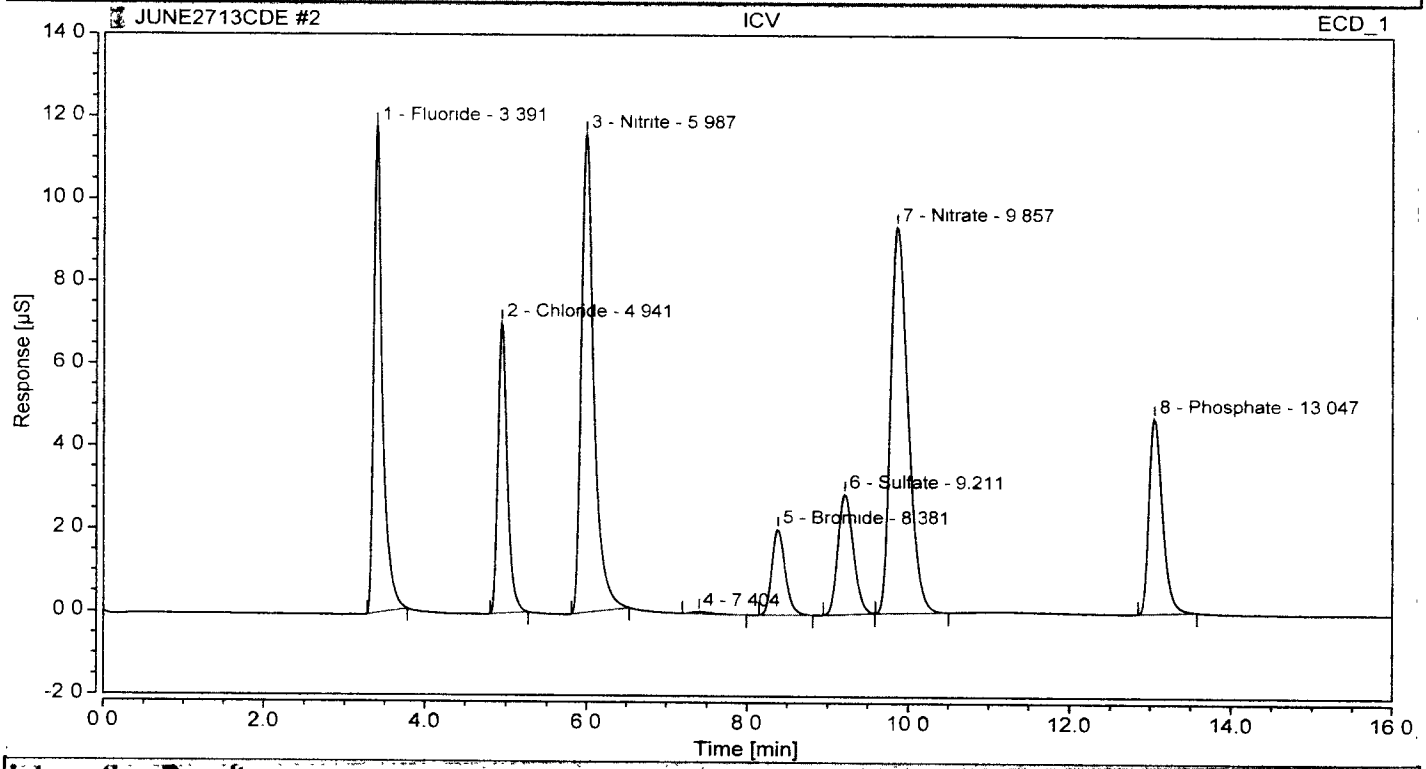
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		1.0	n.a.	7.41	0.019	0.060	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*ICV*	Inject Number:	2
Vial Number	*2*	User	pat
Injection Type	*Check Standard*	Sequence:	JUNE2713CDE
Dilution Factor	*1 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodal*		
Injection Date/Time	*27/06/13 15 59*		

Chromatogram



Integration Results

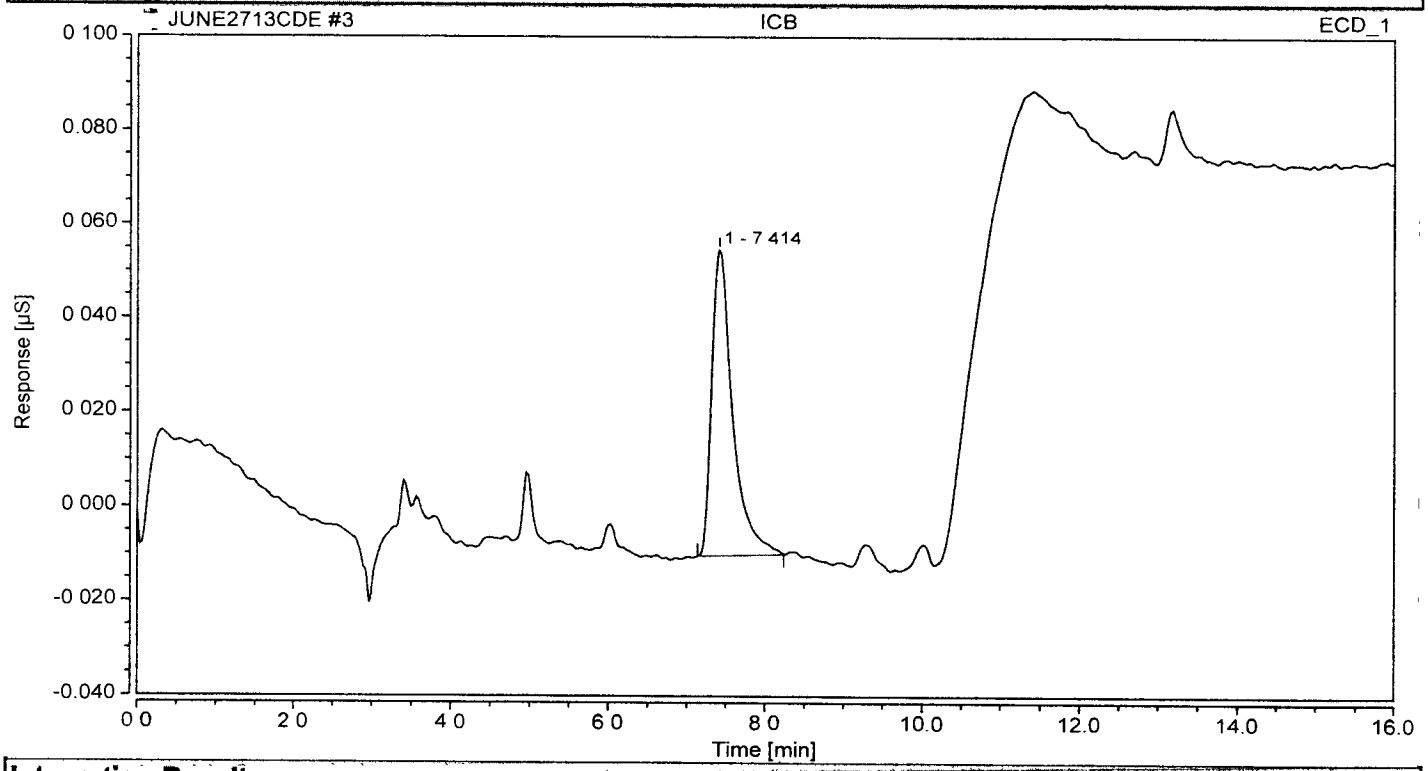
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	2.888	3.39	1.491	11.786	FALSE	-3.75
2	Chloride	1.0	2.867	4.94	0.919	7.040	FALSE	-4.42
3	Nitrite	1.0	2.889	5.99	2.106	11.590	FALSE	-3.71
4		1.0	n.a.	7.40	0.012	0.047	FALSE	n.a.
5	Bromide	1.0	2.912	8.38	0.396	2.068	FALSE	-2.94
6	Sulfate	1.0	2.874	9.21	0.652	2.902	FALSE	-4.20
7	Nitrate	1.0	2.840	9.86	2.329	9.363	FALSE	-5.32
8	Phosphate	1.0	2.935	13.05	0.916	4.715	FALSE	-2.18

Chromatogram and Results

Injection Details

Injection Name	*ICB*	Inject Number	3
Vial Number	*3*	User	pat
Injection Type	*Blank*	Sequence	JUNE2713CDE
Dilution Factor	*1 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodat*		
Injection Date/Time	*27/06/13 16.19*		

Chromatogram



Integration Results

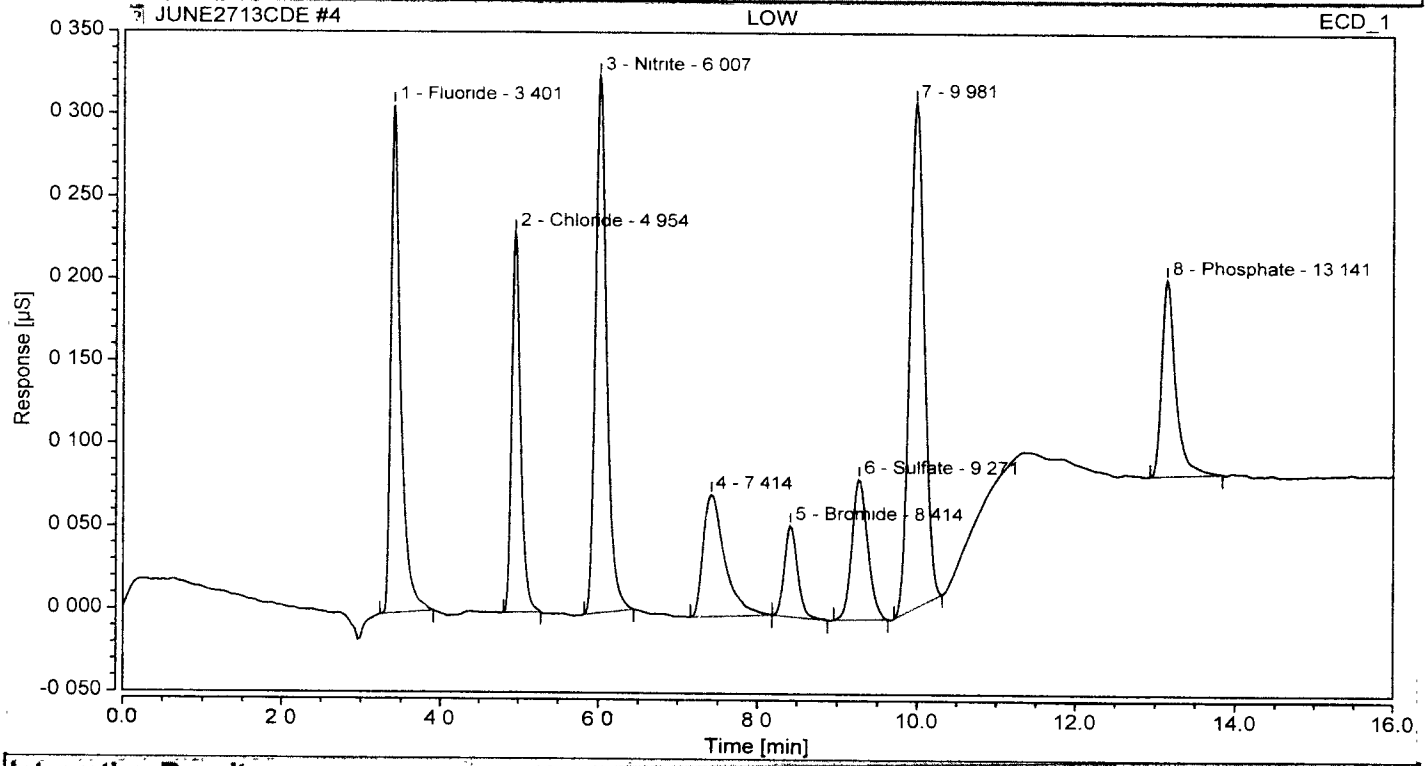
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		1.0	n.a.	7.41	0.020	0.065	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*LOW*	Inject Number	4
Vial Number	*4*	User.	pat
Injection Type	*Unknown*	Sequence:	JUNE2713CDE
Dilution Factor	*1 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodat*		
Injection Date/Time	*27/06/13 16 38*		

Chromatogram



Integration Results

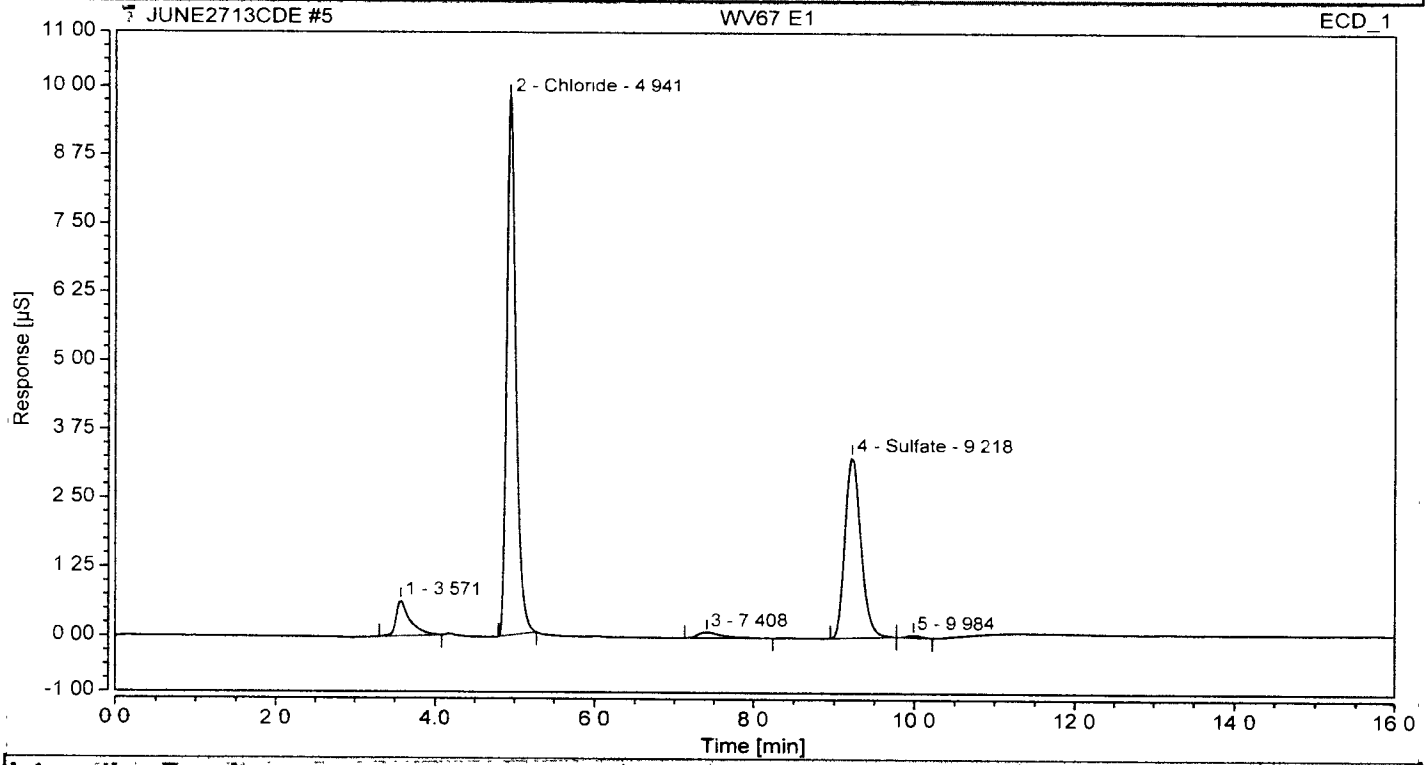
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.084	3.40	0.043	0.308	FALSE	n.a.
2	Chloride	1.0	0.093	4.95	0.030	0.230	FALSE	n.a.
3	Nitrite	1.0	0.072	6.01	0.052	0.325	FALSE	n.a.
4		1.0	n.a.	7.41	0.023	0.074	FALSE	n.a.
5	Bromide	1.0	0.078	8.41	0.011	0.055	FALSE	n.a.
6	Sulfate	1.0	0.085	9.27	0.019	0.085	FALSE	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
7		1.0	n.a.	9.98	0.066	0.305	FALSE	n.a.
8	Phosphate	1.0	0.077	13.14	0.024	0.119	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WV67 E1*	Inject Number	5
Vial Number.	*5*	User.	pat
Injection Type	*Unknown*	Sequence:	JUNE2713CDE
Dilution Factor	*20.0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodat*		
Injection Date/Time.	*27/06/13 16:57*		

Chromatogram



Integration Results

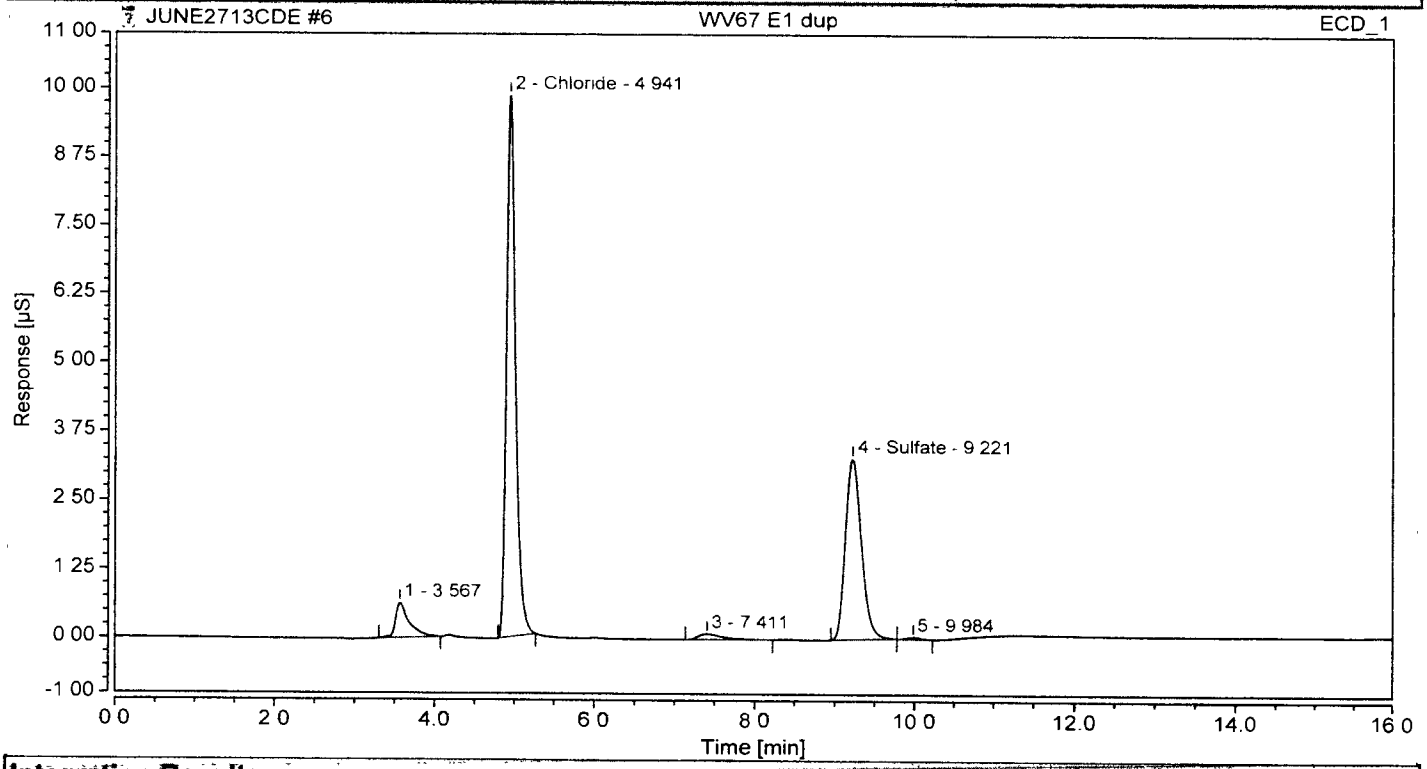
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		20.0	n.a.	3.57	0.126	0.634	FALSE	n.a.
2	Chloride	20.0	80.367	4.94	1.287	9.782	FALSE	n.a.
n.a.	Nitrite	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		20.0	n.a.	7.41	0.035	0.099	FALSE	n.a.
n.a	Bromide	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	20.0	66.327	9.22	0.753	3.263	FALSE	n.a.
n.a.	Nitrate	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5		20.0	n.a.	9.98	0.007	0.037	FALSE	n.a.
n.a.	Phosphate	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WV67 E1 dup*	Inject Number	6
Vial Number:	*6*	User.	pat
Injection Type.	*Unknown*	Sequence.	JUNE2713CDE
Dilution Factor	*20 0*		
Instrument Method.	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time	*27/06/13 17 17*		

Chromatogram



Integration Results

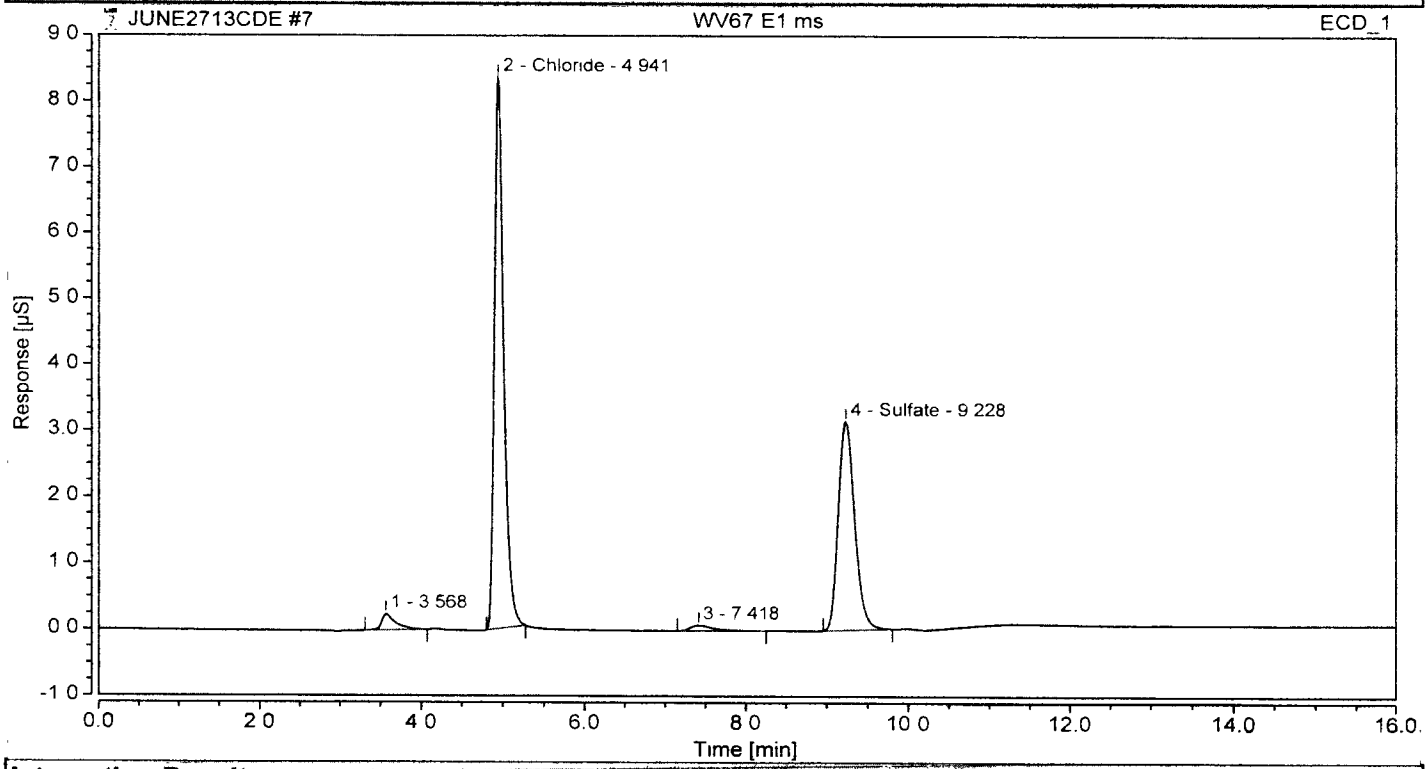
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		20.0	n.a.	3.57	0.124	0.631	FALSE	n.a.
2	Chloride	20.0	81.064	4.94	1.299	9.869	FALSE	n.a.
n.a.	Nitrite	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		20.0	n.a.	7.41	0.035	0.100	FALSE	n.a.
n.a	Bromide	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	20.0	66.922	9.22	0.760	3.289	FALSE	n.a.
n.a.	Nitrate	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5		20.0	n.a.	9.98	0.007	0.035	FALSE	n.a.
n.a.	Phosphate	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WV67 E1 ms*	Inject Number:	7
Vial Number:	*7*	User	pat
Injection Type.	*Unknown*	Sequence:	JUNE2713CDE
Dilution Factor	*50 0*		
Instrument Method.	*INSTRMETH*		
Processing Method.	*processmethodal*		
Injection Date/Time	*27/06/13 17.36*		

Chromatogram



Integration Results

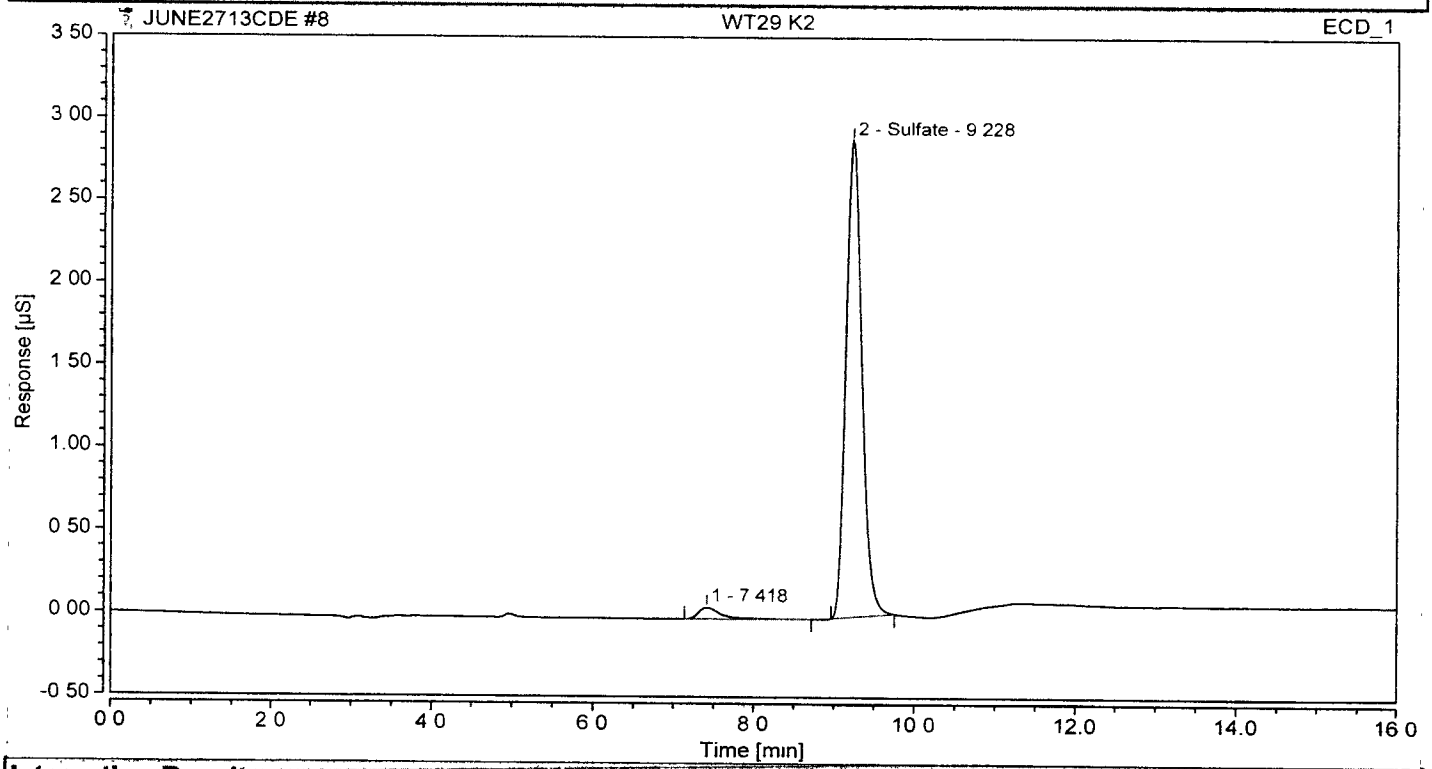
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		50.0	n.a.	3.57	0.047	0.240	FALSE	n.a.
2	Chloride	50.0	171.166	4.94	1.097	8.350	FALSE	n.a.
n.a.	Nitrite	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		50.0	n.a.	7.42	0.027	0.081	FALSE	n.a.
n.a.	Bromide	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	50.0	160.157	9.23	0.727	3.146	FALSE	n.a.
n.a.	Nitrate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WT29 K2*	Inject Number.	8
Vial Number:	*8*	User.	pat
Injection Type	*Unknown*	Sequence	JUNE2713CDE
Dilution Factor	*100 0*		
Instrument Method.	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*27/06/13 17.56*		

Chromatogram



Integration Results

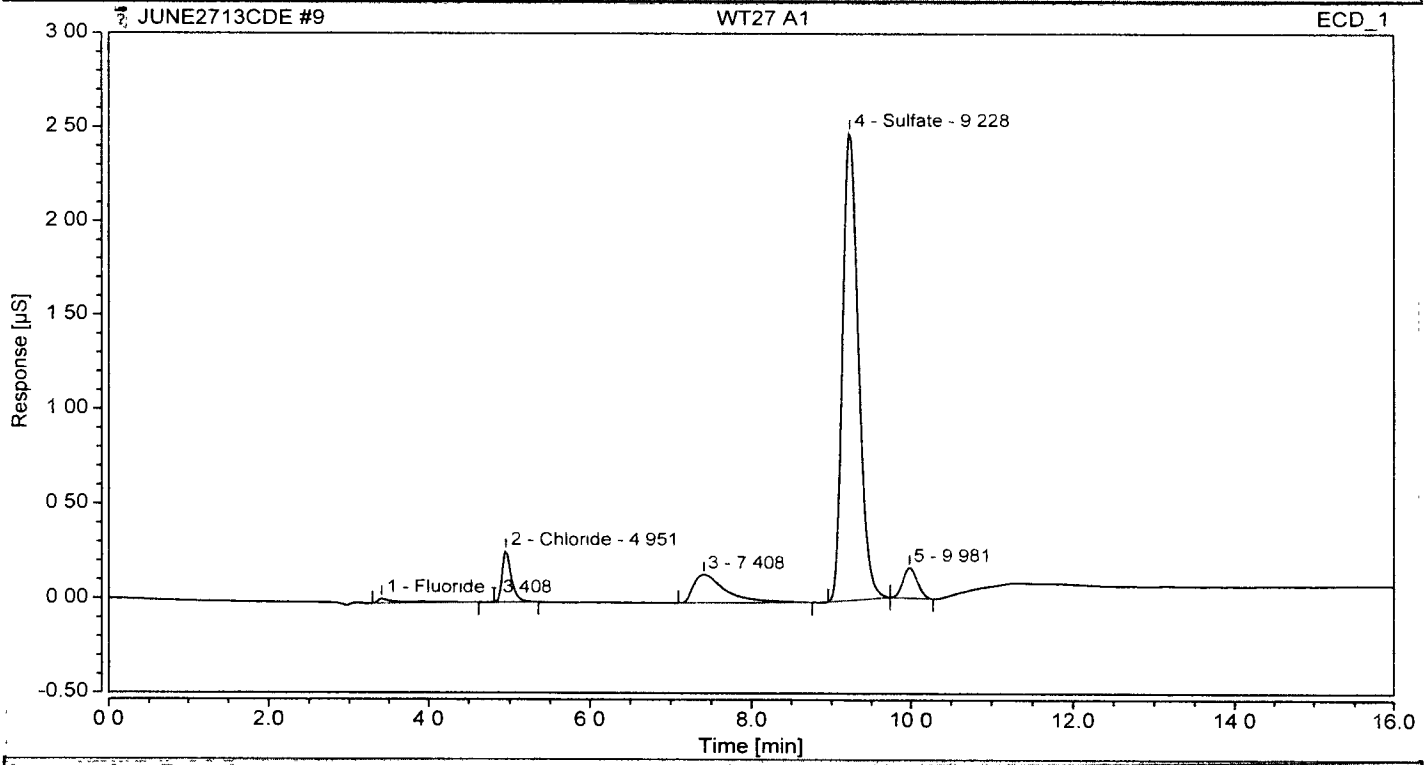
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		100.0	n.a.	7.42	0.023	0.068	FALSE	n.a.
n.a.	Bromide	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	Sulfate	100.0	292.941	9.23	0.665	2.888	FALSE	n.a.
n.a.	Nitrate	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a

Chromatogram and Results

Injection Details

Injection Name.	*WT27 A1*	Inject Number	9
Vial Number:	*9*	User	pat
Injection Type.	*Unknown*	Sequence:	JUNE2713CDE
Dilution Factor	*2 0*		
Instrument Method	*INSTRMETH*		
Processing Method.	*processmethodal*		
Injection Date/Time:	*27/06/13 18.16*		

Chromatogram



Integration Results

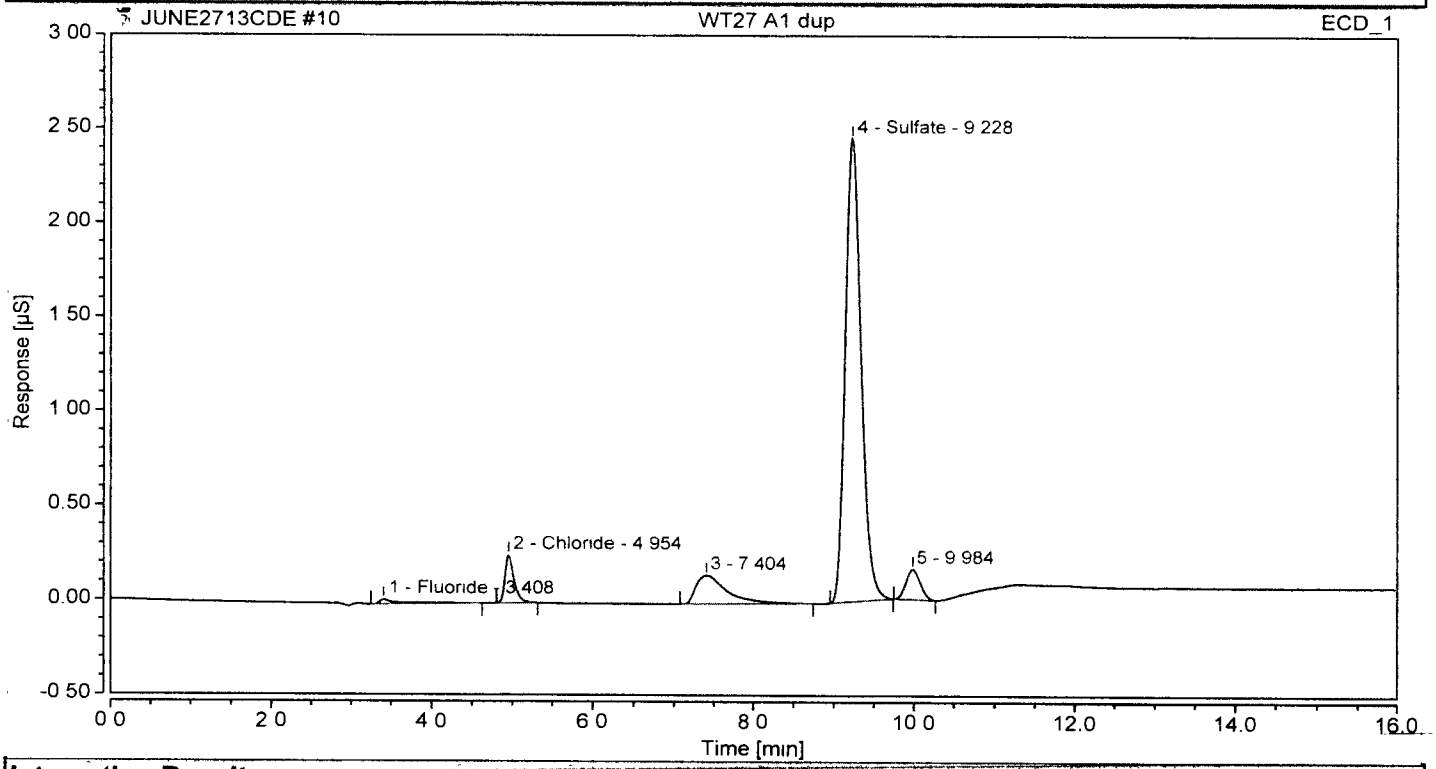
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	2.0	0.030	3.41	0.008	0.024	FALSE	n.a.
2	Chloride	2.0	0.222	4.95	0.036	0.269	FALSE	n.a.
n.a.	Nitrite	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		2.0	n.a.	7.41	0.069	0.149	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	2.0	4.990	9.23	0.566	2.481	FALSE	n.a.
n.a.	Nitrate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5		2.0	n.a.	9.98	0.034	0.160	FALSE	n.a.
n.a.	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WT27 A1 dup*	Inject Number:	10
Vial Number:	*10*	User.	pat
Injection Type	*Unknown*	Sequence:	JUNE2713CDE
Dilution Factor.	*2 0*		
Instrument Method.	*INSTRMETH*		
Processing Method	*processmethodat*		
Injection Date/Time	*27/06/13 18 36*		

Chromatogram



Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	2.0	0.027	3.41	0.007	0.023	FALSE	n.a.
2	Chloride	2.0	0.208	4.95	0.033	0.253	FALSE	n.a.
n.a.	Nitrite	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		2.0	n.a.	7.40	0.068	0.150	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	2.0	4.940	9.23	0.561	2.452	FALSE	n.a.
n.a.	Nitrate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5		2.0	n.a.	9.98	0.033	0.158	FALSE	n.a.
n.a.	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

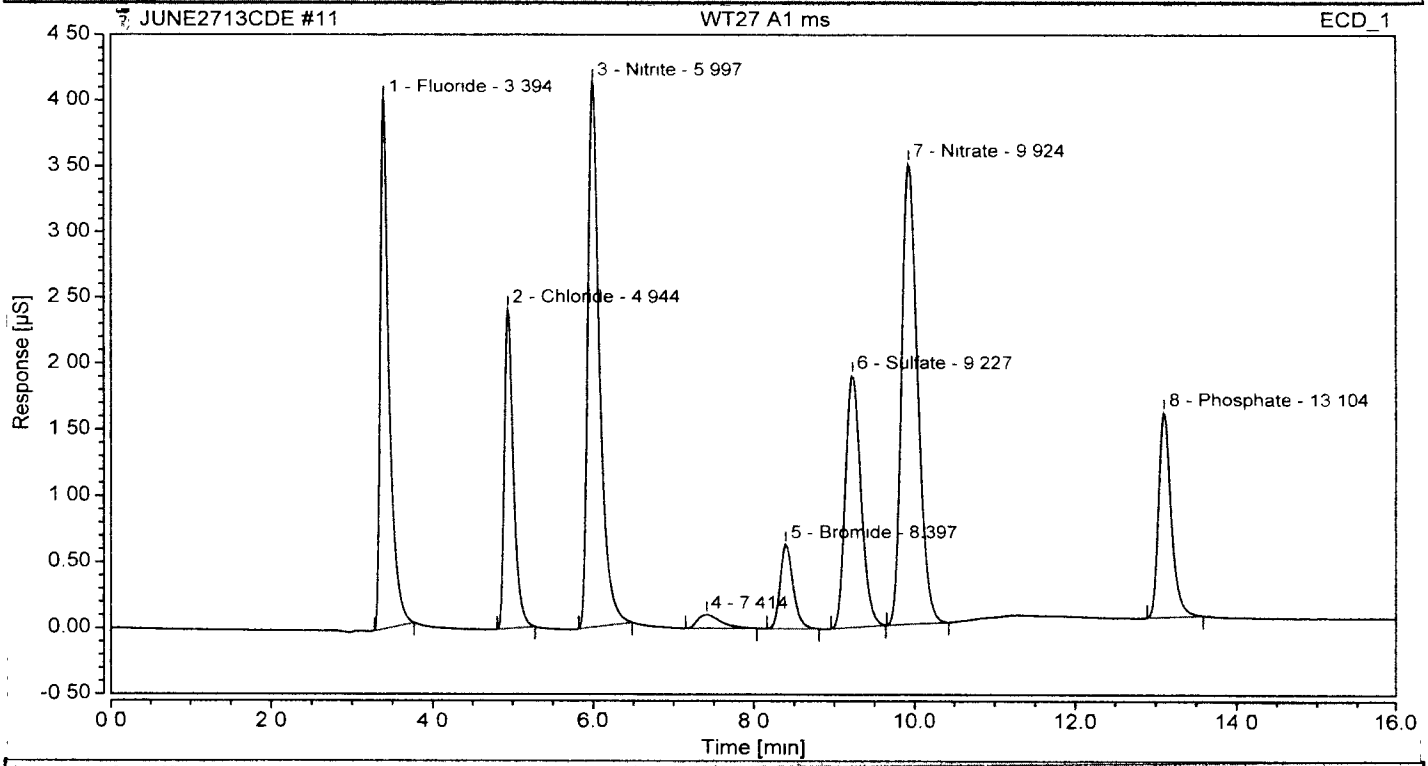
WT27:B1202

Chromatogram and Results

Injection Details

Injection Name.	*WT27 A1 ms*	Inject Number.	11
Vial Number	*11*	User.	pat
Injection Type.	*Unknown*	Sequence.	JUNE2713CDE
Dilution Factor	*5 0*		
Instrument Method	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time.	*27/06/13 18:55*		

Chromatogram



Integration Results

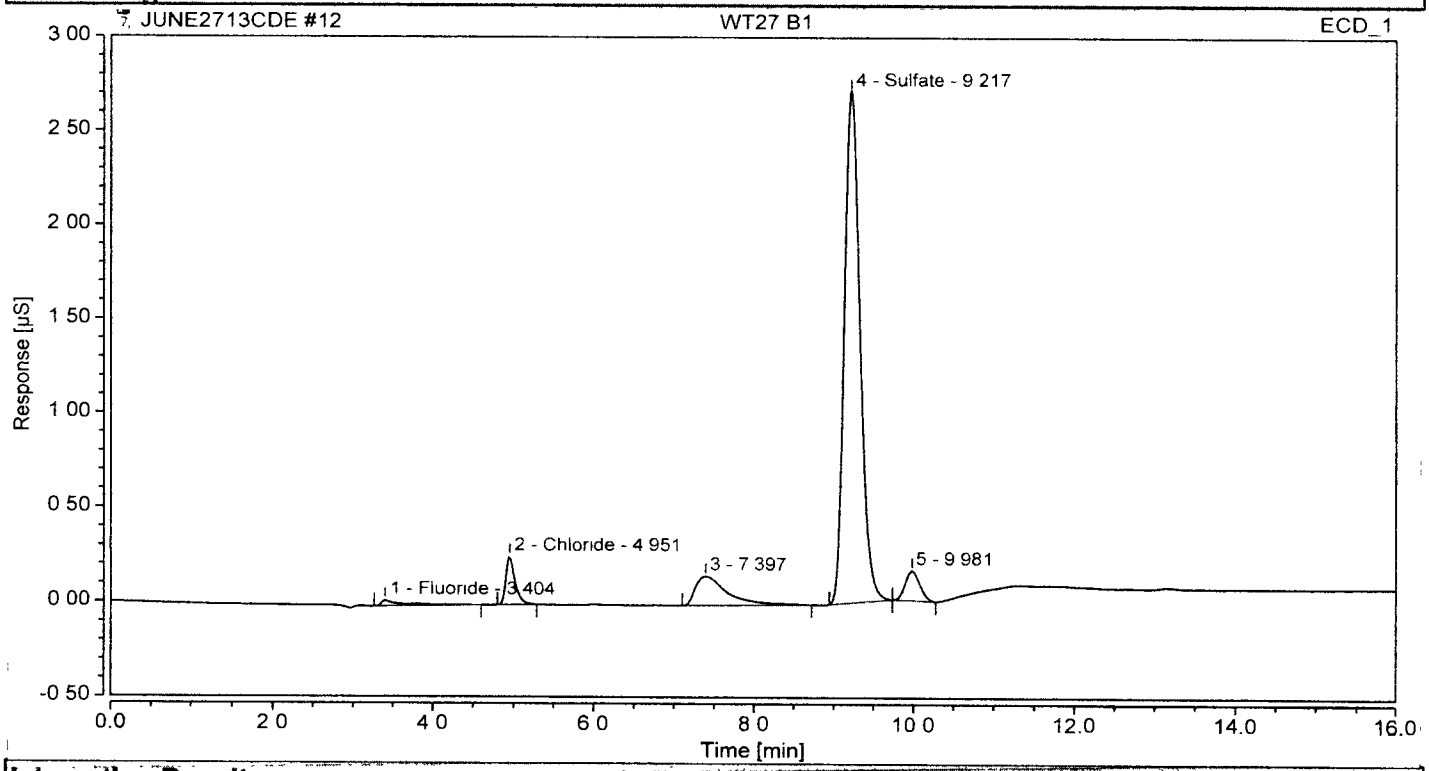
No	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	5.0	4.827	3.39	0.498	4.020	FALSE	n.a.
2	Chloride	5.0	4.905	4.94	0.314	2.417	FALSE	n.a.
3	Nitrite	5.0	4.780	6.00	0.697	4.135	FALSE	n.a.
4		5.0	n.a.	7.41	0.034	0.103	FALSE	n.a.
5	Bromide	5.0	4.447	8.40	0.121	0.637	FALSE	n.a.
6	Sulfate	5.0	9.451	9.23	0.429	1.907	FALSE	n.a.
7	Nitrate	5.0	4.933	9.92	0.809	3.494	FALSE	n.a.
8	Phosphate	5.0	4.498	13.10	0.281	1.549	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WT27 B1*	Inject Number:	12
Vial Number	*12*	User:	pat
Injection Type.	*Unknown*	Sequence	JUNE2713CDE
Dilution Factor	*2 0*		
Instrument Method.	*INSTRMETH*		
Processing Method.	*processmethodal*		
Injection Date/Time	*27/06/13 19 16*		

Chromatogram



Integration Results

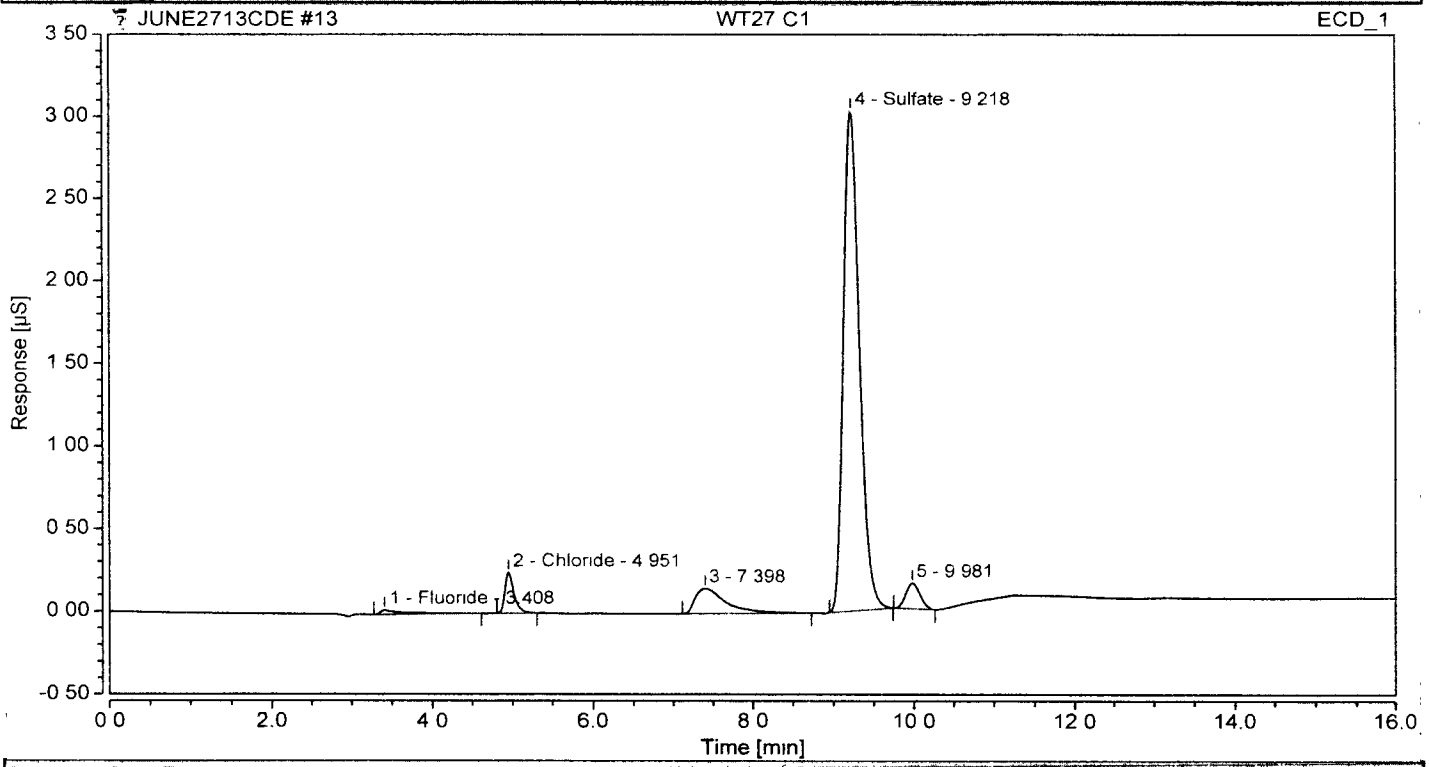
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	2.0	0.039	3.40	0.010	0.029	FALSE	n.a.
2	Chloride	2.0	0.209	4.95	0.033	0.253	FALSE	n.a.
n.a.	Nitrite	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		2.0	n.a.	7.40	0.071	0.153	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	2.0	5.467	9.22	0.621	2.710	FALSE	n.a.
n.a.	Nitrate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5		2.0	n.a.	9.98	0.033	0.157	FALSE	n.a.
n.a.	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WT27 C1*	Inject Number	13
Vial Number	*13*	User:	pat
Injection Type	*Unknown*	Sequence	JUNE2713CDE
Dilution Factor	*2.0*		
Instrument Method	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time.	*27/06/13 19 36*		

Chromatogram



Integration Results

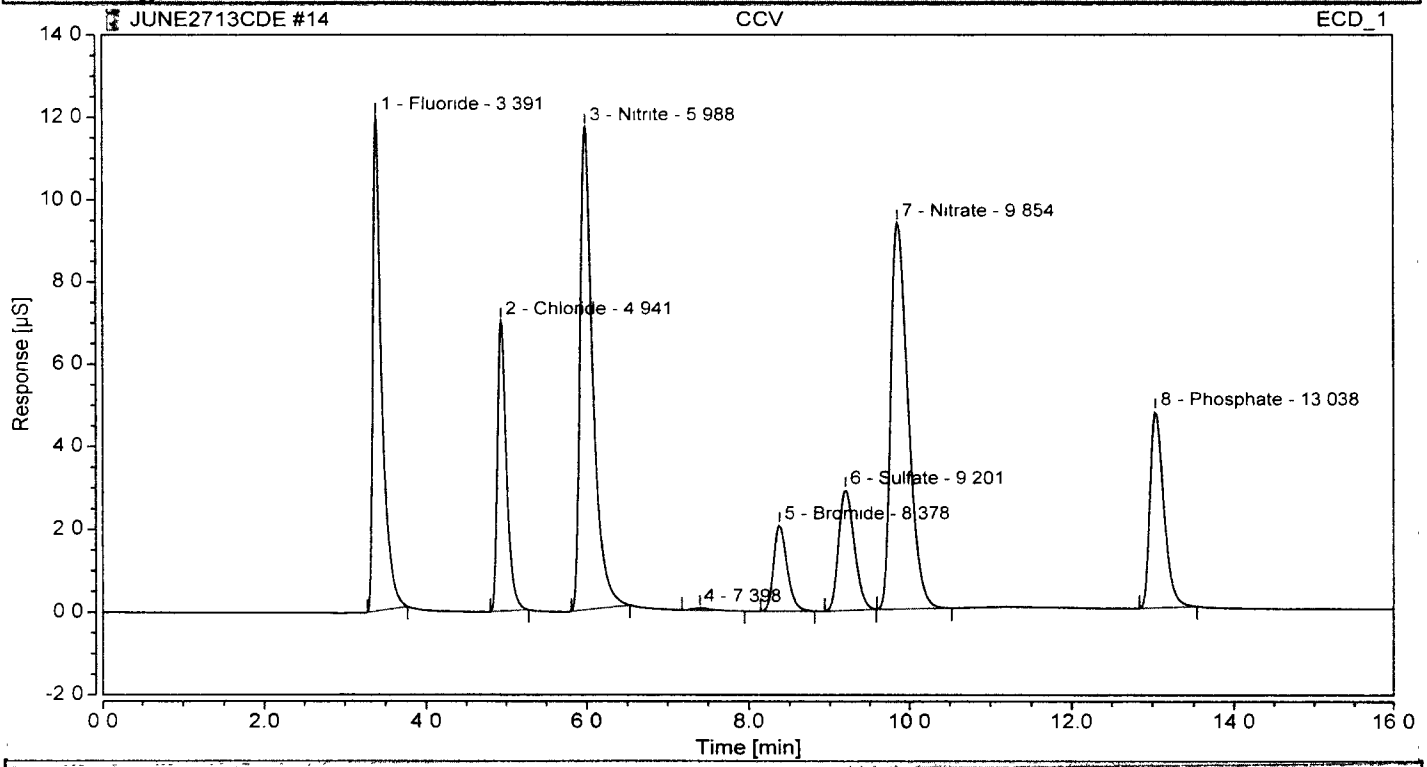
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	2.0	0.036	3.41	0.009	0.027	FALSE	n.a.
2	Chloride	2.0	0.202	4.95	0.032	0.245	FALSE	n.a.
n.a.	Nitrite	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		2.0	n.a.	7.40	0.069	0.151	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	2.0	6.139	9.22	0.697	3.031	FALSE	n.a.
n.a.	Nitrate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5		2.0	n.a.	9.98	0.032	0.155	FALSE	n.a.
n.a.	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*CCV*	Inject Number:	14
Vial Number.	*2*	User	pat
Injection Type.	*Check Standard*	Sequence.	JUNE2713CDE
Dilution Factor	*1 0*		
Instrument Method.	*INSTRMETH*		
Processing Method	*processmethodal*		
Injection Date/Time:	*27/06/13 19.56*		

Chromatogram



Integration Results

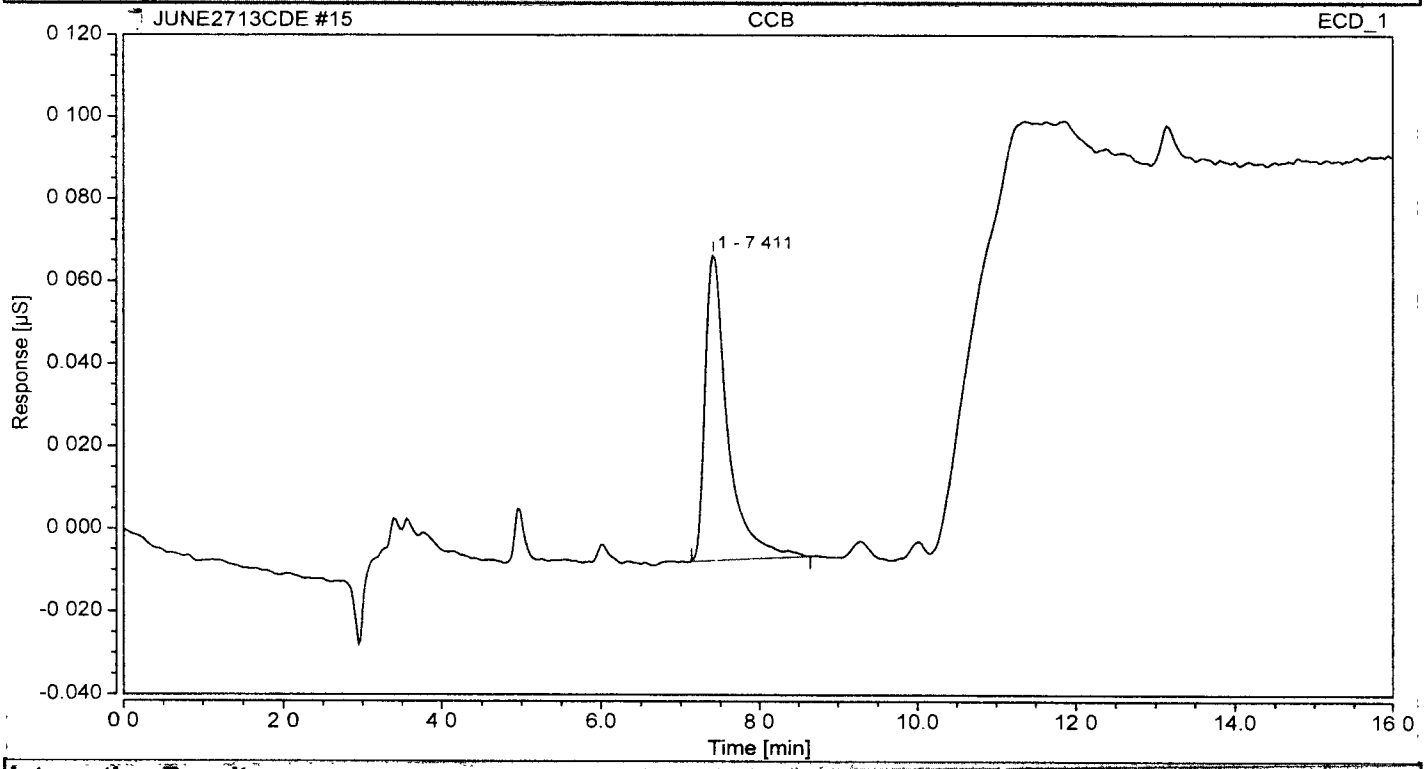
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	2.912	3.39	1.503	12.000	FALSE	-2.94
2	Chloride	1.0	2.888	4.94	0.925	7.032	FALSE	-3.72
3	Nitrite	1.0	2.913	5.99	2.123	11.709	FALSE	-2.90
4		1.0	n.a.	7.40	0.015	0.055	FALSE	n.a.
5	Bromide	1.0	2.920	8.38	0.397	2.074	FALSE	-2.67
6	Sulfate	1.0	2.891	9.20	0.656	2.910	FALSE	-3.62
7	Nitrate	1.0	2.855	9.85	2.341	9.365	FALSE	-4.84
8	Phosphate	1.0	2.956	13.04	0.923	4.743	FALSE	-1.46

Chromatogram and Results

Injection Details

Injection Name	*CCB*	Inject Number:	15
Vial Number	*3*	User.	pat
Injection Type	*Blank*	Sequence	JUNE2713CDE
Dilution Factor	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method	*processmethodal*		
Injection Date/Time.	*27/06/13 20:16*		

Chromatogram



Integration Results

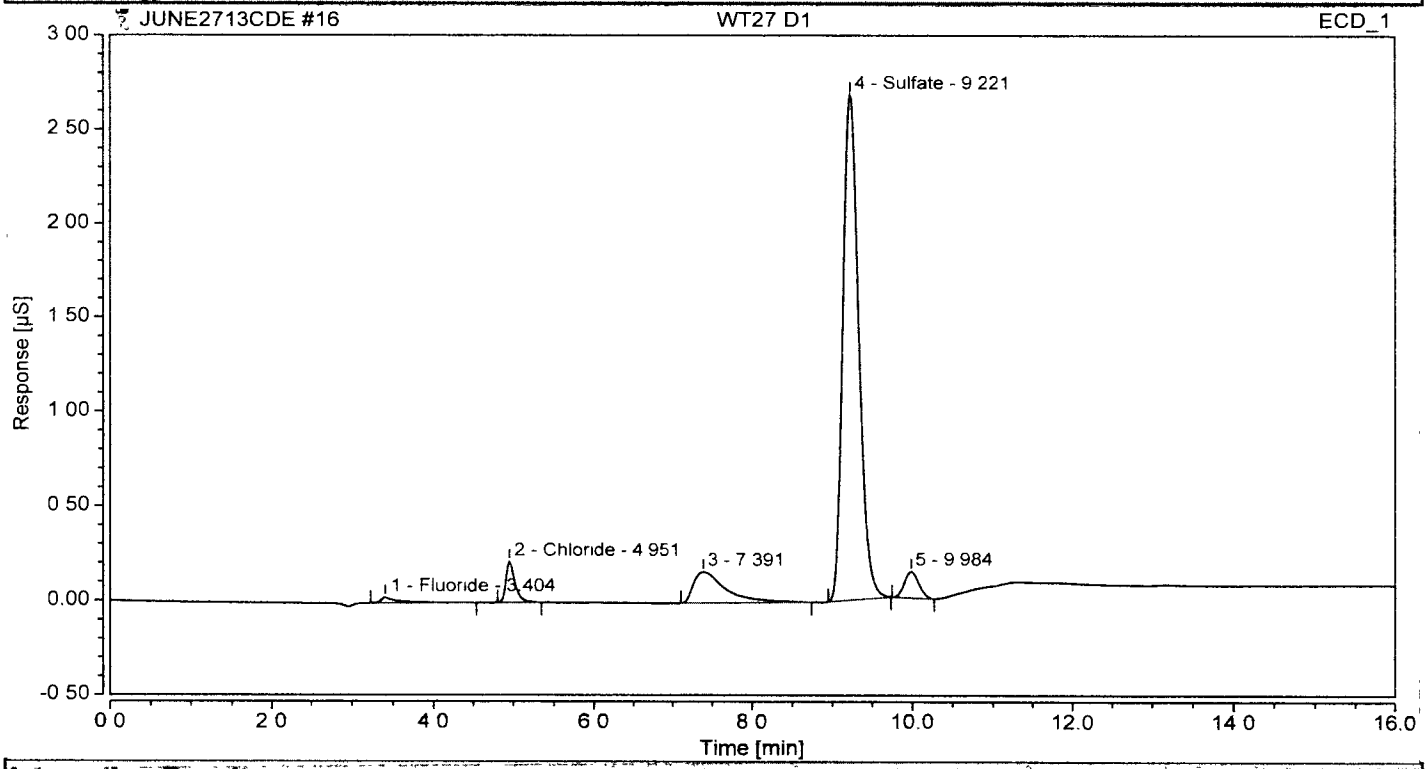
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
1		1.0	n.a.	7.41	0.025	0.074	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WT27 D1*	Inject Number.	16
Vial Number	*14*	User	pat
Injection Type.	*Unknown*	Sequence	JUNE2713CDE
Dilution Factor	*2 0*		
Instrument Method.	*INSTRMETH*		
Processing Method.	*processmethodat*		
Injection Date/Time	*27/06/13 20:37*		

Chromatogram



Integration Results

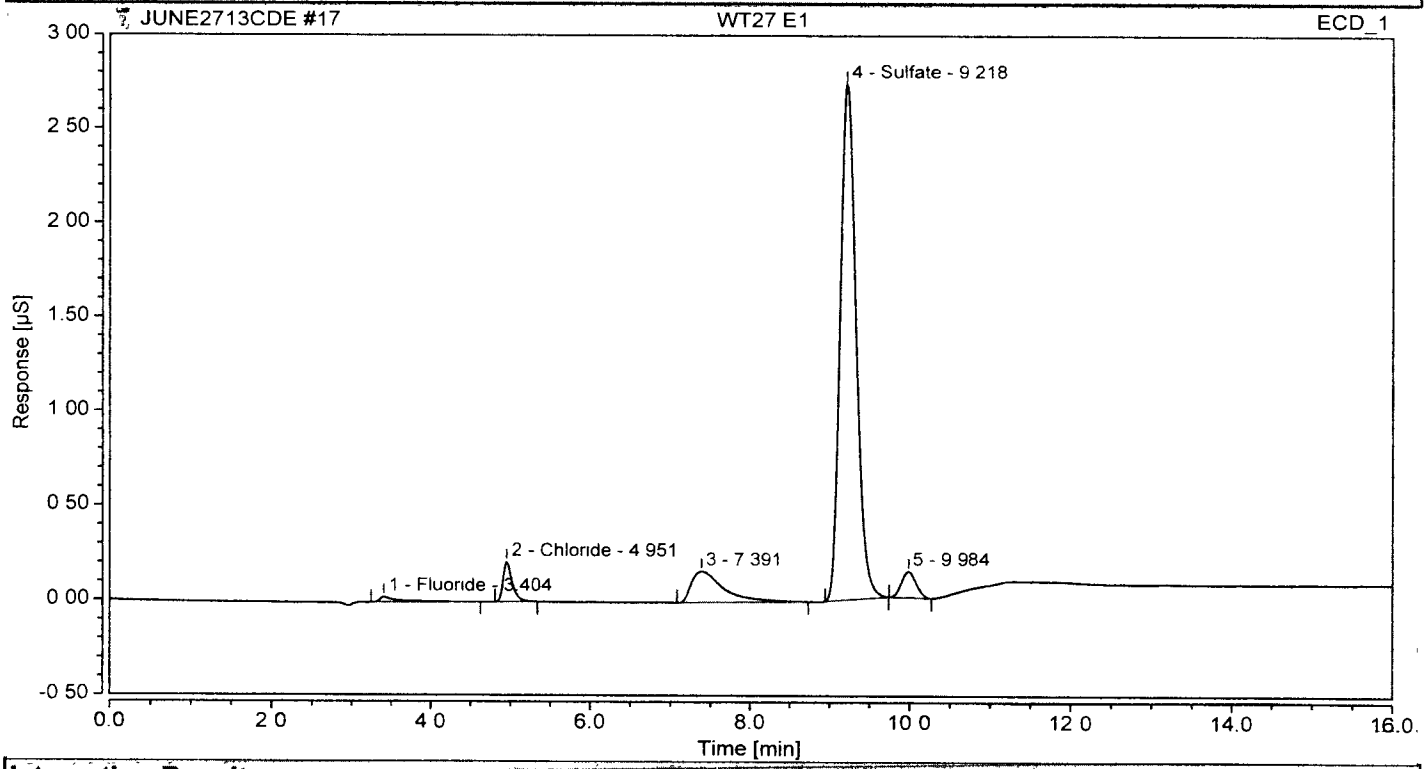
No	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	2.0	0.029	3.40	0.008	0.030	FALSE	n.a.
2	Chloride	2.0	0.177	4.95	0.028	0.214	FALSE	n.a.
n.a.	Nitrite	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		2.0	n.a.	7.39	0.078	0.164	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	2.0	5.411	9.22	0.614	2.681	FALSE	n.a.
n.a.	Nitrate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5		2.0	n.a.	9.98	0.029	0.140	FALSE	n.a.
n.a.	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WT27 E1*	Inject Number:	17
Vial Number.	*15*	User:	pat
Injection Type	*Unknown*	Sequence	JUNE2713CDE
Dilution Factor	*2.0*		
Instrument Method:	*INSTRMETH*		
Processing Method.	*processmethodal*		
Injection Date/Time.	*27/06/13 20:58*		

Chromatogram



Integration Results

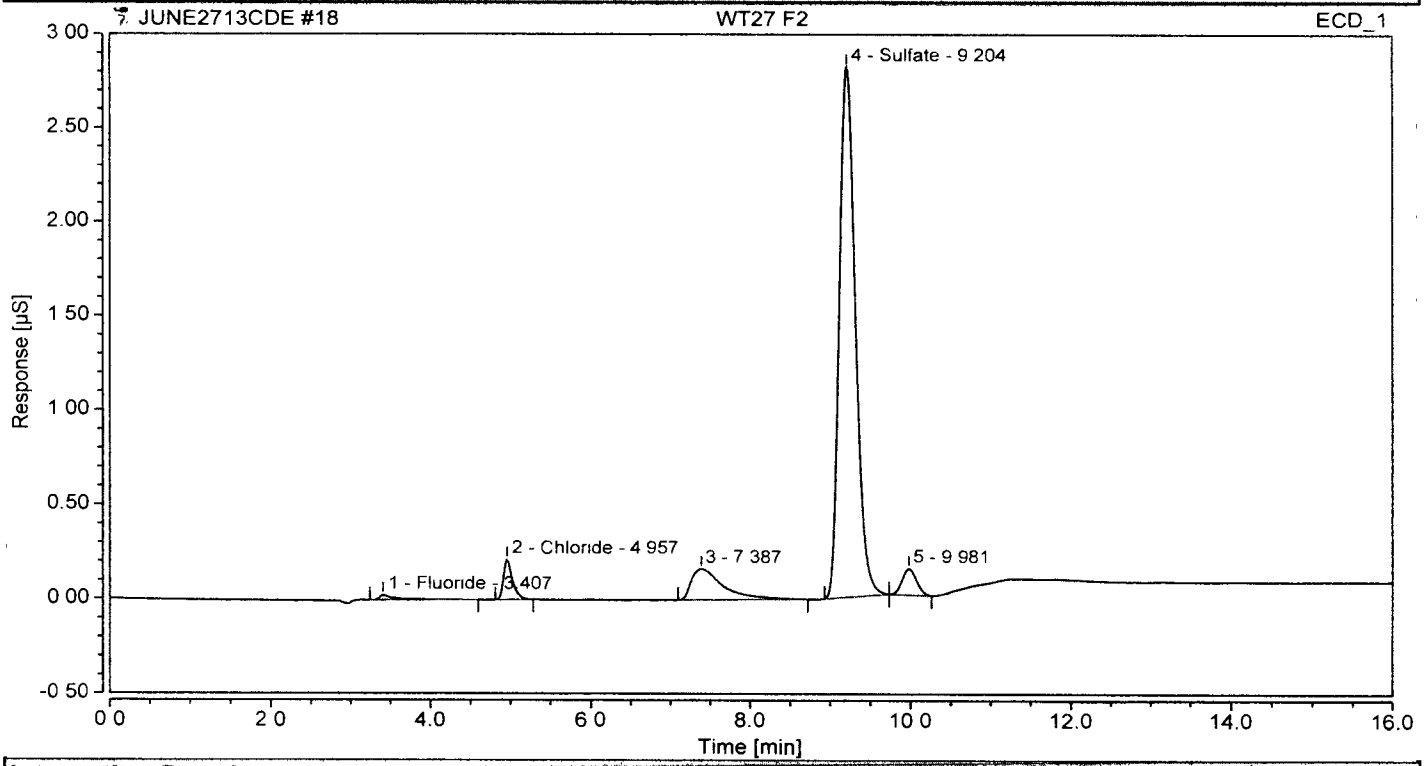
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	2.0	0.028	3.40	0.007	0.026	FALSE	n.a.
2	Chloride	2.0	0.172	4.95	0.028	0.209	FALSE	n.a.
n.a.	Nitrite	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		2.0	n.a.	7.39	0.076	0.163	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	2.0	5.515	9.22	0.626	2.735	FALSE	n.a.
n.a.	Nitrate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5		2.0	n.a.	9.98	0.029	0.138	FALSE	n.a.
n.a.	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WT27 F2*	Inject Number:	18
Vial Number:	*16*	User:	pat
Injection Type	*Unknown*	Sequence:	JUNE2713CDE
Dilution Factor:	*2 0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*27/06/13 21:18*		

Chromatogram



Integration Results

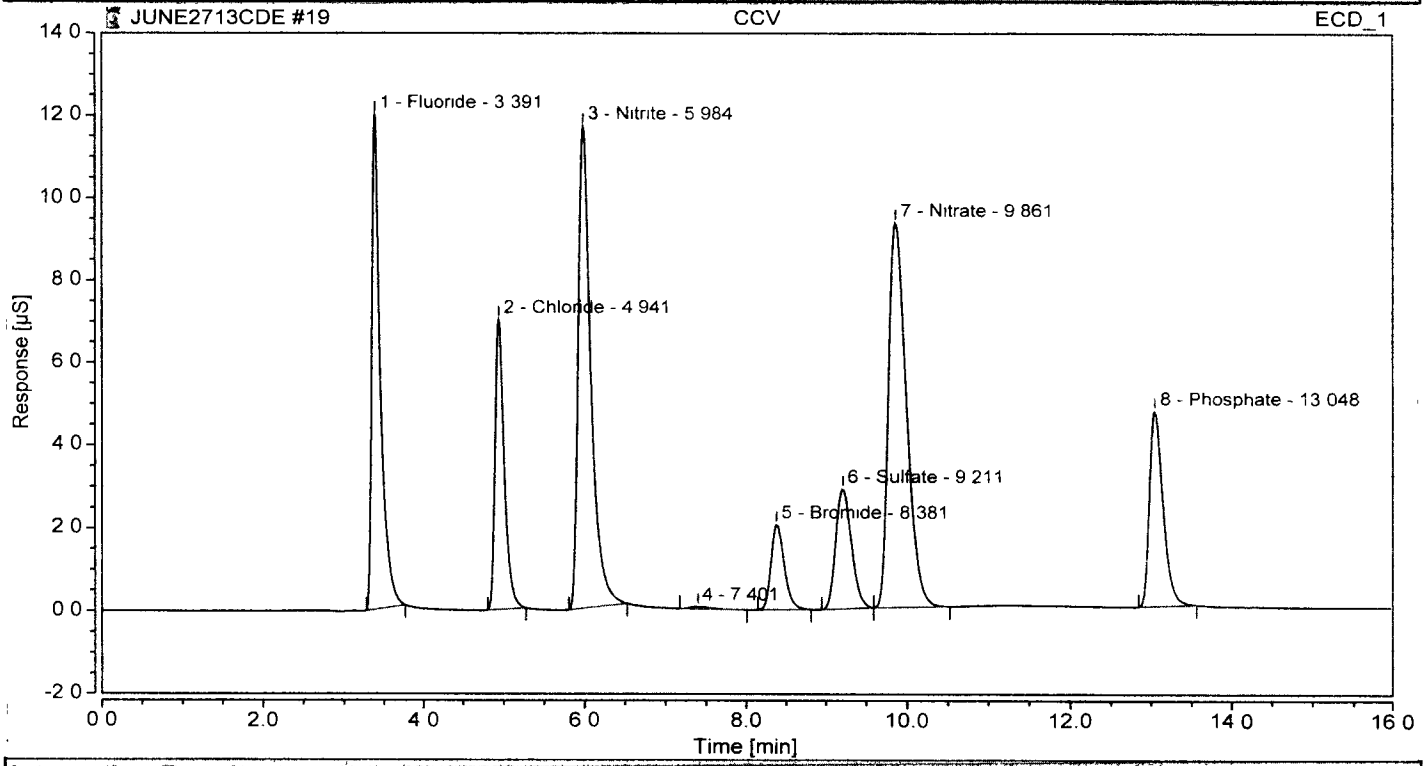
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	2.0	0.025	3.41	0.007	0.026	FALSE	n.a.
2	Chloride	2.0	0.174	4.96	0.028	0.212	FALSE	n.a.
n.a.	Nitrite	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		2.0	n.a.	7.39	0.076	0.163	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	2.0	5.689	9.20	0.646	2.816	FALSE	n.a.
n.a.	Nitrate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5		2.0	n.a.	9.98	0.029	0.139	FALSE	n.a.
n.a.	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*CCV*	Inject Number:	19
Vial Number:	*2*	User:	pat
Injection Type:	*Check Standard*	Sequence:	JUNE2713CDE
Dilution Factor:	*1 0*		
Instrument Method.	*INSTRMETH*		
Processing Method.	*processmethodal*		
Injection Date/Time	*27/06/13 21 39*		

Chromatogram



Integration Results

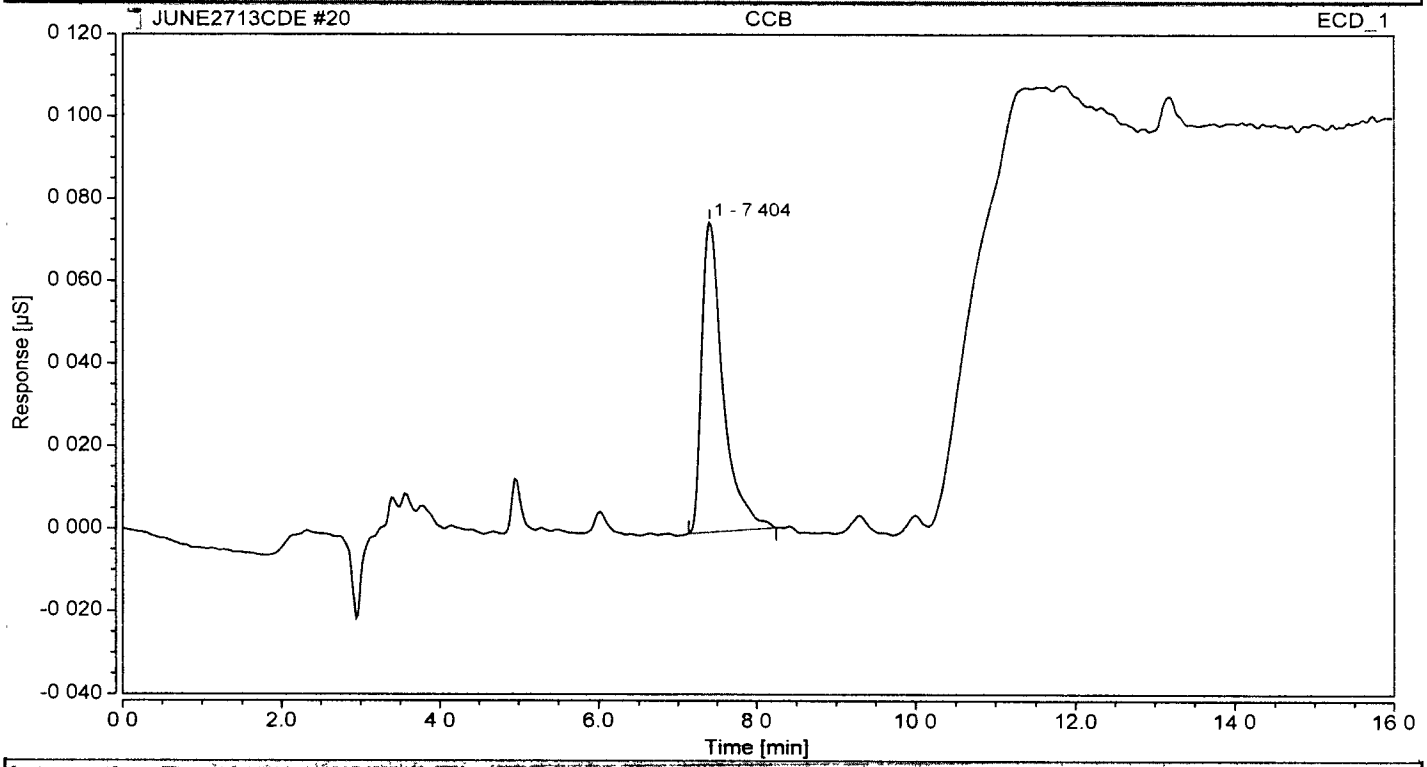
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	2.913	3.39	1.504	11.986	FALSE	-2.91
2	Chloride	1.0	2.875	4.94	0.921	7.019	FALSE	-4.15
3	Nitrite	1.0	2.905	5.98	2.117	11.686	FALSE	-3.17
4		1.0	n.a.	7.40	0.015	0.057	FALSE	n.a.
5	Bromide	1.0	2.913	8.38	0.396	2.059	FALSE	-2.90
6	Sulfate	1.0	2.883	9.21	0.654	2.900	FALSE	-3.89
7	Nitrate	1.0	2.848	9.86	2.335	9.317	FALSE	-5.07
8	Phosphate	1.0	2.946	13.05	0.920	4.717	FALSE	-1 79

Chromatogram and Results

Injection Details

Injection Name.	*CCB*	Inject Number:	20
Vial Number:	*3*	User:	pat
Injection Type	*Blank*	Sequence:	JUNE2713CDE
Dilution Factor.	*1 0*		
Instrument Method.	*INSTRMETH*		
Processing Method	*processmethodal*		
Injection Date/Time:	*27/06/13 22:00*		

Chromatogram



Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
1		1.0	n.a.	7.40	0.024	0.075	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*STOP*	Inject Number:	21
Vial Number.	*1*	User:	pat
Injection Type.	*Unknown*	Sequence:	JUNE2713CDE
Dilution Factor	*1 0*		
Instrument Method.	*SHUTDOWN*		
Processing Method	*processmethodal*		
Injection Date/Time.	*27/06/13 22:22*		

Chromatogram

Can't read channel ECD 1 from injection #21 - STOP
Channel is not available

Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			n.a.	min	natogram in con	matogram in		n.a

Calibration

CALIBRATION FILE NAME: MAY2313RR

Calibration Details — Fluoride

Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	1 9371
Number of Calibration Points	5	*Curve (C2)*	0 0000
Number of disabled Calibration Points	0	*R-Square*	0 9999

Calibration Results — Fluoride

No	Injection Name	Calibration Level	X Value Fluoride	Y Value Fluoride	Amount mg/l Fluoride	Area µS*min Fluoride	Height µS Fluoride
1	STD1	01	0.0437	0.1000	0.0847	0.044	0.345
2	STD2	02	0.2465	0.5000	0.4774	0.246	2.058
3	STD3	03	0.5150	1.0000	0.9977	0.515	4.296
4	STD4	04	1.3017	2.5000	2.5216	1.302	10.658
5	STD5	05	2.5770	5.0000	4.9920	2.577	20 470

Calibration Details — Chloride

Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	3 1205
Number of Calibration Points	5	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9995

Calibration Results — Chloride

No	Injection Name	Calibration Level	X Value Chloride	Y Value Chloride	Amount mg/l Chloride	Area µS*min Chloride	Height µS Chloride
1	STD1	01	0.0297	0.1000	0.0927	0.030	0.227
2	STD2	02	0.1451	0.5000	0.4527	0.145	1.120
3	STD3	03	0.3025	1.0000	0.9440	0.303	2.330
4	STD4	04	0.7874	2.5000	2.4570	0.787	6.013
5	STD5	05	1.6138	5.0000	5.0359	1.614	12.265

Calibration Details — Nitrite

Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	1 3718
Number of Calibration Points	5	*Curve (C2)*	0 0000
Number of disabled Calibration Points	0	*R-Square*	0.9998

Calibration Results — Nitrite

No	Injection Name	Calibration Level	X Value Nitrite	Y Value Nitrite	Amount mg/l Nitrite	Area µS*min Nitrite	Height µS Nitrite
1	STD1	01	0.0644	0.1000	0.0884	0.064	0.405
2	STD2	02	0.3583	0.5000	0.4915	0.358	2.212
3	STD3	03	0.7416	1.0000	1.0173	0.742	4.433
4	STD4	04	1.8526	2.5000	2.5414	1.853	10.468
5	STD5	05	3.6277	5.0000	4.9764	3.628	19.511

Calibration Details — Bromide

Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	7 3523
Number of Calibration Points	5	*Curve (C2)*	0 0000
Number of disabled Calibration Points	0	*R-Square*	0.9981

Calibration Results — Bromide

No.	Injection Name	Calibration Level	X Value Bromide	Y Value Bromide	Amount mg/l Bromide	Area µS*min Bromide	Height µS Bromide
1	STD1	01	0.0103	0.1000	0.0754	0.010	0.053
2	STD2	02	0.0571	0.5000	0.4198	0.057	0.295
3	STD3	03	0.1217	1.0000	0.8948	0.122	0.634
4	STD4	04	0.3283	2.5000	2.4138	0.328	1.709
5	STD5	05	0.6891	5.0000	5.0667	0.689	3.562

WVDT : 03214

Calibration Details	Sulfate		
Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	4 4029
Number of Calibration Points	5	*Curve (C2)*	0 0000
Number of disabled Calibration Points	0	*R-Square*	0 9988

Calibration Results — **Sulfate**

No.	Injection Name	Calibration Level	X Value Sulfate	Y Value Sulfate	Amount mg/l Sulfate	Area µS*min Sulfate	Height µS Sulfate
1	STD1	01	0.0188	0.1000	0.0828	0.019	0.082
2	STD2	02	0.0972	0.5000	0.4279	0.097	0.430
3	STD3	03	0.2082	1.0000	0.9165	0.208	0.922
4	STD4	04	0.5542	2.5000	2.4403	0.554	2.441
5	STD5	05	1 1471	5.0000	5.0504	1.147	5.017

Calibration Details	Nitrate		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	1 2190
Number of Calibration Points	5	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9994

Calibration Results — **Nitrate**

No	Injection Name	Calibration Level	X Value Nitrate	Y Value Nitrate	Amount mg/l Nitrate	Area µS*min Nitrate	Height µS Nitrate
1	STD1	01	0.0615	0.1000	0.0750	0.062	0.286
2	STD2	02	0.3635	0.5000	0.4431	0.363	1.613
3	STD3	03	0.7771	1.0000	0.9473	0.777	3.349
4	STD4	04	2.0213	2.5000	2.4640	2.021	8.179
5	STD5	05	4.1286	5.0000	5.0329	4.129	15.253

Calibration Details	Phosphate		
Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	3 1994
Number of Calibration Points	5	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9974

Calibration Results — **Phosphate**

No	Injection Name	Calibration Level	X Value Phosphate	Y Value Phosphate	Amount mg/l Phosphate	Area µS*min Phosphate	Height µS Phosphate
1	STD1	01	0.0222	0.1000	0.0710	0.022	0.094
2	STD2	02	0.1242	0.5000	0.3972	0.124	0.609
3	STD3	03	0.2753	1.0000	0.8808	0.275	1.415
4	STD4	04	0.7508	2.5000	2.4020	0.751	3.811
5	STD5	05	1.5864	5.0000	5 0755	1.586	7.410

Amount Summary

Sequence Details

Name	**JUNE2613CDE**	*Calibration*	**MAY2313RR**	**ARI # 616-02**
Directory	**Instrument Data\2013 DATA\JUNE 2013**	*Calibration exp*	**7/23/2013**	
Data Vault	**ChromeleonLocal**	*Queue Start.*	**6/26/2013 17:51**	
No of Injections	**55.000**	*User*	**CDE**	

By Component

		ERA 130312	ERA 210312	ERA 490412	ERA 370911	ERA 240312	ERA 220912	ERA 030112
Name	Dilution	Amount mg/l	Amount mg/l	Amount mg/l	Amount mg/l	Amount mg/l	Amount mg/l	Amount mg/l
Chloride	Chloride	Fluoride	Chloride	Nitrite	Bromide	Sulfate	Nitrate	Phosphate
RINSE	1 0	n a	0 018	n a	n a	n.a.	n a	n a
ICV	1 0	2 962	2 973	2 937	2 960	2.965	2 885	2 992
%R=		**98.7%**	**99.1%**	**97.9%**	**98.7%**	**98.8%**	**96.2%**	**99.7%**
ICB	1 0	n a	n a.	n a	n.a	n.a	n a	n a
LOW	1 0	0 085	0.093	0 076	0 076	0 085	0 080	0.090
WT26 B1	2 0	0 026	0 156	n a	n a	4.826	0 065	n.a
WT26 D1	2.0	n a	0.178	n a	n a	4.968	0 069	n a.
WT26 F1	5 0	n a	0 273	n a	n a	20.514	0 073	n.a
WT26 I1	2 0	n a	0 181	n a	n a	5.019	0 072	n a
WT26 J1	2 0	n a	0 153	n a	n a	5 364	0.071	n a
WT26 L1	5 0	0 080	0 162	n a	n.a	12.341	0 117	n a
WT26 M1	2 0	0 031	0 164	n a	n a	5.413	0.069	n a
WT26 N1	2.0	n a	0 185	n a	n a	4 966	0.096	n.a
WT26 O1	2 0	n a	0 166	n a	n a	5.103	0 068	n.a
CCV	1 0	2 956	2 968	2 931	0 622	2.962	2 885	2 955
%R=		**98.5%**	**98.9%**	**97.7%**	**20.7%**	**98.7%**	**96.2%**	**98.5%**
CCB	1.0	n a	n a	n a	n a	n.a.	n a	n a
WT29 A2	50 0	n a	1 646	n a	n a	111 608	n a	n a
WT29 A2 dup	50 0	n a	1 723	n a	n a.	111.839	n a.	n a
%RPD=		**#VALUE!**	**4.60%**			**0.21%**	**#VALUE!**	
WT29 A2 ms	100 0	n a	1 580	n a	n a.	202.558	n a	n a
%R=		**#VALUE!**	**-0.1%**	**#VALUE!**	**#VALUE!**	**90.9%**	**#VALUE!**	**#VALUE!**
SPK=	**0.05**	***mL 10,000ppm SO4 Stk. to***		***5.0***	***mLsample=***	***100.00 ppm***		
WT29 B2	10 0	0 137	0 447	n a	n a	25.472	0 077	n a
WT29 C2	50 0	n a.	1 222	n a	n a.	94 272	n a	n a
WT29 D2	20.0	n a	0.763	n a	n a	74.790	n a	n a
WT29 E2	2 0	n a	0 325	n.a	n a	8 167	0 060	n a
WT29 H2	50 0	n a	1 240	n a	n a	94.195	n a	n a
WT29 J2	20 0	n.a	0.761	n.a	n a	59.255	n a.	n a
~~WT29 K2~~	~~100 0~~	~~n a~~	~~n a~~	~~n a~~	~~n a~~	~~n a~~	~~n.a.~~	~~n a~~
CCV	1 0	2 959	2 971	2 919	2 932	2.954	2.884	2.943
%R=		**98.6%**	**99.0%**	**97.3%**	**97.7%**	**98.5%**	**96.1%**	**98.1%**
CCB	1 0	n a	n.a.	n a.	n a.	n a.	n a	n a
WT29 L2	50 0	n a	n a	n a	n.a	134.059	n a	n a.
WT29 M2	5.0	n a	0.362	n.a.	n.a	12 659	n.a.	n.a
WT29 N2	5 0	n.a	0 603	n a	n a	12.599	n.a	n.a
WT29 O2	5 0	n a	0.224	n a	n a	11.635	n a	n a.
WT29 P2	100 0	n a	n a.	n a	n a	322.772	n a.	n a
WT27 A1	1 0	0.025	0.210	n a	n a.	5.097	0.086	n a
WT27 A1 dup	1.0	0.024	0.210	n a	n.a	5 097	0 086	n a
%RPD=		**2.47%**	**0.30%**			**0.00%**	**0.30%**	
WT27 A1 ms	1 0	1.927	2.117	1 881	1 808	7.016	2.038	1.847
%R=		**95.1%**	**95.4%**	**#VALUE!**	**#VALUE!**	**95.9%**	**97.6%**	**#VALUE!**
SPK=	**0.05**	***mL 200ppm Int. to***		***5.0***	***mLsample=***	***2.00 ppm***		
WT27 B1	1.0	0.022	0.218	n a	n a	5 592	0 084	n a.
WT27 C1	1.0	0 018	0.214	n a.	n a	6 286	0 084	n a
CCV	1 0	2.935	2.920	2.895	2.903	2.889	2.864	2.943
%R=		**97.8%**	**97.3%**	**96.5%**	**96.8%**	**96.3%**	**95.5%**	**98.1%**
CCB	1.0	n.a.	n.a.	n a.	n a	n.a.	n.a.	n a
WT27 D1	1 0	n.a	0.188	n a	n a	5 524	0 076	n a

WT27 E1	1 0	n a	0 214	n a	n a	5 632	0.077	n a
WT27 F1	1 0	0.019	0 180	n a	n a	5 809	0 075	n a
WT27 G1	1 0	0 017	0 181	n a	n.a	5 690	0 076	n a
WT27 I1	1 0	0 021	0 143	n a	n a	3.856	0 061	n a
WT27 H1	500 0	n a	n a	n a	n a	1509 142	n a	n a
WT27 H1	1 0	0 046	0.262	n a	n a.	n a	n a	n a
WV67 E1	1 0	0 011	82 840	0 049	0 182	n a	0 212	n a
WV67 E1 dup	1 0	0 010	82 871	0 048	0 181	n a	0 212	n.a
%RPD=		**5.57%**	**0.04%**			**#VALUE!**	**0.13%**	
~~WV67 E1 ms~~	~~1 0~~	~~2 224~~	~~84.022~~	~~1 234~~	~~1 991~~	~~n a~~	~~1.498~~	~~1.212~~
%R=		**110.7%**	**59.1%**	**59.2%**	**90.6%**	**#VALUE!**	**64.3%**	**#VALUE!**
SPK=	**0.05**	***mL 200ppm Int. to***		***5.0***	***mLsample=***	***2.00 ppm***		
CCV	1 0	2 941	2 969	2 897	2 916	2.960	2 869	2.963
%R=		**98.0%**	**99.0%**	**96.6%**	**97.2%**	**98.7%**	**95.6%**	**98.8%**
CCB	1.0	n a	0 019	n a	n a	0.032	n.a	n a
WV67 E1 ms	1 0	0 868	84 037	1 987	2 046	n a.	2 178	1 864
%R=		**42.9%**	**59.8%**	**96.9%**	**93.2%**	**#VALUE!**	**98.3%**	**#VALUE!**
SPK=	**0.05**	***mL 200ppm Int. to***		***5.0***	***mLsample=***	***2.00 ppm***		
CCV	1 0	2.942	2 963	2 895	2 921	2 930	2 873	2 978
%R=		**98.1%**	**98.8%**	**96.5%**	**97.4%**	**97.7%**	**95.8%**	**99.3%**
CCB	1 0	n a	n a	n a	n a	n a	n a	n a
STOP	1 0	n a	0 027	n a	n a	0 024	n a	n a

WV67 : 81217

Sequence Overview

Sequence Details

Name:	**JUNE2613CDE**	*Queue Start:*	**2013-06-26T17:51:41-**
Directory:	**Instrument Data\2013 DATA\JUNE 2013**	*Created By:*	**pat**
Data Vault	**ChromeleonLocal**		
No. of Injections:	**55**		

Injection Details

No.	Injection Name	Position	Type	Level	Dilution	Inject Time
1	RINSE	1	Unknown		1.0	26/Jun/13 17:51:41
2	ICV	2	Check Standard	06	1.0	26/Jun/13 18:10:38
3	ICB	3	Blank		1.0	26/Jun/13 18:29:49
4	LOW	4	Unknown		1.0	26/Jun/13 18:49:06
5	WT26 B1	5	Unknown		2.0	26/Jun/13 19:08:29
6	WT26 D1	6	Unknown		2.0	26/Jun/13 19:27:57
7	WT26 F1	7	Unknown		5.0	26/Jun/13 19:47:31
8	WT26 I1	8	Unknown		2.0	26/Jun/13 20:07:11
9	WT26 J1	9	Unknown		2.0	26/Jun/13 20:26:55
10	WT26 L1	10	Unknown		5.0	26/Jun/13 20:46:46
11	WT26 M1	11	Unknown		2.0	26/Jun/13 21:06:42
12	WT26 N1	12	Unknown		2.0	26/Jun/13 21:26:45
13	WT26 O1	13	Unknown		2.0	26/Jun/13 21:46:54
14	CCV	2	Check Standard	06	1.0	26/Jun/13 22:07:07
15	CCB	3	Blank		1.0	26/Jun/13 22:27:43
16	WT29 A2	14	Unknown		50.0	26/Jun/13 22:48:25
17	WT29 A2 dup	15	Unknown		50.0	26/Jun/13 23:08:54
18	WT29 A2 ms	16	Unknown		100.0	26/Jun/13 23:29:27
19	WT29 B2	17	Unknown		10.0	26/Jun/13 23:50:05
20	WT29 C2	18	Unknown		50.0	27/Jun/13 00:10:49
21	WT29 D2	19	Unknown		20.0	27/Jun/13 00:31:38
22	WT29 E2	20	Unknown		2.0	27/Jun/13 00:50:58
23	WT29 H2	21	Unknown		50.0	27/Jun/13 01:10:24
24	WT29 J2	22	Unknown		20.0	27/Jun/13 01:29:55
25	WT29 K2	23	Unknown		100.0	27/Jun/13 01:49:32
26	CCV	2	Check Standard	06	1.0	27/Jun/13 02:09:15
27	CCB	3	Blank		1.0	27/Jun/13 02:29:41
28	WT29 L2	24	Unknown		50.0	27/Jun/13 02:50:15
29	WT29 M2	25	Unknown		5.0	27/Jun/13 03:10:16
30	WT29 N2	26	Unknown		5.0	27/Jun/13 03:30:18
31	WT29 O2	27	Unknown		5.0	27/Jun/13 03:50:24
32	WT29 P2	28	Unknown		100.0	27/Jun/13 04:10:33
33	WT27 A1	29	Unknown		1.0	27/Jun/13 04:30:47
34	WT27 A1 dup	30	Unknown		1.0	27/Jun/13 04:51:06
35	WT27 A1 ms	31	Unknown		1.0	27/Jun/13 05:11:28
36	WT27 B1	32	Unknown		1.0	27/Jun/13 05:31:55
37	WT27 C1	33	Unknown		1.0	27/Jun/13 05:52:24
38	CCV	34	Check Standard		1.0	27/Jun/13 06:12:57
39	CCB	35	Blank		1.0	27/Jun/13 06:33:33
40	WT27 D1	36	Unknown		1.0	27/Jun/13 06:54:14
41	WT27 E1	37	Unknown		1.0	27/Jun/13 07:14:58
42	WT27 F1	38	Unknown		1.0	27/Jun/13 07:34:14
43	WT27 G1	39	Unknown		1.0	27/Jun/13 07:53:33

WGT : 81218

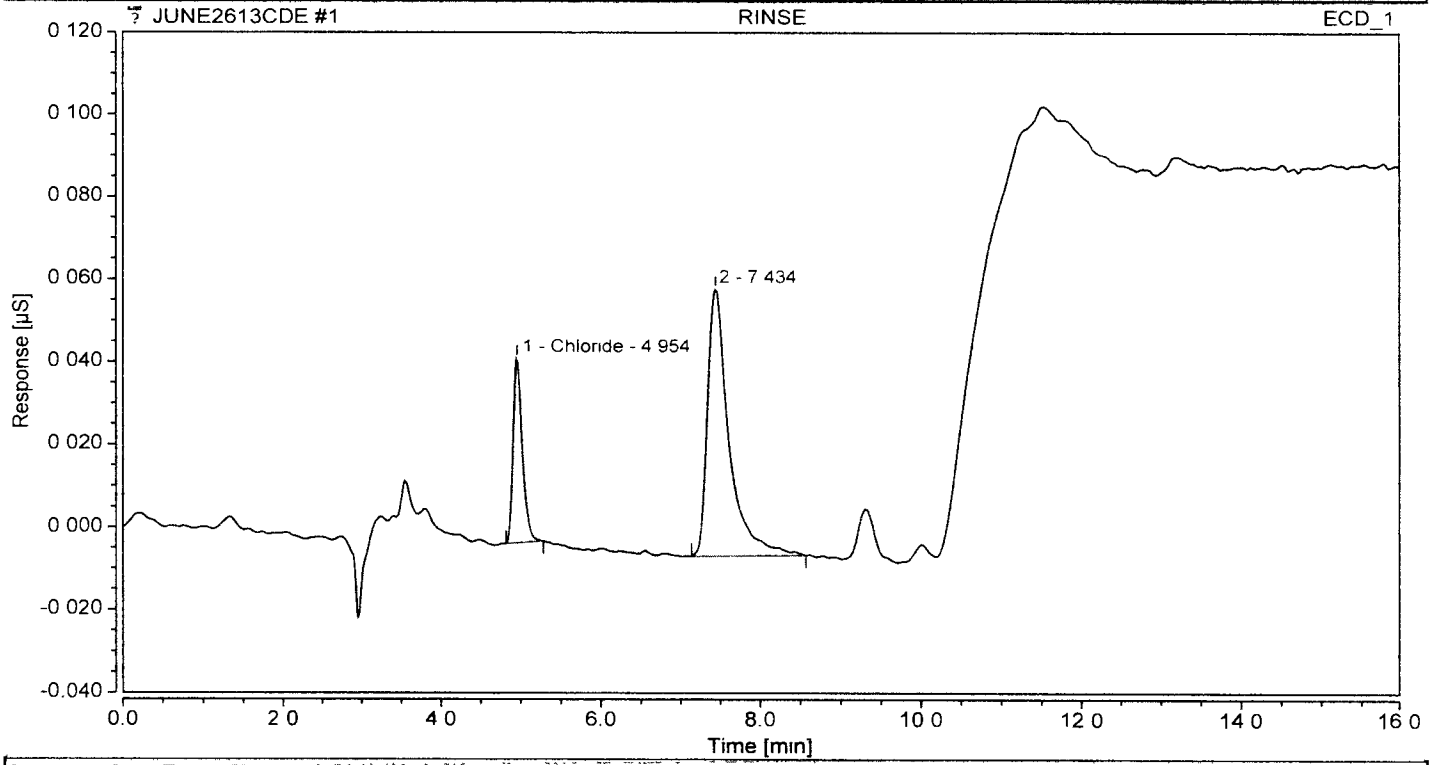
44	WT27 I1	40	Unknown		1.0	27/Jun/13 08:12:55
45	WT27 H1	41	Unknown		500.0	27/Jun/13 08:32.21
46	WT27 H1	42	Unknown		1.0	27/Jun/13 08:51:52
47	WV67 E1	43	Unknown		1.0	27/Jun/13 09:11:25
48	WV67 E1 dup	44	Unknown		1.0	27/Jun/13 09:31:03
49	WV67 E1 ms	45	Unknown		1.0	27/Jun/13 09:50:44
50	CCV	34	Check Standard		1.0	27/Jun/13 10:10:31
51	CCB	35	Blank		1.0	27/Jun/13 10:30:49
52	WV67 E1 ms	46	Unknown		1.0	27/Jun/13 10:51:23
53	CCV	34	Check Standard		1.0	27/Jun/13 11:11:33
54	CCB	35	Blank		1.0	27/Jun/13 11:32:29
55	STOP	1	Unknown		1.0	27/Jun/13 11:53:47

Chromatogram and Results

Injection Details

Injection Name	*RINSE*	Inject Number.	1
Vial Number.	*1*	User	pat
Injection Type.	*Unknown*	Sequence	JUNE2613CDE
Dilution Factor	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method.	*processmethodat*		
Injection Date/Time.	*26/06/13 17:51*		

Chromatogram



Integration Results

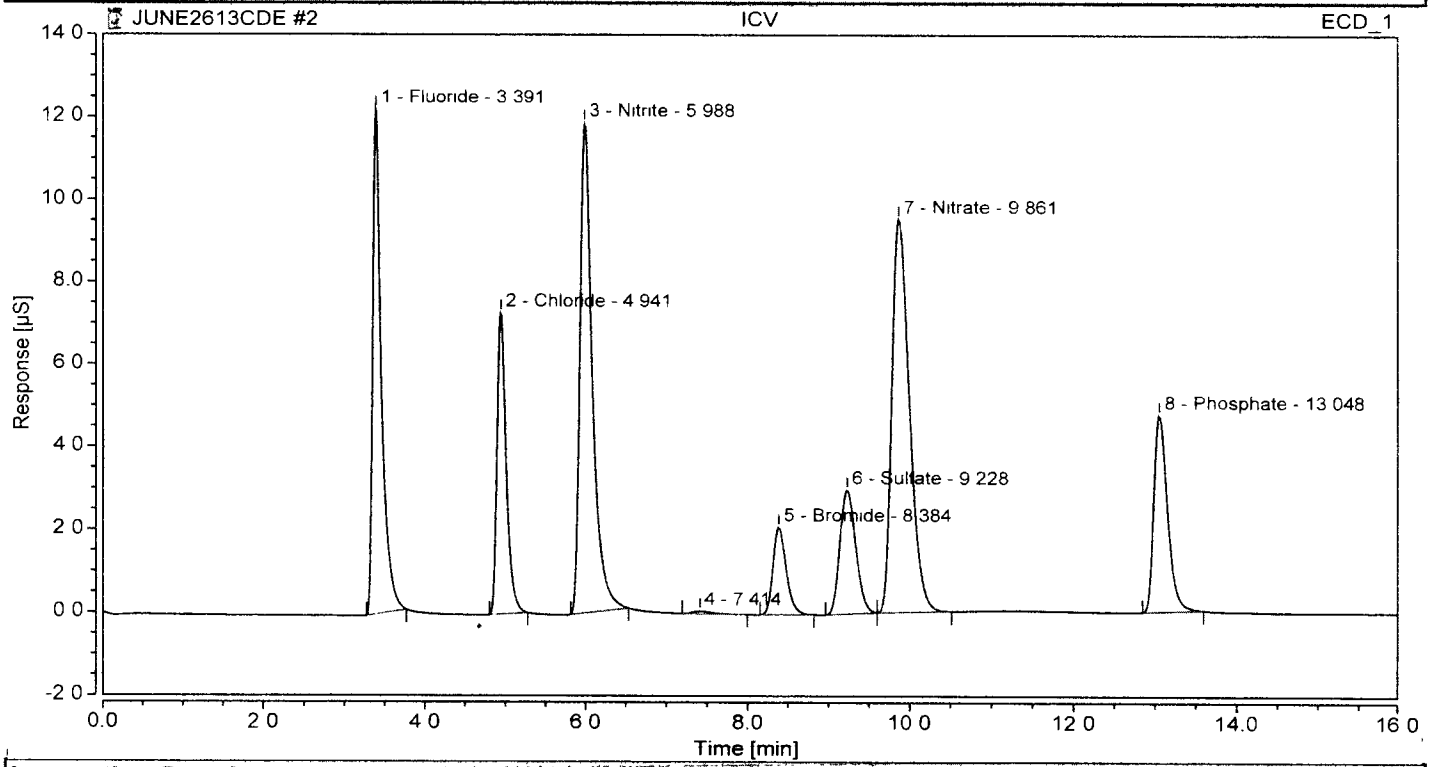
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	1.0	0.018	4.95	0.006	0.045	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		1.0	n.a.	7.43	0.020	0.065	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*ICV*	Inject Number:	2
Vial Number.	*2*	User	pat
Injection Type	*Check Standard*	Sequence	JUNE2613CDE
Dilution Factor.	*1 0*		
Instrument Method:	*INSTRMETH*		
Processing Method	*processmethodat*		
Injection Date/Time.	*26/06/13 18 10*		

Chromatogram



Integration Results

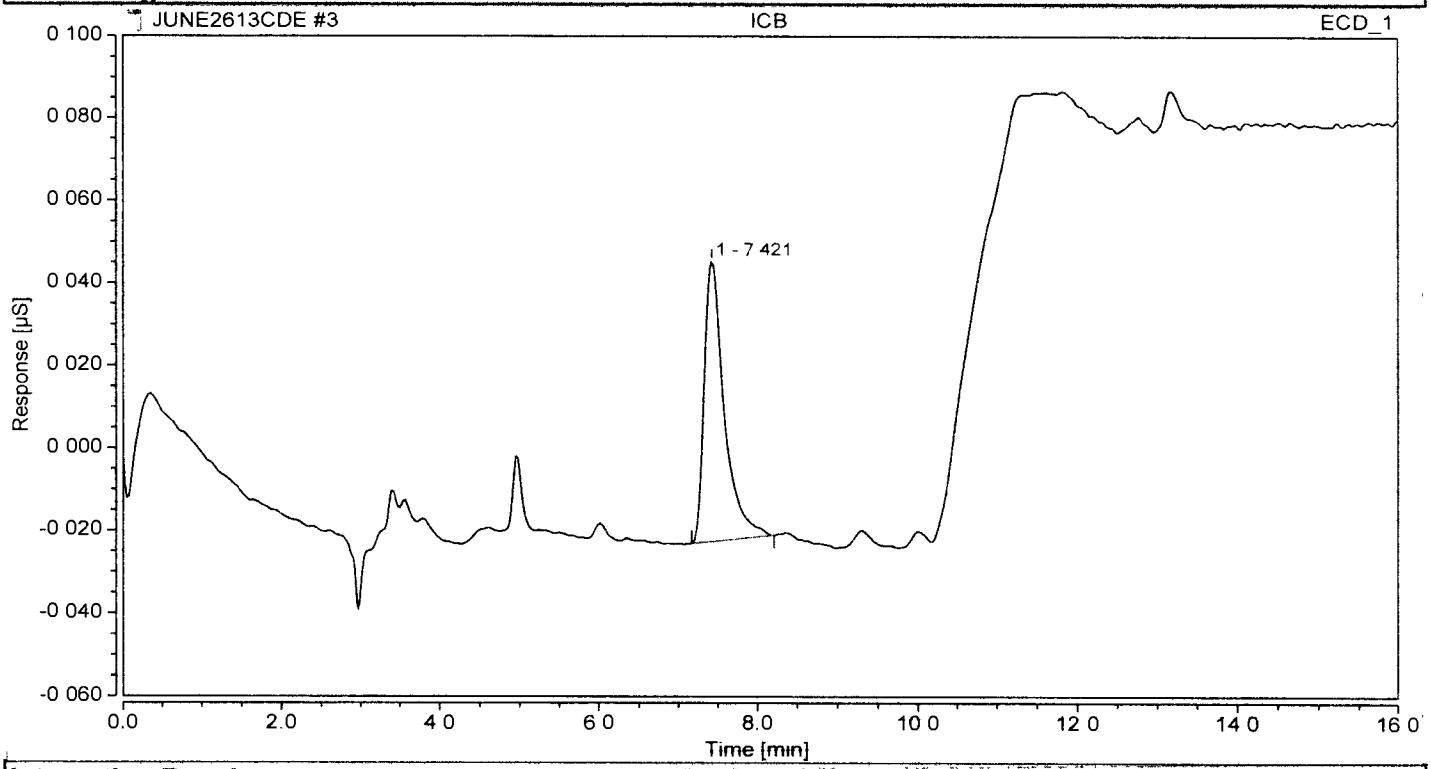
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	2.962	3.39	1.529	12.239	FALSE	-1.28
2	Chloride	1.0	2.973	4.94	0.952	7.292	FALSE	-0.91
3	Nitrite	1.0	2.937	5.99	2.141	11.870	FALSE	-2.09
4		1.0	n.a.	7.41	0.017	0.064	FALSE	n.a.
5	Bromide	1.0	2.960	8.38	0.402	2.112	FALSE	-1.33
6	Sulfate	1.0	2.965	9.23	0.673	2.993	FALSE	-1.17
7	Nitrate	1.0	2.885	9.86	2.366	9.523	FALSE	-3.82
8	Phosphate	1.0	2.992	13.05	0.934	4.762	FALSE	-0.25

Chromatogram and Results

Injection Details

Injection Name	*ICB*	Inject Number.	3
Vial Number	*3*	User.	pat
Injection Type.	*Blank*	Sequence.	JUNE2613CDE
Dilution Factor	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method.	*processmethodai*		
Injection Date/Time:	*26/06/13 18:29*		

Chromatogram



Integration Results

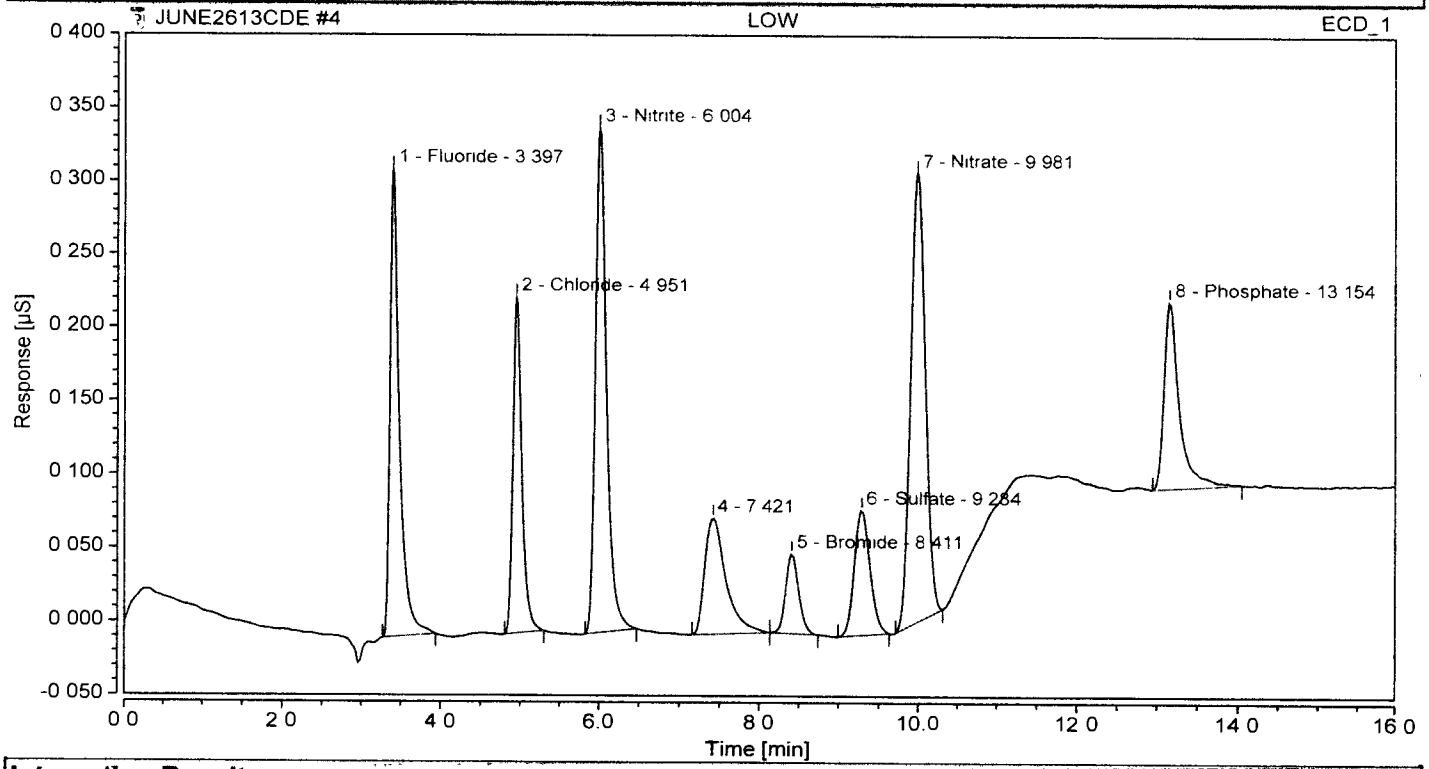
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		1.0	n.a.	7.42	0.020	0.068	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*LOW*	Inject Number.	4
Vial Number.	*4*	User	pat
Injection Type	*Unknown*	Sequence:	JUNE2613CDE
Dilution Factor	*1 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodal*		
Injection Date/Time:	*26/06/13 18:49*		

Chromatogram



Integration Results

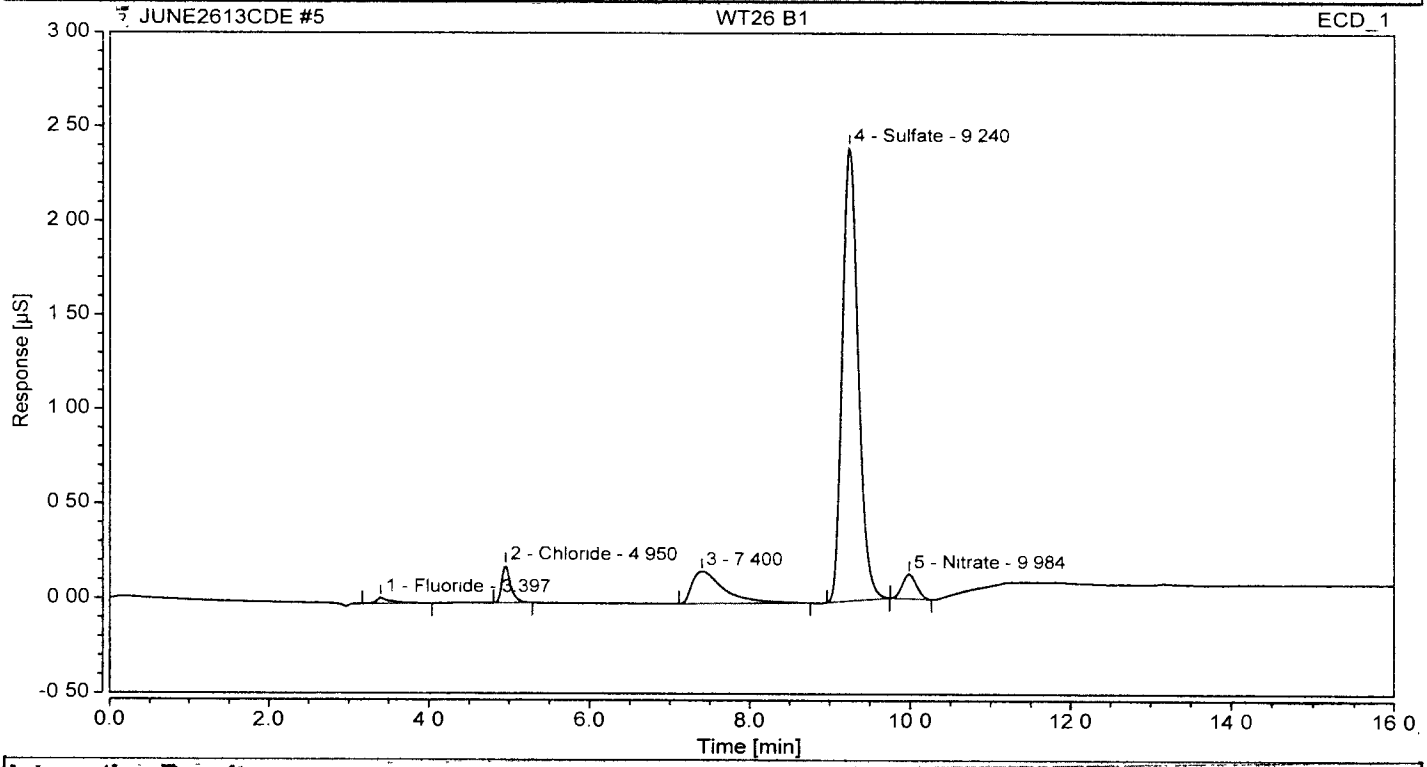
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.085	3.40	0.044	0.319	FALSE	n.a.
2	Chloride	1.0	0.093	4.95	0.030	0.229	FALSE	n.a.
3	Nitrite	1.0	0.076	6.00	0.055	0.344	FALSE	n.a.
4		1.0	n.a.	7.42	0.024	0.079	FALSE	n.a.
5	Bromide	1.0	0.076	8.41	0.010	0.054	FALSE	n.a.
6	Sulfate	1.0	0.085	9.28	0.019	0.085	FALSE	n.a.
7	Nitrate	1.0	0.080	9.98	0.065	0.306	FALSE	n.a.
8	Phosphate	1.0	0.090	13.15	0.028	0.127	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WT26 B1*	Inject Number	5
Vial Number.	*5*	User	pat
Injection Type.	*Unknown*	Sequence.	JUNE2613CDE
Dilution Factor	*2 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodal*		
Injection Date/Time.	*26/06/13 19:08*		

Chromatogram



Integration Results

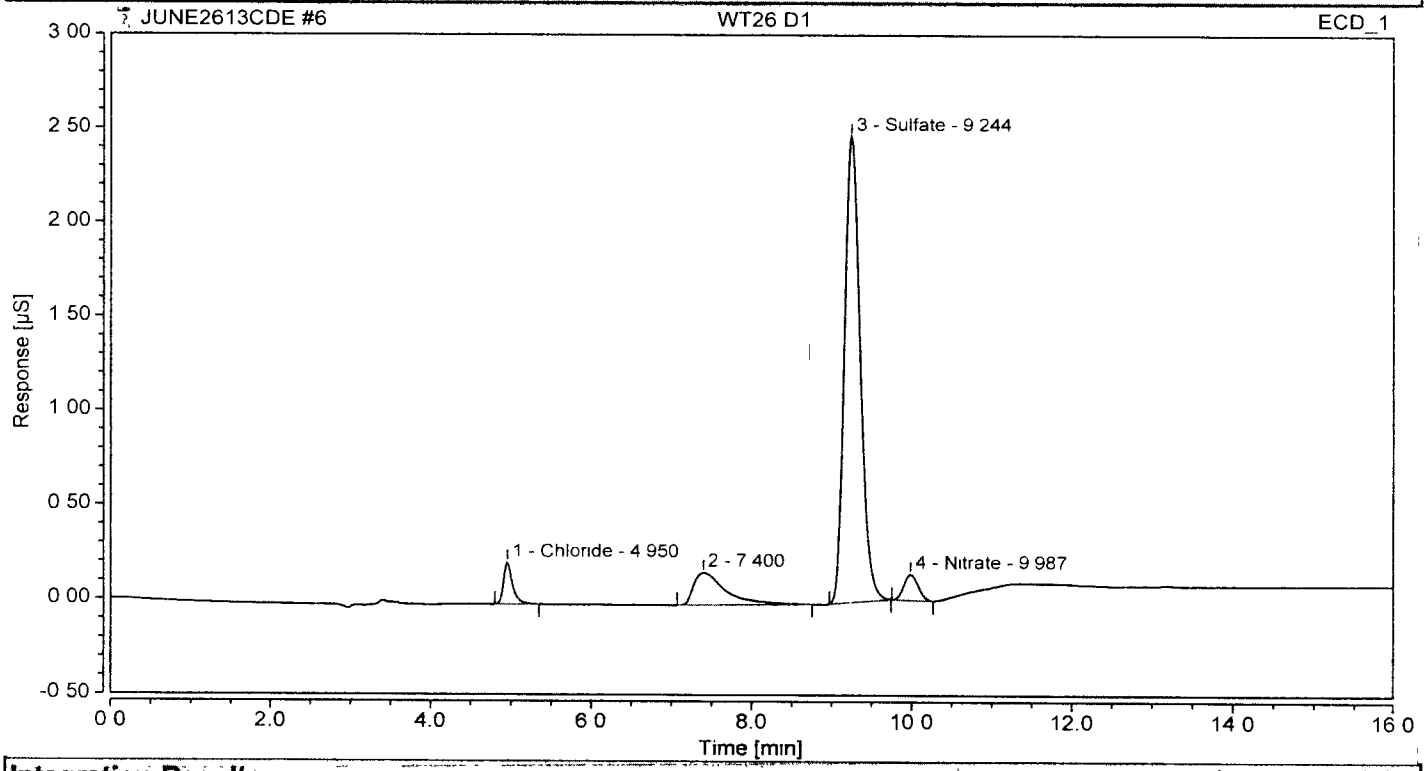
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	2.0	0.026	3.40	0.007	0.030	FALSE	n.a.
2	Chloride	2.0	0.156	4.95	0.025	0.194	FALSE	n.a.
n.a.	Nitrite	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		2.0	n.a.	7.40	0.078	0.169	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	2.0	4.826	9.24	0.548	2.400	FALSE	n.a.
5	Nitrate	2.0	0.065	9.98	0.026	0.129	FALSE	n.a.
n.a.	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WT26 D1*	Inject Number	6
Vial Number	*6*	User	pat
Injection Type	*Unknown*	Sequence	JUNE2613CDE
Dilution Factor:	*2 0*		
Instrument Method	*INSTRMETH*		
Processing Method.	*processmethodal*		
Injection Date/Time.	*26/06/13 19:27*		

Chromatogram



Integration Results

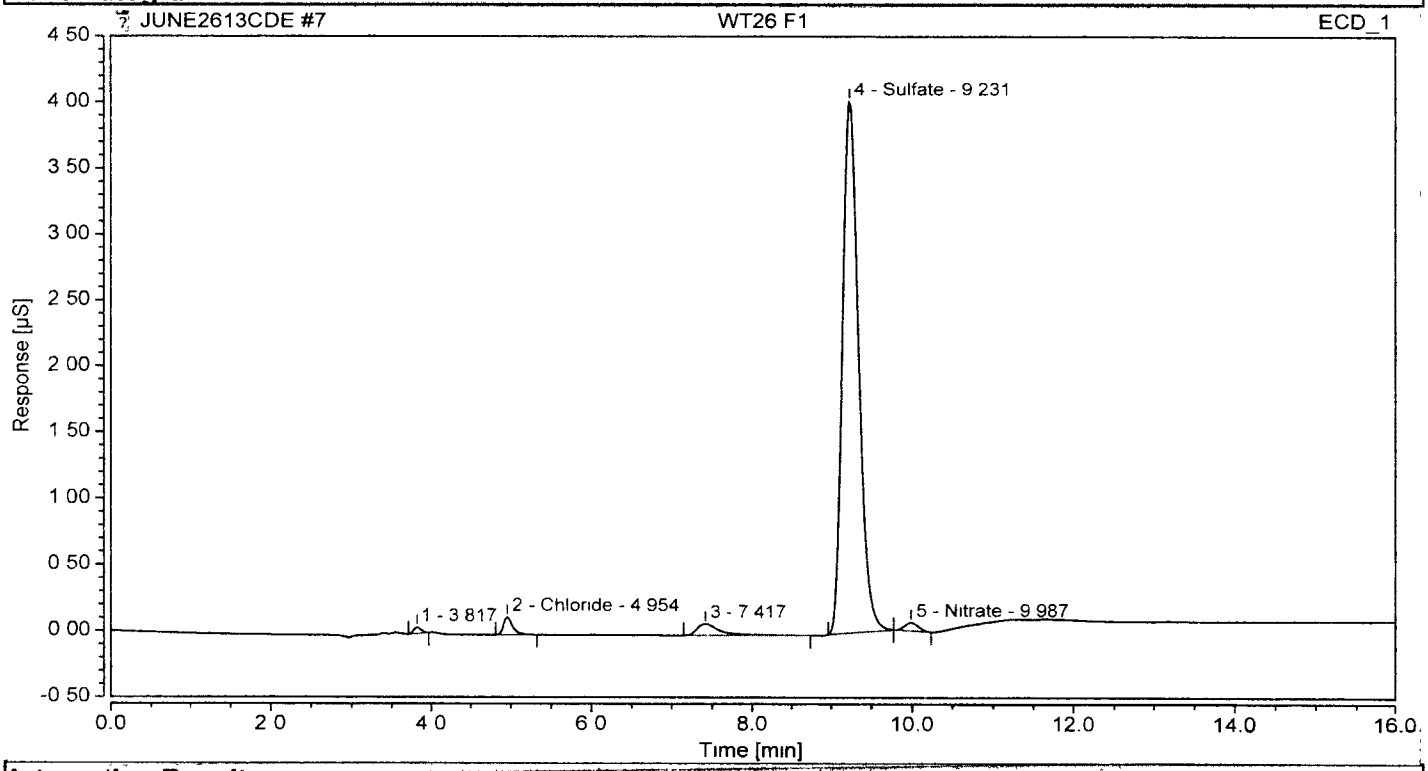
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	2.0	0.178	4.95	0.028	0.218	FALSE	n.a.
n.a.	Nitrite	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		2.0	n.a.	7.40	0.079	0.170	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	2.0	4.968	9.24	0.564	2.471	FALSE	n.a.
4	Nitrate	2.0	0.069	9.99	0.028	0.137	FALSE	n.a.
n.a.	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WT26 F1*	Inject Number.	7
Vial Number:	*7*	User.	pat
Injection Type	*Unknown*	Sequence:	JUNE2613CDE
Dilution Factor	*5.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time.	*26/06/13 19:47*		

Chromatogram



Integration Results

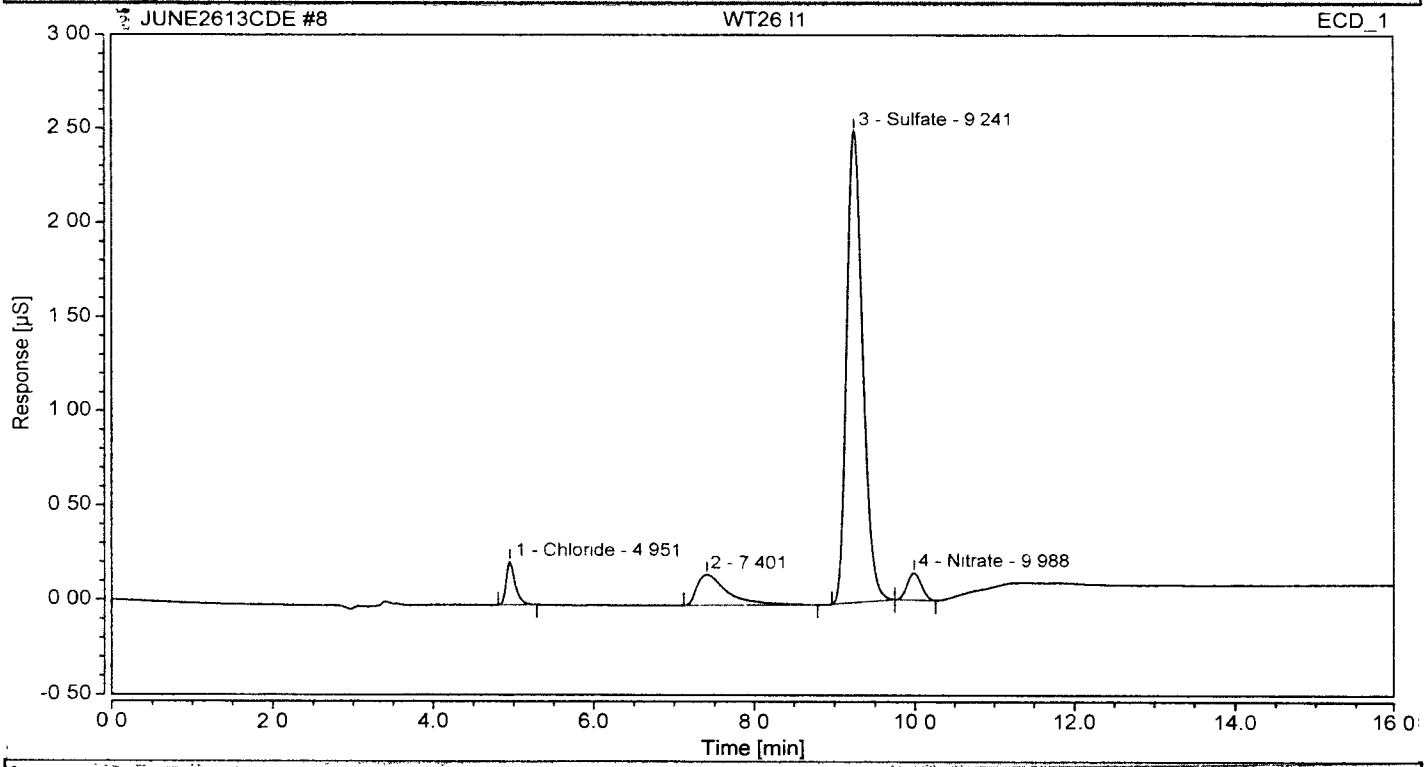
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a	Fluoride	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		5.0	n.a.	3.82	0.005	0.046	FALSE	n.a.
2	Chloride	5.0	0.273	4.95	0.017	0.133	FALSE	n.a.
n.a.	Nitrite	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		5.0	n.a.	7.42	0.028	0.085	FALSE	n.a.
n.a	Bromide	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	5.0	20.514	9.23	0.931	4.020	FALSE	n.a.
5	Nitrate	5.0	0.073	9.99	0.012	0.061	FALSE	n.a.
n.a.	Phosphate	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WT26 I1*	Inject Number.	8
Vial Number	*8*	User	pat
Injection Type	*Unknown*	Sequence.	JUNE2613CDE
Dilution Factor	*2 0*		
Instrument Method:	*INSTRMETH*		
Processing Method.	*processmethodal*		
Injection Date/Time:	*26/06/13 20:07*		

Chromatogram



Integration Results

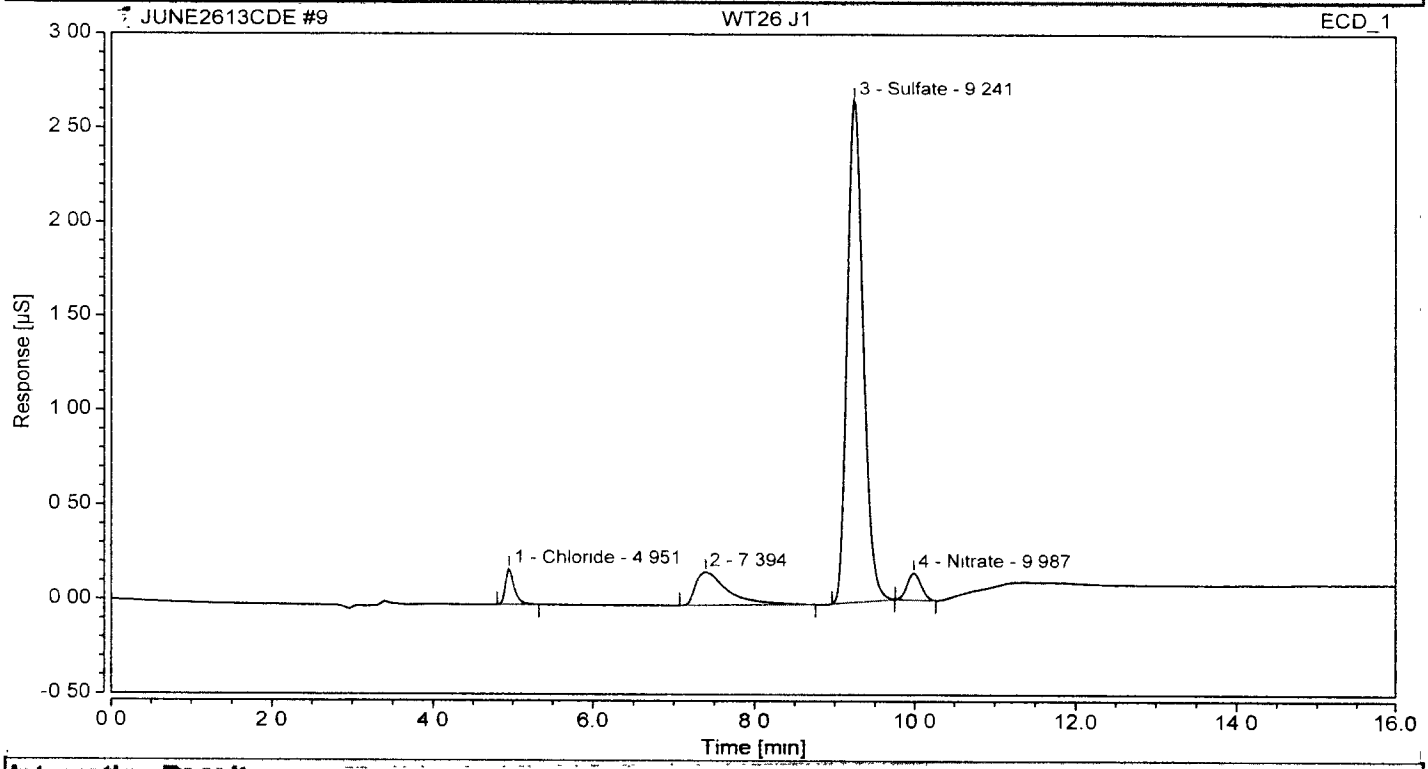
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	2.0	0.181	4.95	0.029	0.225	FALSE	n.a.
n.a.	Nitrite	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		2.0	n.a.	7.40	0.071	0.161	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	2.0	5.019	9.24	0.570	2.499	FALSE	n.a.
4	Nitrate	2.0	0.072	9.99	0.030	0.143	FALSE	n.a.
n.a.	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WT26 J1*	Inject Number:	9
Vial Number.	*9*	User.	pat
Injection Type	*Unknown*	Sequence.	JUNE2613CDE
Dilution Factor	*2 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodal*		
Injection Date/Time.	*26/06/13 20:26*		

Chromatogram



Integration Results

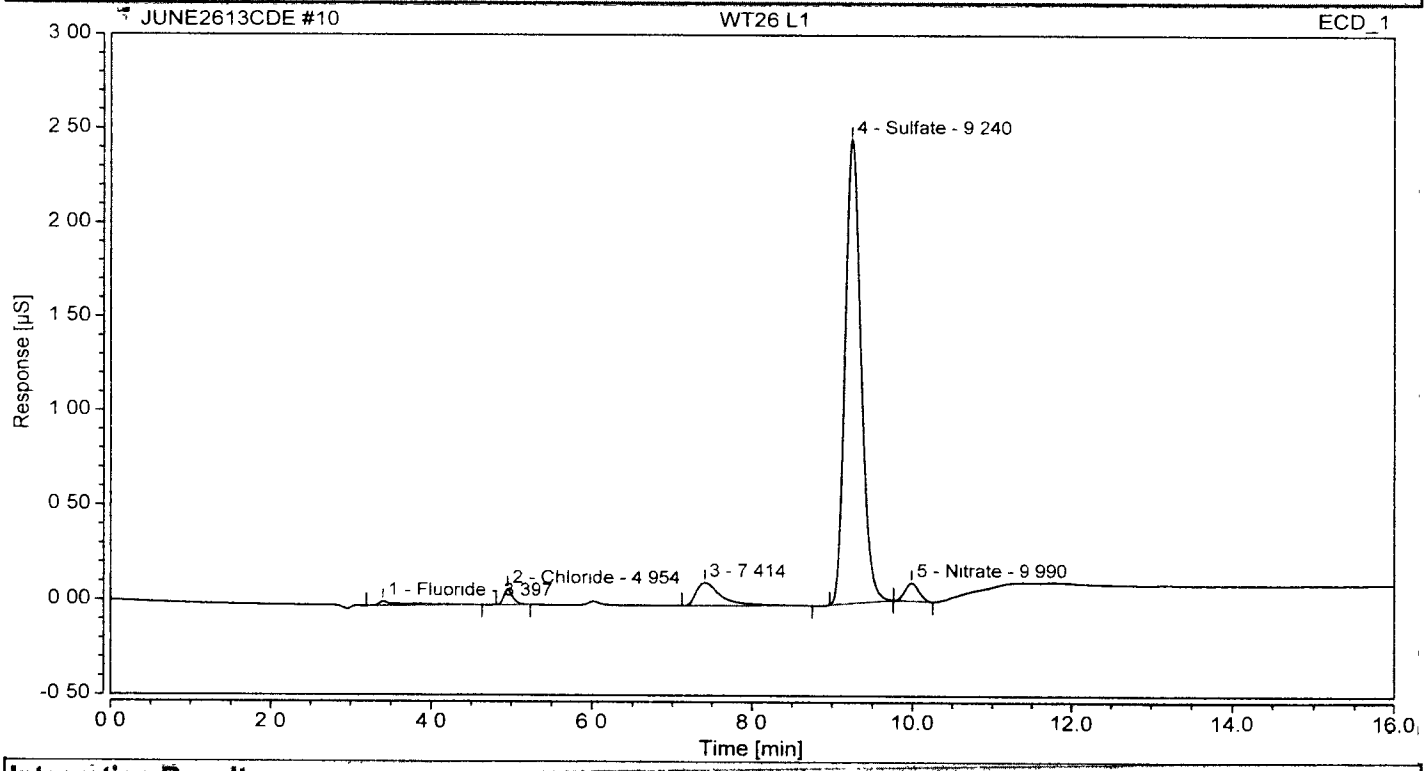
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	2.0	0.153	4.95	0.025	0.187	FALSE	n.a.
n.a.	Nitrite	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		2.0	n.a.	7.39	0.081	0.175	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	2.0	5.364	9.24	0.609	2.660	FALSE	n.a.
4	Nitrate	2.0	0.071	9.99	0.029	0.142	FALSE	n.a.
n.a.	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WT26 L1*	Inject Number:	10
Vial Number	*10*	User:	pat
Injection Type	*Unknown*	Sequence:	JUNE2613CDE
Dilution Factor	*5 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodat*		
Injection Date/Time.	*26/06/13 20.46*		

Chromatogram



Integration Results

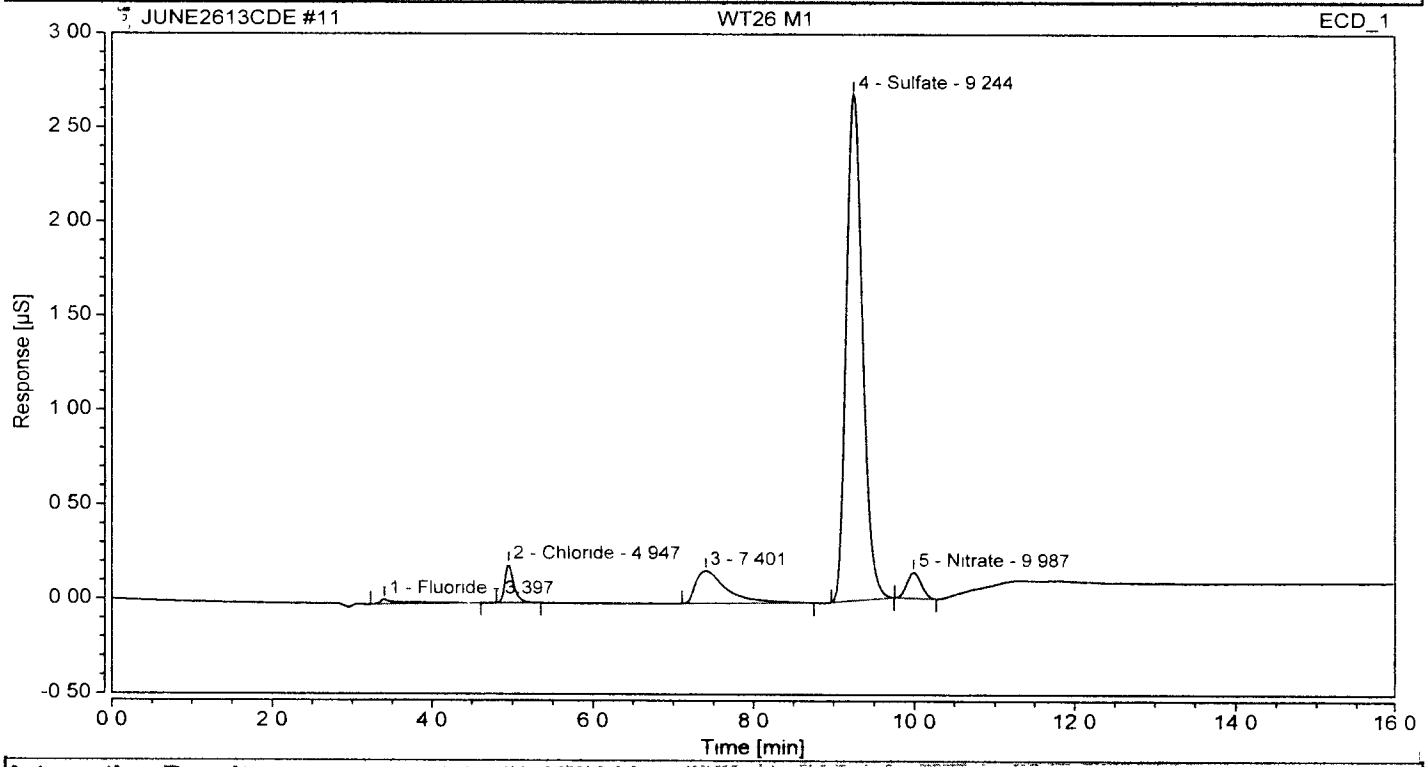
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	5.0	0.080	3.40	0.008	0.022	FALSE	n.a.
2	Chloride	5.0	0.162	4.95	0.010	0.080	FALSE	n.a.
n.a.	Nitrite	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		5.0	n.a.	7.41	0.044	0.120	FALSE	n.a.
n.a.	Bromide	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	5.0	12.341	9.24	0.560	2.456	FALSE	n.a.
5	Nitrate	5.0	0.117	9.99	0.019	0.095	FALSE	n.a.
n.a.	Phosphate	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WT26 M1*	Inject Number.	11
Vial Number	*11*	User:	pat
Injection Type	*Unknown*	Sequence	JUNE2613CDE
Dilution Factor	*2 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodat*		
Injection Date/Time.	*26/06/13 21:06*		

Chromatogram



Integration Results

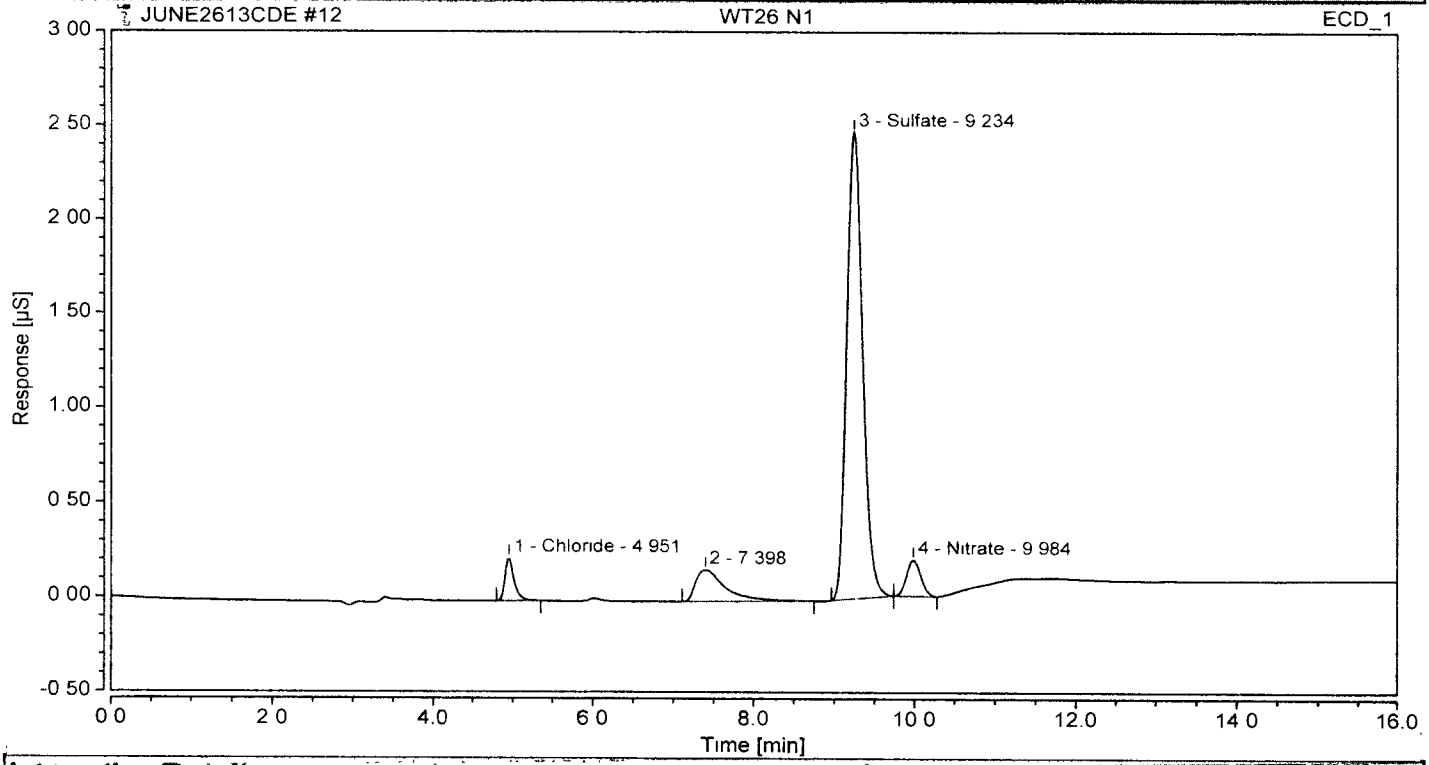
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	2.0	0.031	3.40	0.008	0.024	FALSE	n.a.
2	Chloride	2.0	0.164	4.95	0.026	0.202	FALSE	n.a.
n.a.	Nitrite	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		2.0	n.a.	7.40	0.078	0.173	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	2.0	5.413	9.24	0.614	2.684	FALSE	n.a.
5	Nitrate	2.0	0.069	9.99	0.028	0.138	FALSE	n.a.
n.a.	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WT26 N1*	Inject Number:	12
Vial Number	*12*	User	pat
Injection Type	*Unknown*	Sequence.	JUNE2613CDE
Dilution Factor	*2 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodat*		
Injection Date/Time:	*26/06/13 21:26*		

Chromatogram



Integration Results

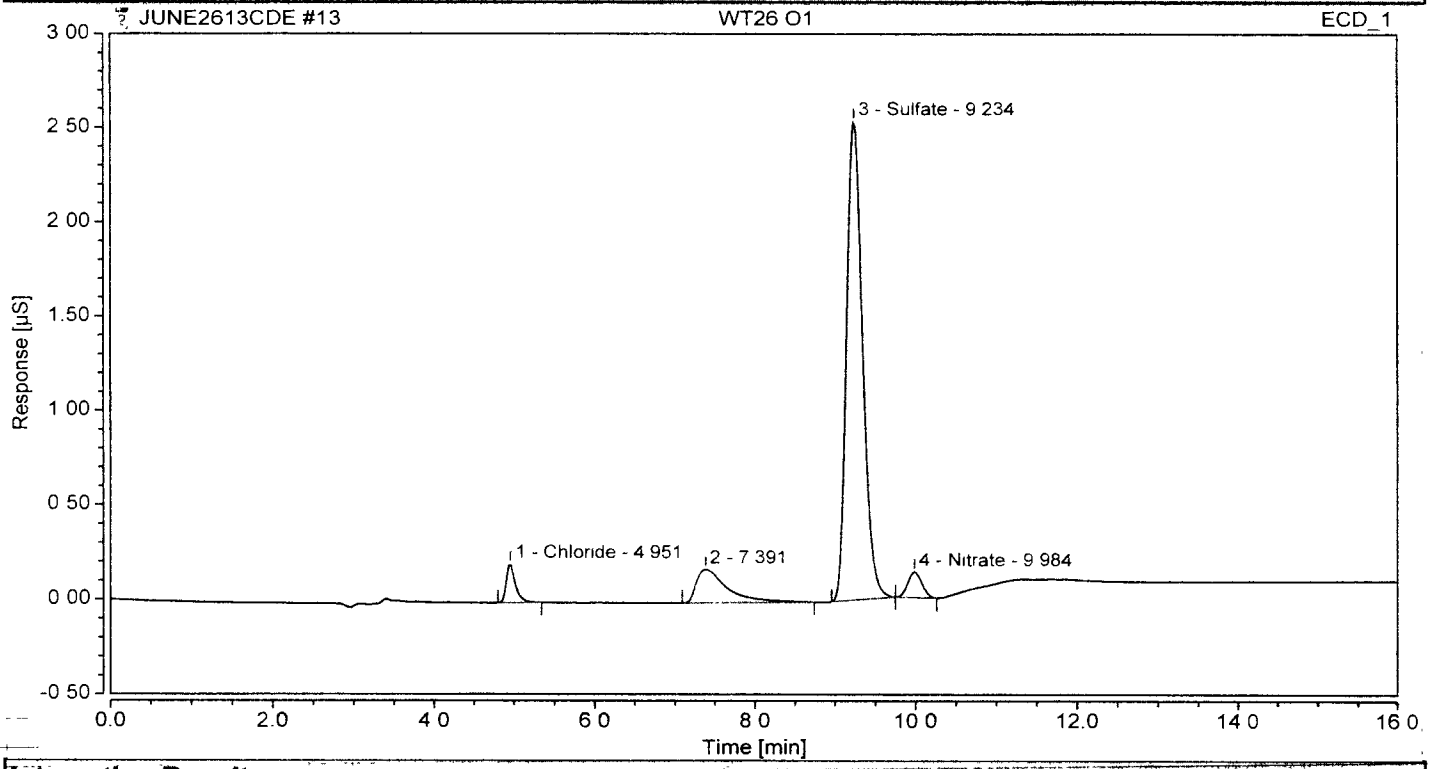
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	2.0	0.185	4.95	0.030	0.226	FALSE	n.a.
n.a.	Nitrite	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		2.0	n.a.	7.40	0.071	0.166	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	2.0	4.966	9.23	0.564	2.473	FALSE	n.a.
4	Nitrate	2.0	0.096	9.98	0.039	0.190	FALSE	n.a.
n.a	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WT26 O1*	Inject Number	13
Vial Number	*13*	User	pat
Injection Type	*Unknown*	Sequence.	JUNE2613CDE
Dilution Factor	*2 0*		
Instrument Method:	*INSTRMETH*		
Processing Method.	*processmethodai*		
Injection Date/Time:	*26/06/13 21:46*		

Chromatogram



Integration Results

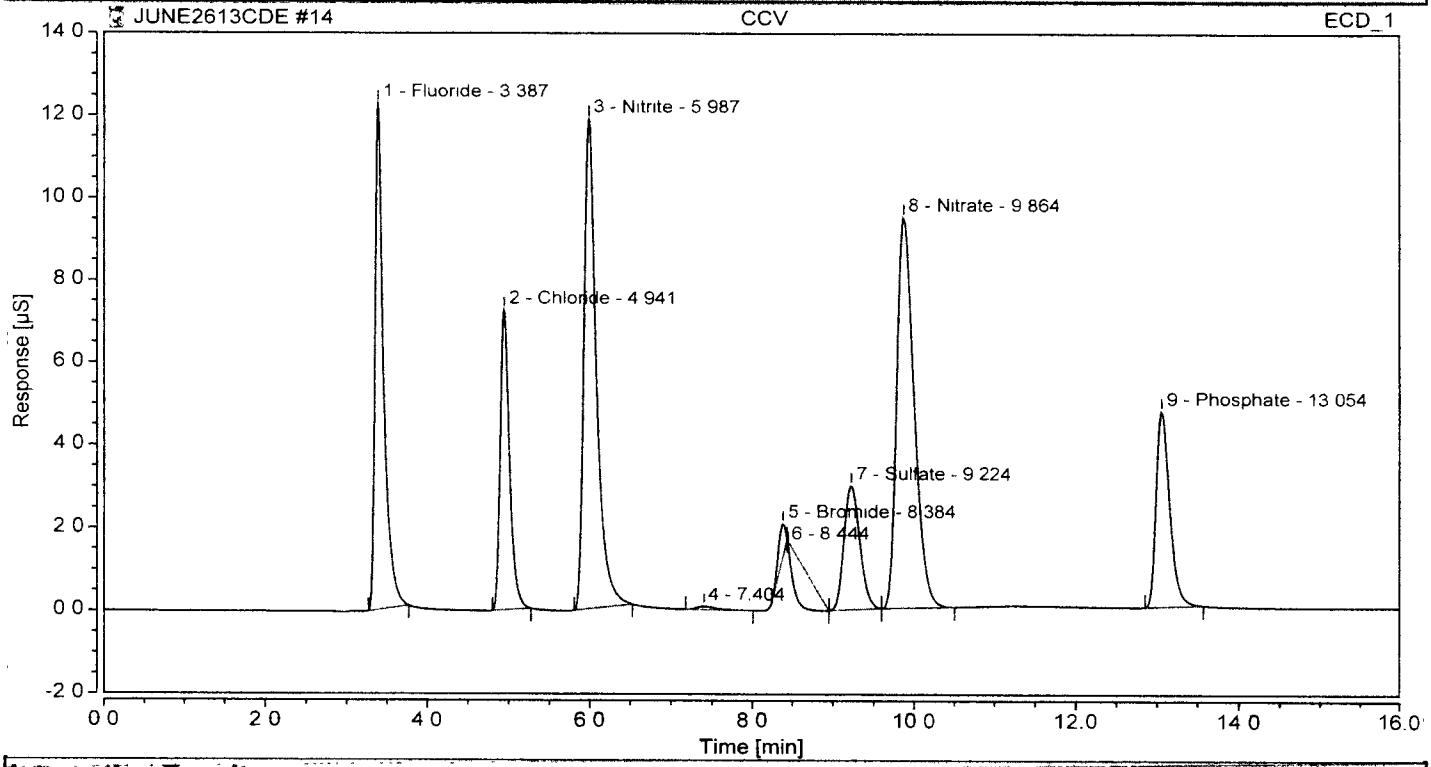
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	2.0	0.166	4.95	0.027	0.203	FALSE	n.a
n.a.	Nitrite	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		2.0	n.a.	7.39	0.079	0.176	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	2.0	5.103	9.23	0.579	2.536	FALSE	n.a.
4	Nitrate	2.0	0.068	9.98	0.028	0.135	FALSE	n.a.
n.a.	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*CCV*	Inject Number.	14
Vial Number	*2*	User	pat
Injection Type	*Check Standard*	Sequence	JUNE2613CDE
Dilution Factor	*1.0*		
Instrument Method	*INSTRMETH*		
Processing Method.	*processmethodat*		
Injection Date/Time	*26/06/13 22.07*		

Chromatogram



Integration Results

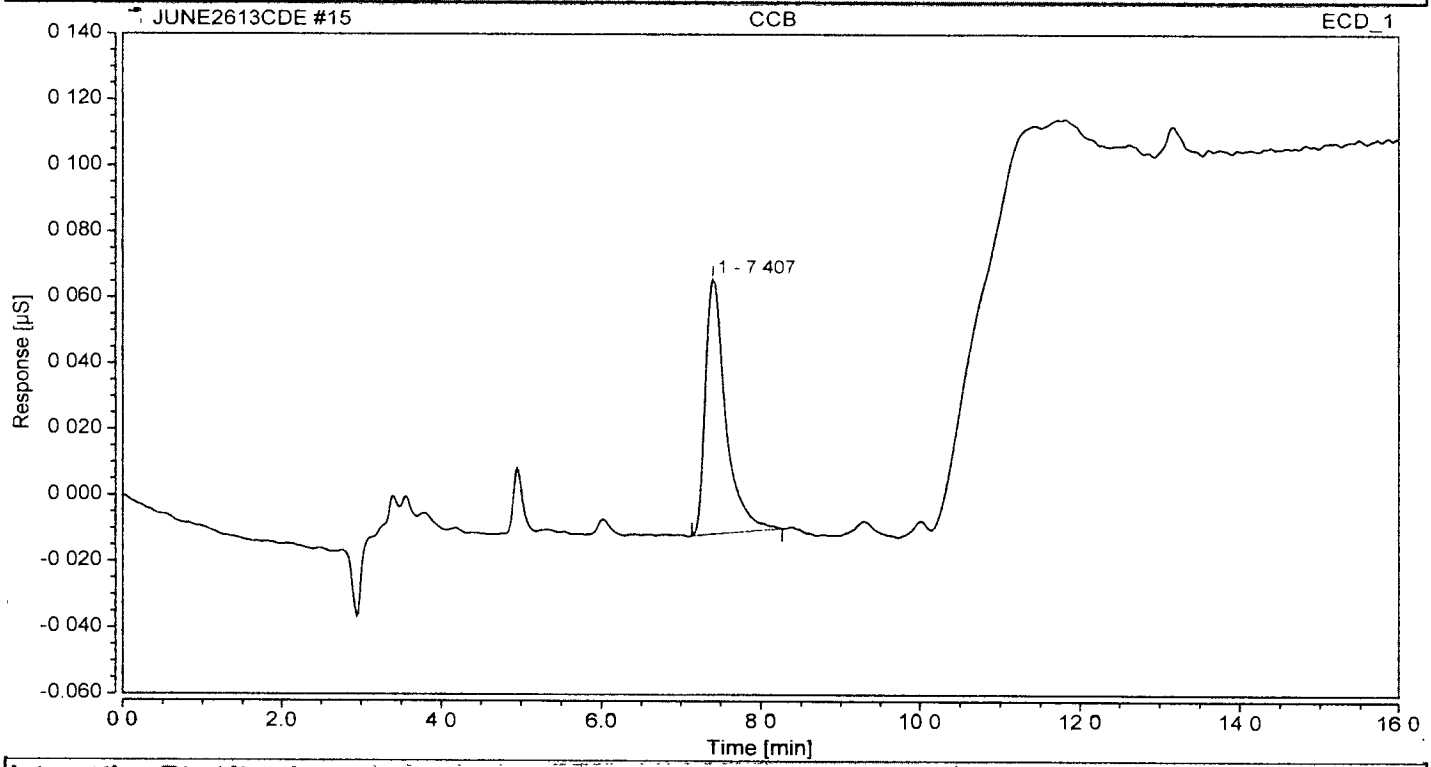
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	2.956	3.39	1.526	12.274	FALSE	-1.46
2	Chloride	1.0	2.968	4.94	0.951	7.254	FALSE	-1.06
3	Nitrite	1.0	2.931	5.99	2.136	11.867	FALSE	-2.31
4		1.0	n.a.	7.40	0.020	0.074	FALSE	n.a.
5	Bromide	1.0	0.622	8.38	0.085	0.788	FALSE	-79.26
6		1.0	n.a.	8.44	0.313	0.108	FALSE	n.a.
7	Sulfate	1.0	2.962	9.22	0.672	2.987	FALSE	-1.25
8	Nitrate	1.0	2.885	9.86	2.366	9.472	FALSE	-3.83
9	Phosphate	1.0	2.955	13.05	0.922	4.721	FALSE	-1.51

Chromatogram and Results

Injection Details

Injection Name	*CCB*	Inject Number:	15
Vial Number	*3*	User:	pat
Injection Type.	*Blank*	Sequence	JUNE2613CDE
Dilution Factor	*1 0*		
Instrument Method.	*INSTRMETH*		
Processing Method	*processmethodat*		
Injection Date/Time:	*26/06/13 22:27*		

Chromatogram



Integration Results

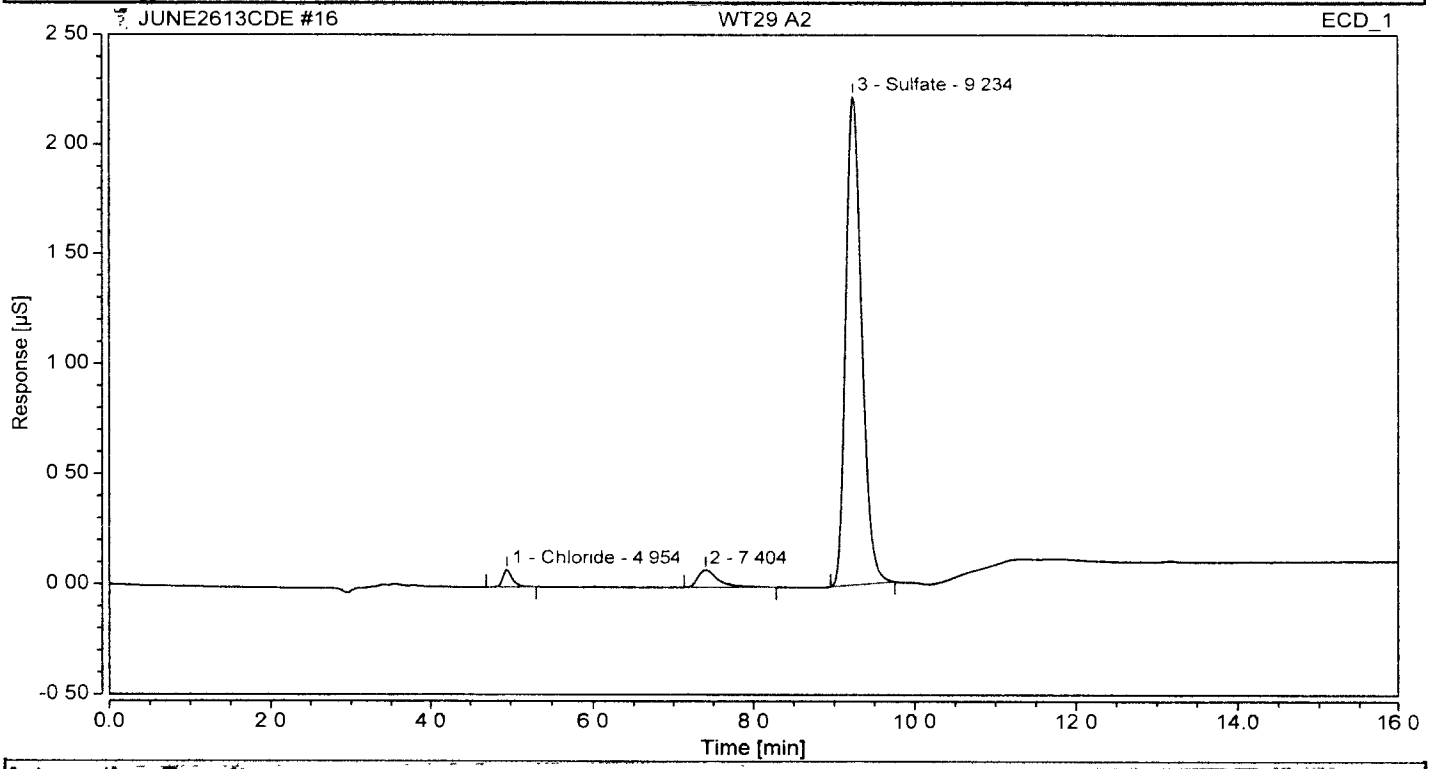
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		1.0	n.a.	7.41	0.022	0.077	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WT29 A2*	Inject Number:	16
Vial Number	*14*	User:	pat
Injection Type	*Unknown*	Sequence:	JUNE2613CDE
Dilution Factor	*50.0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodal*		
Injection Date/Time	*26/06/13 22 48*		

Chromatogram



Integration Results

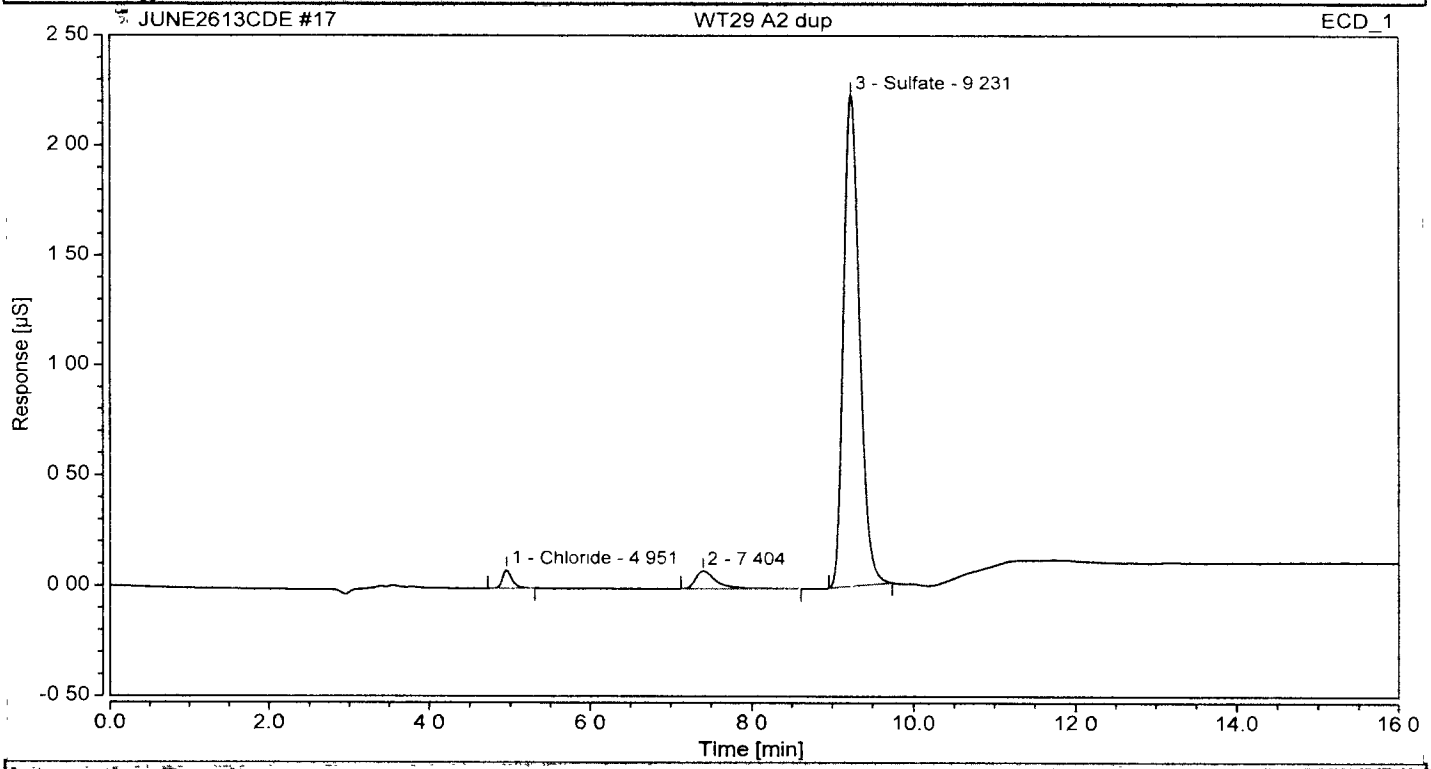
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	50.0	1.646	4.95	0.011	0.079	FALSE	n.a.
n.a.	Nitrite	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		50.0	n.a.	7.40	0.023	0.079	FALSE	n.a.
n.a.	Bromide	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	50.0	111.608	9.23	0.507	2.222	FALSE	n.a.
n.a.	Nitrate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WT29 A2 dup*	Inject Number:	17
Vial Number	*15*	User	pat
Injection Type	*Unknown*	Sequence.	JUNE2613CDE
Dilution Factor.	*50 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodat*		
Injection Date/Time.	*26/06/13 23 08*		

Chromatogram



Integration Results

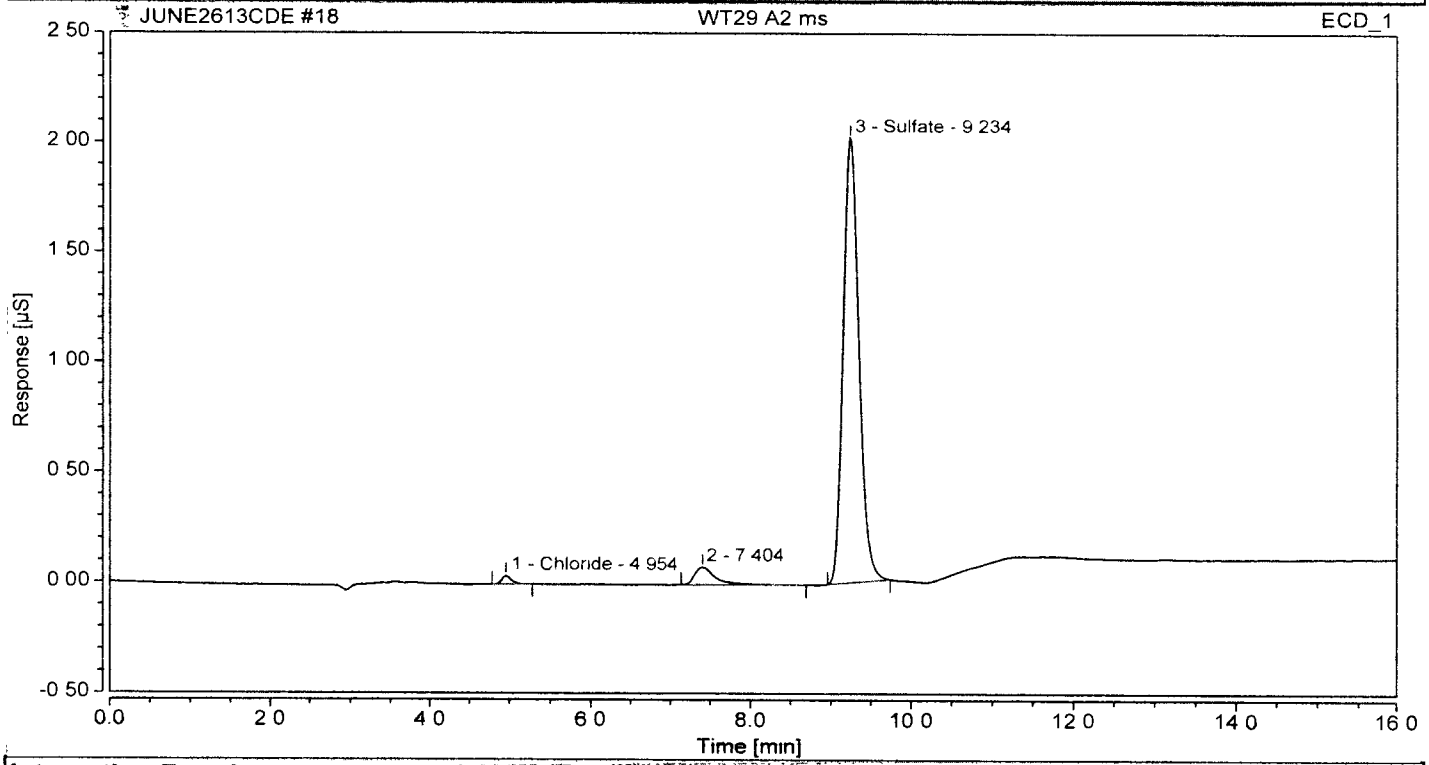
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	50.0	1.723	4.95	0.011	0.083	FALSE	n.a
n.a.	Nitrite	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		50.0	n.a.	7.40	0.024	0.080	FALSE	n.a.
n.a.	Bromide	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	50.0	111.839	9.23	0.508	2.230	FALSE	n.a.
n.a.	Nitrate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WT29 A2 ms*	Inject Number	18
Vial Number.	*16*	User	pat
Injection Type.	*Unknown*	Sequence.	JUNE2613CDE
Dilution Factor	*100.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time.	*26/06/13 23.29*		

Chromatogram



Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	100.0	1.580	4.95	0.005	0.038	FALSE	n.a.
n.a	Nitrite	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		100.0	n.a.	7.40	0.024	0.079	FALSE	n.a.
n.a.	Bromide	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	100.0	202.558	9.23	0.460	2.019	FALSE	n.a.
n.a.	Nitrate	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

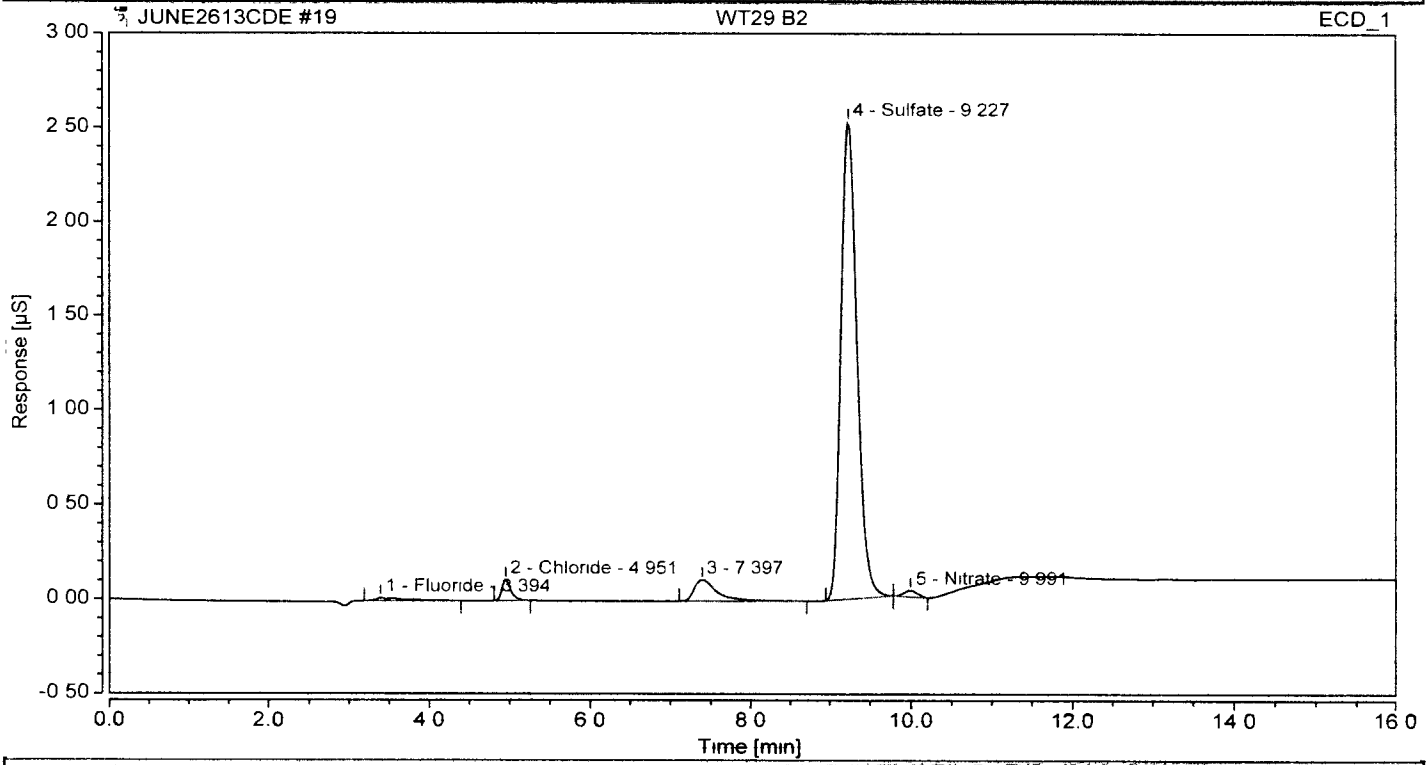
WB7 : 0127

Chromatogram and Results

Injection Details

Injection Name.	*WT29 B2*	Inject Number:	19
Vial Number.	*17*	User.	pat
Injection Type	*Unknown*	Sequence:	JUNE2613CDE
Dilution Factor.	*10 0*		
Instrument Method	*INSTRMETH*		
Processing Method.	*processmethodat*		
Injection Date/Time.	*26/06/13 23:50*		

Chromatogram



Integration Results

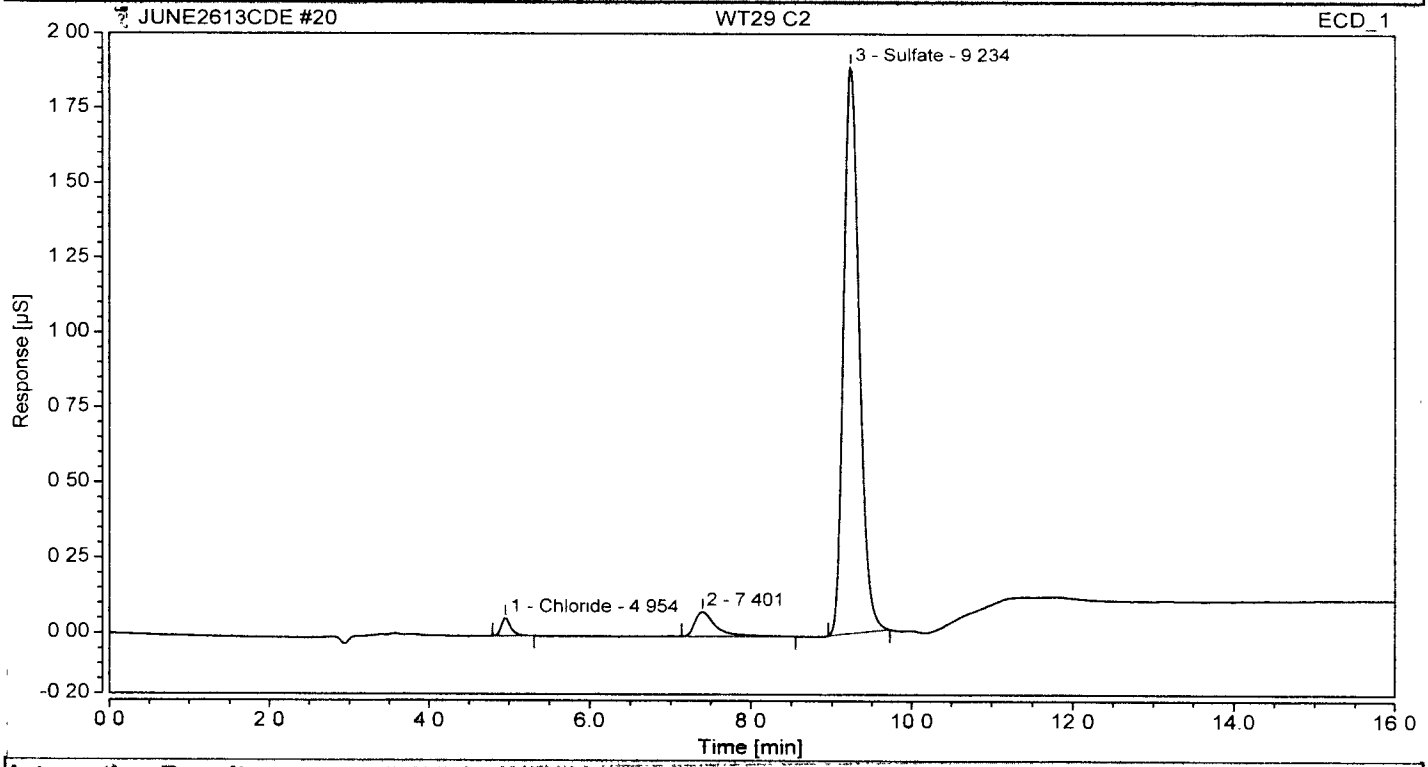
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	10.0	0.137	3.39	0.007	0.017	FALSE	n.a.
2	Chloride	10.0	0.447	4.95	0.014	0.110	FALSE	n.a.
n.a.	Nitrite	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a
3		10.0	n.a.	7.40	0.038	0.113	FALSE	n.a.
n.a.	Bromide	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	10.0	25.472	9.23	0.578	2.527	FALSE	n.a.
5	Nitrate	10.0	0.077	9.99	0.006	0.033	FALSE	n.a.
n.a.	Phosphate	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WT29 C2*	Inject Number:	20
Vial Number	*18*	User	pat
Injection Type.	*Unknown*	Sequence.	JUNE2613CDE
Dilution Factor.	*50 0*		
Instrument Method	*INSTRMETH*		
Processing Method.	*processmethodal*		
Injection Date/Time:	*27/06/13 00:10*		

Chromatogram



Integration Results

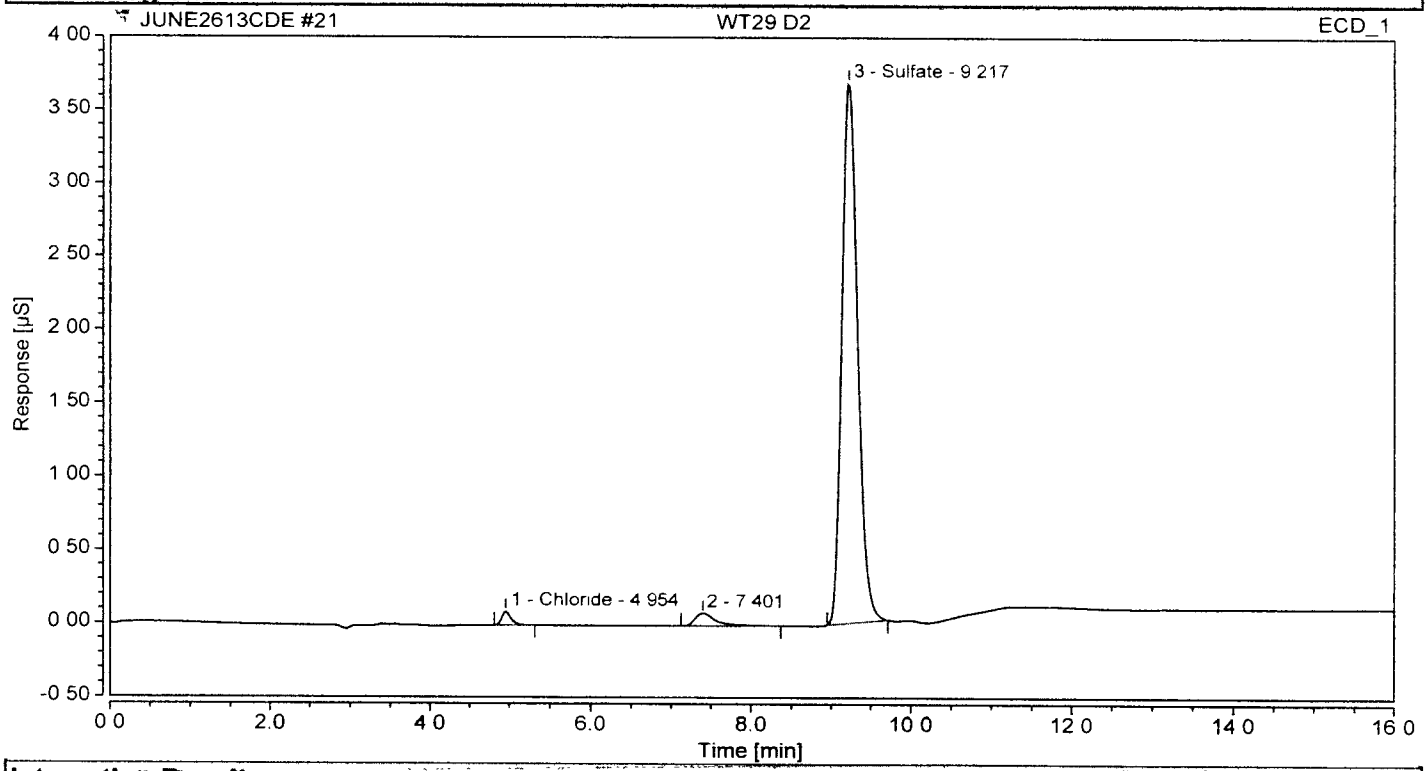
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	50.0	1.222	4.95	0.008	0.059	FALSE	n.a.
n.a.	Nitrite	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		50.0	n.a.	7.40	0.025	0.081	FALSE	n.a.
n.a.	Bromide	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	50.0	94.272	9.23	0.428	1.887	FALSE	n.a.
n.a.	Nitrate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a	Phosphate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WT29 D2*	Inject Number:	21
Vial Number	*19*	User	pat
Injection Type	*Unknown*	Sequence	JUNE2613CDE
Dilution Factor	*20.0*		
Instrument Method.	*INSTRMETH*		
Processing Method	*processmethodal*		
Injection Date/Time.	*27/06/13 00:31*		

Chromatogram



Integration Results

No	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	20.0	0.763	4.95	0.012	0.093	FALSE	n.a.
n.a.	Nitrite	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		20.0	n.a.	7.40	0.025	0.085	FALSE	n.a.
n.a.	Bromide	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	20.0	74.790	9.22	0.849	3.687	FALSE	n.a.
n.a.	Nitrate	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

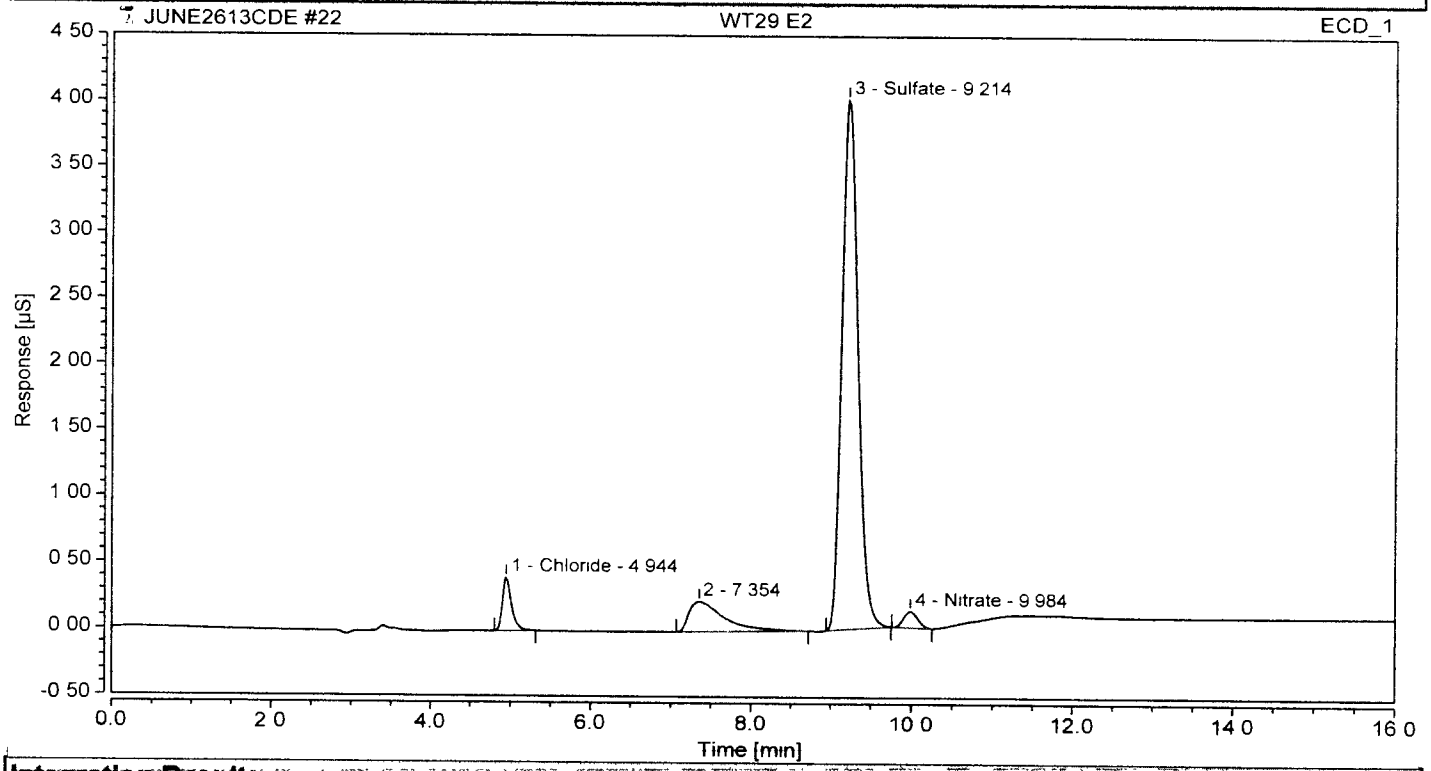
WOT : 61218

Chromatogram and Results

Injection Details

Injection Name.	*WT29 E2*	Inject Number:	22
Vial Number.	*20*	User:	pat
Injection Type	*Unknown*	Sequence:	JUNE2613CDE
Dilution Factor.	*2 0*		
Instrument Method:	*INSTRMETH*		
Processing Method.	*processmethodal*		
Injection Date/Time.	*27/06/13 00.50*		

Chromatogram



Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	2.0	0.325	4.94	0.052	0.400	FALSE	n.a.
n.a.	Nitrite	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		2.0	n.a.	7.35	0.114	0.225	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	2.0	8.167	9.21	0.927	4.008	FALSE	n.a.
4	Nitrate	2.0	0.060	9.98	0.025	0.122	FALSE	n.a.
n.a.	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

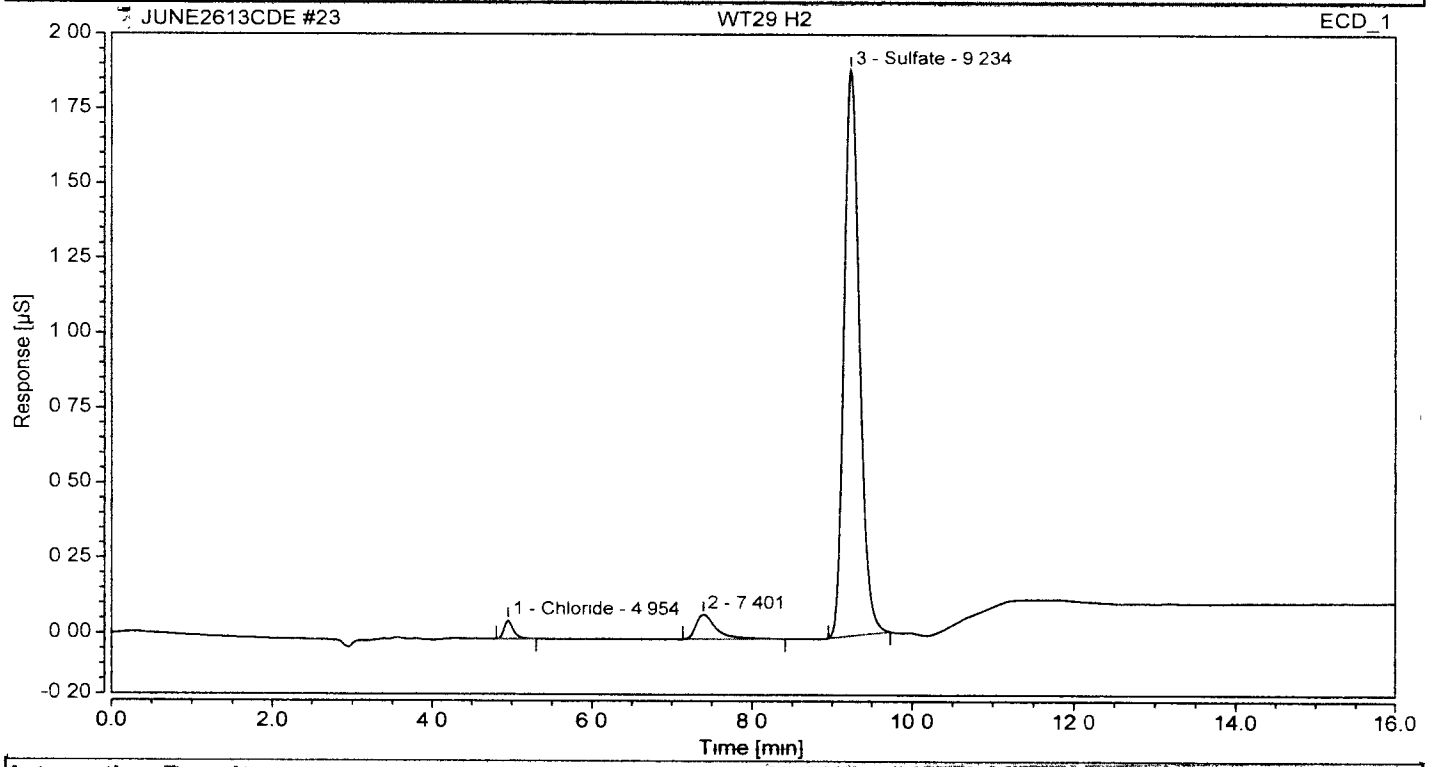
WT: 0124

Chromatogram and Results

Injection Details

Injection Name.	*WT29 H2*	Inject Number:	23
Vial Number	*21*	User:	pat
Injection Type	*Unknown*	Sequence	JUNE2613CDE
Dilution Factor.	*50 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodal*		
Injection Date/Time	*27/06/13 01 10*		

Chromatogram



Integration Results

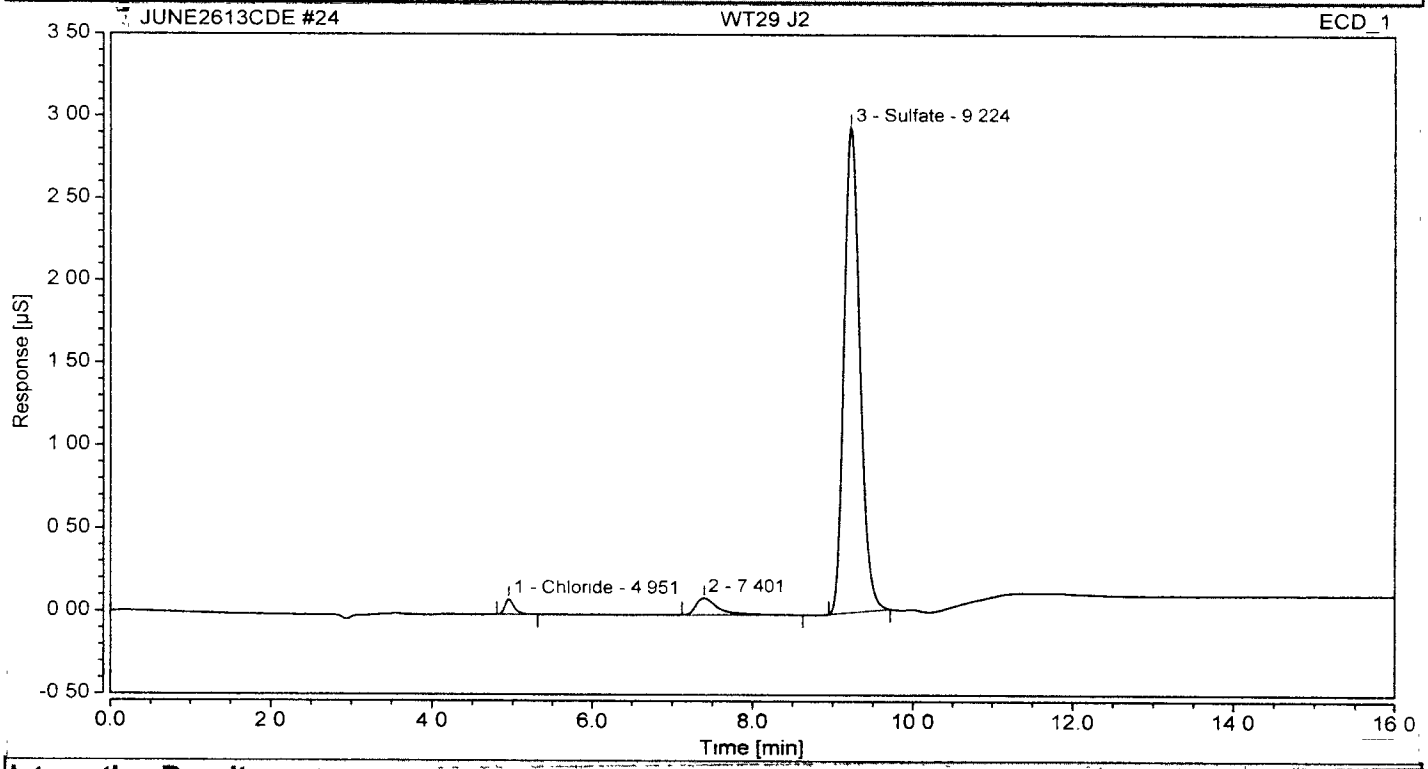
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a	Fluoride	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	50.0	1.240	4.95	0.008	0.060	FALSE	n.a.
n.a.	Nitrite	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		50.0	n.a.	7.40	0.023	0.080	FALSE	n.a.
n.a.	Bromide	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	50.0	94.195	9.23	0.428	1.887	FALSE	n.a.
n.a.	Nitrate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WT29 J2*	Inject Number.	24
Vial Number	*22*	User	pat
Injection Type	*Unknown*	Sequence.	JUNE2613CDE
Dilution Factor	*20 0*		
Instrument Method	*INSTRMETH*		
Processing Method.	*processmethodal*		
Injection Date/Time.	*27/06/13 01:29*		

Chromatogram



Integration Results

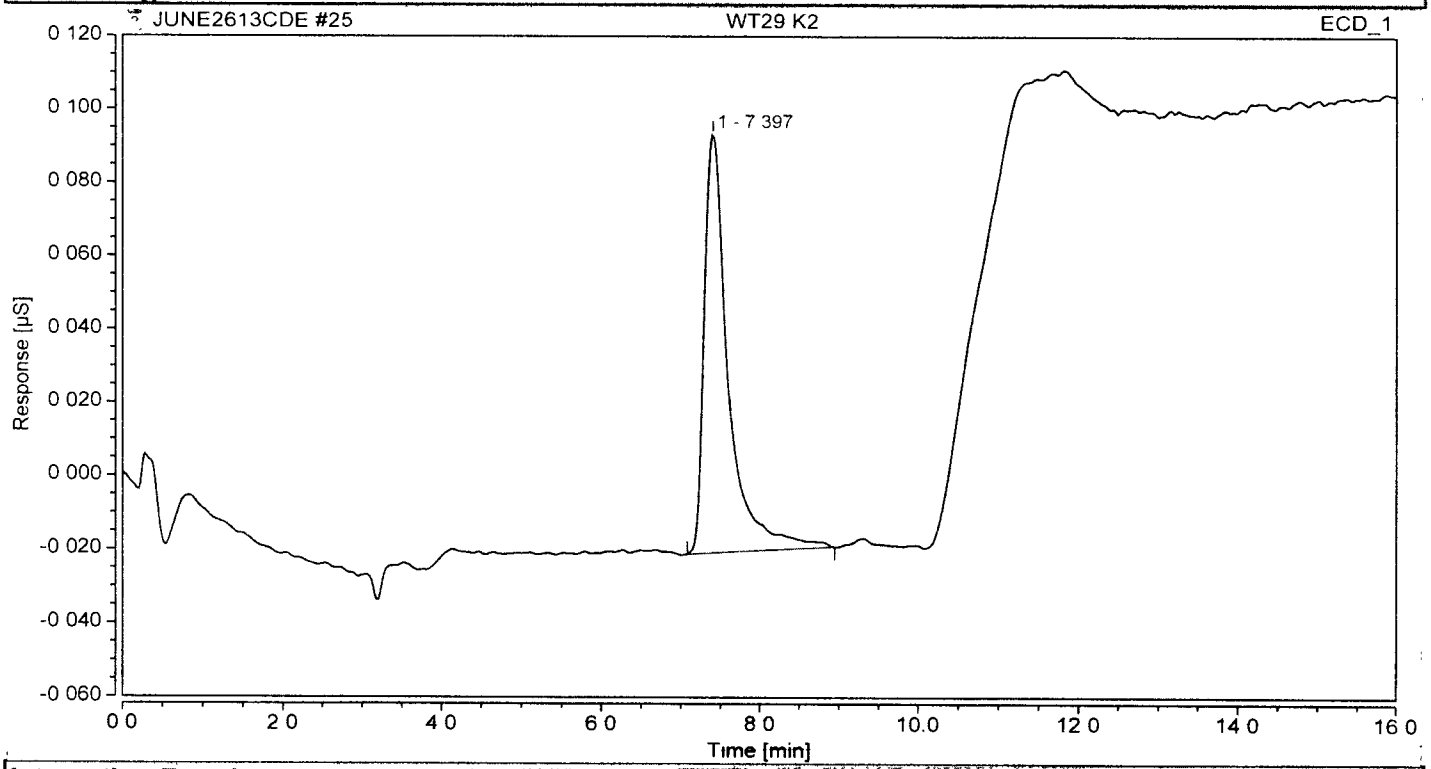
No	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	20.0	0.761	4.95	0.012	0.091	FALSE	n.a.
n.a.	Nitrite	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		20.0	n.a.	7.40	0.032	0.100	FALSE	n.a.
n.a.	Bromide	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	20.0	59.255	9.22	0.673	2.937	FALSE	n.a.
n.a.	Nitrate	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WT29 K2*	Inject Number:	25
Vial Number	*23*	User:	pat
Injection Type.	*Unknown*	Sequence	JUNE2613CDE
Dilution Factor	*100 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodat*		
Injection Date/Time.	*27/06/13 01:49*		

Chromatogram



Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		100.0	n.a.	7.40	0.040	0.114	FALSE	n.a.
n.a.	Bromide	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

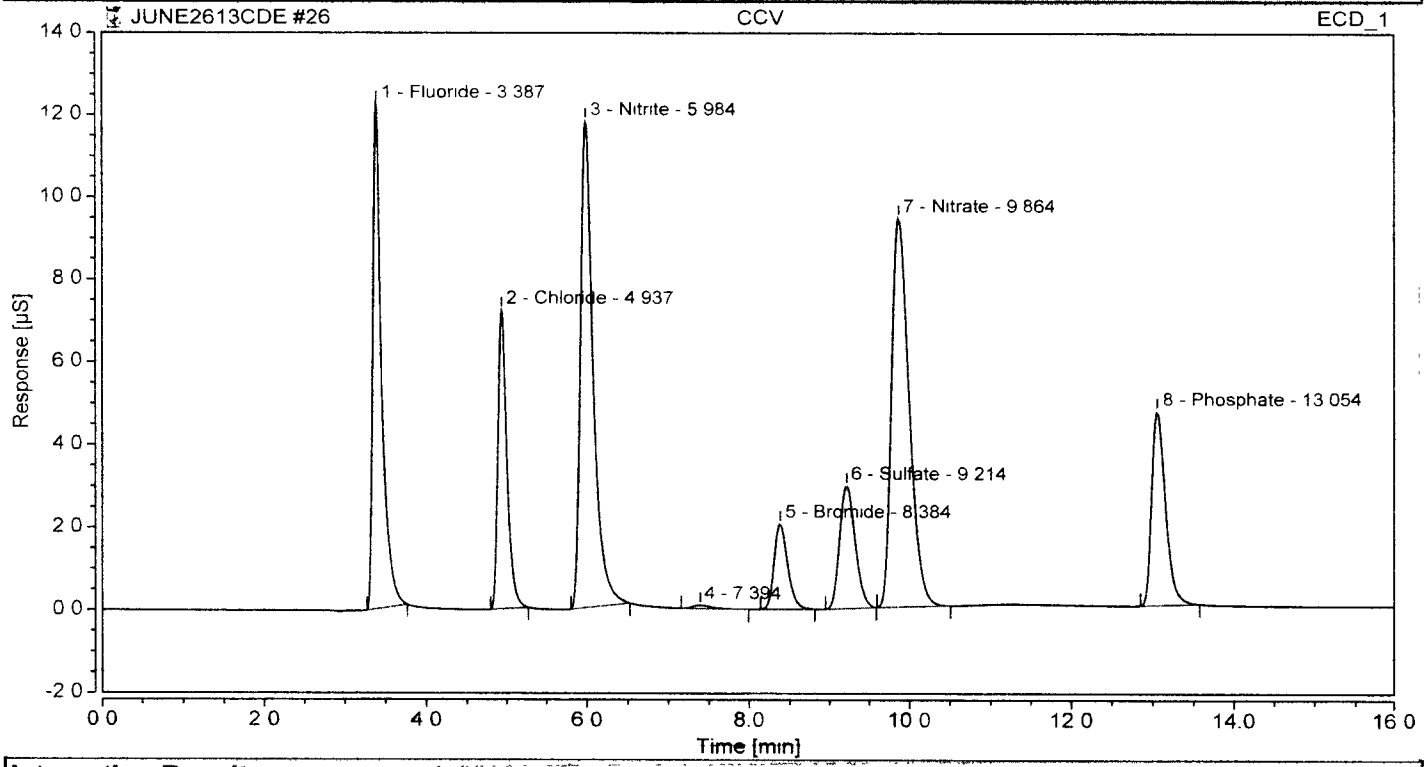
WT7 : 0124h

Chromatogram and Results

Injection Details

Injection Name	*CCV*	Inject Number.	26
Vial Number	*2*	User	pat
Injection Type.	*Check Standard*	Sequence.	JUNE2613CDE
Dilution Factor	*1 0*		
Instrument Method:	*INSTRMETH*		
Processing Method.	*processmethodat*		
Injection Date/Time:	*27/06/13 02:09*		

Chromatogram



Integration Results

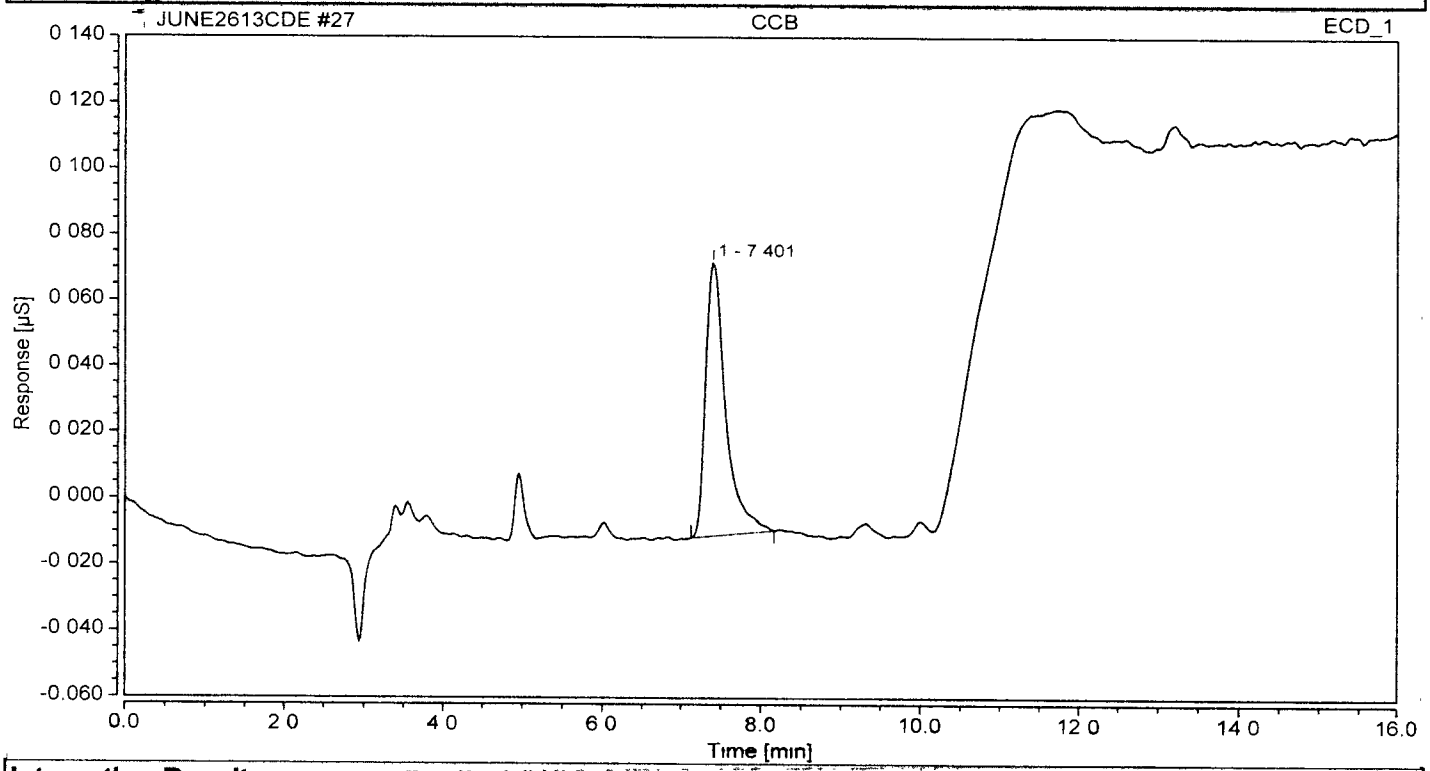
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	2.959	3.39	1.527	12.245	FALSE	-1.37
2	Chloride	1.0	2.971	4.94	0.952	7.235	FALSE	-0.96
3	Nitrite	1.0	2.919	5.98	2.127	11.792	FALSE	-2.71
4		1.0	n.a.	7.39	0.021	0.079	FALSE	n.a.
5	Bromide	1.0	2.932	8.38	0.398	2.079	FALSE	-2.27
6	Sulfate	1.0	2.954	9.21	0.670	2.975	FALSE	-1.54
7	Nitrate	1.0	2.884	9.86	2.365	9.414	FALSE	-3.87
8	Phosphate	1.0	2.943	13.05	0.919	4.697	FALSE	-1.89

Chromatogram and Results

Injection Details

Injection Name.	*CCB*	Inject Number:	27
Vial Number.	*3*	User:	pat
Injection Type	*Blank*	Sequence.	JUNE2613CDE
Dilution Factor	*1 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodal*		
Injection Date/Time	*27/06/13 02.29*		

Chromatogram



Integration Results

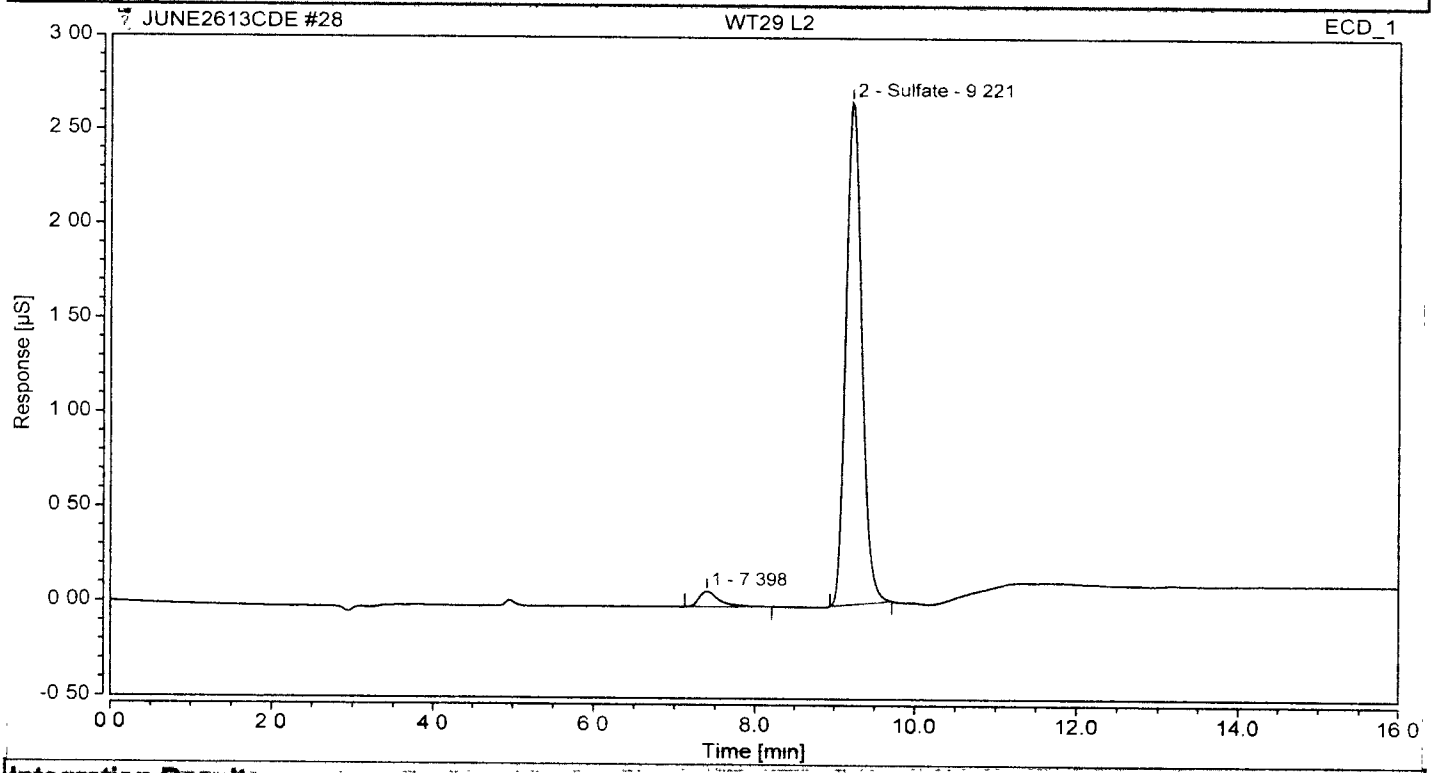
No	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		1.0	n.a.	7.40	0.024	0.083	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WT29 L2*	Inject Number:	28
Vial Number	*24*	User	pat
Injection Type.	*Unknown*	Sequence:	JUNE2613CDE
Dilution Factor	*50 0*		
Instrument Method.	*INSTRMETH*		
Processing Method	*processmethodai*		
Injection Date/Time	*27/06/13 02:50*		

Chromatogram



Integration Results

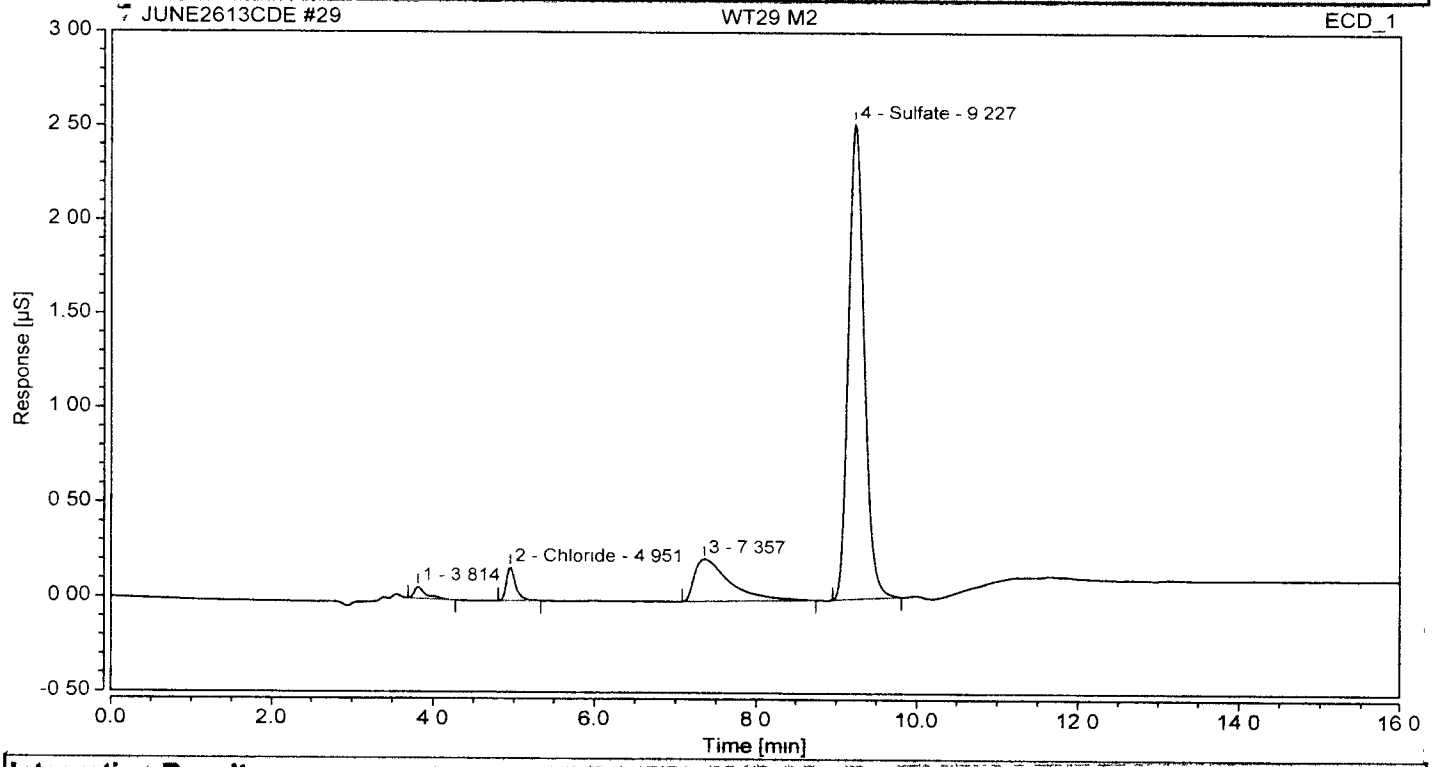
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		50.0	n.a.	7.40	0.023	0.080	FALSE	n.a.
n.a.	Bromide	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	Sulfate	50.0	134.059	9.22	0.609	2.665	FALSE	n.a.
n.a.	Nitrate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WT29 M2*	Inject Number:	29
Vial Number	*25*	User.	pat
Injection Type	*Unknown*	Sequence:	JUNE2613CDE
Dilution Factor	*5 0*		
Instrument Method.	*INSTRMETH*		
Processing Method.	*processmethodal*		
Injection Date/Time	*27/06/13 03 10*		

Chromatogram



Integration Results

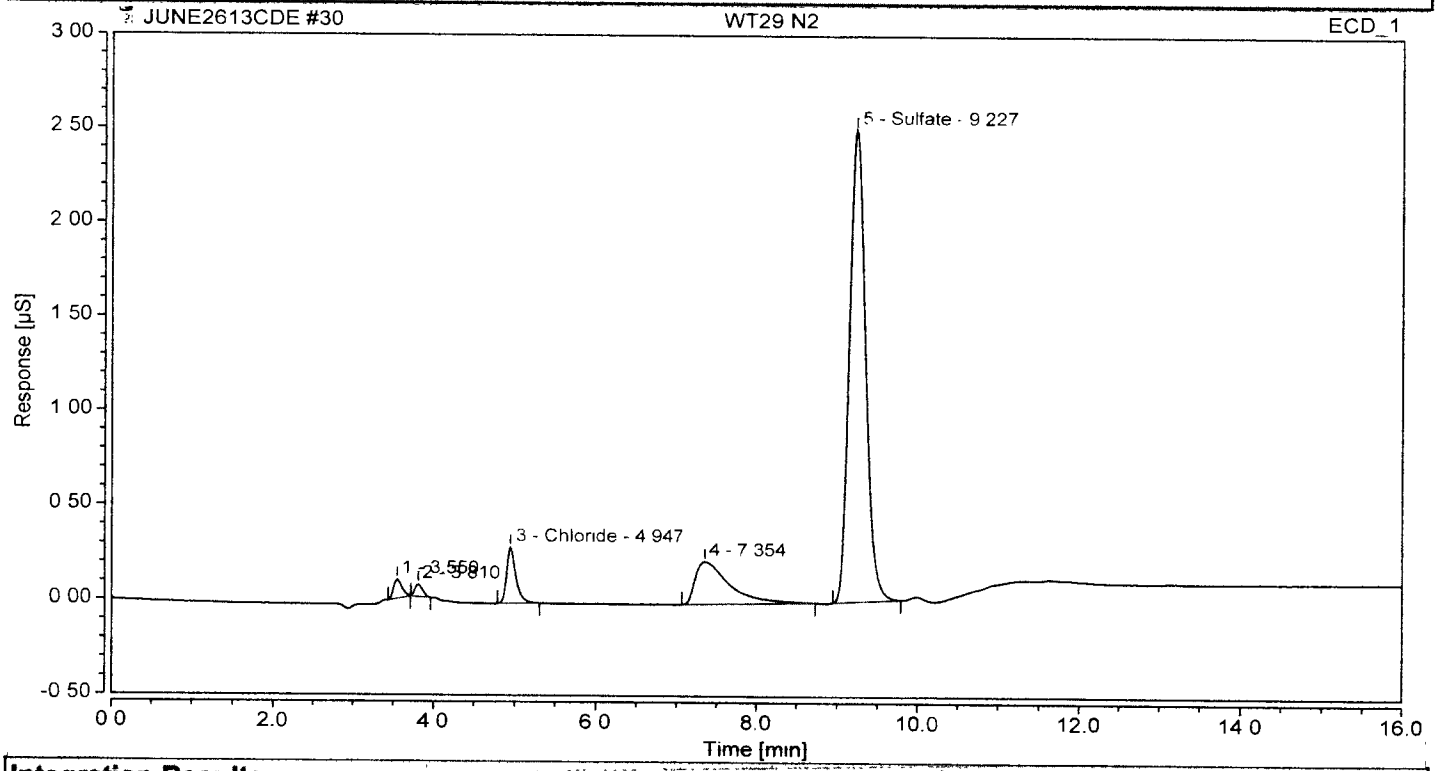
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		5.0	n.a.	3.81	0.010	0.061	FALSE	n.a.
2	Chloride	5.0	0.362	4.95	0.023	0.175	FALSE	n.a.
n.a.	Nitrite	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		5.0	n.a.	7.36	0.112	0.222	FALSE	n.a.
n.a.	Bromide	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	5.0	12.659	9.23	0.575	2.514	FALSE	n.a.
n.a	Nitrate	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WT29 N2*	Inject Number:	30
Vial Number.	*26*	User	pat
Injection Type	*Unknown*	Sequence	JUNE2613CDE
Dilution Factor	*5.0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodal*		
Injection Date/Time:	*27/06/13 03:30*		

Chromatogram



Integration Results

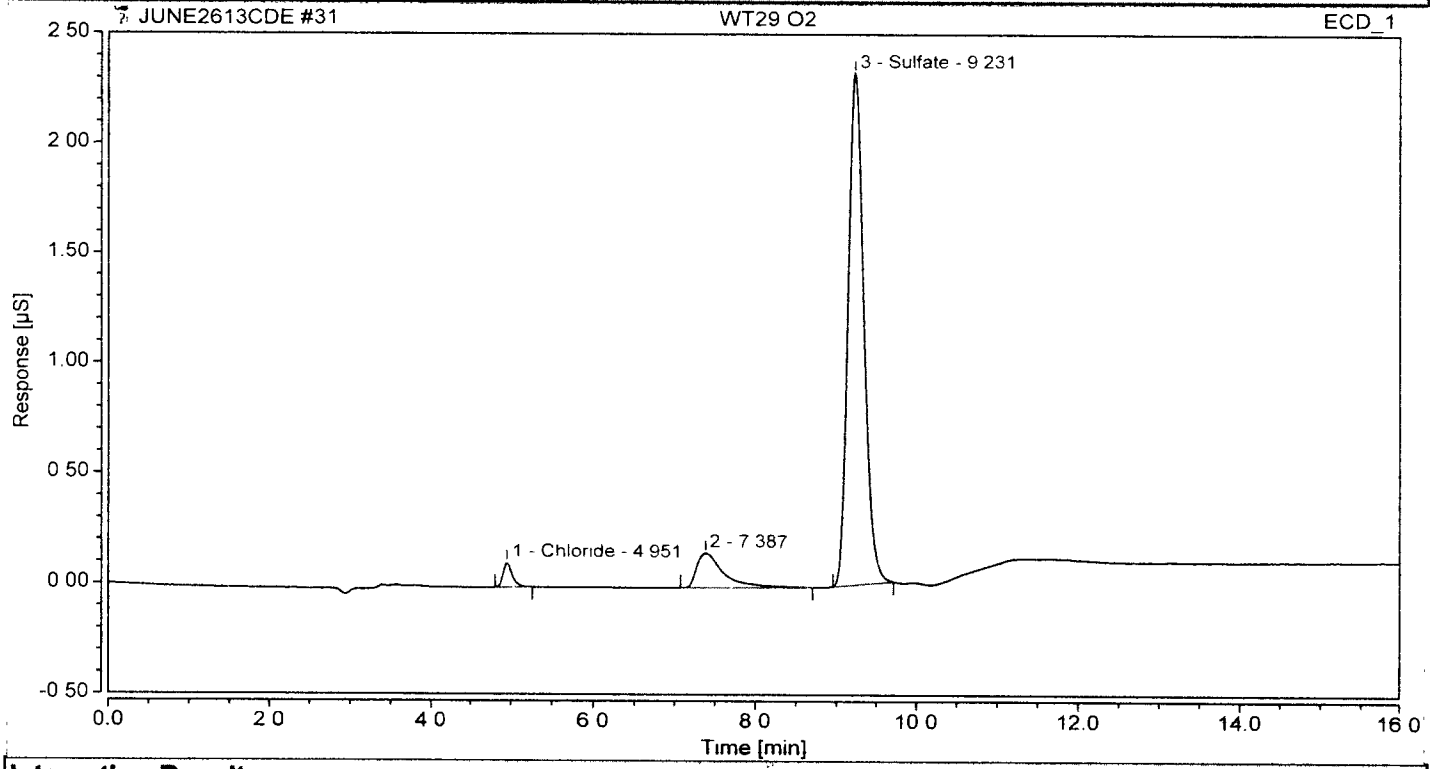
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		5.0	n.a.	3.55	0.012	0.099	FALSE	n.a
2		5.0	n.a.	3.81	0.007	0.064	FALSE	n.a.
3	Chloride	5.0	0.603	4.95	0.039	0.294	FALSE	n.a.
n.a.	Nitrite	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4		5.0	n.a.	7.35	0.112	0.223	FALSE	n.a.
n.a.	Bromide	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	Sulfate	5.0	12.599	9.23	0.572	2.499	FALSE	n.a.
n.a.	Nitrate	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WT29 O2*	Inject Number.	31
Vial Number:	*27*	User	pat
Injection Type.	*Unknown*	Sequence.	JUNE2613CDE
Dilution Factor	*5 0*		
Instrument Method	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time	*27/06/13 03.50*		

Chromatogram



Integration Results

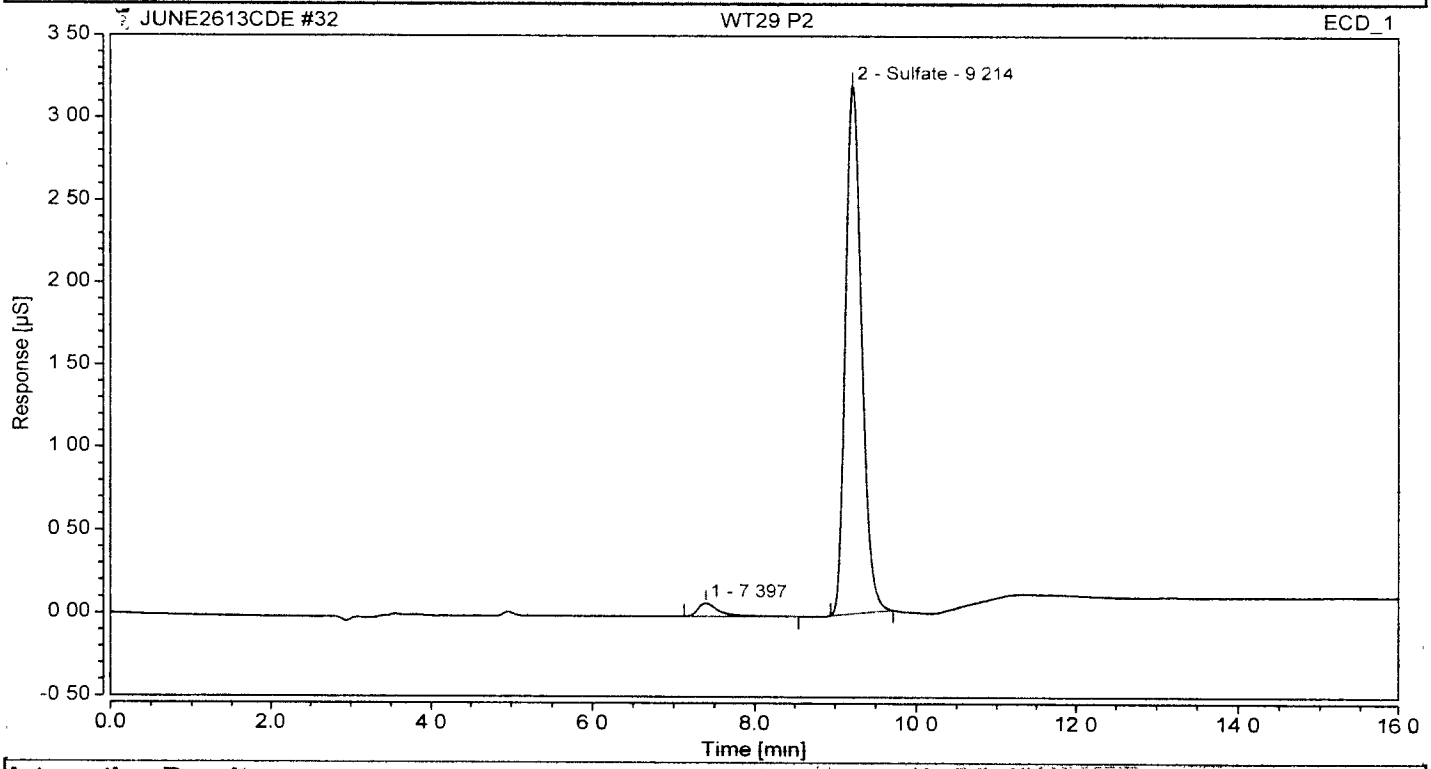
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	5.0	0.224	4.95	0.014	0.109	FALSE	n.a.
n.a.	Nitrite	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		5.0	n.a.	7.39	0.061	0.155	FALSE	n.a.
n.a.	Bromide	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	5.0	11.635	9.23	0.528	2.323	FALSE	n.a.
n.a.	Nitrate	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WT29 P2*	Inject Number:	32
Vial Number	*28*	User:	pat
Injection Type.	*Unknown*	Sequence	JUNE2613CDE
Dilution Factor:	*100 0*		
Instrument Method	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time	*27/06/13 04.10*		

Chromatogram



Integration Results

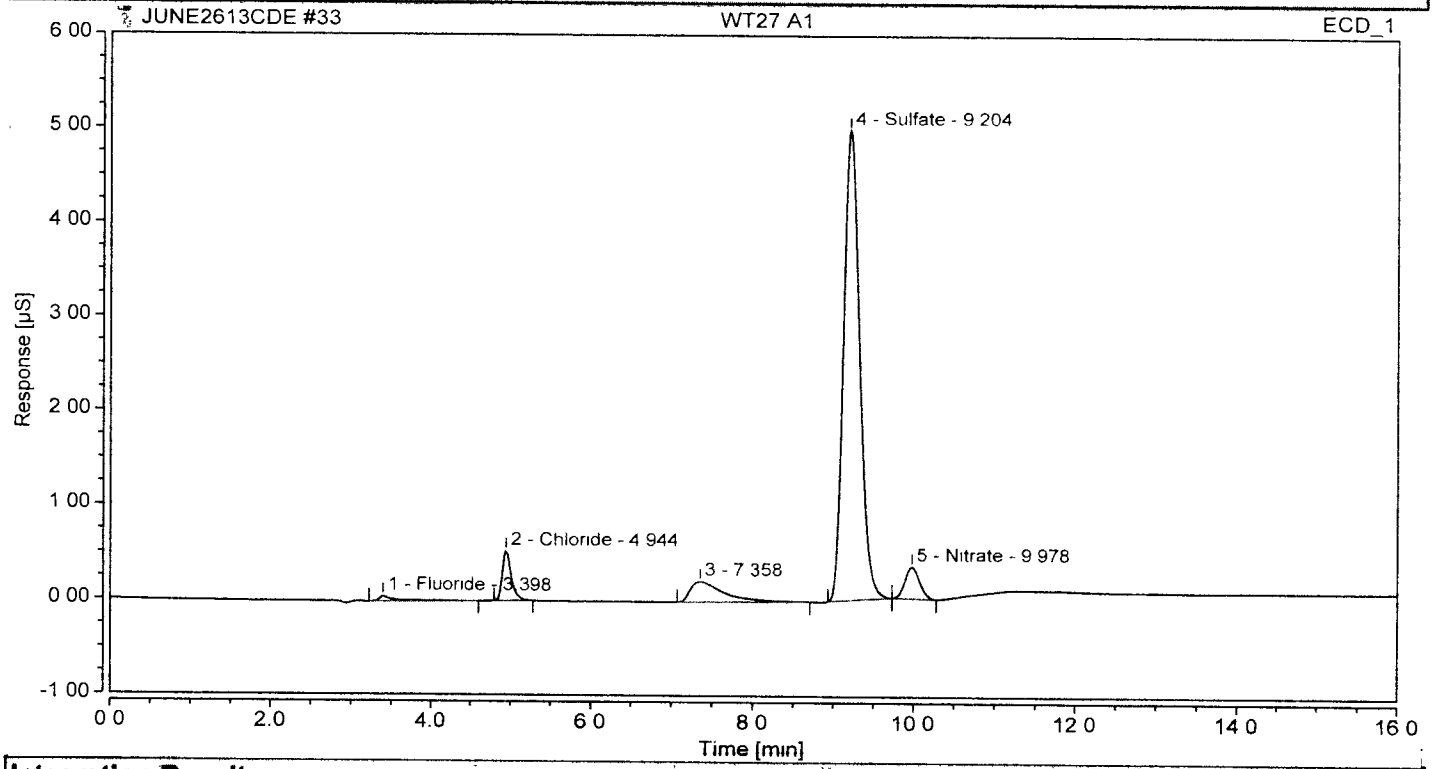
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		100.0	n.a.	7.40	0.023	0.079	FALSE	n.a.
n.a.	Bromide	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	Sulfate	100.0	322.772	9.21	0.733	3.199	FALSE	n.a.
n.a.	Nitrate	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WT27 A1*	Inject Number:	33
Vial Number	*29*	User.	pat
Injection Type	*Unknown*	Sequence.	JUNE2613CDE
Dilution Factor.	*1 0*		
Instrument Method.	*INSTRMETH*		
Processing Method	*processmethodat*		
Injection Date/Time.	*27/06/13 04.30*		

Chromatogram



Integration Results

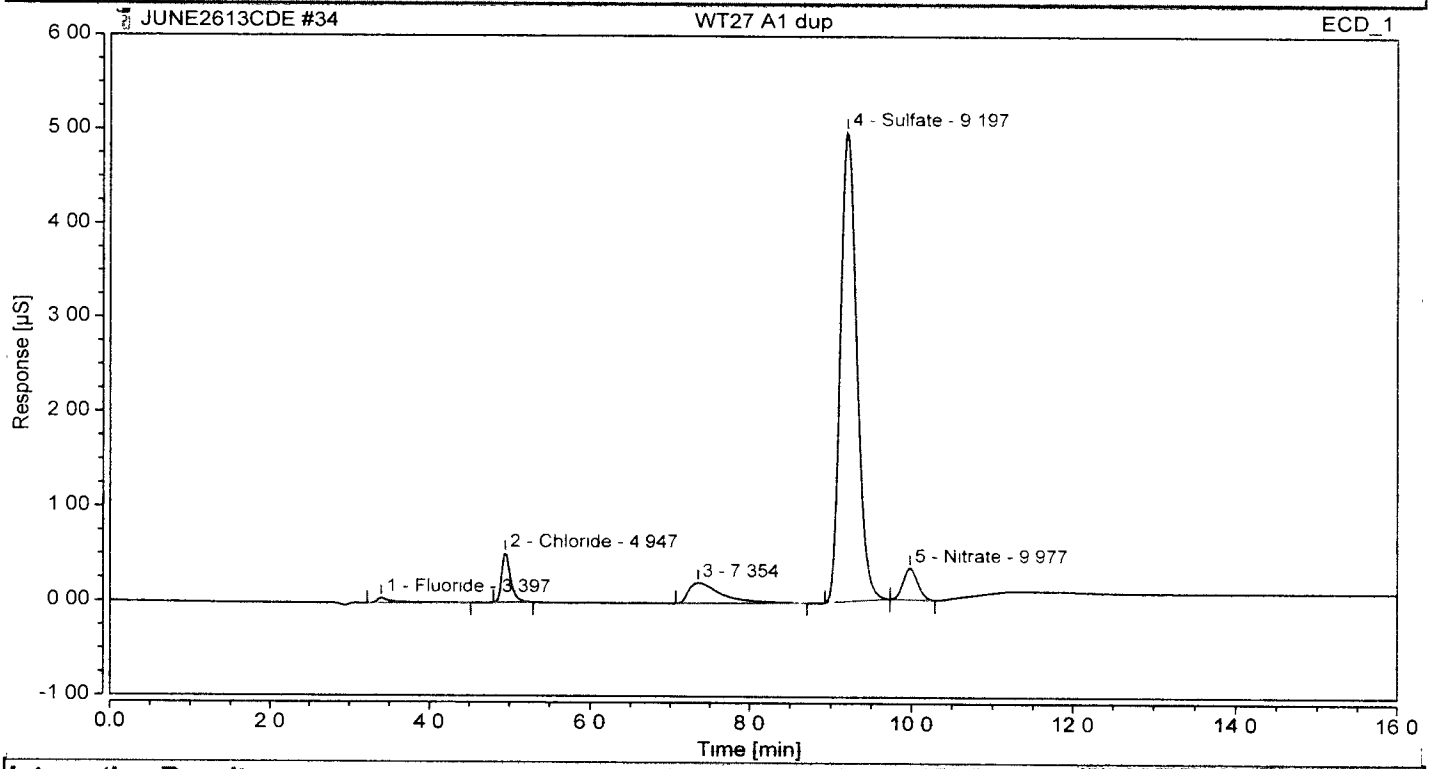
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.025	3.40	0.013	0.053	FALSE	n.a.
2	Chloride	1.0	0.210	4.94	0.067	0.522	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		1.0	n.a.	7.36	0.103	0.214	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	1.0	5.097	9.20	1.157	4.976	FALSE	n.a.
5	Nitrate	1.0	0.086	9.98	0.070	0.333	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WT27 A1 dup*	Inject Number:	34
Vial Number.	*30*	User	pat
Injection Type.	*Unknown*	Sequence	JUNE2613CDE
Dilution Factor:	*1 0*		
Instrument Method	*INSTRMETH*		
Processing Method.	*processmethodal*		
Injection Date/Time:	*27/06/13 04:51*		

Chromatogram



Integration Results

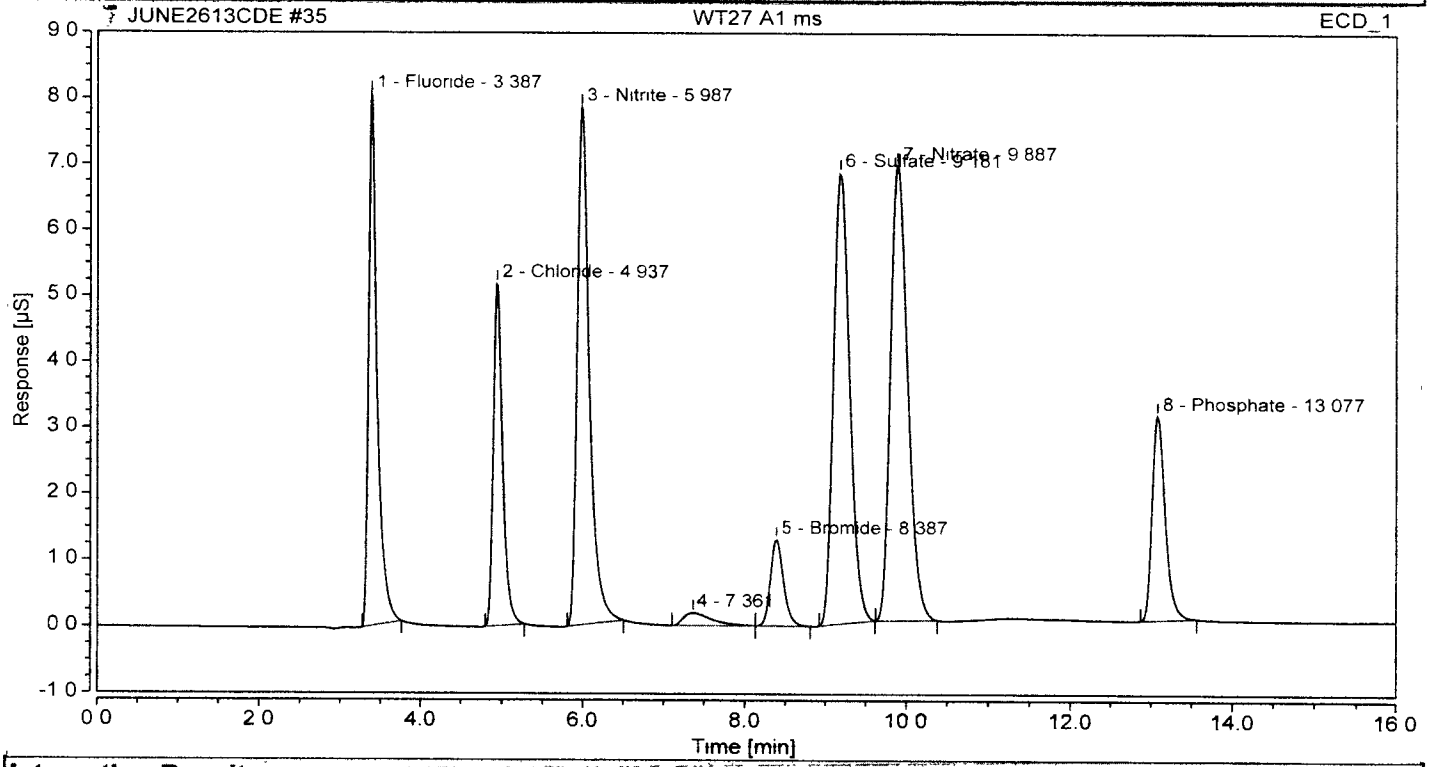
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.024	3.40	0.013	0.054	FALSE	n.a.
2	Chloride	1.0	0.210	4.95	0.067	0.518	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		1.0	n.a.	7.35	0.104	0.214	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	1.0	5.097	9.20	1.157	4.975	FALSE	n.a.
5	Nitrate	1.0	0.086	9.98	0.070	0.331	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WT27 A1 ms*	Inject Number:	35
Vial Number:	*31*	User:	pat
Injection Type	*Unknown*	Sequence.	JUNE2613CDE
Dilution Factor	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method	*processmethodal*		
Injection Date/Time	*27/06/13 05:11*		

Chromatogram



Integration Results

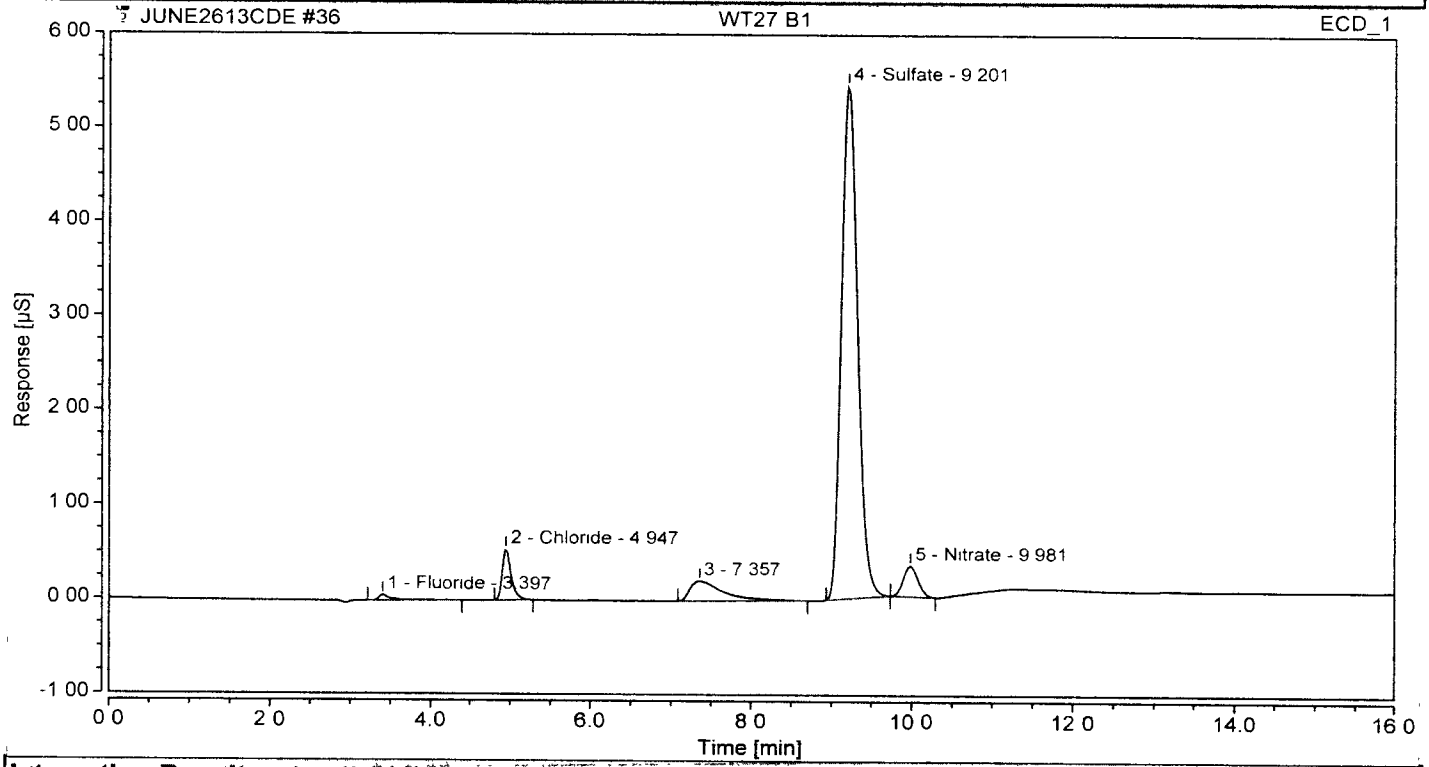
No	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	1.927	3.39	0.995	8.047	FALSE	n.a.
2	Chloride	1.0	2.117	4.94	0.678	5.179	FALSE	n.a.
3	Nitrite	1.0	1.881	5.99	1.371	7.832	FALSE	n.a.
4		1.0	n.a.	7.36	0.075	0.187	FALSE	n.a.
5	Bromide	1.0	1.808	8.39	0.246	1.298	FALSE	n.a.
6	Sulfate	1.0	7.016	9.18	1.593	6.827	FALSE	n.a.
7	Nitrate	1.0	2.038	9.89	1.671	6.883	FALSE	n.a.
8	Phosphate	1.0	1.847	13.08	0.576	3.088	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WT27 B1*	Inject Number:	36
Vial Number.	*32*	User:	pat
Injection Type.	*Unknown*	Sequence.	JUNE2613CDE
Dilution Factor	*1.0*		
Instrument Method.	*INSTRMETH*		
Processing Method.	*processmethodal*		
Injection Date/Time:	*27/06/13 05:31*		

Chromatogram



Integration Results

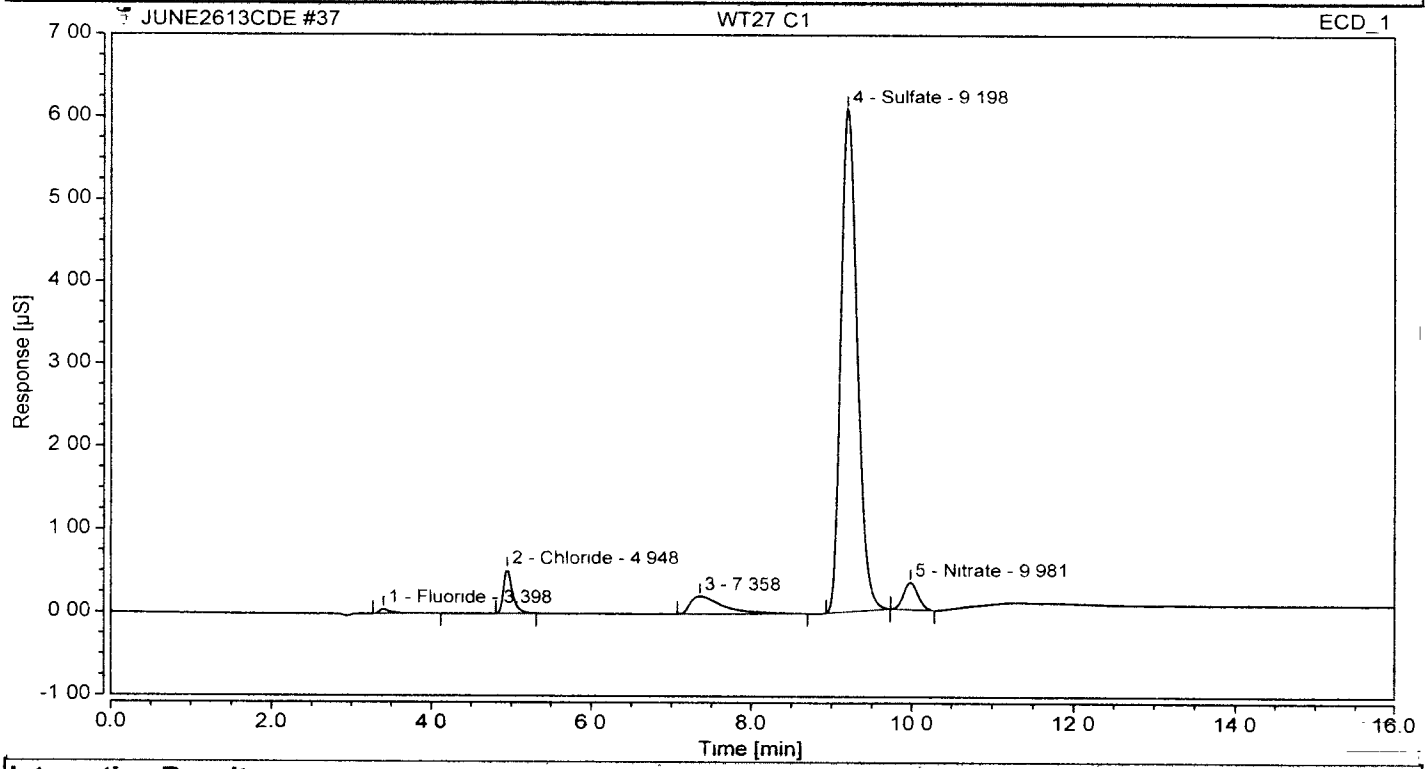
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.022	3.40	0.011	0.059	FALSE	n.a.
2	Chloride	1.0	0.218	4.95	0.070	0.539	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		1.0	n.a.	7.36	0.103	0.212	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	1.0	5.592	9.20	1.269	5.438	FALSE	n.a.
5	Nitrate	1.0	0.084	9.98	0.069	0.326	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WT27 C1*	Inject Number:	37
Vial Number	*33*	User	pat
Injection Type	*Unknown*	Sequence	JUNE2613CDE
Dilution Factor.	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time	*27/06/13 05:52*		

Chromatogram



Integration Results

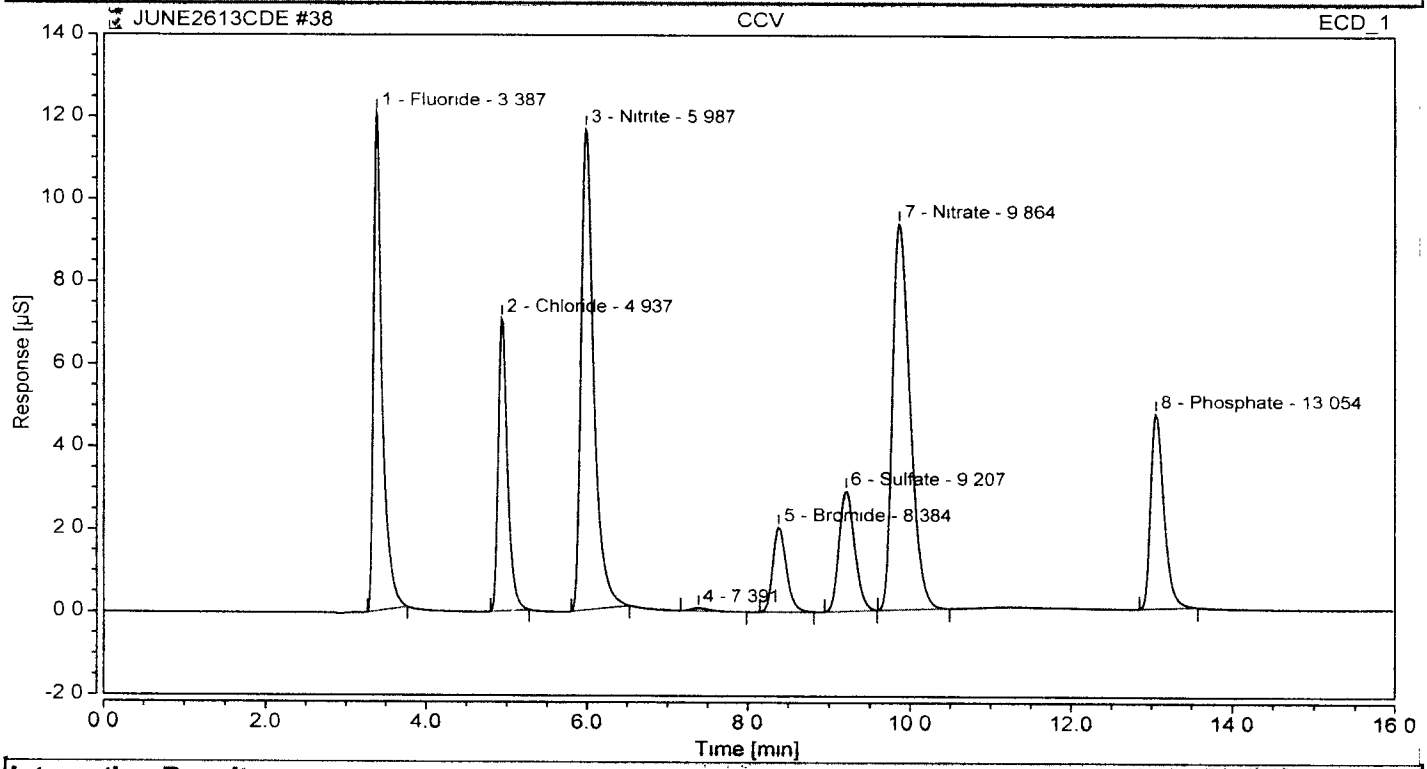
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.018	3.40	0.009	0.054	FALSE	n.a.
2	Chloride	1.0	0.214	4.95	0.068	0.525	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		1.0	n.a.	7.36	0.103	0.212	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	1.0	6.286	9.20	1.427	6.084	FALSE	n.a.
5	Nitrate	1.0	0.084	9.98	0.069	0.328	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*CCV*	Inject Number:	38
Vial Number	*34*	User:	pat
Injection Type	*Check Standard*	Sequence:	JUNE2613CDE
Dilution Factor.	*1 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodal*		
Injection Date/Time	*27/06/13 06 12*		

Chromatogram



Integration Results

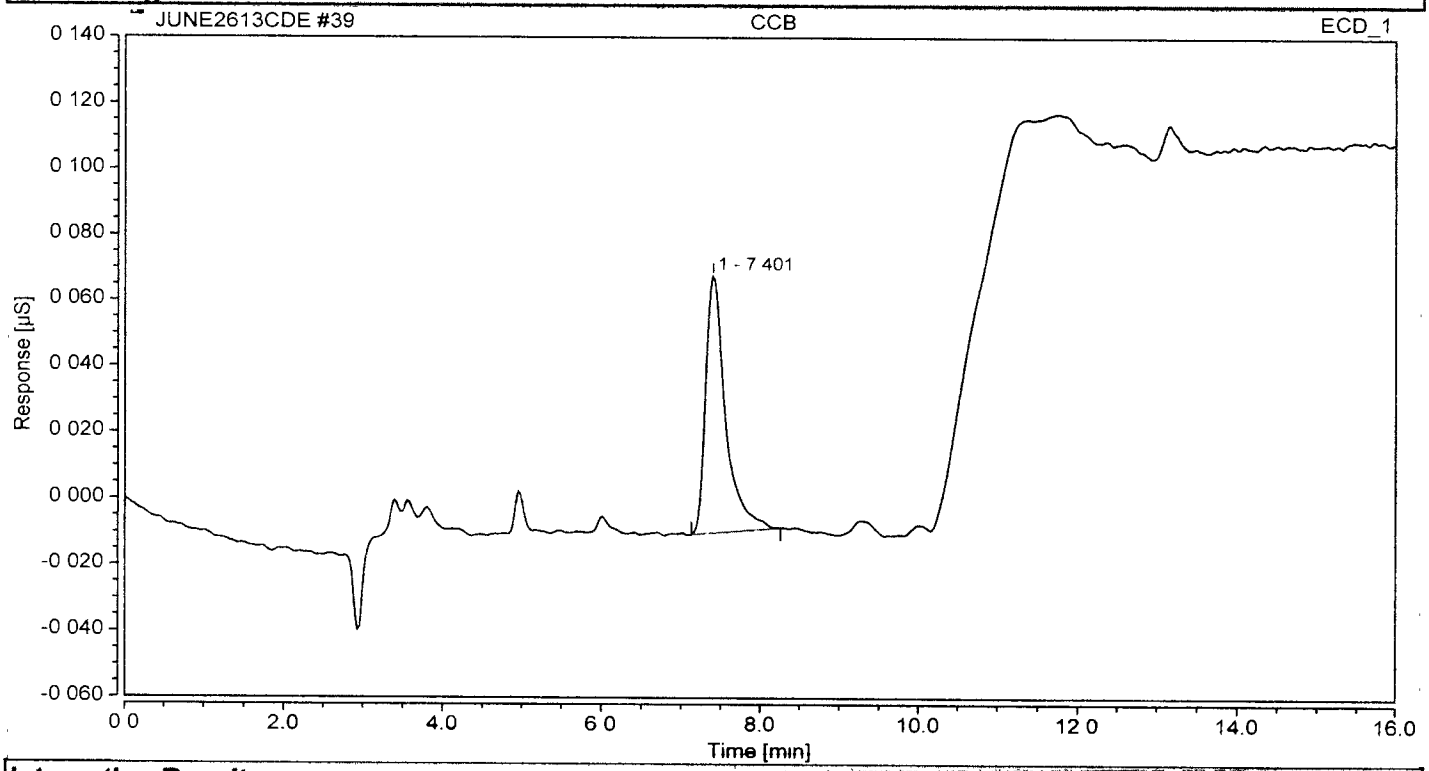
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	2.935	3.39	1.515	12.098	FALSE	n.a.
2	Chloride	1.0	2.920	4.94	0.935	7.093	FALSE	n.a.
3	Nitrite	1.0	2.895	5.99	2.110	11.662	FALSE	n.a.
4		1.0	n.a.	7.39	0.018	0.070	FALSE	n.a.
5	Bromide	1.0	2.903	8.38	0.394	2.056	FALSE	n.a.
6	Sulfate	1.0	2.889	9.21	0.656	2.914	FALSE	n.a.
7	Nitrate	1.0	2.864	9.86	2.349	9.342	FALSE	n.a.
8	Phosphate	1.0	2.943	13.05	0.919	4.718	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name	*CCB*	Inject Number:	39
Vial Number	*35*	User	pat
Injection Type	*Blank*	Sequence	JUNE2613CDE
Dilution Factor.	*1 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodat*		
Injection Date/Time.	*27/06/13 06 33*		

Chromatogram



Integration Results

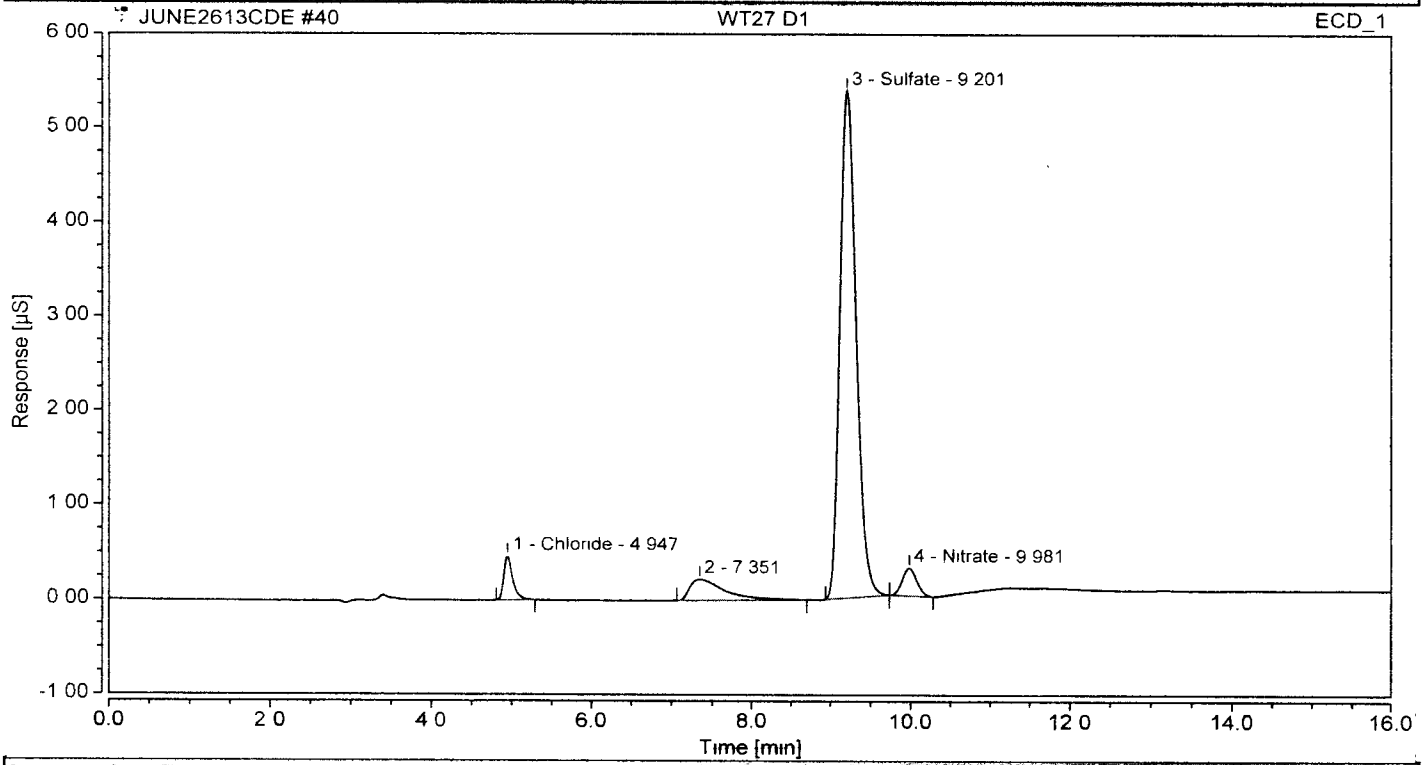
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		1.0	n.a.	7.40	0.023	0.078	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WT27 D1*	Inject Number:	40
Vial Number.	*36*	User	pat
Injection Type	*Unknown*	Sequence.	JUNE2613CDE
Dilution Factor.	*1 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodat*		
Injection Date/Time	*27/06/13 06:54*		

Chromatogram



Integration Results

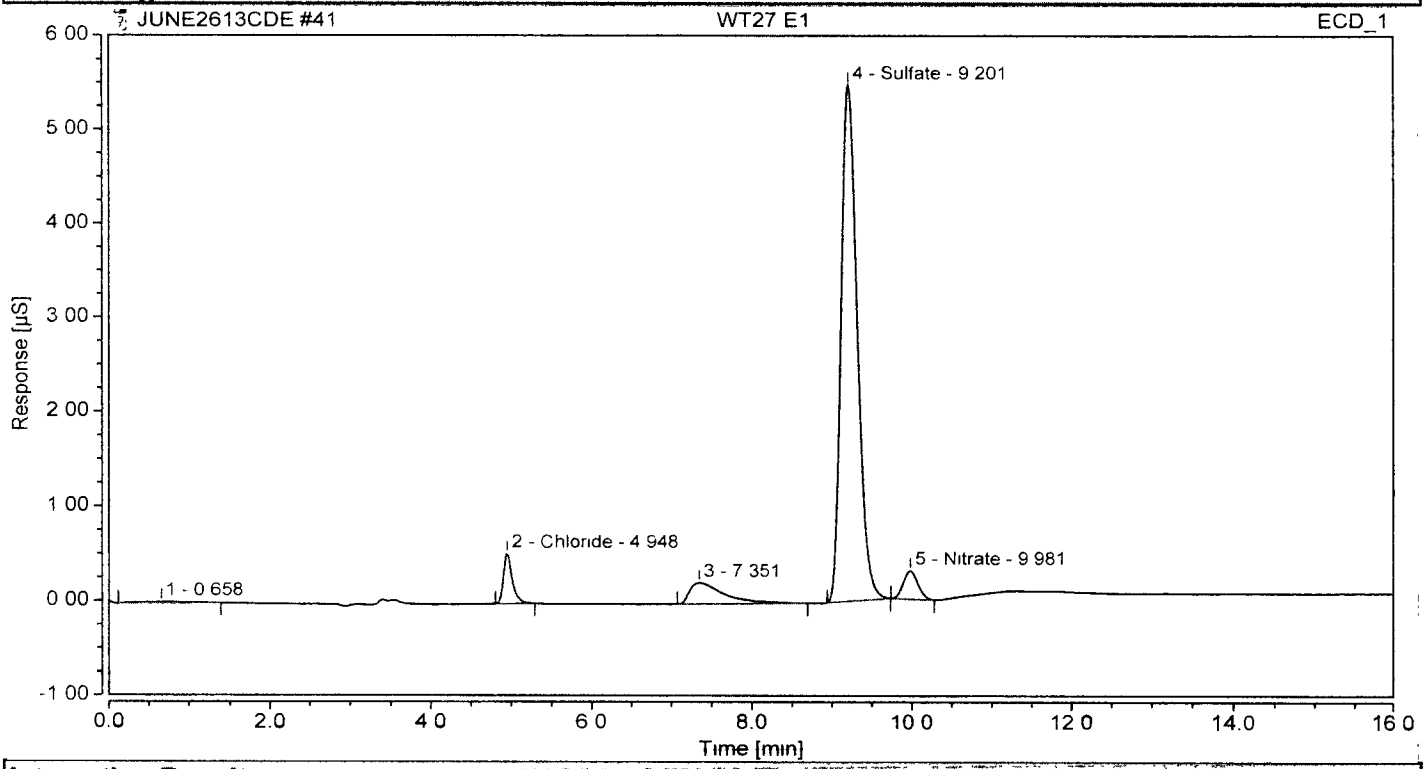
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	1.0	0.188	4.95	0.060	0.464	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		1.0	n.a.	7.35	0.113	0.222	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	1.0	5.524	9.20	1.254	5.372	FALSE	n.a.
4	Nitrate	1.0	0.076	9.98	0.062	0.295	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WT27 E1*	Inject Number.	41
Vial Number	*37*	User:	pat
Injection Type.	*Unknown*	Sequence.	JUNE2613CDE
Dilution Factor.	*1 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodat*		
Injection Date/Time	*27/06/13 07:14*		

Chromatogram



Integration Results

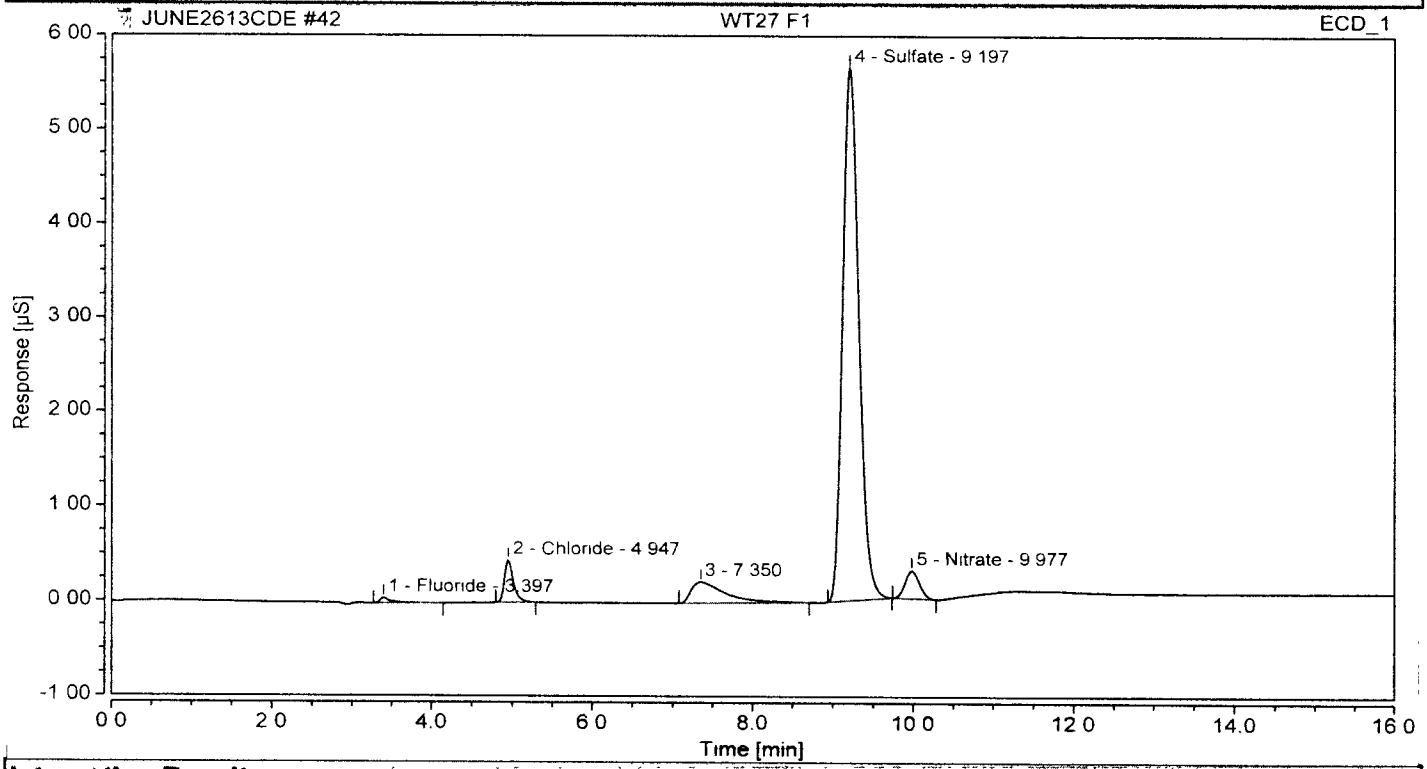
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1		1.0	n.a.	0.66	0.011	0.014	FALSE	n.a.
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	Chloride	1.0	0.214	4.95	0.069	0.530	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		1.0	n.a.	7.35	0.111	0.222	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	1.0	5.632	9.20	1.278	5.474	FALSE	n.a.
5	Nitrate	1.0	0.077	9.98	0.064	0.301	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WT27 F1*	Inject Number:	42
Vial Number.	*38*	User:	pat
Injection Type.	*Unknown*	Sequence:	JUNE2613CDE
Dilution Factor	*1.0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodal*		
Injection Date/Time.	*27/06/13 07.34*		

Chromatogram



Integration Results

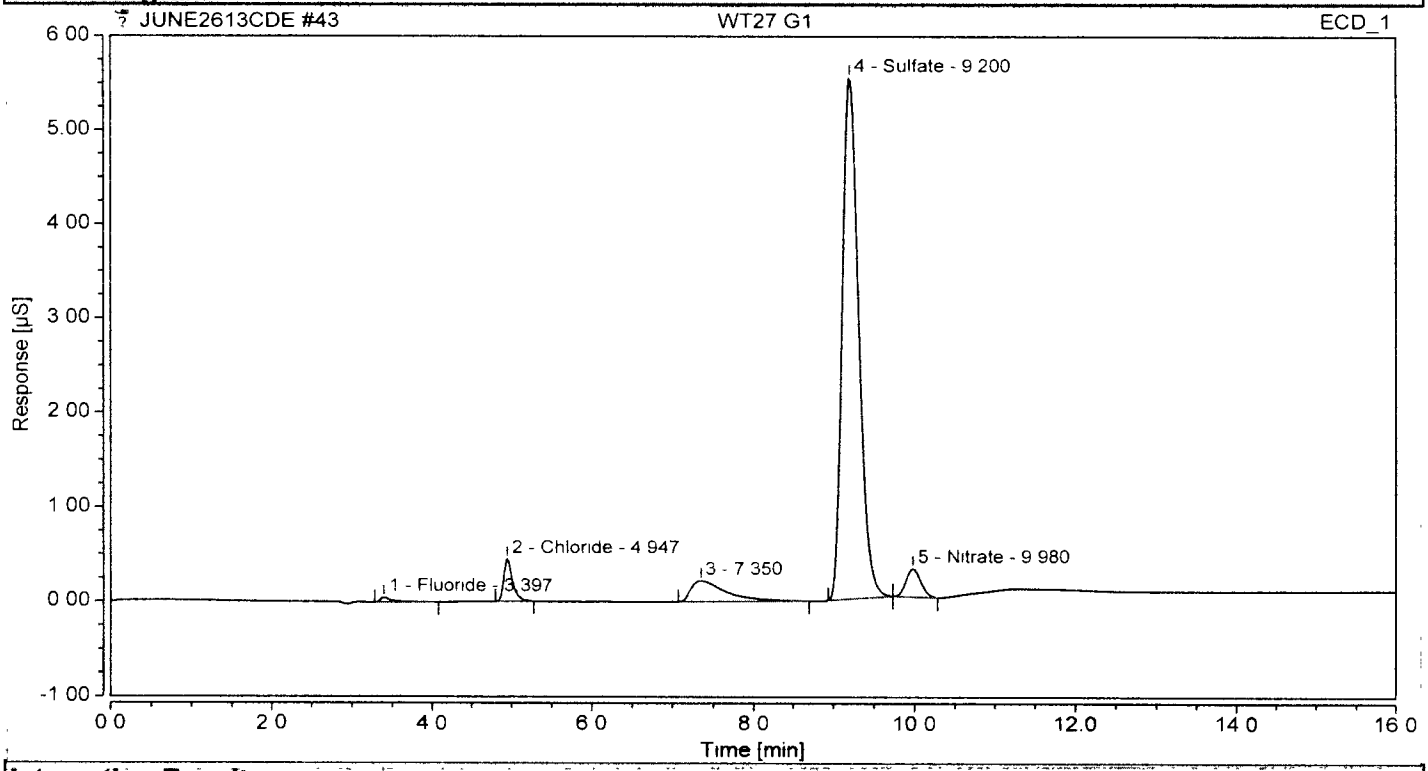
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.019	3.40	0.010	0.055	FALSE	n.a.
2	Chloride	1.0	0.180	4.95	0.058	0.444	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		1.0	n.a.	7.35	0.112	0.222	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	1.0	5.809	9.20	1.319	5.646	FALSE	n.a.
5	Nitrate	1.0	0.075	9.98	0.062	0.294	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WT27 G1*	Inject Number:	43
Vial Number	*39*	User.	pat
Injection Type	*Unknown*	Sequence:	JUNE2613CDE
Dilution Factor	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*27/06/13 07 53*		

Chromatogram



Integration Results

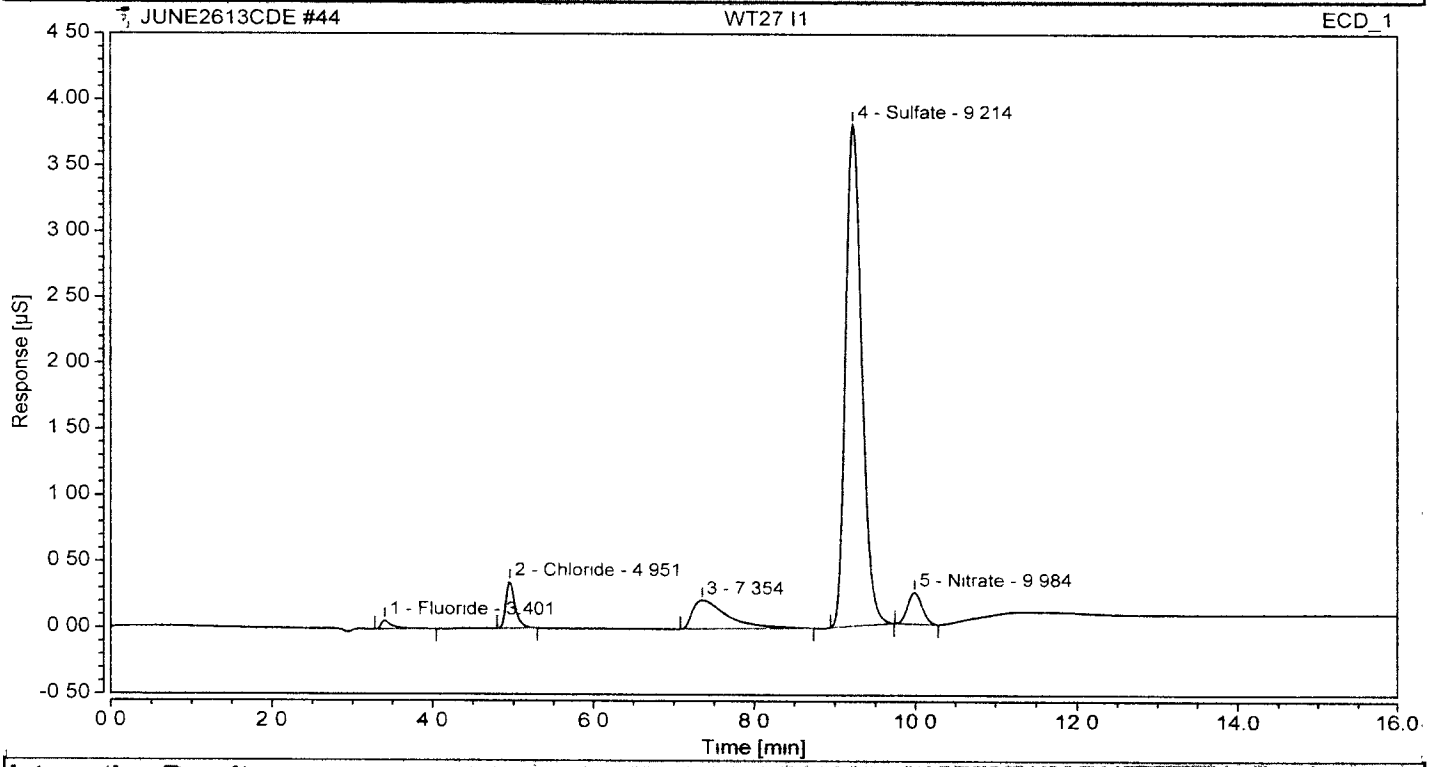
No	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.017	3.40	0.009	0.051	FALSE	n.a.
2	Chloride	1.0	0.181	4.95	0.058	0.445	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		1.0	n.a.	7.35	0.111	0.220	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	1.0	5.690	9.20	1.292	5.528	FALSE	n.a.
5	Nitrate	1.0	0.076	9.98	0.063	0.297	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WT27 I1*	Inject Number.	44
Vial Number	*40*	User:	pat
Injection Type	*Unknown*	Sequence.	JUNE2613CDE
Dilution Factor.	*1 0*		
Instrument Method.	*INSTRMETH*		
Processing Method.	*processmethodal*		
Injection Date/Time	*27/06/13 08 12*		

Chromatogram



Integration Results

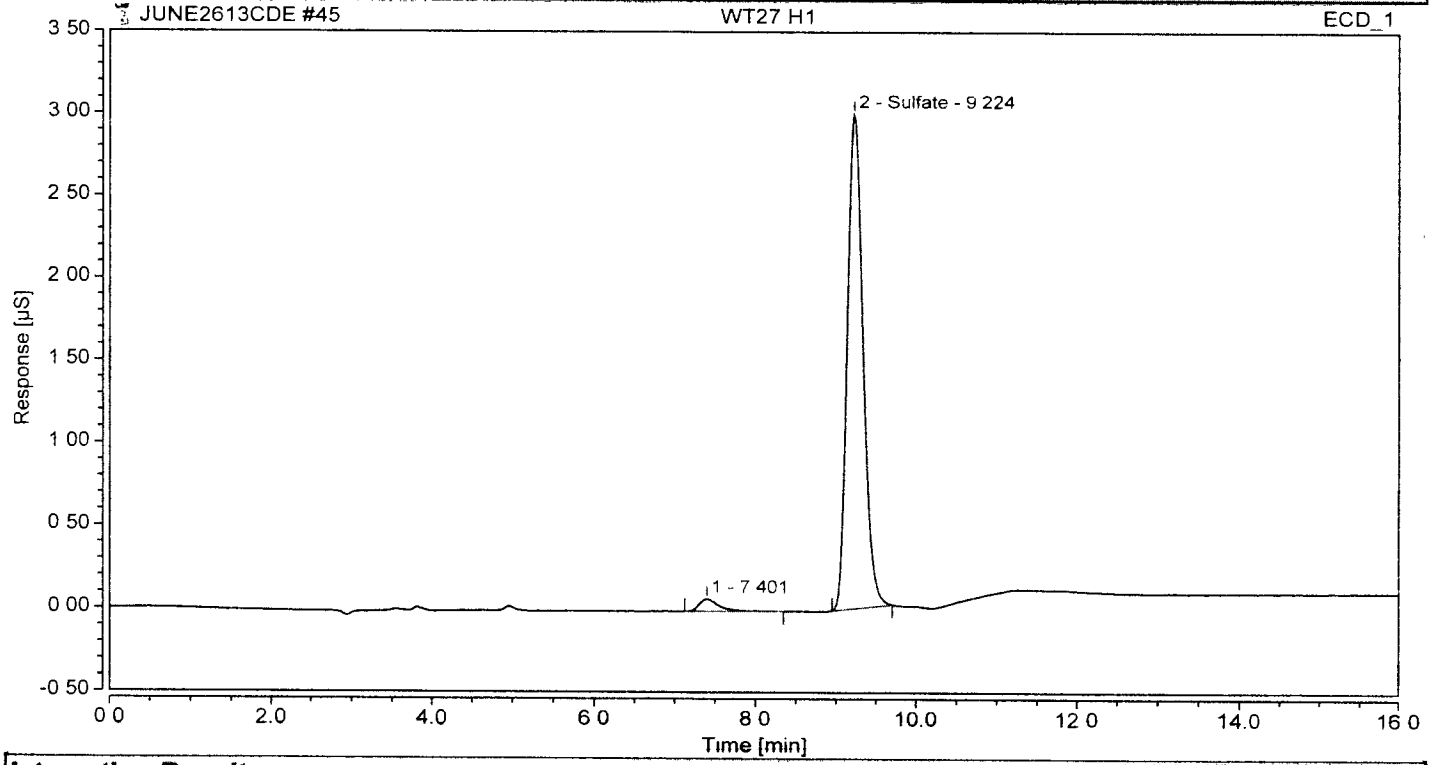
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.021	3.40	0.011	0.064	FALSE	n.a.
2	Chloride	1.0	0.143	4.95	0.046	0.351	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		1.0	n.a.	7.35	0.109	0.216	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	1.0	3.856	9.21	0.875	3.797	FALSE	n.a.
5	Nitrate	1.0	0.061	9.98	0.050	0.239	FALSE	n.a.
n.a	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WT27 H1*	Inject Number:	45
Vial Number	*41*	User.	pat
Injection Type	*Unknown*	Sequence.	JUNE2613CDE
Dilution Factor.	*500 0*		
Instrument Method.	*INSTRMETH*		
Processing Method.	*processmethodal*		
Injection Date/Time	*27/06/13 08:32*		

Chromatogram



Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	500.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	500.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	500.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		500.0	n.a.	7.40	0.021	0.073	FALSE	n.a.
n.a.	Bromide	500.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	Sulfate	500.0	1509.142	9.22	0.685	2.995	FALSE	n.a.
n.a.	Nitrate	500.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	500.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

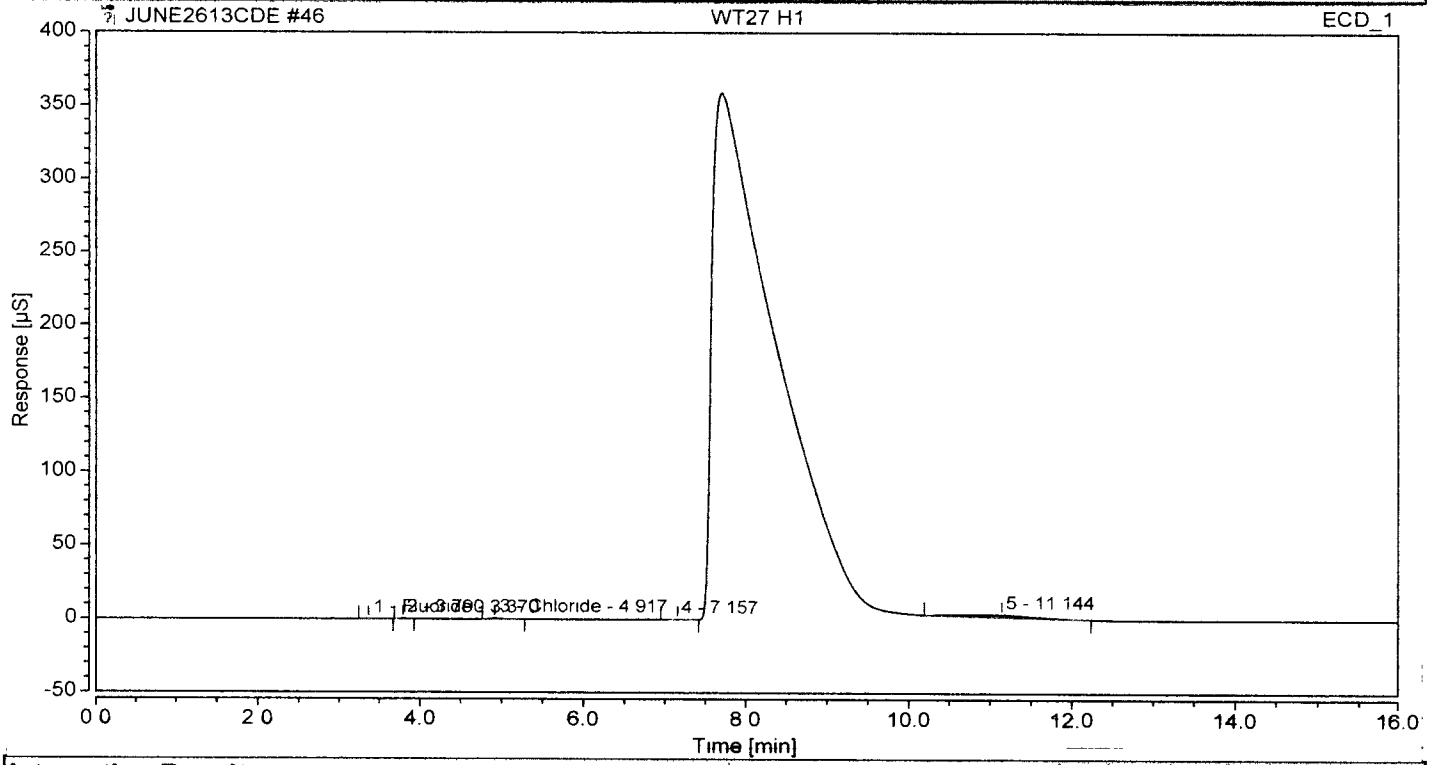
WV67 : 6126H

Chromatogram and Results

Injection Details

Injection Name.	*WT27 H1*	Inject Number:	46
Vial Number:	*42*	User.	pat
Injection Type.	*Unknown*	Sequence	JUNE2613CDE
Dilution Factor.	*1 0*		
Instrument Method	*INSTRMETH*		
Processing Method.	*processmethodat*		
Injection Date/Time	*27/06/13 08 51*		

Chromatogram



Integration Results

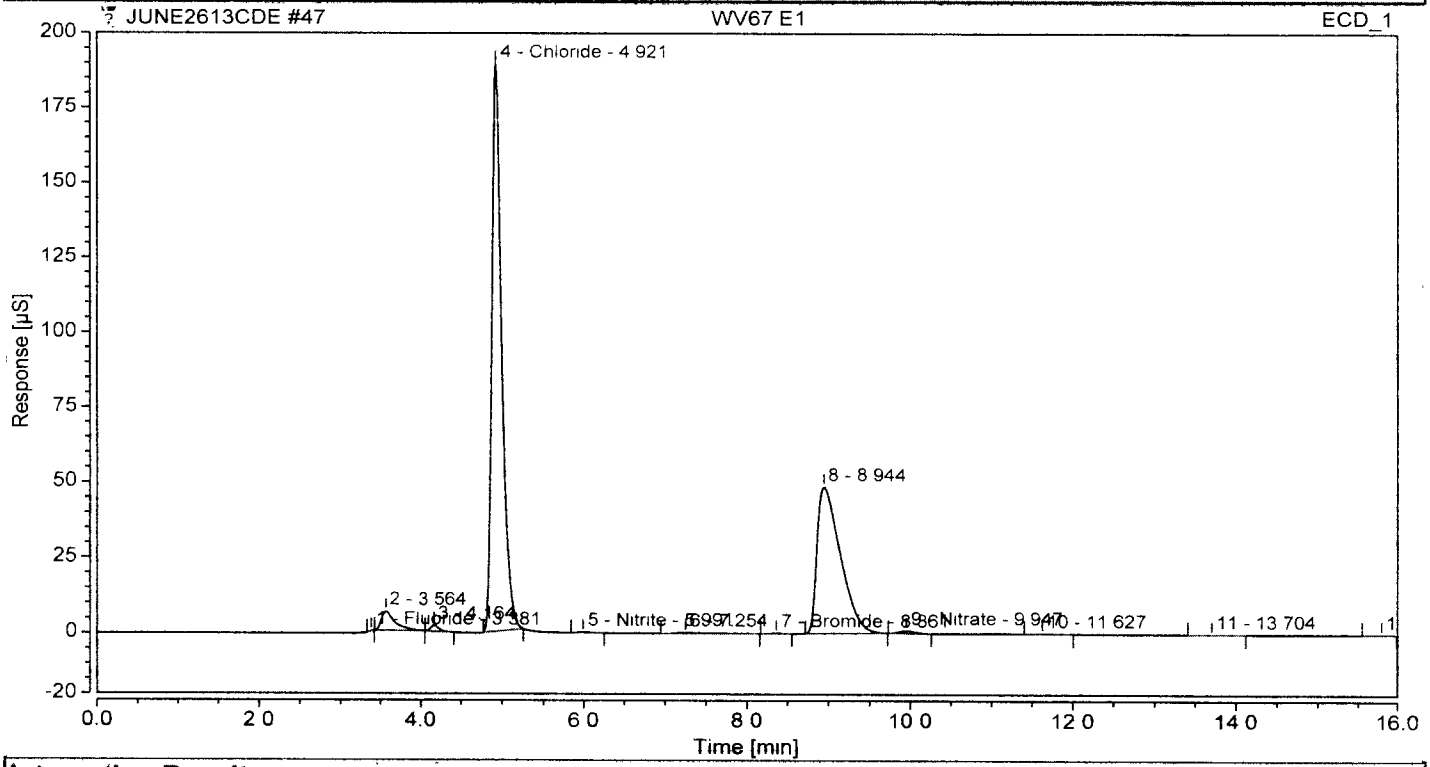
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.046	3.37	0.024	0.152	FALSE	n.a.
2		1.0	n.a.	3.79	0.023	0.208	FALSE	n.a.
3	Chloride	1.0	0.262	4.92	0.084	0.641	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4		1.0	n.a.	7.16	0.023	0.105	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5		1.0	n.a.	11.14	1.555	1.582	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name	*WV67 E1*	Inject Number:	47
Vial Number	*43*	User.	pat
Injection Type	*Unknown*	Sequence	JUNE2613CDE
Dilution Factor.	*1 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodai*		
Injection Date/Time:	*27/06/13 09:11*		

Chromatogram



Integration Results

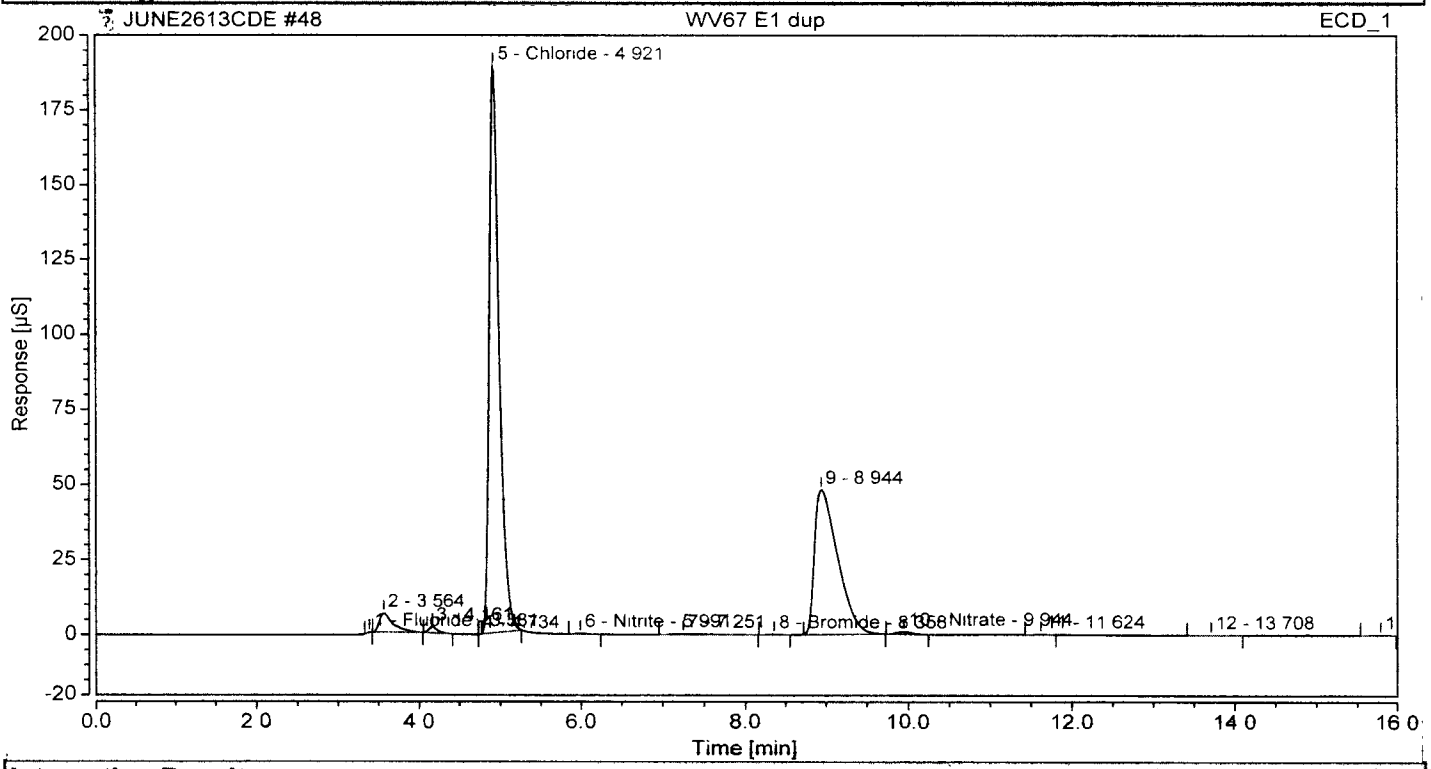
No	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.011	3.38	0.005	0.104	FALSE	n.a.
2		1.0	n.a.	3.56	1.210	6.292	FALSE	n.a.
3		1.0	n.a.	4.16	0.237	1.962	FALSE	n.a.
4	Chloride	1.0	82.840	4.92	26.540	189.114	FALSE	n.a.
5	Nitrite	1.0	0.049	5.99	0.036	0.244	FALSE	n.a.
6		1.0	n.a.	7.25	0.123	0.235	FALSE	n.a.
7	Bromide	1.0	0.182	8.36	0.025	0.154	FALSE	n.a.
8		1.0	n.a.	8.94	15.981	48.441	FALSE	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
9	Nitrate	1.0	0.212	9.95	0.174	0.818	FALSE	n.a.
10		1.0	n.a.	11.63	0.014	0.073	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
11		1.0	n.a.	13.70	0.006	0.020	FALSE	n.a.
12		1.0	n.a.	15.79	0.014	0.064	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WV67 E1 dup*	Inject Number:	48
Vial Number	*44*	User:	pat
Injection Type:	*Unknown*	Sequence	JUNE2613CDE
Dilution Factor:	*1 0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*27/06/13 09.31*		

Chromatogram



Integration Results

No	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.010	3.38	0.005	0.101	FALSE	n.a.
2		1.0	n.a.	3.56	1.196	6.217	FALSE	n.a.
3		1.0	n.a.	4.16	0.242	2.000	FALSE	n.a.
4		1.0	n.a.	4.73	0.001	0.158	FALSE	n.a.
5	Chloride	1.0	82.871	4.92	26.550	189.219	FALSE	n.a.
6	Nitrite	1.0	0.048	5.99	0.035	0.243	FALSE	n.a.
7		1.0	n.a.	7.25	0.121	0.232	FALSE	n.a.
8	Bromide	1.0	0.181	8.36	0.025	0.153	FALSE	n.a.
9		1.0	n.a.	8.94	15.887	48.240	FALSE	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
10	Nitrate	1.0	0.212	9.94	0.173	0.820	FALSE	n.a.
11		1.0	n.a.	11.62	0.009	0.065	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
12		1.0	n.a.	13.71	0.007	0.023	FALSE	n.a.
13		1.0	n.a.	15.78	0.015	0.065	FALSE	n.a.

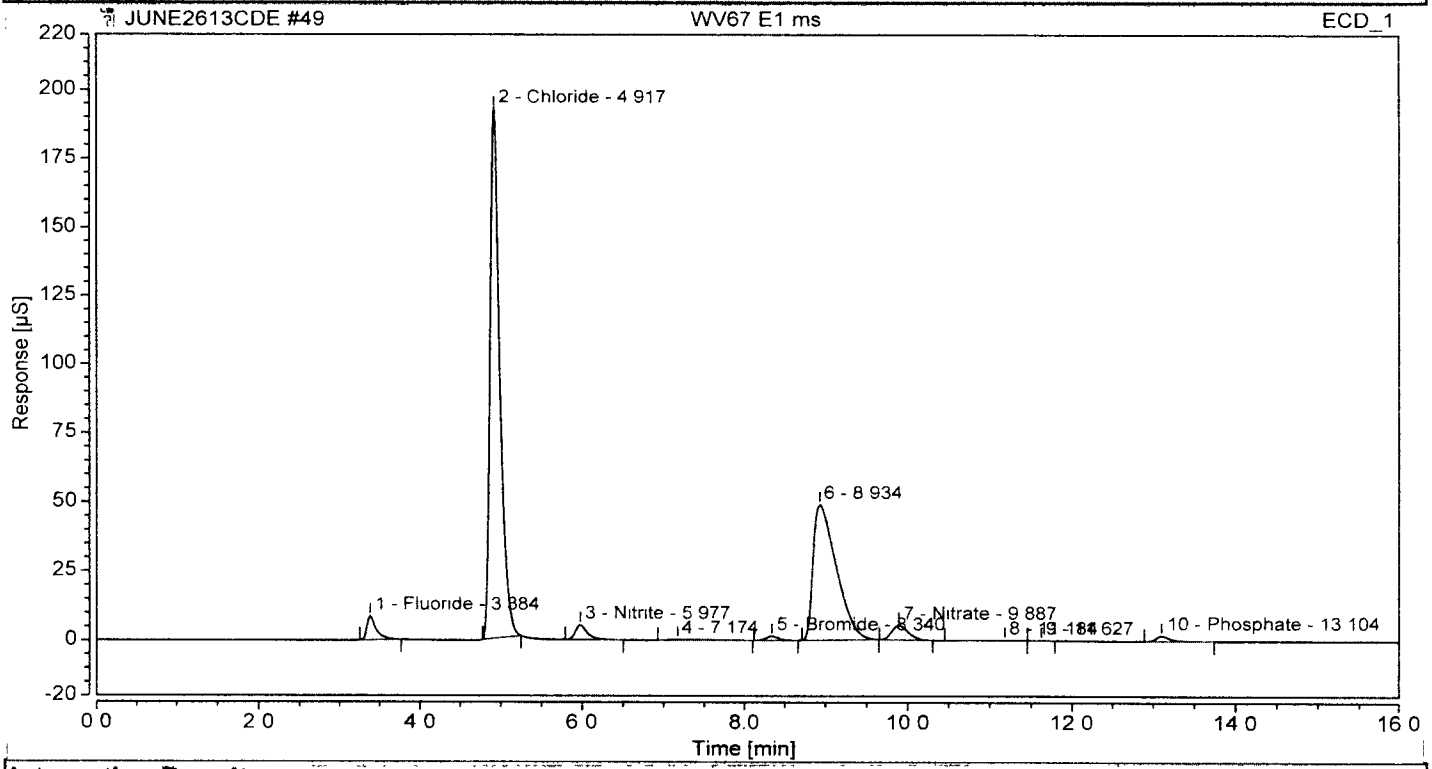
WV67 : 01267

Chromatogram and Results

Injection Details

Injection Name:	*WV67 E1 ms*	Inject Number:	49
Vial Number	*45*	User:	pat
Injection Type	*Unknown*	Sequence:	JUNE2613CDE
Dilution Factor:	*1 0*		
Instrument Method:	*INSTRMETH*		
Processing Method.	*processmethodat*		
Injection Date/Time:	*27/06/13 09.50*		

Chromatogram



Integration Results

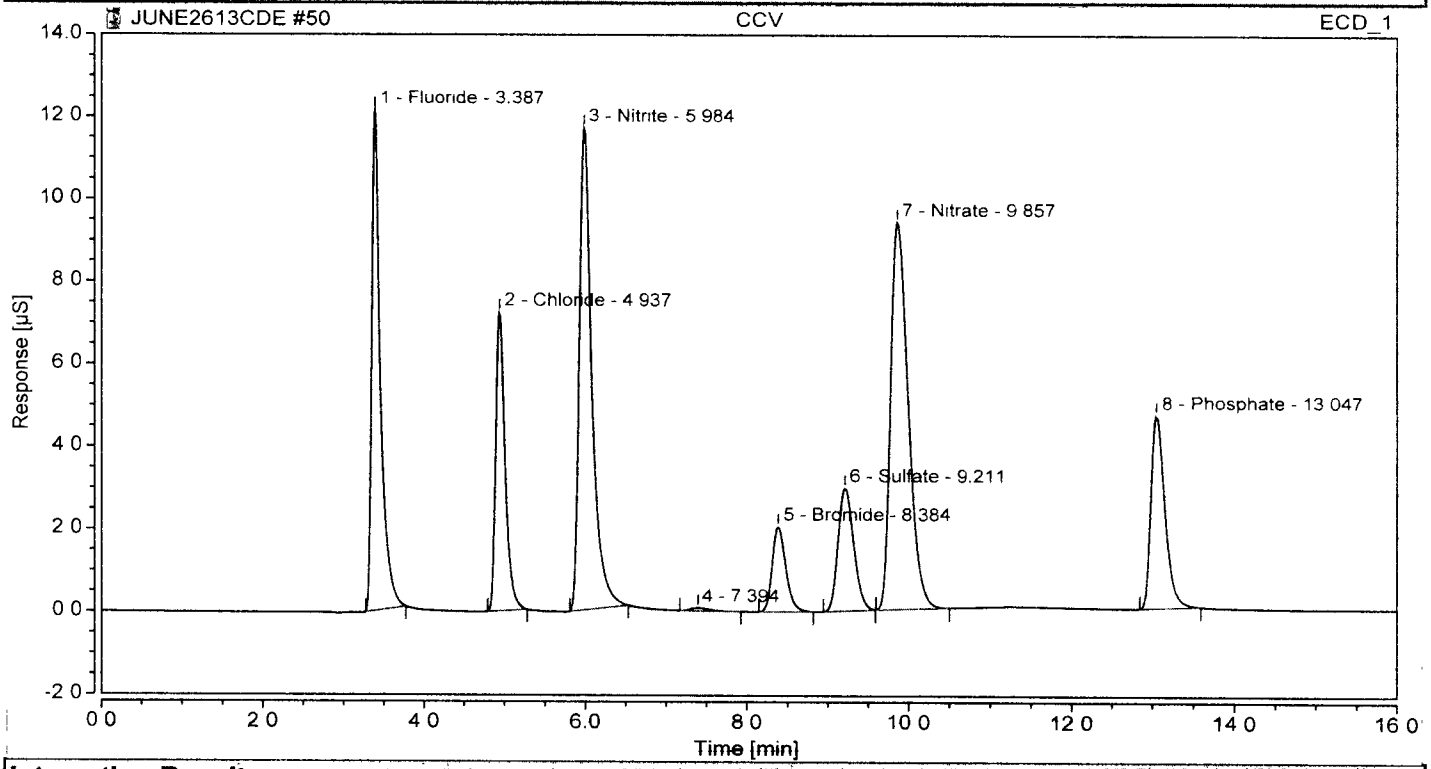
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	2.224	3.38	1.148	8.629	FALSE	n.a.
2	Chloride	1.0	84.022	4.92	26.919	192.234	FALSE	n.a.
3	Nitrite	1.0	1.234	5.98	0.899	5.304	FALSE	n.a.
4		1.0	n.a.	7.17	0.148	0.254	FALSE	n.a.
5	Bromide	1.0	1.991	8.34	0.271	1.504	FALSE	n.a.
6		1.0	n.a.	8.93	16.087	48.836	FALSE	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
7	Nitrate	1.0	1.498	9.89	1.228	5.204	FALSE	n.a.
8		1.0	n.a.	11.18	0.025	0.044	FALSE	n.a.
9		1.0	n.a.	11.63	0.008	0.065	FALSE	n.a.
10	Phosphate	1.0	1.212	13.10	0.378	1.952	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*CCV*	Inject Number:	50
Vial Number:	*34*	User:	pat
Injection Type:	*Check Standard*	Sequence:	JUNE2613CDE
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodai*		
Injection Date/Time:	*27/06/13 10.10*		

Chromatogram



Integration Results

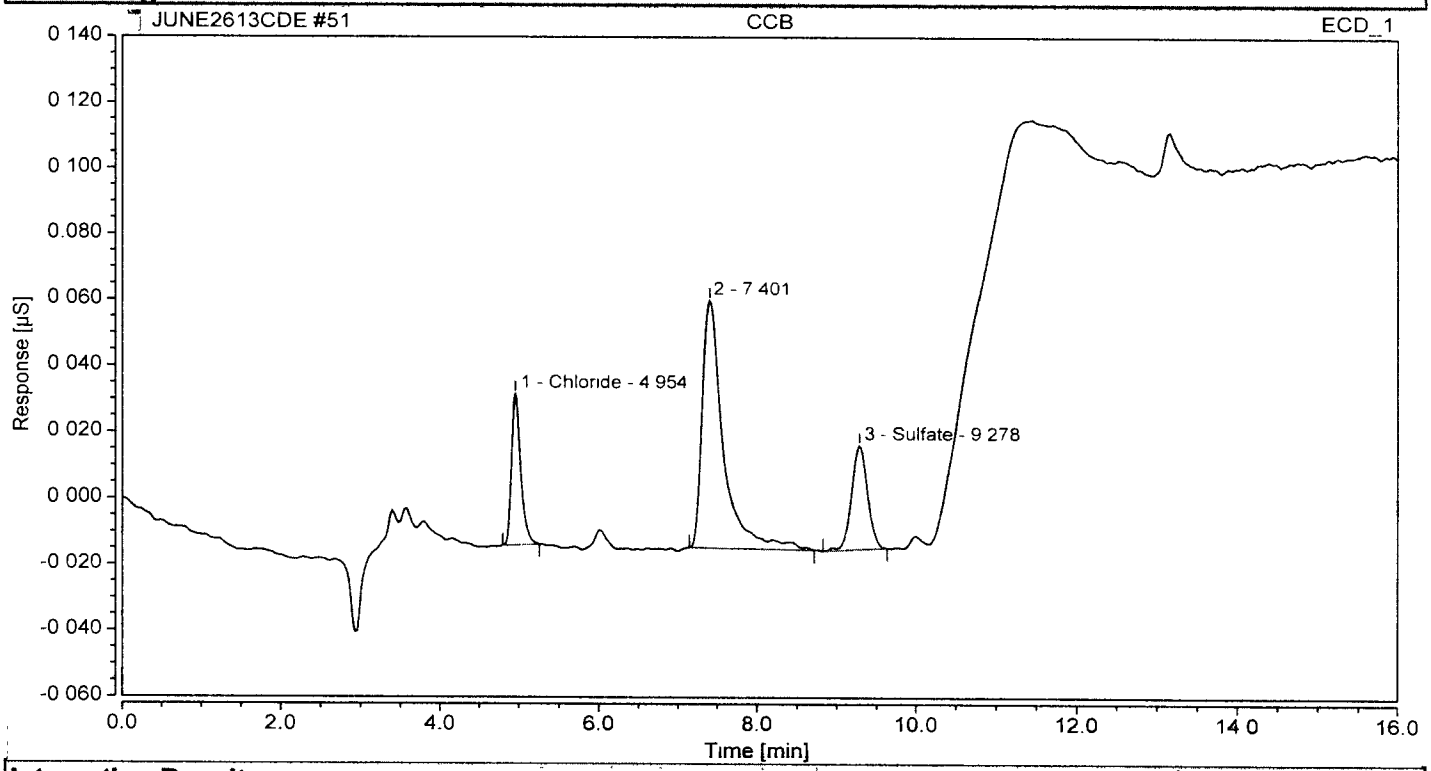
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	2.941	3.39	1.518	12.154	FALSE	n.a.
2	Chloride	1.0	2.969	4.94	0.951	7.242	FALSE	n.a.
3	Nitrite	1.0	2.897	5.98	2.112	11.682	FALSE	n.a.
4		1.0	n.a.	7.39	0.018	0.069	FALSE	n.a.
5	Bromide	1.0	2.916	8.38	0.396	2.070	FALSE	n.a.
6	Sulfate	1.0	2.960	9.21	0.672	2.985	FALSE	n.a.
7	Nitrate	1.0	2.869	9.86	2.353	9.382	FALSE	n.a.
8	Phosphate	1.0	2.963	13.05	0.925	4.686	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*CCB*	Inject Number:	51
Vial Number:	*35*	User	pat
Injection Type:	*Blank*	Sequence:	JUNE2613CDE
Dilution Factor:	*1 0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*27/06/13 10:30*		

Chromatogram



Integration Results

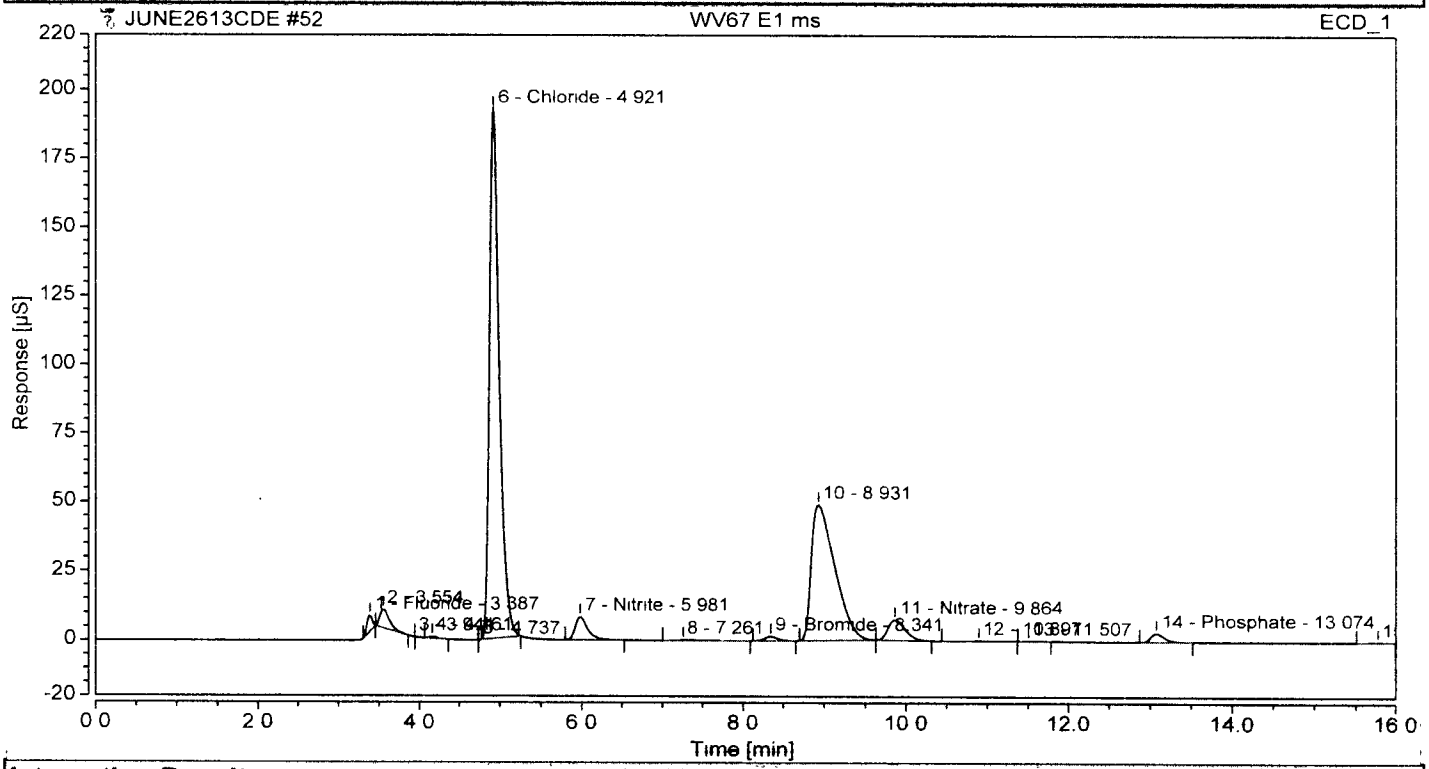
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	1.0	0.019	4.95	0.006	0.046	FALSE	n.a
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		1.0	n.a.	7.40	0.023	0.075	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	1.0	0.032	9.28	0.007	0.031	FALSE	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WV67 E1 ms*	Inject Number.	52
Vial Number	*46*	User	pat
Injection Type	*Unknown*	Sequence	JUNE2613CDE
Dilution Factor	*1 0*		
Instrument Method	*INSTRMETH*		
Processing Method	*processmethodal*		
Injection Date/Time.	*27/06/13 10.51*		

Chromatogram



Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.868	3.39	0.448	5.721	FALSE	n.a.
2		1.0	n.a.	3.55	0.914	6.645	FALSE	n.a.
3		1.0	n.a.	3.94	0.001	0.179	FALSE	n.a.
4		1.0	n.a.	4.16	0.078	0.698	FALSE	n.a.
5		1.0	n.a.	4.74	0.001	0.239	FALSE	n.a.
6	Chloride	1.0	84.037	4.92	26.923	192.174	FALSE	n.a.
7	Nitrite	1.0	1.987	5.98	1.448	8.255	FALSE	n.a.
8		1.0	n.a.	7.26	0.095	0.198	FALSE	n.a.
9	Bromide	1.0	2.046	8.34	0.278	1.553	FALSE	n.a.
10		1.0	n.a.	8.93	16.104	49.015	FALSE	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
11	Nitrate	1.0	2.178	9.86	1.786	7.347	FALSE	n.a.
12		1.0	n.a.	10.90	0.037	0.121	FALSE	n.a.
13		1.0	n.a.	11.51	0.017	0.065	FALSE	n.a.
14	Phosphate	1.0	1.864	13.07	0.582	3.108	FALSE	n.a.
15		1.0	n.a.	15.77	0.017	0.070	FALSE	n.a.

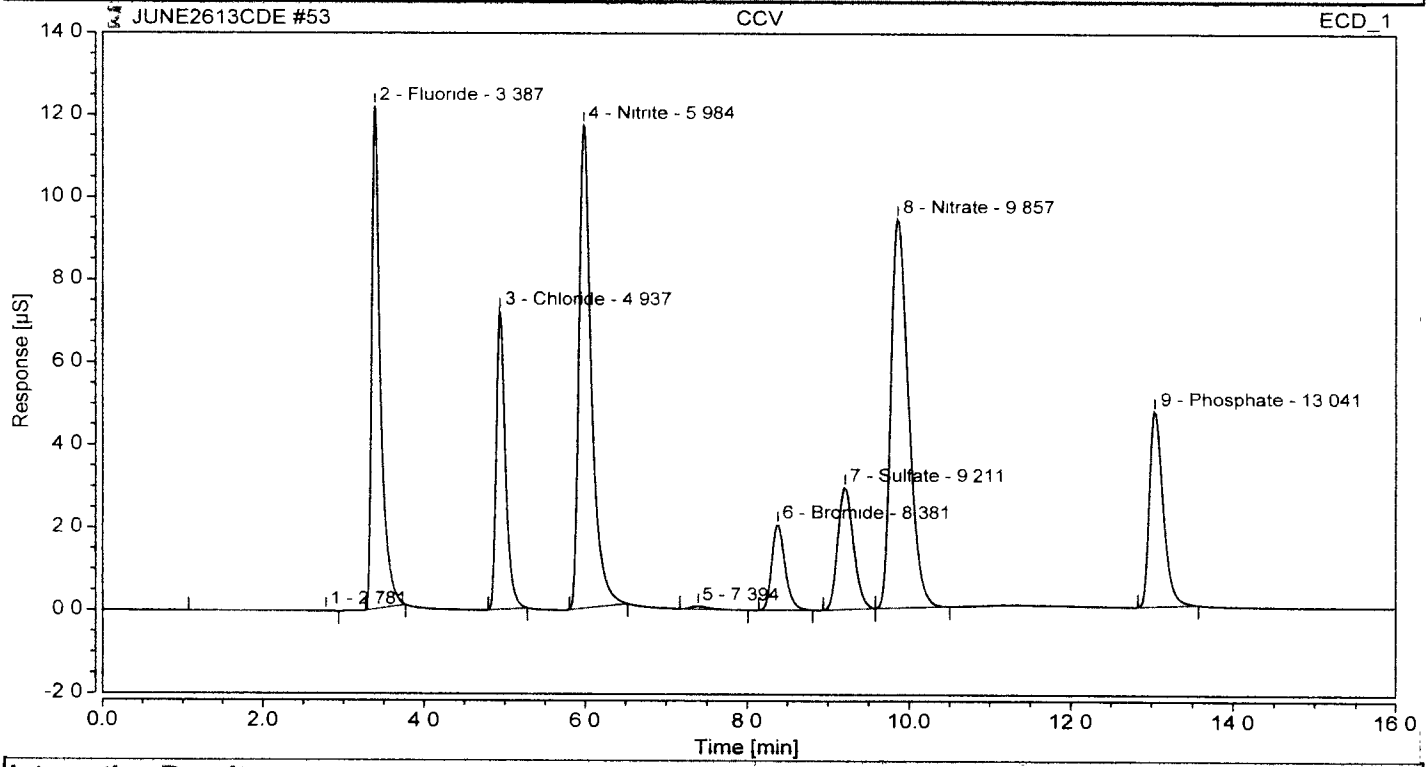
WV67 : 01271

Chromatogram and Results

Injection Details

Injection Name:	*CCV*	Inject Number:	53
Vial Number	*34*	User.	pat
Injection Type.	*Check Standard*	Sequence:	JUNE2613CDE
Dilution Factor.	*1.0*		
Instrument Method.	*INSTRMETH*		
Processing Method.	*processmethodal*		
Injection Date/Time.	*27/06/13 11:11*		

Chromatogram



Integration Results

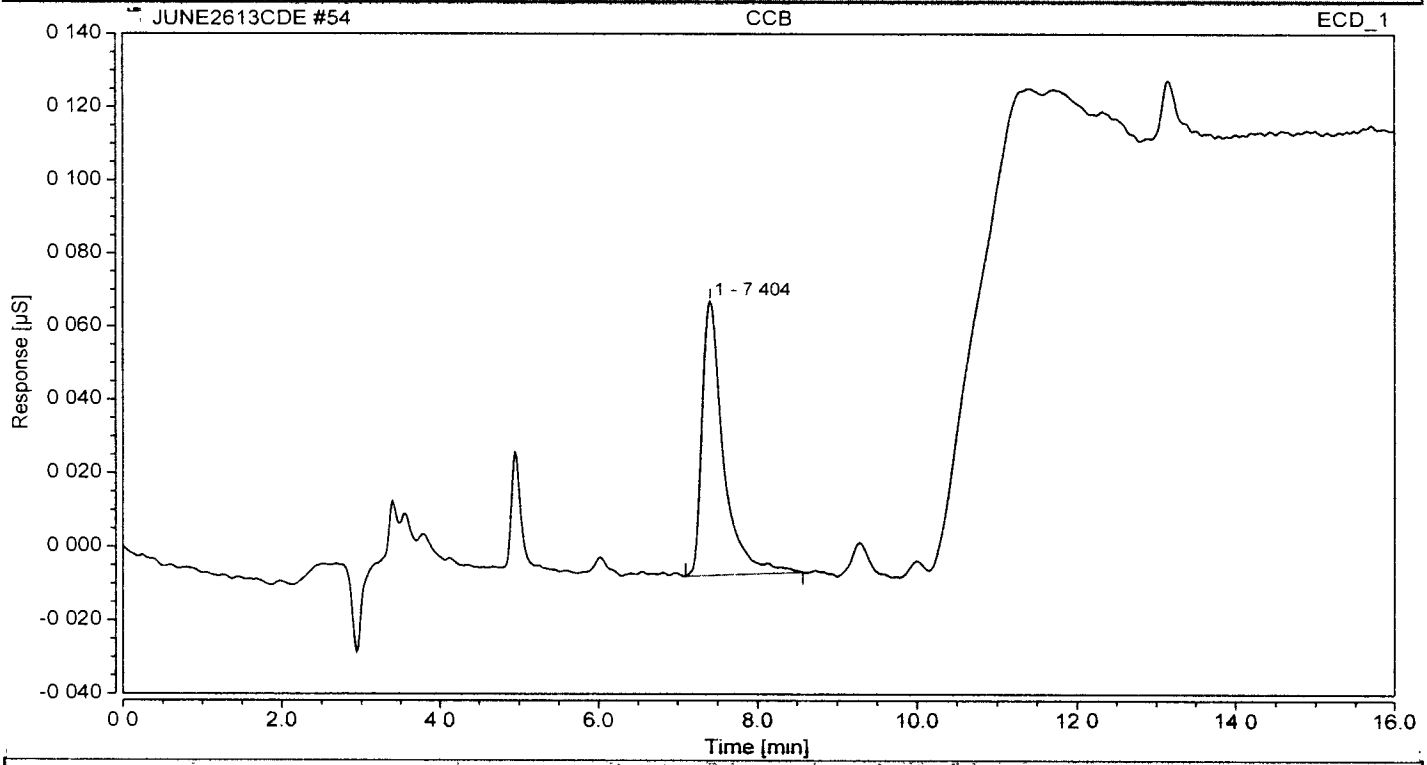
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1		1.0	n.a.	2.78	0.015	0.020	FALSE	n.a.
2	Fluoride	1.0	2.942	3.39	1.519	12.180	FALSE	n.a.
3	Chloride	1.0	2.963	4.94	0.949	7.219	FALSE	n.a.
4	Nitrite	1.0	2.895	5.98	2.110	11.704	FALSE	n.a.
5		1.0	n.a.	7.39	0.018	0.067	FALSE	n.a.
6	Bromide	1.0	2.921	8.38	0.397	2.075	FALSE	n.a.
7	Sulfate	1.0	2.930	9.21	0.665	2.954	FALSE	n.a.
8	Nitrate	1.0	2.873	9.86	2.356	9.415	FALSE	n.a.
9	Phosphate	1.0	2.978	13.04	0.930	4.725	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name	*CCB*	Inject Number:	54
Vial Number	*35*	User.	pat
Injection Type	*Blank*	Sequence:	JUNE2613CDE
Dilution Factor	*1 0*		
Instrument Method	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time	*27/06/13 11.32*		

Chromatogram



Integration Results

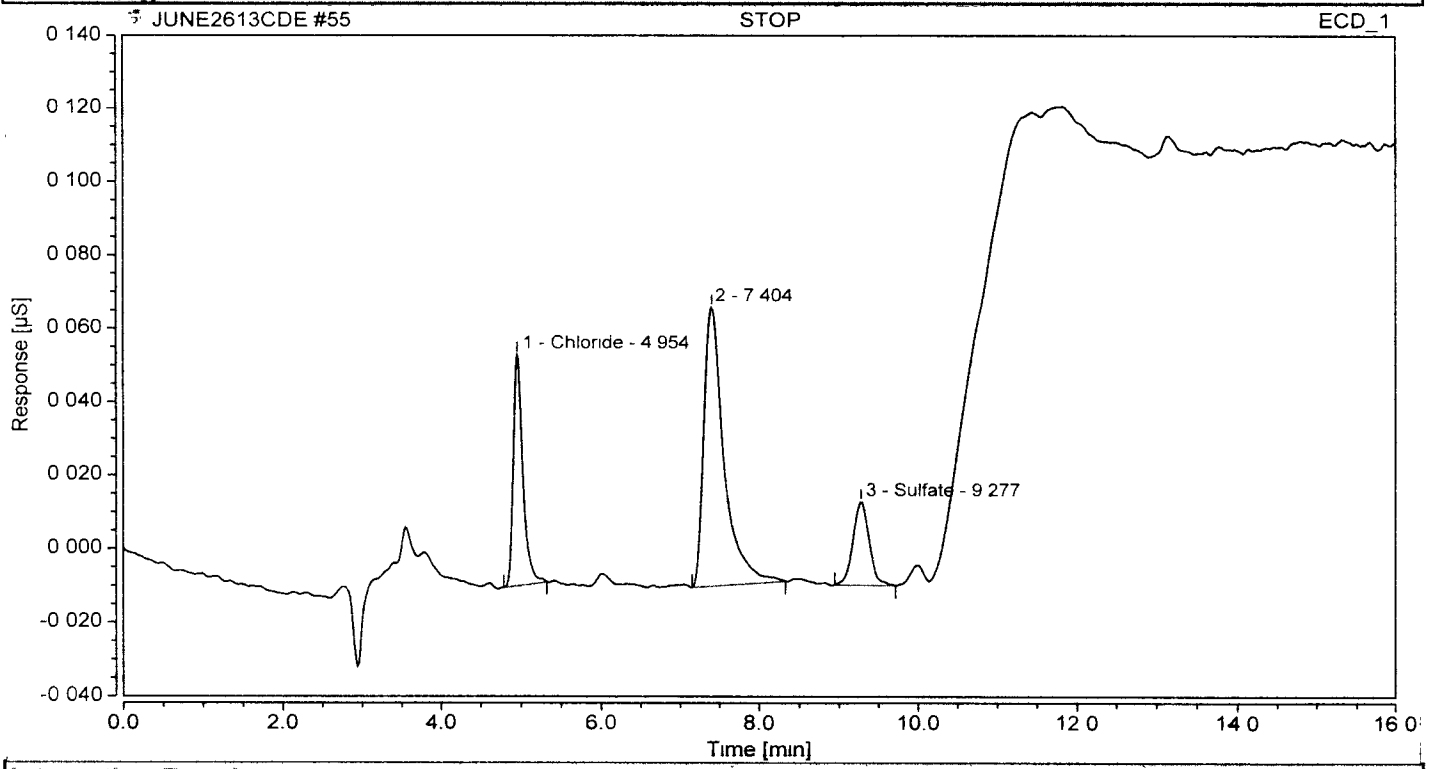
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		1.0	n.a.	7.40	0.023	0.075	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*STOP*	Inject Number:	55
Vial Number	*1*	User.	pat
Injection Type	*Unknown*	Sequence	JUNE2613CDE
Dilution Factor	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time.	*27/06/13 11:53*		

Chromatogram



Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	1.0	0.027	4.95	0.009	0.063	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		1.0	n.a.	7.40	0.023	0.076	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	1.0	0.024	9.28	0.005	0.023	FALSE	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Calibration

CALIBRATION FILE NAME: MAY2313RR

Calibration Details — Fluoride

Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	1 9371
Number of Calibration Points	5	*Curve (C2)*	0 0000
Number of disabled Calibration Points	0	*R-Square*	0 9999

Calibration Results — Fluoride

No	Injection Name	Calibration Level	X Value Fluoride	Y Value Fluoride	Amount mg/l Fluoride	Area µS*min Fluoride	Height µS Fluoride
1	STD1	01	0.0437	0.1000	0.0847	0.044	0.345
2	STD2	02	0.2465	0.5000	0.4774	0.246	2.058
3	STD3	03	0.5150	1.0000	0.9977	0.515	4.296
4	STD4	04	1.3017	2.5000	2.5216	1.302	10.658
5	STD5	05	2.5770	5.0000	4.9920	2.577	20 470

Calibration Details — Chloride

Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	3 1205
Number of Calibration Points	5	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0 9995

Calibration Results — Chloride

No.	Injection Name	Calibration Level	X Value Chloride	Y Value Chloride	Amount mg/l Chloride	Area µS*min Chloride	Height µS Chloride
1	STD1	01	0.0297	0.1000	0.0927	0.030	0.227
2	STD2	02	0.1451	0.5000	0.4527	0.145	1.120
3	STD3	03	0.3025	1.0000	0.9440	0.303	2.330
4	STD4	04	0.7874	2.5000	2.4570	0.787	6.013
5	STD5	05	1.6138	5.0000	5.0359	1.614	12.265

Calibration Details — Nitrite

Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	1 3718
Number of Calibration Points	5	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9998

Calibration Results — Nitrite

No	Injection Name	Calibration Level	X Value Nitrite	Y Value Nitrite	Amount mg/l Nitrite	Area µS*min Nitrite	Height µS Nitrite
1	STD1	01	0.0644	0.1000	0.0884	0.064	0.405
2	STD2	02	0.3583	0.5000	0.4915	0.358	2.212
3	STD3	03	0.7416	1.0000	1.0173	0.742	4.433
4	STD4	04	1.8526	2.5000	2.5414	1.853	10.468
5	STD5	05	3.6277	5.0000	4.9764	3.628	19.511

Calibration Details — Bromide

Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	7.3523
Number of Calibration Points	5	*Curve (C2)*	0 0000
Number of disabled Calibration Points	0	*R-Square*	0.9981

Calibration Results — Bromide

No.	Injection Name	Calibration Level	X Value Bromide	Y Value Bromide	Amount mg/l Bromide	Area µS*min Bromide	Height µS Bromide
1	STD1	01	0.0103	0.1000	0.0754	0.010	0.053
2	STD2	02	0.0571	0.5000	0.4198	0.057	0.295
3	STD3	03	0.1217	1.0000	0.8948	0.122	0.634
4	STD4	04	0.3283	2.5000	2.4138	0.328	1.709
5	STD5	05	0.6891	5.0000	5.0667	0.689	3.562

WVDT : 01275

Calibration Details	**Sulfate**		
Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	4.4029
Number of Calibration Points	5	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0 9988

Calibration Results **Sulfate**

No	Injection Name	Calibration Level	X Value Sulfate	Y Value Sulfate	Amount mg/l Sulfate	Area µS*min Sulfate	Height µS Sulfate
1	STD1	01	0.0188	0.1000	0.0828	0.019	0.082
2	STD2	02	0.0972	0.5000	0.4279	0.097	0.430
3	STD3	03	0.2082	1.0000	0.9165	0.208	0.922
4	STD4	04	0.5542	2.5000	2.4403	0.554	2.441
5	STD5	05	1.1471	5.0000	5.0504	1.147	5.017

Calibration Details	**Nitrate**		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	1.2190
Number of Calibration Points	5	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.9994

Calibration Results **Nitrate**

No.	Injection Name	Calibration Level	X Value Nitrate	Y Value Nitrate	Amount mg/l Nitrate	Area µS*min Nitrate	Height µS Nitrate
1	STD1	01	0.0615	0.1000	0.0750	0.062	0.286
2	STD2	02	0.3635	0.5000	0.4431	0.363	1.613
3	STD3	03	0.7771	1.0000	0.9473	0.777	3.349
4	STD4	04	2.0213	2.5000	2.4640	2.021	8.179
5	STD5	05	4.1286	5.0000	5.0329	4.129	15.253

Calibration Details	**Phosphate**		
Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	3.1994
Number of Calibration Points	5	*Curve (C2)*	0 0000
Number of disabled Calibration Points	0	*R-Square*	0 9974

Calibration Results **Phosphate**

No	Injection Name	Calibration Level	X Value Phosphate	Y Value Phosphate	Amount mg/l Phosphate	Area µS*min Phosphate	Height µS Phosphate
1	STD1	01	0.0222	0.1000	0.0710	0.022	0.094
2	STD2	02	0.1242	0.5000	0.3972	0.124	0.609
3	STD3	03	0.2753	1.0000	0.8808	0.275	1.415
4	STD4	04	0.7508	2.5000	2.4020	0.751	3.811
5	STD5	05	1.5864	5.0000	5.0755	1.586	7.410

Table of Contents: ARI Job WV95

Client: SAIC

Project: 209977 NPDES Sampling Support

	Page From:	Page To:
Inventory Sheet		
Cover Letter	1	1
Chain of Custody Documentation	2	5
Case Narrative, Data Qualifiers, Control Limits	6	12
Pesticide Analysis		
Report and Summary QC Forms	13	38
Pesticide Raw Data		
Extractions Bench Sheets and Notes	39	42
Initial Calibration	43	140
Run Logs, Continuing Calibrations, and Raw Data	141	167

BL
Signature

July-01-2013
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

July 1, 2013

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

RE: Project: NPDES Sampling Support, 209977
ARI Job No.: WV95

Dear Christine:

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

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

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

Sincerely,

ANALYTICAL RESOURCES, INC.

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

cc: eFile WV95

Enclosures

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

Chain of Custody Documentation

ARI Job ID: WV95

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: WW67	Turn-around Requested: 2 day TAT	Date: 6-26-13
ARI Client Company: SAIC	Phone: 206.300.2144 nancarrowc@saic.com	Page: 1 of 1
Client Contact: Christine Nancarrow		No. of Coolers: 2 Cooler Temps: 16, 8.3
Client Project Name: NPDES Sampling Support		
Client Project #: 209977	Samplers: CW CN	

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

Sample ID	Date	Time	Matrix	No. Containers	PCB Aroclors (EPA 8082)	SVOCs/PAHs (EPA 8270 / EPA 8270-SIM)	Pesticides (EPA 8081)	Dioxins/Furans (EPA 1613B)	TPH-Diesel (NWTPH-DW)	VOCs (EPA8260)	Metals (EPA 6010/200.8)	Mercury (EPA 7471)	TOC (Plumb 1981)	Total Solids (SM2540B)	Particle Size Distribution (Sedigraph)	NWTPH-Gas (NWTPH-Gx)	Notes/Comments
UP-CB-BR-20130626-S	6-26-13	1133	Sediment	12	✓	✓	✓	✓+	✓	✓	✓+	✓+	✓	✓	✓+	✓	+HOLD
UP-MHF-165-20130626-S	6-26-13	1409	Sediment	11	✓	✓	✓	~~CW 6-27-13~~ ✓	✓	✓	✓+	✓+	✓	✓	✓+	✓	Do not analyze for Dioxin/Furan
UP-CB-AG-20130626-S	6-26-13	1547	Sediment	11	✓	✓	✓		✓	✓	✓+	✓+	✓	✓	✓+	✓	
										CW							

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Due to pending state shutdown please expedite samples on a 2-d TAT EXCEPT those noted on hold per the '+'.	Printed Name: Corey Wilson	Printed Name: Jennifer Mitsap	Printed Name:	Printed Name:
	Company: SAIC	Company: ARI	Company:	Company:
	Date & Time: 6-26-13 1732	Date & Time: 6/26/13 1732	Date & Time:	Date & Time:

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

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

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: 2 day TAT	Date: 6-26-13
ARI Client Company: SAIC	Phone: 206.300.2144 nancarrowc@saic.com	Page: 1 of 1
Client Contact: Christine Nancarrow		No. of Coolers: 2 Cooler Temps: 17.6, 8.3
Client Project Name: NPDES Sampling Support		
Client Project #: 209977	Samplers: CW CN	

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

Sample ID	Date	Time	Matrix	No. Containers	SVOCs/PAHs (EPA 8270/8270 SIM)	Pesticides (EPA 8081)	Total Metals (EPA 200.8)	Mercury (EPA 7470)	Dissolved Metals (EPA 200.8)	pH (SM4500H)	Specific Conductance (EPA 120.1)	Anions (EPA 300.0/353.2)	Alkalinity (SM2320)	TOC (SM5310)	DOC (SM5310)	TSS (SM2540D)	Notes/Comments: TPH (NWTPH-Gx)	VOCs (EPA 8260)	+'= Hold
UP-CB-BK-20130625-W	6-25-13	1054	Water	12	✓	✓	✓+	✓+	✓+	✓	✓+	✓	✓	✓+	✓+	✓			+
UP-TB-01-20130625-W	6-25-13	1200	Water	2													✓	✓	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Do not dispose of samples without prior written authorization from SAIC PM. Please expedite samples on a 2-day TAT EXCEPT those noted on HOLD per the '+'.	Printed Name: Corey Wilson	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: SAIC	Company: ARI	Company:	Company:
	Date & Time: 6-26-13 1732	Date & Time: 6/26/13 1732	Date & Time:	Date & Time:

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

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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client. SAIC

Project Name: NPDES Sampling Support

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier (Hand Delivered) Other: _____

Assigned ARI Job No: WV67

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO
Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)	17.6 8.3 ___ ___	
If cooler temperature is out of compliance fill out form 00070F	Temp Gun ID#:	90877952

Cooler Accepted by: JM Date: 6/26/13 Time: 1737

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used?	Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other:		
Was sufficient ice used (if appropriate)?	NA	YES	(NO)
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	NA	(YES)	NO
Were all VOC vials free of air bubbles?	NA	(YES)	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	NA	4/15/13	

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

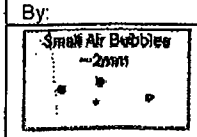
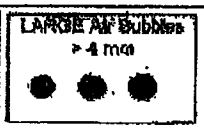
Samples Logged by: JM Date: 6/26/13 Time: 1740

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

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

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm	
			Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

WV67 : 00005

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: WV95

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative

Client: SAIC
Project: NPDES Sampling Support, 209977
ARI Job No.: WV95

Sample Receipt

One water sample was removed from archive on June 28, 2013 and logged under ARI job WV95. The sample was analyzed for Pesticides. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Pesticides by SW8081

The sample was extracted and analyzed within recommended holding times.

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

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limits.

The LCS and LCSD percent recoveries of delta-BHC fell outside the control limits low for **LCS-062813**. All other percent recoveries were within control limits. No corrective action was taken.

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: WV95
Client: SAIC
Project Event: 209977
Project Name: NPDES Sampling Support

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	UP-CB-B8-20130626-W	WV95A	13-13818	Water	06/26/13 10:54	06/26/13 17:32

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

U — Indicates that the target analyte was not detected at the reported concentration

* — Duplicate RPD is not within established control limits

B — Reported value is less than the CRDL but ≥ the Reporting Limit

N — Matrix Spike recovery not within established control limits

NA — Not Applicable, analyte not spiked

H — The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible

L — Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U — Indicates that the target analyte was not detected at the reported concentration

* — Flagged value is not within established control limits

B — Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.

J — Estimated concentration when the value is less than ARI's established reporting limits

D — The spiked compound was not detected due to sample extract dilution

E — Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

Q — Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).

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

NA The flagged analyte was not analyzed for

NR Spiked compound recovery is not reported due to chromatographic interference

NS The flagged analyte was not spiked into the sample

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

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

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

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

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

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

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

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

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

Geotechnical Data

A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.

F Samples were frozen prior to particle size determination

SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations

SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis

W Weight of sample in some pipette aliquots was below the level required for accurate weighting

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

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

LOD Spike level = LOQ Concentration

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

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

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

Pesticide Analysis
Report and Summary QC Forms

ARI Job ID: WV95

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: UP-CB-B8-20130626-W**
Extraction Method: SW3510C **SAMPLE**
Page 1 of 1

Lab Sample ID: WV95A
LIMS ID: 13-13818
Matrix: Water
Data Release Authorized:
Reported: 07/01/13

QC Report No: WV95-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 06/28/13
Date Analyzed: 06/29/13 11:30
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.0085	0.050	< 0.050 U
319-85-7	beta-BHC	0.0098	0.050	< 0.050 U
319-86-8	delta-BHC	0.0087	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.016	0.050	< 0.050 U
76-44-8	Heptachlor	0.011	0.050	< 0.050 U
309-00-2	Aldrin	0.010	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.0079	0.050	< 0.050 U
959-98-8	Endosulfan I	0.0089	0.13	< 0.13 Y
60-57-1	Dieldrin	0.017	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.018	0.10	< 0.10 U
72-20-8	Endrin	0.017	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.014	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.019	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.024	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.017	0.10	< 0.10 U
72-43-5	Methoxychlor	0.074	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.015	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.016	0.10	< 0.10 U
5103-74-2	trans-Chlordane	0.0082	0.050	< 0.050 U
5103-71-9	cis-Chlordane	0.0082	0.050	< 0.050 U
8001-35-2	Toxaphene	0.22	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	0.010	0.050	< 0.050 U
87-68-3	Hexachlorobutadiene	0.012	0.050	< 0.050 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	80.5%
Tetrachlorometaxylene	72.8%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

SW8081/PESTICIDE WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WV95-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP	TCMX	TOT OUT
MB-062813	71.8%	70.5%	0
LCS-062813	74.0%	71.0%	0
LCSD-062813	66.5%	67.0%	0
UP-CB-B8-20130626-W	80.5%	72.8%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(37-125)	(11-144)
(TCMX) = Tetrachlorometaxylene	(38-103)	(30-105)

Prep Method: SW3510C
Log Number Range: 13-13818 to 13-13818

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: LCS-062813**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-062813 QC Report No: WV95-SAIC
LIMS ID: 13-13818 Project: NPDES Sampling Support
Matrix: Water 209977
Data Release Authorized: Date Sampled: 06/26/13
Reported: 07/01/13 Date Received: 06/26/13

Date Extracted LCS/LCSD: 06/28/13 Sample Amount LCS: 500 mL
LCSD: 500 mL
Date Analyzed LCS: 06/29/13 10:55 Final Extract Volume LCS: 5.0 mL
LCSD: 06/29/13 11:13 LCSD: 5.0 mL
Instrument/Analyst LCS: ECD6/YZ Dilution Factor LCS: 1.00
LCSD: ECD6/YZ LCSD: 1.00
GPC Cleanup: No Sulfur Cleanup: Yes
Florisil Cleanup: No Silica Gel: No

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
alpha-BHC	0.162	0.200	81.0%	0.159	0.200	79.5%	1.9%
beta-BHC	0.169	0.200	84.5%	0.167	0.200	83.5%	1.2%
delta-BHC	0.0475 J	0.200	23.8%	0.0480 J	0.200	24.0%	1.0%
gamma-BHC (Lindane)	0.166	0.200	83.0%	0.165	0.200	82.5%	0.6%
Heptachlor	0.151	0.200	75.5%	0.146	0.200	73.0%	3.4%
Aldrin	0.156	0.200	78.0%	0.150	0.200	75.0%	3.9%
Heptachlor Epoxide	0.182	0.200	91.0%	0.183	0.200	91.5%	0.5%
Endosulfan I	0.190	0.200	95.0%	0.192	0.200	96.0%	1.0%
Dieldrin	0.373	0.400	93.2%	0.377	0.400	94.2%	1.1%
4,4'-DDE	0.449	0.400	112%	0.447	0.400	112%	0.4%
Endrin	0.328	0.400	82.0%	0.329	0.400	82.2%	0.3%
Endosulfan II	0.364	0.400	91.0%	0.367	0.400	91.8%	0.8%
4,4'-DDD	0.356	0.400	89.0%	0.355	0.400	88.8%	0.3%
Endosulfan Sulfate	0.298	0.400	74.5%	0.302	0.400	75.5%	1.3%
4,4'-DDT	0.287	0.400	71.8%	0.292	0.400	73.0%	1.7%
Methoxychlor	1.37	2.00	68.5%	1.38	2.00	69.0%	0.7%
Endrin Ketone	0.389	0.400	97.2%	0.393	0.400	98.2%	1.0%
Endrin Aldehyde	0.309	0.400	77.2%	0.322	0.400	80.5%	4.1%
trans-Chlordane	0.180	0.200	90.0%	0.178	0.200	89.0%	1.1%
cis-Chlordane	0.178	0.200	89.0%	0.177	0.200	88.5%	0.6%
Hexachlorobenzene	0.160	0.200	80.0%	0.152	0.200	76.0%	5.1%
Hexachlorobutadiene	0.126	0.200	63.0%	0.122	0.200	61.0%	3.2%

Pest/PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	74.0%	66.5%
Tetrachlorometaxylene	71.0%	67.0%

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

FORM 4
PESTICIDE METHOD BLANK SUMMARY

BLANK NO.

WV95MBW1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WV95
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WV95MBW1
Lab File ID: 0629A005

Date Extracted: 06/28/13
Matrix: LIQUID

Date Analyzed: 06/29/13
Instrument ID: ECD6

Time Analyzed: 1037
GC Columns: STX-CLP1/STX-CLP2

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WV95LCSW1	WV95LCSW1	06/29/13
02	WV95LCSDW1	WV95LCSDW1	06/29/13
03	UP-CB-B8-20130626-W	WV95A	06/29/13

ALL RUNS ARE DUAL COLUMN

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: MB-062813**
Extraction Method: SW3510C **METHOD BLANK**

Page 1 of 1
Lab Sample ID: MB-062813 QC Report No: WV95-SAIC
LIMS ID: 13-13818 Project: NPDES Sampling Support
Matrix: Water 209977
Data Release Authorized: Date Sampled: NA
Reported: 07/01/13 Date Received: NA

Date Extracted: 06/28/13 Sample Amount: 500 mL
Date Analyzed: 06/29/13 10:37 Final Extract Volume: 5.0 mL
Instrument/Analyst: ECD6/YZ Dilution Factor: 1.00
GPC Cleanup: No Silica Gel: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.0085	0.050	< 0.050 U
319-85-7	beta-BHC	0.0098	0.050	< 0.050 U
319-86-8	delta-BHC	0.0087	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.016	0.050	< 0.050 U
76-44-8	Heptachlor	0.011	0.050	< 0.050 U
309-00-2	Aldrin	0.010	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.0079	0.050	< 0.050 U
959-98-8	Endosulfan I	0.0089	0.050	< 0.050 U
60-57-1	Dieldrin	0.017	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.018	0.10	< 0.10 U
72-20-8	Endrin	0.017	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.014	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.019	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.024	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.017	0.10	< 0.10 U
72-43-5	Methoxychlor	0.074	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.015	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.016	0.10	< 0.10 U
5103-74-2	trans-Chlordane	0.0082	0.050	< 0.050 U
5103-71-9	cis-Chlordane	0.0082	0.050	< 0.050 U
8001-35-2	Toxaphene	0.22	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	0.010	0.050	< 0.050 U
87-68-3	Hexachlorobutadiene	0.012	0.050	< 0.050 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	71.8%
Tetrachlorometaxylene	70.5%

6D

8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV95 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

	RT OF STANDARDS							MEAN	RT WINDOW	
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	RT	FROM	TO
alpha-BHC	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.24	4.34
beta-BHC	4.65	4.65	4.65	4.64	4.64	4.64	4.64	4.64	4.59	4.69
delta-BHC	4.82	4.82	4.81	4.81	4.81	4.81	4.81	4.81	4.76	4.86
gamma-BHC (Lindane)	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.52	4.62
Heptachlor	5.01	5.01	5.01	5.01	5.01	5.01	5.01	5.01	4.96	5.06
Aldrin	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.26	5.36
Heptachlor epoxide b	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.83	5.93
Endosulfan I	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.21	6.31
Dieldrin	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.43	6.53
4,4'-DDE	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.13	6.23
Endrin	6.70	6.70	6.70	6.70	6.70	6.70	6.70	6.70	6.65	6.75
Endosulfan II	6.91	6.91	6.91	6.91	6.91	6.91	6.91	6.91	6.86	6.96
4,4'-DDD	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.69	6.79
Endosulfan sulfate	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.62	7.72
4,4'-DDT	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.95	7.05
Methoxychlor	7.43	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.37	7.47
Endrin ketone	7.93	7.93	7.93	7.93	7.93	7.93	7.93	7.93	7.88	7.98
Endrin aldehyde	7.28	7.28	7.28	7.28	7.28	7.28	7.28	7.28	7.23	7.33
gamma-Chlordane	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.95	6.05
alpha-Chlordane	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.08	6.18
Hexachlorobutadiene	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.26	2.36
Hexachlorobenzene	4.14	4.14	4.14	4.14	4.14	4.14	4.14	4.14	4.09	4.19
Tetrachloro-m-xylene	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.75	3.85
Decachlorobiphenyl	8.78	8.78	8.78	8.78	8.78	8.78	8.78	8.78	8.73	8.83

6D
8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV95 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

COMPOUND	RT OF STANDARDS							MEAN RT	RT WINDOW	
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7		FROM	TO
alpha-BHC	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.66	4.76
beta-BHC	5.14	5.14	5.14	5.14	5.14	5.14	5.14	5.14	5.09	5.19
delta-BHC	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.40	5.50
gamma-BHC (Lindane)	5.07	5.07	5.07	5.06	5.07	5.07	5.07	5.07	5.02	5.12
Heptachlor	5.53	5.53	5.53	5.53	5.53	5.53	5.53	5.53	5.48	5.58
Aldrin	5.87	5.87	5.87	5.87	5.87	5.87	5.87	5.87	5.82	5.92
Heptachlor epoxide b	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.37	6.47
Endosulfan I	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.76	6.86
Dieldrin	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.02	7.12
4,4'-DDE	6.87	6.87	6.87	6.87	6.87	6.87	6.87	6.87	6.82	6.92
Endrin	7.36	7.36	7.35	7.35	7.36	7.36	7.36	7.36	7.31	7.41
Endosulfan II	7.54	7.54	7.54	7.54	7.54	7.54	7.55	7.54	7.50	7.60
4,4'-DDD	7.41	7.41	7.41	7.41	7.41	7.41	7.41	7.41	7.36	7.46
Endosulfan sulfate	8.09	8.09	8.09	8.09	8.09	8.09	8.09	8.09	8.04	8.14
4,4'-DDT	7.69	7.69	7.69	7.69	7.69	7.69	7.69	7.69	7.64	7.74
Methoxychlor	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.23	8.33
Endrin ketone	8.58	8.58	8.58	8.58	8.58	8.58	8.58	8.58	8.53	8.63
Endrin aldehyde	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.79	7.89
gamma-Chlordane	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.55	6.65
alpha-Chlordane	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.69	6.79
Hexachlorobutadiene	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.42	2.52
Hexachlorobenzene	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.54	4.64
Tetrachloro-m-xylene	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.08	4.18
Decachlorobiphenyl	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.67	9.77

6E
8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV95 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

	CALIBRATION FACTORS								R^2
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	%RSD
alpha-BHC	1.5439	1.5547	1.5102	1.6675	1.5722	1.6801	1.7024	1.6044	4.8
beta-BHC	0.7227	0.6940	0.6288	0.6544	0.5978	0.6172	0.6154	0.6472	7.1
delta-BHC	1.3108	1.3377	1.2922	1.4417	1.3673	1.4738	1.5010	1.3892	6.0
gamma-BHC (Lindane)	1.4389	1.4516	1.3866	1.5141	1.4188	1.5091	1.5210	1.4629	3.6
Heptachlor	1.4611	1.4499	1.3707	1.4603	1.3396	1.3863	1.3590	1.4038	3.7
Aldrin	1.3809	1.3803	1.3036	1.4204	1.3102	1.3714	1.3549	1.3602	3.0
Heptachlor epoxide b	1.3713	1.3363	1.2293	1.3089	1.1855	1.2139	1.1821	1.2610	6.1
Endosulfan I	1.2951	1.2614	1.1522	1.2204	1.1025	1.1230	1.0962	1.1787	6.8
Dieldrin	1.2872	1.2978	1.2235	1.3084	1.1909	1.2167	1.1938	1.2455	4.1
4,4'-DDE	1.0139	0.9831	0.9049	0.9548	0.8804	0.9337	0.9621	0.9476	4.8
Endrin	1.2671	1.2700	1.2054	1.2552	1.1578	1.1596	1.1241	1.2056	5.0
Endosulfan II	1.2826	1.2659	1.1980	1.2432	1.1395	1.1415	1.1072	1.1968	5.8
4,4'-DDD	1.2001	1.1988	1.1420	1.1784	1.1006	1.1329	1.1060	1.1512	3.6
Endosulfan sulfate	1.1243	1.1172	1.0439	1.0892	0.9973	1.0231	1.0024	1.0568	5.0
4,4'-DDT	1.1508	1.1600	1.1076	1.1738	1.0915	1.1372	1.1217	1.1346	2.6
Methoxychlor	0.6089	0.5929	0.5343	0.5362	0.4840	0.4979	0.5049	0.5370	8.9
Endrin ketone	1.4712	1.4100	1.2991	1.3397	1.2084	1.2410	1.2163	1.3122	7.7
Endrin aldehyde	1.0260	1.0155	0.9446	0.9809	0.8892	0.8943	0.8714	0.9460	6.7
gamma-Chlordane	1.3445	1.3274	1.2342	1.3370	1.2340	1.2975	1.2933	1.2954	3.6
alpha-Chlordane	1.3528	1.3154	1.2108	1.2957	1.1858	1.2371	1.2288	1.2609	4.8
Hexachlorobutadiene	1.9025	1.8274	1.7247	1.8054	1.6395	1.7040	1.7020	1.7579	5.1
Hexachlorobenzene	1.4861	1.3849	1.2506	1.2922	1.1582	1.1894	1.1740	1.2765	9.5
Tetrachloro-m-xylene	1.1560	1.1331	1.0665	1.1244	1.0248	1.0590	1.0400	1.0862	4.7
Decachlorobiphenyl	1.1337	1.0998	0.9925	1.0181	0.9174	0.9470	0.9398	1.0069	8.2

6E

8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV95 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

	CALIBRATION FACTORS								R^2
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	%RSD
alpha-BHC	1.8907	1.9585	1.8601	2.0205	1.8576	1.9256	1.8660	1.9113	3.2
beta-BHC	1.0592	0.9600	0.8113	0.8084	0.7203	0.7323	0.7044	0.8280	16.2
delta-BHC	1.6482	1.6625	1.5719	1.7263	1.5992	1.6594	1.6648	1.6475	3.0
gamma-BHC (Lindane)	1.7179	1.7217	1.6316	1.7706	1.6273	1.6803	1.6806	1.6900	3.0
Heptachlor	1.9323	1.7962	1.6666	1.7262	1.5264	1.4801	1.3470	1.6392	12.3
Aldrin	1.8340	1.6659	1.5367	1.6223	1.4440	1.4302	1.3301	1.5519	11.0
Heptachlor epoxide b	1.8168	1.6398	1.4044	1.4381	1.2629	1.2239	1.1149	1.4144	17.4
Endosulfan I	1.5192	1.4169	1.2720	1.3234	1.1718	1.1458	1.0476	1.2710	12.9
Dieldrin	1.5995	1.4528	1.3259	1.3512	1.1540	1.1018	0.9936	1.2827	16.5
4,4'-DDE	1.5367	1.4595	1.3241	1.3606	1.1790	1.1494	1.0294	1.2912	14.0
Endrin	1.9014	1.8672	1.7277	1.7487	1.5208	1.4564	1.3250	1.6496	13.2
Endosulfan II	1.9719	1.9168	1.7752	1.8312	1.5816	1.5646	1.4555	1.7281	11.3
4,4'-DDD	2.1094	1.9958	1.8121	1.8464	1.6032	1.5801	1.4841	1.7759	13.0
Endosulfan sulfate	1.7321	1.6421	1.4774	1.5146	1.3442	1.3332	1.2549	1.4712	11.8
4,4'-DDT	1.7471	1.6963	1.5902	1.6301	1.4383	1.4739	1.4388	1.5735	8.0
Methoxychlor	0.7305	0.7076	0.6202	0.6027	0.5239	0.5120	0.4022	0.5856	19.7
Endrin ketone	1.6388	1.6002	1.4832	1.5356	1.3499	1.3642	1.3207	1.4704	8.7
Endrin aldehyde	1.5847	1.5114	1.3396	1.3594	1.1937	1.1861	1.1117	1.3266	13.3
gamma-Chlordane	1.8298	1.6423	1.4613	1.5070	1.3462	1.3504	1.2825	1.4885	13.0
alpha-Chlordane	1.6047	1.4942	1.3505	1.4009	1.2502	1.2566	1.1949	1.3646	10.8
Hexachlorobutadiene	1.7754	1.7738	1.6689	1.7660	1.5610	1.5866	1.4596	1.6559	7.5
Hexachlorobenzene	1.9001	1.7583	1.5690	1.6119	1.4286	1.4201	1.3431	1.5759	12.7
Tetrachloro-m-xylene	1.5306	1.4889	1.3673	1.4133	1.2254	1.1895	1.0472	1.3232	13.2
Decachlorobiphenyl	1.4748	1.4207	1.2965	1.3235	1.1681	1.1996	1.1690	1.2932	9.5

6G

8081 INITIAL CALIBRATION OF SINGLE POINT PCBs and TOXAPHENE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV95 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

Toxaphene			
Peak	RT	RT WIN	Cal Factor
1	6.958	6.91- 7.01	0.0513
2	7.010	6.96- 7.06	0.0354
3	7.267	7.22- 7.32	0.0585
4	7.593	7.54- 7.64	0.0595
5	7.632	7.58- 7.68	0.0395
6	7.913	7.86- 7.96	0.0336

6G

8081 INITIAL CALIBRATION OF SINGLE POINT PCBs and TOXAPHENE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV95 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

Toxaphene			
Peak	RT	RT WIN	Cal Factor
1	7.291	7.24- 7.34	0.0560
2	7.615	7.57- 7.67	0.0826
3	7.846	7.80- 7.90	0.0906
4	8.314	8.26- 8.36	0.0653
5	8.353	8.30- 8.40	0.0831

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.: 20130619PEST

Analysis Date: 29-JUN-2013 09:44 Init. Calib. Date: 19-JUN-2013

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.172	256798
Endrin	6.685	7621310
4,4'-DDD	6.727	512202
4,4'-DDT	6.983	7418874
Endrin ketone	7.911	494486
Endrin aldehyde	7.267	319961

DDT Percent Breakdown = 9.4 %
((256798+512202) * 100)/(256798+512202+7418874)

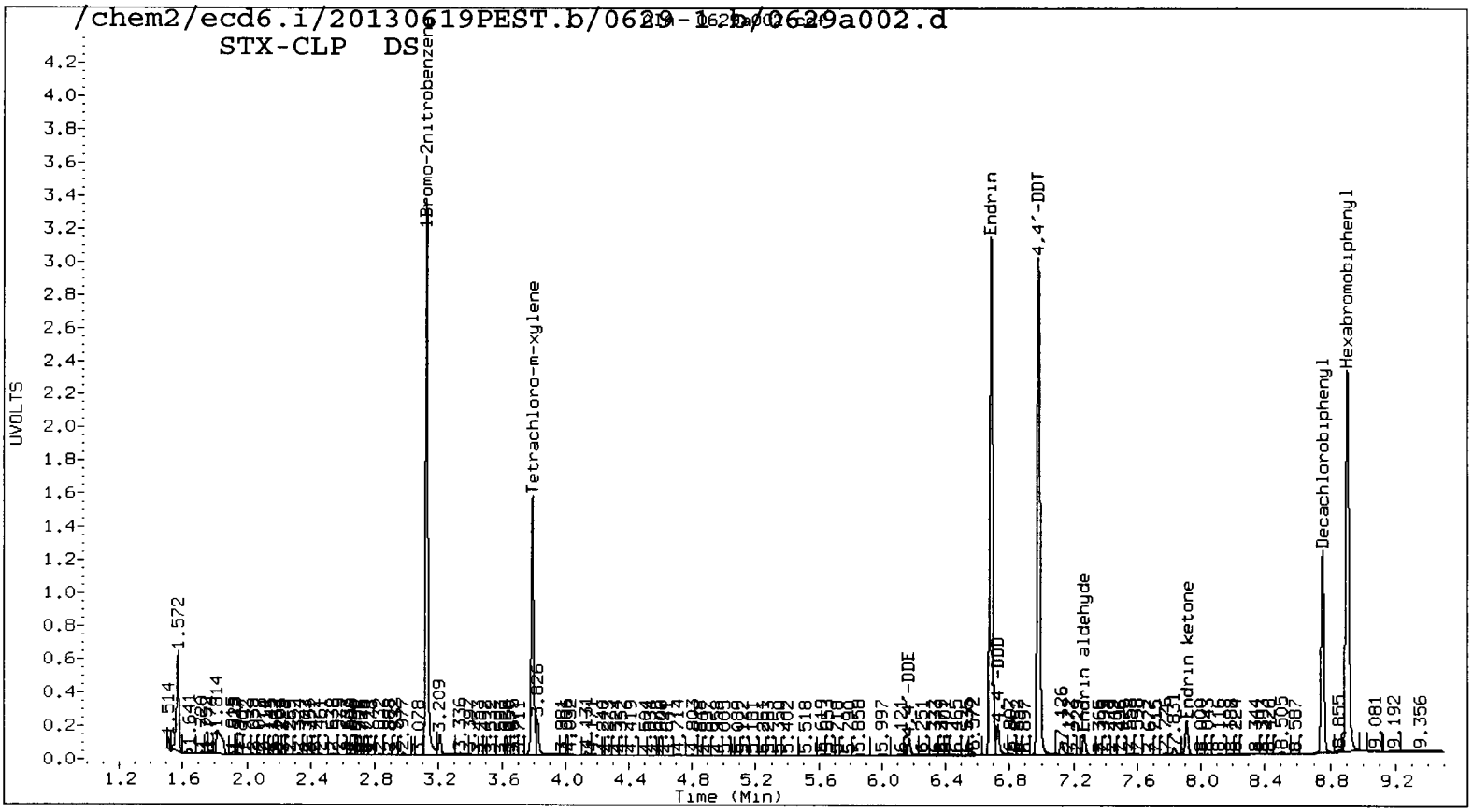
Endrin Percent Breakdown = 9.7 %
((319961+494486) * 100)/(319961+494486+7621310)

GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.871	1031649
Endrin	7.356	24641993
4,4'-DDD	7.407	1740880
4,4'-DDT	7.695	23752449
Endrin ketone	8.578	1382287
Endrin aldehyde	7.842	991757

DDT Percent Breakdown = 10.5 %
((1031649+1740880) * 100)/(1031649+1740880+23752449)

Endrin Percent Breakdown = 8.8 %
((991757+1382287) * 100)/(991757+1382287+24641993)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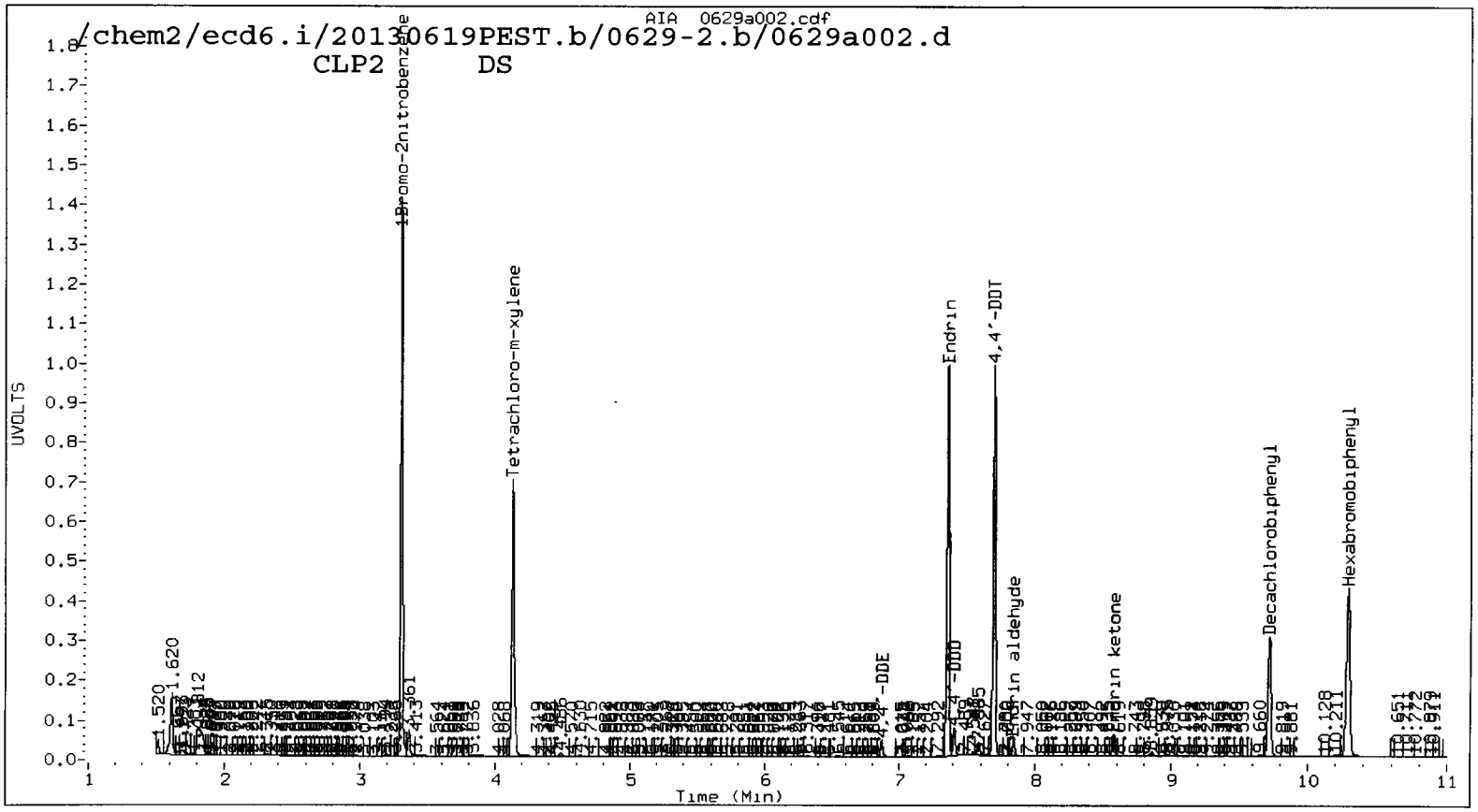
STX-CLP DS
UVOLTS
Time (Min)
1.572
3.209
3.826
4.361
4.4'-DDE
Endrin
4.4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 DS
UVOLTS
Time (Min)
1.620
4.361
4.4'-DDE
Endrin
4.4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV95 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/29/13,1001

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
alpha-BHC	4.71	4.66	4.76	20.9	20.0	4.6
beta-BHC	5.14	5.09	5.19	18.6	20.0	-7.0
delta-BHC	5.45	5.40	5.50	19.9	20.0	-0.5
gamma-BHC (Lindane)	5.07	5.02	5.12	20.6	20.0	3.0
Heptachlor	5.53	5.48	5.58	19.5	20.0	-2.5
Aldrin	5.87	5.82	5.92	20.7	20.0	3.5
Heptachlor epoxide b	6.42	6.37	6.47	19.8	20.0	-1.2
Endosulfan I	6.81	6.76	6.86	20.3	20.0	1.5
Dieldrin	7.07	7.02	7.12	39.6	40.0	-0.9
4,4'-DDE	6.87	6.82	6.92	39.9	40.0	-0.4
Endrin	7.36	7.31	7.41	39.3	40.0	-1.7
Endosulfan II	7.55	7.50	7.60	41.5	40.0	3.8
4,4'-DDD	7.41	7.36	7.46	40.3	40.0	0.6
Endosulfan sulfate	8.09	8.04	8.14	41.7	40.0	4.3
4,4'-DDT	7.69	7.64	7.74	40.9	40.0	2.2
Methoxychlor	8.28	8.23	8.33	174.8	200.0	-12.6
Endrin ketone	8.58	8.53	8.63	44.1	40.0	10.3
Endrin aldehyde	7.84	7.79	7.89	42.0	40.0	4.9
gamma-Chlordane	6.61	6.55	6.65	19.7	20.0	-1.4
alpha-Chlordane	6.74	6.69	6.79	19.9	20.0	-0.5
Hexachlorobutadiene	2.47	2.42	2.52	19.6	20.0	-1.8
Hexachlorobenzene	4.59	4.54	4.64	21.7	20.0	8.5
Tetrachloro-m-xylene	4.13	4.08	4.18	43.1	40.0	7.8
Decachlorobiphenyl	9.72	9.67	9.77	43.2	40.0	7.9

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV95 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/29/13,1001

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
alpha-BHC	4.28	4.24	4.34	22.9	20.0	14.3
beta-BHC	4.64	4.59	4.69	21.1	20.0	5.7
delta-BHC	4.81	4.76	4.86	21.4	20.0	7.2
gamma-BHC (Lindane)	4.56	4.52	4.62	22.5	20.0	12.3
Heptachlor	5.00	4.96	5.06	21.9	20.0	9.3
Aldrin	5.30	5.26	5.36	23.6	20.0	18.0
Heptachlor epoxide b	5.87	5.83	5.93	22.7	20.0	13.5
Endosulfan I	6.25	6.21	6.31	22.2	20.0	10.9
Dieldrin	6.47	6.43	6.53	45.8	40.0	14.4
4,4'-DDE	6.17	6.13	6.23	45.0	40.0	12.6
Endrin	6.69	6.65	6.75	39.2	40.0	-1.9
Endosulfan II	6.89	6.86	6.96	41.6	40.0	4.0
4,4'-DDD	6.73	6.69	6.79	41.5	40.0	3.7
Endosulfan sulfate	7.66	7.62	7.72	39.4	40.0	-1.5
4,4'-DDT	6.98	6.95	7.05	39.9	40.0	-0.2
Methoxychlor	7.41	7.37	7.47	171.9	200.0	-14.0
Endrin ketone	7.91	7.88	7.98	41.2	40.0	3.0
Endrin aldehyde	7.27	7.23	7.33	40.2	40.0	0.6
gamma-Chlordane	5.99	5.95	6.05	23.0	20.0	15.0
alpha-Chlordane	6.11	6.08	6.18	22.7	20.0	13.4
Hexachlorobutadiene	2.30	2.26	2.36	21.9	20.0	9.7
Hexachlorobenzene	4.13	4.09	4.19	21.4	20.0	7.2
Tetrachloro-m-xylene	3.79	3.75	3.85	44.3	40.0	10.6
Decachlorobiphenyl	8.76	8.73	8.83	43.4	40.0	8.5

FORM VII PEST-2

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV95 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 06/29/13,1019

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
Toxaphene -1	7.29	7.24	7.34	2290	2500	-8.4
Toxaphene -2	7.62	7.57	7.67	2260	2500	-9.6
Toxaphene -3	7.85	7.80	7.90	2240	2500	-10.4
Toxaphene -4	8.31	8.26	8.36	2180	2500	-12.8
Toxaphene -5	8.35	8.30	8.40	2120	2500	-15.2

AVERAGE %D = 11.3

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV95 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 06/29/13,1019

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
Toxaphene -1	6.94	6.91	7.01	2150	2500	-14.0	
Toxaphene -2	6.99	6.96	7.06	2300	2500	-8.0	
Toxaphene -3	7.25	7.22	7.32	2120	2500	-15.2	
Toxaphene -4	7.58	7.54	7.64	2100	2500	-16.0	
Toxaphene -5	7.64	7.58	7.68	1620	2500	-35.2	<-
Toxaphene -6	7.90	7.86	7.96	2070	2500	-17.2	

AVERAGE %D = 17.6

FORM VII PEST-3

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.: 20130619PEST

Analysis Date: 29-JUN-2013 11:48 Init. Calib. Date: 19-JUN-2013

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.173	154887
Endrin	6.687	7723225
4,4'-DDD	6.729	401255
4,4'-DDT	6.985	7246125
Endrin ketone	7.913	367271
Endrin aldehyde	7.269	133891

DDT Percent Breakdown = 7.1 %
((154887+401255) * 100)/(154887+401255+7246125)

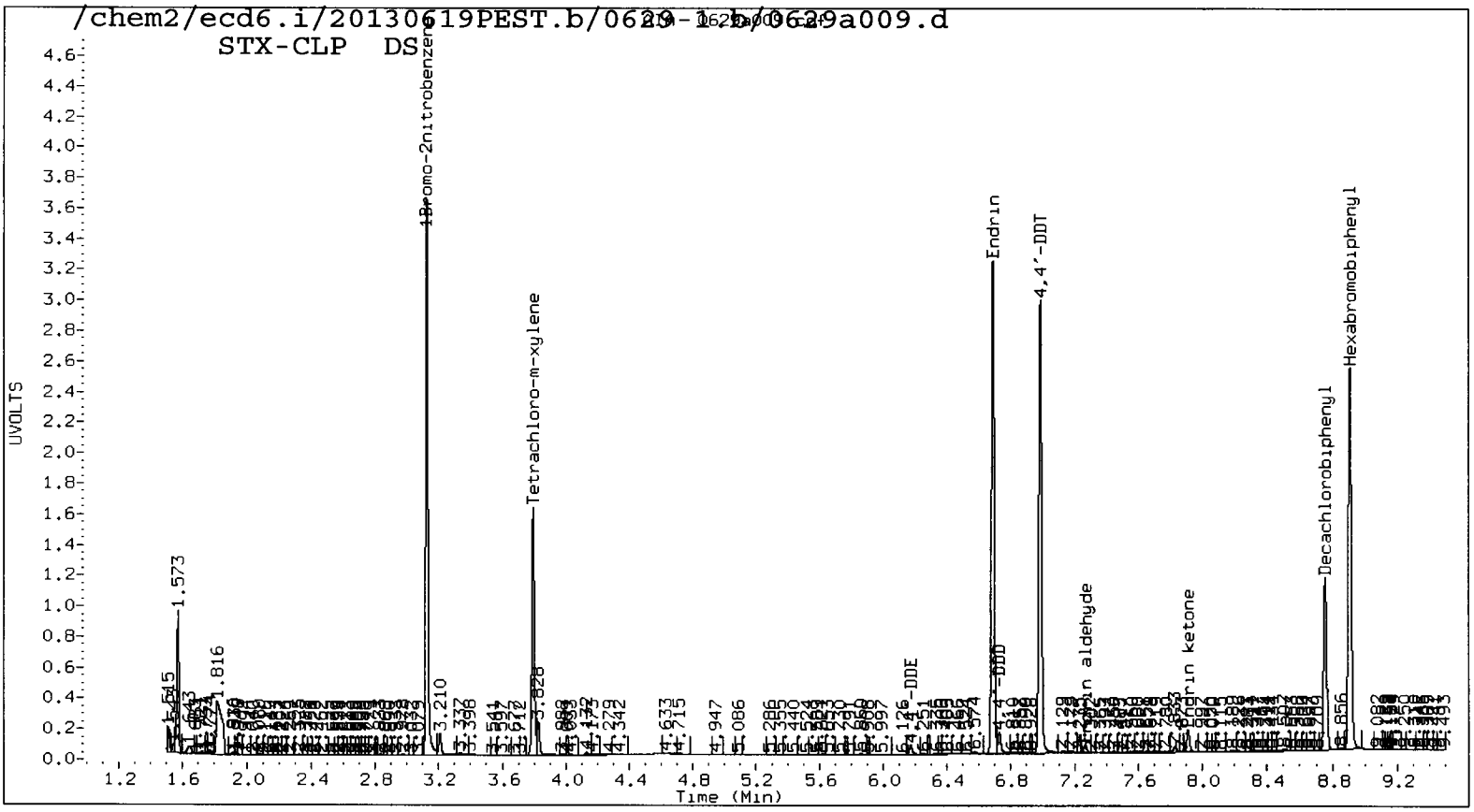
Endrin Percent Breakdown = 6.1 %
((133891+367271) * 100)/(133891+367271+7723225)

GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.871	556122
Endrin	7.357	20959321
4,4'-DDD	7.409	1141951
4,4'-DDT	7.696	19496969
Endrin ketone	8.578	969179
Endrin aldehyde	7.843	334775

DDT Percent Breakdown = 8.0 %
((556122+1141951) * 100)/(556122+1141951+19496969)

Endrin Percent Breakdown = 5.9 %
((334775+969179) * 100)/(334775+969179+20959321)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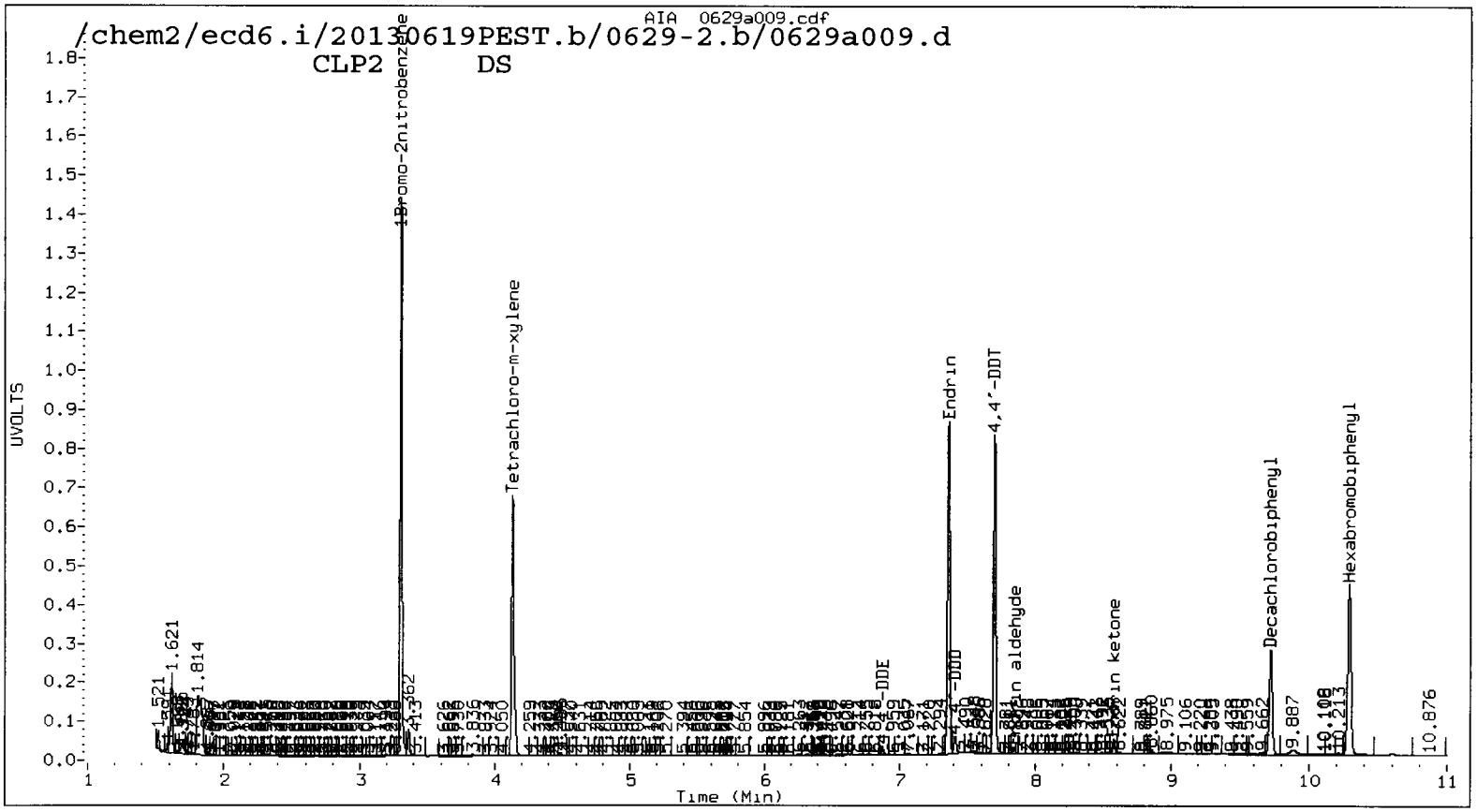
STX-CLP DS
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl
1.573
1.816
3.210
3.828
4.4'-DDE
Endrin aldehyde
Endrin ketone
UVOLTS
Time (Min)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CLP2 DS
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl
1.621
1.814
4.4'-DDE
Endrin aldehyde
Endrin ketone
10.876
UVOLTS
Time (Min)

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV95 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/29/13,1206

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
alpha-BHC	4.71	4.66	4.76	19.9	20.0	-0.4
beta-BHC	5.14	5.09	5.19	17.7	20.0	-11.7
delta-BHC	5.45	5.40	5.50	19.2	20.0	-3.8
gamma-BHC (Lindane)	5.07	5.02	5.12	19.9	20.0	-0.4
Heptachlor	5.53	5.48	5.58	18.9	20.0	-5.5
Aldrin	5.87	5.82	5.92	19.4	20.0	-2.9
Heptachlor epoxide b	6.42	6.37	6.47	18.4	20.0	-7.8
Endosulfan I	6.81	6.76	6.86	18.5	20.0	-7.7
Dieldrin	7.07	7.02	7.12	36.6	40.0	-8.6
4,4'-DDE	6.87	6.82	6.92	36.2	40.0	-9.5
Endrin	7.36	7.31	7.41	38.0	40.0	-5.0
Endosulfan II	7.55	7.50	7.60	39.3	40.0	-1.8
4,4'-DDD	7.41	7.36	7.46	37.6	40.0	-6.0
Endosulfan sulfate	8.09	8.04	8.14	38.7	40.0	-3.4
4,4'-DDT	7.70	7.64	7.74	38.0	40.0	-5.0
Methoxychlor	8.28	8.23	8.33	180.4	200.0	-9.8
Endrin ketone	8.58	8.53	8.63	43.3	40.0	8.1
Endrin aldehyde	7.84	7.79	7.89	38.8	40.0	-2.9
gamma-Chlordane	6.61	6.55	6.65	18.0	20.0	-10.0
alpha-Chlordane	6.74	6.69	6.79	18.1	20.0	-9.3
Hexachlorobutadiene	2.47	2.42	2.52	19.0	20.0	-5.0
Hexachlorobenzene	4.59	4.54	4.64	20.7	20.0	3.2
Tetrachloro-m-xylene	4.13	4.08	4.18	41.3	40.0	3.3
Decachlorobiphenyl	9.72	9.67	9.77	40.0	40.0	0.1

FORM VII PEST-2

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV95 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/29/13,1206

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
alpha-BHC	4.28	4.24	4.34	22.4	20.0	12.1
beta-BHC	4.64	4.59	4.69	20.7	20.0	3.3
delta-BHC	4.81	4.76	4.86	21.2	20.0	6.2
gamma-BHC (Lindane)	4.56	4.52	4.62	22.0	20.0	10.2
Heptachlor	5.00	4.96	5.06	21.7	20.0	8.7
Aldrin	5.30	5.26	5.36	22.8	20.0	14.0
Heptachlor epoxide b	5.87	5.83	5.93	21.9	20.0	9.5
Endosulfan I	6.25	6.21	6.31	21.5	20.0	7.6
Dieldrin	6.47	6.43	6.53	44.2	40.0	10.5
4,4'-DDE	6.17	6.13	6.23	43.4	40.0	8.6
Endrin	6.69	6.65	6.75	37.5	40.0	-6.3
Endosulfan II	6.89	6.86	6.96	37.2	40.0	-7.0
4,4'-DDD	6.73	6.69	6.79	37.8	40.0	-5.5
Endosulfan sulfate	7.66	7.62	7.72	36.3	40.0	-9.2
4,4'-DDT	6.98	6.95	7.05	37.0	40.0	-7.5
Methoxychlor	7.41	7.37	7.47	171.8	200.0	-14.1
Endrin ketone	7.91	7.88	7.98	37.5	40.0	-6.4
Endrin aldehyde	7.27	7.23	7.33	36.7	40.0	-8.2
gamma-Chlordane	5.99	5.95	6.05	22.1	20.0	10.6
alpha-Chlordane	6.11	6.08	6.18	21.8	20.0	8.9
Hexachlorobutadiene	2.31	2.26	2.36	21.5	20.0	7.6
Hexachlorobenzene	4.13	4.09	4.19	20.9	20.0	4.3
Tetrachloro-m-xylene	3.79	3.75	3.85	43.5	40.0	8.8
Decachlorobiphenyl	8.76	8.73	8.83	39.3	40.0	-1.7

FORM VII PEST-2

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV95 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 06/29/13,1224

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
Toxaphene -1	7.29	7.24	7.34	2120	2500	-15.2
Toxaphene -2	7.62	7.57	7.67	2110	2500	-15.6
Toxaphene -3	7.85	7.80	7.90	2080	2500	-16.8
Toxaphene -4	8.31	8.26	8.36	2000	2500	-20.0
Toxaphene -5	8.35	8.30	8.40	2000	2500	-20.0

AVERAGE %D = 17.5

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV95 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 06/29/13,1224

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
Toxaphene -1	6.94	6.91	7.01	1930	2500	-22.8	<-
Toxaphene -2	6.99	6.96	7.06	2090	2500	-16.4	
Toxaphene -3	7.25	7.22	7.32	1890	2500	-24.4	<-
Toxaphene -4	7.58	7.54	7.64	1880	2500	-24.8	<-
Toxaphene -5	7.64	7.58	7.68	2620	2500	4.8	
Toxaphene -6	7.90	7.86	7.96	1860	2500	-25.6	<-

AVERAGE %D = 19.8

FORM VII PEST-3

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV95 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP1 ID: 0.53(mm) Instrument ID: ECD6

Init. Calib. Date: 06/19/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	5590801	3.130	4870538	8.927
	UPPER LIMIT	11181602	3.180	9741076	8.977
	LOWER LIMIT	2795400	3.080	2435269	8.877

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		INDAE	06/19/13	1757	5590801	3.130	4870538	8.927
02		INDAA	06/19/13	1814	5443407	3.130	4756712	8.927
03		INDAB	06/19/13	1832	5578569	3.131	4877747	8.927
04		INDAC	06/19/13	1850	5651084	3.130	4910634	8.926
05		INDAD	06/19/13	1908	5597417	3.130	4918023	8.927
06		INDAF	06/19/13	1926	5751246	3.130	5082371	8.927
07		INDAG	06/19/13	1944	5601251	3.131	5032937	8.927
08		TOXAPHENE	06/19/13	2317	6058478	3.132	5799142	8.927
09		DS	06/29/13	0944	6470247	3.124	6329999	8.906
10		INDAE	06/29/13	1001	7232913	3.124	6941608	8.907
11		TOXAPH	06/29/13	1019	6501305	3.124	6194954	8.908
12	WV95MBW1	WV95MBW1	06/29/13	1037	6335429	3.124	5977502	8.907
13	WV95LCSW1	WV95LCSW1	06/29/13	1055	6614428	3.124	6251513	8.908
14	WV95LCSDW1	WV95LCSDW1	06/29/13	1113	6798637	3.124	6531879	8.907
15	UP-CB-B8-201	WV95A	06/29/13	1130	5955069	3.123	6932378	8.905
16		DS	06/29/13	1148	6945899	3.125	6766527	8.907
17		INDAE	06/29/13	1206	7080712	3.125	7164632	8.907
18		TOXAPH	06/29/13	1224	6584336	3.125	6948679	8.907

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- .05 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WV95 Project: NPDES SAMPLING SUPPORT

GC Column: STX-CLP2 ID: 0.53(mm) Instrument ID: ECD6

Init. Calib. Date: 06/19/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	28320361	3.300	16454599	10.289
	UPPER LIMIT	56640722	3.350	32909198	10.339
	LOWER LIMIT	14160180	3.250	8227300	10.239

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		INDAE	06/19/13	1757	28320361	3.300	16454599	10.289
02		INDAA	06/19/13	1814	27626455	3.300	16087272	10.288
03		INDAB	06/19/13	1832	28124817	3.300	16392538	10.289
04		INDAC	06/19/13	1850	28473248	3.299	16513179	10.289
05		INDAD	06/19/13	1908	28402073	3.299	16714534	10.289
06		INDAF	06/19/13	1926	29146657	3.300	17347014	10.289
07		INDAG	06/19/13	1944	28311756	3.300	17081518	10.289
08		TOXAPHENE	06/19/13	2317	29930668	3.301	19105364	10.289
09		DS	06/29/13	0944	27786922	3.300	14573674	10.287
10		INDAE	06/29/13	1001	28448405	3.301	16332453	10.288
11		TOXAPH	06/29/13	1019	26265433	3.300	14276051	10.289
12	WV95MBW1	WV95MBW1	06/29/13	1037	26238683	3.301	14481238	10.289
13	WV95LCSW1	WV95LCSW1	06/29/13	1055	27535124	3.300	15200415	10.289
14	WV95LCSDW1	WV95LCSDW1	06/29/13	1113	28712214	3.300	15902897	10.288
15	UP-CB-B8-201	WV95A	06/29/13	1130	20722701	3.299	10926838	10.288
16		DS	06/29/13	1148	28137683	3.301	15202400	10.288
17		INDAE	06/29/13	1206	29623128	3.301	16603429	10.288
18		TOXAPH	06/29/13	1224	27583287	3.301	15424075	10.289

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- .05 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

Pesticide Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WV95

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8081B) Pest – Water
Separatory Funnel (3510C) (SOP # 3311S)

Preparation Test Pest # 1(PESWSI)
In-House (0.05-0.1ppb)

ARI Job No(s) WV95 Page 1 of 1 Batch set up by: SC

Bottle #	ARI Sample I.D.	Volume Extracted	(Opt/REQ) Acid Clean (5mL)	(Opt/REQ) Sulfur Clean 4.5mL+0.5mL (5mL) Ethyl Acetate? (1) 2 3	(Opt) Silica Gel Clean (1:5) Any Color	Final Effective Volume	Volume to Lab	Comment	Verify Client ID
	WV95 MBW	500mL	(5mL) Y / (N)	(5mL) (Y) / N	(1:5) Y / (N)	5mL	1mL		AR 06/28/13 Analyst/Date
	SBW	500mL	(5mL) Y / (N)	(5mL) (Y) / N	(1:5) Y / (N)	5mL	1mL		Verify pH is 5-9
	SBW Dup.	500mL	(5mL) Y / (N)	(5mL) (Y) / N	(1:5) Y / (N)	5mL	1mL		AR 06/28/13 Analyst/Date
	QLS	~~500mL~~	~~(5mL) Y / N~~	~~(5mL) Y / N~~	~~(1:5) Y / N~~	5mL	1mL		
1	WV95 A	500mL	(5mL) Y / (N)	(5mL) (Y) / N	(1:5) Y / (N)	5mL	1mL		KD 80-85°C
		~~500mL~~	~~(5mL) Y / N~~	~~(5mL) Y / N~~	~~(1:5) Y / N~~	5mL	1mL		Hexane Exchange (2 X 20mL) 100°C
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		1 (2) (3) 4 5 6
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		TH 6/28/13 Analyst/Date
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		TurboVap 1 (2) 3 Pre-Cleanups (4mL=10mL Hexane Exchange)
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		mw 6/29/13 Analyst/Date
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		TurboVap 1 2 3 Post Cleanups
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		~~500mL~~	~~(5mL) Y / N~~	~~(5mL) Y / N~~	~~(1:5) Y / N~~	5mL	1mL		
Analyst/Date		AR 06/28/13 →	~~6/28/13~~	6/28/13		6/28/13	6/28/13	Reviewed by/ Date 6/28/13	Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N (B400151)	2µg/mL	**100µL**	4/30/14	AR	SC
Spike (Freezer)	3 (B400650)	0.5/1/5µg/mL	**200µL**	12/9/13	AR	SC
QLS Spike (Freezer)	10 ( )	0.25-2.5µg/mL	**50µL**			
Extraction Time: 1500						

SPECIAL INSTRUCTIONS: 1. Verify pH is 5-9 2. Adjust pH (if necessary=Analyst Notes). 3. Add Surr/Spike. 4. Add 30mL DCM to 500mL sample bottle and perform a bottle rinse. 5. Extract 3X with 30mL DCM. 6. KD (NO Drying Column) at 80-85°C. 7. Exchange (2 X with 20mL) Hexane at 100°C. 8. TurboVap to 4mL=10mL Hexane Exchange. 9. TurboVap. 10. Clean-ups? (Any color after Acid or Sulfur Clean=REQ SPE. 11. TurboVap (if Silica Clean). 12. Vial with Hexane. (Note: Ethyl Acetate is needed to recover Endrin Aldehyde in Sulfur Clean, if No Acid Clean).

A. Archive Y / (N)

Mark off as consumed

Revision 11
06/17/13

WV95 : 062813

Reagent and Solution Identification

(8081B) Pest – Water
Separatory Funnel (3510C) (SOP # 3311S)

ARI Job No(s): WV95

(8081B) Pest Aqueous:	Analyst/Date
Separatory Funnel Station: Methylene Chloride: (I# ~~[illegible]~~) B[illegible]674 Anhydrous Sodium Sulfate: (I# 8185 + jar date 6/8/13)	Sep. Funnel AR 04/28/13
KD Station: Methylene Chloride: (I# 8279) Hexane: (I# 8281)	KD TH 6/28/13
Vialing Station: Hexane: (I# 8281) Concentrated Sulfuric Acid: (I#) Ethyl Acetate: (I# 6079) Tetrabutylammonium hydrogensulfate (TBAS): (H# 198) Sodium Sulfite: (I# 7704) Silica Gel (SPE) Darts: (I#)	Vialing LW 6/28/13

WV95 : 20014

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WV95 Client ID: SAIC

Parameter: Pest Client Project: UPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☑ Turbid/Color= WV95 sample A, light grey, turbid	AL 06/28/13
☑ Particulates(%)=(Note: >5%=Notify Supervisor/Lead) WV95 sample A, 2% particulate	AL 06/28/13
☐ Emulsions (%)=	
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

Pesticide Raw Data
Initial Calibration

ARI Job ID: WV95

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 06/19/13 Internal Standard ID 2006-1 Expiration 07/26/13

Endrin/DDT Breakdown <15%? YES / NO / NA
ICal Meets %RSD & r^2 Criteria YES / NO
Manual Integrations for ICal? YES / NO
Minimum Response S/N Met YES / NO

ICV Exceeding ±20%? YES / NO
ICV Exceeding ±30%? YES / NO
Linear Fits Used? YES / NO
Quadratic Fits Used? YES / NO
Calibration Points Dropped? YES NO

Primary Source	Standard #	Expiration		Secondary Source	Standard #	Expiration
DS	B370	08/29/13	C	INDA ICV 6/24/13	2023-1	05/16/13
IB	1982-2	05/16/13	F	WND ICV	2064-1	01/17/14
INDA	B339	12/10/13	S	HCB/HCBD	1886-2	05/28/12
Toxaphene	B558	05/29/14				
WND	B559	07/27/13				

Restek

Detail problems, corrective actions and/or other pertinent information below:

Analyst: JK **Date:** 06/24/13

Reviewer: VD **Date:** 6/25/13

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 06/19/13 Analysis: Pest Analyst: JR

Column 1 Serial No.: 1085624 Column Type: CLP1

Column 2 Serial No.: 109 4709 Column Type: CLP2

GC Method: Pest ICal Date: 2µL (1µL inj)

IS	Ical/Ccal	ICV
2026-1	B339	2083-1
	B559	2064-1
	B959	1836-2
	B370	

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID
1	19-JUN-2013 17:21	0619a010.d	1	IB
2	19-JUN-2013 17:39	0619a011.d	1	DS
3	19-JUN-2013 17:57	0619a012.d	1	INDAE
4	19-JUN-2013 18:14	0619a013.d	1	INDAA
5	19-JUN-2013 18:32	0619a014.d	1	INDAB
6	19-JUN-2013 18:50	0619a015.d	1	INDAC
7	19-JUN-2013 19:08	0619a016.d	1	INDAD
8	19-JUN-2013 19:26	0619a017.d	1	INDAF
9	19-JUN-2013 19:44	0619a018.d	1	INDAG
10	19-JUN-2013 20:01	0619a019.d	1	INDA ICV
11	19-JUN-2013 20:19	0619a020.d	1	HCB/HCBD
12	19-JUN-2013 23:17	0619a030.d	1	TOXAPHENI
13	19-JUN-2013 20:55	0619a022.d	1	WNDE
14	19-JUN-2013 21:13	0619a023.d	1	WNDA
15	19-JUN-2013 21:30	0619a024.d	1	WNDB
16	19-JUN-2013 21:48	0619a025.d	1	WNDC
17	19-JUN-2013 22:06	0619a026.d	1	WNDD
18	19-JUN-2013 22:24	0619a027.d	1	WNDF
19	19-JUN-2013 22:42	0619a028.d	1	WNDG
20	19-JUN-2013 22:59	0619a029.d	1	WND ICV
21	19-JUN-2013 23:35	0619a031.d	1	TECHCHLOI
22	19-JUN-2013 23:53	0619a032.d	1	TECH ICV
23	20-JUN-2013 00:10	0619a033.d	1	DS
24	20-JUN-2013 00:28	0619a034.d	1	INDAE#1
25	20-JUN-2013 00:46	0619a035.d	1	WNDE#1
26	20-JUN-2013 01:04	0619a036.d	1	WT36MBS1
27	20-JUN-2013 01:22	0619a037.d	1	WT36LCS1
28	20-JUN-2013 01:40	0619a038.d	1	WT36LCSDS
29	20-JUN-2013 01:57	0619a039.d	1	WT36A
30	20-JUN-2013 02:15	0619a040.d	1	WS91A
31	20-JUN-2013 02:33	0619a041.d	1	WS91AMS
32	20-JUN-2013 02:51	0619a042.d	1	WS91AMSD
33	20-JUN-2013 03:09	0619a043.d	1	WT53MBW1
34	20-JUN-2013 03:26	0619a044.d	1	WT53LCSW1
35	20-JUN-2013 03:44	0619a045.d	1	WT53LCSDW
36	20-JUN-2013 04:02	0619a046.d	1	DS
37	20-JUN-2013 04:20	0619a047.d	1	INDAE#2
38	20-JUN-2013 04:38	0619a048.d	1	WNDE#2
39	20-JUN-2013 04:55	0619a049.d	1	WT53QLS
40	20-JUN-2013 05:13	0619a050.d	1	WT53A
41	20-JUN-2013 05:31	0619a051.d	1	WT53B
42	20-JUN-2013 05:49	0619a052.d	1	WT53C
43	20-JUN-2013 06:07	0619a053.d	1	WT53D
44	20-JUN-2013 06:24	0619a054.d	1	WT53E
45	20-JUN-2013 06:42	0619a055.d	1	WT07MBW1
46	20-JUN-2013 07:00	0619a056.d	1	WT07LCSW1
47	20-JUN-2013 07:18	0619a057.d	1	WT07LCSDW
48	20-JUN-2013 07:36	0619a058.d	1	WT07QLS
49	20-JUN-2013 07:53	0619a059.d	1	DS
50	20-JUN-2013 08:11	0619a060.d	1	INDAE#3
51	20-JUN-2013 08:29	0619a061.d	1	WNDE#3
52	20-JUN-2013 08:47	0619a062.d	1	WT07A
53	20-JUN-2013 09:05	0619a063.d	1	WT07B
54	20-JUN-2013 09:23	0619a064.d	1	WS90MBW1
55	20-JUN-2013 09:41	0619a065.d	1	WS90LCSS1
56	20-JUN-2013 09:59	0619a066.d	1	WS90LCSDS1
57	20-JUN-2013 10:16	0619a067.d	1	WS90QLS
58	20-JUN-2013 10:34	0619a068.d	1	WS90A
59	20-JUN-2013 10:52	0619a069.d	1	WS90B
60	20-JUN-2013 11:11	0619a070.d	1	DS
61	20-JUN-2013 11:28	0619a071.d	1	INDAE#4
62	20-JUN-2013 11:46	0619a072.d	1	WNDE#4

06/25/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130619PEST.b/ical-1.b

ARI Job No.: IB Method: PEST0619.m Instrument: ecd6.i Date: 19-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1721	0619a010.d	IB		1	NO MANUAL INTEGRATION
1739	0619a011.d	DS		1	NO MANUAL INTEGRATION
1757	0619a012.d	INDAE		1	NO MANUAL INTEGRATION
1814	0619a013.d	INDAA		1	NO MANUAL INTEGRATION
1832	0619a014.d	INDAB		1	NO MANUAL INTEGRATION
1850	0619a015.d	INDAC		1	NO MANUAL INTEGRATION
1908	0619a016.d	INDAD		1	NO MANUAL INTEGRATION
1926	0619a017.d	INDAF		1	NO MANUAL INTEGRATION
1944	0619a018.d	INDAG		1	NO MANUAL INTEGRATION
2001	0619a019.d	INDA ICV		1	NO MANUAL INTEGRATION
2019	0619a020.d	HCB/HCBD ICV		1	NO MANUAL INTEGRATION
2317	0619a030.d	TOXAPHENE		1	NO MANUAL INTEGRATION
2055	0619a022.d	WNDE		1	NO MANUAL INTEGRATION
2113	0619a023.d	WNDA		1	NO MANUAL INTEGRATION
2130	0619a024.d	WNDB		1	NO MANUAL INTEGRATION
2148	0619a025.d	WNDC		1	NO MANUAL INTEGRATION
2206	0619a026.d	WNDD		1	NO MANUAL INTEGRATION
2224	0619a027.d	WNDF		1	NO MANUAL INTEGRATION
2242	0619a028.d	WNDG		1	NO MANUAL INTEGRATION
2259	0619a029.d	WND ICV		1	NO MANUAL INTEGRATION

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a023.d
Level 2: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a024.d
Level 3: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a025.d
Level 4: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a026.d
Level 5: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a030.d
Level 6: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a027.d
Level 7: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a028.d
Level 8: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a030.d

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
1 Hexachlorobutadiene	1.90255	1.82746	1.72475	1.80538	1.63952	1.70403		
	1.70205	+++++					1.75796	5.148
3 Hexachlorobenzene	1.48607	1.38489	1.25065	1.29219	1.15823	1.18938		
	1.17400	+++++					1.27649	9.523
4 alpha-BHC	1.54387	1.55472	1.51023	1.66746	1.57221	1.68013		
	1.70242	+++++					1.60443	4.784
5 gamma-BHC (Lindane)	1.43893	1.45162	1.38660	1.51406	1.41885	1.50915		
	1.52105	+++++					1.46289	3.596
6 beta-BHC	0.72267	0.69399	0.62885	0.65445	0.59777	0.61724		
	0.61539	+++++					0.64719	7.088
7 delta-BHC	1.31076	1.33767	1.29222	1.44170	1.36734	1.47377		
	1.50098	+++++					1.38921	5.957

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Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
8 Heptachlor	1.46111	1.44992	1.37073	1.46029	1.33959	1.38629		
	1.35896	+++++					1.40384	3.694
9 Aldrin	1.38090	1.38032	1.30360	1.42040	1.31018	1.37139		
	1.35489	+++++					1.36024	3.048
38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Heptachlor epoxide b	1.37134	1.33627	1.22935	1.30893	1.18548	1.21388		
	1.18211	+++++					1.26105	6.081
12 gamma-Chlordane	1.34452	1.32741	1.23423	1.33704	1.23398	1.29746		
	1.29333	+++++					1.29542	3.551
13 alpha-Chlordane	1.35279	1.31541	1.21079	1.29571	1.18577	1.23709		
	1.22879	+++++					1.26091	4.844
14 Endosulfan I	1.29513	1.26141	1.15224	1.22045	1.10253	1.12302		
	1.09618	+++++					1.17871	6.801
15 4,4'-DDE	1.01389	0.98313	0.90492	0.95484	0.88046	0.93369		
	0.96207	+++++					0.94757	4.806

Analytical Resources, Inc.

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Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
16 Dieldrin	1.28716	1.29785	1.22354	1.30837	1.19093	1.21674		
	1.19385	+++++					1.24549	4.066
17 Endrin	1.26711	1.27002	1.20537	1.25522	1.15780	1.15955		
	1.12413	+++++					1.20560	4.958
18 4,4'-DDD	1.20014	1.19876	1.14202	1.17837	1.10056	1.13288		
	1.10599	+++++					1.15125	3.621
19 Endosulfan II	1.28259	1.26594	1.19796	1.24319	1.13952	1.14153		
	1.10718	+++++					1.19684	5.775
20 4,4'-DDT	1.15079	1.15997	1.10760	1.17386	1.09155	1.13724		
	1.12168	+++++					1.13467	2.595
21 Endrin aldehyde	1.02599	1.01548	0.94464	0.98095	0.88920	0.89428		
	0.87136	+++++					0.94598	6.675
22 Methoxychlor	0.60895	0.59288	0.53434	0.53623	0.48400	0.49787		
	0.50489	+++++					0.53702	8.891
23 Endosulfan sulfate	1.12427	1.11725	1.04391	1.08924	0.99727	1.02307		
	1.00241	+++++					1.05677	5.047
24 Endrin ketone	1.47123	1.40999	1.29907	1.33968	1.20839	1.24100		
	1.21628	+++++					1.31223	7.673

Analytical Resources, Inc.

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Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	0.000e+00 Level 8	RRF	% RSD
26 Aroclor-1016(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
27 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

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Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
28 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
29 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
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Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(6)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
30 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
31 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
32 Aroclor-1260(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
33 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
34 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
35 Toxaphene(1)	+++++	+++++	+++++	+++++	0.05135	+++++		
	+++++	0.05135					0.05135	0.000
(2)	+++++	+++++	+++++	+++++	0.03543	+++++		
	+++++	+++++					0.03543	0.000
(3)	+++++	+++++	+++++	+++++	0.05845	+++++		
	+++++	+++++					0.05845	0.000
(4)	+++++	+++++	+++++	+++++	0.05954	+++++		
	+++++	+++++					0.05954	0.000
(5)	+++++	+++++	+++++	+++++	0.03954	+++++		
	+++++	+++++					0.03954	0.000
(6)	+++++	+++++	+++++	+++++	0.03356	+++++		
	+++++	+++++					0.03356	0.000
39 2,4-DDE	0.87274	0.86308	0.83381	0.82491	0.81805	0.80267		
	0.74462	+++++					0.82284	5.152
40 2,4-DDD	0.77761	0.77575	0.74597	0.74361	0.73419	0.72905		
	0.68555	+++++					0.74168	4.206
41 2,4-DDT	0.88597	0.88005	0.86843	0.85814	0.85985	0.84955		
	0.80325	+++++					0.85789	3.174

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
43 Oxychlordane	1.15065	1.13104	1.11190	1.08121	1.07576	1.03688		
	0.95359	+++++					1.07729	6.160
44 trans-Nonachlor	1.35198	1.34250	1.32180	1.31589	1.32536	1.33307		
	1.26444	+++++					1.32215	2.140
45 cis-Nonachlor	1.49934	1.50007	1.44006	1.44337	1.45793	1.46723		
	1.40485	+++++					1.45898	2.327
46 Mirex	0.98377	0.93549	0.90240	0.86728	0.86159	0.86043		
	0.82136	+++++					0.89033	6.139
47 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
59 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

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Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
48 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
49 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
50 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
51 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
55 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
56 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
60 Kepone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
61 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

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Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
$ 2 Tetrachloro-m-xylene	1.15603	1.13307	1.06647	1.12441	1.02482	1.05901		
	1.04003	+++++					1.08626	4.688
$ 25 Decachlorobiphenyl	1.13367	1.09978	0.99247	1.01808	0.91736	0.94702		
	0.93976	+++++					1.00688	8.224

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a023.d
Level 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a024.d
Level 3: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a025.d
Level 4: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a026.d
Level 5: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a030.d
Level 6: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a027.d
Level 7: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a028.d
Level 8: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a030.d/0619a030.cdf

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
1 Hexachlorobutadiene	1.77542	1.77383	1.66890	1.76599	1.56096	1.58663		
	1.45961	+++++					1.65591	7.511
3 Hexachlorobenzene	1.90014	1.75831	1.56896	1.61188	1.42856	1.42008		
	1.34315	+++++					1.57587	12.689
4 alpha-BHC	1.89067	1.95848	1.86011	2.02052	1.85761	1.92559		
	1.86606	+++++					1.91129	3.192
5 gamma-BHC (Lindane)	1.71793	1.72173	1.63161	1.77057	1.62732	1.68032		
	1.68059	+++++					1.69001	3.036
6 beta-BHC	1.05921	0.95999	0.81135	0.80846	0.72028	0.73231		
	0.70444	+++++					0.82800	16.171
7 delta-BHC	1.64820	1.66251	1.57188	1.72634	1.59922	1.65937		
	1.66482	+++++					1.64748	3.028

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
8 Heptachlor	1.93228	1.79619	1.66661	1.72620	1.52645	1.48015		
	1.34701	+++++					1.63927	12.258
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
9 Aldrin	1.83405	1.66591	1.53672	1.62235	1.44396	1.43019		
	1.33013	+++++					1.55190	10.956
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Heptachlor epoxide b	1.81675	1.63979	1.40438	1.43813	1.26288	1.22389		
	1.11487	+++++					1.41439	17.374
12 gamma-Chlordane	1.82983	1.64233	1.46128	1.50701	1.34625	1.35044		
	1.28248	+++++					1.48852	12.951
13 alpha-Chlordane	1.60468	1.49416	1.35051	1.40092	1.25024	1.25659		
	1.19492	+++++					1.36457	10.765
14 Endosulfan I	1.51918	1.41686	1.27203	1.32343	1.17177	1.14586		
	1.04761	+++++					1.27096	12.890
15 4,4'-DDE	1.53674	1.45951	1.32415	1.36063	1.17900	1.14945		
	1.02941	+++++					1.29127	13.988

Analytical Resources, Inc.

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Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
16 Dieldrin	1.59950	1.45277	1.32593	1.35123	1.15396	1.10181		
	0.99360	+++++					1.28269	16.499
17 Endrin	1.90141	1.86720	1.72775	1.74870	1.52078	1.45639		
	1.32506	+++++					1.64961	13.234
18 4,4'-DDD	2.10942	1.99577	1.81214	1.84639	1.60315	1.58015		
	1.48408	+++++					1.77587	12.988
19 Endosulfan II	1.97192	1.91679	1.77518	1.83122	1.58158	1.56461		
	1.45551	+++++					1.72812	11.340
20 4,4'-DDT	1.74714	1.69628	1.59021	1.63006	1.43826	1.47388		
	1.43879	+++++					1.57352	8.000
21 Endrin aldehyde	1.58468	1.51144	1.33959	1.35940	1.19370	1.18610		
	1.11175	+++++					1.32666	13.257
22 Endosulfan sulfate	1.73214	1.64211	1.47745	1.51465	1.34424	1.33317		
	1.25492	+++++					1.47124	11.811
23 Methoxychlor	0.73051	0.70763	0.62021	0.60272	0.52386	0.51201		
	0.40225	+++++					0.58560	19.746
24 Endrin ketone	1.63883	1.60020	1.48325	1.53566	1.34995	1.36416		
	1.32073	+++++					1.47040	8.684

Analytical Resources, Inc.

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Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
26 Aroclor-1016(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
27 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

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Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
28 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
29 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

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Start Cal Date : 19-JUN-2013 17:57
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Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
30 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
31 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
32 Aroclor-1260(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
33 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(3)	*****	*****	*****	*****	*****	*****		
	*****	*****					*****	*****
(4)	*****	*****	*****	*****	*****	*****		
	*****	*****					*****	*****
(5)	*****	*****	*****	*****	*****	*****		
	*****	*****					*****	*****
34 Aroclor-1268(1)	*****	*****	*****	*****	*****	*****		
	*****	*****					*****	*****
(2)	*****	*****	*****	*****	*****	*****		
	*****	*****					*****	*****
(3)	*****	*****	*****	*****	*****	*****		
	*****	*****					*****	*****
(4)	*****	*****	*****	*****	*****	*****		
	*****	*****					*****	*****
(5)	*****	*****	*****	*****	*****	*****		
	*****	*****					*****	*****
35 Toxaphene(1)	*****	*****	*****	*****	0.05597	*****		
	*****	*****					0.05597	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	0.08258	+++++		
	+++++	+++++					0.08258	0.000
(3)	+++++	+++++	+++++	+++++	0.09061	+++++		
	+++++	+++++					0.09061	0.000
(4)	+++++	+++++	+++++	+++++	0.06531	+++++		
	+++++	+++++					0.06531	0.000
(5)	+++++	+++++	+++++	+++++	0.08305	+++++		
	+++++	+++++					0.08305	0.000
38 2,4-DDE	0.80626	0.82048	0.79847	0.78354	0.75300	0.69902		
	0.61137	+++++					0.75316	9.901
39 2,4-DDD	1.13292	1.14334	1.11231	1.09801	1.08138	1.03514		
	0.92519	+++++					1.07547	7.001
40 2,4-DDT	1.20070	1.21618	1.21055	1.20015	1.18944	1.14928		
	1.03688	+++++					1.17188	5.412
41 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
42 Oxychlordane	1.05303	1.08292	1.07870	1.07429	1.05167	1.01445		
	0.94342	+++++					1.04264	4.756

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
43 trans-Nonachlor	1.98806	2.04006	2.05919	2.05043	2.00581	1.96863		
	1.70892	+++++					1.97444	6.167
44 cis-Nonachlor	2.06223	2.12219	2.13854	2.12945	2.10040	2.07532		
	1.76577	+++++					2.05627	6.378
45 Mirex	1.11651	1.05520	0.99593	0.98159	0.96129	0.94571		
	0.90853	+++++					0.99497	7.061
46 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
56 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
57 Kepone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
58 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 2 Tetrachloro-m-xylene	1.53064	1.48891	1.36733	1.41327	1.22546	1.18954		
	1.04722	+++++					1.32319	13.239
$ 25 Decachlorobiphenyl	1.47476	1.42068	1.29648	1.32353	1.16810	1.19962		
	1.16903	+++++					1.29317	9.469

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-1.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0619a022	0619a023	0619a024	0619a025	0619a026	0619a027	0619a028
INJ.DATE:	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013
INJ.TIME:	20:55	21:13	21:30	21:48	22:06	22:24	22:42

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.312	2.262-2.362	+++++	+++++
*	54 1Bromo-2nitrobenzene	3.131	3.131	3.130	3.131	3.131	3.130	3.130	3.130	3.080-3.180	3.131	0.000
*	58 Hexabromobiphenyl	8.927	8.927	8.927	8.926	8.928	8.927	8.927	8.927	8.877-8.977	8.927	0.000
$	2 Tetrachloro-m-xylene	3.800	3.800	3.800	3.800	3.800	3.799	3.799	3.799	3.749-3.849	3.800	0.000
	3 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.140	4.090-4.190	+++++	+++++
	4 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.286	4.236-4.336	+++++	+++++
	5 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.569	4.519-4.619	+++++	+++++
	6 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.644	4.594-4.694	+++++	+++++
	7 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.813	4.763-4.863	+++++	+++++
	8 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.015	4.965-5.065	+++++	+++++
	9 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.307	5.257-5.357	+++++	+++++
	38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.577-13.677	+++++	+++++
	10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.819-10.919	+++++	+++++
	11 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.883	5.832-5.933	+++++	+++++
	12 gamma-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.002	5.952-6.052	+++++	+++++
	13 alpha-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.126	6.076-6.176	+++++	+++++
	14 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.260	6.210-6.310	+++++	+++++

Reviewer 1 _____ Date: 06/24/13 (25) 06/25/13

Reviewer 2 _____ Date: 6/25/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-1.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	15 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.184	6.134-6.234	+++++	+++++
	16 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.483	6.433-6.533	+++++	+++++
	17 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.701	6.651-6.751	+++++	+++++
	18 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.740	6.690-6.790	+++++	+++++
	19 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.906	6.856-6.956	+++++	+++++
	20 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.998	6.948-7.048	+++++	+++++
	21 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.284	7.234-7.334	+++++	+++++
	22 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.424	7.374-7.474	+++++	+++++
	23 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.674	7.624-7.724	+++++	+++++
	24 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.930	7.880-7.980	+++++	+++++
$	25 Decachlorobiphenyl	8.777	8.777	8.777	8.776	8.777	8.776	8.777	8.777	8.727-8.827	8.777	0.000
	26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.831-4.931	+++++	+++++
	28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.309-5.409	+++++	+++++
	29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.368-4.468	+++++	+++++
	31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.207-5.307	+++++	+++++
	32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	5.995-6.095	+++++	+++++
	33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.251-8.351	+++++	+++++
	34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.209-11.309	+++++	+++++
	35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.958	6.908-7.008	+++++	+++++
	39 2,4-DDE	5.862	5.863	5.863	5.863	5.863	5.861	5.861	5.861	5.811-5.911	5.862	0.001

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-1.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	6.349	6.350	6.350	6.350	6.350	6.348	6.348	6.348	6.298-6.398	6.349	0.001
41 2,4-DDT	6.587	6.587	6.587	6.588	6.588	6.587	6.587	6.587	6.537-6.637	6.588	0.000
42 Hexachloroethane	1.758	1.758	1.758	1.759	1.758	1.756	1.758	1.758	1.708-1.808	1.758	0.001
43 Oxychlordane	5.787	5.787	5.787	5.787	5.788	5.787	5.787	5.787	5.737-5.837	5.787	0.000
44 trans-Nonachlor	6.110	6.110	6.110	6.110	6.111	6.110	6.110	6.110	6.060-6.160	6.110	0.000
45 cis-Nonachlor	6.726	6.726	6.727	6.727	6.727	6.726	6.727	6.727	6.677-6.777	6.726	0.000
46 Mirex	7.601	7.601	7.600	7.601	7.601	7.601	7.601	7.601	7.551-7.651	7.601	0.000
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.106-20.206	+++++	+++++
59 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.935	4.885-4.985	+++++	+++++
48 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.269-6.369	+++++	+++++
49 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.886-9.986	+++++	+++++
50 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.841-11.941	+++++	+++++
51 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.777-14.877	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.700-9.800	+++++	+++++
55 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.057-9.157	+++++	+++++
56 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.201-10.301	+++++	+++++
60 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.581	6.531-6.631	+++++	+++++
61 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.903-7.003	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-1.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0619a012	0619a013	0619a014	0619a015	0619a016	0619a017	0619a018
INJ.DATE:	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013
INJ.TIME:	17:57	18:14	18:32	18:50	19:08	19:26	19:44

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	2.311	2.310	2.311	2.311	2.310	2.311	2.312	2.312	2.262-2.362	2.311	0.001
* 54 1Bromo-2nitrobenzene	3.130	3.130	3.131	3.130	3.130	3.130	3.131	3.130	3.080-3.180	3.130	0.000
* 58 Hexabromobiphenyl	8.927	8.927	8.927	8.926	8.927	8.927	8.927	8.927	8.877-8.977	8.927	0.000
$ 2 Tetrachloro-m-xylene	3.799	3.799	3.800	3.799	3.799	3.799	3.799	3.799	3.749-3.849	3.799	0.000
3 Hexachlorobenzene	4.140	4.141	4.141	4.141	4.140	4.140	4.140	4.140	4.090-4.190	4.140	0.001
4 alpha-BHC	4.286	4.286	4.286	4.286	4.286	4.286	4.286	4.286	4.236-4.336	4.286	0.000
5 gamma-BHC (Lindane)	4.569	4.568	4.569	4.568	4.568	4.569	4.569	4.569	4.519-4.619	4.569	0.000
6 beta-BHC	4.645	4.646	4.646	4.645	4.645	4.644	4.644	4.644	4.594-4.694	4.645	0.001
7 delta-BHC	4.814	4.815	4.815	4.815	4.814	4.814	4.813	4.813	4.763-4.863	4.814	0.001
8 Heptachlor	5.014	5.014	5.015	5.014	5.014	5.015	5.015	5.015	4.965-5.065	5.014	0.000
9 Aldrin	5.307	5.307	5.307	5.307	5.306	5.307	5.307	5.307	5.257-5.357	5.307	0.000
38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.577-13.677	+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.819-10.919	+++++	+++++
11 Heptachlor epoxide b	5.882	5.882	5.883	5.882	5.881	5.882	5.883	5.883	5.832-5.933	5.882	0.000
12 gamma-Chlordane	6.002	6.002	6.002	6.002	6.001	6.002	6.002	6.002	5.952-6.052	6.002	0.000
13 alpha-Chlordane	6.126	6.127	6.126	6.126	6.126	6.126	6.126	6.126	6.076-6.176	6.126	0.000
14 Endosulfan I	6.260	6.259	6.259	6.259	6.259	6.259	6.260	6.260	6.210-6.310	6.259	0.000

Reviewer 1 VJ Date: 06/25/13
Reviewer 2 Date: 6/25/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-1.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	15 4,4'-DDE	6.183	6.184	6.183	6.182	6.182	6.184	6.184	6.184	6.134-6.234	6.183	0.001
	16 Dieldrin	6.482	6.482	6.482	6.482	6.482	6.482	6.483	6.483	6.433-6.533	6.482	0.000
	17 Endrin	6.701	6.701	6.700	6.700	6.700	6.700	6.701	6.701	6.651-6.751	6.700	0.000
	18 4,4'-DDD	6.741	6.743	6.743	6.742	6.741	6.740	6.740	6.740	6.690-6.790	6.741	0.001
	19 Endosulfan II	6.906	6.907	6.907	6.906	6.906	6.906	6.906	6.906	6.856-6.956	6.906	0.000
	20 4,4'-DDT	6.999	7.000	7.000	6.999	6.999	6.998	6.998	6.998	6.948-7.048	6.999	0.001
	21 Endrin aldehyde	7.284	7.284	7.284	7.283	7.283	7.283	7.284	7.284	7.234-7.334	7.284	0.000
	22 Methoxychlor	7.425	7.425	7.425	7.424	7.424	7.424	7.424	7.424	7.374-7.474	7.425	0.000
	23 Endosulfan sulfate	7.674	7.675	7.674	7.674	7.674	7.674	7.674	7.674	7.624-7.724	7.674	0.000
	24 Endrin ketone	7.930	7.929	7.930	7.929	7.929	7.929	7.930	7.930	7.880-7.980	7.929	0.000
$	25 Decachlorobiphenyl	8.777	8.777	8.777	8.776	8.777	8.777	8.777	8.777	8.727-8.827	8.777	0.000
	26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.831-4.931	+++++	+++++
	28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.309-5.409	+++++	+++++
	29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.368-4.468	+++++	+++++
	31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.207-5.307	+++++	+++++
	32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	5.995-6.095	+++++	+++++
	33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.251-8.351	+++++	+++++
	34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.209-11.309	+++++	+++++
	35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.958	6.908-7.008	+++++	+++++
	39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.861	5.811-5.911	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-1.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.348	6.298-6.398	+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.587	6.537-6.637	+++++	+++++
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.758	1.708-1.808	+++++	+++++
43 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.787	5.737-5.837	+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.110	6.060-6.160	+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.727	6.677-6.777	+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.601	7.551-7.651	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.106-20.206	+++++	+++++
59 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.935	4.885-4.985	+++++	+++++
48 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.269-6.369	+++++	+++++
49 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.886-9.986	+++++	+++++
50 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.841-11.941	+++++	+++++
51 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.777-14.877	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.700-9.800	+++++	+++++
55 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.057-9.157	+++++	+++++
56 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.201-10.301	+++++	+++++
60 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.581	6.531-6.631	+++++	+++++
61 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.903-7.003	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-2.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0619a012	0619a013	0619a014	0619a015	0619a016	0619a017	0619a018
INJ.DATE:	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013
INJ.TIME:	17:57	18:14	18:32	18:50	19:08	19:26	19:44

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	2.467	2.467	2.468	2.467	2.467	2.468	2.469	2.469	2.419-2.519	2.468	0.001
*	52 1Bromo-2nitrobenzene	3.300	3.300	3.300	3.299	3.299	3.300	3.300	3.299	3.249-3.349	3.300	0.000
*	55 Hexabromobiphenyl	10.289	10.288	10.289	10.289	10.289	10.289	10.289	10.288	10.238-10.338	10.289	0.000
$	2 Tetrachloro-m-xylene	4.127	4.127	4.127	4.127	4.126	4.127	4.128	4.128	4.079-4.178	4.127	0.001
	3 Hexachlorobenzene	4.586	4.586	4.587	4.586	4.586	4.586	4.586	4.586	4.536-4.636	4.586	0.000
	4 alpha-BHC	4.709	4.709	4.709	4.709	4.708	4.709	4.710	4.710	4.660-4.760	4.709	0.001
	5 gamma-BHC (Lindane)	5.066	5.065	5.065	5.065	5.065	5.066	5.066	5.066	5.016-5.116	5.065	0.000
	6 beta-BHC	5.138	5.139	5.139	5.139	5.138	5.138	5.138	5.138	5.088-5.188	5.138	0.001
	7 delta-BHC	5.449	5.450	5.450	5.449	5.449	5.450	5.450	5.450	5.400-5.500	5.450	0.000
	8 Heptachlor	5.529	5.528	5.529	5.528	5.528	5.529	5.529	5.529	5.479-5.579	5.529	0.001
	37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.538-14.638	+++++	+++++
	9 Aldrin	5.867	5.866	5.867	5.866	5.866	5.867	5.867	5.867	5.817-5.917	5.867	0.001
	10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.630-12.730	+++++	+++++
	11 Heptachlor epoxide b	6.422	6.421	6.421	6.420	6.420	6.421	6.422	6.422	6.372-6.472	6.421	0.001
	12 gamma-Chlordane	6.604	6.604	6.604	6.603	6.603	6.604	6.604	6.604	6.554-6.654	6.604	0.000
	13 alpha-Chlordane	6.742	6.741	6.742	6.741	6.741	6.742	6.742	6.742	6.692-6.792	6.741	0.001
	14 Endosulfan I	6.809	6.808	6.809	6.808	6.808	6.808	6.809	6.809	6.759-6.859	6.808	0.000

Reviewer 1 _____ Date: 06/25/13

Reviewer 2 _____ Date: 6/25/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-2.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	15 4,4'-DDE	6.868	6.869	6.869	6.868	6.868	6.869	6.870	6.870	6.820-6.920	6.869	0.001
	16 Dieldrin	7.066	7.066	7.065	7.065	7.066	7.067	7.067	7.067	7.017-7.117	7.066	0.001
	17 Endrin	7.355	7.355	7.355	7.355	7.355	7.356	7.356	7.356	7.306-7.406	7.355	0.001
	18 4,4'-DDD	7.407	7.408	7.407	7.407	7.407	7.406	7.407	7.407	7.357-7.457	7.407	0.001
	19 Endosulfan II	7.544	7.544	7.544	7.544	7.544	7.545	7.545	7.545	7.495-7.595	7.544	0.001
	20 4,4'-DDT	7.695	7.694	7.694	7.694	7.694	7.694	7.694	7.694	7.644-7.744	7.694	0.000
	21 Endrin aldehyde	7.842	7.841	7.841	7.841	7.841	7.842	7.843	7.843	7.793-7.893	7.842	0.000
	22 Endosulfan sulfate	8.087	8.087	8.086	8.087	8.087	8.087	8.087	8.087	8.037-8.137	8.087	0.000
	23 Methoxychlor	8.277	8.277	8.277	8.277	8.277	8.277	8.282	8.282	8.232-8.332	8.278	0.002
	24 Endrin ketone	8.578	8.577	8.577	8.577	8.577	8.578	8.578	8.578	8.528-8.628	8.577	0.001
$	25 Decachlorobiphenyl	9.725	9.724	9.725	9.724	9.725	9.724	9.725	9.725	9.675-9.775	9.724	0.000
	26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.130-4.230	+++++	+++++
	27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.001-5.101	+++++	+++++
	28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.121-5.221	+++++	+++++
	29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.920-5.020	+++++	+++++
	30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.235-5.335	+++++	+++++
	31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.918-6.018	+++++	+++++
	32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.717-6.817	+++++	+++++
	33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.664-9.764	+++++	+++++
	34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.741-11.841	+++++	+++++
	35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.291	7.241-7.341	+++++	+++++
	38 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.580	6.530-6.630	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-2.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
39 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.065	7.015-7.115	+++++	+++++
40 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.353	7.303-7.403	+++++	+++++
41 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.726	1.676-1.776	+++++	+++++
42 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.332	6.282-6.382	+++++	+++++
43 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.690	6.640-6.740	+++++	+++++
44 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.415	7.365-7.465	+++++	+++++
45 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.564	8.514-8.614	+++++	+++++
46 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.449-21.549	+++++	+++++
56 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.378	5.328-5.428	+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.821-4.921	+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.590-6.690	+++++	+++++
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.065-8.165	+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.236-11.336	+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.477-6.577	+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.292-6.392	+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.791-6.891	+++++	+++++
57 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.286-7.386	+++++	+++++
58 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.695-7.795	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-2.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0619a022	0619a023	0619a024	0619a025	0619a026	0619a027	0619a028
INJ.DATE:	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013
INJ.TIME:	20:55	21:13	21:30	21:48	22:06	22:24	22:42

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.469	2.419-2.519	+++++	+++++
* 52 1Bromo-2nitrobenzene	3.300	3.300	3.300	3.300	3.300	3.300	3.299	3.299	3.249-3.349	3.300	0.000
* 55 Hexabromobiphenyl	10.289	10.289	10.289	10.288	10.290	10.289	10.288	10.288	10.238-10.338	10.289	0.000
$ 2 Tetrachloro-m-xylene	4.127	4.126	4.127	4.127	4.127	4.127	4.127	4.128	4.079-4.178	4.127	0.000
3 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.586	4.536-4.636	+++++	+++++
4 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.710	4.660-4.760	+++++	+++++
5 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.066	5.016-5.116	+++++	+++++
6 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.138	5.088-5.188	+++++	+++++
7 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.450	5.400-5.500	+++++	+++++
8 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.529	5.479-5.579	+++++	+++++
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.538-14.638	+++++	+++++
9 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.867	5.817-5.917	+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.630-12.730	+++++	+++++
11 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.422	6.372-6.472	+++++	+++++
12 gamma-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.604	6.554-6.654	+++++	+++++
13 alpha-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.742	6.692-6.792	+++++	+++++
14 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.809	6.759-6.859	+++++	+++++

Reviewer 1 _____ Date: 06/25/13
Reviewer 2 _____ Date: 6/25/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-2.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
15 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.870	6.820-6.920	+++++	+++++
16 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.067	7.017-7.117	+++++	+++++
17 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.356	7.306-7.406	+++++	+++++
18 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.407	7.357-7.457	+++++	+++++
19 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.545	7.495-7.595	+++++	+++++
20 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.694	7.644-7.744	+++++	+++++
21 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.843	7.793-7.893	+++++	+++++
22 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.087	8.037-8.137	+++++	+++++
23 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.282	8.232-8.332	+++++	+++++
24 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.578	8.528-8.628	+++++	+++++
$ 25 Decachlorobiphenyl	9.725	9.725	9.725	9.724	9.725	9.725	9.724	9.725	9.675-9.775	9.725	0.000
26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.130-4.230	+++++	+++++
27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.001-5.101	+++++	+++++
28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.121-5.221	+++++	+++++
29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.920-5.020	+++++	+++++
30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.235-5.335	+++++	+++++
31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.918-6.018	+++++	+++++
32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.717-6.817	+++++	+++++
33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.664-9.764	+++++	+++++
34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.741-11.841	+++++	+++++
35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.291	7.241-7.341	+++++	+++++
38 2,4-DDE	6.580	6.580	6.580	6.580	6.581	6.580	6.580	6.580	6.530-6.630	6.580	0.000

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-2.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
39 2,4-DDD	7.065	7.065	7.065	7.066	7.066	7.065	7.065	7.065	7.015-7.115	7.065	0.000
40 2,4-DDT	7.352	7.352	7.352	7.352	7.352	7.352	7.353	7.353	7.303-7.403	7.352	0.000
41 Hexachloroethane	1.727	1.726	1.727	1.727	1.726	1.726	1.726	1.726	1.676-1.776	1.727	0.000
42 Oxychlordane	6.331	6.331	6.331	6.331	6.332	6.332	6.332	6.332	6.282-6.382	6.331	0.001
43 trans-Nonachlor	6.688	6.688	6.687	6.688	6.689	6.688	6.690	6.690	6.640-6.740	6.688	0.001
44 cis-Nonachlor	7.412	7.411	7.412	7.412	7.413	7.412	7.415	7.415	7.365-7.465	7.412	0.001
45 Mirex	8.564	8.564	8.564	8.563	8.565	8.565	8.564	8.564	8.514-8.614	8.564	0.000
46 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.449-21.549	+++++	+++++
56 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.378	5.328-5.428	+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.821-4.921	+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.590-6.690	+++++	+++++
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.065-8.165	+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.236-11.336	+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.477-6.577	+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.292-6.392	+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.791-6.891	+++++	+++++
57 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.286-7.386	+++++	+++++
58 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.695-7.795	+++++	+++++

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a010.d ARI ID: IB
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a010.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 17:21
Compound Sublist: wpest Report Date: 06/25/2013 09:50
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.131	-0.001	5445201	3.300	0.000	27743026	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.272	-0.014	1237	4.712	0.002	5841	0.0113	0.0088	25.0	alpha-BHC
----			5.142	0.003	6031	0.0000	0.0210	---	beta-BHC
4.809	-0.005	1463	5.464	0.014	13614	0.0155	0.0238	42.5*	delta-BHC
----			5.068	0.001	9540	0.0000	0.0163	---	gamma-BHC (Lindane)
----			5.545	0.015	13162	0.0000	0.0232	---	Heptachlor
5.324	0.017	1263	5.852	-0.015	17483	0.0136	0.0325	81.7*	Aldrin
5.892	0.010	3416	6.400	-0.022	27268	0.0398	0.0556	33.1	Heptachlor epoxide b
6.299	0.039	1341	6.782	-0.027	5404	0.0167	0.0123	30.7	Endosulfan I
6.464	-0.018	5067	7.109	0.042	9944	0.0598	0.0224	91.1*	Dieldrin
6.180	-0.004	2407	6.869	-0.001	3466	0.0373	0.0077	131.3*	4,4'-DDE
6.667	-0.034	3562	7.373	0.017	23753	0.0502	0.0729	36.9	Endrin
6.913	0.007	2185	7.551	0.006	5567	0.0310	0.0163	62.1*	Endosulfan II
6.763	0.023	2946	----			0.0434	0.0000	---	4,4'-DDD
7.675	0.001	1856	8.088	0.001	2732	0.0298	0.0094	104.2*	Endosulfan sulfate
6.979	-0.019	7544	7.708	0.013	39804	0.1129	0.1280	12.6	4,4'-DDT
7.383	-0.041	1252	8.259	-0.023	37348	0.0396	0.3227	156.3*	Methoxychlor
7.926	-0.004	15142	8.585	0.007	30994	0.1959	0.1066	59.0*	Endrin ketone
7.303	0.019	3898	7.834	-0.008	11414	0.0700	0.0435	46.6*	Endrin aldehyde
5.988	-0.014	2452	6.626	0.021	24027	0.0278	0.0465	50.4*	gamma-Chlordane
6.127	0.000	4338	6.744	0.002	3096	0.0505	0.0065	154.2*	alpha-Chlordane
2.312	0.000	3453	2.469	-0.001	3790	0.0289	0.0066	125.5*	Hexachlorobutadiene
4.139	0.000	39886	4.583	-0.003	14742	0.4591	0.0270	177.8*	Hexachlorobenzene
5.755	-0.031	1280	6.335	0.003	10455	0.0202	0.0289	35.6	Oxychlordane
----			6.571	-0.009	7079	0.0000	0.0271	---	2,4-DDE
----			6.687	-0.004	4941	0.0000	0.0127	---	trans-Nonachlor
6.335	-0.014	2519	7.045	-0.019	15599	0.0577	0.0734	24.0	2,4-DDD
6.587	0.000	1121	----			0.0222	0.0000	---	2,4-DDT
6.717	-0.010	8796	7.412	-0.003	4224	0.1024	0.0104	163.1*	cis-Nonachlor
7.576	-0.024	8765	8.535	-0.029	217054	0.1671	1.1037	147.4*	Mirex
8.927	0.000	4712338	10.289	0.001	15811694	80.0000	80.0000	0.0	Hexabromobiphenyl
1.757	-0.001	3388	1.727	0.001	198727	0.0000	0.0000	---	Hexachloroethane
6.562	-0.019	2192	7.316	-0.020	7938	0.0000	0.0000	---	Kepone
3.800	0.000	2775489	4.127	-0.001	17285223	37.5388	37.6693	0.3	Tetrachloro-m-xylen
8.777	0.000	2204810	9.726	0.001	9380530	37.1748	36.7014	1.3	Decachlorobiphenyl

06/25/13

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	93.8	94.2	93.8~	130- 0
Decachlorobiphenyl	92.9	91.8	91.8~	130- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

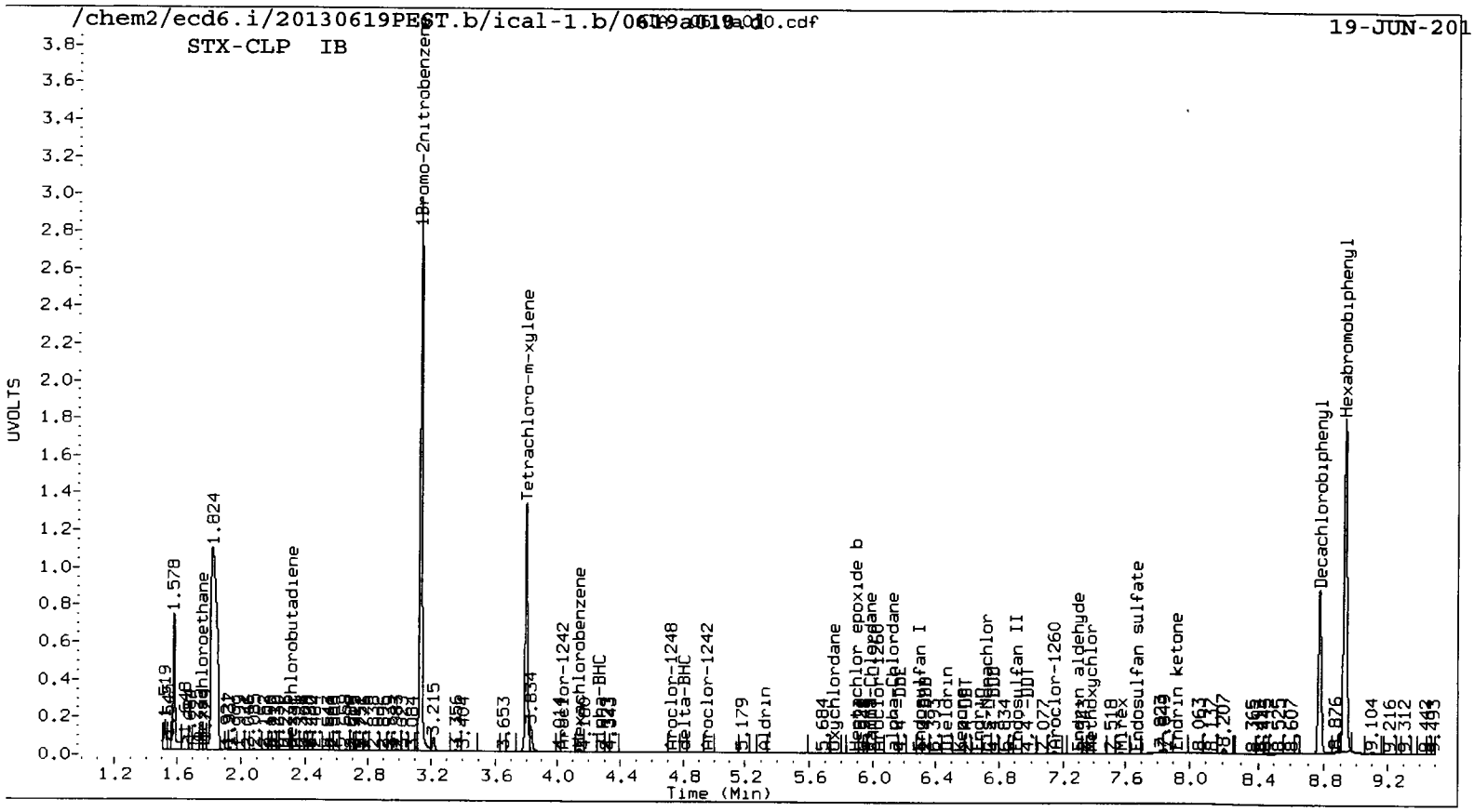
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5445201	-2.6
Hexabromobiphenyl	4870538	4712338	-3.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	27743026	-2.0
Hexabromobiphenyl	16454599	15811694	-3.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.979	0.020	7544	2.5	1	7.316	0.025	7938	0.7
Toxaphene	2	---			0.000	2	7.586	-0.029	150016	9.2
Toxaphene	3	7.303	0.035	3898	1.1	3	7.834	-0.012	11414	0.6
Toxaphene	4	7.576	-0.016	8765	2.5	4	8.317	0.003	5589	0.4
Toxaphene	5	7.675	0.043	1856	0.8	5	8.352	-0.001	1996	0.1
Toxaphene	6	7.926	0.012	15142	7.7	NS	---			----
Total STX-CLPAve (5 peaks): 2.916						Total CLP2Ave (5 peaks): 2.220				RPD = 27
Corrected Ave (4 peaks): 1.731						Corrected Ave (4 peaks): 0.477				RPD = 114*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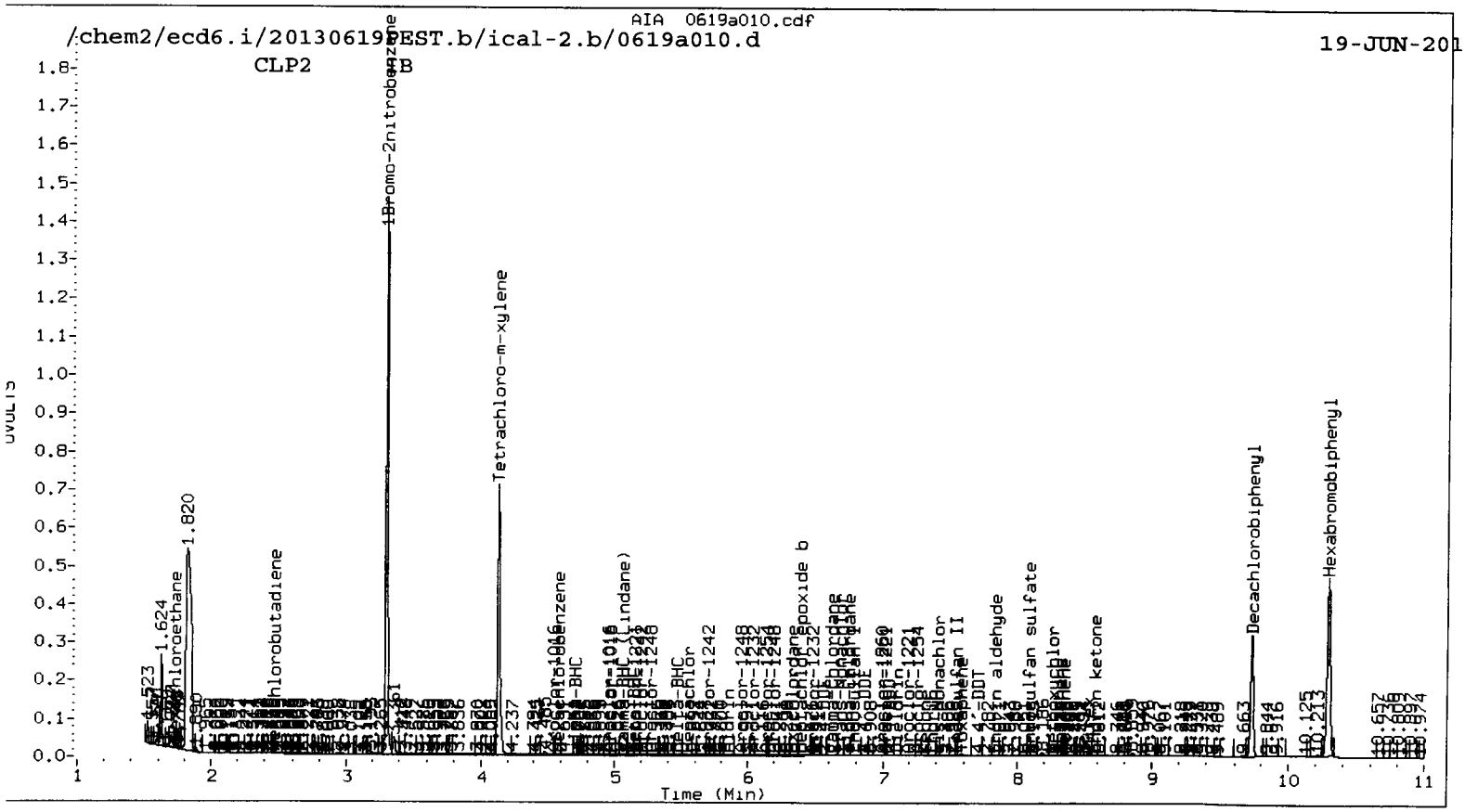
19-JUN-201
STX-CLP IB
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl
1.824
1.578
3.215
3.834
8.826
Aldrin
Endosulfan sulfate
Endrin ketone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19-JUN-201
CLP2 B
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl
1.820
1.624
4.237
8.663
10.213
Aldrin
Endosulfan sulfate
Endrin ketone

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.: 20130619PEST

Analysis Date: 19-JUN-2013 17:39 Init. Calib. Date: 19-JUN-2013

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.186	95936
Endrin	6.701	6813037
4,4'-DDD	6.742	278389
4,4'-DDT	7.000	6738589
Endrin ketone	7.930	275869
Endrin aldehyde	7.284	115494

DDT Percent Breakdown = 5.3 %
((95936+278389) * 100)/(95936+278389+6738589)

Endrin Percent Breakdown = 5.4 %
((115494+275869) * 100)/(115494+275869+6813037)

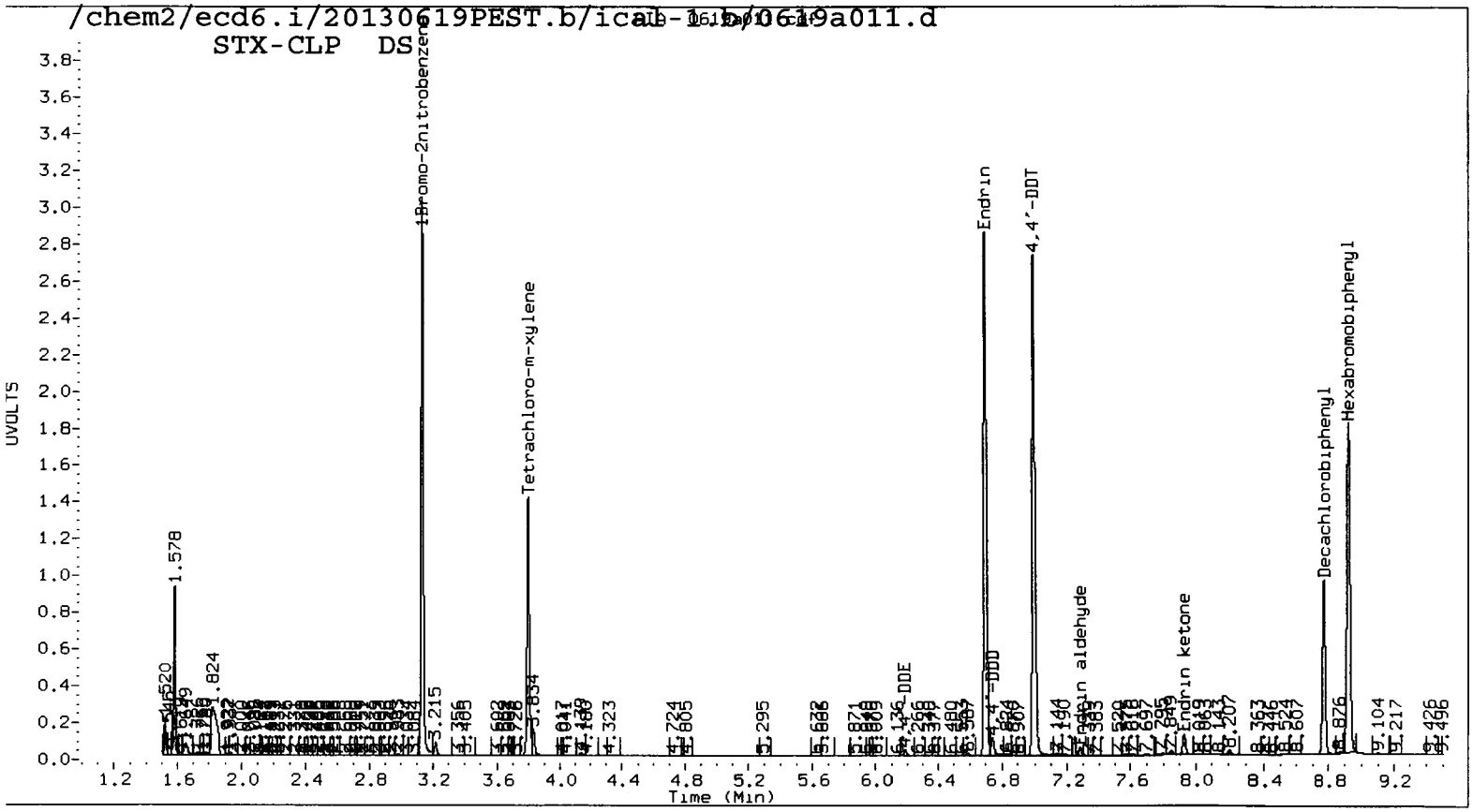
GC Column: STX-CLP2 ID: 0.53(mm)

06/25/13

COMPOUND	RT	AREA
4,4'-DDE	6.869	489895
Endrin	7.356	27988972
4,4'-DDD	7.407	1891401
4,4'-DDT	7.695	28478839
Endrin ketone	8.578	1018617
Endrin aldehyde	7.842	619288

DDT Percent Breakdown = 7.7 %
((489895+1891401) * 100)/(489895+1891401+28478839)

Endrin Percent Breakdown = 5.5 %
((619288+1018617) * 100)/(619288+1018617+27988972)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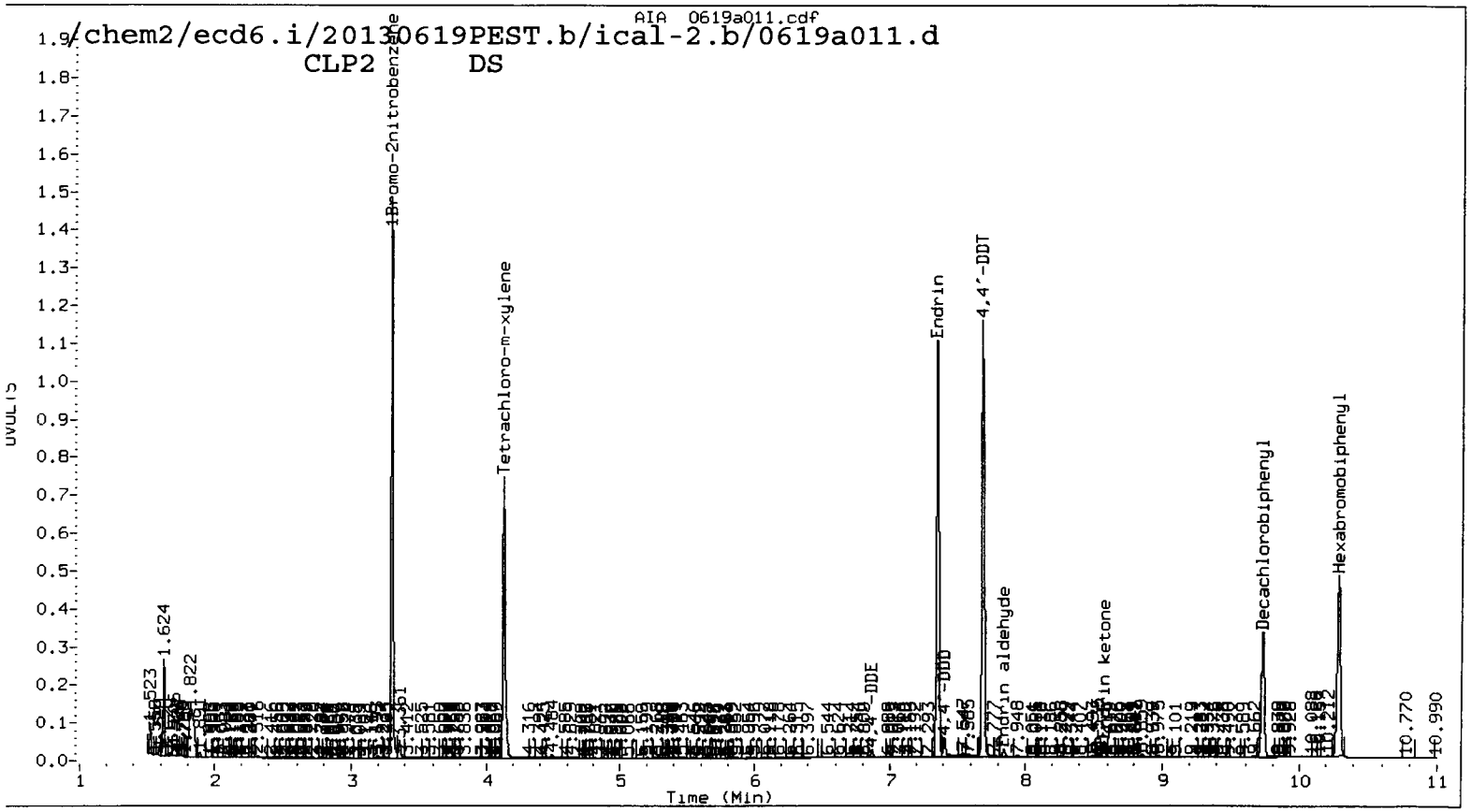
STX-CLP DS
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl
1.578
3.215
3.834
UVOLTS
Time (Min)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CLP2 DS
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl
1.624
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a012.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a012.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 17:57
Compound Sublist: INDA Report Date: 06/25/2013 09:50
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.001	5590801	3.300	0.000	28320361	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	2197479	4.709	-0.001	13152047	19.5983	19.4383	0.8	alpha-BHC
4.645	0.001	835510	5.138	0.000	5099619	18.4728	17.3979	6.0	beta-BHC
4.814	0.001	1911138	5.449	-0.001	11322606	19.6853	19.4141	1.4	delta-BHC
4.569	0.000	1983131	5.066	-0.001	11521601	19.3979	19.2581	0.7	gamma-BHC (Lindane)
5.014	0.000	1872342	5.529	-0.001	10807405	19.0846	18.6236	2.4	Heptachlor
5.307	0.000	1831236	5.867	0.000	10223350	19.2639	18.6089	3.5	Aldrin
5.882	0.000	1656941	6.422	0.000	8941275	18.8014	17.8576	5.1	Heptachlor epoxide b
6.260	0.000	1541002	6.809	0.000	8296243	18.7074	18.4391	1.4	Endosulfan I
6.482	0.000	3329129	7.066	-0.001	16340234	38.2478	35.9857	6.1	Dieldrin
6.183	-0.001	2461228	6.868	-0.002	16694923	37.1669	36.5223	1.7	4,4'-DDE
6.701	0.000	2819551	7.355	-0.001	12511920	38.4140	36.8761	4.1	Endrin
6.906	0.001	2775029	7.544	-0.001	13012156	38.0841	36.6083	4.0	Endosulfan II
6.741	0.001	2680166	7.407	0.000	13189613	38.2390	36.1096	5.7	4,4'-DDD
7.674	0.000	2428615	8.087	0.000	11059493	37.7476	36.5472	3.2	Endosulfan sulfate
6.999	0.001	2658216	7.695	0.000	11832997	38.4799	36.5617	5.1	4,4'-DDT
7.425	0.000	5893323	8.277	-0.005	21549834	180.2526	178.9147	0.7	Methoxychlor
7.930	0.000	2942761	8.578	-0.001	11106420	36.8347	36.7234	0.3	Endrin ketone
7.284	0.000	2165447	7.842	-0.001	9820893	37.5991	35.9909	4.4	Endrin aldehyde
6.002	0.000	1724732	6.604	0.000	9531588	19.0513	18.0885	5.2	gamma-Chlordane
6.126	0.000	1657348	6.742	0.000	8851820	18.8082	18.3243	2.6	alpha-Chlordane
2.311	-0.001	2291552	2.467	-0.002	11051717	18.6525	18.8532	1.1	Hexachlorobutadiene
4.140	0.001	1618855	4.586	0.000	10114339	18.1471	18.1305	0.1	Hexachlorobenzene
8.927	0.000	4870538	10.289	0.001	16454599	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	2864775	4.127	-0.002	17352669	37.7374	37.0454	1.9	Tetrachloro-m-xylen
8.777	-0.001	2234017	9.725	0.000	9610334	36.4437	36.1314	0.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	94.3	92.6	92.6~	115- 0
Decachlorobiphenyl	91.1	90.3	90.3~	115- 0

WY3: 20267

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

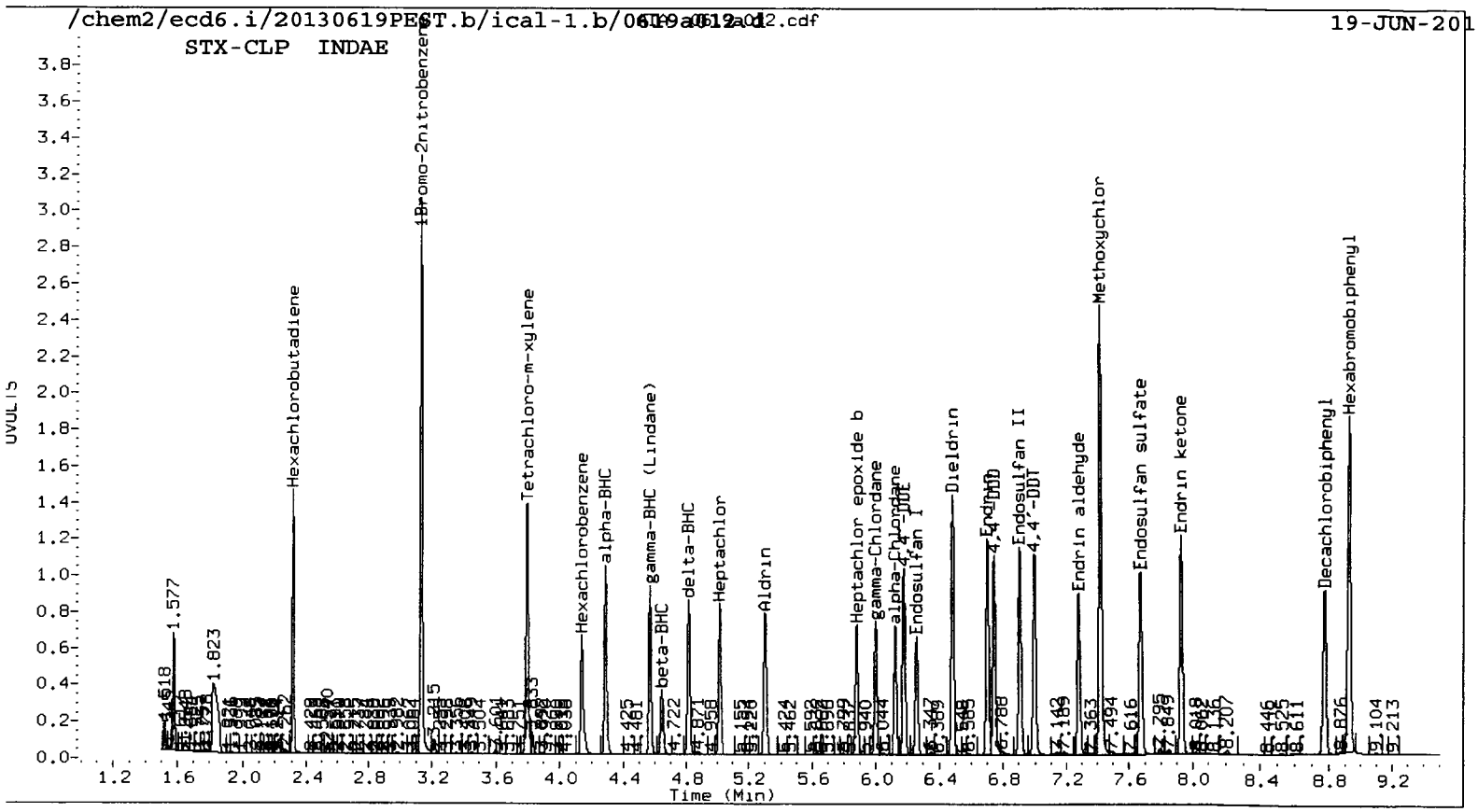
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5590801	0.0
Hexabromobiphenyl	4870538	4870538	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28320361	0.0
Hexabromobiphenyl	16454599	16454599	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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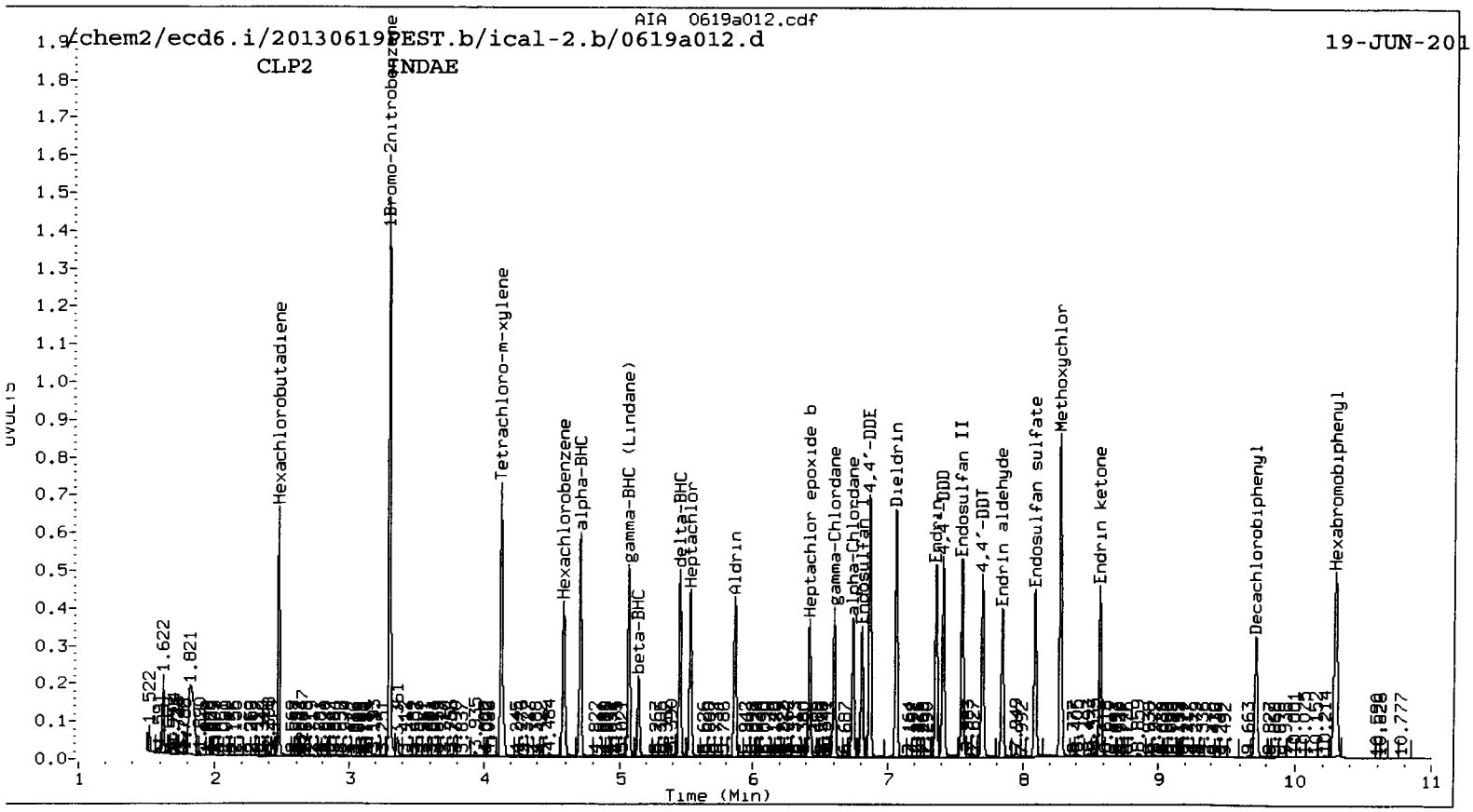
19-JUN-201
STX-CLP INDAE
UVUL 5
Time (Min)
1.577
1.823
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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19-JUN-201
CLP2 INDAE
UVUL 5
Time (Min)
1.622
1.821
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a013.d ARI ID: INDAA
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a013.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 18:14
Compound Sublist: INDA Report Date: 06/25/2013 09:50
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.001	5443407	3.300	0.000	27626455	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	131311	4.709	-0.001	816134	1.2028	1.2365	2.8	alpha-BHC
4.646	0.002	61465	5.139	0.001	457221	1.3958	1.5990	13.6	beta-BHC
4.815	0.002	111484	5.450	0.000	711469	1.1794	1.2506	5.9	delta-BHC
4.568	0.000	122386	5.065	-0.001	741566	1.2295	1.2706	3.3	gamma-BHC (Lindane)
5.014	-0.001	124272	5.528	-0.001	834093	1.3010	1.4734	12.4	Heptachlor
5.307	0.000	117450	5.866	-0.001	791691	1.2690	1.4773	15.2	Aldrin
5.882	0.000	116637	6.421	-0.001	784226	1.3593	1.6056	16.6	Heptachlor epoxide b
6.259	-0.001	110155	6.808	-0.001	655773	1.3735	1.4941	8.4	Endosulfan I
6.482	-0.001	218954	7.066	-0.002	1380894	2.5836	3.1175	18.7	Dieldrin
6.184	0.000	172469	6.869	-0.001	1326712	2.6750	2.9753	10.6	4,4'-DDE
6.701	0.000	188353	7.355	-0.001	955890	2.6276	2.8816	9.2	Endrin
6.907	0.001	190654	7.544	-0.001	991338	2.6791	2.8527	6.3	Endosulfan II
6.743	0.003	178398	7.408	0.001	1060462	2.6062	2.9696	13.0	4,4'-DDD
7.675	0.000	167119	8.087	-0.001	870793	2.6597	2.9433	10.1	Endosulfan sulfate
7.000	0.002	171062	7.694	0.000	878337	2.5355	2.7759	9.0	4,4'-DDT
7.425	0.001	452591	8.277	-0.005	1836243	14.1742	15.5933	9.5	Methoxychlor
7.929	0.000	218694	8.577	-0.001	823887	2.8029	2.7864	0.6	Endrin ketone
7.284	0.001	152510	7.841	-0.001	796663	2.7114	2.9862	9.6	Endrin aldehyde
6.002	0.000	114356	6.604	-0.001	789869	1.2974	1.5366	16.9	gamma-Chlordane
6.127	0.000	115059	6.741	-0.001	692681	1.3411	1.4699	9.2	alpha-Chlordane
2.310	-0.002	161818	2.467	-0.002	766383	1.3528	1.3402	0.9	Hexachlorobutadiene
4.141	0.001	126395	4.586	0.000	820221	1.4552	1.5072	3.5	Hexachlorobenzene
8.927	-0.001	4756712	10.288	0.000	16087272	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	196648	4.127	-0.002	1321445	2.6606	2.8919	8.3	Tetrachloro-m-xylene
8.777	-0.001	168517	9.724	-0.001	741403	2.8148	2.8511	1.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	6.7	7.2	6.7~	115- 0
Decachlorobiphenyl	7.0	7.1	7.0~	115- 0

WV35 : 20030

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

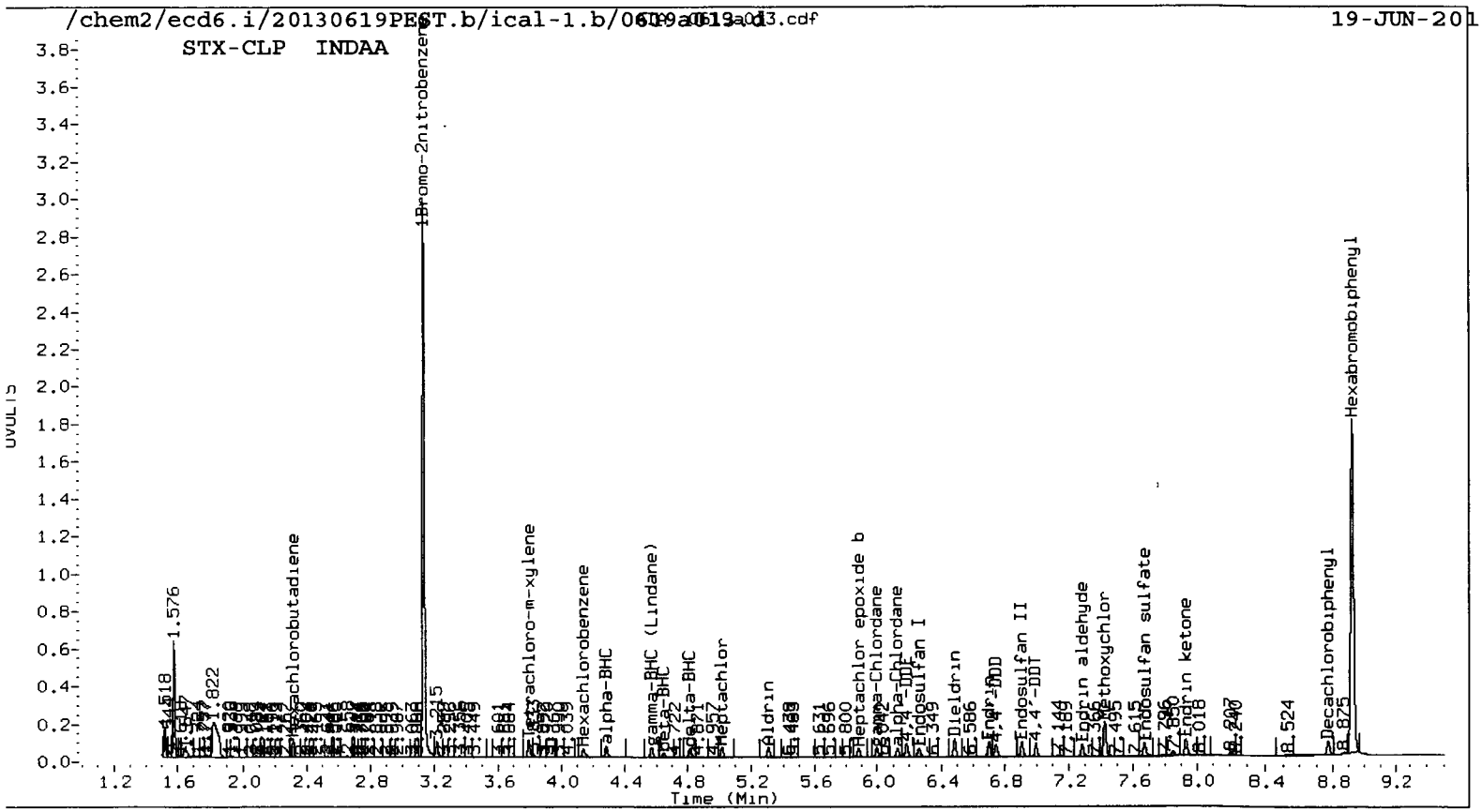
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5443407	-2.6
Hexabromobiphenyl	4870538	4756712	-2.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	27626455	-2.5
Hexabromobiphenyl	16454599	16087272	-2.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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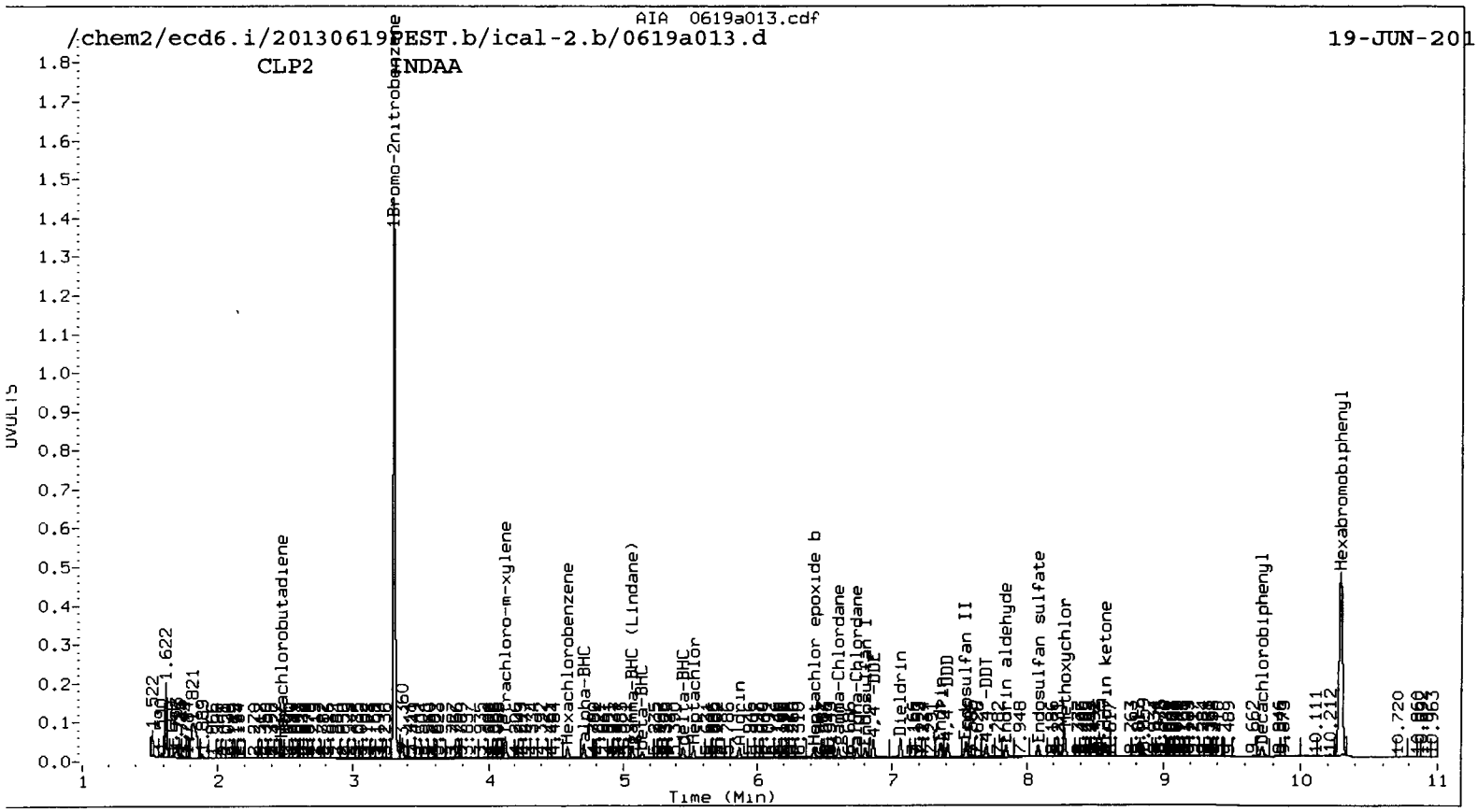
STX-CLP INDAA
UVUL15
Time (Min)
1-Bromo-2nitrobenzene
Hexachlorobutadiene
Pentachloro-m-xylene
Hexachlorobenzene
Alpha-BHC
Gamma-BHC (Lindane)
Beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
Alpha-Chlordane
Gamma-Chlordane
Endosulfan I
Dieldrin
4,4'-DDE
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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19-JUN-201
CLP2 INDAA
UVUL15
Time (Min)
1-Bromo-2nitrobenzene
Hexachlorobutadiene
Pentachloro-m-xylene
Hexachlorobenzene
Alpha-BHC
Gamma-BHC (Lindane)
Beta-BHC
Heptachlor
Heptachlor epoxide b
Alpha-Chlordane
Gamma-Chlordane
Endosulfan I
Dieldrin
4,4'-DDE
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a014.d ARI ID: INDAB
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a014.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 18:32
Compound Sublist: INDA Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.131	-0.001	5578569	3.300	0.001	28124817	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	271034	4.709	-0.001	1721306	2.4225	2.5617	5.6	alpha-BHC
4.646	0.002	120984	5.139	0.001	843735	2.6808	2.8985	7.8	beta-BHC
4.815	0.002	233196	5.450	0.000	1461179	2.4073	2.5228	4.7	delta-BHC
4.569	0.000	253061	5.065	-0.001	1513233	2.4807	2.5469	2.6	gamma-BHC (Lindane)
5.015	0.000	252765	5.529	-0.001	1578669	2.5821	2.7393	5.9	Heptachlor
5.307	0.000	240632	5.867	-0.001	1464165	2.5369	2.6837	5.6	Aldrin
5.883	0.000	232952	6.421	-0.001	1441216	2.6491	2.8984	9.0	Heptachlor epoxide b
6.259	0.000	219902	6.809	0.000	1245281	2.6754	2.7870	4.1	Endosulfan I
6.482	0.000	452509	7.065	-0.002	2553673	5.2102	5.6630	8.3	Dieldrin
6.183	-0.001	342779	6.869	-0.001	2565531	5.1876	5.6514	8.6	4,4'-DDE
6.700	-0.001	387178	7.355	-0.001	1913011	5.2672	5.6595	7.2	Endrin
6.907	0.001	385932	7.544	-0.001	1963811	5.2886	5.5459	4.7	Endosulfan II
6.743	0.003	365453	7.407	0.001	2044731	5.2064	5.6191	7.6	4,4'-DDD
7.674	0.000	340604	8.086	-0.001	1682393	5.2861	5.5807	5.4	Endosulfan sulfate
7.000	0.002	353629	7.694	0.000	1737896	5.1115	5.3901	5.3	4,4'-DDT
7.425	0.001	903724	8.277	-0.005	3624930	27.6004	30.2095	9.0	Methoxychlor
7.930	0.000	429848	8.577	-0.001	1639454	5.3725	5.4414	1.3	Endrin ketone
7.284	0.000	309578	7.841	-0.001	1548519	5.3673	5.6964	5.9	Endrin aldehyde
6.002	0.000	231407	6.604	-0.001	1443449	2.5617	2.7583	7.4	gamma-Chlordane
6.126	0.000	229315	6.742	0.000	1313218	2.6081	2.7374	4.8	alpha-Chlordane
2.311	-0.001	318581	2.468	-0.002	1559023	2.5988	2.6780	3.0	Hexachlorobutadiene
4.141	0.002	241429	4.587	0.000	1545377	2.7123	2.7894	2.8	Hexachlorobenzene
8.927	0.000	4877747	10.289	0.001	16392538	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.001	395058	4.127	-0.001	2617199	5.2155	5.6262	7.6	Tetrachloro-m-xylene
8.777	-0.001	335277	9.725	0.000	1455538	5.4613	5.4930	0.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	13.0	14.1	13.0~	115- 0
Decachlorobiphenyl	13.7	13.7	13.7~	115- 0

WB5:20033

~ Indicates recovery outside QC Limits

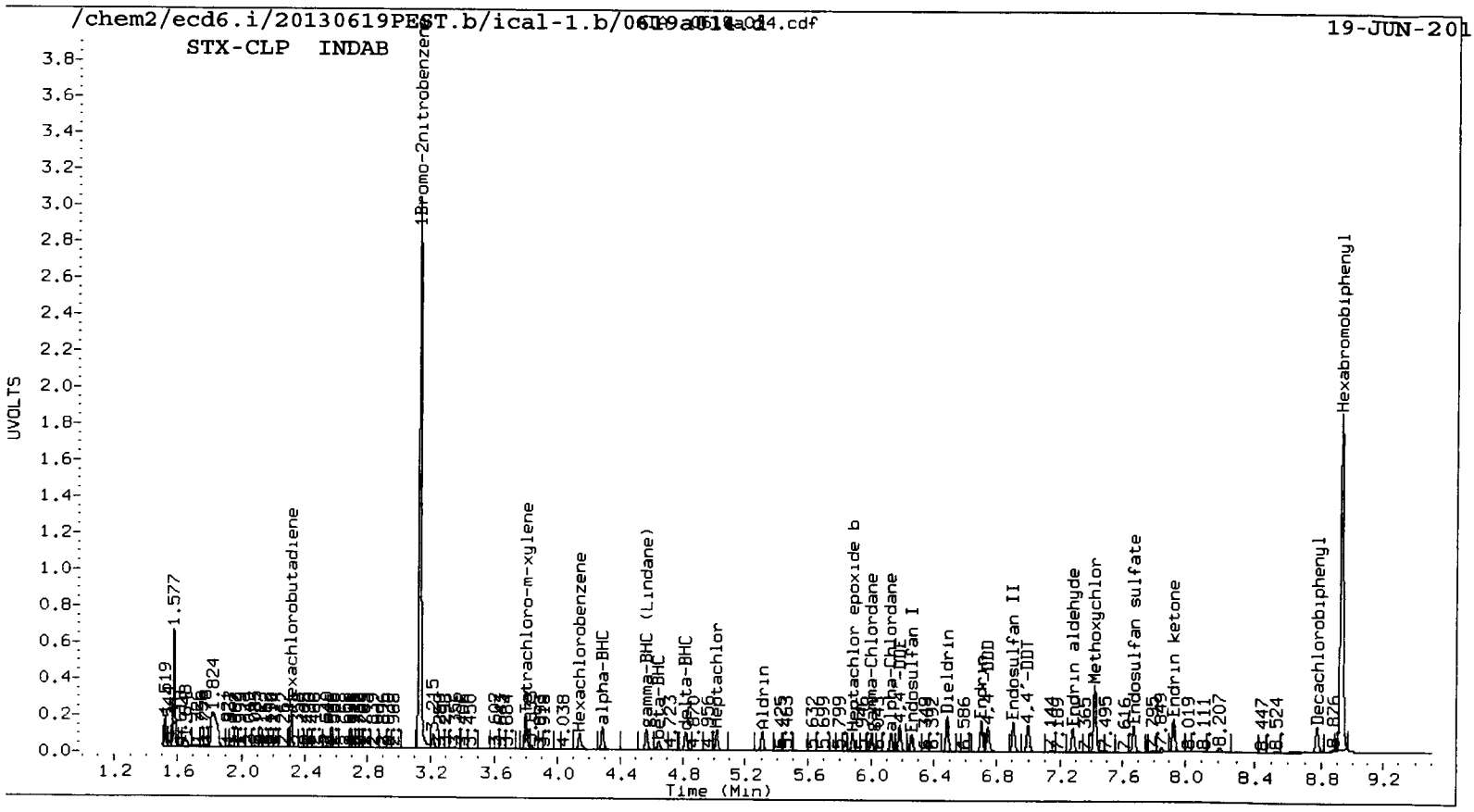
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	5590801	5578569	-0.2
Hexabromobiphenyl	4870538	4877747	0.1

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	28320361	28124817	-0.7
Hexabromobiphenyl	16454599	16392538	-0.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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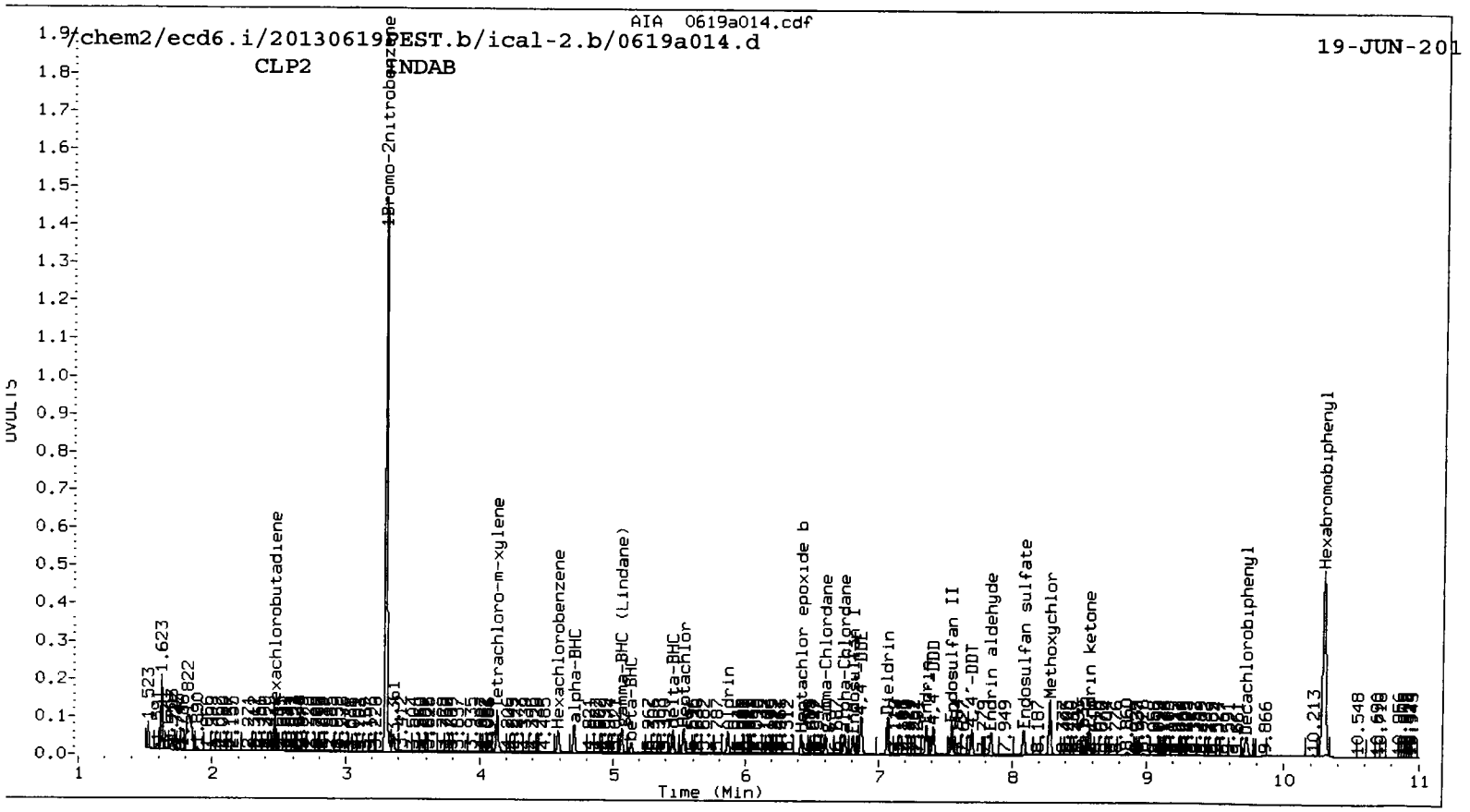
STX-CLP INDAB
19-JUN-201
UVOLTS
Time (Min)
1.577
1-Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 INDAB
19-JUN-201
UVOLTS
Time (Min)
1.623
1-Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a015.d ARI ID: INDAC
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a015.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 18:50
Compound Sublist: INDA Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.001	5651084	3.299	0.000	28473248	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	533404	4.709	-0.001	3310204	4.7064	4.8661	3.3	alpha-BHC
4.645	0.001	222104	5.139	0.000	1443860	4.8583	4.8994	0.8	beta-BHC
4.815	0.001	456403	5.449	-0.001	2797279	4.6509	4.7706	2.5	delta-BHC
4.568	0.000	489737	5.065	-0.001	2903570	4.7392	4.8272	1.8	gamma-BHC (Lindane)
5.014	-0.001	484132	5.528	-0.001	2965857	4.8821	5.0834	4.0	Heptachlor
5.307	-0.001	460422	5.866	-0.001	2734717	4.7918	4.9511	3.3	Aldrin
5.882	-0.001	434196	6.420	-0.002	2499209	4.8743	4.9646	1.8	Heptachlor epoxide b
6.259	-0.001	406962	6.808	-0.001	2263684	4.8877	5.0042	2.4	Endosulfan I
6.482	-0.001	864291	7.065	-0.002	4719193	9.8238	10.3371	5.1	Dieldrin
6.182	-0.002	639222	6.868	-0.002	4712850	9.5499	10.2546	7.1	4,4'-DDE
6.700	-0.001	739889	7.355	-0.002	3566322	9.9981	10.4737	4.6	Endrin
6.906	0.000	735342	7.544	-0.002	3664235	10.0093	10.2723	2.6	Endosulfan II
6.742	0.002	701003	7.407	0.000	3740522	9.9198	10.2042	2.8	4,4'-DDD
7.674	-0.001	640784	8.087	-0.001	3049684	9.8783	10.0422	1.6	Endosulfan sulfate
6.999	0.001	679878	7.694	0.000	3282418	9.7614	10.1061	3.5	4,4'-DDT
7.424	0.000	1639957	8.277	-0.005	6401010	49.7500	52.9550	6.2	Methoxychlor
7.929	0.000	797409	8.577	-0.002	3061655	9.8997	10.0874	1.9	Endrin ketone
7.283	0.000	579846	7.841	-0.001	2765107	9.9858	10.0974	1.1	Endrin aldehyde
6.002	-0.001	435922	6.603	-0.001	2600459	4.7638	4.9085	3.0	gamma-Chlordane
6.126	-0.001	427644	6.741	-0.002	2403332	4.8013	4.9485	3.0	alpha-Chlordane
2.311	-0.001	609169	2.467	-0.002	2969940	4.9055	5.0392	2.7	Hexachlorobutadiene
4.141	0.001	441722	4.586	0.000	2792079	4.8988	4.9781	1.6	Hexachlorobenzene
8.926	-0.001	4910634	10.289	0.000	16513179	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	753339	4.127	-0.002	4866543	9.8178	10.3336	5.1	Tetrachloro-m-xylene
8.776	-0.001	609208	9.724	-0.001	2676119	9.8569	10.0256	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	24.5	25.8	24.5~	115- 0
Decachlorobiphenyl	24.6	25.1	24.6~	115- 0

~ Indicates recovery outside QC Limits

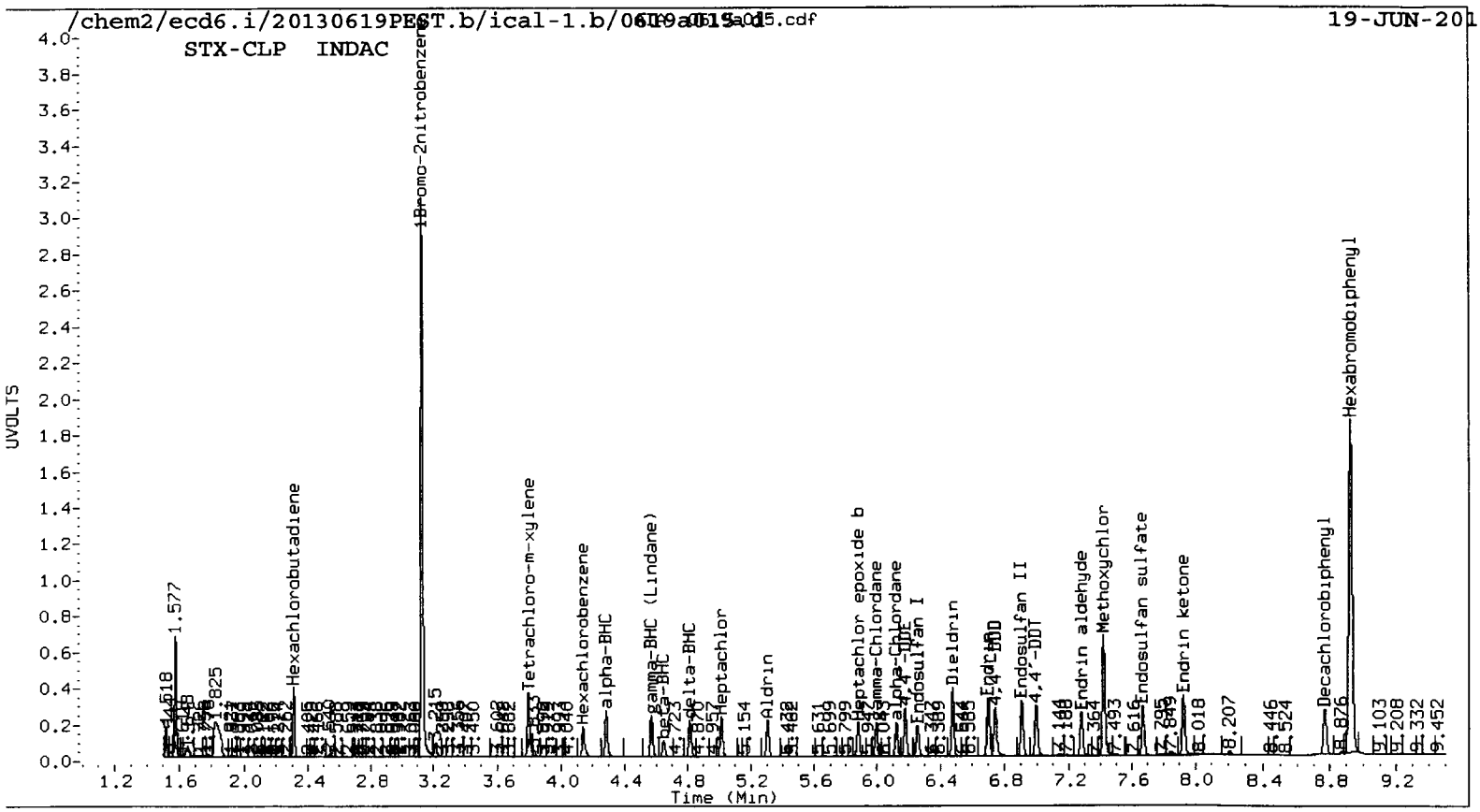
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	%D
Bromo-Nitrobenzene	5590801	5651084	1.1
Hexabromobiphenyl	4870538	4910634	0.8

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	%D
Bromo-Nitrobenzene	28320361	28473248	0.5
Hexabromobiphenyl	16454599	16513179	0.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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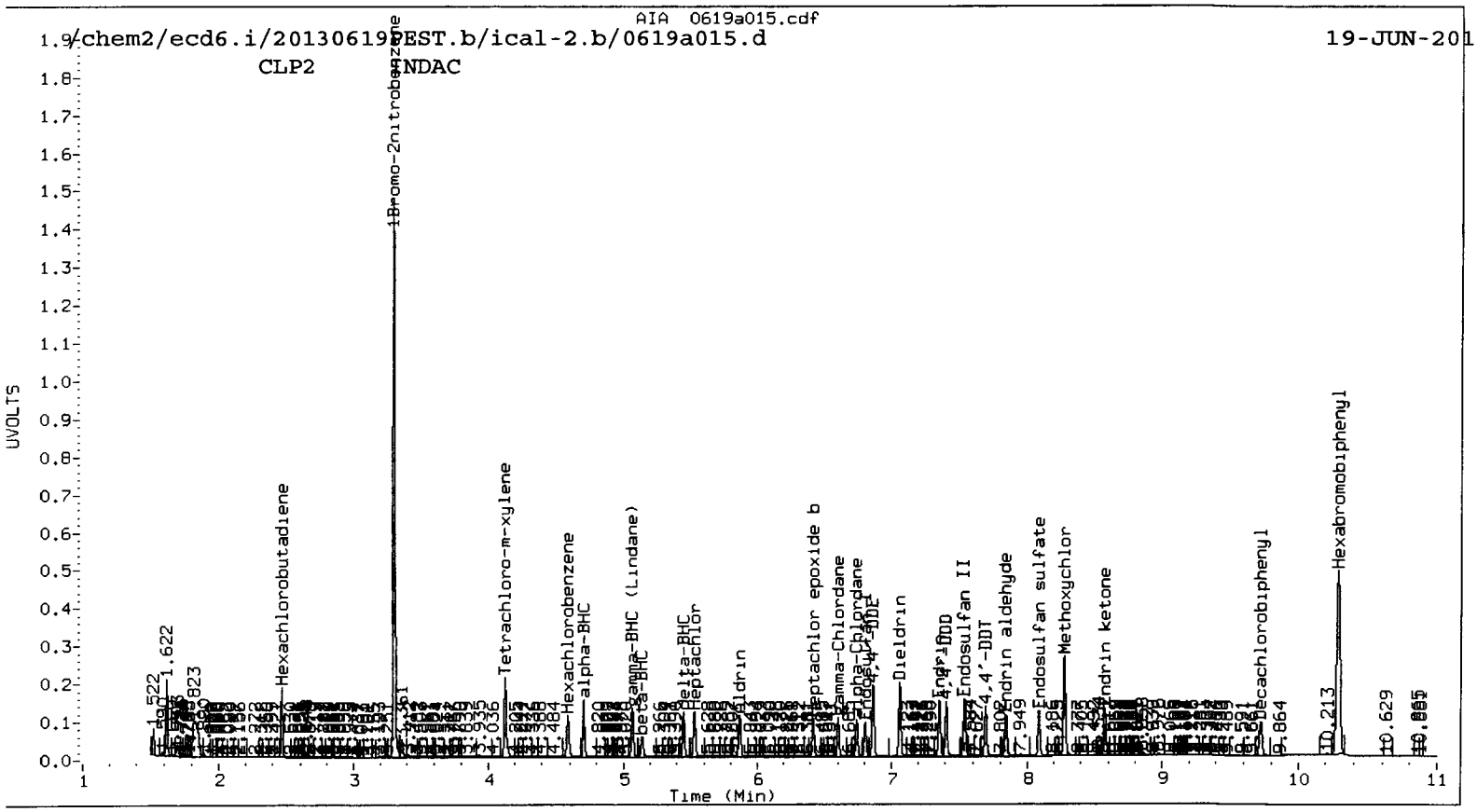
19-JUN-201
STX-CLP INDAC
UVOLTS
Time (Min)
1.577
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
Endosulfan I
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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19-JUN-201
CLP2 INDAC
UVOLTS
Time (Min)
1.622
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
Endosulfan I
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a016.d ARI ID: INDAD
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a016.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 19:08
Compound Sublist: INDA Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.002	5597417	3.299	0.000	28402073	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	-0.001	1166684	4.708	-0.002	7173359	10.3928	10.5715	1.7	alpha-BHC
4.645	0.001	457904	5.138	0.000	2870240	10.1121	9.7639	3.5	beta-BHC
4.814	0.000	1008727	5.449	-0.001	6128970	10.3779	10.4787	1.0	delta-BHC
4.568	0.000	1059355	5.065	-0.002	6285992	10.3498	10.4767	1.2	gamma-BHC (Lindane)
5.014	-0.001	1021731	5.528	-0.001	6128452	10.4021	10.5303	1.2	Heptachlor
5.306	-0.001	993823	5.866	-0.002	5759762	10.4423	10.4540	0.1	Aldrin
5.881	-0.001	915825	6.420	-0.002	5105747	10.3796	10.1679	2.1	Heptachlor epoxide b
6.259	-0.001	853922	6.808	-0.001	4698518	10.3541	10.4128	0.6	Endosulfan I
6.482	-0.001	1830874	7.066	-0.002	9594439	21.0097	21.0688	0.3	Dieldrin
6.182	-0.002	1336155	6.868	-0.002	9661210	20.1534	21.0743	4.5	4,4'-DDE
6.700	-0.001	1543295	7.355	-0.001	7307158	20.8231	21.2013	1.8	Endrin
6.906	0.000	1528510	7.544	-0.001	7652018	20.7745	21.1933	2.0	Endosulfan II
6.741	0.001	1448815	7.407	0.000	7715403	20.4712	20.7942	1.6	4,4'-DDD
7.674	0.000	1339229	8.087	-0.001	6329186	20.6145	20.5902	0.1	Endosulfan sulfate
6.999	0.000	1443267	7.694	-0.001	6811436	20.6908	20.7187	0.1	4,4'-DDT
7.424	0.000	3296480	8.277	-0.005	12592818	99.8523	102.9243	3.0	Methoxychlor
7.929	0.000	1647140	8.577	-0.001	6416942	20.4182	20.8876	2.3	Endrin ketone
7.283	0.000	1206079	7.841	-0.001	5680432	20.7392	20.4935	1.2	Endrin aldehyde
6.001	-0.001	935499	6.603	-0.001	5350283	10.3213	10.1242	1.9	gamma-Chlordane
6.126	-0.001	906578	6.741	-0.001	4973613	10.2760	10.2663	0.1	alpha-Chlordane
2.310	-0.002	1263182	2.467	-0.002	6269724	10.2697	10.6648	3.8	Hexachlorobutadiene
4.140	0.000	904118	4.586	-0.001	5722607	10.1230	10.2285	1.0	Hexachlorobenzene
8.927	0.000	4918023	10.289	0.001	16714534	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	1573454	4.126	-0.002	10034915	20.7024	21.3614	3.1	Tetrachloro-m-xylen
8.777	-0.001	1251738	9.725	0.000	5530544	20.2226	20.4695	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	51.8	53.4	51.8~	115- 0
Decachlorobiphenyl	50.6	51.2	50.6~	115- 0

WV95:00099

~ Indicates recovery outside QC Limits

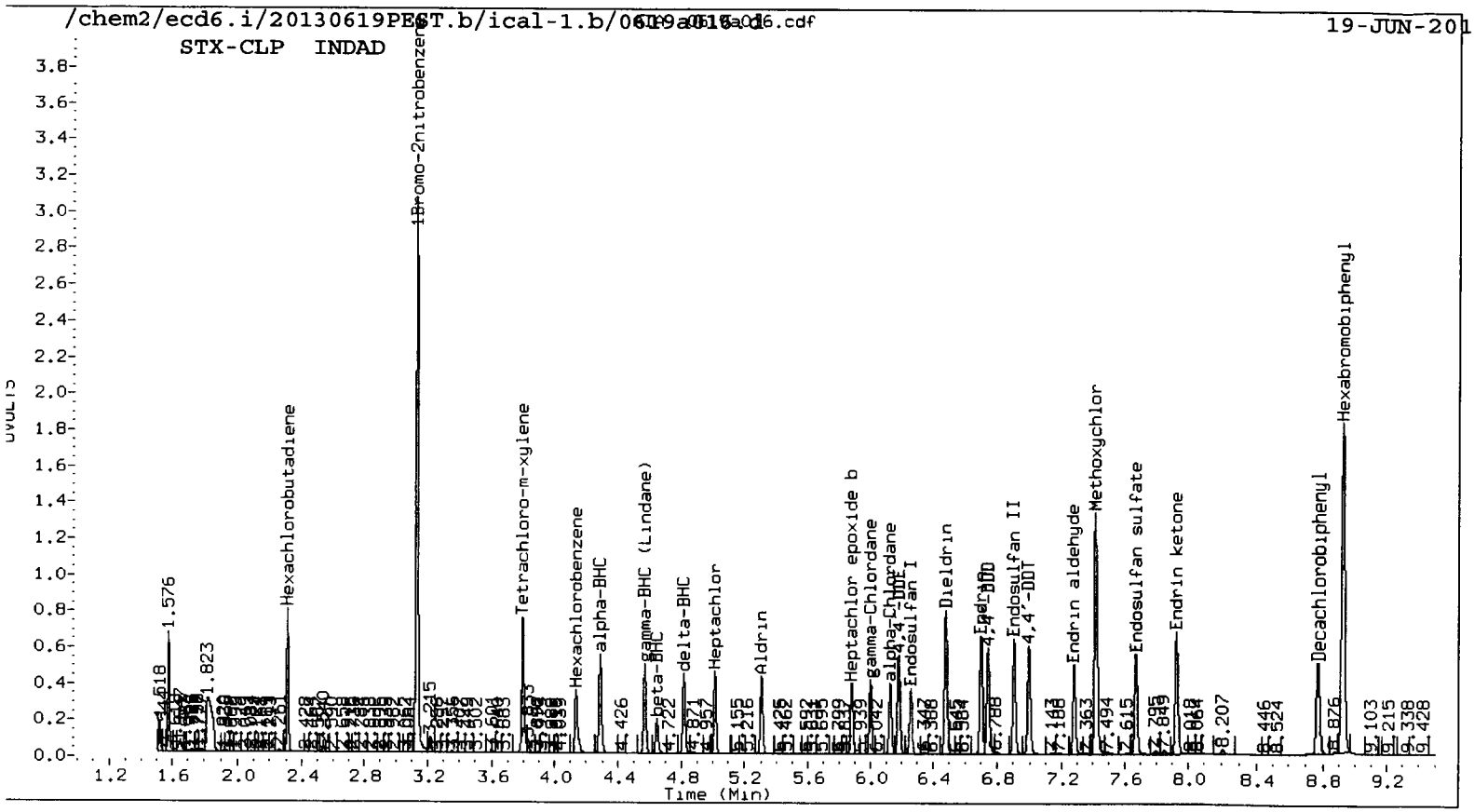
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5597417	0.1
Hexabromobiphenyl	4870538	4918023	1.0

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28402073	0.3
Hexabromobiphenyl	16454599	16714534	1.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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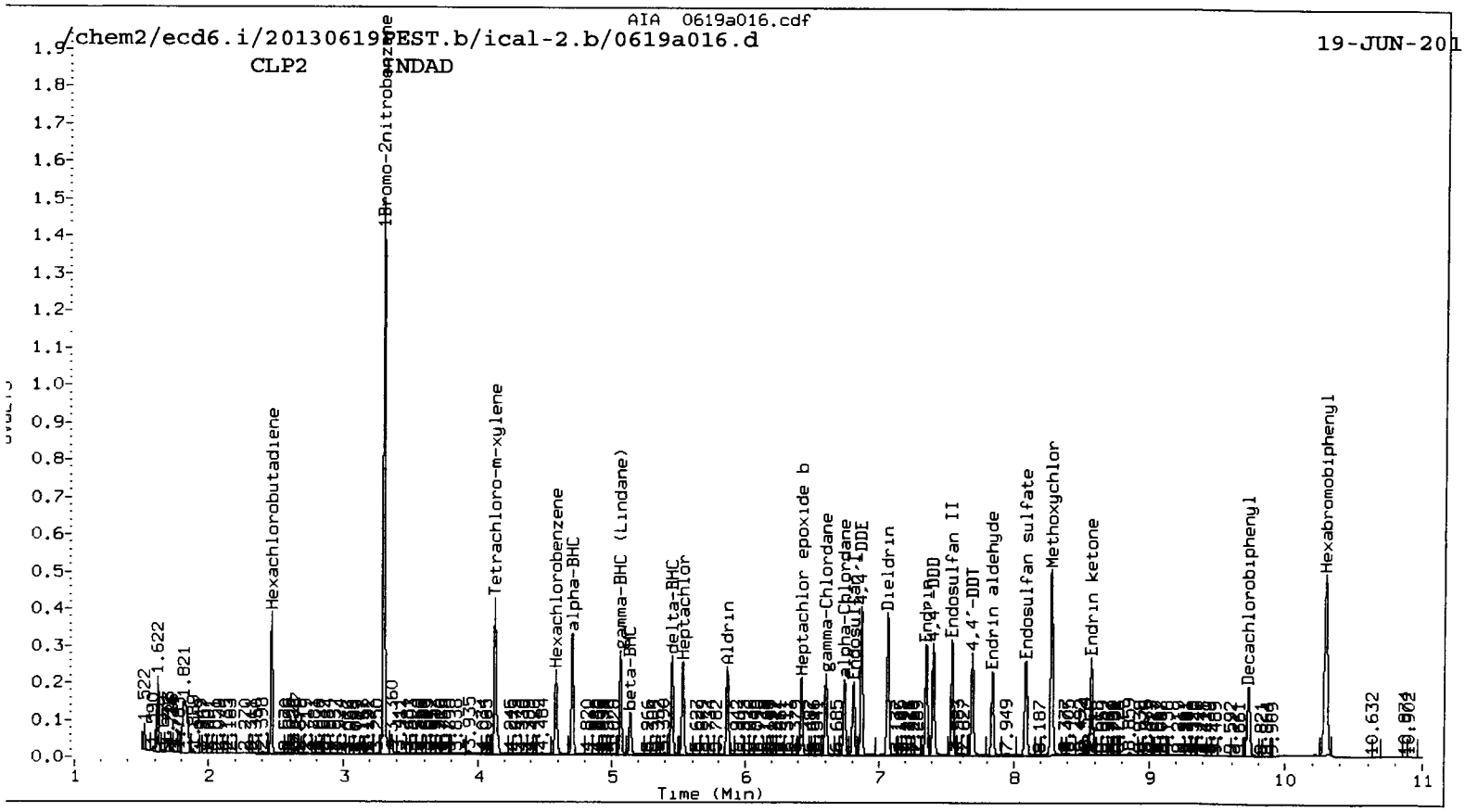
0619a016.cdf
19-JUN-201
STX-CLP INDAD
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
1.576
1.823
Time (Min)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19-JUN-201
CLP2 INDAD
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
1.622
1.821
7.949
8.187
10.632
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a017.d ARI ID: INDAF
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a017.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 19:26
Compound Sublist: INDA Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.001	5751246	3.300	0.000	29146657	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	4831430	4.709	-0.001	28062312	41.8872	40.2993	3.9	alpha-BHC
4.644	0.000	1774946	5.138	-0.001	10672180	38.1486	35.3770	7.5	beta-BHC
4.814	0.000	4238006	5.450	0.000	24182583	42.4349	40.2888	5.2	delta-BHC
4.569	0.000	4339740	5.066	-0.001	24487912	41.2647	39.7707	3.7	gamma-BHC (Lindane)
5.015	0.000	3986440	5.529	0.000	21570666	39.4998	36.1173	8.9	Heptachlor
5.307	0.000	3943610	5.867	-0.001	20842596	40.3280	36.8629	9.0	Aldrin
5.882	0.000	3490657	6.421	-0.001	17836183	38.5037	34.6127	10.6	Heptachlor epoxide
6.259	0.000	3229378	6.808	-0.001	16698987	38.1102	36.0627	5.5	Endosulfan I
6.482	0.000	6997753	7.067	0.000	32113961	78.1531	68.7187	12.8	Dieldrin
6.184	-0.001	5369897	6.869	-0.001	33502698	78.8284	71.2136	10.2	4,4'-DDE
6.700	-0.001	5893266	7.356	-0.001	25263950	76.9443	70.6293	8.6	Endrin
6.906	0.000	5801680	7.545	-0.001	27141373	76.3028	72.4309	5.2	Endosulfan II
6.740	0.000	5757700	7.406	0.000	27410859	78.7235	71.1830	10.1	4,4'-DDD
7.674	0.000	5199603	8.087	-0.001	23126577	77.4483	72.4924	6.6	Endosulfan sulfate
6.998	0.000	5779869	7.694	0.000	25567397	80.1811	74.9342	6.8	4,4'-DDT
7.424	0.000	12651909	8.277	-0.004	44409139	370.8413	349.7334	5.9	Methoxychlor
7.929	0.000	6307219	8.578	-0.001	23664020	75.6572	74.2197	1.9	Endrin ketone
7.283	0.000	4545058	7.842	-0.001	20575239	75.6274	71.5236	5.6	Endrin aldehyde
6.002	0.000	3731013	6.604	0.000	19680475	40.0629	36.2896	9.9	gamma-Chlordane
6.126	0.000	3557417	6.742	-0.001	18312770	39.2446	36.8348	6.3	alpha-Chlordane
2.311	-0.001	4900160	2.468	-0.001	23122415	38.7729	38.3265	1.2	Hexachlorobutadiene
4.140	0.000	3420199	4.586	0.000	20695310	37.2703	36.0457	3.3	Hexachlorobenzene
8.927	0.000	5082371	10.289	0.001	17347014	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	6090602	4.127	-0.002	34671082	77.9926	71.9193	8.1	Tetrachloro-m-xylen
8.777	-0.001	4813124	9.724	-0.001	20809777	75.2444	74.2124	1.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13
06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	195.0	179.8	179.8~	115- 0
Decachlorobiphenyl	188.1	185.5	185.5~	115- 0

WS5 : 00182

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

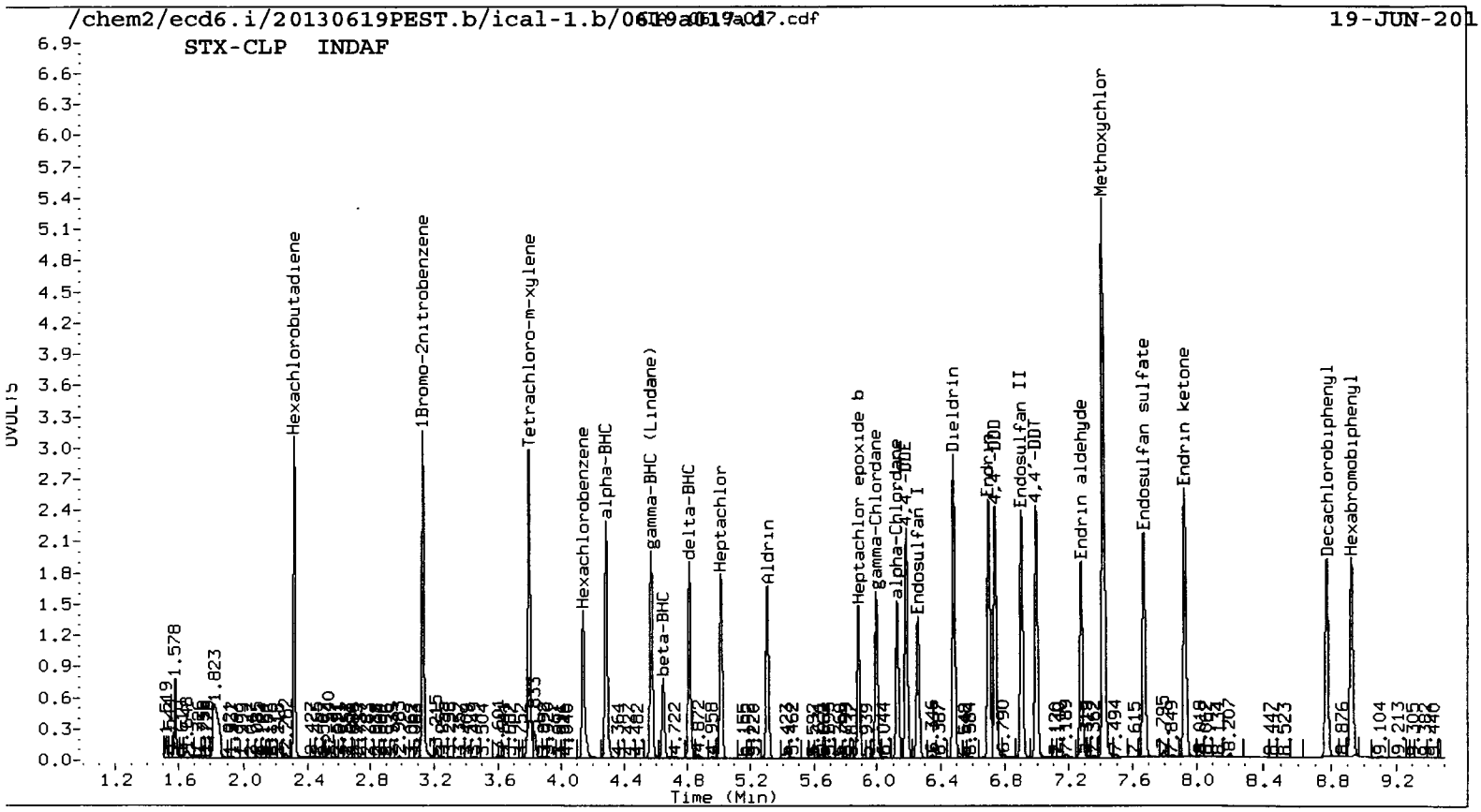
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5751246	2.9
Hexabromobiphenyl	4870538	5082371	4.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29146657	2.9
Hexabromobiphenyl	16454599	17347014	5.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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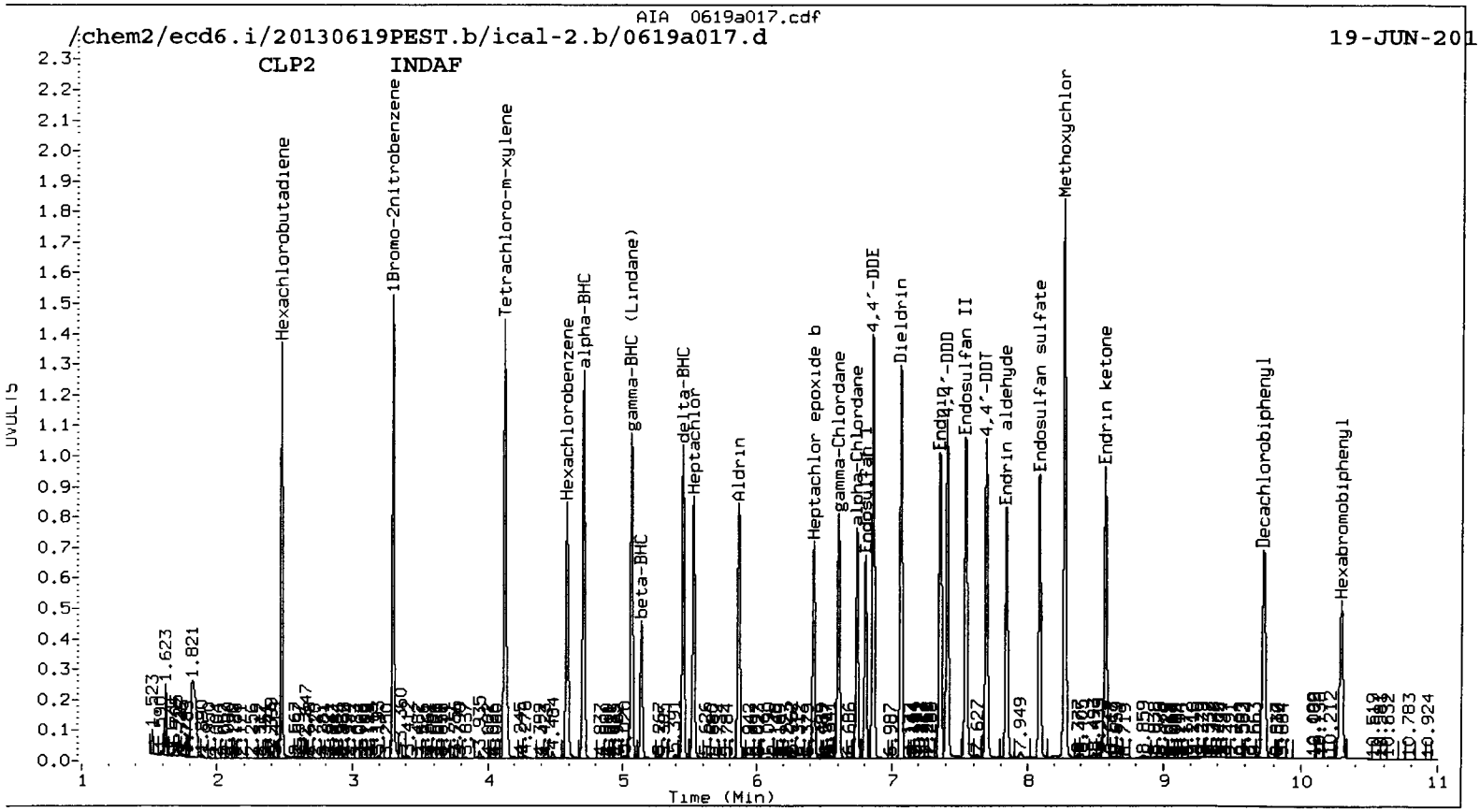
19-JUN-201
STX-CLP INDAF
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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19-JUN-201
CLP2 INDAF
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a018.d ARI ID: INDAG
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a018.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 19:44
Compound Sublist: INDA Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.131	-0.001	5601251	3.300	0.001	28311756	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	9535674	4.710	0.000	52831349	84.8857	78.1067	8.3	alpha-BHC
4.644	0.000	3446963	5.138	0.000	19944043	76.0689	68.0618	11.1	beta-BHC
4.813	0.000	8407388	5.450	0.000	47133896	86.4369	80.8420	6.7	delta-BHC
4.569	0.000	8519760	5.066	0.000	47580501	83.1801	79.5541	4.5	gamma-BHC (Lindane)
5.015	0.000	7611890	5.529	0.000	38136107	77.4425	65.7370	16.4	Heptachlor
5.307	0.000	7589069	5.867	0.000	37658349	79.6852	68.5679	15.0	Aldrin
5.883	0.000	6621317	6.422	0.000	31564056	74.9924	63.0591	17.3	Heptachlor epoxide
6.260	0.000	6139988	6.809	0.000	29659615	74.3988	65.9410	12.1	Endosulfan I
6.483	0.000	13374054	7.067	0.000	56261276	153.3655	123.9403	21.2	Dieldrin
6.184	0.000	10777552	6.870	0.000	58288946	162.4477	127.5532	24.1	4,4'-DDE
6.701	0.000	11315372	7.356	0.000	45268029	149.1881	128.5208	14.9	Endrin
6.906	0.000	11144702	7.545	0.000	49724483	148.0130	134.7600	9.4	Endosulfan II
6.740	0.000	11132759	7.407	0.000	50700725	153.7104	133.7107	13.9	4,4'-DDD
7.674	0.000	10090121	8.087	0.000	42871891	151.7690	136.4747	10.6	Endosulfan sulfat
6.998	0.000	11290652	7.694	0.000	49153383	158.1677	146.3004	7.8	4,4'-DDT
7.424	0.000	25410659	8.282	0.000	68710958	752.1298	549.5270	31.1	Methoxychlor
7.930	0.000	12242959	8.578	0.000	45120219	148.3008	143.7144	3.1	Endrin ketone
7.284	0.000	8770972	7.843	0.000	37980609	147.3779	134.0802	9.4	Endrin aldehyde
6.002	0.000	7244242	6.604	0.000	36309167	79.8704	68.9264	14.7	gamma-Chlordane
6.126	0.000	6882735	6.742	0.000	33830196	77.9620	70.0537	10.7	alpha-Chlordane
2.312	0.000	9533617	2.469	0.000	41324182	77.4557	70.5167	9.4	Hexachlorobutadiene
4.140	0.000	6575895	4.586	0.000	38026898	73.5771	68.1858	7.6	Hexachlorobenzene
8.927	0.000	5032937	10.289	0.001	17081518	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	11650961	4.128	0.000	59297060	153.1904	126.6289	19.0	Tetrachloro-m-xyl
8.777	0.000	9459476	9.725	0.000	39937738	149.3341	144.6407	3.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	383.0	316.6	316.6~	115- 0
Decachlorobiphenyl	373.3	361.6	361.6~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

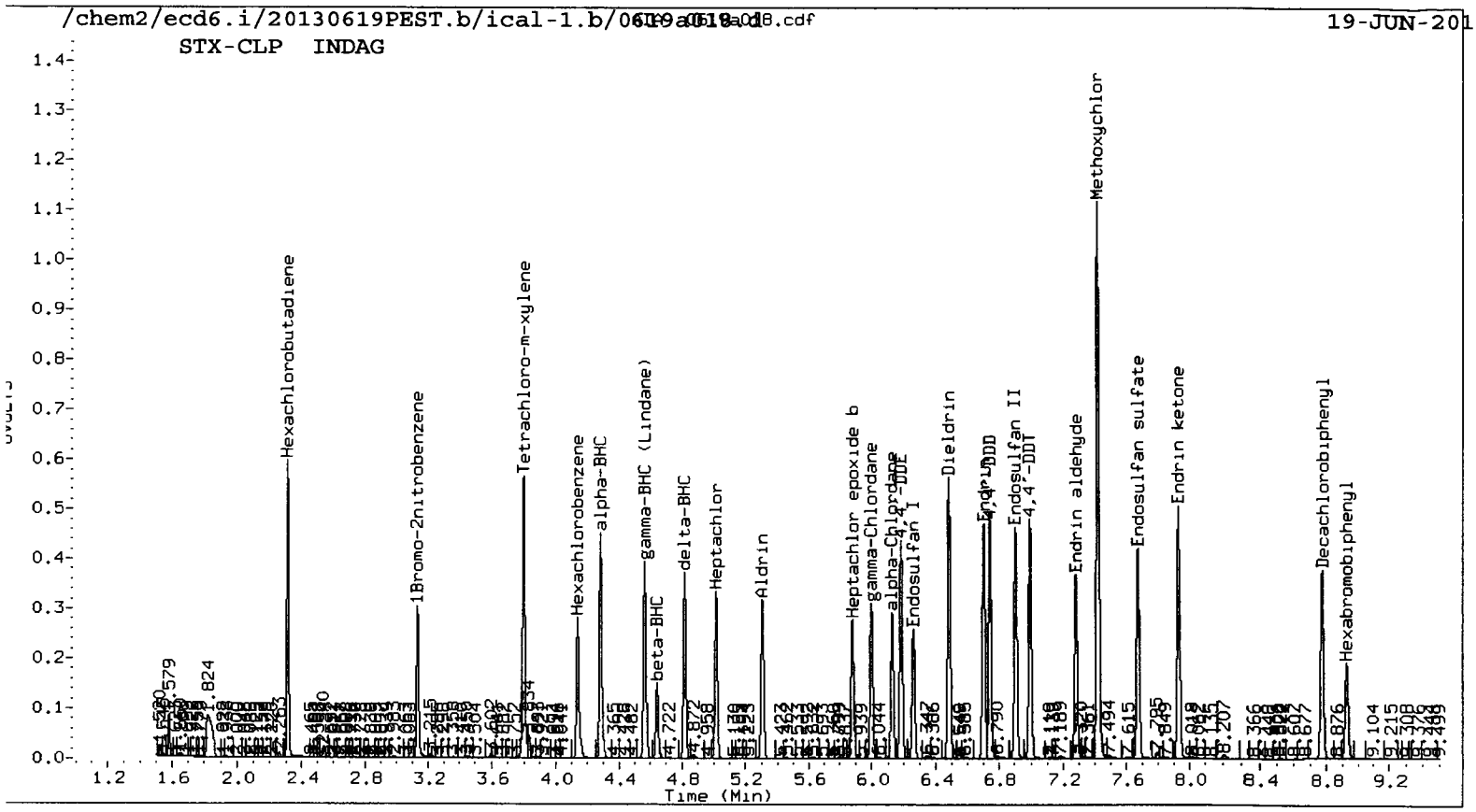
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5601251	0.2
Hexabromobiphenyl	4870538	5032937	3.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28311756	0.0
Hexabromobiphenyl	16454599	17081518	3.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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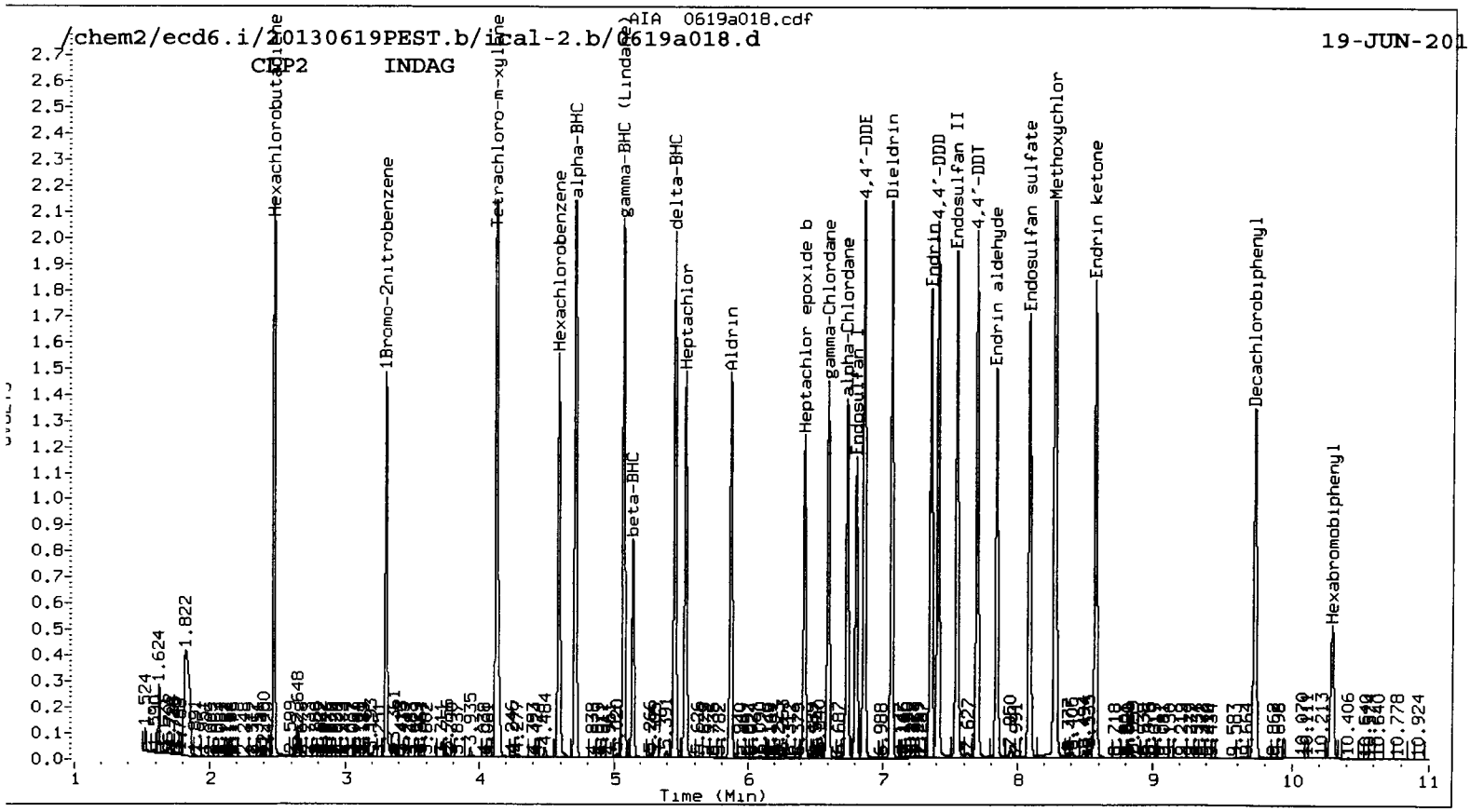
0619a018.cdf
19-JUN-201
STX-CLP INDAG
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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19-JUN-201
CLP2 INDAG
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a019.d ARI ID: INDA ICV
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a019.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 20:01
Compound Sublist: INDA Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.001	5662321	3.300	0.000	28347211	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	4855154	4.710	0.000	27588708	42.7540	40.7366	4.8	alpha-BHC
4.645	0.001	1822898	5.139	0.000	10652715	39.7945	36.3084	9.2	beta-BHC
4.814	0.001	4184696	5.450	0.000	23785579	42.5591	40.7450	4.4	delta-BHC
4.569	0.000	4344523	5.066	0.000	24367918	41.9589	40.6919	3.1	gamma-BHC (Lindane)
5.015	0.000	3968184	5.530	0.000	21193899	39.9364	36.4872	9.0	Heptachlor
5.307	0.000	4065594	5.867	-0.001	21069990	42.2283	38.3160	9.7	Aldrin
5.882	0.000	3520931	6.422	0.000	17669895	39.4476	35.2570	11.2	Heptachlor epoxide
6.260	0.000	3339914	6.809	0.000	16390864	40.0336	36.3956	9.5	Endosulfan I
6.482	0.000	3635982	7.067	-0.001	17715883	41.2455	38.9783	5.7	Dieldrin
6.186	0.001	3446918	6.870	0.000	17845149	51.3943	39.0016	27.4	4,4'-DDE
6.701	0.000	3061363	7.356	0.000	13742736	40.4364	38.9338	3.8	Endrin
6.907	0.001	2960864	7.545	0.000	14554305	39.3951	39.3599	0.1	Endosulfan II
6.742	0.002	2998582	7.408	0.001	14669806	41.4771	38.6054	7.2	4,4'-DDD
7.675	0.000	2678851	8.087	0.000	12153450	40.3671	38.6057	4.5	Endosulfan sulfate
6.999	0.001	2896942	7.695	0.000	13011033	40.6566	38.6434	5.1	4,4'-DDT
7.425	0.001	1399039	8.277	-0.005	5503814	41.4857	43.9237	5.7	Methoxychlor
7.930	0.000	3140634	8.578	0.000	12066382	38.1124	38.3511	0.6	Endrin ketone
7.284	0.000	2303678	7.842	-0.001	10586002	38.7792	37.2912	3.9	Endrin aldehyde
6.002	0.000	3758964	6.605	0.000	19267024	40.9970	36.5292	11.5	gamma-Chlordane
6.126	0.000	3606097	6.742	0.000	18191702	40.4064	37.6232	7.1	alpha-Chlordane
2.294	-0.017	4300	2.454	-0.016	8293	0.0346	0.0141	83.9*	Hexachlorobutadiene
4.139	-0.001	47437	4.597	0.011	15351	0.5250	0.0275	180.1*	Hexachlorobenzene
8.927	0.000	5023768	10.289	0.000	17118059	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	3012987	4.127	-0.002	18593722	39.1884	39.6573	1.2	Tetrachloro-m-xylen
8.777	0.000	2476257	9.725	0.000	10738704	39.1633	38.8089	0.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	98.0	99.1	98.0~	115- 0
Decachlorobiphenyl	97.9	97.0	97.0~	115- 0

WS5 : 00126

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

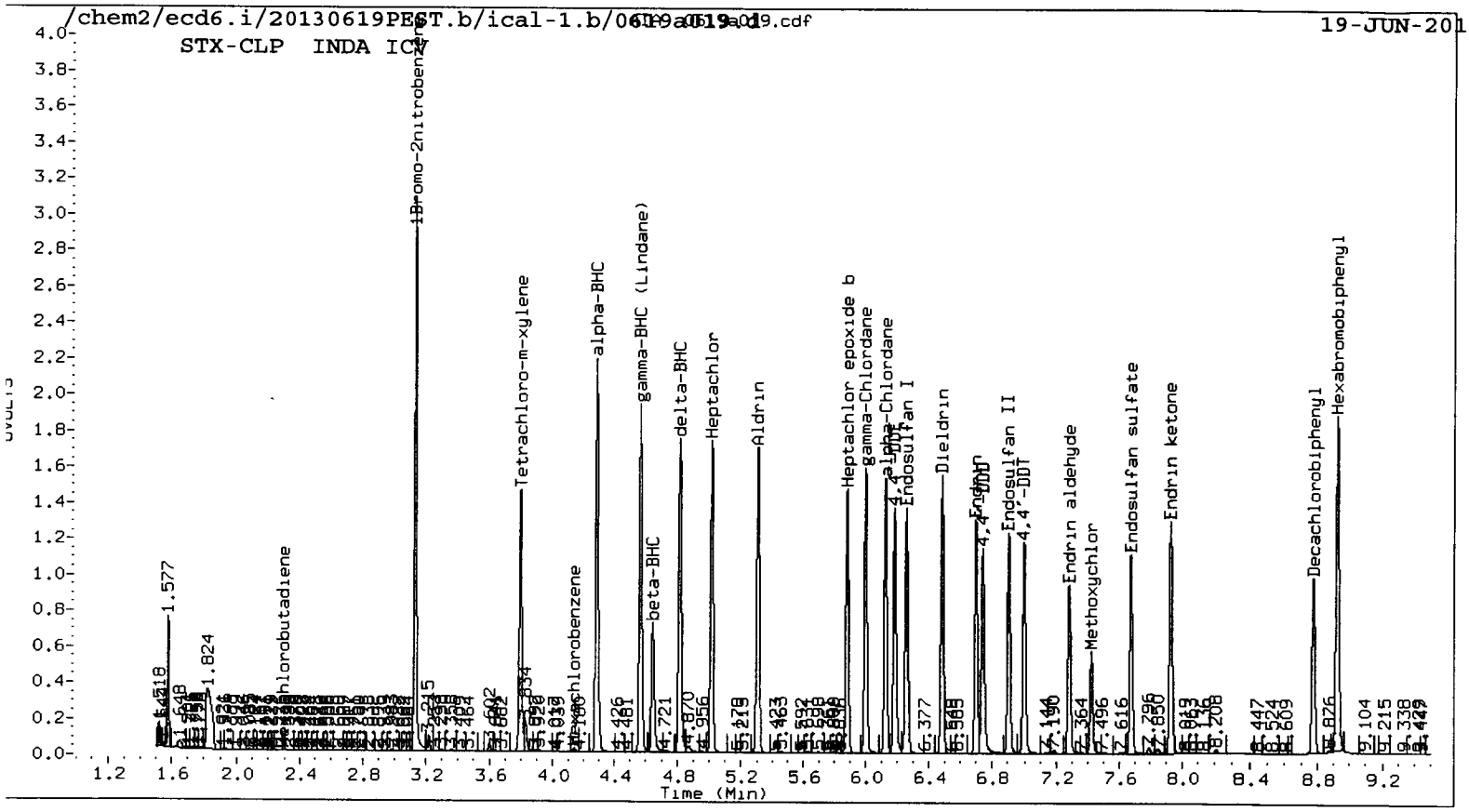
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5662321	1.3
Hexabromobiphenyl	4870538	5023768	3.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28347211	0.1
Hexabromobiphenyl	16454599	17118059	4.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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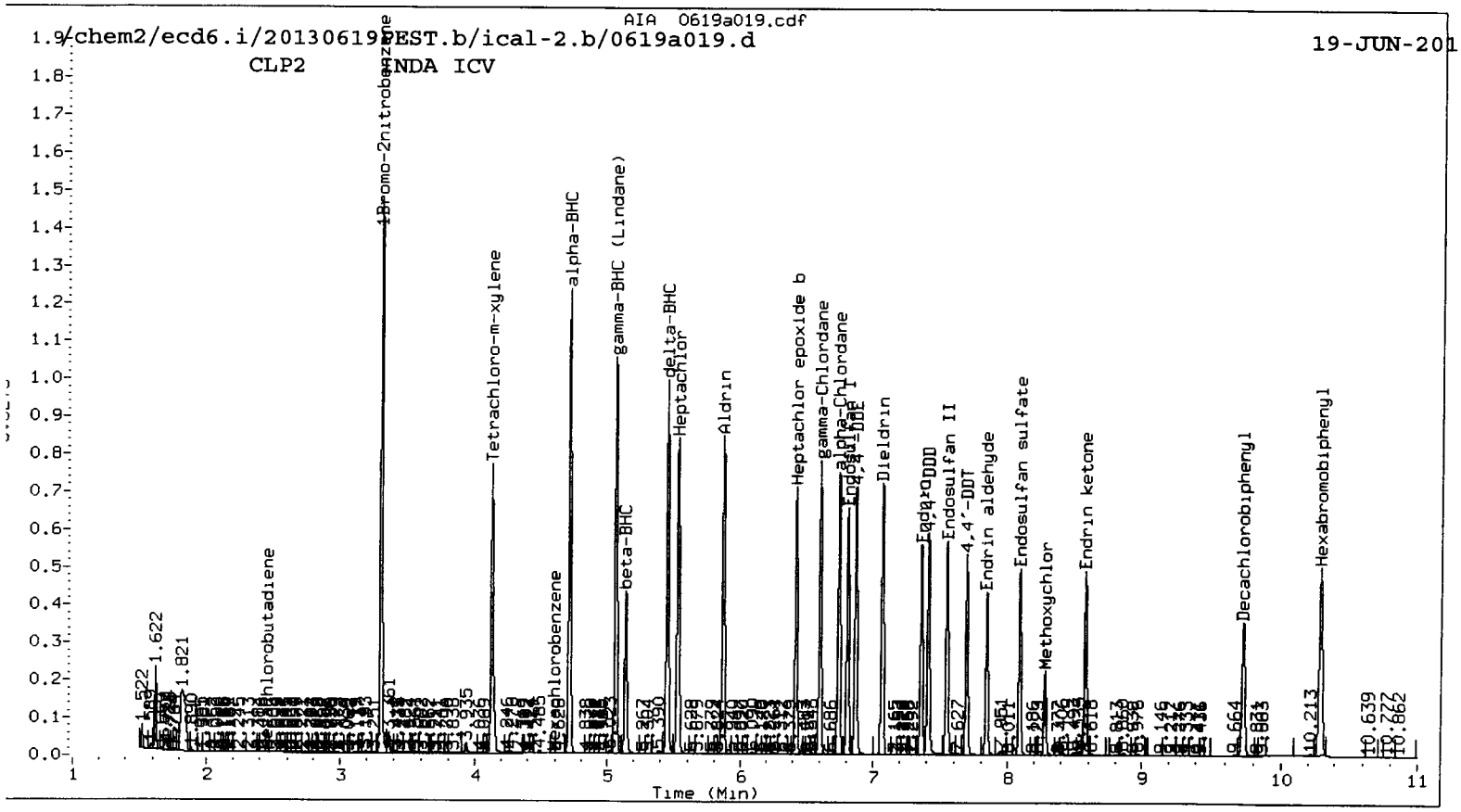
STX-CLP INDA ICV
19-JUN-201
1.577
1.824
Hexachlorobutadiene
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)


AIA 0619a019.cdf
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CLP2 INDA ICV
19-JUN-201
1.622
1.821
Hexachlorobutadiene
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a020.d ARI ID: HCB/HCBD ICV
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a020.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 20:19
Compound Sublist: wpest Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.131	-0.001	5825856	3.300	0.000	29136306	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.270	-0.016	15741	----			0.1347	0.0000	---	alpha-BHC
4.638	-0.006	6185	5.153	0.015	34366	0.1312	0.1140	14.1	beta-BHC
4.807	-0.007	7827	5.460	0.010	55686	0.0774	0.0928	18.1	delta-BHC
4.568	-0.001	6365	5.039	-0.027	48784	0.0597	0.0793	28.1	gamma-BHC (Lindane)
5.011	-0.004	3542	5.532	0.003	24053	0.0346	0.0403	15.1	Heptachlor
5.321	0.014	5699	5.852	-0.016	197176	0.0575	0.3489	143.4*	Aldrin
5.889	0.006	6810	6.421	-0.001	28673	0.0742	0.0557	28.5	Heptachlor epoxide b
6.261	0.001	2191	6.806	-0.004	50626	0.0255	0.1094	124.3*	Endosulfan I
6.470	-0.013	6721	7.043	-0.024	10216	0.0741	0.0219	108.9*	Dieldrin
6.184	-0.001	7689	6.868	-0.002	52897	0.1114	0.1125	0.9	4,4'-DDE
6.664	-0.038	4458	7.355	-0.001	17421	0.0557	0.0477	15.5	Endrin
6.907	0.001	3007	7.523	-0.022	46924	0.0379	0.1227	105.6*	Endosulfan II
6.736	-0.004	11288	7.408	0.001	34975	0.1478	0.0890	49.7*	4,4'-DDD
7.676	0.001	2737	8.087	0.000	30094	0.0390	0.0924	81.2*	Endosulfan sulfate
6.996	-0.002	4564	7.702	0.008	61753	0.0606	0.1773	98.1*	4,4'-DDT
7.429	0.004	2297	8.277	-0.004	19064	0.0645	0.1471	78.1*	Methoxychlor
7.924	-0.005	12452	8.574	-0.004	24754	0.1430	0.0761	61.1*	Endrin ketone
7.285	0.001	3329	7.841	-0.001	51003	0.0530	0.1737	106.4*	Endrin aldehyde
5.977	-0.025	27144	6.612	0.007	182548	0.2877	0.3367	15.7	gamma-Chlordane
6.121	-0.005	10392	6.743	0.001	26109	0.1132	0.0525	73.2*	alpha-Chlordane
2.311	-0.001	5901418	2.469	-0.001	26560599	46.0975	44.0411	4.6	Hexachlorobutadiene
4.139	-0.001	3444301	4.585	-0.001	18722188	37.0522	32.6206	12.7	Hexachlorobenzene
5.786	-0.001	2264	6.329	-0.003	59974	0.0317	0.1579	133.2*	Oxychlordane
----			6.572	-0.008	30438	0.0000	0.1110	---	2,4-DDE
----			6.685	-0.005	39610	0.0000	0.0906	---	trans-Nonachlor
6.347	-0.001	4676	7.062	-0.003	27477	0.0950	0.1154	19.4	2,4-DDD
6.587	0.000	5399	7.371	0.018	18445	0.0949	0.0711	28.6	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.597	-0.004	2451	8.534	-0.030	243505	0.0415	1.1056	185.5*	Mirex
8.926	-0.001	5307615	10.289	0.000	17708234	80.0000	80.0000	0.0	Hexabromobiphenyl
1.759	0.001	2077	1.727	0.001	136283	0.0000	0.0000	---	Hexachloroethane
6.553	-0.028	5051	7.331	-0.006	21984	0.0000	0.0000	---	Kepone
3.799	0.000	3282589	4.126	-0.002	18514400	41.4965	38.4186	7.7	Tetrachloro-m-xylen
8.776	-0.001	2787558	9.725	0.000	11737142	41.7290	41.0035	1.8	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

KR 06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	103.7	96.0	96.0~	130- 0
Decachlorobiphenyl	104.3	102.5	102.5~	130- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

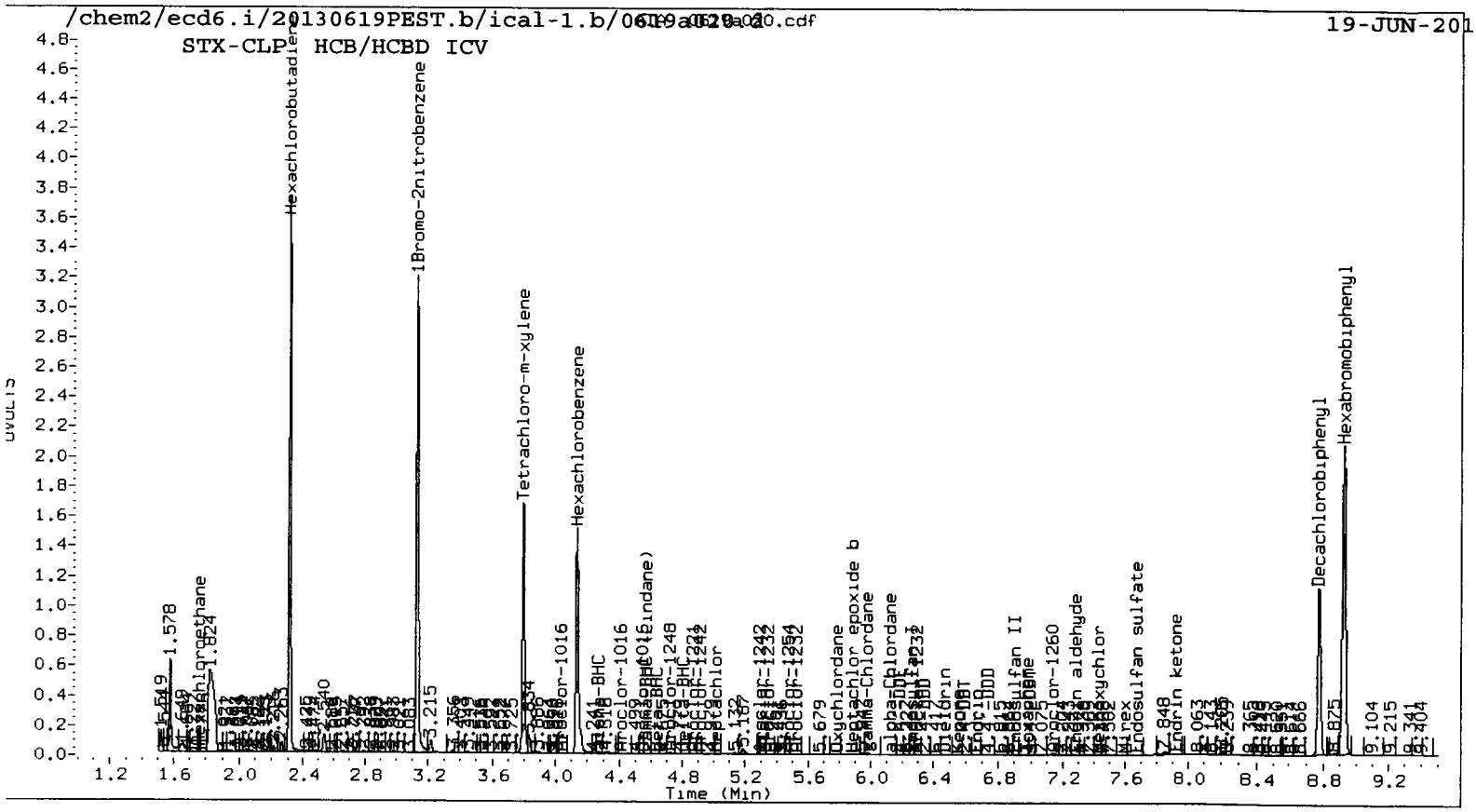
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5825856	4.2
Hexabromobiphenyl	4870538	5307615	9.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29136306	2.9
Hexabromobiphenyl	16454599	17708234	7.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.977	0.019	5656	1.7	1	7.285	-0.006	21029	1.7
Toxaphene	2	6.996	-0.013	4564	1.9	2	7.584	-0.031	161753	8.8
Toxaphene	3	7.285	0.018	3329	0.9	3	7.841	-0.005	51003	2.5
Toxaphene	4	7.597	0.004	2451	0.6	4	8.313	-0.001	27940	1.9
Toxaphene	5	---			0.000	5	8.374	0.022	31267	1.7
Toxaphene	6	7.924	0.011	12452	5.6	NS	---			----
Total STX-CLPAve (5 peaks): 2.135						Total CLP2Ave (5 peaks): 3.345				RPD = 44*
Corrected Ave (4 peaks): 1.270						Corrected Ave (4 peaks): 1.968				RPD = 43*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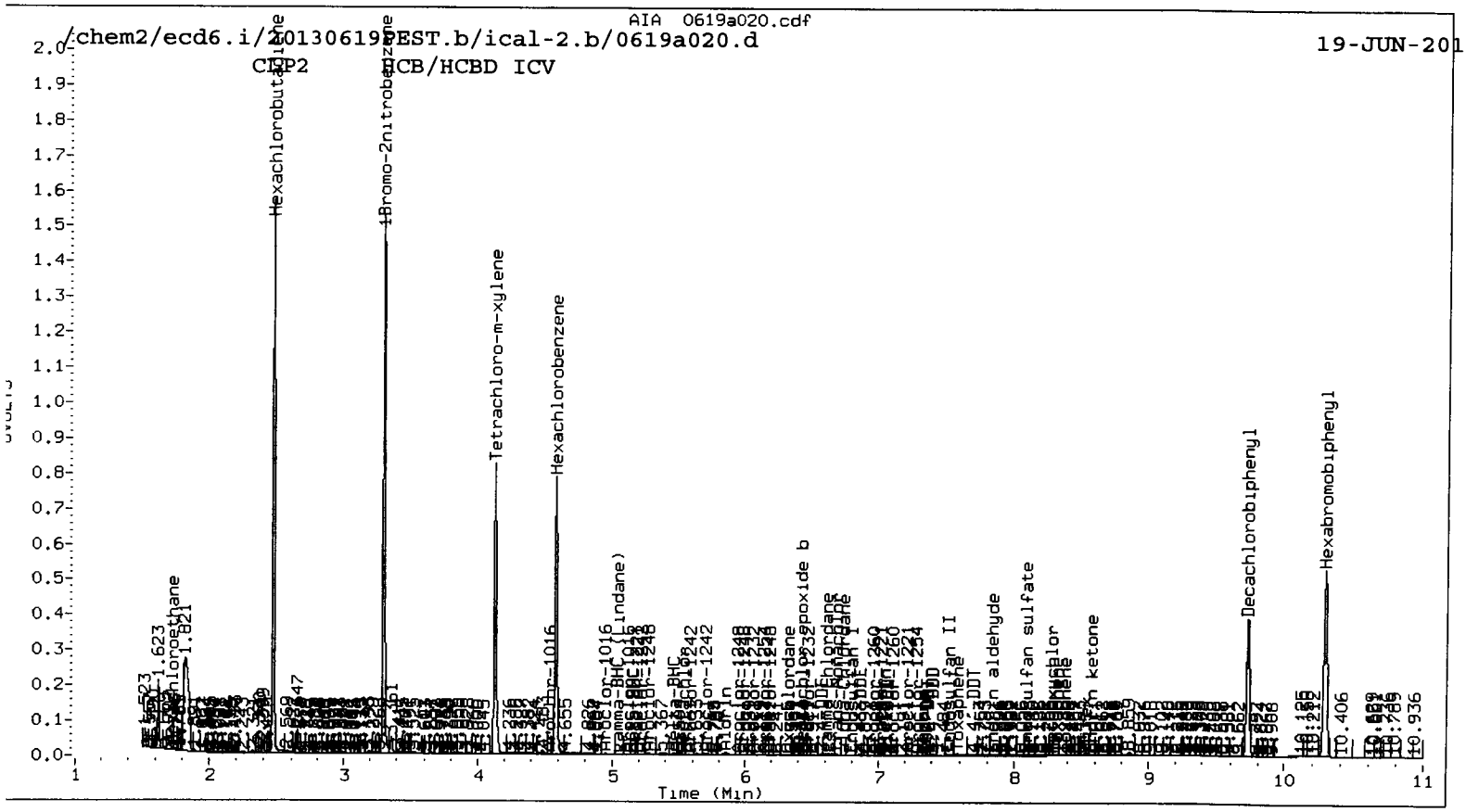
19-JUN-201
STX-CLP1 HCB/HCBD ICV
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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19-JUN-201
CLP2 HCB/HCBD ICV
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a030.d ARI ID: TOXAPHENE
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a030.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Compound Sublist: TOXAPH
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 19-JUN-2013 23:17
Report Date: 06/25/2013 09:51
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.132	0.000	6058478	3.301	0.001	29930668	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.927	0.000	5799142	10.289	0.000	19105364	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.001	2712292	4.127	-0.001	16671590	32.9707	33.6765	2.1	Tetrachloro-m-xylen
8.777	0.000	2659985	9.724	0.000	11618435	36.4442	37.6206	3.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	82.4	84.2	82.4~	150- 0
Decachlorobiphenyl	91.1	94.1	91.1~	150- 0

~ Indicates recovery outside QC Limits

6/26/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6058478	8.4
Hexabromobiphenyl	4870538	5799142	19.1

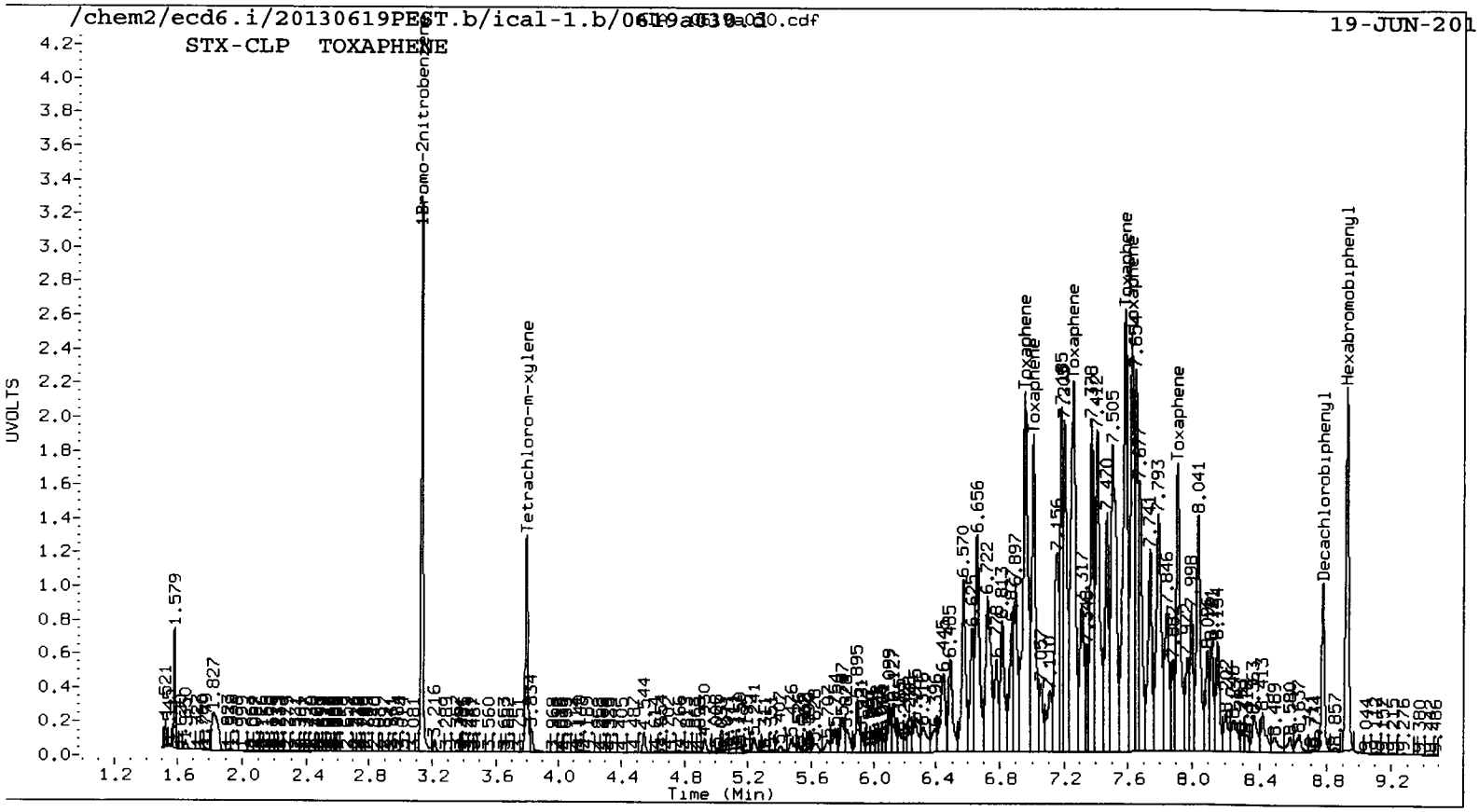
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29930668	5.7
Hexabromobiphenyl	16454599	19105364	16.1

WY35:0211W

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.958	0.000	9305172	2500.0	1	7.291	0.000	33416871	2500.0
Toxaphene	2	7.010	0.000	6420857	2500.0	2	7.615	0.000	49303313	2500.0
Toxaphene	3	7.267	0.000	10593063	2500.0	3	7.846	0.000	54099773	2500.0
Toxaphene	4	7.593	0.000	10790117	2500.0	4	8.314	0.000	38993888	2500.0
Toxaphene	5	7.632	0.000	7165051	2500.0	5	8.353	0.000	49587064	2500.0
Toxaphene	6	7.913	0.000	6082441	2500.0	NS	---			----
Total STX-CLPAve (6 peaks): 2500.000						Total CLP2Ave (5 peaks): 2500.000				RPD = 0
Corrected Ave (6 peaks): 2500.000						Corrected Ave (5 peaks): 2500.000				RPD = 0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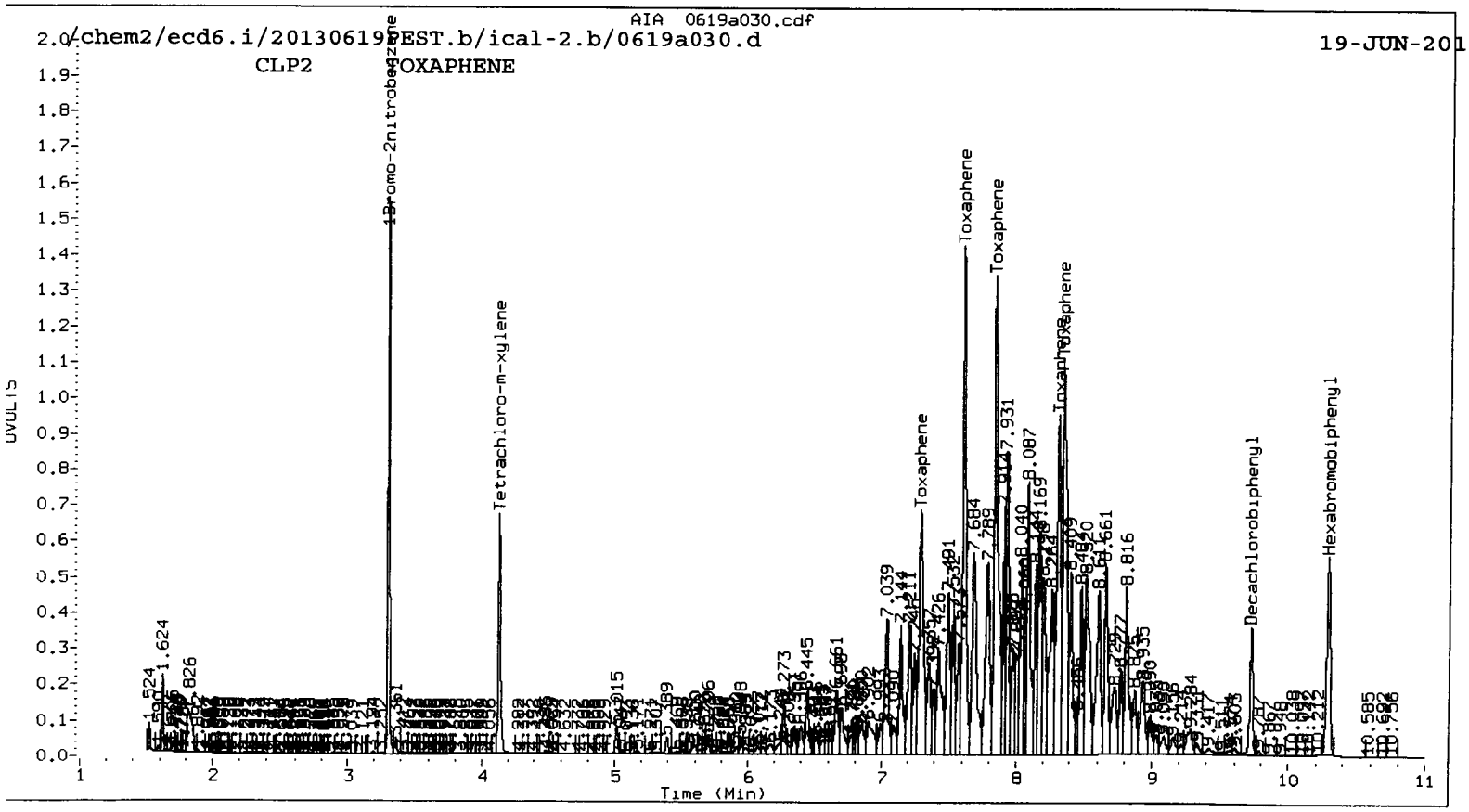
19-JUN-201
STX-CLP TOXAPHENE
UVOLTS
Time (Min)
1.579
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl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19-JUN-201
CLP2 TOXAPHENE
UVOLTS
Time (Min)
1.624
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a022.d ARI ID: WNDE
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a022.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 20:55
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.758	0.001	1274	1.727	0.001	146749	0.0000	0.0000	---	Hexachloroethane
3.131	-0.001	5981300	3.300	0.000	29422294	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	2908033	6.331	-0.001	15471323	39.9432	40.3466	1.0	Oxychlordane
5.862	0.001	2211390	6.580	0.000	11077550	39.7672	39.9916	0.6	2,4-DDE
6.110	0.000	3582762	6.688	-0.002	18301689	40.0972	40.6354	1.3	trans-Nonachlor
6.349	0.001	1984688	7.065	0.000	9866849	39.5962	40.2197	1.6	2,4-DDD
6.587	0.000	2324382	7.352	-0.001	10852842	40.0914	40.5992	1.3	2,4-DDT
6.726	0.000	3941134	7.412	-0.003	19164808	39.9713	40.8584	2.2	cis-Nonachlor
7.601	0.000	2329092	8.564	-0.001	8771162	38.7089	38.6461	0.2	Mirex
8.927	0.000	5406477	10.289	0.001	18248706	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.000	3055226	4.127	-0.002	18478701	37.6186	37.9718	0.9	Tetrachloro-m-xylen
8.777	0.000	2538730	9.725	0.000	10820368	37.3092	36.6812	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	94.0	94.9	94.0~	150- 0
Decachlorobiphenyl	93.3	91.7	91.7~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

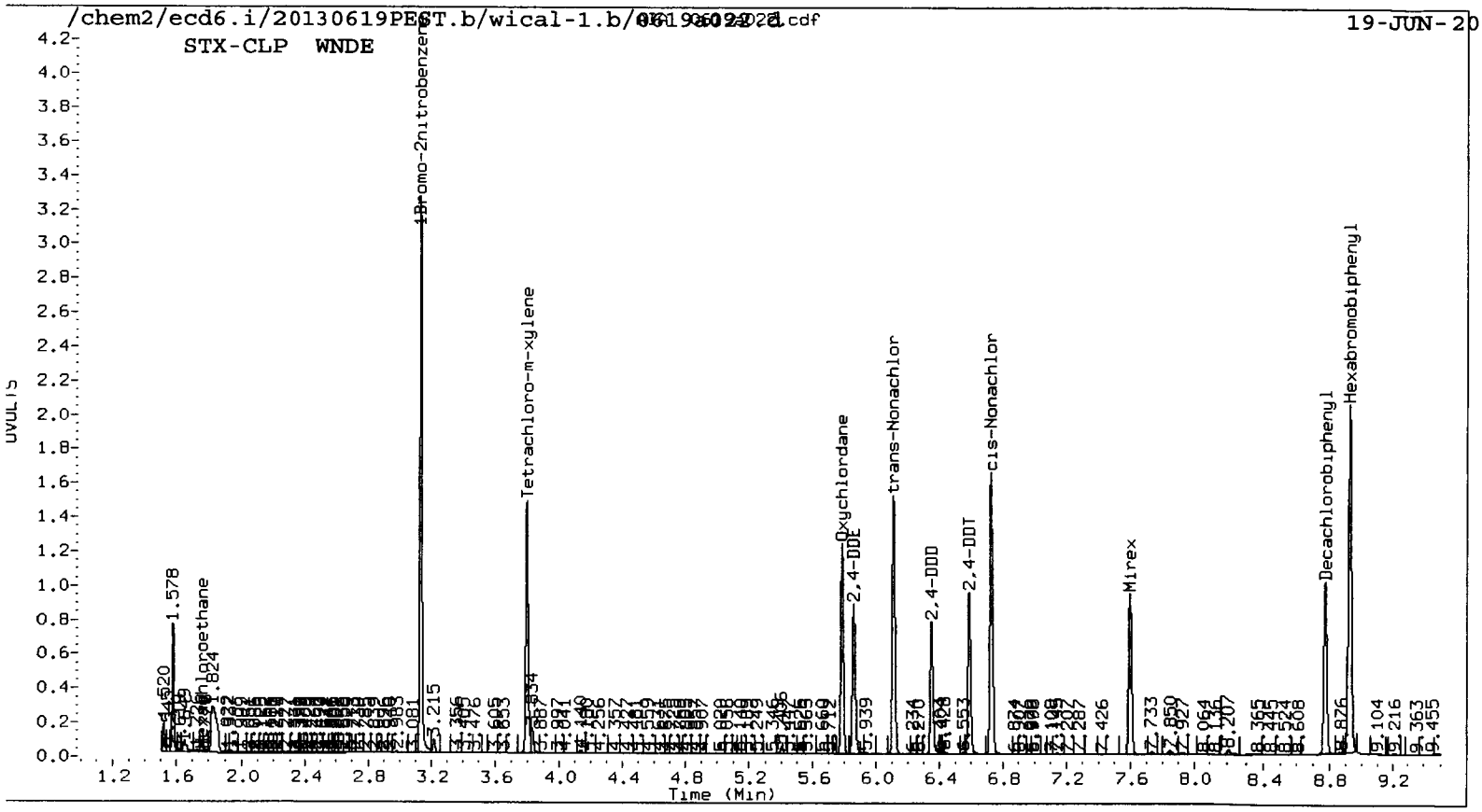
	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5981300	7.0
Hexabromobiphenyl	4870538	5406477	11.0

WSB:00117

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29422294	3.9
Hexabromobiphenyl	16454599	18248706	10.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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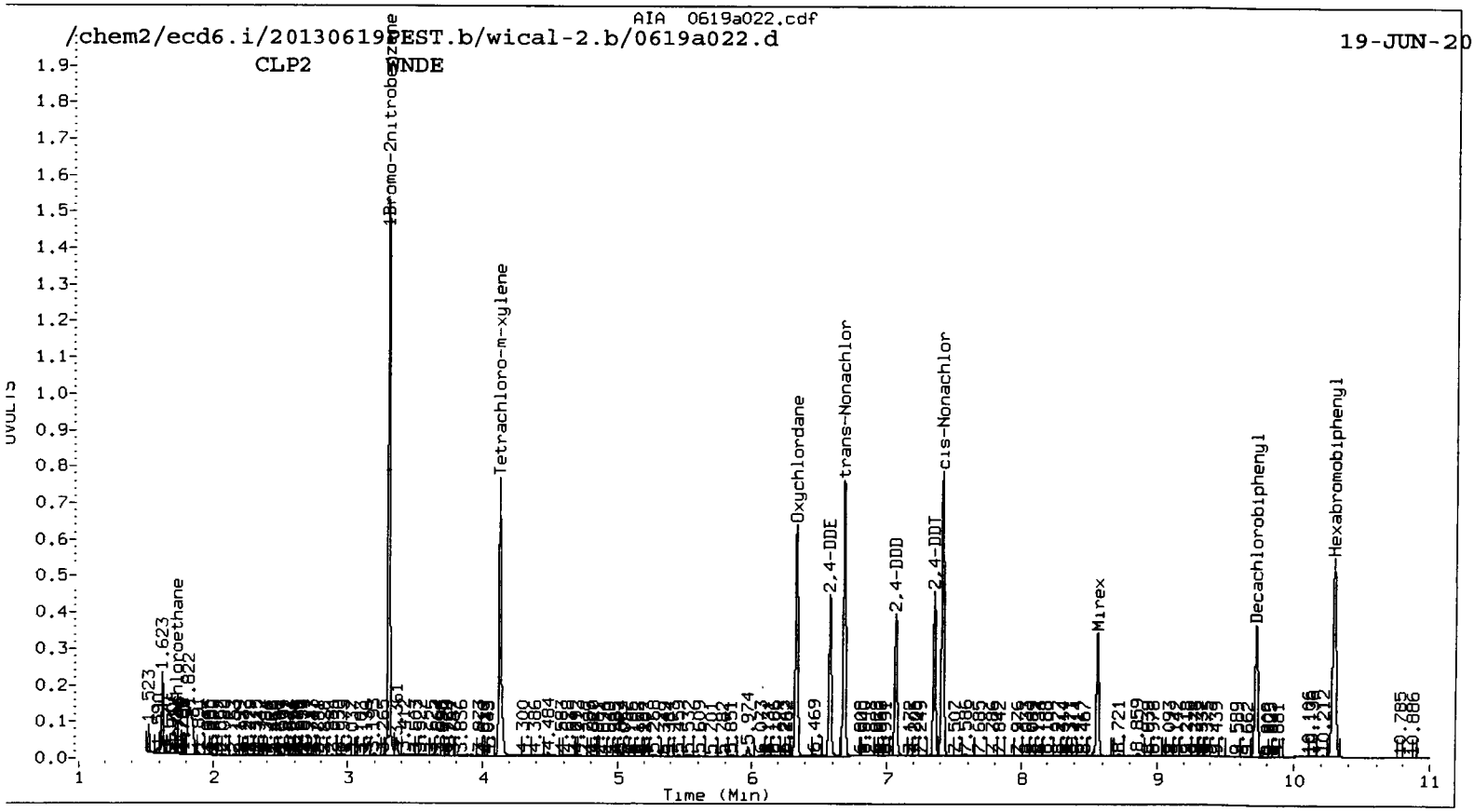
STX-CLP WNDE
19-JUN-20
UVVOLTS
Time (Min)
1.578
1.824
4.620
5.215
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a022.cdf
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CLP2 WNDE
19-JUN-20
UVVOLTS
Time (Min)
1.523
1.623
1.822
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a023.d ARI ID: WNDA
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a023.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 21:13
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.758	0.001	735	1.726	0.000	123087	0.0000	0.0000	---	Hexachloroethane
3.131	-0.001	5831093	3.300	0.001	28731894	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	186864	6.331	-0.002	945490	2.6702	2.5249	5.6	Oxychlordane
5.863	0.001	141733	6.580	0.000	723920	2.6516	2.6763	0.9	2,4-DDE
6.110	-0.001	219560	6.688	-0.002	1094437	2.5564	2.5172	1.5	trans-Nonachlor
6.350	0.002	126284	7.065	0.000	623677	2.6211	2.6335	0.5	2,4-DDD
6.587	0.000	143881	7.352	-0.001	660992	2.5818	2.5615	0.8	2,4-DDT
6.726	-0.001	243492	7.411	-0.004	1135268	2.5692	2.5072	2.4	cis-Nonachlor
7.601	0.000	159764	8.564	-0.001	614646	2.7624	2.8054	1.5	Mirex
8.927	-0.001	5196778	10.289	0.001	17616180	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.001	185150	4.126	-0.002	1188081	2.3385	2.5000	6.7	Tetrachloro-m-xylene
8.777	-0.001	172900	9.725	0.000	734360	2.6435	2.5789	2.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower Limits
Tetrachloro-m-xylene	5.8	6.3	5.8~ 150- 0
Decachlorobiphenyl	6.6	6.4	6.4~ 150- 0

~ Indicates recovery outside QC Limits

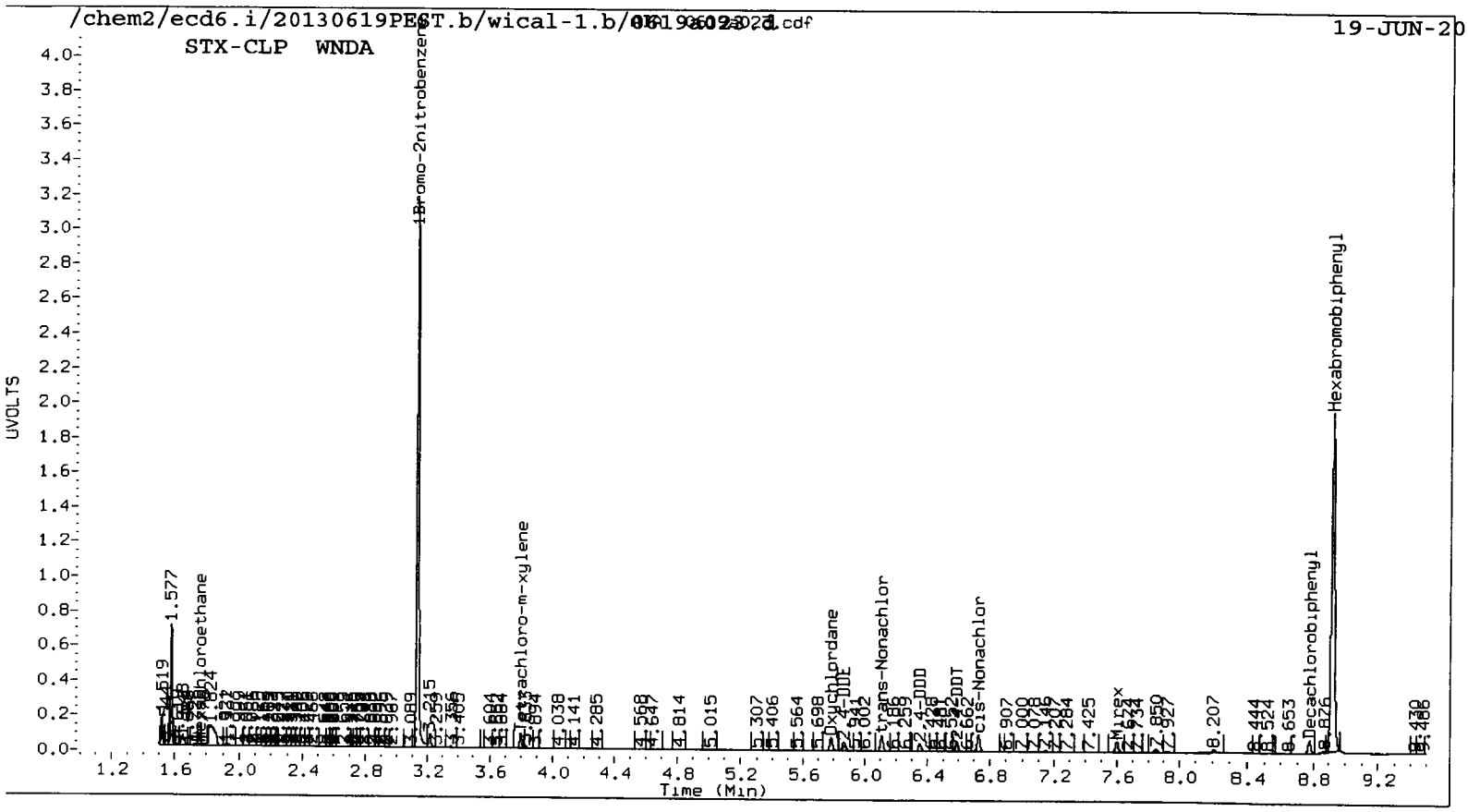
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5831093	4.3
Hexabromobiphenyl	4870538	5196778	6.7

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28731894	1.5
Hexabromobiphenyl	16454599	17616180	7.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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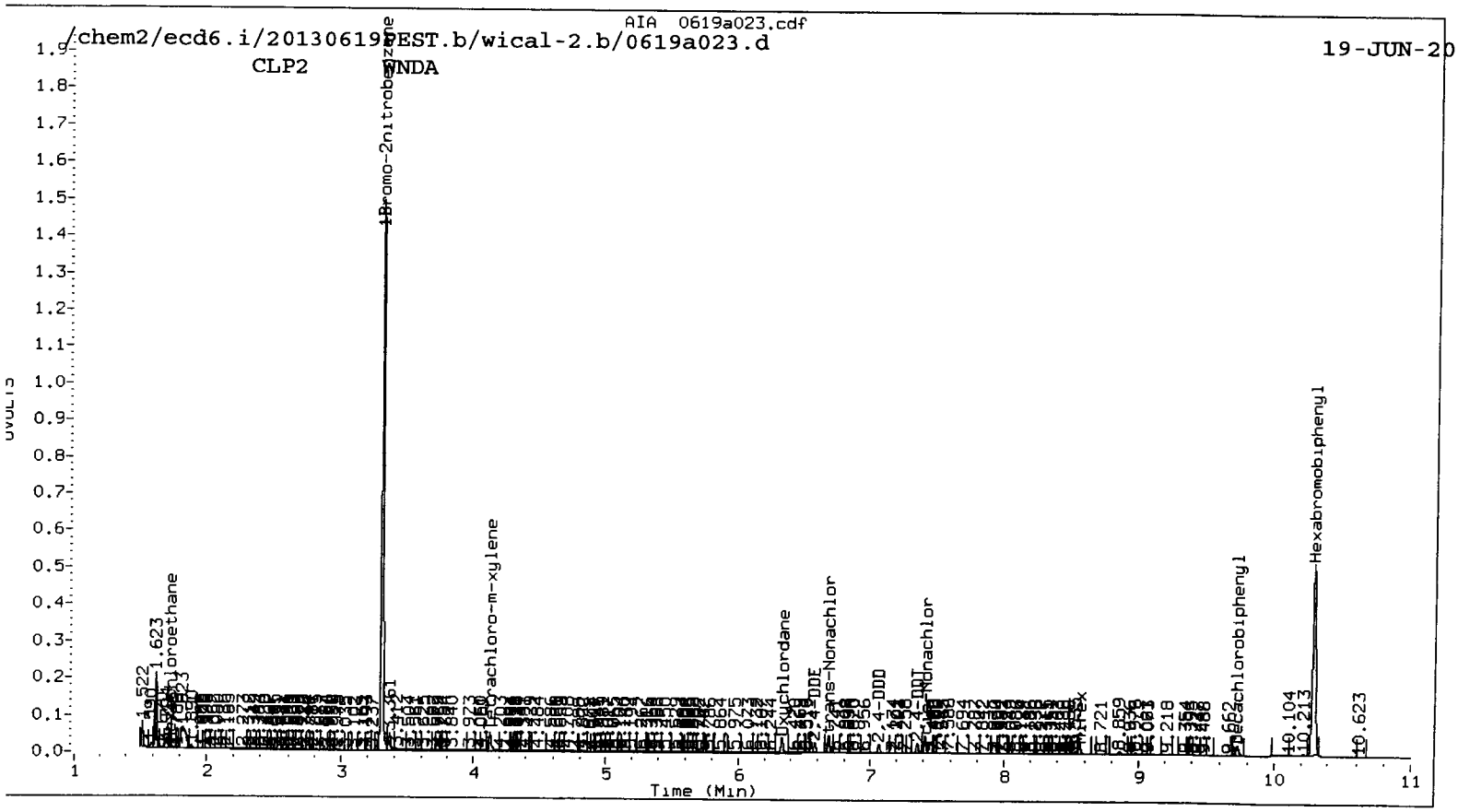
STX-CLP WNDA
19-JUN-20
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Hexachloroethane
Pentachloro-m-xylene
Oxychlordane
4,4'-DDE
trans-Nonachlor
2,4'-DDD
4,4'-DDT
cis-Nonachlor
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0619a023.cdf
CLP2 WNDA
19-JUN-20
Time (Min)
1-Bromo-2nitrobenzene
Hexachloroethane
Pentachloro-m-xylene
Oxychlordane
4,4'-DDE
trans-Nonachlor
2,4'-DDD
4,4'-DDT
cis-Nonachlor
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a024.d ARI ID: WNDB
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a024.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 21:30
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.758	0.000	821	1.727	0.001	125733	0.0000	0.0000	---	Hexachloroethane
3.130	-0.001	5811438	3.300	0.000	28704362	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	370207	6.331	-0.002	1942777	5.2495	5.1931	1.1	Oxychlordane
5.863	0.001	282499	6.580	0.000	1471963	5.2445	5.4469	3.8	2,4-DDE
6.110	-0.001	439420	6.687	-0.003	2255304	5.0770	5.1662	1.7	trans-Nonachlor
6.350	0.002	253914	7.065	0.001	1263973	5.2297	5.3155	1.6	2,4-DDD
6.587	0.000	288053	7.352	-0.001	1344496	5.1291	5.1890	1.2	2,4-DDT
6.727	0.000	490995	7.412	-0.004	2346101	5.1408	5.1603	0.4	cis-Nonachlor
7.600	0.000	306200	8.564	0.000	1166537	5.2536	5.3027	0.9	Mirex
8.927	0.000	5237048	10.289	0.001	17688146	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.000	369366	4.127	-0.002	2455096	4.6809	5.1712	10.0	Tetrachloro-m-xylene
8.777	0.000	341718	9.725	0.000	1439576	5.1844	5.0348	2.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	11.7	12.9	11.7~	150- 0
Decachlorobiphenyl	13.0	12.6	12.6~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

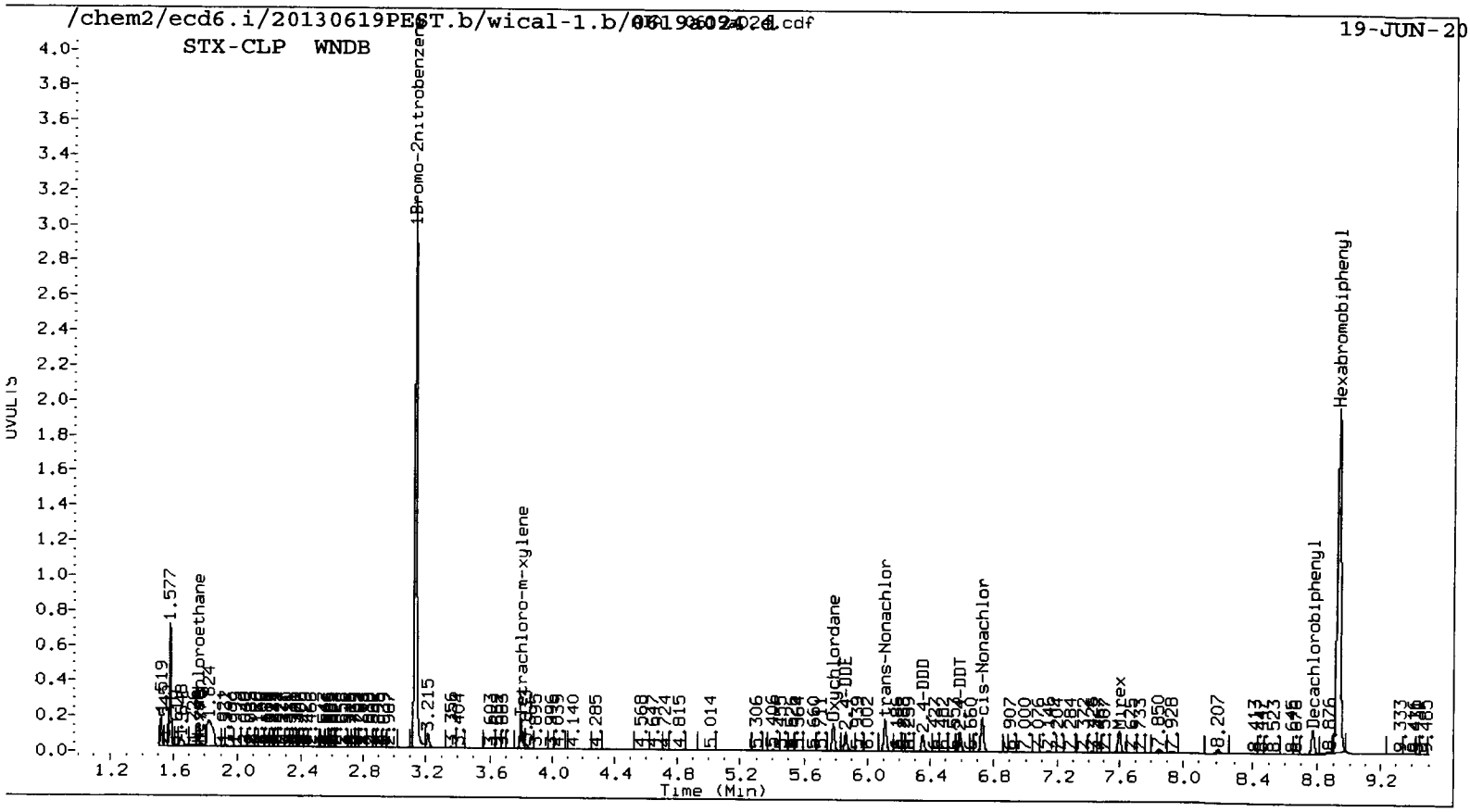
	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5811438	3.9
Hexabromobiphenyl	4870538	5237048	7.5

WV3D : 00123

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28704362	1.4
Hexabromobiphenyl	16454599	17688146	7.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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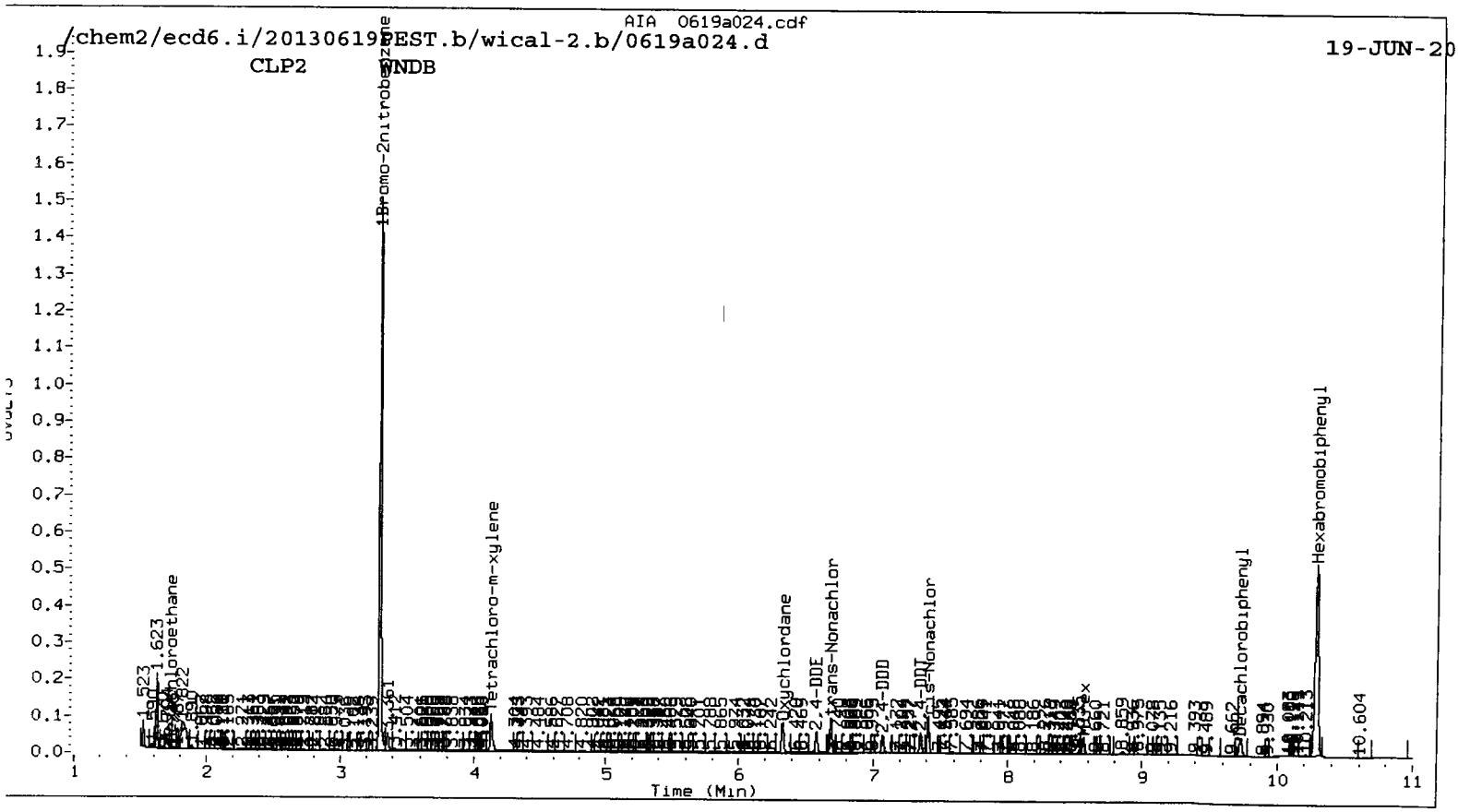
STX-CLP WNDB
19-JUN-20
1-Bromo-2nitrobenzene
1.577
Tetrachloro-m-xylene
3.215
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
4,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
8.207
UV UL 5
Time (Min)


AIA 0619a024.cdf
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CLP2 WNDB
19-JUN-20
1-Bromo-2nitrobenzene
1.523
1.623
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
4,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
10.604
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a025.d ARI ID: WNDC
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a025.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 21:48
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.759	0.001	791	1.727	0.001	131582	0.0000	0.0000	---	Hexachloroethane
3.131	-0.001	5920700	3.300	0.001	29296978	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	743037	6.331	-0.001	3950329	10.3213	10.3459	0.2	Oxychlordane
5.863	0.001	557203	6.580	0.000	2924113	10.1333	10.6016	4.5	2,4-DDE
6.110	0.000	883302	6.688	-0.002	4661405	9.9973	10.4292	4.2	trans-Nonachlor
6.350	0.002	498501	7.066	0.001	2517945	10.0579	10.3425	2.8	2,4-DDD
6.588	0.001	580337	7.352	0.000	2740346	10.1229	10.3300	2.0	2,4-DDT
6.727	0.000	962333	7.412	-0.003	4841041	9.8703	10.4001	5.2	cis-Nonachlor
7.601	0.000	603038	8.563	-0.001	2254506	10.1356	10.0097	1.2	Mirex
8.926	-0.001	5346075	10.288	0.000	18109694	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.001	744789	4.127	-0.001	4872540	9.2644	10.0554	8.2	Tetrachloro-m-xylene
8.776	-0.001	647176	9.724	-0.001	2804700	9.6184	9.5810	0.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	23.2	25.1	23.2~	150- 0
Decachlorobiphenyl	24.0	24.0	24.0~	150- 0

~ Indicates recovery outside QC Limits

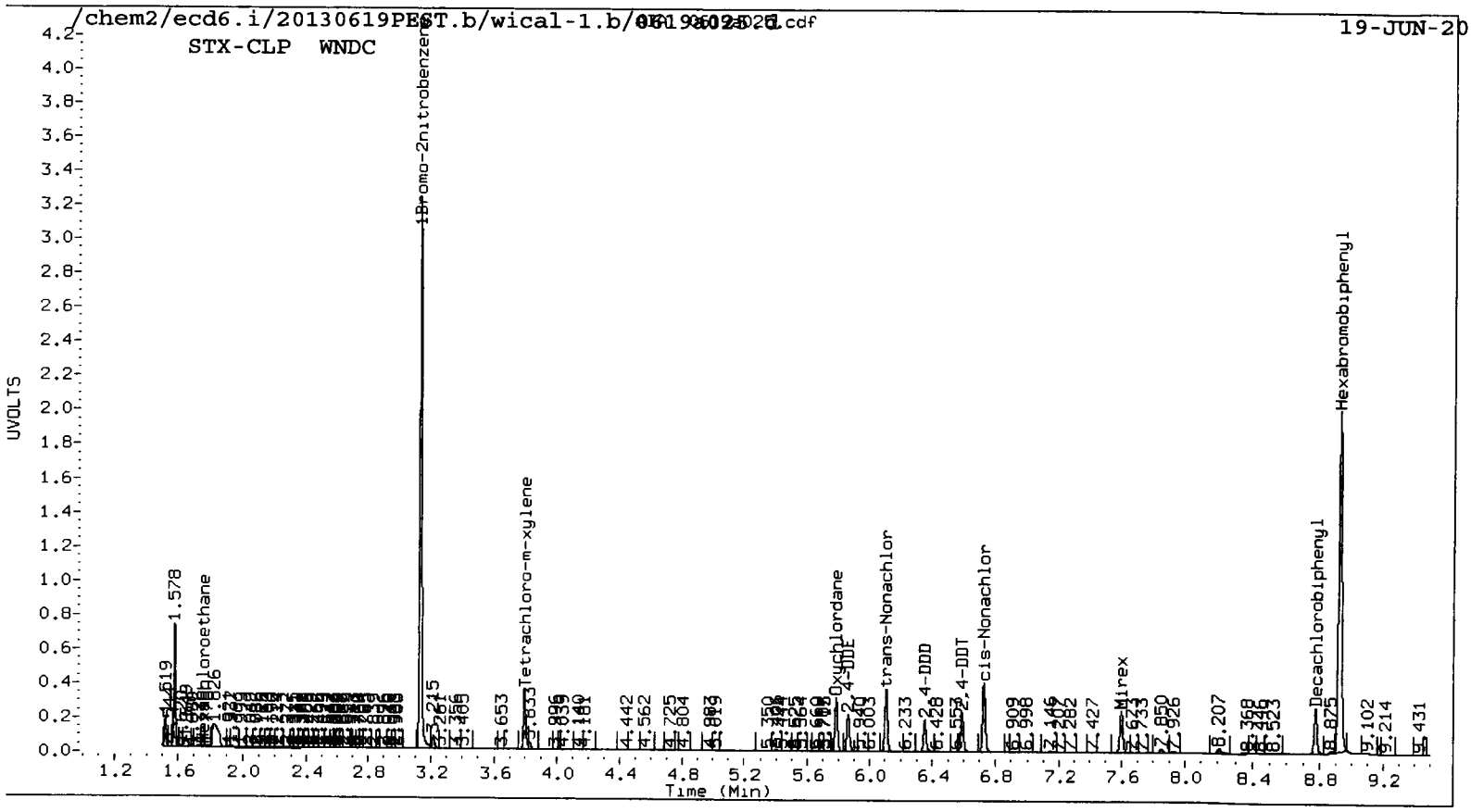
INTERNAL STANDARD SUMMARY

	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5920700	5.9
Hexabromobiphenyl	4870538	5346075	9.8

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29296978	3.4
Hexabromobiphenyl	16454599	18109694	10.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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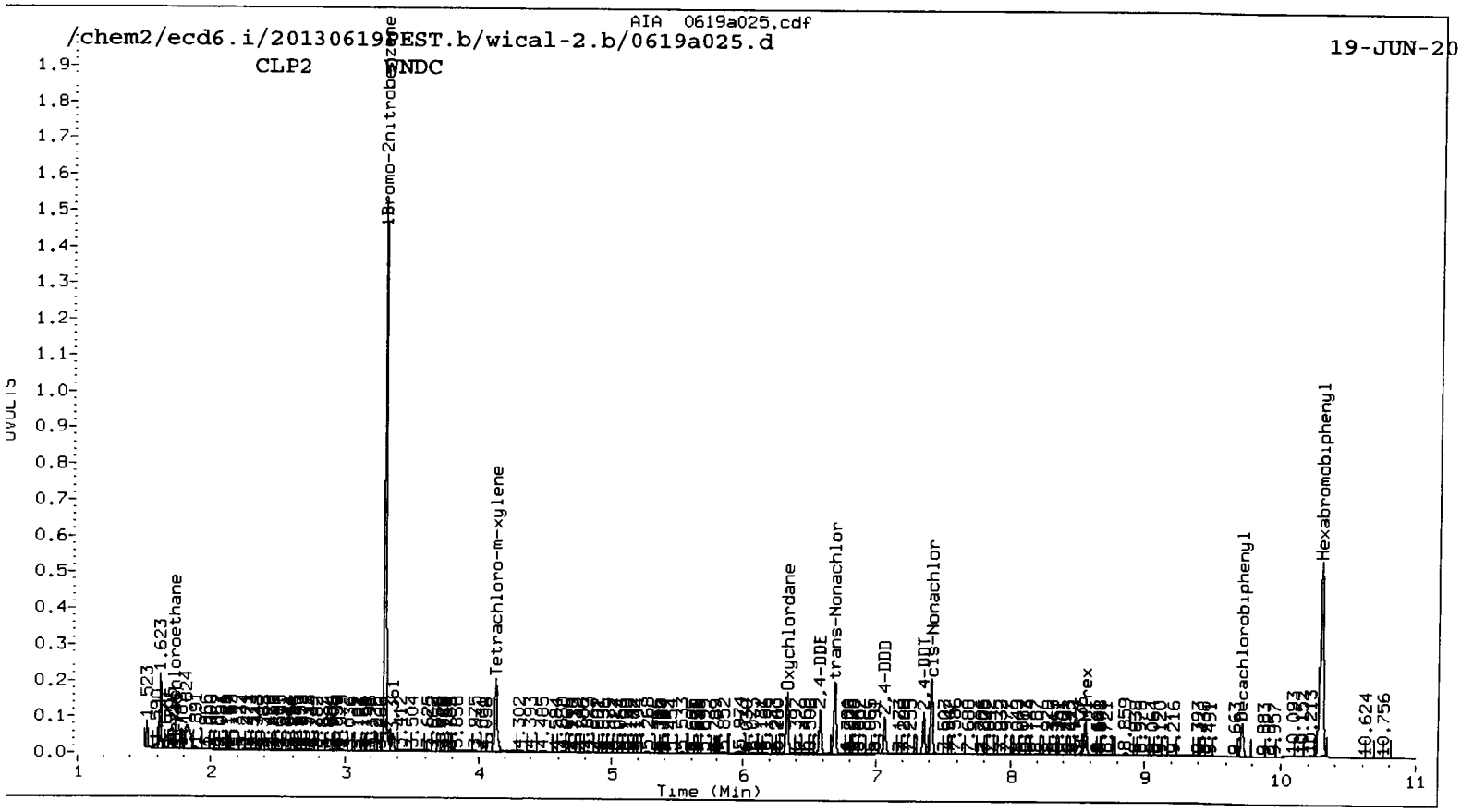
STX-CLP WNDC
19-JUN-20
UVOLTS
Time (Min)
1.578
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a025.cdf
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CLP2 WNDC
19-JUN-20
Time (Min)
1.623
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a026.d ARI ID: WNDD
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a026.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 22:06
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.758	0.001	1046	1.726	0.001	140170	0.0000	0.0000	---	Hexachloroethane
3.131	-0.001	5825954	3.300	0.001	28828761	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.788	0.001	1417285	6.332	-0.001	7742609	20.0729	20.6071	2.6	Oxychlordane
5.863	0.001	1081320	6.581	0.001	5647091	20.0504	20.8065	3.7	2,4-DDE
6.111	0.000	1724901	6.689	-0.002	9125838	19.9053	20.7697	4.3	trans-Nonachlor
6.350	0.002	974743	7.066	0.001	4886930	20.0521	20.4193	1.8	2,4-DDD
6.588	0.001	1124874	7.352	0.000	5341498	20.0058	20.4824	2.4	2,4-DDT
6.727	0.000	1892006	7.413	-0.003	9477549	19.7860	20.7118	4.6	cis-Nonachlor
7.601	0.000	1136859	8.565	0.000	4368778	19.4823	19.7312	1.3	Mirex
8.928	0.000	5243309	10.290	0.001	17802786	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.001	1458232	4.127	-0.001	9366030	18.4338	19.6425	6.3	Tetrachloro-m-xylene
8.777	0.000	1240181	9.725	0.000	5343942	18.7929	18.5698	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

JK 06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	46.1	49.1	46.1~	150- 0
Decachlorobiphenyl	47.0	46.4	46.4~	150- 0

~ Indicates recovery outside QC Limits

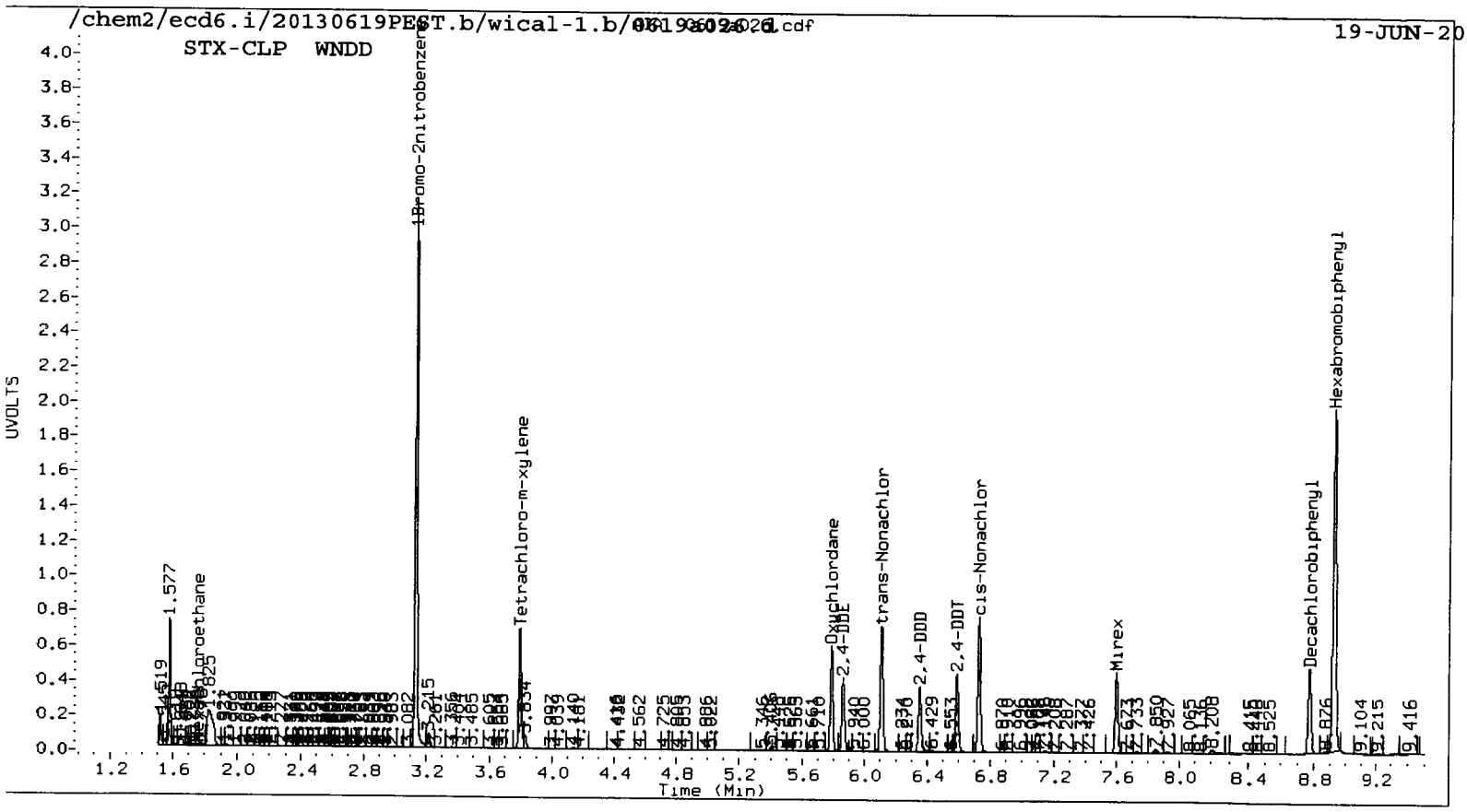
INTERNAL STANDARD SUMMARY

	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5825954	4.2
Hexabromobiphenyl	4870538	5243309	7.7

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28828761	1.8
Hexabromobiphenyl	16454599	17802786	8.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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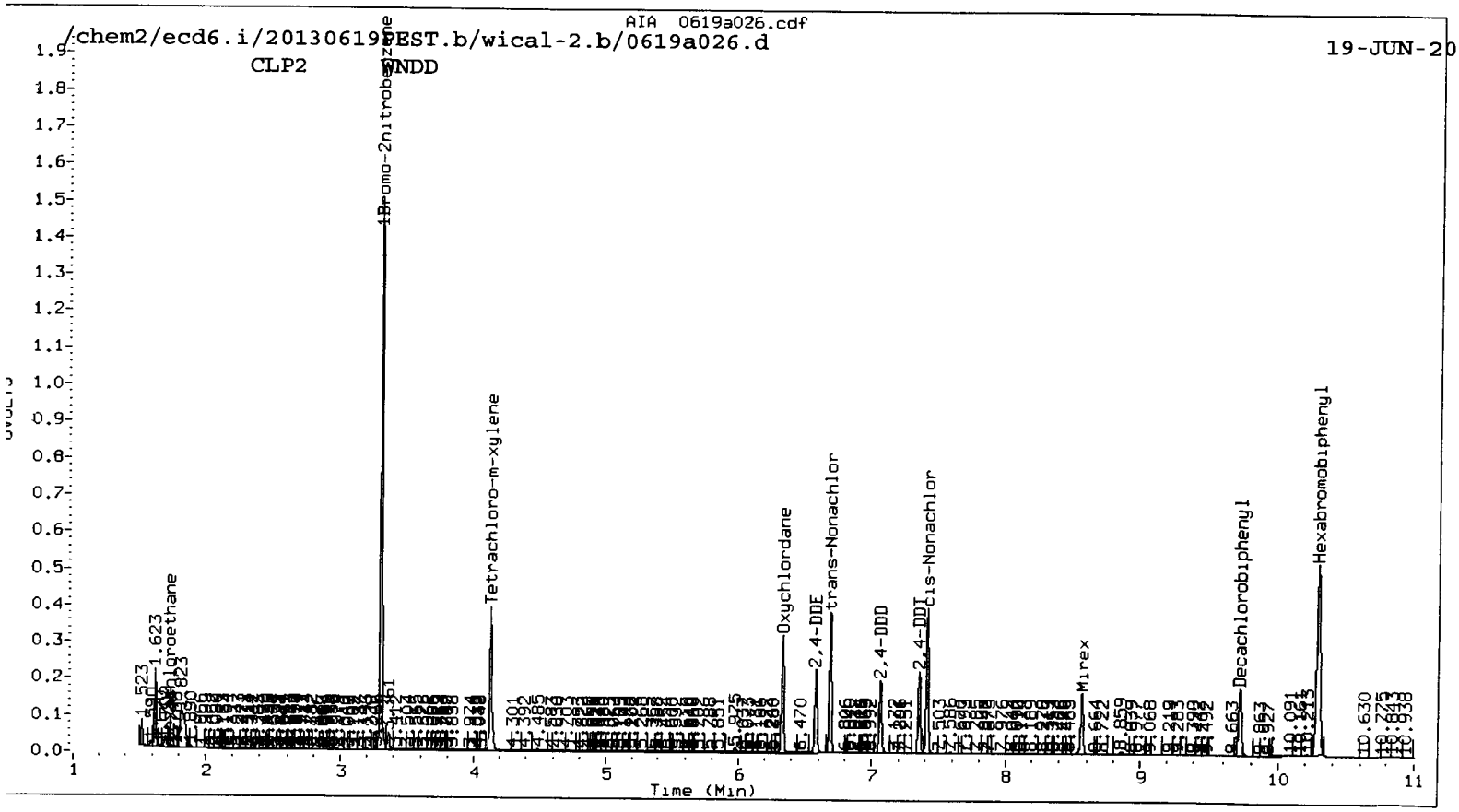
STX-CLP WNDD
19-JUN-20
UVOLTS
Time (Min)
1.577
Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 WNDD
19-JUN-20
Time (Min)
Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a027.d ARI ID: WNDF
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a027.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 22:24
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.756	-0.001	1746	1.726	0.000	191313	0.0000	0.0000	---	Hexachloroethane
3.130	-0.001	5852777	3.300	0.000	28874628	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	5496120	6.332	-0.001	29291826	76.9993	77.8369	1.1	Oxychlordane
5.861	0.000	4254664	6.580	-0.001	20183802	78.0390	74.2485	5.0	2,4-DDE
6.110	0.000	7066116	6.688	-0.002	35122691	80.6611	79.7644	1.1	trans-Nonachlor
6.348	0.000	3864434	7.065	0.000	18468214	78.6383	77.0003	2.1	2,4-DDD
6.587	0.000	4503164	7.352	-0.001	20504517	79.2224	78.4569	1.0	2,4-DDT
6.726	0.000	7777229	7.412	-0.003	37026269	80.4524	80.7412	0.4	cis-Nonachlor
7.601	0.000	4560804	8.565	0.000	16872664	77.3130	76.0396	1.7	Mirex
8.927	0.000	5300626	10.289	0.000	17841215	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	6041881	4.127	-0.002	34519068	76.0265	72.2785	5.1	Tetrachloro-m-xylen
8.776	-0.001	5004883	9.725	0.000	21145178	75.0205	73.3197	2.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	190.1	180.7	180.7~	150- 0
Decachlorobiphenyl	187.6	183.3	183.3~	150- 0

~ Indicates recovery outside QC Limits

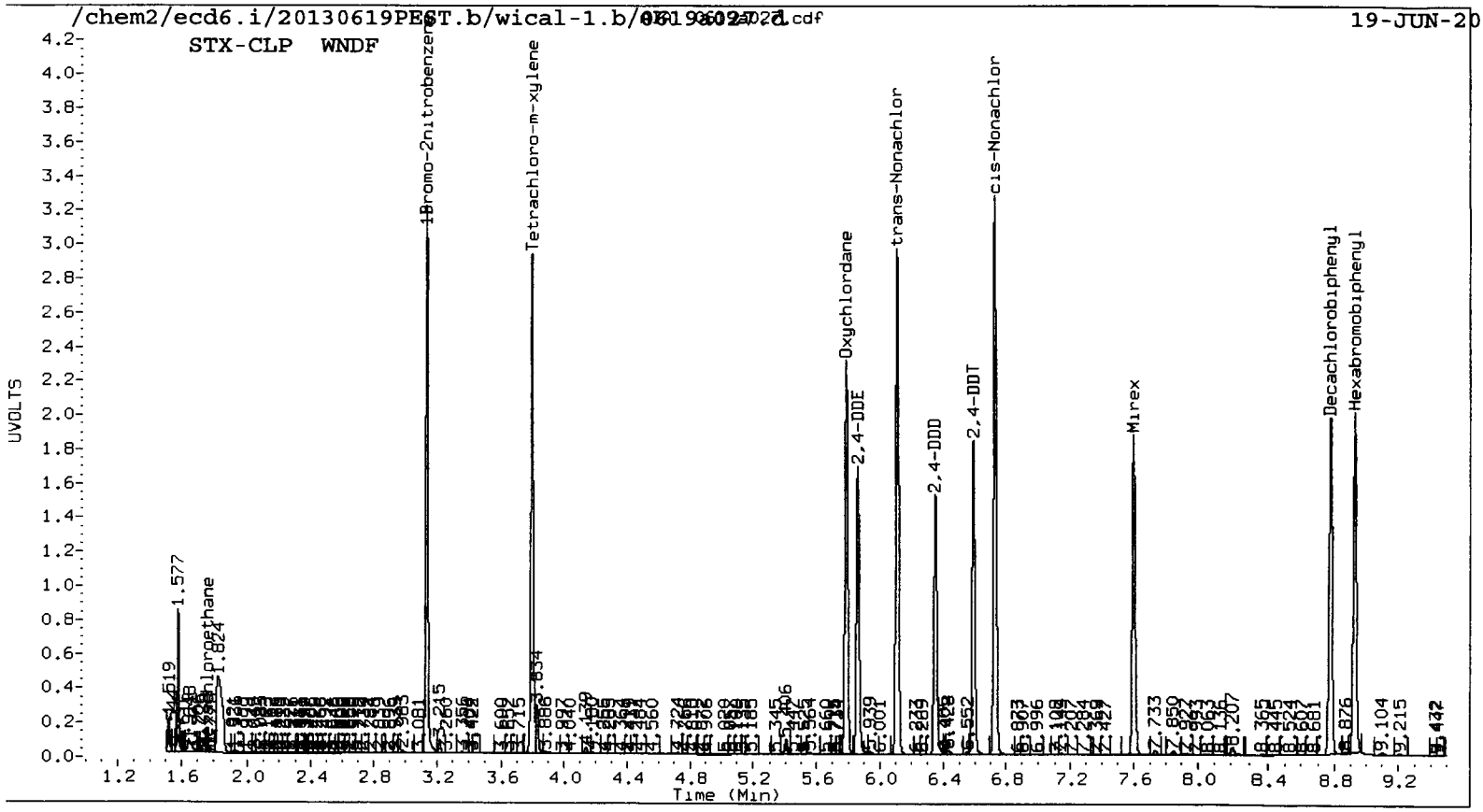
INTERNAL STANDARD SUMMARY

	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5852777	4.7
Hexabromobiphenyl	4870538	5300626	8.8

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28874628	2.0
Hexabromobiphenyl	16454599	17841215	8.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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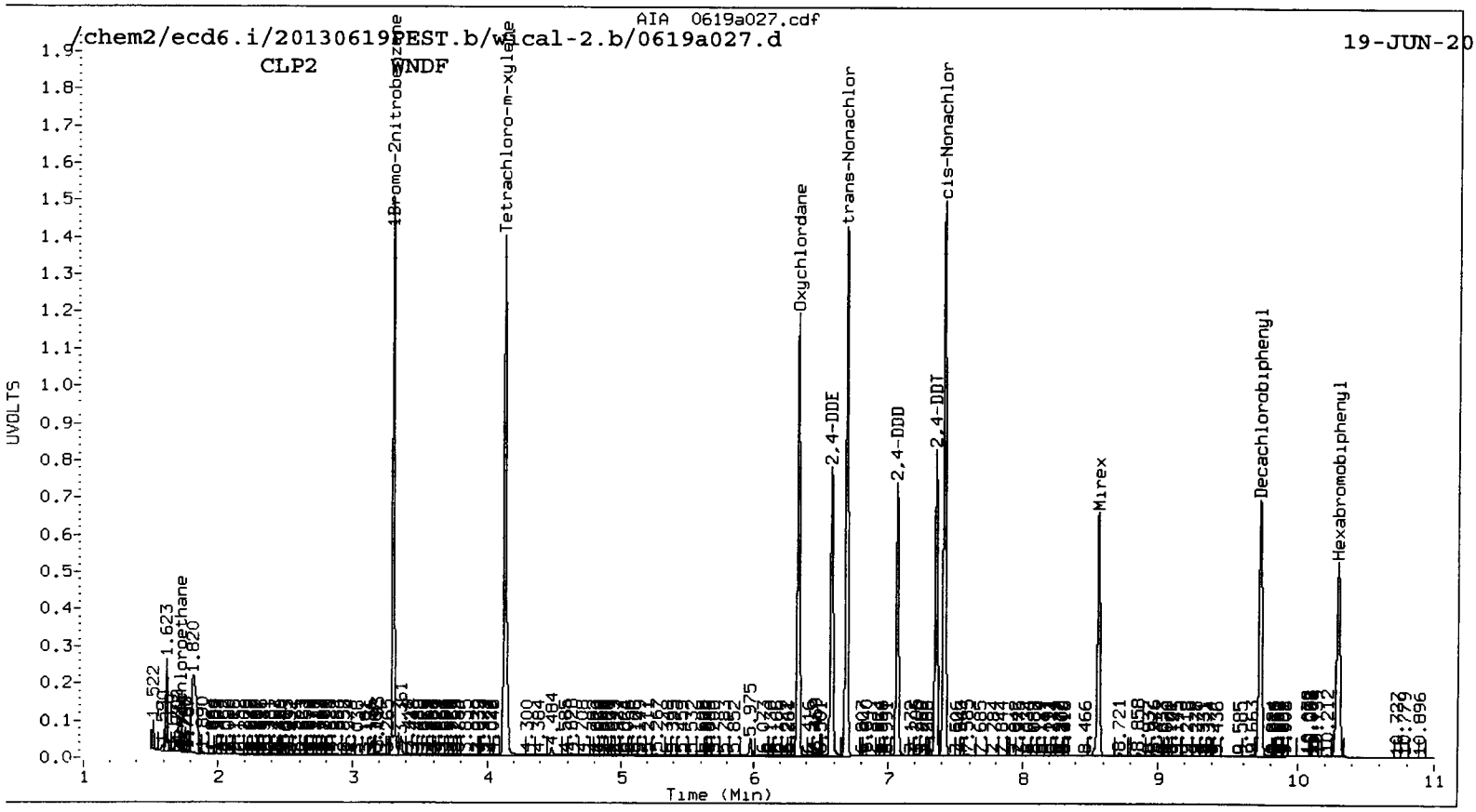
AIA 0619a027.cdf
19-JUN-20
STX-CLP WNDF
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
1.577
1.824
UVOLTS
Time (Min)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AIA 0619a027.cdf
19-JUN-20
CLP2 WNDF
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
1.623
1.820
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a028.d ARI ID: WNDG
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a028.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 22:42
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.758	0.000	2172	1.726	0.000	459344	0.0000	0.0000	---	Hexachloroethane
3.130	-0.001	5777001	3.299	0.000	28352573	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	10041452	6.332	0.000	53496498	141.6274	144.7734	2.2	Oxychlordane
5.861	0.000	7841014	6.580	0.000	34667644	144.7901	129.8772	10.9	2,4-DDE
6.110	0.000	13314783	6.690	0.000	60674113	153.0163	138.4836	10.0	trans-Nonachlor
6.348	0.000	7219024	7.065	0.000	32848121	147.8928	137.6422	7.2	2,4-DDD
6.587	0.000	8458360	7.353	0.000	36813655	149.8087	141.5676	5.7	2,4-DDT
6.727	0.000	14793375	7.415	0.000	62692268	154.0642	137.3955	11.4	cis-Nonachlor
7.601	0.000	8649046	8.564	0.000	32256718	147.6044	146.0999	1.0	Mirex
8.927	0.000	5265103	10.288	0.000	17752152	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	11433536	4.127	-0.002	59324331	145.7582	126.5048	14.1	Tetrachloro-m-xyl
8.777	-0.001	9543559	9.724	0.000	40008772	144.0181	139.4241	3.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	364.4	316.3	316.3~	150- 0
Decachlorobiphenyl	360.0	348.6	348.6~	150- 0

~ Indicates recovery outside QC Limits

06/25/13

INTERNAL STANDARD SUMMARY

	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5777001	3.3
Hexabromobiphenyl	4870538	5265103	8.1

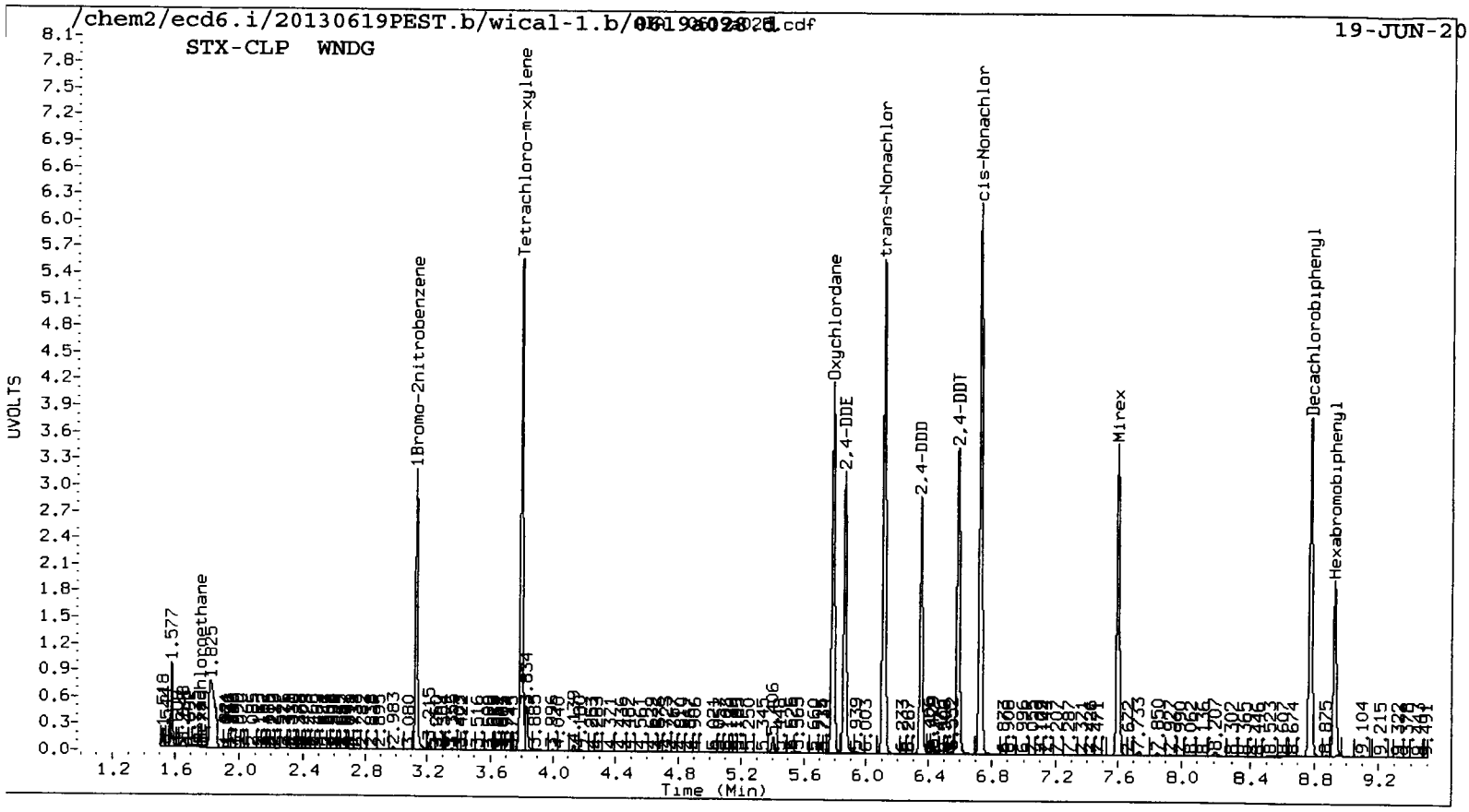
WV55:00135

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28352573	0.1
Hexabromobiphenyl	16454599	17752152	7.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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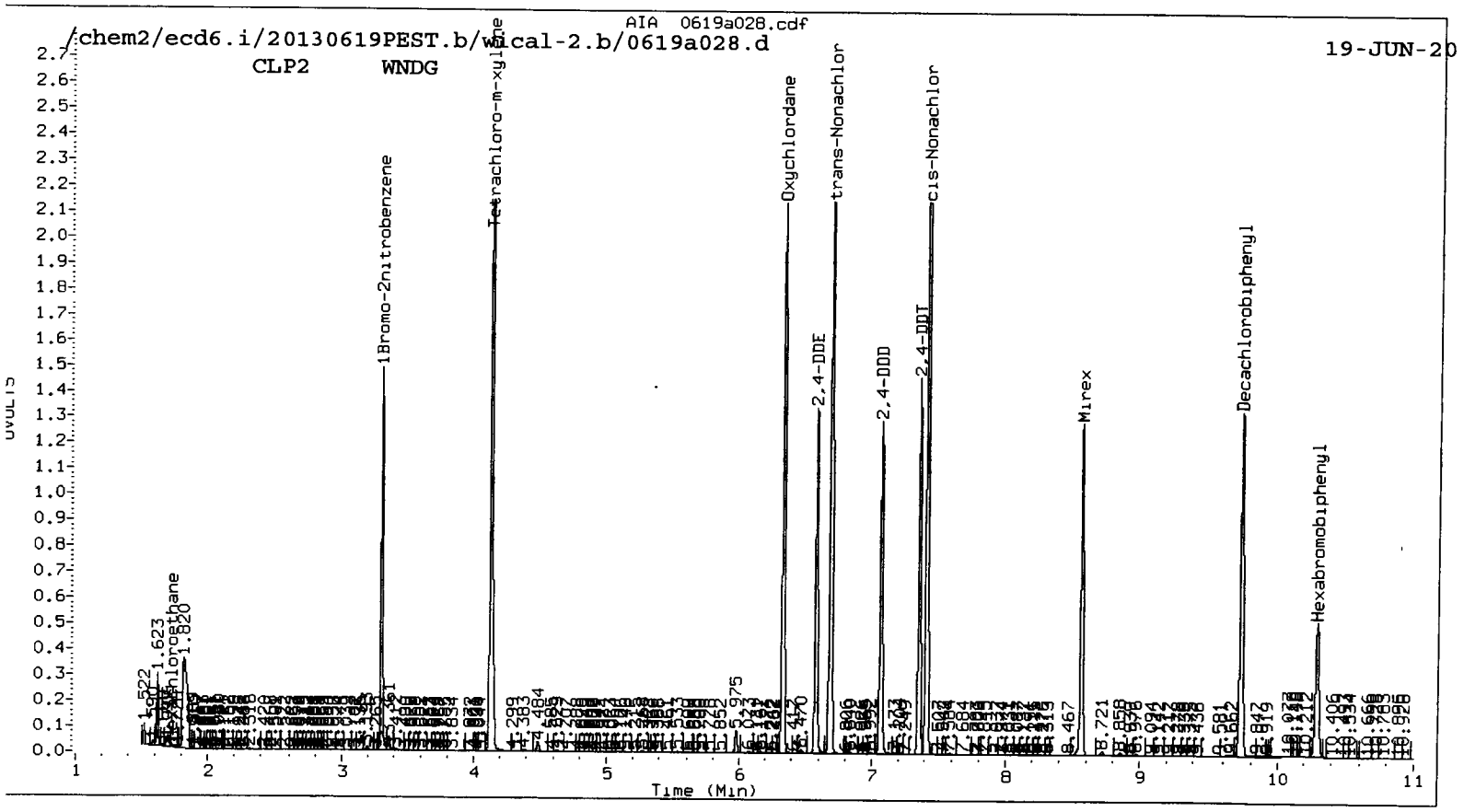
STX-CLP WNDG
19-JUN-20
UVOLTS
Time (Min)
1.577
1.825
Chlorpyrifos
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a028.cdf
/chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a028.d
CLP2 WNDG
19-JUN-20
Time (Min)
1.623
1.820
Chlorpyrifos
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a029.d ARI ID: WND ICV
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a029.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 22:59
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.758	0.001	826	1.726	0.000	153413	0.0000	0.0000	---	Hexachloroethane
3.130	-0.001	5841693	3.299	0.000	28922276	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	3597148	6.331	-0.001	17914975	49.2350	47.5269	3.5	Oxychlordane
5.861	-0.001	2932889	6.580	0.000	14207629	52.5566	52.1783	0.7	2,4-DDE
6.110	-0.001	4035811	6.688	-0.002	19905533	45.0090	44.7751	0.5	trans-Nonachlor
6.348	0.000	2687997	7.064	0.000	12861642	53.4395	53.1136	0.6	2,4-DDD
6.587	0.000	3215633	7.353	0.000	14586359	55.2691	55.2803	0.0	2,4-DDT
6.726	0.000	4401299	7.413	-0.002	20968088	44.4816	45.2883	1.8	cis-Nonachlor
7.598	-0.002	1170	8.574	0.010	45639	0.0194	0.2037	165.3*	Mirex
8.926	-0.001	5425526	10.289	0.000	18012862	80.0000	80.0000	0.0	Hexabromobiphenyl
3.797	-0.002	17239	4.129	0.001	47453	0.2173	0.0992	74.6*	Tetrachloro-m-xylene
8.780	0.003	7350	9.727	0.003	5151	0.1076	0.0177	143.5*	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	0.5	0.2	0.2~	150- 0
Decachlorobiphenyl	0.3	0.0	0.0~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5841693	4.5
Hexabromobiphenyl	4870538	5425526	11.4

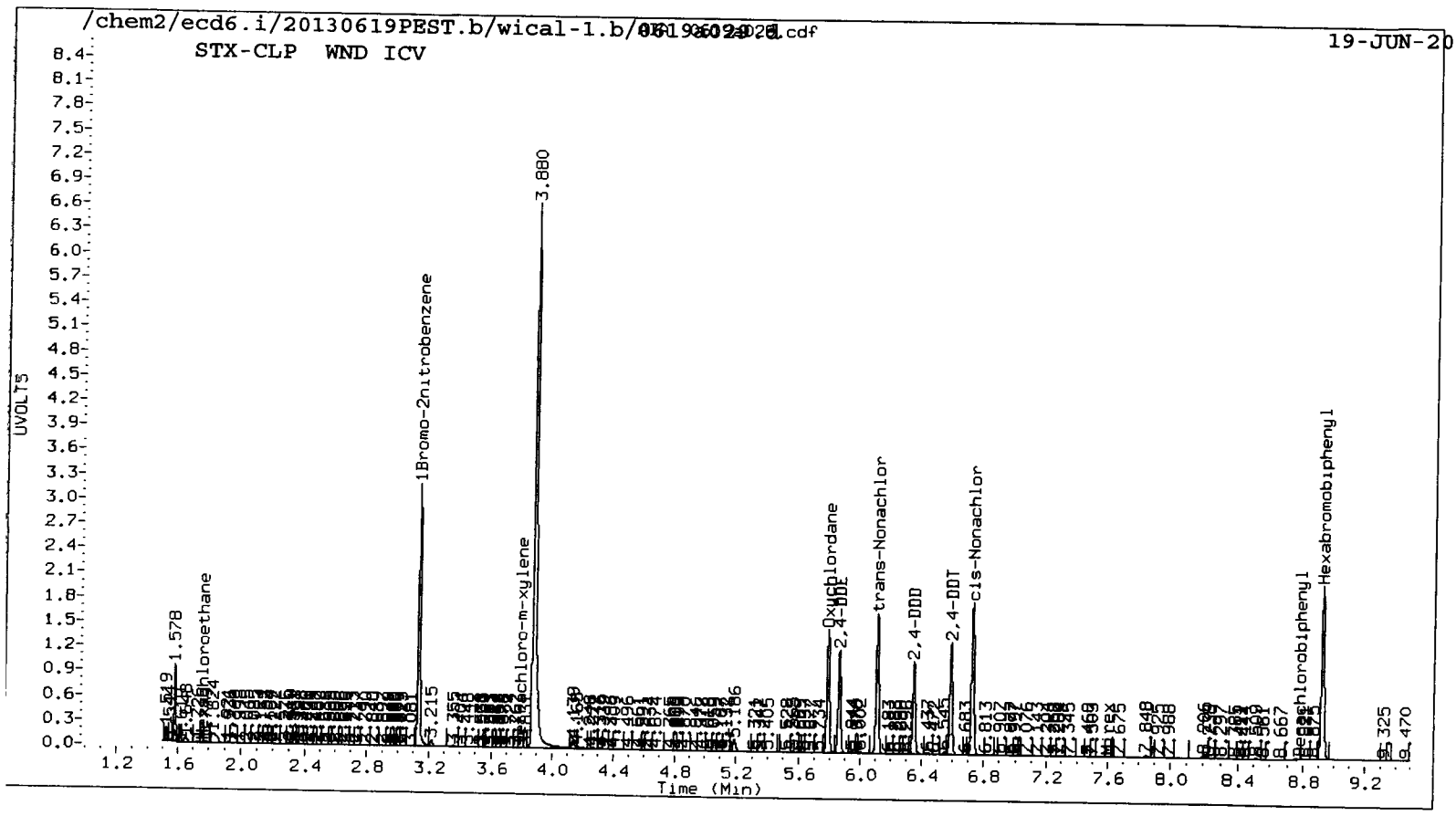
WV35:00136

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28922276	2.1
Hexabromobiphenyl	16454599	18012862	9.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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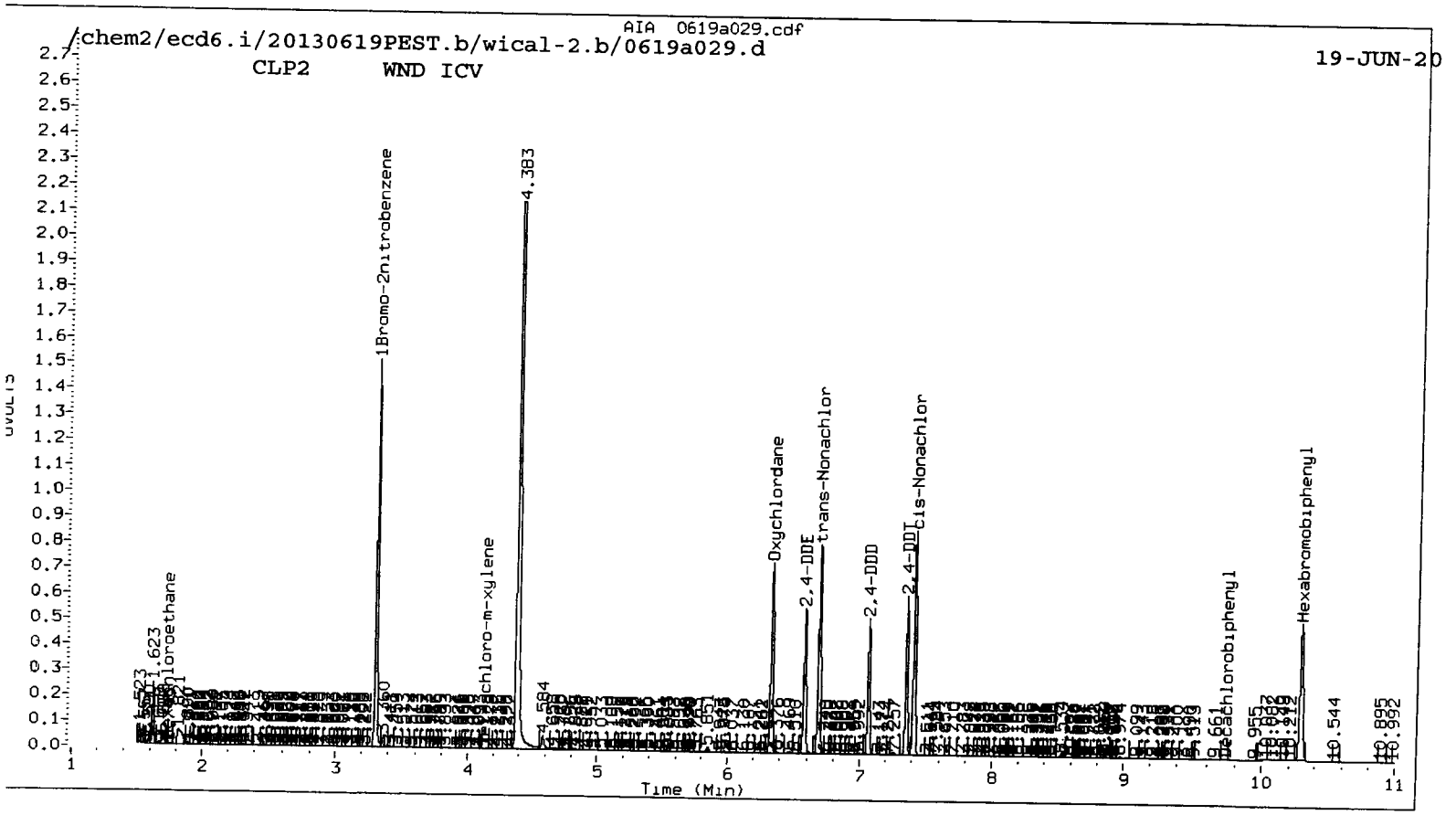
AIA 0619a029.cdf
STX-CLP WND ICV
19-JUN-20
UVOLTS
1.578
1Bromo-2nitrobenzene
3.880
chloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Hexabromobiphenyl
5.215
9.325
9.470
Time (Min)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AIA 0619a029.cdf
CLP2 WND ICV
19-JUN-20
1Bromo-2nitrobenzene
4.383
chloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Hexabromobiphenyl
10.544
Time (Min)

Pesticide Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WV95

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WV95 Client ID: SAIC

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 (ECD-6) ECD-7 ECD-8

Curve Date: 06/19/13 Analysis Start Date: 06/29/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / (Y) / N / ✓	Method Blank in Control?	(Y) / N / ✓
Retention times within Windows?	(Y) / N / ✓	LCS / LCSD Recovery in Control?	(Y) / N / ✓
CCAL met %D Criteria?	(Y) / N / ✓	LCS / LCSD RPD ≤30%?	NA / X
Surrogate Recovery in Control?	(Y) / N / ✓	MS / MSD Recovery in Control?	Y / N /
Internal STD. within 50-200%?	NA / (Y) / N / ✓	MS / MSD RPD ≤30%?	(NA) /
Manual Integrations?	Y / (N) / ✓	Samples Diluted?	Y / (N) /
Integration Summary?	(Y) / N / ✓	Special Analysis Request?	(Y) / N /

Detail problems, corrective actions and/or other pertinent information below

(Review 1) Analyst: YZ **Date:** 6/29/13

(Review 2) Reviewer: MW **Date:** 7/1

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 06/29/13 Analysis: Pest Analyst: YB

Column 1 Serial No.: 085824 Column Type: CLP1

Column 2 Serial No.: 1094709 Column Type: CLP2

GC Method: Pest ICal Date: 06/19/13

IS	Ical/Ccal	ICV
2006-1	B339	
	B359	
	B370	

Document All Maintenance Tasks In StarLIMS

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130619PEST.b/0629-1.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	29-JUN-2013 09:44	0629a002.d	1	DS	
2	29-JUN-2013 10:01	0629a003.d	1	INDAE	
3	29-JUN-2013 10:19	0629a004.d	1	TOXAPH	
4	29-JUN-2013 10:37	0629a005.d	1	WV95MBW1	WV95MBW1
5	29-JUN-2013 10:55	0629a006.d	1	WV95LCSW1	WV95LCSW1
6	29-JUN-2013 11:13	0629a007.d	1	WV95LCSDW1	WV95LCSDW1
7	29-JUN-2013 11:30	0629a008.d	1	WV95A	UP-CB-B8-20130626-W
8	29-JUN-2013 11:48	0629a009.d	1	DS	
9	29-JUN-2013 12:06	0629a010.d	1	INDAE	
10	29-JUN-2013 12:24	0629a011.d	1	TOXAPH	

YB 6/29/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/0629-1.b/0629a003.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130619PEST.b/0629-2.b/0629a003.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar
Injection Date: 29-JUN-2013 10:01
Report Date: 06/29/2013 13:13
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.124	-0.007	7232913	3.301	0.001	28448405	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.277	-0.009	3315025	4.711	0.001	14222564	22.8529	20.9259	8.8	alpha-BHC
4.636	-0.008	1236563	5.141	0.003	5477870	21.1329	18.6042	12.7	beta-BHC
4.805	-0.008	2692359	5.451	0.001	11659579	21.4360	19.9019	7.4	delta-BHC
4.559	-0.010	2969855	5.067	0.001	12385998	22.4543	20.6098	8.6	gamma-BHC (Lindane)
5.004	-0.011	2775663	5.530	0.001	11361802	21.8688	19.4908	11.5	Heptachlor
5.296	-0.011	2901697	5.868	0.000	11422366	23.5946	20.6978	13.1	Aldrin
5.869	-0.013	2588176	6.422	0.000	9940955	22.7006	19.7648	13.8	Heptachlor epoxide b
6.246	-0.014	2362931	6.809	0.000	9173942	22.1729	20.2981	8.8	Endosulfan I
6.468	-0.015	5153051	7.067	0.000	18084070	45.7616	39.6468	14.3	Dieldrin
6.170	-0.014	3858434	6.870	0.000	18299965	45.0377	39.8533	12.2	4,4'-DDE
6.686	-0.016	4105816	7.356	0.000	13242023	39.2488	39.3198	0.2	Endrin
6.891	-0.015	4318510	7.545	0.000	14652459	41.5840	41.5314	0.1	Endosulfan II
6.726	-0.014	4144788	7.407	0.001	14597144	41.4920	40.2620	3.0	4,4'-DDD
7.657	-0.017	3611718	8.087	0.000	12528066	39.3878	41.7099	5.7	Endosulfan sulfate
6.983	-0.015	3930961	7.695	0.000	13133108	39.9263	40.8822	2.4	4,4'-DDT
7.408	-0.016	8010294	8.277	-0.005	20892567	171.9043	174.7551	1.6	Methoxychlor
7.912	-0.018	4691261	8.578	0.000	13246440	41.2010	44.1269	6.9	Endrin ketone
7.267	-0.017	3302143	7.842	-0.001	11365564	40.2293	41.9632	4.2	Endrin aldehyde
5.989	-0.013	2694837	6.605	0.001	10435539	23.0090	19.7148	15.4	gamma-Chlordane
6.113	-0.013	2586781	6.742	0.000	9656399	22.6910	19.8999	13.1	alpha-Chlordane
2.305	-0.007	3486908	2.467	-0.002	11566291	21.9385	19.6422	11.0	Hexachlorobutadiene
4.132	-0.007	2473280	4.588	0.001	12158460	21.4305	21.6966	1.2	Hexachlorobenzene
8.907	-0.020	6941608	10.288	0.000	16332453	80.0000	80.0000	0.0	Hexabromobiphenyl
3.792	-0.007	4345859	4.128	0.000	20300264	44.2504	43.1430	2.5	Tetrachloro-m-xylen
8.756	-0.021	3790708	9.724	-0.001	11396377	43.3884	43.1667	0.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	110.6	107.9	107.9~	115- 0
Decachlorobiphenyl	108.5	107.9	107.9~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

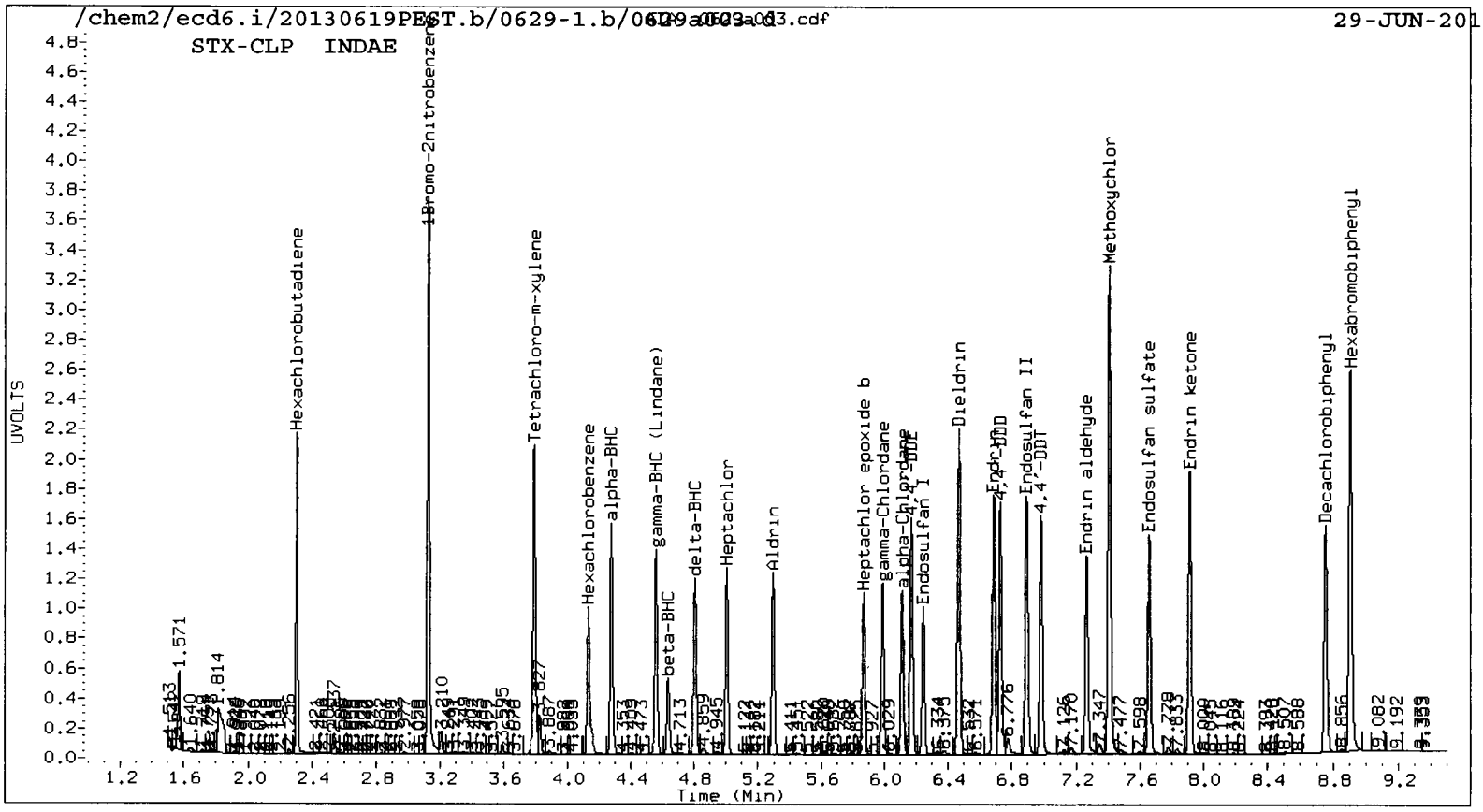
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	7232913	29.4
Hexabromobiphenyl	4870538	6941608	42.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28448405	0.5
Hexabromobiphenyl	16454599	16332453	-0.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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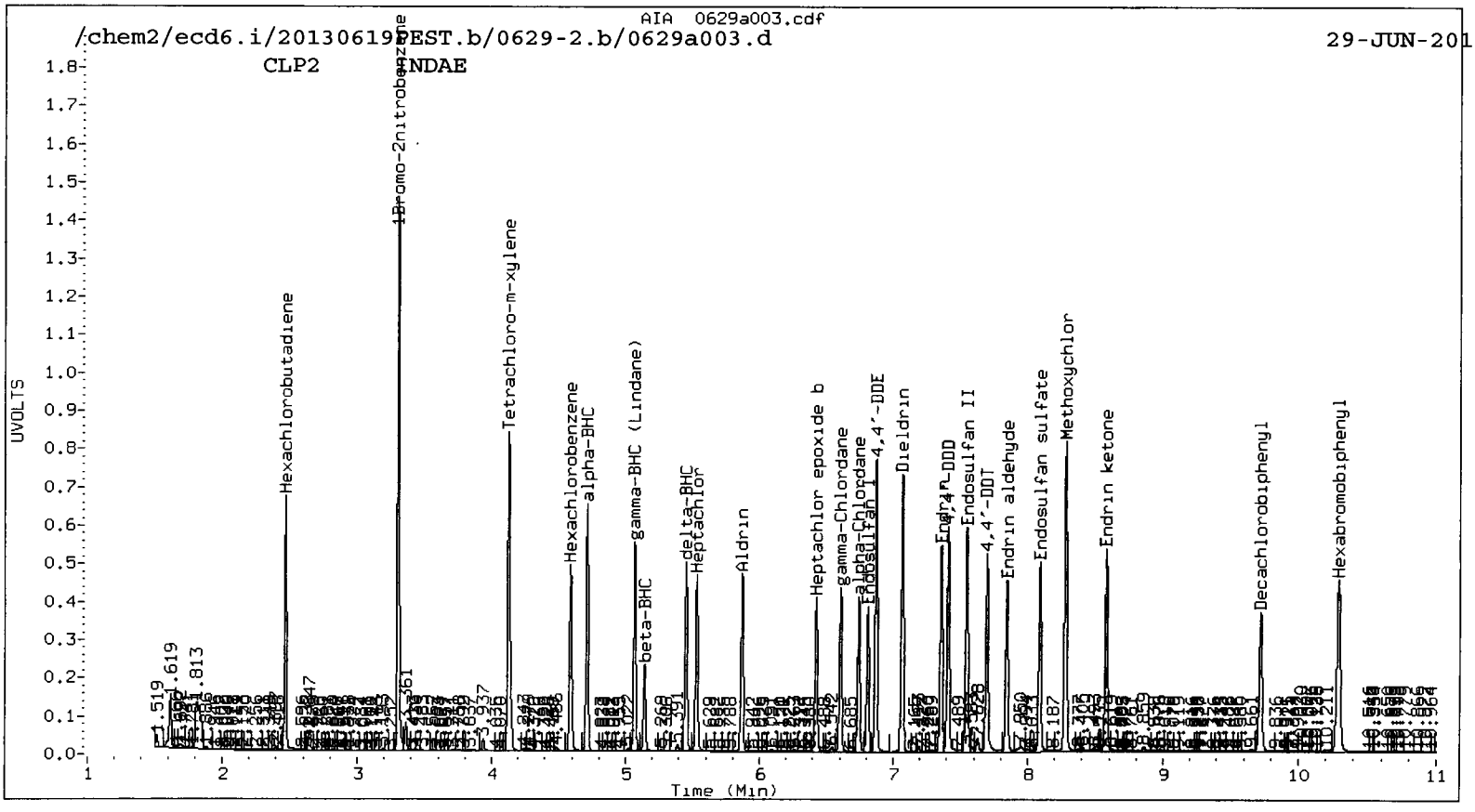
29-JUN-201
STX-CLP INDAE
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0629a003.cdf
/chem2/ecd6.i/20130619PEST.b/0629-2.b/0629a003.d
29-JUN-201
CLP2 INDAE
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/0629-1.b/0629a004.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130619PEST.b/0629-2.b/0629a004.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Compound Sublist: TOXAPH
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 29-JUN-2013 10:19
Report Date: 06/29/2013 13:13
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.124	-0.007	6501305	3.300	0.001	26265433	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.908	-0.019	6194954	10.289	0.000	14276051	80.0000	80.0000	0.0	Hexabromobiphenyl
3.793	-0.006	2658931	4.129	0.000	13458634	30.1205	30.9801	2.8	Tetrachloro-m-xylen
8.757	-0.020	2677898	9.725	0.000	7852527	34.3455	34.0279	0.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	75.3	77.5	75.3~	150- 0
Decachlorobiphenyl	85.9	85.1	85.1~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

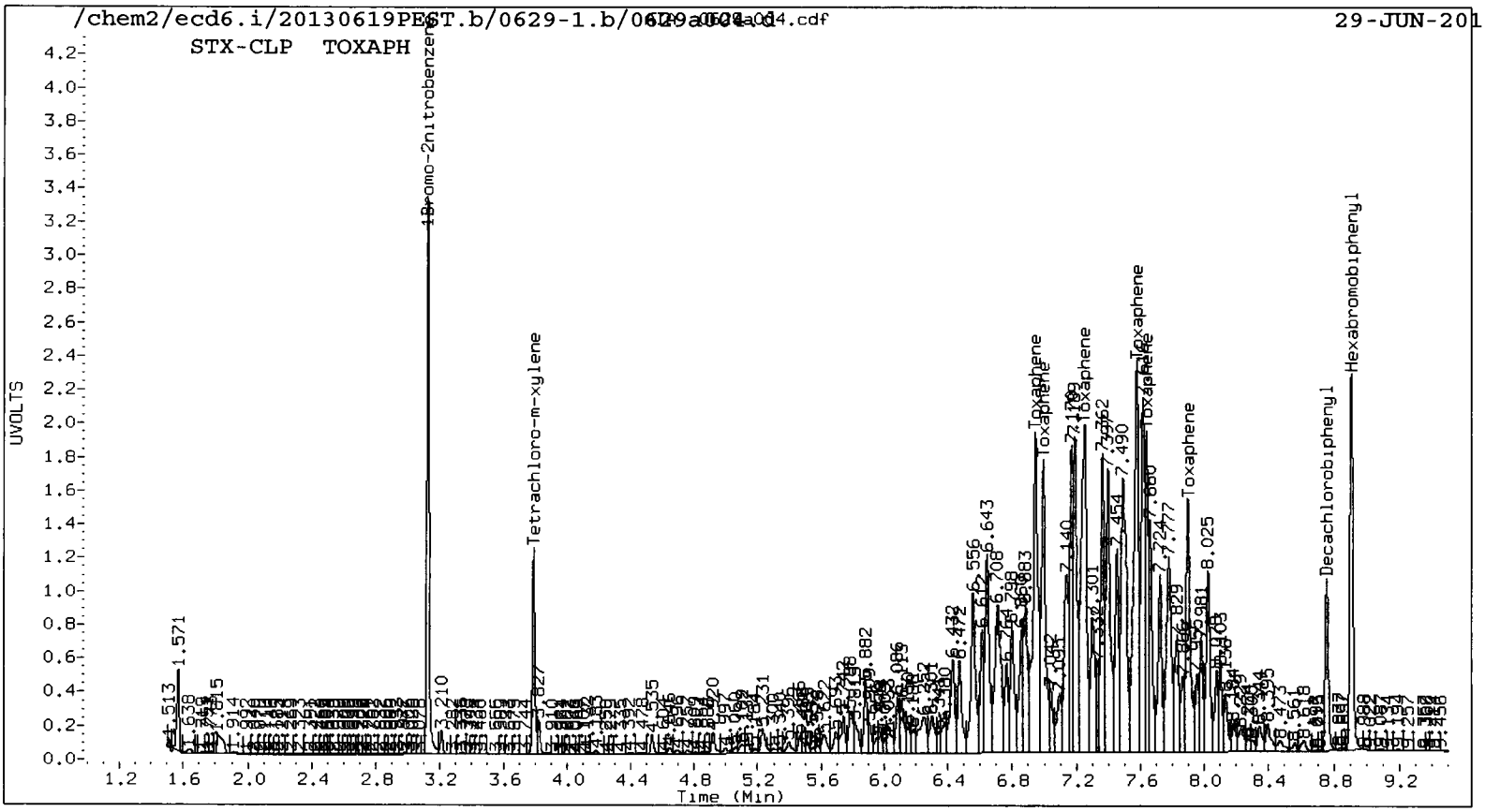
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6501305	16.3
Hexabromobiphenyl	4870538	6194954	27.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	26265433	-7.3
Hexabromobiphenyl	16454599	14276051	-13.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.944	-0.014	8568384	2155.0	1	7.293	0.001	22919712	2294.7
Toxaphene	2	6.995	-0.015	6319353	2303.3	2	7.618	0.002	33376648	2264.9
Toxaphene	3	7.252	-0.015	9589959	2118.7	3	7.848	0.002	36287514	2244.1
Toxaphene	4	7.577	-0.016	9692839	2102.3	4	8.315	0.001	25425020	2181.5
Toxaphene	5	7.638	0.006	4946186	1615.5	5	8.354	0.001	31371002	2116.6
Toxaphene	6	7.896	-0.017	5377783	2069.1	NS	---			----
Total STX-CLPAve (6 peaks): 2060.643						Total CLP2Ave (5 peaks): 2220.382				RPD = 7
Corrected Ave (6 peaks): 2060.643						Corrected Ave (5 peaks): 2220.382				RPD = 7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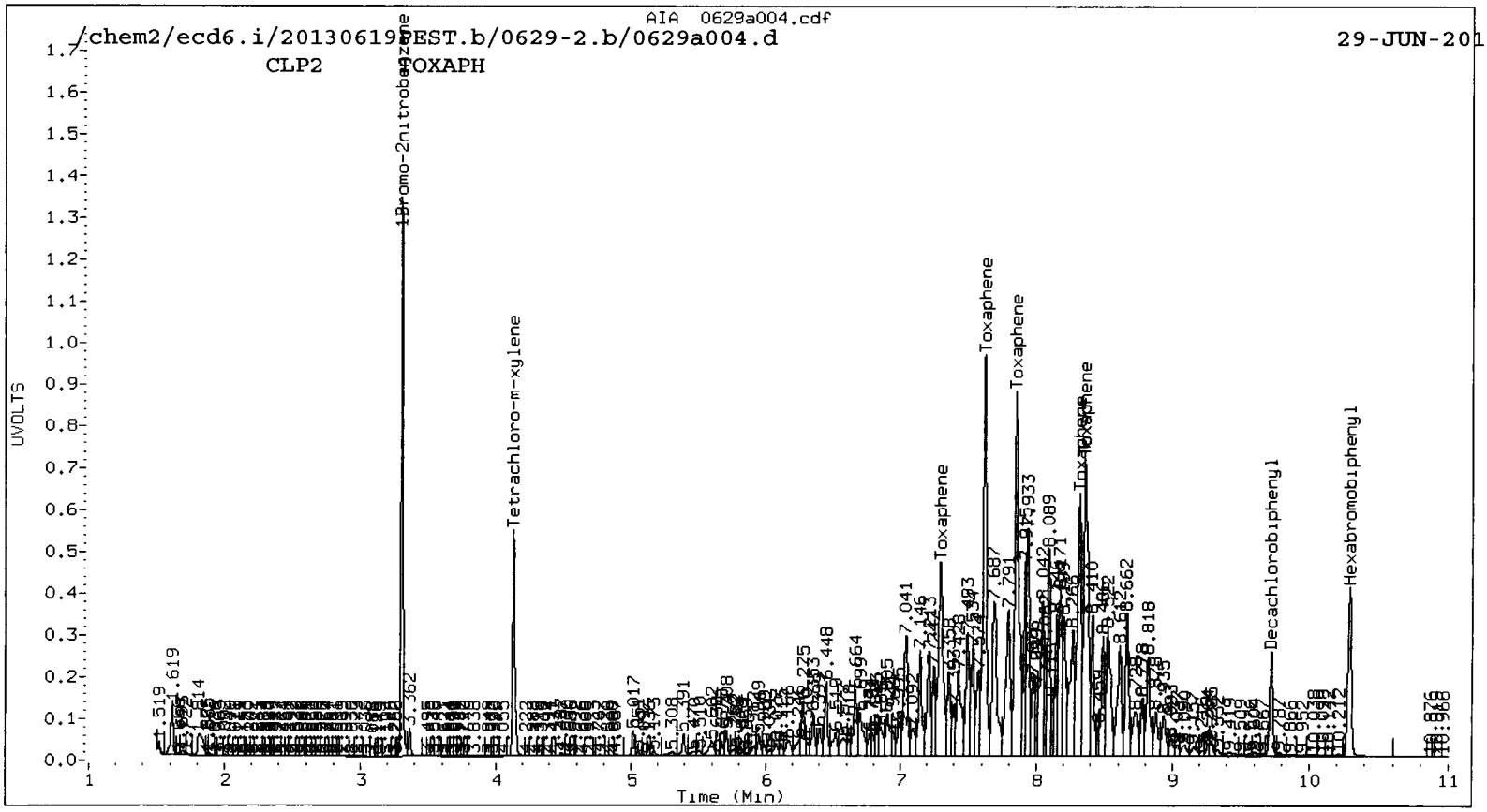
STX-CLP TOXAPH
UVOLTS
Time (Min)
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl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29-JUN-201
CLP2 TOXAPH
UVOLTS
Time (Min)
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 6/29/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0629-1.b/0629a005.d ARI ID: WV95MBW1
Data file 2: /chem2/ecd6.i/20130619PEST.b/0629-2.b/0629a005.d Client ID: WV95MBW1
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 29-JUN-2013 10:37
Compound Sublist: wpest Report Date: 06/29/2013 13:13
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.124	-0.007	6335429	3.301	0.001	26238683	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.277	-0.009	4085	4.710	0.000	10269	~~0.0322~~	~~0.0164~~	65.0*	alpha-BHC
4.637	-0.007	1610	5.168	0.029	8735	0.0314	0.0322	2.4	beta-BHC
4.792	-0.022	1718	5.465	0.015	19925	0.0156	0.0369	81.0*	delta-BHC
4.559	-0.010	3006	5.064	-0.003	4789	0.0259	0.0086	100.1*	gamma-BHC (Lindane)
5.004	-0.011	2358	5.529	-0.001	15586	0.0212	0.0290	31.0	Heptachlor
5.318	0.011	30302	5.852	-0.016	36740	0.2813	0.0722	118.3*	Aldrin
5.881	-0.002	2888	6.447	0.025	11903	0.0289	0.0257	11.9	Heptachlor epoxide b
6.244	-0.016	2329	6.818	0.009	3331	0.0260	0.0080	103.0*	Endosulfan I
6.471	-0.011	2204	7.111	0.043	3985	0.0223	0.0095	80.9*	Dieldrin
6.173	-0.011	2413	6.870	0.000	6806	0.0322	0.0161	66.7*	4,4'-DDE
----			----			0.0000	0.0000	---	Endrin
6.889	-0.017	2112	7.532	-0.013	10365	0.0236	0.0331	33.5	Endosulfan II
6.730	-0.010	1710	7.411	0.004	5078	0.0199	0.0158	22.9	4,4'-DDD
7.662	-0.012	2266	8.089	0.001	9206	0.0287	0.0346	18.6	Endosulfan sulfate
6.996	-0.002	4615	7.699	0.005	15529	0.0544	0.0545	0.2	4,4'-DDT
7.399	-0.026	4280	8.266	-0.016	11115	0.1067	0.1049	1.7	Methoxychlor
7.911	-0.019	17123	8.627	0.049	55167	0.1746	0.2073	17.1	Endrin ketone
7.256	-0.028	5093	7.846	0.003	29975	0.0721	0.1248	53.6*	Endrin aldehyde
5.977	-0.025	4650	6.623	0.018	21356	0.0453	0.0437	3.6	gamma-Chlordane
6.113	-0.014	5698	6.742	0.000	3576	0.0571	0.0080	150.9*	alpha-Chlordane
2.304	-0.008	9078	2.466	-0.003	148341	0.0652	0.2731	122.9*	Hexachlorobutadiene
4.132	-0.008	53414	4.588	0.002	30530	0.5284	0.0591	159.8*	Hexachlorobenzene
5.773	-0.014	9425	6.354	0.022	14720	0.1171	0.0430	92.5*	Oxychlordane
5.816	-0.046	1368	6.573	-0.008	6623	0.0223	0.0268	18.6	2,4-DDE
----			6.691	0.001	8669	0.0000	0.0243	---	trans-Nonachlor
6.300	-0.048	1862	7.041	-0.024	18182	0.0336	0.0934	94.2*	2,4-DDD
6.614	0.027	2161	7.354	0.001	6152	0.0387	0.0290	15.0	2,4-DDT
6.707	-0.020	3860	7.457	0.041	1644	0.0354	0.0044	155.6*	cis-Nonachlor
7.580	-0.021	7155	8.539	-0.025	24633	~~0.1076~~	~~0.1368~~	23.9	Mirex
8.907	-0.020	5977502	10.289	0.000	14481238	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.751	-0.006	803	1.737	0.011	202750	~~0.0000~~	~~0.0000~~	---	Hexachloroethane
6.555	-0.026	3386	7.323	-0.013	2325	~~0.0000~~	~~0.0000~~	---	Kepone
3.793	-0.006	2405299	4.128	0.000	12251420	27.9607	28.2300	1.0	Tetrachloro-m-xylen
8.757	-0.020	2119339	9.725	0.000	6719743	28.1705	28.7065	1.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	69.9	70.6	69.9	52-100
Decachlorobiphenyl	70.4	71.8	70.4	54-100

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

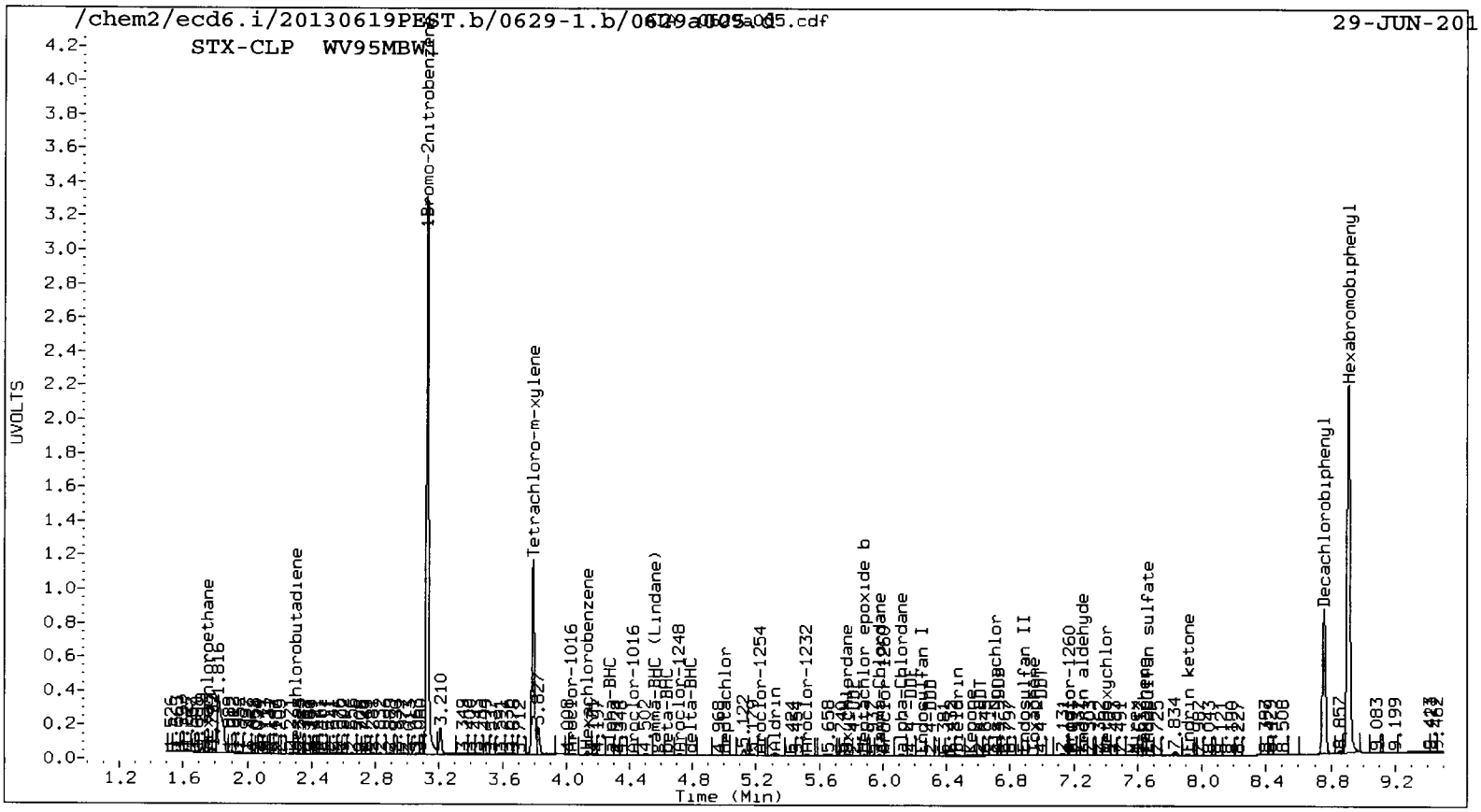
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6335429	13.3
Hexabromobiphenyl	4870538	5977502	22.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	26238683	-7.4
Hexabromobiphenyl	16454599	14481238	-12.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.947	-0.011	5860	1.5	1	7.292	0.001	11344	1.1
Toxaphene	2	6.996	-0.014	4615	1.7	2	7.615	0.000	32443	2.2
Toxaphene	3	7.256	-0.011	5093	1.2	3	7.846	0.000	29975	1.8
Toxaphene	4	7.580	-0.013	7155	1.6	4	8.315	0.001	17354	1.5
Toxaphene	5	7.639	0.007	2481	0.8	5	8.354	0.001	18920	1.3
Toxaphene	6	7.911	-0.002	17123	6.8	NS	---			----
Total STX-CLPAve (6 peaks): 2.285						Total CLP2Ave (5 peaks): 1.569				RPD = 37
Corrected Ave (5 peaks): 1.377						Corrected Ave (5 peaks): 1.569				RPD = 13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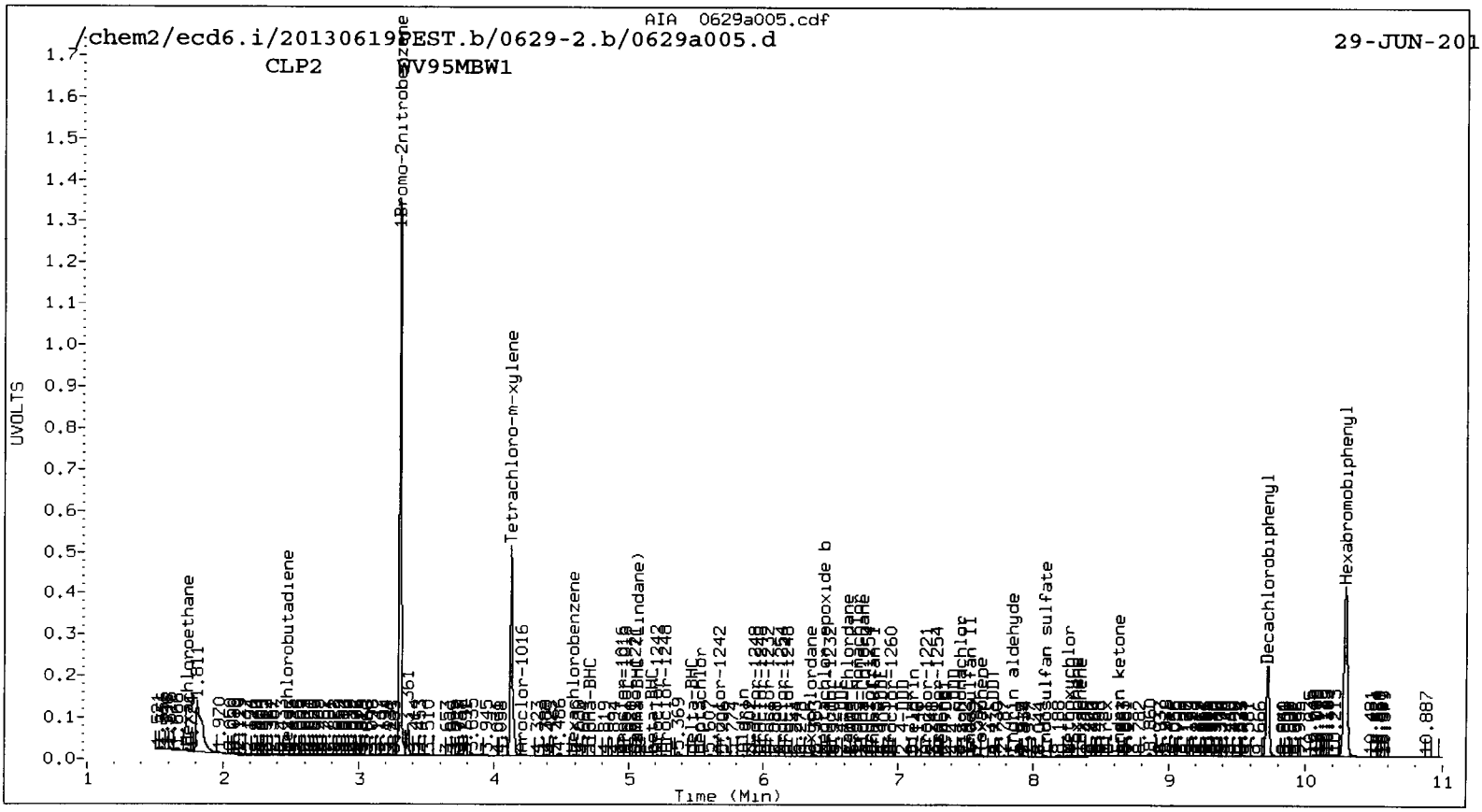
29-JUN-201
STX-CLP WV95MBW1
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl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29-JUN-201
CLP2 WV95MBW1
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/0629-1.b/0629a006.d ARI ID: WV95LCSW1
Data file 2: /chem2/ecd6.i/20130619PEST.b/0629-2.b/0629a006.d Client ID: WV95LCSW1
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 29-JUN-2013 10:55
Compound Sublist: wpest Report Date: 06/29/2013 13:13
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.124	-0.008	6614428	3.300	0.001	27535124	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.277	-0.009	2153511	4.710	0.000	9680108	16.2339	14.7149	9.8	alpha-BHC
4.637	-0.007	901909	5.141	0.003	4032663	16.8549	14.1502	17.4	beta-BHC
4.806	-0.007	545730	5.452	0.002	2488767	4.7513	4.3890	7.9	delta-BHC
4.559	-0.009	2009691	5.067	0.001	8829655	16.6155	15.1795	9.0	gamma-BHC (Lindane)
5.005	-0.010	1746930	5.531	0.001	7520790	15.0507	13.3296	12.1	Heptachlor
5.296	-0.011	1758023	5.869	0.002	7329046	15.6317	13.7210	13.0	Aldrin
5.870	-0.013	1900228	6.423	0.001	7591139	18.2252	15.5934	15.6	Heptachlor epoxide b
6.246	-0.014	1854778	6.811	0.002	7101470	19.0320	16.2337	15.9	Endosulfan I
6.469	-0.014	3836379	7.068	0.001	14459776	37.2545	32.7525	12.9	Dieldrin
6.173	-0.011	3516206	6.872	0.002	13800228	44.8808	31.0507	36.4	4,4'-DDE
6.687	-0.014	2983303	7.357	0.001	10270861	31.6664	32.7687	3.4	Endrin
6.893	-0.013	3245247	7.547	0.002	11953064	34.6989	36.4033	4.8	Endosulfan II
6.729	-0.011	3193973	7.409	0.003	12018924	35.5032	35.6196	0.3	4,4'-DDD
7.658	-0.016	2262200	8.089	0.002	8335309	27.3939	29.8176	8.5	Endosulfan sulfate
6.985	-0.013	2519378	7.696	0.002	8587621	28.4137	28.7234	1.1	4,4'-DDT
7.409	-0.015	5399192	8.278	-0.004	15242785	128.6595	136.9930	6.3	Methoxychlor
7.913	-0.017	3572522	8.579	0.001	10855556	34.8392	38.8555	10.9	Endrin ketone
7.269	-0.015	2149152	7.844	0.001	7796686	29.0729	30.9303	6.2	Endrin aldehyde
5.990	-0.012	1931340	6.607	0.003	7701511	18.0320	15.0323	18.1	gamma-Chlordane
6.114	-0.013	1850764	6.744	0.001	7225753	17.7528	15.3847	14.3	alpha-Chlordane
2.304	-0.008	1828460	2.466	-0.003	6593727	12.5798	11.5691	8.4	Hexachlorobutadiene
4.133	-0.007	1684690	4.587	0.001	8615601	15.9625	15.8843	0.5	Hexachlorobenzene
5.786	-0.001	22845	6.317	-0.015	25468	0.2714	0.0710	117.1*	Oxychlordane
5.825	-0.036	3807	6.546	-0.035	151704	0.0592	0.5852	163.2*	2,4-DDE
----			6.686	-0.005	26996	0.0000	0.0720	---	trans-Nonachlor
6.335	-0.013	40477	7.016	-0.049	20587	0.6984	0.1007	149.6*	2,4-DDD
6.573	-0.014	25685	----			0.3831	0.0000	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.600	-0.001	51667	8.535	-0.029	79542	0.7426	0.4208	55.3*	Mirex
8.908	-0.020	6251513	10.289	0.000	15200415	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.748	-0.010	608	1.738	0.012	174362	0.0000	0.0000	---	Hexachloroethane
6.537	-0.044	7438	7.291	-0.045	74150	0.0000	0.0000	---	Kepone
3.792	-0.007	2528421	4.128	0.000	12927769	28.1522	28.3859	0.8	Tetrachloro-m-xylen
8.757	-0.020	2316871	9.724	-0.001	7277951	29.4463	29.6202	0.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	70.4	71.0	70.4	52-100
Decachlorobiphenyl	73.6	74.1	73.6	54-100
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	79166.1	81921.9	79166.1~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	71034.4	71808.5	71034.4~	0- 0
Endrin ketone	0.0	0.0	0.0~	0- 0
Endrin aldehyde	0.0	0.0	0.0~	0- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

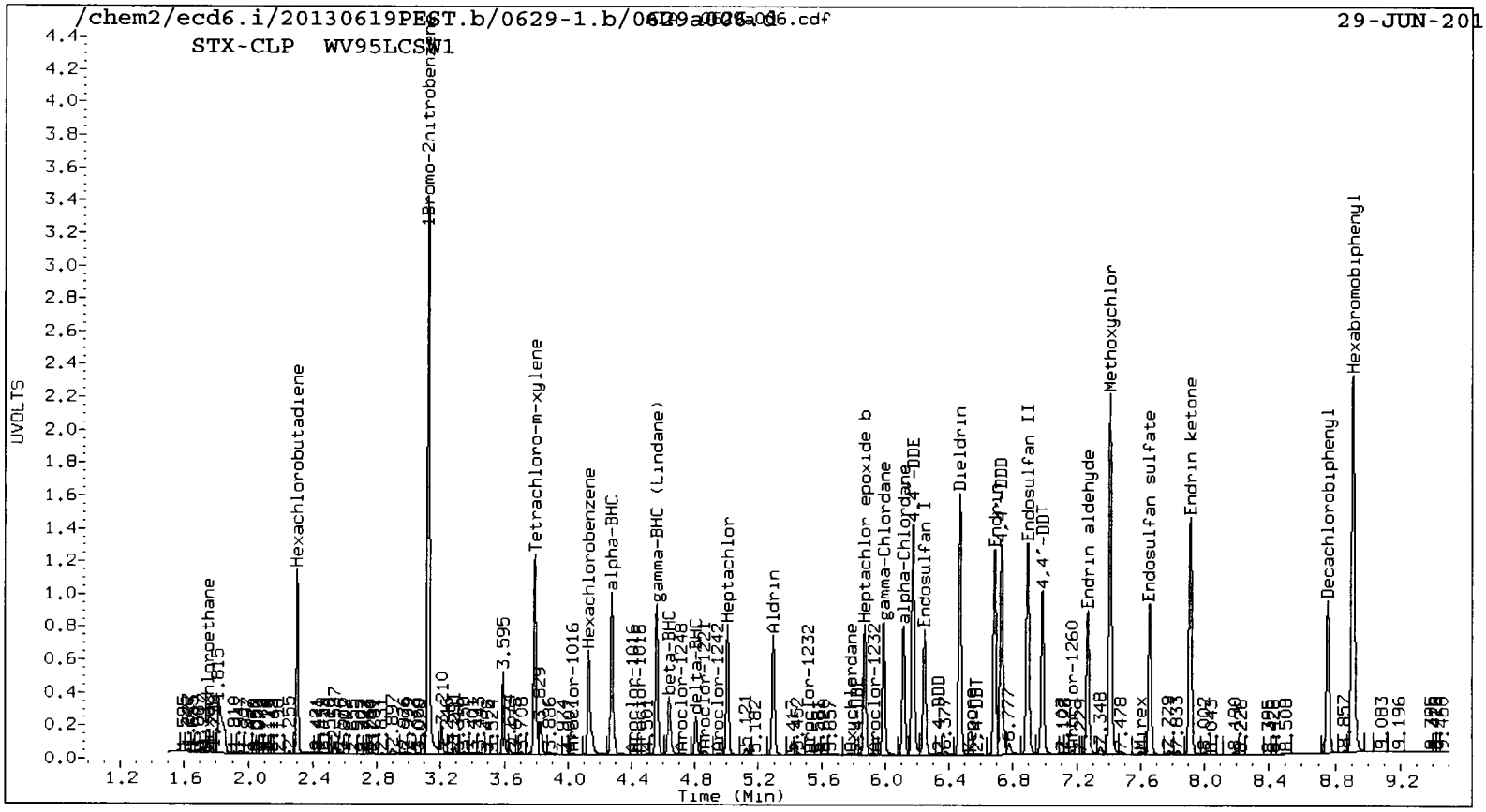
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6614428	18.3
Hexabromobiphenyl	4870538	6251513	28.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	27535124	-2.8
Hexabromobiphenyl	16454599	15200415	-7.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.985	0.027	2519378	627.9	1	7.291	0.000	74150	7.0
Toxaphene	2	---			0.000	2	7.629	0.014	574781	36.6
Toxaphene	3	7.269	0.002	2149152	470.5	3	7.844	-0.002	7796686	452.9
Toxaphene	4	7.600	0.007	51667	11.1	4	8.278	-0.035	15242785	1228.3
Toxaphene	5	7.658	0.026	2262200	732.2	5	8.378	0.025	83819	5.3
Toxaphene	6	7.913	-0.001	3572522	1362.1	NS	---			----
Total STX-CLPAve (5 peaks): 640.765						Total CLP2Ave (5 peaks): 346.015				RPD = 60*
Corrected Ave (4 peaks): 460.427						Corrected Ave (4 peaks): 125.442				RPD = 114*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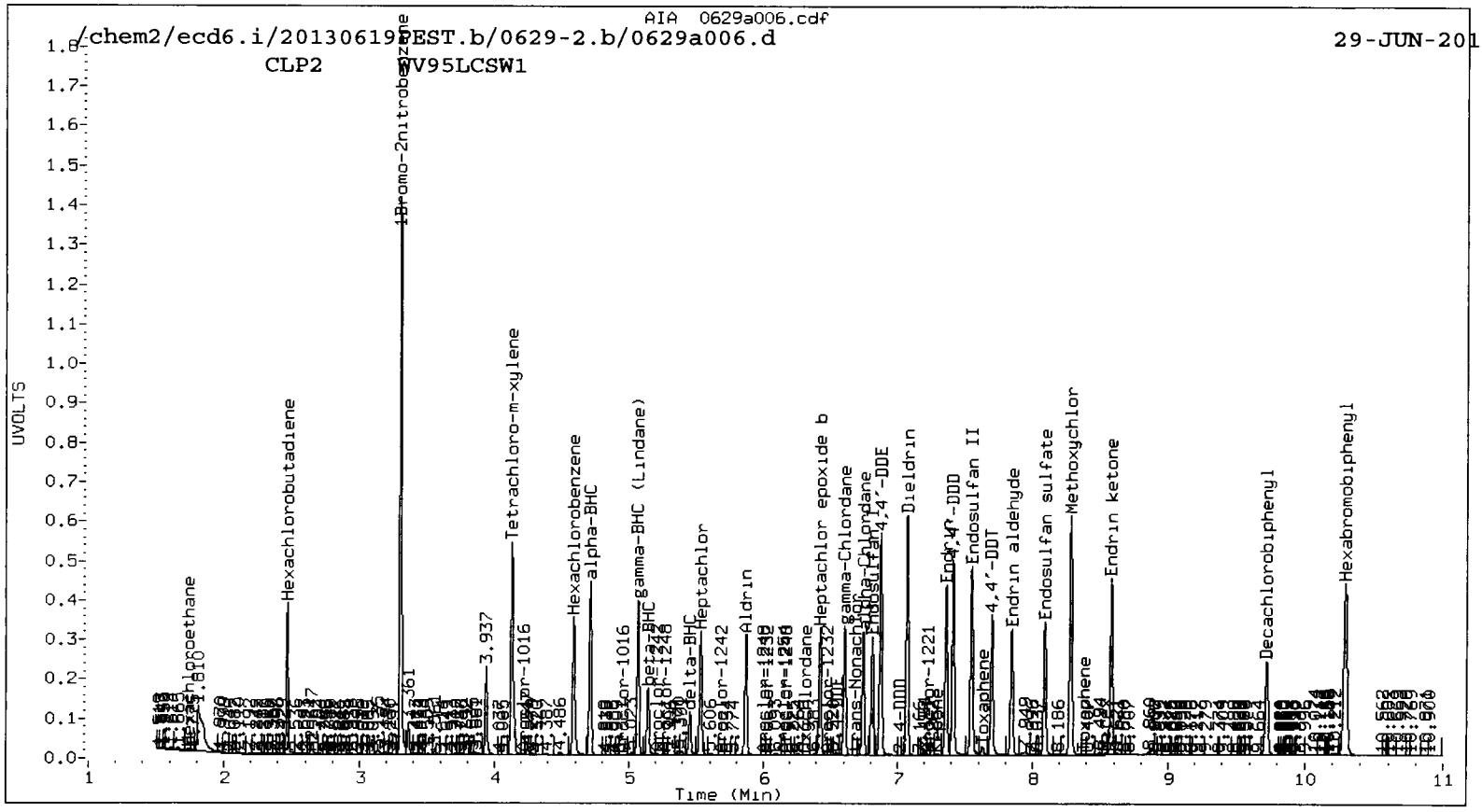
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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29-JUN-201
CLP2 WV95LCSW1
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
trans-Nonachlor
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
Toxaphene
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 6/29/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0629-1.b/0629a007.d ARI ID: WV95LCSDW1
Data file 2: /chem2/ecd6.i/20130619PEST.b/0629-2.b/0629a007.d Client ID: WV95LCSDW1
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 29-JUN-2013 11:13
Compound Sublist: wpest Report Date: 06/29/2013 13:13
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.124	-0.007	6798637	3.300	0.001	28712214	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.278	-0.009	2169029	4.710	0.000	9829050	15.9079	14.3287	10.4	alpha-BHC
4.637	-0.007	918061	5.142	0.003	4124162	16.6919	13.8780	18.4	beta-BHC
4.806	-0.007	566759	5.452	0.002	2591616	4.8006	4.3830	9.1	delta-BHC
4.559	-0.009	2047313	5.067	0.001	9075880	16.4679	14.9631	9.6	gamma-BHC (Lindane)
5.004	-0.010	1735862	5.531	0.001	7529965	14.5501	12.7987	12.8	Heptachlor
5.296	-0.011	1738326	5.868	0.001	7297482	15.0378	13.1018	13.8	Aldrin
5.870	-0.013	1964149	6.423	0.001	7910389	18.3278	15.5831	16.2	Heptachlor epoxide b
6.246	-0.013	1924936	6.810	0.001	7418834	19.2167	16.2640	16.6	Endosulfan I
6.468	-0.014	3994197	7.068	0.000	15175473	37.7361	32.9644	13.5	Dieldrin
6.173	-0.011	3596777	6.871	0.001	14209469	44.6653	30.6608	37.2	4,4'-DDE
6.686	-0.015	3103159	7.357	0.001	10783949	31.5248	32.8859	4.2	Endrin
6.893	-0.013	3401504	7.546	0.001	12603408	34.8085	36.6884	5.3	Endosulfan II
6.728	-0.012	3295076	7.409	0.002	12516868	35.0549	35.4567	1.1	4,4'-DDD
7.658	-0.016	2378143	8.088	0.001	8827622	27.5618	30.1838	9.1	Endosulfan sulfate
6.984	-0.014	2639854	7.696	0.002	9134275	28.4946	29.2023	2.5	4,4'-DDT
7.409	-0.015	5692791	8.278	-0.004	16039429	129.8331	137.7851	5.9	Methoxychlor
7.912	-0.017	3741794	8.578	0.000	11484784	34.9237	39.2918	11.8	Endrin ketone
7.268	-0.015	2327616	7.843	0.001	8497959	30.1356	32.2231	6.7	Endrin aldehyde
5.990	-0.012	1958592	6.606	0.002	7973545	17.7910	14.9252	17.5	gamma-Chlordane
6.113	-0.013	1899710	6.743	0.001	7490079	17.7285	15.2937	14.7	alpha-Chlordane
2.304	-0.007	1829863	2.467	-0.003	6699153	12.2483	11.2722	8.3	Hexachlorobutadiene
4.133	-0.007	1648519	4.588	0.001	8504220	15.1966	15.0362	1.1	Hexachlorobenzene
5.786	-0.001	23119	6.316	-0.016	24897	0.2628	0.0665	119.2*	Oxychlordane
5.825	-0.037	3963	6.545	-0.035	151647	0.0590	0.5610	161.9*	2,4-DDE
----			6.686	-0.004	25516	0.0000	0.0650	---	trans-Nonachlor
6.335	-0.013	41774	----			0.6898	0.0000	---	2,4-DDD
6.573	-0.015	25632	----			0.3659	0.0000	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.600	-0.001	50749	8.535	-0.029	110053	0.6981	0.5564	22.6	Mirex
8.907	-0.020	6531879	10.288	0.000	15902897	80.0000	80.0000	0.0	Hexabromobiphenyl
1.750	-0.008	725	1.738	0.012	189846	0.0000	0.0000	---	Hexachloroethane
----			7.291	-0.045	76673	0.0000	0.0000	---	Kepone
3.792	-0.007	2462466	4.128	0.000	12731135	26.6749	26.8082	0.5	Tetrachloro-m-xylen
8.757	-0.020	2142129	9.725	0.000	6850242	26.0568	26.6479	2.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	66.7	67.0	66.7	52-100
Decachlorobiphenyl	65.1	66.6	65.1	54-100
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	78812.1	82214.8	78812.1~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	71236.4	73005.6	71236.4~	0- 0
Endrin ketone	0.0	0.0	0.0~	0- 0
Endrin aldehyde	0.0	0.0	0.0~	0- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

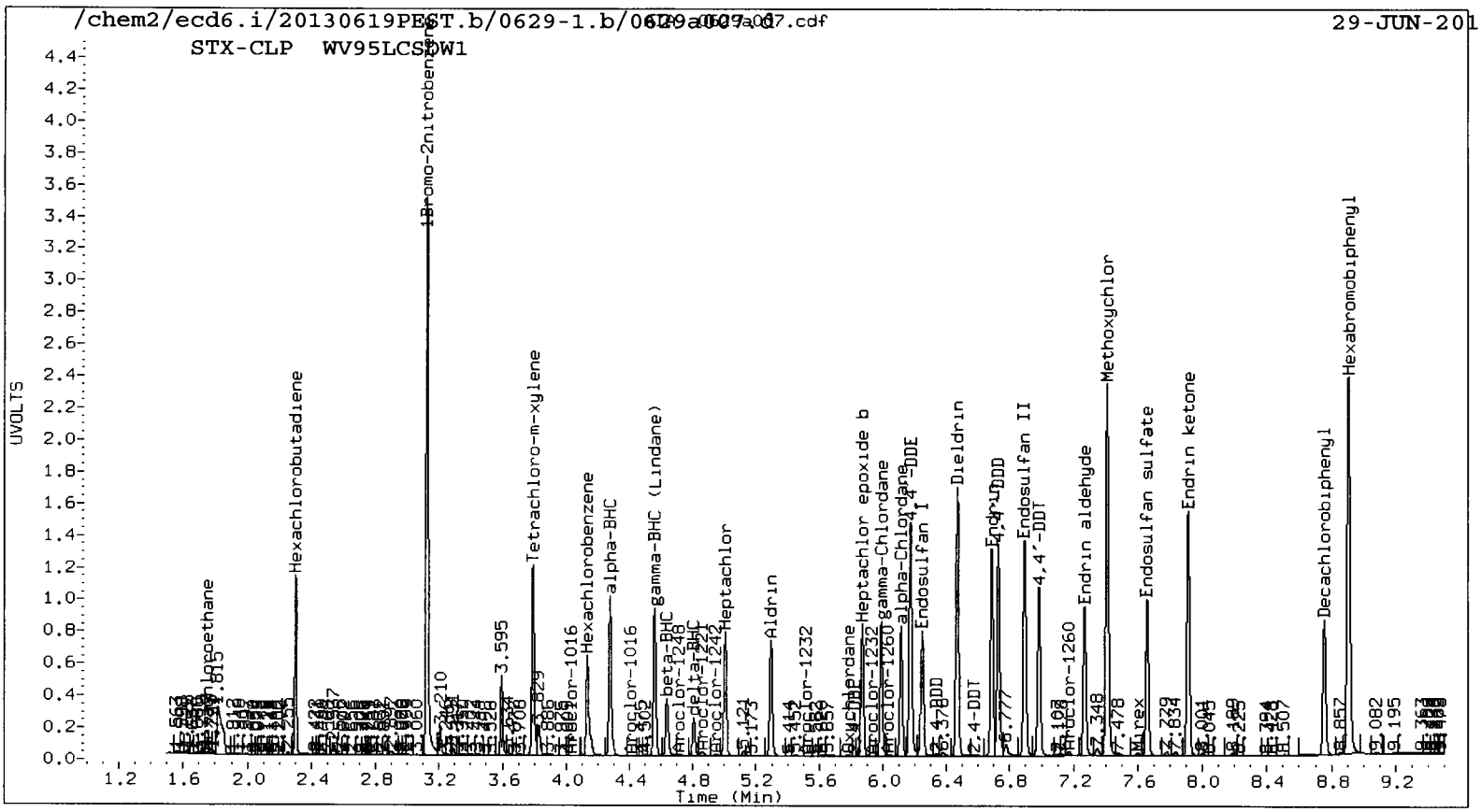
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6798637	21.6
Hexabromobiphenyl	4870538	6531879	34.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28712214	1.4
Hexabromobiphenyl	16454599	15902897	-3.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.984	0.026	2639854	629.7	1	7.291	0.000	76673	6.9
Toxaphene	2	---			0.000	2	7.629	0.014	599718	36.5
Toxaphene	3	7.268	0.001	2327616	487.7	3	7.843	-0.003	8497959	471.8
Toxaphene	4	7.600	0.007	50749	10.4	4	8.278	-0.036	16039429	1235.4
Toxaphene	5	7.658	0.026	2378143	736.7	5	8.378	0.025	89465	5.4
Toxaphene	6	7.912	-0.001	3741794	1365.4	NS	---			----
Total STX-CLPAve (5 peaks): 645.987						Total CLP2Ave (5 peaks): 351.207				RPD = 59*
Corrected Ave (4 peaks): 466.128						Corrected Ave (4 peaks): 130.156				RPD = 113*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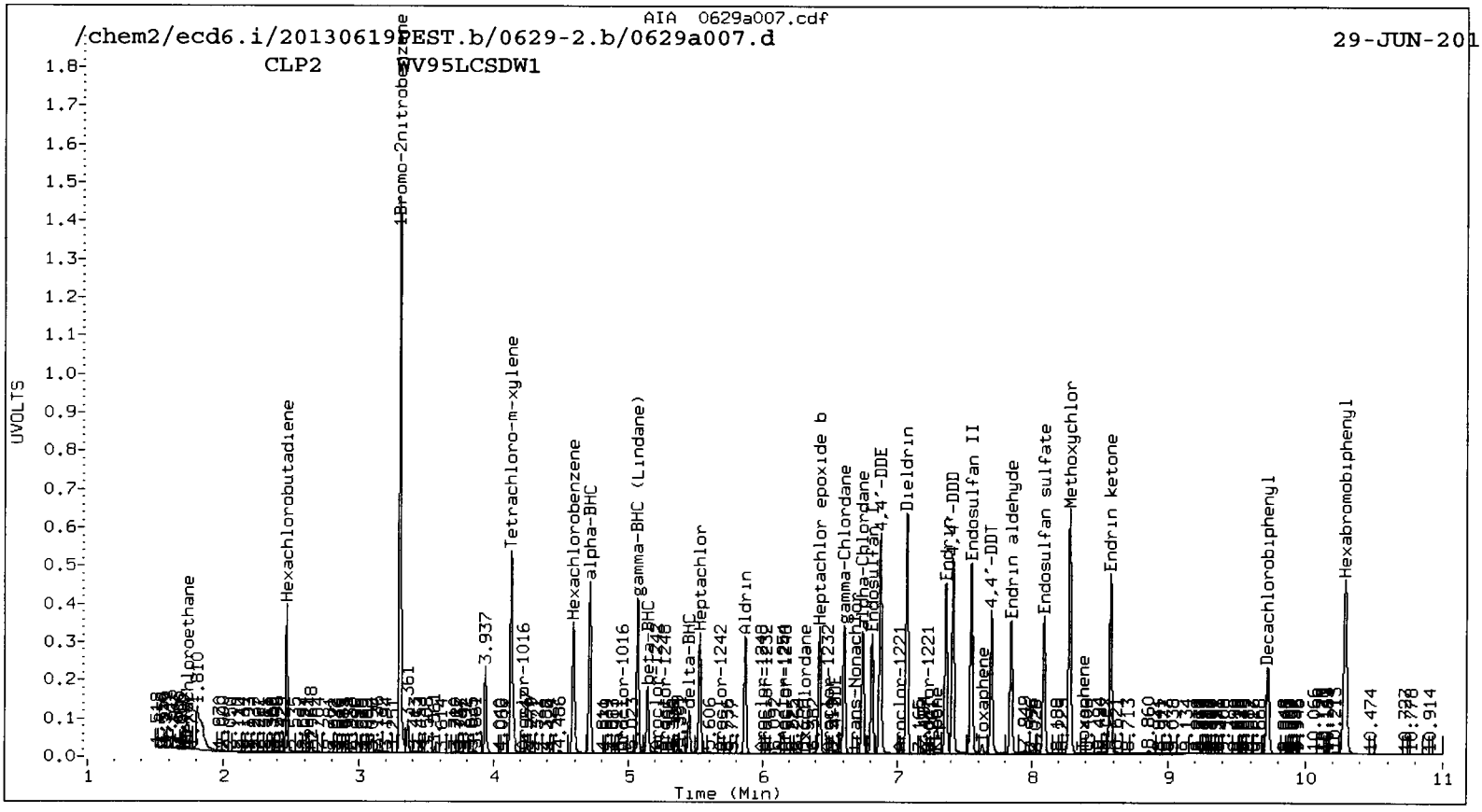
29-JUN-201
STX-CLP WV95LCSDW1
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
4,4'-DDD
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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29-JUN-201
CLP2 WV95LCSDW1
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
4,4'-DDE
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/0629-1.b/0629a008.d ARI ID: WV95A
Data file 2: /chem2/ecd6.i/20130619PEST.b/0629-2.b/0629a008.d Client ID: UP-CB-B8-20130626-W
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 29-JUN-2013 11:30
Compound Sublist: wpest Report Date: 06/29/2013 13:13
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.123	-0.009	5955069	3.299	0.000	20722701	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.265	-0.021	115829	4.705	-0.006	607240	0.9698	1.2265	23.4	alpha-BHC
4.663	0.019	385852	5.121	-0.017	140941	8.0092	0.6571	169.7*	beta-BHC
4.818	0.004	66803	5.430	-0.020	317896	0.6460	0.7449	14.2	delta-BHC
4.559	-0.010	93037	5.061	-0.005	559254	0.8544	1.2775	39.7	gamma-BHC (Lindane)
5.003	-0.012	241758	5.529	-0.001	130249	2.3135	0.3067	153.2*	Heptachlor
5.296	-0.011	127550	5.853	-0.014	548928	1.2597	1.3655	8.1	Aldrin
5.875	-0.008	44455	6.410	-0.012	1318376	0.4736	3.5984	153.5*	Heptachlor epoxide b
6.241	-0.019	945230	6.816	0.007	4240572	10.7729	12.8806	17.8	Endosulfan I
6.470	-0.013	213593	7.104	0.037	154214	2.3038	0.4641	132.9*	Dieldrin
6.169	-0.015	126756	6.873	0.003	746543	1.7971	2.2319	21.6	4,4'-DDE
6.658	-0.043	58006	7.355	-0.001	250673	0.5552	1.1126	66.8*	Endrin
6.890	-0.016	50312	7.566	0.021	1747667	0.4851	7.4043	175.4*	Endosulfan II
6.721	-0.019	773783	7.406	-0.001	302448	7.7564	1.2469	144.6*	4,4'-DDD
7.672	-0.003	753446	8.084	-0.003	1642857	8.2277	8.1754	0.6	Endosulfan sulfate
6.985	-0.013	95077	7.666	-0.029	1281595	0.9670	5.9631	144.2*	4,4'-DDT
7.407	-0.018	210997	8.277	-0.005	537752	4.5341	6.7232	38.9	Methoxychlor
7.912	-0.018	110739	8.578	0.000	1124600	0.9739	5.5996	140.7*	Endrin ketone
7.269	-0.014	88253	7.810	-0.033	11406392	1.0766	62.9481	193.3*	Endrin aldehyde
5.983	-0.019	62937	6.607	0.003	306152	0.6527	0.7940	19.5	gamma-Chlordane
6.115	-0.011	29535	6.742	0.000	96128	0.3147	0.2720	14.6	alpha-Chlordane
2.303	-0.009	28754	2.460	-0.009	410286	0.2197	0.9565	125.3*	Hexachlorobutadiene
4.126	-0.013	254128	4.583	-0.004	215985	2.6745	0.5291	133.9*	Hexachlorobenzene
5.776	-0.011	49104	6.317	-0.015	1210424	0.5260	4.4817	158.0*	Oxychlordane
5.844	-0.017	11647	6.561	-0.019	190066	0.1633	0.9742	142.6*	2,4-DDE
----			6.697	0.007	511022	0.0000	1.8949	---	trans-Nonachlor
6.369	0.021	481370	7.065	0.000	713720	7.4898	4.8588	42.6*	2,4-DDD
6.584	-0.004	16182	----			0.2177	0.0000	---	2,4-DDT
----			7.451	0.036	251912	0.0000	0.8969	---	cis-Nonachlor
7.583	-0.018	384162	8.534	-0.030	566338	4.9793	4.1674	17.8	Mirex
8.905	-0.022	6932378	10.288	-0.001	10926838	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.752	-0.005	1819	1.737	0.011	539841	0.0000	0.0000	---	Hexachloroethane
6.559	-0.022	32879	7.314	-0.023	119291	0.0000	0.0000	---	Kepone
3.791	-0.008	2350863	4.127	-0.001	9182833	29.0734	26.7915	8.2	Tetrachloro-m-xylene
8.757	-0.021	2279220	9.724	-0.001	5680545	26.1227	32.1610	20.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	72.7	67.0	67.0	52-100
Decachlorobiphenyl	65.3	80.4	65.3	54-100

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

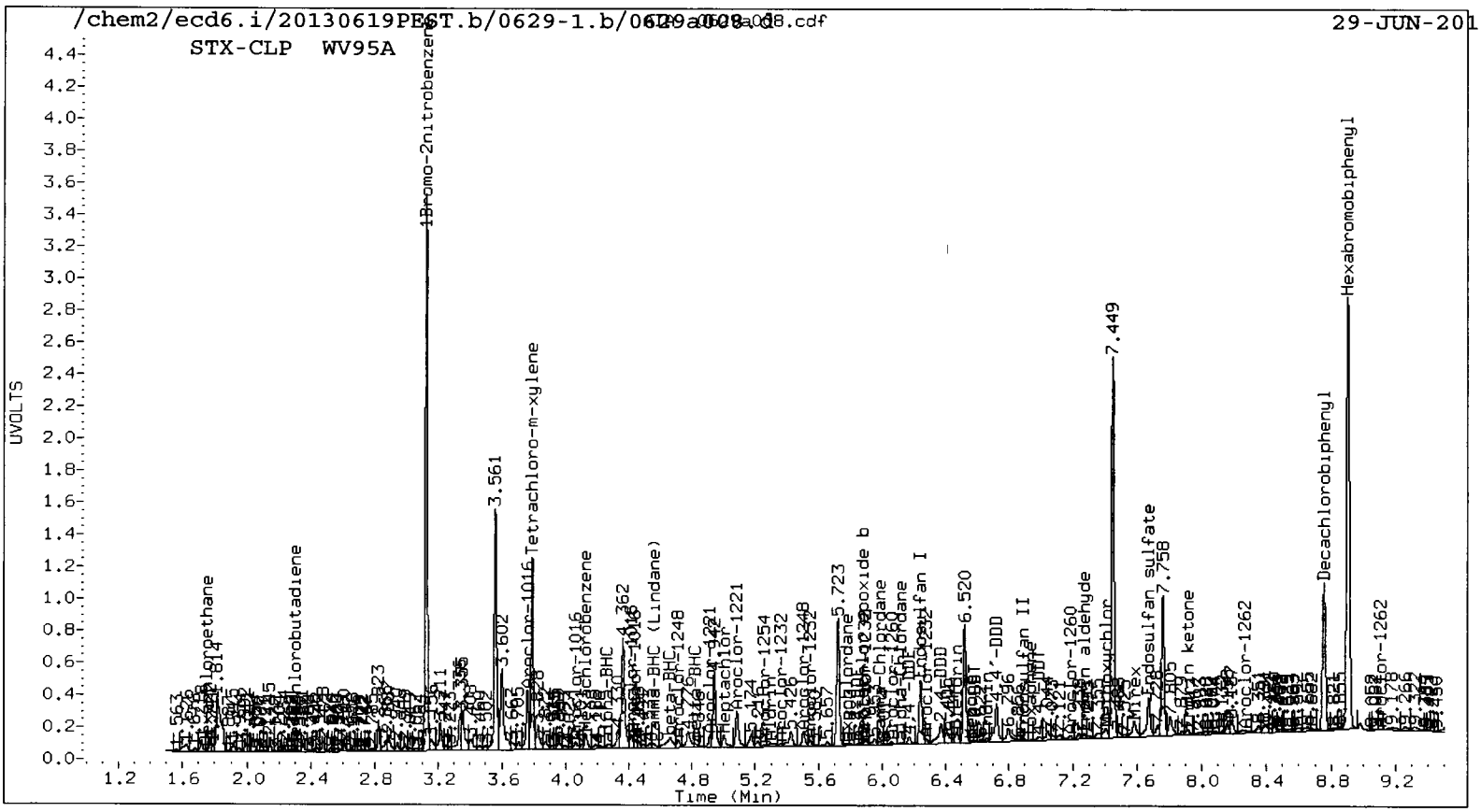
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5955069	6.5
Hexabromobiphenyl	4870538	6932378	42.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	20722701	-26.8
Hexabromobiphenyl	16454599	10926838	-33.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.938	-0.020	12518	2.8	1	7.278	-0.014	327706	42.9
Toxaphene	2	6.985	-0.025	95077	31.0	2	7.633	0.018	153221	13.6
Toxaphene	3	7.269	0.002	88253	17.4	3	7.810	-0.036	11406392	921.6
Toxaphene	4	7.583	-0.010	384162	74.5	4	8.344	0.030	134707	15.1
Toxaphene	5	7.672	0.040	753446	219.9	5	---			0.0
Toxaphene	6	7.912	-0.001	110739	38.1	NS	---			----
Total STX-CLPAve (6 peaks): 63.942						Total CLP2Ave (4 peaks): 248.294				RPD = 118*
Corrected Ave (5 peaks): 32.747						Corrected Ave (3 peaks): 23.851				RPD = 31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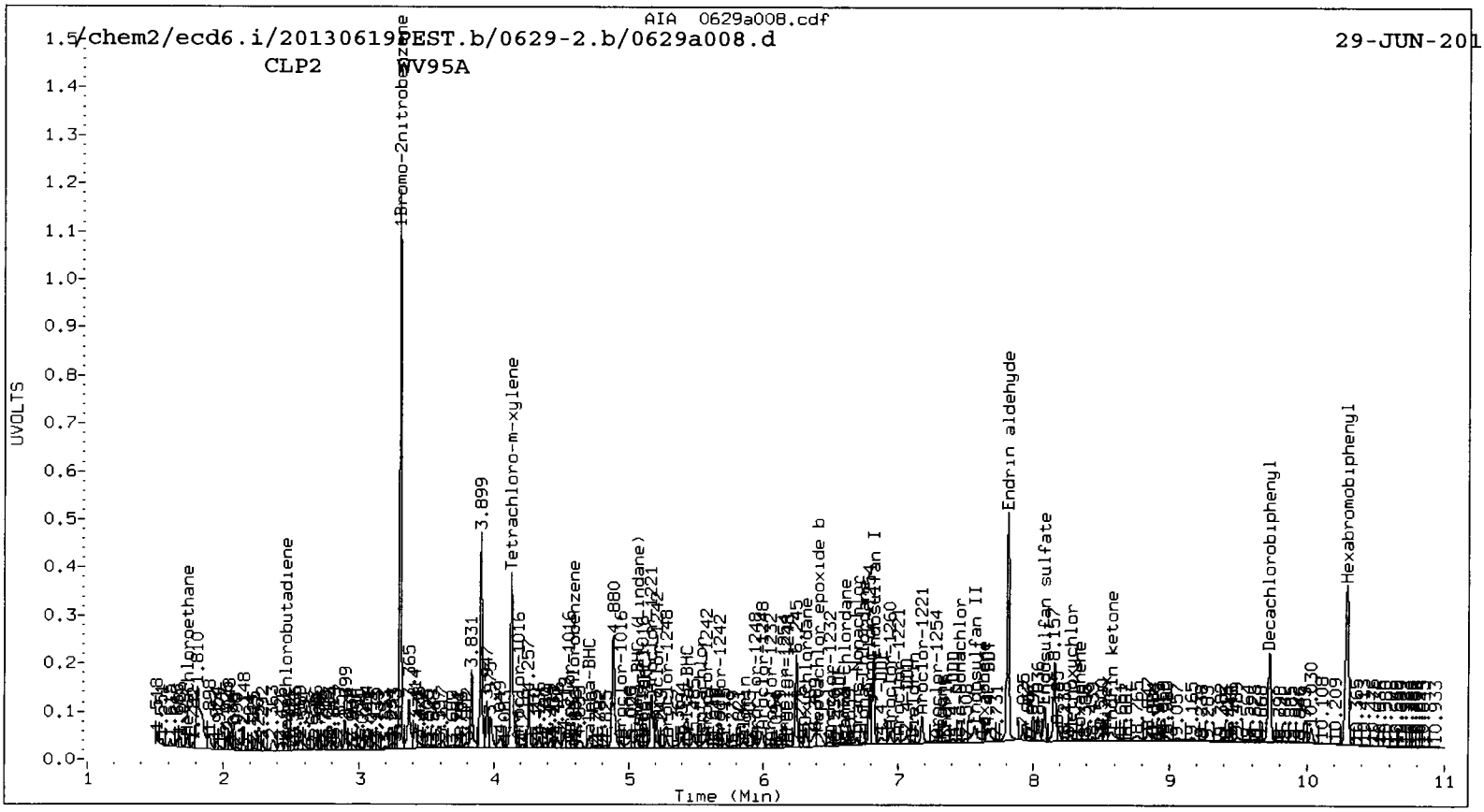
STX-CLP WV95A
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
3.561
Tetrachloro-m-xylene
7.449
Hexabromobiphenyl
Decachlorobiphenyl
7.758
Endosulfan sulfate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29-JUN-201
CLP2 WV95A
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
3.899
Tetrachloro-m-xylene
Endrin aldehyde
Hexabromobiphenyl
Decachlorobiphenyl
Endosulfan sulfate

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 6/29/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0629-1.b/0629a010.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130619PEST.b/0629-2.b/0629a010.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 29-JUN-2013 12:06
Compound Sublist: INDA Report Date: 06/29/2013 13:13
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.125	-0.007	7080712	3.301	0.001	29623128	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.278	-0.008	3184967	4.710	0.000	14092753	22.4283	19.9126	11.9	alpha-BHC
4.636	-0.008	1183604	5.141	0.003	5416649	20.6626	17.6668	15.6	beta-BHC
4.805	-0.008	2612306	5.452	0.002	11736473	21.2457	19.2388	9.9	delta-BHC
4.559	-0.009	2853176	5.066	0.000	12468144	22.0358	19.9238	10.1	gamma-BHC (Lindane)
5.004	-0.011	2700660	5.530	0.001	11473083	21.7353	18.9012	13.9	Heptachlor
5.296	-0.011	2746108	5.868	0.001	11159992	22.8095	19.4204	16.1	Aldrin
5.869	-0.013	2445386	6.423	0.001	9655091	21.9093	18.4352	17.2	Heptachlor epoxide b
6.246	-0.014	2244435	6.810	0.001	8687150	21.5136	18.4588	15.3	Endosulfan I
6.468	-0.015	4873673	7.067	0.000	17367876	44.2109	36.5667	18.9	Dieldrin
6.170	-0.014	3642742	6.870	0.000	17301684	43.4340	36.1851	18.2	4,4'-DDE
6.686	-0.015	4046303	7.357	0.000	13007612	37.4758	37.9934	1.4	Endrin
6.891	-0.014	3985902	7.546	0.001	14088411	37.1865	39.2809	5.5	Endosulfan II
6.727	-0.013	3898508	7.408	0.002	13862977	37.8117	37.6129	0.5	4,4'-DDD
7.658	-0.017	3436457	8.088	0.001	11804167	36.3099	38.6584	6.3	Endosulfan sulfate
6.984	-0.014	3760506	7.695	0.001	12405694	37.0061	37.9876	2.6	4,4'-DDT
7.409	-0.016	8260723	8.278	-0.004	21922326	171.7602	180.3758	4.9	Methoxychlor
7.912	-0.017	4401383	8.579	0.000	13198864	37.4519	43.2508	14.4	Endrin ketone
7.268	-0.016	3110993	7.843	0.000	10690639	36.7207	38.8271	5.6	Endrin aldehyde
5.989	-0.013	2535951	6.606	0.001	9925769	22.1178	18.0082	20.5	gamma-Chlordane
6.113	-0.013	2431233	6.743	0.001	9163306	21.7850	18.1349	18.3	alpha-Chlordane
2.305	-0.006	3347724	2.467	-0.002	11651770	21.5156	19.0027	12.4	Hexachlorobutadiene
4.133	-0.007	2356162	4.588	0.001	12050793	20.8546	20.6517	1.0	Hexachlorobenzene
8.907	-0.020	7164632	10.288	0.000	16603429	80.0000	80.0000	0.0	Hexabromobiphenyl
3.793	-0.006	4182808	4.128	0.000	20241909	43.5057	41.3130	5.2	Tetrachloro-m-xylen
8.756	-0.021	3545781	9.725	0.000	10746169	39.3216	40.0396	1.8	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	108.8	103.3	103.3~	115- 0
Decachlorobiphenyl	98.3	100.1	98.3~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

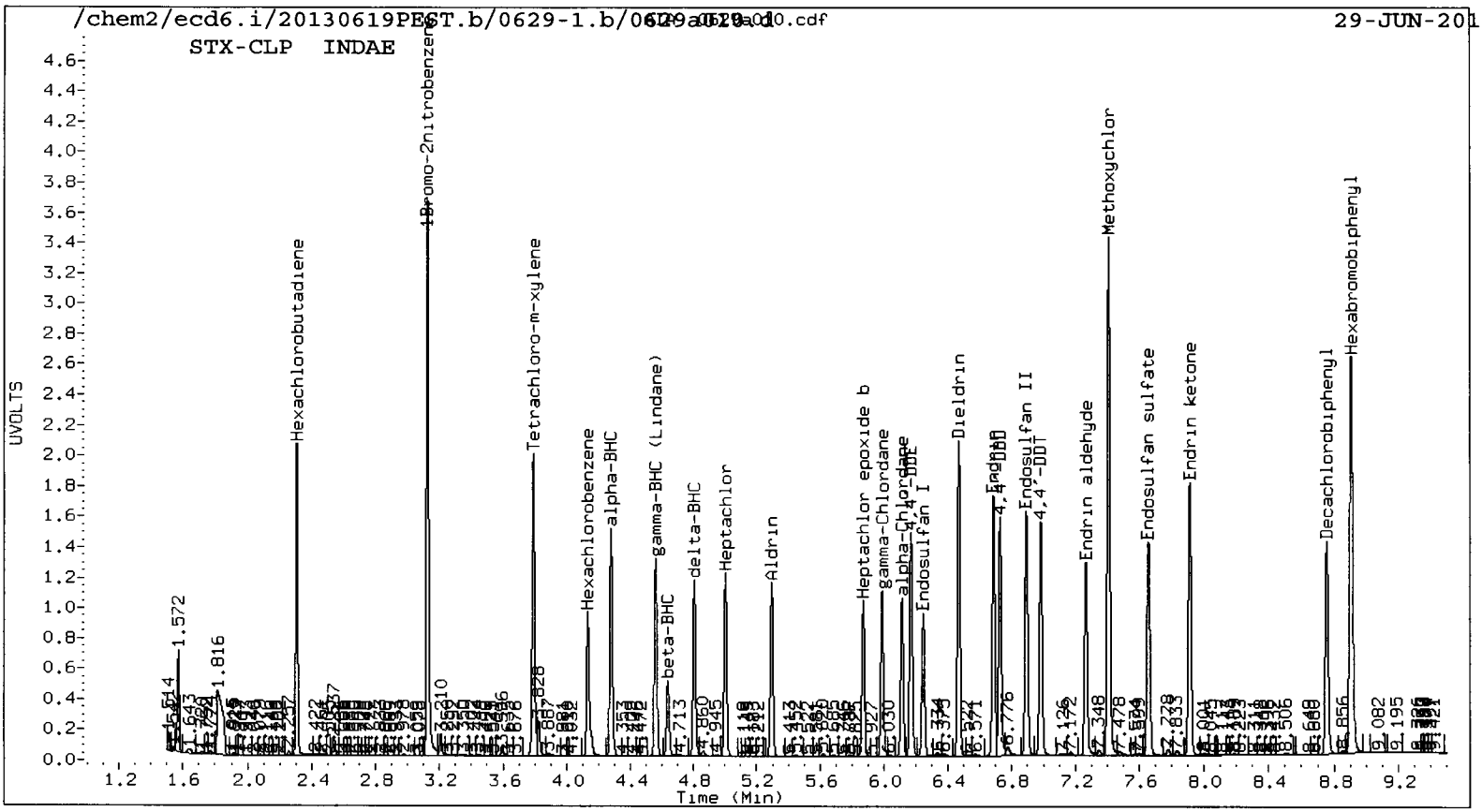
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	7080712	26.6
Hexabromobiphenyl	4870538	7164632	47.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29623128	4.6
Hexabromobiphenyl	16454599	16603429	0.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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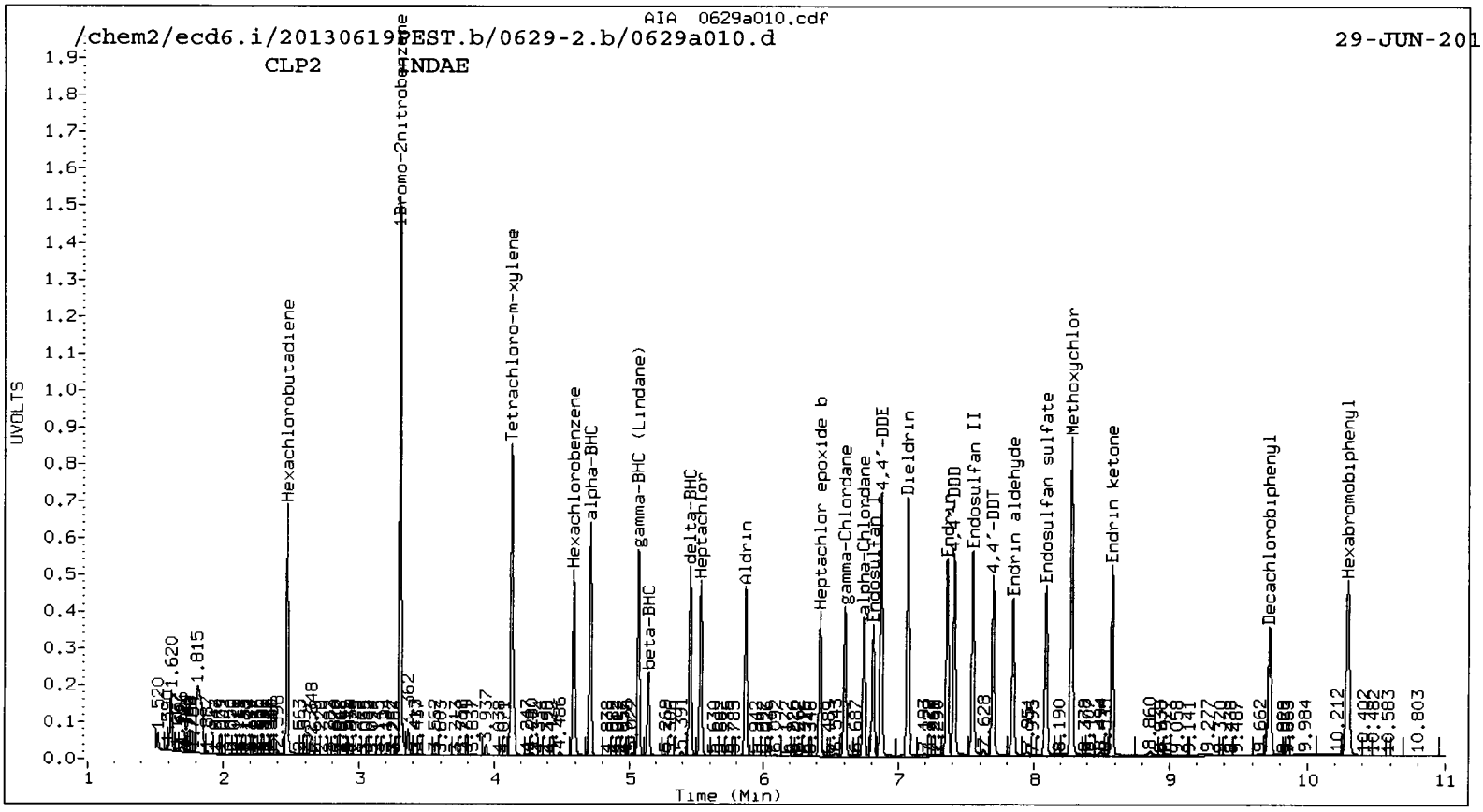
29-JUN-201
STX-CLP INDAE
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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/chem2/ecd6.i/20130619PEST.b/0629-2.b/0629a010.d
29-JUN-201
CLP2 INDAE
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 6/29/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0629-1.b/0629a011.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130619PEST.b/0629-2.b/0629a011.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 29-JUN-2013 12:24
Compound Sublist: TOXAPH Report Date: 06/29/2013 13:13
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.125	-0.007	6584336	3.301	0.002	27583287	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.907	-0.020	6948679	10.289	0.000	15424075	80.0000	80.0000	0.0	Hexabromobiphenyl
3.793	-0.006	2667661	4.129	0.001	13931285	29.8383	30.5360	2.3	Tetrachloro-m-xylen
8.757	-0.020	2705878	9.725	0.000	7828195	30.9399	31.3976	1.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	74.6	76.3	74.6~	150- 0
Decachlorobiphenyl	77.3	78.5	77.3~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

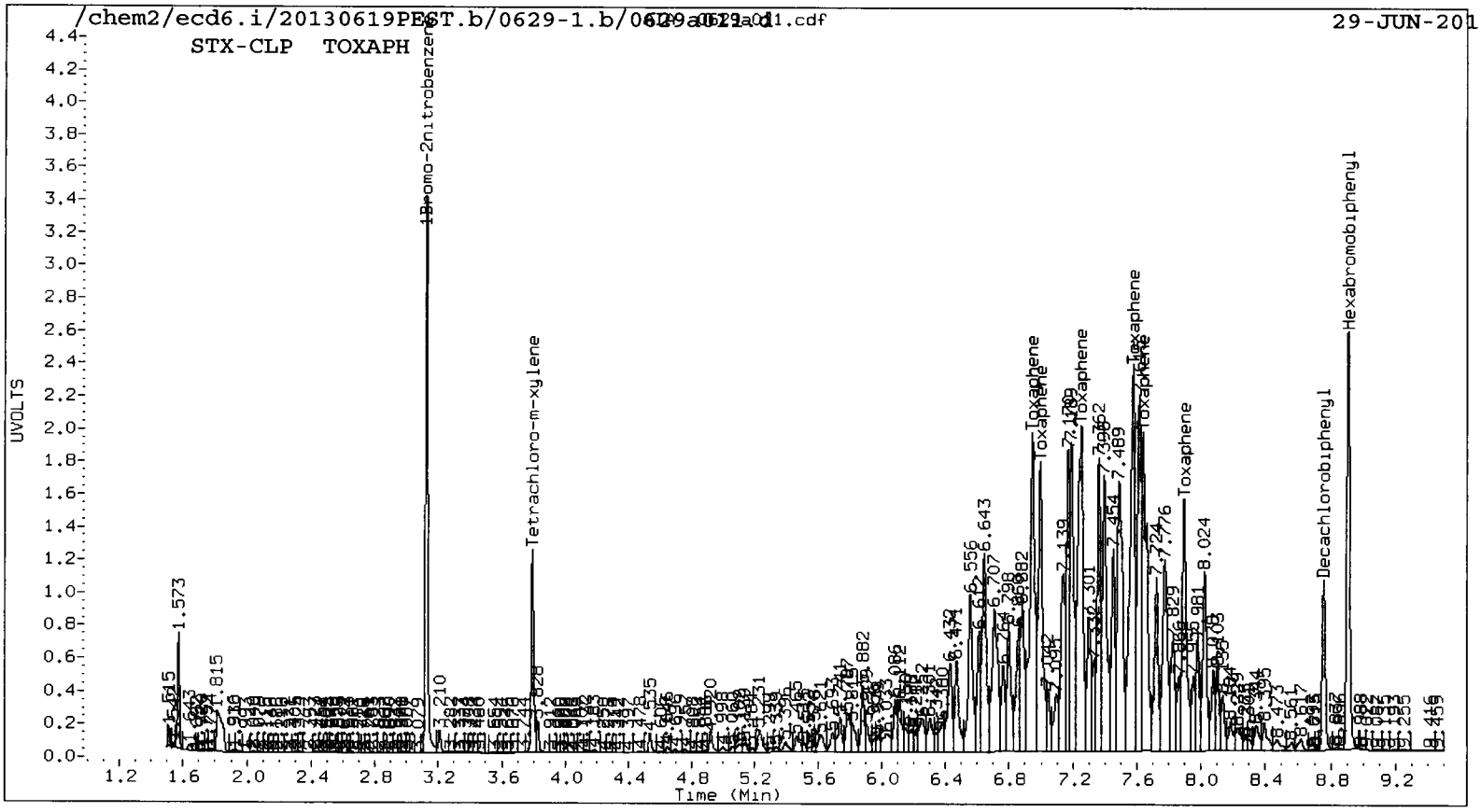
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6584336	17.8
Hexabromobiphenyl	4870538	6948679	42.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	27583287	-2.6
Hexabromobiphenyl	16454599	15424075	-6.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.944	-0.015	8606076	1929.7	1	7.293	0.001	22855675	2118.0
Toxaphene	2	6.995	-0.015	6426932	2088.4	2	7.617	0.002	33619245	2111.6
Toxaphene	3	7.252	-0.015	9605977	1892.0	3	7.847	0.001	36352403	2080.8
Toxaphene	4	7.576	-0.016	9731458	1881.7	4	8.315	0.001	25228679	2003.5
Toxaphene	5	7.637	0.005	8996567	2619.7	5	8.354	0.001	31969027	1996.4
Toxaphene	6	7.896	-0.017	5430869	1862.9	NS	---			----
Total STX-CLPAve (6 peaks): 2045.739						Total CLP2Ave (5 peaks): 2062.072				RPD = 1
Corrected Ave (6 peaks): 2045.739						Corrected Ave (5 peaks): 2062.072				RPD = 1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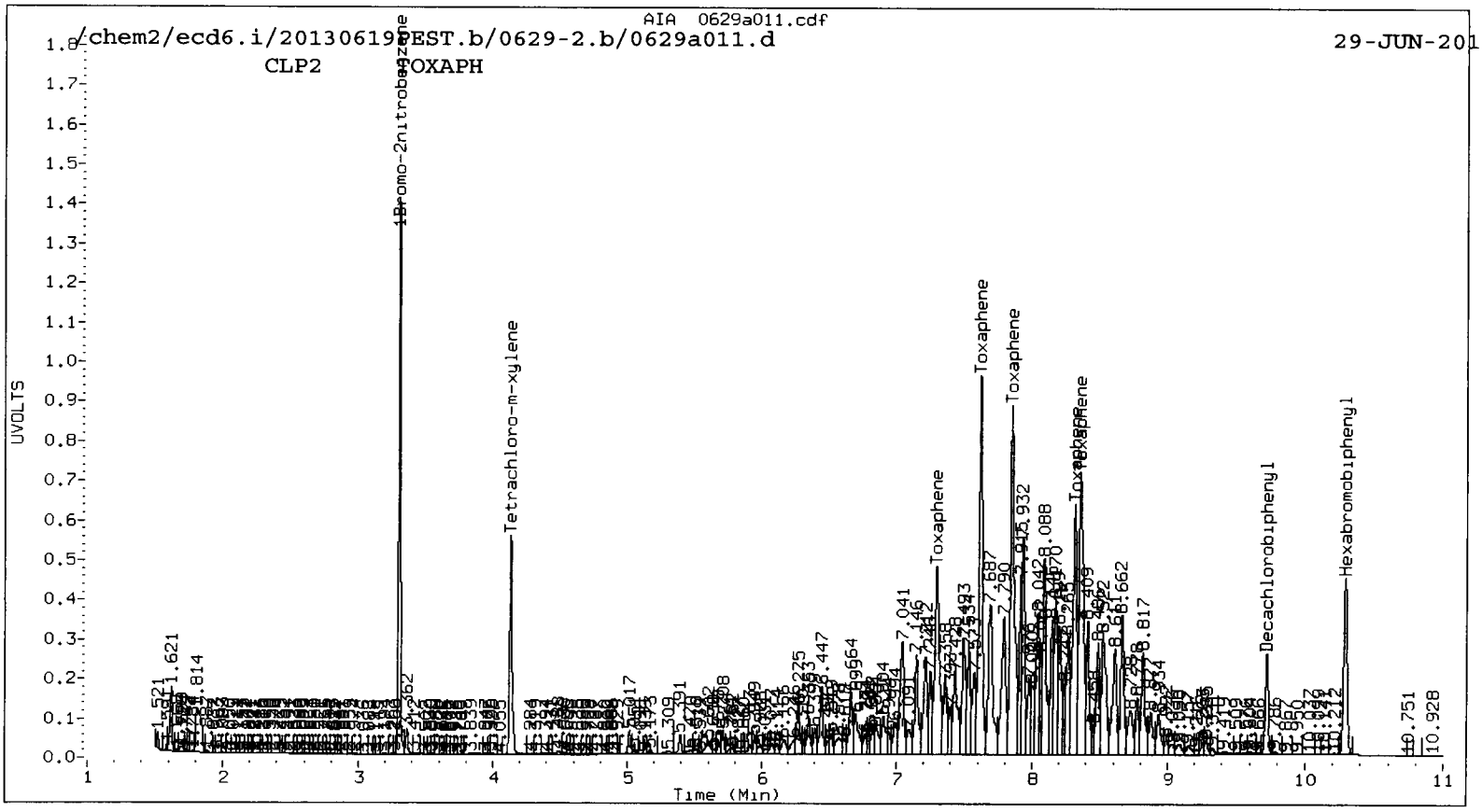
29-JUN-201
STX-CLP TOXAPH
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)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29-JUN-201
CLP2 TOXAPH
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)

Table of Contents: ARI Job WY32, WY33

Client: SAIC

Project: 209977 NPDES Sampling Support

	Page From:	Page To:
Inventory Sheet		
Cover Letter	1	1
Chain of Custody Documentation	2	9
Case Narrative, Data Qualifiers, Control Limits	10	32
Semivolatile Analysis		
Report and Summary QC Forms	33	72
SIM Semivolatile Analysis		
Report and Summary QC Forms	73	90
Dioxin Analysis		
Report and Summary QC Forms	91	108
Pesticide Analysis		
Report and Summary QC Forms	109	139
PCB Analysis		
Report and Summary QC Forms	140	166
TPHD Analysis		
Report and Summary QC Forms	167	183
Metals Analysis		
Report and Summary QC Forms	184	220
Mercury Analysis		
Report and Summary QC Forms	221	232
General Chemistry Analysis		
Report and Summary QC Forms	233	246
Geotechnical Analysis		
Report and Summary QC Forms	247	252
Total Solids		
Report and Summary QC Forms	253	258

BC
Signature

August-05-2013
Date

Table of Contents: ARI Job WY32, WY33

Client: SAIC

Project: 209977 NPDES Sampling Support

	Page From:	Page To:
Semivolatile Raw Data		
Extractions Bench Sheets and Notes	259	262
Initial Calibration	263	376
Run Logs, Continuing Calibrations, and Raw Data	377	667
SIM Semivolatile Raw Data		
Extractions Bench Sheets and Notes	608	609
Initial Calibration	610	679
Run Logs, Continuing Calibrations, and Raw Data	680	777
Dioxin Raw Data		
Extractions Bench Sheets and Notes	778	780
Initial Calibration	781	894
Run Logs, Continuing Calibrations, and Raw Data	895	1035
Pesticide Raw Data		
Extractions Bench Sheets and Notes	1036	1039
Initial Calibration	1040	1118
Run Logs, Continuing Calibrations, and Raw Data	1119	1154
PCB Raw Data		
Extractions Bench Sheets and Notes	1155	1159
Initial Calibration	1160	1268
Run Logs, Continuing Calibrations, and Raw Data	1269	1321
TPHD Raw Data		
Extractions Bench Sheets and Notes	1322	1326
Initial Calibration	1327	1399
Run Logs, Continuing Calibrations, and Raw Data	1400	1439
Metals Raw Data		
Preparation Bench Sheets and Notes	1440	1450
Run Logs, Calibrations, and Raw Data	1451	1582

DC

Signature

August-05-2013

Date

Table of Contents: ARI Job WY32, WY33

Client: SAIC

Project: 209977 NPDES Sampling Support

	Page From:	Page To:
Mercury Raw Data		
Preparation Bench Sheets and Notes	1583	1585
Run Logs, Continuing Calibrations, and Raw Data	1586	1594
General Chemistry Raw Data		
Analyst Notes and Raw Data	1595	1655
Geotechnical Raw Data		
Analyst Notes and Raw Data	1656	1674

Signature

August-05-2013
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

August 16, 2013

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

RE: Project: NPDES Sampling Support, 209977
ARI Job Nos.: WY32 & WY33

Dear Christine:

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

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

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

Sincerely,

ANALYTICAL RESOURCES, INC.

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

cc: eFile WY32_WY33

Enclosures

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

Chain of Custody Documentation

ARI Job ID: WY32, WY33

Subject: RE: WV67 Re-logs
From: "Mitchell, Marina I." <MARINA.I.MITCHELL@saic.com>
Date: 7/23/2013 12:11 PM
To: "Cheronne Oreiro" <cheronneo@arilabs.com>
CC: "Nancarrow, Christine F." <CHRISTINE.F.NANCARROW@saic.com>

Yes, Cheronne. Please analyze these samples for the analyses listed below. Will we be able to meet all of the holding times?

Thank you,
Marina

Marina I. Mitchell | SAIC
Senior Environmental Chemist
Engineering Solutions
office: 425.482.3310 | mobile: 425.443.1399
email: marina.i.mitchell@saic.com

-----Original Message-----
From: Cheronne Oreiro [mailto:cheronneo@arilabs.com]
Sent: Tuesday, July 23, 2013 10:24 AM
To: Nancarrow, Christine F.
Cc: Mitchell, Marina I.
Subject: WV67 Re-logs

Christine,

I know there were some phone calls yesterday regarding samples initially logged under ARI job WV67.

Please confirm that these analyses are required for the following samples. We will not be able to start analyses until we have email confirmation.

UP-CB-B8-20130626-S - PCBs, SVOCs, Pesticides, Dioxins, TPHD, Metals, Mercury, TOC, TS, Grain Size UP-MHF-165-20130626-S - PCBs, SVOCs, Pesticides, TPHD, Metals, Mercury, TOC, TS, Grain Size UP-CB-A6-20130626-S - PCBs, SVOCs, Pesticides, TPHD, Metals, Mercury, TOC, TS, Grain Size

UP-CB-B8-20130626-W - Metals, Mercury (total and dissolved), Conductivity, TOC, and DOC.

Thank you,
-Cheronne

--
I will be out of the office Friday (7/26/13).

Cheronne Oreiro
Project Manager
Analytical Resources, Inc.
4611 S. 134th Place, Suite 100
Tukwila, WA 98168-3240
cheronneo@arilabs.com

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: WW67	Turn-around Requested: 2 day TAT	Date: C-26-13	
ARI Client Company: SAIC	Phone: 206.300.2144 nancarrowc@saic.com	Page: 1 of 1	
Client Contact: Christine Nancarrow		No. of Coolers: 2	Cooler Temps: 17.6, 8.3
Client Project Name: NPDES Sampling Support			
Client Project #: 209977	Samplers: CW CN		

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

Sample ID	Date	Time	Matrix	No. Containers	PCB Aroclors (EPA 8082)	SVOCs/PAHs (EPA 8270 / EPA 8270-SIM)	Pesticides (EPA 8081)	Dioxins/Furans (EPA 1613B)	TPH-Diesel (NWTPH-DW)	VOCs (EPA8260)	Metals (EPA 6010/200.8)	Mercury (EPA 7471)	TOC (Plumb 1981)	Total Solids (SM2540B)	Particle Size Distribution (Sedigraph)	NWTPH-Gas (NWTPH-Gx)	Notes/Comments
UP-CB-BR-20130626-S	6-26-13	1133	Sediment	12	✓	✓	✓	✓+	✓	✓	✓+	✓+	✓	✓	✓+	✓	+HOLD
UP-MAF-165-20130626-S	6-26-13	1409	Sediment	11	✓	✓	✓	CW to add ✓	✓	✓	✓+	✓+	✓	✓	✓+	✓	Do not analyze for Dioxin/Furan
UP-CB-A6-20130626-S	6-26-13	1547	Sediment	11	✓	✓	✓		✓	✓	✓+	✓+	✓	✓	✓+	✓	
										CW							

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Due to pending state shutdown please expedite samples on a 2-d TAT EXCEPT those noted on hold per the '+'.	Printed Name: Corey Wilson	Printed Name: Jennifer Mitsop	Printed Name:	Printed Name:
	Company: SAIC	Company: ARI	Company:	Company:
	Date & Time: 6-26-13 1732	Date & Time: 6/26/13 1732	Date & Time:	Date & Time:

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

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

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: 2 day TAT	Date: 6-26-13
ARI Client Company: SAIC	Phone: 206.300.2144 nancarrowc@saic.com	Page: 1 of 1
Client Contact: Christine Nancarrow		No. of Coolers: 2 Cooler Temps: 17.6, 8.3
Client Project Name: NPDES Sampling Support		
Client Project #: 209977	Samplers: CW CN	

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

Sample ID	Date	Time	Matrix	No. Containers	SVOCs/PAHs (EPA 8270/8270 SIM)	Pesticides (EPA 8081)	Total Metals (EPA 200.8)	Mercury (EPA 7470)	Dissolved Metals (EPA 200.8)	pH (SM4500H)	Specific Conductance (EPA 120.1)	Anions (EPA 300.0/353.2)	Alkalinity (SM2320)	TOC (SM5310)	DOC (SM5310)	TSS (SM2540D)	Notes/Comments: TPH (NWTPH-Gx)	Notes/Comments: VOCs (EPA 8260)	Notes/Comments: +'= HOLD
UP-CB-BS-20130626-W	6-26-13	1054	Water	12	✓	✓	✓+	✓+	✓+	✓	✓+	✓	✓	✓+	✓+	✓			+
UP-TB-01-20130626-W	6-26-13	1200	Water	2													✓	✓	

Comments/Special Instructions	Relinquished by: (Signature) / Printed Name / Company / Date & Time	Received by: (Signature) / Printed Name / Company / Date & Time	Relinquished by: (Signature) / Printed Name / Company / Date & Time	Received by: (Signature) / Printed Name / Company / Date & Time
Do not dispose of samples without prior written authorization from SAIC PM. Please expedite samples on a 2 day TAT EXCEPT those noted on HOLD per the '+'.	Corey Wilson / SAIC / 6-26-13 1732	Jennifer Millsap / ARI / 6/26/13 1732		

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

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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client. SAIC

Project Name: NPDES Sampling Support

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier (Hand Delivered) Other: _____

Assigned ARI Job No: WV67

Tracking No: _____ NA

Preliminary Examination Phase:

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

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

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

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 17.6 8.3 ___ ___

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877952

Cooler Accepted by: JM Date: 6/26/13 Time: 1737

Complete custody forms and attach all shipping documents

Log-In Phase:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

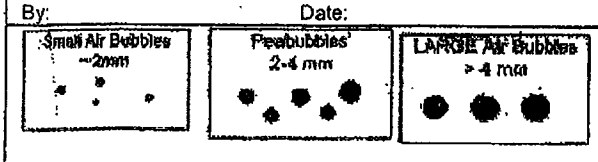
Samples Logged by: JM Date: 6/26/13 Time: 1740

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

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

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm"

Peabubbles → "pb"

Large → "lg"

Headspace → "hs"

PRESERVATION VERIFICATION 07/22/13
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **WY32**

Inquiry Number: NONE
Analysis Requested: 07/22/13
Contact: Nancarrow, Christine
Client: SAIC
Logged by: AV
Sample Set Used: Yes-491
Validatable Package: Lv4
Deliverables:

PC: Cheronne
VTSR: 06/26/13

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

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	TPHD <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
13-15396 **WY32D**	UP-CB-B8-20130626-W						TOT pass					pass					Y					
13-15397 **WY32E**	UP-CB-B8-20130626-W						DIS pass									Y						

labs filtered and preserved metals (Diss) and DOC already Preserved TOC

DOC - Pass

Checked By AV Date 7/22/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client SAIC

Project Name NPDES Sampling Support

COC No(s) _____ (NA)

Delivered by Fed-Ex UPS Courier (Hand Delivered) Other _____

Assigned ARI Job No WV67

Tracking No _____ NA

Preliminary Examination Phase.

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6 0 °C for chemistry) 17.6 8.3 ___ ___

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID# 90877952

Cooler Accepted by JM Date 6/26/13 Time 1737

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other:			
Was sufficient ice used (if appropriate)?	NA	YES	(NO)
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	NA	(YES)	NO
Were all VOC vials free of air bubbles?	NA	(YES)	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	NA	4/15/13	

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

Samples Logged by: JM Date 6/26/13 Time 1740

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

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

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm	Small → "sm"
			Peabubbles → "pb"
			Large → "lg"
			Headspace → "hs"

WV67

PRESERVATION VERIFICATION 07/22/13
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **WY33**

Inquiry Number: NONE
Analysis Requested: 07/22/13
Contact: Nancarrow, Christine
Client: SAIC
Logged by: AV
Sample Set Used: Yes-491
Validatable Package: Lv4
Deliverables:

PC: Cheronne
VTSR: 06/26/13

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

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	TPHD <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
13-15398 **WY33A**	UP-CB-B8-20130626-W						TOT pass															
13-15399 **WY33B**	UP-CB-B8-20130626-W						DIS pass									Y						

lab filtered and preserved Diss. metals 6/27/13

Checked By AV Date 7/22/13

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: WY32, WY33

Case Narrative

Client: SAIC
Project: NPDES Sampling Support, 209977
ARI Job Nos.: WY32 & WY33

Sample Receipt

Three sediment samples and two water samples were received on samples were received June 26, 2013 under ARI job WV67. Select sample containers were archived upon receipt. These containers were removed from archive on July 22, 2013 and July 23, 2013 and logged under ARI jobs WY32 and WY33. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Semivolatiles by SW8270D

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

Initial calibrations were within method requirements.

The continuing calibration (CCAL) on 8/2/13 was outside the 20% control limit high for Carbazole, and fell out low for Benzoic Acid, 2,4-Dinitrophenol, and 4,6-Dinitro-2-methylphenol. All detected results associated with this CCAL have been flagged with a "Q" qualifier. No further corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

Phenol was present in **MB-072513** at a level that was greater than ½ the reporting limit. All detected results for this compound have been flagged with a "B" qualifier. No further corrective action was taken.

The LCS percent recoveries of 4-Chloroaniline, Carbazole, 3,3'-Dichlorobenzidine, and Aniline were outside control limits for **LCS-072513**. All other percent recoveries were within control limits. No corrective action was taken.

Several matrix spike and matrix spike duplicate percent recoveries were outside advisory control limits with wide RPDs for sample **UP-CB-B8-20130626-S**. No corrective action is required for matrix QC.

SIM Semivolatiles by SW78270-SIM

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

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

The surrogate percent recoveries were within control limits.

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

Several matrix spike and matrix spike duplicate percent recoveries were outside advisory control limits with wide RPDs for sample **UP-CB-B8-20130626-S**. No corrective action is required for matrix QC.

Dioxin/Furans by SW1613B

The sample was extracted and analyzed within the method recommended holding times for samples stored frozen.

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

Initial and continuing calibration results were within method requirements.

Both extraction and cleanup surrogates had recoveries within control limits.

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

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

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

Select results have has been flagged with an "X" on the Form I's due to indication of a co-eluting PDBE.

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

Pesticides by SW8081

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

Initial calibrations were within method requirements.

The closing continuing calibration fell outside the 20% control limit for several compounds on both columns due to sample matrix effects. No corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

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

Several matrix spike and matrix spike duplicate percent recoveries were outside advisory control limits with wide RPDs for sample **UP-CB-A6-20130626-S**. No corrective action is required for matrix QC.

PCBs by SW8082

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

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

The surrogate percent recoveries were within control limits.

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

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

NWTPH-Dx

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

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

The surrogate percent recoveries were within control limits.

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

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

Total Metals and Mercury

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

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

The matrix spike percent recoveries of antimony and lead were outside the control limits for sample **UP-CB-B8-20130626-S**. All relevant data have been flagged with an "N" qualifier on the appropriate Form V. No further corrective action was taken.

The matrix spike percent recovery of silver fell outside the control limits low for sample **UP-CB-B8-20130626-W**. All relevant data have been flagged with an "N" qualifier on the Form V. No further corrective action was taken.

The duplicate RPD of copper was outside the control limit for sample **UP-CB-B8-20130626-S**. All relevant data have been flagged with a "*" qualifier on the Form VI. No further corrective action was taken.

Low-Level Mercury

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

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

General Chemistry

Sediment samples and associated laboratory QC were initially prepared and analyzed within method recommended holding times for samples stored frozen. The water sample was

analyzed within the method recommended holding times for conductivity and DOC. The water sample was analyzed one-day outside the recommended holding time for TOC.

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

The SRM percent recoveries were within limits.

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

Geotechnical Parameters

A laboratory-specific case narrative follows this page.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: SAIC	**ARI Job No.:** WY32
Client Project: NPDES Sampling Support	**Client Project No.:** 209977

Case Narrative

1. Three samples were submitted for analysis on July 22, 2013.
2. The samples were submitted for grain size analysis by means of X-ray diffraction using a Sedigraph 5120. The values are calculated using Stokes' Law of sedimentation and Beer's law of extinction.
3. The samples were run in a single batch and one sample from another job was chosen for triplicate analysis.
4. The standard operating procedure calls for the sample to be measured on the #4 (4750 µm) sieve, down to the 1.0 µm particle size with the Sedigraph 5120. If there were no particles measured at these extremes, the data is not included in the report.
5. The samples contained organic material. Organic material does not absorb X-rays, and is not included in the fine portion of the analysis. This most likely contributed to the negative mass frequency (percent) values. The sample was rerun three times and no report could be generated without negative values.
6. The samples contained a black tar-like material that stuck to the tares and other particles when oven dried. This may have affected the grain size distribution.
7. The data is provided in summary tables and plots.
8. There were no other noted anomalies in the samples or methods on this project.

Released by: Yvonne Curtis — *Geotechnical Laboratory Manager* — Date: 8/2/13

Reviewed by: Gabe Noble — *Lead Technician* — Date: August 6, 2013

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: WY32
Client: SAIC
Project Event: 209977
Project Name: NPDES Sampling Support

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	UP-CB-B8-20130626-S	WY32A	13-15393	Sediment	06/26/13 11:33	06/26/13 17:32
2.	UP-MHF-165-20130626-S	WY32B	13-15394	Sediment	06/26/13 14:09	06/26/13 17:32
3.	UP-CB-A6-20130626-S	WY32C	13-15395	Sediment	06/26/13 15:47	06/26/13 17:32
4.	UP-CB-B8-20130626-W	WY32D	13-15396	Water	06/26/13 10:54	06/26/13 17:32
5.	UP-CB-B8-20130626-W	WY32E	13-15397	Water	06/26/13 10:54	06/26/13 17:32

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: WY33
Client: SAIC
Project Event: 209977
Project Name: NPDES Sampling Support

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	UP-CB-B8-20130626-W	WY33A	13-15398	Water	06/26/13 10:54	06/26/13 17:32
2.	UP-CB-B8-20130626-W	WY33B	13-15399	Water	06/26/13 10:54	06/26/13 17:32

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

U — Indicates that the target analyte was not detected at the reported concentration

* — Duplicate RPD is not within established control limits

B — Reported value is less than the CRDL but ≥ the Reporting Limit

N — Matrix Spike recovery not within established control limits

NA — Not Applicable, analyte not spiked

H — The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible

L — Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U — Indicates that the target analyte was not detected at the reported concentration

* — Flagged value is not within established control limits

B — Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.

J — Estimated concentration when the value is less than ARI's established reporting limits

D — The spiked compound was not detected due to sample extract dilution

E — Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

Q — Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).

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

NA The flagged analyte was not analyzed for

NR Spiked compound recovery is not reported due to chromatographic interference

NS The flagged analyte was not spiked into the sample

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

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

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

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

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

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

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

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

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

Geotechnical Data

A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.

F Samples were frozen prior to particle size determination

SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations

SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis

W Weight of sample in some pipette aliquots was below the level required for accurate weighting

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

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

LOD Spike level = LOQ (unless otherwise noted)

Analyte	Full Scan Analysis (µg/kg)			SIM Analysis (µg/kg)			LCS, MS Control Limits (%)[2, 12]		RPD[4]
	DL	LOD	LOQ	DL	LOD	LOQ	Full Scan	SIM	
Phenol	8.23	10	**20**	3.67	5	**5**	34 – **120**	30 – 160[3]	≤ 30
bis-(2-Chloroethyl)ether	6.78	10	**20**	--	--	--	36 – **120**	--	≤ 30
2-Chlorophenol	6.47	10	**20**	--	--	--	39 – **120**	--	≤ 30
1,3-Dichlorobenzene	5.07	10	**20**	1.30	2.5	**5**	40 – **120**	30 – **120**	≤ 30
1,4-Dichlorobenzene	4.39	10	**20**	1.91	2.5	**5**	39 – **120**	36 – **120**	≤ 30
1,2-Dichlorobenzene	4.66	10	**20**	1.32	2.5	**5**	40 – **120**	36 – **120**	≤ 30
Benzyl alcohol	14.9	20	**20**	12.1	15	**20**[5]	19 – **120**	25 – 123	≤ 30
2,2'-oxy-*bis*-(1-Chloropropane)	5.67	10	**20**	--	--	--	32 – **120**	--	≤ 30
2-Methylphenol	7.84	10	**20**	1.92	2.5	**5**	28 – **120**	26 – **120**	≤ 30
Hexachloroethane	5.65	10	**20**	--	--	--	38 – **120**	--	≤ 30
N-Nitroso-di-n-propylamine	10.8	15	**20**	15.1	20	**20**[5]	34 – **120**	30 – 160[3]	≤ 30
4-Methylphenol[8]	14.7	15	**20**	2.53	5	**5**	29 – **120**	30 – 160[3]	≤ 30
Nitrobenzene	7.95	10	**20**	--	--	--	36 – **120**	--	≤ 30
Isophorone	7.75	10	**20**	--	--	--	37 – **120**	--	≤ 30
2-Nitrophenol	6.92	10	**20**	--	--	--	30 – **120**	--	≤ 30
2,4-Dimethylphenol	38.6	50	**100**	10.2	12.5	**25**	**10 – 120**	10 – **120**	≤ 30
bis-(2-Chloroethoxy) methane	6.34	10	**20**	--	--	--	39 – **120**	--	≤ 30
2,4-Dichlorophenol	32.0	50	**100**	--	--	--	28 – **120**	--	≤ 30
1,2,4-Trichlorobenzene	5.96	10	**20**	1.51	2.5	**5**	35 – **120**	35 – **120**	≤ 30
Naphthalene	5.25	10	**20**	--	--	--	43 – **120**	--	≤ 30
Benzoic acid	59.1	100	**200**	--	--	--	**10 – 120**	--	≤ 30
4-Chloroaniline	33.7	50	**100**	--	--	--	11 – **120**	--	≤ 30
Hexachlorobutadiene	5.01	10	**20**	1.42	2.5	**5**	37 – **120**	34 – **120**	≤ 30
4-Chloro-3-methylphenol	28.9	50	**100**	--	--	--	32 – **120**	--	≤ 30
2-Methylnaphthalene	5.67	10	**20**	--	--	--	43 – **120**	--	≤ 30
Hexachlorocyclopentadiene	41.3	50	**100**	--	--	--	**10 – 120**	--	≤ 30
2,4,6-Trichlorophenol	25.4	50	**100**	--	--	--	30 – **120**	--	≤ 30
2,4,5-Trichlorophenol	26.9	50	**100**	--	--	--	28 – **120**	--	≤ 30
2-Chloronaphthalene	4.44	10	**20**	--	--	--	40 – **120**	--	≤ 30
2-Nitroaniline	30.2	50	**100**	--	--	--	31 – 126	--	≤ 30
Acenaphthylene	4.77	10	**20**	--	--	--	42 – **120**	--	≤ 30
Dimethylphthalate	6.44	10	**20**	1.21	2.5	**5**	43 – **120**	38 – **120**	≤ 30
2,6-Dinitrotoluene	26.7	50	**100**	--	--	--	33 – 123	--	≤ 30

Full Scan and SIM DL Revised 7/24/13
DL effective _____
Full Scan Control limits effective 4/12/13
Sim Control Limits effective 5/22/13

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

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

LOD Spike level = LOQ (unless otherwise noted)

Analyte	Full Scan Analysis (µg/kg)			SIM Analysis (µg/kg)			LCS, MS Control Limits (%)[2, 12]		RPD[4]
	DL	LOD	LOQ	DL	LOD	LOQ	Full Scan	SIM	
Acenaphthene	5.13	10	**20**	--	--	--	45 – **120**	--	≤ 30
3-Nitroaniline	37.7	50	**100**	--	--	--	22 – **120**	--	≤ 30
2,4-Dinitrophenol	41.3	100	**200**	--	--	--	**10 – 120**	--	≤ 30
Dibenzofuran	4.61	10	**20**	--	--	--	43 – **120**	--	≤ 30
4-Nitrophenol	44.4	50	**100**	--	--	--	15 – 138	--	≤ 30
2,4-Dinitrotoluene	22.9	50	**100**	--	--	--	35 – 127	--	≤ 30
Fluorene	4.95	10	**20**	--	--	--	45 – **120**	--	≤ 30
4-Chlorophenyl-phenylether	6.96	10	**20**	--	--	--	32 – **120**	--	≤ 30
Diethylphthalate	17.7	20	**20**	19.9	20	**20**[5]	50 – 120	55 – **120**	≤ 30
4-Nitroaniline	34.9	50	**100**	--	--	--	24 – 125	--	≤ 30
4,6-Dinitro-2-methylphenol	50.5	100	**200**	--	--	--	24 – **120**	--	≤ 30
N-Nitrosodiphenylamine	9.57	10	**20**	2.31	2.5	**5**	36 – **120**	27 – **120**	≤ 30
4-Bromophenyl-phenylether	6.07	10	**20**	--	--	--	39 – **120**	--	≤ 30
Hexachlorobenzene	4.74	10	**20**	2.11	2.5	**5**	33 – **120**	32 – **120**	≤ 30
Pentachlorophenol	31.3	50	**100**	10.4	15	**20**[5]	16 – 120	26 – **120**	≤ 30
Phenanthrene	4.69	10	**20**	--	--	--	49 – **120**	--	≤ 30
Anthracene	5.93	10	**20**	--	--	--	45 – **120**	--	≤ 30
Carbazole	7.37	10	**20**	--	--	--	43 – 135	--	≤ 30
Di-n-butylphthalate	5.31	10	**20**	--	--	--	48 – 126	--	≤ 30
Fluoranthene	4.52	10	**20**	--	--	--	53 – **120**	--	≤ 30
Pyrene	5.55	10	**20**	--	--	--	48 – 121	--	≤ 30
Butylbenzylphthalate	8.05	10	**20**	2.18	2.5	**5**	45 – 132	32 – 142	≤ 30
Benzo(a)anthracene	5.18	10	**20**	--	--	--	49 – **120**	--	≤ 30
3,3'-Dichlorobenzidine	31.2	50	**100**	--	--	--	**10 – 120**	--	≤ 30
Chrysene	5.22	10	**20**	--	--	--	47 – **120**	--	≤ 30
bis-(2-Ethylhexyl)phthalate	28.8	40	**50**[6]	--	--	--	34 – 130	--	≤ 30
Di-n-octylphthalate	8.72	10	**20**	--	--	--	28 – 124	--	≤ 30
Benzo(b)fluoranthene[9]	7.02	10	**20**	--	--	--	42 – 132	--	≤ 30
Benzo(k)fluoranthene[9]	5.01	10	**20**	--	--	--	39 – 129	--	≤ 30
Benzofluoranthene-Total[10]	10.2	20	**40**	--	--	--	30 – 160[3]	--	≤ 30
Benzo(a)pyrene	6.48	10	**20**	--	--	--	42 – **120**	--	≤ 30
Indeno(1,2,3-cd)pyrene	5.99	10	**20**	--	--	--	42 – 123	--	≤ 30
Dibenzo(a,h)anthracene	6.16	10	**20**	1.38	2.5	**5**	30 – 133	28 – 125	≤ 30
Benzo(g,h,i)perylene	5.82	10	**20**	--	--	--	38 – 126	--	≤ 30

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

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

LOD Spike level = LOQ (unless otherwise noted)

Analyte	Full Scan Analysis (µg/kg)			SIM Analysis (µg/kg)			LCS, MS Control Limits (%)[2, 12]		RPD[4]
	DL	LOD	LOQ	DL	LOD	LOQ	Full Scan	SIM	
N-Nitrosodimethylamine	22.4	30	**40**[7]	3.15	10	**25**	17 – **120**	30 – 160[3]	≤ 30
Aniline	16.9	50	**100**	--	--	--	**10** – 134	--	≤ 30
Pyridine	86.6	100	**100**	--	--	--	**10** – 147	--	≤ 30
1-Methylnaphthalene	5.95	10	**20**	--	--	--	42 – **120**	--	≤ 30
Azobenzene (1,2-DP-Hydrazine)	4.61	10	**20**	--	--	--	35 – **120**	--	≤ 30
Retene [11]	4.01	10	**20**	--	--	--	30 – 160[3]	--	≤ 30
Perylene	4.90	10	**20**	--	--	--	30 – 160[3]	--	≤ 30
2,3,4,6 Tetrachlorophenol	5.37	10	**20**	--	--	--	30 – 160[3]	--	≤ 30
Surrogate Standards									
2-Fluorophenol							32 – **120**	27 – **120**	≤ 30
Phenol-d_5							32 – **120**	29 – **120**	≤ 30
2-Chlorophenol-d_4							36 – **120**	31 – **120**	≤ 30
1,2-Dichlorobenzene-d_4							37 – **120**	32 – **120**	≤ 30
Nitrobenzene-d_5							33 –**120**	30 – **120**	≤ 30
2-Fluorobiphenyl							35 –**120**	35 – **120**	≤ 30
2,4,6-Tribromophenol							23 – 133	24 – 134	≤ 30
p-Terphenyl-d_{14}							42 – 124	37 – **120**	≤ 30

(1) Detection Limit (DL), Limit of Detection (LOD), Limit of Quantitation (LOQ) are defined in ARI SOP 1018S
(2) Highlighted control limits (**bold font**) are adjusted from the calculated values to reflect that ARI does not use control limits < 10 for the lower limit or < 120 for the upper limit
(3) 30 – 160 are default values used when there is insufficient data to calculate historic control limits.
(4) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$

(5) Spiked at 5 ppb
(6) Spiked at 20 ppb
(7) Spiked at 100 ppb
(8) 3-Methylphenol (not calibrated) co-elutes with 4-Methylphennol (calibrated)
(9) Benzo(b)fluoranthene and Benzo(k)fluoranthene are reported as separate analytes only when the height of the valley between the isomer peaks is less than than 50% of the average of the two peak heights, otherwise total Benzofluoranthenes are reported.
(10) Benzo(b)fluoranthene + Benzo(k)fluoranthene
(11) LOD study WC15 (2/5/13)
(12) Control limits calculated using spike recovery data from 3/1/11 through 4/1/13

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

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

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

Analyte	DL[1] pg/g	LOD[1] pg/g	LOQ[1] pg/g	OPR Control Limit [2,3]	Sample Replicate RPD [3,4]
2,3,7,8-TCDF	0.235	**0.5**	**1**	75 – 158	≤ 25
2,3,7,8-TCDD	0.174	**0.5**	**1**	67 – 158	≤ 25
1,2,3,7,8-PeCDF	0.516	**1.25**	**2.5**	80 – 134	≤ 25
2,3,4,7,8-PeCDF	0.670	**1.0**	**1**	68 – 160	≤ 25
1,2,3,7,8-PeCDD	0.375	**1.0**	**1**	70 – 142	≤ 25
1,2,3,4,7,8-HxCDF	0.714	**1.25**	**2.5**	72 – 134	≤ 25
1,2,3,6,7,8-HxCDF	0.274	**1.25**	**2.5**	84 – 130	≤ 25
2,3,4,6,7,8-HxCDF	0.695	**1.25**	**2.5**	70 – 156	≤ 25
1,2,3,7,8,9-HxCDF	0.892	**1.25**	**2.5**	78 – 130	≤ 25
1,2,3,4,7,8-HxCDD	0.768	**1.25**	**2.5**	70 – 164	≤ 25
1,2,3,6,7,8-HxCDD	0.655	**1.25**	**2.5**	76 – 134	≤ 25
1,2,3,7,8,9-HxCDD	0.475	**1.25**	**2.5**	64 – 162	≤ 25
1,2,3,4,6,7,8-HpCDF	1.109	**1.25**	**2.5**	82 – 122	≤ 25
1,2,3,4,7,8,9-HpCDF	0.875	**1.25**	**2.5**	78 – 138	≤ 25
1,2,3,4,6,7,8-HpCDD	0.750	**1.25**	**2.5**	70 – 140	≤ 25
OCDF	1.516	**2.5**	**5**	63 – 170	≤ 25
OCDD	1.732	**2.5**	**5**	78 – 144	≤ 25

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

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

(3) Method specified control limits.

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

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

4

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

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

LOD Spike level = LOQ Concentration

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

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

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

Analytical Resources,Incorporated
Analytical Chemists and Consultants

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

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

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

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

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

Analytical Resources,Incorporated
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Quality Control Criteria
Total Petroleum Hydrocarbons
(Diesel & Motor Oil)

Analysis Code	Analyte[5]	DL[1] ppm	LOD[1] ppm	LOQ[2] ppm	Spike % Recovery Control Limits[3]			RPD[4]
					LCS	MB/LCS Surrogate	Sample Surrogate	
HCIWVX	NWTPH-HCID – Water Samples	--	--	0.50 [7]	--	--	50-150	≤ 40
HCISVX	NWTPH-HCID – Solid Samples	--	--	50 [7]	--	--	50-150	
DIESWI	DRO – NWTPH-Dext (C_{12}-C_{24})	0.022	0.05	0.1	64-112	50-150	50-150	≤ 40
AK2WSI	DRO – AK102 (C_{10}-C_{25})	0.022	0.05	0.1	75-125 [6]	60-120	50-150	
OILWSI	RRO – NWTPH-Dext (C_{24}-C_{38})	0.044	0.1	0.2	60 – 130 [8]	50-150	50-150	
AK3WSI	RRO – AK103 (C_{25}-C_{36})	0.030 [9]	0.1	0.2	60-120 [6]	60-120	50-150	
DIESWI	DRO – NWTPH-Dext (C_{12}-C_{24})	0.039	0.05	0.1	61-104	50-150	50-150	≤ 40
AK2WSI	DRO – AK102 (C_{10}-C_{25})	0.042	0.05	0.1	75-125 [6]	60-120	50-150	
OILWSI	RRO – NWTPH-Dext (C_{24}-C_{38})	0.010	0.1	0.2	60 – 130 [8]	50-150	50-150	
AK3WSI	RRO – AK103 (C_{25}-C_{36})	0.030 [8]	0.1	0.2	60-120 [6]	60-120	50-150	
DIESMI	DRO – NWTPH-Dext (C_{12}-C_{24})	1.35	2.5	5	62-119	50-150	50-150	≤ 40
DIESMI	DRO – NWTPH-Dext Jet A	2.22 [11]	2.5	5	60 – 130 [8]	50-150	50-150	
AK2SMI	DRO – AK102 (C_{10}-C_{25})	2.43	2.5	5	75-125 [6]	60-120	50-150	
OILSMI	RRO – NWTPH-Dext (C_{24}-C_{38})	2.48	5	10	60 – 130 [8]	50-150	50-150	
AK3SMI	RRO – AK103 (C_{25}-C_{36})	0.665 [9]	5	10	60-120 [6]	60-120	50-150	
DIESMI	DRO – NWTPH-Dext (C_{12}-C_{24})	1.28	2.5	5	60-108	50-150	50-150	≤ 40
AK2SMI	DRO – AK102 (C_{10}-C_{25})	2.06	2.5	5	75-125 [6]	60-120	50-150	
OILSMI	RRO – NWTPH-Dext (C_{24}-C_{38})	1.57	5	10	60 – 130 [8]	50-150	50-150	
AK3SMI	RRO – AK103 (C_{25}-C_{36})	0.665 [10]	5	10	60-120 [6]	60-120	50-150	

(1) DL (Detection Limit) and LOD (Limit of Detection) as defined in ARI SOP 1018S.
(2) Limit of Quantitation as defined in ARI SOP 1018S. The spike concentration used to determine the DL and the concentration of the lowest standard used to calibrate the GC-FID instrument.
(3) All surrogate recovery limits are specified in the published methods (AK102, AK103 & NWTPH-Dext). The surrogate standard is *o*-Terphenyl.
(4) Acceptance criteria for the relative percent difference (RPD) between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$
(5) DRO = Diesel Range Organics and RRO = Residual Range Organics as defined in the methods referenced in footnote 3.
(6) Method specified LCS acceptance limits.
(7) Method specified reporting limits
(8) Default LCS control limits pending calculation of historic limits
(9) MDL study QD55 completed 2/12/10
(10) MDL study QD35 completed 1/29/10
(11) LOD Study UI44 completed 2/28/12

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

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

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

Quality Control Parameters for Metals Analysis ICP-MS EPA Methods 200.8 or 6020A								
Analyte	Mass	Aqueous Samples[2]			Spike Recovery		RPD[3]	Solids[2]
		DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS		LOQ[1] mg/kg
Aluminum	27	1.601	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Antimony	121	0.010	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
	123	0.011	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Arsenic #1	75	0.048	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Arsenic #2	75	0.092	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Barium	135	0.020	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	137	0.019	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Beryllium	9	0.021	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Cadmium	111	0.010	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
	114	0.005	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
Calcium	43	3.983	25	**50.0**	75 – 125	80 – 120	≤ 20	**50.0**
Chromium	52	0.045	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	53	0.118	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Cobalt	59	0.011	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Copper	63	0.158	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	65	0.236	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Iron	54	5.753	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
	57	3.876	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Lead	208	0.046	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
Magnesium	24	0.297	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Manganese	55	0.022	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Molybdenum	98	0.013	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Nickel	60	0.079	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	62	0.089	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Potassium	39	2.944	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Selenium	82	0.127	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	78	0.324	1.0	**2.0**	75 – 125	80 – 120	≤ 20	**2.0**
Silver	107	0.008	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Sodium	23	2.833	50	**100.0**	75 – 125	80 – 120	≤ 20	**100.0**
Thorium[4]	232	0.013	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Thallium	205	0.004	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Uranium[4]	238	0.003	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Vanadium	51	0.043	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Zinc	66	0.497	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**
	67	0.531	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**
	68	0.524	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 50 mL sample and 50 mL final volume Solids LOQ based on 100% solids using 1.0 g sample 100 mL final volume.

(3) Relative Percent Difference in replicate analyzes. $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$ where C_0=Original, C_D=Duplicate

(4) ARI has no accreditation for these elements.

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

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

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

Analytical Resources,Incorporated
Analytical Chemists and Consultants

Spike Recovery Control Limits for Conventional Wet Chemistry
Effective 5/1/09

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

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

Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: WY32, WY33

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: UP-CB-B8-20130626-S
SAMPLE

Lab Sample ID: WY32A
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized:
Reported: 08/05/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/25/13
Date Analyzed: 08/01/13 19:09
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 4.86 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 31.0%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	**Phenol**	**51**	**120**	**180 B**
111-44-4	Bis-(2-Chloroethyl) Ether	42	120	< 120 U
95-57-8	2-Chlorophenol	40	120	< 120 U
541-73-1	1,3-Dichlorobenzene	31	120	< 120 U
106-46-7	1,4-Dichlorobenzene	27	120	< 120 U
100-51-6	Benzyl Alcohol	92	120	< 120 U
95-50-1	1,2-Dichlorobenzene	29	120	< 120 U
95-48-7	2-Methylphenol	48	120	< 120 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	35	120	< 120 U
106-44-5	**4-Methylphenol**	**91**	**120**	**540**
621-64-7	N-Nitroso-Di-N-Propylamine	67	120	< 120 U
67-72-1	Hexachloroethane	35	120	< 120 U
98-95-3	Nitrobenzene	49	120	< 120 U
78-59-1	Isophorone	48	120	< 120 U
88-75-5	2-Nitrophenol	43	120	< 120 U
105-67-9	2,4-Dimethylphenol	240	620	< 620 U
65-85-0	**Benzoic Acid**	**360**	**1,200**	**840 J**
111-91-1	bis(2-Chloroethoxy) Methane	39	120	< 120 U
120-83-2	2,4-Dichlorophenol	200	620	< 620 U
120-82-1	1,2,4-Trichlorobenzene	37	120	< 120 U
91-20-3	**Naphthalene**	**32**	**120**	**220**
106-47-8	4-Chloroaniline	210	620	< 620 U
87-68-3	Hexachlorobutadiene	31	120	< 120 U
59-50-7	4-Chloro-3-methylphenol	180	620	< 620 U
91-57-6	**2-Methylnaphthalene**	**35**	**120**	**250**
77-47-4	Hexachlorocyclopentadiene	250	620	< 620 U
88-06-2	2,4,6-Trichlorophenol	160	620	< 620 U
95-95-4	2,4,5-Trichlorophenol	170	620	< 620 U
91-58-7	2-Chloronaphthalene	27	120	< 120 U
88-74-4	2-Nitroaniline	190	620	< 620 U
131-11-3	Dimethylphthalate	40	120	< 120 U
208-96-8	Acenaphthylene	29	120	< 120 U
99-09-2	3-Nitroaniline	230	620	< 620 U
83-32-9	**Acenaphthene**	**32**	**120**	**470**
51-28-5	2,4-Dinitrophenol	250	1,200	< 1,200 U
100-02-7	4-Nitrophenol	270	620	< 620 U
132-64-9	**Dibenzofuran**	**28**	**120**	**400**
606-20-2	2,6-Dinitrotoluene	160	620	< 620 U
121-14-2	2,4-Dinitrotoluene	140	620	< 620 U
84-66-2	Diethylphthalate	110	120	< 120 U
7005-72-3	4-Chlorophenyl-phenylether	43	120	< 120 U
86-73-7	**Fluorene**	**31**	**120**	**700**
100-01-6	4-Nitroaniline	220	620	< 620 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: UP-CB-B8-20130626-S**
Extraction Method: SW3546 **SAMPLE**

Lab Sample ID: WY32A QC Report No: WY32-SAIC
LIMS ID: 13-15393 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 08/01/13 19:09

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	310	1,200	< 1,200 U
86-30-6	**N-Nitrosodiphenylamine**	**59**	**120**	**170**
101-55-3	4-Bromophenyl-phenylether	37	120	< 120 U
118-74-1	Hexachlorobenzene	29	120	< 120 U
87-86-5	Pentachlorophenol	190	620	< 620 U
85-01-8	**Phenanthrene**	**29**	**120**	**3,700**
86-74-8	**Carbazole**	**45**	**120**	**610**
120-12-7	**Anthracene**	**37**	**120**	**600**
84-74-2	**Di-n-Butylphthalate**	**33**	**120**	**590**
206-44-0	**Fluoranthene**	**28**	**120**	**2,700**
129-00-0	**Pyrene**	**34**	**120**	**2,300**
85-68-7	**Butylbenzylphthalate**	**50**	**120**	**12,000**
91-94-1	3,3'-Dichlorobenzidine	190	620	< 620 U
56-55-3	**Benzo(a)anthracene**	**32**	**120**	**510**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**180**	**310**	**59,000 E**
218-01-9	**Chrysene**	**32**	**120**	**1,000**
117-84-0	**Di-n-Octyl phthalate**	**54**	**120**	**580**
50-32-8	**Benzo(a)pyrene**	**40**	**120**	**320**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**37**	**120**	**160**
53-70-3	Dibenz(a,h)anthracene	38	120	< 120 U
191-24-2	**Benzo(g,h,i)perylene**	**36**	**120**	**430**
62-53-3	Aniline	100	620	< 620 U
62-75-9	N-Nitrosodimethylamine	140	250	< 250 U
90-12-0	**1-Methylnaphthalene**	**37**	**120**	**140**
TOTBFA	**Total Benzofluoranthenes**	**63**	**250**	**800**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	54.0%	2-Fluorobiphenyl	64.8%
d14-p-Terphenyl	67.2%	d4-1,2-Dichlorobenzene	52.2%
d5-Phenol	78.4%	2-Fluorophenol	74.0%
2,4,6-Tribromophenol	80.8%	d4-2-Chlorophenol	77.6%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: UP-CB-B8-20130626-S
DILUTION

Lab Sample ID: WY32A
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized: MW
Reported: 08/05/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/25/13
Date Analyzed: 08/02/13 13:36
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 4.86 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 30.0
Percent Moisture: 31.0%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	510	1,200	< 1,200 U
111-44-4	Bis-(2-Chloroethyl) Ether	420	1,200	< 1,200 U
95-57-8	2-Chlorophenol	400	1,200	< 1,200 U
541-73-1	1,3-Dichlorobenzene	310	1,200	< 1,200 U
106-46-7	1,4-Dichlorobenzene	270	1,200	< 1,200 U
100-51-6	Benzyl Alcohol	920	1,200	< 1,200 U
95-50-1	1,2-Dichlorobenzene	290	1,200	< 1,200 U
95-48-7	2-Methylphenol	480	1,200	< 1,200 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	350	1,200	< 1,200 U
106-44-5	4-Methylphenol	910	1,200	< 1,200 U
621-64-7	N-Nitroso-Di-N-Propylamine	670	1,200	< 1,200 U
67-72-1	Hexachloroethane	350	1,200	< 1,200 U
98-95-3	Nitrobenzene	490	1,200	< 1,200 U
78-59-1	Isophorone	480	1,200	< 1,200 U
88-75-5	2-Nitrophenol	430	1,200	< 1,200 U
105-67-9	2,4-Dimethylphenol	2400	6,200	< 6,200 U
65-85-0	Benzoic Acid	3600	12,000	< 12,000 U
111-91-1	bis(2-Chloroethoxy) Methane	390	1,200	< 1,200 U
120-83-2	2,4-Dichlorophenol	2000	6,200	< 6,200 U
120-82-1	1,2,4-Trichlorobenzene	370	1,200	< 1,200 U
91-20-3	Naphthalene	320	1,200	< 1,200 U
106-47-8	4-Chloroaniline	2100	6,200	< 6,200 U
87-68-3	Hexachlorobutadiene	310	1,200	< 1,200 U
59-50-7	4-Chloro-3-methylphenol	1800	6,200	< 6,200 U
91-57-6	2-Methylnaphthalene	350	1,200	< 1,200 U
77-47-4	Hexachlorocyclopentadiene	2500	6,200	< 6,200 U
88-06-2	2,4,6-Trichlorophenol	1600	6,200	< 6,200 U
95-95-4	2,4,5-Trichlorophenol	1700	6,200	< 6,200 U
91-58-7	2-Chloronaphthalene	270	1,200	< 1,200 U
88-74-4	2-Nitroaniline	1900	6,200	< 6,200 U
131-11-3	Dimethylphthalate	400	1,200	< 1,200 U
208-96-8	Acenaphthylene	290	1,200	< 1,200 U
99-09-2	3-Nitroaniline	2300	6,200	< 6,200 U
83-32-9	Acenaphthene	320	1,200	< 1,200 U
51-28-5	2,4-Dinitrophenol	2500	12,000	< 12,000 U
100-02-7	4-Nitrophenol	2700	6,200	< 6,200 U
132-64-9	Dibenzofuran	280	1,200	< 1,200 U
606-20-2	2,6-Dinitrotoluene	1600	6,200	< 6,200 U
121-14-2	2,4-Dinitrotoluene	1400	6,200	< 6,200 U
84-66-2	Diethylphthalate	1100	1,200	< 1,200 U
7005-72-3	4-Chlorophenyl-phenylether	430	1,200	< 1,200 U
86-73-7	**Fluorene**	**310**	**1,200**	**860 J**
100-01-6	4-Nitroaniline	2200	6,200	< 6,200 U

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: UP-CB-B8-20130626-S
DILUTION

Lab Sample ID: WY32A
LIMS ID: 13-15393
Matrix: Sediment
Date Analyzed: 08/02/13 13:36

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	3100	12,000	< 12,000 U
86-30-6	N-Nitrosodiphenylamine	590	1,200	< 1,200 U
101-55-3	4-Bromophenyl-phenylether	370	1,200	< 1,200 U
118-74-1	Hexachlorobenzene	290	1,200	< 1,200 U
87-86-5	Pentachlorophenol	1900	6,200	< 6,200 U
85-01-8	**Phenanthrene**	**290**	**1,200**	**4,100**
86-74-8	**Carbazole**	**450**	**1,200**	**860 JQ**
120-12-7	**Anthracene**	**370**	**1,200**	**740 J**
84-74-2	**Di-n-Butylphthalate**	**330**	**1,200**	**680 J**
206-44-0	**Fluoranthene**	**280**	**1,200**	**3,200**
129-00-0	**Pyrene**	**340**	**1,200**	**2,900**
85-68-7	**Butylbenzylphthalate**	**500**	**1,200**	**15,000**
91-94-1	3,3'-Dichlorobenzidine	1900	6,200	< 6,200 U
56-55-3	**Benzo(a)anthracene**	**320**	**1,200**	**680 J**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**1800**	**3,100**	**67,000**
218-01-9	**Chrysene**	**320**	**1,200**	**1,300**
117-84-0	**Di-n-Octyl phthalate**	**540**	**1,200**	**740 J**
50-32-8	Benzo(a)pyrene	400	1,200	< 1,200 U
193-39-5	Indeno(1,2,3-cd)pyrene	370	1,200	< 1,200 U
53-70-3	Dibenz(a,h)anthracene	380	1,200	< 1,200 U
191-24-2	**Benzo(g,h,i)perylene**	**360**	**1,200**	**680 J**
62-53-3	Aniline	1000	6,200	< 6,200 U
62-75-9	N-Nitrosodimethylamine	1400	2,500	< 2,500 U
90-12-0	1-Methylnaphthalene	370	1,200	< 1,200 U
TOTBFA	**Total Benzofluoranthenes**	**630**	**2,500**	**1,200 J**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	84.0%	2-Fluorobiphenyl	96.0%
d14-p-Terphenyl	108%	d4-1,2-Dichlorobenzene	84.0%
d5-Phenol	96.0%	2-Fluorophenol	104%
2,4,6-Tribromophenol	112%	d4-2-Chlorophenol	104%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: UP-MHF-165-20130626-S
SAMPLE

Lab Sample ID: WY32B
LIMS ID: 13-15394
Matrix: Sediment
Data Release Authorized:
Reported: 08/05/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/25/13
Date Analyzed: 08/01/13 21:03
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 15.0%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	**Phenol**	**24**	**59**	**47 J**
111-44-4	Bis-(2-Chloroethyl) Ether	20	59	< 59 U
95-57-8	2-Chlorophenol	19	59	< 59 U
541-73-1	1,3-Dichlorobenzene	15	59	< 59 U
106-46-7	1,4-Dichlorobenzene	13	59	< 59 U
100-51-6	Benzyl Alcohol	44	59	< 59 U
95-50-1	1,2-Dichlorobenzene	14	59	< 59 U
95-48-7	2-Methylphenol	23	59	< 59 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	17	59	< 59 U
106-44-5	4-Methylphenol	43	59	< 59 U
621-64-7	N-Nitroso-Di-N-Propylamine	32	59	< 59 U
67-72-1	Hexachloroethane	17	59	< 59 U
98-95-3	Nitrobenzene	23	59	< 59 U
78-59-1	Isophorone	23	59	< 59 U
88-75-5	2-Nitrophenol	20	59	< 59 U
105-67-9	2,4-Dimethylphenol	110	290	< 290 U
65-85-0	Benzoic Acid	170	590	< 590 U
111-91-1	bis(2-Chloroethoxy) Methane	19	59	< 59 U
120-83-2	2,4-Dichlorophenol	94	290	< 290 U
120-82-1	1,2,4-Trichlorobenzene	17	59	< 59 U
91-20-3	**Naphthalene**	**15**	**59**	**50 J**
106-47-8	4-Chloroaniline	99	290	< 290 U
87-68-3	Hexachlorobutadiene	15	59	< 59 U
59-50-7	4-Chloro-3-methylphenol	85	290	< 290 U
91-57-6	**2-Methylnaphthalene**	**17**	**59**	**41 J**
77-47-4	Hexachlorocyclopentadiene	120	290	< 290 U
88-06-2	2,4,6-Trichlorophenol	74	290	< 290 U
95-95-4	2,4,5-Trichlorophenol	79	290	< 290 U
91-58-7	2-Chloronaphthalene	13	59	< 59 U
88-74-4	2-Nitroaniline	88	290	< 290 U
131-11-3	**Dimethylphthalate**	**19**	**59**	**5,700**
208-96-8	Acenaphthylene	14	59	< 59 U
99-09-2	3-Nitroaniline	110	290	< 290 U
83-32-9	**Acenaphthene**	**15**	**59**	**76**
51-28-5	2,4-Dinitrophenol	120	590	< 590 U
100-02-7	4-Nitrophenol	130	290	< 290 U
132-64-9	**Dibenzofuran**	**14**	**59**	**67**
606-20-2	2,6-Dinitrotoluene	78	290	< 290 U
121-14-2	2,4-Dinitrotoluene	67	290	< 290 U
84-66-2	Diethylphthalate	52	59	< 59 U
7005-72-3	4-Chlorophenyl-phenylether	20	59	< 59 U
86-73-7	**Fluorene**	**15**	**59**	**140**
100-01-6	4-Nitroaniline	100	290	< 290 U

Lab Sample ID: WY32B QC Report No: WY32-SAIC
LIMS ID: 13-15394 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 08/01/13 21:03

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	150	590	< 590 U
86-30-6	**N-Nitrosodiphenylamine**	**28**	**59**	**70**
101-55-3	4-Bromophenyl-phenylether	18	59	< 59 U
118-74-1	Hexachlorobenzene	14	59	< 59 U
87-86-5	Pentachlorophenol	92	290	< 290 U
85-01-8	**Phenanthrene**	**14**	**59**	**900**
86-74-8	**Carbazole**	**22**	**59**	**160**
120-12-7	**Anthracene**	**17**	**59**	**310**
84-74-2	**Di-n-Butylphthalate**	**16**	**59**	**180**
206-44-0	**Fluoranthene**	**13**	**59**	**1,200**
129-00-0	**Pyrene**	**16**	**59**	**990**
85-68-7	**Butylbenzylphthalate**	**24**	**59**	**97**
91-94-1	3,3'-Dichlorobenzidine	91	290	< 290 U
56-55-3	**Benzo(a)anthracene**	**15**	**59**	**290**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**84**	**150**	**2,300**
218-01-9	**Chrysene**	**15**	**59**	**600**
117-84-0	Di-n-Octyl phthalate	26	59	< 59 U
50-32-8	**Benzo(a)pyrene**	**19**	**59**	**240**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**18**	**59**	**130**
53-70-3	**Dibenz(a,h)anthracene**	**18**	**59**	**56 J**
191-24-2	**Benzo(g,h,i)perylene**	**17**	**59**	**200**
62-53-3	Aniline	50	290	< 290 U
62-75-9	N-Nitrosodimethylamine	66	120	< 120 U
90-12-0	**1-Methylnaphthalene**	**17**	**59**	**38 J**
TOTBFA	**Total Benzofluoranthenes**	**30**	**120**	**630**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	60.0%	2-Fluorobiphenyl	76.8%
d14-p-Terphenyl	69.6%	d4-1,2-Dichlorobenzene	54.6%
d5-Phenol	79.6%	2-Fluorophenol	73.2%
2,4,6-Tribromophenol	96.0%	d4-2-Chlorophenol	81.6%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: UP-CB-A6-20130626-S
SAMPLE

Lab Sample ID: WY32C
LIMS ID: 13-15395
Matrix: Sediment
Data Release Authorized:
Reported: 08/05/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/25/13
Date Analyzed: 08/01/13 21:41
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 4.24 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 29.8%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	**Phenol**	**58**	**140**	**180 B**
111-44-4	Bis-(2-Chloroethyl) Ether	48	140	< 140 U
95-57-8	2-Chlorophenol	46	140	< 140 U
541-73-1	1,3-Dichlorobenzene	36	140	< 140 U
106-46-7	1,4-Dichlorobenzene	31	140	< 140 U
100-51-6	**Benzyl Alcohol**	**110**	**140**	**160**
95-50-1	1,2-Dichlorobenzene	33	140	< 140 U
95-48-7	2-Methylphenol	55	140	< 140 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	40	140	< 140 U
106-44-5	**4-Methylphenol**	**100**	**140**	**130 J**
621-64-7	N-Nitroso-Di-N-Propylamine	76	140	< 140 U
67-72-1	Hexachloroethane	40	140	< 140 U
98-95-3	Nitrobenzene	56	140	< 140 U
78-59-1	Isophorone	55	140	< 140 U
88-75-5	2-Nitrophenol	49	140	< 140 U
105-67-9	2,4-Dimethylphenol	270	710	< 710 U
65-85-0	Benzoic Acid	420	1,400	< 1,400 U
111-91-1	bis(2-Chloroethoxy) Methane	45	140	< 140 U
120-83-2	2,4-Dichlorophenol	230	710	< 710 U
120-82-1	1,2,4-Trichlorobenzene	42	140	< 140 U
91-20-3	**Naphthalene**	**37**	**140**	**230**
106-47-8	4-Chloroaniline	240	710	< 710 U
87-68-3	Hexachlorobutadiene	35	140	< 140 U
59-50-7	4-Chloro-3-methylphenol	200	710	< 710 U
91-57-6	**2-Methylnaphthalene**	**40**	**140**	**200**
77-47-4	Hexachlorocyclopentadiene	290	710	< 710 U
88-06-2	2,4,6-Trichlorophenol	180	710	< 710 U
95-95-4	2,4,5-Trichlorophenol	190	710	< 710 U
91-58-7	2-Chloronaphthalene	31	140	< 140 U
88-74-4	2-Nitroaniline	210	710	< 710 U
131-11-3	**Dimethylphthalate**	**46**	**140**	**110 J**
208-96-8	**Acenaphthylene**	**34**	**140**	**71 J**
99-09-2	3-Nitroaniline	270	710	< 710 U
83-32-9	**Acenaphthene**	**36**	**140**	**180**
51-28-5	2,4-Dinitrophenol	290	1,400	< 1,400 U
100-02-7	4-Nitrophenol	310	710	< 710 U
132-64-9	**Dibenzofuran**	**33**	**140**	**190**
606-20-2	2,6-Dinitrotoluene	190	710	< 710 U
121-14-2	2,4-Dinitrotoluene	160	710	< 710 U
84-66-2	Diethylphthalate	130	140	< 140 U
7005-72-3	4-Chlorophenyl-phenylether	49	140	< 140 U
86-73-7	**Fluorene**	**35**	**140**	**300**
100-01-6	4-Nitroaniline	250	710	< 710 U

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: UP-CB-A6-20130626-S
SAMPLE

Lab Sample ID: WY32C
LIMS ID: 13-15395
Matrix: Sediment
Date Analyzed: 08/01/13 21:41

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	360	1,400	< 1,400 U
86-30-6	**N-Nitrosodiphenylamine**	**68**	**140**	**160**
101-55-3	4-Bromophenyl-phenylether	43	140	< 140 U
118-74-1	Hexachlorobenzene	34	140	< 140 U
87-86-5	Pentachlorophenol	220	710	< 710 U
85-01-8	**Phenanthrene**	**33**	**140**	**2,000**
86-74-8	**Carbazole**	**52**	**140**	**350**
120-12-7	**Anthracene**	**42**	**140**	**320**
84-74-2	**Di-n-Butylphthalate**	**38**	**140**	**1,100**
206-44-0	**Fluoranthene**	**32**	**140**	**2,000**
129-00-0	**Pyrene**	**39**	**140**	**2,100**
85-68-7	**Butylbenzylphthalate**	**57**	**140**	**1,600**
91-94-1	3,3'-Dichlorobenzidine	220	710	< 710 U
56-55-3	**Benzo(a)anthracene**	**37**	**140**	**450**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**200**	**350**	**52,000 E**
218-01-9	**Chrysene**	**37**	**140**	**1,200**
117-84-0	**Di-n-Octyl phthalate**	**62**	**140**	**460**
50-32-8	**Benzo(a)pyrene**	**46**	**140**	**350**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**42**	**140**	**150**
53-70-3	Dibenz(a,h)anthracene	44	140	< 140 U
191-24-2	**Benzo(g,h,i)perylene**	**41**	**140**	**460**
62-53-3	Aniline	120	710	< 710 U
62-75-9	N-Nitrosodimethylamine	160	280	< 280 U
90-12-0	**1-Methylnaphthalene**	**42**	**140**	**92 J**
TOTBFA	**Total Benzofluoranthenes**	**72**	**280**	**920**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	68.4%	2-Fluorobiphenyl	84.0%
d14-p-Terphenyl	76.2%	d4-1,2-Dichlorobenzene	63.0%
d5-Phenol	88.8%	2-Fluorophenol	82.4%
2,4,6-Tribromophenol	104%	d4-2-Chlorophenol	92.8%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: UP-CB-A6-20130626-S
DILUTION

Lab Sample ID: WY32C
LIMS ID: 13-15395
Matrix: Sediment
Data Release Authorized:
Reported: 08/05/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/25/13
Date Analyzed: 08/02/13 14:14
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 4.24 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 30.0
Percent Moisture: 29.8%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	580	1,400	< 1,400 U
111-44-4	Bis-(2-Chloroethyl) Ether	480	1,400	< 1,400 U
95-57-8	2-Chlorophenol	460	1,400	< 1,400 U
541-73-1	1,3-Dichlorobenzene	360	1,400	< 1,400 U
106-46-7	1,4-Dichlorobenzene	310	1,400	< 1,400 U
100-51-6	Benzyl Alcohol	1100	1,400	< 1,400 U
95-50-1	1,2-Dichlorobenzene	330	1,400	< 1,400 U
95-48-7	2-Methylphenol	550	1,400	< 1,400 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	400	1,400	< 1,400 U
106-44-5	4-Methylphenol	1000	1,400	< 1,400 U
621-64-7	N-Nitroso-Di-N-Propylamine	760	1,400	< 1,400 U
67-72-1	Hexachloroethane	400	1,400	< 1,400 U
98-95-3	Nitrobenzene	560	1,400	< 1,400 U
78-59-1	Isophorone	550	1,400	< 1,400 U
88-75-5	2-Nitrophenol	490	1,400	< 1,400 U
105-67-9	2,4-Dimethylphenol	2700	7,100	< 7,100 U
65-85-0	Benzoic Acid	4200	14,000	< 14,000 U
111-91-1	bis(2-Chloroethoxy) Methane	450	1,400	< 1,400 U
120-83-2	2,4-Dichlorophenol	2300	7,100	< 7,100 U
120-82-1	1,2,4-Trichlorobenzene	420	1,400	< 1,400 U
91-20-3	Naphthalene	370	1,400	< 1,400 U
106-47-8	4-Chloroaniline	2400	7,100	< 7,100 U
87-68-3	Hexachlorobutadiene	350	1,400	< 1,400 U
59-50-7	4-Chloro-3-methylphenol	2000	7,100	< 7,100 U
91-57-6	2-Methylnaphthalene	400	1,400	< 1,400 U
77-47-4	Hexachlorocyclopentadiene	2900	7,100	< 7,100 U
88-06-2	2,4,6-Trichlorophenol	1800	7,100	< 7,100 U
95-95-4	2,4,5-Trichlorophenol	1900	7,100	< 7,100 U
91-58-7	2-Chloronaphthalene	310	1,400	< 1,400 U
88-74-4	2-Nitroaniline	2100	7,100	< 7,100 U
131-11-3	Dimethylphthalate	460	1,400	< 1,400 U
208-96-8	Acenaphthylene	340	1,400	< 1,400 U
99-09-2	3-Nitroaniline	2700	7,100	< 7,100 U
83-32-9	Acenaphthene	360	1,400	< 1,400 U
51-28-5	2,4-Dinitrophenol	2900	14,000	< 14,000 U
100-02-7	4-Nitrophenol	3100	7,100	< 7,100 U
132-64-9	Dibenzofuran	330	1,400	< 1,400 U
606-20-2	2,6-Dinitrotoluene	1900	7,100	< 7,100 U
121-14-2	2,4-Dinitrotoluene	1600	7,100	< 7,100 U
84-66-2	Diethylphthalate	1300	1,400	< 1,400 U
7005-72-3	4-Chlorophenyl-phenylether	490	1,400	< 1,400 U
86-73-7	Fluorene	350	1,400	< 1,400 U
100-01-6	4-Nitroaniline	2500	7,100	< 7,100 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: UP-CB-A6-20130626-S**
Extraction Method: SW3546 **DILUTION**

Lab Sample ID: WY32C QC Report No: WY32-SAIC
LIMS ID: 13-15395 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 08/02/13 14:14

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	3600	14,000	< 14,000 U
86-30-6	N-Nitrosodiphenylamine	680	1,400	< 1,400 U
101-55-3	4-Bromophenyl-phenylether	430	1,400	< 1,400 U
118-74-1	Hexachlorobenzene	340	1,400	< 1,400 U
87-86-5	Pentachlorophenol	2200	7,100	< 7,100 U
85-01-8	**Phenanthrene**	**330**	**1,400**	**2,000**
86-74-8	Carbazole	520	1,400	< 1,400 U
120-12-7	Anthracene	420	1,400	< 1,400 U
84-74-2	**Di-n-Butylphthalate**	**380**	**1,400**	**1,100 J**
206-44-0	**Fluoranthene**	**320**	**1,400**	**2,100**
129-00-0	**Pyrene**	**390**	**1,400**	**2,500**
85-68-7	**Butylbenzylphthalate**	**570**	**1,400**	**1,800**
91-94-1	3,3'-Dichlorobenzidine	2200	7,100	< 7,100 U
56-55-3	Benzo(a)anthracene	370	1,400	< 1,400 U
117-81-7	**bis(2-Ethylhexyl)phthalate**	**2000**	**3,500**	**54,000**
218-01-9	**Chrysene**	**370**	**1,400**	**1,100 J**
117-84-0	Di-n-Octyl phthalate	620	1,400	< 1,400 U
50-32-8	Benzo(a)pyrene	460	1,400	< 1,400 U
193-39-5	Indeno(1,2,3-cd)pyrene	420	1,400	< 1,400 U
53-70-3	Dibenz(a,h)anthracene	440	1,400	< 1,400 U
191-24-2	**Benzo(g,h,i)perylene**	**410**	**1,400**	**920 J**
62-53-3	Aniline	1200	7,100	< 7,100 U
62-75-9	N-Nitrosodimethylamine	1600	2,800	< 2,800 U
90-12-0	1-Methylnaphthalene	420	1,400	< 1,400 U
TOTBFA	**Total Benzofluoranthenes**	**720**	**2,800**	**1,100 J**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	72.0%	2-Fluorobiphenyl	72.0%
d14-p-Terphenyl	90.0%	d4-1,2-Dichlorobenzene	66.0%
d5-Phenol	84.0%	2-Fluorophenol	92.0%
2,4,6-Tribromophenol	96.0%	d4-2-Chlorophenol	88.0%

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
209977

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-072513	57.6%	57.4%	71.6%	54.2%	74.1%	70.4%	82.4%	75.3%	0
LCS-072513	61.0%	61.8%	77.4%	57.8%	84.3%	79.7%	86.9%	83.3%	0
UP-CB-B8-20130626-	54.0%	64.8%	67.2%	52.2%	78.4%	74.0%	80.8%	77.6%	0
UP-CB-B8-20130626- DL	84.0%	96.0%	108%	84.0%	96.0%	104%	112%	104%	0
UP-CB-B8-20130626- MS	63.0%	78.0%	75.0%	58.8%	90.8%	81.6%	99.6%	91.2%	0
UP-CB-B8-20130626- MSD	59.4%	74.4%	72.6%	54.6%	84.0%	74.8%	93.6%	84.8%	0
UP-MHF-165-2013062	60.0%	76.8%	69.6%	54.6%	79.6%	73.2%	96.0%	81.6%	0
UP-CB-A6-20130626-	68.4%	84.0%	76.2%	63.0%	88.8%	82.4%	104%	92.8%	0
UP-CB-A6-20130626- DL	72.0%	72.0%	90.0%	66.0%	84.0%	92.0%	96.0%	88.0%	0

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

Prep Method: SW3546
Log Number Range: 13-15393 to 13-15395

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: UP-CB-B8-20130626-S
MS/MSD

Lab Sample ID: WY32A
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized:
Reported: 08/05/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted MS/MSD: 07/25/13

Date Analyzed MS: 08/01/13 19:47
MSD: 08/01/13 20:25
Instrument/Analyst MS: NT10/YZ
MSD: NT10/YZ
GPC Cleanup: Yes

Sample Amount MS: 4.86 g-dry-wt
MSD: 4.84 g-dry-wt
Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL
Dilution Factor MS: 3.00
MSD: 3.00
Percent Moisture: 31.0 %

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Phenol	180 B	951 B	1030	74.9%	837 B	1030	63.8%	12.8%
Bis-(2-Chloroethyl) Ether	< 120 U	704	1030	68.3%	620	1030	60.2%	12.7%
2-Chlorophenol	< 120 U	710	1030	68.9%	632	1030	61.4%	11.6%
1,3-Dichlorobenzene	< 120 U	667	1030	64.8%	576	1030	55.9%	14.6%
1,4-Dichlorobenzene	< 120 U	698	1030	67.8%	638	1030	61.9%	9.0%
Benzyl Alcohol	< 120 U	907	1030	88.1%	3000	1030	291%	107%
1,2-Dichlorobenzene	< 120 U	691	1030	67.1%	614	1030	59.6%	11.8%
2-Methylphenol	< 120 U	741	1030	71.9%	676	1030	65.6%	9.2%
2,2'-Oxybis(1-Chloropropane)	< 120 U	716	1030	69.5%	645	1030	62.6%	10.4%
4-Methylphenol	540	2060	2060	73.8%	1900	2070	65.7%	8.1%
N-Nitroso-Di-N-Propylamine	< 120 U	821	1030	79.7%	700	1030	68.0%	15.9%
Hexachloroethane	< 120 U	599	1030	58.2%	595	1030	57.8%	0.7%
Nitrobenzene	< 120 U	710	1030	68.9%	632	1030	61.4%	11.6%
Isophorone	< 120 U	827	1030	80.3%	725	1030	70.4%	13.1%
2-Nitrophenol	< 120 U	414	1030	40.2%	415	1030	40.3%	0.2%
2,4-Dimethylphenol	< 620 U	2310	3090	74.8%	2100	3100	67.7%	9.5%
Benzoic Acid	840 J	4870	5660	71.2%	4560	5680	65.5%	6.6%
bis(2-Chloroethoxy) Methane	< 120 U	790	1030	76.7%	719	1030	69.8%	9.4%
2,4-Dichlorophenol	< 620 U	2570	3090	83.2%	2130	3100	68.7%	18.7%
1,2,4-Trichlorobenzene	< 120 U	753	1030	73.1%	682	1030	66.2%	9.9%
Naphthalene	220	975	1030	73.3%	886	1030	64.7%	9.6%
4-Chloroaniline	< 620 U	< 617 U	3090	NA	304 J	3100	9.8%	NA
Hexachlorobutadiene	< 120 U	741	1030	71.9%	669	1030	65.0%	10.2%
4-Chloro-3-methylphenol	< 620 U	2510	3090	81.2%	2310	3100	74.5%	8.3%
2-Methylnaphthalene	250	1090	1030	81.6%	973	1030	70.2%	11.3%
Hexachlorocyclopentadiene	< 620 U	< 617 U	3090	NA	< 620 U	3100	NA	NA
2,4,6-Trichlorophenol	< 620 U	2600	3090	84.1%	2370	3100	76.5%	9.3%
2,4,5-Trichlorophenol	< 620 U	2690	3090	87.1%	2430	3100	78.4%	10.2%
2-Chloronaphthalene	< 120 U	895	1030	86.9%	800	1030	77.7%	11.2%
2-Nitroaniline	< 620 U	2470	3090	79.9%	2480	3100	80.0%	0.4%
Dimethylphthalate	< 120 U	944	1030	91.7%	855	1030	83.0%	9.9%
Acenaphthylene	< 120 U	833	1030	80.9%	756	1030	73.4%	9.7%
3-Nitroaniline	< 620 U	< 617 U	3090	NA	< 620 U	3100	NA	NA
Acenaphthene	470	1700	1030	119%	1290	1030	79.6%	27.4%
2,4-Dinitrophenol	< 1200 U	1090 J	5660	19.3%	787 J	5680	13.9%	32.3%
4-Nitrophenol	< 620 U	2440	3090	79.0%	2440	3100	78.7%	0.0%
Dibenzofuran	400	1480	1030	105%	1160	1030	73.8%	24.2%
2,6-Dinitrotoluene	< 620 U	2130	3090	68.9%	2210	3100	71.3%	3.7%
2,4-Dinitrotoluene	< 620 U	2140	3090	69.3%	2110	3100	68.1%	1.4%
Diethylphthalate	< 120 U	846	1030	82.1%	818	1030	79.4%	3.4%
4-Chlorophenyl-phenylether	< 120 U	975	1030	94.7%	899	1030	87.3%	8.1%
Fluorene	700	2000	1030	126%	1520	1030	79.6%	27.3%
4-Nitroaniline	< 620 U	< 617 U	3090	NA	< 620 U	3100	NA	NA
4,6-Dinitro-2-Methylphenol	< 1200 U	1690	5660	29.9%	1330	5680	23.4%	23.8%
N-Nitrosodiphenylamine	170	1010	1030	81.6%	948	1030	75.5%	6.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: UP-CB-B8-20130626-S
MS/MSD

Lab Sample ID: WY32A
LIMS ID: 13-15393
Matrix: Sediment
Date Analyzed MS: 08/01/13 19:47
MSD: 08/01/13 20:25

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
209977

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
4-Bromophenyl-phenylether	< 120 U	840	1030	81.6%	775	1030	75.2%	8.0%
Hexachlorobenzene	< 120 U	907	1030	88.1%	806	1030	78.3%	11.8%
Pentachlorophenol	< 620 U	2270	3090	73.5%	1920	3100	61.9%	16.7%
Phenanthrene	3700	6980	1030	318%	4870	1030	114%	35.6%
Carbazole	610	2580	1030	191%	2190	1030	153%	16.4%
Anthracene	600	1890	1030	125%	1690	1030	106%	11.2%
Di-n-Butylphthalate	590	1270	1030	66.0%	1210	1030	60.2%	4.8%
Fluoranthene	2700	4990	1030	222%	3770	1030	104%	27.9%
Pyrene	2300	4120	1030	177%	3170	1030	84.5%	26.1%
Butylbenzylphthalate	12000	10100	1030	NA	8650	1030	NA	15.5%
3,3'-Dichlorobenzidine	< 620 U	< 617 U	3090	NA	< 620 U	3100	NA	NA
Benzo(a)anthracene	510	1510	1030	97.1%	1380	1030	84.5%	9.0%
bis(2-Ethylhexyl)phthalate	59000 E	88300 E	1030	NA	61300 E	1030	NA	36.1%
Chrysene	1000	2290	1030	125%	2110	1030	108%	8.2%
Di-n-Octyl phthalate	580	2970	1030	232%	1320	1030	71.8%	76.9%
Benzo(a)pyrene	320	1180	1030	83.5%	1060	1030	71.8%	10.7%
Indeno(1,2,3-cd)pyrene	160	790	1030	61.2%	663	1030	48.8%	17.5%
Dibenz(a,h)anthracene	< 120 U	537	1030	52.1%	471	1030	45.7%	13.1%
Benzo(g,h,i)perylene	430	1030	1030	58.3%	812	1030	37.1%	23.7%
Aniline	< 620 U	< 617 U	3090	NA	< 620 U	3100	NA	NA
N-Nitrosodimethylamine	< 250 U	1510	3090	48.9%	1420	3100	45.8%	6.1%
1-Methylnaphthalene	140	1000	1030	83.5%	886	1030	72.4%	12.1%
Total Benzofluoranthenes	800	2610	2060	87.9%	2410	2070	77.8%	8.0%

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

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: UP-CB-B8-20130626-S
MATRIX SPIKE

Lab Sample ID: WY32A
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized: MW
Reported: 08/05/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/25/13
Date Analyzed: 08/01/13 19:47
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 4.86 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 31.0%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	51	120	---
111-44-4	Bis-(2-Chloroethyl) Ether	42	120	---
95-57-8	2-Chlorophenol	40	120	---
541-73-1	1,3-Dichlorobenzene	31	120	---
106-46-7	1,4-Dichlorobenzene	27	120	---
100-51-6	Benzyl Alcohol	92	120	---
95-50-1	1,2-Dichlorobenzene	29	120	---
95-48-7	2-Methylphenol	48	120	---
108-60-1	2,2'-Oxybis(1-Chloropropane)	35	120	---
106-44-5	4-Methylphenol	91	120	---
621-64-7	N-Nitroso-Di-N-Propylamine	67	120	---
67-72-1	Hexachloroethane	35	120	---
98-95-3	Nitrobenzene	49	120	---
78-59-1	Isophorone	48	120	---
88-75-5	2-Nitrophenol	43	120	---
105-67-9	2,4-Dimethylphenol	240	620	---
65-85-0	Benzoic Acid	360	1,200	---
111-91-1	bis(2-Chloroethoxy) Methane	39	120	---
120-83-2	2,4-Dichlorophenol	200	620	---
120-82-1	1,2,4-Trichlorobenzene	37	120	---
91-20-3	Naphthalene	32	120	---
106-47-8	4-Chloroaniline	210	620	---
87-68-3	Hexachlorobutadiene	31	120	---
59-50-7	4-Chloro-3-methylphenol	180	620	---
91-57-6	2-Methylnaphthalene	35	120	---
77-47-4	Hexachlorocyclopentadiene	250	620	---
88-06-2	2,4,6-Trichlorophenol	160	620	---
95-95-4	2,4,5-Trichlorophenol	170	620	---
91-58-7	2-Chloronaphthalene	27	120	---
88-74-4	2-Nitroaniline	190	620	---
131-11-3	Dimethylphthalate	40	120	---
208-96-8	Acenaphthylene	29	120	---
99-09-2	3-Nitroaniline	230	620	---
83-32-9	Acenaphthene	32	120	---
51-28-5	2,4-Dinitrophenol	250	1,200	---
100-02-7	4-Nitrophenol	270	620	---
132-64-9	Dibenzofuran	28	120	---
606-20-2	2,6-Dinitrotoluene	160	620	---
121-14-2	2,4-Dinitrotoluene	140	620	---
84-66-2	Diethylphthalate	110	120	---
7005-72-3	4-Chlorophenyl-phenylether	43	120	---
86-73-7	Fluorene	31	120	---
100-01-6	4-Nitroaniline	220	620	---

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: UP-CB-B8-20130626-S**
Extraction Method: SW3546 **MATRIX SPIKE**

Lab Sample ID: WY32A QC Report No: WY32-SAIC
LIMS ID: 13-15393 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 08/01/13 19:47

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	310	1,200	---
86-30-6	N-Nitrosodiphenylamine	59	120	---
101-55-3	4-Bromophenyl-phenylether	37	120	---
118-74-1	Hexachlorobenzene	29	120	---
87-86-5	Pentachlorophenol	190	620	---
85-01-8	Phenanthrene	29	120	---
86-74-8	Carbazole	45	120	---
120-12-7	Anthracene	37	120	---
84-74-2	Di-n-Butylphthalate	33	120	---
206-44-0	Fluoranthene	28	120	---
129-00-0	Pyrene	34	120	---
85-68-7	Butylbenzylphthalate	50	120	---
91-94-1	3,3'-Dichlorobenzidine	190	620	---
56-55-3	Benzo(a)anthracene	32	120	---
117-81-7	bis(2-Ethylhexyl)phthalate	180	310	---
218-01-9	Chrysene	32	120	---
117-84-0	Di-n-Octyl phthalate	54	120	---
50-32-8	Benzo(a)pyrene	40	120	---
193-39-5	Indeno(1,2,3-cd)pyrene	37	120	---
53-70-3	Dibenz(a,h)anthracene	38	120	---
191-24-2	Benzo(g,h,i)perylene	36	120	---
62-53-3	Aniline	100	620	---
62-75-9	N-Nitrosodimethylamine	140	250	---
90-12-0	1-Methylnaphthalene	37	120	---
TOTBFA	Total Benzofluoranthenes	63	250	---

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.0%	2-Fluorobiphenyl	78.0%
d14-p-Terphenyl	75.0%	d4-1,2-Dichlorobenzene	58.8%
d5-Phenol	90.8%	2-Fluorophenol	81.6%
2,4,6-Tribromophenol	99.6%	d4-2-Chlorophenol	91.2%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: UP-CB-B8-20130626-S
MATRIX SPIKE DUPLICATE

Lab Sample ID: WY32A
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized: MW
Reported: 08/05/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/25/13
Date Analyzed: 08/01/13 20:25
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 4.84 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 31.0%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	51	120	---
111-44-4	Bis-(2-Chloroethyl) Ether	42	120	---
95-57-8	2-Chlorophenol	40	120	---
541-73-1	1,3-Dichlorobenzene	31	120	---
106-46-7	1,4-Dichlorobenzene	27	120	---
100-51-6	Benzyl Alcohol	92	120	---
95-50-1	1,2-Dichlorobenzene	29	120	---
95-48-7	2-Methylphenol	49	120	---
108-60-1	2,2'-Oxybis(1-Chloropropane)	35	120	---
106-44-5	4-Methylphenol	91	120	---
621-64-7	N-Nitroso-Di-N-Propylamine	67	120	---
67-72-1	Hexachloroethane	35	120	---
98-95-3	Nitrobenzene	49	120	---
78-59-1	Isophorone	48	120	---
88-75-5	2-Nitrophenol	43	120	---
105-67-9	2,4-Dimethylphenol	240	620	---
65-85-0	Benzoic Acid	370	1,200	---
111-91-1	bis(2-Chloroethoxy) Methane	39	120	---
120-83-2	2,4-Dichlorophenol	200	620	---
120-82-1	1,2,4-Trichlorobenzene	37	120	---
91-20-3	Naphthalene	33	120	---
106-47-8	4-Chloroaniline	210	620	---
87-68-3	Hexachlorobutadiene	31	120	---
59-50-7	4-Chloro-3-methylphenol	180	620	---
91-57-6	2-Methylnaphthalene	35	120	---
77-47-4	Hexachlorocyclopentadiene	260	620	---
88-06-2	2,4,6-Trichlorophenol	160	620	---
95-95-4	2,4,5-Trichlorophenol	170	620	---
91-58-7	2-Chloronaphthalene	28	120	---
88-74-4	2-Nitroaniline	190	620	---
131-11-3	Dimethylphthalate	40	120	---
208-96-8	Acenaphthylene	30	120	---
99-09-2	3-Nitroaniline	230	620	---
83-32-9	Acenaphthene	32	120	---
51-28-5	2,4-Dinitrophenol	260	1,200	---
100-02-7	4-Nitrophenol	280	620	---
132-64-9	Dibenzofuran	29	120	---
606-20-2	2,6-Dinitrotoluene	170	620	---
121-14-2	2,4-Dinitrotoluene	140	620	---
84-66-2	Diethylphthalate	110	120	---
7005-72-3	4-Chlorophenyl-phenylether	43	120	---
86-73-7	Fluorene	31	120	---
100-01-6	4-Nitroaniline	220	620	---

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: UP-CB-B8-20130626-S
MATRIX SPIKE DUPLICATE

Lab Sample ID: WY32A
LIMS ID: 13-15393
Matrix: Sediment
Date Analyzed: 08/01/13 20:25

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	310	1,200	---
86-30-6	N-Nitrosodiphenylamine	59	120	---
101-55-3	4-Bromophenyl-phenylether	38	120	---
118-74-1	Hexachlorobenzene	29	120	---
87-86-5	Pentachlorophenol	190	620	---
85-01-8	Phenanthrene	29	120	---
86-74-8	Carbazole	46	120	---
120-12-7	Anthracene	37	120	---
84-74-2	Di-n-Butylphthalate	33	120	---
206-44-0	Fluoranthene	28	120	---
129-00-0	Pyrene	34	120	---
85-68-7	Butylbenzylphthalate	50	120	---
91-94-1	3,3'-Dichlorobenzidine	190	620	---
56-55-3	Benzo(a)anthracene	32	120	---
117-81-7	bis(2-Ethylhexyl)phthalate	180	310	---
218-01-9	Chrysene	32	120	---
117-84-0	Di-n-Octyl phthalate	54	120	---
50-32-8	Benzo(a)pyrene	40	120	---
193-39-5	Indeno(1,2,3-cd)pyrene	37	120	---
53-70-3	Dibenz(a,h)anthracene	38	120	---
191-24-2	Benzo(g,h,i)perylene	36	120	---
62-53-3	Aniline	100	620	---
62-75-9	N-Nitrosodimethylamine	140	250	---
90-12-0	1-Methylnaphthalene	37	120	---
TOTBFA	Total Benzofluoranthenes	63	250	---

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	59.4%	2-Fluorobiphenyl	74.4%
d14-p-Terphenyl	72.6%	d4-1,2-Dichlorobenzene	54.6%
d5-Phenol	84.0%	2-Fluorophenol	74.8%
2,4,6-Tribromophenol	93.6%	d4-2-Chlorophenol	84.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LCS-072513
LAB CONTROL

Lab Sample ID: LCS-072513
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized:
Reported: 08/05/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/25/13
Date Analyzed: 08/01/13 17:16
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

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

Analyte	Lab Control	Spike Added	Recovery
Phenol	362 B	500	72.4%
Bis-(2-Chloroethyl) Ether	321	500	64.2%
2-Chlorophenol	306	500	61.2%
1,3-Dichlorobenzene	311	500	62.2%
1,4-Dichlorobenzene	315	500	63.0%
Benzyl Alcohol	242	500	48.4%
1,2-Dichlorobenzene	323	500	64.6%
2-Methylphenol	286	500	57.2%
2,2'-Oxybis(1-Chloropropane)	325	500	65.0%
4-Methylphenol	609	1000	60.9%
N-Nitroso-Di-N-Propylamine	304	500	60.8%
Hexachloroethane	312	500	62.4%
Nitrobenzene	342	500	68.4%
Isophorone	349	500	69.8%
2-Nitrophenol	309	500	61.8%
2,4-Dimethylphenol	522	1500	34.8%
Benzoic Acid	1940	2750	70.5%
bis(2-Chloroethoxy) Methane	337	500	67.4%
2,4-Dichlorophenol	1040	1500	69.3%
1,2,4-Trichlorobenzene	318	500	63.6%
Naphthalene	308	500	61.6%
4-Chloroaniline	142	1500	9.5%
Hexachlorobutadiene	316	500	63.2%
4-Chloro-3-methylphenol	1130	1500	75.3%
2-Methylnaphthalene	313	500	62.6%
Hexachlorocyclopentadiene	794	1500	52.9%
2,4,6-Trichlorophenol	973	1500	64.9%
2,4,5-Trichlorophenol	1030	1500	68.7%
2-Chloronaphthalene	337	500	67.4%
2-Nitroaniline	1200	1500	80.0%
Dimethylphthalate	372	500	74.4%
Acenaphthylene	307	500	61.4%
3-Nitroaniline	477	1500	31.8%
Acenaphthene	328	500	65.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LCS-072513
LAB CONTROL

Lab Sample ID: LCS-072513
LIMS ID: 13-15393
Matrix: Sediment
Date Analyzed: 08/01/13 17:16

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977

Analyte	Lab Control	Spike Added	Recovery
2,4-Dinitrophenol	1680	2750	61.1%
4-Nitrophenol	1160	1500	77.3%
Dibenzofuran	337	500	67.4%
2,6-Dinitrotoluene	1180	1500	78.7%
2,4-Dinitrotoluene	1210	1500	80.7%
Diethylphthalate	431	500	86.2%
4-Chlorophenyl-phenylether	343	500	68.6%
Fluorene	320	500	64.0%
4-Nitroaniline	827	1500	55.1%
4,6-Dinitro-2-Methylphenol	2030	2750	73.8%
N-Nitrosodiphenylamine	339	500	67.8%
4-Bromophenyl-phenylether	358	500	71.6%
Hexachlorobenzene	362	500	72.4%
Pentachlorophenol	1020	1500	68.0%
Phenanthrene	373	500	74.6%
Carbazole	703	500	141%
Anthracene	317	500	63.4%
Di-n-Butylphthalate	420	500	84.0%
Fluoranthene	372	500	74.4%
Pyrene	372	500	74.4%
Butylbenzylphthalate	437	500	87.4%
3,3'-Dichlorobenzidine	94.0 J	1500	6.3%
Benzo(a)anthracene	351	500	70.2%
bis(2-Ethylhexyl)phthalate	393	500	78.6%
Chrysene	353	500	70.6%
Di-n-Octyl phthalate	338	500	67.6%
Benzo(a)pyrene	322	500	64.4%
Indeno(1,2,3-cd)pyrene	356	500	71.2%
Dibenz(a,h)anthracene	284	500	56.8%
Benzo(g,h,i)perylene	314	500	62.8%
Aniline	57.0 J	1500	3.8%
N-Nitrosodimethylamine	801	1500	53.4%
1-Methylnaphthalene	334	500	66.8%
Total Benzofluoranthenes	772	1000	77.2%

Semivolatile Surrogate Recovery	
d5-Nitrobenzene	61.0%
2-Fluorobiphenyl	61.8%
d14-p-Terphenyl	77.4%
d4-1,2-Dichlorobenzene	57.8%
d5-Phenol	84.3%
2-Fluorophenol	79.7%
2,4,6-Tribromophenol	86.9%
d4-2-Chlorophenol	83.3%

Reported in µg/kg (ppb)

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WY32MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No: WY32
Project: NPDES SAMPLING SUPPO

Lab File ID: WY32MB
Date Extracted: 07/25/13

Instrument ID: NT10
Date Analyzed: 08/01/13

Matrix: SOLID
Time Analyzed: 1638

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WY32LCSS1	WY32LCSS1	WY32SB	08/01/13
02	UP-CB-B8-2013062	WY32A	WY32A	08/01/13
03	UP-CB-B8-201306	WY32AMS	WY32AMS	08/01/13
04	UP-CB-B8-201306	WY32AMSD	WY32AMSD	08/01/13
05	UP-MHF-165-20130	WY32B	WY32B	08/01/13
06	UP-CB-A6-2013062	WY32C	WY32C	08/01/13
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FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MB-072513**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-072513
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized:
Reported: 08/05/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 07/25/13
Date Analyzed: 08/01/13 16:38
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

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

CAS Number	Analyte	DL	LOQ	Result
108-95-2	**Phenol**	**8.2**	**20**	**11 J**
111-44-4	Bis-(2-Chloroethyl) Ether	6.8	20	< 20 U
95-57-8	2-Chlorophenol	6.5	20	< 20 U
541-73-1	1,3-Dichlorobenzene	5.1	20	< 20 U
106-46-7	1,4-Dichlorobenzene	4.4	20	< 20 U
100-51-6	Benzyl Alcohol	15	20	< 20 U
95-50-1	1,2-Dichlorobenzene	4.7	20	< 20 U
95-48-7	2-Methylphenol	7.8	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	5.7	20	< 20 U
106-44-5	4-Methylphenol	15	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	11	20	< 20 U
67-72-1	Hexachloroethane	5.6	20	< 20 U
98-95-3	Nitrobenzene	8.0	20	< 20 U
78-59-1	Isophorone	7.8	20	< 20 U
88-75-5	2-Nitrophenol	6.9	20	< 20 U
105-67-9	2,4-Dimethylphenol	39	100	< 100 U
65-85-0	Benzoic Acid	59	200	< 200 U
111-91-1	bis(2-Chloroethoxy) Methane	6.3	20	< 20 U
120-83-2	2,4-Dichlorophenol	32	100	< 100 U
120-82-1	1,2,4-Trichlorobenzene	6.0	20	< 20 U
91-20-3	Naphthalene	5.2	20	< 20 U
106-47-8	4-Chloroaniline	34	100	< 100 U
87-68-3	Hexachlorobutadiene	5.0	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	29	100	< 100 U
91-57-6	2-Methylnaphthalene	5.7	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	41	100	< 100 U
88-06-2	2,4,6-Trichlorophenol	25	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	27	100	< 100 U
91-58-7	2-Chloronaphthalene	4.4	20	< 20 U
88-74-4	2-Nitroaniline	30	100	< 100 U
131-11-3	Dimethylphthalate	6.4	20	< 20 U
208-96-8	Acenaphthylene	4.8	20	< 20 U
99-09-2	3-Nitroaniline	38	100	< 100 U
83-32-9	Acenaphthene	5.1	20	< 20 U
51-28-5	2,4-Dinitrophenol	41	200	< 200 U
100-02-7	4-Nitrophenol	44	100	< 100 U
132-64-9	Dibenzofuran	4.6	20	< 20 U
606-20-2	2,6-Dinitrotoluene	27	100	< 100 U
121-14-2	2,4-Dinitrotoluene	23	100	< 100 U
84-66-2	Diethylphthalate	18	20	< 20 U
7005-72-3	4-Chlorophenyl-phenylether	7.0	20	< 20 U
86-73-7	Fluorene	5.0	20	< 20 U
100-01-6	4-Nitroaniline	35	100	< 100 U

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MB-072513
METHOD BLANK

Lab Sample ID: MB-072513
LIMS ID: 13-15393
Matrix: Sediment
Date Analyzed: 08/01/13 16:38

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	50	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	9.6	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	6.1	20	< 20 U
118-74-1	Hexachlorobenzene	4.7	20	< 20 U
87-86-5	Pentachlorophenol	31	100	< 100 U
85-01-8	Phenanthrene	4.7	20	< 20 U
86-74-8	Carbazole	7.4	20	< 20 U
120-12-7	Anthracene	5.9	20	< 20 U
84-74-2	Di-n-Butylphthalate	5.3	20	< 20 U
206-44-0	Fluoranthene	4.5	20	< 20 U
129-00-0	Pyrene	5.6	20	< 20 U
85-68-7	Butylbenzylphthalate	8.0	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	31	100	< 100 U
56-55-3	Benzo(a)anthracene	5.2	20	< 20 U
117-81-7	bis(2-Ethylhexyl)phthalate	29	50	< 50 U
218-01-9	Chrysene	5.2	20	< 20 U
117-84-0	Di-n-Octyl phthalate	8.7	20	< 20 U
50-32-8	Benzo(a)pyrene	6.5	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	6.0	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	6.2	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	5.8	20	< 20 U
62-53-3	Aniline	17	100	< 100 U
62-75-9	N-Nitrosodimethylamine	22	40	< 40 U
90-12-0	1-Methylnaphthalene	6.0	20	< 20 U
TOTBFA	Total Benzofluoranthenes	10	40	< 40 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	57.6%	2-Fluorobiphenyl	57.4%
d14-p-Terphenyl	71.6%	d4-1,2-Dichlorobenzene	54.2%
d5-Phenol	74.1%	2-Fluorophenol	70.4%
2,4,6-Tribromophenol	82.4%	d4-2-Chlorophenol	75.3%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES

DFTPP Injection Date: 07/30/13 DFTPP Injection Time: 1139

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	18.4
68	Less than 2.0% of mass 69	0.6 (1.6)1
69	Mass 69 relative abundance	38.8
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	47.4
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 60.0% of mass 198	25.7
365	Greater than 1.0% of mass 198	3.16
441	0.0 - 24.0% of mass 442	13.6 (15.4)2
442	50.0 - 200.0% of mass 198	88.2
443	15.0 - 24.0% of mass 442	17.3 (19.7)2

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		IC0726A	IC0730A	07/30/13	1154
02		IC0730C	IC0730C	07/30/13	1311
03		IC0730D	IC0730D	07/30/13	1349
04		IC0730F	IC0730F	07/30/13	1505
05		IC0730G	IC0730G	07/30/13	1543
06		IC0730H	IC0730H	07/30/13	1621
07		IC0730I	IC0730I	07/30/13	1659
08					
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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES

DFTPP Injection Date: 08/01/13 DFTPP Injection Time: 1507

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	17.3
68	Less than 2.0% of mass 69	0.6 (1.6)1
69	Mass 69 relative abundance	37.2
70	Less than 2.0% of mass 69	0.1 (0.3)1
127	10.0 - 80.0% of mass 198	46.2
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	26.5
365	Greater than 1.0% of mass 198	3.49
441	0.0 - 24.0% of mass 442	15.5 (15.0)2
442	50.0 - 200.0% of mass 198	103.4
443	15.0 - 24.0% of mass 442	20.1 (19.5)2

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC0801A	CC0801A	08/01/13	1600
02	WY32MBS1	WY32MBS1	WY32MB	08/01/13	1638
03	WY32LCSS1	WY32LCSS1	WY32SB	08/01/13	1716
04	UP-CB-B8-2013062	WY32A	WY32A	08/01/13	1909
05	UP-CB-B8-201306	WY32AMS	WY32AMS	08/01/13	1947
06	UP-CB-B8-201306	WY32AMSD	WY32AMSD	08/01/13	2025
07	UP-MHF-165-20130	WY32B	WY32B	08/01/13	2103
08	UP-CB-A6-2013062	WY32C	WY32C	08/01/13	2141
09					
10					
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20					
21					
22					

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WY32 Project: NPDES

Instrument ID: NT10 Calibration Date: 07/30/13

Method = ABN.m
Cal levels = 7

LAB FILE ID: RRF0.2=IC0730C RRF0.5=IC0730I RRF1 =IC0730D
RRF2.5=IC0730G RRF5 =IC0730A RRF10 =IC0730E
RRF20 =IC0730B

COMPOUND	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF 20	RRF	%RSD /R^2
Phenol	2.031	2.282	2.150	2.293	2.112	2.307	2.030	2.172	5.6
Bis(2-Chloroethyl)ether	1.755	1.877	1.713	1.715	1.569	1.670	1.531	1.690	6.9
2-Chlorophenol	1.515	1.605	1.544	1.560	1.486	1.594	1.610	1.559	3.0
1,3-Dichlorobenzene	1.697	1.706	1.630	1.583	1.507	1.580	1.496	1.600	5.2
1,4-Dichlorobenzene	1.689	1.625	1.588	1.531	1.474	1.561	1.459	1.561	5.2
1,2-Dichlorobenzene	1.564	1.550	1.509	1.504	1.402	1.481	1.374	1.483	4.8
Benzyl alcohol	0.692	0.911	0.893	0.998	0.968	1.050	0.900	0.916	12.5
2,2'-oxybis(1-Chloropropane)	0.553	0.533	0.516	0.514	0.482	0.511	0.473	0.512	5.4
2-Methylphenol	1.437	1.578	1.538	1.581	1.466	1.581	1.452	1.519	4.3
Hexachloroethane	0.674	0.703	0.676	0.650	0.615	0.663	0.618	0.657	4.9
N-Nitroso-di-n-propylamine	1.107	1.104	1.046	1.080	0.989	1.075	0.987	1.055	4.8
4-Methylphenol	1.463	1.636	1.506	1.625	1.569	1.650	1.466	1.559	5.2
Nitrobenzene	0.440	0.450	0.416	0.446	0.401	0.433	0.411	0.428	4.4
Isophorone	0.738	0.773	0.740	0.786	0.731	0.801	0.775	0.763	3.5
2-Nitrophenol	0.223	0.219	0.234	0.252	0.244	0.254	0.249	0.239	5.8
2,4-Dimethylphenol	0.405	0.415	0.408	0.421	0.392	0.399	0.378	0.402	3.6
Bis(2-Chloroethoxy)methane	0.537	0.524	0.512	0.503	0.465	0.494	0.472	0.501	5.3
2,4-Dichlorophenol	0.288	0.334	0.366	0.342	0.359	0.368	0.350	0.344	8.0
1,2,4-Trichlorobenzene	0.389	0.376	0.366	0.361	0.340	0.352	0.369	0.365	4.4
Naphthalene	1.142	1.126	1.090	1.092	1.022	1.078	1.037	1.084	4.0
Benzoic acid		0.227	0.298	0.347	0.356	0.382	0.326	0.323	17.0
4-Chloroaniline	0.440	0.450	0.458	0.474	0.459	0.512	0.448	0.463	5.2
Hexachlorobutadiene	0.228	0.208	0.204	0.203	0.191	0.201	0.193	0.204	6.0
4-Chloro-3-methylphenol	0.249	0.333	0.334	0.374	0.353	0.379	0.362	0.340	12.9
2-Methylnaphthalene	0.777	0.775	0.758	0.772	0.742	0.781	0.759	0.766	1.8
Hexachlorocyclopentadiene		0.463	0.482	0.474	0.478	0.485	0.489	0.478	1.9
2,4,6-Trichlorophenol	0.441	0.442	0.465	0.465	0.462	0.462	0.456	0.456	2.3
2,4,5-Trichlorophenol	0.405	0.443	0.456	0.491	0.490	0.497	0.484	0.466	7.2
2-Chloronaphthalene	1.245	1.219	1.226	1.191	1.159	1.174	1.150	1.195	3.0
2-Nitroaniline	0.252	0.295	0.337	0.344	0.338	0.347	0.339	0.322	10.9
Acenaphthylene	2.065	2.030	2.022	1.953	1.872	1.844	1.779	1.938	5.6
Dimethylphthalate	1.390	1.340	1.366	1.324	1.277	1.253	1.189	1.306	5.4
2,6-Dinitrotoluene	0.307	0.308	0.319	0.318	0.314	0.313	0.299	0.311	2.3
Acenaphthene	1.189	1.149	1.156	1.145	1.125	1.151	1.132	1.150	1.8
3-Nitroaniline	0.233	0.271	0.304	0.270	0.255	0.273	0.232	0.262	9.6
2,4-Dinitrophenol		0.151	0.209	0.253	0.275	0.288	0.295	0.245	0.999
Dibenzofuran	1.765	1.706	1.713	1.701	1.647	1.676	1.638	1.692	2.6

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

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WY32 Project: NPDES

Instrument ID: NT10 Calibration Date: 07/30/13

Method = ABN.m
Cal levels = 7

LAB FILE ID: RRF0.2=IC0730C RRF0.5=IC0730I RRF1 =IC0730D
RRF2.5=IC0730G RRF5 =IC0730A RRF10 =IC0730E
RRF20 =IC0730B

COMPOUND	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF 20	RRF	%RSD /R^2
4-Nitrophenol		0.109	0.128	0.160	0.160	0.174	0.171	0.150	17.2
2,4-Dinitrotoluene	0.345	0.382	0.414	0.419	0.412	0.424	0.417	0.402	7.1
Fluorene	1.487	1.417	1.431	1.423	1.335	1.496	1.505	1.442	4.1
4-Chlorophenyl-phenylether	0.712	0.718	0.708	0.688	0.661	0.653	0.631	0.682	5.0
Diethylphthalate	1.321	1.327	1.334	1.301	1.238	1.238	1.193	1.279	4.3
4-Nitroaniline	0.285	0.252	0.266	0.276	0.260	0.289	0.304	0.276	6.6
4,6-Dinitro-2-methylphenol	0.149	0.170	0.193	0.204	0.199	0.199	0.199	0.188	10.9
N-Nitrosodiphenylamine (1)	0.550	0.521	0.541	0.522	0.483	0.461	0.461	0.506	7.4
4-Bromophenyl-phenylether	0.242	0.236	0.248	0.246	0.238	0.234	0.240	0.240	2.2
Hexachlorobenzene	0.294	0.259	0.268	0.257	0.248	0.240	0.238	0.258	7.5
Pentachlorophenol		0.178	0.200	0.205	0.206	0.202	0.205	0.199	5.4
Phenanthrene	1.141	1.092	1.109	1.124	1.066	1.066	1.087	1.098	2.6
Anthracene	1.200	1.147	1.155	1.194	1.149	1.146	1.152	1.163	2.0
Carbazole	0.947	0.891	0.867	0.587	0.456	0.570	0.703	0.717	0.996
Di-n-butylphthalate	1.195	1.150	1.229	1.279	1.239	1.274	1.302	1.238	4.3
Fluoranthene	1.354	1.319	1.338	1.367	1.317	1.361	1.375	1.347	1.7
Pyrene	1.440	1.376	1.437	1.457	1.427	1.438	1.474	1.436	2.1
Butylbenzylphthalate	0.502	0.453	0.512	0.535	0.520	0.520	0.527	0.510	5.3
Benzo(a)anthracene	1.376	1.312	1.326	1.316	1.263	1.260	1.282	1.305	3.1
3,3'-Dichlorobenzidine	0.619	0.471	0.468	0.397	0.422	0.527	0.595	0.500	16.8
Chrysene	1.198	1.129	1.154	1.124	1.103	1.110	1.126	1.135	2.9
bis(2-Ethylhexyl)phthalate	0.521	0.494	0.544	0.536	0.512	0.503	0.504	0.516	3.5
Di-n-octylphthalate	1.066	1.018	1.005	0.975	0.944	0.929	0.936	0.982	5.1
Benzo(b)fluoranthene	1.187	1.132	1.188	1.244	1.278	1.284	1.327	1.234	5.5
Benzo(k)fluoranthene	1.330	1.380	1.394	1.292	1.240	1.257	1.232	1.304	5.1
Benzo(a)pyrene	1.074	1.047	1.089	1.098	1.091	1.100	1.125	1.089	2.2
Indeno(1,2,3-cd)pyrene	1.226	1.198	1.287	1.295	1.287	1.315	1.339	1.278	3.9
Dibenzo(a,h)anthracene	0.981	0.929	1.016	1.019	1.002	1.022	1.046	1.002	3.8
Benzo(g,h,i)perylene	1.098	1.049	1.111	1.111	1.082	1.122	1.175	1.107	3.5
N-Nitrosodimethylamine	1.074	1.146	1.103	1.135	1.031	1.148	1.040	1.097	4.5
Aniline	4.940	5.002	4.859	4.872	4.537	4.780	4.255	4.749	5.6
Benzidine		0.319	0.365	0.202	0.171	0.179	0.266	0.250	0.995
Retene	0.555	0.523	0.547	0.549	0.543	0.543	0.564	0.546	2.3
Perylene	1.025	1.030	1.056	1.032	1.008	1.031	1.052	1.033	1.6
Pyridine	0.914	1.018	0.938	0.948	0.862	0.929	0.834	0.920	6.5
1-methylnaphthalene	0.726	0.708	0.687	0.697	0.674	0.708	0.689	0.698	2.5
Azobenzene (1,2-DP-Hydrazine	1.388	1.439	1.385	1.370	1.239	1.284	1.236	1.334	6.1

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

FORM VI SV-2

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WY32 Project: NPDES

Instrument ID: NT10 Calibration Date: 07/30/13

Method = ABN.m
Cal levels = 7

LAB FILE ID: RRF0.2=IC0730C RRF0.5=IC0730I RRF1 =IC0730D
RRF2.5=IC0730G RRF5 =IC0730A RRF10 =IC0730E
RRF20 =IC0730B

COMPOUND	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF 20	___ RRF	%RSD /R^2
2,3,4,6-Tetrachlorophenol	0.324	0.332	0.365	0.369	0.375	0.384	0.382	0.362	6.7
Total Benzofluoranthenes	1.227	1.191	1.225	1.210	1.198	1.210	1.210	1.210	1.1
2-Fluorophenol	1.606	1.641	1.614	1.644	1.556	1.672	1.548	1.612	2.8
Phenol-d5	1.880	2.199	2.083	2.216	2.150	2.366	2.220	2.159	6.9
2-Chlorophenol-d4	1.522	1.585	1.513	1.552	1.491	1.596	1.487	1.535	2.8
1,2-Dichlorobenzene-d4	1.148	1.150	1.070	1.088	1.021	1.077	1.017	1.082	4.9
Nitrobenzene-d5	0.474	0.497	0.472	0.495	0.457	0.497	0.476	0.481	3.2
2-Fluorobiphenyl	1.602	1.508	1.550	1.481	1.464	1.476	1.439	1.503	3.7
2,4,6-Tribromophenol	0.225	0.228	0.240	0.239	0.244	0.246	0.250	0.239	3.9
Terphenyl-d14	0.790	0.763	0.791	0.783	0.767	0.750	0.758	0.772	2.1

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

FORM VI SV-3

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WY32 Project: NPDES

Instrument ID: NT10 Cont. Calib. Date: 08/01/13

Init. Calib. Date: 07/30/13 Cont. Calib. Time: 1522

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Phenol	2.172	2.158	0.800	AVRG	-0.6
Bis(2-Chloroethyl)ether	1.690	1.567	0.700	AVRG	-7.3
2-Chlorophenol	1.559	1.498	0.800	AVRG	-3.9
1,3-Dichlorobenzene	1.600	1.484	0.010	AVRG	-7.2
1,4-Dichlorobenzene	1.561	1.431	0.010	AVRG	-8.3
1,2-Dichlorobenzene	1.483	1.378	0.010	AVRG	-7.1
Benzyl alcohol	0.916	0.932	0.010	AVRG	1.7
2,2'-oxybis(1-Chloropropane)	0.512	0.478	0.010	AVRG	-6.6
2-Methylphenol	1.519	1.652	0.700	AVRG	8.8
Hexachloroethane	0.657	0.606	0.300	AVRG	-7.8
N-Nitroso-di-n-propylamine	1.055	1.026	0.500	AVRG	-2.7
4-Methylphenol	1.559	1.572	0.600	AVRG	0.8
Nitrobenzene	0.428	0.418	0.200	AVRG	-2.3
Isophorone	0.763	0.770	0.400	AVRG	0.9
2-Nitrophenol	0.239	0.248	0.100	AVRG	3.8
2,4-Dimethylphenol	0.402	0.397	0.200	AVRG	-1.2
Bis(2-Chloroethoxy)methane	0.501	0.486	0.300	AVRG	-3.0
2,4-Dichlorophenol	0.344	0.332	0.200	AVRG	-3.5
1,2,4-Trichlorobenzene	0.365	0.338	0.010	AVRG	-7.4
Naphthalene	1.084	1.039	0.700	AVRG	-4.2
Benzoic acid	0.323	0.348	0.010	AVRG	7.7
4-Chloroaniline	0.463	0.451	0.010	AVRG	-2.6
Hexachlorobutadiene	0.204	0.191	0.010	AVRG	-6.4
4-Chloro-3-methylphenol	0.340	0.370	0.200	AVRG	8.8
2-Methylnaphthalene	0.766	0.753	0.400	AVRG	-1.7
Hexachlorocyclopentadiene	0.478	0.452	0.050	AVRG	-5.4
2,4,6-Trichlorophenol	0.456	0.446	0.200	AVRG	-2.2
2,4,5-Trichlorophenol	0.466	0.487	0.200	AVRG	4.5
2-Chloronaphthalene	1.195	1.153	0.800	AVRG	-3.5
2-Nitroaniline	0.322	0.350	0.010	AVRG	8.7
Acenaphthylene	1.938	1.848	0.900	AVRG	-4.6
Dimethylphthalate	1.306	1.248	0.010	AVRG	-4.4
2,6-Dinitrotoluene	0.311	0.310	0.200	AVRG	-0.3
Acenaphthene	1.150	1.121	0.900	AVRG	-2.5
3-Nitroaniline	0.262	0.223	0.010	AVRG	-14.9
2,4-Dinitrophenol	20.00	19.30	0.010	2ORDR	-3.5
Dibenzofuran	1.692	1.638	0.800	AVRG	-3.2

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

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WY32 Project: NPDES

Instrument ID: NT10 Cont. Calib. Date: 08/01/13

Init. Calib. Date: 07/30/13 Cont. Calib. Time: 1522

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
4-Nitrophenol	0.150	0.169	0.010	AVRG	12.7
2,4-Dinitrotoluene	0.402	0.418	0.200	AVRG	4.0
Fluorene	1.442	1.325	0.900	AVRG	-8.1
4-Chlorophenyl-phenylether	0.682	0.640	0.400	AVRG	-6.2
Diethylphthalate	1.279	1.232	0.010	AVRG	-3.7
4-Nitroaniline	0.276	0.283	0.010	AVRG	2.5
4,6-Dinitro-2-methylphenol	0.188	0.203	0.010	AVRG	8.0
N-Nitrosodiphenylamine(1)	0.506	0.494	0.010	AVRG	-2.4
4-Bromophenyl-phenylether	0.240	0.238	0.100	AVRG	-0.8
Hexachlorobenzene	0.258	0.245	0.100	AVRG	-5.0
Pentachlorophenol	0.199	0.191	0.050	AVRG	-4.0
Phenanthrene	1.098	1.078	0.700	AVRG	-1.8
Anthracene	1.163	1.136	0.700	AVRG	-2.3
Carbazole	5.000	5.314	0.010	2ORDR	6.3
Di-n-butylphthalate	1.238	1.283	0.010	AVRG	3.6
Fluoranthene	1.347	1.332	0.600	AVRG	-1.1
Pyrene	1.436	1.487	0.600	AVRG	3.6
Butylbenzylphthalate	0.510	0.557	0.010	AVRG	9.2
Benzo(a)anthracene	1.305	1.282	0.800	AVRG	-1.8
3,3'-Dichlorobenzidine	0.500	0.416	0.010	AVRG	-16.8
Chrysene	1.135	1.124	0.700	AVRG	-1.0
bis(2-Ethylhexyl)phthalate	0.516	0.530	0.010	AVRG	2.7
Di-n-octylphthalate	0.982	0.937	0.010	AVRG	-4.6
Benzo(b)fluoranthene	1.234	1.230	0.700	AVRG	-0.3
Benzo(k)fluoranthene	1.304	1.286	0.700	AVRG	-1.4
Benzo(a)pyrene	1.089	1.078	0.700	AVRG	-1.0
Indeno(1,2,3-cd)pyrene	1.278	1.268	0.500	AVRG	-0.8
Dibenzo(a,h)anthracene	1.002	0.991	0.400	AVRG	-1.1
Benzo(g,h,i)perylene	1.107	1.079	0.500	AVRG	-2.5
N-Nitrosodimethylamine	1.097	1.033	0.010	AVRG	-5.8
Aniline	4.749	4.558	0.010	AVRG	-4.0
Benzidine	10.00	10.32	0.010	2ORDR	3.2
Retene	0.546	0.558	0.010	AVRG	2.2
Perylene	1.033	1.009	0.010	AVRG	-2.3
Pyridine	0.920	0.844	0.010	AVRG	-8.3
1-methylnaphthalene	0.698	0.687	0.010	AVRG	-1.6

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WY32 Project: NPDES

Instrument ID: NT10 Cont. Calib. Date: 08/01/13

Init. Calib. Date: 07/30/13 Cont. Calib. Time: 1522

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Azobenzene (1,2-DP-Hydrazine	1.334	1.275	0.010	AVRG	-4.4
2,3,4,6-Tetrachlorophenol	0.362	0.360	0.010	AVRG	-0.6
Total Benzofluoranthenes	1.210	1.201	0.010	AVRG	-0.7
2-Fluorophenol	1.612	1.586	0.010	AVRG	-1.6
Phenol-d5	2.159	2.244	0.010	AVRG	3.9
2-Chlorophenol-d4	1.535	1.489	0.010	AVRG	-3.0
1,2-Dichlorobenzene-d4	1.082	1.013	0.010	AVRG	-6.4
Nitrobenzene-d5	0.481	0.476	0.010	AVRG	-1.0
2-Fluorobiphenyl	1.503	1.428	0.010	AVRG	-5.0
2,4,6-Tribromophenol	0.239	0.232	0.010	AVRG	-2.9
Terphenyl-d14	0.772	0.795	0.010	AVRG	3.0

<- Exceeds QC limit of 20% D

* RF less than minimum RF

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WY32 Project: NPDES

Instrument ID: NT10 Cont. Calib. Date: 08/02/13

Init. Calib. Date: 07/30/13 Cont. Calib. Time: 1236

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	2.172	2.061	0.800	AVRG	-5.1	
Bis(2-Chloroethyl)ether	1.690	1.583	0.700	AVRG	-6.3	
2-Chlorophenol	1.559	1.495	0.800	AVRG	-4.1	
1,3-Dichlorobenzene	1.600	1.495	0.010	AVRG	-6.6	
1,4-Dichlorobenzene	1.561	1.445	0.010	AVRG	-7.4	
1,2-Dichlorobenzene	1.483	1.403	0.010	AVRG	-5.4	
Benzyl alcohol	0.916	0.956	0.010	AVRG	4.4	
2,2'-oxybis(1-Chloropropane)	0.512	0.470	0.010	AVRG	-8.2	
2-Methylphenol	1.519	1.455	0.700	AVRG	-4.2	
Hexachloroethane	0.657	0.614	0.300	AVRG	-6.5	
N-Nitroso-di-n-propylamine	1.055	0.986	0.500	AVRG	-6.5	
4-Methylphenol	1.559	1.512	0.600	AVRG	-3.0	
Nitrobenzene	0.428	0.402	0.200	AVRG	-6.1	
Isophorone	0.763	0.768	0.400	AVRG	0.6	
2-Nitrophenol	0.239	0.246	0.100	AVRG	2.9	
2,4-Dimethylphenol	0.402	0.392	0.200	AVRG	-2.5	
Bis(2-Chloroethoxy)methane	0.501	0.475	0.300	AVRG	-5.2	
2,4-Dichlorophenol	0.344	0.362	0.200	AVRG	5.2	
1,2,4-Trichlorobenzene	0.365	0.344	0.010	AVRG	-5.8	
Naphthalene	1.084	1.049	0.700	AVRG	-3.2	
Benzoic acid	0.323	0.243	0.010	AVRG	-24.8	<-
4-Chloroaniline	0.463	0.444	0.010	AVRG	-4.1	
Hexachlorobutadiene	0.204	0.193	0.010	AVRG	-5.4	
4-Chloro-3-methylphenol	0.340	0.365	0.200	AVRG	7.4	
2-Methylnaphthalene	0.766	0.759	0.400	AVRG	-0.9	
Hexachlorocyclopentadiene	0.478	0.431	0.050	AVRG	-9.8	
2,4,6-Trichlorophenol	0.456	0.445	0.200	AVRG	-2.4	
2,4,5-Trichlorophenol	0.466	0.490	0.200	AVRG	5.2	
2-Chloronaphthalene	1.195	1.160	0.800	AVRG	-2.9	
2-Nitroaniline	0.322	0.344	0.010	AVRG	6.8	
Acenaphthylene	1.938	1.875	0.900	AVRG	-3.2	
Dimethylphthalate	1.306	1.270	0.010	AVRG	-2.8	
2,6-Dinitrotoluene	0.311	0.311	0.200	AVRG	0.0	
Acenaphthene	1.150	1.136	0.900	AVRG	-1.2	
3-Nitroaniline	0.262	0.265	0.010	AVRG	1.1	
2,4-Dinitrophenol	20.00	9.420	0.010	2ORDR	-52.9	<-
Dibenzofuran	1.692	1.658	0.800	AVRG	-2.0	

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

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WY32 Project: NPDES

Instrument ID: NT10 Cont. Calib. Date: 08/02/13

Init. Calib. Date: 07/30/13 Cont. Calib. Time: 1236

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
4-Nitrophenol	0.150	0.149	0.010	AVRG	-0.7	
2,4-Dinitrotoluene	0.402	0.415	0.200	AVRG	3.2	
Fluorene	1.442	1.462	0.900	AVRG	1.4	
4-Chlorophenyl-phenylether	0.682	0.725	0.400	AVRG	6.3	
Diethylphthalate	1.279	1.219	0.010	AVRG	-4.7	
4-Nitroaniline	0.276	0.282	0.010	AVRG	2.2	
4,6-Dinitro-2-methylphenol	0.188	0.143	0.010	AVRG	-23.9	<-
N-Nitrosodiphenylamine(1)	0.506	0.500	0.010	AVRG	-1.2	
4-Bromophenyl-phenylether	0.240	0.240	0.100	AVRG	0.0	
Hexachlorobenzene	0.258	0.254	0.100	AVRG	-1.6	
Pentachlorophenol	0.199	0.182	0.050	AVRG	-8.5	
Phenanthrene	1.098	1.076	0.700	AVRG	-2.0	
Anthracene	1.163	1.157	0.700	AVRG	-0.5	
Carbazole	5.000	6.072	0.010	2ORDR	21.4	<-
Di-n-butylphthalate	1.238	1.288	0.010	AVRG	4.0	
Fluoranthene	1.347	1.288	0.600	AVRG	-4.4	
Pyrene	1.436	1.482	0.600	AVRG	3.2	
Butylbenzylphthalate	0.510	0.538	0.010	AVRG	5.5	
Benzo(a)anthracene	1.305	1.256	0.800	AVRG	-3.8	
3,3'-Dichlorobenzidine	0.500	0.461	0.010	AVRG	-7.8	
Chrysene	1.135	1.134	0.700	AVRG	-0.1	
bis(2-Ethylhexyl)phthalate	0.516	0.511	0.010	AVRG	-1.0	
Di-n-octylphthalate	0.982	0.950	0.010	AVRG	-3.2	
Benzo(b)fluoranthene	1.234	1.158	0.700	AVRG	-6.2	
Benzo(k)fluoranthene	1.304	1.265	0.700	AVRG	-3.0	
Benzo(a)pyrene	1.089	1.075	0.700	AVRG	-1.3	
Indeno(1,2,3-cd)pyrene	1.278	1.314	0.500	AVRG	2.8	
Dibenzo(a,h)anthracene	1.002	1.050	0.400	AVRG	4.8	
Benzo(g,h,i)perylene	1.107	1.116	0.500	AVRG	0.8	
N-Nitrosodimethylamine	1.097	0.970	0.010	AVRG	-11.6	
Aniline	4.749	4.437	0.010	AVRG	-6.6	
Benzidine	10.00	9.060	0.010	2ORDR	-9.4	
Retene	0.546	0.564	0.010	AVRG	3.3	
Perylene	1.033	1.028	0.010	AVRG	-0.5	
Pyridine	0.920	0.803	0.010	AVRG	-12.7	
1-methylnaphthalene	0.698	0.694	0.010	AVRG	-0.6	

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WY32 Project: NPDES

Instrument ID: NT10 Cont. Calib. Date: 08/02/13

Init. Calib. Date: 07/30/13 Cont. Calib. Time: 1236

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Azobenzene (1,2-DP-Hydrazine	1.334	1.234	0.010	AVRG	-7.5
2,3,4,6-Tetrachlorophenol	0.362	0.357	0.010	AVRG	-1.4
Total Benzofluoranthenes	1.210	1.149	0.010	AVRG	-5.0
2-Fluorophenol	1.612	1.542	0.010	AVRG	-4.3
Phenol-d5	2.159	2.141	0.010	AVRG	-0.8
2-Chlorophenol-d4	1.535	1.496	0.010	AVRG	-2.5
1,2-Dichlorobenzene-d4	1.082	1.018	0.010	AVRG	-5.9
Nitrobenzene-d5	0.481	0.458	0.010	AVRG	-4.8
2-Fluorobiphenyl	1.503	1.477	0.010	AVRG	-1.7
2,4,6-Tribromophenol	0.239	0.231	0.010	AVRG	-3.3
Terphenyl-d14	0.772	0.782	0.010	AVRG	1.3

<- Exceeds QC limit of 20% D

* RF less than minimum RF

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WY32 Project: NPDES

Ical Midpoint ID: IC0730A Ical Date: 07/30/13

Instrument ID: NT10 Cont. Cal Date: 08/01/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	123587	9.32	446161	11.99	267600	15.89
	UPPER LIMIT	247174		892322		535200	
	LOWER LIMIT	61794		223080		133800	
	CCAL	135027	9.22	479596	11.89	296056	15.80
	UPPER LIMIT		9.72		12.39		16.30
	LOWER LIMIT		8.72		11.39		15.30
01	WY32MBS1	103253	9.22	392358	11.89	232054	15.79
02	WY32LCSS1	89413	9.22	335126	11.89	204750	15.80
03	UP-CB-B8-201	104782	9.22	403857	11.89	214912	15.80
04	UP-CB-B8-201	93145	9.22	337697	11.89	176759	15.80
05	UP-CB-B8-201	98356	9.22	375110	11.89	196140	15.80
06	UP-MHF-165-2	99494	9.22	376480	11.89	188762	15.80
07	UP-CB-A6-201	97612	9.22	363484	11.89	190646	15.80
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IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

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

* Values outside of QC limits.

FORM VIII SV-1

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WY32 Project: NPDES

Ical Midpoint ID: IC0730A Ical Date: 07/30/13

Instrument ID: NT10 Cont. Cal Date: 08/01/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	460929	19.19	439520	24.58	451599	27.17
	UPPER LIMIT	921858		879040		903198	
	LOWER LIMIT	230464		219760		225800	
	CCAL	499317	19.09	459644	24.53	449761	27.11
	UPPER LIMIT		19.59		25.03		27.61
	LOWER LIMIT		18.59		24.03		26.61
01	WY32MBS1	401751	19.08	373693	24.52	342533	27.10
02	WY32LCSS1	346289	19.09	331677	24.53	302062	27.11
03	UP-CB-B8-201	348018	19.10	318219	24.55	343875	27.17
04	UP-CB-B8-201	282257	19.10	273936	24.56	310644	27.18
05	UP-CB-B8-201	320044	19.10	311156	24.56	343011	27.18
06	UP-MHF-165-2	316442	19.10	310711	24.56	328687	27.18
07	UP-CB-A6-201	303211	19.10	294220	24.57	306720	27.21
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IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

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

* Values outside of QC limits.

FORM VIII SV-2

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WY32 Project: NPDES

Ical Midpoint ID: IC0730A Ical Date: 07/30/13

Instrument ID: NT10 Cont. Cal Date: 08/01/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	593075	25.68				
	UPPER LIMIT	1186150					
	LOWER LIMIT	296538					
	CCAL	637005	25.65				
	UPPER LIMIT		26.15				
	LOWER LIMIT		25.15				
01	WY32MBS1	491239	25.64				
02	WY32LCSS1	447211	25.65				
03	UP-CB-B8-201	438599	25.68				
04	UP-CB-B8-201	384280	25.68				
05	UP-CB-B8-201	430636	25.68				
06	UP-MHF-165-2	428221	25.68				
07	UP-CB-A6-201	383510	25.69				
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IS7 = Di-n-octylphthalate-d4

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

* Values outside of QC limits.

FORM VIII SV-3

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WY32 Project: NPDES

Ical Midpoint ID: IC0730A Ical Date: 07/30/13

Instrument ID: NT10 Cont. Cal Date: 08/02/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	123587	9.32	446161	11.99	267600	15.89
	UPPER LIMIT	247174		892322		535200	
	LOWER LIMIT	61794		223080		133800	
	CCAL	135117	9.22	476002	11.89	293277	15.80
	UPPER LIMIT		9.72		12.39		16.30
	LOWER LIMIT		8.72		11.39		15.30
01	UP-CB-B8-201	117576	9.22	416074	11.89	242019	15.80
02	UP-CB-A6-201	121059	9.22	439223	11.89	256695	15.80
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IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

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

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WY32 Project: NPDES

Ical Midpoint ID: IC0730A Ical Date: 07/30/13

Instrument ID: NT10 Cont. Cal Date: 08/02/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	460929	19.19	439520	24.58	451599	27.17
	UPPER LIMIT	921858		879040		903198	
	LOWER LIMIT	230464		219760		225800	
	CCAL	488284	19.10	425239	24.53	465717	27.13
	UPPER LIMIT		19.60		25.03		27.63
	LOWER LIMIT		18.60		24.03		26.63
01	UP-CB-B8-201	391248	19.10	338443	24.53	366977	27.13
02	UP-CB-A6-201	411321	19.09	357337	24.53	383038	27.13
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IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

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

* Values outside of QC limits.

FORM VIII SV-2

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WY32 Project: NPDES

Ical Midpoint ID: IC0730A Ical Date: 07/30/13

Instrument ID: NT10 Cont. Cal Date: 08/02/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	593075	25.68				
	UPPER LIMIT	1186150					
	LOWER LIMIT	296538					
	CCAL	628957	25.65				
	UPPER LIMIT		26.15				
	LOWER LIMIT		25.15				
01	UP-CB-B8-201	477360	25.65				
02	UP-CB-A6-201	497176	25.66				
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IS7 = Di-n-octylphthalate-d4

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

* Values outside of QC limits.

SIM Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: WY32, WY33

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: UP-CB-B8-20130626-S**
Extraction Method: SW3546 **SAMPLE**

Lab Sample ID: WY32A
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized:
Reported: 08/05/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/25/13
Date Analyzed: 08/01/13 19:09
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 4.86 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 31.0 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	**Dibenz(a,h)anthracene**	**8.5**	**31**	**110**
106-46-7	**1,4-Dichlorobenzene**	**12**	**31**	**44**
120-82-1	1,2,4-Trichlorobenzene	9.3	31	< 31 U
118-74-1	Hexachlorobenzene	13	31	< 31 U
87-68-3	Hexachlorobutadiene	8.8	31	< 31 U
131-11-3	**Dimethylphthalate**	**7.5**	**31**	**40**
84-66-2	Diethylphthalate	120	120	< 120 U
85-68-7	**Butylbenzylphthalate**	**13**	**31**	**13,000 E**
95-48-7	2-Methylphenol	12	31	< 31 U
105-67-9	2,4-Dimethylphenol	63	150	< 150 U
86-30-6	**N-Nitrosodiphenylamine**	**14**	**31**	**150**
100-51-6	Benzyl Alcohol	75	120	< 120 U
87-86-5	Pentachlorophenol	64	120	< 120 U
95-50-1	1,2-Dichlorobenzene	8.1	31	< 31 U
541-73-1	1,3-Dichlorobenzene	8.0	31	< 31 U
621-64-7	N-Nitroso-Di-N-Propylamine	93	120	< 120 U
62-75-9	N-Nitrosodimethylamine	19	150	< 150 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	73.6%
d14-p-Terphenyl	70.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: UP-MHF-165-20130626-S**
Extraction Method: SW3546 **SAMPLE**

Lab Sample ID: WY32B
LIMS ID: 13-15394
Matrix: Sediment
Data Release Authorized:
Reported: 08/05/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/25/13
Date Analyzed: 08/01/13 21:03
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.2 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 15.0 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	**Dibenz(a,h)anthracene**	**4.0**	**15**	**65**
106-46-7	1,4-Dichlorobenzene	5.6	15	< 15 U
120-82-1	**1,2,4-Trichlorobenzene**	**4.4**	**15**	**10 J**
118-74-1	Hexachlorobenzene	6.2	15	< 15 U
87-68-3	Hexachlorobutadiene	4.2	15	< 15 U
131-11-3	**Dimethylphthalate**	**3.5**	**15**	**5,800 E**
84-66-2	Diethylphthalate	58	59	< 59 U
85-68-7	**Butylbenzylphthalate**	**6.4**	**15**	**96**
95-48-7	2-Methylphenol	5.6	15	< 15 U
105-67-9	2,4-Dimethylphenol	30	73	< 73 U
86-30-6	**N-Nitrosodiphenylamine**	**6.8**	**15**	**71**
100-51-6	Benzyl Alcohol	35	59	< 59 U
87-86-5	**Pentachlorophenol**	**30**	**59**	**41 J**
95-50-1	1,2-Dichlorobenzene	3.9	15	< 15 U
541-73-1	1,3-Dichlorobenzene	3.8	15	< 15 U
621-64-7	N-Nitroso-Di-N-Propylamine	44	59	< 59 U
62-75-9	N-Nitrosodimethylamine	9.2	73	< 73 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	73.6%
d14-p-Terphenyl	72.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: UP-CB-A6-20130626-S**
Extraction Method: SW3546 **SAMPLE**

Lab Sample ID: WY32C
LIMS ID: 13-15395
Matrix: Sediment
Data Release Authorized:
Reported: 08/05/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/25/13
Date Analyzed: 08/01/13 21:41
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 4.24 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 29.8 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	**Dibenz(a,h)anthracene**	**9.8**	**35**	**75**
106-46-7	1,4-Dichlorobenzene	14	35	< 35 U
120-82-1	1,2,4-Trichlorobenzene	11	35	< 35 U
118-74-1	Hexachlorobenzene	15	35	< 35 U
87-68-3	Hexachlorobutadiene	10	35	< 35 U
131-11-3	**Dimethylphthalate**	**8.6**	**35**	**110**
84-66-2	Diethylphthalate	140	140	< 140 U
85-68-7	**Butylbenzylphthalate**	**15**	**35**	**1,800**
95-48-7	2-Methylphenol	14	35	< 35 U
105-67-9	2,4-Dimethylphenol	72	180	< 180 U
86-30-6	**N-Nitrosodiphenylamine**	**16**	**35**	**170**
100-51-6	**Benzyl Alcohol**	**86**	**140**	**260**
87-86-5	Pentachlorophenol	74	140	< 140 U
95-50-1	1,2-Dichlorobenzene	9.3	35	< 35 U
541-73-1	1,3-Dichlorobenzene	9.2	35	< 35 U
621-64-7	N-Nitroso-Di-N-Propylamine	110	140	< 140 U
62-75-9	N-Nitrosodimethylamine	22	180	< 180 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	84.0%
d14-p-Terphenyl	92.4%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977

Client ID	FPH	TER	TOT OUT
MB-072513	70.4%	70.2%	0
LCS-072513	78.8%	74.2%	0
UP-CB-B8-20130626-S	73.6%	70.8%	0
UP-CB-B8-20130626-S MS	80.4%	74.4%	0
UP-CB-B8-20130626-S MSD	75.2%	70.2%	0
UP-MHF-165-20130626-S	73.6%	72.0%	0
UP-CB-A6-20130626-S	84.0%	92.4%	0

	LCS/MB LIMITS	QC LIMITS
(FPH) = 2-Fluorophenol	(32-120)	(27-120)
(TER) = d14-p-Terphenyl	(42-124)	(37-120)

Prep Method: SW3546
Log Number Range: 13-15393 to 13-15395

FORM-II SIM SW8270

WY32:209977

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: UP-CB-B8-20130626-S**
Page 1 of 1 **MATRIX SPIKE**

Lab Sample ID: WY32A
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized: MC
Reported: 08/05/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted MS/MSD: 07/25/13

Sample Amount MS: 4.86 g-dry-wt
MSD: 4.84 g-dry-wt
Date Analyzed MS: 08/01/13 19:47
MSD: 08/01/13 20:25
Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL
Instrument/Analyst MS: NT10/YZ
MSD: NT10/YZ
Dilution Factor MS: 3.00
MSD: 3.00

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Dibenz(a,h)anthracene	110	549	1030	42.6%	500	1030	37.9%	9.3%
1,4-Dichlorobenzene	44	674	1030	61.2%	615	1030	55.4%	9.2%
1,2,4-Trichlorobenzene	< 31 U	741	1030	71.9%	671	1030	65.1%	9.9%
Hexachlorobenzene	< 31 U	872	1030	84.7%	773	1030	75.0%	12.0%
Hexachlorobutadiene	< 31 U	729	1030	70.8%	648	1030	62.9%	11.8%
Dimethylphthalate	40	937	1030	87.1%	852	1030	78.8%	9.5%
Diethylphthalate	< 120 U	868	1030	84.3%	814	1030	79.0%	6.4%
Butylbenzylphthalate	13000 E	10900 E	1030	NA	9230 E	1030	NA	16.6%
2-Methylphenol	< 31 U	733	1030	71.2%	661	1030	64.2%	10.3%
2,4-Dimethylphenol	< 150 U	2320	3090	75.1%	2050	3100	66.1%	12.4%
N-Nitrosodiphenylamine	150	1050	1030	87.4%	990	1030	81.6%	5.9%
Benzyl Alcohol	< 120 U	959	1030	93.1%	3080	1030	299%	105%
Pentachlorophenol	< 120 U	2640	3090	85.4%	2320	3100	74.8%	12.9%
1,2-Dichlorobenzene	< 31 U	667	1030	64.8%	588	1030	57.1%	12.6%
1,3-Dichlorobenzene	< 31 U	641	1030	62.2%	569	1030	55.2%	11.9%
N-Nitroso-Di-N-Propylamine	< 120 U	808	1030	78.4%	748	1030	72.6%	7.7%
N-Nitrosodimethylamine	< 150 U	1550	3090	50.2%	1430	3100	46.1%	8.1%

Reported in µg/kg (ppb)

NA-No recovery due to high concentration (> 4X) of analyte in original sample, calculated negative recovery, or undetected spike.
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: UP-CB-B8-20130626-S**
Extraction Method: SW3546 **MATRIX SPIKE**

Lab Sample ID: WY32A
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized:
Reported: 08/05/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/25/13
Date Analyzed: 08/01/13 19:47
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 4.86 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 31.0 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	Dibenz(a,h)anthracene	8.5	31	---
106-46-7	1,4-Dichlorobenzene	12	31	---
120-82-1	1,2,4-Trichlorobenzene	9.3	31	---
118-74-1	Hexachlorobenzene	13	31	---
87-68-3	Hexachlorobutadiene	8.8	31	---
131-11-3	Dimethylphthalate	7.5	31	---
84-66-2	Diethylphthalate	120	120	---
85-68-7	Butylbenzylphthalate	13	31	---
95-48-7	2-Methylphenol	12	31	---
105-67-9	2,4-Dimethylphenol	63	150	---
86-30-6	N-Nitrosodiphenylamine	14	31	---
100-51-6	Benzyl Alcohol	75	120	---
87-86-5	Pentachlorophenol	64	120	---
95-50-1	1,2-Dichlorobenzene	8.1	31	---
541-73-1	1,3-Dichlorobenzene	8.0	31	---
621-64-7	N-Nitroso-Di-N-Propylamine	93	120	---
62-75-9	N-Nitrosodimethylamine	19	150	---

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	80.4%
d14-p-Terphenyl	74.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: UP-CB-B8-20130626-S**
Extraction Method: SW3546 **MATRIX SPIKE DUP**

Lab Sample ID: WY32A
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized:
Reported: 08/05/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/25/13
Date Analyzed: 08/01/13 20:25
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 4.84 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 3.00
Percent Moisture: 31.0 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	Dibenz(a,h)anthracene	8.6	31	---
106-46-7	1,4-Dichlorobenzene	12	31	---
120-82-1	1,2,4-Trichlorobenzene	9.4	31	---
118-74-1	Hexachlorobenzene	13	31	---
87-68-3	Hexachlorobutadiene	8.8	31	---
131-11-3	Dimethylphthalate	7.5	31	---
84-66-2	Diethylphthalate	120	120	---
85-68-7	Butylbenzylphthalate	14	31	---
95-48-7	2-Methylphenol	12	31	---
105-67-9	2,4-Dimethylphenol	63	160	---
86-30-6	N-Nitrosodiphenylamine	14	31	---
100-51-6	Benzyl Alcohol	75	120	---
87-86-5	Pentachlorophenol	64	120	---
95-50-1	1,2-Dichlorobenzene	8.2	31	---
541-73-1	1,3-Dichlorobenzene	8.1	31	---
621-64-7	N-Nitroso-Di-N-Propylamine	94	120	---
62-75-9	N-Nitrosodimethylamine	20	160	---

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	75.2%
d14-p-Terphenyl	70.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: LCS-072513**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-072513
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized: MW
Reported: 08/05/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 07/25/13
Date Analyzed LCS: 08/01/13 17:16
Instrument/Analyst LCS: NT10/YZ

Sample Amount LCS: 10.00 g-dry-wt
Final Extract Volume LCS: 1.0 mL
Dilution Factor LCS: 1.00

Analyte	LCS	Spike Added	Recovery
Dibenz(a,h)anthracene	289	500	57.8%
1,4-Dichlorobenzene	302	500	60.4%
1,2,4-Trichlorobenzene	313	500	62.6%
Hexachlorobenzene	352	500	70.4%
Hexachlorobutadiene	312	500	62.4%
Dimethylphthalate	361	500	72.2%
Diethylphthalate	428	500	85.6%
Butylbenzylphthalate	456	500	91.2%
2-Methylphenol	296	500	59.2%
2,4-Dimethylphenol	520	1500	34.7%
N-Nitrosodiphenylamine	340	500	68.0%
Benzyl Alcohol	247	500	49.4%
Pentachlorophenol	1180 E	1500	78.7%
1,2-Dichlorobenzene	313	500	62.6%
1,3-Dichlorobenzene	298	500	59.6%
N-Nitroso-Di-N-Propylamine	306	500	61.2%
N-Nitrosodimethylamine	802	1500	53.5%

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	78.8%
d14-p-Terphenyl	74.2%

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WY32MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No: WY32
Project: NPDES SAMPLING SUPPO

Lab File ID: WY32MB
Date Extracted: 07/25/13

Instrument ID: NT10
Date Analyzed: 08/01/13

Matrix: SOLID
Time Analyzed: 1638

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WY32LCSS1	WY32LCSS1	WY32SB	08/01/13
02	UP-CB-B8-2013062	WY32A	WY32A	08/01/13
03	UP-CB-B8-201306	WY32AMS	WY32AMS	08/01/13
04	UP-CB-B8-201306	WY32AMSD	WY32AMSD	08/01/13
05	UP-MHF-165-20130	WY32B	WY32B	08/01/13
06	UP-CB-A6-2013062	WY32C	WY32C	08/01/13
07	UP-CB-B8-2013062	WY32A	WY32A30	08/02/13
08	UP-CB-A6-2013062	WY32C	WY32C30	08/02/13
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10				
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ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: MB-072513**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-072513
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized:
Reported: 08/05/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 07/25/13
Date Analyzed: 08/01/13 16:38
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

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

CAS Number	Analyte	DL	LOQ	Result
53-70-3	Dibenz(a,h)anthracene	1.4	5.0	< 5.0 U
106-46-7	1,4-Dichlorobenzene	1.9	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.5	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	2.1	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	1.4	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.2	5.0	< 5.0 U
84-66-2	Diethylphthalate	20	20	< 20 U
85-68-7	Butylbenzylphthalate	2.2	5.0	< 5.0 U
95-48-7	2-Methylphenol	1.9	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	10	25	< 25 U
86-30-6	N-Nitrosodiphenylamine	2.3	5.0	< 5.0 U
100-51-6	Benzyl Alcohol	12	20	< 20 U
87-86-5	Pentachlorophenol	10	20	< 20 U
95-50-1	1,2-Dichlorobenzene	1.3	5.0	< 5.0 U
541-73-1	1,3-Dichlorobenzene	1.3	5.0	< 5.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	15	20	< 20 U
62-75-9	N-Nitrosodimethylamine	3.2	25	< 25 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	70.4%
d14-p-Terphenyl	70.2%

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES

DFTPP Injection Date: 07/30/13 DFTPP Injection Time: 1139

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	18.4
68	Less than 2.0% of mass 69	0.6 (1.6)1
69	Mass 69 relative abundance	38.8
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	47.4
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 60.0% of mass 198	25.7
365	Greater than 1.0% of mass 198	3.16
441	0.0 - 24.0% of mass 442	13.6 (15.4)2
442	50.0 - 200.0% of mass 198	88.2
443	15.0 - 24.0% of mass 442	17.3 (19.7)2

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		IC0726A	IC0730A	07/30/13	1154
02		IC0730B	IC0730B	07/30/13	1232
03		IC0730C	IC0730C	07/30/13	1311
04		IC0730D	IC0730D	07/30/13	1349
05		IC0730E	IC0730E	07/30/13	1427
06		IC0730G	IC0730G	07/30/13	1543
07		IC0730I	IC0730I	07/30/13	1659
08					
09					
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22					

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES

DFTPP Injection Date: 08/01/13 DFTPP Injection Time: 1507

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	17.3
68	Less than 2.0% of mass 69	0.6 (1.6)1
69	Mass 69 relative abundance	37.2
70	Less than 2.0% of mass 69	0.1 (0.3)1
127	10.0 - 80.0% of mass 198	46.2
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	26.5
365	Greater than 1.0% of mass 198	3.49
441	0.0 - 24.0% of mass 442	15.5 (15.0)2
442	50.0 - 200.0% of mass 198	103.4
443	15.0 - 24.0% of mass 442	20.1 (19.5)2

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC0801	CC0801	08/01/13	1522
02	WY32MBS1	WY32MBS1	WY32MB	08/01/13	1638
03	WY32LCSS1	WY32LCSS1	WY32SB	08/01/13	1716
04	UP-CB-B8-2013062	WY32A	WY32A	08/01/13	1909
05	UP-CB-B8-201306	WY32AMS	WY32AMS	08/01/13	1947
06	UP-CB-B8-201306	WY32AMSD	WY32AMSD	08/01/13	2025
07	UP-MHF-165-20130	WY32B	WY32B	08/01/13	2103
08	UP-CB-A6-2013062	WY32C	WY32C	08/01/13	2141
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES

DFTPP Injection Date: 08/02/13 DFTPP Injection Time: 1221

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	16.4
68	Less than 2.0% of mass 69	0.5 (1.5)1
69	Mass 69 relative abundance	36.1
70	Less than 2.0% of mass 69	0.1 (0.4)1
127	10.0 - 80.0% of mass 198	45.6
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	27.4
365	Greater than 1.0% of mass 198	3.93
441	0.0 - 24.0% of mass 442	17.1 (15.4)2
442	50.0 - 200.0% of mass 198	111.1
443	15.0 - 24.0% of mass 442	21.8 (19.6)2

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

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC0802	CC0802	08/02/13	1236
02	UP-CB-B8-2013062	WY32A	WY32A30	08/02/13	1336
03	UP-CB-A6-2013062	WY32C	WY32C30	08/02/13	1414
04					
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FORM V SV

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WY32 Project: NPDES

Instrument ID: NT10 Calibration Date: 07/30/13

Method = SIM.b/SIMABN2.m
Cal levels = 7

LAB FILE ID: RRF0.05=IC0730F RRF0.1=IC0730H RRF0.2=IC0730C
RRF0.5=IC0730I RRF1 =IC0730D RRF2.5=IC0730G
RRF5 =IC0730A

COMPOUND	RRF 0.05	RRF 0.1	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	___ RRF	%RSD /R^2
Phenol	1.956	2.078	1.987	2.222	2.082	2.211	2.004	2.077	5.1
1,3-Dichlorobenzene	1.691	1.706	1.698	1.681	1.618	1.589	1.464	1.635	5.3
1,4-Dichlorobenzene	1.626	1.756	1.655	1.631	1.558	1.545	1.417	1.598	6.6
1,2-Dichlorobenzene	1.548	1.592	1.582	1.574	1.511	1.471	1.360	1.520	5.4
Benzyl alcohol	1.009	1.029	0.799	1.107	1.006	1.145	1.069	1.023	10.9
2-Methylphenol	1.429	1.476	1.521	1.570	1.527	1.566	1.436	1.504	3.8
N-Nitroso-di-n-propylamine	0.898	0.925	0.970	0.988	0.955	0.979	0.868	0.940	4.8
4-Methylphenol	1.408	1.457	1.510	1.613	1.581	1.625	1.503	1.528	5.3
2,4-Dimethylphenol	0.374	0.393	0.403	0.416	0.412	0.410	0.375	0.398	4.3
1,2,4-Trichlorobenzene	0.389	0.402	0.398	0.388	0.378	0.370	0.344	0.381	5.2
Hexachlorobutadiene	0.213	0.217	0.215	0.213	0.208	0.207	0.194	0.210	3.7
Dimethylphthalate	1.230	1.346	1.347	1.290	1.313	1.285	1.199	1.287	4.4
Diethylphthalate	1.425	1.458	1.497	1.452	1.488	1.475	1.368	1.452	3.1
N-Nitrosodiphenylamine (1)	0.390	0.474	0.531	0.510	0.534	0.508	0.476	0.489	10.2
Hexachlorobenzene	0.287	0.293	0.297	0.276	0.281	0.271	0.261	0.281	4.4
Pentachlorophenol	0.120	0.160	0.178	0.186	0.205	0.211	0.210	0.181	18.1
Butylbenzylphthalate	0.388	0.430	0.481	0.454	0.505	0.510	0.501	0.467	9.8
Dibenzo(a,h)anthracene	0.908	0.958	1.036	0.992	1.056	1.051	1.015	1.002	5.4
N-Nitrosodimethylamine	0.986	1.042	1.021	1.102	1.041	1.082	0.961	1.034	4.8
2-Fluorophenol	1.558	1.590	1.608	1.642	1.609	1.624	1.501	1.590	3.0
Terphenyl-d14	0.494	0.556	0.532	0.512	0.530	0.521	0.491	0.519	4.4

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

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WY32 Project: NPDES

Instrument ID: NT10 Cont. Calib. Date: 08/01/13

Init. Calib. Date: 07/30/13 Cont. Calib. Time: 1600

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Phenol	2.077	2.223	0.800	AVRG	7.0
1,3-Dichlorobenzene	1.635	1.612	0.010	AVRG	-1.4
1,4-Dichlorobenzene	1.598	1.553	0.010	AVRG	-2.8
1,2-Dichlorobenzene	1.520	1.510	0.010	AVRG	-0.6
Benzyl alcohol	1.023	1.097	0.010	AVRG	7.2
2-Methylphenol	1.504	1.657	0.700	AVRG	10.2
N-Nitroso-di-n-propylamine	0.940	1.017	0.500	AVRG	8.2
4-Methylphenol	1.528	1.716	0.600	AVRG	12.3
2,4-Dimethylphenol	0.398	0.420	0.200	AVRG	5.5
1,2,4-Trichlorobenzene	0.381	0.376	0.010	AVRG	-1.3
Hexachlorobutadiene	0.210	0.202	0.010	AVRG	-3.8
Dimethylphthalate	1.287	1.342	0.010	AVRG	4.3
Diethylphthalate	1.452	1.535	0.010	AVRG	5.7
N-Nitrosodiphenylamine(1)	0.489	0.553	0.010	AVRG	13.1
Hexachlorobenzene	0.281	0.283	0.100	AVRG	0.7
Pentachlorophenol	0.181	0.189	0.050	AVRG	4.4
Butylbenzylphthalate	0.467	0.558	0.010	AVRG	19.5
Dibenzo(a,h)anthracene	1.002	1.084	0.400	AVRG	8.2
N-Nitrosodimethylamine	1.034	1.016	0.010	AVRG	-1.7
2-Fluorophenol	1.590	1.641	0.010	AVRG	3.2
Terphenyl-d14	0.519	0.554	0.010	AVRG	6.7

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WY32 Project: NPDES

Ical Midpoint ID: IC0730D Ical Date: 07/30/13

Instrument ID: NT10 Cont. Cal Date: 08/01/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	139368	9.32	497738	11.99	263483	15.90
	UPPER LIMIT	278736		995476		526966	
	LOWER LIMIT	69684		248869		131742	
	CCAL	135945	9.22	494817	11.89	261014	15.80
	UPPER LIMIT		9.72		12.39		16.30
	LOWER LIMIT		8.72		11.39		15.30
01	WY32MBS1	117471	9.22	449658	11.88	236837	15.80
02	WY32LCSS1	102846	9.22	379092	11.89	207225	15.80
03	UP-CB-B8-201	120926	9.22	449010	11.89	222142	15.80
04	UP-CB-B8-201	108042	9.22	382996	11.89	179848	15.81
05	UP-CB-B8-201	113485	9.22	427376	11.89	197445	15.81
06	UP-MHF-165-2	113541	9.22	422511	11.89	188556	15.81
07	UP-CB-A6-201	109640	9.22	414541	11.89	192478	15.81
08							
09							
10							
11							
12							
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14							
15							
16							
17							
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19							
20							
21							
22							
23							
24							
25							

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

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

* Values outside of QC limits.

FORM VIII SV-1

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WY32 Project: NPDES

Ical Midpoint ID: IC0730D Ical Date: 07/30/13

Instrument ID: NT10 Cont. Cal Date: 08/01/13

		IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
	ICAL MIDPT	519545	19.18	513753	24.58	525862	27.17
	UPPER LIMIT	1039090		1027506		1051724	
	LOWER LIMIT	259772		256876		262931	
	CCAL	515482	19.09	498735	24.52	492140	27.11
	UPPER LIMIT		19.59		25.02		27.61
	LOWER LIMIT		18.59		24.02		26.61
01	WY32MBS1	461469	19.09	441464	24.52	412109	27.11
02	WY32LCSS1	401843	19.09	393081	24.52	362225	27.11
03	UP-CB-B8-201	404188	19.10	384492	24.55	417082	27.17
04	UP-CB-B8-201	328200	19.10	319931	24.55	391517	27.18
05	UP-CB-B8-201	369537	19.11	360131	24.55	402630	27.19
06	UP-MHF-165-2	366992	19.11	354926	24.55	387885	27.18
07	UP-CB-A6-201	352808	19.11	336964	24.58	382483	27.22
08							
09							
10							
11							
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16							
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19							
20							
21							
22							
23							
24							
25							

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

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

* Values outside of QC limits.

FORM VIII SV-2

Dioxin Analysis
Report and Summary QC Forms

ARI Job ID: WY32, WY33

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: UP-CB-B8-20130626-S**

Lab Sample ID: WY32A
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized:
Reported: 08/09/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/29/13
Date Analyzed: 08/01/13 16:28
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.71	0.65-0.89		0.997	2.85	
2,3,7,8-TCDD	0.67	0.65-0.89		0.997	0.877	BJ
1,2,3,7,8-PeCDF	1.53	1.32-1.78		0.997	2.26	X
2,3,4,7,8-PeCDF	1.43	1.32-1.78		0.997	3.71	
1,2,3,7,8-PeCDD	1.54	1.32-1.78		0.997	3.87	
1,2,3,4,7,8-HxCDF	1.16	1.05-1.43		0.997	9.10	
1,2,3,6,7,8-HxCDF	1.23	1.05-1.43		0.997	4.87	
2,3,4,6,7,8-HxCDF	1.14	1.05-1.43		0.997	7.18	
1,2,3,7,8,9-HxCDF	1.23	1.05-1.43		0.997	2.88	
1,2,3,4,7,8-HxCDD	1.28	1.05-1.43		0.997	5.60	
1,2,3,6,7,8-HxCDD	1.23	1.05-1.43		0.997	23.0	
1,2,3,7,8,9-HxCDD	1.26	1.05-1.43		0.997	11.9	
1,2,3,4,6,7,8-HpCDF	1.01	0.88-1.20		0.997	111	
1,2,3,4,7,8,9-HpCDF	0.98	0.88-1.20		0.997	8.48	
1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20		0.997	617	
OCDF	0.86	0.76-1.02		1.99	420	
OCDD	0.89	0.76-1.02		1.99	6,500	E

Homologue Group	EDL	RL	Result	
Total TCDF		0.997	59.9	EMPC
Total TCDD		0.997	14.1	EMPC
Total PeCDF		1.99	81.5	EMPC
Total PeCDD		0.997	28.8	
Total HxCDF		1.99	177	EMPC
Total HxCDD		1.99	180	
Total HpCDF		1.99	409	EMPC
Total HpCDD		1.99	1,550	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 22.1

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 22.1

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: UP-CB-B8-20130626-S**

Lab Sample ID: WY32A
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized: MW
Reported: 08/09/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/29/13
Date Analyzed: 08/01/13 16:28
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	46.3	24-169	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	61.4	25-164	
13C-1,2,3,7,8-PeCDF	1.58	1.32-1.78	68.3	24-185	
13C-2,3,4,7,8-PeCDF	1.57	1.32-1.78	68.9	21-178	
13C-1,2,3,7,8-PeCDD	1.56	1.32-1.78	73.0	25-181	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	68.8	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	68.3	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	67.7	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	69.0	29-147	
13C-1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	71.0	32-141	
13C-1,2,3,6,7,8-HxCDD	1.25	1.05-1.43	70.2	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	54.0	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	57.8	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	58.3	23-140	
13C-OCDD	0.89	0.76-1.02	39.0	17-157	
37Cl4-2,3,7,8-TCDD			71.0	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-072913**

Lab Sample ID: OPR-072913
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized: MW
Reported: 08/09/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 07/29/13
Date Analyzed: 08/01/13 12:54
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	RL	Result
2,3,7,8-TCDF	0.72	0.65-0.89	1.00	22.3
2,3,7,8-TCDD	0.75	0.65-0.89	1.00	21.6
1,2,3,7,8-PeCDF	1.47	1.32-1.78	1.00	109
2,3,4,7,8-PeCDF	1.46	1.32-1.78	1.00	111
1,2,3,7,8-PeCDD	1.56	1.32-1.78	1.00	106
1,2,3,4,7,8-HxCDF	1.19	1.05-1.43	1.00	108
1,2,3,6,7,8-HxCDF	1.20	1.05-1.43	1.00	106
2,3,4,6,7,8-HxCDF	1.19	1.05-1.43	1.00	109
1,2,3,7,8,9-HxCDF	1.21	1.05-1.43	1.00	108
1,2,3,4,7,8-HxCDD	1.27	1.05-1.43	1.00	112
1,2,3,6,7,8-HxCDD	1.25	1.05-1.43	1.00	108
1,2,3,7,8,9-HxCDD	1.21	1.05-1.43	1.00	110
1,2,3,4,6,7,8-HpCDF	1.00	0.88-1.20	1.00	122
1,2,3,4,7,8,9-HpCDF	0.98	0.88-1.20	1.00	109
1,2,3,4,6,7,8-HpCDD	1.03	0.88-1.20	1.00	108
OCDF	0.86	0.76-1.02	2.00	214
OCDD	0.90	0.76-1.02	2.00	219

Homologue Group	EDL	RL	Result	
Total TCDF		1.00	24.1	EMPC
Total TCDD		1.00	22.4	EMPC
Total PeCDF		2.00	227	EMPC
Total PeCDD		1.00	107	EMPC
Total HxCDF		2.00	432	
Total HxCDD		2.00	331	EMPC
Total HpCDF		2.00	233	
Total HpCDD		2.00	111	

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-072913**

Lab Sample ID: OPR-072913
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized: MW
Reported: 08/09/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 07/29/13
Date Analyzed: 08/01/13 12:54
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	87.4	22-152	
13C-2,3,7,8-TCDD	0.79	0.65-0.89	87.5	20-175	
13C-1,2,3,7,8-PeCDF	1.58	1.32-1.78	91.2	21-192	
13C-2,3,4,7,8-PeCDF	1.58	1.32-1.78	84.0	13-328	
13C-1,2,3,7,8-PeCDD	1.58	1.32-1.78	85.8	21-227	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	91.4	19-202	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	95.2	21-159	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	90.7	22-176	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	89.2	17-205	
13C-1,2,3,4,7,8-HxCDD	1.27	1.05-1.43	91.9	21-193	
13C-1,2,3,6,7,8-HxCDD	1.24	1.05-1.43	93.2	25-163	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	80.7	21-158	
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	83.3	20-186	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	86.9	26-166	
13C-OCDD	0.90	0.76-1.02	71.0	13-198	
37Cl4-2,3,7,8-TCDD			88.1	31-191	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-072913**

Lab Sample ID: OPR-072913
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized:
Reported: 08/09/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 07/29/13
Date Analyzed: 08/01/13 12:54
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	OPR	Spiked	Recovery	Limits
2,3,7,8-TCDF	22.3	20.0	112	75-158
2,3,7,8-TCDD	21.6	20.0	108	67-158
1,2,3,7,8-PeCDF	109	100	109	80-134
2,3,4,7,8-PeCDF	111	100	111	68-160
1,2,3,7,8-PeCDD	106	100	106	70-142
1,2,3,4,7,8-HxCDF	108	100	108	72-134
1,2,3,6,7,8-HxCDF	106	100	106	84-130
2,3,4,6,7,8-HxCDF	109	100	109	70-156
1,2,3,7,8,9-HxCDF	108	100	108	78-130
1,2,3,4,7,8-HxCDD	112	100	112	70-164
1,2,3,6,7,8-HxCDD	108	100	108	76-134
1,2,3,7,8,9-HxCDD	110	100	110	64-162
1,2,3,4,6,7,8-HpCDF	122	100	122	82-132
1,2,3,4,7,8,9-HpCDF	109	100	109	78-138
1,2,3,4,6,7,8-HpCDD	108	100	108	70-140
OCDF	214	200	107	63-170
OCDD	219	200	110	78-144

Reported in pg/g

4DF - FORM IV-HR CDD
CDD/CDF METHOD BLANK SUMMARY
HIGH RESOLUTION

Blank No.
WY32MB

Lab Name: ANALYTICAL RESOURCES, INC. Contract: SAIC

Lab Code: WY32 Project: NPDES

Matrix:(Soil/Water/Ash/Tissue/Oil) SOIL Lab Sample ID: WY32MBS

Sample wt/vol: 10 (g/ml) g Lab File ID: 13080104

Water Sample Prep: (sep/spe) Date Received: 26-JUN-13

GC Column: RTX-DIOXIN2 ID: 0.25 mm Date Extracted: 29-JUL-13

Instrument ID: AUTOSPEC1 Date Analyzed: 01-AUG-13

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed
WY32OPR	WY32OPR	13080105	08/01/13
~~WY32SRM~~	~~WY32SRM~~	~~13080106~~	~~08/01/13~~
UP-CB-BB-20130626-2-S	WY32A	13080109	08/01/13

8/8/13

WY32:00057

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: MB-072913**

Lab Sample ID: MB-072913 QC Report No: WY32-SAIC
LIMS ID: 13-15393 Project: NPDES Sampling Support
Matrix: Sediment 209977
Data Release Authorized: Date Sampled: NA
Reported: 08/09/13 Date Received: NA

Date Extracted: 07/29/13 Sample Amount: 10.0 g-dry-wt
Date Analyzed: 08/01/13 12:03 Final Extract Volume: 20 uL
Instrument/Analyst: AS1/PK Dilution Factor: 1.00
Acid Cleanup: Yes Silica-Florisil Cleanup: Yes
Silica-Carbon Cleanup: No

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	1.03	0.65-0.89		1.00	0.0420	JEMPC
2,3,7,8-TCDD	0.19	0.65-0.89		1.00	0.186	JEMPC
1,2,3,7,8-PeCDF	0.94	1.32-1.78		1.00	0.142	JEMPC
2,3,4,7,8-PeCDF	1.21	1.32-1.78		1.00	0.0660	JEMPC
1,2,3,7,8-PeCDD	1.23	1.32-1.78		1.00	0.106	JEMPC
1,2,3,4,7,8-HxCDF	1.52	1.05-1.43		1.00	0.0280	JEMPC
1,2,3,6,7,8-HxCDF	1.69	1.05-1.43		1.00	0.0560	JEMPC
2,3,4,6,7,8-HxCDF	1.06	1.05-1.43		1.00	0.0406	J
1,2,3,7,8,9-HxCDF	1.34	1.05-1.43		1.00	0.0862	J
1,2,3,4,7,8-HxCDD	1.18	1.05-1.43		1.00	0.102	J
1,2,3,6,7,8-HxCDD	1.87	1.05-1.43		1.00	0.122	JEMPC
1,2,3,7,8,9-HxCDD	1.38	1.05-1.43		1.00	0.195	J
1,2,3,4,6,7,8-HpCDF	1.83	0.88-1.20		1.00	0.0760	JEMPC
1,2,3,4,7,8,9-HpCDF		0.88-1.20	0.0320	1.00	< 0.0320	U
1,2,3,4,6,7,8-HpCDD	1.08	0.88-1.20		1.00	1.50	
OCDF	1.21	0.76-1.02		2.00	0.134	JEMPC
OCDD	0.89	0.76-1.02		2.00	6.93	

Homologue Group	EDL	RL	Result	
Total TCDF		1.00	0.0812	EMPC
Total TCDD		1.00	0.186	EMPC
Total PeCDF		2.00	0.207	EMPC
Total PeCDD		1.00	0.394	EMPC
Total HxCDF		2.00	0.211	EMPC
Total HxCDD		2.00	1.70	EMPC
Total HpCDF		2.00	0.0760	EMPC
Total HpCDD		2.00	4.12	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.40

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.40

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: MB-072913**

Lab Sample ID: MB-072913 QC Report No: WY32-SAIC
LIMS ID: 13-15393 Project: NPDES Sampling Support 209977
Matrix: Sediment
Data Release Authorized:
Reported: 08/09/13 Date Sampled: NA
Date Received: NA

Date Extracted: 07/29/13 Sample Amount: 10.0 g-dry-wt
Date Analyzed: 08/01/13 12:03 Final Extract Volume: 20 uL
Instrument/Analyst: AS1/PK Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.77	0.65-0.89	91.4	24-169	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	88.2	25-164	
13C-1,2,3,7,8-PeCDF	1.58	1.32-1.78	93.6	24-185	
13C-2,3,4,7,8-PeCDF	1.58	1.32-1.78	84.8	21-178	
13C-1,2,3,7,8-PeCDD	1.56	1.32-1.78	84.9	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	96.0	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	96.4	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	93.4	28-136	
13C-1,2,3,7,8,9-HxCDF	0.53	0.43-0.59	91.8	29-147	
13C-1,2,3,4,7,8-HxCDD	1.28	1.05-1.43	93.8	32-141	
13C-1,2,3,6,7,8-HxCDD	1.24	1.05-1.43	94.4	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	84.4	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	86.3	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20	87.0	23-140	
13C-OCDD	0.89	0.76-1.02	72.8	17-157	
37Cl4-2,3,7,8-TCDD			86.8	35-197	

Reported in Percent Recovery

5DFA - FORM V-HR CDD-1
CDD/CDF WINDOW DEFINING MIX (WDM) SUMMARY
HIGH RESOLUTION

Standard No.: CS3

Lab Name: ANALYTICAL RESOURCES, INC. Contract: SAIC

Lab Code: WY32 Project: NPDES

GC Column: RTX-DIOXIN2 ID: 0.25 mm Lab File ID: 13080102

Instrument ID: AUTOSPEC1 Date Analyzed: 01-AUG-13

Time Analyzed: 10:15

CDD/CDF	RT First Eluting	RT Last Eluting
TCDD	23.88	27.33
TCDF	22.60	27.59
PeCDD	29.10	32.23
PeCDF	27.44	32.61
HxCDD	34.32	37.04
HxCDF	33.52	37.49
HpCDD	40.10	41.36
HpCDF	39.55	42.25

5DFB - FORM V-HR CDD-2
CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY
HIGH RESOLUTION

Standard No.

TETRA ISC

Lab Name:	ANALYTICAL RESOURCES, INC.	Contract:	SAIC
Lab Code:	WY32	Project:	NPDES
GC Column:	RTX-DIOXIN2 ID: .25 mm	Lab File ID:	13080103
Instrument:	AUTOSPEC1	Date Analyzed:	01-AUG-13
		Time Analyzed:	11:10

Percent Valley determination for RTX-DIOXIN2 column -
For the column performance solution beginning 12-hour period:

1278-TCDD/2378-TCDD: 12.3

Quality Control (QC) Limits:

Percent Valley between the TCDD isomers must be less than or equal to 25%

Percent Valley determination for RTX-DIOXIN2 column -
For the column performance solution beginning 12-hour period:

3467-TCDF/2378-TCDF: 13.0

QC Limits:

Percent Valley between the TCDD/TCDF isomers must be less than or equal to 25%

5DFB - FORM V-HR CDD-3
CDD/CDF ANALTYICAL SEQUENCE SUMMARY
HIGH RESOLUTION

Lab Name: ANALYTICAL RESOURCES, INC. Contract: SAIC

Lab Code: WY32 Project: NPDES

GC Column: RTX-DIOXIN2 ID: 0.25 mm Instrument ID: AUTOSPEC1

Init. Calib. Date(s): 18-JUL-13

Init: Calib. Times: 12:34 to 19:02

The Analytical Sequence of standards, samples, blanks, and Laboratory Control Samples (LCS) is as follows:

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
CS3	CS3	13080102	08/01/13	1015
ISC	ISC	13080103	08/01/13	1110
WY32MB	WY32MBS	13080104	08/01/13	1203
~~WY32OPR~~	~~WY32OPR~~	~~13080105~~	~~08/01/13~~	~~1254~~
WY32SRM	WY32SRM	13080106	08/01/13	1353
UP-CB-BB-20130626-2-S	WY32A	13080109	08/01/13	1628
CS3	CS3	13080112	08/01/13	1905

6DFA - Form VI-HR CDD-1

CDD/CDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY

HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES	Contract:	SAIC
Lab Code:	WY32	Case No.:	NPDES
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1		
Init.Calib.Date CSL:	18-Jul-13	Init.Calib.Time CSL:	12:34:52
Init.Calib.Date CS1:	18-Jul-13	Init.Calib.Time CS1:	15:34:56
Init.Calib.Date CS2:	18-Jul-13	Init.Calib.Time CS2:	16:25:18
Init.Calib.Date CS3:	18-Jul-13	Init.Calib.Time CS3:	17:17:44
Init.Calib.Date CS4:	18-Jul-13	Init.Calib.Time CS4:	18:09:59
Init.Calib.Date CS5:	18-Jul-13	Init.Calib.Time CS5:	19:02:18

Target Analytes	RR/RRF						Mean RR/RRF	% RSD	Limits (% +/-)
	CSL	CS1	CS2	CS3	CS4	CS5			
2378-TCDD	0.00	0.93	1.01	0.98	1.01	1.04	0.99	4.3	20.0
2378-TCDF	0.00	0.90	0.85	0.84	0.86	0.89	0.87	2.9	20.0
12378-PeCDF	0.89	0.84	0.85	0.86	0.88	0.91	0.87	2.9	20.0
12378-PeCDD	1.03	0.96	0.96	0.96	0.96	0.99	0.98	2.9	20.0
23478-PeCDF	0.86	0.85	0.86	0.88	0.90	0.93	0.88	3.2	20.0
123478-HxCDF	1.09	1.01	1.04	1.03	1.04	1.07	1.05	2.9	20.0
123678-HxCDF	1.04	1.00	1.02	1.00	1.03	1.06	1.02	2.4	20.0
123478-HxCDD	0.94	0.98	0.95	0.96	0.96	1.00	0.97	2.4	20.0
123678-HxCDD	0.92	0.85	0.91	0.90	0.91	0.91	0.90	3.1	20.0
123789-HxCDD[2]	0.92	0.94	0.88	0.91	0.90	0.93	0.91	2.2	20.0
234678-HxCDF	1.02	1.10	1.07	1.09	1.12	1.13	1.09	3.6	20.0
123789-HxCDF	0.94	0.94	0.97	0.95	0.97	0.99	0.96	2.1	20.0
1234678-HpCDF	1.18	1.24	1.19	1.22	1.22	1.24	1.21	2.3	20.0
1234678-HpCDD	1.04	1.01	0.96	0.99	0.99	1.00	1.00	2.6	20.0
1234789-HpCDF	1.17	1.18	1.17	1.21	1.23	1.25	1.20	2.8	20.0
OCDD	0.99	0.98	0.96	0.97	0.98	0.99	0.98	1.2	20.0
OCDF[1]	1.08	1.02	1.01	1.04	1.09	1.15	1.06	4.9	20.0
37CL-2378-TCDD	1.16	1.09	1.05	1.03	1.04	1.17	1.09	5.8	20.0

(1) The Relative Response (RR) is calculated based on the labeled analogs of the other two HxCDDs.
(2) The RR is calculated based on the labeled analog of OCDD.

Labeled Compounds	RR/RRF						Mean RR/RRF	% RSD	Limits (% +/-)
	CSL	CS1	CS2	CS3	CS4	CS5			
13C-2378-TCDD	0.97	0.93	0.94	0.95	0.94	1.04	0.96	4.0	35.0
13C-12378-PeCDD	0.74	0.70	0.72	0.70	0.72	0.90	0.75	10.5	35.0
13C-123478-HxCDD	0.97	0.99	1.00	1.01	1.02	1.02	1.00	2.0	35.0
13C-123678-HxCDD	1.00	1.06	1.07	1.05	1.06	1.07	1.05	2.4	35.0
13C-1234678-HpCDD	0.86	0.89	0.89	0.88	0.88	0.88	0.88	1.5	35.0
13C-OCDD	0.75	0.76	0.76	0.77	0.77	0.84	0.77	4.3	35.0
13C-2378-TCDF	1.48	1.38	1.38	1.40	1.41	1.47	1.42	3.2	35.0
13C-12378-PeCDF	1.14	1.08	1.12	1.08	1.11	1.41	1.16	10.9	35.0
13C-23478-PeCDF	1.10	1.05	1.10	1.05	1.08	1.37	1.13	10.9	35.0
13C-123478-HxCDF	1.17	1.21	1.22	1.20	1.22	1.21	1.21	1.4	35.0
13C-123678-HxCDF	1.22	1.26	1.28	1.27	1.28	1.28	1.27	1.9	35.0
13C-234678-HxCDF	1.20	1.16	1.14	1.15	1.13	1.16	1.16	1.9	35.0
13C-123789-HxCDF	1.09	1.12	1.11	1.13	1.12	1.15	1.12	1.7	35.0
13C-1234678-HpCDF	0.98	1.04	1.06	1.04	1.05	1.06	1.04	2.9	35.0
13C-1234789-HpCDF	0.78	0.78	0.79	0.80	0.78	0.80	0.79	1.4	35.0

6DFB - Form VI-HR CDD-2

CDD/CDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY

HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES	Contract:	SAIC
Lab Code:	WY32	Case No.:	NPDES
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1		
Init.Calib.Date CSL:	18-Jul-13	Init.Calib.Time CSL:	12:34:52
Init.Calib.Date CS1:	18-Jul-13	Init.Calib.Time CS1:	15:34:56
Init.Calib.Date CS2:	18-Jul-13	Init.Calib.Time CS2:	16:25:18
Init.Calib.Date CS3:	18-Jul-13	Init.Calib.Time CS3:	17:17:44
Init.Calib.Date CS4:	18-Jul-13	Init.Calib.Time CS4:	18:09:59
Init.Calib.Date CS5:	18-Jul-13	Init.Calib.Time CS5:	19:02:18

Target Analytes	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits#
		CSL	CS1	CS2	CS3	CS4	CS5		
2378-TCDD	320/322	0.00	0.77	0.82	0.79	0.78	0.77		0.65 - 0.89
2378-TCDF	304/306	0.00	0.66	0.73	0.71	0.70	0.73		0.65 - 0.89
12378-PeCDF	340/342	1.46	1.40	1.37	1.45	1.51	1.50		1.32 - 1.78
12378-PeCDD	356/358	1.67	1.63	1.52	1.57	1.53	1.54		1.32 - 1.78
23478-PeCDF	340/342	1.57	1.48	1.42	1.45	1.48	1.49		1.32 - 1.78
123478-HxCDF	374/376	1.06	1.16	1.18	1.17	1.20	1.19		1.05 - 1.43
123678-HxCDF	374/376	1.17	1.20	1.17	1.18	1.18	1.20		1.05 - 1.43
123478-HxCDD	390/392	1.30	1.29	1.21	1.25	1.23	1.25		1.05 - 1.43
123678-HxCDD	390/392	1.19	1.28	1.26	1.24	1.25	1.24		1.05 - 1.43
123789-HxCDD	390/392	1.21	1.13	1.19	1.24	1.24	1.24		1.05 - 1.43
234678-HxCDF	374/376	1.29	1.14	1.17	1.18	1.21	1.18		1.05 - 1.43
123789-HxCDF	374/376	1.39	1.19	1.22	1.18	1.18	1.20		1.05 - 1.43
1234678-HpCDF	408/410	0.93	0.98	0.98	0.97	0.99	1.00		0.89 - 1.21
1234678-HpCDD	424/426	1.11	1.04	1.05	1.05	1.04	1.03		0.89 - 1.21
1234789-HpCDF	408/410	1.07	0.97	0.96	1.01	0.98	0.99		0.89 - 1.21
OCDD	458/460	0.85	0.87	0.91	0.88	0.90	0.89		0.76 - 1.02
OCDF	442/444	0.86	0.84	0.86	0.84	0.85	0.86		0.76 - 1.02

Labeled Compounds	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits
		CSL	CS1	CS2	CS3	CS4	CS5		
13C-2378-TCDD	332/334	0.77	0.77	0.79	0.78	0.78	0.78		0.65 - 0.89
13C-12378-PeCDD	368/370	1.58	1.55	1.54	1.59	1.57	1.57		1.32 - 1.78
13C-123478-HxCDD	402/404	1.28	1.26	1.25	1.26	1.24	1.26		1.05 - 1.43
13C-123678-HxCDD	402/404	1.23	1.24	1.23	1.24	1.22	1.24		1.05 - 1.43
13C-1234678-HpCDD	436/438	1.05	1.03	1.05	1.06	1.05	1.05		0.89 - 1.21
13C-OCDD	470/472	0.89	0.89	0.88	0.88	0.87	0.88		0.76 - 1.02
13C-2378-TCDF	316/318	0.78	0.78	0.78	0.77	0.77	0.78		0.65 - 0.89
13C-12378-PeCDF	352/354	1.56	1.55	1.56	1.58	1.55	1.57		1.32 - 1.78
13C-23478-PeCDF	352/354	1.57	1.55	1.57	1.56	1.57	1.57		1.32 - 1.78
13C-123478-HxCDF	384/386	0.52	0.52	0.52	0.52	0.52	0.52		0.43 - 0.59
13C-123678-HxCDF	384/386	0.53	0.53	0.53	0.51	0.52	0.52		0.43 - 0.59
13C-234678-HxCDF	384/386	0.52	0.52	0.52	0.51	0.52	0.52		0.43 - 0.59
13C-123789-HxCDF	384/386	0.52	0.52	0.52	0.52	0.52	0.53		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.44	0.45	0.45	0.45	0.45	0.45		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.44	0.45	0.44	0.44	0.45	0.45		0.37 - 0.51

Internal Standards	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ion Ratio QC Limits
		CSL	CS1	CS2	CS3	CS4	CS5		
13C-1234-TCDD	332/334	0.78	0.79	0.79	0.80	0.79	0.78		0.65 - 0.89
13C-123789-HxCDD	402/404	1.23	1.24	1.24	1.21	1.24	1.25		1.05 - 1.43

(#) Quality Control (QC) limits represent ±15% window around the theoretical ion abundance ratio. The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterisk in the flag column.

7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES	Contract:	SAIC
Lab Code:	WY32	Case No :	NPDES
TO No :		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	25
Instrument ID:	AUTOSPEC1	Lab File ID:	13080102
Date Analysed	01-Aug-13	Time Analysed	10:15.29
Init Calib Date.	18-JUL-13	Init.Calib Time.	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	0.97	0 99	-1.9		0 77		0.65 - 0 89
2378-TCDF	304/306	0.90	0.87	3.7		0.73		0.65 - 0 89
12378-PeCDF	340/342	0.88	0.87	1 2		1.45		1.32 - 1.78
12378-PeCDD	356/358	0.96	0.98	-1.9		1.54		1.32 - 1.78
23478-PeCDF	340/342	0.89	0.88	1.5		1 45		1 32 - 1.78
123478-HxCDF	374/376	1.06	1 05	1.3		1 18		1.05 - 1.43
123678-HxCDF	374/376	1.02	1 02	-0.4		1 19		1.05 - 1 43
123478-HxCDD	390/392	0.99	0 97	2.6		1 27		1.05 - 1.43
123678-HxCDD	390/392	0 91	0.90	1.1		1.24		1.05 - 1.43
123789-HxCDD	390/392	0 93	0.91	2.1		1.24		1.05 - 1 43
234678-HxCDF	374/376	1.11	1.09	2 1		1.19		1.05 - 1.43
123789-HxCDF	374/376	0.99	0 96	3.1		1.22		1.05 - 1.43
1234678-HpCDF	408/410	1.23	1.21	1.1		0.99		0.89 - 1.21
1234678-HpCDD	424/426	1.00	1.00	0.6		1.06		0.89 - 1.21
1234789-HpCDF	408/410	1.21	1.20	0.6		1 00		0.89 - 1 21
OCDD	458/460	0 99	0 98	0.6		0.89		0.76 - 1 02
OCDF	442/444	1 11	1.06	4.5		0.86		0.76 - 1 02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	1.00	0 96	3.5		0.78		0 65 - 0.89
13C-12378-PeCDD	368/370	0.73	0 75	-1 7		1.57		1 32 - 1.78
13C-123478-HxCDD	402/404	1 02	1.00	1.8		1 28		1.05 - 1.43
13C-123678-HxCDD	402/404	1.09	1.05	3.2		1.22		1 05 - 1.43
13C-1234678-HpCDD	436/438	0 89	0.88	0.8		1 06		0.89 - 1 21
13C-OCDD	470/472	0.76	0.77	-1.7		0.89		0.76 - 1.02
13C-2378-TCDF	316/318	1.43	1.42	0.9		0 77		0.65 - 0 89
13C-12378-PeCDF	352/354	1.15	1.16	-0.7		1.57		1.32 - 1 78
13C-23478-PeCDF	352/354	1.12	1.13	-0.7		1 55		1.32 - 1.78
13C-123478-HxCDF	384/386	1.29	1.21	6 6		0.51		0.43 - 0.59
13C-123678-HxCDF	384/386	1.38	1.27	9.3		0.51		0.43 - 0.59
13C-234678-HxCDF	384/386	1.20	1 16	4.1		0.52		0.43 - 0.59
13C-123789-HxCDF	384/386	1.20	1 12	6.8		0.53		0.43 - 0.59
13C-1234678-HpCDF	418/420	1.06	1 04	2.1		0.44		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.84	0 79	6.7		0.45		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
37CL-2378-TCDD	328	1 08	1.09	-1.0		NA	NA	NA

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.79		0 65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.23		1 05 - 1.43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate flag column.

7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES	Contract:	SAIC
Lab Code:	WY32	Case No.:	NPDES
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	13080102
Date Analysed	01-Aug-13	Time Analysed	10:15:29
Init.Calib.Date:	18-JUL-13	Init.Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1.00	26.74
2378-TCDF	1 00	26.09
12378-PeCDF	1 00	30.23
12378-PeCDD	1 00	31.83
23478-PeCDF	1.00	31.58
123478-HxCDF	1.00	35.25
123678-HxCDF	1.00	35 41
123478-HxCDD	1 00	36.48
123678-HxCDD	1 00	36.61
123789-HxCDD	1 01	37.04
234678-HxCDF	1 00	36.35
123789-HxCDF	1.00	37.49
1234678-HpCDF	1.00	39.55
1234678-HpCDD	1.00	41.36
1234789-HpCDF	1 00	42.25
OCDD	1 00	47.28
OCDF	1.01	47.56

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1 03	26.72
13C-12378-PeCDD	1 23	31.82
13C-123478-HxCDD	0.99	36.47
13C-123678-HxCDD	0 99	36.59
13C-1234678-HpCDD	1.12	41.34
13C-OCDD	1 28	47.25
13C-2378-TCDF	1.01	26.08
13C-12378-PeCDF	1.17	30.22
13C-23478-PeCDF	1.22	31.57
13C-123478-HxCDF	0.95	35.23
13C-123678-HxCDF	0.96	35 39
13C-234678-HxCDF	0.98	36 33
13C-123789-HxCDF	1.01	37.48
13C-1234678-HpCDF	1.07	39.53
13C-1234789-HpCDF	1.14	42.24

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1.03	26.74

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	25.90
13C-123789-HxCDD	0.00	37.02

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound).

7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES	Contract:	SAIC
Lab Code:	WY32	Case No..	NPDES
TO No..		SDG No.:	
GC Column	RTX-DIOXIN2	ID (mm):	.25
Instrument ID.	AUTOSPEC1	Lab File ID:	13080112
Date Analysed	01-Aug-13	Time Analysed	19:05:06
Init Calib Date:	18-JUL-13	Init.Calib.Time:	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1.01	0.99	1.4		0.78		0.65 - 0.89
2378-TCDF	304/306	0.91	0.87	5.0		0.72		0.65 - 0.89
12378-PeCDF	340/342	0 89	0.87	2.3		1.49		1.32 - 1.78
12378-PeCDD	356/358	0.98	0.98	0.0		1.55		1.32 - 1.78
23478-PeCDF	340/342	0 92	0.88	4.3		1.49		1.32 - 1.78
123478-HxCDF	374/376	1.06	1.05	1.5		1.20		1.05 - 1.43
123678-HxCDF	374/376	1 03	1.02	0.6		1 20		1 05 - 1.43
123478-HxCDD	390/392	1.01	0 97	4 4		1.26		1.05 - 1.43
123678-HxCDD	390/392	0 91	0.90	1.0		1.23		1.05 - 1.43
123789-HxCDD	390/392	0 96	0.91	5.4		1.23		1.05 - 1 43
234678-HxCDF	374/376	1.11	1.09	2 3		1.20		1.05 - 1.43
123789-HxCDF	374/376	0 98	0.96	2.4		1.19		1.05 - 1.43
1234678-HpCDF	408/410	1.23	1 21	1.4		0.99		0.89 - 1.21
1234678-HpCDD	424/426	0 99	1.00	-0.8		1.04		0 89 - 1 21
1234789-HpCDF	408/410	1.22	1.20	2 1		1.02		0.89 - 1.21
OCDD	458/460	1 00	0.98	1.7		0.89		0 76 - 1 02
OCDF	442/444	1 12	1.06	4.8		0.87		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0.96	0.96	0.2		0.79		0.65 - 0.89
13C-12378-PeCDD	368/370	0.77	0.75	3.2		1.56		1.32 - 1.78
13C-123478-HxCDD	402/404	0.98	1.00	-1.9		1.24		1.05 - 1.43
13C-123678-HxCDD	402/404	1.05	1.05	0.0		1.25		1.05 - 1 43
13C-1234678-HpCDD	436/438	0.94	0.88	6 5		1.05		0 89 - 1.21
13C-OCDD	470/472	0.79	0 77	1 7		0.88		0.76 - 1.02
13C-2378-TCDF	316/318	1 45	1.42	2 4		0.78		0.65 - 0.89
13C-12378-PeCDF	352/354	1.22	1.16	5.2		1 59		1.32 - 1.78
13C-23478-PeCDF	352/354	1.18	1.13	4.7		1.58		1.32 - 1.78
13C-123478-HxCDF	384/386	1.23	1.21	1.7		0.52		0.43 - 0.59
13C-123678-HxCDF	384/386	1 27	1.27	0.4		0.52		0 43 - 0 59
13C-234678-HxCDF	384/386	1 16	1.16	0.1		0.52		0.43 - 0.59
13C-123789-HxCDF	384/386	1.15	1.12	2.5		0.52		0 43 - 0.59
13C-1234678-HpCDF	418/420	1.07	1.04	3 2		0.45		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.86	0 79	9.6		0.45		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
37CL-2378-TCDD	328	1 06	1.09	-2 6		NA	NA	NA

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.79		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.24		1 05 - 1.43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate flag column.

7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES	Contract:	SAIC
Lab Code:	WY32	Case No.:	NPDES
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	13080112
Date Analysed	01-Aug-13	Time Analysed	19:05:06
Init.Calib.Date:	18-JUL-13	Init.Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1 00	26.71
2378-TCDF	1.00	26.08
12378-PeCDF	1.00	30.21
12378-PeCDD	1.00	31.81
23478-PeCDF	1 00	31.56
123478-HxCDF	1 00	35.24
123678-HxCDF	1.00	35.39
123478-HxCDD	1.00	36.47
123678-HxCDD	1.00	36.60
123789-HxCDD	1.01	37.03
234678-HxCDF	1.00	36.34
123789-HxCDF	1.00	37.48
1234678-HpCDF	1.00	39.54
1234678-HpCDD	1.00	41 36
1234789-HpCDF	1.00	42.25
OCDD	1.00	47 27
OCDF	1.01	47 55

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	26.69
13C-12378-PeCDD	1.23	31.80
13C-123478-HxCDD	0.98	36.45
13C-123678-HxCDD	0.99	36.58
13C-1234678-HpCDD	1 12	41.34
13C-OCDD	1.28	47.25
13C-2378-TCDF	1.01	26 05
13C-12378-PeCDF	1.17	30 20
13C-23478-PeCDF	1.22	31.55
13C-123478-HxCDF	0.95	35.22
13C-123678-HxCDF	0.96	35.37
13C-234678-HxCDF	0.98	36.32
13C-123789-HxCDF	1.01	37.47
13C-1234678-HpCDF	1.07	39.52
13C-1234789-HpCDF	1.14	42.23

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1.03	26.71

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	25.87
13C-123789-HxCDD	0.00	37.01

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound)

Pesticide Analysis
Report and Summary QC Forms

ARI Job ID: WY32, WY33

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: UP-CB-B8-20130626-S
SAMPLE

Lab Sample ID: WY32A
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized:
Reported: 08/16/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/26/13
Date Analyzed: 08/14/13 22:25
Instrument/Analyst: ECD6/YZ
GPC Cleanup: Yes
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.1 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 31.0%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.39	2.4	< 2.4 U
319-85-7	beta-BHC	0.66	13	< 13 Y
319-86-8	delta-BHC	0.39	7.4	< 7.4 Y
58-89-9	gamma-BHC (Lindane)	0.23	5.1	< 5.1 Y
76-44-8	Heptachlor	0.63	11	< 11 Y
309-00-2	Aldrin	0.26	25	< 25 Y
1024-57-3	Heptachlor Epoxide	0.40	64	< 64 Y
959-98-8	Endosulfan I	0.34	8.9	< 8.9 Y
60-57-1	Dieldrin	0.48	210	< 210 Y
72-55-9	4,4'-DDE	0.59	11	< 11 Y
72-20-8	Endrin	1.0	8.8	< 8.8 Y
33213-65-9	Endosulfan II	0.55	4.8	< 4.8 U
72-54-8	4,4'-DDD	0.64	22	< 22 Y
1031-07-8	Endosulfan Sulfate	0.91	4.8	< 4.8 U
50-29-3	4,4'-DDT	0.91	10	< 10 Y
72-43-5	Methoxychlor	3.3	24	< 24 U
53494-70-5	Endrin Ketone	0.57	13	< 13 Y
7421-93-4	Endrin Aldehyde	1.0	4.8	< 4.8 U
5103-74-2	trans-Chlordane	0.37	28	< 28 Y
5103-71-9	cis-Chlordane	0.24	23	< 23 Y
8001-35-2	Toxaphene	160	480	< 480 U
118-74-1	Hexachlorobenzene	0.45	6.6	< 6.6 Y
87-68-3	Hexachlorobutadiene	0.66	4.8	< 4.8 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	94.1%
Tetrachlorometaxylene	142%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: UP-MHF-165-20130626-S
SAMPLE

Lab Sample ID: WY32B
LIMS ID: 13-15394
Matrix: Sediment
Data Release Authorized:
Reported: 08/16/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/26/13
Date Analyzed: 08/14/13 22:43
Instrument/Analyst: ECD6/YZ
GPC Cleanup: Yes
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.8 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 15.0%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.40	2.4	< 2.4 U
319-85-7	beta-BHC	0.68	2.4	< 2.4 U
319-86-8	delta-BHC	0.40	120	< 120 Y
58-89-9	gamma-BHC (Lindane)	0.23	2.4	< 2.4 U
76-44-8	Heptachlor	0.64	2.4	< 2.4 U
309-00-2	Aldrin	0.27	2.4	< 2.4 U
1024-57-3	Heptachlor Epoxide	0.42	4.9	< 4.9 U
959-98-8	Endosulfan I	0.35	2.4	< 2.4 U
60-57-1	Dieldrin	0.49	4.9	< 4.9 U
72-55-9	4,4'-DDE	0.61	4.9	< 4.9 U
72-20-8	Endrin	1.1	4.9	< 4.9 U
33213-65-9	Endosulfan II	0.57	4.9	< 4.9 U
72-54-8	4,4'-DDD	0.66	4.9	< 4.9 U
1031-07-8	Endosulfan Sulfate	0.94	4.9	< 4.9 U
50-29-3	4,4'-DDT	0.94	4.9	< 4.9 U
72-43-5	Methoxychlor	3.4	24	< 24 U
53494-70-5	Endrin Ketone	0.58	4.9	< 4.9 U
7421-93-4	Endrin Aldehyde	1.1	4.9	< 4.9 U
5103-74-2	trans-Chlordane	0.38	2.4	< 2.4 U
5103-71-9	cis-Chlordane	0.25	2.4	< 2.4 U
8001-35-2	Toxaphene	170	490	< 490 U
118-74-1	Hexachlorobenzene	0.46	4.9	< 4.9 U
87-68-3	Hexachlorobutadiene	0.67	4.9	< 4.9 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	58.2%
Tetrachlorometaxylene	99.9%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: UP-CB-A6-20130626-S
SAMPLE

Lab Sample ID: WY32C
LIMS ID: 13-15395
Matrix: Sediment
Data Release Authorized:
Reported: 08/16/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/26/13
Date Analyzed: 08/14/13 23:01
Instrument/Analyst: ECD6/YZ
GPC Cleanup: Yes
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.7 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 29.8%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.40	2.5	< 2.5 U
319-85-7	beta-BHC	0.69	17	< 17 Y
319-86-8	delta-BHC	0.40	8.4	< 8.4 Y
58-89-9	gamma-BHC (Lindane)	0.24	4.8	< 4.8 Y
76-44-8	Heptachlor	0.65	8.8	< 8.8 Y
309-00-2	Aldrin	0.27	32	< 32 Y
1024-57-3	Heptachlor Epoxide	0.42	12	< 12 Y
959-98-8	Endosulfan I	0.36	2.5	< 2.5 U
60-57-1	Dieldrin	0.49	28	< 28 Y
72-55-9	4,4'-DDE	0.61	4.9	< 4.9 U
72-20-8	Endrin	1.1	4.9	< 4.9 U
33213-65-9	Endosulfan II	0.57	9.2	< 9.2 Y
72-54-8	4,4'-DDD	0.67	4.9	< 4.9 U
1031-07-8	Endosulfan Sulfate	0.95	4.9	< 4.9 U
50-29-3	4,4'-DDT	0.95	4.9	< 4.9 U
72-43-5	Methoxychlor	3.4	25	< 25 U
53494-70-5	Endrin Ketone	0.59	10	< 10 Y
7421-93-4	Endrin Aldehyde	1.1	4.9	< 4.9 U
5103-74-2	trans-Chlordane	0.38	12	< 12 Y
5103-71-9	cis-Chlordane	0.25	2.5	< 2.5 U
8001-35-2	Toxaphene	170	490	< 490 U
118-74-1	Hexachlorobenzene	0.46	9.8	< 9.8 Y
87-68-3	Hexachlorobutadiene	0.68	4.9	< 4.9 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	65.8%
Tetrachlorometaxylene	119%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

SW8081 PESTICIDE SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP	TCMX	TOT OUT
UP-CB-B8-20130626-S	94.1%	142%	0
UP-MHF-165-20130626-S	58.2%	99.9%	0
MB-072613	102%	61.8%	0
LCS-072613	86.5%	50.0%	0
UP-CB-A6-20130626-S	65.8%	119%	0
UP-CB-A6-20130626-S MS	71.1%	109%	0
UP-CB-A6-20130626-S MSD	91.0%	106%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(60-149)	(36-182)
(TCMX) = Tetrachlorometaxylene	(47-124)	(34-169)

Prep Method: SW3546
Log Number Range: 13-15393 to 13-15395

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Page 1 of 1

Sample ID: UP-CB-A6-20130626-S
MS/MSD

Lab Sample ID: WY32C
LIMS ID: 13-15395
Matrix: Sediment
Data Release Authorized:
Reported: 08/16/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted MS/MSD: 07/26/13

Date Analyzed MS: 08/14/13 23:19
MSD: 08/14/13 23:37
Instrument/Analyst MS: ECD6/YZ
MSD: ECD6/YZ

Sample Amount MS: 12.7 g-dry-wt
MSD: 12.7 g-dry-wt
Final Extract Volume MS: 2.5 mL
MSD: 2.5 mL
Dilution Factor MS: 5.00
MSD: 5.00

GPC Cleanup: Yes
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Silica Gel: Yes

Percent Moisture: 29.8%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
alpha-BHC	< 2.47	5.12	3.94	130%	6.49	3.94	165%	23.6%
beta-BHC	< 16.9	9.75 P	3.94	NA	6.43 P	3.94	NA	41.0%
delta-BHC	< 8.43	32.2 P	3.94	817%	10.1	3.94	256%	104%
gamma-BHC (Lindane)	< 4.78	8.24 P	3.94	209%	6.80	3.94	173%	19.1%
Heptachlor	< 8.75	13.4 P	3.94	340%	11.4	3.94	289%	16.1%
Aldrin	< 31.8	31.4 P	3.94	NA	31.4 P	3.94	NA	0.0%
Heptachlor Epoxide	< 12.1	22.7 P	3.94	576%	24.1 P	3.94	612%	6.0%
Endosulfan I	< 2.47	5.87	3.94	149%	5.77 P	3.94	146%	1.7%
Dieldrin	< 28.0	29.8 P	7.89	378%	33.4 P	7.88	424%	11.4%
4,4'-DDE	< 4.93	17.6 P	7.89	223%	12.6 P	7.88	160%	33.1%
Endrin	< 4.93	< 4.93 U	7.89	NA	7.13	7.88	90.5%	NA
Endosulfan II	< 9.19	10.4	7.89	132%	18.4 P	7.88	234%	55.6%
4,4'-DDD	< 4.93	9.01	7.89	114%	11.3	7.88	143%	22.6%
Endosulfan Sulfate	< 4.93	23.2 P	7.89	294%	5.45 JP	7.88	69.2%	124%
4,4'-DDT	< 4.93	< 4.93 U	7.89	NA	14.8 JP	7.88	188%	NA
Methoxychlor	< 24.7	< 24.6 U	39.4	NA	60.1	39.4	153%	NA
Endrin Ketone	< 10.5	8.31	7.89	105%	14.9 P	7.88	189%	56.8%
Endrin Aldehyde	< 4.93	2.37 JP	7.89	30.0%	3.91 JP	7.88	49.6%	49.0%
trans-Chlordane	< 12.0	16.1 P	3.94	409%	14.2 P	3.94	360%	12.5%
cis-Chlordane	< 2.47	15.3 P	3.94	388%	12.6 P	3.94	320%	19.4%
Hexachlorobenzene	< 9.83	7.88	3.94	200%	9.45	3.94	240%	18.1%
Hexachlorobutadiene	< 4.93	4.36 J	3.94	111%	4.44 J	3.94	113%	1.8%

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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: UP-CB-A6-20130626-S
MATRIX SPIKE

Lab Sample ID: WY32C
LIMS ID: 13-15395
Matrix: Sediment
Data Release Authorized:
Reported: 08/16/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/26/13
Date Analyzed: 08/14/13 23:19
Instrument/Analyst: ECD6/YZ
GPC Cleanup: Yes
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.7 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 29.8%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.40	2.5	---
319-85-7	beta-BHC	0.69	2.5	---
319-86-8	delta-BHC	0.40	2.5	---
58-89-9	gamma-BHC (Lindane)	0.24	2.5	---
76-44-8	Heptachlor	0.65	2.5	---
309-00-2	Aldrin	0.27	2.5	---
1024-57-3	Heptachlor Epoxide	0.42	4.9	---
959-98-8	Endosulfan I	0.35	2.5	---
60-57-1	Dieldrin	0.49	4.9	---
72-55-9	4,4'-DDE	0.61	4.9	---
72-20-8	Endrin	1.1	4.9	---
33213-65-9	Endosulfan II	0.57	4.9	---
72-54-8	4,4'-DDD	0.67	4.9	---
1031-07-8	Endosulfan Sulfate	0.95	4.9	---
50-29-3	4,4'-DDT	0.95	4.9	---
72-43-5	Methoxychlor	3.4	25	---
53494-70-5	Endrin Ketone	0.59	4.9	---
7421-93-4	Endrin Aldehyde	1.1	4.9	---
5103-74-2	trans-Chlordane	0.38	2.5	---
5103-71-9	cis-Chlordane	0.25	2.5	---
8001-35-2	Toxaphene	170	490	< 490 U
118-74-1	Hexachlorobenzene	0.46	4.9	---
87-68-3	Hexachlorobutadiene	0.68	4.9	---

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	71.1%
Tetrachlorometaxylene	109%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: UP-CB-A6-20130626-S
MATRIX SPIKE DUP

Lab Sample ID: WY32C
LIMS ID: 13-15395
Matrix: Sediment
Data Release Authorized:
Reported: 08/16/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/26/13
Date Analyzed: 08/14/13 23:37
Instrument/Analyst: ECD6/YZ
GPC Cleanup: Yes
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.7 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 29.8%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.40	2.5	---
319-85-7	beta-BHC	0.68	2.5	---
319-86-8	delta-BHC	0.40	2.5	---
58-89-9	gamma-BHC (Lindane)	0.24	2.5	---
76-44-8	Heptachlor	0.65	2.5	---
309-00-2	Aldrin	0.27	2.5	---
1024-57-3	Heptachlor Epoxide	0.42	4.9	---
959-98-8	Endosulfan I	0.35	2.5	---
60-57-1	Dieldrin	0.49	4.9	---
72-55-9	4,4'-DDE	0.61	4.9	---
72-20-8	Endrin	1.1	4.9	---
33213-65-9	Endosulfan II	0.57	4.9	---
72-54-8	4,4'-DDD	0.66	4.9	---
1031-07-8	Endosulfan Sulfate	0.95	4.9	---
50-29-3	4,4'-DDT	0.95	4.9	---
72-43-5	Methoxychlor	3.4	25	---
53494-70-5	Endrin Ketone	0.59	4.9	---
7421-93-4	Endrin Aldehyde	1.1	4.9	---
5103-74-2	trans-Chlordane	0.38	2.5	---
5103-71-9	cis-Chlordane	0.25	2.5	---
8001-35-2	Toxaphene	170	490	< 490 U
118-74-1	Hexachlorobenzene	0.46	4.9	---
87-68-3	Hexachlorobutadiene	0.68	4.9	---

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	91.0%
Tetrachlorometaxylene	106%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Page 1 of 1

Sample ID: LCS-072613
LAB CONTROL

Lab Sample ID: LCS-072613
LIMS ID: 13-15395
Matrix: Sediment
Data Release Authorized:
Reported: 08/16/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/26/13
Date Analyzed: 08/14/13 22:08
Instrument/Analyst: ECD6/YZ
GPC Cleanup: Yes
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.5 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
alpha-BHC	3.02	4.00	75.5%
beta-BHC	3.38	4.00	84.5%
delta-BHC	3.80	4.00	95.0%
gamma-BHC (Lindane)	3.28	4.00	82.0%
Heptachlor	3.16	4.00	79.0%
Aldrin	3.32	4.00	83.0%
Heptachlor Epoxide	3.96	4.00	99.0%
Endosulfan I	3.96	4.00	99.0%
Dieldrin	8.28	8.00	104%
4,4'-DDE	8.46	8.00	106%
Endrin	6.80	8.00	85.0%
Endosulfan II	6.82	8.00	85.2%
4,4'-DDD	6.60	8.00	82.5%
Endosulfan Sulfate	7.04	8.00	88.0%
4,4'-DDT	6.42	8.00	80.2%
Methoxychlor	31.6	40.0	79.0%
Endrin Ketone	7.34	8.00	91.8%
Endrin Aldehyde	4.14	8.00	51.8%
trans-Chlordane	3.88	4.00	97.0%
cis-Chlordane	3.82	4.00	95.5%
Hexachlorobenzene	2.66	4.00	66.5%
Hexachlorobutadiene	2.28	4.00	57.0%

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	86.5%
Tetrachlorometaxylene	50.0%

Reported in µg/kg (ppb)

FORM 4
PESTICIDE METHOD BLANK SUMMARY

BLANK NO.

WY32MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WY32
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WY32MBS1
Lab File ID: 0814A022

Date Extracted: 07/26/13
Matrix: SOLID

Date Analyzed: 08/14/13
Instrument ID: ECD6

Time Analyzed: 2150
GC Columns: STX-CLP1/STX-CLP2

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WY32LCSS1	WY32LCSS1	08/14/13
02	UP-CB-B8-20130626-S	WY32A	08/14/13
03	UP-MHF-165-20130626	WY32B	08/14/13
04	UP-CB-A6-20130626-S	WY32C	08/14/13
05	UP-CB-A6-201306 MS	WY32CMS	08/14/13
06	UP-CB-A6-201306 MSD	WY32CMSD	08/14/13

ALL RUNS ARE DUAL COLUMN

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD **Sample ID: MB-072613**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-072613
LIMS ID: 13-15395
Matrix: Sediment
Data Release Authorized:
Reported: 08/16/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 07/26/13
Date Analyzed: 08/14/13 21:50
Instrument/Analyst: ECD6/YZ
GPC Cleanup: Yes
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.5 g
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.081	0.50	< 0.50 U
319-85-7	beta-BHC	0.14	0.50	< 0.50 U
319-86-8	delta-BHC	0.082	0.50	< 0.50 U
58-89-9	gamma-BHC (Lindane)	0.048	0.50	< 0.50 U
76-44-8	Heptachlor	0.13	0.50	< 0.50 U
309-00-2	Aldrin	0.055	0.50	< 0.50 U
1024-57-3	Heptachlor Epoxide	0.085	1.0	< 1.0 U
959-98-8	Endosulfan I	0.072	0.50	< 0.50 U
60-57-1	Dieldrin	0.10	1.0	< 1.0 U
72-55-9	4,4'-DDE	0.12	1.0	< 1.0 U
72-20-8	Endrin	0.22	1.0	< 1.0 U
33213-65-9	Endosulfan II	0.12	1.0	< 1.0 U
72-54-8	4,4'-DDD	0.14	1.0	< 1.0 U
1031-07-8	Endosulfan Sulfate	0.19	1.0	< 1.0 U
50-29-3	4,4'-DDT	0.19	1.0	< 1.0 U
72-43-5	Methoxychlor	0.70	5.0	< 5.0 U
53494-70-5	Endrin Ketone	0.12	1.0	< 1.0 U
7421-93-4	Endrin Aldehyde	0.22	1.0	< 1.0 U
5103-74-2	trans-Chlordane	0.077	0.50	< 0.50 U
5103-71-9	cis-Chlordane	0.051	0.50	< 0.50 U
8001-35-2	Toxaphene	35	100	< 100 U
118-74-1	Hexachlorobenzene	0.094	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	0.14	1.0	< 1.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	102%
Tetrachlorometaxylene	61.8%

6D

8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 08/06/13

	RT OF STANDARDS							MEAN	RT WINDOW	
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	RT	FROM	TO
alpha-BHC	4.28	4.28	4.28	4.28	4.28	4.28	4.28	4.28	4.23	4.33
beta-BHC	4.65	4.65	4.64	4.64	4.64	4.64	4.64	4.64	4.59	4.69
delta-BHC	4.82	4.82	4.81	4.81	4.81	4.81	4.81	4.81	4.76	4.86
gamma-BHC (Lindane)	4.57	4.56	4.56	4.56	4.56	4.56	4.56	4.56	4.51	4.61
Heptachlor	5.01	5.01	5.01	5.01	5.01	5.01	5.00	5.01	4.95	5.05
Aldrin	5.30	5.30	5.30	5.30	5.30	5.30	5.29	5.30	5.24	5.34
Heptachlor epoxide b	5.87	5.87	5.87	5.87	5.87	5.87	5.87	5.87	5.82	5.92
Endosulfan I	6.25	6.25	6.25	6.25	6.25	6.24	6.24	6.25	6.19	6.29
Dieldrin	6.47	6.47	6.47	6.47	6.47	6.47	6.46	6.47	6.41	6.51
4,4'-DDE	6.18	6.17	6.17	6.17	6.17	6.17	6.17	6.17	6.12	6.22
Endrin	6.69	6.69	6.69	6.68	6.68	6.68	6.68	6.68	6.63	6.73
Endosulfan II	6.89	6.89	6.89	6.89	6.89	6.89	6.89	6.89	6.84	6.94
4,4'-DDD	6.74	6.73	6.73	6.73	6.73	6.73	6.72	6.73	6.67	6.77
Endosulfan sulfate	7.66	7.66	7.66	7.66	7.66	7.65	7.65	7.66	7.60	7.70
4,4'-DDT	6.99	6.99	6.99	6.99	6.98	6.98	6.98	6.99	6.93	7.03
Methoxychlor	7.41	7.41	7.41	7.41	7.41	7.41	7.41	7.41	7.36	7.46
Endrin ketone	7.91	7.91	7.91	7.91	7.91	7.91	7.91	7.91	7.86	7.96
Endrin aldehyde	7.27	7.27	7.27	7.27	7.27	7.27	7.26	7.27	7.21	7.31
gamma-Chlordane	5.99	5.99	5.99	5.99	5.99	5.99	5.99	5.99	5.94	6.04
alpha-Chlordane	6.12	6.11	6.11	6.11	6.11	6.11	6.11	6.11	6.06	6.16
Hexachlorobutadiene	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.25	2.35
Hexachlorobenzene	4.14	4.14	4.14	4.14	4.14	4.14	4.13	4.14	4.08	4.18
Tetrachloro-m-xylene	3.80	3.80	3.80	3.80	3.80	3.80	3.79	3.80	3.74	3.84
Decachlorobiphenyl	8.75	8.75	8.75	8.75	8.75	8.75	8.75	8.75	8.70	8.80

6D

8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 08/06/13

	RT OF STANDARDS							MEAN	RT WINDOW	
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	RT	FROM	TO
alpha-BHC	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.66	4.76
beta-BHC	5.15	5.14	5.14	5.14	5.14	5.14	5.14	5.14	5.09	5.19
delta-BHC	5.46	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.40	5.50
gamma-BHC (Lindane)	5.07	5.07	5.07	5.07	5.07	5.07	5.06	5.07	5.01	5.11
Heptachlor	5.53	5.53	5.53	5.53	5.53	5.53	5.52	5.53	5.47	5.57
Aldrin	5.87	5.87	5.87	5.86	5.87	5.86	5.86	5.87	5.81	5.91
Heptachlor epoxide b	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.37	6.47
Endosulfan I	6.81	6.81	6.81	6.81	6.81	6.81	6.80	6.81	6.75	6.85
Dieldrin	7.06	7.06	7.06	7.06	7.06	7.06	7.06	7.06	7.01	7.11
4,4'-DDE	6.87	6.87	6.87	6.87	6.87	6.87	6.87	6.87	6.82	6.92
Endrin	7.35	7.35	7.35	7.35	7.35	7.35	7.35	7.35	7.30	7.40
Endosulfan II	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.54	7.49	7.59
4,4'-DDD	7.41	7.41	7.41	7.41	7.40	7.40	7.40	7.41	7.35	7.45
Endosulfan sulfate	8.08	8.08	8.08	8.08	8.08	8.08	8.08	8.08	8.03	8.13
4,4'-DDT	7.69	7.69	7.69	7.69	7.69	7.69	7.69	7.69	7.64	7.74
Methoxychlor	8.27	8.27	8.27	8.27	8.27	8.27	8.27	8.27	8.22	8.32
Endrin ketone	8.57	8.57	8.57	8.57	8.57	8.57	8.57	8.57	8.52	8.62
Endrin aldehyde	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.79	7.89
gamma-Chlordane	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.55	6.65
alpha-Chlordane	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.69	6.79
Hexachlorobutadiene	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.41	2.51
Hexachlorobenzene	4.59	4.59	4.59	4.59	4.59	4.59	4.58	4.59	4.53	4.63
Tetrachloro-m-xylene	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.08	4.18
Decachlorobiphenyl	9.72	9.72	9.72	9.72	9.72	9.72	9.71	9.72	9.66	9.76

6E
8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 08/06/13

	CALIBRATION FACTORS								R^2
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	%RSD
alpha-BHC	1.4329	1.4668	1.4941	1.5856	1.5998	1.6675	1.6510	1.5568	5.9
beta-BHC	0.6624	0.6515	0.6124	0.6178	0.5982	0.6036	0.5865	0.6189	4.5
delta-BHC	1.2616	1.1700	1.1853	1.3059	1.3433	1.4135	1.4153	1.2993	7.7
gamma-BHC (Lindane)	1.3482	1.3745	1.3772	1.4464	1.4444	1.4906	1.4713	1.4218	3.8
Heptachlor	1.3677	1.3694	1.3592	1.3983	1.3675	1.3758	1.3199	1.3654	1.7
Aldrin	1.3427	1.3505	1.3469	1.3977	1.3830	1.4036	1.3482	1.3675	1.9
Heptachlor epoxide b	1.2687	1.2644	1.2358	1.2652	1.2214	1.2197	1.1554	1.2329	3.2
Endosulfan I	1.2724	1.2405	1.1849	1.1778	1.1222	1.1046	1.0522	1.1649	6.6
Dieldrin	1.2203	1.2500	1.2323	1.2610	1.2227	1.2149	1.1627	1.2234	2.6
4,4'-DDE	0.9652	0.9454	0.9071	0.9186	0.9121	0.9366	0.9264	0.9302	2.2
Endrin	1.0649	1.0874	1.0675	1.1026	1.0760	1.0622	1.0324	1.0704	2.1
Endosulfan II	1.1344	1.1277	1.1037	1.1406	1.0974	1.0793	1.0453	1.1040	3.1
4,4'-DDD	1.0801	1.0967	1.0746	1.0376	1.0253	1.0440	1.0222	1.0544	2.8
Endosulfan sulfate	0.9640	0.9628	0.9393	0.9726	0.9514	0.9536	0.9355	0.9542	1.4
4,4'-DDT	1.0171	1.0390	1.0327	1.0779	1.0622	1.0736	1.0662	1.0527	2.2
Methoxychlor	0.5442	0.5347	0.5022	0.4958	0.4584	0.4615	0.4669	0.4948	7.0
Endrin ketone	1.3247	1.2976	1.2403	1.2541	1.2000	1.1925	1.1616	1.2387	4.7
Endrin aldehyde	0.9712	0.9492	0.9229	0.9381	0.8981	0.8869	0.8533	0.9171	4.4
gamma-Chlordane	1.3016	1.3015	1.2770	1.3156	1.2958	1.3224	1.2787	1.2989	1.3
alpha-Chlordane	1.2610	1.2514	1.2172	1.2492	1.2296	1.2516	1.2093	1.2385	1.6
Hexachlorobutadiene	1.7682	1.7672	1.7088	1.7198	1.6565	1.6752	1.6653	1.7087	2.7
Hexachlorobenzene	1.2880	1.3455	1.2190	1.2156	1.1641	1.1656	1.1292	1.2181	6.2
Tetrachloro-m-xylene	1.0173	1.0212	1.0128	1.0445	1.0274	1.0316	0.9995	1.0220	1.4
Decachlorobiphenyl	1.0442	1.0256	0.9800	0.9744	0.9086	0.9328	0.9114	0.9681	5.5

6E
8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 08/06/13

COMPOUND	CALIBRATION FACTORS LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	R^2 %RSD
alpha-BHC	1.4576	1.5789	1.5694	1.6904	1.6706	1.7099	1.6497	1.6181	5.5
beta-BHC	0.5999	0.6149	0.6102	0.6302	0.6231	0.6377	0.6143	0.6186	2.1
delta-BHC	1.1059	1.1922	1.2676	1.3972	1.4052	1.4473	1.4400	1.3222	10.2
gamma-BHC (Lindane)	1.2675	1.3492	1.3843	1.4814	1.4688	1.4956	1.4853	1.4189	6.1
Heptachlor	1.3155	1.3667	1.3678	1.4144	1.3603	1.3309	1.2306	1.3409	4.3
Aldrin	1.2960	1.2818	1.2901	1.3286	1.2887	1.2854	1.2022	1.2818	3.0
Heptachlor epoxide b	1.0710	1.1195	1.1105	1.1559	1.1202	1.1034	1.0222	1.1004	3.9
Endosulfan I	0.9717	1.0164	1.0202	1.0643	1.0317	1.0172	0.9424	1.0091	4.0
Dieldrin	1.0695	1.0982	1.0832	1.0937	1.0206	0.9787	0.8735	1.0310	7.9
4,4'-DDE	0.9911	1.0511	1.0595	1.0850	1.0265	1.0074	0.9026	1.0176	5.9
Endrin	1.5502	1.5945	1.5699	1.6194	1.5453	1.4744	1.3494	1.5290	6.0
Endosulfan II	1.7033	1.7400	1.7134	1.7628	1.6694	1.6318	1.5129	1.6762	5.0
4,4'-DDD	1.5656	1.6287	1.6222	1.6758	1.6108	1.5853	1.4950	1.5976	3.6
Endosulfan sulfate	1.3069	1.3530	1.3364	1.4134	1.3761	1.3572	1.2743	1.3453	3.4
4,4'-DDT	1.3786	1.4373	1.4357	1.5206	1.4835	1.4466	1.4537	1.4508	3.0
Methoxychlor	0.6424	0.6359	0.5967	0.5699	0.5063	0.4753	0.4024	0.5470	16.3
Endrin ketone	1.5980	1.5766	1.5283	1.5686	1.4714	1.4601	1.3776	1.5115	5.2
Endrin aldehyde	1.3837	1.3898	1.3548	1.3988	1.3332	1.3044	1.2058	1.3386	5.0
gamma-Chlordane	1.0797	1.1247	1.1287	1.1761	1.1520	1.1562	1.0930	1.1300	3.1
alpha-Chlordane	1.0040	1.0483	1.0540	1.0984	1.0708	1.0737	1.0165	1.0522	3.1
Hexachlorobutadiene	1.4211	1.4157	1.3660	1.3944	1.3356	1.3012	1.2646	1.3569	4.4
Hexachlorobenzene	1.7385	1.7870	1.6791	1.7479	1.7008	1.6915	1.6390	1.7120	2.9
Tetrachloro-m-xylene	1.1874	1.2264	1.2121	1.2347	1.1723	1.1487	0.9965	1.1683	7.0
Decachlorobiphenyl	1.4342	1.4175	1.3539	1.3567	1.2919	1.2984	1.2587	1.3445	4.9

6G

8081 INITIAL CALIBRATION OF SINGLE POINT PCBs and TOXAPHENE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 08/06/13

Toxaphene			
Peak	RT	RT WIN	Cal Factor
1	6.940	6.89- 6.99	0.0498
2	6.991	6.94- 7.04	0.0354
3	7.247	7.20- 7.30	0.0563
4	7.358	7.31- 7.41	0.0296
5	7.572	7.52- 7.62	0.0568
6	7.891	7.84- 7.94	0.0322

6G

8081 INITIAL CALIBRATION OF SINGLE POINT PCBs and TOXAPHENE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 08/06/13

Toxaphene			
Peak	RT	RT WIN	Cal Factor
1	7.285	7.23- 7.33	0.0569
2	7.610	7.56- 7.66	0.0835
3	7.840	7.79- 7.89	0.0908
4	8.307	8.26- 8.36	0.0648
5	8.346	8.30- 8.40	0.0847

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date: 14-AUG-2013 20:56 Init. Calib. Date: 06-AUG-2013

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.173	137640
Endrin	6.679	7440275
4,4'-DDD	6.727	487121
4,4'-DDT	6.981	7648578
Endrin ketone	7.905	443207
Endrin aldehyde	7.261	293950

DDT Percent Breakdown = 7.6 %
((137640+487121) * 100)/(137640+487121+7648578)

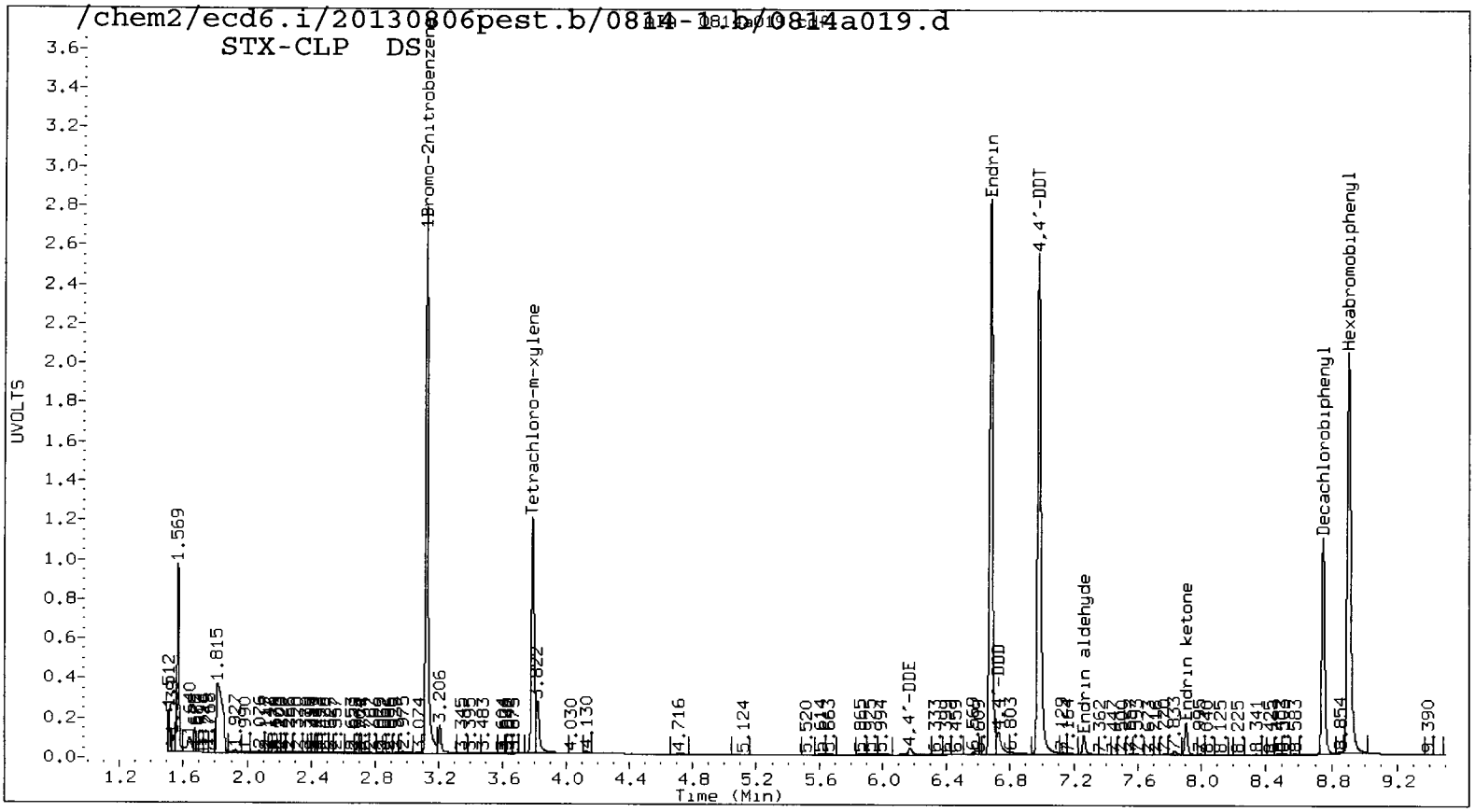
Endrin Percent Breakdown = 9.0 %
((293950+443207) * 100)/(293950+443207+7440275)

GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.864	612985
Endrin	7.346	30817569
4,4'-DDD	7.401	2323891
4,4'-DDT	7.687	30492993
Endrin ketone	8.567	1751117
Endrin aldehyde	7.833	1405803

DDT Percent Breakdown = 8.8 %
((612985+2323891) * 100)/(612985+2323891+30492993)

Endrin Percent Breakdown = 9.3 %
((1405803+1751117) * 100)/(1405803+1751117+30817569)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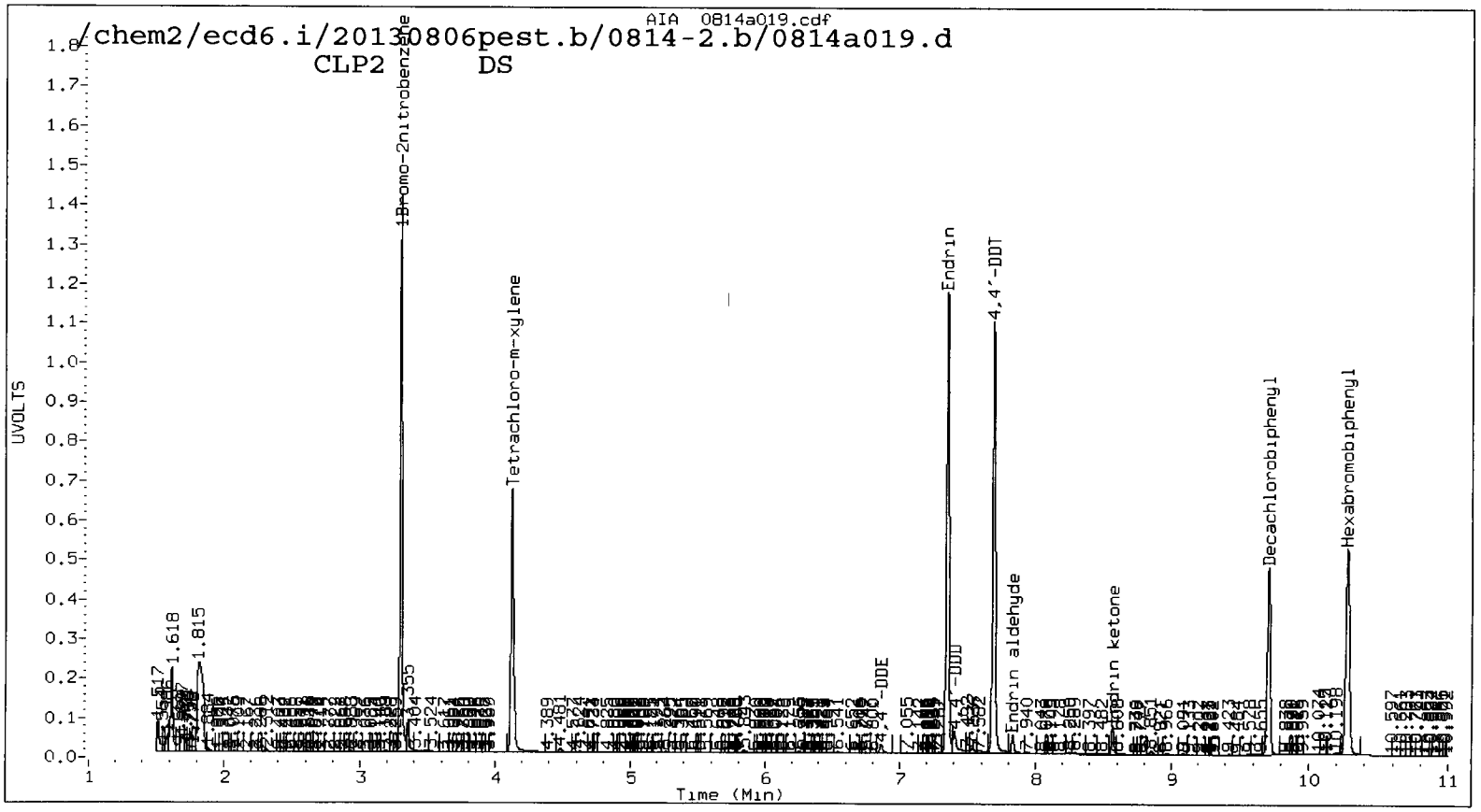
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
4,4'-DDE
UVOLTS
Time (Min)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CLP2 DS
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
4,4'-DDE
UVOLTS
Time (Min)

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 08/06/13

Lab Ccal ID: INDAE Date/Time Analyzed: 08/14/13,2114

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
alpha-BHC	4.70	4.66	4.76	21.1	20.0	5.6
beta-BHC	5.13	5.09	5.19	20.9	20.0	4.5
delta-BHC	5.44	5.40	5.50	21.7	20.0	8.5
gamma-BHC (Lindane)	5.06	5.01	5.11	21.2	20.0	6.2
Heptachlor	5.52	5.47	5.57	21.0	20.0	5.2
Aldrin	5.86	5.81	5.91	21.2	20.0	5.8
Heptachlor epoxide b	6.41	6.37	6.47	22.3	20.0	11.6
Endosulfan I	6.80	6.75	6.85	22.6	20.0	13.1
Dieldrin	7.06	7.01	7.11	45.0	40.0	12.6
4,4'-DDE	6.86	6.82	6.92	44.1	40.0	10.2
Endrin	7.34	7.30	7.40	33.5	40.0	-16.1
Endosulfan II	7.53	7.49	7.59	34.7	40.0	-13.3
4,4'-DDD	7.40	7.35	7.45	34.3	40.0	-14.2
Endosulfan sulfate	8.08	8.03	8.13	36.6	40.0	-8.4
4,4'-DDT	7.69	7.64	7.74	33.4	40.0	-16.5
Methoxychlor	8.27	8.22	8.32	162.3	200.0	-18.8
Endrin ketone	8.57	8.52	8.62	36.8	40.0	-7.9
Endrin aldehyde	7.83	7.79	7.89	34.7	40.0	-13.3
gamma-Chlordane	6.59	6.55	6.65	22.1	20.0	10.6
alpha-Chlordane	6.73	6.69	6.79	22.3	20.0	11.7
Hexachlorobutadiene	2.46	2.41	2.51	17.6	20.0	-12.0
Hexachlorobenzene	4.58	4.53	4.63	19.9	20.0	-0.3
Tetrachloro-m-xylene	4.12	4.08	4.18	39.7	40.0	-0.6
Decachlorobiphenyl	9.71	9.66	9.76	39.9	40.0	-0.2

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 08/06/13

Lab Ccal ID: INDAE Date/Time Analyzed: 08/14/13,2114

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
alpha-BHC	4.27	4.23	4.33	20.3	20.0	1.4
beta-BHC	4.63	4.59	4.69	18.9	20.0	-5.5
delta-BHC	4.80	4.76	4.86	20.2	20.0	1.0
gamma-BHC (Lindane)	4.55	4.51	4.61	19.9	20.0	-0.4
Heptachlor	5.00	4.95	5.05	19.7	20.0	-1.6
Aldrin	5.29	5.24	5.34	19.7	20.0	-1.3
Heptachlor epoxide b	5.86	5.82	5.92	19.9	20.0	-0.7
Endosulfan I	6.24	6.19	6.29	19.0	20.0	-4.9
Dieldrin	6.46	6.41	6.51	40.1	40.0	0.2
4,4'-DDE	6.16	6.12	6.22	37.9	40.0	-5.2
Endrin	6.68	6.63	6.73	34.9	40.0	-12.7
Endosulfan II	6.88	6.84	6.94	35.4	40.0	-11.4
4,4'-DDD	6.72	6.67	6.77	36.7	40.0	-8.3
Endosulfan sulfate	7.65	7.60	7.70	35.6	40.0	-11.0
4,4'-DDT	6.98	6.93	7.03	35.1	40.0	-12.2
Methoxychlor	7.40	7.36	7.46	168.0	200.0	-16.0
Endrin ketone	7.90	7.86	7.96	35.1	40.0	-12.2
Endrin aldehyde	7.26	7.21	7.31	34.9	40.0	-12.6
gamma-Chlordane	5.98	5.94	6.04	19.8	20.0	-1.0
alpha-Chlordane	6.11	6.06	6.16	19.7	20.0	-1.6
Hexachlorobutadiene	2.30	2.25	2.35	18.8	20.0	-6.0
Hexachlorobenzene	4.13	4.08	4.18	18.4	20.0	-8.0
Tetrachloro-m-xylene	3.79	3.74	3.84	36.9	40.0	-7.7
Decachlorobiphenyl	8.75	8.70	8.80	35.3	40.0	-11.8

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 08/06/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 08/14/13,2132

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
Toxaphene -1	7.28	7.23	7.33	2200	2500	-12.0
Toxaphene -2	7.61	7.56	7.66	2200	2500	-12.0
Toxaphene -3	7.84	7.79	7.89	2220	2500	-11.2
Toxaphene -4	8.30	8.26	8.36	2270	2500	-9.2
Toxaphene -5	8.34	8.30	8.40	2250	2500	-10.0

AVERAGE %D = 10.9

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 08/06/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 08/14/13,2132

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
Toxaphene -1	6.94	6.89	6.99	2340	2500	-6.4
Toxaphene -2	6.99	6.94	7.04	2260	2500	-9.6
Toxaphene -3	7.24	7.20	7.30	2370	2500	-5.2
Toxaphene -4	7.35	7.31	7.41	2350	2500	-6.0
Toxaphene -5	7.57	7.52	7.62	2310	2500	-7.6
Toxaphene -6	7.89	7.84	7.94	2380	2500	-4.8

AVERAGE %D = 6.6

FORM VII PEST-3

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date: 14-AUG-2013 23:54 Init. Calib. Date: 06-AUG-2013

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.171	47362
Endrin	6.679	5342199
4,4'-DDD	6.724	520393
4,4'-DDT	6.979	4470567
Endrin ketone	7.905	448208
Endrin aldehyde	7.261	164422

DDT Percent Breakdown = 11.3 %
((47362+520393) * 100)/(47362+520393+4470567)

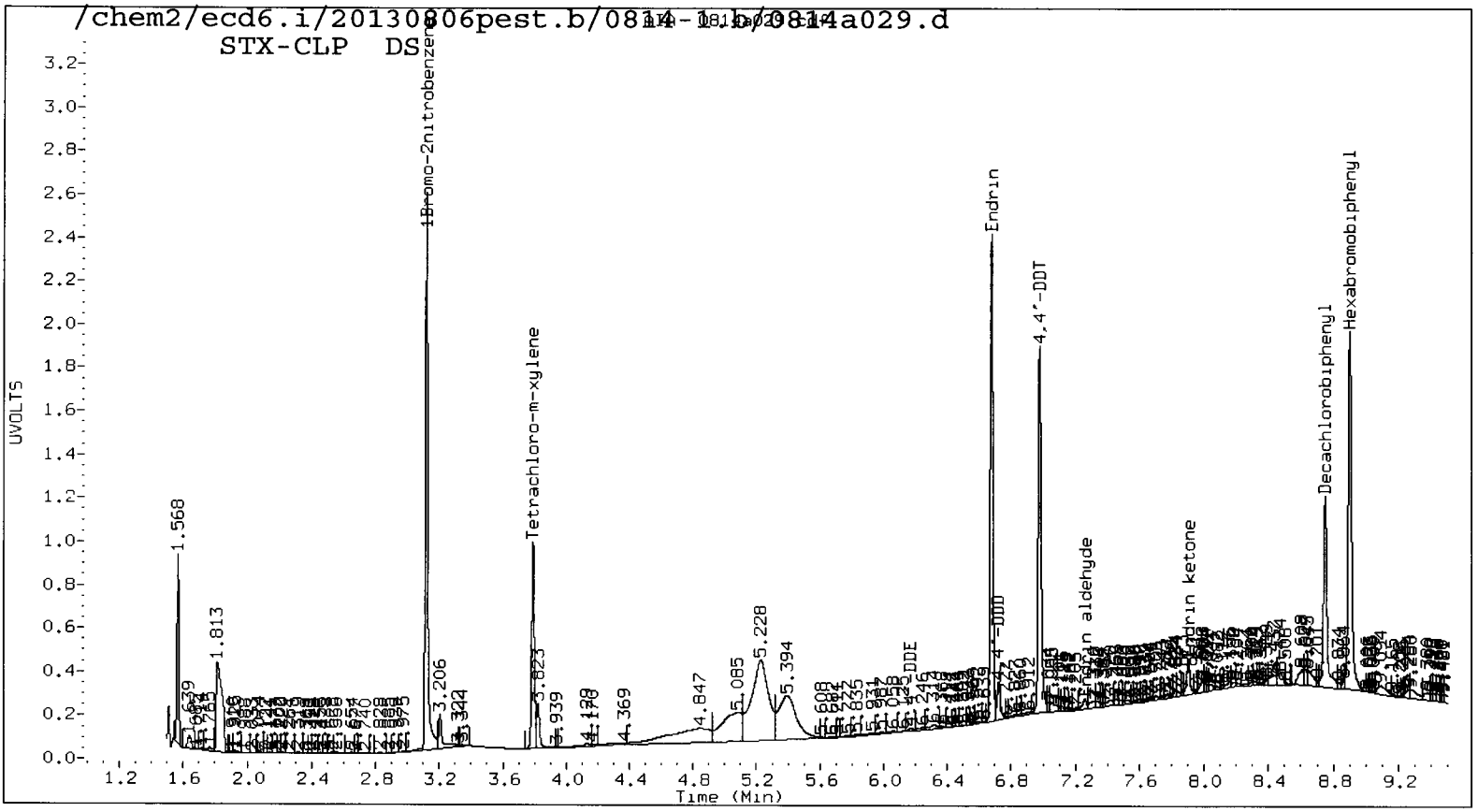
Endrin Percent Breakdown = 10.3 %
((164422+448208) * 100)/(164422+448208+5342199)

GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.862	141048
Endrin	7.347	8347248
4,4'-DDD	7.401	942029
4,4'-DDT	7.687	6827991
Endrin ketone	8.568	599703
Endrin aldehyde	7.830	400021

DDT Percent Breakdown = 13.7 %
((141048+942029) * 100)/(141048+942029+6827991)

Endrin Percent Breakdown = 10.7 %
((400021+599703) * 100)/(400021+599703+8347248)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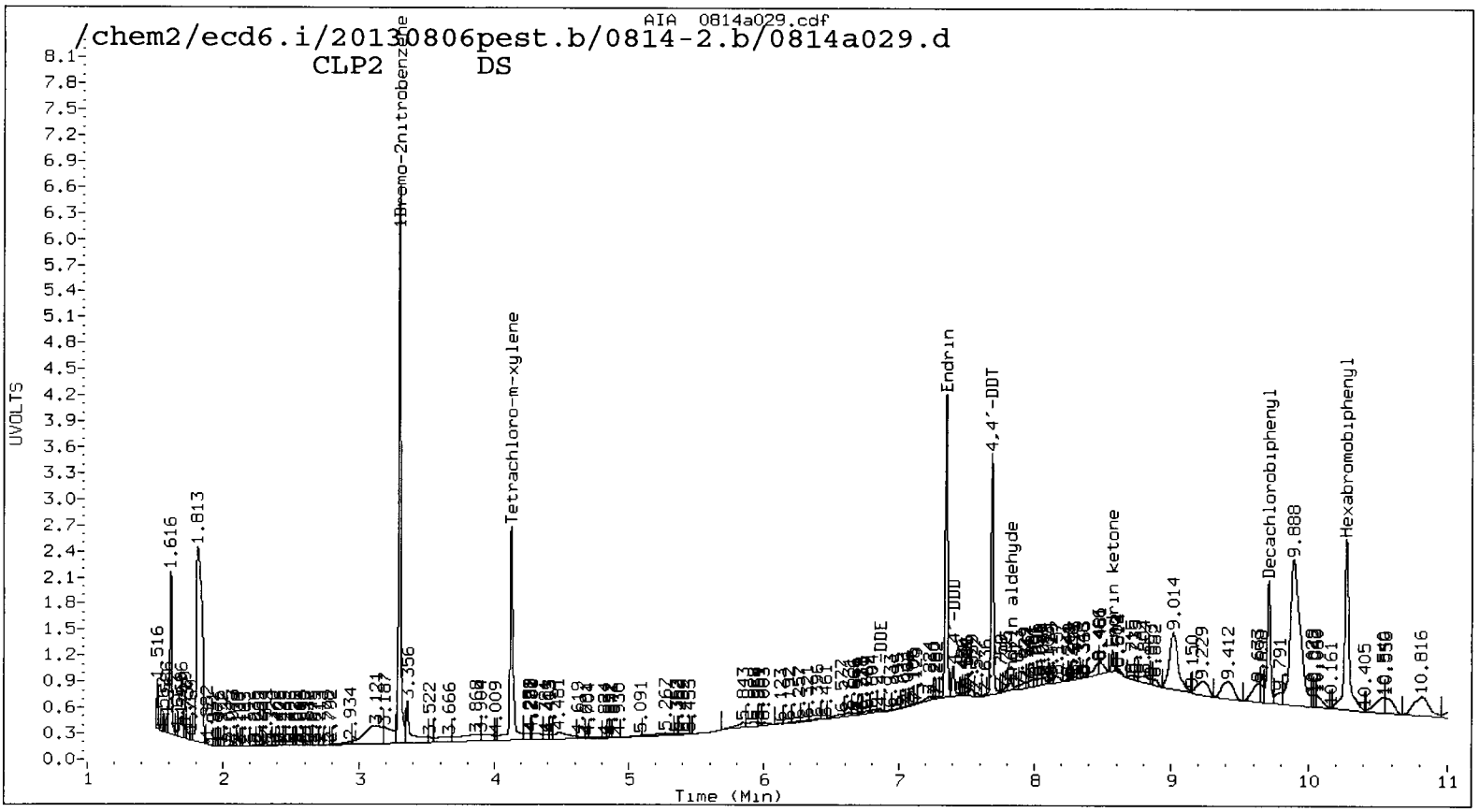
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl
1.568
1.813
3.206
3.823
4.847
5.085
5.228
5.394
4.369
DDE
4,4'-DDD
Endrin aldehyde
Endrin ketone
UVOLTS
Time (Min)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CLP2 DS
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl
1.616
1.813
3.356
4.847
5.085
5.228
5.394
9.014
9.888
10.816
DDE
4,4'-DDD
Endrin aldehyde
Endrin ketone
UVOLTS
Time (Min)

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 08/06/13

Lab Ccal ID: INDAE Date/Time Analyzed: 08/15/13,0012

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
alpha-BHC	4.70	4.66	4.76	14.1	20.0	-29.4	<-
beta-BHC	5.13	5.09	5.19	13.0	20.0	-34.8	<-
delta-BHC	5.44	5.40	5.50	12.9	20.0	-35.3	<-
gamma-BHC (Lindane)	5.06	5.01	5.11	13.7	20.0	-31.4	<-
Heptachlor	5.52	5.47	5.57	11.9	20.0	-40.4	<-
Aldrin	5.86	5.81	5.91	10.4	20.0	-47.8	<-
Heptachlor epoxide b	6.41	6.37	6.47	9.9	20.0	-50.6	<-
Endosulfan I	6.80	6.75	6.85	7.9	20.0	-60.3	<-
Dieldrin	7.06	7.01	7.11	18.0	40.0	-54.9	<-
4,4'-DDE	6.86	6.82	6.92	16.1	40.0	-59.8	<-
Endrin	7.35	7.30	7.40	24.6	40.0	-38.5	<-
Endosulfan II	7.54	7.49	7.59	23.1	40.0	-42.3	<-
4,4'-DDD	7.40	7.35	7.45	24.5	40.0	-38.7	<-
Endosulfan sulfate	8.08	8.03	8.13	25.3	40.0	-36.7	<-
4,4'-DDT	7.69	7.64	7.74	20.9	40.0	-47.7	<-
Methoxychlor	8.27	8.22	8.32	124.6	200.0	-37.7	<-
Endrin ketone	8.57	8.52	8.62	26.4	40.0	-33.9	<-
Endrin aldehyde	7.83	7.79	7.89	22.0	40.0	-44.9	<-
gamma-Chlordane	6.59	6.55	6.65	9.5	20.0	-52.6	<-
alpha-Chlordane	6.73	6.69	6.79	8.1	20.0	-59.4	<-
Hexachlorobutadiene	2.46	2.41	2.51	18.6	20.0	-7.2	
Hexachlorobenzene	4.58	4.53	4.63	13.2	20.0	-33.8	<-
Tetrachloro-m-xylene	4.12	4.08	4.18	27.1	40.0	-32.3	<-
Decachlorobiphenyl	9.71	9.66	9.76	37.4	40.0	-6.5	

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 08/06/13

Lab Ccal ID: INDAE Date/Time Analyzed: 08/15/13,0012

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
alpha-BHC	4.27	4.23	4.33	19.0	20.0	-5.1	
beta-BHC	4.63	4.59	4.69	16.9	20.0	-15.2	
delta-BHC	4.80	4.76	4.86	18.4	20.0	-8.2	
gamma-BHC (Lindane)	4.55	4.51	4.61	18.1	20.0	-9.3	
Heptachlor	5.00	4.95	5.05	17.4	20.0	-13.0	
Aldrin	5.29	5.24	5.34	17.4	20.0	-13.2	
Heptachlor epoxide b	5.86	5.82	5.92	16.5	20.0	-17.7	
Endosulfan I	6.24	6.19	6.29	15.9	20.0	-20.4	<-
Dieldrin	6.46	6.41	6.51	31.8	40.0	-20.6	<-
4,4'-DDE	6.16	6.12	6.22	35.2	40.0	-11.9	
Endrin	6.68	6.63	6.73	40.2	40.0	0.4	
Endosulfan II	6.88	6.84	6.94	37.5	40.0	-6.2	
4,4'-DDD	6.72	6.67	6.77	41.6	40.0	4.0	
Endosulfan sulfate	7.65	7.60	7.70	36.3	40.0	-9.3	
4,4'-DDT	6.98	6.93	7.03	32.2	40.0	-19.6	
Methoxychlor	7.40	7.36	7.46	178.5	200.0	-10.7	
Endrin ketone	7.90	7.86	7.96	36.2	40.0	-9.4	
Endrin aldehyde	7.26	7.21	7.31	35.6	40.0	-11.0	
gamma-Chlordane	5.98	5.94	6.04	16.1	20.0	-19.5	
alpha-Chlordane	6.11	6.06	6.16	15.7	20.0	-21.3	<-
Hexachlorobutadiene	2.30	2.25	2.35	18.6	20.0	-7.2	
Hexachlorobenzene	4.13	4.08	4.18	17.4	20.0	-12.8	
Tetrachloro-m-xylene	3.79	3.74	3.84	37.3	40.0	-6.6	
Decachlorobiphenyl	8.75	8.70	8.80	35.8	40.0	-10.5	

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 08/06/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 08/15/13,0030

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
Toxaphene -1	7.28	7.23	7.33	2210	2500	-11.6	
Toxaphene -2	7.61	7.56	7.66	2230	2500	-10.8	
Toxaphene -3	7.84	7.79	7.89	2020	2500	-19.2	
Toxaphene -4	8.30	8.26	8.36	1930	2500	-22.8	<-
Toxaphene -5	8.34	8.30	8.40	1880	2500	-24.8	<-

AVERAGE %D = 17.8

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 08/06/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 08/15/13,0030

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
Toxaphene -1	6.94	6.89	6.99	2260	2500	-9.6
Toxaphene -2	6.99	6.94	7.04	2290	2500	-8.4
Toxaphene -3	7.24	7.20	7.30	2200	2500	-12.0
Toxaphene -4	7.35	7.31	7.41	2170	2500	-13.2
Toxaphene -5	7.57	7.52	7.62	2130	2500	-14.8
Toxaphene -6	7.89	7.84	7.94	2020	2500	-19.2

AVERAGE %D = 12.9

FORM VII PEST-3

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: STX-CLP1 ID: 0.53(mm) Instrument ID: ECD6

Init. Calib. Date: 08/06/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	6543663	3.125	6145816	8.908
	UPPER LIMIT	13087326	3.175	12291632	8.958
	LOWER LIMIT	3271832	3.075	3072908	8.858

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		INDAE	08/06/13	1449	6543663	3.125	6145816	8.908
02		INDAA	08/06/13	1507	6716330	3.126	6353355	8.908
03		INDAB	08/06/13	1525	6761013	3.125	6361933	8.908
04		INDAC	08/06/13	1543	6654949	3.125	6280845	8.908
05		INDAD	08/06/13	1600	6555754	3.125	6135575	8.908
06		INDAF	08/06/13	1618	6566625	3.125	6215153	8.908
07		INDAG	08/06/13	1636	6550783	3.123	6120423	8.907
08		TOXAPHENE	08/06/13	1858	6548179	3.123	6422616	8.907
09		DS	08/14/13	2056	5918752	3.121	6285430	8.904
10		INDAE	08/14/13	2114	6042633	3.121	6413353	8.904
11		TOXAPH	08/14/13	2132	5680248	3.121	6161982	8.905
12	WY32MBS1	WY32MBS1	08/14/13	2150	5934062	3.120	6143263	8.899
13	WY32LCSS1	WY32LCSS1	08/14/13	2208	6582865	3.119	6677007	8.898
14	UP-CB-B8-201	WY32A	08/14/13	2225	5488162	3.117	5667249	8.948
15	UP-MHF-165-2	WY32B	08/14/13	2243	5758102	3.118	6123081	8.925
16	UP-CB-A6-201	WY32C	08/14/13	2301	5308386	3.117	6421935	8.976*
17	UP-CB-A6-201	WY32CMS	08/14/13	2319	5015507	3.117	8258163	8.972*
18	UP-CB-A6-201	WY32CMSD	08/14/13	2337	4952143	3.116	7279610	8.974*
19		DS	08/14/13	2354	5430996	3.120	5045491	8.901
20		INDAE	08/15/13	0012	6157914	3.121	4601078	8.902
21		TOXAPH	08/15/13	0030	5966970	3.121	4961834	8.902

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- .05 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: STX-CLP2 ID: 0.53(mm) Instrument ID: ECD6

Init. Calib. Date: 08/06/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	32480641	3.300	16281238	10.280
	UPPER LIMIT	64961282	3.350	32562476	10.330
	LOWER LIMIT	16240320	3.250	8140619	10.230

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		INDAE	08/06/13	1449	32480641	3.300	16281238	10.280
02		INDAA	08/06/13	1507	33285043	3.301	16722696	10.279
03		INDAB	08/06/13	1525	32938676	3.300	16681138	10.280
04		INDAC	08/06/13	1543	32580583	3.300	16528373	10.280
05		INDAD	08/06/13	1600	32255555	3.299	16244730	10.280
06		INDAF	08/06/13	1618	32181454	3.300	16249363	10.279
07		INDAG	08/06/13	1636	31840350	3.297	16046830	10.279
08		TOXAPHENE	08/06/13	1858	32786474	3.297	17237151	10.279
09		DS	08/14/13	2056	29386510	3.295	19118166	10.274
10		INDAE	08/14/13	2114	29484318	3.295	20179042	10.274
11		TOXAPH	08/14/13	2132	28661157	3.296	19515649	10.275
12	WY32MBS1	WY32MBS1	08/14/13	2150	27367441	3.294	18569283	10.271
13	WY32LCSS1	WY32LCSS1	08/14/13	2208	29287669	3.294	20049791	10.270
14	UP-CB-B8-201	WY32A	08/14/13	2225	17227250	3.292	10210246	10.302
15	UP-MHF-165-2	WY32B	08/14/13	2243	13194377*	3.293	9412375	10.288
16	UP-CB-A6-201	WY32C	08/14/13	2301	15948319*	3.291	8655237	10.323
17	UP-CB-A6-201	WY32CMS	08/14/13	2319	14324778*	3.291	8937019	10.320
18	UP-CB-A6-201	WY32CMSD	08/14/13	2337	14856773*	3.291	8208249	10.321
19		DS	08/14/13	2354	13348652*	3.295	9273378	10.273
20		INDAE	08/15/13	0012	27079738	3.295	9405980	10.273
21		TOXAPH	08/15/13	0030	26538848	3.295	8139522*	10.273

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- .05 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

PCB Analysis
Report and Summary QC Forms

ARI Job ID: WY32, WY33

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: UP-CB-B8-20130626-S
SAMPLE

Lab Sample ID: WY32A
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized:
Reported: 08/02/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/25/13
Date Analyzed: 07/31/13 20:39
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 13.2 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 31.0%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	4.8	19	< 19 U
53469-21-9	Aroclor 1242	6.4	19	< 19 U
12672-29-6	**Aroclor 1248**	**6.4**	**19**	**270**
11097-69-1	**Aroclor 1254**	**6.4**	**19**	**180**
11096-82-5	**Aroclor 1260**	**6.4**	**19**	**79**
11104-28-2	Aroclor 1221	6.4	19	< 19 U
11141-16-5	Aroclor 1232	6.4	19	< 19 U
37324-23-5	Aroclor 1262	6.4	19	< 19 U
11100-14-4	Aroclor 1268	6.4	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	NR
Tetrachlorometaxylene	86.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: UP-MHF-165-20130626-S
SAMPLE

Lab Sample ID: WY32B
LIMS ID: 13-15394
Matrix: Sediment
Data Release Authorized:
Reported: 08/02/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/25/13
Date Analyzed: 07/31/13 21:01
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 12.9 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 15.0%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	4.9	19	< 19 U
53469-21-9	Aroclor 1242	6.6	19	< 19 U
12672-29-6	**Aroclor 1248**	**6.6**	**19**	**30**
11097-69-1	**Aroclor 1254**	**6.6**	**19**	**32**
11096-82-5	**Aroclor 1260**	**6.6**	**19**	**28**
11104-28-2	Aroclor 1221	6.6	19	< 19 U
11141-16-5	Aroclor 1232	6.6	19	< 19 U
37324-23-5	Aroclor 1262	6.6	19	< 19 U
11100-14-4	Aroclor 1268	6.6	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	90.8%
Tetrachlorometaxylene	78.4%

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

Sample ID: UP-CB-A6-20130626-S
SAMPLE

Lab Sample ID: WY32C
LIMS ID: 13-15395
Matrix: Sediment
Data Release Authorized:
Reported: 08/02/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/25/13
Date Analyzed: 07/31/13 22:07
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 12.7 g-dry-wt
Final Extract Volume: 5.0 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 29.8%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	10	39	< 39 U
53469-21-9	**Aroclor 1242**	**13**	**39**	**530**
12672-29-6	Aroclor 1248	13	39	< 39 U
11097-69-1	**Aroclor 1254**	**13**	**39**	**120**
11096-82-5	**Aroclor 1260**	**13**	**39**	**80**
11104-28-2	Aroclor 1221	13	39	< 39 U
11141-16-5	Aroclor 1232	13	39	< 39 U
37324-23-5	Aroclor 1262	13	39	< 39 U
11100-14-4	Aroclor 1268	13	39	< 39 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	104%
Tetrachlorometaxylene	86.8%

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
UP-CB-B8-20130626-S	NR	37-128	86.8%	45-102	0
MB-072513	89.5%	64-105	71.5%	54-100	0
LCS-072513	88.2%	64-105	77.2%	54-100	0
UP-MHF-165-20130626-S	90.8%	37-128	78.4%	45-102	0
UP-MHF-165-20130626-S MS	103%	37-128	86.8%	45-102	0
UP-MHF-165-20130626-S MSD	103%	37-128	85.2%	45-102	0
UP-CB-A6-20130626-S	104%	54-115	86.8%	57-109	0

Microwave (MARS) Control Limits PCBSMM
Prep Method: SW3546
Log Number Range: 13-15393 to 13-15395

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: UP-MHF-165-20130626-S
MS/MSD

Lab Sample ID: WY32B
LIMS ID: 13-15394
Matrix: Sediment
Data Release Authorized:
Reported: 08/02/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted MS/MSD: 07/25/13

Date Analyzed MS: 07/31/13 21:23
MSD: 07/31/13 21:45
Instrument/Analyst MS: ECD7/JGR
MSD: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount MS: 13.0 g-dry-wt
MSD: 12.8 g-dry-wt
Final Extract Volume MS: 2.5 mL
MSD: 2.5 mL
Dilution Factor MS: 5.00
MSD: 5.00
Silica Gel: Yes

Percent Moisture: 15.0%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Aroclor 1016	< 19 U	107	97.3	110%	106	98.1	108%	0.9%
Aroclor 1260	28	128	97.3	103%	121	98.1	94.8%	5.6%

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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: UP-MHF-165-20130626-S
MATRIX SPIKE

Lab Sample ID: WY32B
LIMS ID: 13-15394
Matrix: Sediment
Data Release Authorized:
Reported: 08/02/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/25/13
Date Analyzed: 07/31/13 21:23
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 13.0 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 15.0%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	4.9	19	---
53469-21-9	Aroclor 1242	6.6	19	< 19 U
12672-29-6	**Aroclor 1248**	**6.6**	**19**	**110**
11097-69-1	**Aroclor 1254**	**6.6**	**19**	**89**
11096-82-5	Aroclor 1260	6.6	19	---
11104-28-2	Aroclor 1221	6.6	19	< 19 U
11141-16-5	Aroclor 1232	6.6	19	< 19 U
37324-23-5	Aroclor 1262	6.6	19	< 19 U
11100-14-4	Aroclor 1268	6.6	19	< 19 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	103%
Tetrachlorometaxylene	86.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: UP-MHF-165-20130626-S
MATRIX SPIKE DUP

Lab Sample ID: WY32B
LIMS ID: 13-15394
Matrix: Sediment
Data Release Authorized:
Reported: 08/02/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted: 07/25/13
Date Analyzed: 07/31/13 21:45
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 12.8 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 15.0%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	5.0	20	---
53469-21-9	Aroclor 1242	6.6	20	< 20 U
12672-29-6	**Aroclor 1248**	**6.6**	**20**	**110**
11097-69-1	**Aroclor 1254**	**6.6**	**20**	**86**
11096-82-5	Aroclor 1260	6.6	20	---
11104-28-2	Aroclor 1221	6.6	20	< 20 U
11141-16-5	Aroclor 1232	6.6	20	< 20 U
37324-23-5	Aroclor 1262	6.6	20	< 20 U
11100-14-4	Aroclor 1268	6.6	20	< 20 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	103%
Tetrachlorometaxylene	85.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: LCS-072513
LAB CONTROL

Lab Sample ID: LCS-072513
LIMS ID: 13-15394
Matrix: Sediment
Data Release Authorized:
Reported: 08/02/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 07/25/13
Date Analyzed: 07/31/13 19:55
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.5 g-dry-wt
Final Extract Volume: 2.50 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
Aroclor 1016	87.5	101	86.6%
Aroclor 1260	93.0	101	92.1%

PCB Surrogate Recovery

Decachlorobiphenyl	88.2%
Tetrachlorometaxylene	77.2%

Results reported in µg/kg (ppb)

PCB METHOD BLANK SUMMARY

BLANK NO.

WY32MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WY32
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WY32MBS1
Lab File ID: 0731A015

Date Extracted: 07/25/13
Matrix: SOLID

Date Analyzed: 07/31/13
Instrument ID: ECD7

Time Analyzed: 1934
GC Columns: ZB5/ZB35

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WY32LCSS1	WY32LCSS1	07/31/13
02	UP-CB-B8-20130626-S	WY32A	07/31/13
03	UP-MHF-165-20130626	WY32B	07/31/13
04	UP-MHF-165-2013 MS	WY32BMS	07/31/13
05	UP-MHF-165-2013 MSD	WY32BMSD	07/31/13
06	UP-CB-A6-20130626-S	WY32C	07/31/13

ALL RUNS ARE DUAL COLUMN

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: MB-072513
METHOD BLANK

Lab Sample ID: MB-072513
LIMS ID: 13-15394
Matrix: Sediment
Data Release Authorized:
Reported: 08/02/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 07/25/13
Date Analyzed: 07/31/13 19:34
Instrument/Analyst: ECD7/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 12.5 g
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	1.0	4.0	< 4.0 U
53469-21-9	Aroclor 1242	1.4	4.0	< 4.0 U
12672-29-6	Aroclor 1248	1.4	4.0	< 4.0 U
11097-69-1	Aroclor 1254	1.4	4.0	< 4.0 U
11096-82-5	Aroclor 1260	1.4	4.0	< 4.0 U
11104-28-2	Aroclor 1221	1.4	4.0	< 4.0 U
11141-16-5	Aroclor 1232	1.4	4.0	< 4.0 U
37324-23-5	Aroclor 1262	1.4	4.0	< 4.0 U
11100-14-4	Aroclor 1268	1.4	4.0	< 4.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	89.5%
Tetrachlorometaxylene	71.5%

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: ZB5 Instrument ID: ECD7

Calibration Date: 07/25/13

SURROGATES

RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX 5.64- 5.84	0.8212	0.8610	0.9101	0.9473	0.9700	0.9657	0.9125	6.6
DCB 14.49-14.69	1.1620	1.1568	1.1545	1.1172	1.0988	1.0625	1.1253	3.5

Aroclor-1016 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	7.64- 7.84	0.0242	0.0245	0.0242	0.0237	0.0235	0.0226	0.0238	2.8
2	8.16- 8.36	0.0792	0.0805	0.0817	0.0820	0.0817	0.0794	0.0807	1.5
3	8.35- 8.55	0.0313	0.0318	0.0319	0.0315	0.0314	0.0302	0.0314	1.9
4	8.78- 8.98	0.0193	0.0194	0.0190	0.0183	0.0179	0.0172	0.0185	4.6

AROCLOR AVERAGE %RSD = 2.7

Aroclor-1260 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	11.94-12.14	0.0630	0.0629	0.0635	0.0631	0.0614	0.0592	0.0622	2.6
2	12.26-12.46	0.0631	0.0635	0.0648	0.0649	0.0637	0.0617	0.0636	1.9
3	12.63-12.83	0.1501	0.1512	0.1555	0.1569	0.1540	0.1490	0.1528	2.1
4	13.03-13.23	0.0759	0.0782	0.0808	0.0823	0.0818	0.0801	0.0799	3.0
5	13.20-13.40	0.0333	0.0342	0.0351	0.0352	0.0350	0.0342	0.0345	2.1

AROCLOR AVERAGE %RSD = 2.3

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: ZB35 Instrument ID: ECD7

Calibration Date: 07/25/13

SURROGATES

RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX 5.28- 5.48	1.1334	1.0590	1.0307	0.9993	0.9891	0.9644	1.0293	5.9
DCB 14.52-14.72	1.3966	1.3345	1.2806	1.1968	1.1496	1.1114	1.2449	8.9

Aroclor-1016 Peak RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1 6.54- 6.74	0.0232	0.0217	0.0201	0.0181	0.0169	0.0154	0.0192	15.3
2 7.42- 7.62	0.0517	0.0486	0.0450	0.0409	0.0382	0.0352	0.0432	14.6
3 8.23- 8.43	0.1055	0.0977	0.0918	0.0858	0.0824	0.0781	0.0902	11.3
4 8.83- 9.03	0.0327	0.0302	0.0278	0.0249	0.0234	0.0216	0.0268	15.8

AROCLOR AVERAGE %RSD = 14.2

Aroclor-1260 Peak RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1 11.84-12.04	0.1341	0.1227	0.1156	0.1067	0.1005	0.0948	0.1124	13.0
2 12.38-12.58	0.1110	0.1015	0.0939	0.0864	0.0807	0.0759	0.0916	14.4
3 12.65-12.85	0.2029	0.1898	0.1824	0.1704	0.1641	0.1572	0.1778	9.6
4 13.21-13.41	0.1375	0.1303	0.1239	0.1142	0.1086	0.1029	0.1196	11.1

AROCLOR AVERAGE %RSD = 12.0

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: ZB5 Instrument ID: ECD7

Calibration Date: 07/25/13

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	6.187	6.09- 6.29	0.00946
2	6.396	6.30- 6.50	0.00816
3	6.519	6.42- 6.62	0.02388

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	6.521	6.42- 6.62	0.01568
2	7.742	7.64- 7.84	0.00950
3	8.264	8.16- 8.36	0.03176
4	8.449	8.35- 8.55	0.01248

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	7.734	7.63- 7.83	0.01902
2	8.255	8.15- 8.35	0.06498
3	8.441	8.34- 8.54	0.02513
4	9.408	9.31- 9.51	0.02377

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	8.256	8.16- 8.36	0.04049
2	8.874	8.77- 8.97	0.02652
3	9.412	9.31- 9.51	0.03757
4	9.883	9.78- 9.98	0.04839

6G
8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: ZB5 Instrument ID: ECD7

Calibration Date: 07/25/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	10.226	10.13-10.33	0.05017
2	10.615	10.51-10.71	0.03103
3	10.756	10.66-10.86	0.06115
4	11.114	11.01-11.21	0.06306
5	11.811	11.71-11.91	0.06184

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	12.358	12.26-12.46	0.08548
2	12.729	12.63-12.83	0.19880
3	13.126	13.03-13.23	0.06440
4	13.303	13.20-13.40	0.07700
5	13.884	13.78-13.98	0.06047

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	13.236	13.14-13.34	0.21605
2	13.303	13.20-13.40	0.19163
3	13.648	13.55-13.75	0.16079
4	14.285	14.19-14.39	0.42440

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: ZB35 Instrument ID: ECD7

Calibration Date: 07/25/13

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	6.204	6.10- 6.30	0.01352
2	6.501	6.40- 6.60	0.00781
3	6.636	6.54- 6.74	0.02366
4	7.529	7.43- 7.63	0.00825

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	6.638	6.54- 6.74	0.01674
2	7.517	7.42- 7.62	0.01901
3	8.328	8.23- 8.43	0.03629
4	8.927	8.83- 9.03	0.01190

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.626	6.53- 6.73	0.01598
2	7.506	7.41- 7.61	0.03309
3	8.315	8.22- 8.42	0.06934
4	9.386	9.29- 9.49	0.02755

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	7.511	7.41- 7.61	0.01646
2	8.322	8.22- 8.42	0.04512
3	8.924	8.82- 9.02	0.03303
4	10.333	10.23-10.43	0.04741

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: ZB35 Instrument ID: ECD7

Calibration Date: 07/25/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	10.036	9.94-10.14	0.03060
2	10.221	10.12-10.32	0.03896
3	10.916	10.82-11.02	0.06521
4	11.171	11.07-11.27	0.06641
5	11.940	11.84-12.04	0.04811

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	12.484	12.38-12.58	0.10703
2	12.753	12.65-12.85	0.21287
3	13.260	13.16-13.36	0.09271
4	13.317	13.22-13.42	0.14001
5	13.944	13.84-14.04	0.07064

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	13.260	13.16-13.36	0.22079
2	13.321	13.22-13.42	0.20697
3	13.669	13.57-13.77	0.16702
4	14.320	14.22-14.42	0.44661

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WY32

Project: NPDES

GC Column: ZB5

Intrument: ECD7

Init. Calib. Date: 07/25/13

Date Analyzed :07/31/13

Lab Standard ID: AR1248

Time Analyzed :1850

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	8.26	8.16	8.36	251.9	250.0	0.8
Aroclor-1248-2	8.87	8.77	8.97	252.2	250.0	0.9
Aroclor-1248-3	9.41	9.31	9.51	252.7	250.0	1.1
Aroclor-1248-4	9.88	9.78	9.98	251.9	250.0	0.7

AVERAGE %D = 0.9

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WY32

Project: NPDES

GC Column: ZB35

Intrument: ECD7

Init. Calib. Date: 07/25/13

Date Analyzed :07/31/13

Lab Standard ID: AR1248

Time Analyzed :1850

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	7.51	7.41	7.61	256.5	250.0	2.6
Aroclor-1248-2	8.32	8.22	8.42	249.8	250.0	-0.1
Aroclor-1248-3	8.92	8.82	9.02	256.4	250.0	2.6
Aroclor-1248-4	10.33	10.23	10.43	258.4	250.0	3.4

AVERAGE %D = 2.2

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: ZB5 Intrument: ECD7

Init. Calib. Date: 07/25/13

Date Analyzed :07/31/13

Lab Standard ID: AR1660 Time Analyzed :1912

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	7.74	7.64	7.84	244.9	250.0	-2.0
Aroclor-1016-2	8.26	8.16	8.36	249.1	250.0	-0.4
Aroclor-1016-3	8.45	8.35	8.55	246.6	250.0	-1.3
Aroclor-1016-4	8.87	8.78	8.98	243.3	250.0	-2.7

AVERAGE %D = 1.6

Date Analyzed :07/31/13

Lab Standard ID: AR1660 Time Analyzed :1912

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	12.04	11.94	12.14	242.0	250.0	-3.2
Aroclor-1260-2	12.36	12.26	12.46	243.7	250.0	-2.5
Aroclor-1260-3	12.73	12.63	12.83	244.2	250.0	-2.3
Aroclor-1260-4	13.13	13.03	13.23	247.8	250.0	-0.9
Aroclor-1260-5	13.30	13.20	13.40	245.7	250.0	-1.7

AVERAGE %D = 2.1

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 07/25/13

Date Analyzed :07/31/13

Lab Standard ID: AR1660 Time Analyzed :1912

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.64	6.54	6.74	233.3	250.0	-6.7
Aroclor-1016-2	7.52	7.42	7.62	232.2	250.0	-7.1
Aroclor-1016-3	8.33	8.23	8.43	234.2	250.0	-6.3
Aroclor-1016-4	8.92	8.83	9.03	230.7	250.0	-7.7

AVERAGE %D = 7.0

Date Analyzed :07/31/13

Lab Standard ID: AR1660 Time Analyzed :1912

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	11.94	11.84	12.04	225.4	250.0	-9.8
Aroclor-1260-2	12.48	12.38	12.58	224.0	250.0	-10.4
Aroclor-1260-3	12.75	12.65	12.85	229.7	250.0	-8.1
Aroclor-1260-4	13.31	13.21	13.41	230.2	250.0	-7.9

AVERAGE %D = 9.1

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: ZB5 Intrument: ECD7

Init. Calib. Date: 07/25/13

Date Analyzed :07/31/13

Lab Standard ID: AR1254 Time Analyzed :2229

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	10.23	10.13	10.33	228.7	250.0	-8.5
Aroclor-1254-2	10.61	10.51	10.71	225.0	250.0	-10.0
Aroclor-1254-3	10.76	10.66	10.86	223.3	250.0	-10.7
Aroclor-1254-4	11.11	11.01	11.21	217.7	250.0	-12.9
Aroclor-1254-5	11.81	11.71	11.91	209.6	250.0	-16.2

AVERAGE %D = 11.7

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 07/25/13

Date Analyzed :07/31/13

Lab Standard ID: AR1254 Time Analyzed :2229

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	10.04	9.94	10.14	229.4	250.0	-8.2
Aroclor-1254-2	10.22	10.12	10.32	228.2	250.0	-8.7
Aroclor-1254-3	10.92	10.82	11.02	222.2	250.0	-11.1
Aroclor-1254-4	11.17	11.07	11.27	218.9	250.0	-12.4
Aroclor-1254-5	11.94	11.84	12.04	209.9	250.0	-16.0

AVERAGE %D = 11.3

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: ZB5 Intrument: ECD7

Init. Calib. Date: 07/25/13

Date Analyzed :07/31/13

Lab Standard ID: AR1660 Time Analyzed :2251

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	7.74	7.64	7.84	246.8	250.0	-1.3
Aroclor-1016-2	8.26	8.16	8.36	250.6	250.0	0.2
Aroclor-1016-3	8.45	8.35	8.55	247.2	250.0	-1.1
Aroclor-1016-4	8.88	8.78	8.98	242.2	250.0	-3.1

AVERAGE %D = 1.4

Date Analyzed :07/31/13

Lab Standard ID: AR1660 Time Analyzed :2251

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	12.04	11.94	12.14	283.7	250.0	13.5
Aroclor-1260-2	12.36	12.26	12.46	281.8	250.0	12.7
Aroclor-1260-3	12.73	12.63	12.83	275.0	250.0	10.0
Aroclor-1260-4	13.13	13.03	13.23	274.2	250.0	9.7
Aroclor-1260-5	13.30	13.20	13.40	270.7	250.0	8.3

AVERAGE %D = 10.8

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: ZB35 Intrument: ECD7

Init. Calib. Date: 07/25/13

Date Analyzed :07/31/13

Lab Standard ID: AR1660 Time Analyzed :2251

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.64	6.54	6.74	237.2	250.0	-5.1
Aroclor-1016-2	7.52	7.42	7.62	234.7	250.0	-6.1
Aroclor-1016-3	8.33	8.23	8.43	235.7	250.0	-5.7
Aroclor-1016-4	8.93	8.83	9.03	228.1	250.0	-8.8

AVERAGE %D = 6.4

Date Analyzed :07/31/13

Lab Standard ID: AR1660 Time Analyzed :2251

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	11.94	11.84	12.04	246.4	250.0	-1.4
Aroclor-1260-2	12.48	12.38	12.58	238.6	250.0	-4.6
Aroclor-1260-3	12.75	12.65	12.85	243.0	250.0	-2.8
Aroclor-1260-4	13.31	13.21	13.41	236.4	250.0	-5.4

AVERAGE %D = 3.6

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: ZB5 ID: 0.53(mm) Instrument ID: ECD7

Init. Calib. Date: 07/25/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	7185814	2.784	4753836	14.849
	UPPER LIMIT	14371628	2.884	9507672	14.949
	LOWER LIMIT	3592907	2.684	2376918	14.749

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	07/25/13	1444	7344066	2.784	4849223	14.849
02		0.25PPMAR166	07/25/13	1506	7185814	2.784	4753836	14.849
03		0.02PPMAR166	07/25/13	1528	7267768	2.784	4873020	14.849
04		0.05PPMAR166	07/25/13	1550	6945459	2.786	4657741	14.850
05		1PPMAR1660	07/25/13	1612	7099903	2.786	4819445	14.849
06		0.1PPMAR1660	07/25/13	1633	7413451	2.786	4943526	14.850
07		0.5PPMAR1660	07/25/13	1655	7104865	2.783	4808040	14.849
08		AR1242	07/25/13	1717	7266838	2.785	4892863	14.849
09		AR1248	07/25/13	1739	7203526	2.786	4871116	14.849
10		AR1254	07/25/13	1801	7320093	2.787	4953324	14.849
11		AR2162	07/25/13	1823	7180582	2.785	4843454	14.849
12		AR3268	07/25/13	1845	7219784	2.785	4877532	14.849
13	ZZZZZ	ZZZZZ	07/25/13	1907	7194873	2.785	4906190	14.848
14	ZZZZZ	ZZZZZ	07/25/13	1929	7157074	2.784	4863830	14.849
15	ZZZZZ	ZZZZZ	07/25/13	1951	7504609	2.786	5071708	14.849
16	ZZZZZ	ZZZZZ	07/25/13	2013	7429197	2.788	5114156	14.850
17	ZZZZZ	ZZZZZ	07/25/13	2035	7173741	2.787	4886739	14.849
18	ZZZZZ	ZZZZZ	07/25/13	2057	7321504	2.787	4924098	14.849
19		AR1248	07/31/13	1850	7371831	2.785	5147325	14.849
20		AR1660	07/31/13	1912	7985041	2.784	5478975	14.849
21	WY32MBS1	WY32MBS1	07/31/13	1934	7751168	2.783	5539837	14.849
22	WY32LCSS1	WY32LCSS1	07/31/13	1955	7788738	2.783	5552091	14.849
23	ZZZZZ	ZZZZZ	07/31/13	2017	7629485	2.784	5588365	14.849
24	UP-CB-B8-201	WY32A	07/31/13	2039	7155590	2.785	4290999	14.854
25	UP-MHF-165-2	WY32B	07/31/13	2101	7028149	2.783	3876511	14.850
26	UP-MHF-165-2	WY32BMS	07/31/13	2123	6914592	2.784	3658574	14.849
27	UP-MHF-165-2	WY32BMSD	07/31/13	2145	7069600	2.786	3784451	14.850
28	UP-CB-A6-201	WY32C	07/31/13	2207	7272780	2.786	3680423	14.852
29		AR1254	07/31/13	2229	7496198	2.786	3825994	14.848
30		AR1660	07/31/13	2251	7709525	2.787	4000408	14.848

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WY32 Project: NPDES

GC Column: ZB35 ID: 0.53(mm) Instrument ID: ECD7

Init. Calib. Date: 07/25/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	9837847	3.194	5491228	15.217
	UPPER LIMIT	19675694	3.294	10982456	15.317
	LOWER LIMIT	4918924	3.094	2745614	15.117

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	07/25/13	1444	9861880	3.193	5539359	15.217
02		0.25PPMAR166	07/25/13	1506	9837847	3.194	5491228	15.217
03		0.02PPMAR166	07/25/13	1528	9945886	3.194	5623589	15.217
04		0.05PPMAR166	07/25/13	1550	9546991	3.195	5392217	15.217
05		1PPMAR1660	07/25/13	1612	9753051	3.195	5606193	15.217
06		0.1PPMAR1660	07/25/13	1633	10237659	3.195	5707164	15.217
07		0.5PPMAR1660	07/25/13	1655	9792543	3.193	5568508	15.217
08		AR1242	07/25/13	1717	9976265	3.194	5658004	15.217
09		AR1248	07/25/13	1739	9862115	3.195	5614176	15.217
10		AR1254	07/25/13	1801	9991725	3.196	5653884	15.217
11		AR2162	07/25/13	1823	9613689	3.194	5551599	15.217
12		AR3268	07/25/13	1845	9751183	3.194	5626585	15.217
13	ZZZZZ	ZZZZZ	07/25/13	1907	9900417	3.195	5686619	15.218
14	ZZZZZ	ZZZZZ	07/25/13	1929	9902336	3.193	5649279	15.218
15	ZZZZZ	ZZZZZ	07/25/13	1951	10304870	3.195	5880558	15.217
16	ZZZZZ	ZZZZZ	07/25/13	2013	10278986	3.196	5929902	15.217
17	ZZZZZ	ZZZZZ	07/25/13	2035	9777525	3.196	5661156	15.218
18	ZZZZZ	ZZZZZ	07/25/13	2057	10043103	3.197	5718970	15.218
19		AR1248	07/31/13	1850	9647666	3.193	5830372	15.216
20		AR1660	07/31/13	1912	10679039	3.192	6230282	15.216
21	WY32MBS1	WY32MBS1	07/31/13	1934	10321893	3.192	6230593	15.216
22	WY32LCSS1	WY32LCSS1	07/31/13	1955	10427135	3.191	6298833	15.216
23	ZZZZZ	ZZZZZ	07/31/13	2017	10147170	3.192	6273716	15.215
24	UP-CB-B8-201	WY32A	07/31/13	2039	8935614	3.193	5082383	15.219
25	UP-MHF-165-2	WY32B	07/31/13	2101	8715432	3.191	4766092	15.216
26	UP-MHF-165-2	WY32BMS	07/31/13	2123	8544007	3.192	4417894	15.217
27	UP-MHF-165-2	WY32BMSD	07/31/13	2145	8784777	3.193	4552804	15.216
28	UP-CB-A6-201	WY32C	07/31/13	2207	9341648	3.194	4405214	15.219
29		AR1254	07/31/13	2229	9860005	3.195	4664045	15.215
30		AR1660	07/31/13	2251	10130405	3.194	4835275	15.215

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

TPHD Analysis
Report and Summary QC Forms

ARI Job ID: WY32, WY33

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID
Extraction Method: SW3510C
Page 1 of 1

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
209977

Matrix: Sediment

Date Received: 06/26/13

Data Release Authorized:
Reported: 07/29/13

ARI ID	Sample ID	Analysis Date	DF	Range	Result	RL	MDL
WY32A	UP-CB-B8-20130626-S	07/26/13	5.0	**Diesel**	**3,100**	360	360
13-15393		FID4A		**Motor Oil**	**9,700**	710	710
				HC ID	DIESEL/MOTOR OIL		
				o-Terphenyl	91.3%		
MB-072513	Method Blank	07/26/13	1.0	Diesel	< 50 U	50	50
13-15394		FID4A		Motor Oil	< 100 U	100	100
				HC ID	---		
				o-Terphenyl	102%		
WY32B	UP-MHF-165-20130626-S	07/26/13	5.0	**Diesel**	**1,500**	290	290
13-15394		FID4A		**Motor Oil**	**4,100**	580	580
				HC ID	DIESEL/MOTOR OIL		
				o-Terphenyl	102%		
WY32C	UP-CB-A6-20130626-S	07/26/13	5.0	**Diesel**	**3,600**	350	350
13-15395		FID4A		**Motor Oil**	**14,000**	700	700
				HC ID	DIESEL/MOTOR OIL		
				o-Terphenyl	92.4%		

Reported in mg/kg (ppm)

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

ANALYTICAL RESOURCES INCORPORATED

TPHD SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
209977

Client ID	OTER	TOT OUT
UP-CB-B8-20130626-S	91.3%	0
072513MBS	102%	0
072513LCS	102%	0
UP-MHF-165-20130626-S	102%	0
UP-MHF-165-20130626-S MS	101%	0
UP-MHF-165-20130626-S MSD	99.4%	0
UP-CB-A6-20130626-S	92.4%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(50-150)	(50-150)

Prep Method: SW3510C
Log Number Range: 13-15393 to 13-15395

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID

Sample ID: UP-MHF-165-20130626-S
MS/MSD

Lab Sample ID: WY32B
LIMS ID: 13-15394
Matrix: Sediment
Data Release Authorized:
Reported: 07/29/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Date Extracted MS/MSD: 07/25/13

Date Analyzed MS: 07/26/13 16:45
MSD: 07/26/13 17:06
Instrument/Analyst MS: FID4A/JLW
MSD: FID4A/JLW

Sample Amount MS: 8.55 g-dry-wt
MSD: 8.58 g-dry-wt
Final Extract Volume MS: 10 mL
MSD: 10 mL
Dilution Factor MS: 5.00
MSD: 5.00
Percent Moisture: 15.0%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	1,500	3,170	1,750	95.4%	3,150	1,750	94.3%	0.6%

TPHD Surrogate Recovery

	MS	MSD
o-Terphenyl	101 %	99.4%

Results reported in mg/kg
RPD calculated using sample concentrations per SW846.

WY32:0626

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID

Sample ID: LCS-072513
LAB CONTROL

Lab Sample ID: LCS-072513
LIMS ID: 13-15394
Matrix: Sediment
Data Release Authorized:
Reported: 07/29/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 07/25/13
Date Analyzed: 07/26/13 15:24
Instrument/Analyst: FID4A/JLW

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 10 mL
Dilution Factor: 1.00

Range	Lab Control	Spike Added	Recovery
Diesel	1,470	1,500	98.0%

TPHD Surrogate Recovery

o-Terphenyl	102%

Results reported in mg/kg

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: WY32
Matrix: Sediment Project: NPDES Sampling Support
Date Received: 06/26/13 209977

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-15393-WY32A	UP-CB-B8-20130626-S	7.01 g	10.0 mL	D	07/25/13
13-15394-072513MB1	Method Blank	10.0 g	10.0 mL	-	07/25/13
13-15394-072513LCS1	Lab Control	10.0 g	10.0 mL	-	07/25/13
13-15394-WY32B	UP-MHF-165-20130626	8.57 g	10.0 mL	D	07/25/13
13-15394-WY32BMS	UP-MHF-165-20130626	8.55 g	10.0 mL	D	07/25/13
13-15394-WY32BMSD	UP-MHF-165-20130626	8.58 g	10.0 mL	D	07/25/13
13-15395-WY32C	UP-CB-A6-20130626-S	7.13 g	10.0 mL	D	07/25/13

Basis: D=Dry Weight W=As Received

TPH METHOD BLANK SUMMARY

BLANK NO.

WY32MBS1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

SDG No.: WY32

Project No.: NPDES SAMPLING SUPP

Date Extracted: 07/25/13

Matrix: SOLID

Date Analyzed : 07/26/13

Instrument ID : FID4A

Time Analyzed : 1503

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WY32LCSS1	WY32LCSS1	07/26/13
02	UP-CB-B8-201	WY32A	07/26/13
03	UP-MHF-165-2	WY32B	07/26/13
04	UP-MHF-165-2	WY32BMS	07/26/13
05	UP-MHF-165-2	WY32BMSD	07/26/13
06	UP-CB-A6-201	WY32C	07/26/13
07			
08			
09			
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11			
12			
13			
14			
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6a
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

Instrument: FID4A.I
Project: NPDES Sampling Supp

Calibration Date: 13-APR-2013
SDG No.: WY32
3

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	15188	15021	14479	14279	14226	13910	14517	3.4
AK Diesel	17981	17836	17184	16948	16866	16485	17217	3.4
OR Diesel	18067	17904	17254	17021	16941	16562	17291	3.4
Cal Diesel	17937	17789	17145	16910	16821	16447	17175	3.4
o-Terph	20876	20737	19497	18356	18320	17911	19283	6.7

<- Indicates %RSD outside limits
Surrogate areas are not included in Diesel RF calculation.

Quant Ranges : WA Diesel C12-C24 (3.908-7.326)
AK Diesel C10-C25 (2.967-7.574)
OR Diesel C10-C28 (2.967-8.269)
Cal Diesel C10-C24 (2.967-7.326)

Calibration Files	Analysis Time
0413a006.d	13-APR-2013 11:53
0413a007.d	13-APR-2013 12:13
0413a008.d	13-APR-2013 12:34
0413a009.d	13-APR-2013 12:54
0413a010.d	13-APR-2013 13:15
0413a011.d	13-APR-2013 13:35

6a
NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

Instrument: FID4A.I Project: NPDES Sampling Supp

Calibration Date: 20-MAY-2013 SDG No.: WY32

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	14505	14238	13594	13326	11838	9930	12905	13.4
Triac Surr	19882	20137	19857	19391	18502	18199	19328	4.1

<- Indicates %RSD outside limits
Surrogate areas are not included in Motor Oil RF calculation.

Calibration Files	Analysis Time
0520a016.d	20-MAY-2013 17:53
0520a017.d	20-MAY-2013 18:13
0520a018.d	20-MAY-2013 18:34
0520a019.d	20-MAY-2013 18:55
0520a020.d	20-MAY-2013 19:15
0520a021.d	20-MAY-2013 19:36

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 13-APR-2013
Project: NPDES Sampling Supp

CCal Date: 26-JUL-2013
SDG No.: WY32

Analysis Time: 14:22
Lab ID: DIESEL#2

Instrument: FID4A.I
Lab File Name: 0726a019.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D	
WADies(C12-C24)	3866077	266.4	250	6.5	
AK102 (C10-C25)	4547590	264.2	250	5.7	
NASDies(C10-C24)	4532044	229.8	250	-8.1	
Terphenyl	895478	46.4	45	3.2	
Creos (C12-C22)	3724684	1707.1	250	582.8	<-

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

FORM VII-Diesel

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 20-MAY-2013
Project: NPDES Sampling Supp

CCal Date: 26-JUL-2013
SDG No.: WY32

Analysis Time: 14:42
Lab ID: MOIL#2

Instrument: FID4A.I
Lab File Name: 0726a020.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	5980076	463.4	500	-7.3
AK103 (C25-C36)	5258169	571.4	500	14.3
OR MOIL(C28-C40)	4445542	588.6	500	17.7
CRUDE(Tol-C40)	6944348	919.4	500	83.9
n-Triacontane	877957	45.4	45	0.9

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

FORM VII-Diesel

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 13-APR-2013
Project: NPDES Sampling Supp

CCal Date: 26-JUL-2013
SDG No.: WY32

Analysis Time: 17:47
Lab ID: DIESEL#3

Instrument: FID4A.I
Lab File Name: 0726a029.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D	
WADies(C12-C24)	3968490	273.4	250	9.4	
AK102 (C10-C25)	4666878	271.1	250	8.4	
NASDies(C10-C24)	4646177	235.6	250	-5.8	
Terphenyl	923256	47.9	45	6.4	
Creos (C12-C22)	3802817	1742.9	250	597.2	<-

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

FORM VII-Diesel

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 20-MAY-2013
Project: NPDES Sampling Supp

CCal Date: 26-JUL-2013
SDG No.: WY32

Analysis Time: 18:07
Lab ID: MOIL#3

Instrument: FID4A.I
Lab File Name: 0726a030.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	5805808	449.9	500	-10.0
AK103 (C25-C36)	5248481	570.4	500	14.1
OR MOIL(C28-C40)	4139068	548.0	500	9.6
CRUDE(Tol-C40)	6716134	889.2	500	77.8
n-Triacontane	896227	46.4	45	3.0

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

FORM VII-Diesel

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WY32 Project: NPDES SAMPLING SUPP

Instrument ID: FID4A GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 6.25 TRIAC: 9.15

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	07/26/13	0810	6.26	9.11
02		RT0726	07/26/13	0830	6.25	9.15
03	ZZZZZ	ZZZZZ	07/26/13	0851	6.25	9.14
04	DUWAMISH SHI	DIESEL#1	07/26/13	0911	6.25	9.15
05	DUWAMISH SHI	MOIL#1	07/26/13	0932	6.24	9.14
06	ZZZZZ	ZZZZZ	07/26/13	0954	6.26	9.14
07	ZZZZZ	ZZZZZ	07/26/13	1014	6.26	9.16
08	ZZZZZ	ZZZZZ	07/26/13	1035	6.26	9.16
09	ZZZZZ	ZZZZZ	07/26/13	1056	6.25	9.15
10	ZZZZZ	ZZZZZ	07/26/13	1116	6.25	9.17
11	ZZZZZ	ZZZZZ	07/26/13	1137	6.25	9.16
12	ZZZZZ	ZZZZZ	07/26/13	1158	6.25	9.16
13	ZZZZZ	ZZZZZ	07/26/13	1218	6.26	9.16
14	ZZZZZ	ZZZZZ	07/26/13	1239	6.26	9.16
15	ZZZZZ	ZZZZZ	07/26/13	1300	6.26	9.15
16	ZZZZZ	ZZZZZ	07/26/13	1320	6.25	9.15
17	ZZZZZ	ZZZZZ	07/26/13	1341	6.25	9.16
18	ZZZZZ	ZZZZZ	07/26/13	1401	6.25	9.16
19	NPDES SAMPLI	DIESEL#2	07/26/13	1422	6.25	9.14
20	NPDES SAMPLI	MOIL#2	07/26/13	1442	6.24	9.16
21	WY32MBS1	WY32MBS1	07/26/13	1503	6.25	9.16
22	WY32LCSS1	WY32LCSS1	07/26/13	1524	6.26	9.15
23	ZZZZZ	ZZZZZ	07/26/13	1544	6.26	9.16
24	UP-CB-B8-201	WY32A	07/26/13	1605	6.25	9.16
25	UP-MHF-165-2	WY32B	07/26/13	1625	6.25	9.15
26	UP-MHF-165-2	WY32BMS	07/26/13	1645	6.25	9.16
27	UP-MHF-165-2	WY32BMSD	07/26/13	1706	6.25	9.15
28	UP-CB-A6-201	WY32C	07/26/13	1726	6.25	9.16
29	NPDES SAMPLI	DIESEL#3	07/26/13	1747	6.26	9.14
30	NPDES SAMPLI	MOIL#3	07/26/13	1807	6.24	9.15
31	ZZZZZ	ZZZZZ	07/26/13	1828	6.25	9.15
32	ZZZZZ	ZZZZZ	07/26/13	1849	6.25	9.15

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WY32 Project: NPDES SAMPLING SUPP

Instrument ID: FID4A GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 6.25 TRIAC: 9.15

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	07/26/13	1910	6.25	9.15
02	ZZZZZ	ZZZZZ	07/26/13	1930	6.25	9.14
03	ZZZZZ	ZZZZZ	07/26/13	1951	6.25	9.15
04	ZZZZZ	ZZZZZ	07/26/13	2012	6.25	9.14
05	ZZZZZ	ZZZZZ	07/26/13	2032	6.26	9.12
06	ZZZZZ	ZZZZZ	07/26/13	2053	6.24	9.15

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WY32 Project: NPDES Sampling Supp

Instrument ID: FID4A GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 5.72 TRIAC: 8.54

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	05/20/13	1100	5.79*	8.61*
02		RINSE	05/20/13	1120	5.77*	8.60*
03		RINSE	05/20/13	1141	5.77*	8.63*
04		RINSE	05/20/13	1202	5.77*	8.60*
05		RT0520	05/20/13	1223	5.72	8.54
06		IB0520	05/20/13	1244	5.71	8.54
07		DIESEL#1	05/20/13	1305	5.72	8.52
08		MOIL#1	05/20/13	1325	5.73	8.54
09		RINSE	05/20/13	1528	5.72	8.55
10		MINSP 50	05/20/13	1549	5.71	8.53
11		MINSP 100	05/20/13	1609	5.71	8.52
12		MINSP 250	05/20/13	1630	5.72	8.55
13		MINSP 500	05/20/13	1651	5.73	8.54
14		MINSP 1000	05/20/13	1711	5.74	8.56
15		MINSP 2500	05/20/13	1732	5.76	8.55
16		MOIL 100	05/20/13	1753	5.71	8.53
17		MOIL 250	05/20/13	1813	5.71	8.54
18		MOIL 500	05/20/13	1834	5.71	8.54
19		MOIL 1000	05/20/13	1855	5.71	8.56
20		MOIL 2500	05/20/13	1915	5.71	8.58
21		MOIL 5000	05/20/13	1936	5.71	8.61*
22		MOIL ICV 500	05/20/13	1956	5.71	8.54

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

8
TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WY32 Project: NPDES Sampling Supp

Instrument ID: FID4A GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 5.86 TRIAC: 8.70

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	04/13/13	0947	5.87	8.70
02		RT0413	04/13/13	1007	5.86	8.70
03		IB0413	04/13/13	1027	5.86	8.69
04		DIESEL#1	04/13/13	1047	5.87	8.69
05		MOIL#1	04/13/13	1107	5.85	8.69
06		DIESEL50	04/13/13	1153	5.86	8.71
07		DIESEL100	04/13/13	1213	5.86	8.71
08		DIESEL250	04/13/13	1234	5.87	8.71
09		DIESEL500	04/13/13	1254	5.87	8.71
10		DIESEL1000	04/13/13	1315	5.88	8.71
11		DIESEL2500	04/13/13	1335	5.90	8.70
12		DIESELICV250	04/13/13	1356	5.86	8.70
13		MOIL100	04/13/13	1416	5.90	8.67
14		MOIL250	04/13/13	1436	5.90	8.68
15		MOIL500	04/13/13	1457	5.90	8.68
16		MOIL1000	04/13/13	1517	5.90	8.70
17		MOIL2500	04/13/13	1538	5.90	8.72
18		MOIL5000	04/13/13	1558	5.90	8.75
19		MOILICV500	04/13/13	1619	5.90	8.68

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

Metals Analysis
Report and Summary QC Forms

ARI Job ID: WY32, WY33

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WY32

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
UP-CB-B8-20130626-	WY32A	13-15393	
UP-CB-B8-20130626-D	WY32ADUP	13-15393	
UP-CB-B8-20130626-S	WY32ASPK	13-15393	
UP-MHF-165-2013062	WY32B	13-15394	
PBS	WY32MB1	13-15394	
LCSS	WY32MB1SPD	13-15394	
LCSS	WY32MB1SPK	13-15394	
UP-CB-A6-20130626-	WY32C	13-15395	
UP-CB-B8-20130626-	WY32D	13-15396	
UP-CB-B8-20130626-D	WY32DDUP	13-15396	
UP-CB-B8-20130626-S	WY32DSPK	13-15396	
PBW	WY32MB2	13-15396	
LCSW	WY32MB2SPD	13-15396	
LCSW	WY32MB2SPK	13-15396	
UP-CB-B8-20130626-	WY32E	13-15397	
PBW	WY32MB3	13-15397	
LCSW	WY32MB3SPD	13-15397	
LCSW	WY32MB3SPK	13-15397	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: _____ Name: Jay Kuhn

Date: 7/31/13 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: UP-CB-B8-20130626-S
SAMPLE

Lab Sample ID: WY32A
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized:
Reported: 07/30/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Percent Total Solids: 69.3%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
3050B	07/23/13	200.8	07/29/13	7440-36-0	Antimony	0.018	0.3	0.3	U
3050B	07/23/13	200.8	07/29/13	**7440-38-2**	**Arsenic**	0.12	0.3	**8.0**	
3050B	07/23/13	6010C	07/25/13	7440-41-7	Beryllium	0.034	0.3	0.3	U
3050B	07/23/13	200.8	07/29/13	**7440-43-9**	**Cadmium**	0.016	0.1	**1.3**	
3050B	07/23/13	200.8	07/29/13	**7440-47-3**	**Chromium**	0.052	0.7	**47.2**	
3050B	07/23/13	6010C	07/25/13	**7440-50-8**	**Copper**	0.17	0.7	**81.5**	
3050B	07/23/13	200.8	07/29/13	**7439-92-1**	**Lead**	0.064	0.1	**94.3**	
CLP	07/23/13	7471A	07/23/13	**7439-97-6**	**Mercury**	0.0015	0.03	**0.20**	
3050B	07/23/13	200.8	07/29/13	**7440-02-0**	**Nickel**	0.066	0.7	**34.2**	
3050B	07/23/13	200.8	07/29/13	7782-49-2	Selenium	0.13	0.7	0.7	U
3050B	07/23/13	200.8	07/29/13	**7440-22-4**	**Silver**	0.011	0.3	**0.3**	
3050B	07/23/13	200.8	07/29/13	7440-28-0	Thallium	0.0041	0.3	0.3	U
3050B	07/23/13	6010C	07/25/13	**7440-66-6**	**Zinc**	0.41	3	**974**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: UP-MHF-165-20130626-S
SAMPLE

Lab Sample ID: WY32B
LIMS ID: 13-15394
Matrix: Sediment
Data Release Authorized:
Reported: 07/30/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Percent Total Solids: 80.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
3050B	07/23/13	200.8	07/29/13	7440-36-0	Antimony	0.016	0.2	0.2	U
3050B	07/23/13	200.8	07/29/13	**7440-38-2**	**Arsenic**	0.11	0.2	**5.7**	
3050B	07/23/13	6010C	07/25/13	**7440-41-7**	**Beryllium**	0.011	0.1	**0.2**	
3050B	07/23/13	200.8	07/29/13	**7440-43-9**	**Cadmium**	0.015	0.1	**1.2**	
3050B	07/23/13	200.8	07/29/13	**7440-47-3**	**Chromium**	0.046	0.6	**40.2**	
3050B	07/23/13	6010C	07/25/13	**7440-50-8**	**Copper**	0.057	0.2	**65.0**	
3050B	07/23/13	200.8	07/29/13	**7439-92-1**	**Lead**	0.057	0.1	**144**	
CLP	07/23/13	7471A	07/23/13	**7439-97-6**	**Mercury**	0.0013	0.02	**0.04**	
3050B	07/23/13	200.8	07/29/13	**7440-02-0**	**Nickel**	0.060	0.6	**28.1**	
3050B	07/23/13	200.8	07/29/13	7782-49-2	Selenium	0.12	0.6	0.6	U
3050B	07/23/13	200.8	07/29/13	7440-22-4	Silver	0.0097	0.2	0.2	U
3050B	07/23/13	200.8	07/29/13	7440-28-0	Thallium	0.0036	0.2	0.2	U
3050B	07/23/13	6010C	07/25/13	**7440-66-6**	**Zinc**	0.14	1	**618**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: UP-CB-A6-20130626-S
SAMPLE

Lab Sample ID: WY32C
LIMS ID: 13-15395
Matrix: Sediment
Data Release Authorized:
Reported: 07/30/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Percent Total Solids: 71.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
3050B	07/23/13	200.8	07/29/13	7440-36-0	Antimony	0.017	0.3	0.3	U
3050B	07/23/13	200.8	07/29/13	**7440-38-2**	**Arsenic**	0.12	0.3	**5.8**	
3050B	07/23/13	6010C	07/25/13	**7440-41-7**	**Beryllium**	0.013	0.1	**0.2**	
3050B	07/23/13	200.8	07/29/13	**7440-43-9**	**Cadmium**	0.016	0.1	**1.1**	
3050B	07/23/13	200.8	07/29/13	**7440-47-3**	**Chromium**	0.051	0.7	**50.2**	
3050B	07/23/13	6010C	07/25/13	**7440-50-8**	**Copper**	0.067	0.3	**278**	
3050B	07/23/13	200.8	07/29/13	**7439-92-1**	**Lead**	0.063	0.1	**96.4**	
CLP	07/23/13	7471A	07/23/13	**7439-97-6**	**Mercury**	0.0015	0.03	**0.08**	
3050B	07/23/13	200.8	07/29/13	**7440-02-0**	**Nickel**	0.066	0.7	**31.3**	
3050B	07/23/13	200.8	07/29/13	7782-49-2	Selenium	0.13	0.7	0.7	U
3050B	07/23/13	200.8	07/29/13	7440-22-4	Silver	0.011	0.3	0.3	U
3050B	07/23/13	200.8	07/29/13	7440-28-0	Thallium	0.0040	0.3	0.3	U
3050B	07/23/13	6010C	07/25/13	**7440-66-6**	**Zinc**	0.16	1	**1,250**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: UP-CB-B8-20130626-S
MATRIX SPIKE

Lab Sample ID: WY32A
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized:
Reported: 07/30/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/26/13
Date Received: 06/26/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	0.3 U	1.1	33.9	3.2%	N
Arsenic	200.8	8.0	37.4	33.9	86.7%	
Beryllium	6010C	0.3 U	61.2	68.8	89.0%	
Cadmium	200.8	1.3	33.0	33.9	93.5%	
Chromium	200.8	47.2	78.5	33.9	92.3%	
Copper	6010C	81.5	145	68.8	92.3%	
Lead	200.8	94.3	154	33.9	176%	N
Mercury	7471A	0.20	0.52	0.296	108%	
Nickel	200.8	34.2	68.2	33.9	100%	
Selenium	200.8	0.7 U	101	109	92.7%	
Silver	200.8	0.3	31.2	33.9	91.2%	
Thallium	200.8	0.3 U	30.2	33.9	89.1%	
Zinc	6010C	974	990	68.8	23.3%	H

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: UP-CB-B8-20130626-S
DUPLICATE

Lab Sample ID: WY32A
LIMS ID: 13-15393
Matrix: Sediment
Data Release Authorized:
Reported: 07/30/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/26/13
Date Received: 06/26/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Arsenic	200.8	8.0	7.3	9.2%	+/- 20%	
Beryllium	6010C	0.3 U	0.3 U	0.0%	+/- 0.3	L
Cadmium	200.8	1.3	1.3	0.0%	+/- 20%	
Chromium	200.8	47.2	42.0	11.7%	+/- 20%	
Copper	6010C	81.5	106	26.1%	+/- 20%	*
Lead	200.8	94.3	80.4	15.9%	+/- 20%	
Mercury	7471A	0.20	0.19	5.1%	+/- 20%	
Nickel	200.8	34.2	35.1	2.6%	+/- 20%	
Selenium	200.8	0.7 U	0.7 U	0.0%	+/- 0.7	L
Silver	200.8	0.3	0.4	28.6%	+/- 0.3	L
Thallium	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Zinc	6010C	974	1,010	3.6%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: WY32LCS
LIMS ID: 13-15394
Matrix: Sediment
Data Release Authorized:
Reported: 07/30/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE/BLANK SPIKE DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Dup Found	Spike Added	Spike Recovery	Spike Dup Recovery	RPD	Q
Antimony	200.8	24.1	24.4	25.0	96.4%	97.6%	1.2%	
Arsenic	200.8	23.4	24.0	25.0	93.6%	96.0%	2.5%	
Beryllium	6010C	47.4	47.5	50.0	94.8%	95.0%	0.2%	
Cadmium	200.8	24.9	24.9	25.0	99.6%	99.6%	0.0%	
Chromium	200.8	24.7	24.9	25.0	98.8%	99.6%	0.8%	
Copper	6010C	52.0	51.8	50.0	104%	104%	0.4%	
Lead	200.8	25.0	25.1	25.0	100%	100%	0.4%	
Mercury	7471A	0.54	0.55	0.50	108%	110%	1.8%	
Nickel	200.8	25.4	26.3	25.0	102%	105%	3.5%	
Selenium	200.8	79.6	81.7	80.0	99.5%	102%	2.6%	
Silver	200.8	25.8	25.6	25.0	103%	102%	0.8%	
Thallium	200.8	24.3	24.5	25.0	97.2%	98.0%	0.8%	
Zinc	6010C	51	51	50	102%	102%	0.0%	

Reported in mg/kg-dry

N-Control limit not met
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: WY32MB
LIMS ID: 13-15394
Matrix: Sediment
Data Release Authorized:
Reported: 07/30/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
3050B	07/23/13	200.8	07/29/13	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	07/23/13	200.8	07/29/13	7440-38-2	Arsenic	0.087	0.2	0.2	U
3050B	07/23/13	6010C	07/25/13	7440-41-7	Beryllium	0.010	0.1	0.1	U
3050B	07/23/13	200.8	07/29/13	7440-43-9	Cadmium	0.012	0.1	0.1	U
3050B	07/23/13	200.8	07/29/13	7440-47-3	Chromium	0.038	0.5	0.5	U
3050B	07/23/13	6010C	07/25/13	7440-50-8	Copper	0.050	0.2	0.2	U
3050B	07/23/13	200.8	07/29/13	7439-92-1	Lead	0.047	0.1	0.1	U
CLP	07/23/13	7471A	07/23/13	7439-97-6	Mercury	0.0013	0.02	0.02	U
3050B	07/23/13	200.8	07/29/13	7440-02-0	Nickel	0.049	0.5	0.5	U
3050B	07/23/13	200.8	07/29/13	7782-49-2	Selenium	0.099	0.5	0.5	U
3050B	07/23/13	200.8	07/29/13	7440-22-4	Silver	0.0080	0.2	0.2	U
3050B	07/23/13	200.8	07/29/13	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	07/23/13	6010C	07/25/13	7440-66-6	Zinc	0.12	1	1	U

Reported in mg/kg (ppm).
U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: UP-CB-B8-20130626-W
SAMPLE

Lab Sample ID: WY32D
LIMS ID: 13-15396
Matrix: Water
Data Release Authorized:
Reported: 07/30/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
200.8	07/25/13	200.8	07/29/13	**7440-36-0**	**Antimony**	0.010	0.2	**6.0**	
200.8	07/25/13	200.8	07/29/13	**7440-38-2**	**Arsenic**	0.048	0.2	**2.0**	
200.8	07/25/13	200.8	07/29/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	07/25/13	200.8	07/29/13	**7440-43-9**	**Cadmium**	0.010	0.1	**0.6**	
200.8	07/25/13	200.8	07/29/13	**7440-47-3**	**Chromium**	0.045	0.5	**4.5**	
200.8	07/25/13	200.8	07/29/13	**7440-50-8**	**Copper**	0.158	0.5	**21.9**	
200.8	07/25/13	200.8	07/29/13	**7439-92-1**	**Lead**	0.046	0.1	**13.3**	
200.8	07/25/13	200.8	07/29/13	**7440-02-0**	**Nickel**	0.079	0.5	**14.4**	
200.8	07/25/13	200.8	07/29/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	07/25/13	200.8	07/29/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	07/25/13	200.8	07/29/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	07/25/13	200.8	07/29/13	**7440-66-6**	**Zinc**	1.2	10	**490**	

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: UP-CB-B8-20130626-W
MATRIX SPIKE

Lab Sample ID: WY32D
LIMS ID: 13-15396
Matrix: Water
Data Release Authorized:
Reported: 07/30/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/26/13
Date Received: 06/26/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	6.0	27.7	25.0	86.8%	
Arsenic	200.8	2.0	25.8	25.0	95.2%	
Beryllium	200.8	0.2 U	21.3	25.0	85.2%	
Cadmium	200.8	0.6	23.9	25.0	93.2%	
Chromium	200.8	4.5	27.6	25.0	92.4%	
Copper	200.8	21.9	47.4	25.0	102%	
Lead	200.8	13.3	36.2	25.0	91.6%	
Nickel	200.8	14.4	40.5	25.0	104%	
Selenium	200.8	0.5 U	76.1	80.0	95.1%	
Silver	200.8	0.2 U	17.4	25.0	69.6%	N
Thallium	200.8	0.2 U	22.5	25.0	90.0%	
Zinc	200.8	490	560	80	87.5%	H

Reported in µg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked
NR-Not Recovered

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: UP-CB-B8-20130626-W
DUPLICATE

Lab Sample ID: WY32D
LIMS ID: 13-15396
Matrix: Water
Data Release Authorized:
Reported: 07/30/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/26/13
Date Received: 06/26/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	6.0	6.0	0.0%	+/- 20%	
Arsenic	200.8	2.0	2.1	4.9%	+/- 20%	
Beryllium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Cadmium	200.8	0.6	0.6	0.0%	+/- 20%	
Chromium	200.8	4.5	4.7	4.3%	+/- 20%	
Copper	200.8	21.9	22.9	4.5%	+/- 20%	
Lead	200.8	13.3	13.4	0.7%	+/- 20%	
Nickel	200.8	14.4	14.6	1.4%	+/- 20%	
Selenium	200.8	0.5 U	0.5	0.0%	+/- 0.5	L
Silver	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Thallium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Zinc	200.8	490	510	4.0%	+/- 20%	

Reported in µg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: WY32LCS
LIMS ID: 13-15396
Matrix: Water
Data Release Authorized:
Reported: 07/30/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE/BLANK SPIKE DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Dup Found	Spike Added	Spike Recovery	Spike Dup Recovery	RPD	Q
Antimony	200.8	24.0	23.5	25.0	96.0%	94.0%	2.1%	
Arsenic	200.8	23.3	23.1	25.0	93.2%	92.4%	0.9%	
Beryllium	200.8	24.4	23.7	25.0	97.6%	94.8%	2.9%	
Cadmium	200.8	24.9	24.4	25.0	99.6%	97.6%	2.0%	
Chromium	200.8	25.0	24.2	25.0	100%	96.8%	3.3%	
Copper	200.8	27.2	26.1	25.0	109%	104%	4.1%	
Lead	200.8	25.4	25.3	25.0	102%	101%	0.4%	
Nickel	200.8	26.2	25.8	25.0	105%	103%	1.5%	
Selenium	200.8	78.1	77.4	80.0	97.6%	96.8%	0.9%	
Silver	200.8	26.5	26.2	25.0	106%	105%	1.1%	
Thallium	200.8	25.0	24.8	25.0	100%	99.2%	0.8%	
Zinc	200.8	81	80	80	101%	100%	1.2%	

Reported in ug/L

N-Control limit not met
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: WY32MB
LIMS ID: 13-15396
Matrix: Water
Data Release Authorized:
Reported: 07/30/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
200.8	07/25/13	200.8	07/29/13	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	07/25/13	200.8	07/29/13	7440-38-2	Arsenic	0.048	0.2	0.2	U
200.8	07/25/13	200.8	07/29/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	07/25/13	200.8	07/29/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	07/25/13	200.8	07/29/13	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	07/25/13	200.8	07/29/13	7440-50-8	Copper	0.158	0.5	0.5	U
200.8	07/25/13	200.8	07/29/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	07/25/13	200.8	07/29/13	7440-02-0	Nickel	0.079	0.5	0.5	U
200.8	07/25/13	200.8	07/29/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	07/25/13	200.8	07/29/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	07/25/13	200.8	07/29/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	07/25/13	200.8	07/29/13	7440-66-6	Zinc	0.50	4	4	U

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS

Sample ID: UP-CB-B8-20130626-W
SAMPLE

Lab Sample ID: WY32E
LIMS ID: 13-15397
Matrix: Water
Data Release Authorized:
Reported: 07/30/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	07/25/13	200.8	07/29/13	**7440-36-0**	**Antimony**	0.010	0.2	**5.9**	
200.8	07/25/13	200.8	07/29/13	**7440-38-2**	**Arsenic**	0.048	0.2	**1.6**	
200.8	07/25/13	200.8	07/29/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	07/25/13	200.8	07/29/13	**7440-43-9**	**Cadmium**	0.010	0.1	**0.4**	
200.8	07/25/13	200.8	07/29/13	**7440-47-3**	**Chromium**	0.045	0.5	**1.5**	
200.8	07/25/13	200.8	07/29/13	**7440-50-8**	**Copper**	0.158	0.5	**10.5**	
200.8	07/25/13	200.8	07/29/13	**7439-92-1**	**Lead**	0.046	0.1	**0.9**	
200.8	07/25/13	200.8	07/29/13	**7440-02-0**	**Nickel**	0.079	0.5	**12.4**	
200.8	07/25/13	200.8	07/29/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	07/25/13	200.8	07/29/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	07/25/13	200.8	07/29/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	07/25/13	200.8	07/29/13	**7440-66-6**	**Zinc**	1.2	10	**370**	

Reported In µg/L (ppb)
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WY32LCS
LIMS ID: 13-15397
Matrix: Water
Data Release Authorized:
Reported: 07/30/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE/BLANK SPIKE DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Dup Found	Spike Added	Spike Recovery	Spike Dup Recovery	RPD	Q
Antimony	200.8	23.8	24.0	25.0	95.2%	96.0%	0.8%	
Arsenic	200.8	22.8	24.0	25.0	91.2%	96.0%	5.1%	
Beryllium	200.8	23.9	24.3	25.0	95.6%	97.2%	1.7%	
Cadmium	200.8	24.5	25.2	25.0	98.0%	101%	2.8%	
Chromium	200.8	24.6	26.1	25.0	98.4%	104%	5.9%	
Copper	200.8	27.1	27.3	25.0	108%	109%	0.7%	
Lead	200.8	25.2	26.0	25.0	101%	104%	3.1%	
Nickel	200.8	26.6	27.8	25.0	106%	111%	4.4%	
Selenium	200.8	75.4	78.6	80.0	94.2%	98.2%	4.2%	
Silver	200.8	26.1	27.3	25.0	104%	109%	4.5%	
Thallium	200.8	24.7	25.2	25.0	98.8%	101%	2.0%	
Zinc	200.8	78	91	80	97.5%	114%	15.4%	

Reported in ug/L

N-Control limit not met
Control Limits: 80-120%

FORM-VII

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS **Sample ID: METHOD BLANK**

Lab Sample ID: WY32MB
LIMS ID: 13-15397
Matrix: Water
Data Release Authorized:
Reported: 07/30/13

QC Report No: WY32-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	07/25/13	200.8	07/29/13	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	07/25/13	200.8	07/29/13	7440-38-2	Arsenic	0.048	0.2	0.2	U
200.8	07/25/13	200.8	07/29/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	07/25/13	200.8	07/29/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	07/25/13	200.8	07/29/13	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	07/25/13	200.8	07/29/13	7440-50-8	Copper	0.158	0.5	0.5	U
200.8	07/25/13	200.8	07/29/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	07/25/13	200.8	07/29/13	7440-02-0	Nickel	0.079	0.5	0.5	U
200.8	07/25/13	200.8	07/29/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	07/25/13	200.8	07/29/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	07/25/13	200.8	07/29/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	07/25/13	200.8	07/29/13	7440-66-6	Zinc	0.50	4	4	U

Reported In µg/L (ppb)
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS:ug/L

SDG: WY32

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Antimony	SB	PMS	MS072911	50.0	49.53	**99.1**	50.0	49.63	**99.3**	49.65	**99.3**	49.27	**98.5**	49.88	**99.8**	49.99	**100.0**
Arsenic	AS	PMS	MS072911	50.0	49.67	**99.3**	50.0	50.70	**101.4**	49.23	**98.5**	50.23	**100.5**	50.99	**102.0**	50.13	**100.3**
Beryllium	BE	PMS	MS072911	50.0	50.08	**100.2**	50.0	50.06	**100.1**	50.46	**100.9**	49.16	**98.3**	50.57	**101.1**	50.75	**101.5**
Beryllium	BE	ICP	IP072571	1000.0	1006.24	**100.6**	1000.0	1012.81	**101.3**	1014.63	**101.5**	998.00	**99.8**	994.38	**99.4**	992.61	**99.3**
Cadmium	CD	PMS	MS072911	50.0	48.20	**96.4**	50.0	49.80	**99.6**	50.40	**100.8**	50.43	**100.9**	50.02	**100.0**	51.03	**102.1**
Chromium	CR	PMS	MS072911	50.0	49.11	**98.2**	50.0	49.69	**99.4**	48.76	**97.5**	49.06	**98.1**	49.83	**99.7**	48.51	**97.0**
Copper	CU	ICP	IP072571	1000.0	1027.39	**102.7**	1000.0	1027.41	**102.7**	1028.06	**102.8**	1032.76	**103.3**	1030.14	**103.0**	1025.86	**102.6**
Copper	CU	PMS	MS072911	50.0	51.69	**103.4**	50.0	51.26	**102.5**	49.57	**99.1**	50.45	**100.9**	50.91	**101.8**	50.53	**101.1**
Lead	PB	PMS	MS072911	50.0	49.67	**99.3**	50.0	49.61	**99.2**	49.17	**98.3**	49.36	**98.7**	49.56	**99.1**	49.54	**99.1**
Mercury	HG	CVA	HG072302	8.0	8.23	**102.9**	4.0	4.15	**103.8**	4.23	**105.8**	4.28	**107.0**	4.18	**104.5**		
Nickel	NI	PMS	MS072911	50.0	50.41	**100.8**	50.0	51.36	**102.7**	50.01	**100.0**	50.03	**100.1**	51.53	**103.1**	50.86	**101.7**
Selenium	SE	PMS	MS072911	80.0	78.52	**98.2**	50.0	52.15	**104.3**	51.46	**102.9**	52.05	**104.1**	53.08	**106.2**	51.65	**103.3**
Silver	AG	PMS	MS072911	50.0	50.15	**100.3**	50.0	49.50	**99.0**	50.50	**101.0**	51.36	**102.7**	49.74	**99.5**	50.83	**101.7**
Thallium	TL	PMS	MS072911	50.0	48.23	**96.5**	50.0	48.62	**97.2**	48.12	**96.2**	48.43	**96.9**	48.60	**97.2**	48.48	**97.0**
Zinc	ZN	PMS	MS072911	50.0	50.27	**100.5**	50.0	51.86	**103.7**	50.53	**101.1**	50.40	**100.8**	51.37	**102.7**	50.68	**101.4**
Zinc	ZN	ICP	IP072571	1000.0	1014.28	**101.4**	1000.0	1040.34	**104.0**	1069.58	**107.0**	1032.91	**103.3**	1027.37	**102.7**	1033.90	**103.4**

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ug/L

SDG: WY32

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Antimony	SB	PMS	MS072911	50.0												
Arsenic	AS	PMS	MS072911	50.0												
Beryllium	BE	PMS	MS072911	50.0												
Beryllium	BE	ICP	IP072571	1000.0	993.84	**99.4**										
Cadmium	CD	PMS	MS072911	50.0												
Chromium	CR	PMS	MS072911	50.0												
Copper	CU	ICP	IP072571	1000.0	1021.51	**102.2**										
Copper	CU	PMS	MS072911	50.0												
Lead	PB	PMS	MS072911	50.0												
Mercury	HG	CVA	HG072302	4.0												
Nickel	NI	PMS	MS072911	50.0												
Selenium	SE	PMS	MS072911	50.0												
Silver	AG	PMS	MS072911	50.0												
Thallium	TL	PMS	MS072911	50.0												
Zinc	ZN	PMS	MS072911	50.0												
Zinc	ZN	ICP	IP072571	1000.0	1045.73	**104.6**										

Control Limits: Mercury 80-120; Other Metals 90-110

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS:ug/L

SDG: WY32

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Antimony	SB	PMS	MS072911	0.2	0.22	**110.0**										
Arsenic	AS	PMS	MS072911	0.2	0.19	**95.0**										
Beryllium	BE	PMS	MS072911	0.2	0.20	**100.0**										
Beryllium	BE	ICP	IP072571	1.0	0.95	**95.0**										
Cadmium	CD	PMS	MS072911	0.1	0.11	**110.0**										
Chromium	CR	PMS	MS072911	0.5	0.53	**106.0**										
Copper	CU	ICP	IP072571	2.0	2.16	**108.0**										
Copper	CU	PMS	MS072911	0.5	0.54	**108.0**										
Lead	PB	PMS	MS072911	0.1	0.10	**100.0**										
Mercury	HG	CVA	HG072302	0.1	0.09	**90.0**										
Nickel	NI	PMS	MS072911	0.5	0.51	**102.0**										
Selenium	SE	PMS	MS072911	0.5	0.51	**102.0**										
Silver	AG	PMS	MS072911	0.2	0.20	**100.0**										
Thallium	TL	PMS	MS072911	0.2	0.20	**100.0**										
Zinc	ZN	PMS	MS072911	4.0	4.11	**102.8**										
Zinc	ZN	ICP	IP072571	10.0	9.95	**99.5**										

Control Limits: no control limits have been established by the EPA at this time.

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WY32

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Antimony	SB	PMS	MS072911	60.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Arsenic	AS	PMS	MS072911	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Beryllium	BE	PMS	MS072911	5.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Beryllium	BE	ICP	IP072571	5.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	CD	PMS	MS072911	5.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Chromium	CR	PMS	MS072911	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Copper	CU	ICP	IP072571	25.0	2.0	2.0	U	2.0	U	3.3	B	2.0	B	2.0	U	2.0	U
Copper	CU	PMS	MS072911	25.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Lead	PB	PMS	MS072911	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Mercury	HG	CVA	HG072302	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U		
Nickel	NI	PMS	MS072911	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Selenium	SE	PMS	MS072911	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Silver	AG	PMS	MS072911	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Thallium	TL	PMS	MS072911	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Zinc	ZN	PMS	MS072911	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U
Zinc	ZN	ICP	IP072571	20.0	10.0	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS:ug/L

SDG: WY32

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Antimony	SB	PMS	MS072911	60.0	0.2												
Arsenic	AS	PMS	MS072911	10.0	0.2												
Beryllium	BE	PMS	MS072911	5.0	0.2												
Beryllium	BE	ICP	IP072571	5.0	1.0	1.0	U										
Cadmium	CD	PMS	MS072911	5.0	0.1												
Chromium	CR	PMS	MS072911	10.0	0.5												
Copper	CU	ICP	IP072571	25.0	2.0	2.0	U										
Copper	CU	PMS	MS072911	25.0	0.5												
Lead	PB	PMS	MS072911	3.0	0.1												
Mercury	HG	CVA	HG072302	0.2	0.1												
Nickel	NI	PMS	MS072911	40.0	0.5												
Selenium	SE	PMS	MS072911	5.0	0.5												
Silver	AG	PMS	MS072911	10.0	0.2												
Thallium	TL	PMS	MS072911	10.0	0.2												
Zinc	ZN	PMS	MS072911	20.0	4.0												
Zinc	ZN	ICP	IP072571	20.0	10.0	10.0	U										

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ICS SOURCE: I.V.

PROJECT: NPDES Sampling Suppo

RUNID: IP072571

SDG: WY32

INSTRUMENT ID: OPTIMA ICP 2

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Aluminum	200000	200000	203014.9	202329.4	**101.2**						
Antimony		1000	11.5	1011.6	**101.2**						
Arsenic		1000	20.2	1050.0	**105.0**						
Barium		1000	-6.7	1020.6	**102.1**						
Beryllium		1000	0.0	981.6	**98.2**						
Boron			-5.7	-8.6							
Cadmium		1000	0.6	1072.3	**107.2**						
Calcium	100000	100000	101427.9	100943.1	**100.9**						
Chromium		1000	-2.6	1023.5	**102.4**						
Cobalt		1000	-0.3	990.6	**99.1**						
Copper		1000	0.6	1077.7	**107.8**						
Iron	200000	200000	202402.1	201304.5	**100.7**						
Lead		1000	-6.0	981.2	**98.1**						
Magnesium	100000	100000	106378.3	101532.6	**101.5**						
Manganese		1000	1.4	975.9	**97.6**						
Molybdenum			3.4	2.9							
Nickel		1000	1.5	987.0	**98.7**						
Potassium			17.4	21.6							
Selenium		1000	13.3	1043.3	**104.3**						
Silicon			-4.5	-5.2							
Silver		1000	-1.2	1069.5	**107.0**						
Sodium			5.9	-0.8							
Strontium			5.3	5.2							
Thallium		1000	4.5	947.9	**94.8**						
Tin			-14.0	-14.0							
Titanium			2.7	2.2							
Vanadium		1000	-1.4	1000.4	**100.0**						
Zinc		1000	1.1	981.0	**98.1**						

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ICS SOURCE: I.V.

PROJECT: NPDES Sampling Suppo

RUNID: MS072911

SDG: WY32

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Antimony			0.1	0.1							
Arsenic		20	0.1	19.6	**98.0**						
Barium			0.1	0.1							
Cadmium		20	0.1	19.1	**95.5**						
Chromium		20	0.5	20.0	**100.0**						
Cobalt		20	0.0	19.6	**98.0**						
Copper		20	1.3	21.0	**105.0**						
Manganese		20	0.1	19.2	**96.0**						
Molybdenum	400	400	411.1	416.1	**104.0**						
Nickel		20	0.3	20.2	**101.0**						
Selenium			-0.1	-0.2							
Silver		20	0.0	19.9	**99.5**						
Thorium			0.2	0.1							
Vanadium			0.1	0.1							
Zinc		20	1.1	19.6	**98.0**						

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WY32 UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Antimony	SB	PMS	NEXION 300D MS	0.00		60	0.2	4/1/2012		
Arsenic	AS	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Beryllium	BE	PMS	NEXION 300D MS	0.00		5	0.2	4/1/2012		
Beryllium	BE	ICP	OPTIMA ICP 2	313.04		5	1.0	4/1/2012	5000.0	6/10/2013
Cadmium	CD	PMS	NEXION 300D MS	0.00		5	0.1	4/1/2012		
Chromium	CR	PMS	NEXION 300D MS	0.00		10	0.5	4/1/2012		
Copper	CU	PMS	NEXION 300D MS	0.00		25	0.5	4/1/2012		
Copper	CU	ICP	OPTIMA ICP 2	324.75		25	2.0	4/1/2012	40000.0	6/10/2013
Lead	PB	PMS	NEXION 300D MS	0.00		3	0.1	4/1/2012		
Mercury	HG	CVA	CETAC MERCURY	253.70		0.2	0.1	4/1/2012		
Nickel	NI	PMS	NEXION 300D MS	0.00		40	0.5	4/1/2012		
Selenium	SE	PMS	NEXION 300D MS	0.00		5	0.5	4/1/2012		
Silver	AG	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Thallium	TL	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Zinc	ZN	PMS	NEXION 300D MS	0.00		20	4.0	4/1/2012		
Zinc	ZN	ICP	OPTIMA ICP 2	213.86		20	10.0	4/1/2012	100000.0	6/10/2013

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

IEC DATE: 6/10/2013

SDG: WY32

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	13.5116900	0.0000000	0.0000000
Arsenic	188.98	0.0000000	0.0000000	0.0000000	0.0000000	0.0733590	0.0000000	-1.1562270	1.6205640	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1808730	0.0000000	0.0000000	0.1684250
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.67	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	2.1037380	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	5.4930220	0.0000000	0.0000000	0.0000000	0.0000000	0.1385480	0.0000000	0.0000000	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0970800	0.0000000	0.0000000	0.0000000	0.0000000	-0.0418440
Cobalt	228.62	0.0000000	0.0000000	0.0906750	0.0000000	0.0000000	0.0000000	0.0000000	-0.0404570	0.0000000	0.0120010
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1617900	0.0000000	0.0000000	-0.0440960
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.0775070	0.0000000	0.0000000
Lead	220.35	-0.2330880	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1375770	-1.7455340	1.4164220	0.0510640
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.1238020	0.0000000	-1.6776030	-1.2063230	0.0000000	0.6021300
Manganese	257.61	0.0056830	0.0000000	0.0000000	0.0000000	0.0040290	0.0000000	0.0000000	0.0000000	0.0000000	-0.0043570
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0127170	0.0000000	0.0000000	0.0494370	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.1095620	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.5156780	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.7783440	0.0000000	-0.6443870	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	4.3373140	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	5.9719930	0.4226130	0.0000000	-0.1373360
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.1284010	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0622130	0.0000000	0.0000000	0.1906300	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.9208100	0.0000000	0.0530020
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0123920	0.0000000	0.0000000	-0.0659320	0.0000000	0.0000000

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

IEC DATE: 6/10/2013

SDG: WY32

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	MG	MN	MO	NI	PB	SB	TI	TL	V	ZN
Aluminum	308.22	0.0000000	0.0000000	16.0812590	0.0000000	0.0000000	0.0000000	1.9531650	0.0000000	15.6704600	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.8263670	0.0000000	-3.8485090	0.0000000
Arsenic	188.98	0.0000000	0.0000000	3.4165090	0.0000000	0.0000000	0.0000000	-32.1596340	0.0000000	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.1266550	0.0000000	0.0000000	0.0000000	0.0000000	0.2235440	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0102770	0.0000000	0.2401990	0.0000000
Boron	249.67	0.0000000	0.0000000	-1.0759410	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	0.0000000	0.0000000	-0.9387840	0.0000000	0.0000000	0.0000000	0.0000000	0.0597550	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0860990	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.3212800	0.0000000
Cobalt	228.62	0.0000000	0.0000000	-0.1256200	0.1682020	0.0000000	0.0000000	1.7253070	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0058198	0.0000000	0.3004190	0.0000000	0.0000000	0.0000000	0.1851800	0.0000000	0.0000000	0.0000000
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	7.2530080	0.0000000
Lead	220.35	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	-5.2138260	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	-0.1832430	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.5439300	0.0000000	0.4201630	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.5911140	0.0000000
Silicon	288.16	-0.1130470	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.2887870	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	287.1603720	0.0000000	0.0000000	306.9999840
Thallium	190.80	0.0000000	0.0000000	-1.5891790	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	3.6439390	0.0000000
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.0384380	-0.4873020	-0.2074990	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.9474070	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	-0.1525200	-0.5409400	0.0000000	0.0000000	0.0000000	0.5527510	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.2376970	0.0000000	-0.0608720	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ANALYSIS METHOD: ICP

PROJECT: NPDES Sampling Suppo

ARI PREP CODE: SWC

SDG: WY32

PREPDATE: 7/23/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
UP-CB-B8-20130626-	WY32A	1.049	0.0	50.0
UP-CB-B8-20130626-D	WY32ADUP	1.051	0.0	50.0
UP-CB-B8-20130626-S	WY32ASPK	1.049	0.0	50.0
UP-MHF-165-2013062	WY32B	1.097	0.0	50.0
UP-CB-A6-20130626-	WY32C	1.042	0.0	50.0
PBS	WY32MB1	1.000	0.0	50.0
LCSS	WY32MB1SPD	1.000	0.0	50.0
LCSS	WY32MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ANALYSIS METHOD: PMS

PROJECT: NPDES Sampling Suppo

ARI PREP CODE: SWN

SDG: WY32

PREPDATE: 7/23/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
UP-CB-B8-20130626-	WY32A	1.064	0.0	50.0
UP-CB-B8-20130626-D	WY32ADUP	1.059	0.0	50.0
UP-CB-B8-20130626-S	WY32ASPK	1.063	0.0	50.0
UP-MHF-165-2013062	WY32B	1.026	0.0	50.0
UP-CB-A6-20130626-	WY32C	1.050	0.0	50.0
PBS	WY32MB1	1.000	0.0	50.0
LCSS	WY32MB1SPD	1.000	0.0	50.0
LCSS	WY32MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WY32

ANALYSIS METHOD: PMS

ARI PREP CODE: REN

PREPDATE: 7/25/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
UP-CB-B8-20130626-	WY32D	0.000	50.0	25.0
UP-CB-B8-20130626-D	WY32DDUP	0.000	50.0	25.0
UP-CB-B8-20130626-S	WY32DSPK	0.000	50.0	25.0
UP-CB-B8-20130626-	WY32E	0.000	50.0	25.0
PBW	WY32MB2	0.000	50.0	25.0
LCSW	WY32MB2SPD	0.000	50.0	25.0
LCSW	WY32MB2SPK	0.000	50.0	25.0
PBW	WY32MB3	0.000	50.0	25.0
LCSW	WY32MB3SPD	0.000	50.0	25.0
LCSW	WY32MB3SPK	0.000	50.0	25.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WY32

ANALYSIS METHOD: CVA

ARI PREP CODE: SMM

PREPDATE: 7/23/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
UP-CB-B8-20130626-	WY32A	0.242	0.0	50.0
UP-CB-B8-20130626-D	WY32ADUP	0.245	0.0	50.0
UP-CB-B8-20130626-S	WY32ASPK	0.244	0.0	50.0
UP-MHF-165-2013062	WY32B	0.255	0.0	50.0
UP-CB-A6-20130626-	WY32C	0.250	0.0	50.0
PBS	WY32MB1	0.200	0.0	50.0
LCSS	WY32MB1SPD	0.200	0.0	50.0
LCSW	WY32MB1SPK	0.200	0.0	50.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 7/25/2013

SDG: WY32 | RUNID: IP072571 | METHOD: ICP | END DATE: 7/25/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	08190							X					X																		X
S2	S2	1.00	08232												X																		
S3	S3	1.00	08252							X																							X
S4	S4	1.00	08275																														
S5	S5	1.00	08301																														
ICV	ICV	1.00	08322							X					X																		X
ICB	ICB	1.00	08370							X					X																		X
CRI	CRII	1.00	08412							X					X																		X
ZZZZZZ	ZZZZZZ	1.00	08454																														
ICSA	ICSAI	1.00	08510							X					X																		X
ICSAB	ICSABI	1.00	08551							X					X																		X
CCV	CCV1	1.00	08592							X					X																		X
CCB	CCB1	1.00	09032							X					X																		X
ZZZZZZ	WY21MB1	1.00	09074																														
ZZZZZZ	WY21ADUP	1.00	09115																														
ZZZZZZ	WY21A	1.00	09155																														
ZZZZZZ	WY21ASPK	1.00	09195																														
ZZZZZZ	WY21B	2.00	09231																														
ZZZZZZ	WY21C	2.00	09254																														
ZZZZZZ	WY21D	2.00	09294																														
ZZZZZZ	WY21E	1.00	09334																														
ZZZZZZ	WY21F	2.00	09380																														
ZZZZZZ	WY21MB1SPK	1.00	09402																														
CCV	CCV2	1.00	09442							X					X																		X
CCB	CCB2	1.00	09482							X					X																		X
ZZZZZZ	WY21MB2	1.00	09524																														
ZZZZZZ	WY21MB3	1.00	09565																														
ZZZZZZ	WY21GDUP	1.00	10011																														
ZZZZZZ	WY21G	1.00	10051																														
ZZZZZZ	WY21GSPK	1.00	10091																														
ZZZZZZ	WY21H	1.00	10131																														
ZZZZZZ	WY21I	1.00	10173																														
ZZZZZZ	WY21J	1.00	10213																														
ZZZZZZ	WY21MB2SPK	1.00	10253																														
ZZZZZZ	WY21MB3SPK	1.00	10293																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 7/25/2013

SDG: WY32 | RUNID: IP072571 | METHOD: ICP | END DATE: 7/25/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCV	CCV3	1.00	10333							X					X																		X
CCB	CCB3	1.00	10373							X					X																		X
S0	S0	1.00	10433							X					X																		X
ZZZZZZ	ZZZZZZ	1.00	10484																														
CCV	CCV4	1.00	10535							X					X																		X
CCB	CCB4	1.00	10580							X					X																		X
PBS	WY32MB1	2.00	11021							X					X																		X
ZZZZZZ	WY21K	1.00	11063																														
UP-CB-B8-20130626-D	WY32ADUP	2.00	11104																														
UP-CB-B8-20130626-	WY32A	2.00	11144																														
UP-CB-B8-20130626-S	WY32ASPK	2.00	11184																														
UP-MHF-165-2013062	WY32B	2.00	11225							X					X																		X
UP-CB-A6-20130626-	WY32C	2.00	11265							X					X																		X
LCSS	WY32MB1SPK	2.00	11305							X					X																		X
PBS	WY32MB1SPD	2.00	11345							X					X																		X
CCV	CCV5	1.00	11385							X					X																		X
CCB	CCB5	1.00	11430							X					X																		X
ZZZZZZ	WY21C	2.00	11474																														
ZZZZZZ	WY21B	20.00	11514																														
ZZZZZZ	WY21F	20.00	11554																														
UP-CB-B8-20130626-D	WY32ADUP	5.00	11594							X					X																		X
UP-CB-B8-20130626-	WY32A	5.00	12034							X					X																		X
UP-CB-B8-20130626-S	WY32ASPK	5.00	12074							X					X																		X
CCV	CCV6	1.00	12114							X					X																		X
CCB	CCB6	1.00	12155							X					X																		X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: NEXION 300D MS | START DATE: 7/29/2013

SDG: WY32 | RUNID: MS072911 | METHOD: PMS | END DATE: 7/29/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	13080		X		X			X		X		X	X								X	X	X	X				X			X
S1	S1	1.00	13120		X		X			X		X		X	X								X	X	X	X				X			X
S2	S2	1.00	13160		X		X			X		X		X	X								X	X	X	X				X			X
S3	S3	1.00	13200		X		X			X		X		X	X								X	X	X	X				X			X
S4	S4	1.00	13250		X		X			X		X		X	X								X	X	X	X				X			X
S5	S5	1.00	13300																														
ZZZZZZ	Rinse sampl	1.00	13360																														
ICV	MICV	1.00	13420		X		X			X		X		X	X								X	X	X	X				X			X
ICB	ICB	1.00	13490		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV1	1.00	13530		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB1	1.00	14000		X		X			X		X		X	X								X	X	X	X				X			X
CRI	MCRI	1.00	14040		X		X			X		X		X	X								X	X	X	X				X			X
ICSA	ICSAI	1.00	14080		X		X			X		X		X	X								X	X	X	X				X			X
ICSAB	ICSABI	1.00	14150		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	LR200	1.00	14220																														
ZZZZZZ	LR300	1.00	14290																														
ZZZZZZ	B1	1.00	14350																														
CCV	MCCV2	1.00	14410		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB2	1.00	14480		X		X			X		X		X	X								X	X	X	X				X			X
PBW	WY32MB2	2.00	14530		X		X			X		X		X	X								X	X	X	X				X			X
PBW	WY32MB3	2.00	14570		X		X			X		X		X	X								X	X	X	X				X			X
UP-CB-B8-20130626-	WY32E	2.00	15010		X		X			X		X		X	X								X	X	X	X				X			
UP-CB-B8-20130626-D	WY32DDUP	2.00	15060		X		X			X		X		X	X								X	X	X	X				X			
UP-CB-B8-20130626-	WY32D	2.00	15100		X		X			X		X		X	X								X	X	X	X				X			
UP-CB-B8-20130626-S	WY32DSPK	2.00	15140		X		X			X		X		X	X								X	X	X	X				X			
LCSW	WY32MB2SPK	2.00	15180		X		X			X		X		X	X								X	X	X	X				X			X
PBW	WY32MB2SPD	2.00	15220		X		X			X		X		X	X								X	X	X	X				X			X
LCSW	WY32MB3SPK	2.00	15260		X		X			X		X		X	X								X	X	X	X				X			X
PBW	WY32MB3SPD	2.00	15300		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV3	1.00	15360		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB3	1.00	15420		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	DI Check	1.00	15470																														
ZZZZZZ	ERA P197	10.00	15510																														
PBS	WY32MB1	20.00	15550		X		X					X		X									X	X	X	X				X			
UP-MHF-165-2013062	WY32B	20.00	15590		X		X					X		X									X	X	X	X				X			

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: NEXION 300D MS | START DATE: 7/29/2013

SDG: WY32 | RUNID: MS072911 | METHOD: PMS | END DATE: 7/29/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
UP-CB-A6-20130626-	WY32C	20.00	16040		X		X					X		X									X	X	X	X				X			
UP-CB-B8-20130626-D	WY32ADUP	20.00	16080		X		X					X		X									X	X	X	X				X			
UP-CB-B8-20130626-	WY32A	20.00	16120		X		X					X		X									X	X	X	X				X			
UP-CB-B8-20130626-S	WY32ASPK	20.00	16160		X		X					X		X									X	X	X	X				X			
LCSS	WY32MB1SPK	20.00	16200		X		X					X		X									X	X	X	X				X			
PBS	WY32MB1SPD	20.00	16240		X		X					X		X									X	X	X	X				X			
CCV	MCCV4	1.00	16290		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB4	1.00	16360		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	WY90MB	20.00	16400																														
UP-CB-B8-20130626-	WY32E	5.00	16450																														X
UP-CB-B8-20130626-D	WY32DDUP	5.00	16490																														X
UP-CB-B8-20130626-	WY32D	5.00	16530																														X
UP-CB-B8-20130626-S	WY32DSPK	5.00	16570																														X
ZZZZZZ	WY90A	20.00	17010																														
ZZZZZZ	WY90MBSPK	20.00	17050																														
CCV	MCCV5	1.00	17100		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB5	1.00	17170		X		X			X		X		X	X								X	X	X	X				X			X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 7/23/2013

SDG: WY32 | RUNID: HG072302 | METHOD: CVA | END DATE: 7/23/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	13022														X																
S0.1	S0.1	1.00	13040														X																
S0.5	S0.5	1.00	13054														X																
S1	S1	1.00	13071														X																
S2	S2	1.00	13085														X																
S5	S5	1.00	13103														X																
S10	S10	1.00	13121														X																
ICV	AICV	1.00	13165														X																
ICB	ICB	1.00	13183														X																
CCV	ACCV1	1.00	13201														X																
CCB	CCB1	1.00	13215														X																
CRA	CRA	1.00	13232														X																
ZZZZZZ	WX42MB1	1.00	13250																														
ZZZZZZ	WX42MB1SPK	1.00	13264																														
ZZZZZZ	WX42A	1.00	13281																														
ZZZZZZ	WX42ADUP	1.00	13295																														
ZZZZZZ	WX42ASPK	1.00	13313																														
ZZZZZZ	WX42B	1.00	13330																														
ZZZZZZ	WX42C	1.00	13344																														
ZZZZZZ	WX42D	1.00	13362																														
ZZZZZZ	WX42E	1.00	13380																														
CCV	ACCV2	1.00	13394														X																
CCB	CCB2	1.00	13412														X																
ZZZZZZ	WX42F	1.00	13425																														
ZZZZZZ	WX42G	1.00	13443																														
ZZZZZZ	WX42H	1.00	13460																														
ZZZZZZ	WX42I	1.00	13474																														
ZZZZZZ	WX42J	1.00	13492																														
ZZZZZZ	WX43A	1.00	13505																														
ZZZZZZ	WX43B	1.00	13523																														
ZZZZZZ	WX43C	1.00	13541																														
ZZZZZZ	WX43D	1.00	13554																														
ZZZZZZ	WX43E	1.00	13572																														
CCV	ACCV3	1.00	13590														X																
CCB	CCB3	1.00	14004														X																

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 7/23/2013

SDG: WY32 | RUNID: HG072302 | METHOD: CVA | END DATE: 7/23/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	WX43F	1.00	14022																														
ZZZZZZ	WX43G	1.00	14040																														
PBW	WY32MB1	1.00	14054														X																
LCSW	WY32MB1SPK	1.00	14071														X																
PBW	WY32MB1SPD	1.00	14085														X																
UP-CB-B8-20130626-	WY32A	1.00	14102														X																
UP-CB-B8-20130626-D	WY32ADUP	1.00	14120														X																
UP-CB-B8-20130626-S	WY32ASPK	1.00	14134														X																
UP-MHF-165-2013062	WY32B	1.00	14151														X																
UP-CB-A6-20130626-	WY32C	1.00	14165														X																
CCV	ACCV4	1.00	14183														X																
CCB	CCB4	1.00	14201														X																

Mercury Analysis
Report and Summary QC Forms

ARI Job ID: WY32, WY33

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WY33

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
UP-CB-B8-20130626-	WY33A	13-15398	
PBW	WY33MB1	13-15398	
LCSW	WY33MB1SPD	13-15398	
LCSW	WY33MB1SPK	13-15398	
UP-CB-B8-20130626-	WY33B	13-15399	
PBW	WY33MB2	13-15399	
LCSW	WY33MB2SPD	13-15399	
LCSW	WY33MB2SPK	13-15399	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: Jay Kuhn Name: Jay Kuhn

Date: 7/25/13 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
Total Mercury by Method SW7470A

Data Release Authorized:
Reported: 07/24/13
Date Received: 06/26/13
Page 1 of 1

QC Report No: WY33-SAIC
Project: NPDES Sampling Support
209977

Client/ ARI ID	Date Sampled	Matrix	Prep Date Anal Date	RL	Result
UP-CB-B8-20130626-W WY33A 13-15398	06/26/13	Water	07/23/13 07/24/13	**20.0**	**43.3**
MB-072313 Method Blank	NA	Water	07/23/13 07/24/13	20.0	20.0 U

Reported in ng/L

RL-Analytical reporting limit
U-Undetected at reported detection limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: WY33LCS
LIMS ID: 13-15398
Matrix: Water
Data Release Authorized:
Reported: 07/24/13

QC Report No: WY33-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE/BLANK SPIKE DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Dup Found	Spike Added	Spike Recovery	Spike Dup Recovery	RPD	Q
Mercury	7470A	206	188	200	103%	94.0%	9.1%	

Reported in ng/L

N-Control limit not met
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
Dissolved Mercury by Method SW7470A

Data Release Authorized:
Reported: 07/24/13
Date Received: 06/26/13
Page 1 of 1

QC Report No238: WY33-SAIC
Project: NPDES Sampling Support
209977

Client/ ARI ID	Date Sampled	Matrix	Prep Date Anal Date	RL	Result
UP-CB-B8-20130626-W WY33B 13-15399	06/26/13	Water	07/23/13 07/24/13	20.0	20.0 U
MB-072313 Method Blank	NA	Water	07/23/13 07/24/13	20.0	20.0 U

Reported in ng/L

RL-Analytical reporting limit
U-Undetected at reported detection limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS **Sample ID: LAB CONTROL**

Lab Sample ID: WY33LCS
LIMS ID: 13-15399
Matrix: Water
Data Release Authorized:
Reported: 07/24/13

QC Report No: WY33-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE/BLANK SPIKE DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Dup Found	Spike Added	Spike Recovery	Spike Dup Recovery	RPD	Q
Mercury	7470A	190	194	200	95.0%	97.0%	2.1%	

Reported in ng/L

N-Control limit not met
Control Limits: 80-120%

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS:ng/L

SDG: WY33

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Mercury	HG	CVL	HG072401	500.0	479.00	**95.8**	500.0	502.00	**100.4**	517.00	**103.4**						

Control Limits: Mercury 80-120; Other Metals 90-110

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ng/L

SDG: WY33

ANALYTE	EL	M	RUN	CRA/I	TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Mercury	HG	CVL	HG072401		20.0	16.90	**84.5**										

Control Limits: no control limits have been established by the EPA at this time.

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WY33

UNITS:ng/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Mercury	HG	CVL	HG072401	25.0	20.0	20.0	U	20.0	U	20.0	U						

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WY33 UNITS: ng/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ng/L)	ICP LR DATE
Mercury	HG	CVL	CETAC MERCURY	253.70		25	20.0	4/1/2012		

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WY33

ANALYSIS METHOD: CVL

ARI PREP CODE: TLM

PREPDATE: 7/23/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
UP-CB-B8-20130626-	WY33A	0.000	20.0	20.0
UP-CB-B8-20130626-	WY33B	0.000	20.0	20.0
PBW	WY33MB1	0.000	20.0	20.0
LCSW	WY33MB1SPD	0.000	20.0	20.0
LCSW	WY33MB1SPK	0.000	20.0	20.0
PBW	WY33MB2	0.000	20.0	20.0
LCSW	WY33MB2SPD	0.000	20.0	20.0
LCSW	WY33MB2SPK	0.000	20.0	20.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 7/24/2013

SDG: WY33 | RUNID: HG072401 | METHOD: CVL | END DATE: 7/24/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	08144														X																
S20	S20	1.00	08172														X																
S50	S50	1.00	08200														X																
S100	S100	1.00	08225														X																
S200	S200	1.00	08253														X																
S400	S400	1.00	08281														X																
S1000	S1000	1.00	08310														X																
ICV	AICV	1.00	08350														X																
ICB	ICB	1.00	08374														X																
CCV	ACCV1	1.00	08403														X																
CCB	CCB1	1.00	08431														X																
CRA	CRA	1.00	08455														X																
PBW	WY33MB1	1.00	08483														X																
LCSW	WY33MB1SPK	1.00	08512														X																
PBW	WY33MB1SPD	1.00	08540														X																
UP-CB-B8-20130626-	WY33A	1.00	08564														X																
PBW	WY33MB2	1.00	08592														X																
LCSW	WY33MB2SPK	1.00	09020														X																
PBW	WY33MB2SPD	1.00	09044														X																
UP-CB-B8-20130626-	WY33B	1.00	09073														X																
ZZZZZZ	WX48MB4	1.00	09101																														
CCV	ACCV2	1.00	09125														X																
CCB	CCB2	1.00	09154														X																

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: WY32, WY33

SAMPLE RESULTS-CONVENTIONALS
WY32-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 08/05/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Client ID: UP-CB-B8-20130626-S
ARI ID: 13-15393 WY32A

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/13 072413#1	SM2540B	Percent	0.01	67.64
Total Organic Carbon	07/30/13 073013#1	Plumb,1981	Percent	0.200	9.47

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
WY32-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 08/05/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Client ID: UP-MHF-165-20130626-S
ARI ID: 13-15394 WY32B

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/13 072413#1	SM2540B	Percent	0.01	79.36
Total Organic Carbon	07/30/13 073013#1	Plumb,1981	Percent	0.200	10.0

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
WY32-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 08/05/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Client ID: UP-CB-A6-20130626-S
ARI ID: 13-15395 WY32C

Analyte	Date	Method	Units	RL	Sample
Total Solids	07/24/13 072413#1	SM2540B	Percent	0.01	70.48
Total Organic Carbon	07/30/13 073013#1	Plumb,1981	Percent	0.192	11.3

RL Analytical reporting limit
U Undetected at reported detection limit

MS/MSD RESULTS-CONVENTIONALS
WY32-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 08/05/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Analyte	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: WY32A Client ID: UP-CB-B8-20130626-S						
Total Organic Carbon	07/30/13	Percent	9.47	19.7	11.5	88.7%

REPLICATE RESULTS-CONVENTIONALS
WY32-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 08/05/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: WY32A Client ID: UP-CB-B8-20130626-S					
Total Solids	07/24/13	Percent	67.64	67.56 66.71	0.8%
Total Organic Carbon	07/30/13	Percent	9.47	8.96 10.1	6.0%

LAB CONTROL RESULTS-CONVENTIONALS
WY32-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 08/05/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Total Organic Carbon Plumb,1981	ICVL	07/30/13	Percent	0.092	0.100	92.0%

METHOD BLANK RESULTS-CONVENTIONALS
WY32-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 08/05/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	Blank	QC ID
Total Solids	07/24/13	Percent	< 0.01 U	ICB
Total Organic Carbon	07/30/13	Percent	< 0.020 U	ICB

STANDARD REFERENCE RESULTS-CONVENTIONALS
WY32-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 08/05/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Date	Units	SRM	True Value	Recovery
Total Organic Carbon NIST 1941B	07/30/13	Percent	2.91	2.99	97.3%

SAMPLE RESULTS-CONVENTIONALS
WY32-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/05/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Client ID: UP-CB-B8-20130626-W
ARI ID: 13-15396 WY32D

Analyte	Date Batch	Method	Units	RL	Sample
Conductivity	07/23/13 072313#1	EPA 120.1	umhos/cm	1.00	528
Total Organic Carbon	07/25/13 072513#1	SM5310B	mg/L	3.00	65.7
Dissolved Organic Carbon	07/24/13 072413#1	SM5310B	mg/L	1.50	64.8

RL Analytical reporting limit
U Undetected at reported detection limit

MS/MSD RESULTS-CONVENTIONALS
WY32-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/05/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: WY32D Client ID: UP-CB-B8-20130626-W							
Total Organic Carbon	SM5310B	07/25/13	mg/L	65.7	112	50.0	92.6%
Dissolved Organic Carbon	SM5310B	07/24/13	mg/L	64.8	85.2	20.0	102.0%

REPLICATE RESULTS-CONVENTIONALS
WY32-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/05/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/26/13
Date Received: 06/26/13

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: WY32D Client ID: UP-CB-B8-20130626-W						
Conductivity	EPA 120.1	07/23/13	umhos/cm	528	532	0.8%
Total Organic Carbon	SM5310B	07/25/13	mg/L	65.7	65.6	0.2%
Dissolved Organic Carbo	SM5310B	07/24/13	mg/L	64.8	66.0	1.8%

METHOD BLANK RESULTS-CONVENTIONALS
WY32-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/05/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Conductivity	EPA 120.1	07/23/13	umhos/cm	< 1.00 U	
Total Organic Carbon	SM5310B	07/25/13	mg/L	< 1.50 U	
Dissolved Organic Carbon	SM5310B	07/24/13	mg/L	< 1.50 U	

STANDARD REFERENCE RESULTS-CONVENTIONALS
WY32-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/05/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
Conductivity Ricca #4110724	EPA 120.1	07/23/13	umhos/cm	1,010	1,000	101.0%
Total Organic Carbon ERA #0408-13-02	SM5310B	07/25/13	mg/L	21.6	20.0	108.0%
Dissolved Organic Carbon ERA #0408-13-02	SM5310B	07/24/13	mg/L	21.7	20.0	108.5%

Geotechnical Analysis
Report and Summary QC Forms

ARI Job ID: WY32, WY33

SAIC
NPDES Sampling Support
209977

Modified PSEP - Sieve/Sedigraph Method
Apparent Grain Size Distribution Summary
Percent Finer Than Indicated Size

Sample No.	Gravel			Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt				Clay	
Phi Size	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
Sieve Size (microns)	3/8"	#4 (4750)	#10 (2000)	#18 (1000)	#35 (500)	#60 (250)	#120 (125)	#230 (63)	31.00	15.60	7.80	3.90	2.00	1.00
WT81 A	100.0	100.0	99.4	98.8	98.3	97.2	95.7	94.2	93.4	88.0	55.1	34.5	26.6	23.8
	100.0	100.0	99.9	99.6	99.1	98.0	96.4	94.9	94.8	88.8	52.9	35.6	27.9	23.4
	100.0	100.0	99.8	99.2	98.5	97.2	95.7	94.2	93.2	86.5	52.6	34.3	26.9	25.4
UP-CB-B8-20130626-S	100.0	100.0	95.7	87.3	76.8	63.4	50.5	41.0	26.7	10.6	6.9	4.7	2.2	1.4
UP-MHF-165-20130626-S	100.0	97.1	83.5	57.6	33.3	21.0	17.5	15.2	11.7	6.0	3.9	1.8	1.2	1.3
UP-CB-A6-20130626-S	100.0	100.0	94.7	84.7	73.3	58.0	43.8	34.4	26.3	14.3	9.9	5.8	3.1	2.8

Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

WY32

SAIC
NPDES Sampling Support
209977

Modified PSEP - Sieve/Sedigraph Method
Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	< -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	> 10	> 4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62 5-31 0	31 0-15 6	15 6-7 8	7 8-3 9	3 9-2 0	2 0-1 0	<1 0	<230 (<62)
WT81 A	0.6	0.6	0.6	1.1	1.5	1.4	0.8	5.4	32.9	20.6	7.9	2.8	23.8	94.2
	0.1	0.3	0.5	1.1	1.6	1.5	0.1	6.0	35.9	17.3	7.7	4.5	23.4	94.9
	0.2	0.6	0.7	1.3	1.6	1.5	1.0	6.7	33.9	18.3	7.4	1.5	25.4	94.2
UP-CB-B8-20130626-S	4.3	8.4	10.5	13.4	12.9	9.5	14.3	16.1	3.7	2.2	2.5	0.8	1.4	41.0
UP-MHF-165-20130626-S	16.5	25.9	24.2	12.3	3.5	2.3	3.5	5.7	2.1	2.1	0.6	-0.1	1.3	15.2
UP-CB-A6-20130626-S	5.3	10.0	11.4	15.3	14.2	9.4	8.1	12.0	4.4	4.1	2.7	0.3	2.8	34.4

Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

WY32

QA SUMMARY

Client:	SAIC	Client Project:	NPDES Sampling Support
ARI Trip Sample ID:	WT81 A	Client Project No.:	209977
		Batch No :	WY32-1

Relative Standard Deviation, By Phi Size

Sample ID	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
WT81 A	100 0	100 0	99.4	98.8	98.3	97.2	95.7	94 2	93.4	88 0	55 1	34 5	26.6	23.8
	100.0	100.0	99.9	99 6	99.1	98 0	96.4	94 9	94 8	88 8	52.9	35.6	27.9	23.4
	100 0	100 0	99.8	99 2	98.5	97.2	95.7	94.2	93.2	86.5	52.6	34.3	26.9	25.4
AVE	100.0	100 0	99.7	99.2	98.6	97.5	95.9	94 4	93.8	87.8	53 5	34 8	27.1	24.2
STDEV	0.0	0 0	0.3	0.4	0.4	0.4	0.4	0.4	0.9	1.2	1.4	0.7	0 7	1.1
%RSD	0.0	0.0	0 3	0 4	0 4	0.5	0 4	0 5	0 9	1.3	2 5	2.0	2.5	4 4

The Triplicate Applies To The Following Samples

Client ID	Date Sampled	Date Extracted	Date Complete	Data Qualifier	Sedigraph Fine Portion Dry Mass (g)
WT81 A	6/12/2013	6/27/2013	7/1/2013		6.8
	6/12/2013	6/27/2013	7/1/2013		7.2
	6/12/2013	6/27/2013	7/1/2013		7.8
UP-CB-B8-20130626-S	6/26/2013	7/24/2013	7/29/2013		3.6
UP-MHF-165-20130626-S	6/26/2013	7/24/2013	7/29/2013		1.9
UP-CB-A6-20130626-S	6/26/2013	7/24/2013	7/29/2013		3.5

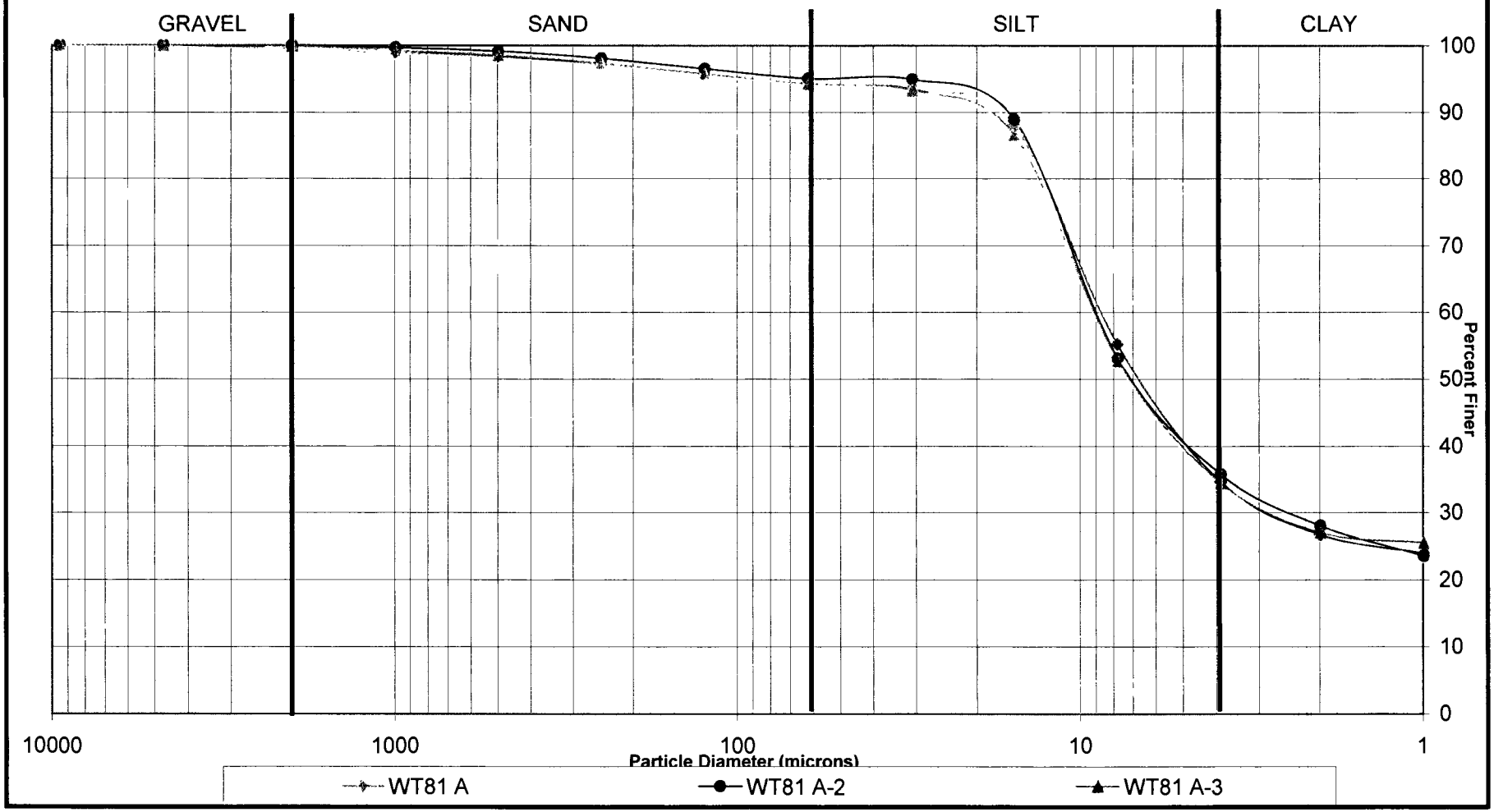
* ARI Internal QA limits = 95-105%

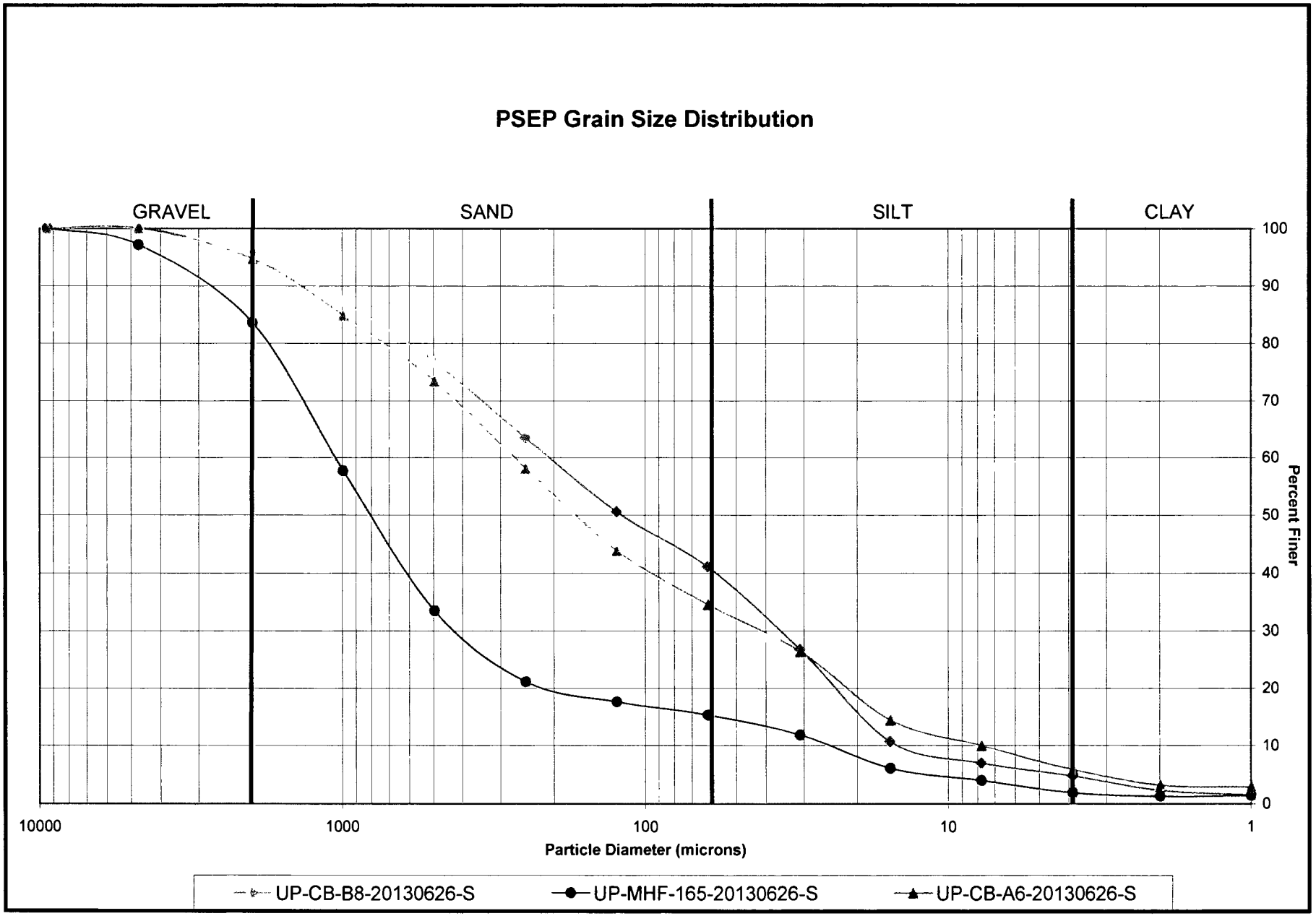
Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

PSEP Grain Size Distribution

Triplicate Sample Plot




PSEP Grain Size Distribution
GRAVEL
SAND
SILT
CLAY
100
90
80
70
60
50
40
30
20
10
0
Percent Finer
10000
1000
100
10
1
Particle Diameter (microns)
UP-CB-B8-20130626-S
UP-MHF-165-20130626-S
UP-CB-A6-20130626-S

Total Solids

ARI Job ID: WY32, WY33

Extractions Total Solids-extts
Data By: Nhon Luu
Created: 7/24/13

Worklist: 3103
Analyst: RVR
Comments:

Oven ID:_____

Balance ID:_____

Samples In: Date:_____ Time:_____ Temp:_____ Analyst:_____

Samples Out: Date:_____ Time:_____ Temp:_____ Analyst:_____

	ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	WY32A 13-15393 UP-CB-B8-20130626-S	1.18	12.82	9.21	69.0	NR
2.	WY32B 13-15394 UP-MHF-165-20130626-S	1.18	12.62	10.90	85.0	NR
3.	WY32C 13-15395 UP-CB-A6-20130626-S	1.16	12.61	9.20	70.2	NR

Extractions Total Solids-extts
Data By: Nhon Luu
Created: 7/24/13

Worklist: 3103
Analyst: NL
Comments:

Oven ID: Ø15

Balance ID: B14646614

Samples In: Date: 07/24/13 Time: 1225 Temp: 100 Analyst: NL

Samples Out: Date: 07/25/13 Time: 07:30 Temp: 102 Analyst: RR

	ARI ID / CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	WY32A 13-15393 UP-CB-B8-20130626-S	1.18	12.82	9.21		NR
2.	WY32B 13-15394 UP-MHF-165-20130626-S	1.18	12.62	10.90		NR
3.	WY32C 13-15395 UP-CB-A6-20130626-S	1.16	12.61	9.20		NR

Solids Data Entry Report
Date: 07/24/13

Checked by: CB Date: 2/24/13
Data Analyst: DM

Solids Determination performed on 07/23/13 by DM

JOB	SAMPLE	CLIENTID	TAREWEIGHT	SAMPDISH	DRYWEIGHT	SOLIDS
WY32	A	UP-CB-B8-20130626-S	0.992	10.767	7.769	69.33
WY32	B	UP-MHF-165-20130626	0.980	10.224	8.390	80.16
WY32	C	UP-CB-A6-20130626-S	1.019	10.559	7.805	71.13

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Total Solids Bench Sheet

Laboratory Section Metals

Oven Identification: 07 **Balance ID:** 068755

Samples in Oven: Date: 7-23-13 Time: 0950 Temp: 103°C Analyst: DM

Removed from Oven: Date: 7-24-13 Time: 0700 Temp: 104°C Analyst: DM

ARI Sample ID	Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs[1]
WY32 A	0.992	10.767	7.769	–	✓
" B	0.980	10.224	8.390	–	✓
" C	1.019	10.559	7.805	–	✓
		7-23-13	DM		

1) Place a check mark in this column if samples have dried > 12 but < 24 hours. When samples have been at 104°C < 12 hours, constant weight must be verified as described in SOP 10023S. Use a 2nd bench sheet for additional weightings.

WY32 : 0825

Total Solids Targets-Extractions
Data By: Jim Hawk
Created: 7/25/13

Worklist: 3386
Analyst: JBH
Comments:

	ARI ID	Target Dry Wt (g)	Total Solids	Min Wet Wt (g)
1.	WY32A	10.00	69.0	14.49

Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WY32, WY33

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Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8270D) BAN/SIM SVOA PSDDA–Soil/Sediment Microwave (3546) (SOP # 3304S)

Preparation Test BAN/SIM SVOA PSDDA # 9 (BANSBANSDMP)

PSDDA (5-20ppb)

ARI Job No(s) WY32 Page 1 of 1 Batch set up by: JH

Bottle #	Extraction Requirements	Weight Extracted (eq. to 10g dry wt)	(REQ) GPC (1:1) 1 or 2	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	MBS WY32	10.00g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	CT 7/25/13 Analyst/Date
	SBS	10.00g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave 1 2 3 CT 7/25/13 Analyst/Date
	~~SBS Dup~~	~~10.00g~~	~~(1:1) Y/N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	YL/SR KD 80-85°C 1 2 3 4 5 6 7/29/13 Analyst/Date
	QLS WY32	10.00g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	
	QLS (SIM)	10.00g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	TurboVap 1 2 3
5	A	7.04	(1:1) Y/N	1mL	1mL	see Analyst Notes	CSZ 7/30/13 Analyst/Date
5	Ams	7.04	(1:1) Y/N	1mL	1mL	↓	GPC Prep Filter (1:1)
5	Amsl	7.01	(1:1) Y/N	1mL	1mL		CSZ 7/30/13 Analyst/Date
84	B	12.05	(1:1) Y/N	1mL	1mL		
94	C	6.04	(1:1) Y/N	1mL	1mL	see Analyst Notes	Post GPC KD 80-85°C 1 2 3 4 5 6 SR RS 7/31/13 Analyst/Date
			(1:1) Y/N	1mL	1mL		
			(1:1) Y/N	1mL	1mL		
			(1:1) Y/N	1mL	1mL		TurboVap 1 2 3
Analyst/Date CT 7/25/13			CSZ 7/30/13	CSZ 7/31/13	CSZ 7/31/13	Reviewed by/Date CSZ 7/31/13	CSZ 7/31/13 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (B###661)	100/150µg/mL	50µL	6/28/14	CT	AC
Full List Spike (Freezer)	7 (B###695)	100µg/mL	50µL	12/18/13	CT	AC
Base Spike	56(B###696)	200µg/mL	50µL	12/18/13	CT	AC
Acid Spike	38(B###697)	100/200µg/mL	50µL	12/18/13	CT	AC
QLS Spike (14 in Freezer)	14(B###538)	10/100µg/mL	20µL	1/31/14	CT	AC
SIM QLS Spike (Freezer)	25(B###547)	1µg/mL	50µL	1/31/14	CT	AC

Extraction Time: 11:42 Balance ID: B139298002

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 DCM/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-rehomogenize while hot then let cool 15 min in cold water. Re-homogenize while cool. 7. Decant 1:1 DCM/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using 80:20 DCM/ACE (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. KD (small ~~on large~~ drying column with pre-deactivated glasswool-Blanks=5g sulfate)) to 5mL at 80- 85°C. 12. GPC Req. 13. (After GPC): KD at 80-85°. 14. TurboVap. 15. Vial in DCM.

A. Need Total Solids Y (N) B. Archive/Freeze Y (N)

WY32 : 88266

Reagent and Solutions Identification

(8270D) BAN/SIM SVOA PSDDA–Soil/ Sediment
Microwave (3546) (SOP # 3304S)

ARI Job No(s)_____

(8270D) BAN/SIM SVOA PSDDA Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station: Pre-Deactivated Sodium Sulfate: (H157 6/3/13) Anhydrous Sodium Sulfate: (9185 7/5/13) 1:1 Methylene Chloride/Acetone: (B004156) 80:20 Methylene Chloride/Acetone: (B004130) Methylene Chloride: (B004975) Pre-Deactivated Glasswool: (244 6/18/13)	Microwave CT 7/25/13
	Pre-GPC, KD YL/SR 7/29/13
Pre-GPC KD Station: Pre-Deactivated Glasswool: (H204) Anhydrous Sodium Sulfate: (~~8271 7/8/13~~ 7/24/13 8271 7/18/13 Methylene Chloride: (B004974)	GPC Filter Prep CSZ 7/30/13
GPC Filter Prep: Methylene Chloride: (B000974)	GPC CSZ 7/30/13
GPC Station: Acetone: (B000946) Methylene Chloride: (B000974)	Post GPC KD SR/RR 7/31/13
Post GPC KD Station: Methylene Chloride: (B004975)	Vialing
Vialing Station: CSZ 7/31/13 Methylene Chloride: (~~B000~~ B001095) Hexane: (B001147)	CSZ 7/31/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WY32 Client ID: SAIC

Parameter: BAN/SIMSVOA Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☒ Standing Water Decanted (Not shared)= B, C	M 7/24/13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☒ Organics (Leaves/sticks/grass)= ~~M 7/24/13~~ ~~A~~ ~~B~~ ~~C~~ A M 7/24/13	Φ 7/24/13 M
☒ Oily, obvious fuel/sulfur odors= A - C has real light fuel odor smells like a	M 7/24/13
☒ Other (Details)= Samples ID Check this Job WY32, but Sample B, C has no client Label ID on the Jar and verified the Lims sheet with our Label matched.	M 7/24/13
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions). (Centrifuge#1 used for all Centrifugations) GCMS analyst, reduced extraction weights for Samples A and C, based on sample pre-screens.	JH 7/25/13

Semivolatile Raw Data
Initial Calibration

ARI Job ID: WY32, WY33

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS,SVOA Initial Calibration Notes

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date(s): 07/30/13 Internal Standard ID B000929 Expiration 6/6/14

DFTPP Tune Meets Criteria?	YES / NO	Minimum Response Factors Met/	YES / NO
DDT Breakdown <20%?	YES / NO	ICV Exceeding ±20%?	YES / NO
Peak Tailing Factor ≤2?	YES / NO	ICV Exceeding ±30%?	YES / NO
ICal Meets %RSD & r^2 Criteria?	YES / NO	Linear Fits Used?	YES / NO
Q flag applied?	YES / NO	Quadratic Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Calibration Points Dropped?	YES / NO
Spectral Library Updated?	YES / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Supelco	B000112	10/15/13	Ultra	2055-1	12/05/13
	2004-2	9/25/14		2054-1	12/13/13
	B000931	2/20/14		2053-2	8/13/13
	B000943	7/3/14			
	B000676	10/14/13			

Detail problems, corrective actions and/or other pertinent information below:

- 2,4 Dinitrophenol, Carbazol, Benzidine - quadratic fit.
- low part of the curve dropped for Benzoic acid, 4-Nitrophenol 2,4 Dinitrophenol, Benzidine

Analyst: YR **Date:** 8/8/13

Reviewer: VD **Date:** 8/12/13

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 07/30/13 Analysis: 8270 / SIM 8270 Analyst: YZ

GC Program: 8270_2 Column No: 268782 Column Type: 20m ms1

Instrument Tune (.U or .CT.): 1302284 EM Voltage: 1929

Calibration File: DF 0730 Curve Date: 7/30/13 Injection Vol.: 1ul

DF 0730

IS/SS	Ical/Ccal	LCS/ICV
B928	B1121 B676	
	B943 8270-2	
	B931.	

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130730.b

	Time	Filename	LabID	ClientId	DF											
1	1139	df0730.d	DFTPP	DFTPP	1	NO ISTDS FOUND										
2	1154	ic0730a.d	IC0726A		1	9.32	123587	11.99	446161	15.89	267600	19.19	460929	24.58	439520	27.17	451599	25.68	593075
3	1232	ic0730b.d	IC0730B		1	9.33	106862	11.99	378798	15.90	236501	19.19	412257	24.59	386460	27.18	408910	25.69	571564
4	1311	ic0730c.d	IC0730C		1	9.32	122096	11.99	442732	15.89	262249	19.18	449452	24.58	437006	27.17	437657	25.68	531885
5	1349	ic0730d.d	IC0730D		1	9.32	122254	11.99	443646	15.89	262295	19.19	454721	24.58	434562	27.17	437624	25.68	537223
6	1427	ic0730e.d	IC0730E		1	9.33	107846	11.99	397562	15.90	250062	19.19	441107	24.59	421826	27.18	435911	25.69	595963
7	1543	ic0730g.d	IC0730G		1	9.32	116891	11.99	418876	15.89	257669	19.19	439102	24.58	426854	27.17	440779	25.69	559964
8	1659	ic0730i.d	IC0730I		1	9.32	120932	11.99	441904	15.89	265742	19.19	462057	24.58	451362	27.18	448689	25.69	536669
9	1827	cc0730.d	CC0730		1	9.33	114136	11.99	407683	15.90	246521	19.19	415765	24.60	401446	27.20	416125	25.70	534823
10	1738	icv0730.d	ICV0730		1	9.32	126392	11.99	443133	15.90	269002	19.19	461406	24.59	433195	27.19	451738	25.69	581378
11	1811	df0730a.d	DFTPP	DFTPP	1	NO ISTDS FOUND										
12	1827	cc0730.d	CC0730		1	9.33	114136	11.99	407683	15.90	246521	19.19	415765	24.60	401446	27.20	416125	25.70	534823
13	1905	wx64mb.d	WX64MBS1	WX64MBS1	1	9.33	122621	11.99	458878	15.90	271755	19.19	464083	24.60	453456	27.20	410590	25.70	562062
14	1943	wx64mb.d	WX64LCSS1	WX64LCSS1	1	9.32	107995	11.99	400909	15.91	239167	19.19	409403	24.60	389786	27.20	350840	25.70	505499
15	2021	wx64qls.d	WX64QLS		1	9.33	104962	11.99	398715	15.90	235257	19.20	400127	24.60	378815	27.20	328043	25.71	477388
16	2059	wx64a.d	WX64A	CS-071113<25	15	9.33	109957	11.99	411163	15.91	234801	19.20	378857	24.60	325796	27.22	362632	25.72	469300
17	2137	wx64b.d	WX64B	ML-071113<25	15	9.33	120226	12.00	453509	15.91	257347	19.20	412198	24.61	350943	27.23	380743	25.72	496873
18	2215	wx64c.d	WX64C	FBS-071113<2	15	9.32	110479	12.00	416916	15.91	243463	19.20	388631	24.61	324524	27.23	353536	25.72	461215
19	2253	wx14mb d	WX14MBS1	WX14MBS1	1	9.33	115989	11.99	447733	15.91	261199	19.21	432274	24.60	347286	27.22	364988	25.72	489839
20	2331	wx14mb.d	WX14LCSS1	WX14LCSS1	1	9.32	109669	12.00	399514	15.92	245337	19.21	405854	24.61	361668	27.22	366745	25.72	490565
21	0009	wx14sbd.d	WX14LCSDS1	WX14LCSDS1	1	9.32	107892	12.00	400107	15.92	242318	19.21	412638	24.61	376428	27.22	374131	25.72	522076
22	0046	wx14a.d	WX14A	EX-10-14	1	9.33	111448	12.00	434968	15.92	256813	19.21	433234	24.61	398342	27.22	376151	25.72	532594
23	0124	wx28a.d	WX28A	CS-071113	3	9.33	103289	12 00	388762	15.92	226282	19.21	357131	24.63	329933	27.27	350195	25.75	456738
24	0202	wx28b.d	WX28B	ML-071113	3	9.33	109674	12.01	416725	15.92	231313	19.22	370387	24.65	338846	27.29	364283	25.76	473495
25	0239	wx28c.d	WX28C	FBS-071113	3	9.33	93969	12.01	362532	15.92	206172	19.22	323171	24.63	294990	27.26	309772	25.74	412041

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In Element

YZ 8/2/13

Report Date : 01-Aug-2013 15:40

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130730.b/ABN.m
Batch File: /chem1/nt10.i/20130730.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0730a	ic0730b	ic0730c	ic0730d	ic0730e	ic0730g	ic0730i
INJ.DATE:	30-JUL-2013	30-JUL-2013	30-JUL-2013	30-JUL-2013	30-JUL-2013	30-JUL-2013	30-JUL-2013
INJ.TIME:	11:54	12:32	13:11	13:49	14:27	15:43	16:59

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.953	6.968	6.952	6.952	6.960	6.952	6.952	6.953	3.953-9.953	6.956	0.006
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.785	15.785-21.785	+++++	+++++
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.645	5.645-11.645	+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.455	14.455-20.455	+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.696	17.696-23.696	+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.219	16.219-22.219	+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.949	19.949-25.949	+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.195	16.195-22.195	+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.503	17.503-23.503	+++++	+++++
177 p-Benzoquinone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.827	4.827-10.827	+++++	+++++
168 Pentachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.842	12.842-18.842	+++++	+++++
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.212	44.212-50.212	+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.746	44.746-50.746	+++++	+++++
147 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.216	45.216-51.216	+++++	+++++

Reviewer 1 _____ Date: 8/1/13
Reviewer 2 _____ Date: 8/2/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130730.b/ABN.m
Batch File: /chem1/nt10.i/20130730.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
148 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.281	44.281-50.281	+++++	+++++
149 TCMX	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.387	40.387-46.387	+++++	+++++
150 DCBP	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.989	47.989-53.989	+++++	+++++
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	67.733	64.733-70.733	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.067	62.067-68.067	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.917	46.917-52.917	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.383	13.383-19.383	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.317	36.317-42.317	+++++	+++++
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.445	0.000-5.445	+++++	+++++
* 134 Di-n-octylphthalate-d4	25.679	25.687	25.679	25.679	25.687	25.687	25.687	25.679	22.679-28.679	25.684	0.004
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.571	12.571-18.571	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.450	62.450-68.450	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	64.400	61.400-67.400	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	62.100	59.100-65.100	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.912	51.912-57.912	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.212	51.212-57.212	+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	57.650	54.650-60.650	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.750	53.750-59.750	+++++	+++++
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.447	8.447-14.447	+++++	+++++
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.166	49.166-55.166	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130730.b/ABN.m
Batch File: /chem1/nt10.i/20130730.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.617	47.617-53.617	+++++	+++++
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.252	7.252-13.252	+++++	+++++
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.467	40.467-46.467	+++++	+++++
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.697	0.000-5.697	+++++	+++++
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.500	51.500-57.500	+++++	+++++
120 2,3,4,6-Tetrachlorophe	16.690	16.706	16.690	16.690	16.698	16.690	16.698	16.690	13.690-19.690	16.695	0.006
178 2-Benzyl-4-Chloropheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.963	15.963-21.963	+++++	+++++
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.069	44.069-50.069	+++++	+++++
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.215	18.215-24.215	+++++	+++++
117 Butyl Diphenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.761	13.761-19.761	+++++	+++++
116 Dibutyl Phenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.747	15.747-21.747	+++++	+++++
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.923	13.923-19.923	+++++	+++++
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.950	45.950-51.950	+++++	+++++
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.341	11.341-17.341	+++++	+++++
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.085	11.085-17.085	+++++	+++++
111 Azobenzene (1,2-DP-Hyd	17.448	17.463	17.447	17.448	17.455	17.447	17.447	17.448	14.448-20.448	17.451	0.006
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.324	14.324-20.324	+++++	+++++
109 3,4,5-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.115	12.115-18.115	+++++	+++++
181 3,4,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.270	12.270-18.270	+++++	+++++
108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.519	13.519-19.519	+++++	+++++
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.019	10.019-16.019	+++++	+++++
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.095	11.095-17.095	+++++	+++++
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.118	11.118-17.118	+++++	+++++
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.572	8.572-14.572	+++++	+++++

Report Date : 01-Aug-2013 15:40

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130730.b/ABN.m
Batch File: /chem1/nt10.i/20130730.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.243	6.243-12.243	+++++	+++++
105 1-methylnaphthalene	13.782	13.789	13.781	13.782	13.781	13.781	13.781	13.782	10.782-16.782	13.782	0.003
151 1,2,4,5-Tetrachloroben	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.499	8.499-14.499	+++++	+++++
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.943	27.943-33.943	+++++	+++++
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.642	24.642-30.642	+++++	+++++
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.953	22.953-28.953	+++++	+++++
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.750	24.750-30.750	+++++	+++++
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.464	23.464-29.464	+++++	+++++
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.099	24.099-30.099	+++++	+++++
158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.513	21.513-27.513	+++++	+++++
159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.132	22.132-28.132	+++++	+++++
160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.528	16.528-22.528	+++++	+++++
161 1,2,3-Trichloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	36.246	33.246-39.246	+++++	+++++
162 1,2,3,4-Tetrachloronap	+++++	+++++	+++++	+++++	+++++	+++++	+++++	37.506	34.506-40.506	+++++	+++++
163 1,2,3,5,8-Pentachloron	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.893	35.893-41.893	+++++	+++++
164 1,2,3,4,6,7-Hexachloro	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.681	36.681-42.681	+++++	+++++
165 1,2,3,4,5,6,7-Heptachl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	41.123	38.123-44.123	+++++	+++++
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.253	39.253-45.253	+++++	+++++
167 2,2',4,4',5-Pentabromo	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.033	39.033-45.033	+++++	+++++
$ 2 Phenol-d5	8.652	8.675	8.644	8.645	8.660	8.644	8.644	8.652	5.652-11.652	8.652	0.012
3 Phenol	8.676	8.699	8.667	8.668	8.683	8.675	8.668	8.676	5.676-11.676	8.676	0.011
4 Bis(2-Chloroethyl)ethe	8.845	8.861	8.845	8.845	8.853	8.845	8.845	8.845	5.845-11.845	8.849	0.006
$ 5 2-Chlorophenol-d4	8.930	8.946	8.930	8.930	8.938	8.930	8.930	8.930	5.930-11.930	8.934	0.006

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130730.b/ABN.m
Batch File: /chem1/nt10.i/20130730.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	6 2-Chlorophenol	8.961	8.977	8.961	8.961	8.961	8.961	8.961	8.961	5.961-11.961	8.963	0.006
	7 1,3-Dichlorobenzene	9.248	9.255	9.247	9.248	9.248	9.247	9.247	9.248	6.248-12.248	9.249	0.003
*	8 1,4-Dichlorobenzene-d4	9.317	9.325	9.317	9.317	9.325	9.317	9.317	9.317	6.317-12.317	9.320	0.004
	9 1,4-Dichlorobenzene	9.348	9.356	9.356	9.356	9.356	9.348	9.356	9.348	6.348-12.348	9.354	0.004
$	10 1,2-Dichlorobenzene-d4	9.705	9.713	9.705	9.705	9.705	9.705	9.705	9.705	6.705-12.705	9.706	0.003
	11 Benzyl alcohol	9.620	9.635	9.620	9.620	9.628	9.620	9.620	9.620	6.620-12.620	9.623	0.006
	12 1,2-Dichlorobenzene	9.737	9.736	9.736	9.736	9.736	9.736	9.736	9.737	6.737-12.737	9.736	0.000
	13 2-Methylphenol	9.869	9.884	9.868	9.868	9.876	9.868	9.868	9.869	6.869-12.869	9.872	0.006
	14 2,2'-oxybis(1-Chloropr	9.946	9.954	9.954	9.946	9.954	9.946	9.946	9.946	6.946-12.946	9.949	0.004
	15 4-Methylphenol	10.164	10.179	10.163	10.164	10.171	10.163	10.163	10.164	7.164-13.164	10.167	0.006
	16 N-Nitroso-di-n-propyla	10.226	10.249	10.225	10.218	10.233	10.225	10.225	10.226	7.226-13.226	10.229	0.010
	17 Hexachloroethane	10.365	10.373	10.365	10.365	10.365	10.365	10.365	10.365	7.365-13.365	10.366	0.003
$	18 Nitrobenzene-d5	10.497	10.513	10.497	10.497	10.505	10.497	10.497	10.497	7.497-13.497	10.500	0.006
	19 Nitrobenzene	10.536	10.551	10.536	10.536	10.544	10.536	10.536	10.536	7.536-13.536	10.539	0.006
	20 Isophorone	11.023	11.062	11.015	11.016	11.039	11.023	11.023	11.023	8.023-14.023	11.029	0.017
	21 2-Nitrophenol	11.216	11.224	11.216	11.216	11.216	11.216	11.216	11.216	8.216-14.216	11.217	0.003
	22 2,4-Dimethylphenol	11.285	11.308	11.285	11.285	11.293	11.285	11.285	11.285	8.285-14.285	11.290	0.009
	23 Bis(2-Chloroethoxy)met	11.501	11.516	11.501	11.501	11.501	11.501	11.501	11.501	8.501-14.501	11.503	0.006
	24 Benzoic acid	11.555	11.709	11.385	11.439	11.648	11.501	11.416	11.555	8.555-14.555	11.522	0.122
	25 2,4-Dichlorophenol	11.702	11.717	11.709	11.701	11.709	11.701	11.701	11.702	8.702-14.702	11.706	0.006
	26 1,2,4-Trichlorobenzene	11.902	11.910	11.902	11.902	11.902	11.902	11.902	11.902	8.902-14.902	11.903	0.003
*	27 Naphthalene-d8	11.995	11.995	11.987	11.987	11.995	11.994	11.987	11.995	8.995-14.995	11.991	0.004
	28 Naphthalene	12.033	12.041	12.033	12.033	12.041	12.033	12.033	12.033	9.033-15.033	12.035	0.004
	29 4-Chloroaniline	12.195	12.218	12.187	12.188	12.203	12.187	12.187	12.195	9.195-15.195	12.195	0.012

Report Date : 01-Aug-2013 15:40

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130730.b/ABN.m
Batch File: /chem1/nt10.i/20130730.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	30 Hexachlorobutadiene	12.435	12.443	12.435	12.435	12.443	12.435	12.435	12.435	9.435-15.435	12.437	0.004
	31 4-Chloro-3-methylpheno	13.240	13.255	13.232	13.240	13.248	13.240	13.240	13.240	10.240-16.240	13.242	0.007
	32 2-Methylnaphthalene	13.542	13.549	13.541	13.542	13.542	13.541	13.541	13.542	10.542-16.542	13.543	0.003
	33 Hexachlorocyclopentadi	14.052	14.060	14.052	14.052	14.052	14.052	14.052	14.052	11.052-17.052	14.053	0.003
	34 2,4,6-Trichlorophenol	14.223	14.238	14.222	14.223	14.223	14.222	14.222	14.223	11.223-17.223	14.225	0.006
	35 2,4,5-Trichlorophenol	14.300	14.315	14.300	14.300	14.300	14.300	14.300	14.300	11.300-17.300	14.302	0.006
$	36 2-Fluorobiphenyl	14.401	14.408	14.400	14.401	14.401	14.400	14.400	14.401	11.401-17.401	14.402	0.003
	37 2-Chloronaphthalene	14.617	14.625	14.609	14.610	14.617	14.617	14.617	14.617	11.617-17.617	14.616	0.005
	38 2-Nitroaniline	14.911	14.927	14.903	14.904	14.919	14.903	14.903	14.911	11.911-17.911	14.910	0.009
	39 Dimethylphthalate	15.391	15.414	15.383	15.391	15.399	15.391	15.391	15.391	12.391-18.391	15.394	0.010
	40 Acenaphthylene	15.554	15.562	15.554	15.554	15.562	15.554	15.554	15.554	12.554-18.554	15.556	0.004
	41 2,6-Dinitrotoluene	15.531	15.554	15.530	15.531	15.546	15.530	15.530	15.531	12.531-18.531	15.536	0.010
*	42 Acenaphthene-d10	15.894	15.902	15.894	15.894	15.902	15.894	15.894	15.894	12.894-18.894	15.896	0.004
	43 3-Nitroaniline	15.840	15.863	15.824	15.832	15.848	15.832	15.832	15.840	12.840-18.840	15.839	0.013
	44 Acenaphthene	15.964	15.979	15.963	15.964	15.971	15.964	15.971	15.964	12.964-18.964	15.968	0.006
	45 2,4-Dinitrophenol	16.064	16.095	16.056	16.056	16.080	16.056	16.056	16.064	13.064-19.064	16.066	0.015
	46 Dibenzofuran	16.327	16.335	16.319	16.319	16.327	16.319	16.319	16.327	13.327-19.327	16.324	0.006
	47 4-Nitrophenol	16.196	16.234	16.195	16.188	16.211	16.195	16.195	16.196	13.196-19.196	16.202	0.016
	48 2,4-Dinitrotoluene	16.404	16.435	16.396	16.397	16.420	16.404	16.404	16.404	13.404-19.404	16.409	0.014
	49 Fluorene	17.093	17.108	17.092	17.093	17.100	17.092	17.092	17.093	14.093-20.093	17.096	0.006
	50 Diethylphthalate	16.977	17.007	16.969	16.969	16.992	16.976	16.969	16.977	13.977-19.977	16.980	0.015
	51 4-Chlorophenyl-phenyle	17.100	17.108	17.100	17.100	17.100	17.100	17.100	17.100	14.100-20.100	17.101	0.003
	52 4-Nitroaniline	17.216	17.270	17.201	17.201	17.232	17.208	17.201	17.216	14.216-20.216	17.218	0.026
	53 4,6-Dinitro-2-methylph	17.317	17.355	17.301	17.301	17.332	17.309	17.309	17.317	14.317-20.317	17.317	0.020

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130730.b/ABN.m
Batch File: /chem1/nt10.i/20130730.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	54 N-Nitrosodiphenylamine	17.378	17.394	17.370	17.370	17.386	17.370	17.370	17.378	14.378-20.378	17.377	0.009
$	55 2,4,6-Tribromophenol	17.671	17.687	17.671	17.671	17.679	17.671	17.671	17.671	14.671-20.671	17.674	0.006
	56 4-Bromophenyl-phenylet	18.188	18.195	18.180	18.188	18.188	18.188	18.188	18.188	15.188-21.188	18.188	0.005
	57 Hexachlorobenzene	18.512	18.528	18.512	18.512	18.520	18.512	18.512	18.512	15.512-21.512	18.516	0.006
	58 Pentachlorophenol	18.907	18.923	18.907	18.907	18.915	18.907	18.907	18.907	15.907-21.907	18.910	0.006
*	59 Phenanthrene-d10	19.186	19.193	19.178	19.186	19.194	19.186	19.186	19.186	16.186-22.186	19.187	0.005
	60 Phenanthrene	19.240	19.248	19.232	19.232	19.248	19.232	19.240	19.240	16.240-22.240	19.239	0.007
	61 Anthracene	19.333	19.348	19.332	19.333	19.348	19.333	19.340	19.333	16.333-22.333	19.338	0.007
	62 Carbazole	19.704	19.712	19.704	19.704	19.712	19.704	19.704	19.704	16.704-22.704	19.706	0.004
	63 Di-n-butylphthalate	20.625	20.633	20.625	20.625	20.625	20.625	20.632	20.625	17.625-23.625	20.627	0.004
	64 Fluoranthene	21.832	21.847	21.831	21.832	21.840	21.832	21.839	21.832	18.832-24.832	21.836	0.006
	65 Pyrene	22.281	22.296	22.280	22.281	22.288	22.280	22.288	22.281	19.281-25.281	22.285	0.006
$	66 Terphenyl-d14	22.613	22.621	22.613	22.613	22.613	22.613	22.621	22.613	19.613-25.613	22.615	0.004
	67 Butylbenzylphthalate	23.604	23.612	23.604	23.604	23.612	23.604	23.612	23.604	20.604-26.604	23.608	0.004
	68 Benzo(a)anthracene	24.549	24.564	24.549	24.549	24.557	24.549	24.557	24.549	21.549-27.549	24.553	0.006
*	69 Chrysene-d12	24.580	24.588	24.580	24.580	24.588	24.580	24.580	24.580	21.580-27.580	24.582	0.004
	70 3,3'-Dichlorobenzidine	24.518	24.541	24.518	24.518	24.526	24.526	24.526	24.518	21.518-27.518	24.525	0.008
	71 Chrysene	24.627	24.642	24.618	24.627	24.634	24.626	24.626	24.627	21.627-27.627	24.629	0.007
	72 bis(2-Ethylhexyl)phtha	24.681	24.681	24.680	24.681	24.681	24.680	24.688	24.681	21.681-27.681	24.682	0.003
	73 Di-n-octylphthalate	25.695	25.695	25.695	25.695	25.695	25.695	25.695	25.695	22.695-28.695	25.695	0.000
	74 Benzo(b)fluoranthene	26.430	26.446	26.422	26.430	26.438	26.430	26.430	26.430	23.430-29.430	26.432	0.007
	75 Benzo(k)fluoranthene	26.477	26.492	26.469	26.469	26.484	26.477	26.476	26.477	23.477-29.477	26.478	0.008
	187 Total Benzofluoranthen	26.477	26.492	26.422	26.469	26.484	26.477	26.476	26.477	23.477-29.477	26.471	0.023
	76 Benzo(a)pyrene	27.058	27.073	27.057	27.058	27.065	27.057	27.057	27.058	24.058-30.058	27.061	0.006

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130730.b/ABN.m
Batch File: /chem1/nt10.i/20130730.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	77 Perylene-d12	27.174	27.181	27.166	27.166	27.181	27.173	27.181	27.174	24.174-30.174	27.175	0.007
	78 Indeno(1,2,3-cd)pyrene	29.716	29.755	29.708	29.708	29.732	29.716	29.724	29.716	26.716-32.716	29.723	0.016
	79 Dibenzo(a,h)anthracene	29.739	29.770	29.731	29.732	29.755	29.739	29.747	29.739	26.739-32.739	29.745	0.014
	80 Benzo(g,h,i)perylene	30.470	30.516	30.438	30.454	30.485	30.462	30.469	30.470	27.470-33.470	30.471	0.025
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	51.633	48.633-54.633	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	63.533	60.533-66.533	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	60.273	57.273-63.273	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	78.600	75.600-81.600	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.841	47.841-53.841	+++++	+++++
	90 N-Nitrosodimethylamine	4.674	4.728	4.689	4.690	4.697	4.674	4.690	4.674	1.674-7.674	4.692	0.018
	91 Aniline	8.745	8.760	8.745	8.745	8.753	8.745	8.745	8.745	5.745-11.745	8.748	0.006
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
	93 Benzidine	22.110	22.110	22.110	22.110	22.110	22.110	22.110	22.110	19.110-25.110	22.110	0.000
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.075	49.075-55.075	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.250	46.250-52.250	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	61.202	58.202-64.202	+++++	+++++
	98 Retene	22.923	22.931	22.923	22.923	22.923	22.923	22.923	22.923	19.923-25.923	22.924	0.003
	99 Perylene	27.228	27.243	27.220	27.220	27.236	27.228	27.228	27.228	24.228-30.228	27.229	0.008
	100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.411	22.411-28.411	+++++	+++++
	101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.023	23.023-29.023	+++++	+++++
	102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	79.550	76.550-82.550	+++++	+++++
	103 Pyridine	4.698	4.736	4.743	4.721	4.705	4.697	4.728	4.698	1.698-7.698	4.718	0.019
	188 2,6-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.874	8.874-14.874	+++++	+++++
	189 N-Nitrosomethylethylam	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.818	2.818-8.818	+++++	+++++

Report Date : 31-Jul-2013 09:29

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Averaged.

Start Cal Date : 30-JUL-2013 11:54
End Cal Date : 30-JUL-2013 16:59
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 31-Jul-2013 09:23 yev

Calibration File Names:
Level 1: /chem1/nt10.i/20130730.b/ic0730c.d
Level 2: /chem1/nt10.i/20130730.b/ic0730i.d
Level 3: /chem1/nt10.i/20130730.b/ic0730d.d
Level 4: /chem1/nt10.i/20130730.b/ic0730g.d
Level 5: /chem1/nt10.i/20130730.b/ic0730a.d
Level 6: /chem1/nt10.i/20130730.b/ic0730e.d
Level 7: /chem1/nt10.i/20130730.b/ic0730b.d

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
186 Carbaryl	+++++ +++++	+++++	+++++	+++++	+++++	+++++		AVRG		0.000e+00		0.000e+00	<-
179 n-Decane	+++++ +++++	+++++	+++++	+++++	+++++	+++++		AVRG		0.000e+00		0.000e+00	<-
180 n-Octadecane	+++++ +++++	+++++	+++++	+++++	+++++	+++++		AVRG		0.000e+00		0.000e+00	<-
169 4-tert-Butylphenol	+++++ +++++	+++++	+++++	+++++	+++++	+++++		AVRG		0.000e+00		0.000e+00	

Report Date : 31-Jul-2013 09:29

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-JUL-2013 11:54
End Cal Date : 30-JUL-2013 16:59
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 31-Jul-2013 09:23 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
143 1,4-Dioxane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
121 Quinoline	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
120 2,3,4,6-Tetrachlorophenol	0.32404 0.38255	0.33160	0.36501	0.36939	0.37499	0.38411	AVRG		0.36167		6.68534	
178 2-Benzyl-4-Chlorophenol	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
119 7,12-Dimethylbenz(a)anthracen	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
118 Triphenyl Phosphate	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
117 Butyl Diphenyl Phosphate	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 31-Jul-2013 09:23 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
116 Dibutyl Phenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
111 Azobenzene (1,2-DP-Hydrazine)	1.38822	1.43911	1.38510	1.37025	1.23876	1.28371						
	1.23568						AVRG		1.33440		6.05564	
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						QUAD	0.000e+00	0.000e+00	0.000e+00	0.000e+00	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-JUL-2013 11:54
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Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 31-Jul-2013 09:23 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
105 1-methylnaphthalene	0.72581	0.70859	0.68684	0.69702	0.67358	0.70808	0.68903	AVRG		0.69842		2.47197	
151 1,2,4,5-Tetrachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-JUL-2013 11:54
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Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 31-Jul-2013 09:23 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
163 1,2,3,5,8-Pentachloronaphthal	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
164 1,2,3,4,6,7-Hexachloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
165 1,2,3,4,5,6,7-Heptachloronaph	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
3 Phenol	2.03070	2.28254	2.14988	2.29325	2.11183	2.30668					
	2.02971						AVRG		2.17209		5.61917
4 Bis(2-Chloroethyl)ether	1.75468	1.87682	1.71315	1.71479	1.56886	1.67029					
	1.53080						AVRG		1.68991		6.86043

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-JUL-2013 11:54
End Cal Date : 30-JUL-2013 16:59
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 31-Jul-2013 09:23 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2
6 2-Chlorophenol	1.51487	1.60460	1.54374	1.55957	1.48602	1.59450	1.61048	AVRG		1.55911		3.04200
7 1,3-Dichlorobenzene	1.69735	1.70588	1.62959	1.58284	1.50706	1.57957	1.49617	AVRG		1.59978		5.21090
9 1,4-Dichlorobenzene	1.68884	1.62538	1.58804	1.53068	1.47379	1.56113	1.45911	AVRG		1.56100		5.23865
11 Benzyl alcohol	0.69257	0.91145	0.89280	0.99774	0.96805	1.04999	0.90013	AVRG		0.91611		12.45208
12 1,2-Dichlorobenzene	1.56418	1.54983	1.50915	1.50457	1.40215	1.48105	1.37364	AVRG		1.48351		4.82192
13 2-Methylphenol	1.43739	1.57761	1.53791	1.58096	1.46645	1.58105	1.45219	AVRG		1.51908		4.28041
14 2,2'-oxybis(1-Chloropropane)	0.55334	0.53299	0.51647	0.51360	0.48223	0.51108	0.47264	AVRG		0.51176		5.41530

Report Date : 31-Jul-2013 09:29

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-JUL-2013 11:54
End Cal Date : 30-JUL-2013 16:59
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 31-Jul-2013 09:23 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
15 4-Methylphenol	1.46327	1.63609	1.50654	1.62464	1.56920	1.65016	AVRG		1.55941		5.18551
	1.46598										
16 N-Nitroso-di-n-propylamine	1.10683	1.10363	1.04622	1.07991	0.98927	1.07547	AVRG		1.05550		4.75074
	0.98718										
17 Hexachloroethane	0.67373	0.70340	0.67554	0.64997	0.61489	0.66297	AVRG		0.65694		4.87280
	0.61810										
19 Nitrobenzene	0.44049	0.44962	0.41589	0.44610	0.40069	0.43321	AVRG		0.42813		4.43580
	0.41088										
20 Isophorone	0.73774	0.77316	0.74013	0.78608	0.73104	0.80091	AVRG		0.76340		3.54406
	0.77472										
21 2-Nitrophenol	0.22348	0.21914	0.23453	0.25169	0.24444	0.25369	AVRG		0.23949		5.82985
	0.24947										
22 2,4-Dimethylphenol	0.40539	0.41539	0.40826	0.42150	0.39238	0.39929	AVRG		0.40286		3.63955
	0.37782										
20 Level 7											

Analytical Resources, Inc.

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
23 Bis(2-Chloroethoxy)methane	0.53694	0.52408	0.51171	0.50318	0.46480	0.49363					
	0.47179						AVRG		0.50087		5.25815
24 Benzoic acid	+++++	0.22728	0.29854	0.34684	0.35629	0.38252					
	0.32592						AVRG		0.32290		16.95647
25 2,4-Dichlorophenol	0.28839	0.33405	0.36574	0.34238	0.35885	0.36824					
	0.35001						AVRG		0.34395		7.97205
26 1,2,4-Trichlorobenzene	0.38922	0.37659	0.36605	0.36098	0.33980	0.35173					
	0.36910						AVRG		0.36478		4.42889
28 Naphthalene	1.14155	1.12624	1.08952	1.09256	1.02226	1.07834					
	1.03670						AVRG		1.08388		4.00049
29 4-Chloroaniline	0.44047	0.44958	0.45824	0.47412	0.45879	0.51165					
	0.44781						AVRG		0.46295		5.17906
30 Hexachlorobutadiene	0.22845	0.20857	0.20430	0.20263	0.19130	0.20081					
	0.19338						AVRG		0.20420		6.01267

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
31 4-Chloro-3-methylphenol	0.24925	0.33288	0.33385	0.37395	0.35295	0.37875					
	0.36225						AVRG		0.34055		12.93291
32 2-Methylnaphthalene	0.77704	0.77497	0.75825	0.77231	0.74156	0.78119					
	0.75908						AVRG		0.76634		1.82780
33 Hexachlorocyclopentadiene	+++++	0.46328	0.48165	0.47451	0.47808	0.48532					
	0.48905						AVRG		0.47865		1.90452
34 2,4,6-Trichlorophenol	0.44095	0.44204	0.46484	0.46470	0.46247	0.46235					
	0.45556						AVRG		0.45613		2.29477
35 2,4,5-Trichlorophenol	0.40545	0.44273	0.45640	0.49072	0.48966	0.49669					
	0.48406						AVRG		0.46653		7.18217
37 2-Chloronaphthalene	1.24531	1.21950	1.22596	1.19065	1.15886	1.17451					
	1.15050						AVRG		1.19504		3.01998
38 2-Nitroaniline	0.25228	0.29541	0.33738	0.34373	0.33834	0.34672					
	0.33925						AVRG		0.32188		10.94939

Report Date : 31-Jul-2013 09:29

Analytical Resources, Inc.

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
39 Dimethylphthalate	1.39051	1.34043	1.36654	1.32434	1.27695	1.25296	AVRG		1.30585		5.38006	
	1.18925											
40 Acenaphthylene	2.06514	2.02958	2.02243	1.95324	1.87243	1.84414	AVRG		1.93798		5.58688	
	1.77888											
41 2,6-Dinitrotoluene	0.30669	0.30773	0.31947	0.31757	0.31356	0.31303	AVRG		0.31097		2.29555	
	0.29872											
43 3-Nitroaniline	0.23310	0.27124	0.30429	0.27045	0.25485	0.27292	AVRG		0.26271		9.62755	
	0.23215											
44 Acenaphthene	1.18864	1.14896	1.15633	1.14498	1.12533	1.15116	AVRG		1.14965		1.77109	
	1.13214											
45 2,4-Dinitrophenol	+++++	0.15103	0.20934	0.25328	0.27507	0.28796	AVRG		0.24535		22.66223	<-
	0.29538											
46 Dibenzofuran	1.76504	1.70641	1.71287	1.70081	1.64741	1.67614	AVRG		1.69242		2.55059	
	1.63828											

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	20 Level 7										
47 4-Nitrophenol	+++++	0.10922	0.12839	0.15966	0.16046	0.17358					
	0.17120						AVRG		0.15042		17.17490
48 2,4-Dinitrotoluene	0.34482	0.38218	0.41370	0.41870	0.41187	0.42387					
	0.41735						AVRG		0.40178		7.10456
49 Fluorene	1.48721	1.41665	1.43062	1.42267	1.33548	1.49655					
	1.50476						AVRG		1.44199		4.14663
50 Diethylphthalate	1.32111	1.32727	1.33406	1.30082	1.23753	1.23799					
	1.19330						AVRG		1.27887		4.32520
51 4-Chlorophenyl-phenylether	0.71222	0.71859	0.70771	0.68755	0.66088	0.65280					
	0.63082						AVRG		0.68151		4.96156
52 4-Nitroaniline	0.28503	0.25154	0.26580	0.27631	0.25997	0.28869					
	0.30407						AVRG		0.27592		6.60043
53 4,6-Dinitro-2-methylphenol	0.14898	0.16983	0.19270	0.20427	0.19879	0.19928					
	0.19926						AVRG		0.18759		10.90034

Analytical Resources, Inc.

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
54 N-Nitrosodiphenylamine	0.55009	0.52106	0.54146	0.52216	0.48286	0.46090						
	0.46094						AVRG		0.50564		7.35057	
56 4-Bromophenyl-phenylether	0.24238	0.23556	0.24838	0.24584	0.23859	0.23374						
	0.24006						AVRG		0.24065		2.19839	
57 Hexachlorobenzene	0.29414	0.25863	0.26829	0.25702	0.24841	0.24008						
	0.23822						AVRG		0.25783		7.45586	
58 Pentachlorophenol	+++++	0.17788	0.20032	0.20514	0.20560	0.20209						
	0.20477						AVRG		0.19930		5.36281	
60 Phenanthrene	1.14086	1.09164	1.10881	1.12423	1.06659	1.06596						
	1.08710						AVRG		1.09788		2.58008	
61 Anthracene	1.19991	1.14743	1.15539	1.19395	1.14910	1.14571						
	1.15197						AVRG		1.16335		1.99533	
62 Carbazole	0.94675	0.89134	0.86746	0.58679	0.45637	0.57047						
	0.70299						AVRG		0.71745		26.22251	<-

Report Date : 31-Jul-2013 09:29

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
63 Di-n-butylphthalate	1.19541	1.14968	1.22913	1.27896	1.23948	1.27456	AVRG		1.23845		4.27225
	1.30194										
64 Fluoranthene	1.35423	1.31921	1.33800	1.36661	1.31704	1.36091	AVRG		1.34730		1.70641
	1.37512										
65 Pyrene	1.43961	1.37633	1.43678	1.45712	1.42666	1.43807	AVRG		1.43553		2.12131
	1.47413										
67 Butylbenzylphthalate	0.50187	0.45340	0.51159	0.53516	0.52052	0.52021	AVRG		0.51000		5.32084
	0.52728										
68 Benzo(a)anthracene	1.37646	1.31214	1.32639	1.31555	1.26301	1.25968	AVRG		1.30501		3.14063
	1.28184										
70 3,3'-Dichlorobenzidine	0.61864	0.47136	0.46779	0.39687	0.42167	0.52671	AVRG		0.49976		16.84024
	0.59529										
71 Chrysene	1.19856	1.12917	1.15388	1.12392	1.10274	1.10958	AVRG		1.13478		2.86187
	1.12563										

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
72 bis(2-Ethylhexyl)phthalate	0.52105	0.49420	0.54367	0.53588	0.51245	0.50327					
	0.50453						AVRG		0.51644		3.50535
73 Di-n-octylphthalate	1.06591	1.01831	1.00479	0.97464	0.94396	0.92864					
	0.93612						AVRG		0.98177		5.14872
74 Benzo(b)fluoranthene	1.18737	1.13233	1.18766	1.24358	1.27753	1.28385					
	1.32675						AVRG		1.23415		5.50875
75 Benzo(k)fluoranthene	1.33059	1.37956	1.39427	1.29204	1.24041	1.25707					
	1.23218						AVRG		1.30373		5.06005
187 Total Benzofluoranthenes	1.22715	1.19139	1.22493	1.21017	1.19762	1.20974					
	1.20957						AVRG		1.21008		1.07576
76 Benzo(a)pyrene	1.07381	1.04712	1.08936	1.09784	1.09140	1.10008					
	1.12474						AVRG		1.08919		2.20737
78 Indeno(1,2,3-cd)pyrene	1.22612	1.19848	1.28750	1.29498	1.28662	1.31502					
	1.33943						AVRG		1.27831		3.86042

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	20 Level 7										
79 Dibenzo(a,h)anthracene	0.98100	0.92943	1.01571	1.01867	1.00195	1.02182					
	1.04655						AVRG		1.00216		3.76708
80 Benzo(g,h,i)perylene	1.09794	1.04919	1.11076	1.11067	1.08227	1.12210					
	1.17506						AVRG		1.10686		3.48415
90 N-Nitrosodimethylamine	1.07415	1.14567	1.10267	1.13531	1.03106	1.14798					
	1.03970						AVRG		1.09665		4.50112
91 Aniline	4.93956	5.00222	4.85874	4.87193	4.53665	4.77976					
	4.25485						AVRG		4.74910		5.55649
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
93 Benzidine	+++++	35957	79342	108009	187790	377518					
	1028468						QUAD	0.000e+00	6.08592	-0.87137	0.99549
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Report Date : 31-Jul-2013 09:29

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	20 Level 7											
97 Caffeine	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
98 Retene	0.55532 0.56413	0.52318	0.54749	0.54917	0.54293	0.54313	AVRG		0.54648		2.32013	
99 Perylene	1.02509 1.05242	1.02967	1.05561	1.03185	1.00805	1.03136	AVRG		1.03344		1.57382	
100 3-beta-Coprostanol	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
101 Cholesterol	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
102 beta-Sitosterol	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
103 Pyridine	0.91436 0.83394	1.01763	0.93762	0.94795	0.86202	0.92874	AVRG		0.92032		6.50411	

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	20 Level 7											
188 2,6-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
	+++++											
189 N-Nitrosomethylethylamine	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
	+++++											
$ 1 2-Fluorophenol	1.60644	1.64086	1.61411	1.64384	1.55656	1.67152	AVRG		1.61157		2.84816	
	1.54763											
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
	+++++											
$ 2 Phenol-d5	1.88032	2.19932	2.08307	2.21627	2.14969	2.36551	AVRG		2.15919		6.94199	
	2.22014											
$ 5 2-Chlorophenol-d4	1.52224	1.58489	1.51324	1.55220	1.49118	1.59660	AVRG		1.53536		2.84191	
	1.48716											
$ 10 1,2-Dichlorobenzene-d4	1.14811	1.15020	1.06967	1.08837	1.02089	1.07718	AVRG		1.08165		4.94721	
	1.01712											

eport Date : 31-Jul-2013 09:29

Analytical Resources, Inc.

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
$ 18 Nitrobenzene-d5	0.47433	0.49703	0.47220	0.49501	0.45721	0.49700	AVRG		0.48131		3.19410
	0.47639										
$ 36 2-Fluorobiphenyl	1.60252	1.50808	1.55036	1.48118	1.46450	1.47584	AVRG		1.50303		3.74433
	1.43871										
$ 55 2,4,6-Tribromophenol	0.22528	0.22798	0.24013	0.23912	0.24430	0.24639	AVRG		0.23911		3.91899
	0.25055										
$ 66 Terphenyl-d14	0.78987	0.76295	0.79121	0.78284	0.76742	0.74960	AVRG		0.77165		2.12649
	0.75765										
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
	+++++										
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
	+++++										
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
	+++++										

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	20 Level 7										
$ 88 Dibenz(a,h)anthracene-d14	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
$ 89 Diphenyl-d10	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
$ 95 D10-1-methylnaphthalene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00

Report Date : 31-Jul-2013 09:29

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date	: 30-JUL-2013 11:54
End Cal Date	: 30-JUL-2013 16:59
Quant Method	: ISTD
Origin	: Force
Target Version	: 3.50
Integrator	: HP RTE
Method file	: /chem1/nt10.i/20130730.b/ABN.m
Cal Date	: 31-Jul-2013 09:23 yev

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-JUL-2013 11:54
End Cal Date : 30-JUL-2013 16:59
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 01-Aug-2013 11:41 yev

Calibration File Names:
Level 1: /chem1/nt10.i/20130730.b/ic0730c.d
Level 2: /chem1/nt10.i/20130730.b/ic0730i.d
Level 3: /chem1/nt10.i/20130730.b/ic0730d.d
Level 4: /chem1/nt10.i/20130730.b/ic0730g.d
Level 5: /chem1/nt10.i/20130730.b/ic0730a.d
Level 6: /chem1/nt10.i/20130730.b/ic0730e.d
Level 7: /chem1/nt10.i/20130730.b/ic0730b.d

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	

Report Date : 01-Aug-2013 15:41

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-JUL-2013 11:54
End Cal Date : 30-JUL-2013 16:59
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 01-Aug-2013 11:41 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
143 1,4-Dioxane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
121 Quinoline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
120 2,3,4,6-Tetrachlorophenol	0.32404 / 0.38255	0.33160	0.36501	0.36939	0.37499	0.38411	AVRG		0.36167		6.68534	
178 2-Benzyl-4-Chlorophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
119 7,12-Dimethylbenz(a)anthracen	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
118 Triphenyl Phosphate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
117 Butyl Diphenyl Phosphate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-JUL-2013 11:54
End Cal Date : 30-JUL-2013 16:59
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 01-Aug-2013 11:41 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
116 Dibutyl Phenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
111 Azobenzene (1,2-DP-Hydrazine)	1.38822	1.43911	1.38510	1.37025	1.23876	1.28371						
	1.23568						AVRG		1.33440		6.05564	
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						QUAD	0.000e+00	0.000e+00	0.000e+00	0.000e+00	<-

Report Date : 01-Aug-2013 15:41

Analytical Resources, Inc.

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Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 01-Aug-2013 11:41 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
106 Guaiacol	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
105 1-methylnaphthalene	0.72581 0.68903	0.70859	0.68684	0.69702	0.67358	0.70808	AVRG		0.69842		2.47197	
151 1,2,4,5-Tetrachlorobenzene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
152 Benzo(e)pyrene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
153 Chlorpyrifos	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
154 Diazinon	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
155 Kelthane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	

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Analytical Resources, Inc.

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Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 01-Aug-2013 11:41 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
163 1,2,3,5,8-Pentachloronaphthal	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
164 1,2,3,4,6,7-Hexachloronaphtha	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
165 1,2,3,4,5,6,7-Heptachloronaph	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
166 Octachloronaphthalene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
167 2,2',4,4',5-Pentabromobipheny	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
3 Phenol	2.03070 2.02971	2.28254	2.14988	2.29325	2.11183	2.30668	AVRG		2.17209		5.61917
4 Bis(2-Chloroethyl)ether	1.75468 1.53080	1.87682	1.71315	1.71479	1.56886	1.67029	AVRG		1.68991		6.86043

Analytical Resources, Inc.

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Cal Date : 01-Aug-2013 11:41 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
6 2-Chlorophenol	1.51487	1.60460	1.54374	1.55957	1.48602	1.59450					
	1.61048						AVRG		1.55911		3.04200
7 1,3-Dichlorobenzene	1.69735	1.70588	1.62959	1.58284	1.50706	1.57957					
	1.49617						AVRG		1.59978		5.21090
9 1,4-Dichlorobenzene	1.68884	1.62538	1.58804	1.53068	1.47379	1.56113					
	1.45911						AVRG		1.56100		5.23865
11 Benzyl alcohol	0.69257	0.91145	0.89280	0.99774	0.96805	1.04999					
	0.90013						AVRG		0.91611		12.45208
12 1,2-Dichlorobenzene	1.56418	1.54983	1.50915	1.50457	1.40215	1.48105					
	1.37364						AVRG		1.48351		4.82192
13 2-Methylphenol	1.43739	1.57761	1.53791	1.58096	1.46645	1.58105					
	1.45219						AVRG		1.51908		4.28041
14 2,2'-oxybis(1-Chloropropane)	0.55334	0.53299	0.51647	0.51360	0.48223	0.51108					
	0.47264						AVRG		0.51176		5.41530

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Analytical Resources, Inc.

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Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 01-Aug-2013 11:41 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2
15 4-Methylphenol	1.46327	1.63609	1.50654	1.62464	1.56920	1.65016	1.46598	AVRG		1.55941		5.18551
16 N-Nitroso-di-n-propylamine	1.10683	1.10363	1.04622	1.07991	0.98927	1.07547	0.98718	AVRG		1.05550		4.75074
17 Hexachloroethane	0.67373	0.70340	0.67554	0.64997	0.61489	0.66297	0.61810	AVRG		0.65694		4.87280
19 Nitrobenzene	0.44049	0.44962	0.41589	0.44610	0.40069	0.43321	0.41088	AVRG		0.42813		4.43580
20 Isophorone	0.73774	0.77316	0.74013	0.78608	0.73104	0.80091	0.77472	AVRG		0.76340		3.54406
21 2-Nitrophenol	0.22348	0.21914	0.23453	0.25169	0.24444	0.25369	0.24947	AVRG		0.23949		5.82985
22 2,4-Dimethylphenol	0.40539	0.41539	0.40826	0.42150	0.39238	0.39929	0.37782	AVRG		0.40286		3.63955

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Cal Date : 01-Aug-2013 11:41 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
23 Bis(2-Chloroethoxy)methane	0.53694	0.52408	0.51171	0.50318	0.46480	0.49363					
	0.47179						AVRG		0.50087		5.25815
24 Benzoic acid	+++++	0.22728	0.29854	0.34684	0.35629	0.38252					
	0.32592						AVRG		0.32290		16.95647
25 2,4-Dichlorophenol	0.28839	0.33405	0.36574	0.34238	0.35885	0.36824					
	0.35001						AVRG		0.34395		7.97205
26 1,2,4-Trichlorobenzene	0.38922	0.37659	0.36605	0.36098	0.33980	0.35173					
	0.36910						AVRG		0.36478		4.42889
28 Naphthalene	1.14155	1.12624	1.08952	1.09256	1.02226	1.07834					
	1.03670						AVRG		1.08388		4.00049
29 4-Chloroaniline	0.44047	0.44958	0.45824	0.47412	0.45879	0.51165					
	0.44781						AVRG		0.46295		5.17906
30 Hexachlorobutadiene	0.22845	0.20857	0.20430	0.20263	0.19130	0.20081					
	0.19338						AVRG		0.20420		6.01267

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Analytical Resources, Inc.

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Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 01-Aug-2013 11:41 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
31 4-Chloro-3-methylphenol	0.24925	0.33288	0.33385	0.37395	0.35295	0.37875	AVRG		0.34055		12.93291
	0.36225										
32 2-Methylnaphthalene	0.77704	0.77497	0.75825	0.77231	0.74156	0.78119	AVRG		0.76634		1.82780
	0.75908										
33 Hexachlorocyclopentadiene	+++++	0.46328	0.48165	0.47451	0.47808	0.48532	AVRG		0.47865		1.90452
	0.48905										
34 2,4,6-Trichlorophenol	0.44095	0.44204	0.46484	0.46470	0.46247	0.46235	AVRG		0.45613		2.29477
	0.45556										
35 2,4,5-Trichlorophenol	0.40545	0.44273	0.45640	0.49072	0.48966	0.49669	AVRG		0.46653		7.18217
	0.48406										
37 2-Chloronaphthalene	1.24531	1.21950	1.22596	1.19065	1.15886	1.17451	AVRG		1.19504		3.01998
	1.15050										
38 2-Nitroaniline	0.25228	0.29541	0.33738	0.34373	0.33834	0.34672	AVRG		0.32188		10.94939
	0.33925										

Analytical Resources, Inc.

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Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 01-Aug-2013 11:41 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
39 Dimethylphthalate	1.39051	1.34043	1.36654	1.32434	1.27695	1.25296					
	1.18925						AVRG		1.30585		5.38006
40 Acenaphthylene	2.06514	2.02958	2.02243	1.95324	1.87243	1.84414					
	1.77888						AVRG		1.93798		5.58688
41 2,6-Dinitrotoluene	0.30669	0.30773	0.31947	0.31757	0.31356	0.31303					
	0.29872						AVRG		0.31097		2.29555
43 3-Nitroaniline	0.23310	0.27124	0.30429	0.27045	0.25485	0.27292					
	0.23215						AVRG		0.26271		9.62755
44 Acenaphthene	1.18864	1.14896	1.15633	1.14498	1.12533	1.15116					
	1.13214						AVRG		1.14965		1.77109
45 2,4-Dinitrophenol	+++++	20068	54910	163156	368048	720016					
	1397176						QUAD	0.000e+00	3.66575	-0.04836	0.99976
46 Dibenzofuran	1.76504	1.70641	1.71287	1.70081	1.64741	1.67614					
	1.63828						AVRG		1.69242		2.55059

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Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 01-Aug-2013 11:41 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
47 4-Nitrophenol	+++++	0.10922	0.12839	0.15966	0.16046	0.17358					
	0.17120						AVRG		0.15042		17.17490
48 2,4-Dinitrotoluene	0.34482	0.38218	0.41370	0.41870	0.41187	0.42387					
	0.41735						AVRG		0.40178		7.10456
49 Fluorene	1.48721	1.41665	1.43062	1.42267	1.33548	1.49655					
	1.50476						AVRG		1.44199		4.14663
50 Diethylphthalate	1.32111	1.32727	1.33406	1.30082	1.23753	1.23799					
	1.19330						AVRG		1.27887		4.32520
51 4-Chlorophenyl-phenylether	0.71222	0.71859	0.70771	0.68755	0.66088	0.65280					
	0.63082						AVRG		0.68151		4.96156
52 4-Nitroaniline	0.28503	0.25154	0.26580	0.27631	0.25997	0.28869					
	0.30407						AVRG		0.27592		6.60043
53 4,6-Dinitro-2-methylphenol	0.14898	0.16983	0.19270	0.20427	0.19879	0.19928					
	0.19926						AVRG		0.18759		10.90034

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Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
54 N-Nitrosodiphenylamine	0.55009 / 0.46094	0.52106	0.54146	0.52216	0.48286	0.46090	AVRG		0.50564		7.35057
56 4-Bromophenyl-phenylether	0.24238 / 0.24006	0.23556	0.24838	0.24584	0.23859	0.23374	AVRG		0.24065		2.19839
57 Hexachlorobenzene	0.29414 / 0.23822	0.25863	0.26829	0.25702	0.24841	0.24008	AVRG		0.25783		7.45586
58 Pentachlorophenol	+++++ / 0.20477	0.17788	0.20032	0.20514	0.20560	0.20209	AVRG		0.19930		5.36281
60 Phenanthrene	1.14086 / 1.08710	1.09164	1.10881	1.12423	1.06659	1.06596	AVRG		1.09788		2.58008
61 Anthracene	1.19991 / 1.15197	1.14743	1.15539	1.19395	1.14910	1.14571	AVRG		1.16335		1.99533
62 Carbazole	21276 / 1449070	51481	98613	161039	262941	629094	QUAD	0.000e+00	1.98688	-0.16044	0.99681

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Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2
63 Di-n-butylphthalate	1.19541	1.14968	1.22913	1.27896	1.23948	1.27456	1.30194	AVRG		1.23845		4.27225
64 Fluoranthene	1.35423	1.31921	1.33800	1.36661	1.31704	1.36091	1.37512	AVRG		1.34730		1.70641
65 Pyrene	1.43961	1.37633	1.43678	1.45712	1.42666	1.43807	1.47413	AVRG		1.43553		2.12131
67 Butylbenzylphthalate	0.50187	0.45340	0.51159	0.53516	0.52052	0.52021	0.52728	AVRG		0.51000		5.32084
68 Benzo(a)anthracene	1.37646	1.31214	1.32639	1.31555	1.26301	1.25968	1.28184	AVRG		1.30501		3.14063
70 3,3'-Dichlorobenzidine	0.61864	0.47136	0.46779	0.39687	0.42167	0.52671	0.59529	AVRG		0.49976		16.84024
71 Chrysene	1.19856	1.12917	1.15388	1.12392	1.10274	1.10958	1.12563	AVRG		1.13478		2.86187

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Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-JUL-2013 11:54
End Cal Date : 30-JUL-2013 16:59
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 01-Aug-2013 11:41 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
72 bis(2-Ethylhexyl)phthalate	0.52105	0.49420	0.54367	0.53588	0.51245	0.50327	AVRG		0.51644		3.50535
	0.50453										
73 Di-n-octylphthalate	1.06591	1.01831	1.00479	0.97464	0.94396	0.92864	AVRG		0.98177		5.14872
	0.93612										
74 Benzo(b)fluoranthene	1.18737	1.13233	1.18766	1.24358	1.27753	1.28385	AVRG		1.23415		5.50875
	1.32675										
75 Benzo(k)fluoranthene	1.33059	1.37956	1.39427	1.29204	1.24041	1.25707	AVRG		1.30373		5.06005
	1.23218										
187 Total Benzofluoranthenes	1.22715	1.19139	1.22493	1.21017	1.19762	1.20974	AVRG		1.21008		1.07576
	1.20957										
76 Benzo(a)pyrene	1.07381	1.04712	1.08936	1.09784	1.09140	1.10008	AVRG		1.08919		2.20737
	1.12474										
78 Indeno(1,2,3-cd)pyrene	1.22612	1.19848	1.28750	1.29498	1.28662	1.31502	AVRG		1.27831		3.86042
	1.33943										

Analytical Resources, Inc.

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Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 01-Aug-2013 11:41 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
79 Dibenzo(a,h)anthracene	0.98100	0.92943	1.01571	1.01867	1.00195	1.02182					
	1.04655						AVRG		1.00216		3.76708
80 Benzo(g,h,i)perylene	1.09794	1.04919	1.11076	1.11067	1.08227	1.12210					
	1.17506						AVRG		1.10686		3.48415
90 N-Nitrosodimethylamine	1.07415	1.14567	1.10267	1.13531	1.03106	1.14798					
	1.03970						AVRG		1.09665		4.50112
91 Aniline	4.93956	5.00222	4.85874	4.87193	4.53665	4.77976					
	4.25485						AVRG		4.74910		5.55649
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
93 Benzidine	+++++	35957	79342	108009	187790	377518					
	1028468						QUAD	0.000e+00	6.08592	-0.87137	0.99549
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 01-Aug-2013 11:41 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
	+++++											
98 Retene	0.55532	0.52318	0.54749	0.54917	0.54293	0.54313	AVRG		0.54648		2.32013	
	0.56413											
99 Perylene	1.02509	1.02967	1.05561	1.03185	1.00805	1.03136	AVRG		1.03344		1.57382	
	1.05242											
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
	+++++											
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
	+++++											
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
	+++++											
103 Pyridine	0.91436	1.01763	0.93762	0.94795	0.86202	0.92874	AVRG		0.92032		6.50411	
	0.83394											

Report Date : 01-Aug-2013 15:41

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-JUL-2013 11:54
End Cal Date : 30-JUL-2013 16:59
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 01-Aug-2013 11:41 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
188 2,6-Dichlorophenol	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
189 N-Nitrosomethylethylamine	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
$ 1 2-Fluorophenol	1.60644 1.54763	1.64086	1.61411	1.64384	1.55656	1.67152	AVRG		1.61157		2.84816	
$ 137 d8-1,4-Dioxane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
$ 2 Phenol-d5	1.88032 2.22014	2.19932	2.08307	2.21627	2.14969	2.36551	AVRG		2.15919		6.94199	
$ 5 2-Chlorophenol-d4	1.52224 1.48716	1.58489	1.51324	1.55220	1.49118	1.59660	AVRG		1.53536		2.84191	
$ 10 1,2-Dichlorobenzene-d4	1.14811 1.01712	1.15020	1.06967	1.08837	1.02089	1.07718	AVRG		1.08165		4.94721	

Analytical Resources, Inc.

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Start Cal Date : 30-JUL-2013 11:54
End Cal Date : 30-JUL-2013 16:59
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 01-Aug-2013 11:41 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
$ 18 Nitrobenzene-d5	0.47433	0.49703	0.47220	0.49501	0.45721	0.49700					
	0.47639						AVRG		0.48131		3.19410
$ 36 2-Fluorobiphenyl	1.60252	1.50808	1.55036	1.48118	1.46450	1.47584					
	1.43871						AVRG		1.50303		3.74433
$ 55 2,4,6-Tribromophenol	0.22528	0.22798	0.24013	0.23912	0.24430	0.24639					
	0.25055						AVRG		0.23911		3.91899
$ 66 Terphenyl-d14	0.78987	0.76295	0.79121	0.78284	0.76742	0.74960					
	0.75765						AVRG		0.77165		2.12649
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

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Start Cal Date : 30-JUL-2013 11:54
End Cal Date : 30-JUL-2013 16:59
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 01-Aug-2013 11:41 yev

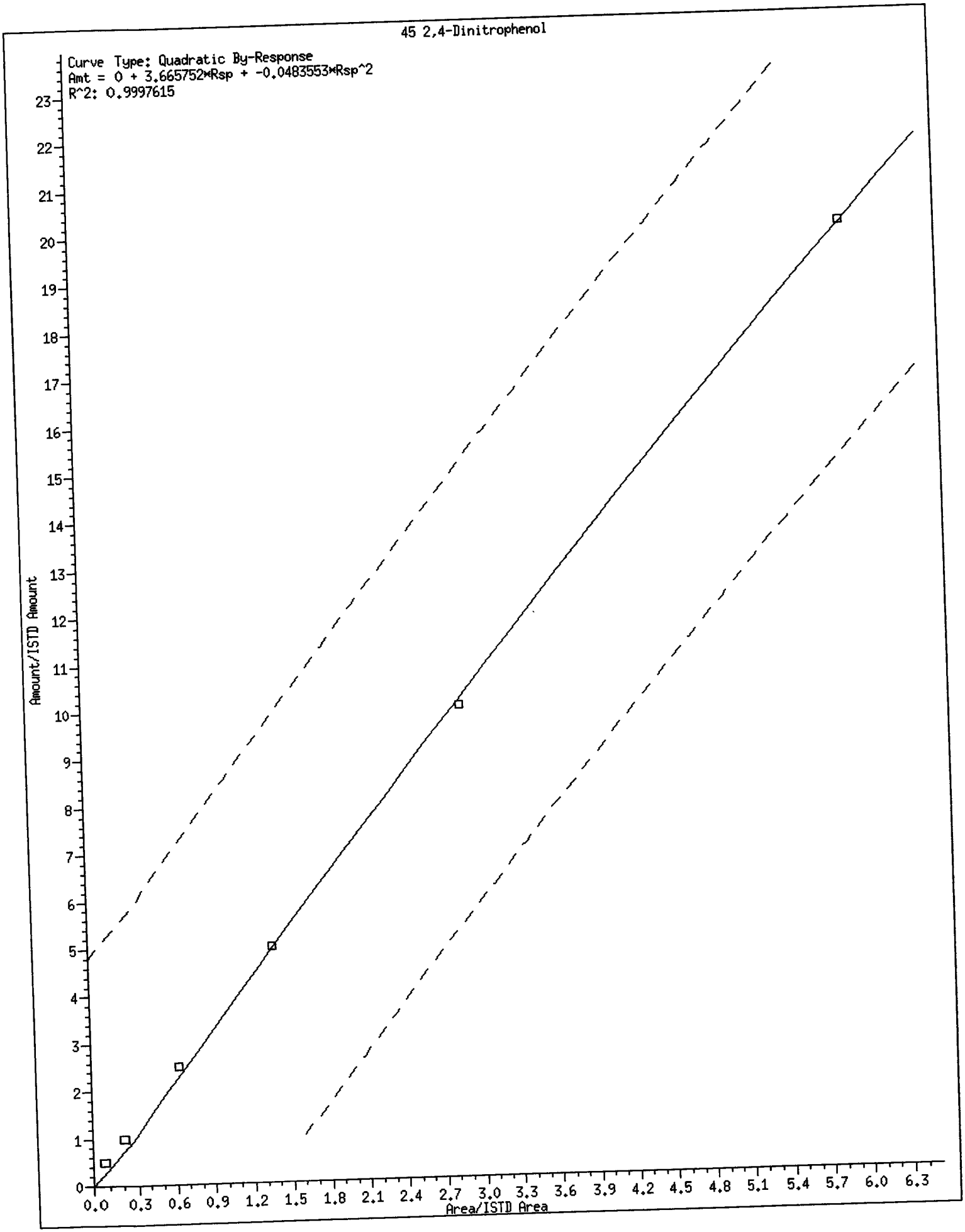
Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
$ 88 Dibenz(a,h)anthracene-d14	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
$ 89 Diphenyl-d10	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
$ 95 D10-1-methylnaphthalene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00

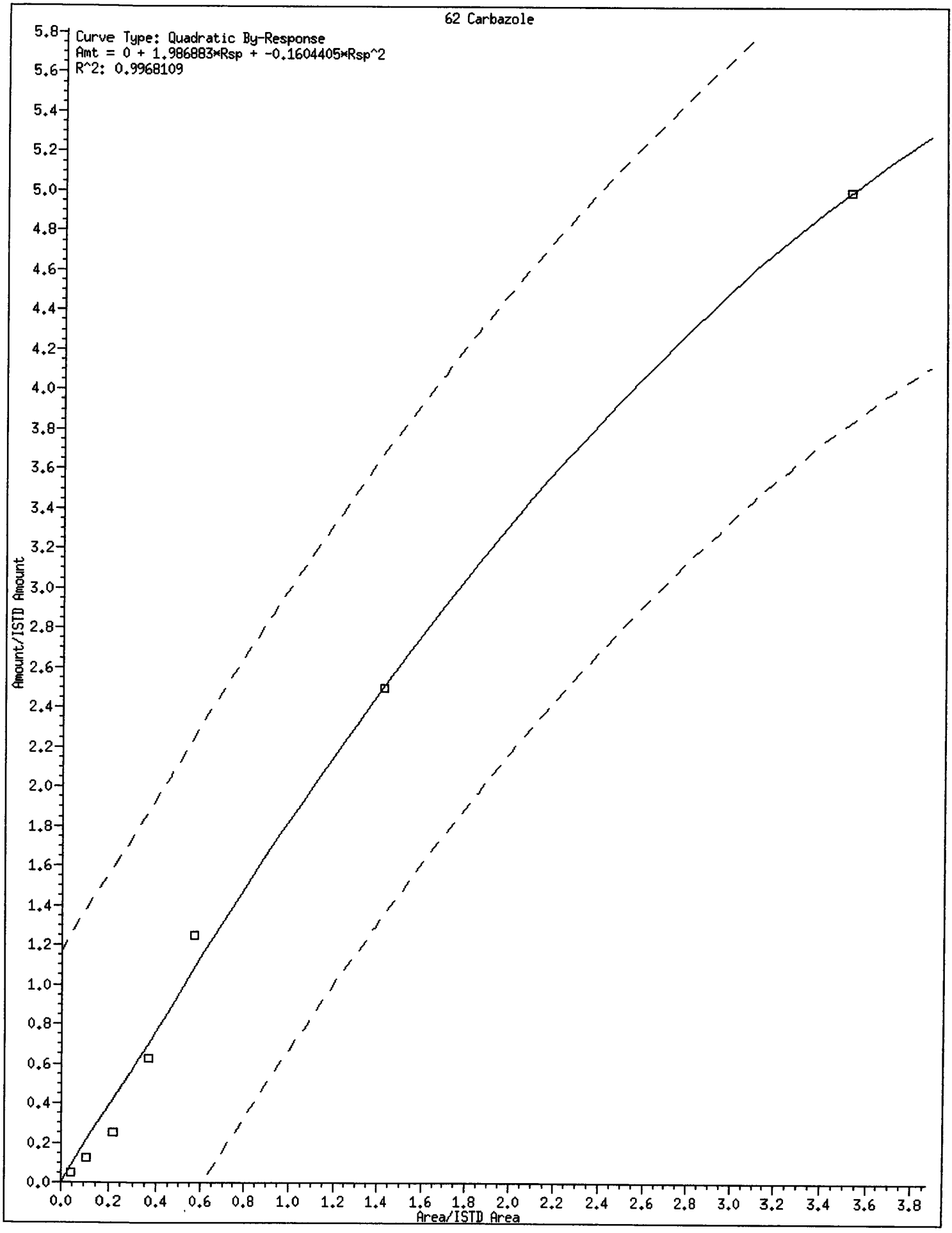
Analytical Resources, Inc.

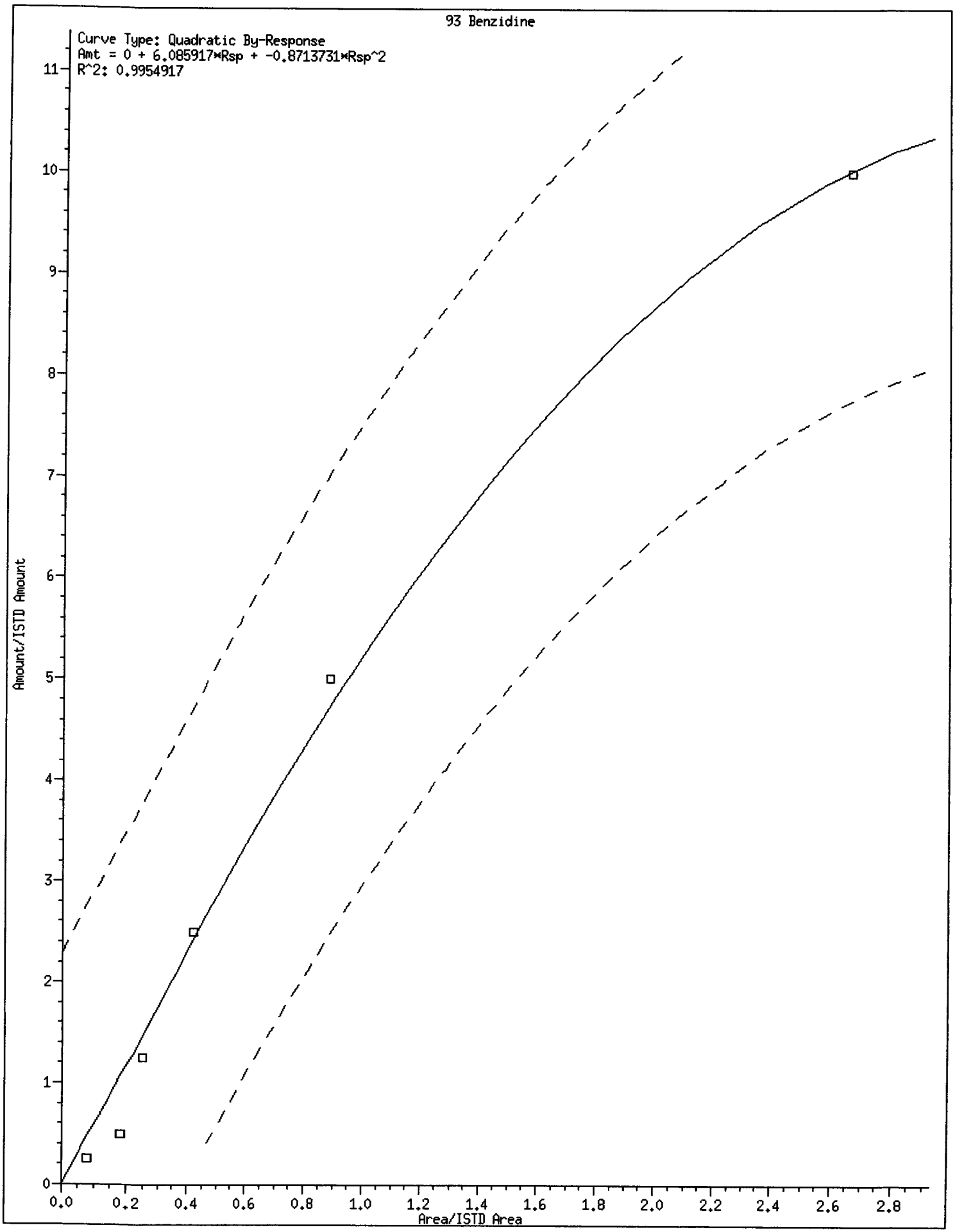
INITIAL CALIBRATION DATA

Start Cal Date : 30-JUL-2013 11:54
End Cal Date : 30-JUL-2013 16:59
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/ABN.m
Cal Date : 01-Aug-2013 11:41 yev

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response


45 2,4-Dinitrophenol
Curve Type: Quadratic By-Response
Amt = 0 + 3.665752*Rsp + -0.0483553*Rsp^2
R^2: 0.9997615
Amount/ISTD Amount
Area/ISTD Area
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
0.0 0.3 0.6 0.9 1.2 1.5 1.8 2.1 2.4 2.7 3.0 3.3 3.6 3.9 4.2 4.5 4.8 5.1 5.4 5.7 6.0 6.3


62 Carbazole
Curve Type: Quadratic By-Response
Amt = 0 + 1.986883*Rsp + -0.1604405*Rsp^2
R^2: 0.9968109
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
5.0
5.2
5.4
5.6
5.8


93 Benzidine
Curve Type: Quadratic By-Response
Amt = 0 + 6.085917*Rsp + -0.8713731*Rsp^2
R^2: 0.9954917
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 8/1/13

Data file : /chem1/nt10.i/20130730.b/ic0730a.d
Lab Smp Id: IC0726A
Inj Date : 30-JUL-2013 11:54
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0726A
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130730.b/ABN.m
Meth Date : 01-Aug-2013 11:41 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 11:54 Cal File: ic0730a.d
Als bottle: 3 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.953	6.952	(0.746)	240463	5.00000	4.829
$	2 Phenol-d5	99	8.652	8.652	(0.929)	332092	5.00000	4.978
	3 Phenol	94	8.676	8.676	(0.931)	326243	5.00000	4.861
$	5 2-Chlorophenol-d4	132	8.930	8.930	(0.958)	230363	5.00000	4.856
	4 Bis(2-Chloroethyl)ether	93	8.845	8.845	(0.949)	242363	5.00000	4.642
	6 2-Chlorophenol	128	8.961	8.961	(0.962)	229566	5.00000	4.766
	7 1,3-Dichlorobenzene	146	9.248	9.248	(0.992)	232816	5.00000	4.710
*	8 1,4-Dichlorobenzene-d4	152	9.317	9.325	(1.000)	123587	4.00000	
	9 1,4-Dichlorobenzene	146	9.348	9.356	(1.003)	227677	5.00000	4.721
$	10 1,2-Dichlorobenzene-d4	152	9.705	9.705	(1.042)	157711	5.00000	4.719
	12 1,2-Dichlorobenzene	146	9.737	9.737	(1.045)	216610	5.00000	4.726
	11 Benzyl alcohol	108	9.620	9.620	(1.032)	149548	5.00000	5.284
	14 2,2'-oxybis(1-Chloropropane)	121	9.946	9.954	(1.067)	74496	5.00000	4.711
	13 2-Methylphenol	108	9.869	9.876	(1.059)	226542	5.00000	4.827
	17 Hexachloroethane	117	10.365	10.373	(1.112)	94991	5.00000	4.680
	16 N-Nitroso-di-n-propylamine	70	10.226	10.233	(1.097)	152826	5.00000	4.686
	15 4-Methylphenol	108	10.164	10.164	(1.091)	242416	5.00000	5.031
$	18 Nitrobenzene-d5	82	10.497	10.505	(0.875)	254985	5.00000	4.750
	19 Nitrobenzene	77	10.536	10.544	(0.878)	223463	5.00000	4.680
	20 Isophorone	82	11.023	11.031	(0.919)	407701	5.00000	4.788
	21 2-Nitrophenol	139	11.216	11.216	(0.935)	136326	5.00000	5.103
	22 2,4-Dimethylphenol	107	11.285	11.293	(0.941)	437657	10.0000	9.740
	23 Bis(2-Chloroethoxy)methane	93	11.501	11.509	(0.959)	259218	5.00000	4.640
	24 Benzoic acid	105	11.555	11.563	(0.963)	794822	20.0000	22.07
	25 2,4-Dichlorophenol	162	11.702	11.709	(0.976)	400266	10.0000	10.43
	26 1,2,4-Trichlorobenzene	180	11.902	11.910	(0.992)	189505	5.00000	4.658
*	27 Naphthalene-d8	136	11.995	11.995	(1.000)	446161	4.00000	

Data File: /chem1/nt10.i/20130730.b/ic0730a.d
Report Date: 01-Aug-2013 15:43

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	12.033	12.041	(1.003)	570114	5.00000	4.716
	29 4-Chloroaniline	127	12.195	12.203	(1.017)	511739	10.0000	9.910
	30 Hexachlorobutadiene	225	12.435	12.443	(1.037)	106688	5.00000	4.684
	31 4-Chloro-3-methylphenol	107	13.240	13.248	(1.104)	393676	10.0000	10.36
	32 2-Methylnaphthalene	142	13.542	13.549	(1.129)	413571	5.00000	4.838
	33 Hexachlorocyclopentadiene	237	14.052	14.060	(0.884)	319834	10.0000	9.988
	34 2,4,6-Trichlorophenol	196	14.223	14.230	(0.895)	309392	10.0000	10.14
	35 2,4,5-Trichlorophenol	196	14.300	14.308	(0.900)	327584	10.0000	10.50
$	36 2-Fluorobiphenyl	172	14.401	14.408	(0.906)	489875	5.00000	4.872
	37 2-Chloronaphthalene	162	14.617	14.625	(0.920)	387637	5.00000	4.849
	38 2-Nitroaniline	65	14.911	14.919	(0.938)	226351	10.0000	10.51
	39 Dimethylphthalate	163	15.391	15.399	(0.968)	427141	5.00000	4.889
	40 Acenaphthylene	152	15.554	15.562	(0.979)	626329	5.00000	4.831
	41 2,6-Dinitrotoluene	165	15.531	15.546	(0.977)	209771	10.0000	10.08
*	42 Acenaphthene-d10	164	15.894	15.902	(1.000)	267600	4.00000	
	43 3-Nitroaniline	138	15.840	15.848	(0.997)	170493	10.0000	9.701
	44 Acenaphthene	153	15.964	15.979	(1.004)	376424	5.00000	4.894
	45 2,4-Dinitrophenol	184	16.064	16.072	(1.011)	368048	20.0000	22.42
	46 Dibenzofuran	168	16.327	16.335	(1.027)	551059	5.00000	4.867
	47 4-Nitrophenol	109	16.196	16.211	(1.019)	107346	10.0000	10.67
	48 2,4-Dinitrotoluene	165	16.404	16.412	(1.032)	275540	10.0000	10.25
	50 Diethylphthalate	149	16.977	16.984	(1.068)	413954	5.00000	4.838
	49 Fluorene	166	17.093	17.108	(1.075)	446717	5.00000	4.631
	51 4-Chlorophenyl-phenylether	204	17.100	17.108	(1.076)	221066	5.00000	4.849
	52 4-Nitroaniline	138	17.216	17.224	(1.083)	173919	10.0000	9.422
	53 4,6-Dinitro-2-methylphenol	198	17.317	17.324	(0.903)	458140	20.0000	21.19
	54 N-Nitrosodiphenylamine	169	17.378	17.386	(0.906)	278205	5.00000	4.775
$	55 2,4,6-Tribromophenol	330	17.671	17.687	(1.112)	81719	5.00000	5.109
	56 4-Bromophenyl-phenylether	248	18.188	18.196	(0.948)	137469	5.00000	4.957
	57 Hexachlorobenzene	284	18.512	18.520	(0.965)	143125	5.00000	4.817
	58 Pentachlorophenol	266	18.907	18.915	(0.985)	236914	10.0000	10.32
*	59 Phenanthrene-d10	188	19.186	19.194	(1.000)	460929	4.00000	
	60 Phenanthrene	178	19.240	19.248	(1.003)	614527	5.00000	4.857
	61 Anthracene	178	19.333	19.348	(1.008)	662069	5.00000	4.939
	62 Carbazole	167	19.704	19.720	(1.027)	262941	5.00000	3.180
	63 Di-n-butylphthalate	149	20.625	20.640	(1.075)	714141	5.00000	5.004
	64 Fluoranthene	202	21.832	21.847	(1.138)	758825	5.00000	4.888
	65 Pyrene	202	22.281	22.296	(0.906)	783805	5.00000	4.969
$	66 Terphenyl-d14	244	22.613	22.629	(0.920)	421620	5.00000	4.973
	67 Butylbenzylphthalate	149	23.604	23.620	(0.960)	285973	5.00000	5.103
	68 Benzo(a)anthracene	228	24.549	24.565	(0.999)	693900	5.00000	4.839
*	69 Chrysene-d12	240	24.580	24.596	(1.000)	439520	4.00000	
	70 3,3'-Dichlorobenzidine	252	24.518	24.541	(0.997)	463329	10.0000	8.437
	71 Chrysene	228	24.627	24.642	(1.002)	605844	5.00000	4.859
	72 bis(2-Ethylhexyl)phthalate	149	24.681	24.696	(0.961)	379905	5.00000	4.961
*	134 Di-n-octylphthalate-d4	153	25.679	25.703	(1.000)	593075	4.00000	
	73 Di-n-octylphthalate	149	25.695	25.710	(1.001)	699799	5.00000	4.807

Data File: /chem1/nt10.i/20130730.b/ic0730a.d
Report Date: 01-Aug-2013 15:43

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	26.430	26.454	(0.973)	721165	5.00000	5.176
	75 Benzo(k)fluoranthene	252	26.477	26.492	(0.974)	700210	5.00000	4.757
	76 Benzo(a)pyrene	252	27.058	27.081	(0.996)	616096	5.00000	5.010
*	77 Perylene-d12	264	27.174	27.197	(1.000)	451599	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	29.716	29.755	(1.094)	726296	5.00000	5.033
	79 Dibenzo(a,h)anthracene	278	29.739	29.778	(1.094)	565597	5.00000	4.999
	80 Benzo(g,h,i)perylene	276	30.470	30.501	(1.121)	610940	5.00000	4.889
	90 N-Nitrosodimethylamine	74	4.674	4.674	(0.502)	318563	10.0000	9.402
	91 Aniline	93	8.745	8.745	(0.939)	700839	5.00000	4.776
	93 Benzidine	184	22.110	22.126	(0.900)	187790	10.0000	6.826
	103 Pyridine	79	4.698	4.690	(0.504)	266336	10.0000	9.366
	105 1-methylnaphthalene	142	13.782	13.789	(1.149)	375656	5.00000	4.822
	111 Azobenzene (1,2-DP-Hydrazine)	77	17.448	17.463	(1.098)	414366	5.00000	4.642
	187 Total Benzofluoranthenes	252	26.477	26.492	(0.974)	1352109	10.0000	9.897
	99 Perylene	252	27.228	27.251	(1.002)	569043	5.00000	4.877
	98 Retene	219	22.923	22.939	(0.933)	298286	5.00000	4.968
	120 2,3,4,6-Tetrachlorophenol	232	16.690	16.706	(1.050)	125434	5.00000	5.184

Data File: /chem1/nt10.i/20130730.b/ic0730a.d
Report Date: 01-Aug-2013 15:43

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0730a.d
Lab Smp Id: IC0726A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130730.b/ABN.m
Misc Info:

Calibration Date: 30-JUL-2013
Calibration Time: 18:27

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	123587	61794	247174	123587	0.00
27 Naphthalene-d8	446161	223080	892322	446161	0.00
42 Acenaphthene-d10	267600	133800	535200	267600	0.00
59 Phenanthrene-d10	460929	230464	921858	460929	0.00
69 Chrysene-d12	439520	219760	879040	439520	0.00
134 Di-n-octylphthala	593075	296538	1186150	593075	0.00
77 Perylene-d12	451599	225800	903198	451599	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.33	8.83	9.83	9.32	-0.08
27 Naphthalene-d8	11.99	11.49	12.49	11.99	0.00
42 Acenaphthene-d10	15.90	15.40	16.40	15.89	-0.05
59 Phenanthrene-d10	19.19	18.69	19.69	19.19	-0.04
69 Chrysene-d12	24.60	24.10	25.10	24.58	-0.06
134 Di-n-octylphthala	25.70	25.20	26.20	25.68	-0.09
77 Perylene-d12	27.20	26.70	27.70	27.17	-0.09

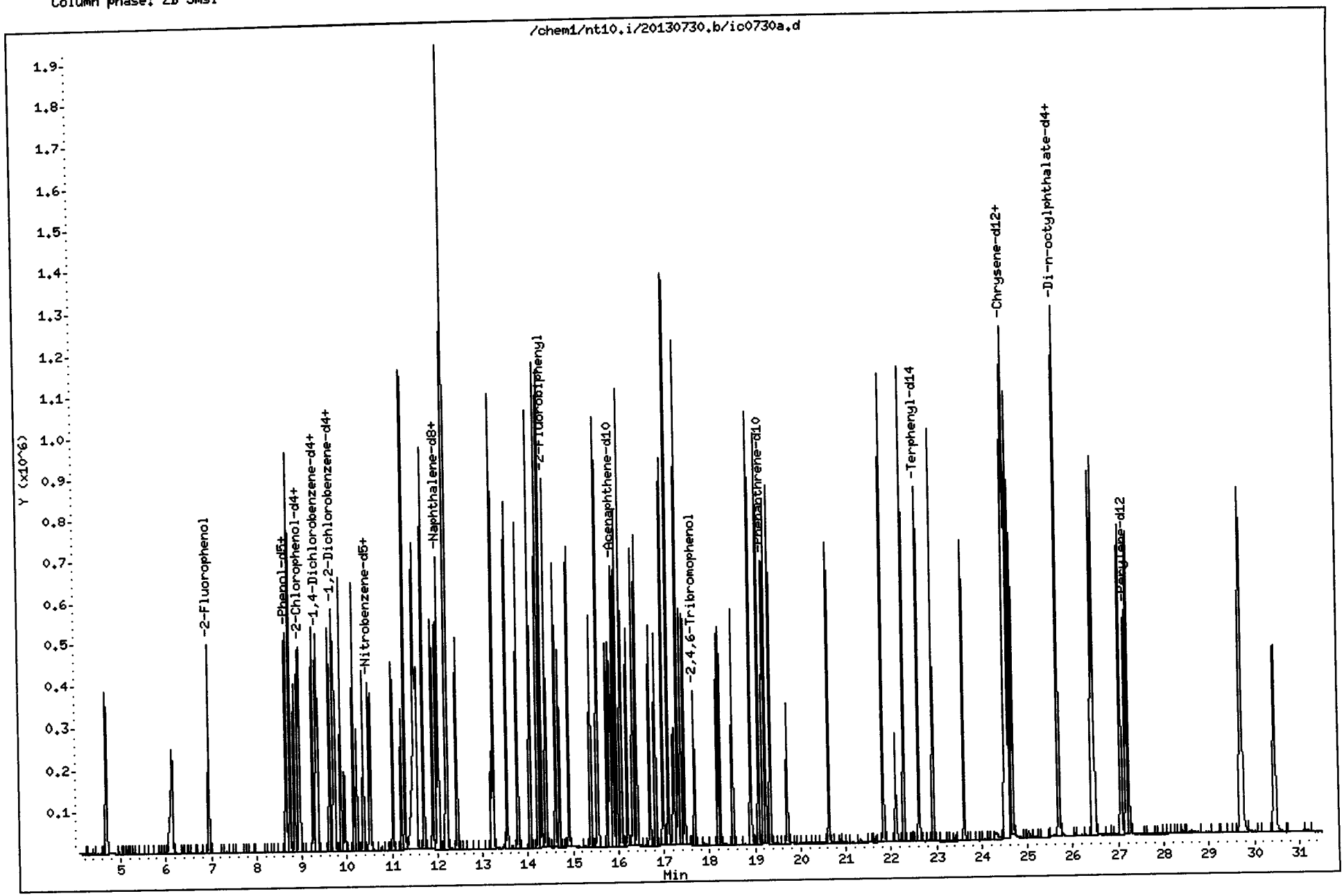
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130730.b/ic0730a.d
Date : 30-JUL-2013 11:54
Client ID:
Sample Info: IC0726A

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0730a.d

Lab ID: IC0726A, Method: ABN.m, Instrument: nt10.i, Date: 30-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130730.b/ic0730b.d
Report Date: 01-Aug-2013 15:43

8/1/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130730.b/ic0730b.d
Lab Smp Id: IC0730B
Inj Date : 30-JUL-2013 12:32 Inst ID: nt10.i
Operator : VTS/YZ
Smp Info : IC0730B
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130730.b/ABN.m Quant Type: ISTD
Meth Date : 01-Aug-2013 11:41 yev Cal File: ic0730b.d
Cal Date : 30-JUL-2013 12:32 Calibration Sample, Level: 7
Als bottle: 4
Dil Factor: 1.00000 Compound Sublist: PSDDAICAL.sub
Integrator: HP RTE
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.968	6.952	(0.747)	826915	20.0000	19.21
$	2 Phenol-d5	99	8.675	8.652	(0.930)	1186241	20.0000	20.56
	3 Phenol	94	8.699	8.676	(0.933)	1084497	20.0000	18.69
$	5 2-Chlorophenol-d4	132	8.946	8.930	(0.959)	794603	20.0000	19.37
	4 Bis(2-Chloroethyl)ether	93	8.861	8.845	(0.950)	817922	20.0000	18.12
	6 2-Chlorophenol	128	8.977	8.961	(0.963)	860496	20.0000	20.66
	7 1,3-Dichlorobenzene	146	9.255	9.248	(0.992)	799416	20.0000	18.70
*	8 1,4-Dichlorobenzene-d4	152	9.325	9.325	(1.000)	106862	4.00000	
	9 1,4-Dichlorobenzene	146	9.356	9.356	(1.003)	779617	20.0000	18.69
$	10 1,2-Dichlorobenzene-d4	152	9.713	9.705	(1.042)	543457	20.0000	18.81
	12 1,2-Dichlorobenzene	146	9.736	9.737	(1.044)	733951	20.0000	18.52
	11 Benzyl alcohol	108	9.635	9.620	(1.033)	480947	20.0000	19.65
	14 2,2'-oxybis(1-Chloropropane)	121	9.954	9.954	(1.067)	252535	20.0000	18.47
	13 2-Methylphenol	108	9.884	9.876	(1.060)	775921	20.0000	19.12
	17 Hexachloroethane	117	10.373	10.373	(1.112)	330256	20.0000	18.82
	16 N-Nitroso-di-n-propylamine	70	10.249	10.233	(1.099)	527461	20.0000	18.71
	15 4-Methylphenol	108	10.179	10.164	(1.092)	783286	20.0000	18.80
$	18 Nitrobenzene-d5	82	10.513	10.505	(0.876)	902269	20.0000	19.80
	19 Nitrobenzene	77	10.551	10.544	(0.880)	778209	20.0000	19.19
	20 Isophorone	82	11.062	11.031	(0.922)	1467305	20.0000	20.30
	21 2-Nitrophenol	139	11.224	11.216	(0.936)	472489	20.0000	20.83
	22 2,4-Dimethylphenol	107	11.308	11.293	(0.943)	1431156	40.0000	37.51
	23 Bis(2-Chloroethoxy)methane	93	11.516	11.509	(0.960)	893563	20.0000	18.84
	24 Benzoic acid	105	11.709	11.563	(0.976)	2469170	80.0000	80.75
	25 2,4-Dichlorophenol	162	11.717	11.709	(0.977)	1325836	40.0000	40.70
	26 1,2,4-Trichlorobenzene	180	11.910	11.910	(0.993)	699067	20.0000	20.24
*	27 Naphthalene-d8	136	11.995	11.995	(1.000)	378798	4.00000	

Data File: /chem1/nt10.i/20130730.b/ic0730b.d
Report Date: 01-Aug-2013 15:43

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	12.041	12.041	(1.004)	1963500	20.0000	19.13
	29 4-Chloroaniline	127	12.218	12.203	(1.019)	1696290	40.0000	38.69
	30 Hexachlorobutadiene	225	12.443	12.443	(1.037)	366251	20.0000	18.94
	31 4-Chloro-3-methylphenol	107	13.255	13.248	(1.105)	1372213	40.0000	42.55
	32 2-Methylnaphthalene	142	13.549	13.549	(1.130)	1437693	20.0000	19.81
	33 Hexachlorocyclopentadiene	237	14.060	14.060	(0.884)	1156611	40.0000	40.87
	34 2,4,6-Trichlorophenol	196	14.238	14.230	(0.895)	1077404	40.0000	39.95
	35 2,4,5-Trichlorophenol	196	14.315	14.308	(0.900)	1144805	40.0000	41.50
$	36 2-Fluorobiphenyl	172	14.408	14.408	(0.906)	1701277	20.0000	19.14
	37 2-Chloronaphthalene	162	14.625	14.625	(0.920)	1360474	20.0000	19.25
	38 2-Nitroaniline	65	14.927	14.919	(0.939)	802341	40.0000	42.16
	39 Dimethylphthalate	163	15.414	15.399	(0.969)	1406296	20.0000	18.21
	40 Acenaphthylene	152	15.562	15.562	(0.979)	2103537	20.0000	18.36
	41 2,6-Dinitrotoluene	165	15.554	15.546	(0.978)	706465	40.0000	38.42
*	42 Acenaphthene-d10	164	15.902	15.902	(1.000)	236501	4.00000	
	43 3-Nitroaniline	138	15.863	15.848	(0.998)	549036	40.0000	35.35
	44 Acenaphthene	153	15.979	15.979	(1.005)	1338759	20.0000	19.70
	45 2,4-Dinitrophenol	184	16.095	16.072	(1.012)	1397176	80.0000	96.32
	46 Dibenzofuran	168	16.335	16.335	(1.027)	1937270	20.0000	19.36
	47 4-Nitrophenol	109	16.234	16.211	(1.021)	404882	40.0000	45.53
	48 2,4-Dinitrotoluene	165	16.435	16.412	(1.034)	987047	40.0000	41.55
	50 Diethylphthalate	149	17.007	16.984	(1.070)	1411079	20.0000	18.66
	49 Fluorene	166	17.108	17.108	(1.076)	1779391	20.0000	20.87
	51 4-Chlorophenyl-phenylether	204	17.108	17.108	(1.076)	745951	20.0000	18.51
	52 4-Nitroaniline	138	17.270	17.224	(1.086)	719126	40.0000	44.08
	53 4,6-Dinitro-2-methylphenol	198	17.355	17.324	(0.904)	1642917	80.0000	84.98
	54 N-Nitrosodiphenylamine	169	17.394	17.386	(0.906)	950128	20.0000	18.23
$	55 2,4,6-Tribromophenol	330	17.687	17.687	(1.112)	296275	20.0000	20.96
	56 4-Bromophenyl-phenylether	248	18.195	18.196	(0.948)	494832	20.0000	19.95
	57 Hexachlorobenzene	284	18.528	18.520	(0.965)	491043	20.0000	18.48
	58 Pentachlorophenol	266	18.923	18.915	(0.986)	844195	40.0000	41.10
*	59 Phenanthrene-d10	188	19.193	19.194	(1.000)	412257	4.00000	
	60 Phenanthrene	178	19.248	19.248	(1.003)	2240827	20.0000	19.80
	61 Anthracene	178	19.348	19.348	(1.008)	2374532	20.0000	19.80
	62 Carbazole	167	19.712	19.720	(1.027)	1449070	20.0000	19.60
	63 Di-n-butylphthalate	149	20.633	20.640	(1.075)	2683674	20.0000	21.03
	64 Fluoranthene	202	21.847	21.847	(1.138)	2834511	20.0000	20.41
	65 Pyrene	202	22.296	22.296	(0.907)	2848462	20.0000	20.54
$	66 Terphenyl-d14	244	22.621	22.629	(0.920)	1464011	20.0000	19.64
	67 Butylbenzylphthalate	149	23.612	23.620	(0.960)	1018862	20.0000	20.68
	68 Benzo(a)anthracene	228	24.564	24.565	(0.999)	2476897	20.0000	19.64
*	69 Chrysene-d12	240	24.588	24.596	(1.000)	386460	4.00000	
	70 3,3'-Dichlorobenzidine	252	24.541	24.541	(0.998)	2300556	40.0000	47.65
	71 Chrysene	228	24.642	24.642	(1.002)	2175060	20.0000	19.84
	72 bis(2-Ethylhexyl)phthalate	149	24.681	24.696	(0.961)	1441845	20.0000	19.54
*	134 Di-n-octylphthalate-d4	153	25.687	25.703	(1.000)	571564	4.00000	
	73 Di-n-octylphthalate	149	25.695	25.710	(1.000)	2675262	20.0000	19.07

Data File: /chem1/nt10.i/20130730.b/ic0730b.d
Report Date: 01-Aug-2013 15:43

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	26.446	26.454	(0.973)	2712602	20.0000	21.50
	75 Benzo(k)fluoranthene	252	26.492	26.492	(0.975)	2519254	20.0000	18.90
	76 Benzo(a)pyrene	252	27.073	27.081	(0.996)	2299579	20.0000	20.65
*	77 Perylene-d12	264	27.181	27.197	(1.000)	408910	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	29.755	29.755	(1.095)	2738535	20.0000	20.96
	79 Dibenzo(a,h)anthracene	278	29.770	29.778	(1.095)	2139724	20.0000	20.89
	80 Benzo(g,h,i)perylene	276	30.516	30.501	(1.123)	2402469	20.0000	21.23
	90 N-Nitrosodimethylamine	74	4.728	4.674	(0.507)	1111047	40.0000	37.92
	91 Aniline	93	8.760	8.745	(0.939)	2273409	20.0000	17.92
	93 Benzidine	184	22.110	22.126	(0.899)	1028468	40.0000	42.52
	103 Pyridine	79	4.736	4.690	(0.508)	891168	40.0000	36.25
	105 1-methylnaphthalene	142	13.789	13.789	(1.150)	1305015	20.0000	19.73
	111 Azobenzene (1,2-DP-Hydrazine)	77	17.463	17.463	(1.098)	1461196	20.0000	18.52
	187 Total Benzofluoranthenes	252	26.492	26.492	(0.975)	4946058	40.0000	39.98
	99 Perylene	252	27.243	27.251	(1.002)	2151729	20.0000	20.37
	98 Retene	219	22.931	22.939	(0.933)	1090063	20.0000	20.65
	120 2,3,4,6-Tetrachlorophenol	232	16.706	16.706	(1.051)	452370	20.0000	21.15

Data File: /chem1/nt10.i/20130730.b/ic0730b.d
Report Date: 01-Aug-2013 15:43

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0730b.d
Lab Smp Id: IC0730B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130730.b/ABN.m
Misc Info:

Calibration Date: 30-JUL-2013
Calibration Time: 18:27

Level:
Sample Type:

Test Mode: Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	123587	61794	247174	106862	-13.53
27 Naphthalene-d8	446161	223080	892322	378798	-15.10
42 Acenaphthene-d10	267600	133800	535200	236501	-11.62
59 Phenanthrene-d10	460929	230464	921858	412257	-10.56
69 Chrysene-d12	439520	219760	879040	386460	-12.07
134 Di-n-octylphthala	593075	296538	1186150	571564	-3.63
77 Perylene-d12	451599	225800	903198	408910	-9.45

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.33	8.83	9.83	9.33	0.00
27 Naphthalene-d8	11.99	11.49	12.49	11.99	0.00
42 Acenaphthene-d10	15.90	15.40	16.40	15.90	0.00
59 Phenanthrene-d10	19.19	18.69	19.69	19.19	0.00
69 Chrysene-d12	24.60	24.10	25.10	24.59	-0.03
134 Di-n-octylphthala	25.70	25.20	26.20	25.69	-0.06
77 Perylene-d12	27.20	26.70	27.70	27.18	-0.06

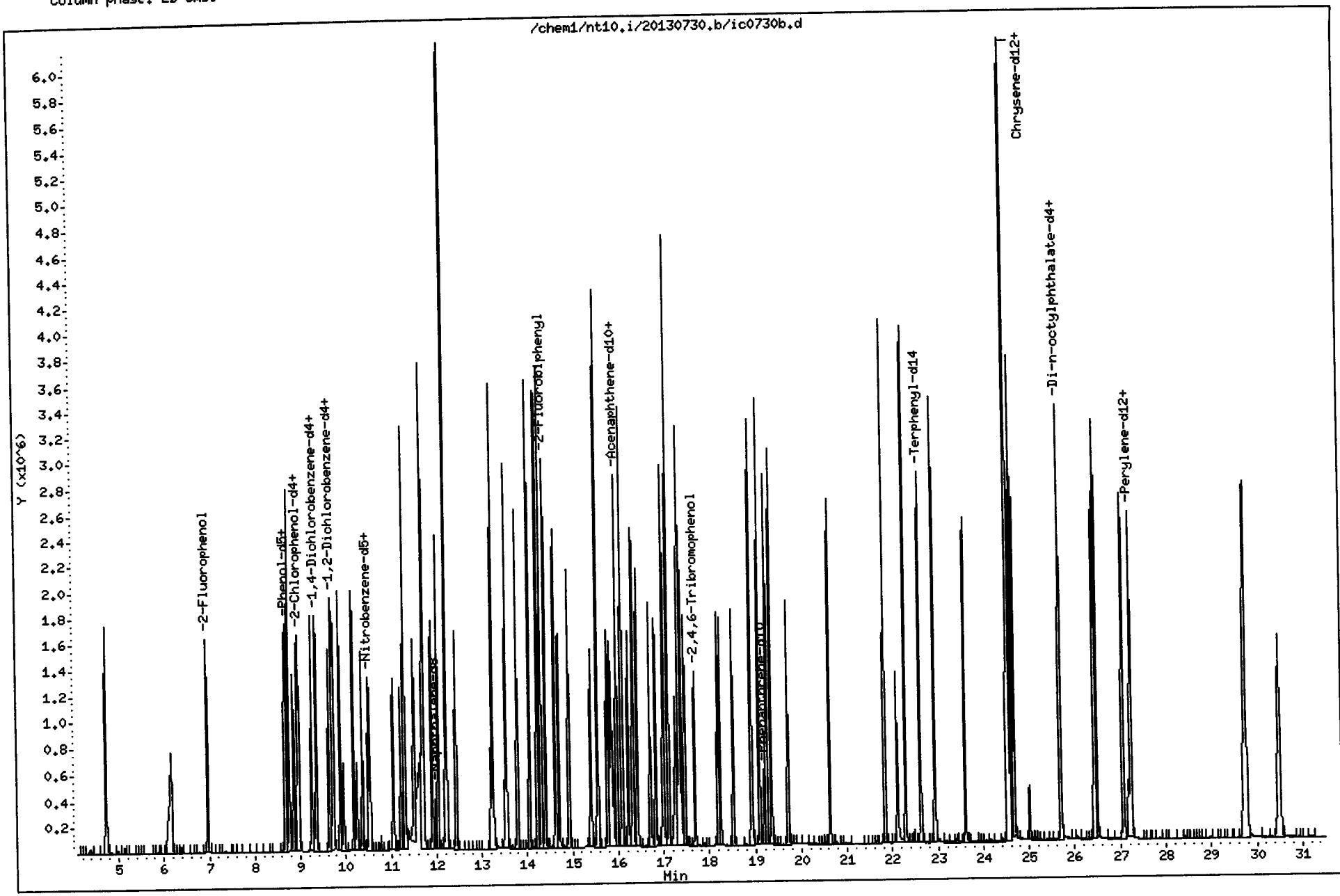
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130730.b/ic0730b.d
Date : 30-JUL-2013 12:32
Client ID:
Sample Info: IC0730B

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0730b.d

Lab ID: IC0730B, Method: ABN.m, Instrument: nt10.i, Date: 30-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130730.b/ic0730c.d
Report Date: 01-Aug-2013 15:43

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

9/11/13

Data file : /chem1/nt10.i/20130730.b/ic0730c.d
Lab Smp Id: IC0730C
Inj Date : 30-JUL-2013 13:11
Operator : VTS/YZ
Inst ID: nt10.i
Smp Info : IC0730C
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130730.b/ABN.m
Meth Date : 01-Aug-2013 11:41 yev
Quant Type: ISTD
Cal Date : 30-JUL-2013 13:11
Cal File: ic0730c.d
Als bottle: 5
Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.952	6.952	(0.746)	9807	0.20000	0.1994
$	2 Phenol-d5	99	8.644	8.652	(0.928)	11479	0.20000	0.1742
	3 Phenol	94	8.667	8.676	(0.930)	12397	0.20000	0.1870
$	5 2-Chlorophenol-d4	132	8.930	8.930	(0.958)	9293	0.20000	0.1983
	4 Bis(2-Chloroethyl)ether	93	8.845	8.845	(0.949)	10712	0.20000	0.2077
	6 2-Chlorophenol	128	8.961	8.961	(0.962)	9248	0.20000	0.1943
	7 1,3-Dichlorobenzene	146	9.247	9.248	(0.992)	10362	0.20000	0.2122
*	8 1,4-Dichlorobenzene-d4	152	9.317	9.325	(1.000)	122096	4.00000	
	9 1,4-Dichlorobenzene	146	9.356	9.356	(1.004)	10310	0.20000	0.2164
$	10 1,2-Dichlorobenzene-d4	152	9.705	9.705	(1.042)	7009	0.20000	0.2123
	12 1,2-Dichlorobenzene	146	9.736	9.737	(1.045)	9549	0.20000	0.2109
	11 Benzyl alcohol	108	9.620	9.620	(1.032)	4228	0.20000	0.1512
	14 2,2'-oxybis(1-Chloropropane)	121	9.954	9.954	(1.068)	3378	0.20000	0.2162
	13 2-Methylphenol	108	9.868	9.876	(1.059)	8775	0.20000	0.1892
	17 Hexachloroethane	117	10.365	10.373	(1.112)	4113	0.20000	0.2051
	16 N-Nitroso-di-n-propylamine	70	10.225	10.233	(1.097)	6757	0.20000	0.2097
	15 4-Methylphenol	108	10.163	10.164	(1.091)	8933	0.20000	0.1877
$	18 Nitrobenzene-d5	82	10.497	10.505	(0.876)	10500	0.20000	0.1971
	19 Nitrobenzene	77	10.536	10.544	(0.879)	9751	0.20000	0.2058
	20 Isophorone	82	11.015	11.031	(0.919)	16331	0.20000	0.1933
	21 2-Nitrophenol	139	11.216	11.216	(0.936)	4947	0.20000	0.1866
	22 2,4-Dimethylphenol	107	11.285	11.293	(0.941)	17948	0.40000	0.4025
	23 Bis(2-Chloroethoxy)methane	93	11.501	11.509	(0.959)	11886	0.20000	0.2144
	24 Benzoic acid	105	11.385	11.563	(0.950)	14598	0.80000	0.4085 (M)
	25 2,4-Dichlorophenol	162	11.709	11.709	(0.977)	12768	0.40000	0.3354
	26 1,2,4-Trichlorobenzene	180	11.902	11.910	(0.993)	8616	0.20000	0.2134
*	27 Naphthalene-d8	136	11.987	11.995	(1.000)	442732	4.00000	

Data File: /chem1/nt10.i/20130730.b/ic0730c.d
Report Date: 01-Aug-2013 15:43

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	12.033	12.041	(1.004)	25270	0.20000	0.2106
	29 4-Chloroaniline	127	12.187	12.203	(1.017)	19501	0.40000	0.3806
	30 Hexachlorobutadiene	225	12.435	12.443	(1.037)	5057	0.20000	0.2237
	31 4-Chloro-3-methylphenol	107	13.232	13.248	(1.104)	11035	0.40000	0.2928
	32 2-Methylnaphthalene	142	13.541	13.549	(1.130)	17201	0.20000	0.2028
	33 Hexachlorocyclopentadiene	237	14.052	14.060	(0.884)	12222	0.40000	0.3895
	34 2,4,6-Trichlorophenol	196	14.222	14.230	(0.895)	11564	0.40000	0.3867
	35 2,4,5-Trichlorophenol	196	14.300	14.308	(0.900)	10633	0.40000	0.3476
$	36 2-Fluorobiphenyl	172	14.400	14.408	(0.906)	21013	0.20000	0.2132
	37 2-Chloronaphthalene	162	14.609	14.625	(0.919)	16329	0.20000	0.2084
	38 2-Nitroaniline	65	14.903	14.919	(0.938)	6616	0.40000	0.3135
	39 Dimethylphthalate	163	15.383	15.399	(0.968)	18233	0.20000	0.2130
	40 Acenaphthylene	152	15.554	15.562	(0.979)	27079	0.20000	0.2131
	41 2,6-Dinitrotoluene	165	15.530	15.546	(0.977)	8043	0.40000	0.3945
*	42 Acenaphthene-d10	164	15.894	15.902	(1.000)	262249	4.00000	
	43 3-Nitroaniline	138	15.824	15.848	(0.996)	6113	0.40000	0.3549
	44 Acenaphthene	153	15.963	15.979	(1.004)	15586	0.20000	0.2068
	45 2,4-Dinitrophenol	184	16.056	16.072	(1.010)	4793	0.80000	0.2980
	46 Dibenzofuran	168	16.319	16.335	(1.027)	23144	0.20000	0.2086
	47 4-Nitrophenol	109	16.195	16.211	(1.019)	1206	0.40000	0.1223
	48 2,4-Dinitrotoluene	165	16.396	16.412	(1.032)	9043	0.40000	0.3433
	50 Diethylphthalate	149	16.969	16.984	(1.068)	17323	0.20000	0.2066
	49 Fluorene	166	17.092	17.108	(1.075)	19501	0.20000	0.2063
	51 4-Chlorophenyl-phenylether	204	17.100	17.108	(1.076)	9339	0.20000	0.2090
	52 4-Nitroaniline	138	17.201	17.224	(1.082)	7475	0.40000	0.4132 (M)
	53 4,6-Dinitro-2-methylphenol	198	17.301	17.324	(0.902)	13392	0.80000	0.6354
	54 N-Nitrosodiphenylamine	169	17.370	17.386	(0.906)	12362	0.20000	0.2176
$	55 2,4,6-Tribromophenol	330	17.671	17.687	(1.112)	2954	0.20000	0.1884
	56 4-Bromophenyl-phenylether	248	18.180	18.196	(0.948)	5447	0.20000	0.2014
	57 Hexachlorobenzene	284	18.512	18.520	(0.965)	6610	0.20000	0.2282
	58 Pentachlorophenol	266	18.907	18.915	(0.986)	7630	0.40000	0.3407
*	59 Phenanthrene-d10	188	19.178	19.194	(1.000)	449452	4.00000	
	60 Phenanthrene	178	19.232	19.248	(1.003)	25638	0.20000	0.2078
	61 Anthracene	178	19.332	19.348	(1.008)	26965	0.20000	0.2063
	62 Carbazole	167	19.704	19.720	(1.027)	21276	0.20000	0.2639
	63 Di-n-butylphthalate	149	20.625	20.640	(1.075)	26864	0.20000	0.1930
	64 Fluoranthene	202	21.831	21.847	(1.138)	30433	0.20000	0.2010
	65 Pyrene	202	22.280	22.296	(0.906)	31456	0.20000	0.2006
$	66 Terphenyl-d14	244	22.613	22.629	(0.920)	17259	0.20000	0.2047
	67 Butylbenzylphthalate	149	23.604	23.620	(0.960)	10966	0.20000	0.1968
	68 Benzo(a)anthracene	228	24.549	24.565	(0.999)	30076	0.20000	0.2109
*	69 Chrysene-d12	240	24.580	24.596	(1.000)	437006	4.00000	
	70 3,3'-Dichlorobenzidine	252	24.518	24.541	(0.997)	27035	0.40000	0.4951
	71 Chrysene	228	24.618	24.642	(1.002)	26189	0.20000	0.2112
	72 bis(2-Ethylhexyl)phthalate	149	24.680	24.696	(0.961)	13857	0.20000	0.2018
*	134 Di-n-octylphthalate-d4	153	25.679	25.703	(1.000)	531885	4.00000	
	73 Di-n-octylphthalate	149	25.695	25.710	(1.001)	28347	0.20000	0.2171

Data File: /chem1/nt10.i/20130730.b/ic0730c.d
Report Date: 01-Aug-2013 15:43

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
		====	==	======	======	========	=======	=======
74	Benzo(b)fluoranthene	252	26.422	26.454	(0.973)	25983	0.20000	0.1924
75	Benzo(k)fluoranthene	252	26.469	26.492	(0.974)	29117	0.20000	0.2041
76	Benzo(a)pyrene	252	27.057	27.081	(0.996)	23498	0.20000	0.1972
* 77	Perylene-d12	264	27.166	27.197	(1.000)	437657	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	29.708	29.755	(1.094)	26831	0.20000	0.1918
79	Dibenzo(a,h)anthracene	278	29.731	29.778	(1.094)	21467	0.20000	0.1958
80	Benzo(g,h,i)perylene	276	30.438	30.501	(1.120)	24026	0.20000	0.1984
90	N-Nitrosodimethylamine	74	4.689	4.674	(0.503)	13115	0.40000	0.3918
91	Aniline	93	8.745	8.745	(0.939)	30155	0.20000	0.2080
93	Benzidine	184	22.110	22.126	(0.900)	20038	0.40000	0.7325
103	Pyridine	79	4.743	4.690	(0.509)	11164	0.40000	0.3974
105	1-methylnaphthalene	142	13.781	13.789	(1.150)	16067	0.20000	0.2078
111	Azobenzene (1,2-DP-Hydrazine)	77	17.447	17.463	(1.098)	18203	0.20000	0.2081
187	Total Benzofluoranthenes	252	26.422	26.492	(0.973)	53707	0.40000	0.4056
99	Perylene	252	27.220	27.251	(1.002)	22432	0.20000	0.1984
98	Retene	219	22.923	22.939	(0.933)	12134	0.20000	0.2032
120	2,3,4,6-Tetrachlorophenol	232	16.690	16.706	(1.050)	4249	0.20000	0.1792

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0730c.d
Lab Smp Id: IC0730C
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130730.b/ABN.m
Misc Info:

Calibration Date: 30-JUL-2013
Calibration Time: 18:27

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	123587	61794	247174	122096	-1.21
27 Naphthalene-d8	446161	223080	892322	442732	-0.77
42 Acenaphthene-d10	267600	133800	535200	262249	-2.00
59 Phenanthrene-d10	460929	230464	921858	449452	-2.49
69 Chrysene-d12	439520	219760	879040	437006	-0.57
134 Di-n-octylphthala	593075	296538	1186150	531885	-10.32
77 Perylene-d12	451599	225800	903198	437657	-3.09

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.33	8.83	9.83	9.32	-0.09
27 Naphthalene-d8	11.99	11.49	12.49	11.99	-0.07
42 Acenaphthene-d10	15.90	15.40	16.40	15.89	-0.05
59 Phenanthrene-d10	19.19	18.69	19.69	19.18	-0.08
69 Chrysene-d12	24.60	24.10	25.10	24.58	-0.06
134 Di-n-octylphthala	25.70	25.20	26.20	25.68	-0.09
77 Perylene-d12	27.20	26.70	27.70	27.17	-0.12

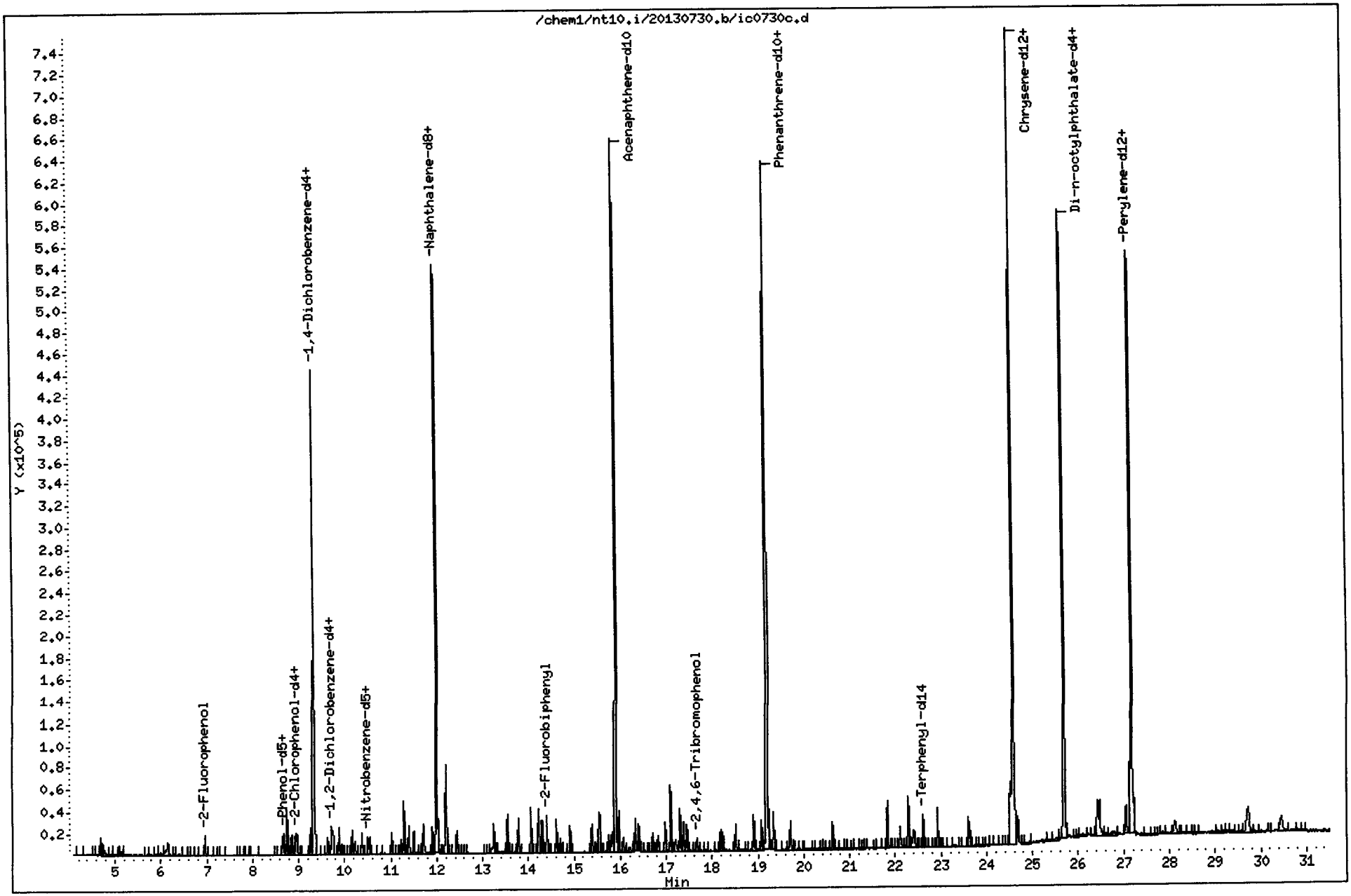
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130730.b/ic0730c.d
Date : 30-JUL-2013 13:11
Client ID:
Sample Info: IC0730C

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0730c.d

Lab ID: IC0730C, Method: ABN.m, Instrument: nt10.i, Date: 30-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130730.b/ic0730d.d
Report Date: 01-Aug-2013 15:43

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 8/1/13

Data file : /chem1/nt10.i/20130730.b/ic0730d.d
Lab Smp Id: IC0730D
Inj Date : 30-JUL-2013 13:49
Operator : VTS/YZ
Inst ID: nt10.i
Smp Info : IC0730D
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130730.b/ABN.m
Meth Date : 01-Aug-2013 11:41 yev
Quant Type: ISTD
Cal Date : 30-JUL-2013 13:49
Cal File: ic0730d.d
Als bottle: 6
Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.952	6.952	(0.746)	49333	1.00000	1.002
$	2 Phenol-d5	99	8.645	8.652	(0.928)	63666	1.00000	0.9647
	3 Phenol	94	8.668	8.676	(0.930)	65708	1.00000	0.9898
$	5 2-Chlorophenol-d4	132	8.930	8.930	(0.958)	46250	1.00000	0.9856
	4 Bis(2-Chloroethyl)ether	93	8.845	8.845	(0.949)	52360	1.00000	1.014
	6 2-Chlorophenol	128	8.961	8.961	(0.962)	47182	1.00000	0.9901
	7 1,3-Dichlorobenzene	146	9.248	9.248	(0.992)	49806	1.00000	1.019
*	8 1,4-Dichlorobenzene-d4	152	9.317	9.325	(1.000)	122254	4.00000	
	9 1,4-Dichlorobenzene	146	9.356	9.356	(1.004)	48536	1.00000	1.017
$	10 1,2-Dichlorobenzene-d4	152	9.705	9.705	(1.042)	32693	1.00000	0.9889
	12 1,2-Dichlorobenzene	146	9.736	9.737	(1.045)	46125	1.00000	1.017
	11 Benzyl alcohol	108	9.620	9.620	(1.032)	27287	1.00000	0.9746
	14 2,2'-oxybis(1-Chloropropane)	121	9.946	9.954	(1.067)	15785	1.00000	1.009
	13 2-Methylphenol	108	9.868	9.876	(1.059)	47004	1.00000	1.012
	17 Hexachloroethane	117	10.365	10.373	(1.112)	20647	1.00000	1.028
	16 N-Nitroso-di-n-propylamine	70	10.218	10.233	(1.097)	31976	1.00000	0.9912
	15 4-Methylphenol	108	10.164	10.164	(1.091)	46045	1.00000	0.9661
$	18 Nitrobenzene-d5	82	10.497	10.505	(0.876)	52349	1.00000	0.9811
	19 Nitrobenzene	77	10.536	10.544	(0.879)	46106	1.00000	0.9714
	20 Isophorone	82	11.016	11.031	(0.919)	82052	1.00000	0.9695
	21 2-Nitrophenol	139	11.216	11.216	(0.936)	26000	1.00000	0.9793
	22 2,4-Dimethylphenol	107	11.285	11.293	(0.941)	90521	2.00000	2.027
	23 Bis(2-Chloroethoxy)methane	93	11.501	11.509	(0.959)	56729	1.00000	1.022
	24 Benzoic acid	105	11.439	11.563	(0.954)	132386	4.00000	3.698
	25 2,4-Dichlorophenol	162	11.701	11.709	(0.976)	81094	2.00000	2.127
	26 1,2,4-Trichlorobenzene	180	11.902	11.910	(0.993)	40581	1.00000	1.003
*	27 Naphthalene-d8	136	11.987	11.995	(1.000)	443446	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	12.033	12.041	(1.004)	120786	1.00000	1.005
	29 4-Chloroaniline	127	12.188	12.203	(1.017)	101602	2.00000	1.980
	30 Hexachlorobutadiene	225	12.435	12.443	(1.037)	22649	1.00000	1.000
	31 4-Chloro-3-methylphenol	107	13.240	13.248	(1.105)	74023	2.00000	1.961
	32 2-Methylnaphthalene	142	13.542	13.549	(1.130)	84061	1.00000	0.9894
	33 Hexachlorocyclopentadiene	237	14.052	14.060	(0.884)	63167	2.00000	2.013
	34 2,4,6-Trichlorophenol	196	14.223	14.230	(0.895)	60962	2.00000	2.038
	35 2,4,5-Trichlorophenol	196	14.300	14.308	(0.900)	59856	2.00000	1.957
$	36 2-Fluorobiphenyl	172	14.401	14.408	(0.906)	101663	1.00000	1.031
	37 2-Chloronaphthalene	162	14.610	14.625	(0.919)	80391	1.00000	1.026
	38 2-Nitroaniline	65	14.904	14.919	(0.938)	44246	2.00000	2.096
	39 Dimethylphthalate	163	15.391	15.399	(0.968)	89609	1.00000	1.046
	40 Acenaphthylene	152	15.554	15.562	(0.979)	132618	1.00000	1.044
	41 2,6-Dinitrotoluene	165	15.531	15.546	(0.977)	41898	2.00000	2.055
*	42 Acenaphthene-d10	164	15.894	15.902	(1.000)	262295	4.00000	
	43 3-Nitroaniline	138	15.832	15.848	(0.996)	39907	2.00000	2.317
	44 Acenaphthene	153	15.964	15.979	(1.004)	75825	1.00000	1.006
	45 2,4-Dinitrophenol	184	16.056	16.072	(1.010)	54910	4.00000	3.413
	46 Dibenzofuran	168	16.319	16.335	(1.027)	112319	1.00000	1.012
	47 4-Nitrophenol	109	16.188	16.211	(1.018)	16838	2.00000	1.707
	48 2,4-Dinitrotoluene	165	16.397	16.412	(1.032)	54256	2.00000	2.059
	50 Diethylphthalate	149	16.969	16.984	(1.068)	87479	1.00000	1.043
	49 Fluorene	166	17.093	17.108	(1.075)	93811	1.00000	0.9921
	51 4-Chlorophenyl-phenylether	204	17.100	17.108	(1.076)	46407	1.00000	1.038
	52 4-Nitroaniline	138	17.201	17.224	(1.082)	34859	2.00000	1.927
	53 4,6-Dinitro-2-methylphenol	198	17.301	17.324	(0.902)	87623	4.00000	4.109
	54 N-Nitrosodiphenylamine	169	17.370	17.386	(0.905)	61553	1.00000	1.071
$	55 2,4,6-Tribromophenol	330	17.671	17.687	(1.112)	15746	1.00000	1.004
	56 4-Bromophenyl-phenylether	248	18.188	18.196	(0.948)	28236	1.00000	1.032
	57 Hexachlorobenzene	284	18.512	18.520	(0.965)	30499	1.00000	1.041
	58 Pentachlorophenol	266	18.907	18.915	(0.985)	45545	2.00000	2.010
*	59 Phenanthrene-d10	188	19.186	19.194	(1.000)	454721	4.00000	
	60 Phenanthrene	178	19.232	19.248	(1.002)	126050	1.00000	1.010
	61 Anthracene	178	19.333	19.348	(1.008)	131345	1.00000	0.9932
	62 Carbazole	167	19.704	19.720	(1.027)	98613	1.00000	1.209
	63 Di-n-butylphthalate	149	20.625	20.640	(1.075)	139728	1.00000	0.9925
	64 Fluoranthene	202	21.832	21.847	(1.138)	152104	1.00000	0.9931
	65 Pyrene	202	22.281	22.296	(0.906)	156085	1.00000	1.001
$	66 Terphenyl-d14	244	22.613	22.629	(0.920)	85953	1.00000	1.025
	67 Butylbenzylphthalate	149	23.604	23.620	(0.960)	55577	1.00000	1.003
	68 Benzo(a)anthracene	228	24.549	24.565	(0.999)	144093	1.00000	1.016
*	69 Chrysene-d12	240	24.580	24.596	(1.000)	434542	4.00000	
	70 3,3'-Dichlorobenzidine	252	24.518	24.541	(0.997)	101638	2.00000	1.872
	71 Chrysene	228	24.627	24.642	(1.002)	125352	1.00000	1.017
	72 bis(2-Ethylhexyl)phthalate	149	24.681	24.696	(0.961)	73018	1.00000	1.053
*	134 Di-n-octylphthalate-d4	153	25.679	25.703	(1.000)	537223	4.00000	
	73 Di-n-octylphthalate	149	25.695	25.710	(1.001)	134949	1.00000	1.023

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	26.430	26.454	(0.973)	129937	1.00000	0.9623
75	Benzo(k)fluoranthene	252	26.469	26.492	(0.974)	152542	1.00000	1.069
76	Benzo(a)pyrene	252	27.058	27.081	(0.996)	119182	1.00000	1.000
* 77	Perylene-d12	264	27.166	27.197	(1.000)	437624	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	29.708	29.755	(1.094)	140860	1.00000	1.007
79	Dibenzo(a,h)anthracene	278	29.732	29.778	(1.094)	111125	1.00000	1.014
80	Benzo(g,h,i)perylene	276	30.454	30.501	(1.121)	121524	1.00000	1.004
90	N-Nitrosodimethylamine	74	4.690	4.674	(0.503)	67403	2.00000	2.011
91	Aniline	93	8.745	8.745	(0.939)	148500	1.00000	1.023
93	Benzidine	184	22.110	22.126	(0.900)	79342	2.00000	2.917
103	Pyridine	79	4.721	4.690	(0.507)	57314	2.00000	2.038
105	1-methylnaphthalene	142	13.782	13.789	(1.150)	76144	1.00000	0.9834
111	Azobenzene (1,2-DP-Hydrazine)	77	17.448	17.463	(1.098)	90826	1.00000	1.038
187	Total Benzofluoranthenes	252	26.469	26.492	(0.974)	268029	2.00000	2.025
99	Perylene	252	27.220	27.251	(1.002)	115490	1.00000	1.021
98	Retene	219	22.923	22.939	(0.933)	59477	1.00000	1.002
120	2,3,4,6-Tetrachlorophenol	232	16.690	16.706	(1.050)	23935	1.00000	1.009

Data File: /chem1/nt10.i/20130730.b/ic0730d.d
Report Date: 01-Aug-2013 15:43

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0730d.d
Lab Smp Id: IC0730D
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130730.b/ABN.m
Misc Info:

Calibration Date: 30-JUL-2013
Calibration Time: 18:27

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	123587	61794	247174	122254	-1.08
27 Naphthalene-d8	446161	223080	892322	443446	-0.61
42 Acenaphthene-d10	267600	133800	535200	262295	-1.98
59 Phenanthrene-d10	460929	230464	921858	454721	-1.35
69 Chrysene-d12	439520	219760	879040	434542	-1.13
134 Di-n-octylphthala	593075	296538	1186150	537223	-9.42
77 Perylene-d12	451599	225800	903198	437624	-3.09

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.33	8.83	9.83	9.32	-0.08
27 Naphthalene-d8	11.99	11.49	12.49	11.99	-0.06
42 Acenaphthene-d10	15.90	15.40	16.40	15.89	-0.05
59 Phenanthrene-d10	19.19	18.69	19.69	19.19	-0.04
69 Chrysene-d12	24.60	24.10	25.10	24.58	-0.06
134 Di-n-octylphthala	25.70	25.20	26.20	25.68	-0.09
77 Perylene-d12	27.20	26.70	27.70	27.17	-0.11

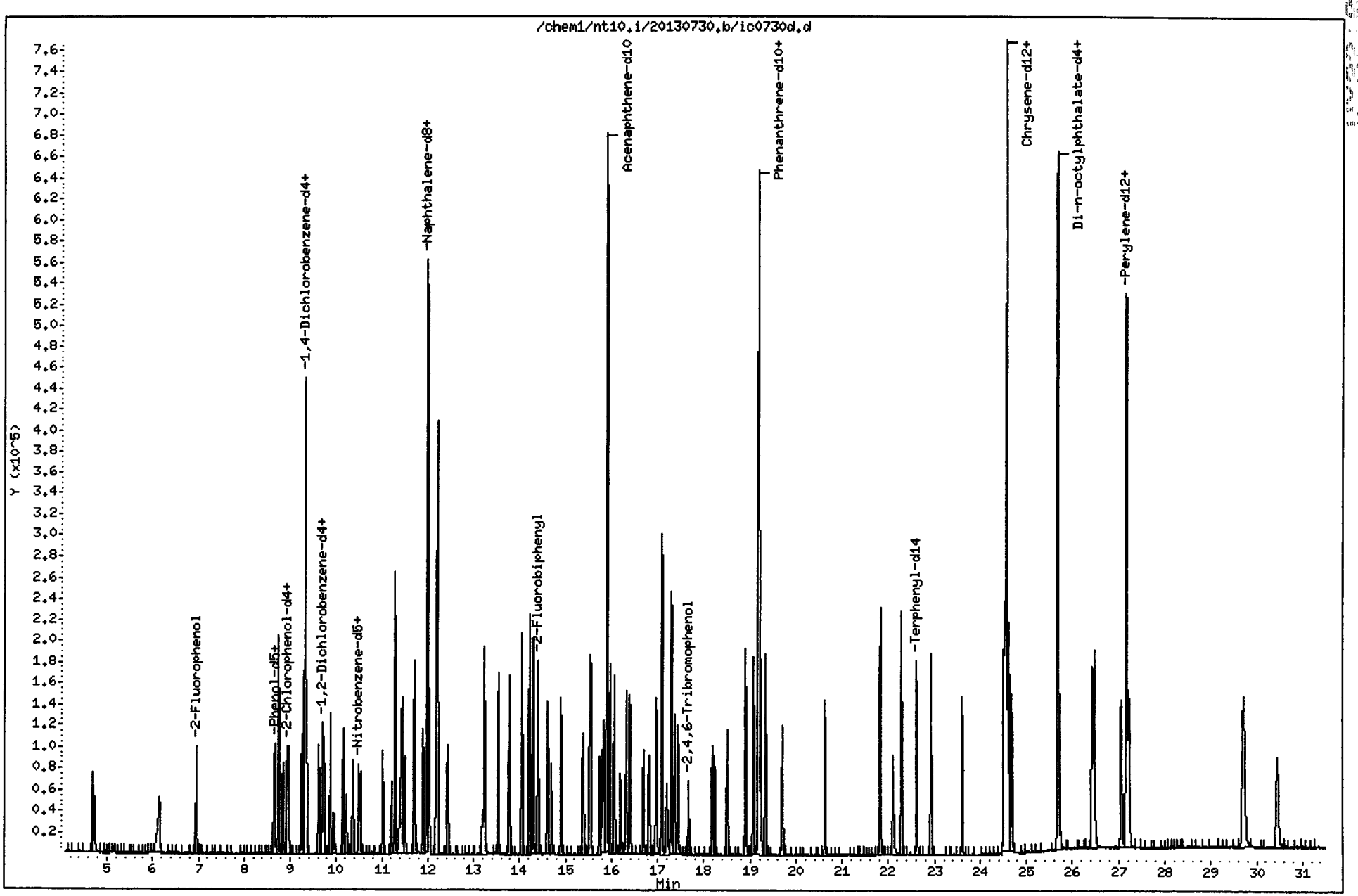
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130730.b/ic0730d.d
Date : 30-JUL-2013 13:49
Client ID:
Sample Info: IC0730D

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0730d.d

Lab ID: IC0730D, Method: ABN.m, Instrument: nt10.i, Date: 30-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130730.b/ic0730e.d
Report Date: 01-Aug-2013 15:43

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D YZ 8/1/13

Data file : /chem1/nt10.i/20130730.b/ic0730e.d
Lab Smp Id: IC0730E
Inj Date : 30-JUL-2013 14:27 Inst ID: nt10.i
Operator : VTS/YZ
Smp Info : IC0730E
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130730.b/ABN.m
Meth Date : 01-Aug-2013 11:41 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 14:27 Cal File: ic0730e.d
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.960	6.952	(0.746)	450668	10.0000	10.37
$	2 Phenol-d5	99	8.660	8.652	(0.929)	637778	10.0000	10.96
	3 Phenol	94	8.683	8.676	(0.931)	621916	10.0000	10.62
$	5 2-Chlorophenol-d4	132	8.938	8.930	(0.958)	430466	10.0000	10.40
	4 Bis(2-Chloroethyl)ether	93	8.853	8.845	(0.949)	450335	10.0000	9.884
	6 2-Chlorophenol	128	8.961	8.961	(0.961)	429901	10.0000	10.23
	7 1,3-Dichlorobenzene	146	9.248	9.248	(0.992)	425876	10.0000	9.874
*	8 1,4-Dichlorobenzene-d4	152	9.325	9.325	(1.000)	107846	4.00000	
	9 1,4-Dichlorobenzene	146	9.356	9.356	(1.003)	420904	10.0000	10.00
$	10 1,2-Dichlorobenzene-d4	152	9.705	9.705	(1.041)	290425	10.0000	9.959
	12 1,2-Dichlorobenzene	146	9.736	9.737	(1.044)	399314	10.0000	9.983
	11 Benzyl alcohol	108	9.628	9.620	(1.032)	283094	10.0000	11.46
	14 2,2'-oxybis(1-Chloropropane)	121	9.954	9.954	(1.067)	137794	10.0000	9.987
	13 2-Methylphenol	108	9.876	9.876	(1.059)	426276	10.0000	10.41
	17 Hexachloroethane	117	10.365	10.373	(1.112)	178746	10.0000	10.09
	16 N-Nitroso-di-n-propylamine	70	10.233	10.233	(1.097)	289964	10.0000	10.19
	15 4-Methylphenol	108	10.171	10.164	(1.091)	444907	10.0000	10.58
$	18 Nitrobenzene-d5	82	10.505	10.505	(0.876)	493973	10.0000	10.33
	19 Nitrobenzene	77	10.544	10.544	(0.879)	430567	10.0000	10.12
	20 Isophorone	82	11.039	11.031	(0.920)	796026	10.0000	10.49
	21 2-Nitrophenol	139	11.216	11.216	(0.935)	252145	10.0000	10.59
	22 2,4-Dimethylphenol	107	11.293	11.293	(0.942)	793706	20.0000	19.82
	23 Bis(2-Chloroethoxy)methane	93	11.501	11.509	(0.959)	490624	10.0000	9.855
	24 Benzoic acid	105	11.648	11.563	(0.971)	1520740	40.0000	47.39
	25 2,4-Dichlorophenol	162	11.709	11.709	(0.976)	731987	20.0000	21.41
	26 1,2,4-Trichlorobenzene	180	11.902	11.910	(0.992)	349582	10.0000	9.642
*	27 Naphthalene-d8	136	11.995	11.995	(1.000)	397562	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	12.041	12.041	(1.004)	1071767	10.0000	9.949
	29 4-Chloroaniline	127	12.203	12.203	(1.017)	1017063	20.0000	22.10
	30 Hexachlorobutadiene	225	12.443	12.443	(1.037)	199585	10.0000	9.834
	31 4-Chloro-3-methylphenol	107	13.248	13.248	(1.104)	752875	20.0000	22.24
	32 2-Methylnaphthalene	142	13.542	13.549	(1.129)	776433	10.0000	10.19
	33 Hexachlorocyclopentadiene	237	14.052	14.060	(0.884)	606756	20.0000	20.28
	34 2,4,6-Trichlorophenol	196	14.223	14.230	(0.894)	578038	20.0000	20.27
	35 2,4,5-Trichlorophenol	196	14.300	14.308	(0.899)	620966	20.0000	21.29
$	36 2-Fluorobiphenyl	172	14.401	14.408	(0.906)	922554	10.0000	9.819
	37 2-Chloronaphthalene	162	14.617	14.625	(0.919)	734190	10.0000	9.828
	38 2-Nitroaniline	65	14.919	14.919	(0.938)	433479	20.0000	21.54
	39 Dimethylphthalate	163	15.399	15.399	(0.968)	783233	10.0000	9.595
	40 Acenaphthylene	152	15.562	15.562	(0.979)	1152780	10.0000	9.516
	41 2,6-Dinitrotoluene	165	15.546	15.546	(0.978)	391353	20.0000	20.13
*	42 Acenaphthene-d10	164	15.902	15.902	(1.000)	250042	4.00000	
	43 3-Nitroaniline	138	15.848	15.848	(0.997)	341202	20.0000	20.78
	44 Acenaphthene	153	15.971	15.979	(1.004)	719593	10.0000	10.01
	45 2,4-Dinitrophenol	184	16.080	16.072	(1.011)	720016	40.0000	46.95
	46 Dibenzofuran	168	16.327	16.335	(1.027)	1047762	10.0000	9.904
	47 4-Nitrophenol	109	16.211	16.211	(1.019)	217009	20.0000	23.08
	48 2,4-Dinitrotoluene	165	16.420	16.412	(1.033)	529924	20.0000	21.10
	50 Diethylphthalate	149	16.992	16.984	(1.069)	773871	10.0000	9.680
	49 Fluorene	166	17.100	17.108	(1.075)	935500	10.0000	10.38
	51 4-Chlorophenyl-phenylether	204	17.100	17.108	(1.075)	408067	10.0000	9.579
	52 4-Nitroaniline	138	17.232	17.224	(1.084)	360920	20.0000	20.93
	53 4,6-Dinitro-2-methylphenol	198	17.332	17.324	(0.903)	879056	40.0000	42.49
	54 N-Nitrosodiphenylamine	169	17.386	17.386	(0.906)	508264	10.0000	9.115
$	55 2,4,6-Tribromophenol	330	17.679	17.687	(1.112)	154017	10.0000	10.30
	56 4-Bromophenyl-phenylether	248	18.188	18.196	(0.948)	257765	10.0000	9.713
	57 Hexachlorobenzene	284	18.520	18.520	(0.965)	264748	10.0000	9.312
	58 Pentachlorophenol	266	18.915	18.915	(0.985)	445712	20.0000	20.28
*	59 Phenanthrene-d10	188	19.194	19.194	(1.000)	441107	4.00000	
	60 Phenanthrene	178	19.248	19.248	(1.003)	1175502	10.0000	9.709
	61 Anthracene	178	19.348	19.348	(1.008)	1263455	10.0000	9.848
	62 Carbazole	167	19.712	19.720	(1.027)	629094	10.0000	7.951
	63 Di-n-butylphthalate	149	20.625	20.640	(1.075)	1405539	10.0000	10.29
	64 Fluoranthene	202	21.840	21.847	(1.138)	1500766	10.0000	10.10
	65 Pyrene	202	22.288	22.296	(0.906)	1516538	10.0000	10.02
$	66 Terphenyl-d14	244	22.613	22.629	(0.920)	790502	10.0000	9.714
	67 Butylbenzylphthalate	149	23.612	23.620	(0.960)	548592	10.0000	10.20
	68 Benzo(a)anthracene	228	24.557	24.565	(0.999)	1328416	10.0000	9.653
*	69 Chrysene-d12	240	24.588	24.596	(1.000)	421826	4.00000	
	70 3,3'-Dichlorobenzidine	252	24.526	24.541	(0.997)	1110900	20.0000	21.08
	71 Chrysene	228	24.634	24.642	(1.002)	1170123	10.0000	9.778
	72 bis(2-Ethylhexyl)phthalate	149	24.681	24.696	(0.961)	749830	10.0000	9.745
*	134 Di-n-octylphthalate-d4	153	25.687	25.703	(1.000)	595963	4.00000	
	73 Di-n-octylphthalate	149	25.695	25.710	(1.000)	1383595	10.0000	9.459

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	26.438	26.454	(0.973)	1399114	10.0000	10.40
	75 Benzo(k)fluoranthene	252	26.484	26.492	(0.974)	1369928	10.0000	9.642
	76 Benzo(a)pyrene	252	27.065	27.081	(0.996)	1198844	10.0000	10.10
*	77 Perylene-d12	264	27.181	27.197	(1.000)	435911	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	29.732	29.755	(1.094)	1433075	10.0000	10.29
	79 Dibenzo(a,h)anthracene	278	29.755	29.778	(1.095)	1113560	10.0000	10.20
	80 Benzo(g,h,i)perylene	276	30.485	30.501	(1.122)	1222838	10.0000	10.14
	90 N-Nitrosodimethylamine	74	4.697	4.674	(0.504)	619023	20.0000	20.94
	91 Aniline	93	8.753	8.745	(0.939)	1288694	10.0000	10.06
	93 Benzidine	184	22.110	22.126	(0.899)	377518	20.0000	14.30
	103 Pyridine	79	4.705	4.690	(0.505)	500806	20.0000	20.18
	105 1-methylnaphthalene	142	13.781	13.789	(1.149)	703769	10.0000	10.14
	111 Azobenzene (1,2-DP-Hydrazine)	77	17.455	17.463	(1.098)	802453	10.0000	9.620
	187 Total Benzofluoranthenes	252	26.484	26.492	(0.974)	2636688	20.0000	19.99
	99 Perylene	252	27.236	27.251	(1.002)	1123948	10.0000	9.980
	98 Retene	219	22.923	22.939	(0.932)	572770	10.0000	9.939
	120 2,3,4,6-Tetrachlorophenol	232	16.698	16.706	(1.050)	240109	10.0000	10.62

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0730e.d
Lab Smp Id: IC0730E
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130730.b/ABN.m
Misc Info:

Calibration Date: 30-JUL-2013
Calibration Time: 18:27

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	123587	61794	247174	107846	-12.74
27 Naphthalene-d8	446161	223080	892322	397562	-10.89
42 Acenaphthene-d10	267600	133800	535200	250042	-6.56
59 Phenanthrene-d10	460929	230464	921858	441107	-4.30
69 Chrysene-d12	439520	219760	879040	421826	-4.03
134 Di-n-octylphthala	593075	296538	1186150	595963	0.49
77 Perylene-d12	451599	225800	903198	435911	-3.47

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.33	8.83	9.83	9.33	0.00
27 Naphthalene-d8	11.99	11.49	12.49	11.99	0.00
42 Acenaphthene-d10	15.90	15.40	16.40	15.90	0.00
59 Phenanthrene-d10	19.19	18.69	19.69	19.19	0.00
69 Chrysene-d12	24.60	24.10	25.10	24.59	-0.03
134 Di-n-octylphthala	25.70	25.20	26.20	25.69	-0.06
77 Perylene-d12	27.20	26.70	27.70	27.18	-0.06

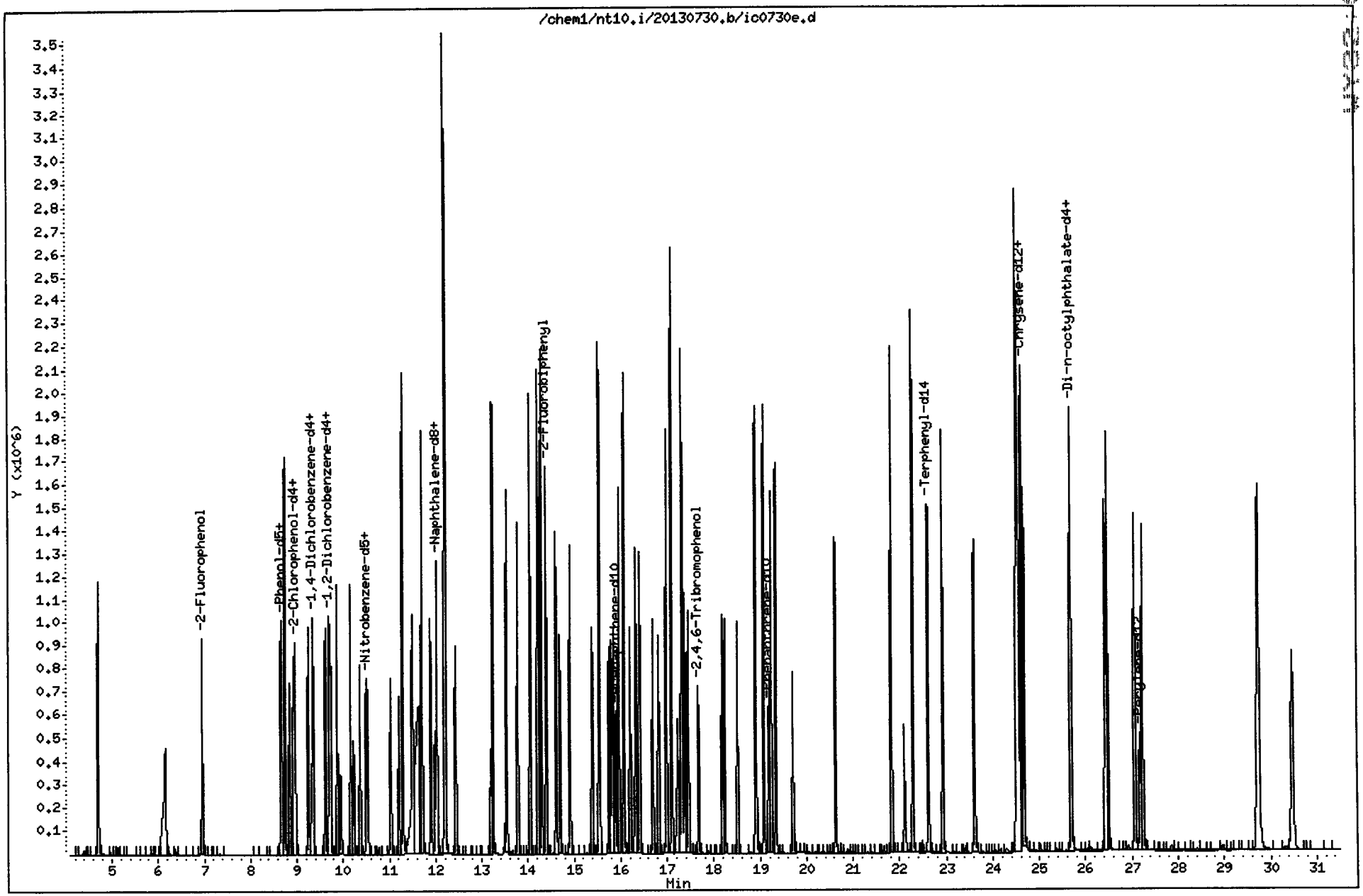
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130730.b/ic0730e.d
Date : 30-JUL-2013 14:27
Client ID:
Sample Info: IC0730E

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0730e.d

Lab ID: IC0730E, Method: ABN.m, Instrument: nt10.i, Date: 30-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 8/1/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130730.b/ic0730g.d
Lab Smp Id: IC0730G
Inj Date : 30-JUL-2013 15:43
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0730G
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130730.b/ABN.m
Meth Date : 01-Aug-2013 11:41 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 15:43 Cal File: ic0730g.d
Als bottle: 9 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.952	6.952	(0.746)	120094	2.50000	2.550
$	2	Phenol-d5	99	8.644	8.652	(0.928)	161914	2.50000	2.566
	3	Phenol	94	8.675	8.676	(0.931)	167538	2.50000	2.639
$	5	2-Chlorophenol-d4	132	8.930	8.930	(0.958)	113399	2.50000	2.527
	4	Bis(2-Chloroethyl)ether	93	8.845	8.845	(0.949)	125277	2.50000	2.537
	6	2-Chlorophenol	128	8.961	8.961	(0.962)	113937	2.50000	2.501
	7	1,3-Dichlorobenzene	146	9.247	9.248	(0.992)	115637	2.50000	2.474
*	8	1,4-Dichlorobenzene-d4	152	9.317	9.325	(1.000)	116891	4.00000	
	9	1,4-Dichlorobenzene	146	9.348	9.356	(1.003)	111827	2.50000	2.451
$	10	1,2-Dichlorobenzene-d4	152	9.705	9.705	(1.042)	79513	2.50000	2.516
	12	1,2-Dichlorobenzene	146	9.736	9.737	(1.045)	109919	2.50000	2.535
	11	Benzyl alcohol	108	9.620	9.620	(1.032)	72892	2.50000	2.723
	14	2,2'-oxybis(1-Chloropropane)	121	9.946	9.954	(1.067)	37522	2.50000	2.509
	13	2-Methylphenol	108	9.868	9.876	(1.059)	115500	2.50000	2.602
	17	Hexachloroethane	117	10.365	10.373	(1.112)	47485	2.50000	2.473
	16	N-Nitroso-di-n-propylamine	70	10.225	10.233	(1.097)	78895	2.50000	2.558
	15	4-Methylphenol	108	10.163	10.164	(1.091)	118691	2.50000	2.605
$	18	Nitrobenzene-d5	82	10.497	10.505	(0.875)	129593	2.50000	2.571
	19	Nitrobenzene	77	10.536	10.544	(0.878)	116789	2.50000	2.605
	20	Isophorone	82	11.023	11.031	(0.919)	205794	2.50000	2.574
	21	2-Nitrophenol	139	11.216	11.216	(0.935)	65891	2.50000	2.627
	22	2,4-Dimethylphenol	107	11.285	11.293	(0.941)	220693	5.00000	5.231
	23	Bis(2-Chloroethoxy)methane	93	11.501	11.509	(0.959)	131730	2.50000	2.511
	24	Benzoic acid	105	11.501	11.563	(0.959)	363206	10.0000	10.74
	25	2,4-Dichlorophenol	162	11.701	11.709	(0.976)	179266	5.00000	4.977
	26	1,2,4-Trichlorobenzene	180	11.902	11.910	(0.992)	94503	2.50000	2.474
*	27	Naphthalene-d8	136	11.994	11.995	(1.000)	418876	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	12.033	12.041	(1.003)	286029	2.50000	2.520
	29 4-Chloroaniline	127	12.187	12.203	(1.016)	248246	5.00000	5.121
	30 Hexachlorobutadiene	225	12.435	12.443	(1.037)	53047	2.50000	2.481
	31 4-Chloro-3-methylphenol	107	13.240	13.248	(1.104)	195798	5.00000	5.490
	32 2-Methylnaphthalene	142	13.541	13.549	(1.129)	202188	2.50000	2.519
	33 Hexachlorocyclopentadiene	237	14.052	14.060	(0.884)	152834	5.00000	4.957
	34 2,4,6-Trichlorophenol	196	14.222	14.230	(0.895)	149674	5.00000	5.094
	35 2,4,5-Trichlorophenol	196	14.300	14.308	(0.900)	158054	5.00000	5.259
$	36 2-Fluorobiphenyl	172	14.400	14.408	(0.906)	238534	2.50000	2.464
	37 2-Chloronaphthalene	162	14.617	14.625	(0.920)	191746	2.50000	2.491
	38 2-Nitroaniline	65	14.903	14.919	(0.938)	110712	5.00000	5.340
	39 Dimethylphthalate	163	15.391	15.399	(0.968)	213276	2.50000	2.535
	40 Acenaphthylene	152	15.554	15.562	(0.979)	314556	2.50000	2.520
	41 2,6-Dinitrotoluene	165	15.530	15.546	(0.977)	102284	5.00000	5.106
*	42 Acenaphthene-d10	164	15.894	15.902	(1.000)	257669	4.00000	
	43 3-Nitroaniline	138	15.832	15.848	(0.996)	87108	5.00000	5.147
	44 Acenaphthene	153	15.964	15.979	(1.004)	184391	2.50000	2.490
	45 2,4-Dinitrophenol	184	16.056	16.072	(1.010)	163156	10.0000	10.32
	46 Dibenzofuran	168	16.319	16.335	(1.027)	273904	2.50000	2.512
	47 4-Nitrophenol	109	16.195	16.211	(1.019)	51424	5.00000	5.307
	48 2,4-Dinitrotoluene	165	16.404	16.412	(1.032)	134858	5.00000	5.211
	50 Diethylphthalate	149	16.976	16.984	(1.068)	209488	2.50000	2.543
	49 Fluorene	166	17.092	17.108	(1.075)	229111	2.50000	2.466
	51 4-Chlorophenyl-phenylether	204	17.100	17.108	(1.076)	110725	2.50000	2.522
	52 4-Nitroaniline	138	17.208	17.224	(1.083)	88997	5.00000	5.007
	53 4,6-Dinitro-2-methylphenol	198	17.309	17.324	(0.902)	224233	10.0000	10.89
	54 N-Nitrosodiphenylamine	169	17.370	17.386	(0.905)	143301	2.50000	2.582
$	55 2,4,6-Tribromophenol	330	17.671	17.687	(1.112)	38509	2.50000	2.500
	56 4-Bromophenyl-phenylether	248	18.188	18.196	(0.948)	67468	2.50000	2.554
	57 Hexachlorobenzene	284	18.512	18.520	(0.965)	70536	2.50000	2.492
	58 Pentachlorophenol	266	18.907	18.915	(0.985)	112594	5.00000	5.146
*	59 Phenanthrene-d10	188	19.186	19.194	(1.000)	439102	4.00000	
	60 Phenanthrene	178	19.232	19.248	(1.002)	308533	2.50000	2.560
	61 Anthracene	178	19.333	19.348	(1.008)	327665	2.50000	2.566
	62 Carbazole	167	19.704	19.720	(1.027)	161039	2.50000	2.045
	63 Di-n-butylphthalate	149	20.625	20.640	(1.075)	350995	2.50000	2.582
	64 Fluoranthene	202	21.832	21.847	(1.138)	375052	2.50000	2.536
	65 Pyrene	202	22.280	22.296	(0.906)	388736	2.50000	2.538
$	66 Terphenyl-d14	244	22.613	22.629	(0.920)	208850	2.50000	2.536
	67 Butylbenzylphthalate	149	23.604	23.620	(0.960)	142771	2.50000	2.623
	68 Benzo(a)anthracene	228	24.549	24.565	(0.999)	350968	2.50000	2.520
*	69 Chrysene-d12	240	24.580	24.596	(1.000)	426854	4.00000	
	70 3,3'-Dichlorobenzidine	252	24.526	24.541	(0.998)	211755	5.00000	3.971
	71 Chrysene	228	24.626	24.642	(1.002)	299843	2.50000	2.476
	72 bis(2-Ethylhexyl)phthalate	149	24.680	24.696	(0.961)	187546	2.50000	2.594
*	134 Di-n-octylphthalate-d4	153	25.687	25.703	(1.000)	559964	4.00000	
	73 Di-n-octylphthalate	149	25.695	25.710	(1.000)	341101	2.50000	2.482

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	26.430	26.454	(0.973)	342591	2.50000	2.519
75	Benzo(k)fluoranthene	252	26.477	26.492	(0.974)	355939	2.50000	2.478
76	Benzo(a)pyrene	252	27.057	27.081	(0.996)	302441	2.50000	2.520
* 77	Perylene-d12	264	27.173	27.197	(1.000)	440779	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	29.716	29.755	(1.094)	356749	2.50000	2.533
79	Dibenzo(a,h)anthracene	278	29.739	29.778	(1.094)	280631	2.50000	2.541
80	Benzo(g,h,i)perylene	276	30.462	30.501	(1.121)	305975	2.50000	2.509
90	N-Nitrosodimethylamine	74	4.674	4.674	(0.502)	165884	5.00000	5.176
91	Aniline	93	8.745	8.745	(0.939)	355928	2.50000	2.565
93	Benzidine	184	22.110	22.126	(0.900)	108009	5.00000	4.042
103	Pyridine	79	4.697	4.690	(0.504)	138509	5.00000	5.150
105	1-methylnaphthalene	142	13.781	13.789	(1.149)	182477	2.50000	2.495
111	Azobenzene (1,2-DP-Hydrazine)	77	17.447	17.463	(1.098)	220669	2.50000	2.567
187	Total Benzofluoranthenes	252	26.477	26.492	(0.974)	666770	5.00000	5.000
99	Perylene	252	27.228	27.251	(1.002)	284261	2.50000	2.496
98	Retene	219	22.923	22.939	(0.933)	146510	2.50000	2.512
120	2,3,4,6-Tetrachlorophenol	232	16.690	16.706	(1.050)	59487	2.50000	2.553

Data File: /chem1/nt10.i/20130730.b/ic0730g.d
Report Date: 01-Aug-2013 15:43

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0730g.d
Lab Smp Id: IC0730G
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130730.b/ABN.m
Misc Info:

Calibration Date: 30-JUL-2013
Calibration Time: 18:27

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	123587	61794	247174	116891	-5.42
27 Naphthalene-d8	446161	223080	892322	418876	-6.12
42 Acenaphthene-d10	267600	133800	535200	257669	-3.71
59 Phenanthrene-d10	460929	230464	921858	439102	-4.74
69 Chrysene-d12	439520	219760	879040	426854	-2.88
134 Di-n-octylphthala	593075	296538	1186150	559964	-5.58
77 Perylene-d12	451599	225800	903198	440779	-2.40

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.33	8.83	9.83	9.32	-0.09
27 Naphthalene-d8	11.99	11.49	12.49	11.99	0.00
42 Acenaphthene-d10	15.90	15.40	16.40	15.89	-0.05
59 Phenanthrene-d10	19.19	18.69	19.69	19.19	-0.04
69 Chrysene-d12	24.60	24.10	25.10	24.58	-0.06
134 Di-n-octylphthala	25.70	25.20	26.20	25.69	-0.06
77 Perylene-d12	27.20	26.70	27.70	27.17	-0.09

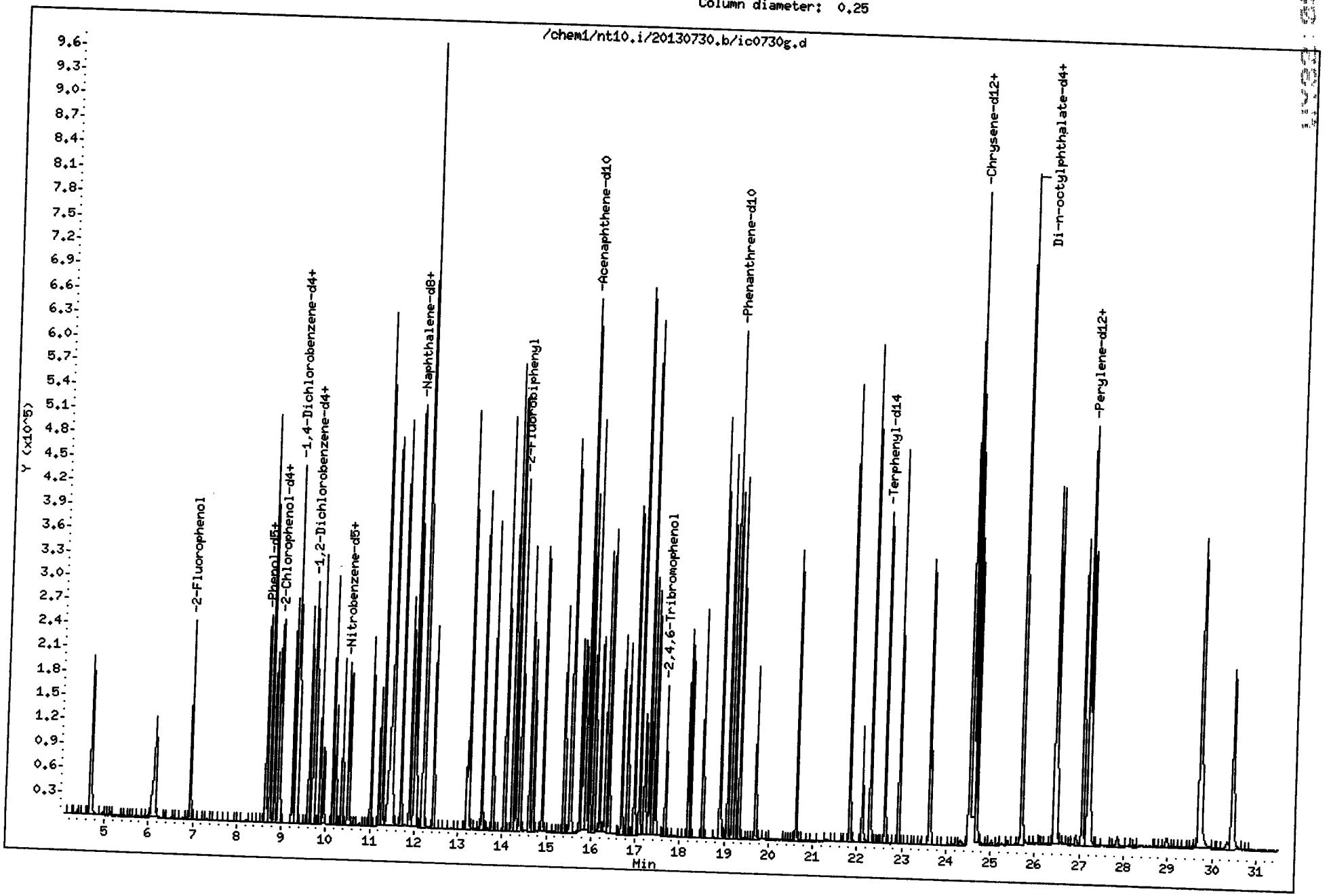
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130730.b/ic0730g.d
Date : 30-JUL-2013 15:43
Client ID:
Sample Info: IC0730C

Instrument: nt10.i

Column phase: ZB-5msi

Operator: VTS/YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0730g.d

Lab ID: IC0730G, Method: ABN.m, Instrument: nt10.i, Date: 30-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

8/1/13

Data file : /chem1/nt10.i/20130730.b/ic0730i.d
Lab Smp Id: IC0730I
Inj Date : 30-JUL-2013 16:59
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0730I
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130730.b/ABN.m
Meth Date : 01-Aug-2013 11:41 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 11 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.952	6.952	(0.746)	24804	0.50000	0.5091
$	2 Phenol-d5	99	8.644	8.652	(0.928)	33246	0.50000	0.5093
	3 Phenol	94	8.668	8.676	(0.930)	34504	0.50000	0.5254
$	5 2-Chlorophenol-d4	132	8.930	8.930	(0.958)	23958	0.50000	0.5161
	4 Bis(2-Chloroethyl)ether	93	8.845	8.845	(0.949)	28371	0.50000	0.5553
	6 2-Chlorophenol	128	8.961	8.961	(0.962)	24256	0.50000	0.5146
	7 1,3-Dichlorobenzene	146	9.247	9.248	(0.992)	25787	0.50000	0.5332
*	8 1,4-Dichlorobenzene-d4	152	9.317	9.325	(1.000)	120932	4.00000	
	9 1,4-Dichlorobenzene	146	9.356	9.356	(1.004)	24570	0.50000	0.5206
$	10 1,2-Dichlorobenzene-d4	152	9.705	9.705	(1.042)	17387	0.50000	0.5317
	12 1,2-Dichlorobenzene	146	9.736	9.737	(1.045)	23428	0.50000	0.5224
	11 Benzyl alcohol	108	9.620	9.620	(1.032)	13778	0.50000	0.4975
	14 2,2'-oxybis(1-Chloropropane)	121	9.946	9.954	(1.067)	8057	0.50000	0.5207
	13 2-Methylphenol	108	9.868	9.876	(1.059)	23848	0.50000	0.5193
	17 Hexachloroethane	117	10.365	10.373	(1.112)	10633	0.50000	0.5354
	16 N-Nitroso-di-n-propylamine	70	10.225	10.233	(1.097)	16683	0.50000	0.5228
	15 4-Methylphenol	108	10.163	10.164	(1.091)	24732	0.50000	0.5246
$	18 Nitrobenzene-d5	82	10.497	10.505	(0.876)	27455	0.50000	0.5163
	19 Nitrobenzene	77	10.536	10.544	(0.879)	24836	0.50000	0.5251
	20 Isophorone	82	11.023	11.031	(0.920)	42708	0.50000	0.5064
	21 2-Nitrophenol	139	11.216	11.216	(0.936)	12105	0.50000	0.4575
	22 2,4-Dimethylphenol	107	11.285	11.293	(0.941)	45891	1.00000	1.031
	23 Bis(2-Chloroethoxy)methane	93	11.501	11.509	(0.959)	28949	0.50000	0.5232
	24 Benzoic acid	105	11.416	11.563	(0.952)	50217	2.00000	1.408
	25 2,4-Dichlorophenol	162	11.701	11.709	(0.976)	36904	1.00000	0.9712
	26 1,2,4-Trichlorobenzene	180	11.902	11.910	(0.993)	20802	0.50000	0.5162
*	27 Naphthalene-d8	136	11.987	11.995	(1.000)	441904	4.00000	

Data File: /chem1/nt10.i/20130730.b/ic0730i.d
Report Date: 01-Aug-2013 15:43

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	12.033	12.041	(1.004)	62211	0.50000	0.5195
	29 4-Chloroaniline	127	12.187	12.203	(1.017)	49668	1.00000	0.9711
	30 Hexachlorobutadiene	225	12.435	12.443	(1.037)	11521	0.50000	0.5107
	31 4-Chloro-3-methylphenol	107	13.240	13.248	(1.105)	36775	1.00000	0.9775
	32 2-Methylnaphthalene	142	13.541	13.549	(1.130)	42808	0.50000	0.5056
	33 Hexachlorocyclopentadiene	237	14.052	14.060	(0.884)	30778	1.00000	0.9679
	34 2,4,6-Trichlorophenol	196	14.222	14.230	(0.895)	29367	1.00000	0.9691
	35 2,4,5-Trichlorophenol	196	14.300	14.308	(0.900)	29413	1.00000	0.9490
$	36 2-Fluorobiphenyl	172	14.400	14.408	(0.906)	50095	0.50000	0.5017
	37 2-Chloronaphthalene	162	14.617	14.625	(0.920)	40509	0.50000	0.5102
	38 2-Nitroaniline	65	14.903	14.919	(0.938)	19626	1.00000	0.9178
	39 Dimethylphthalate	163	15.391	15.399	(0.968)	44526	0.50000	0.5132
	40 Acenaphthylene	152	15.554	15.562	(0.979)	67418	0.50000	0.5236
	41 2,6-Dinitrotoluene	165	15.530	15.546	(0.977)	20444	1.00000	0.9896
*	42 Acenaphthene-d10	164	15.894	15.902	(1.000)	265742	4.00000	
	43 3-Nitroaniline	138	15.832	15.848	(0.996)	18020	1.00000	1.032
	44 Acenaphthene	153	15.971	15.979	(1.005)	38166	0.50000	0.4997
	45 2,4-Dinitrophenol	184	16.056	16.072	(1.010)	20068	2.00000	1.231
	46 Dibenzofuran	168	16.319	16.335	(1.027)	56683	0.50000	0.5041
	47 4-Nitrophenol	109	16.195	16.211	(1.019)	7256	1.00000	0.7261 (M)
	48 2,4-Dinitrotoluene	165	16.404	16.412	(1.032)	25390	1.00000	0.9512
	50 Diethylphthalate	149	16.969	16.984	(1.068)	44089	0.50000	0.5189
	49 Fluorene	166	17.092	17.108	(1.075)	47058	0.50000	0.4912
	51 4-Chlorophenyl-phenylether	204	17.100	17.108	(1.076)	23870	0.50000	0.5272
	52 4-Nitroaniline	138	17.201	17.224	(1.082)	16711	1.00000	0.9116
	53 4,6-Dinitro-2-methylphenol	198	17.309	17.324	(0.902)	39235	2.00000	1.811
	54 N-Nitrosodiphenylamine	169	17.370	17.386	(0.905)	30095	0.50000	0.5153
$	55 2,4,6-Tribromophenol	330	17.671	17.687	(1.112)	7573	0.50000	0.4767
	56 4-Bromophenyl-phenylether	248	18.188	18.196	(0.948)	13605	0.50000	0.4894
	57 Hexachlorobenzene	284	18.512	18.520	(0.965)	14938	0.50000	0.5016
	58 Pentachlorophenol	266	18.907	18.915	(0.985)	20548	1.00000	0.8925
*	59 Phenanthrene-d10	188	19.186	19.194	(1.000)	462057	4.00000	
	60 Phenanthrene	178	19.240	19.248	(1.003)	63050	0.50000	0.4972
	61 Anthracene	178	19.340	19.348	(1.008)	66272	0.50000	0.4932
	62 Carbazole	167	19.704	19.720	(1.027)	51481	0.50000	0.6212
	63 Di-n-butylphthalate	149	20.632	20.640	(1.075)	66402	0.50000	0.4642
	64 Fluoranthene	202	21.839	21.847	(1.138)	76194	0.50000	0.4896
	65 Pyrene	202	22.288	22.296	(0.907)	77653	0.50000	0.4794
$	66 Terphenyl-d14	244	22.621	22.629	(0.920)	43046	0.50000	0.4944
	67 Butylbenzylphthalate	149	23.612	23.620	(0.961)	25581	0.50000	0.4445
	68 Benzo(a)anthracene	228	24.557	24.565	(0.999)	74031	0.50000	0.5027
*	69 Chrysene-d12	240	24.580	24.596	(1.000)	451362	4.00000	
	70 3,3'-Dichlorobenzidine	252	24.526	24.541	(0.998)	53189	1.00000	0.9432
	71 Chrysene	228	24.626	24.642	(1.002)	63708	0.50000	0.4975
	72 bis(2-Ethylhexyl)phthalate	149	24.688	24.696	(0.961)	33153	0.50000	0.4785
*	134 Di-n-octylphthalate-d4	153	25.687	25.703	(1.000)	536669	4.00000	
	73 Di-n-octylphthalate	149	25.695	25.710	(1.000)	68312	0.50000	0.5186

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	26.430	26.454	(0.972)	63508	0.50000	0.4587
	75 Benzo(k)fluoranthene	252	26.476	26.492	(0.974)	77374	0.50000	0.5291
	76 Benzo(a)pyrene	252	27.057	27.081	(0.995)	58729	0.50000	0.4807
*	77 Perylene-d12	264	27.181	27.197	(1.000)	448689	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	29.724	29.755	(1.094)	67218	0.50000	0.4688
	79 Dibenzo(a,h)anthracene	278	29.747	29.778	(1.094)	52128	0.50000	0.4637
	80 Benzo(g,h,i)perylene	276	30.469	30.501	(1.121)	58845	0.50000	0.4740
	90 N-Nitrosodimethylamine	74	4.690	4.674	(0.503)	34637	1.00000	1.045
	91 Aniline	93	8.745	8.745	(0.939)	75616	0.50000	0.5266
	93 Benzidine	184	22.110	22.126	(0.900)	35957	1.00000	1.273
	103 Pyridine	79	4.728	4.690	(0.507)	30766	1.00000	1.106
	105 1-methylnaphthalene	142	13.781	13.789	(1.150)	39141	0.50000	0.5073
	111 Azobenzene (1,2-DP-Hydrazine)	77	17.447	17.463	(1.098)	47804	0.50000	0.5392
	187 Total Benzofluoranthenes	252	26.476	26.492	(0.974)	133641	1.00000	0.9846
	99 Perylene	252	27.228	27.251	(1.002)	57750	0.50000	0.4982
	98 Retene	219	22.923	22.939	(0.933)	29518	0.50000	0.4787
	120 2,3,4,6-Tetrachlorophenol	232	16.698	16.706	(1.051)	11015	0.50000	0.4584

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem1/nt10.i/20130730.b/ic0730i.d
Report Date: 01-Aug-2013 15:43

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0730i.d
Lab Smp Id: IC0730I
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130730.b/ABN.m
Misc Info:

Calibration Date: 30-JUL-2013
Calibration Time: 18:27

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	123587	61794	247174	120932	-2.15
27 Naphthalene-d8	446161	223080	892322	441904	-0.95
42 Acenaphthene-d10	267600	133800	535200	265742	-0.69
59 Phenanthrene-d10	460929	230464	921858	462057	0.24
69 Chrysene-d12	439520	219760	879040	451362	2.69
134 Di-n-octylphthala	593075	296538	1186150	536669	-9.51
77 Perylene-d12	451599	225800	903198	448689	-0.64

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.33	8.83	9.83	9.32	-0.09
27 Naphthalene-d8	11.99	11.49	12.49	11.99	-0.07
42 Acenaphthene-d10	15.90	15.40	16.40	15.89	-0.05
59 Phenanthrene-d10	19.19	18.69	19.69	19.19	-0.04
69 Chrysene-d12	24.60	24.10	25.10	24.58	-0.06
134 Di-n-octylphthala	25.70	25.20	26.20	25.69	-0.06
77 Perylene-d12	27.20	26.70	27.70	27.18	-0.06

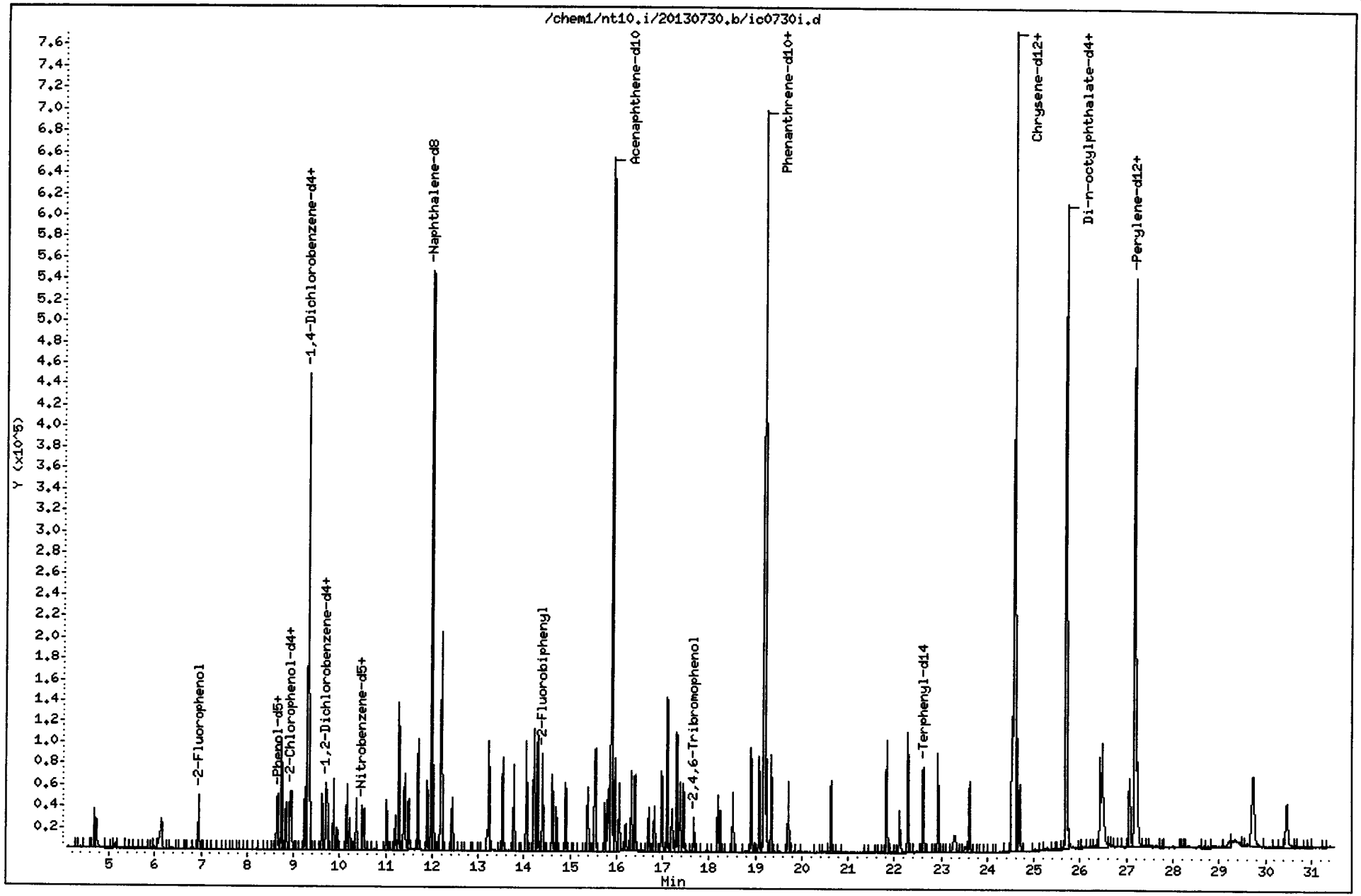
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130730.b/ic0730i.d
Date : 30-JUL-2013 16:59
Client ID:
Sample Info: IC0730I

Instrument: nt10.i

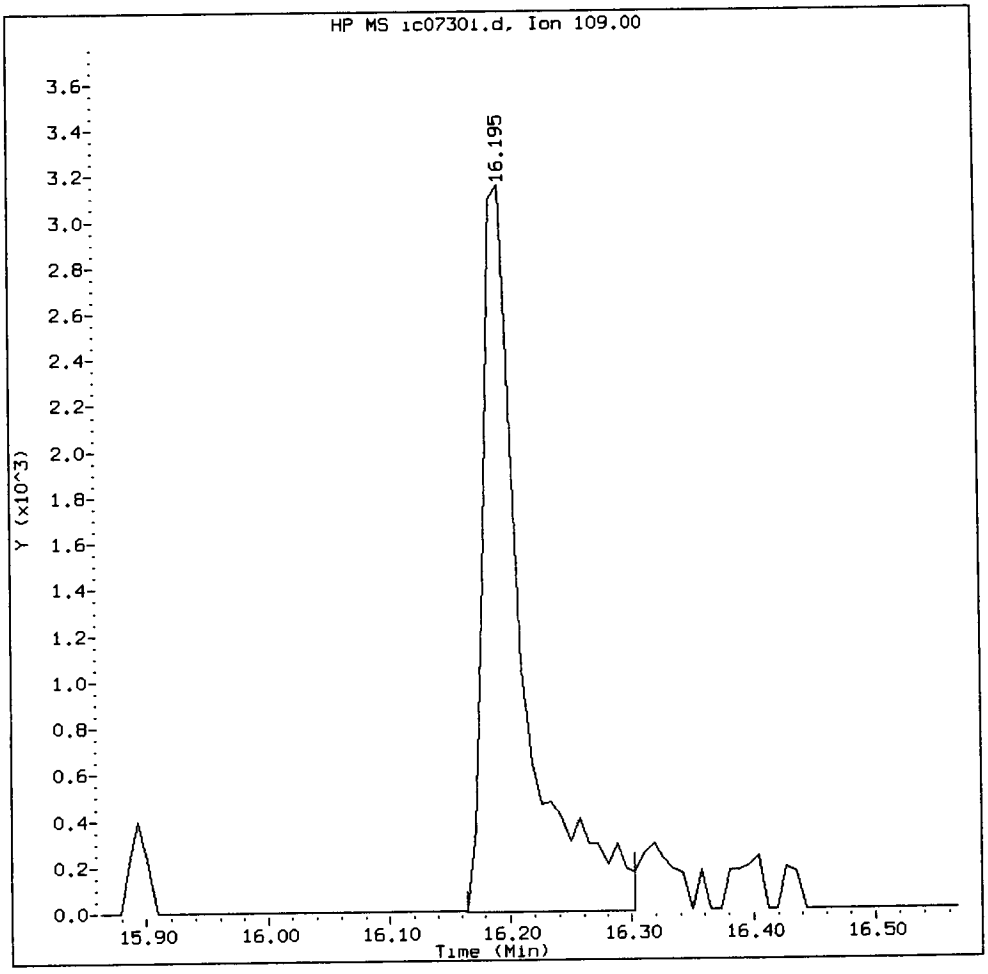
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0730I, /chem1/nt10.i/20130730.b/ic0730i.d

4-Nitrophenol Amount: 0.73 Area: 7256



MANUAL INTEGRATION for 4-Nitrophenol

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 8/11/13

CO-ELUTION SUMMARY FOR FILE - ic0730i.d

Lab ID: IC0730I, Method: ABN.m, Instrument: nt10.i, Date: 30-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Y.Z 8/11/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130730.b/icv0730.d
Lab Smp Id: ICV0730
Inj Date : 30-JUL-2013 17:38
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : ICV0730
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130730.b/ABN.m
Meth Date : 01-Aug-2013 11:41 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 12 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
$	1 2-Fluorophenol	112	Compound Not Detected.					
$	2 Phenol-d5	99	Compound Not Detected.					
	3 Phenol	94	8.675	8.676	(0.931)	329936	4.80720	4.807
$	5 2-Chlorophenol-d4	132	Compound Not Detected.					
	4 Bis(2-Chloroethyl)ether	93	8.845	8.845	(0.949)	229385	4.29577	4.296
	6 2-Chlorophenol	128	8.961	8.961	(0.962)	217835	4.42172	4.422
	7 1,3-Dichlorobenzene	146	9.248	9.248	(0.992)	222819	4.40790	4.408
*	8 1,4-Dichlorobenzene-d4	152	9.317	9.325	(1.000)	126392	4.00000	
	9 1,4-Dichlorobenzene	146	9.356	9.356	(1.004)	214034	4.33931	4.339
$	10 1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	9.736	9.737	(1.045)	208598	4.45001	4.450
	11 Benzyl alcohol	108	9.620	9.620	(1.032)	132294	4.57021	4.570
	14 2,2'-oxybis(1-Chloropropane)	121	9.954	9.954	(1.068)	68939	4.26325	4.263
	13 2-Methylphenol	108	9.876	9.876	(1.060)	231036	4.81326	4.813
	17 Hexachloroethane	117	10.373	10.373	(1.113)	90434	4.35655	4.357
	16 N-Nitroso-di-n-propylamine	70	10.225	10.233	(1.097)	141940	4.25584	4.256
	15 4-Methylphenol	108	10.163	10.164	(1.091)	243142	4.93446	4.934
$	18 Nitrobenzene-d5	82	Compound Not Detected.					
	19 Nitrobenzene	77	10.536	10.544	(0.878)	220762	4.65457	4.655
	20 Isophorone	82	11.023	11.031	(0.919)	416938	4.93001	4.930
	21 2-Nitrophenol	139	11.216	11.216	(0.935)	124203	4.68136	4.681
	22 2,4-Dimethylphenol	107	11.293	11.293	(0.942)	423334	9.48540	9.485
	23 Bis(2-Chloroethoxy)methane	93	11.501	11.509	(0.959)	242453	4.36944	4.369
	24 Benzoic acid	105	11.563	11.563	(0.964)	788835	22.0520	22.05
	25 2,4-Dichlorophenol	162	11.709	11.709	(0.976)	385116	10.1070	10.11
	26 1,2,4-Trichlorobenzene	180	11.902	11.910	(0.992)	180205	4.45927	4.459
*	27 Naphthalene-d8	136	11.995	11.995	(1.000)	443133	4.00000	

Data File: /chem1/nt10.i/20130730.b/icv0730.d
Report Date: 01-Aug-2013 15:43

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	28 Naphthalene	128	12.041	12.041	(1.004)	532358	4.43352	4.434
	29 4-Chloroaniline	127	12.195	12.203	(1.017)	484096	9.43893	9.439
	30 Hexachlorobutadiene	225	12.443	12.443	(1.037)	103823	4.58942	4.589
	31 4-Chloro-3-methylphenol	107	13.240	13.248	(1.104)	394977	10.4692	10.47
	32 2-Methylnaphthalene	142	13.542	13.549	(1.129)	367746	4.33162	4.332
	33 Hexachlorocyclopentadiene	237	14.060	14.060	(0.884)	289817	9.00352	9.004
	34 2,4,6-Trichlorophenol	196	14.223	14.230	(0.894)	294868	9.61266	9.613
	35 2,4,5-Trichlorophenol	196	14.300	14.308	(0.899)	324313	10.3369	10.34
$	36 2-Fluorobiphenyl	172	14.308	14.408	(0.900)	455	0.00450	0.004503(R)
	37 2-Chloronaphthalene	162	14.617	14.625	(0.919)	366940	4.56581	4.566
	38 2-Nitroaniline	65	14.911	14.919	(0.938)	207695	9.59498	9.595
	39 Dimethylphthalate	163	15.391	15.399	(0.968)	384139	4.37419	4.374
	40 Acenaphthylene	152	15.562	15.562	(0.979)	575538	4.41601	4.416
	41 2,6-Dinitrotoluene	165	15.538	15.546	(0.977)	193646	9.25979	9.260
*	42 Acenaphthene-d10	164	15.902	15.902	(1.000)	269002	4.00000	
	43 3-Nitroaniline	138	15.840	15.848	(0.996)	192241	10.8810	10.88
	44 Acenaphthene	153	15.971	15.979	(1.004)	352562	4.56010	4.560
	45 2,4-Dinitrophenol	184	16.072	16.072	(1.011)	362009	19.3824	19.38
	46 Dibenzofuran	168	16.327	16.335	(1.027)	492253	4.32498	4.325
	47 4-Nitrophenol	109	16.203	16.211	(1.019)	109490	10.8240	10.82
	48 2,4-Dinitrotoluene	165	16.412	16.412	(1.032)	255576	9.45872	9.459
	50 Diethylphthalate	149	16.984	16.984	(1.068)	362968	4.22034	4.220
	49 Fluorene	166	17.100	17.108	(1.075)	421273	4.34416	4.344
	51 4-Chlorophenyl-phenylether	204	17.100	17.108	(1.075)	197736	4.31437	4.314
	52 4-Nitroaniline	138	17.216	17.224	(1.083)	190203	10.2505	10.25
	53 4,6-Dinitro-2-methylphenol	198	17.316	17.324	(0.903)	460535	21.2832	21.28
	54 N-Nitrosodiphenylamine	169	17.378	17.386	(0.906)	250488	4.29462	4.295
$	55 2,4,6-Tribromophenol	330	Compound Not Detected.					
	56 4-Bromophenyl-phenylether	248	18.188	18.196	(0.948)	122105	4.39870	4.399
	57 Hexachlorobenzene	284	18.520	18.520	(0.965)	135004	4.53937	4.539
	58 Pentachlorophenol	266	18.915	18.915	(0.986)	223409	9.71789	9.718
*	59 Phenanthrene-d10	188	19.186	19.194	(1.000)	461406	4.00000	
	60 Phenanthrene	178	19.240	19.248	(1.003)	585234	4.62114	4.621
	61 Anthracene	178	19.340	19.348	(1.008)	610690	4.55079	4.551
	62 Carbazole	167	19.712	19.720	(1.027)	391051	6.27472	6.275
	63 Di-n-butylphthalate	149	20.633	20.640	(1.075)	653250	4.57274	4.573
	64 Fluoranthene	202	21.839	21.847	(1.138)	715891	4.60636	4.606
	65 Pyrene	202	22.288	22.296	(0.906)	736749	4.73897	4.739
$	66 Terphenyl-d14	244	Compound Not Detected.					
	67 Butylbenzylphthalate	149	23.612	23.620	(0.960)	266264	4.82077	4.821
	68 Benzo(a)anthracene	228	24.557	24.565	(0.999)	657051	4.64902	4.649
*	69 Chrysene-d12	240	24.588	24.596	(1.000)	433195	4.00000	
	70 3,3'-Dichlorobenzidine	252	24.534	24.541	(0.998)	383917	7.09333	7.093
	71 Chrysene	228	24.634	24.642	(1.002)	572596	4.65920	4.659
	72 bis(2-Ethylhexyl)phthalate	149	24.688	24.696	(0.961)	344095	4.58419	4.584
*	134 Di-n-octylphthalate-d4	153	25.695	25.703	(1.000)	581378	4.00000	
	73 Di-n-octylphthalate	149	25.702	25.710	(1.000)	612173	4.29009	4.290

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
74	Benzo(b)fluoranthene	252	26.446	26.454	(0.973)	628793	4.51141	4.511
75	Benzo(k)fluoranthene	252	26.484	26.492	(0.974)	705157	4.78929	4.789
76	Benzo(a)pyrene	252	27.073	27.081	(0.996)	562548	4.57328	4.573
* 77	Perylene-d12	264	27.189	27.197	(1.000)	451738	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	29.739	29.755	(1.094)	691267	4.78833	4.788
79	Dibenzo(a,h)anthracene	278	29.755	29.778	(1.094)	538512	4.75807	4.758
80	Benzo(g,h,i)perylene	276	30.493	30.501	(1.121)	584208	4.67358	4.674
90	N-Nitrosodimethylamine	74	4.682	4.674	(0.502)	310658	8.96511	8.965
91	Aniline	93	8.745	8.745	(0.939)	608383	4.05421	4.054
93	Benzidine	184	22.118	22.126	(0.900)	306077	15.4602	15.46 (R)
103	Pyridine	79	4.697	4.690	(0.504)	250658	8.61948	8.619
105	1-methylnaphthalene	142	13.781	13.789	(1.149)	342126	4.42176	4.422
111	Azobenzene (1,2-DP-Hydrazine)	77	17.455	17.463	(1.098)	423615	4.72051	4.721
187	Total Benzofluoranthenes	252	26.484	26.492	(0.974)	1270806	9.29904	9.299
99	Perylene	252	27.243	27.251	(1.002)	606850	5.19961	5.200
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	16.690	16.706	(1.050)	572	0.02353	0.02353 (R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /chem1/nt10.i/20130730.b/icv0730.d
Report Date: 01-Aug-2013 15:43

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: icv0730.d
Lab Smp Id: ICV0730
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130730.b/ABN.m
Misc Info:

Calibration Date: 30-JUL-2013
Calibration Time: 18:27

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	123587	61794	247174	126392	2.27
27 Naphthalene-d8	446161	223080	892322	443133	-0.68
42 Acenaphthene-d10	267600	133800	535200	269002	0.52
59 Phenanthrene-d10	460929	230464	921858	461406	0.10
69 Chrysene-d12	439520	219760	879040	433195	-1.44
134 Di-n-octylphthala	593075	296538	1186150	581378	-1.97
77 Perylene-d12	451599	225800	903198	451738	0.03

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.33	8.83	9.83	9.32	-0.08
27 Naphthalene-d8	11.99	11.49	12.49	11.99	0.00
42 Acenaphthene-d10	15.90	15.40	16.40	15.90	0.00
59 Phenanthrene-d10	19.19	18.69	19.69	19.19	-0.04
69 Chrysene-d12	24.60	24.10	25.10	24.59	-0.03
134 Di-n-octylphthala	25.70	25.20	26.20	25.69	-0.03
77 Perylene-d12	27.20	26.70	27.70	27.19	-0.03

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20130730
Sample Matrix: NONE Fraction: SV
Lab Smp Id: ICV0730
Level: Operator: VTS/YZ
Data Type: MS DATA SampleType: LCS
SpikeList File: ICVS.spk Quant Type: ISTD
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130730.b/ABN.m
Misc Info:

SPIKE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
3 Phenol	5.000	4.807	96.14	
4 Bis(2-Chloroethyl)	5.000	4.296	85.92	
6 2-Chlorophenol	5.000	4.422	88.43	
7 1,3-Dichlorobenzen	5.000	4.408	88.16	
9 1,4-Dichlorobenzen	5.000	4.339	86.79	
11 Benzyl alcohol	5.000	4.570	91.40	
12 1,2-Dichlorobenzen	5.000	4.450	89.00	
13 2-Methylphenol	5.000	4.813	96.27	
14 2,2'-oxybis(1-Chlo	5.000	4.263	85.26	
15 4-Methylphenol	5.000	4.934	98.69	
16 N-Nitroso-di-n-pro	5.000	4.256	85.12	
17 Hexachloroethane	5.000	4.357	87.13	
19 Nitrobenzene	5.000	4.655	93.09	
20 Isophorone	5.000	4.930	98.60	
21 2-Nitrophenol	5.000	4.681	93.63	
22 2,4-Dimethylphenol	10.00	9.485	94.85	
23 Bis(2-Chloroethoxy	5.000	4.369	87.39	
24 Benzoic acid	20.00	22.05	110.26	
25 2,4-Dichlorophenol	10.00	10.11	101.07	
26 1,2,4-Trichloroben	5.000	4.459	89.19	
28 Naphthalene	5.000	4.434	88.67	
29 4-Chloroaniline	10.00	9.439	94.39	
30 Hexachlorobutadien	5.000	4.589	91.79	
31 4-Chloro-3-methylp	10.00	10.47	104.69	
32 2-Methylnaphthalen	5.000	4.332	86.63	
33 Hexachlorocyclopen	10.00	9.004	90.04	
34 2,4,6-Trichlorophe	10.00	9.613	96.13	
35 2,4,5-Trichlorophe	10.00	10.34	103.37	
37 2-Chloronaphthalen	5.000	4.566	91.32	
38 2-Nitroaniline	10.00	9.595	95.95	
39 Dimethylphthalate	5.000	4.374	87.48	
40 Acenaphthylene	5.000	4.416	88.32	
41 2,6-Dinitrotoluene	10.00	9.260	92.60	

SPIKE	COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
43	3-Nitroaniline	10.00	10.88	108.81	
44	Acenaphthene	5.000	4.560	91.20	
45	2,4-Dinitrophenol	20.00	19.38	96.91	
46	Dibenzofuran	5.000	4.325	86.50	
47	4-Nitrophenol	10.00	10.82	108.24	
48	2,4-Dinitrotoluene	10.00	9.459	94.59	
49	Fluorene	5.000	4.344	86.88	
50	Diethylphthalate	5.000	4.220	84.41	
51	4-Chlorophenyl-phe	5.000	4.314	86.29	
52	4-Nitroaniline	10.00	10.25	102.51	
53	4,6-Dinitro-2-meth	20.00	21.28	106.42	
54	N-Nitrosodiphenyla	5.000	4.295	85.89	
56	4-Bromophenyl-phen	5.000	4.399	87.97	
57	Hexachlorobenzene	5.000	4.539	90.79	
58	Pentachlorophenol	10.00	9.718	97.18	
60	Phenanthrene	5.000	4.621	92.42	
61	Anthracene	5.000	4.551	91.02	
63	Di-n-butylphthalat	5.000	4.573	91.45	
64	Fluoranthene	5.000	4.606	92.13	
65	Pyrene	5.000	4.739	94.78	
67	Butylbenzylphthala	5.000	4.821	96.42	
68	Benzo(a)anthracene	5.000	4.649	92.98	
70	3,3'-Dichlorobenzi	10.00	7.093	70.93	
71	Chrysene	5.000	4.659	93.18	
72	bis(2-Ethylhexyl)p	5.000	4.584	91.68	
73	Di-n-octylphthalat	5.000	4.290	85.80	
74	Benzo(b)fluoranthe	5.000	4.511	90.23	
75	Benzo(k)fluoranthe	5.000	4.789	95.79	
76	Benzo(a)pyrene	5.000	4.573	91.47	
78	Indeno(1,2,3-cd)py	5.000	4.788	95.77	
79	Dibenzo(a,h)anthra	5.000	4.758	95.16	
80	Benzo(g,h,i)peryle	5.000	4.674	93.47	
90	N-Nitrosodimethyla	10.00	8.965	89.65	
91	Aniline	5.000	4.054	81.08	
93	Benzidine	10.00	15.46	154.60*	
105	1-methylnaphthalen	5.000	4.422	88.44	
120	2,3,4,6-Tetrachlor	5.000	0.02353	0.47*	
151	1,2,4,5-Tetrachlo	5.000	0.000	*	
110	Tetrachloroguaiac	10.00	0.000	*	
109	3,4,5-Trichlorogu	5.000	0.000	*	
181	3,4,6-Trichlorogu	5.000	0.000	*	
108	4,5,6-Trichlorogu	5.000	0.000	*	
184	3,4-Dichloroguaia	5.000	0.000	*	
107	4,5-Dichloroguaia	10.00	0.000	*	
182	4,6-Dichloroguaia	10.00	0.000	*	
185	4-Chloroguaiacol	2.500	0.000	*	
106	Guaiacol	5.000	0.000	*	

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20130730
Sample Matrix: NONE Fraction: SV
Lab Smp Id: ICV0730
Level: Operator: VTS/YZ
Data Type: MS DATA SampleType: LCS
SpikeList File: ICVS.spk Quant Type: ISTD
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130730.b/ABN.m
Misc Info:

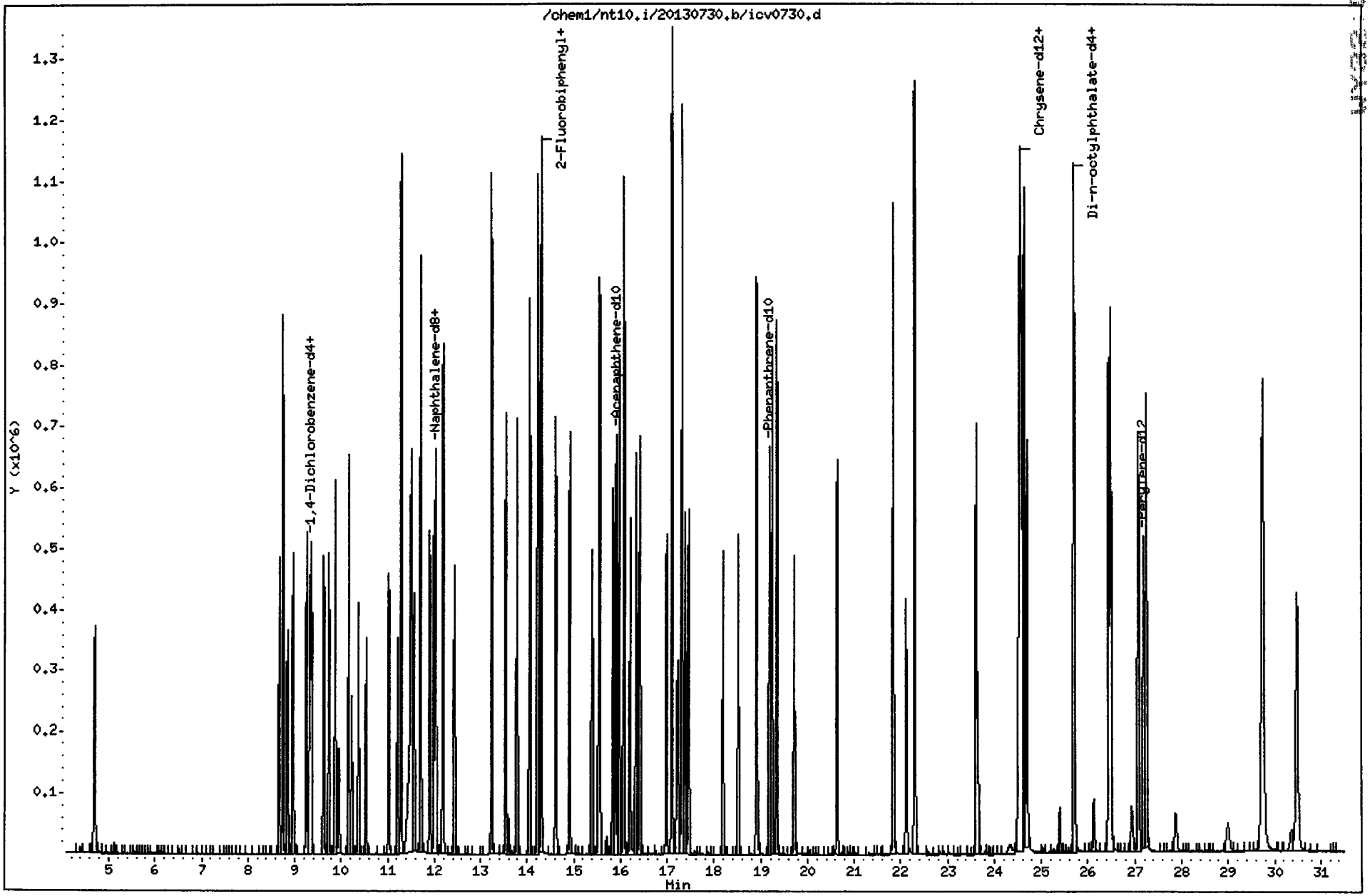
SURROGATE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	7.500	0.000	*	
$ 2 Phenol-d5	7.500	0.000	*	
$ 5 2-Chlorophenol-d4	7.500	0.000	*	
$ 10 1,2-Dichlorobenze	5.000	0.000	*	
$ 18 Nitrobenzene-d5	5.000	0.000	*	
$ 36 2-Fluorobiphenyl	5.000	0.004503	0.09	
$ 55 2,4,6-Tribromophe	7.500	0.000	*	
$ 66 Terphenyl-d14	5.000	0.000	*	

Data File: /chem1/nt10.i/20130730.b/icv0730.d
Date : 30-JUL-2013 17:38
Client ID:
Sample Info: ICV0730

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - icv0730.d

Lab ID: ICV0730, Method: ABN.m, Instrument: nt10.i, Date: 30-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130730.b/df0730.d

Date : 30-JUL-2013 11:39

Client ID: DFTPP

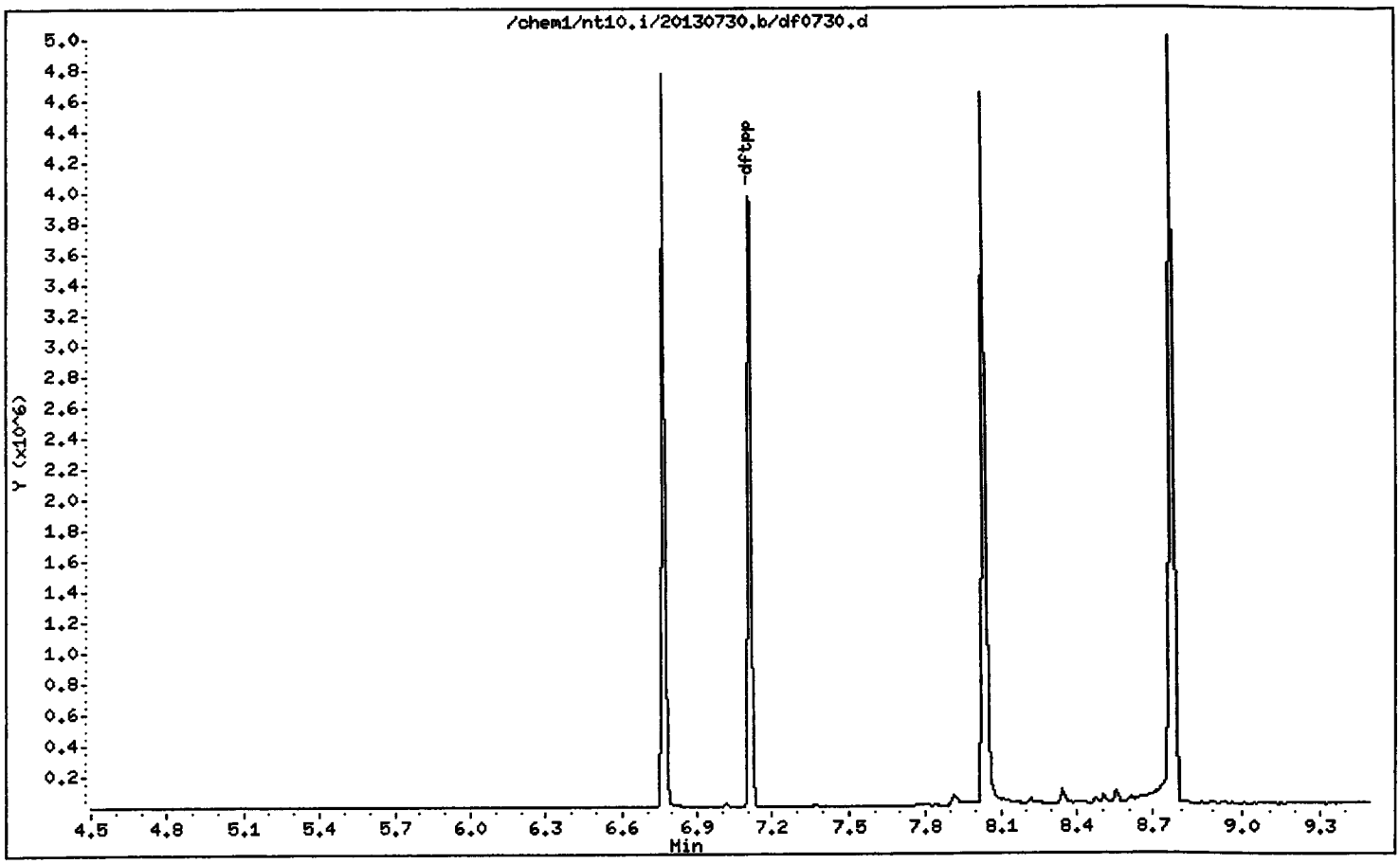
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130730.b/df0730.d

Date : 30-JUL-2013 11:39

Client ID: DFTPP

Instrument: nt10.i

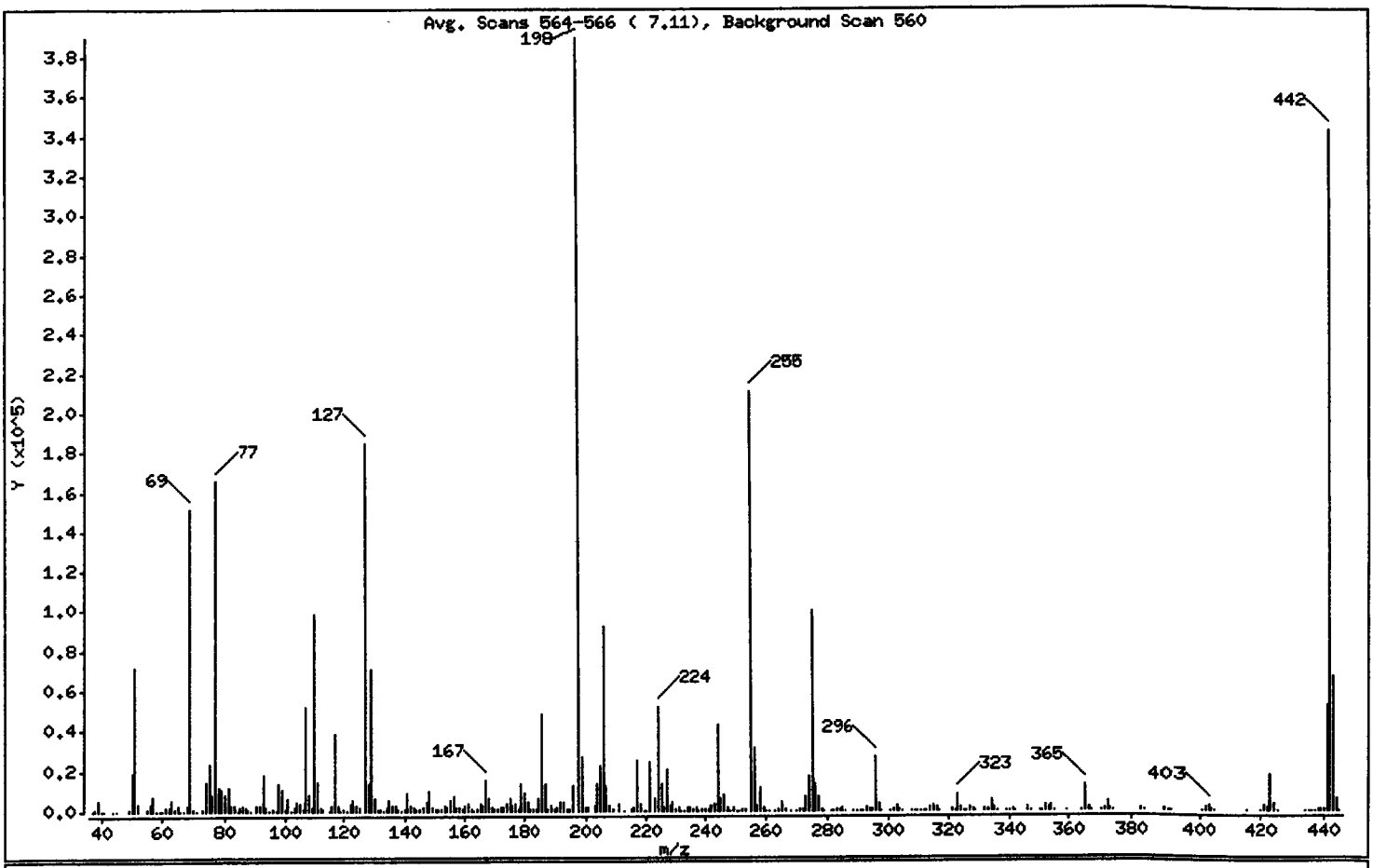
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	18.36
68	Less than 2.00% of mass 69	0.61 (1.56)
69	Mass 69 relative abundance	38.84
70	Less than 2.00% of mass 69	0.19 (0.50)
127	10.00 - 80.00% of mass 198	47.39
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.91
275	10.00 - 60.00% of mass 198	25.68
365	Greater than 1.00% of mass 198	3.16
441	0.01 - 24.00% of mass 442	13.62 (15.45)
442	50.00 - 200.00% of mass 198	88.15
443	15.00 - 24.00% of mass 442	17.35 (19.68)

Data File: /chem1/nt10.i/20130730.b/df0730.d

Date : 30-JUL-2013 11:39

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0730.d
Spectrum: Avg. Scans 564-566 (7.11), Background Scan 560
Location of Maximum: 198.00
Number of points: 318

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	328	128.00	13574	211.00	3640	303.00	2788
38.00	1008	129.00	70864	213.00	265	304.00	907
39.00	5753	130.00	6439	215.00	1013	305.00	57
40.00	244	131.00	1138	216.00	1931	308.00	311
41.00	81	132.00	563	217.00	25520	309.00	223
44.00	225	133.00	283	218.00	3227	310.00	369
45.00	74	134.00	1986	219.00	303	311.00	62
49.00	549	135.00	5739	220.00	158	312.00	52
50.00	19168	136.00	2274	221.00	24544	313.00	296
51.00	71624	137.00	2538	223.00	5897	314.00	1369
52.00	3836	138.00	665	224.00	52328	315.00	2905
55.00	534	139.00	307	225.00	13367	316.00	1653
56.00	3163	140.00	927	226.00	1501	317.00	334
57.00	7367	141.00	8634	227.00	20440	321.00	866
58.00	337	142.00	2792	228.00	3050	322.00	437
59.00	56	143.00	1939	229.00	4379	323.00	8245
60.00	53	144.00	541	230.00	594	324.00	1532
61.00	1519	145.00	519	231.00	1901	325.00	136
62.00	1975	146.00	1467	232.00	400	326.00	154
63.00	5409	147.00	4271	233.00	394	327.00	1611
64.00	843	148.00	9477	234.00	1392	328.00	783
65.00	2858	149.00	1935	235.00	1564	329.00	126
66.00	264	150.00	517	236.00	893	332.00	753
67.00	195	151.00	1084	237.00	1659	333.00	913
68.00	2366	152.00	702	238.00	194	334.00	5326
69.00	151488	153.00	2559	239.00	920	335.00	1440
70.00	751	154.00	2187	240.00	717	336.00	123
71.00	147	155.00	4977	241.00	1198	339.00	70
73.00	988	156.00	7129	242.00	2752	340.00	134
74.00	14451	157.00	1529	243.00	3163	341.00	1030
75.00	23368	158.00	1446	244.00	43432	342.00	227
76.00	7675	159.00	1291	245.00	5913	346.00	1687
77.00	166080	160.00	2690	246.00	8005	347.00	268
78.00	11280	161.00	3917	247.00	1566	350.00	62
79.00	10509	162.00	1188	248.00	447	351.00	147

Data File: /chem1/nt10.i/20130730.b/df0730.d

Date : 30-JUL-2013 11:39

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0730.d
Spectrum: Avg. Scans 564-566 (7.11), Background Scan 560
Location of Maximum: 198.00
Number of points: 318

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	8278	163.00	351	249.00	1510	352.00	2709
81.00	11914	164.00	546	250.00	350	353.00	1873
82.00	2957	165.00	3335	251.00	442	354.00	2577
83.00	2658	166.00	2456	252.00	506	355.00	429
84.00	192	167.00	15600	253.00	1128	359.00	160
85.00	2166	168.00	6478	255.00	210496	364.00	90
86.00	3042	169.00	1382	256.00	31032	365.00	12333
87.00	1516	170.00	597	257.00	2327	366.00	1703
88.00	579	171.00	742	258.00	12061	367.00	55
89.00	306	172.00	1641	259.00	1838	370.00	337
91.00	2726	173.00	2127	260.00	317	371.00	832
92.00	3046	174.00	3632	261.00	306	372.00	4535
93.00	17840	175.00	6642	263.00	51	373.00	1082
94.00	1450	176.00	2260	264.00	458	374.00	103
95.00	411	177.00	3199	265.00	4689	383.00	1163
96.00	689	178.00	1141	266.00	971	384.00	261
97.00	402	179.00	13100	268.00	154	390.00	653
98.00	13253	180.00	8739	270.00	328	391.00	437
99.00	10502	181.00	4295	271.00	907	392.00	276
100.00	930	182.00	721	272.00	706	401.00	266
101.00	6620	183.00	531	273.00	7209	402.00	1690
102.00	349	184.00	1198	274.00	17384	403.00	2664
103.00	2203	185.00	6414	275.00	100160	404.00	953
104.00	4401	186.00	48520	276.00	13021	405.00	128
105.00	3905	187.00	13672	277.00	7510	415.00	71
106.00	1332	188.00	1334	278.00	1191	420.00	50
107.00	51816	189.00	2935	279.00	271	421.00	2375
108.00	7949	190.00	474	281.00	85	422.00	2092
109.00	1628	191.00	1435	282.00	197	423.00	17584
110.00	99016	192.00	4384	283.00	904	424.00	3287
111.00	14650	193.00	4812	284.00	582	425.00	315
112.00	1936	194.00	1008	285.00	1351	434.00	67
113.00	600	195.00	783	286.00	209	435.00	154
115.00	161	196.00	12411	289.00	434	436.00	356
116.00	2694	198.00	390016	290.00	328	437.00	139

Data File: /chem1/nt10.i/20130730.b/df0730.d

Date : 30-JUL-2013 11:39

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0730.d

Spectrum: Avg. Scans 564-566 (7.11), Background Scan 560

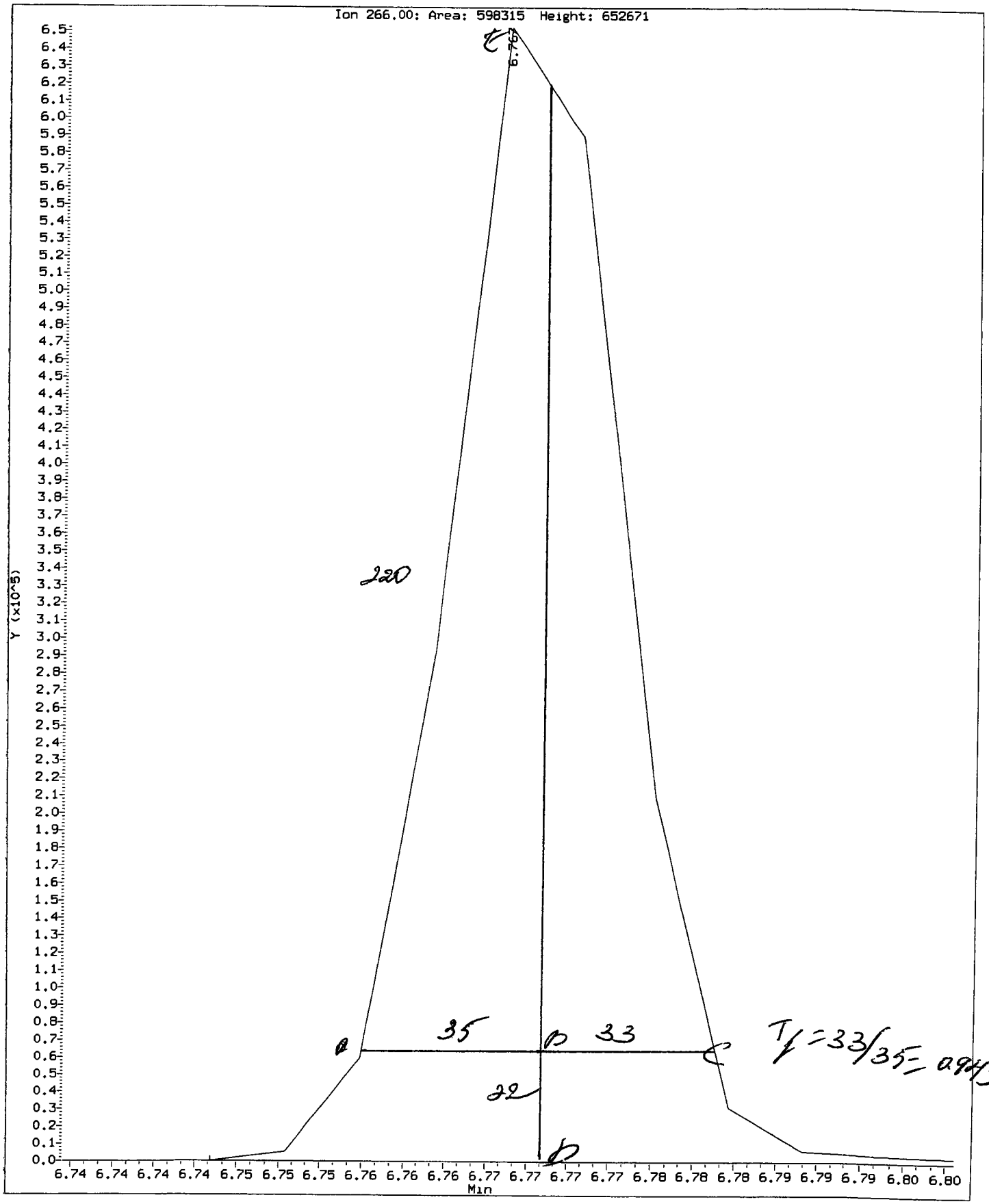
Location of Maximum: 198.00

Number of points: 318

m/z	Y	m/z	Y	m/z	Y	m/z	Y
117.00	38656	199.00	26952	291.00	367	438.00	683
118.00	2667	200.00	2008	292.00	395	439.00	603
119.00	404	201.00	2032	293.00	1673	440.00	726
120.00	594	203.00	2520	294.00	469	441.00	53112
121.00	265	204.00	13213	295.00	712	442.00	343808
122.00	3147	205.00	22616	296.00	26880	443.00	67656
123.00	5056	206.00	92536	297.00	3712	444.00	6285
124.00	2345	207.00	12210	298.00	267	445.00	389
125.00	1977	208.00	2889	301.00	251		
127.00	184832	209.00	952	302.00	482		

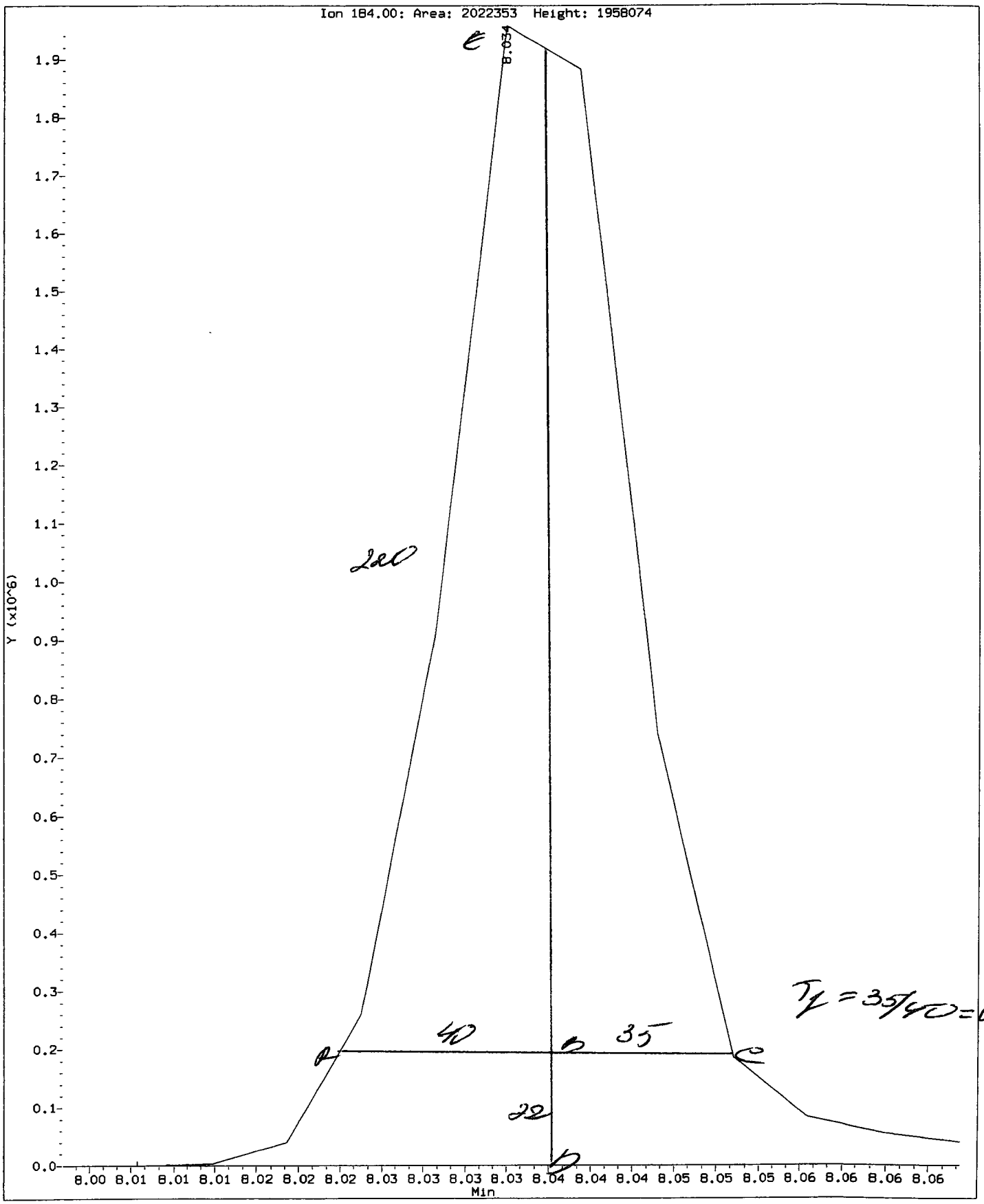
Data File: /chem1/nt10.i/20130730.b/ddt.b/df0730.d
Injection Date: 30-JUL-2013 11:39
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20130730.b/ddt.b/df0730.d
Injection Date: 30-JUL-2013 11:39
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130730.b/ddt.b/df0730.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130730.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 30-JUL-2013 11:39 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.767	598188
Benzidine	8.034	2020321
4,4'-DDE	8.216	3238
4,4'-DDD	8.505	11850
4,4'-DDT	8.772	1034743

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(\ 3238 + 11850) * 100}{(\ 3238 + 11850 + 1034743)}$$

DDT Percent Breakdown = 1.4 %

Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WY32, WY33

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WK32 Client ID: SAIC

METHOD: **8270D**(SIM-SVOA) **KRONE**(Butyl Tins) **8270D**(SVOA) **8270D**(OP-Pest)

Instrument: NT-4 NT-6 NT-8 (NT-10) NT11 NT12

Curve Date: 07/30/13 Analysis Start Date: 08/01/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
DFTPP Tune met Criteria?	(Y) / N / ✓	Internal Standard within 50-200%?	(Y) / N / ✓
DDT Breakdown <20%?	(Y) / N / ✓	Retention Times within Windows?	(Y) / N / ✓
Peak Tailing Factor ≤2?	(Y) / N /	Method Blank in Control?	(Y) / N / ✓
CCAL Meets %D?	(Y) / N /	LCS / LCSD Recovery in Control?	(Y) / N / ✓
ICAL Q Flag applied?	Y / (N) /	LCS / LCSD RPD ≤ 30%?	(NA) /
CCAL Q flag applied?	Y / (N) /	MS / MSD Recovery in Control?	(Y) / N / ✓
Surrogate Recovery met?	(Y) / N / ✓	MS / MSD RPD ≤ 30%?	NA / X
Manual Integrations?	(Y) / N /	Samples Diluted?	(Y) / N / 3x, 30x
Integration Summary?	(Y) / N /	Special Analysis Request?	(Y) / N /

Detail problems, corrective actions and/or other pertinent information below.

- All samples + ms/msd were run @ 3x dilution due to dark color of the extracts.
- Samples A, C were re-run @ 30x dilution on 08/02/13

(Review 1) Analyst: YZ **Date:** 8/3/13

(Review 2) Reviewer: AMW **Date:** 8/5

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 08/01/13 Analysis: ABN/SIM Analyst: YZ

GC Program: ABN21 Column No: 268782 Column Type: ZB5msi

Instrument Tune (.U or .CT.): B022841 EM Voltage: 1829

Calibration File: DF073/ Curve Date: 7/30/13 Injection Vol.: 1 uL

IS/SS	Ical/Ccal	LCS/ICV
B928	B921 B943	
	B670 2084-2	
	B931.	

Document All Maintenance Tasks In Element

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130801.b

	Time	Filename	LabID	ClientId	DF											
1	1507	df0801.d	DFTPP	DFTPP	1	NO ISTDS FOUND										
2	1522	cc0801.d	CC0801		1	9.22	135027	11.89	479596	15.80	296056	19.09	499317	24.53	459644	27 11	469761	25.65	637005
3	2218	wy56h2.d	WY56H	WCE-SC-6-0.9	2	9.22	99448	11.89	368290	15 80	198649	19.10	337678	24.55	328664	27.15	352697	25.66	452804
4	1638	wy32mb.d	WY32MBS1	WY32MBS1	1	9.22	103253	11.89	392358	15.79	232054	19.08	401751	24.52	373693	27.10	342533	25 64	491239
5	1716	wy32sb.d	WY32LCSS1	WY32LCSS1	1	9 22	89413	11.89	335126	15.80	204750	19.09	346289	24.53	331677	27.11	302062	25.65	447211
6	1754	wy32qls.d	WY32QLS		1	9 22	97834	11.89	375026	15.79	226518	19.08	380511	24 52	362230	27.10	334785	25.64	473273
7	1909	wy32a.d	WY32A	UP-CB-B8-201	3	9.22	104782	11.89	403857	15.80	214912	19.10	348018	24.55	318219	27.17	343875	25.68	438599
8	1947	wy32ams.d	WY32AMS	UP-CB-B8-201	3	9.22	93145	11.89	337697	15.80	176759	19.10	282257	24 56	273936	27.18	310644	25.68	384280
9	2025	wy32amsd.d	WY32AMSD	UP-CB-B8-201	3	9.22	98356	11.89	375110	15.80	196140	19.10	320044	24 56	311156	27 18	343011	25.68	430636
10	2103	wy32b d	WY32B	UP-MHF-165-2	3	9 22	99494	11.89	376480	15.80	188762	19.10	316442	24.56	310711	27.18	328687	25.68	428221
11	2141	wy32c d	WY32C	UP-CB-A6-201	3	9.22	97612	11.89	363484	15 80	190646	19.10	303211	24.57	294220	27 21	306720	25.69	383510

YZ 8/2/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In Element

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20130801.b

ARI Job No.: WY32 Method: ABN.m Instrument: nt10.i Date: 01-AUG-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1638	wy32mb.d	WY32MBS1	WY32MBS1	1	NO MANUAL INTEGRATION
1716	wy32sb.d	WY32LCSS1	WY32LCSS1	1	NO MANUAL INTEGRATION
1909	wy32a.d	WY32A	UP-CB-B8-2	3	Di-n-octylphthalate, Benzo(k)fluoranthene,
1947	wy32ams.d	WY32AMS	UP-CB-B8-2	3	Di-n-octylphthalate, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene,
2025	wy32amsd.d	WY32AMSD	UP-CB-B8-2	3	Di-n-octylphthalate, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene,
2103	wy32b.d	WY32B	UP-MHF-165	3	Dimethylphthalate, Butylbenzylphthalate, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Perylene,
2141	wy32c.d	WY32C	UP-CB-A6-2	3	Di-n-octylphthalate, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Total Benzofluoranthenes,
1336	wy32a30.d	WY32A	UP-CB-B8-2	30	NO MANUAL INTEGRATION
1414	wy32c30.d	WY32C	UP-CB-A6-2	30	Total Benzofluoranthenes,

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130801.b

Instrument: nt10.i Date: 01-AUG-2013 Method: ABN.m

INITIAL CAL: 30-JUL-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 01-AUG-2013

Compound	%D
NO Q-FLAGS	

Data File: /chem1/nt10.i/20130801.b/df0801.d

Date : 01-AUG-2013 15:07

Client ID: DFTPP

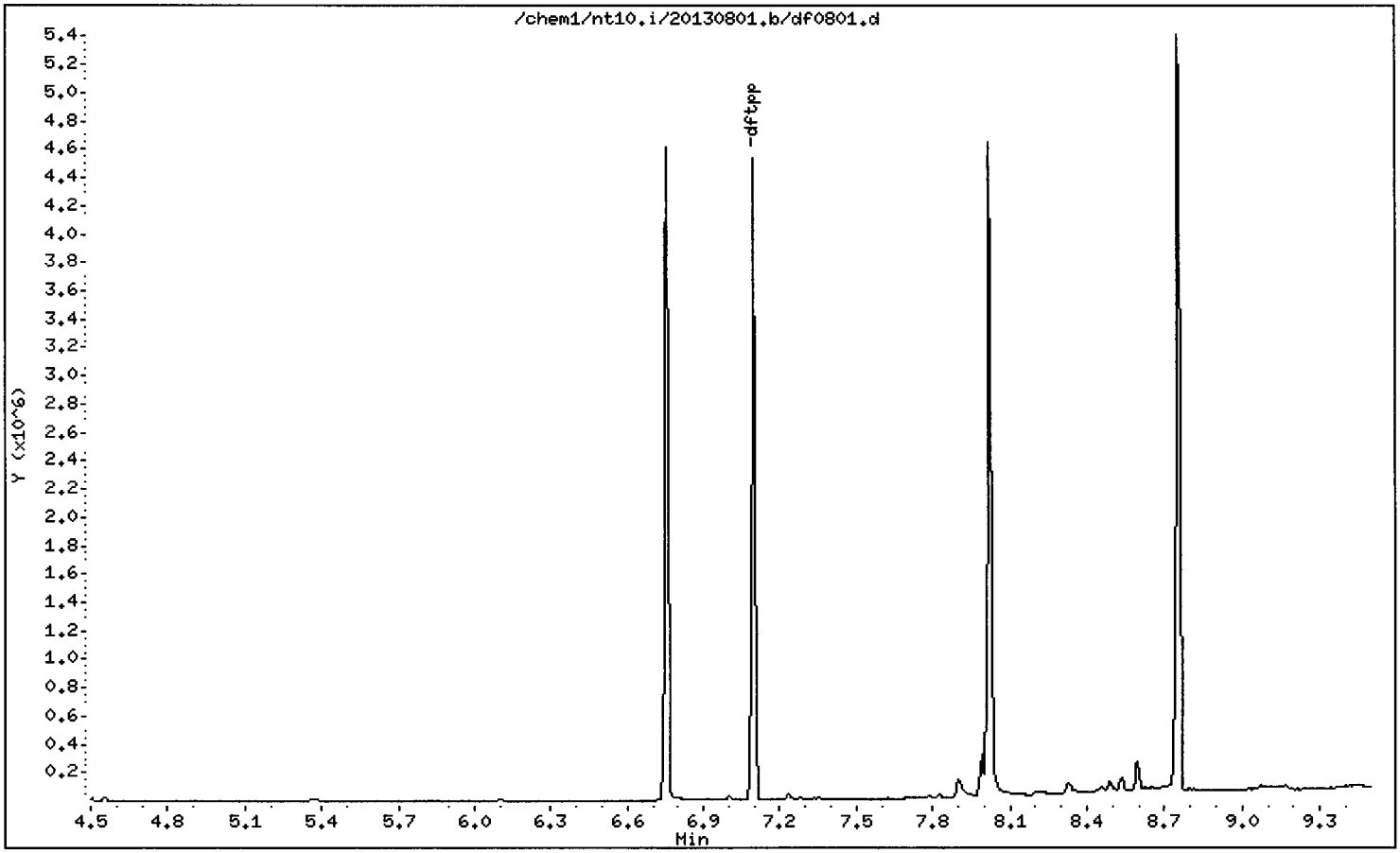
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130801.b/df0801.d

Date : 01-AUG-2013 15:07

Client ID: DFTPP

Instrument: nt10.i

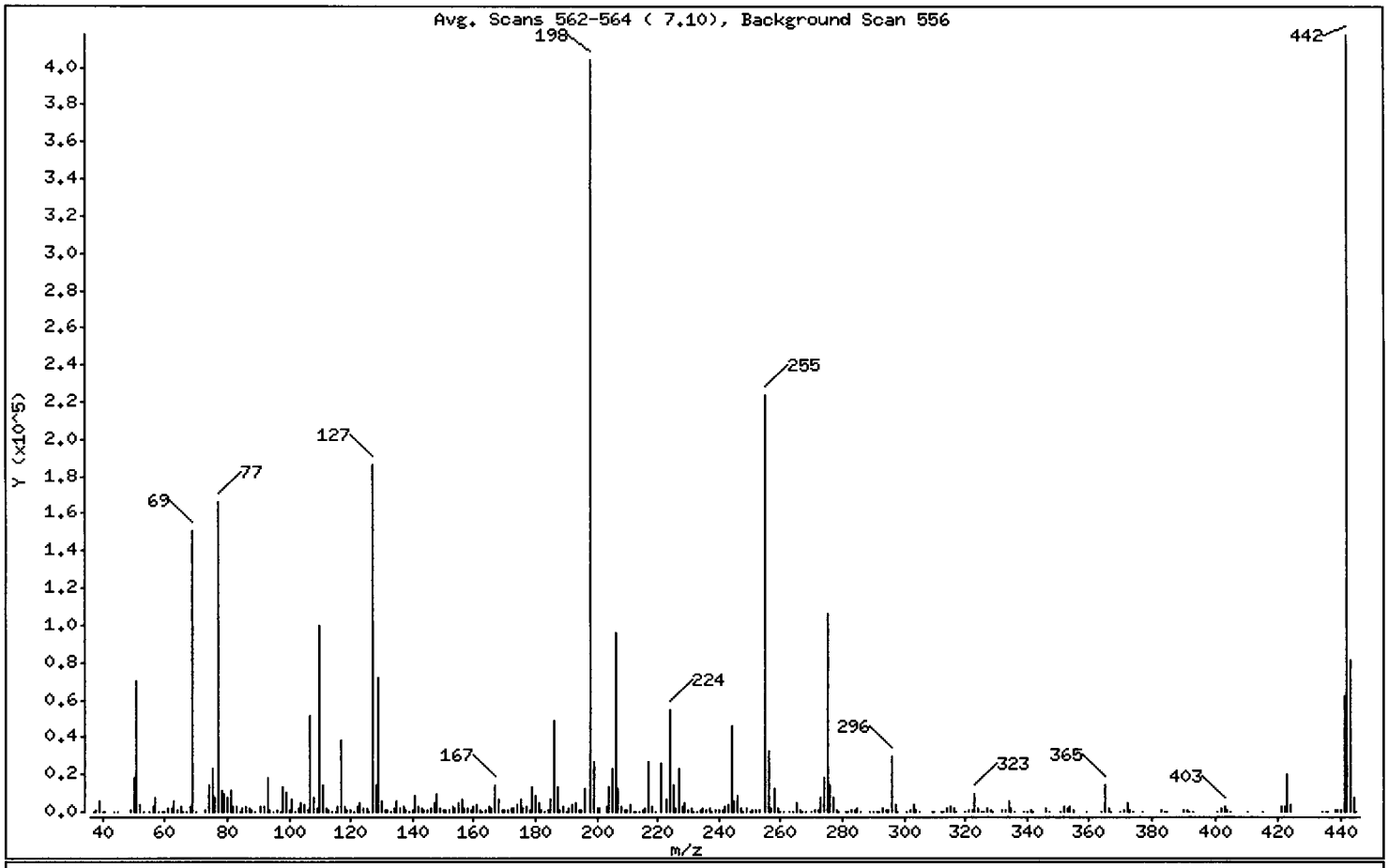
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	17.27
68	Less than 2.00% of mass 69	0.60 (1.60)
69	Mass 69 relative abundance	37.21
70	Less than 2.00% of mass 69	0.12 (0.31)
127	10.00 - 80.00% of mass 198	46.16
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.72
275	10.00 - 60.00% of mass 198	26.48
365	Greater than 1.00% of mass 198	3.49
441	0.01 - 24.00% of mass 442	15.51 (14.99)
442	50.00 - 200.00% of mass 198	103.42
443	15.00 - 24.00% of mass 442	20.12 (19.45)

Data File: /chem1/nt10.i/20130801.b/df0801.d

Date : 01-AUG-2013 15:07

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0801.d

Spectrum: Avg. Scans 562-564 (7.10), Background Scan 556

Location of Maximum: 442.00

Number of points: 326

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	239	128.00	13975	212.00	227	304.00	820
38.00	1093	129.00	72456	213.00	324	305.00	55
39.00	5381	130.00	5858	214.00	63	308.00	362
40.00	307	131.00	1196	215.00	1012	309.00	343
41.00	46	132.00	625	216.00	2152	310.00	430
44.00	164	133.00	8	217.00	26864	312.00	60
45.00	158	134.00	1895	218.00	3190	313.00	371
49.00	492	135.00	5719	219.00	386	314.00	1578
50.00	18152	136.00	2141	221.00	26312	315.00	3252
51.00	69768	137.00	2624	223.00	6427	316.00	1819
52.00	3463	138.00	481	224.00	55000	317.00	354
53.00	181	139.00	94	225.00	14098	320.00	62
55.00	252	140.00	693	226.00	1653	321.00	1089
56.00	3086	141.00	8847	227.00	22752	322.00	539
57.00	7479	142.00	2836	228.00	3145	323.00	9682
58.00	182	143.00	2102	229.00	4710	324.00	1577
59.00	63	144.00	498	230.00	648	325.00	50
60.00	51	145.00	527	231.00	2156	326.00	187
61.00	1461	146.00	1454	232.00	325	327.00	1801
62.00	1830	147.00	4571	233.00	444	328.00	936
63.00	5296	148.00	9155	234.00	1434	329.00	232
64.00	928	149.00	1852	235.00	1763	332.00	814
65.00	2622	150.00	530	236.00	1076	333.00	988
66.00	166	151.00	1189	237.00	1906	334.00	5981
67.00	124	152.00	794	238.00	313	335.00	1543
68.00	2408	153.00	2734	239.00	964	336.00	74
69.00	150336	154.00	2132	240.00	718	339.00	135
70.00	471	155.00	5121	241.00	1437	340.00	226
73.00	823	156.00	7153	242.00	3031	341.00	1156
74.00	13937	157.00	1474	243.00	3408	342.00	338
75.00	22856	158.00	1476	244.00	45800	346.00	1994
76.00	7738	159.00	1355	245.00	6092	347.00	418
77.00	166208	160.00	2812	246.00	8408	351.00	143
78.00	11127	161.00	4023	247.00	1670	352.00	3280
79.00	9925	162.00	1117	248.00	462	353.00	2117

Data File: /chem1/nt10.i/20130801.b/df0801.d

Date : 01-AUG-2013 15:07

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0801.d

Spectrum: Avg. Scans 562-564 (7.10), Background Scan 556

Location of Maximum: 442.00

Number of points: 326

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	8100	163.00	432	249.00	1651	354.00	2903
81.00	11515	164.00	519	250.00	353	355.00	622
82.00	2753	165.00	3162	251.00	533	359.00	195
83.00	2640	166.00	2299	252.00	491	364.00	82
84.00	89	167.00	14820	253.00	1138	365.00	14084
85.00	1771	168.00	6498	255.00	223616	366.00	1953
86.00	3104	169.00	1424	256.00	32456	367.00	69
87.00	1472	170.00	655	257.00	2363	370.00	325
88.00	528	171.00	777	258.00	12923	371.00	875
89.00	367	172.00	1709	259.00	2106	372.00	5157
91.00	2510	173.00	2020	260.00	364	373.00	1298
92.00	2863	174.00	3574	261.00	422	374.00	136
93.00	18240	175.00	7017	263.00	134	377.00	89
94.00	1279	176.00	2249	264.00	328	383.00	1402
95.00	153	177.00	3196	265.00	5056	384.00	372
96.00	830	178.00	1166	266.00	687	385.00	51
97.00	167	179.00	13502	267.00	144	390.00	792
98.00	13538	180.00	8889	268.00	38	391.00	518
99.00	10783	181.00	4504	270.00	330	392.00	367
100.00	1012	182.00	744	271.00	856	393.00	52
101.00	6940	183.00	471	272.00	805	401.00	295
102.00	417	184.00	1235	273.00	7324	402.00	1965
103.00	2372	185.00	6586	274.00	18176	403.00	3040
104.00	4583	186.00	49000	275.00	107000	404.00	1139
105.00	3966	187.00	13926	276.00	14125	405.00	82
106.00	1342	188.00	1340	277.00	7945	410.00	53
107.00	51496	189.00	3106	278.00	1365	415.00	52
108.00	8135	190.00	458	279.00	322	421.00	3017
109.00	1589	191.00	1465	281.00	183	422.00	2652
110.00	100304	192.00	4203	282.00	285	423.00	20520
111.00	14773	193.00	4914	283.00	1060	424.00	3863
112.00	1939	194.00	1152	284.00	544	425.00	389
113.00	552	195.00	883	285.00	1452	432.00	59
114.00	62	196.00	12802	286.00	286	434.00	150
115.00	140	198.00	404032	289.00	324	435.00	147

Data File: /chem1/nt10.i/20130801.b/df0801.d

Date : 01-AUG-2013 15:07

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

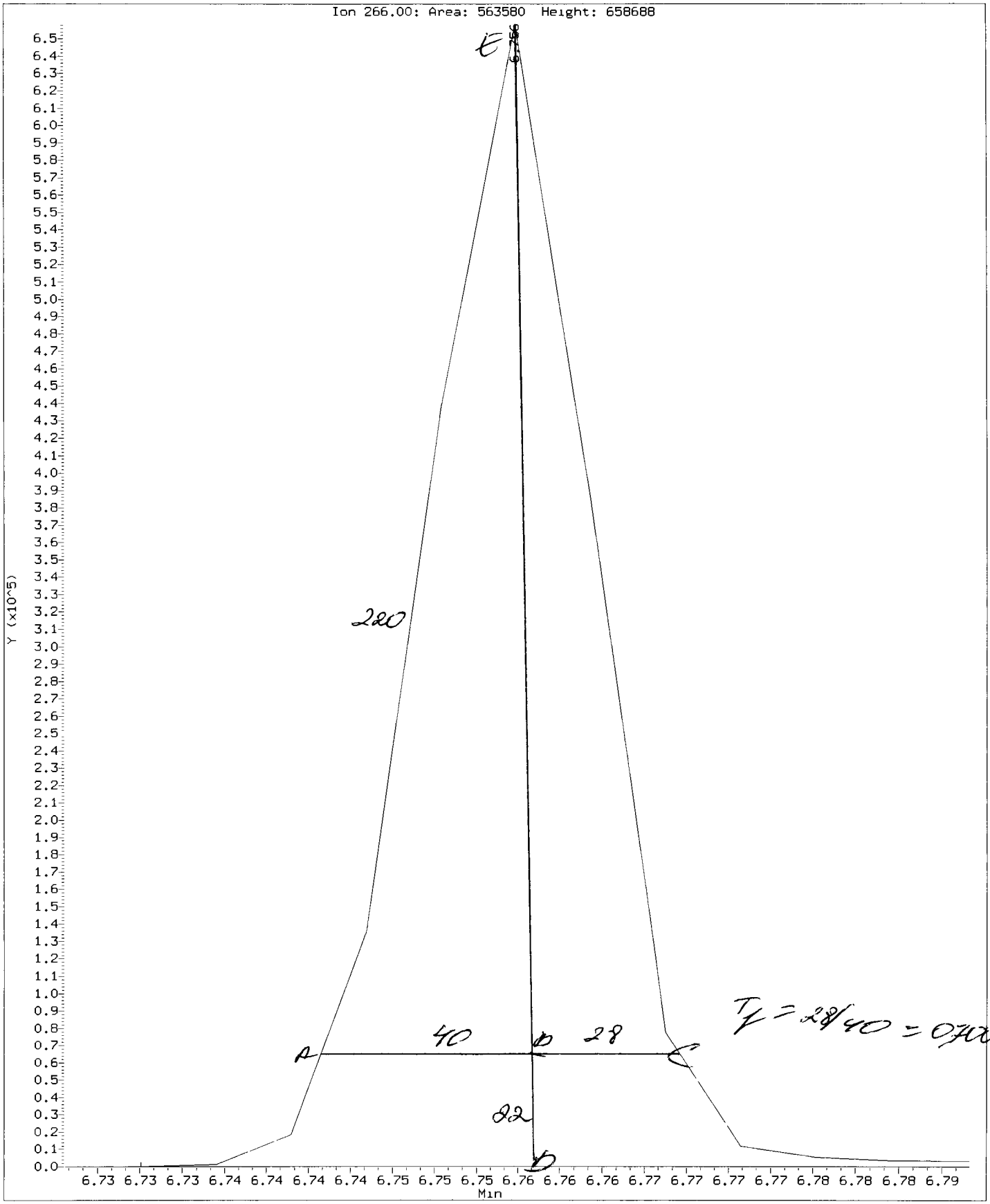
Column diameter: 0.25

Data File: df0801.d
Spectrum: Avg. Scans 562-564 (7.10), Background Scan 556
Location of Maximum: 442.00
Number of points: 326

m/z	Y	m/z	Y	m/z	Y	m/z	Y
116.00	2970	199.00	27152	290.00	282	436.00	452
117.00	38216	200.00	2160	291.00	317	437.00	424
118.00	2613	201.00	2362	292.00	438	438.00	549
119.00	565	203.00	2777	293.00	1852	439.00	730
120.00	764	204.00	13790	294.00	619	440.00	1062
121.00	316	205.00	23296	295.00	848	441.00	62648
122.00	3170	206.00	96120	296.00	29608	442.00	417856
123.00	5191	207.00	12770	297.00	3945	443.00	81288
124.00	2340	208.00	3124	298.00	245	444.00	7342
125.00	2222	209.00	1014	301.00	434	445.00	422
126.00	240	210.00	1096	302.00	598		
127.00	186496	211.00	3902	303.00	3551		

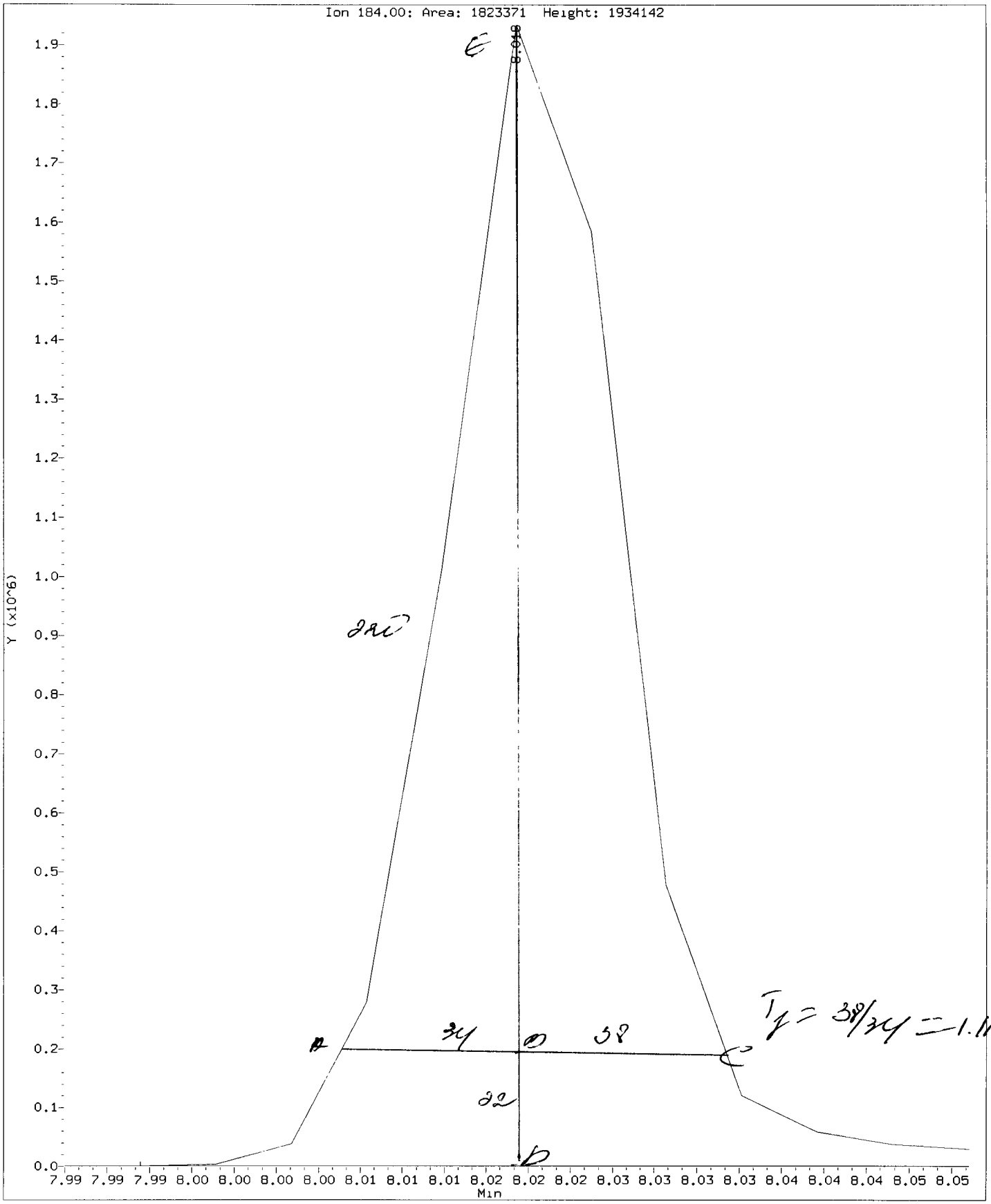
Data File: /chem1/nt10.i/20130801.b/ddt.b/df0801.d
Injection Date: 01-AUG-2013 15:07
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20130801.b/ddt.b/df0801.d
Injection Date: 01-AUG-2013 15:07
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



UY321:88388

Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130801.b/ddt.b/df0801.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130801.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 01-AUG-2013 15:07 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.756	563580
Benzidine	8.018	1823371
4,4'-DDE	8.200	2179
4,4'-DDD	8.489	10935
4,4'-DDT	8.756	1101597

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(\ 2179 + 10935) * 100}{(\ 2179 + 10935 + 1101597)}$$

DDT Percent Breakdown = 1.2 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 01-AUG-2013 15:22
Lab File ID: cc0801.d Init. Cal. Date(s): 30-JUL-2013 30-JUL-2013
Analysis Type: Init. Cal. Times: 11:54 16:59
Lab Sample ID: CC0801 Quant Type: ISTD
Method: /chem1/nt10.i/20130801.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 2-Fluorophenol	1.61157	1.58558	1.58558	0.010	-1.61262	20.00000	Averaged
$ 2 Phenol-d5	2.15919	2.24420	2.24420	0.010	3.93706	20.00000	Averaged
3 Phenol	2.17209	2.15802	2.15802	0.100	-0.64735	20.00000	Averaged
$ 5 2-Chlorophenol-d4	1.53536	1.48897	1.48897	0.010	-3.02132	20.00000	Averaged
4 Bis(2-Chloroethyl)ether	1.68991	1.56678	1.56678	0.700	-7.28632	20.00000	Averaged
6 2-Chlorophenol	1.55911	1.49858	1.49858	0.800	-3.88247	20.00000	Averaged
7 1,3-Dichlorobenzene	1.59978	1.48355	1.48355	0.010	-7.26505	20.00000	Averaged
9 1,4-Dichlorobenzene	1.56100	1.43093	1.43093	0.010	-8.33216	20.00000	Averaged
$ 10 1,2-Dichlorobenzene-d4	1.08165	1.01324	1.01324	0.010	-6.32505	20.00000	Averaged
12 1,2-Dichlorobenzene	1.48351	1.37774	1.37774	0.010	-7.12995	20.00000	Averaged
11 Benzyl alcohol	0.91611	0.93251	0.93251	0.010	1.79028	20.00000	Averaged
14 2,2'-oxybis(1-Chloropropane	0.51176	0.47765	0.47765	0.010	-6.66651	20.00000	Averaged
13 2-Methylphenol	1.51908	1.65226	1.65226	0.700	8.76691	20.00000	Averaged
17 Hexachloroethane	0.65694	0.60560	0.60560	0.300	-7.81599	20.00000	Averaged
16 N-Nitroso-di-n-propylamine	1.05550	1.02644	1.02644	0.500	-2.75371	20.00000	Averaged
15 4-Methylphenol	1.55941	1.57249	1.57249	0.600	0.83848	20.00000	Averaged
$ 18 Nitrobenzene-d5	0.48131	0.47553	0.47553	0.010	-1.19990	20.00000	Averaged
19 Nitrobenzene	0.42813	0.41808	0.41808	0.200	-2.34685	20.00000	Averaged
20 Isophorone	0.76340	0.77031	0.77031	0.300	0.90509	20.00000	Averaged
21 2-Nitrophenol	0.23949	0.24824	0.24824	0.100	3.65356	20.00000	Averaged
22 2,4-Dimethylphenol	0.40286	0.39686	0.39686	0.200	-1.48980	20.00000	Averaged
23 Bis(2-Chloroethoxy)methane	0.50087	0.48643	0.48643	0.050	-2.88391	20.00000	Averaged
24 Benzoic acid	0.32290	0.34859	0.34859	0.010	7.95650	20.00000	Averaged
25 2,4-Dichlorophenol	0.34395	0.33187	0.33187	0.100	-3.51288	20.00000	Averaged
26 1,2,4-Trichlorobenzene	0.36478	0.33793	0.33793	0.010	-7.35922	20.00000	Averaged
28 Naphthalene	1.08388	1.03923	1.03923	0.100	-4.11945	20.00000	Averaged
29 4-Chloroaniline	0.46295	0.45098	0.45098	0.010	-2.58654	20.00000	Averaged
30 Hexachlorobutadiene	0.20420	0.19140	0.19140	0.010	-6.26871	20.00000	Averaged
31 4-Chloro-3-methylphenol	0.34055	0.36958	0.36958	0.200	8.52258	20.00000	Averaged
32 2-Methylnaphthalene	0.76634	0.75319	0.75319	0.300	-1.71601	20.00000	Averaged
33 Hexachlorocyclopentadiene	0.47865	0.45249	0.45249	0.001	-5.46549	20.00000	Averaged
34 2,4,6-Trichlorophenol	0.45613	0.44656	0.44656	0.200	-2.09898	20.00000	Averaged
35 2,4,5-Trichlorophenol	0.46653	0.48678	0.48678	0.200	4.34058	20.00000	Averaged
$ 36 2-Fluorobiphenyl	1.50303	1.42859	1.42859	0.010	-4.95272	20.00000	Averaged
37 2-Chloronaphthalene	1.19504	1.15290	1.15290	0.700	-3.52599	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 01-AUG-2013 15:22
Lab File ID: cc0801.d Init. Cal. Date(s): 30-JUL-2013 30-JUL-2013
Analysis Type: Init. Cal. Times: 11:54 16:59
Lab Sample ID: CC0801 Quant Type: ISTD
Method: /chem1/nt10.i/20130801.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
38 2-Nitroaniline	0.32188	0.35059	0.35059	0.010	8.91983	20.00000	Averaged
39 Dimethylphthalate	1.30585	1.24799	1.24799	0.010	-4.43102	20.00000	Averaged
40 Acenaphthylene	1.93798	1.84786	1.84786	0.900	-4.65009	20.00000	Averaged
41 2,6-Dinitrotoluene	0.31097	0.31036	0.31036	0.100	-0.19371	20.00000	Averaged
43 3-Nitroaniline	0.26271	0.22268	0.22268	0.010	-15.23675	20.00000	Averaged
44 Acenaphthene	1.14965	1.12111	1.12111	0.100	-2.48218	20.00000	Averaged
45 2,4-Dinitrophenol	19.30399	20.00000	0.26804	0.030	-3.48007	20.00000	Quadratic
46 Dibenzofuran	1.69242	1.63791	1.63791	0.800	-3.22069	20.00000	Averaged
47 4-Nitrophenol	0.15042	0.16901	0.16901	0.010	12.35867	20.00000	Averaged
48 2,4-Dinitrotoluene	0.40178	0.41815	0.41815	0.200	4.07368	20.00000	Averaged
50 Diethylphthalate	1.27887	1.23254	1.23254	0.010	-3.62253	20.00000	Averaged
49 Fluorene	1.44199	1.32497	1.32497	0.100	-8.11552	20.00000	Averaged
51 4-Chlorophenyl-phenylether	0.68151	0.63985	0.63985	0.100	-6.11283	20.00000	Averaged
52 4-Nitroaniline	0.27592	0.28274	0.28274	0.010	2.47446	20.00000	Averaged
53 4,6-Dinitro-2-methylphenol	0.18759	0.20334	0.20334	0.001	8.39798	20.00000	Averaged
54 N-Nitrosodiphenylamine	0.50564	0.49391	0.49391	0.010	-2.31950	20.00000	Averaged
$ 55 2,4,6-Tribromophenol	0.23911	0.23156	0.23156	0.010	-3.15701	20.00000	Averaged
56 4-Bromophenyl-phenylether	0.24065	0.23771	0.23771	0.100	-1.22415	20.00000	Averaged
57 Hexachlorobenzene	0.25783	0.24526	0.24526	0.100	-4.87598	20.00000	Averaged
58 Pentachlorophenol	0.19930	0.19074	0.19074	0.010	-4.29550	20.00000	Averaged
60 Phenanthrene	1.09788	1.07762	1.07762	0.700	-1.84546	20.00000	Averaged
61 Anthracene	1.16335	1.13553	1.13553	0.700	-2.39142	20.00000	Averaged
62 Carbazole	5.31369	5.00000	0.56737	0.010	6.27382	20.00000	Quadratic
63 Di-n-butylphthalate	1.23845	1.28303	1.28303	0.010	3.59936	20.00000	Averaged
64 Fluoranthene	1.34730	1.33197	1.33197	0.600	-1.13768	20.00000	Averaged
65 Pyrene	1.43553	1.48746	1.48746	0.600	3.61778	20.00000	Averaged
$ 66 Terphenyl-d14	0.77165	0.79463	0.79463	0.010	2.97835	20.00000	Averaged
67 Butylbenzylphthalate	0.51000	0.55694	0.55694	0.010	9.20398	20.00000	Averaged
68 Benzo(a)anthracene	1.30501	1.28220	1.28220	0.700	-1.74817	20.00000	Averaged
70 3,3'-Dichlorobenzidine	0.49976	0.41632	0.41632	0.010	-16.69643	20.00000	Averaged
71 Chrysene	1.13478	1.12379	1.12379	0.700	-0.96854	20.00000	Averaged
72 bis(2-Ethylhexyl)phthalate	0.51644	0.53006	0.53006	0.010	2.63822	20.00000	Averaged
73 Di-n-octylphthalate	0.98177	0.93744	0.93744	0.010	-4.51478	20.00000	Averaged
74 Benzo(b)fluoranthene	1.23415	1.23006	1.23006	0.700	-0.33155	20.00000	Averaged
75 Benzo(k)fluoranthene	1.30373	1.28623	1.28623	0.700	-1.34234	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 01-AUG-2013 15:22
Lab File ID: cc0801.d Init. Cal. Date(s): 30-JUL-2013 30-JUL-2013
Analysis Type: Init. Cal. Times: 11:54 16:59
Lab Sample ID: CC0801 Quant Type: ISTD
Method: /chem1/nt10.i/20130801.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
76 Benzo(a)pyrene	1.08919	1.07808	1.07808	0.700	-1.02041	20.00000	Averaged
78 Indeno(1,2,3-cd)pyrene	1.27831	1.26810	1.26810	0.500	-0.79850	20.00000	Averaged
79 Dibenzo(a,h)anthracene	1.00216	0.99127	0.99127	0.400	-1.08638	20.00000	Averaged
80 Benzo(g,h,i)perylene	1.10686	1.07946	1.07946	0.500	-2.47486	20.00000	Averaged
90 N-Nitrosodimethylamine	1.09665	1.03276	1.03276	0.010	-5.82562	20.00000	Averaged
91 Aniline	4.74910	4.55830	4.55830	0.010	-4.01762	20.00000	Averaged
93 Benzidine	10.32498	10.00000	0.18144	0.010	3.24978	20.00000	Quadratic
103 Pyridine	0.92032	0.84439	0.84439	0.010	-8.25068	20.00000	Averaged
105 1-methylnaphthalene	0.69842	0.68724	0.68724	0.010	-1.60074	20.00000	Averaged
111 Azobenzene (1,2-DP-Hydrazin	1.33440	1.27462	1.27462	0.010	-4.47983	20.00000	Averaged
187 Total Benzofluoranthenes	1.21008	1.20079	1.20079	0.010	-0.76806	20.00000	Averaged
99 Perylene	1.03344	1.00881	1.00881	0.010	-2.38333	20.00000	Averaged
98 Retene	0.54648	0.55820	0.55820	0.010	2.14499	20.00000	Averaged
120 2,3,4,6-Tetrachlorophenol	0.36167	0.36007	0.36007	0.010	-0.44275	20.00000	Averaged

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 8/2/13

Data file : /chem1/nt10.i/20130801.b/cc0801.d
Lab Smp Id: CC0801
Inj Date : 01-AUG-2013 15:22
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : CC0801
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130801.b/ABN.m
Meth Date : 02-Aug-2013 10:37 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

							AMOUNTS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.859	6.859	(0.744)	267621	5.00000	4.919
$	2 Phenol-d5	99	8.567	8.567	(0.930)	378786	5.00000	5.197
	3 Phenol	94	8.590	8.590	(0.932)	364241	5.00000	4.968
$	5 2-Chlorophenol-d4	132	8.830	8.830	(0.958)	251315	5.00000	4.849
	4 Bis(2-Chloroethyl)ether	93	8.745	8.745	(0.949)	264448	5.00000	4.636
	6 2-Chlorophenol	128	8.860	8.860	(0.961)	252937	5.00000	4.806
	7 1,3-Dichlorobenzene	146	9.147	9.147	(0.992)	250401	5.00000	4.637
*	8 1,4-Dichlorobenzene-d4	152	9.217	9.217	(1.000)	135027	4.00000	
	9 1,4-Dichlorobenzene	146	9.248	9.248	(1.003)	241518	5.00000	4.583
$	10 1,2-Dichlorobenzene-d4	152	9.605	9.605	(1.042)	171018	5.00000	4.684
	12 1,2-Dichlorobenzene	146	9.628	9.628	(1.045)	232540	5.00000	4.644
	11 Benzyl alcohol	108	9.527	9.527	(1.034)	157392	5.00000	5.090
	14 2,2'-oxybis(1-Chloropropane)	121	9.853	9.853	(1.069)	80619	5.00000	4.667
	13 2-Methylphenol	108	9.783	9.783	(1.061)	278875	5.00000	5.438
	17 Hexachloroethane	117	10.264	10.264	(1.114)	102215	5.00000	4.609
	16 N-Nitroso-di-n-propylamine	70	10.125	10.125	(1.099)	173246	5.00000	4.862
	15 4-Methylphenol	108	10.078	10.078	(1.093)	265411	5.00000	5.042
$	18 Nitrobenzene-d5	82	10.396	10.396	(0.874)	285080	5.00000	4.940
	19 Nitrobenzene	77	10.435	10.435	(0.877)	250636	5.00000	4.883
	20 Isophorone	82	10.930	10.930	(0.919)	461795	5.00000	5.045
	21 2-Nitrophenol	139	11.115	11.115	(0.935)	148819	5.00000	5.183
	22 2,4-Dimethylphenol	107	11.200	11.200	(0.942)	475829	10.0000	9.851
	23 Bis(2-Chloroethoxy)methane	93	11.408	11.408	(0.959)	291612	5.00000	4.856
	24 Benzoic acid	105	11.493	11.493	(0.966)	835910	20.0000	21.59
	25 2,4-Dichlorophenol	162	11.608	11.608	(0.976)	397907	10.0000	9.649
	26 1,2,4-Trichlorobenzene	180	11.801	11.801	(0.992)	202590	5.00000	4.632
*	27 Naphthalene-d8	136	11.894	11.894	(1.000)	479596	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.932	11.932	(1.003)	623014	5.00000	4.794
	29 4-Chloroaniline	127	12.102	12.102	(1.018)	540717	10.0000	9.741
	30 Hexachlorobutadiene	225	12.334	12.334	(1.037)	114745	5.00000	4.687
	31 4-Chloro-3-methylphenol	107	13.154	13.154	(1.106)	443120	10.0000	10.85
	32 2-Methylnaphthalene	142	13.441	13.441	(1.130)	451536	5.00000	4.914
	33 Hexachlorocyclopentadiene	237	13.952	13.952	(0.883)	334904	10.0000	9.453
	34 2,4,6-Trichlorophenol	196	14.130	14.130	(0.894)	330514	10.0000	9.790
	35 2,4,5-Trichlorophenol	196	14.207	14.207	(0.899)	360286	10.0000	10.43
$	36 2-Fluorobiphenyl	172	14.300	14.300	(0.905)	528677	5.00000	4.752
	37 2-Chloronaphthalene	162	14.516	14.516	(0.919)	426655	5.00000	4.824
	38 2-Nitroaniline	65	14.818	14.818	(0.938)	259482	10.0000	10.89
	39 Dimethylphthalate	163	15.298	15.298	(0.968)	461844	5.00000	4.778
	40 Acenaphthylene	152	15.453	15.453	(0.978)	683837	5.00000	4.767
	41 2,6-Dinitrotoluene	165	15.445	15.445	(0.977)	229712	10.0000	9.981
*	42 Acenaphthene-d10	164	15.801	15.801	(1.000)	296056	4.00000	
	43 3-Nitroaniline	138	15.747	15.747	(0.997)	164817	10.0000	8.476
	44 Acenaphthene	153	15.871	15.871	(1.004)	414890	5.00000	4.876
	45 2,4-Dinitrophenol	184	15.979	15.979	(1.011)	396775	20.0000	19.30
	46 Dibenzofuran	168	16.226	16.226	(1.027)	606143	5.00000	4.839
	47 4-Nitrophenol	109	16.126	16.126	(1.021)	125088	10.0000	11.24
	48 2,4-Dinitrotoluene	165	16.319	16.319	(1.033)	309491	10.0000	10.41
	50 Diethylphthalate	149	16.891	16.891	(1.069)	456126	5.00000	4.819
	49 Fluorene	166	17.000	17.000	(1.076)	490330	5.00000	4.594
	51 4-Chlorophenyl-phenylether	204	17.007	17.007	(1.076)	236789	5.00000	4.694
	52 4-Nitroaniline	138	17.123	17.123	(1.084)	209269	10.0000	10.25
	53 4,6-Dinitro-2-methylphenol	198	17.231	17.231	(0.902)	507655	20.0000	21.68
	54 N-Nitrosodiphenylamine	169	17.285	17.285	(0.905)	308272	5.00000	4.884
$	55 2,4,6-Tribromophenol	330	17.578	17.578	(1.112)	85692	5.00000	4.842
	56 4-Bromophenyl-phenylether	248	18.095	18.095	(0.948)	148363	5.00000	4.939
	57 Hexachlorobenzene	284	18.419	18.419	(0.965)	153075	5.00000	4.756
	58 Pentachlorophenol	266	18.814	18.814	(0.985)	238097	10.0000	9.570
*	59 Phenanthrene-d10	188	19.092	19.092	(1.000)	499317	4.00000	
	60 Phenanthrene	178	19.139	19.139	(1.002)	672595	5.00000	4.908
	61 Anthracene	178	19.247	19.247	(1.008)	708737	5.00000	4.880
	62 Carbazole	167	19.619	19.619	(1.028)	354122	5.00000	5.314
	63 Di-n-butylphthalate	149	20.547	20.547	(1.076)	800797	5.00000	5.180
	64 Fluoranthene	202	21.762	21.762	(1.140)	831347	5.00000	4.943
	65 Pyrene	202	22.210	22.210	(0.906)	854629	5.00000	5.181
$	66 Terphenyl-d14	244	22.551	22.551	(0.919)	456560	5.00000	5.149
	67 Butylbenzylphthalate	149	23.550	23.550	(0.960)	319995	5.00000	5.460
	68 Benzo(a)anthracene	228	24.494	24.494	(0.999)	736692	5.00000	4.913
*	69 Chrysene-d12	240	24.525	24.525	(1.000)	459644	4.00000	
	70 3,3'-Dichlorobenzidine	252	24.471	24.471	(0.998)	478397	10.0000	8.330
	71 Chrysene	228	24.572	24.572	(1.002)	645680	5.00000	4.952
	72 bis(2-Ethylhexyl)phthalate	149	24.634	24.634	(0.960)	422065	5.00000	5.132
*	134 Di-n-octylphthalate-d4	153	25.648	25.648	(1.000)	637005	4.00000	
	73 Di-n-octylphthalate	149	25.656	25.656	(1.000)	746444	5.00000	4.774

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	26.383	26.383	(0.973)	691542	5.00000	4.983
	75 Benzo(k)fluoranthene	252	26.422	26.422	(0.975)	723121	5.00000	4.933
	76 Benzo(a)pyrene	252	26.995	26.995	(0.996)	606097	5.00000	4.949
*	77 Perylene-d12	264	27.111	27.111	(1.000)	449761	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	29.632	29.632	(1.093)	712927	5.00000	4.960
	79 Dibenzo(a,h)anthracene	278	29.647	29.647	(1.094)	557296	5.00000	4.946
	80 Benzo(g,h,i)perylene	276	30.370	30.370	(1.120)	606875	5.00000	4.876
	90 N-Nitrosodimethylamine	74	4.574	4.574	(0.496)	348628	10.0000	9.417
	91 Aniline	93	8.644	8.644	(0.938)	769370	5.00000	4.799
	93 Benzidine	184	22.040	22.040	(0.899)	208491	10.0000	10.32
	103 Pyridine	79	4.589	4.589	(0.498)	285040	10.0000	9.175
	105 1-methylnaphthalene	142	13.681	13.681	(1.150)	411998	5.00000	4.920
	111 Azobenzene (1,2-DP-Hydrazine)	77	17.355	17.355	(1.098)	471700	5.00000	4.776
	187 Total Benzofluoranthenes	252	26.422	26.422	(0.975)	1350168	10.0000	9.923
	99 Perylene	252	27.165	27.165	(1.002)	567152	5.00000	4.881
	98 Retene	219	22.861	22.861	(0.932)	320717	5.00000	5.107
	120 2,3,4,6-Tetrachlorophenol	232	16.605	16.605	(1.051)	133250	5.00000	4.978

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0801.d
Lab Smp Id: CC0801
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130801.b/ABN.m
Misc Info:

Calibration Date: 01-AUG-2013
Calibration Time: 14:14

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	123587	61794	247174	135027	9.26
27 Naphthalene-d8	446161	223080	892322	479596	7.49
42 Acenaphthene-d10	267600	133800	535200	296056	10.63
59 Phenanthrene-d10	460929	230464	921858	499317	8.33
69 Chrysene-d12	439520	219760	879040	459644	4.58
134 Di-n-octylphthala	593075	296538	1186150	637005	7.41
77 Perylene-d12	451599	225800	903198	449761	-0.41

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.22	8.72	9.72	9.22	0.00
27 Naphthalene-d8	11.89	11.39	12.39	11.89	0.00
42 Acenaphthene-d10	15.80	15.30	16.30	15.80	0.00
59 Phenanthrene-d10	19.09	18.59	19.59	19.09	0.00
69 Chrysene-d12	24.53	24.03	25.03	24.53	0.00
134 Di-n-octylphthala	25.65	25.15	26.15	25.65	0.00
77 Perylene-d12	27.11	26.61	27.61	27.11	0.00

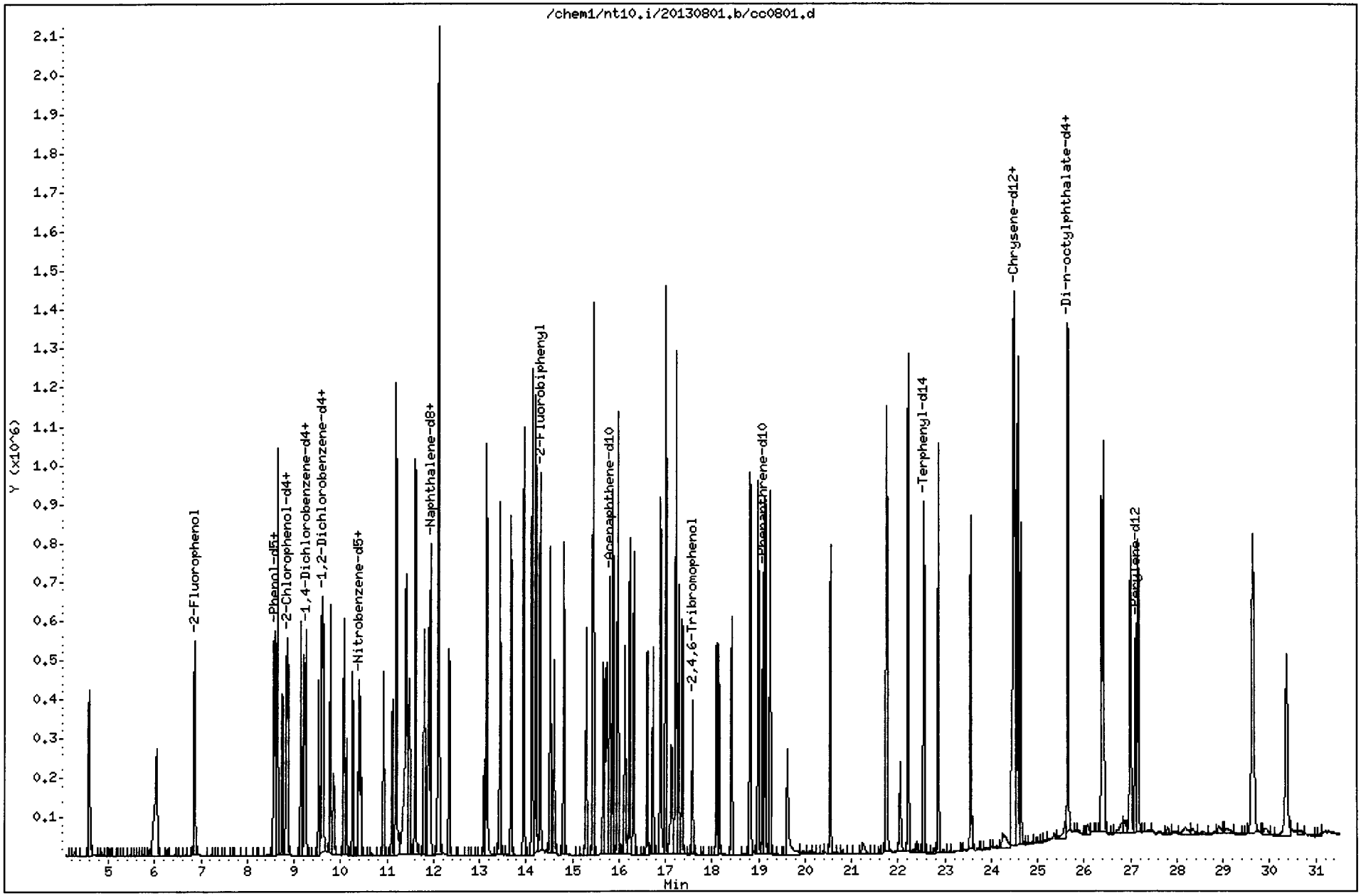
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130801.b/cc0801.d
Date : 01-AUG-2013 15:22
Client ID:
Sample Info: CC0801

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - cc0801.d

Lab ID: CC0801, Method: ABN.m, Instrument: nt10.i, Date: 01-AUG-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

YZ 8/7/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130801.b/wy32mb.d
Lab Smp Id: WY32MBS1 Client Smp ID: WY32MBS1
Inj Date : 01-AUG-2013 16:38
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WY32MBS1
Misc Info : 13-15393
Comment : 1ul Injection
Method : /chem1/nt10.i/20130801.b/ABN.m
Meth Date : 02-Aug-2013 10:37 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1	2-Fluorophenol	112	6.867	6.859	(0.745)	219854	5.28498	528.5
$ 2	Phenol-d5	99	8.567	8.567	(0.930)	309949	5.56105	556.1
3	Phenol	94	8.590	8.590	(0.932)	5899	0.10521 J	10.52(R)
$ 5	2-Chlorophenol-d4	132	8.830	8.830	(0.958)	224065	5.65355	565.4
4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
6	2-Chlorophenol	128	8.644	8.860	(0.938)	5195	0.12908	12.91(R)
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	9.217	9.217	(1.000)	103253	4.00000	
9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10	1,2-Dichlorobenzene-d4	152	9.605	9.605	(1.042)	75761	2.71341	271.3
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	108	Compound Not Detected.					
14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	10.396	10.396	(0.875)	135806	2.87655	287.7
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.886	11.894	(1.000)	392358	4.00000	
	28 Naphthalene	128	Compound Not Detected.					
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	14.300	14.300	(0.905)	250060	2.86780	286.8
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	15.793	15.801	(1.000)	232054	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	17.578	17.578	(1.113)	85786	6.18437	618.4
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	19.085	19.092	(1.000)	401751	4.00000	
	60 Phenanthrene	178	Compound Not Detected.					
	61 Anthracene	178	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
62	Carbazole	167	Compound Not Detected.					
63	Di-n-butylphthalate	149	Compound Not Detected.					
64	Fluoranthene	202	Compound Not Detected.					
65	Pyrene	202	Compound Not Detected.					
$ 66	Terphenyl-d14	244	22.551	22.551	(0.920)	257932	3.57792	357.8
67	Butylbenzylphthalate	149	Compound Not Detected.					
68	Benzo(a)anthracene	228	Compound Not Detected.					
* 69	Chrysene-d12	240	24.518	24.525	(1.000)	373693	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	Compound Not Detected.					
72	bis(2-Ethylhexyl)phthalate	149	Compound Not Detected.					
* 134	Di-n-octylphthalate-d4	153	25.640	25.648	(1.000)	491239	4.00000	
73	Di-n-octylphthalate	149	Compound Not Detected.					
74	Benzo(b)fluoranthene	252	Compound Not Detected.					
75	Benzo(k)fluoranthene	252	Compound Not Detected.					
76	Benzo(a)pyrene	252	Compound Not Detected.					
* 77	Perylene-d12	264	27.104	27.111	(1.000)	342533	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
80	Benzo(g,h,i)perylene	276	Compound Not Detected.					
90	N-Nitrosodimethylamine	74	Compound Not Detected.					
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	Compound Not Detected.					
105	1-methylnaphthalene	142	Compound Not Detected.					
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
187	Total Benzofluoranthenes	252	Compound Not Detected.					
99	Perylene	252	Compound Not Detected.					
98	~~Retene~~	219	~~22.853~~	~~22.861~~	~~(0.932)~~	~~1408~~	~~0.02758~~	~~2.758~~
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wy32mb.d
Lab Smp Id: WY32MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130801.b/ABN.m
Misc Info: 13-15393

Calibration Date: 01-AUG-2013
Calibration Time: 15:22
Client Smp ID: WY32MBS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	123587	61794	247174	103253	-16.45
27 Naphthalene-d8	446161	223080	892322	392358	-12.06
42 Acenaphthene-d10	267600	133800	535200	232054	-13.28
59 Phenanthrene-d10	460929	230464	921858	401751	-12.84
69 Chrysene-d12	439520	219760	879040	373693	-14.98
134 Di-n-octylphthala	593075	296538	1186150	491239	-17.17
77 Perylene-d12	451599	225800	903198	342533	-24.15

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.22	8.72	9.72	9.22	0.00
27 Naphthalene-d8	11.89	11.39	12.39	11.89	-0.06
42 Acenaphthene-d10	15.80	15.30	16.30	15.79	-0.05
59 Phenanthrene-d10	19.09	18.59	19.59	19.08	-0.04
69 Chrysene-d12	24.53	24.03	25.03	24.52	-0.03
134 Di-n-octylphthala	25.65	25.15	26.15	25.64	-0.03
77 Perylene-d12	27.11	26.61	27.61	27.10	-0.03

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

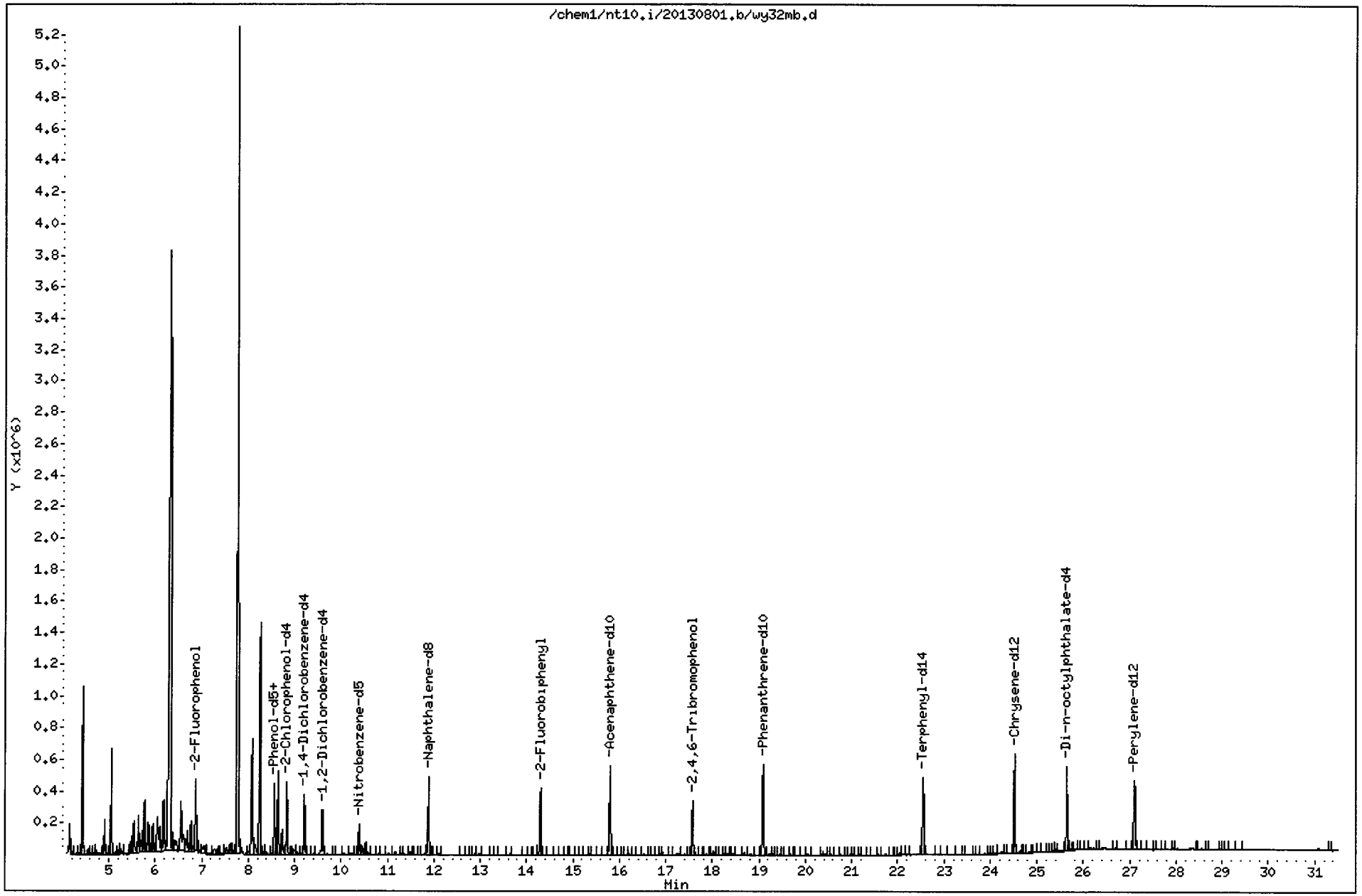
SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
43 3-Nitroaniline	1500	0.000	*	22-120
44 Acenaphthene	500.0	0.000	*	45-120
45 2,4-Dinitrophenol	2750	0.000	*	10-120
46 Dibenzofuran	500.0	0.000	*	43-120
47 4-Nitrophenol	1500	0.000	*	15-138
48 2,4-Dinitrotoluene	1500	0.000	*	35-127
49 Fluorene	500.0	0.000	*	45-120
50 Diethylphthalate	500.0	0.000	*	50-120
51 4-Chlorophenyl-ph	500.0	0.000	*	32-120
52 4-Nitroaniline	1500	0.000	*	24-125
53 4,6-Dinitro-2-met	2750	0.000	*	24-120
54 N-Nitrosodiphenyl	500.0	0.000	*	36-120
56 4-Bromophenyl-phe	500.0	0.000	*	39-120
57 Hexachlorobenzene	500.0	0.000	*	33-120
58 Pentachlorophenol	1500	0.000	*	16-120
60 Phenanthrene	500.0	0.000	*	49-120
61 Anthracene	500.0	0.000	*	45-120
62 Carbazole	500.0	0.000	*	43-135
63 Di-n-butylphthala	500.0	0.000	*	48-126
64 Fluoranthene	500.0	0.000	*	53-120
65 Pyrene	500.0	0.000	*	48-121
67 Butylbenzylphthal	500.0	0.000	*	45-132
68 Benzo(a)anthracene	500.0	0.000	*	49-120
70 3,3'-Dichlorobenz	1500	0.000	*	10-120
71 Chrysene	500.0	0.000	*	47-120
72 bis(2-Ethylhexyl)	500.0	0.000	*	34-130
73 Di-n-octylphthala	500.0	0.000	*	28-124
74 Benzo(b)fluoranth	500.0	0.000	*	42-132
75 Benzo(k)fluoranth	500.0	0.000	*	39-129
76 Benzo(a)pyrene	500.0	0.000	*	42-120
78 Indeno(1,2,3-cd)p	500.0	0.000	*	42-120
79 Dibenzo(a,h)anthr	500.0	0.000	*	30-120
80 Benzo(g,h,i)peryl	500.0	0.000	*	38-126
91 Aniline	1500	0.000	*	10-134
111 Azobenzene (1,2-D	500.0	0.000	*	35-120
90 N-Nitrosodimethyl	1500	0.000	*	17-120
105 1-methylnaphthale	500.0	0.000	*	42-120
103 Pyridine	1000	0.000	*	10-147
187 Total Benzofluora	1000	0.000	*	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	528.5	70.47	27-120

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 2 Phenol-d5	750.0	556.1	74.15	29-120
$ 5 2-Chlorophenol-d4	750.0	565.4	75.38	31-120
$ 10 1,2-Dichlorobenzen	500.0	271.3	54.27	32-120
$ 18 Nitrobenzene-d5	500.0	287.7	57.53	30-120
$ 36 2-Fluorobiphenyl	500.0	286.8	57.36	35-120
$ 55 2,4,6-Tribromophen	750.0	618.4	82.46	24-134
$ 66 Terphenyl-d14	500.0	357.8	71.56	37-120

Data File: /chem1/nt10.i/20130801.b/wy32mb.d
Date : 01-AUG-2013 16:38
Client ID: WY32MBS1
Sample Info: WY32MBS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130801.b/wy32mb.d

Date : 01-AUG-2013 16:38

Client ID: WY32MBS1

Instrument: nt10.i

Sample Info: WY32MBS1

Volume Injected (uL): 1.0

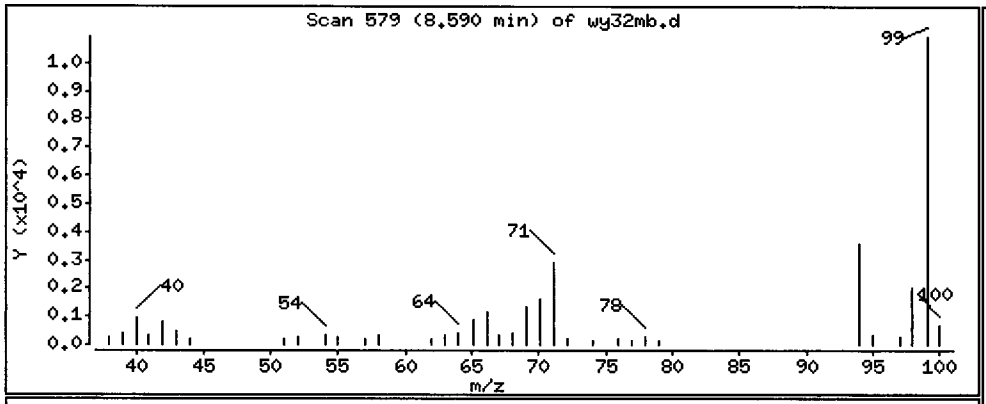
Operator: VTS/YZ

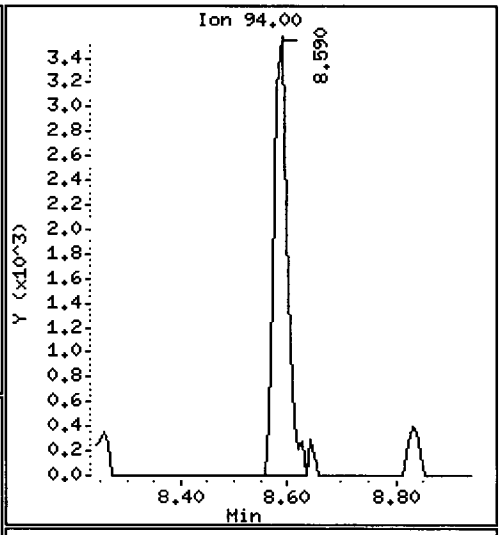
Column phase: ZB-5msi

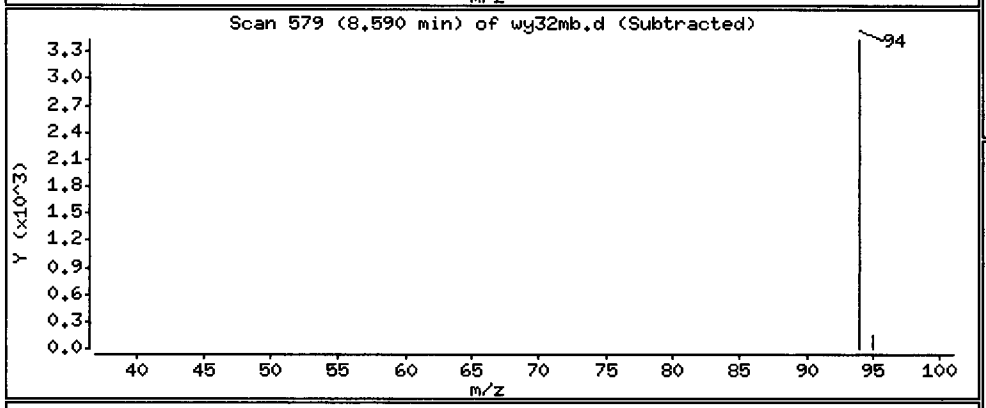
Column diameter: 0.25

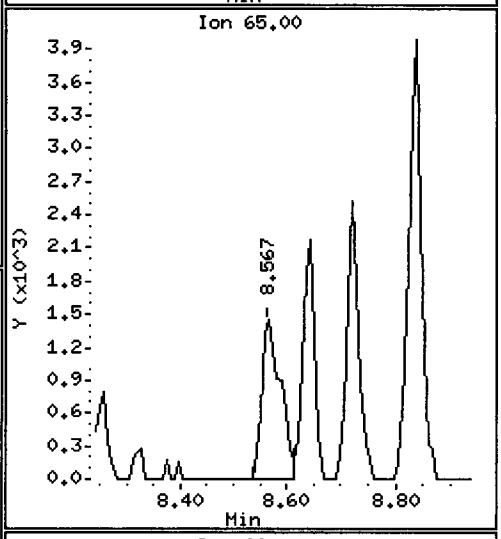
3 Phenol

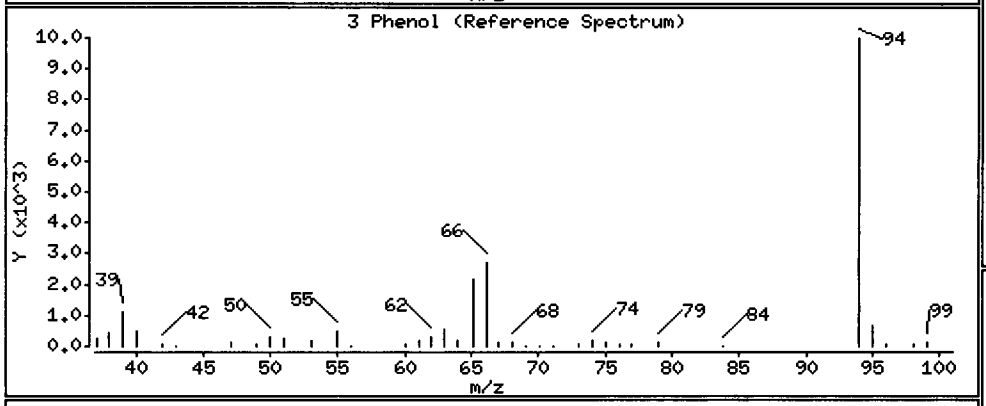
Concentration: 10.52 ug/kg

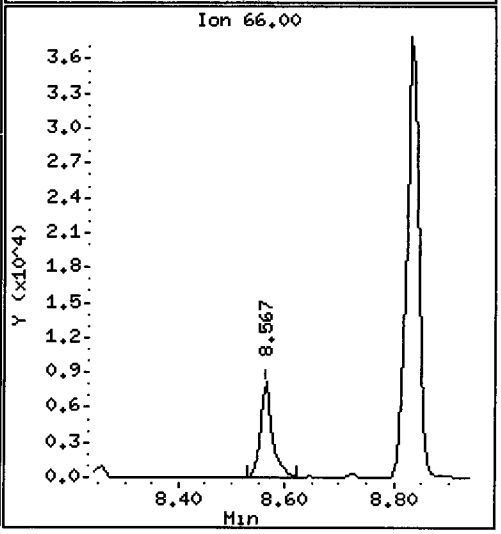


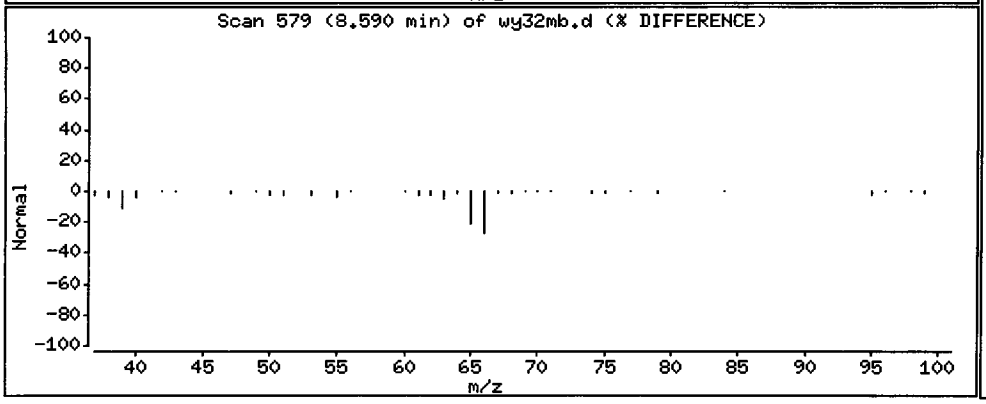












CO-ELUTION SUMMARY FOR FILE - wy32mb.d

Lab ID: WY32MBS1, Method: ABN.m, Instrument: nt10.i, Date: 01-AUG-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 8/3/13

Data file : /chem1/nt10.i/20130801.b/wy32sb.d
Lab Smp Id: WY32LCSS1 Client Smp ID: WY32LCSS1
Inj Date : 01-AUG-2013 17:16
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WY32LCSS1
Misc Info : 13-15393
Comment : 1ul Injection
Method : /chem1/nt10.i/20130801.b/ABN.m
Meth Date : 03-Aug-2013 10:44 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$ 1	2-Fluorophenol	112	6.867	6.859	(0.745)	215561	5.98386	598.4
$ 2	Phenol-d5	99	8.567	8.567	(0.930)	304944	6.31813	631.8
3	Phenol	94	8.590	8.590	(0.932)	175519	3.61499	361.5
$ 5	2-Chlorophenol-d4	132	8.837	8.830	(0.959)	214550	6.25141	625.1
4	Bis(2-Chloroethyl)ether	93	8.752	8.745	(0.950)	121131	3.20664	320.7
6	2-Chlorophenol	128	8.868	8.860	(0.962)	106791	3.06420	306.4
7	1,3-Dichlorobenzene	146	9.147	9.147	(0.992)	111063	3.10576	310.6
* 8	1,4-Dichlorobenzene-d4	152	9.217	9.217	(1.000)	89413	4.00000	
9	1,4-Dichlorobenzene	146	9.256	9.248	(1.004)	109869	3.14871	314.9
$ 10	1,2-Dichlorobenzene-d4	152	9.605	9.605	(1.042)	69916	2.89167	289.2
12	1,2-Dichlorobenzene	146	9.636	9.628	(1.045)	107241	3.23392	323.4
11	Benzyl alcohol	108	9.535	9.527	(1.035)	49583	2.42129	242.1
14	2,2'-oxybis(1-Chloropropane)	121	9.845	9.853	(1.068)	37219	3.25354	325.4
13	2-Methylphenol	108	9.783	9.783	(1.061)	97149	2.86099	286.1

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	10.265	10.264	(1.114)	45854	3.12254	312.3
	16 N-Nitroso-di-n-propylamine	70	10.125	10.125	(1.099)	71766	3.04172	304.2
	15 4-Methylphenol	108	10.086	10.078	(1.094)	212246	6.08889	608.9
$	18 Nitrobenzene-d5	82	10.396	10.396	(0.875)	123092	3.05251	305.3
	19 Nitrobenzene	77	10.435	10.435	(0.878)	122621	3.41858	341.9
	20 Isophorone	82	10.923	10.930	(0.919)	223426	3.49330	349.3
	21 2-Nitrophenol	139	11.115	11.115	(0.935)	61993	3.08963	309.0
	22 2,4-Dimethylphenol	107	11.200	11.200	(0.942)	176181	5.21983	522.0
	23 Bis(2-Chloroethoxy)methane	93	11.400	11.408	(0.959)	141356	3.36851	336.9
	24 Benzoic acid	105	11.447	11.493	(0.963)	525556	19.4270	1943
	25 2,4-Dichlorophenol	162	11.608	11.608	(0.977)	299941	10.4086	1041
	26 1,2,4-Trichlorobenzene	180	11.801	11.801	(0.993)	97281	3.18309	318.3
*	27 Naphthalene-d8	136	11.886	11.894	(1.000)	335126	4.00000	
	28 Naphthalene	128	11.933	11.932	(1.004)	279729	3.08041	308.0
	29 4-Chloroaniline	127	12.095	12.102	(1.018)	55078	1.42002	142.0(R)
	30 Hexachlorobutadiene	225	12.334	12.334	(1.038)	54041	3.15873	315.9
	31 4-Chloro-3-methylphenol	107	13.155	13.154	(1.107)	322046	11.2872	1129
	32 2-Methylnaphthalene	142	13.441	13.441	(1.131)	200847	3.12819	312.8
	33 Hexachlorocyclopentadiene	237	13.952	13.952	(0.883)	194618	7.94333	794.3
	34 2,4,6-Trichlorophenol	196	14.130	14.130	(0.894)	227261	9.73357	973.4
	35 2,4,5-Trichlorophenol	196	14.207	14.207	(0.899)	245755	10.2910	1029
$	36 2-Fluorobiphenyl	172	14.300	14.300	(0.905)	238099	3.09476	309.5
	37 2-Chloronaphthalene	162	14.517	14.516	(0.919)	206090	3.36907	336.9
	38 2-Nitroaniline	65	14.811	14.818	(0.937)	198225	12.0312	1203
	39 Dimethylphthalate	163	15.298	15.298	(0.968)	248433	3.71664	371.7
	40 Acenaphthylene	152	15.453	15.453	(0.978)	304597	3.07053	307.1
	41 2,6-Dinitrotoluene	165	15.438	15.445	(0.977)	187245	11.7634	1176
*	42 Acenaphthene-d10	164	15.801	15.801	(1.000)	204750	4.00000	
	43 3-Nitroaniline	138	15.739	15.747	(0.996)	64083	4.76537	476.5
	44 Acenaphthene	153	15.871	15.871	(1.004)	192962	3.27901	327.9
	45 2,4-Dinitrophenol	184	15.971	15.979	(1.011)	237726	16.7638	1676
	46 Dibenzofuran	168	16.226	16.226	(1.027)	291707	3.36724	336.7
	47 4-Nitrophenol	109	16.118	16.126	(1.020)	88950	11.5528	1155
	48 2,4-Dinitrotoluene	165	16.311	16.319	(1.032)	247963	12.0567	1206
	50 Diethylphthalate	149	16.884	16.891	(1.068)	282110	4.30952	431.0
	49 Fluorene	166	17.000	17.000	(1.076)	236531	3.20451	320.5
	51 4-Chlorophenyl-phenylether	204	17.007	17.007	(1.076)	119551	3.42702	342.7
	52 4-Nitroaniline	138	17.116	17.123	(1.083)	116847	8.27327	827.3
	53 4,6-Dinitro-2-methylphenol	198	17.224	17.231	(0.902)	329885	20.3134	2031
	54 N-Nitrosodiphenylamine	169	17.278	17.285	(0.905)	148590	3.39446	339.4
$	55 2,4,6-Tribromophenol	330	17.578	17.578	(1.112)	79854	6.52440	652.4
	56 4-Bromophenyl-phenylether	248	18.087	18.095	(0.947)	74627	3.58203	358.2
	57 Hexachlorobenzene	284	18.419	18.419	(0.965)	80813	3.62055	362.1
	58 Pentachlorophenol	266	18.814	18.814	(0.985)	176737	10.2434	1024
*	59 Phenanthrene-d10	188	19.093	19.092	(1.000)	346289	4.00000	
	60 Phenanthrene	178	19.139	19.139	(1.002)	354665	3.73150	373.1
	61 Anthracene	178	19.240	19.247	(1.008)	319623	3.17358	317.4

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
62	Carbazole	167	19.619	19.619	(1.028)	332072	7.03109	703.1(R)
63	Di-n-butylphthalate	149	20.547	20.547	(1.076)	450121	4.19828	419.8
64	Fluoranthene	202	21.754	21.762	(1.139)	434338	3.72378	372.4
65	Pyrene	202	22.211	22.210	(0.906)	442342	3.71613	371.6
$ 66	Terphenyl-d14	244	22.551	22.551	(0.919)	247562	3.86909	386.9
67	Butylbenzylphthalate	149	23.550	23.550	(0.960)	184927	4.37292	437.3
68	Benzo(a)anthracene	228	24.495	24.494	(0.999)	379758	3.50944	350.9
* 69	Chrysene-d12	240	24.526	24.525	(1.000)	331677	4.00000	
70	3,3'-Dichlorobenzidine	252	24.471	24.471	(0.998)	38813	0.93661	93.66(R)
71	Chrysene	228	24.572	24.572	(1.002)	332453	3.53315	353.3
72	bis(2-Ethylhexyl)phthalate	149	24.634	24.634	(0.960)	226669	3.92575	392.6
* 134	Di-n-octylphthalate-d4	153	25.648	25.648	(1.000)	447211	4.00000	
73	Di-n-octylphthalate	149	25.656	25.656	(1.000)	370703	3.37727	337.7
74	Benzo(b)fluoranthene	252	26.376	26.383	(0.973)	382695	4.10627	410.6
75	Benzo(k)fluoranthene	252	26.415	26.422	(0.974)	364799	3.70535	370.5
76	Benzo(a)pyrene	252	26.995	26.995	(0.996)	264990	3.22173	322.2
* 77	Perylene-d12	264	27.111	27.111	(1.000)	302062	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	29.616	29.632	(1.092)	343569	3.55912	355.9
79	Dibenzo(a,h)anthracene	278	29.640	29.647	(1.093)	214661	2.83648	283.6
80	Benzo(g,h,i)perylene	276	30.362	30.370	(1.120)	262370	3.13897	313.9
90	N-Nitrosodimethylamine	74	4.605	4.574	(0.500)	196393	8.01158	801.2
91	Aniline	93	8.652	8.644	(0.939)	60805	0.57278	57.28(R)
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	4.628	4.589	(0.502)	244882	11.9035	1190
105	1-methylnaphthalene	142	13.681	13.681	(1.151)	195531	3.34157	334.2
111	Azobenzene (1,2-DP-Hydrazine)	77	17.355	17.355	(1.098)	238370	3.48980	349.0
187	Total Benzofluoranthenes	252	26.376	26.422	(0.973)	705822	7.72405	772.4
99	Perylene	252	27.158	27.165	(1.002)	145896	1.86949	186.9
98	Retene	219	22.853	22.861	(0.932)	1614	0.03562	3.562
120	2,3,4,6-Tetrachlorophenol	232	16.597	16.605	(1.050)	67615	3.65230	365.2

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wy32sb.d
Lab Smp Id: WY32LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130801.b/ABN.m
Misc Info: 13-15393

Calibration Date: 01-AUG-2013
Calibration Time: 15:22
Client Smp ID: WY32LCSS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	123587	61794	247174	89413	-27.65
27 Naphthalene-d8	446161	223080	892322	335126	-24.89
42 Acenaphthene-d10	267600	133800	535200	204750	-23.49
59 Phenanthrene-d10	460929	230464	921858	346289	-24.87
69 Chrysene-d12	439520	219760	879040	331677	-24.54
134 Di-n-octylphthala	593075	296538	1186150	447211	-24.59
77 Perylene-d12	451599	225800	903198	302062	-33.11

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.22	8.72	9.72	9.22	0.00
27 Naphthalene-d8	11.89	11.39	12.39	11.89	-0.06
42 Acenaphthene-d10	15.80	15.30	16.30	15.80	0.00
59 Phenanthrene-d10	19.09	18.59	19.59	19.09	0.00
69 Chrysene-d12	24.53	24.03	25.03	24.53	0.00
134 Di-n-octylphthala	25.65	25.15	26.15	25.65	0.00
77 Perylene-d12	27.11	26.61	27.61	27.11	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WY32LCSS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDALCS.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130801.b/ABN.m
Misc Info: 13-15393

Client SDG: WY32
Fraction: SV
Client Smp ID: WY32LCSS1
Operator: VTS/YZ
SampleType: LCS
Quant Type: ISTD

SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	361.5	72.30	34-120
4	Bis(2-Chloroethyl)	500.0	320.7	64.13	36-120
6	2-Chlorophenol	500.0	306.4	61.28	39-120
7	1,3-Dichlorobenzen	500.0	310.6	62.12	40-120
9	1,4-Dichlorobenzen	500.0	314.9	62.97	39-120
11	Benzyl alcohol	500.0	242.1	48.43	19-120
12	1,2-Dichlorobenzen	500.0	323.4	64.68	32-120
13	2-Methylphenol	500.0	286.1	57.22	28-120
14	2,2'-oxybis(1-Chlo	500.0	325.4	65.07	32-120
15	4-Methylphenol	1000	608.9	60.89	29-120
16	N-Nitroso-di-n-pro	500.0	304.2	60.83	30-120
17	Hexachloroethane	500.0	312.3	62.45	38-120
19	Nitrobenzene	500.0	341.9	68.37	36-120
20	Isophorone	500.0	349.3	69.87	37-120
21	2-Nitrophenol	500.0	309.0	61.79	37-120
22	2,4-Dimethylphenol	1500	522.0	34.80	10-120
23	Bis(2-Chloroethoxy	500.0	336.9	67.37	39-120
24	Benzoic acid	2750	1943	70.64	10-120
25	2,4-Dichlorophenol	1500	1041	69.39	28-120
26	1,2,4-Trichloroben	500.0	318.3	63.66	35-120
28	Naphthalene	500.0	308.0	61.61	43-120
29	4-Chloroaniline	1500	142.0	9.47*	11-120
30	Hexachlorobutadien	500.0	315.9	63.17	37-120
31	4-Chloro-3-methylp	1500	1129	75.25	32-120
32	2-Methylnaphthalen	500.0	312.8	62.56	43-120
33	Hexachlorocyclopen	1500	794.3	52.96	10-120
34	2,4,6-Trichlorophe	1500	973.4	64.89	30-120
35	2,4,5-Trichlorophe	1500	1029	68.61	28-120
37	2-Chloronaphthalen	500.0	336.9	67.38	40-120
38	2-Nitroaniline	1500	1203	80.21	31-126
39	Dimethylphthalate	500.0	371.7	74.33	43-120
40	Acenaphthylene	500.0	307.1	61.41	42-120
41	2,6-Dinitrotoluene	1500	1176	78.42	33-123

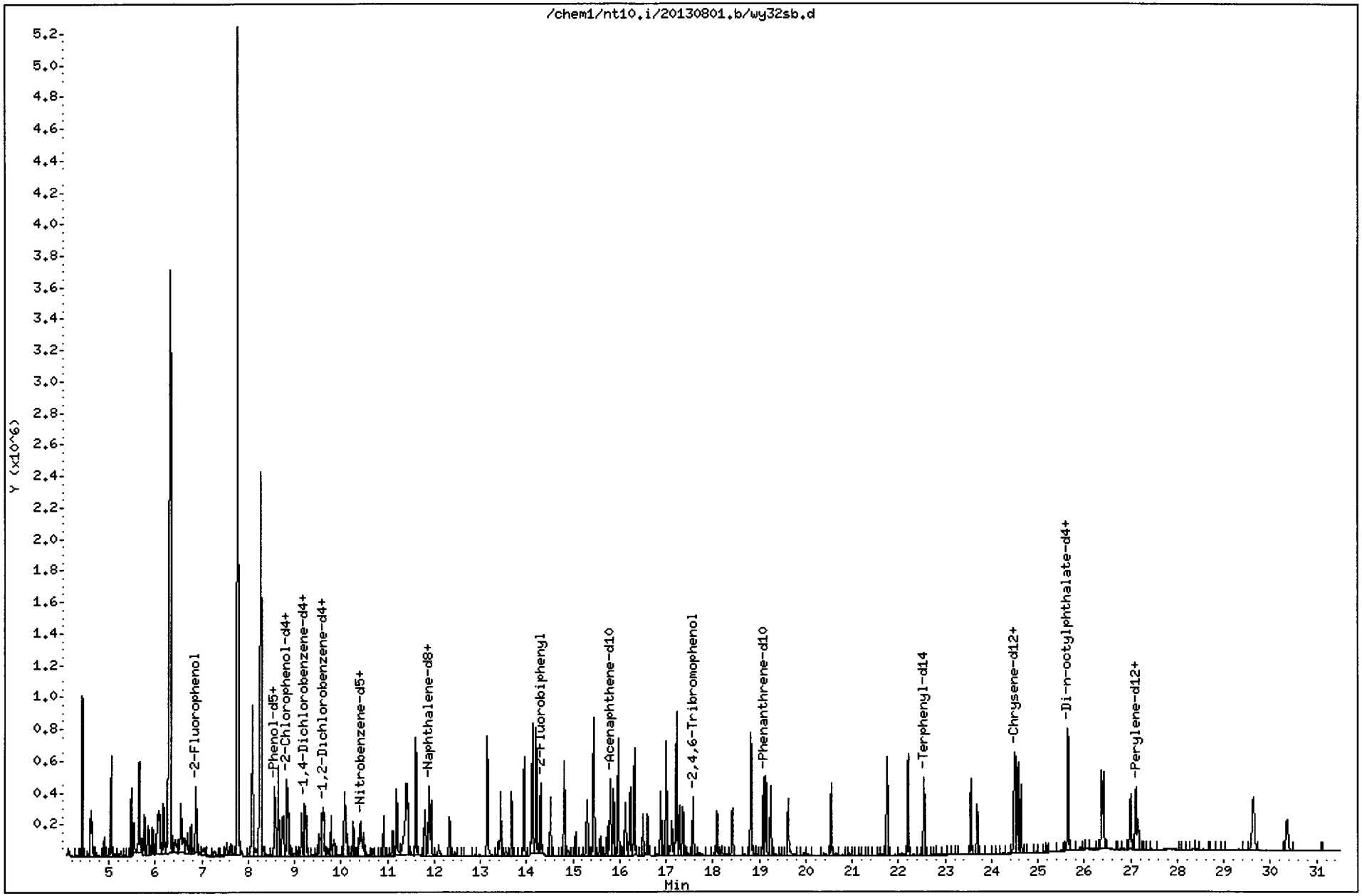
SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
43 3-Nitroaniline	1500	476.5	31.77	22-120
44 Acenaphthene	500.0	327.9	65.58	45-120
45 2,4-Dinitrophenol	2750	1676	60.96	10-120
46 Dibenzofuran	500.0	336.7	67.34	43-120
47 4-Nitrophenol	1500	1155	77.02	15-138
48 2,4-Dinitrotoluene	1500	1206	80.38	35-127
49 Fluorene	500.0	320.5	64.09	45-120
50 Diethylphthalate	500.0	431.0	86.19	50-120
51 4-Chlorophenyl-phe	500.0	342.7	68.54	32-120
52 4-Nitroaniline	1500	827.3	55.16	24-125
53 4,6-Dinitro-2-meth	2750	2031	73.87	24-120
54 N-Nitrosodiphenyla	500.0	339.4	67.89	36-120
56 4-Bromophenyl-phen	500.0	358.2	71.64	39-120
57 Hexachlorobenzene	500.0	362.1	72.41	33-120
58 Pentachlorophenol	1500	1024	68.29	16-120
60 Phenanthrene	500.0	373.1	74.63	49-120
61 Anthracene	500.0	317.4	63.47	45-120
62 Carbazole	500.0	703.1	140.62*	43-135
63 Di-n-butylphthalat	500.0	419.8	83.97	48-126
64 Fluoranthene	500.0	372.4	74.48	53-120
65 Pyrene	500.0	371.6	74.32	48-121
67 Butylbenzylphthala	500.0	437.3	87.46	45-132
68 Benzo(a)anthracene	500.0	350.9	70.19	49-120
70 3,3'-Dichlorobenzi	1500	93.66	6.24*	10-120
71 Chrysene	500.0	353.3	70.66	47-120
72 bis(2-Ethylhexyl)p	500.0	392.6	78.51	34-130
73 Di-n-octylphthalat	500.0	337.7	67.55	28-124
74 Benzo(b)fluoranthe	500.0	410.6	82.13	42-132
75 Benzo(k)fluoranthe	500.0	370.5	74.11	39-129
76 Benzo(a)pyrene	500.0	322.2	64.43	42-120
78 Indeno(1,2,3-cd)py	500.0	355.9	71.18	42-120
79 Dibenzo(a,h)anthra	500.0	283.6	56.73	30-120
80 Benzo(g,h,i)peryle	500.0	313.9	62.78	38-126
91 Aniline	1500	57.28	3.82*	10-134
111 Azobenzene (1,2-DP	500.0	349.0	69.80	35-120
90 N-Nitrosodimethyla	1500	801.2	53.41	17-120
105 1-methylnaphthalen	500.0	334.2	66.83	42-120
103 Pyridine	1000	1190	119.04	10-147
187 Total Benzofluoran	1000	772.4	77.24	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	598.4	79.78	27-120

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 2 Phenol-d5	750.0	631.8	84.24	29-120
$ 5 2-Chlorophenol-d4	750.0	625.1	83.35	31-120
$ 10 1,2-Dichlorobenzen	500.0	289.2	57.83	32-120
$ 18 Nitrobenzene-d5	500.0	305.3	61.05	30-120
$ 36 2-Fluorobiphenyl	500.0	309.5	61.90	35-120
$ 55 2,4,6-Tribromophen	750.0	652.4	86.99	24-134
$ 66 Terphenyl-d14	500.0	386.9	77.38	37-120

Data File: /chem1/nt10.i/20130801.b/wy32sb.d
Date : 01-AUG-2013 17:16
Client ID: WY32LCSS1
Sample Info: WY32LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wy32sb.d

Lab ID: WY32LCSS1, Method: ABN.m, Instrument: nt10.i, Date: 01-AUG-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 8/3/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130801.b/wy32ams.d
Lab Smp Id: WY32AMS Client Smp ID: UP-CB-B8-201306 MS
Inj Date : 01-AUG-2013 19:47
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WY32AMS
Misc Info : 13-15393
Comment : 1ul Injection
Method : /chem1/nt10.i/20130801.b/ABN.m
Meth Date : 03-Aug-2013 10:44 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 9 QC Sample: MS
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	7.04000	Weight of sample extracted (g)
M	31.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	6.875	6.859	(0.746)	76555	2.03998	1260
$	2 Phenol-d5	99	8.575	8.567	(0.930)	114262	2.27254	1403
	3 Phenol	94	8.598	8.590	(0.933)	77934	1.54081	951.6
$	5 2-Chlorophenol-d4	132	8.837	8.830	(0.959)	81345	2.27521	1405
	4 Bis(2-Chloroethyl)ether	93	8.745	8.745	(0.949)	44843	1.13954	703.8
	6 2-Chlorophenol	128	8.868	8.860	(0.962)	41652	1.14725	708.5
	7 1,3-Dichlorobenzene	146	9.147	9.147	(0.992)	40115	1.07683	665.0
*	8 1,4-Dichlorobenzene-d4	152	9.217	9.217	(1.000)	93145	4.00000	
	9 1,4-Dichlorobenzene	146	9.255	9.248	(1.004)	41059	1.12955	697.6
$	10 1,2-Dichlorobenzene-d4	152	9.605	9.605	(1.042)	24645	0.97846	604.3
	12 1,2-Dichlorobenzene	146	9.636	9.628	(1.045)	38598	1.11731	690.0
	11 Benzyl alcohol	108	9.543	9.527	(1.035)	31254	1.46508	904.8
	14 2,2'-oxybis(1-Chloropropane)	121	9.853	9.853	(1.069)	13869	1.16380	718.7
	13 2-Methylphenol	108	9.791	9.783	(1.062)	42355	1.19736	739.5

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	10.265	10.264	(1.114)	14802	0.96759	597.6
	16 N-Nitroso-di-n-propylamine	70	10.125	10.125	(1.099)	32669	1.32916	820.9
	15 4-Methylphenol	108	10.086	10.078	(1.094)	120904	3.32951	2056
$	18 Nitrobenzene-d5	82	10.396	10.396	(0.874)	42778	1.05276	650.2
	19 Nitrobenzene	77	10.435	10.435	(0.877)	41682	1.15321	712.2
	20 Isophorone	82	10.930	10.930	(0.919)	86561	1.34309	829.5
	21 2-Nitrophenol	139	11.115	11.115	(0.935)	13561	0.67071	414.2
	22 2,4-Dimethylphenol	107	11.200	11.200	(0.942)	127128	3.73783	2308
	23 Bis(2-Chloroethoxy)methane	93	11.408	11.408	(0.959)	54012	1.27730	788.8
	24 Benzoic acid	105	11.400	11.493	(0.958)	215210	7.89461	4876
	25 2,4-Dichlorophenol	162	11.616	11.608	(0.977)	121205	4.17404	2578
	26 1,2,4-Trichlorobenzene	180	11.801	11.801	(0.992)	37637	1.22213	754.8
*	27 Naphthalene-d8	136	11.894	11.894	(1.000)	337697	4.00000	
	28 Naphthalene	128	11.932	11.932	(1.003)	144630	1.58056	976.1
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	12.334	12.334	(1.037)	20614	1.19573	738.5
	31 4-Chloro-3-methylphenol	107	13.162	13.154	(1.107)	117005	4.06960	2513
	32 2-Methylnaphthalene	142	13.441	13.441	(1.130)	114568	1.77081	1094
	33 Hexachlorocyclopentadiene	237	13.952	13.952	(0.883)	5609	0.26518	163.8(R)
	34 2,4,6-Trichlorophenol	196	14.130	14.130	(0.894)	85092	4.22161	2607
	35 2,4,5-Trichlorophenol	196	14.215	14.207	(0.900)	89703	4.35116	2687
$	36 2-Fluorobiphenyl	172	14.300	14.300	(0.905)	86574	1.30346	805.0
	37 2-Chloronaphthalene	162	14.517	14.516	(0.919)	76443	1.44755	894.0
	38 2-Nitroaniline	65	14.811	14.818	(0.937)	56942	4.00335	2472
	39 Dimethylphthalate	163	15.298	15.298	(0.968)	88303	1.53024	945.1
	40 Acenaphthylene	152	15.453	15.453	(0.978)	115257	1.34585	831.2
	41 2,6-Dinitrotoluene	165	15.438	15.445	(0.977)	47466	3.45420	2133
*	42 Acenaphthene-d10	164	15.801	15.801	(1.000)	176759	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	15.871	15.871	(1.004)	139871	2.75322	1700(R)
	45 2,4-Dinitrophenol	184	15.971	15.979	(1.011)	21378	1.77058	1093
	46 Dibenzofuran	168	16.226	16.226	(1.027)	179349	2.39811	1481(R)
	47 4-Nitrophenol	109	16.141	16.126	(1.022)	26332	3.96156	2447
	48 2,4-Dinitrotoluene	165	16.311	16.319	(1.032)	61615	3.47033	2143
	50 Diethylphthalate	149	16.884	16.891	(1.068)	77381	1.36926	845.6
	49 Fluorene	166	17.000	17.000	(1.076)	206738	3.24441	2004(R)
	51 4-Chlorophenyl-phenylether	204	17.007	17.007	(1.076)	47545	1.57874	975.0
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	17.223	17.231	(0.902)	36219	2.73622	1690
	54 N-Nitrosodiphenylamine	169	17.285	17.285	(0.905)	58529	1.64039	1013
$	55 2,4,6-Tribromophenol	330	17.586	17.578	(1.113)	26259	2.48522	1535
	56 4-Bromophenyl-phenylether	248	18.102	18.095	(0.948)	23174	1.36467	842.8
	57 Hexachlorobenzene	284	18.427	18.419	(0.965)	26821	1.47422	910.5
	58 Pentachlorophenol	266	18.829	18.814	(0.986)	51645	3.67229	2268
*	59 Phenanthrene-d10	188	19.100	19.092	(1.000)	282257	4.00000	
	60 Phenanthrene	178	19.154	19.139	(1.003)	875296	11.2983	6978(R)
	61 Anthracene	178	19.255	19.247	(1.008)	251098	3.05878	1889(R)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
62	Carbazole	167	19.626	19.619	(1.028)	155410	4.18134	2582(R)
63	Di-n-butylphthalate	149	20.563	20.547	(1.077)	179617	2.05534	1269
64	Fluoranthene	202	21.777	21.762	(1.140)	767926	8.07736	4988(R)
65	Pyrene	202	22.226	22.210	(0.905)	655545	6.66809	4118(R)
$ 66	Terphenyl-d14	244	22.567	22.551	(0.919)	65853	1.24614	769.6
67	Butylbenzylphthalate	149	23.573	23.550	(0.960)	572961	16.4045	10130(R)
68	Benzo(a)anthracene	228	24.525	24.494	(0.999)	218519	2.44504	1510(R)
* 69	Chrysene-d12	240	24.556	24.525	(1.000)	273936	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	24.603	24.572	(1.002)	288454	3.71172	2292(R)
72	bis(2-Ethylhexyl)phthalate	149	24.680	24.634	(0.961)	7100153	143.108	88380(R)
* 134	Di-n-octylphthalate-d4	153	25.679	25.648	(1.000)	384280	4.00000	
73	Di-n-octylphthalate	149	25.694	25.656	(1.001)	453825	4.81163	2972(RM)
74	Benzo(b)fluoranthene	252	26.430	26.383	(0.972)	234094	2.44241	1508(RM)
75	Benzo(k)fluoranthene	252	26.469	26.422	(0.974)	196361	1.93939	1198(M)
76	Benzo(a)pyrene	252	27.065	26.995	(0.996)	161168	1.90533	1177
* 77	Perylene-d12	264	27.181	27.111	(1.000)	310644	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	29.733	29.632	(1.094)	127293	1.28223	791.9
79	Dibenzo(a,h)anthracene	278	29.756	29.647	(1.095)	67999	0.87370	539.6(M)
80	Benzo(g,h,i)perylene	276	30.486	30.370	(1.122)	143332	1.66744	1030
90	N-Nitrosodimethylamine	74	4.581	4.574	(0.497)	62679	2.45446	1516
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	4.628	4.589	(0.502)	54462	2.54128	1569
105	1-methylnaphthalene	142	13.681	13.681	(1.150)	95431	1.61847	999.5
111	Azobenzene (1,2-DP-Hydrazine)	77	17.362	17.355	(1.099)	83978	1.42415	879.5
187	Total Benzofluoranthenes	252	26.430	26.422	(0.972)	397845	4.23347	2615
99	Perylene	252	27.235	27.165	(1.002)	76769	0.95653	590.7
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	16.605	16.605	(1.051)	21593	1.35107	834.4

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wy32ams.d
Lab Smp Id: WY32AMS
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130801.b/ABN.m
Misc Info: 13-15393

Calibration Date: 01-AUG-2013
Calibration Time: 15:22
Client Smp ID: UP-CB-B8-201306
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	123587	61794	247174	93145	-24.63
27 Naphthalene-d8	446161	223080	892322	337697	-24.31
42 Acenaphthene-d10	267600	133800	535200	176759	-33.95
59 Phenanthrene-d10	460929	230464	921858	282257	-38.76
69 Chrysene-d12	439520	219760	879040	273936	-37.67
134 Di-n-octylphthala	593075	296538	1186150	384280	-35.21
77 Perylene-d12	451599	225800	903198	310644	-31.21

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.22	8.72	9.72	9.22	0.00
27 Naphthalene-d8	11.89	11.39	12.39	11.89	0.00
42 Acenaphthene-d10	15.80	15.30	16.30	15.80	0.00
59 Phenanthrene-d10	19.09	18.59	19.59	19.10	0.04
69 Chrysene-d12	24.53	24.03	25.03	24.56	0.13
134 Di-n-octylphthala	25.65	25.15	26.15	25.68	0.12
77 Perylene-d12	27.11	26.61	27.61	27.18	0.26

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WY32AMS
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDALCS.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130801.b/ABN.m
Misc Info: 13-15393

Client SDG: WY32
Fraction: SV
Client Smp ID: UP-CB-B8-201306 MS
Operator: VTS/YZ
SampleType: MS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	1029	951.6	92.45	34-120
4 Bis(2-Chloroethyl)	1029	703.8	68.37	36-120
6 2-Chlorophenol	1029	708.5	68.84	39-120
7 1,3-Dichlorobenzen	1029	665.0	64.61	40-120
9 1,4-Dichlorobenzen	1029	697.6	67.77	39-120
11 Benzyl alcohol	1029	904.8	87.90	19-120
12 1,2-Dichlorobenzen	1029	690.0	67.04	32-120
13 2-Methylphenol	1029	739.5	71.84	28-120
14 2,2'-oxybis(1-Chlo	1029	718.7	69.83	32-120
15 4-Methylphenol	2059	2056	99.89	29-120
16 N-Nitroso-di-n-pro	1029	820.9	79.75	30-120
17 Hexachloroethane	1029	597.6	58.06	38-120
19 Nitrobenzene	1029	712.2	69.19	36-120
20 Isophorone	1029	829.5	80.59	37-120
21 2-Nitrophenol	1029	414.2	40.24	37-120
22 2,4-Dimethylphenol	3088	2308	74.76	10-120
23 Bis(2-Chloroethoxy	1029	788.8	76.64	39-120
24 Benzoic acid	5661	4876	86.12	10-120
25 2,4-Dichlorophenol	3088	2578	83.48	28-120
26 1,2,4-Trichloroben	1029	754.8	73.33	35-120
28 Naphthalene	1029	976.1	94.83	43-120
29 4-Chloroaniline	3088	0.000	*	11-120
30 Hexachlorobutadien	1029	738.5	71.74	37-120
31 4-Chloro-3-methylp	3088	2513	81.39	32-120
32 2-Methylnaphthalen	1029	1094	106.25	43-120
33 Hexachlorocyclopen	3088	163.8	5.30*	10-120
34 2,4,6-Trichlorophe	3088	2607	84.43	30-120
35 2,4,5-Trichlorophe	3088	2687	87.02	28-120
37 2-Chloronaphthalen	1029	894.0	86.85	40-120
38 2-Nitroaniline	3088	2472	80.07	31-126
39 Dimethylphthalate	1029	945.1	91.81	43-120
40 Acenaphthylene	1029	831.2	80.75	42-120
41 2,6-Dinitrotoluene	3088	2133	69.08	33-123

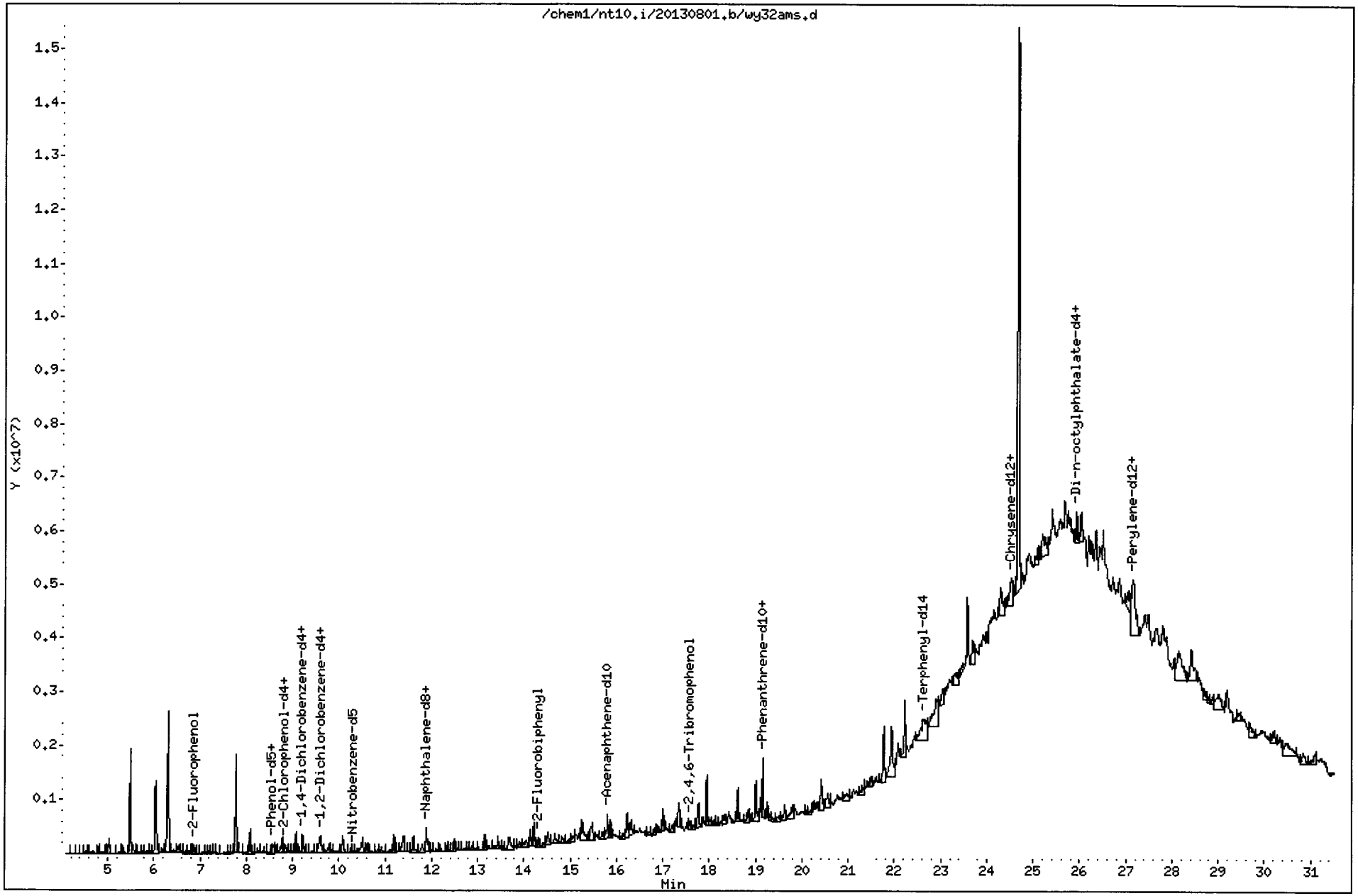
SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
43 3-Nitroaniline	3088	0.000	*	22-120
44 Acenaphthene	1029	1700	165.19*	45-120
45 2,4-Dinitrophenol	5661	1093	19.32	10-120
46 Dibenzofuran	1029	1481	143.89*	43-120
47 4-Nitrophenol	3088	2447	79.23	15-138
48 2,4-Dinitrotoluene	3088	2143	69.41	35-127
49 Fluorene	1029	2004	194.66*	45-120
50 Diethylphthalate	1029	845.6	82.16	50-120
51 4-Chlorophenyl-phe	1029	975.0	94.72	32-120
52 4-Nitroaniline	3088	0.000	*	24-125
53 4,6-Dinitro-2-meth	5661	1690	29.85	24-120
54 N-Nitrosodiphenyla	1029	1013	98.42	36-120
56 4-Bromophenyl-phen	1029	842.8	81.88	39-120
57 Hexachlorobenzene	1029	910.5	88.45	33-120
58 Pentachlorophenol	3088	2268	73.45	16-120
60 Phenanthrene	1029	6978	677.90*	49-120
61 Anthracene	1029	1889	183.53*	45-120
62 Carbazole	1029	2582	250.88*	43-135
63 Di-n-butylphthalat	1029	1269	123.32	48-126
64 Fluoranthene	1029	4988	484.64*	53-120
65 Pyrene	1029	4118	400.09*	48-121
67 Butylbenzylphthala	1029	10130	984.27*	45-132
68 Benzo(a)anthracene	1029	1510	146.70*	49-120
70 3,3'-Dichlorobenz	3088	0.000	*	10-120
71 Chrysene	1029	2292	222.70*	47-120
72 bis(2-Ethylhexyl)p	1029	88380	8586.45*	34-130
73 Di-n-octylphthalat	1029	2972	288.70*	28-124
74 Benzo(b)fluoranthe	1029	1508	146.54*	42-132
75 Benzo(k)fluoranthe	1029	1198	116.36	39-129
76 Benzo(a)pyrene	1029	1177	114.32	42-120
78 Indeno(1,2,3-cd)py	1029	791.9	76.93	42-120
79 Dibenzo(a,h)anthra	1029	539.6	52.42	30-120
80 Benzo(g,h,i)peryle	1029	1030	100.05	38-126
91 Aniline	3088	0.000	*	10-134
111 Azobenzene (1,2-DP	1029	879.5	85.45	35-120
90 N-Nitrosodimethyla	3088	1516	49.09	17-120
105 1-methylnaphthalen	1029	999.5	97.11	42-120
103 Pyridine	2059	1569	76.24	10-147
187 Total Benzofluoran	2059	2615	127.00	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	1544	1260	81.60	27-120

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 2 Phenol-d5	1544	1403	90.90	29-120
$ 5 2-Chlorophenol-d4	1544	1405	91.01	31-120
$ 10 1,2-Dichlorobenzen	1029	604.3	58.71	32-120
$ 18 Nitrobenzene-d5	1029	650.2	63.17	30-120
$ 36 2-Fluorobiphenyl	1029	805.0	78.21	35-120
$ 55 2,4,6-Tribromophen	1544	1535	99.41	24-134
$ 66 Terphenyl-d14	1029	769.6	74.77	37-120

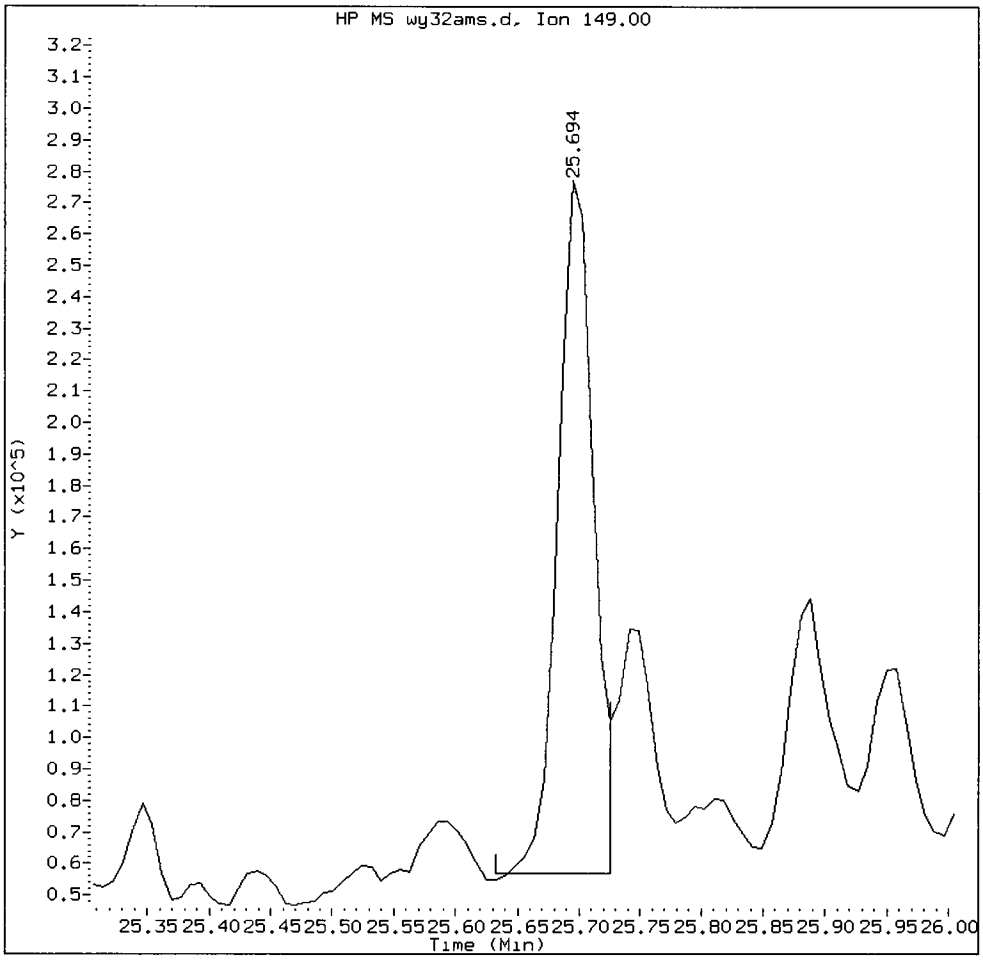
Data File: /chem1/nt10.i/20130801.b/wy32ams.d
Date : 01-AUG-2013 19:47
Client ID: UP-CB-B8-201306 MS
Sample Info: WY32AMS
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



WY32AMS, /chem1/nt10.i/20130801.b/wy32ams.d

Di-n-octylphthalate Amount: 4.81 Area: 453825



MANUAL INTEGRATION for Di-n-octylphthalate

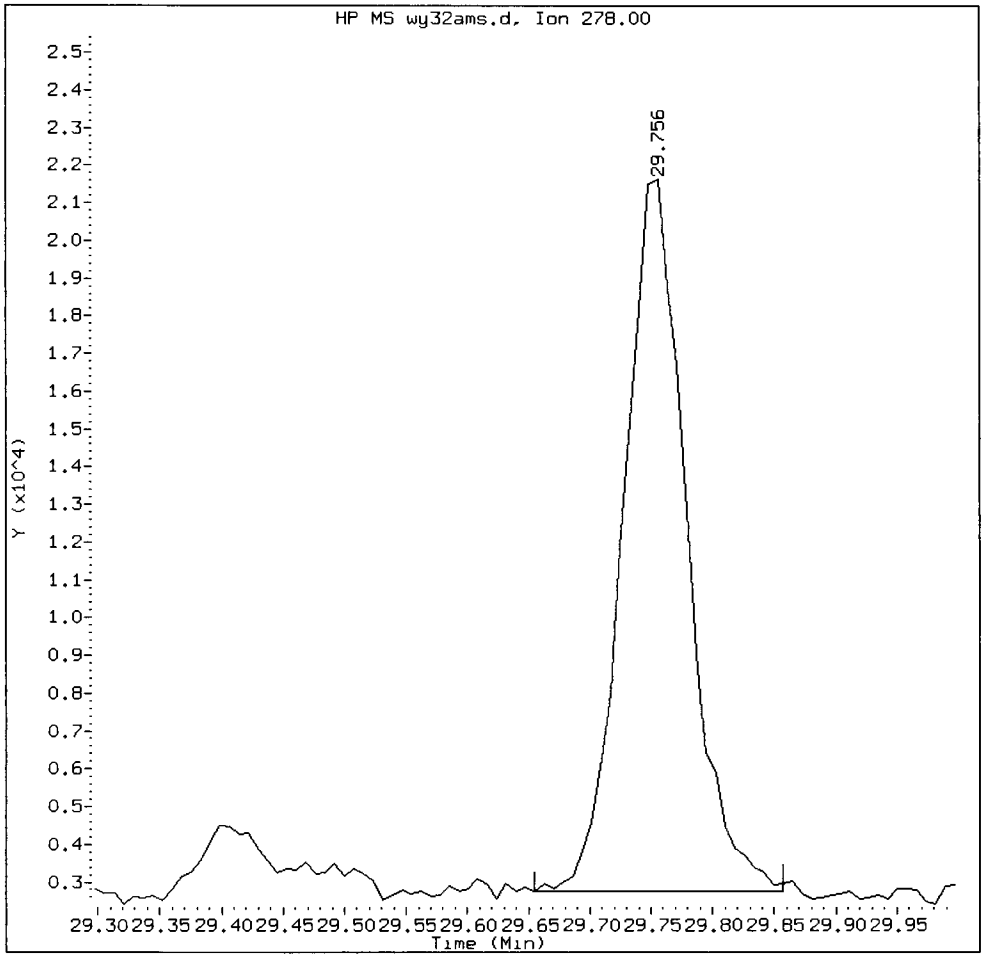
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 9/3/13

WY32AMS, /chem1/nt10.i/20130801.b/wy32ams.d

Dibenzo(a,h)anthracene Amount: 0.87 Area: 67999



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 8/3/13

CO-ELUTION SUMMARY FOR FILE - wy32ams.d

Lab ID: WY32AMS, Method: ABN.m, Instrument: nt10.i, Date: 01-AUG-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 8/3/13

Data file : /chem1/nt10.i/20130801.b/wy32amsd.d
Lab Smp Id: WY32AMSD Client Smp ID: UP-CB-B8-201306 MSD
Inj Date : 01-AUG-2013 20:25
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WY32AMSD
Misc Info : 13-15393
Comment : 1ul Injection
Method : /chem1/nt10.i/20130801.b/ABN.m
Meth Date : 03-Aug-2013 10:44 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 10 QC Sample: MSD
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	7.01000	Weight of sample extracted (g)
M	31.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$ 1	2-Fluorophenol	112	6.875	6.859	(0.745)	74211	1.87275	1162
$ 2	Phenol-d5	99	8.575	8.567	(0.930)	111740	2.10464	1305
3	Phenol	94	8.606	8.590	(0.933)	72051	1.34903	836.7
$ 5	2-Chlorophenol-d4	132	8.837	8.830	(0.958)	79859	2.11531	1312
4	Bis(2-Chloroethyl)ether	93	8.753	8.745	(0.949)	41445	0.99739	618.6
6	2-Chlorophenol	128	8.868	8.860	(0.961)	39271	1.02436	635.3
7	1,3-Dichlorobenzene	146	9.147	9.147	(0.992)	36716	0.93337	578.9
* 8	1,4-Dichlorobenzene-d4	152	9.225	9.217	(1.000)	98356	4.00000	
9	1,4-Dichlorobenzene	146	9.256	9.248	(1.003)	39395	1.02636	636.6
$ 10	1,2-Dichlorobenzene-d4	152	9.605	9.605	(1.041)	24094	0.90590	561.9
12	1,2-Dichlorobenzene	146	9.636	9.628	(1.045)	35996	0.98679	612.0
11	Benzyl alcohol	108	9.535	9.527	(1.034)	108989	4.83834	3001(R)
14	2,2'-oxybis(1-Chloropropane)	121	9.853	9.853	(1.068)	13040	1.03626	642.7
13	2-Methylphenol	108	9.791	9.783	(1.061)	40599	1.08691	674.1

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	10.265	10.264	(1.113)	15427	0.95502	592.3
	16 N-Nitroso-di-n-propylamine	70	10.133	10.125	(1.098)	29270	1.12778	699.5
	15 4-Methylphenol	108	10.086	10.078	(1.093)	117384	3.06131	1899
$	18 Nitrobenzene-d5	82	10.397	10.396	(0.874)	44696	0.99025	614.2
	19 Nitrobenzene	77	10.435	10.435	(0.877)	40898	1.01867	631.8
	20 Isophorone	82	10.930	10.930	(0.919)	83924	1.17230	727.1
	21 2-Nitrophenol	139	11.115	11.115	(0.935)	14966	0.66637	413.3
	22 2,4-Dimethylphenol	107	11.200	11.200	(0.942)	127713	3.38051	2097
	23 Bis(2-Chloroethoxy)methane	93	11.408	11.408	(0.959)	54487	1.16002	719.5
	24 Benzoic acid	105	11.408	11.493	(0.959)	222619	7.35189	4560
	25 2,4-Dichlorophenol	162	11.616	11.608	(0.977)	110717	3.43256	2129
	26 1,2,4-Trichlorobenzene	180	11.801	11.801	(0.992)	37527	1.09702	680.4
*	27 Naphthalene-d8	136	11.894	11.894	(1.000)	375110	4.00000	
	28 Naphthalene	128	11.933	11.932	(1.003)	145838	1.43480	889.9
	29 4-Chloroaniline	127	11.933	12.102	(1.003)	21337	0.49147	304.8(R)
	30 Hexachlorobutadiene	225	12.334	12.334	(1.037)	20734	1.08273	671.5
	31 4-Chloro-3-methylphenol	107	13.162	13.154	(1.107)	119115	3.72977	2313
	32 2-Methylnaphthalene	142	13.449	13.441	(1.131)	112673	1.56782	972.4
	33 Hexachlorocyclopentadiene	237	13.952	13.952	(0.883)	3121	0.13298	82.48(R)
	34 2,4,6-Trichlorophenol	196	14.130	14.130	(0.894)	85341	3.81560	2367
	35 2,4,5-Trichlorophenol	196	14.215	14.207	(0.900)	89565	3.91518	2428
$	36 2-Fluorobiphenyl	172	14.300	14.300	(0.905)	91747	1.24486	772.1
	37 2-Chloronaphthalene	162	14.517	14.516	(0.919)	75471	1.28793	798.8
	38 2-Nitroaniline	65	14.818	14.818	(0.938)	63150	4.00110	2482
	39 Dimethylphthalate	163	15.298	15.298	(0.968)	88308	1.37911	855.4
	40 Acenaphthylene	152	15.461	15.453	(0.978)	115537	1.21581	754.1
	41 2,6-Dinitrotoluene	165	15.445	15.445	(0.977)	54236	3.55687	2206
*	42 Acenaphthene-d10	164	15.801	15.801	(1.000)	196140	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	15.871	15.871	(1.004)	117495	2.08424	1293(R)
	45 2,4-Dinitrophenol	184	15.971	15.979	(1.011)	17031	1.27174	788.8
	46 Dibenzofuran	168	16.226	16.226	(1.027)	155511	1.87390	1162
	47 4-Nitrophenol	109	16.141	16.126	(1.022)	29095	3.94472	2447
	48 2,4-Dinitrotoluene	165	16.319	16.319	(1.033)	67077	3.40466	2112
	50 Diethylphthalate	149	16.884	16.891	(1.068)	82592	1.31706	816.9
	49 Fluorene	166	17.007	17.000	(1.076)	173419	2.45261	1521(R)
	51 4-Chlorophenyl-phenylether	204	17.007	17.007	(1.076)	48509	1.45159	900.3
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	17.224	17.231	(0.902)	32269	2.14998	1333(R)
	54 N-Nitrosodiphenylamine	169	17.285	17.285	(0.905)	61922	1.53058	949.3
$	55 2,4,6-Tribromophenol	330	17.586	17.578	(1.113)	27407	2.33756	1450
	56 4-Bromophenyl-phenylether	248	18.103	18.095	(0.948)	24081	1.25065	775.7
	57 Hexachlorobenzene	284	18.427	18.419	(0.965)	26746	1.29653	804.1
	58 Pentachlorophenol	266	18.830	18.814	(0.986)	49274	3.09002	1917
*	59 Phenanthrene-d10	188	19.100	19.092	(1.000)	320044	4.00000	
	60 Phenanthrene	178	19.155	19.139	(1.003)	690178	7.85697	4873(R)
	61 Anthracene	178	19.255	19.247	(1.008)	253396	2.72232	1688(R)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
62	Carbazole	167	19.627	19.619	(1.028)	147748	3.53220	2191(R)
63	Di-n-butylphthalate	149	20.563	20.547	(1.077)	194214	1.95998	1216
64	Fluoranthene	202	21.777	21.762	(1.140)	655989	6.08530	3774(R)
65	Pyrene	202	22.226	22.210	(0.905)	571555	5.11833	3175(R)
$ 66	Terphenyl-d14	244	22.567	22.551	(0.919)	72651	1.21033	750.7
67	Butylbenzylphthalate	149	23.573	23.550	(0.960)	553633	13.9550	8655(R)
68	Benzo(a)anthracene	228	24.526	24.494	(0.999)	226338	2.22959	1383(R)
* 69	Chrysene-d12	240	24.557	24.525	(1.000)	311156	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	24.603	24.572	(1.002)	300770	3.40725	2113(R)
72	bis(2-Ethylhexyl)phthalate	149	24.680	24.634	(0.961)	5500210	98.9262	61360(R)
* 134	Di-n-octylphthalate-d4	153	25.679	25.648	(1.000)	430636	4.00000	
73	Di-n-octylphthalate	149	25.695	25.656	(1.001)	225446	2.13296	1323(RM)
74	Benzo(b)fluoranthene	252	26.430	26.383	(0.972)	215171	2.03314	1261
75	Benzo(k)fluoranthene	252	26.469	26.422	(0.974)	230899	2.06531	1281(M)
76	Benzo(a)pyrene	252	27.065	26.995	(0.996)	159558	1.70831	1060
* 77	Perylene-d12	264	27.181	27.111	(1.000)	343011	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	29.741	29.632	(1.094)	117574	1.07258	665.2
79	Dibenzo(a,h)anthracene	278	29.764	29.647	(1.095)	65686	0.76434	474.1(M)
80	Benzo(g,h,i)perylene	276	30.502	30.370	(1.122)	124409	1.31073	813.0
90	N-Nitrosodimethylamine	74	4.589	4.574	(0.497)	61829	2.29289	1422
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	4.636	4.589	(0.503)	56038	2.47629	1536
105	1-methylnaphthalene	142	13.681	13.681	(1.150)	93843	1.43280	888.7
111	Azobenzene (1,2-DP-Hydrazine)	77	17.362	17.355	(1.099)	83053	1.26929	787.3
187	Total Benzofluoranthenes	252	26.430	26.422	(0.972)	403964	3.89296	2415
99	Perylene	252	27.235	27.165	(1.002)	82229	0.92788	575.5
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	16.605	16.605	(1.051)	21927	1.23640	766.9

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wy32amsd.d
Lab Smp Id: WY32AMSD
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130801.b/ABN.m
Misc Info: 13-15393

Calibration Date: 01-AUG-2013
Calibration Time: 15:22
Client Smp ID: UP-CB-B8-201306
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	123587	61794	247174	98356	-20.42
27 Naphthalene-d8	446161	223080	892322	375110	-15.92
42 Acenaphthene-d10	267600	133800	535200	196140	-26.70
59 Phenanthrene-d10	460929	230464	921858	320044	-30.57
69 Chrysene-d12	439520	219760	879040	311156	-29.21
134 Di-n-octylphthala	593075	296538	1186150	430636	-27.39
77 Perylene-d12	451599	225800	903198	343011	-24.05

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.22	8.72	9.72	9.22	0.09
27 Naphthalene-d8	11.89	11.39	12.39	11.89	0.00
42 Acenaphthene-d10	15.80	15.30	16.30	15.80	0.00
59 Phenanthrene-d10	19.09	18.59	19.59	19.10	0.04
69 Chrysene-d12	24.53	24.03	25.03	24.56	0.13
134 Di-n-octylphthala	25.65	25.15	26.15	25.68	0.12
77 Perylene-d12	27.11	26.61	27.61	27.18	0.26

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Client SDG: WY32
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WY32AMSD
Client Smp ID: UP-CB-B8-201306 MSD
Level: LOW
Operator: VTS/YZ
Data Type: MS DATA
SampleType: MSD
SpikeList File: PSDDALCS.spk
Quant Type: ISTD
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130801.b/ABN.m
Misc Info: 13-15393

SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	1034	836.7	80.94	34-120
4	Bis(2-Chloroethyl)	1034	618.6	59.84	36-120
6	2-Chlorophenol	1034	635.3	61.46	39-120
7	1,3-Dichlorobenzen	1034	578.9	56.00	40-120
9	1,4-Dichlorobenzen	1034	636.6	61.58	39-120
11	Benzyl alcohol	1034	3001	290.30*	19-120
12	1,2-Dichlorobenzen	1034	612.0	59.21	32-120
13	2-Methylphenol	1034	674.1	65.21	28-120
14	2,2'-oxybis(1-Chlo	1034	642.7	62.18	32-120
15	4-Methylphenol	2067	1899	91.84	29-120
16	N-Nitroso-di-n-pro	1034	699.5	67.67	30-120
17	Hexachloroethane	1034	592.3	57.30	38-120
19	Nitrobenzene	1034	631.8	61.12	36-120
20	Isophorone	1034	727.1	70.34	37-120
21	2-Nitrophenol	1034	413.3	39.98	37-120
22	2,4-Dimethylphenol	3101	2097	67.61	10-120
23	Bis(2-Chloroethoxy	1034	719.5	69.60	39-120
24	Benzoic acid	5685	4560	80.20	10-120
25	2,4-Dichlorophenol	3101	2129	68.65	28-120
26	1,2,4-Trichloroben	1034	680.4	65.82	35-120
28	Naphthalene	1034	889.9	86.09	43-120
29	4-Chloroaniline	3101	304.8	9.83*	11-120
30	Hexachlorobutadien	1034	671.5	64.96	37-120
31	4-Chloro-3-methylp	3101	2313	74.60	32-120
32	2-Methylnaphthalen	1034	972.4	94.07	43-120
33	Hexachlorocyclopen	3101	82.48	2.66*	10-120
34	2,4,6-Trichlorophe	3101	2367	76.31	30-120
35	2,4,5-Trichlorophe	3101	2428	78.30	28-120
37	2-Chloronaphthalen	1034	798.8	77.28	40-120
38	2-Nitroaniline	3101	2482	80.02	31-126
39	Dimethylphthalate	1034	855.4	82.75	43-120
40	Acenaphthylene	1034	754.1	72.95	42-120
41	2,6-Dinitrotoluene	3101	2206	71.14	33-123

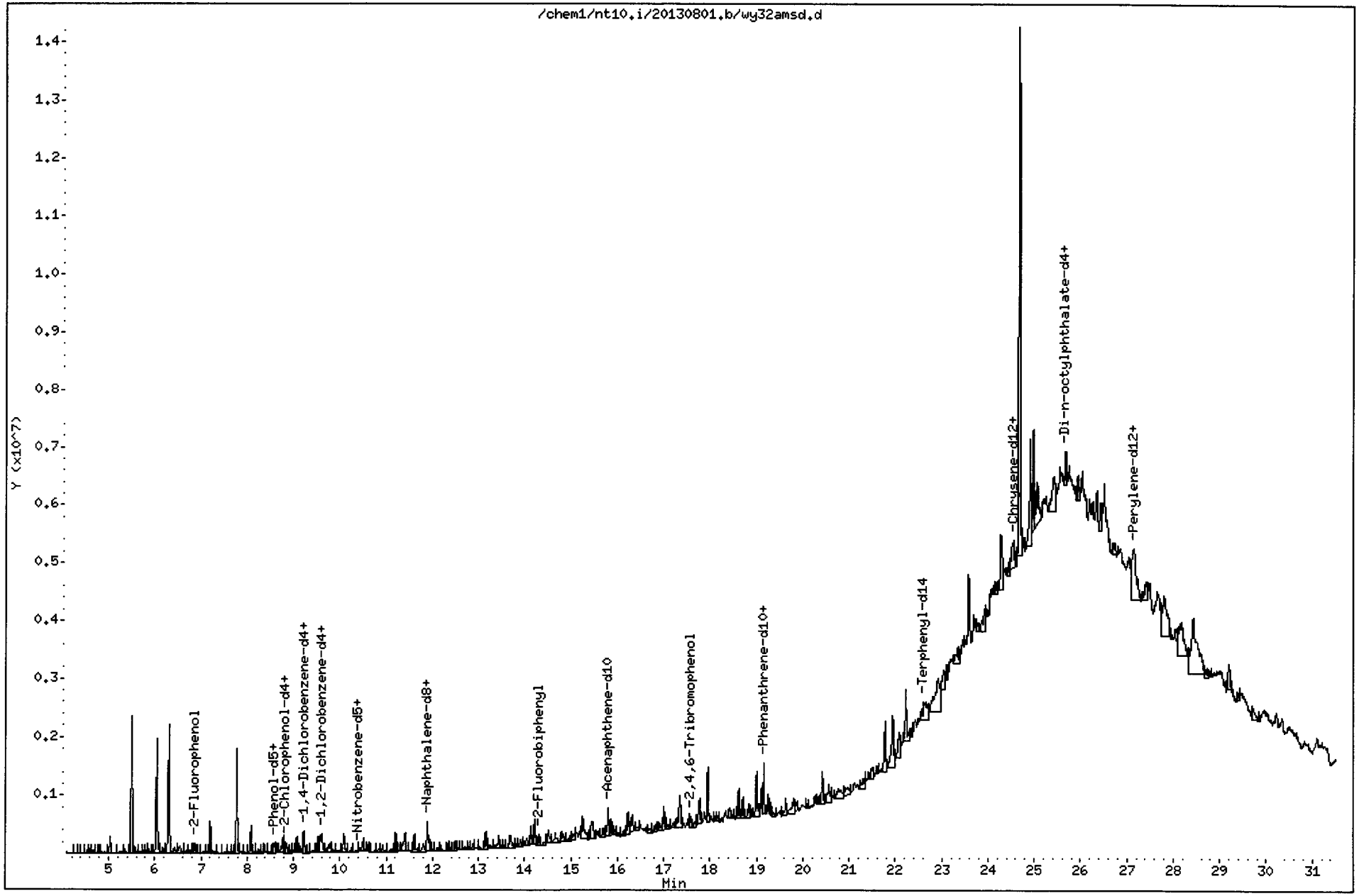
SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
43 3-Nitroaniline	3101	0.000	*	22-120
44 Acenaphthene	1034	1293	125.05*	45-120
45 2,4-Dinitrophenol	5685	788.8	13.87	10-120
46 Dibenzofuran	1034	1162	112.43	43-120
47 4-Nitrophenol	3101	2447	78.89	15-138
48 2,4-Dinitrotoluene	3101	2112	68.09	35-127
49 Fluorene	1034	1521	147.16*	45-120
50 Diethylphthalate	1034	816.9	79.02	50-120
51 4-Chlorophenyl-phe	1034	900.3	87.10	32-120
52 4-Nitroaniline	3101	0.000	*	24-125
53 4,6-Dinitro-2-meth	5685	1333	23.45*	24-120
54 N-Nitrosodiphenyla	1034	949.3	91.83	36-120
56 4-Bromophenyl-phen	1034	775.7	75.04	39-120
57 Hexachlorobenzene	1034	804.1	77.79	33-120
58 Pentachlorophenol	3101	1917	61.80	16-120
60 Phenanthrene	1034	4873	471.42*	49-120
61 Anthracene	1034	1688	163.34*	45-120
62 Carbazole	1034	2191	211.93*	43-135
63 Di-n-butylphthalat	1034	1216	117.60	48-126
64 Fluoranthene	1034	3774	365.12*	53-120
65 Pyrene	1034	3175	307.10*	48-121
67 Butylbenzylphthala	1034	8655	837.30*	45-132
68 Benzo(a)anthracene	1034	1383	133.78*	49-120
70 3,3'-Dichlorobenz	3101	0.000	*	10-120
71 Chrysene	1034	2113	204.43*	47-120
72 bis(2-Ethylhexyl)p	1034	61360	5935.57*	34-130
73 Di-n-octylphthalat	1034	1323	127.98*	28-124
74 Benzo(b)fluoranthe	1034	1261	121.99	42-132
75 Benzo(k)fluoranthe	1034	1281	123.92	39-129
76 Benzo(a)pyrene	1034	1060	102.50	42-120
78 Indeno(1,2,3-cd)py	1034	665.2	64.35	42-120
79 Dibenzo(a,h)anthra	1034	474.1	45.86	30-120
80 Benzo(g,h,i)peryle	1034	813.0	78.64	38-126
91 Aniline	3101	0.000	*	10-134
111 Azobenzene (1,2-DP	1034	787.3	76.16	35-120
90 N-Nitrosodimethyla	3101	1422	45.86	17-120
105 1-methylnaphthalen	1034	888.7	85.97	42-120
103 Pyridine	2067	1536	74.29	10-147
187 Total Benzofluoran	2067	2415	116.79	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	1551	1162	74.91	27-120

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 2 Phenol-d5	1551	1305	84.19	29-120
$ 5 2-Chlorophenol-d4	1551	1312	84.61	31-120
$ 10 1,2-Dichlorobenzen	1034	561.9	54.35	32-120
$ 18 Nitrobenzene-d5	1034	614.2	59.42	30-120
$ 36 2-Fluorobiphenyl	1034	772.1	74.69	35-120
$ 55 2,4,6-Tribromophen	1551	1450	93.50	24-134
$ 66 Terphenyl-d14	1034	750.7	72.62	37-120

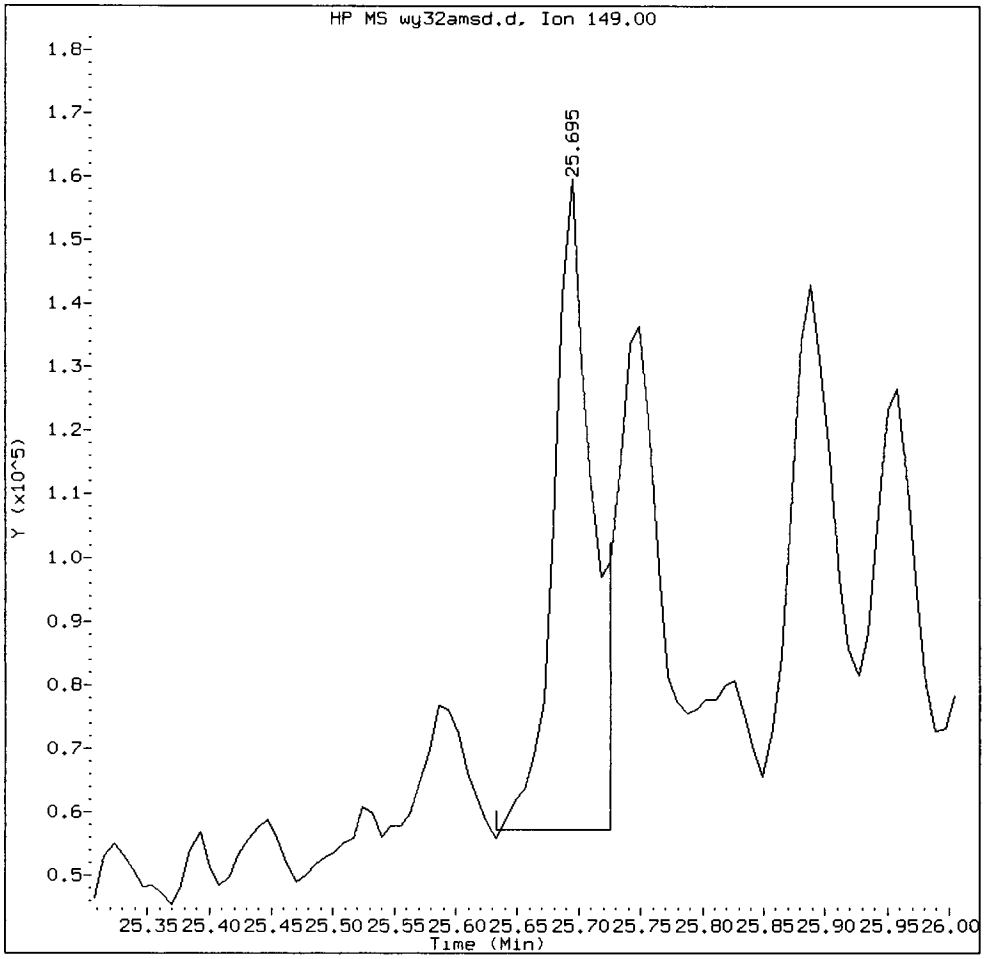
Data File: /chem1/nt10.i/20130801.b/wy32amsd.d
Date : 01-AUG-2013 20:25
Client ID: UP-CB-B8-201306 MSD
Sample Info: WY32AMSD
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



WY32AMSD, /chem1/nt10.i/20130801.b/wy32amsd.d

Di-n-octylphthalate Amount: 2.13 Area: 225446



MANUAL INTEGRATION for Di-n-octylphthalate

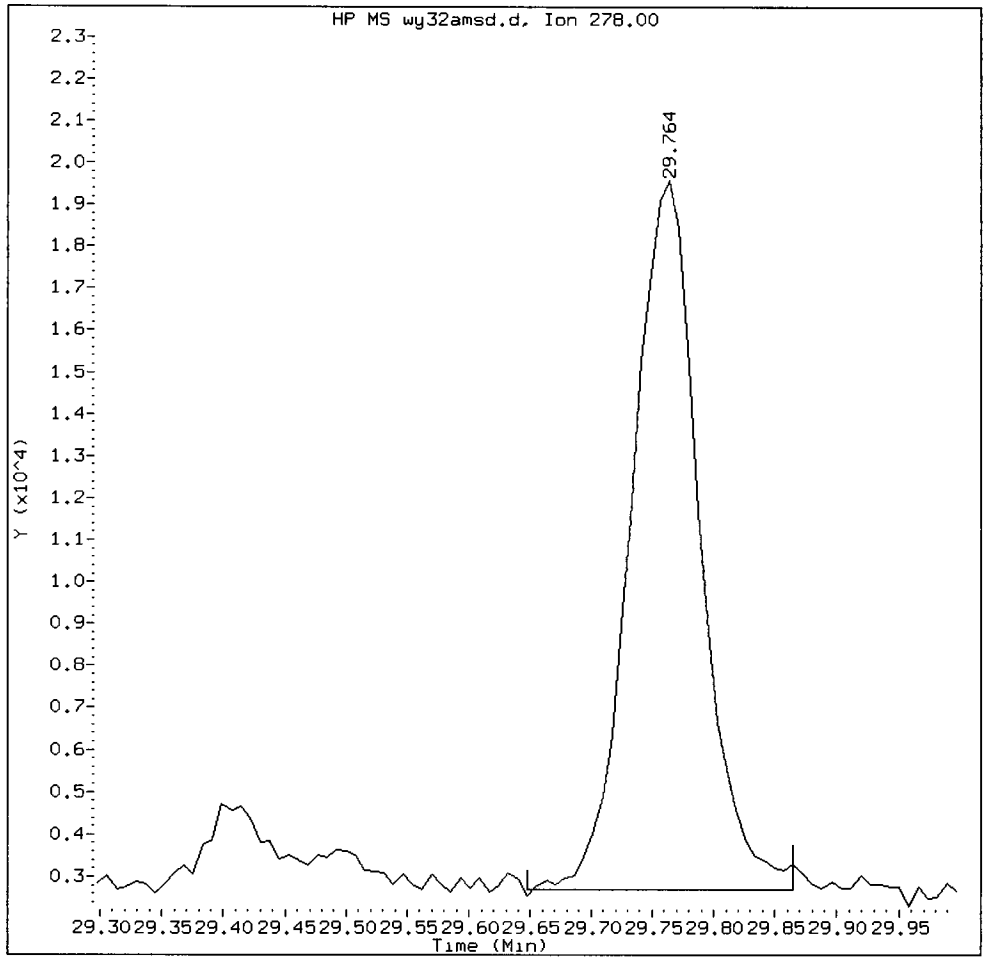
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VT Date: 8/3/13

WY32AMSD, /chem1/nt10.i/20130801.b/wy32amsd.d

Dibenzo(a,h)anthracene Amount: 0.76 Area: 65686



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VT Date: 8/3/13

CO-ELUTION SUMMARY FOR FILE - wy32amsd.d

Lab ID: WY32AMSD, Method: ABN.m, Instrument: nt10.i, Date: 01-AUG-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 8/3/13

Data file : /chem1/nt10.i/20130801.b/wy32a.d
Lab Smp Id: WY32A Client Smp ID: UP-CB-B8-20130626-S
Inj Date : 01-AUG-2013 19:09
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WY32A
Misc Info : 13-15393
Comment : 1ul Injection
Method : /chem1/nt10.i/20130801.b/ABN.m
Meth Date : 02-Aug-2013 10:37 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 8
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	7.04000	Weight of sample extracted (g)
M	31.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$ 1	2-Fluorophenol	112	6.875	6.859	(0.746)	77974	1.84703	1141
$ 2	Phenol-d5	99	8.575	8.567	(0.930)	110608	1.95555	1208
3	Phenol	94	8.598	8.590	(0.933)	16904	0.29709	183.5
$ 5	2-Chlorophenol-d4	132	8.837	8.830	(0.959)	78034	1.94020	1198
4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
6	2-Chlorophenol	128	Compound Not Detected.					
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	9.217	9.217	(1.000)	104782	4.00000	
9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10	1,2-Dichlorobenzene-d4	152	9.605	9.605	(1.042)	24700	0.87173	538.4
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	108	Compound Not Detected.					
14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
13	2-Methylphenol	108	10.078	9.783	(1.093)	34306	0.86211	532.4
17	Hexachloroethane	117	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	10.078	10.078	(1.093)	35518	0.86948	537.0
$	18 Nitrobenzene-d5	82	10.396	10.396	(0.875)	43725	0.89978	555.7
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	11.339	11.493	(0.954)	44185	1.35532	837.0(H)
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.886	11.894	(1.000)	403857	4.00000	
	28 Naphthalene	128	11.932	11.932	(1.004)	37762	0.34507	213.1
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	13.441	13.441	(1.131)	31622	0.40869	252.4
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	14.300	14.300	(0.905)	87329	1.08141	667.9
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	15.801	15.801	(1.000)	214912	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	15.871	15.871	(1.004)	47044	0.76162	470.4
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	16.226	16.226	(1.027)	58334	0.64152	396.2
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	17.000	17.000	(1.076)	87567	1.13026	698.0
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	17.285	17.285	(0.905)	11732	0.26668	164.7
$	55 2,4,6-Tribromophenol	330	17.586	17.578	(1.113)	25961	2.02083	1248
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	19.100	19.092	(1.000)	348018	4.00000	
	60 Phenanthrene	178	19.147	19.139	(1.002)	575193	6.02165	3719
	61 Anthracene	178	19.247	19.247	(1.008)	99234	0.98041	605.5
	62 Carbazole	167	19.619	19.619	(1.027)	43649	0.98670	609.4

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
63	Di-n-butylphthalate	149	20.555	20.547	(1.076)	102319	0.94959	586.5
64	Fluoranthene	202	21.769	21.762	(1.140)	509080	4.34289	2682
65	Pyrene	202	22.218	22.210	(0.905)	422185	3.69679	2283
$ 66	Terphenyl-d14	244	22.559	22.551	(0.919)	68710	1.11927	691.2
67	Butylbenzylphthalate	149	23.573	23.550	(0.960)	805177	19.8451	12260
68	Benzo(a)anthracene	228	24.518	24.494	(0.999)	85394	0.82252	508.0
* 69	Chrysene-d12	240	24.549	24.525	(1.000)	318219	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	24.587	24.572	(1.002)	146306	1.62063	1001
72	bis(2-Ethylhexyl)phthalate	149	24.673	24.634	(0.961)	5451372	96.2677 E	59450
* 134	Di-n-octylphthalate-d4	153	25.679	25.648	(1.000)	438599	4.00000	
73	Di-n-octylphthalate	149	25.694	25.656	(1.001)	101212	0.94019	580.7(M)
74	Benzo(b)fluoranthene	252	26.422	26.383	(0.973)	96004	0.90486	558.8
75	Benzo(k)fluoranthene	252	26.445	26.422	(0.973)	60071	0.53596	331.0(M)
76	Benzo(a)pyrene	252	27.057	26.995	(0.996)	47307	0.50522	312.0
* 77	Perylene-d12	264	27.166	27.111	(1.000)	343875	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	29.725	29.632	(1.094)	28672	0.26091	161.1
79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
80	Benzo(g,h,i)perylene	276	30.471	30.370	(1.122)	65275	0.68599	423.7
90	N-Nitrosodimethylamine	74	Compound Not Detected.					
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	Compound Not Detected.					
105	1-methylnaphthalene	142	13.681	13.681	(1.151)	16324	0.23149	143.0
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
187	Total Benzofluoranthenes	252	26.422	26.422	(0.973)	133965	1.28776	795.3
99	Perylene	252	27.220	27.165	(1.002)	19145	0.21549	133.1
98	Retene	219	22.868	22.861	(0.932)	13811	0.31768	196.2
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wy32a.d
Lab Smp Id: WY32A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130801.b/ABN.m
Misc Info: 13-15393

Calibration Date: 01-AUG-2013
Calibration Time: 15:22
Client Smp ID: UP-CB-B8-2013062
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	123587	61794	247174	104782	-15.22
27 Naphthalene-d8	446161	223080	892322	403857	-9.48
42 Acenaphthene-d10	267600	133800	535200	214912	-19.69
59 Phenanthrene-d10	460929	230464	921858	348018	-24.50
69 Chrysene-d12	439520	219760	879040	318219	-27.60
134 Di-n-octylphthala	593075	296538	1186150	438599	-26.05
77 Perylene-d12	451599	225800	903198	343875	-23.85

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.22	8.72	9.72	9.22	0.00
27 Naphthalene-d8	11.89	11.39	12.39	11.89	-0.06
42 Acenaphthene-d10	15.80	15.30	16.30	15.80	0.00
59 Phenanthrene-d10	19.09	18.59	19.59	19.10	0.04
69 Chrysene-d12	24.53	24.03	25.03	24.55	0.09
134 Di-n-octylphthala	25.65	25.15	26.15	25.68	0.12
77 Perylene-d12	27.11	26.61	27.61	27.17	0.20

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

Analytical Resources, Inc.

RECOVERY REPORT

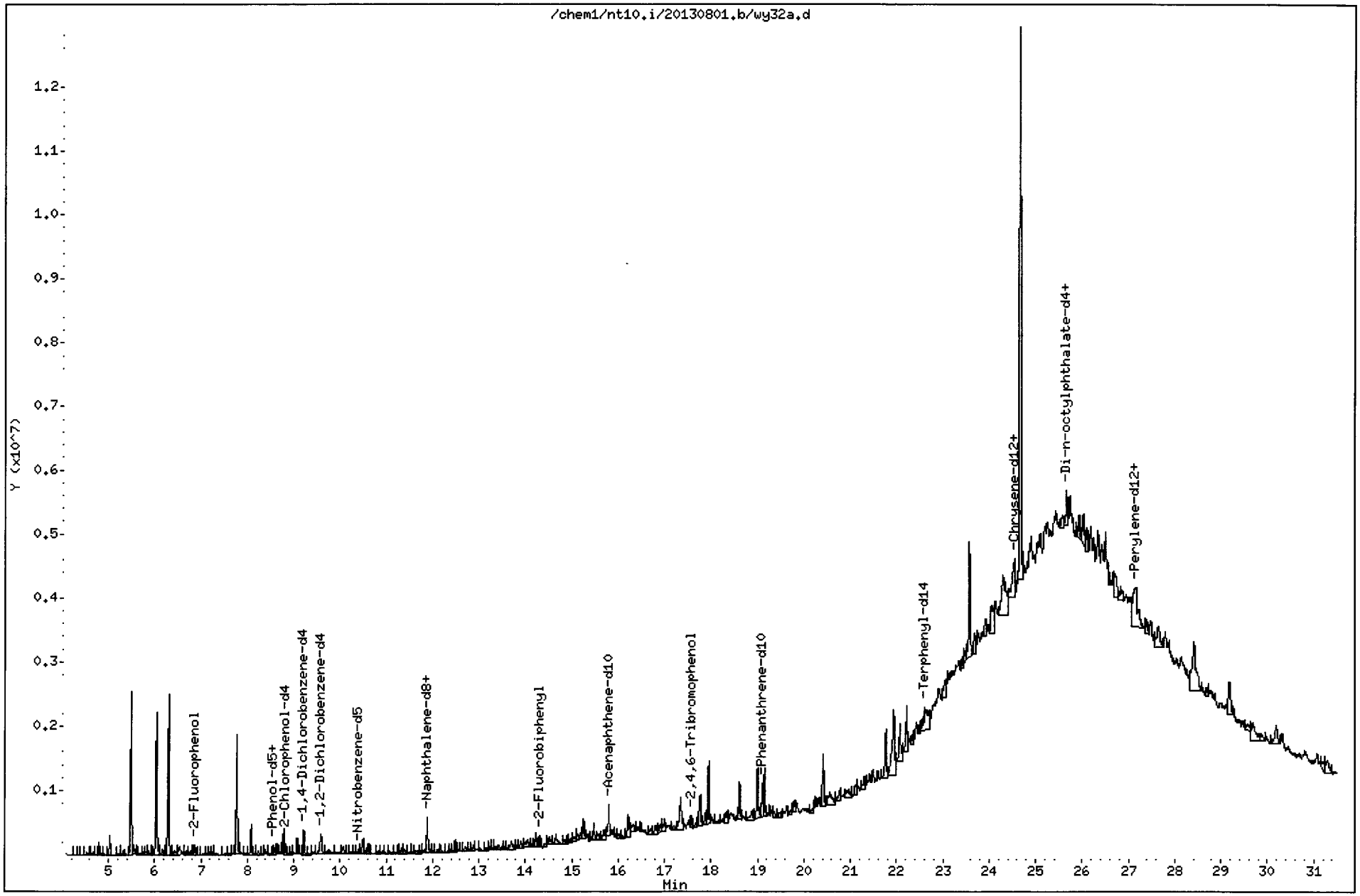
Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WY32A
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDALCS.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130801.b/ABN.m
Misc Info: 13-15393

Client SDG: WY32
Fraction: SV
Client Smp ID: UP-CB-B8-20130626-S
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	1544	1141	73.88	27-120
$ 2 Phenol-d5	1544	1208	78.22	29-120
$ 5 2-Chlorophenol-d4	1544	1198	77.61	31-120
$ 10 1,2-Dichlorobenzen	1029	538.4	52.30	32-120
$ 18 Nitrobenzene-d5	1029	555.7	53.99	30-120
$ 36 2-Fluorobiphenyl	1029	667.9	64.88	35-120
$ 55 2,4,6-Tribromophen	1544	1248	80.83	24-134
$ 66 Terphenyl-d14	1029	691.2	67.16	37-120

Data File: /chem1/nt10.i/20130801.b/wy32a.d
Date : 01-AUG-2013 19:09
Client ID: UP-CB-B8-20130626-S
Sample Info: WY32A
Volume Injected (uL): 1.0
Column phase: ZB-5ms1

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

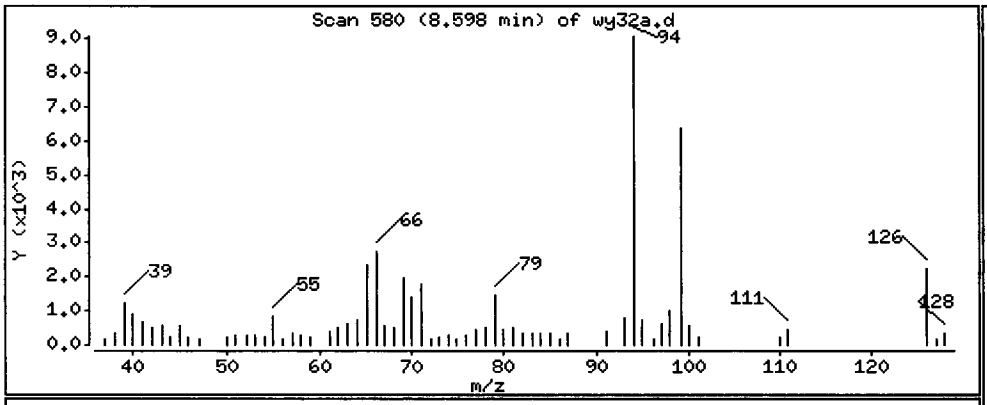
Operator: VTS/YZ

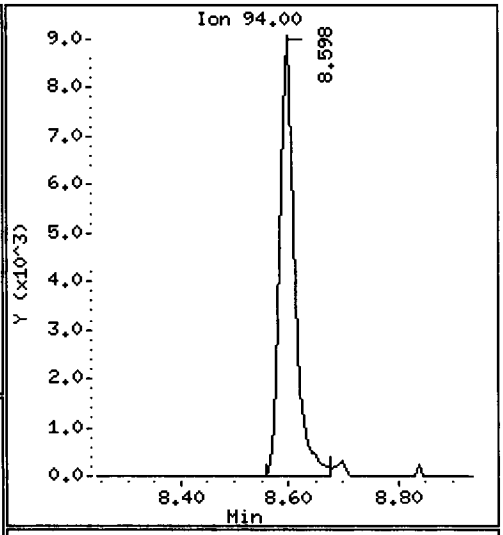
Column phase: ZB-5msi

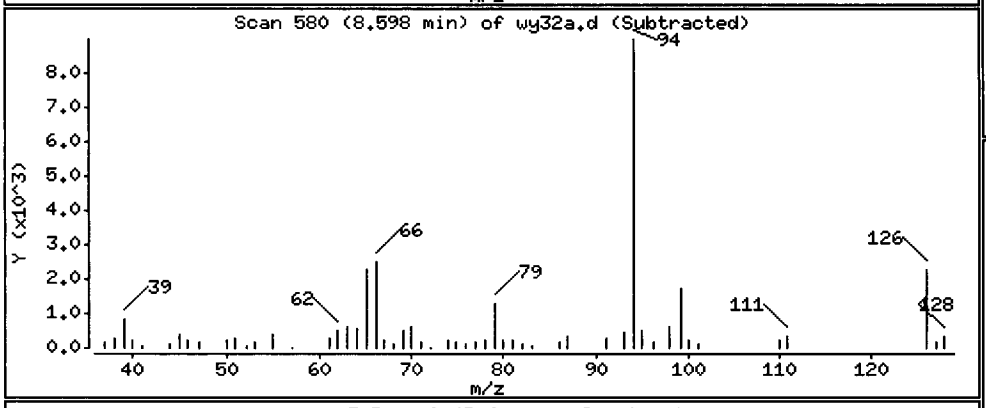
Column diameter: 0.25

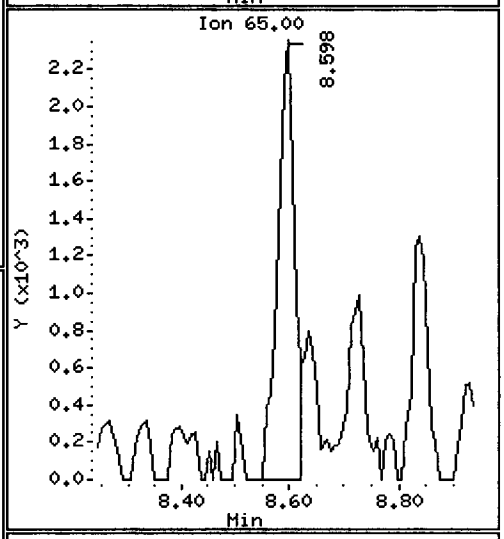
3 Phenol

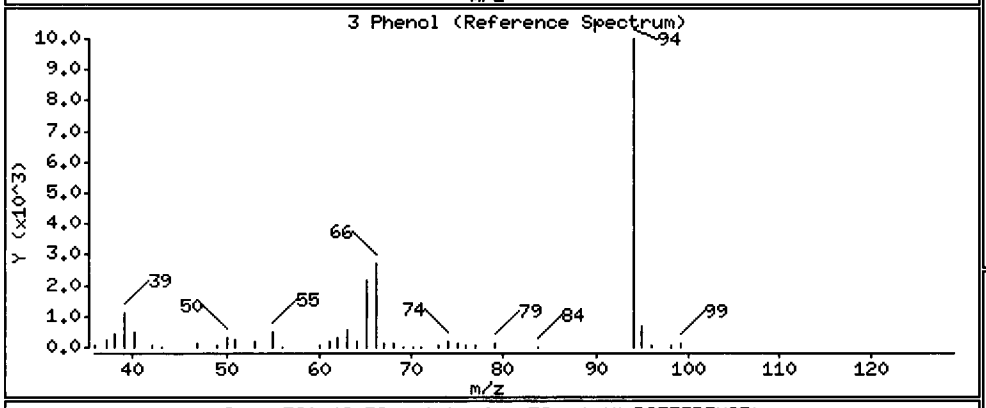
Concentration: 183.5 ug/kg

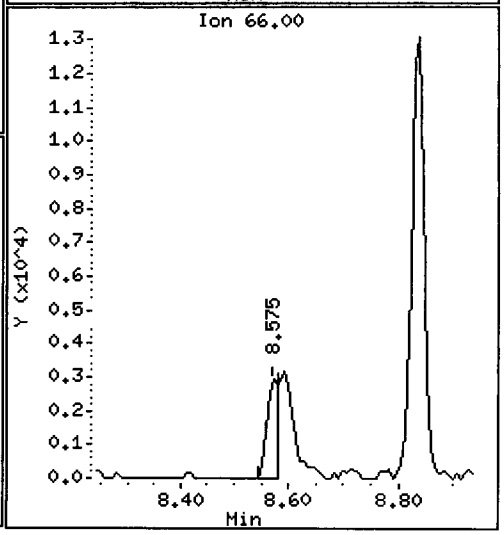


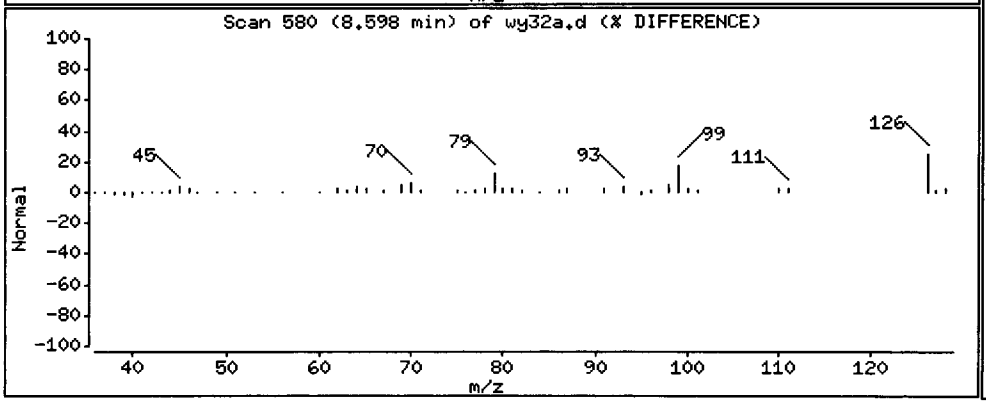












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

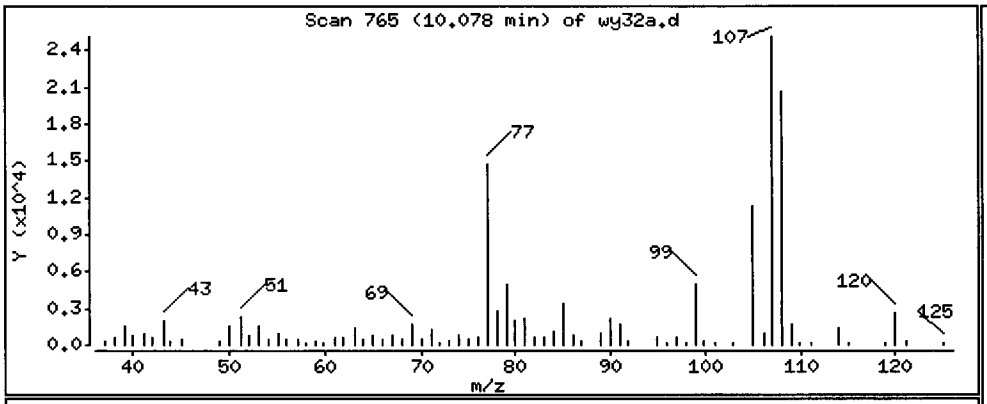
Operator: VTS/YZ

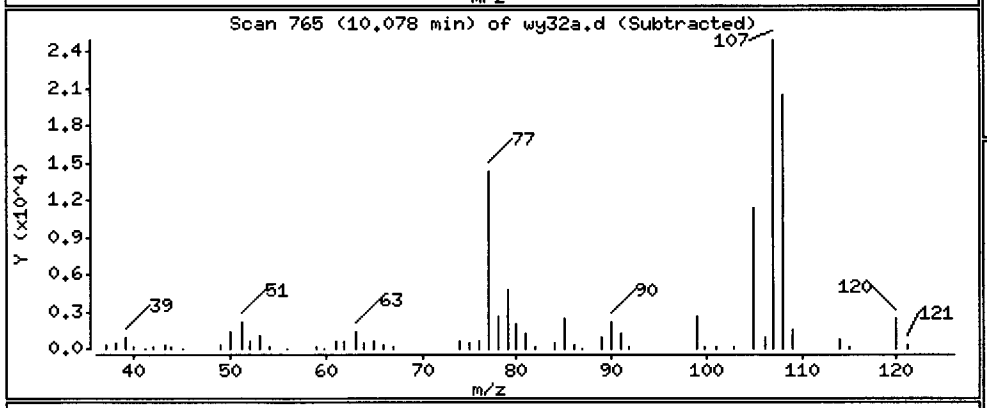
Column phase: ZB-5msi

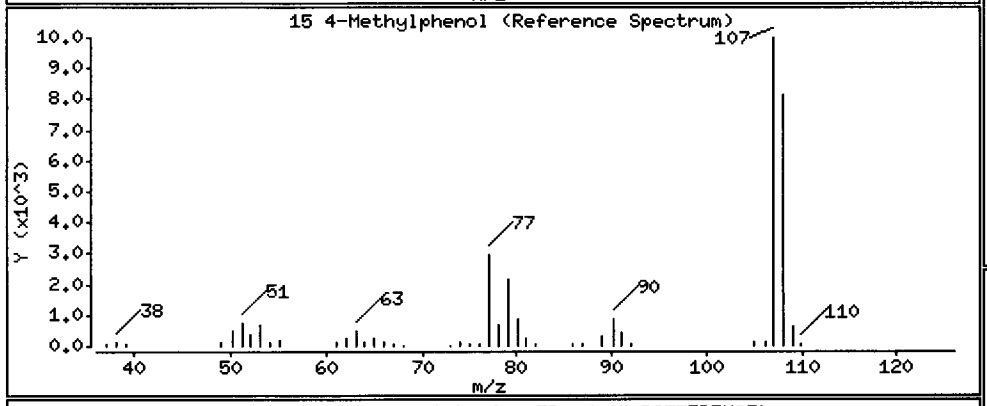
Column diameter: 0.25

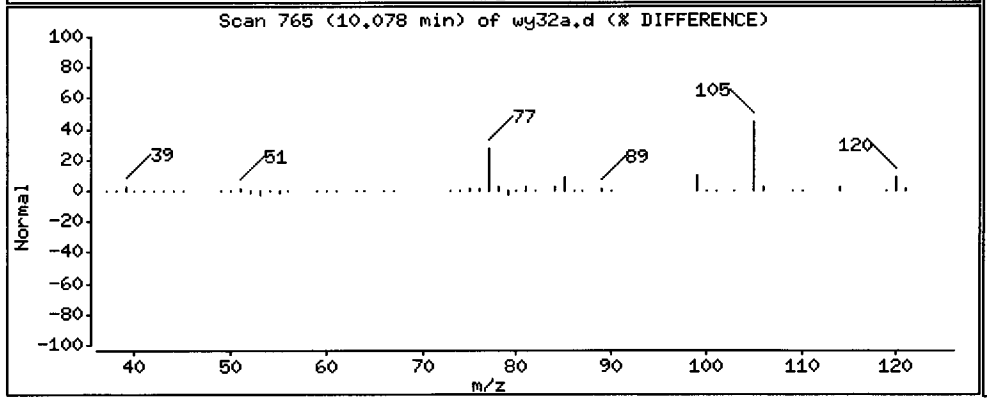
15 4-Methylphenol

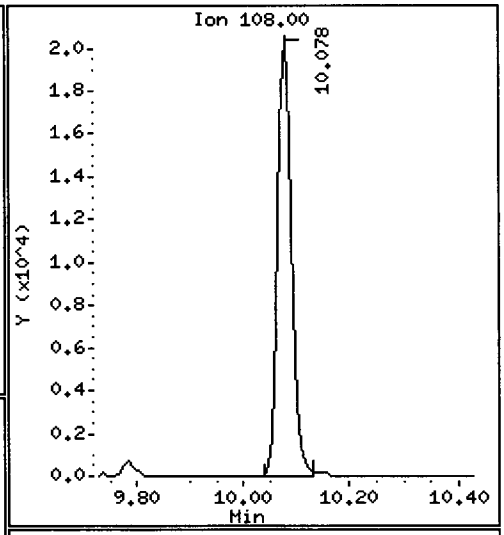
Concentration: 537.0 ug/kg

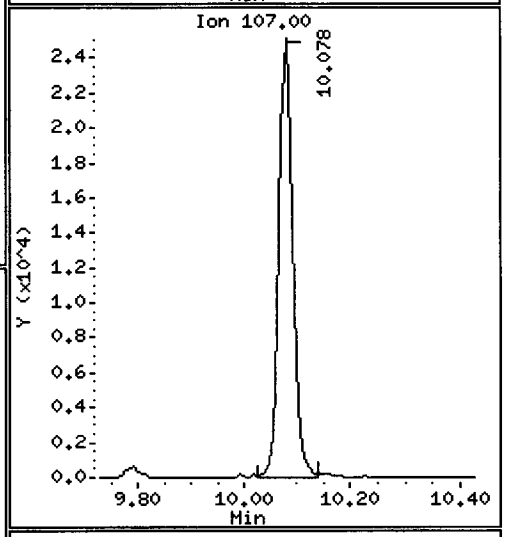


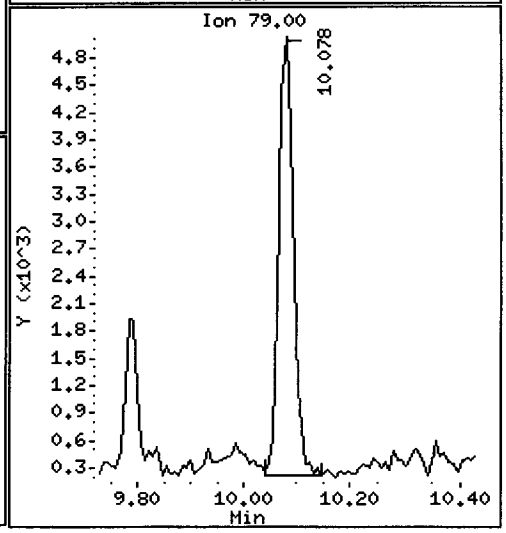












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

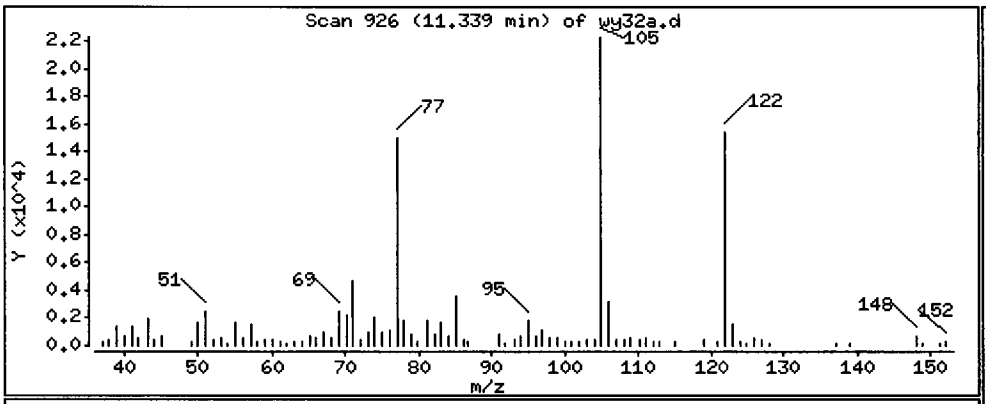
Operator: VTS/YZ

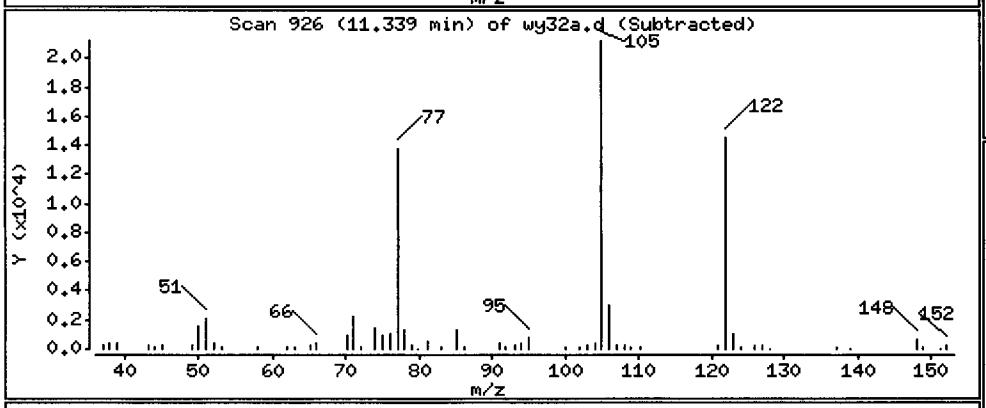
Column phase: ZB-5msi

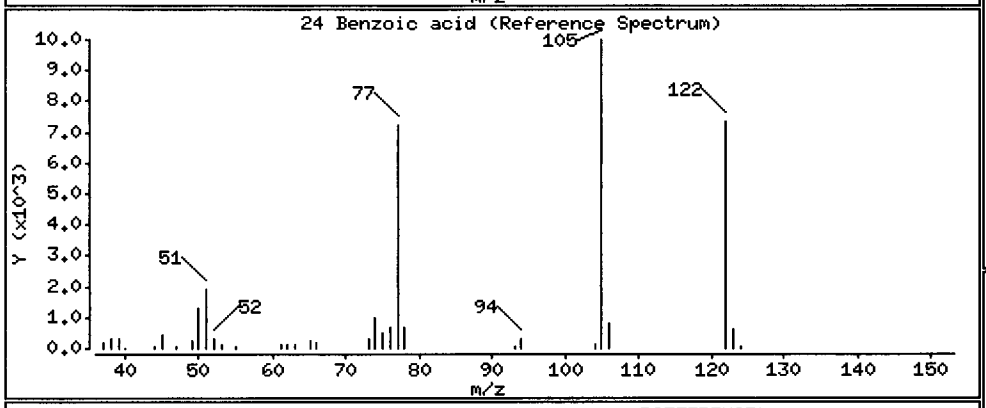
Column diameter: 0.25

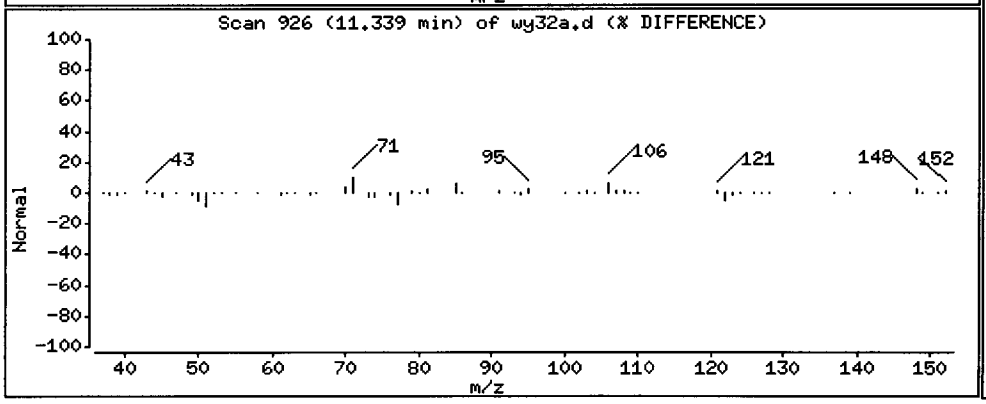
24 Benzoic acid

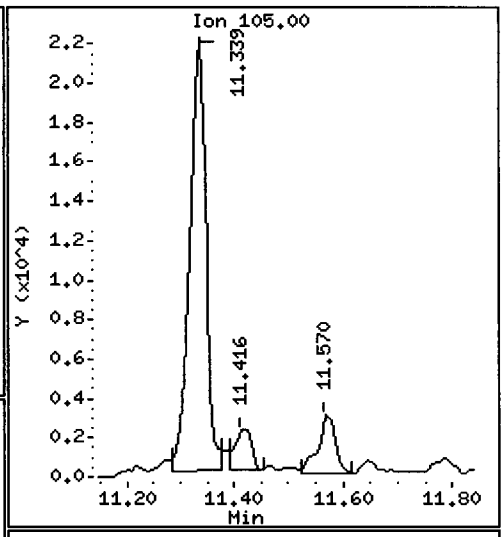
Concentration: 837.0 ug/kg

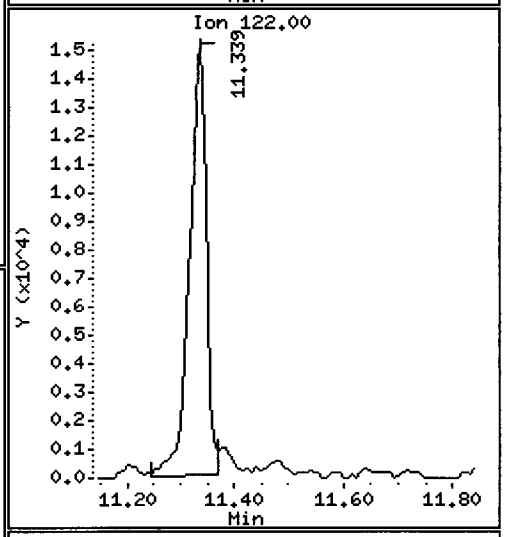


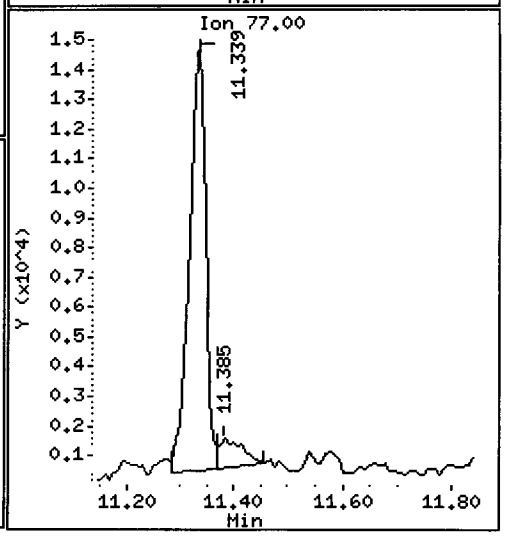












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

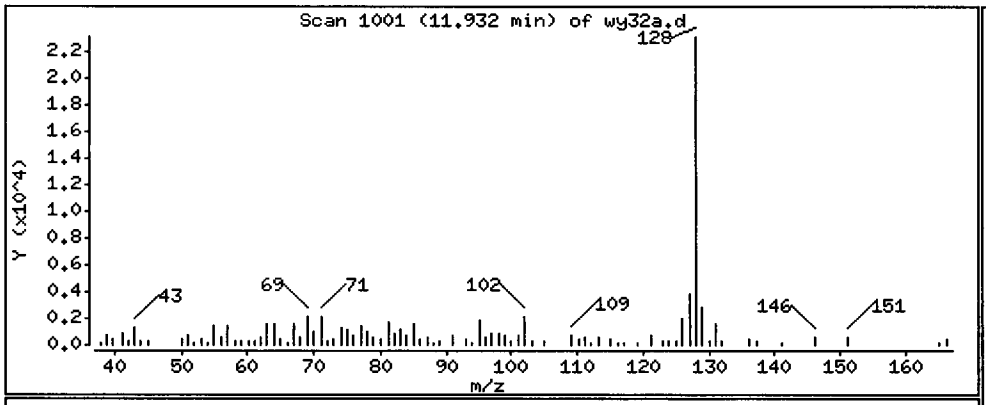
Operator: VTS/YZ

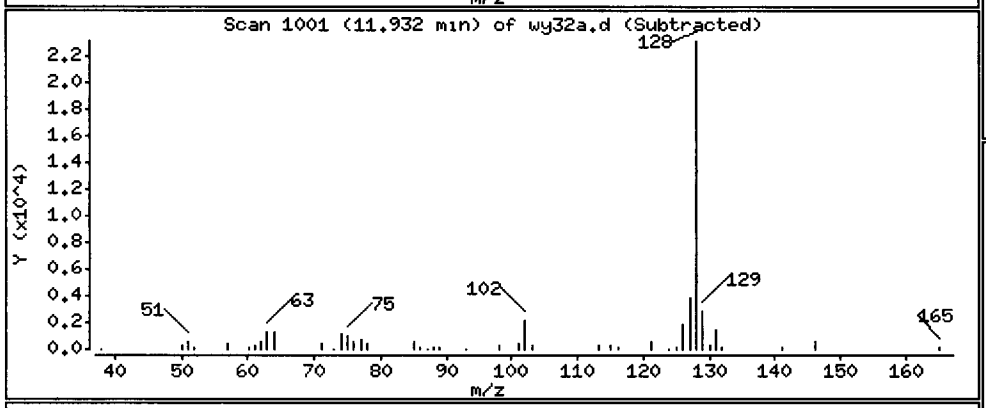
Column phase: ZB-5msi

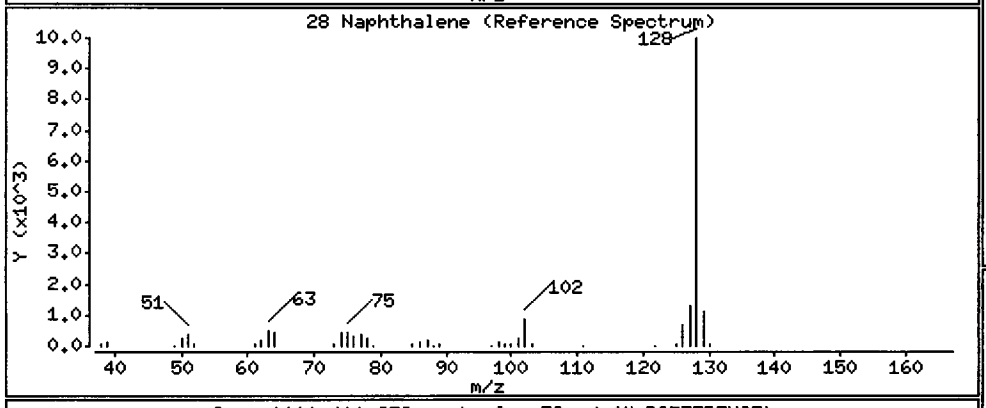
Column diameter: 0.25

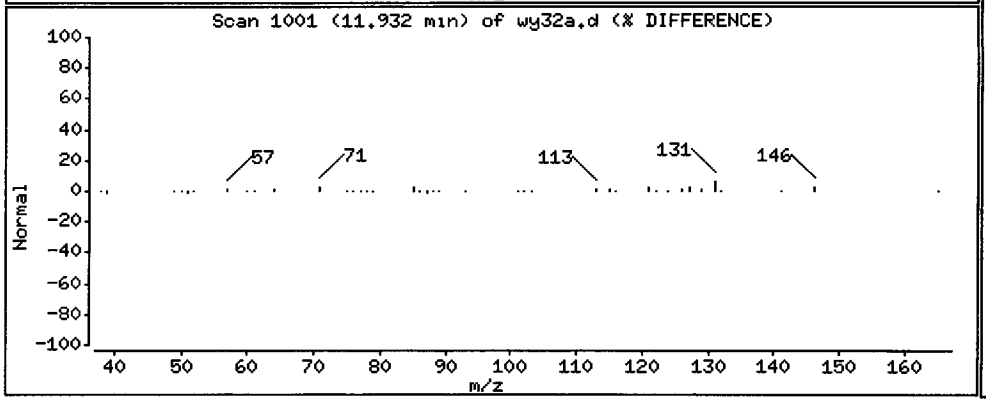
28 Naphthalene

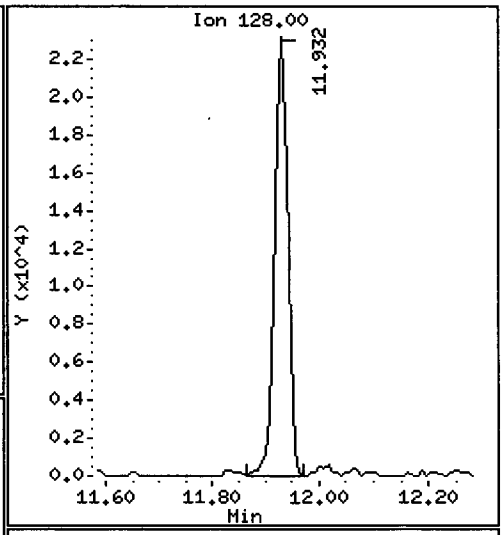
Concentration: 213.1 ug/kg

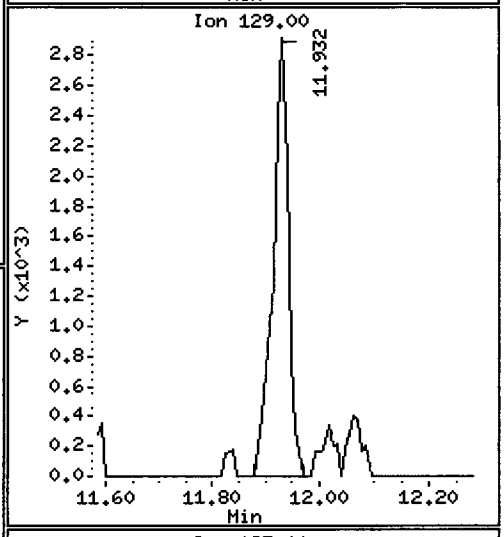


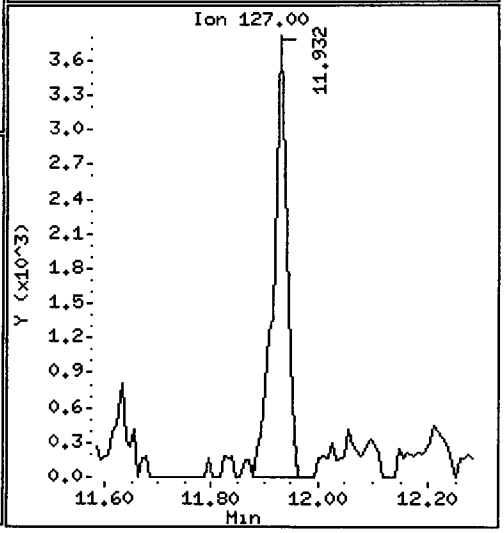












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

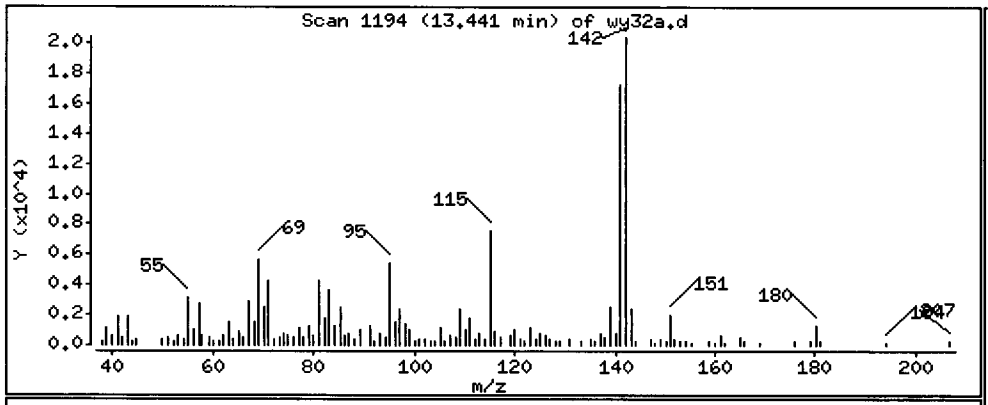
Operator: VTS/YZ

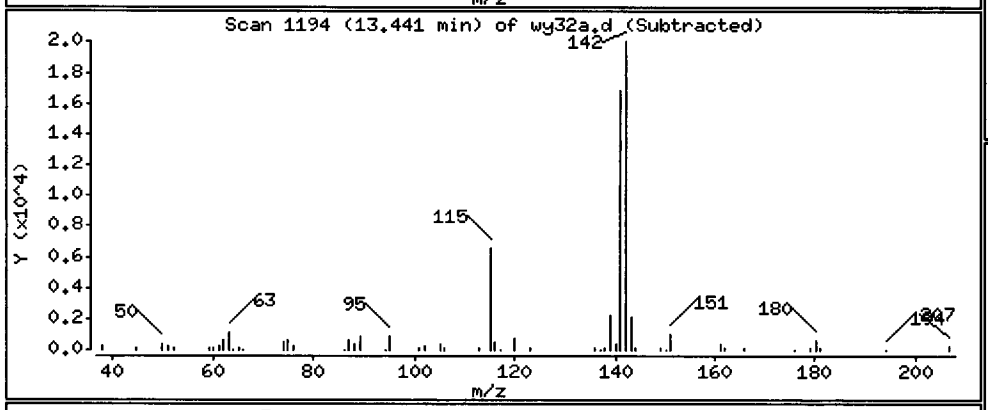
Column phase: ZB-5ms1

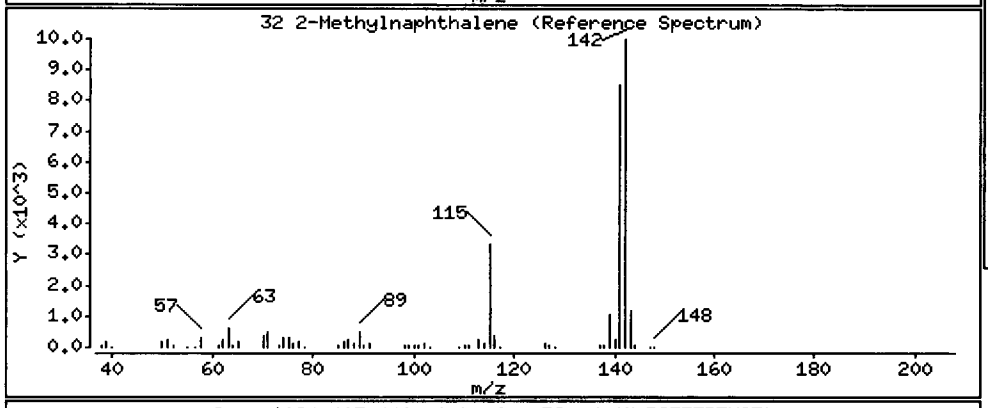
Column diameter: 0.25

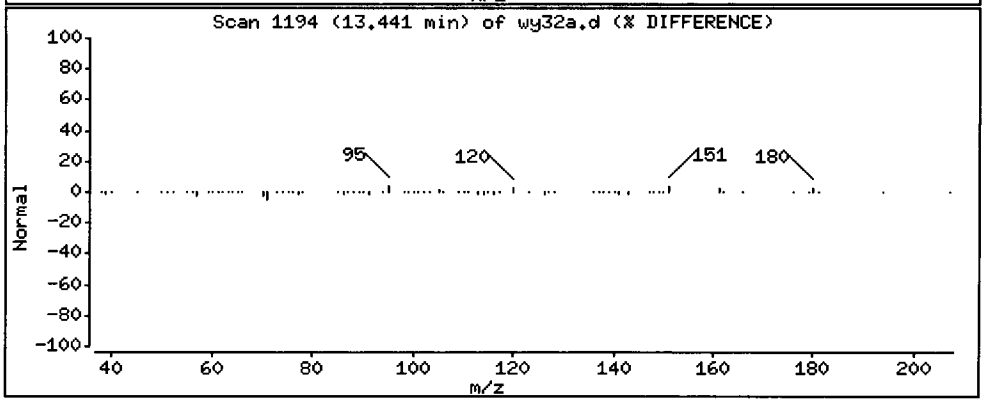
32 2-Methylnaphthalene

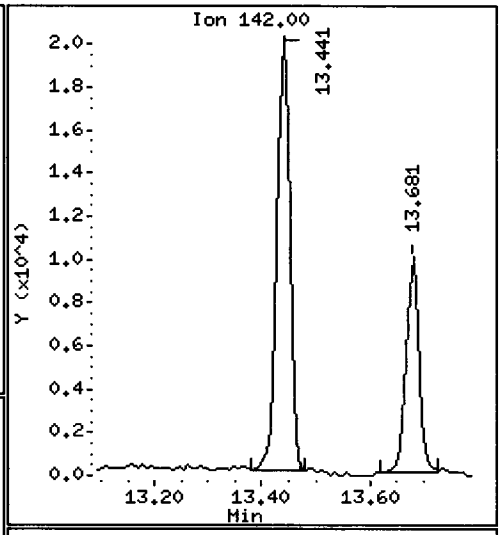
Concentration: 252.4 ug/kg

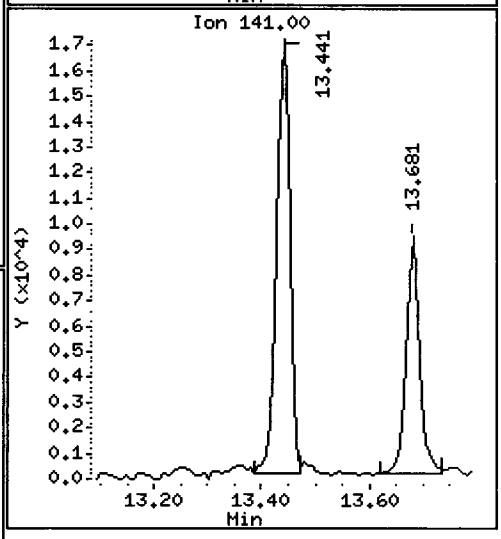












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

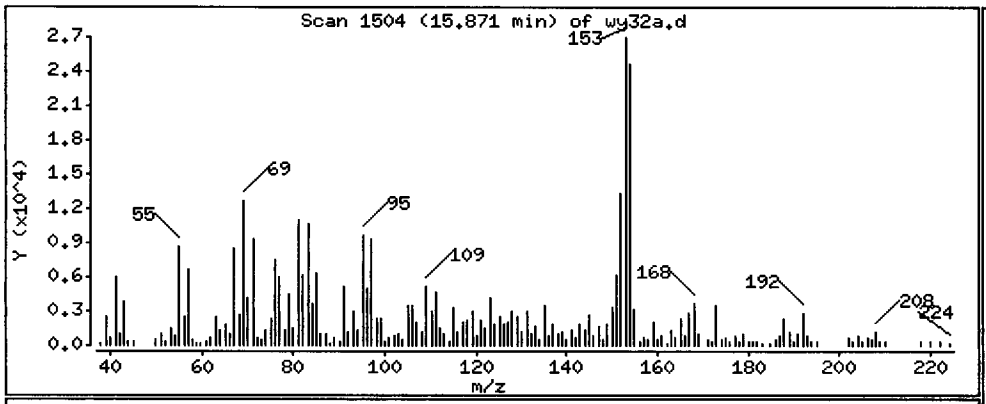
Operator: VTS/YZ

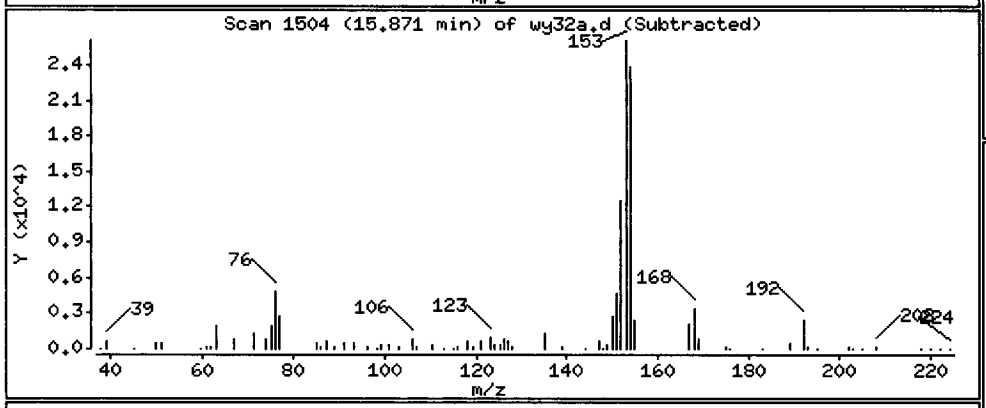
Column phase: ZB-5msi

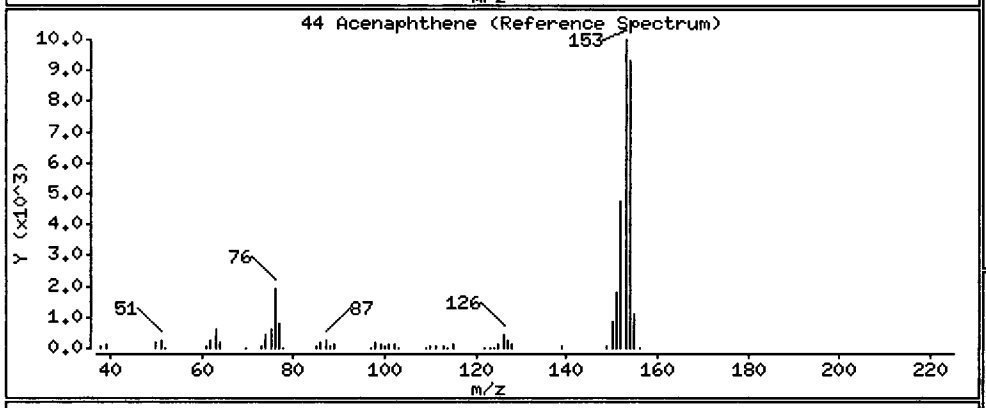
Column diameter: 0.25

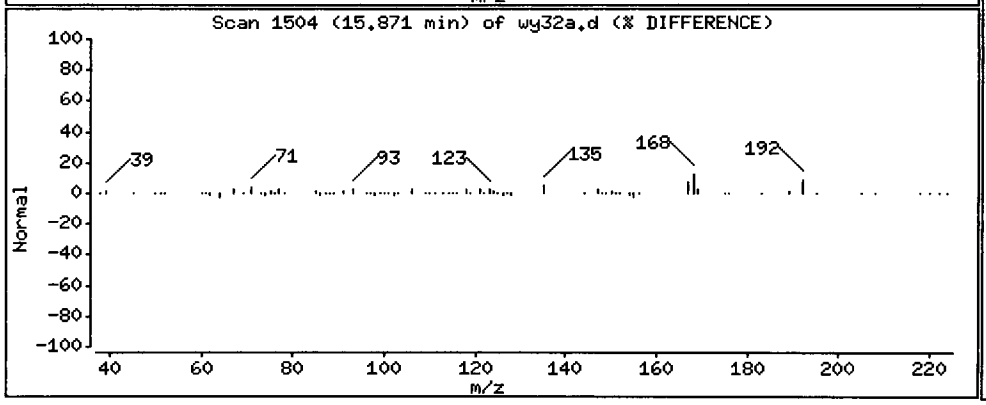
44 Acenaphthene

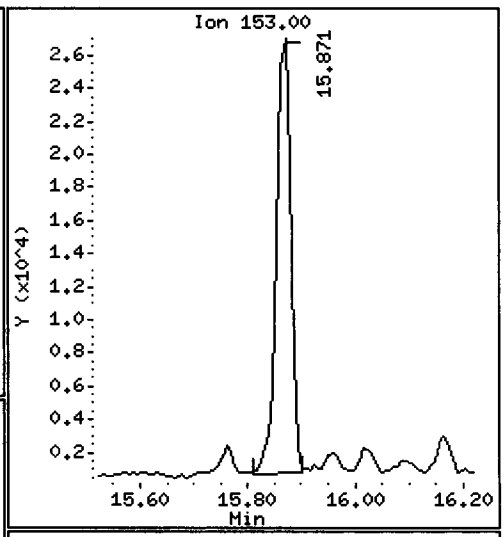
Concentration: 470.4 ug/kg

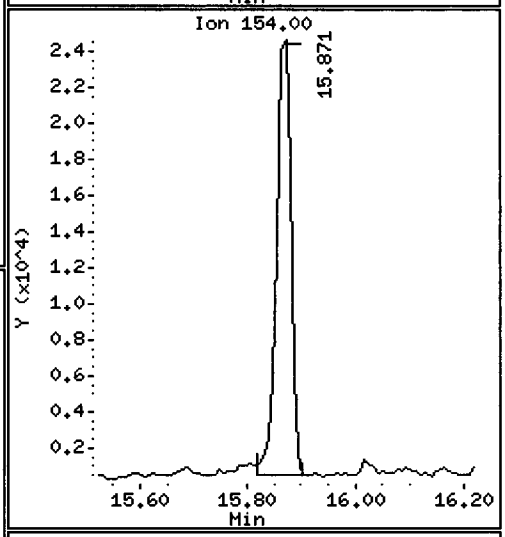


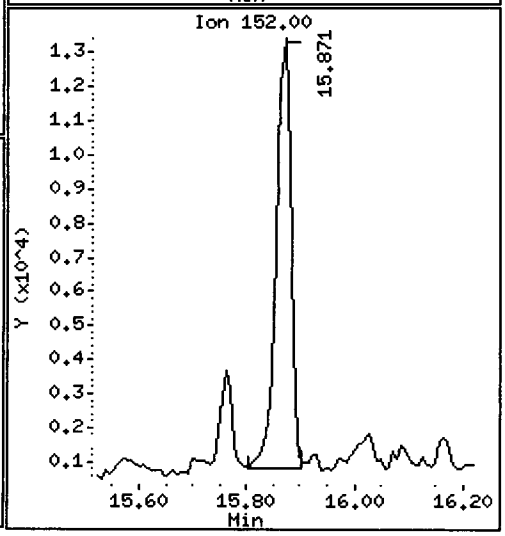












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

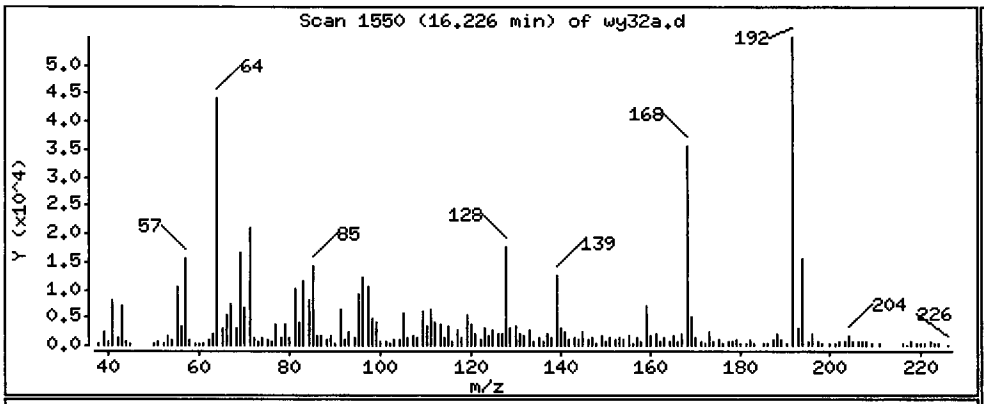
Operator: VTS/YZ

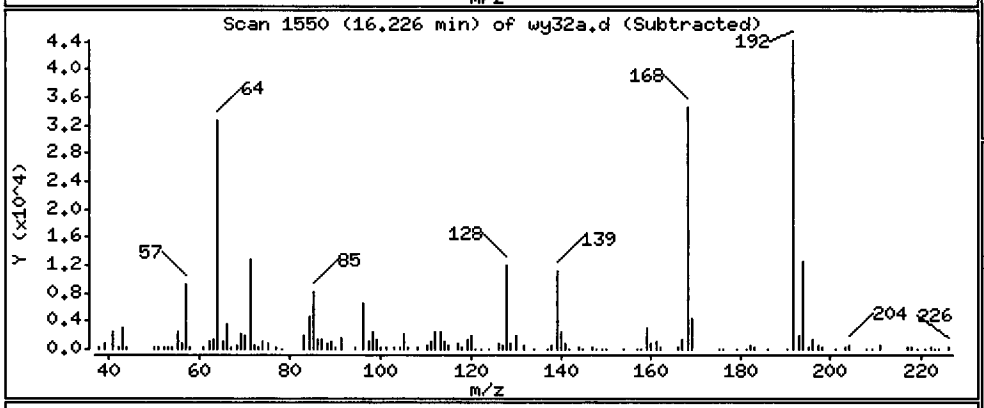
Column phase: ZB-5msi

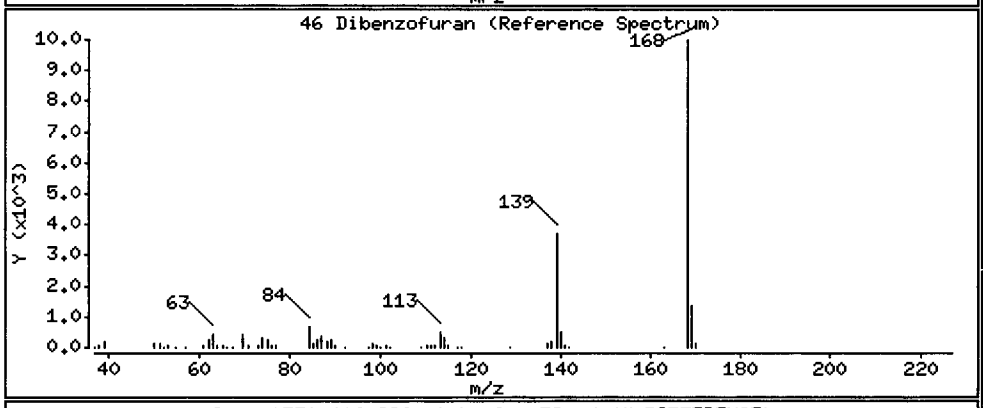
Column diameter: 0.25

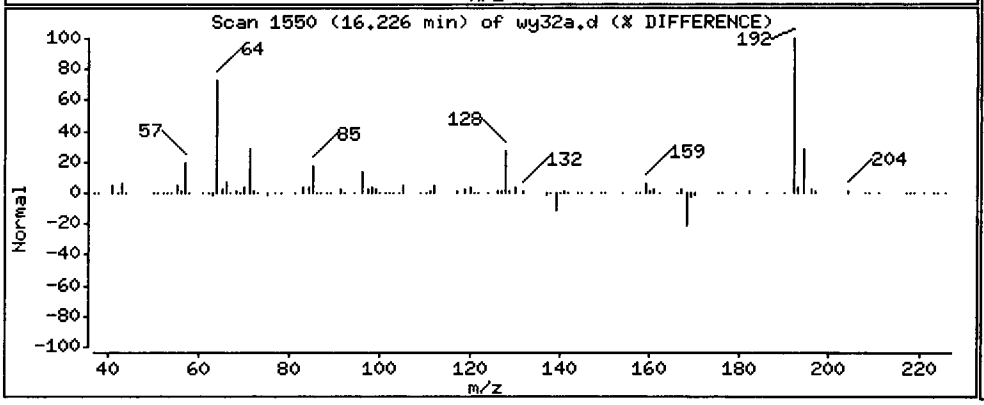
46 Dibenzofuran

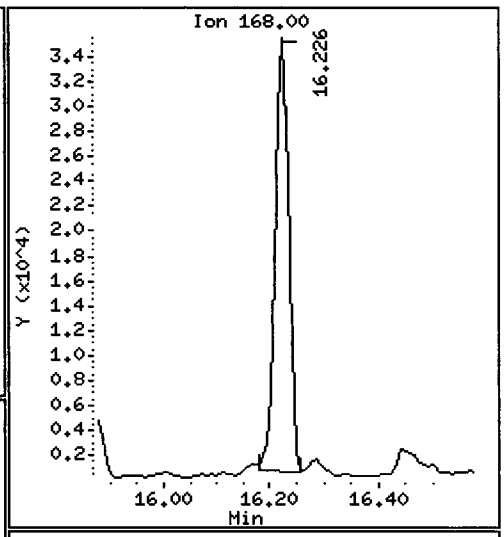
Concentration: 396.2 ug/kg

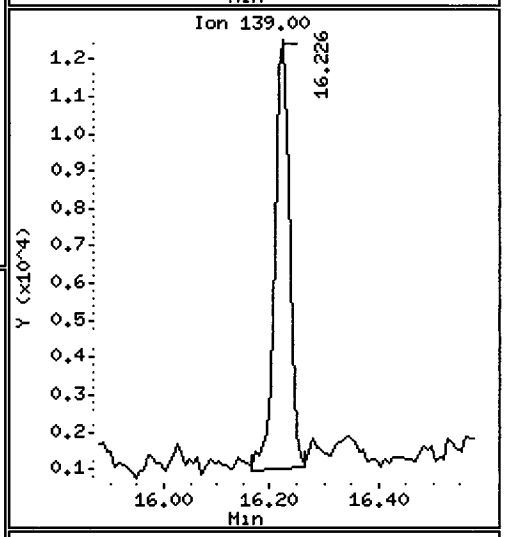


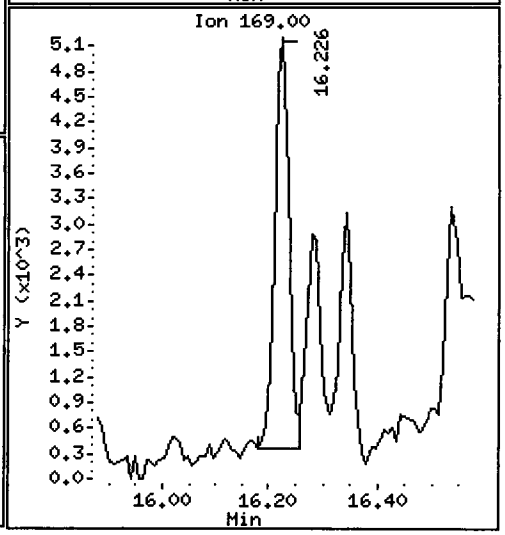












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

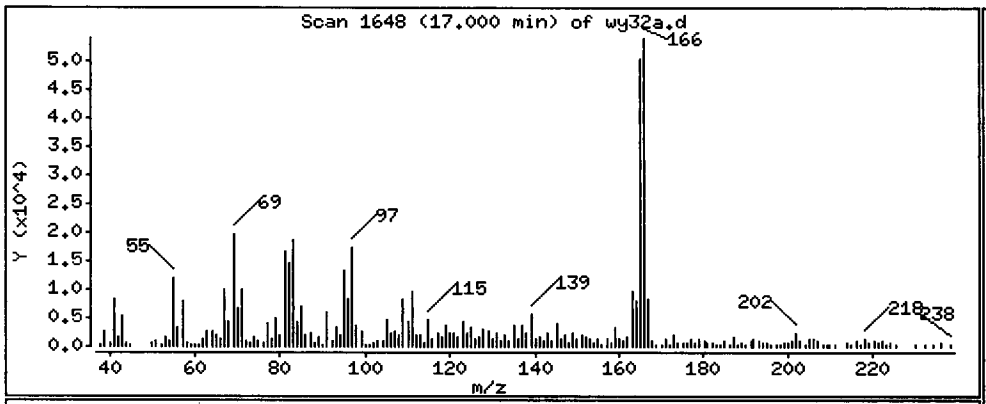
Operator: VTS/YZ

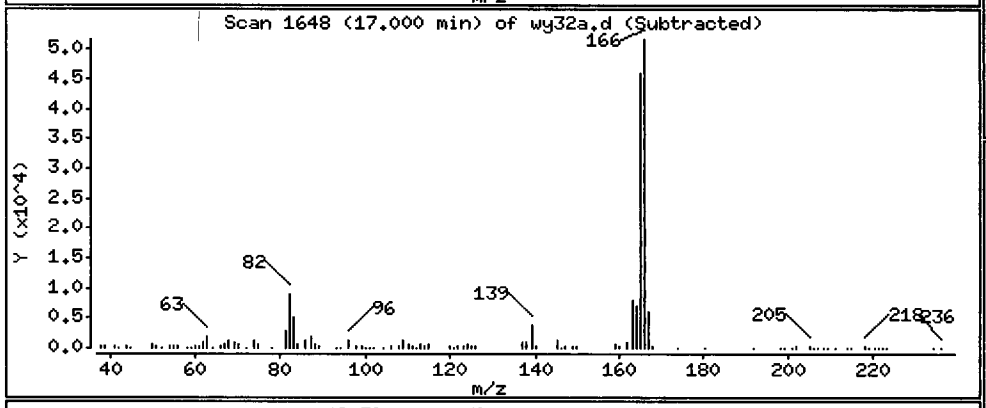
Column phase: ZB-5msi

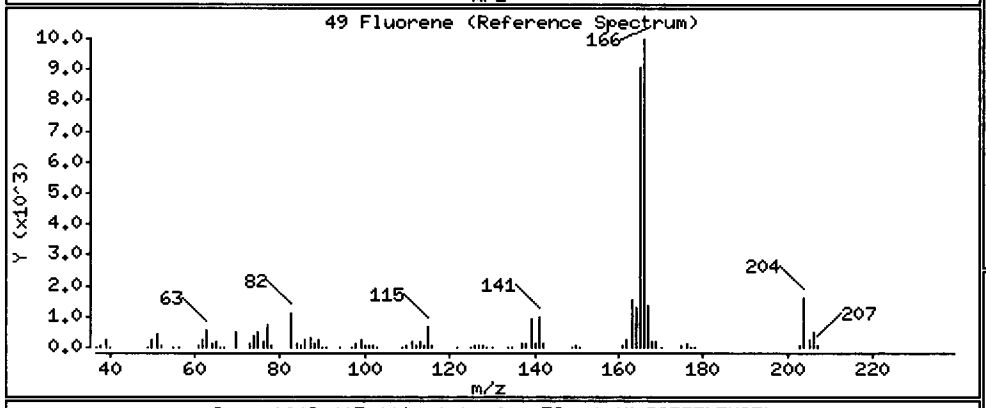
Column diameter: 0.25

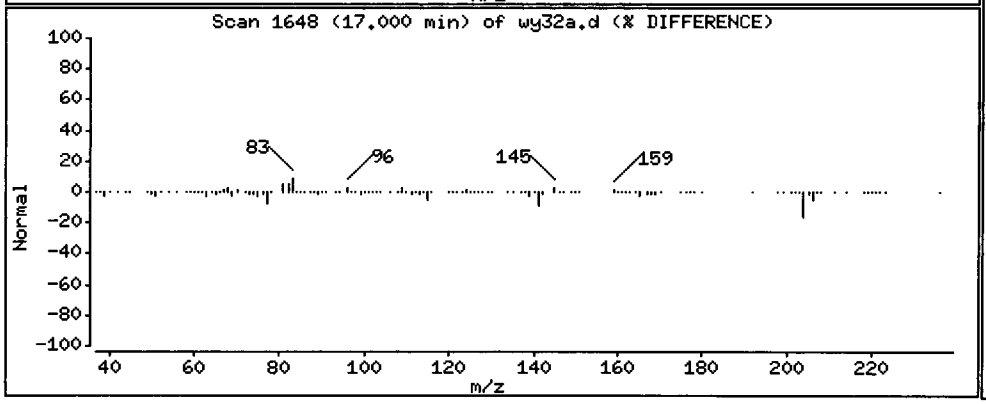
49 Fluorene

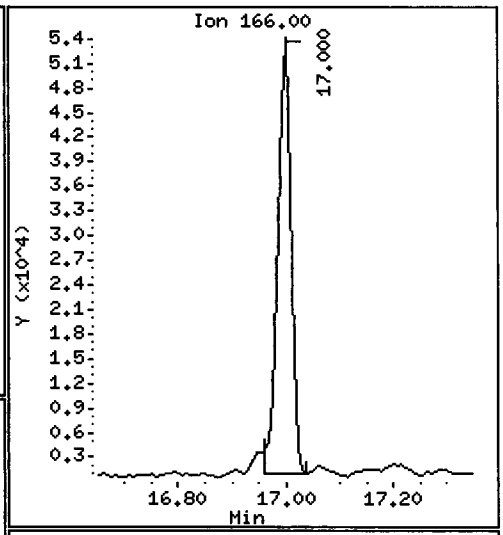
Concentration: 698.0 ug/kg

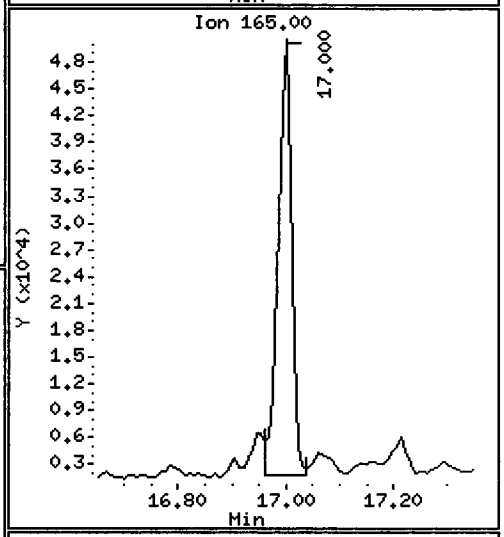


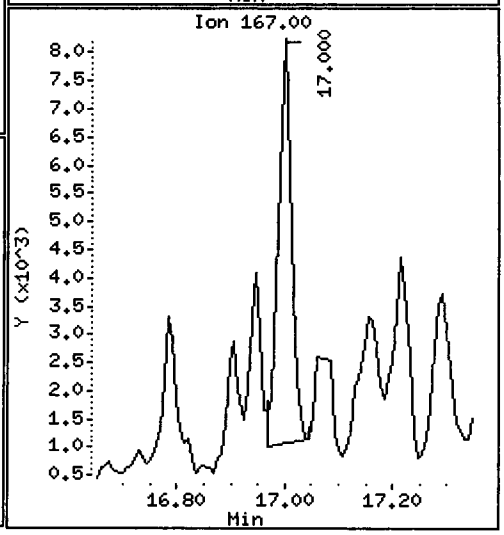












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

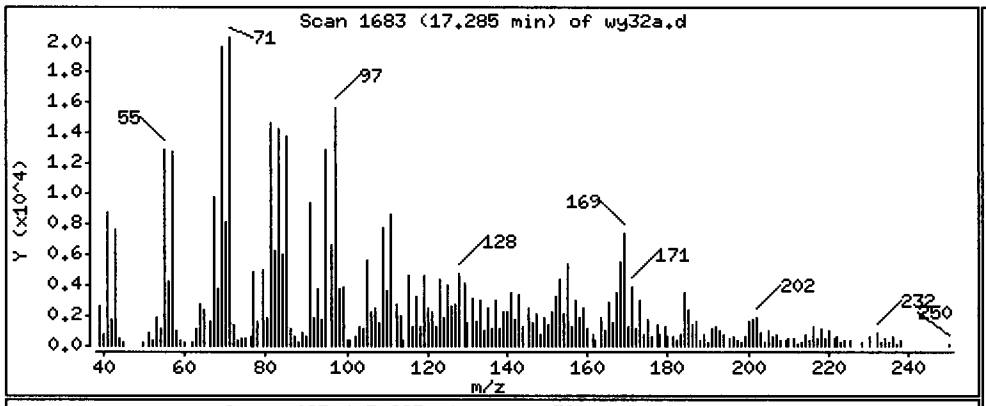
Operator: VTS/YZ

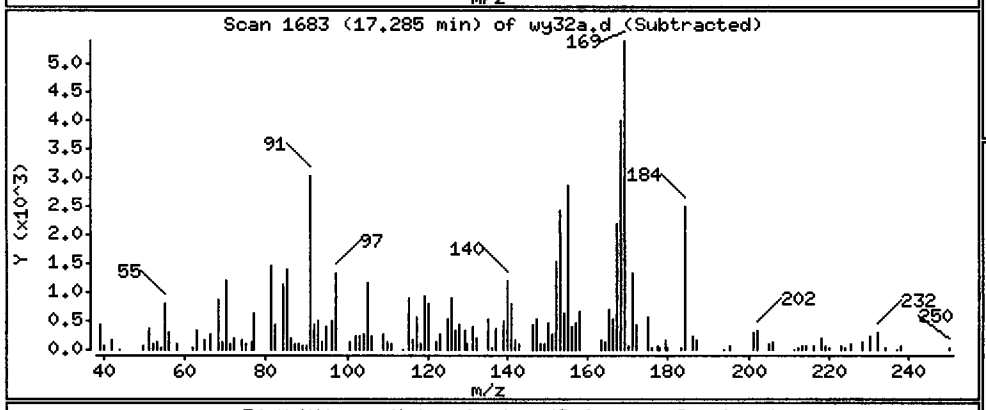
Column phase: ZB-5msi

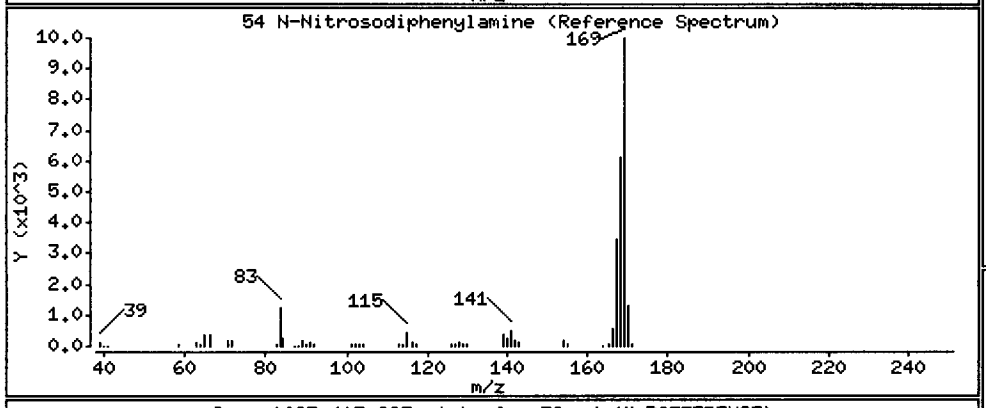
Column diameter: 0.25

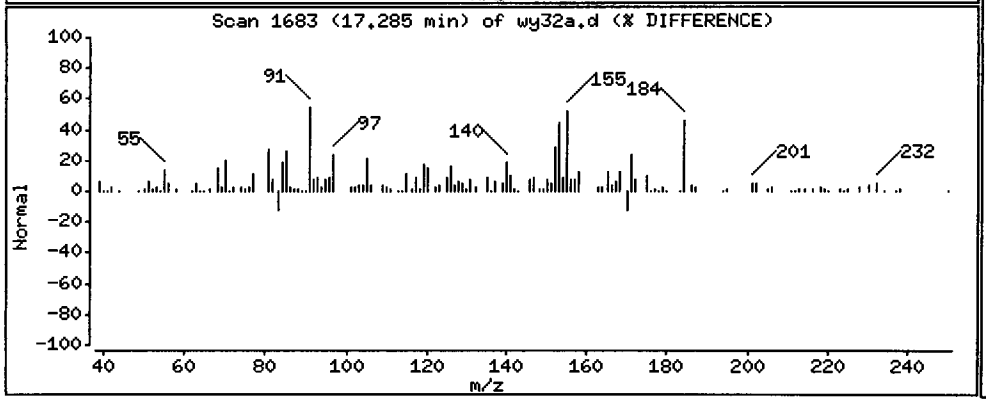
54 N-Nitrosodiphenylamine

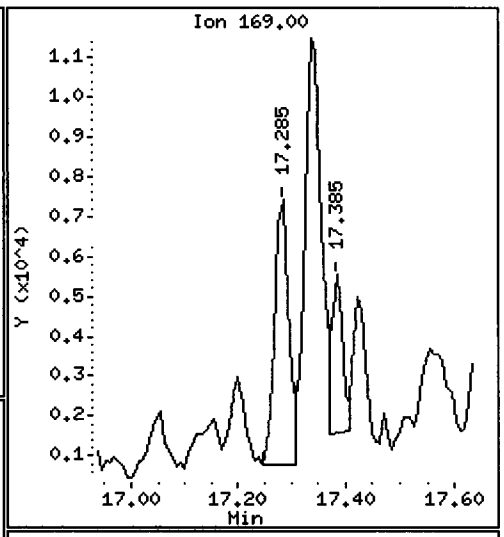
Concentration: 164.7 ug/kg

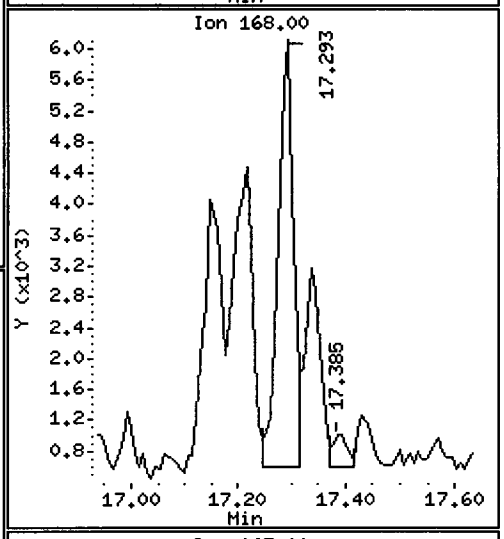


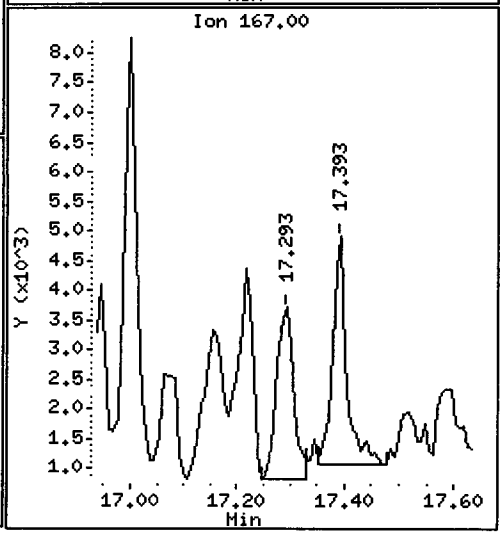












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

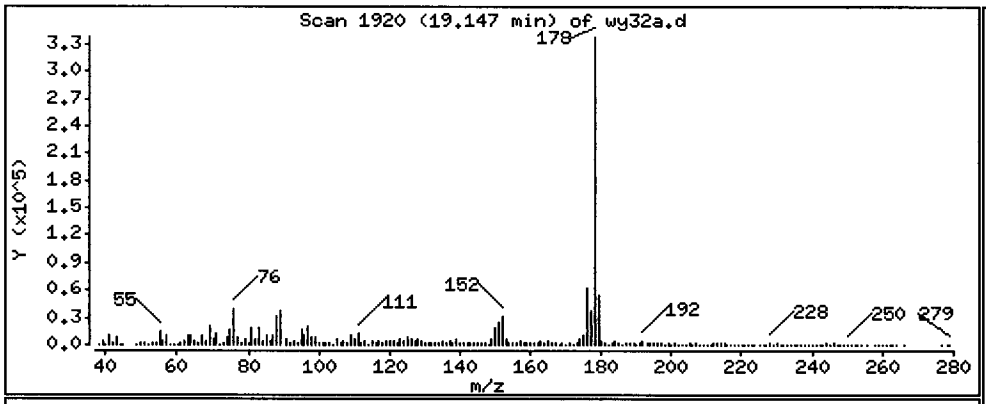
Operator: VTS/YZ

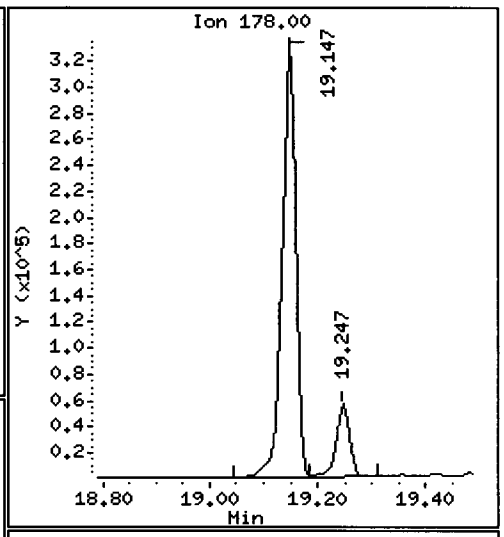
Column phase: ZB-5msi

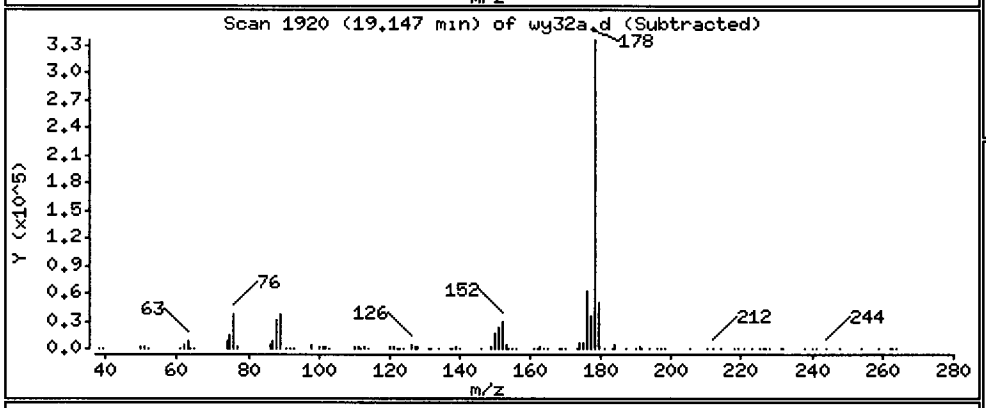
Column diameter: 0.25

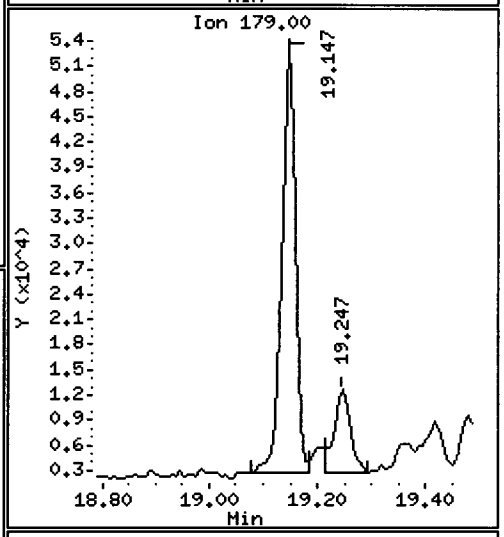
60 Phenanthrene

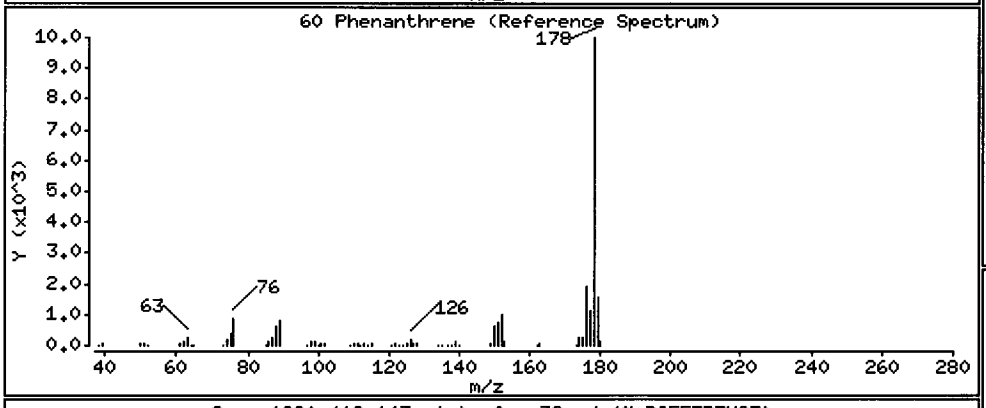
Concentration: 3719 ug/kg

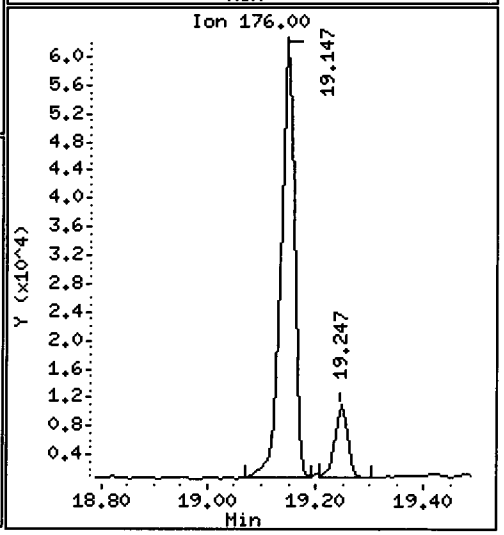


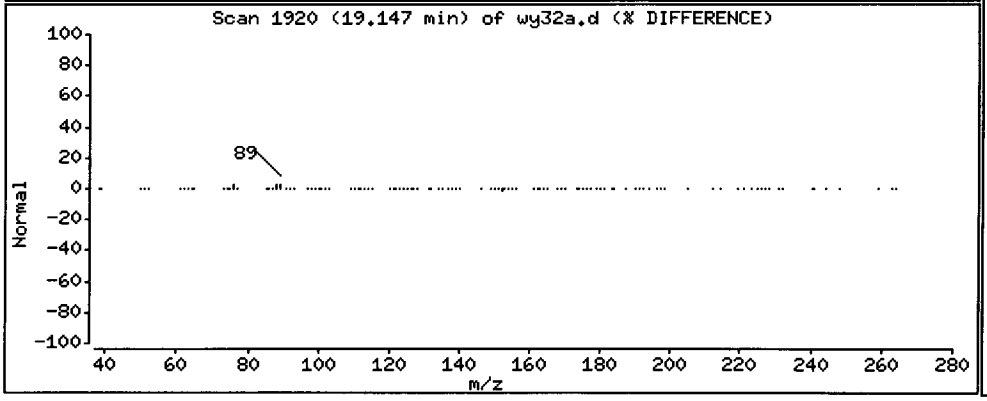












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

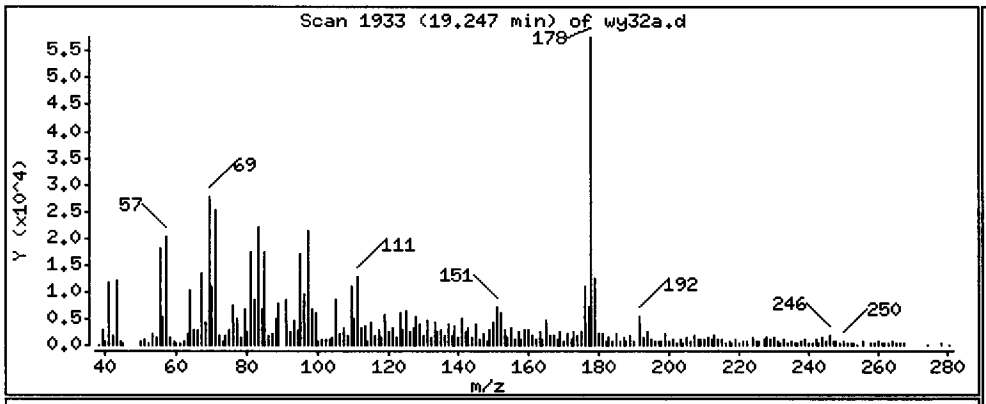
Operator: VTS/YZ

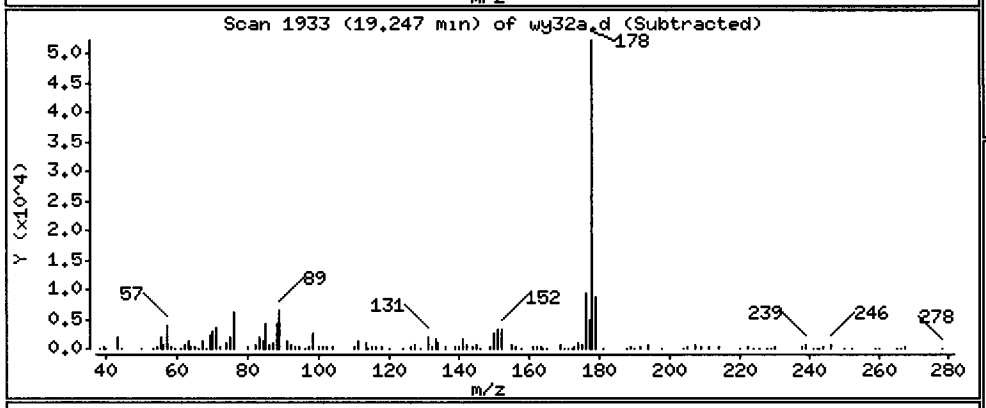
Column phase: ZB-5ms1

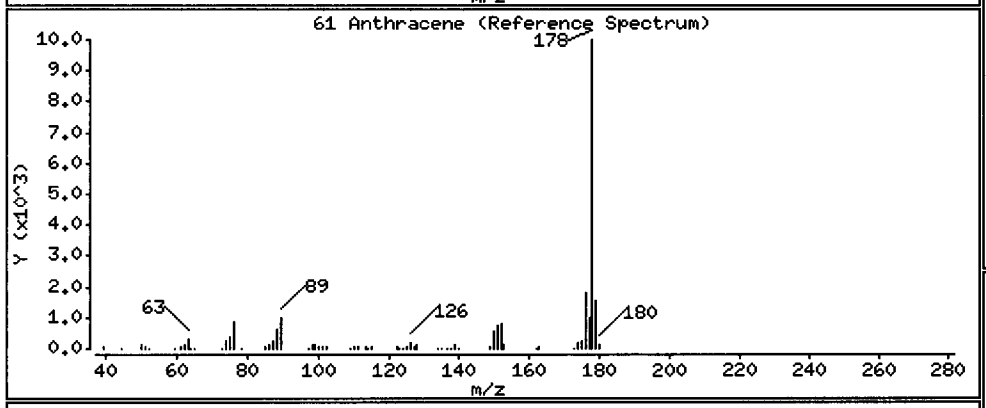
Column diameter: 0.25

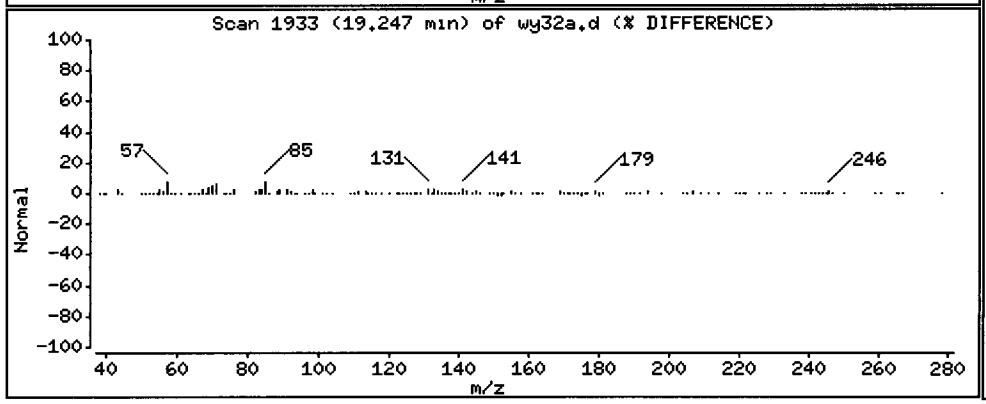
61 Anthracene

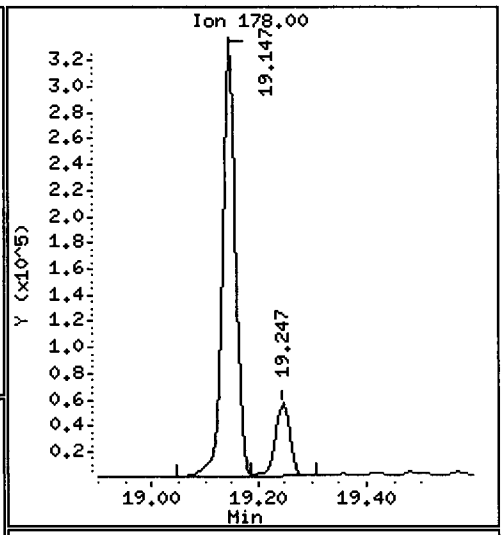
Concentration: 605.5 ug/kg

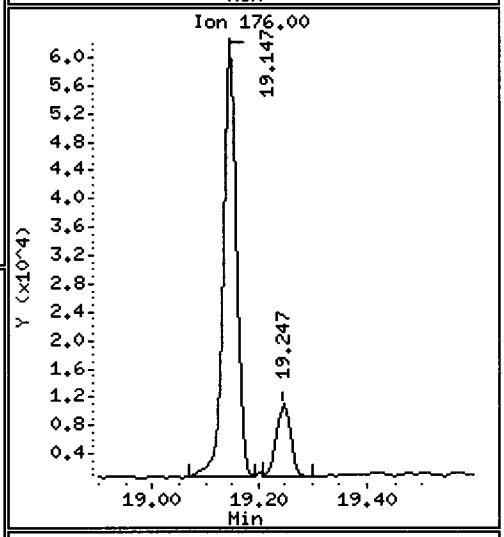


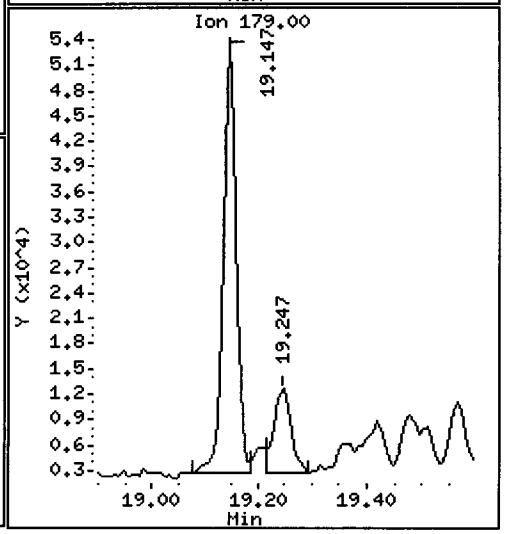












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

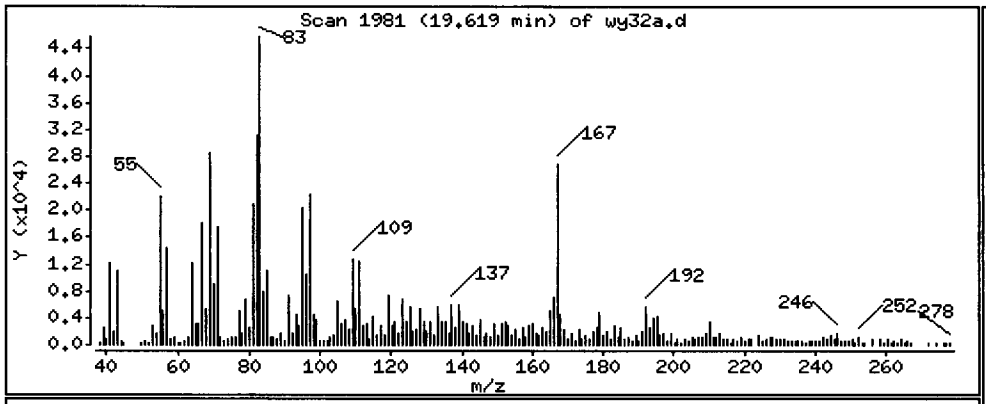
Operator: VTS/YZ

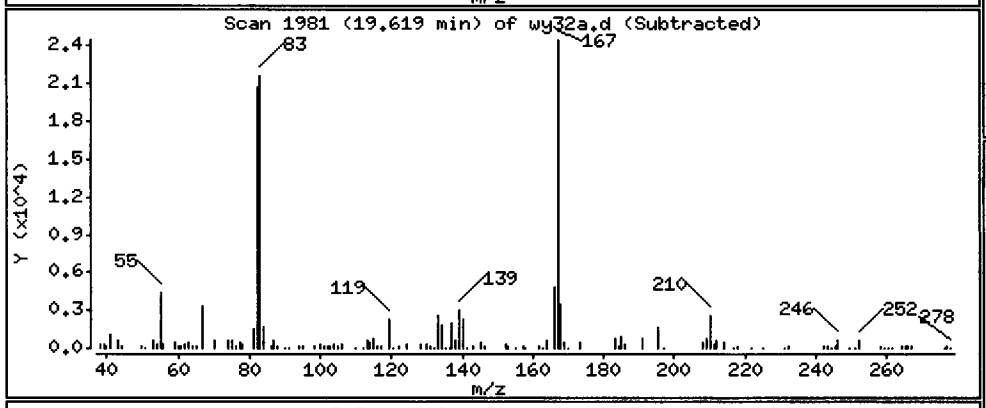
Column phase: ZB-5msi

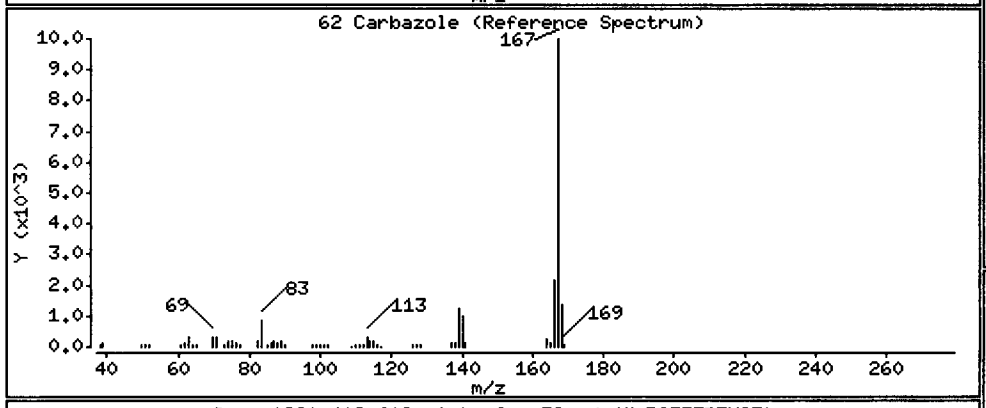
Column diameter: 0.25

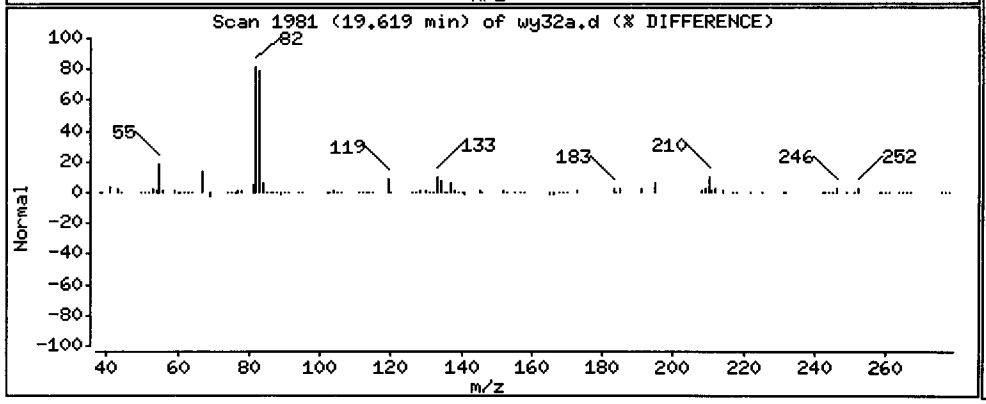
62 Carbazole

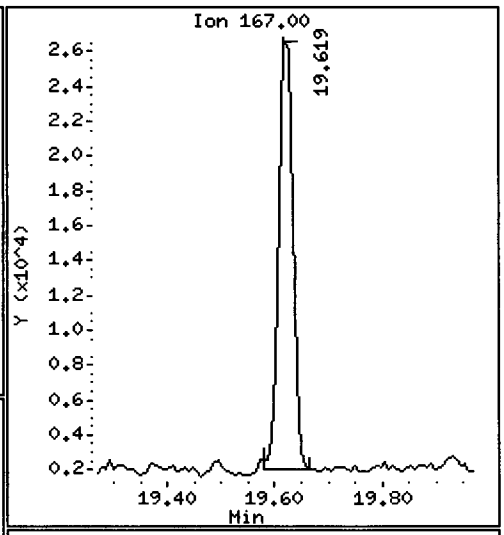
Concentration: 609.4 ug/kg

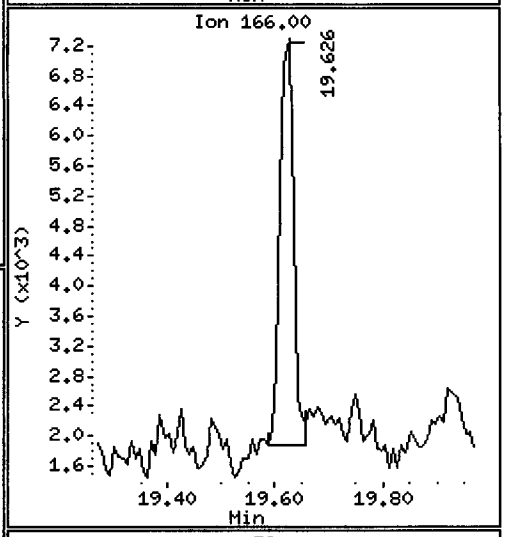


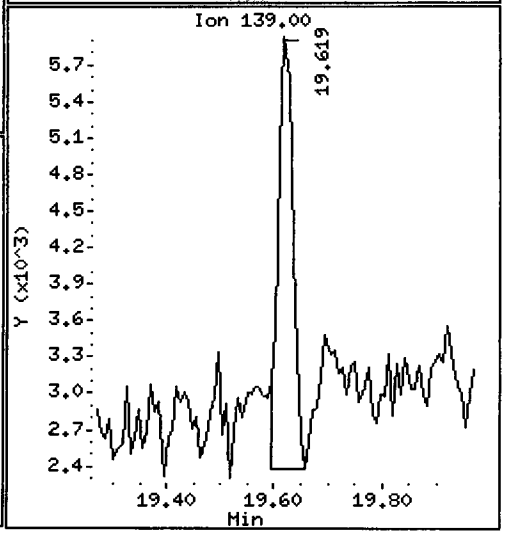












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

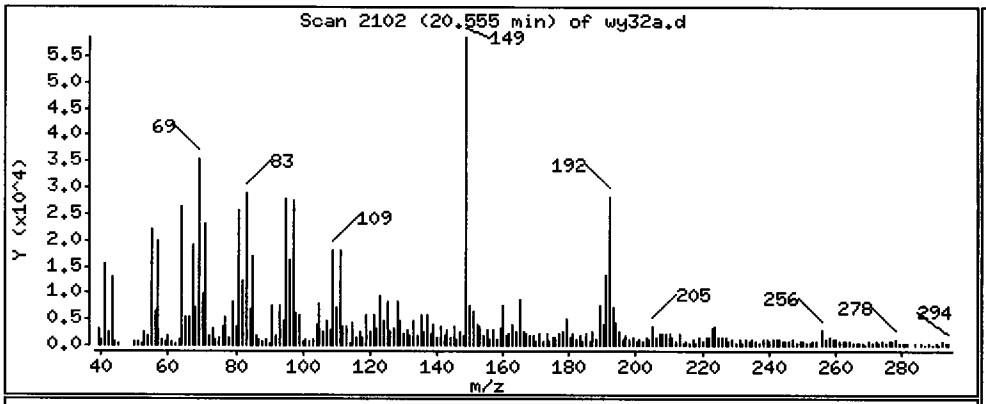
Operator: VTS/YZ

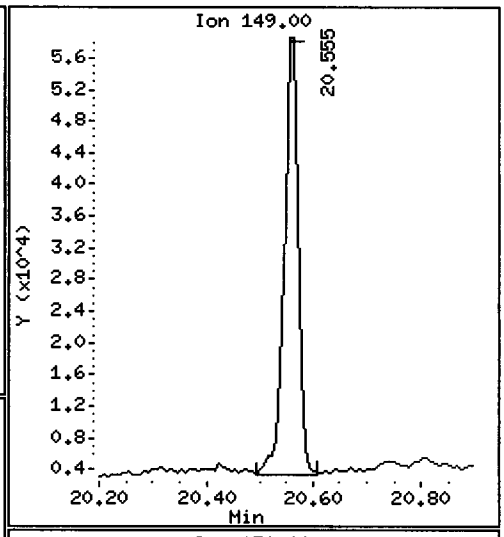
Column phase: ZB-5ms1

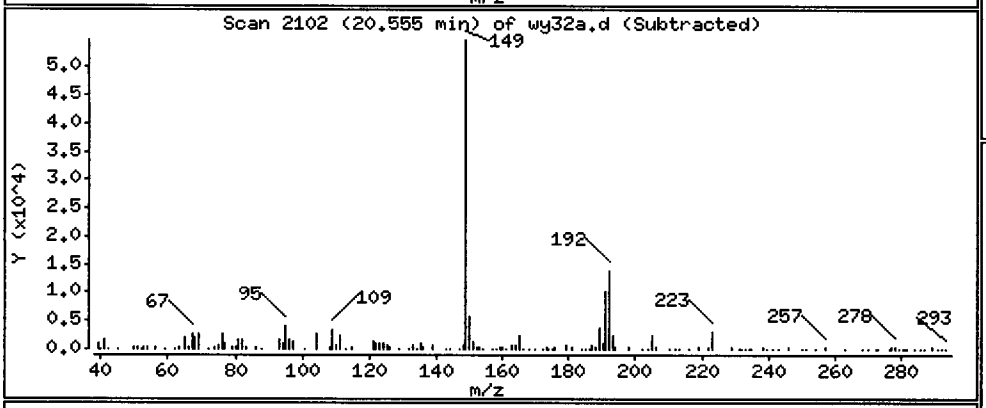
Column diameter: 0.25

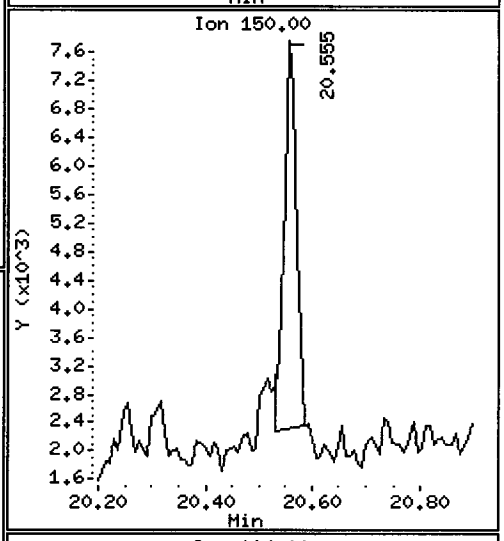
63 Di-n-butylphthalate

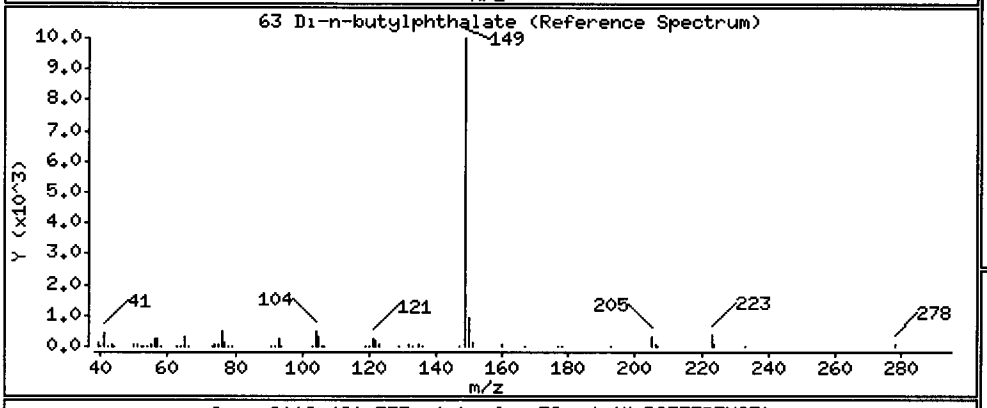
Concentration: 586.5 ug/kg

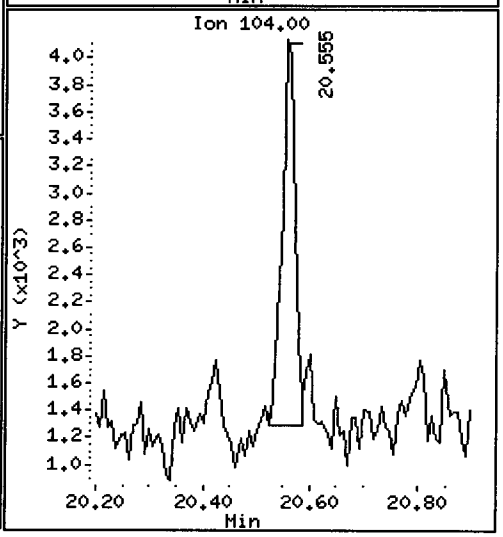


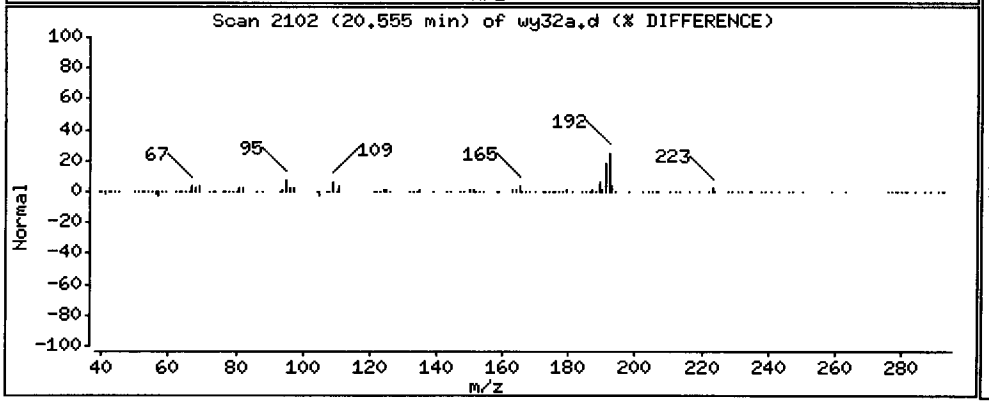












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

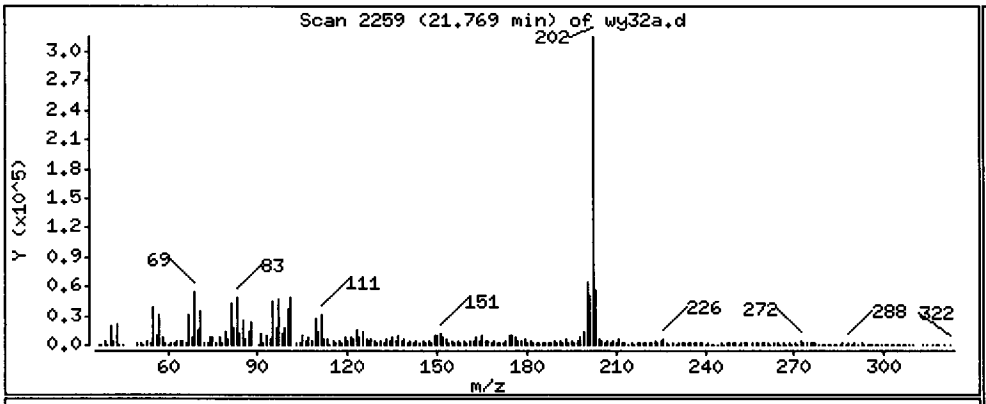
Operator: VTS/YZ

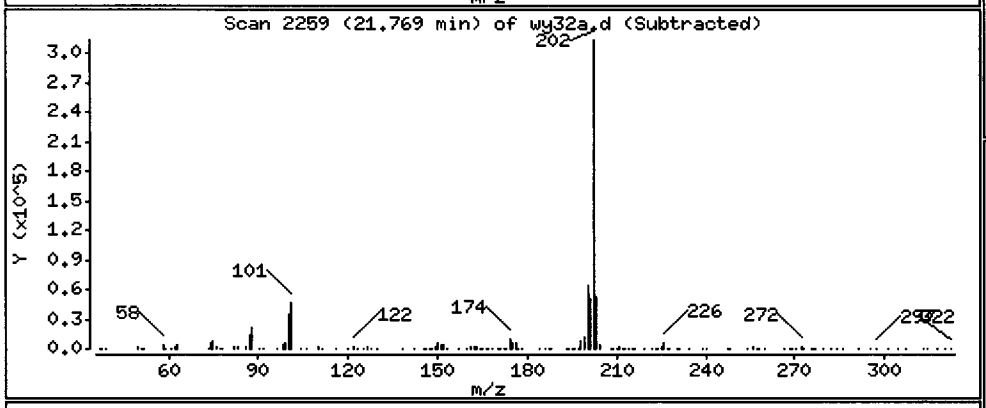
Column phase: ZB-5msi

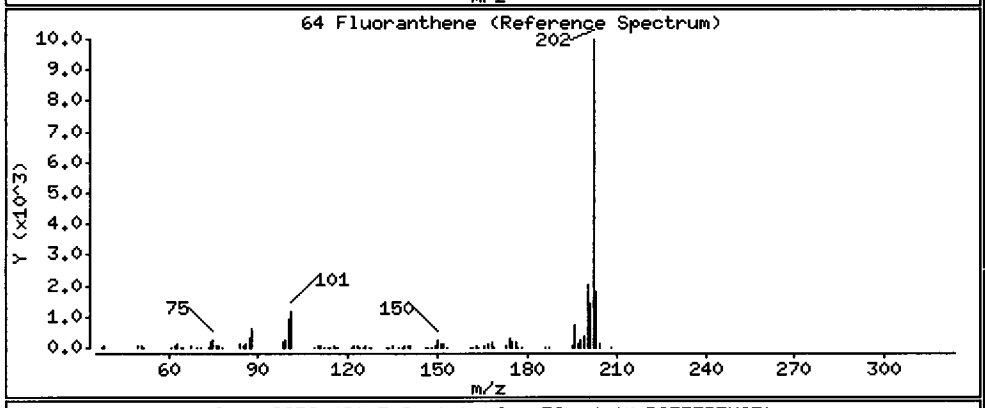
Column diameter: 0.25

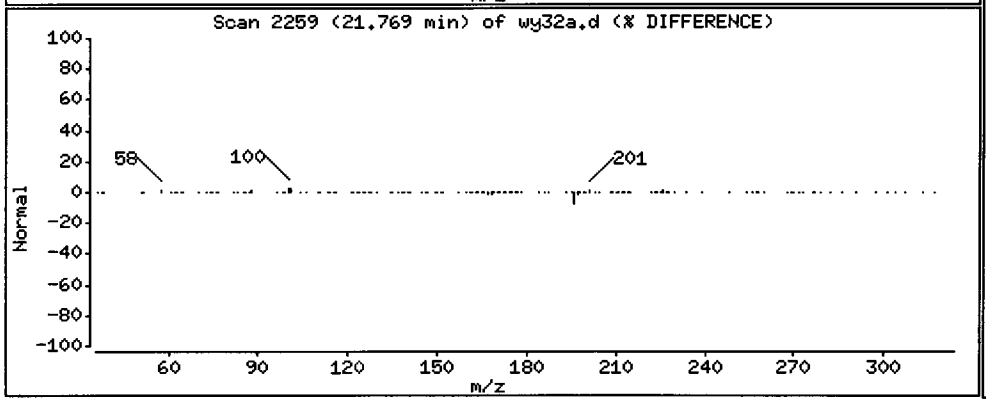
64 Fluoranthene

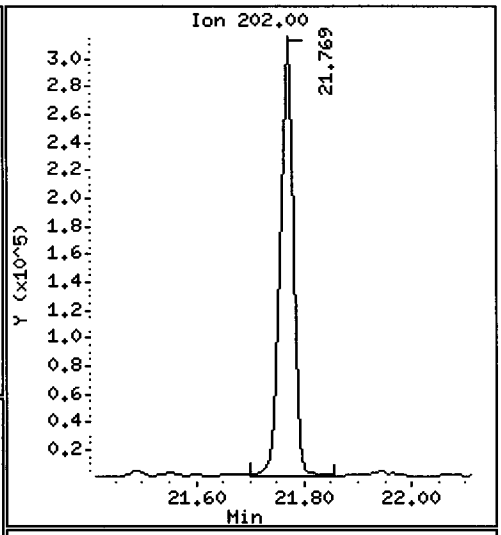
Concentration: 2682 ug/kg

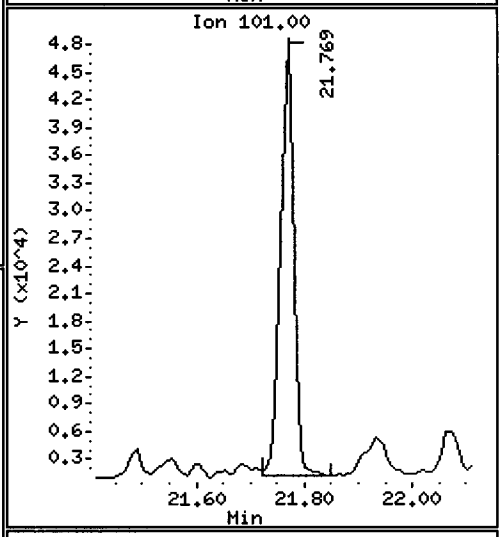


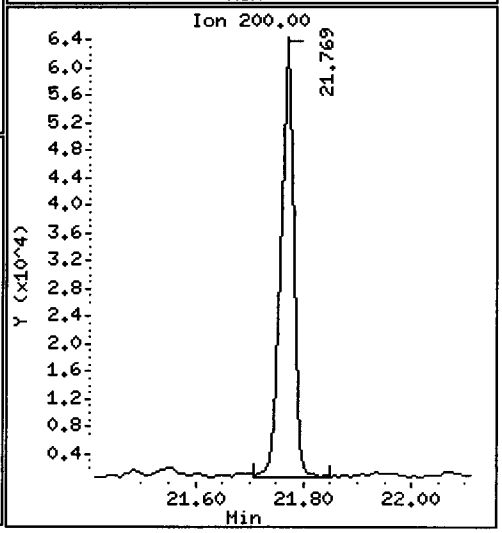












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

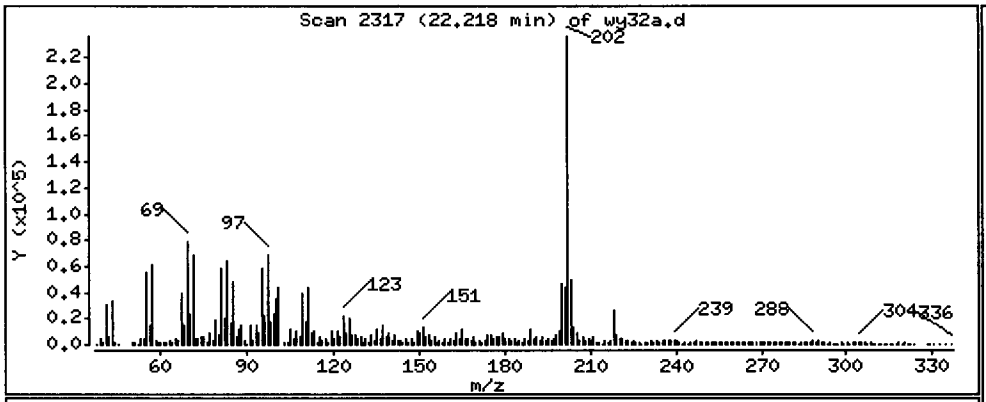
Operator: VTS/YZ

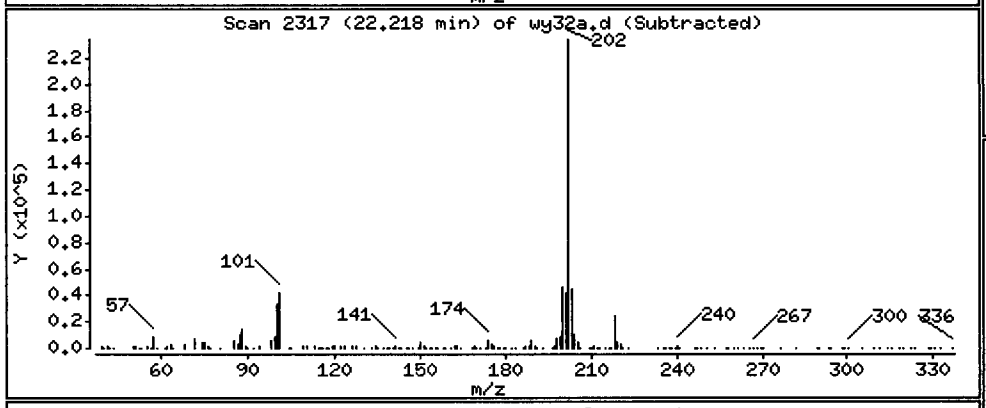
Column phase: ZB-5msi

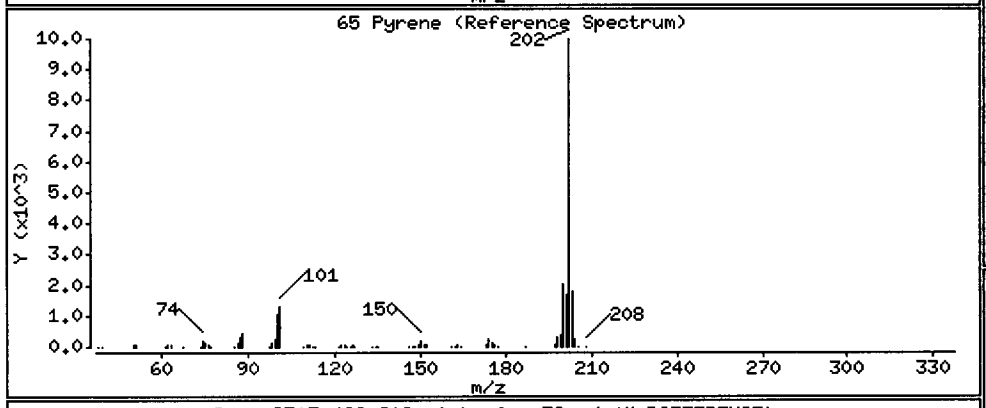
Column diameter: 0.25

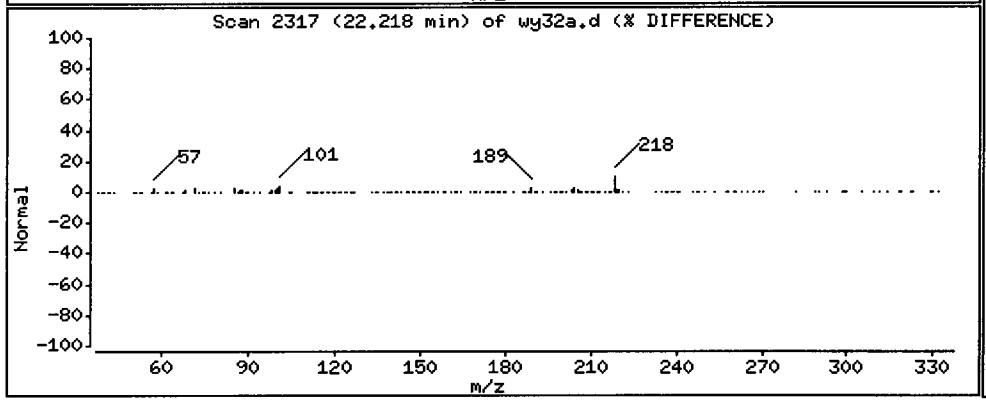
65 Pyrene

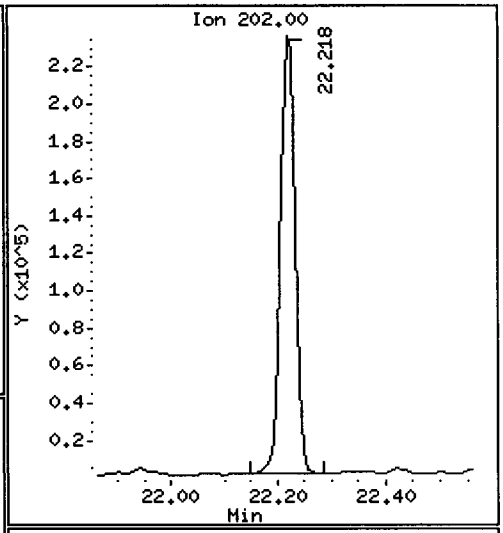
Concentration: 2283 ug/kg

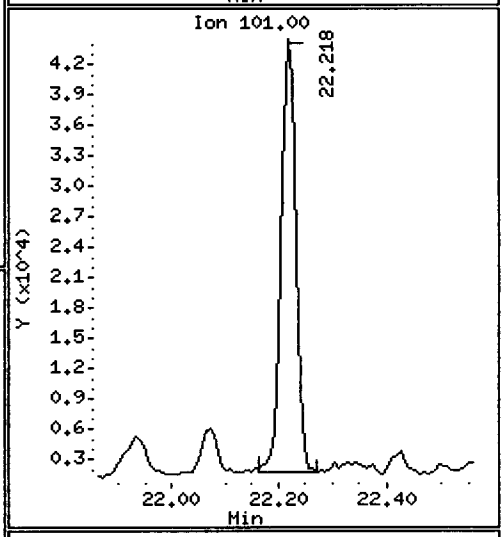


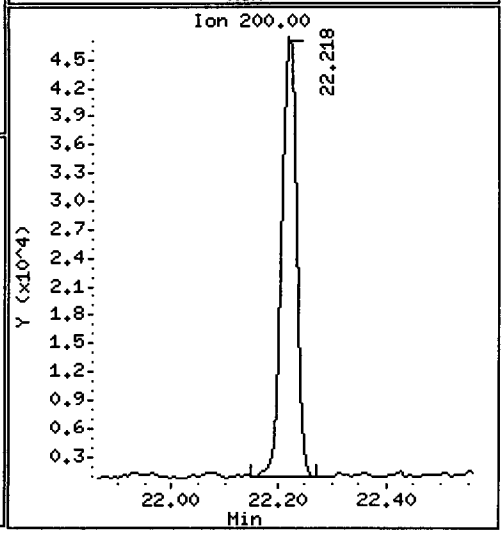












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

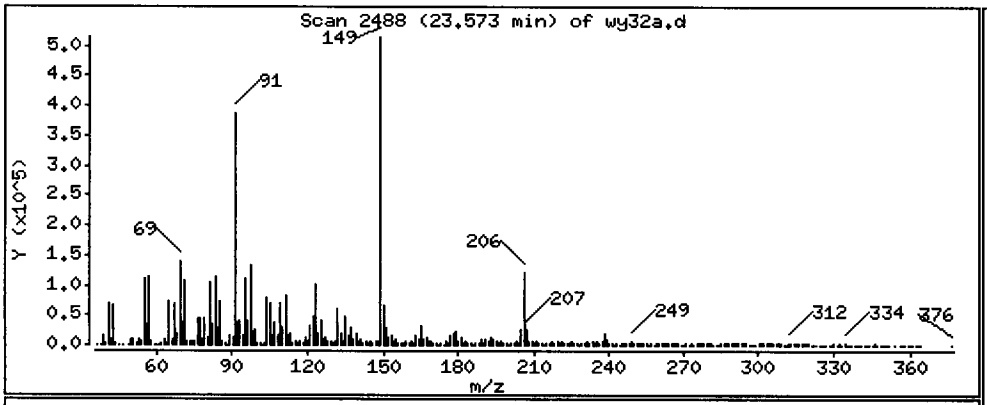
Operator: VTS/YZ

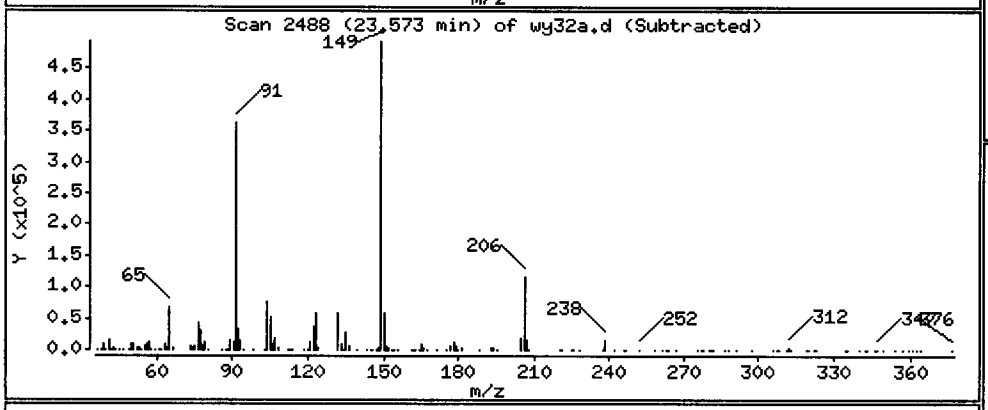
Column phase: ZB-5msi

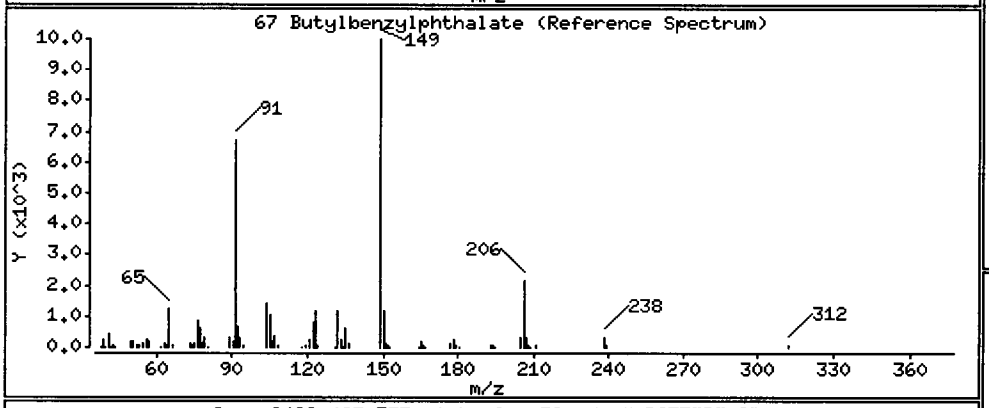
Column diameter: 0.25

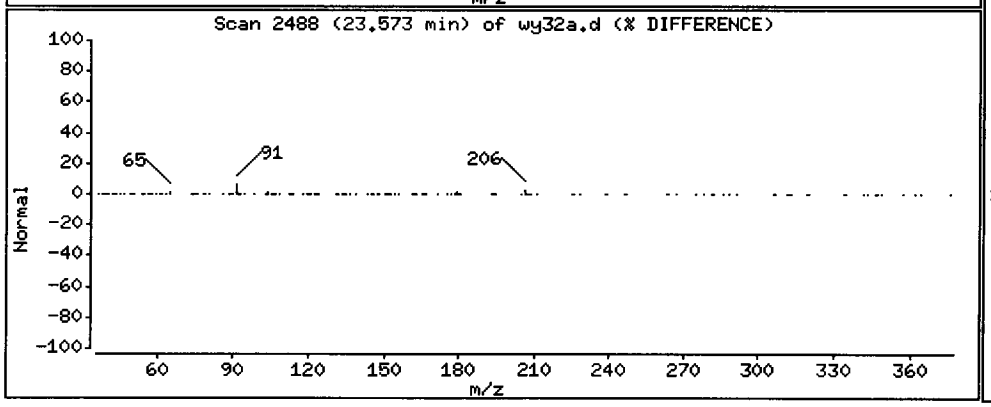
67 Butylbenzylphthalate

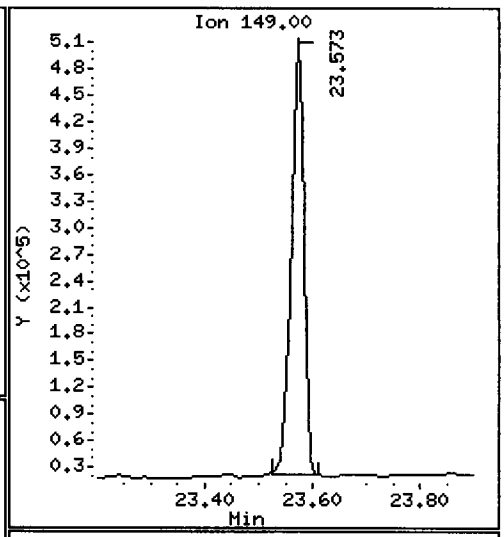
Concentration: 12260 ug/kg

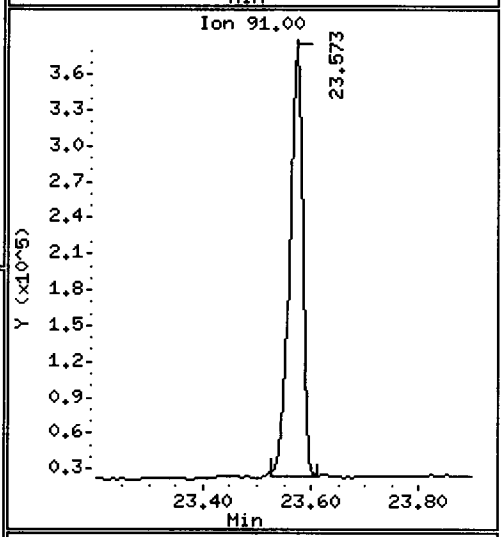


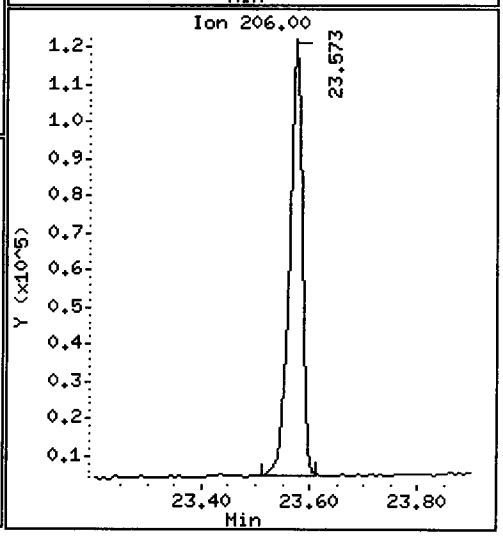












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

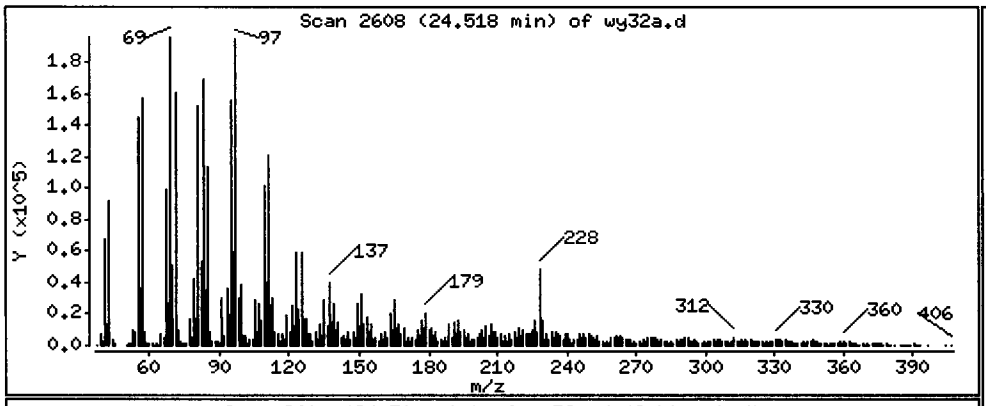
Operator: VTS/YZ

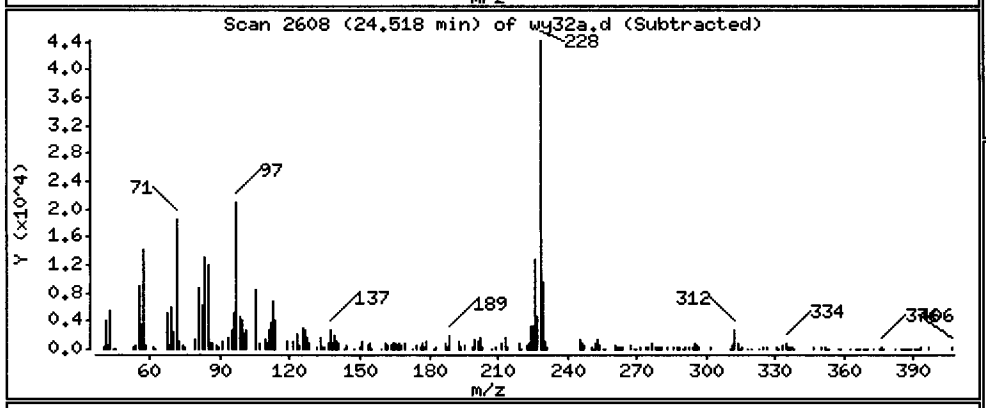
Column phase: ZB-5msi

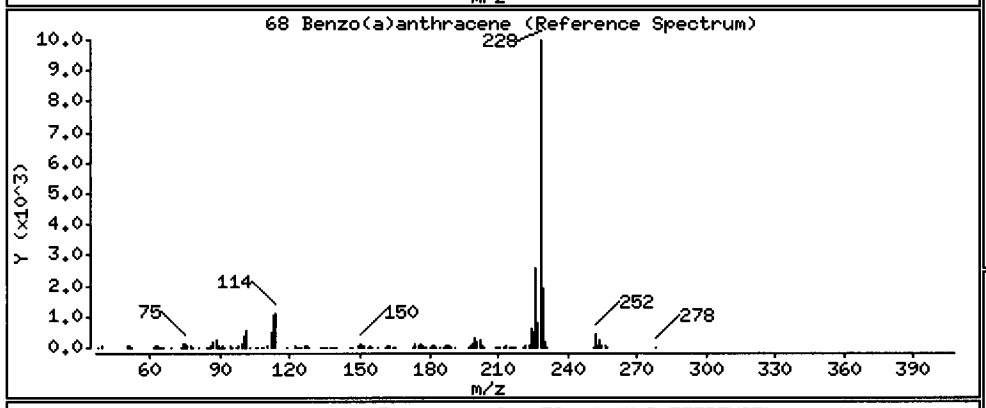
Column diameter: 0.25

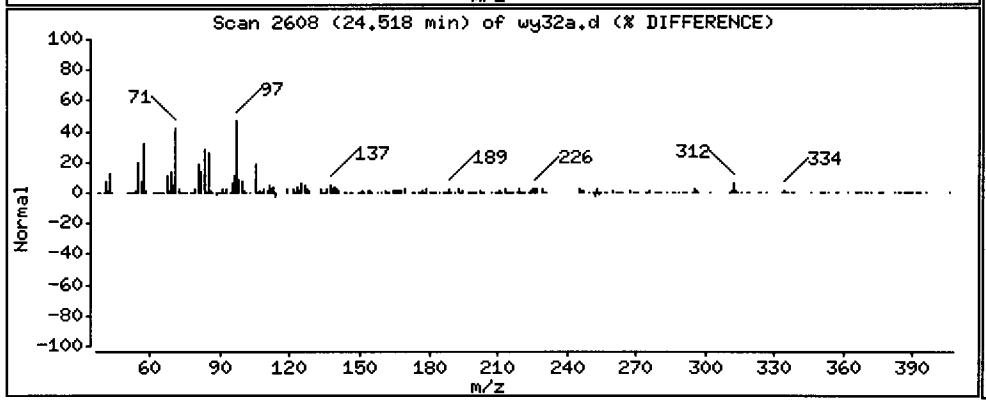
68 Benzo(a)anthracene

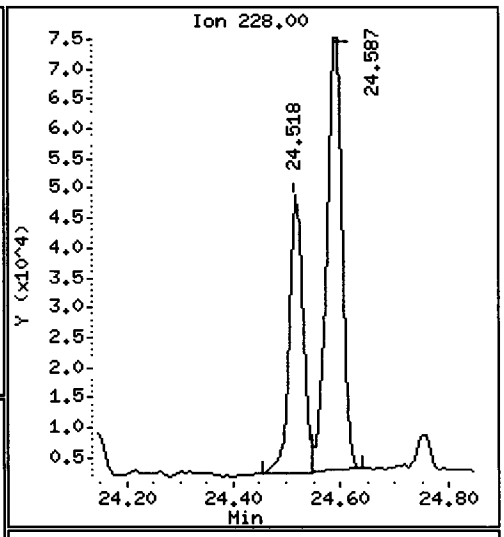
Concentration: 508.0 ug/kg

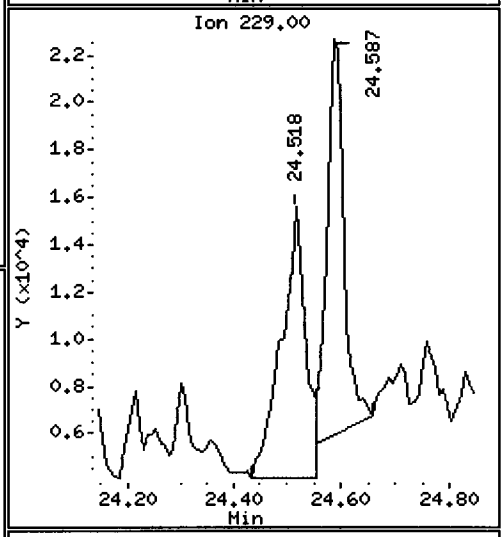


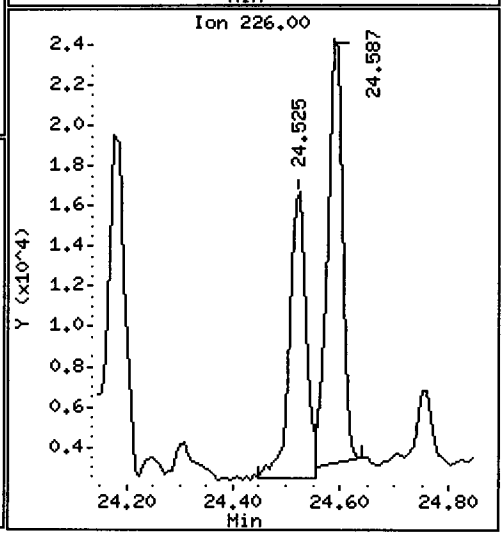












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

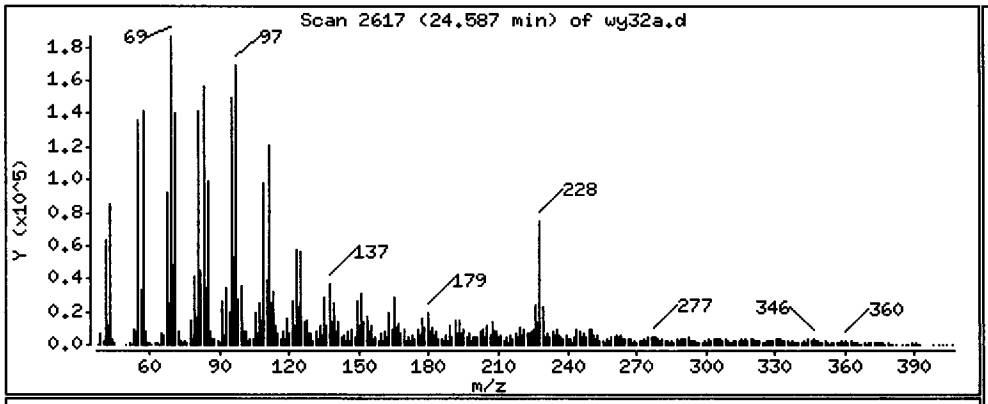
Operator: VTS/YZ

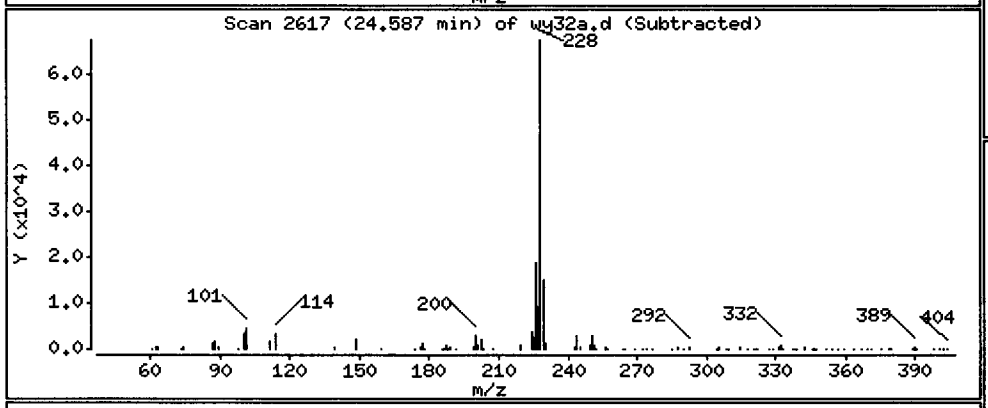
Column phase: ZB-5msi

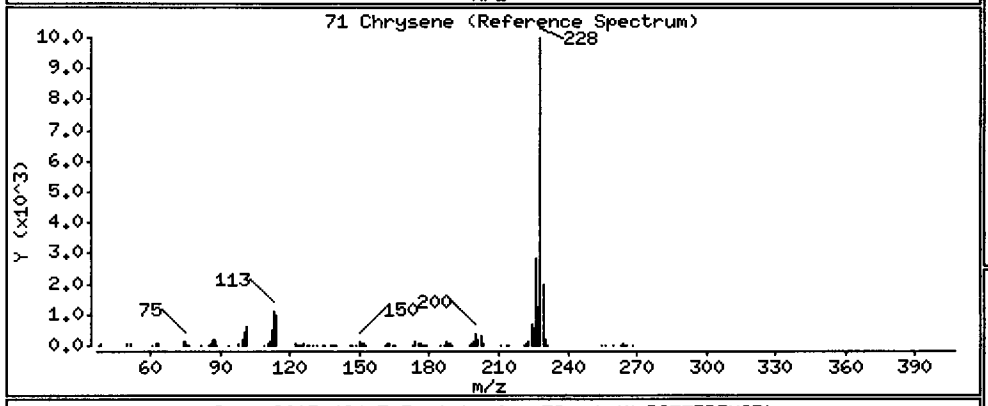
Column diameter: 0.25

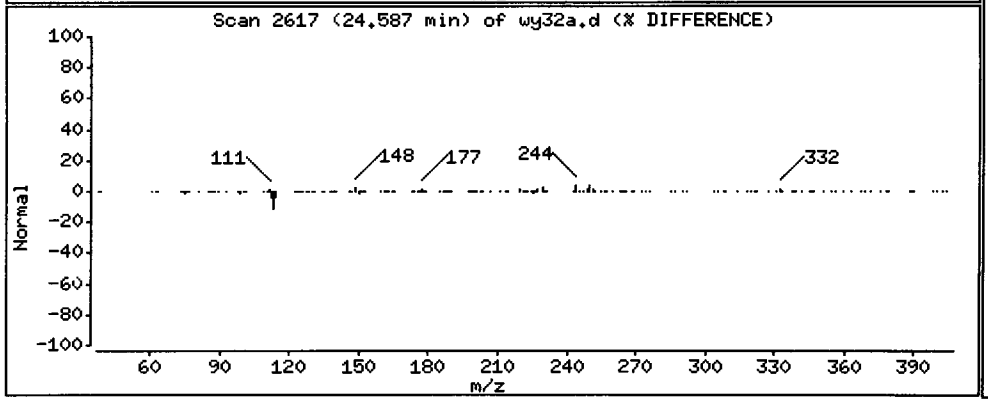
71 Chrysene

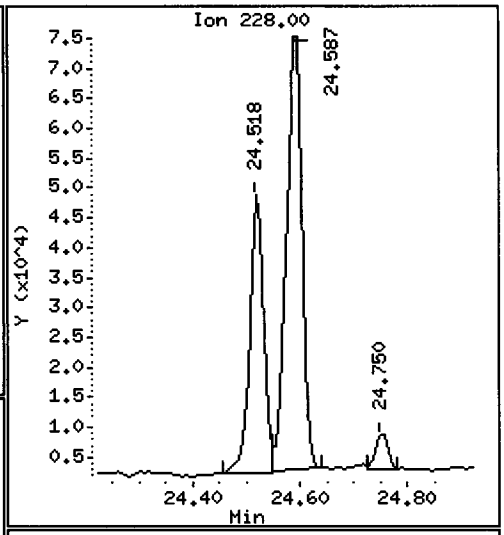
Concentration: 1001 ug/kg

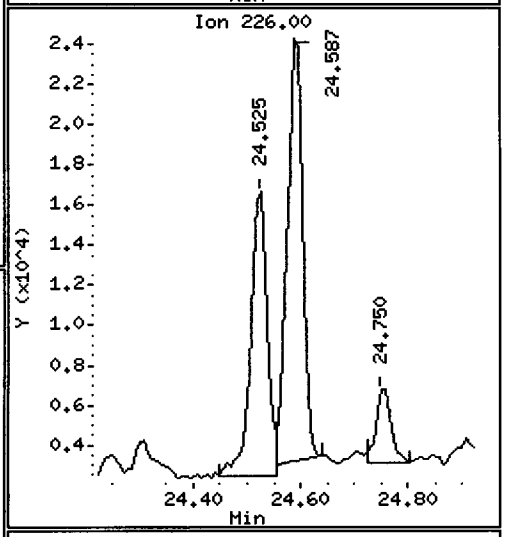


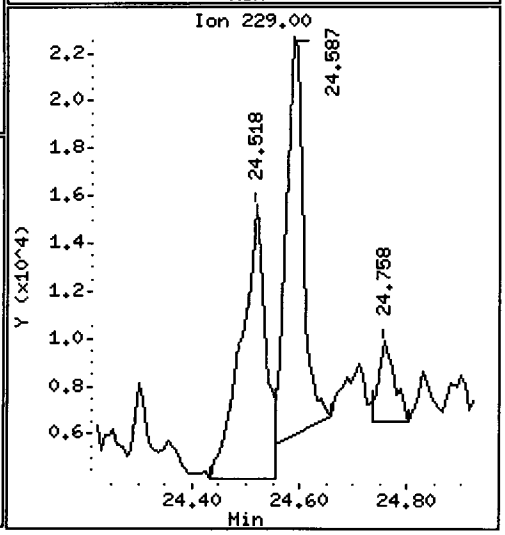












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

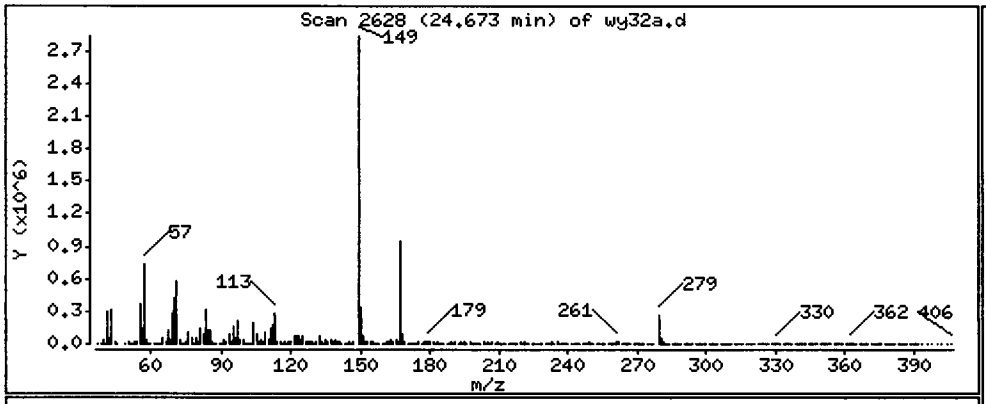
Operator: VTS/YZ

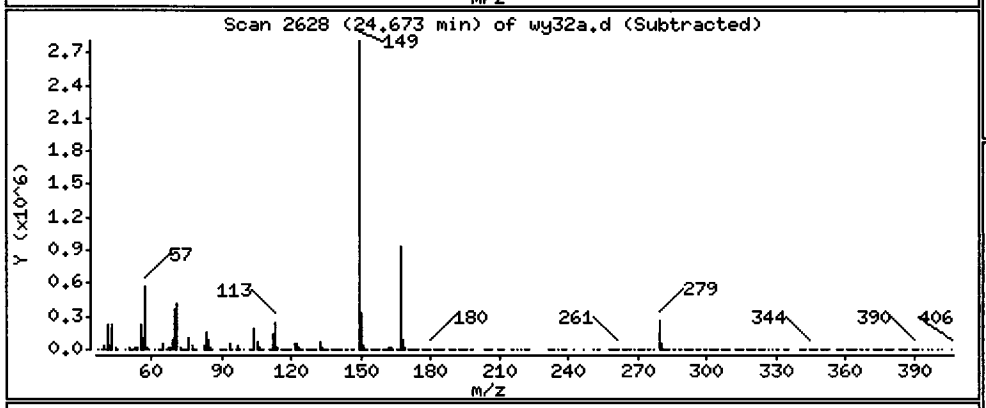
Column phase: ZB-5ms1

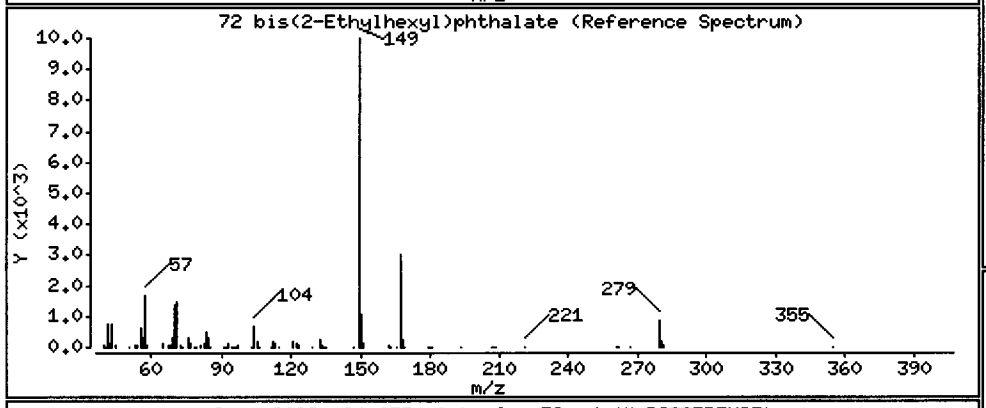
Column diameter: 0.25

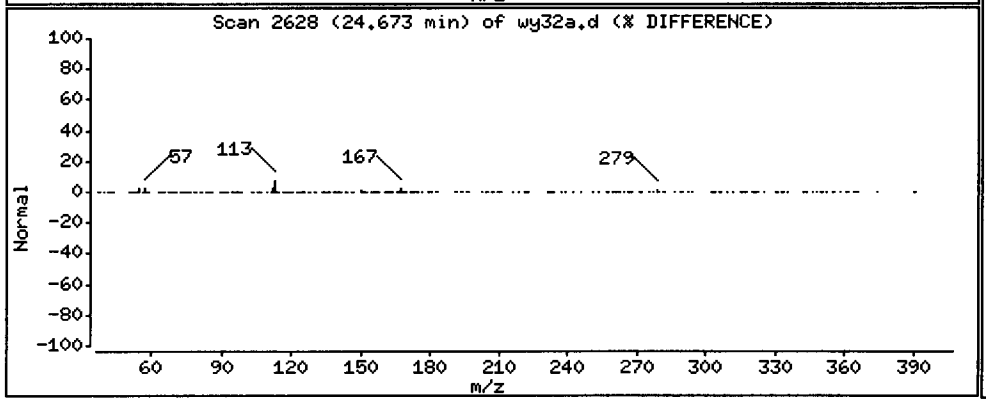
72 bis(2-Ethylhexyl)phthalate

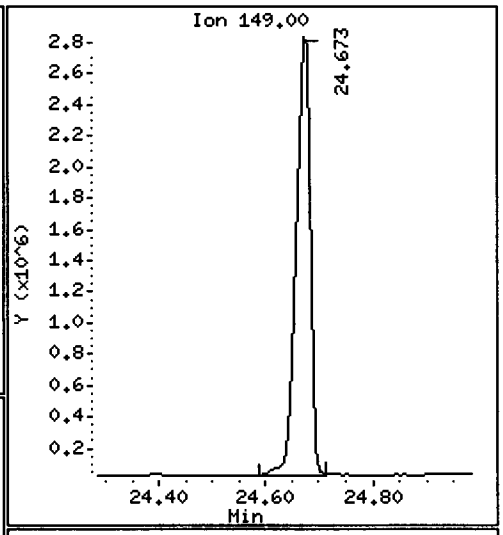
Concentration: 59450 ug/kg

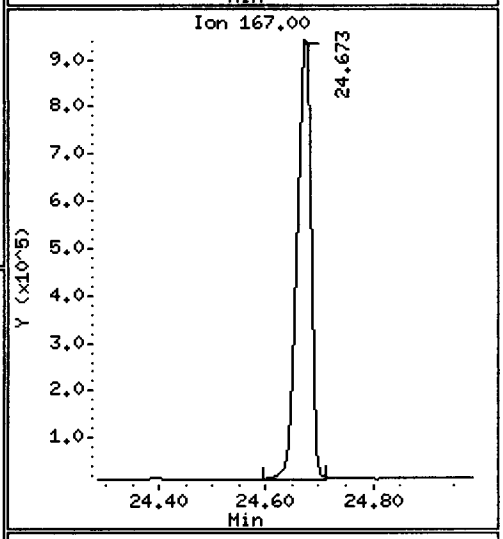


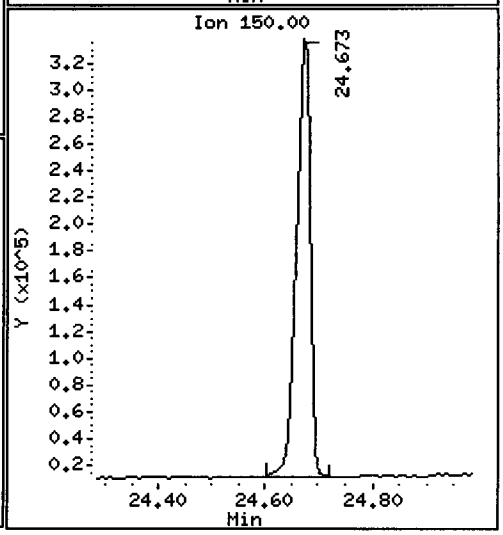












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

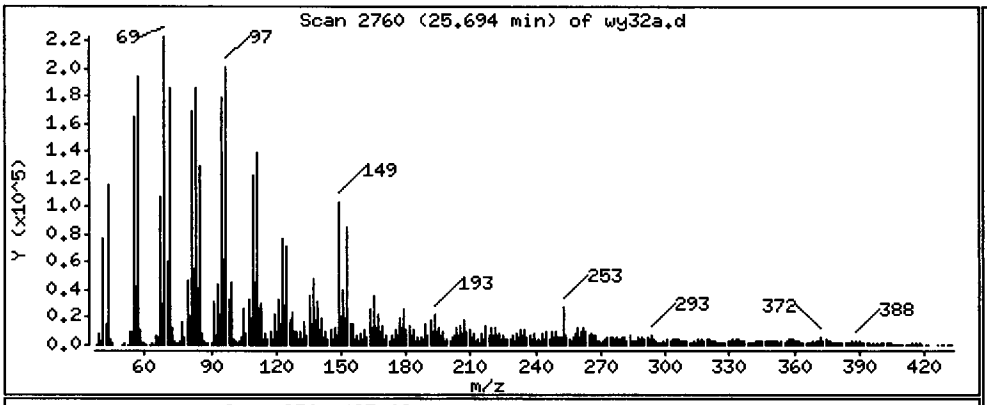
Operator: VTS/YZ

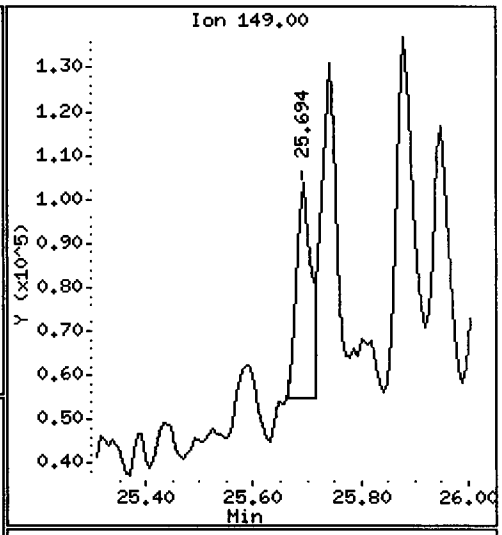
Column phase: ZB-5msi

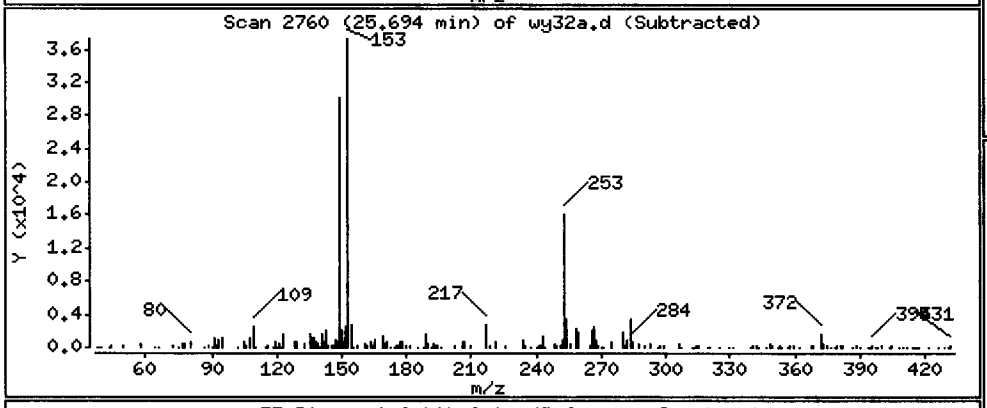
Column diameter: 0.25

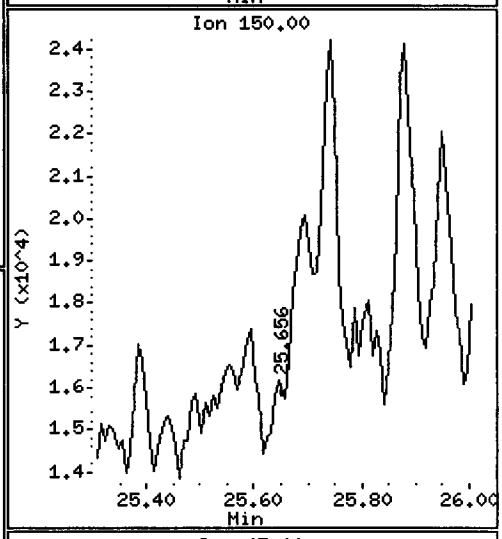
73 Di-n-octylphthalate

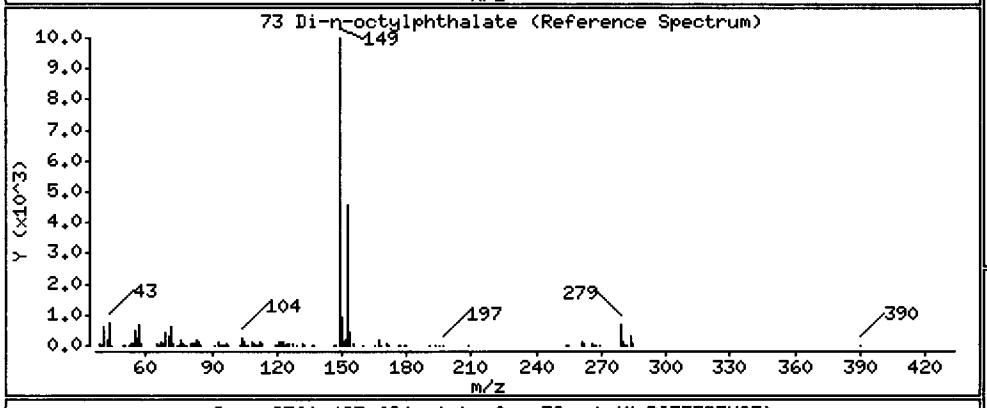
Concentration: 580.7 ug/kg

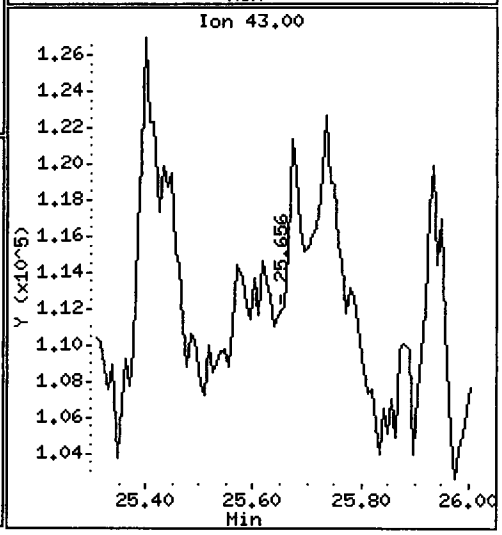


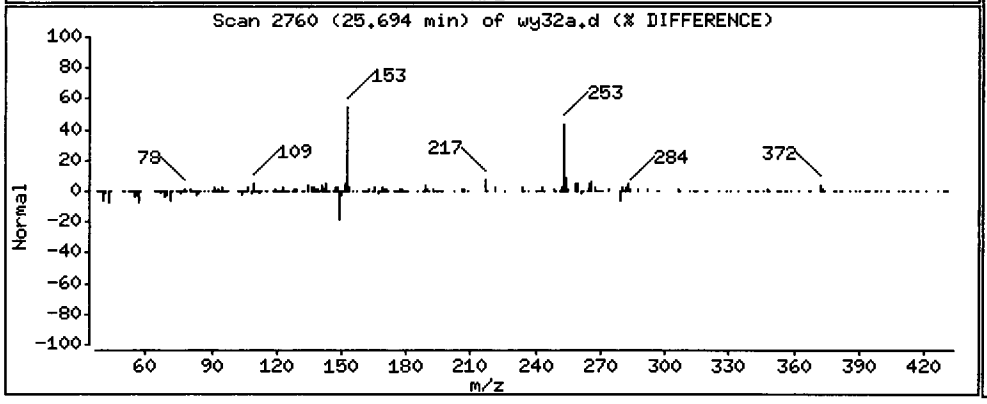












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

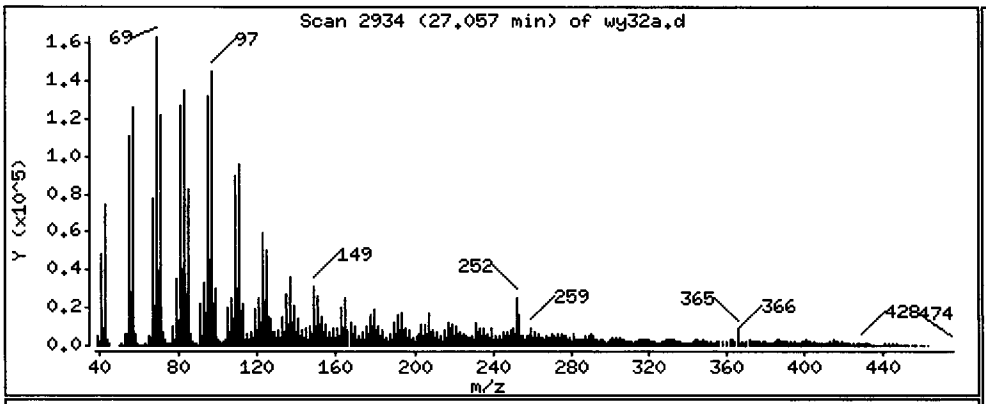
Operator: VTS/YZ

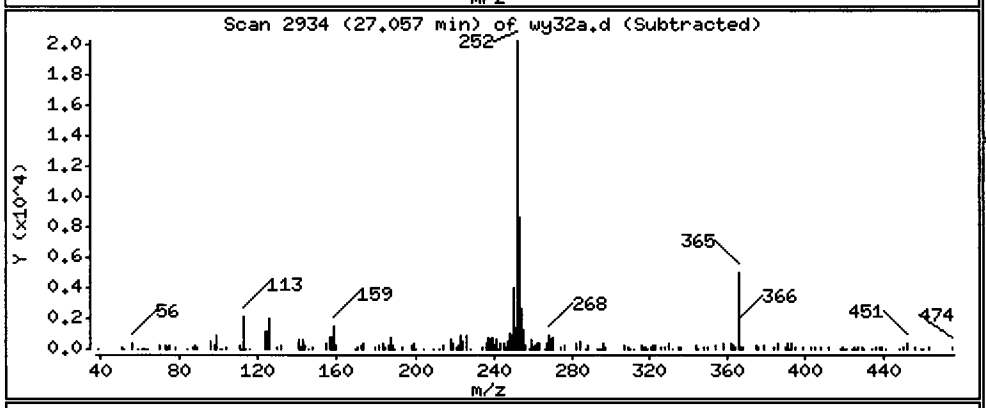
Column phase: ZB-5msi

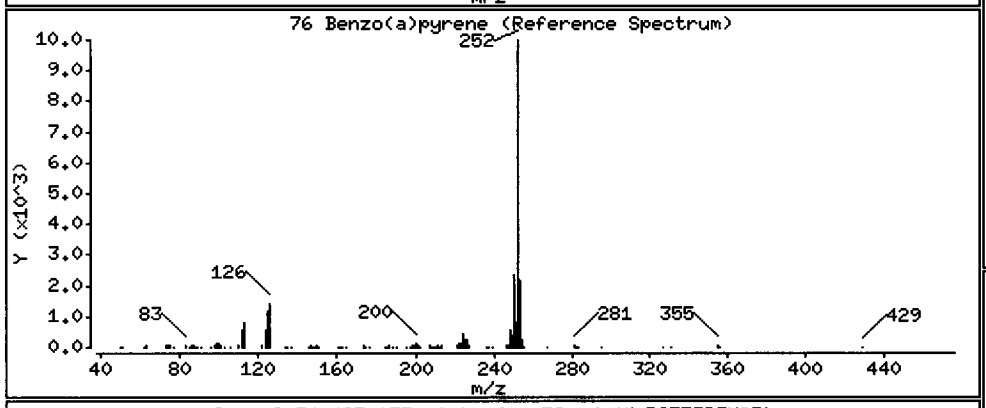
Column diameter: 0.25

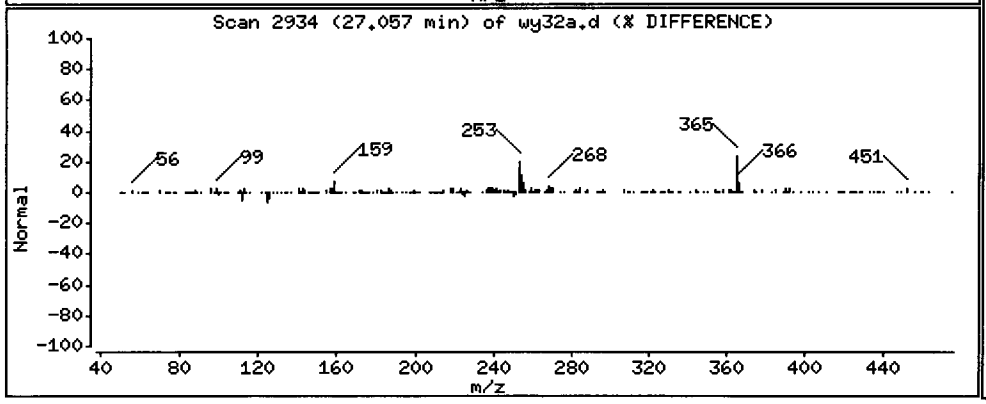
76 Benzo(a)pyrene

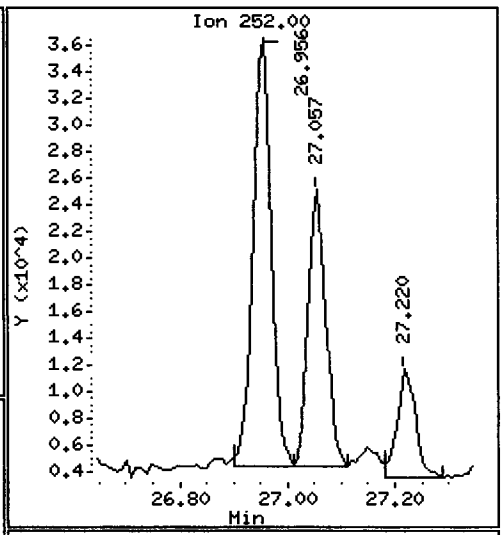
Concentration: 312.0 ug/kg

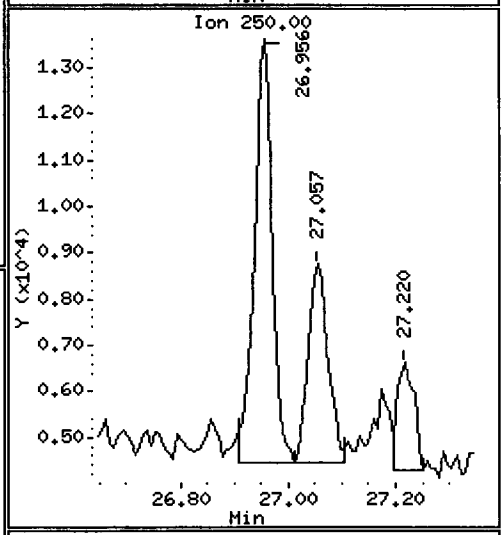


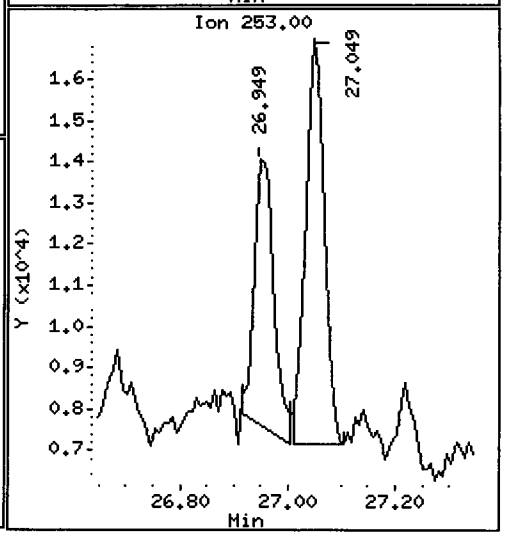












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

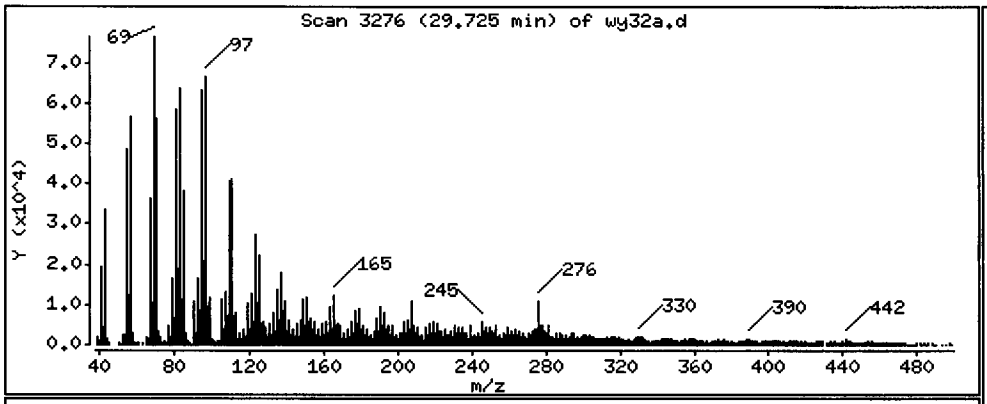
Operator: VTS/YZ

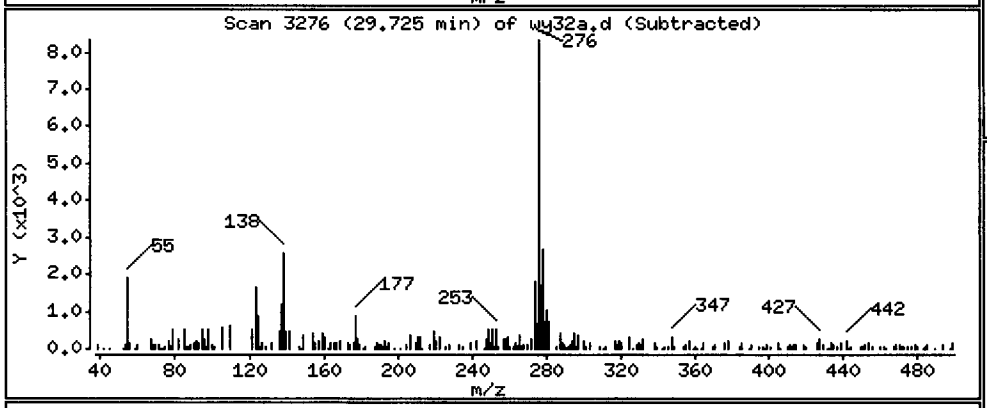
Column phase: ZB-5msi

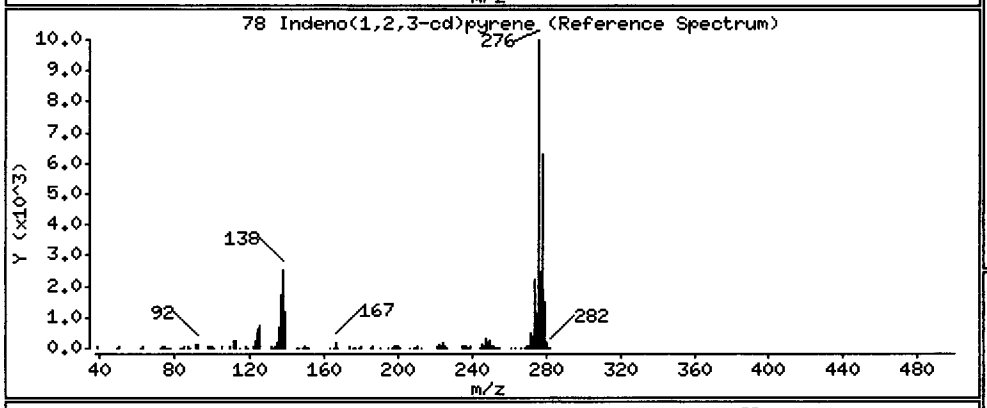
Column diameter: 0.25

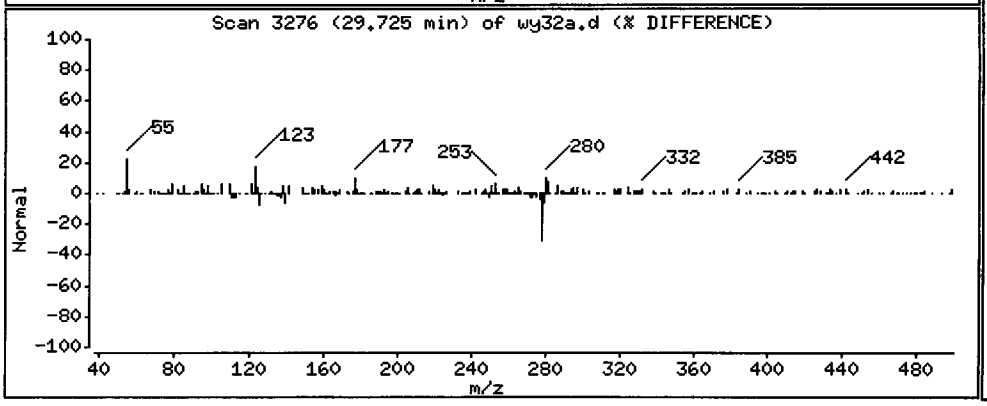
78 Indeno(1,2,3-cd)pyrene

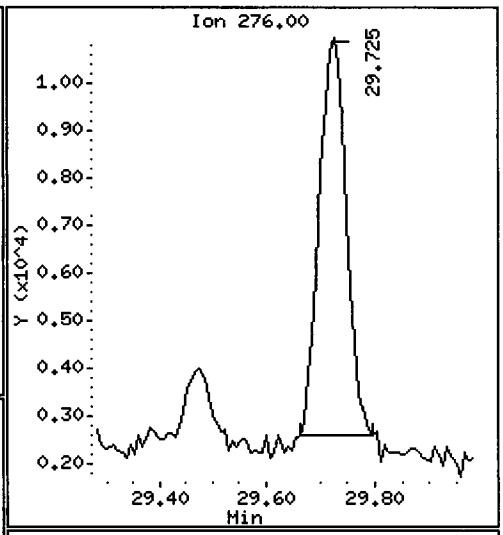
Concentration: 161.1 ug/kg

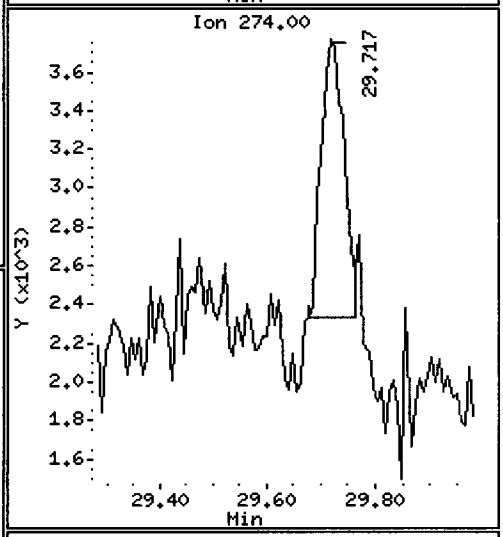


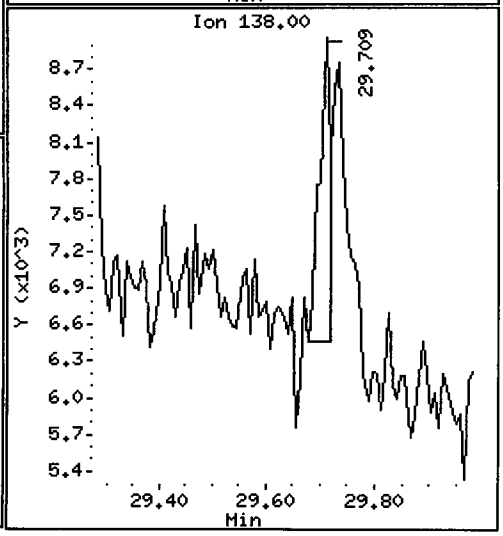












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

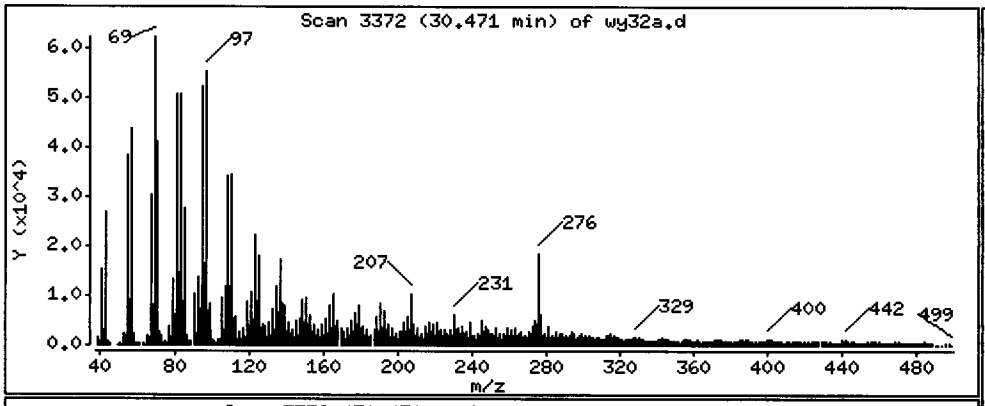
Operator: VTS/YZ

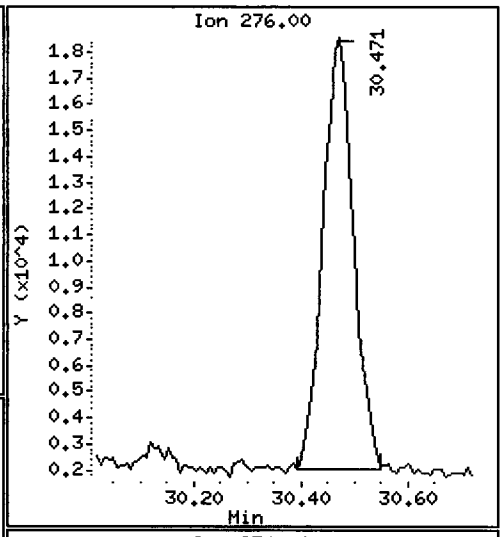
Column phase: ZB-5msi

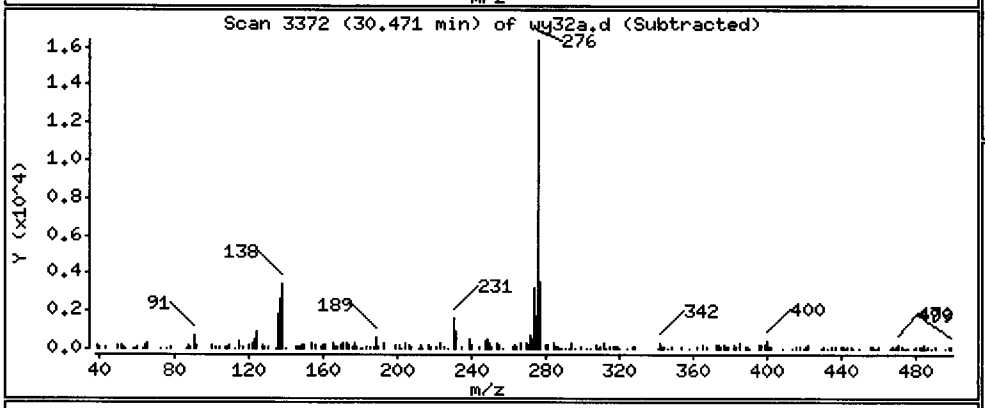
Column diameter: 0.25

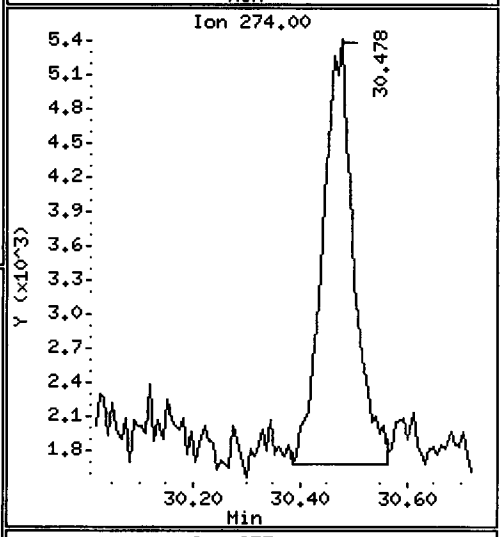
80 Benzo(g,h,i)perylene

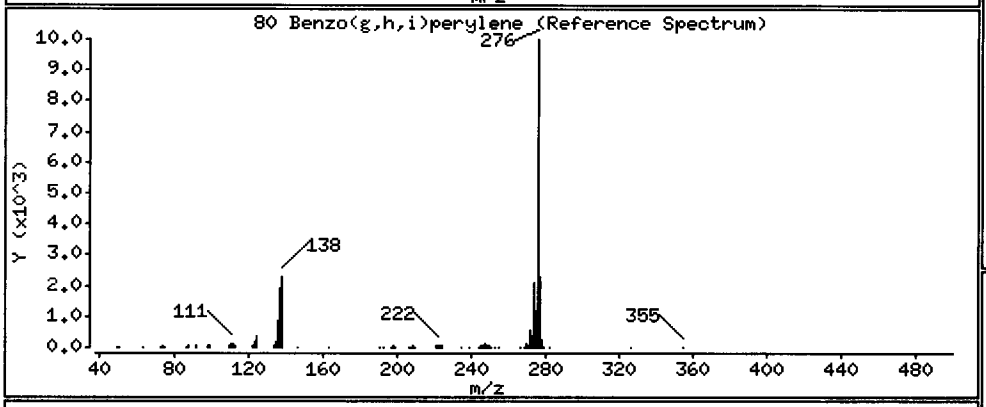
Concentration: 423.7 ug/kg

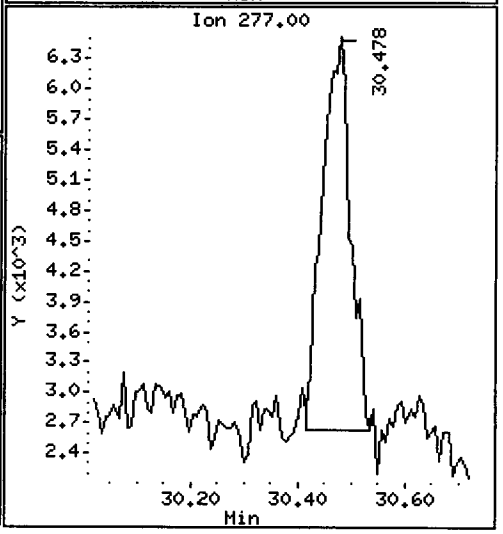


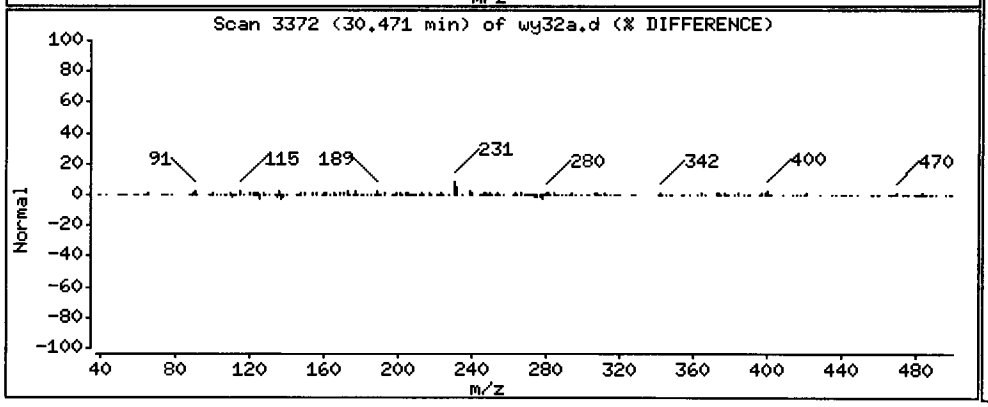












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

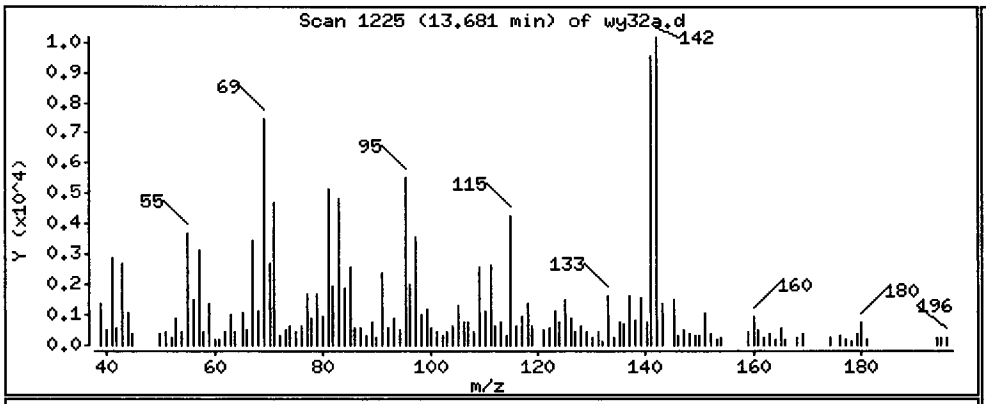
Operator: VTS/YZ

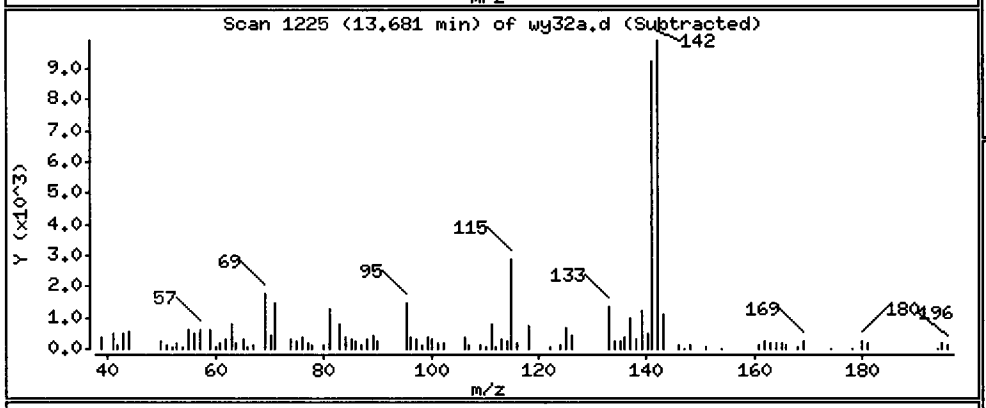
Column phase: ZB-5msi

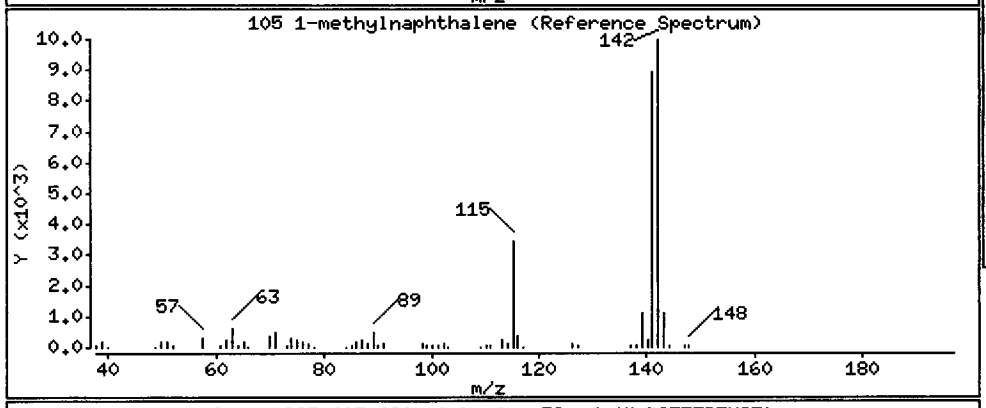
Column diameter: 0.25

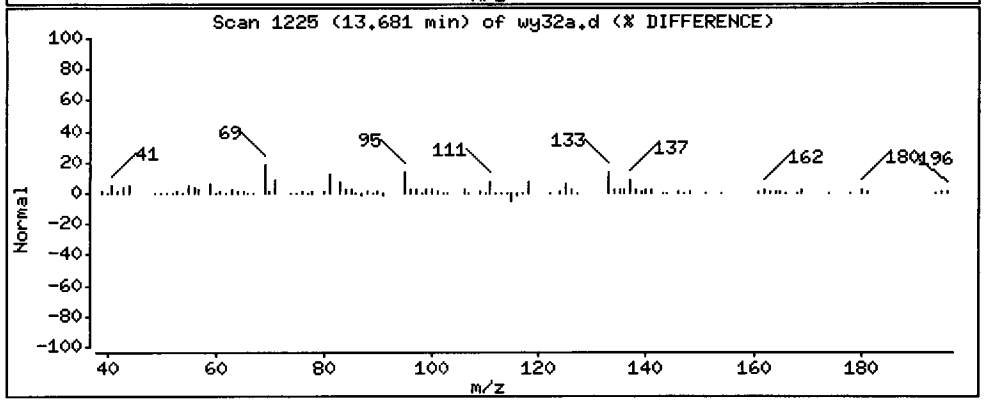
105 1-methylnaphthalene

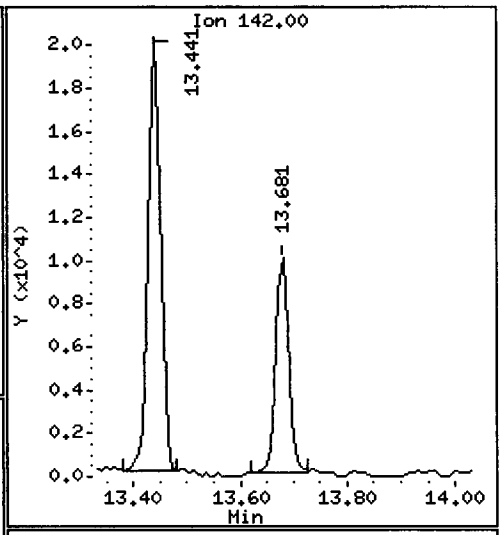
Concentration: 143.0 ug/kg

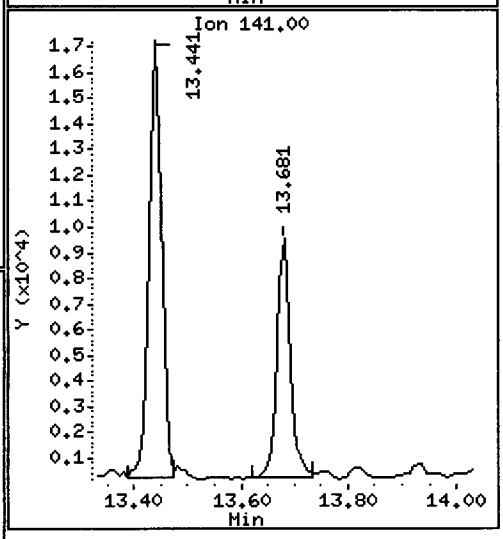












Data File: /chem1/nt10.i/20130801.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

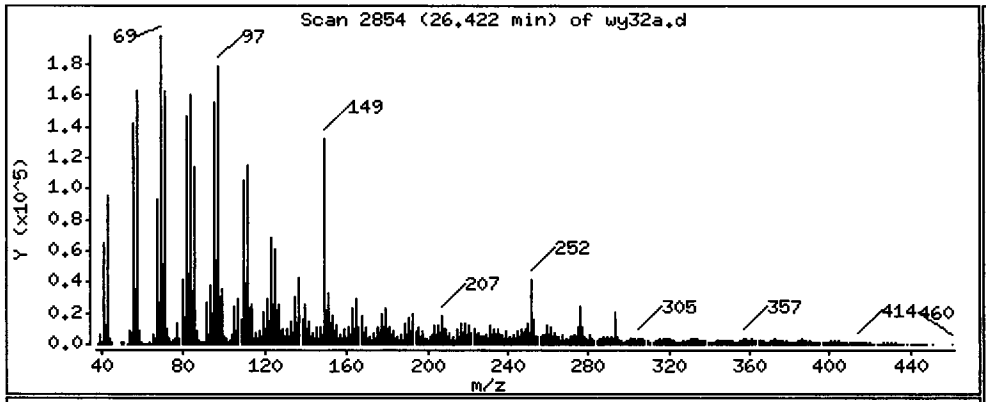
Operator: VTS/YZ

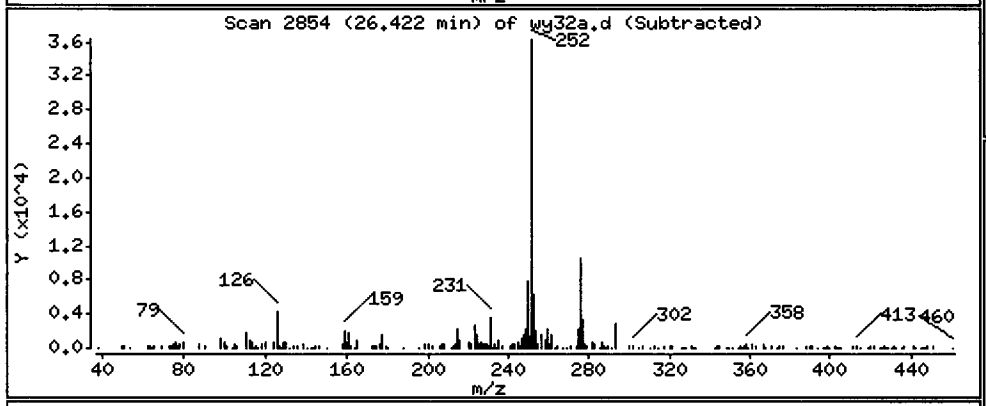
Column phase: ZB-5msi

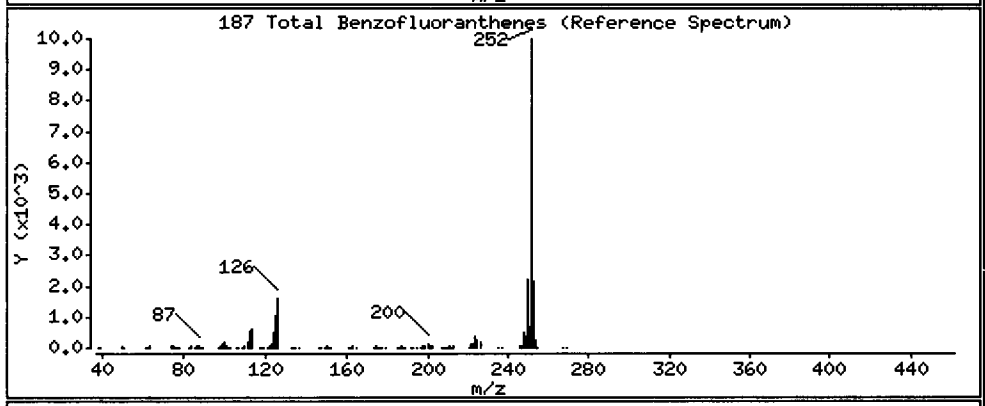
Column diameter: 0.25

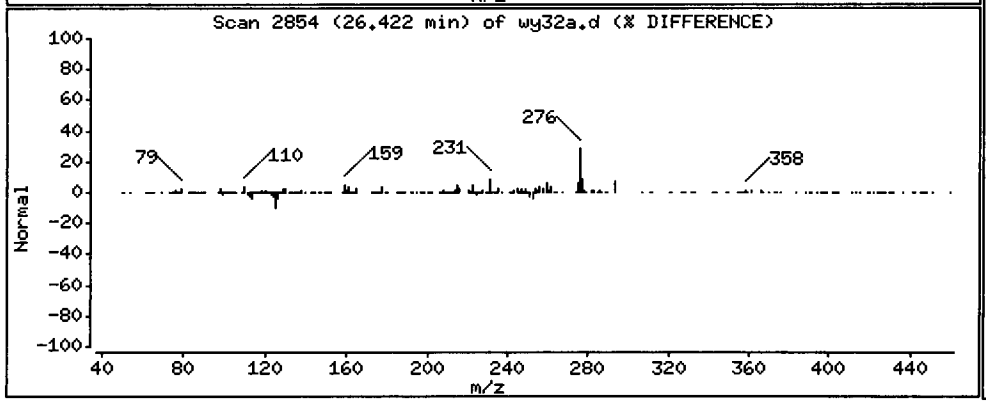
187 Total Benzofluoranthenes

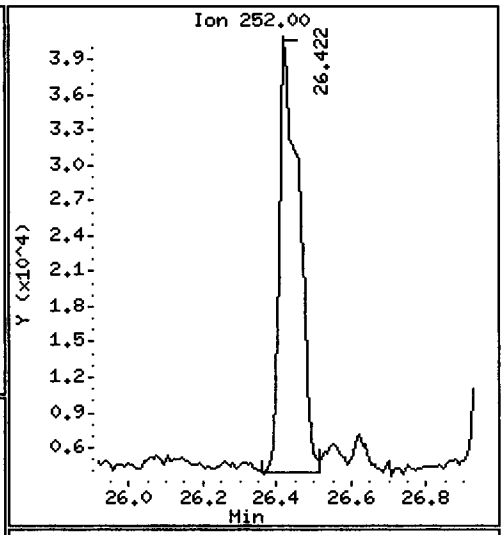
Concentration: 795.3 ug/kg

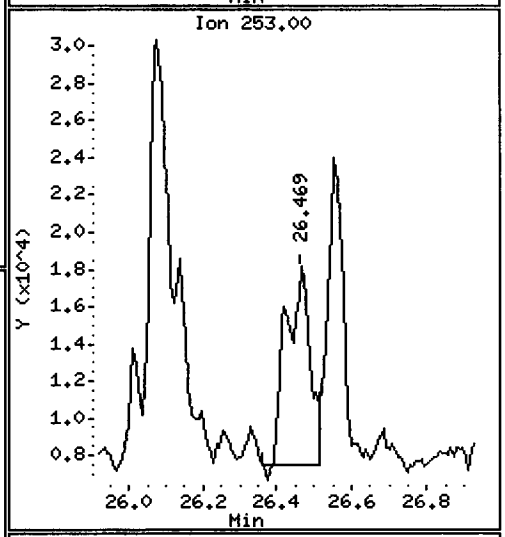


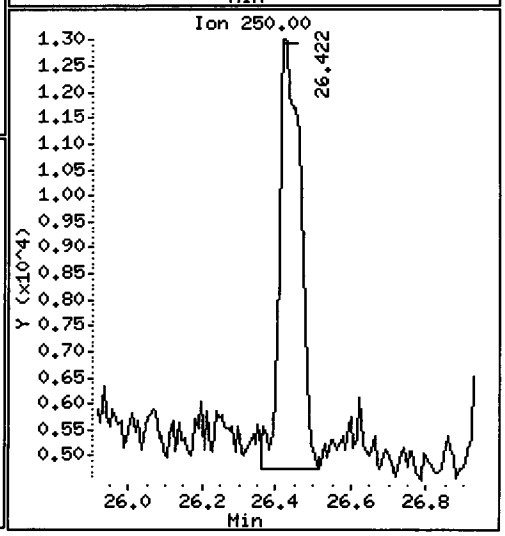






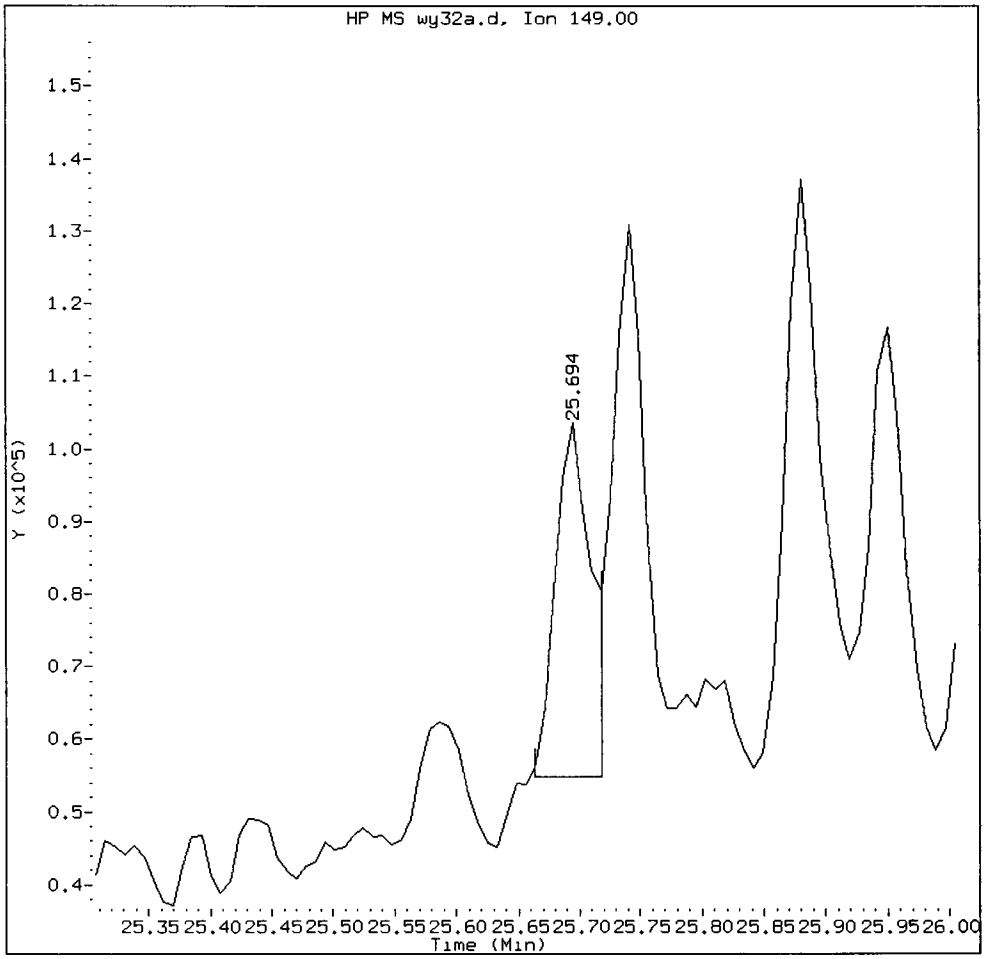






WY32A, /chem1/nt10.i/20130801.b/wy32a.d

Di-n-octylphthalate Amount: 0.94 Area: 101212



MANUAL INTEGRATION for Di-n-octylphthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 9/3/13

CO-ELUTION SUMMARY FOR FILE - wy32a.d

Lab ID: WY32A, Method: ABN.m, Instrument: nt10.i, Date: 01-AUG-2013

RT	CO-ELUTION COMPOUNDS
10.078	4-Methylphenol and ~~2-Methylphenol~~

Analytical Resources, Inc.

8/3/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130801.b/wy32b.d
Lab Smp Id: WY32B Client Smp ID: UP-MHF-165-20130626
Inj Date : 01-AUG-2013 21:03
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WY32B
Misc Info : 13-15394
Comment : 1ul Injection
Method : /chem1/nt10.i/20130801.b/ABN.m
Meth Date : 03-Aug-2013 10:44 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 11
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	12.00000	Weight of sample extracted (g)
M	15.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$	1 2-Fluorophenol	112	6.875	6.859	(0.745)	73163	1.82518	536.8
$	2 Phenol-d5	99	8.575	8.567	(0.930)	106857	1.98964	585.2
	3 Phenol	94	8.598	8.590	(0.932)	8595	0.15909	46.79
$	5 2-Chlorophenol-d4	132	8.838	8.830	(0.958)	78030	2.04322	600.9
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	9.225	9.217	(1.000)	99494	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	9.605	9.605	(1.041)	24574	0.91338	268.6
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					

WY32:08/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	10.397	10.396	(0.874)	45198	0.99773	293.4
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	11.424	11.493	(0.960)	9355	0.30782	90.54
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.894	11.894	(1.000)	376480	4.00000	
	28 Naphthalene	128	11.933	11.932	(1.003)	16978	0.16643	48.95
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	13.449	13.441	(1.131)	10075	0.13968	41.08
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	14.308	14.300	(0.905)	90800	1.28016	376.5
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	15.306	15.298	(0.969)	1192173	19.3459	5690(M)
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	15.801	15.801	(1.000)	188762	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	15.871	15.871	(1.004)	13887	0.25597	75.29
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	16.226	16.226	(1.027)	18182	0.22766	66.96
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	16.884	16.891	(1.068)	6464	0.10711	31.50
	49 Fluorene	166	17.000	17.000	(1.076)	32177	0.47286	139.1
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	17.285	17.285	(0.905)	9774	0.24434	71.87
$	55 2,4,6-Tribromophenol	330	17.586	17.578	(1.113)	27100	2.40172	706.4
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	19.100	19.092	(1.000)	316442	4.00000	
	60 Phenanthrene	178	19.155	19.139	(1.003)	266817	3.07201	903.5
	61 Anthracene	178	19.255	19.247	(1.008)	98805	1.07358	315.8

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
62	Carbazole	167	19.634	19.619	(1.028)	21511	0.53729	158.0
63	Di-n-butylphthalate	149	20.563	20.547	(1.077)	60650	0.61904	182.1
64	Fluoranthene	202	21.785	21.762	(1.141)	435456	4.08550	1202
65	Pyrene	202	22.234	22.210	(0.905)	377937	3.38931	996.9
$ 66	Terphenyl-d14	244	22.567	22.551	(0.919)	69537	1.16011	341.2
67	Butylbenzylphthalate	149	23.565	23.550	(0.960)	12906	0.32578	95.82(M)
68	Benzo(a)anthracene	228	24.526	24.494	(0.999)	101607	1.00234	294.8
* 69	Chrysene-d12	240	24.557	24.525	(1.000)	310711	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	24.595	24.572	(1.002)	178752	2.02788	596.4
72	bis(2-Ethylhexyl)phthalate	149	24.665	24.634	(0.960)	436708	7.89888	2323
* 134	Di-n-octylphthalate-d4	153	25.679	25.648	(1.000)	428221	4.00000	
73	Di-n-octylphthalate	149	Compound Not Detected.					
74	Benzo(b)fluoranthene	252	Compound Not Detected.					
75	Benzo(k)fluoranthene	252	Compound Not Detected.					
76	Benzo(a)pyrene	252	27.065	26.995	(0.996)	73715	0.82362	242.2
* 77	Perylene-d12	264	27.181	27.111	(1.000)	328687	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	29.741	29.632	(1.094)	45334	0.43159	126.9(M)
79	Dibenzo(a,h)anthracene	278	29.748	29.647	(1.094)	15272	0.18545	54.55(M)
80	Benzo(g,h,i)perylene	276	30.479	30.370	(1.121)	63275	0.69569	204.6
90	N-Nitrosodimethylamine	74	Compound Not Detected.					
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	Compound Not Detected.					
105	1-methylnaphthalene	142	13.681	13.681	(1.150)	8234	0.12526	36.84
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
187	Total Benzofluoranthenes	252	26.438	26.422	(0.973)	212352	2.13560	628.1
99	Perylene	252	27.228	27.165	(1.002)	35816	0.42177	124.0(MH)
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wy32b.d
Lab Smp Id: WY32B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130801.b/ABN.m
Misc Info: 13-15394

Calibration Date: 01-AUG-2013
Calibration Time: 15:22
Client Smp ID: UP-MHF-165-20130
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	123587	61794	247174	99494	-19.49
27 Naphthalene-d8	446161	223080	892322	376480	-15.62
42 Acenaphthene-d10	267600	133800	535200	188762	-29.46
59 Phenanthrene-d10	460929	230464	921858	316442	-31.35
69 Chrysene-d12	439520	219760	879040	310711	-29.31
134 Di-n-octylphthala	593075	296538	1186150	428221	-27.80
77 Perylene-d12	451599	225800	903198	328687	-27.22

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.22	8.72	9.72	9.22	0.09
27 Naphthalene-d8	11.89	11.39	12.39	11.89	0.00
42 Acenaphthene-d10	15.80	15.30	16.30	15.80	0.00
59 Phenanthrene-d10	19.09	18.59	19.59	19.10	0.04
69 Chrysene-d12	24.53	24.03	25.03	24.56	0.13
134 Di-n-octylphthala	25.65	25.15	26.15	25.68	0.12
77 Perylene-d12	27.11	26.61	27.61	27.18	0.26

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

Analytical Resources, Inc.

RECOVERY REPORT

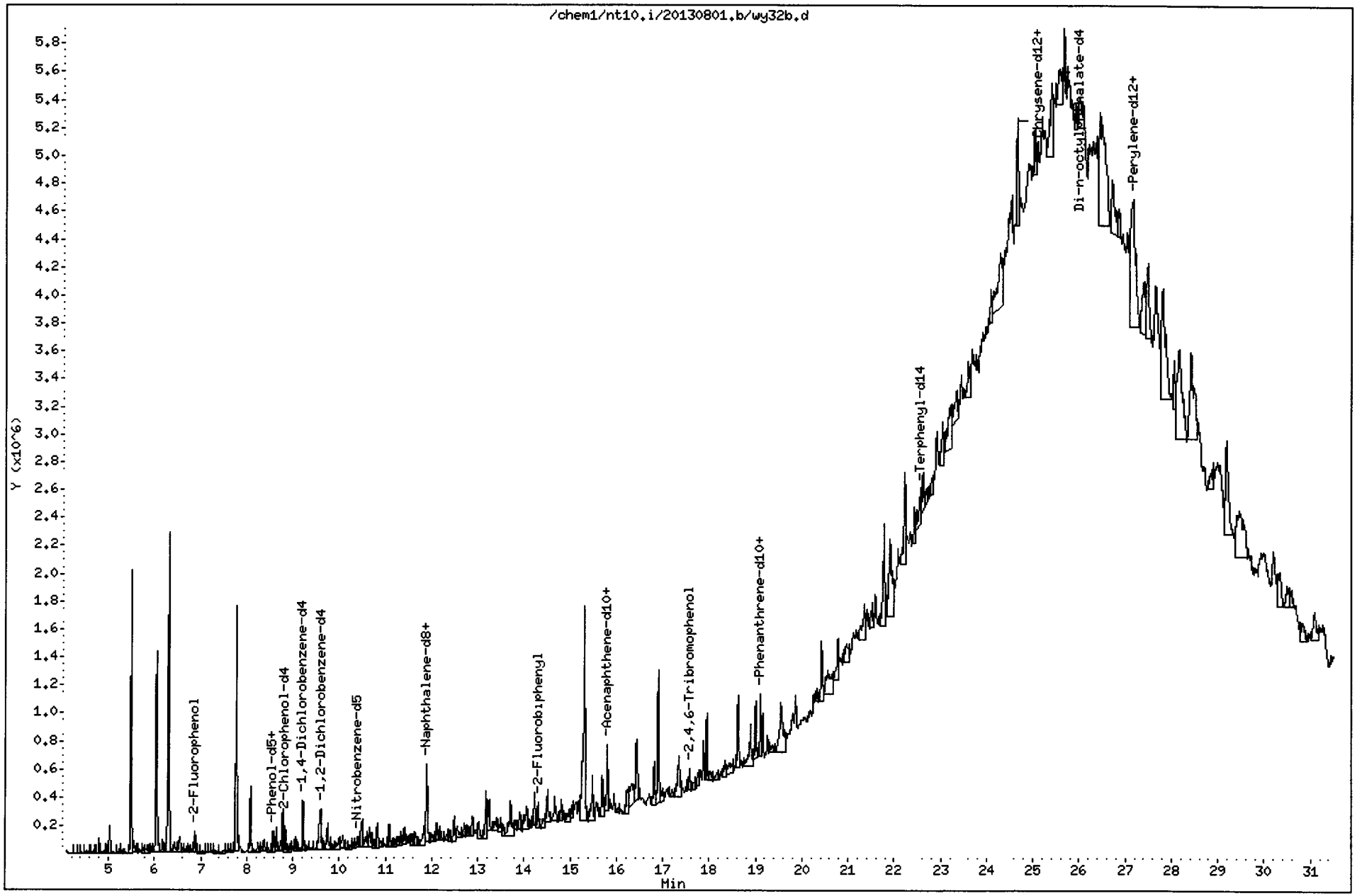
Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WY32B
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDALCS.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130801.b/ABN.m
Misc Info: 13-15394

Client SDG: WY32
Fraction: SV
Client Smp ID: UP-MHF-165-20130626
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	735.3	536.8	73.01	27-120
$ 2 Phenol-d5	735.3	585.2	79.59	29-120
$ 5 2-Chlorophenol-d4	735.3	600.9	81.73	31-120
$ 10 1,2-Dichlorobenzen	490.2	268.6	54.80	32-120
$ 18 Nitrobenzene-d5	490.2	293.4	59.86	30-120
$ 36 2-Fluorobiphenyl	490.2	376.5	76.81	35-120
$ 55 2,4,6-Tribromophen	735.3	706.4	96.07	24-134
$ 66 Terphenyl-d14	490.2	341.2	69.61	37-120

Data File: /chem1/nt10.i/20130801.b/wy32b.d
Date : 01-AUG-2013 21:03
Client ID: UP-MHF-165-20130626
Sample Info: WY32B
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

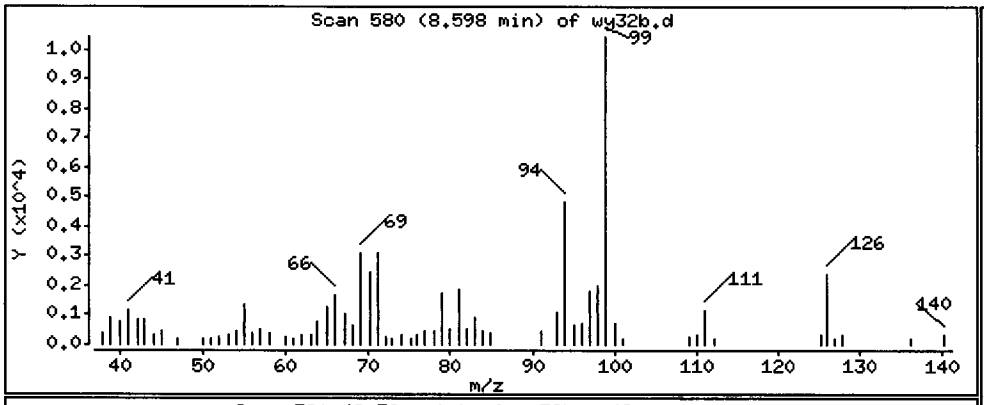
Operator: VTS/YZ

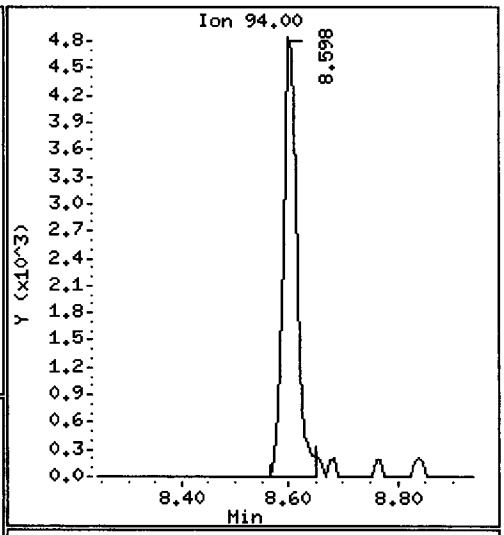
Column phase: ZB-5msi

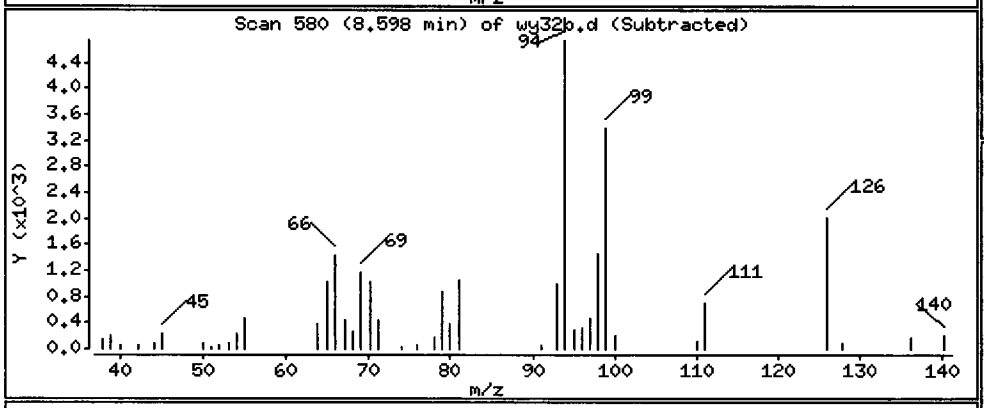
Column diameter: 0.25

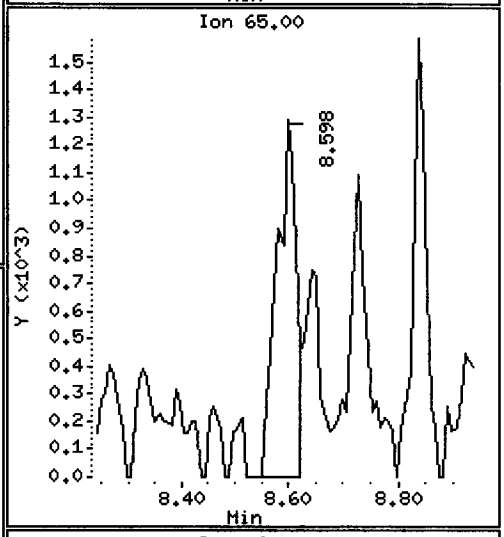
3 Phenol

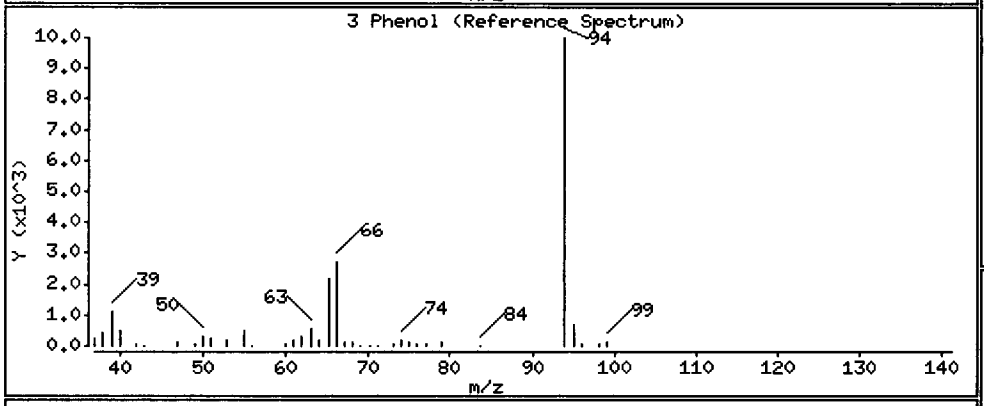
Concentration: 46.79 ug/kg

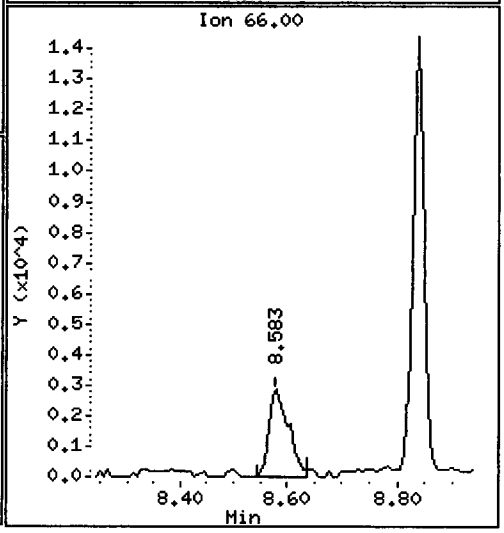


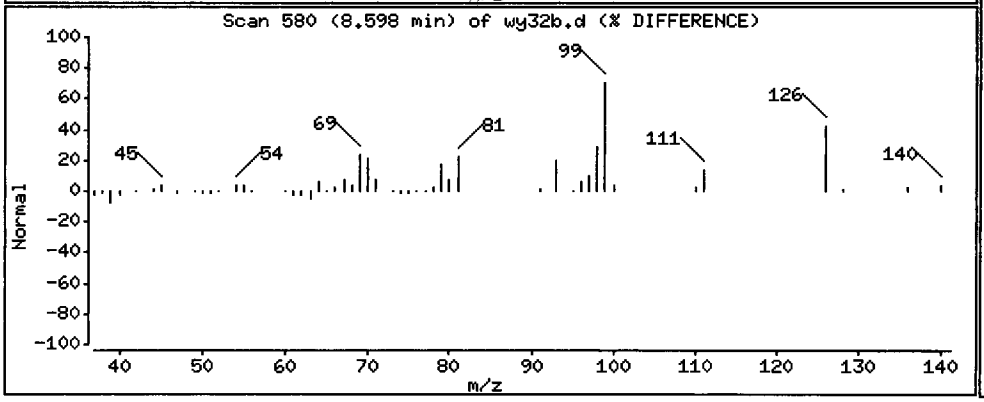












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

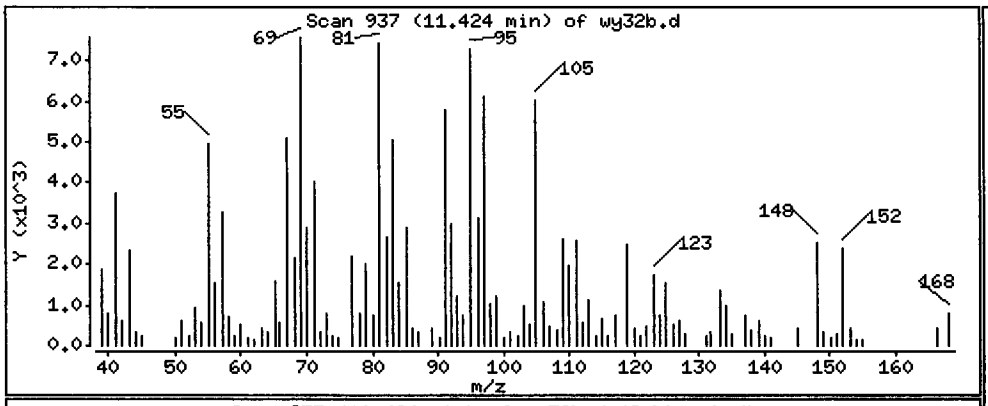
Operator: VTS/YZ

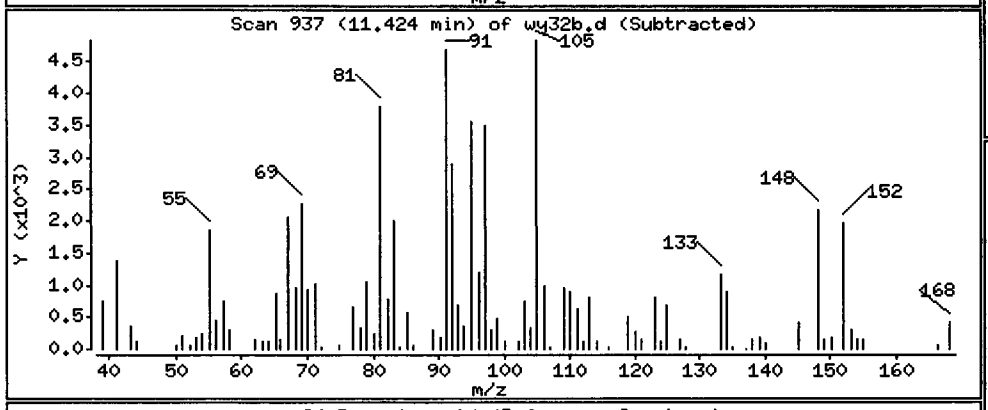
Column phase: ZB-5msi

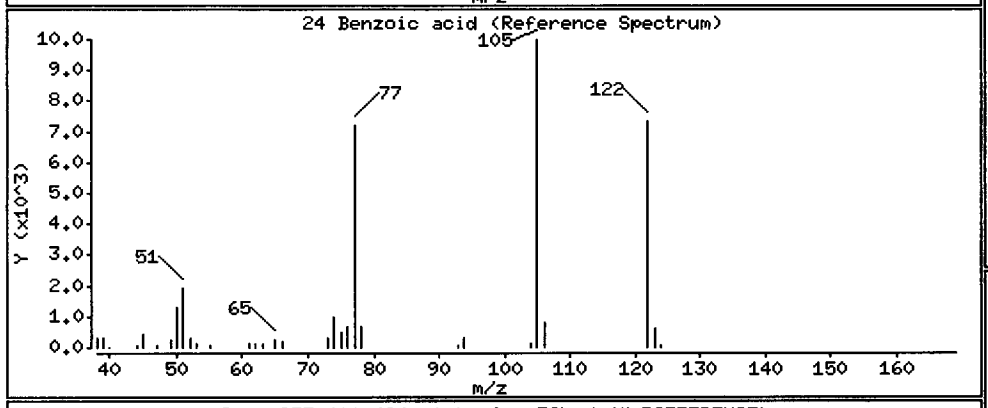
Column diameter: 0.25

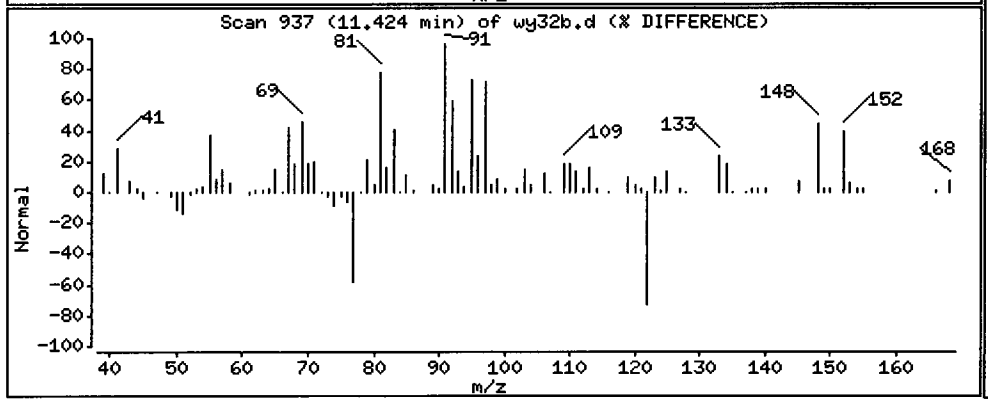
24 Benzoic acid

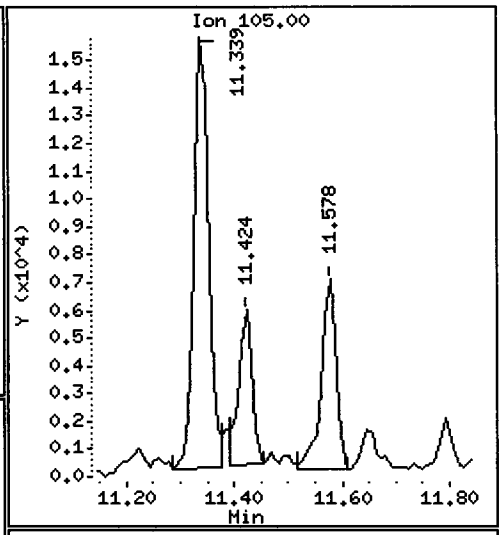
Concentration: 90.54 ug/kg

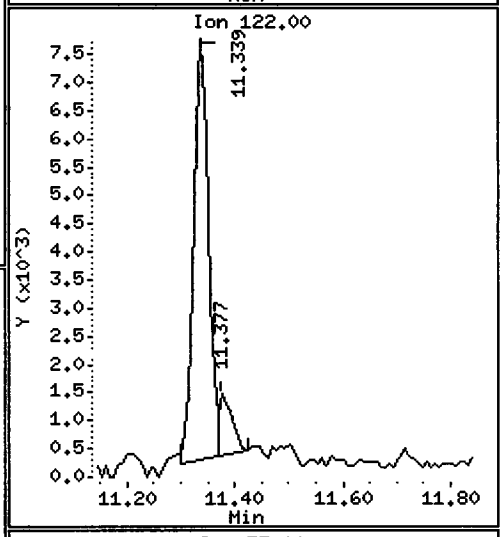


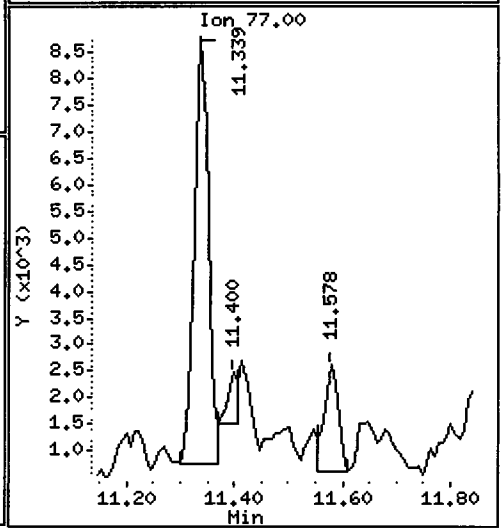












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

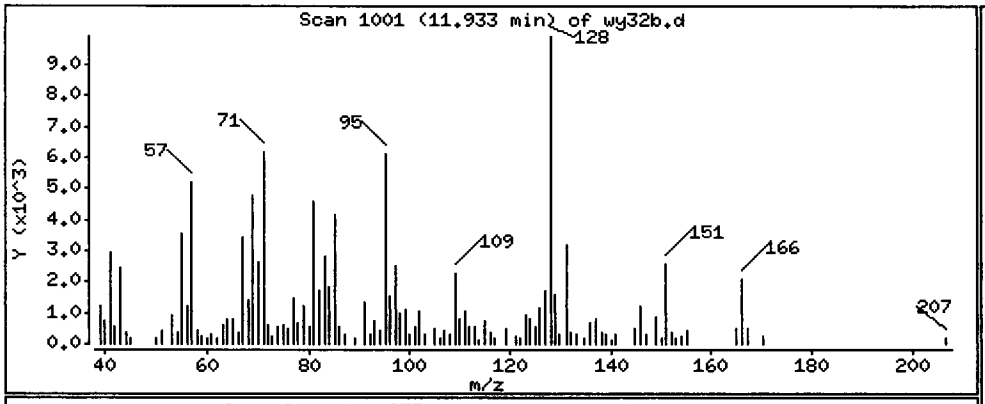
Operator: VTS/YZ

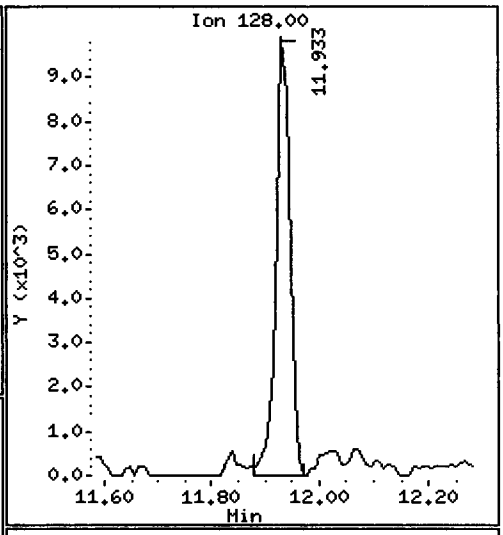
Column phase: ZB-5msi

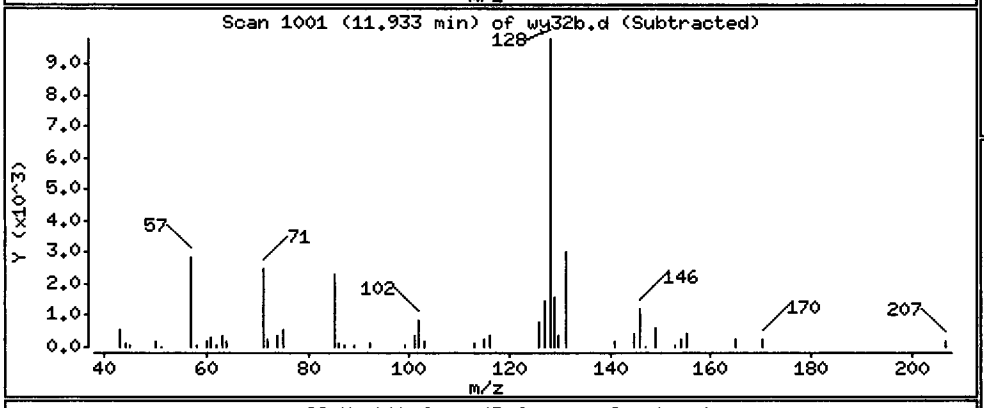
Column diameter: 0.25

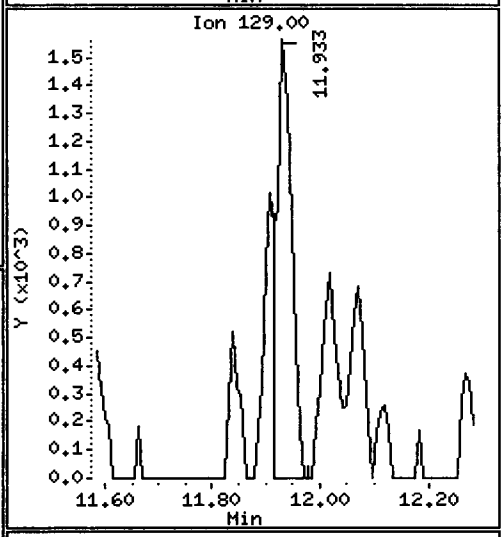
28 Naphthalene

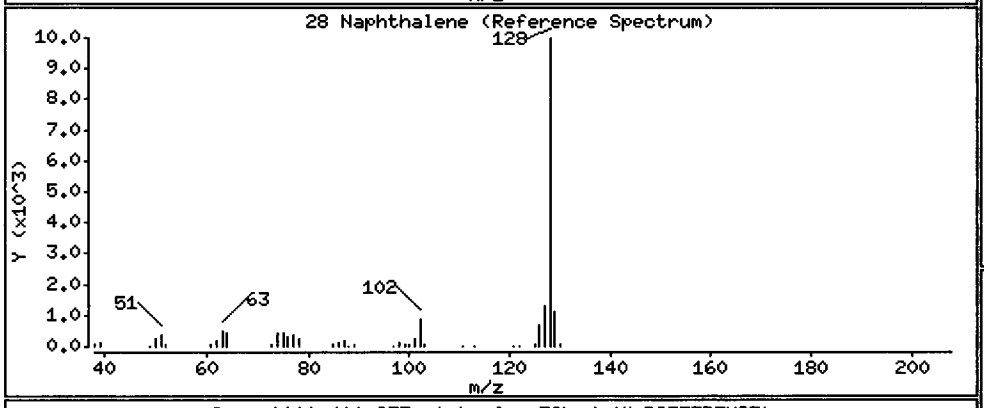
Concentration: 48.95 ug/kg

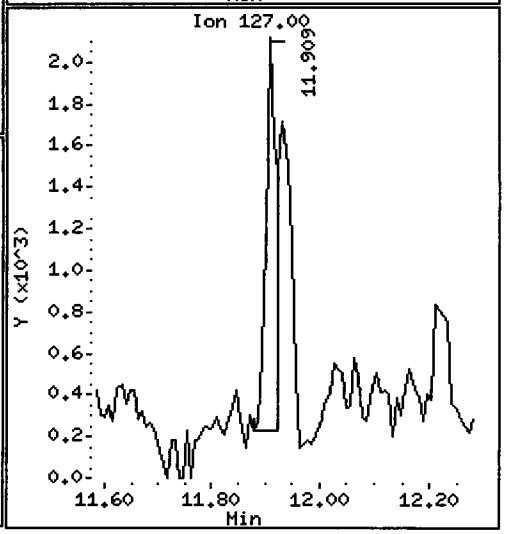


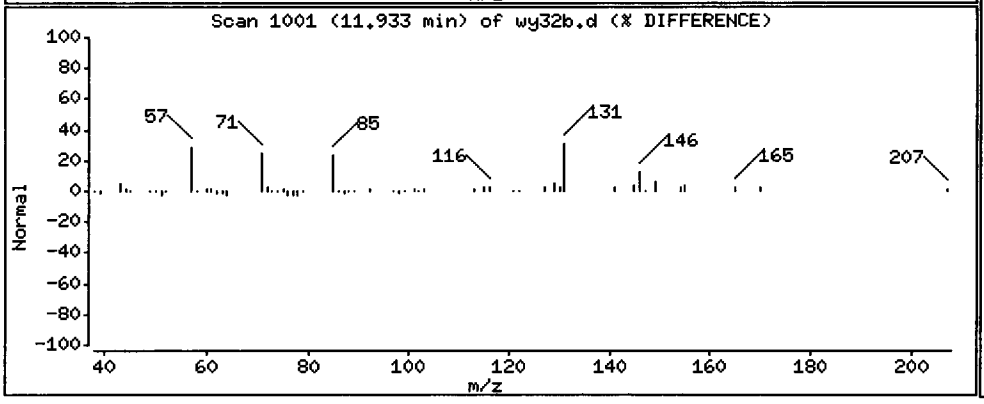












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

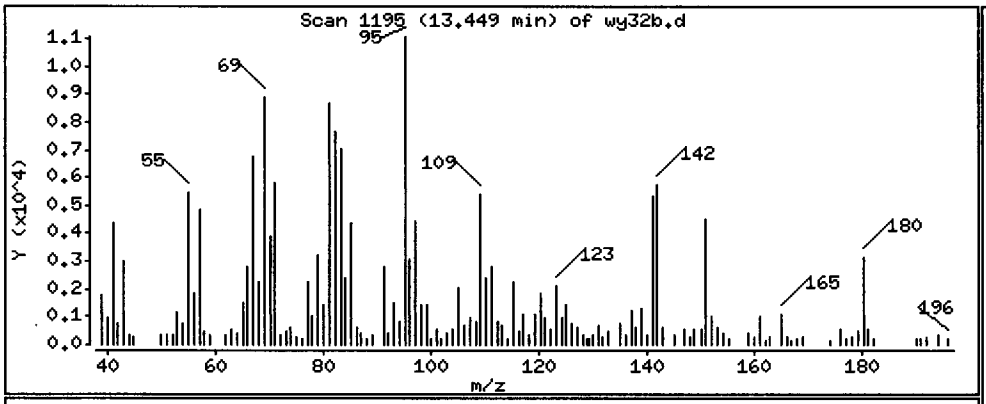
Operator: VTS/YZ

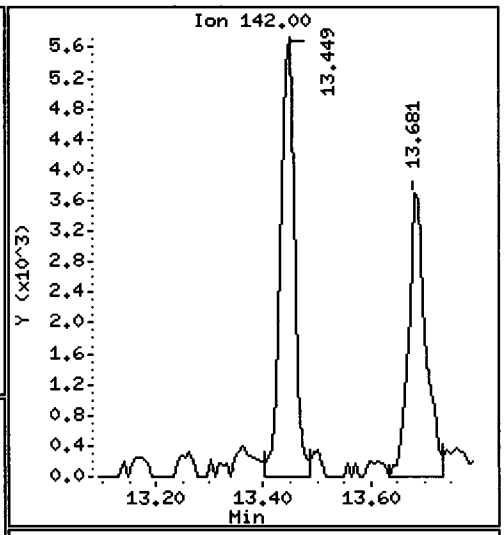
Column phase: ZB-5msi

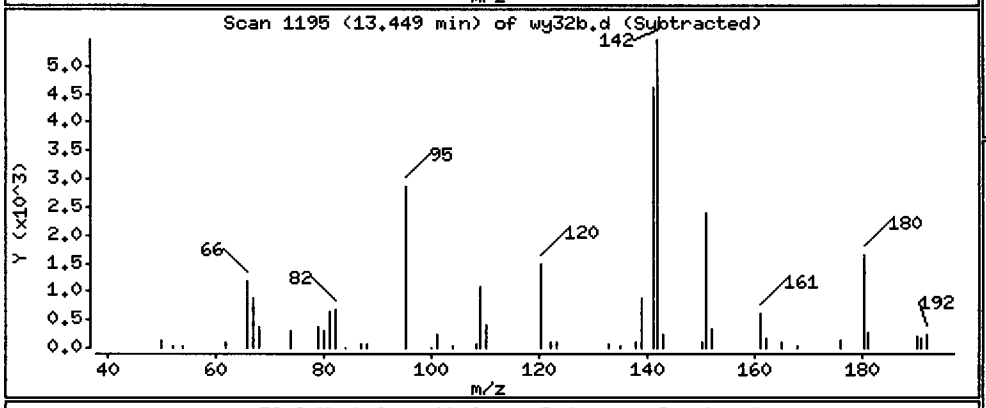
Column diameter: 0.25

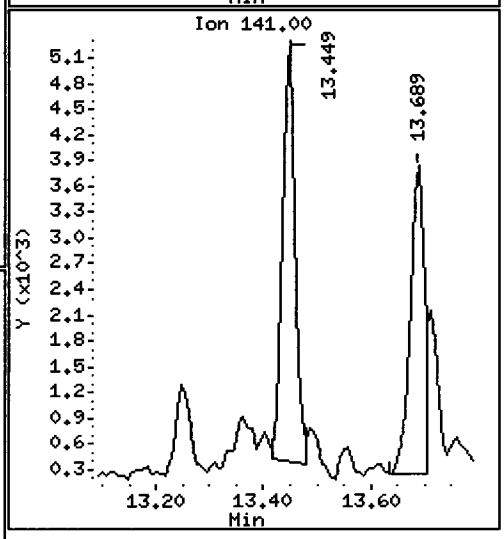
32 2-Methylnaphthalene

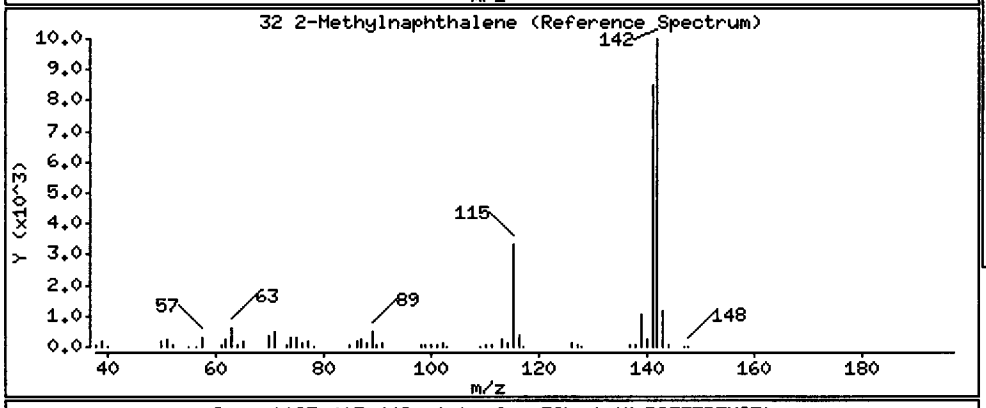
Concentration: 41.08 ug/kg

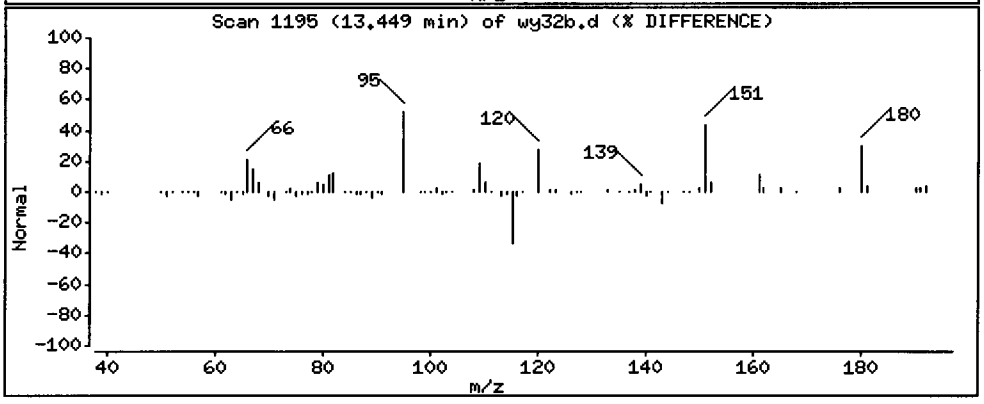












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

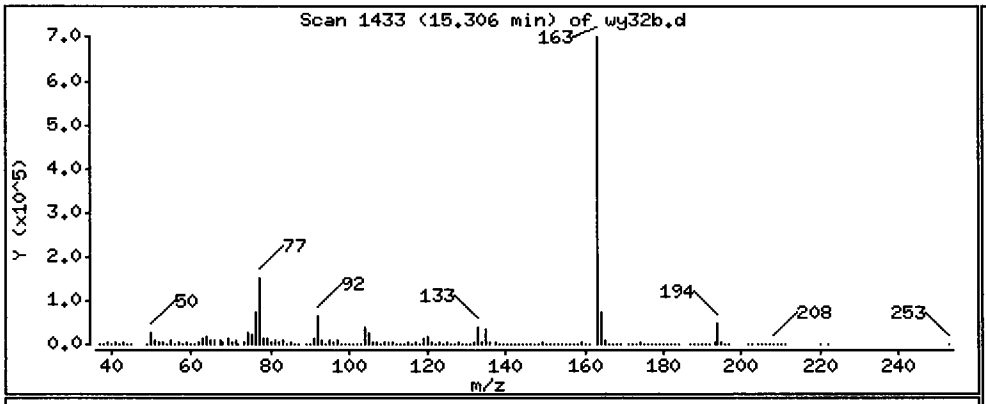
Operator: VTS/YZ

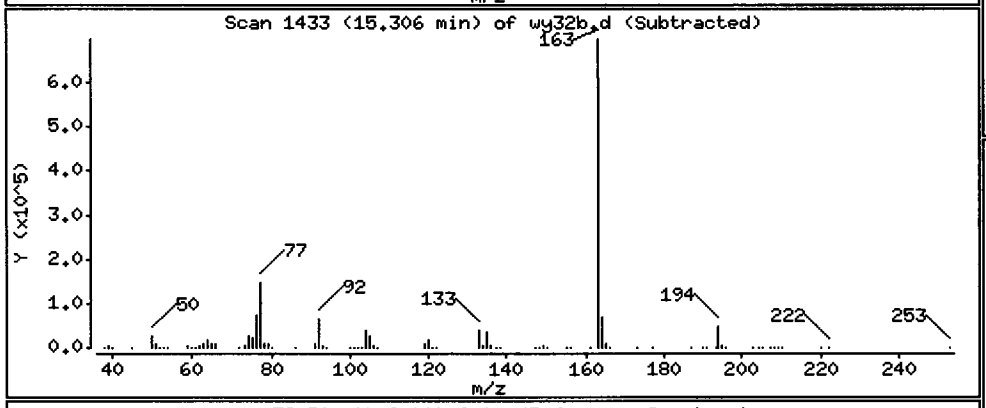
Column phase: ZB-5msi

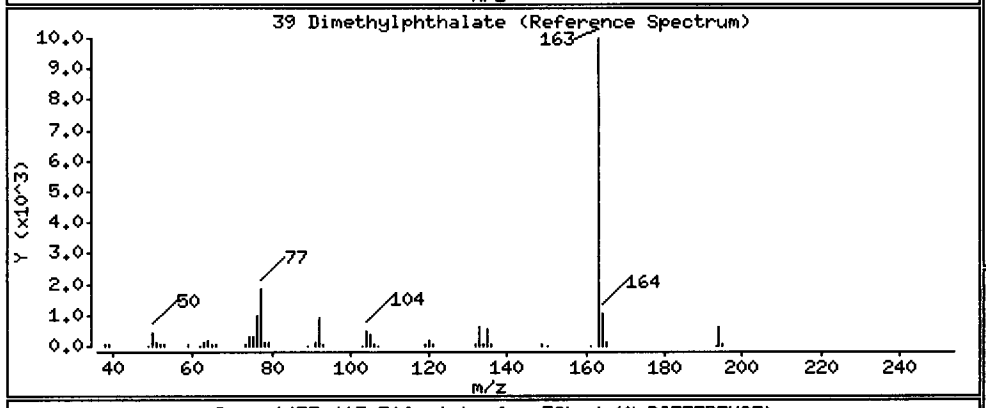
Column diameter: 0.25

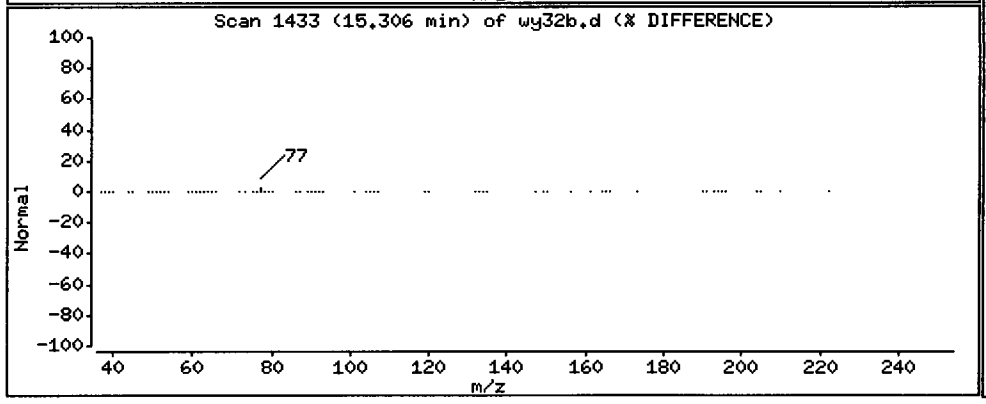
39 Dimethylphthalate

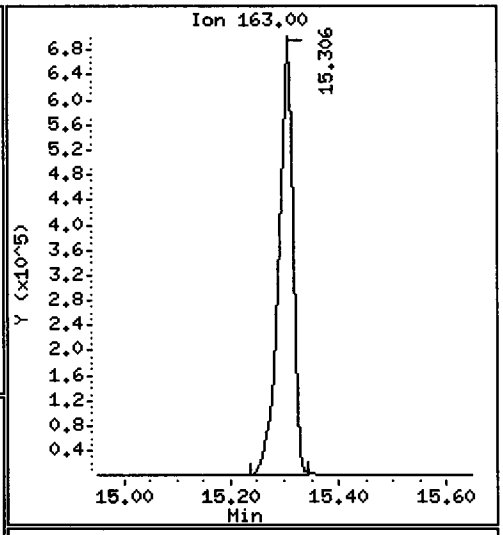
Concentration: 6051 ug/kg

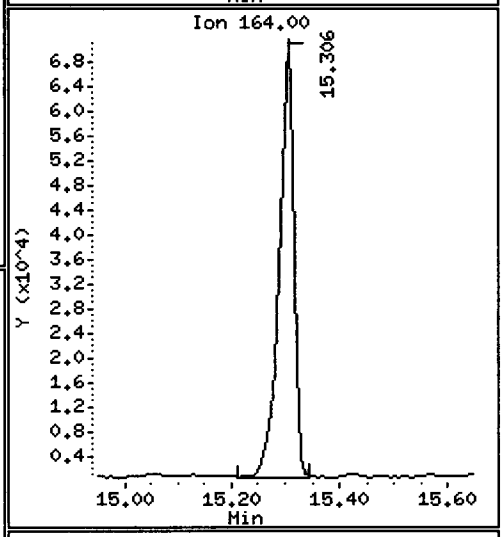


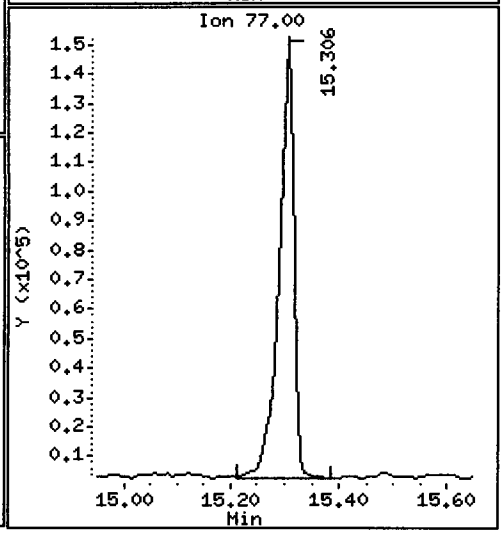












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

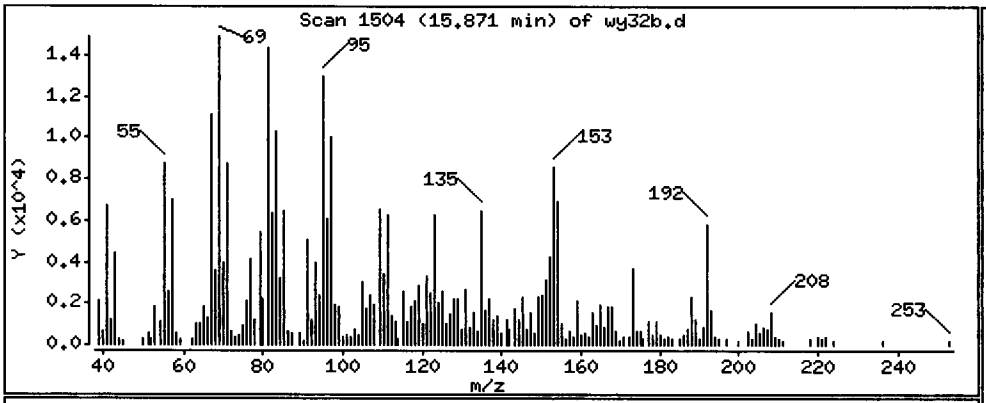
Operator: VTS/YZ

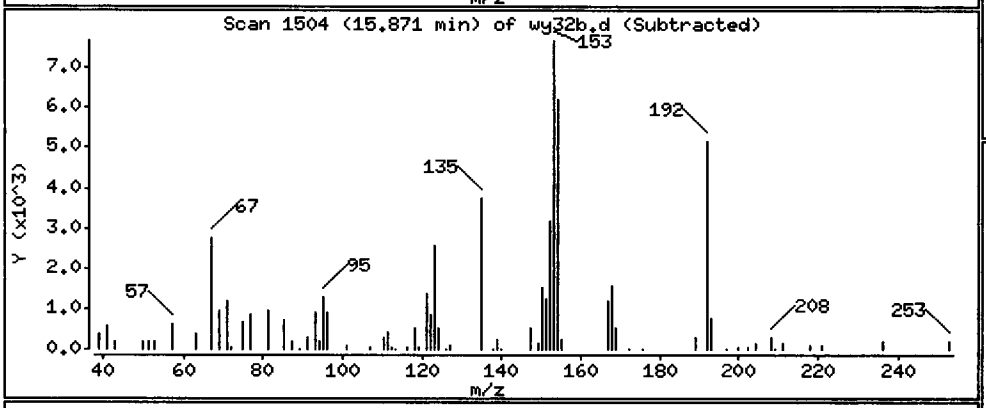
Column phase: ZB-5msi

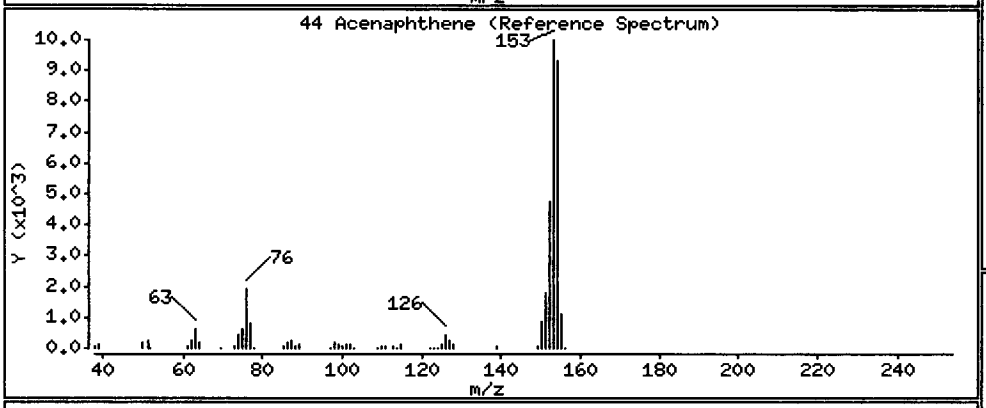
Column diameter: 0.25

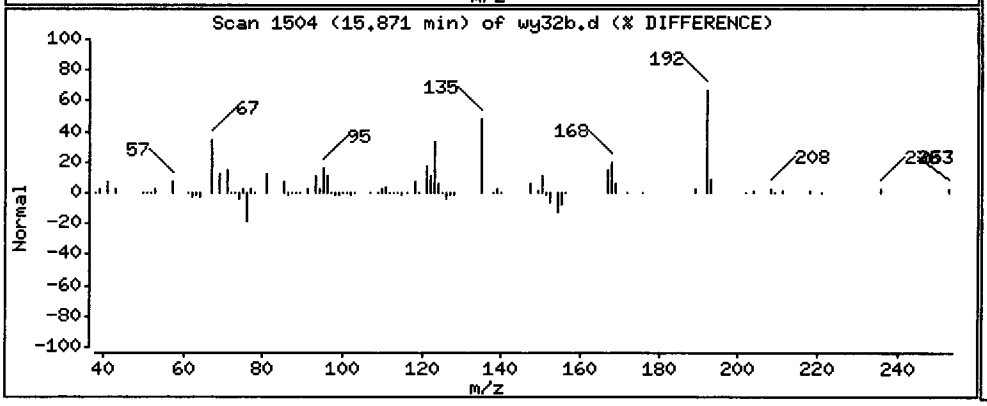
44 Acenaphthene

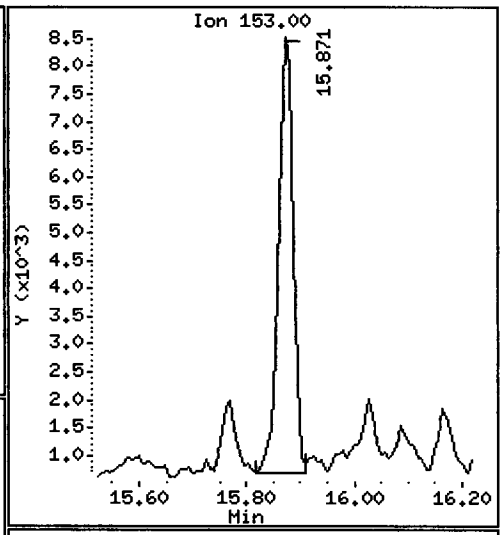
Concentration: 75.29 ug/kg

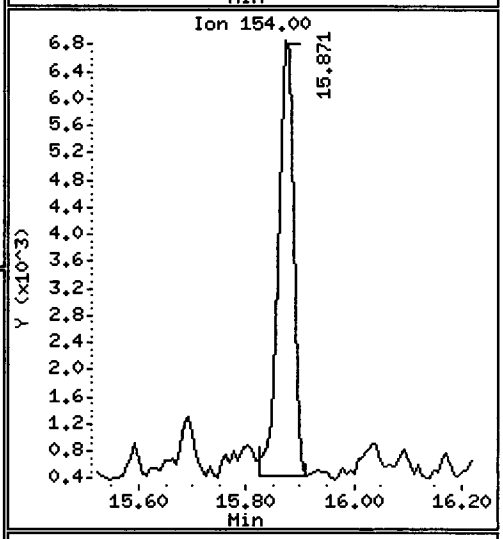


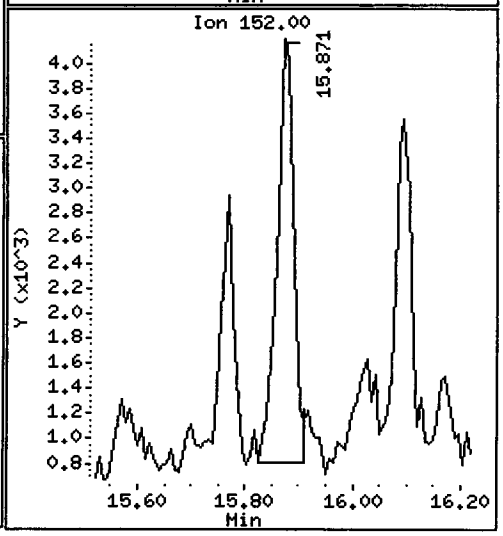












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

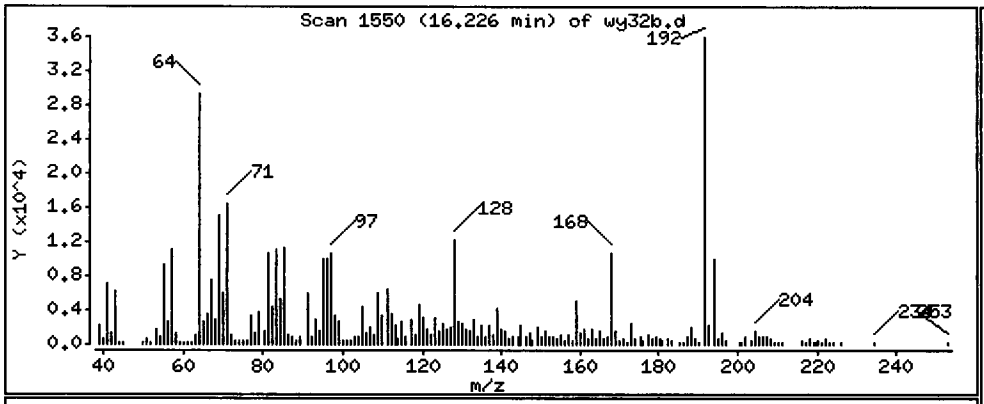
Operator: VTS/YZ

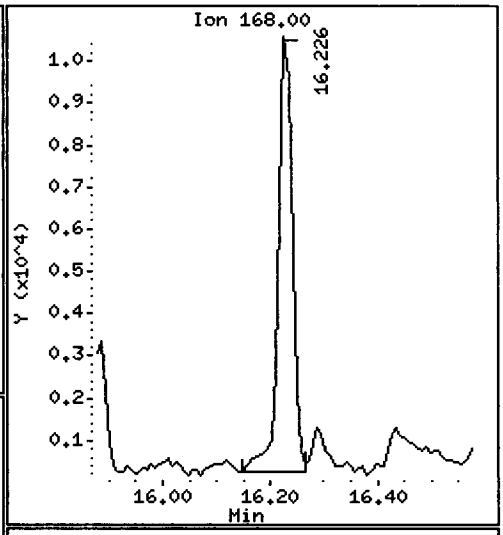
Column phase: ZB-5msi

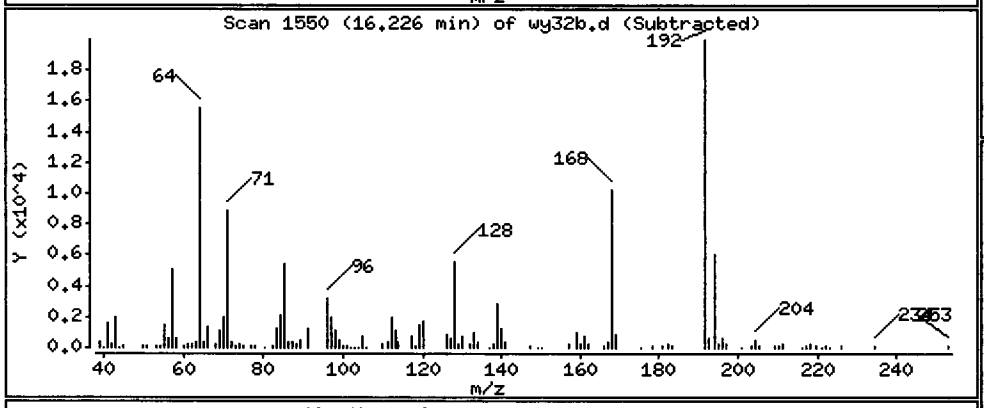
Column diameter: 0.25

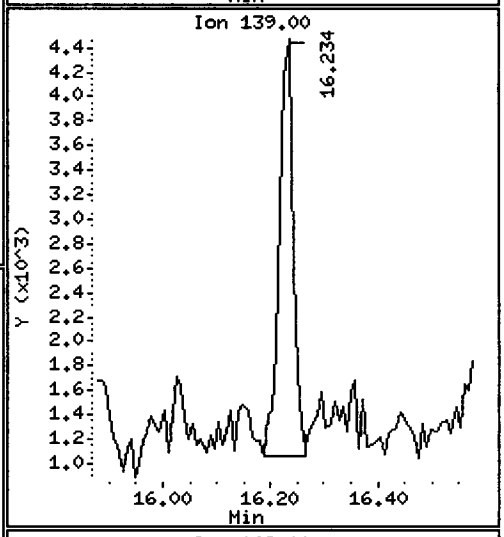
46 Dibenzofuran

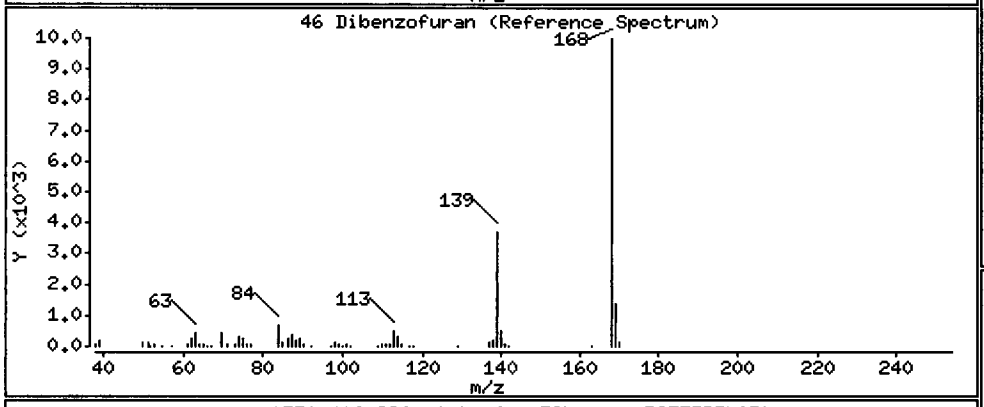
Concentration: 66.96 ug/kg

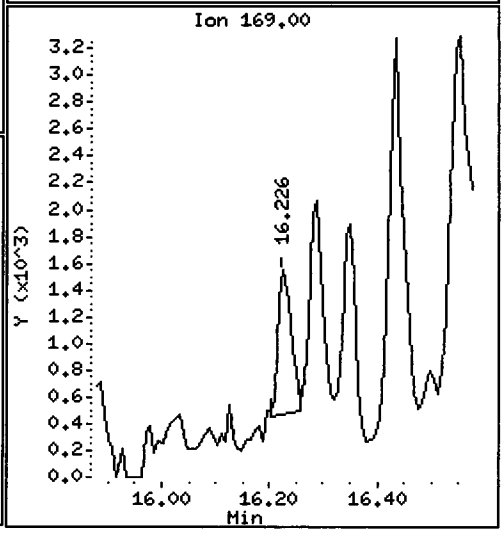


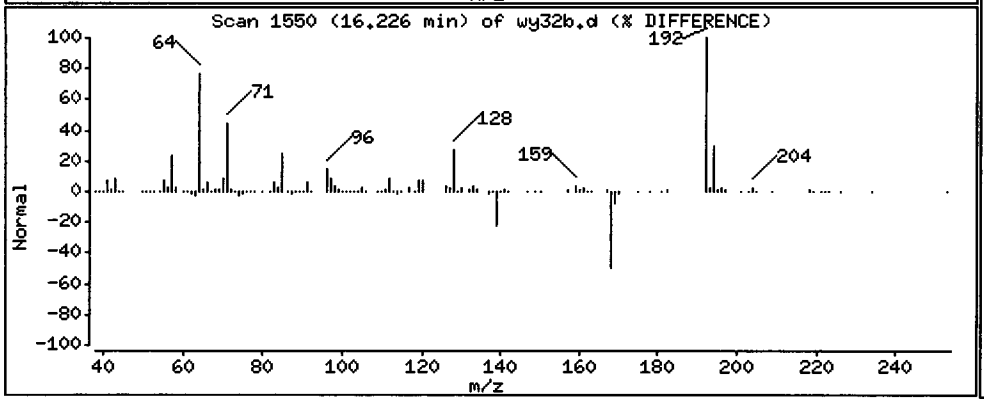












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

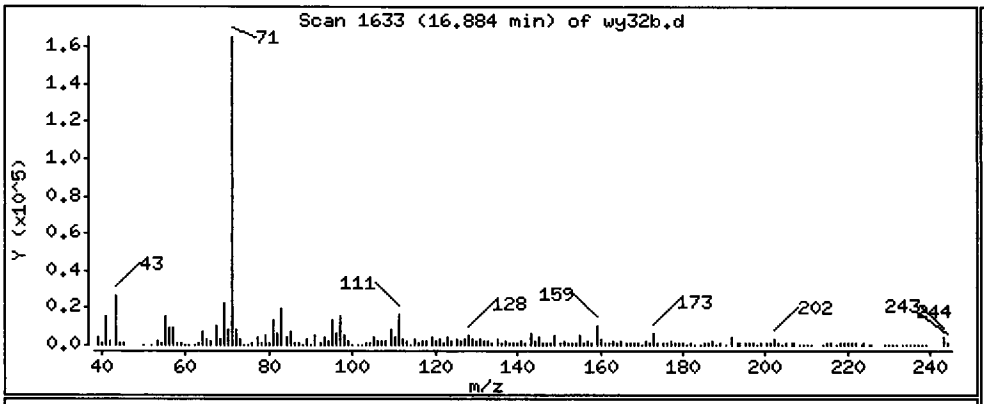
Operator: VTS/YZ

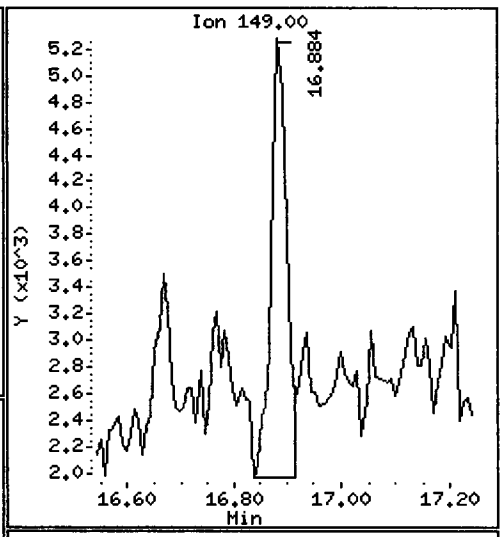
Column phase: ZB-5msi

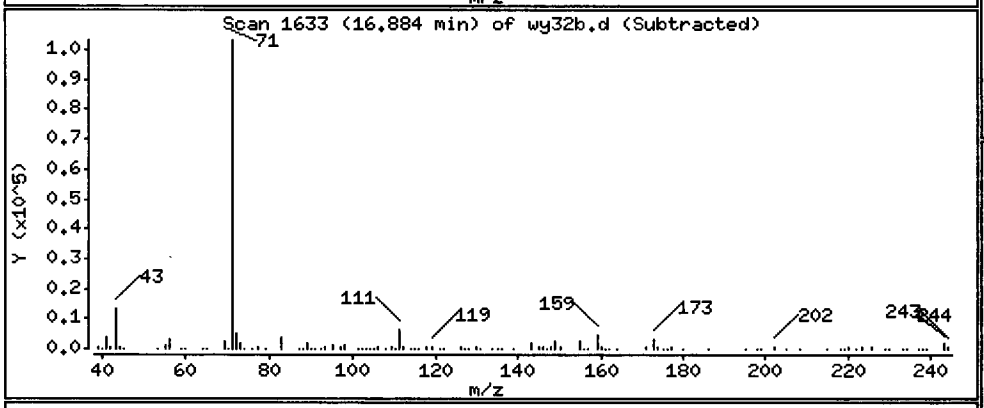
Column diameter: 0.25

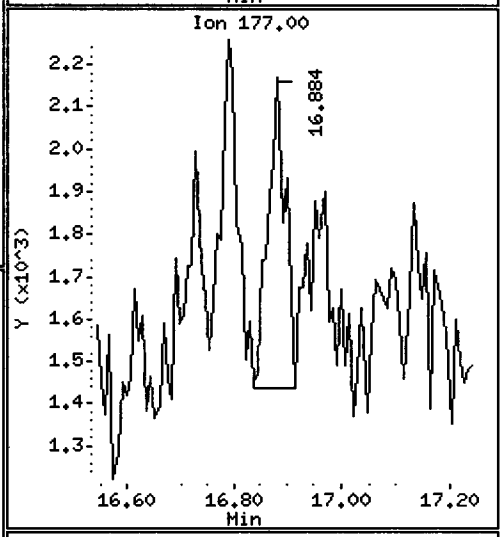
50 Diethylphthalate

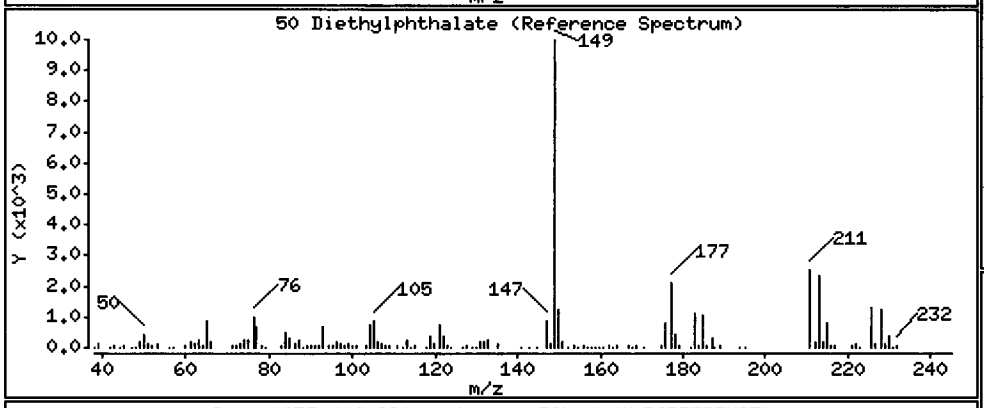
Concentration: 31.50 ug/kg

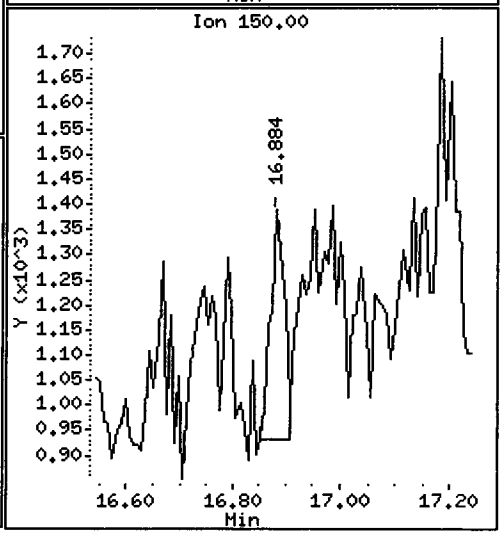


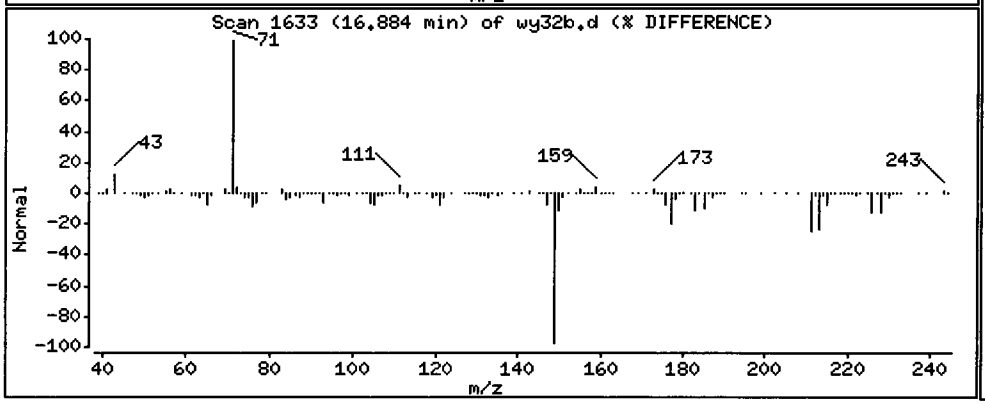












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

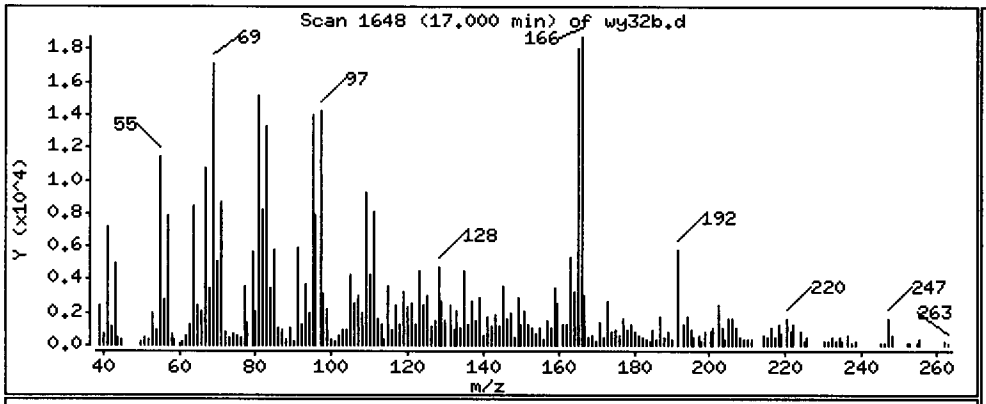
Operator: VTS/YZ

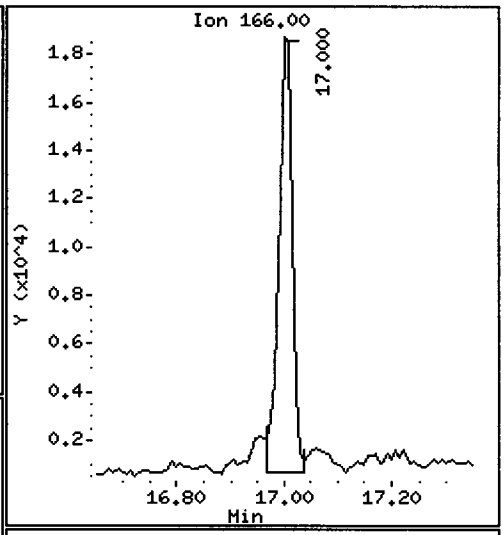
Column phase: ZB-5msi

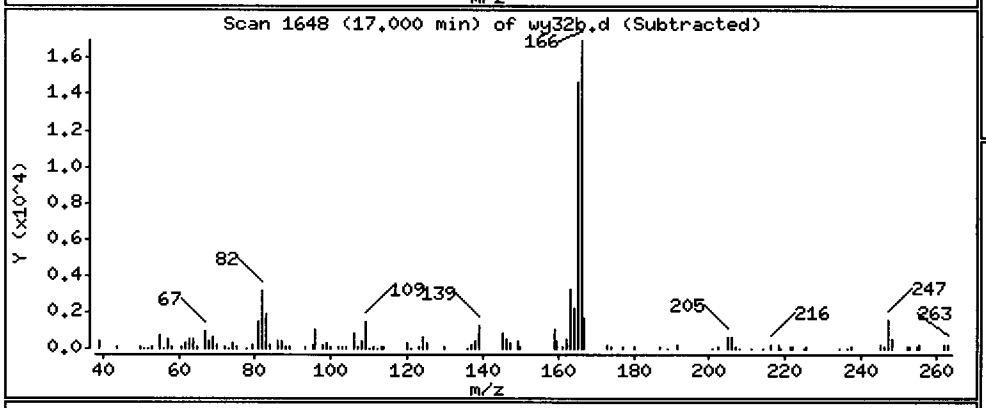
Column diameter: 0.25

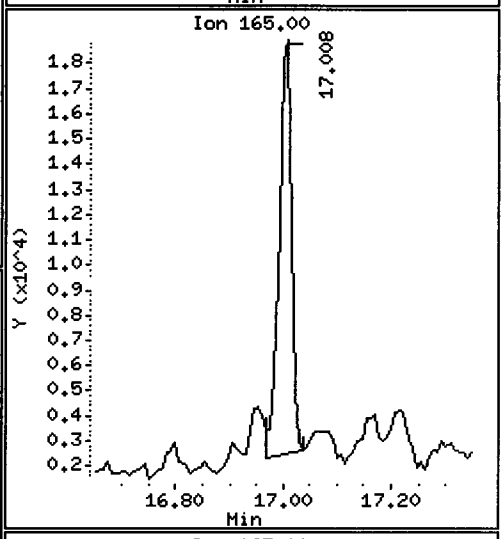
49 Fluorene

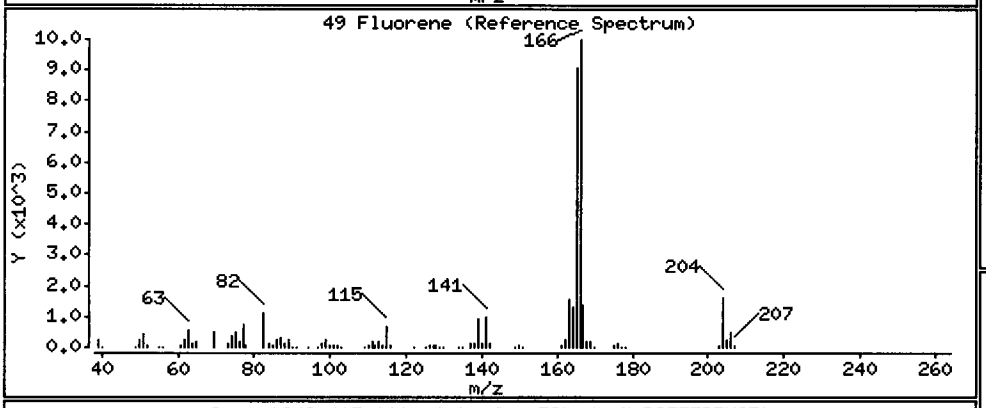
Concentration: 139.1 ug/kg

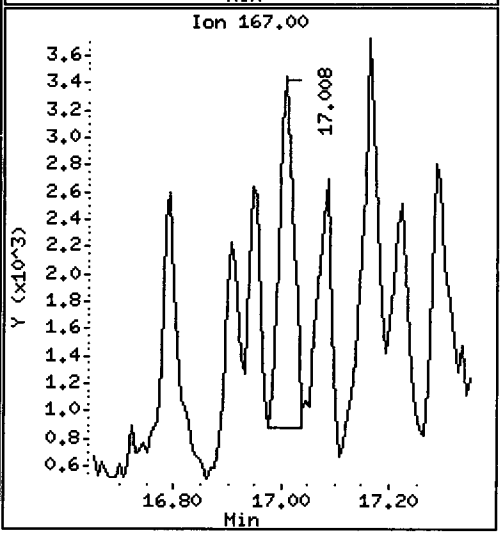


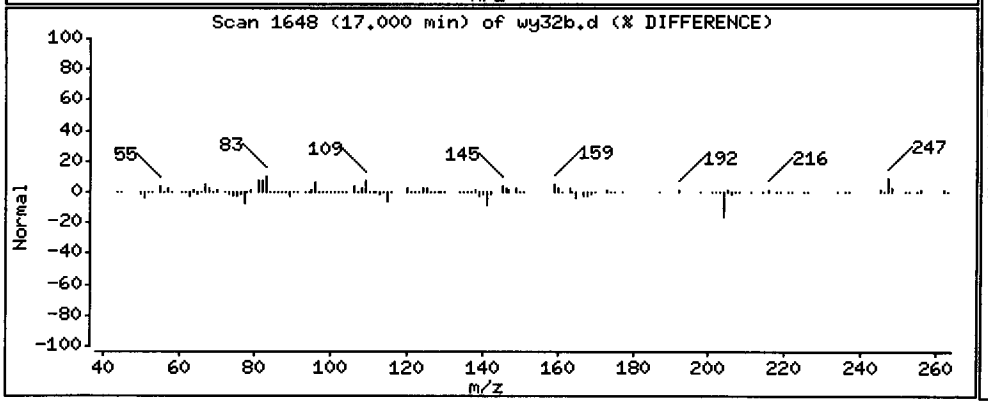












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

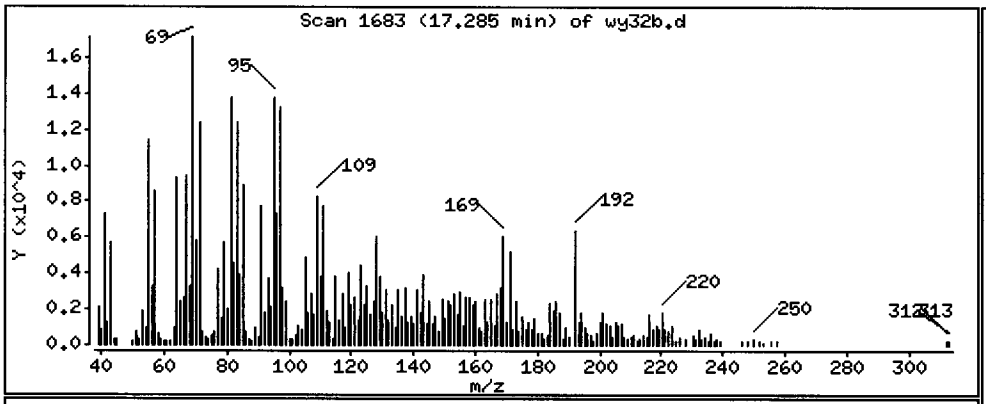
Operator: VTS/YZ

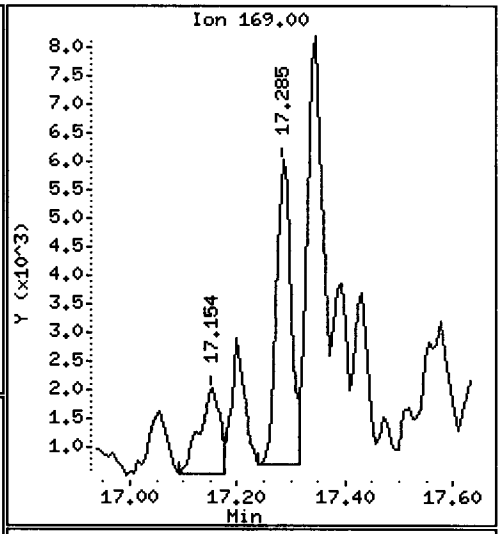
Column phase: ZB-5ms1

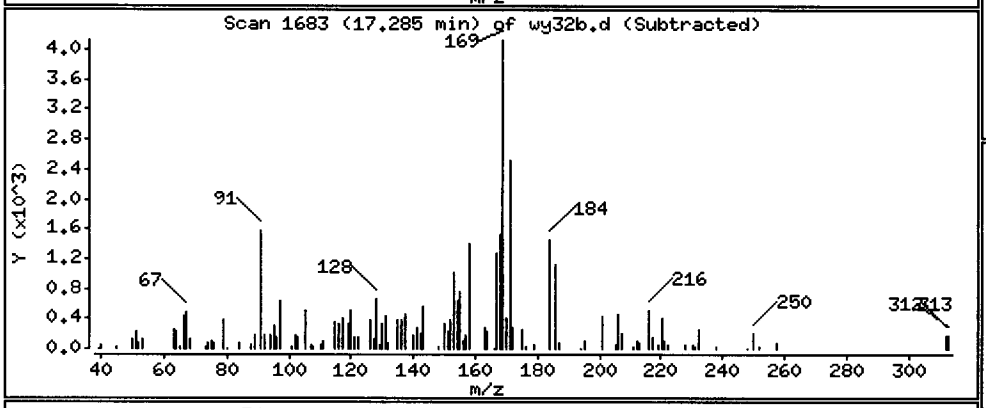
Column diameter: 0.25

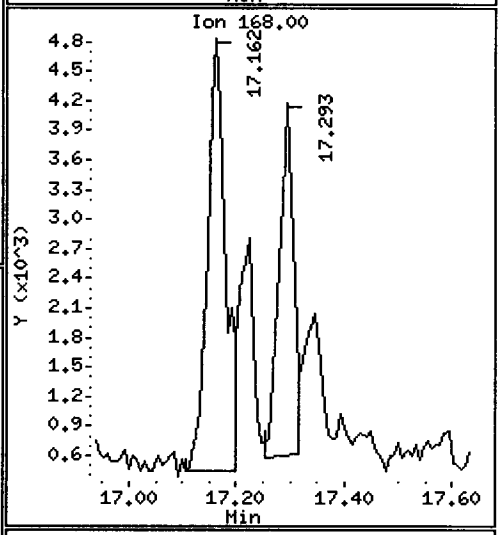
54 N-Nitrosodiphenylamine

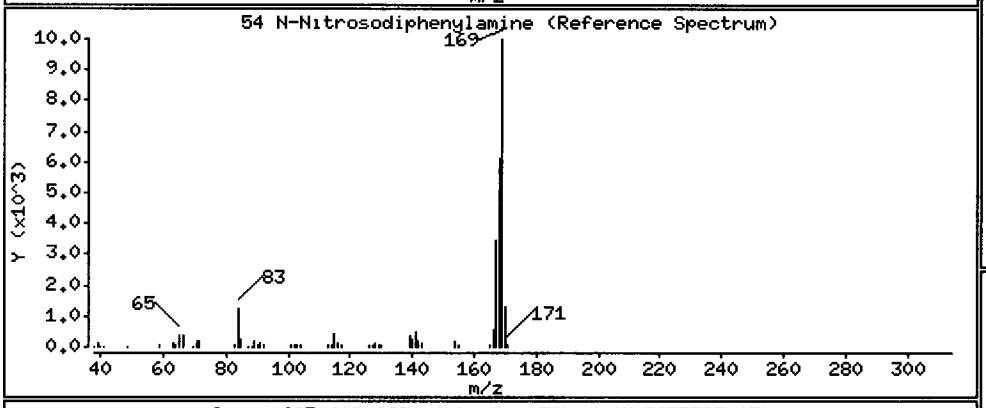
Concentration: 71.87 ug/kg

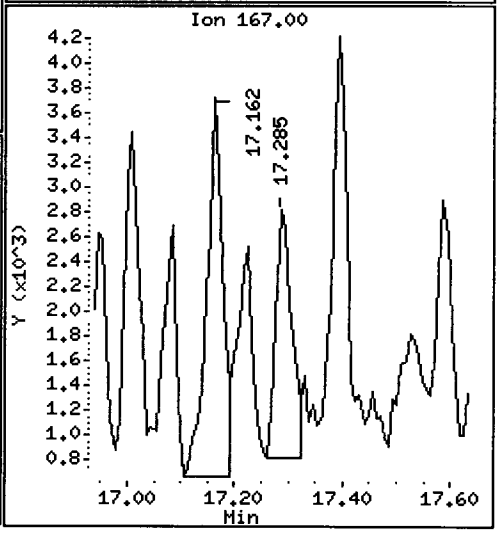


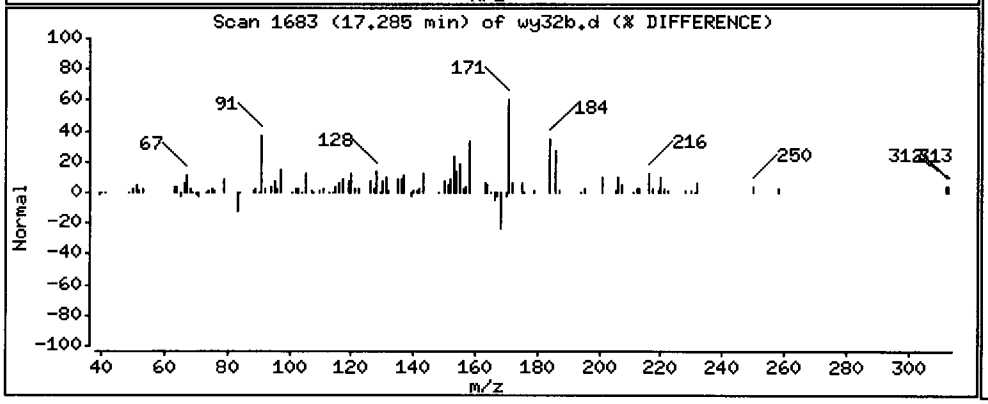












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

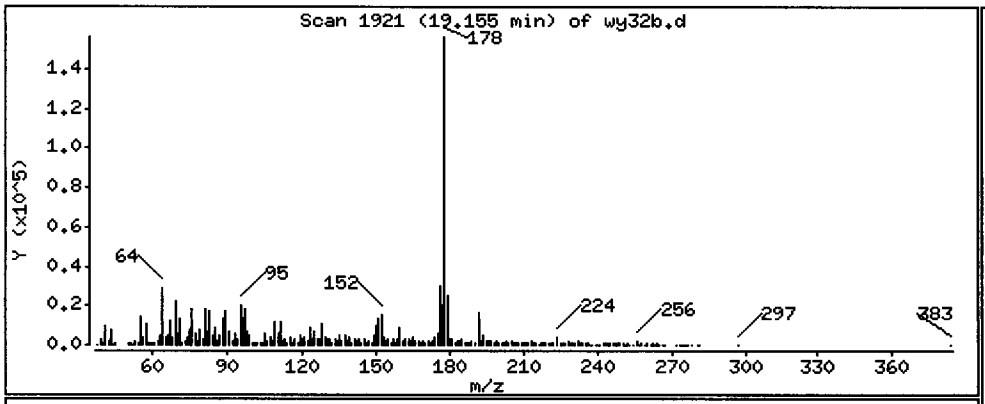
Operator: VTS/YZ

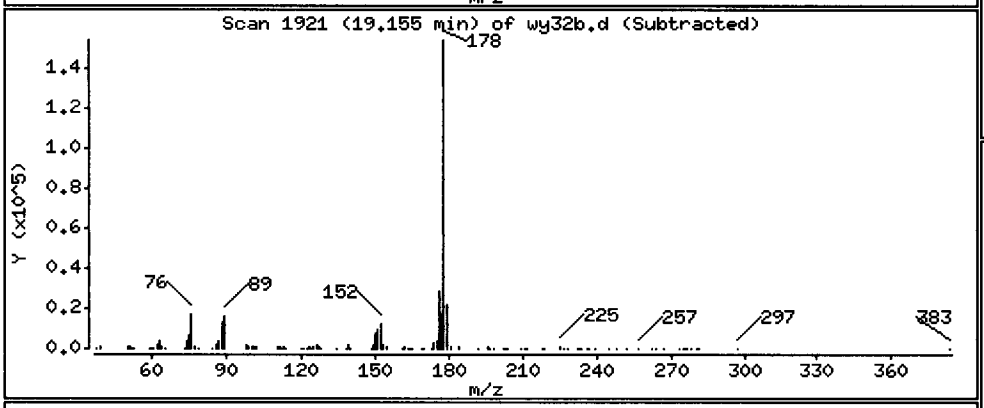
Column phase: ZB-5ms1

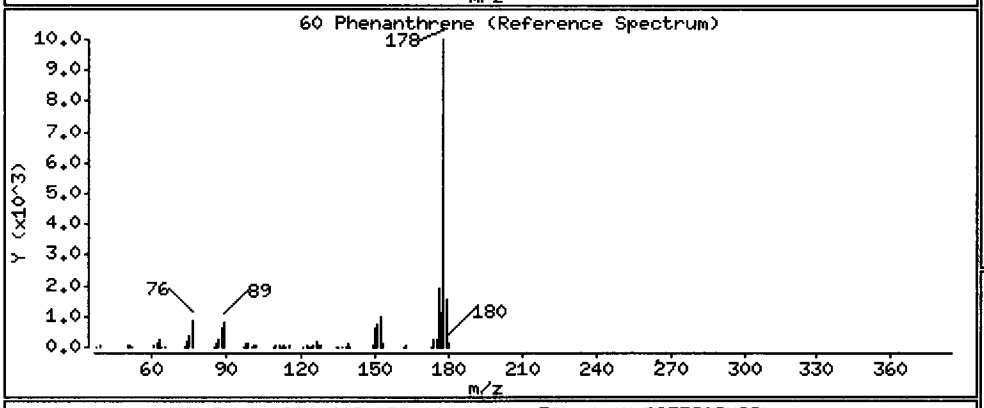
Column diameter: 0.25

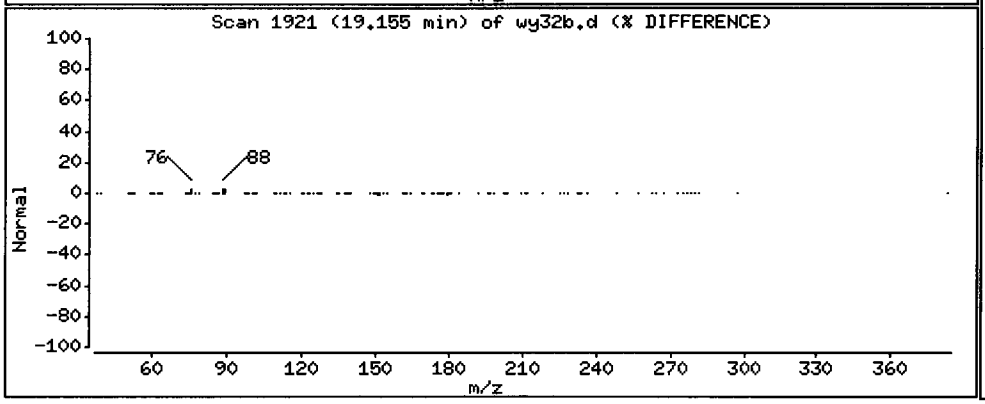
60 Phenanthrene

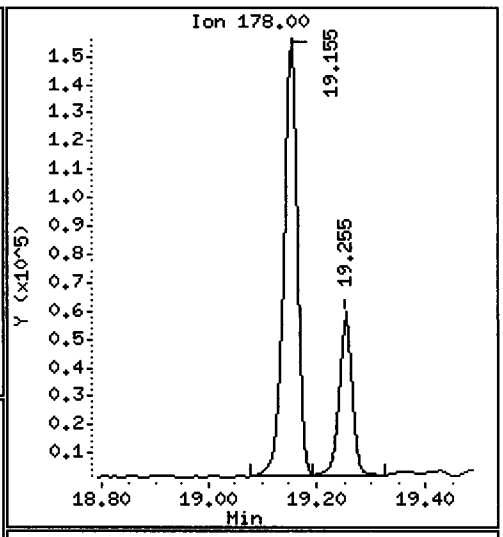
Concentration: 903.5 ug/kg

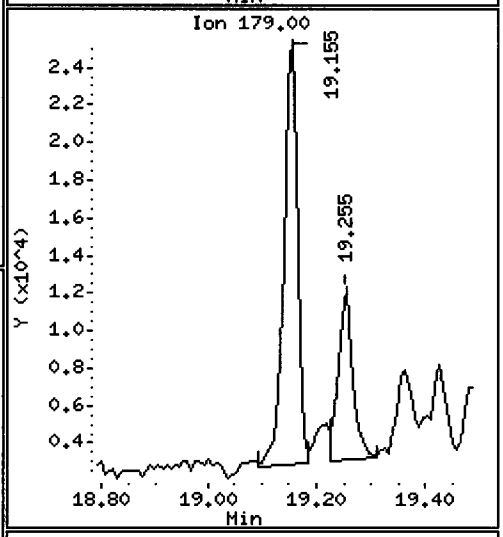


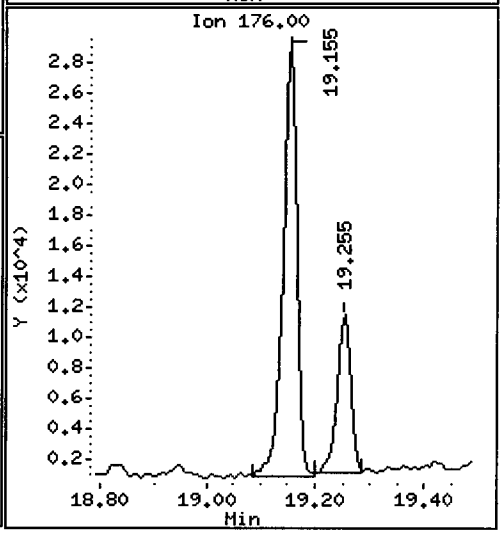












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

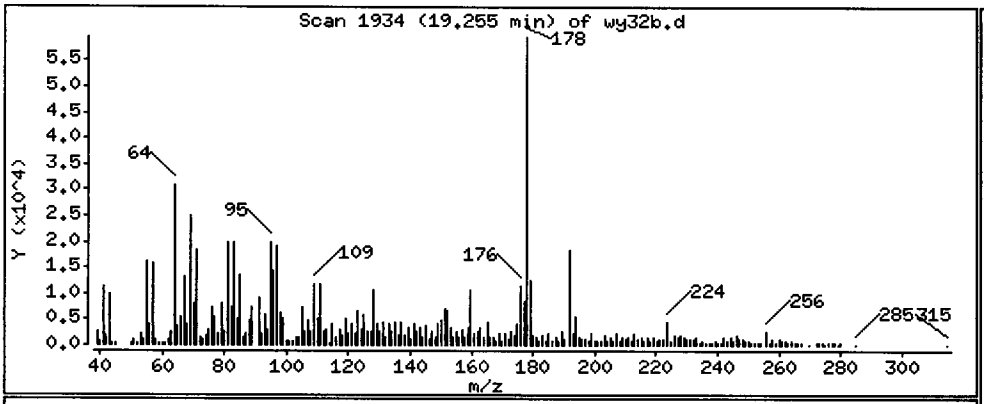
Operator: VTS/YZ

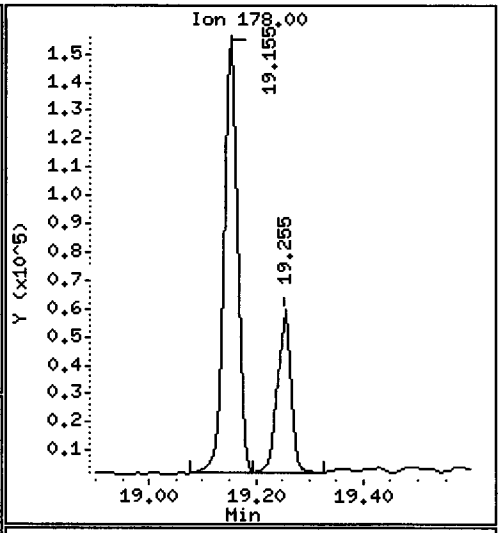
Column phase: ZB-5msi

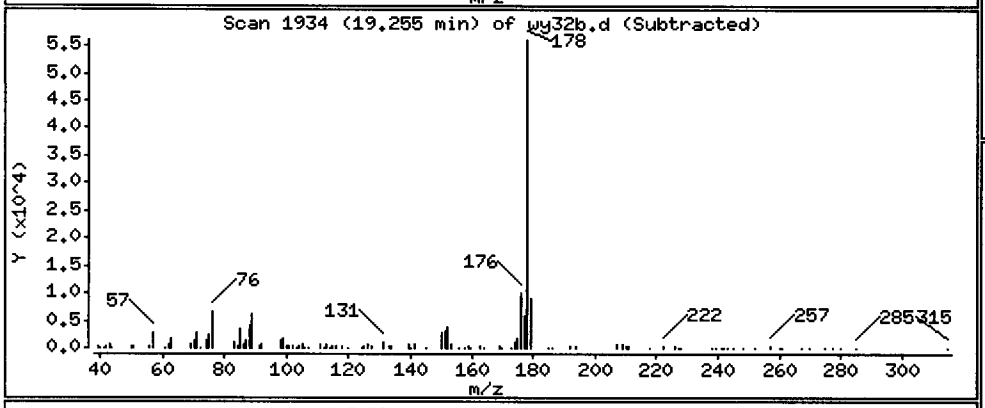
Column diameter: 0.25

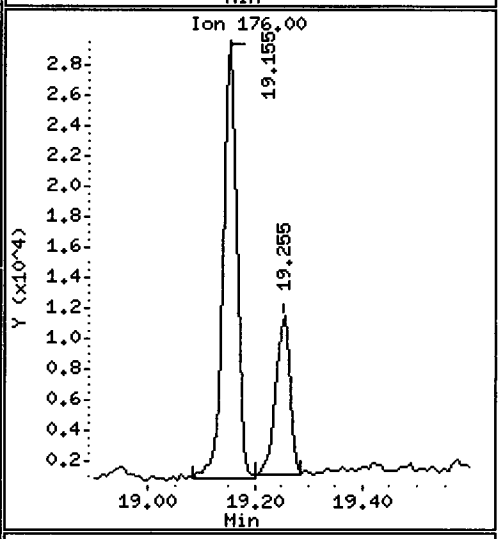
61 Anthracene

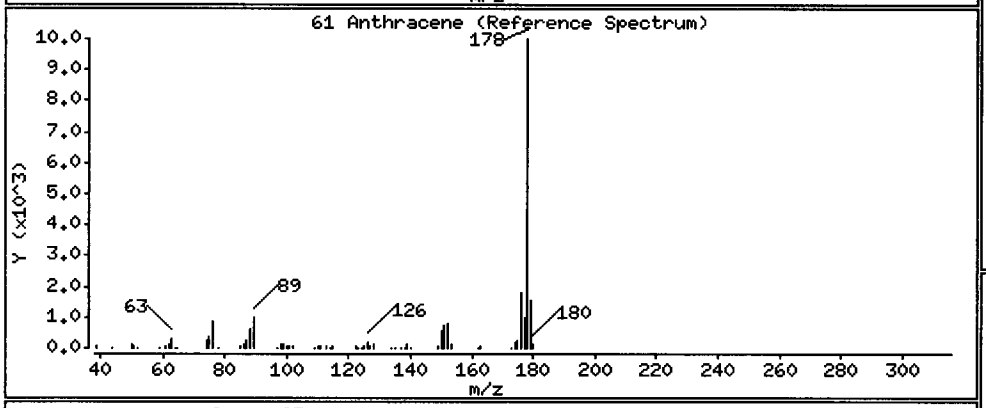
Concentration: 315.8 ug/kg

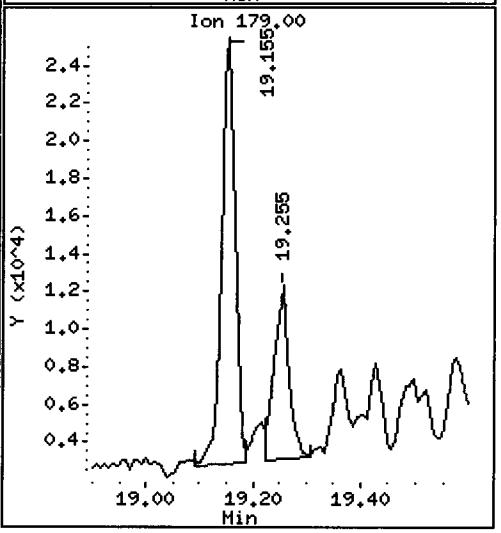


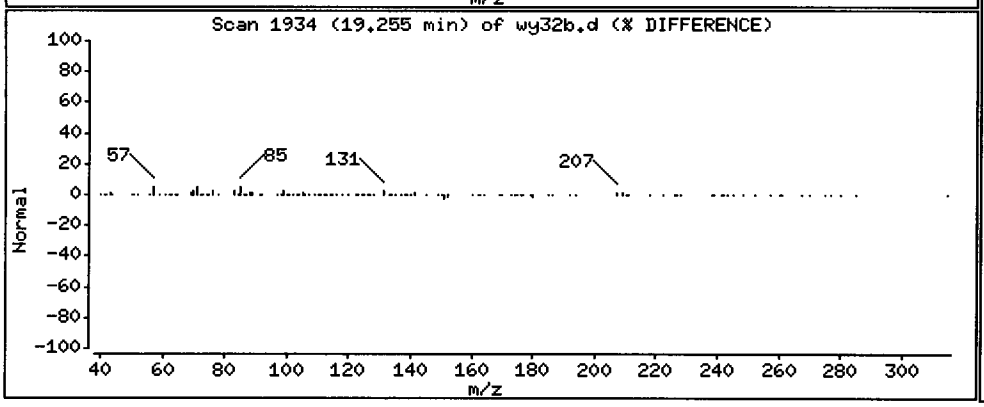












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

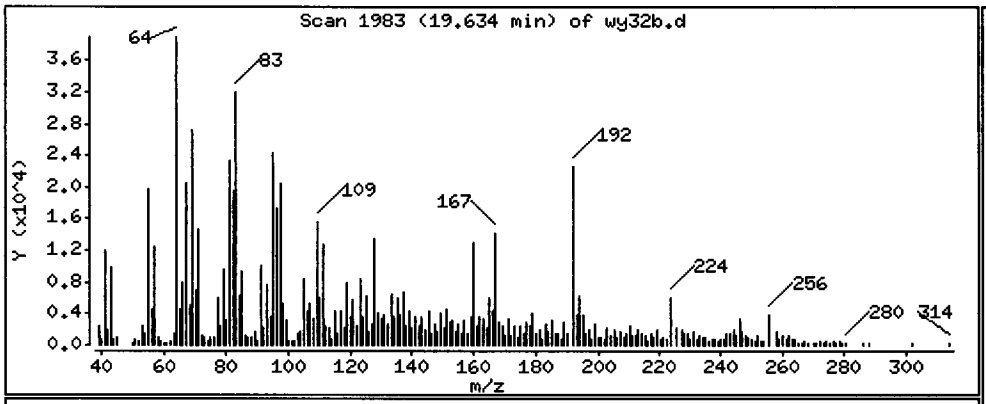
Operator: VTS/YZ

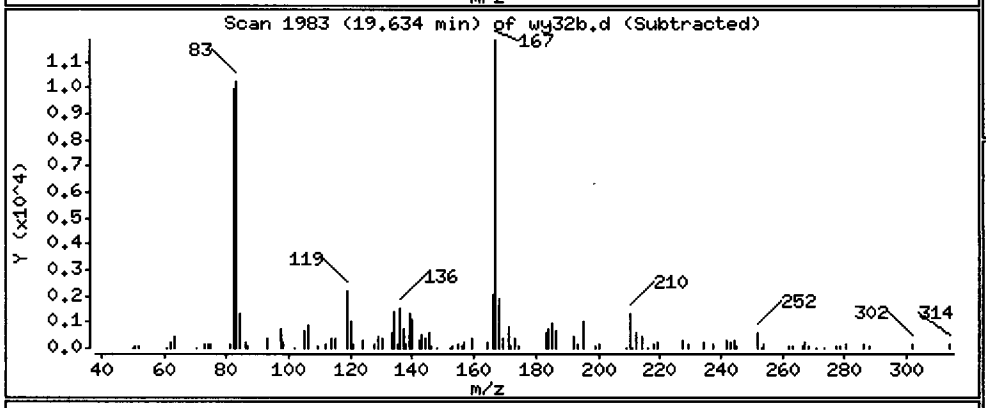
Column phase: ZB-5msi

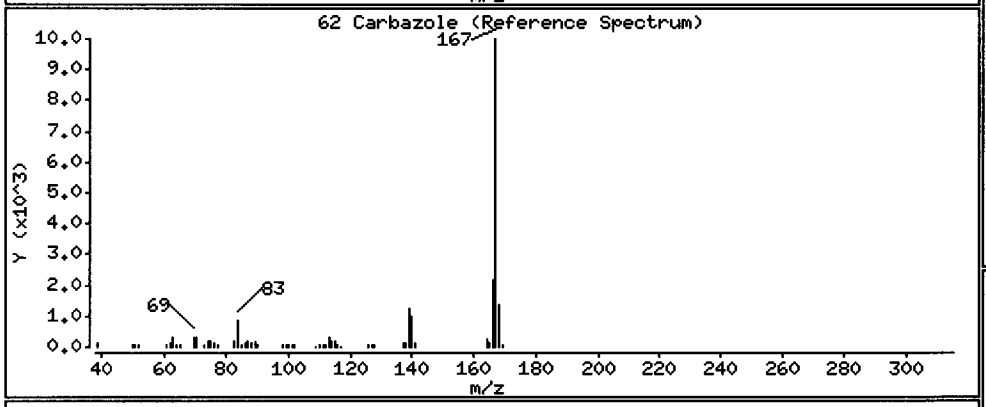
Column diameter: 0.25

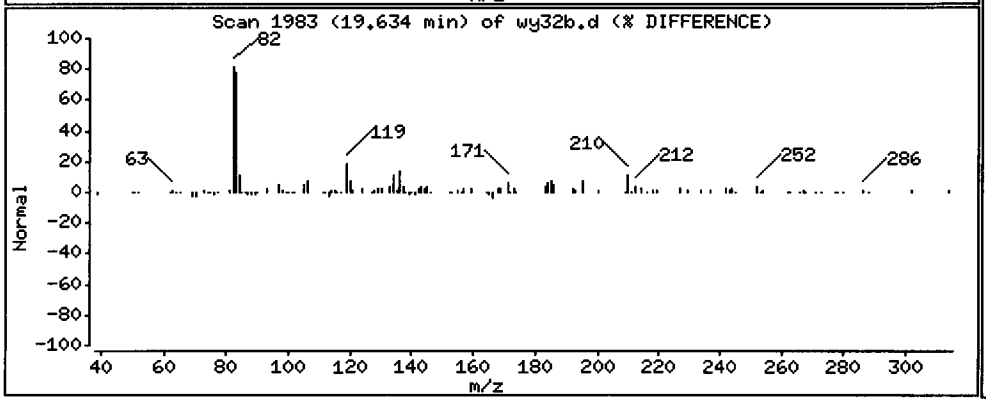
62 Carbazole

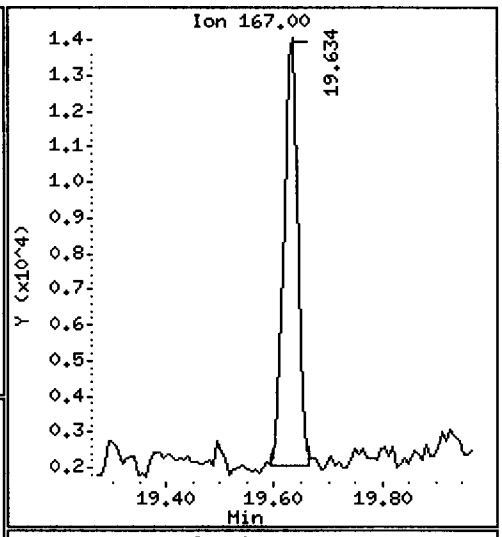
Concentration: 158.0 ug/kg

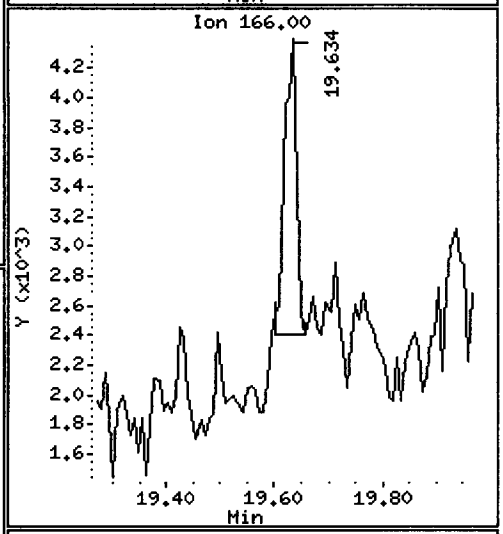


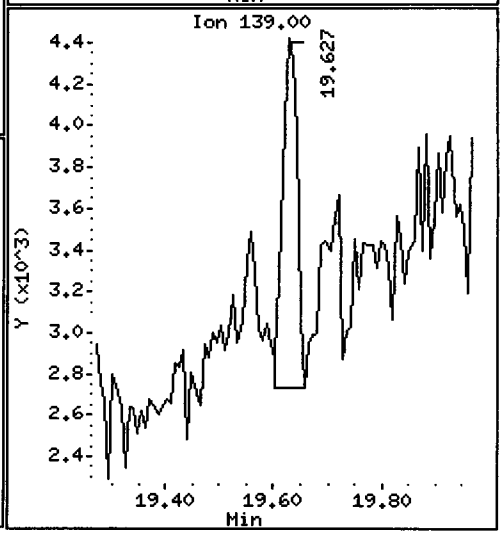












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

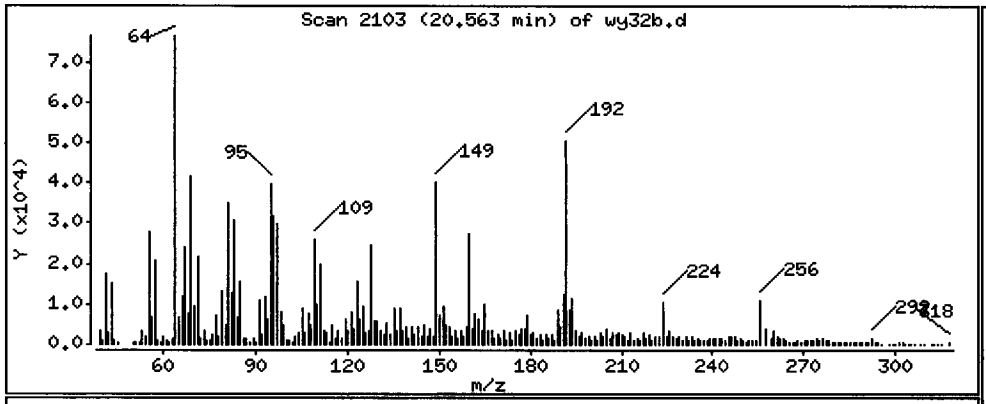
Operator: VTS/YZ

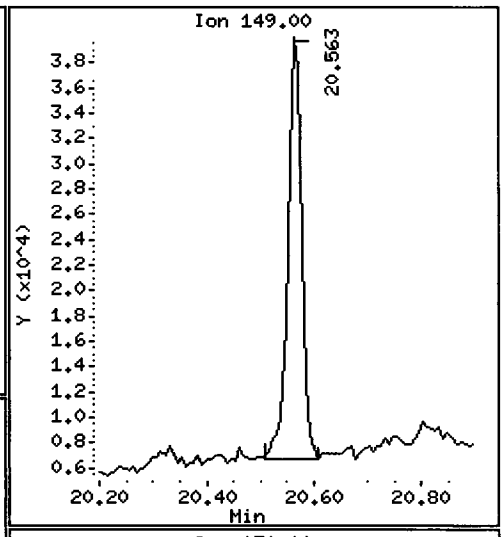
Column phase: ZB-5msi

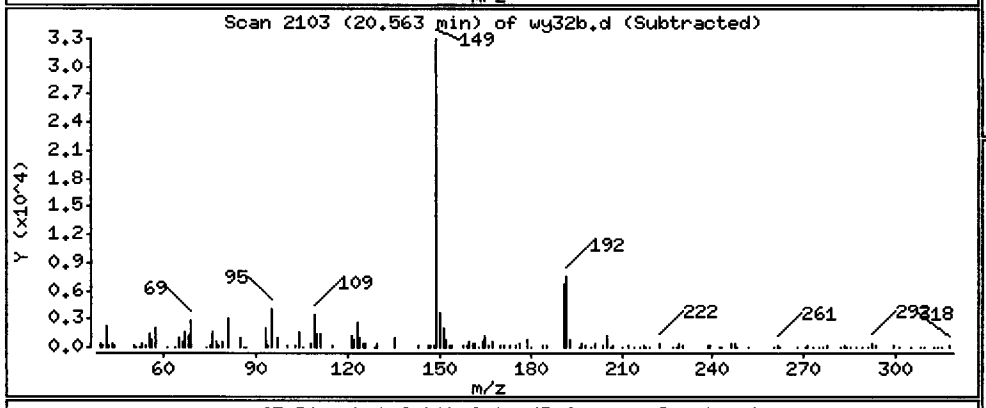
Column diameter: 0.25

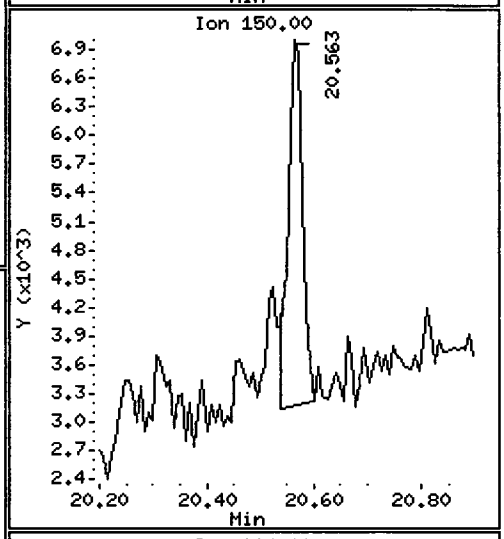
63 Di-n-butylphthalate

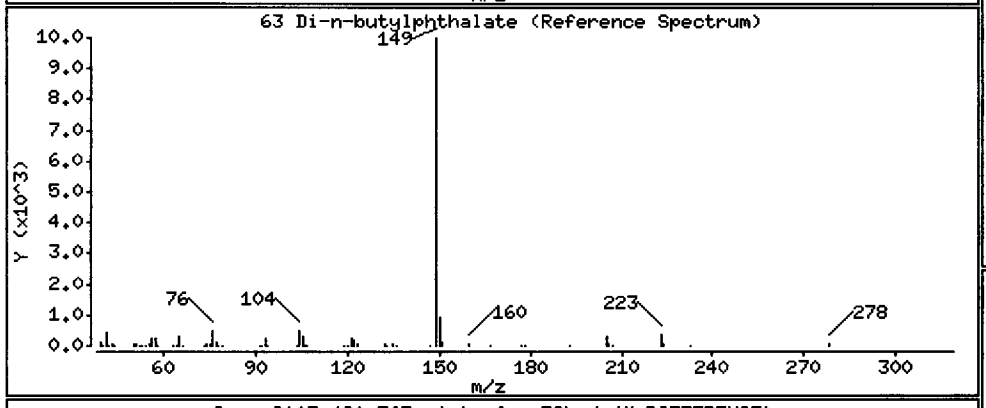
Concentration: 182.1 ug/kg

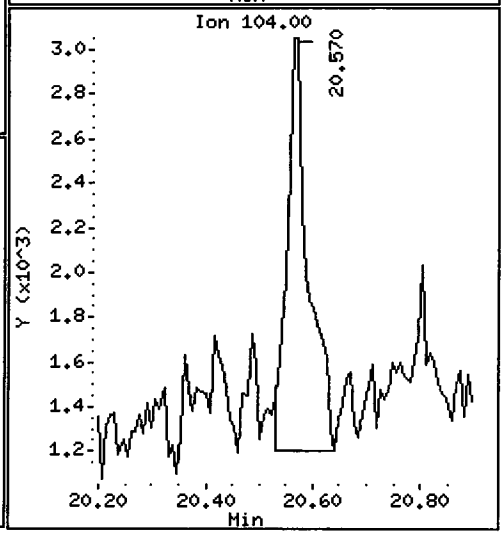


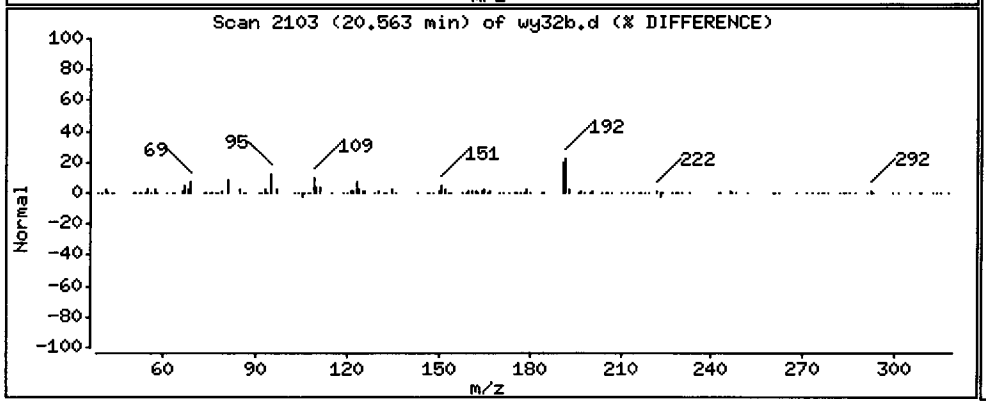












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

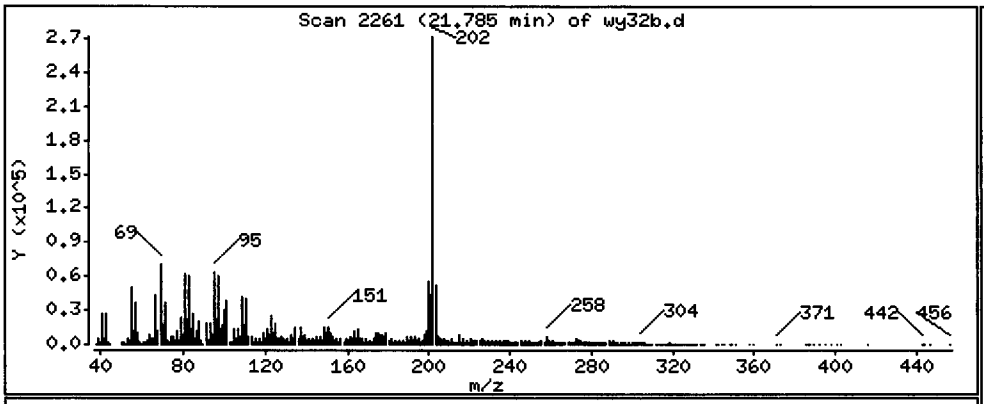
Operator: VTS/YZ

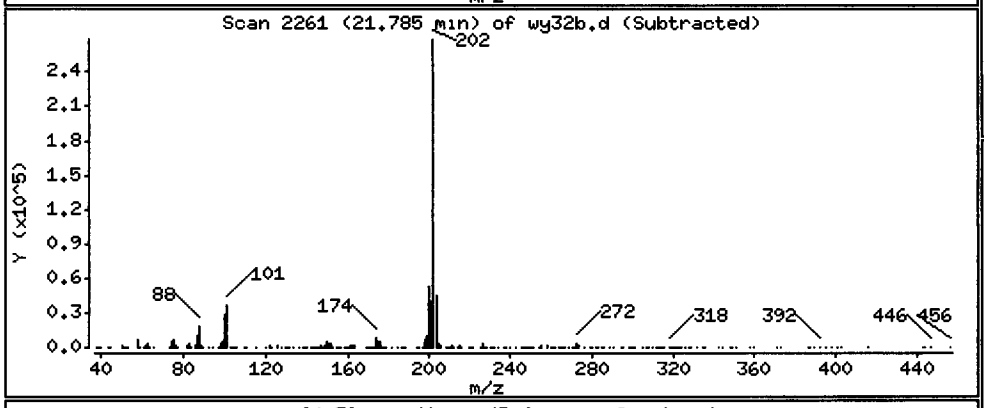
Column phase: ZB-5msi

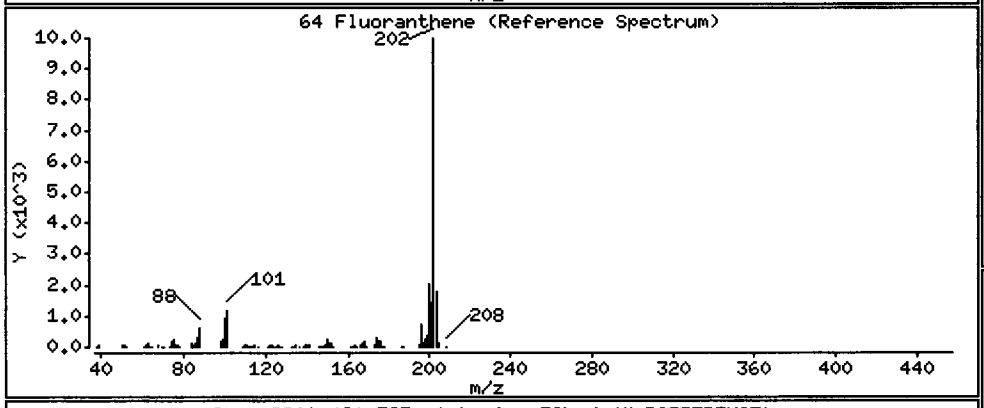
Column diameter: 0.25

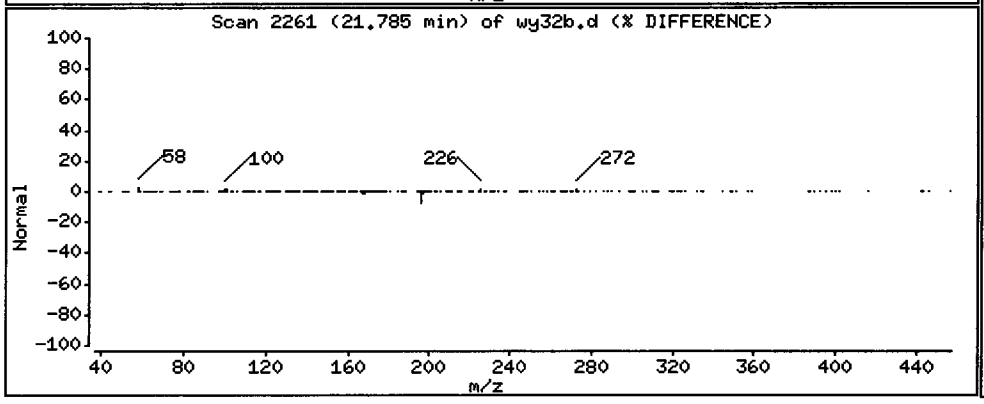
64 Fluoranthene

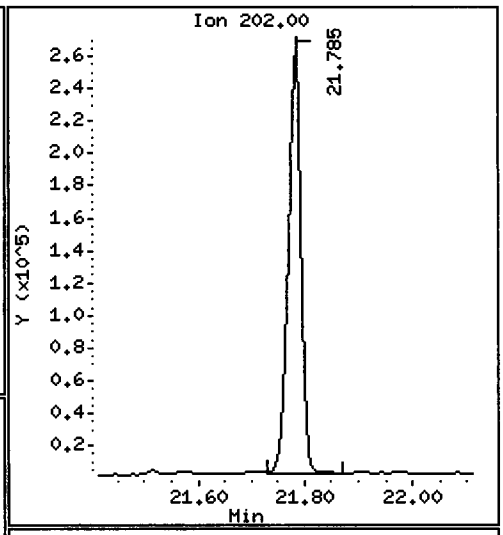
Concentration: 1202 ug/kg

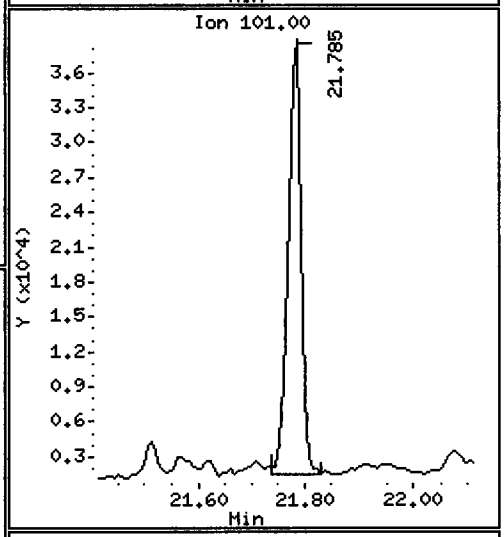


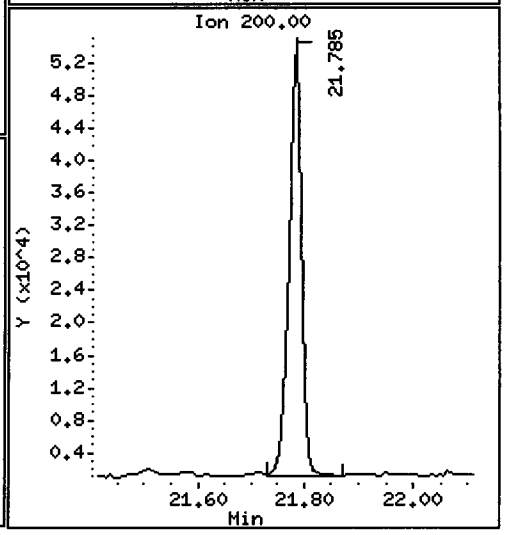












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

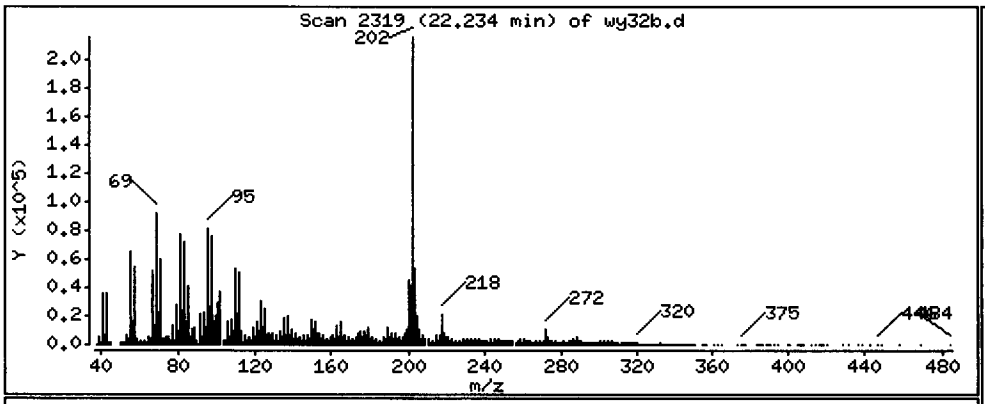
Operator: VTS/YZ

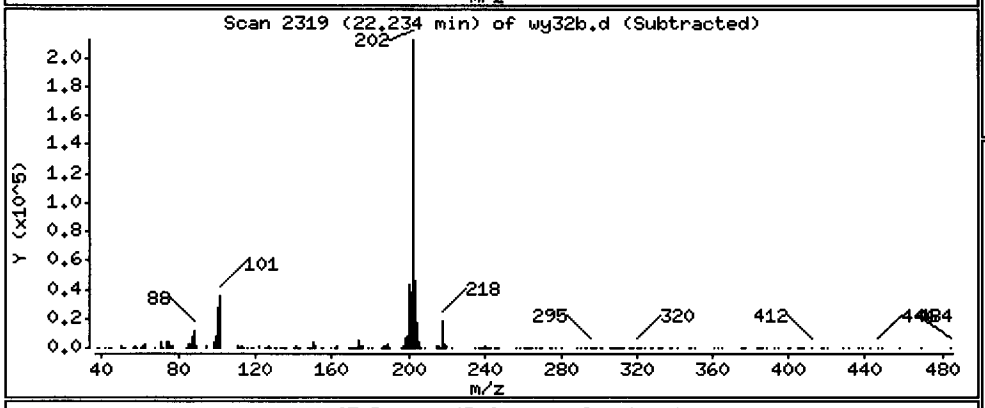
Column phase: ZB-5msi

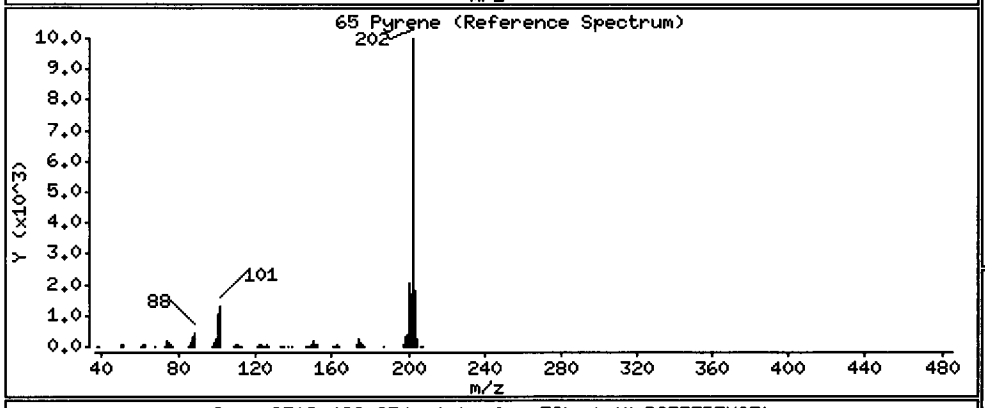
Column diameter: 0.25

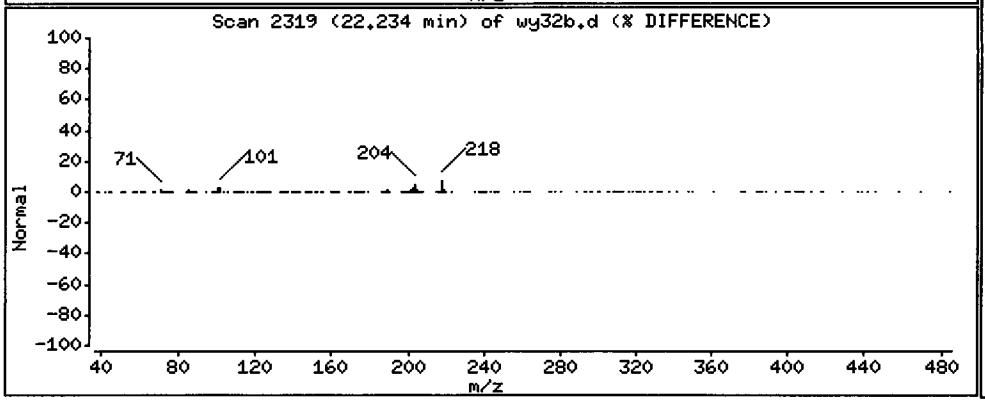
65 Pyrene

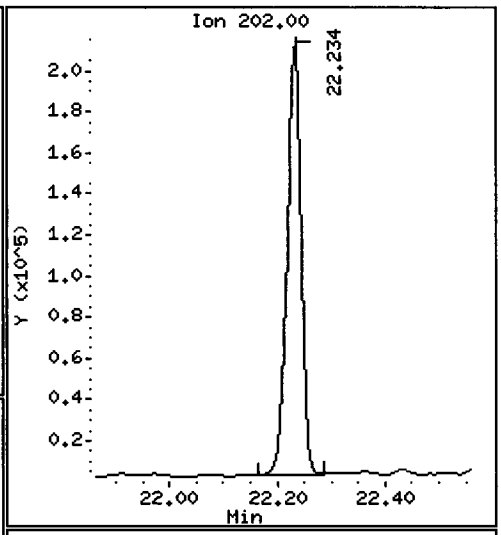
Concentration: 996.9 ug/kg

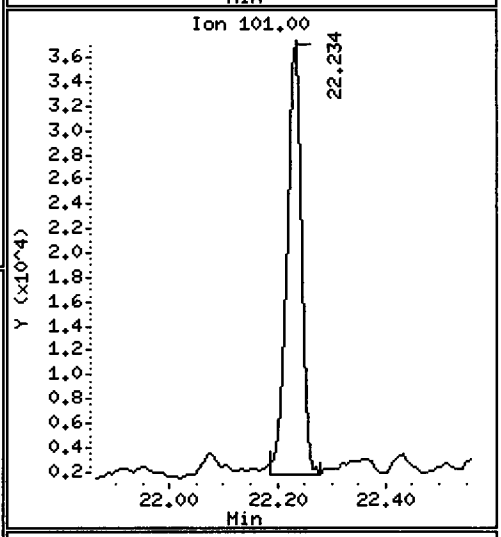


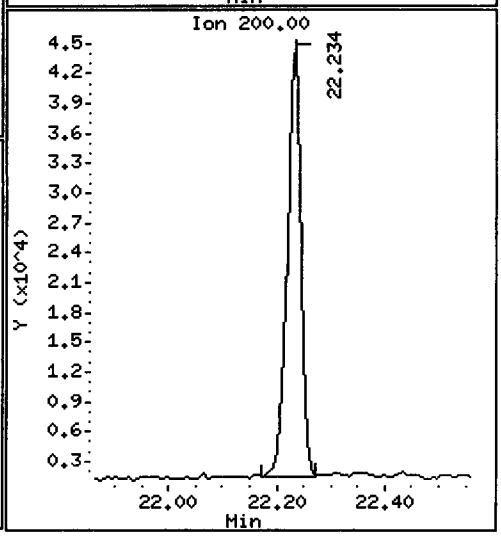












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

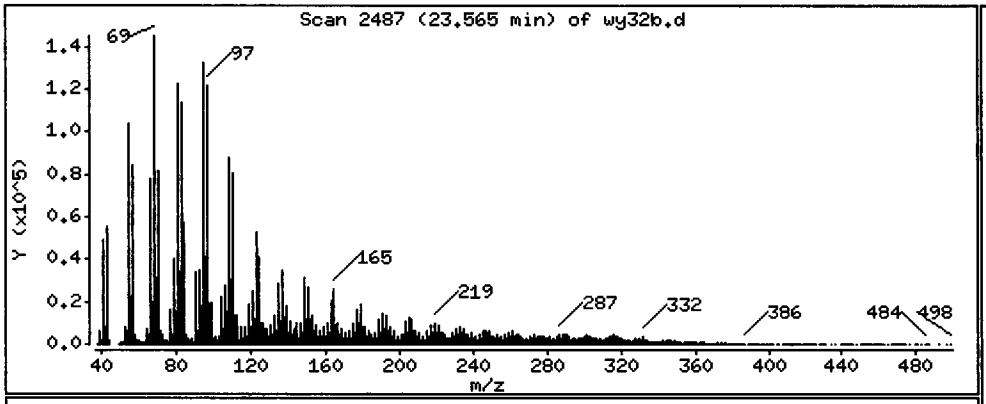
Operator: VTS/YZ

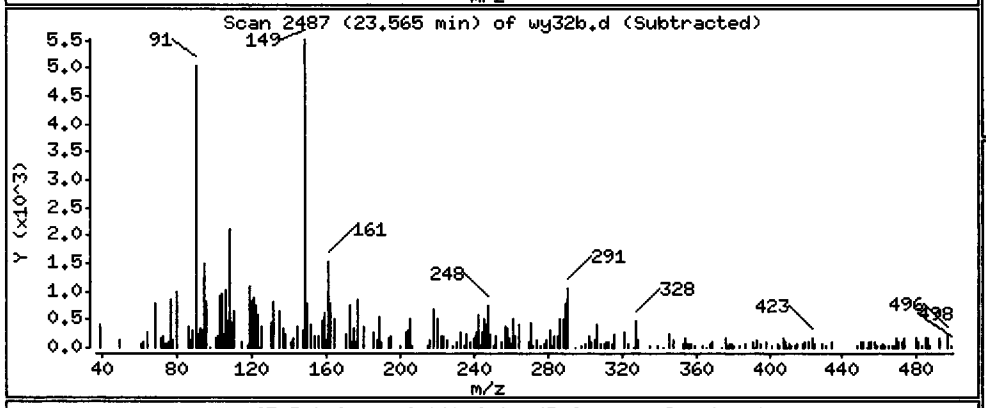
Column phase: ZB-5msi

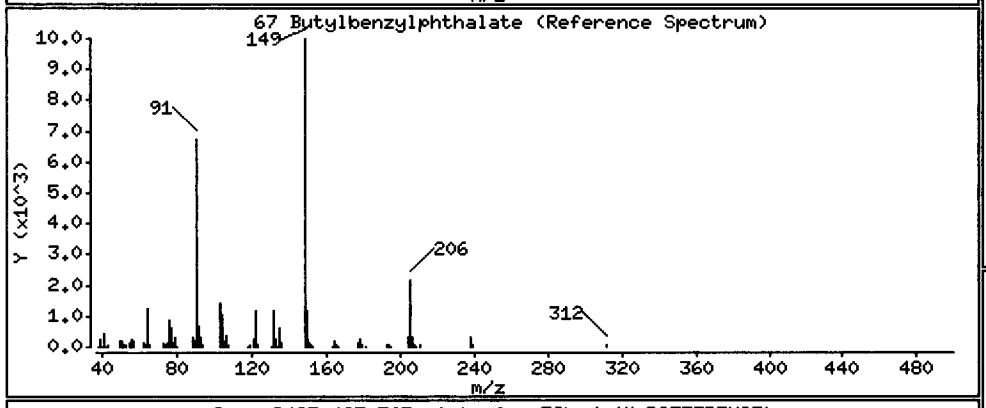
Column diameter: 0.25

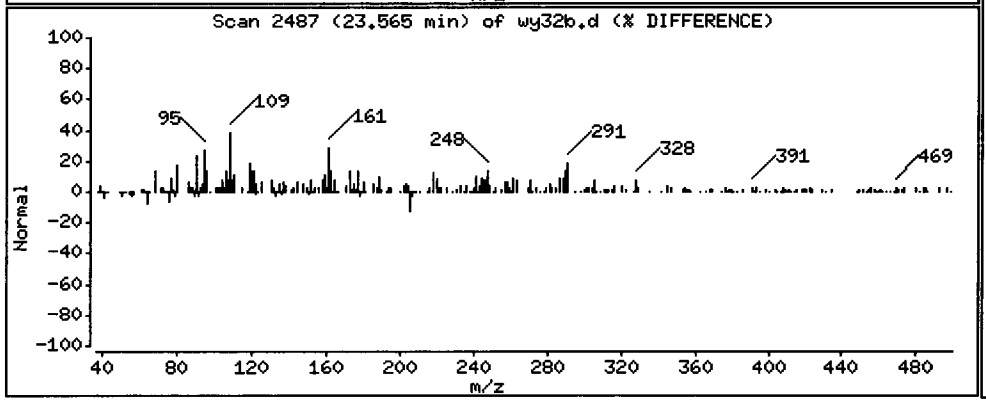
67 Butylbenzylphthalate

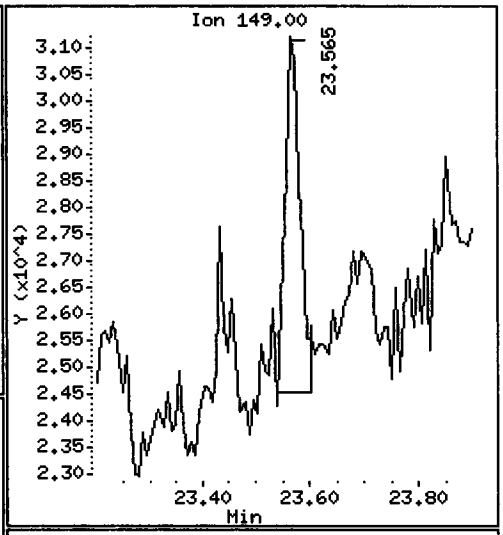
Concentration: 95.82 ug/kg

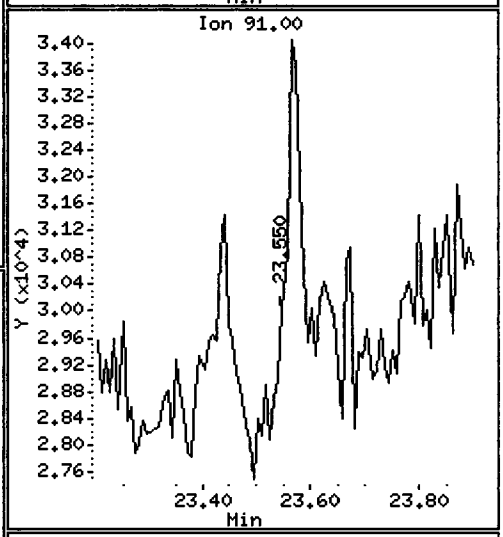


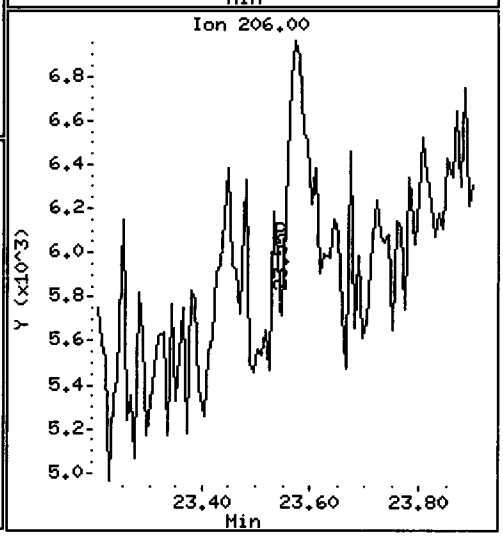












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

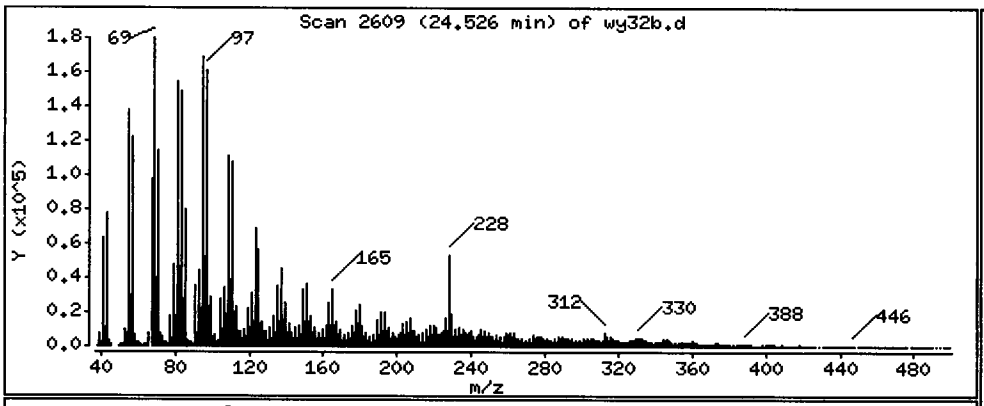
Operator: VTS/YZ

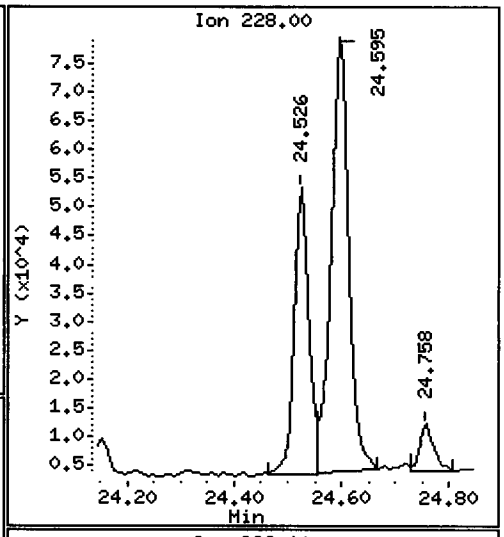
Column phase: ZB-5msi

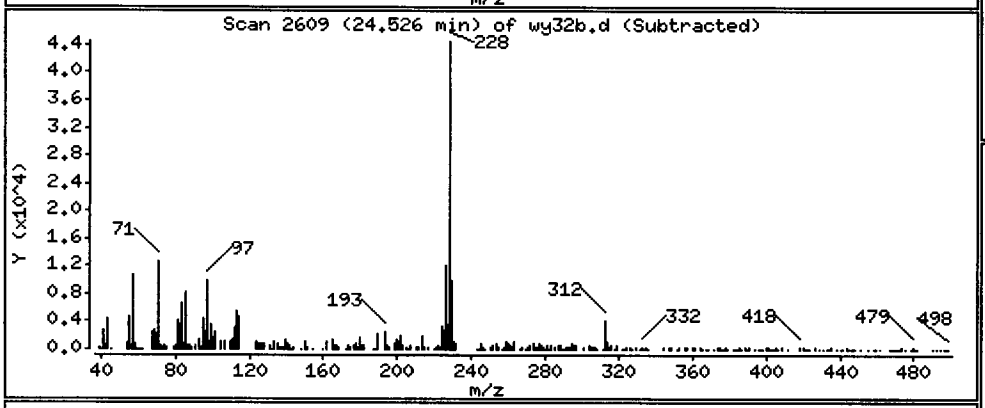
Column diameter: 0.25

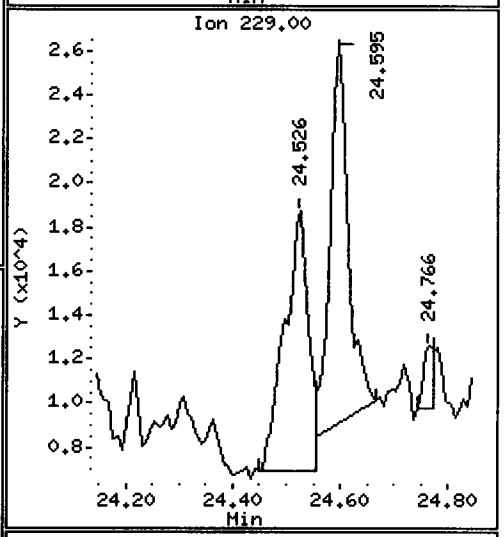
68 Benzo(a)anthracene

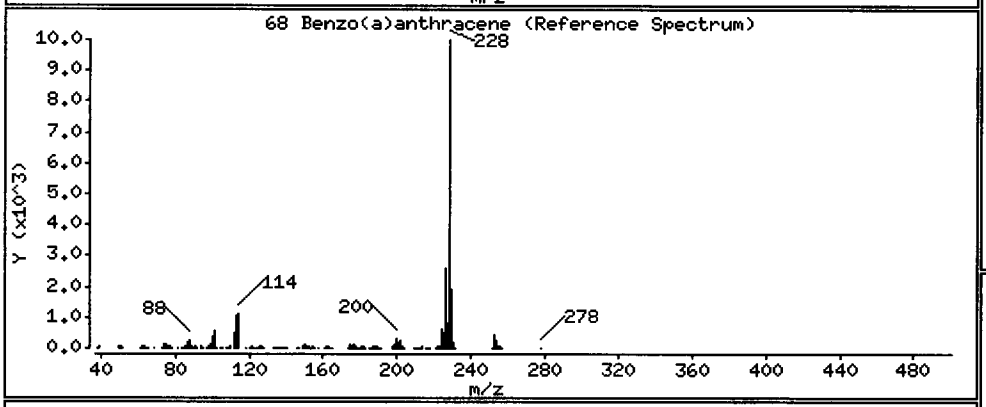
Concentration: 294.8 ug/kg

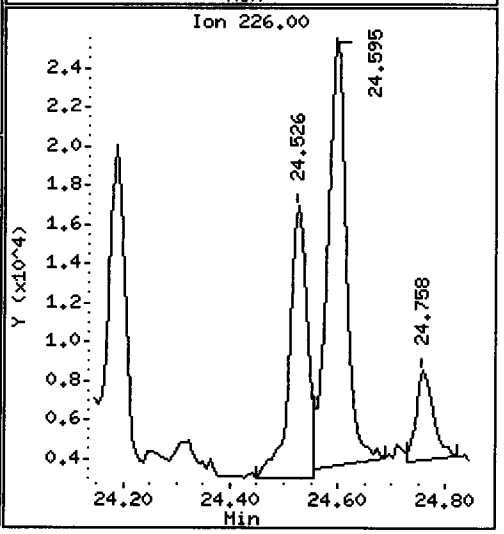


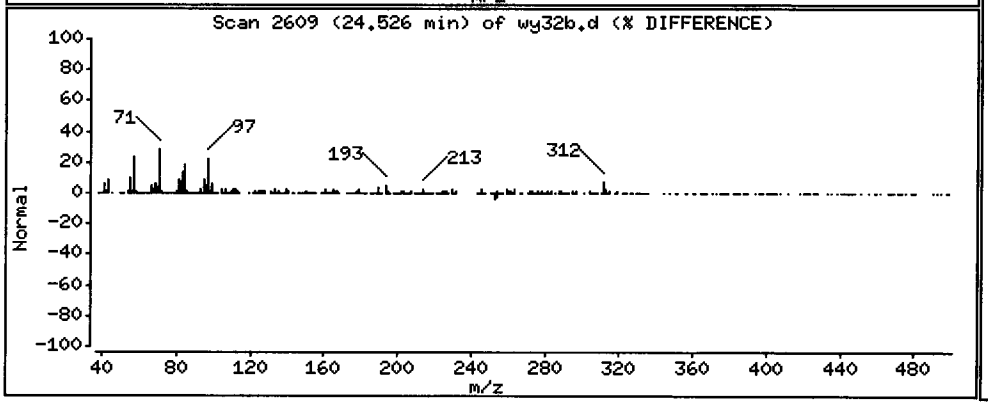












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

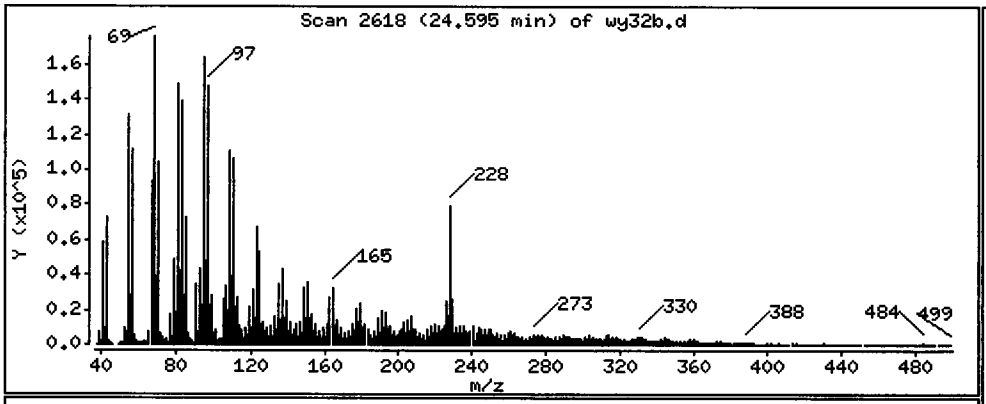
Operator: VTS/YZ

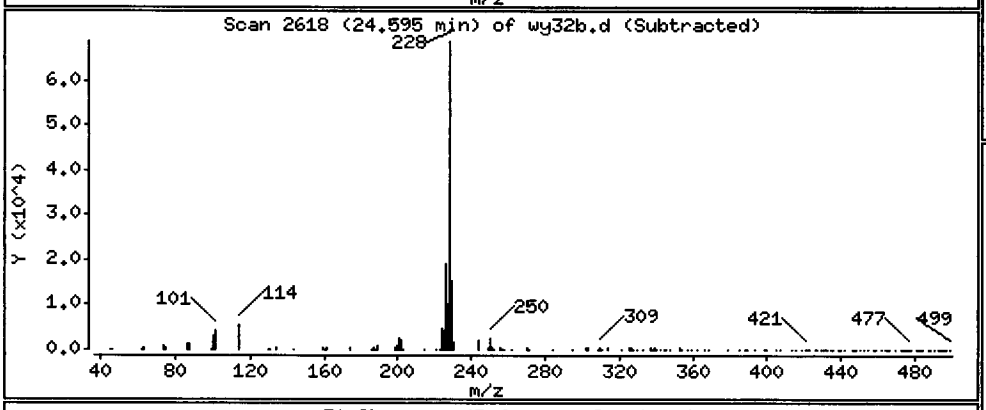
Column phase: ZB-5msi

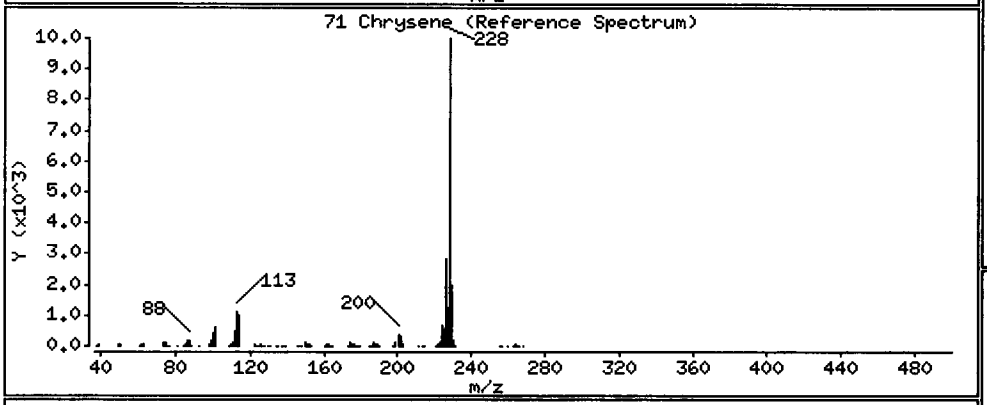
Column diameter: 0.25

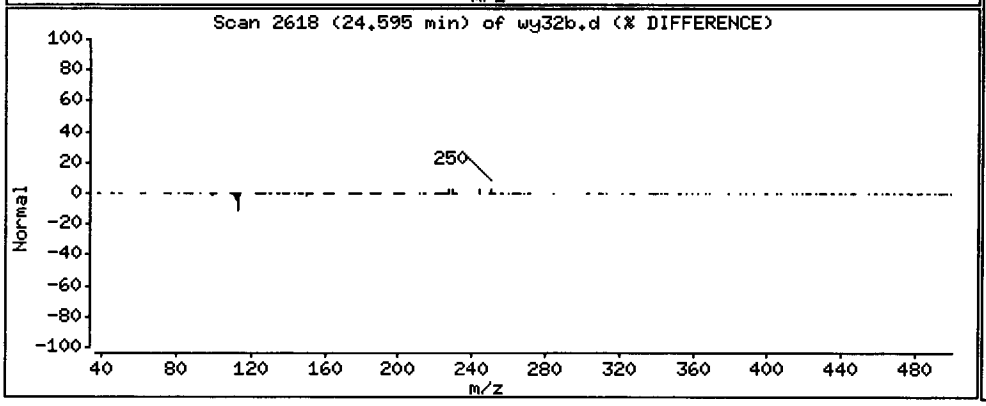
71 Chrysene

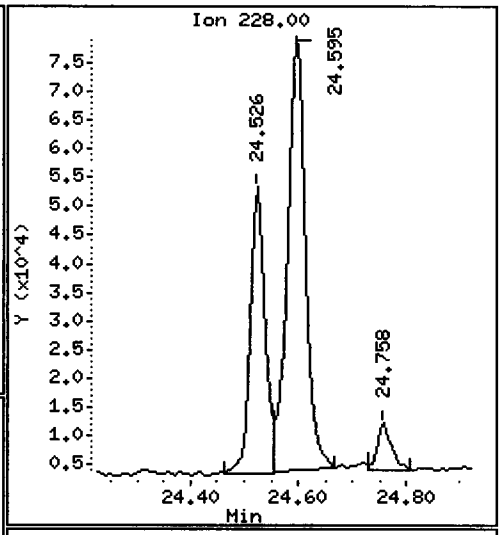
Concentration: 596.4 ug/kg

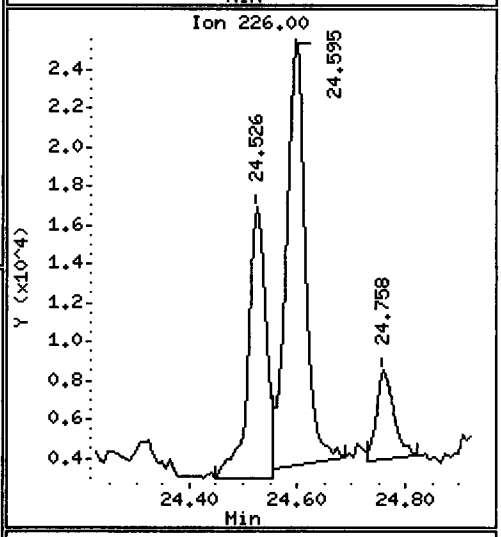


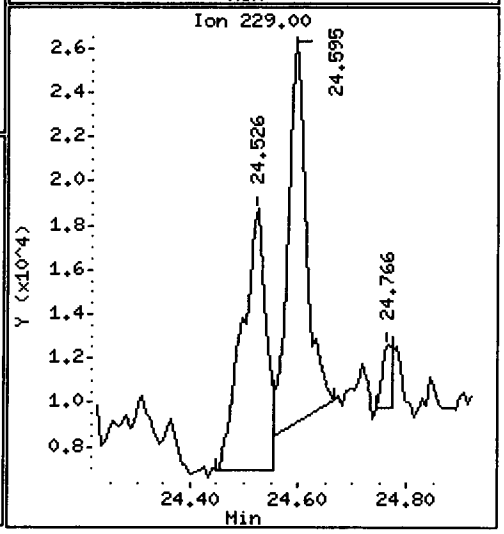












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

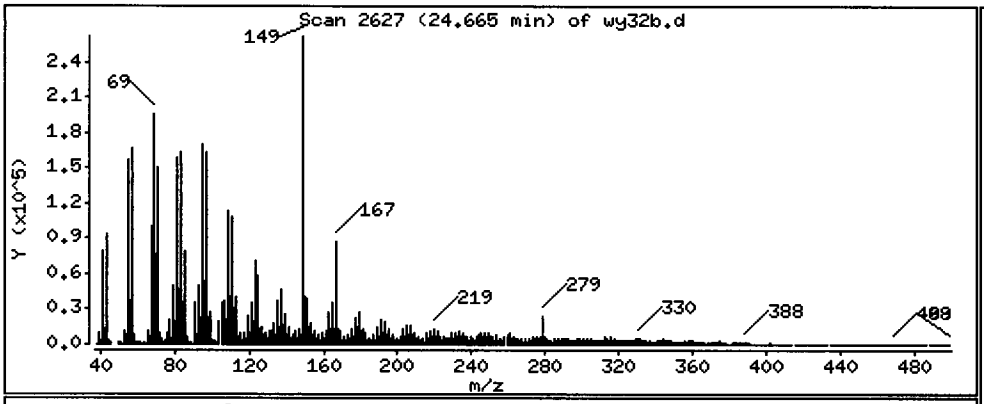
Operator: VTS/YZ

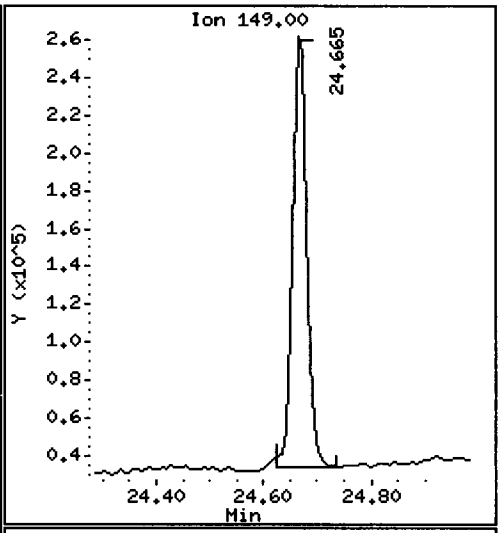
Column phase: ZB-5msi

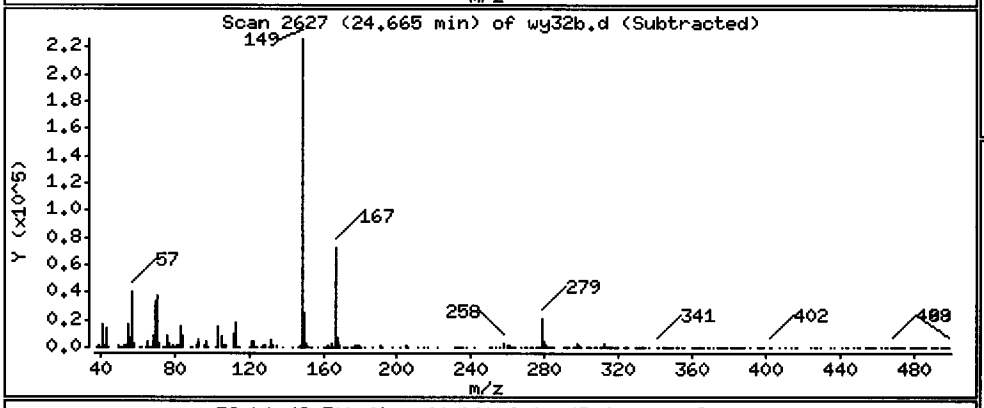
Column diameter: 0.25

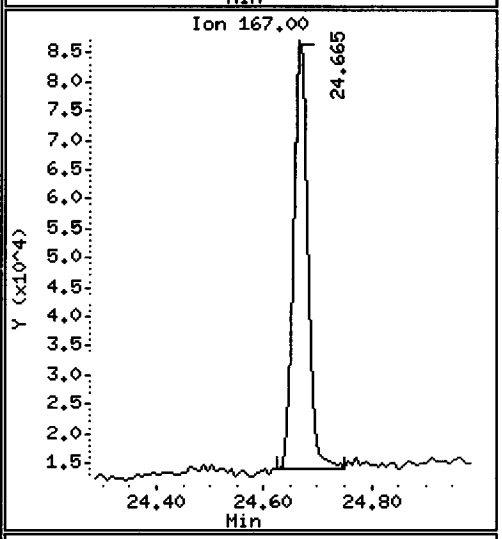
72 bis(2-Ethylhexyl)phthalate

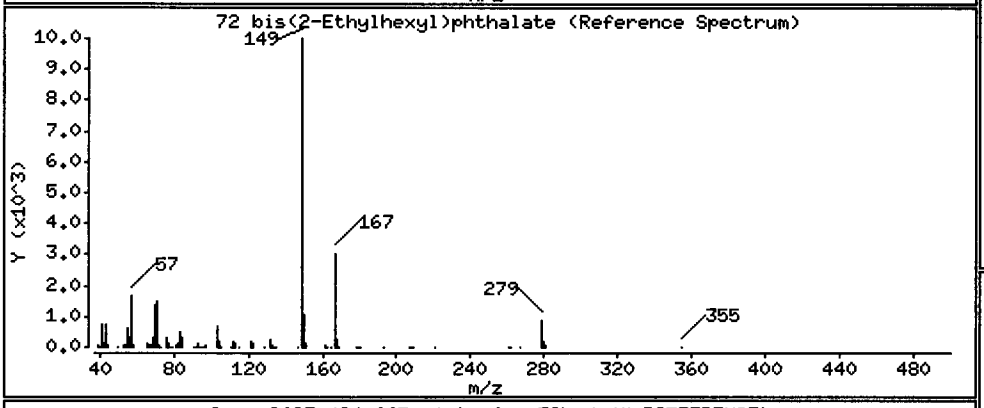
Concentration: 2323 ug/kg

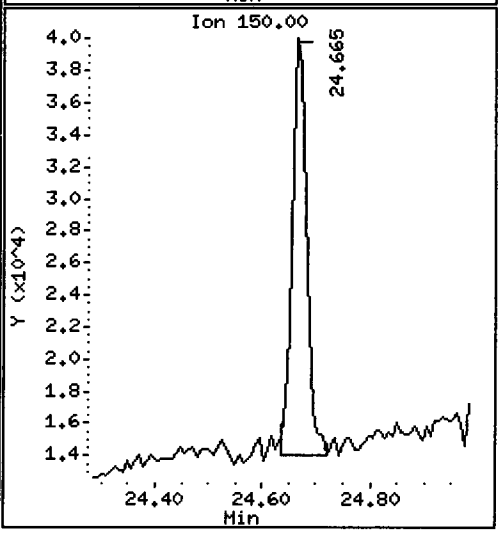


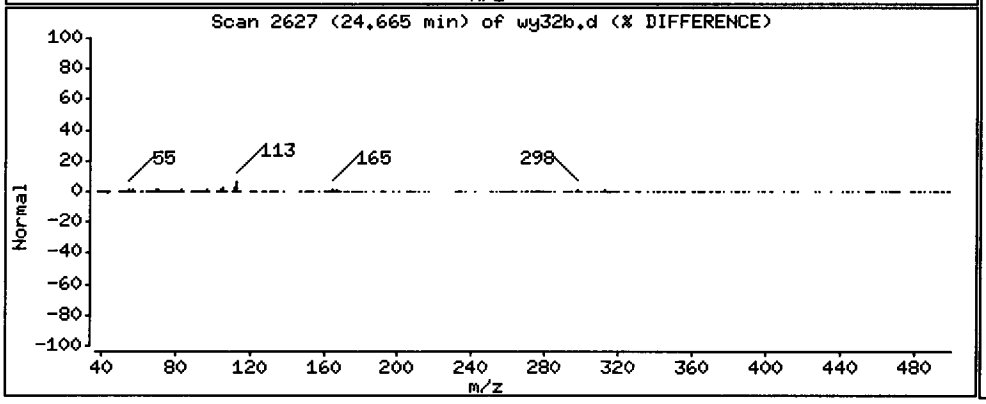












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

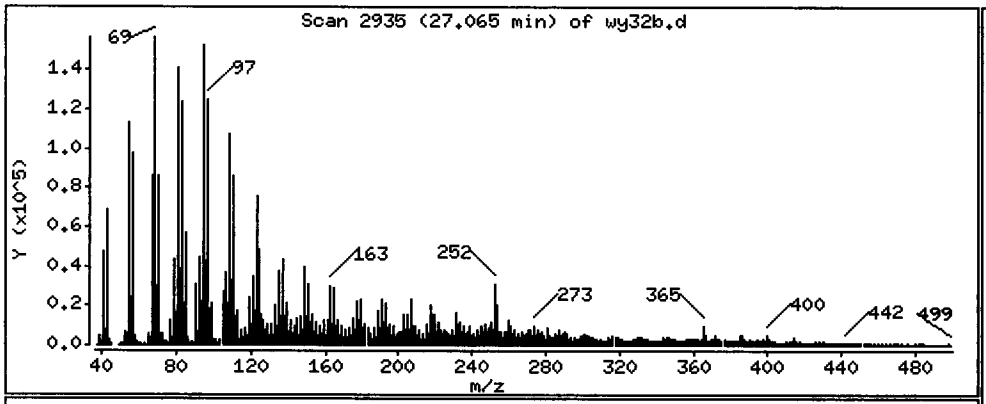
Operator: VTS/YZ

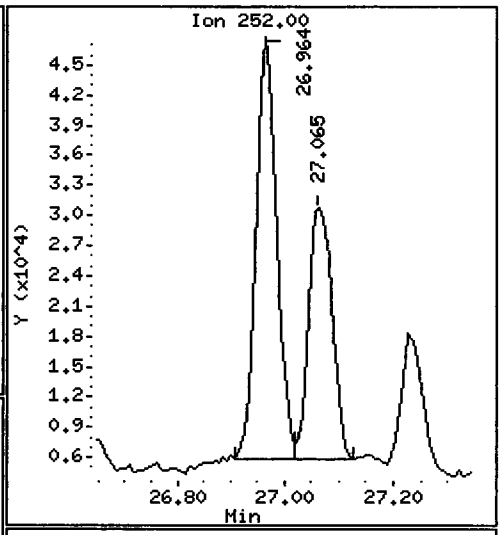
Column phase: ZB-5msi

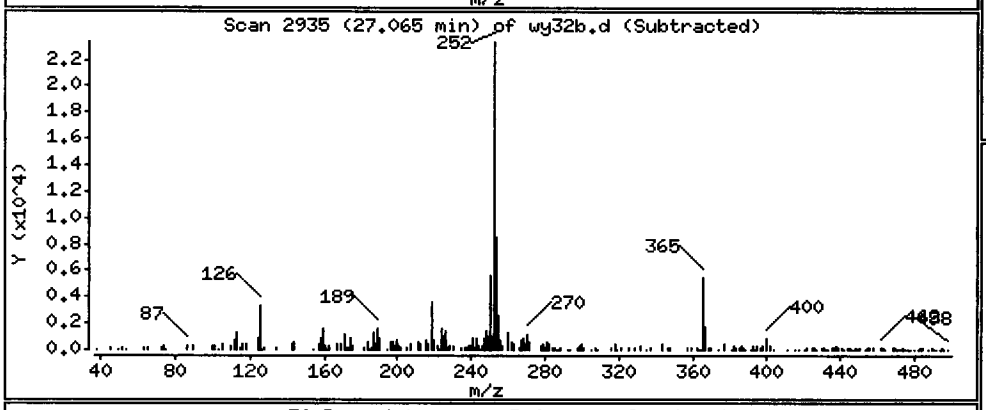
Column diameter: 0.25

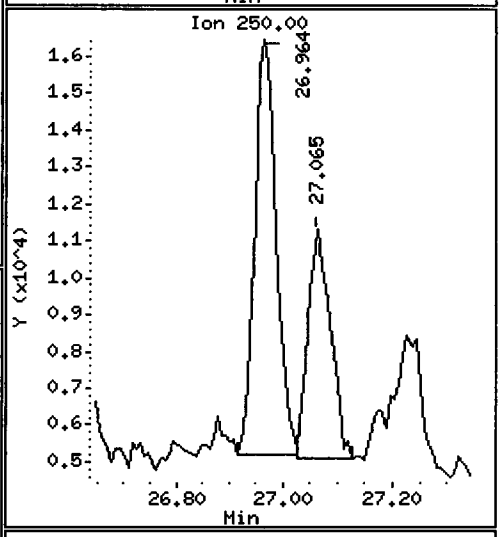
76 Benzo(a)pyrene

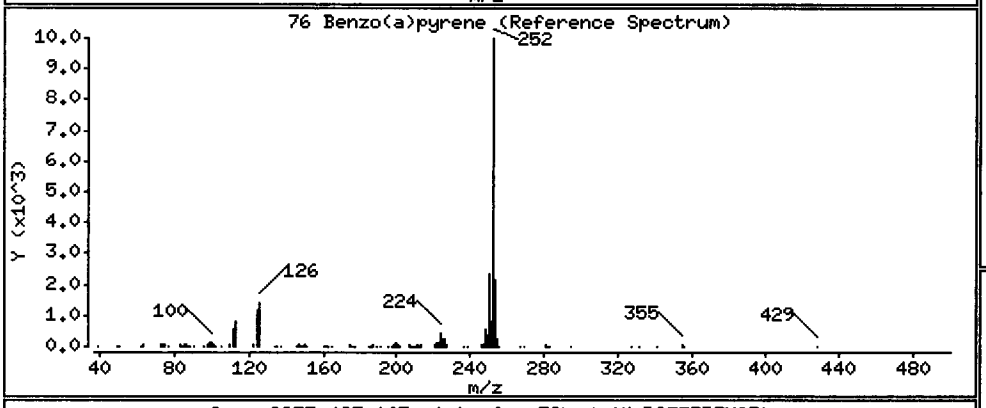
Concentration: 242.2 ug/kg

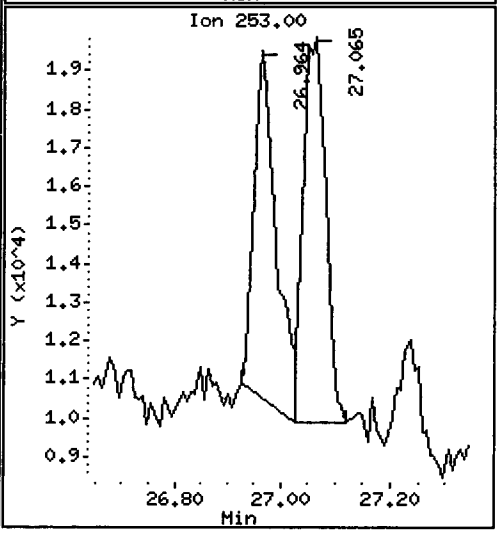


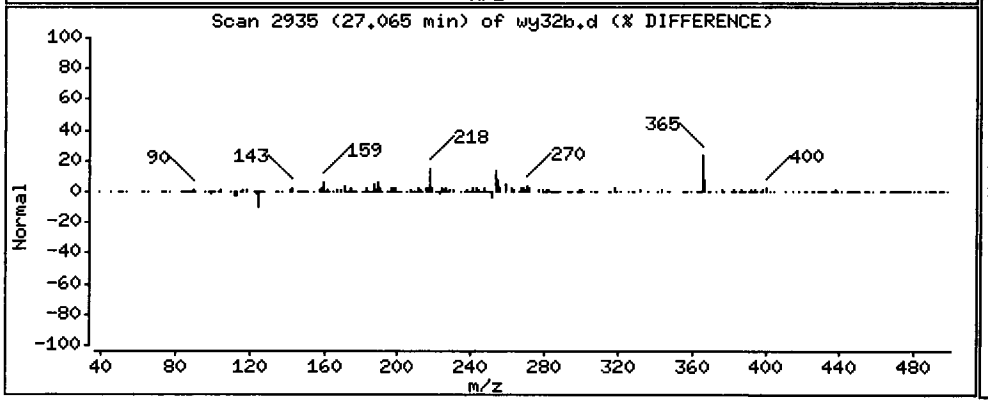












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

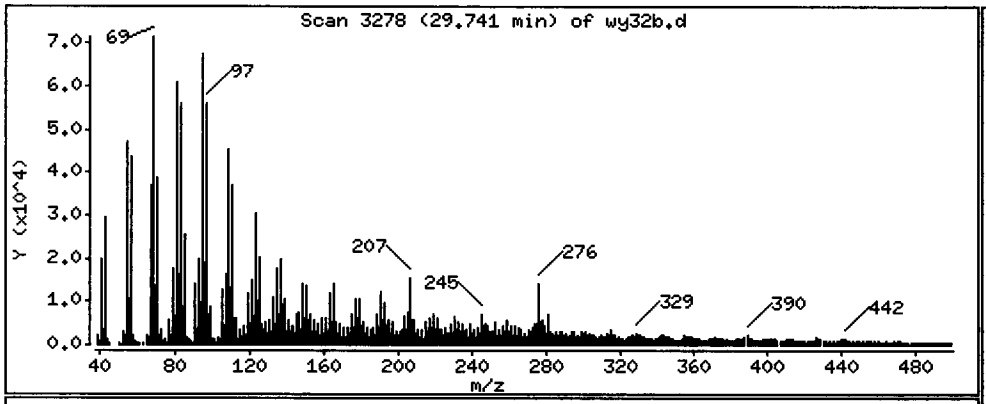
Operator: VTS/YZ

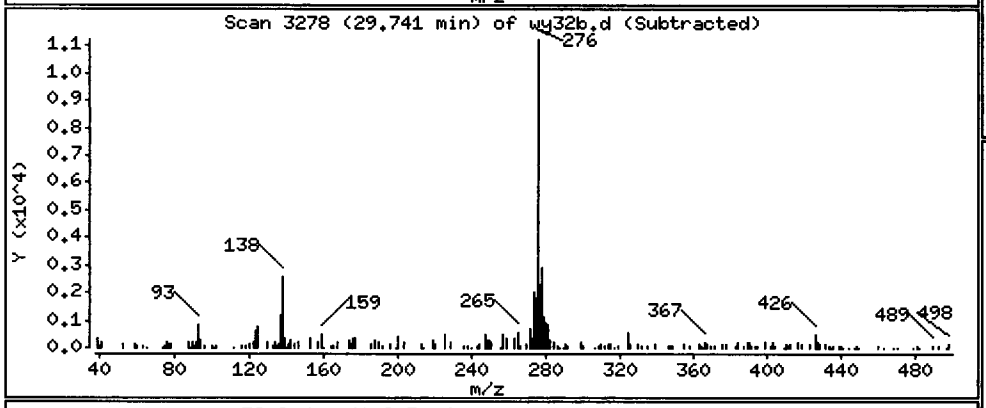
Column phase: ZB-5msi

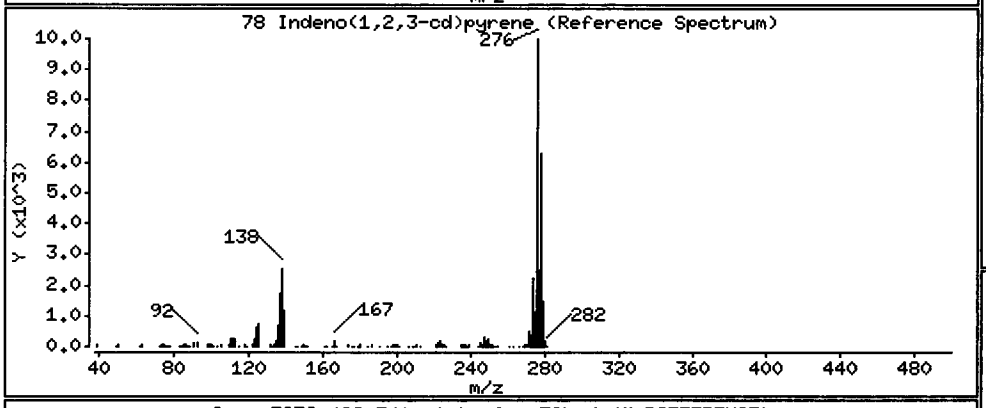
Column diameter: 0.25

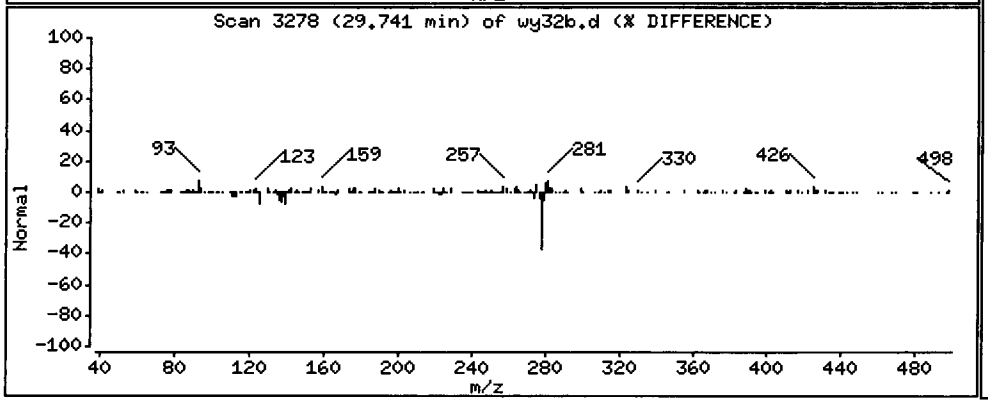
78 Indeno(1,2,3-cd)pyrene

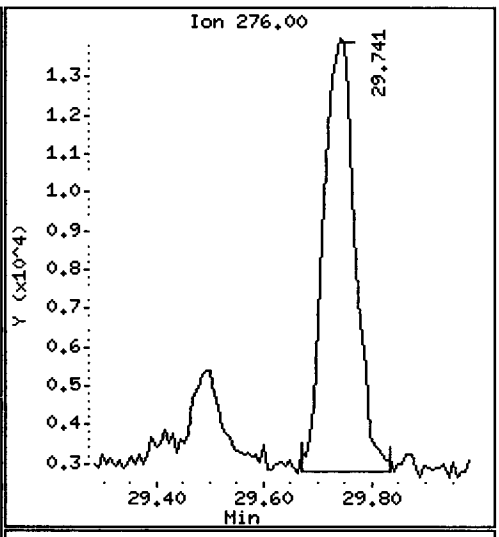
Concentration: 126.9 ug/kg

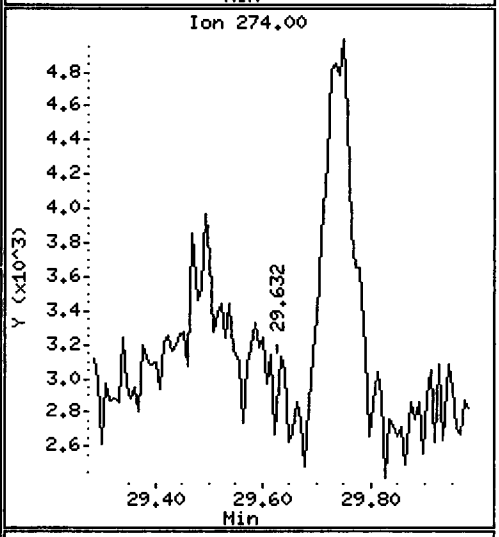


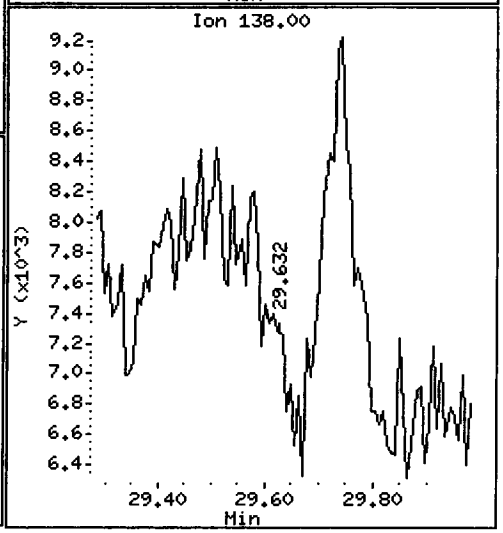












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

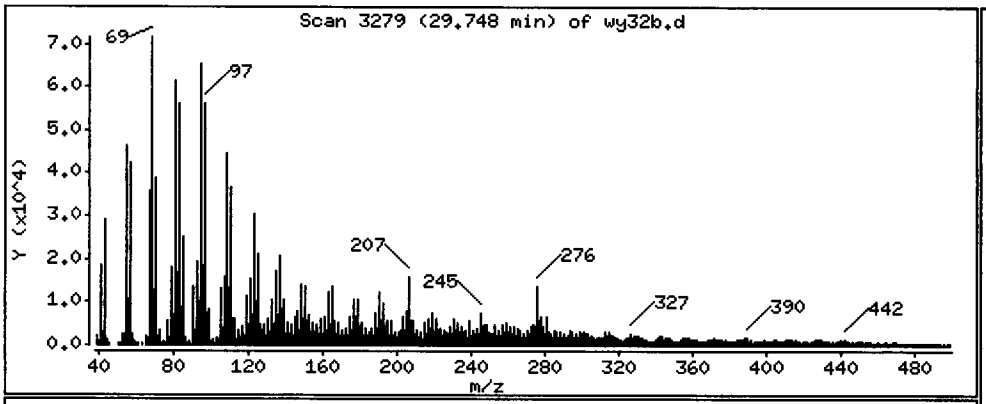
Operator: VTS/YZ

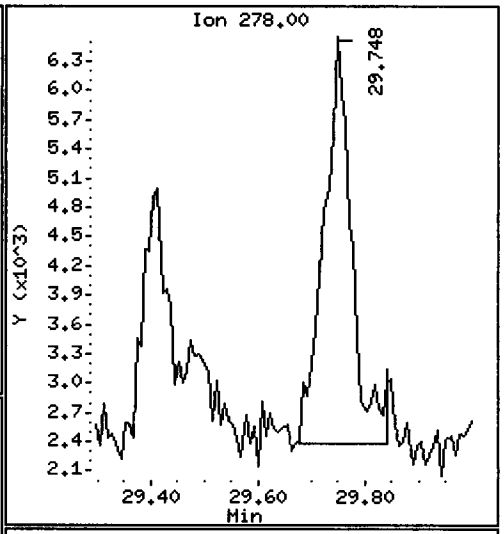
Column phase: ZB-5msi

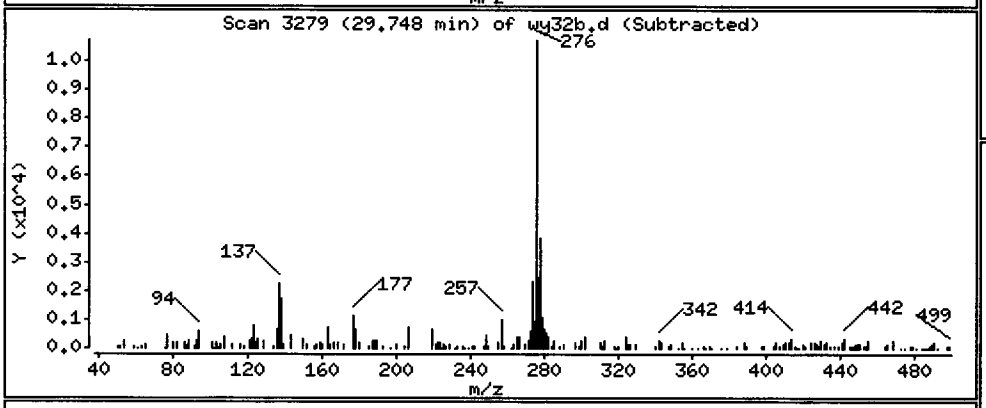
Column diameter: 0.25

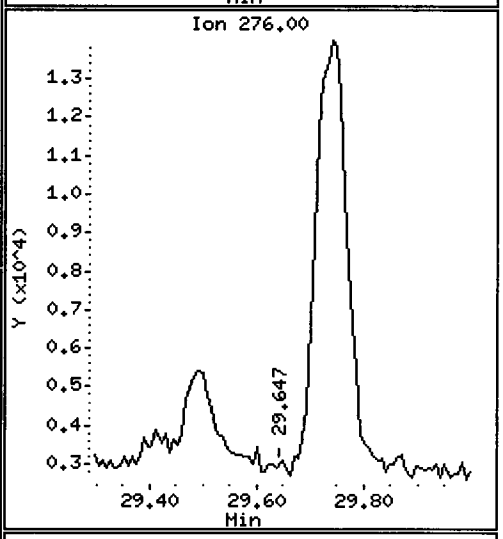
79 Dibenzo(a,h)anthracene

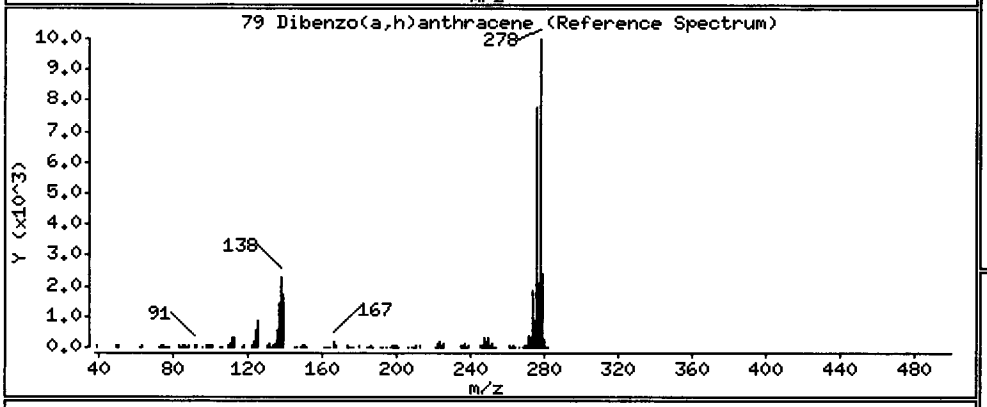
Concentration: 54.55 ug/kg

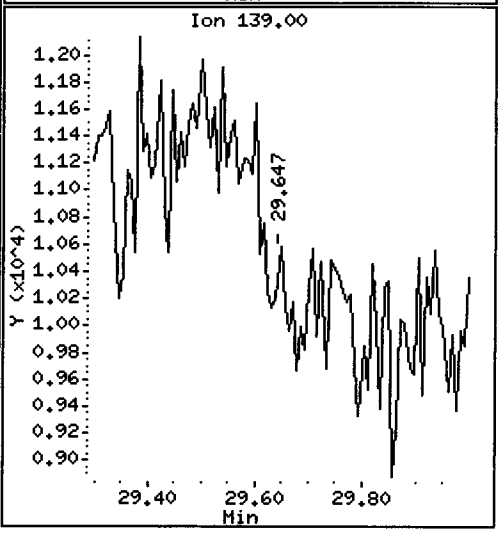


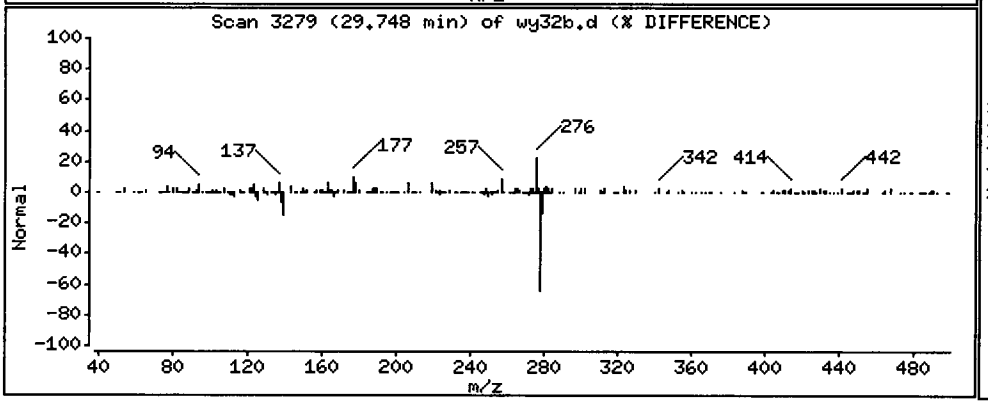












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

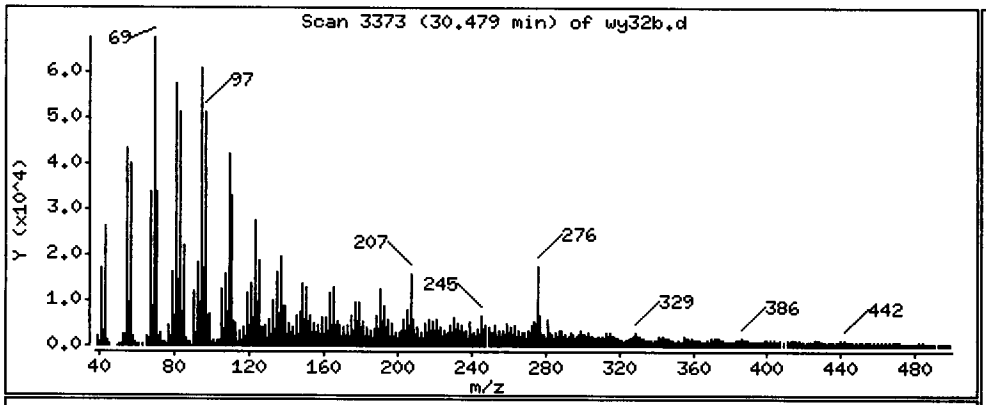
Operator: VTS/YZ

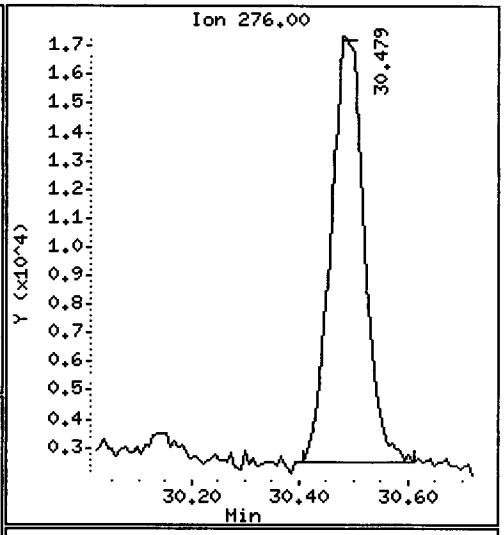
Column phase: ZB-5msi

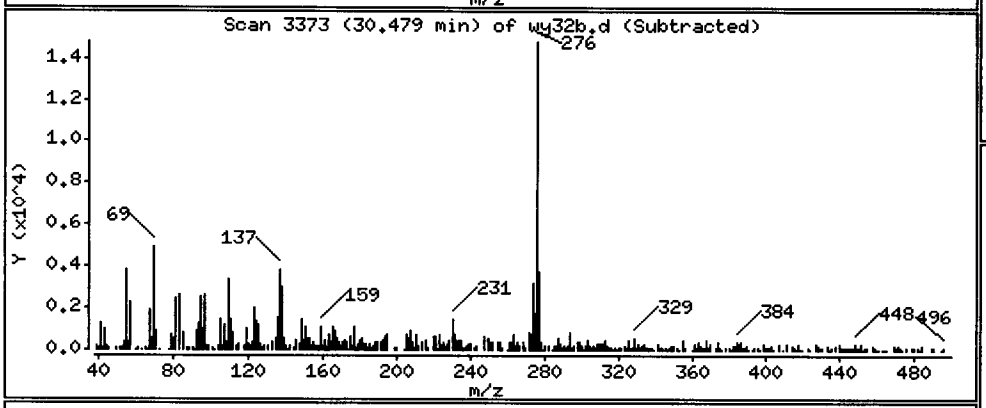
Column diameter: 0.25

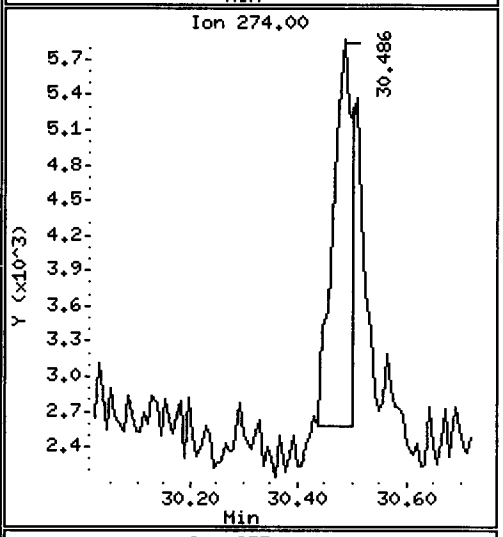
80 Benzo(g,h,i)perylene

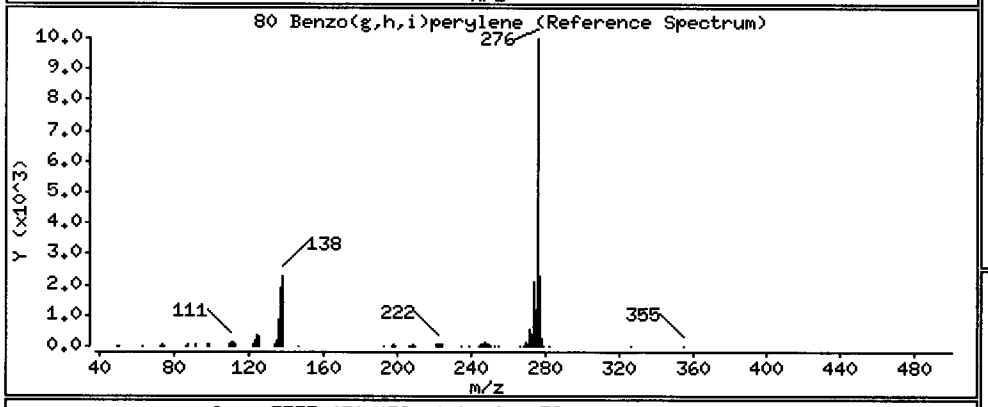
Concentration: 204.6 ug/kg

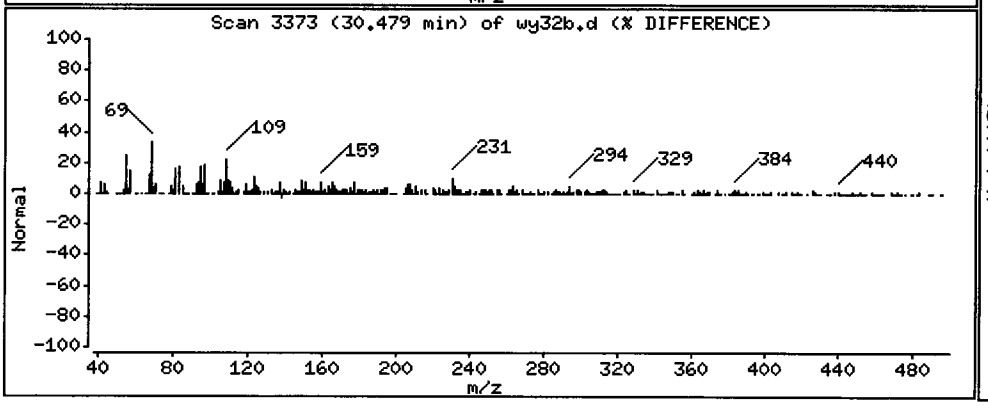


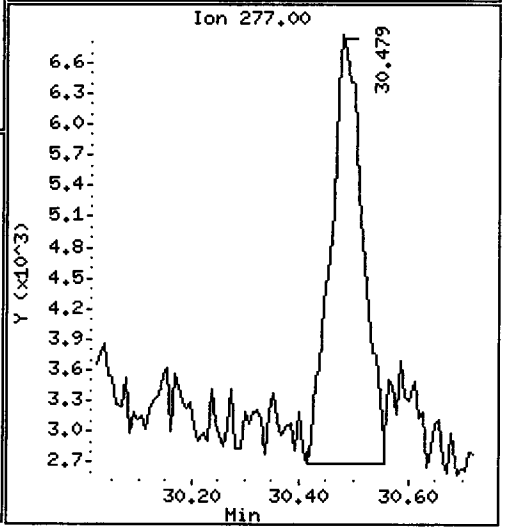












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

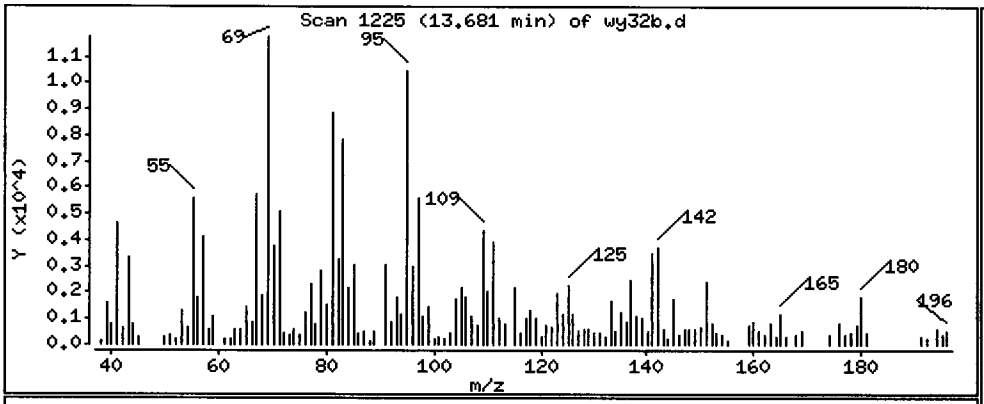
Operator: VTS/YZ

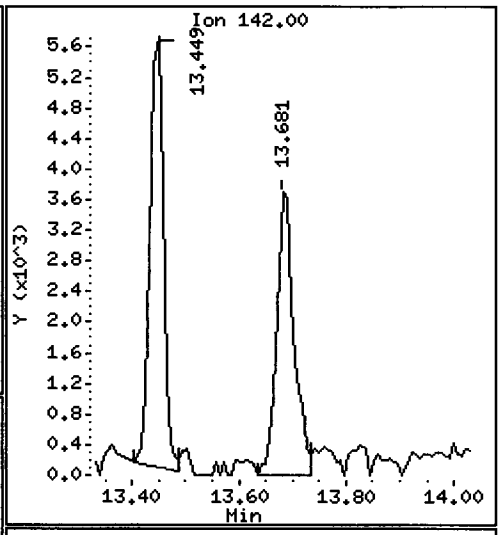
Column phase: ZB-5msi

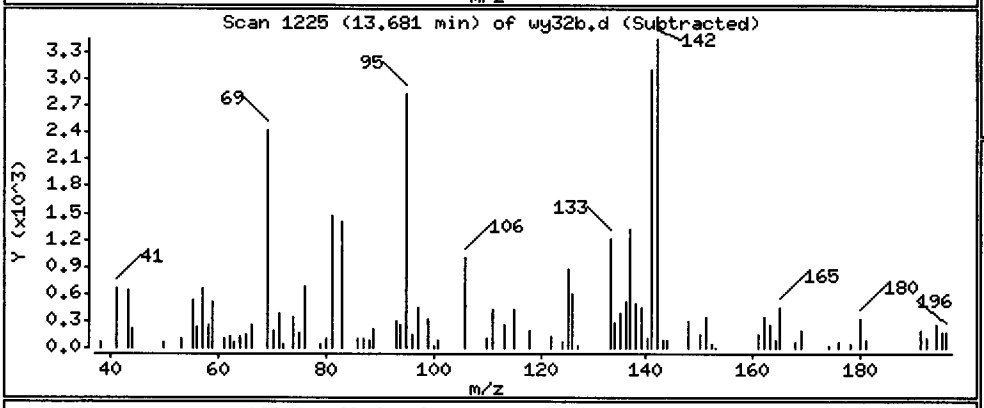
Column diameter: 0.25

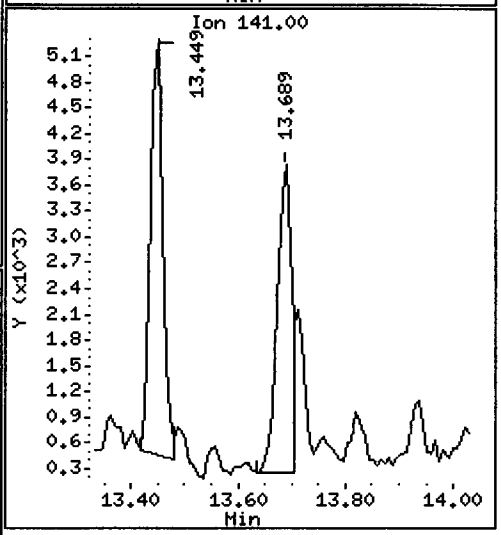
105 1-methylnaphthalene

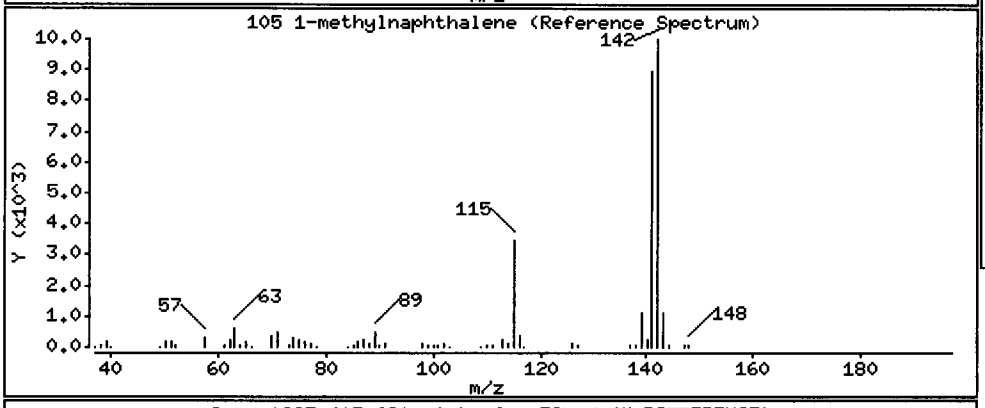
Concentration: 36.84 ug/kg

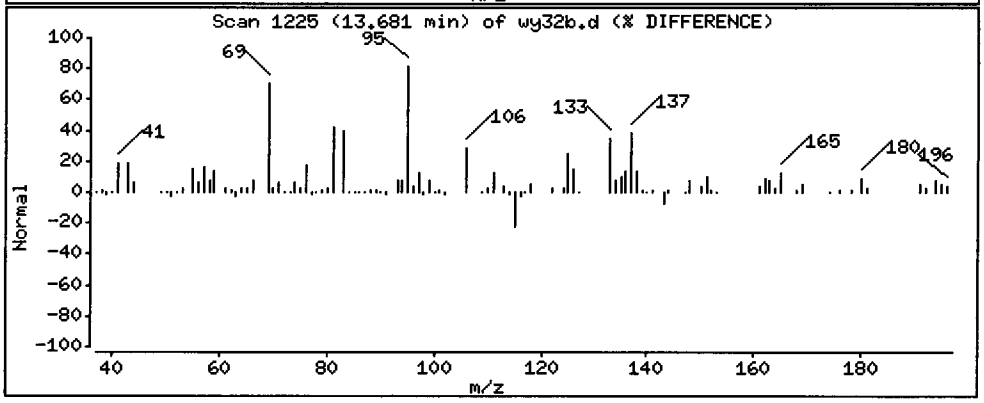












Data File: /chem1/nt10.i/20130801.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

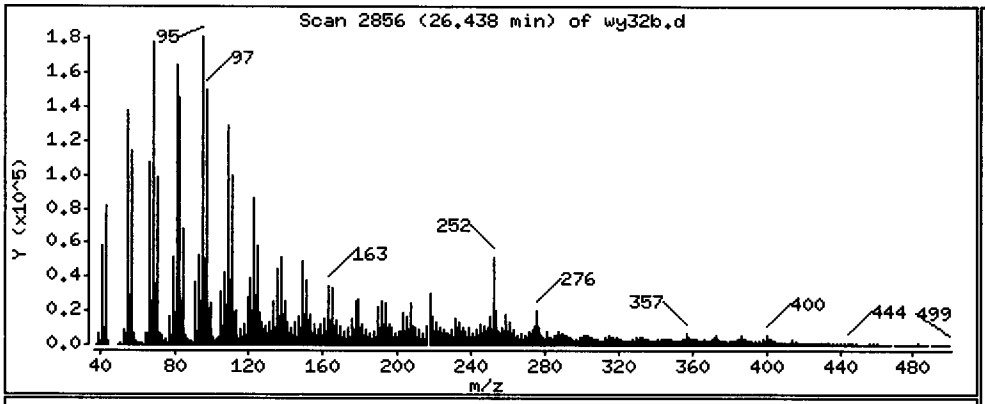
Operator: VTS/YZ

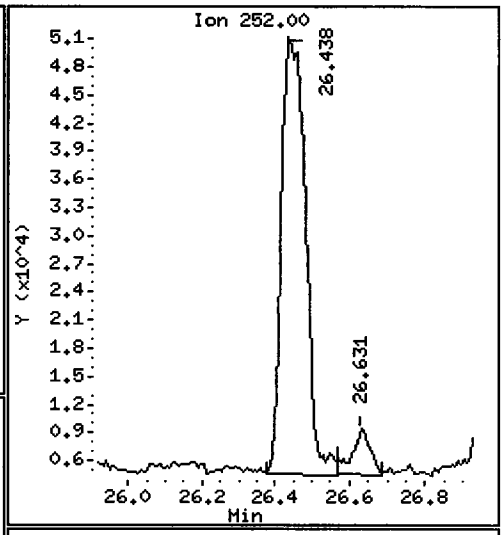
Column phase: ZB-5msi

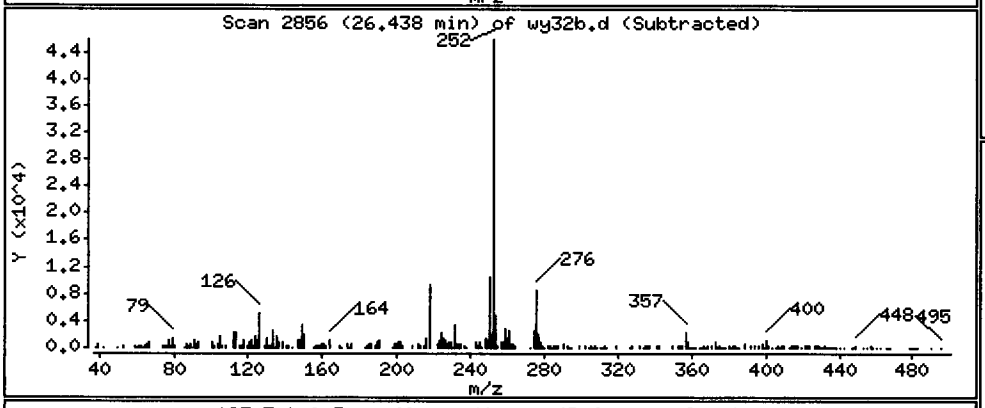
Column diameter: 0.25

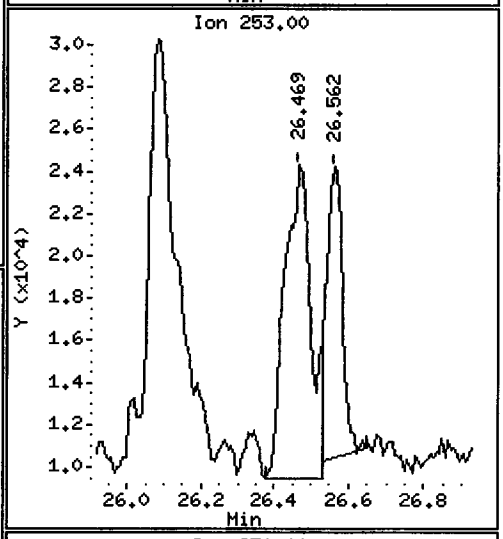
187 Total Benzofluoranthenes

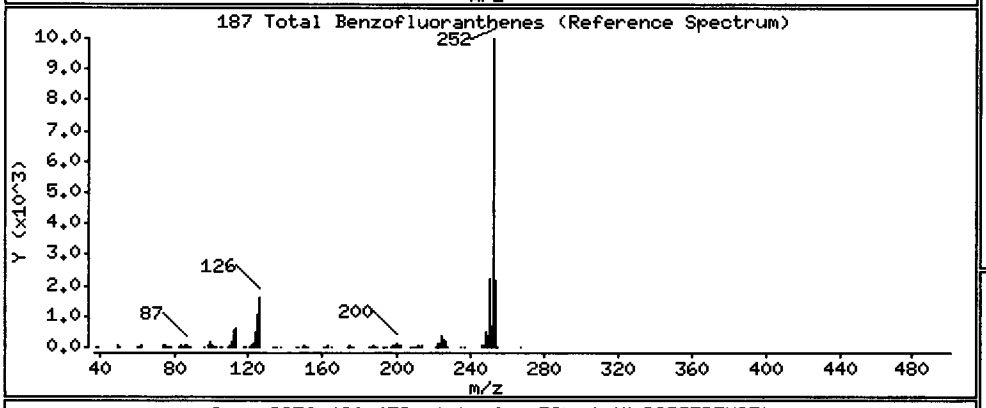
Concentration: 628.1 ug/kg

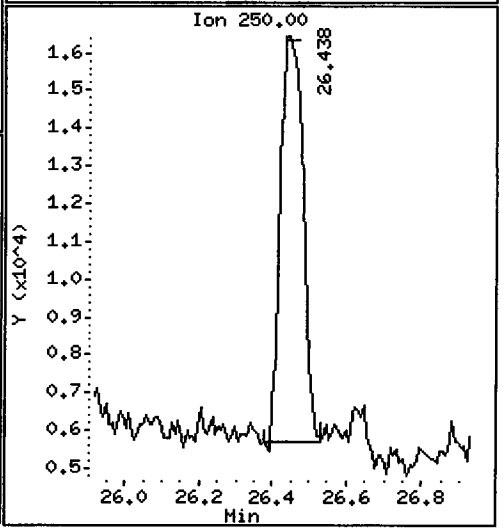


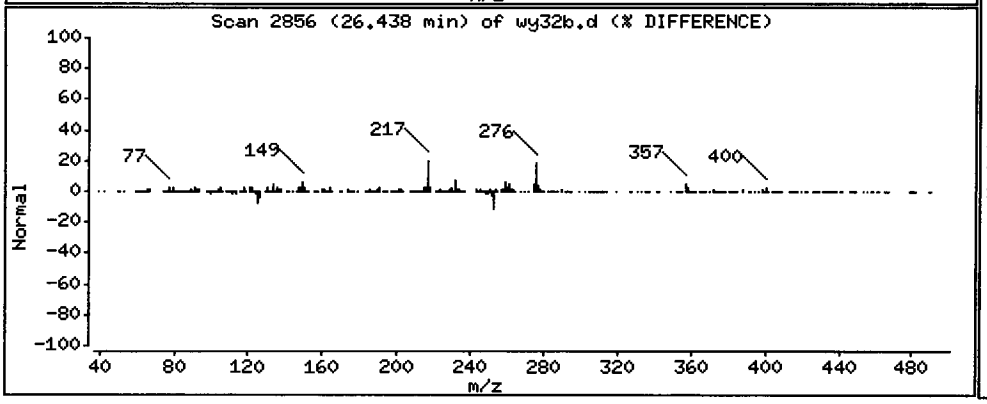






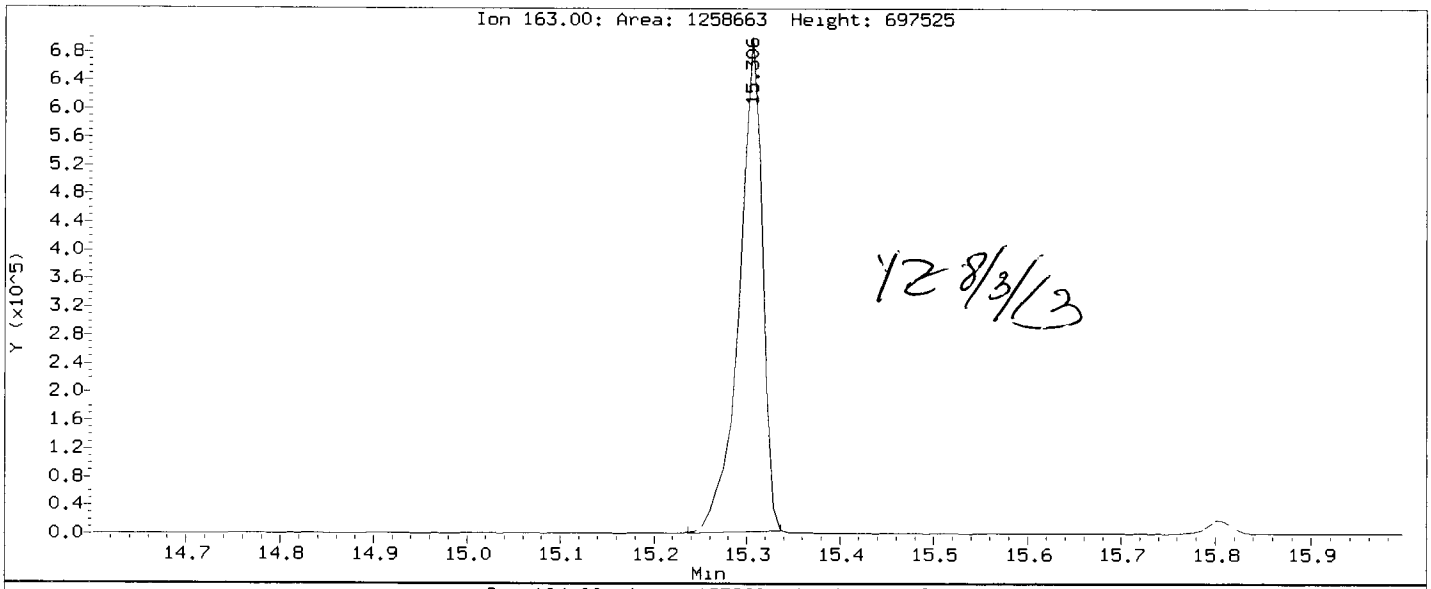




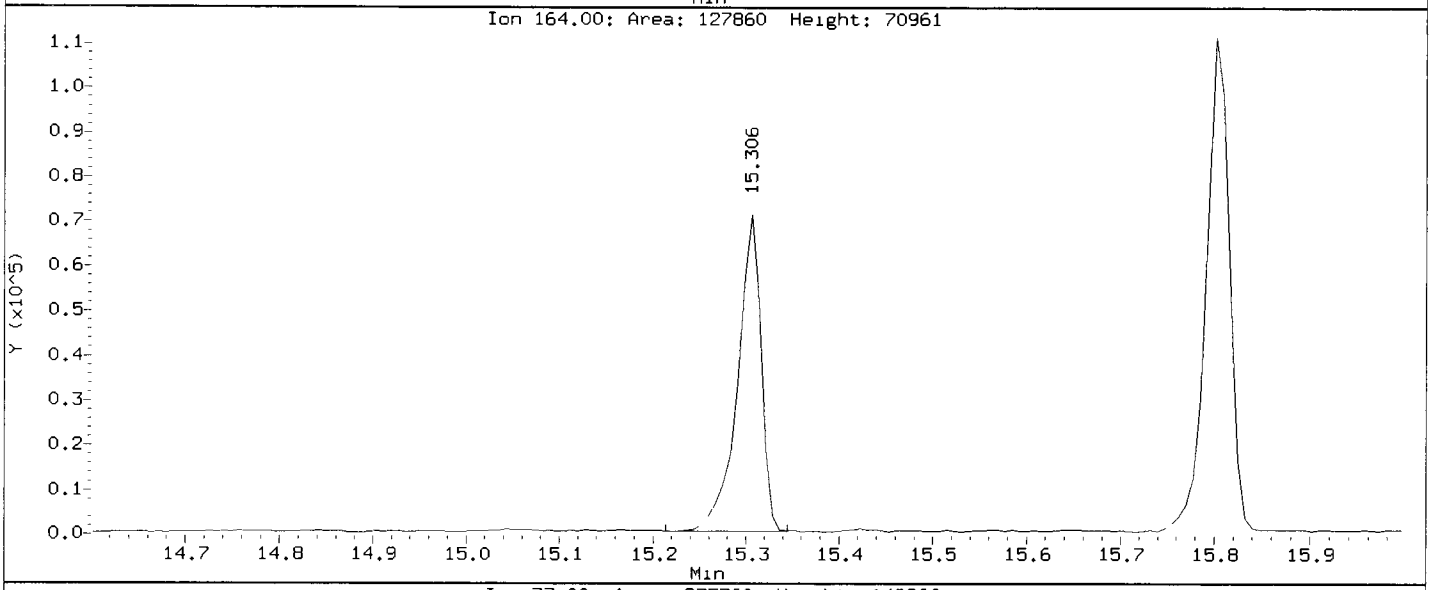


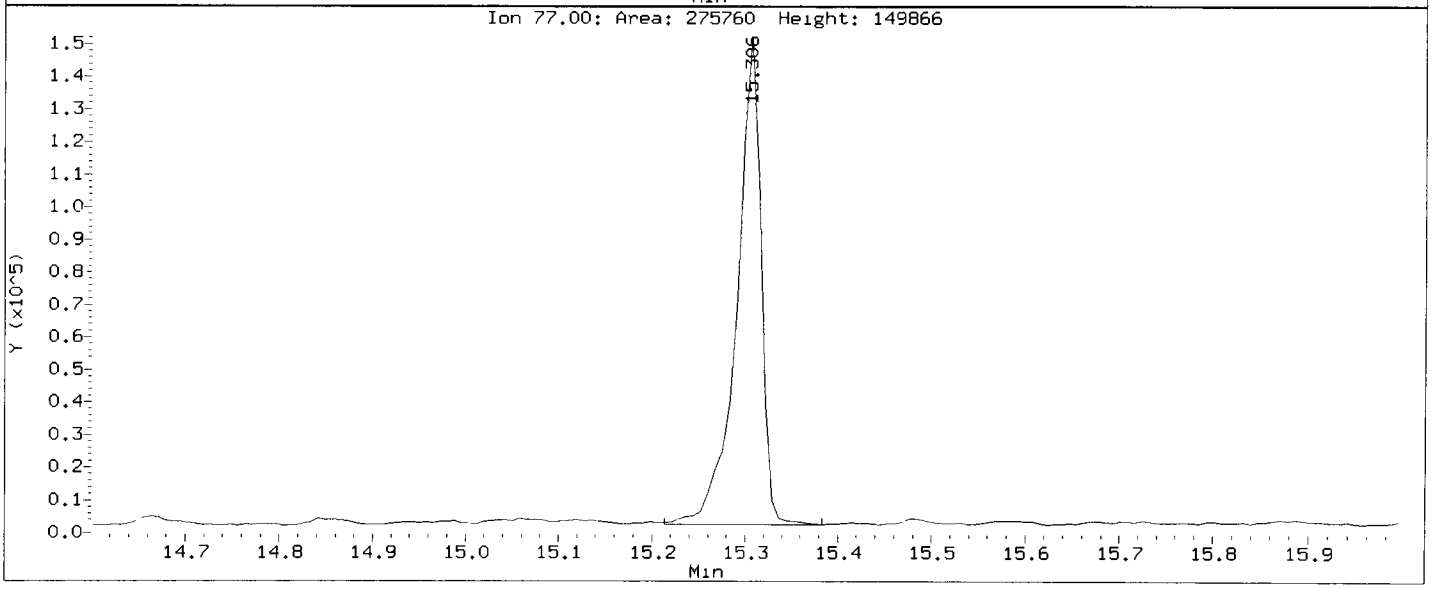
Data File: /chem1/nt10.1/20130801.b/wy32b.d
Injection Date: 01-AUG-2013 21:03
Instrument: nt10.1
Client Sample ID: UP-MHF-165-20130626

Compound: Dimethylphthalate
CAS Number: 131-11-3



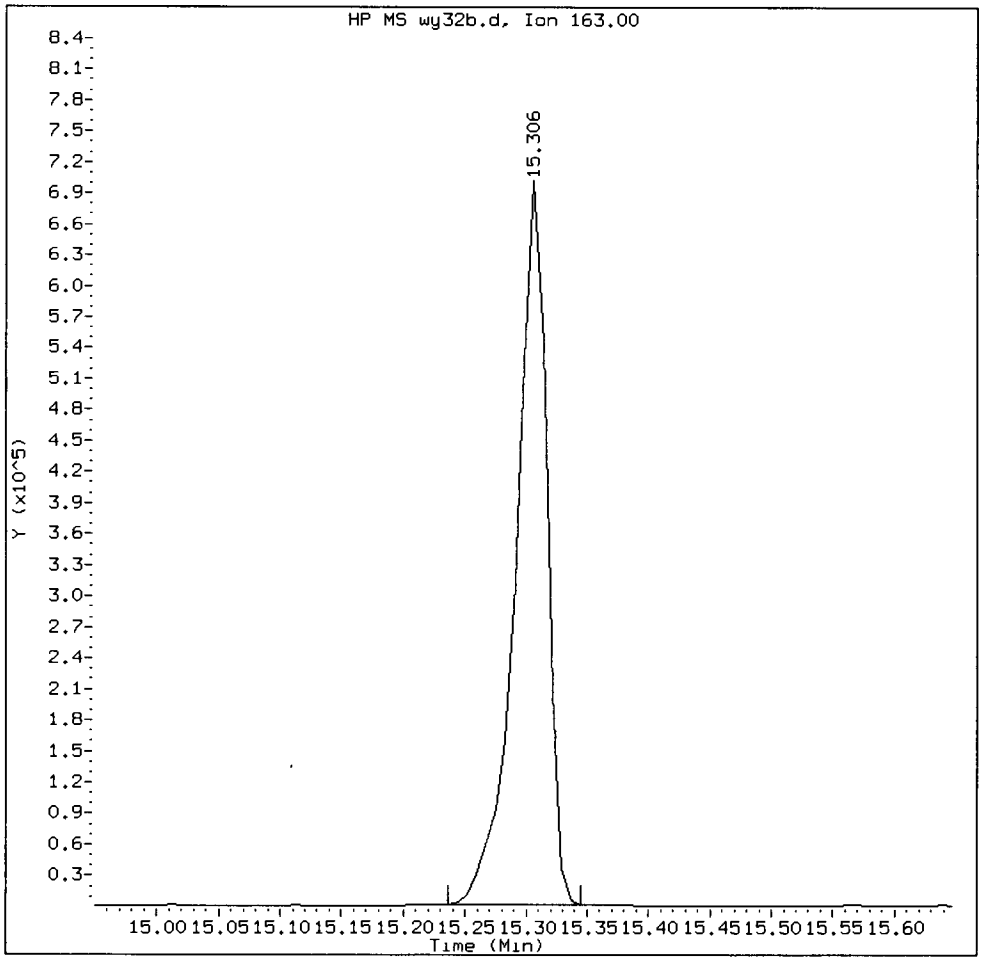
12 8/3/13





WY32B, /chem1/nt10.i/20130801.b/wy32b.d

Dimethylphthalate Amount: 20.57 Area: 1267883



MANUAL INTEGRATION for Dimethylphthalate

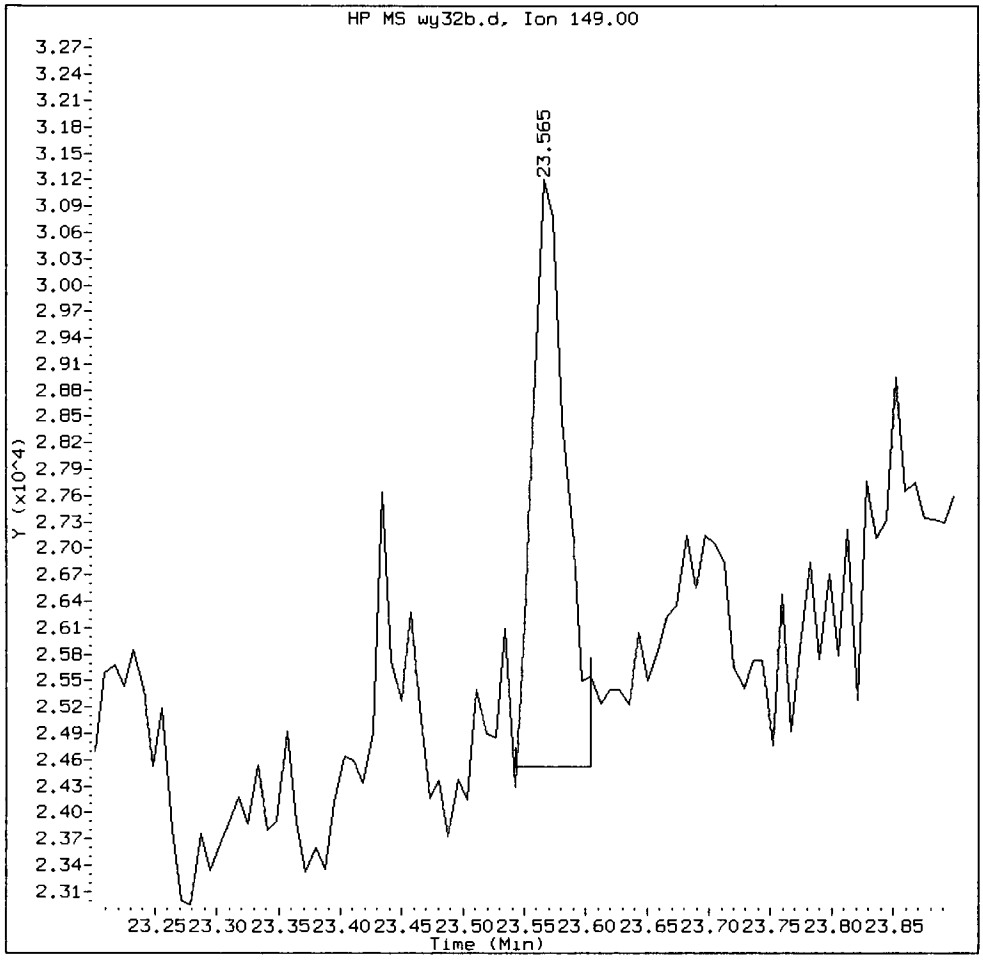
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VR Date: 8/3/13

WY32B, /chem1/nt10.i/20130801.b/wy32b.d

Butylbenzylphthalate Amount: 0.33 Area: 12906



MANUAL INTEGRATION for Butylbenzylphthalate

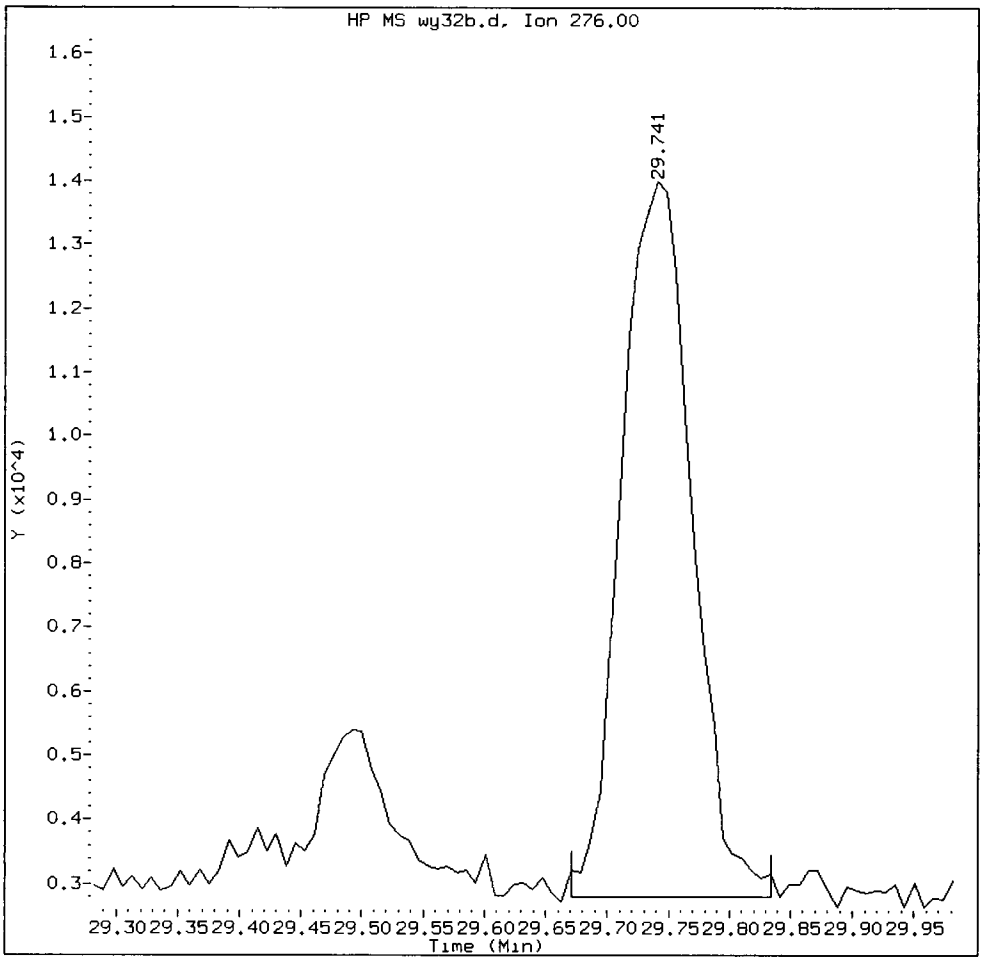
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 9/3/13

WY32B, /chem1/nt10.i/20130801.b/wy32b.d

Indeno(1,2,3-cd)pyrene Amount: 0.43 Area: 45334



MANUAL INTEGRATION for Indeno(1,2,3-cd)pyrene

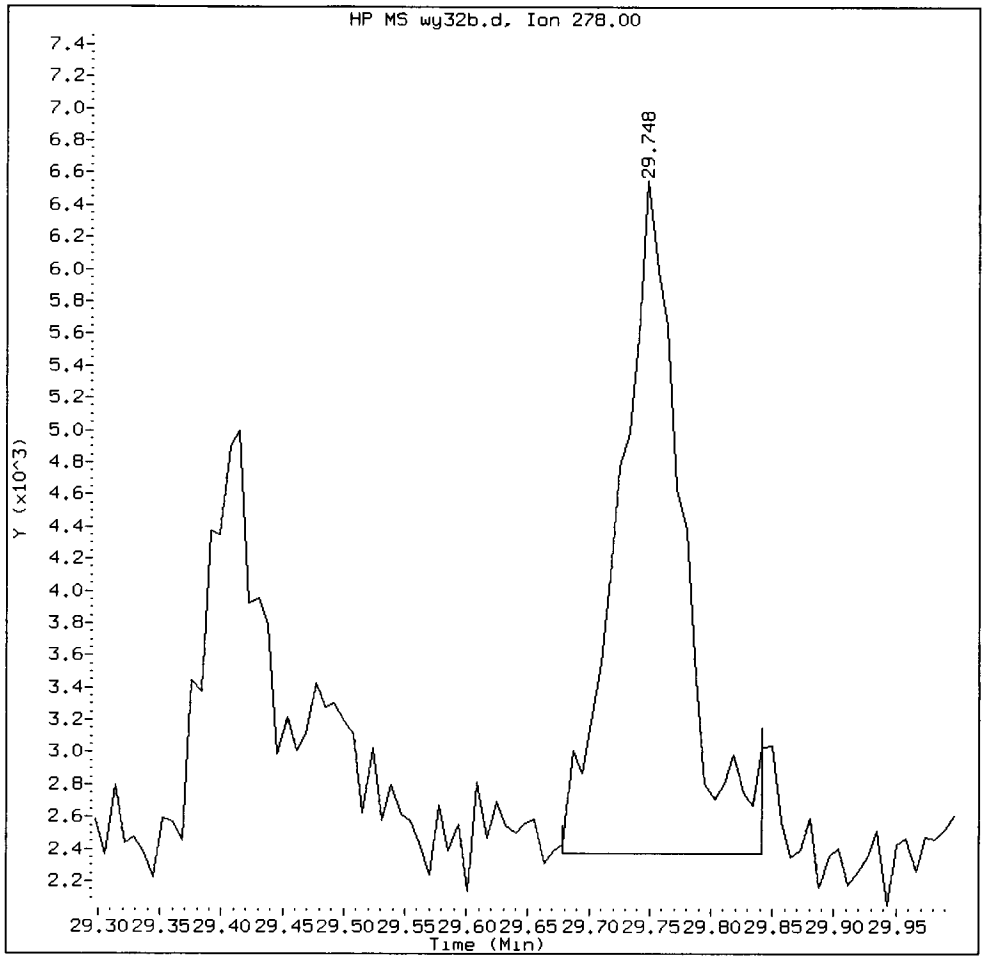
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 8/3/13

WY32B, /chem1/nt10.i/20130801.b/wy32b.d

Dibenzo(a,h)anthracene Amount: 0.19 Area: 15272



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 8/3/13

CO-ELUTION SUMMARY FOR FILE - wy32b.d

Lab ID: WY32B, Method: ABN.m, Instrument: nt10.i, Date: 01-AUG-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D YZ 8/3/13

Data file : /chem1/nt10.i/20130801.b/wy32c.d
Lab Smp Id: WY32C Client Smp ID: UP-CB-A6-20130626-S
Inj Date : 01-AUG-2013 21:41
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WY32C
Misc Info : 13-15395
Comment : 1ul Injection
Method : /chem1/nt10.i/20130801.b/ABN.m
Meth Date : 02-Aug-2013 10:37 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 12
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	6.04000	Weight of sample extracted (g)
M	29.80000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	6.875	6.859	(0.746)	81122	2.06275	1459
$	2 Phenol-d5	99	8.583	8.567	(0.931)	117231	2.22489	1574
	3 Phenol	94	8.606	8.590	(0.934)	13786	0.26009	184.0
$	5 2-Chlorophenol-d4	132	8.837	8.830	(0.959)	86887	2.31901	1641
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	9.217	9.217	(1.000)	97612	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	9.605	9.605	(1.042)	27670	1.04828	741.7
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	9.543	9.527	(1.035)	4940	0.22097	156.3
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	10.086	10.078	(1.094)	7119	0.18707 J	132.4
$	18 Nitrobenzene-d5	82	10.397	10.396	(0.874)	50055	1.14445	809.7
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.894	11.894	(1.000)	363484	4.00000	
	28 Naphthalene	128	11.933	11.932	(1.003)	31367	0.31847	225.3
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	13.449	13.441	(1.131)	19716	0.28312	200.3
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	14.308	14.300	(0.905)	100230	1.39915	989.9
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	15.298	15.298	(0.968)	9939	0.15969 J	113.0
	40 Acenaphthylene	152	15.461	15.453	(0.978)	9313	0.10083 J	71.34
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	15.801	15.801	(1.000)	190646	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	15.871	15.871	(1.004)	14333	0.26158	185.1
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	16.226	16.226	(1.027)	21875	0.27119	191.9
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	17.007	17.000	(1.076)	29256	0.42568	301.2
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	17.285	17.285	(0.905)	8302	0.21660	153.3
$	55 2,4,6-Tribromophenol	330	17.594	17.578	(1.113)	29665	2.60306	1842
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	19.100	19.092	(1.000)	303211	4.00000	
	60 Phenanthrene	178	19.155	19.139	(1.003)	240799	2.89343	2047
	61 Anthracene	178	19.255	19.247	(1.008)	39260	0.44520	315.0

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	62 Carbazole	167	19.634	19.619	(1.028)	18617	0.48555	343.5
	63 Di-n-butylphthalate	149	20.563	20.547	(1.077)	147832	1.57473	1114
	64 Fluoranthene	202	21.777	21.762	(1.140)	292392	2.86296	2026
	65 Pyrene	202	22.234	22.210	(0.905)	320183	3.03231	2145
$	66 Terphenyl-d14	244	22.574	22.551	(0.919)	71866	1.26617	895.9
	67 Butylbenzylphthalate	149	23.581	23.550	(0.960)	82825	2.20788	1562
	68 Benzo(a)anthracene	228	24.549	24.494	(0.999)	61278	0.63838	451.7
*	69 Chrysene-d12	240	24.572	24.525	(1.000)	294220	4.00000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	24.619	24.572	(1.002)	137940	1.65259	1169
	72 bis(2-Ethylhexyl)phthalate	149	24.688	24.634	(0.961)	3664905	74.0165 E	52370
*	134 Di-n-octylphthalate-d4	153	25.695	25.648	(1.000)	383510	4.00000	
	73 Di-n-octylphthalate	149	25.718	25.656	(1.001)	61412	0.65242	461.6(M)
	74 Benzo(b)fluoranthene	252	26.461	26.383	(0.972)	119565	1.26343 NAD	893.9
	75 Benzo(k)fluoranthene	252	26.461	26.422	(0.972)	119565	1.19601	846.2
	76 Benzo(a)pyrene	252	27.096	26.995	(0.996)	41413	0.49585	350.8(M)
*	77 Perylene-d12	264	27.212	27.111	(1.000)	306720	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	29.795	29.632	(1.095)	20352	0.20763	146.9(M)
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	30.541	30.370	(1.122)	55446	0.65328	462.2
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	142	13.689	13.681	(1.151)	8390	0.13220 J	93.53
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	26.461	26.422	(0.972)	120951	1.30351	922.3(M)
	99 Perylene	252	Compound Not Detected.					
	98 Retene	219	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wy32c.d
Lab Smp Id: WY32C
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130801.b/ABN.m
Misc Info: 13-15395

Calibration Date: 01-AUG-2013
Calibration Time: 15:22
Client Smp ID: UP-CB-A6-2013062
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	123587	61794	247174	97612	-21.02
27 Naphthalene-d8	446161	223080	892322	363484	-18.53
42 Acenaphthene-d10	267600	133800	535200	190646	-28.76
59 Phenanthrene-d10	460929	230464	921858	303211	-34.22
69 Chrysene-d12	439520	219760	879040	294220	-33.06
134 Di-n-octylphthala	593075	296538	1186150	383510	-35.34
77 Perylene-d12	451599	225800	903198	306720	-32.08

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.22	8.72	9.72	9.22	0.00
27 Naphthalene-d8	11.89	11.39	12.39	11.89	0.00
42 Acenaphthene-d10	15.80	15.30	16.30	15.80	0.00
59 Phenanthrene-d10	19.09	18.59	19.59	19.10	0.04
69 Chrysene-d12	24.53	24.03	25.03	24.57	0.19
134 Di-n-octylphthala	25.65	25.15	26.15	25.69	0.18
77 Perylene-d12	27.11	26.61	27.61	27.21	0.37

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

Analytical Resources, Inc.

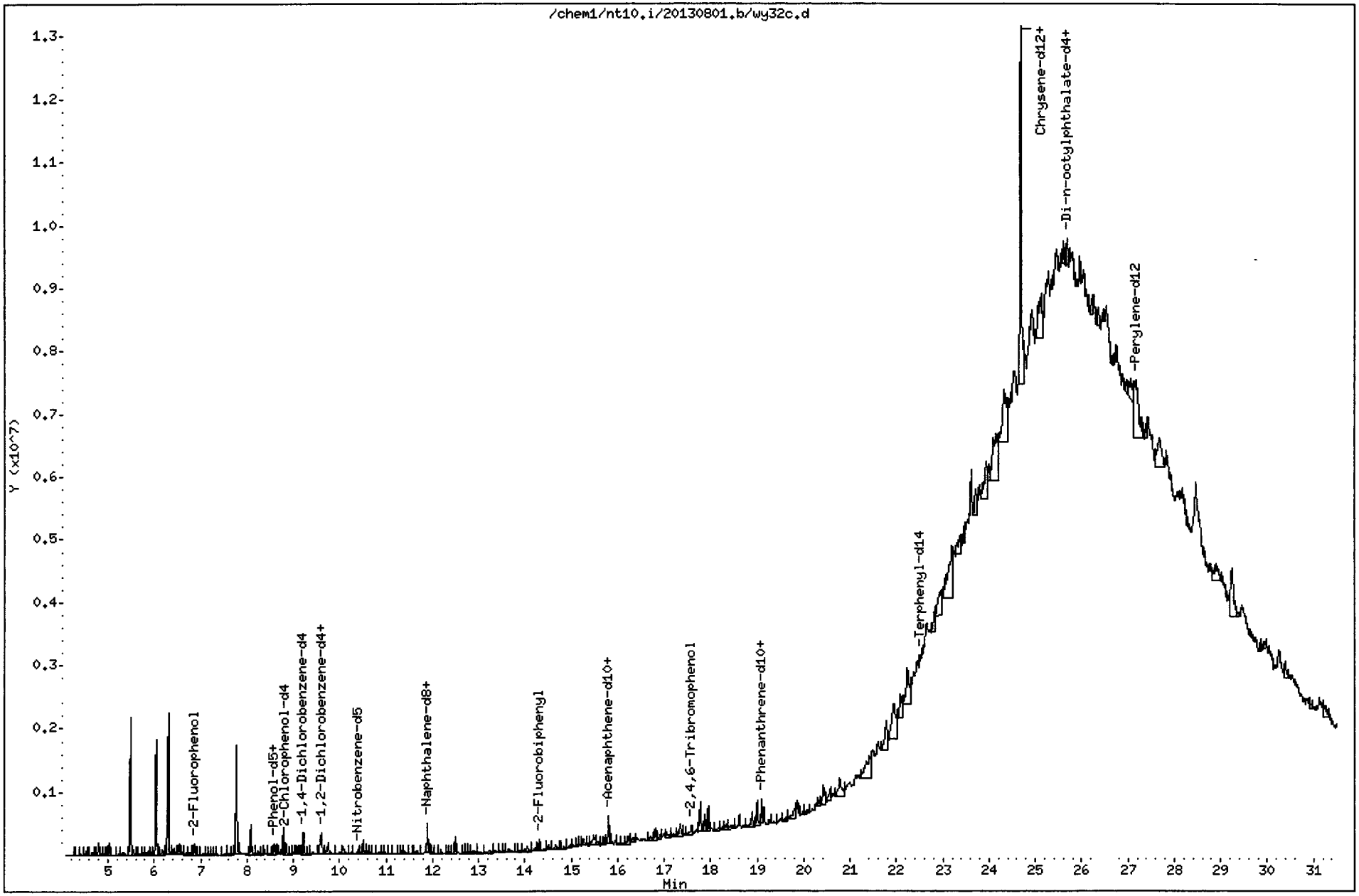
RECOVERY REPORT

Client Name: SAIC
Client SDG: WY32
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WY32C
Client Smp ID: UP-CB-A6-20130626-S
Level: LOW
Operator: VTS/YZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: PSDDALCS.spk
Quant Type: ISTD
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130801.b/ABN.m
Misc Info: 13-15395

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	1769	1459	82.51	27-120
$ 2 Phenol-d5	1769	1574	89.00	29-120
$ 5 2-Chlorophenol-d4	1769	1641	92.76	31-120
$ 10 1,2-Dichlorobenzen	1179	741.7	62.90	32-120
$ 18 Nitrobenzene-d5	1179	809.7	68.67	30-120
$ 36 2-Fluorobiphenyl	1179	989.9	83.95	35-120
$ 55 2,4,6-Tribromophen	1769	1842	104.12	24-134
$ 66 Terphenyl-d14	1179	895.9	75.97	37-120

Data File: /chem1/nt10.i/20130801.b/wy32c.d
Date : 01-AUG-2013 21:41
Client ID: UP-CB-A6-20130626-S
Sample Info: WY32C
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

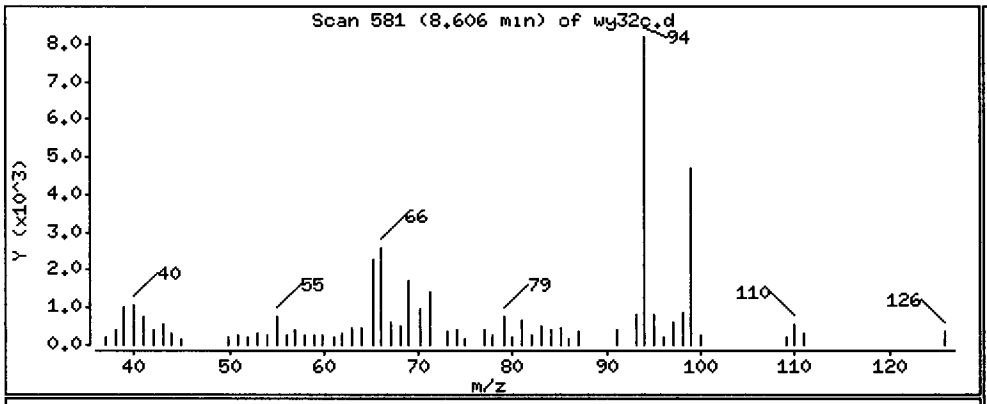
Operator: VTS/YZ

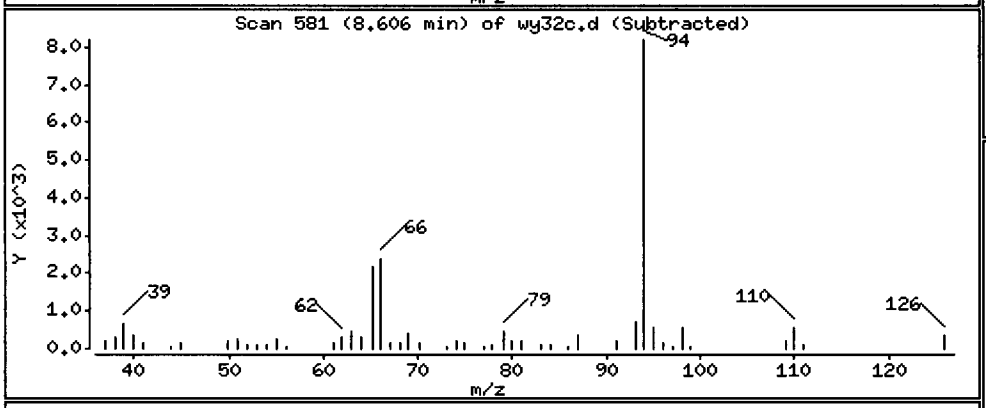
Column phase: ZB-5ms

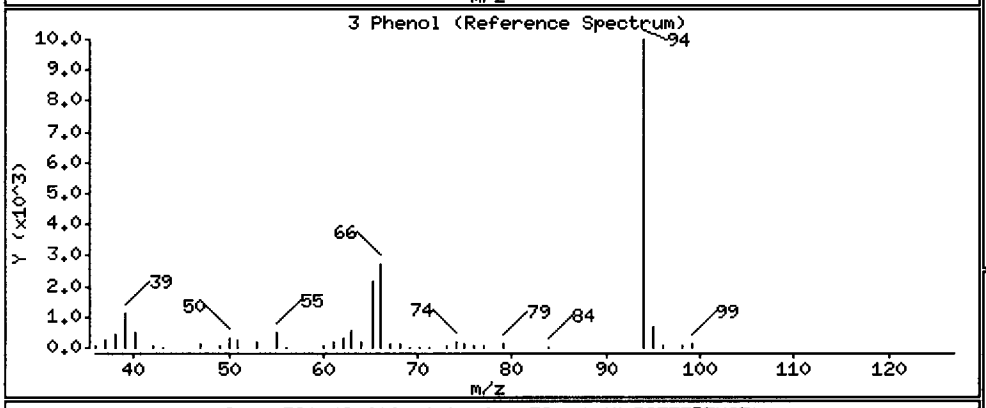
Column diameter: 0.25

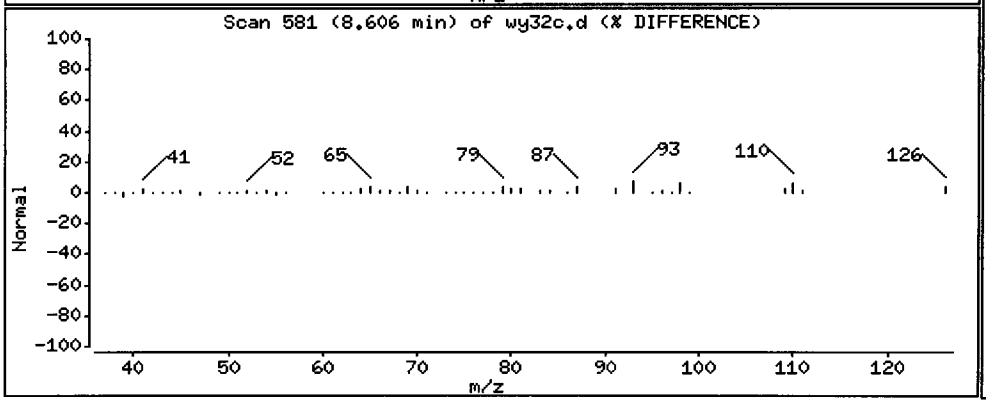
3 Phenol

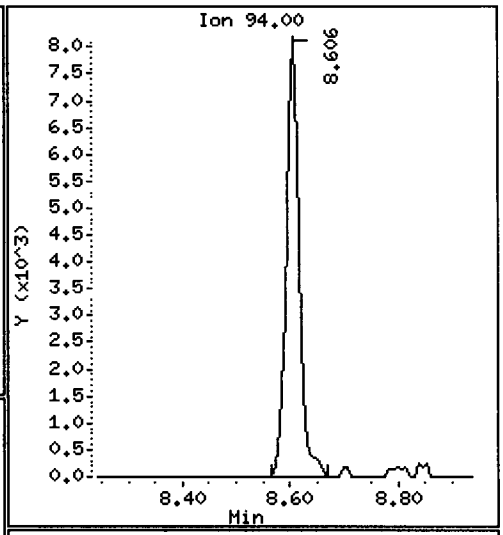
Concentration: 184.0 ug/kg

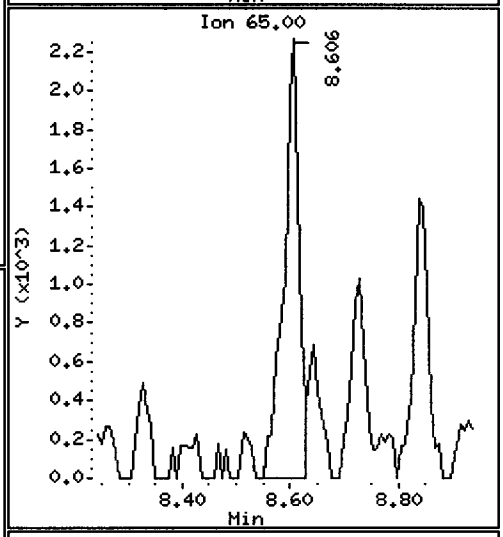


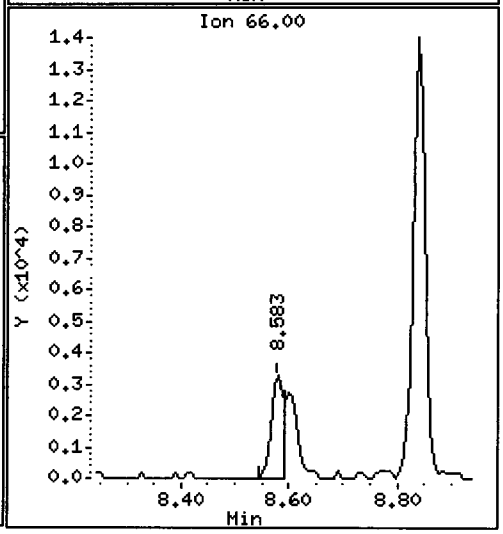












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

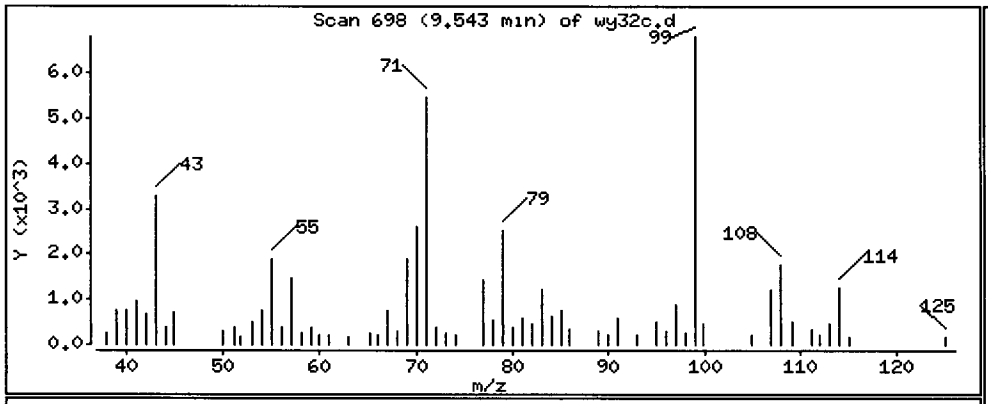
Operator: VTS/YZ

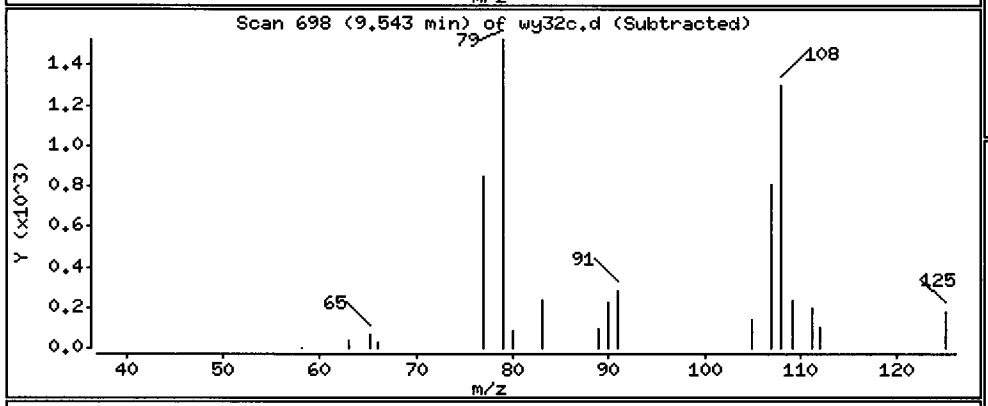
Column phase: ZB-5msi

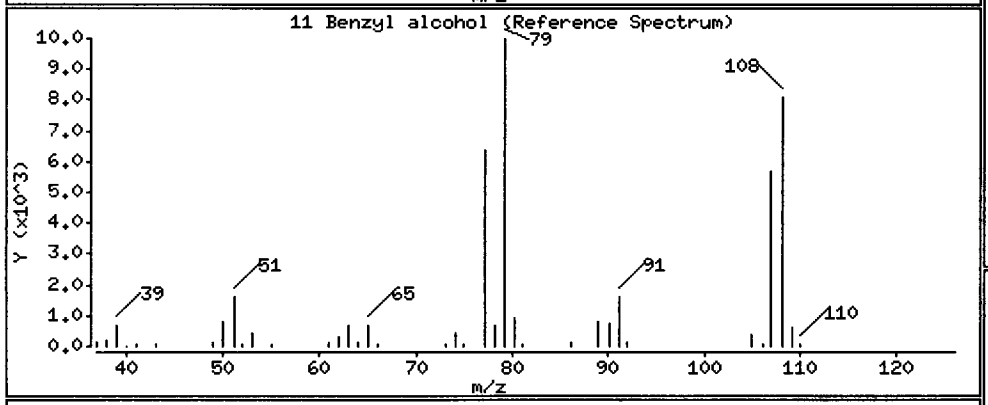
Column diameter: 0.25

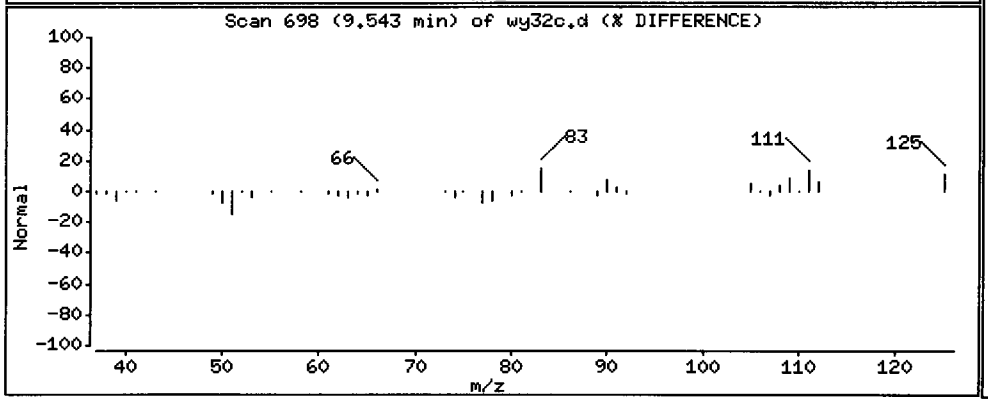
11 Benzyl alcohol

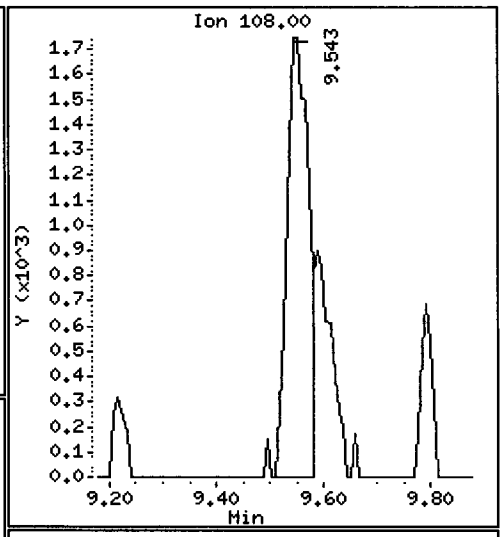
Concentration: 156.3 ug/kg

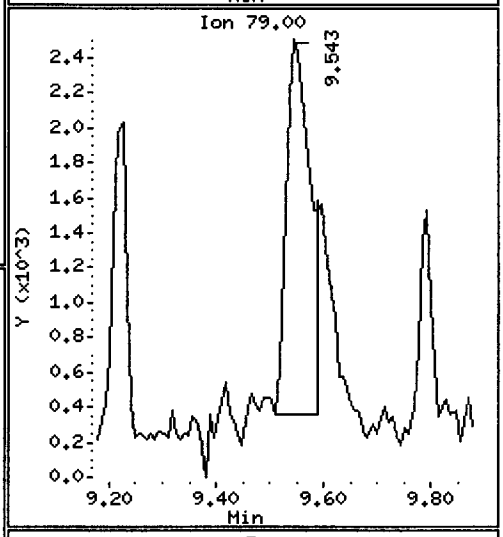


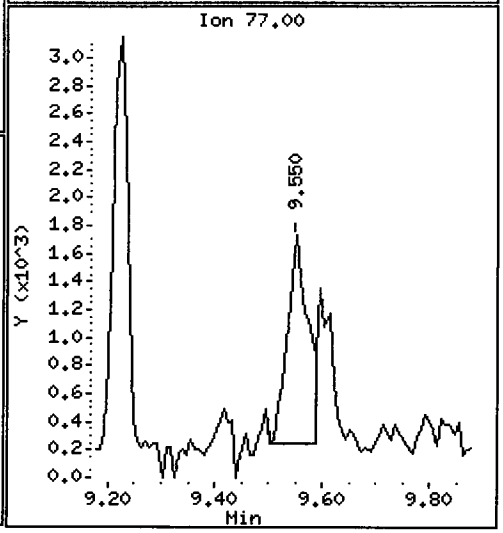












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

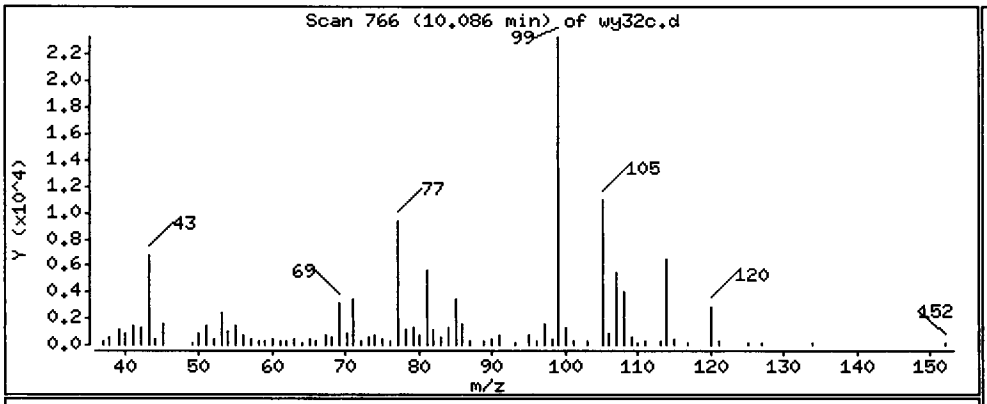
Operator: VTS/YZ

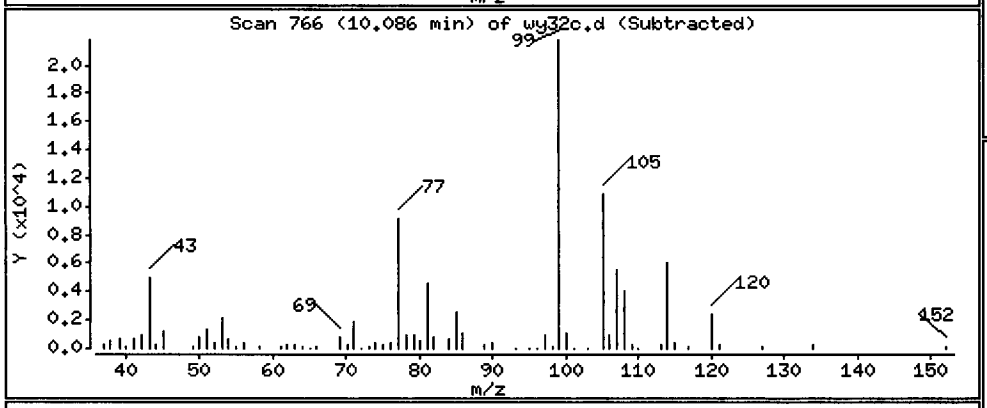
Column phase: ZB-5msi

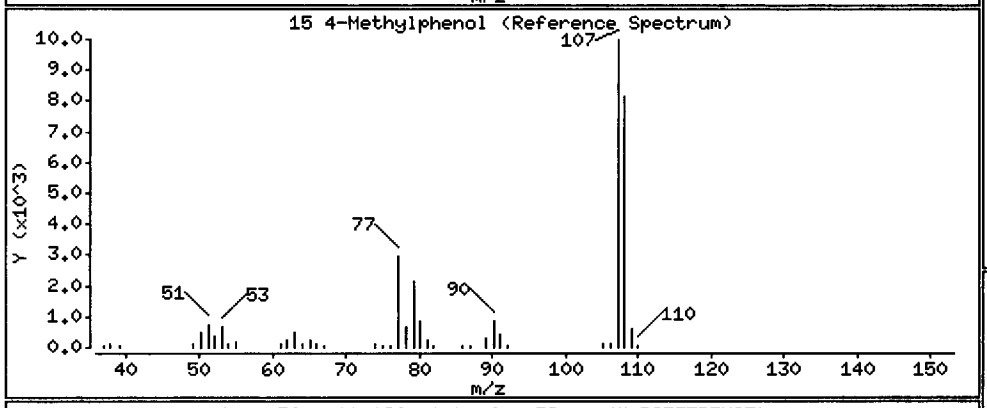
Column diameter: 0.25

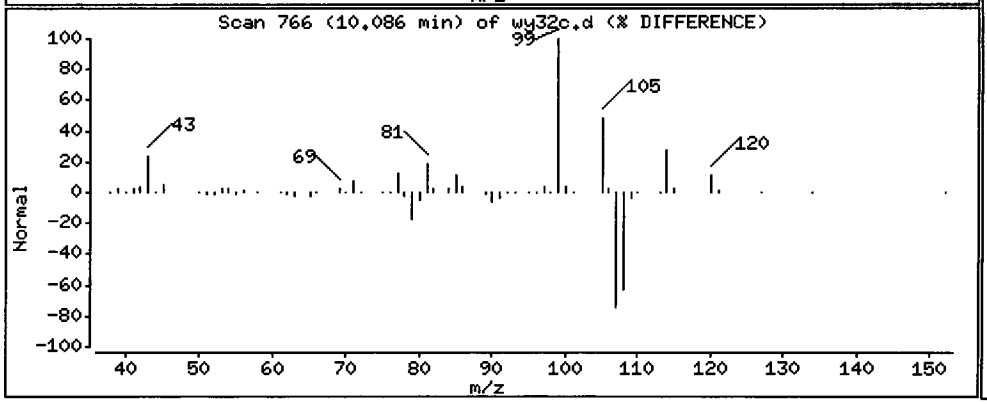
15 4-Methylphenol

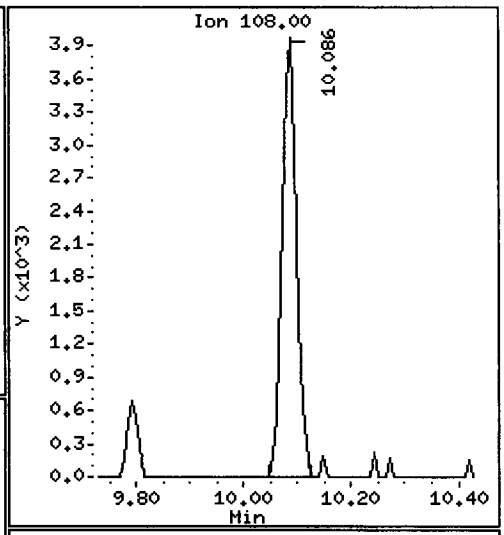
Concentration: 132.4 ug/kg

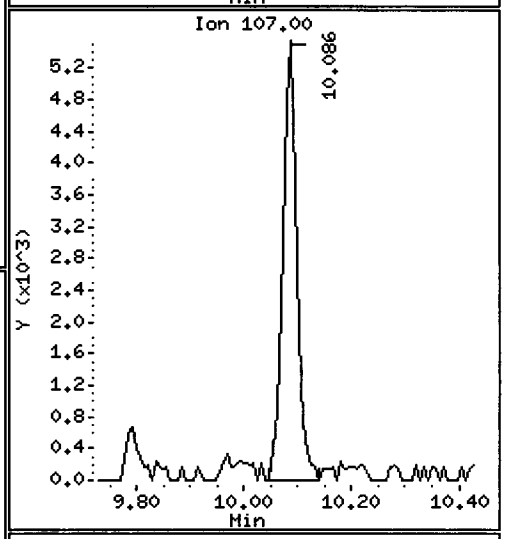


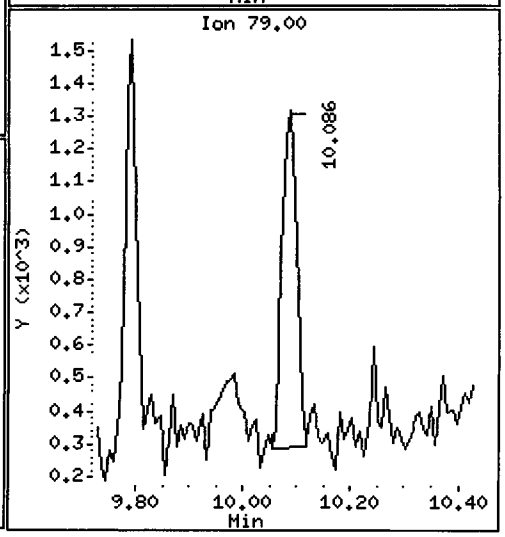












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

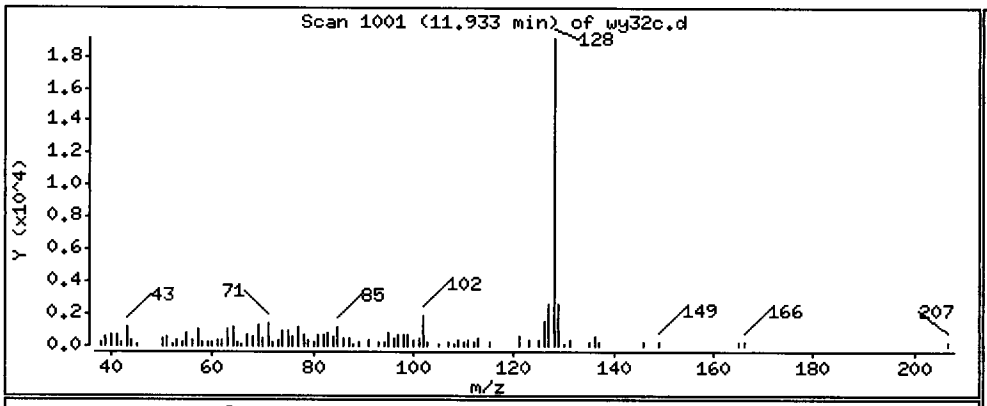
Operator: VTS/YZ

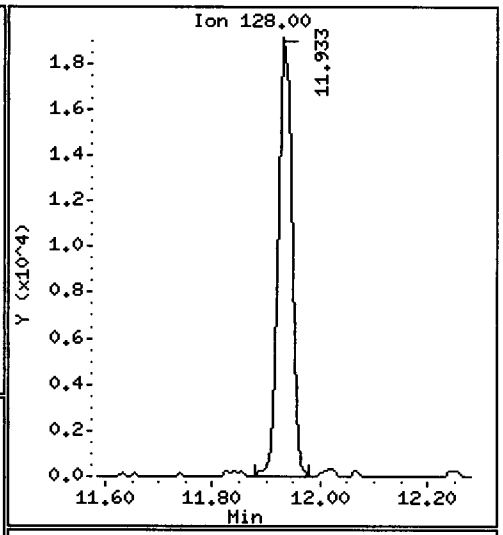
Column phase: ZB-5msi

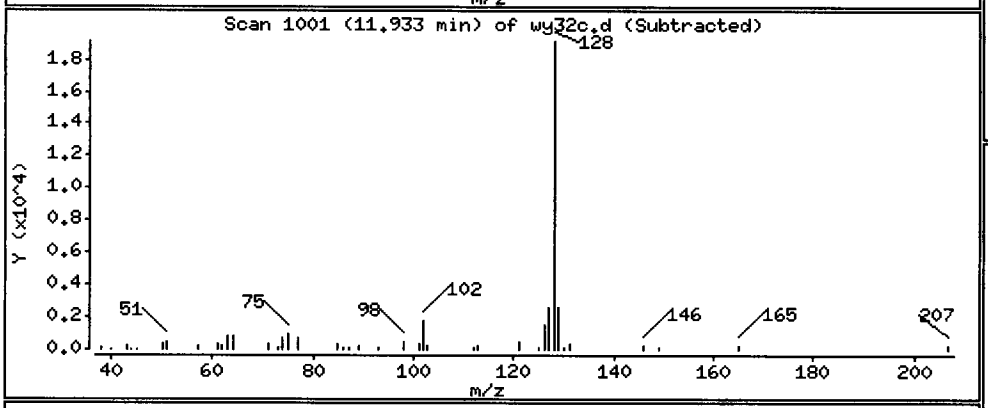
Column diameter: 0.25

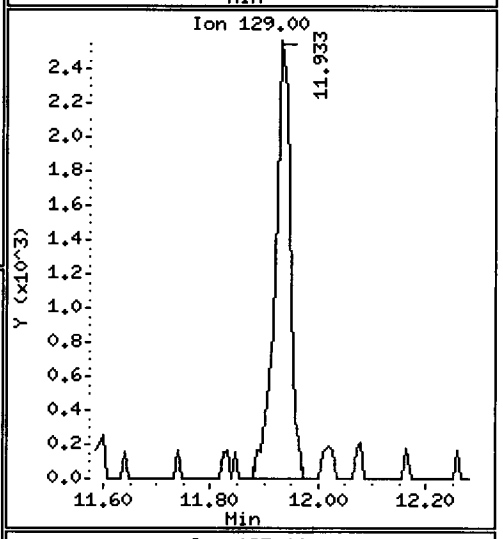
28 Naphthalene

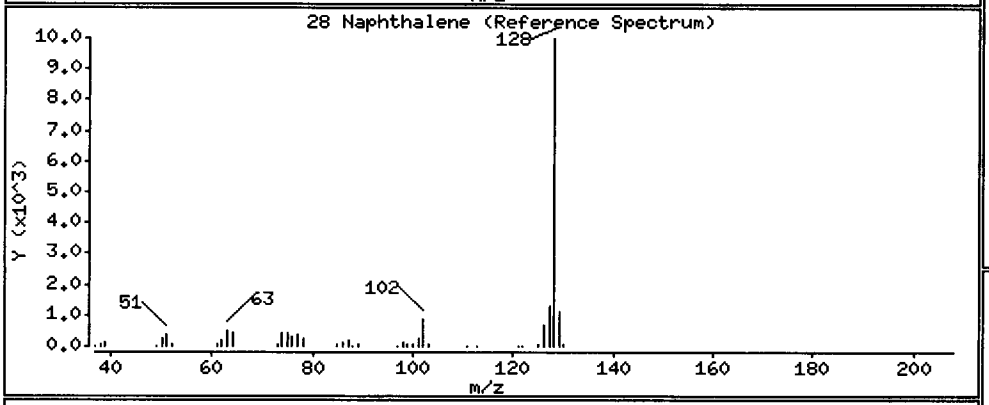
Concentration: 225.3 ug/kg

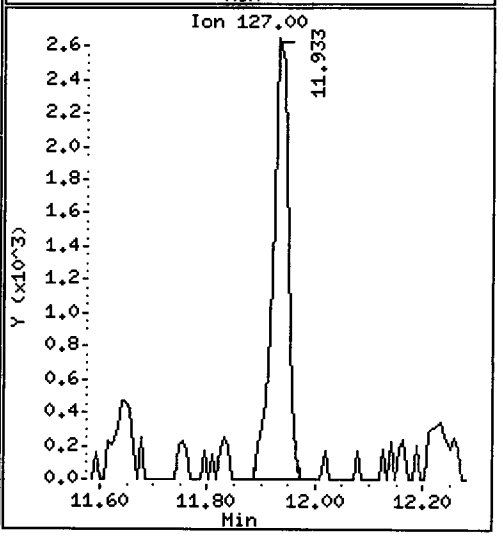


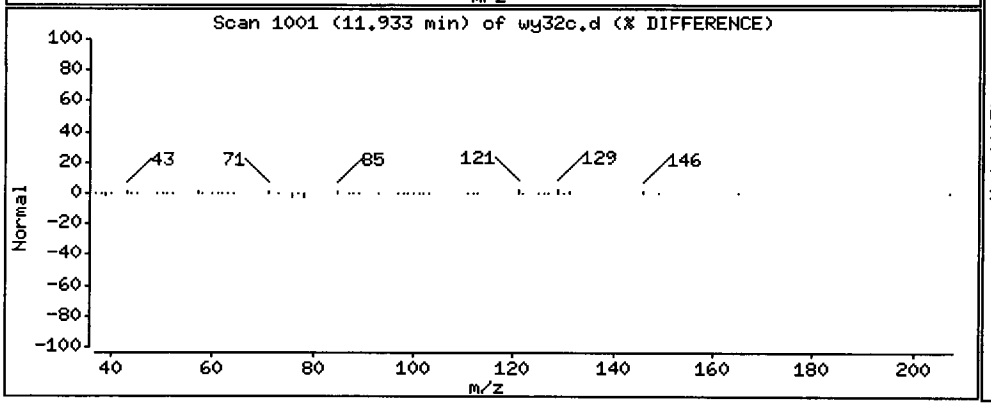












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

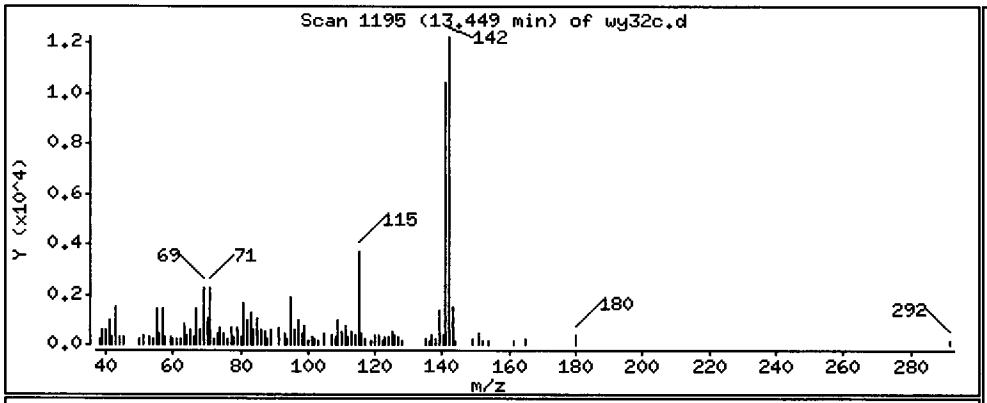
Operator: VTS/YZ

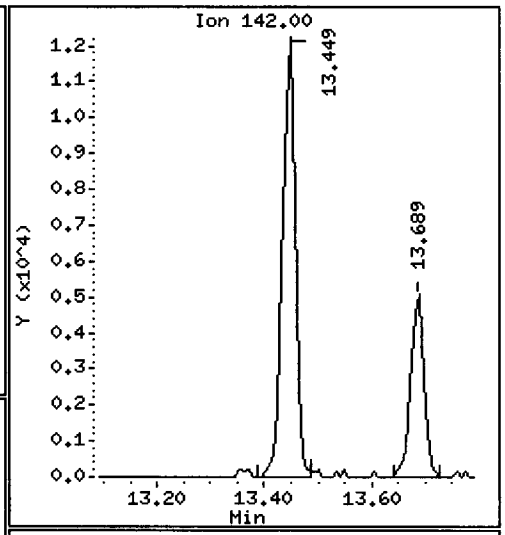
Column phase: ZB-5msi

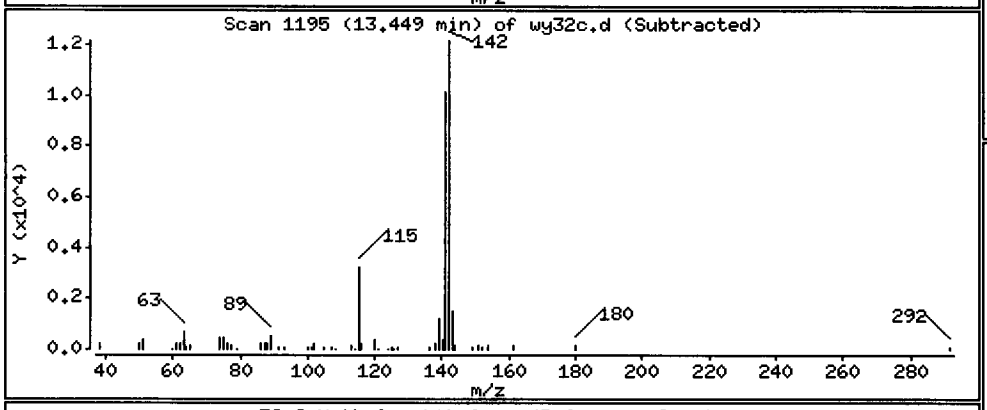
Column diameter: 0.25

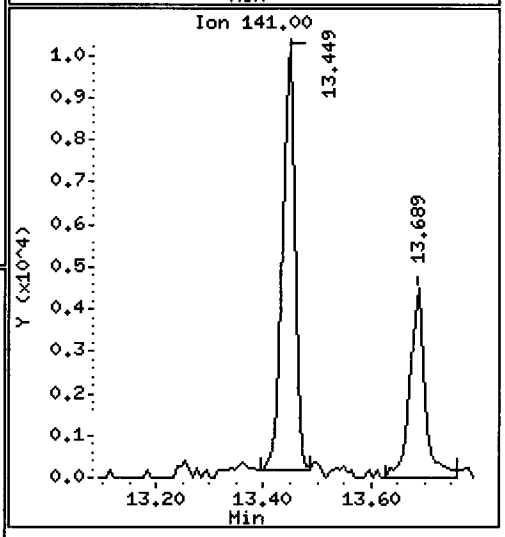
32 2-Methylnaphthalene

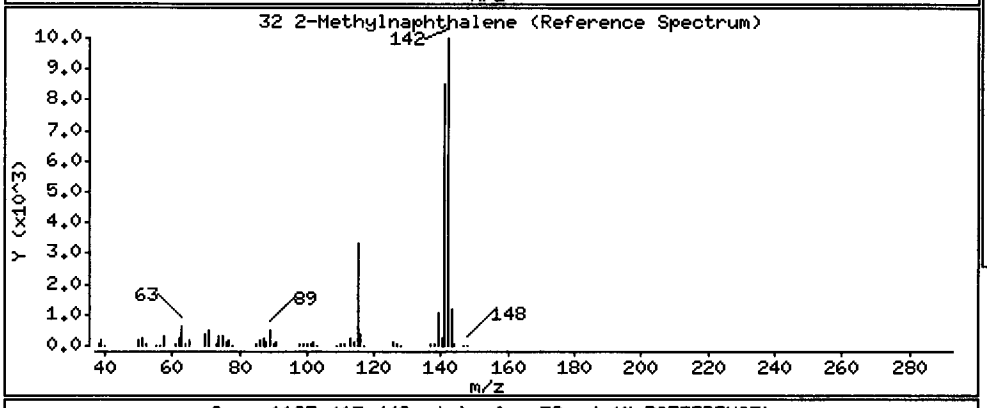
Concentration: 200.3 ug/kg

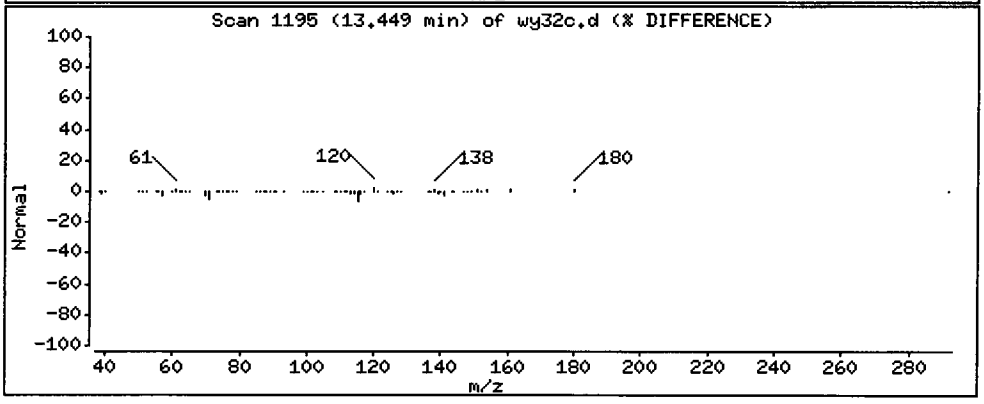












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

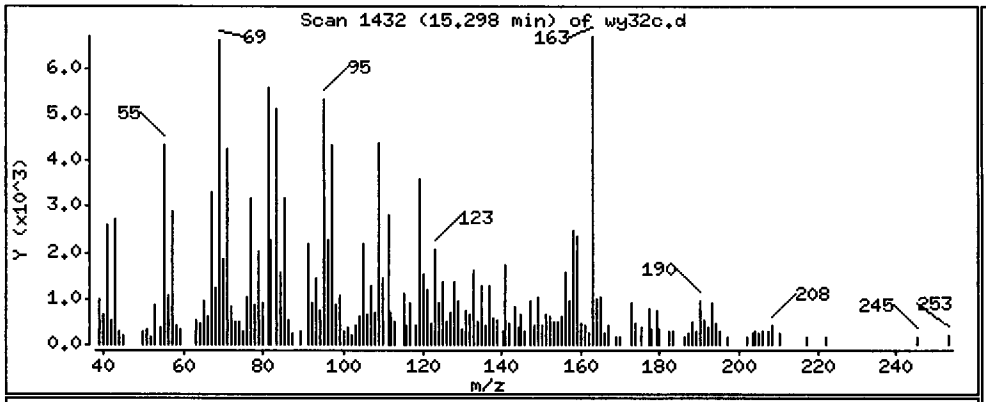
Operator: VTS/YZ

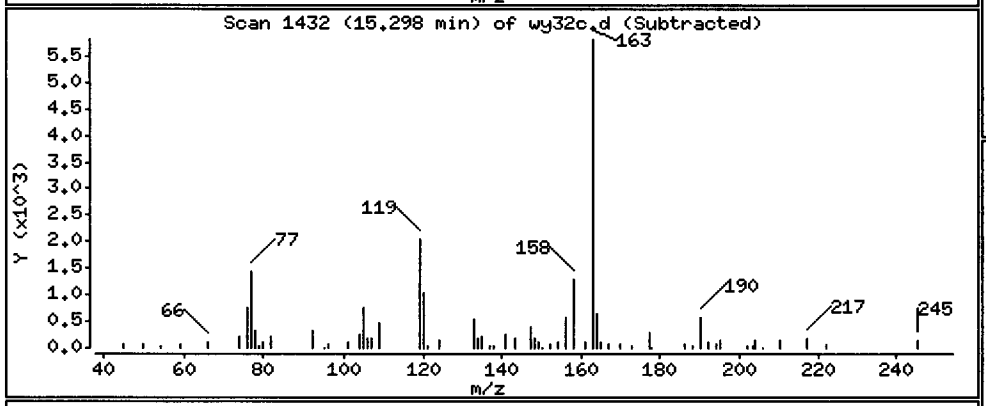
Column phase: ZB-5msi

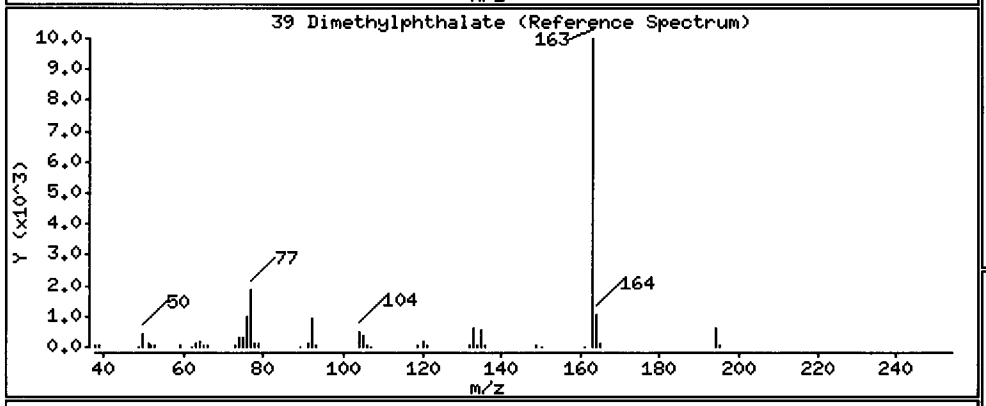
Column diameter: 0.25

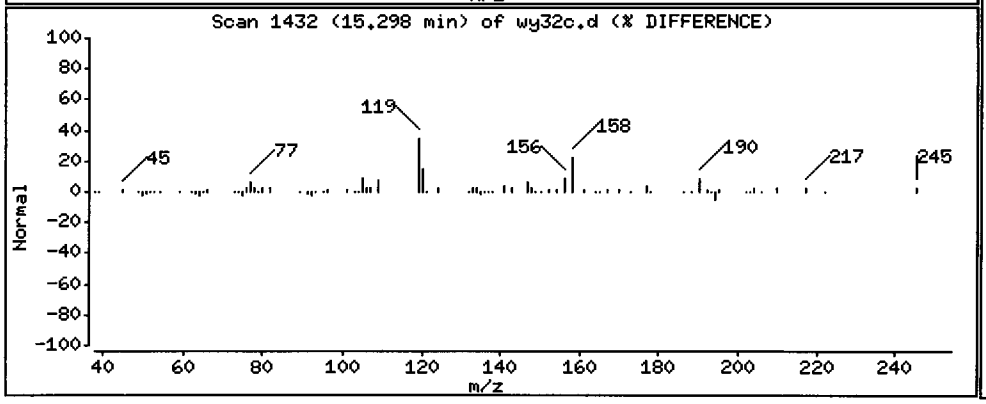
39 Dimethylphthalate

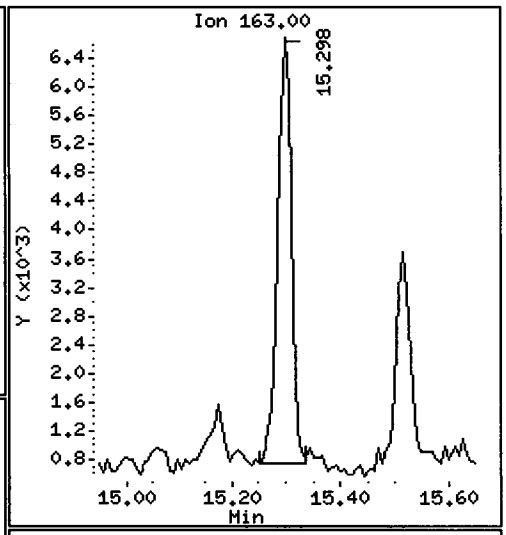
Concentration: 113.0 ug/kg

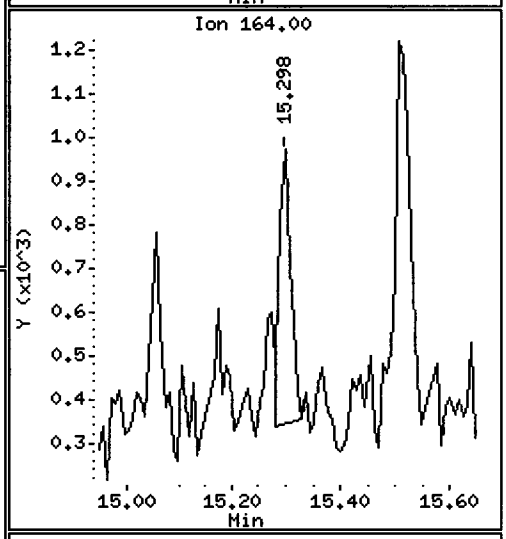


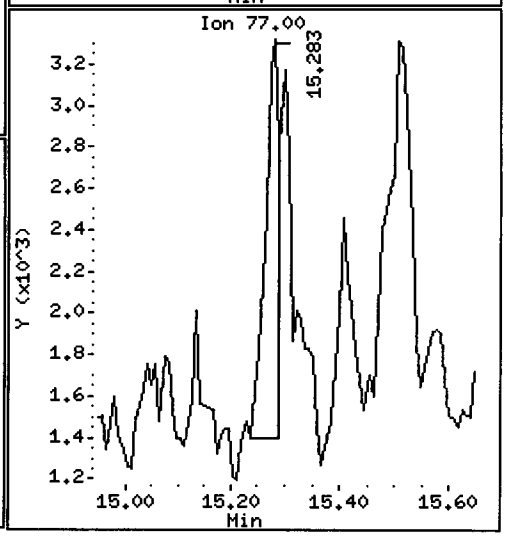












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

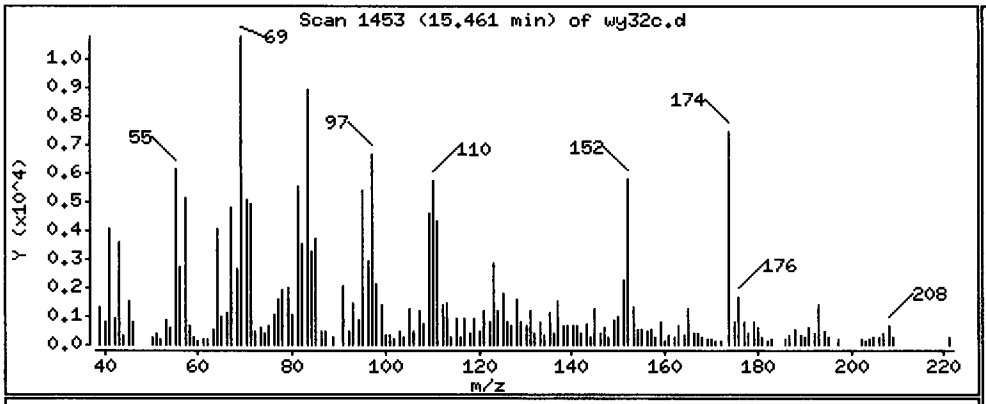
Operator: VTS/YZ

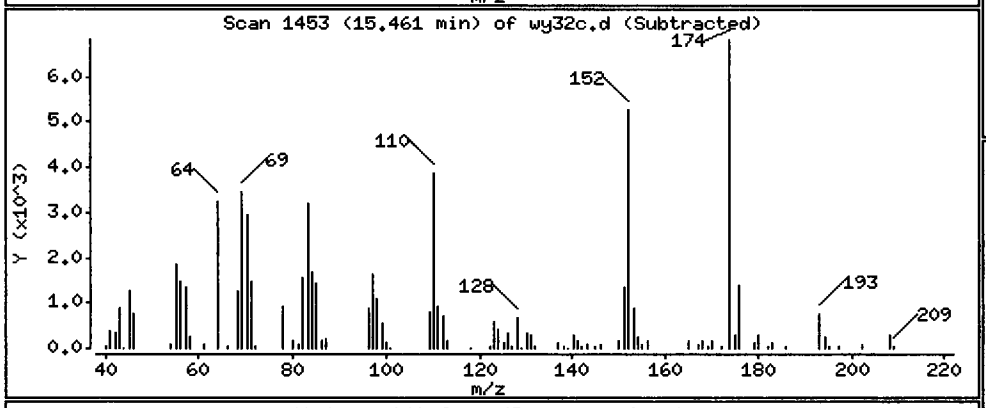
Column phase: ZB-5msi

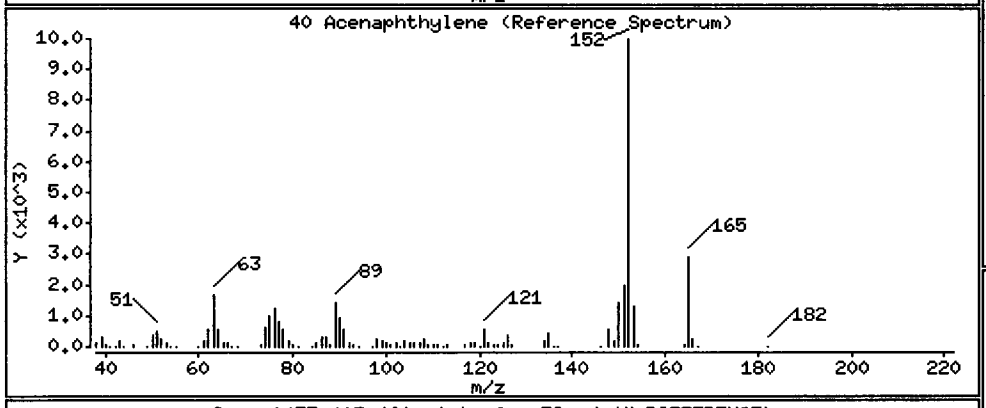
Column diameter: 0.25

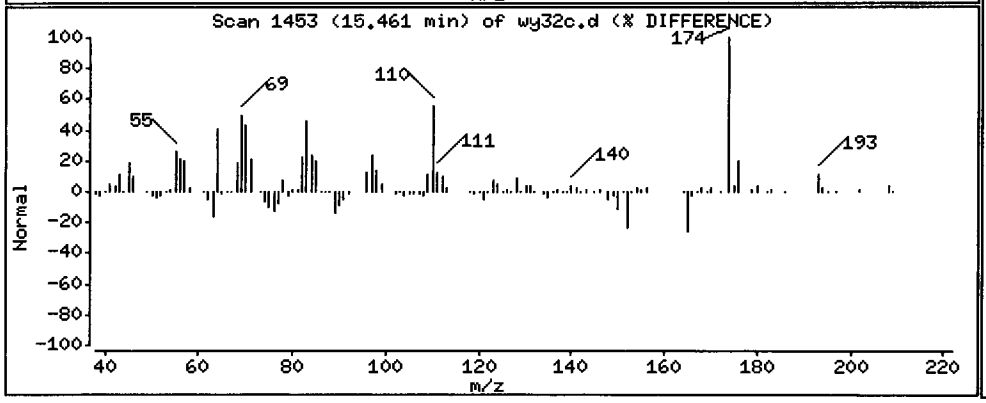
40 Acenaphthylene

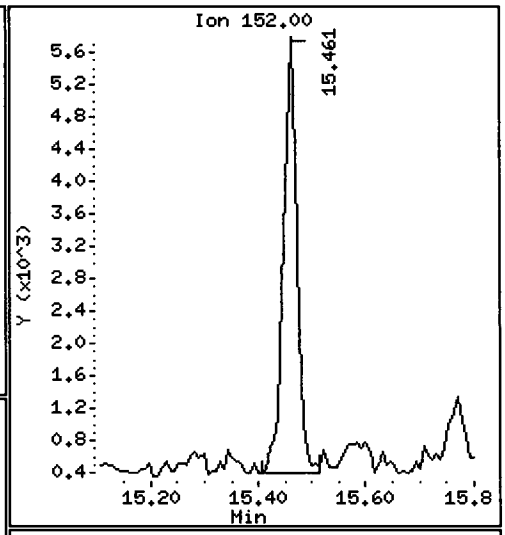
Concentration: 71.34 ug/kg

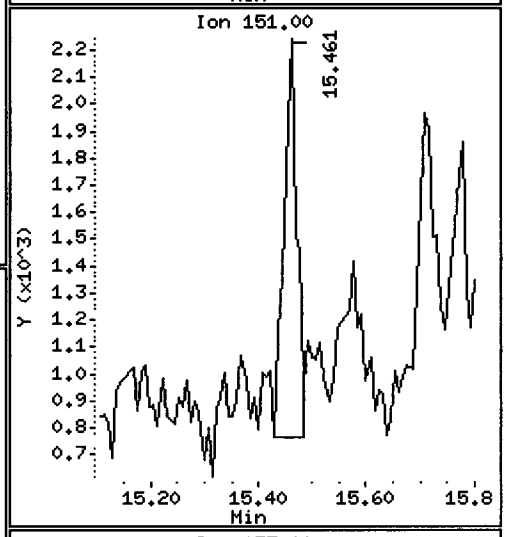


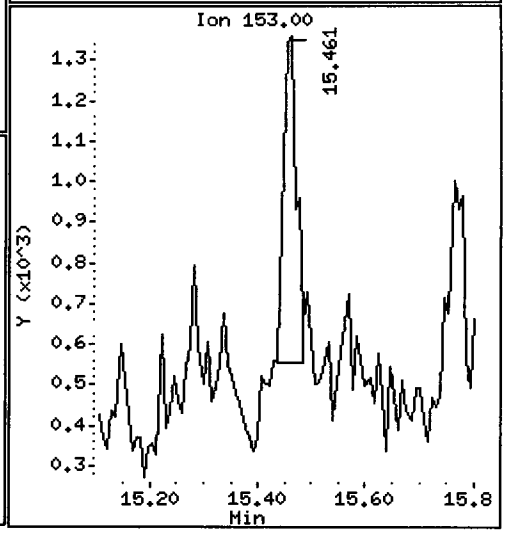












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

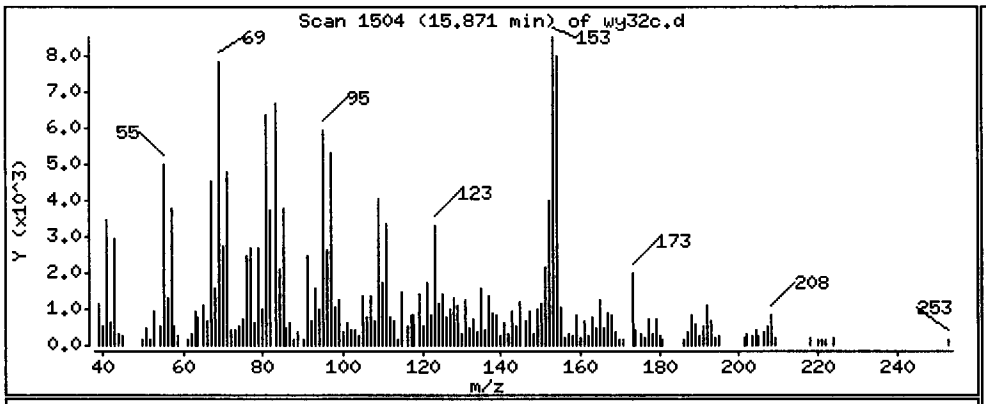
Operator: VTS/YZ

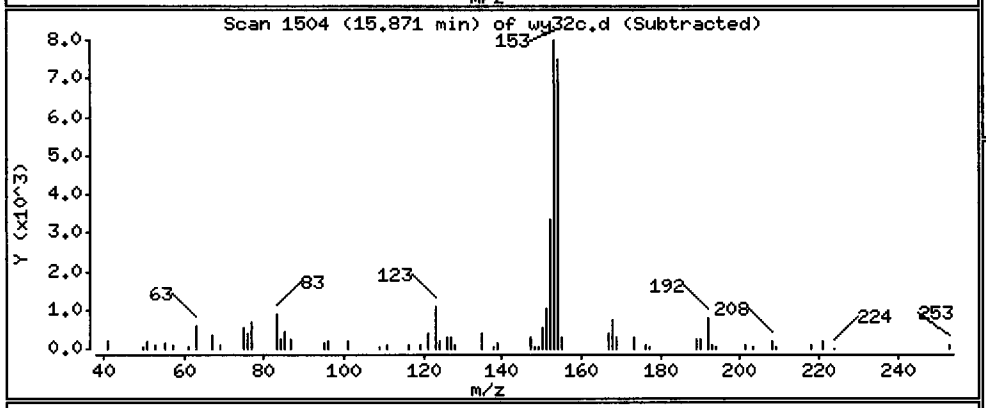
Column phase: ZB-5msi

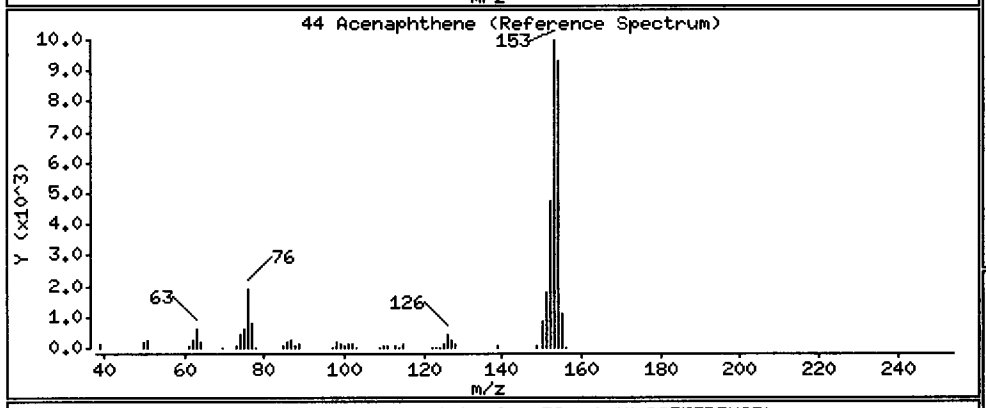
Column diameter: 0.25

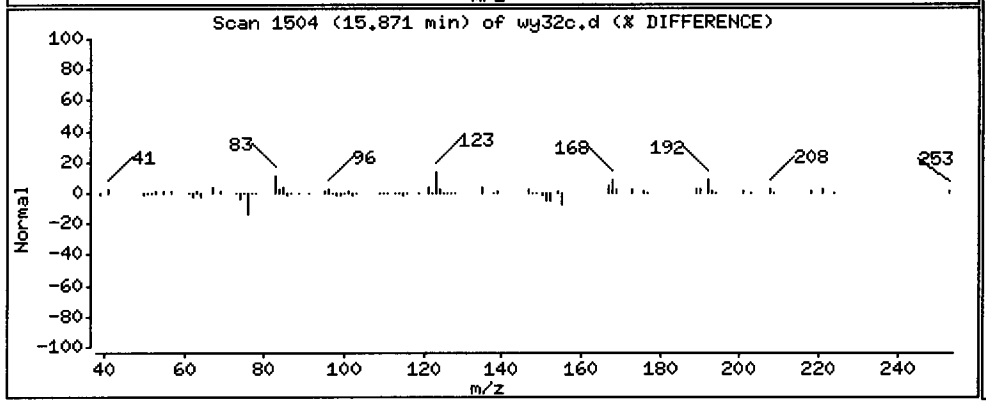
44 Acenaphthene

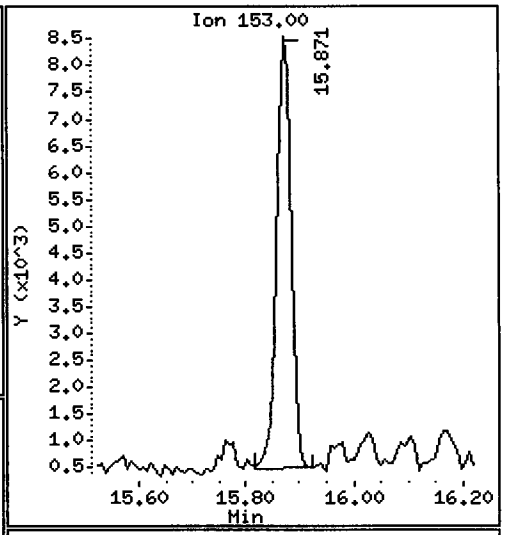
Concentration: 185.1 ug/kg

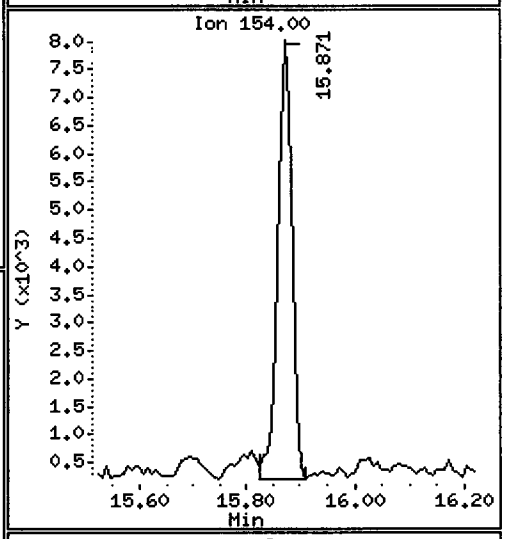


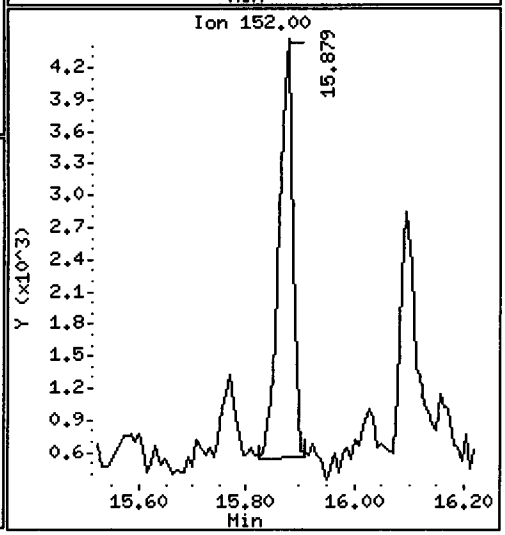












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

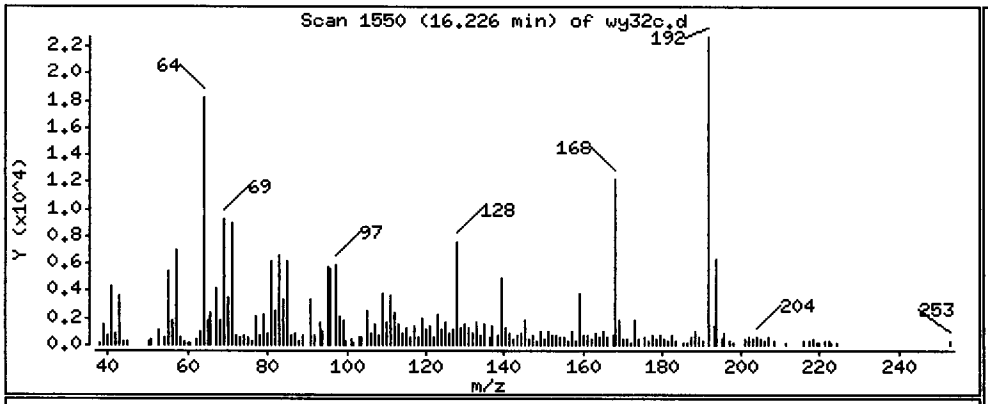
Operator: VTS/YZ

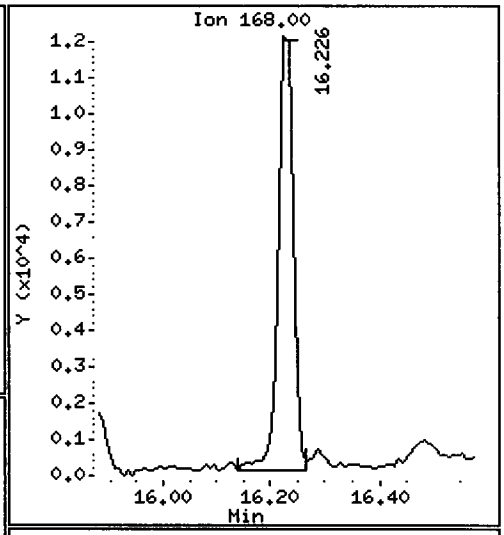
Column phase: ZB-5msi

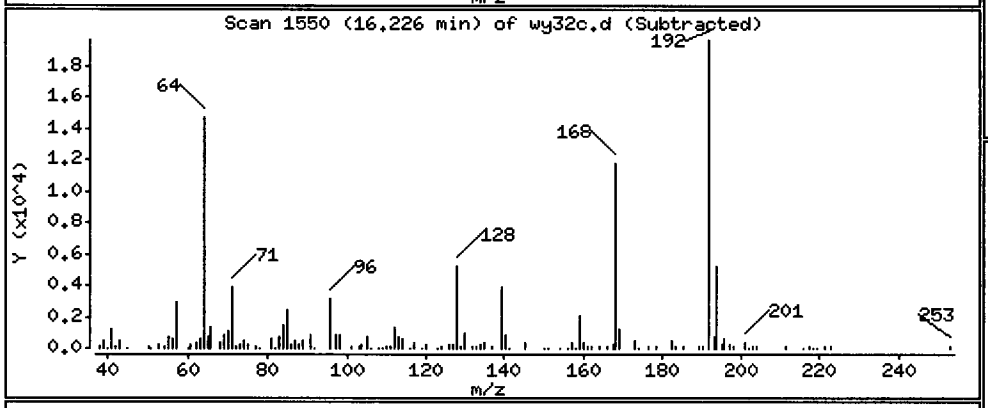
Column diameter: 0.25

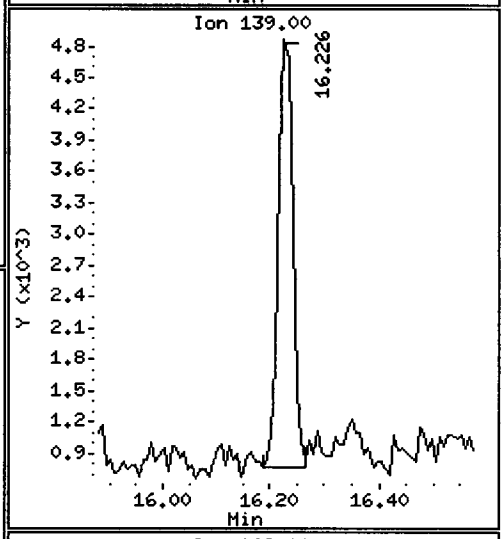
46 Dibenzofuran

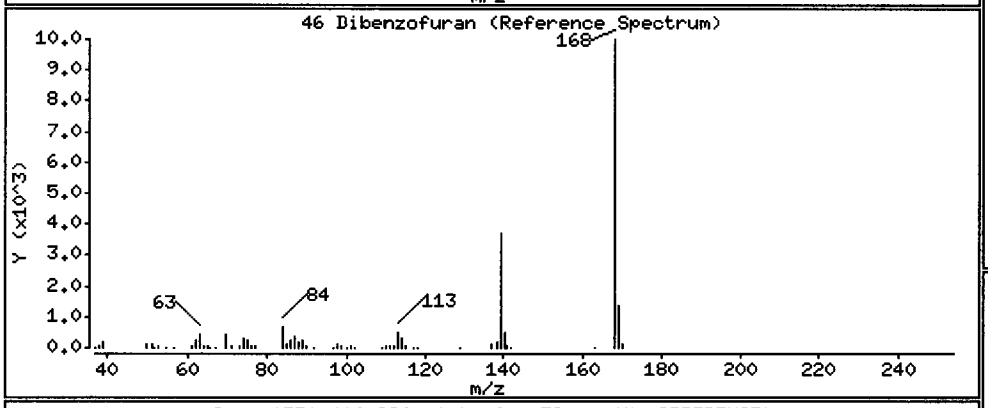
Concentration: 191.9 ug/kg

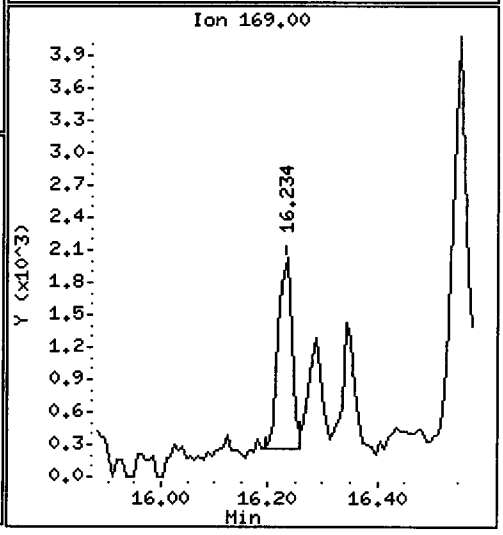


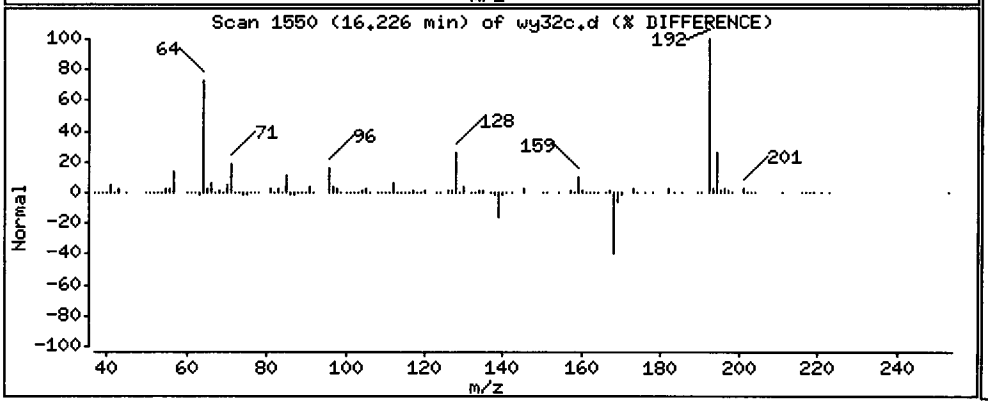












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

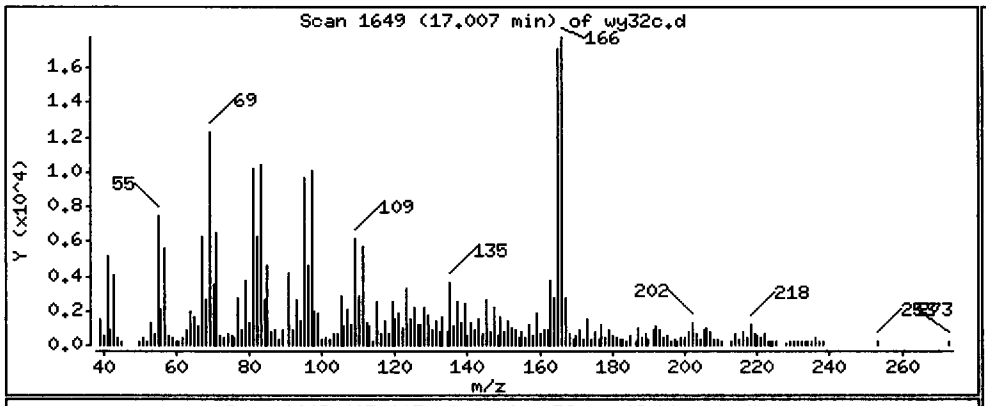
Operator: VTS/YZ

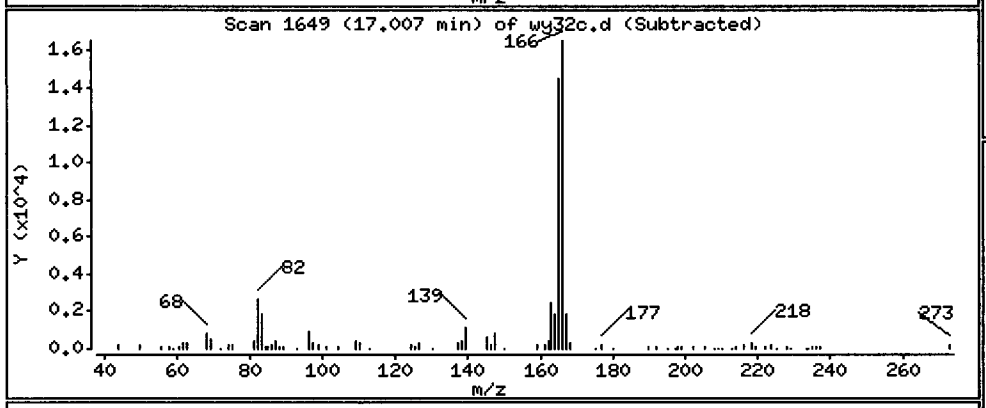
Column phase: ZB-5msi

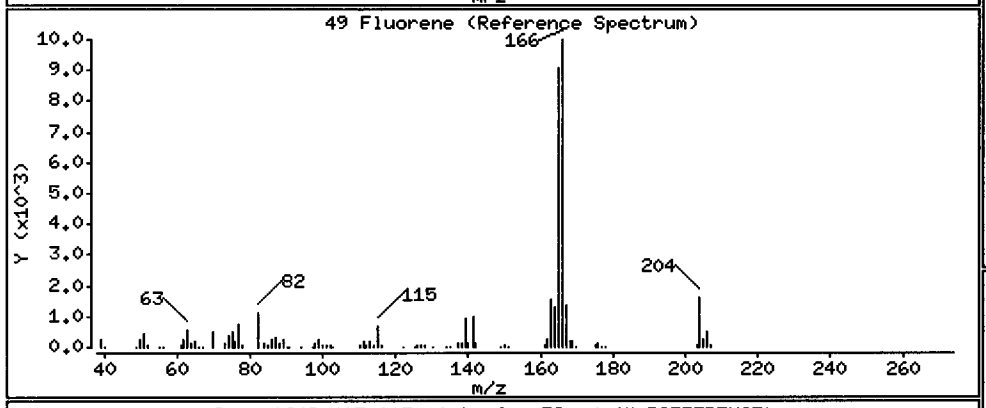
Column diameter: 0.25

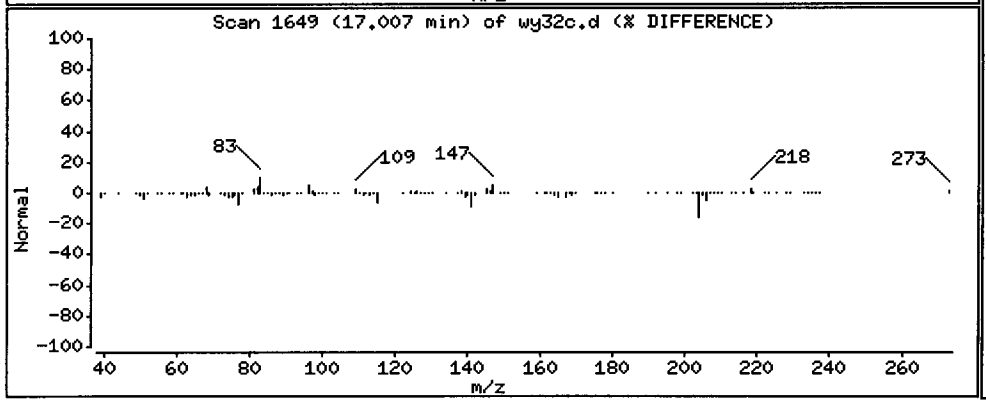
49 Fluorene

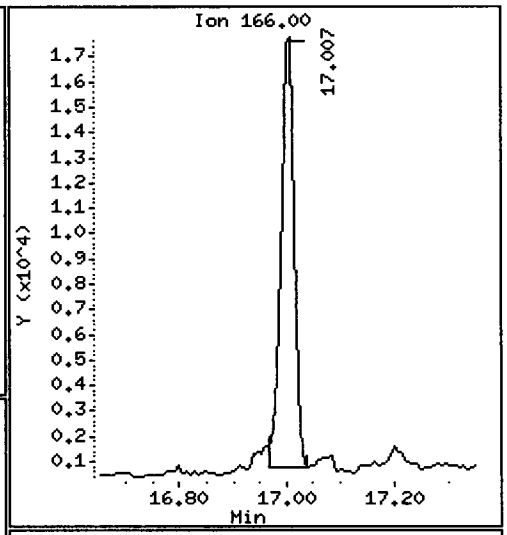
Concentration: 301.2 ug/kg

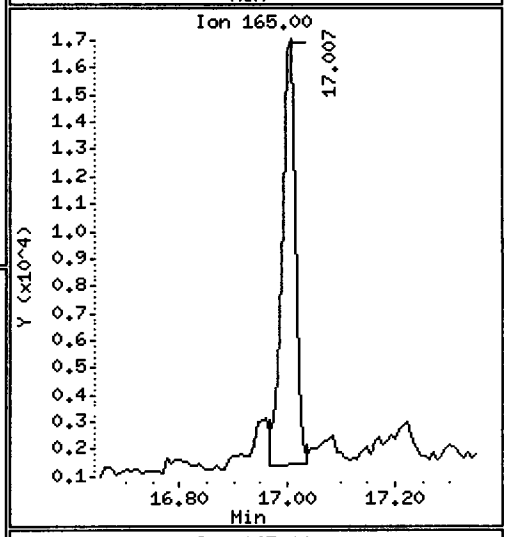


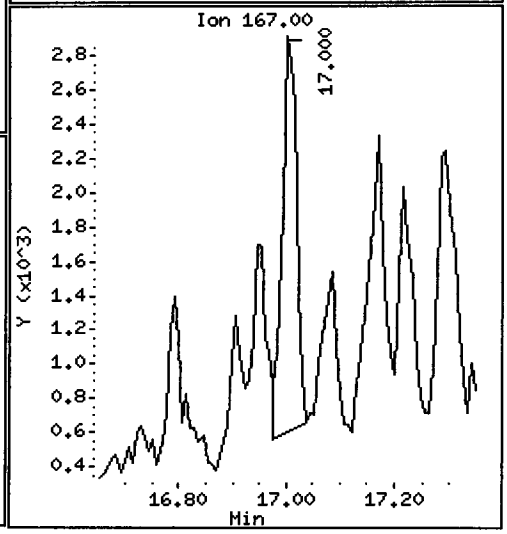












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

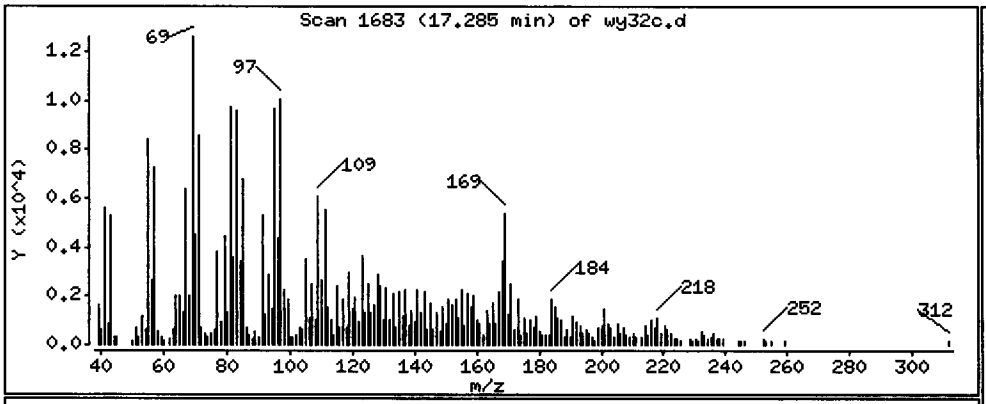
Operator: VTS/YZ

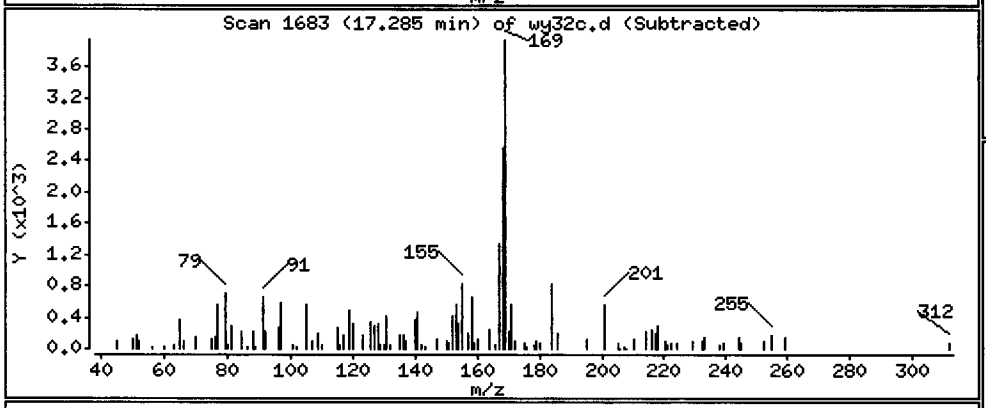
Column phase: ZB-5msi

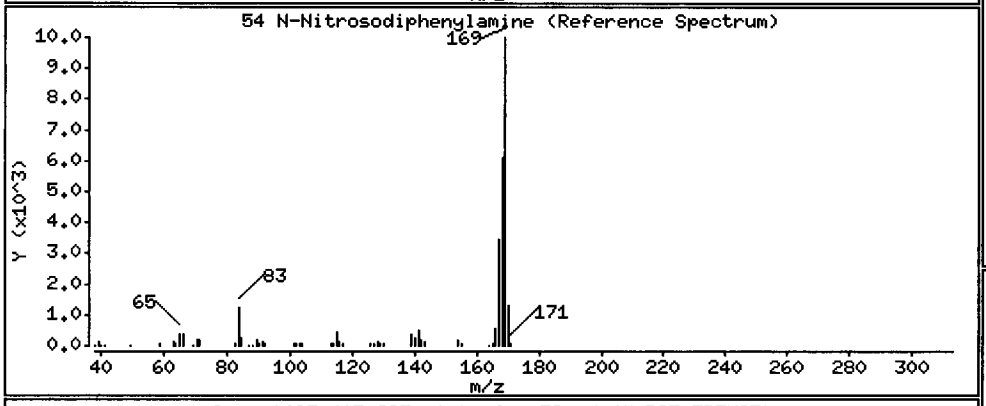
Column diameter: 0.25

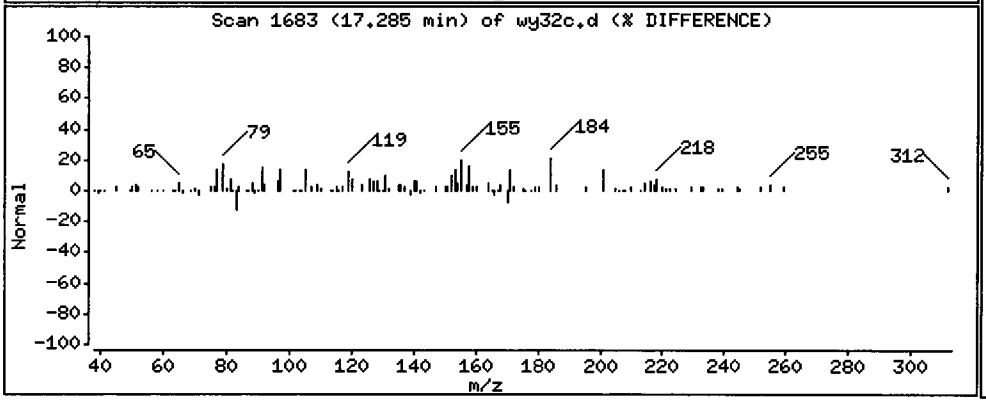
54 N-Nitrosodiphenylamine

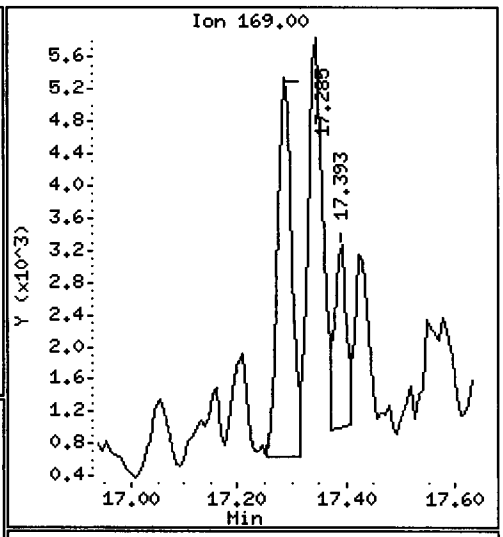
Concentration: 153.3 ug/kg

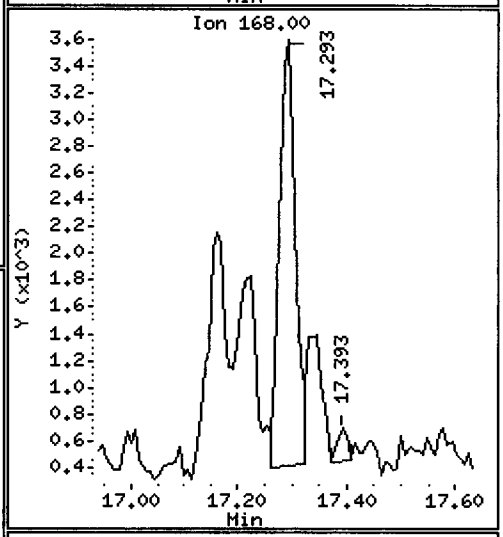


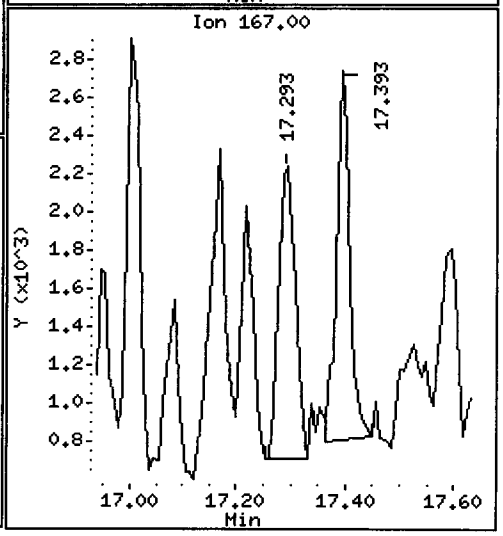












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

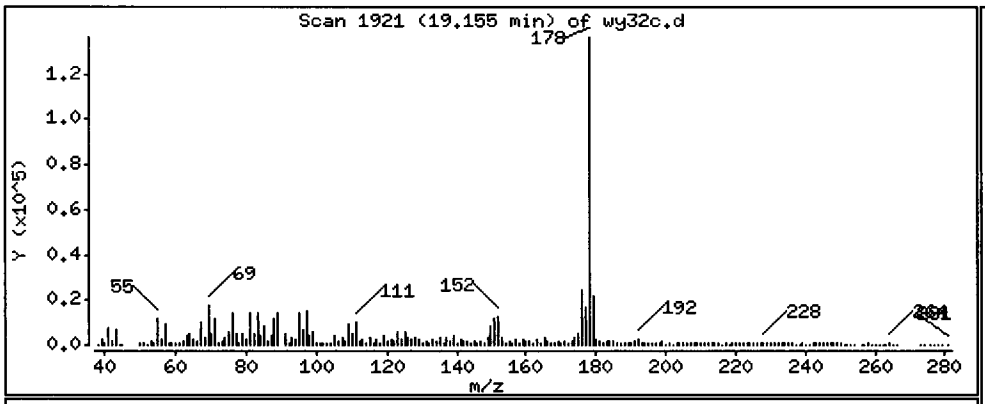
Operator: VTS/YZ

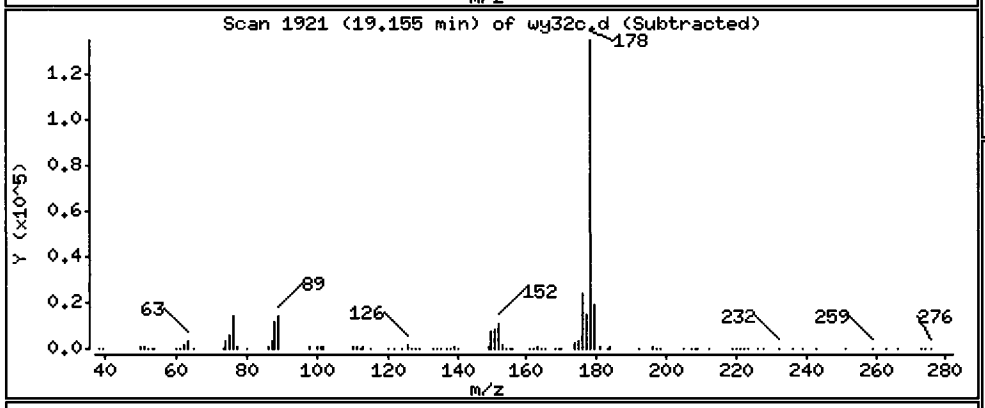
Column phase: ZB-5msi

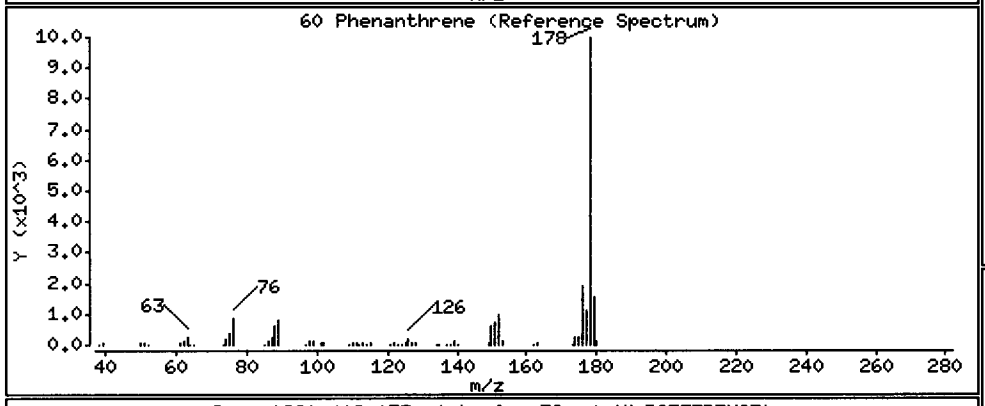
Column diameter: 0.25

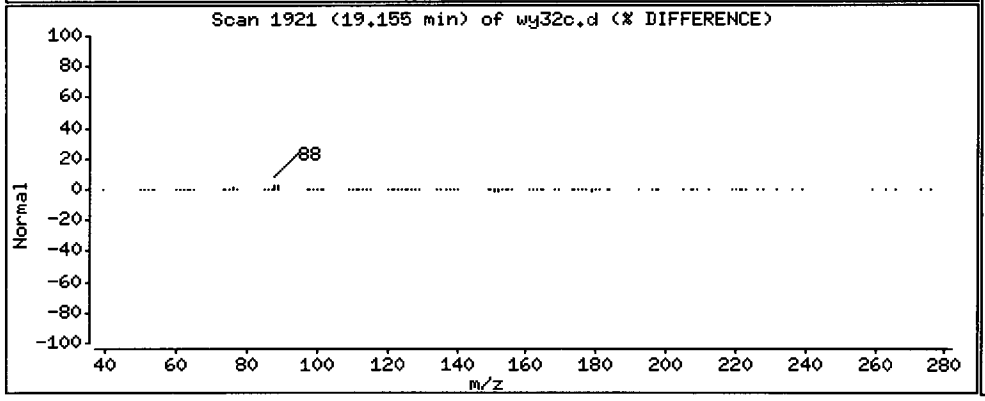
60 Phenanthrene

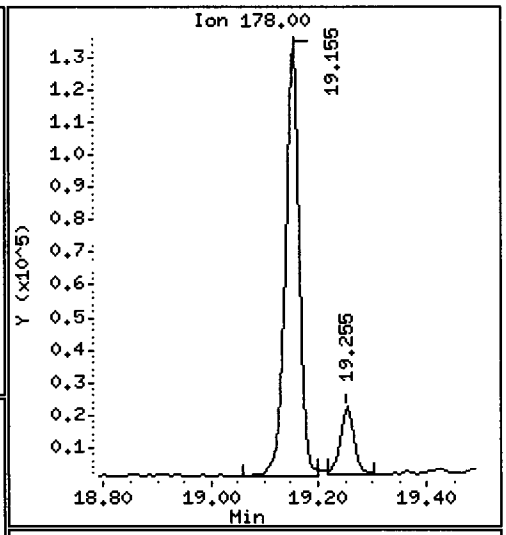
Concentration: 2047 ug/kg

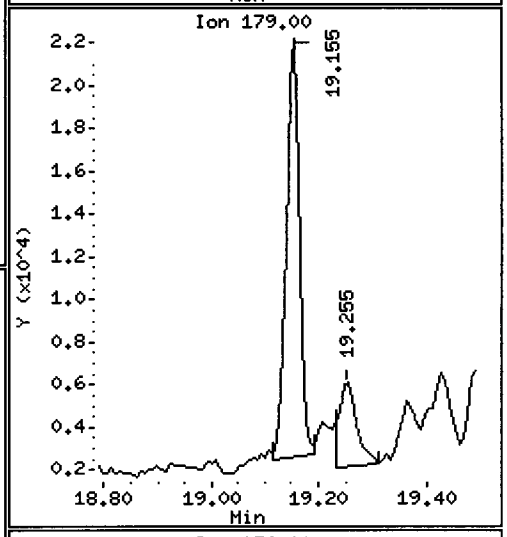


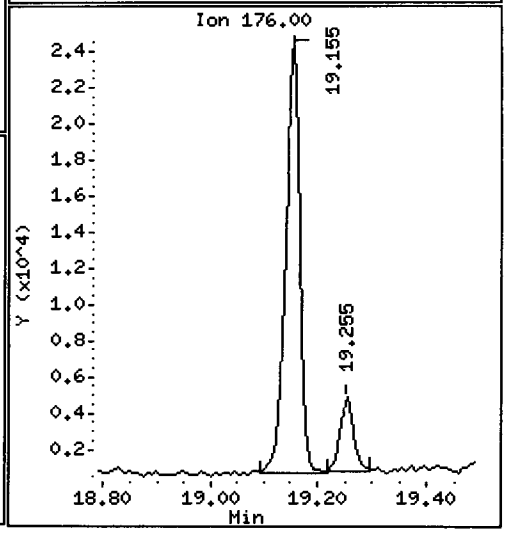












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

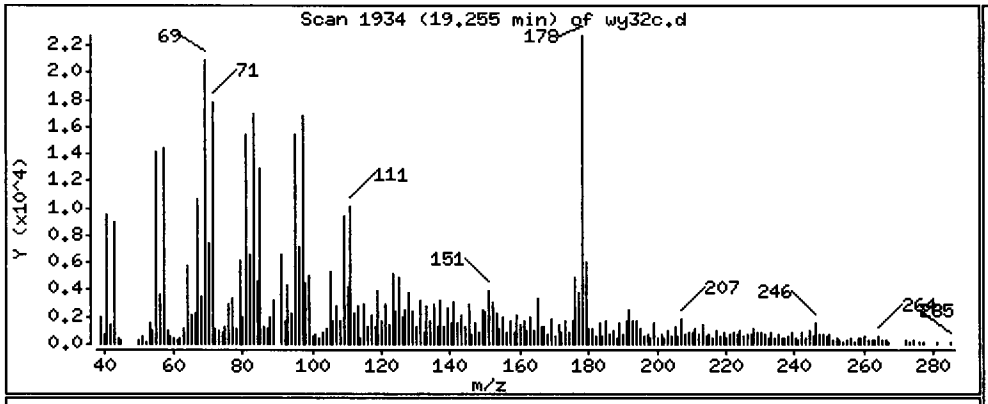
Operator: VTS/YZ

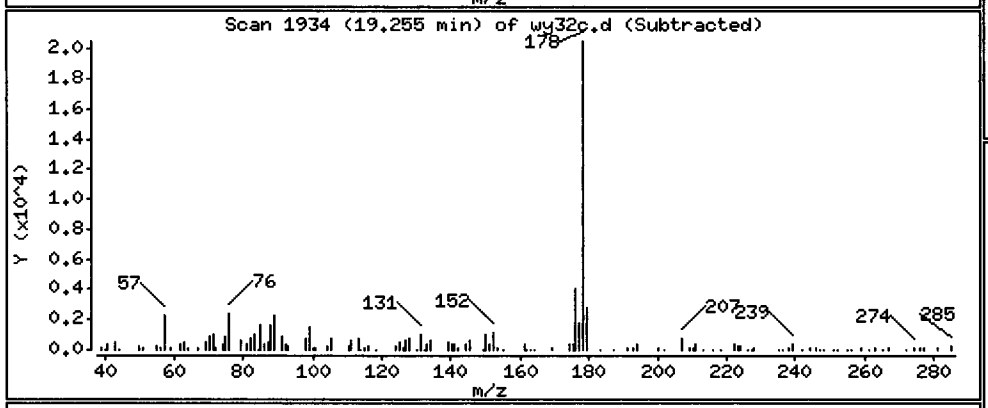
Column phase: ZB-5msi

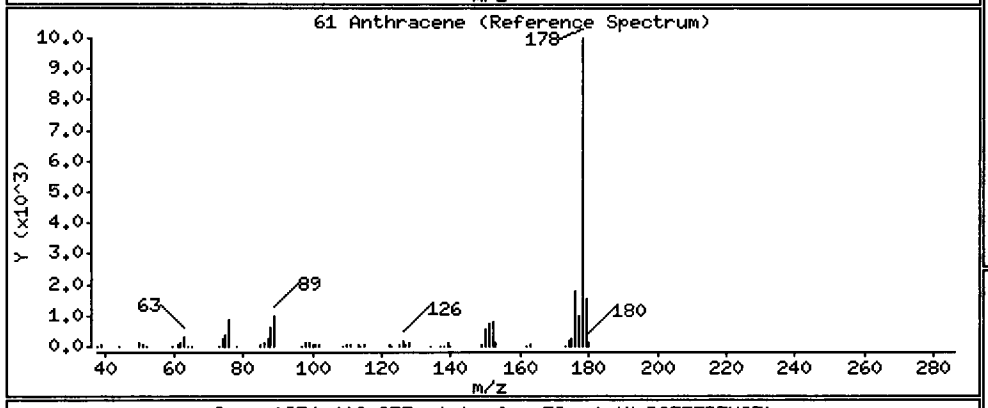
Column diameter: 0.25

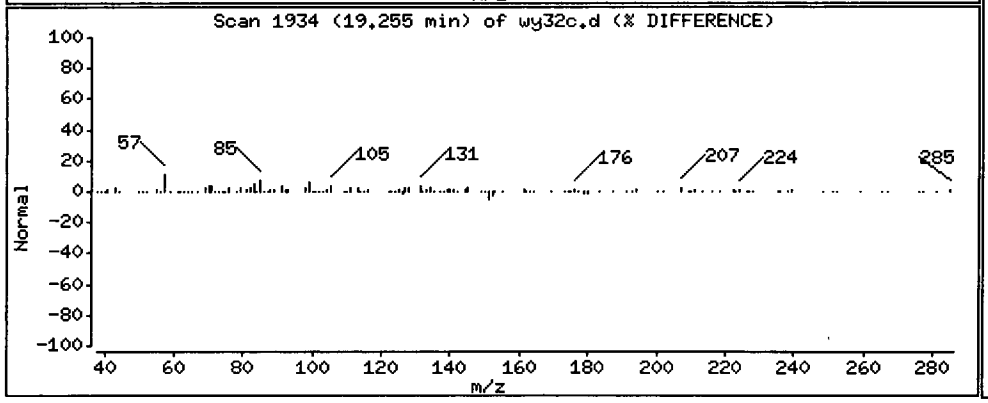
61 Anthracene

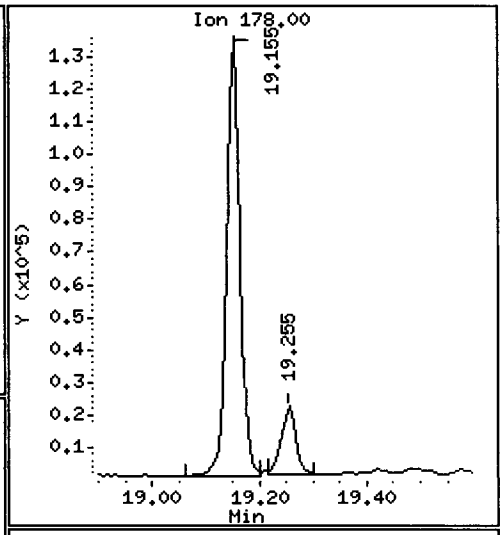
Concentration: 315.0 ug/kg

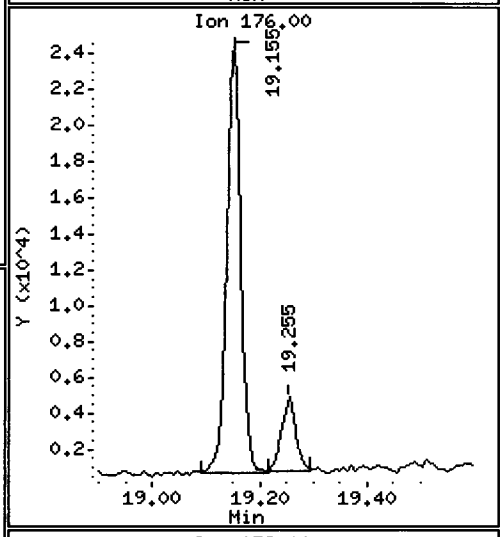


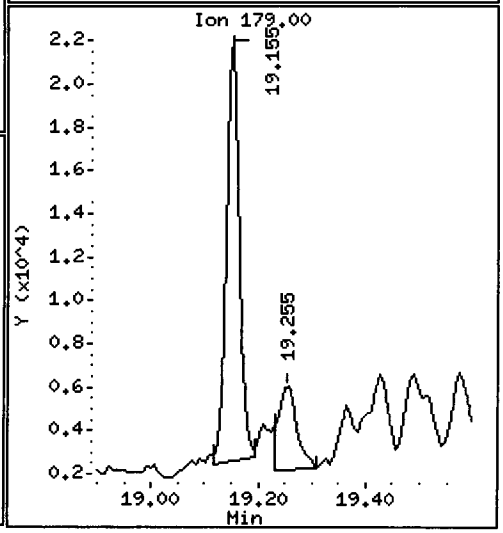












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

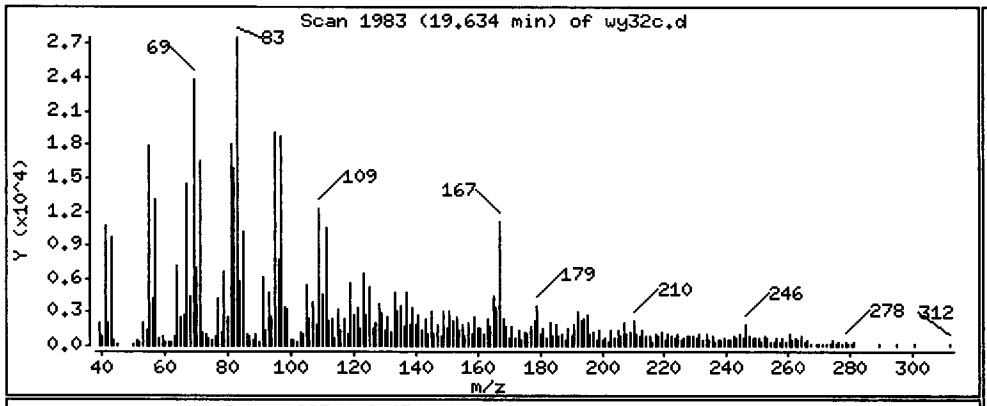
Operator: VTS/YZ

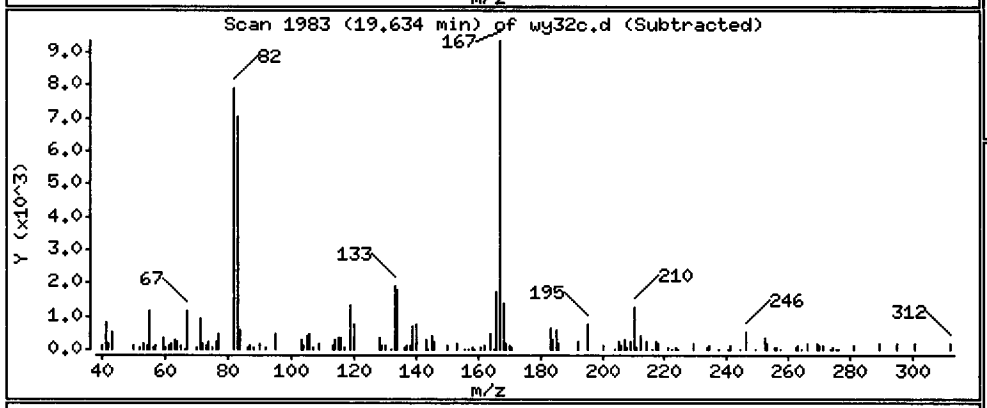
Column phase: ZB-5msi

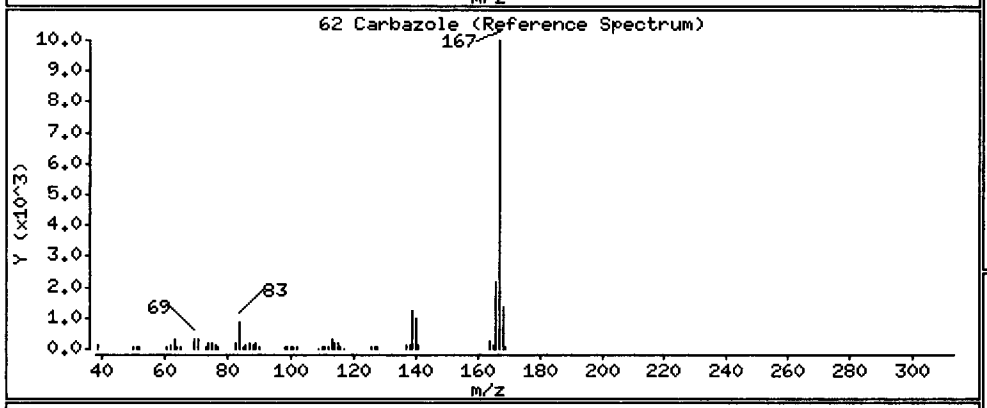
Column diameter: 0.25

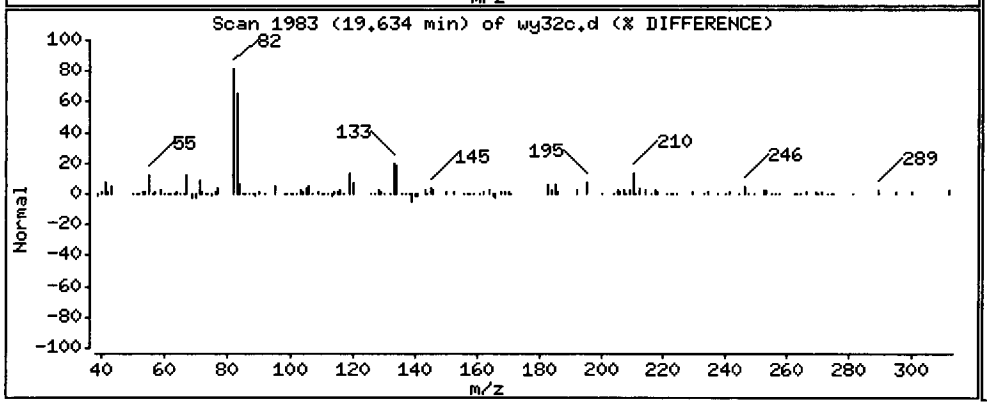
62 Carbazole

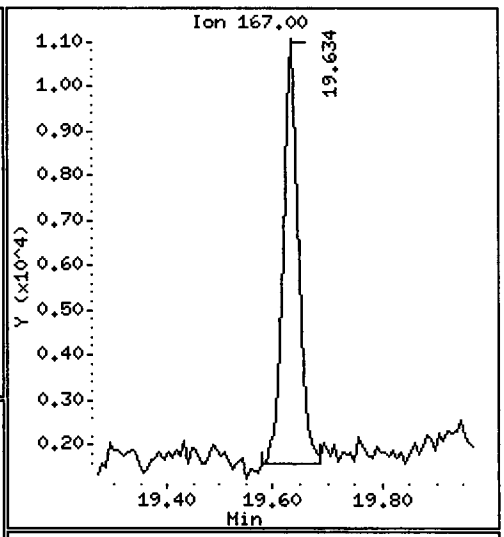
Concentration: 343.5 ug/kg

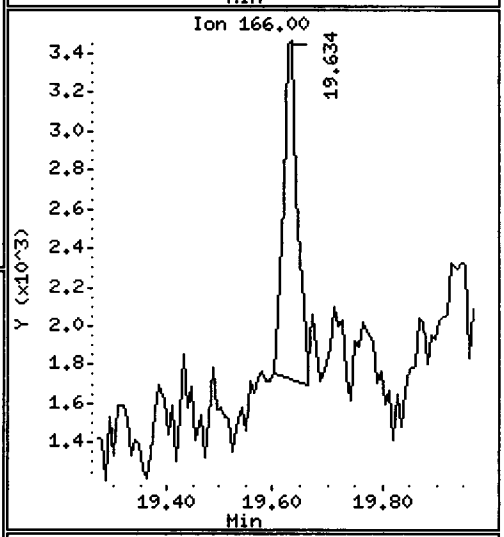


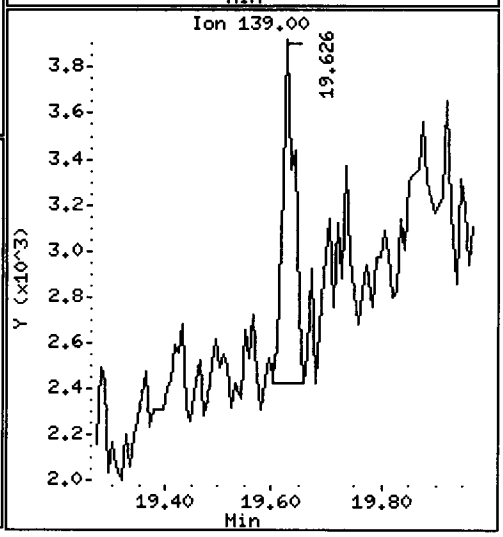












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

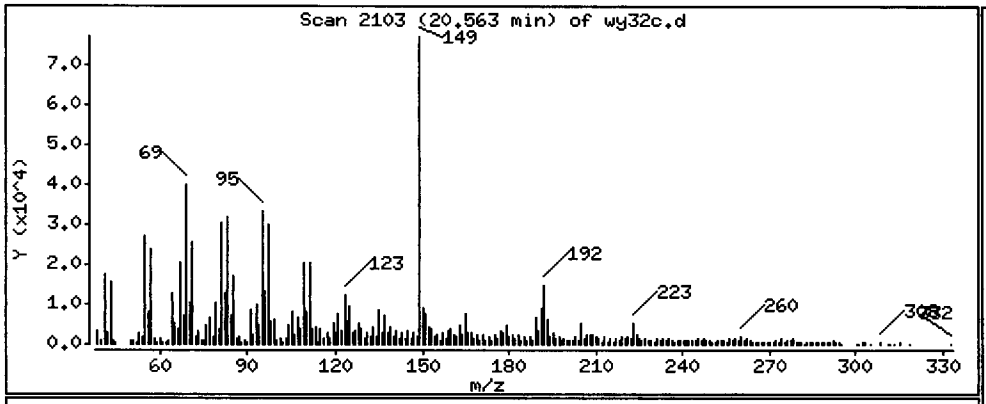
Operator: VTS/YZ

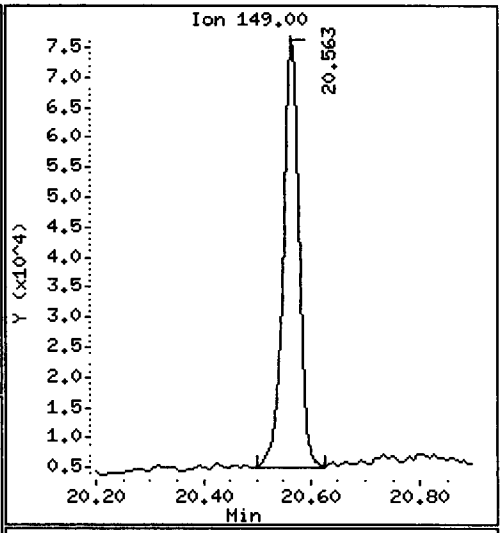
Column phase: ZB-5msi

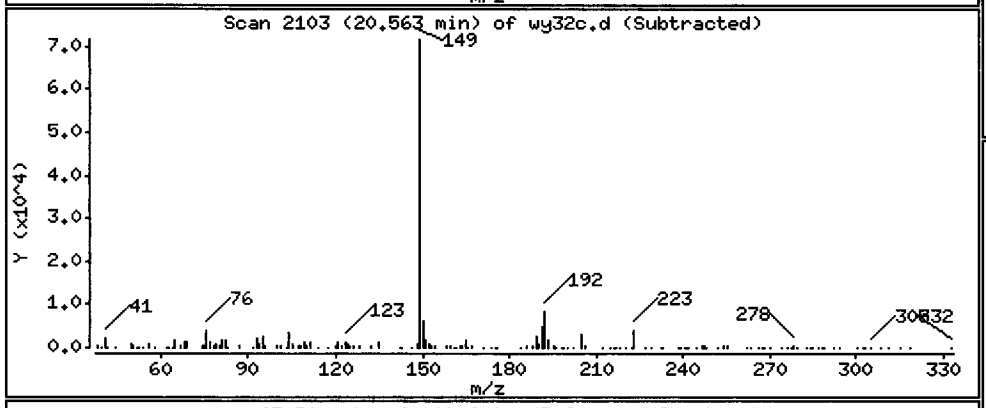
Column diameter: 0.25

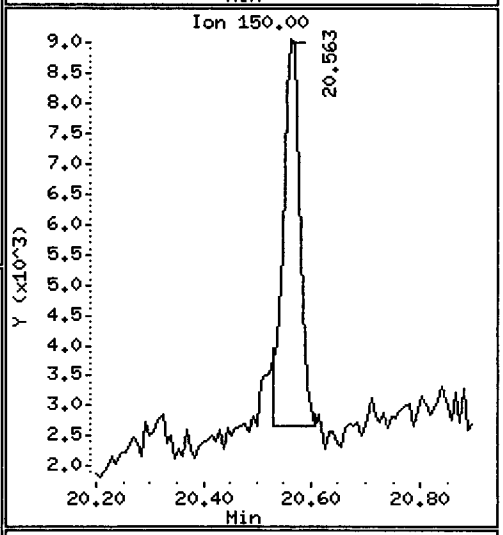
63 Di-n-butylphthalate

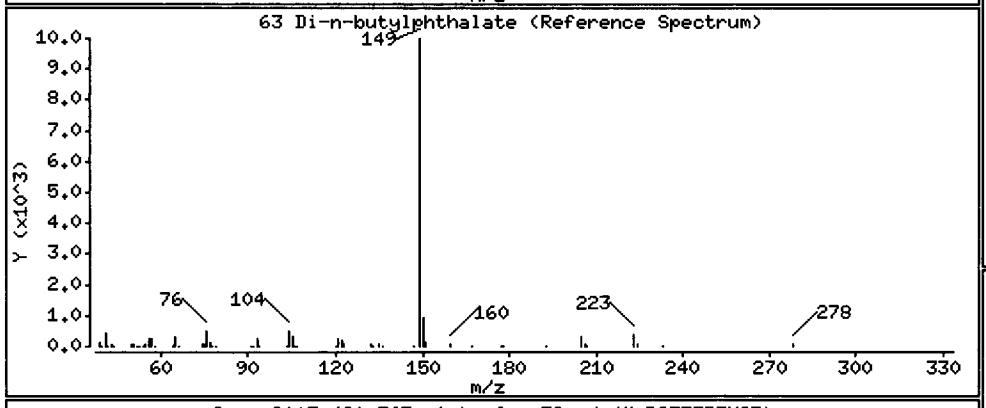
Concentration: 1114 ug/kg

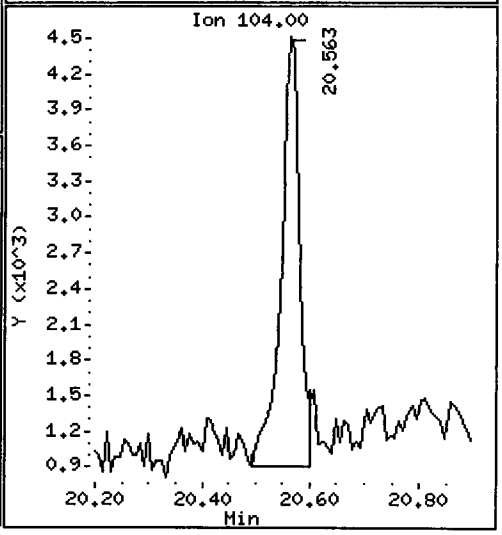


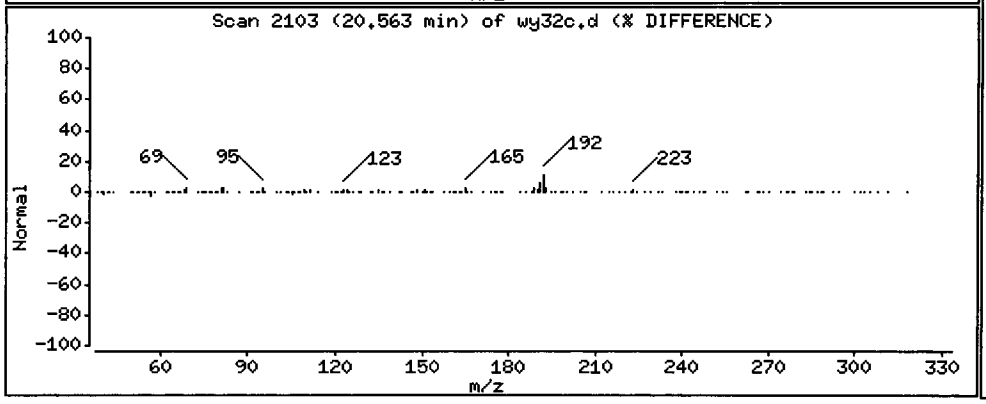












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

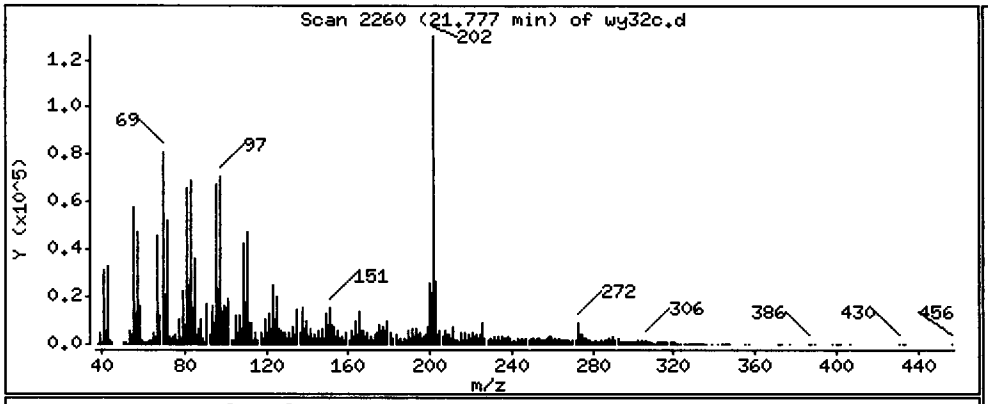
Operator: VTS/YZ

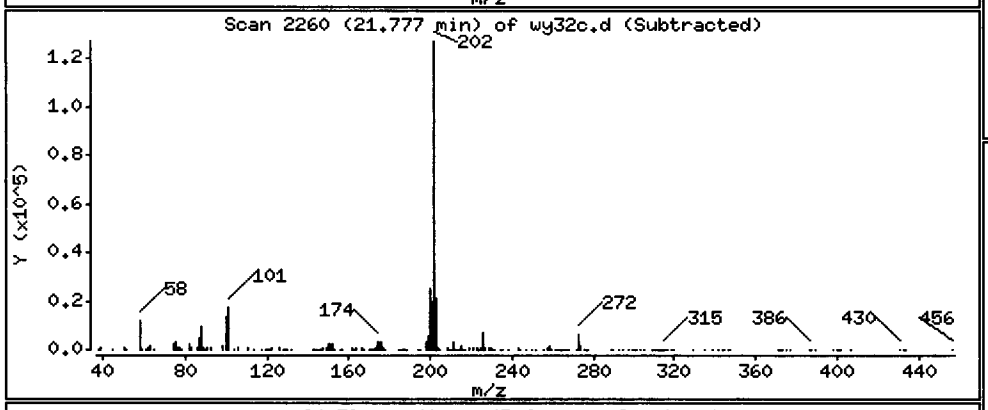
Column phase: ZB-5msi

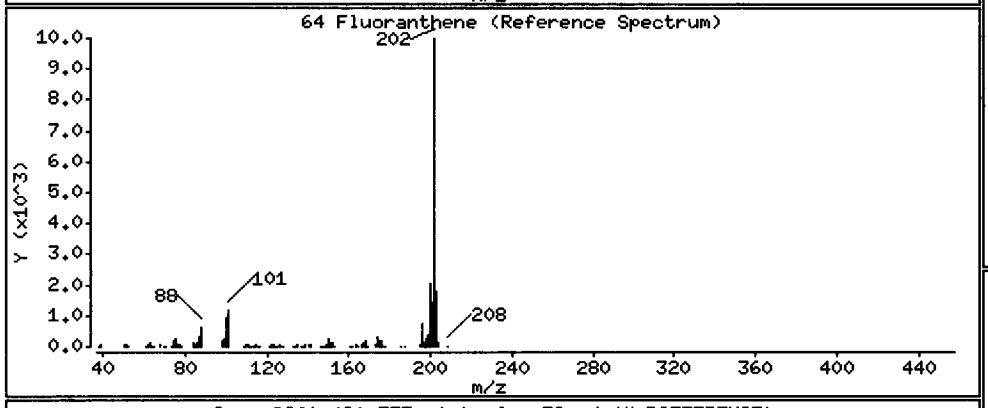
Column diameter: 0.25

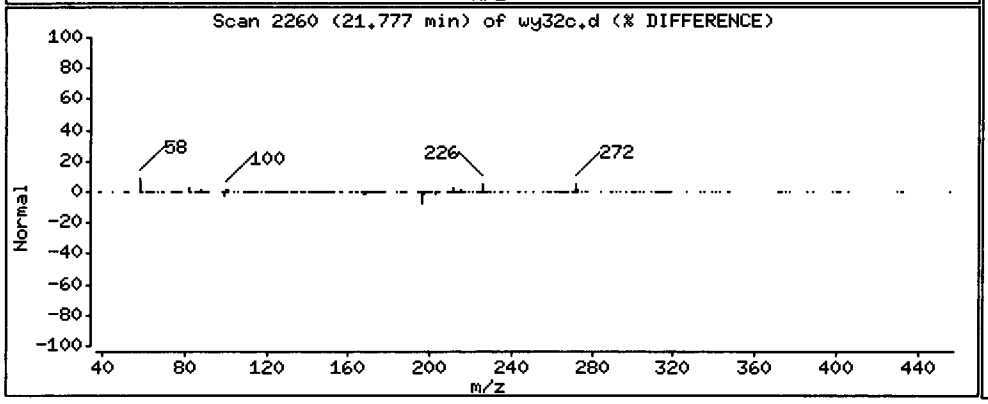
64 Fluoranthene

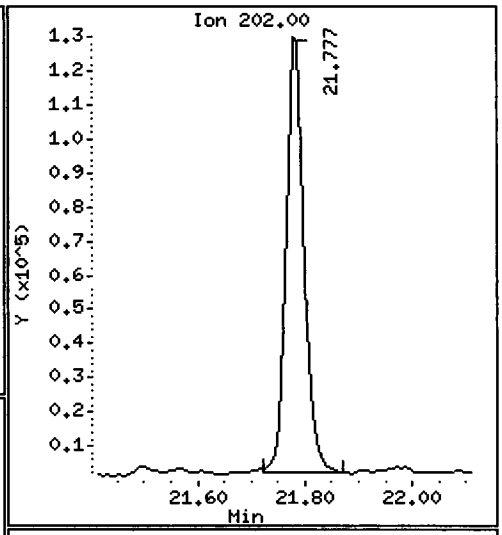
Concentration: 2026 ug/kg

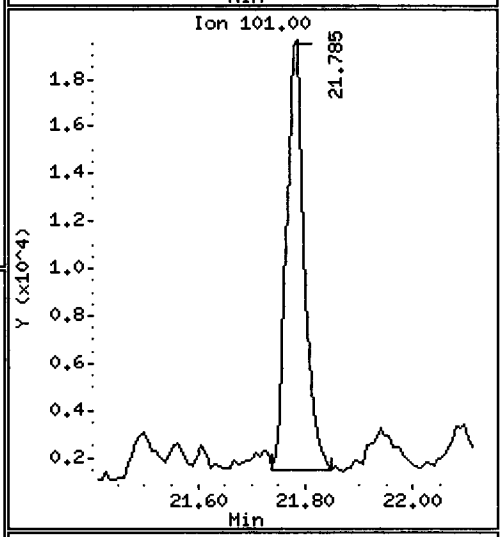


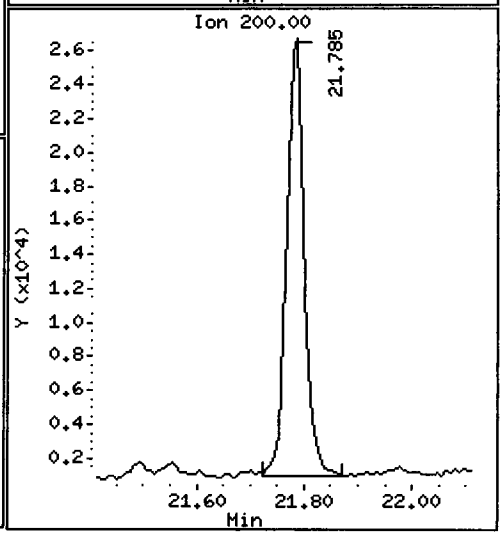












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

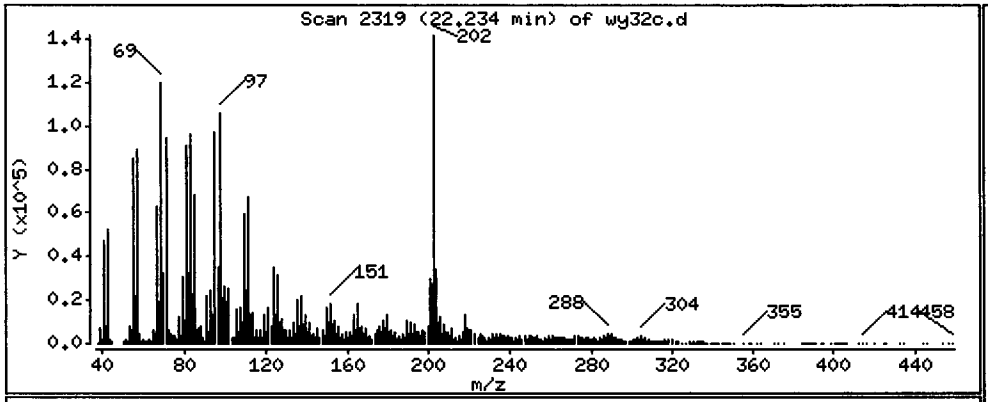
Operator: VTS/YZ

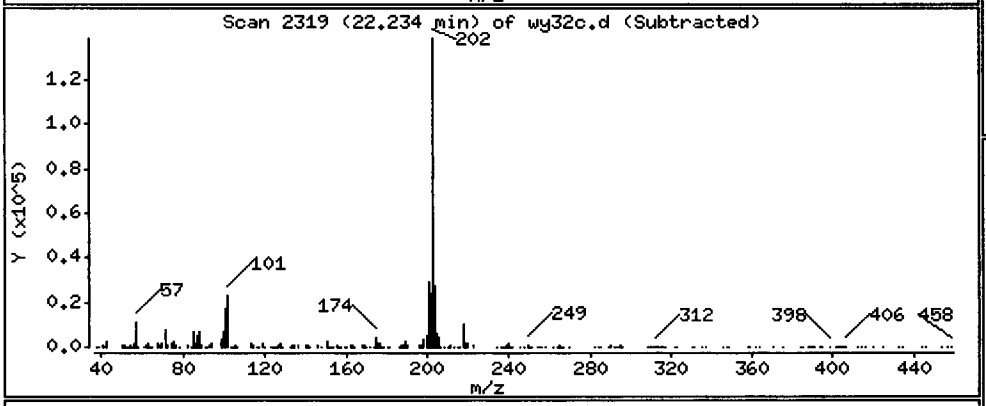
Column phase: ZB-5msi

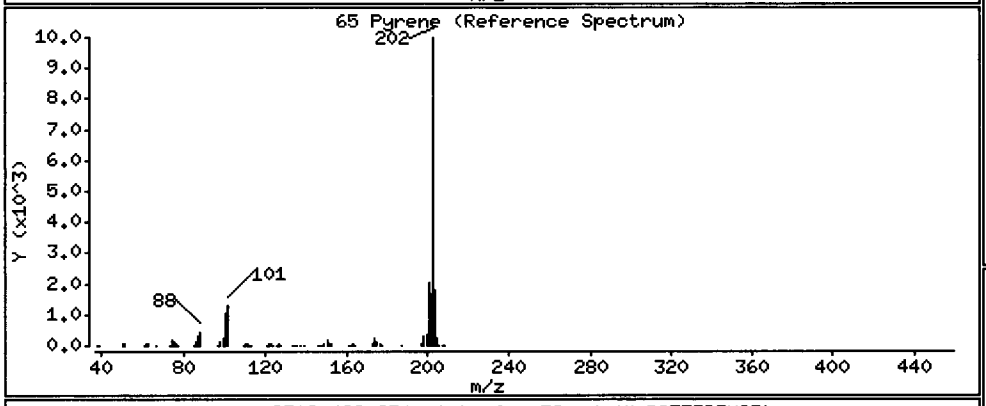
Column diameter: 0.25

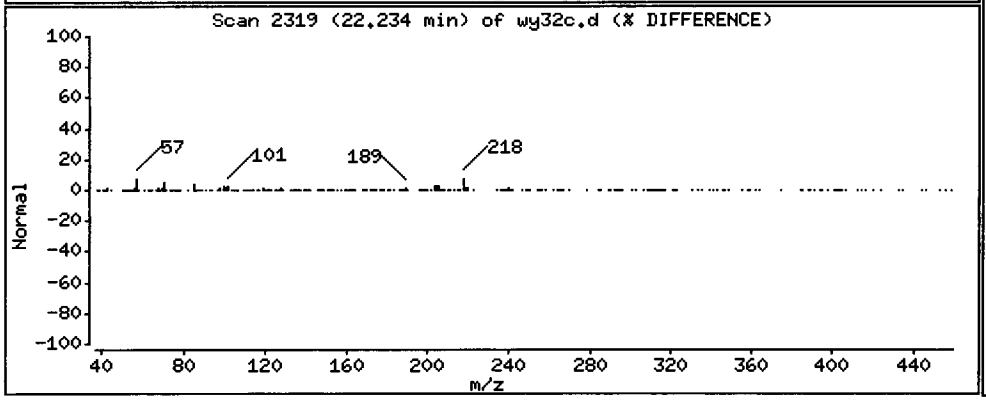
65 Pyrene

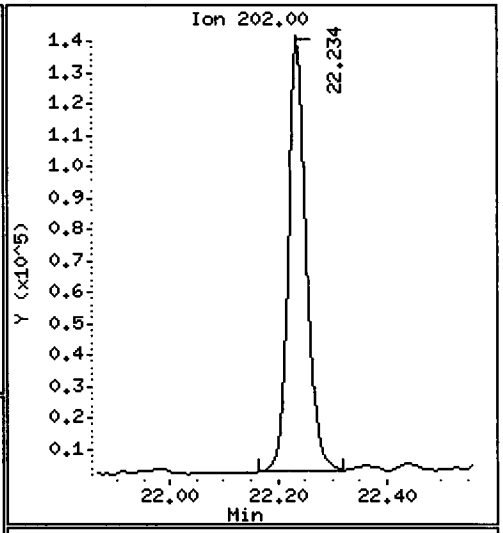
Concentration: 2145 ug/kg

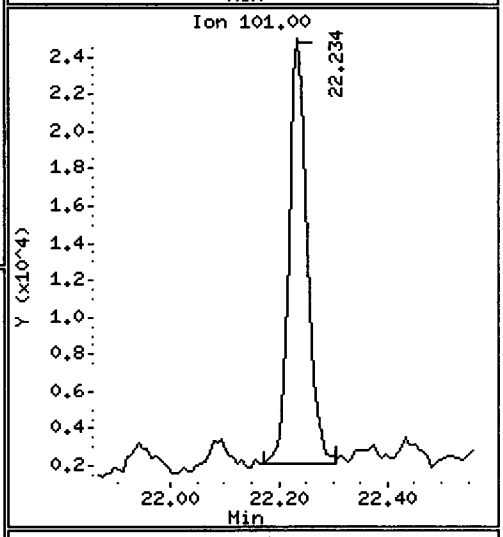


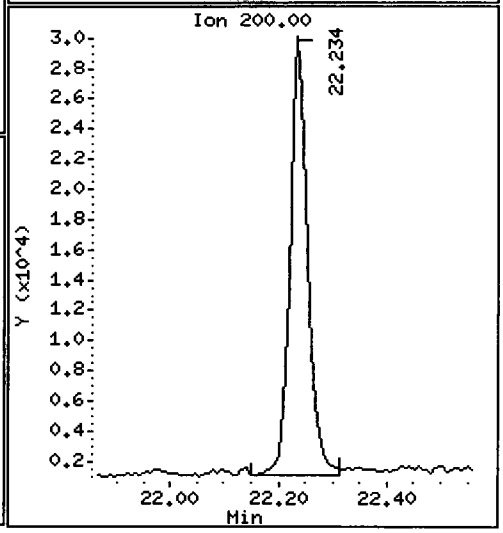












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

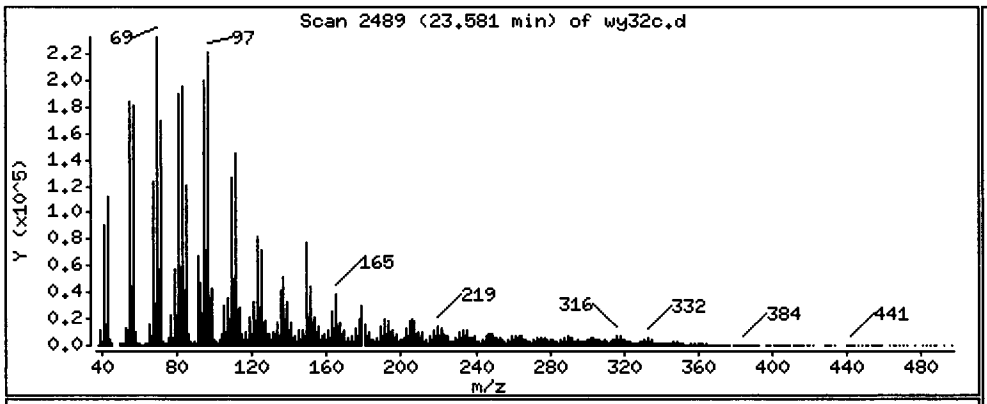
Operator: VTS/YZ

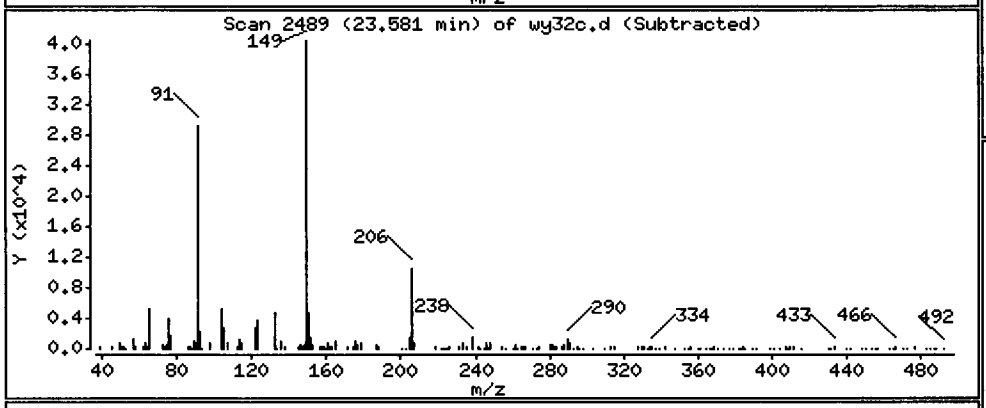
Column phase: ZB-5msi

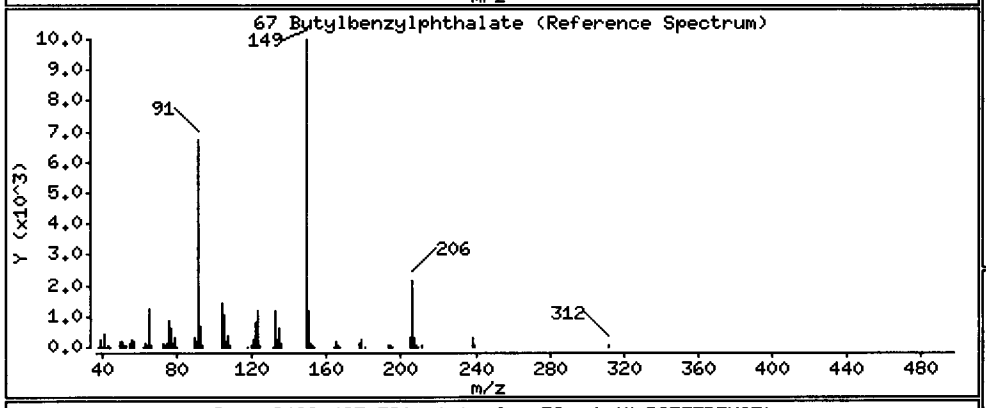
Column diameter: 0.25

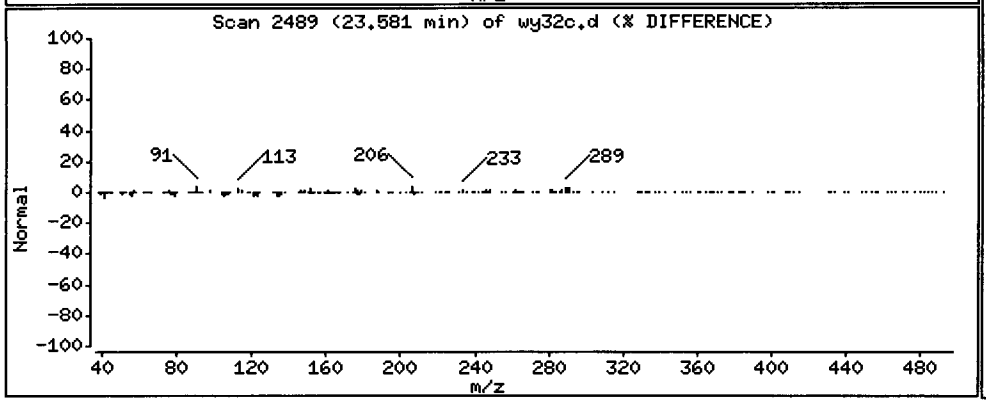
67 Butylbenzylphthalate

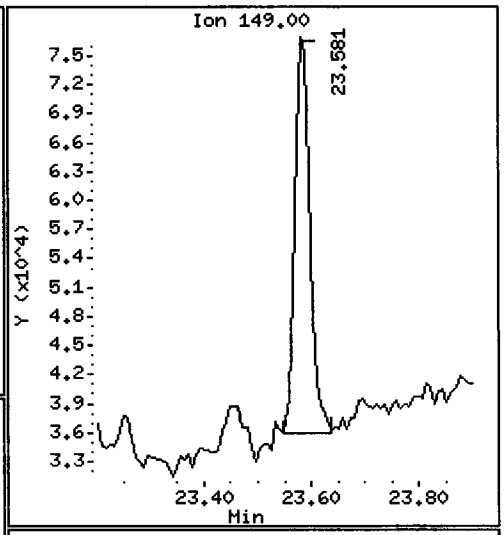
Concentration: 1562 ug/kg

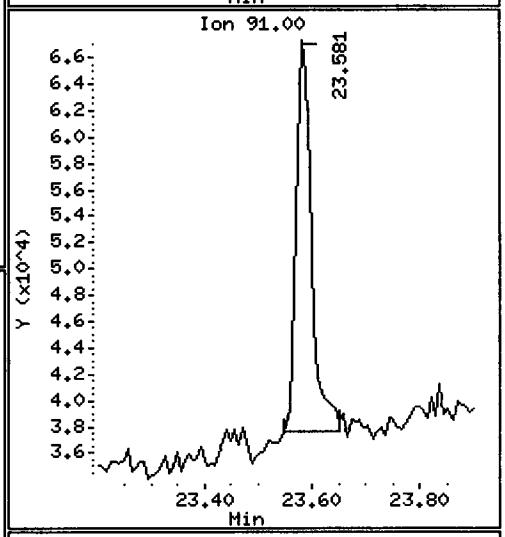


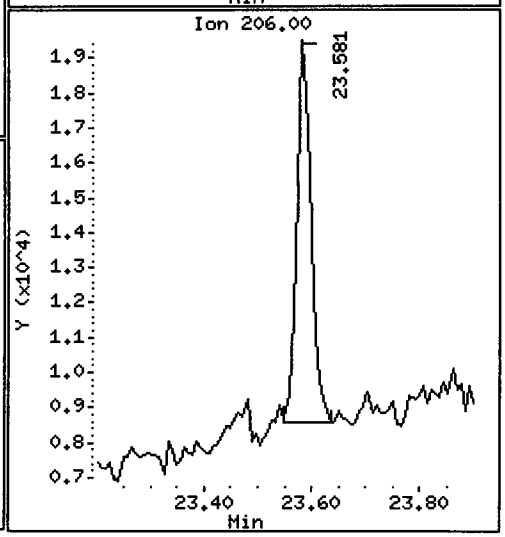












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

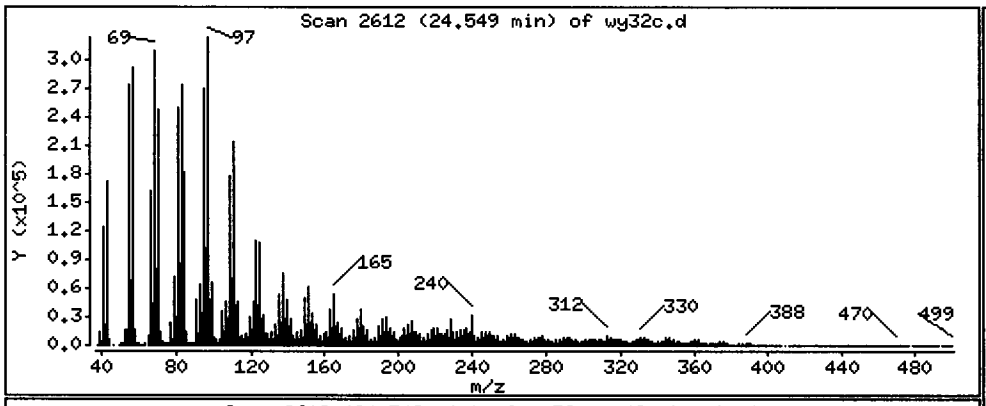
Operator: VTS/YZ

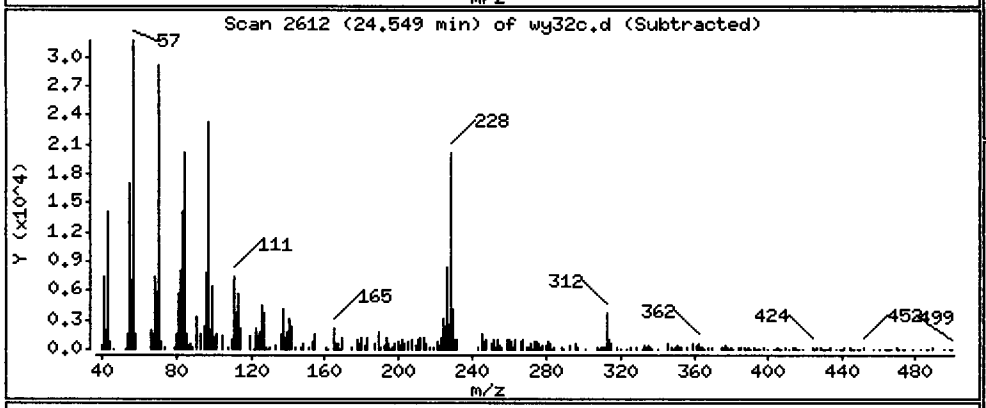
Column phase: ZB-5msi

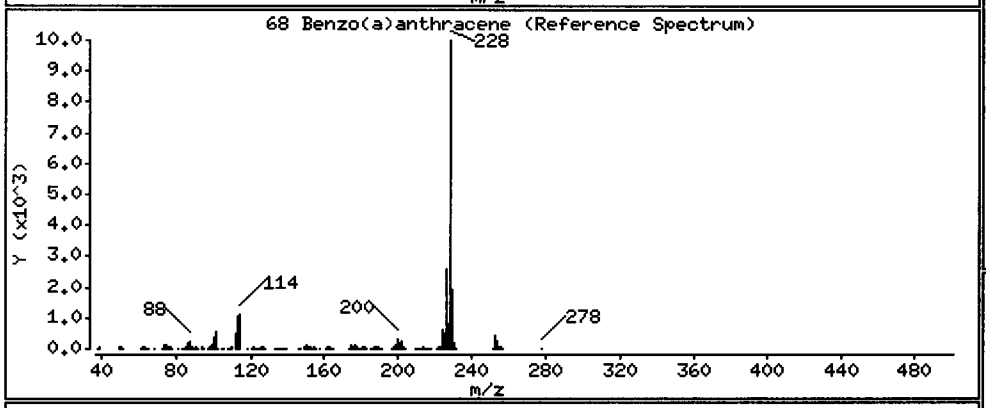
Column diameter: 0.25

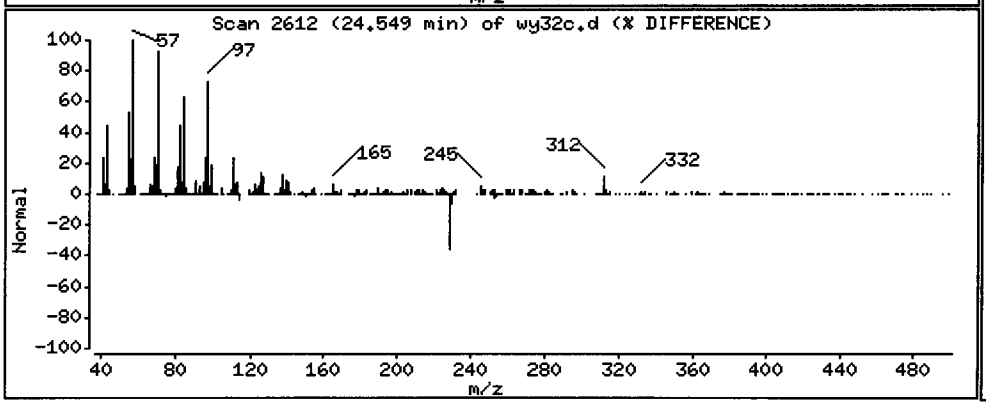
68 Benzo(a)anthracene

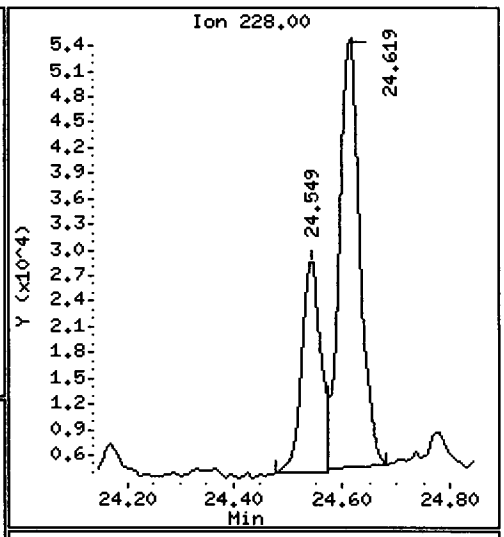
Concentration: 451.7 ug/kg

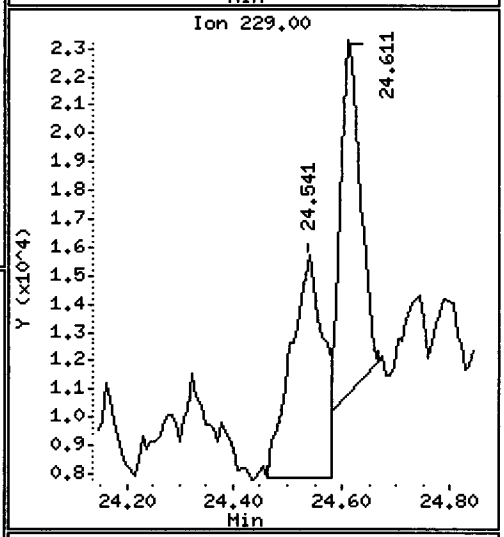


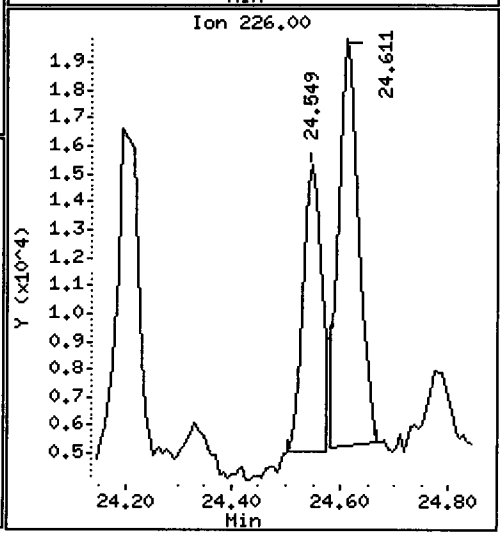












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

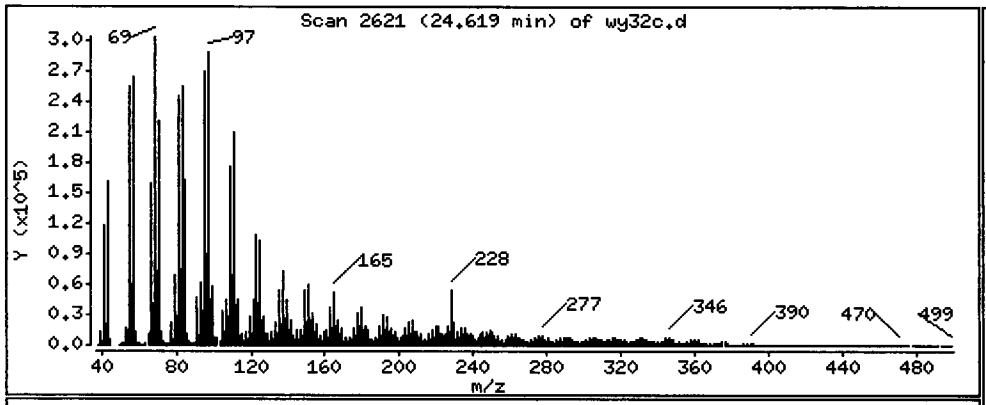
Operator: VTS/YZ

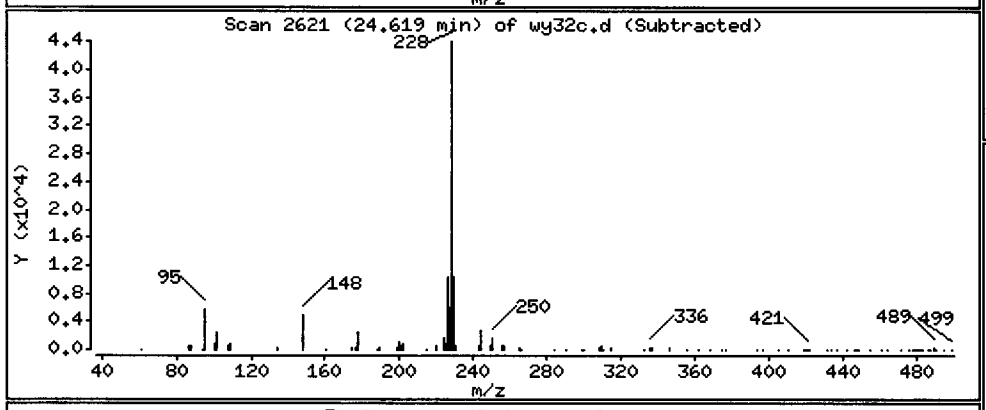
Column phase: ZB-5msi

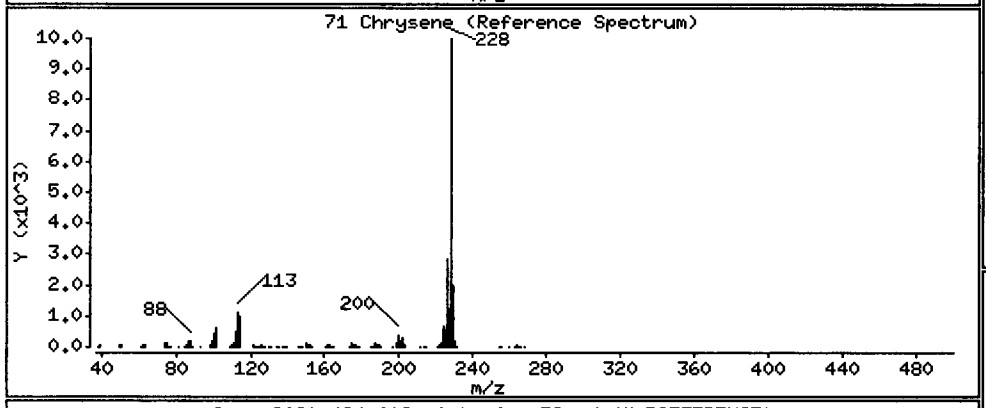
Column diameter: 0.25

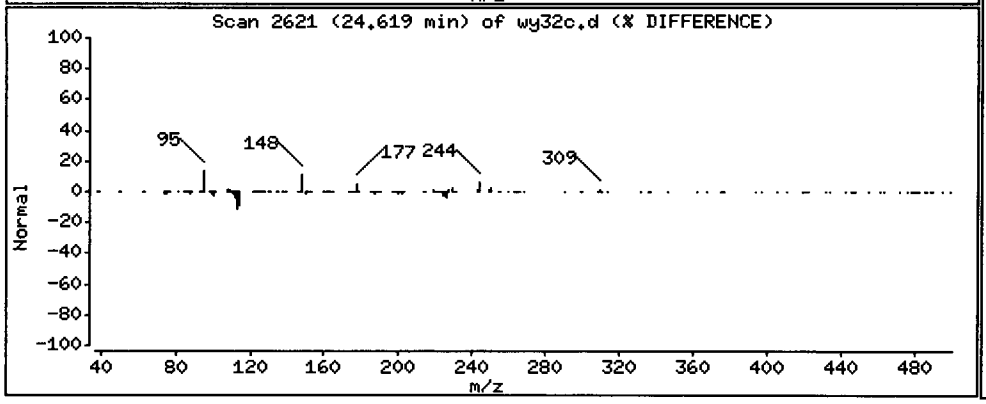
71 Chrysene

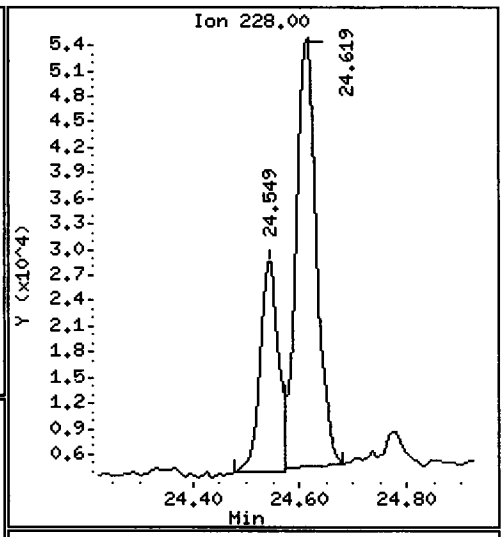
Concentration: 1169 ug/kg

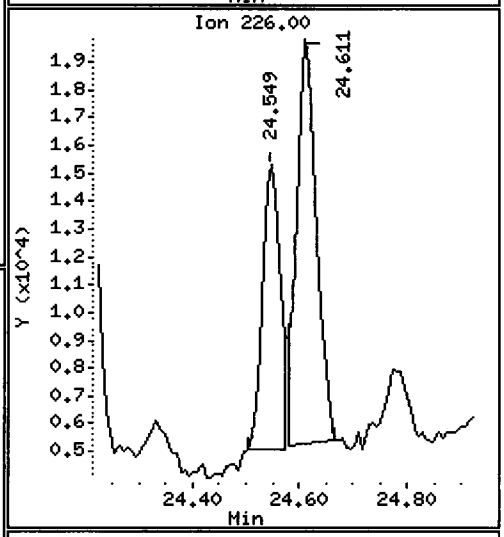


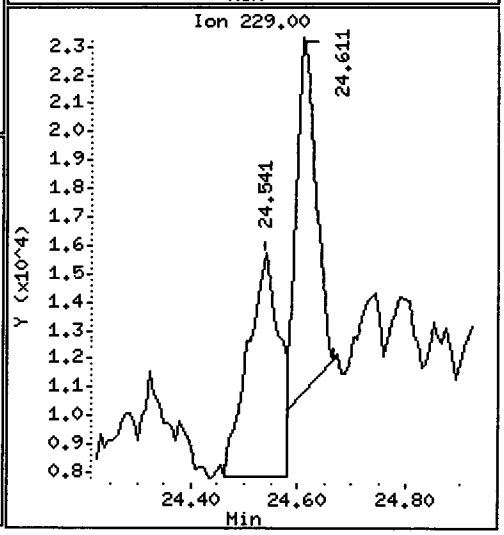












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

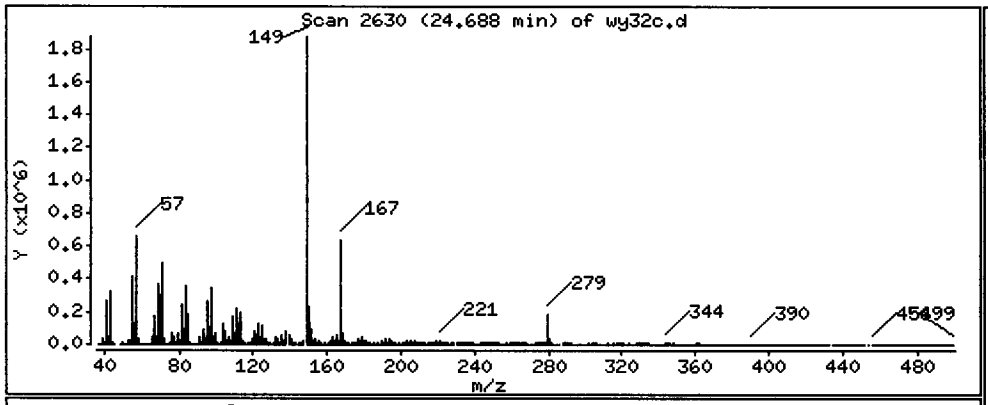
Operator: VTS/YZ

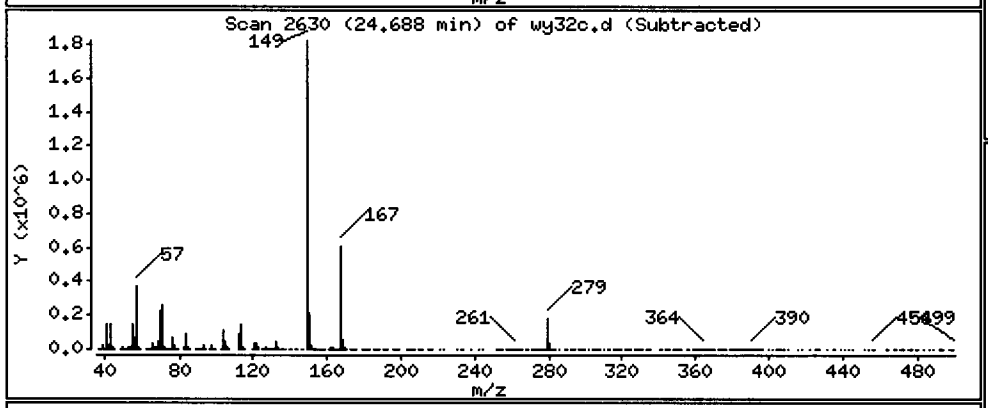
Column phase: ZB-5msi

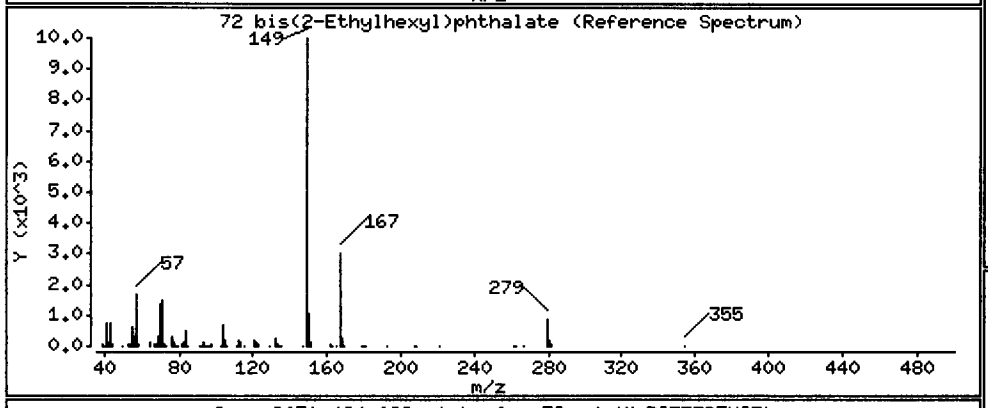
Column diameter: 0.25

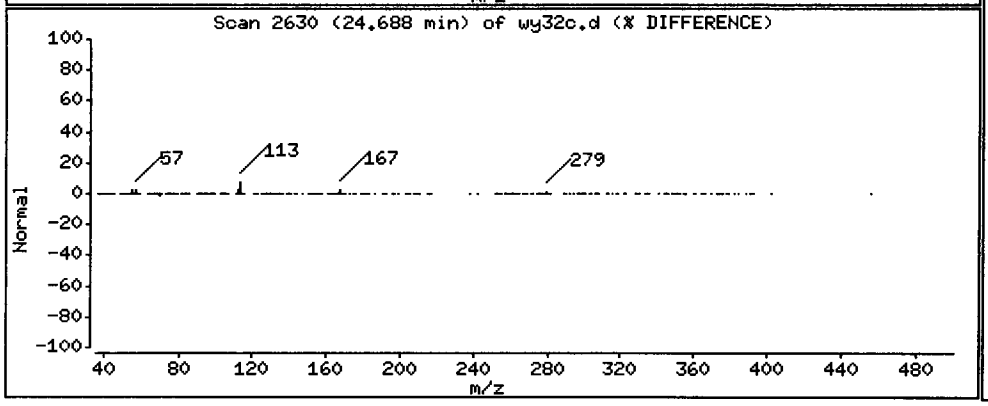
72 bis(2-Ethylhexyl)phthalate

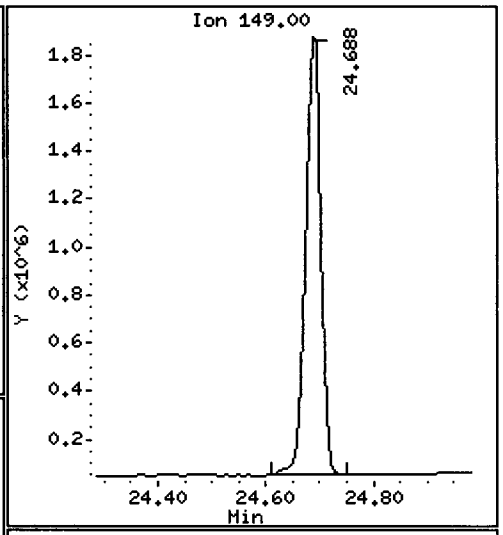
Concentration: 52370 ug/kg

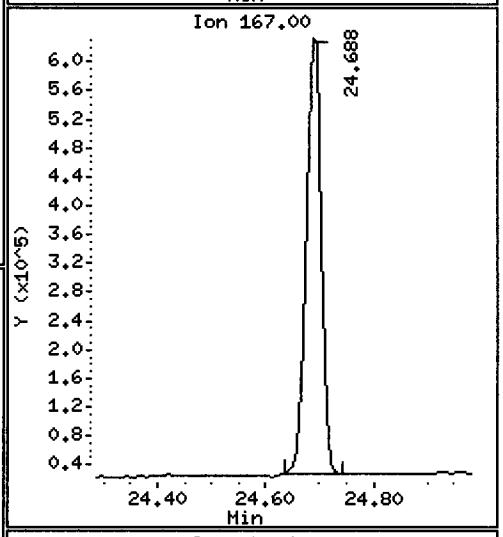


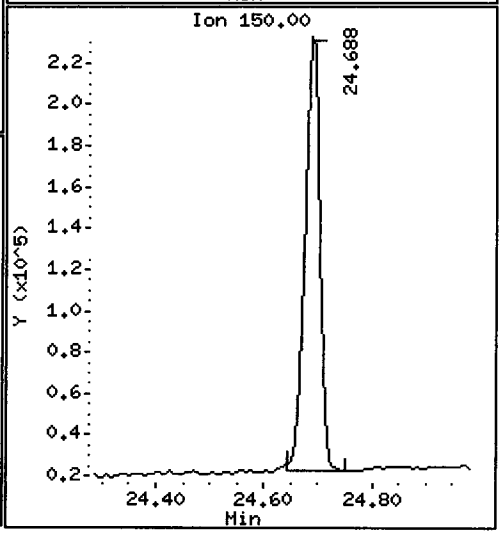












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

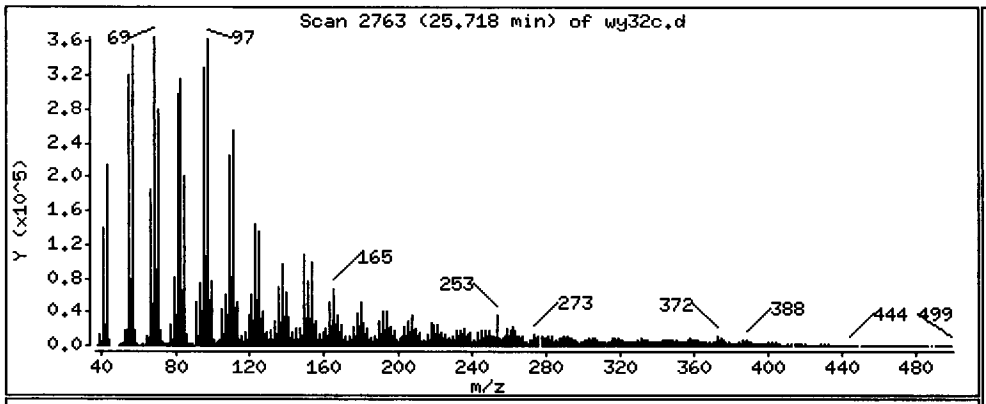
Operator: VTS/YZ

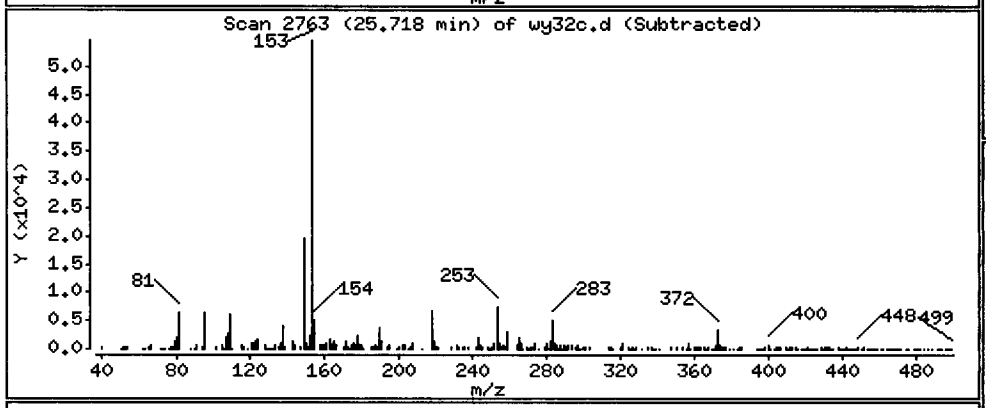
Column phase: ZB-5ms1

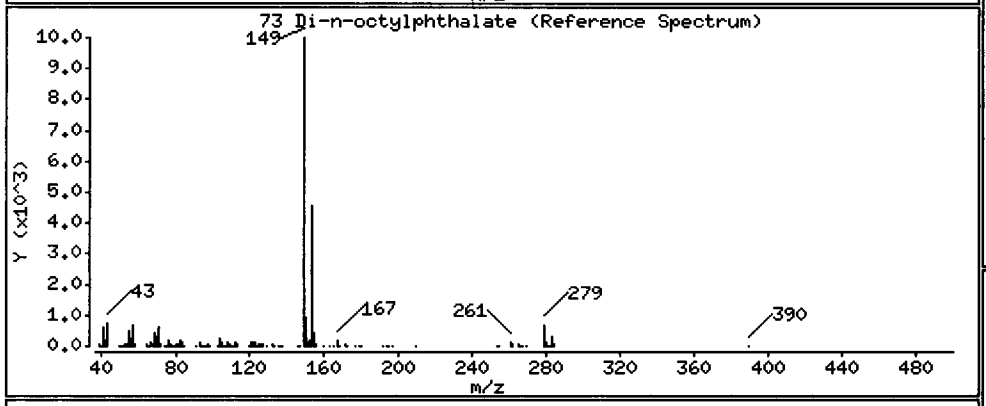
Column diameter: 0.25

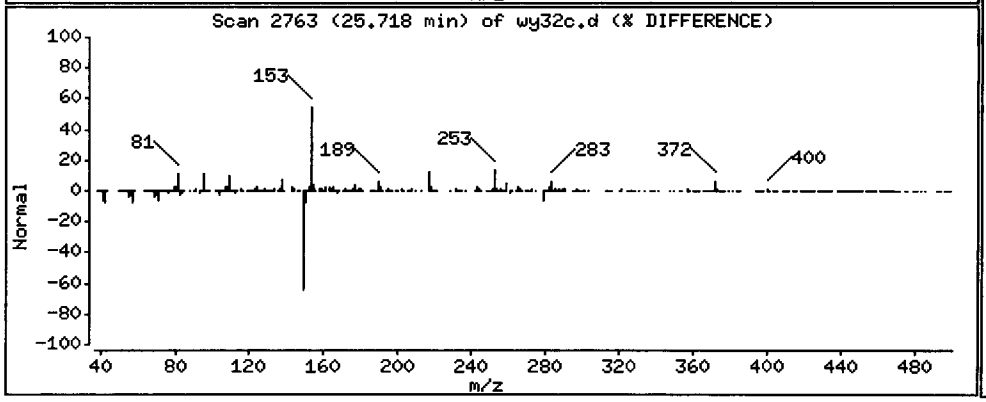
73 Di-n-octylphthalate

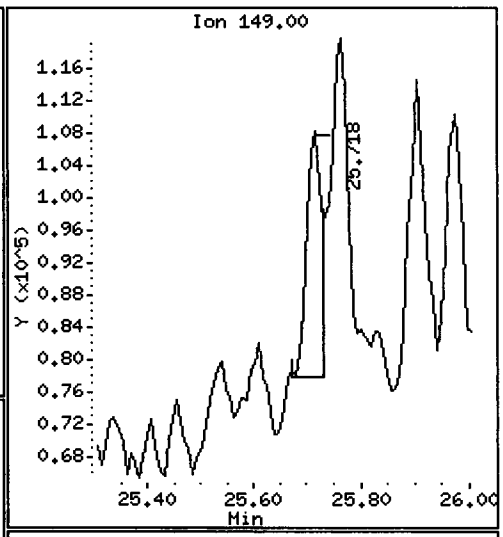
Concentration: 461.6 ug/kg

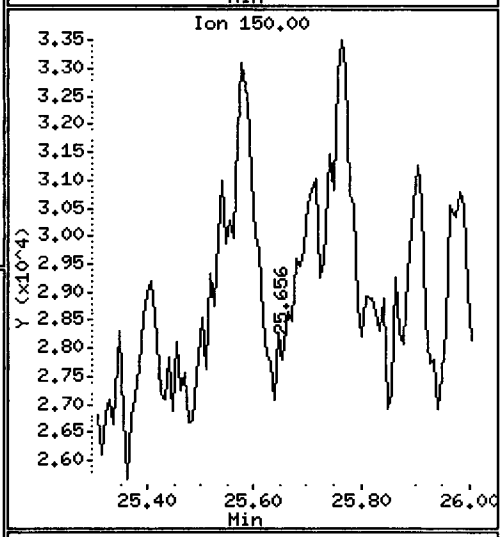


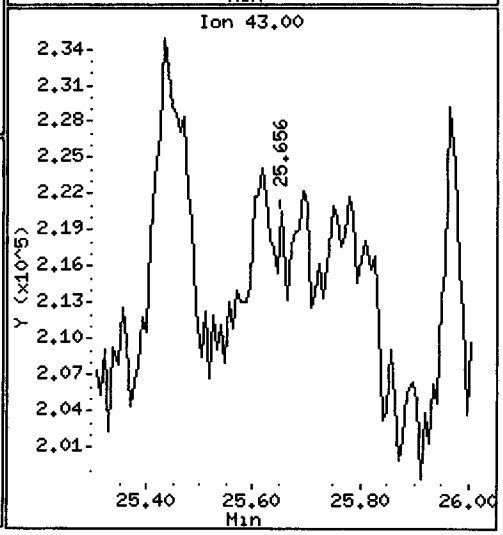












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

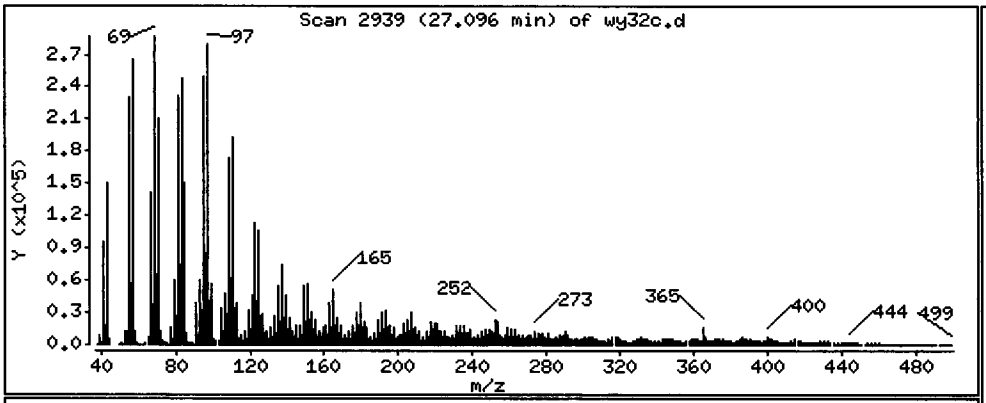
Operator: VTS/YZ

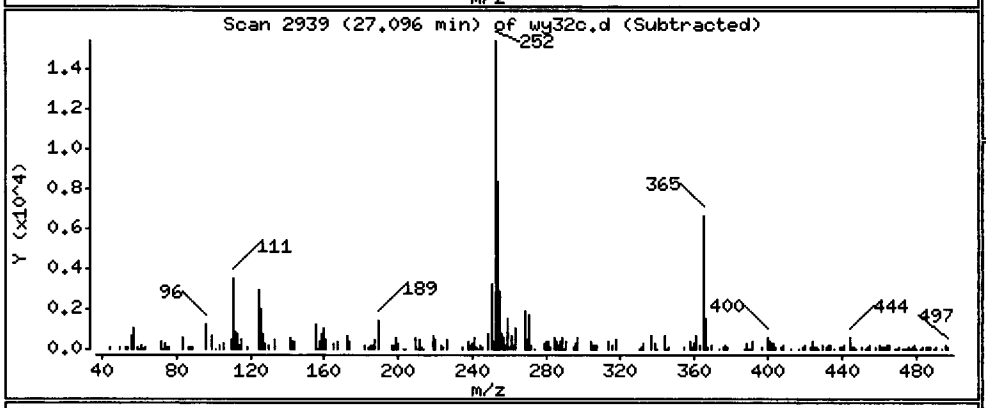
Column phase: ZB-5msi

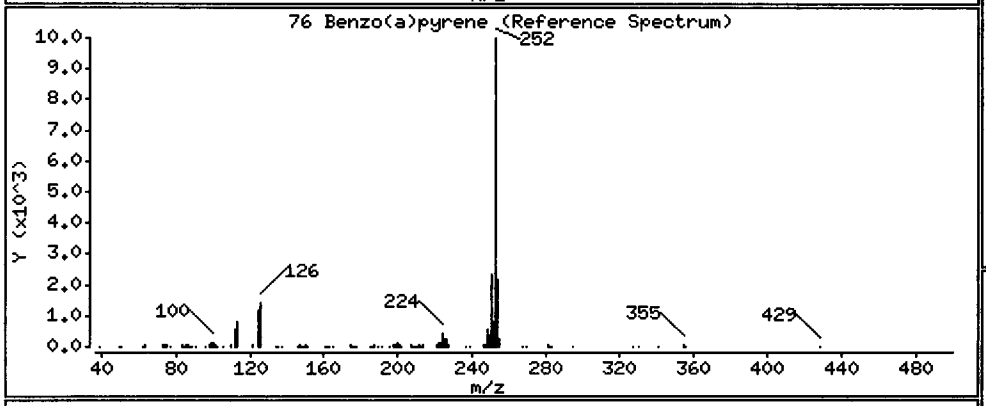
Column diameter: 0.25

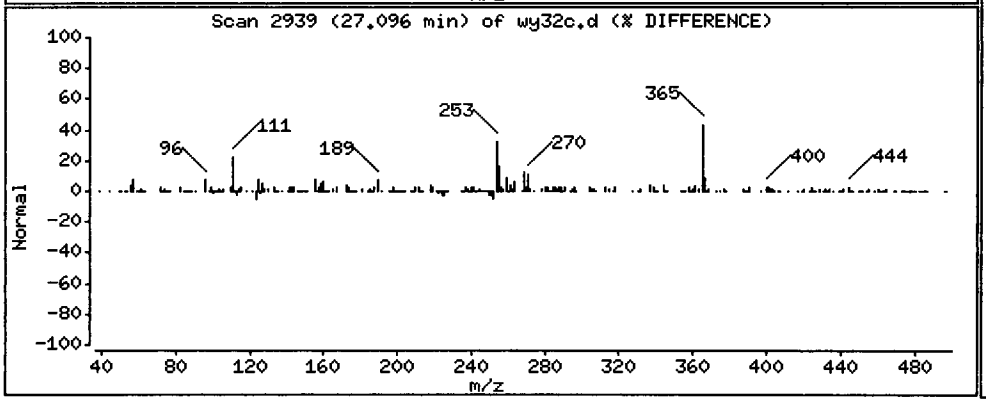
76 Benzo(a)pyrene

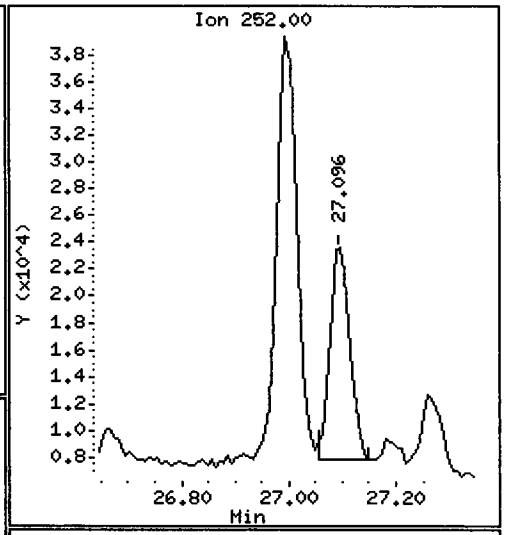
Concentration: 350.8 ug/kg

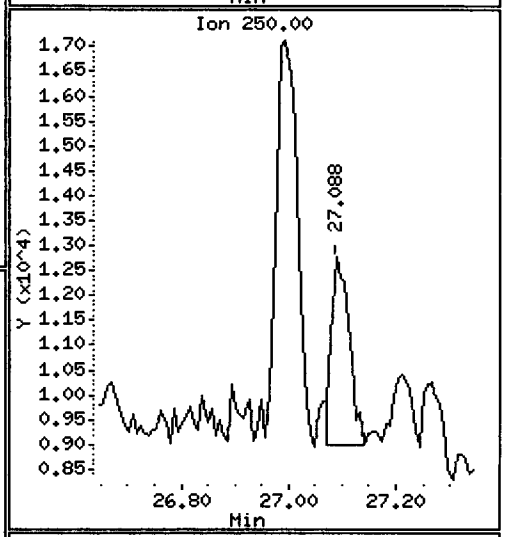


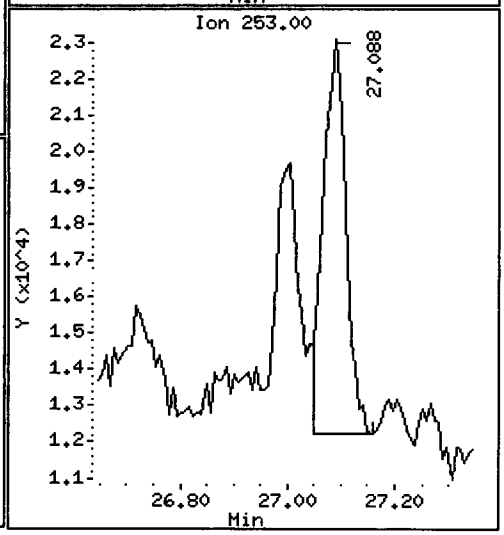












Data File: /chem1/nt10.1/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.1

Sample Info: WY32C

Volume Injected (uL): 1.0

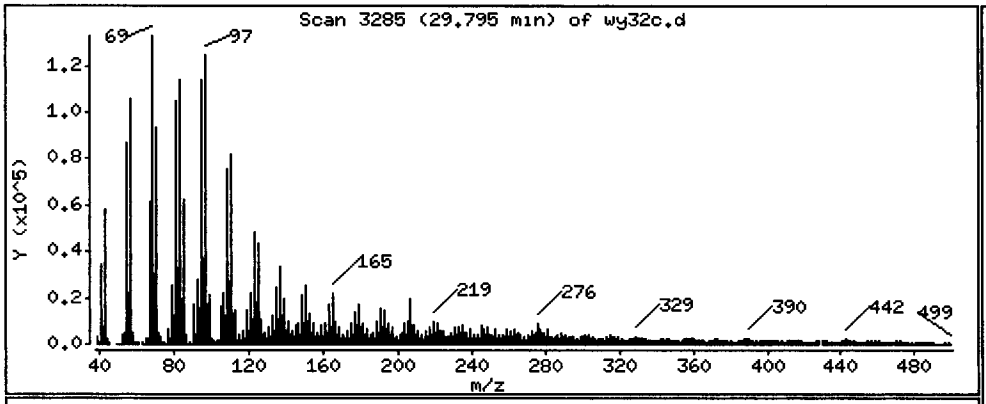
Operator: VTS/YZ

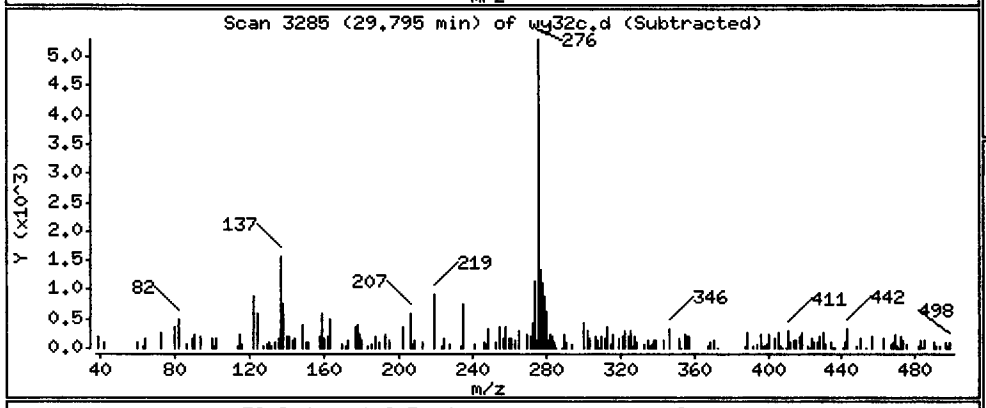
Column phase: ZB-5msi

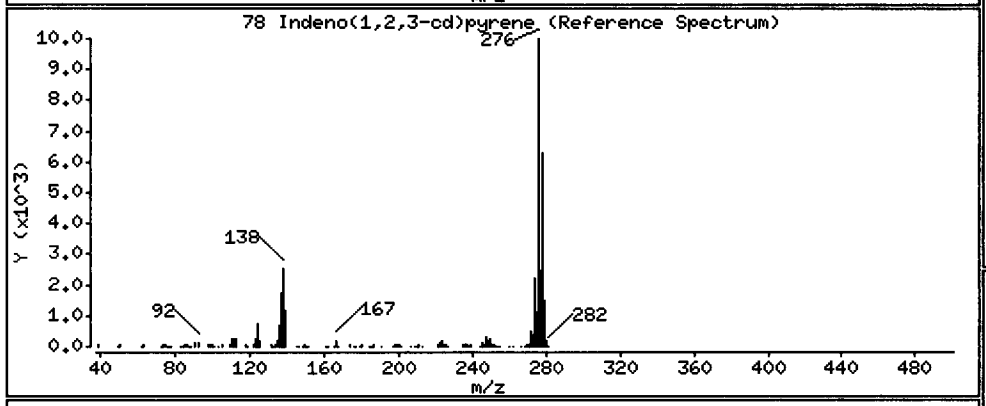
Column diameter: 0.25

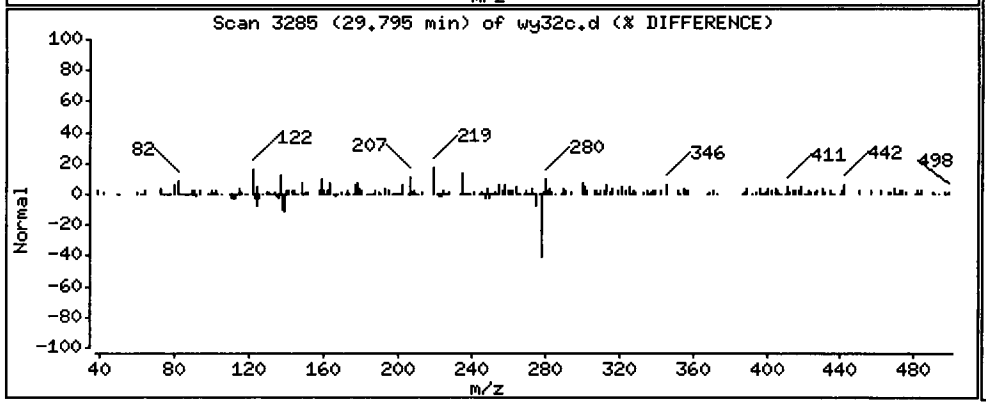
78 Indeno(1,2,3-cd)pyrene

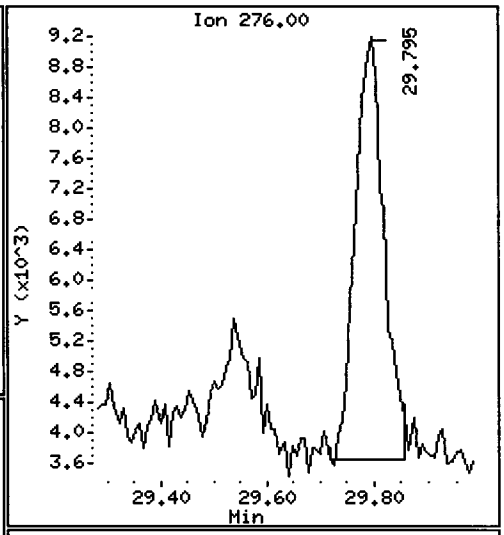
Concentration: 146.9 ug/kg

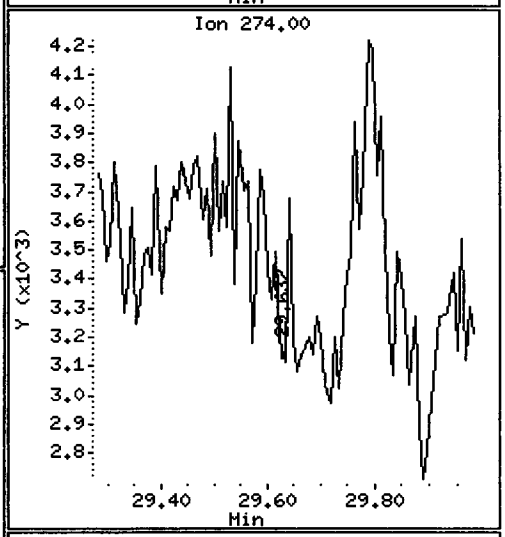


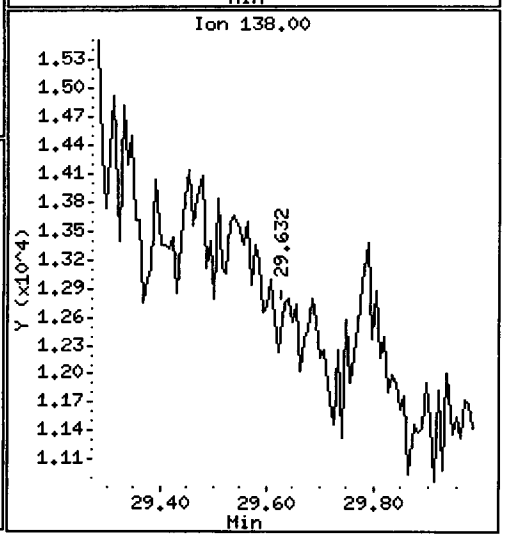












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

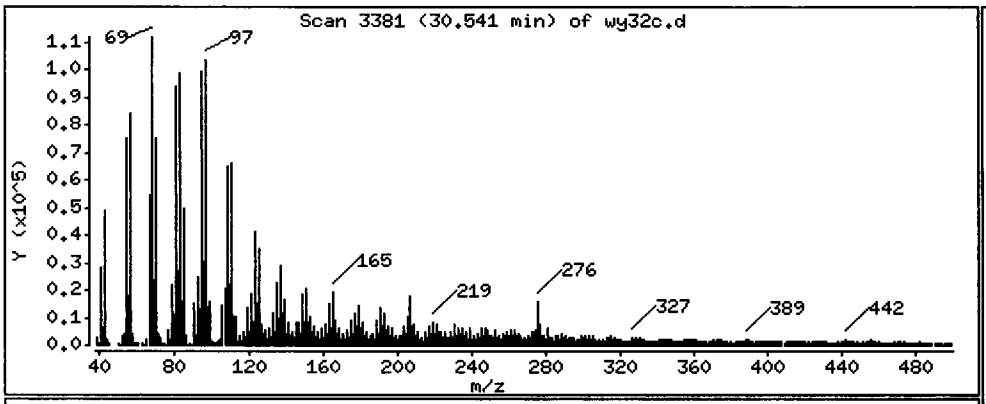
Operator: VTS/YZ

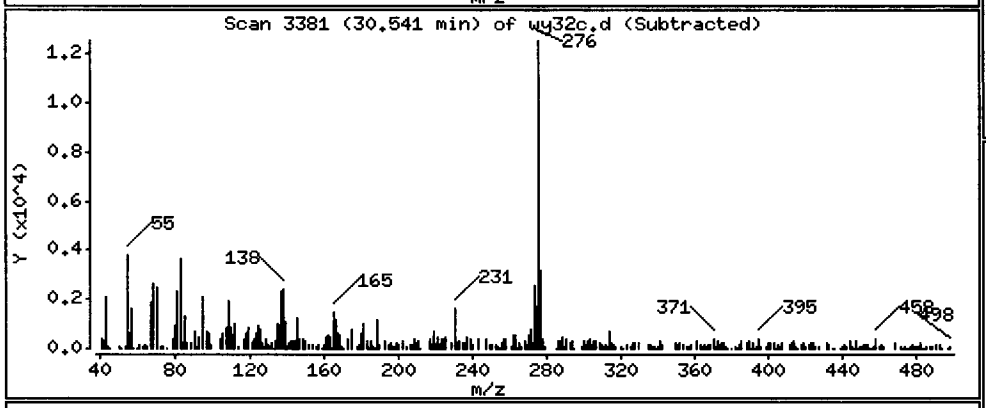
Column phase: ZB-5msi

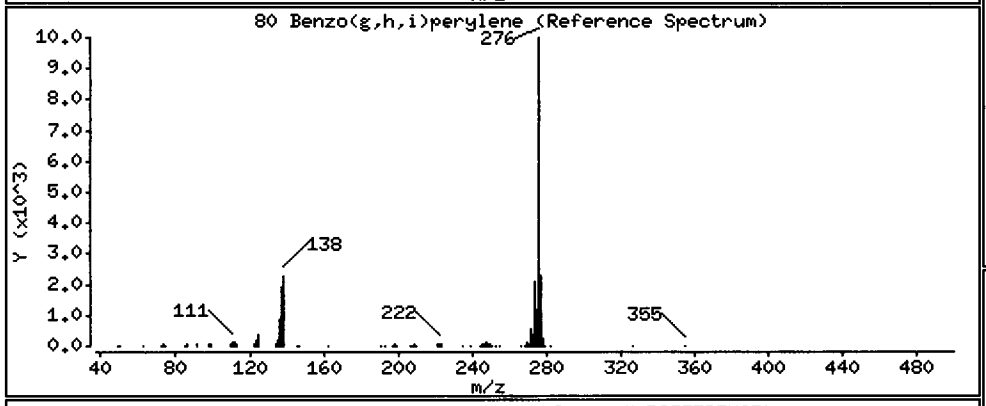
Column diameter: 0.25

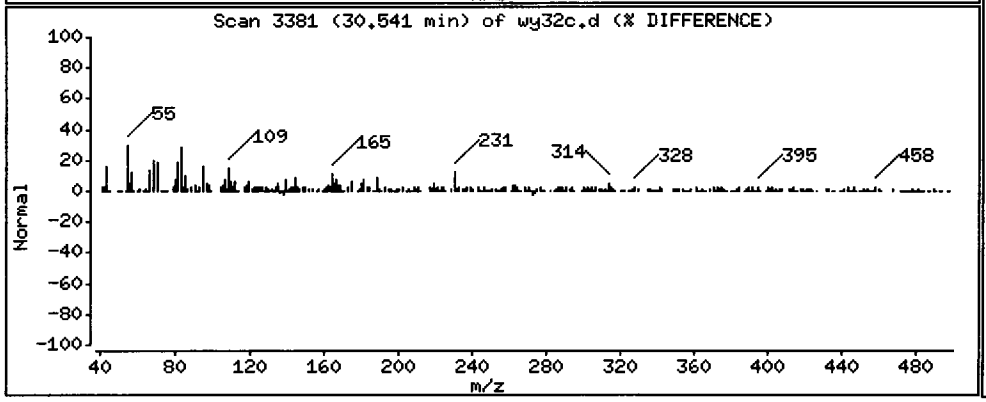
80 Benzo(g,h,i)perylene

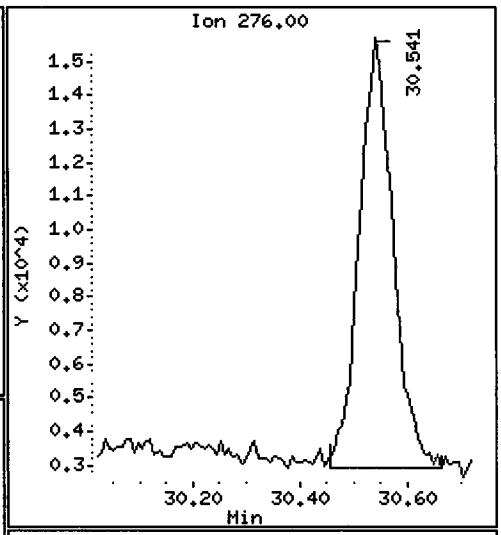
Concentration: 462.2 ug/kg

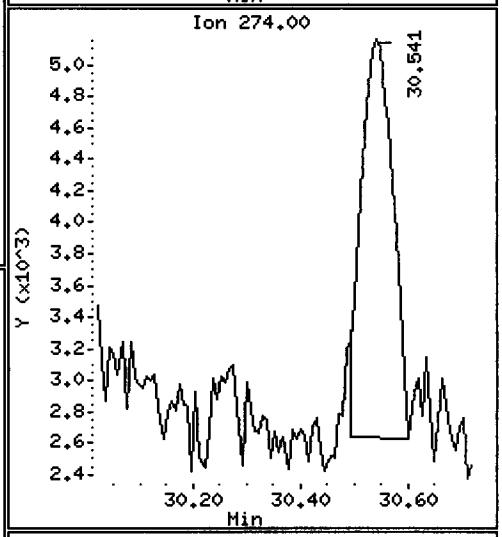


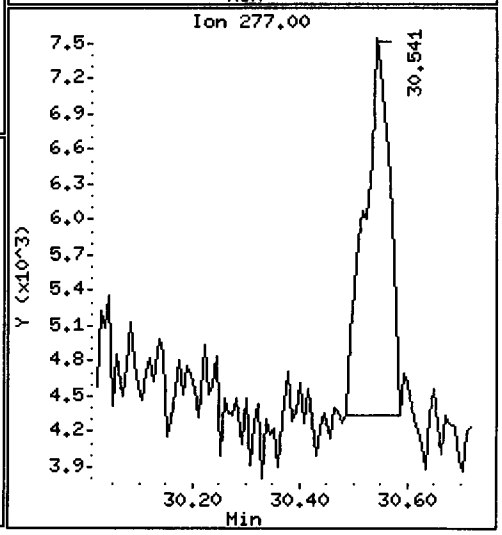












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

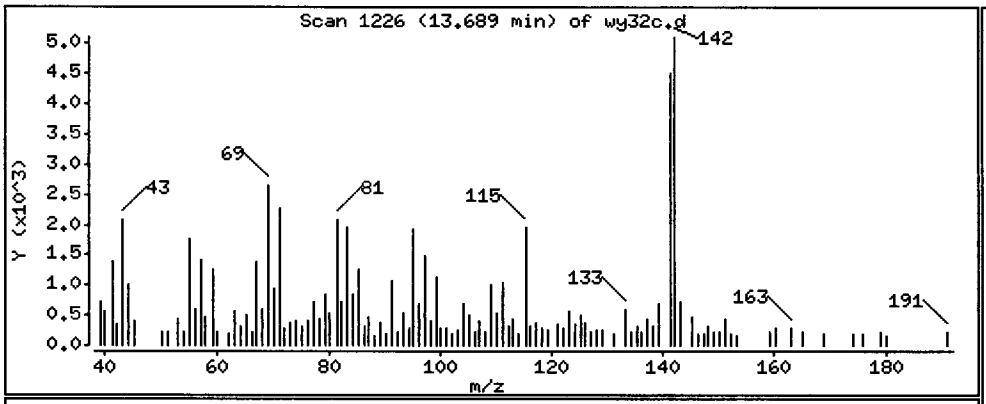
Operator: VTS/YZ

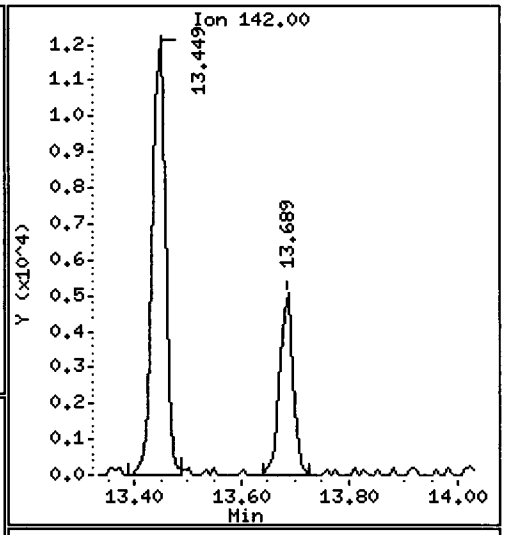
Column phase: ZB-5msi

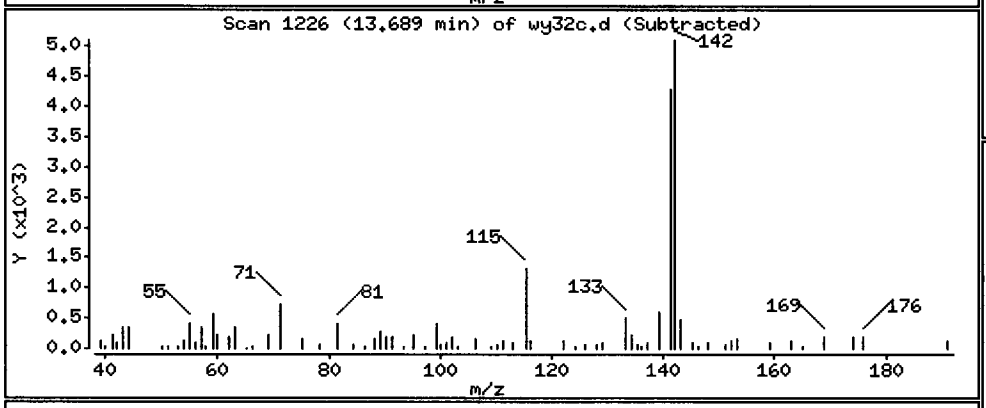
Column diameter: 0.25

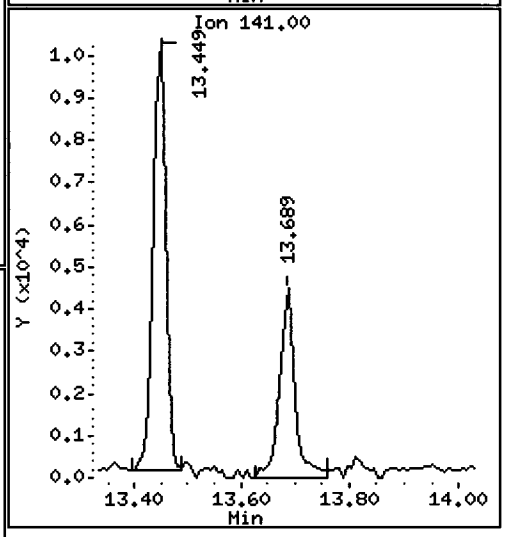
105 1-methylnaphthalene

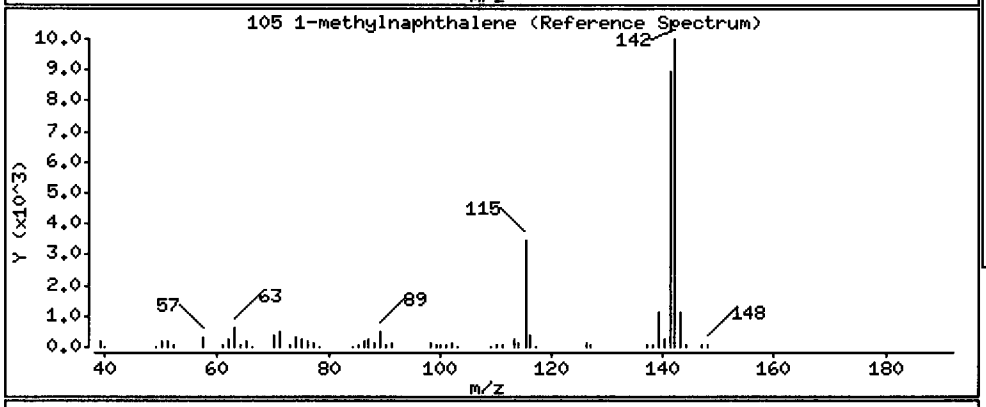
Concentration: 93.53 ug/kg

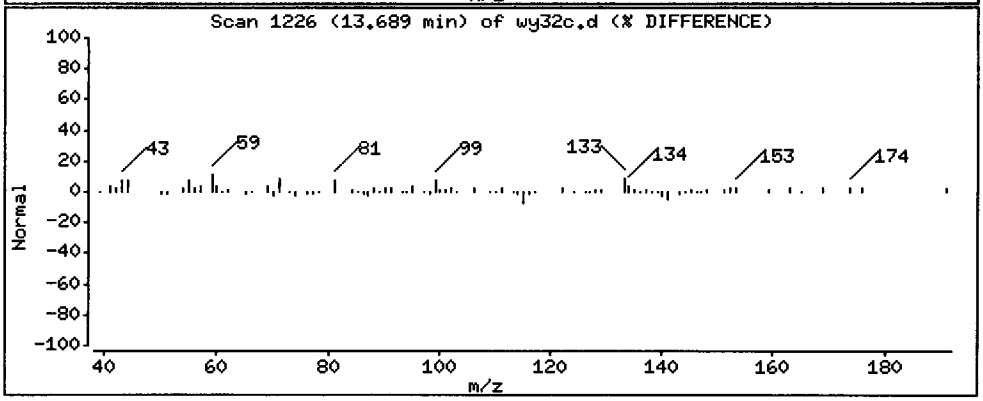












Data File: /chem1/nt10.i/20130801.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

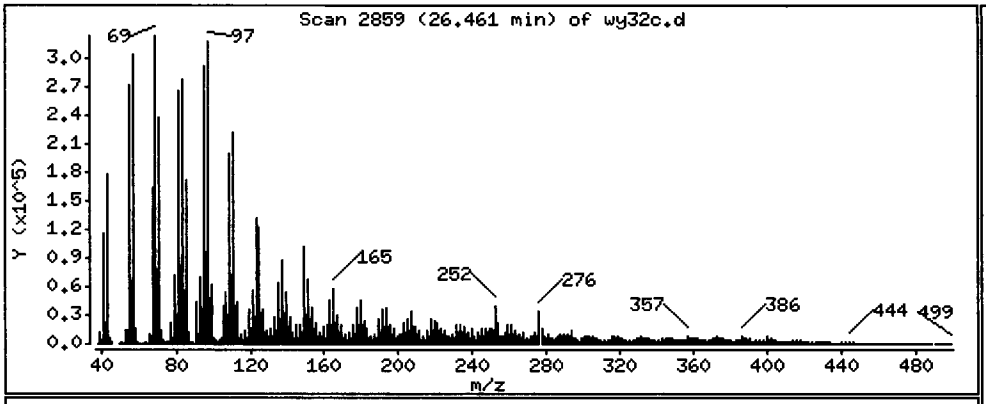
Operator: VTS/YZ

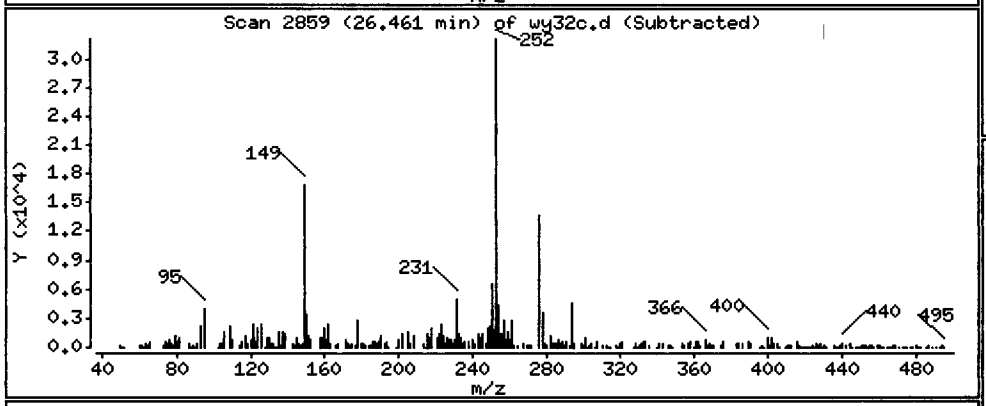
Column phase: ZB-5msi

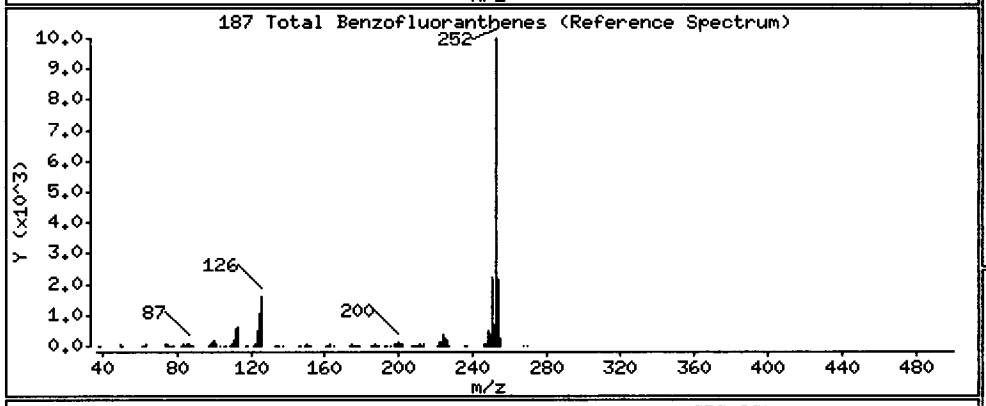
Column diameter: 0.25

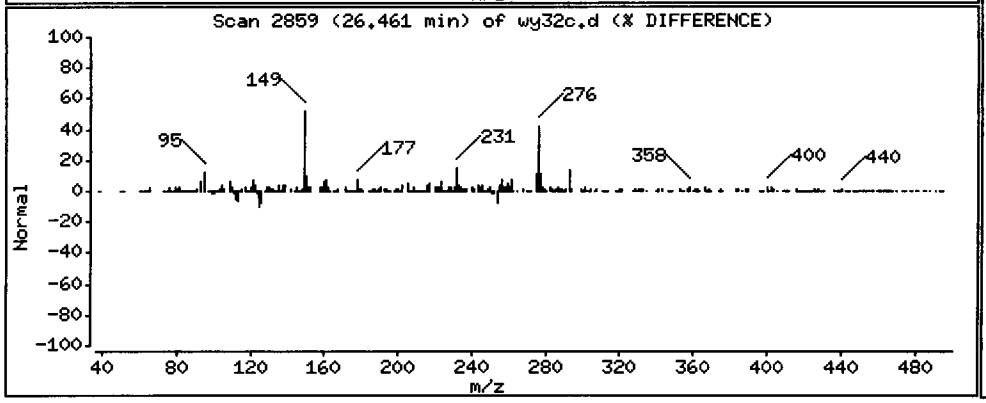
187 Total Benzofluoranthenes

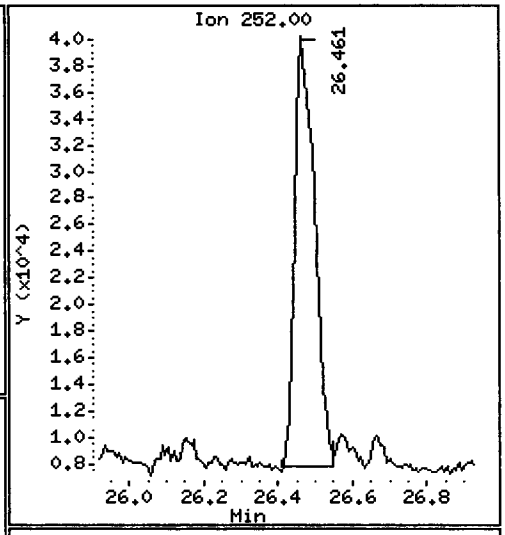
Concentration: 922.3 ug/kg

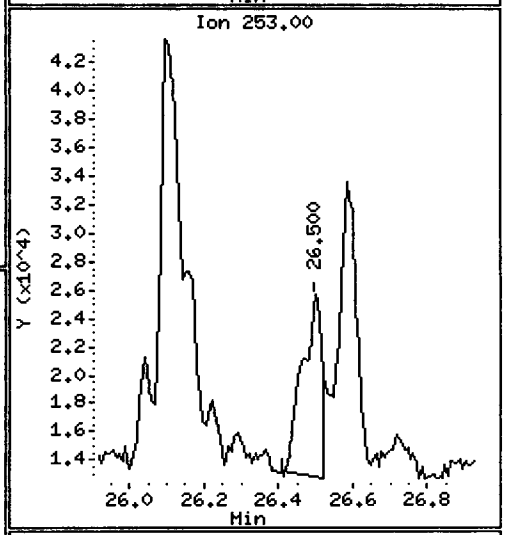


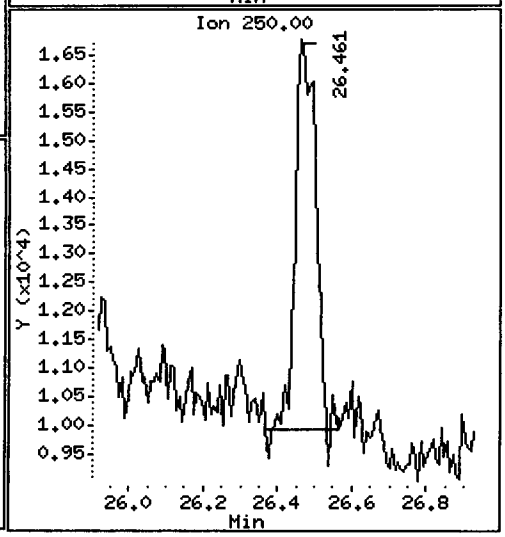






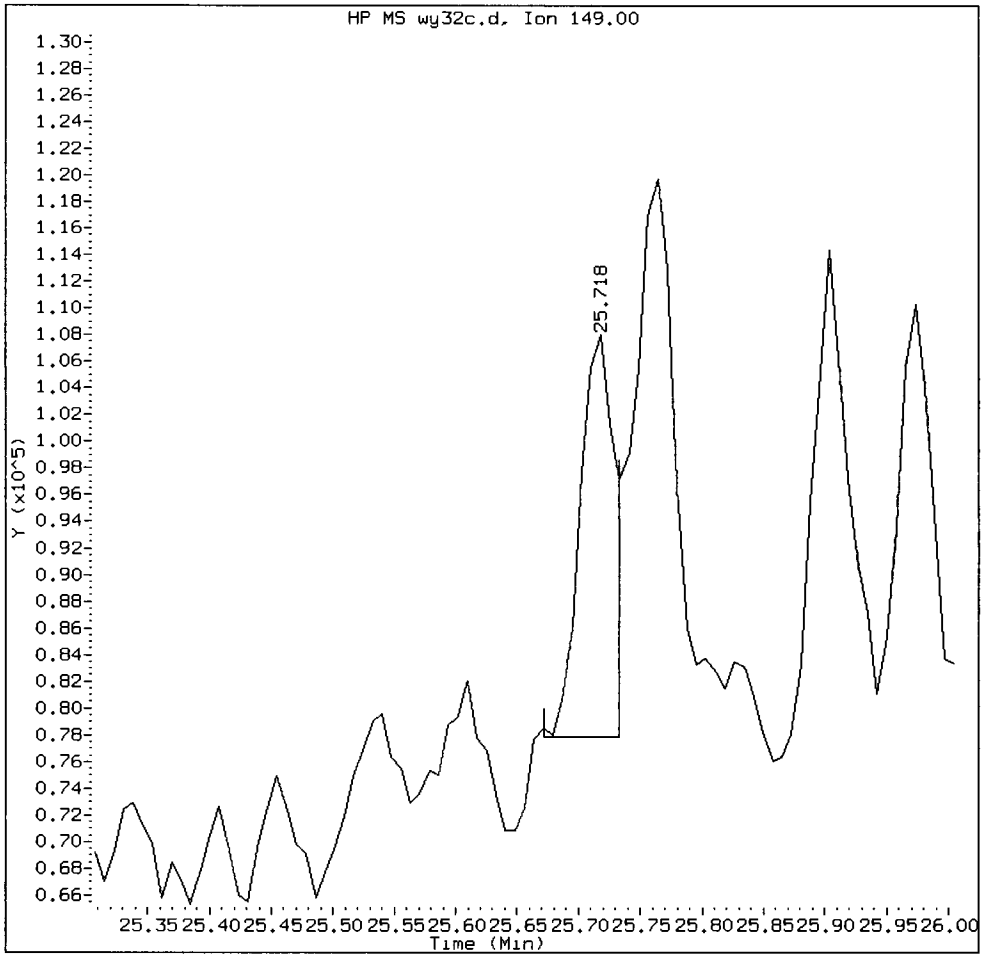






WY32C, /chem1/nt10.i/20130801.b/wy32c.d

Di-n-octylphthalate Amount: 0.65 Area: 61412



MANUAL INTEGRATION for Di-n-octylphthalate

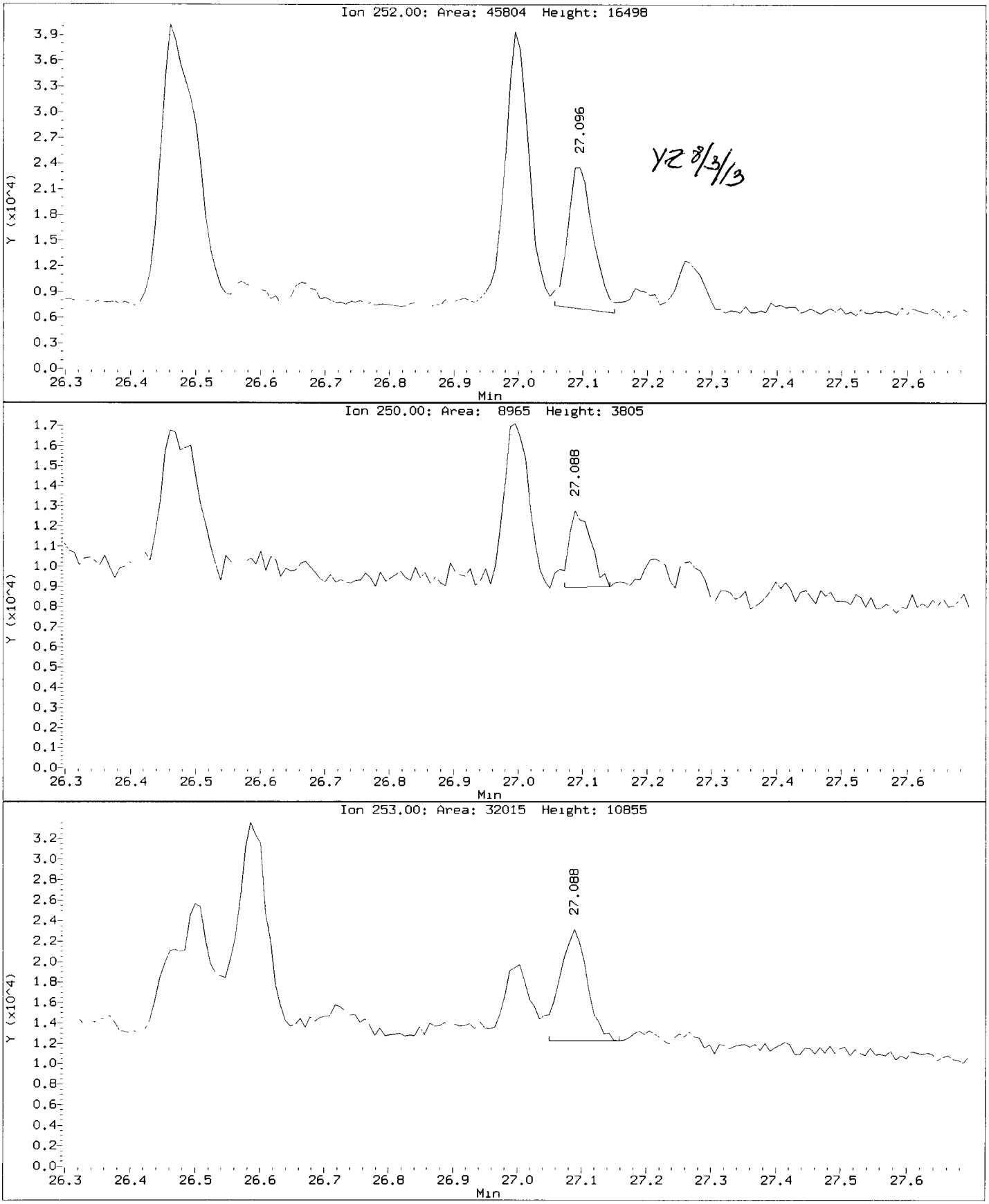
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 8/3/13

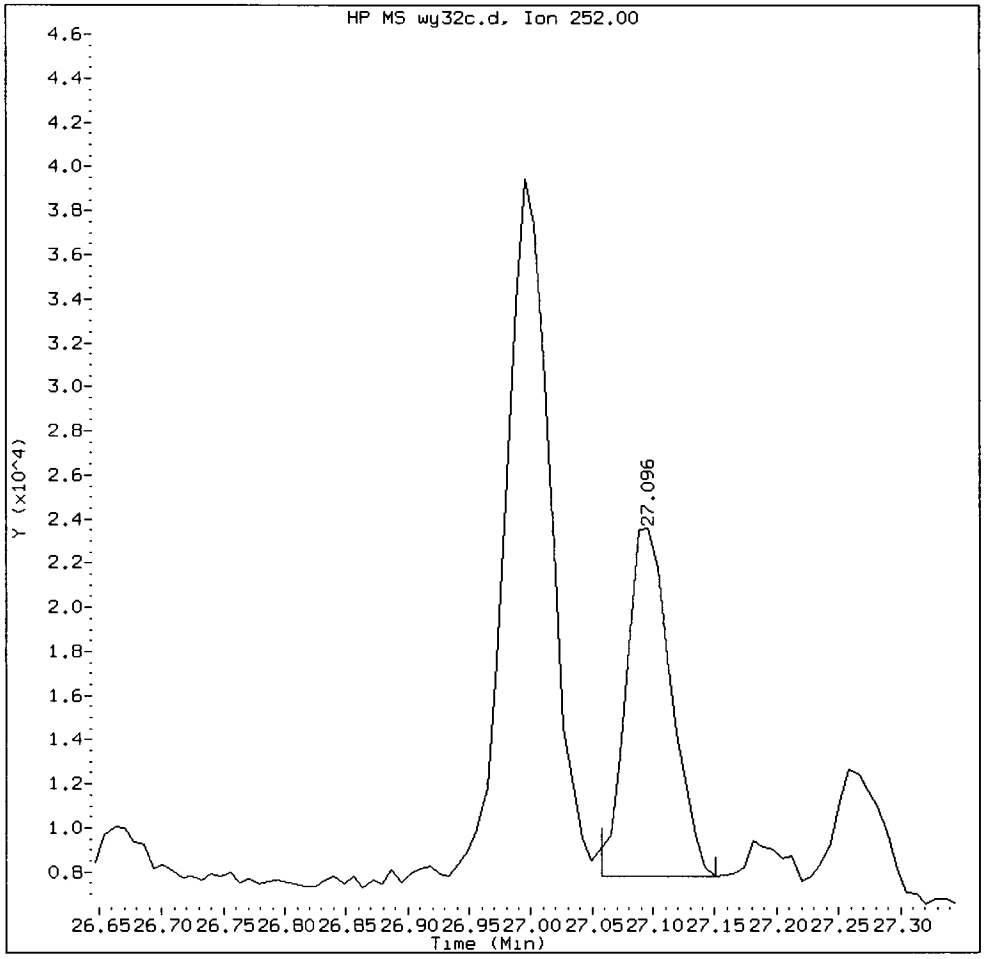
Data File: /chem1/nt10.1/20130801.b/wy32c.d
Injection Date: 01-AUG-2013 21:41
Instrument: nt10.1
Client Sample ID:

Compound: Benzo(a)pyrene
CAS Number: 50-32-8



WY32C, /chem1/nt10.i/20130801.b/wy32c.d

Benzo(a)pyrene Amount: 0.50 Area: 41413



MANUAL INTEGRATION for Benzo(a)pyrene

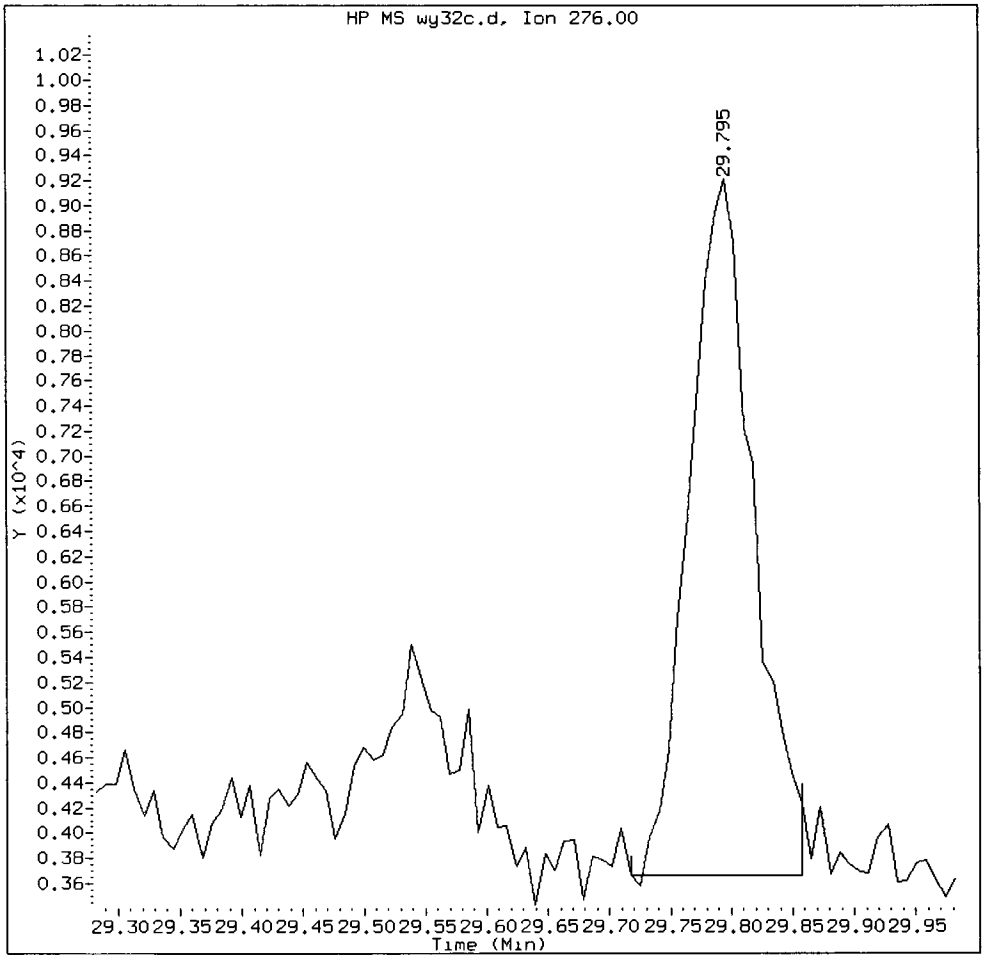
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: JZ Date: 8/3/13

WY32C, /chem1/nt10.i/20130801.b/wy32c.d

Indeno(1,2,3-cd)pyrene Amount: 0.21 Area: 20352



MANUAL INTEGRATION for Indeno(1,2,3-cd)pyrene

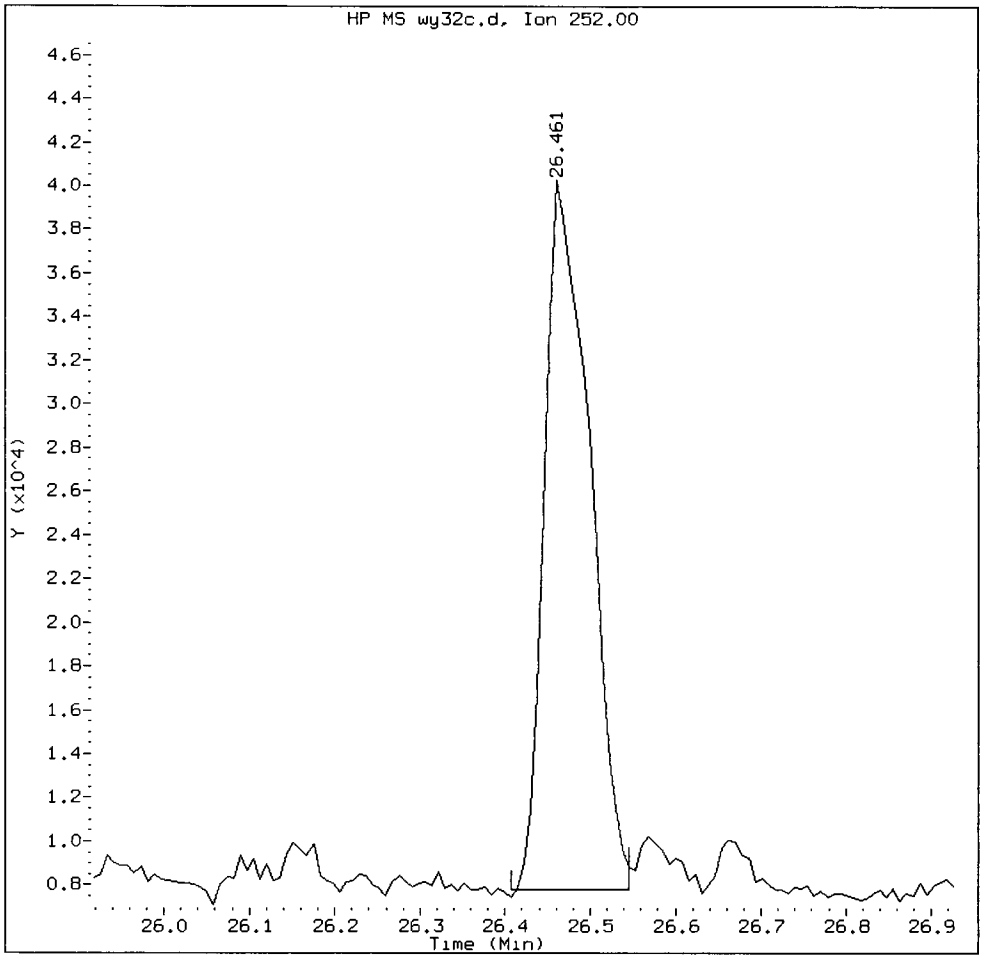
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 8/3/13

WY32C, /chem1/nt10.i/20130801.b/wy32c.d

Total Benzofluoranthenes Amount: 1.30 Area: 120951



MANUAL INTEGRATION for Total Benzofluoranthenes

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VZ Date: 8/3/13

CO-ELUTION SUMMARY FOR FILE - wy32c.d

Lab ID: WY32C, Method: ABN.m, Instrument: nt10.i, Date: 01-AUG-2013

RT	CO-ELUTION COMPOUNDS
26.461	Benzo(k)fluoranthene and Benzo(b)fluoranthene

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130802.b

Instrument: nt10.i Date: 02-AUG-2013 Method: ABN.m

INITIAL CAL: 30-JUL-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 02-AUG-2013

Compound	%D
Benzoic acid	-24.8
2,4-Dinitrophenol	-52.9
4,6-Dinitro-2-methylphenol	-23.6
Carbazole	21.4

Data File: /chem1/nt10.i/20130802.b/df0802.d

Date : 02-AUG-2013 12:21

Client ID: DFTPP

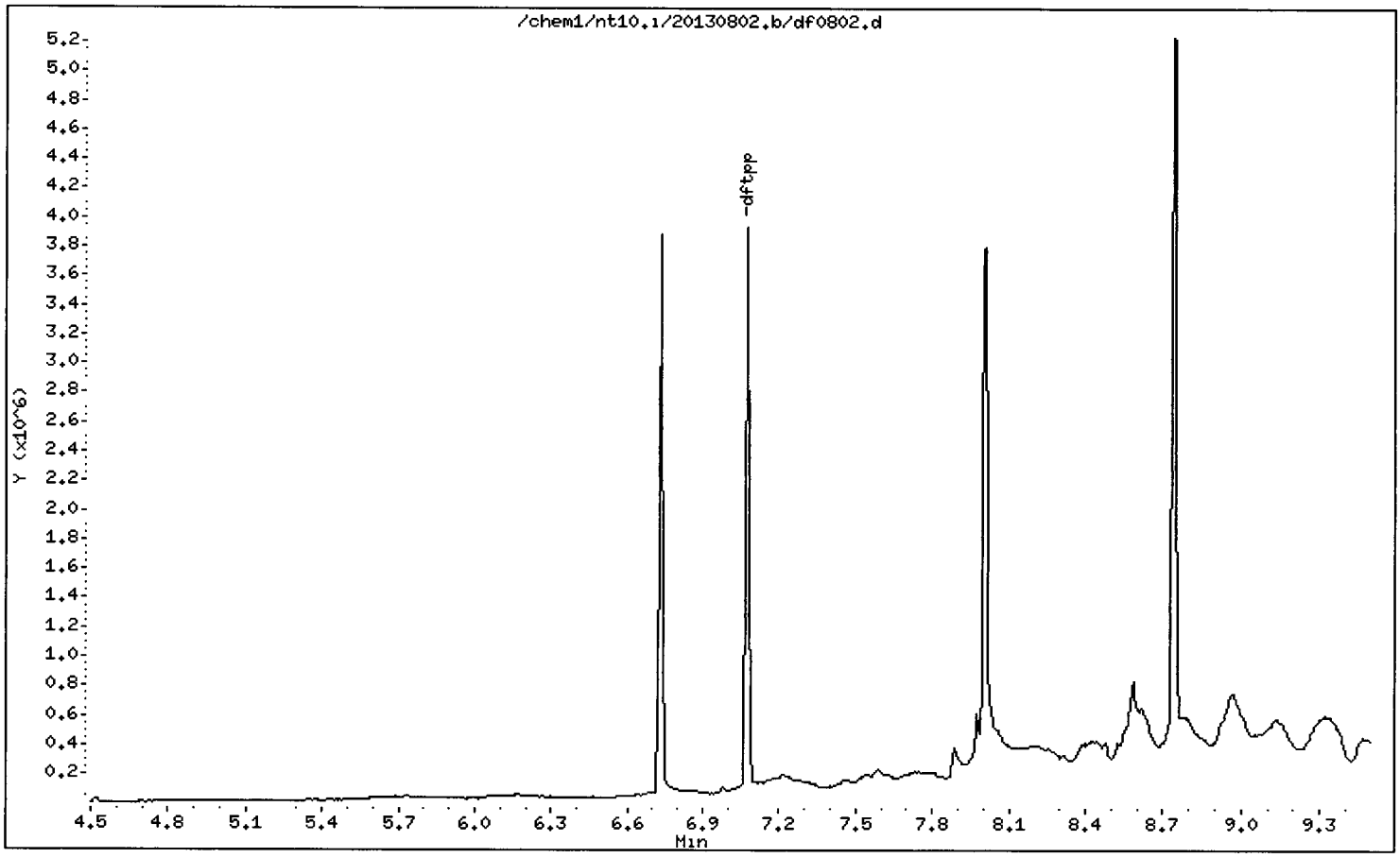
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130802.b/df0802.d

Date : 02-AUG-2013 12:21

Client ID: DFTPP

Instrument: nt10.i

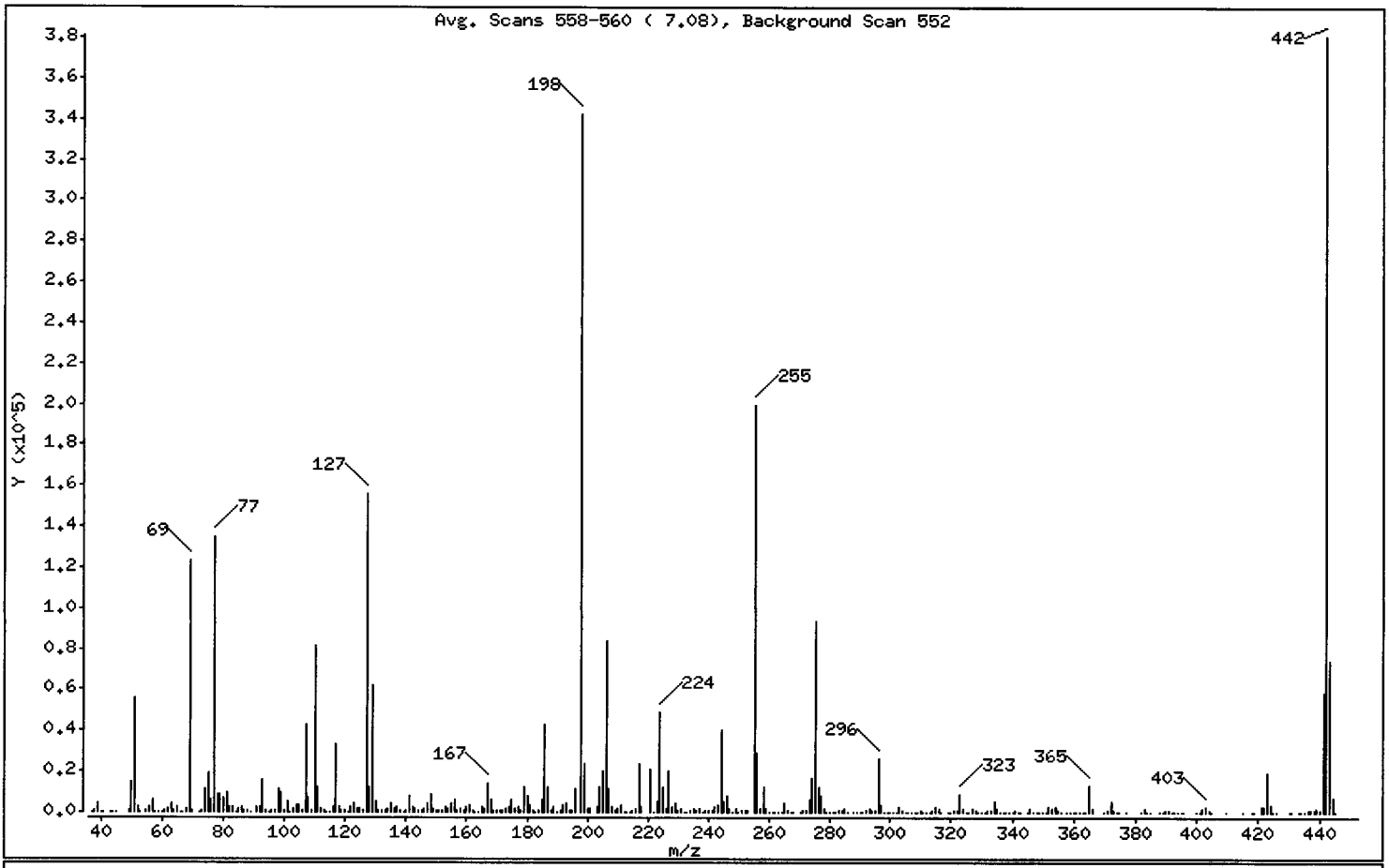
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	16.42
68	Less than 2.00% of mass 69	0.55 (1.51)
69	Mass 69 relative abundance	36.08
70	Less than 2.00% of mass 69	0.15 (0.40)
127	10.00 - 80.00% of mass 198	45.56
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.85
275	10.00 - 60.00% of mass 198	27.36
365	Greater than 1.00% of mass 198	3.93
441	0.01 - 24.00% of mass 442	17.12 (15.40)
442	50.00 - 200.00% of mass 198	111.15
443	15.00 - 24.00% of mass 442	21.77 (19.59)

Data File: /chem1/nt10.i/20130802.b/df0802.d

Date : 02-AUG-2013 12:21

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0802.d

Spectrum: Avg. Scans 558-560 (7.08), Background Scan 552

Location of Maximum: 442.00

Number of points: 368

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	229	136.00	1701	232.00	258	329.00	287
38.00	722	137.00	2276	233.00	409	330.00	165
39.00	4294	138.00	465	234.00	1270	331.00	213
40.00	179	139.00	94	235.00	1410	332.00	890
41.00	162	140.00	586	236.00	943	333.00	856
43.00	395	141.00	7659	237.00	1482	334.00	5520
44.00	16	142.00	2597	238.00	220	335.00	1577
45.00	190	143.00	1993	239.00	748	336.00	339
49.00	486	144.00	486	240.00	696	337.00	230
50.00	14784	145.00	451	241.00	1232	338.00	115
51.00	56272	146.00	1453	242.00	2728	339.00	69
52.00	2987	147.00	4070	243.00	3071	340.00	320
53.00	134	148.00	8397	244.00	40488	341.00	1021
55.00	600	149.00	1687	245.00	5407	342.00	437
56.00	2350	150.00	461	246.00	7605	343.00	238
57.00	6194	151.00	955	247.00	1571	345.00	150
58.00	161	152.00	670	248.00	337	346.00	1821
59.00	197	153.00	2517	249.00	1530	347.00	377
60.00	243	154.00	1843	250.00	262	348.00	65
61.00	1209	155.00	4410	251.00	461	349.00	72
62.00	1446	156.00	6032	252.00	455	350.00	271
63.00	4514	157.00	1276	253.00	1089	351.00	279
64.00	522	158.00	1320	255.00	199936	352.00	2829
65.00	2220	159.00	1028	256.00	29272	353.00	1944
66.00	88	160.00	2388	257.00	2098	354.00	2670
67.00	147	161.00	3312	258.00	11941	355.00	518
68.00	1870	162.00	1012	259.00	1809	356.00	210
69.00	123664	163.00	305	260.00	249	358.00	226
70.00	499	164.00	422	261.00	421	359.00	314
71.00	253	165.00	2837	262.00	15	360.00	208
72.00	169	166.00	2059	263.00	193	361.00	182
73.00	783	167.00	14207	264.00	328	362.00	63
74.00	11404	168.00	5893	265.00	4606	363.00	197
75.00	18848	169.00	1220	266.00	670	364.00	80
76.00	6455	170.00	552	267.00	19	365.00	13459

Data File: /chem1/nt10.i/20130802.b/df0802.d

Date : 02-AUG-2013 12:21

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0802.d
Spectrum: Avg. Scans 558-560 (7.08), Background Scan 552
Location of Maximum: 442.00
Number of points: 368

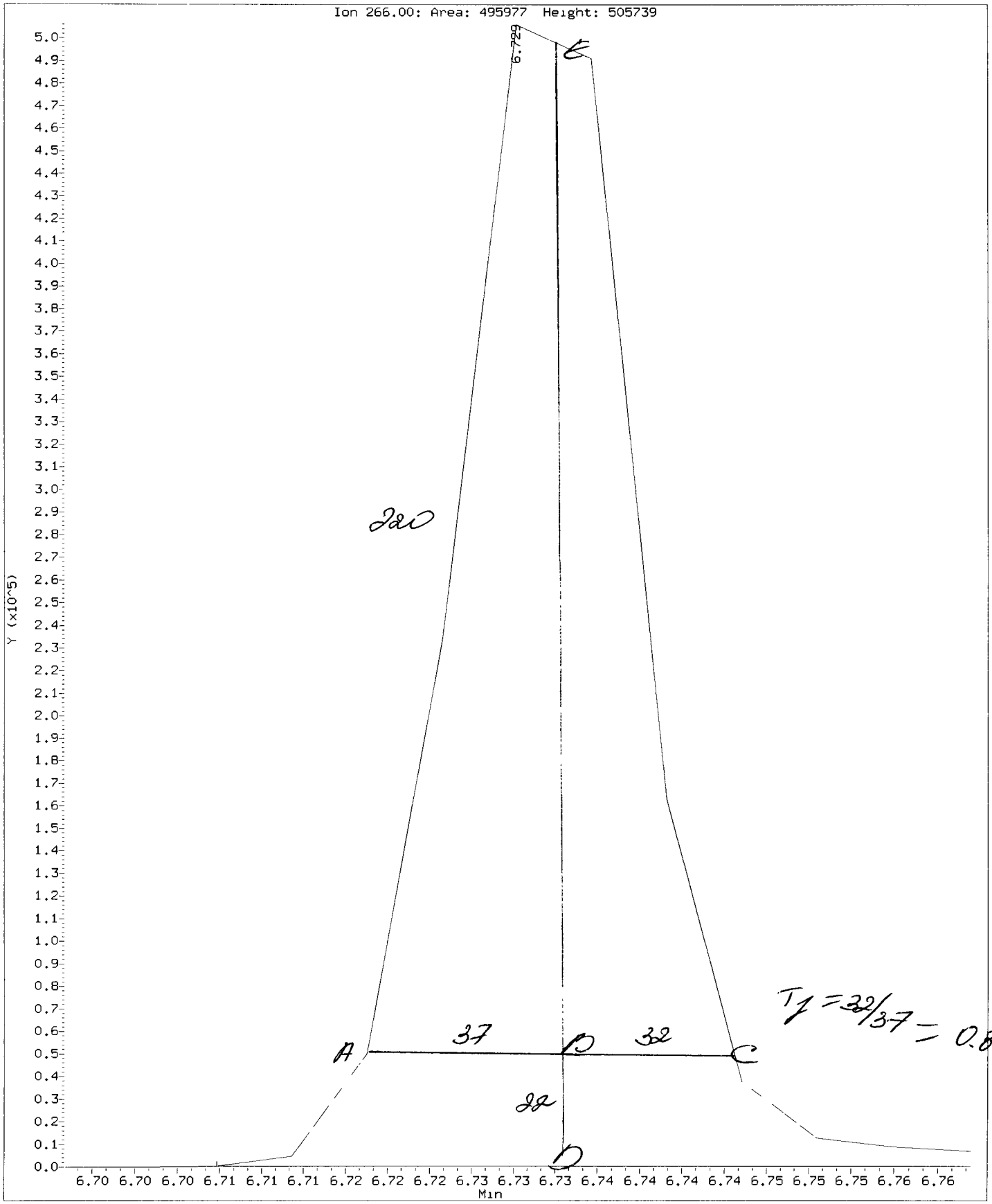
m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	134912	171.00	673	268.00	10	366.00	1835
78.00	9178	172.00	1266	270.00	75	370.00	360
79.00	8415	173.00	1965	271.00	697	371.00	742
80.00	6971	174.00	3057	272.00	719	372.00	5004
81.00	9834	175.00	5889	273.00	6437	373.00	1301
82.00	2400	176.00	1961	274.00	16376	374.00	210
83.00	2382	177.00	2659	275.00	93760	375.00	130
84.00	91	178.00	875	276.00	12241	377.00	169
85.00	1489	179.00	12115	277.00	7617	382.00	187
86.00	2283	180.00	7944	278.00	1314	383.00	1343
87.00	1114	181.00	3922	279.00	231	384.00	430
88.00	528	182.00	581	280.00	211	385.00	233
89.00	160	183.00	427	281.00	323	388.00	50
91.00	2237	184.00	855	282.00	273	389.00	179
92.00	2439	185.00	5715	283.00	869	390.00	795
93.00	15396	186.00	42880	284.00	623	391.00	594
94.00	933	187.00	12441	285.00	1355	392.00	427
95.00	97	188.00	1188	286.00	426	393.00	50
96.00	720	189.00	2956	288.00	53	394.00	205
97.00	646	190.00	423	289.00	394	395.00	121
98.00	11674	191.00	711	290.00	308	396.00	53
99.00	9253	192.00	3538	291.00	347	397.00	58
100.00	913	193.00	3983	292.00	592	400.00	60
101.00	5586	194.00	937	293.00	1650	401.00	400
102.00	358	195.00	842	294.00	438	402.00	2027
103.00	1896	196.00	11263	295.00	583	403.00	2792
104.00	3446	198.00	342720	296.00	26200	404.00	1096
105.00	3388	199.00	23464	297.00	3674	405.00	209
106.00	1075	200.00	1809	298.00	196	410.00	113
107.00	42512	201.00	1838	299.00	132	415.00	215
108.00	6589	203.00	2250	300.00	118	418.00	56
109.00	1307	204.00	12051	301.00	317	419.00	114
110.00	81544	205.00	20480	302.00	397	421.00	2798
111.00	12369	206.00	84304	303.00	2975	422.00	2455
112.00	1558	207.00	11021	304.00	664	423.00	19168

Data File: df0802.d
Spectrum: Avg. Scans 558-560 (7.08), Background Scan 552
Location of Maximum: 442.00
Number of points: 368

m/z	Y	m/z	Y	m/z	Y	m/z	Y
113.00	535	208.00	2532	305.00	308	424.00	3690
114.00	260	209.00	687	306.00	127	425.00	376
115.00	261	210.00	1620	307.00	13	426.00	172
116.00	2694	211.00	3322	308.00	400	430.00	63
117.00	33584	212.00	13	309.00	313	431.00	51
118.00	2253	213.00	229	310.00	490	433.00	139
119.00	613	214.00	64	311.00	234	434.00	224
120.00	554	215.00	1113	312.00	310	435.00	244
121.00	287	216.00	1766	313.00	262	436.00	472
122.00	2529	217.00	23640	314.00	1264	437.00	633
123.00	4541	218.00	2906	315.00	3021	438.00	838
124.00	2122	219.00	296	316.00	1516	439.00	1612
125.00	1988	221.00	20696	317.00	217	440.00	553
126.00	441	222.00	409	319.00	208	441.00	58672
127.00	156160	223.00	5271	320.00	41	442.00	380928
128.00	11908	224.00	48720	321.00	890	443.00	74608
129.00	62056	225.00	11989	322.00	451	444.00	6690
130.00	5068	226.00	1353	323.00	8833	445.00	433
131.00	1114	227.00	20312	324.00	1780	451.00	65
132.00	490	228.00	2960	325.00	382		
133.00	444	229.00	4192	326.00	315		
134.00	1584	230.00	538	327.00	1589		
135.00	4768	231.00	1869	328.00	854		

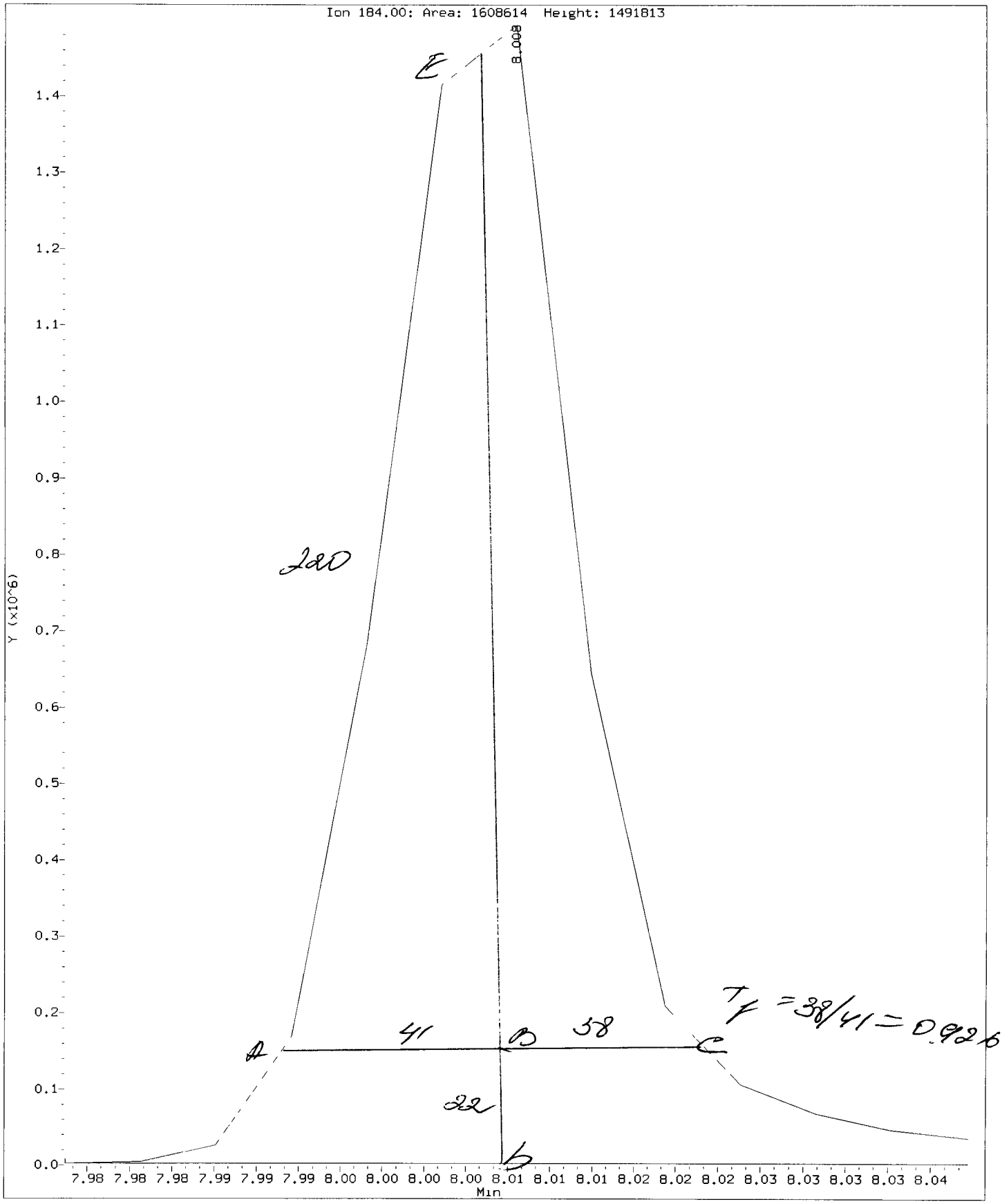
Data File: /chem1/nt10.1/20130802.b/ddt.b/df0802.d
Injection Date: 02-AUG-2013 12:21
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.1/20130802.b/ddt.b/df0802.d
Injection Date: 02-AUG-2013 12:21
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130802.b/ddt.b/df0802.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130802.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 02-AUG-2013 12:21 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.729	495977
Benzidine	8.008	1608614
4,4'-DDE	8.184	2851
4,4'-DDD	8.478	12160
4,4'-DDT	8.746	1000878

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(\ 2851 + 12160) * 100}{(\ 2851 + 12160 + 1000878)}$$

DDT Percent Breakdown = 1.5 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0802.d
Analysis Type:
Lab Sample ID: CC0802
Method: /chem1/nt10.i/20130802.b/ABN.m

Injection Date: 02-AUG-2013 12:36
Init. Cal. Date(s): 30-JUL-2013 30-JUL-2013
Init. Cal. Times: 11:54 16:59
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.61157	1.54238	1.54238	0.010	-4.29285	20.00000	Averaged	
$ 2 Phenol-d5	2.15919	2.14085	2.14085	0.010	-0.84925	20.00000	Averaged	
3 Phenol	2.17209	2.06084	2.06084	0.100	-5.12164	20.00000	Averaged	
$ 5 2-Chlorophenol-d4	1.53536	1.49554	1.49554	0.010	-2.59349	20.00000	Averaged	
4 Bis(2-Chloroethyl)ether	1.68991	1.58287	1.58287	0.700	-6.33456	20.00000	Averaged	
6 2-Chlorophenol	1.55911	1.49488	1.49488	0.800	-4.11961	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.59978	1.49511	1.49511	0.010	-6.54293	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.56100	1.44490	1.44490	0.010	-7.43732	20.00000	Averaged	
$ 10 1,2-Dichlorobenzene-d4	1.08165	1.01848	1.01848	0.010	-5.83989	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.48351	1.40300	1.40300	0.010	-5.42725	20.00000	Averaged	
11 Benzyl alcohol	0.91611	0.95566	0.95566	0.010	4.31748	20.00000	Averaged	
14 2,2'-oxybis(1-Chloropropane	0.51176	0.47055	0.47055	0.010	-8.05312	20.00000	Averaged	
13 2-Methylphenol	1.51908	1.45537	1.45537	0.700	-4.19392	20.00000	Averaged	
17 Hexachloroethane	0.65694	0.61396	0.61396	0.300	-6.54269	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	1.05550	0.98636	0.98636	0.500	-6.55036	20.00000	Averaged	
15 4-Methylphenol	1.55941	1.51203	1.51203	0.600	-3.03807	20.00000	Averaged	
$ 18 Nitrobenzene-d5	0.48131	0.45825	0.45825	0.010	-4.79133	20.00000	Averaged	
19 Nitrobenzene	0.42813	0.40227	0.40227	0.200	-6.04031	20.00000	Averaged	
20 Isophorone	0.76340	0.76758	0.76758	0.300	0.54802	20.00000	Averaged	
21 2-Nitrophenol	0.23949	0.24634	0.24634	0.100	2.86006	20.00000	Averaged	
22 2,4-Dimethylphenol	0.40286	0.39250	0.39250	0.200	-2.57078	20.00000	Averaged	
23 Bis(2-Chloroethoxy)methane	0.50087	0.47504	0.47504	0.050	-5.15785	20.00000	Averaged	
24 Benzoic acid	0.32290	0.24277	0.24277	0.010	-24.81400	20.00000	Averaged	<-
25 2,4-Dichlorophenol	0.34395	0.36192	0.36192	0.100	5.22502	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.36478	0.34370	0.34370	0.010	-5.77750	20.00000	Averaged	
28 Naphthalene	1.08388	1.04914	1.04914	0.100	-3.20499	20.00000	Averaged	
29 4-Chloroaniline	0.46295	0.44419	0.44419	0.010	-4.05226	20.00000	Averaged	
30 Hexachlorobutadiene	0.20420	0.19345	0.19345	0.010	-5.26796	20.00000	Averaged	
31 4-Chloro-3-methylphenol	0.34055	0.36488	0.36488	0.200	7.14299	20.00000	Averaged	
32 2-Methylnaphthalene	0.76634	0.75932	0.75932	0.300	-0.91713	20.00000	Averaged	
33 Hexachlorocyclopentadiene	0.47865	0.43120	0.43120	0.001	-9.91230	20.00000	Averaged	
34 2,4,6-Trichlorophenol	0.45613	0.44509	0.44509	0.200	-2.42121	20.00000	Averaged	
35 2,4,5-Trichlorophenol	0.46653	0.49025	0.49025	0.200	5.08511	20.00000	Averaged	
$ 36 2-Fluorobiphenyl	1.50303	1.47676	1.47676	0.010	-1.74772	20.00000	Averaged	
37 2-Chloronaphthalene	1.19504	1.16017	1.16017	0.700	-2.91789	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 02-AUG-2013 12:36
Lab File ID: cc0802.d Init. Cal. Date(s): 30-JUL-2013 30-JUL-2013
Analysis Type: Init. Cal. Times: 11:54 16:59
Lab Sample ID: CC0802 Quant Type: ISTD
Method: /chem1/nt10.i/20130802.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
38 2-Nitroaniline	0.32188	0.34378	0.34378	0.010	6.80671	20.00000	Averaged	
39 Dimethylphthalate	1.30585	1.27009	1.27009	0.010	-2.73845	20.00000	Averaged	
40 Acenaphthylene	1.93798	1.87509	1.87509	0.900	-3.24480	20.00000	Averaged	
41 2,6-Dinitrotoluene	0.31097	0.31063	0.31063	0.100	-0.10796	20.00000	Averaged	
43 3-Nitroaniline	0.26271	0.26465	0.26465	0.010	0.73908	20.00000	Averaged	
44 Acenaphthene	1.14965	1.13602	1.13602	0.100	-1.18541	20.00000	Averaged	
45 2,4-Dinitrophenol	9.42004	20.00000	0.12959	0.030	-52.89978	20.00000	Quadratic	<-
46 Dibenzofuran	1.69242	1.65765	1.65765	0.800	-2.05473	20.00000	Averaged	
47 4-Nitrophenol	0.15042	0.14936	0.14936	0.010	-0.70032	20.00000	Averaged	
48 2,4-Dinitrotoluene	0.40178	0.41500	0.41500	0.200	3.28879	20.00000	Averaged	
50 Diethylphthalate	1.27887	1.21925	1.21925	0.010	-4.66203	20.00000	Averaged	
49 Fluorene	1.44199	1.46233	1.46233	0.100	1.41069	20.00000	Averaged	
51 4-Chlorophenyl-phenylether	0.68151	0.72464	0.72464	0.100	6.32913	20.00000	Averaged	
52 4-Nitroaniline	0.27592	0.28196	0.28196	0.010	2.19011	20.00000	Averaged	
53 4,6-Dinitro-2-methylphenol	0.18759	0.14335	0.14335	0.001	-23.58058	20.00000	Averaged	<-
54 N-Nitrosodiphenylamine	0.50564	0.50024	0.50024	0.010	-1.06731	20.00000	Averaged	
$ 55 2,4,6-Tribromophenol	0.23911	0.23128	0.23128	0.010	-3.27494	20.00000	Averaged	
56 4-Bromophenyl-phenylether	0.24065	0.24027	0.24027	0.100	-0.15773	20.00000	Averaged	
57 Hexachlorobenzene	0.25783	0.25416	0.25416	0.100	-1.42266	20.00000	Averaged	
58 Pentachlorophenol	0.19930	0.18232	0.18232	0.010	-8.51873	20.00000	Averaged	
60 Phenanthrene	1.09788	1.07628	1.07628	0.700	-1.96821	20.00000	Averaged	
61 Anthracene	1.16335	1.15743	1.15743	0.700	-0.50876	20.00000	Averaged	
62 Carbazole	6.07193	5.00000	0.65443	0.010	21.43852	20.00000	Quadratic	<-
63 Di-n-butylphthalate	1.23845	1.28771	1.28771	0.010	3.97773	20.00000	Averaged	
64 Fluoranthene	1.34730	1.28792	1.28792	0.600	-4.40755	20.00000	Averaged	
65 Pyrene	1.43553	1.48227	1.48227	0.600	3.25621	20.00000	Averaged	
$ 66 Terphenyl-d14	0.77165	0.78223	0.78223	0.010	1.37054	20.00000	Averaged	
67 Butylbenzylphthalate	0.51000	0.53808	0.53808	0.010	5.50491	20.00000	Averaged	
68 Benzo(a)anthracene	1.30501	1.25639	1.25639	0.700	-3.72556	20.00000	Averaged	
70 3,3'-Dichlorobenzidine	0.49976	0.46102	0.46102	0.010	-7.75156	20.00000	Averaged	
71 Chrysene	1.13478	1.13354	1.13354	0.700	-0.10912	20.00000	Averaged	
72 bis(2-Ethylhexyl)phthalate	0.51644	0.51071	0.51071	0.010	-1.10831	20.00000	Averaged	
73 Di-n-octylphthalate	0.98177	0.94960	0.94960	0.010	-3.27618	20.00000	Averaged	
74 Benzo(b)fluoranthene	1.23415	1.15788	1.15788	0.700	-6.18014	20.00000	Averaged	
75 Benzo(k)fluoranthene	1.30373	1.26479	1.26479	0.700	-2.98670	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 02-AUG-2013 12:36
Lab File ID: cc0802.d Init. Cal. Date(s): 30-JUL-2013 30-JUL-2013
Analysis Type: Init. Cal. Times: 11:54 16:59
Lab Sample ID: CC0802 Quant Type: ISTD
Method: /chem1/nt10.i/20130802.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
76 Benzo(a)pyrene	1.08919	1.07511	1.07511	0.700	-1.29299	20.00000	Averaged
78 Indeno(1,2,3-cd)pyrene	1.27831	1.31415	1.31415	0.500	2.80437	20.00000	Averaged
79 Dibenzo(a,h)anthracene	1.00216	1.05005	1.05005	0.400	4.77878	20.00000	Averaged
80 Benzo(g,h,i)perylene	1.10686	1.11586	1.11586	0.500	0.81326	20.00000	Averaged
90 N-Nitrosodimethylamine	1.09665	0.97011	0.97011	0.010	-11.53887	20.00000	Averaged
91 Aniline	4.74910	4.43703	4.43703	0.010	-6.57122	20.00000	Averaged
93 Benzidine	9.05957	10.00000	0.15777	0.010	-9.40434	20.00000	Quadratic
103 Pyridine	0.92032	0.80310	0.80310	0.010	-12.73704	20.00000	Averaged
105 1-methylnaphthalene	0.69842	0.69402	0.69402	0.010	-0.63007	20.00000	Averaged
111 Azobenzene (1,2-DP-Hydrazin	1.33440	1.23386	1.23386	0.010	-7.53484	20.00000	Averaged
187 Total Benzofluoranthenes	1.21008	1.14942	1.14942	0.010	-5.01291	20.00000	Averaged
99 Perylene	1.03344	1.02838	1.02838	0.010	-0.48928	20.00000	Averaged
98 Retene	0.54648	0.56438	0.56438	0.010	3.27536	20.00000	Averaged
120 2,3,4,6-Tetrachlorophenol	0.36167	0.35719	0.35719	0.010	-1.23830	20.00000	Averaged

Analytical Resources, Inc.

YZ 8/3/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130802.b/cc0802.d
Lab Smp Id: CC0802
Inj Date : 02-AUG-2013 12:36
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : CC0802
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130802.b/ABN.m
Meth Date : 02-Aug-2013 13:03 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	6.867	6.867	(0.744)	260503	5.00000	4.785
$ 2	Phenol-d5	99	8.583	8.583	(0.930)	361582	5.00000	4.958
3	Phenol	94	8.606	8.606	(0.933)	348068	5.00000	4.744
$ 5	2-Chlorophenol-d4	132	8.845	8.845	(0.959)	252591	5.00000	4.870
4	Bis(2-Chloroethyl)ether	93	8.753	8.753	(0.949)	267340	5.00000	4.683
6	2-Chlorophenol	128	8.868	8.868	(0.961)	252480	5.00000	4.794
7	1,3-Dichlorobenzene	146	9.155	9.155	(0.992)	252518	5.00000	4.673
* 8	1,4-Dichlorobenzene-d4	152	9.225	9.225	(1.000)	135117	4.00000	
9	1,4-Dichlorobenzene	146	9.256	9.256	(1.003)	244038	5.00000	4.628
$ 10	1,2-Dichlorobenzene-d4	152	9.613	9.613	(1.042)	172018	5.00000	4.708
12	1,2-Dichlorobenzene	146	9.636	9.636	(1.045)	236961	5.00000	4.729
11	Benzyl alcohol	108	9.535	9.535	(1.034)	161407	5.00000	5.216
14	2,2'-oxybis(1-Chloropropane)	121	9.853	9.853	(1.068)	79474	5.00000	4.597
13	2-Methylphenol	108	9.791	9.791	(1.061)	245807	5.00000	4.790
17	Hexachloroethane	117	10.265	10.265	(1.113)	103696	5.00000	4.673
16	N-Nitroso-di-n-propylamine	70	10.133	10.133	(1.098)	166593	5.00000	4.672
15	4-Methylphenol	108	10.086	10.086	(1.093)	255377	5.00000	4.848
$ 18	Nitrobenzene-d5	82	10.404	10.404	(0.875)	272659	5.00000	4.760
19	Nitrobenzene	77	10.443	10.443	(0.878)	239349	5.00000	4.698
20	Isophorone	82	10.930	10.930	(0.919)	456712	5.00000	5.027
21	2-Nitrophenol	139	11.123	11.123	(0.935)	146573	5.00000	5.143
22	2,4-Dimethylphenol	107	11.208	11.208	(0.942)	467081	10.0000	9.743
23	Bis(2-Chloroethoxy)methane	93	11.408	11.408	(0.959)	282650	5.00000	4.742
24	Benzoic acid	105	11.470	11.470	(0.964)	577804	20.0000	15.04(M)
25	2,4-Dichlorophenol	162	11.616	11.616	(0.977)	430690	10.0000	10.52
26	1,2,4-Trichlorobenzene	180	11.809	11.809	(0.993)	204505	5.00000	4.711
* 27	Naphthalene-d8	136	11.894	11.894	(1.000)	476002	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.940	11.940	(1.004)	624242	5.00000	4.840
	29 4-Chloroaniline	127	12.102	12.102	(1.018)	528590	10.0000	9.595
	30 Hexachlorobutadiene	225	12.342	12.342	(1.038)	115101	5.00000	4.737
	31 4-Chloro-3-methylphenol	107	13.162	13.162	(1.107)	434208	10.0000	10.71
	32 2-Methylnaphthalene	142	13.449	13.449	(1.131)	451795	5.00000	4.954
	33 Hexachlorocyclopentadiene	237	13.959	13.959	(0.883)	316155	10.0000	9.009
	34 2,4,6-Trichlorophenol	196	14.137	14.137	(0.895)	326334	10.0000	9.758
	35 2,4,5-Trichlorophenol	196	14.215	14.215	(0.900)	359451	10.0000	10.51
$	36 2-Fluorobiphenyl	172	14.308	14.308	(0.905)	541374	5.00000	4.913
	37 2-Chloronaphthalene	162	14.517	14.517	(0.919)	425314	5.00000	4.854
	38 2-Nitroaniline	65	14.818	14.818	(0.938)	252060	10.0000	10.68
	39 Dimethylphthalate	163	15.298	15.298	(0.968)	465612	5.00000	4.863
	40 Acenaphthylene	152	15.461	15.461	(0.978)	687402	5.00000	4.838
	41 2,6-Dinitrotoluene	165	15.445	15.445	(0.977)	227752	10.0000	9.989
*	42 Acenaphthene-d10	164	15.801	15.801	(1.000)	293277	4.00000	
	43 3-Nitroaniline	138	15.755	15.755	(0.997)	194043	10.0000	10.07
	44 Acenaphthene	153	15.871	15.871	(1.004)	416461	5.00000	4.941
	45 2,4-Dinitrophenol	184	15.979	15.979	(1.011)	190036	20.0000	9.420
	46 Dibenzofuran	168	16.234	16.234	(1.027)	607687	5.00000	4.897
	47 4-Nitrophenol	109	16.141	16.141	(1.022)	109512	10.0000	9.930
	48 2,4-Dinitrotoluene	165	16.327	16.327	(1.033)	304274	10.0000	10.33
	50 Diethylphthalate	149	16.891	16.891	(1.069)	446971	5.00000	4.767
	49 Fluorene	166	17.007	17.007	(1.076)	536086	5.00000	5.071
	51 4-Chlorophenyl-phenylether	204	17.007	17.007	(1.076)	265652	5.00000	5.316
	52 4-Nitroaniline	138	17.139	17.139	(1.085)	206730	10.0000	10.22
	53 4,6-Dinitro-2-methylphenol	198	17.231	17.231	(0.902)	349983	20.0000	15.28
	54 N-Nitrosodiphenylamine	169	17.285	17.285	(0.905)	305325	5.00000	4.947
$	55 2,4,6-Tribromophenol	330	17.586	17.586	(1.113)	84785	5.00000	4.836
	56 4-Bromophenyl-phenylether	248	18.095	18.095	(0.947)	146651	5.00000	4.992
	57 Hexachlorobenzene	284	18.427	18.427	(0.965)	155127	5.00000	4.929
	58 Pentachlorophenol	266	18.830	18.830	(0.986)	222562	10.0000	9.148
*	59 Phenanthrene-d10	188	19.100	19.100	(1.000)	488284	4.00000	
	60 Phenanthrene	178	19.155	19.155	(1.003)	656910	5.00000	4.902
	61 Anthracene	178	19.247	19.247	(1.008)	706444	5.00000	4.975
	62 Carbazole	167	19.627	19.627	(1.028)	399435	5.00000	6.072
	63 Di-n-butylphthalate	149	20.555	20.555	(1.076)	785962	5.00000	5.199
	64 Fluoranthene	202	21.770	21.770	(1.140)	786088	5.00000	4.780
	65 Pyrene	202	22.218	22.218	(0.906)	787900	5.00000	5.163
$	66 Terphenyl-d14	244	22.559	22.559	(0.920)	415791	5.00000	5.069
	67 Butylbenzylphthalate	149	23.558	23.558	(0.960)	286015	5.00000	5.275
	68 Benzo(a)anthracene	228	24.502	24.502	(0.999)	667833	5.00000	4.814
*	69 Chrysene-d12	240	24.533	24.533	(1.000)	425239	4.00000	
	70 3,3'-Dichlorobenzidine	252	24.479	24.479	(0.998)	490112	10.0000	9.225
	71 Chrysene	228	24.580	24.580	(1.002)	602534	5.00000	4.995
	72 bis(2-Ethylhexyl)phthalate	149	24.642	24.642	(0.961)	401521	5.00000	4.945
*	134 Di-n-octylphthalate-d4	153	25.648	25.648	(1.000)	628957	4.00000	
	73 Di-n-octylphthalate	149	25.664	25.664	(1.001)	746574	5.00000	4.836

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	26.391	26.391	(0.973)	674056	5.00000	4.691
75	Benzo(k)fluoranthene	252	26.430	26.430	(0.974)	736294	5.00000	4.851
76	Benzo(a)pyrene	252	27.011	27.011	(0.996)	625871	5.00000	4.935
* 77	Perylene-d12	264	27.127	27.127	(1.000)	465717	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	29.647	29.647	(1.093)	765030	5.00000	5.140
79	Dibenzo(a,h)anthracene	278	29.671	29.671	(1.094)	611284	5.00000	5.239
80	Benzo(g,h,i)perylene	276	30.393	30.393	(1.120)	649592	5.00000	5.041
90	N-Nitrosodimethylamine	74	4.581	4.581	(0.497)	327695	10.0000	8.846
91	Aniline	93	8.652	8.652	(0.938)	749397	5.00000	4.671
93	Benzidine	184	22.056	22.056	(0.899)	167726	10.0000	9.060
103	Pyridine	79	4.597	4.597	(0.498)	271282	10.0000	8.726
105	1-methylnaphthalene	142	13.689	13.689	(1.151)	412944	5.00000	4.968
111	Azobenzene (1,2-DP-Hydrazine)	77	17.362	17.362	(1.099)	452328	5.00000	4.623
187	Total Benzofluoranthenes	252	26.430	26.430	(0.974)	1338261	10.0000	9.499
99	Perylene	252	27.173	27.173	(1.002)	598667	5.00000	4.976
98	Retene	219	22.869	22.869	(0.932)	299995	5.00000	5.164
120	2,3,4,6-Tetrachlorophenol	232	16.613	16.613	(1.051)	130945	5.00000	4.938

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0802.d
Lab Smp Id: CC0802
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130802.b/ABN.m
Misc Info:

Calibration Date: 02-AUG-2013
Calibration Time: 12:36

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	123587	61794	247174	135117	9.33
27 Naphthalene-d8	446161	223080	892322	476002	6.69
42 Acenaphthene-d10	267600	133800	535200	293277	9.60
59 Phenanthrene-d10	460929	230464	921858	488284	5.93
69 Chrysene-d12	439520	219760	879040	425239	-3.25
134 Di-n-octylphthala	593075	296538	1186150	628957	6.05
77 Perylene-d12	451599	225800	903198	465717	3.13

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.22	8.72	9.72	9.22	0.00
27 Naphthalene-d8	11.89	11.39	12.39	11.89	0.00
42 Acenaphthene-d10	15.80	15.30	16.30	15.80	0.00
59 Phenanthrene-d10	19.10	18.60	19.60	19.10	0.00
69 Chrysene-d12	24.53	24.03	25.03	24.53	0.00
134 Di-n-octylphthala	25.65	25.15	26.15	25.65	0.00
77 Perylene-d12	27.13	26.63	27.63	27.13	0.00

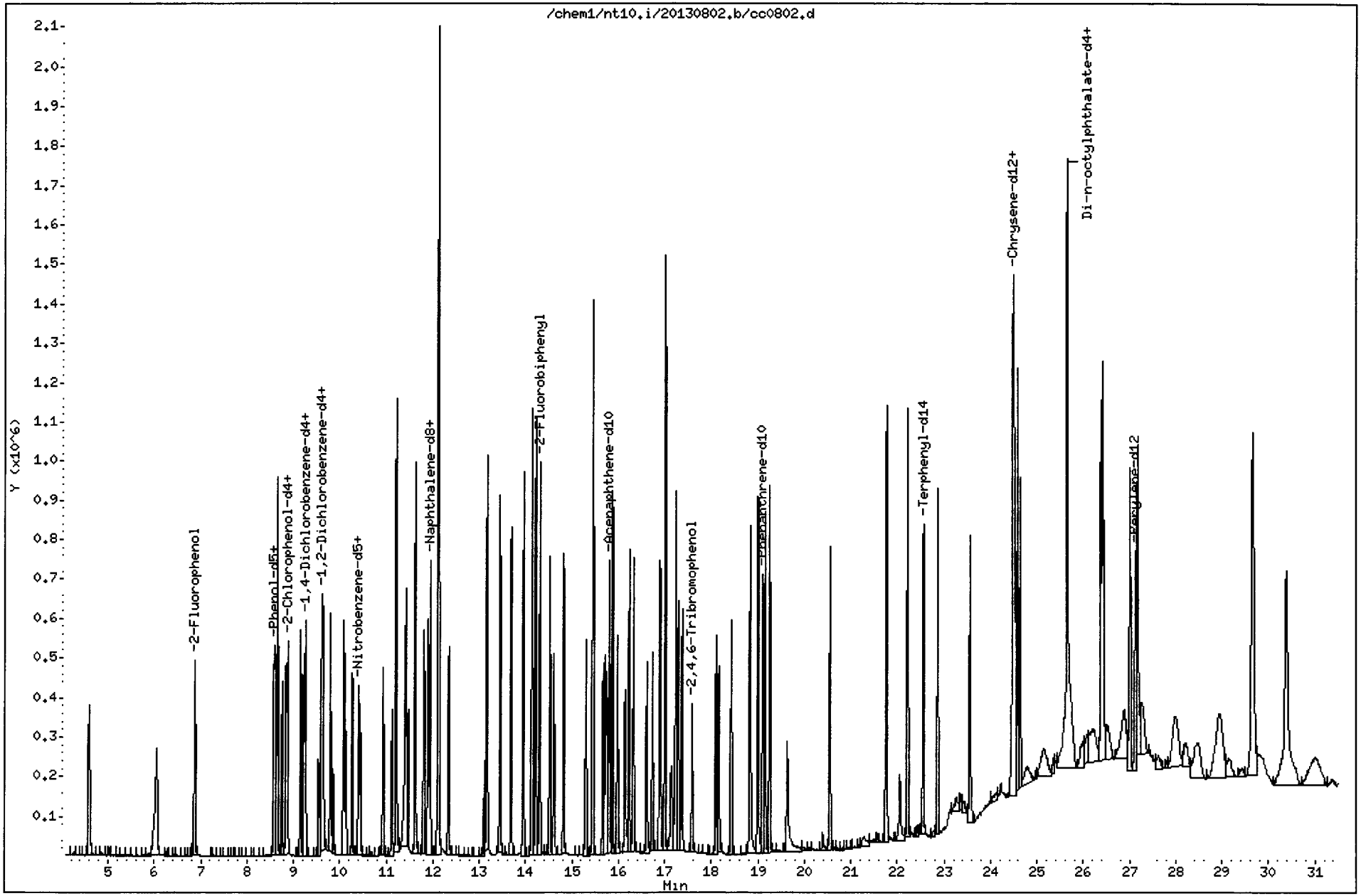
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130802.b/cc0802.d
Date : 02-AUG-2013 12:36
Client ID:
Sample Info: CC0802

Instrument: nt10.i

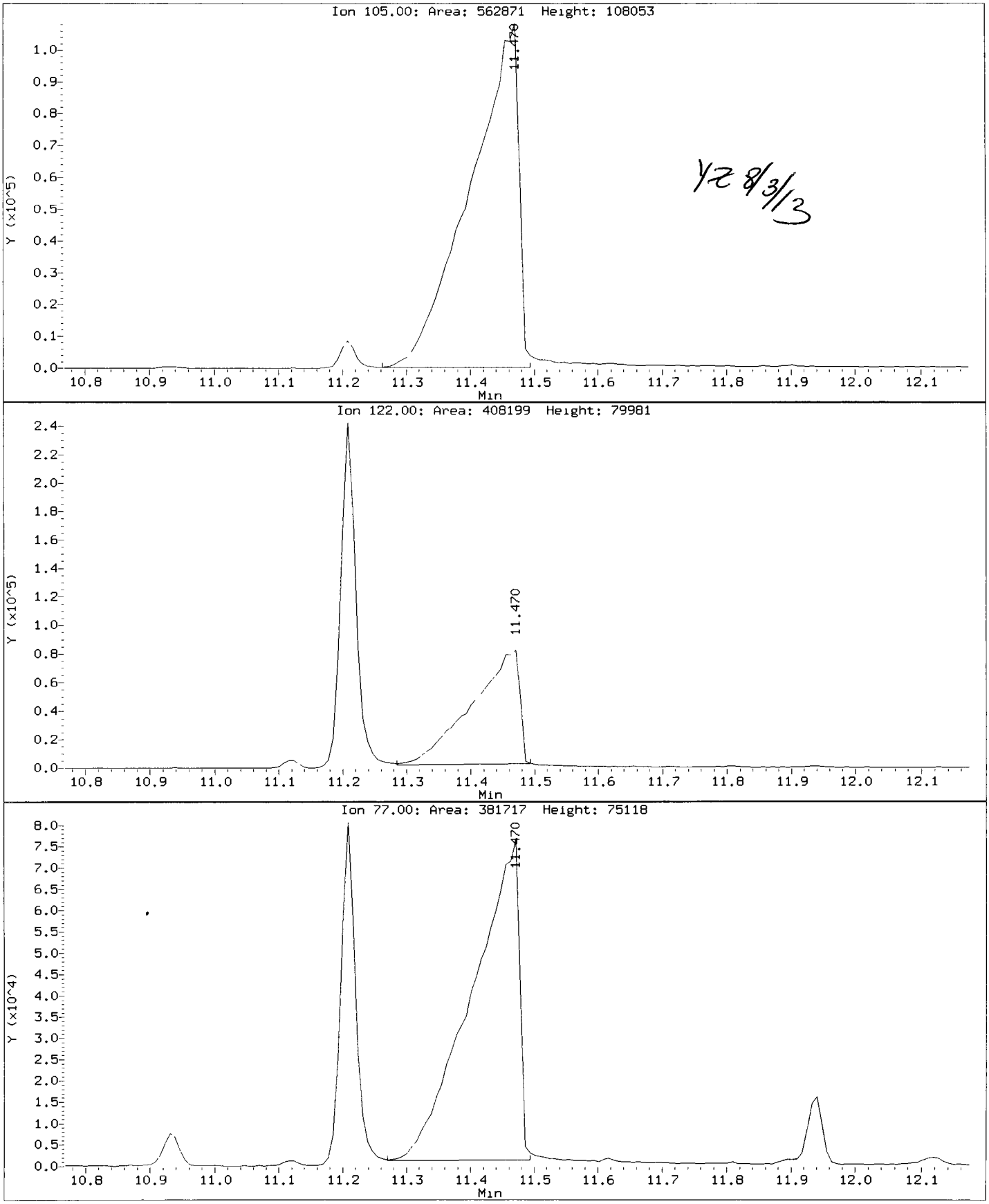
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



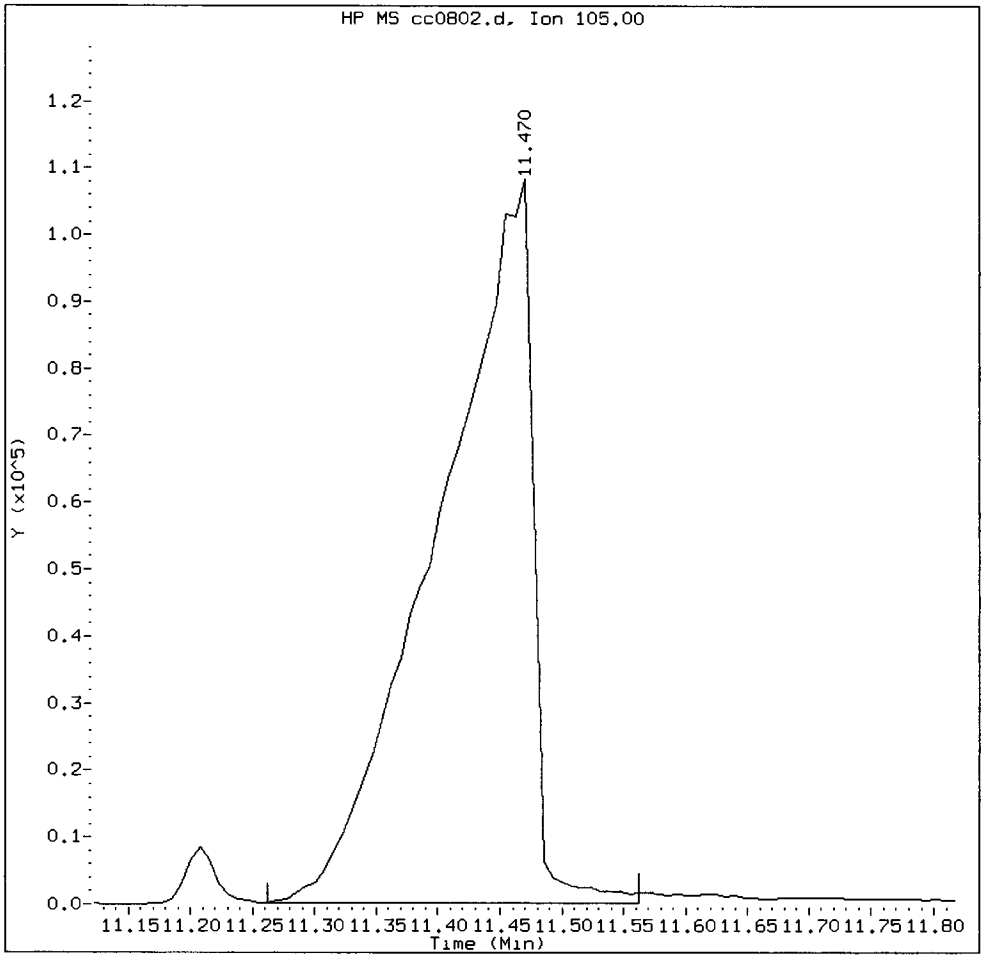
Data File: /chem1/nt10.1/20130802.b/cc0802.d
Injection Date: 02-AUG-2013 12:36
Instrument: nt10.1
Client Sample ID:

Compound: Benzoic acid
CAS Number: 65-85-0



CC0802, /chem1/nt10.i/20130802.b/cc0802.d

Benzoic acid Amount: 15.04 Area: 577804



MANUAL INTEGRATION for Benzoic acid

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 8/3/13

CO-ELUTION SUMMARY FOR FILE - cc0802.d

Lab ID: CC0802, Method: ABN.m, Instrument: nt10.i, Date: 02-AUG-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130802.b/wy32a30.d
Lab Smp Id: WY32A Client Smp ID: UP-CB-B8-20130626-S
Inj Date : 02-AUG-2013 13:36
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WY32A,30
Misc Info : 13-15393
Comment : 1ul Injection
Method : /chem1/nt10.i/20130802.b/ABN.m
Meth Date : 02-Aug-2013 13:03 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 1
Dil Factor: 30.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	30.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	7.04000	Weight of sample extracted (g)
M	31.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$	1 2-Fluorophenol	112	6.875	6.867	(0.745)	12511	0.26411	1631
$	2 Phenol-d5	99	8.583	8.583	(0.930)	15467	0.24370	1505
	3 Phenol	94	Compound Not Detected.					
$	5 2-Chlorophenol-d4	132	8.845	8.845	(0.959)	11918	0.26408	1631
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	9.224	9.225	(1.000)	117576	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	9.612	9.613	(1.042)	4356	0.13701	846.1
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	10.404	10.404	(0.875)	7109	0.14200	876.9
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.894	11.894	(1.000)	416074	4.00000	
	28 Naphthalene	128	Compound Not Detected.					
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	14.308	14.308	(0.905)	14176	0.15588	962.7
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	15.801	15.801	(1.000)	242019	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	17.000	17.007	(1.076)	12039	0.13799	852.2
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	17.586	17.586	(1.113)	4045	0.27960	1727
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	19.100	19.100	(1.000)	391248	4.00000	
	60 Phenanthrene	178	19.147	19.155	(1.002)	71395	0.66484	4106
	61 Anthracene	178	19.247	19.247	(1.008)	13818	0.12143	750.0

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
62	Carbazole	167	19.626	19.627	(1.028)	6692	0.13575	838.4
63	Di-n-butylphthalate	149	20.555	20.555	(1.076)	13070	0.10790	666.4
64	Fluoranthene	202	21.770	21.770	(1.140)	66930	0.50788	3137
65	Pyrene	202	22.218	22.218	(0.906)	56994	0.46924	2898
$ 66	Terphenyl-d14	244	22.559	22.559	(0.920)	11975	0.18341	1133
67	Butylbenzylphthalate	149	23.558	23.558	(0.960)	101920	2.36190	14590
68	Benzo(a)anthracene	228	24.502	24.502	(0.999)	12037	0.10901	673.3
* 69	Chrysene-d12	240	24.533	24.533	(1.000)	338443	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	24.572	24.580	(1.002)	19989	0.20819	1286
72	bis(2-Ethylhexyl)phthalate	149	24.649	24.642	(0.961)	665905	10.8046	66730
* 134	Di-n-octylphthalate-d4	153	25.648	25.648	(1.000)	477360	4.00000	
73	Di-n-octylphthalate	149	25.671	25.664	(1.001)	13872	0.11840	731.2
74	Benzo(b)fluoranthene	252	26.391	26.391	(0.973)	12260	0.10828	668.7
75	Benzo(k)fluoranthene	252	Compound Not Detected.					
76	Benzo(a)pyrene	252	Compound Not Detected.					
* 77	Perylene-d12	264	27.127	27.127	(1.000)	366977	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
80	Benzo(g,h,i)perylene	276	30.385	30.393	(1.120)	11353	0.11180	690.5
90	N-Nitrosodimethylamine	74	Compound Not Detected.					
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	Compound Not Detected.					
105	1-methylnaphthalene	142	Compound Not Detected.					
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
187	Total Benzofluoranthenes	252	26.391	26.430	(0.973)	21914	0.19739	1219
99	Perylene	252	Compound Not Detected.					
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wy32a30.d
Lab Smp Id: WY32A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130802.b/ABN.m
Misc Info: 13-15393

Calibration Date: 02-AUG-2013
Calibration Time: 12:36
Client Smp ID: UP-CB-B8-2013062
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	123587	61794	247174	117576	-4.86
27 Naphthalene-d8	446161	223080	892322	416074	-6.74
42 Acenaphthene-d10	267600	133800	535200	242019	-9.56
59 Phenanthrene-d10	460929	230464	921858	391248	-15.12
69 Chrysene-d12	439520	219760	879040	338443	-23.00
134 Di-n-octylphthala	593075	296538	1186150	477360	-19.51
77 Perylene-d12	451599	225800	903198	366977	-18.74

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.22	8.72	9.72	9.22	0.00
27 Naphthalene-d8	11.89	11.39	12.39	11.89	0.00
42 Acenaphthene-d10	15.80	15.30	16.30	15.80	0.00
59 Phenanthrene-d10	19.10	18.60	19.60	19.10	0.00
69 Chrysene-d12	24.53	24.03	25.03	24.53	0.00
134 Di-n-octylphthala	25.65	25.15	26.15	25.65	0.00
77 Perylene-d12	27.13	26.63	27.63	27.13	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

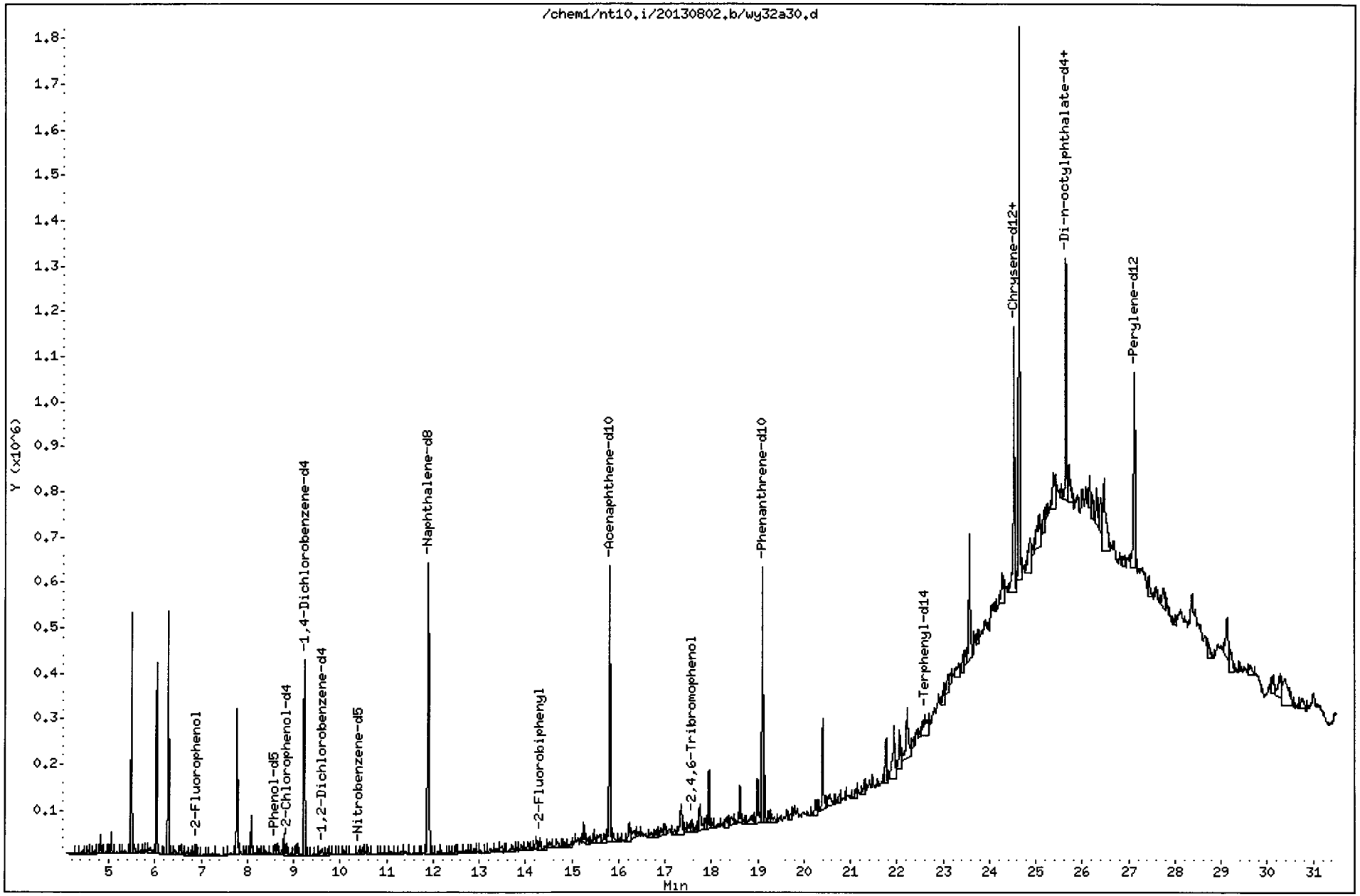
Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WY32A
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDALCS.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130802.b/ABN.m
Misc Info: 13-15393

Client SDG: WY32
Fraction: SV
Client Smp ID: UP-CB-B8-20130626-S
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	1544	1631	105.64	27-120
$ 2 Phenol-d5	1544	1505	97.48	29-120
$ 5 2-Chlorophenol-d4	1544	1631	105.63	31-120
$ 10 1,2-Dichlorobenzen	1029	846.1	82.20	32-120
$ 18 Nitrobenzene-d5	1029	876.9	85.20	30-120
$ 36 2-Fluorobiphenyl	1029	962.7	93.53	35-120
$ 55 2,4,6-Tribromophen	1544	1727	111.84	24-134
$ 66 Terphenyl-d14	1029	1133	110.05	37-120

Data File: /chem1/nt10.i/20130802.b/wy32a30.d
Date : 02-AUG-2013 13:36
Client ID: UP-CB-B8-20130626-S
Sample Info: WY32A,30
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130802.b/wy32a30.d

Date : 02-AUG-2013 13:36

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A,30

Volume Injected (uL): 1.0

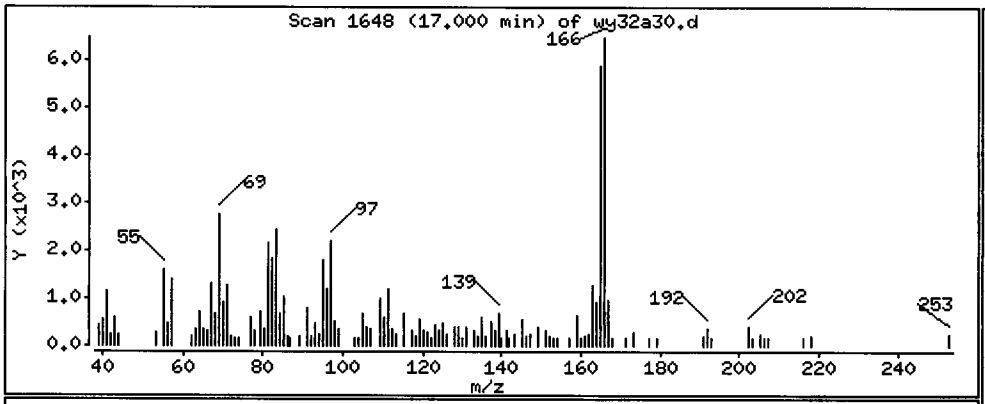
Operator: VTS/YZ

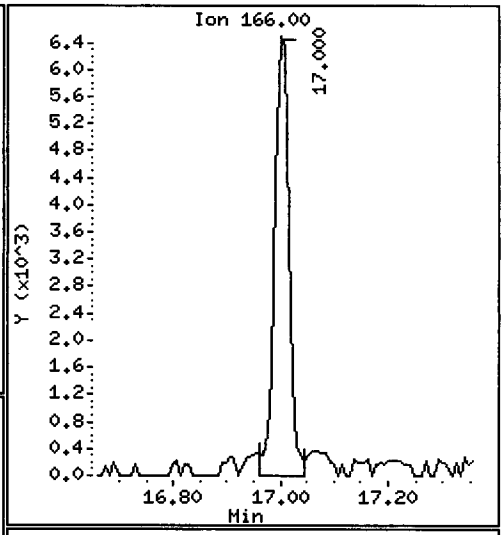
Column phase: ZB-5ms1

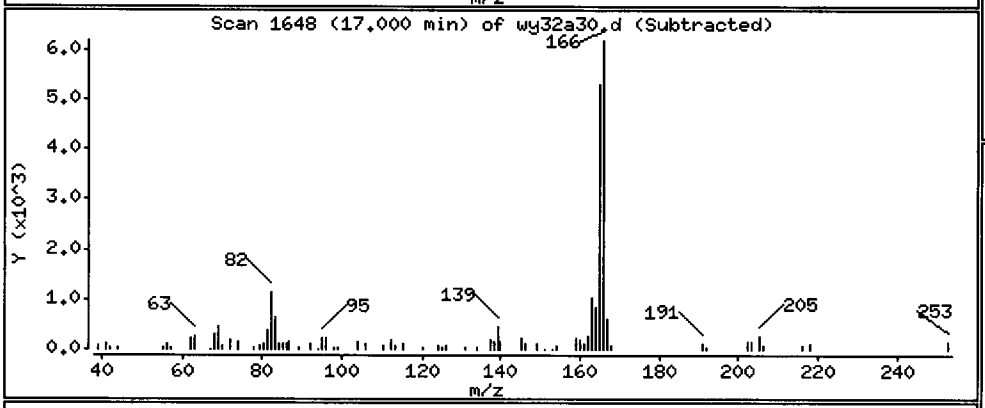
Column diameter: 0.25

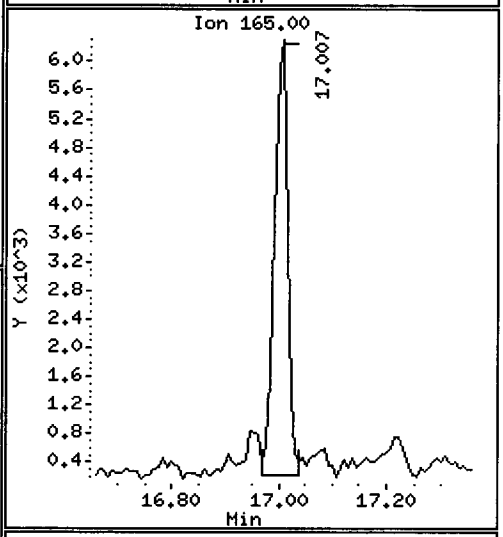
49 Fluorene

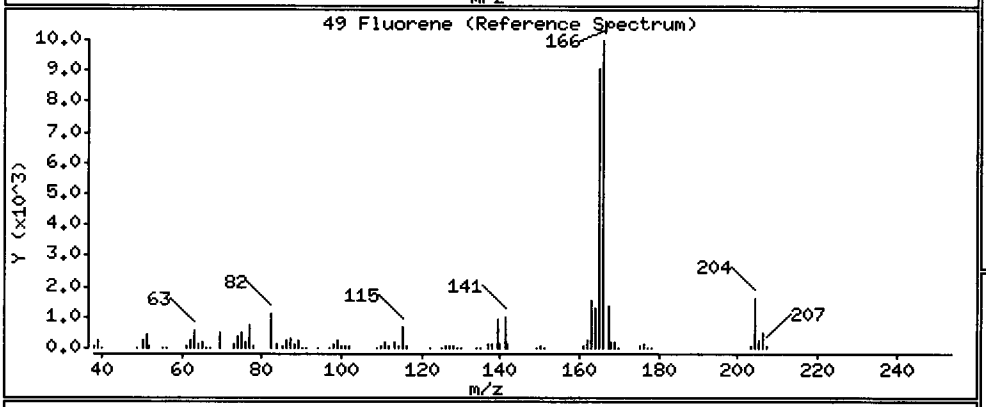
Concentration: 852.2 ug/kg

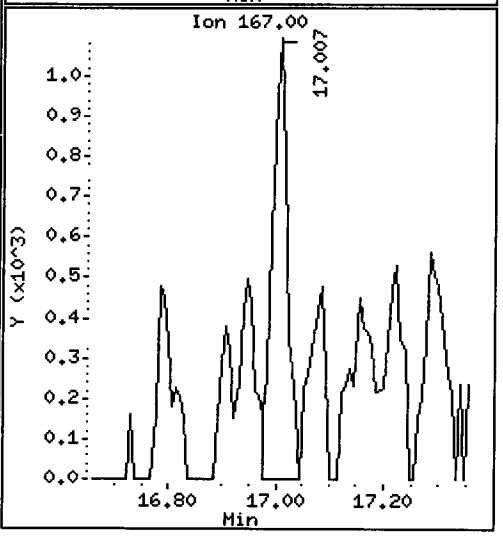


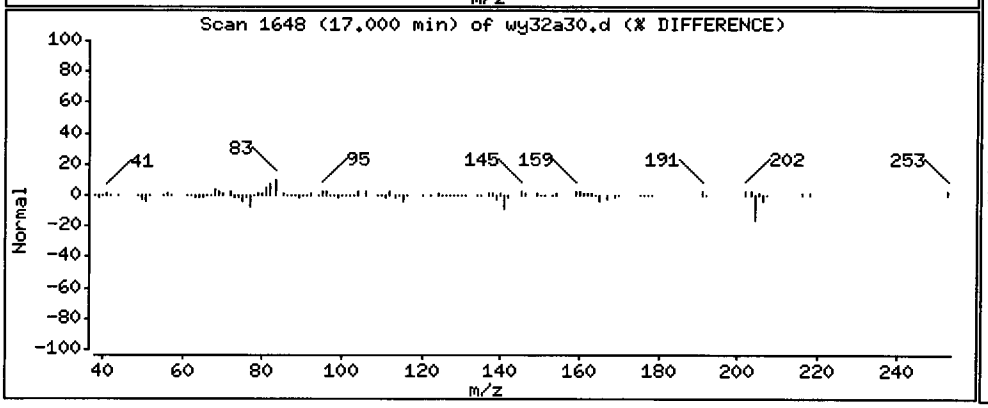












Data File: /chem1/nt10.i/20130802.b/wy32a30.d

Date : 02-AUG-2013 13:36

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A,30

Volume Injected (uL): 1.0

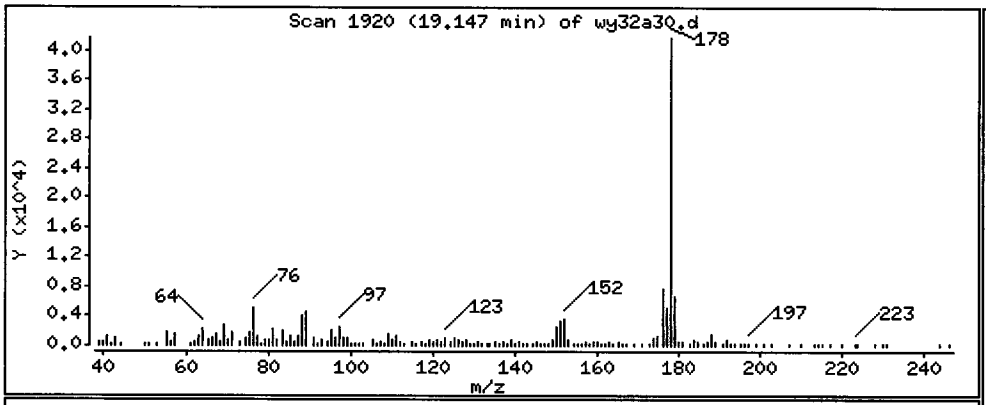
Operator: VTS/YZ

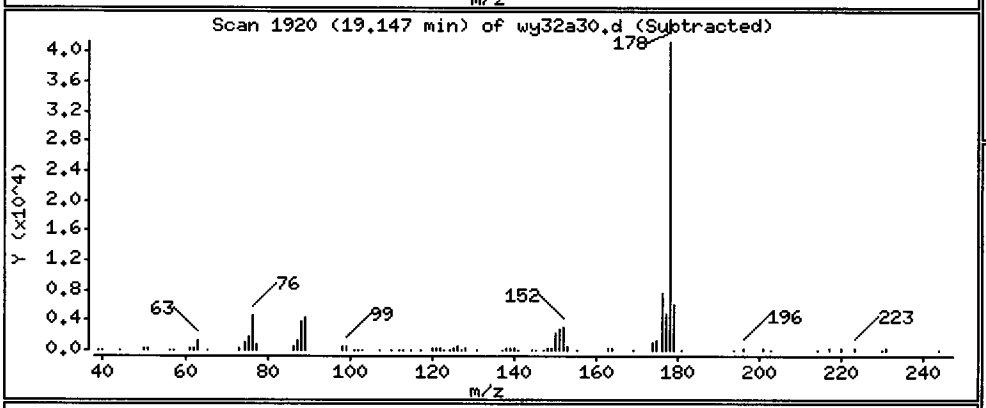
Column phase: ZB-5ms1

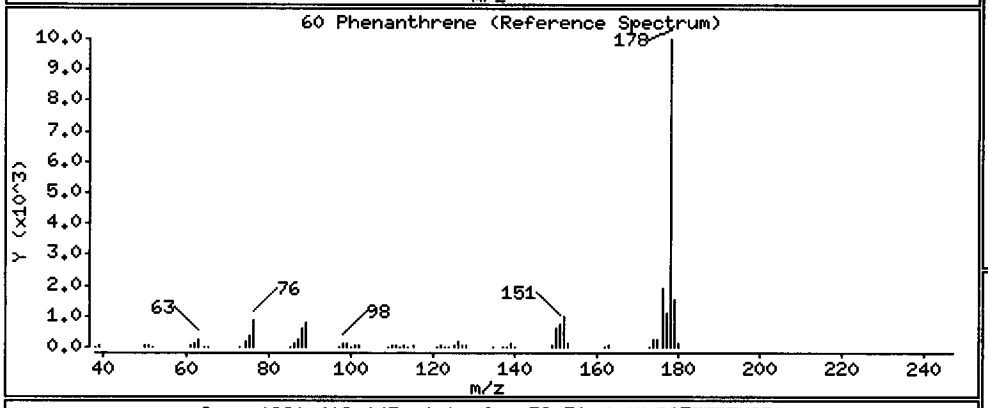
Column diameter: 0.25

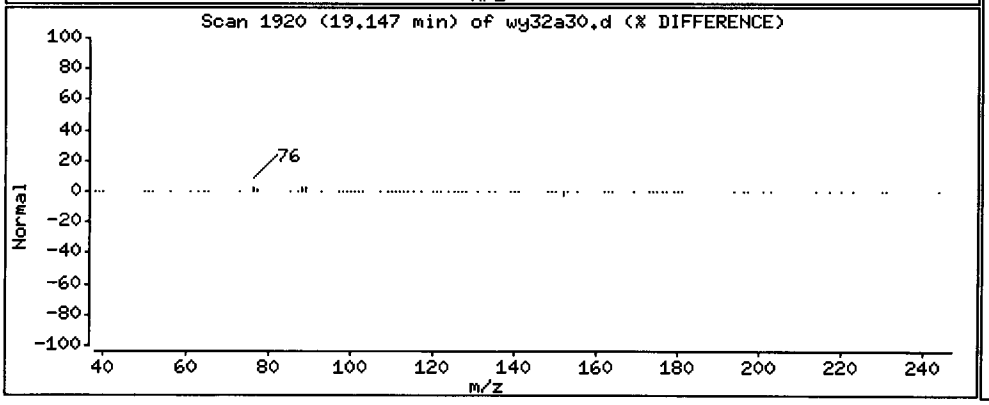
60 Phenanthrene

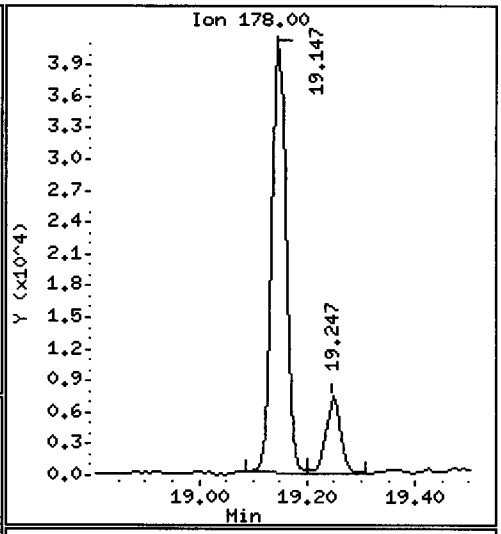
Concentration: 4106 ug/kg

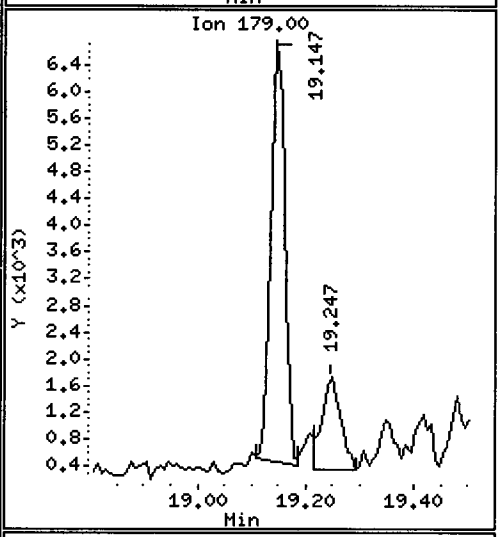


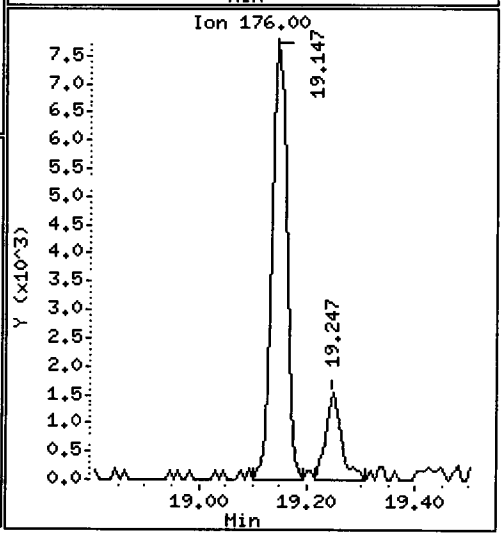












Data File: /chem1/nt10.i/20130802.b/wy32a30.d

Date : 02-AUG-2013 13:36

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A,30

Volume Injected (uL): 1.0

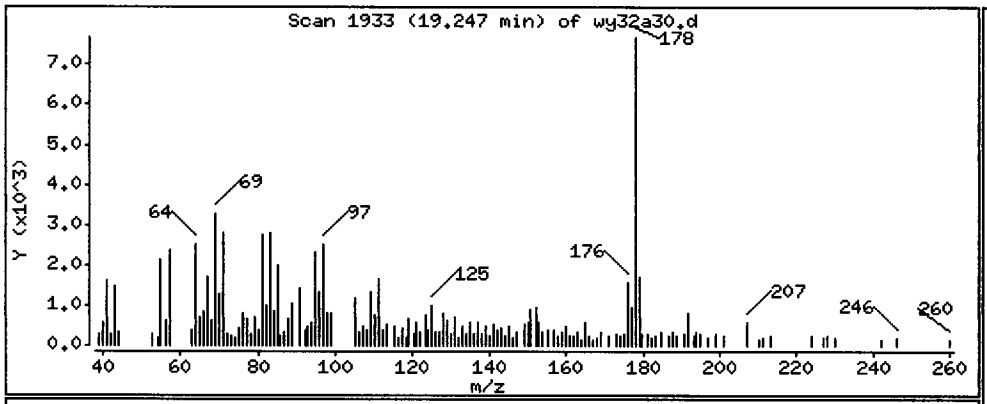
Operator: VTS/YZ

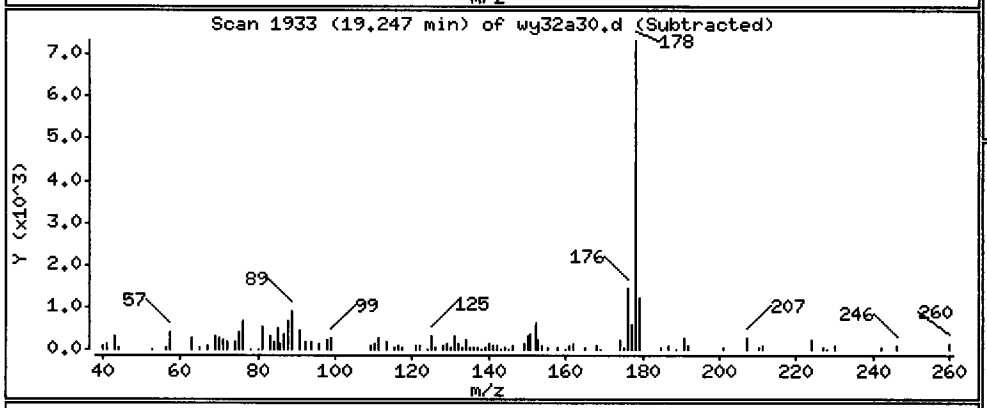
Column phase: ZB-5msi

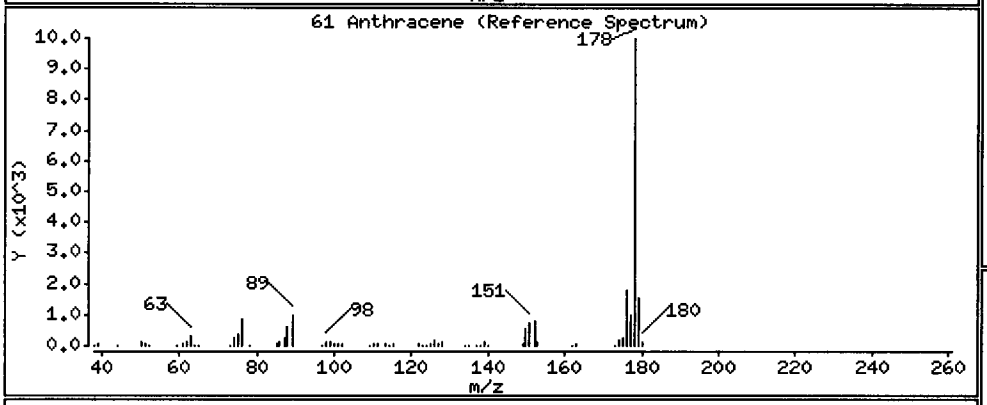
Column diameter: 0.25

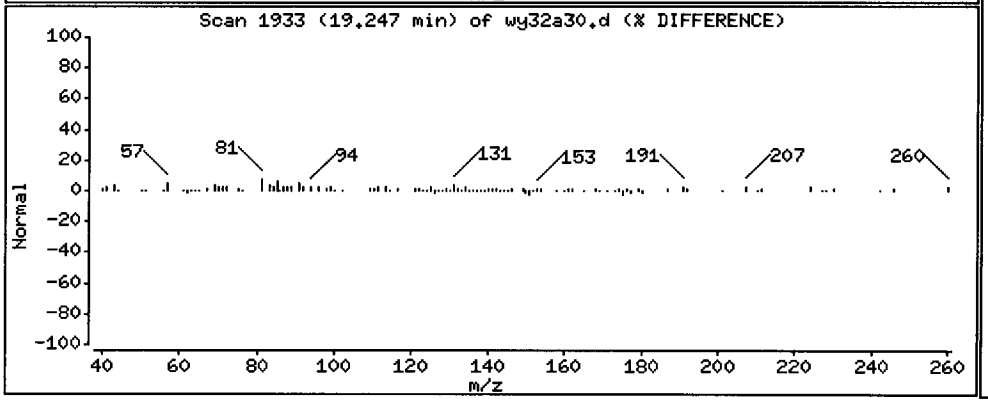
61 Anthracene

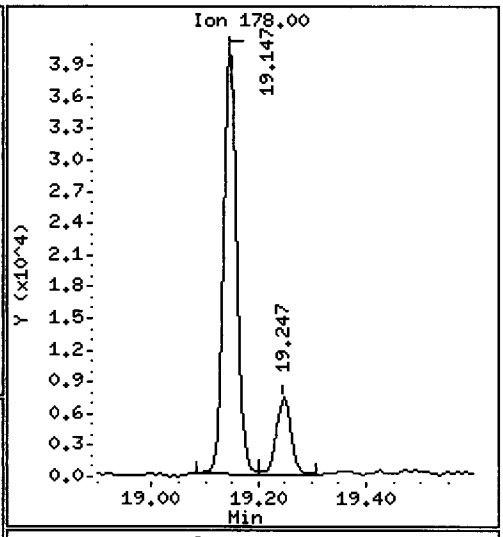
Concentration: 750.0 ug/kg

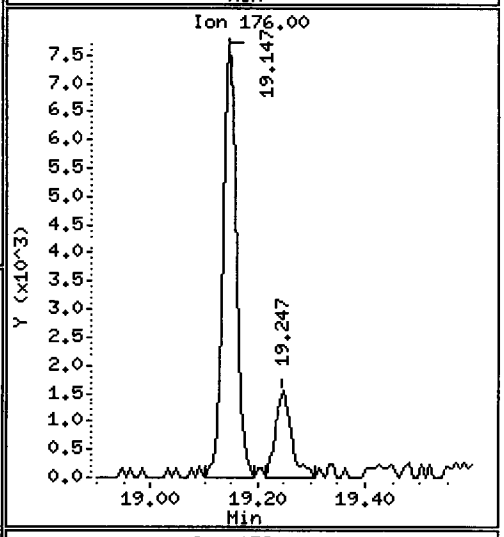


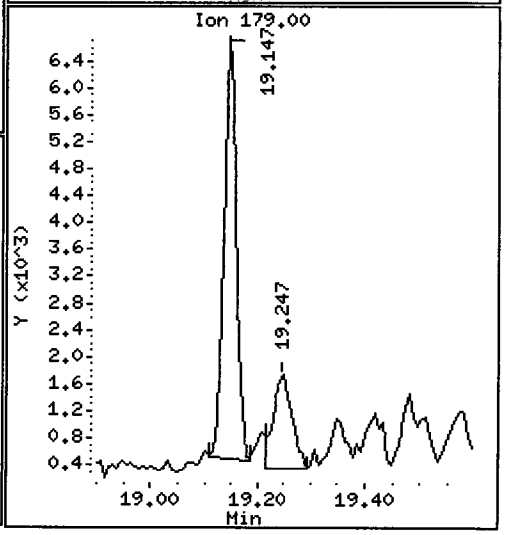












Data File: /chem1/nt10.i/20130802.b/wy32a30.d

Date : 02-AUG-2013 13:36

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A,30

Volume Injected (uL): 1.0

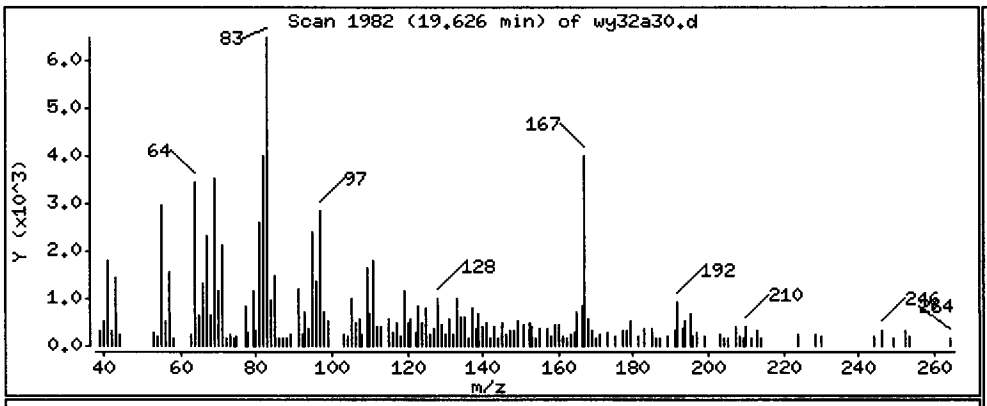
Operator: VTS/YZ

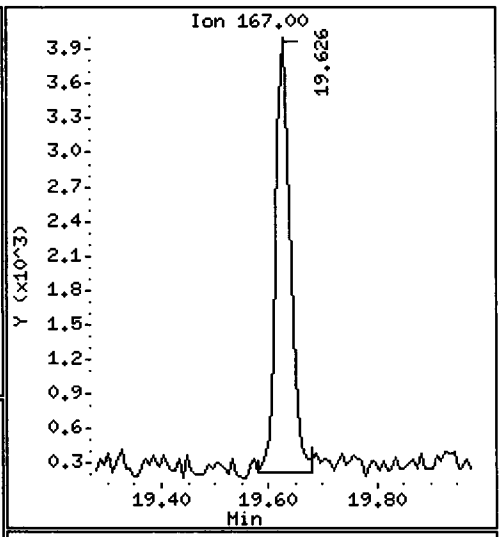
Column phase: ZB-5msi

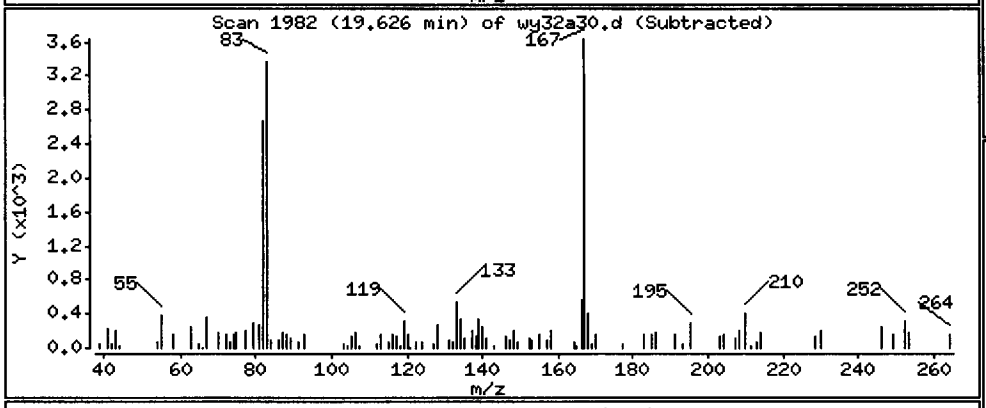
Column diameter: 0.25

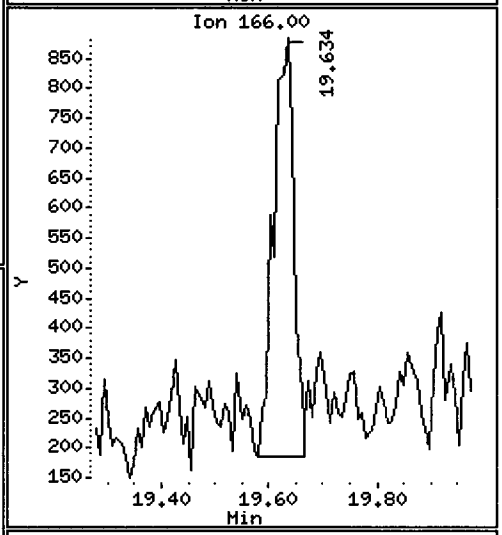
62 Carbazole

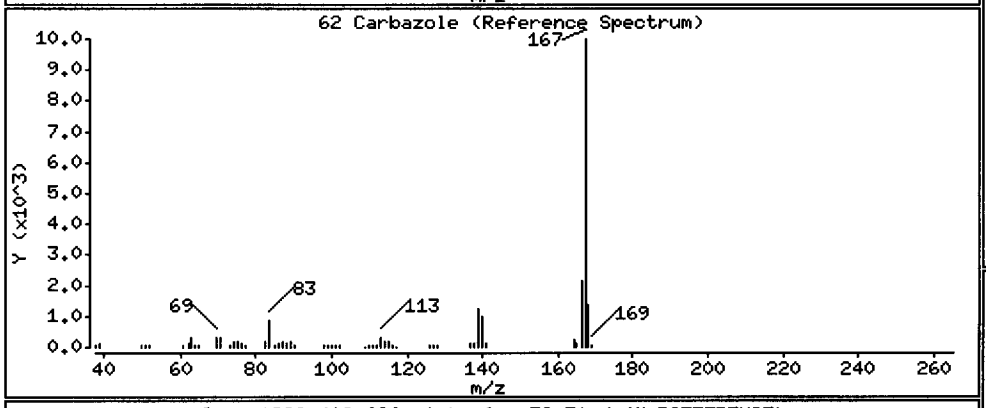
Concentration: 838.4 ug/kg

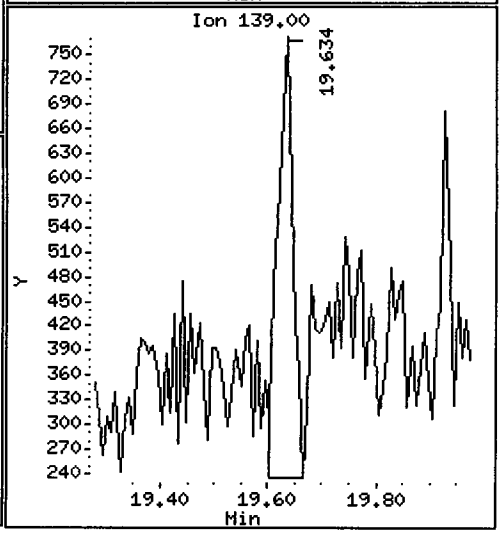


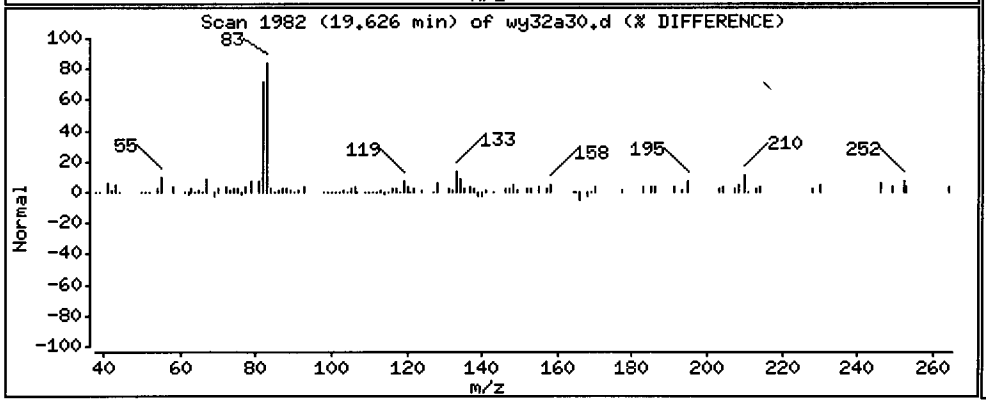












Data File: /chem1/nt10.i/20130802.b/wy32a30.d

Date : 02-AUG-2013 13:36

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A,30

Volume Injected (uL): 1.0

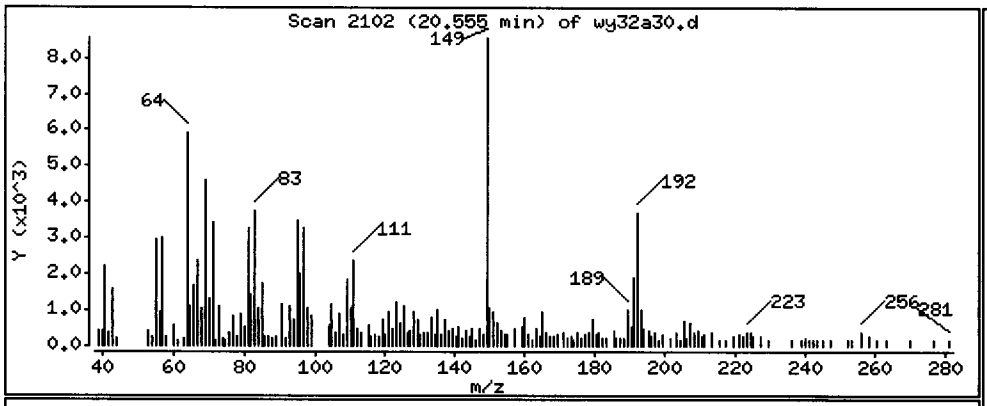
Operator: VTS/YZ

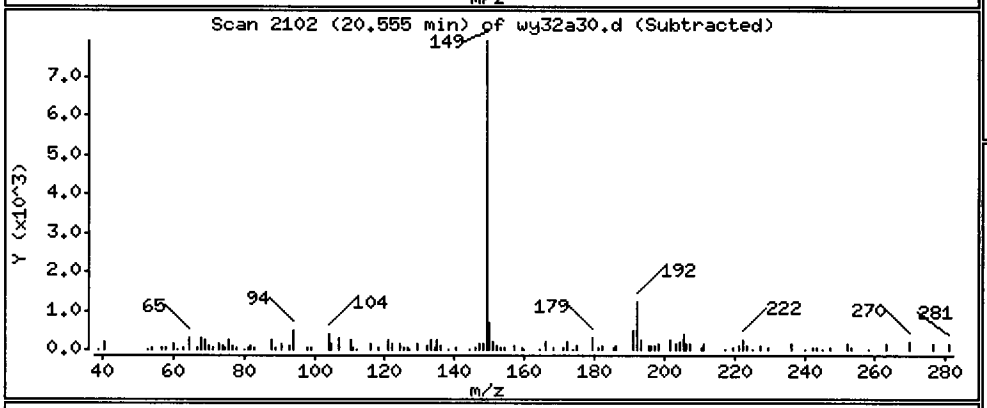
Column phase: ZB-5msi

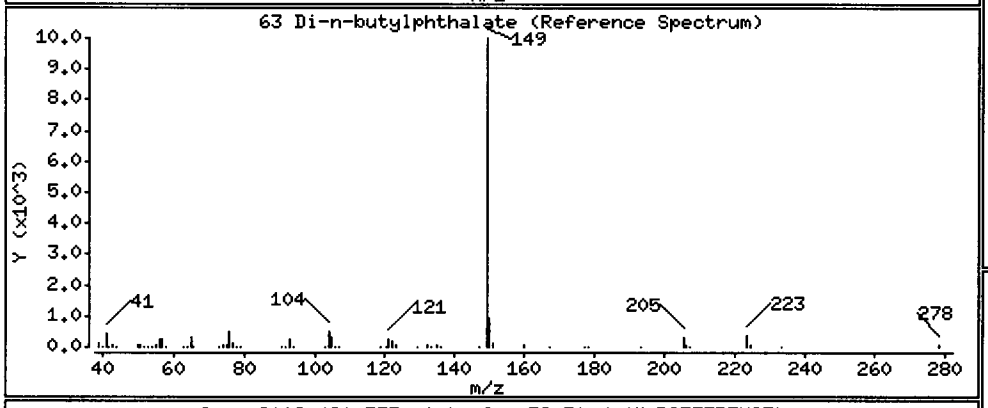
Column diameter: 0.25

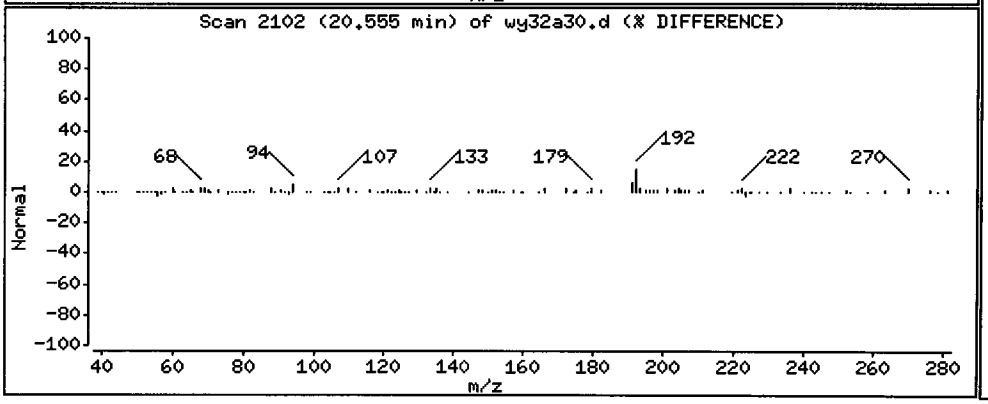
63 Di-n-butylphthalate

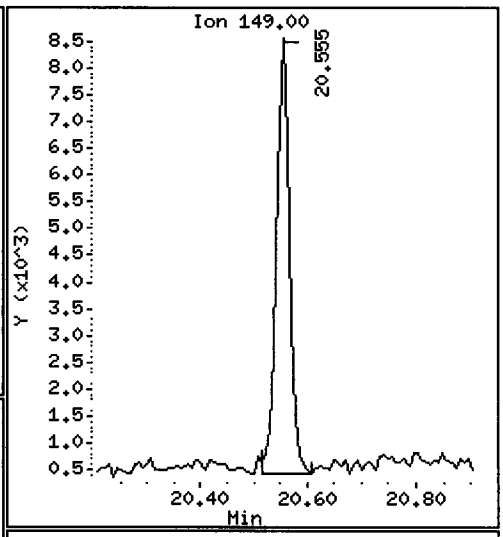
Concentration: 666.4 ug/kg

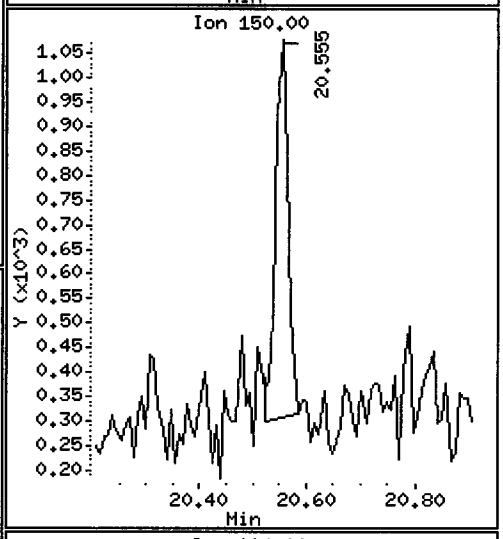


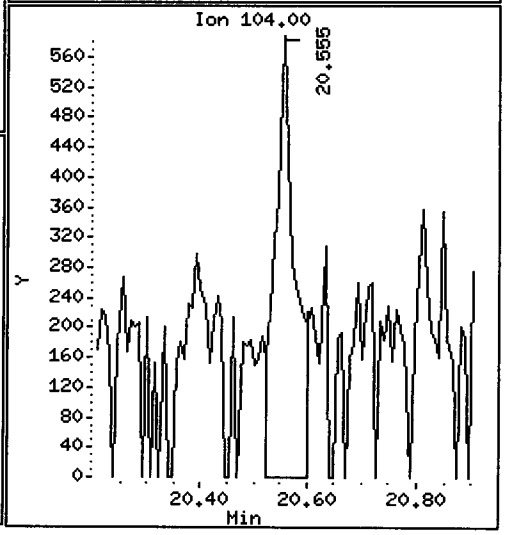












Data File: /chem1/nt10.i/20130802.b/wy32a30.d

Date : 02-AUG-2013 13:36

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A,30

Volume Injected (uL): 1.0

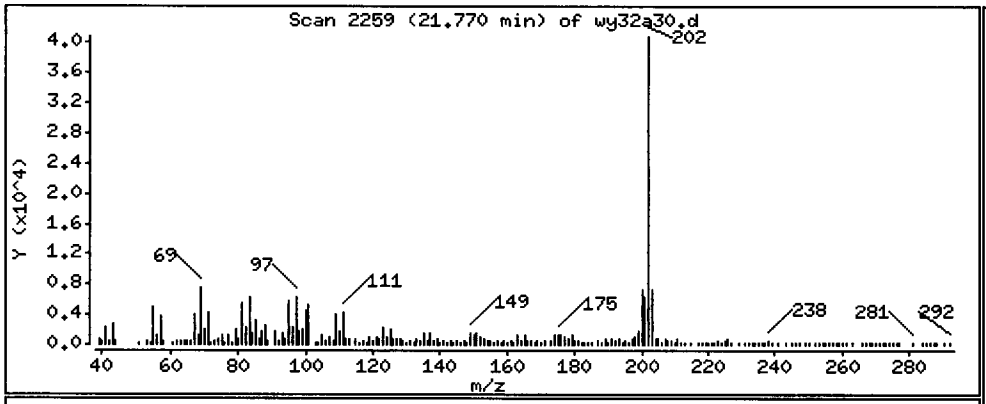
Operator: VTS/YZ

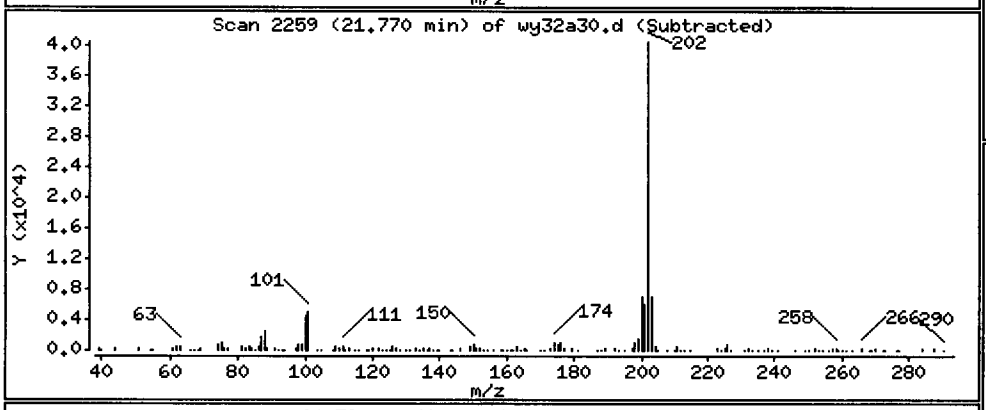
Column phase: ZB-5msi

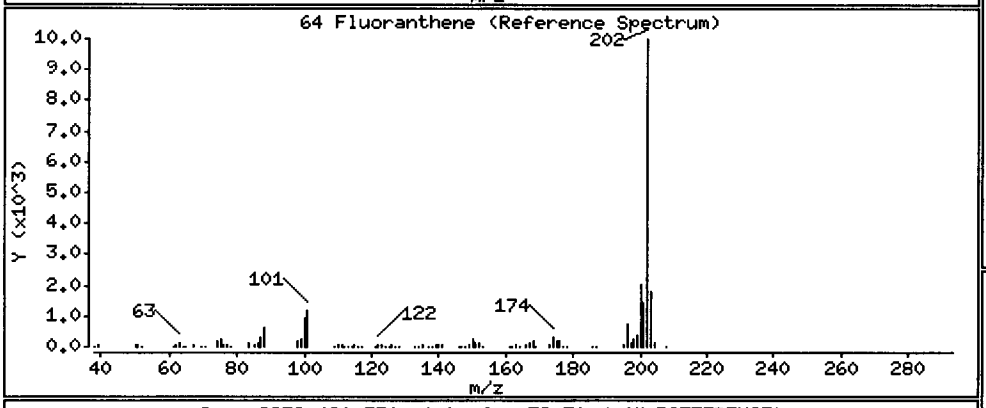
Column diameter: 0.25

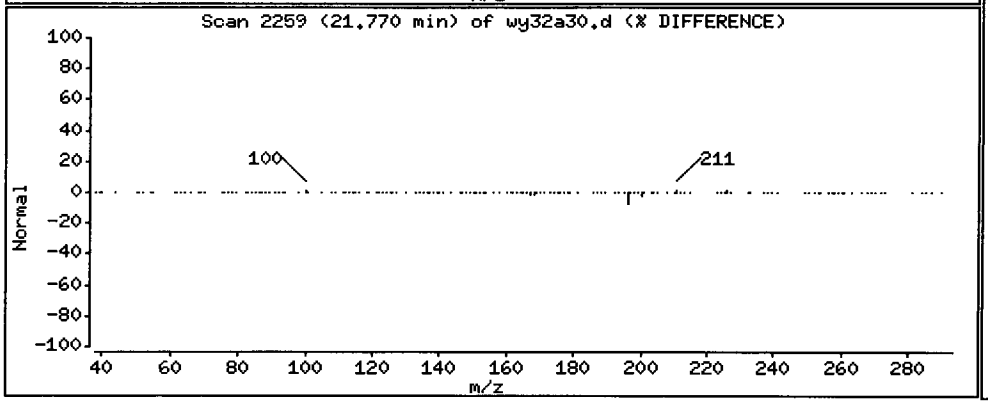
64 Fluoranthene

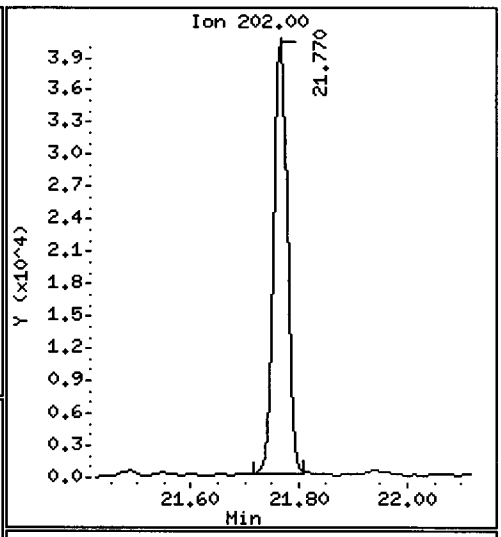
Concentration: 3137 ug/kg

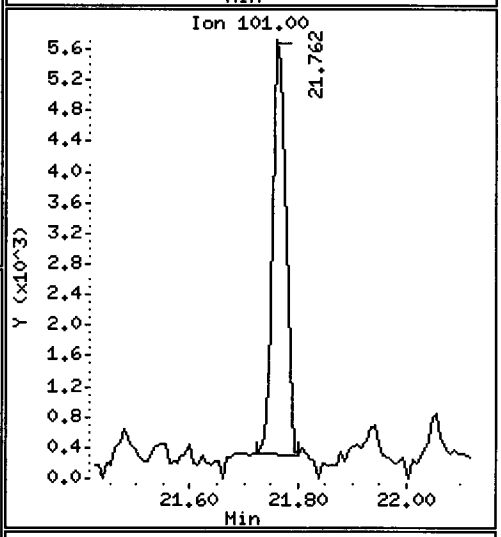


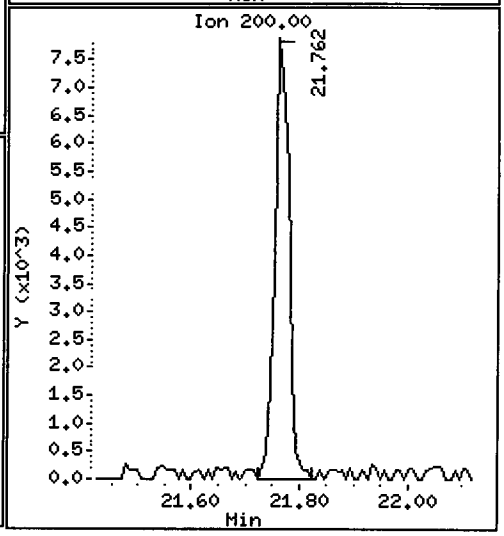












Data File: /chem1/nt10.i/20130802.b/wy32a30.d

Date : 02-AUG-2013 13:36

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A,30

Volume Injected (uL): 1.0

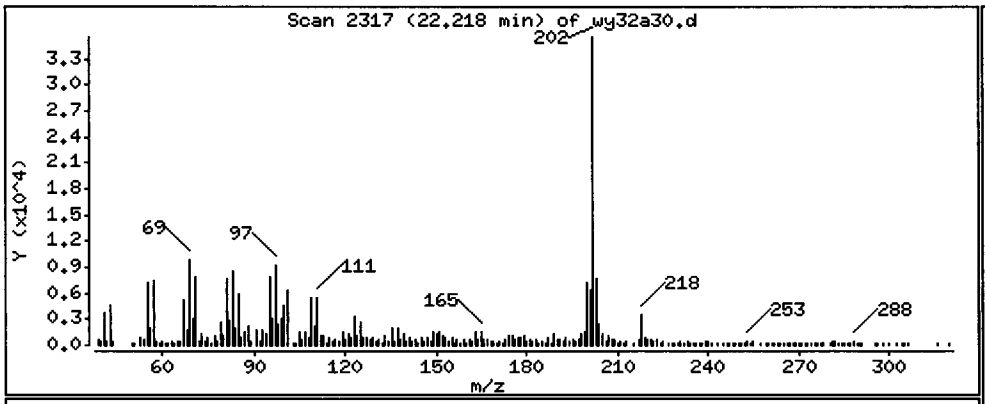
Operator: VTS/YZ

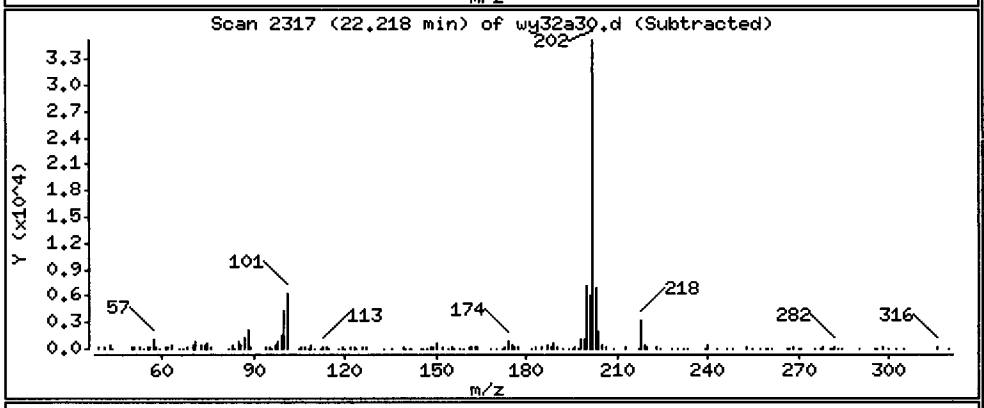
Column phase: ZB-5msi

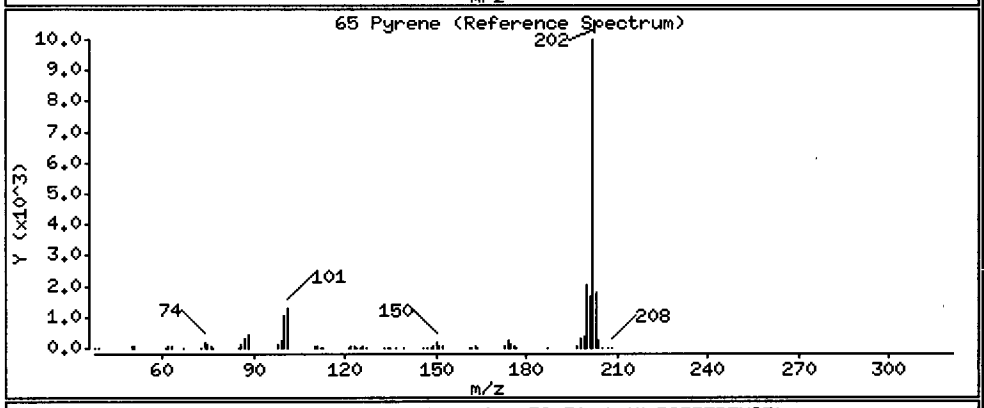
Column diameter: 0.25

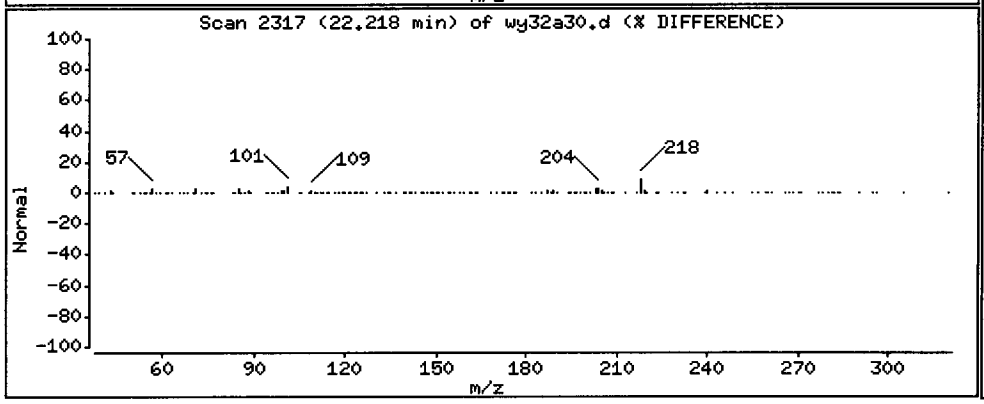
65 Pyrene

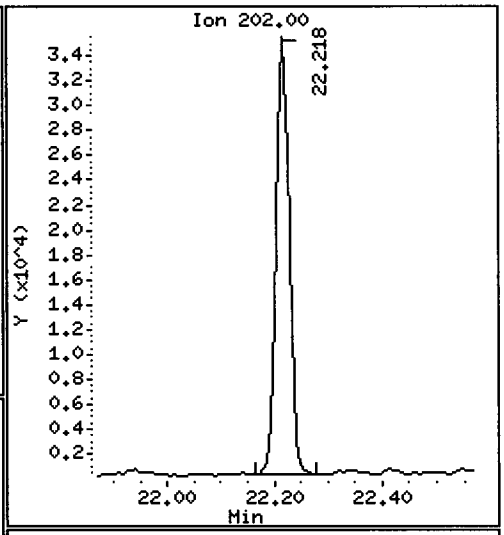
Concentration: 2898 ug/kg

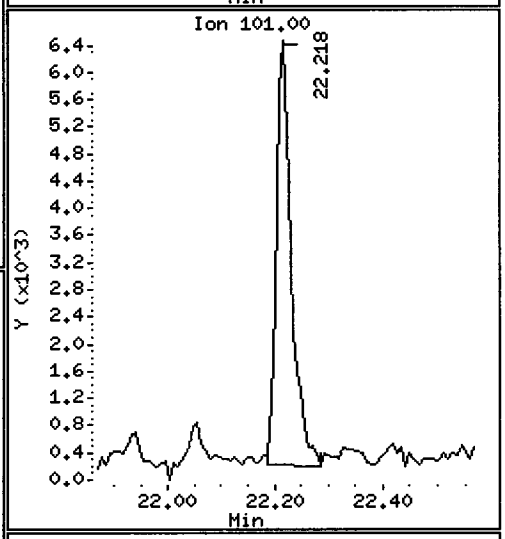


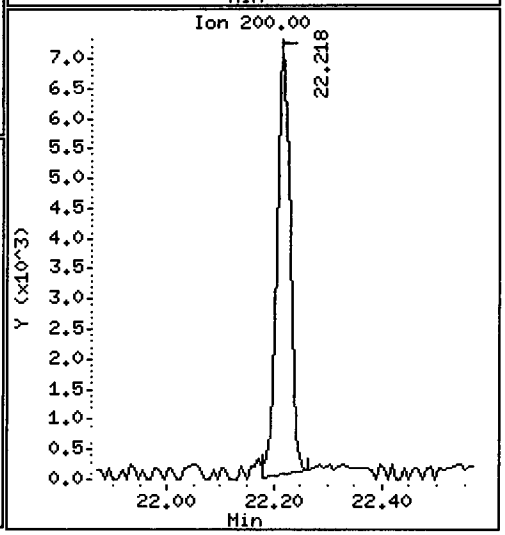












Data File: /chem1/nt10.i/20130802.b/wy32a30.d

Date : 02-AUG-2013 13:36

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A,30

Volume Injected (uL): 1.0

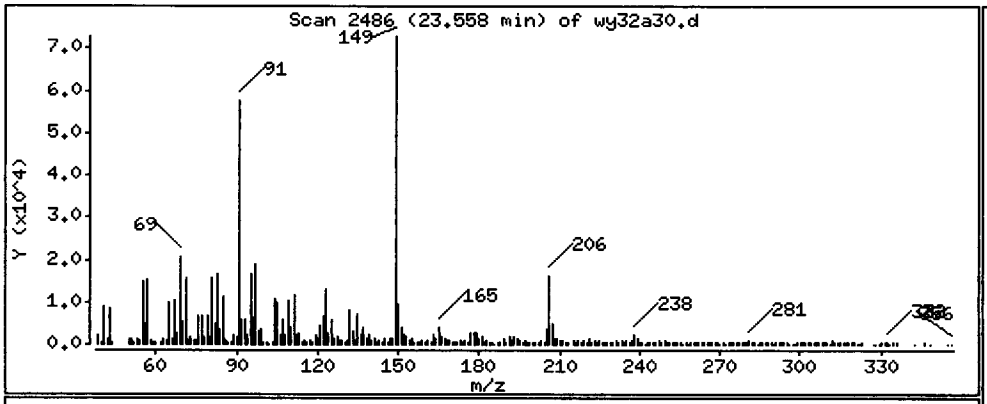
Operator: VTS/YZ

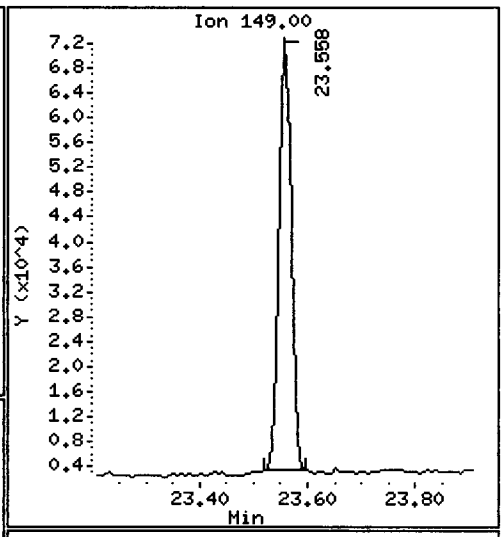
Column phase: ZB-5ms1

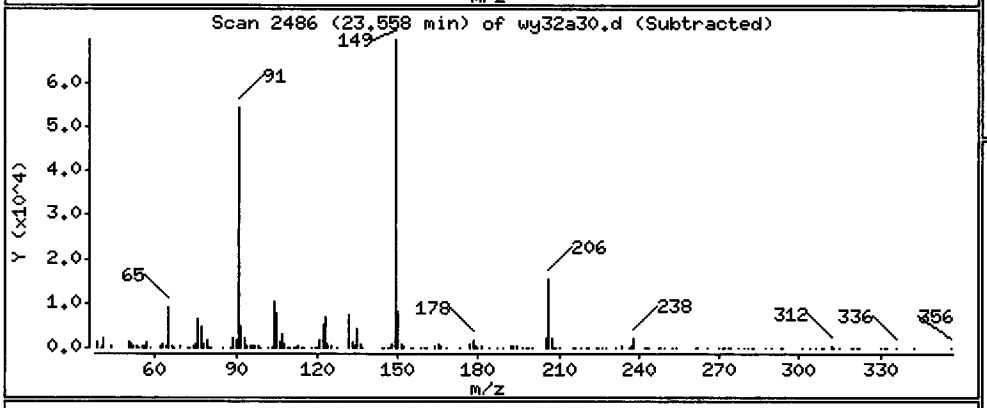
Column diameter: 0.25

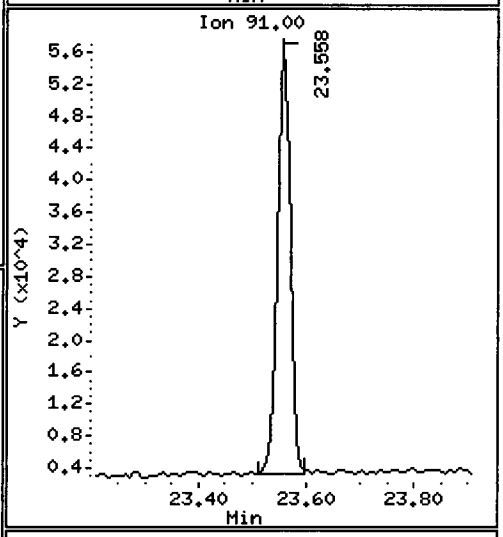
67 Butylbenzylphthalate

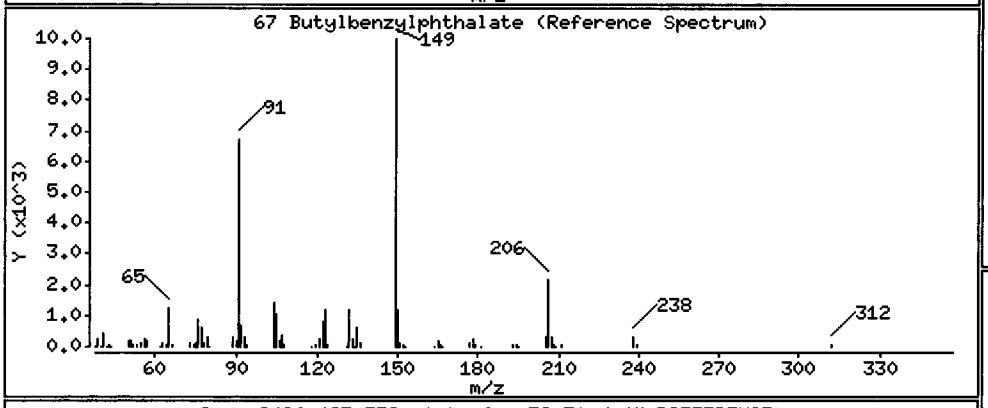
Concentration: 14590 ug/kg

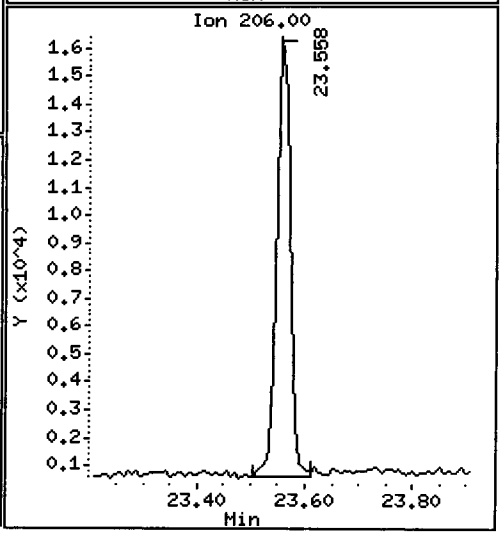


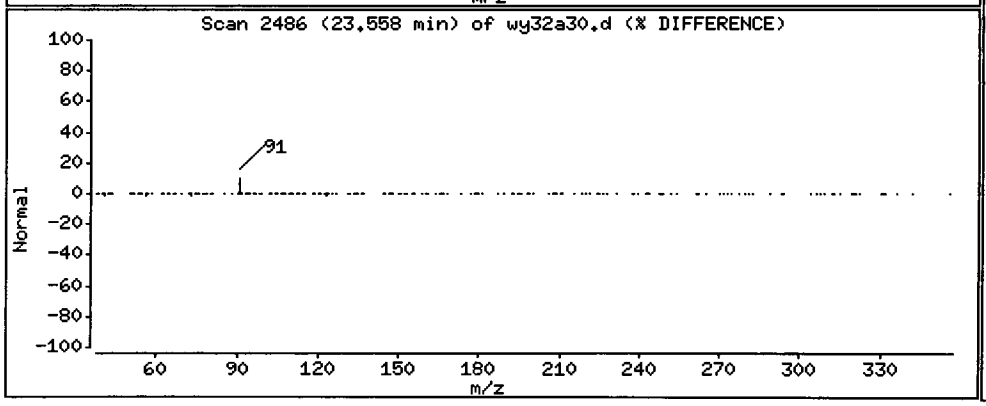












Data File: /chem1/nt10.i/20130802.b/wy32a30.d

Date : 02-AUG-2013 13:36

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A,30

Volume Injected (uL): 1.0

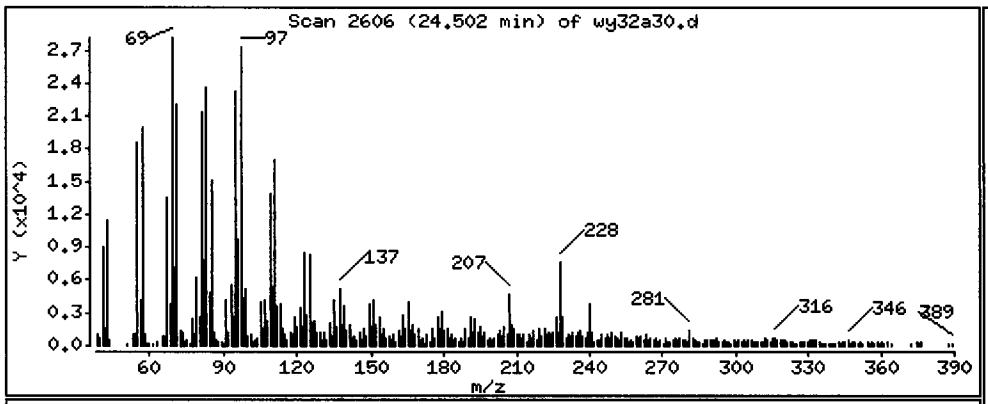
Operator: VTS/YZ

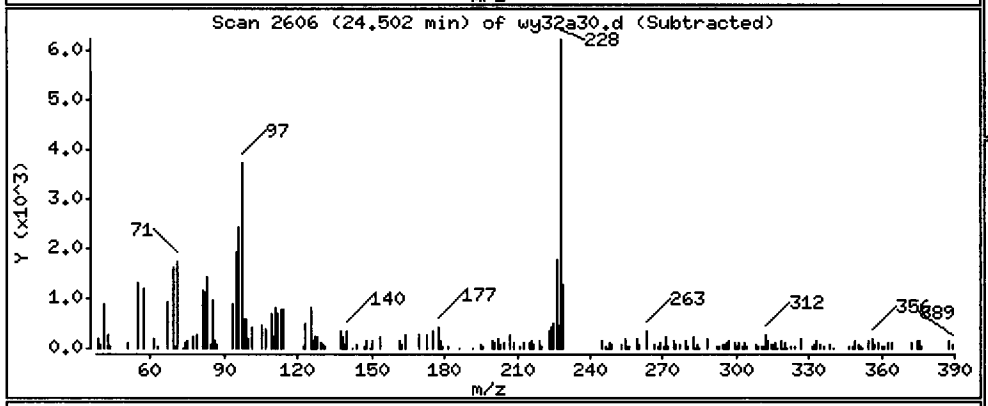
Column phase: ZB-5msi

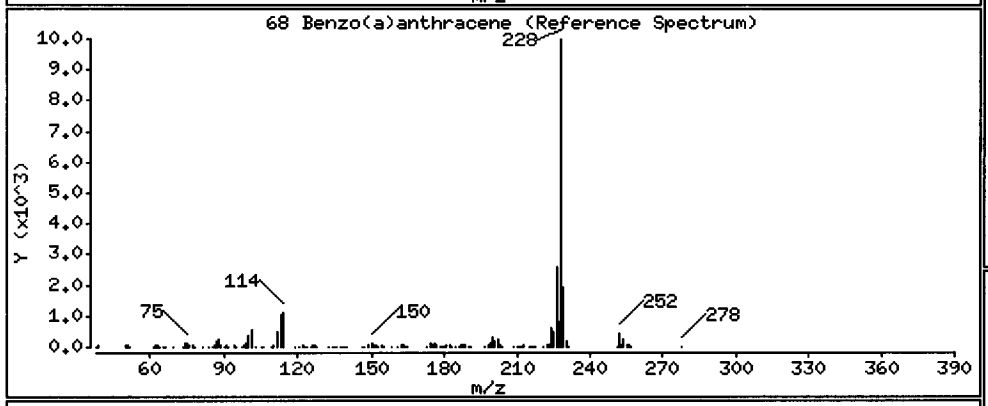
Column diameter: 0.25

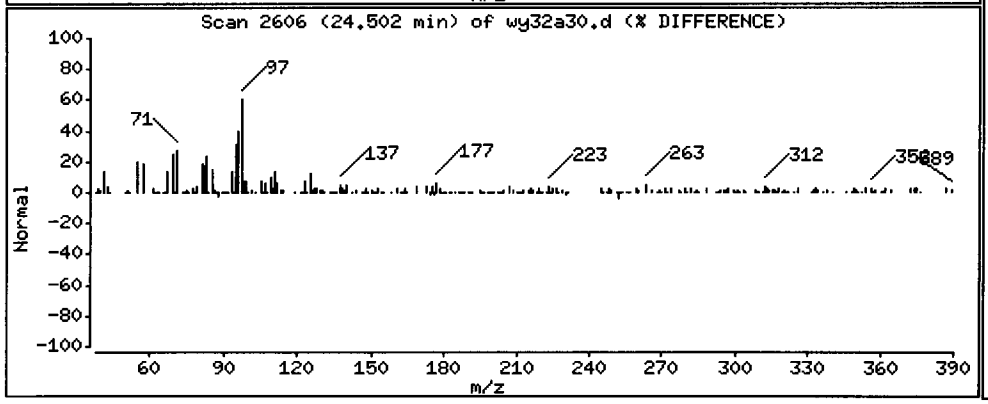
68 Benzo(a)anthracene

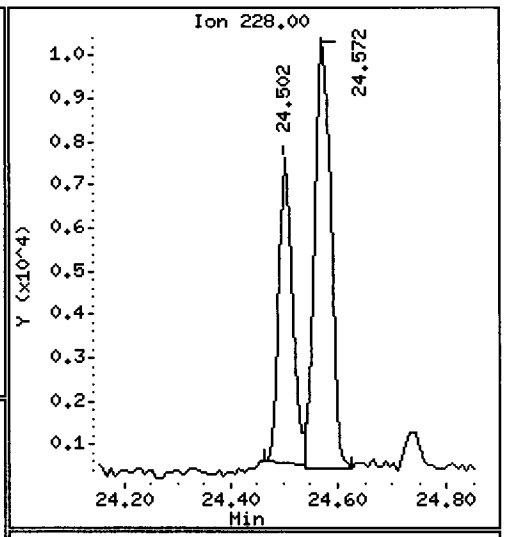
Concentration: 673.3 ug/kg

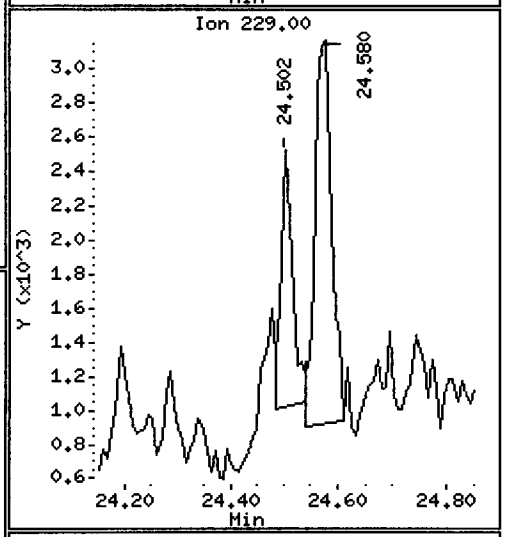


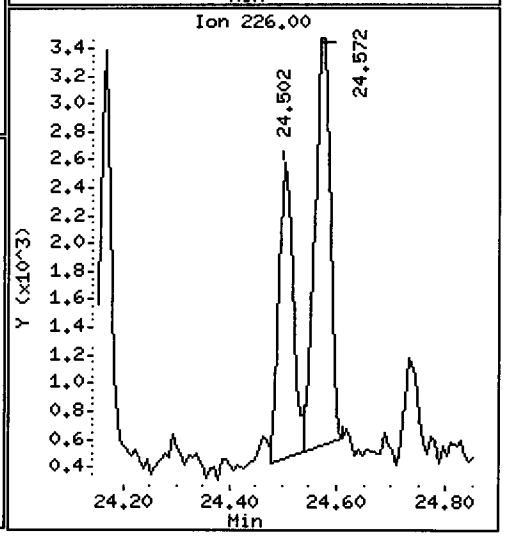












Data File: /chem1/nt10.i/20130802.b/wy32a30.d

Date : 02-AUG-2013 13:36

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A,30

Volume Injected (uL): 1.0

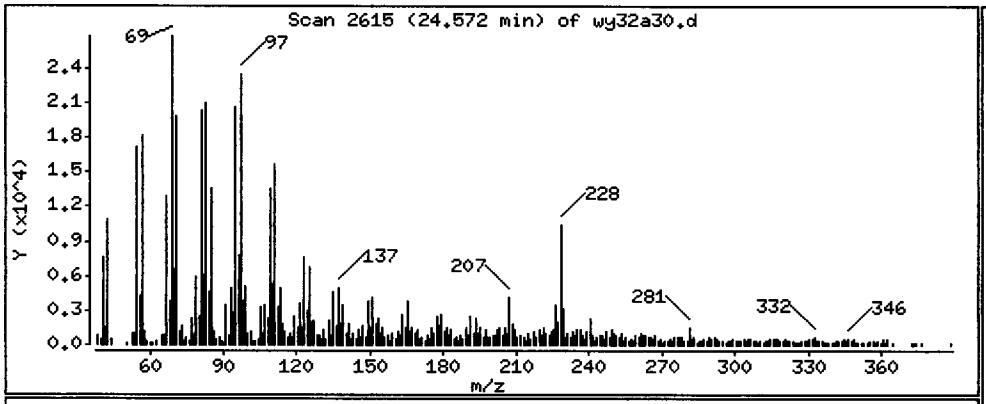
Operator: VTS/YZ

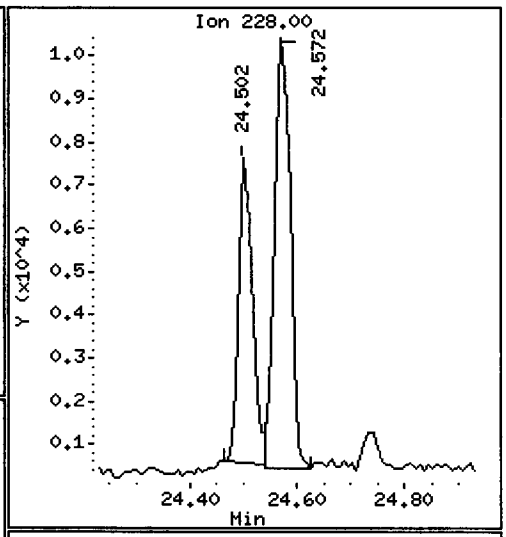
Column phase: ZB-5ms

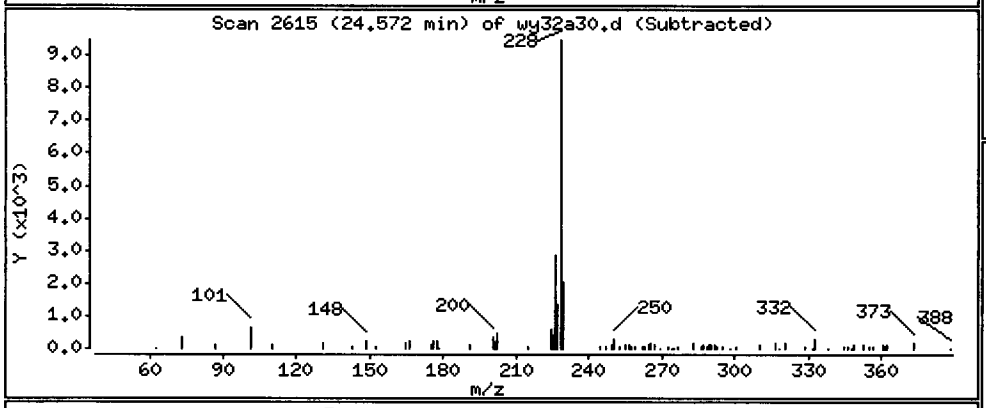
Column diameter: 0.25

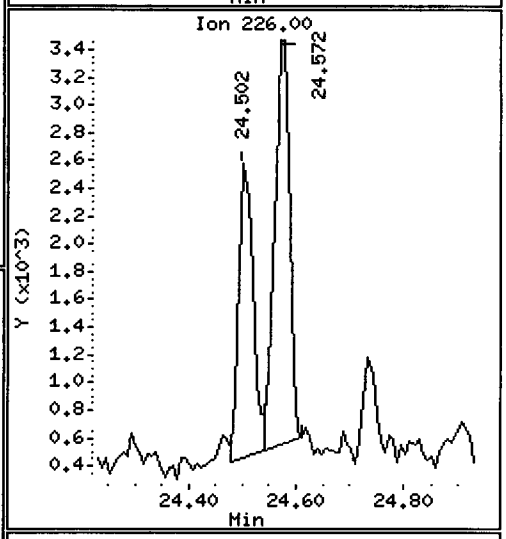
71 Chrysene

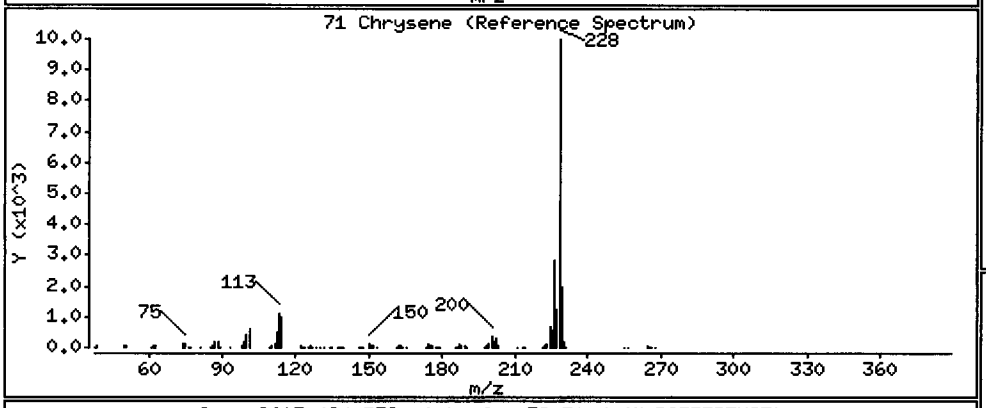
Concentration: 1286 ug/kg

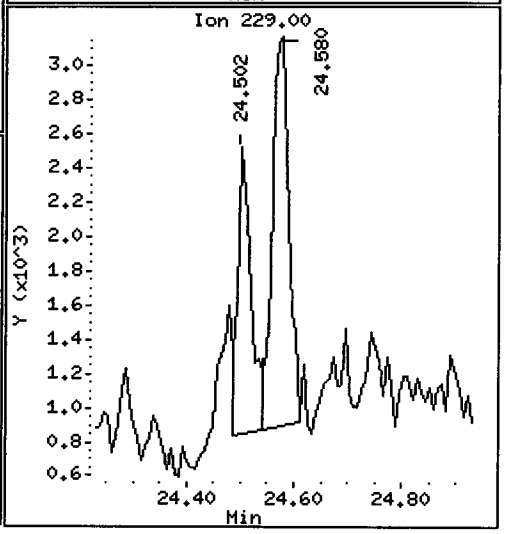


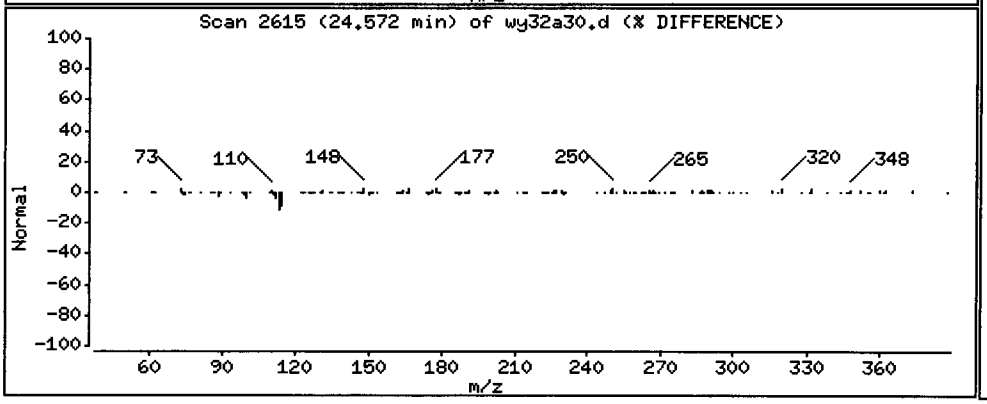












Data File: /chem1/nt10.i/20130802.b/wy32a30.d

Date : 02-AUG-2013 13:36

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A,30

Volume Injected (uL): 1.0

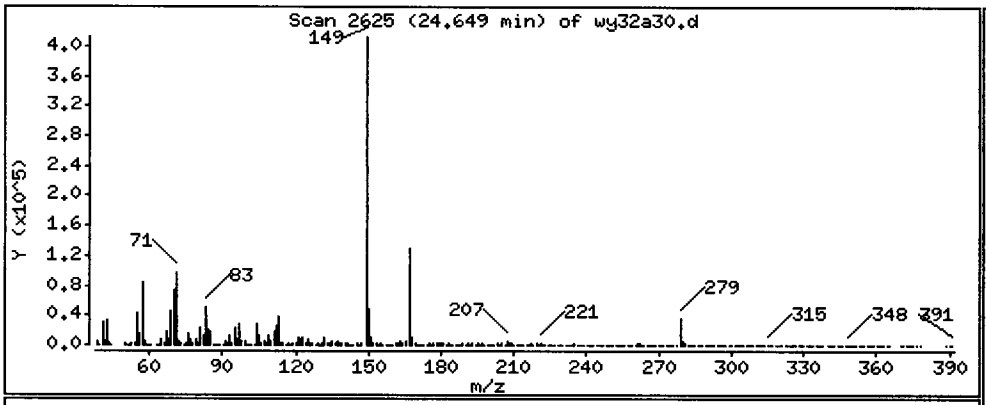
Operator: VTS/YZ

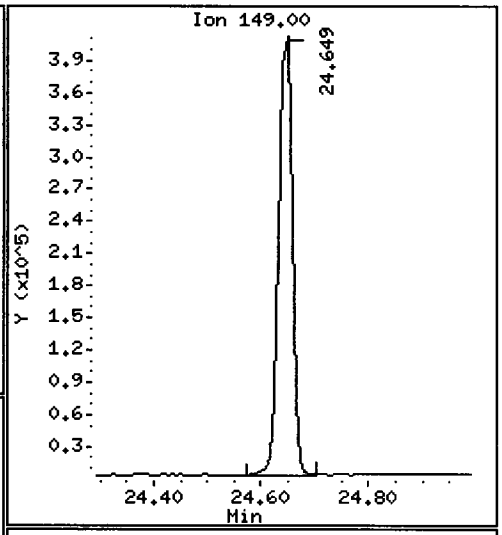
Column phase: ZB-5msi

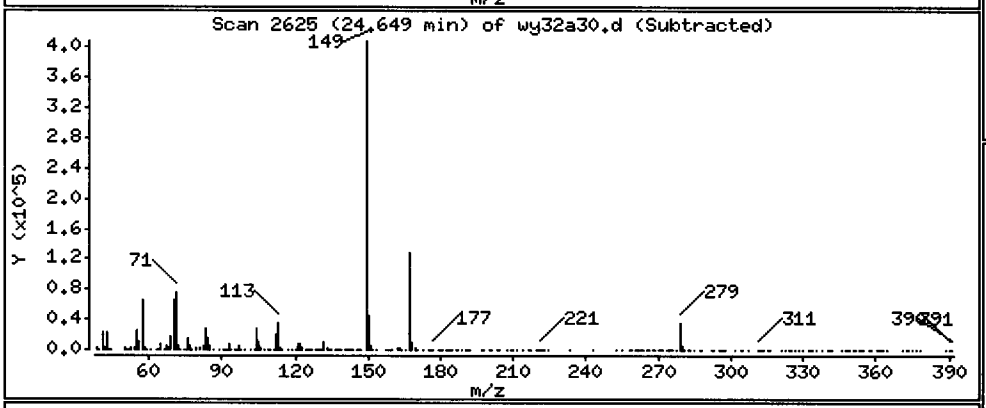
Column diameter: 0.25

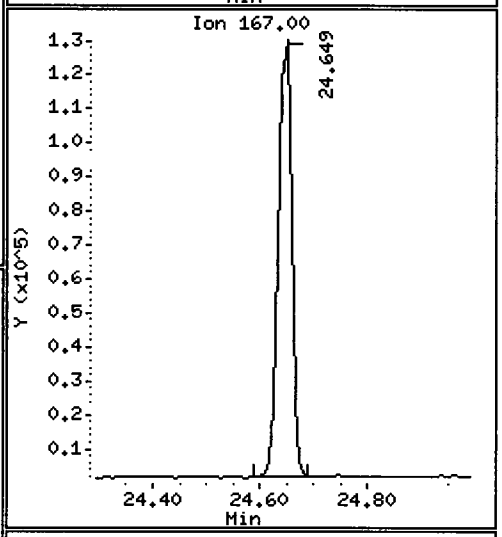
72 bis(2-Ethylhexyl)phthalate

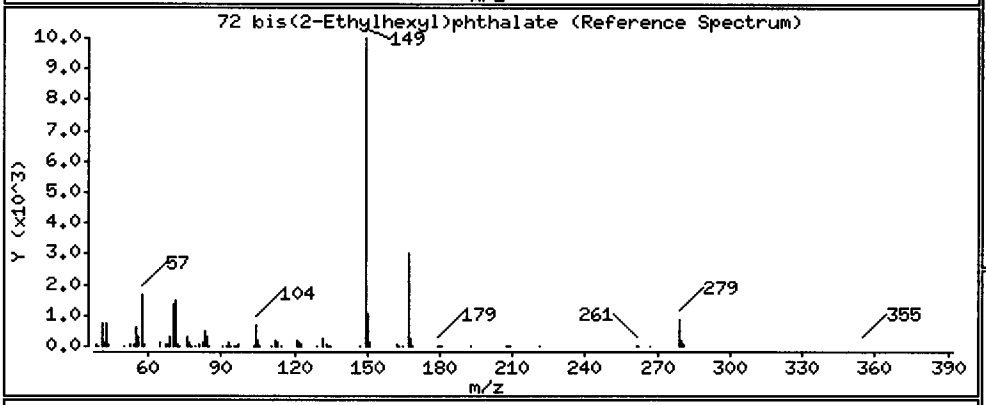
Concentration: 66730 ug/kg

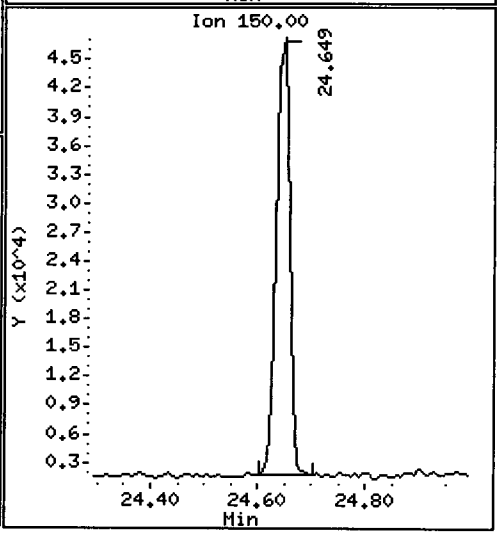


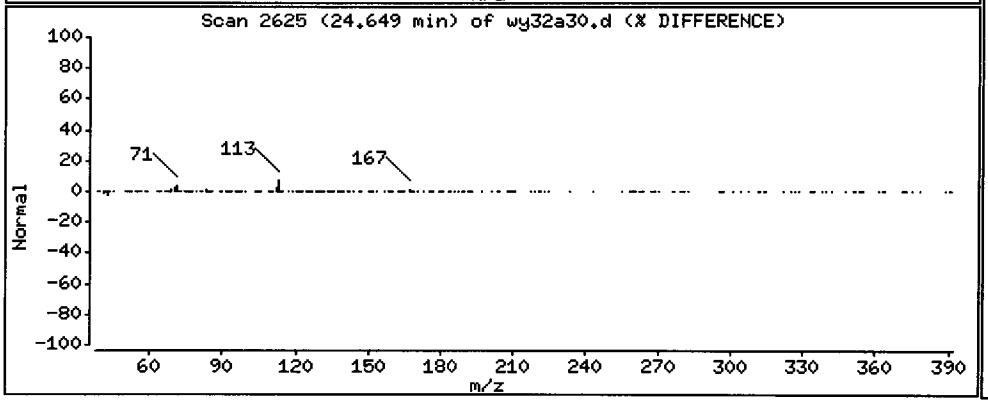












Data File: /chem1/nt10.i/20130802.b/wy32a30.d

Date : 02-AUG-2013 13:36

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A,30

Volume Injected (uL): 1.0

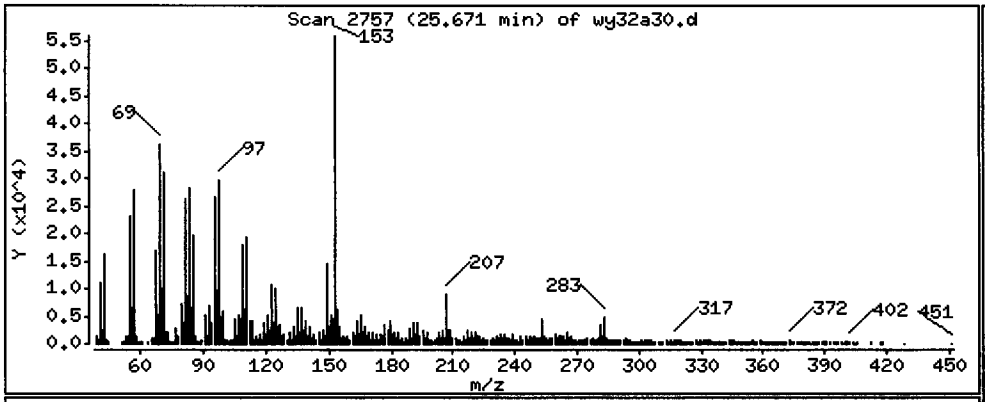
Operator: VTS/YZ

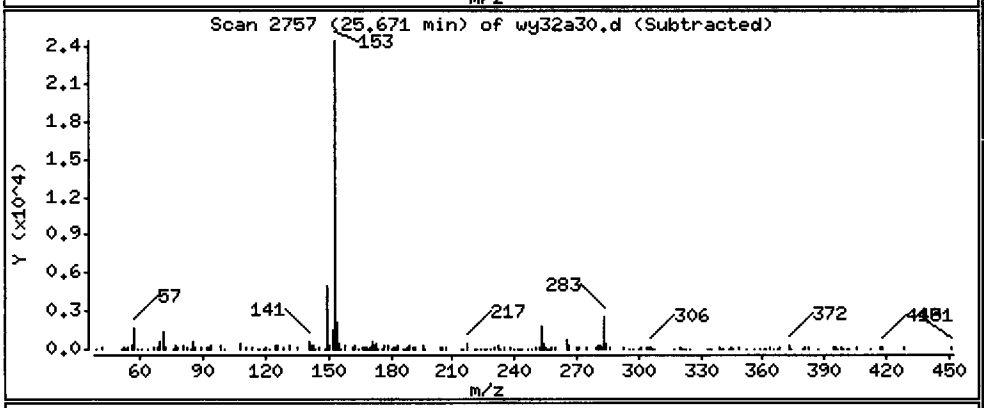
Column phase: ZB-5msi

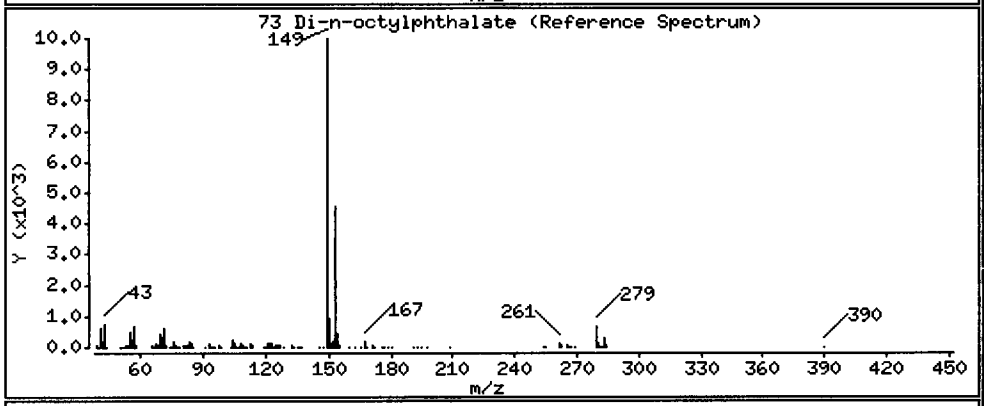
Column diameter: 0.25

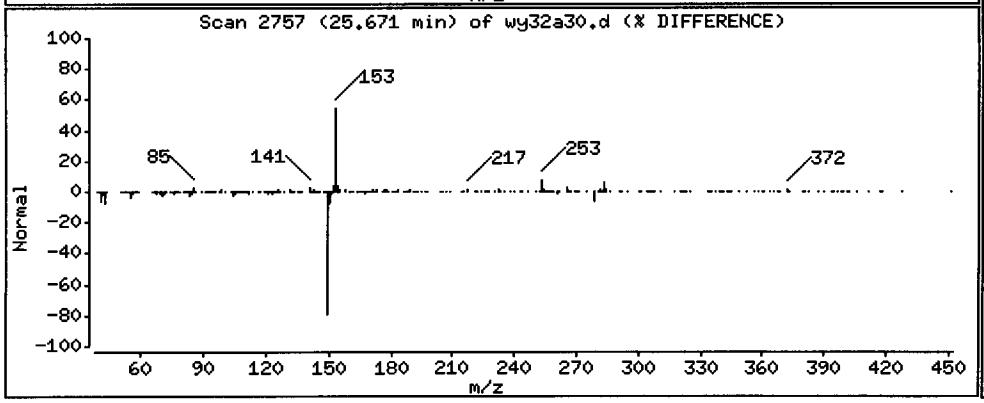
73 Di-n-octylphthalate

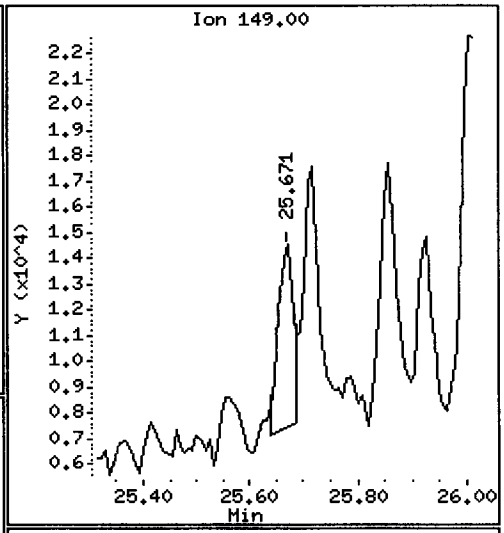
Concentration: 731.2 ug/kg

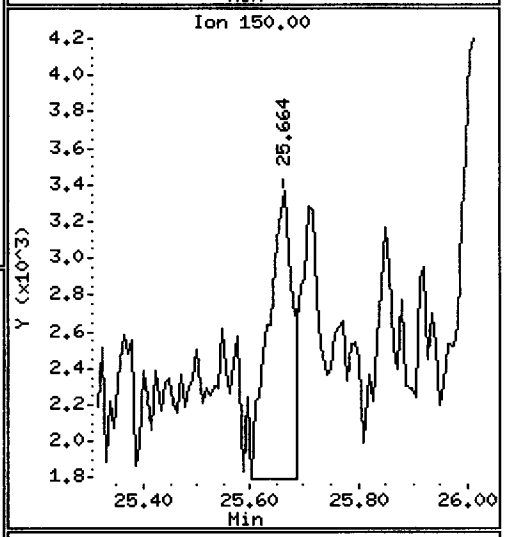


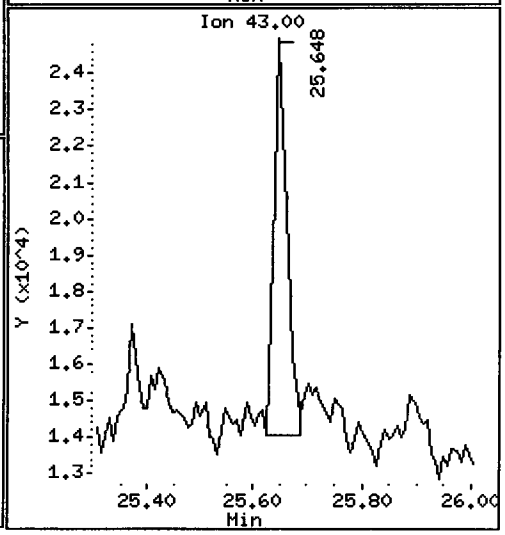












Data File: /chem1/nt10.i/20130802.b/wy32a30.d

Date : 02-AUG-2013 13:36

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A,30

Volume Injected (uL): 1.0

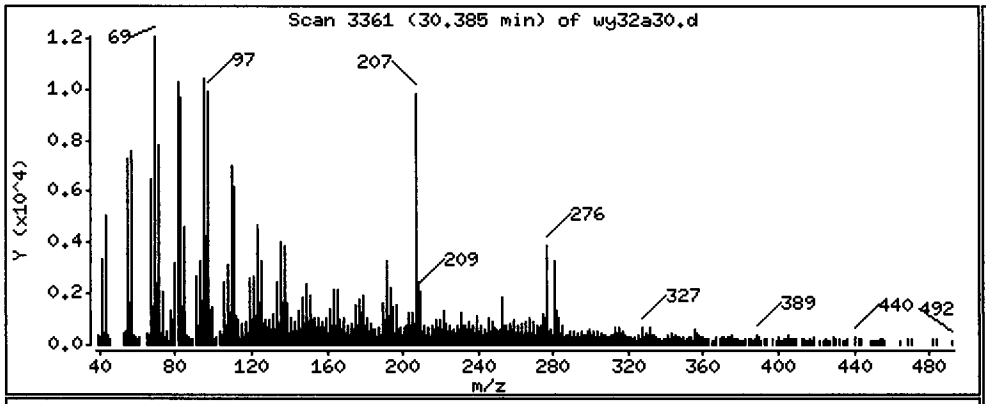
Operator: VTS/YZ

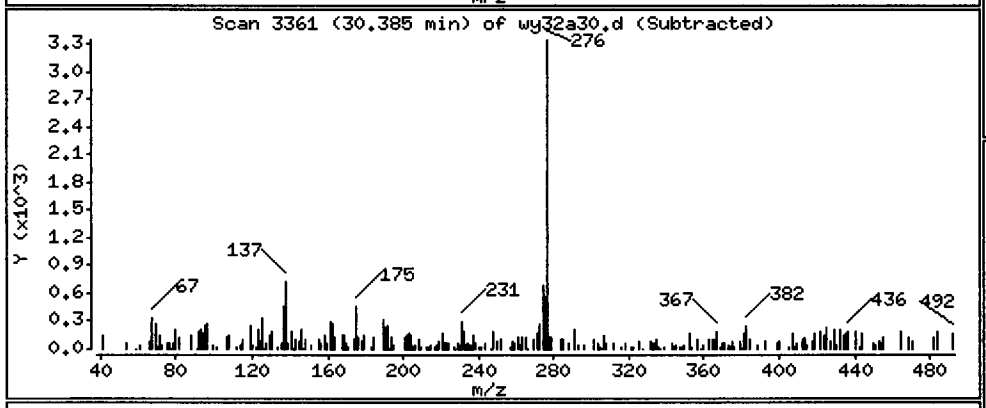
Column phase: ZB-5msi

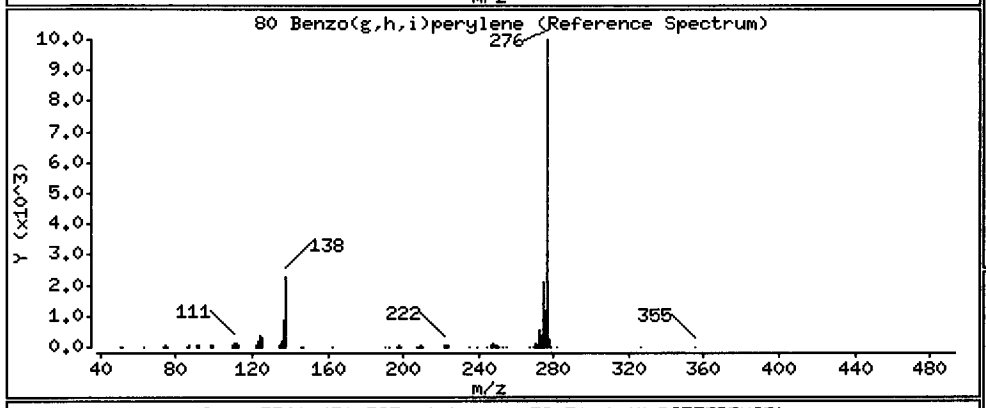
Column diameter: 0.25

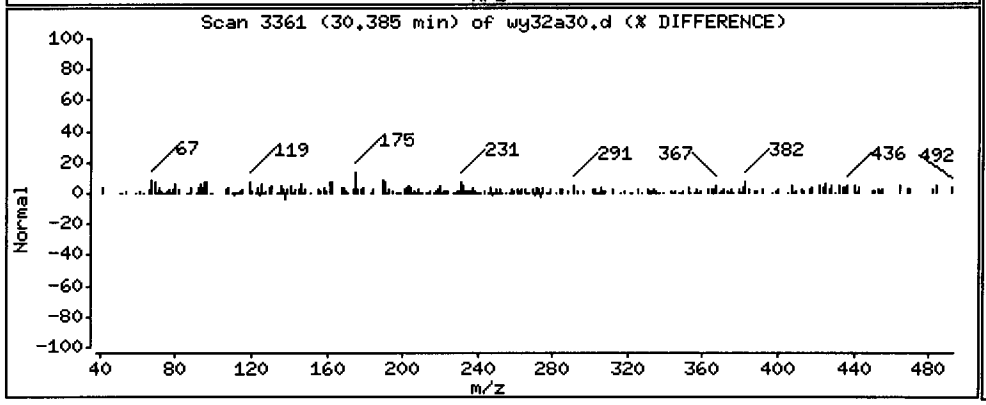
80 Benzo(g,h,i)perylene

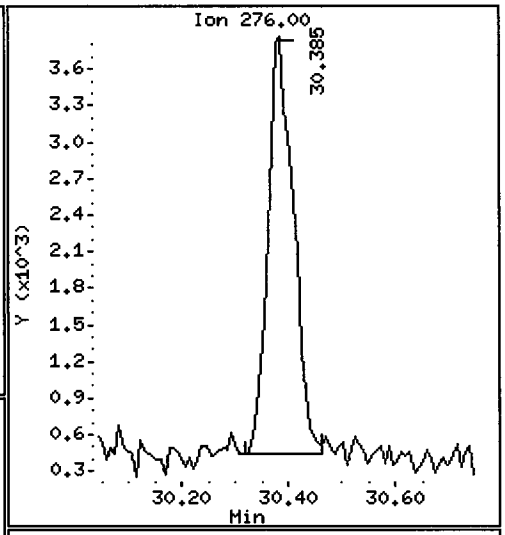
Concentration: 690.5 ug/kg

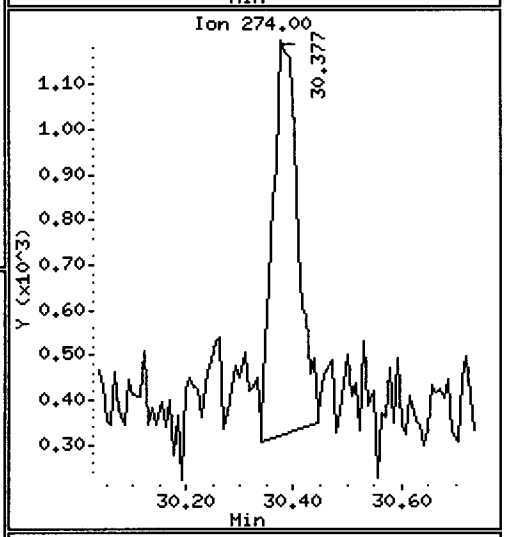


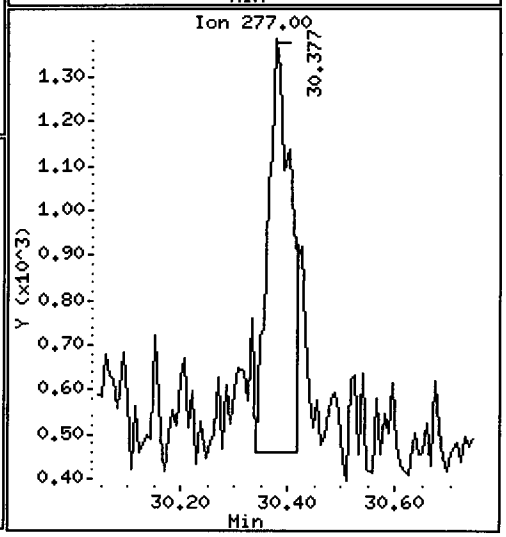












Data File: /chem1/nt10.i/20130802.b/wy32a30.d

Date : 02-AUG-2013 13:36

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A,30

Volume Injected (uL): 1.0

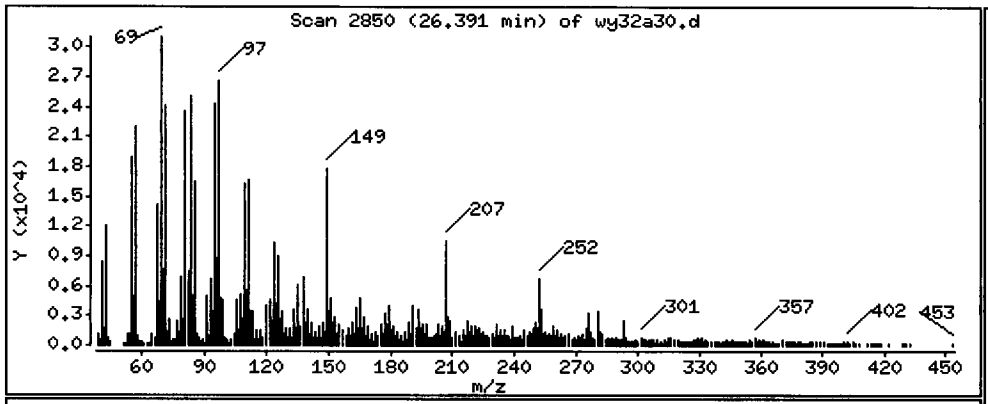
Operator: VTS/YZ

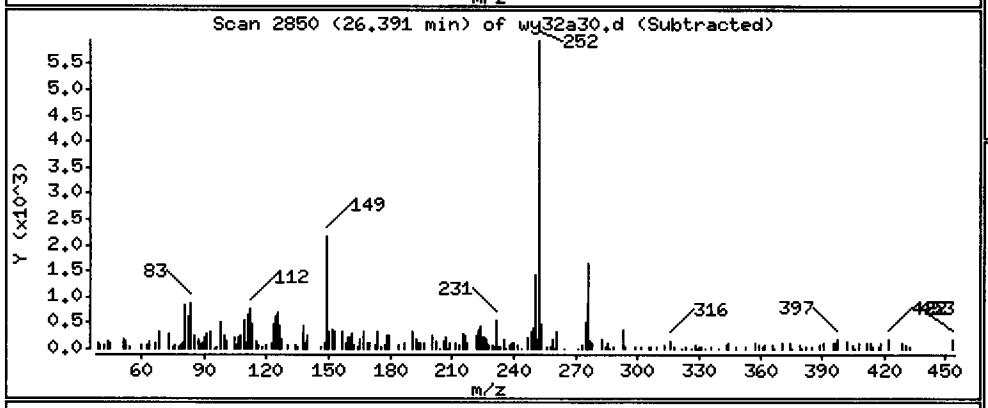
Column phase: ZB-5msi

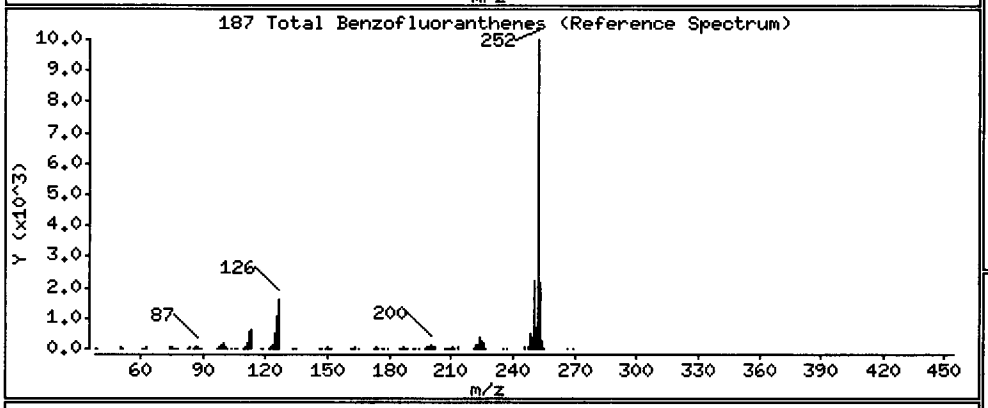
Column diameter: 0.25

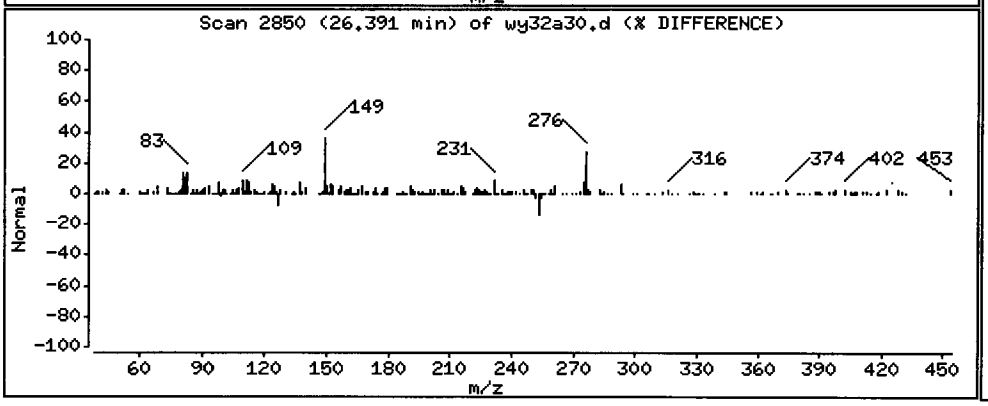
187 Total Benzofluoranthenes

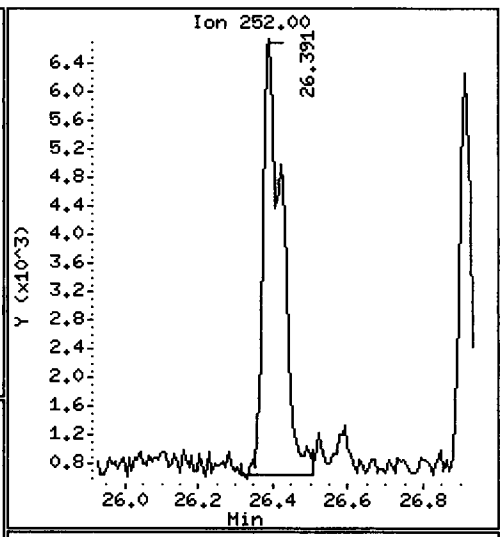
Concentration: 1219 ug/kg

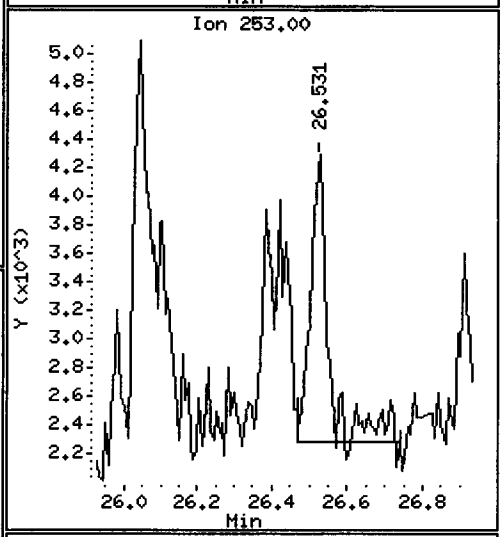


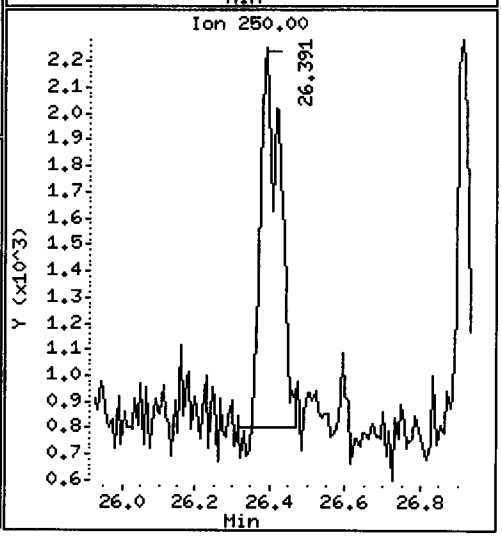












CO-ELUTION SUMMARY FOR FILE - wy32a30.d

Lab ID: WY32A, Method: ABN.m, Instrument: nt10.i, Date: 02-AUG-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 8/3/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130802.b/wy32c30.d
Lab Smp Id: WY32C Client Smp ID: UP-CB-A6-20130626-S
Inj Date : 02-AUG-2013 14:14
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WY32C,30
Misc Info : 13-15395
Comment : 1ul Injection
Method : /chem1/nt10.i/20130802.b/ABN.m
Meth Date : 02-Aug-2013 13:03 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 2
Dil Factor: 30.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	30.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	6.04000	Weight of sample extracted (g)
M	29.80000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	6.867	6.867	(0.744)	11337	0.23244	1645
$	2 Phenol-d5	99	8.575	8.583	(0.930)	13962	0.21366	1512
	3 Phenol	94	Compound Not Detected.					
$	5 2-Chlorophenol-d4	132	8.838	8.845	(0.958)	10453	0.22495	1592
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	9.225	9.225	(1.000)	121059	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	9.613	9.613	(1.042)	3465	0.10585	748.9
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	10.397	10.404	(0.874)	6116	0.11572	818.8
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.894	11.894	(1.000)	439223	4.00000	
	28 Naphthalene	128	Compound Not Detected.					
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	14.308	14.308	(0.905)	12020	0.12462	881.7
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	15.801	15.801	(1.000)	256695	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	17.586	17.586	(1.113)	3707	0.24159	1709
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	19.093	19.100	(1.000)	411321	4.00000	
	60 Phenanthrene	178	19.147	19.155	(1.003)	32327	0.28634	2026
	61 Anthracene	178	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
62	Carbazole	167	Compound Not Detected.					
63	Di-n-butylphthalate	149	20.555	20.555	(1.077)	19810	0.15556 J	1101
64	Fluoranthene	202	21.762	21.770	(1.140)	41132	0.29689	2101
65	Pyrene	202	22.218	22.218	(0.906)	44541	0.34732	2457
$ 66	Terphenyl-d14	244	22.559	22.559	(0.920)	10199	0.14795	1047
67	Butylbenzylphthalate	149	23.558	23.558	(0.960)	11242	0.24675	1746
68	Benzo(a)anthracene	228	Compound Not Detected.					
* 69	Chrysene-d12	240	24.533	24.533	(1.000)	357337	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	24.572	24.580	(1.002)	15999	0.15782 J	1117
72	bis(2-Ethylhexyl)phthalate	149	24.650	24.642	(0.961)	486393	7.57739	53610
* 134	Di-n-octylphthalate-d4	153	25.656	25.648	(1.000)	497176	4.00000	
73	Di-n-octylphthalate	149	Compound Not Detected.					
74	Benzo(b)fluoranthene	252	26.391	26.391	(0.973)	17659	0.14942 MFO	1057
75	Benzo(k)fluoranthene	252	26.391	26.430	(0.973)	17659	0.14145	1001
76	Benzo(a)pyrene	252	Compound Not Detected.					
* 77	Perylene-d12	264	27.135	27.127	(1.000)	383038	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
80	Benzo(g,h,i)perylene	276	30.393	30.393	(1.120)	13681	0.12908 J	913.3
90	N-Nitrosodimethylamine	74	Compound Not Detected.					
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	Compound Not Detected.					
105	1-methylnaphthalene	142	Compound Not Detected.					
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
187	Total Benzofluoranthenes	252	26.391	26.430	(0.973)	17011	0.14680 J	1039(M)
99	Perylene	252	Compound Not Detected.					
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wy32c30.d
Lab Smp Id: WY32C
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130802.b/ABN.m
Misc Info: 13-15395

Calibration Date: 02-AUG-2013
Calibration Time: 12:36
Client Smp ID: UP-CB-A6-2013062
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	123587	61794	247174	121059	-2.05
27 Naphthalene-d8	446161	223080	892322	439223	-1.56
42 Acenaphthene-d10	267600	133800	535200	256695	-4.08
59 Phenanthrene-d10	460929	230464	921858	411321	-10.76
69 Chrysene-d12	439520	219760	879040	357337	-18.70
134 Di-n-octylphthala	593075	296538	1186150	497176	-16.17
77 Perylene-d12	451599	225800	903198	383038	-15.18

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.22	8.72	9.72	9.22	0.00
27 Naphthalene-d8	11.89	11.39	12.39	11.89	0.00
42 Acenaphthene-d10	15.80	15.30	16.30	15.80	0.00
59 Phenanthrene-d10	19.10	18.60	19.60	19.09	-0.04
69 Chrysene-d12	24.53	24.03	25.03	24.53	0.00
134 Di-n-octylphthala	25.65	25.15	26.15	25.66	0.03
77 Perylene-d12	27.13	26.63	27.63	27.13	0.03

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

Analytical Resources, Inc.

RECOVERY REPORT

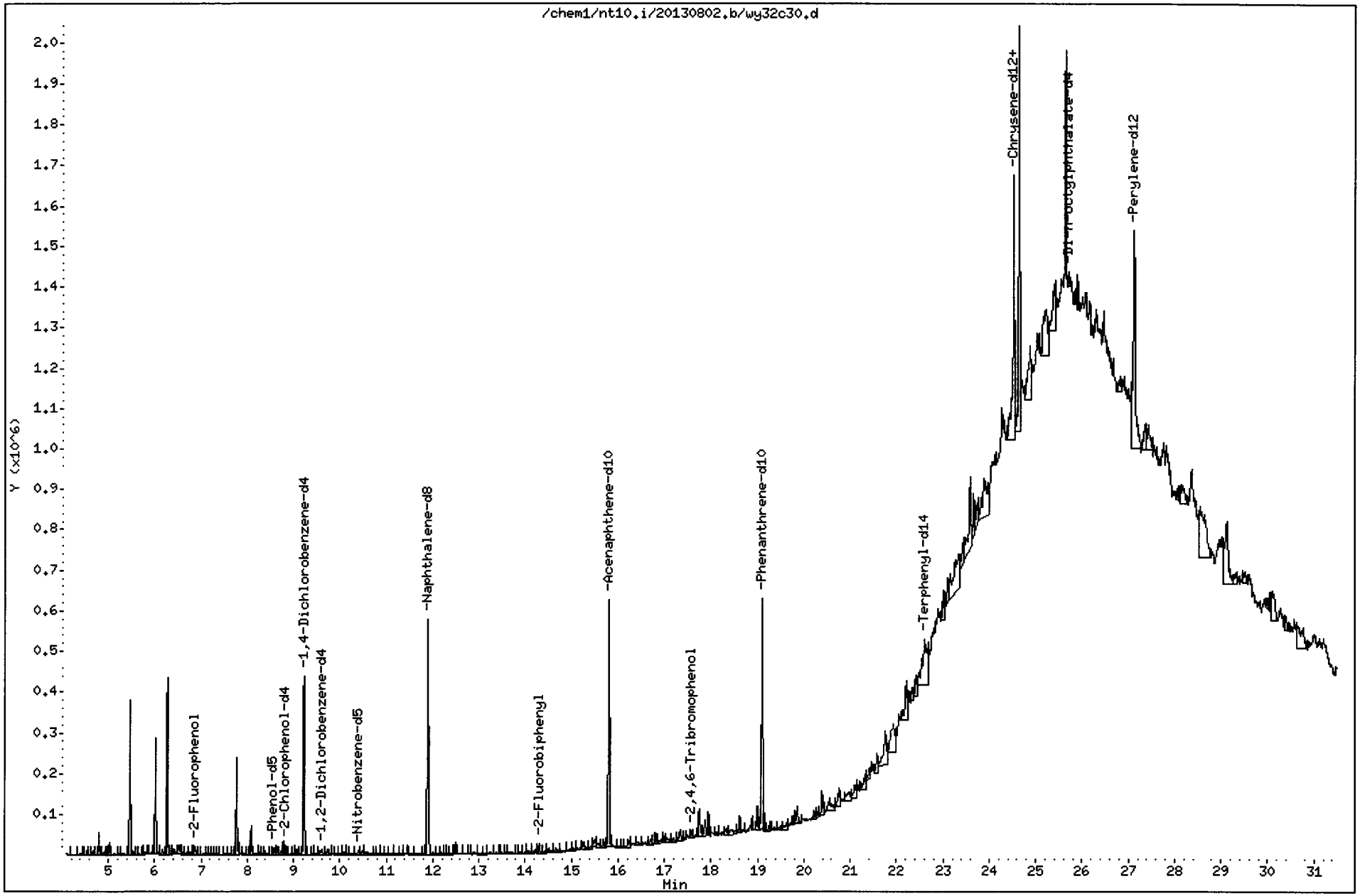
Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WY32C
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDALCS.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130802.b/ABN.m
Misc Info: 13-15395

Client SDG: WY32
Fraction: SV
Client Smp ID: UP-CB-A6-20130626-S
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	1769	1645	92.98	27-120
$ 2 Phenol-d5	1769	1512	85.46	29-120
$ 5 2-Chlorophenol-d4	1769	1592	89.98	31-120
$ 10 1,2-Dichlorobenzen	1179	748.9	63.51	32-120
$ 18 Nitrobenzene-d5	1179	818.8	69.43	30-120
$ 36 2-Fluorobiphenyl	1179	881.7	74.77	35-120
$ 55 2,4,6-Tribromophen	1769	1709	96.63	24-134
$ 66 Terphenyl-d14	1179	1047	88.77	37-120

Data File: /chem1/nt10.i/20130802.b/wy32c30.d
Date : 02-AUG-2013 14:14
Client ID: UP-CB-A6-20130626-S
Sample Info: WY32C,30
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130802.b/wy32c30.d

Date : 02-AUG-2013 14:14

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C,30

Volume Injected (uL): 1.0

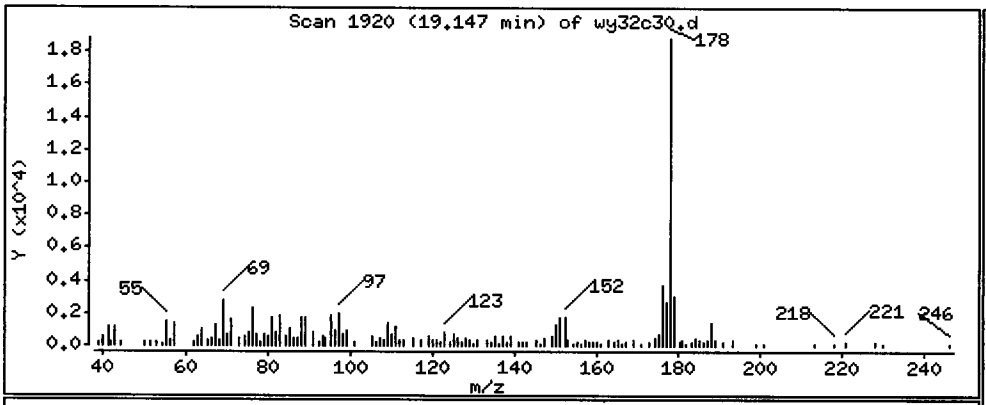
Operator: VTS/YZ

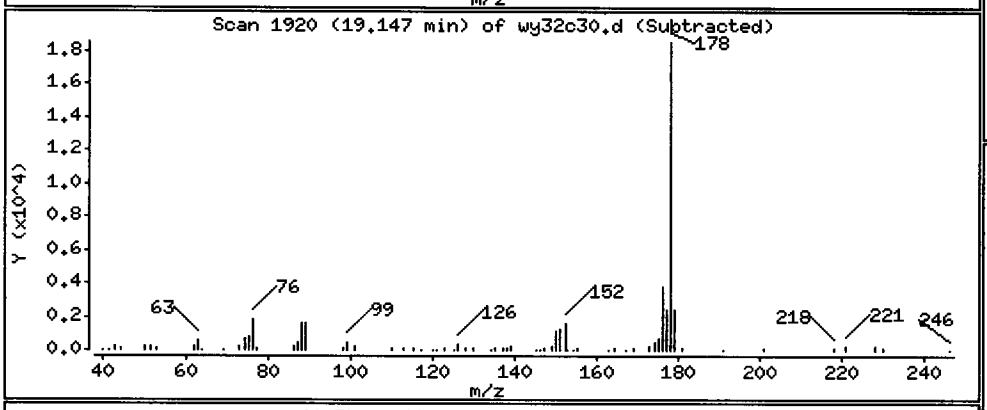
Column phase: ZB-5msi

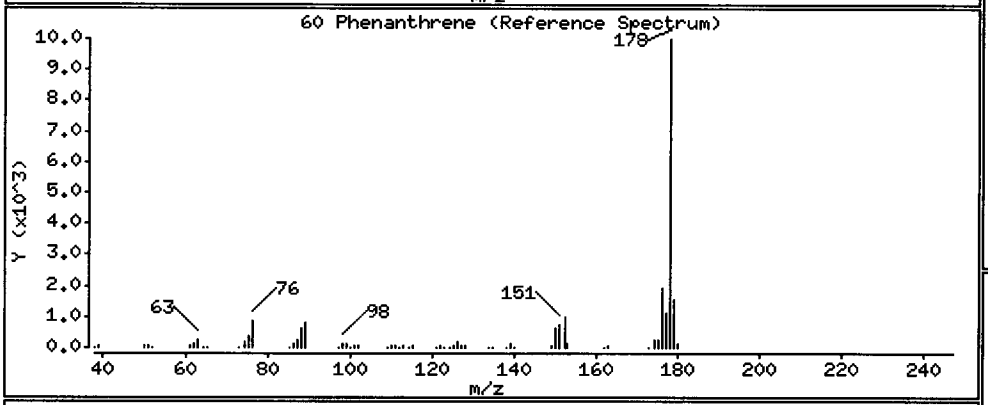
Column diameter: 0.25

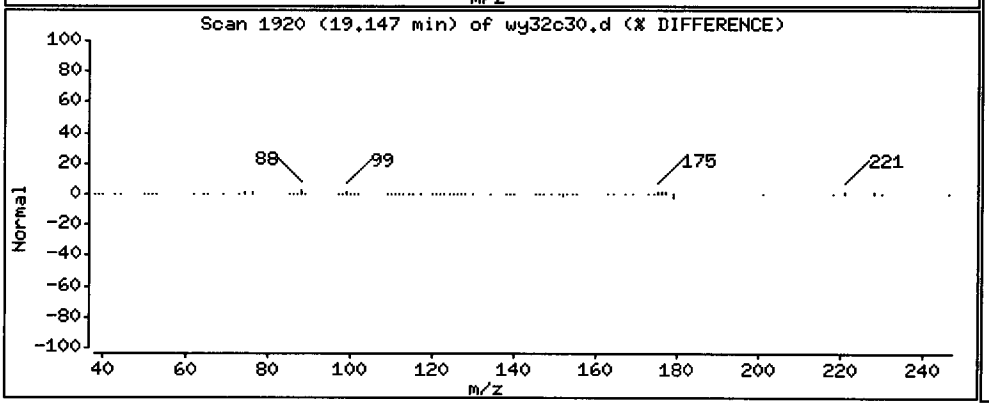
60 Phenanthrene

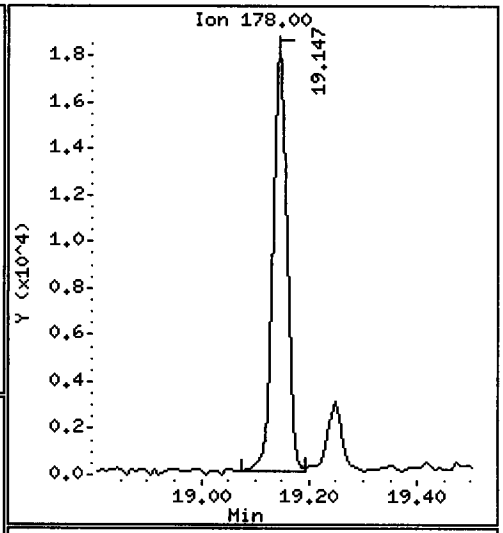
Concentration: 2026 ug/kg

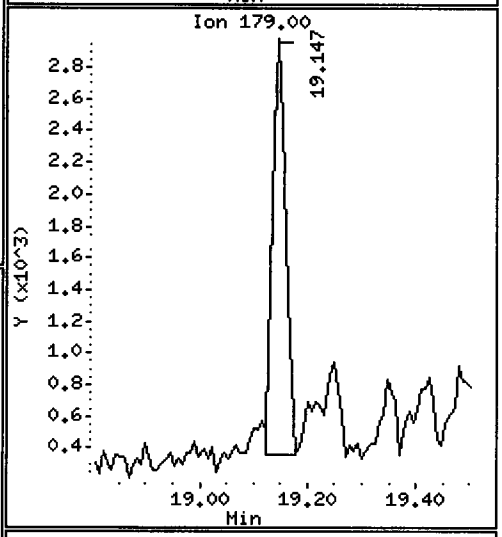


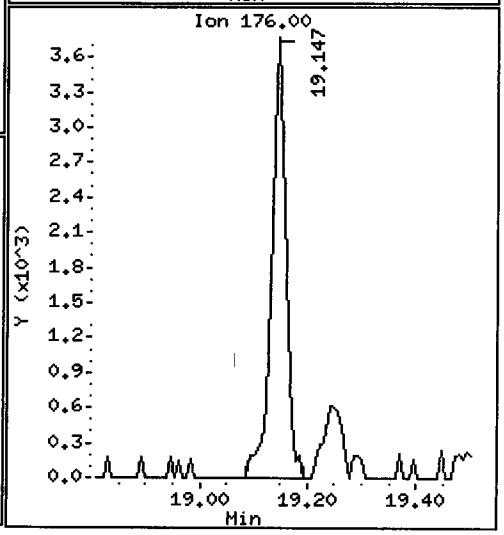












Data File: /chem1/nt10.i/20130802.b/wy32c30.d

Date : 02-AUG-2013 14:14

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C,30

Volume Injected (uL): 1.0

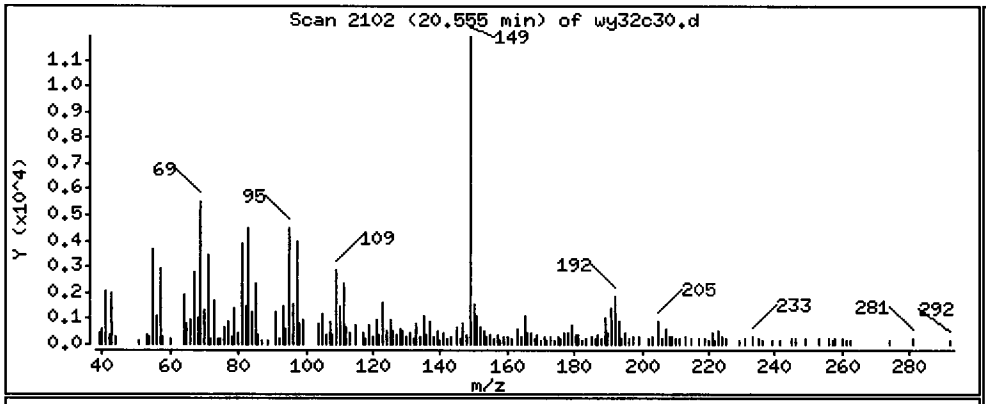
Operator: VTS/YZ

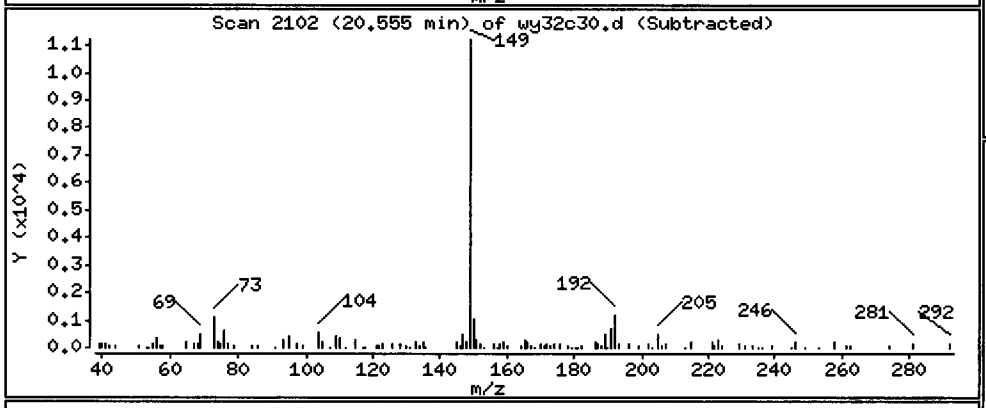
Column phase: ZB-5msi

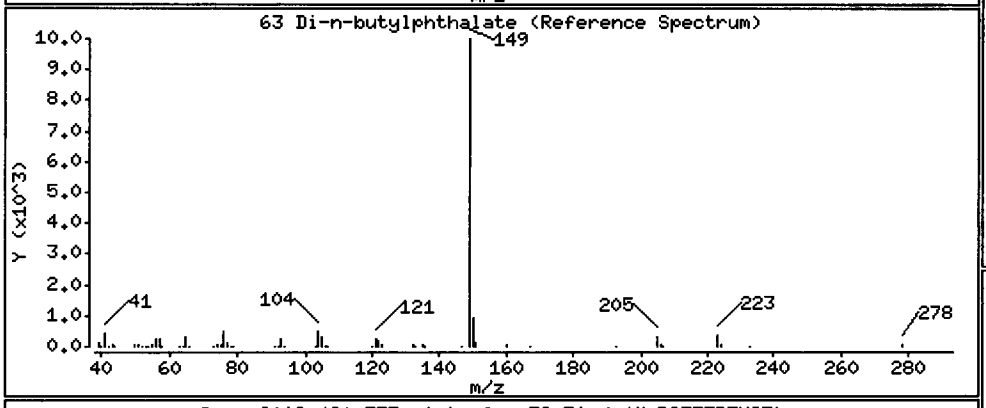
Column diameter: 0.25

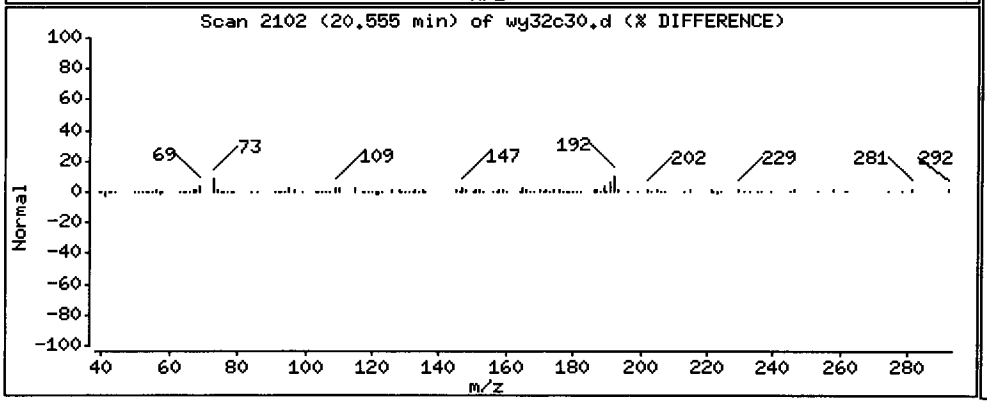
63 Di-n-butylphthalate

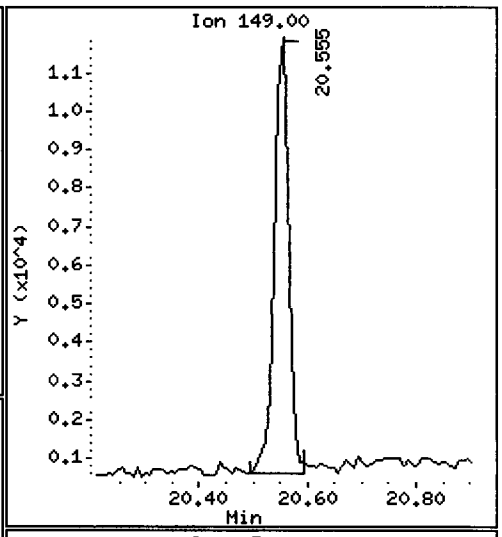
Concentration: 1101 ug/kg

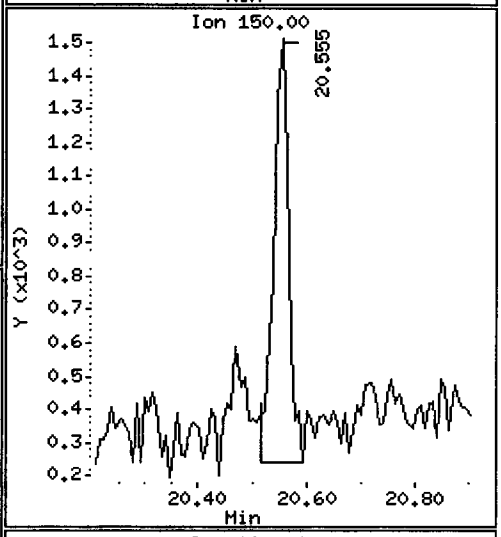


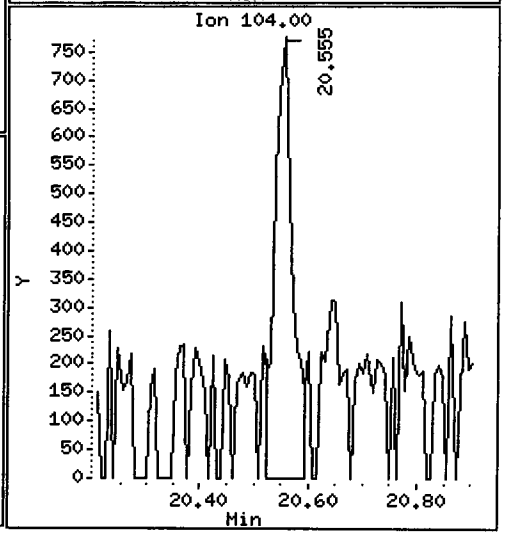












Data File: /chem1/nt10.i/20130802.b/wy32c30.d

Date : 02-AUG-2013 14:14

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C,30

Volume Injected (uL): 1.0

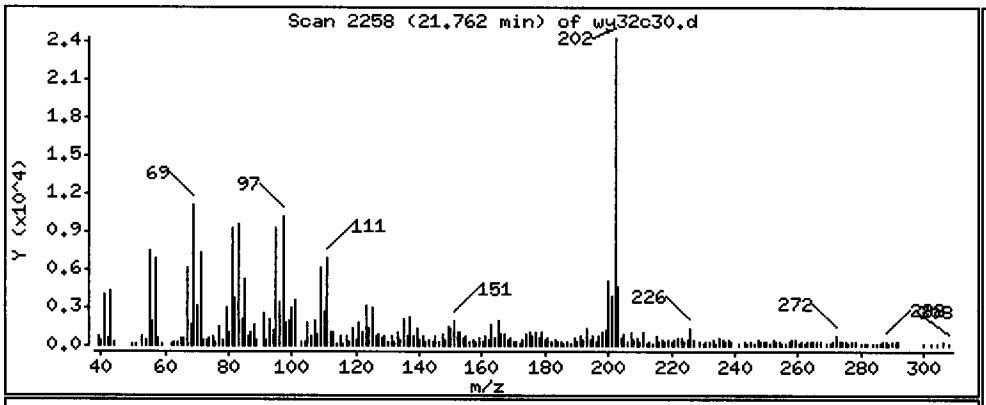
Operator: VTS/YZ

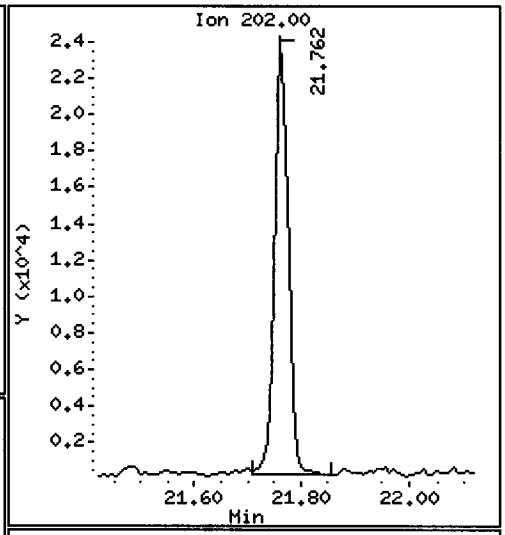
Column phase: ZB-5msi

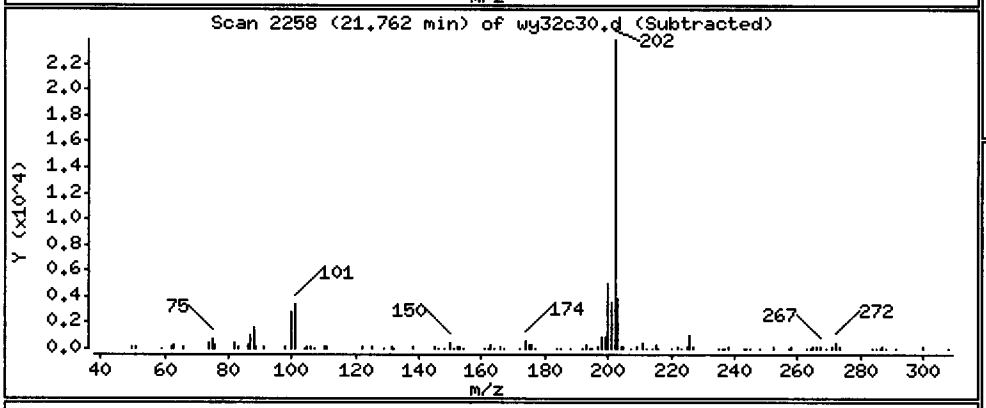
Column diameter: 0.25

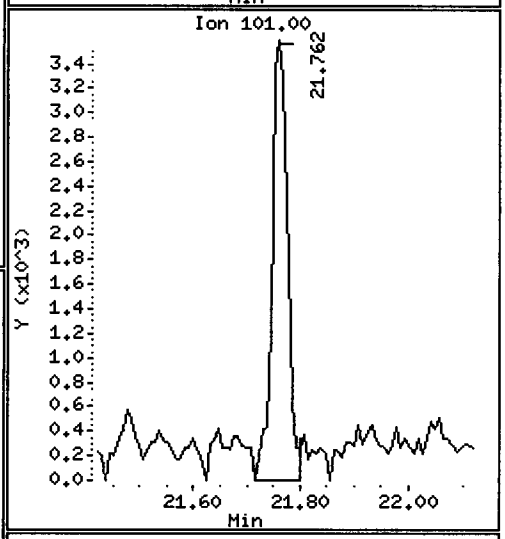
64 Fluoranthene

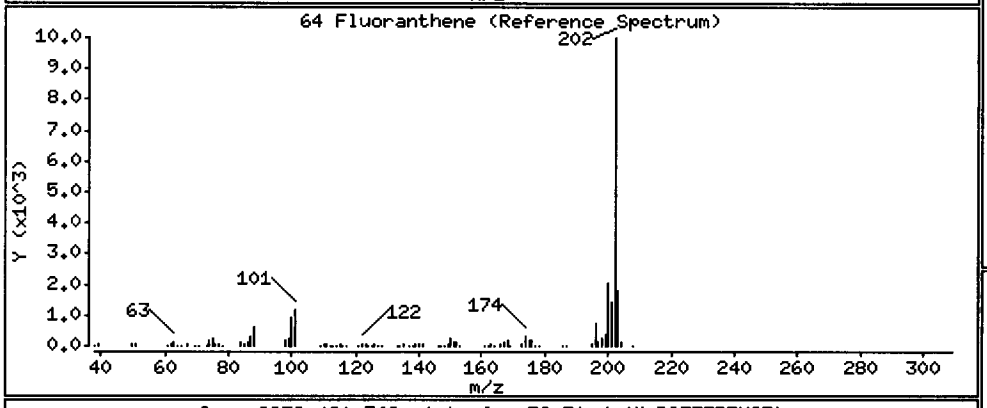
Concentration: 2101 ug/kg

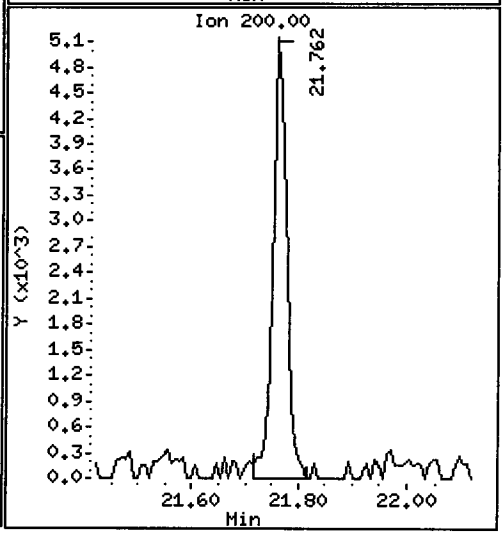


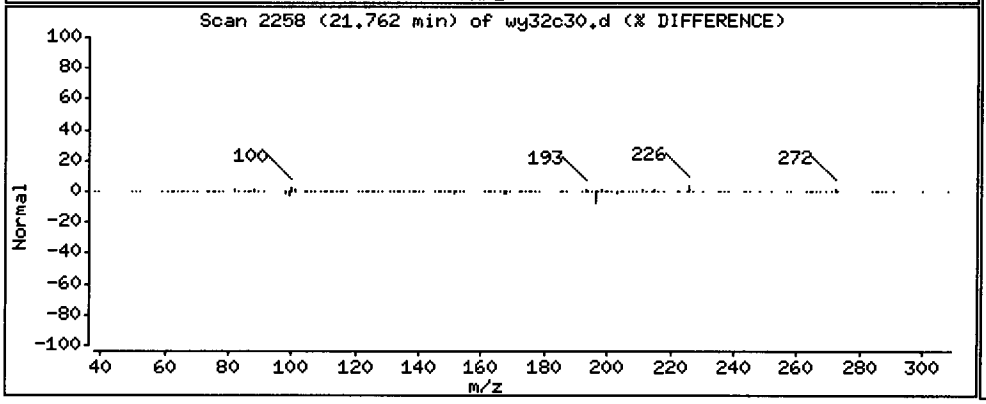












Data File: /chem1/nt10.i/20130802.b/wy32c30.d

Date : 02-AUG-2013 14:14

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C,30

Volume Injected (uL): 1.0

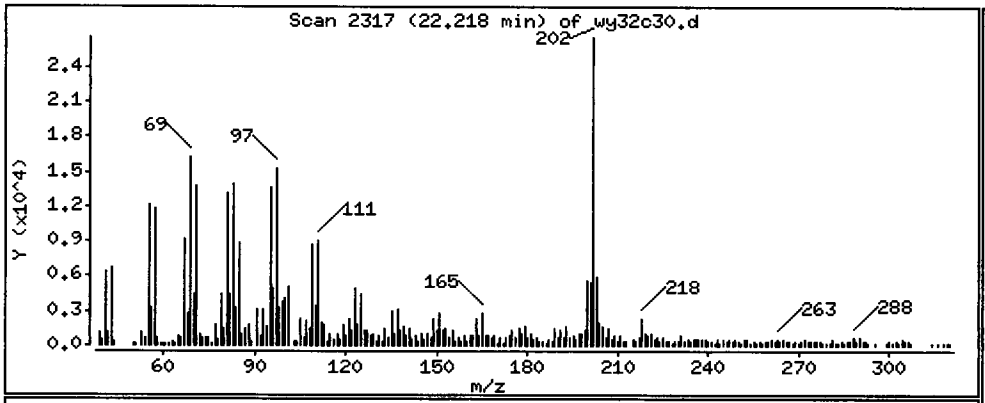
Operator: VTS/YZ

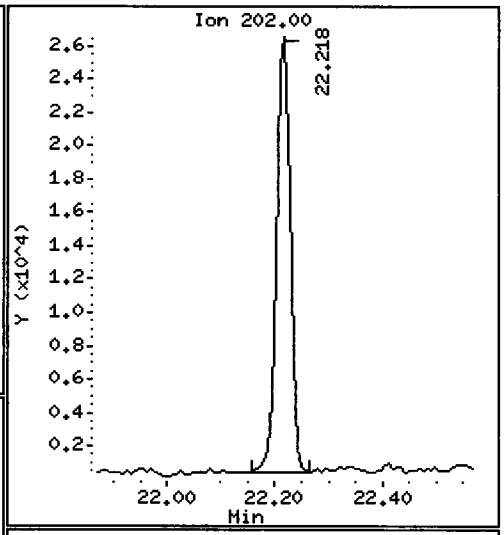
Column phase: ZB-5msi

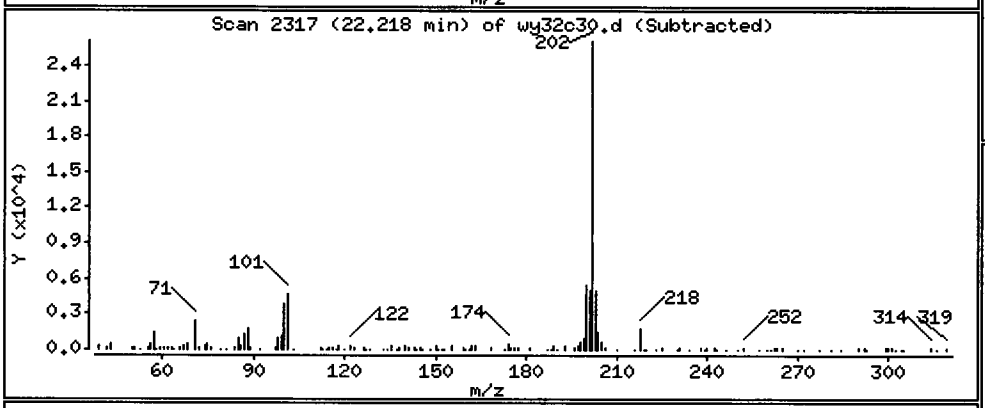
Column diameter: 0.25

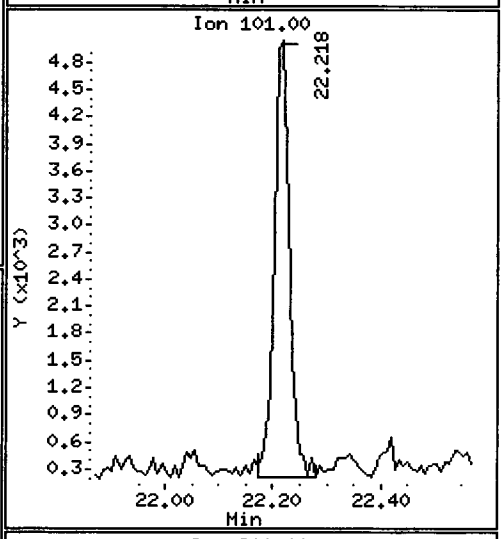
65 Pyrene

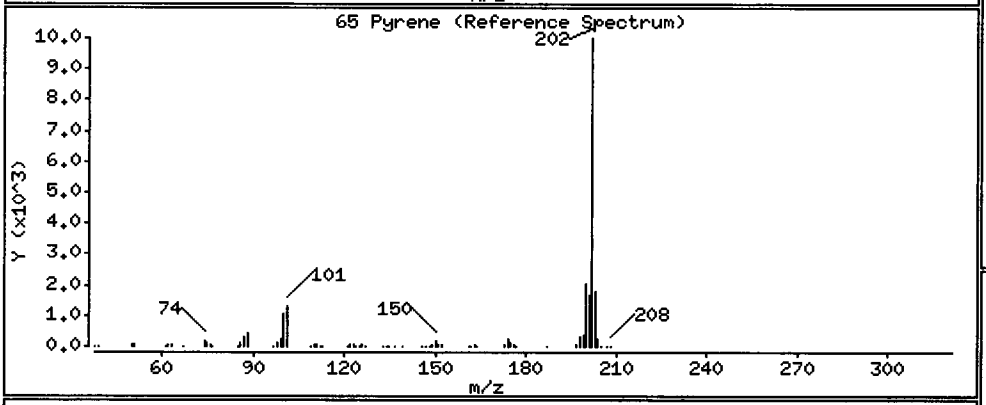
Concentration: 2457 ug/kg

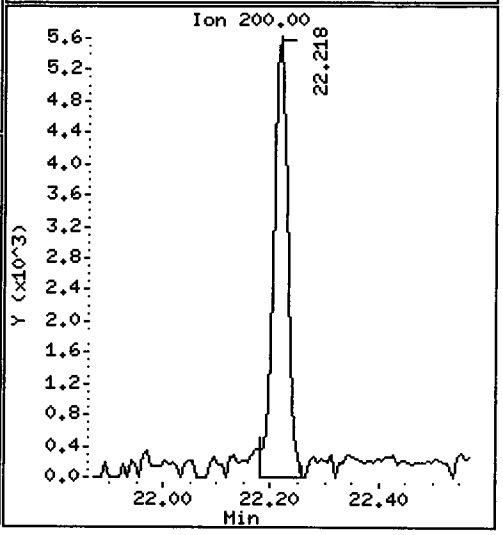


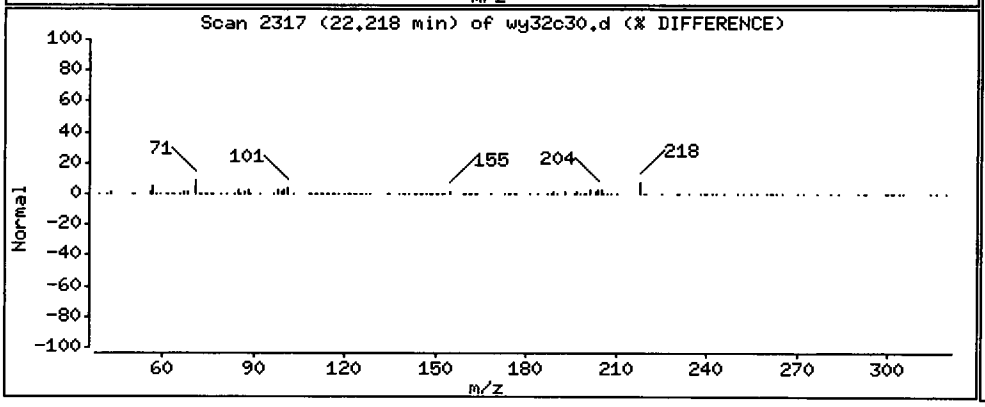












Data File: /chem1/nt10.i/20130802.b/wy32c30.d

Date : 02-AUG-2013 14:14

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C,30

Volume Injected (uL): 1.0

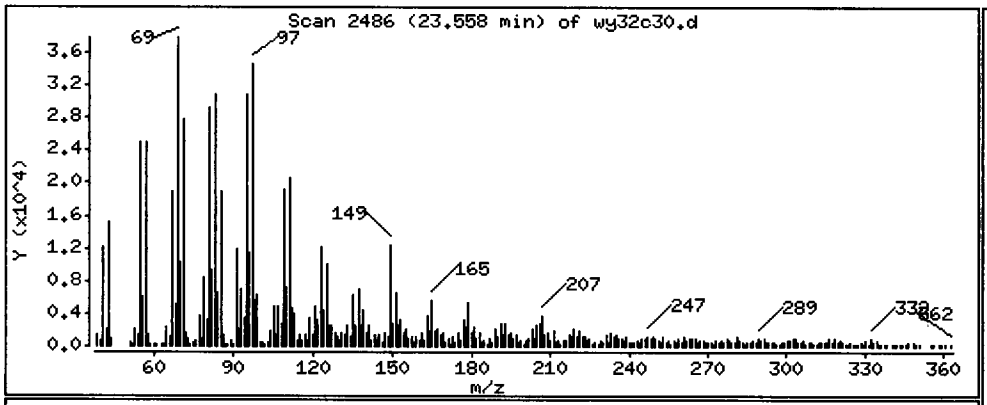
Operator: VTS/YZ

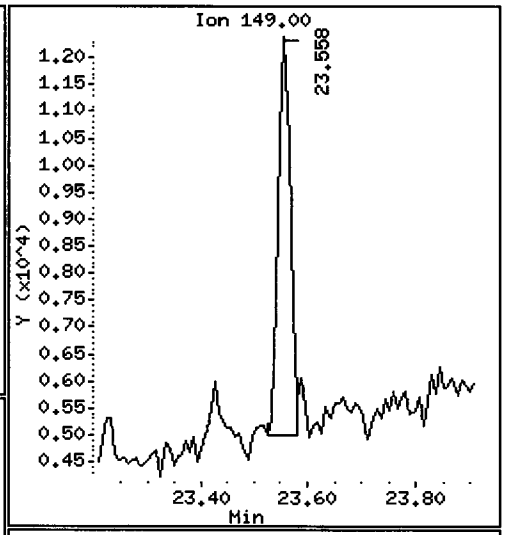
Column phase: ZB-5ms

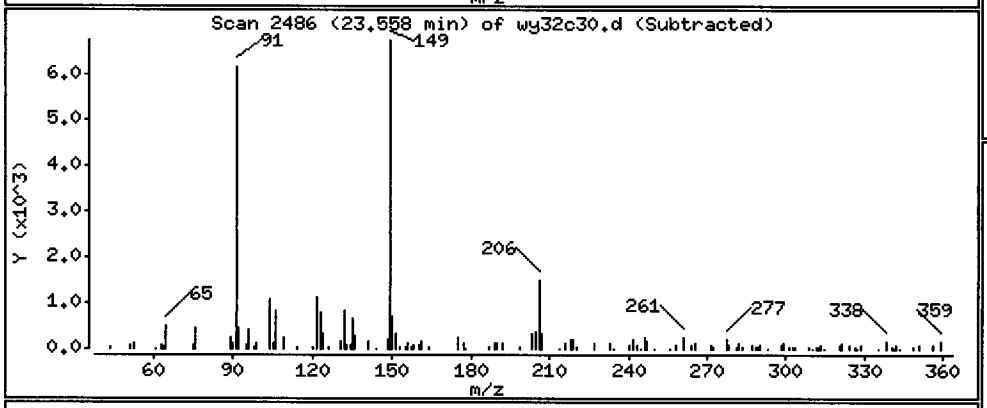
Column diameter: 0.25

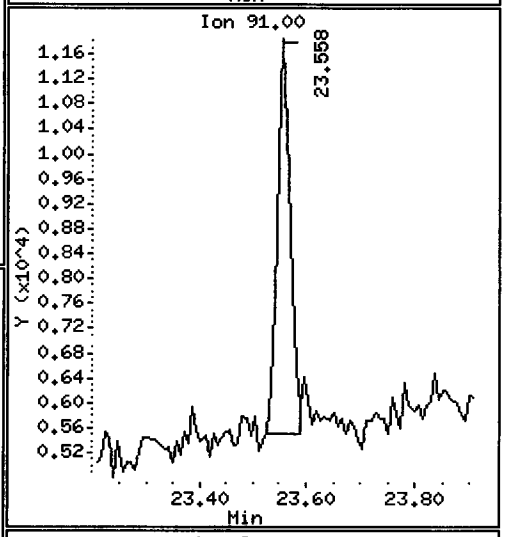
67 Butylbenzylphthalate

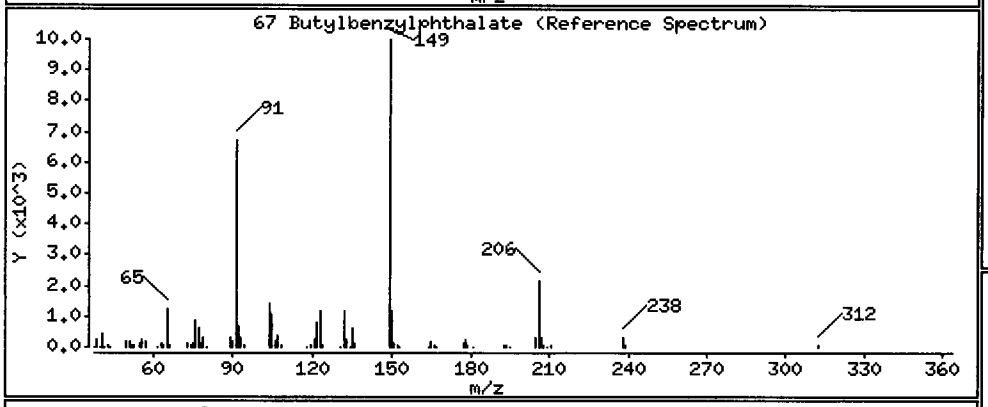
Concentration: 1746 ug/kg

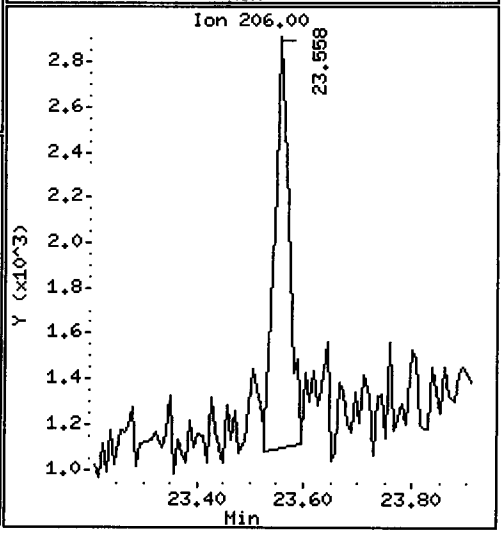


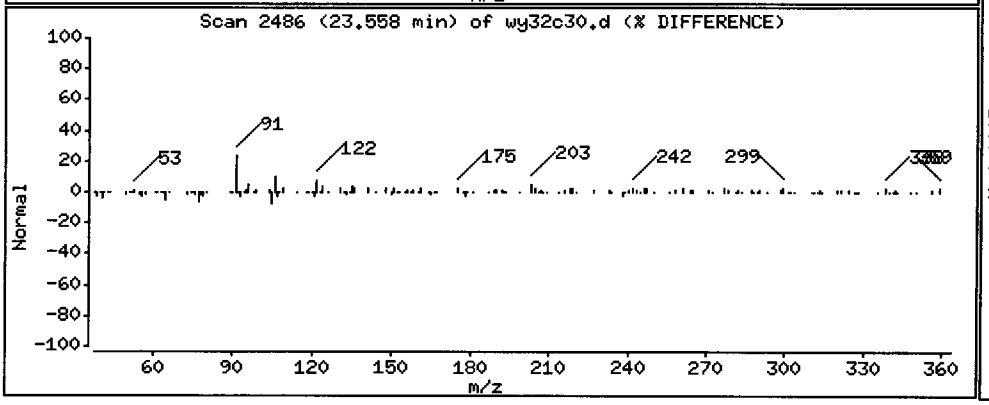












Data File: /chem1/nt10.i/20130802.b/wy32c30.d

Date : 02-AUG-2013 14:14

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C,30

Volume Injected (uL): 1.0

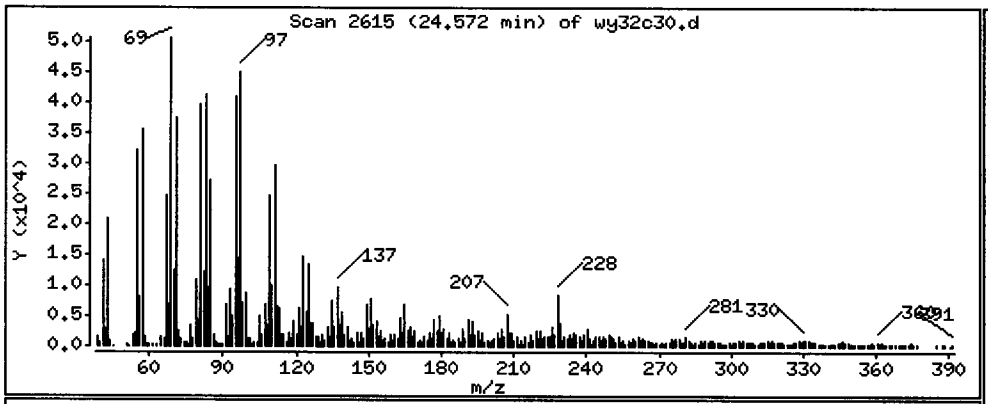
Operator: VTS/YZ

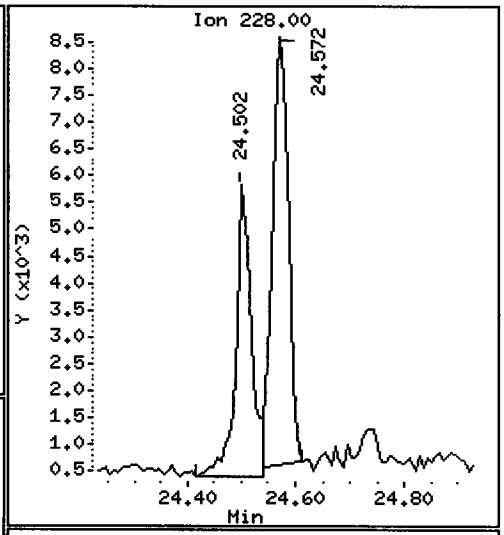
Column phase: ZB-5msi

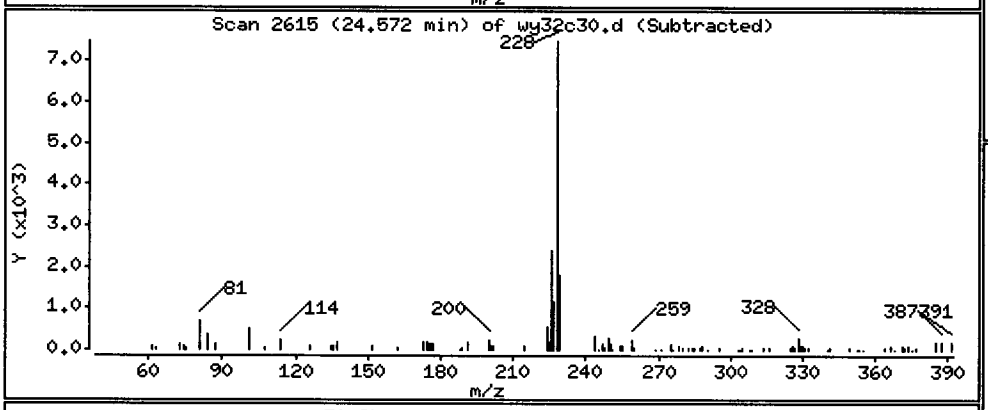
Column diameter: 0.25

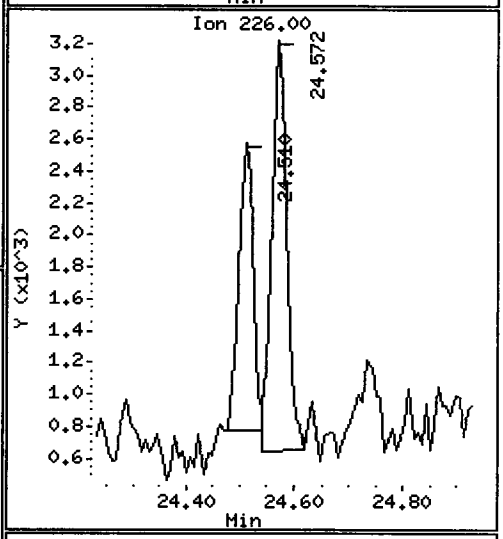
71 Chrysene

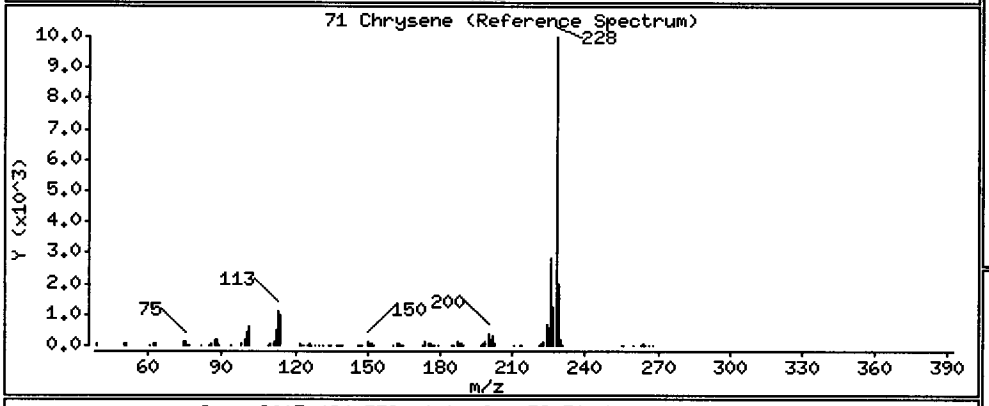
Concentration: 1117 ug/kg

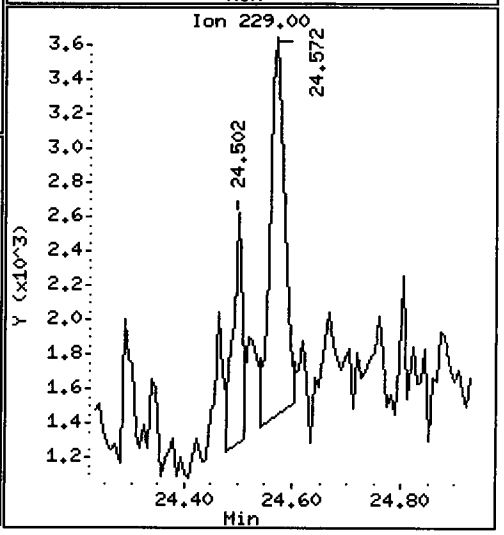


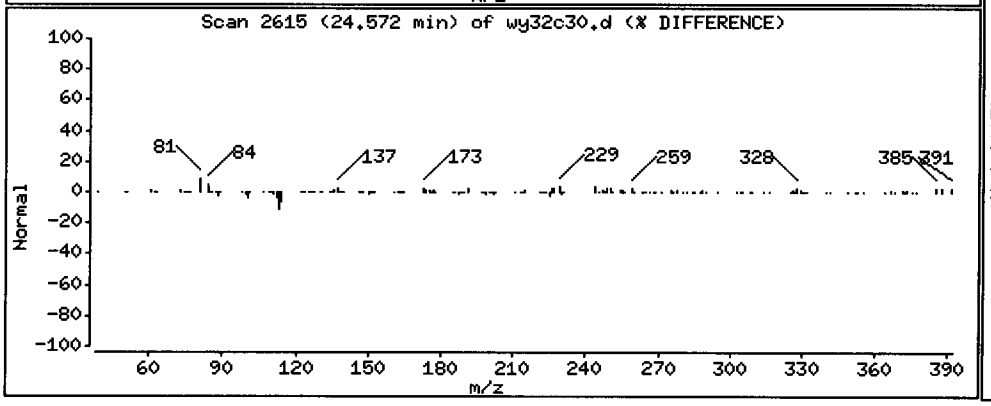












Data File: /chem1/nt10.i/20130802.b/wy32c30.d

Date : 02-AUG-2013 14:14

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C,30

Volume Injected (uL): 1.0

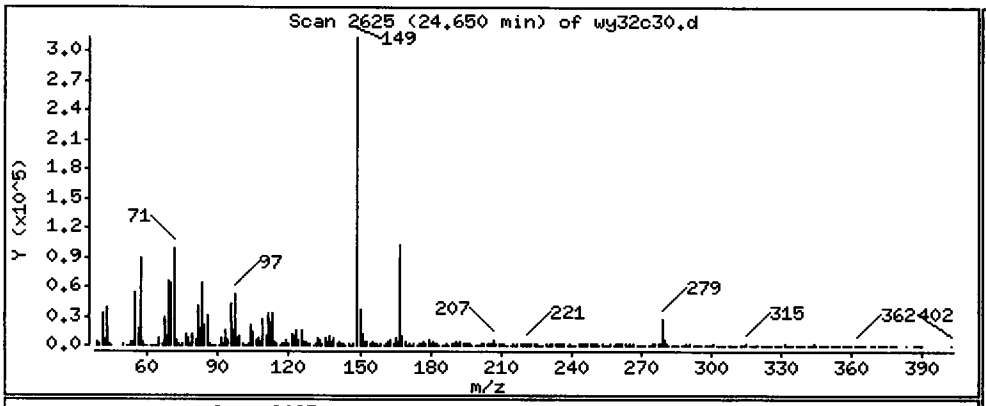
Operator: VTS/YZ

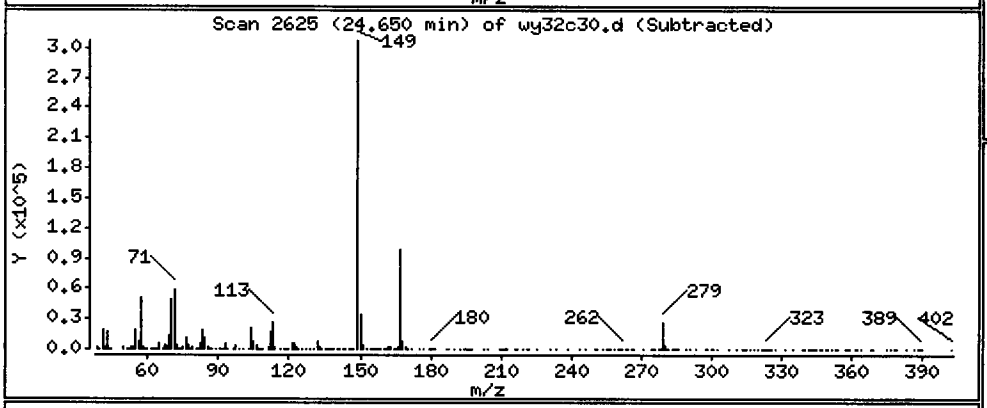
Column phase: ZB-5msi

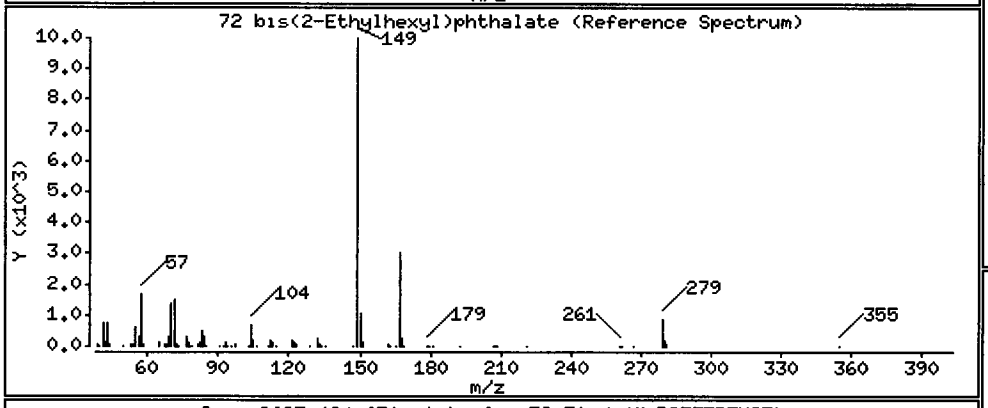
Column diameter: 0.25

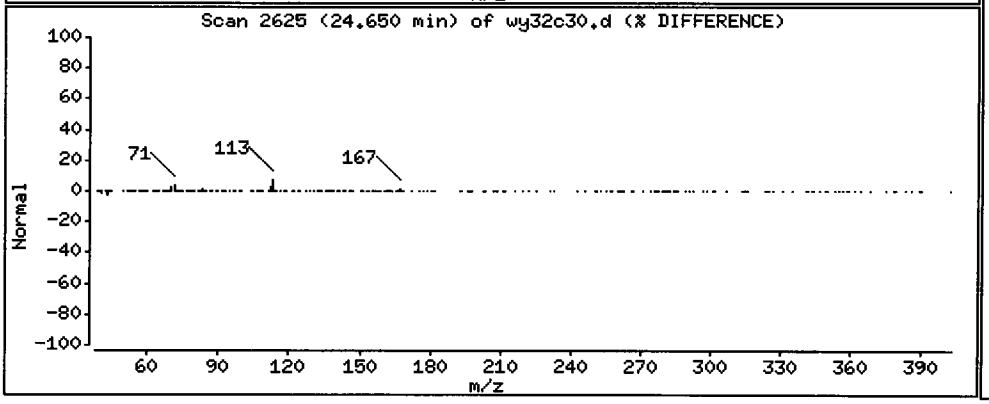
72 bis(2-Ethylhexyl)phthalate

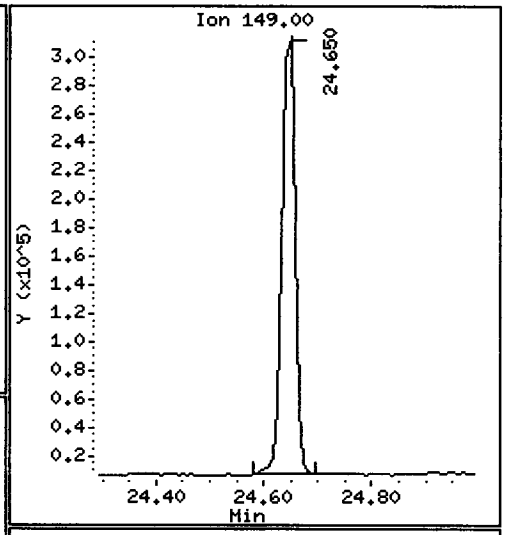
Concentration: 53610 ug/kg

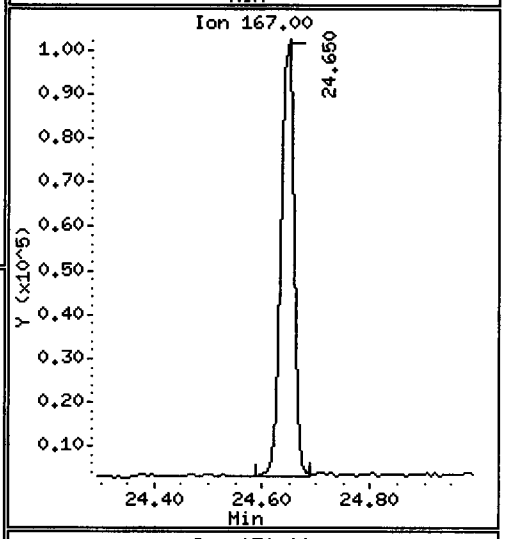


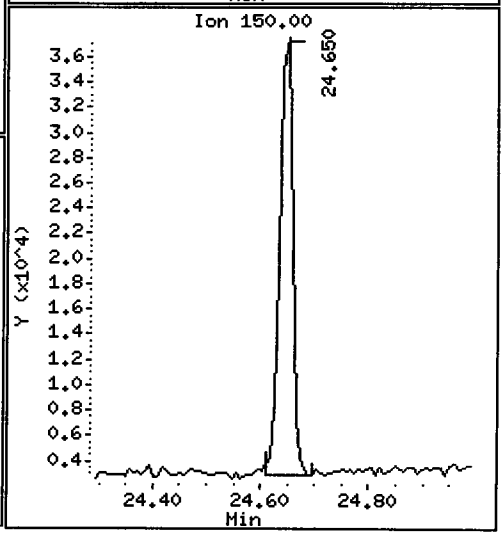












Data File: /chem1/nt10.i/20130802.b/wy32c30.d

Date : 02-AUG-2013 14:14

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C,30

Volume Injected (uL): 1.0

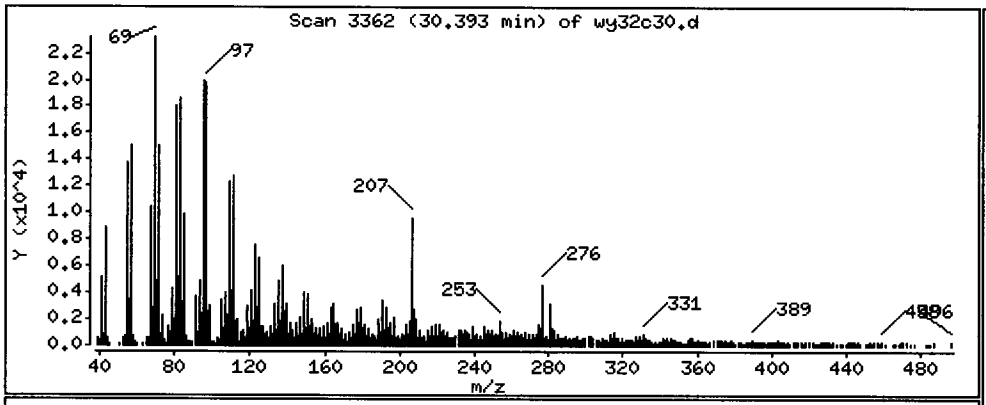
Operator: VTS/YZ

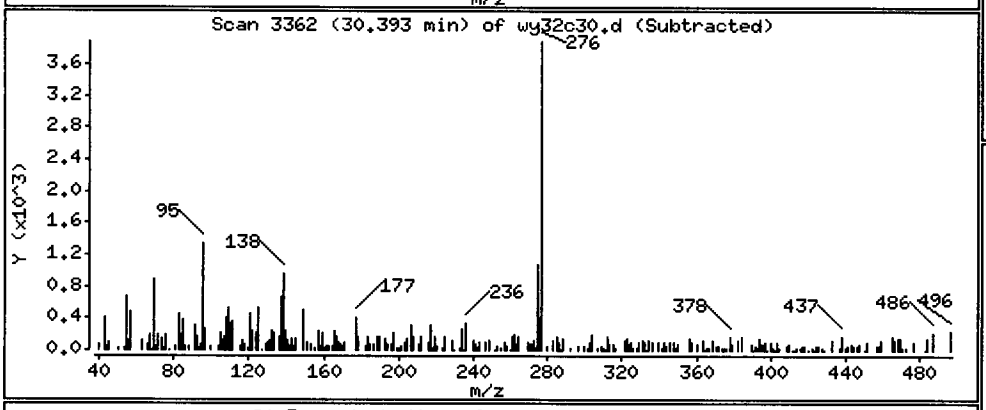
Column phase: ZB-5msi

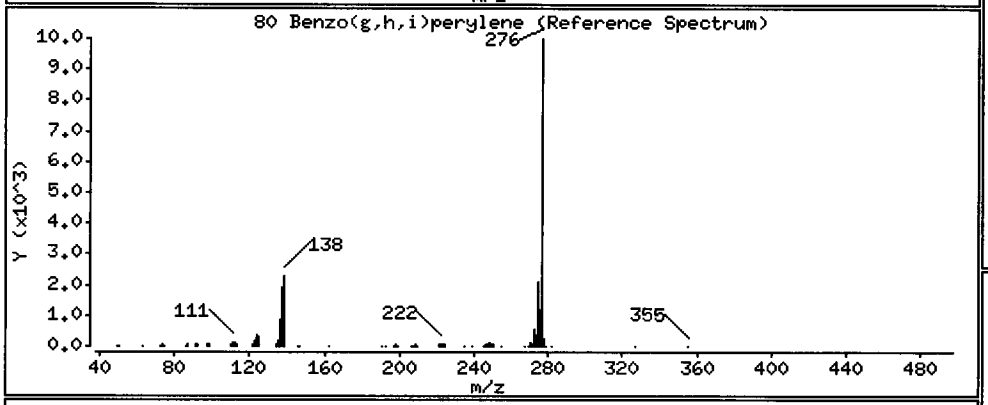
Column diameter: 0.25

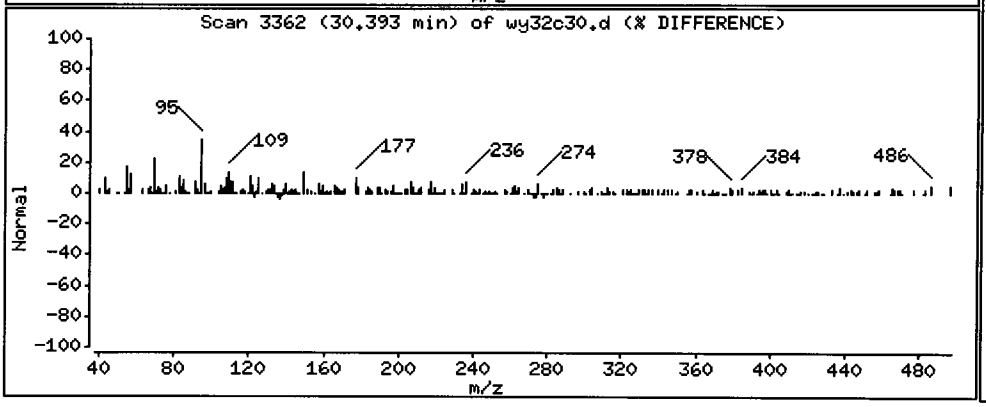
80 Benzo(g,h,i)perylene

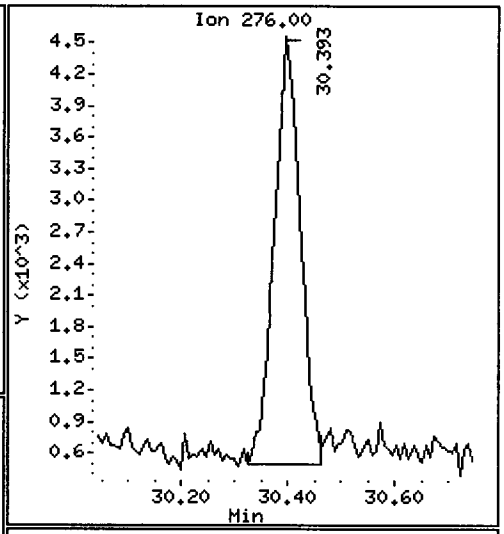
Concentration: 913.3 ug/kg

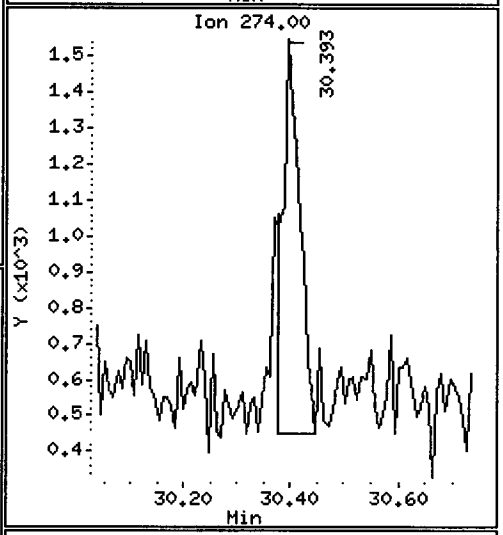


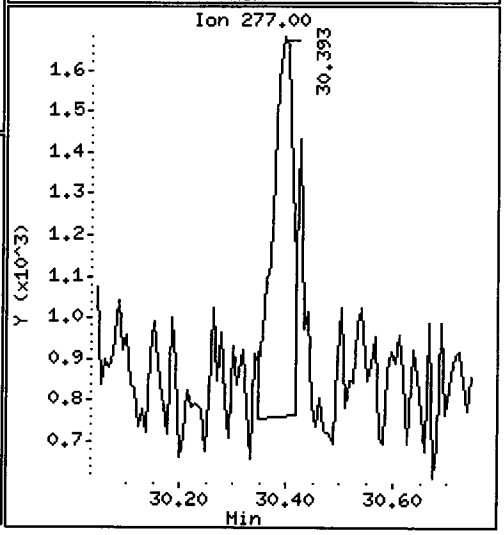












Data File: /chem1/nt10.i/20130802.b/wy32c30.d

Date : 02-AUG-2013 14:14

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C,30

Volume Injected (uL): 1.0

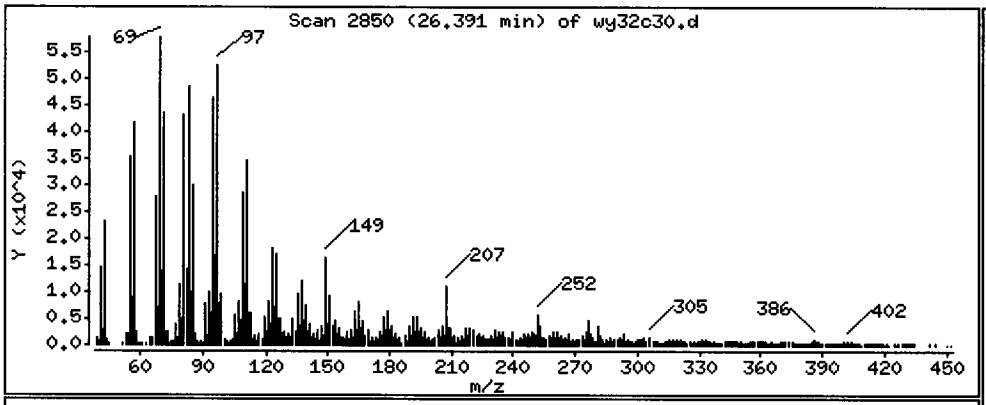
Operator: VTS/YZ

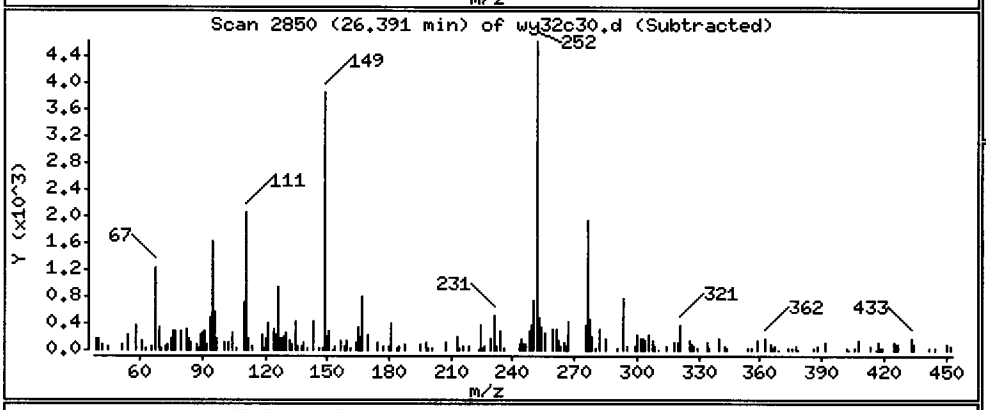
Column phase: ZB-5msi

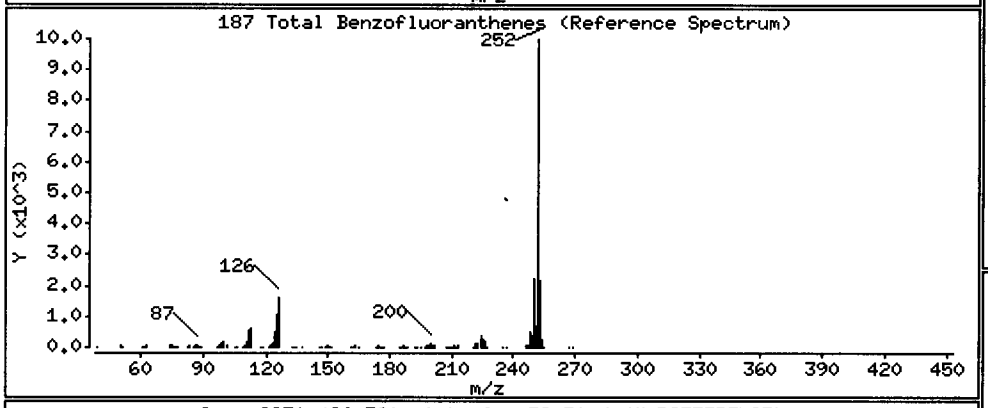
Column diameter: 0.25

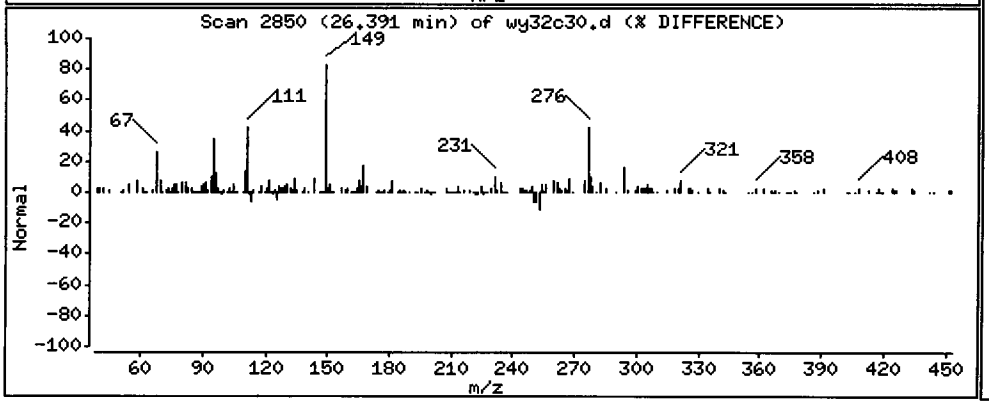
187 Total Benzofluoranthenes

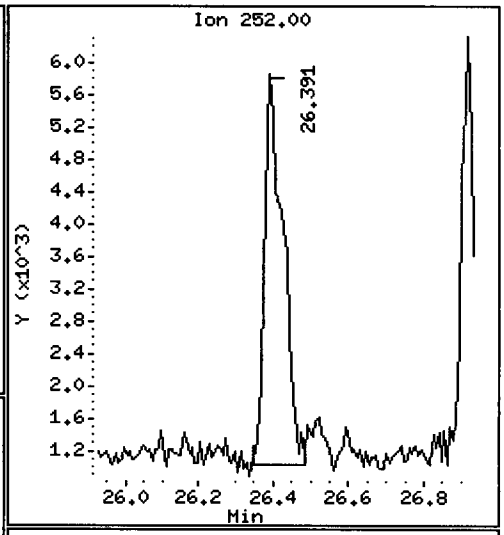
Concentration: 1039 ug/kg

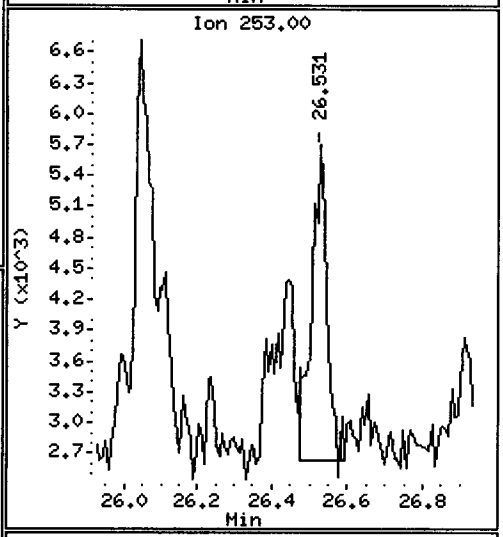


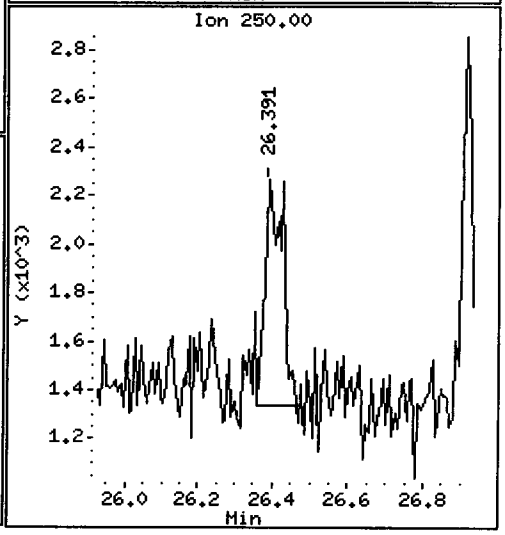






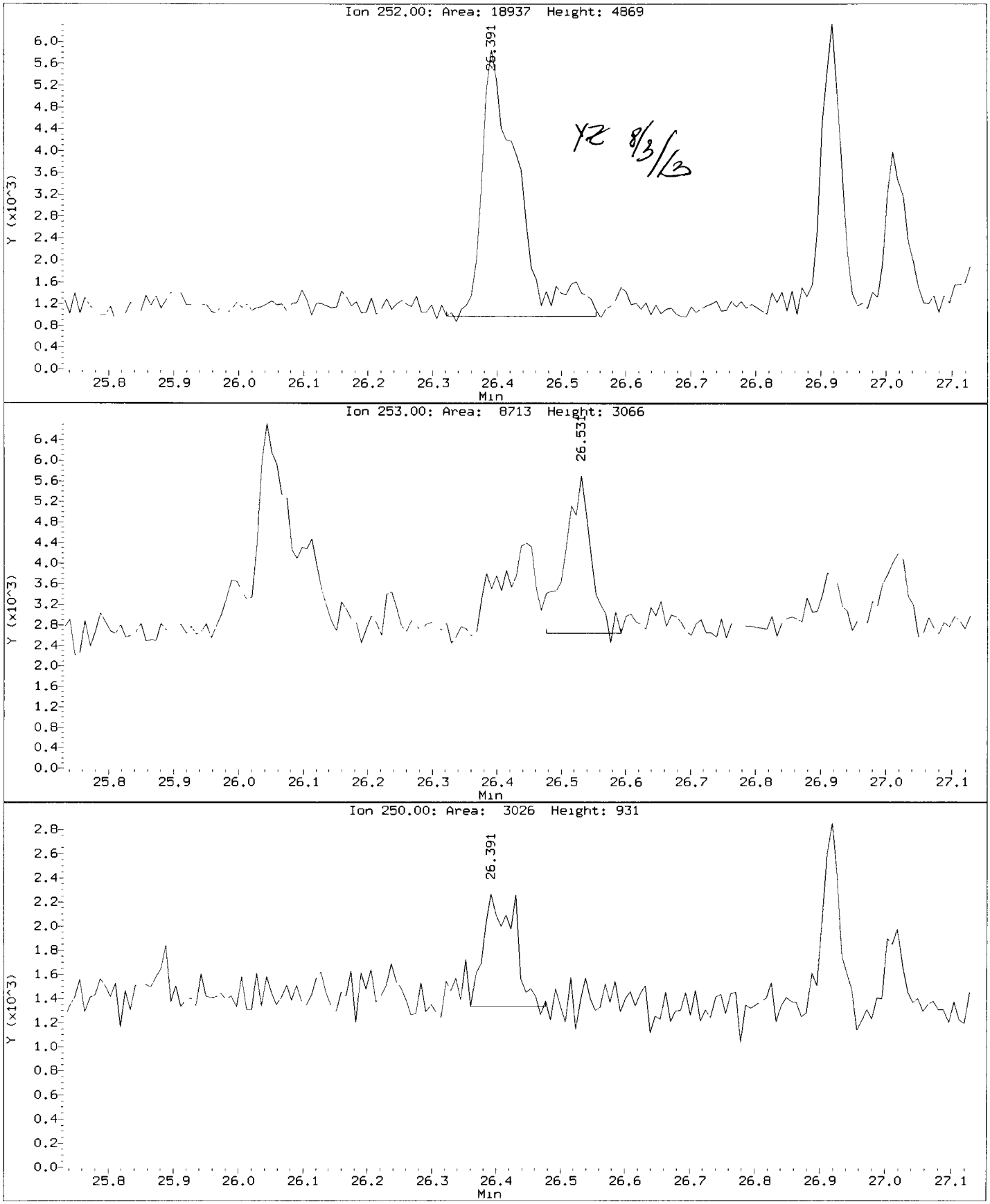






Data File: /chem1/nt10.1/20130802.b/wy32b30.d
Injection Date: 02-AUG-2013 14:14
Instrument: nt10.1
Client Sample ID:

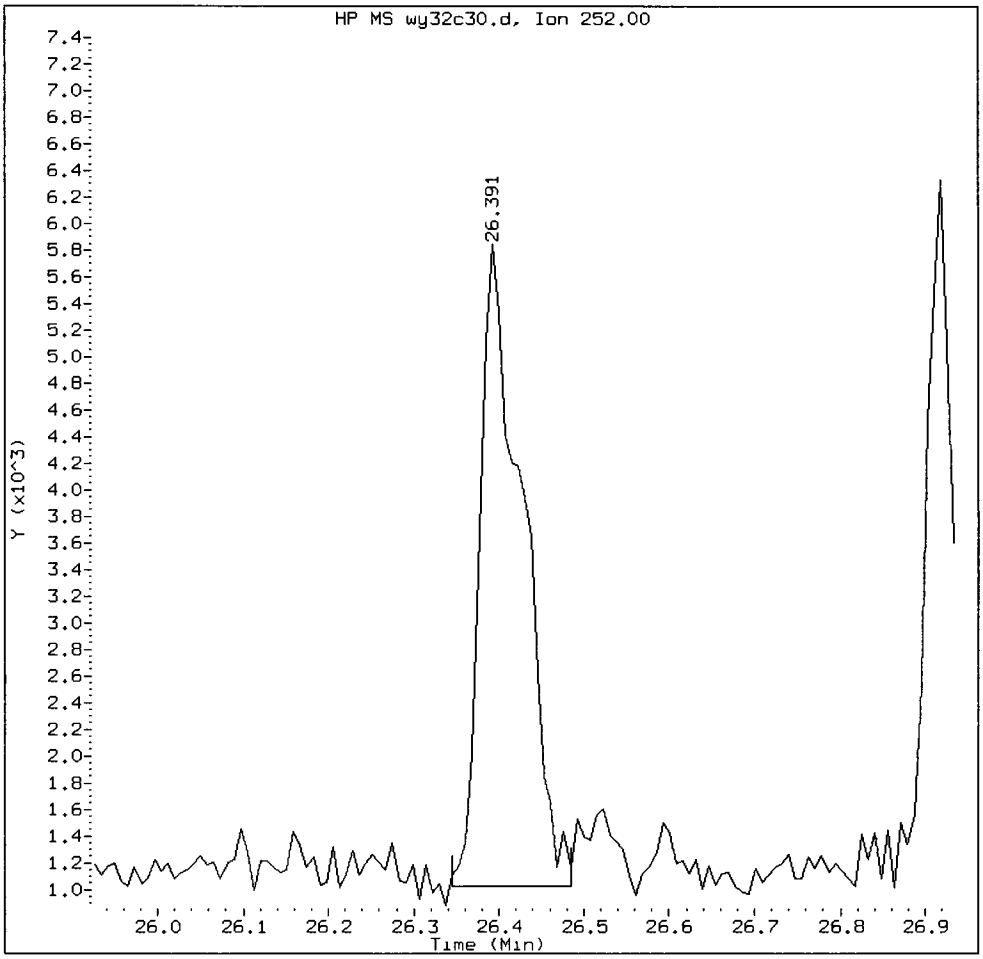
Compound: Total Benzofluoranthenes
CAS Number:



YZ 8/3/13

WY32C, /chem1/nt10.i/20130802.b/wy32c30.d

Total Benzofluoranthenes Amount: 0.15 Area: 17011



MANUAL INTEGRATION for Total Benzofluoranthenes

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 8/3/13

CO-ELUTION SUMMARY FOR FILE - wy32c30.d

Lab ID: WY32C, Method: ABN.m, Instrument: nt10.i, Date: 02-AUG-2013

RT	CO-ELUTION COMPOUNDS
26.391	Benzo(k)fluoranthene and Benzo(b)fluoranthene

SIM Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WY32, WY33

Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8270D) BAN/SIM SVOA PSDDA–Soil/Sediment Microwave (3546) (SOP # 3304S)

Preparation Test BAN/SIM SVOA PSDDA # 9 (BANSBANSDMP)

PSDDA (5-20ppb)

ARI Job No(s) WY32 Page 1 of 1 Batch set up by: JH

Bottle #	Extraction Requirements	Weight Extracted (eq. to 10g dry wt)	(REQ) GPC (1:1) 1 or 2	Final Effective Volume	Volume to Lab	Comments	Verify Client ID CT 7/25/13 Analyst/Date
	WY32 MBS	10.00g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave 1 2 3 CT 7/25/13 Analyst/Date
	SBS	10.00g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	
	~~SBS Dup~~	~~10.00g~~	(1:1) Y/N	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	YL/SR KD 80-85°C 1 2 3 4 5 6 7/29/13 Analyst/Date
	QLS WY32	10.00g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	
	QLS (SIM)	10.00g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	TurboVap 1 2 3 CSZ 7/30/13 Analyst/Date
5	A	7.04	(1:1) Y/N	1mL	1mL	see Analyst Notes	
5	AMS	7.04	(1:1) Y/N	1mL	1mL	↓	GPC Prep Filter (1:1)
5	AMSD	7.01	(1:1) Y/N	1mL	1mL	↓	CSZ 7/30/13 Analyst/Date
5	B	12.05	(1:1) Y/N	1mL	1mL		
5	C	6.04	(1:1) Y/N	1mL	1mL	see Analyst Notes	Post GPC KD 80-85°C 1 2 3 4 5 6 SR RS 7/31/13 Analyst/Date
			(1:1) Y/N	1mL	1mL		
			(1:1) Y/N	1mL	1mL		
			(1:1) Y/N	1mL	1mL		TurboVap 1 2 3 CSZ 7/31/13 Analyst/Date
Analyst/Date CT 7/25/13			CSZ 7/30/13	CSZ 7/31/13	CSZ 7/31/13	Reviewed by/Date CSZ 7/31/13	

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (B~~###~~661)	100/150µg/mL	50µL	6/28/14	CT	AC
Full List Spike (Freezer)	7 (B~~###~~695)	100µg/mL	50µL	12/18/13	CT	AC
Base Spike	56(B~~###~~696)	200µg/mL	50µL	12/18/13	CT	AC
Acid Spike	38(B~~###~~697)	100/200µg/mL	50µL	12/18/13	CT	AC
QLS Spike (14 in Freezer)	14(B~~###~~538)	10/100µg/mL	20µL	1/31/14	CT	AC
SIM QLS Spike (Freezer)	25(B~~###~~547)	1µg/mL	50µL	1/31/14	CT	AC
Extraction Time: 11:42				Balance ID: B139298002		

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 DCM/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-rehomogenize while hot then let cool 15 min in cold water. Re-homogenize while cool. 7. Decant 1:1 DCM/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using 80:20 DCM/ACE (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. KD (small ~~or large~~ drying column with pre-deactivated glasswool-Blanks=5g sulfate)) to 5mL at 80- 85°C. 12. GPC Req. 13. (After GPC): KD at 80-85°. 14. TurboVap. 15. Vial in DCM.

A. Need Total Solids Y (N) B. Archive/Freeze Y (N)

WY32 : 2013

SIM Semivolatile Raw Data
Initial Calibration

ARI Job ID: WY32, WY33

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS,SVOA Initial Calibration Notes

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) + SIM ABN **805S**(op-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date(s): 07/30/13 Internal Standard ID B000829 Expiration 6/26/14

DFTPP Tune Meets Criteria?	YES / NO	Minimum Response Factors Met/	YES / NO
DDT Breakdown <20%?	YES / NO	ICV Exceeding ±20%? see full scan	YES / NO
Peak Tailing Factor ≤2?	YES / NO	ICV Exceeding ±30%?	YES / NO
ICal Meets %RSD & r^2 Criteria?	YES / NO	Linear Fits Used?	YES / NO
Q flag applied?	YES / NO	Quadratic Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Calibration Points Dropped?	YES / NO
Spectral Library Updated?	YES / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Supelco	B000112	10/15/13			
	2064-2	01/25/14			
	B000931	8/20/14			
	B000943	7/3/14			
	B000676	12/14/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: YZ **Date:** 8/2/13

Reviewer: [illegible] **Date:** 8/2/13

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 07/31/13 Analysis: ABN / SIM ABN Analyst: YZ

GC Program: ABN21 Column No: 268782 Column Type: 5B5 ms

Instrument Tune (.U or .CT.): B02128.U EM Voltage: 1929

Calibration File: DF0731 Curve Date: 07/30/13 Injection Vol.: 1ul

IS/SS	Ical/Ccal	LCS/ICV
B928	B921 B676 B931	
	B943 2004-2	

Document All Maintenance Tasks In Element

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130731.b

	Time	Filename	LabID	ClientId	DF											
1	1232	df0731.d	DFTPP	DFTPP	1	NO ISTDS FOUND										
2	1247	cc0731.d	CC0731		1	9.31	132182	11.98	474194	15.89	287489	19.17	467095	24.57	380549	27.17	400051	25.67	555325
3	1506	wy56mb.d	WY56MBS1	WY56MB61	1	9.30	108349	11.97	409518	15.87	241065	19.16	397696	24.56	336547	27.15	324515	25.66	447860
4	1544	wy56ab.d	WY56LCSS1	WY56LCSS1	1	9.30	96510	11.97	351178	15.87	215756	19.16	343770	24.56	315759	27.14	290446	25.66	428670
5	1622	wy56a.d	WY56A	WCE-SS-3	1	9.30	104613	11.97	395343	15.87	226574	19.16	338473	24.57	323314	27.17	359201	25.67	462759
6	1700	wy56b.d	WY56B	WCE-SC-6-0-0	1	9.32	103383	11.99	398379	15.90	218828	19.19	357803	24.60	322435	27.23	353008	25.71	454536
7	1738	wy56c.d	WY56C	WCE-SC-1-0-1	1	9.32	108814	11.99	414528	15.89	237933	19.19	369453	24.60	326161	27.20	366228	25.69	466908
8	1816	wy56d.d	WY56D	WCE-SC-1-1-2	1	9.30	100461	11.97	373448	15.88	211417	19.18	321444	24.58	290403	27.20	335509	25.68	412583
9	1854	wy56e.d	WY56E	WCE-SC-5-2-3	1	9.31	106813	11.98	407962	15.89	234075	19.19	373148	24.58	316041	27.18	346544	25.68	446669
10	1932	wy56f.d	WY56F	WCE-SC-3-2.7	1	9.31	103317	11.98	385032	15.89	232390	19.18	359950	24.58	307650	27.17	329896	25.67	419395
11	2009	wy56fms.d	WY56FMS	WCE-SC-3-2.7	1	9.33	102690	12.00	379526	15.92	233306	19.22	378826	24.62	338413	27.24	359830	25.73	458708
12	2047	wy56fmsd.d	WY56FMSD	WCE-SC-3-2.7	1	9.31	99218	11.99	357710	15.89	216850	19.19	351602	24.59	314846	27.20	331653	25.69	420666
13	2125	wy56g.d	WY56G	WCE-SC-5-0.7	1	9.31	103927	11.98	395929	15.89	234351	19.18	373125	24.58	341331	27.18	361842	25.68	449970
14	2203	wy56h.d	WY56H	WCE-SC-6-0.9	1	9.32	98629	11.99	367505	15.91	210278	19.21	326003	24.63	309614	27.27	327883	25.73	433163
15	2241	wy56i.d	WY56I	WCE-SC-2-0-0	1	9.30	101983	11.97	388094	15.88	220807	19.17	328614	24.57	300916	27.17	337974	25.67	434978
16	2319	wy56j.d	WY56J	WCE-SC-2-0.8	1	9.33	115700	12.00	436159	15.92	254001	19.22	401298	24.62	363696	27.24	377112	25.73	484020

YZ 8/2/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In Element

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-JUL-2013 11:54
End Cal Date : 30-JUL-2013 16:59
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Cal Date : 01-Aug-2013 13:48 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt10.i/20130730.b/SIM.b/ic0730f.d
Level 2: /chem1/nt10.i/20130730.b/SIM.b/ic0730h.d
Level 3: /chem1/nt10.i/20130730.b/SIM.b/ic0730c.d
Level 4: /chem1/nt10.i/20130730.b/SIM.b/ic0730i.d
Level 5: /chem1/nt10.i/20130730.b/SIM.b/ic0730d.d
Level 6: /chem1/nt10.i/20130730.b/SIM.b/ic0730g.d
Level 7: /chem1/nt10.i/20130730.b/SIM.b/ic0730a.d

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
142 1,2-Dibromo-3-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
135 2,3,5,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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111 Azobenzene (1,2-DP-Hydrazine)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
107 4,5-Dichloro-2-Methoxyphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
3 Phenol	1.95655	2.07761	1.98691	2.22155	2.08165	2.21082	2.00357	2.07695	5.082
4 Bis(2-Chloroethyl)ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
6 2-Chlorophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
7 1,3-Dichlorobenzene	1.69064 / 1.46393	1.70578	1.69809	1.68144	1.61776	1.58932	1.63528	5.348
9 1,4-Dichlorobenzene	1.62573 / 1.41690	1.75580	1.65546	1.63138	1.55821	1.54483	1.59833	6.626
11 Benzyl alcohol	1.00884 / 1.06936	1.02891	0.79878	1.10706	1.00594	1.14535	1.02346	10.923
12 1,2-Dichlorobenzene	1.54823 / 1.35979	1.59173	1.58199	1.57407	1.51142	1.47118	1.51977	5.428
13 2-Methylphenol	1.42913 / 1.43596	1.47659	1.52146	1.57035	1.52669	1.56637	1.50379	3.849
14 2,2'-oxybis(1-Chloropropane)	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
15 4-Methylphenol	1.40771 / 1.50349	1.45680	1.50968	1.61286	1.58062	1.62488	1.52801	5.332
16 N-Nitroso-di-n-propylamine	0.89793 / 0.86823	0.92476	0.96988	0.98778	0.95528	0.97896	0.94040	4.771

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Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
22 2,4-Dimethylphenol	0.37442	0.39313	0.40338	0.41582	0.41183	0.41002	0.37535	0.39771	4.324
23 Bis(2-Chloroethoxy)methane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Benzoic acid	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
26 1,2,4-Trichlorobenzene	0.38932	0.40244	0.39783	0.38832	0.37818	0.36982	0.34445	0.38148	5.169

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Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
30 Hexachlorobutadiene	0.21317	0.21719	0.21537	0.21270	0.20800	0.20685	0.19415	0.20963	3.705
31 4-Chloro-3-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
33 Hexachlorocyclopentadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
39 Dimethylphthalate	1.23001	1.34655	1.34678	1.28955	1.31284	1.28490	1.19884	1.28707	4.351
40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Compound	0.05000 Level 1 / 5.000 Level 7	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	___ RRF	% RSD
48 2,4-Dinitrotoluene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Fluorene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Diethylphthalate	1.42504 / 1.36761	1.45860	1.49737	1.45169	1.48820	1.47519	1.45196	3.054
51 4-Chlorophenyl-phenylether	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
52 4-Nitroaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
53 4,6-Dinitro-2-methylphenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
54 N-Nitrosodiphenylamine	0.38952 / 0.47592	0.47405	0.53095	0.51046	0.53351	0.50815	0.48894	10.178
56 4-Bromophenyl-phenylether	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
57 Hexachlorobenzene	0.28670 / 0.26149	0.29343	0.29662	0.27610	0.28118	0.27127	0.28097	4.432

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Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
58 Pentachlorophenol	0.12032	0.15970	0.17815	0.18640	0.20535	0.21090	0.20997	0.18154	18.126
60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
67 Butylbenzylphthalate	0.38812	0.42966	0.48103	0.45354	0.50462	0.51026	0.50124	0.46692	9.758
68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
72 bis(2-Ethylhexyl)phthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
79 Dibenzo(a,h)anthracene	0.90777	0.95852	1.03552	0.99193	1.05598	1.05133	1.01521	1.00232	5.391

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80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
90 N-Nitrosodimethylamine	0.98584	1.04196	1.02132	1.10192	1.04147	1.08198	0.96110	1.03366	4.810
91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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	5.000 Level 7							
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
103 Pyridine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 1 2-Fluorophenol	1.55768	1.58981	1.60818	1.64172	1.60912	1.62380		
	1.50127						1.59023	2.975
$ 145 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

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$ 18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 66 Terphenyl-d14	0.49417	0.55637	0.53204	0.51199	0.53028	0.52106	0.49113	0.51958	4.401
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-JUL-2013 11:54
End Cal Date : 30-JUL-2013 16:59
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Cal Date : 01-Aug-2013 13:48 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130730.b/SIM.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0730a	ic0730c	ic0730d	ic0730f	ic0730g	ic0730h	ic0730i
INJ.DATE:	30-JUL-2013	30-JUL-2013	30-JUL-2013	30-JUL-2013	30-JUL-2013	30-JUL-2013	30-JUL-2013
INJ.TIME:	11:54	13:11	13:49	15:05	15:43	16:21	16:59

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.958	6.957	6.957	6.950	6.957	6.957	6.957	6.958	6.458-7.458	6.956	0.003
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	33.580	33.080-34.080	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.873	30.373-31.373	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.496	14.996-15.996	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.428	19.928-20.928	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.471	19.971-20.971	+++++	+++++
137 NewCpnd_131	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.828	7.328-8.328	+++++	+++++
* 134 Di-n-octylphthalate-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.740	16.240-17.240	+++++	+++++
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.190	13.690-14.690	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.262	30.762-31.762	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.954	29.454-30.454	+++++	+++++
146 Benzo(j)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.752	23.252-24.252	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.717	27.217-28.217	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.566	20.066-21.066	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.796	19.296-20.296	+++++	+++++

Reviewer 1 YE Date: 8/1/13
Reviewer 2 Date: 8/2/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130730.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
108	4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.517	16.017-17.017	+++++	+++++
107	4,5-Dichloro-2-Methoxy	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
106	Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.843	11.343-12.343	+++++	+++++
105	1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.826	10.326-11.326	+++++	+++++
$ 2	Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.886	6.386-7.386	+++++	+++++
3	Phenol	8.681	8.672	8.673	8.673	8.673	8.673	8.673	8.681	8.181-9.181	8.674	0.003
4	Bis(2-Chloroethyl)ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.268	7.768-8.768	+++++	+++++
$ 5	2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.087	6.587-7.587	+++++	+++++
6	2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.592	8.092-9.092	+++++	+++++
7	1,3-Dichlorobenzene	9.253	9.252	9.253	9.253	9.252	9.253	9.252	9.253	8.753-9.753	9.253	0.000
* 8	1,4-Dichlorobenzene-d4	9.323	9.322	9.322	9.322	9.322	9.322	9.322	9.323	8.823-9.823	9.322	0.000
9	1,4-Dichlorobenzene	9.354	9.353	9.354	9.353	9.353	9.353	9.353	9.354	8.854-9.854	9.353	0.000
$ 10	1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.656	7.156-8.156	+++++	+++++
11	Benzyl alcohol	9.625	9.625	9.617	9.625	9.617	9.625	9.625	9.625	9.125-10.125	9.623	0.004
12	1,2-Dichlorobenzene	9.734	9.733	9.734	9.734	9.734	9.734	9.733	9.734	9.234-10.234	9.734	0.000
13	2-Methylphenol	9.874	9.873	9.874	9.873	9.873	9.873	9.873	9.874	9.374-10.374	9.873	0.000
14	2,2'-oxybis(1-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.998	8.498-9.498	+++++	+++++
15	4-Methylphenol	10.169	10.160	10.161	10.161	10.161	10.161	10.161	10.169	9.669-10.669	10.162	0.003
16	N-Nitroso-di-n-propyla	10.231	10.223	10.223	10.223	10.230	10.223	10.223	10.231	9.731-10.731	10.225	0.004
17	Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.363	8.863-9.863	+++++	+++++
$ 18	Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.237	7.737-8.737	+++++	+++++
19	Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.696	8.196-9.196	+++++	+++++
20	Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.987	8.487-9.487	+++++	+++++
21	2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.356	8.856-9.856	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130730.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
22	2,4-Dimethylphenol	11.290	11.282	11.290	11.283	11.290	11.290	11.290	11.290	10.790-11.790	11.288	0.004
23	Bis(2-Chloroethoxy)met	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.557	9.057-10.057	+++++	+++++
24	Benzoic acid	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.387	9.887-10.887	+++++	+++++
25	2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.500	9.000-10.000	+++++	+++++
26	1,2,4-Trichlorobenzene	11.907	11.907	11.907	11.899	11.907	11.907	11.907	11.907	11.407-12.407	11.906	0.003
* 27	Naphthalene-d8	11.992	11.992	11.992	11.992	11.992	11.992	11.992	11.992	11.492-12.492	11.992	0.000
28	Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.518	9.018-10.018	+++++	+++++
29	4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.911	9.411-10.411	+++++	+++++
30	Hexachlorobutadiene	12.440	12.440	12.440	12.440	12.440	12.440	12.440	12.440	11.940-12.940	12.440	0.000
31	4-Chloro-3-methylpheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.387	9.887-10.887	+++++	+++++
32	2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.826	10.326-11.326	+++++	+++++
33	Hexachlorocyclopentadi	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.194	10.694-11.694	+++++	+++++
34	2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.019	10.519-11.519	+++++	+++++
35	2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.386	10.886-11.886	+++++	+++++
$ 36	2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.091	10.591-11.591	+++++	+++++
37	2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.600	11.100-12.100	+++++	+++++
38	2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.805	11.305-12.305	+++++	+++++
39	Dimethylphthalate	15.396	15.388	15.389	15.389	15.388	15.388	15.388	15.396	14.896-15.896	15.390	0.003
40	Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.232	11.732-12.732	+++++	+++++
41	2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.177	11.677-12.677	+++++	+++++
* 42	Acenaphthene-d10	15.899	15.899	15.899	15.899	15.899	15.899	15.899	15.899	15.399-16.399	15.899	0.000
43	3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.508	12.008-13.008	+++++	+++++
44	Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.578	12.078-13.078	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130730.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.660	12.160-13.160	+++++	+++++
	46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.756	12.256-13.256	+++++	+++++
	47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.867	12.367-13.367	+++++	+++++
	48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.031	12.531-13.531	+++++	+++++
	49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.248	12.748-13.748	+++++	+++++
	50 Diethylphthalate	16.982	16.966	16.974	16.966	16.974	16.974	16.974	16.982	16.482-17.482	16.973	0.005
	51 4-Chlorophenyl-phenyle	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.368	13.868-14.868	+++++	+++++
	52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.510	13.010-14.010	+++++	+++++
	53 4,6-Dinitro-2-methylph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.340	12.840-13.840	+++++	+++++
	54 N-Nitrosodiphenylamine	17.376	17.375	17.376	17.375	17.375	17.375	17.375	17.376	16.876-17.876	17.375	0.000
$	55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.476	12.976-13.976	+++++	+++++
	56 4-Bromophenyl-phenylet	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.191	13.691-14.691	+++++	+++++
	57 Hexachlorobenzene	18.518	18.509	18.510	18.510	18.517	18.517	18.517	18.518	18.018-19.018	18.514	0.004
	58 Pentachlorophenol	18.912	18.904	18.905	18.912	18.904	18.912	18.912	18.912	18.412-19.412	18.909	0.004
*	59 Phenanthrene-d10	19.191	19.183	19.183	19.183	19.191	19.183	19.191	19.191	18.691-19.691	19.186	0.004
	60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
	61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
	62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.290	14.790-15.790	+++++	+++++
	63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.986	15.486-16.486	+++++	+++++
	64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.867	16.367-17.367	+++++	+++++
	65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.445	16.945-17.945	+++++	+++++
$	66 Terphenyl-d14	22.611	22.610	22.618	22.618	22.618	22.618	22.618	22.611	22.111-23.111	22.616	0.004
	67 Butylbenzylphthalate	23.610	23.609	23.609	23.609	23.609	23.609	23.609	23.610	23.110-24.110	23.609	0.000
	68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.250	18.750-19.750	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130730.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	69 Chrysene-d12	24.577	24.577	24.577	24.577	24.585	24.585	24.585	24.577	24.077-25.077	24.581	0.004
	70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.276	19.776-20.776	+++++	+++++
	71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.339	19.839-20.839	+++++	+++++
	72 bis(2-Ethylhexyl)phtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.411	18.911-19.911	+++++	+++++
	73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.324	19.824-20.824	+++++	+++++
	74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.144	20.644-21.644	+++++	+++++
	75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.144	20.644-21.644	+++++	+++++
	76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.373	21.873-22.873	+++++	+++++
*	77 Perylene-d12	27.171	27.171	27.171	27.171	27.179	27.179	27.178	27.171	26.671-27.671	27.174	0.004
	78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.378	23.878-24.878	+++++	+++++
	79 Dibenzo(a,h)anthracene	29.737	29.729	29.737	29.737	29.736	29.744	29.744	29.737	29.237-30.237	29.738	0.005
	80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.408	24.908-25.908	+++++	+++++
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.238	16.738-17.738	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.316	28.816-29.816	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.007	25.507-26.507	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	44.609	44.109-45.109	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.597	16.097-17.097	+++++	+++++
	90 N-Nitrosodimethylamine	4.679	4.694	4.687	4.679	4.679	4.695	4.687	4.679	4.179-5.179	4.686	0.007
	91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.913	7.413-8.413	+++++	+++++
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.615	21.115-22.115	+++++	+++++
	93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.089	14.589-15.589	+++++	+++++
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.686	17.186-18.186	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.540	14.040-15.040	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.957	26.457-27.457	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130730.b/SIM.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.609	19.109-20.109	+++++	+++++
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.672	25.172-26.172	+++++	+++++
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.384	25.884-26.884	+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.881	43.381-44.381	+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	45.573	45.073-46.073	+++++	+++++
103 Pyridine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.827	3.327-4.327	+++++	+++++

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 8/1/13

Data file : /chem1/nt10.i/20130730.b/SIM.b/ic0730a.d
Lab Smp Id: IC0726A
Inj Date : 30-JUL-2013 11:54
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0726A
Misc Info :
Comment :
Method : /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Meth Date : 01-Aug-2013 13:48 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 11:54 Cal File: ic0730a.d
Als bottle: 3 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.958	6.957	(0.746)	268414	5.00000	4.720
	3 Phenol	94	8.681	8.673	(0.931)	358221	5.00000	4.823
	7 1,3-Dichlorobenzene	146	9.253	9.252	(0.992)	261738	5.00000	4.476
*	8 1,4-Dichlorobenzene-d4	152	9.323	9.322	(1.000)	143033	4.00000	
	9 1,4-Dichlorobenzene	146	9.354	9.353	(1.003)	253329	5.00000	4.432
	11 Benzyl alcohol	79	9.625	9.625	(1.032)	191193	5.00000	5.224
	12 1,2-Dichlorobenzene	146	9.734	9.733	(1.044)	243119	5.00000	4.474
	13 2-Methylphenol	108	9.874	9.873	(1.059)	256737	5.00000	4.774
	15 4-Methylphenol	108	10.169	10.161	(1.091)	268811	5.00000	4.920
	16 N-Nitroso-di-n-propylamine	70	10.231	10.223	(1.097)	155232	5.00000	4.616(H)
	22 2,4-Dimethylphenol	107	11.290	11.290	(0.941)	470315	10.0000	9.438
	26 1,2,4-Trichlorobenzene	180	11.907	11.907	(0.993)	215797	5.00000	4.515
*	27 Naphthalene-d8	136	11.992	11.992	(1.000)	501201	4.00000	
	30 Hexachlorobutadiene	225	12.440	12.440	(1.037)	121636	5.00000	4.631
	39 Dimethylphthalate	163	15.396	15.388	(0.968)	406964	5.00000	4.657
*	42 Acenaphthene-d10	162	15.899	15.899	(1.000)	271571	4.00000	
	50 Diethylphthalate	149	16.982	16.974	(1.068)	464253	5.00000	4.710
	54 N-Nitrosodiphenylamine	169	17.376	17.375	(0.905)	314262	5.00000	4.867
	57 Hexachlorobenzene	284	18.518	18.517	(0.965)	172668	5.00000	4.653
	58 Pentachlorophenol	266	18.912	18.912	(0.985)	277295	10.0000	9.987
*	59 Phenanthrene-d10	188	19.191	19.191	(1.000)	528257	4.00000	
$	66 Terphenyl-d14	244	22.611	22.618	(0.920)	315958	5.00000	4.726
	67 Butylbenzylphthalate	149	23.610	23.609	(0.961)	322462	5.00000	5.368
*	69 Chrysene-d12	240	24.577	24.585	(1.000)	514658	4.00000	
*	77 Perylene-d12	264	27.171	27.178	(1.000)	542850	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.737	29.744	(1.094)	688882	5.00000	5.064
	90 N-Nitrosodimethylamine	74	4.679	4.687	(0.502)	343672	10.0000	9.298

QC Flag Legend

H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0730a.d
Lab Smp Id: IC0726A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 30-JUL-2013
Calibration Time: 13:49

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	139368	69684	278736	143033	2.63
27 Naphthalene-d8	497738	248869	995476	501201	0.70
42 Acenaphthene-d10	263483	131742	526966	271571	3.07
59 Phenanthrene-d10	519545	259772	1039090	528257	1.68
69 Chrysene-d12	513753	256876	1027506	514658	0.18
77 Perylene-d12	525862	262931	1051724	542850	3.23

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.32	8.82	9.82	9.32	0.00
27 Naphthalene-d8	11.99	11.49	12.49	11.99	0.00
42 Acenaphthene-d10	15.90	15.40	16.40	15.90	0.00
59 Phenanthrene-d10	19.18	18.68	19.68	19.19	0.04
69 Chrysene-d12	24.58	24.08	25.08	24.58	0.00
77 Perylene-d12	27.17	26.67	27.67	27.17	0.00

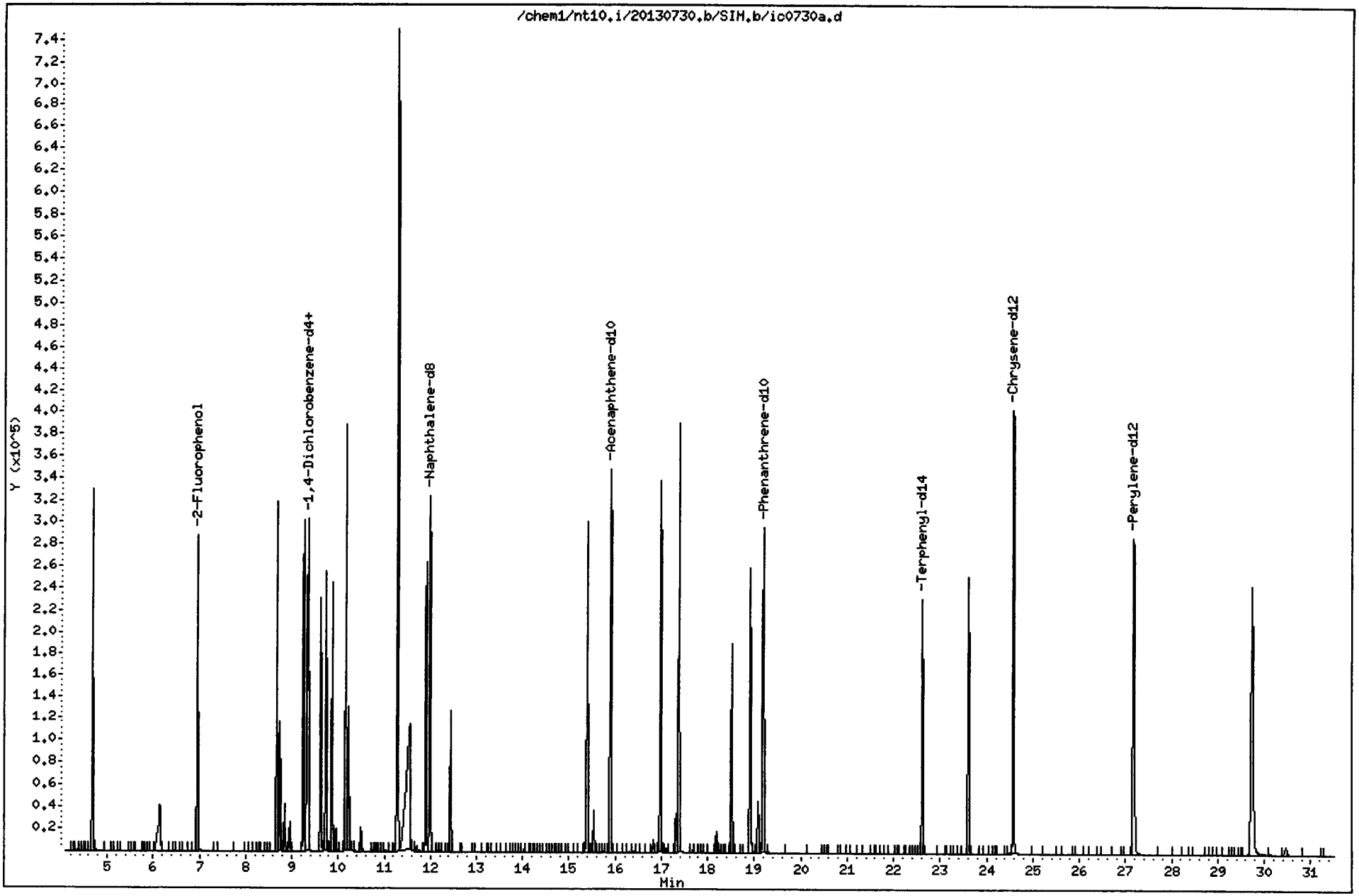
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130730.b/SIM.b/ic0730a.d
Date : 30-JUL-2013 11:54
Client ID:
Sample Info: IC0726A

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0730a.d

Lab ID: IC0726A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 30-JUL-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 8/1/13

Data file : /chem1/nt10.i/20130730.b/SIM.b/ic0730c.d
Lab Smp Id: IC0730C
Inj Date : 30-JUL-2013 13:11
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0730C
Misc Info :
Comment :
Method : /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Meth Date : 01-Aug-2013 13:48 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 13:11 Cal File: ic0730c.d
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.957	6.957	(0.746)	11053	0.20000	0.2023
	3 Phenol	94	8.672	8.673	(0.930)	13656	0.20000	0.1913
	7 1,3-Dichlorobenzene	146	9.252	9.252	(0.992)	11671	0.20000	0.2077
*	8 1,4-Dichlorobenzene-d4	152	9.322	9.322	(1.000)	137460	4.00000	
	9 1,4-Dichlorobenzene	146	9.353	9.353	(1.003)	11378	0.20000	0.2071
	11 Benzyl alcohol	79	9.625	9.625	(1.032)	5490	0.20000	0.1561
	12 1,2-Dichlorobenzene	146	9.733	9.733	(1.044)	10873	0.20000	0.2082
	13 2-Methylphenol	108	9.873	9.873	(1.059)	10457	0.20000	0.2023
	15 4-Methylphenol	108	10.160	10.161	(1.090)	10376	0.20000	0.1976
	16 N-Nitroso-di-n-propylamine	70	10.223	10.223	(1.097)	6666	0.20000	0.2063
	22 2,4-Dimethylphenol	107	11.282	11.290	(0.941)	20056	0.40000	0.4057
	26 1,2,4-Trichlorobenzene	180	11.907	11.907	(0.993)	9890	0.20000	0.2086
*	27 Naphthalene-d8	136	11.992	11.992	(1.000)	497202	4.00000	
	30 Hexachlorobutadiene	225	12.440	12.440	(1.037)	5354	0.20000	0.2055
	39 Dimethylphthalate	163	15.388	15.388	(0.968)	17771	0.20000	0.2093
*	42 Acenaphthene-d10	162	15.899	15.899	(1.000)	263903	4.00000	
	50 Diethylphthalate	149	16.966	16.974	(1.067)	19758	0.20000	0.2063
	54 N-Nitrosodiphenylamine	169	17.375	17.375	(0.906)	13765	0.20000	0.2172
	57 Hexachlorobenzene	284	18.509	18.517	(0.965)	7690	0.20000	0.2111
	58 Pentachlorophenol	266	18.904	18.912	(0.985)	9237	0.40000	0.3443
*	59 Phenanthrene-d10	188	19.183	19.191	(1.000)	518501	4.00000	
$	66 Terphenyl-d14	244	22.610	22.618	(0.920)	13735	0.20000	0.2048
	67 Butylbenzylphthalate	149	23.609	23.609	(0.961)	12418	0.20000	0.2060
*	69 Chrysene-d12	240	24.577	24.585	(1.000)	516311	4.00000	
*	77 Perylene-d12	264	27.171	27.178	(1.000)	524123	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.729	29.744	(1.094)	27137	0.20000	0.2066
	90 N-Nitrosodimethylamine	74	4.694	4.687	(0.504)	14039	0.40000	0.3952

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0730c.d
Lab Smp Id: IC0730C
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 30-JUL-2013
Calibration Time: 13:49
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	139368	69684	278736	137460	-1.37
27 Naphthalene-d8	497738	248869	995476	497202	-0.11
42 Acenaphthene-d10	263483	131742	526966	263903	0.16
59 Phenanthrene-d10	519545	259772	1039090	518501	-0.20
69 Chrysene-d12	513753	256876	1027506	516311	0.50
77 Perylene-d12	525862	262931	1051724	524123	-0.33

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.32	8.82	9.82	9.32	0.00
27 Naphthalene-d8	11.99	11.49	12.49	11.99	0.00
42 Acenaphthene-d10	15.90	15.40	16.40	15.90	0.00
59 Phenanthrene-d10	19.18	18.68	19.68	19.18	0.00
69 Chrysene-d12	24.58	24.08	25.08	24.58	0.00
77 Perylene-d12	27.17	26.67	27.67	27.17	0.00

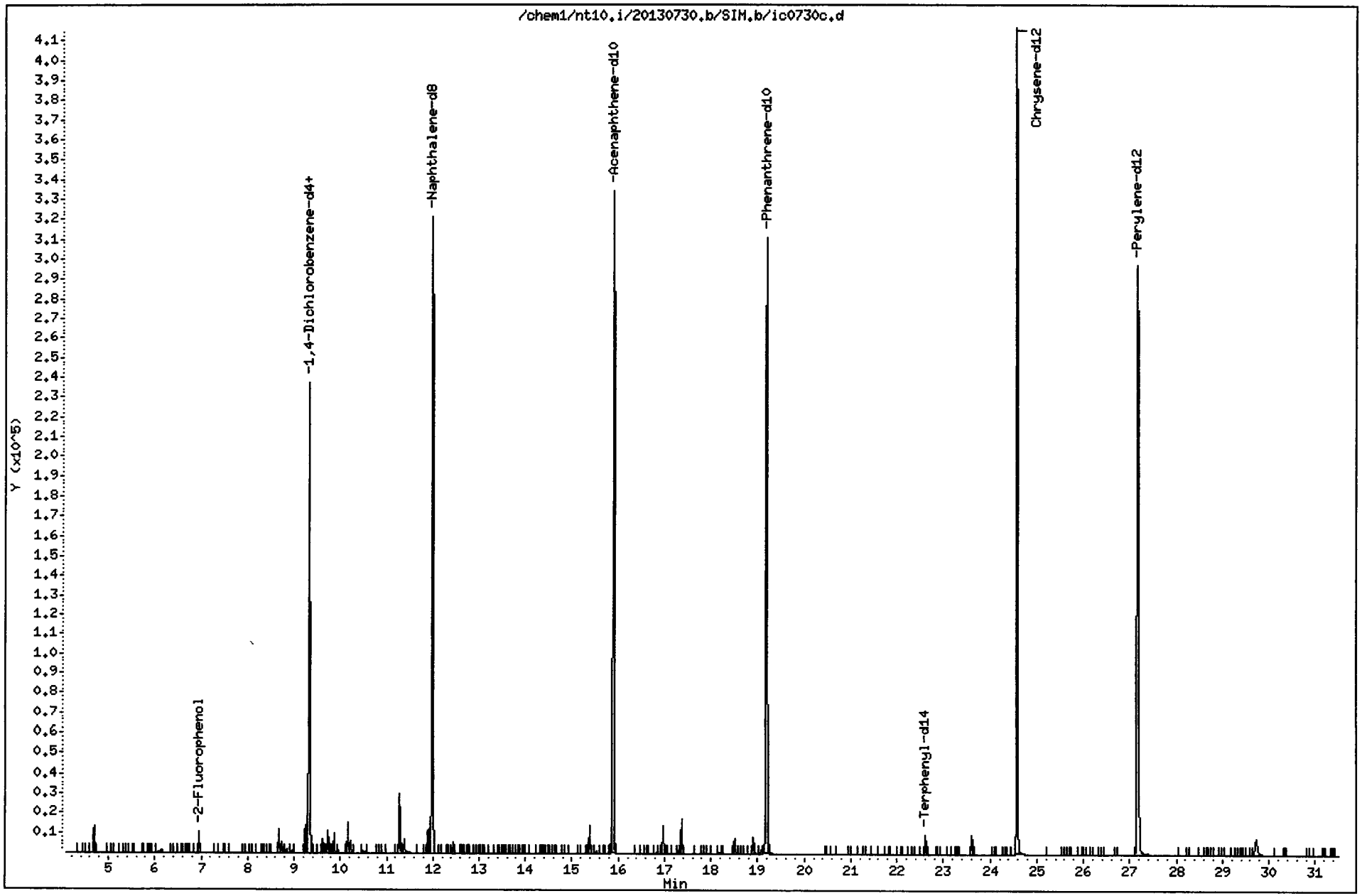
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130730.b/SIM.b/ic0730c.d
Date : 30-JUL-2013 13:11
Client ID:
Sample Info: IC0730C

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0730c.d

Lab ID: IC0730C, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 30-JUL-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 8/1/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130730.b/SIM.b/ic0730d.d
Lab Smp Id: IC0730D
Inj Date : 30-JUL-2013 13:49
Operator : VTS/YZ
Smp Info : IC0730D
Misc Info :
Comment :
Method : /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Meth Date : 01-Aug-2013 13:48 yev
Cal Date : 30-JUL-2013 13:49
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.50

Inst ID: nt10.i
Quant Type: ISTD
Cal File: ic0730d.d
Calibration Sample, Level: 5
Compound Sublist: PSDDA.sub

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.957	6.957	(0.746)	56065	1.00000	1.012
	3 Phenol	94	8.673	8.673	(0.930)	72529	1.00000	1.002
	7 1,3-Dichlorobenzene	146	9.253	9.252	(0.992)	56366	1.00000	0.9893
*	8 1,4-Dichlorobenzene-d4	152	9.322	9.322	(1.000)	139368	4.00000	
	9 1,4-Dichlorobenzene	146	9.354	9.353	(1.003)	54291	1.00000	0.9749
	11 Benzyl alcohol	79	9.617	9.625	(1.032)	35049	1.00000	0.9829
	12 1,2-Dichlorobenzene	146	9.734	9.733	(1.044)	52661	1.00000	0.9945
	13 2-Methylphenol	108	9.874	9.873	(1.059)	53193	1.00000	1.015
	15 4-Methylphenol	108	10.161	10.161	(1.090)	55072	1.00000	1.034
	16 N-Nitroso-di-n-propylamine	70	10.223	10.223	(1.097)	33284	1.00000	1.016
	22 2,4-Dimethylphenol	107	11.290	11.290	(0.941)	102492	2.00000	2.071
	26 1,2,4-Trichlorobenzene	180	11.907	11.907	(0.993)	47059	1.00000	0.9914
*	27 Naphthalene-d8	136	11.992	11.992	(1.000)	497738	4.00000	
	30 Hexachlorobutadiene	225	12.440	12.440	(1.037)	25882	1.00000	0.9922
	39 Dimethylphthalate	163	15.389	15.388	(0.968)	86478	1.00000	1.020
*	42 Acenaphthene-d10	162	15.899	15.899	(1.000)	263483	4.00000	
	50 Diethylphthalate	149	16.974	16.974	(1.068)	98029	1.00000	1.025
	54 N-Nitrosodiphenylamine	169	17.376	17.375	(0.906)	69295	1.00000	1.091
	57 Hexachlorobenzene	284	18.510	18.517	(0.965)	36521	1.00000	1.001
	58 Pentachlorophenol	266	18.905	18.912	(0.985)	53343	2.00000	1.979
*	59 Phenanthrene-d10	188	19.183	19.191	(1.000)	519545	4.00000	
$	66 Terphenyl-d14	244	22.618	22.618	(0.920)	68108	1.00000	1.021
	67 Butylbenzylphthalate	149	23.609	23.609	(0.961)	64813	1.00000	1.081
*	69 Chrysene-d12	240	24.577	24.585	(1.000)	513753	4.00000	
*	77 Perylene-d12	264	27.171	27.178	(1.000)	525862	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.737	29.744	(1.094)	138825	1.00000	1.054
	90 N-Nitrosodimethylamine	74	4.687	4.687	(0.503)	72574	2.00000	2.015

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0730d.d
Lab Smp Id: IC0730D
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 30-JUL-2013
Calibration Time: 13:49
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	139368	69684	278736	139368	0.00
27 Naphthalene-d8	497738	248869	995476	497738	0.00
42 Acenaphthene-d10	263483	131742	526966	263483	0.00
59 Phenanthrene-d10	519545	259772	1039090	519545	0.00
69 Chrysene-d12	513753	256876	1027506	513753	0.00
77 Perylene-d12	525862	262931	1051724	525862	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.32	8.82	9.82	9.32	0.00
27 Naphthalene-d8	11.99	11.49	12.49	11.99	0.00
42 Acenaphthene-d10	15.90	15.40	16.40	15.90	0.00
59 Phenanthrene-d10	19.18	18.68	19.68	19.18	0.00
69 Chrysene-d12	24.58	24.08	25.08	24.58	0.00
77 Perylene-d12	27.17	26.67	27.67	27.17	0.00

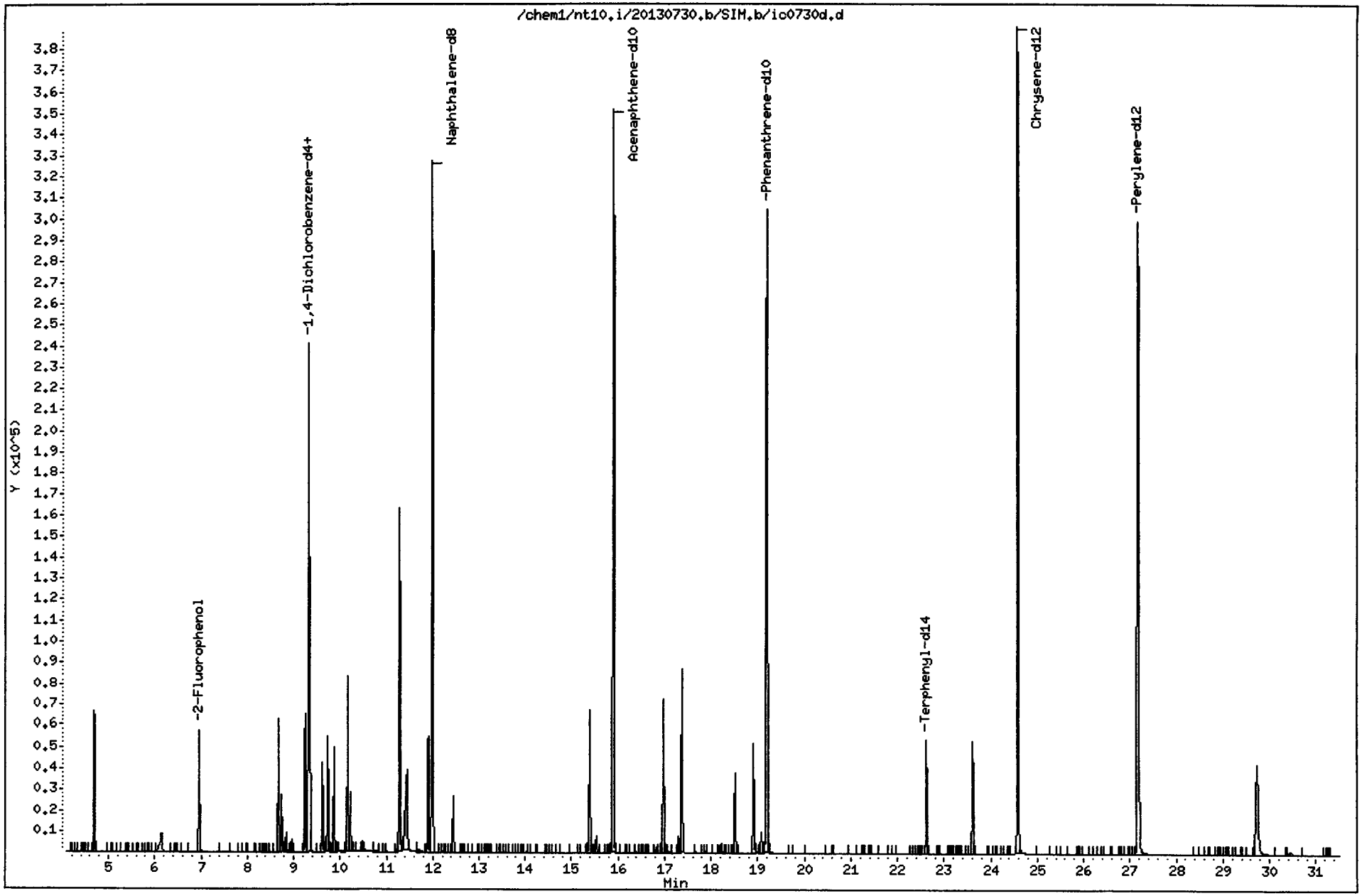
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130730.b/SIM.b/ic0730d.d
Date : 30-JUL-2013 13:49
Client ID:
Sample Info: IC0730D

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0730d.d

Lab ID: IC0730D, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 30-JUL-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 8/1/13

Data file : /chem1/nt10.i/20130730.b/SIM.b/ic0730f.d
Lab Smp Id: IC0730F
Inj Date : 30-JUL-2013 15:05
Operator : YZ Inst ID: nt10.i
Smp Info : IC0730F
Misc Info :
Comment :
Method : /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Meth Date : 01-Aug-2013 13:48 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 15:05 Cal File: ic0730f.d
Als bottle: 8 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

							AMOUNTS	
		QUANT SIG					CAL-AMT	ON-COL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
$	1 2-Fluorophenol	112	6.950	6.957	(0.745)	2472	0.05000	0.04898
	3 Phenol	94	8.673	8.673	(0.930)	3105	0.05000	0.04710
	7 1,3-Dichlorobenzene	146	9.253	9.252	(0.992)	2683	0.05000	0.05169
*	8 1,4-Dichlorobenzene-d4	152	9.322	9.322	(1.000)	126958	4.00000	
	9 1,4-Dichlorobenzene	146	9.353	9.353	(1.003)	2580	0.05000	0.05086 (M)
	11 Benzyl alcohol	79	9.625	9.625	(1.032)	1601	0.05000	0.04929
	12 1,2-Dichlorobenzene	146	9.734	9.733	(1.044)	2457	0.05000	0.05094
	13 2-Methylphenol	108	9.873	9.873	(1.059)	2268	0.05000	0.04752
	15 4-Methylphenol	108	10.161	10.161	(1.090)	2234	0.05000	0.04606
	16 N-Nitroso-di-n-propylamine	70	10.223	10.223	(1.097)	1425	0.05000	0.04774 (M)
	22 2,4-Dimethylphenol	107	11.283	11.290	(0.941)	4247	0.10000	0.09415
	26 1,2,4-Trichlorobenzene	180	11.899	11.907	(0.992)	2208	0.05000	0.05103
*	27 Naphthalene-d8	136	11.992	11.992	(1.000)	453714	4.00000	
	30 Hexachlorobutadiene	225	12.440	12.440	(1.037)	1209	0.05000	0.05084
	39 Dimethylphthalate	163	15.389	15.388	(0.968)	3658	0.05000	0.04778 (M)
*	42 Acenaphthene-d10	162	15.899	15.899	(1.000)	237916	4.00000	
	50 Diethylphthalate	149	16.966	16.974	(1.067)	4238	0.05000	0.04907
	54 N-Nitrosodiphenylamine	169	17.375	17.375	(0.906)	2292	0.05000	0.03983
	57 Hexachlorobenzene	284	18.510	18.517	(0.965)	1687	0.05000	0.05102
	58 Pentachlorophenol	266	18.912	18.912	(0.986)	1416	0.10000	0.05816 (M)
*	59 Phenanthrene-d10	188	19.183	19.191	(1.000)	470737	4.00000	
$	66 Terphenyl-d14	244	22.618	22.618	(0.920)	2847	0.05000	0.04756 (M)
	67 Butylbenzylphthalate	149	23.609	23.609	(0.961)	2236	0.05000	0.04156
*	69 Chrysene-d12	240	24.577	24.585	(1.000)	460892	4.00000	
*	77 Perylene-d12	264	27.171	27.178	(1.000)	468755	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.737	29.744	(1.094)	5319	0.05000	0.04528
	90 N-Nitrosodimethylamine	74	4.679	4.687	(0.502)	3129	0.10000	0.09537

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0730f.d
Lab Smp Id: IC0730F
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 30-JUL-2013
Calibration Time: 13:49

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	139368	69684	278736	126958	-8.90
27 Naphthalene-d8	497738	248869	995476	453714	-8.84
42 Acenaphthene-d10	263483	131742	526966	237916	-9.70
59 Phenanthrene-d10	519545	259772	1039090	470737	-9.39
69 Chrysene-d12	513753	256876	1027506	460892	-10.29
77 Perylene-d12	525862	262931	1051724	468755	-10.86

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.32	8.82	9.82	9.32	0.00
27 Naphthalene-d8	11.99	11.49	12.49	11.99	0.00
42 Acenaphthene-d10	15.90	15.40	16.40	15.90	0.00
59 Phenanthrene-d10	19.18	18.68	19.68	19.18	0.00
69 Chrysene-d12	24.58	24.08	25.08	24.58	0.00
77 Perylene-d12	27.17	26.67	27.67	27.17	0.00

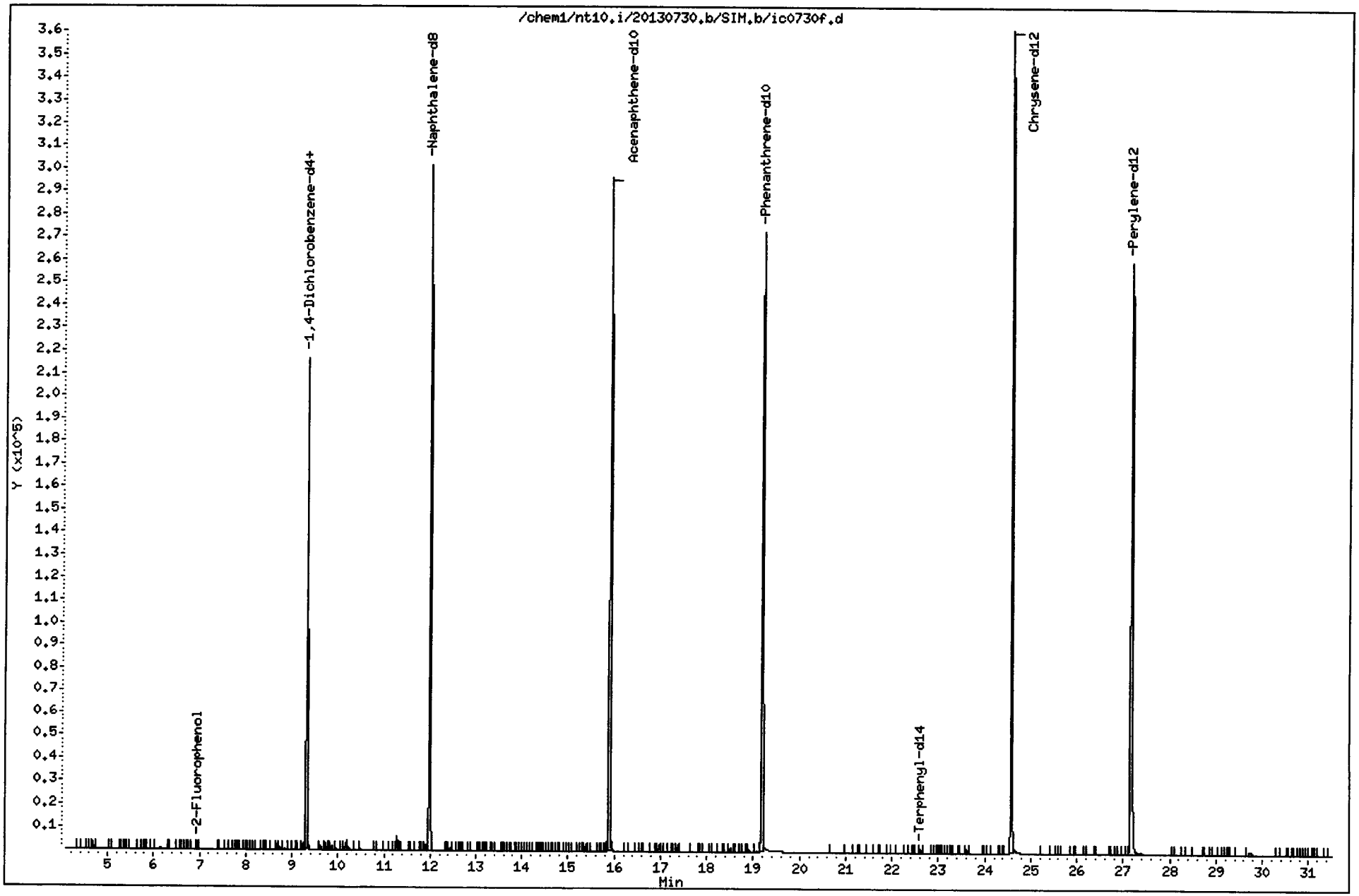
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130730.b/SIM.b/ic0730f.d
Date : 30-JUL-2013 15:05
Client ID:
Sample Info: IC0730F

Column phase: ZB-5msi

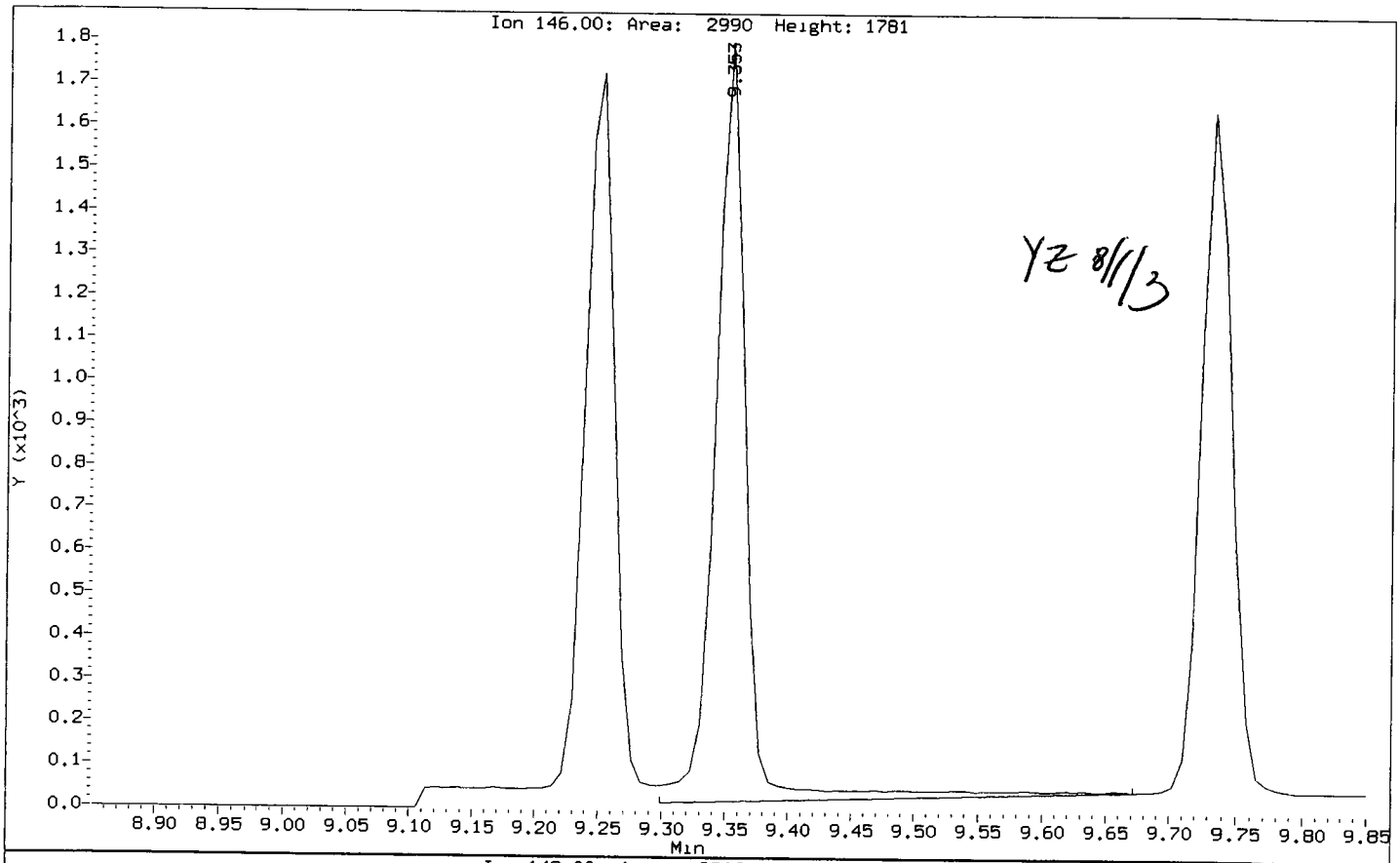
Instrument: nt10.i

Operator: YZ
Column diameter: 0.25

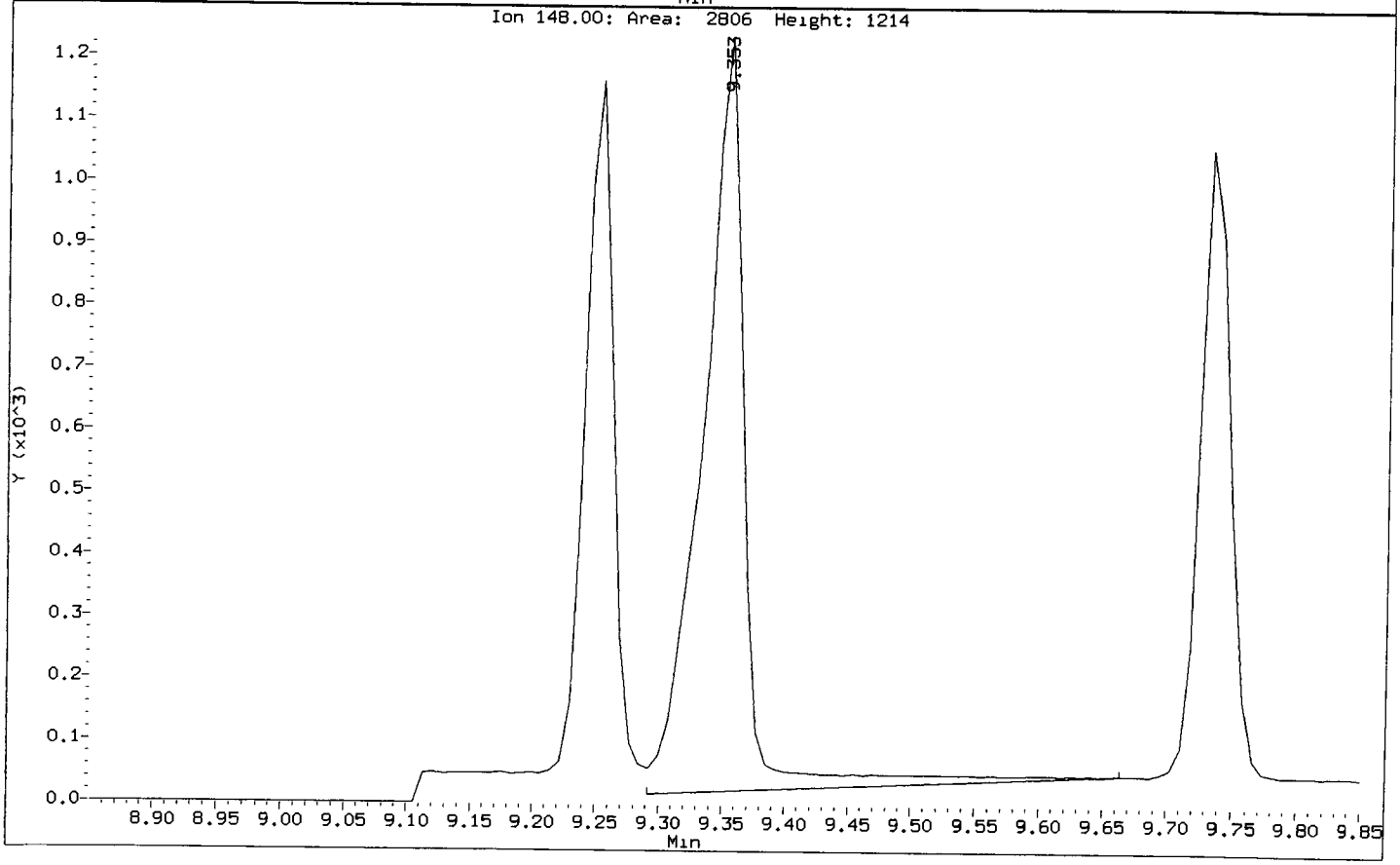


Data File: /chem1/nt10.i/20130730.b/SIM.b/ic0730f.d
Injection Date: 30-JUL-2013 15:05
Instrument: nt10.i
Client Sample ID:

Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7

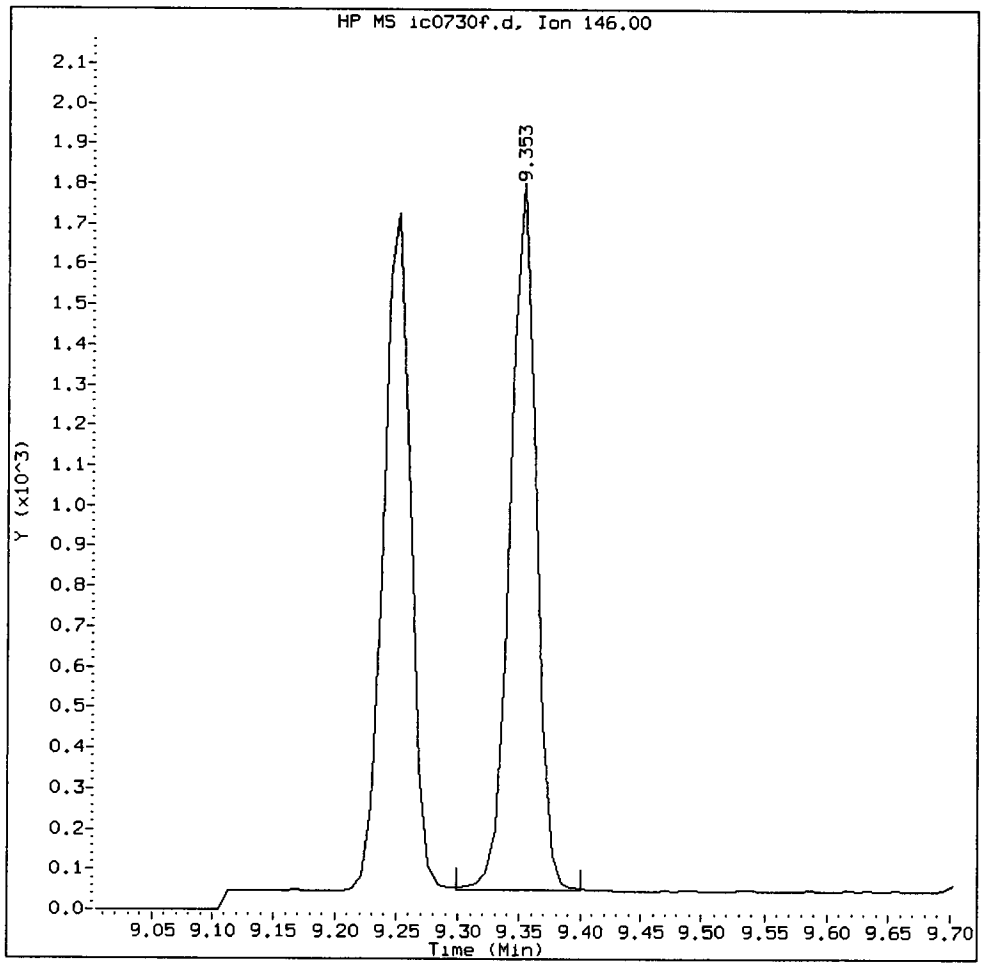


YZ 8/1/13



IC0730F, /chem1/nt10.i/20130730.b/SIM.b/ic0730f.d

1,4-Dichlorobenzene Amount: 0.05 Area: 2580



MANUAL INTEGRATION for 1,4-Dichlorobenzene

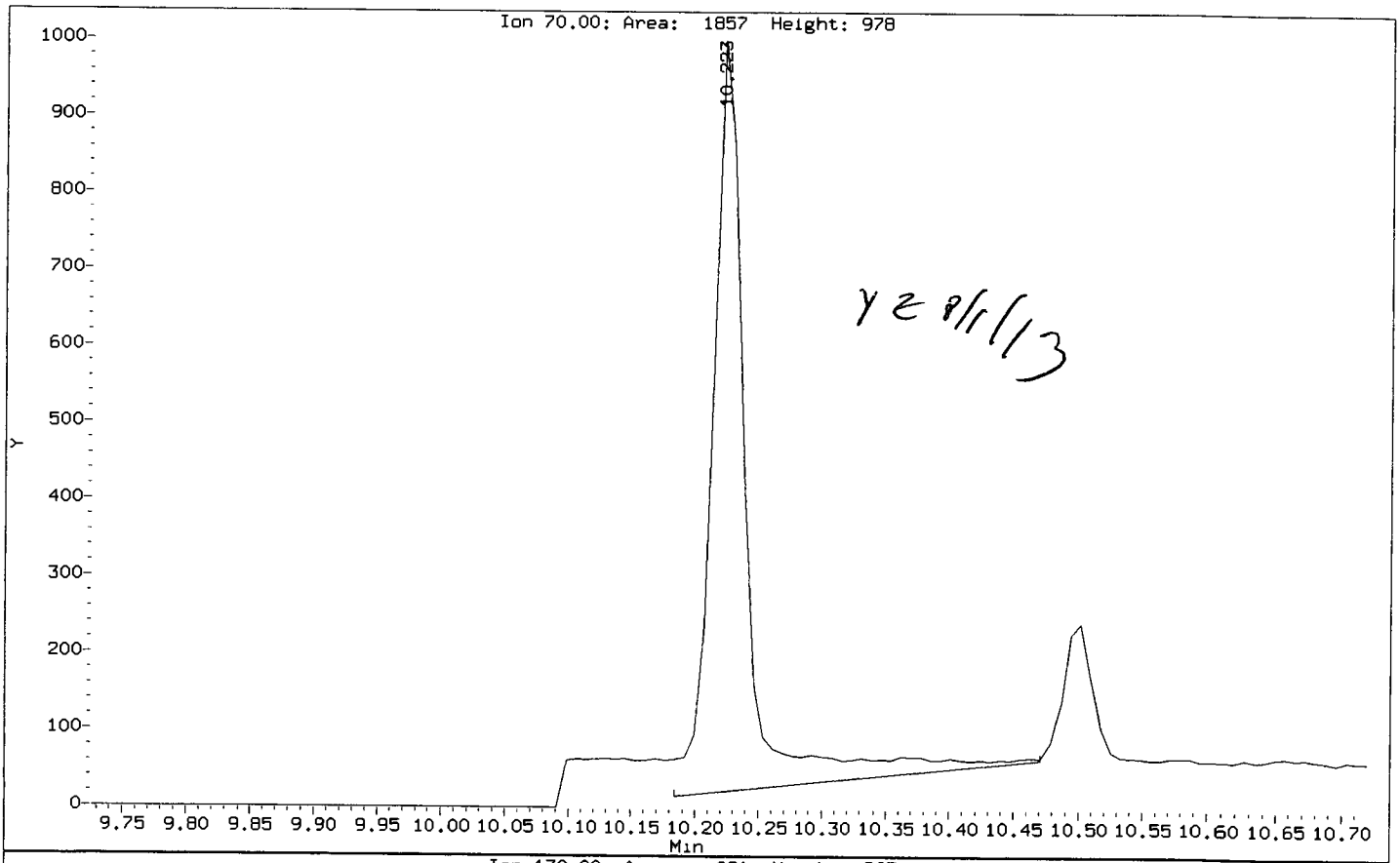
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

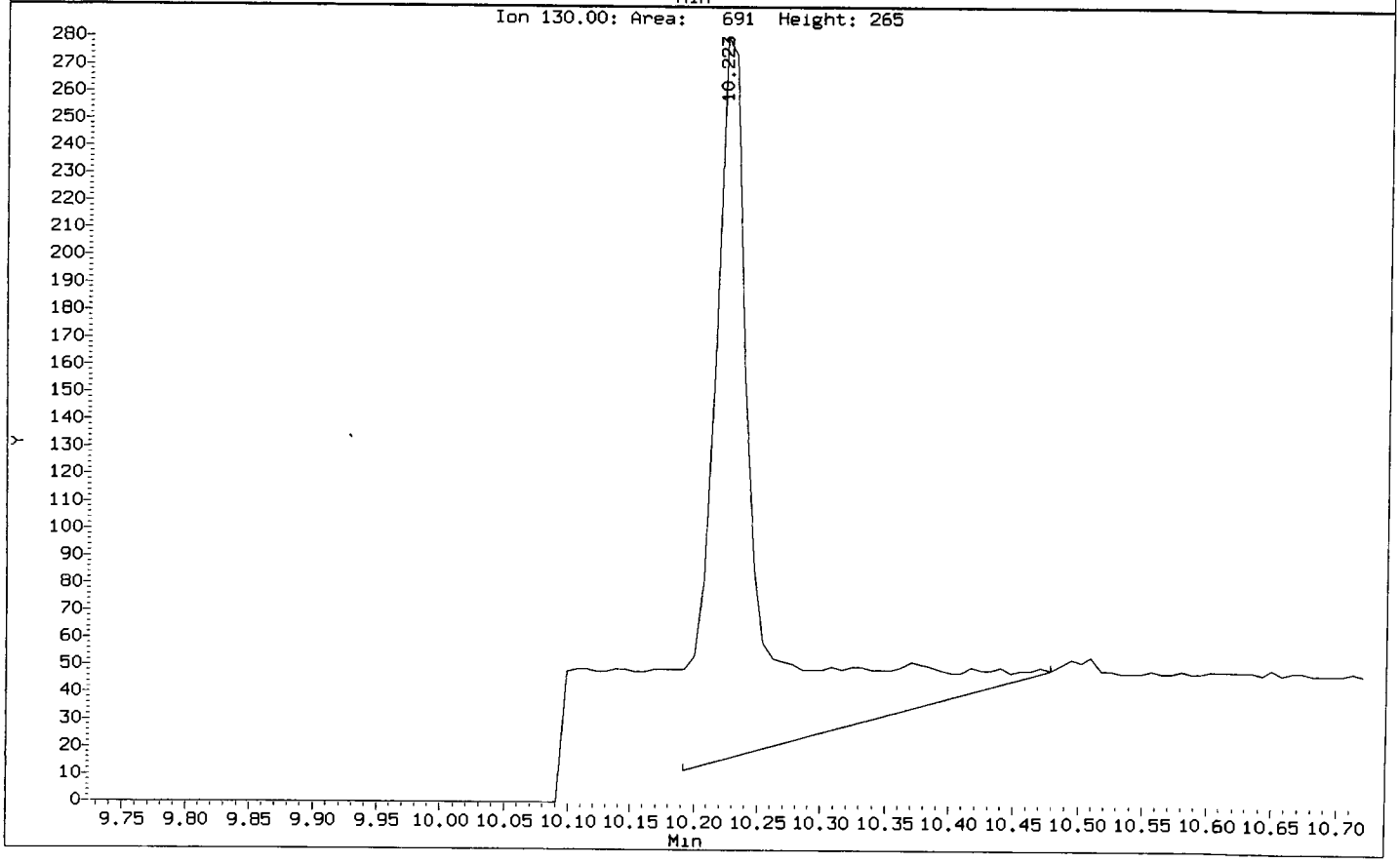
Analyst: VZ Date: 8/1/13

Data File: /chem1/nt10.1/20130730.b/SIM.b/1c0730f.d
Injection Date: 30-JUL-2013 15:05
Instrument: nt10.1
Client Sample ID:

Compound: N-Nitroso-di-n-propylamine
CAS Number: 621-64-7

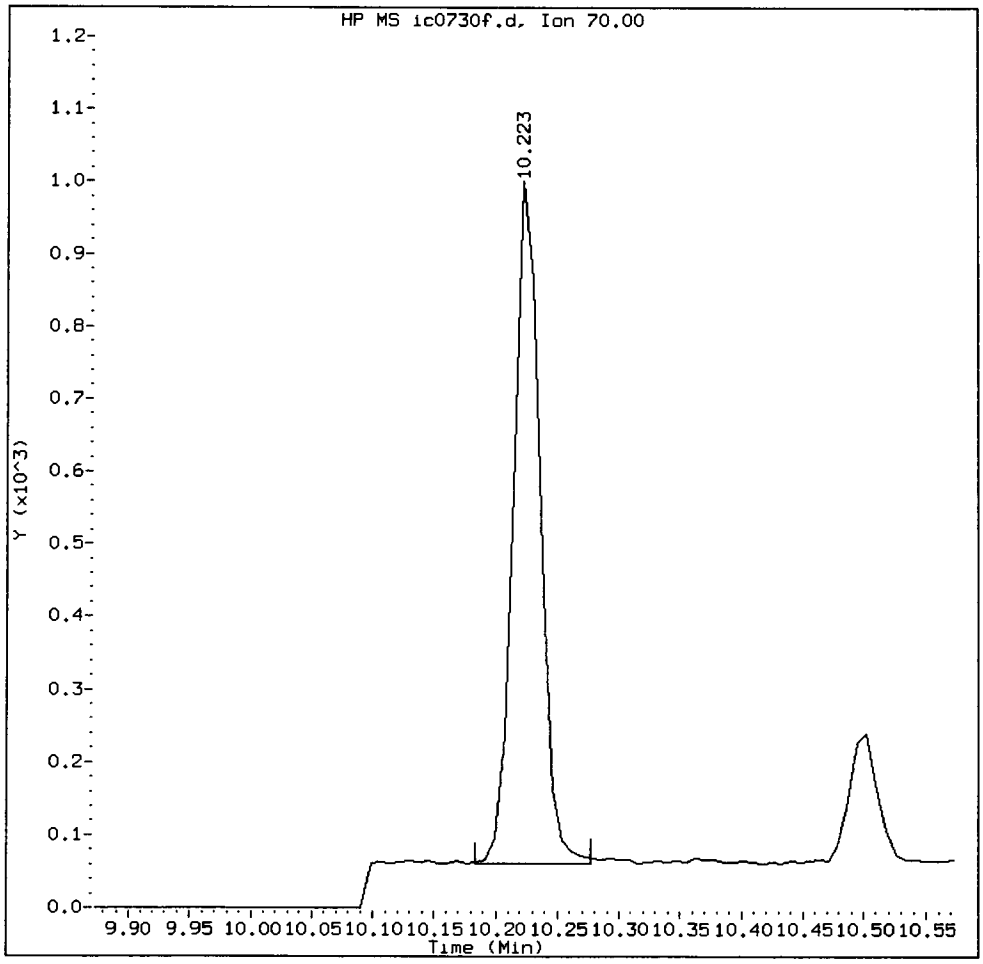


Y ≥ 8/1/13



IC0730F, /chem1/nt10.i/20130730.b/SIM.b/ic0730f.d

N-Nitroso-di-n-propylamine Amount: 0.05 Area: 1425



MANUAL INTEGRATION for N-Nitroso-di-n-propylamine

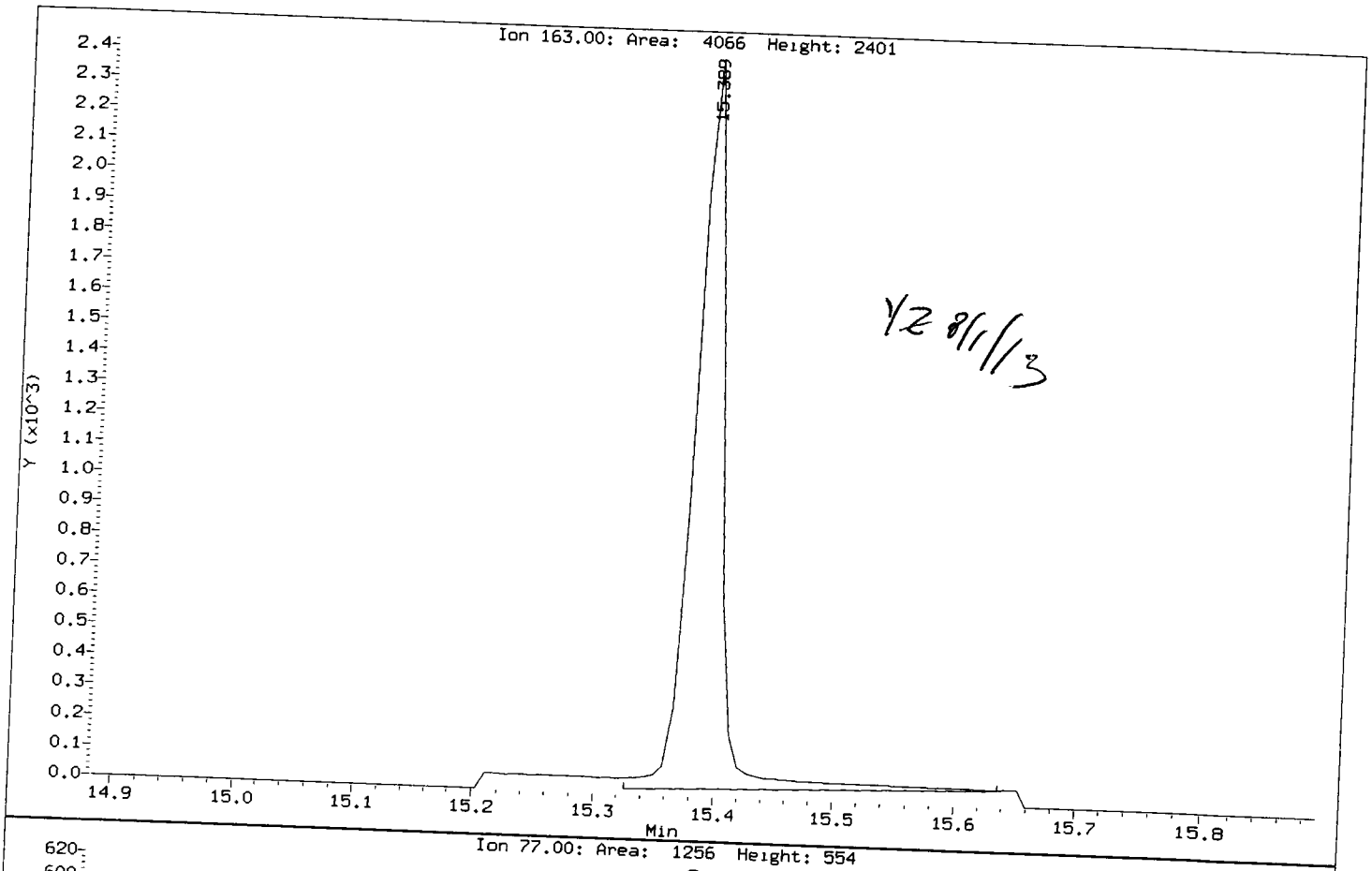
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

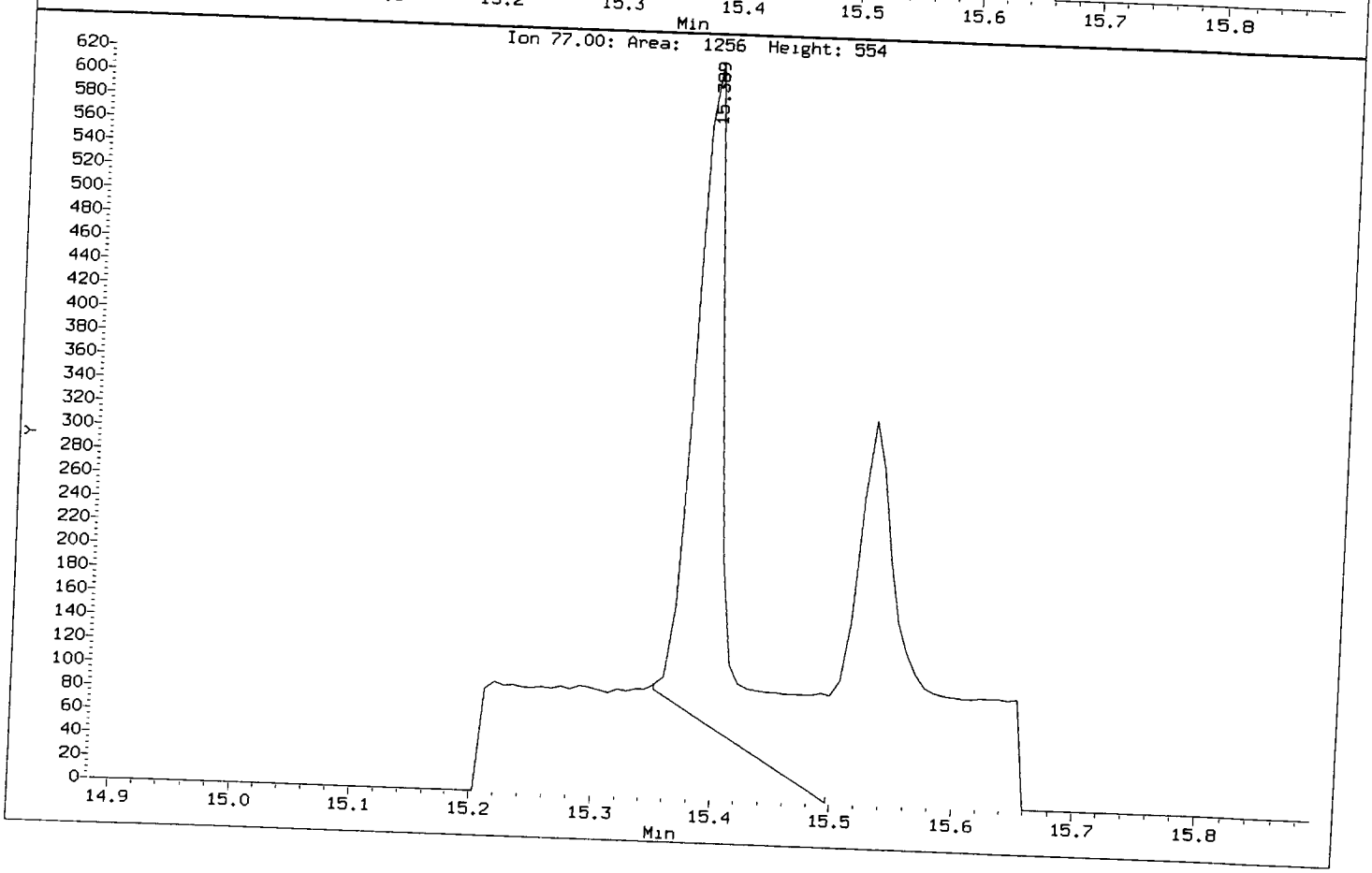
Analyst: YZ Date: 8/1/13

Data File: /chem1/nt10.1/20130730.b/SIM.b/1c0730f.d
Injection Date: 30-JUL-2013 15:05
Instrument: nt10.1
Client Sample ID:

Compound: Dimethylphthalate
CAS Number: 131-11-3

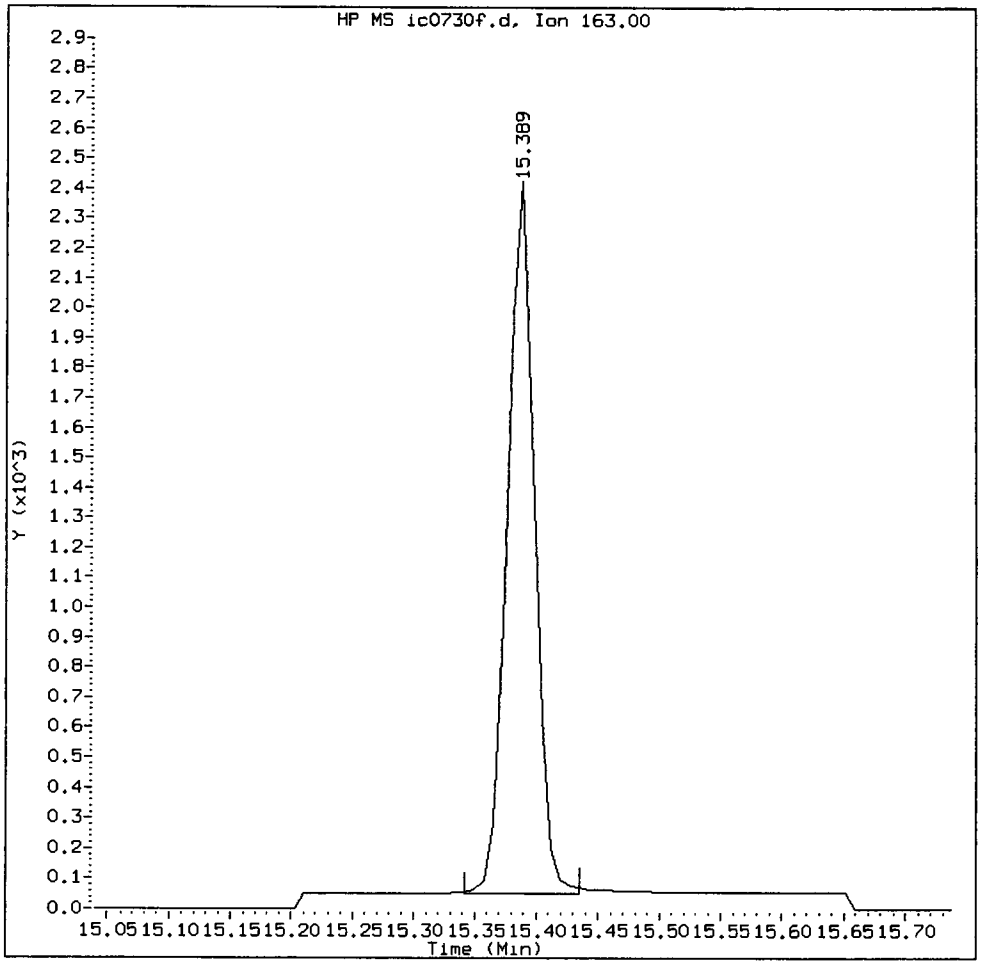


YZ 8/1/13



IC0730F, /chem1/nt10.i/20130730.b/SIM.b/ic0730f.d

Dimethylphthalate Amount: 0.05 Area: 3658



MANUAL INTEGRATION for Dimethylphthalate

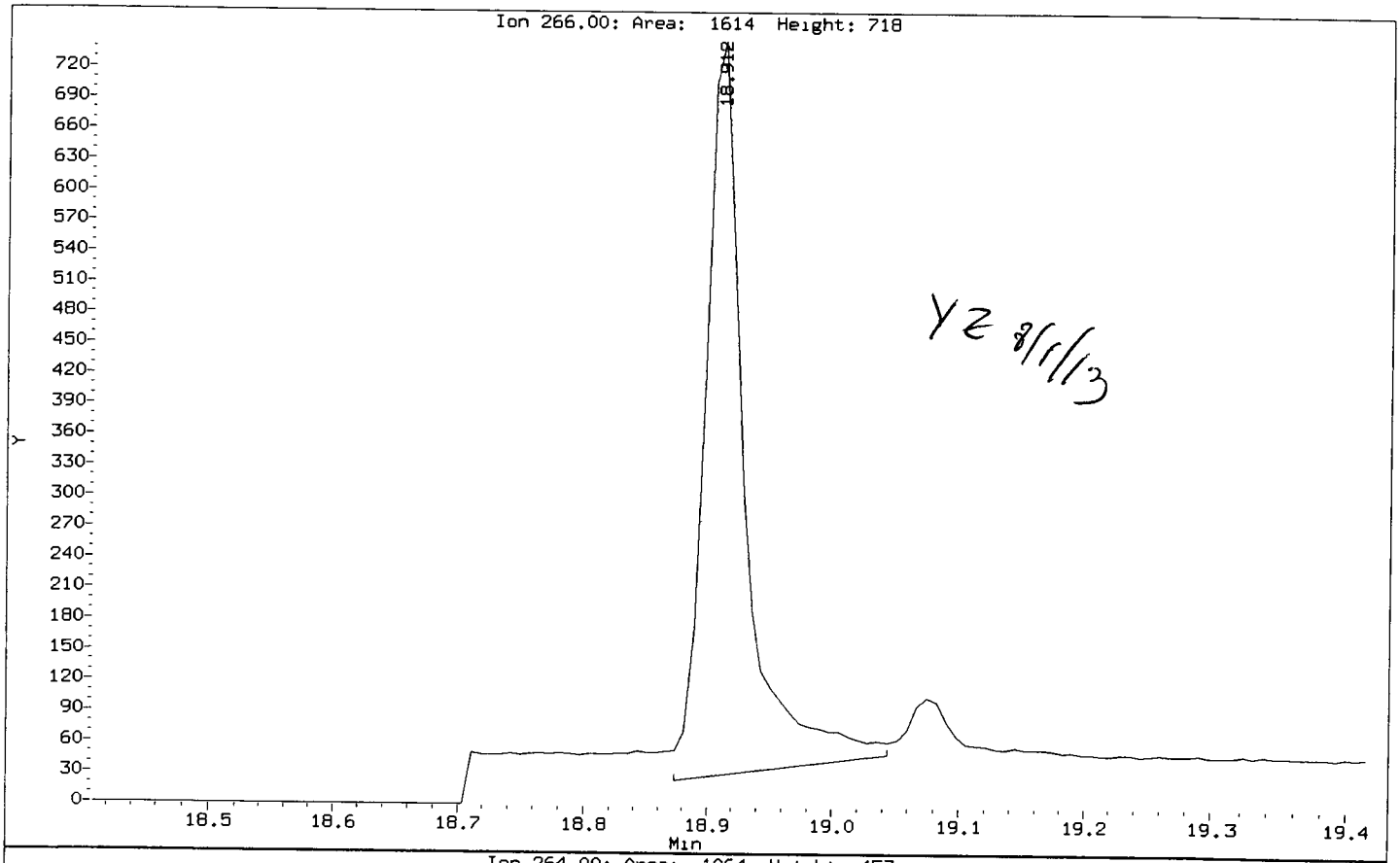
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

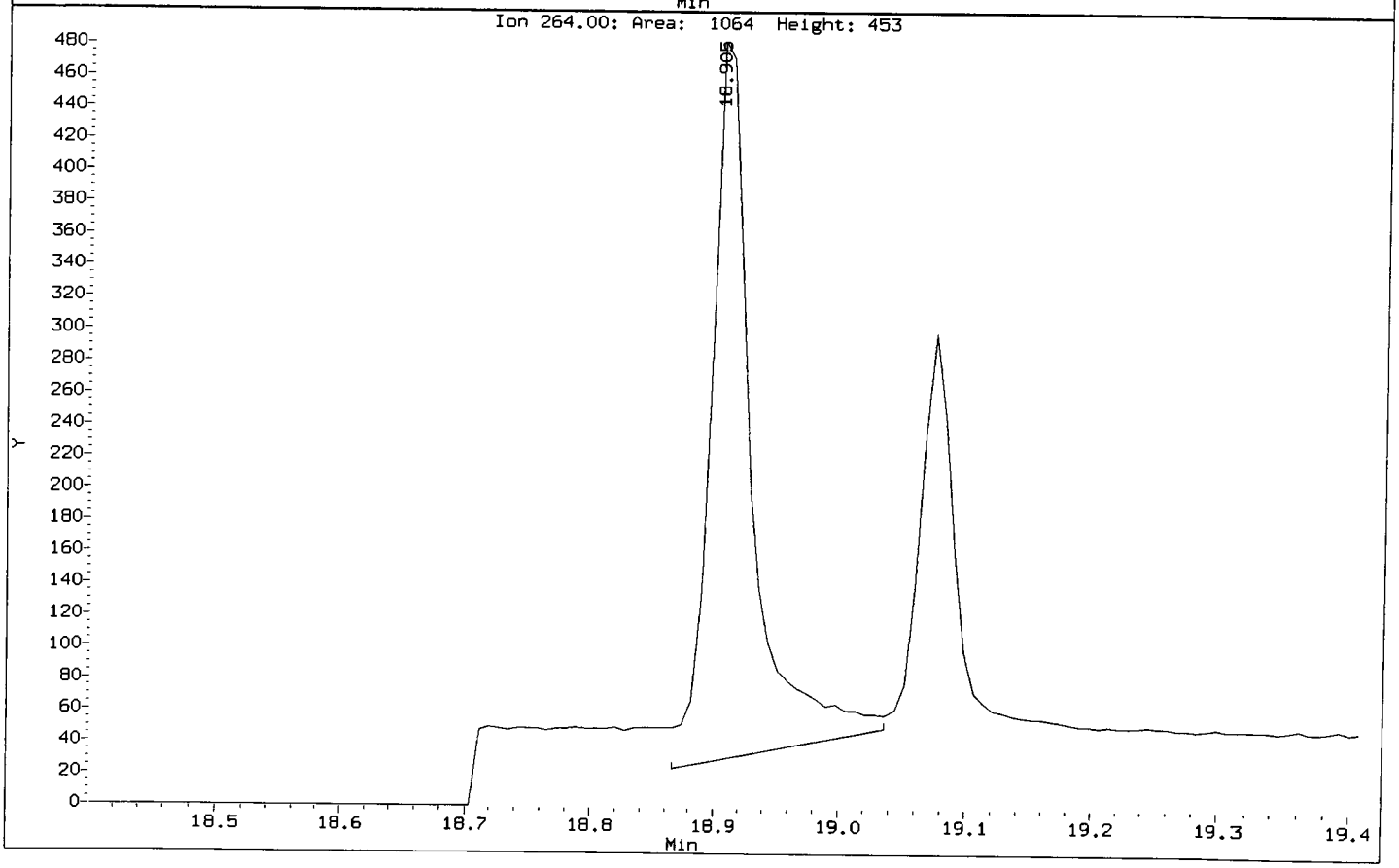
Analyst: YZ Date: 8/11/13

Data File: /chem1/nt10.1/20130730.b/SIM.b/1c0730f.d
Injection Date: 30-JUL-2013 15:05
Instrument: nt10.1
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5

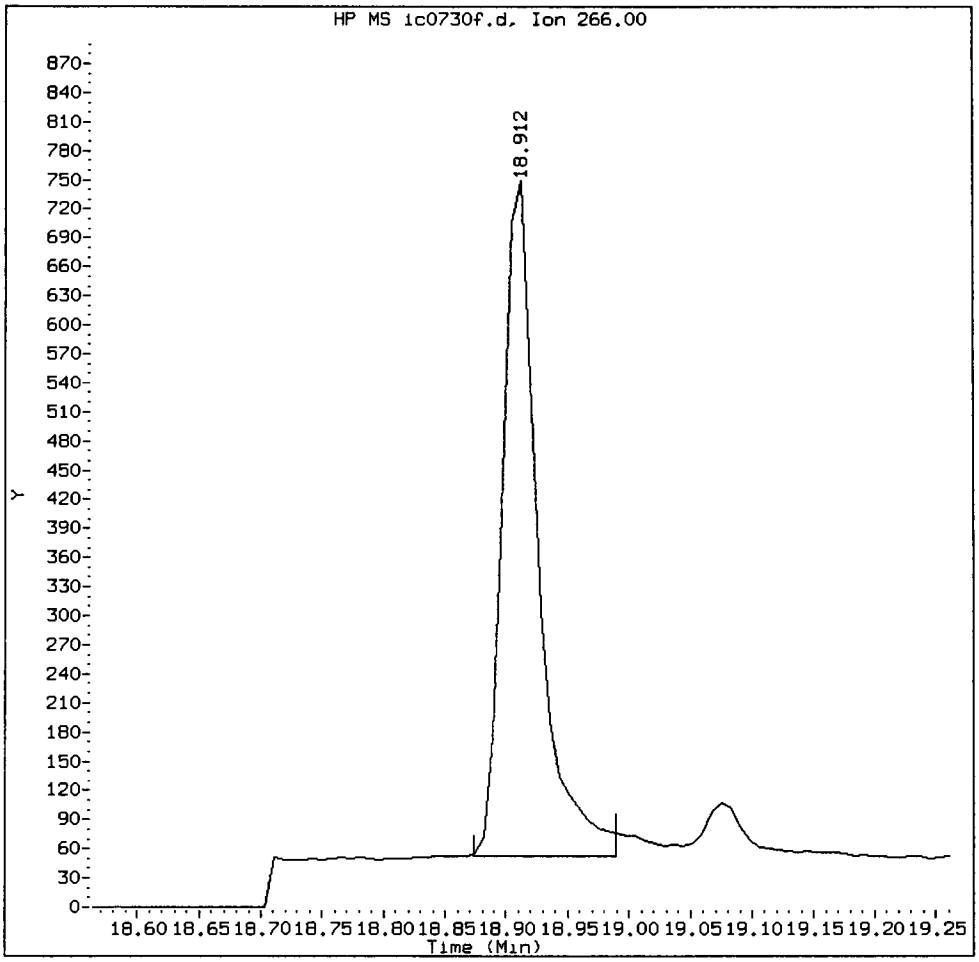


YZ 8/1/13



IC0730F, /chem1/nt10.i/20130730.b/SIM.b/ic0730f.d

Pentachlorophenol Amount: 0.06 Area: 1416



MANUAL INTEGRATION for Pentachlorophenol

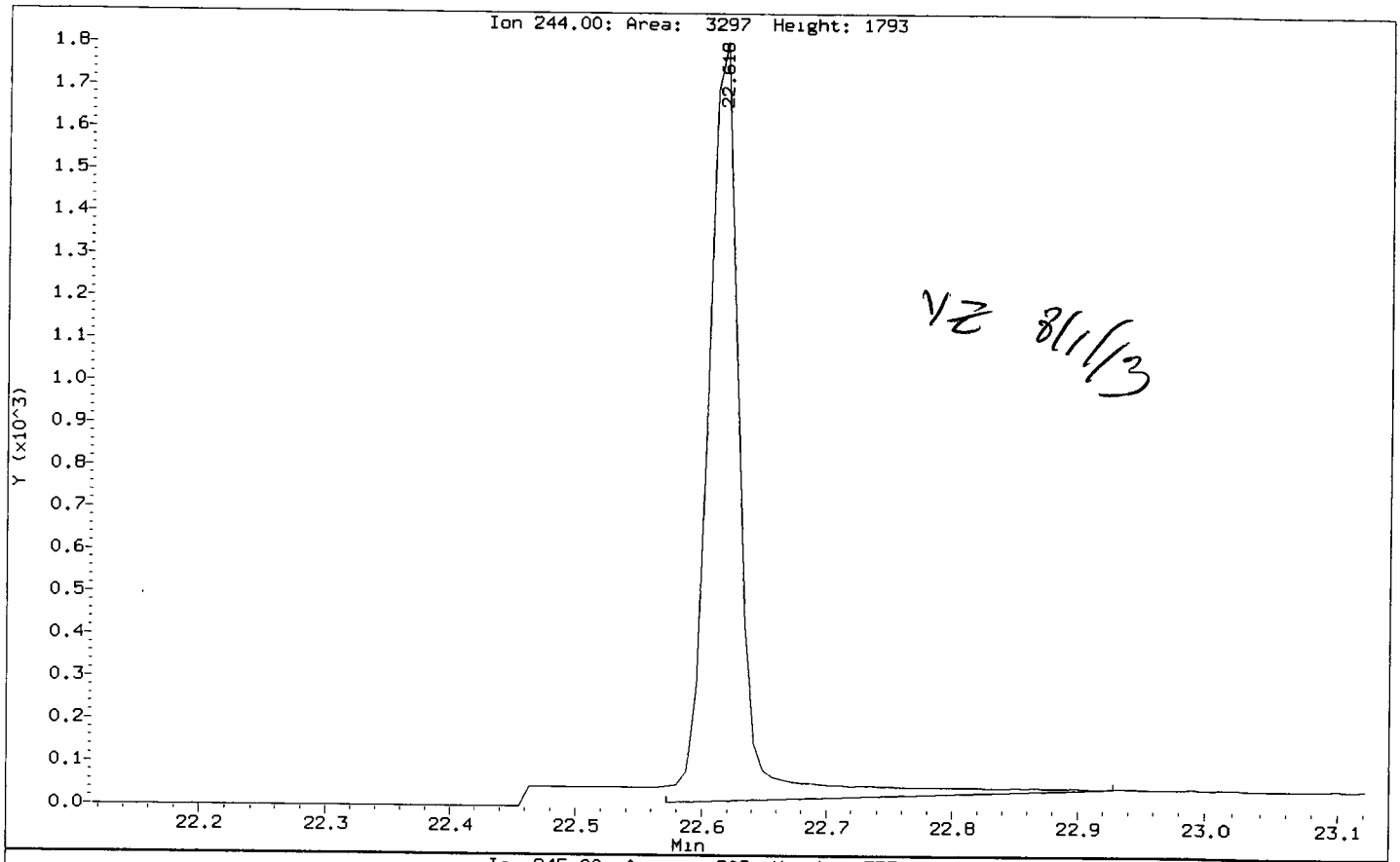
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

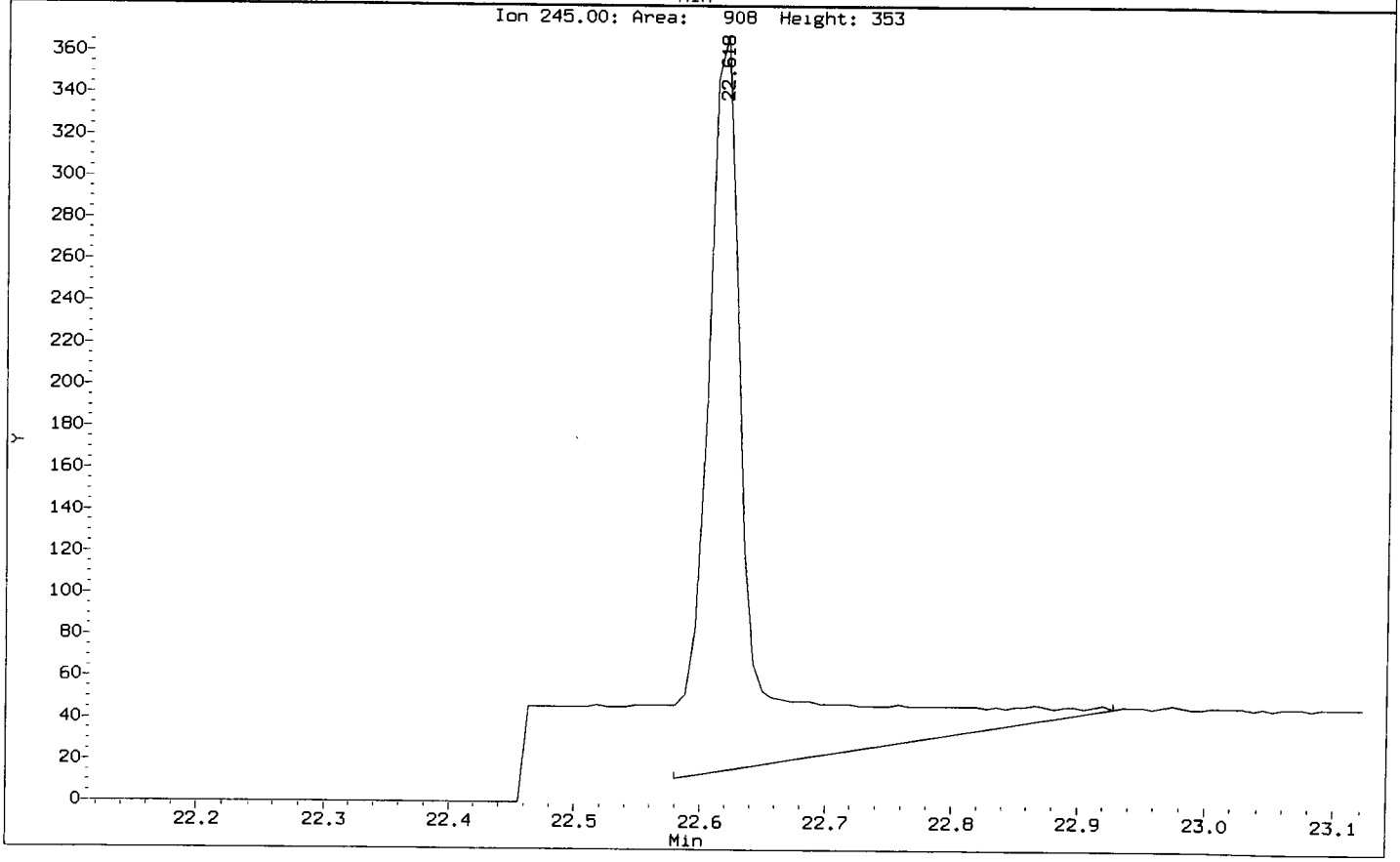
Analyst: JB Date: 8/11/13

Data File: /chem1/nt10.1/20130730.b/SIM.b/1c0730f.d
Injection Date: 30-JUL-2013 15:05
Instrument: nt10.1
Client Sample ID:

Compound: Terphenyl-d14
CAS Number:

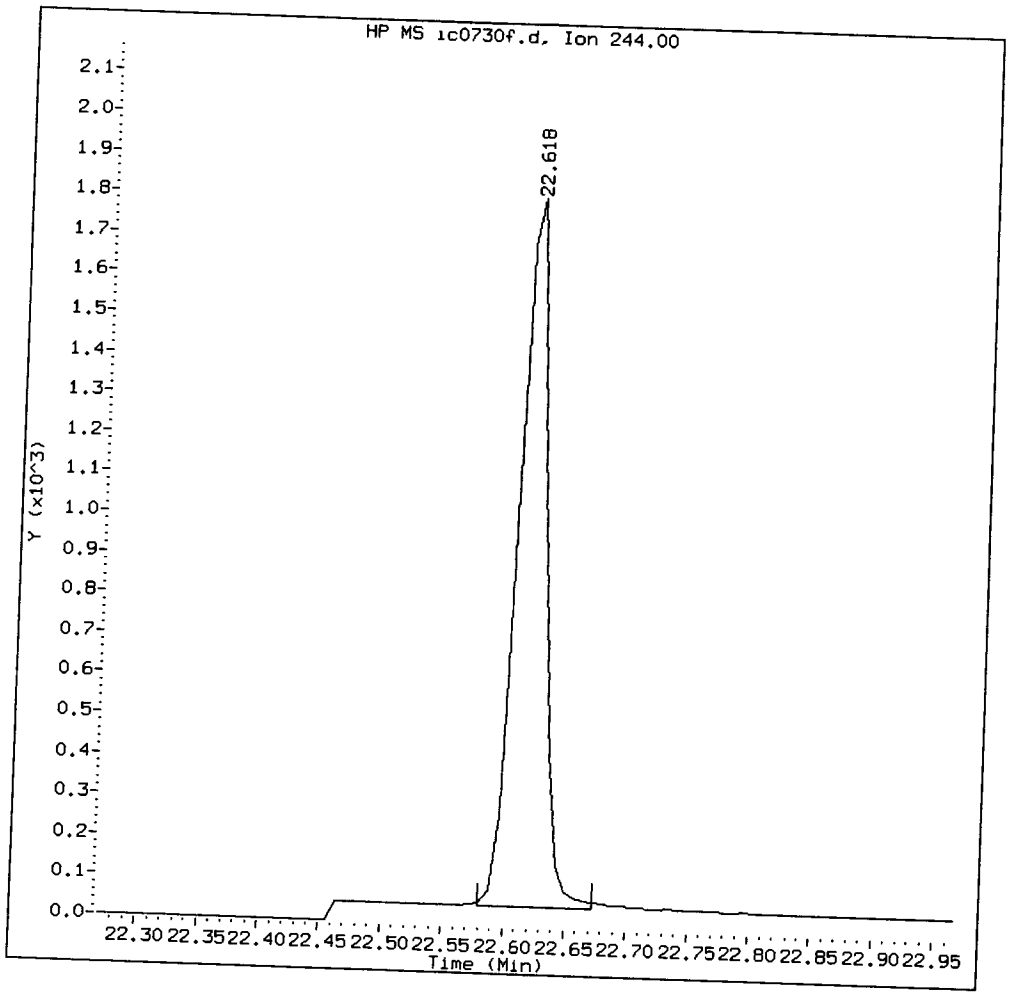


YZ 8/1/13



IC0730F, /chem1/nt10.i/20130730.b/SIM.b/ic0730f.d

Terphenyl-d14 Amount: 0.05 Area: 2847



MANUAL INTEGRATION for Terphenyl-d14

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: 1/3 Date: 8/1/13

CO-ELUTION SUMMARY FOR FILE - ic0730f.d

Lab ID: IC0730F, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 30-JUL-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130730.b/SIM.b/ic0730g.d
Lab Smp Id: IC0730G
Inj Date : 30-JUL-2013 15:43
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0730G
Misc Info :
Comment :
Method : /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Meth Date : 01-Aug-2013 13:48 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 15:43 Cal File: ic0730g.d
Als bottle: 9 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

YZ 8/1/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.957	6.957	(0.746)	134887	2.50000	2.553
	3 Phenol	94	8.673	8.673	(0.930)	183650	2.50000	2.661
	7 1,3-Dichlorobenzene	146	9.252	9.252	(0.992)	132023	2.50000	2.430
*	8 1,4-Dichlorobenzene-d4	152	9.322	9.322	(1.000)	132910	4.00000	
	9 1,4-Dichlorobenzene	146	9.353	9.353	(1.003)	128327	2.50000	2.416
	11 Benzyl alcohol	79	9.617	9.625	(1.032)	95143	2.50000	2.798
	12 1,2-Dichlorobenzene	146	9.734	9.733	(1.044)	122209	2.50000	2.420
	13 2-Methylphenol	108	9.873	9.873	(1.059)	130116	2.50000	2.604
	15 4-Methylphenol	108	10.161	10.161	(1.090)	134977	2.50000	2.659
	16 N-Nitroso-di-n-propylamine	70	10.230	10.223	(1.097)	81321	2.50000	2.602
	22 2,4-Dimethylphenol	107	11.290	11.290	(0.941)	243357	5.00000	5.155
	26 1,2,4-Trichlorobenzene	180	11.907	11.907	(0.993)	109747	2.50000	2.424
*	27 Naphthalene-d8	136	11.992	11.992	(1.000)	474817	4.00000	
	30 Hexachlorobutadiene	225	12.440	12.440	(1.037)	61384	2.50000	2.467
	39 Dimethylphthalate	163	15.388	15.388	(0.968)	206684	2.50000	2.496
*	42 Acenaphthene-d10	162	15.899	15.899	(1.000)	257369	4.00000	
	50 Diethylphthalate	149	16.974	16.974	(1.068)	237292	2.50000	2.540
	54 N-Nitrosodiphenylamine	169	17.375	17.375	(0.905)	162276	2.50000	2.598
	57 Hexachlorobenzene	284	18.517	18.517	(0.965)	86630	2.50000	2.414
	58 Pentachlorophenol	266	18.904	18.912	(0.985)	134703	5.00000	5.057
*	59 Phenanthrene-d10	188	19.191	19.191	(1.000)	510959	4.00000	
$	66 Terphenyl-d14	244	22.618	22.618	(0.920)	164109	2.50000	2.507
	67 Butylbenzylphthalate	149	23.609	23.609	(0.960)	160708	2.50000	2.732
*	69 Chrysene-d12	240	24.585	24.585	(1.000)	503923	4.00000	
*	77 Perylene-d12	264	27.179	27.178	(1.000)	528517	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.736	29.744	(1.094)	347280	2.50000	2.622
	90 N-Nitrosodimethylamine	74	4.679	4.687	(0.502)	179758	5.00000	5.234

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0730g.d
Lab Smp Id: IC0730G
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 30-JUL-2013
Calibration Time: 13:49
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	139368	69684	278736	132910	-4.63
27 Naphthalene-d8	497738	248869	995476	474817	-4.61
42 Acenaphthene-d10	263483	131742	526966	257369	-2.32
59 Phenanthrene-d10	519545	259772	1039090	510959	-1.65
69 Chrysene-d12	513753	256876	1027506	503923	-1.91
77 Perylene-d12	525862	262931	1051724	528517	0.50

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.32	8.82	9.82	9.32	0.00
27 Naphthalene-d8	11.99	11.49	12.49	11.99	0.00
42 Acenaphthene-d10	15.90	15.40	16.40	15.90	0.00
59 Phenanthrene-d10	19.18	18.68	19.68	19.19	0.04
69 Chrysene-d12	24.58	24.08	25.08	24.58	0.03
77 Perylene-d12	27.17	26.67	27.67	27.18	0.03

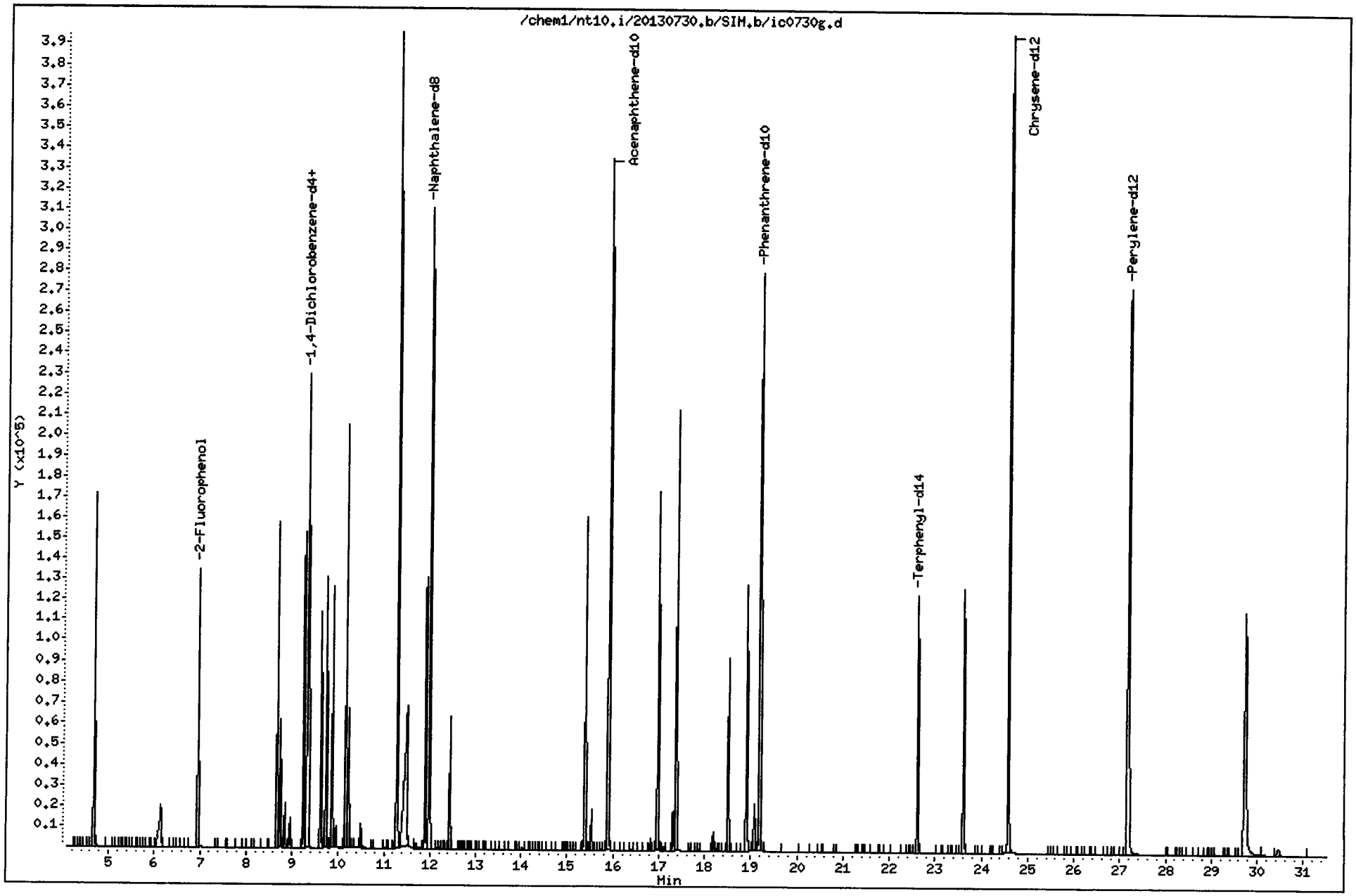
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130730.b/SIM.b/ic0730g.d
Date : 30-JUL-2013 15:43
Client ID:
Sample Info: IC0730G

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0730g.d

Lab ID: IC0730G, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 30-JUL-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130730.b/SIM.b/ic0730h.d
Lab Smp Id: IC0730H
Inj Date : 30-JUL-2013 16:21
Operator : YZ Inst ID: nt10.i
Smp Info : IC0730H
Misc Info :
Comment :
Method : /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Meth Date : 01-Aug-2013 13:48 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:21 Cal File: ic0730h.d
Als bottle: 10 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

YZ 8/1/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.957	6.957	(0.746)	5785	0.10000	0.09997
	3 Phenol	94	8.673	8.673	(0.930)	7560	0.10000	0.1000
	7 1,3-Dichlorobenzene	146	9.253	9.252	(0.992)	6207	0.10000	0.1043
*	8 1,4-Dichlorobenzene-d4	152	9.322	9.322	(1.000)	145552	4.00000	
	9 1,4-Dichlorobenzene	146	9.353	9.353	(1.003)	6389	0.10000	0.1099
	11 Benzyl alcohol	79	9.625	9.625	(1.032)	3744	0.10000	0.1005
	12 1,2-Dichlorobenzene	146	9.734	9.733	(1.044)	5792	0.10000	0.1047
	13 2-Methylphenol	108	9.873	9.873	(1.059)	5373	0.10000	0.09819
	15 4-Methylphenol	108	10.161	10.161	(1.090)	5301	0.10000	0.09534
	16 N-Nitroso-di-n-propylamine	70	10.223	10.223	(1.097)	3365	0.10000	0.09834
	22 2,4-Dimethylphenol	107	11.290	11.290	(0.941)	10169	0.20000	0.1977
	26 1,2,4-Trichlorobenzene	180	11.907	11.907	(0.993)	5205	0.10000	0.1055
*	27 Naphthalene-d8	136	11.992	11.992	(1.000)	517340	4.00000	
	30 Hexachlorobutadiene	225	12.440	12.440	(1.037)	2809	0.10000	0.1036
	39 Dimethylphthalate	163	15.388	15.388	(0.968)	9242	0.10000	0.1046
*	42 Acenaphthene-d10	162	15.899	15.899	(1.000)	274538	4.00000	
	50 Diethylphthalate	149	16.974	16.974	(1.068)	10011	0.10000	0.1005
	54 N-Nitrosodiphenylamine	169	17.375	17.375	(0.906)	6333	0.10000	0.09695
	57 Hexachlorobenzene	284	18.517	18.517	(0.965)	3920	0.10000	0.1044
	58 Pentachlorophenol	266	18.912	18.912	(0.986)	4267	0.20000	0.1544
*	59 Phenanthrene-d10	188	19.183	19.191	(1.000)	534378	4.00000	
$	66 Terphenyl-d14	244	22.618	22.618	(0.920)	7368	0.10000	0.1071
	67 Butylbenzylphthalate	149	23.609	23.609	(0.960)	5690	0.10000	0.09202
*	69 Chrysene-d12	240	24.585	24.585	(1.000)	529724	4.00000	
*	77 Perylene-d12	264	27.179	27.178	(1.000)	527438	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.744	29.744	(1.094)	12639	0.10000	0.09563
	90 N-Nitrosodimethylamine	74	4.695	4.687	(0.504)	7583	0.20000	0.2016

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0730h.d
Lab Smp Id: IC0730H
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 30-JUL-2013
Calibration Time: 13:49

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	139368	69684	278736	145552	4.44
27 Naphthalene-d8	497738	248869	995476	517340	3.94
42 Acenaphthene-d10	263483	131742	526966	274538	4.20
59 Phenanthrene-d10	519545	259772	1039090	534378	2.85
69 Chrysene-d12	513753	256876	1027506	529724	3.11
77 Perylene-d12	525862	262931	1051724	527438	0.30

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.32	8.82	9.82	9.32	0.00
27 Naphthalene-d8	11.99	11.49	12.49	11.99	0.00
42 Acenaphthene-d10	15.90	15.40	16.40	15.90	0.00
59 Phenanthrene-d10	19.18	18.68	19.68	19.18	0.00
69 Chrysene-d12	24.58	24.08	25.08	24.58	0.03
77 Perylene-d12	27.17	26.67	27.67	27.18	0.03

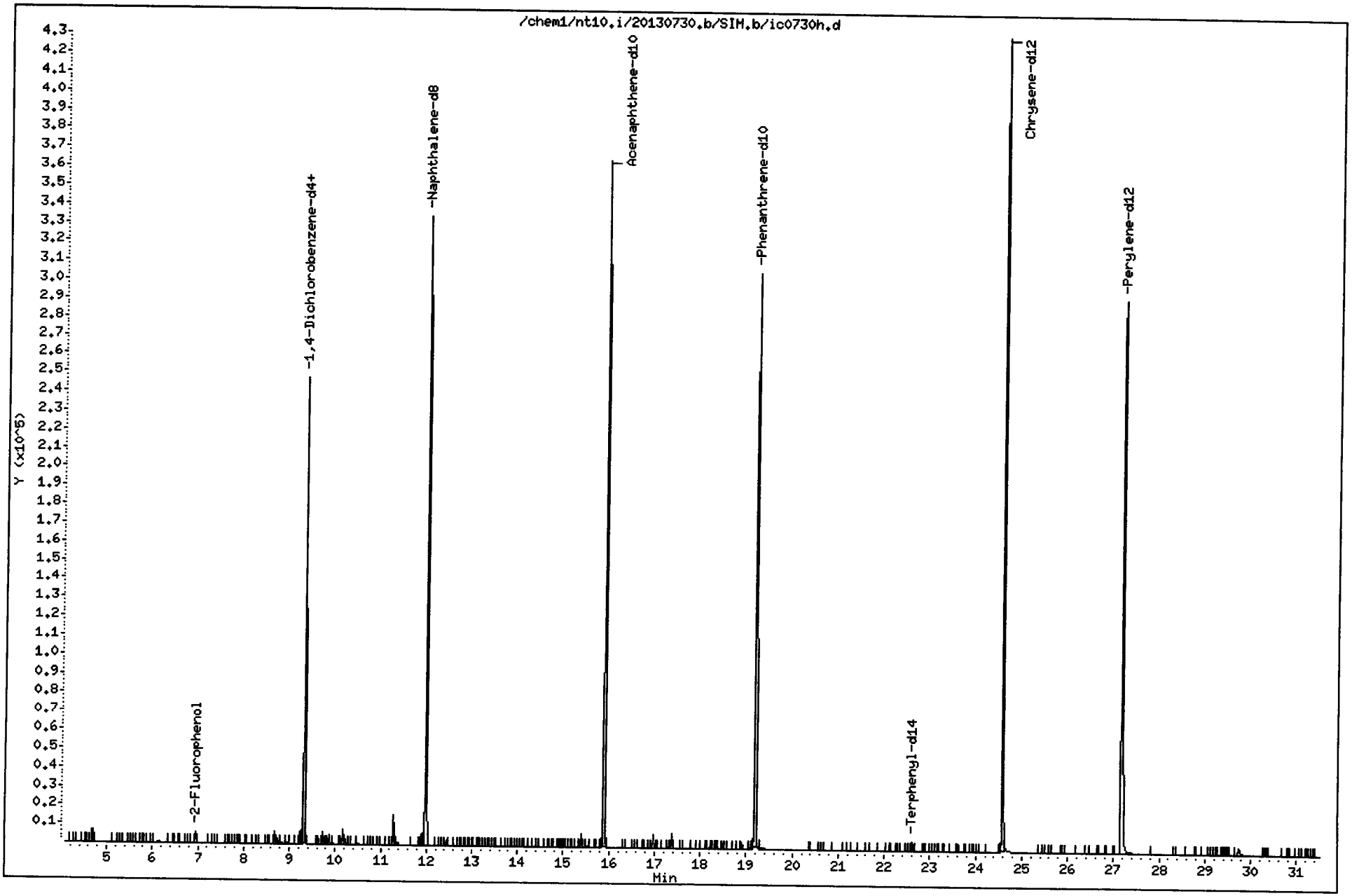
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130730.b/SIM.b/ic0730h.d
Date : 30-JUL-2013 16:21
Client ID:
Sample Info: IC0730H

Column phase: ZB-5msi

Instrument: nt10.i

Operator: YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0730h.d

Lab ID: IC0730H, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 30-JUL-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 8/1/13

Data file : /chem1/nt10.i/20130730.b/SIM.b/ic0730i.d
Lab Smp Id: IC0730I
Inj Date : 30-JUL-2013 16:59
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0730I
Misc Info :
Comment :
Method : /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Meth Date : 01-Aug-2013 13:48 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 11 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.957	6.957	(0.746)	28271	0.50000	0.5162
	3 Phenol	94	8.673	8.673	(0.930)	38256	0.50000	0.5348
	7 1,3-Dichlorobenzene	146	9.252	9.252	(0.992)	28955	0.50000	0.5141
*	8 1,4-Dichlorobenzene-d4	152	9.322	9.322	(1.000)	137763	4.00000	
	9 1,4-Dichlorobenzene	146	9.353	9.353	(1.003)	28093	0.50000	0.5103
	11 Benzyl alcohol	79	9.625	9.625	(1.032)	19064	0.50000	0.5408
	12 1,2-Dichlorobenzene	146	9.733	9.733	(1.044)	27106	0.50000	0.5179
	13 2-Methylphenol	108	9.873	9.873	(1.059)	27042	0.50000	0.5221
	15 4-Methylphenol	108	10.161	10.161	(1.090)	27774	0.50000	0.5278
	16 N-Nitroso-di-n-propylamine	70	10.223	10.223	(1.097)	17010	0.50000	0.5252
	22 2,4-Dimethylphenol	107	11.290	11.290	(0.941)	51930	1.00000	1.046
	26 1,2,4-Trichlorobenzene	180	11.907	11.907	(0.993)	24248	0.50000	0.5090
*	27 Naphthalene-d8	136	11.992	11.992	(1.000)	499547	4.00000	
	30 Hexachlorobutadiene	225	12.440	12.440	(1.037)	13282	0.50000	0.5073
	39 Dimethylphthalate	163	15.388	15.388	(0.968)	43710	0.50000	0.5010
*	42 Acenaphthene-d10	162	15.899	15.899	(1.000)	271165	4.00000	
	50 Diethylphthalate	149	16.974	16.974	(1.068)	49206	0.50000	0.4999
	54 N-Nitrosodiphenylamine	169	17.375	17.375	(0.905)	34399	0.50000	0.5220
	57 Hexachlorobenzene	284	18.517	18.517	(0.965)	18606	0.50000	0.4913
	58 Pentachlorophenol	266	18.912	18.912	(0.985)	25122	1.00000	0.8998
*	59 Phenanthrene-d10	188	19.191	19.191	(1.000)	539106	4.00000	
$	66 Terphenyl-d14	244	22.618	22.618	(0.920)	34363	0.50000	0.4927
	67 Butylbenzylphthalate	149	23.609	23.609	(0.960)	30440	0.50000	0.4857
*	69 Chrysene-d12	240	24.585	24.585	(1.000)	536934	4.00000	
*	77 Perylene-d12	264	27.178	27.178	(1.000)	547990	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.744	29.744	(1.094)	67946	0.50000	0.4948
	90 N-Nitrosodimethylamine	74	4.687	4.687	(0.503)	37951	1.00000	1.066

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0730i.d
Lab Smp Id: IC0730I
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130730.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 30-JUL-2013
Calibration Time: 13:49
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	139368	69684	278736	137763	-1.15
27 Naphthalene-d8	497738	248869	995476	499547	0.36
42 Acenaphthene-d10	263483	131742	526966	271165	2.92
59 Phenanthrene-d10	519545	259772	1039090	539106	3.77
69 Chrysene-d12	513753	256876	1027506	536934	4.51
77 Perylene-d12	525862	262931	1051724	547990	4.21

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.32	8.82	9.82	9.32	0.00
27 Naphthalene-d8	11.99	11.49	12.49	11.99	0.00
42 Acenaphthene-d10	15.90	15.40	16.40	15.90	0.00
59 Phenanthrene-d10	19.18	18.68	19.68	19.19	0.04
69 Chrysene-d12	24.58	24.08	25.08	24.58	0.03
77 Perylene-d12	27.17	26.67	27.67	27.18	0.03

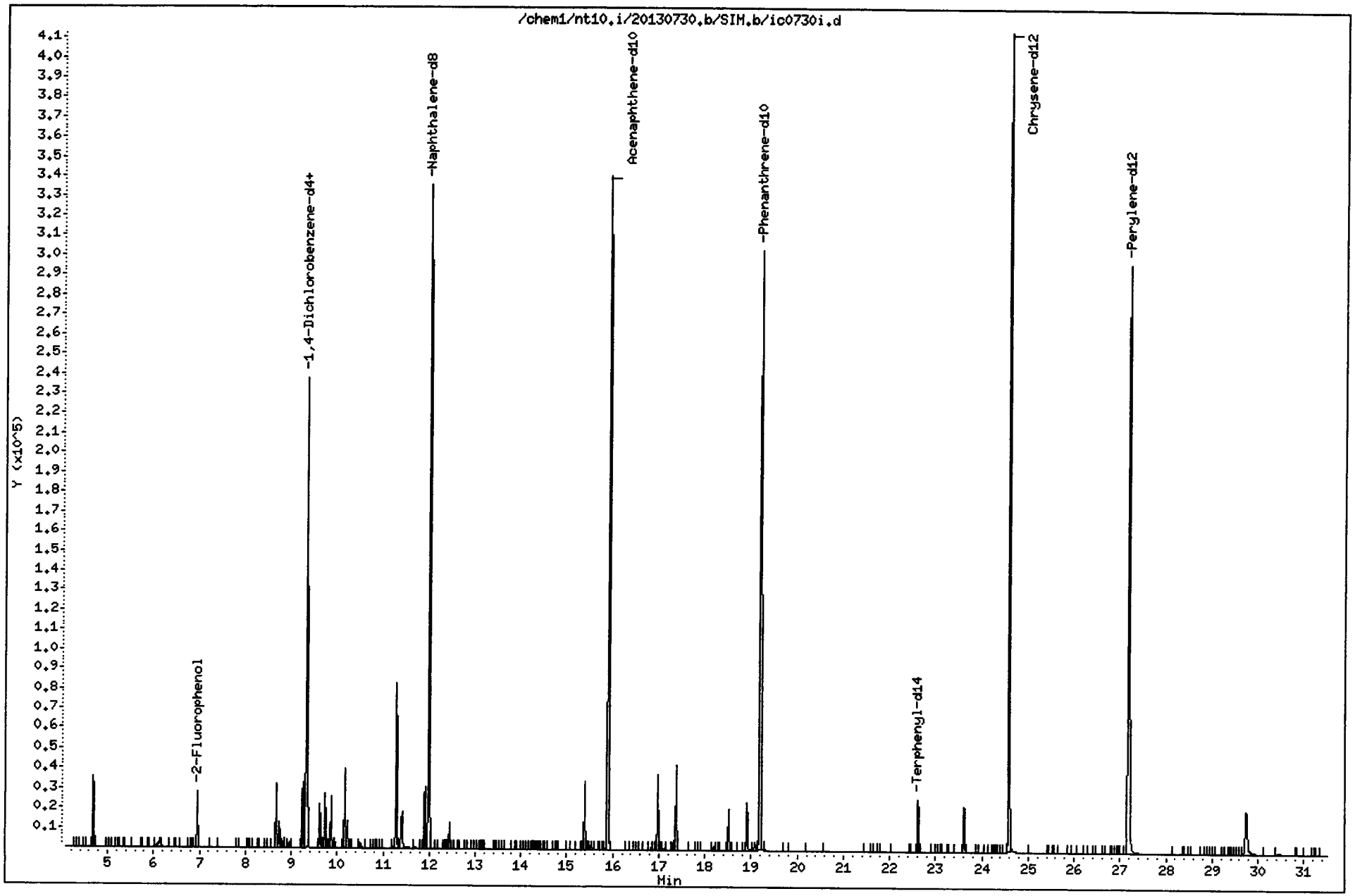
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130730.b/SIM.b/ic0730i.d
Date : 30-JUL-2013 16:59
Client ID:
Sample Info: IC0730I

Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0730i.d

Lab ID: IC0730I, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 30-JUL-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130730.b/df0730.d

Date : 30-JUL-2013 11:39

Client ID: DFTPP

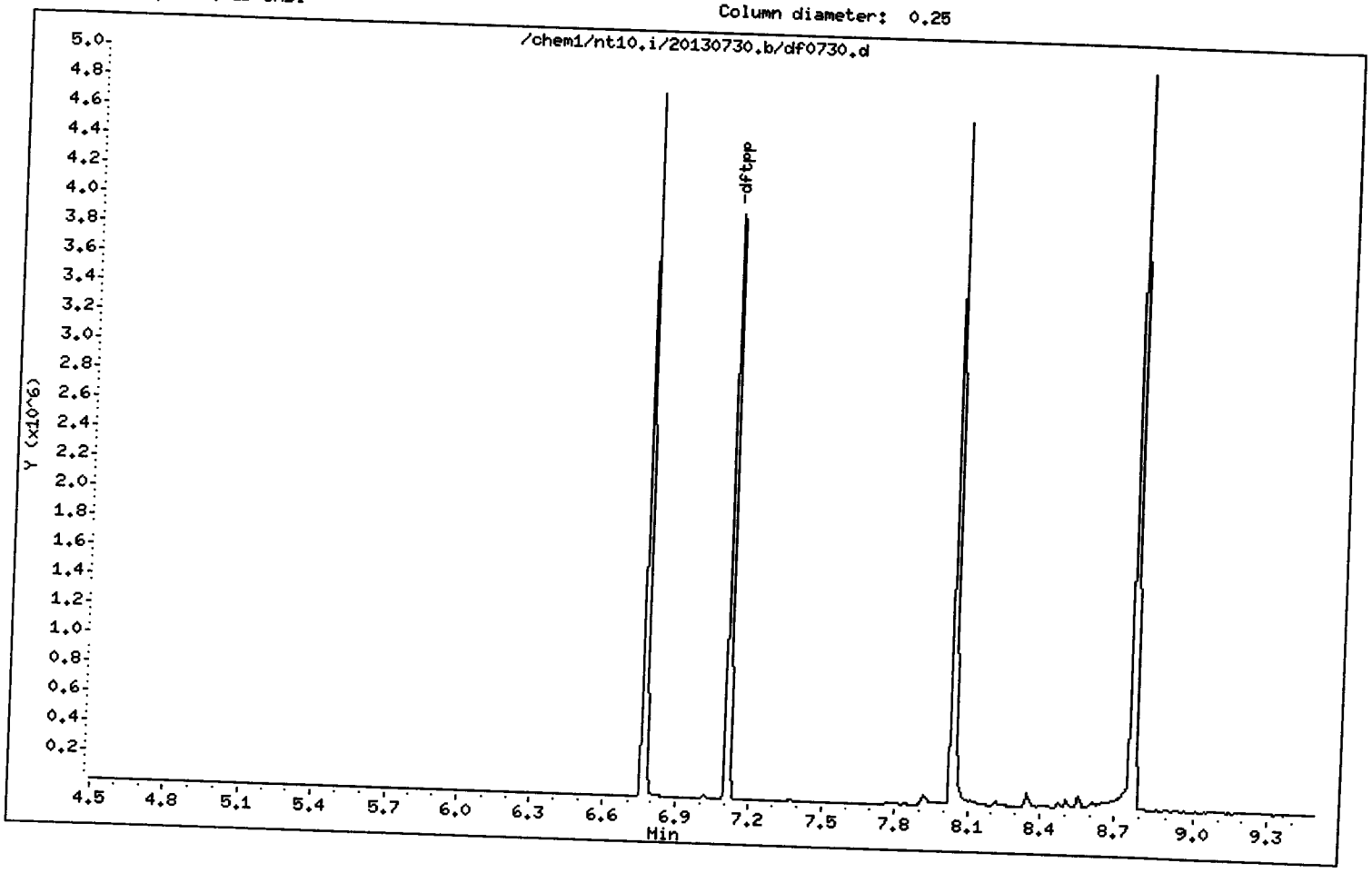
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130730.b/df0730.d

Date : 30-JUL-2013 11:39

Client ID: DFTPP

Instrument: nt10.i

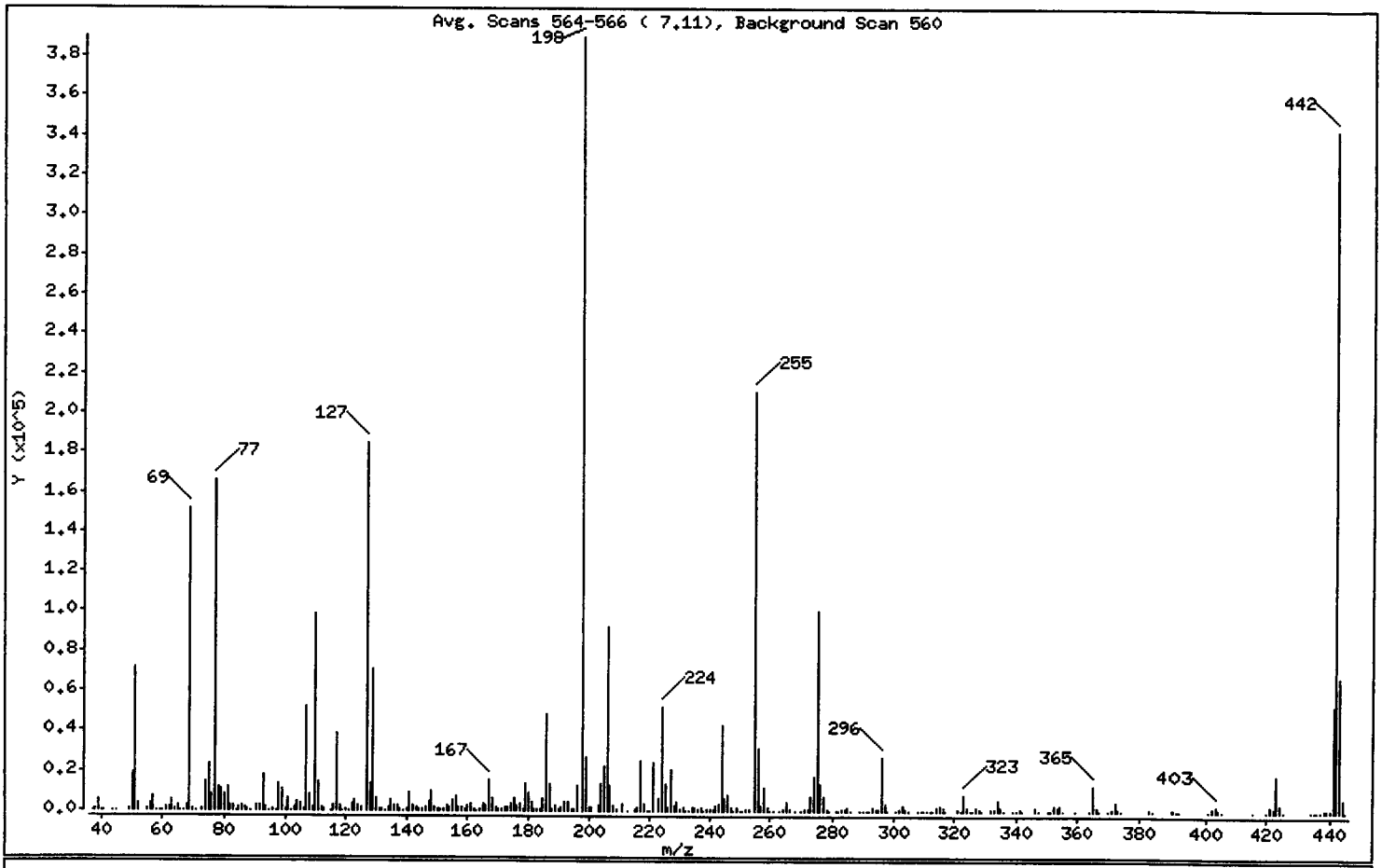
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	18.36
68	Less than 2.00% of mass 69	0.61 (1.56)
69	Mass 69 relative abundance	38.84
70	Less than 2.00% of mass 69	0.19 (0.50)
127	10.00 - 80.00% of mass 198	47.39
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.91
275	10.00 - 60.00% of mass 198	25.68
365	Greater than 1.00% of mass 198	3.16
441	0.01 - 24.00% of mass 442	13.62 (15.45)
442	50.00 - 200.00% of mass 198	88.15
443	15.00 - 24.00% of mass 442	17.35 (19.68)

Data File: /chem1/nt10.i/20130730.b/df0730.d

Date : 30-JUL-2013 11:39

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0730.d

Spectrum: Avg. Scans 564-566 (7.11), Background Scan 560

Location of Maximum: 198.00

Number of points: 318

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	328	128.00	13574	211.00	3640	303.00	2788
38.00	1008	129.00	70864	213.00	265	304.00	907
39.00	5753	130.00	6439	215.00	1013	305.00	57
40.00	244	131.00	1138	216.00	1931	308.00	311
41.00	81	132.00	563	217.00	25520	309.00	223
44.00	225	133.00	283	218.00	3227	310.00	369
45.00	74	134.00	1986	219.00	303	311.00	62
49.00	549	135.00	5739	220.00	158	312.00	52
50.00	19168	136.00	2274	221.00	24544	313.00	296
51.00	71624	137.00	2538	223.00	5897	314.00	1369
52.00	3836	138.00	665	224.00	52328	315.00	2905
55.00	534	139.00	307	225.00	13367	316.00	1653
56.00	3163	140.00	927	226.00	1501	317.00	334
57.00	7367	141.00	8634	227.00	20440	321.00	866
58.00	337	142.00	2792	228.00	3050	322.00	437
59.00	56	143.00	1939	229.00	4379	323.00	8245
60.00	53	144.00	541	230.00	594	324.00	1532
61.00	1519	145.00	519	231.00	1901	325.00	136
62.00	1975	146.00	1467	232.00	400	326.00	154
63.00	5409	147.00	4271	233.00	394	327.00	1611
64.00	843	148.00	9477	234.00	1392	328.00	783
65.00	2858	149.00	1935	235.00	1564	329.00	126
66.00	264	150.00	517	236.00	893	332.00	753
67.00	195	151.00	1084	237.00	1659	333.00	913
68.00	2366	152.00	702	238.00	194	334.00	5326
69.00	151488	153.00	2559	239.00	920	335.00	1440
70.00	751	154.00	2187	240.00	717	336.00	123
71.00	147	155.00	4977	241.00	1198	339.00	70
73.00	988	156.00	7129	242.00	2752	340.00	134
74.00	14451	157.00	1529	243.00	3163	341.00	1030
75.00	23368	158.00	1446	244.00	43432	342.00	227
76.00	7675	159.00	1291	245.00	5913	346.00	1687
77.00	166080	160.00	2690	246.00	8005	347.00	268
78.00	11280	161.00	3917	247.00	1566	350.00	62
79.00	10509	162.00	1188	248.00	447	351.00	147

Data File: /chem1/nt10.i/20130730.b/df0730.d

Date : 30-JUL-2013 11:39

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0730.d

Spectrum: Avg. Scans 564-566 (7.11), Background Scan 560

Location of Maximum: 198.00

Number of points: 318

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	8278	163.00	351	249.00	1510	352.00	2709
81.00	11914	164.00	546	250.00	350	353.00	1873
82.00	2957	165.00	3335	251.00	442	354.00	2577
83.00	2658	166.00	2456	252.00	506	355.00	429
84.00	192	167.00	15600	253.00	1128	359.00	160
85.00	2166	168.00	6478	255.00	210496	364.00	90
86.00	3042	169.00	1382	256.00	31032	365.00	12333
87.00	1516	170.00	597	257.00	2327	366.00	1703
88.00	579	171.00	742	258.00	12061	367.00	55
89.00	306	172.00	1641	259.00	1838	370.00	337
91.00	2726	173.00	2127	260.00	317	371.00	832
92.00	3046	174.00	3632	261.00	306	372.00	4535
93.00	17840	175.00	6642	263.00	51	373.00	1082
94.00	1450	176.00	2260	264.00	458	374.00	103
95.00	411	177.00	3199	265.00	4689	383.00	1163
96.00	689	178.00	1141	266.00	971	384.00	261
97.00	402	179.00	13100	268.00	154	390.00	653
98.00	13253	180.00	8739	270.00	328	391.00	437
99.00	10502	181.00	4295	271.00	907	392.00	276
100.00	930	182.00	721	272.00	706	401.00	266
101.00	6620	183.00	531	273.00	7209	402.00	1690
102.00	349	184.00	1198	274.00	17384	403.00	2664
103.00	2203	185.00	6414	275.00	100160	404.00	953
104.00	4401	186.00	48520	276.00	13021	405.00	128
105.00	3905	187.00	13572	277.00	7510	415.00	71
106.00	1332	188.00	1334	278.00	1191	420.00	50
107.00	51816	189.00	2935	279.00	271	421.00	2375
108.00	7949	190.00	474	281.00	85	422.00	2092
109.00	1628	191.00	1435	282.00	197	423.00	17584
110.00	99016	192.00	4384	283.00	904	424.00	3287
111.00	14650	193.00	4812	284.00	582	425.00	315
112.00	1936	194.00	1008	285.00	1351	434.00	67
113.00	600	195.00	783	286.00	209	435.00	154
115.00	161	196.00	12411	289.00	434	436.00	356
116.00	2694	198.00	390016	290.00	328	437.00	139

Data File: /chem1/nt10.i/20130730.b/df0730.d

Date : 30-JUL-2013 11:39

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0730.d

Spectrum: Avg. Scans 564-566 (7.11), Background Scan 560

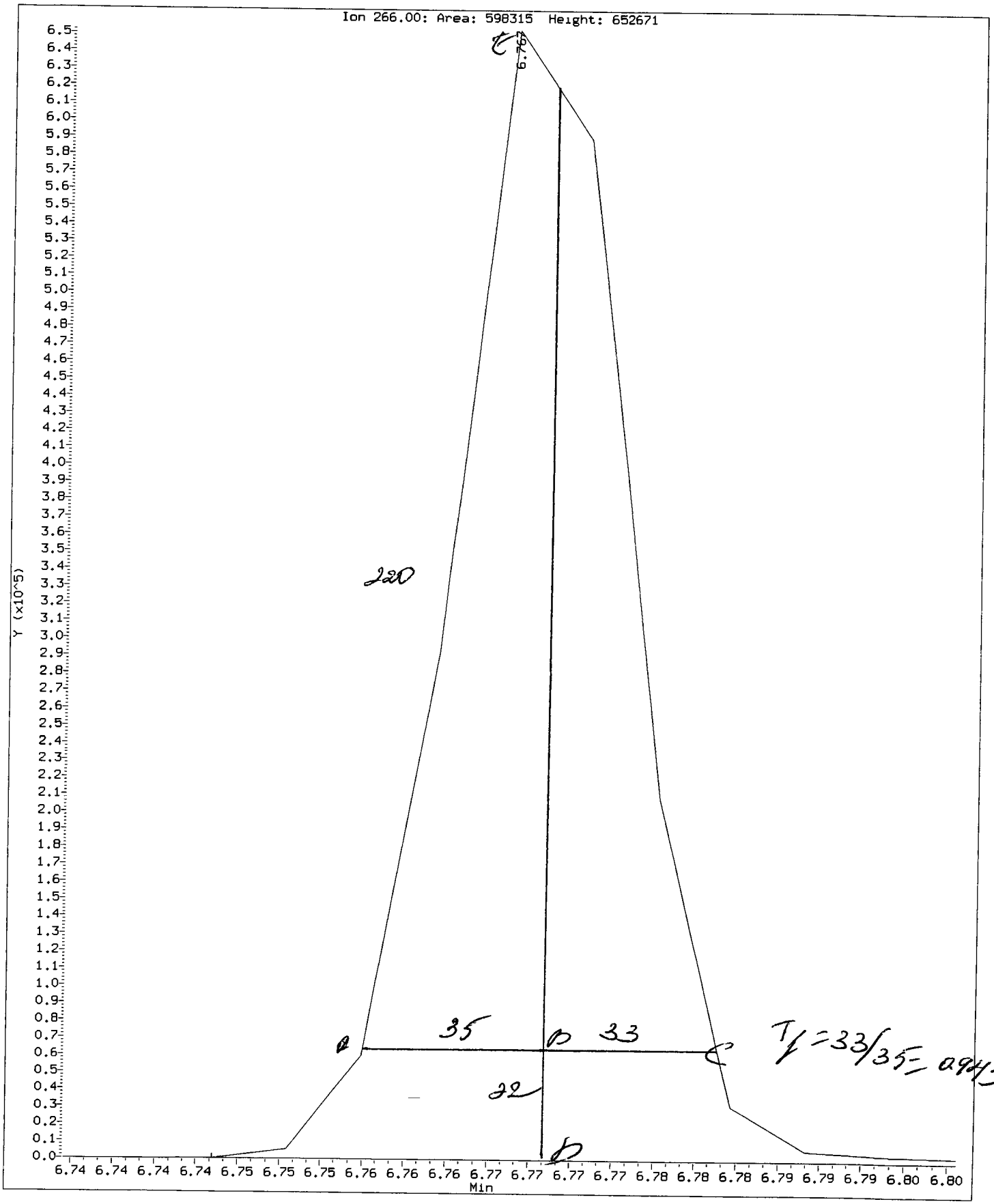
Location of Maximum: 198.00

Number of points: 318

m/z	Y	m/z	Y	m/z	Y	m/z	Y
117.00	38656	199.00	26952	291.00	367	438.00	683
118.00	2667	200.00	2008	292.00	395	439.00	603
119.00	404	201.00	2032	293.00	1673	440.00	726
120.00	594	203.00	2520	294.00	469	441.00	53112
121.00	265	204.00	13213	295.00	712	442.00	343808
122.00	3147	205.00	22616	296.00	26880	443.00	67656
123.00	5056	206.00	92536	297.00	3712	444.00	6285
124.00	2345	207.00	12210	298.00	267	445.00	389
125.00	1977	208.00	2889	301.00	251		
127.00	184832	209.00	952	302.00	482		

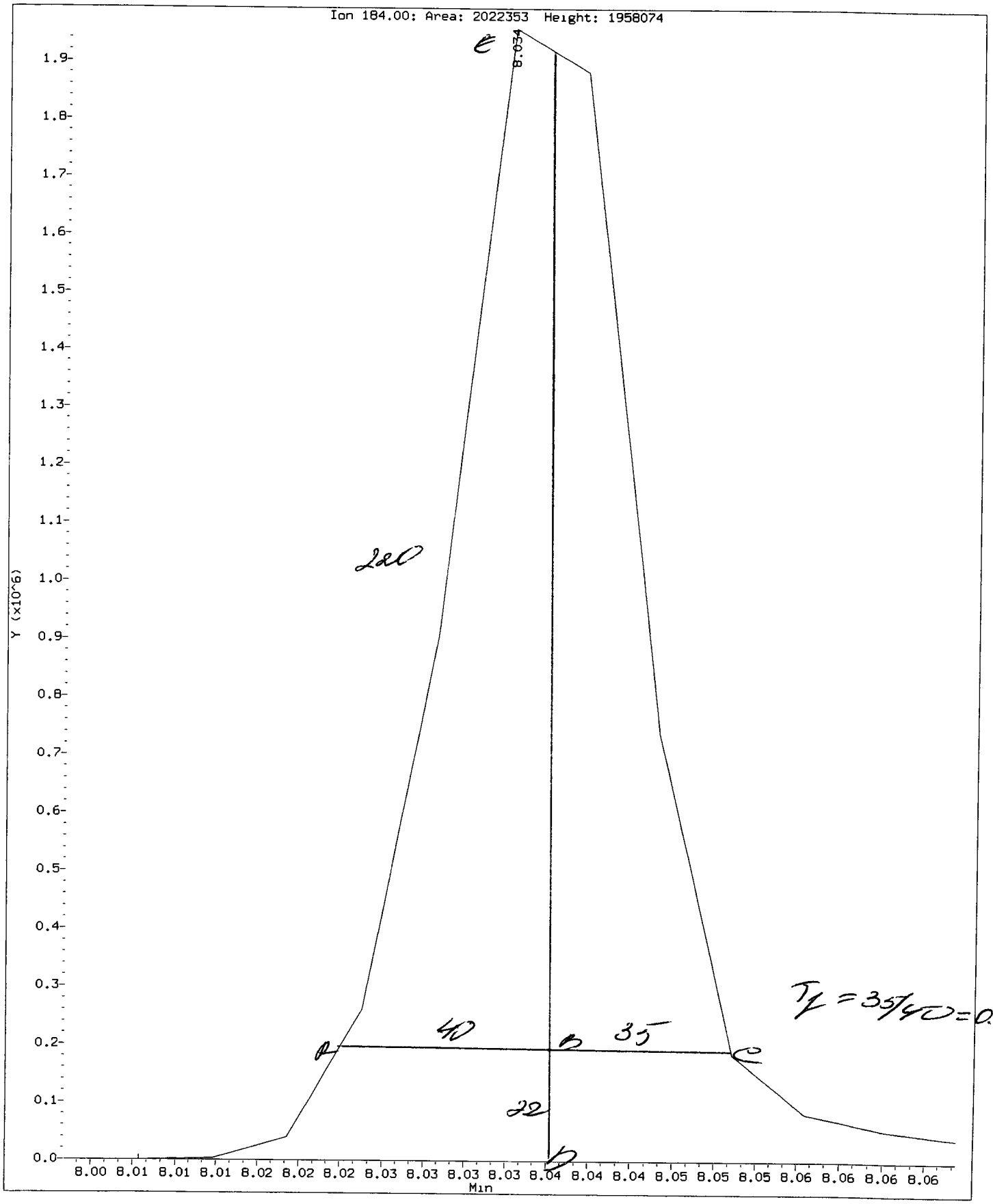
Data File: /chem1/nt10.i/20130730.b/ddt.b/df0730.d
Injection Date: 30-JUL-2013 11:39
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.1/20130730.b/ddt.b/df0730.d
Injection Date: 30-JUL-2013 11:39
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130730.b/ddt.b/df0730.d
Method: /chem1/nt10.i/20130730.b/ddt.b/sw846ddt.m
Analysis Date: 30-JUL-2013 11:39

ARI ID: DFTPP
Misc: 11-
Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.767	598188
Benzidine	8.034	2020321
4,4'-DDE	8.216	3238
4,4'-DDD	8.505	11850
4,4'-DDT	8.772	1034743

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(3238 + 11850) * 100}{(3238 + 11850 + 1034743)}$$

DDT Percent Breakdown = 1.4 %

SIM Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WY32, WY33

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WX32 Client ID: SAIC

METHOD: **8270D**(SIM-SVOA) **KRONE**(Butyl Tins) **8270D**(SVOA) **8270D**(OP-Pest)

Instrument: NT-4 NT-6 NT-8 (NT-10) NT11 NT12

Curve Date: 07/30/13 Analysis Start Date: 08/04/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
DFTPP Tune met Criteria?	(Y) / N / ✓	Internal Standard within 50-200%?	(Y) / N / ✓
DDT Breakdown <20%?	(Y) / N / ___	Retention Times within Windows?	(Y) / N / ✓
Peak Tailing Factor ≤2?	(Y) / N / ✓	Method Blank in Control?	(Y) / N / ✓
CCAL Meets %D?	(Y) / N / ✓	LCS / LCSD Recovery in Control?	(Y) / N / ✓
ICAL Q Flag applied?	Y / (N) / ___	LCS / LCSD RPD ≤ 30%?	(NA) / ___
CCAL Q flag applied?	Y / (N) / ___	MS / MSD Recovery in Control?	(Y) / N / ✓
Surrogate Recovery met?	(Y) / N / ✓	MS / MSD RPD ≤ 30%?	NA / X
Manual Integrations?	(Y) / N / ✓	Samples Diluted?	(Y) / N / 3X
Integration Summary?	(Y) / N / ✓	Special Analysis Request?	(Y) / N / ___

Detail problems, corrective actions and/or other pertinent information below.

- All samples + ms/msd were run @ 3x dilution due to dark color of the extracts

(Review 1) Analyst: KZ **Date:** 8/3/13

(Review 2) Reviewer: [signature] **Date:** 8/5

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 8/1/13 Analysis: ~~ABN~~/SIM ABN Analyst: YZ

GC Program: ABN_1 Column No: 268782 Column Type: 20 5 ms i

Instrument Tune (.U or .CT.): B0228C1 EM Voltage: 1829

Calibration File: ~~DF073~~ DF0801 Curve Date: ~~07/30/13~~ Injection Vol.: 1uL

IS/SS	Ical/Ccal	LCS/ICV
B928	B112 B943	
	B676 2004-2	
	B931	

Document All Maintenance Tasks In Element

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130801.b

	Time	Filename	LabID	ClientId	DF											
1	1507	df0801.d	DFTPP	DFTPP	1	NO ISTDS FOUND										
2	1600	cc0801a.d	CC0801A		1	9.22	135945	11.89	494817	15.80	261014	19.09	515482	24.52	498735	27.11	492140
3	1638	wy32mb.d	WY32MBS1	WY32MBS1	1	9.22	117471	11.88	449658	15.80	236837	19.09	461469	24.52	441464	27.11	412109
4	1716	wy32sb.d	WY32LCSS1	WY32LCSS1	1	9.22	102846	11.89	379092	15.80	207225	19.09	401843	24.52	393081	27.11	362225
5	1909	wy32a.d	WY32A	UP-CB-B8-201	3	9.22	120926	11.89	449010	15.80	222142	19.10	404188	24.55	384492	27.17	417082
6	1947	wy32ams.d	WY32AMS	UP-CB-B8-201	3	9.22	108042	11.89	382996	15.81	179848	19.10	328200	24.55	319931	27.18	391517
7	2025	wy32amsd.d	WY32AMSD	UP-CB-B8-201	3	9.22	113485	11.89	427376	15.81	197445	19.11	369537	24.55	360131	27.19	402630
8	2103	wy32b.d	WY32B	UP-MHF-165-2	3	9.22	113541	11.89	422511	15.81	188556	19.11	366992	24.55	354926	27.18	387885
9	2141	wy32c.d	WY32C	UP-CB-A6-201	3	9.22	109640	11.89	414541	15.81	192478	19.11	352808	24.58	336964	27.22	382483

YZ 8/3/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In Element

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20130801.b/SIM.b

ARI Job No.: WY32 Method: SIM.b/SIMABN2.m Instrument: nt10.i Date: 01-AUG-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1638	wy32mb.d	WY32MBS1	WY32MBS1	1	NO MANUAL INTEGRATION
1716	wy32sb.d	WY32LCSS1	WY32LCSS1	1	NO MANUAL INTEGRATION
1909	wy32a.d	WY32A	UP-CB-B8-2	3	1,4-Dichlorobenzene, Dimethylphthalate, Diethylphthalate,
1947	wy32ams.d	WY32AMS	UP-CB-B8-2	3	NO MANUAL INTEGRATION
2025	wy32amsd.d	WY32AMSD	UP-CB-B8-2	3	NO MANUAL INTEGRATION
2103	wy32b.d	WY32B	UP-MHF-165	3	1,2,4-Trichlorobenzene, Pentachlorophenol,
2141	wy32c.d	WY32C	UP-CB-A6-2	3	Benzyl alcohol, Dimethylphthalate, Diethylphthalate,

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130801.b/SIM.b

Instrument: nt10.i Date: 01-AUG-2013 Method: SIM.b/SIMABN2.m

INITIAL CAL: 30-JUL-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 01-AUG-2013

Compound	%D
NO Q-FLAGS	

Data File: /chem1/nt10.i/20130801.b/df0801.d

Date : 01-AUG-2013 15:07

Client ID: DFTPP

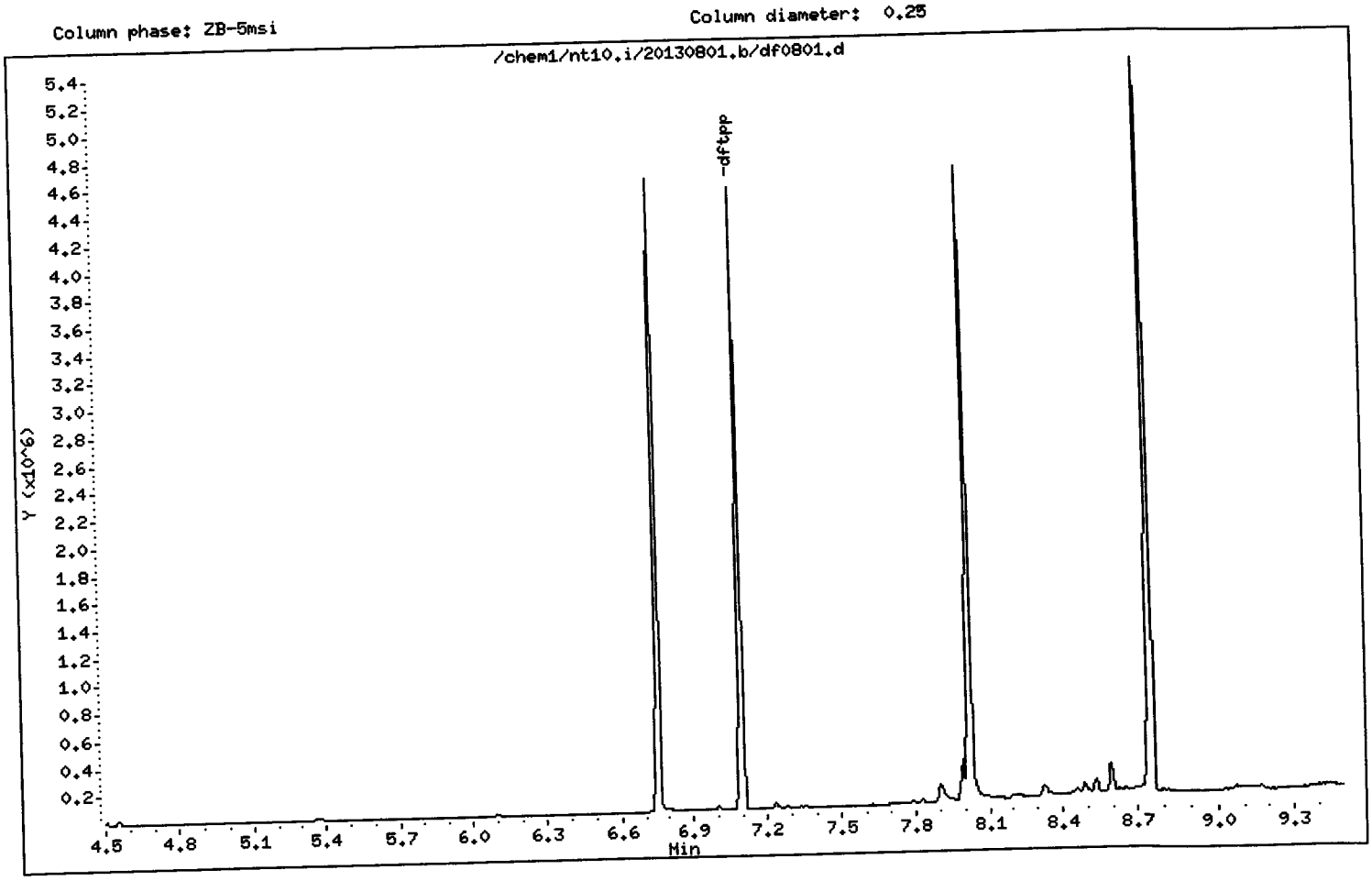
Sample Info: DFTPP

Instrument: nt10.i

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130801.b/df0801.d

Date : 01-AUG-2013 15:07

Client ID: DFTPP

Instrument: nt10.i

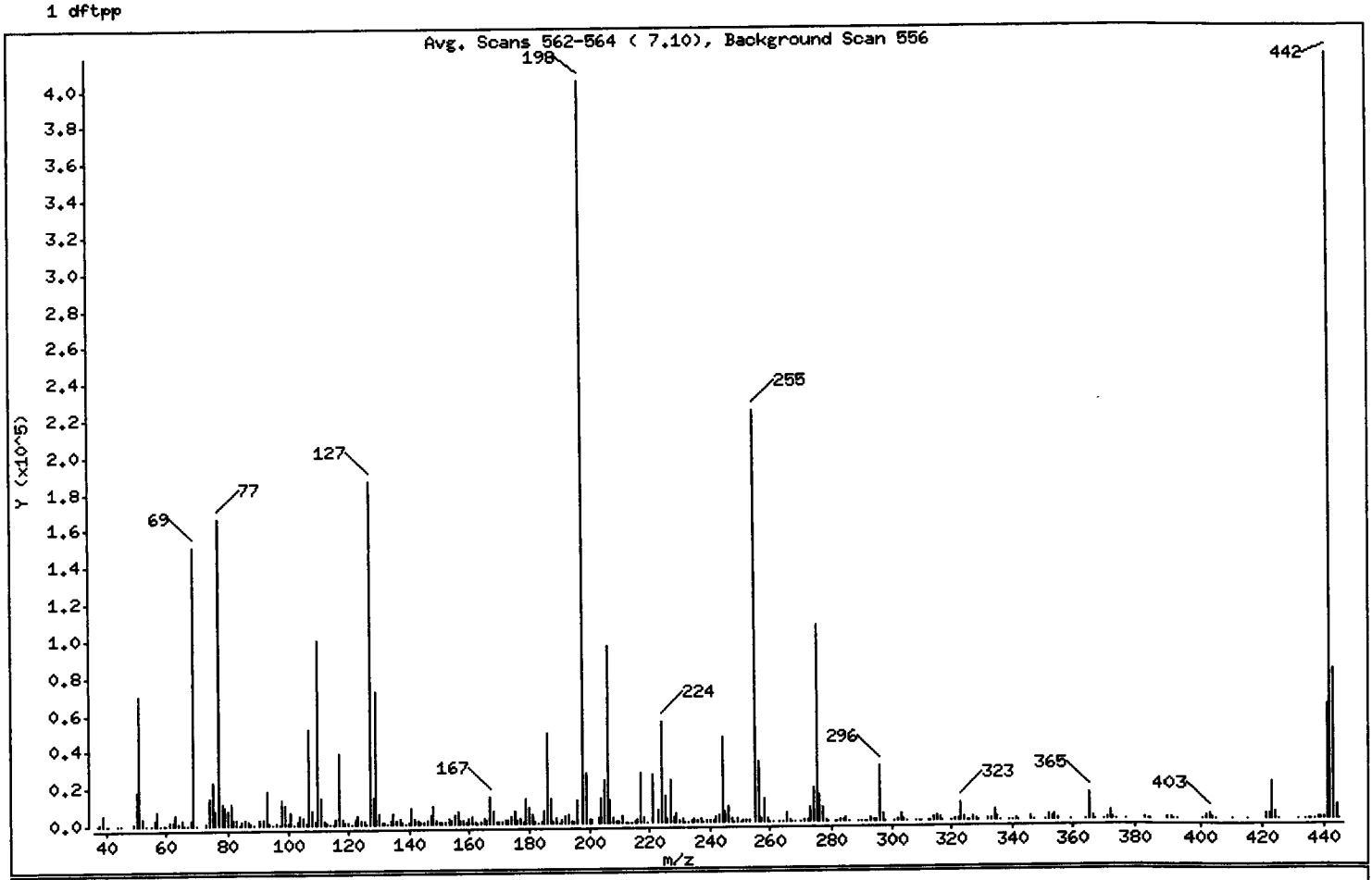
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	17.27
68	Less than 2.00% of mass 69	0.60 (1.60)
69	Mass 69 relative abundance	37.21
70	Less than 2.00% of mass 69	0.12 (0.31)
127	10.00 - 80.00% of mass 198	46.16
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.72
275	10.00 - 60.00% of mass 198	26.48
365	Greater than 1.00% of mass 198	3.49
441	0.01 - 24.00% of mass 442	15.51 (14.99)
442	50.00 - 200.00% of mass 198	103.42
443	15.00 - 24.00% of mass 442	20.12 (19.45)

Date : 01-AUG-2013 15:07

Client ID: DFTPP Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi Column diameter: 0.25

Data File: df0801.d
Spectrum: Avg. Scans 562-564 (7.10), Background Scan 556
Location of Maximum: 442.00
Number of points: 326

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	239	128.00	13975	212.00	227	304.00	820
38.00	1093	129.00	72456	213.00	324	305.00	55
39.00	5381	130.00	5858	214.00	63	308.00	362
40.00	307	131.00	1196	215.00	1012	309.00	343
41.00	46	132.00	625	216.00	2152	310.00	430
44.00	164	133.00	8	217.00	26864	312.00	60
45.00	158	134.00	1895	218.00	3190	313.00	371
49.00	492	135.00	5719	219.00	386	314.00	1578
50.00	18152	136.00	2141	221.00	26312	315.00	3252
51.00	69768	137.00	2624	223.00	6427	316.00	1819
52.00	3463	138.00	481	224.00	55000	317.00	354
53.00	181	139.00	94	225.00	14098	320.00	62
55.00	252	140.00	693	226.00	1653	321.00	1089
56.00	3086	141.00	8847	227.00	22752	322.00	539
57.00	7479	142.00	2836	228.00	3145	323.00	9682
58.00	182	143.00	2102	229.00	4710	324.00	1577
59.00	63	144.00	498	230.00	648	325.00	50
60.00	51	145.00	527	231.00	2156	326.00	187
61.00	1461	146.00	1454	232.00	325	327.00	1801
62.00	1830	147.00	4571	233.00	444	328.00	936
63.00	5296	148.00	9155	234.00	1434	329.00	232
64.00	928	149.00	1852	235.00	1763	332.00	814
65.00	2622	150.00	530	236.00	1076	333.00	988
66.00	166	151.00	1189	237.00	1906	334.00	5981
67.00	124	152.00	794	238.00	313	335.00	1543
68.00	2408	153.00	2734	239.00	964	336.00	74
69.00	150336	154.00	2132	240.00	718	339.00	135
70.00	471	155.00	5121	241.00	1437	340.00	226
73.00	823	156.00	7153	242.00	3031	341.00	1156
74.00	13937	157.00	1474	243.00	3408	342.00	338
75.00	22856	158.00	1476	244.00	45800	346.00	1994
76.00	7738	159.00	1355	245.00	6092	347.00	418
77.00	166208	160.00	2812	246.00	8408	351.00	143
78.00	11127	161.00	4023	247.00	1670	352.00	3280
79.00	9925	162.00	1117	248.00	462	353.00	2117

Date : 01-AUG-2013 15:07

Client ID: DFTPP Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi Column diameter: 0.25

Data File: df0801.d
Spectrum: Avg. Scans 562-564 (7.10), Background Scan 556
Location of Maximum: 442.00
Number of points: 326

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	8100	163.00	432	249.00	1651	354.00	2903
81.00	11515	164.00	519	250.00	353	355.00	622
82.00	2753	165.00	3162	251.00	533	359.00	195
83.00	2640	166.00	2299	252.00	491	364.00	82
84.00	89	167.00	14820	253.00	1138	365.00	14084
85.00	1771	168.00	6498	255.00	223616	366.00	1953
86.00	3104	169.00	1424	256.00	32456	367.00	69
87.00	1472	170.00	655	257.00	2363	370.00	325
88.00	528	171.00	777	258.00	12923	371.00	875
89.00	367	172.00	1709	259.00	2106	372.00	5157
91.00	2510	173.00	2020	260.00	364	373.00	1298
92.00	2863	174.00	3574	261.00	422	374.00	136
93.00	18240	175.00	7017	263.00	134	377.00	89
94.00	1279	176.00	2249	264.00	328	383.00	1402
95.00	153	177.00	3196	265.00	5056	384.00	372
96.00	830	178.00	1166	266.00	687	385.00	51
97.00	167	179.00	13502	267.00	144	390.00	792
98.00	13538	180.00	8889	268.00	38	391.00	518
99.00	10783	181.00	4504	270.00	330	392.00	367
100.00	1012	182.00	744	271.00	856	393.00	52
101.00	6940	183.00	471	272.00	805	401.00	295
102.00	417	184.00	1235	273.00	7324	402.00	1965
103.00	2372	185.00	6586	274.00	18176	403.00	3040
104.00	4583	186.00	49000	275.00	107000	404.00	1139
105.00	3966	187.00	13926	276.00	14125	405.00	82
106.00	1342	188.00	1340	277.00	7945	410.00	53
107.00	51496	189.00	3106	278.00	1365	415.00	52
108.00	8135	190.00	458	279.00	322	421.00	3017
109.00	1589	191.00	1465	281.00	183	422.00	2652
110.00	100304	192.00	4203	282.00	285	423.00	20520
111.00	14773	193.00	4914	283.00	1060	424.00	3863
112.00	1939	194.00	1152	284.00	544	425.00	389
113.00	552	195.00	883	285.00	1452	432.00	59
114.00	62	196.00	12802	286.00	286	434.00	150
115.00	140	198.00	404032	289.00	324	435.00	147

Data File: /chem1/nt10.i/20130801.b/df0801.d

Date : 01-AUG-2013 15:07

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

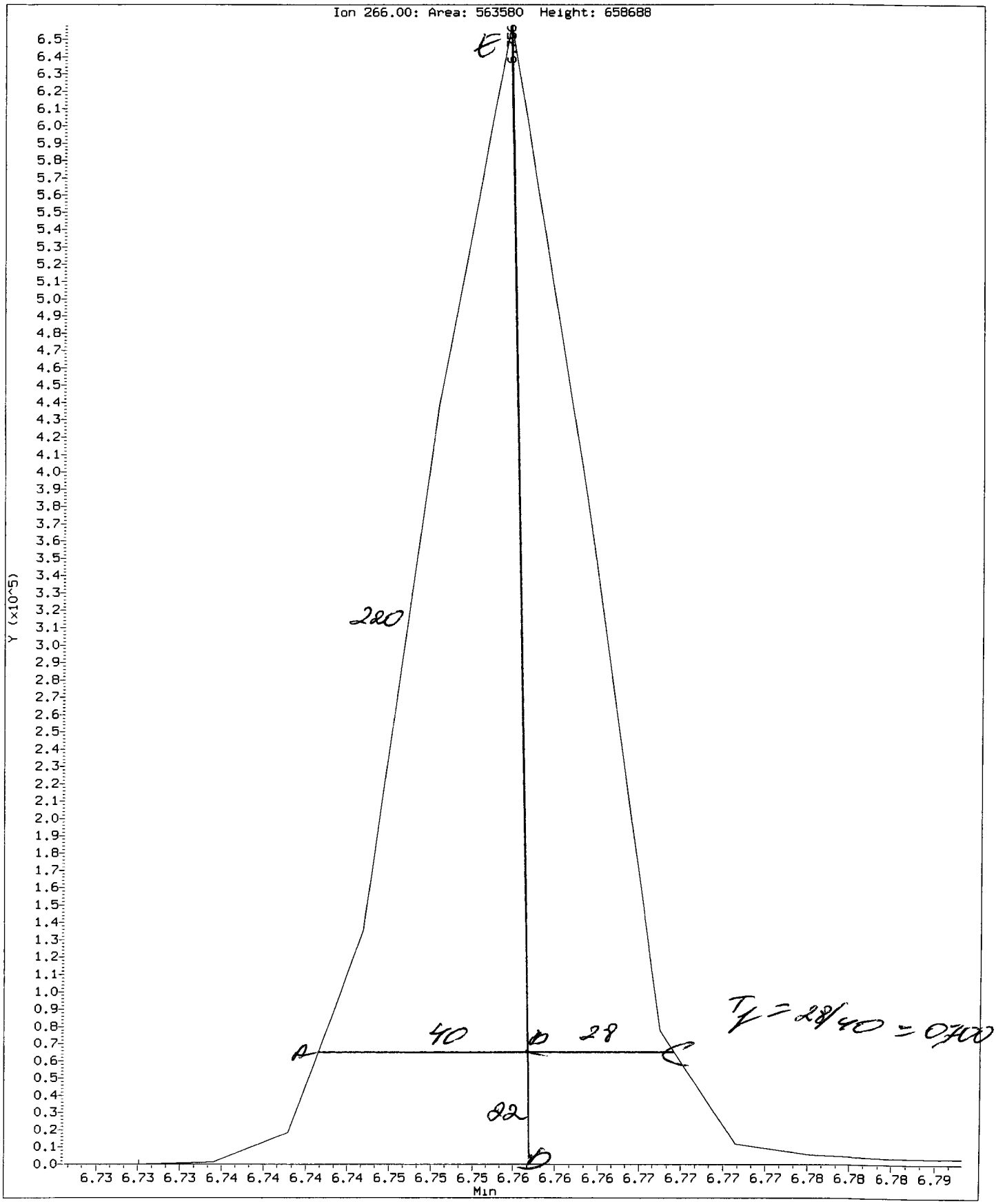
Column diameter: 0.25

Data File: df0801.d
Spectrum: Avg. Scans 562-564 (7.10), Background Scan 556
Location of Maximum: 442.00
Number of points: 326

m/z	Y	m/z	Y	m/z	Y	m/z	Y
116.00	2970	199.00	27152	290.00	282	436.00	452
117.00	38216	200.00	2160	291.00	317	437.00	424
118.00	2613	201.00	2362	292.00	438	438.00	549
119.00	565	203.00	2777	293.00	1852	439.00	730
120.00	764	204.00	13790	294.00	619	440.00	1062
121.00	316	205.00	23296	295.00	848	441.00	62648
122.00	3170	206.00	96120	296.00	29608	442.00	417856
123.00	5191	207.00	12770	297.00	3945	443.00	81288
124.00	2340	208.00	3124	298.00	245	444.00	7342
125.00	2222	209.00	1014	301.00	434	445.00	422
126.00	240	210.00	1096	302.00	598		
127.00	186496	211.00	3902	303.00	3551		

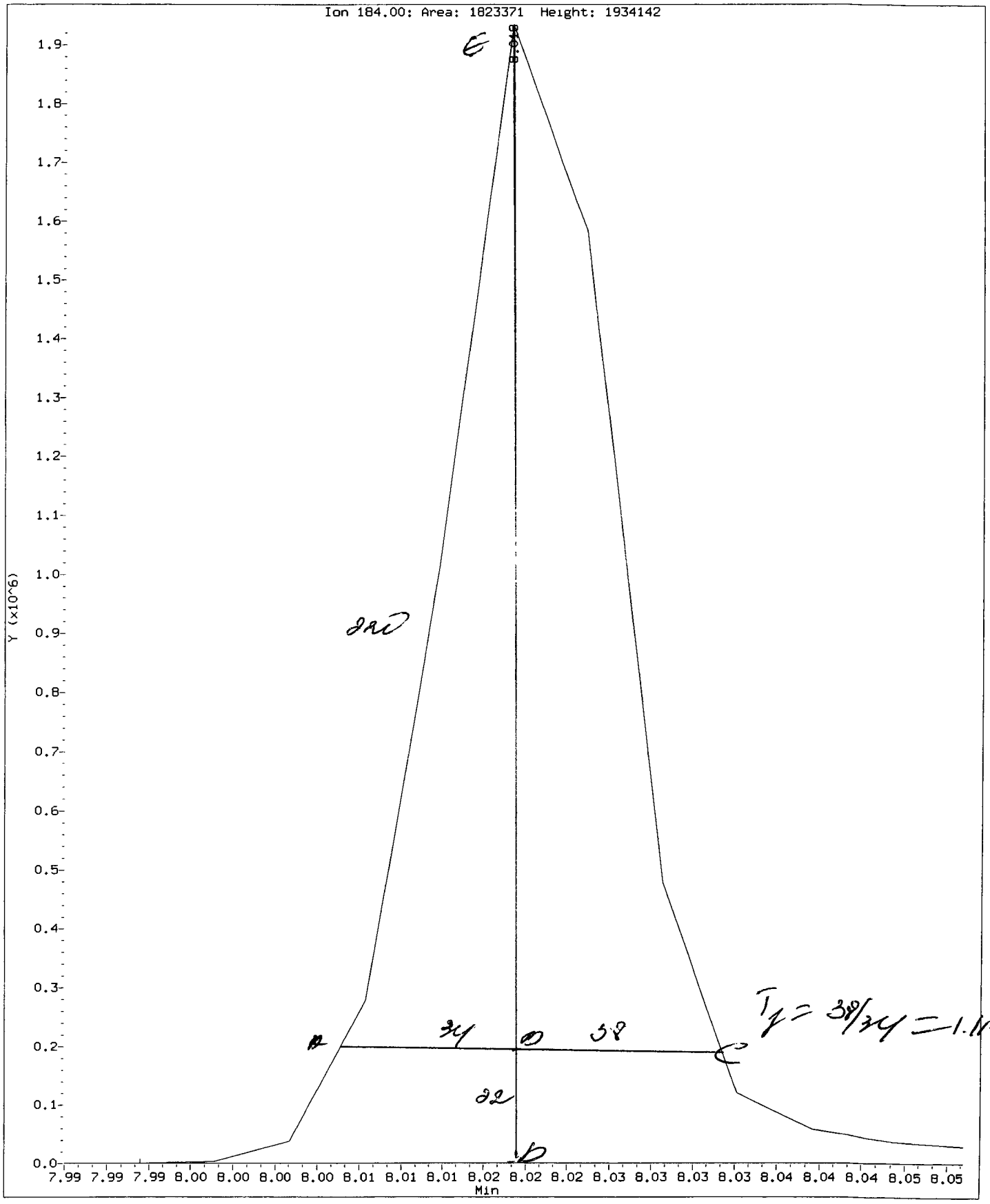
Data File: /chem1/nt10.1/20130801.b/ddt.b/df0801.d
Injection Date: 01-AUG-2013 15:07
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20130801.b/ddt.b/df0801.d
Injection Date: 01-AUG-2013 15:07
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130801.b/ddt.b/df0801.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130801.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 01-AUG-2013 15:07 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.756	563580
Benzidine	8.018	1823371
4,4'-DDE	8.200	2179
4,4'-DDD	8.489	10935
4,4'-DDT	8.756	1101597

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(\ 2179 + 10935) * 100}{(\ 2179 + 10935 + 1101597)}$$

DDT Percent Breakdown = 1.2 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 01-AUG-2013 16:00
Lab File ID: cc0801a.d Init. Cal. Date(s): 30-JUL-2013 30-JUL-2013
Analysis Type: Init. Cal. Times: 11:54 16:59
Lab Sample ID: CC0801A Quant Type: ISTD
Method: /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m

COMPOUND	RRF / AMOUNT	RF1	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 2-Fluorophenol	1.59023	1.64146	0.010	3.22173	20.00000	Averaged
3 Phenol	2.07695	2.22302	0.010	7.03264	20.00000	Averaged
7 1,3-Dichlorobenzene	1.63528	1.61159	0.010	-1.44855	20.00000	Averaged
9 1,4-Dichlorobenzene	1.59833	1.55292	0.010	-2.84096	20.00000	Averaged
11 Benzyl alcohol	1.02346	1.09662	0.010	7.14793	20.00000	Averaged
12 1,2-Dichlorobenzene	1.51977	1.50979	0.010	-0.65706	20.00000	Averaged
13 2-Methylphenol	1.50379	1.65673	0.010	10.17005	20.00000	Averaged
15 4-Methylphenol	1.52801	1.71558	0.010	12.27555	20.00000	Averaged
16 N-Nitroso-di-n-propylamine	0.94040	1.01682	0.050	8.12615	20.00000	Averaged
22 2,4-Dimethylphenol	0.39771	0.42021	0.010	5.65881	20.00000	Averaged
26 1,2,4-Trichlorobenzene	0.38148	0.37590	0.010	-1.46139	20.00000	Averaged
30 Hexachlorobutadiene	0.20963	0.20222	0.010	-3.53388	20.00000	Averaged
39 Dimethylphthalate	1.28707	1.34198	0.010	4.26643	20.00000	Averaged
50 Diethylphthalate	1.45196	1.53509	0.010	5.72566	20.00000	Averaged
54 N-Nitrosodiphenylamine	0.48894	0.55328	0.010	13.16089	20.00000	Averaged
57 Hexachlorobenzene	0.28097	0.28307	0.010	0.74922	20.00000	Averaged
58 Pentachlorophenol	0.18154	0.18931	0.005	4.27766	20.00000	Averaged
$ 66 Terphenyl-d14	0.51958	0.55359	0.010	6.54667	20.00000	Averaged
67 Butylbenzylphthalate	0.46692	0.55831	0.010	19.57149	20.00000	Averaged
79 Dibenzo(a,h)anthracene	1.00232	1.08413	0.010	8.16181	20.00000	Averaged
90 N-Nitrosodimethylamine	1.03366	1.01606	0.010	-1.70253	20.00000	Averaged

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130801.b/SIM.b/cc0801a.d
Lab Smp Id: CC0801A
Inj Date : 01-AUG-2013 16:00
Operator : YZ Inst ID: nt10.i
Smp Info : CC0801A
Misc Info :
Comment :
Method : /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Meth Date : 03-Aug-2013 12:01 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.857	6.857	(0.744)	55787	1.00000	1.032
	3 Phenol	94	8.588	8.588	(0.931)	75552	1.00000	1.070(H)
	7 1,3-Dichlorobenzene	146	9.144	9.144	(0.992)	54772	1.00000	0.9855(H)
*	8 1,4-Dichlorobenzene-d4	152	9.222	9.222	(1.000)	135945	4.00000	
	9 1,4-Dichlorobenzene	146	9.253	9.253	(1.003)	52778	1.00000	0.9716
	11 Benzyl alcohol	79	9.524	9.524	(1.033)	37270	1.00000	1.071
	12 1,2-Dichlorobenzene	146	9.633	9.633	(1.045)	51312	1.00000	0.9934
	13 2-Methylphenol	108	9.781	9.781	(1.061)	56306	1.00000	1.102
	15 4-Methylphenol	108	10.076	10.076	(1.093)	58306	1.00000	1.123
	16 N-Nitroso-di-n-propylamine	70	10.122	10.122	(1.098)	34558	1.00000	1.081
	22 2,4-Dimethylphenol	107	11.197	11.197	(0.942)	103964	2.00000	2.113
	26 1,2,4-Trichlorobenzene	180	11.799	11.799	(0.992)	46501	1.00000	0.9854
*	27 Naphthalene-d8	136	11.891	11.891	(1.000)	494817	4.00000	
	30 Hexachlorobutadiene	225	12.339	12.339	(1.038)	25016	1.00000	0.9647
	39 Dimethylphthalate	163	15.296	15.296	(0.968)	87569	1.00000	1.043
*	42 Acenaphthene-d10	162	15.798	15.798	(1.000)	261014	4.00000	
	50 Diethylphthalate	149	16.881	16.881	(1.069)	100170	1.00000	1.057
	54 N-Nitrosodiphenylamine	169	17.282	17.282	(0.905)	71302	1.00000	1.132
	57 Hexachlorobenzene	284	18.416	18.416	(0.965)	36480	1.00000	1.007
	58 Pentachlorophenol	266	18.819	18.819	(0.986)	48792	2.00000	2.086
*	59 Phenanthrene-d10	188	19.090	19.090	(1.000)	515482	4.00000	
$	66 Terphenyl-d14	244	22.548	22.548	(0.919)	69024	1.00000	1.065
	67 Butylbenzylphthalate	149	23.547	23.547	(0.960)	69612	1.00000	1.196
*	69 Chrysene-d12	240	24.523	24.523	(1.000)	498735	4.00000	
*	77 Perylene-d12	264	27.109	27.109	(1.000)	492140	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.637	29.637	(1.093)	133386	1.00000	1.082
	90 N-Nitrosodimethylamine	74	4.571	4.571	(0.496)	69064	2.00000	1.966

QC Flag Legend

H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0801a.d
Lab Smp Id: CC0801A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 01-AUG-2013
Calibration Time: 16:00
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	139368	69684	278736	135945	-2.46
27 Naphthalene-d8	497738	248869	995476	494817	-0.59
42 Acenaphthene-d10	263483	131742	526966	261014	-0.94
59 Phenanthrene-d10	519545	259772	1039090	515482	-0.78
69 Chrysene-d12	513753	256876	1027506	498735	-2.92
77 Perylene-d12	525862	262931	1051724	492140	-6.41

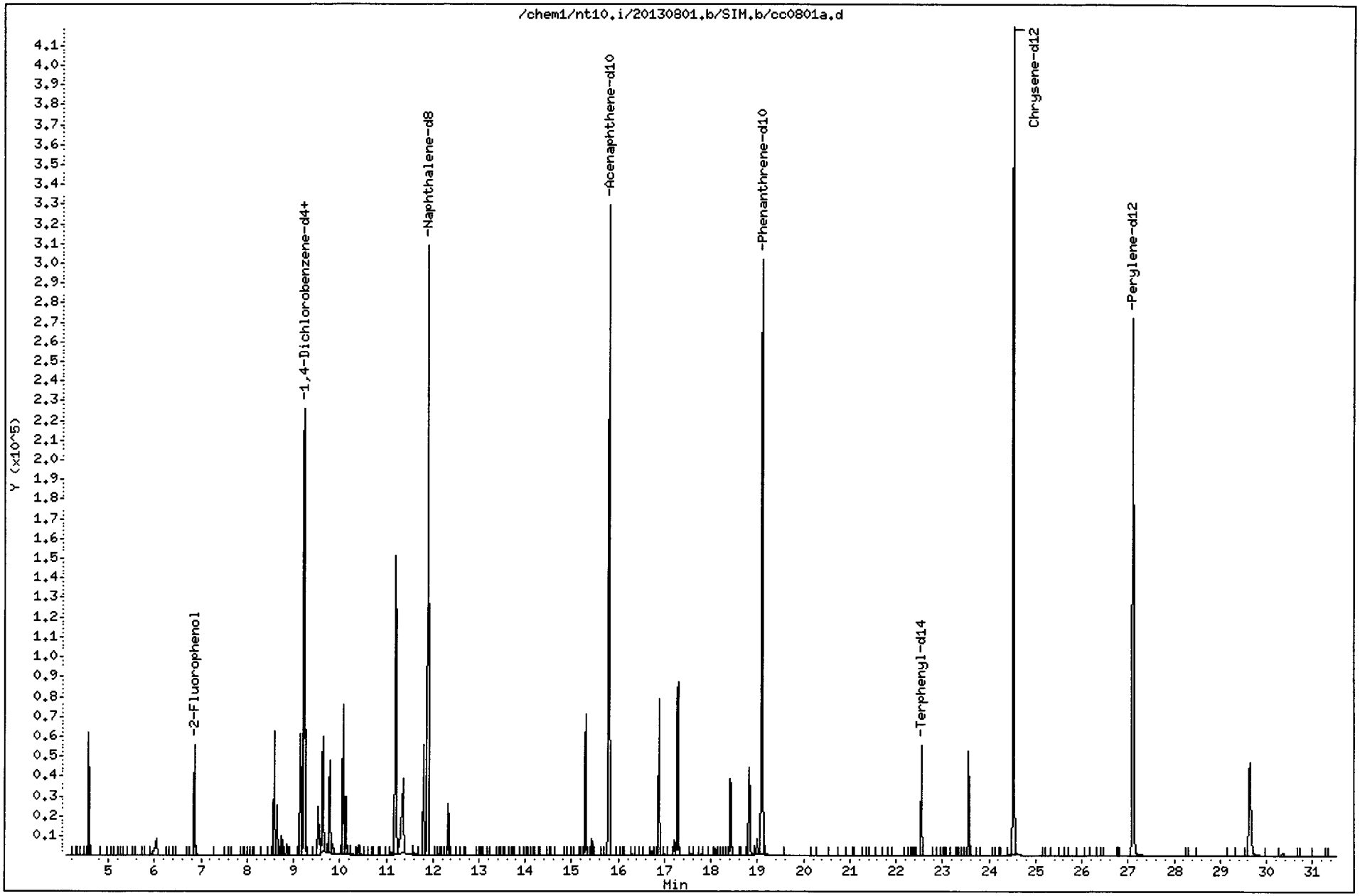
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.22	8.72	9.72	9.22	0.00
27 Naphthalene-d8	11.89	11.39	12.39	11.89	0.00
42 Acenaphthene-d10	15.80	15.30	16.30	15.80	0.00
59 Phenanthrene-d10	19.09	18.59	19.59	19.09	0.00
69 Chrysene-d12	24.52	24.02	25.02	24.52	0.00
77 Perylene-d12	27.11	26.61	27.61	27.11	0.00

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

Data File: /chem1/nt10.i/20130801.b/SIM.b/cc0801a.d
Date : 01-AUG-2013 16:00
Client ID:
Sample Info: CC0801A

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - cc0801a.d

Lab ID: CC0801A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 01-AUG-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 8/3/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130801.b/SIM.b/wy32mb.d
Lab Smp Id: WY32MBS1 Client Smp ID: WY32MBS1
Inj Date : 01-AUG-2013 16:38
Operator : YZ Inst ID: nt10.i
Smp Info : WY32MBS1
Misc Info : 13-15393
Comment :
Method : /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Meth Date : 03-Aug-2013 12:01 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1	2-Fluorophenol	112	6.872	6.857	(0.745)	246799	5.28462	528.5
	3	Phenol	94	8.595	8.588	(0.932)	6490	0.10640	10.64 (R)
	7	1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8	1,4-Dichlorobenzene-d4	152	9.222	9.222	(1.000)	117471	4.00000	
	9	1,4-Dichlorobenzene	146	Compound Not Detected.					
	11	Benzyl alcohol	79	Compound Not Detected.					
	12	1,2-Dichlorobenzene	146	Compound Not Detected.					
	13	2-Methylphenol	108	Compound Not Detected.					
	15	4-Methylphenol	108	Compound Not Detected.					
	16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22	2,4-Dimethylphenol	107	Compound Not Detected.					
	26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27	Naphthalene-d8	136	11.883	11.891	(1.000)	449658	4.00000	
	30	Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	Compound Not Detected.					
*	42 Acenaphthene-d10	162	15.798	15.798	(1.000)	236837	4.00000	
	50 Diethylphthalate	149	16.881	16.881	(1.069)	6790	0.07898	7.898(R)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	19.090	19.090	(1.000)	461469	4.00000	
$	66 Terphenyl-d14	244	22.548	22.548	(0.919)	201404	3.51223	351.2
	67 Butylbenzylphthalate	149	Compound Not Detected.					
*	69 Chrysene-d12	240	24.523	24.523	(1.000)	441464	4.00000	
*	77 Perylene-d12	264	27.109	27.109	(1.000)	412109	4.00000	
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wy32mb.d
Lab Smp Id: WY32MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Misc Info: 13-15393

Calibration Date: 01-AUG-2013
Calibration Time: 16:00
Client Smp ID: WY32MBS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	139368	69684	278736	117471	-15.71
27 Naphthalene-d8	497738	248869	995476	449658	-9.66
42 Acenaphthene-d10	263483	131742	526966	236837	-10.11
59 Phenanthrene-d10	519545	259772	1039090	461469	-11.18
69 Chrysene-d12	513753	256876	1027506	441464	-14.07
77 Perylene-d12	525862	262931	1051724	412109	-21.63

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.22	8.72	9.72	9.22	0.00
27 Naphthalene-d8	11.89	11.39	12.39	11.88	-0.07
42 Acenaphthene-d10	15.80	15.30	16.30	15.80	0.00
59 Phenanthrene-d10	19.09	18.59	19.59	19.09	0.00
69 Chrysene-d12	24.52	24.02	25.02	24.52	0.00
77 Perylene-d12	27.11	26.61	27.61	27.11	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WY32MBS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Misc Info: 13-15393

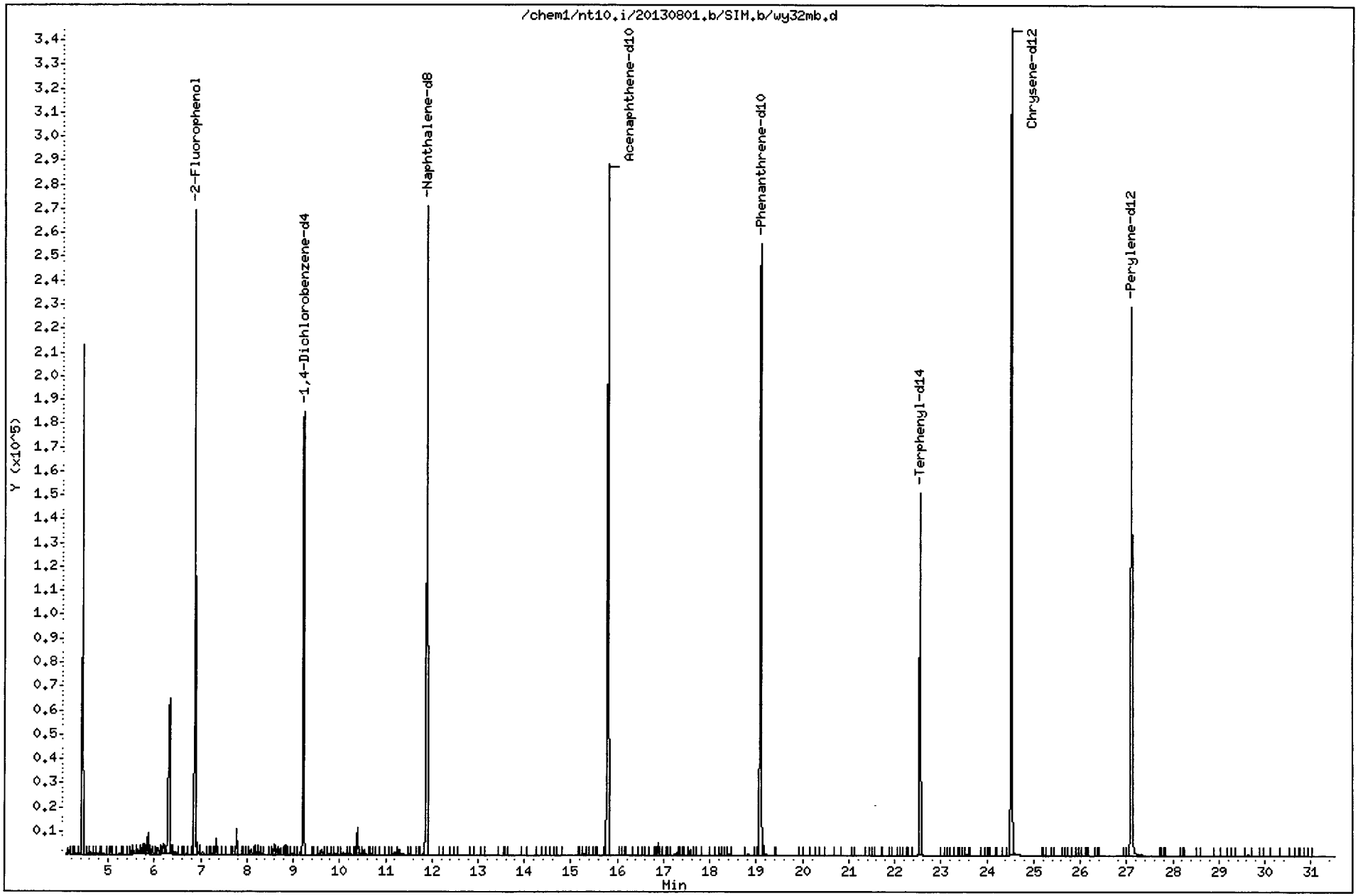
Client SDG: WY32
Fraction: SV
Client Smp ID: WY32MBS1
Operator: YZ
SampleType: BLANK
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	10.64	2.13*	30-160
7	1,3-Dichlorobenze	500.0	0.000	*	30-160
9	1,4-Dichlorobenze	500.0	0.000	*	30-160
11	Benzyl alcohol	500.0	0.000	*	30-160
12	1,2-Dichlorobenze	500.0	0.000	*	30-160
13	2-Methylphenol	500.0	0.000	*	30-160
15	4-Methylphenol	1000	0.000	*	30-160
16	N-Nitroso-di-n-pr	500.0	0.000	*	30-160
22	2,4-Dimethylphenol	1000	0.000	*	30-160
26	1,2,4-Trichlorobe	500.0	0.000	*	30-160
30	Hexachlorobutadie	500.0	0.000	*	30-160
39	Dimethylphthalate	500.0	0.000	*	30-160
50	Diethylphthalate	500.0	7.898	1.58*	30-160
54	N-Nitrosodiphenyl	500.0	0.000	*	30-160
57	Hexachlorobenzene	500.0	0.000	*	30-160
58	Pentachlorophenol	1000	0.000	*	30-160
67	Butylbenzylphthal	500.0	0.000	*	30-160
79	Dibenzo(a,h)anthr	500.0	0.000	*	30-160
90	N-Nitrosodimethyl	1000	0.000	*	30-160

	SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	750.0	528.5	70.46	27-120
$ 66	Terphenyl-d14	500.0	351.2	70.24	37-120

Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32mb.d
Date : 01-AUG-2013 16:38
Client ID: WY32MBS1
Sample Info: WY32MBS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32mb.d

Date : 01-AUG-2013 16:38

Client ID: WY32MBS1

Instrument: nt10.i

Sample Info: WY32MBS1

Volume Injected (uL): 1.0

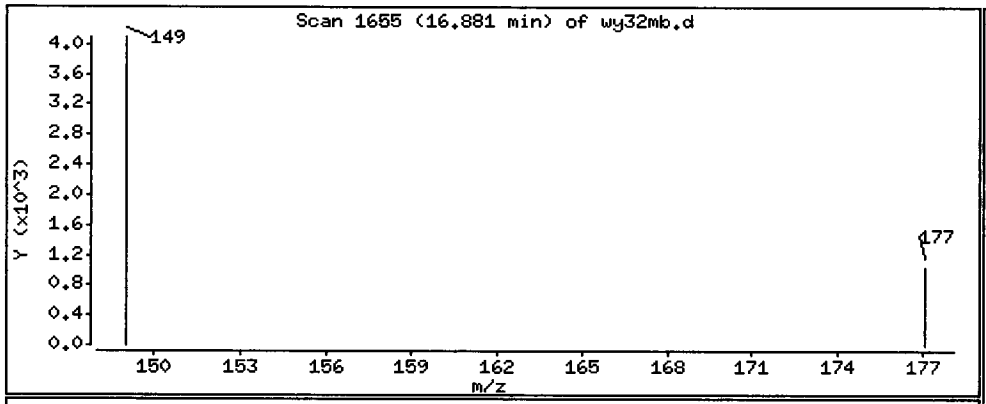
Operator: YZ

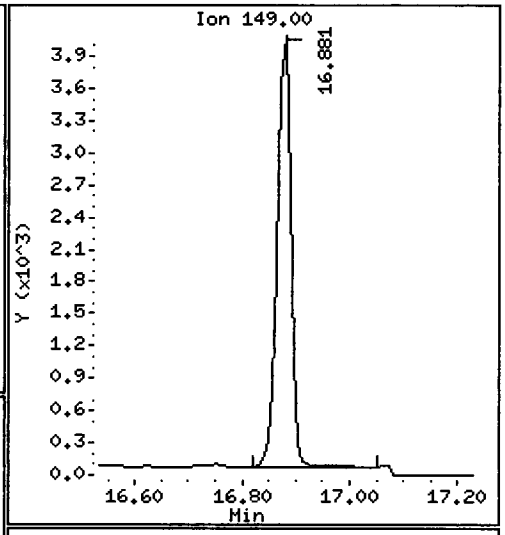
Column phase: ZB-5msi

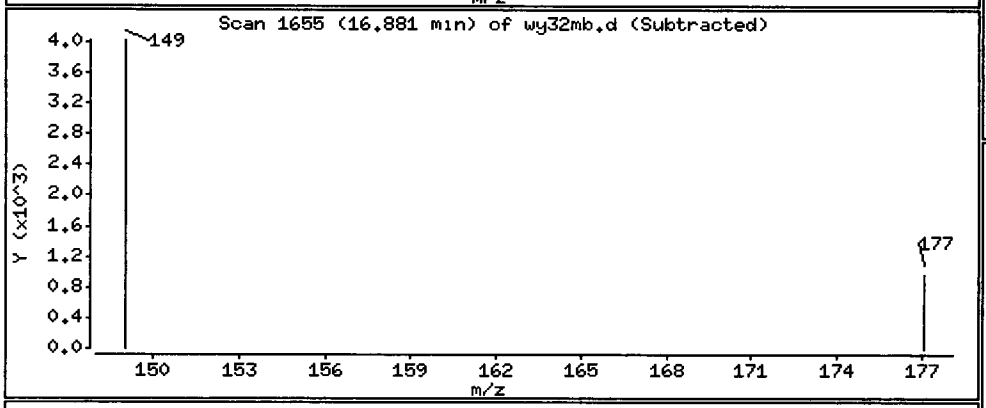
Column diameter: 0.25

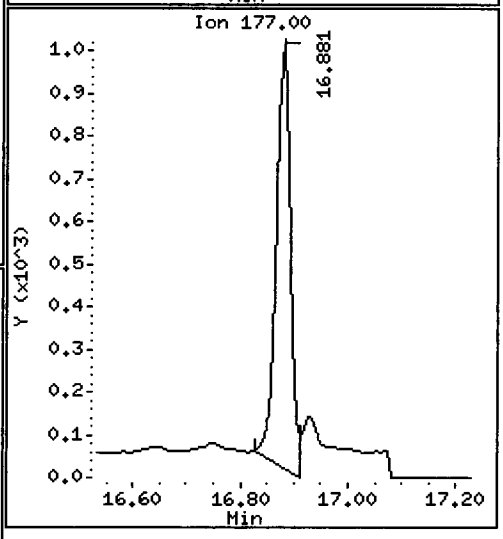
50 Diethylphthalate

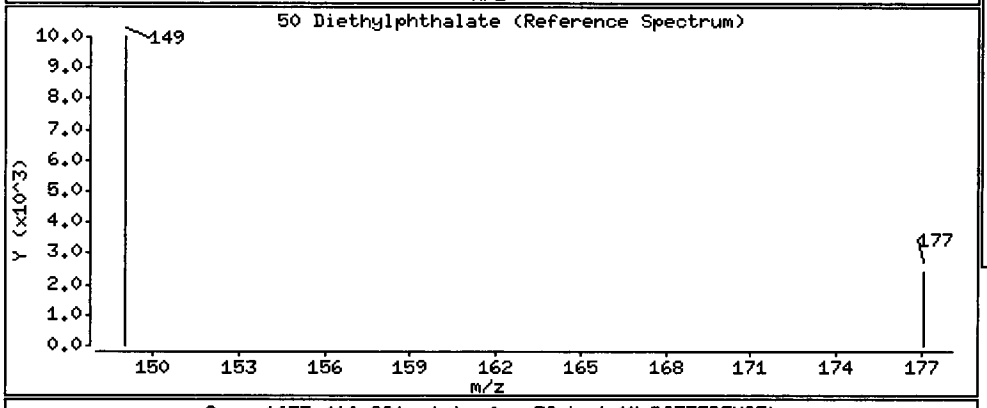
Concentration: 7.898 ug/kg

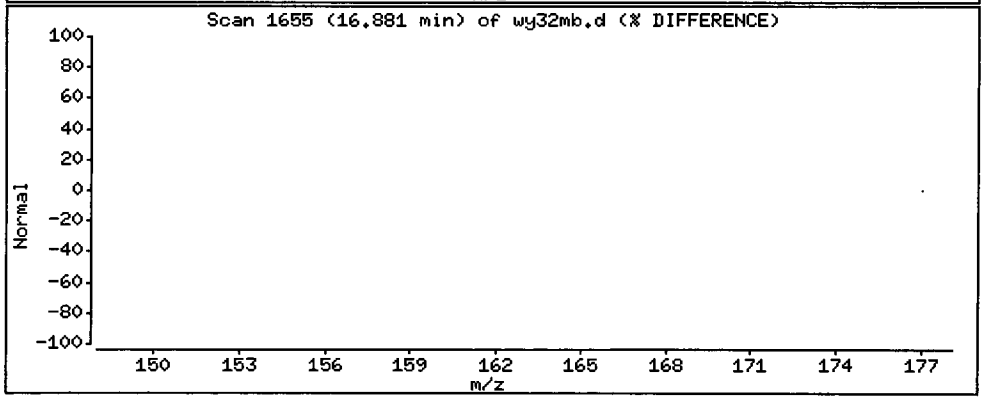












CO-ELUTION SUMMARY FOR FILE - wy32mb.d

Lab ID: WY32MBS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 01-AUG-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

YZ 8/3/13

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130801.b/SIM.b/wy32sb.d
Lab Smp Id: WY32LCSS1 Client Smp ID: WY32LCSS1
Inj Date : 01-AUG-2013 17:16
Operator : YZ Inst ID: nt10.i
Smp Info : WY32LCSS1
Misc Info : 13-15393
Comment :
Method : /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Meth Date : 03-Aug-2013 09:50 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	6.872	6.857	(0.745)	241783	5.91343	591.3
	3 Phenol	94	8.595	8.588	(0.932)	194748	3.64686	364.7
	7 1,3-Dichlorobenzene	146	9.152	9.144	(0.992)	125385	2.98212	298.2
*	8 1,4-Dichlorobenzene-d4	152	9.222	9.222	(1.000)	102846	4.00000	
	9 1,4-Dichlorobenzene	146	9.253	9.253	(1.003)	124095	3.01968	302.0
	11 Benzyl alcohol	79	9.532	9.524	(1.034)	65088	2.47344	247.3
	12 1,2-Dichlorobenzene	146	9.633	9.633	(1.045)	122166	3.12640	312.6
	13 2-Methylphenol	108	9.788	9.781	(1.061)	114299	2.95615	295.6
	15 4-Methylphenol	108	10.083	10.076	(1.093)	246319	6.26968	627.0
	16 N-Nitroso-di-n-propylamine	70	10.130	10.122	(1.098)	74013	3.06102	306.1
	22 2,4-Dimethylphenol	107	11.197	11.197	(0.942)	196167	5.20450	520.4
	26 1,2,4-Trichlorobenzene	180	11.806	11.799	(0.993)	113058	3.12713	312.7
*	27 Naphthalene-d8	136	11.891	11.891	(1.000)	379092	4.00000	
	30 Hexachlorobutadiene	225	12.339	12.339	(1.038)	61895	3.11539	311.5

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	15.303	15.296	(0.969)	240730	3.61032	361.0
*	42 Acenaphthene-d10	162	15.798	15.798	(1.000)	207225	4.00000	
	50 Diethylphthalate	149	16.889	16.881	(1.069)	321624	4.27576	427.6
	54 N-Nitrosodiphenylamine	169	17.283	17.282	(0.905)	167148	3.40293	340.3
	57 Hexachlorobenzene	284	18.417	18.416	(0.965)	99346	3.51961	352.0
	58 Pentachlorophenol	266	18.819	18.819	(0.986)	214246	11.7474	1175
*	59 Phenanthrene-d10	188	19.090	19.090	(1.000)	401843	4.00000	
$	66 Terphenyl-d14	244	22.548	22.548	(0.919)	189675	3.71482	371.5
	67 Butylbenzylphthalate	149	23.555	23.547	(0.961)	209063	4.55626	455.6
*	69 Chrysene-d12	240	24.523	24.523	(1.000)	393081	4.00000	
*	77 Perylene-d12	264	27.109	27.109	(1.000)	362225	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.645	29.637	(1.094)	262215	2.88889	288.9
	90 N-Nitrosodimethylamine	74	4.610	4.571	(0.500)	213059	8.01671	801.7

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wy32sb.d
Lab Smp Id: WY32LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Misc Info: 13-15393

Calibration Date: 01-AUG-2013
Calibration Time: 16:00
Client Smp ID: WY32LCSS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	139368	69684	278736	102846	-26.21
27 Naphthalene-d8	497738	248869	995476	379092	-23.84
42 Acenaphthene-d10	263483	131742	526966	207225	-21.35
59 Phenanthrene-d10	519545	259772	1039090	401843	-22.65
69 Chrysene-d12	513753	256876	1027506	393081	-23.49
77 Perylene-d12	525862	262931	1051724	362225	-31.12

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.22	8.72	9.72	9.22	0.00
27 Naphthalene-d8	11.89	11.39	12.39	11.89	0.00
42 Acenaphthene-d10	15.80	15.30	16.30	15.80	0.00
59 Phenanthrene-d10	19.09	18.59	19.59	19.09	0.00
69 Chrysene-d12	24.52	24.02	25.02	24.52	0.00
77 Perylene-d12	27.11	26.61	27.61	27.11	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WY32LCSS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Misc Info: 13-15393

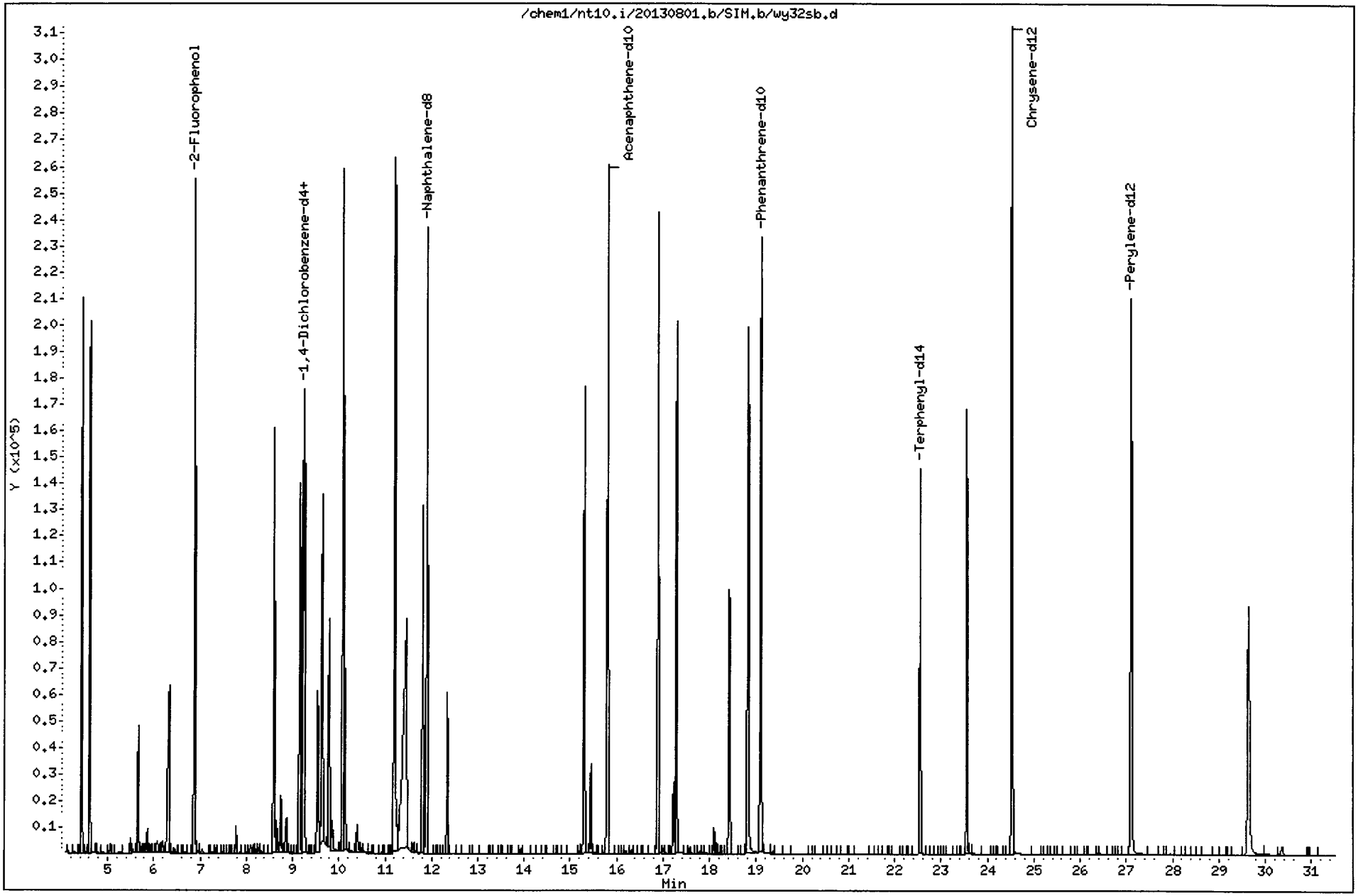
Client SDG: WY32
Fraction: SV
Client Smp ID: WY32LCSS1
Operator: YZ
SampleType: LCS
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	364.7	72.94	30-160
7	1,3-Dichlorobenzen	500.0	298.2	59.64	30-160
9	1,4-Dichlorobenzen	500.0	302.0	60.39	30-160
11	Benzyl alcohol	500.0	247.3	49.47	30-160
12	1,2-Dichlorobenzen	500.0	312.6	62.53	30-160
13	2-Methylphenol	500.0	295.6	59.12	30-160
15	4-Methylphenol	1000	627.0	62.70	30-160
16	N-Nitroso-di-n-pro	500.0	306.1	61.22	30-160
22	2,4-Dimethylphenol	1000	520.4	52.04	30-160
26	1,2,4-Trichloroben	500.0	312.7	62.54	30-160
30	Hexachlorobutadien	500.0	311.5	62.31	30-160
39	Dimethylphthalate	500.0	361.0	72.21	30-160
50	Diethylphthalate	500.0	427.6	85.52	30-160
54	N-Nitrosodiphenyla	500.0	340.3	68.06	30-160
57	Hexachlorobenzene	500.0	352.0	70.39	30-160
58	Pentachlorophenol	1000	1175	117.47	30-160
67	Butylbenzylphthala	500.0	455.6	91.13	30-160
79	Dibenzo(a,h)anthra	500.0	288.9	57.78	30-160
90	N-Nitrosodimethyla	1000	801.7	80.17	30-160

	SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	750.0	591.3	78.85	27-120
$ 66	Terphenyl-d14	500.0	371.5	74.30	37-120

Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32sb.d
Date : 01-AUG-2013 17:16
Client ID: WY32LCSS1
Sample Info: WY32LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wy32sb.d

Lab ID: WY32LCSS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 01-AUG-

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

YZ 8/3/13

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130801.b/SIM.b/wy32ams.d
Lab Smp Id: WY32AMS Client Smp ID: UP-CB-B8-201306 MS
Inj Date : 01-AUG-2013 19:47
Operator : YZ Inst ID: nt10.i
Smp Info : WY32AMS
Misc Info : 13-15393
Comment :
Method : /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Meth Date : 03-Aug-2013 09:50 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 9 QC Sample: MS
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	7.04000	Weight of sample extracted (g)
M	31.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	6.880	6.857	(0.746)	86236	2.00769	1240
	3 Phenol	94	8.603	8.588	(0.933)	85357	1.52153	939.7
	7 1,3-Dichlorobenzene	146	9.152	9.144	(0.992)	45846	1.03795	641.0
*	8 1,4-Dichlorobenzene-d4	152	9.222	9.222	(1.000)	108042	4.00000	
	9 1,4-Dichlorobenzene	146	9.253	9.253	(1.003)	47160	1.09238	674.6
	11 Benzyl alcohol	79	9.548	9.524	(1.035)	42960	1.55403	959.8
	12 1,2-Dichlorobenzene	146	9.633	9.633	(1.045)	44337	1.08008	667.0
	13 2-Methylphenol	108	9.788	9.781	(1.061)	48219	1.18713	733.2
	15 4-Methylphenol	108	10.083	10.076	(1.093)	136992	3.31923	2050
	16 N-Nitroso-di-n-propylamine	70	10.130	10.122	(1.098)	33246	1.30886	808.3
	22 2,4-Dimethylphenol	107	11.205	11.197	(0.942)	143050	3.75657	2320
	26 1,2,4-Trichlorobenzene	180	11.806	11.799	(0.993)	43841	1.20026	741.3
*	27 Naphthalene-d8	136	11.891	11.891	(1.000)	382996	4.00000	
	30 Hexachlorobutadiene	225	12.339	12.339	(1.038)	23712	1.18134	729.6

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	15.303	15.296	(0.968)	87869	1.51841	937.8
*	42 Acenaphthene-d10	162	15.806	15.798	(1.000)	179848	4.00000	
	50 Diethylphthalate	149	16.889	16.881	(1.068)	91760	1.40558	868.1
	54 N-Nitrosodiphenylamine	169	17.290	17.282	(0.905)	68149	1.69875	1049
	57 Hexachlorobenzene	284	18.432	18.416	(0.965)	32542	1.41158	871.8
	58 Pentachlorophenol	266	18.835	18.819	(0.986)	63718	4.27769	2642
*	59 Phenanthrene-d10	188	19.098	19.090	(1.000)	328200	4.00000	
$	66 Terphenyl-d14	244	22.564	22.548	(0.919)	51580	1.24118	766.5
	67 Butylbenzylphthalate	149	23.578	23.547	(0.960)	659603	17.6620	10910(R)
*	69 Chrysene-d12	240	24.554	24.523	(1.000)	319931	4.00000	
*	77 Perylene-d12	264	27.178	27.109	(1.000)	391517	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.753	29.637	(1.095)	87337	0.89023	549.8
	90 N-Nitrosodimethylamine	74	4.586	4.571	(0.497)	69879	2.50287	1546

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wy32ams.d
Lab Smp Id: WY32AMS
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Misc Info: 13-15393

Calibration Date: 01-AUG-2013
Calibration Time: 16:00
Client Smp ID: UP-CB-B8-201306
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	139368	69684	278736	108042	-22.48
27 Naphthalene-d8	497738	248869	995476	382996	-23.05
42 Acenaphthene-d10	263483	131742	526966	179848	-31.74
59 Phenanthrene-d10	519545	259772	1039090	328200	-36.83
69 Chrysene-d12	513753	256876	1027506	319931	-37.73
77 Perylene-d12	525862	262931	1051724	391517	-25.55

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.22	8.72	9.72	9.22	0.00
27 Naphthalene-d8	11.89	11.39	12.39	11.89	0.00
42 Acenaphthene-d10	15.80	15.30	16.30	15.81	0.05
59 Phenanthrene-d10	19.09	18.59	19.59	19.10	0.04
69 Chrysene-d12	24.52	24.02	25.02	24.55	0.13
77 Perylene-d12	27.11	26.61	27.61	27.18	0.26

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

Analytical Resources, Inc.

RECOVERY REPORT

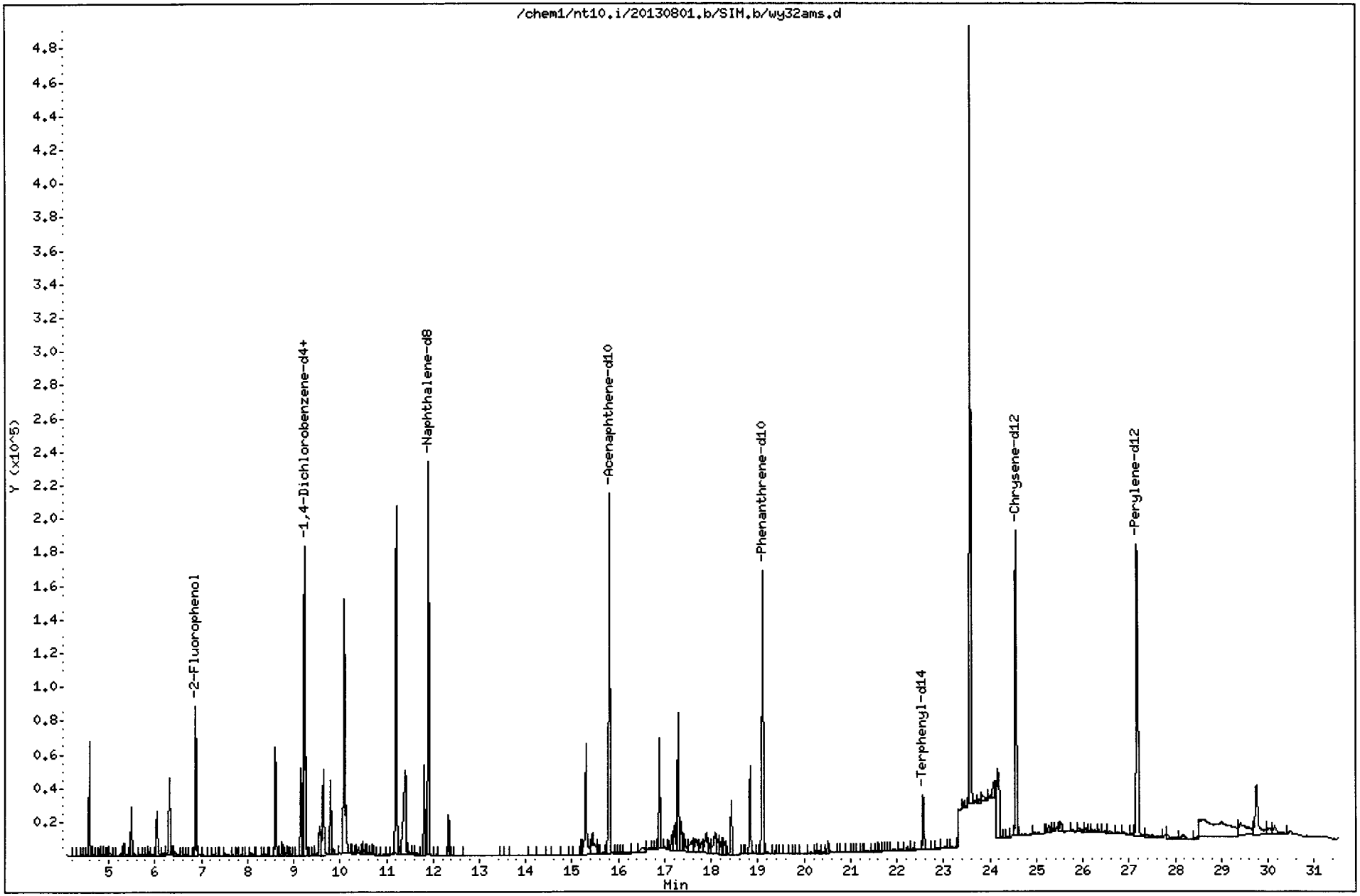
Client Name: SAIC
Client SDG: WY32
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WY32AMS
Client Smp ID: UP-CB-B8-201306 MS
Level: LOW
Operator: YZ
Data Type: MS DATA
SampleType: MS
SpikeList File: PSDDASIMLCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Misc Info: 13-15393

	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	1029	939.7	91.29	30-160
7	1,3-Dichlorobenzen	1029	641.0	62.28	30-160
9	1,4-Dichlorobenzen	1029	674.6	65.54	30-160
11	Benzyl alcohol	1029	959.8	93.24	30-160
12	1,2-Dichlorobenzen	1029	667.0	64.80	30-160
13	2-Methylphenol	1029	733.2	71.23	30-160
15	4-Methylphenol	2059	2050	99.58	30-160
16	N-Nitroso-di-n-pro	1029	808.3	78.53	30-160
22	2,4-Dimethylphenol	2059	2320	112.70	30-160
26	1,2,4-Trichloroben	1029	741.3	72.02	30-160
30	Hexachlorobutadien	1029	729.6	70.88	30-160
39	Dimethylphthalate	1029	937.8	91.10	30-160
50	Diethylphthalate	1029	868.1	84.33	30-160
54	N-Nitrosodiphenyla	1029	1049	101.92	30-160
57	Hexachlorobenzene	1029	871.8	84.69	30-160
58	Pentachlorophenol	2059	2642	128.33	30-160
67	Butylbenzylphthala	1029	10910	1059.72*	30-160
79	Dibenzo(a,h)anthra	1029	549.8	53.41	30-160
90	N-Nitrosodimethyla	2059	1546	75.09	30-160

	SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	1544	1240	80.31	27-120
$ 66	Terphenyl-d14	1029	766.5	74.47	37-120

Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32ams.d
Date : 01-AUG-2013 19:47
Client ID: UP-CB-B8-201306 MS
Sample Info: WY32AMS
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wy32ams.d

Lab ID: WY32AMS, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 01-AUG-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Y28/3/13

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130801.b/SIM.b/wy32amsd.d
Lab Smp Id: WY32AMSD Client Smp ID: UP-CB-B8-201306 MSD
Inj Date : 01-AUG-2013 20:25
Operator : YZ Inst ID: nt10.i
Smp Info : WY32AMSD
Misc Info : 13-15393
Comment :
Method : /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Meth Date : 03-Aug-2013 09:50 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 10 QC Sample: MS
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	7.01000	Weight of sample extracted (g)
M	31.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	6.880	6.857	(0.746)	84817	1.87995	1166
	3 Phenol	94	8.603	8.588	(0.933)	79170	1.34356	833.3
	7 1,3-Dichlorobenzene	146	9.152	9.144	(0.992)	42569	0.91754	569.1
*	8 1,4-Dichlorobenzene-d4	152	9.222	9.222	(1.000)	113485	4.00000	
	9 1,4-Dichlorobenzene	146	9.253	9.253	(1.003)	44978	0.99187	615.2
	11 Benzyl alcohol	79	9.540	9.524	(1.034)	144154	4.96450	3079(R)
	12 1,2-Dichlorobenzene	146	9.641	9.633	(1.045)	40917	0.94896	588.6
	13 2-Methylphenol	108	9.788	9.781	(1.061)	45471	1.06578	661.0
	15 4-Methylphenol	108	10.091	10.076	(1.094)	134550	3.10370	1925
	16 N-Nitroso-di-n-propylamine	70	10.130	10.122	(1.098)	32215	1.20744	748.9
	22 2,4-Dimethylphenol	107	11.205	11.197	(0.942)	140350	3.30293	2049
	26 1,2,4-Trichlorobenzene	180	11.806	11.799	(0.993)	44152	1.08325	671.9
*	27 Naphthalene-d8	136	11.891	11.891	(1.000)	427376	4.00000	
	30 Hexachlorobutadiene	225	12.339	12.339	(1.038)	23399	1.04469	648.0

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	15.303	15.296	(0.968)	87342	1.37479	852.7
*	42 Acenaphthene-d10	162	15.806	15.798	(1.000)	197445	4.00000	
	50 Diethylphthalate	149	16.889	16.881	(1.068)	94169	1.31392	814.9
	54 N-Nitrosodiphenylamine	169	17.290	17.282	(0.905)	72156	1.59743	990.8
	57 Hexachlorobenzene	284	18.432	18.416	(0.965)	32357	1.24655	773.2
	58 Pentachlorophenol	266	18.835	18.819	(0.986)	62914	3.75125	2327
*	59 Phenanthrene-d10	188	19.105	19.090	(1.000)	369537	4.00000	
$	66 Terphenyl-d14	244	22.564	22.548	(0.919)	54843	1.17239	727.2
	67 Butylbenzylphthalate	149	23.578	23.547	(0.960)	625875	14.8881	9234(R)
*	69 Chrysene-d12	240	24.554	24.523	(1.000)	360131	4.00000	
*	77 Perylene-d12	264	27.186	27.109	(1.000)	402630	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.761	29.637	(1.095)	81442	0.80723	500.7
	90 N-Nitrosodimethylamine	74	4.594	4.571	(0.498)	67542	2.30313	1428

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wy32amsd.d
Lab Smp Id: WY32AMSD
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Misc Info: 13-15393

Calibration Date: 01-AUG-2013
Calibration Time: 16:00
Client Smp ID: UP-CB-B8-201306
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	139368	69684	278736	113485	-18.57
27 Naphthalene-d8	497738	248869	995476	427376	-14.14
42 Acenaphthene-d10	263483	131742	526966	197445	-25.06
59 Phenanthrene-d10	519545	259772	1039090	369537	-28.87
69 Chrysene-d12	513753	256876	1027506	360131	-29.90
77 Perylene-d12	525862	262931	1051724	402630	-23.43

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.22	8.72	9.72	9.22	0.00
27 Naphthalene-d8	11.89	11.39	12.39	11.89	0.00
42 Acenaphthene-d10	15.80	15.30	16.30	15.81	0.05
59 Phenanthrene-d10	19.09	18.59	19.59	19.11	0.08
69 Chrysene-d12	24.52	24.02	25.02	24.55	0.13
77 Perylene-d12	27.11	26.61	27.61	27.19	0.29

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

Analytical Resources, Inc.

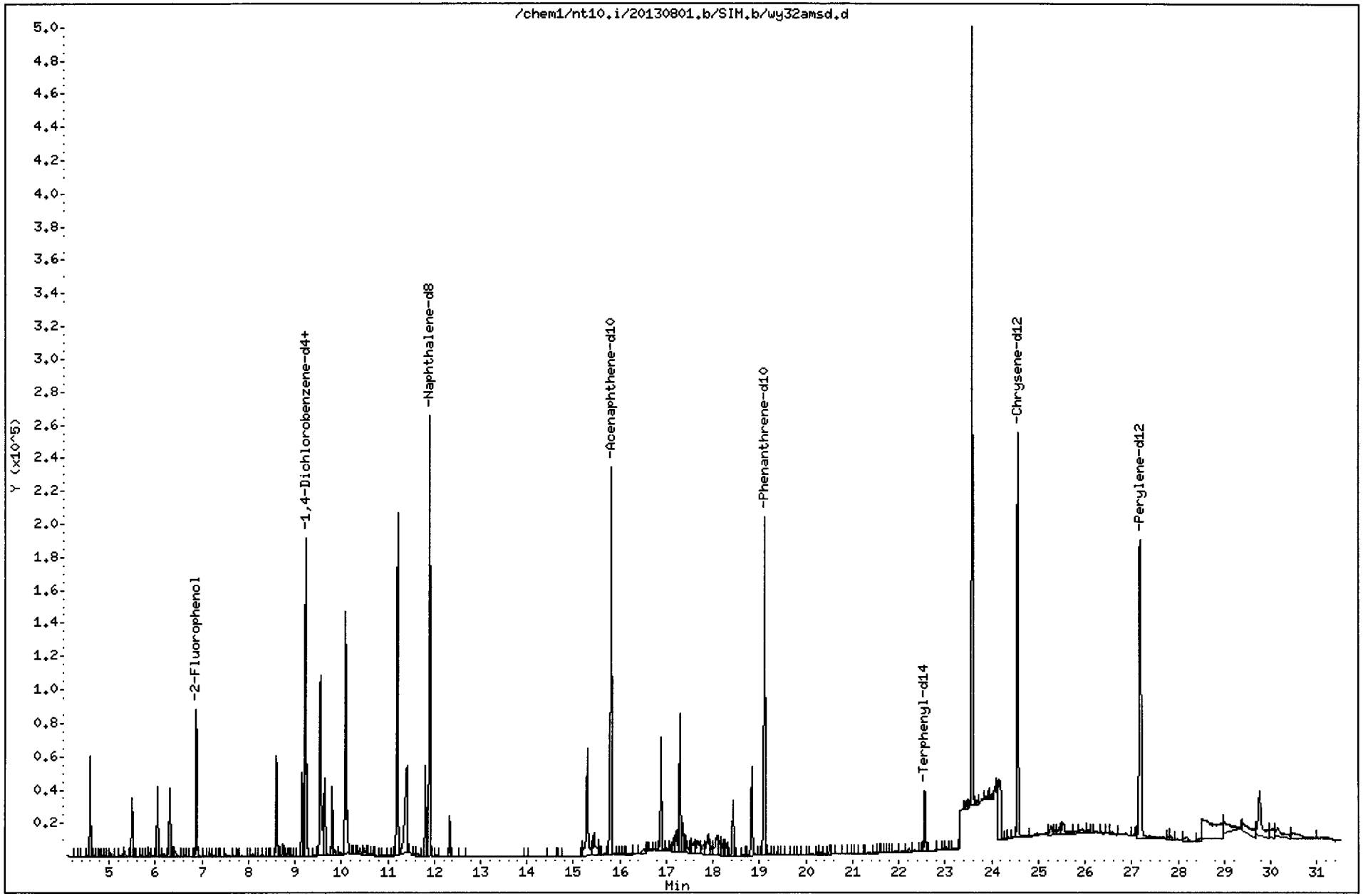
RECOVERY REPORT

Client Name: SAIC
Client SDG: WY32
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WY32AMSD
Client Smp ID: UP-CB-B8-201306 MSD
Level: LOW
Operator: YZ
Data Type: MS DATA
SampleType: MS
SpikeList File: PSDDASIMLCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Misc Info: 13-15393

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	1034	833.3	80.61	30-160
7 1,3-Dichlorobenzen	1034	569.1	55.05	30-160
9 1,4-Dichlorobenzen	1034	615.2	59.51	30-160
11 Benzyl alcohol	1034	3079	297.87*	30-160
12 1,2-Dichlorobenzen	1034	588.6	56.94	30-160
13 2-Methylphenol	1034	661.0	63.95	30-160
15 4-Methylphenol	2067	1925	93.11	30-160
16 N-Nitroso-di-n-pro	1034	748.9	72.45	30-160
22 2,4-Dimethylphenol	2067	2049	99.09	30-160
26 1,2,4-Trichloroben	1034	671.9	65.00	30-160
30 Hexachlorobutadien	1034	648.0	62.68	30-160
39 Dimethylphthalate	1034	852.7	82.49	30-160
50 Diethylphthalate	1034	814.9	78.84	30-160
54 N-Nitrosodiphenyla	1034	990.8	95.85	30-160
57 Hexachlorobenzene	1034	773.2	74.79	30-160
58 Pentachlorophenol	2067	2327	112.54	30-160
67 Butylbenzylphthala	1034	9234	893.29*	30-160
79 Dibenzo(a,h)anthra	1034	500.7	48.43	30-160
90 N-Nitrosodimethyla	2067	1428	69.09	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	1551	1166	75.20	27-120
$ 66 Terphenyl-d14	1034	727.2	70.34	37-120

Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32amsd.d
Date : 01-AUG-2013 20:25
Client ID: UP-CB-B8-201306 MSD
Instrument: nt10.i
Sample Info: WY32AMSD
Volume Injected (uL): 1.0
Operator: YZ
Column phase: ZB-5msi
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wy32amsd.d

Lab ID: WY32AMSD, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 01-AUG-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 8/3/13

Data file : /chem1/nt10.i/20130801.b/SIM.b/wy32a.d
Lab Smp Id: WY32A Client Smp ID: UP-CB-B8-20130626-S
Inj Date : 01-AUG-2013 19:09
Operator : YZ Inst ID: nt10.i
Smp Info : WY32A
Misc Info : 13-15393
Comment :
Method : /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Meth Date : 03-Aug-2013 12:01 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 8
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	7.04000	Weight of sample extracted (g)
M	31.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	6.880	6.857	(0.746)	88312	1.83697	1134
	3 Phenol	94	8.603	8.588	(0.933)	18275	0.29105	179.8
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	9.222	9.222	(1.000)	120926	4.00000	
	9 1,4-Dichlorobenzene	146	9.253	9.253	(1.003)	3470	0.07181	44.35(M)
	11 Benzyl alcohol	79	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	15 4-Methylphenol	108	10.083	10.076	(1.093)	40242	0.87115	538.0
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.891	11.891	(1.000)	449010	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	15.296	15.296	(0.968)	4667	0.06529	40.32(M)
*	42 Acenaphthene-d10	162	15.798	15.798	(1.000)	222142	4.00000	
	50 Diethylphthalate	149	16.881	16.881	(1.069)	6083	0.07544	46.59(M)
	54 N-Nitrosodiphenylamine	169	17.290	17.282	(0.905)	12030	0.24350	150.4
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	19.098	19.090	(1.000)	404188	4.00000	
$	66 Terphenyl-d14	244	22.564	22.548	(0.919)	58961	1.18056	729.1
	67 Butylbenzylphthalate	149	23.578	23.547	(0.960)	917448	20.4413 E	12620
*	69 Chrysene-d12	240	24.554	24.523	(1.000)	384492	4.00000	
*	77 Perylene-d12	264	27.171	27.109	(1.000)	417082	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.730	29.637	(1.094)	17963	0.17187	106.1
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wy32a.d
Lab Smp Id: WY32A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Misc Info: 13-15393

Calibration Date: 01-AUG-2013
Calibration Time: 16:00
Client Smp ID: UP-CB-B8-2013062
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	139368	69684	278736	120926	-13.23
27 Naphthalene-d8	497738	248869	995476	449010	-9.79
42 Acenaphthene-d10	263483	131742	526966	222142	-15.69
59 Phenanthrene-d10	519545	259772	1039090	404188	-22.20
69 Chrysene-d12	513753	256876	1027506	384492	-25.16
77 Perylene-d12	525862	262931	1051724	417082	-20.69

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.22	8.72	9.72	9.22	0.00
27 Naphthalene-d8	11.89	11.39	12.39	11.89	0.00
42 Acenaphthene-d10	15.80	15.30	16.30	15.80	0.00
59 Phenanthrene-d10	19.09	18.59	19.59	19.10	0.04
69 Chrysene-d12	24.52	24.02	25.02	24.55	0.13
77 Perylene-d12	27.11	26.61	27.61	27.17	0.23

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

Analytical Resources, Inc.

RECOVERY REPORT

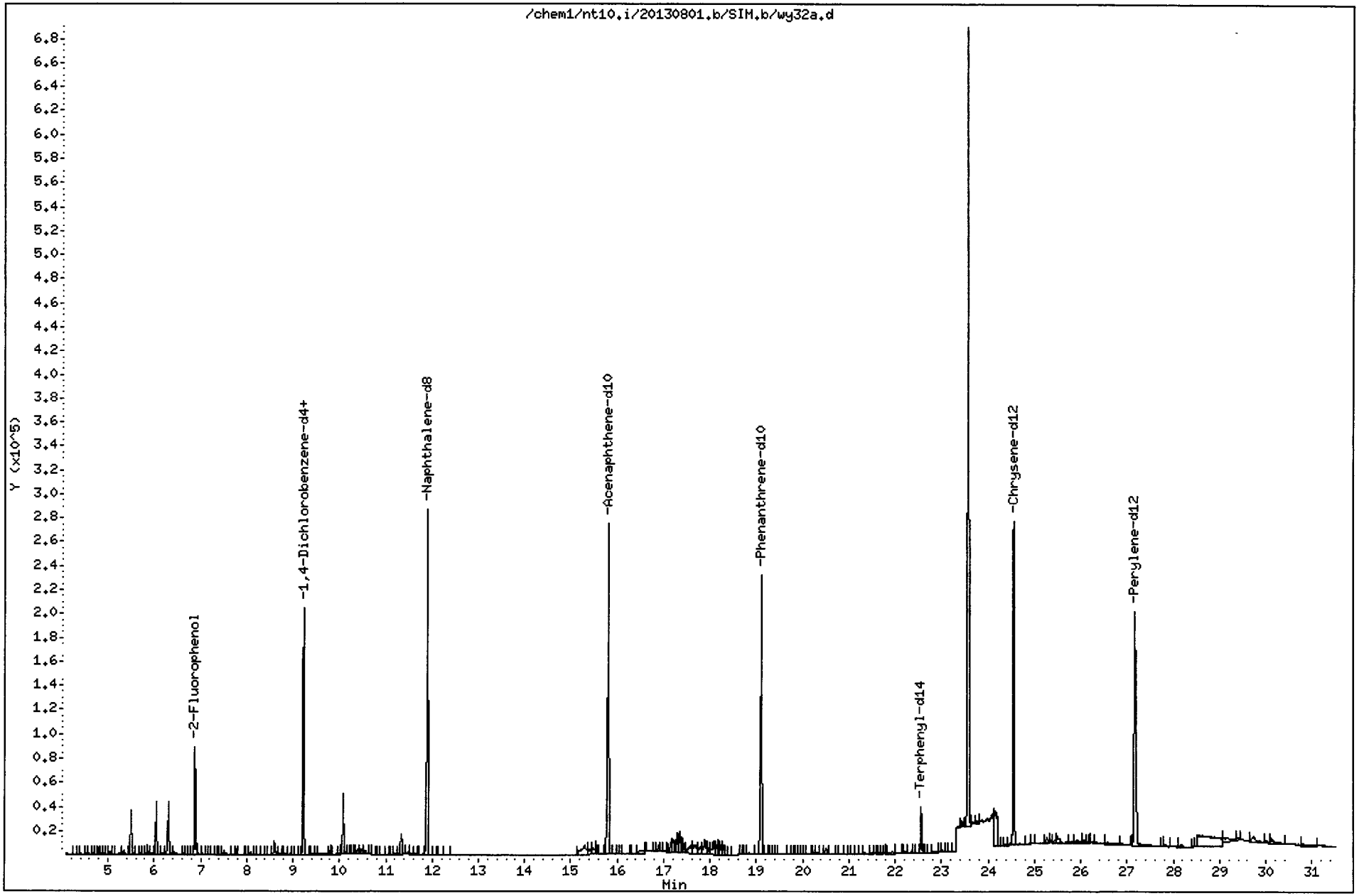
Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WY32A
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Misc Info: 13-15393

Client SDG: WY32
Fraction: SV
Client Smp ID: UP-CB-B8-20130626-S
Operator: YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	1544	1134	73.48	27-120
$ 66 Terphenyl-d14	1029	729.1	70.83	37-120

Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32a.d
Date : 01-AUG-2013 19:09
Client ID: UP-CB-B8-20130626-S
Sample Info: WY32A
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

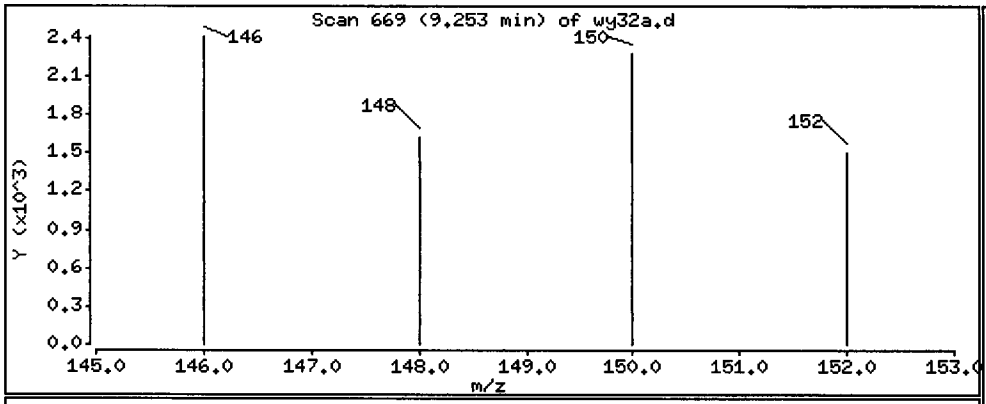
Operator: YZ

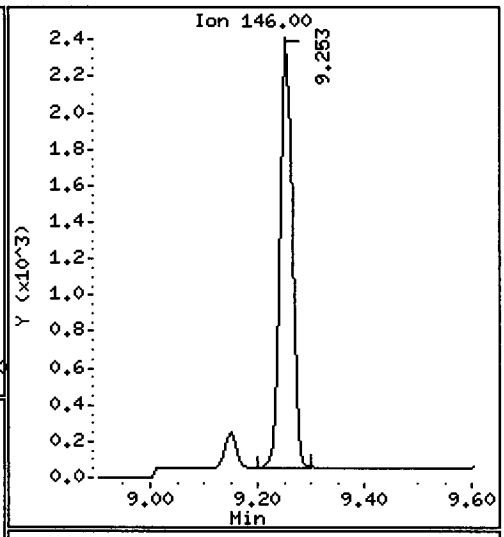
Column phase: ZB-5msi

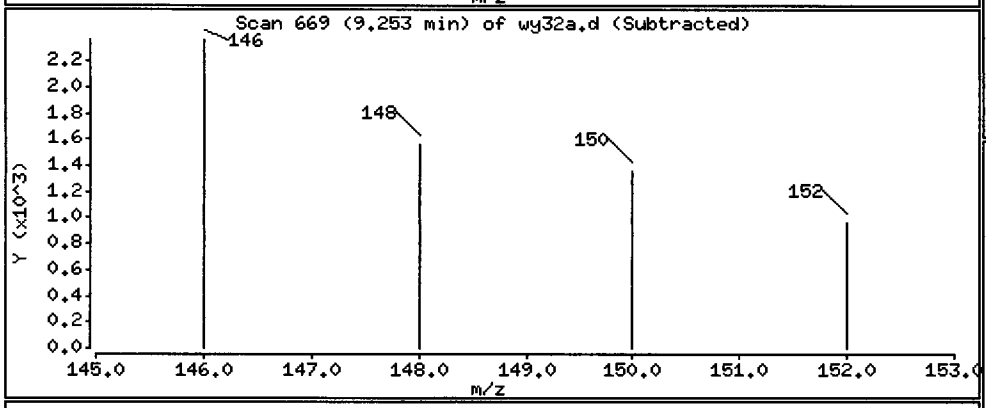
Column diameter: 0.25

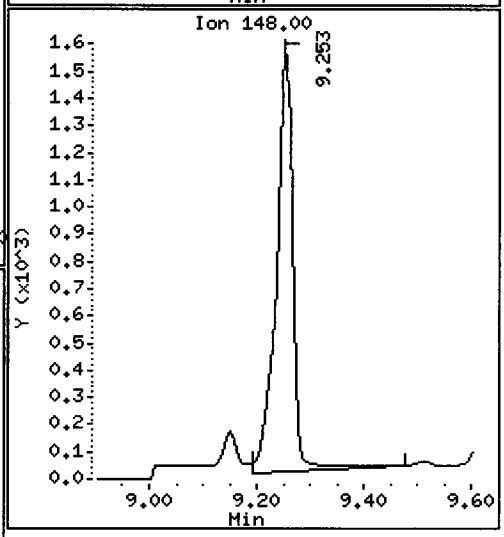
9 1,4-Dichlorobenzene

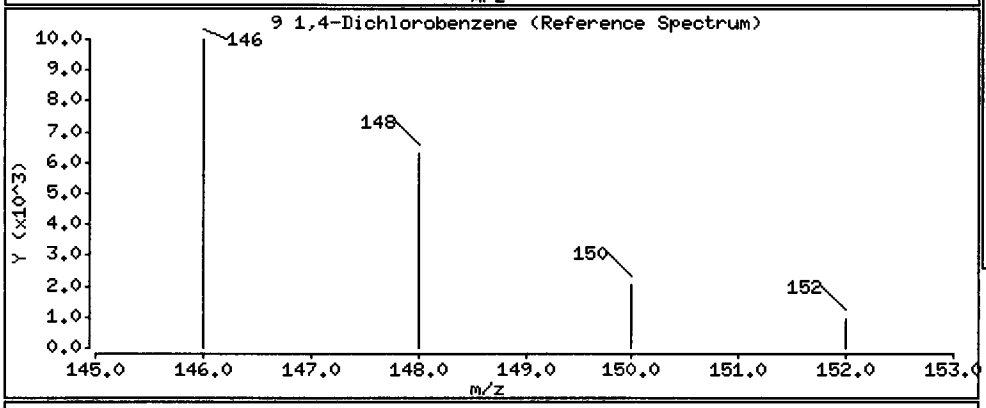
Concentration: 44.35 ug/kg

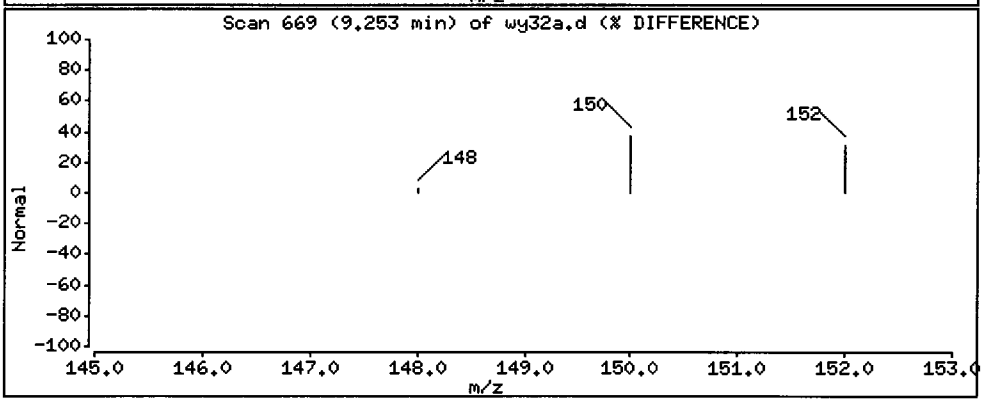












Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

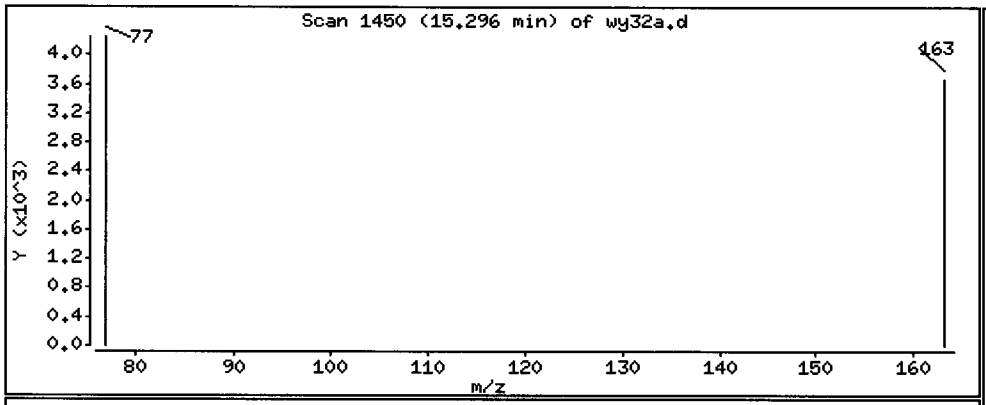
Operator: YZ

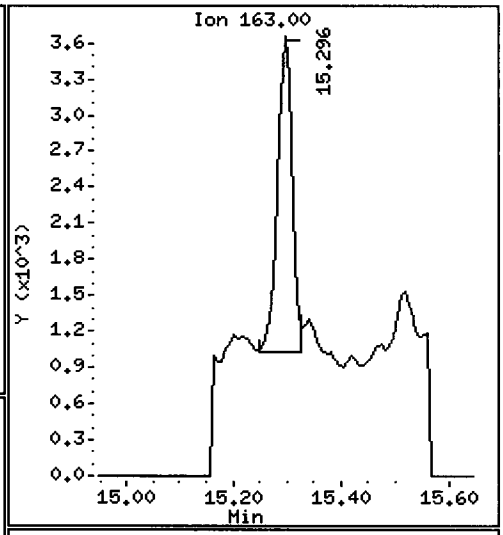
Column phase: ZB-5msi

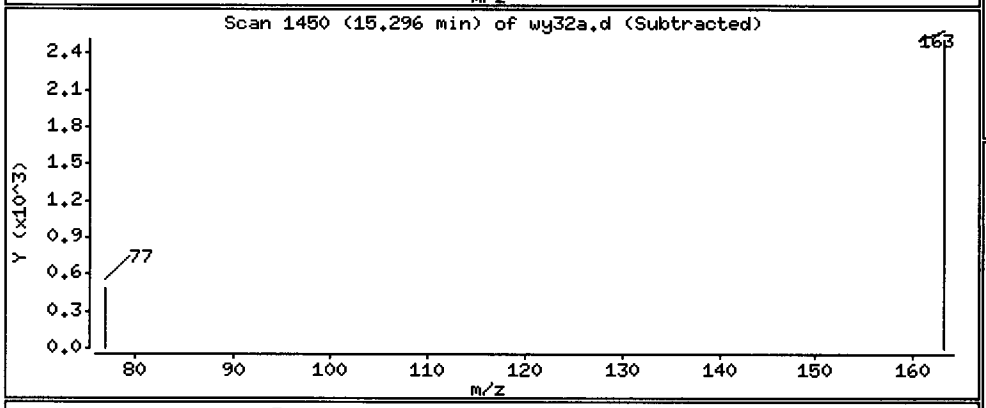
Column diameter: 0.25

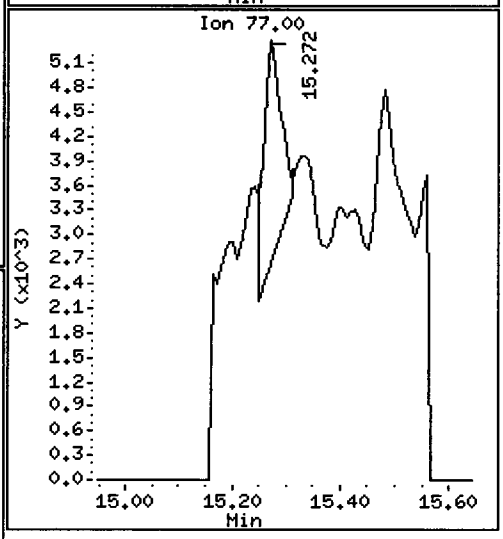
39 Dimethylphthalate

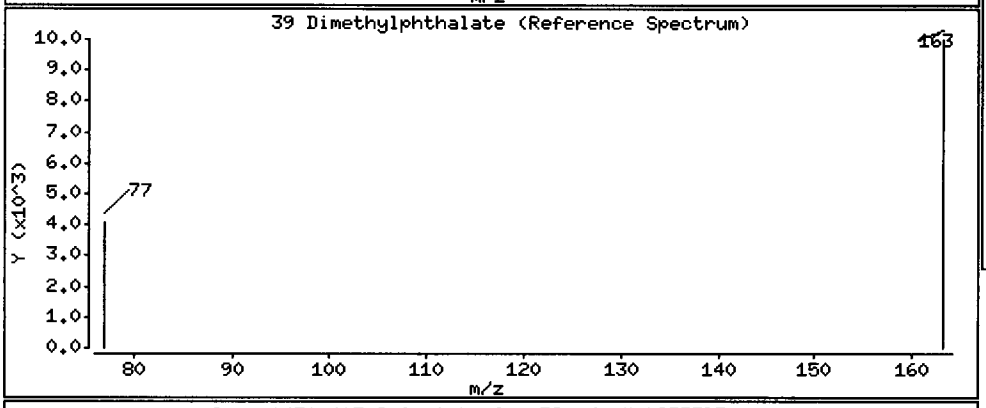
Concentration: 40.32 ug/kg

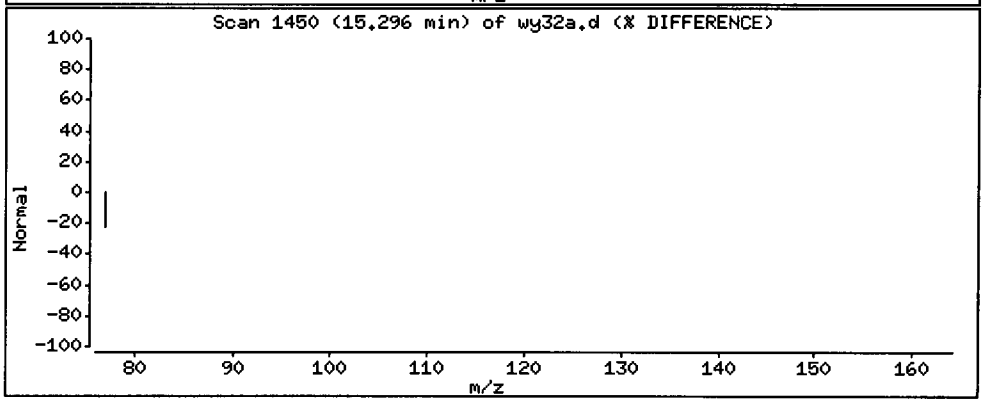












Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

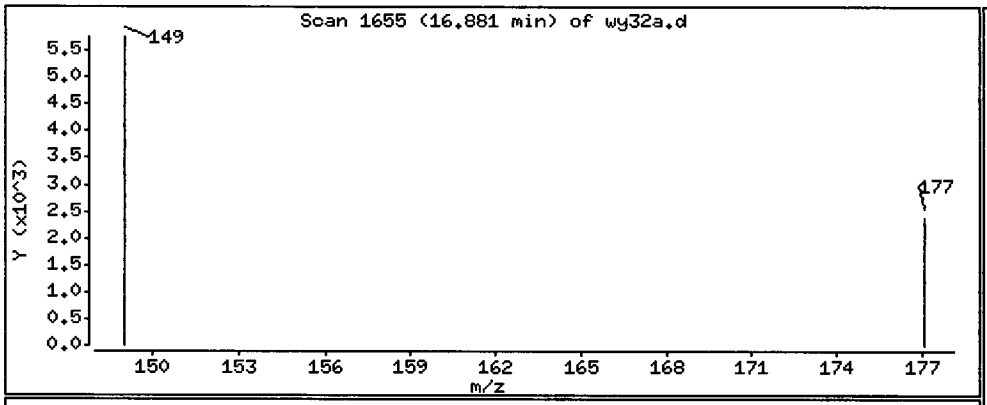
Operator: YZ

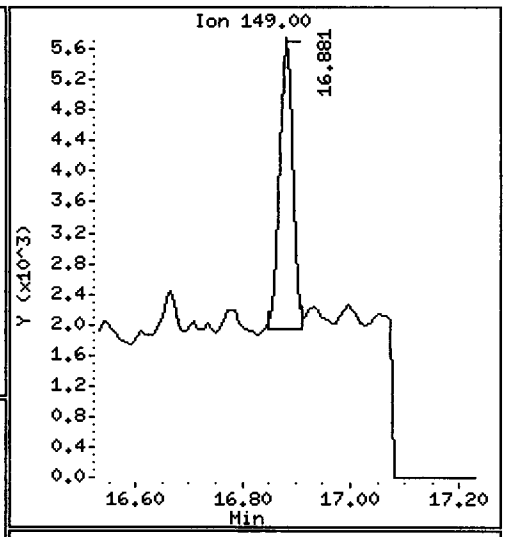
Column phase: ZB-5msi

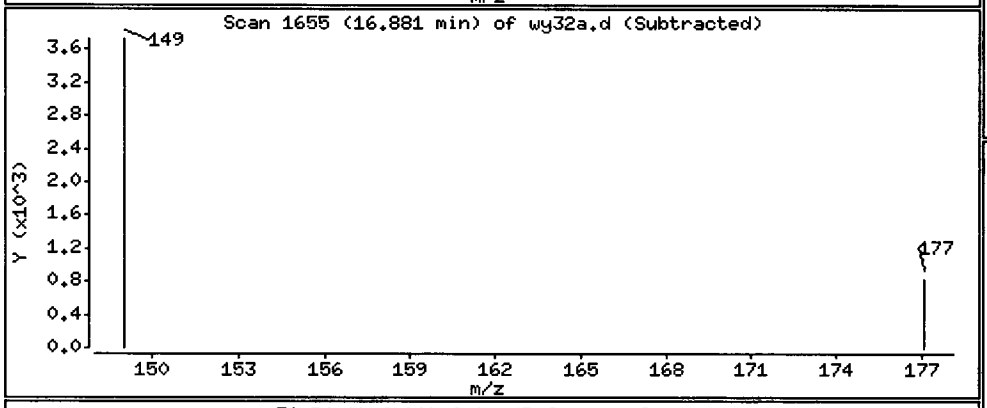
Column diameter: 0.25

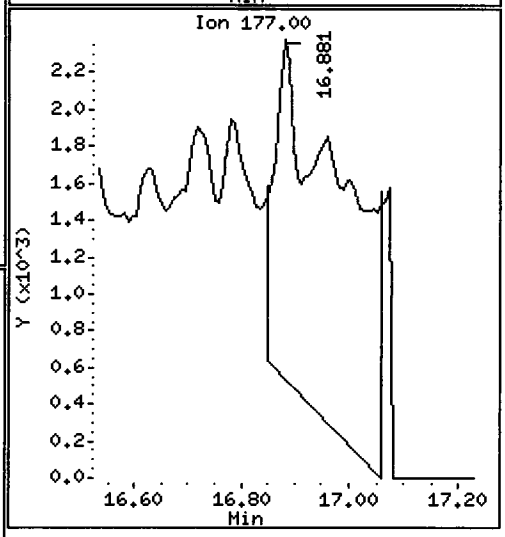
50 Diethylphthalate

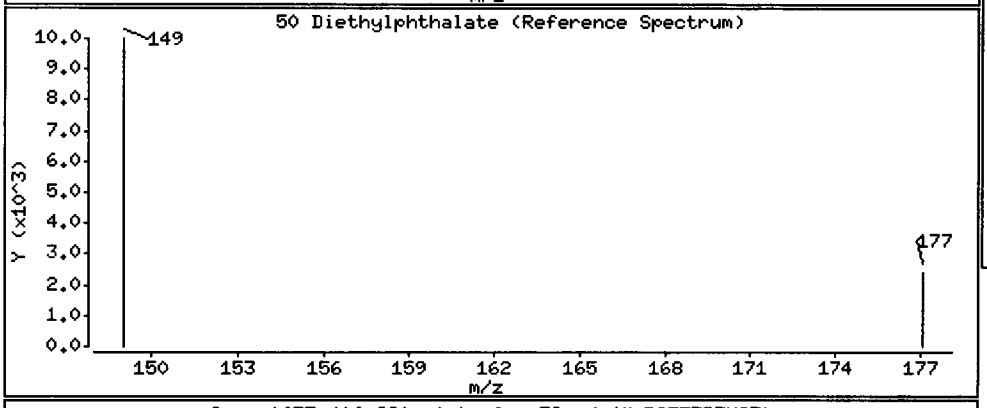
Concentration: 46.59 ug/kg

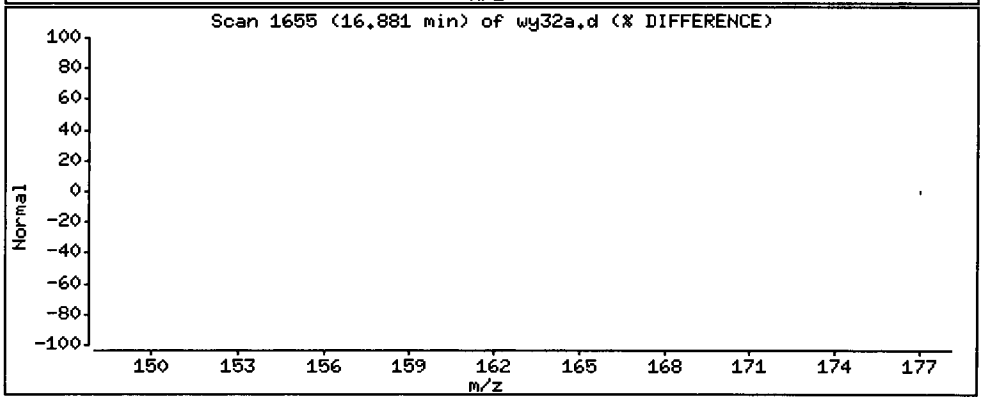












Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

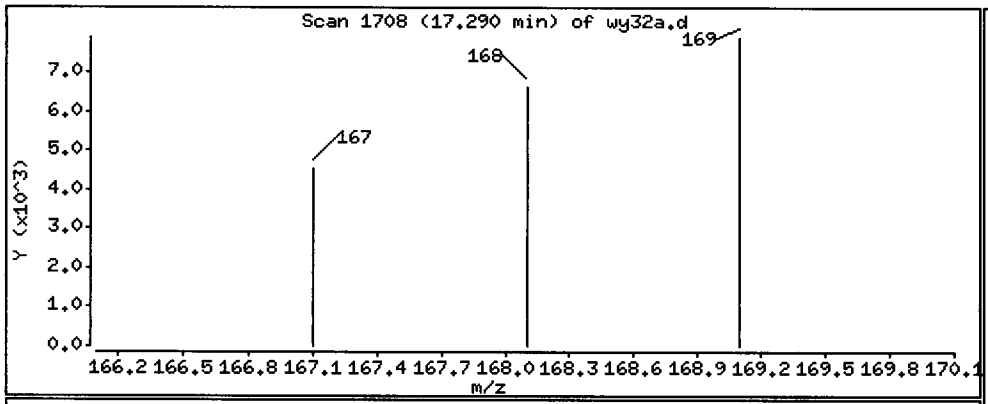
Operator: YZ

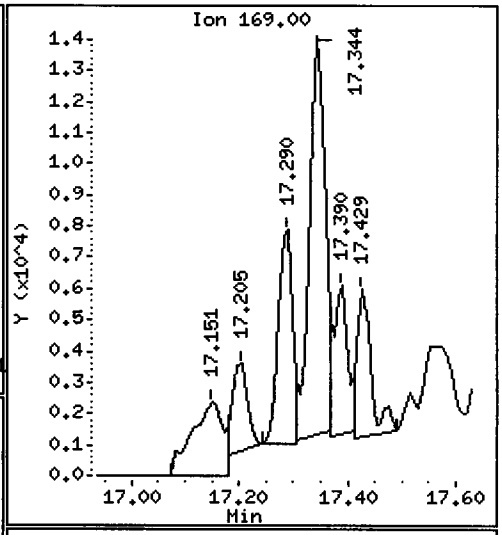
Column phase: ZB-5msi

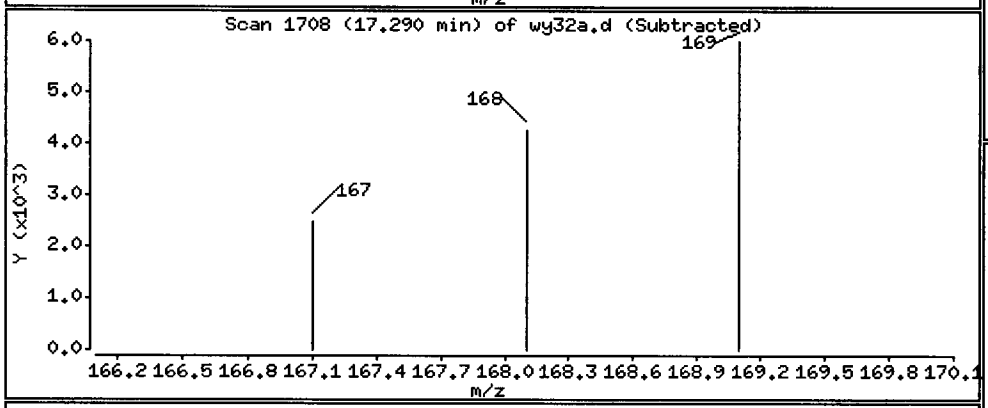
Column diameter: 0.25

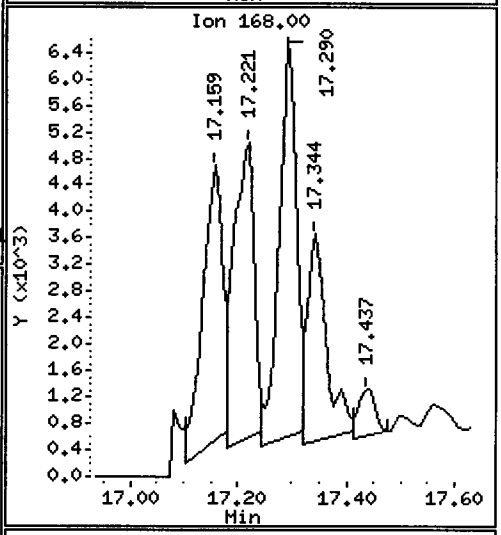
54 N-Nitrosodiphenylamine

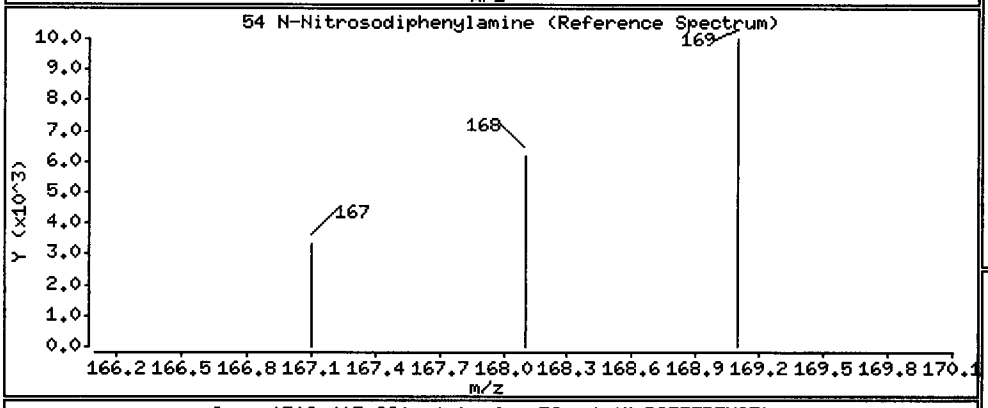
Concentration: 150.4 ug/kg

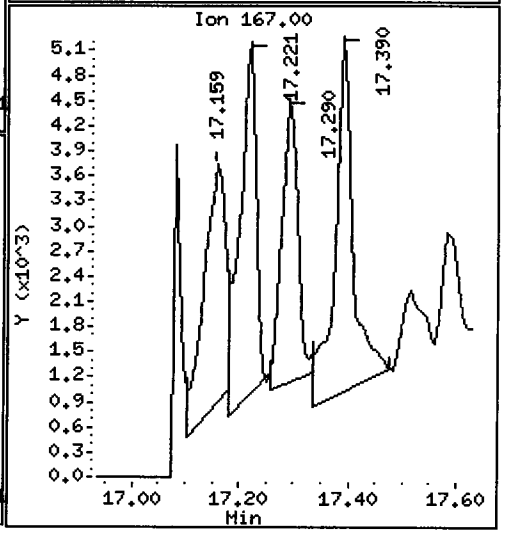


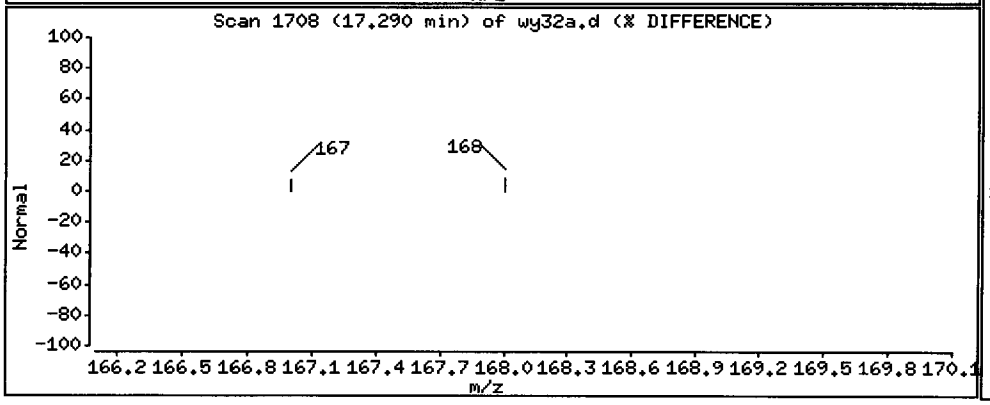












Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

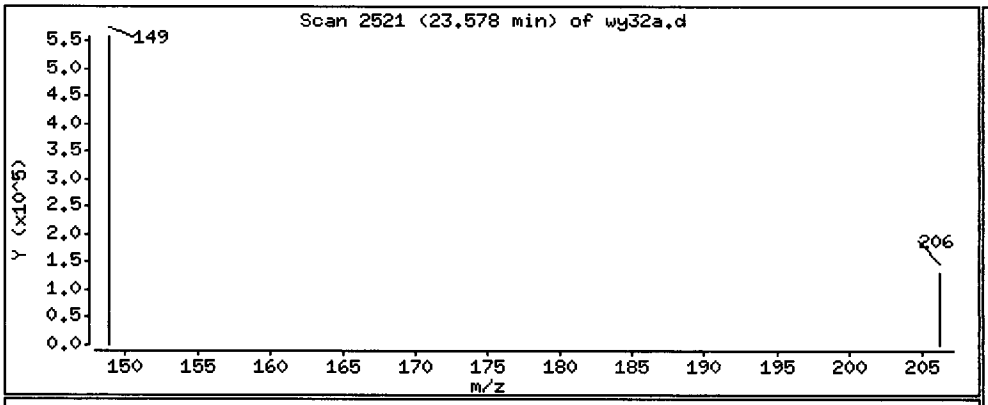
Operator: YZ

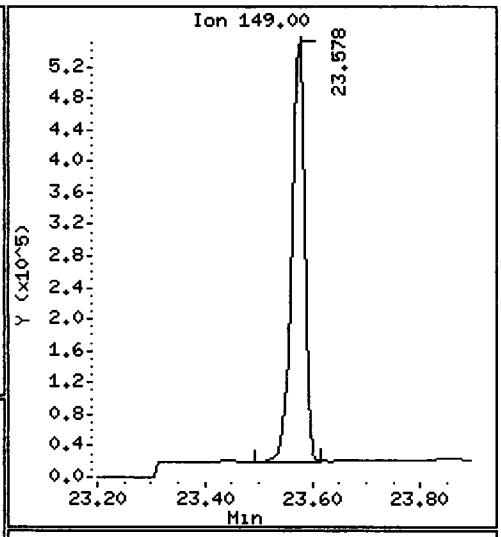
Column phase: ZB-5msi

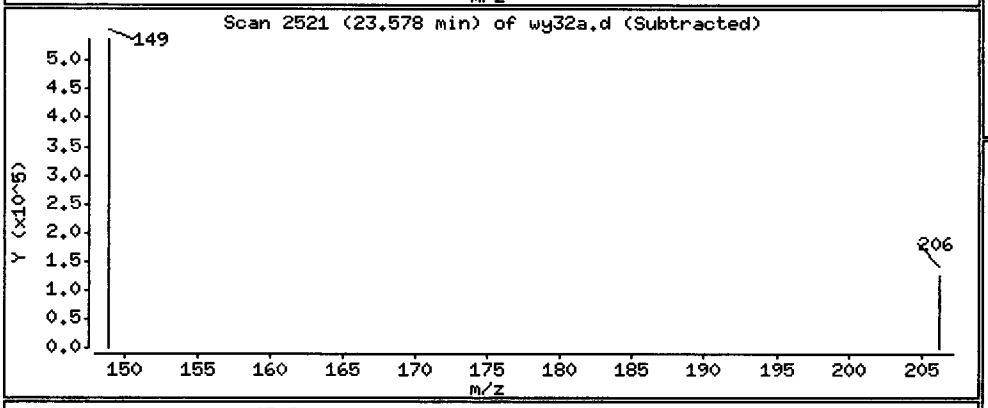
Column diameter: 0.25

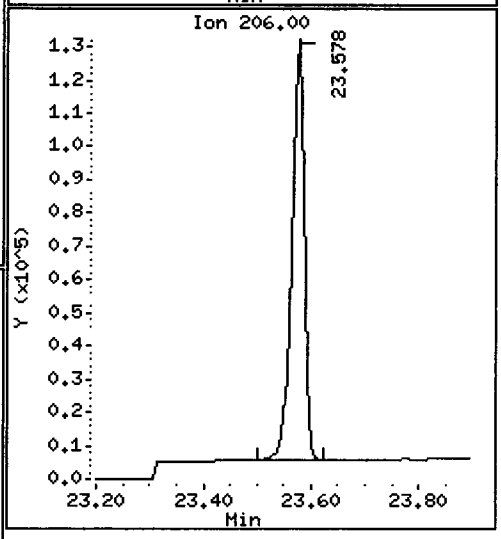
67 Butylbenzylphthalate

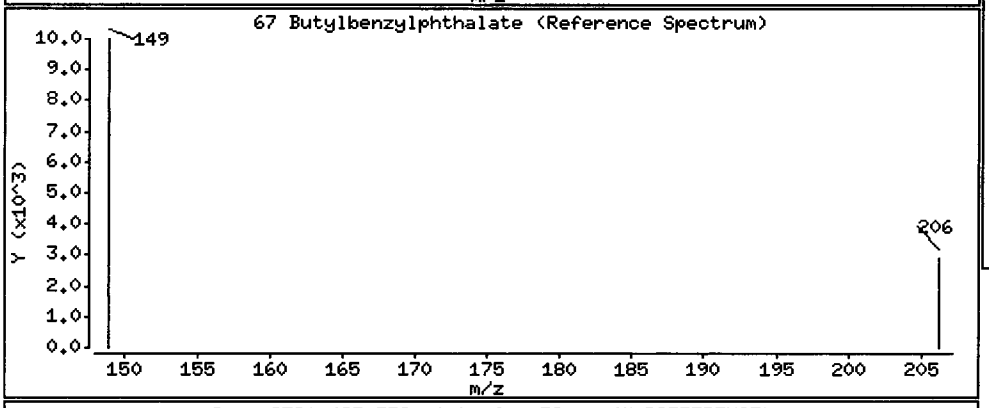
Concentration: 12620 ug/kg

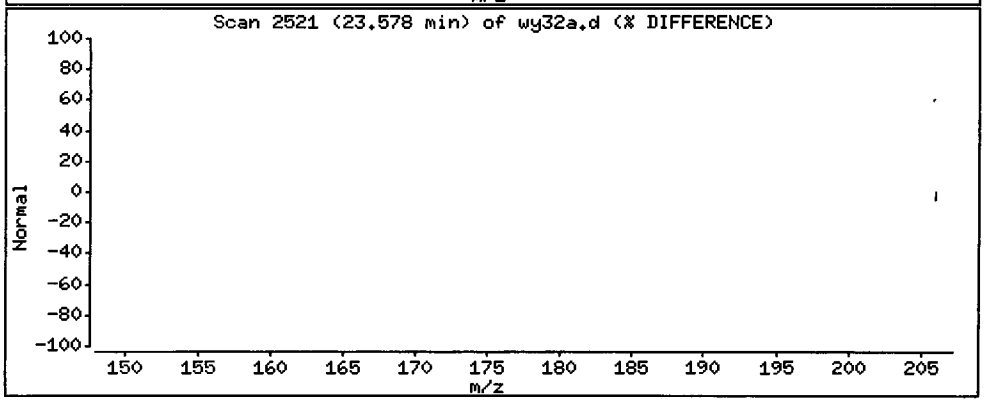












Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32a.d

Date : 01-AUG-2013 19:09

Client ID: UP-CB-B8-20130626-S

Instrument: nt10.i

Sample Info: WY32A

Volume Injected (uL): 1.0

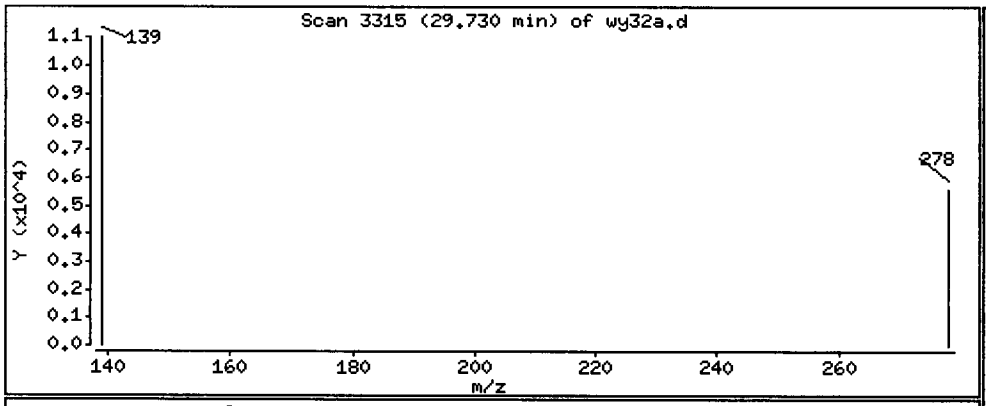
Operator: YZ

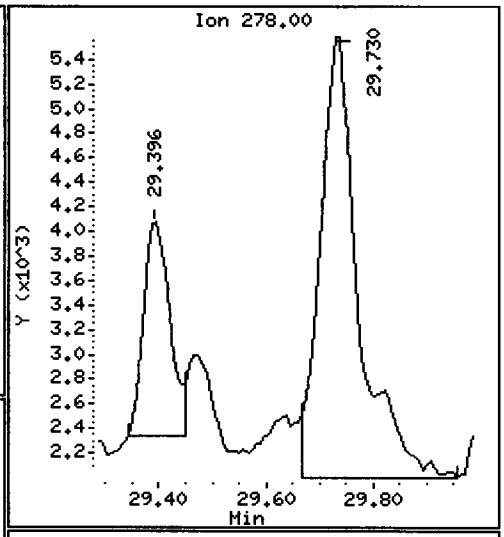
Column phase: ZB-5msi

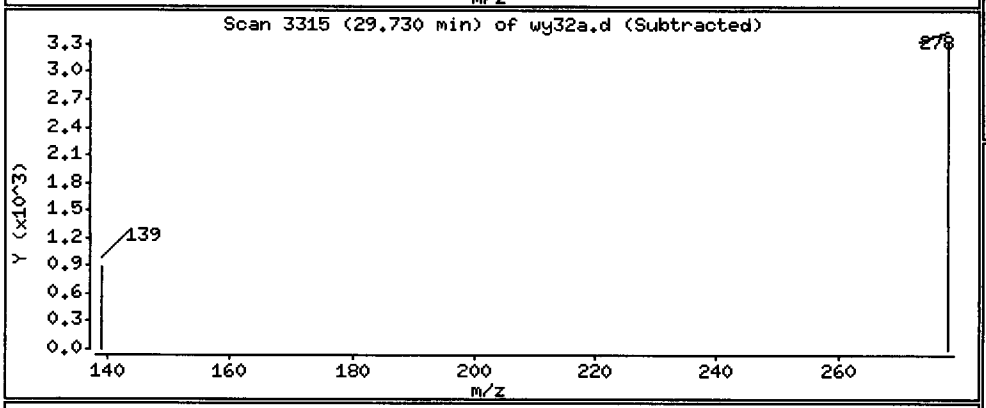
Column diameter: 0.25

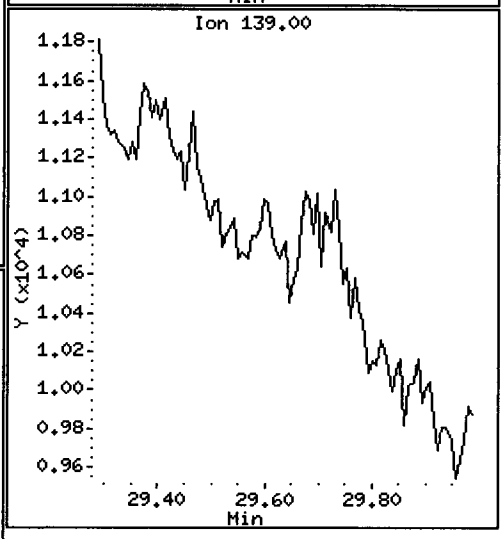
79 Dibenzo(a,h)anthracene

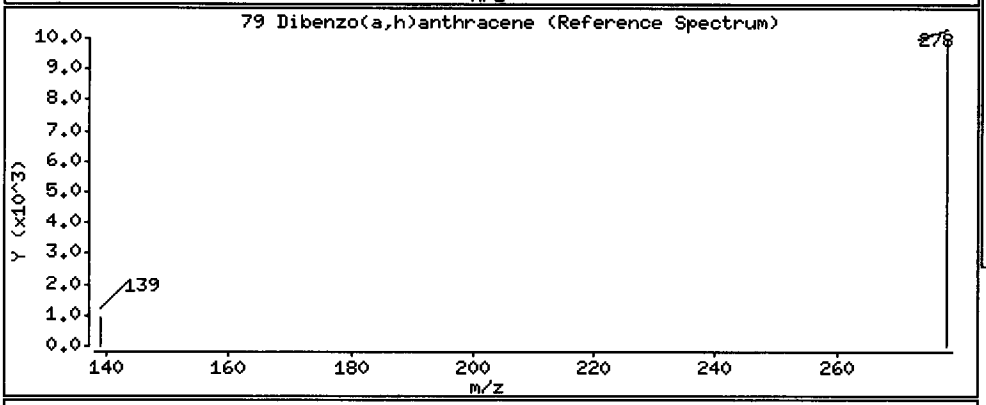
Concentration: 106.1 ug/kg

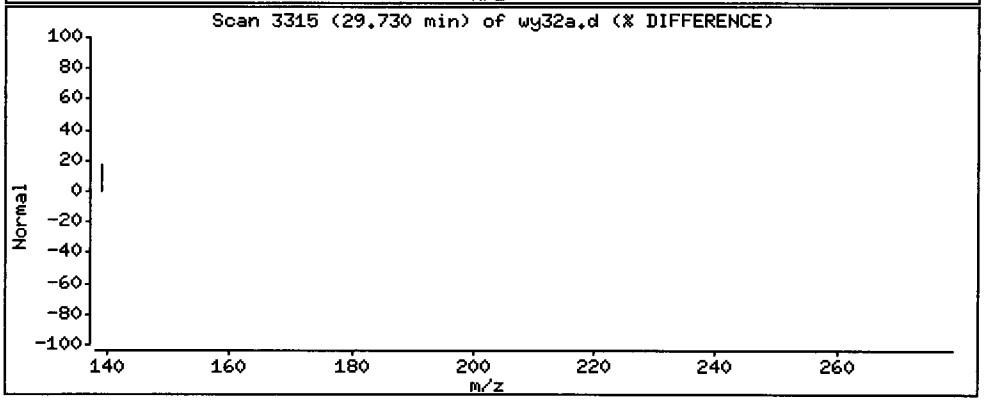






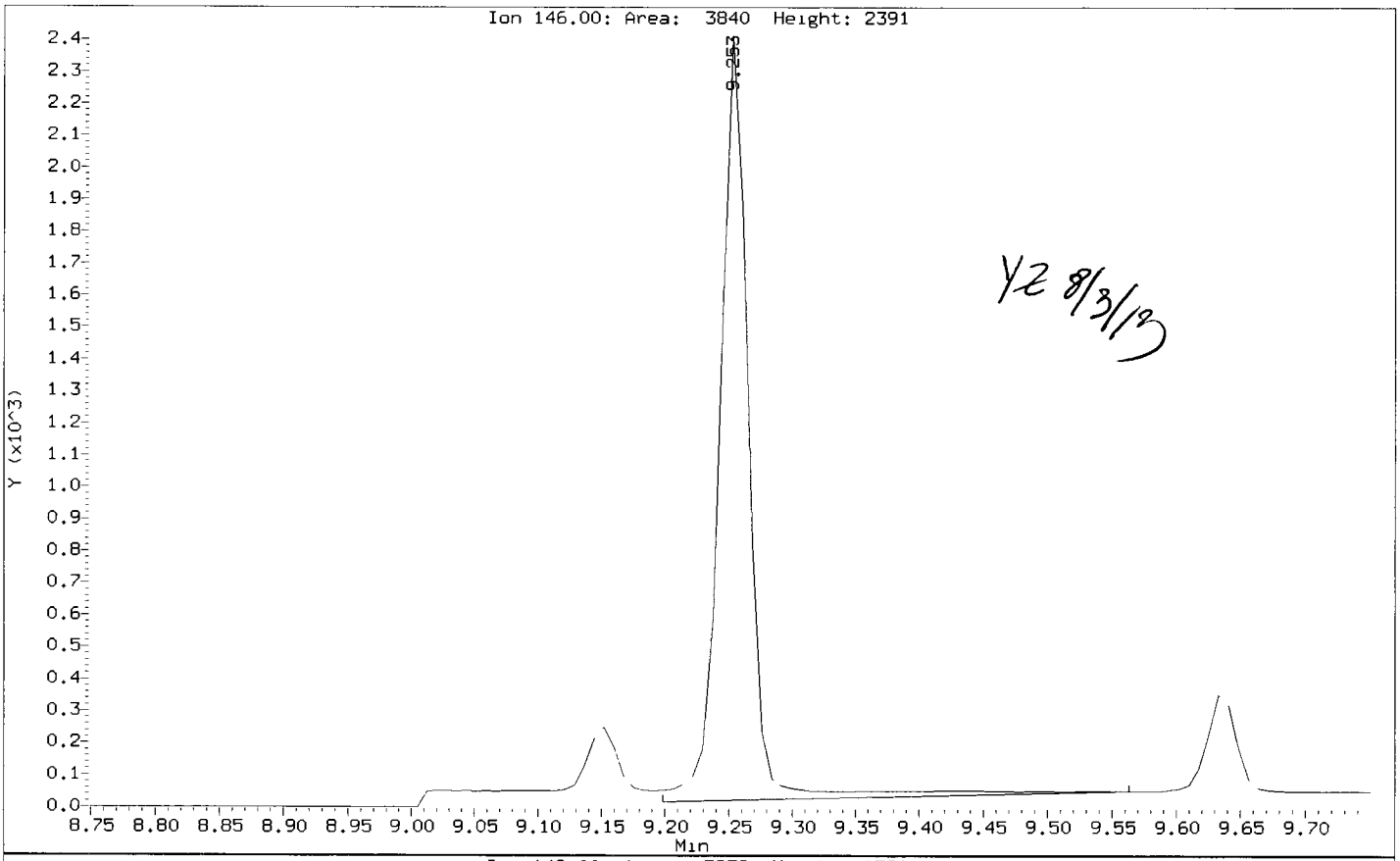




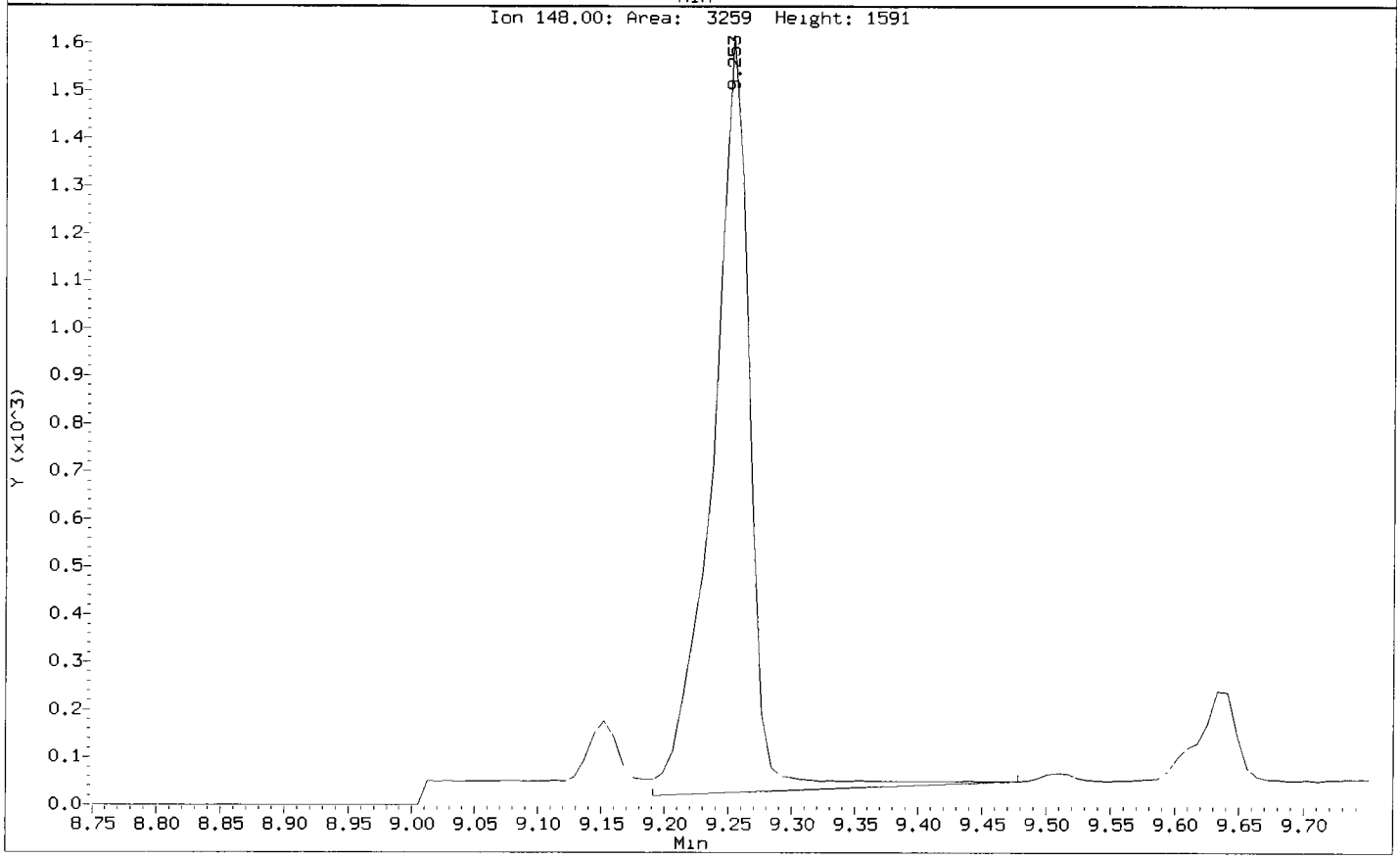


Data File: /chem1/nt10.1/20130801.b/SIM.b/wy32a.d
Injection Date: 01-AUG-2013 19:09
Instrument: nt10.1
Client Sample ID:

Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7

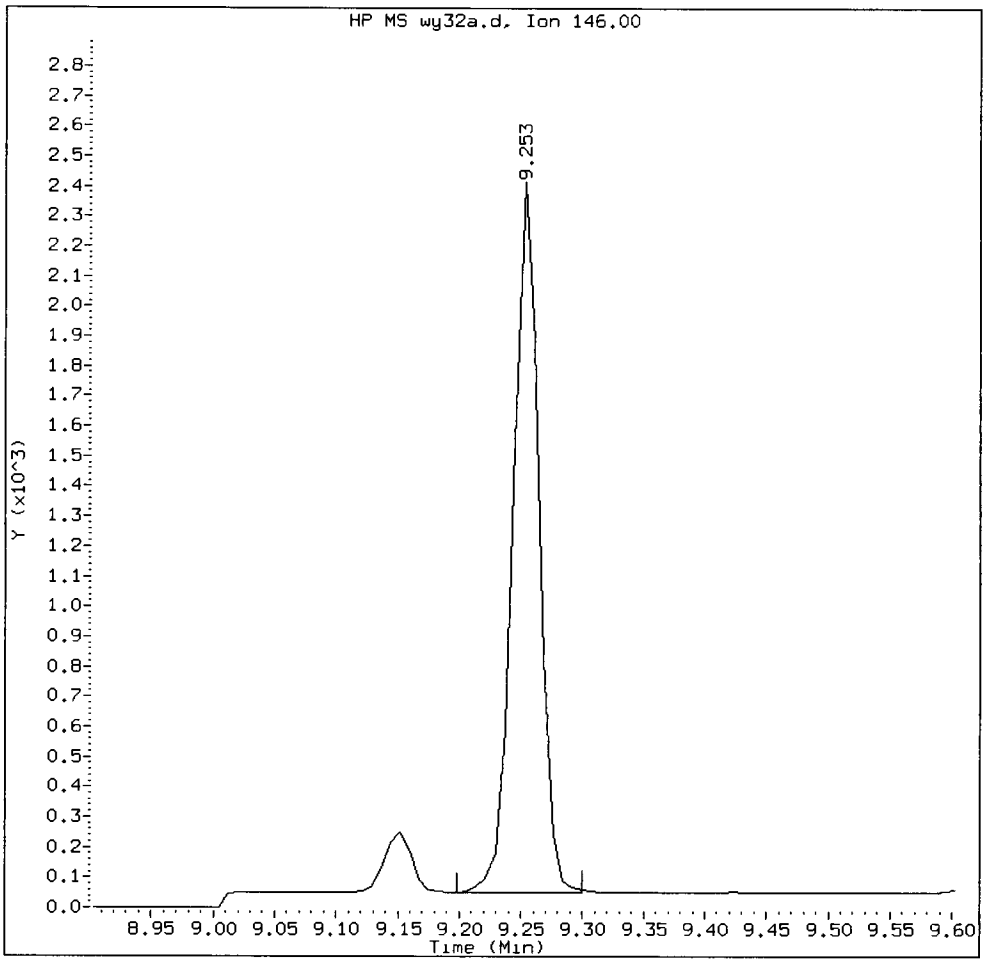


YZ 8/3/13



WY32A, /chem1/nt10.i/20130801.b/SIM.b/wy32a.d

1,4-Dichlorobenzene Amount: 0.07 Area: 3470



MANUAL INTEGRATION for 1,4-Dichlorobenzene

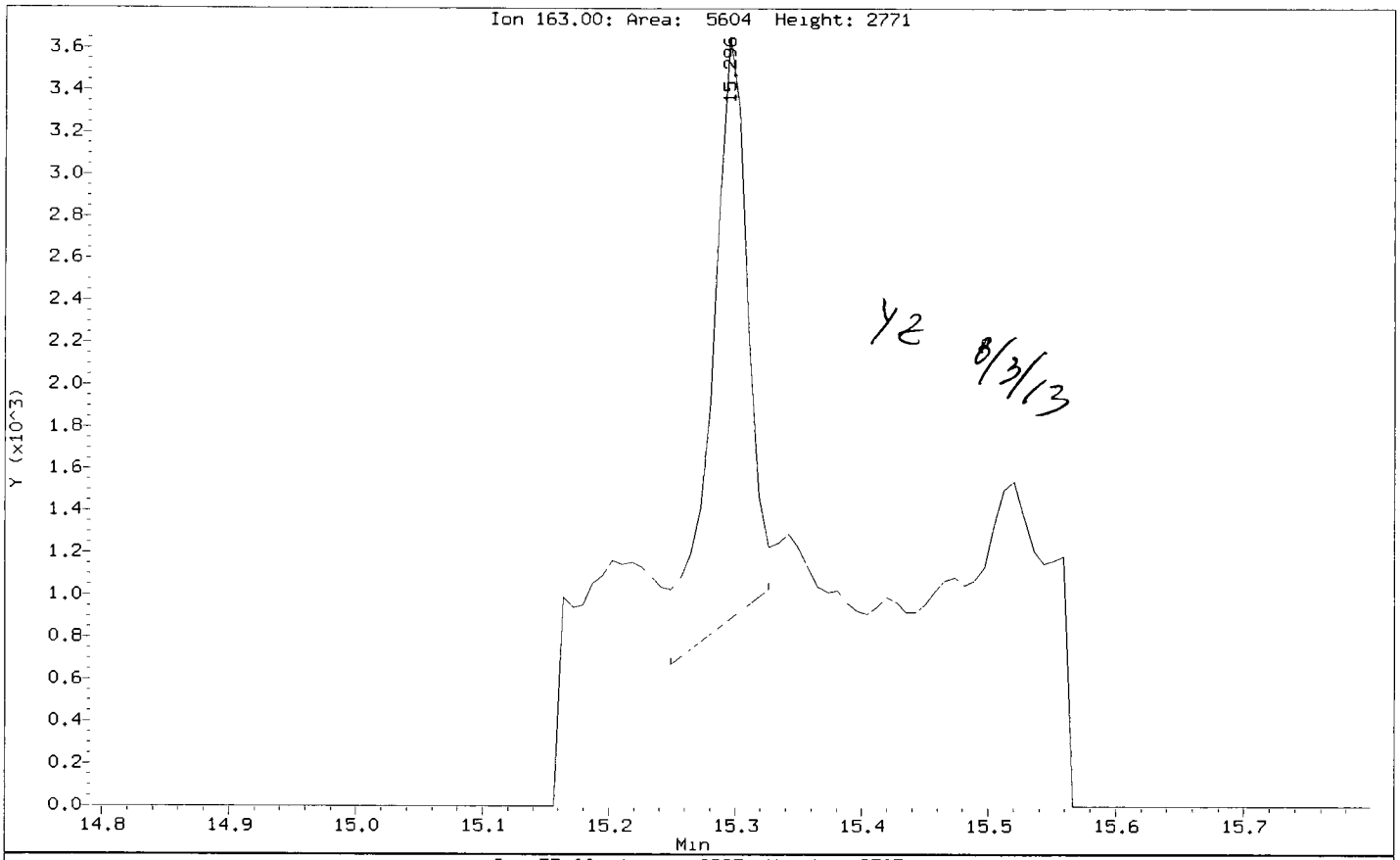
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

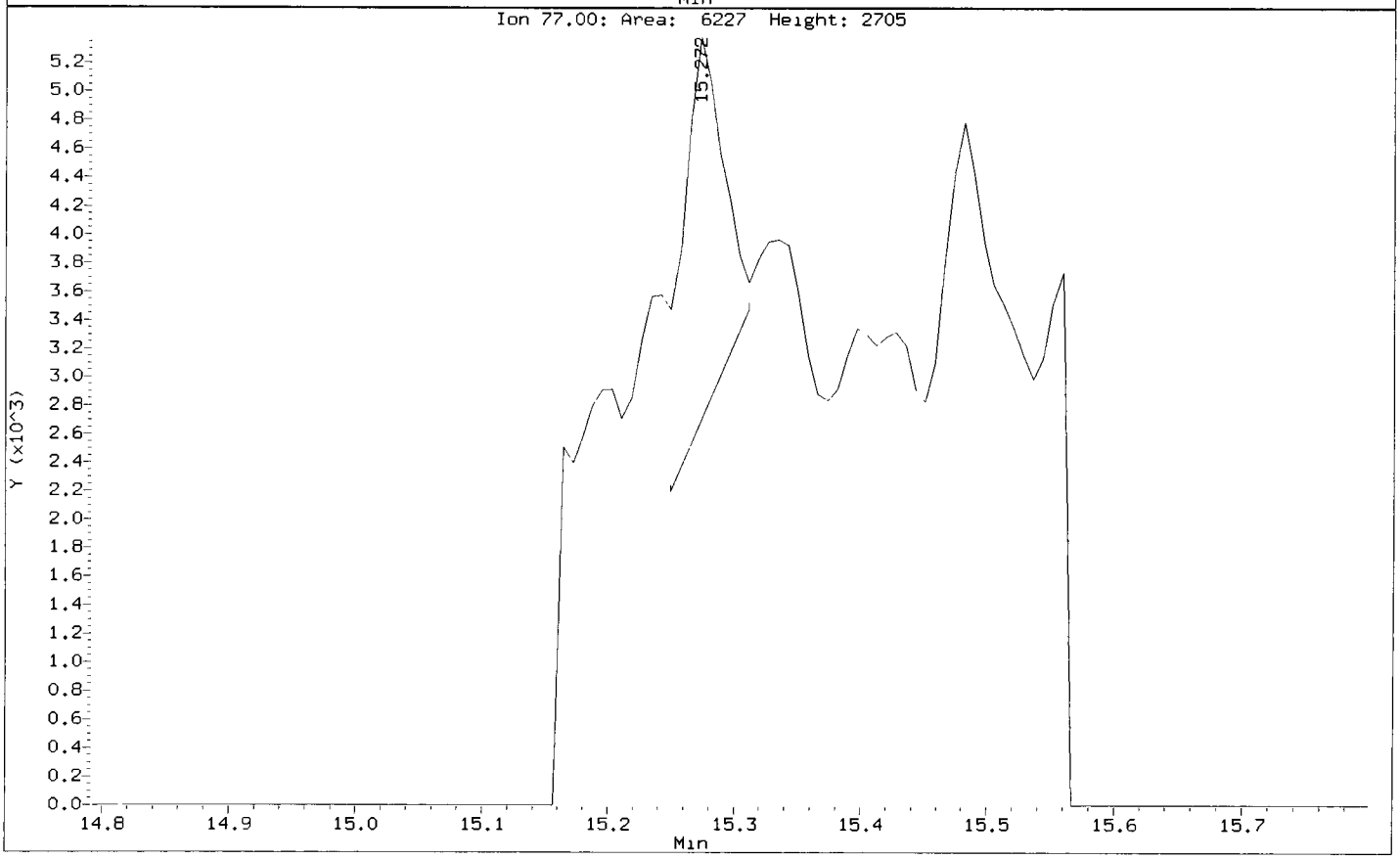
5. Other _____

Analyst: JZ Date: 8/8/13

Data File: /chem1/nt10.1/20130801.b/SIM.b/wy32a.d
Injection Date: 01-AUG-2013 19:09
Instrument: nt10.1
Client Sample ID:

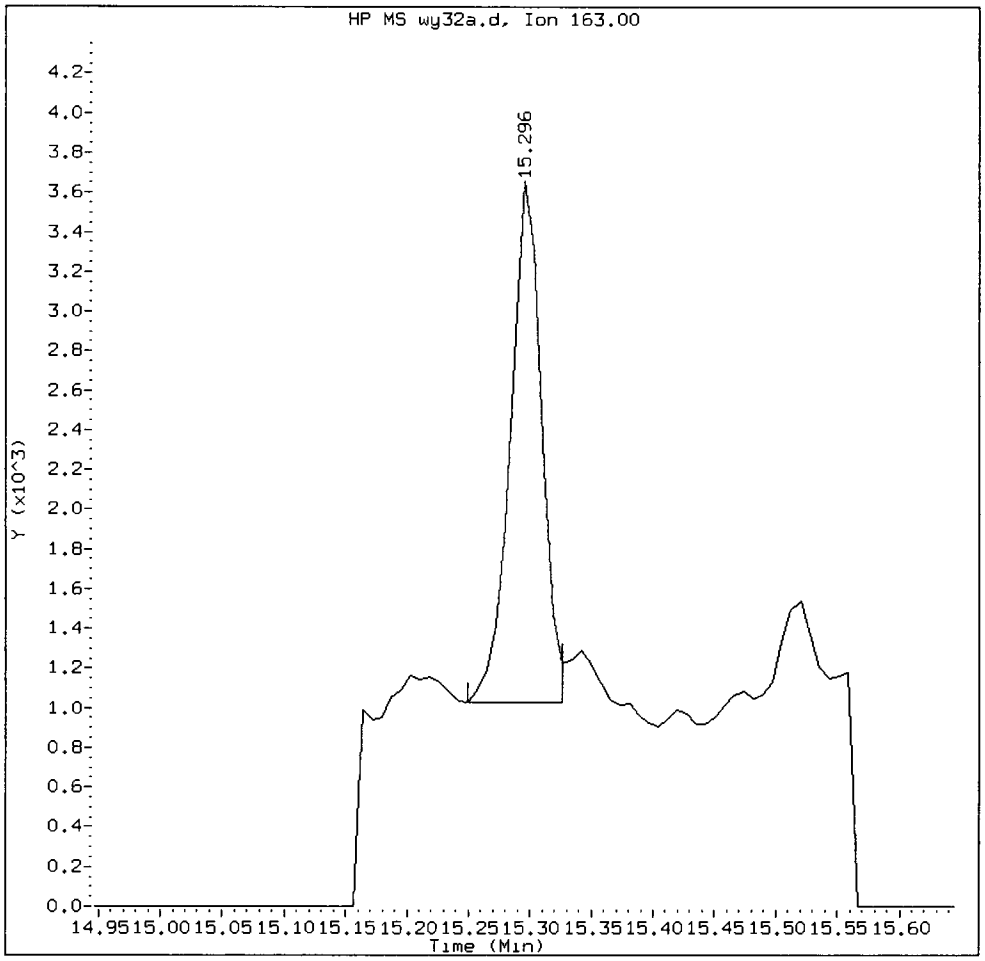
Compound: Dimethylphthalate
CAS Number: 131-11-3





WY32A, /chem1/nt10.i/20130801.b/SIM.b/wy32a.d

Dimethylphthalate Amount: 0.07 Area: 4667



MANUAL INTEGRATION for Dimethylphthalate

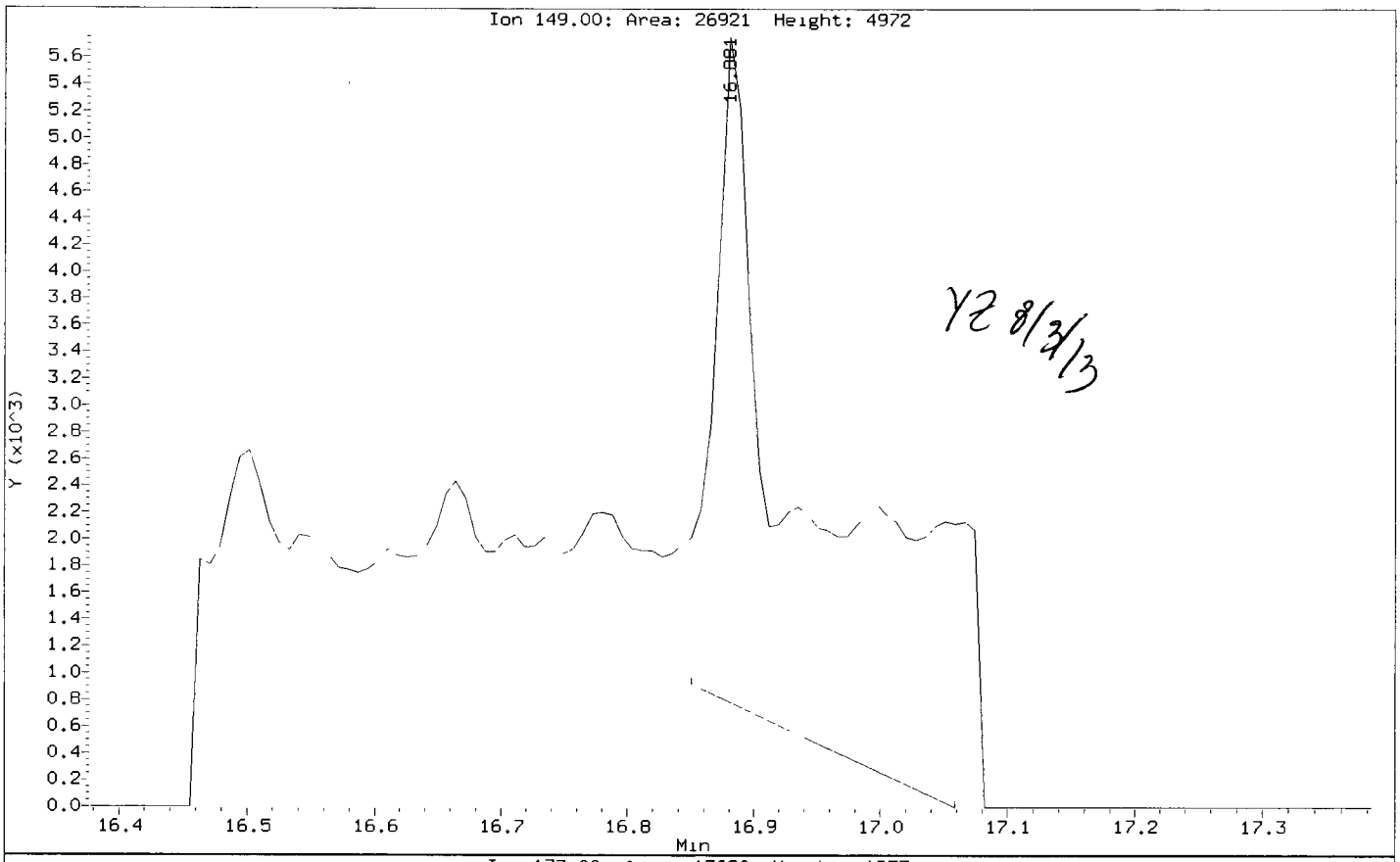
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

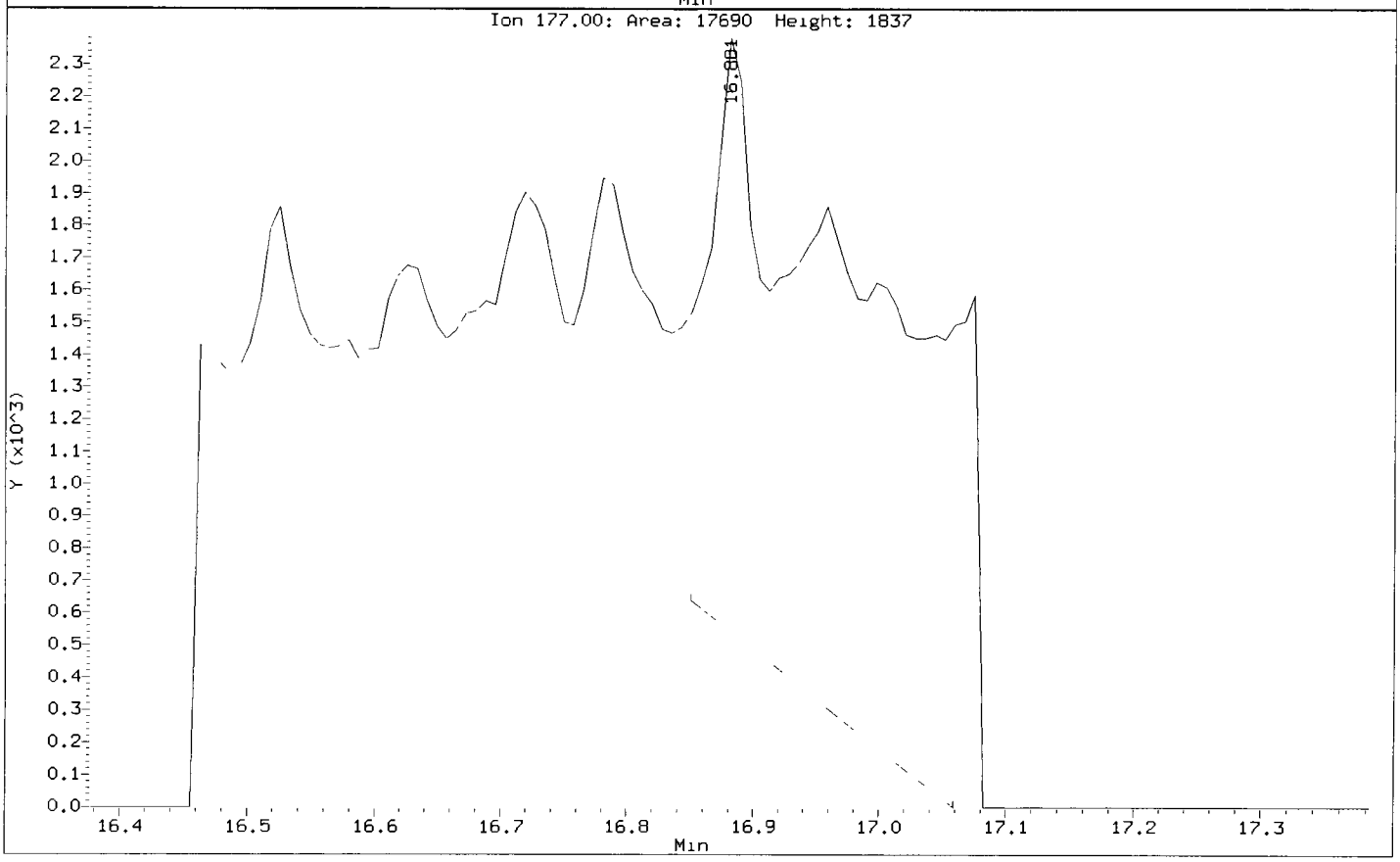
Analyst: YZ Date: 8/3/13

Data File: /chem1/nt10.1/20130801.b/SIM.b/wy32a.d
Injection Date: 01-AUG-2013 19:09
Instrument: nt10.1
Client Sample ID:

Compound: Diethylphthalate
CAS Number: 84-66-2

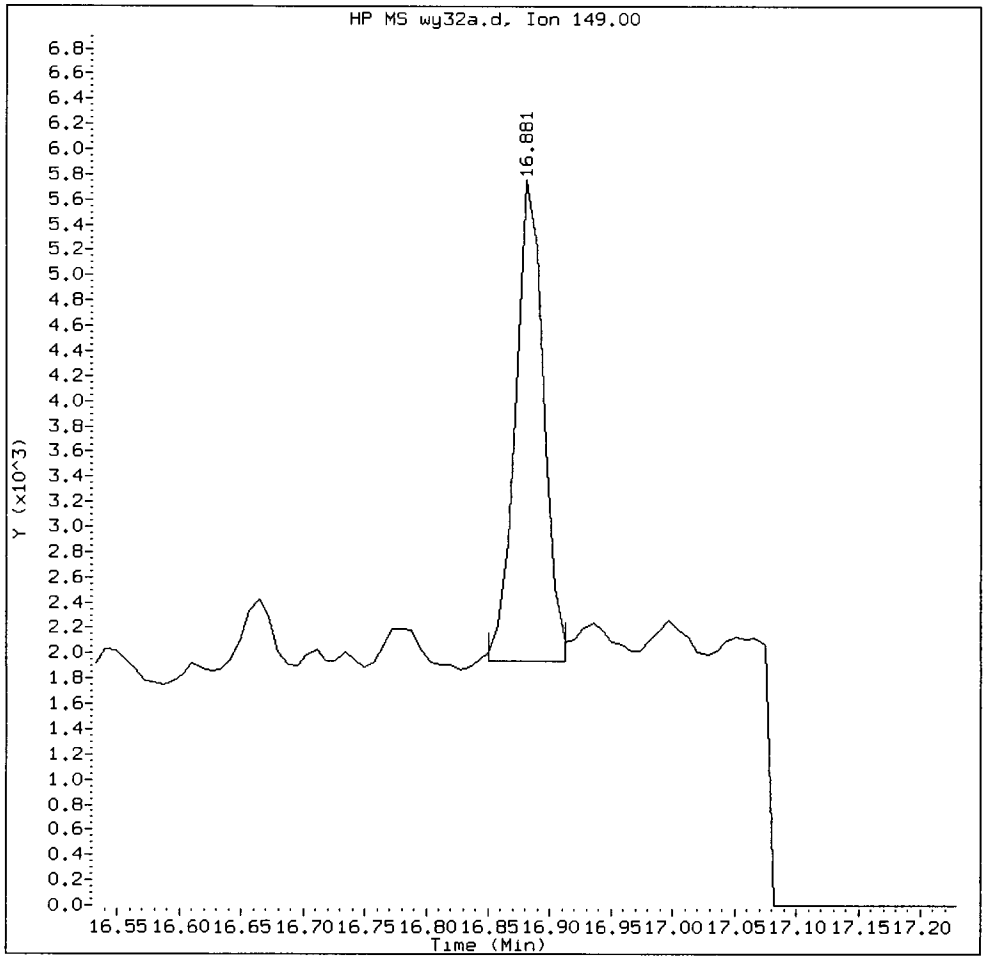


YZ 8/2/13



WY32A, /chem1/nt10.i/20130801.b/SIM.b/wy32a.d

Diethylphthalate Amount: 0.08 Area: 6083



MANUAL INTEGRATION for Diethylphthalate

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JZ Date: 8/3/13

CO-ELUTION SUMMARY FOR FILE - wy32a.d

Lab ID: WY32A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 01-AUG-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 8/8/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130801.b/SIM.b/wy32b.d
Lab Smp Id: WY32B Client Smp ID: UP-MHF-165-20130626
Inj Date : 01-AUG-2013 21:03
Operator : YZ Inst ID: nt10.i
Smp Info : WY32B
Misc Info : 13-15394
Comment :
Method : /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Meth Date : 03-Aug-2013 12:01 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 11
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	12.05000	Weight of sample extracted (g)
M	15.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$	1 2-Fluorophenol	112	6.880	6.857	(0.746)	83014	1.83908	538.7
	3 Phenol	94	8.603	8.588	(0.933)	9236	0.15666	45.89
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	9.222	9.222	(1.000)	113541	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	79	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	15 4-Methylphenol	108	10.083	10.076	(1.093)	3621	0.08349	24.45
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	11.205	11.197	(0.942)	1107	0.02635 J	7.718
	26 1,2,4-Trichlorobenzene	180	11.806	11.799	(0.993)	1411	0.03502 J	10.26 (M)
*	27 Naphthalene-d8	136	11.891	11.891	(1.000)	422511	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	15.311	15.296	(0.969)	1197978	19.7454	5783
*	42 Acenaphthene-d10	162	15.806	15.798	(1.000)	188556	4.00000	
	50 Diethylphthalate	149	16.889	16.881	(1.068)	5625	0.08218	24.07
	54 N-Nitrosodiphenylamine	169	17.290	17.282	(0.905)	10862	0.24214	70.92
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	18.835	18.819	(0.986)	2308	0.13857	40.59(M)
*	59 Phenanthrene-d10	188	19.105	19.090	(1.000)	366992	4.00000	
$	66 Terphenyl-d14	244	22.572	22.548	(0.919)	55446	1.20266	352.3
	67 Butylbenzylphthalate	149	23.570	23.547	(0.960)	13498	0.32580	95.42
*	69 Chrysene-d12	240	24.554	24.523	(1.000)	354926	4.00000	
*	77 Perylene-d12	264	27.178	27.109	(1.000)	387885	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.753	29.637	(1.095)	21695	0.22321	65.38
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wy32b.d
Lab Smp Id: WY32B
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Misc Info: 13-15394

Calibration Date: 01-AUG-2013
Calibration Time: 16:00
Client Smp ID: UP-MHF-165-20130
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	139368	69684	278736	113541	-18.53
27 Naphthalene-d8	497738	248869	995476	422511	-15.11
42 Acenaphthene-d10	263483	131742	526966	188556	-28.44
59 Phenanthrene-d10	519545	259772	1039090	366992	-29.36
69 Chrysene-d12	513753	256876	1027506	354926	-30.92
77 Perylene-d12	525862	262931	1051724	387885	-26.24

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.22	8.72	9.72	9.22	0.00
27 Naphthalene-d8	11.89	11.39	12.39	11.89	0.00
42 Acenaphthene-d10	15.80	15.30	16.30	15.81	0.05
59 Phenanthrene-d10	19.09	18.59	19.59	19.11	0.08
69 Chrysene-d12	24.52	24.02	25.02	24.55	0.13
77 Perylene-d12	27.11	26.61	27.61	27.18	0.26

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

Analytical Resources, Inc.

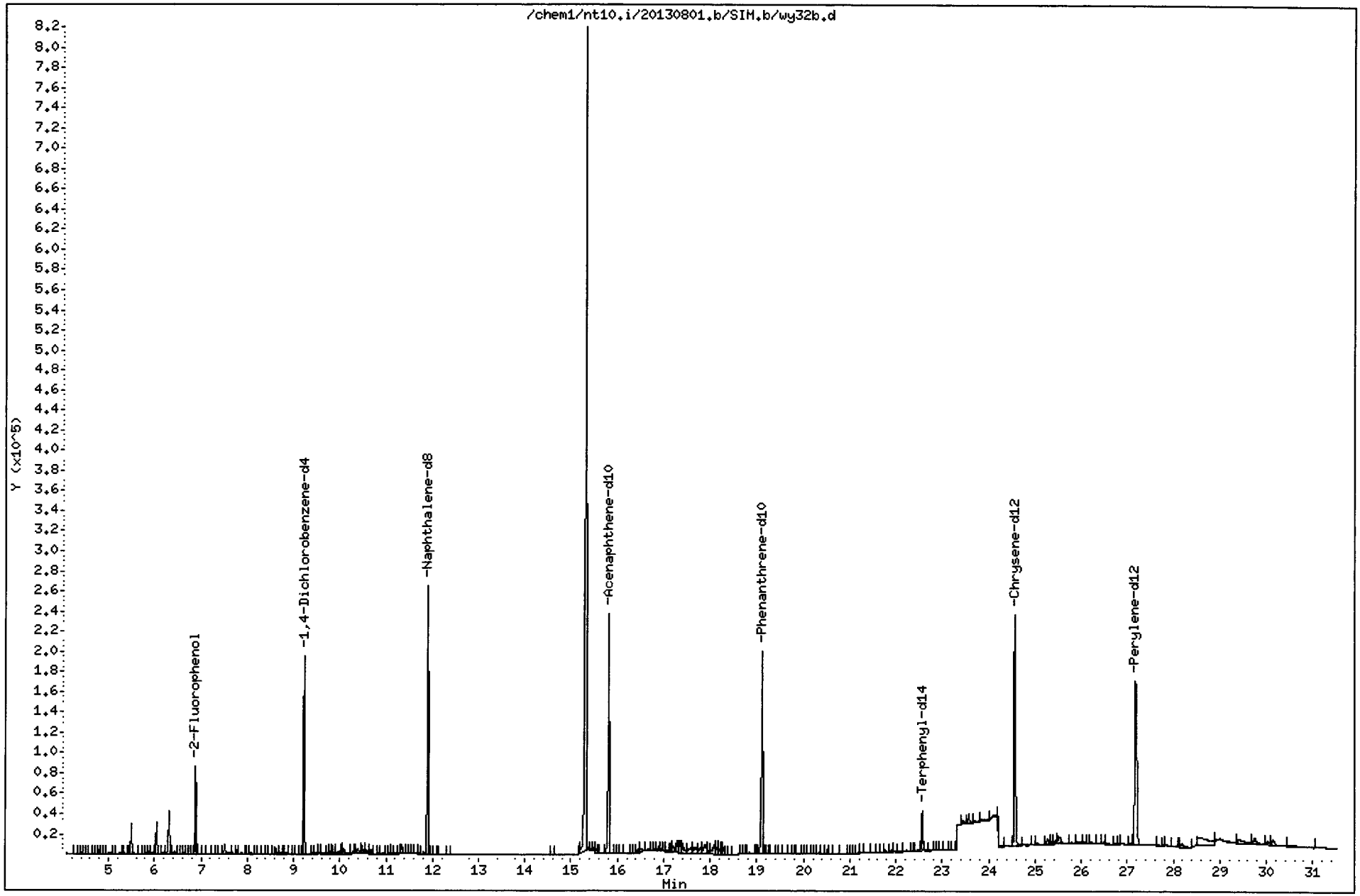
RECOVERY REPORT

Client Name: SAIC
Client SDG: WY32
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WY32B
Client Smp ID: UP-MHF-165-20130626
Level: LOW
Operator: YZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: PSDDASIMLCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Misc Info: 13-15394

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	732.2	538.7	73.56	27-120
$ 66 Terphenyl-d14	488.2	352.3	72.16	37-120

Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32b.d
Date : 01-AUG-2013 21:03
Client ID: UP-MHF-165-20130626
Sample Info: WY32B
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

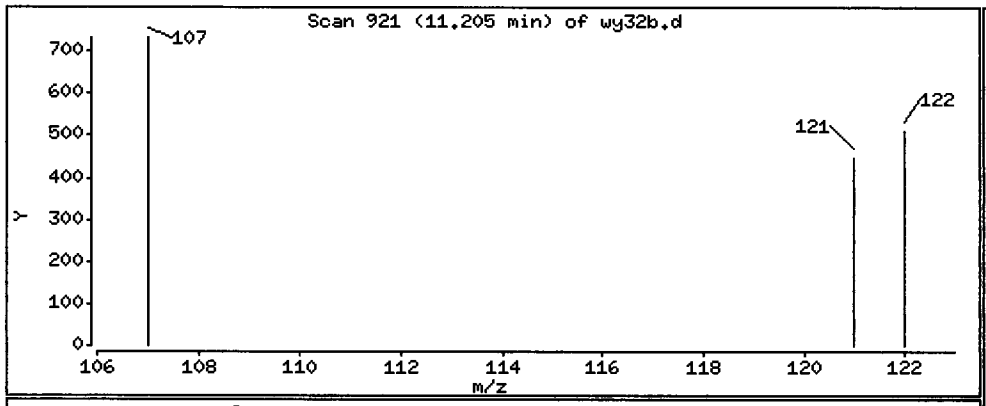
Operator: YZ

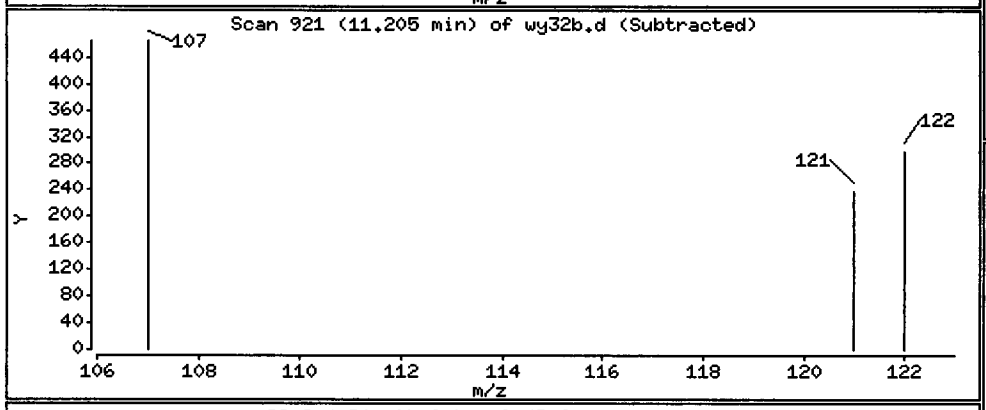
Column phase: ZB-5msi

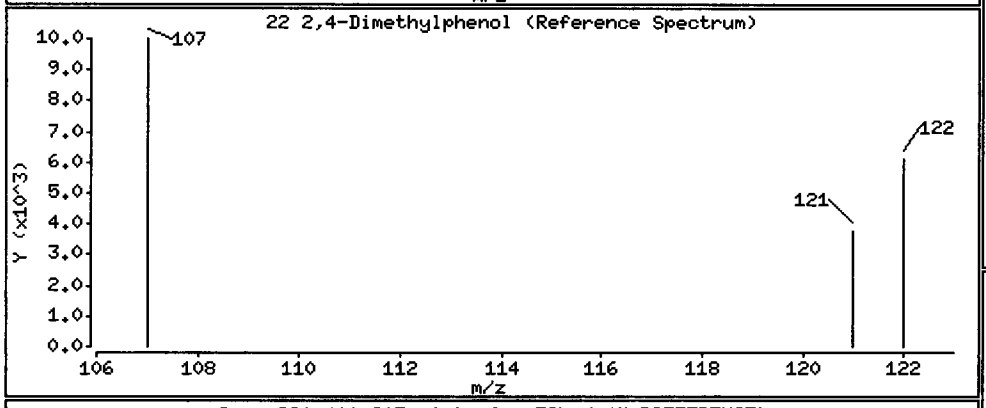
Column diameter: 0.25

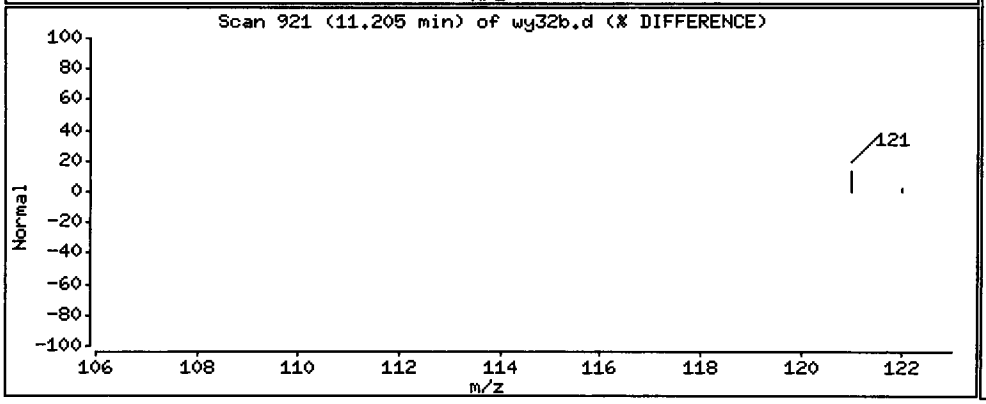
22 2,4-Dimethylphenol

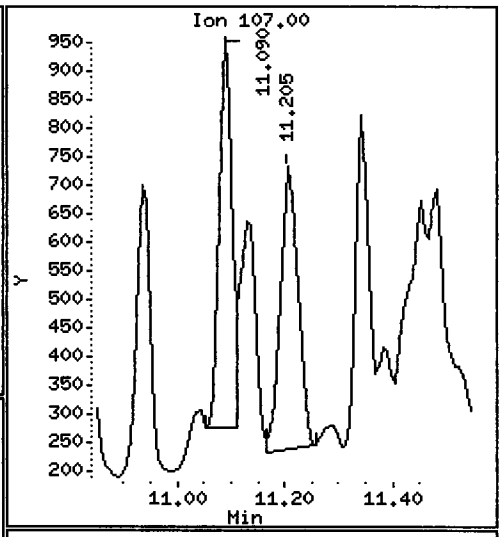
Concentration: 7.718 ug/kg

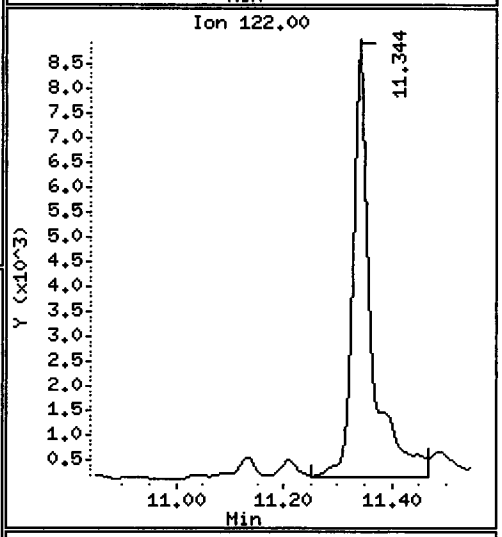


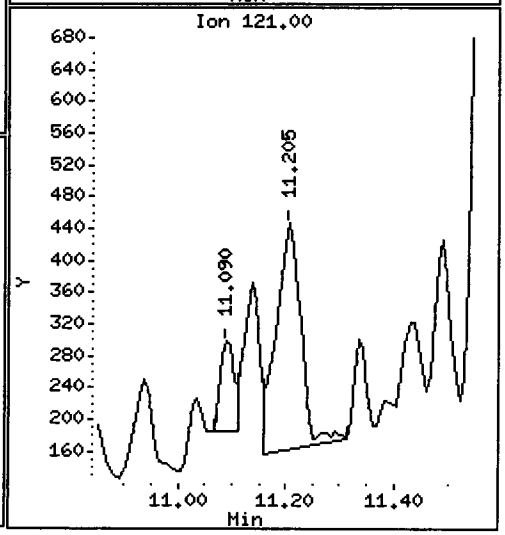












Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32b.d

Date : 01-AUG-2013 21:03

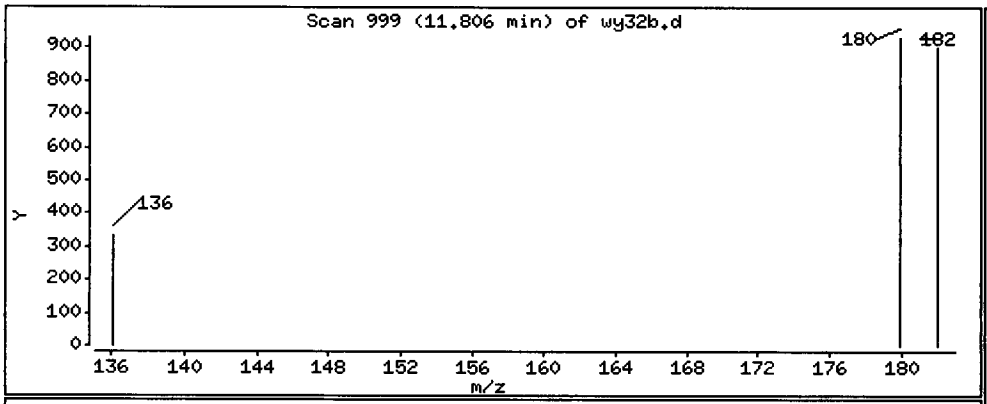
Client ID: UP-MHF-165-20130626 Instrument: nt10.i

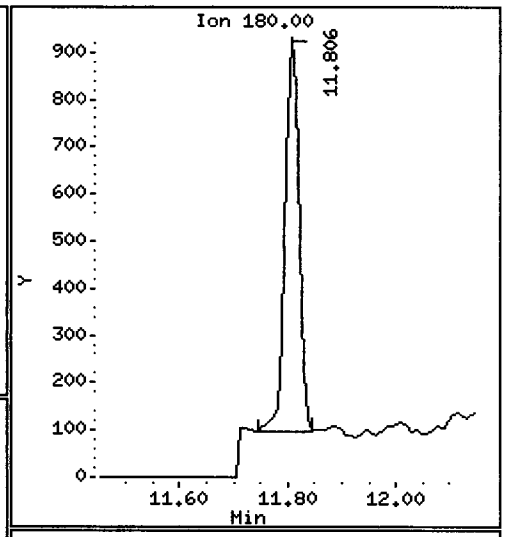
Sample Info: WY32B

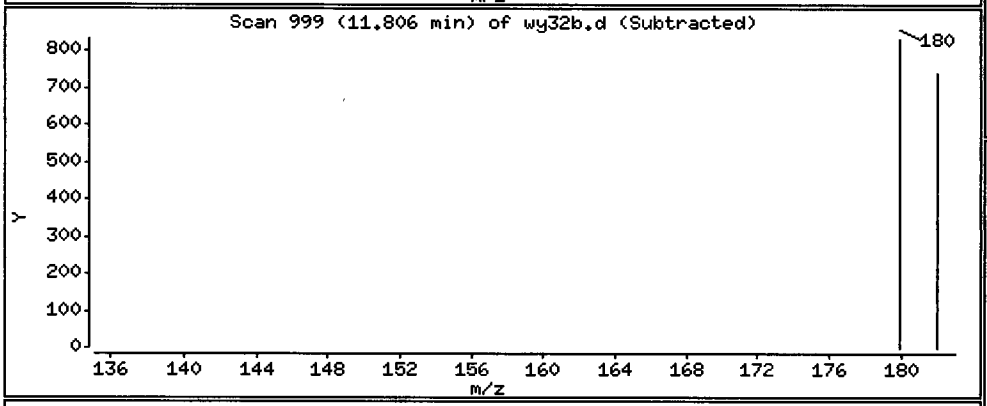
Volume Injected (uL): 1.0 Operator: YZ

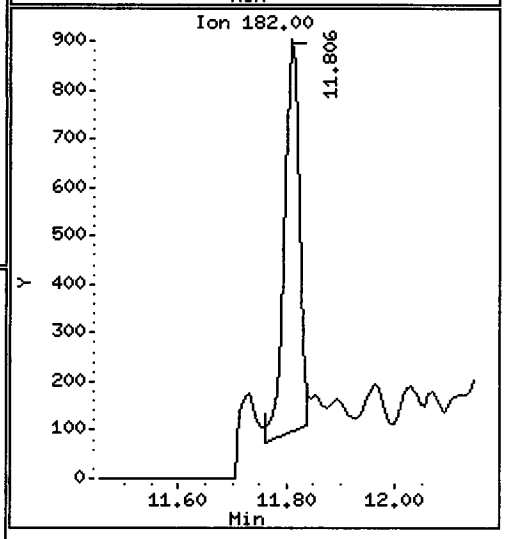
Column phase: ZB-5msi Column diameter: 0.25

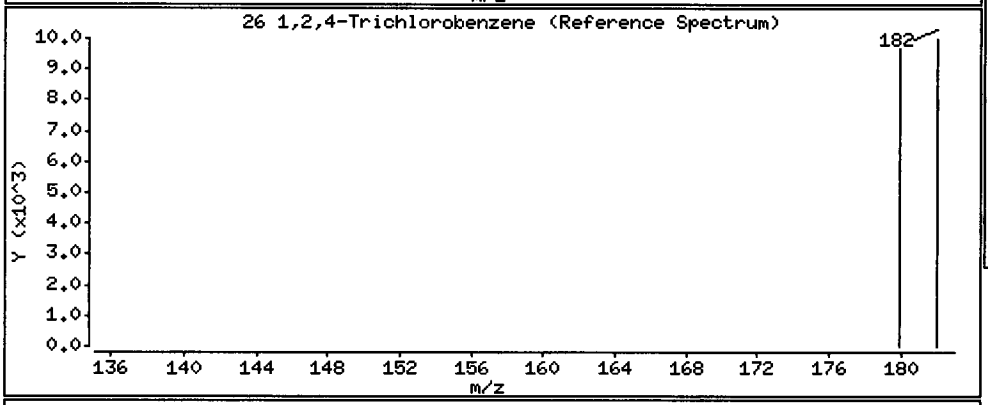
26 1,2,4-Trichlorobenzene Concentration: 10.26 ug/kg

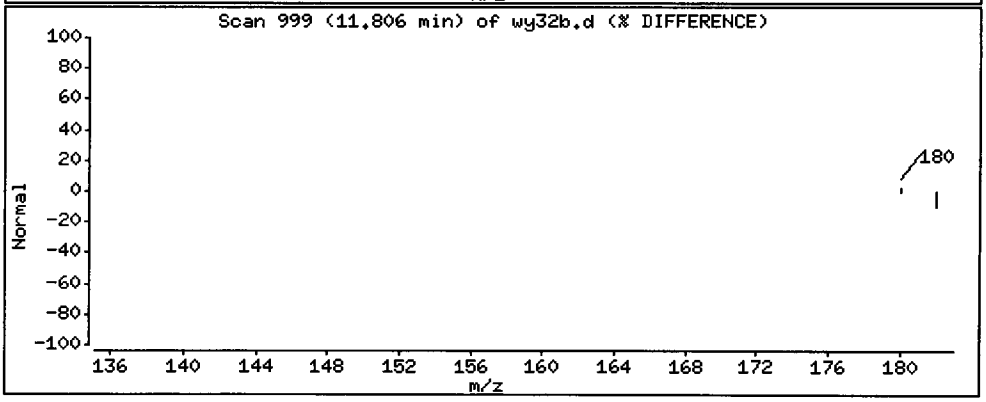












Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

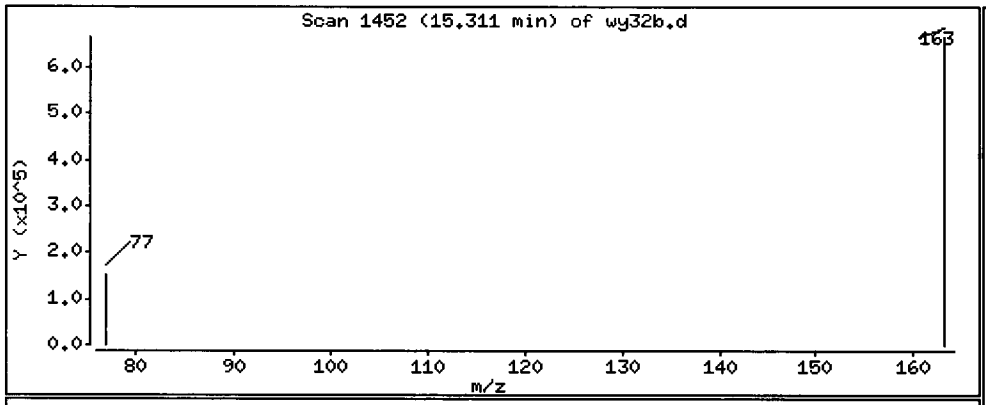
Operator: YZ

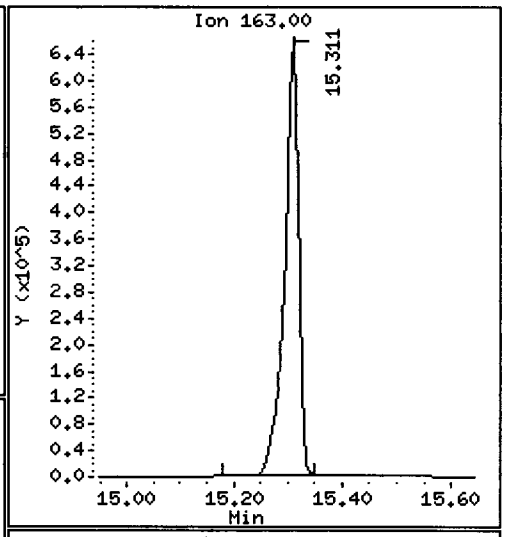
Column phase: ZB-5msi

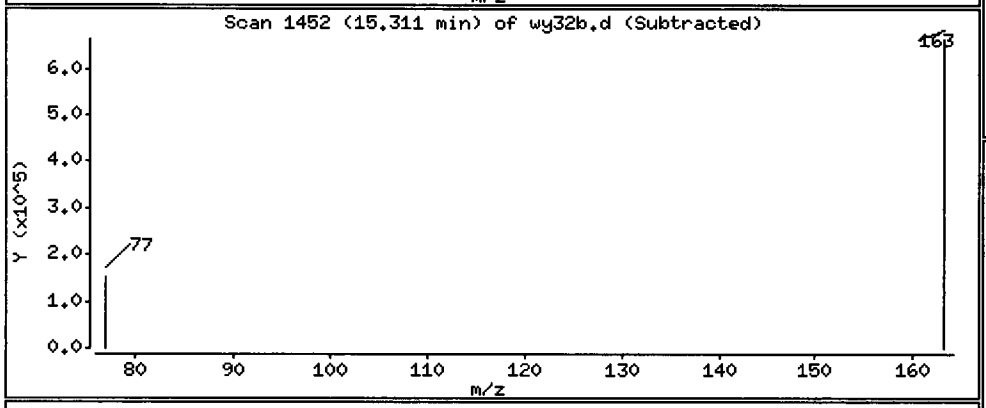
Column diameter: 0.25

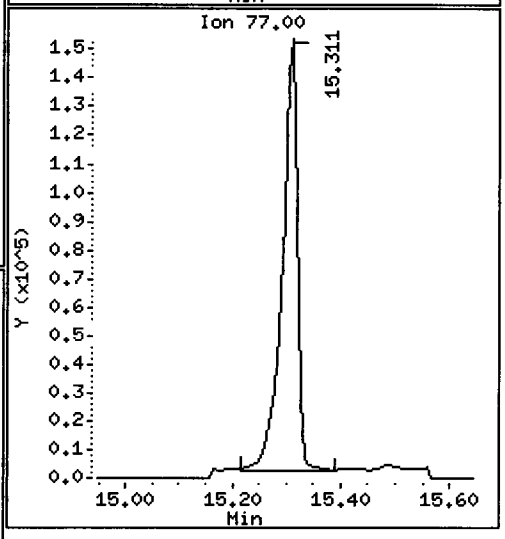
39 Dimethylphthalate

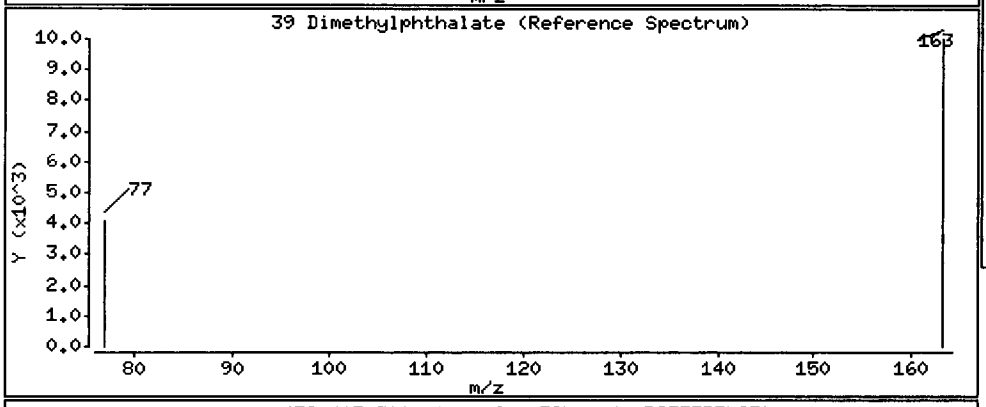
Concentration: 5783 ug/kg

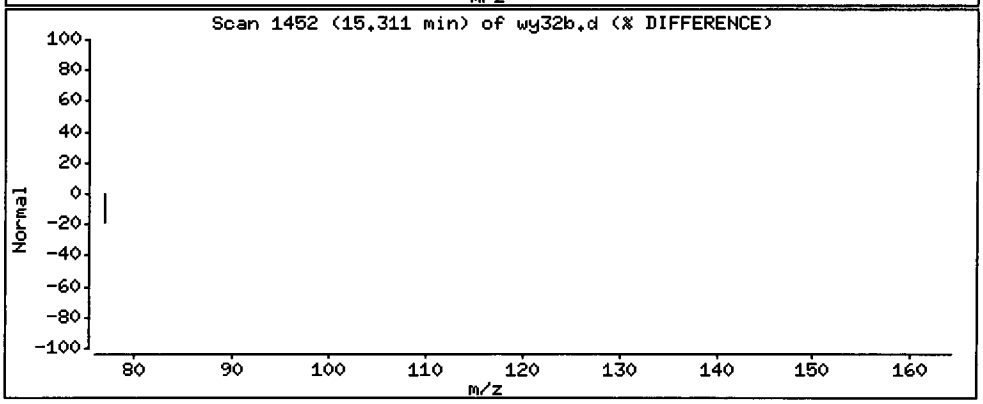












Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

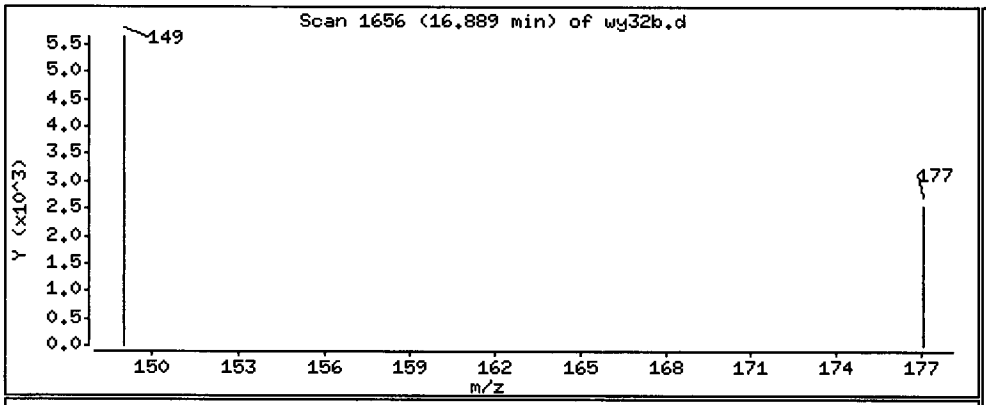
Operator: YZ

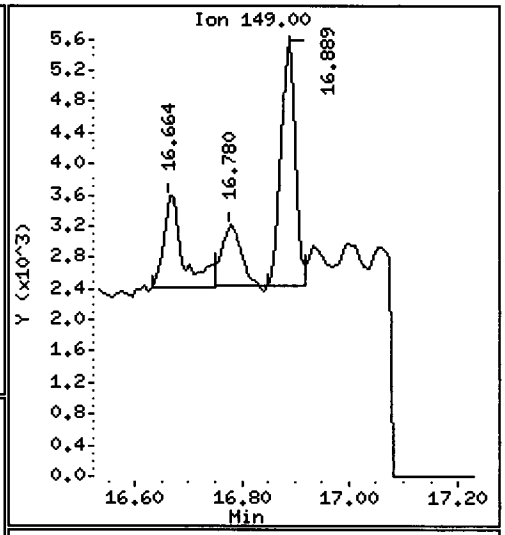
Column phase: ZB-5msi

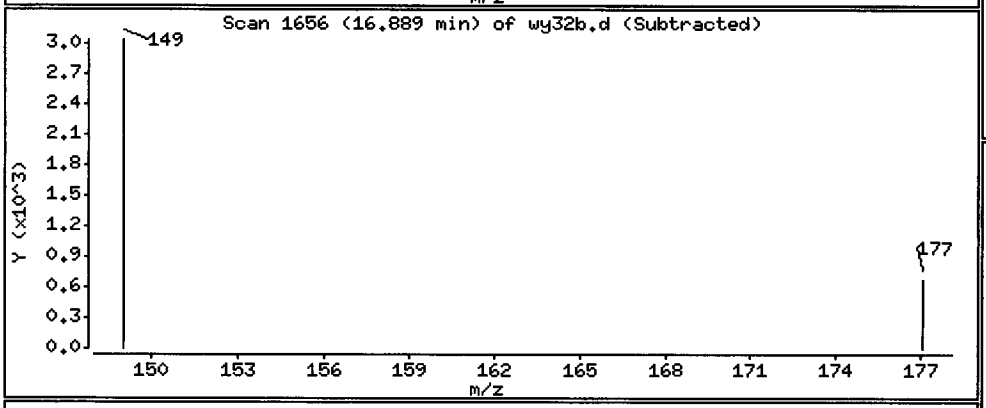
Column diameter: 0.25

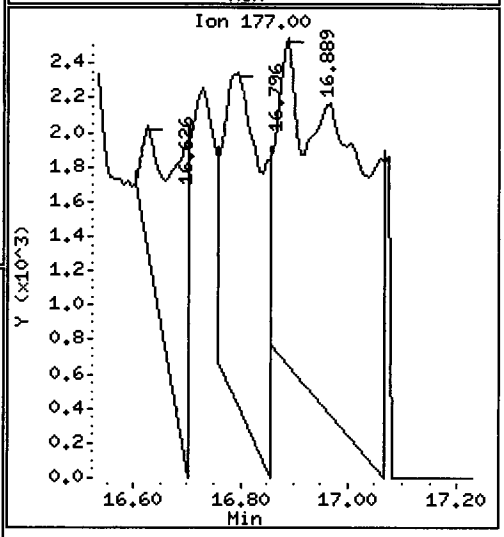
50 Diethylphthalate

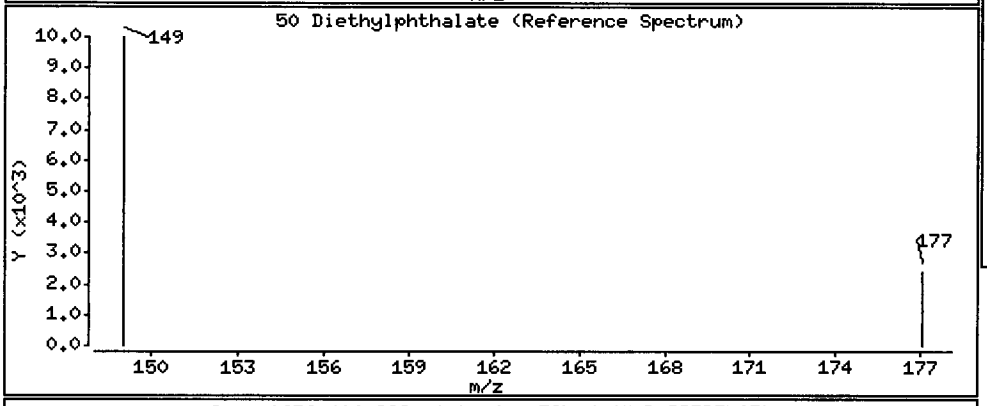
Concentration: 24.07 ug/kg

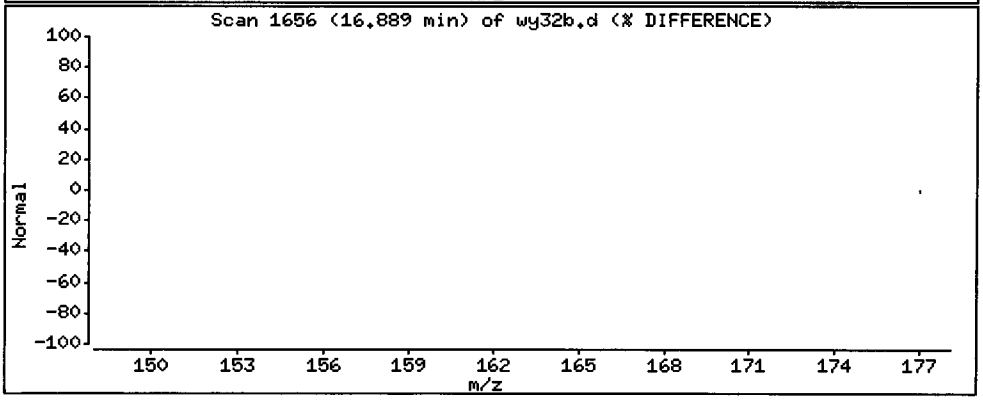












Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

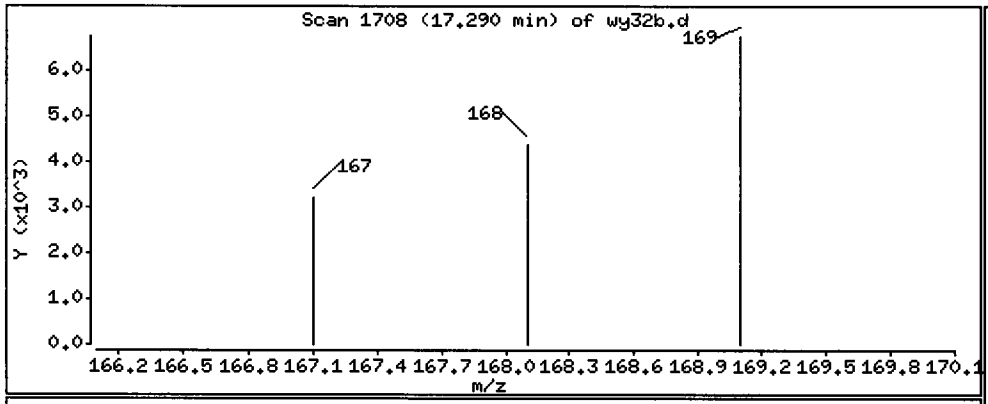
Operator: YZ

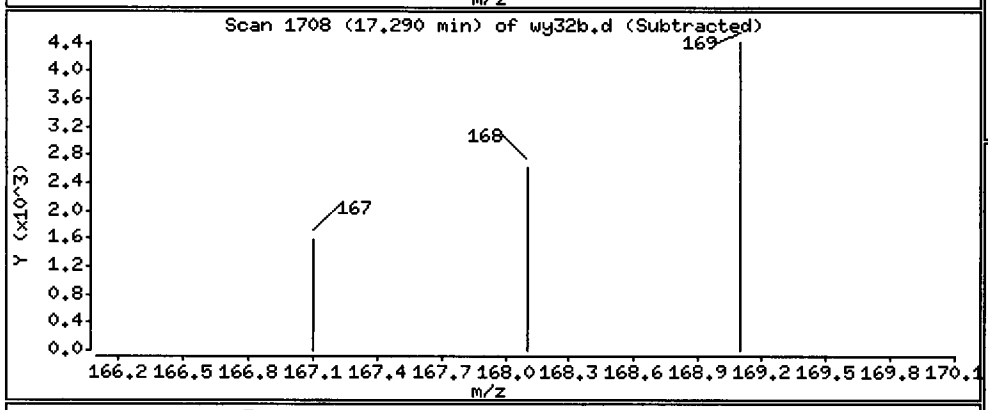
Column phase: ZB-5msi

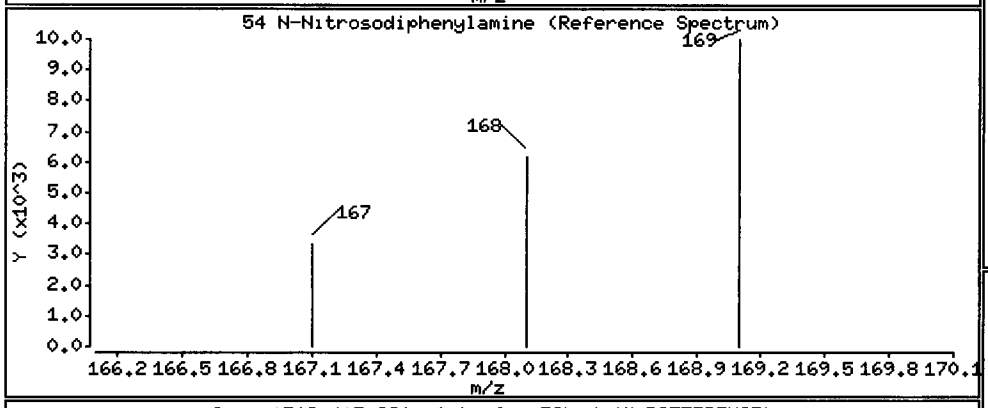
Column diameter: 0.25

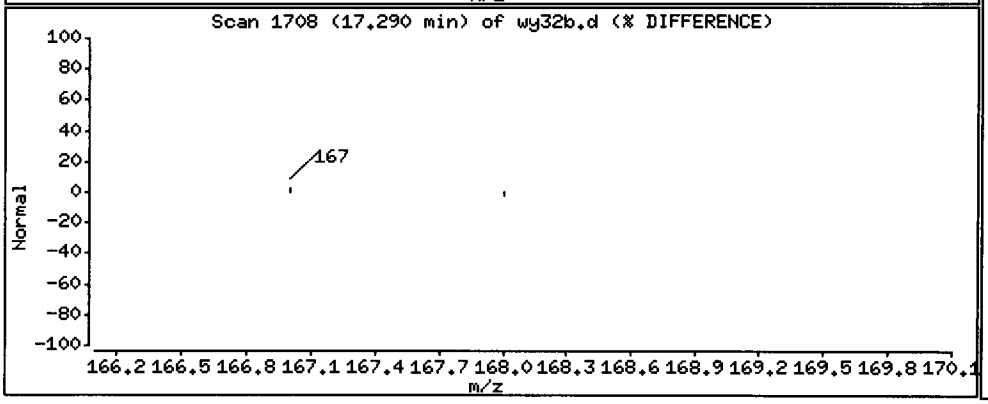
54 N-Nitrosodiphenylamine

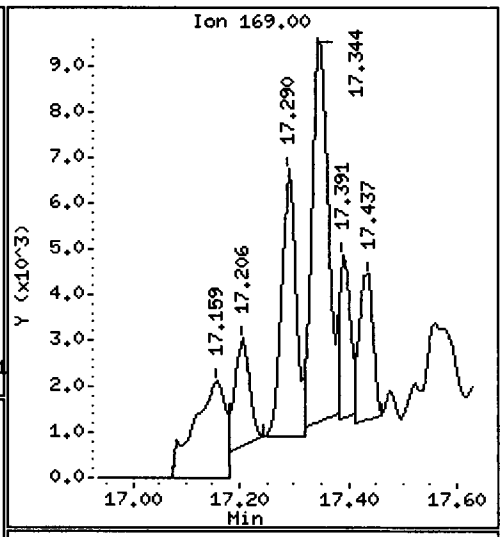
Concentration: 70.92 ug/kg

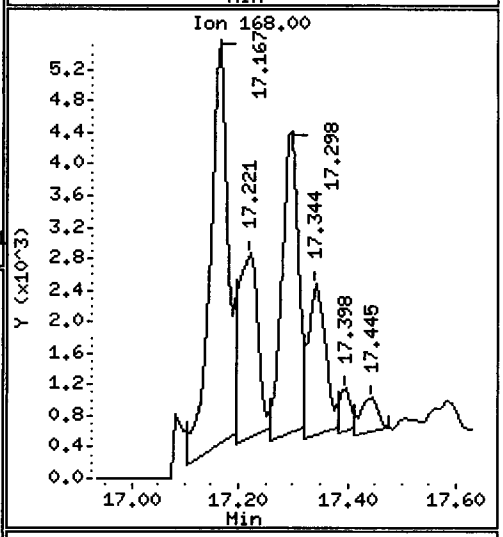


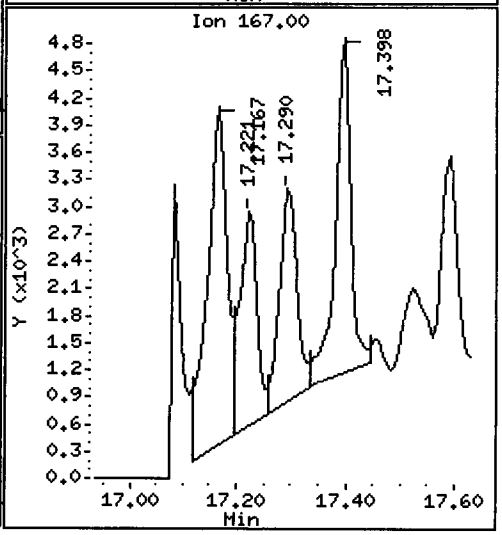












Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

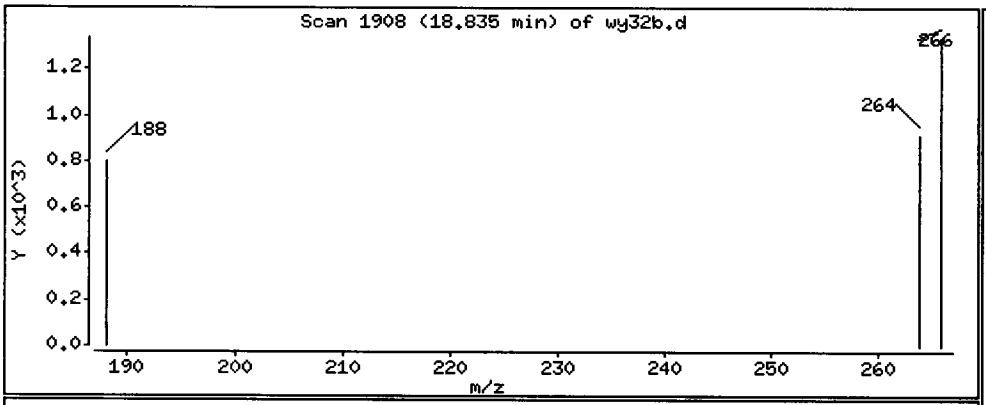
Operator: YZ

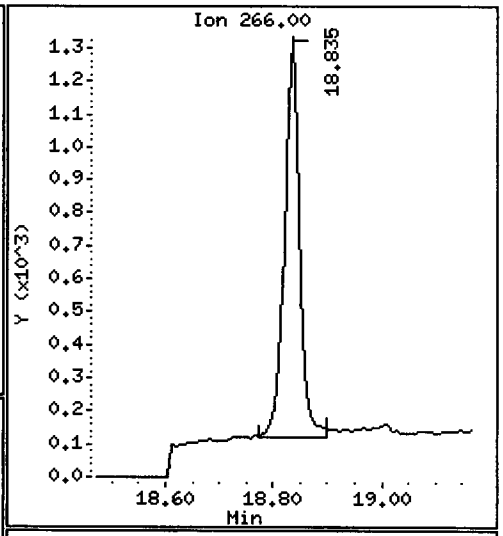
Column phase: ZB-5msi

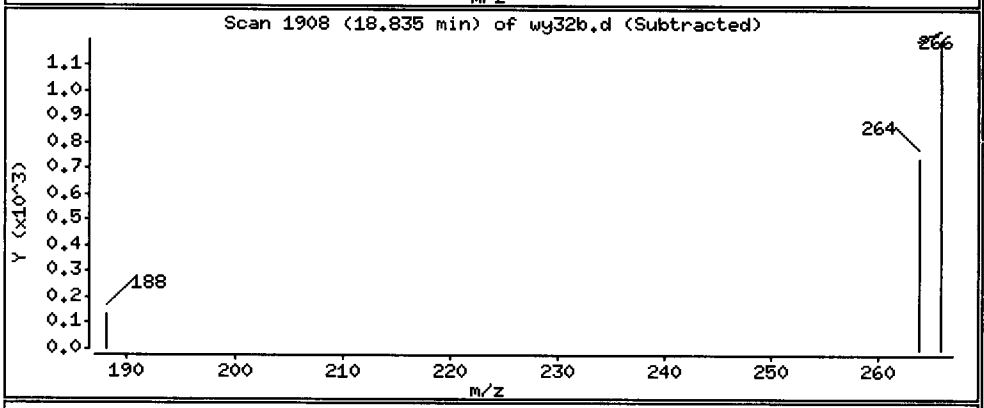
Column diameter: 0.25

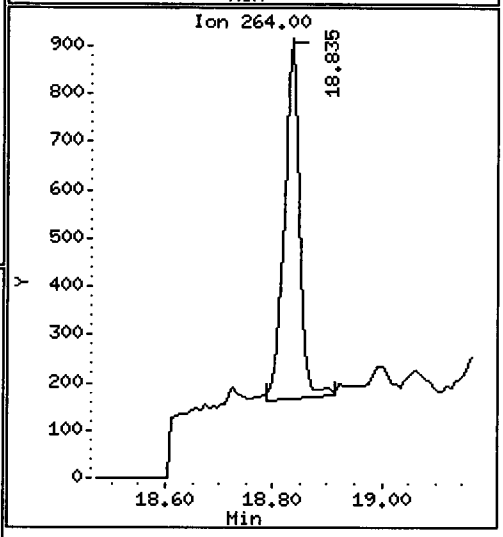
58 Pentachlorophenol

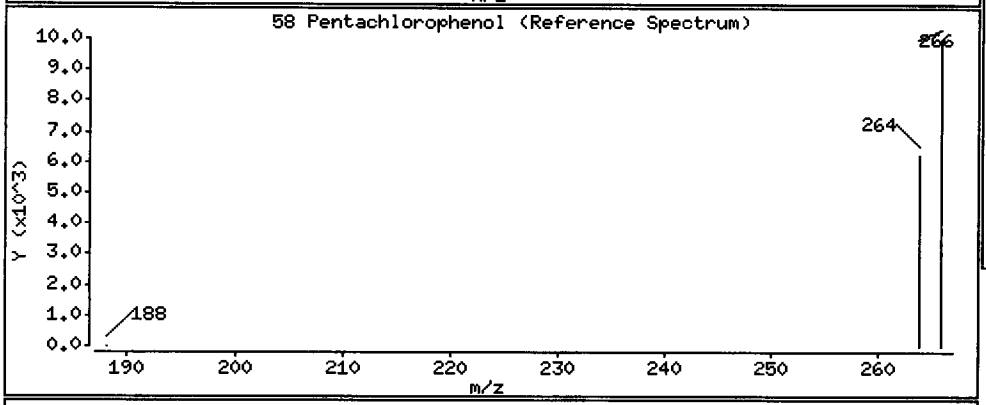
Concentration: 40.59 ug/kg

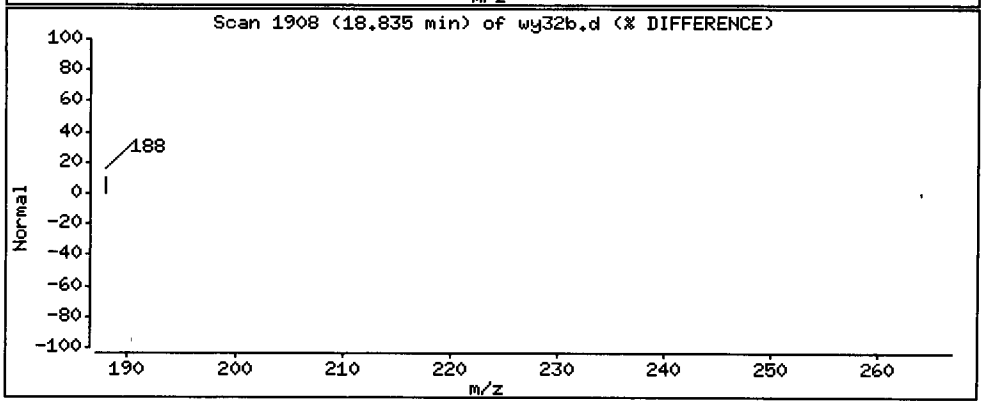












Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

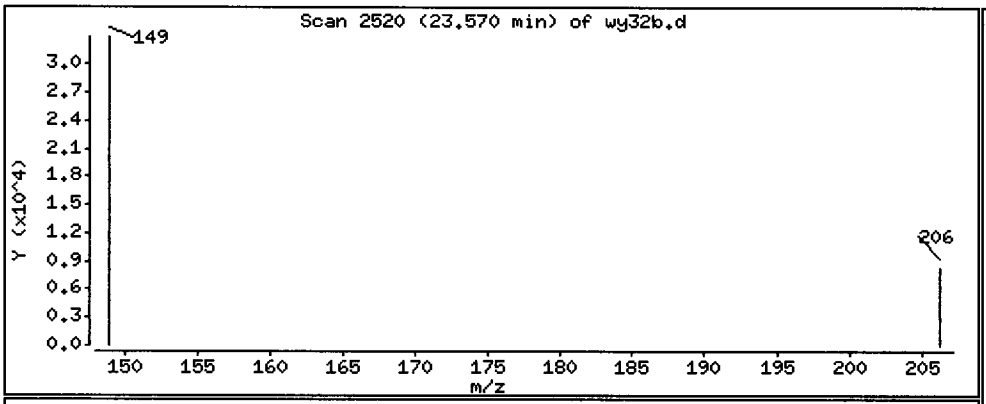
Operator: YZ

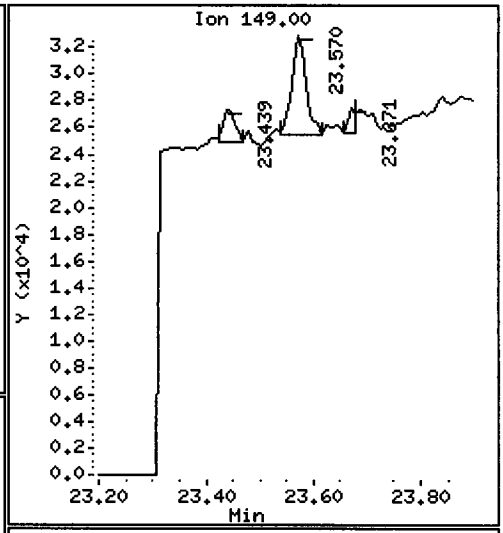
Column phase: ZB-5msi

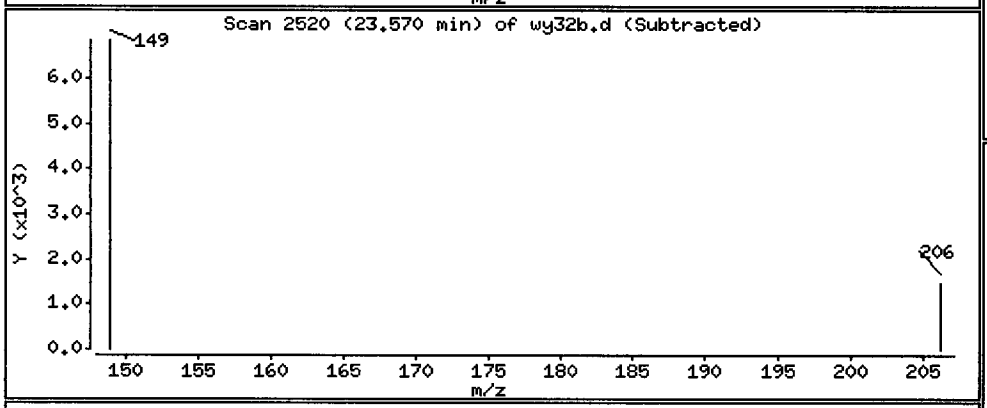
Column diameter: 0.25

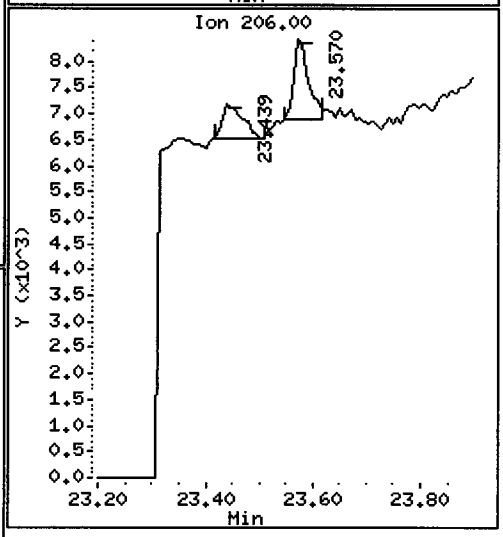
67 Butylbenzylphthalate

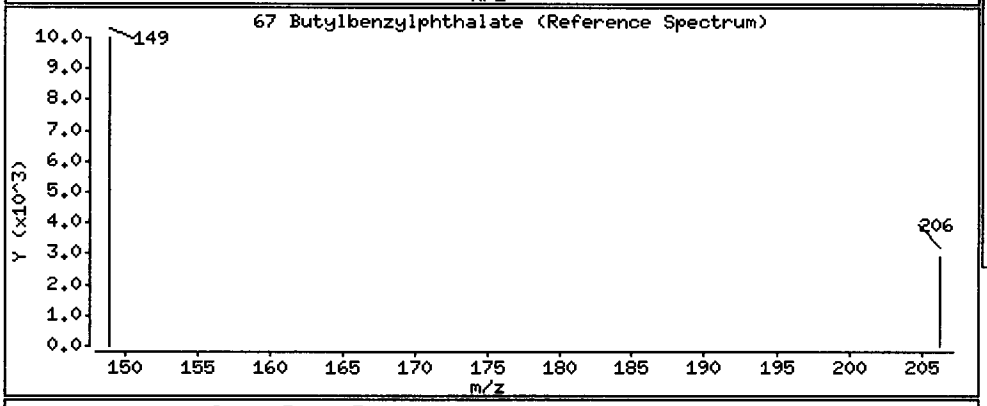
Concentration: 95.42 ug/kg

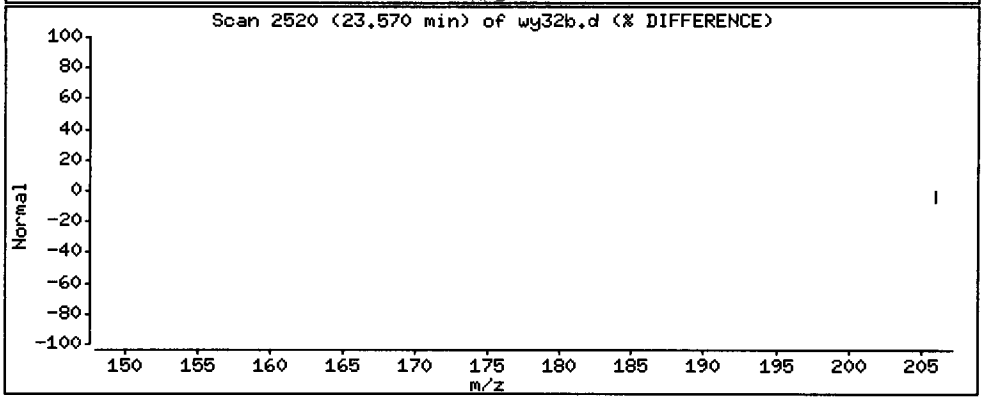












Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32b.d

Date : 01-AUG-2013 21:03

Client ID: UP-MHF-165-20130626

Instrument: nt10.i

Sample Info: WY32B

Volume Injected (uL): 1.0

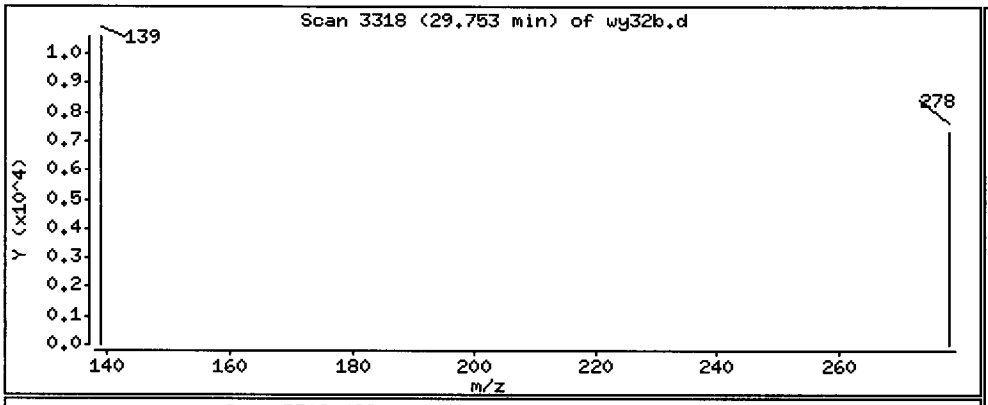
Operator: YZ

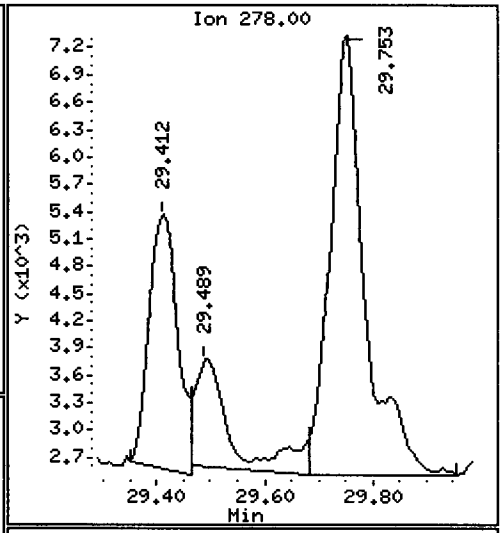
Column phase: ZB-5msi

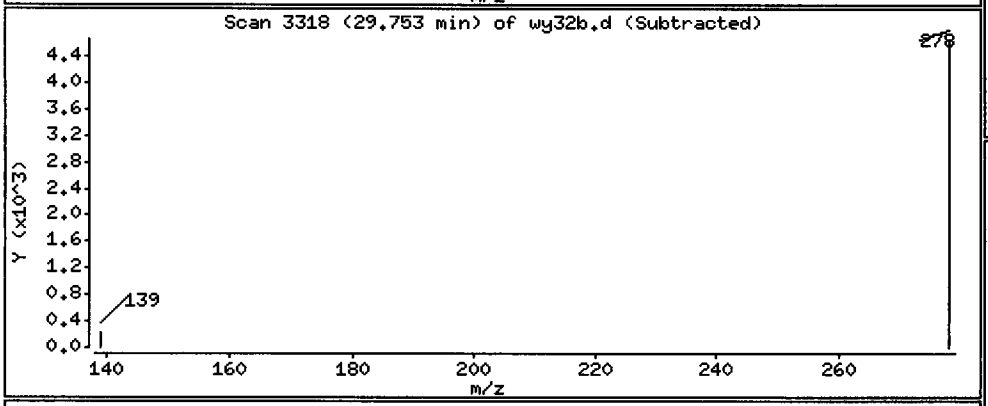
Column diameter: 0.25

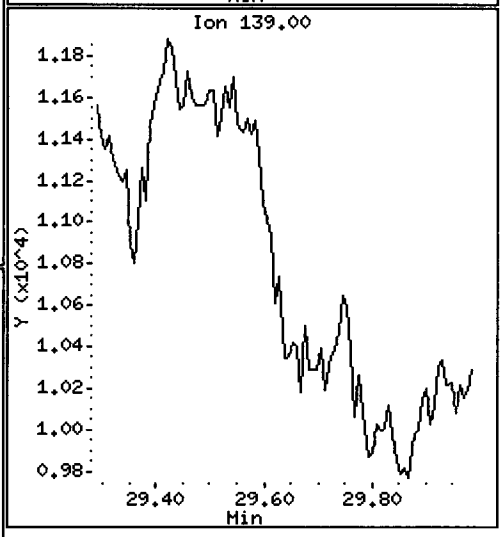
79 Dibenzo(a,h)anthracene

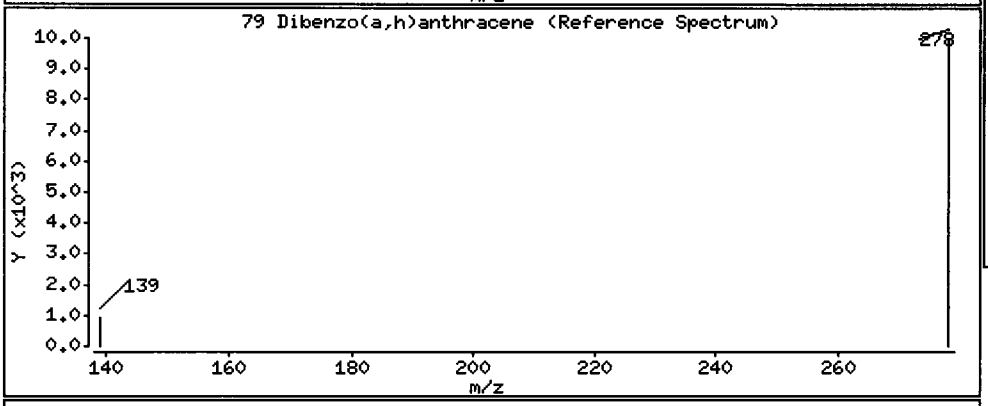
Concentration: 65.38 ug/kg

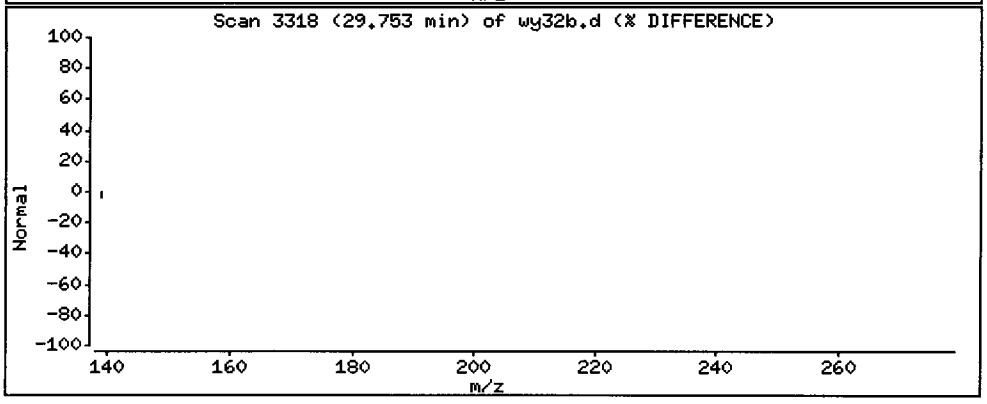






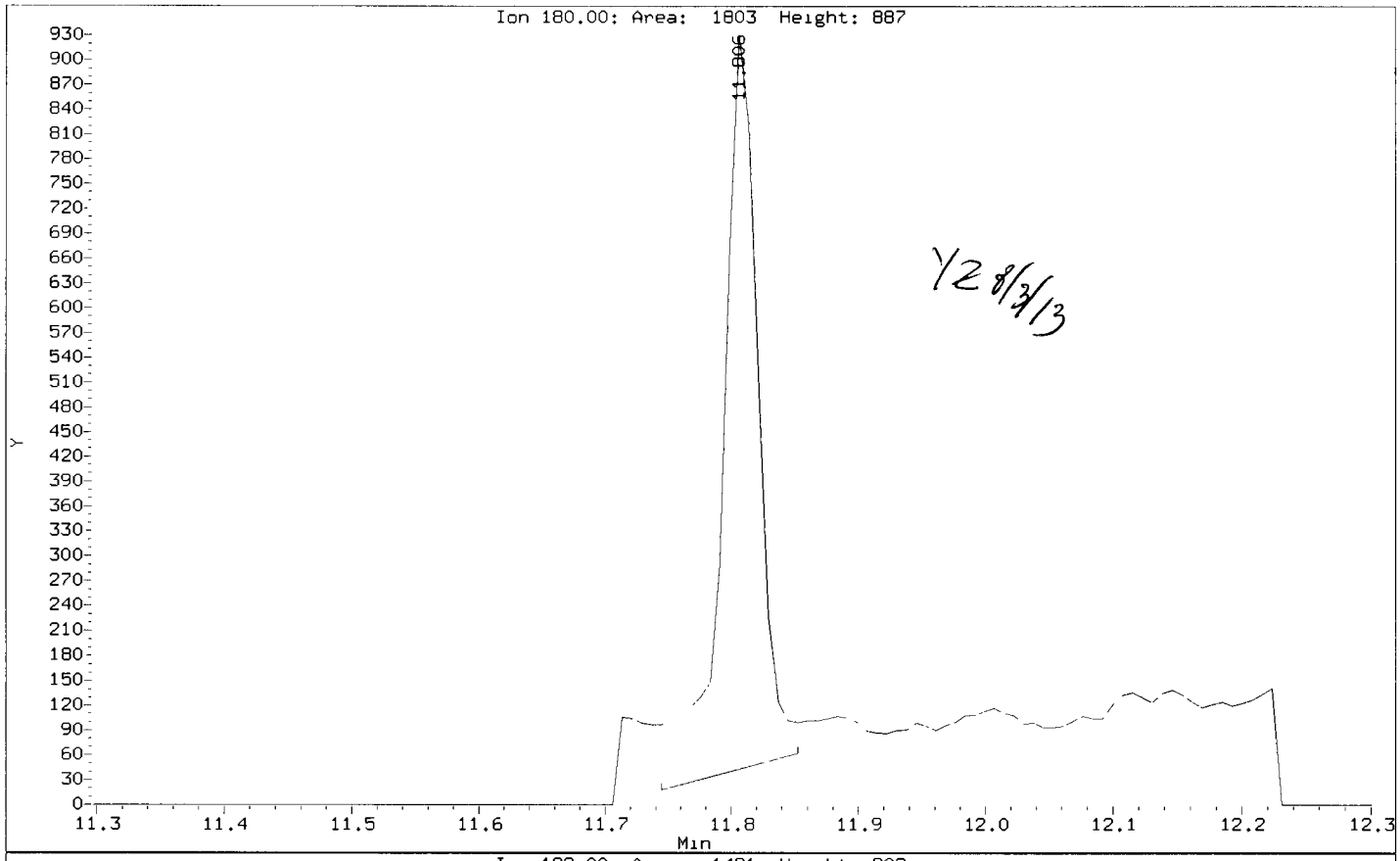




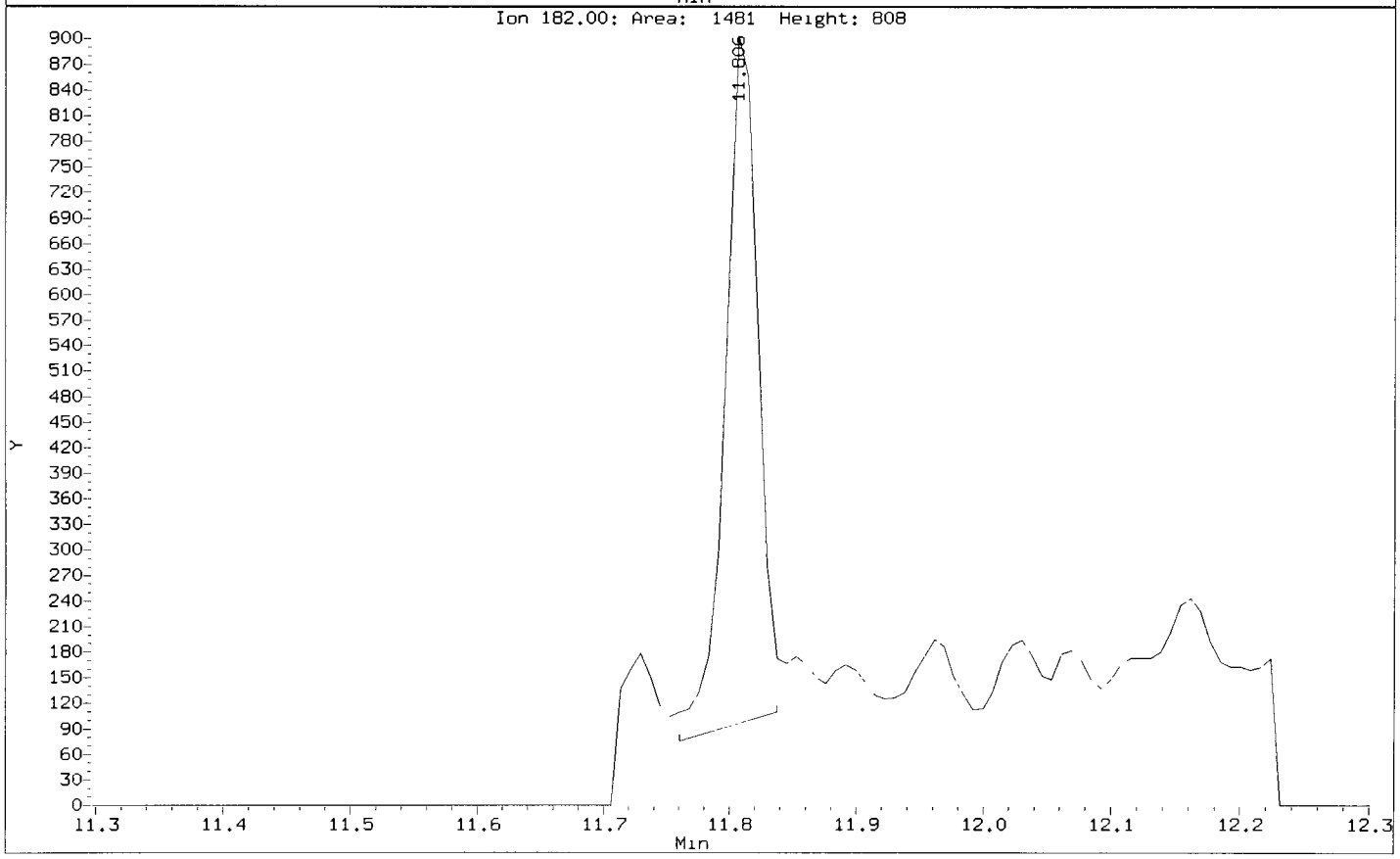


Data File: /chem1/nt10.1/20130801.b/SIM.b/wy32b.d
Injection Date: 01-AUG-2013 21:03
Instrument: nt10.1
Client Sample ID:

Compound: 1,2,4-Trichlorobenzene
CAS Number: 120-82-1

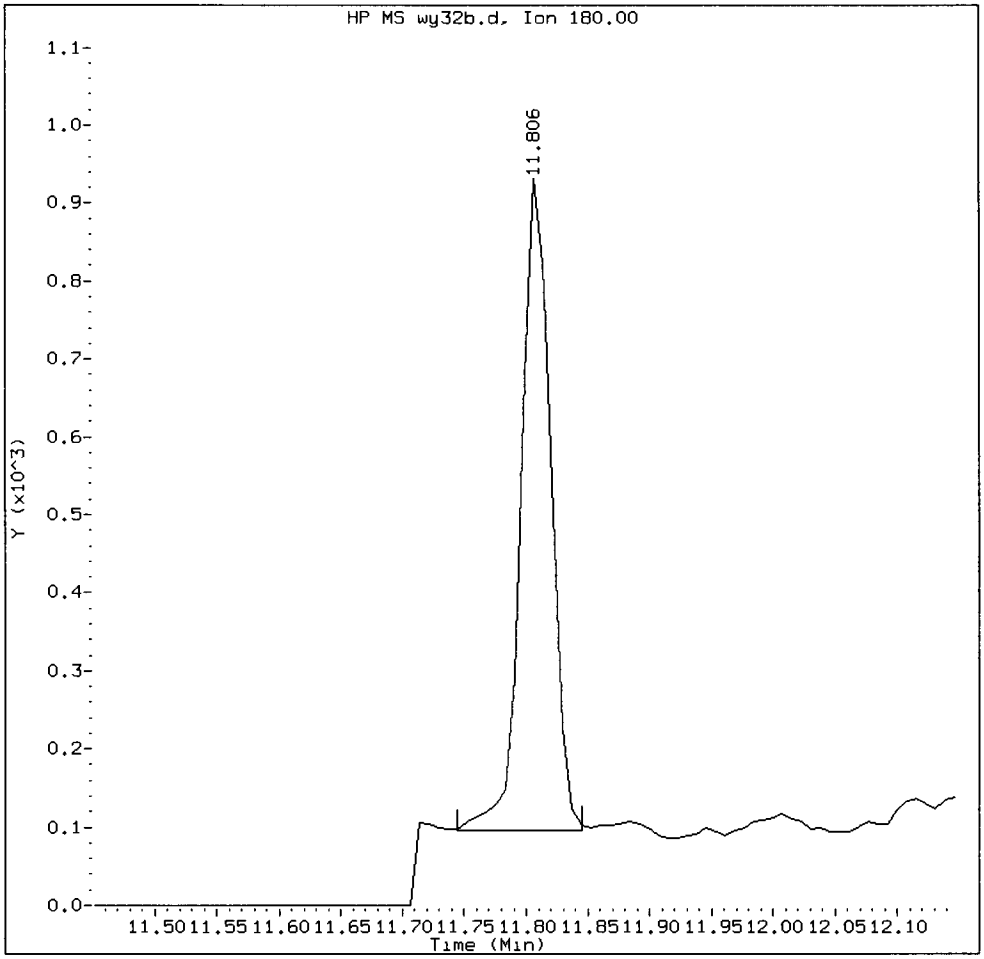


8/2/13



WY32B, /chem1/nt10.i/20130801.b/SIM.b/wy32b.d

1,2,4-Trichlorobenzene Amount: 0.04 Area: 1411



MANUAL INTEGRATION for 1,2,4-Trichlorobenzene

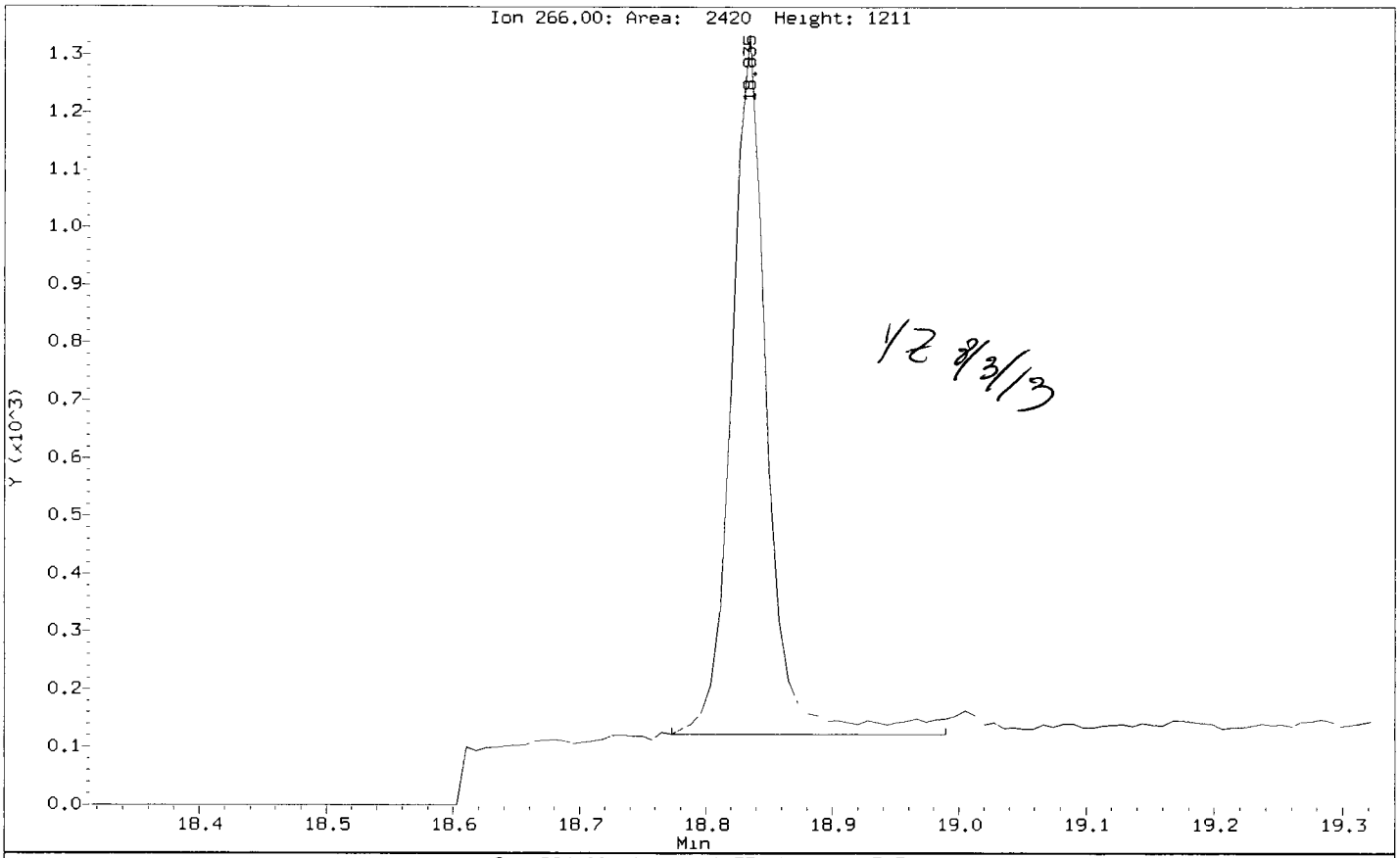
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

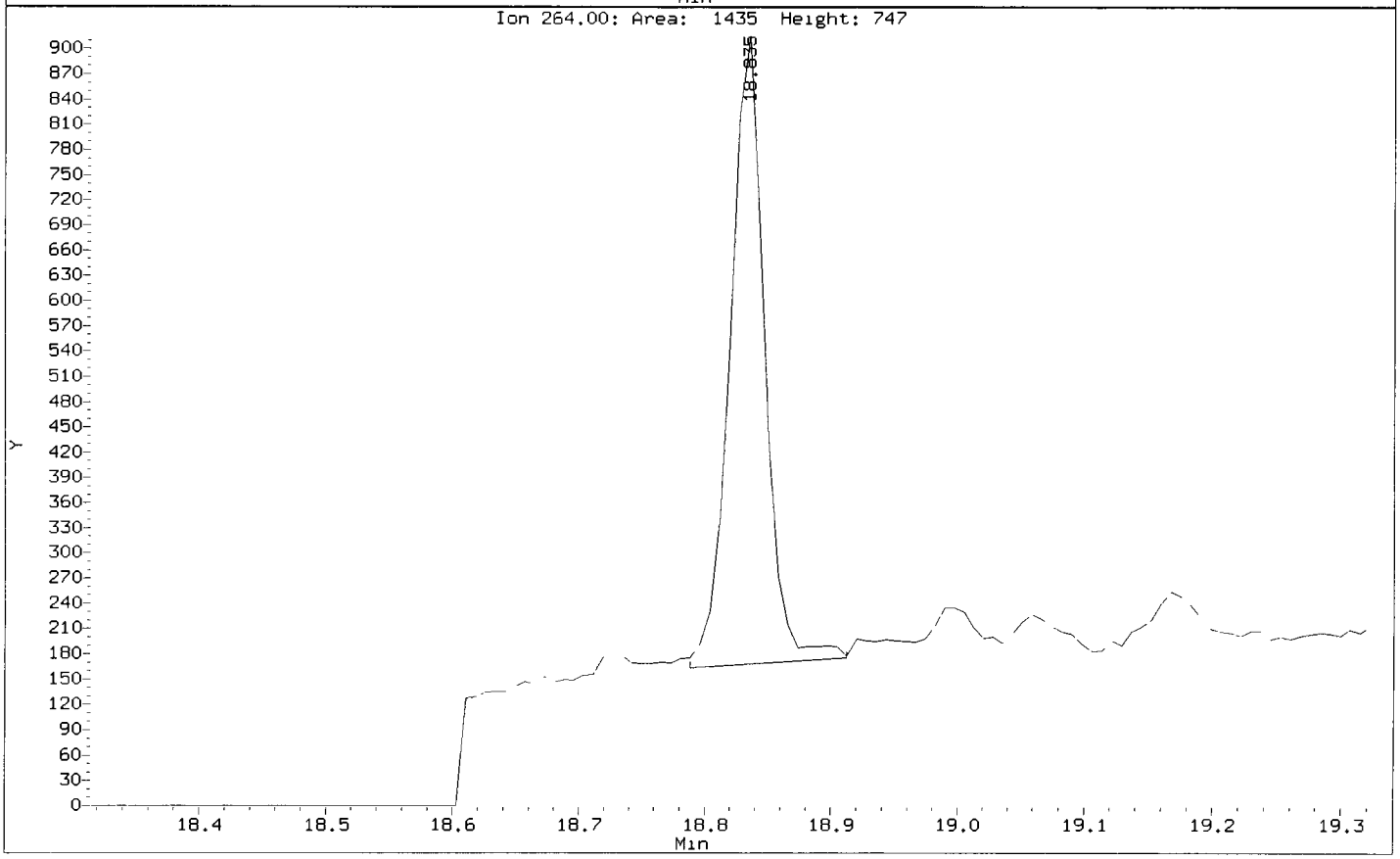
Analyst: _____ Date: 9/3/13

Data File: /chem1/nt10.1/20130801.b/SIM.b/wy32b.d
Injection Date: 01-AUG-2013 21:03
Instrument: nt10.1
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5

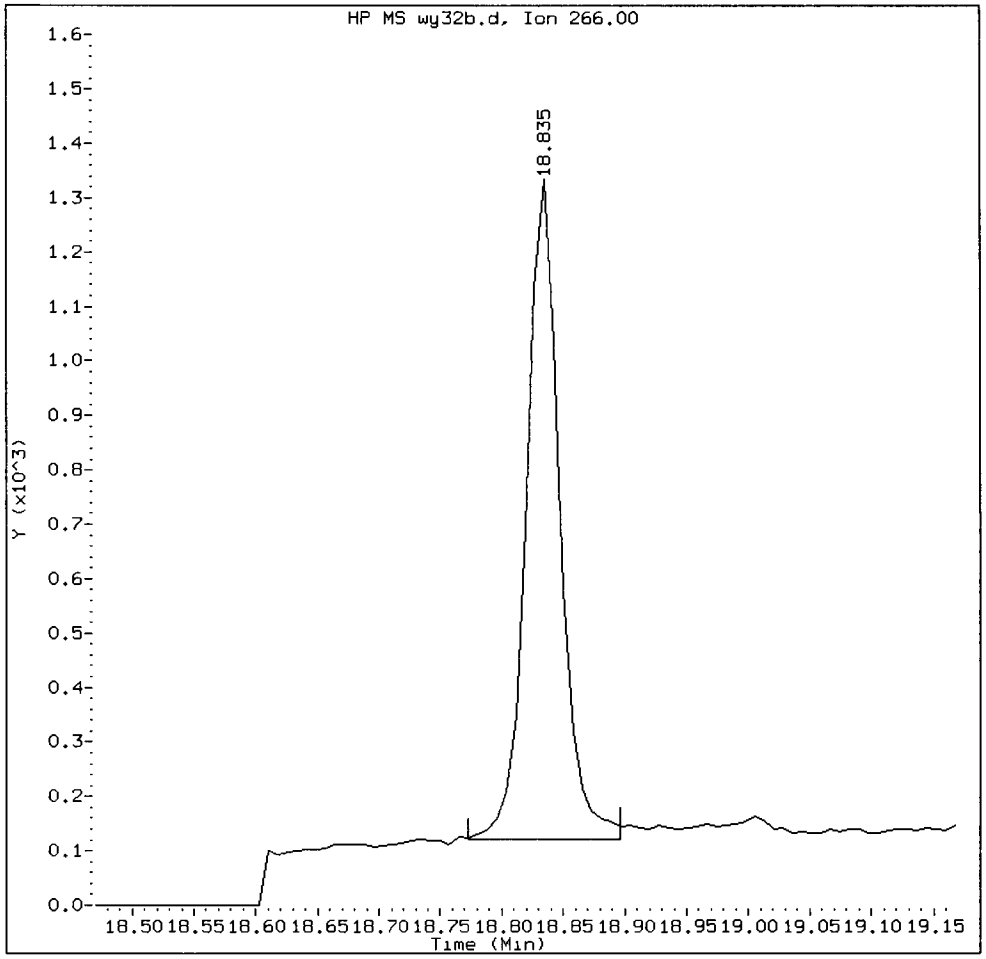


1/2 8/3/13



WY32B, /chem1/nt10.i/20130801.b/SIM.b/wy32b.d

Pentachlorophenol Amount: 0.14 Area: 2308



MANUAL INTEGRATION for Pentachlorophenol

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 8/31/13

CO-ELUTION SUMMARY FOR FILE - wy32b.d

Lab ID: WY32B, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 01-AUG-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

12 8/3/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130801.b/SIM.b/wy32c.d
Lab Smp Id: WY32C Client Smp ID: UP-CB-A6-20130626-S
Inj Date : 01-AUG-2013 21:41
Operator : YZ Inst ID: nt10.i
Smp Info : WY32C
Misc Info : 13-15395
Comment :
Method : /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Meth Date : 03-Aug-2013 12:01 yev Quant Type: ISTD
Cal Date : 30-JUL-2013 16:59 Cal File: ic0730i.d
Als bottle: 12
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt/(Ws * (100 - M)/100) * CpndVariable

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	6.04000	Weight of sample extracted (g)
M	29.80000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$	1 2-Fluorophenol	112	6.880	6.857	(0.746)	91663	2.10294	1488
	3 Phenol	94	8.611	8.588	(0.934)	14448	0.25379	179.6
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	9.222	9.222	(1.000)	109640	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	79	9.548	9.524	(1.035)	10269	0.36606	259.0(M)
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	15 4-Methylphenol	108	10.091	10.076	(1.094)	7931	0.18936	134.0
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.891	11.891	(1.000)	414541	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	15.303	15.296	(0.968)	9854	0.15911	112.6 (M)
*	42 Acenaphthene-d10	162	15.806	15.798	(1.000)	192478	4.00000	
	50 Diethylphthalate	149	16.889	16.881	(1.068)	4263	0.06102	43.17 (M)
	54 N-Nitrosodiphenylamine	169	17.290	17.282	(0.905)	10110	0.23443	165.9
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	19.105	19.090	(1.000)	352808	4.00000	
$	66 Terphenyl-d14	244	22.572	22.548	(0.918)	67455	1.54113	1090
	67 Butylbenzylphthalate	149	23.586	23.547	(0.960)	97207	2.47131	1749
*	69 Chrysene-d12	240	24.577	24.523	(1.000)	336964	4.00000	
*	77 Perylene-d12	264	27.217	27.109	(1.000)	382483	4.00000	(H)
	79 Dibenzo(a,h)anthracene	278	29.800	29.637	(1.098)	10135	0.10575	74.82
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wy32c.d
Lab Smp Id: WY32C
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Misc Info: 13-15395

Calibration Date: 01-AUG-2013
Calibration Time: 16:00
Client Smp ID: UP-CB-A6-2013062
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	139368	69684	278736	109640	-21.33
27 Naphthalene-d8	497738	248869	995476	414541	-16.72
42 Acenaphthene-d10	263483	131742	526966	192478	-26.95
59 Phenanthrene-d10	519545	259772	1039090	352808	-32.09
69 Chrysene-d12	513753	256876	1027506	336964	-34.41
77 Perylene-d12	525862	262931	1051724	382483	-27.27

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.22	8.72	9.72	9.22	0.00
27 Naphthalene-d8	11.89	11.39	12.39	11.89	0.00
42 Acenaphthene-d10	15.80	15.30	16.30	15.81	0.05
59 Phenanthrene-d10	19.09	18.59	19.59	19.11	0.08
69 Chrysene-d12	24.52	24.02	25.02	24.58	0.22
77 Perylene-d12	27.11	26.61	27.61	27.22	0.40

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

Analytical Resources, Inc.

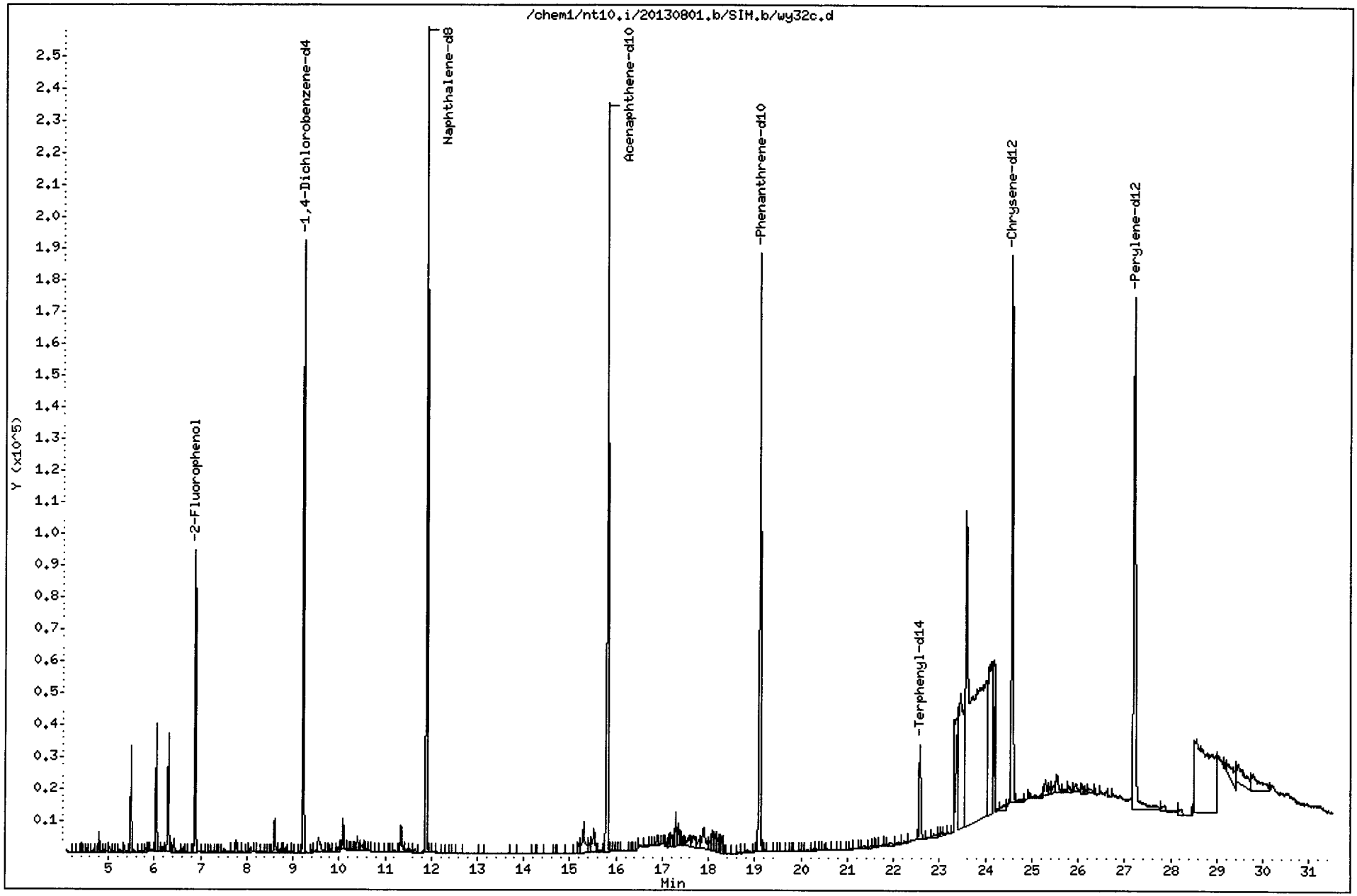
RECOVERY REPORT

Client Name: SAIC
Client SDG: WY32
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WY32C
Client Smp ID: UP-CB-A6-20130626-S
Level: LOW
Operator: YZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: PSDDASIMLCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130801.b/SIM.b/SIMABN2.m
Misc Info: 13-15395

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	1769	1488	84.12	27-120
$ 66 Terphenyl-d14	1179	1090	92.47	37-120

Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32c.d
Date : 01-AUG-2013 21:41
Client ID: UP-CB-A6-20130626-S
Sample Info: WY32C
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

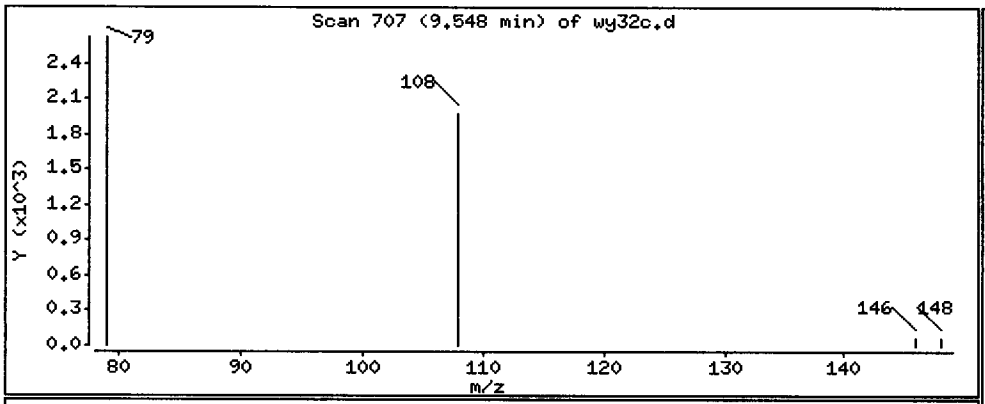
Operator: YZ

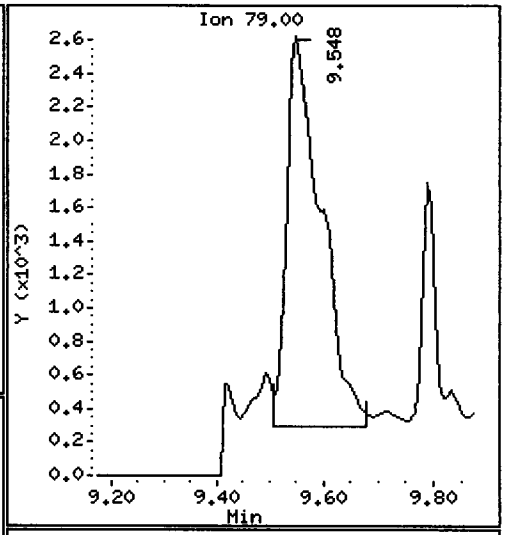
Column phase: ZB-5msi

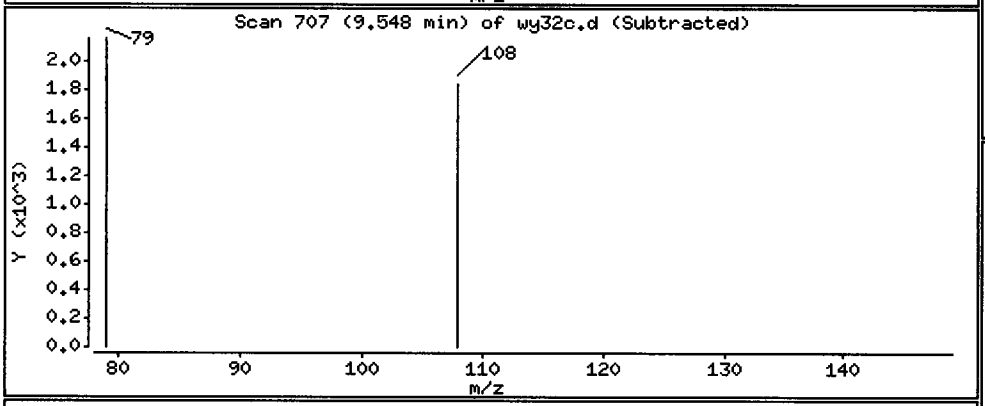
Column diameter: 0.25

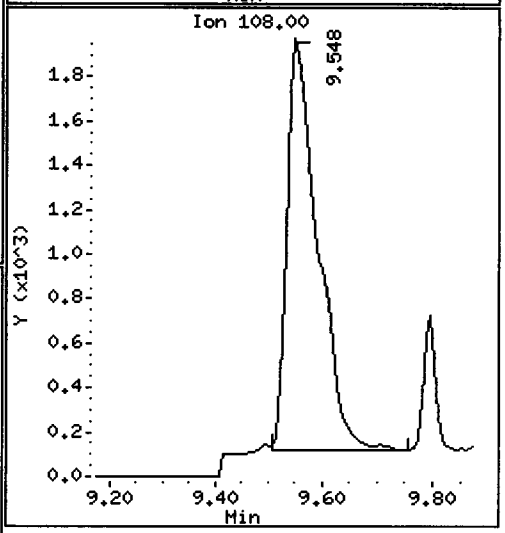
11 Benzyl alcohol

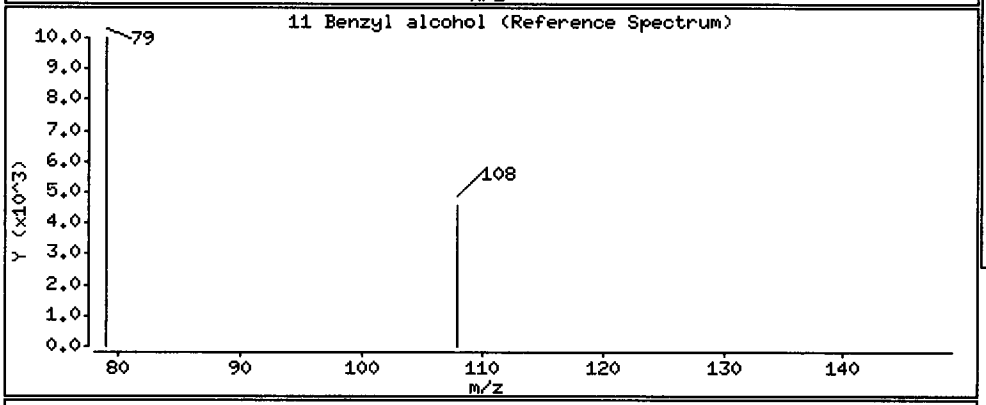
Concentration: 259.0 ug/kg

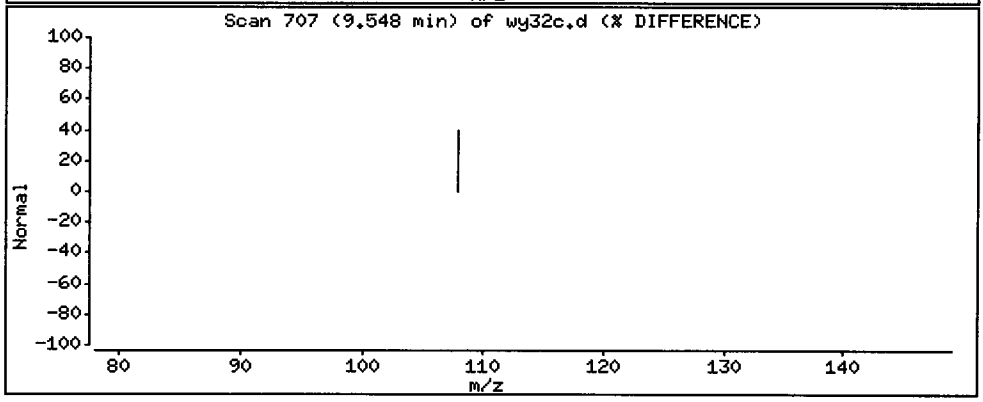












Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

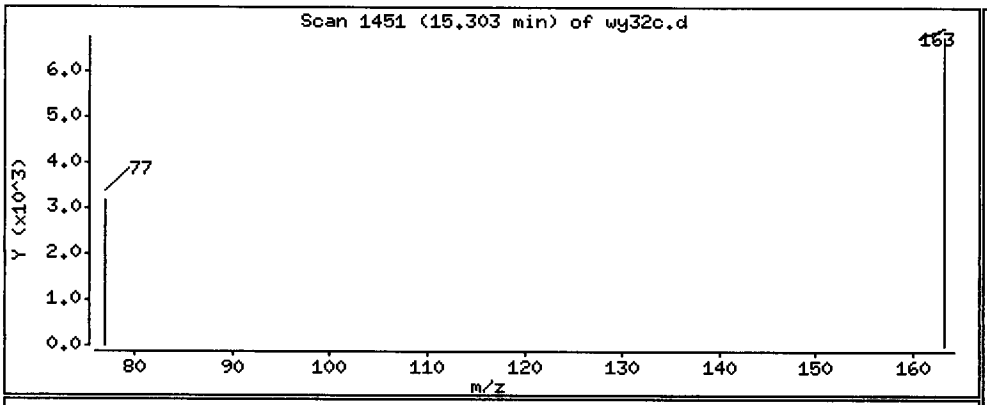
Operator: YZ

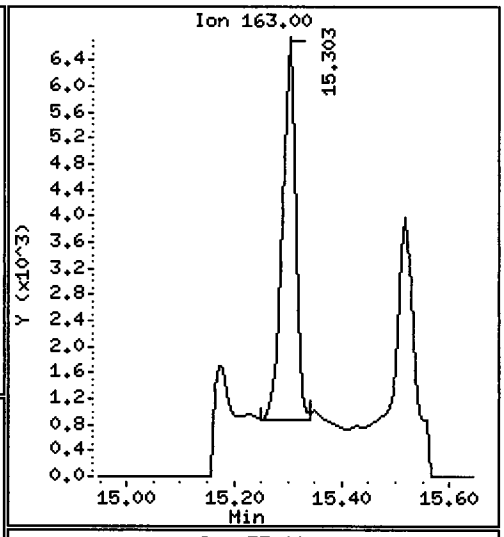
Column phase: ZB-5msi

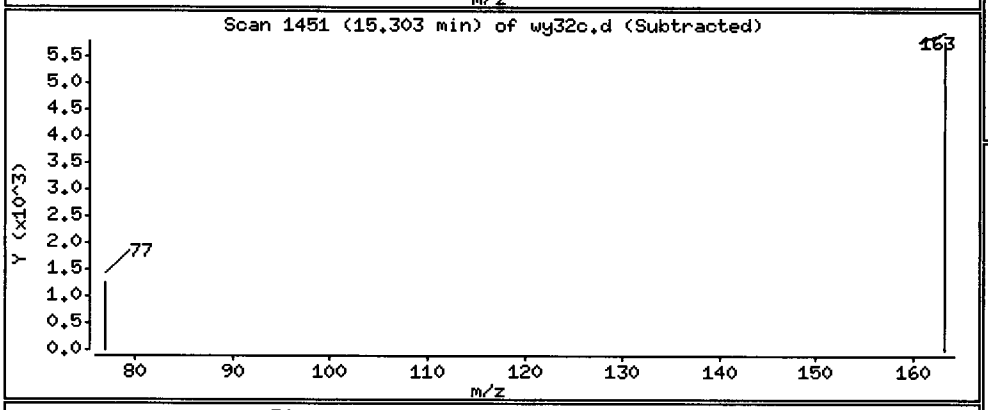
Column diameter: 0.25

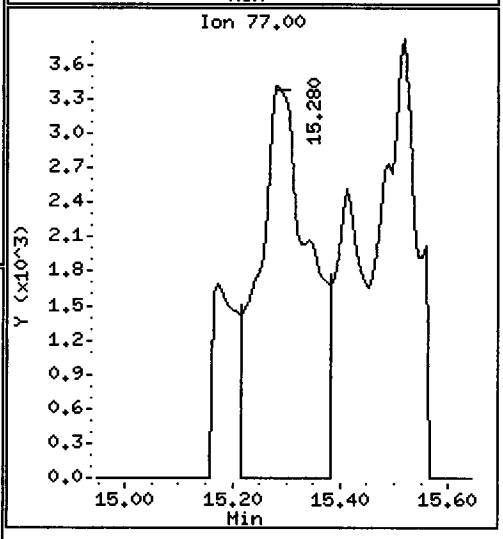
39 Dimethylphthalate

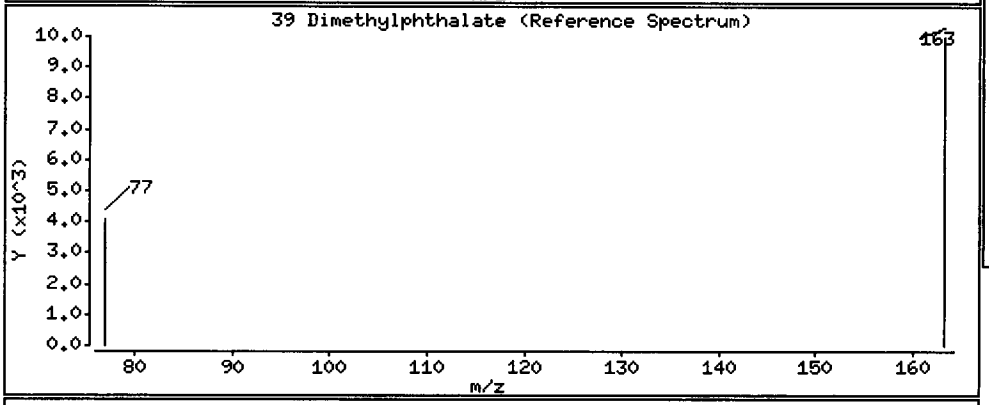
Concentration: 112.6 ug/kg

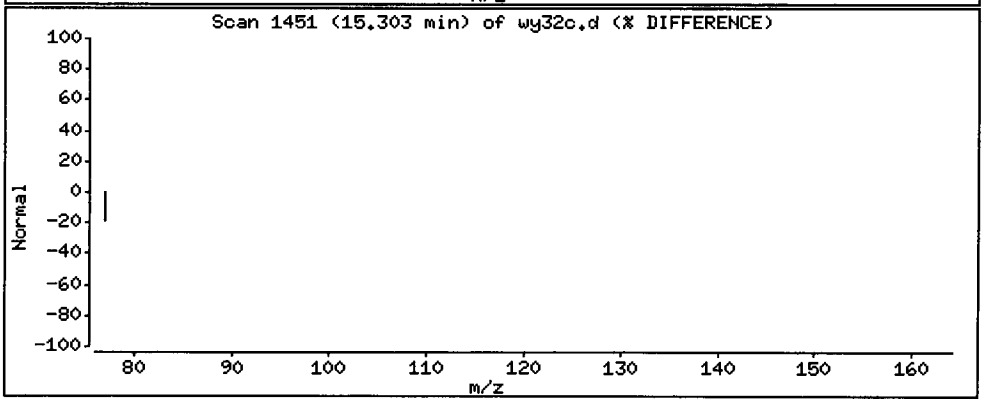












Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

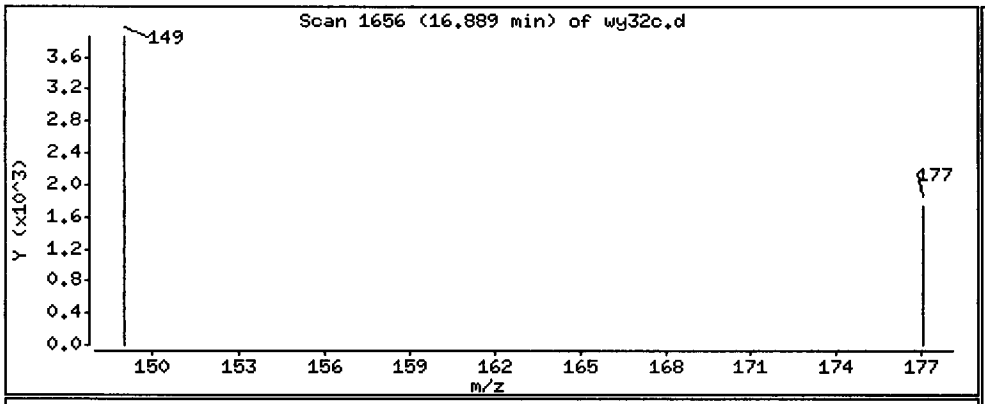
Operator: YZ

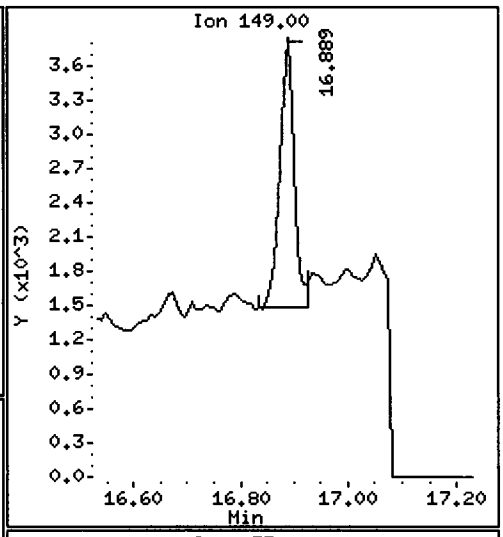
Column phase: ZB-5msi

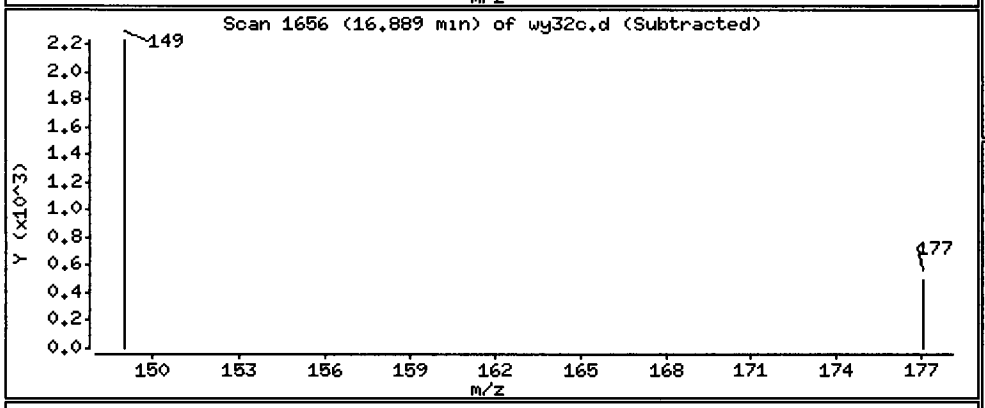
Column diameter: 0.25

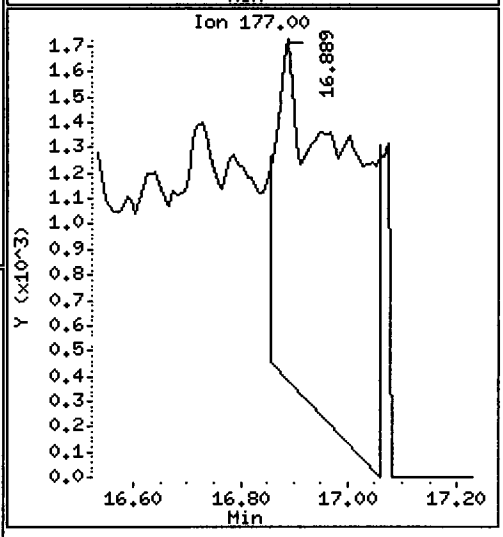
50 Diethylphthalate

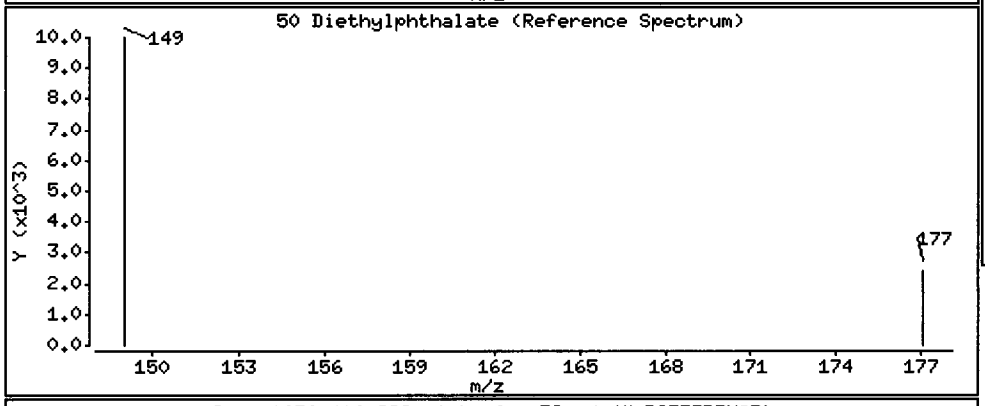
Concentration: 43.17 ug/kg

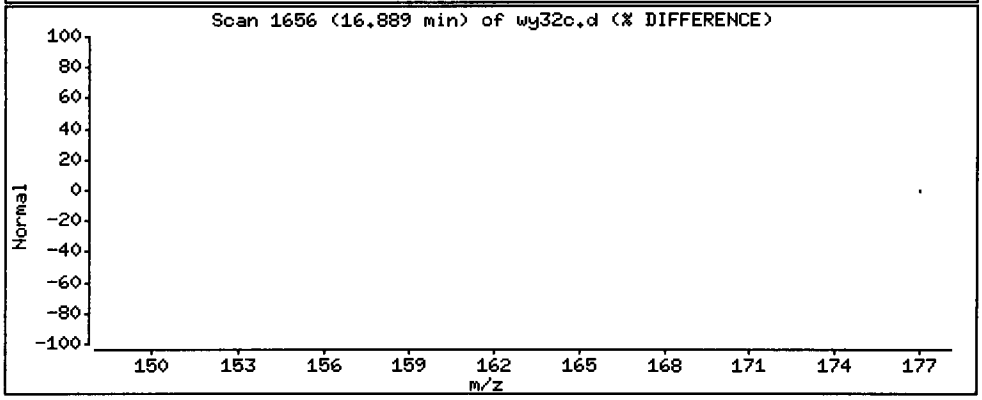












Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

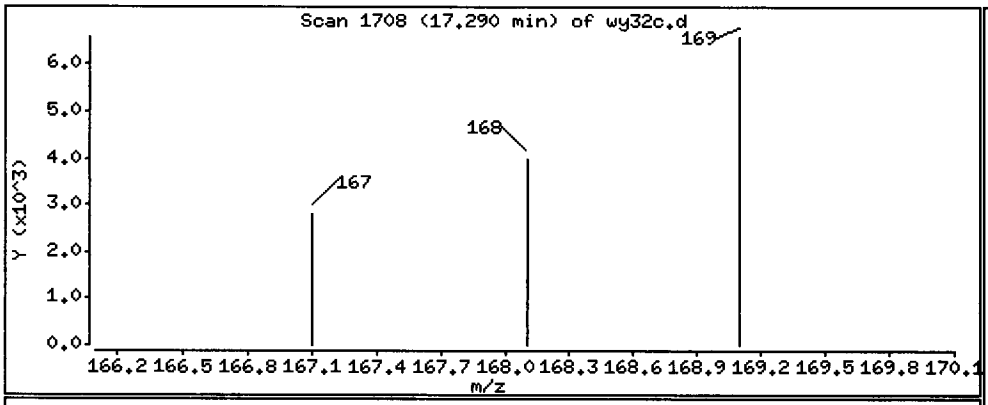
Operator: YZ

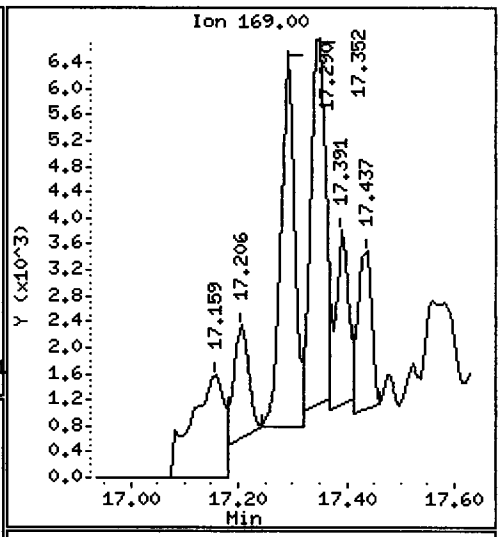
Column phase: ZB-5msi

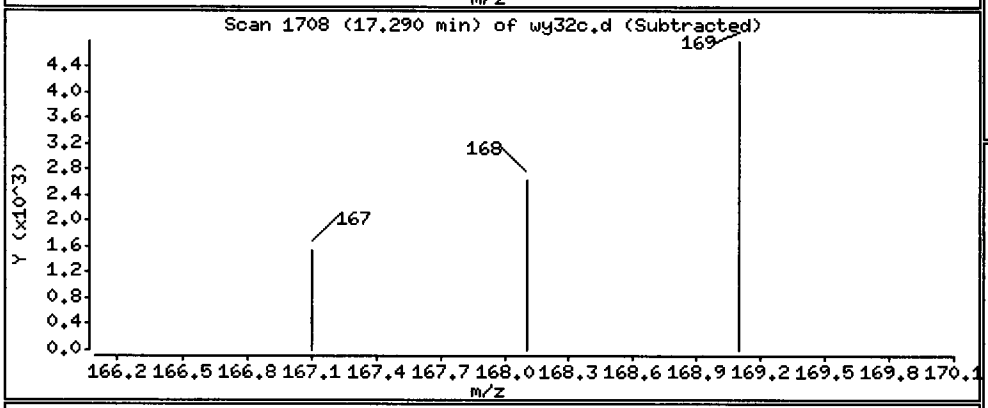
Column diameter: 0.25

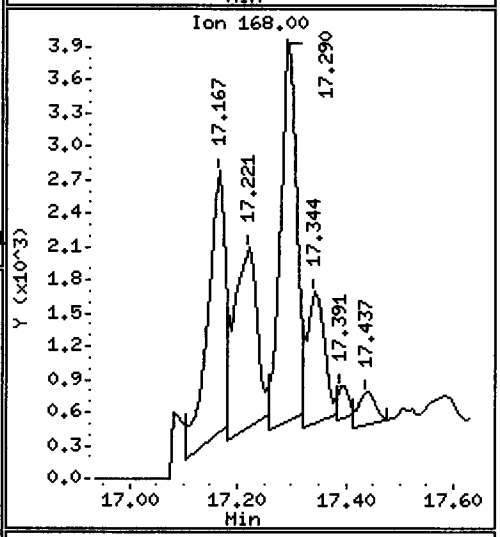
54 N-Nitrosodiphenylamine

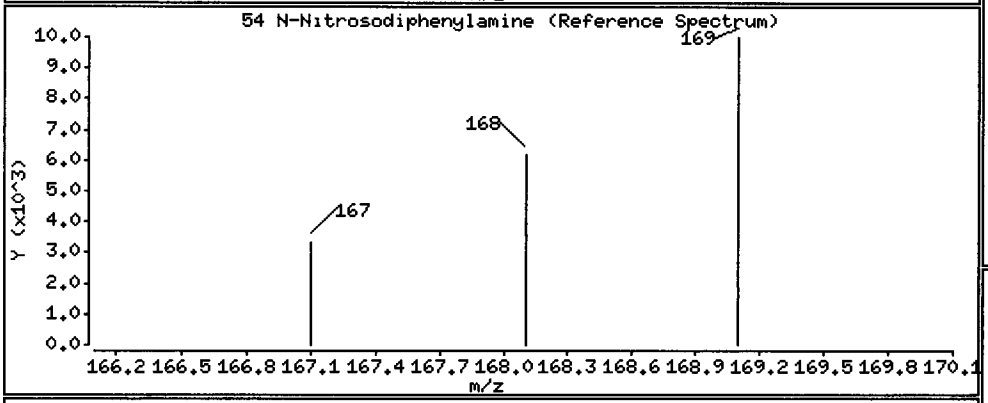
Concentration: 165.9 ug/kg

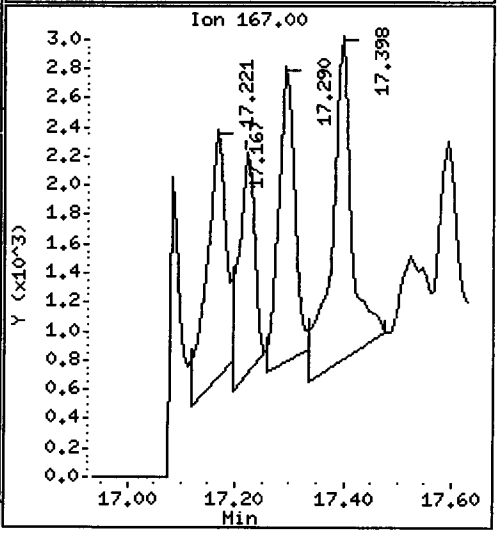


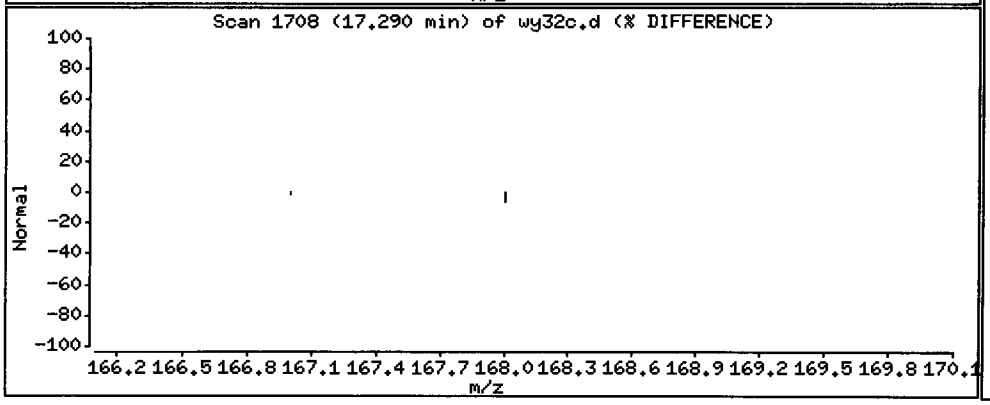












Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

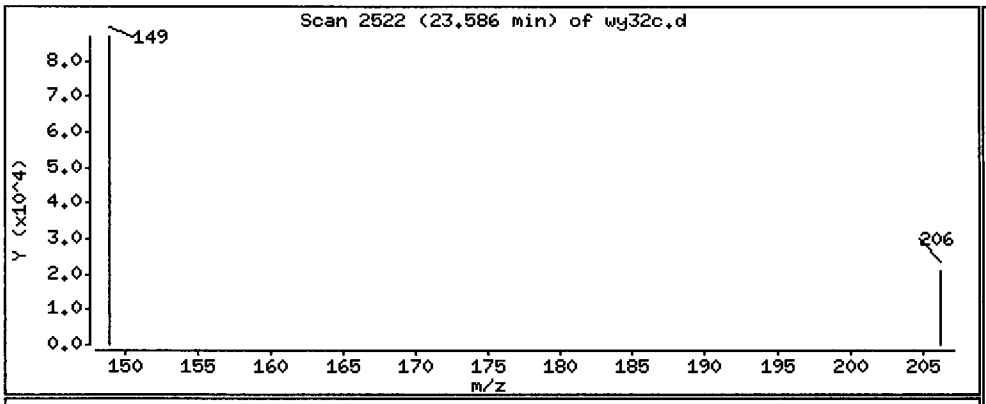
Operator: YZ

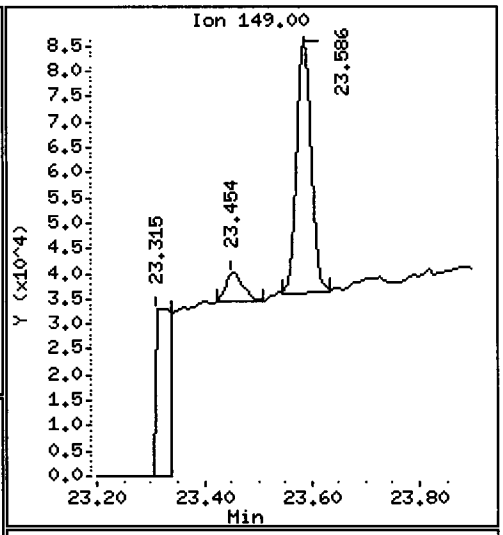
Column phase: ZB-5msi

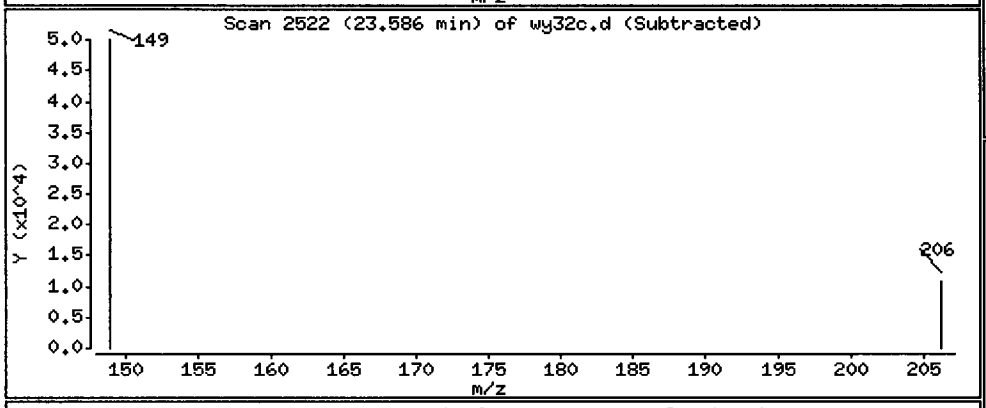
Column diameter: 0.25

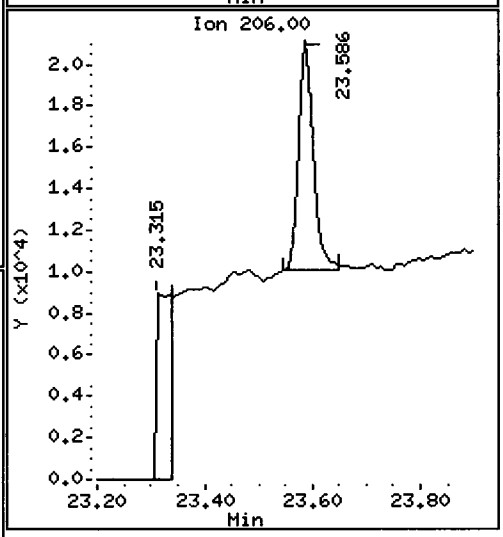
67 Butylbenzylphthalate

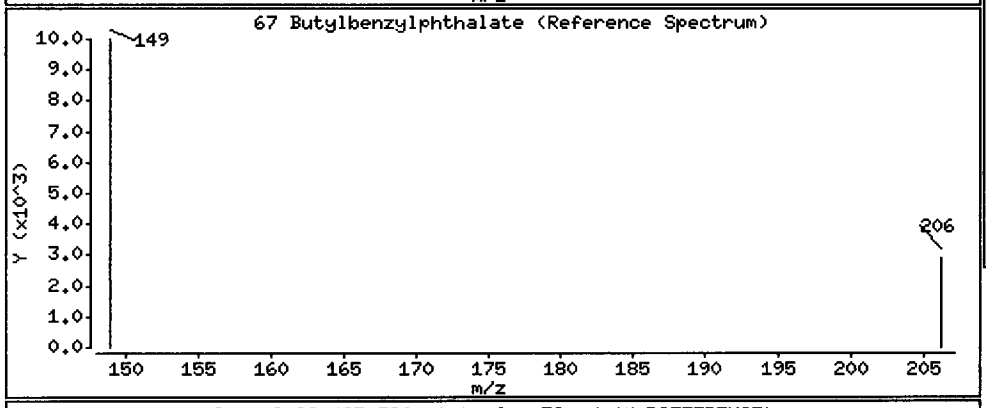
Concentration: 1749 ug/kg

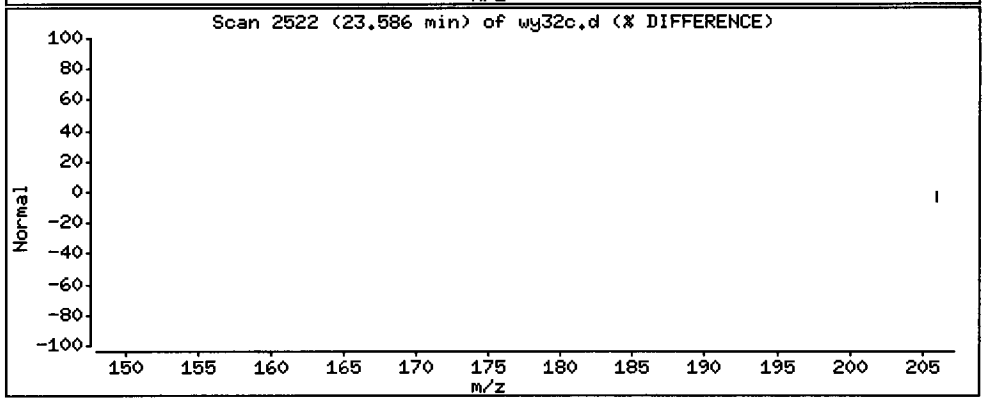












Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32c.d

Date : 01-AUG-2013 21:41

Client ID: UP-CB-A6-20130626-S

Instrument: nt10.i

Sample Info: WY32C

Volume Injected (uL): 1.0

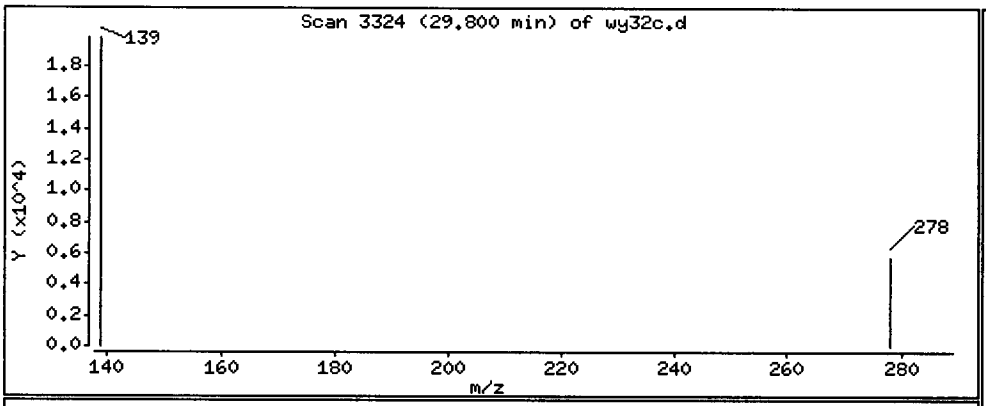
Operator: YZ

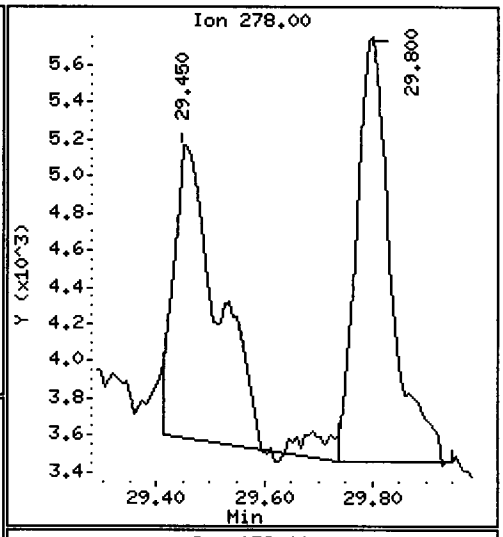
Column phase: ZB-5msi

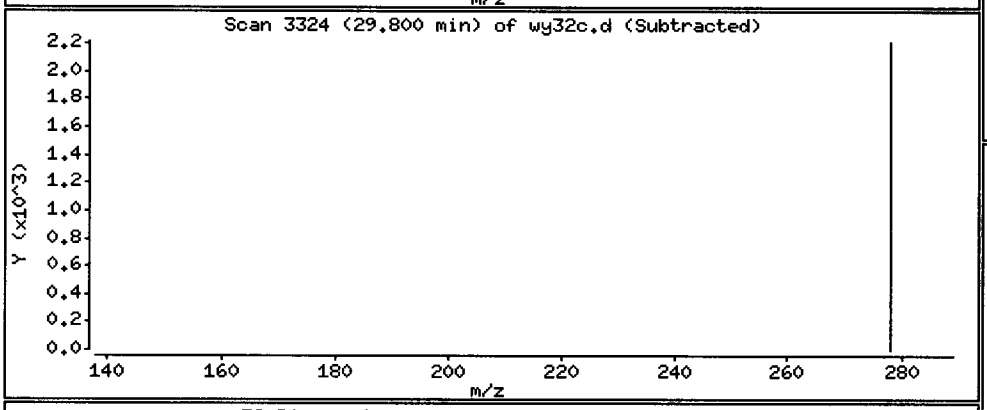
Column diameter: 0.25

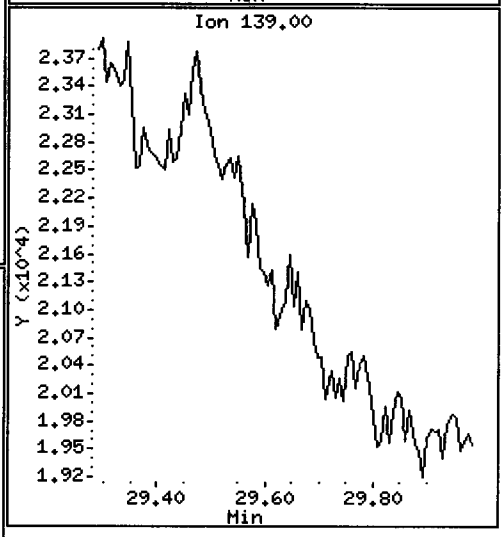
79 Dibenzo(a,h)anthracene

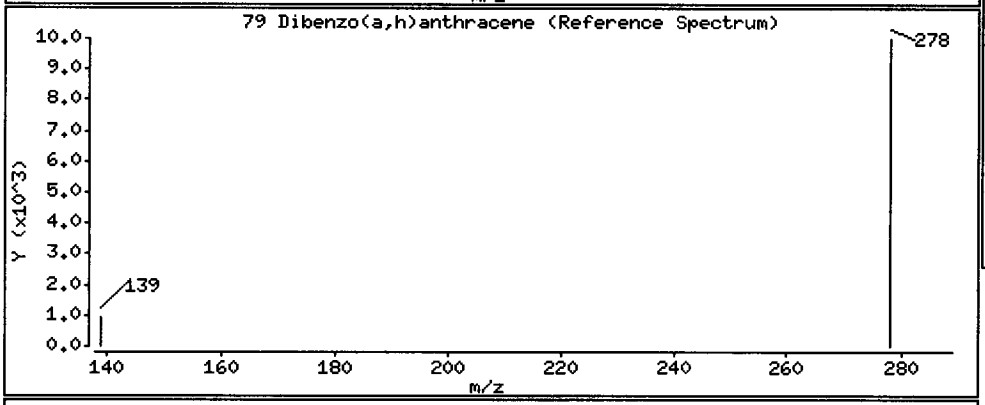
Concentration: 74.82 ug/kg

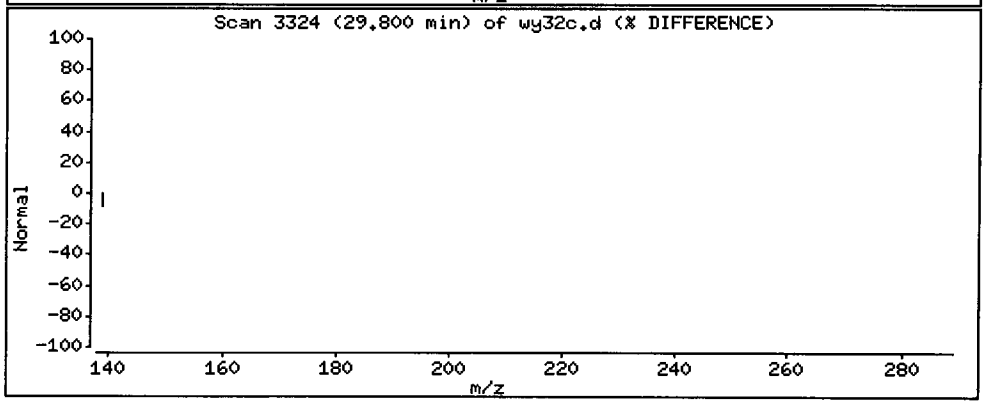






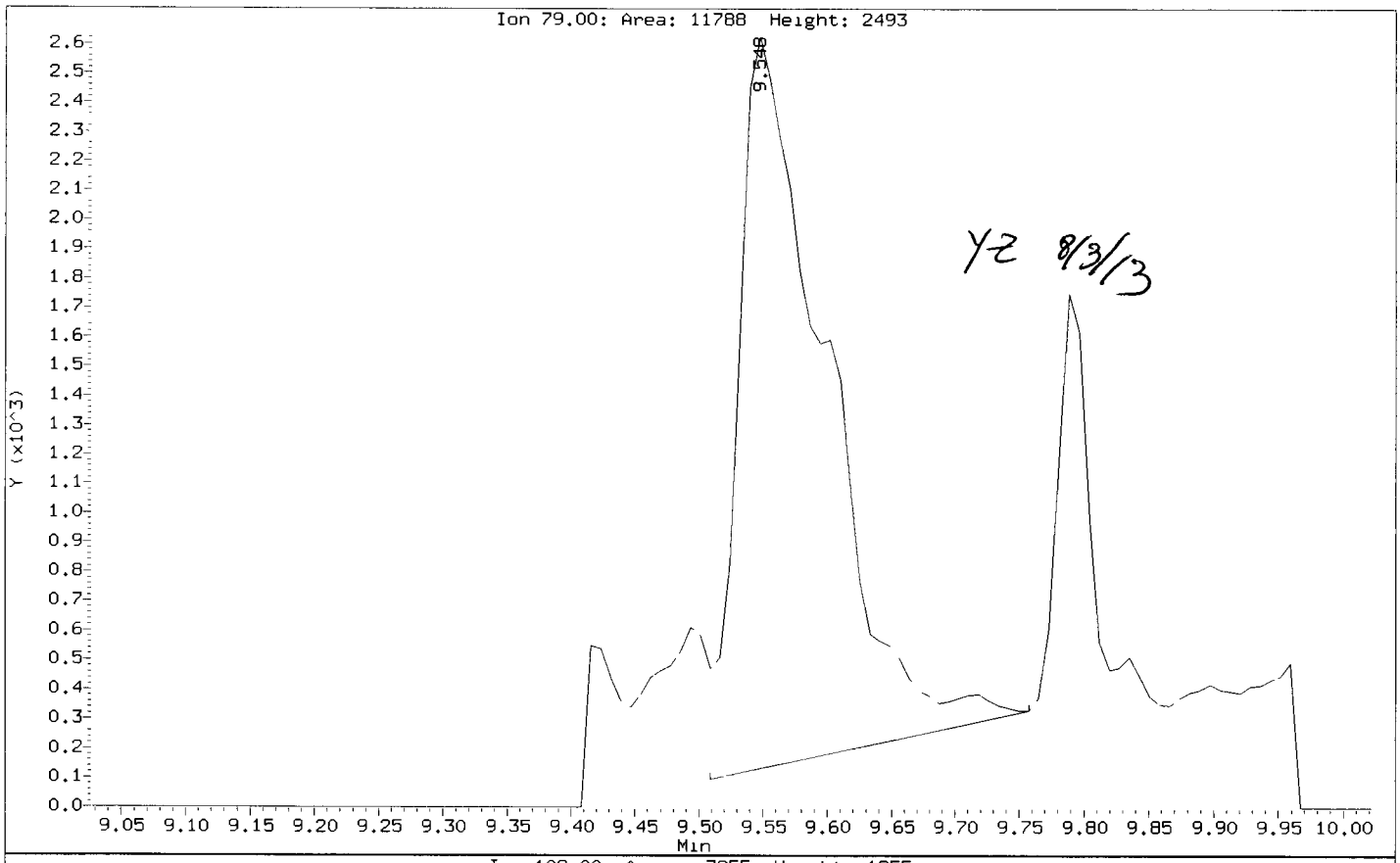


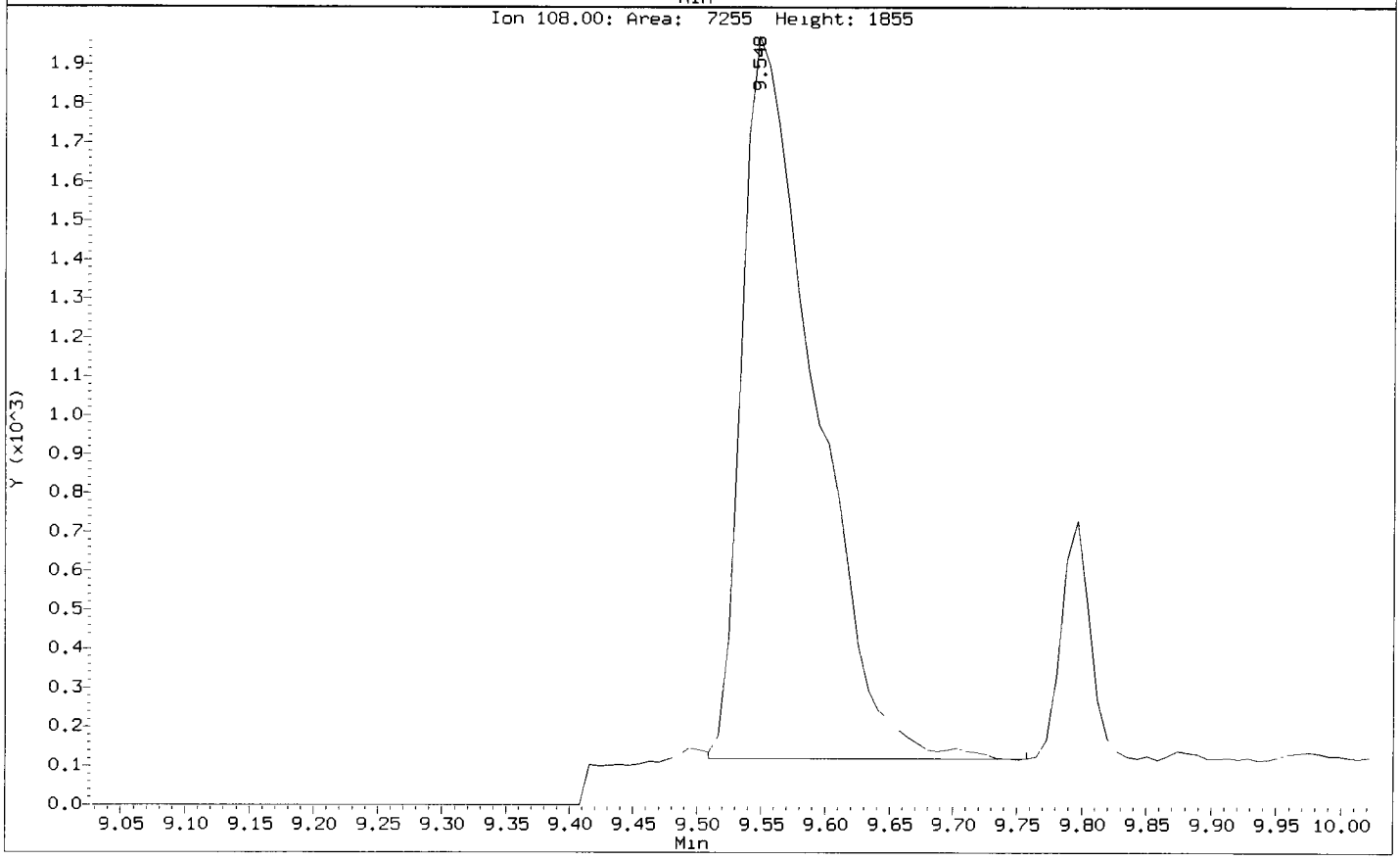




Data File: /chem1/nt10.i/20130801.b/SIM.b/wy32c.d
Injection Date: 01-AUG-2013 21:41
Instrument: nt10.i
Client Sample ID:

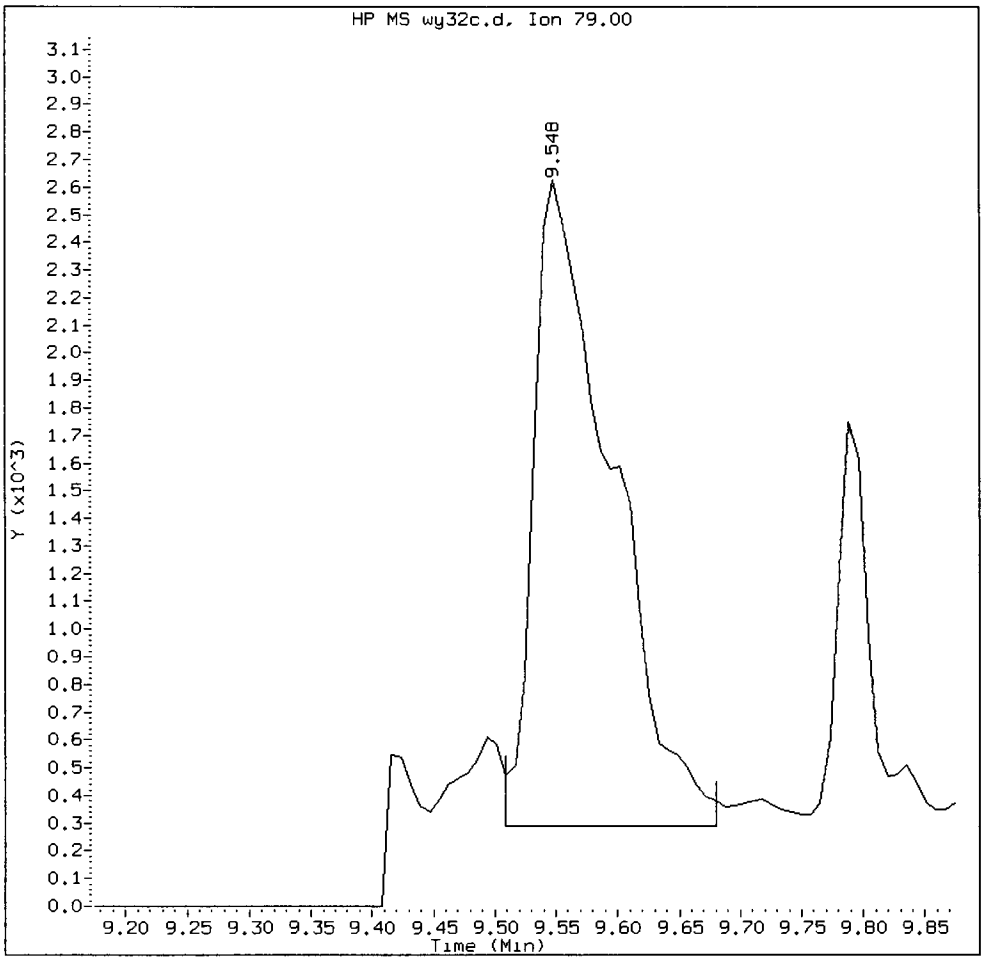
Compound: Benzyl alcohol
CAS Number: 100-51-6





WY32C, /chem1/nt10.i/20130801.b/SIM.b/wy32c.d

Benzyl alcohol Amount: 0.37 Area: 10269



MANUAL INTEGRATION for Benzyl alcohol

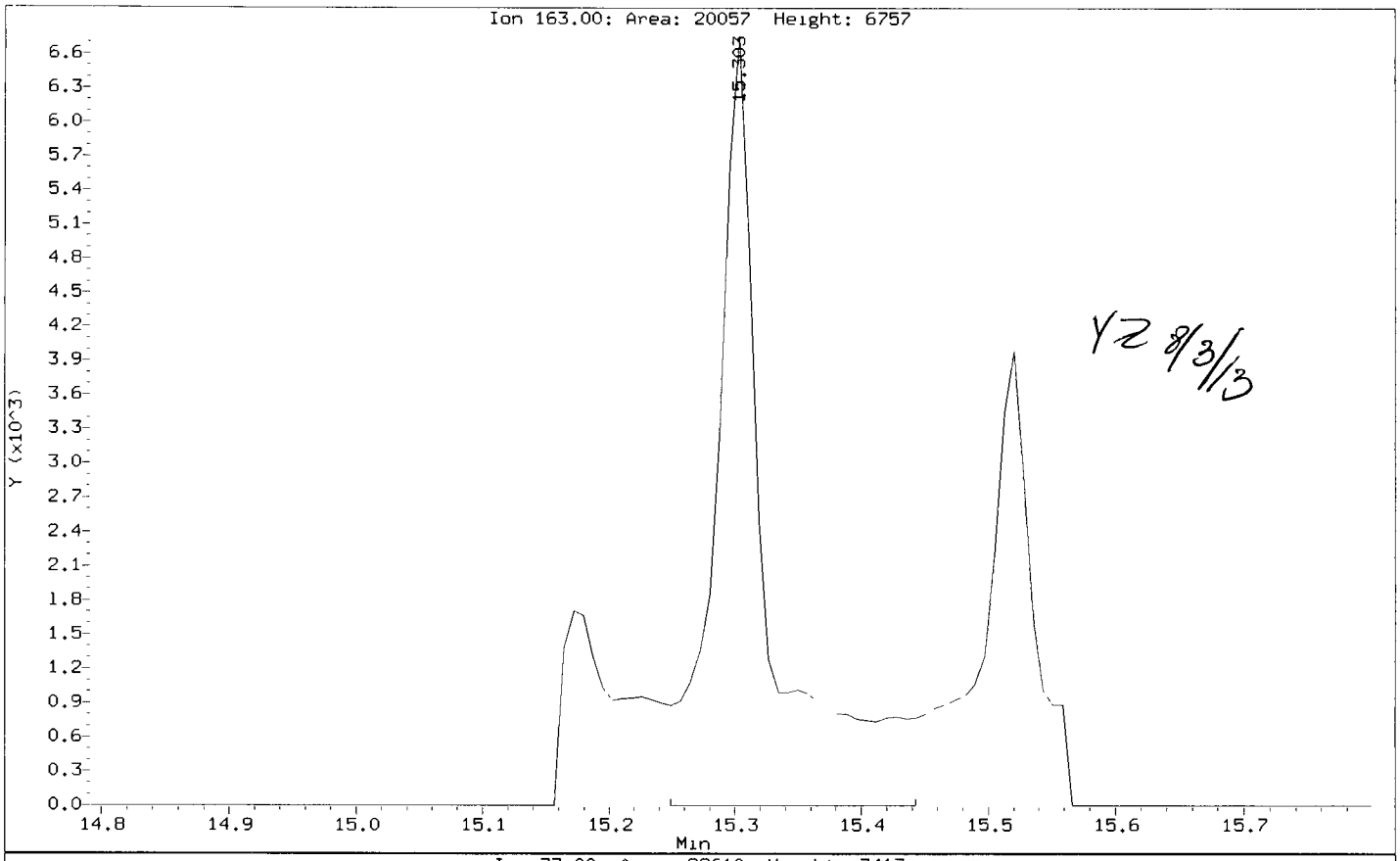
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

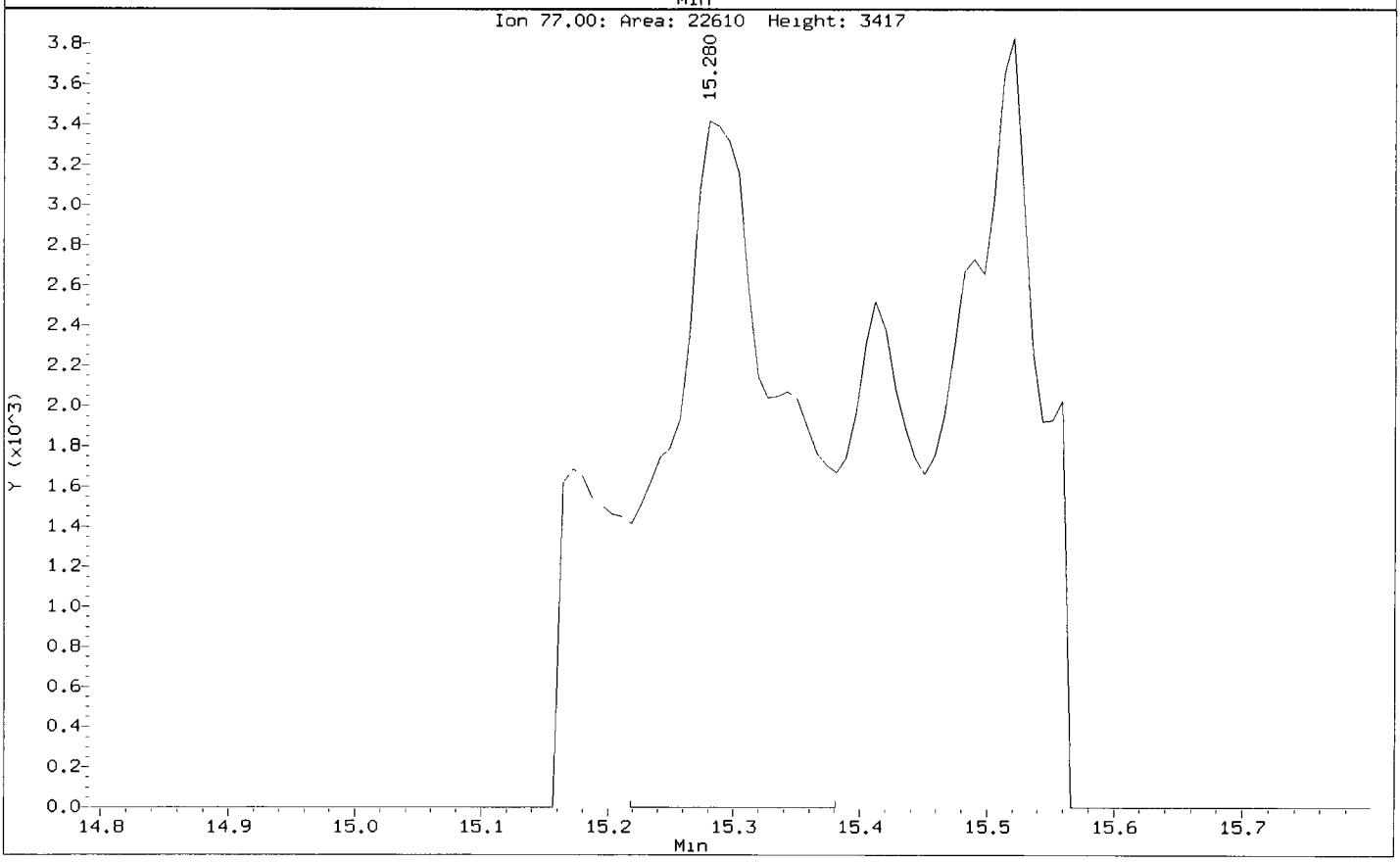
Analyst: YZ Date: 8/3/13

Data File: /chem1/nt10.1/20130801.b/SIM.b/wy32c.d
Injection Date: 01-AUG-2013 21:41
Instrument: nt10.1
Client Sample ID:

Compound: Dimethylphthalate
CAS Number: 131-11-3

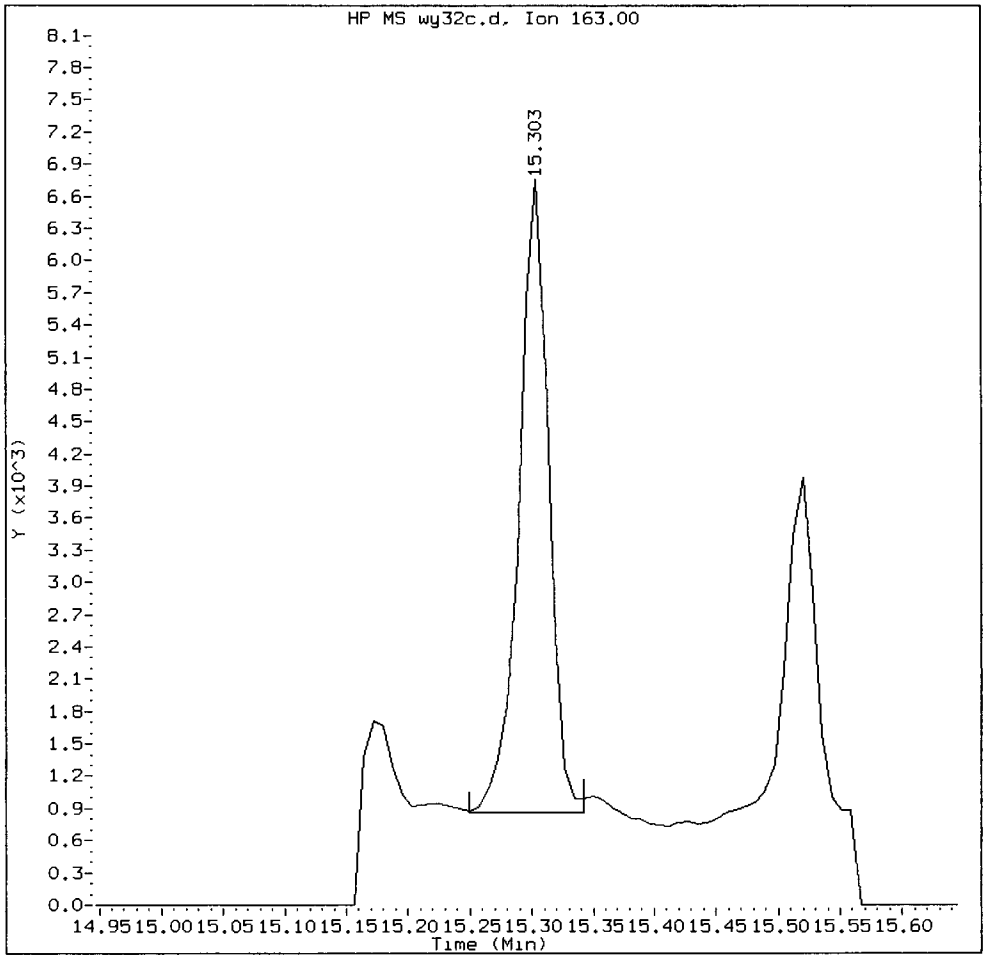


YZ 8/3/13



WY32C, /chem1/nt10.i/20130801.b/SIM.b/wy32c.d

Dimethylphthalate Amount: 0.16 Area: 9854



MANUAL INTEGRATION for Dimethylphthalate

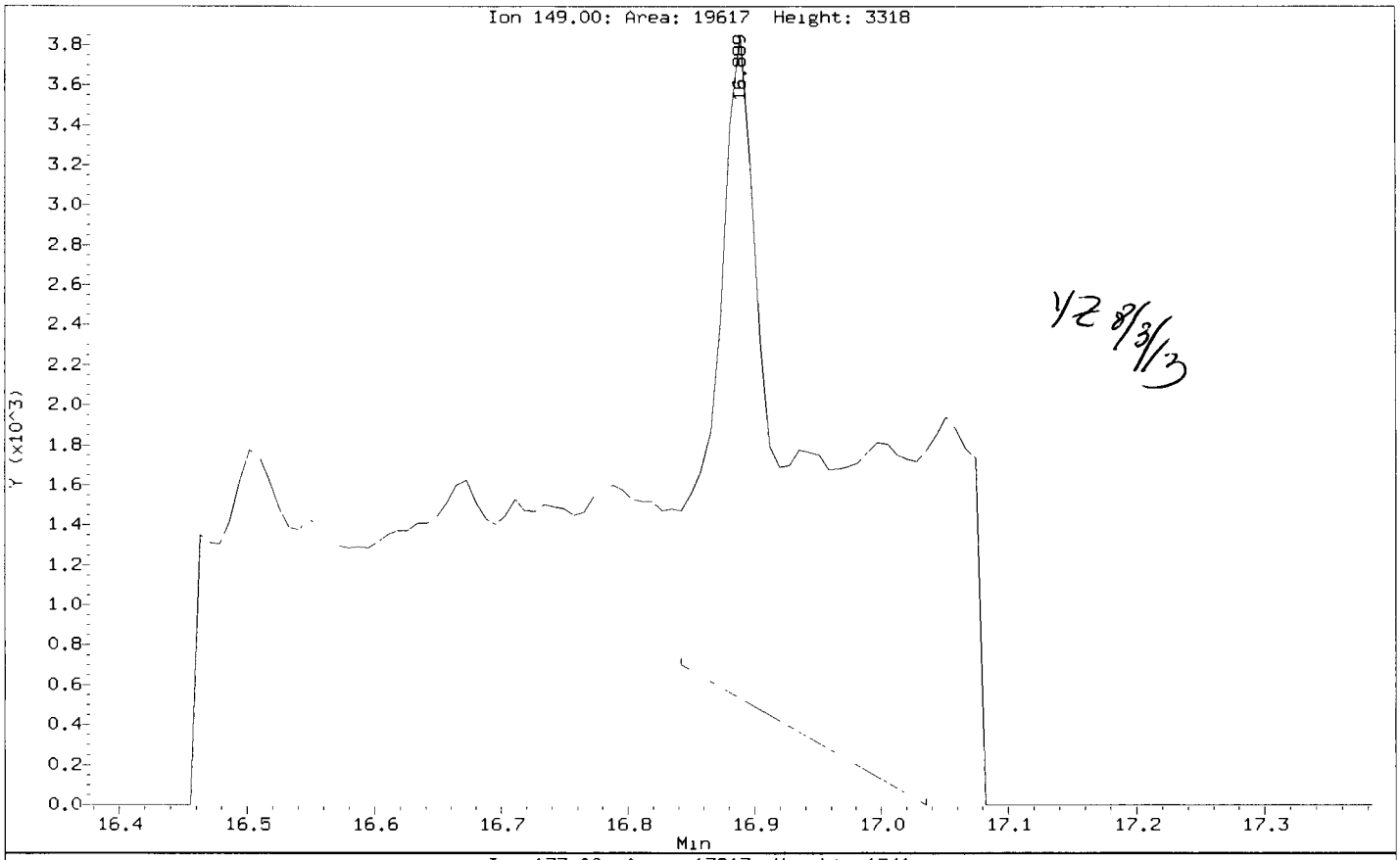
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

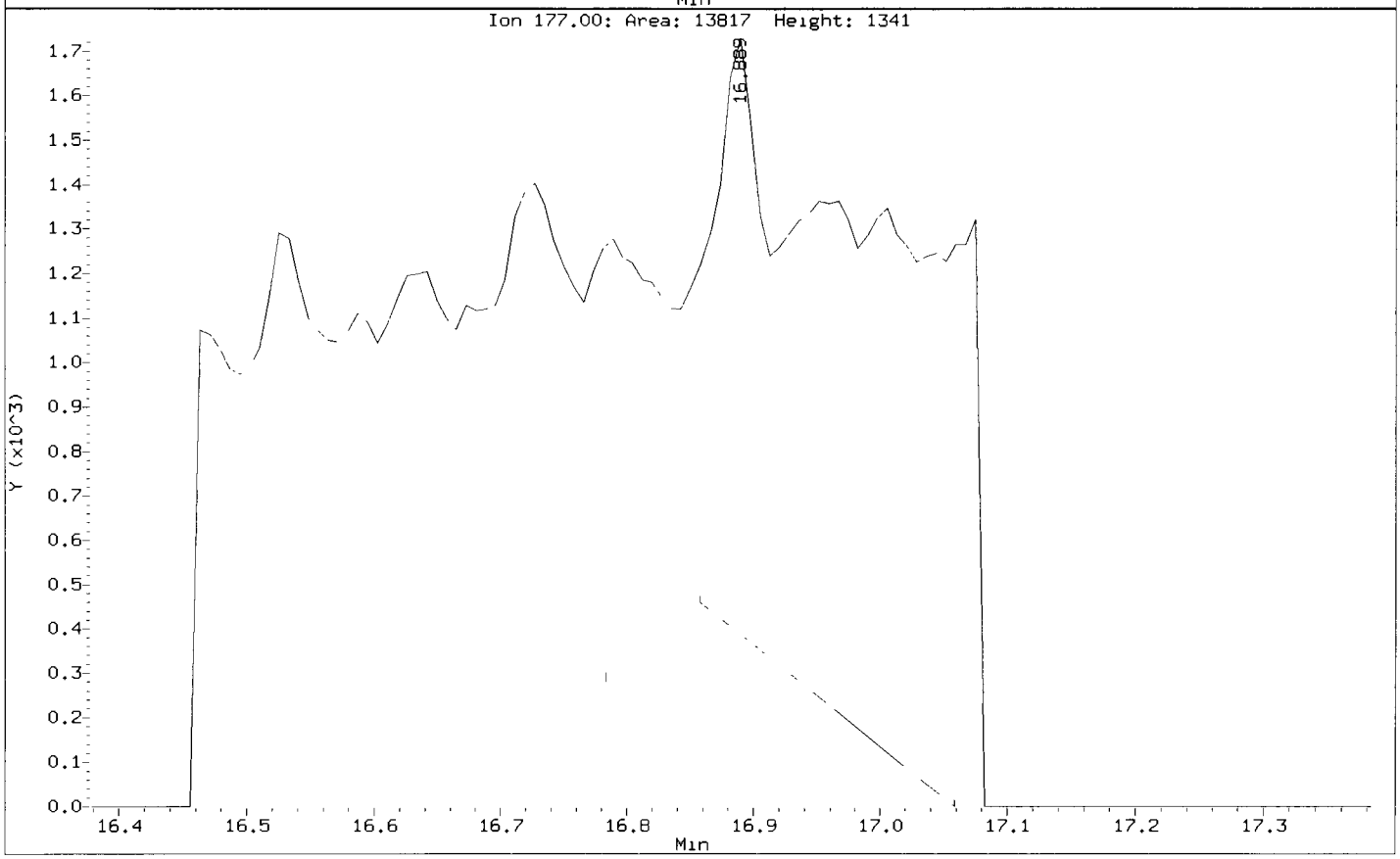
Analyst: JZ Date: 8/3/13

Data File: /chem1/nt10.1/20130801.b/SIM.b/wy32c.d
Injection Date: 01-AUG-2013 21:41
Instrument: nt10.1
Client Sample ID:

Compound: Diethylphthalate
CAS Number: 84-66-2

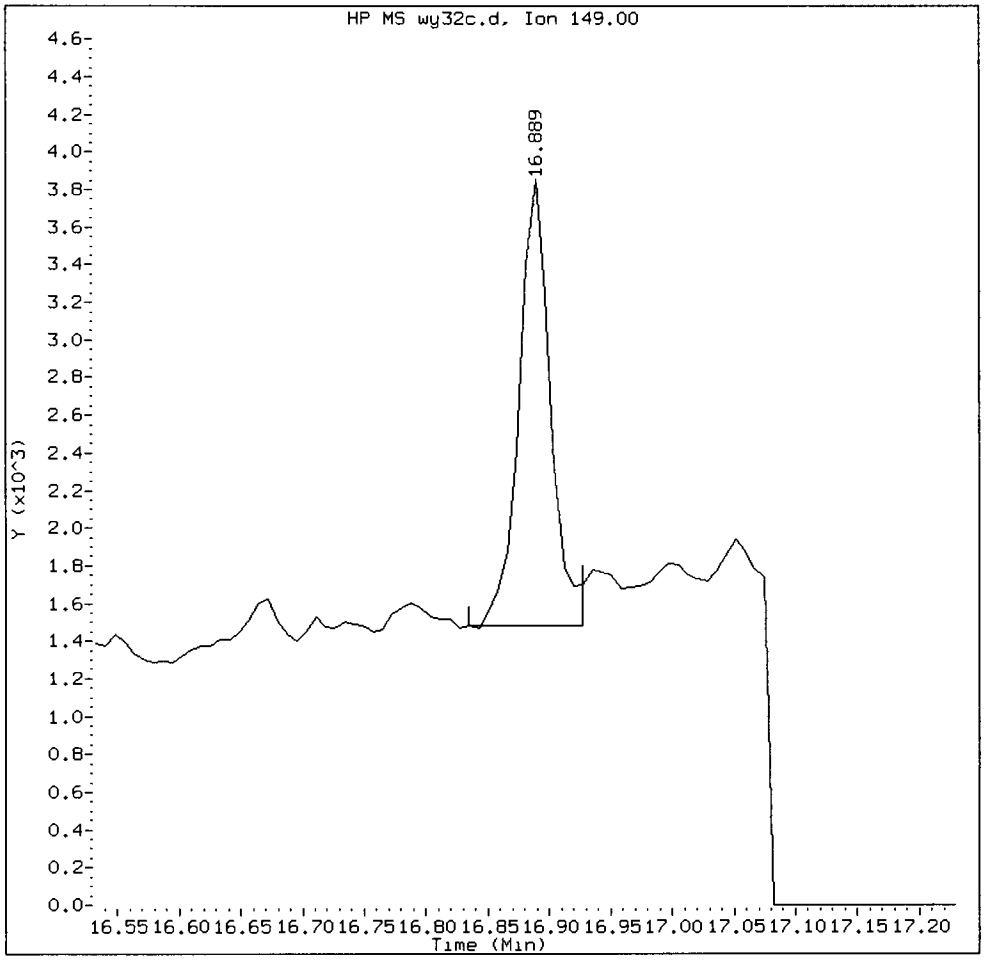


YZ 8/3/13



WY32C, /chem1/nt10.i/20130801.b/SIM.b/wy32c.d

Diethylphthalate Amount: 0.06 Area: 4263



MANUAL INTEGRATION for Diethylphthalate

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 8/3/13

CO-ELUTION SUMMARY FOR FILE - wy32c.d

Lab ID: WY32C, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 01-AUG-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Dioxin Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WY32, WY33

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dioxin / Furan Bench Sheet EPA Methods 8290A & 1613B
Solid Samples

ARI Job No(s) WY54, WY44, WY32, WY56		
Matrix (circle one)	Soil Sediment Oil Tissue	
Extraction Method	Start ~~Time/Date~~:	End Time/Date:
Soxhlet	1240 7/29/13	0506 7/30/13

Reagent / Standard	NA	ID / Lot Number	Initials	Date
Analytical Balance		SN 24650344	PD	7/29/13
Purified Sand		F8025	PD	7/29/13
Toluene		F8251	PD	7/29/13
Hexane		B000974	PD	7/30/13
CH_2Cl_2		B000661	PD	7/31/13
H_2SO_4		F8263	PD	7/30/13
Na_2SO_4		E9185	PD	7/31/13
Glasswool		5/18/12	PD	7/31/13
10 % $AgNO_3$	/			
Basic Silica		H142	PD	7/31/13
Acid Silica		H191	PD	7/31/13
0% Silica		F8035	PD	7/31/13
Activated Florisil		H127	PD	7/31/13
Dual Carbon Column	/			
Other (PARSRM)		B000664	PD	7/29/13
Nonane		I8006	PD	8/1/13

Bottle ID	ARI Sample ID	Sample Weight (eq to dry wt)	Roto Vap 45 °C	Final Vol.	H20 Trap Vol (mL)	Comments
7/29/13	WY54 MB	10.00g	1 / (2)	10uL	0.6	
↓	↓OPR	10.00g	(1) / 2	10uL	0.8	
	~~QLS~~	~~10.00g~~	~~1 / 2~~	~~10uL~~		
	WY54SRM	10.01	(1) 2	10uL	0.1	
7	A	12.36	1 (2)	10uL	2.6	
	↓ B	14.99	(1) 2	10uL	3.5	
	WY44 A	~~11.80~~ 12.10	1 (2)	10uL	2.2	
	B	12.21	(1) 2	10uL	2.0	
	C	14.02	1 (2)	10uL	5.0	
	D	14.11	(1) 2	10uL	4.8	
	E	14.08	1 (2)	10uL	4.2	
	F	15.21	(1) 2	10uL	5.8	
	G	11.97	1 (2)	10uL	2.0	
	↓ H	12.51	(1) 2	10uL	2.0	
16	WY32A	14.54	1 (2)	10uL	4.2	
4	WY56A	14.33	1 / 2	10uL	4.4	
2	↓ F	11.54	1 / 2	10uL	1.8	
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
Prep Analyst/Date		PD 7/29/13	PD 7/24/13	PD 8/1/13	PD 7/31/13	

Reagent / Standard	Vol	ID / Lot Number	Solution Conc.	Expiration Date	Initials	Date	Witness
Recovery Standard	1.0 mL	B000395	2/4ng/mL	5/20/14	PDx2	7/29/13	PD
Ongoing Precision /Recovery	20 µL	2069-3	10/50/100ng/mL	2/6/14	PDx2	7/29/13	PD
~~QLS Standard~~	~~10 µL~~	211	~~0.5/2.5/5ng/mL~~				
Clean-up Standard	1.0 mL	B000394	0.8ng/mL	5/20/14	PDx2	7/31/13	PD
Internal Standard	10 µL		200ng/mL				

Supervisor Review: _____ Bench Sheet No.: 00064

Verify Client ID

Analyst/Date PD 7/29/13

Acid Clean

(Y)N

Analyst/Date PD 7/30/13 / NL 7/30/13

Silica-Florisil

(Y)N

Analyst/Date PD 7/31/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WY32 Client ID: SAIC

Parameter: Dioxin 1613B Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☒ Standing Water Decanted (Not shared)= B, C	M 07/24/13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☒ Organics (Leaves/sticks/grass)= ~~A~~ M 07/24/13 B C A	07/24/13 M
☒ Oily, obvious fuel/sulfur odors= A - C has real light fuel odor smells like M 7/24/13	
☒ Other (Details)= Samples ID Check this Job WY32, but Sample B, C has no Client Label ID on the Jar and Verified the Lims sheet with our Label Matched.	M 07/24/13
A Bumped on Rotovap (Loi effex 5%)	CP 7/30/13
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

Dioxin Raw Data
Initial Calibration

ARI Job ID: WY32, WY33

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

HR-GC/MS Analyst Notes / Data Review Checklist

ARI Work Order: _____ Client ID: _____

METHOD: **1613B** (Dioxins) **8290A** (Dioxins)

Instrument: **AutoSpec01** Dioxin Curve 7/18/13

Curve Date: 7/18/13 Analysis Start Date: _____

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Resolution Check > 10,000ppm	Y / N / _____	Signal / Noise ≥ 2.5?	Y / N / _____
TCDD / TCDF Resolution ≤ 25%	Y / N / _____	Extraction STD Limits Met?	Y / N / _____
PCDF Windows Verified	Y / N / _____	Cleanup STD Limits Met?	Y / N / _____
CCV Meets %D Limits?	Y / N / _____	Method Blank in Control?	Y / N / _____
CCV Ion Ratios within Limits?	Y / N / _____	OPR Recovery Limits Met?	Y / N / _____
CCV RRT within Limits?	Y / N / _____	Values Exceeding Curve Range?	Y / N / _____
Manual Integrations for Samples?	Y / N / _____	Samples Diluted?	Y / N / _____
Special Analysis Request?	Y / N / _____	Duplicate Sample RPD ≤ 25%?	NA / _____

Detail problems, corrective actions and/or other pertinent information below:

- TCDD/TCDF NOT used in CSL. 5 point curve, CS1 - CS5. All others 6 points, CSL - CS5.

- Man Int. for PF, HF, HpF in CSL.

(Review 1)Analyst: _____ Date: 7/19/13

(Review 2)Reviewer: _____ Date: _____

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 7/18/13 Analysis: Dioxins Analyst: JK

GC Program: 8290C Column No: I7822 Column Type: VF-Dioxin 2

Inj Vol: 1ul Instrument Tune (IPR): Jul1613_1-5 Detector Voltage: 350

Resolution Check Files: 10:39, 20:54 Curve Date: 7/18/13

IS/SS	Ical/Ccal	LCS/ICV
	I8145-8149	
I8144	I7708	I7383
	1997-2	
	I8155	

1	18-Jul-13	10:41:13	13071802	CS3WD	
2	18-Jul-13	11:40:00	13071803	ISC01	
3	18-Jul-13	12:34:52	13071804	CSL	
4	18-Jul-13	15:34:56	13071805	CS1	
5	18-Jul-13	16:25:18	13071806	CS2	
6	18-Jul-13	17:17:44	13071807	CS3	
7	18-Jul-13	18:09:59	13071808	CS4	
8	18-Jul-13	19:02:18	13071809	CS5	
9	18-Jul-13	19:54:25	13071810	ICV	
10	18-Jul-13	20:54:58	13071811	ISC02	

JK 7/19/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Printed: Thursday, July 18, 2013 10:39:00 Pacific Daylight Time

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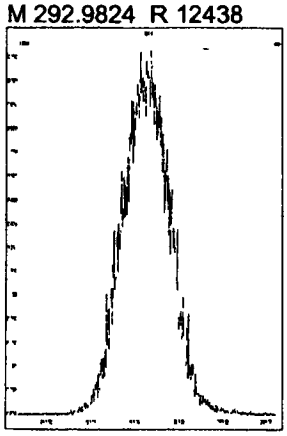

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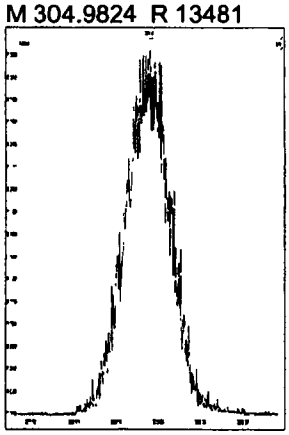

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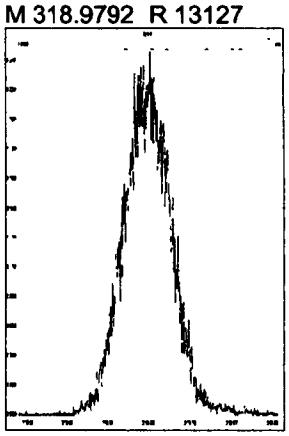

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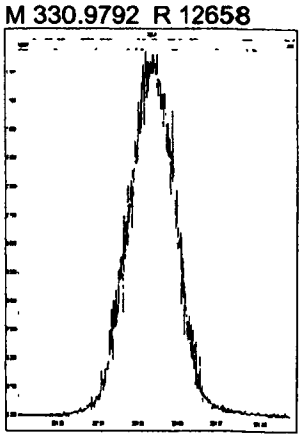

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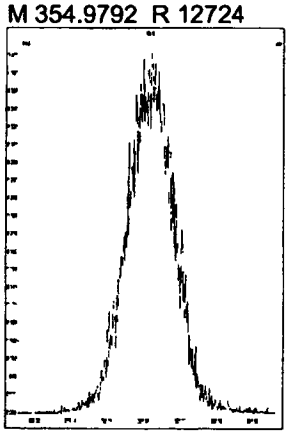

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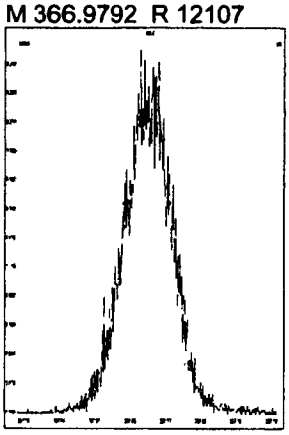

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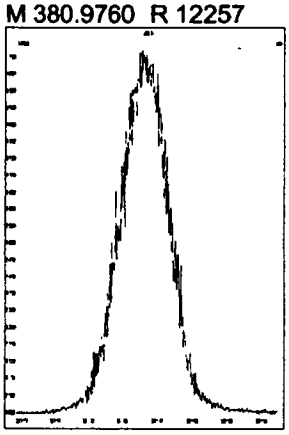

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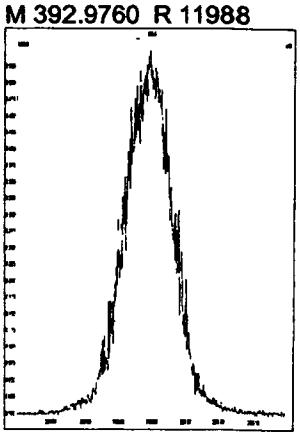

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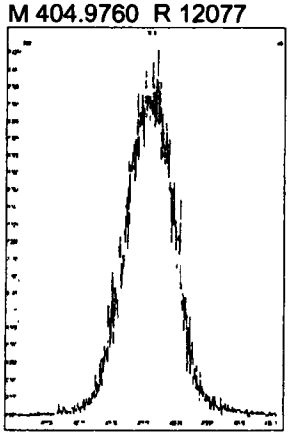

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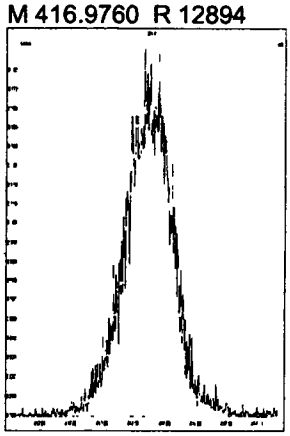

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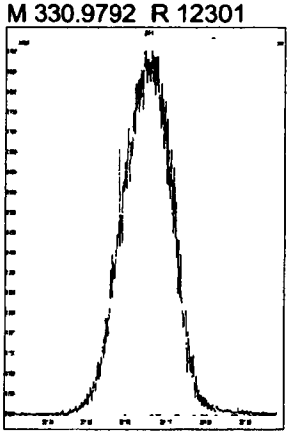

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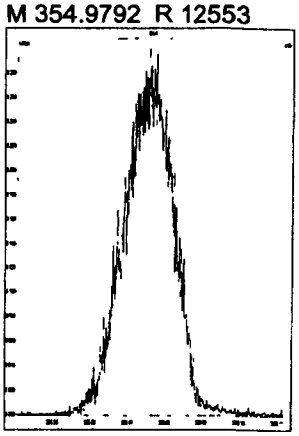

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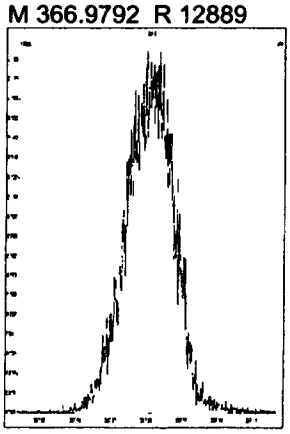

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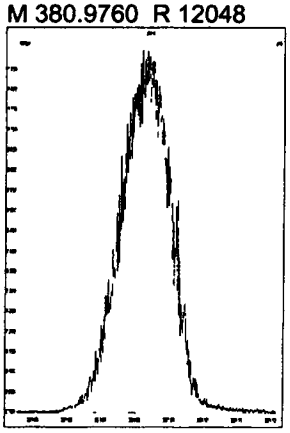

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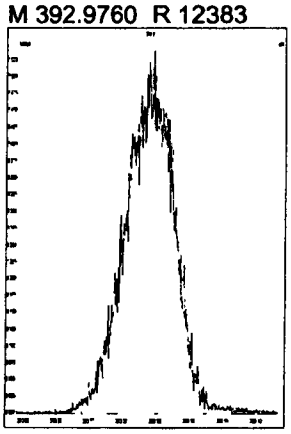

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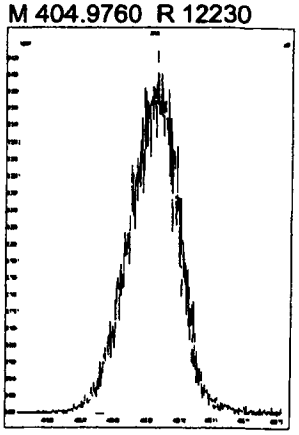

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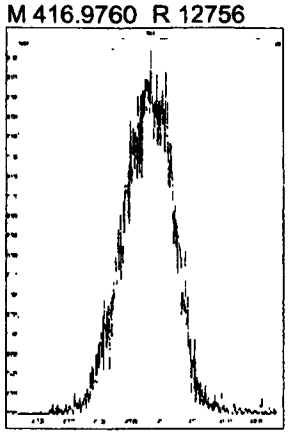

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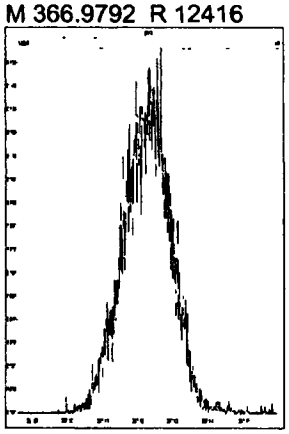

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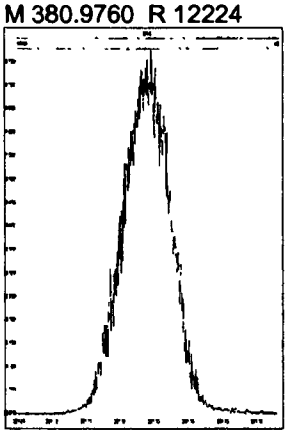

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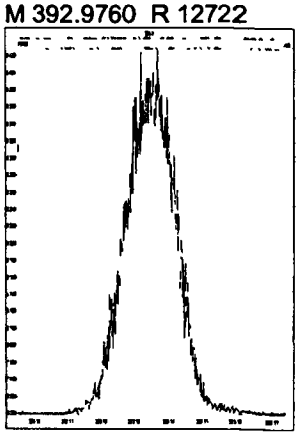

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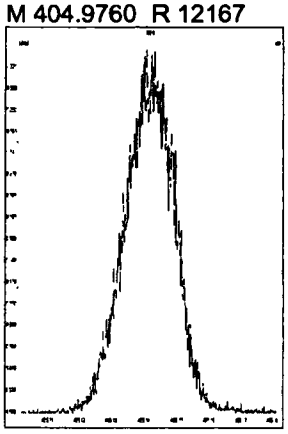

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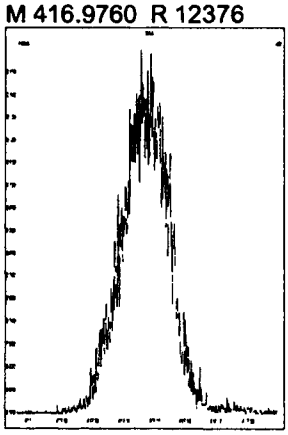

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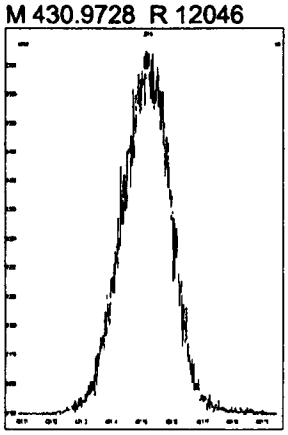

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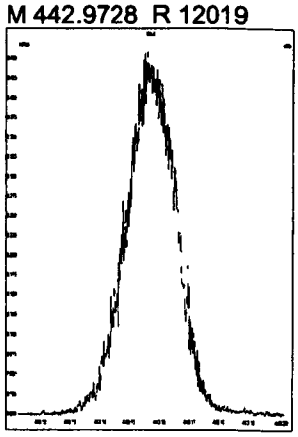

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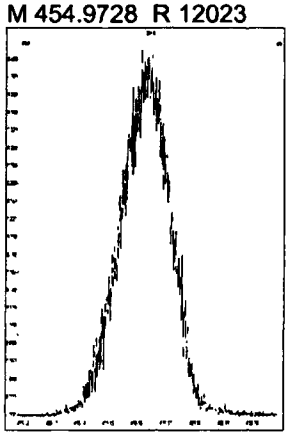

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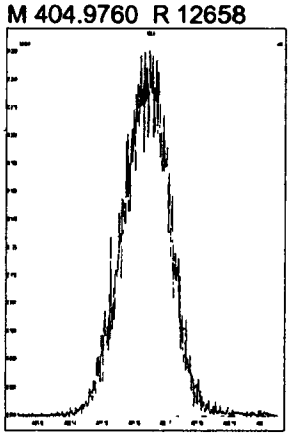

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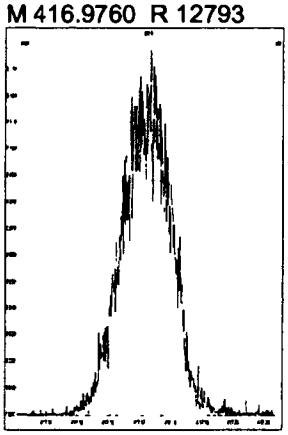

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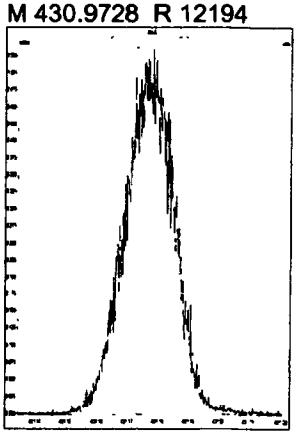

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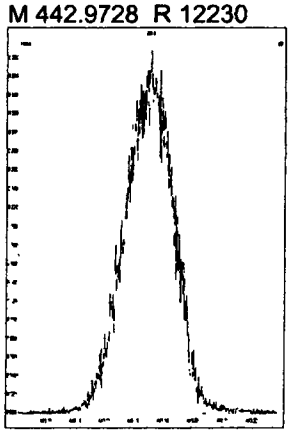

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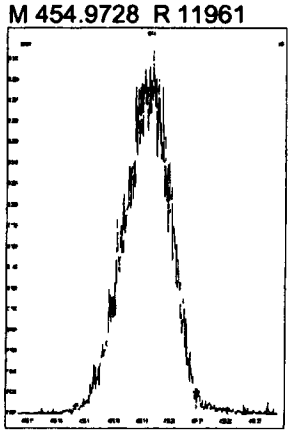

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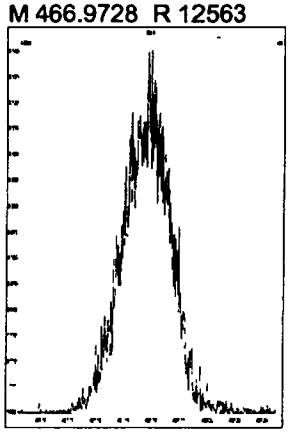

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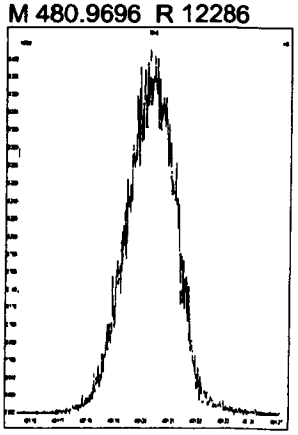

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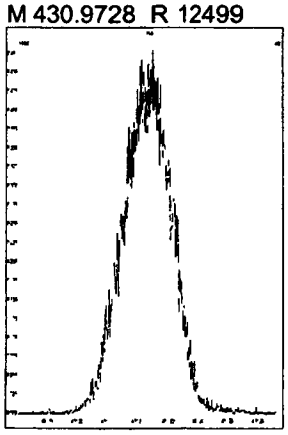

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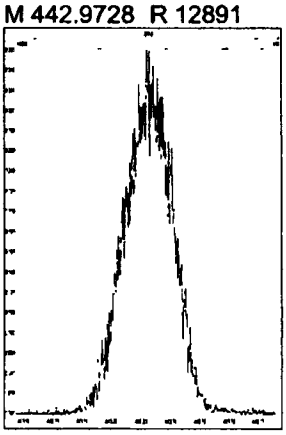

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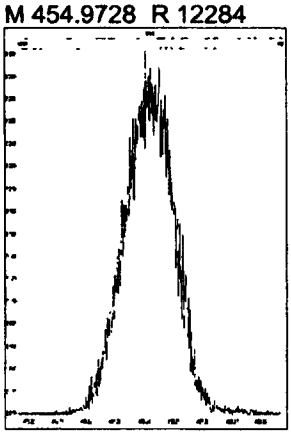

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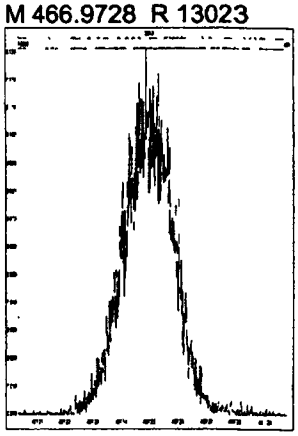

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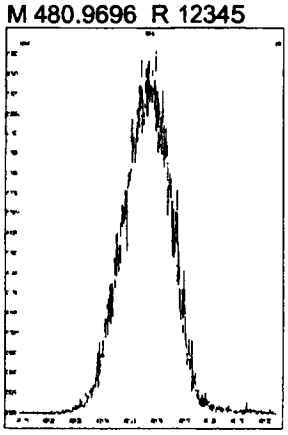

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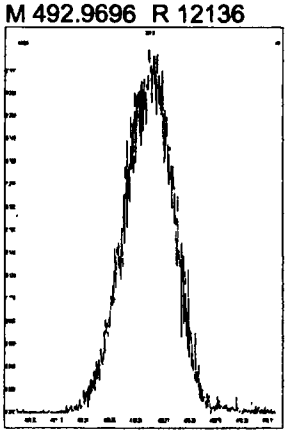

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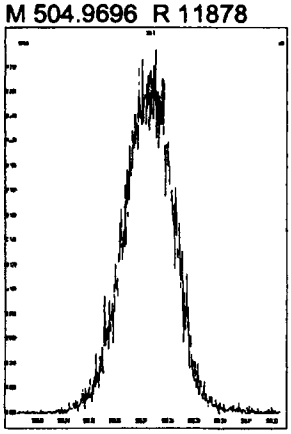

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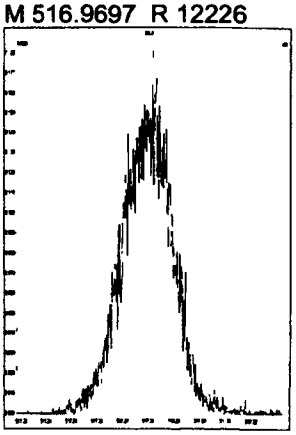

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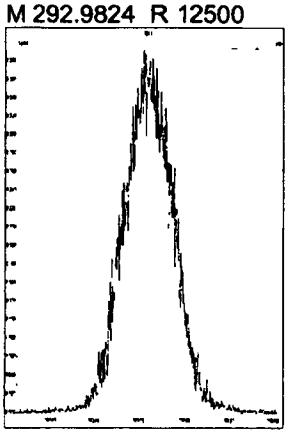

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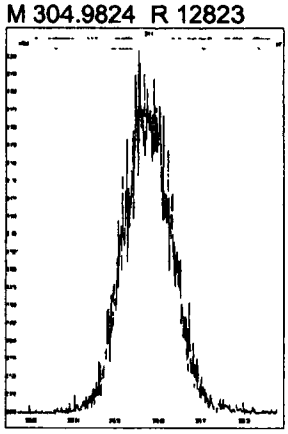
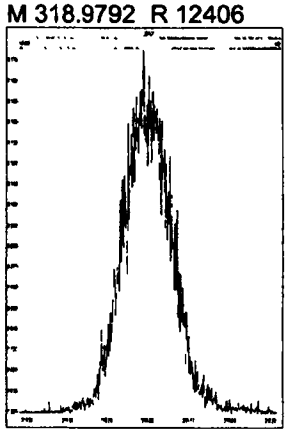
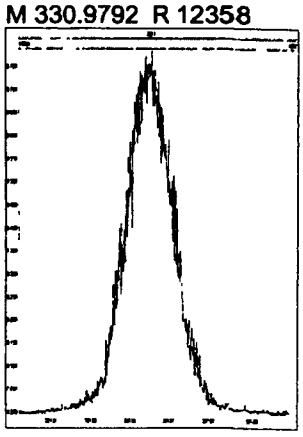


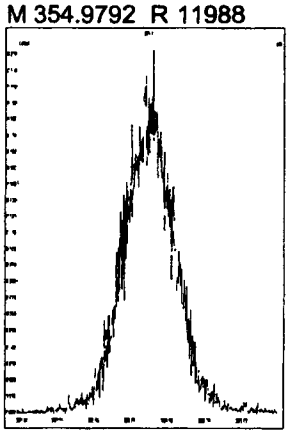
M 318.9792 R 12406



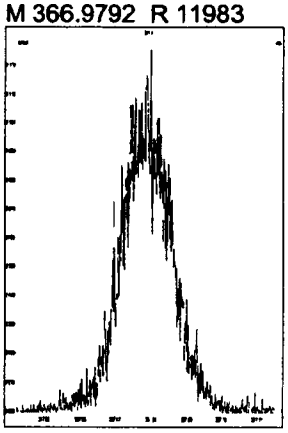
M 330.9792 R 12358



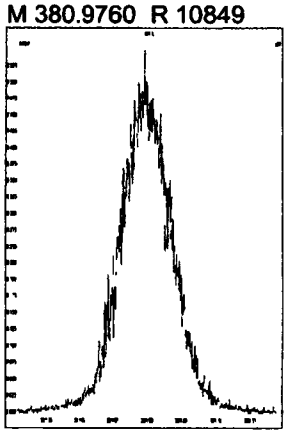
M 354.9792 R 11988



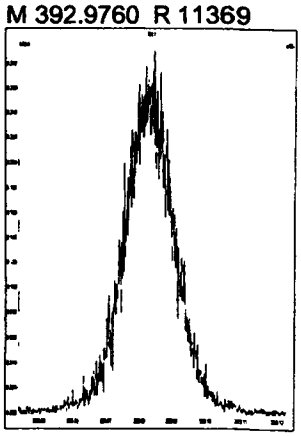
M 366.9792 R 11983



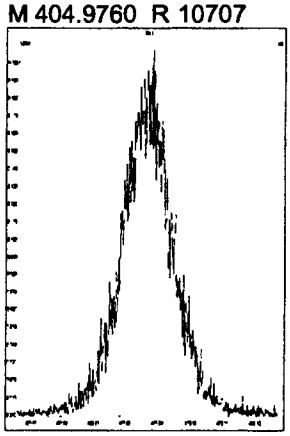
M 380.9760 R 10849



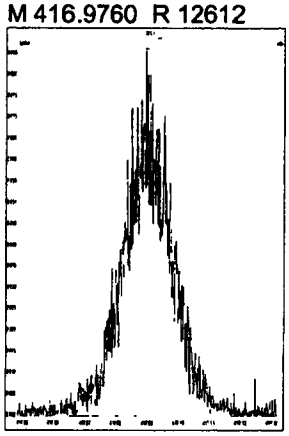
M 392.9760 R 11369



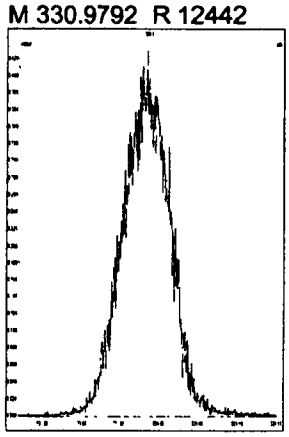
M 404.9760 R 10707



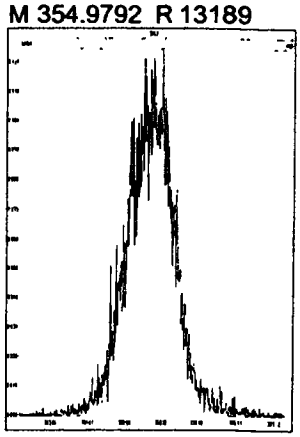
M 416.9760 R 12612



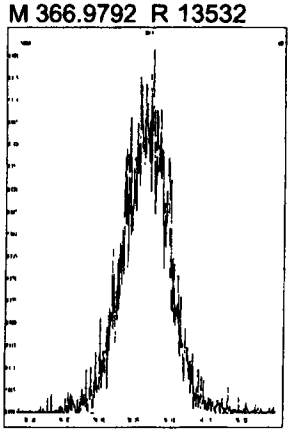
M 330.9792 R 12442



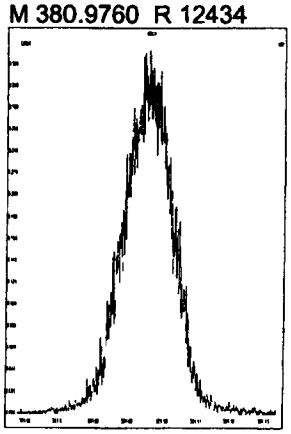
M 354.9792 R 13189



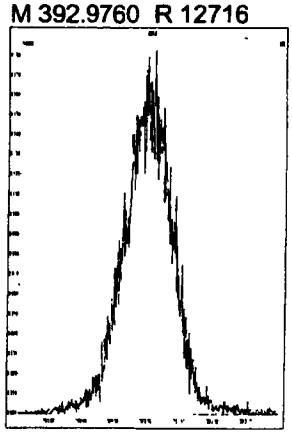
M 366.9792 R 13532



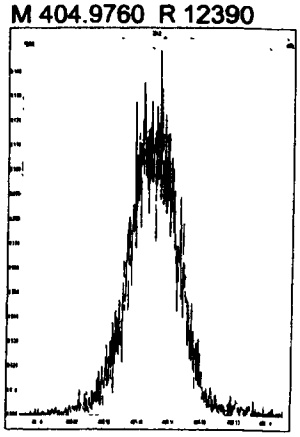
M 380.9760 R 12434



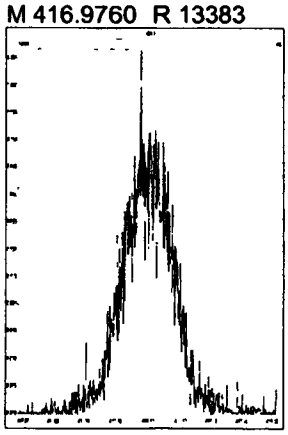
M 392.9760 R 12716



M 404.9760 R 12390



M 416.9760 R 13383



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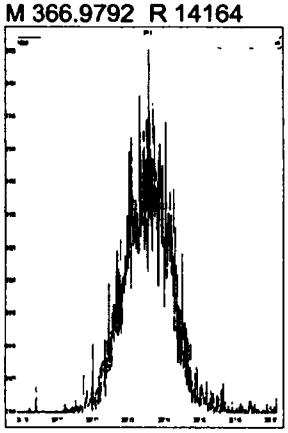
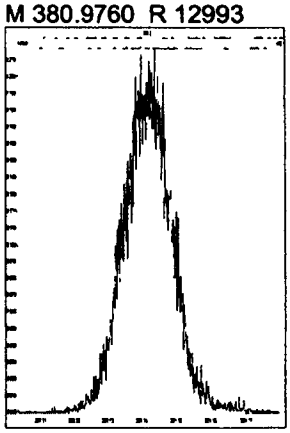
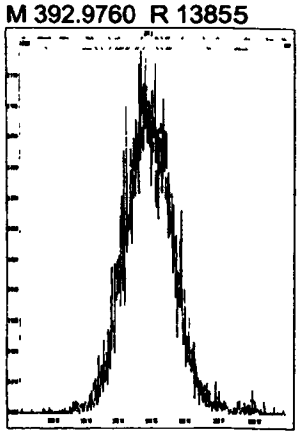


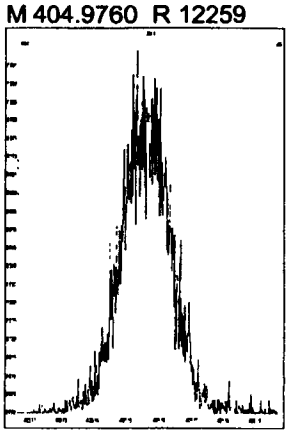
M 380.9760 R 12993



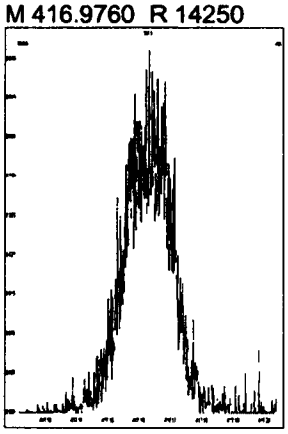
M 392.9760 R 13855



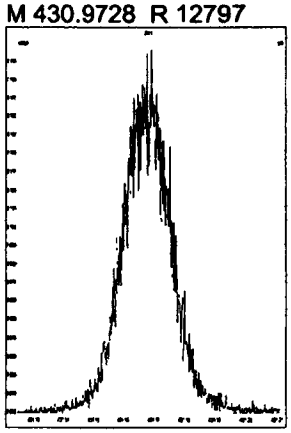
M 404.9760 R 12259



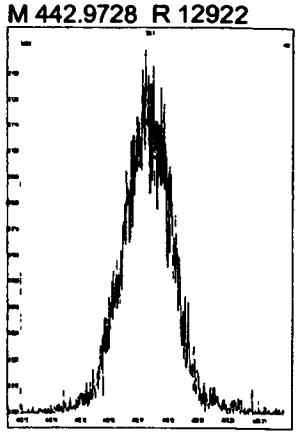
M 416.9760 R 14250



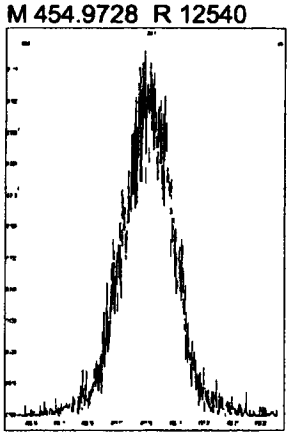
M 430.9728 R 12797



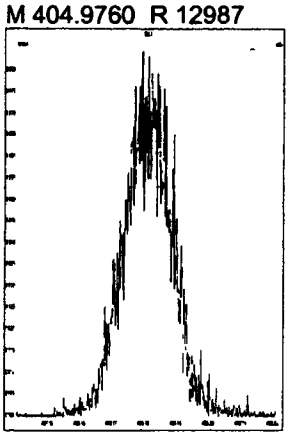
M 442.9728 R 12922



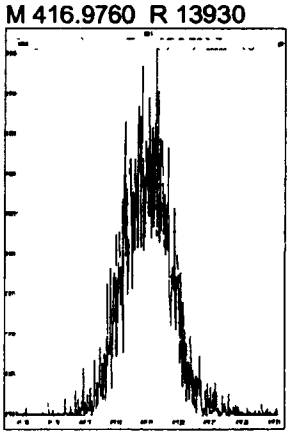
M 454.9728 R 12540



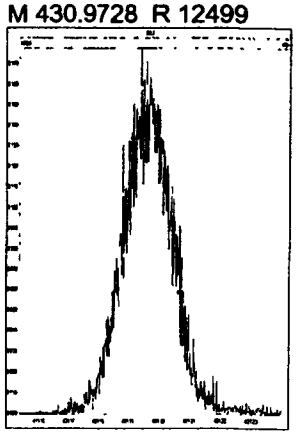
M 404.9760 R 12987



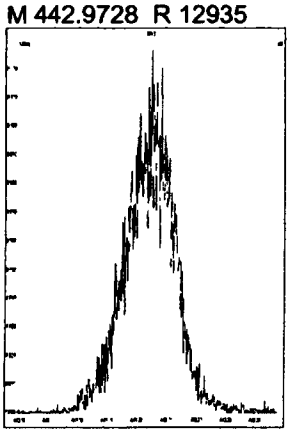
M 416.9760 R 13930



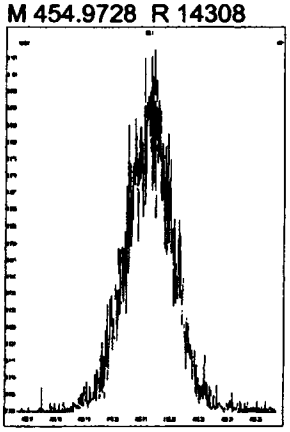
M 430.9728 R 12499



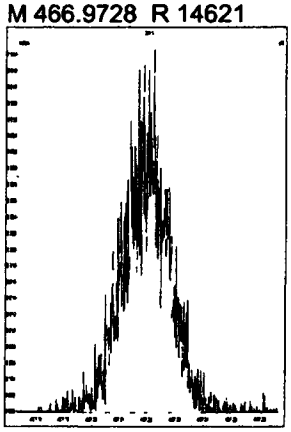
M 442.9728 R 12935



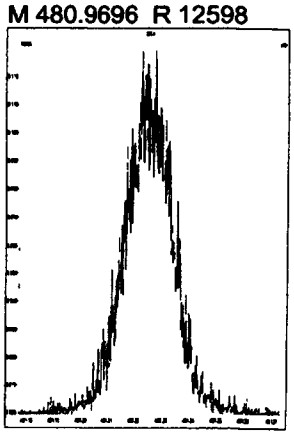
M 454.9728 R 14308



M 466.9728 R 14621



M 480.9696 R 12598



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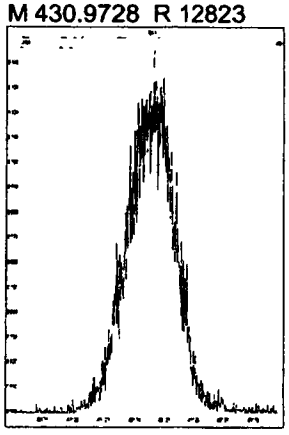
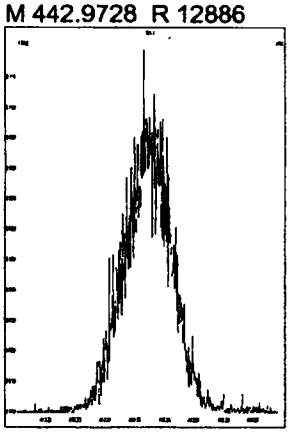
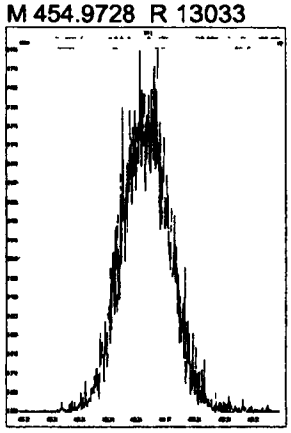
M 430.9728 R 12823



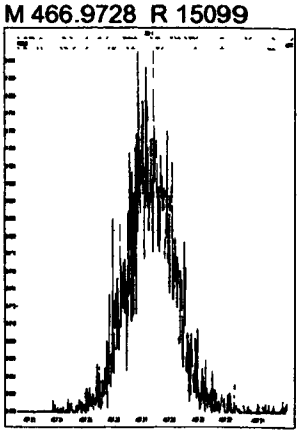
M 442.9728 R 12886



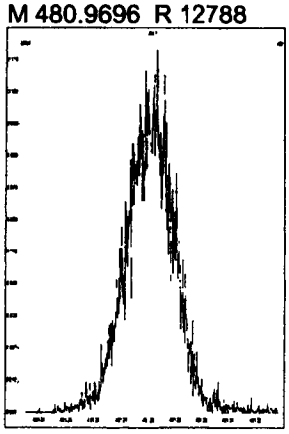
M 454.9728 R 13033



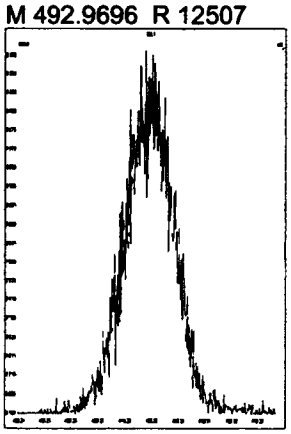
M 466.9728 R 15099



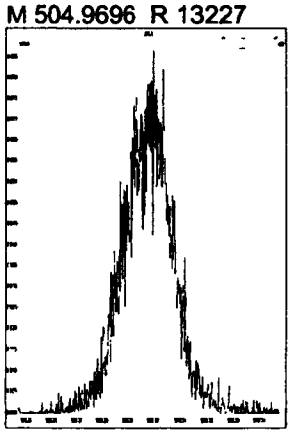
M 480.9696 R 12788



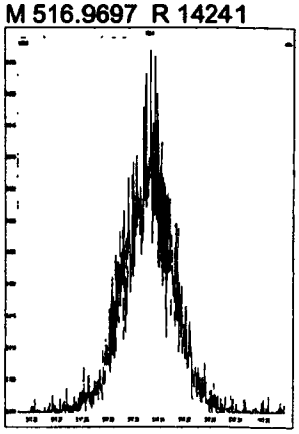
M 492.9696 R 12507

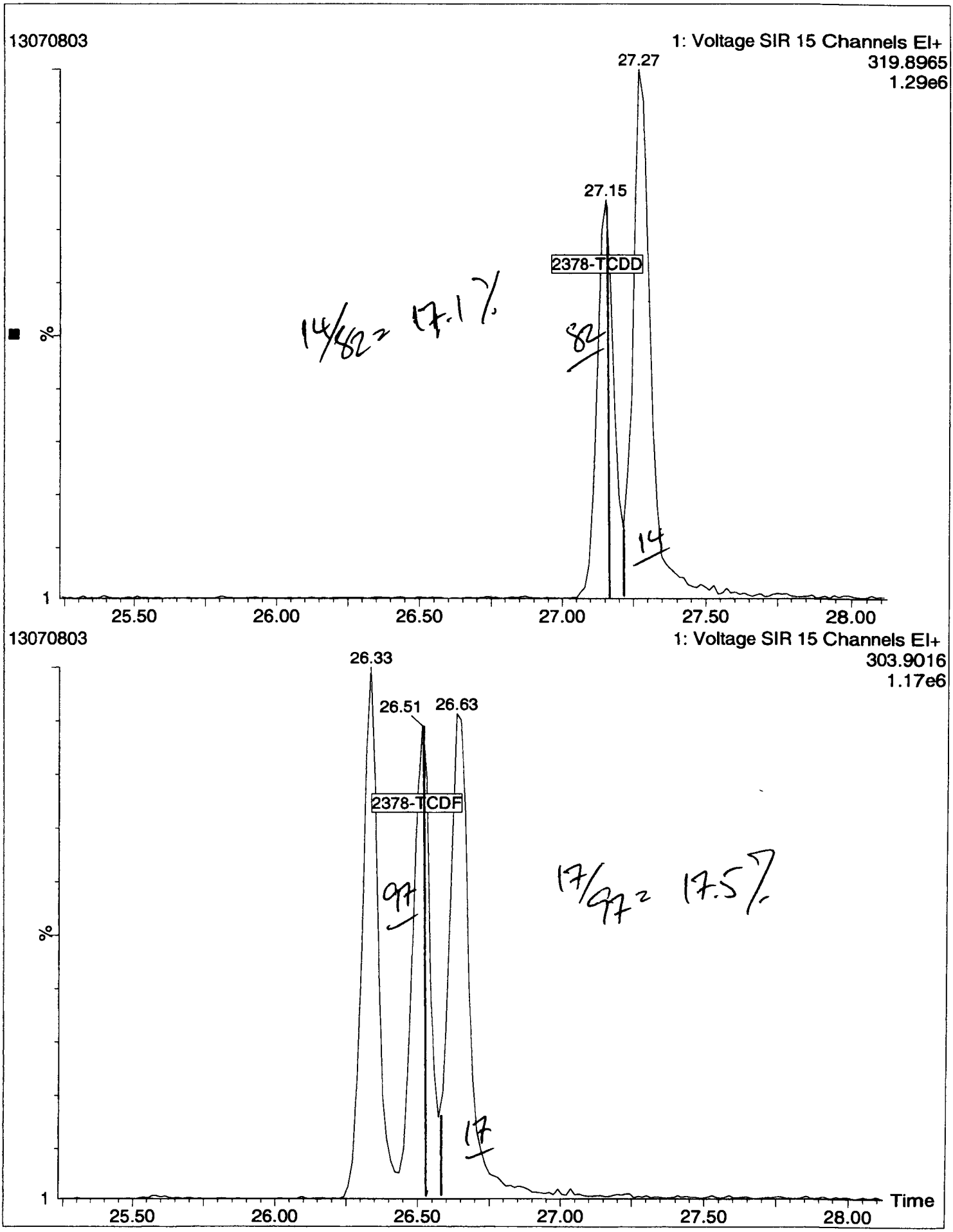


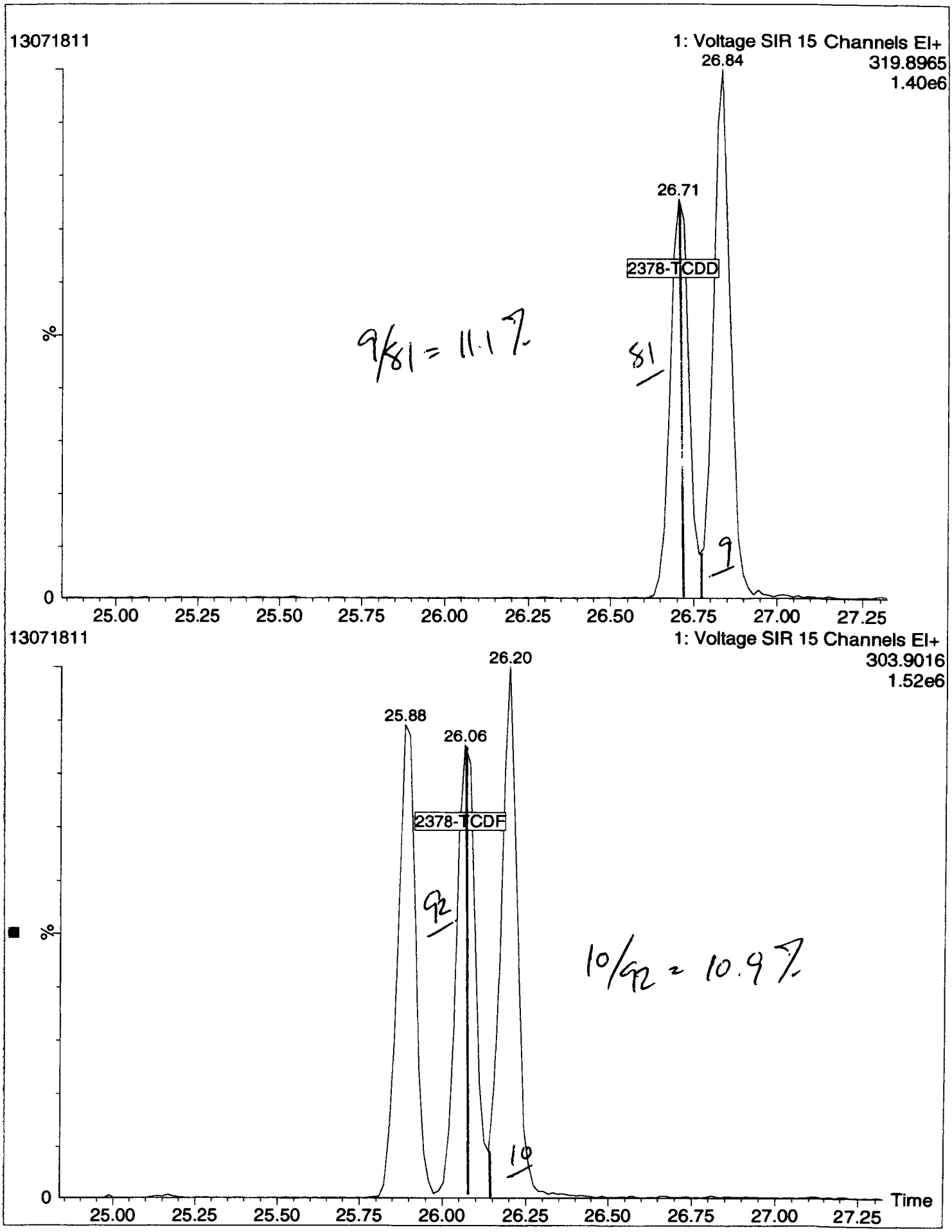
M 504.9696 R 13227

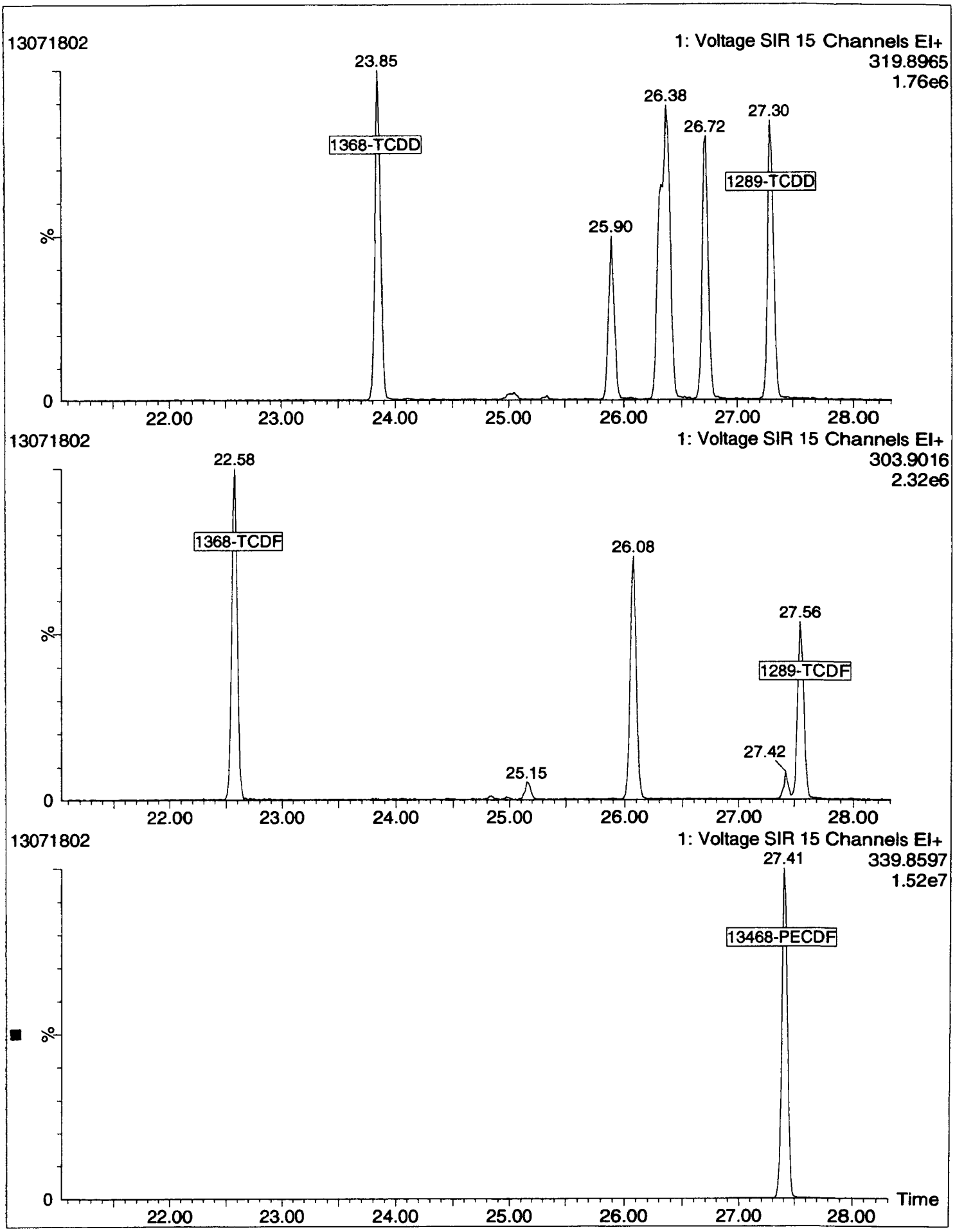


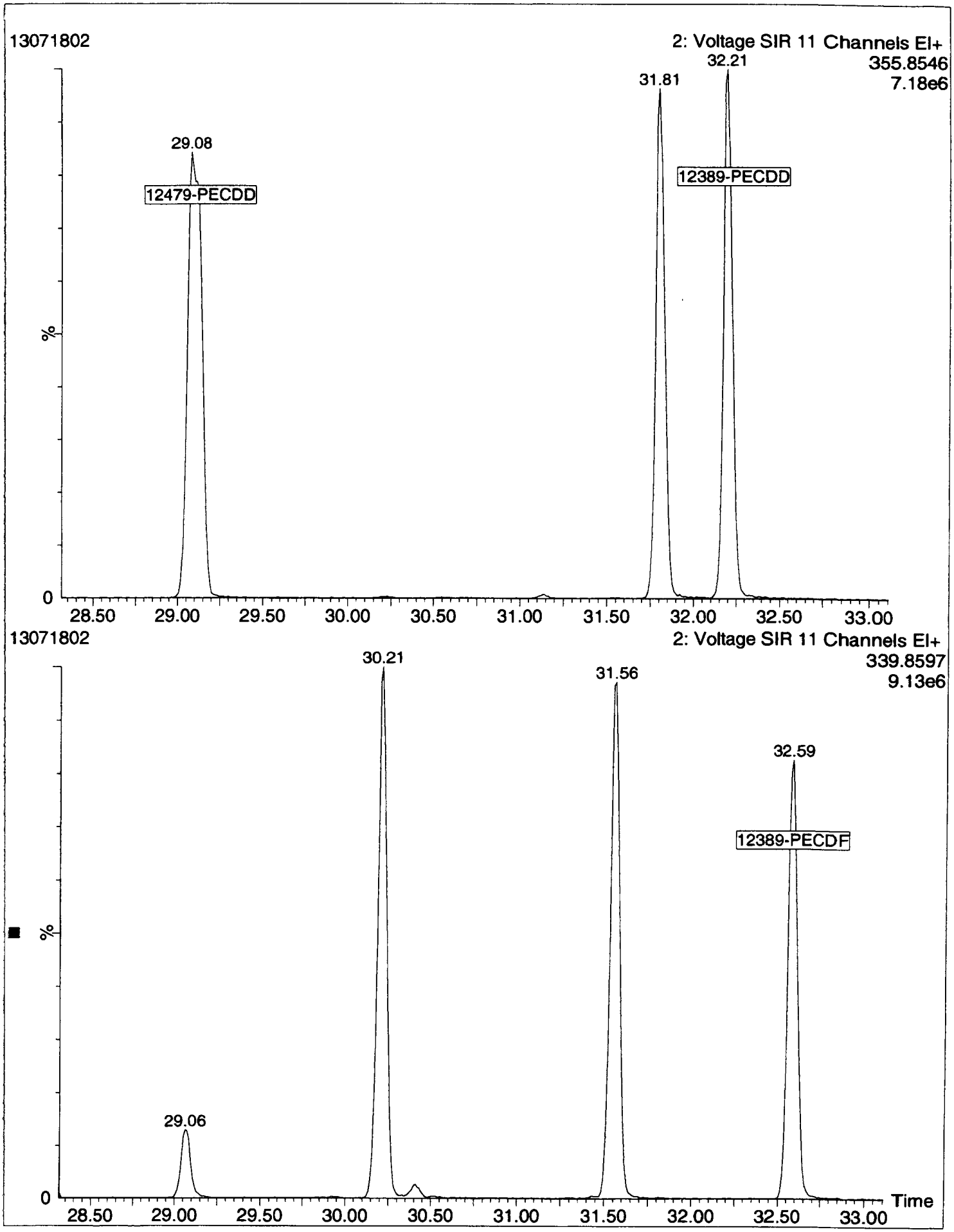
M 516.9697 R 14241

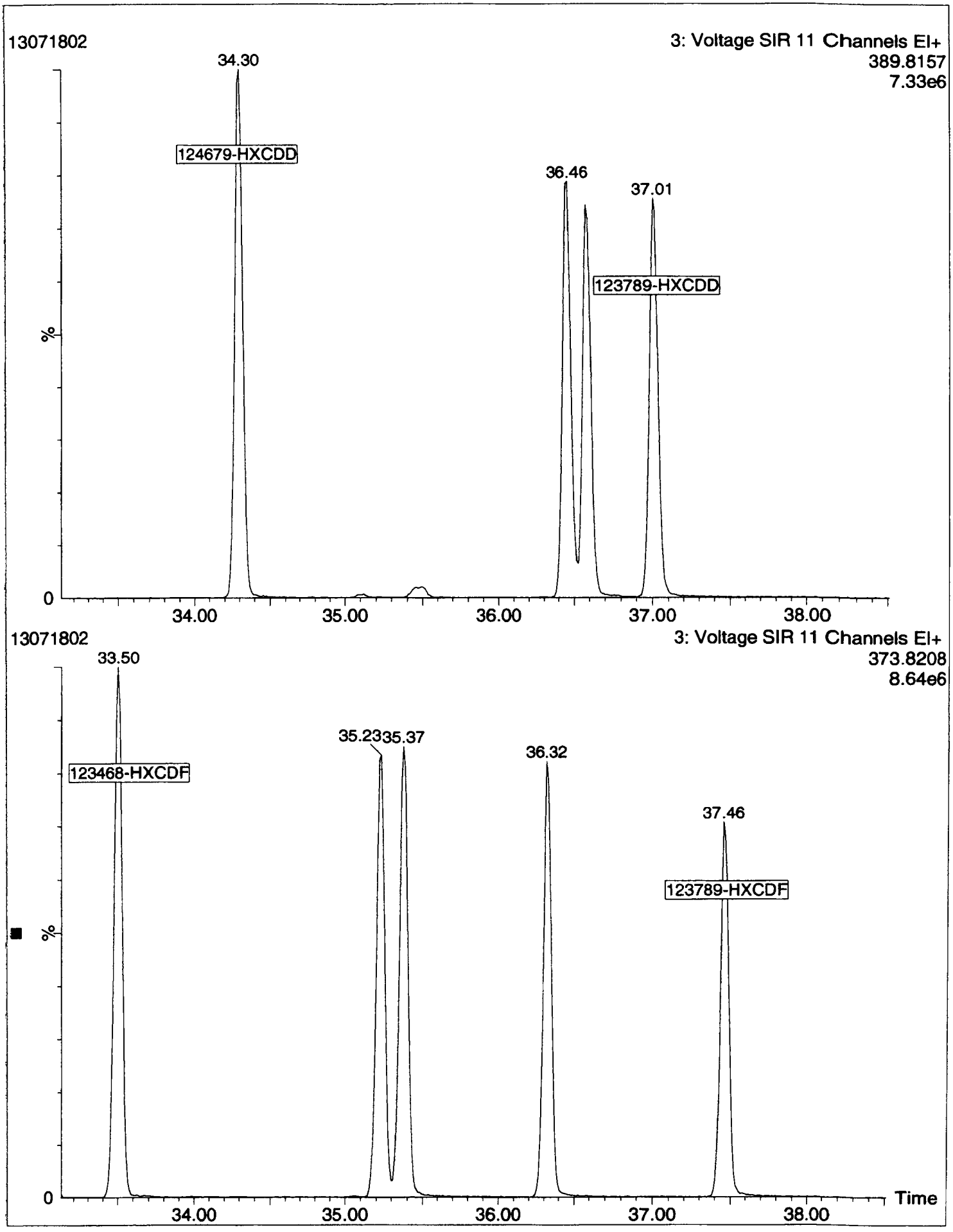


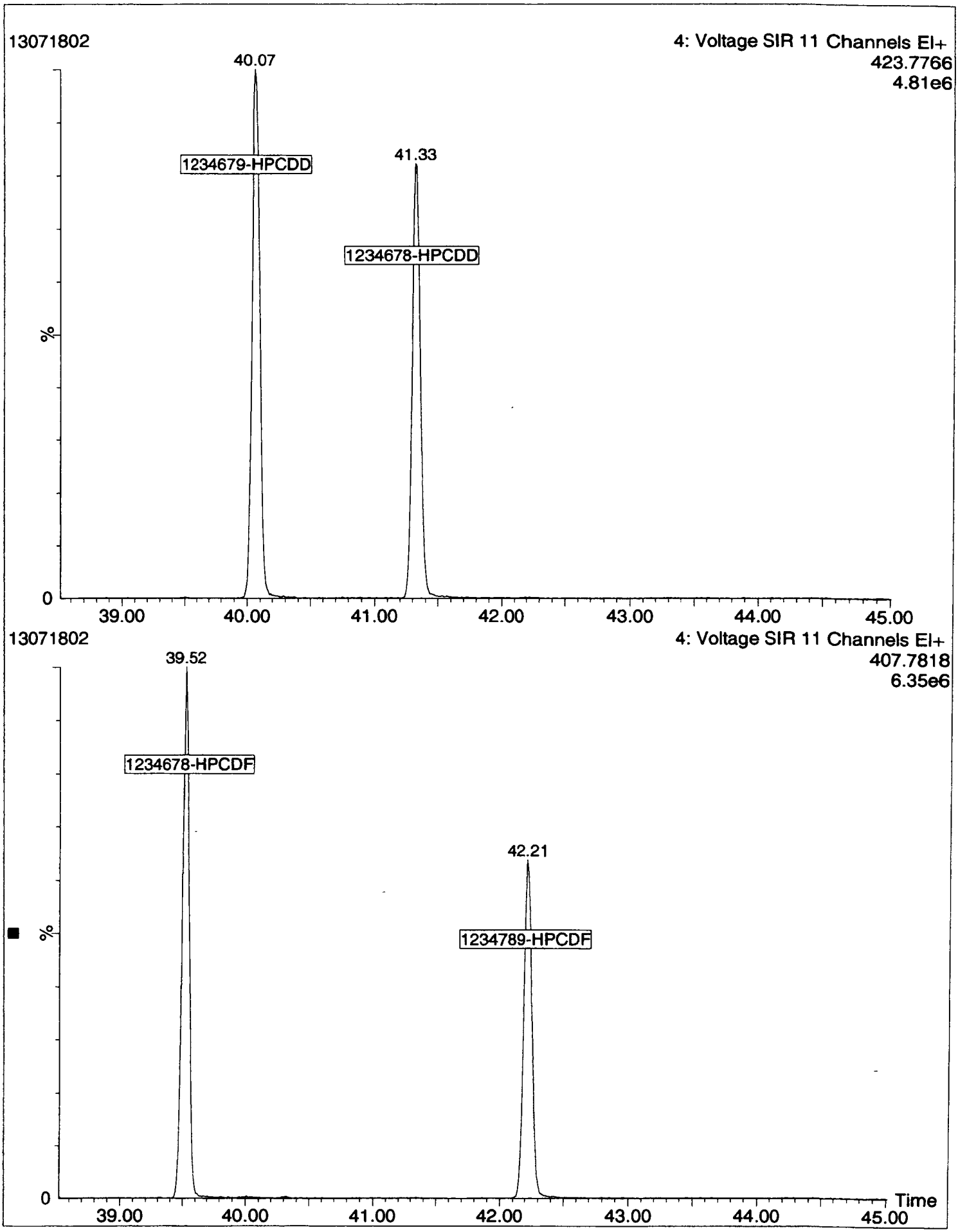

13070803
1: Voltage SIR 15 Channels EI+
319.8965
1.29e6
27.27
27.15
2378-TCDD
14/82 = 17.1%
82
14
%
1
25.50
26.00
26.50
27.00
27.50
28.00
13070803
1: Voltage SIR 15 Channels EI+
303.9016
1.17e6
26.33
26.51
26.63
2378-TCDF
97
17
17/97 = 17.5%
%
1
Time
25.50
26.00
26.50
27.00
27.50
28.00


13071811
1: Voltage SIR 15 Channels EI+
319.8965
1.40e6
26.84
26.71
2378-TCDD
9/81 = 11.1%
81
9
%
0
25.00
25.25
25.50
25.75
26.00
26.25
26.50
26.75
27.00
27.25
13071811
1: Voltage SIR 15 Channels EI+
303.9016
1.52e6
26.20
25.88
26.06
2378-TCDF
82
10/82 = 10.9%
10
%
0
Time
25.00
25.25
25.50
25.75
26.00
26.25
26.50
26.75
27.00
27.25


13071802
1: Voltage SIR 15 Channels EI+
319.8965
1.76e6
23.85
1368-TCDD
25.90
26.38
26.72
27.30
1289-TCDD
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
13071802
1: Voltage SIR 15 Channels EI+
303.9016
2.32e6
22.58
1368-TCDF
25.15
26.08
27.42
27.56
1289-TCDF
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
13071802
1: Voltage SIR 15 Channels EI+
339.8597
1.52e7
27.41
13468-PECDF
%
0
Time
22.00
23.00
24.00
25.00
26.00
27.00
28.00


13071802
2: Voltage SIR 11 Channels EI+
355.8546
7.18e6
29.08
12479-PECDD
31.81
32.21
12389-PECDD
%
0
28.50
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
13071802
2: Voltage SIR 11 Channels EI+
339.8597
9.13e6
30.21
31.56
32.59
12389-PECDF
29.06
%
0
Time
28.50
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00


13071802
3: Voltage SIR 11 Channels EI+
389.8157
7.33e6
34.30
124679-HXCDD
36.46
37.01
123789-HXCDD
%
0
34.00
35.00
36.00
37.00
38.00
13071802
3: Voltage SIR 11 Channels EI+
373.8208
8.64e6
33.50
123468-HXCDF
35.23
35.37
36.32
37.46
123789-HXCDF
%
0
Time
34.00
35.00
36.00
37.00
38.00


13071802
4: Voltage SIR 11 Channels EI+
423.7766
4.81e6
40.07
1234679-HPCDD
41.33
1234678-HPCDD
%
0
39.00
40.00
41.00
42.00
43.00
44.00
45.00
13071802
4: Voltage SIR 11 Channels EI+
407.7818
6.35e6
39.52
1234678-HPCDF
42.21
1234789-HPCDF
%
0
Time
39.00
40.00
41.00
42.00
43.00
44.00
45.00

Process Extract		
Process Integrate		
Process Calibrate		
Process Quantify		
Dataset Created		
Pre modification peak	Sample:13071804, Compound:HF, RT:37.455	1
Peak modified	Sample:13071804, Compound:HF, RT:37.455	1
Pre modification peak	Sample:13071804, Compound:HPF, RT:39.516	1
Peak modified	Sample:13071804, Compound:HPF, RT:39.516	1
Pre modification peak	Sample:13071804, Compound:HPF, RT:39.516	1
Peak modified	Sample:13071804, Compound:HPF, RT:39.516	1
Pre modification peak	Sample:13071804, Compound:PF, RT:31.548	1
Peak modified	Sample:13071804, Compound:PF, RT:31.548	1
Pre modification peak	Sample:13071804, Compound:HPF, RT:42.212	1
Peak modified	Sample:13071804, Compound:HPF, RT:42.212	1
Dataset Saved	Saved to 'P:\DIOXIN8290.PRO\130718IC.qld'	
Calibration Saved	Saved to 'P:\DIOXIN8290.PRO\CurveDB\130718ICAL.cdb'	
Dataset Saved	Saved to 'P:\DIOXIN8290.PRO\130718IC.qld'	

Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:24 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130716.mdb 18 Jul 2013 10:49:00
Calibration: 19 Jul 2013 10:15:25

ID: CSL, Name: 13071804, Date: 18-Jul-2013, Time: 12:34:52, Conditions: AUTOSPEC01, User: pk

2378-TCDF					0.867		0.770				
12378-PeCDF	30.189	1.000	6.02e3	4.12e3	0.875	1.461	1.550	100.1	NO	0.509	0.509
23478-PeCDF	31.548	1.000	5.77e3	3.67e3	0.880	1.574	1.550	103.1	NO	0.489	0.489
123478-HxCDF	35.220	1.001	4.86e3	4.57e3	1.048	1.064	1.240	71.2	NO	0.521	0.521
234678-HxCDF	36.315	1.001	5.06e3	3.92e3	1.088	1.289	1.240	70.3	NO	0.469	0.469
123678-HxCDF	35.373	1.001	5.02e3	4.31e3	1.025	1.166	1.240	69.2	NO	0.507	0.507
123789-HxCDF	37.455	1.000	4.40e3	3.17e3	0.959	1.389	1.240	70.7	NO	0.491	0.491
1234678-HpCDF	39.516	1.001	4.08e3	4.40e3	1.215	0.927	1.050	84.0	NO	0.484	0.484
1234789-HpCDF	42.212	1.000	3.46e3	3.23e3	1.200	1.073	1.050	53.8	NO	0.486	0.486
OCDF	47.528	1.007	5.48e3	6.37e3	1.064	0.861	0.890	62.2	NO	1.014	1.014
2378-TCDD					0.994		0.770				
12378-PeCDD	31.800	1.001	4.76e3	2.85e3	0.976	1.668	1.550	54.1	NO	0.526	0.526
123478-HxCDD	36.447	1.000	3.80e3	2.93e3	0.967	1.297	1.240	74.5	NO	0.487	0.487
123678-HxCDD	36.578	1.001	3.71e3	3.11e3	0.902	1.193	1.240	79.0	NO	0.513	0.513
123789-HxCDD	37.006	1.012	3.64e3	3.01e3	0.914	1.211	1.240	67.0	NO	0.501	0.501
1234678-HpCDD	41.324	1.001	3.45e3	3.10e3	0.999	1.114	1.050	48.5	NO	0.521	0.521
OCDD	47.232	1.001	4.99e3	5.90e3	0.979	0.846	0.890	29.1	NO	1.013	1.013
13C-2378-TCDF	26.048	1.007	1.30e6	1.67e6	1.419	0.777	0.770	5391.2	NO		104.484
13C-12378-PeCDF	30.178	1.167	1.39e6	8.88e5	1.158	1.564	1.550	6838.8	NO		98.252
13C-23478-PeCDF	31.537	1.219	1.34e6	8.55e5	1.127	1.565	1.550	6634.5	NO		97.319
13C-123478-HxCDF	35.197	0.952	5.90e5	1.14e6	1.206	0.518	0.510	4561.2	NO		97.320
13C-123678-HxCDF	35.351	0.956	6.18e5	1.18e6	1.266	0.526	0.510	4900.7	NO		96.359
13C-234678-HxCDF	36.293	0.981	5.98e5	1.16e6	1.155	0.515	0.510	4659.6	NO		103.533
13C-123789-HxCDF	37.444	1.012	5.50e5	1.06e6	1.121	0.520	0.510	4295.3	NO		97.573
13C-1234678-HpCDF	39.494	1.068	4.44e5	9.99e5	1.040	0.444	0.440	4645.6	NO		94.381
13C-1234789-HpCDF	42.201	1.141	3.53e5	7.95e5	0.789	0.444	0.440	3206.6	NO		98.882
13C-1234-TCDD	25.868	0.000	8.77e5	1.12e6	1.000	0.781	0.770	3695.4	NO		100.000
13C-2378-TCDD	26.675	1.031	8.46e5	1.10e6	0.962	0.772	0.770	3507.9	NO		100.924
13C-12378-PeCDD	31.778	1.228	9.08e5	5.76e5	0.746	1.577	1.550	7512.6	NO		99.319
13C-123478-HxCDD	36.436	0.985	8.03e5	6.28e5	1.003	1.278	1.240	5081.3	NO		96.996
13C-123678-HxCDD	36.556	0.988	8.12e5	6.63e5	1.052	1.225	1.240	4993.3	NO		95.354
13C-1234678-HpCDD	41.303	1.117	6.44e5	6.14e5	0.880	1.049	1.050	4540.0	NO		97.178
13C-OCDD	47.205	1.276	1.03e6	1.16e6	0.775	0.886	0.890	5435.7	NO		192.773

Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:24 Pacific Daylight Time

ID: CSL, Name: 13071804, Date: 18-Jul-2013, Time: 12:34:52, Conditions: AUTOSPEC01, User: pk

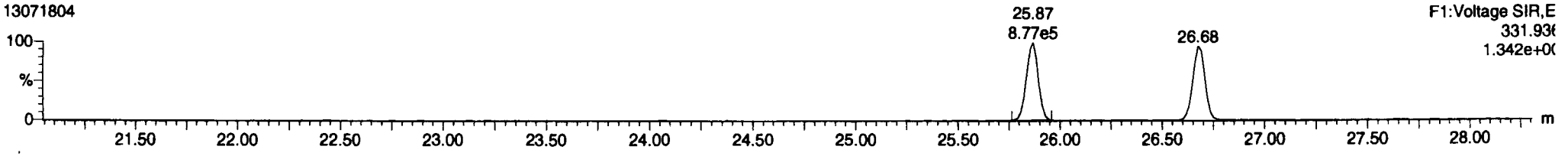
13C-123789-HxCDD	36.984	0.000	8.12e5	6.59e5	1.000	1.232	1.240	4995.2	NO		100.000
Total-tetrafurans			0.00e0		0.867						
Total-penta1			0.00e0								
Total-pentafurans			1.18e4		0.877						0.999
Total-hexafurans			1.93e4		1.030						1.989
Total-heptafurans			7.54e3		1.207						0.970
Total-Furans			4.42e4		1.022						4.971
Total-tetradioxins			0.00e0		0.994						
Total-pentadioxins			5.12e3		0.976						0.557
Total-hexadioxins			1.12e4		0.928						1.500
Total-heptadioxins			3.45e3		0.999						0.521
Total-Dioxins			2.47e4		0.962						3.591
Total-TEQ			6.89e4								8.562
37CL-2378-TCDD	26.705	1.032	2.33e3		1.091			22.5			0.107
FUNCTION1 PFK			6.54e7								
FUNCTION2 PFK			0.00e0								
FUNCTION3 PFK			1.56e7								0.000
FUNCTION4 PFK			1.34e6								
FUNCTION5 PFK			0.00e0								
FUNCTION1 HXCDPE			0.00e0								
FUNCTION1 HPCDPE			1.09e3								0.000
FUNCTION2 HPCDPE			3.24e2								0.000
FUNCTION3 OCDPE			8.74e1								0.000
FUNCTION4 NCDPE			9.61e1								0.000
FUNCTION5 DCDPE			0.00e0								

Dataset: P:\DIOXIN8290.PRO\13071804.qld
Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:24 Pacific Daylight Time

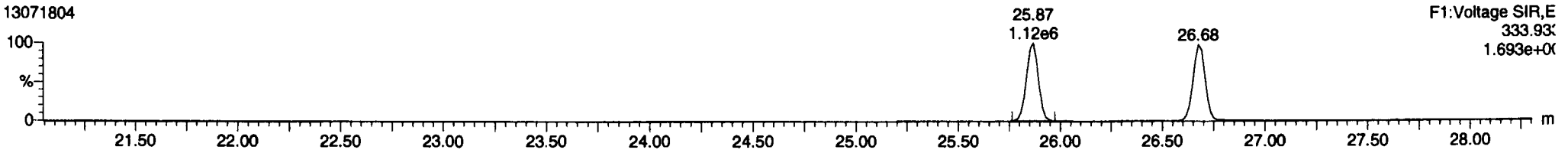
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130716.mdb 18 Jul 2013 10:49:00
Calibration: 19 Jul 2013 10:15:25

ID: CSL, Name: 13071804, Date: 18-Jul-2013, Time: 12:34:52, Conditions: AUTOSPEC01, User: pk

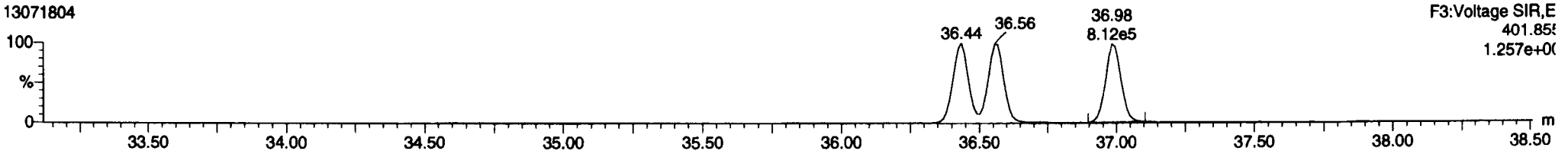
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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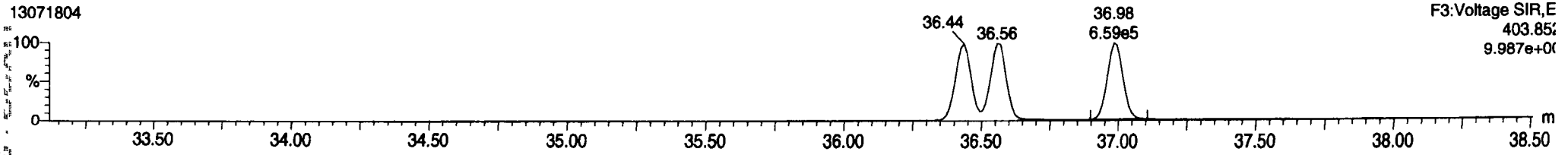
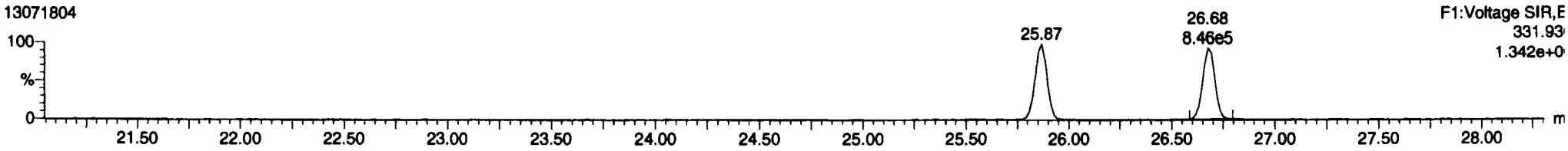


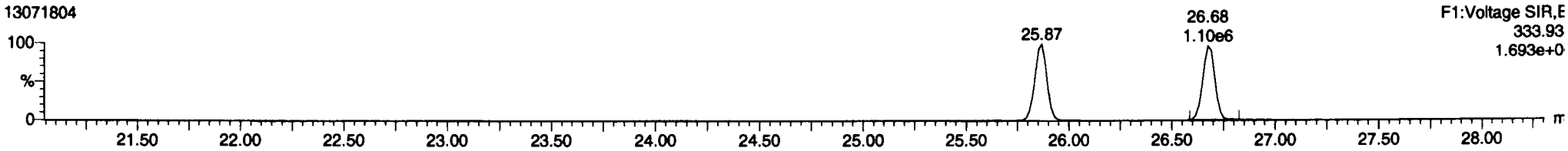
Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:24 Pacific Daylight Time

ID: CSL, Name: 13071804, Date: 18-Jul-2013, Time: 12:34:52, Conditions: AUTOSPEC01, User: pk

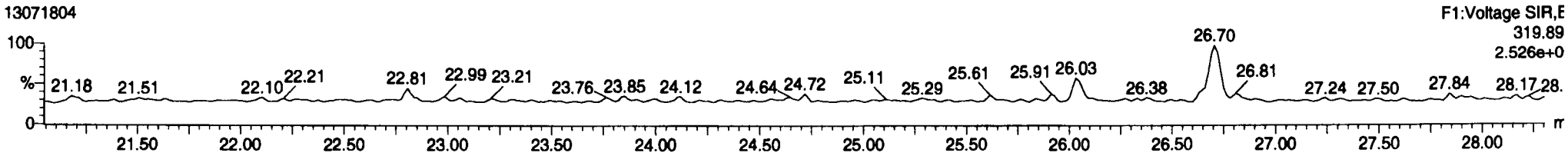
13C-2378-TCDD



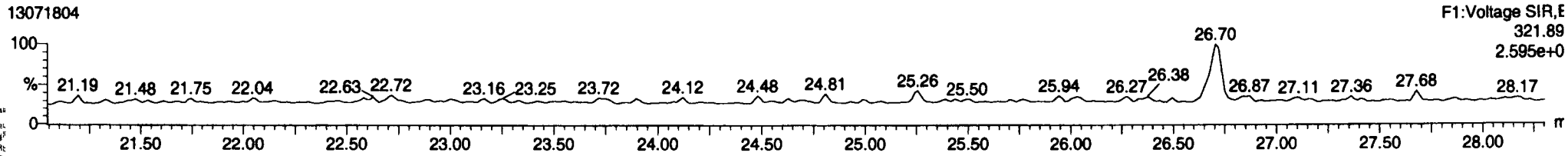
13C-2378-TCDD



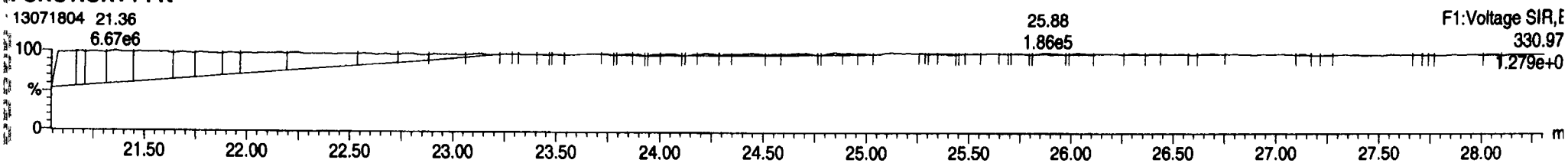
Total-tetradioxins



Total-tetradioxins



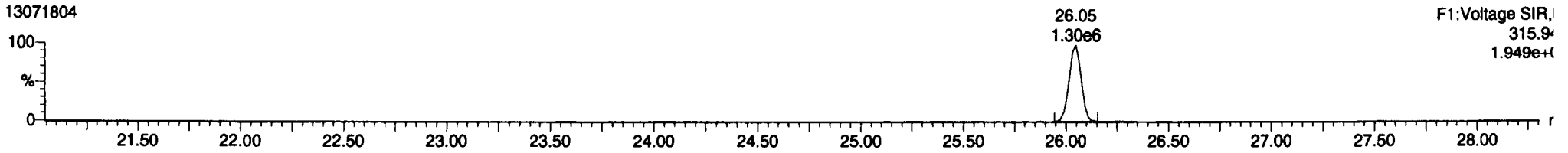
FUNCTION1 PFK



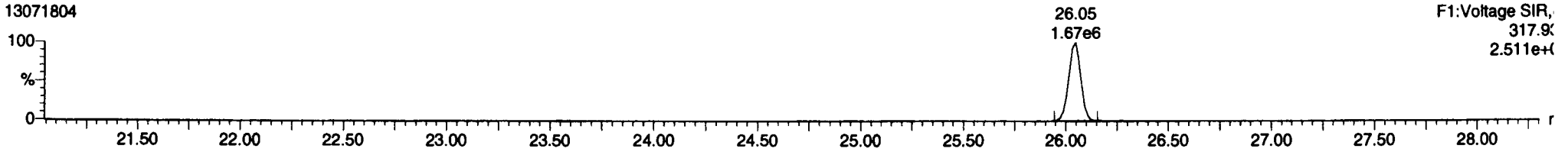
Dataset: F:\DIOXIN8280.PRO\13071804.qld
Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:24 Pacific Daylight Time

ID: CSL, Name: 13071804, Date: 18-Jul-2013, Time: 12:34:52, Conditions: AUTOSPEC01, User: pk

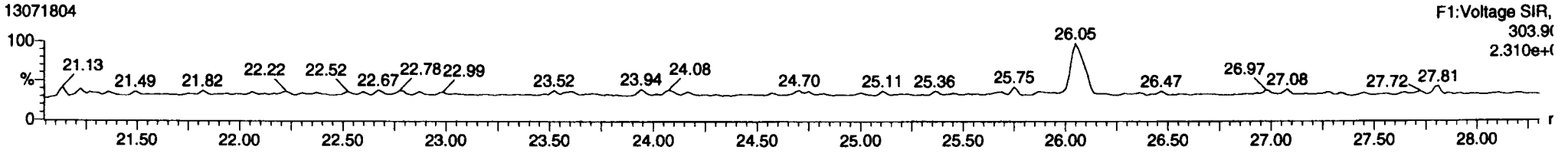
13C-2378-TCDF



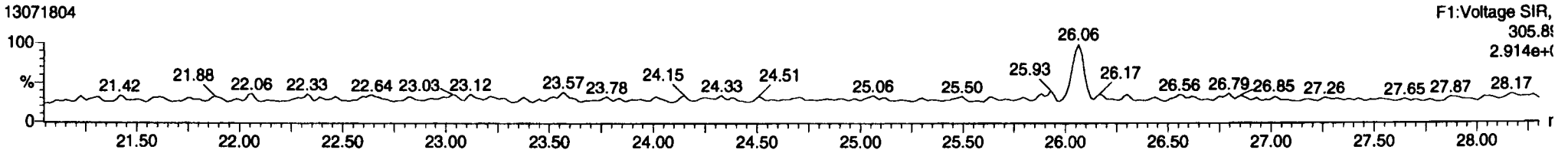
13C-2378-TCDF



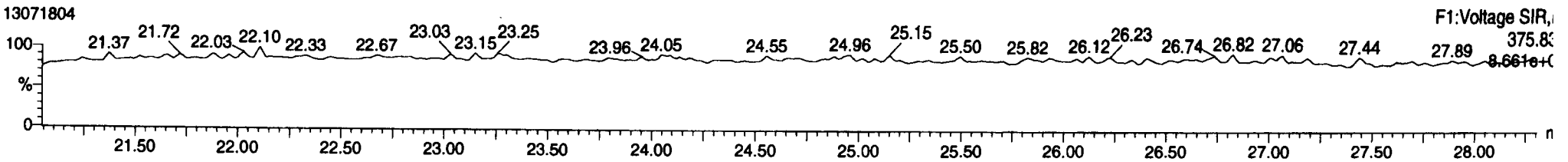
Total-tetrafurans



Total-tetrafurans



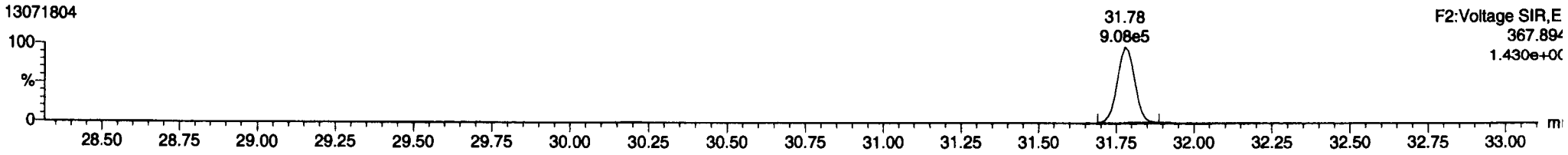
FUNCTION1 HXCDPE



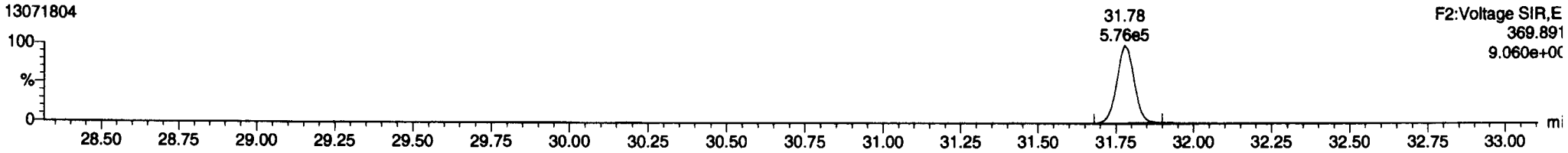
Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:24 Pacific Daylight Time

ID: CSL, Name: 13071804, Date: 18-Jul-2013, Time: 12:34:52, Conditions: AUTOSPEC01, User: pk

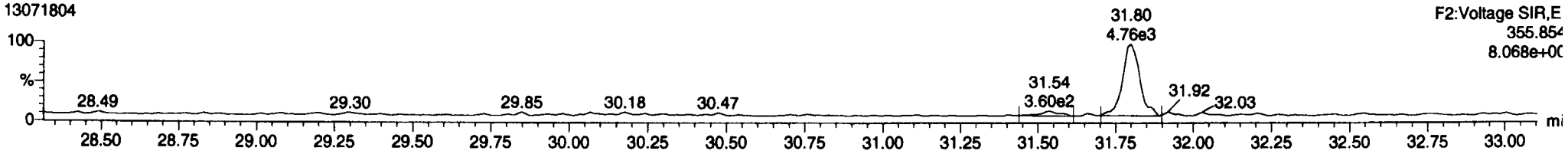
13C-12378-PeCDD



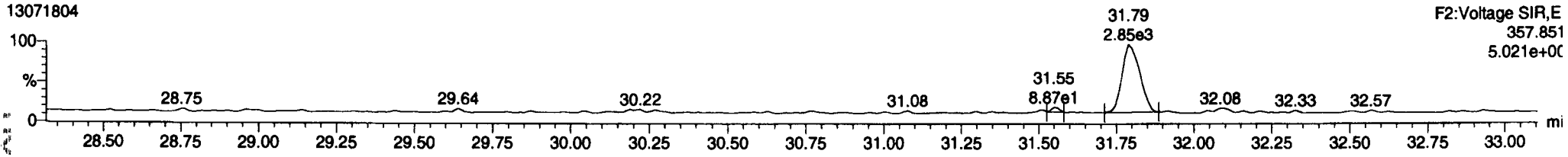
13C-12378-PeCDD



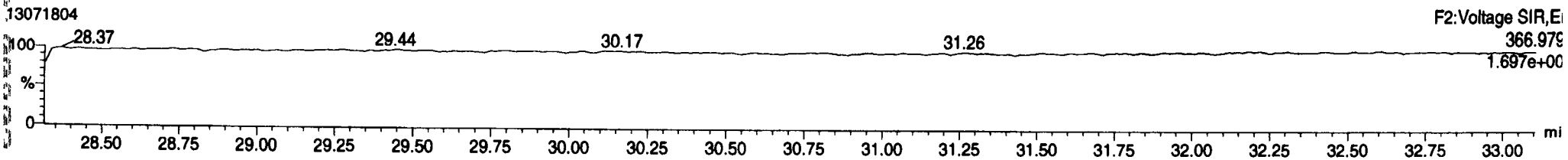
Total-pentadioxins



Total-pentadioxins



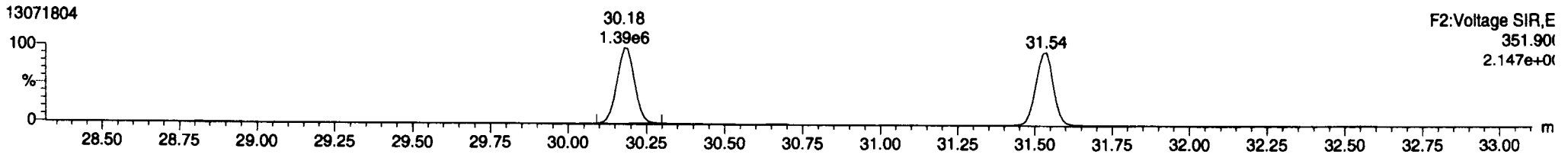
FUNCTION2 PFK



Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:24 Pacific Daylight Time

ID: CSL, Name: 13071804, Date: 18-Jul-2013, Time: 12:34:52, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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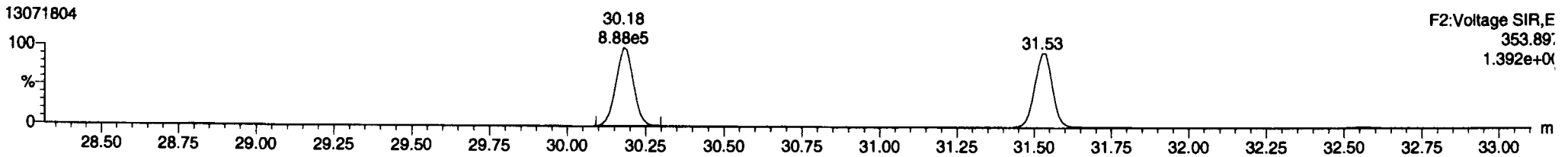
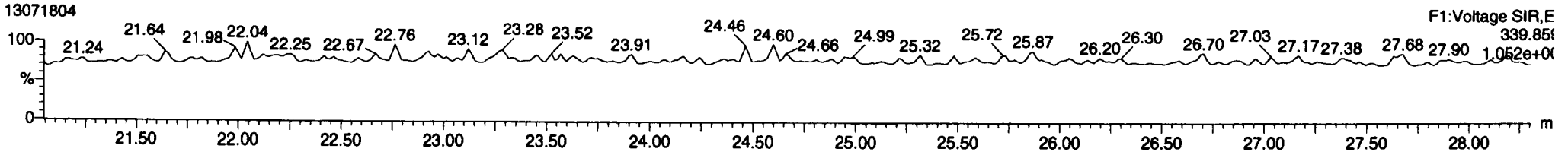
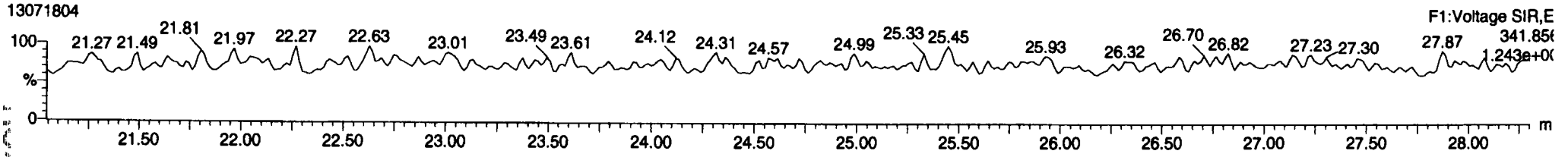


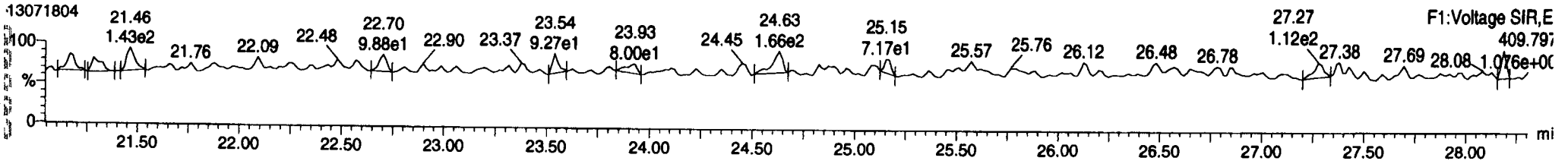
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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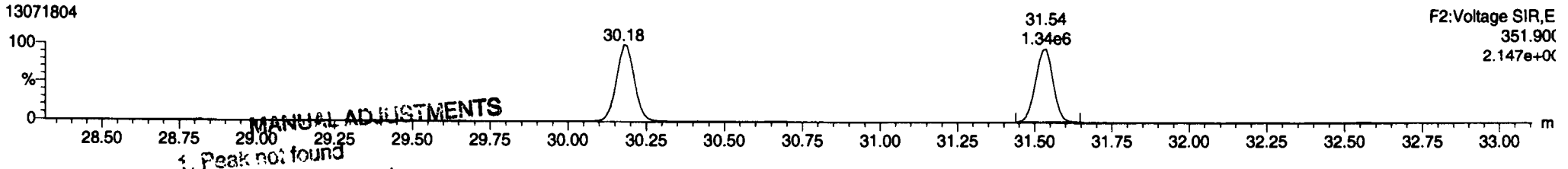
13C-23478-PeCDF



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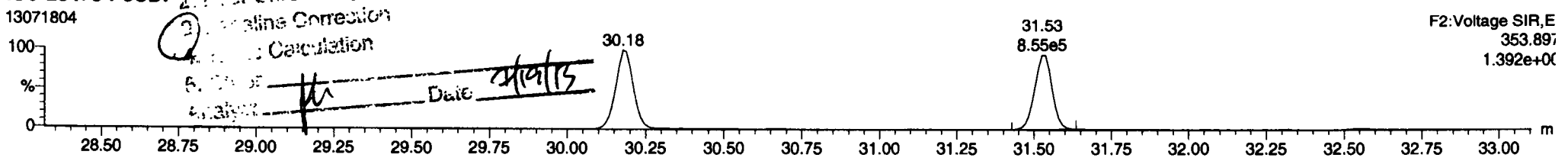
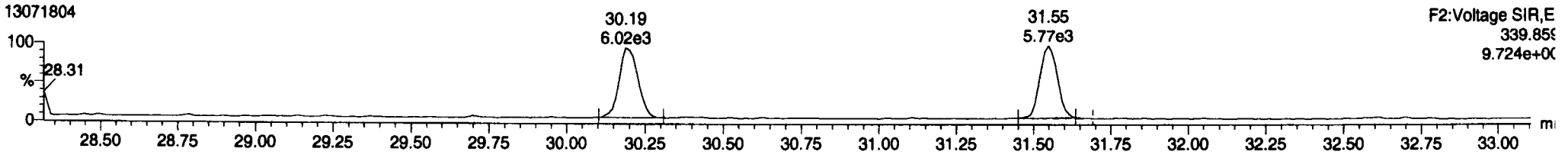
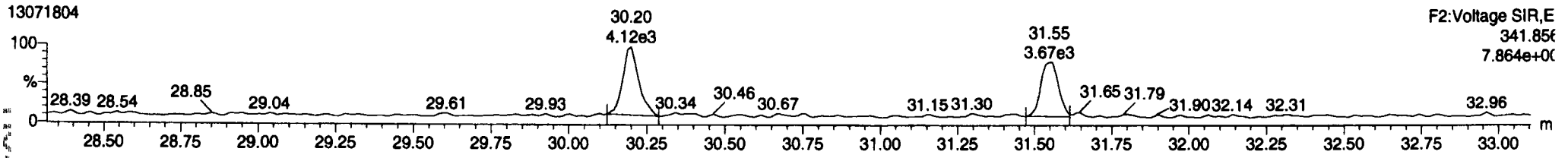


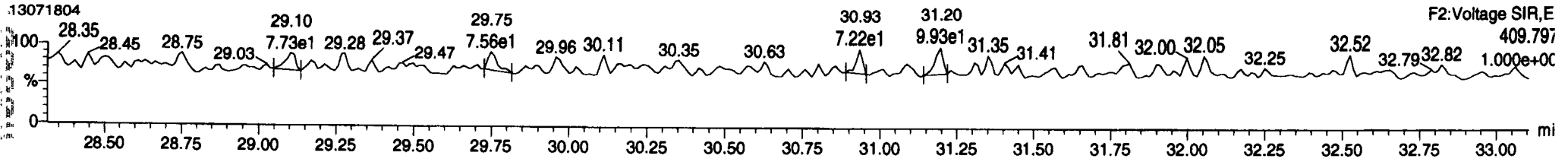
Total-pentafurans



Total-pentafurans



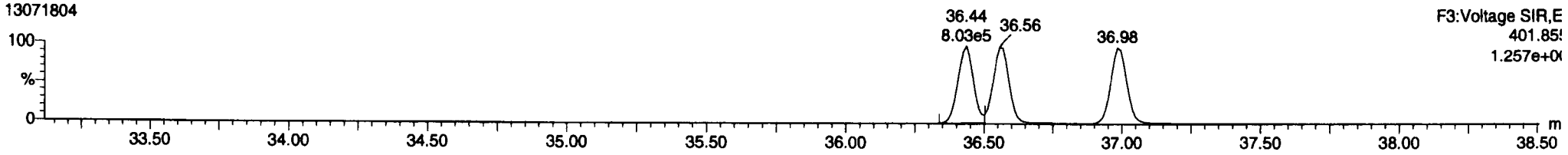
FUNCTION2 HPCDPE



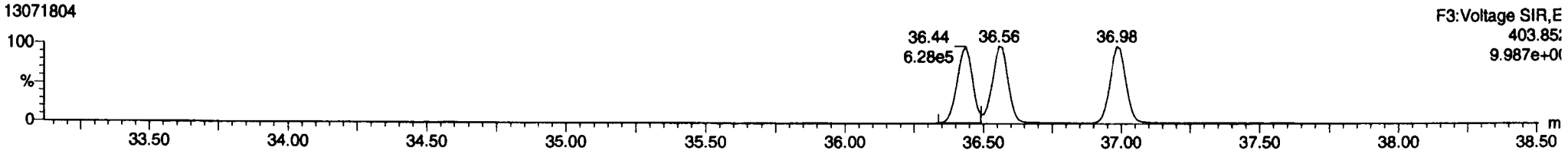
Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:24 Pacific Daylight Time

ID: CSL, Name: 13071804, Date: 18-Jul-2013, Time: 12:34:52, Conditions: AUTOSPEC01, User: pk

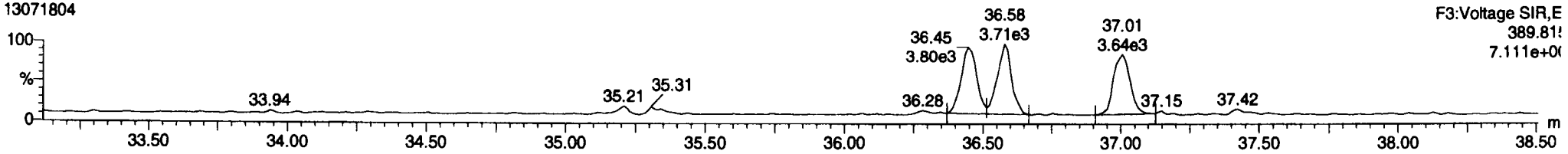
13C-123478-HxCDD



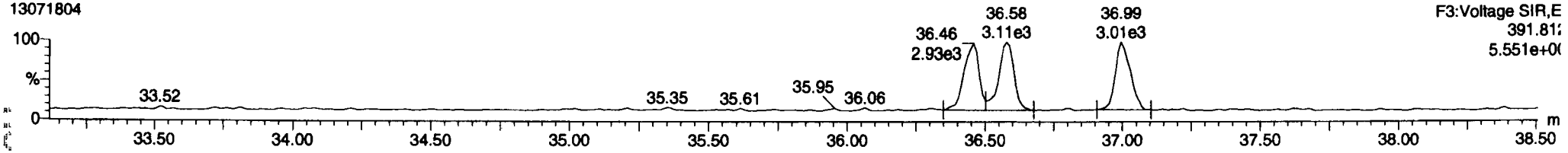
13C-123478-HxCDD



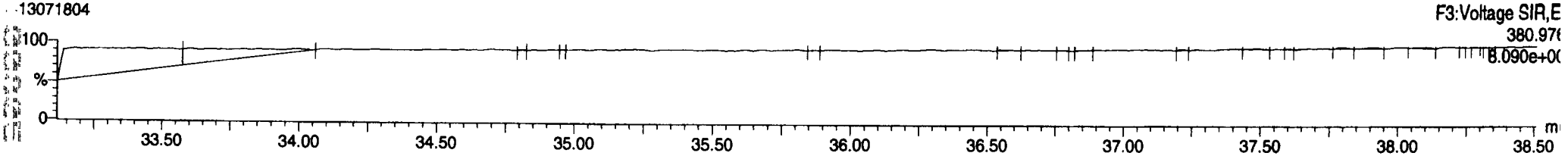
Total-hexadioxins



Total-hexadioxins



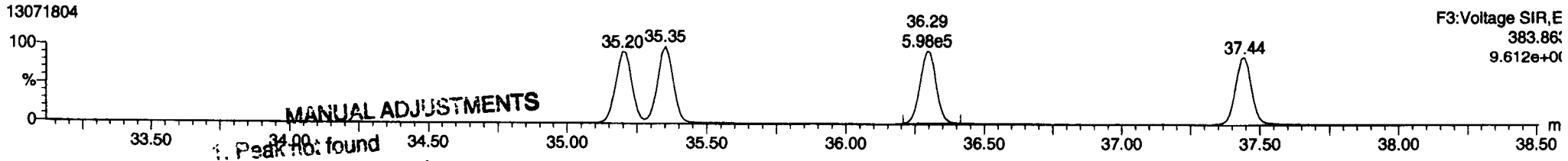
FUNCTION3 PFK



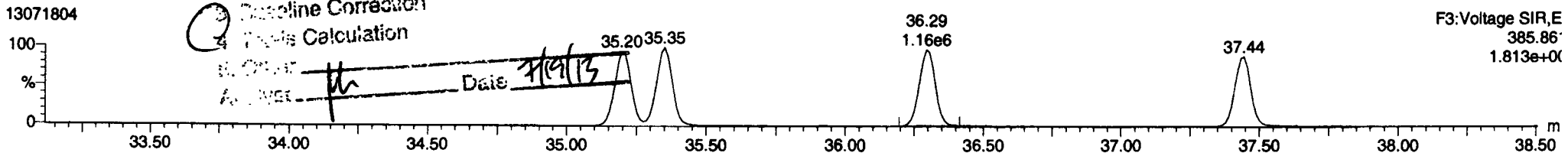
Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:24 Pacific Daylight Time

ID: CSL, Name: 13071804, Date: 18-Jul-2013, Time: 12:34:52, Conditions: AUTOSPEC01, User: pk

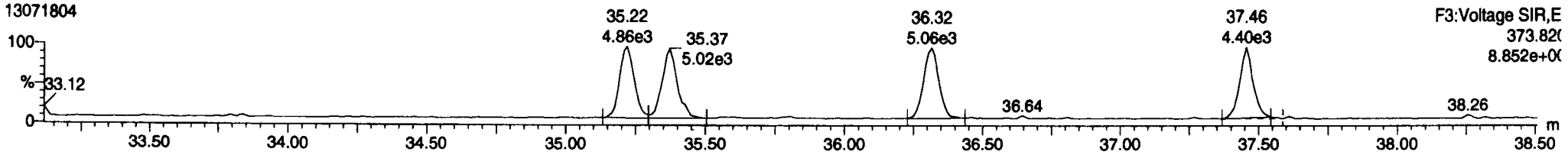
13C-234678-HxCDF



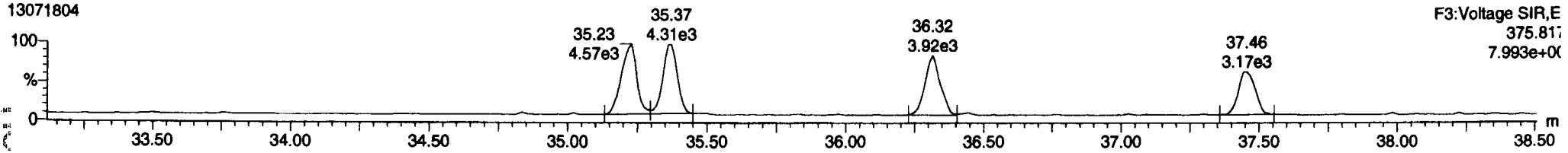
13C-234678-HxCDF



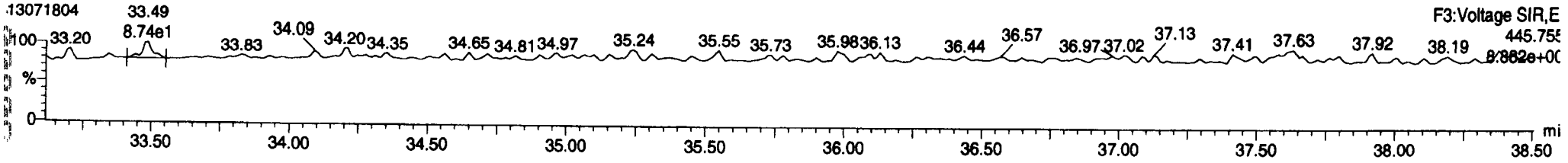
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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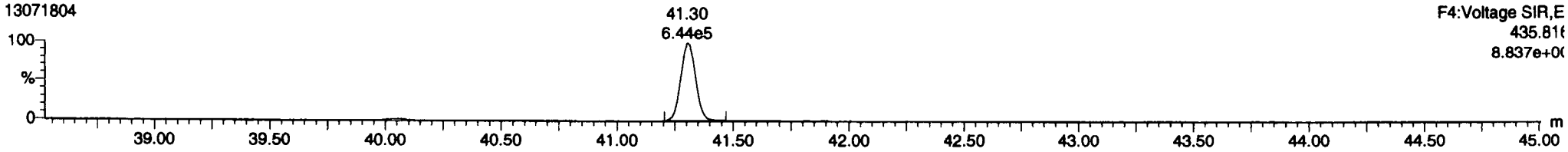
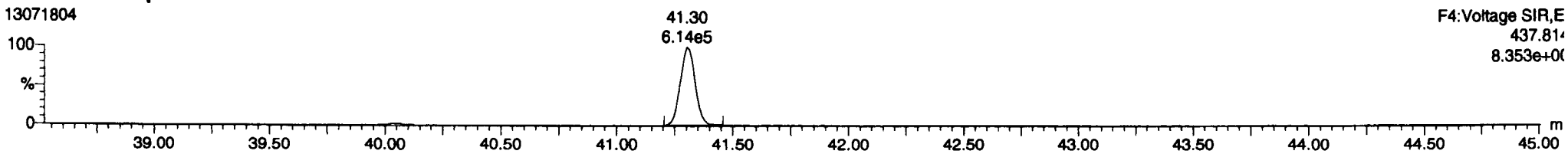
ID: CSL, Name: 13071804, Date: 18-Jul-2013, Time: 12:34:52, Conditions: AUTOSPEC01, User: pk

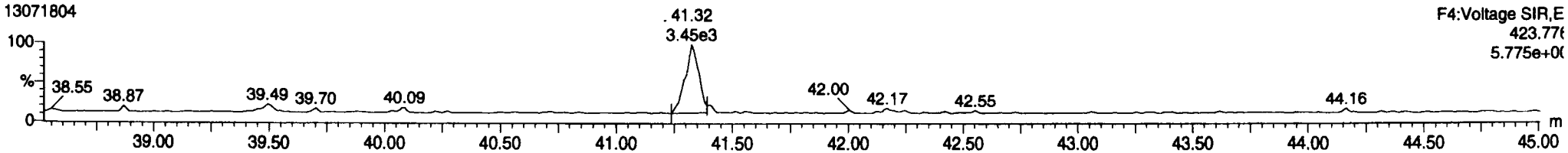
13C-1234678-HpCDD



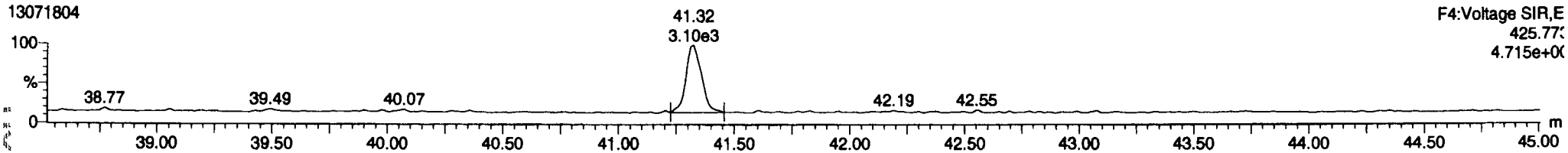
13C-1234678-HpCDD



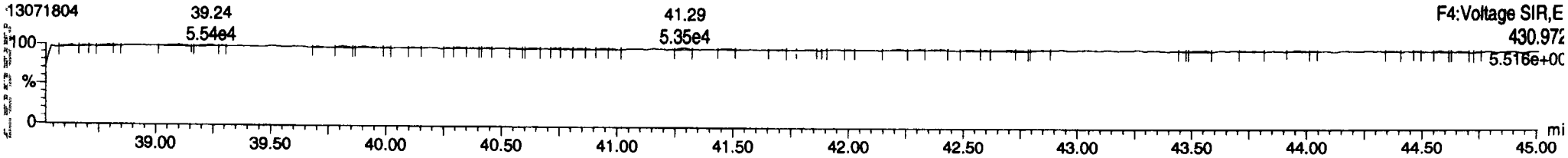
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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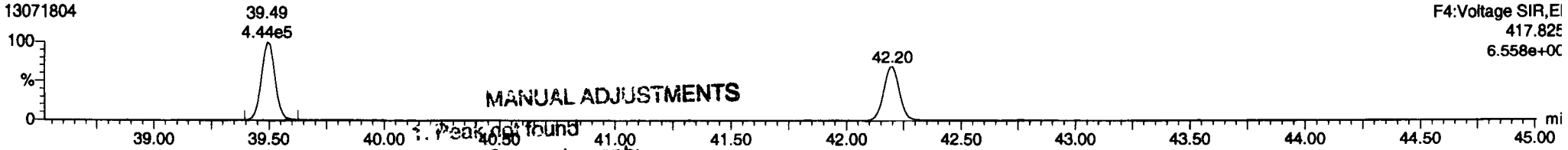
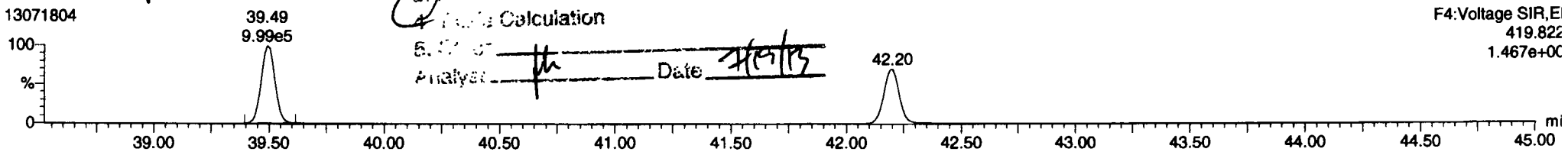
ID: CSL, Name: 13071804, Date: 18-Jul-2013, Time: 12:34:52, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF

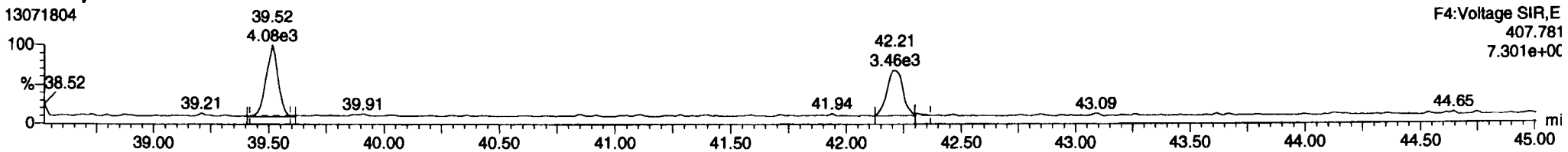


MANUAL ADJUSTMENTS
1. Peak detection found
2. Gas Chromatography
3. Baseline Correction
4. Area Calculation
5. Other
Analyst _____ Date 7/19/13

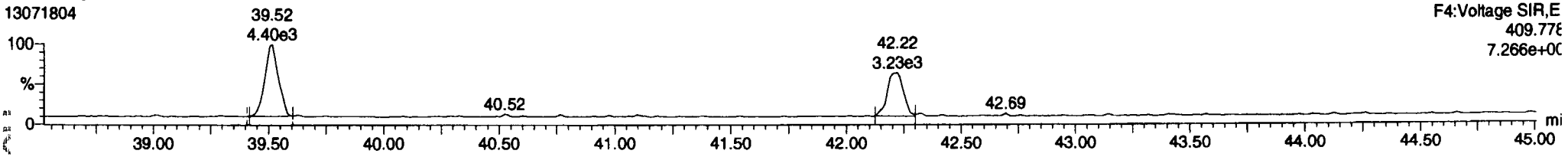
13C-1234678-HpCDF



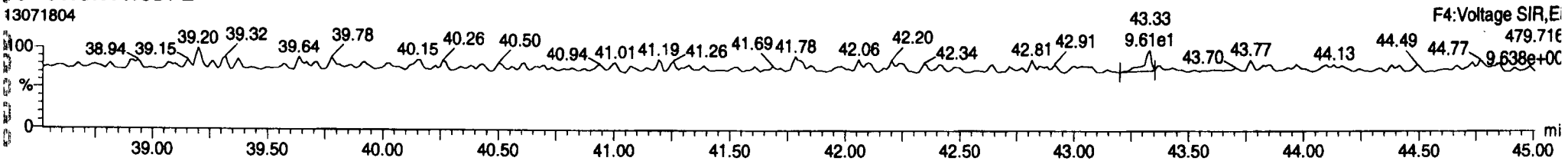
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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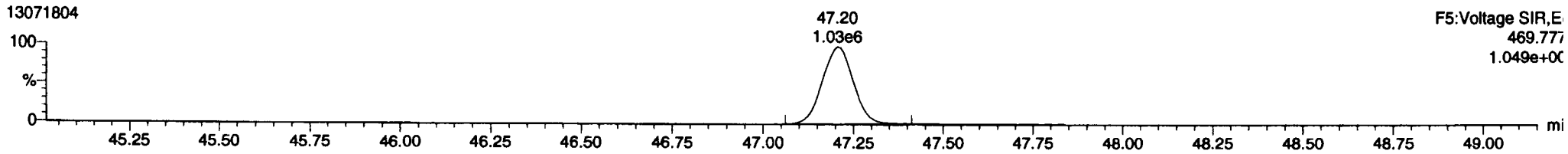
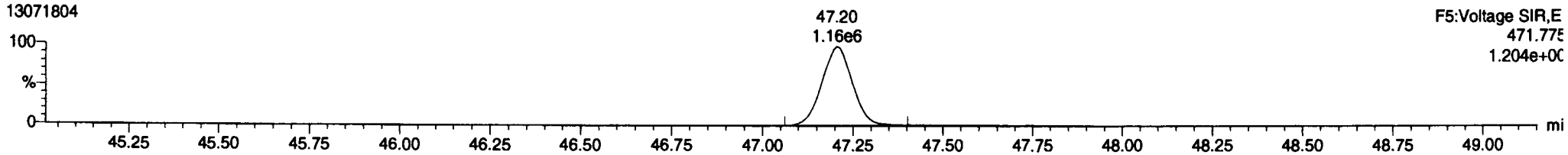
Printed: Friday, July 19, 2013 10:16:24 Pacific Daylight Time

ID: CSL, Name: 13071804, Date: 18-Jul-2013, Time: 12:34:52, Conditions: AUTOSPEC01, User: pk

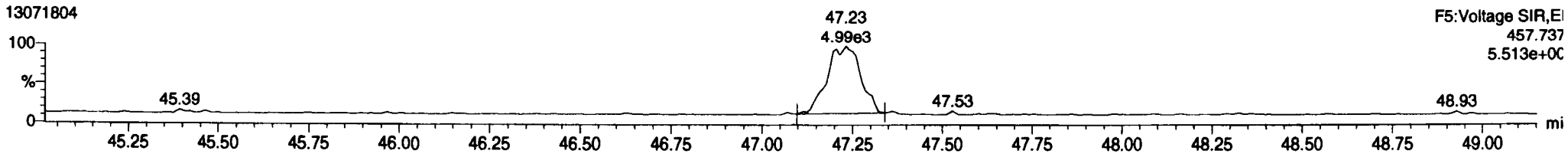
13C-OCDD



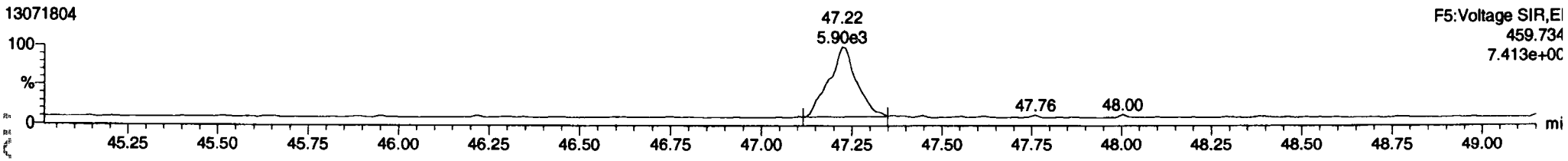
13C-OCDD



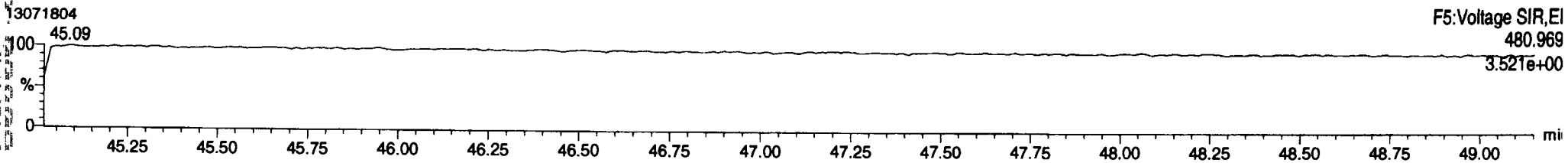
OCDD



OCDD



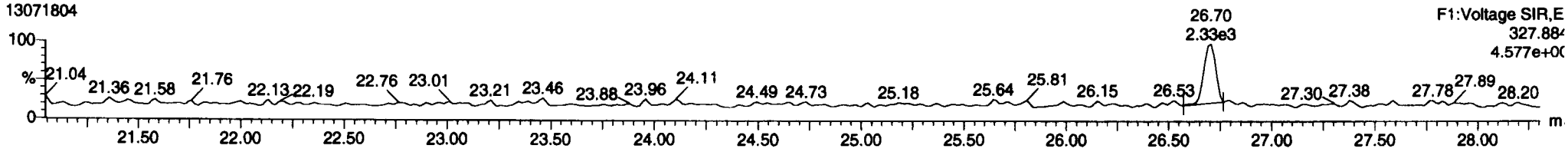
FUNCTION5 PFK



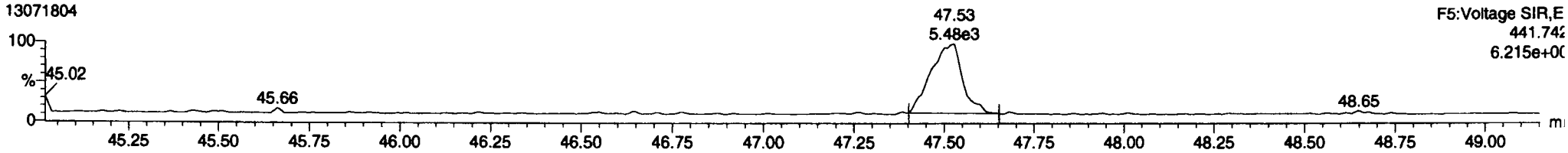
Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:24 Pacific Daylight Time

ID: CSL, Name: 13071804, Date: 18-Jul-2013, Time: 12:34:52, Conditions: AUTOSPEC01, User: pk

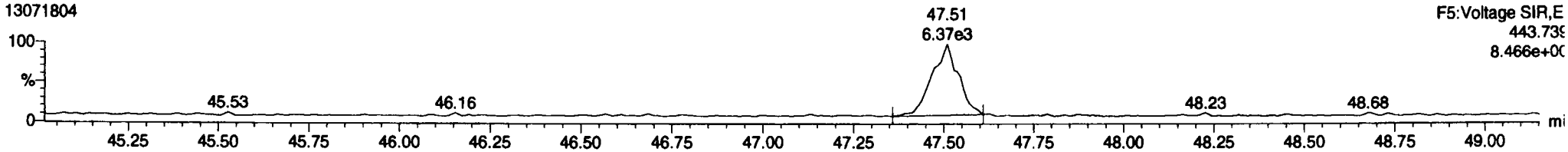
37CL-2378-TCDD



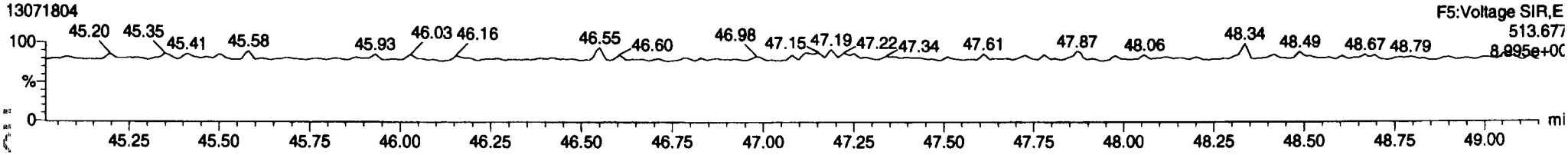
OCDF



OCDF



FUNCTION5 DCDPE



Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:33 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130716.mdb 18 Jul 2013 10:49:00
Calibration: 19 Jul 2013 10:15:25

ID: CS1, Name: 13071805, Date: 18-Jul-2013, Time: 15:34:56, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.048	1.001	3.60e3	5.43e3	0.867	0.663	0.770	49.7	NO	0.518	0.518
12378-PeCDF	30.201	1.001	1.95e4	1.39e4	0.875	1.401	1.550	372.5	NO	2.415	2.415
23478-PeCDF	31.549	1.001	1.96e4	1.32e4	0.880	1.484	1.550	365.4	NO	2.422	2.422
123478-HxCDF	35.220	1.001	1.58e4	1.37e4	1.048	1.159	1.240	312.9	NO	2.403	2.403
234678-HxCDF	36.316	1.001	1.64e4	1.43e4	1.088	1.141	1.240	342.0	NO	2.525	2.525
123678-HxCDF	35.363	1.000	1.66e4	1.38e4	1.025	1.201	1.240	345.9	NO	2.432	2.432
123789-HxCDF	37.456	1.001	1.38e4	1.16e4	0.959	1.190	1.240	293.0	NO	2.443	2.443
1234678-HpCDF	39.517	1.001	1.54e4	1.57e4	1.215	0.980	1.050	347.7	NO	2.556	2.555
1234789-HpCDF	42.214	1.000	1.10e4	1.13e4	1.200	0.969	1.050	228.3	NO	2.455	2.455
OCDF	47.512	1.007	1.71e4	2.04e4	1.064	0.839	0.890	281.0	NO	4.779	4.779
2378-TCDD	26.691	1.001	2.75e3	3.55e3	0.994	0.773	0.770	58.7	NO	0.467	0.467
12378-PeCDD	31.801	1.001	1.51e4	9.27e3	0.976	1.626	1.550	203.7	NO	2.455	2.455
123478-HxCDD	36.448	1.001	1.33e4	1.03e4	0.967	1.290	1.240	304.2	NO	2.542	2.542
123678-HxCDD	36.579	1.001	1.22e4	9.54e3	0.902	1.275	1.240	251.1	NO	2.349	2.349
123789-HxCDD	37.007	1.012	1.24e4	1.09e4	0.914	1.133	1.240	273.7	NO	2.567	2.567
1234678-HpCDD	41.326	1.000	1.10e4	1.06e4	0.999	1.035	1.050	268.7	NO	2.523	2.524
OCDD	47.216	1.000	1.68e4	1.92e4	0.979	0.875	0.890	344.9	NO	4.985	4.986
13C-2378-TCDF	26.033	1.006	8.80e5	1.13e6	1.419	0.778	0.770	4191.4	NO		97.068
13C-12378-PeCDF	30.179	1.167	9.62e5	6.21e5	1.158	1.549	1.550	4580.6	NO		93.526
13C-23478-PeCDF	31.527	1.219	9.37e5	6.03e5	1.127	1.555	1.550	4644.4	NO		93.541
13C-123478-HxCDF	35.198	0.952	3.98e5	7.72e5	1.206	0.516	0.510	2257.9	NO		100.462
13C-123678-HxCDF	35.352	0.956	4.21e5	7.99e5	1.266	0.527	0.510	2385.0	NO		99.788
13C-234678-HxCDF	36.294	0.981	3.83e5	7.33e5	1.155	0.522	0.510	2220.0	NO		100.064
13C-123789-HxCDF	37.434	1.012	3.70e5	7.16e5	1.121	0.516	0.510	2112.4	NO		100.293
13C-1234678-HpCDF	39.495	1.068	3.11e5	6.92e5	1.040	0.450	0.440	3030.1	NO		99.911
13C-1234789-HpCDF	42.203	1.141	2.34e5	5.22e5	0.789	0.448	0.440	1973.1	NO		99.179
13C-1234-TCDD	25.869	0.000	6.45e5	8.16e5	1.000	0.791	0.770	2237.0	NO		100.000
13C-2378-TCDD	26.676	1.031	5.93e5	7.66e5	0.962	0.774	0.770	2112.8	NO		96.664
13C-12378-PeCDD	31.779	1.229	6.18e5	3.98e5	0.746	1.552	1.550	7915.8	NO		93.120
13C-123478-HxCDD	36.426	0.985	5.34e5	4.23e5	1.003	1.262	1.240	4105.7	NO		98.819
13C-123678-HxCDD	36.557	0.988	5.67e5	4.58e5	1.052	1.238	1.240	4303.1	NO		100.803
13C-1234678-HpCDD	41.304	1.117	4.36e5	4.22e5	0.880	1.033	1.050	2289.0	NO		100.929
13C-OCDD	47.207	1.276	6.97e5	7.79e5	0.775	0.895	0.890	4190.8	NO		197.319

Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:33 Pacific Daylight Time

ID: CS1, Name: 13071805, Date: 18-Jul-2013, Time: 15:34:56, Conditions: AUTOSPEC01, User: pk

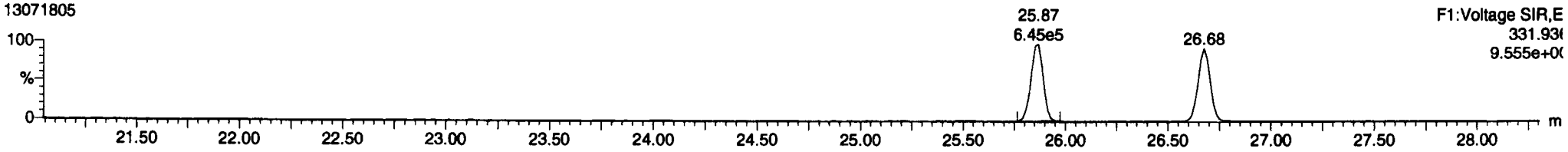
13C-123789-HxCDD	36.985	0.000	5.35e5	4.31e5	1.000	1.241	1.240	4117.7	NO		100.000
Total-tetrafurans			3.70e3		0.867						0.530
Total-penta1			0.00e0								
Total-pentafurans			3.95e4		0.877						4.904
Total-hexafurans			6.26e4		1.030						9.803
Total-heptafurans			2.64e4		1.207						5.010
Total-Furans			1.49e5		1.022						25.026
Total-tetradioxins			3.02e3		0.994						0.493
Total-pentadioxins			1.51e4		0.976						2.455
Total-hexadioxins			3.79e4		0.928						7.479
Total-heptadioxins			1.10e4		0.999						2.524
Total-Dioxins			8.38e4		0.962						17.937
Total-TEQ			2.33e5								42.963
37CL-2378-TCDD	26.691	1.032	7.98e3		1.091			69.7			0.500
FUNCTION1 PFK			5.12e7								
FUNCTION2 PFK			2.66e5								0.000
FUNCTION3 PFK			3.99e5								0.000
FUNCTION4 PFK			4.51e5								
FUNCTION5 PFK			8.81e4								
FUNCTION1 HXCDPE			0.00e0								
FUNCTION1 HPCDPE			5.80e2								0.000
FUNCTION2 HPCDPE			3.44e2								0.000
FUNCTION3 OCDPE			9.00e1								0.000
FUNCTION4 NCDPE			0.00e0								
FUNCTION5 DCDPE			0.00e0								

Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:33 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130716.mdb 18 Jul 2013 10:49:00
Calibration: 19 Jul 2013 10:15:25

ID: CS1, Name: 13071805, Date: 18-Jul-2013, Time: 15:34:56, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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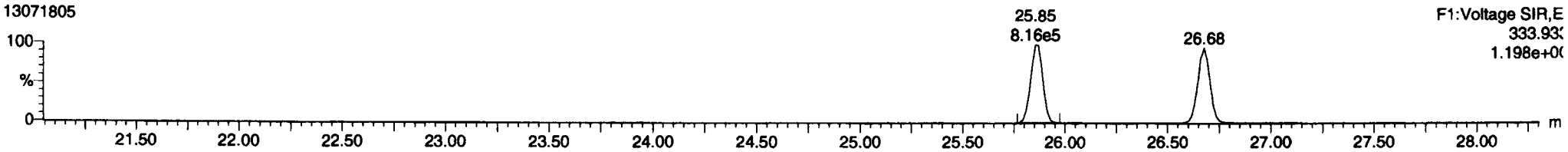

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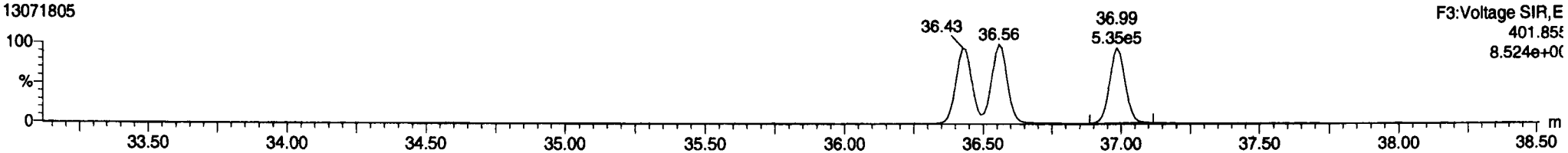

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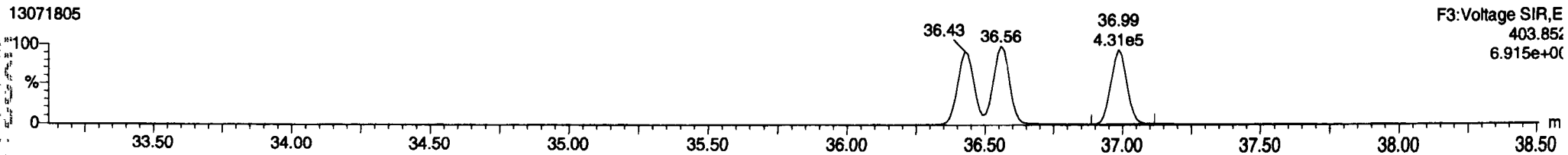

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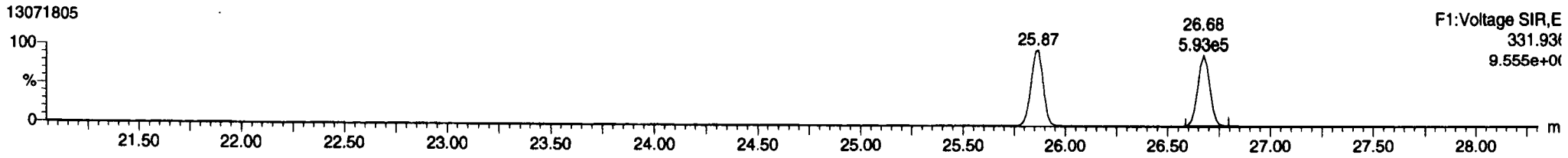
Printed: Friday, July 19, 2013 10:16:33 Pacific Daylight Time

ID: CS1, Name: 13071805, Date: 18-Jul-2013, Time: 15:34:56, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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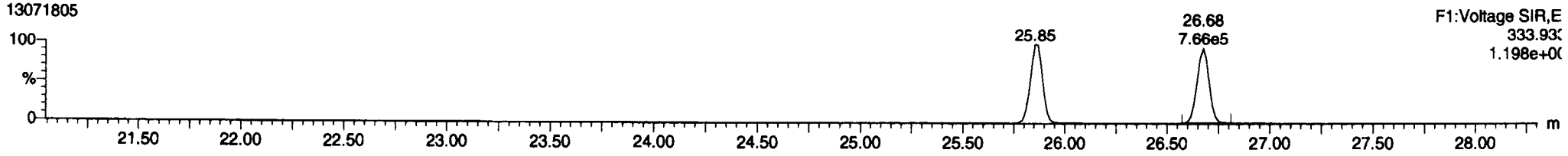

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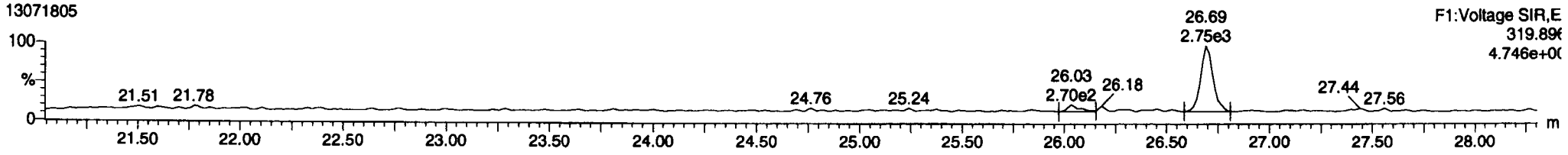
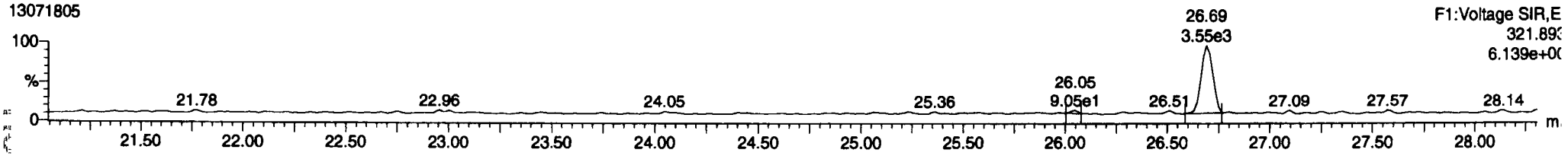
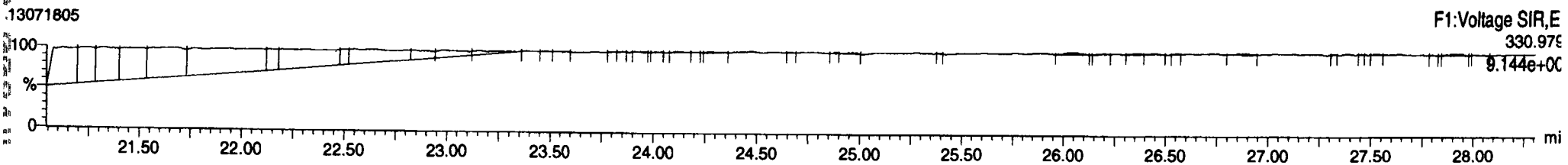


Total-tetradioxins



FUNCTION1 PFK



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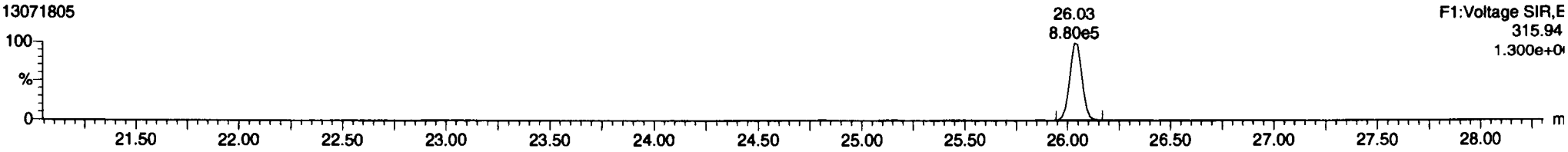
ID: CS1, Name: 13071805, Date: 18-Jul-2013, Time: 15:34:56, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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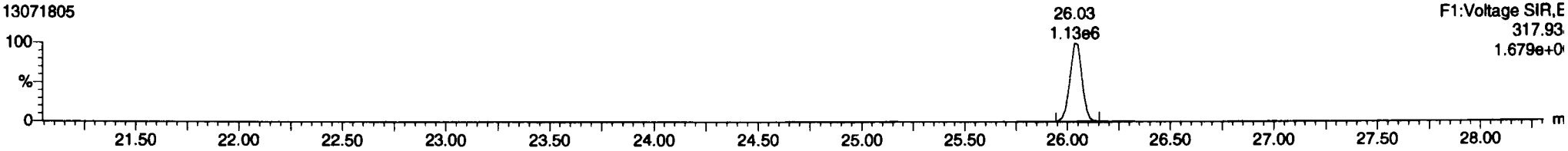

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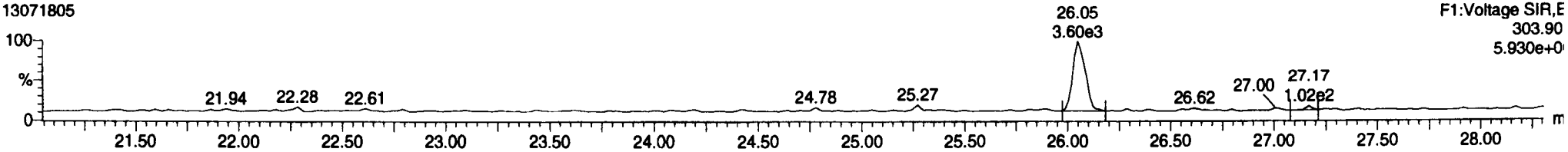

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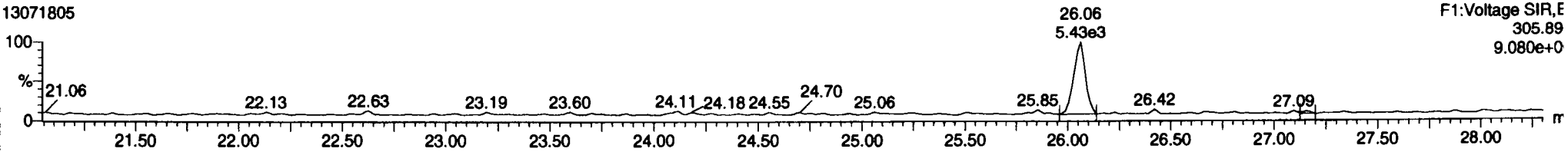
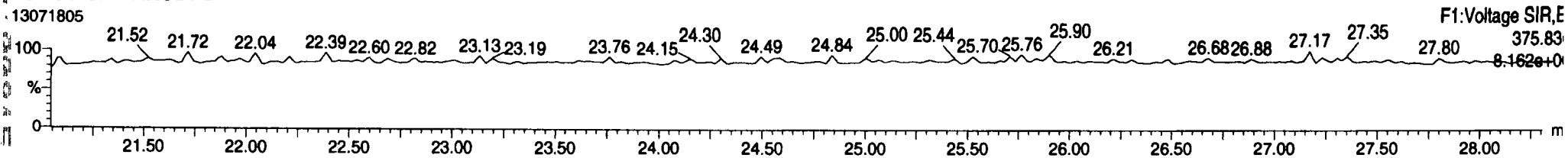


FUNCTION1 HXCDPE



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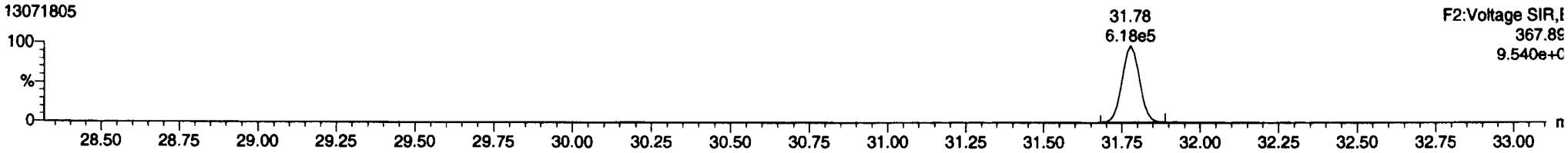
ID: CS1, Name: 13071805, Date: 18-Jul-2013, Time: 15:34:56, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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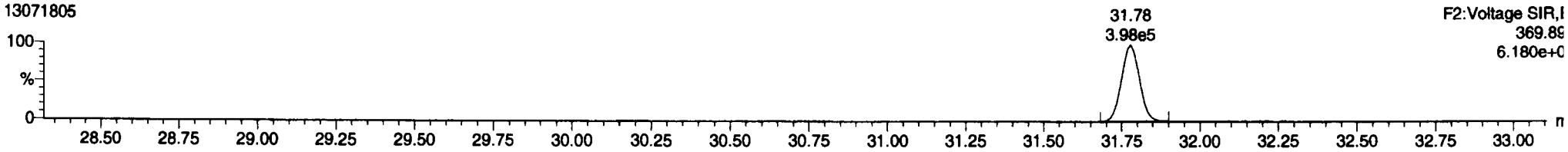

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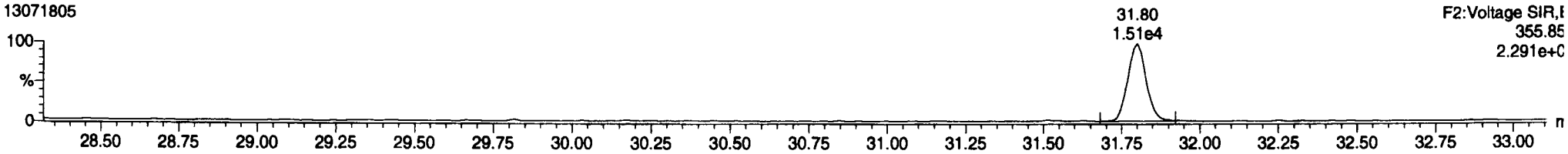

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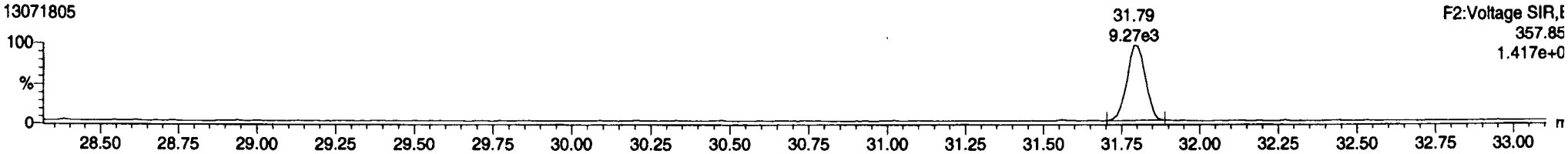

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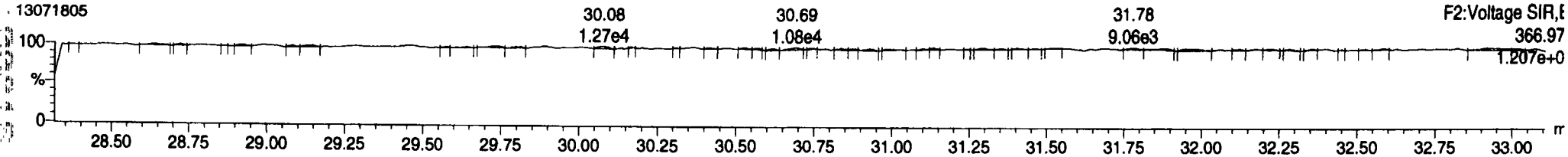

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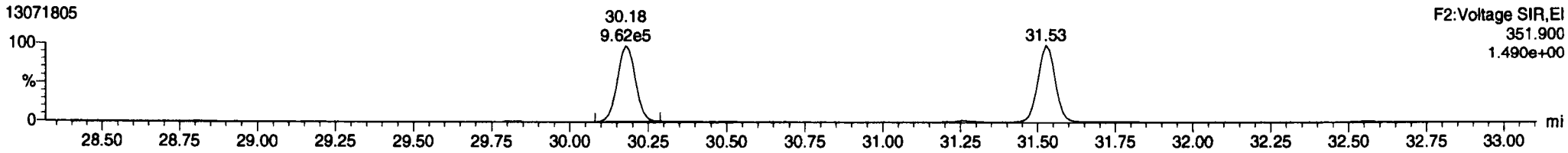
13C-12378-PeCDF



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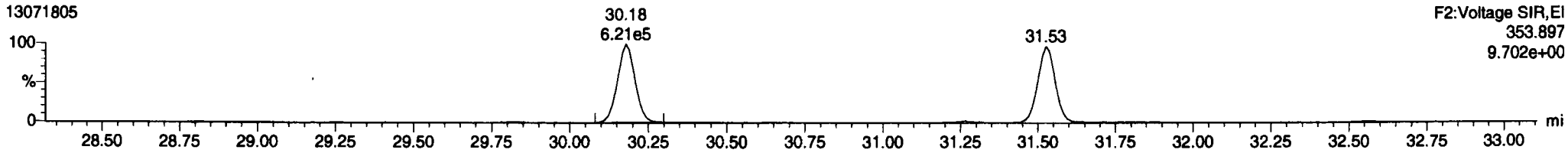

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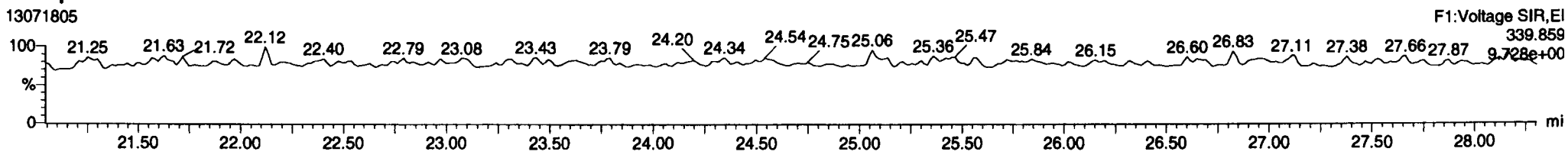

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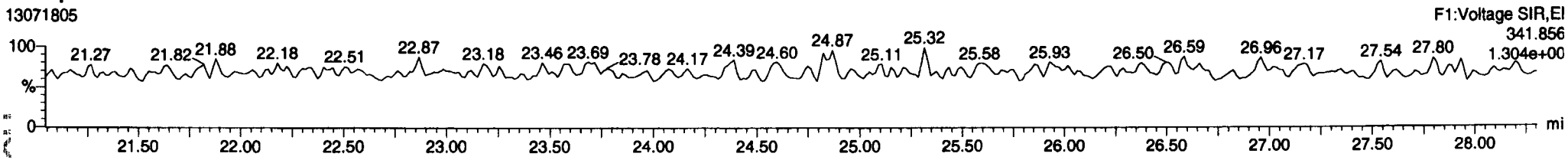

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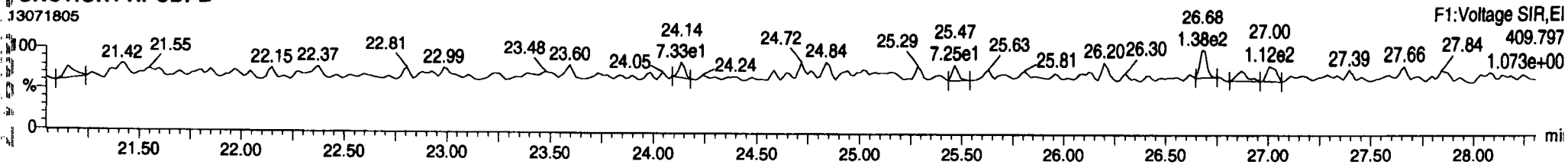

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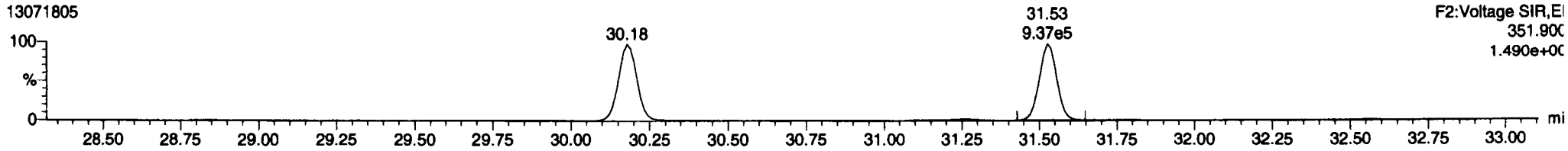
13C-23478-PeCDF



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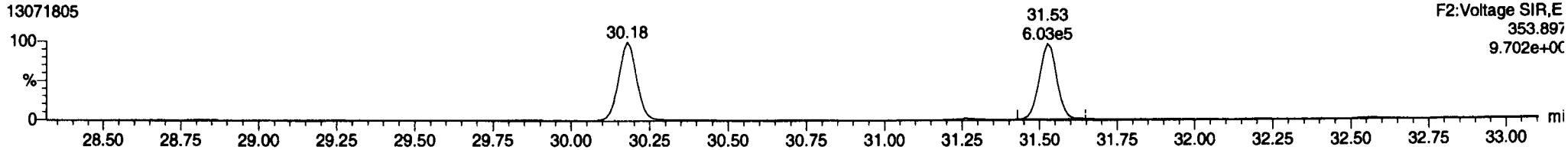

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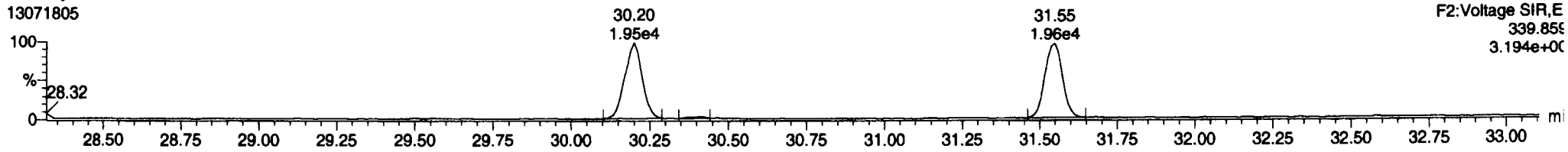

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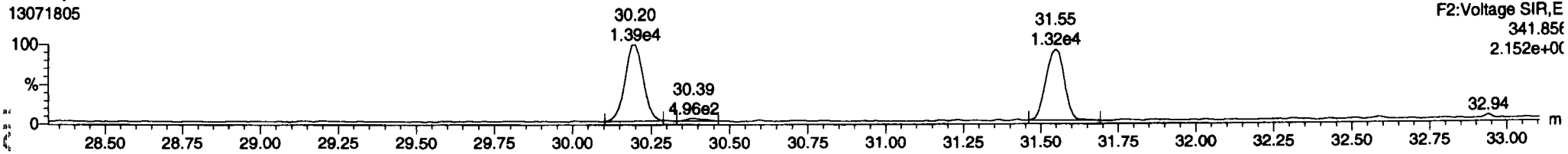

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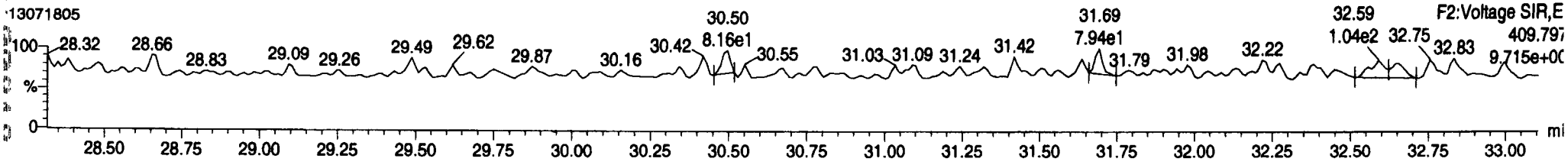

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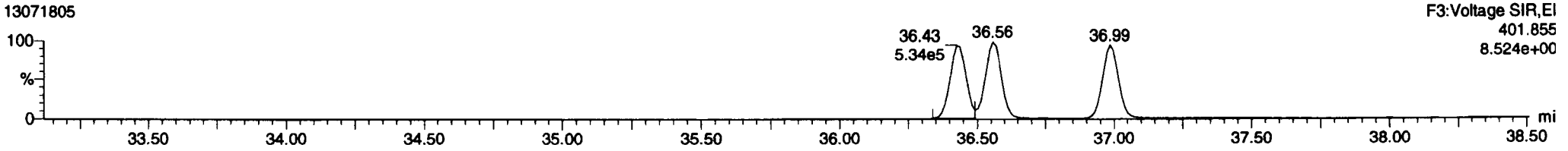

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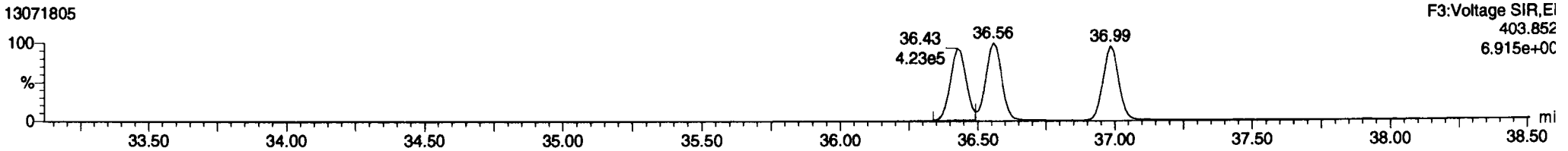

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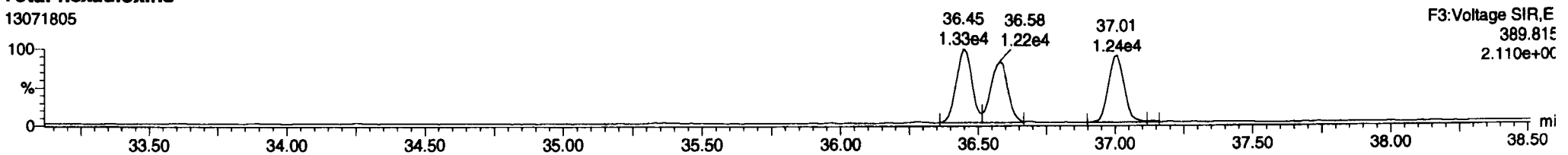
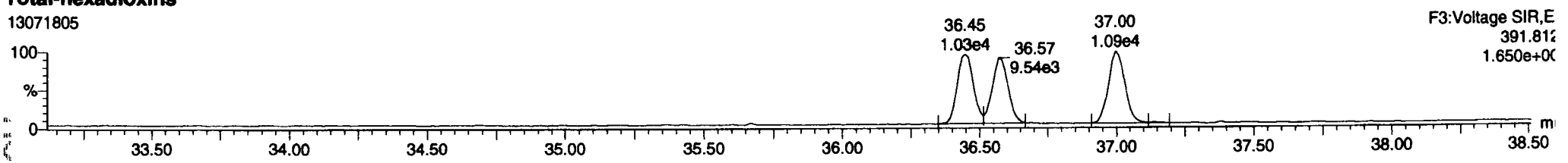


Total-hexadioxins



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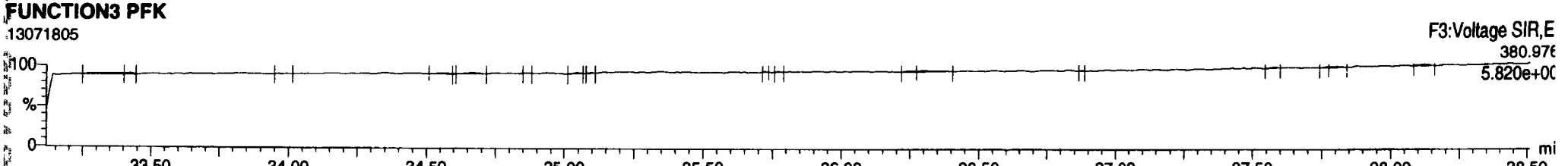

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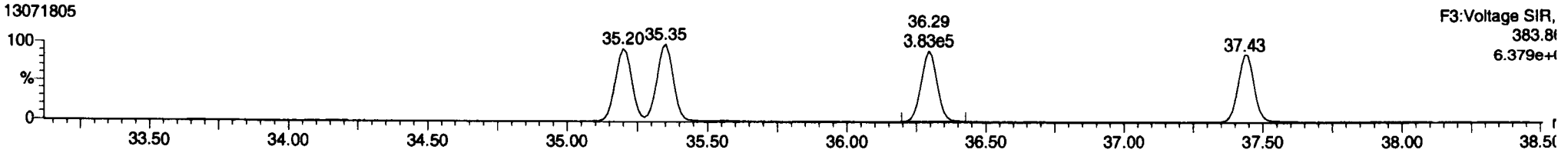

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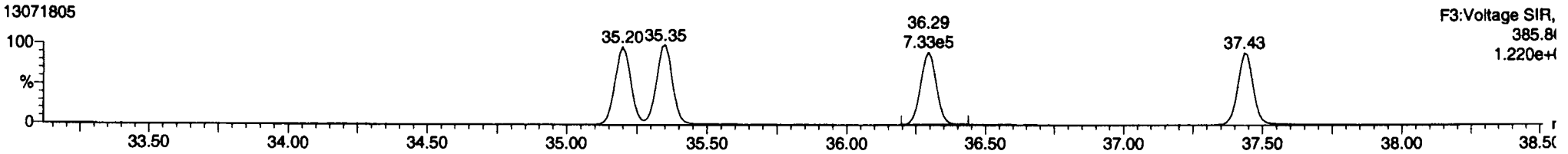
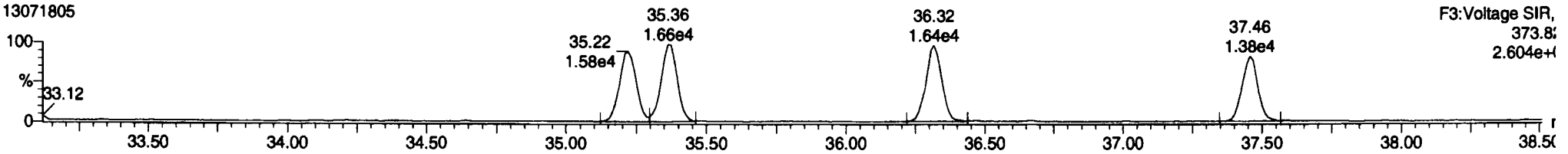


Total-hexafurans



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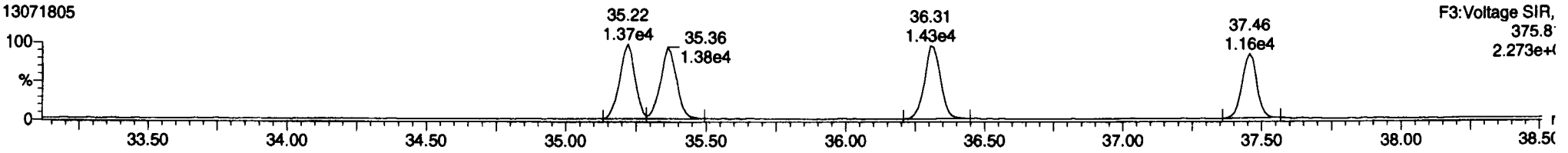
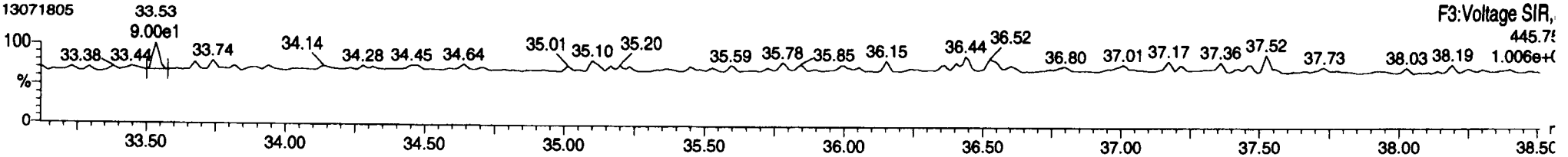


FUNCTION3 OCDPE



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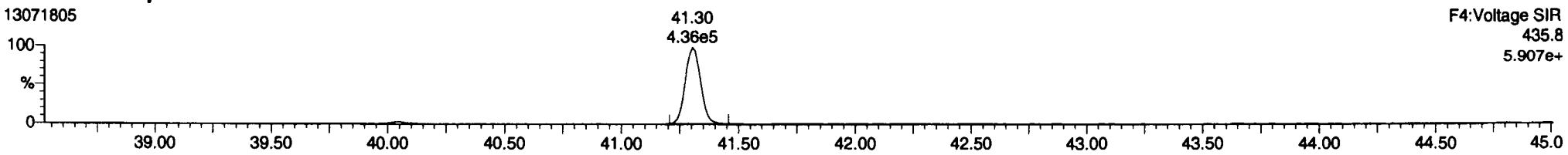

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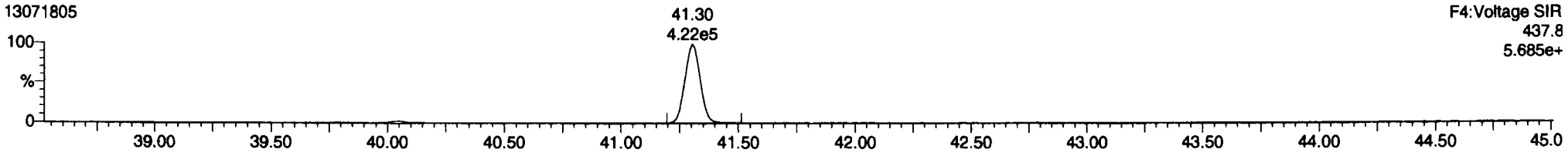
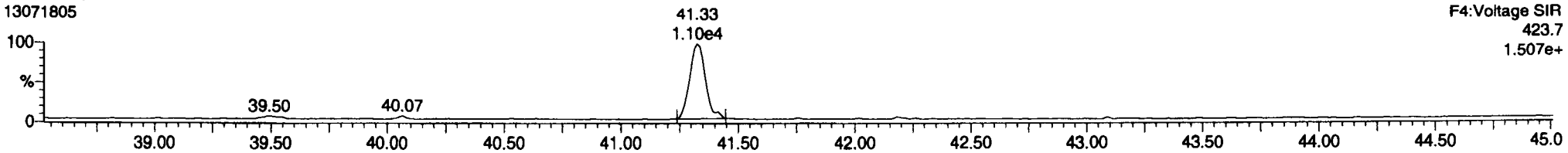
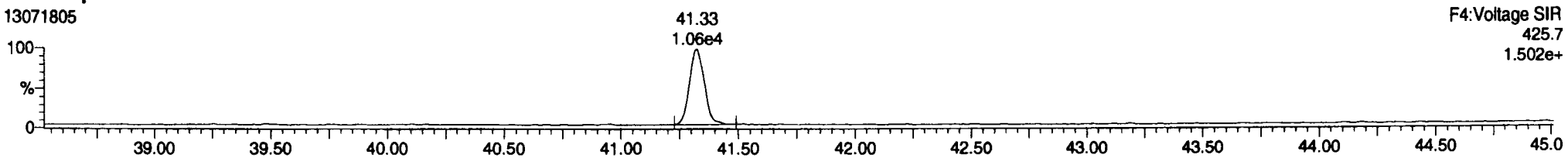


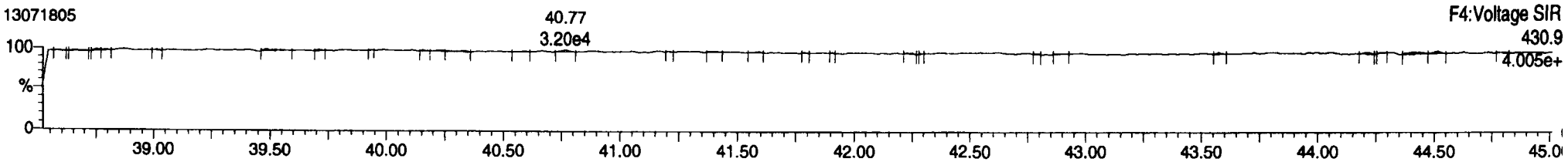
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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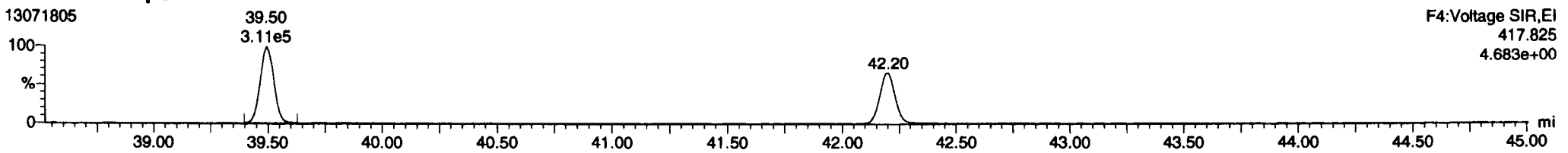
13C-1234678-HpCDF



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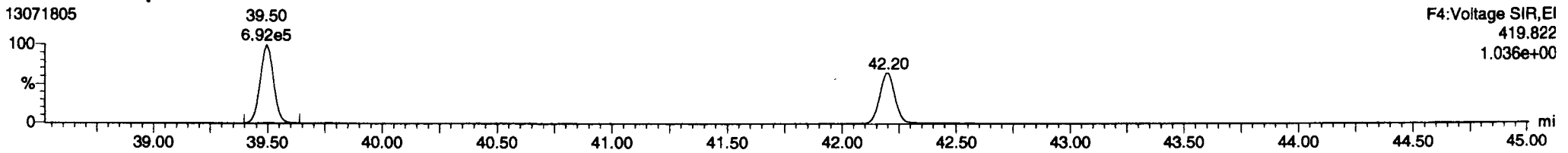
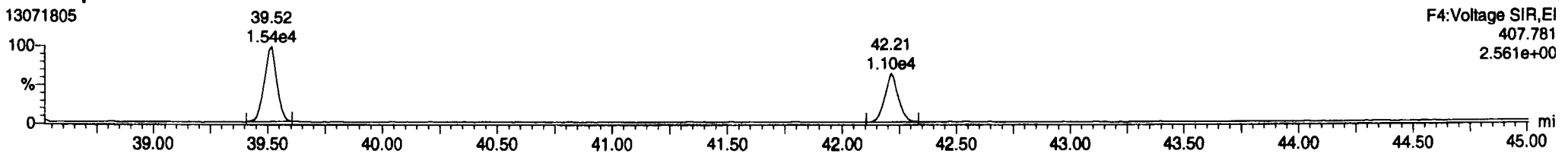
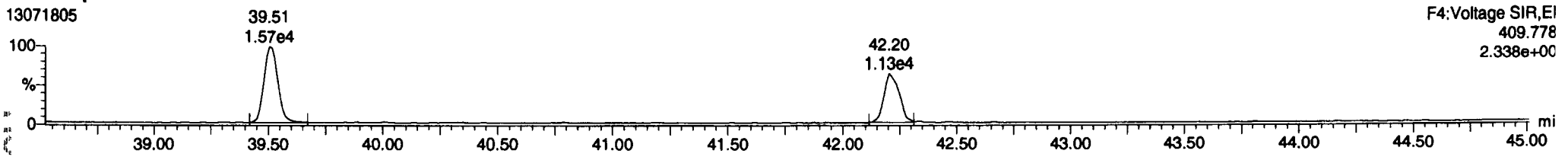


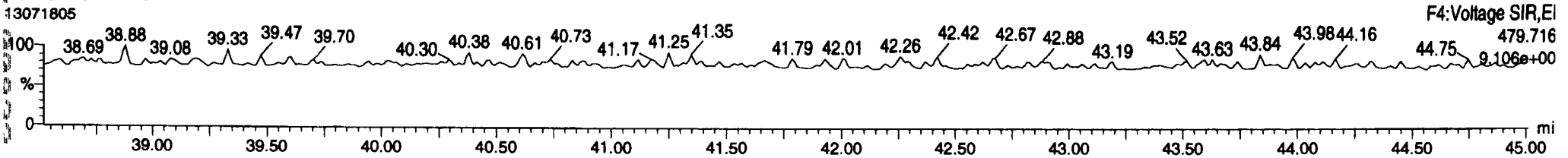
Total-heptafurans



Total-heptafurans



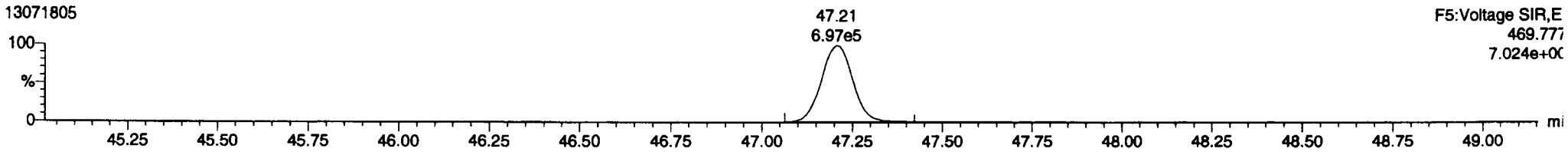
FUNCTION4 NCDPE



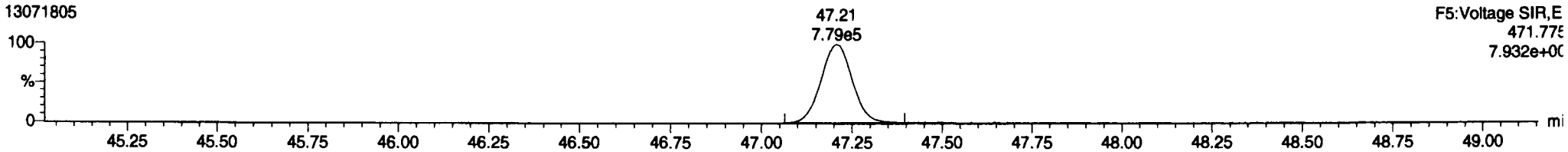
Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:33 Pacific Daylight Time

ID: CS1, Name: 13071805, Date: 18-Jul-2013, Time: 15:34:56, Conditions: AUTOSPEC01, User: pk

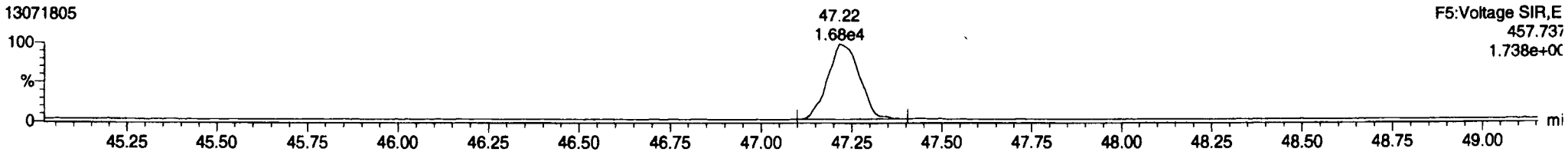
13C-OCDD



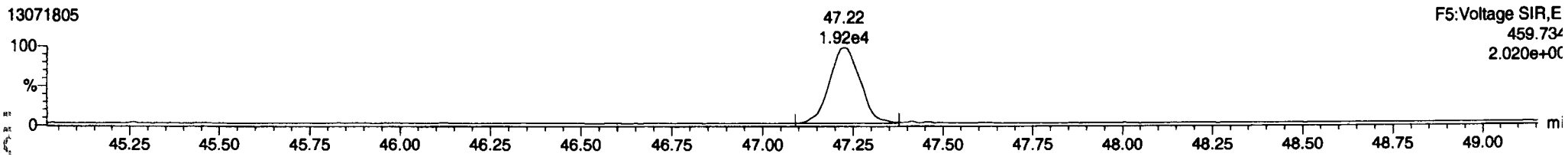
13C-OCDD



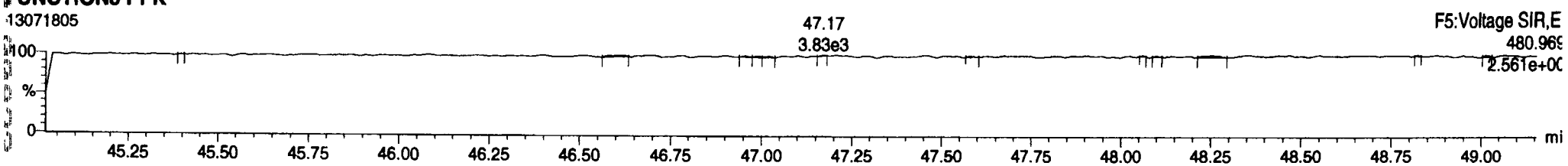
OCDD



OCDD



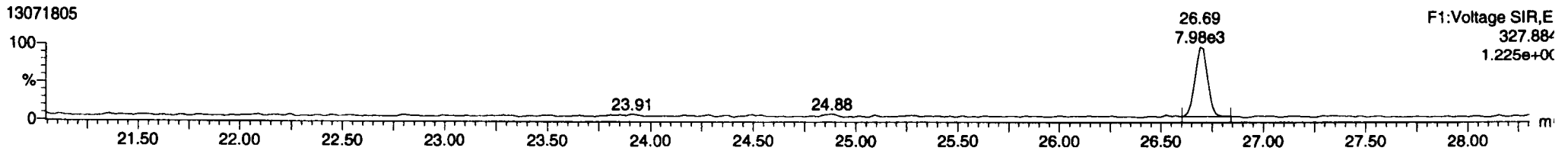
FUNCTION5 PFK



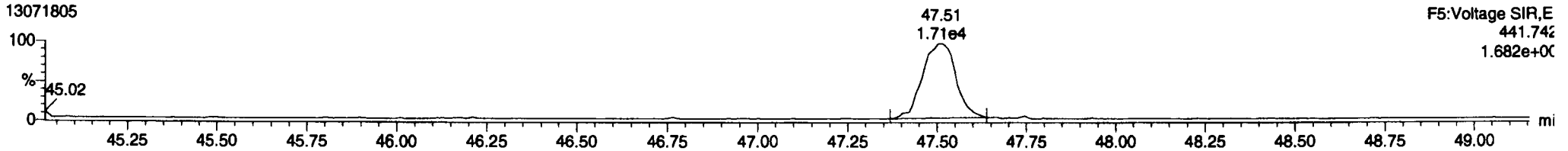
Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:33 Pacific Daylight Time

ID: CS1, Name: 13071805, Date: 18-Jul-2013, Time: 15:34:56, Conditions: AUTOSPEC01, User: pk

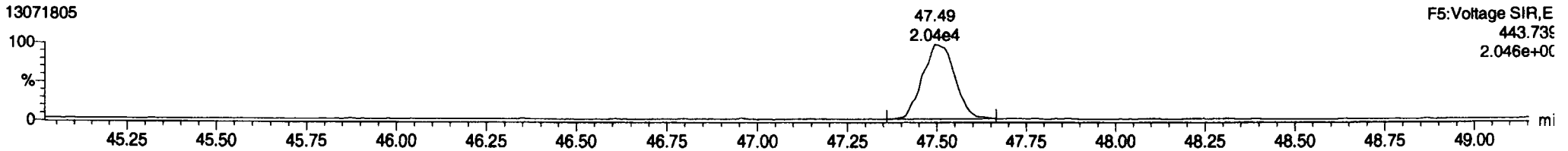
37CL-2378-TCDD



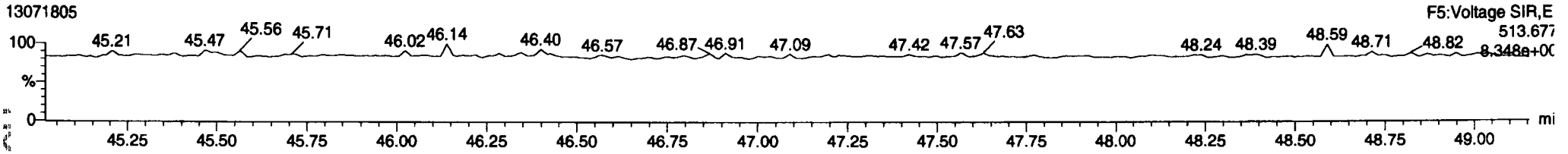
OCDF



OCDF



FUNCTION5 DCDPE



Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:43 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130716.mdb 18 Jul 2013 10:49:00
Calibration: 19 Jul 2013 10:15:25

ID: CS2, Name: 13071806, Date: 18-Jul-2013, Time: 16:25:18, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.063	1.001	1.63e4	2.23e4	0.867	0.733	0.770	273.9	NO	1.955	1.954
12378-PeCDF	30.200	1.001	9.16e4	6.67e4	0.875	1.374	1.550	1172.3	NO	9.767	9.767
23478-PeCDF	31.549	1.001	9.22e4	6.50e4	0.880	1.417	1.550	1199.9	NO	9.820	9.820
123478-HxCDF	35.220	1.001	8.00e4	6.80e4	1.048	1.176	1.240	929.5	NO	9.952	9.952
234678-HxCDF	36.316	1.001	7.66e4	6.55e4	1.088	1.170	1.240	878.6	NO	9.846	9.847
123678-HxCDF	35.363	1.000	8.14e4	6.95e4	1.025	1.172	1.240	952.9	NO	9.909	9.909
123789-HxCDF	37.456	1.000	6.85e4	5.62e4	0.959	1.218	1.240	798.0	NO	10.079	10.079
1234678-HpCDF	39.516	1.001	7.23e4	7.37e4	1.215	0.981	1.050	818.3	NO	9.772	9.772
1234789-HpCDF	42.213	1.000	5.22e4	5.45e4	1.200	0.959	1.050	502.5	NO	9.769	9.769
OCDF	47.511	1.007	8.29e4	9.62e4	1.064	0.862	0.890	975.1	NO	19.014	19.014
2378-TCDD	26.690	1.001	1.42e4	1.72e4	0.994	0.825	0.770	151.5	NO	2.036	2.036
12378-PeCDD	31.801	1.001	6.90e4	4.53e4	0.976	1.521	1.550	1332.1	NO	9.804	9.805
123478-HxCDD	36.447	1.000	6.01e4	4.97e4	0.967	1.210	1.240	920.9	NO	9.807	9.807
123678-HxCDD	36.579	1.001	6.26e4	4.98e4	0.902	1.258	1.240	918.1	NO	10.091	10.091
123789-HxCDD	37.007	1.012	5.75e4	4.82e4	0.914	1.194	1.240	840.9	NO	9.664	9.663
1234678-HpCDD	41.325	1.000	5.10e4	4.85e4	0.999	1.051	1.050	1078.5	NO	9.649	9.649
OCDD	47.233	1.001	8.15e4	8.92e4	0.979	0.913	0.890	1206.5	NO	19.696	19.696
13C-2378-TCDF	26.033	1.007	1.00e6	1.28e6	1.419	0.784	0.770	4705.6	NO		97.384
13C-12378-PeCDF	30.178	1.167	1.13e6	7.24e5	1.158	1.560	1.550	6299.5	NO		97.100
13C-23478-PeCDF	31.527	1.219	1.11e6	7.09e5	1.127	1.569	1.550	6149.1	NO		98.044
13C-123478-HxCDF	35.198	0.952	4.84e5	9.35e5	1.206	0.517	0.510	2968.4	NO		101.438
13C-123678-HxCDF	35.352	0.956	5.13e5	9.73e5	1.266	0.527	0.510	2997.7	NO		101.269
13C-234678-HxCDF	36.294	0.981	4.54e5	8.72e5	1.155	0.521	0.510	2772.7	NO		99.040
13C-123789-HxCDF	37.445	1.012	4.43e5	8.48e5	1.121	0.522	0.510	2709.7	NO		99.351
13C-1234678-HpCDF	39.494	1.068	3.79e5	8.50e5	1.040	0.446	0.440	3587.5	NO		102.022
13C-1234789-HpCDF	42.191	1.141	2.77e5	6.34e5	0.789	0.437	0.440	2242.9	NO		99.545
13C-1234-TCDD	25.854	0.000	7.30e5	9.18e5	1.000	0.795	0.770	3204.6	NO		100.000
13C-2378-TCDD	26.676	1.032	6.84e5	8.68e5	0.962	0.789	0.770	3008.2	NO		97.868
13C-12378-PeCDD	31.778	1.229	7.24e5	4.70e5	0.746	1.541	1.550	10776.7	NO		97.085
13C-123478-HxCDD	36.437	0.985	6.44e5	5.14e5	1.003	1.253	1.240	4342.9	NO		99.559
13C-123678-HxCDD	36.557	0.988	6.82e5	5.53e5	1.052	1.235	1.240	4413.1	NO		101.294
13C-1234678-HpCDD	41.303	1.117	5.30e5	5.03e5	0.880	1.052	1.050	3498.5	NO		101.280
13C-OCDD	47.206	1.276	8.27e5	9.44e5	0.775	0.876	0.890	2515.3	NO		197.168

Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:43 Pacific Daylight Time

ID: CS2, Name: 13071806, Date: 18-Jul-2013, Time: 16:25:18, Conditions: AUTOSPEC01, User: pk

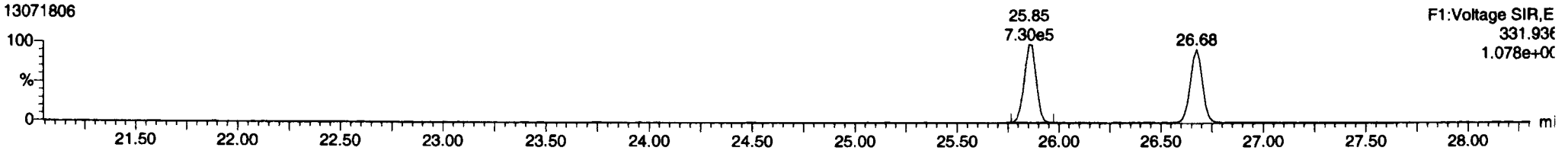
13C-123789-HxCDD	36.985	0.000	6.41e5	5.18e5	1.000	1.238	1.240	4234.8	NO	100.000
Total-tetrafurans			1.63e4		0.867					1.954
Total-penta1			0.00e0							
Total-pentafurans			1.87e5		0.877					19.974
Total-hexafurans			3.08e5		1.030					39.913
Total-heptafurans			1.25e5		1.207					19.567
Total-Furans			7.19e5		1.022					100.423
Total-tetradioxins			1.48e4		0.994					2.105
Total-pentadioxins			6.90e4		0.976					9.805
Total-hexadioxins			1.81e5		0.928					29.615
Total-heptadioxins			5.14e4		0.999					9.707
Total-Dioxins			3.97e5		0.962					70.946
Total-TEQ			1.12e6							171.369
37CL-2378-TCDD	26.690	1.032	3.45e4		1.091			265.7		1.921
FUNCTION1 PFK			6.93e4							
FUNCTION2 PFK			0.00e0							
FUNCTION3 PFK			7.13e5							0.000
FUNCTION4 PFK			3.89e5							
FUNCTION5 PFK			2.58e5							
FUNCTION1 HXCDPE			0.00e0							
FUNCTION1 HPCDPE			8.55e2							0.000
FUNCTION2 HPCDPE			5.08e2							0.000
FUNCTION3 OCDPE			0.00e0							
FUNCTION4 NCDPE			2.70e2							0.000
FUNCTION5 DCDPE			0.00e0							

Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:43 Pacific Daylight Time

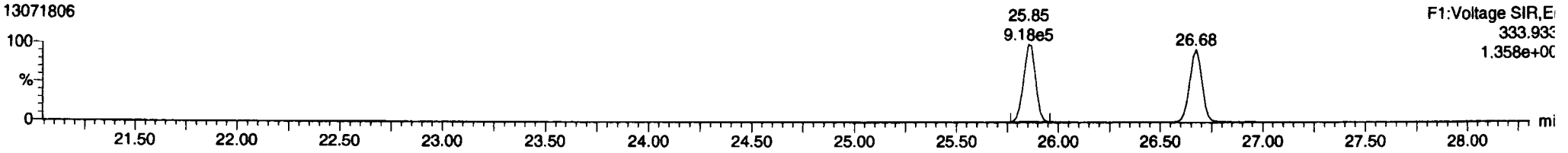
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130716.mdb 18 Jul 2013 10:49:00
Calibration: 19 Jul 2013 10:15:25

ID: CS2, Name: 13071806, Date: 18-Jul-2013, Time: 16:25:18, Conditions: AUTOSPEC01, User: pk

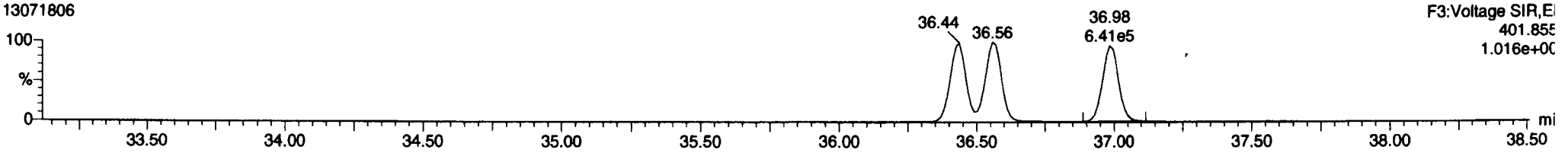
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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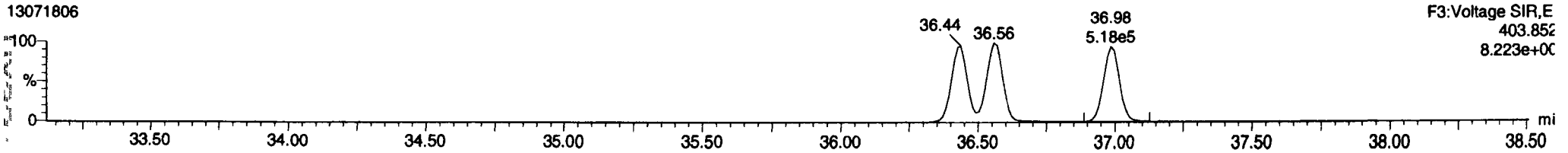

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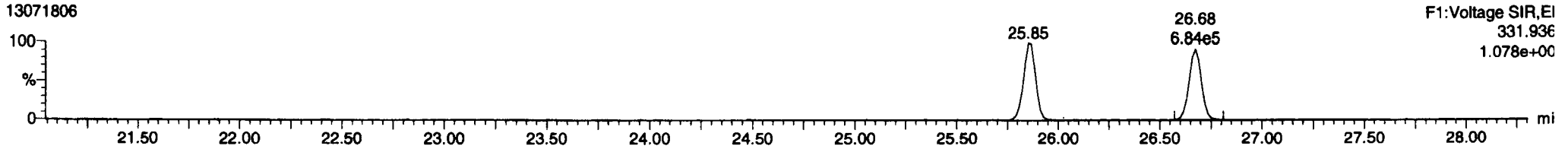
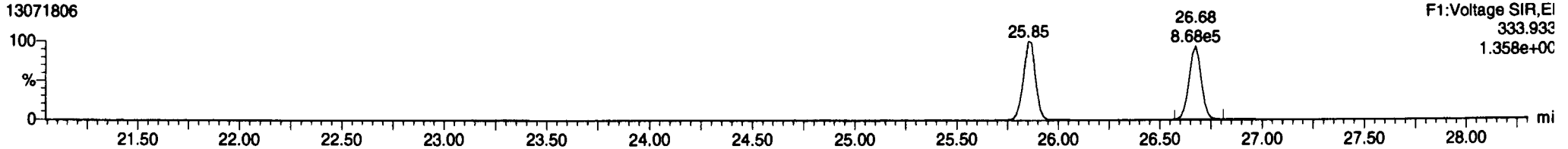
Printed: Friday, July 19, 2013 10:16:43 Pacific Daylight Time

ID: CS2, Name: 13071806, Date: 18-Jul-2013, Time: 16:25:18, Conditions: AUTOSPEC01, User: pk

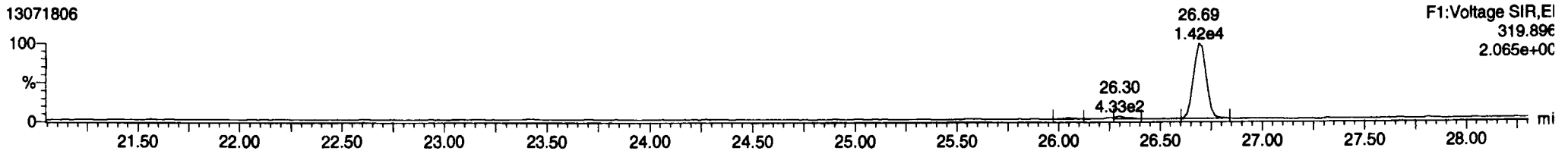
13C-2378-TCDD



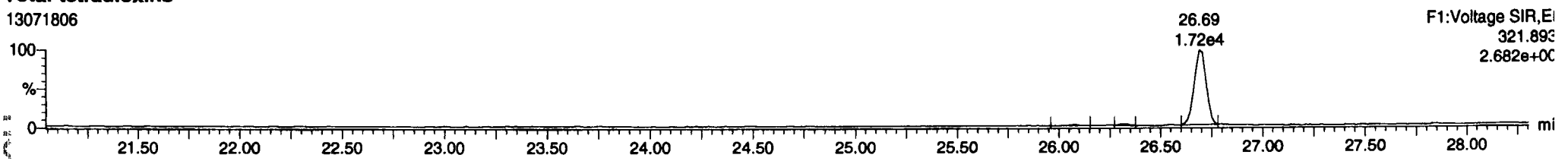
13C-2378-TCDD



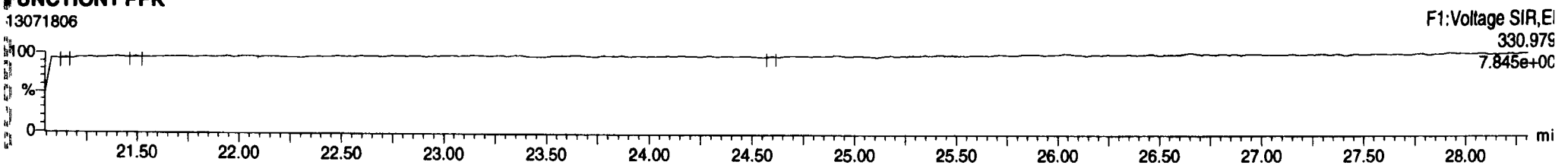
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
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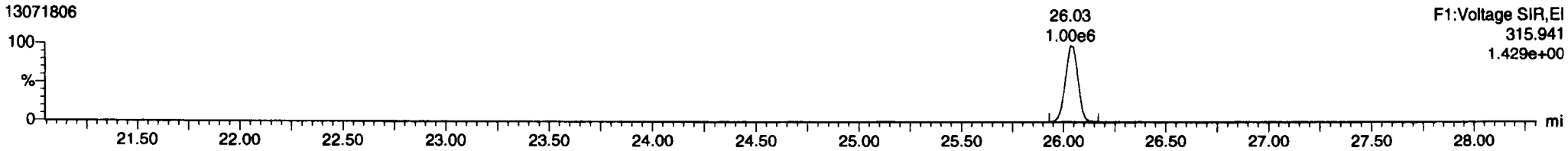
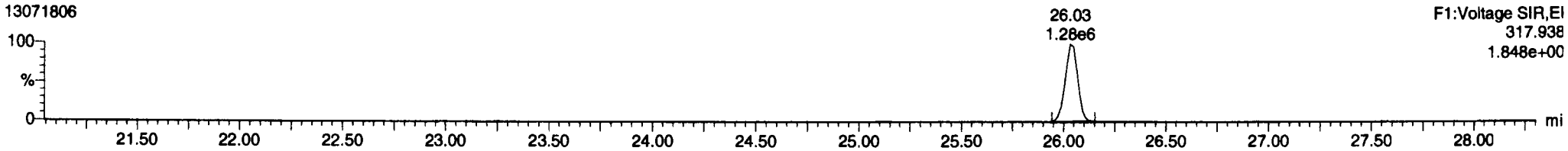
ID: CS2, Name: 13071806, Date: 18-Jul-2013, Time: 16:25:18, Conditions: AUTOSPEC01, User: pk

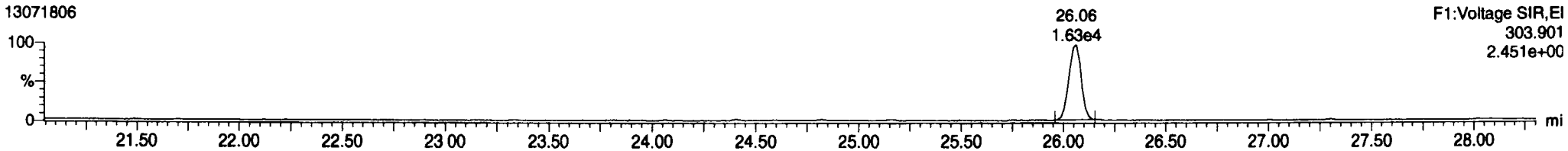
13C-2378-TCDF



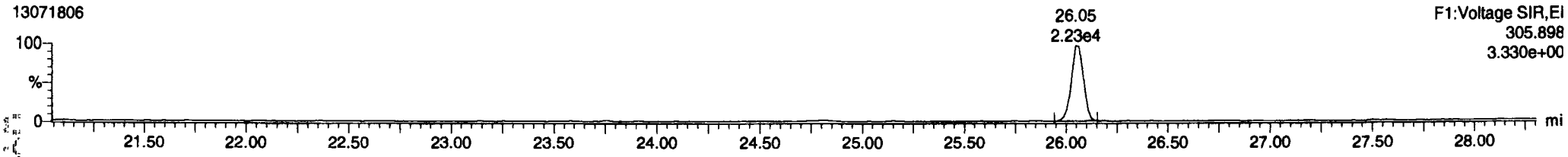
13C-2378-TCDF



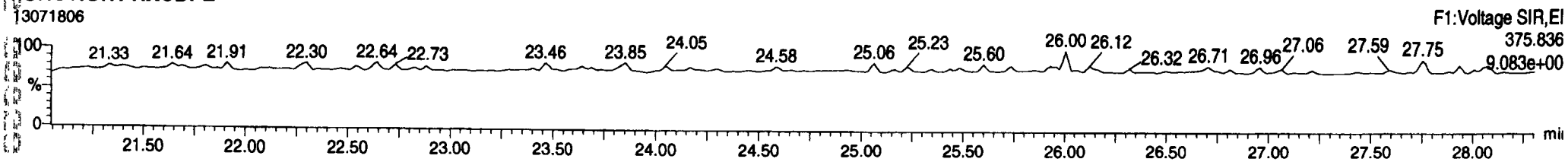
Total-tetrafurans



Total-tetrafurans



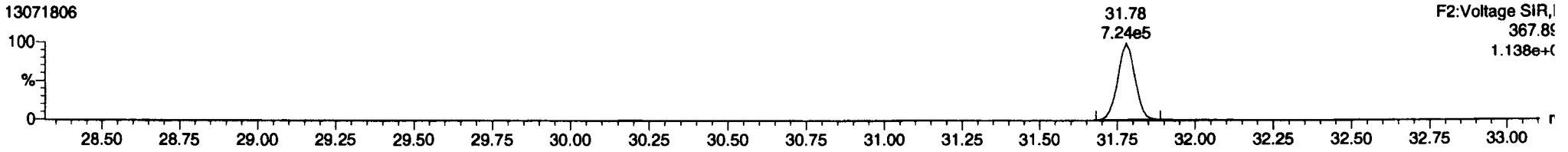
FUNCTION1 HXCDPE



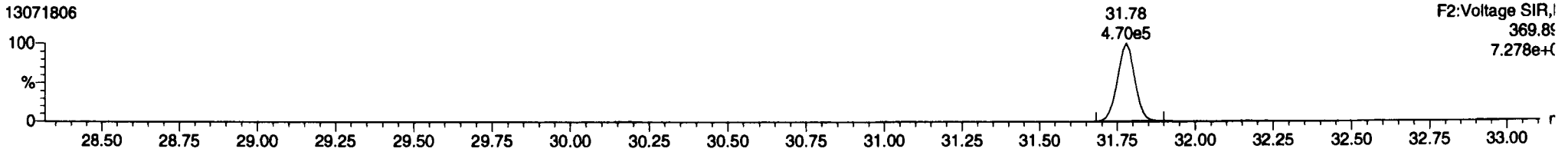
Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:43 Pacific Daylight Time

ID: CS2, Name: 13071806, Date: 18-Jul-2013, Time: 16:25:18, Conditions: AUTOSPEC01, User: pk

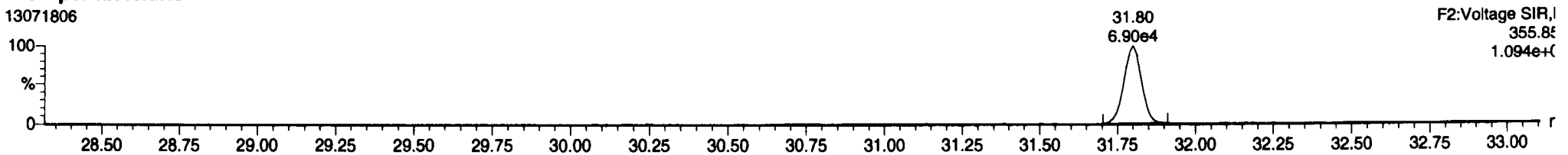
13C-12378-PeCDD



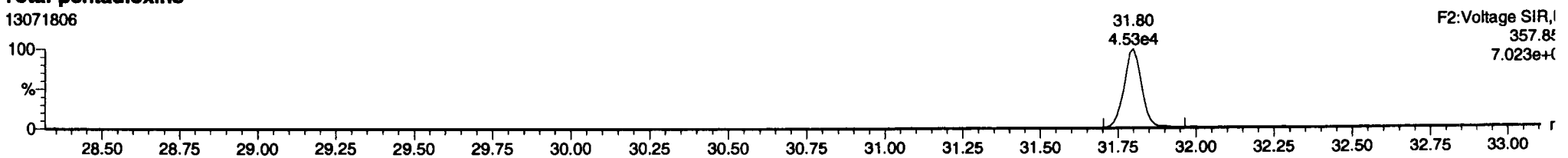
13C-12378-PeCDD



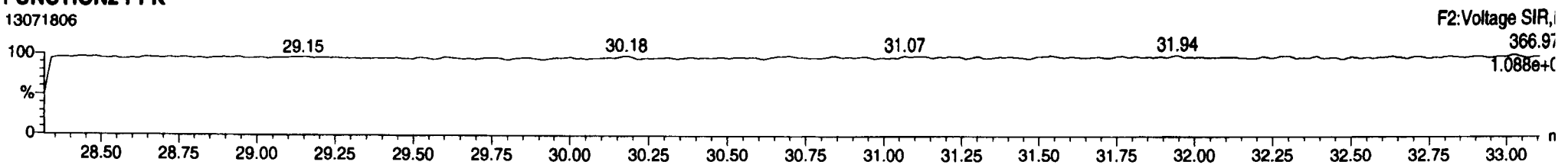
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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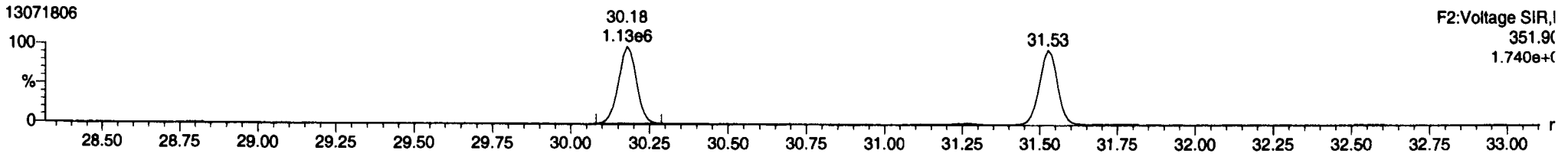
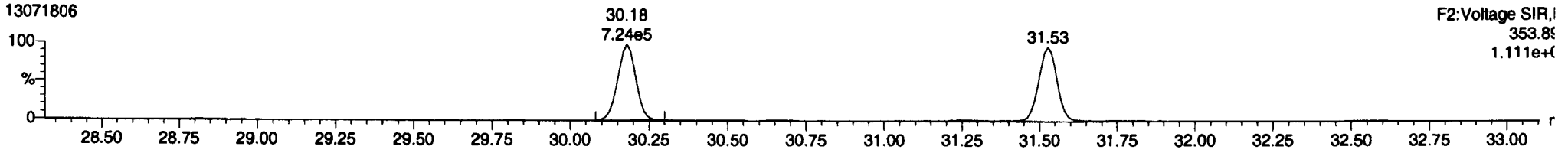
Printed: Friday, July 19, 2013 10:16:43 Pacific Daylight Time

ID: CS2, Name: 13071806, Date: 18-Jul-2013, Time: 16:25:18, Conditions: AUTOSPEC01, User: pk

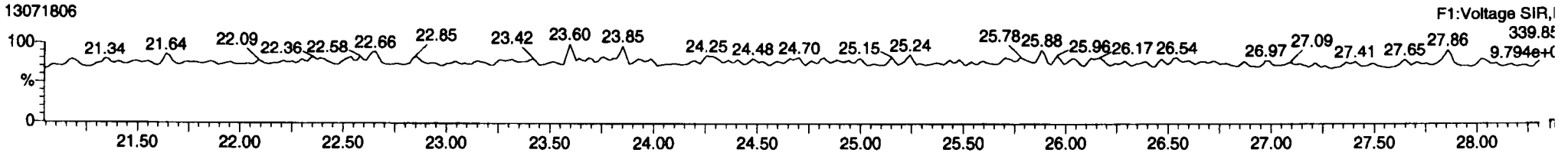
13C-12378-PeCDF



13C-12378-PeCDF



Total-penta1



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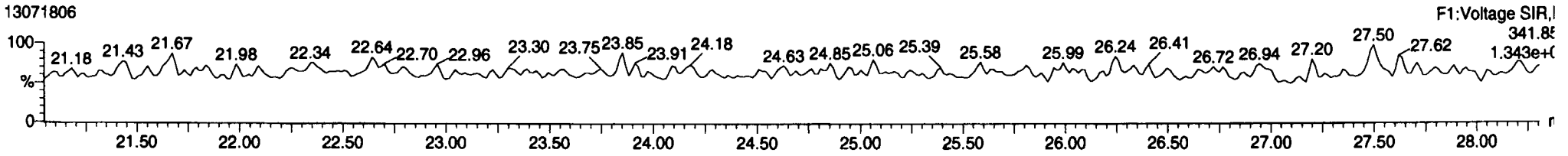
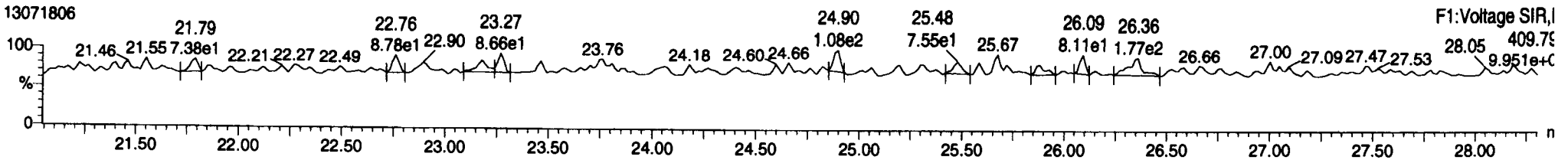


FUNCTION1 HPCDPE



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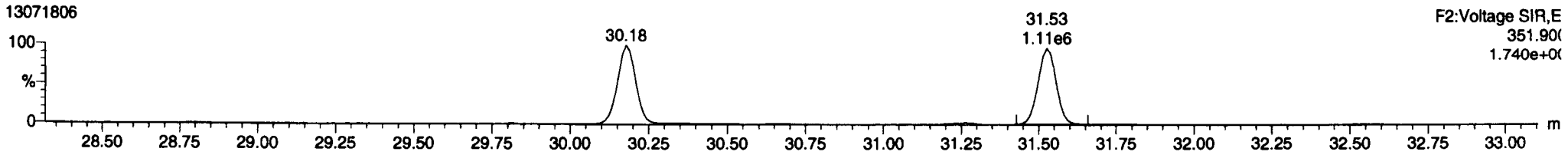
Printed: Friday, July 19, 2013 10:16:43 Pacific Daylight Time

ID: CS2, Name: 13071806, Date: 18-Jul-2013, Time: 16:25:18, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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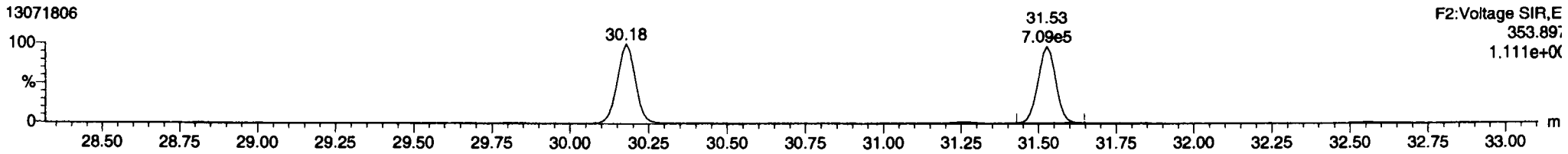
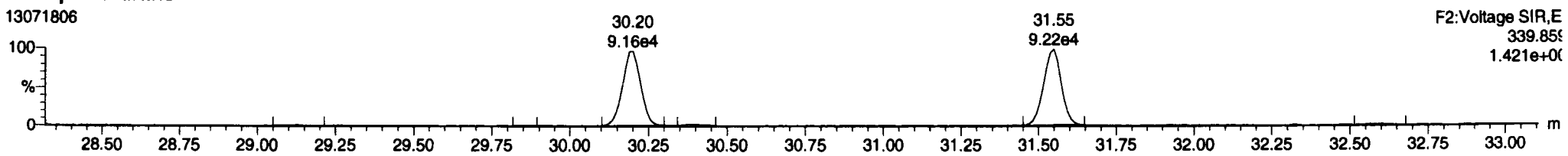
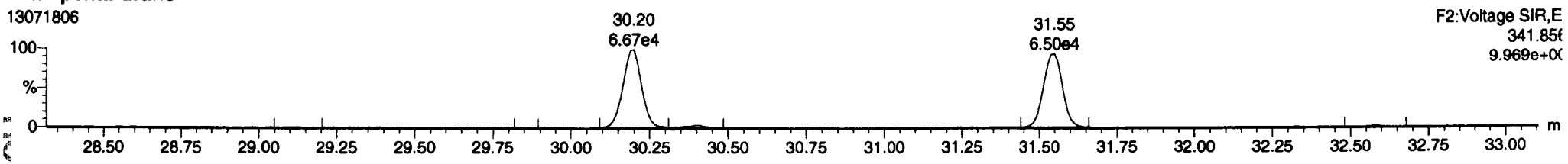


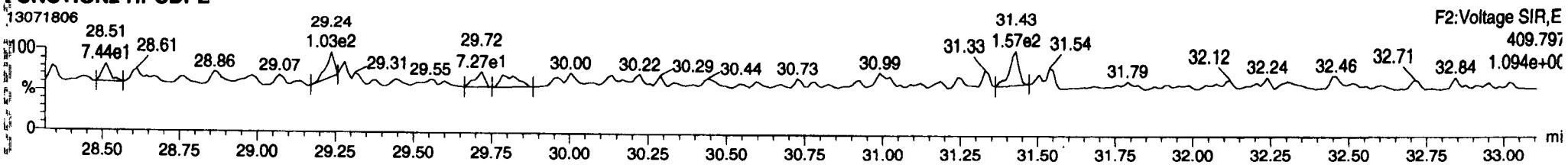
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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Printed: Friday, July 19, 2013 10:16:43 Pacific Daylight Time

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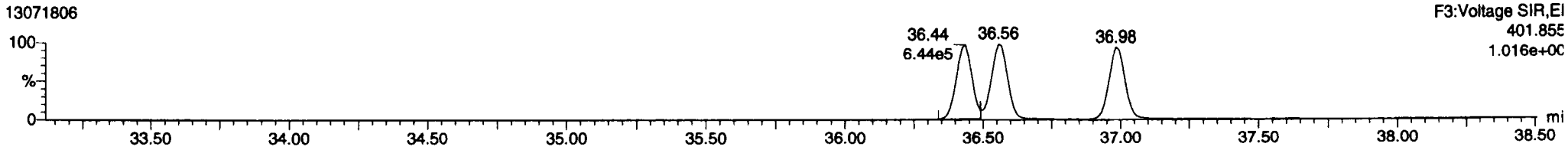
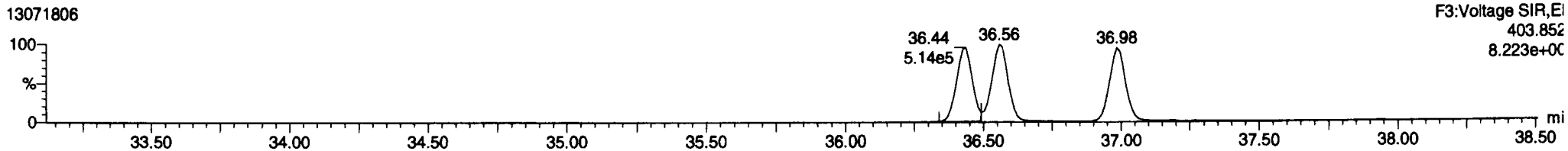
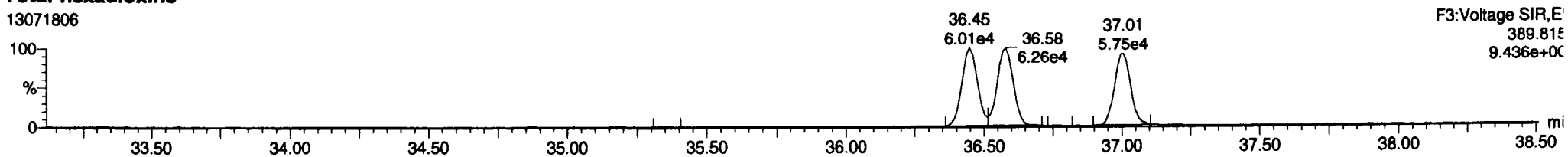
13C-123478-HxCDD



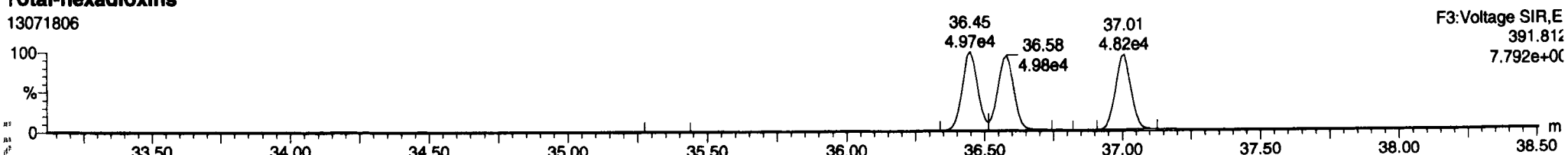
13C-123478-HxCDD



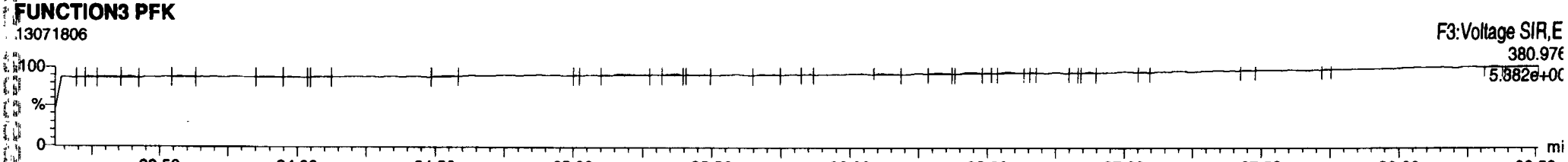
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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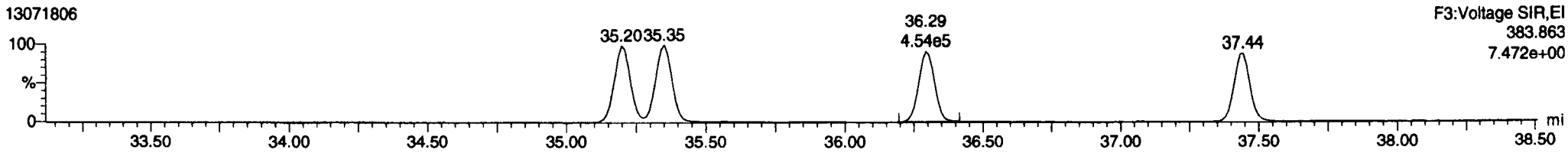
ID: CS2, Name: 13071806, Date: 18-Jul-2013, Time: 16:25:18, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



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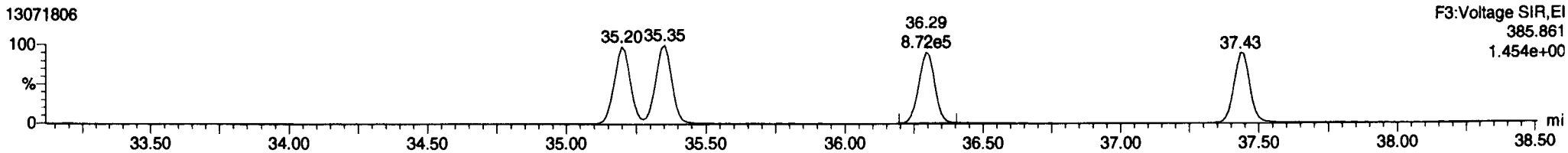
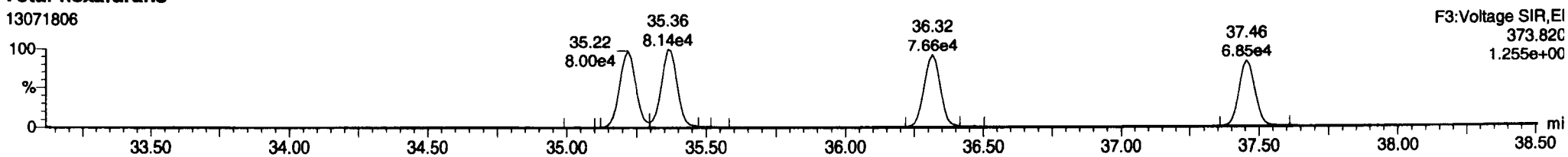
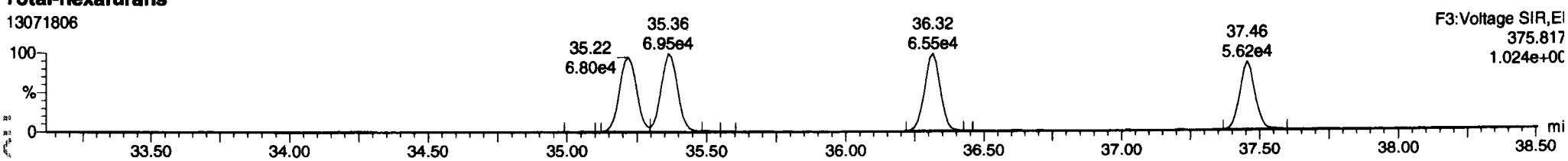


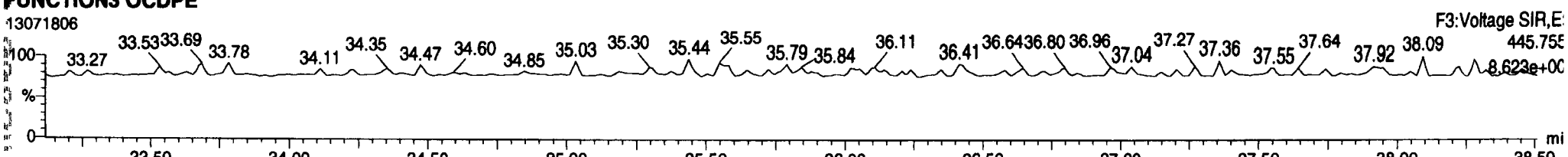
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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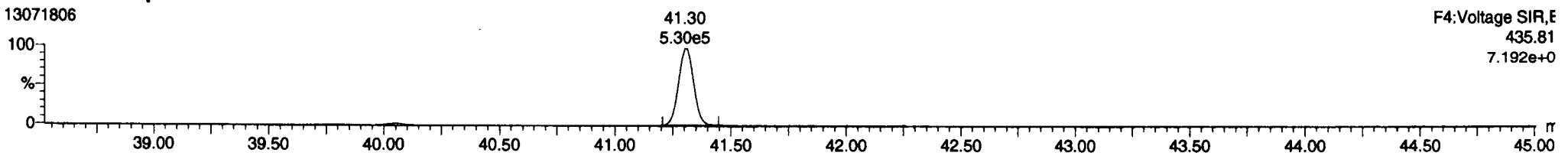
ID: CS2, Name: 13071806, Date: 18-Jul-2013, Time: 16:25:18, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD



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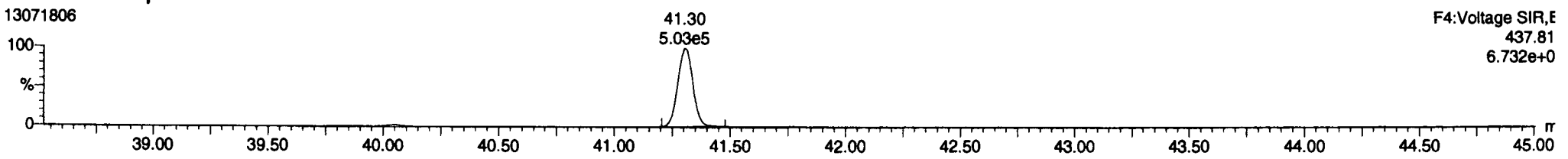
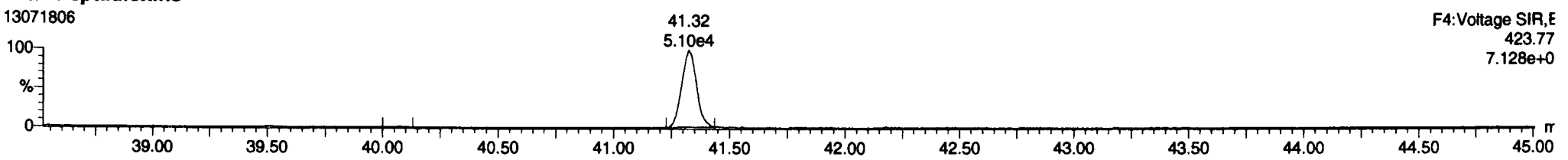
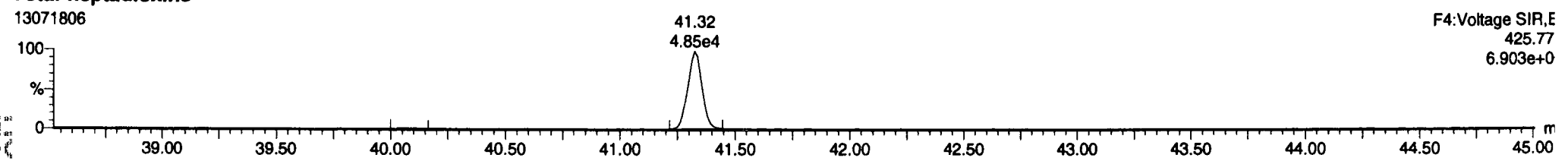


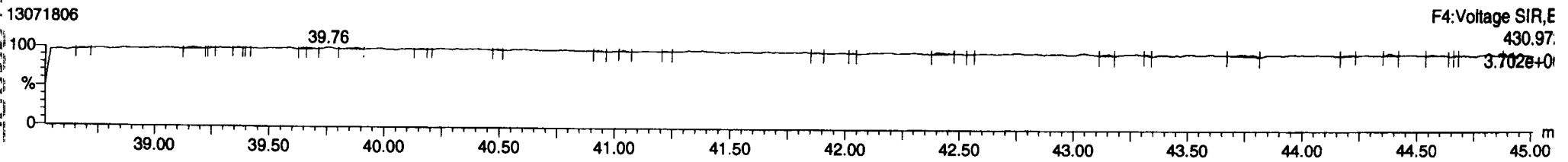
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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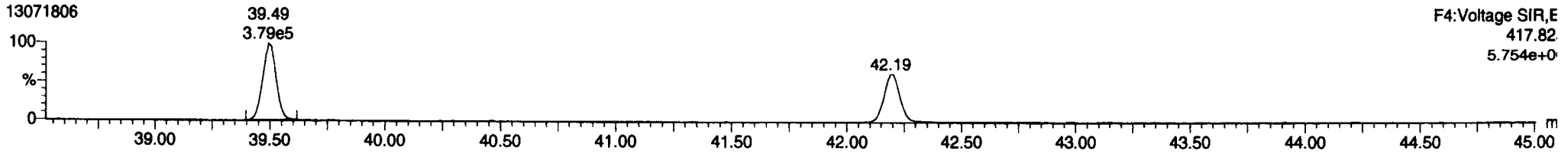
ID: CS2, Name: 13071806, Date: 18-Jul-2013, Time: 16:25:18, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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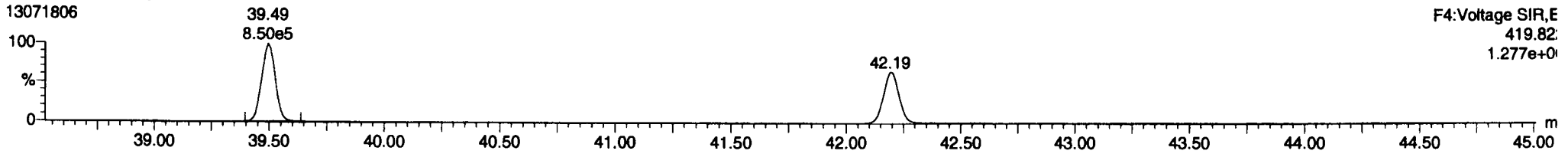
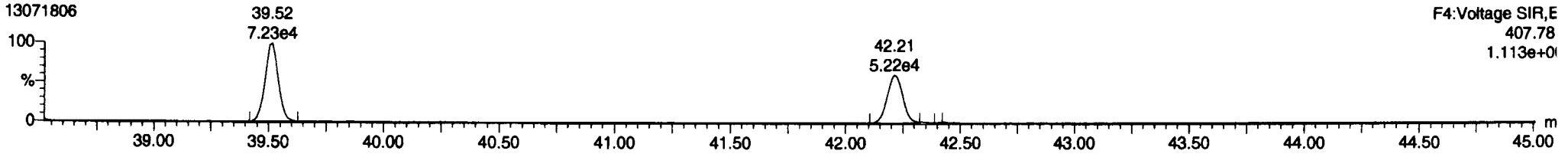


Total-heptafurans



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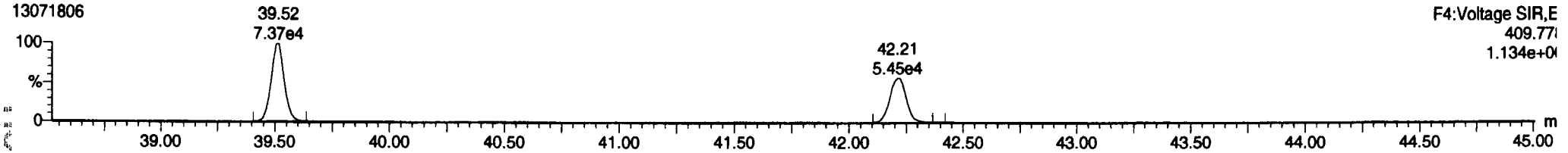
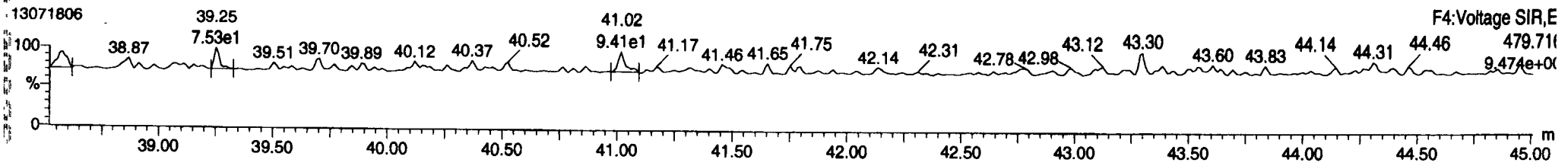


FUNCTION4 NCDPE



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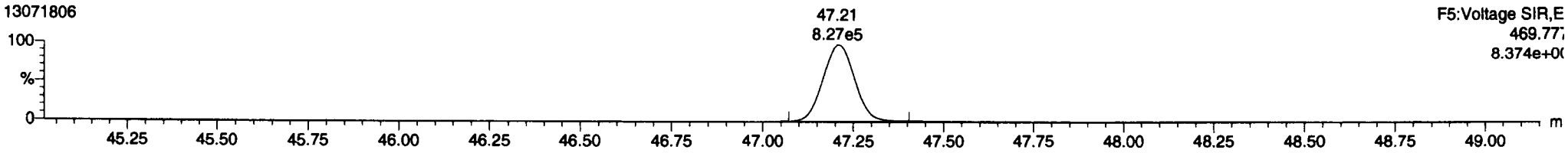
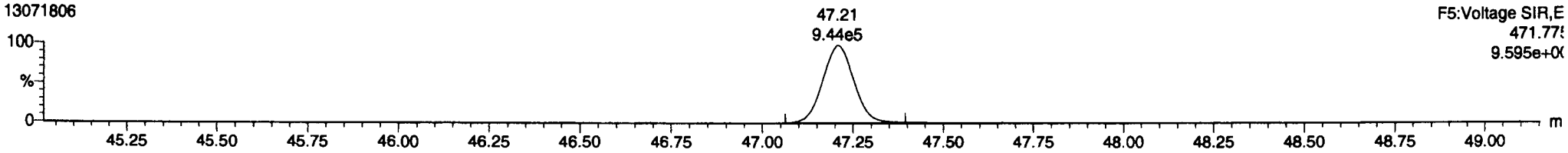
ID: CS2, Name: 13071806, Date: 18-Jul-2013, Time: 16:25:18, Conditions: AUTOSPEC01, User: pk

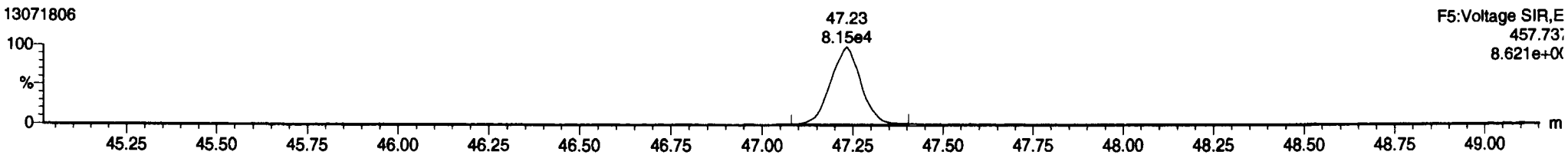
13C-OCDD



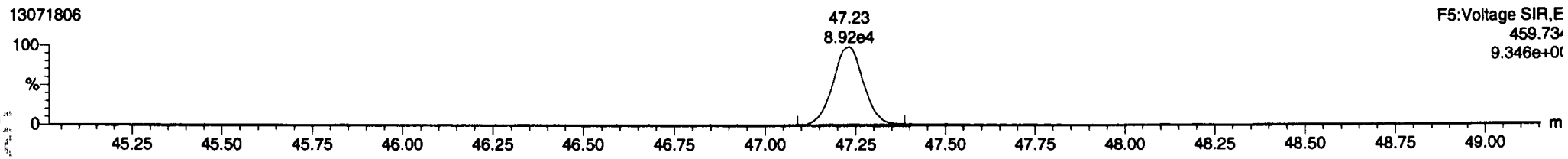
13C-OCDD



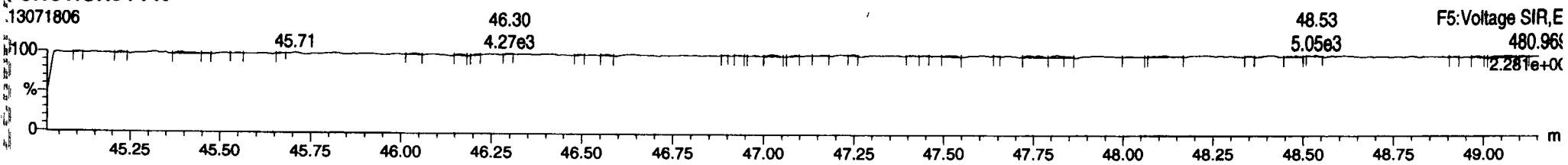
OCDD



OCDD



FUNCTION5 PFK



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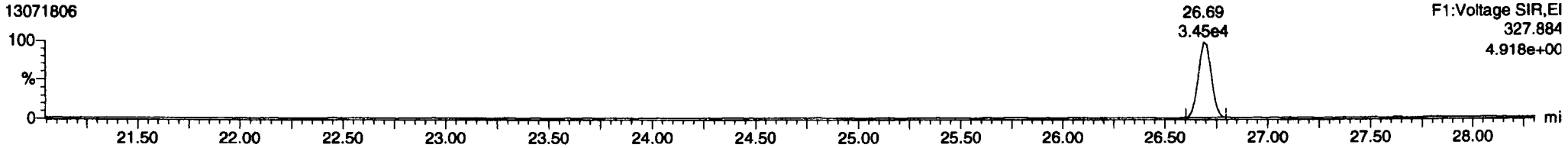
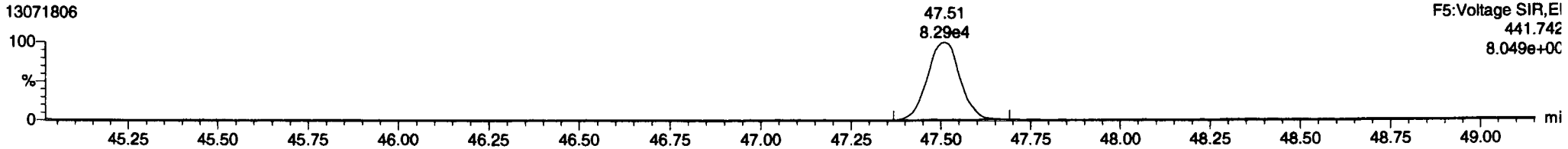
ID: CS2, Name: 13071806, Date: 18-Jul-2013, Time: 16:25:18, Conditions: AUTOSPEC01, User: pk

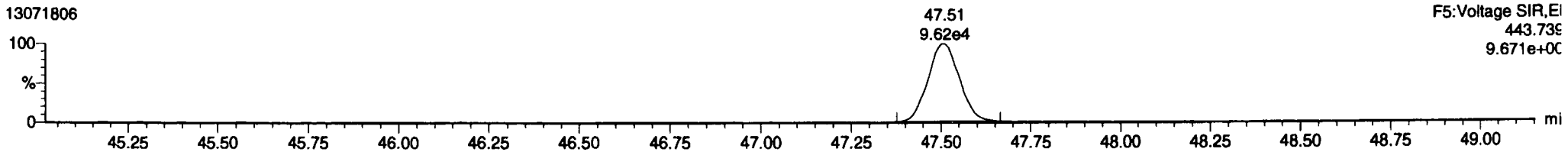
37CL-2378-TCDD



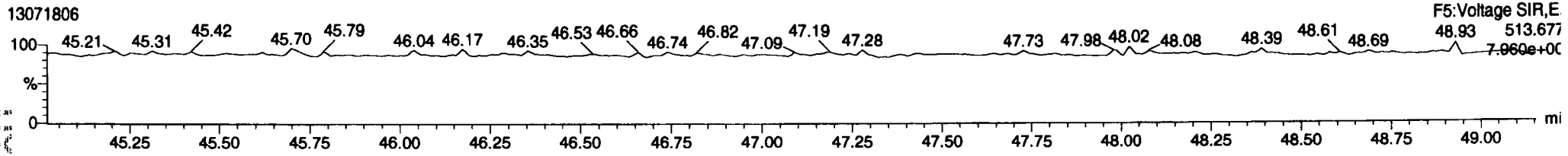
OCDF



OCDF



FUNCTION5 DCDPE



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Printed: Friday, July 19, 2013 10:16:53 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130716.mdb 18 Jul 2013 10:49:00
Calibration: 19 Jul 2013 10:15:25

ID: CS3, Name: 13071807, Date: 18-Jul-2013, Time: 17:17:44, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.048	1.001	6.84e4	9.69e4	0.867	0.706	0.770	803.3	NO	9.689	9.688
12378-PeCDF	30.189	1.001	3.90e5	2.68e5	0.875	1.454	1.550	2933.1	NO	49.335	49.335
23478-PeCDF	31.538	1.000	3.84e5	2.65e5	0.880	1.448	1.550	2987.8	NO	49.769	49.769
123478-HxCDF	35.209	1.001	3.16e5	2.69e5	1.048	1.174	1.240	1979.1	NO	49.045	49.045
234678-HxCDF	36.305	1.001	3.19e5	2.71e5	1.088	1.177	1.240	2034.7	NO	49.927	49.927
123678-HxCDF	35.363	1.001	3.26e5	2.75e5	1.025	1.184	1.240	2042.5	NO	48.862	48.863
123789-HxCDF	37.445	1.000	2.73e5	2.32e5	0.959	1.180	1.240	1755.8	NO	49.410	49.410
1234678-HpCDF	39.506	1.001	2.95e5	3.05e5	1.215	0.967	1.050	2385.2	NO	50.104	50.104
1234789-HpCDF	42.202	1.000	2.31e5	2.28e5	1.200	1.012	1.050	1649.5	NO	50.336	50.336
OCDF	47.502	1.006	3.45e5	4.09e5	1.064	0.842	0.890	2261.8	NO	97.779	97.780
2378-TCDD	26.691	1.001	5.79e4	7.37e4	0.994	0.786	0.770	843.7	NO	9.852	9.853
12378-PeCDD	31.789	1.001	2.87e5	1.83e5	0.976	1.566	1.550	2170.3	NO	49.095	49.096
123478-HxCDD	36.437	1.000	2.55e5	2.04e5	0.967	1.250	1.240	2464.6	NO	49.774	49.774
123678-HxCDD	36.569	1.000	2.49e5	2.01e5	0.902	1.236	1.240	2441.5	NO	50.163	50.163
123789-HxCDD	36.996	1.012	2.45e5	1.98e5	0.914	1.236	1.240	2360.9	NO	49.714	49.714
1234678-HpCDD	41.325	1.000	2.12e5	2.02e5	0.999	1.051	1.050	1935.5	NO	49.581	49.581
OCDD	47.224	1.000	3.29e5	3.73e5	0.979	0.882	0.890	3397.1	NO	99.036	99.035
13C-2378-TCDF	26.033	1.007	8.58e5	1.11e6	1.419	0.773	0.770	4436.9	NO		98.498
13C-12378-PeCDF	30.167	1.167	9.33e5	5.91e5	1.158	1.580	1.550	6118.8	NO		93.377
13C-23478-PeCDF	31.527	1.219	9.04e5	5.81e5	1.127	1.556	1.550	6045.9	NO		93.533
13C-123478-HxCDF	35.188	0.951	3.87e5	7.50e5	1.206	0.516	0.510	971.9	NO		99.650
13C-123678-HxCDF	35.341	0.956	4.08e5	7.93e5	1.266	0.515	0.510	1040.6	NO		100.288
13C-234678-HxCDF	36.284	0.981	3.68e5	7.17e5	1.155	0.513	0.510	920.0	NO		99.235
13C-123789-HxCDF	37.434	1.012	3.66e5	6.99e5	1.121	0.525	0.510	947.4	NO		100.449
13C-1234678-HpCDF	39.484	1.068	3.05e5	6.81e5	1.040	0.448	0.440	3228.2	NO		100.213
13C-1234789-HpCDF	42.191	1.141	2.31e5	5.28e5	0.789	0.438	0.440	2178.9	NO		101.696
13C-1234-TCDD	25.854	0.000	6.25e5	7.84e5	1.000	0.798	0.770	2382.7	NO		100.000
13C-2378-TCDD	26.661	1.031	5.89e5	7.56e5	0.962	0.779	0.770	2172.4	NO		99.192
13C-12378-PeCDD	31.768	1.229	6.02e5	3.78e5	0.746	1.593	1.550	7836.6	NO		93.233
13C-123478-HxCDD	36.426	0.985	5.32e5	4.23e5	1.003	1.258	1.240	3596.5	NO		100.624
13C-123678-HxCDD	36.557	0.988	5.50e5	4.44e5	1.052	1.241	1.240	3682.8	NO		99.874
13C-1234678-HpCDD	41.303	1.117	4.30e5	4.06e5	0.880	1.058	1.050	4094.1	NO		100.421
13C-OCDD	47.207	1.276	6.80e5	7.69e5	0.775	0.884	0.890	4434.2	NO		197.715

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Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:53 Pacific Daylight Time

ID: CS3, Name: 13071807, Date: 18-Jul-2013, Time: 17:17:44, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	36.985	0.000	5.19e5	4.27e5	1.000	1.213	1.240	3407.5	NO		100.000
Total-tetrafurans			2.22e5		0.867						31.305
Total-penta1			5.98e5								72.061
Total-pentafurans			1.17e6		0.877						148.959
Total-hexafurans			1.61e6		1.030						256.514
Total-heptafurans			5.26e5		1.207						100.621
Total-Furans			4.47e6		1.022						707.275
Total-tetradioxins			3.22e5		0.994						55.365
Total-pentadioxins			1.00e6		0.976						172.257
Total-hexadioxins			1.08e6		0.928						215.171
Total-heptadioxins			4.56e5		0.999						107.020
Total-Dioxins			3.18e6		0.962						648.848
Total-TEQ			7.65e6								1356.123
37CL-2378-TCDD	26.691	1.032	1.45e5		1.091			1342.5			9.412
FUNCTION1 PFK			1.69e5								
FUNCTION2 PFK			1.33e5								0.000
FUNCTION3 PFK			9.02e5								0.000
FUNCTION4 PFK			1.79e5								
FUNCTION5 PFK			4.36e3								
FUNCTION1 HXCDPE			0.00e0								
FUNCTION1 HPCDPE			6.00e2								0.000
FUNCTION2 HPCDPE			8.52e2								0.000
FUNCTION3 OCDPE			0.00e0								
FUNCTION4 NCDPE			0.00e0								
FUNCTION5 DCDPE			0.00e0								

Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:53 Pacific Daylight Time

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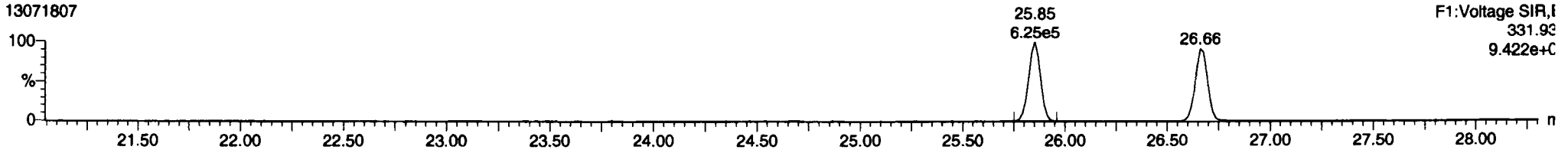
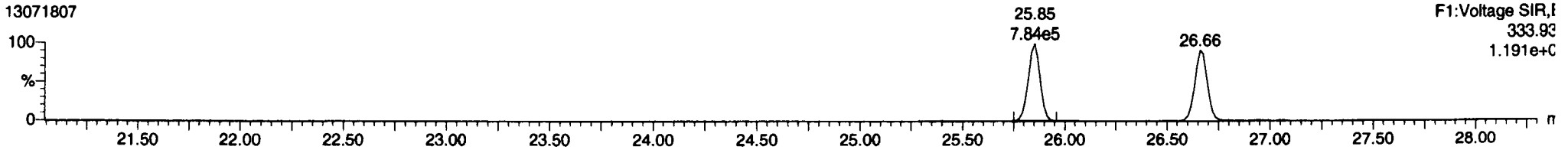
Calibration: 19 Jul 2013 10:15:25

ID: CS3, Name: 13071807, Date: 18-Jul-2013, Time: 17:17:44, Conditions: AUTOSPEC01, User: pk

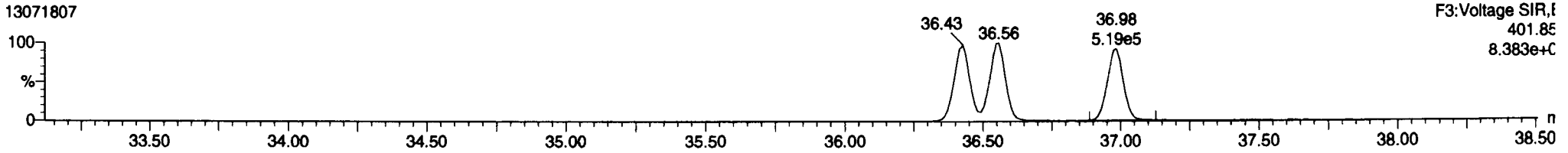
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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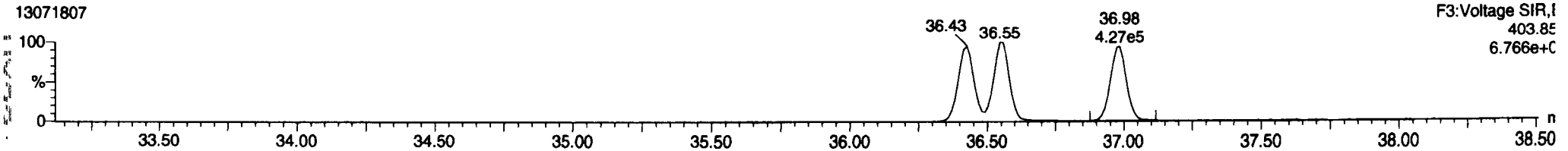

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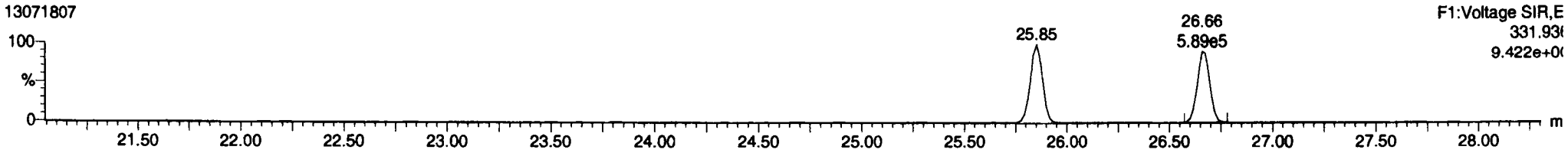
ID: CS3, Name: 13071807, Date: 18-Jul-2013, Time: 17:17:44, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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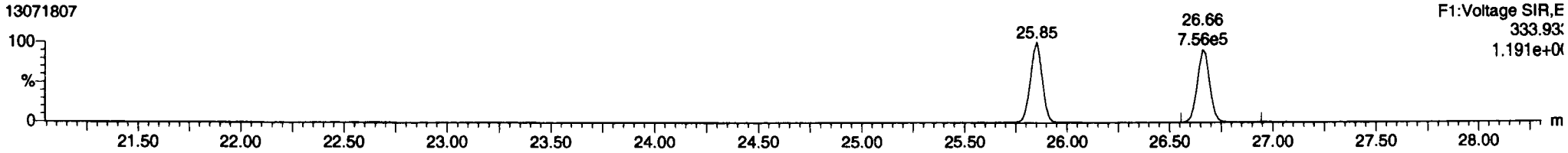
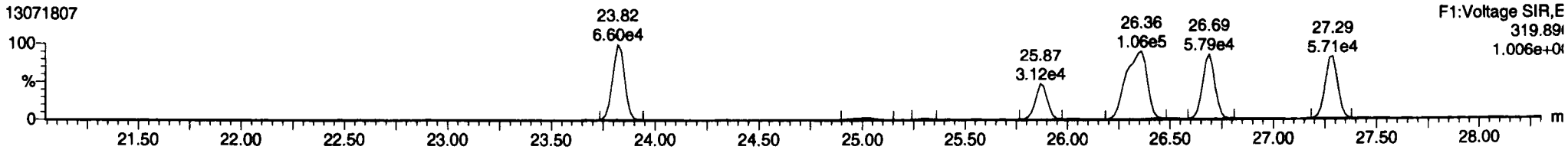
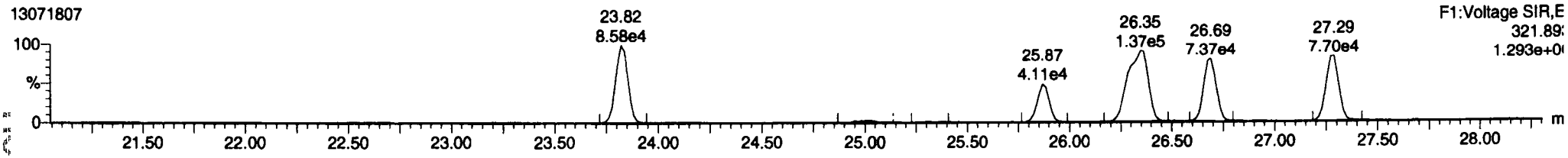


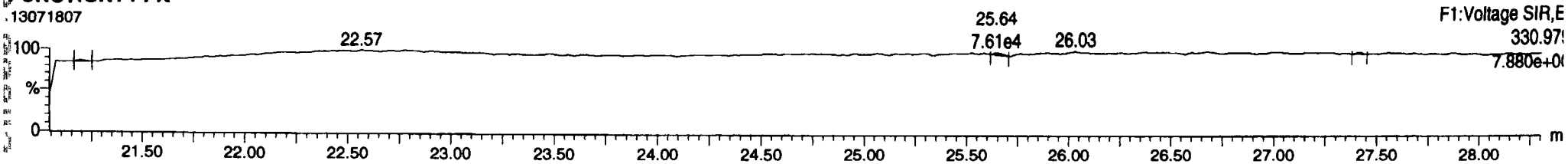
Total-tetradioxins



Total-tetradioxins



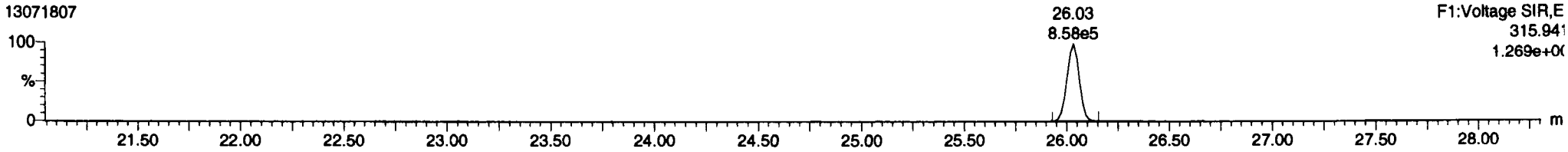
FUNCTION1 PFK



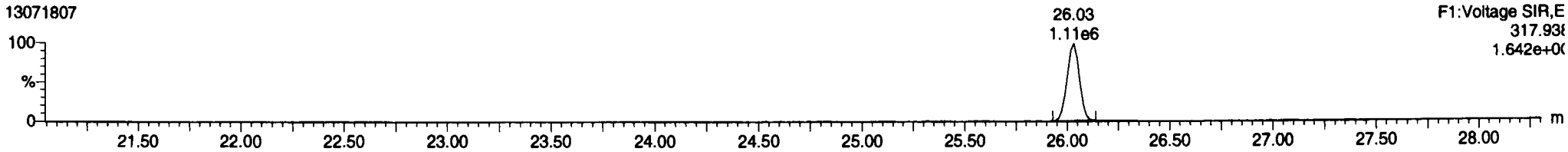
Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:53 Pacific Daylight Time

ID: CS3, Name: 13071807, Date: 18-Jul-2013, Time: 17:17:44, Conditions: AUTOSPEC01, User: pk

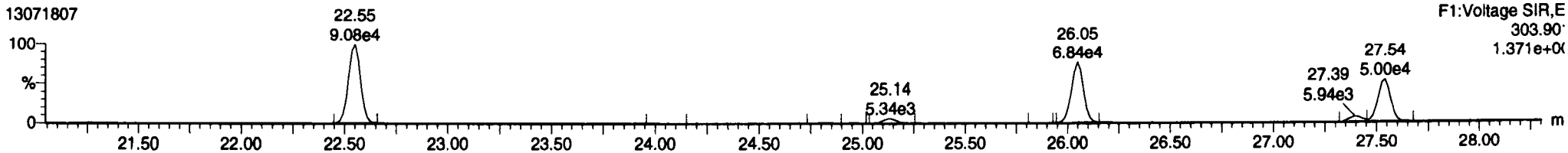
13C-2378-TCDF



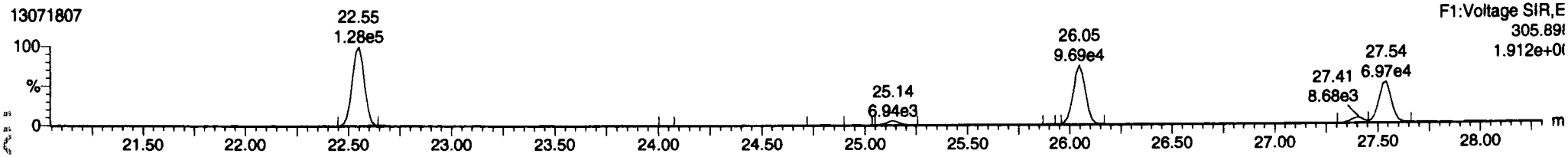
13C-2378-TCDF



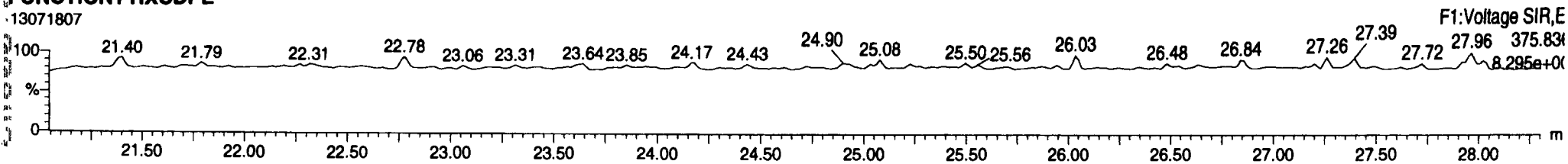
Total-tetrafurans



Total-tetrafurans



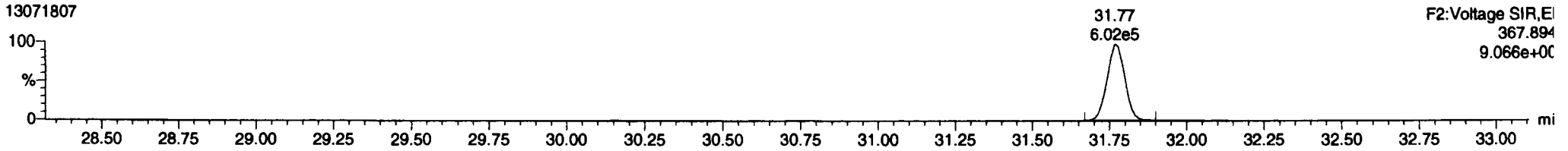
FUNCTION1 HXCDPE



Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:16:53 Pacific Daylight Time

ID: CS3, Name: 13071807, Date: 18-Jul-2013, Time: 17:17:44, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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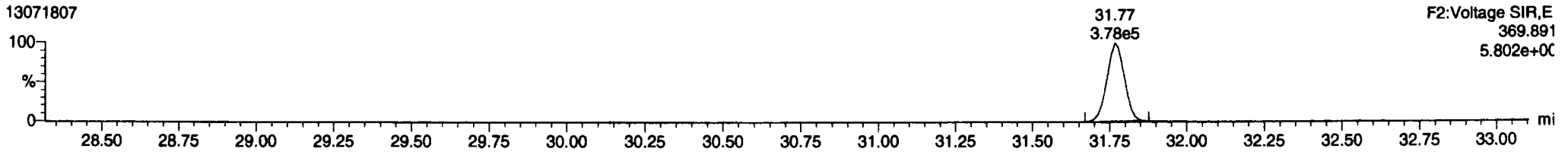
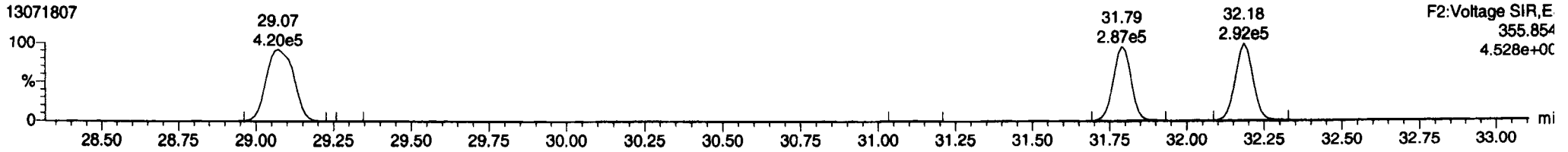
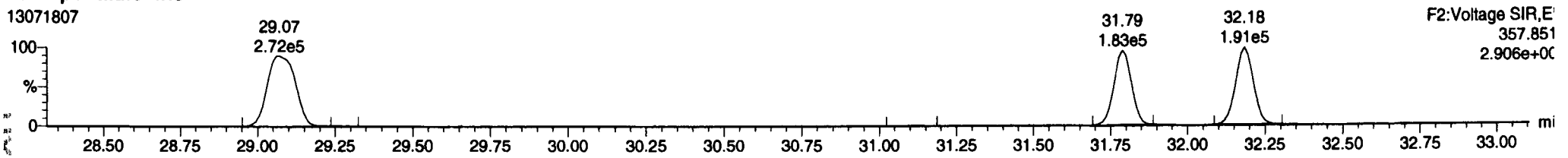


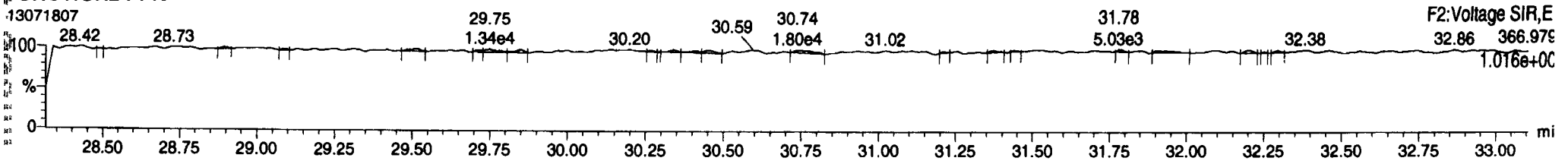
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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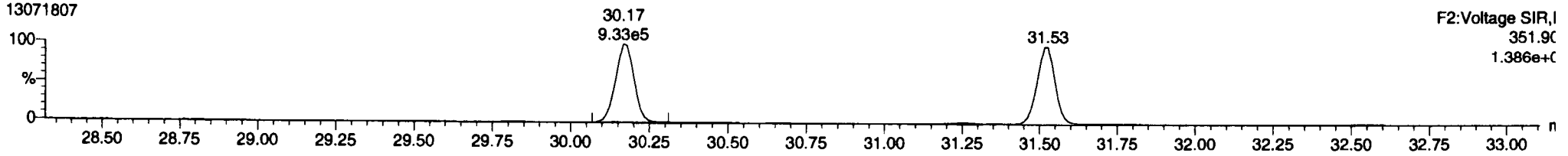
13C-12378-PeCDF



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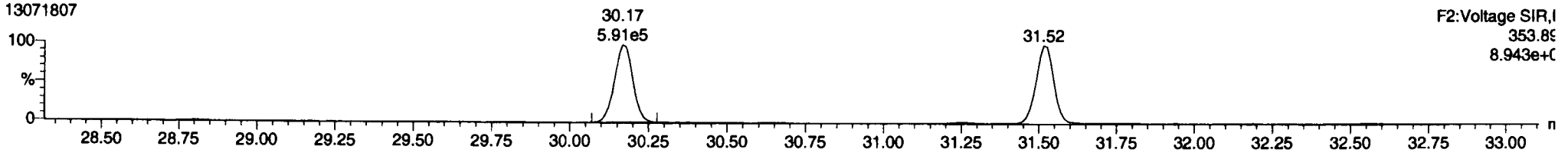

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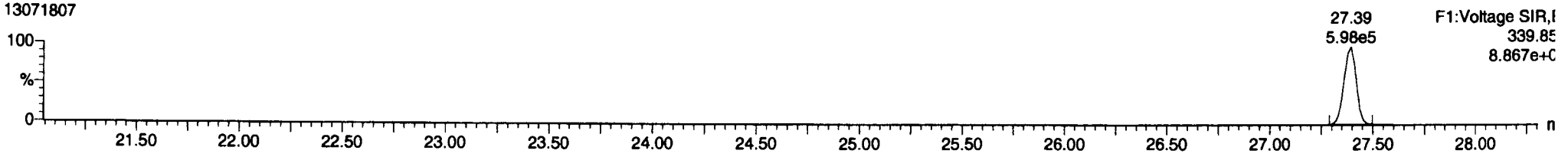
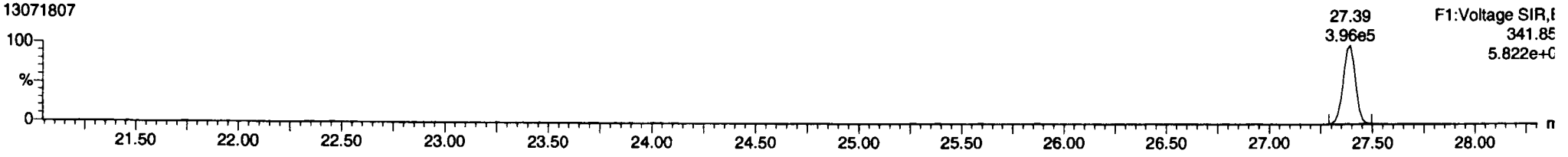
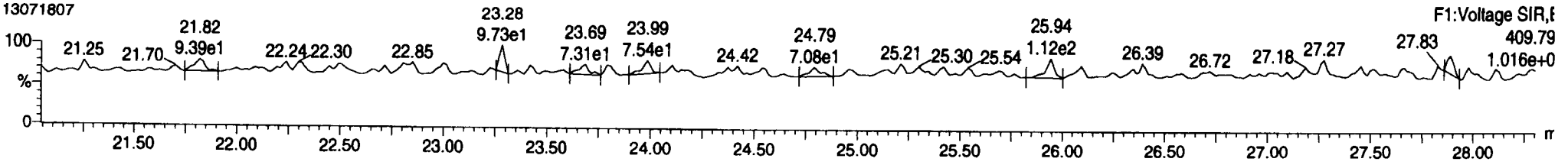


Total-penta1



FUNCTION1 HPCDPE



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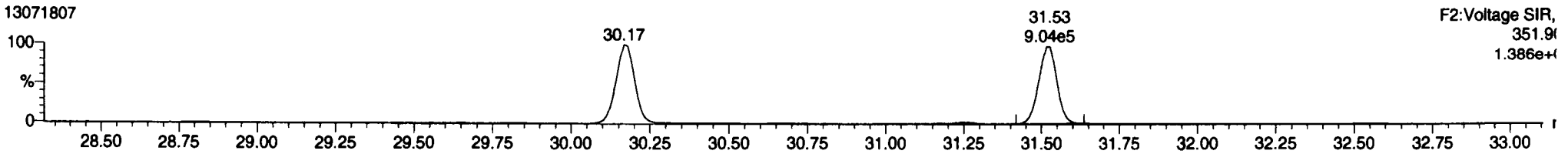
13C-23478-PeCDF



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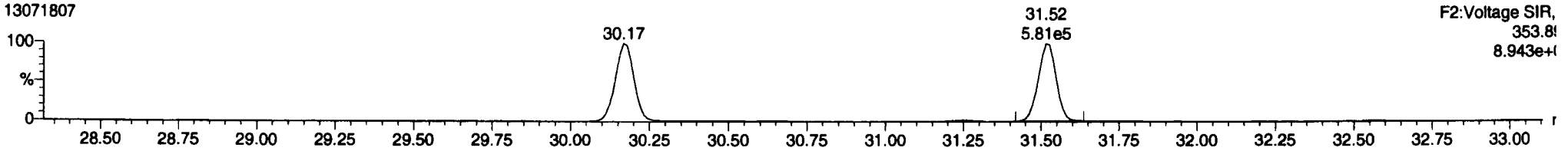
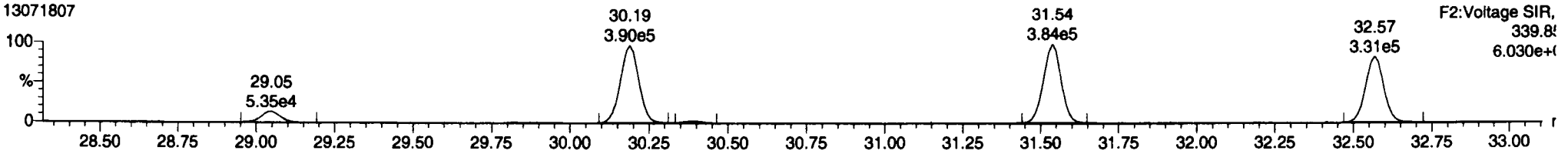
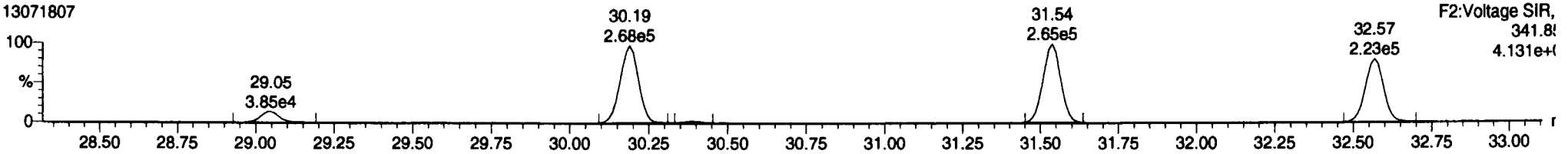


Total-pentafurans



Total-pentafurans



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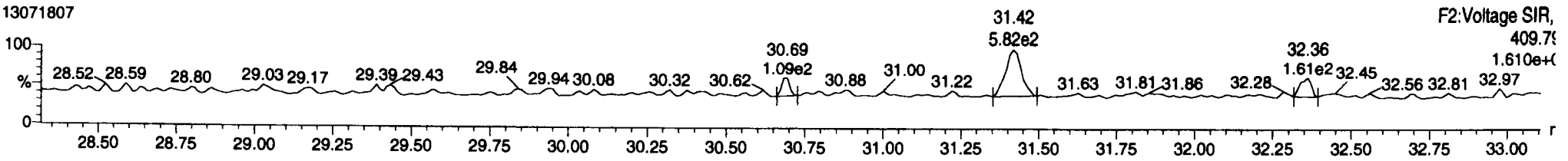

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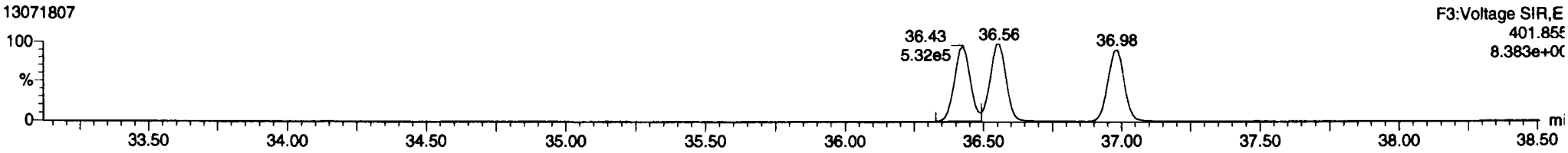
13C-123478-HxCDD



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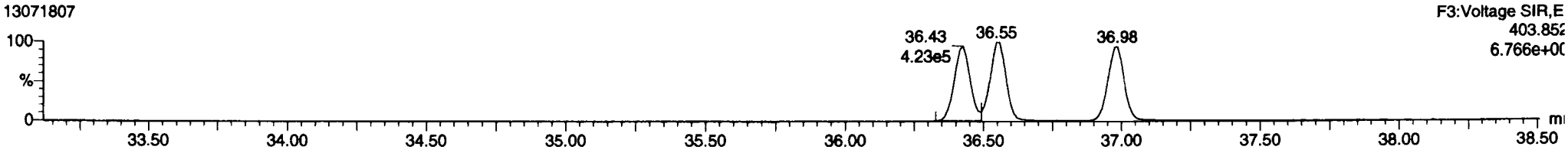
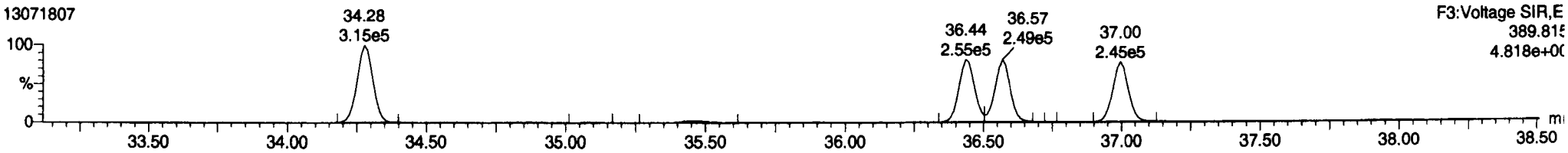
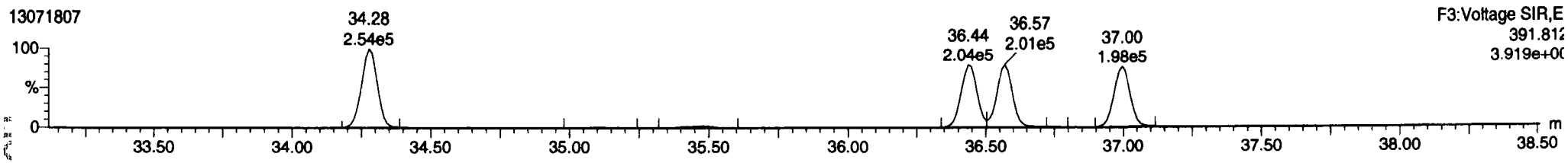


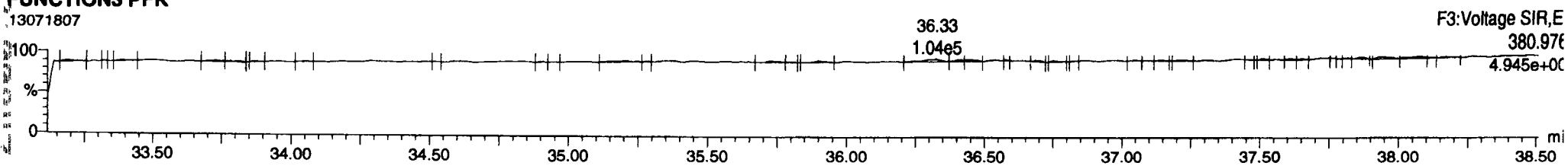
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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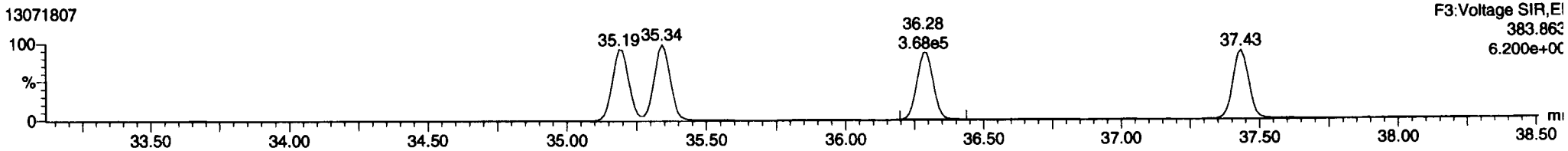
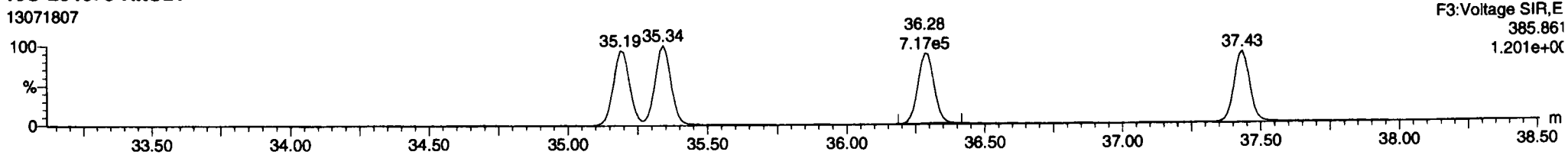
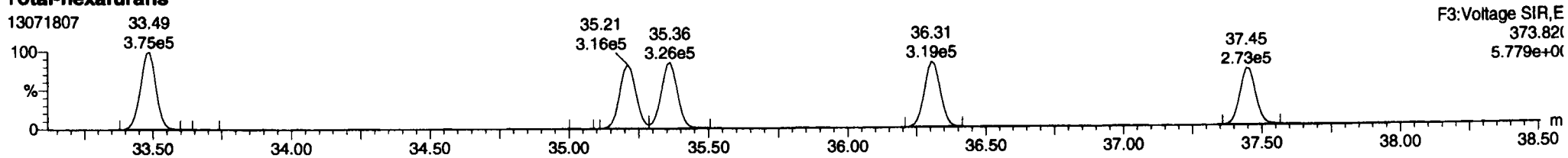
13C-234678-HxCDF



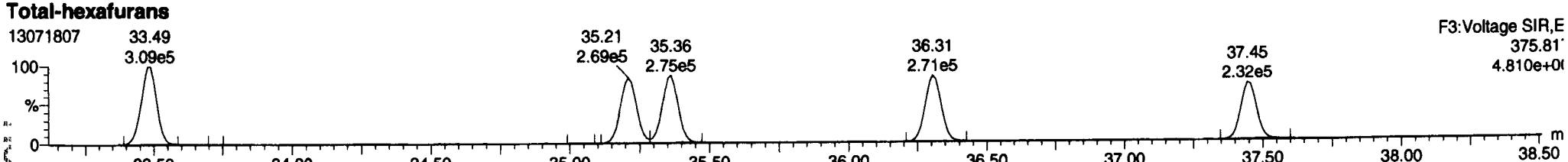
13C-234678-HxCDF



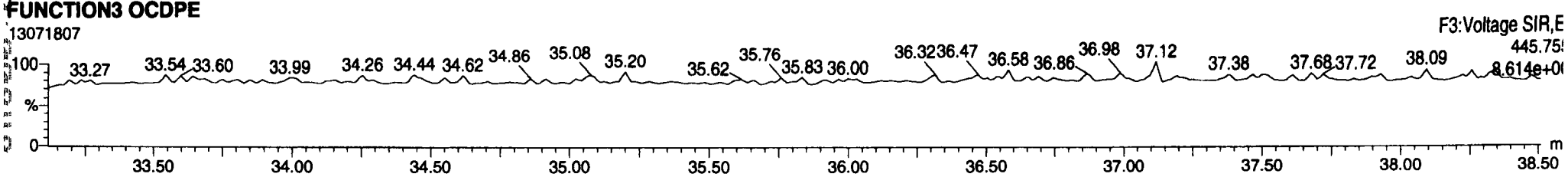
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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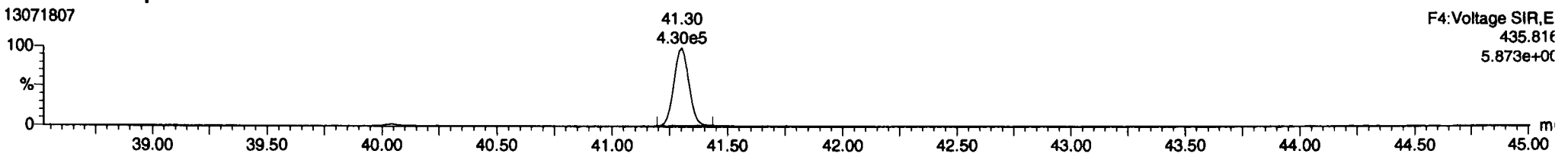
ID: CS3, Name: 13071807, Date: 18-Jul-2013, Time: 17:17:44, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD



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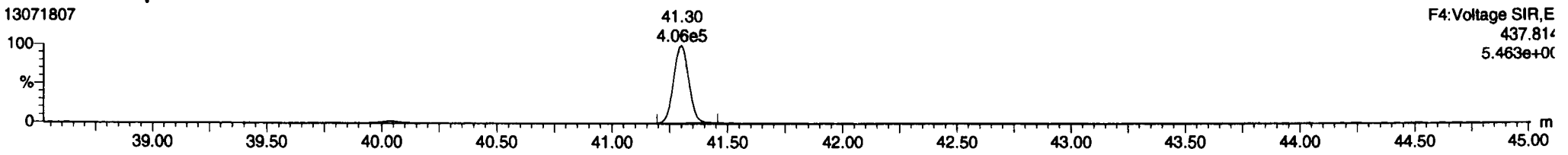
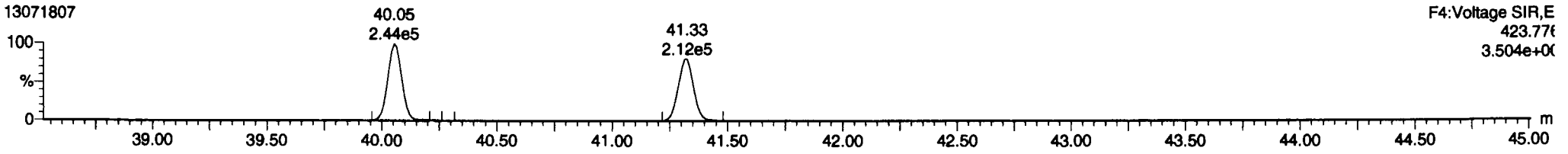
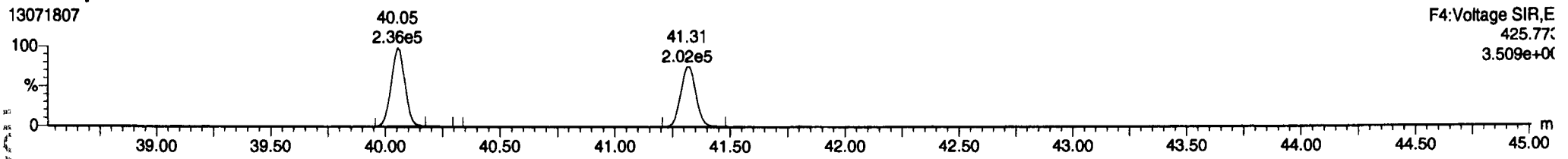


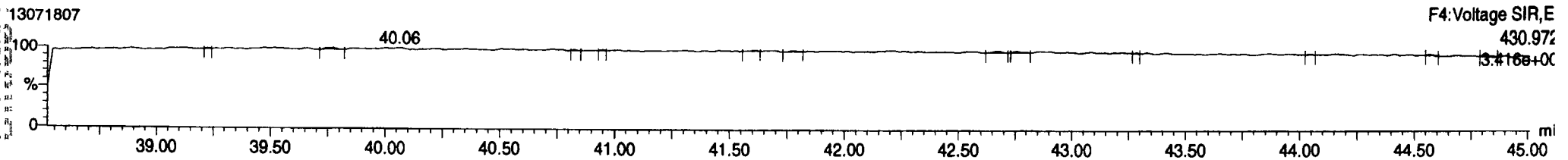
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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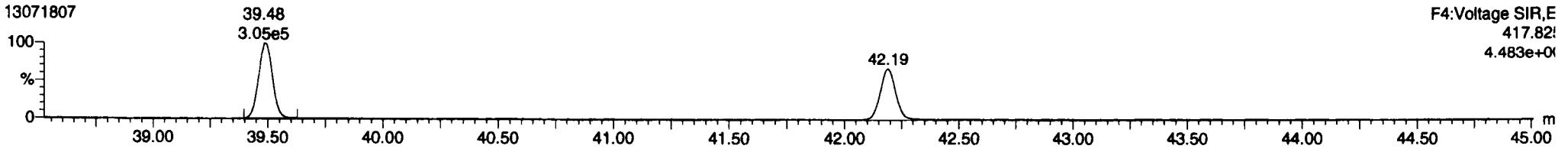
Printed: Friday, July 19, 2013 10:16:53 Pacific Daylight Time

ID: CS3, Name: 13071807, Date: 18-Jul-2013, Time: 17:17:44, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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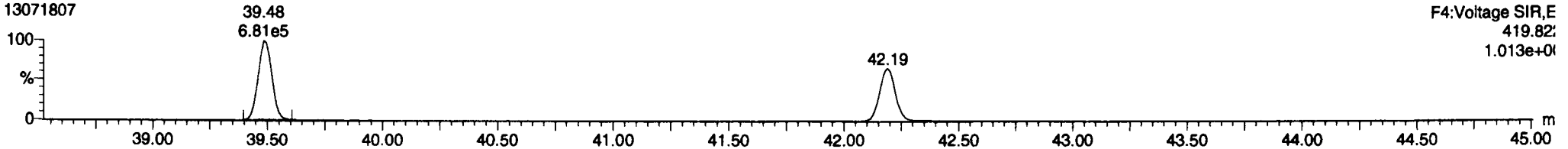
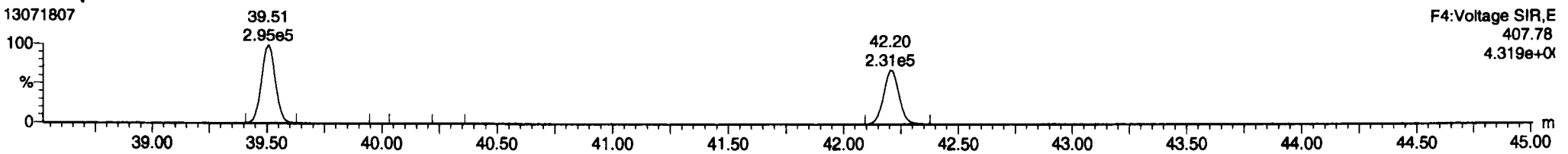


Total-heptafurans



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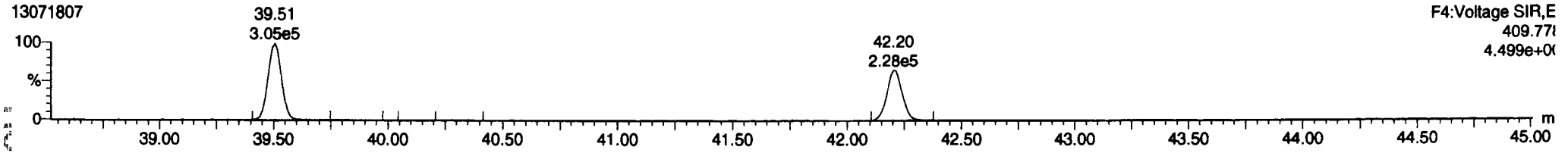
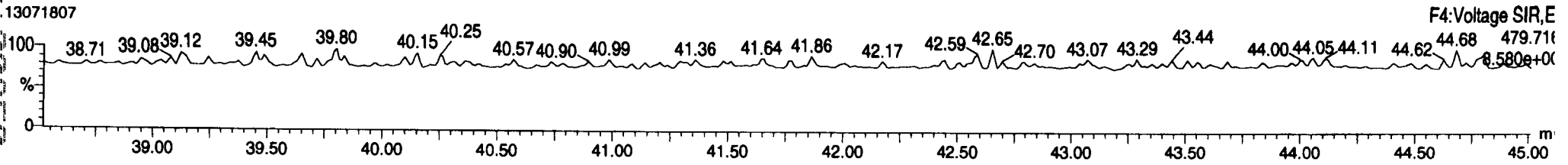


FUNCTION4 NCDPE



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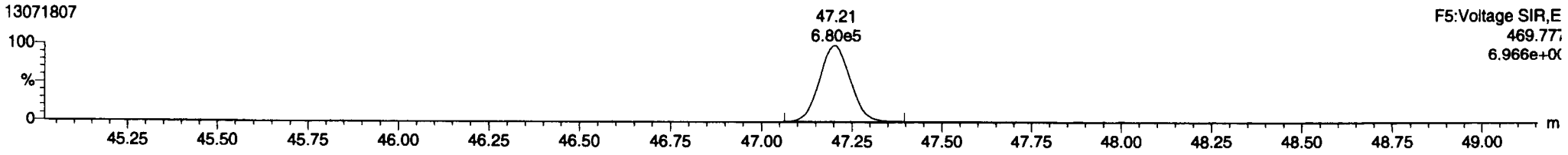
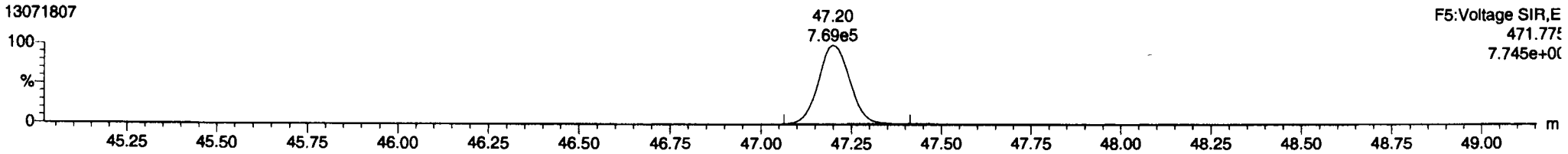
ID: CS3, Name: 13071807, Date: 18-Jul-2013, Time: 17:17:44, Conditions: AUTOSPEC01, User: pk

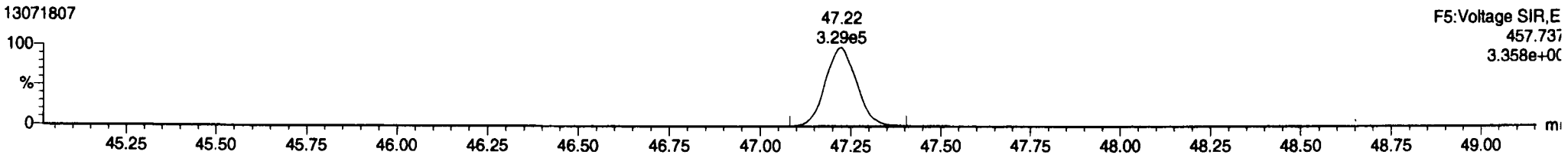
13C-OCDD



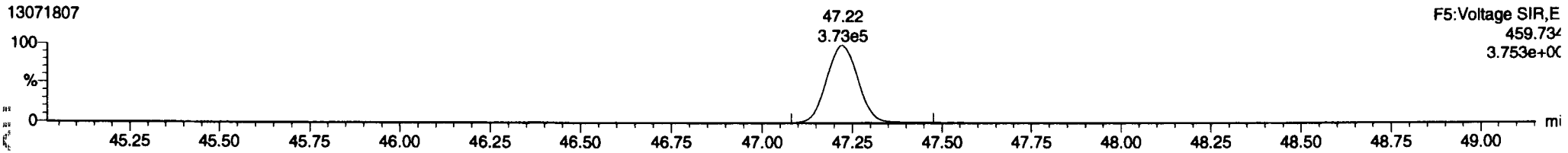
13C-OCDD



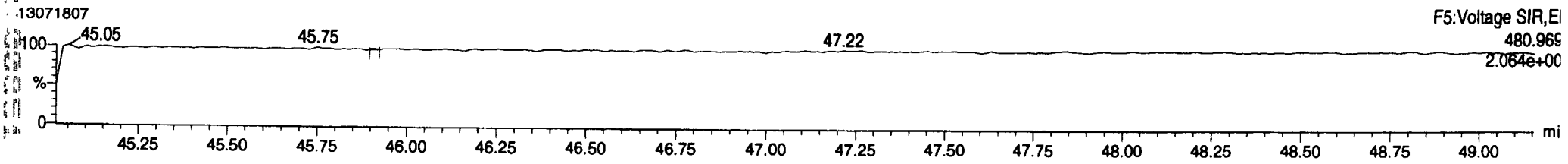
OCDD



OCDD



FUNCTION5 PFK



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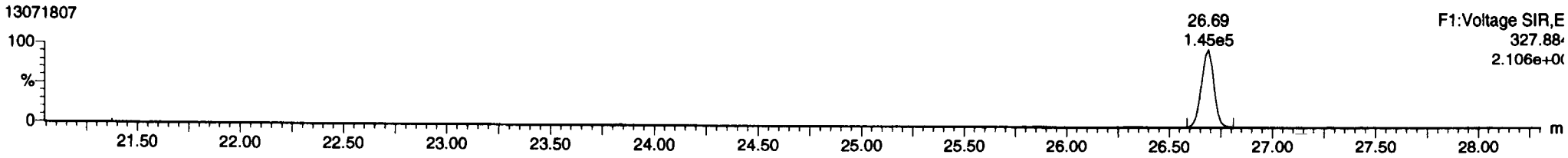
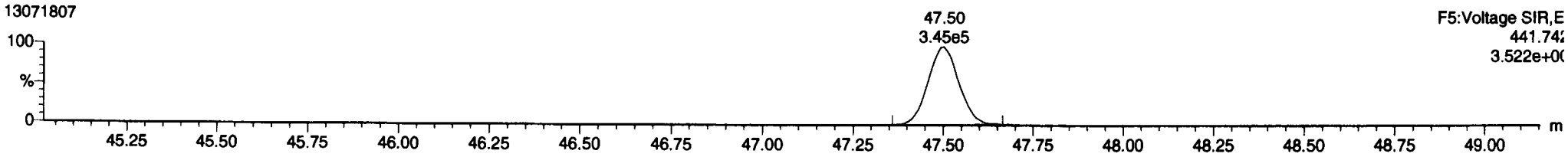
ID: CS3, Name: 13071807, Date: 18-Jul-2013, Time: 17:17:44, Conditions: AUTOSPEC01, User: pk

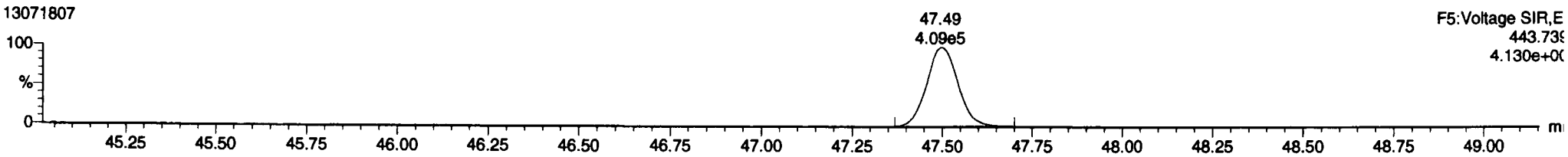
37CL-2378-TCDD



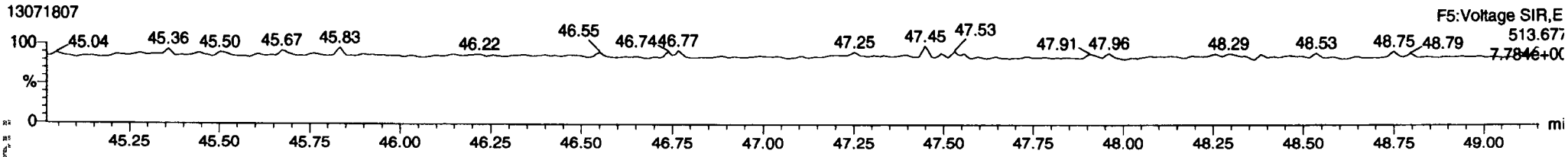
OCDF



OCDF



FUNCTION5 DCDPE



Dataset: P:\DIOXIN8290.PRO\130716IC.qld
Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:17:03 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130716.mdb 18 Jul 2013 10:49:00
Calibration: 19 Jul 2013 10:15:25

ID: CS4, Name: 13071808, Date: 18-Jul-2013, Time: 18:09:59, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.063	1.001	3.07e5	4.40e5	0.867	0.698	0.770	3135.8	NO	39.838	39.838
12378-PeCDF	30.200	1.000	1.81e6	1.20e6	0.875	1.506	1.550	10650.2	NO	201.927	201.927
23478-PeCDF	31.548	1.000	1.78e6	1.20e6	0.880	1.483	1.550	10577.7	NO	204.507	204.507
123478-HxCDF	35.220	1.000	1.46e6	1.21e6	1.048	1.199	1.240	7544.7	NO	199.228	199.228
234678-HxCDF	36.316	1.000	1.46e6	1.21e6	1.088	1.207	1.240	7243.5	NO	206.046	206.046
123678-HxCDF	35.374	1.001	1.50e6	1.27e6	1.025	1.179	1.240	7840.1	NO	201.958	201.958
123789-HxCDF	37.467	1.001	1.23e6	1.05e6	0.959	1.178	1.240	6317.1	NO	202.643	202.643
1234678-HpCDF	39.516	1.000	1.35e6	1.36e6	1.215	0.992	1.050	7522.7	NO	201.194	201.194
1234789-HpCDF	42.223	1.000	9.95e5	1.02e6	1.200	0.979	1.050	4820.2	NO	204.545	204.544
OCDF	47.520	1.006	1.60e6	1.90e6	1.064	0.845	0.890	8451.2	NO	408.890	408.890
2378-TCDD	26.705	1.001	2.56e5	3.29e5	0.994	0.779	0.770	5223.0	NO	40.778	40.778
12378-PeCDD	31.800	1.001	1.29e6	8.41e5	0.976	1.531	1.550	15522.9	NO	196.972	196.972
123478-HxCDD	36.447	1.000	1.14e6	9.28e5	0.967	1.232	1.240	7566.0	NO	199.417	199.417
123678-HxCDD	36.579	1.000	1.12e6	9.02e5	0.902	1.245	1.240	7282.9	NO	201.929	201.929
123789-HxCDD	37.006	1.012	1.09e6	8.83e5	0.914	1.237	1.240	7187.6	NO	197.800	197.800
1234678-HpCDD	41.336	1.000	9.29e5	8.95e5	0.999	1.038	1.050	7794.3	NO	197.918	197.918
OCDD	47.242	1.000	1.49e6	1.66e6	0.979	0.897	0.890	7672.0	NO	399.813	399.813
13C-2378-TCDF	26.048	1.007	9.42e5	1.22e6	1.419	0.772	0.770	4539.5	NO		99.075
13C-12378-PeCDF	30.189	1.167	1.04e6	6.68e5	1.158	1.553	1.550	6248.4	NO		95.772
13C-23478-PeCDF	31.537	1.219	1.01e6	6.45e5	1.127	1.567	1.550	6065.6	NO		95.557
13C-123478-HxCDF	35.209	0.952	4.35e5	8.43e5	1.206	0.516	0.510	2204.0	NO		100.926
13C-123678-HxCDF	35.352	0.956	4.59e5	8.82e5	1.266	0.520	0.510	2349.5	NO		100.887
13C-234678-HxCDF	36.305	0.981	4.06e5	7.83e5	1.155	0.519	0.510	2036.7	NO		98.053
13C-123789-HxCDF	37.445	1.012	4.00e5	7.71e5	1.121	0.519	0.510	2084.6	NO		99.537
13C-1234678-HpCDF	39.505	1.068	3.41e5	7.66e5	1.040	0.446	0.440	3719.7	NO		101.381
13C-1234789-HpCDF	42.202	1.141	2.54e5	5.66e5	0.789	0.448	0.440	2387.6	NO		98.916
13C-1234-TCDD	25.868	0.000	6.80e5	8.58e5	1.000	0.792	0.770	2799.5	NO		100.000
13C-2378-TCDD	26.675	1.031	6.33e5	8.12e5	0.962	0.779	0.770	2574.5	NO		97.672
13C-12378-PeCDD	31.778	1.229	6.77e5	4.30e5	0.746	1.574	1.550	8697.6	NO		96.413
13C-123478-HxCDD	36.437	0.985	5.95e5	4.78e5	1.003	1.244	1.240	3345.8	NO		101.957
13C-123678-HxCDD	36.568	0.988	6.12e5	5.00e5	1.052	1.224	1.240	3432.6	NO		100.683
13C-1234678-HpCDD	41.314	1.117	4.72e5	4.50e5	0.880	1.049	1.050	4465.7	NO		99.814
13C-OCDD	47.224	1.276	7.50e5	8.60e5	0.775	0.872	0.890	5805.0	NO		197.976

Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:17:03 Pacific Daylight Time

ID: CS4, Name: 13071808, Date: 18-Jul-2013, Time: 18:09:59, Conditions: AUTOSPEC01, User: pk

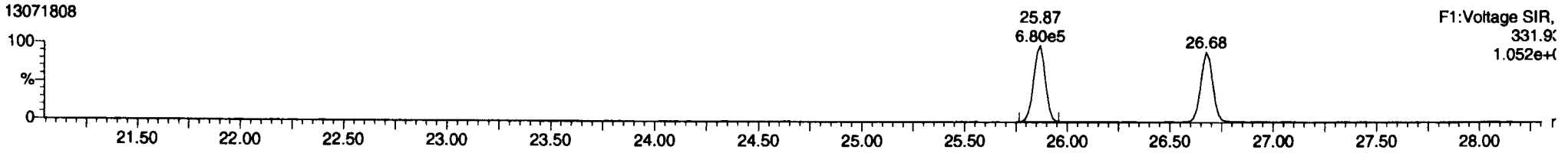
13C-123789-HxCDD	36.995	0.000	5.81e5	4.69e5	1.000	1.240	1.240	3213.2	NO		100.000
Total-tetrafurans			3.13e5		0.867						40.570
Total-penta1			3.31e2								0.058
Total-pentafurans			3.66e6		0.877						413.734
Total-hexafurans			5.66e6		1.030						811.065
Total-heptafurans			2.34e6		1.207						406.060
Total-Furans			1.36e7		1.022						2080.376
Total-tetradioxins			2.64e5		0.994						41.978
Total-pentadioxins			1.29e6		0.976						197.406
Total-hexadioxins			3.36e6		0.928						599.175
Total-heptadioxins			9.33e5		0.999						198.835
Total-Dioxins			7.34e6		0.962						1437.208
Total-TEQ			2.09e7								3517.584
37CL-2378-TCDD	26.705	1.032	6.42e5		1.091			5682.6			38.248
FUNCTION1 PFK			4.90e7								
FUNCTION2 PFK			2.45e6								0.000
FUNCTION3 PFK			9.08e5								0.000
FUNCTION4 PFK			0.00e0								
FUNCTION5 PFK			3.62e6								
FUNCTION1 HXCDPE			0.00e0								
FUNCTION1 HPCDPE			2.00e2								0.000
FUNCTION2 HPCDPE			2.80e3								0.000
FUNCTION3 OCDPE			0.00e0								
FUNCTION4 NCDPE			0.00e0								
FUNCTION5 DCDPE			0.00e0								

Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:17:03 Pacific Daylight Time

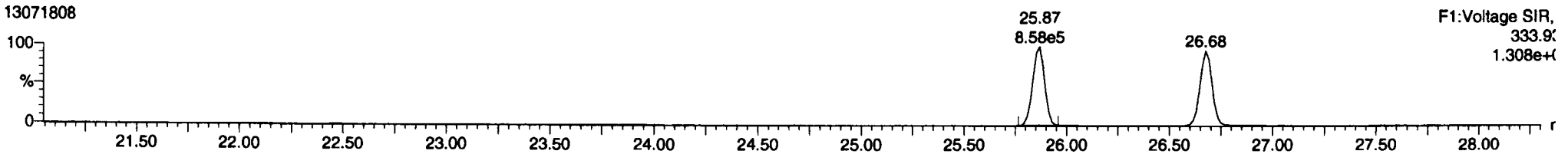
Method: P:\DIOXIN8290.PRO\MethDB\DioxIn130716.mdb 18 Jul 2013 10:49:00
Calibration: 19 Jul 2013 10:15:25

ID: CS4, Name: 13071808, Date: 18-Jul-2013, Time: 18:09:59, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



13C-1234-TCDD



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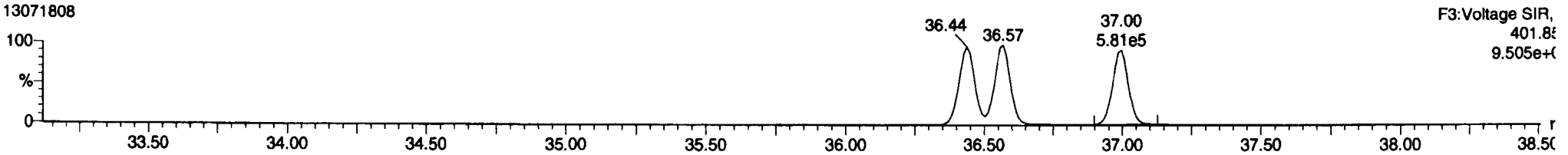

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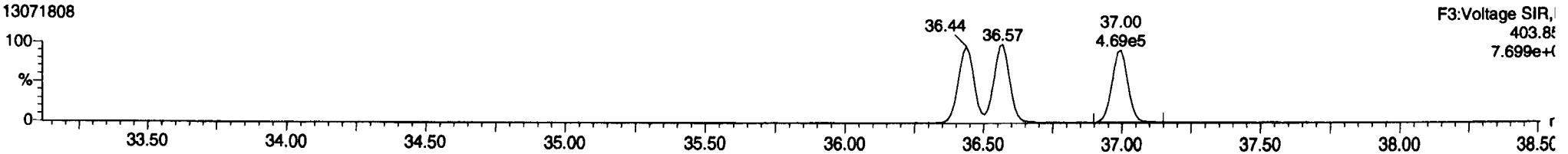

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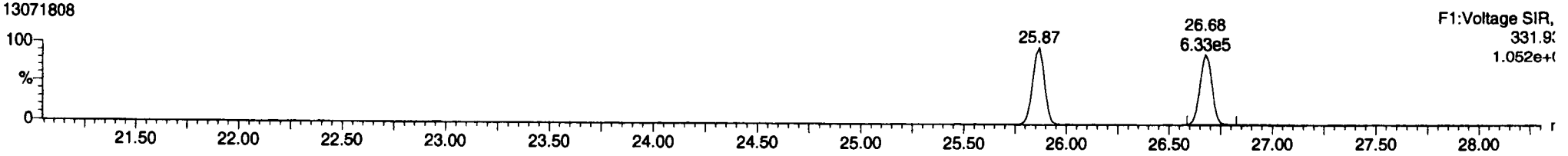
ID: CS4, Name: 13071808, Date: 18-Jul-2013, Time: 18:09:59, Conditions: AUTOSPEC01, User: pk

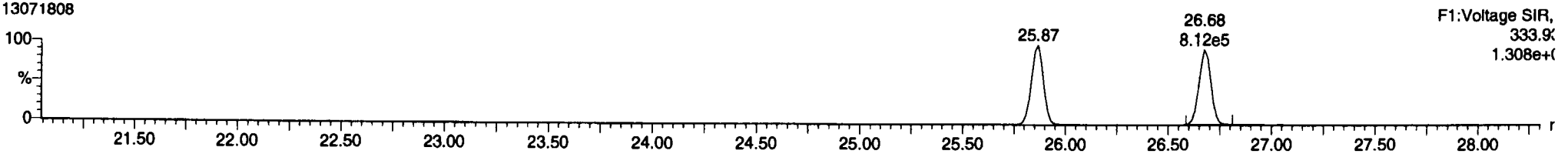
13C-2378-TCDD

13071808



13C-2378-TCDD

13071808



Total-tetradioxins

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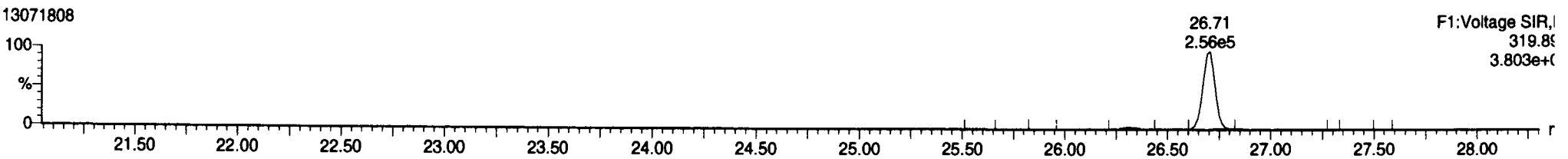
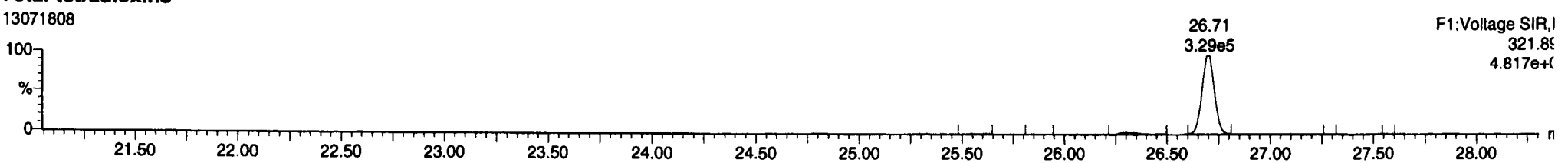


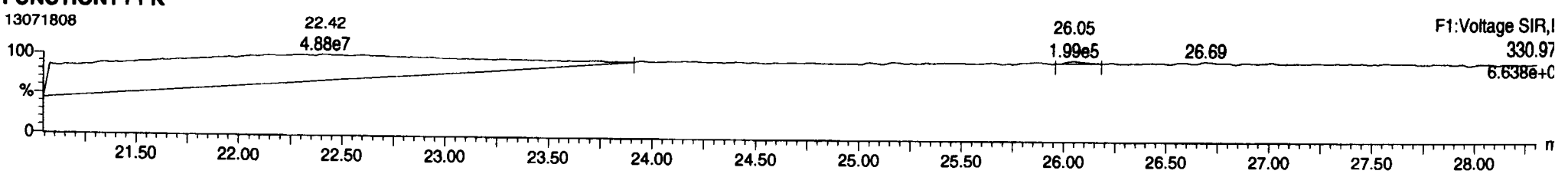
Total-tetradioxins

13071808



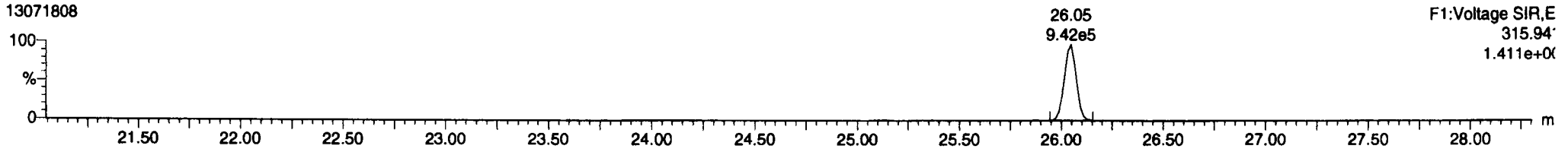
FUNCTION1 PFK

13071808

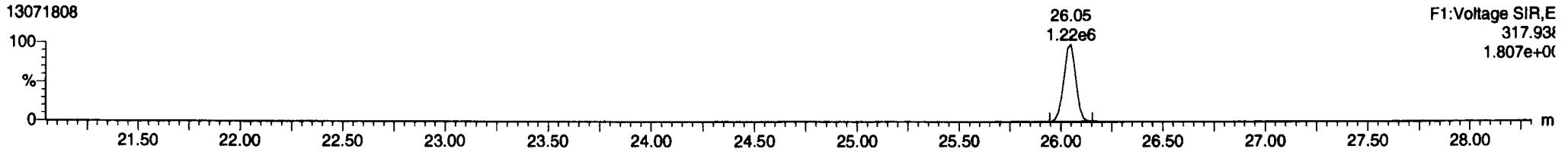


ID: CS4, Name: 13071808, Date: 18-Jul-2013, Time: 18:09:59, Conditions: AUTOSPEC01, User: pk

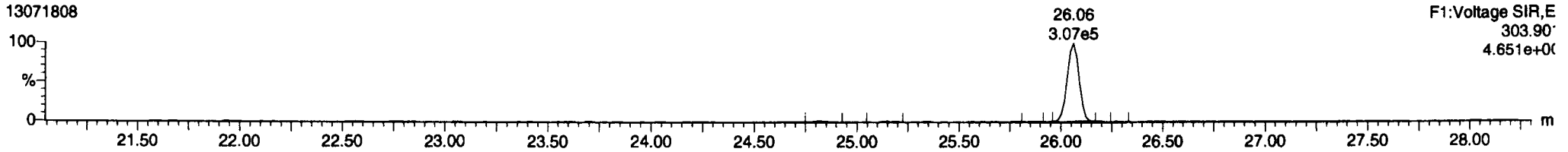
13C-2378-TCDF



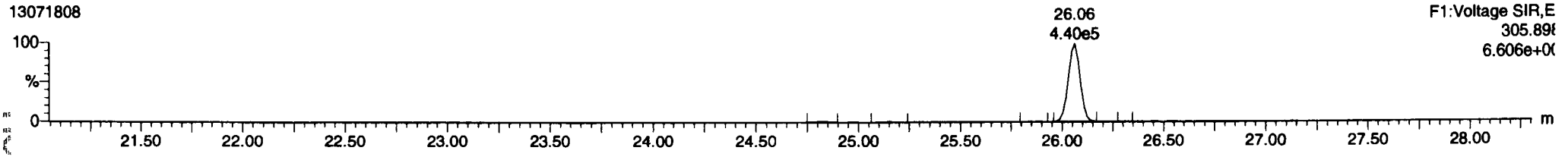
13C-2378-TCDF



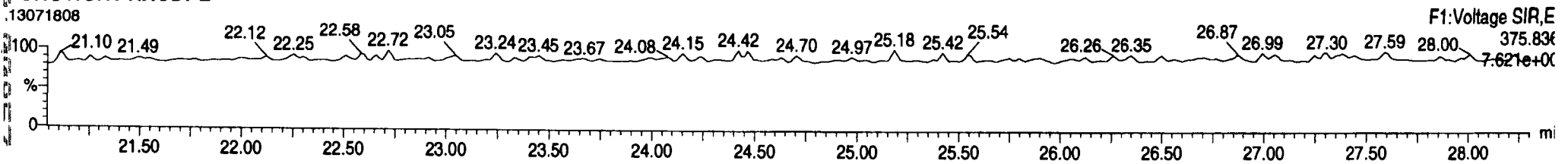
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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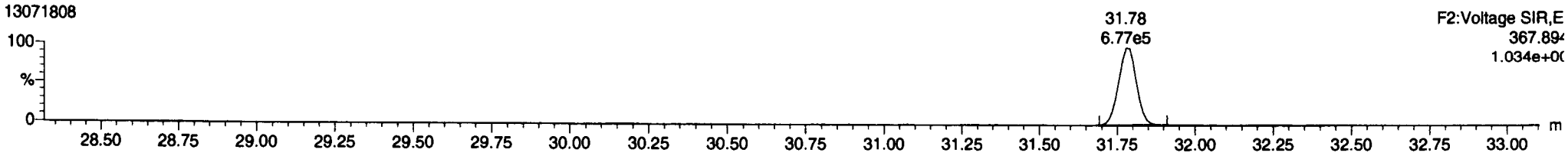
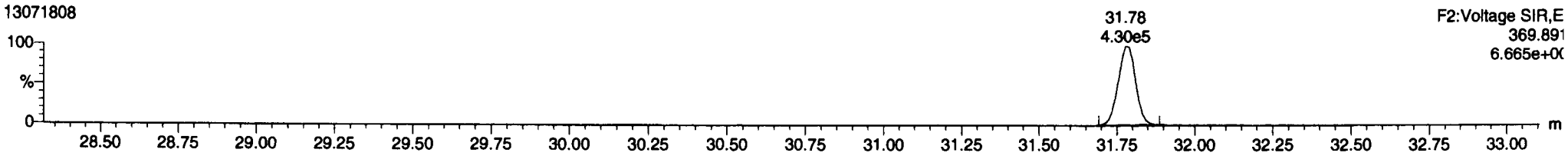
Printed: Friday, July 19, 2013 10:17:03 Pacific Daylight Time

ID: CS4, Name: 13071808, Date: 18-Jul-2013, Time: 18:09:59, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



13C-12378-PeCDD



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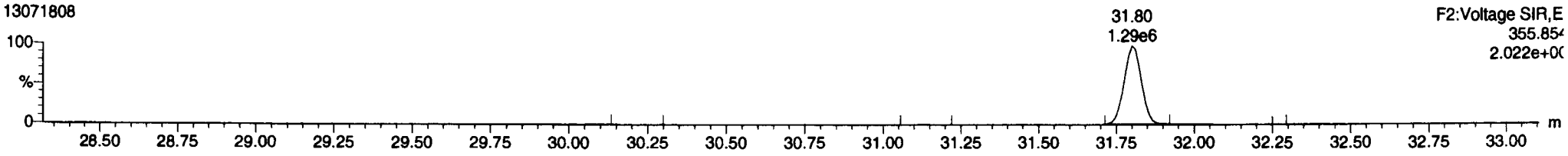

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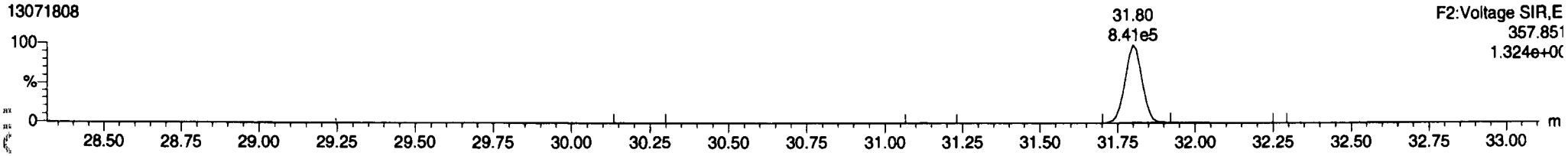

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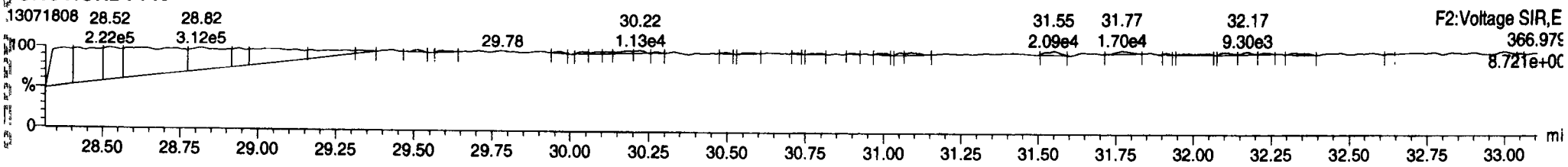

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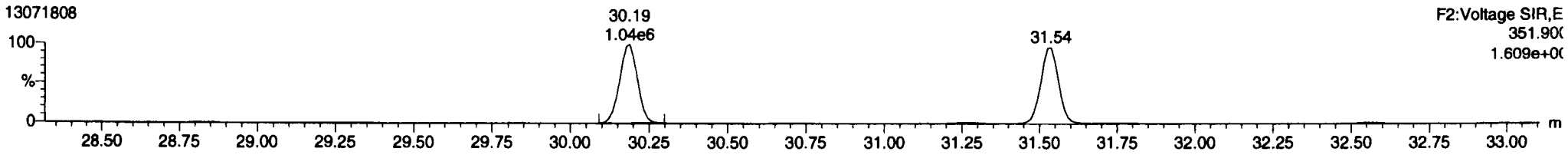
13C-12378-PeCDF



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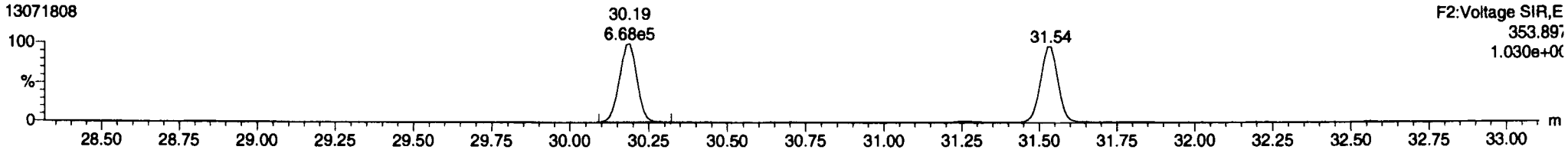

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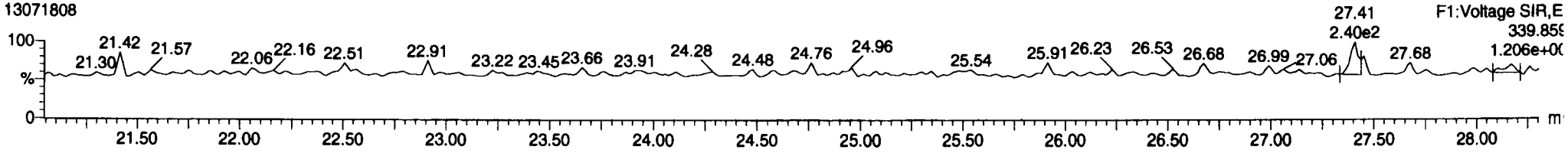

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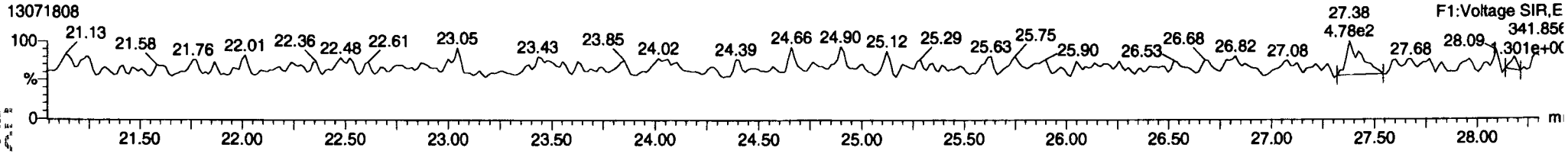

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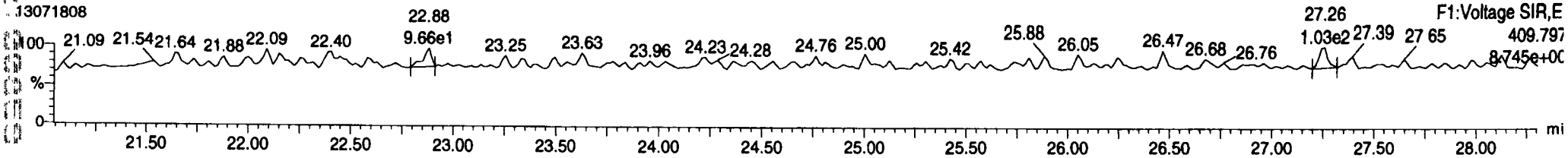

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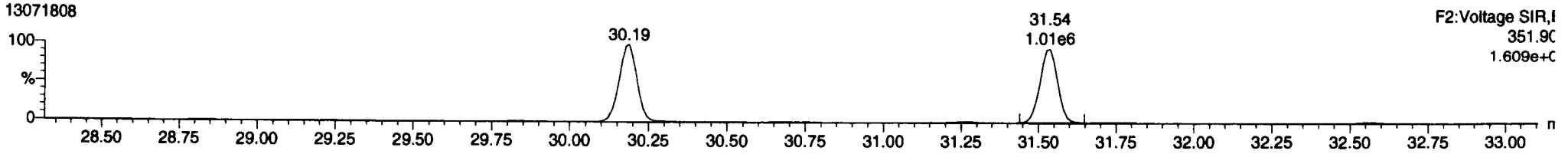
ID: CS4, Name: 13071808, Date: 18-Jul-2013, Time: 18:09:59, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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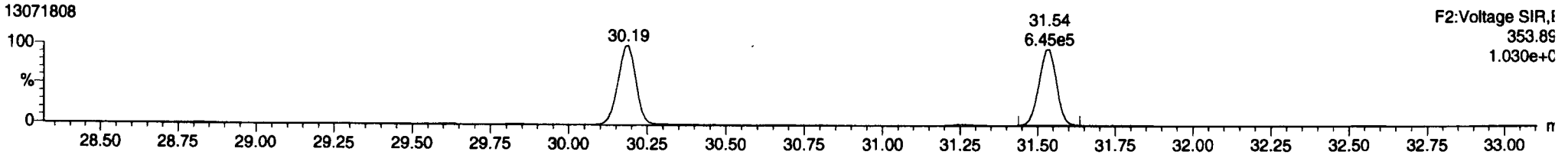
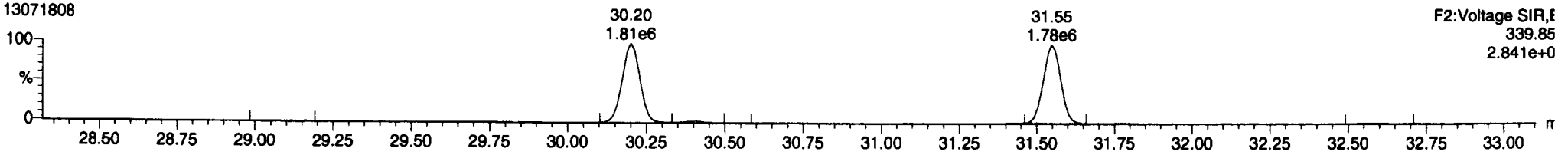


Total-pentafurans



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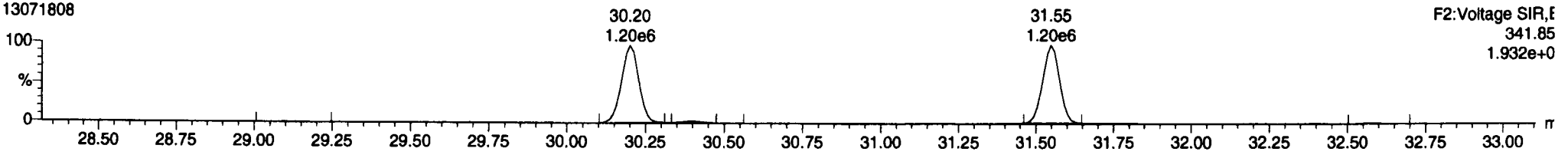
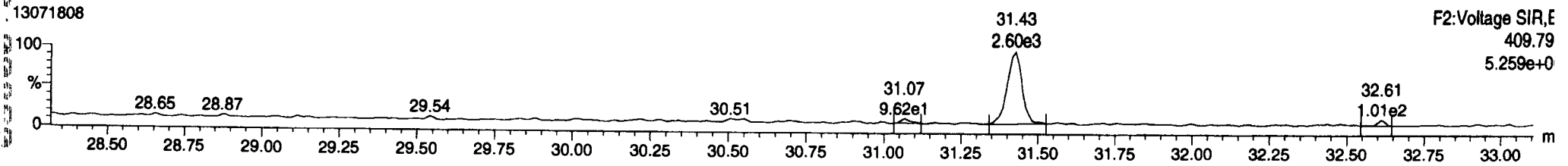


FUNCTION2 HPCDPE



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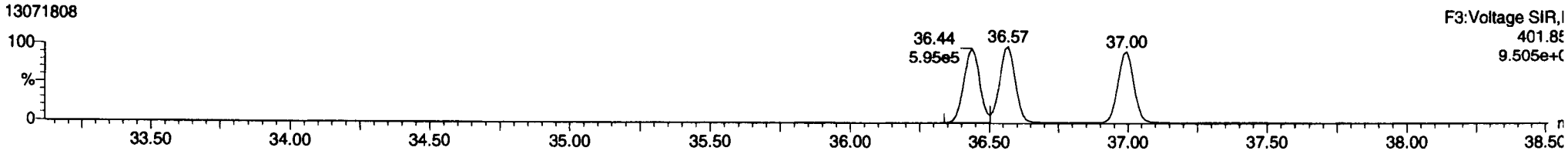
13C-123478-HxCDD



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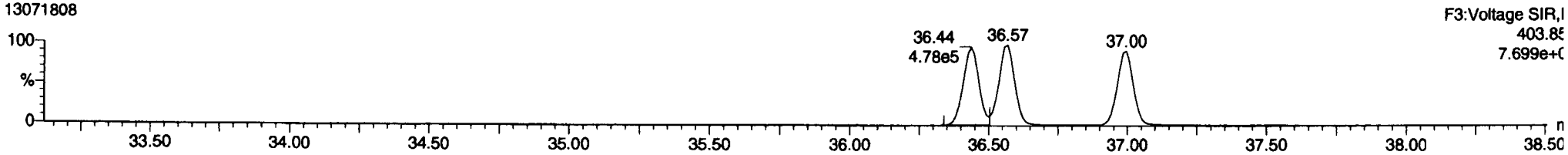
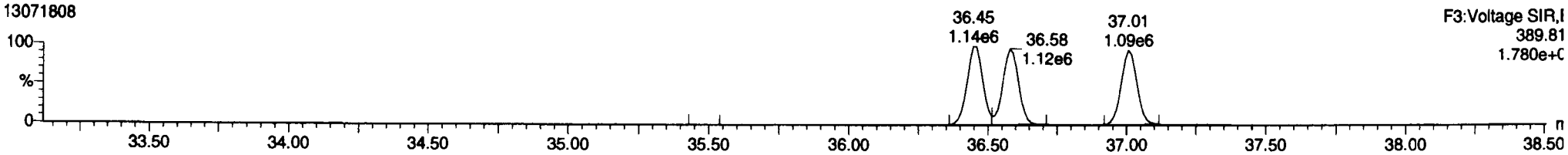
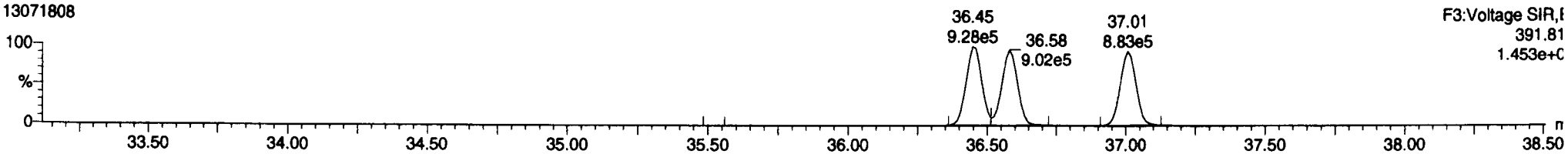


Total-hexadioxins



Total-hexadioxins



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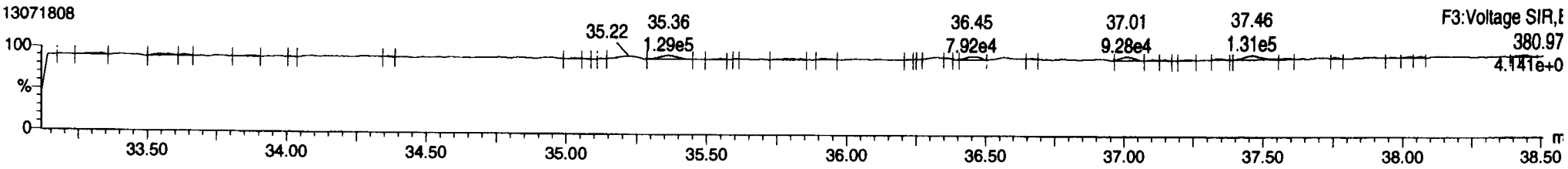

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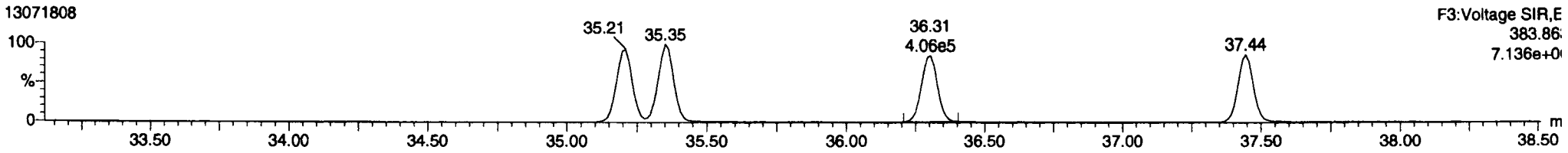
13C-234678-HxCDF



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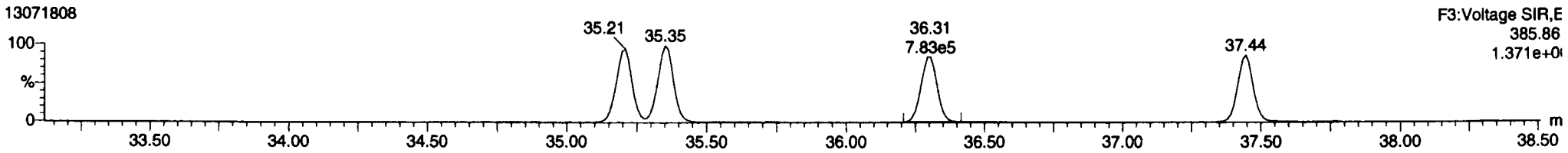

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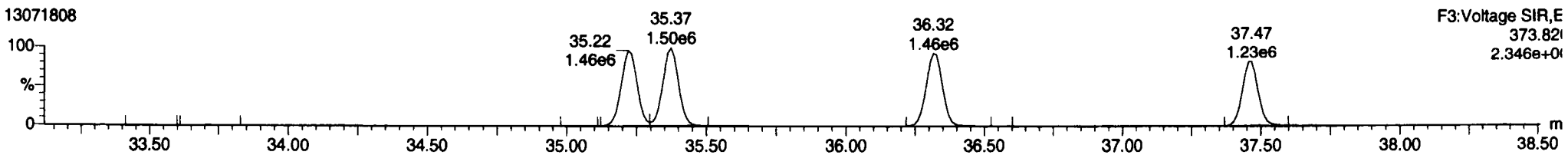

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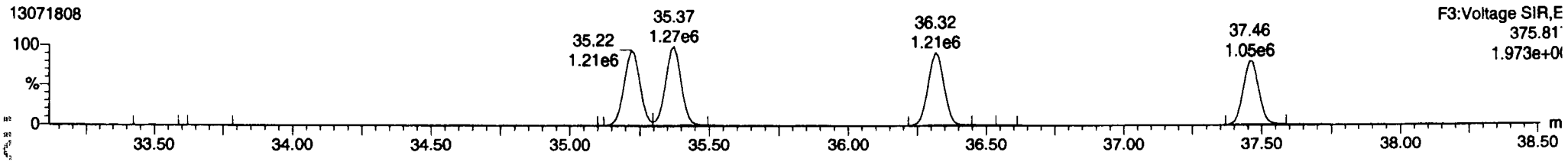
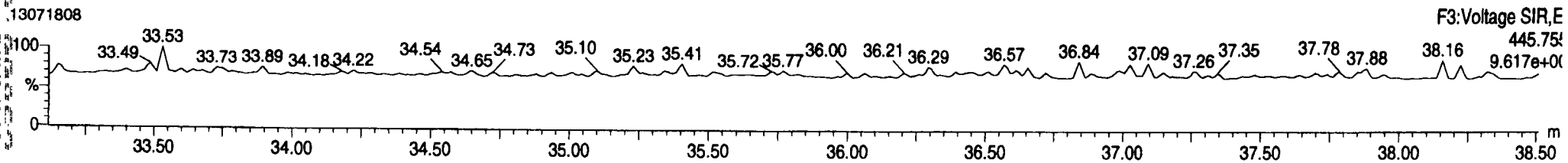


FUNCTION3 OCDPE



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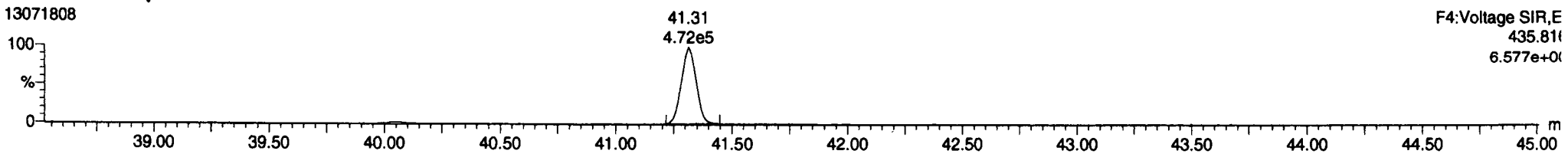
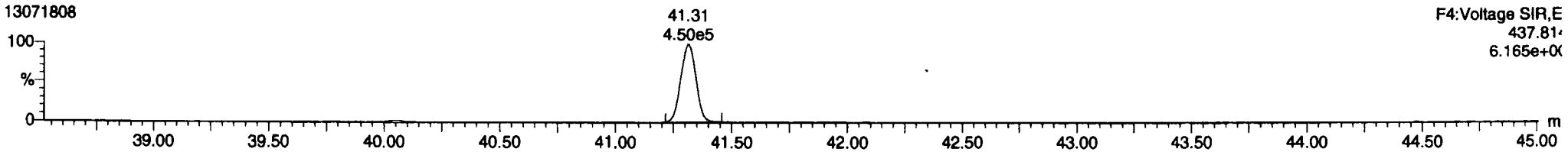
13C-1234678-HpCDD



13C-1234678-HpCDD



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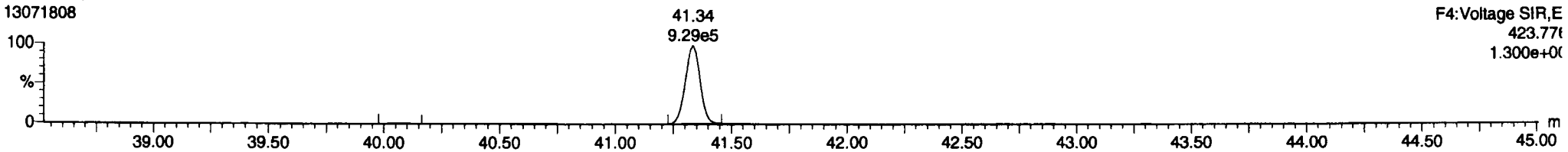
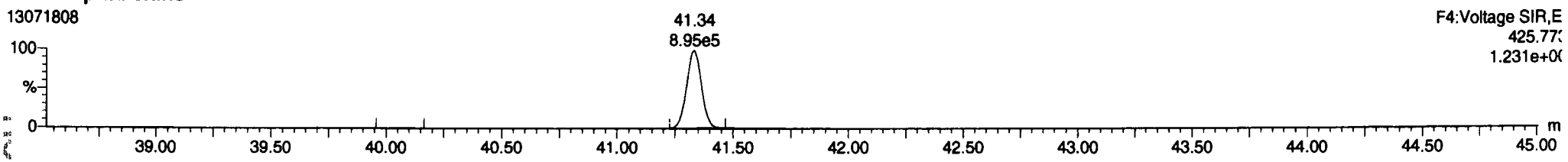
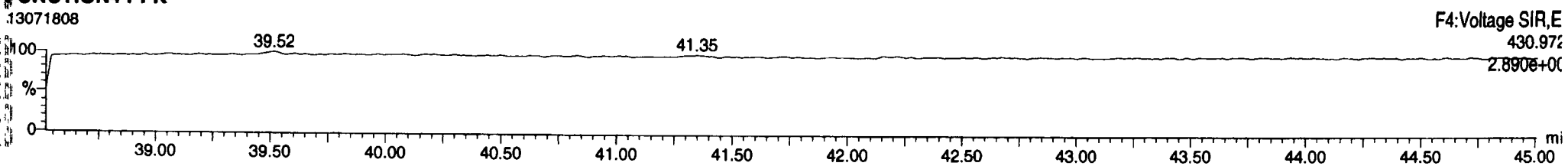


Total-heptadioxins



FUNCTION4 PFK



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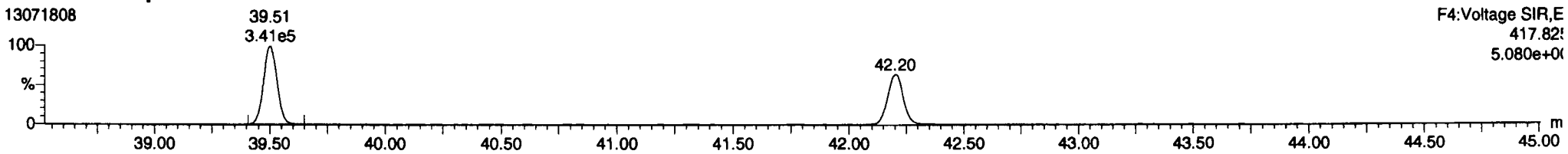
ID: CS4, Name: 13071808, Date: 18-Jul-2013, Time: 18:09:59, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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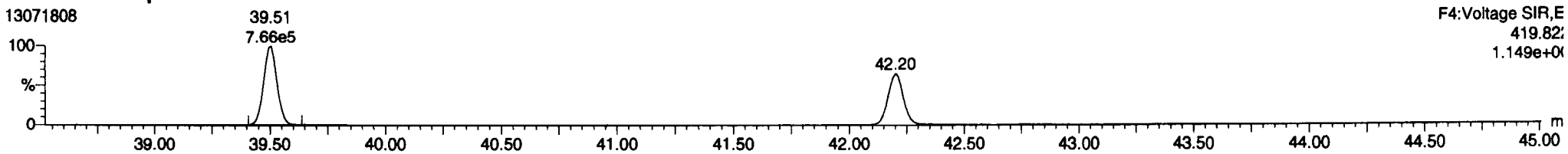
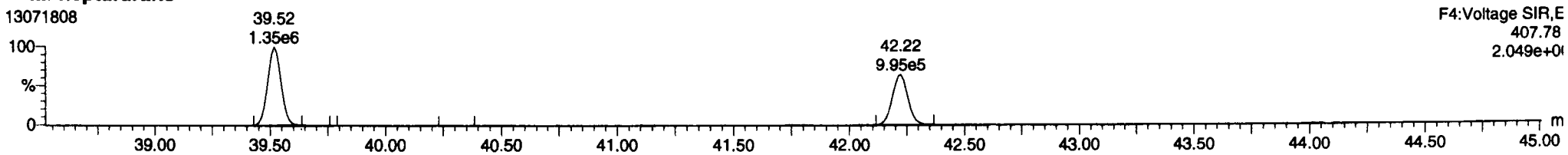


Total-heptafurans



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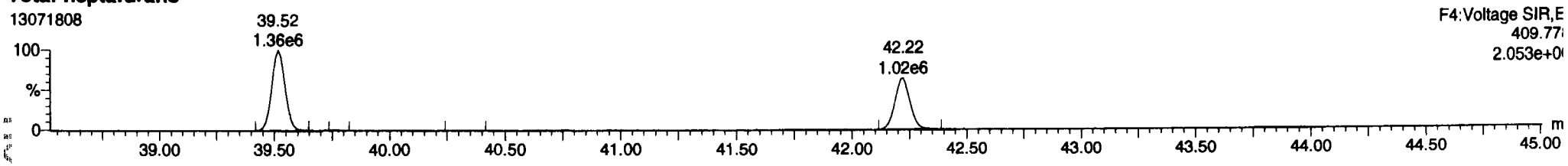

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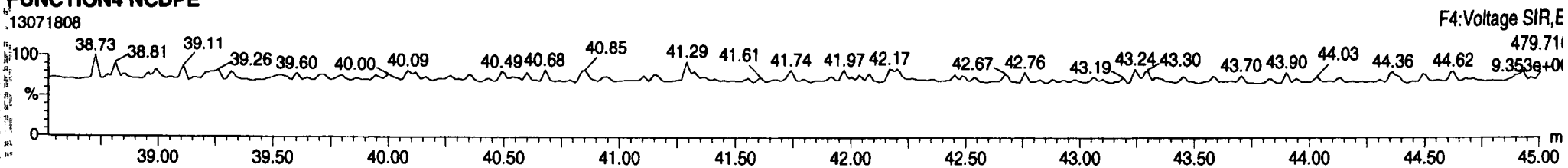

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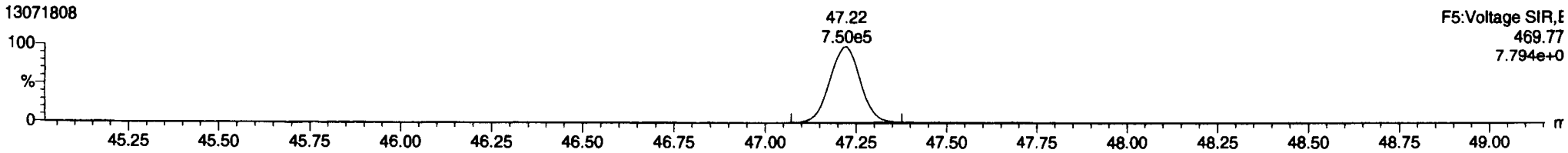
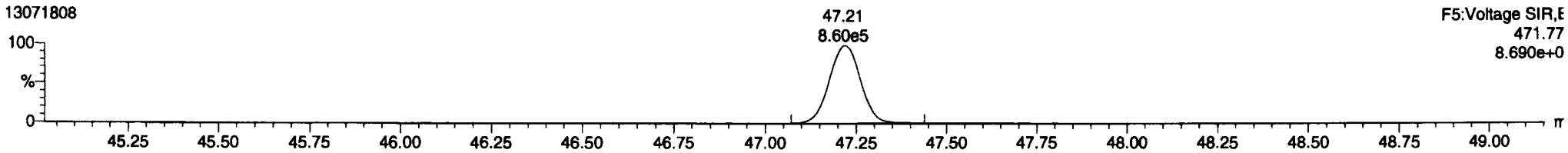
ID: CS4, Name: 13071808, Date: 18-Jul-2013, Time: 18:09:59, Conditions: AUTOSPEC01, User: pk

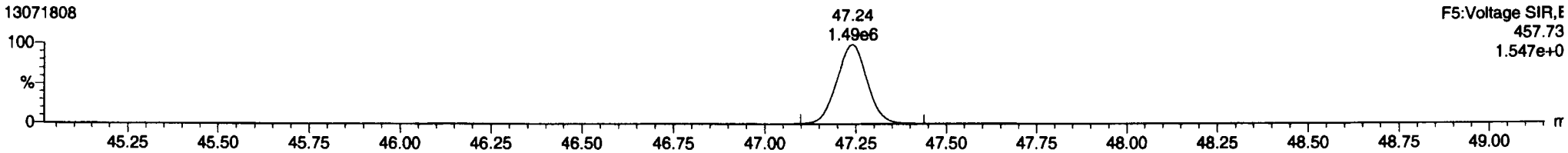
13C-OCDD



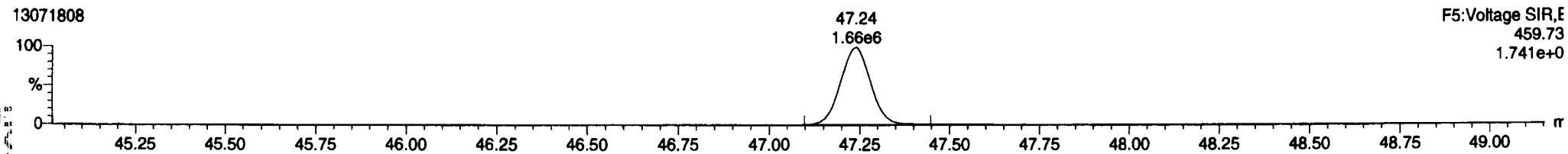
13C-OCDD



OCDD



OCDD



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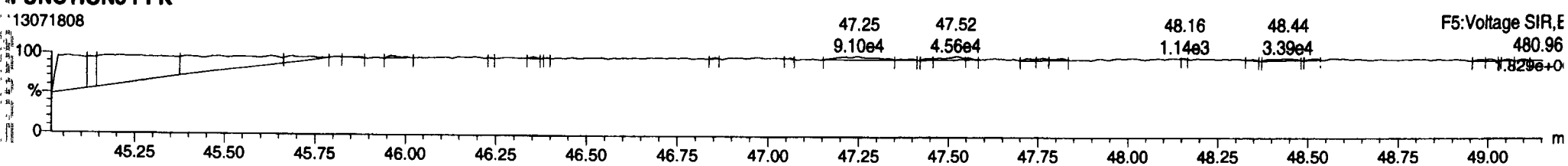

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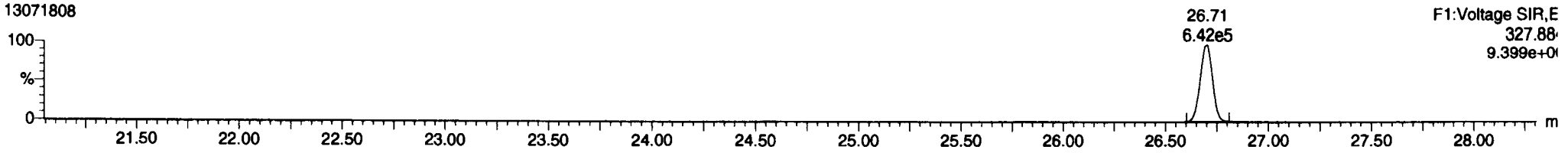
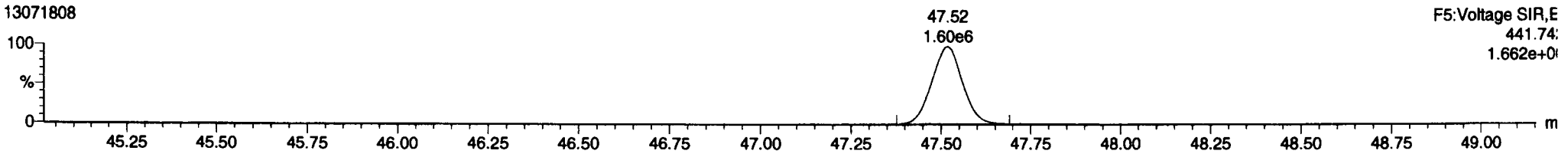
Printed: Friday, July 19, 2013 10:17:03 Pacific Daylight Time

ID: CS4, Name: 13071808, Date: 18-Jul-2013, Time: 18:09:59, Conditions: AUTOSPEC01, User: pk

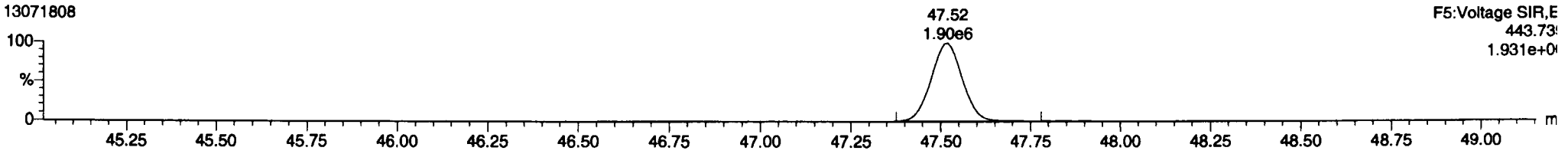
37CL-2378-TCDD



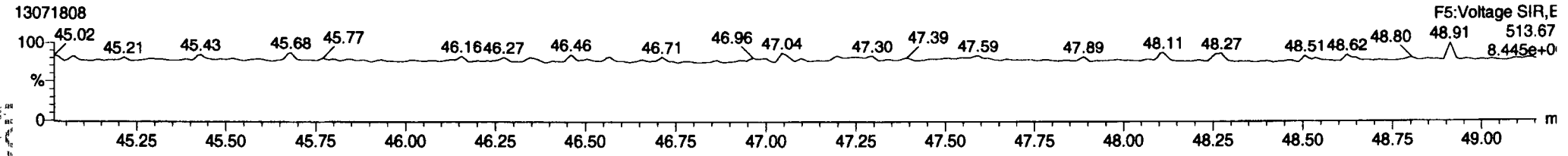
OCDF



OCDF



FUNCTION5 DCDPE



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Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130716.mdb 18 Jul 2013 10:49:00
Calibration: 19 Jul 2013 10:15:25

ID: CS5, Name: 13071809, Date: 18-Jul-2013, Time: 19:02:18, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.048	1.001	2.35e6	3.21e6	0.867	0.730	0.770	18985.2	NO	204.499	204.499
12378-PeCDF	30.188	1.000	1.65e7	1.10e7	0.875	1.497	1.550	32037.8	NO	1042.041	1042.041
23478-PeCDF	31.536	1.000	1.63e7	1.09e7	0.880	1.492	1.550	32383.4	NO	1053.116	1053.116
123478-HxCDF	35.219	1.001	1.33e7	1.12e7	1.048	1.186	1.240	37238.4	NO	1024.270	1024.269
234678-HxCDF	36.315	1.001	1.33e7	1.13e7	1.088	1.179	1.240	37829.4	NO	1038.147	1038.147
123678-HxCDF	35.361	1.000	1.40e7	1.17e7	1.025	1.197	1.240	39515.6	NO	1034.216	1034.216
123789-HxCDF	37.455	1.001	1.17e7	9.74e6	0.959	1.205	1.240	33549.4	NO	1032.086	1032.086
1234678-HpCDF	39.515	1.001	1.24e7	1.24e7	1.215	1.000	1.050	32347.7	NO	1024.724	1024.724
1234789-HpCDF	42.212	1.000	9.41e6	9.47e6	1.200	0.994	1.050	21540.1	NO	1040.552	1040.552
OCDF	47.519	1.006	1.68e7	1.96e7	1.064	0.859	0.890	76216.9	NO	2158.364	2158.364
2378-TCDD	26.690	1.001	2.00e6	2.59e6	0.994	0.773	0.770	20358.3	NO	208.788	208.788
12378-PeCDD	31.788	1.000	1.16e7	7.54e6	0.976	1.542	1.550	67616.7	NO	1018.897	1018.897
123478-HxCDD	36.446	1.000	1.07e7	8.61e6	0.967	1.245	1.240	46241.2	NO	1036.930	1036.930
123678-HxCDD	36.578	1.001	1.02e7	8.24e6	0.902	1.239	1.240	43170.2	NO	1012.841	1012.841
123789-HxCDD	37.005	1.012	1.02e7	8.23e6	0.914	1.239	1.240	42575.7	NO	1021.559	1021.560
1234678-HpCDD	41.324	1.000	8.47e6	8.19e6	0.999	1.033	1.050	22417.6	NO	1002.687	1002.688
OCDD	47.241	1.000	1.48e7	1.67e7	0.979	0.886	0.890	54554.4	NO	2030.426	2030.426
13C-2378-TCDF	26.033	1.007	1.37e6	1.76e6	1.419	0.777	0.770	7498.1	NO		103.491
13C-12378-PeCDF	30.177	1.167	1.84e6	1.17e6	1.158	1.568	1.550	13624.8	NO		121.973
13C-23478-PeCDF	31.525	1.219	1.79e6	1.14e6	1.127	1.572	1.550	13391.3	NO		122.006
13C-123478-HxCDF	35.197	0.952	7.75e5	1.50e6	1.206	0.516	0.510	4836.8	NO		100.205
13C-123678-HxCDF	35.350	0.956	8.28e5	1.59e6	1.266	0.521	0.510	5235.4	NO		101.408
13C-234678-HxCDF	36.293	0.981	7.44e5	1.43e6	1.155	0.519	0.510	4755.0	NO		100.075
13C-123789-HxCDF	37.433	1.012	7.49e5	1.42e6	1.121	0.527	0.510	4687.7	NO		102.796
13C-1234678-HpCDF	39.493	1.068	6.20e5	1.38e6	1.040	0.450	0.440	5976.6	NO		102.091
13C-1234789-HpCDF	42.201	1.141	4.68e5	1.04e6	0.789	0.448	0.440	3912.3	NO		101.782
13C-1234-TCDD	25.853	0.000	9.37e5	1.20e6	1.000	0.782	0.770	4678.3	NO		100.000
13C-2378-TCDD	26.675	1.032	9.66e5	1.25e6	0.962	0.775	0.770	4860.5	NO		107.680
13C-12378-PeCDD	31.777	1.229	1.18e6	7.48e5	0.746	1.574	1.550	11753.5	NO		120.829
13C-123478-HxCDD	36.436	0.985	1.07e6	8.54e5	1.003	1.258	1.240	10543.6	NO		102.045
13C-123678-HxCDD	36.556	0.988	1.12e6	9.03e5	1.052	1.237	1.240	10970.3	NO		101.992
13C-1234678-HpCDD	41.302	1.117	8.53e5	8.11e5	0.880	1.052	1.050	7061.2	NO		100.377
13C-OCDD	47.223	1.277	1.48e6	1.68e6	0.775	0.882	0.890	7588.7	NO		217.049

Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:17:13 Pacific Daylight Time

ID: CS5, Name: 13071809, Date: 18-Jul-2013, Time: 19:02:18, Conditions: AUTOSPEC01, User: pk

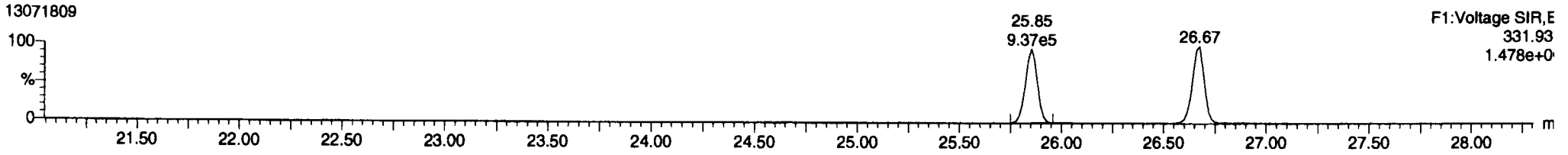
13C-123789-HxCDD	36.984	0.000	1.05e6	8.38e5	1.000	1.247	1.240	10141.3	NO		100.000
Total-tetrafurans			2.39e6		0.867						208.310
Total-penta1			0.00e0								
Total-pentafurans			3.32e7		0.877						2126.019
Total-hexafurans			5.23e7		1.030						4133.627
Total-heptafurans			2.19e7		1.207						2067.242
Total-Furans			1.27e8		1.022						10693.562
Total-tetradioxins			2.05e6		0.994						214.105
Total-pentadioxins			1.16e7		0.976						1021.046
Total-hexadioxins			3.11e7		0.928						3071.605
Total-heptadioxins			8.50e6		0.999						1006.537
Total-Dioxins			6.81e7		0.962						7343.718
Total-TEQ			1.95e8								18037.281
37CL-2378-TCDD	26.690	1.032	5.01e6		1.091			32774.0			215.171
FUNCTION1 PFK			2.24e7								
FUNCTION2 PFK			2.88e5								0.000
FUNCTION3 PFK			3.42e6								0.000
FUNCTION4 PFK			8.06e5								
FUNCTION5 PFK			6.52e5								
FUNCTION1 HXCDPE			1.46e2								0.000
FUNCTION1 HPCDPE			4.03e2								0.000
FUNCTION2 HPCDPE			2.07e4								0.000
FUNCTION3 OCDPE			4.46e2								0.000
FUNCTION4 NCDPE			1.76e2								0.000
FUNCTION5 DCDPE			3.21e2								0.000

Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:17:13 Pacific Daylight Time

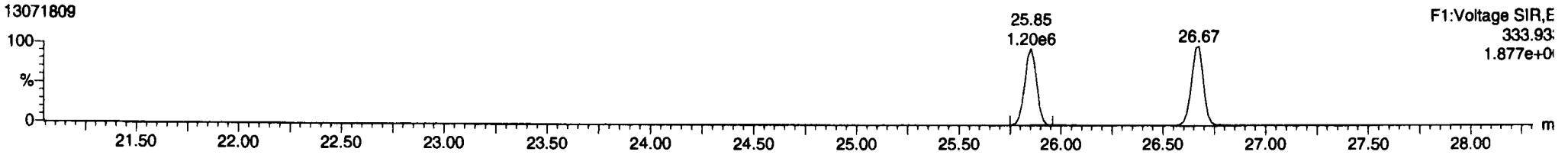
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130716.mdb 18 Jul 2013 10:49:00
Calibration: 19 Jul 2013 10:15:25

ID: CS5, Name: 13071809, Date: 18-Jul-2013, Time: 19:02:18, Conditions: AUTOSPEC01, User: pk

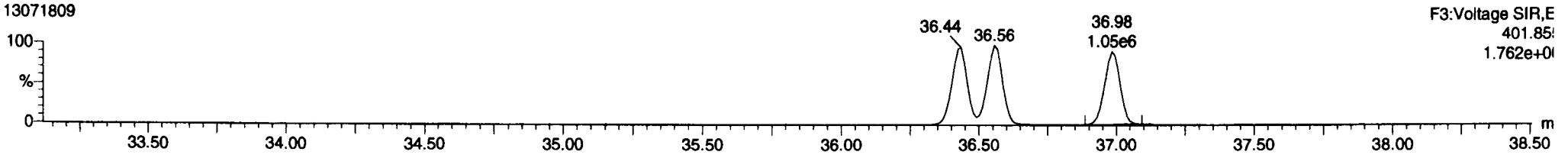
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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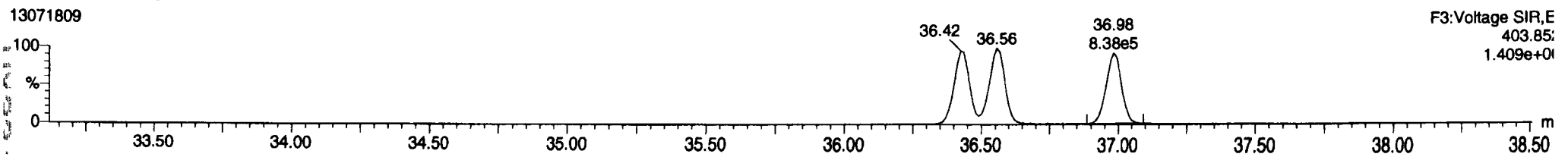
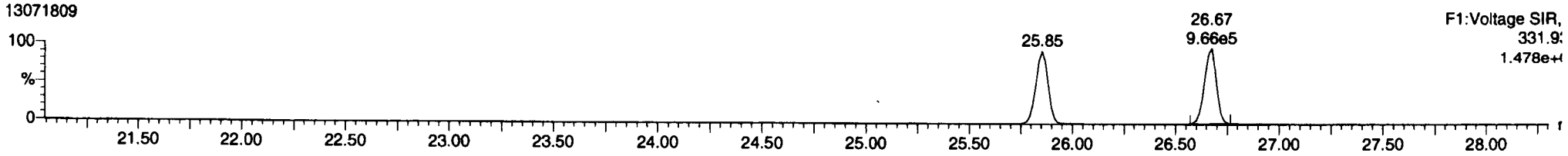


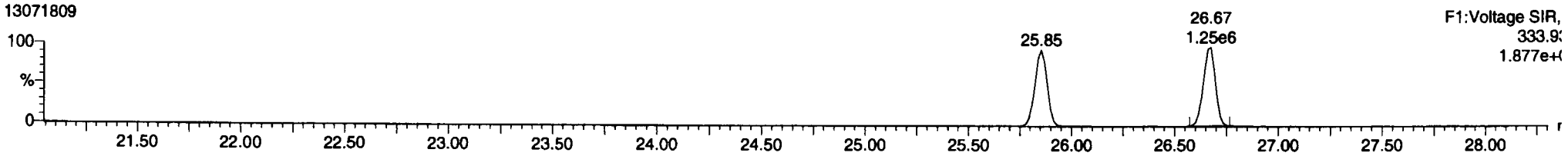
Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:17:13 Pacific Daylight Time

ID: CS5, Name: 13071809, Date: 18-Jul-2013, Time: 19:02:18, Conditions: AUTOSPEC01, User: pk

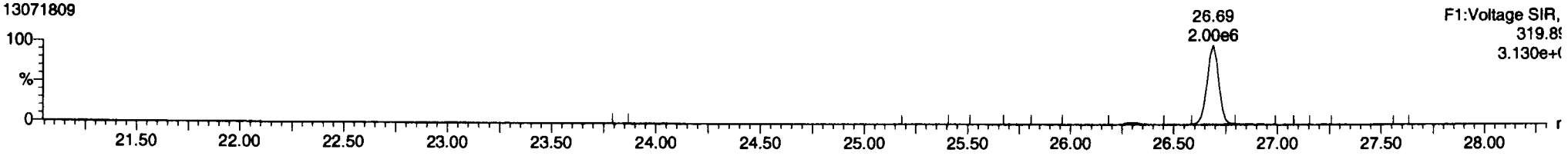
13C-2378-TCDD



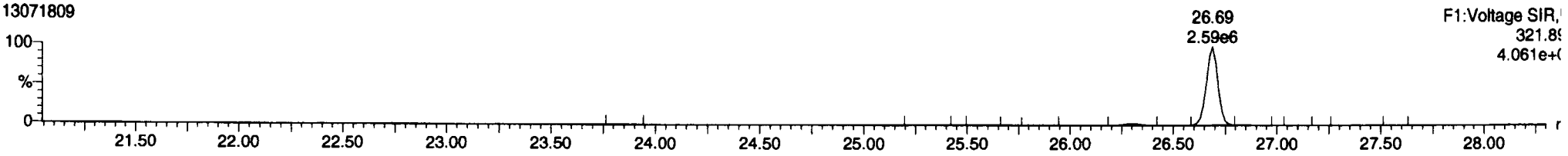
13C-2378-TCDD



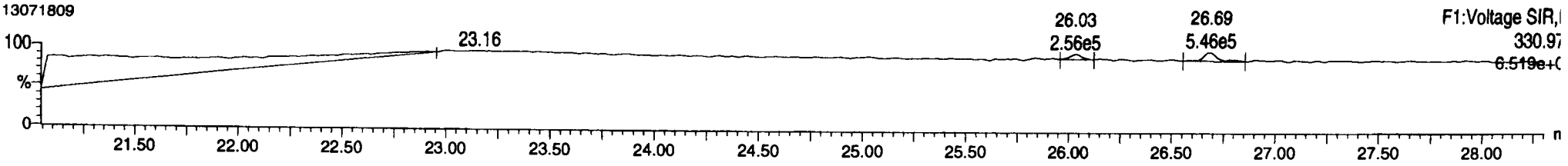
Total-tetradioxins



Total-tetradioxins



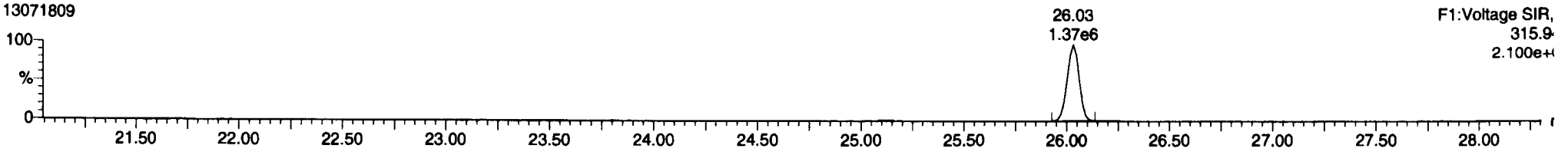
FUNCTION1 PFK



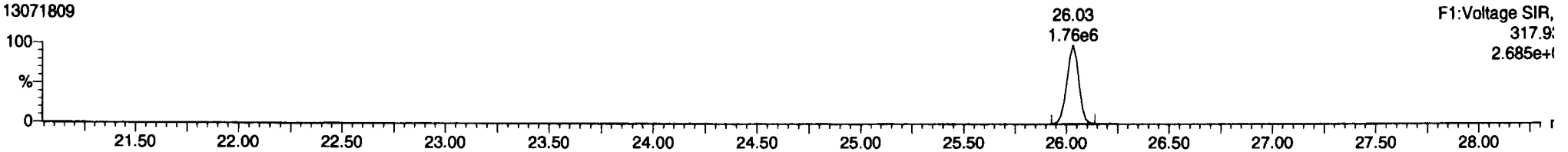
Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:17:13 Pacific Daylight Time

ID: CS5, Name: 13071809, Date: 18-Jul-2013, Time: 19:02:18, Conditions: AUTOSPEC01, User: pk

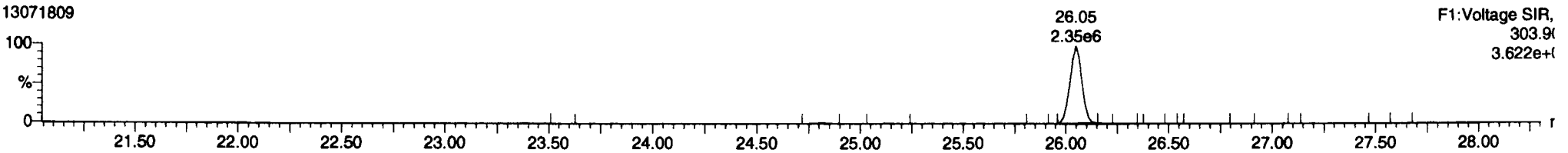
13C-2378-TCDF



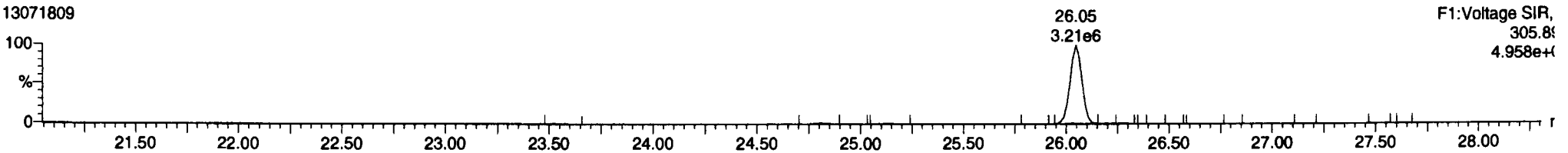
13C-2378-TCDF



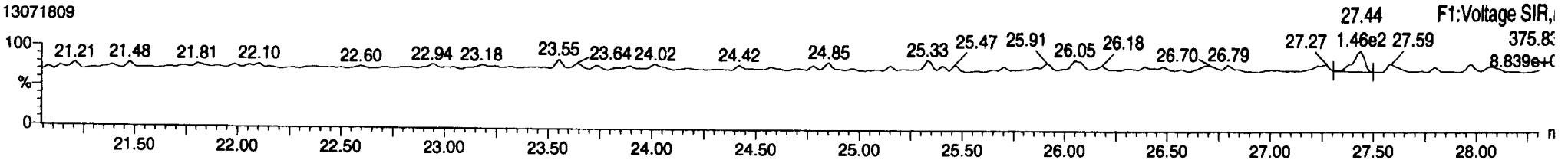
Total-tetrafurans



Total-tetrafurans



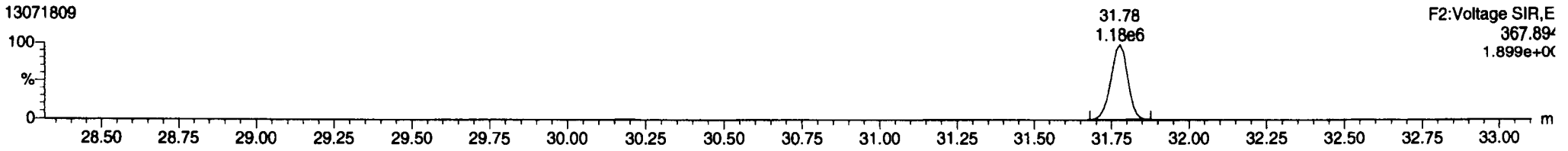
FUNCTION1 HXCDPE



Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:17:13 Pacific Daylight Time

ID: CS5, Name: 13071809, Date: 18-Jul-2013, Time: 19:02:18, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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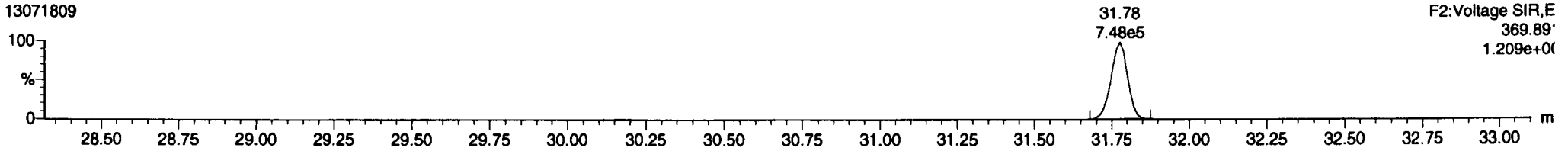
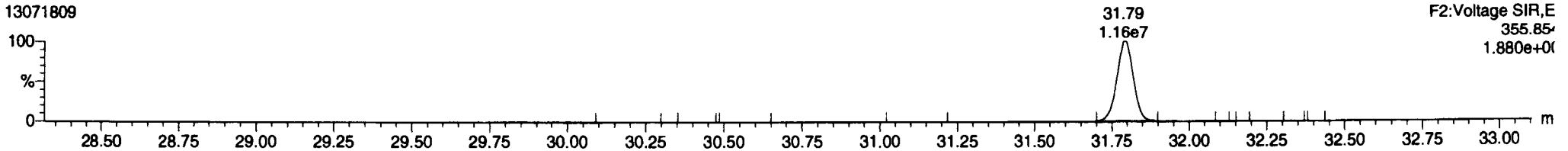
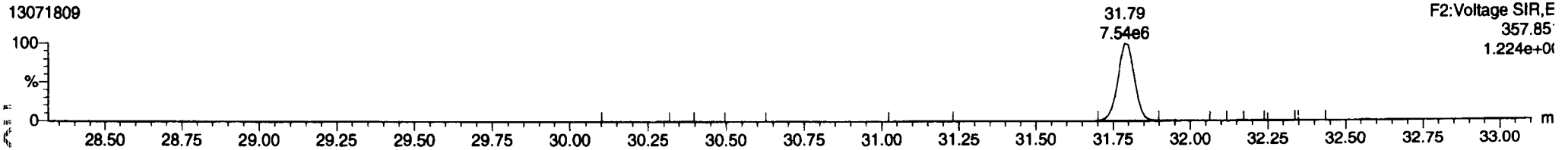


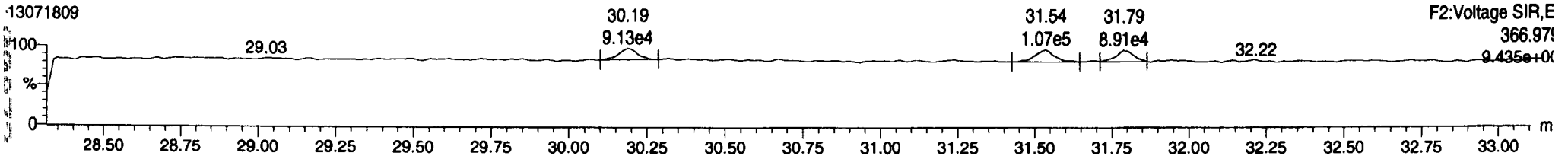
Total-pentadioxins



Total-pentadioxins



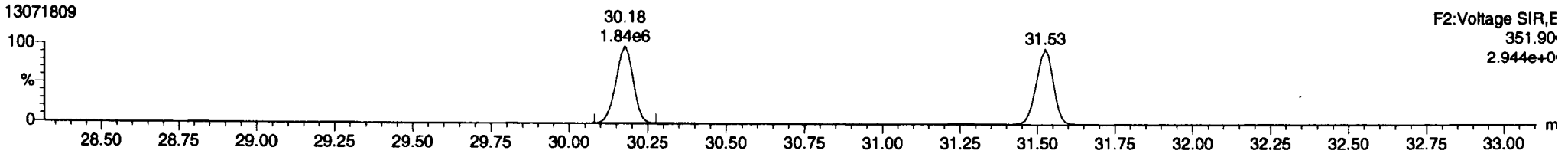
FUNCTION2 PFK



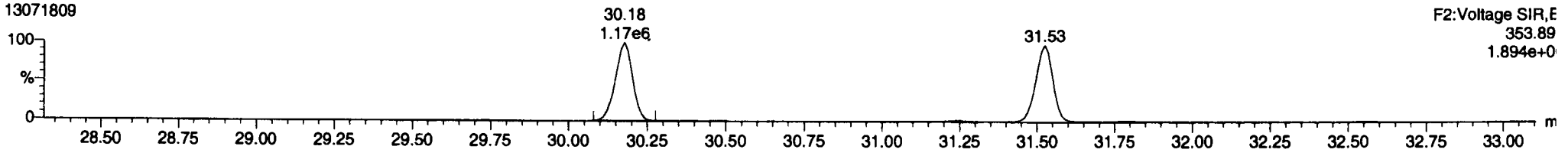
Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:17:13 Pacific Daylight Time

ID: CS5, Name: 13071809, Date: 18-Jul-2013, Time: 19:02:18, Conditions: AUTOSPEC01, User: pk

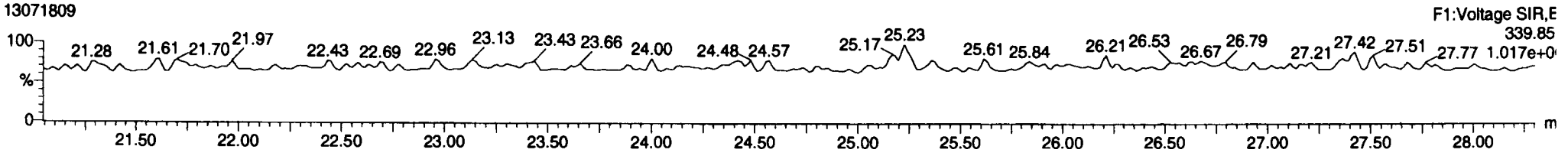
13C-12378-PeCDF



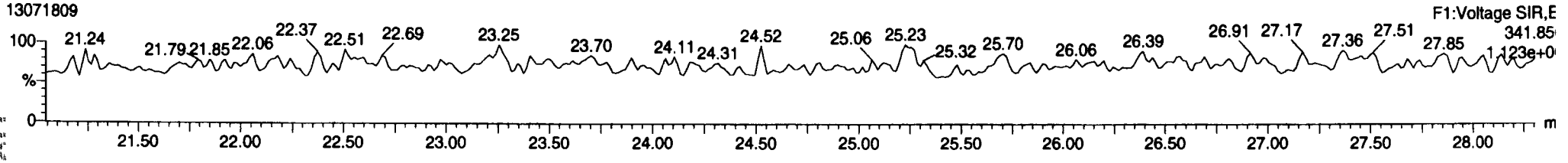
13C-12378-PeCDF



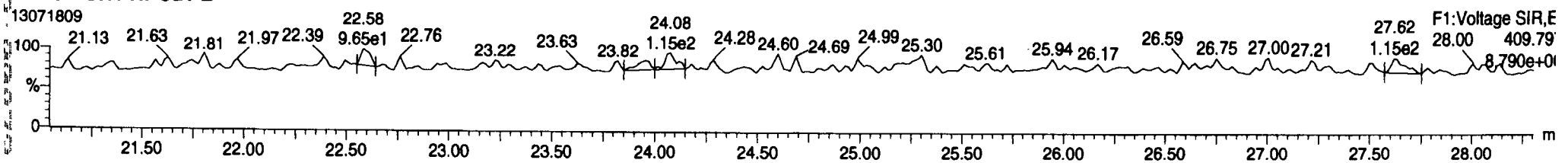
Total-penta1



Total-penta1



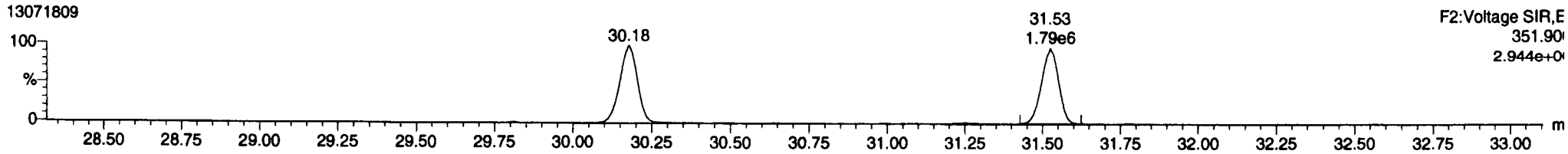
FUNCTION1 HPCDPE



Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:17:13 Pacific Daylight Time

ID: CS5, Name: 13071809, Date: 18-Jul-2013, Time: 19:02:18, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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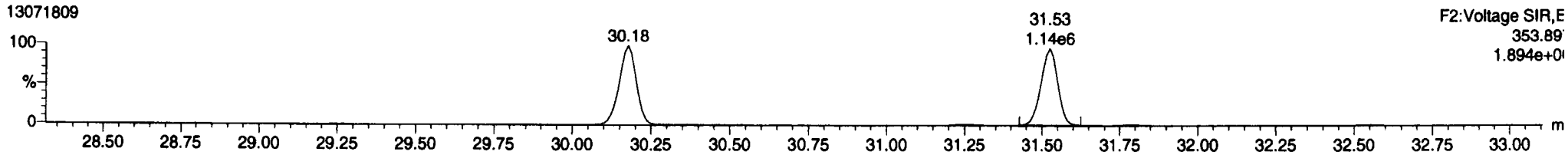
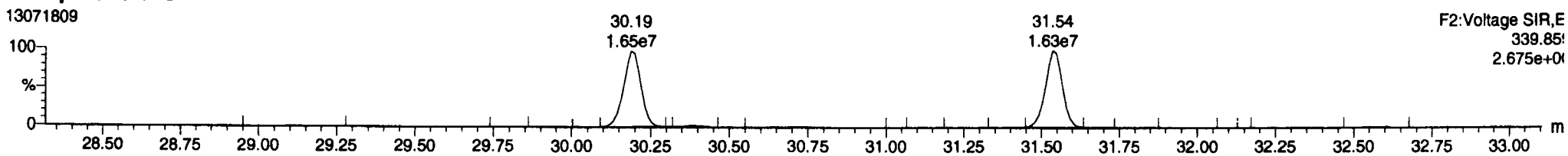
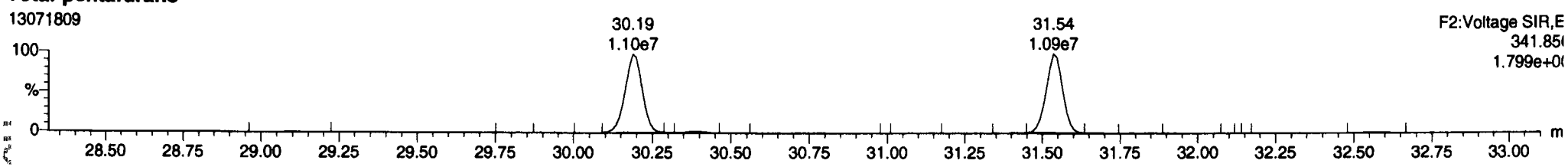


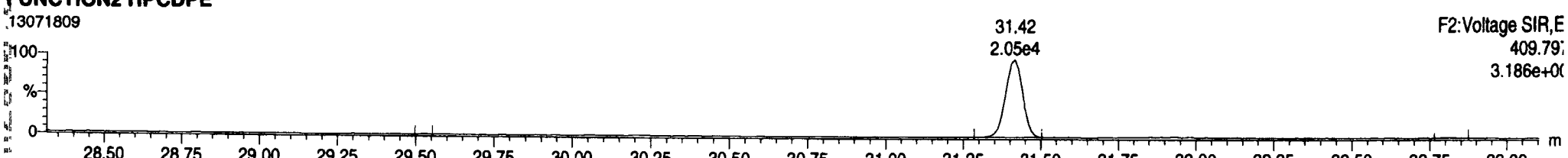
Total-pentafurans



Total-pentafurans



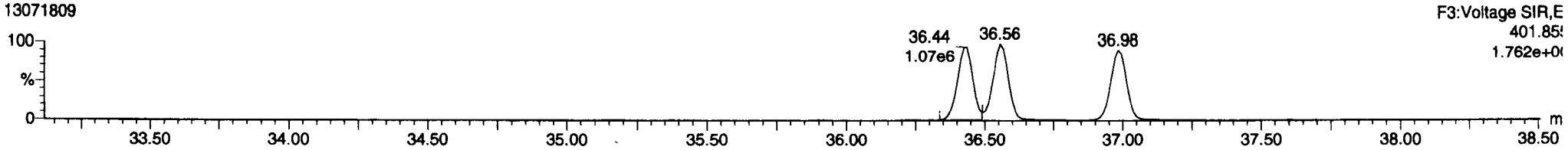
FUNCTION2 HPCDPE



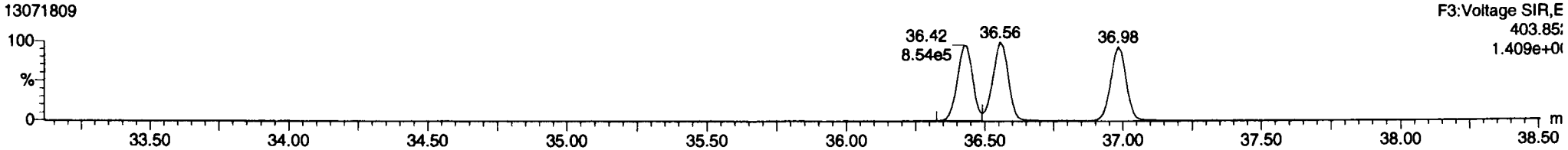
Last Altered: Friday, July 19, 2013 10:15:25 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:17:13 Pacific Daylight Time

ID: CS5, Name: 13071809, Date: 18-Jul-2013, Time: 19:02:18, Conditions: AUTOSPEC01, User: pk

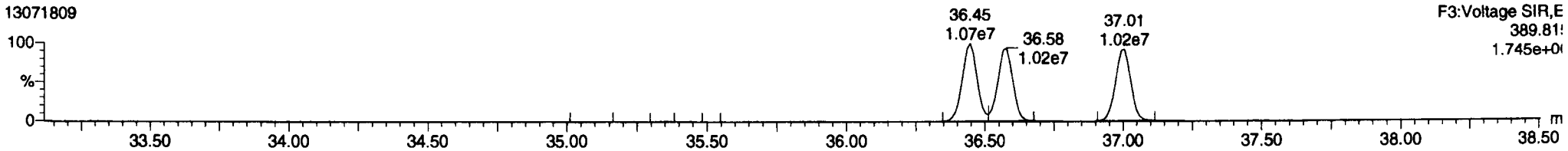
13C-123478-HxCDD



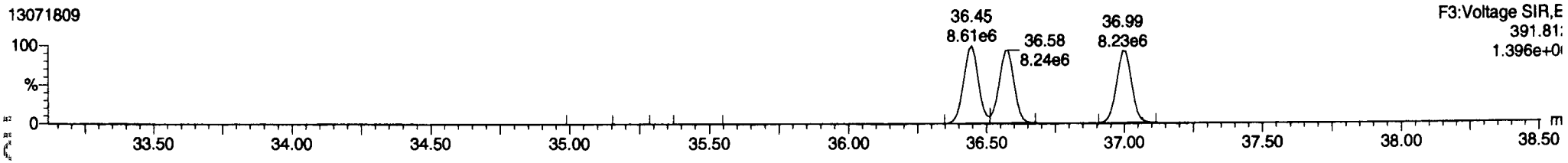
13C-123478-HxCDD



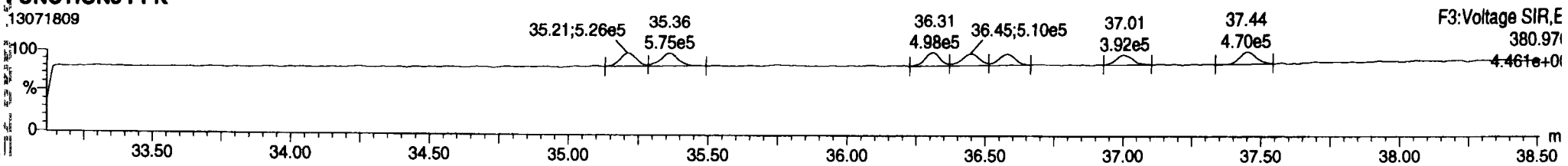
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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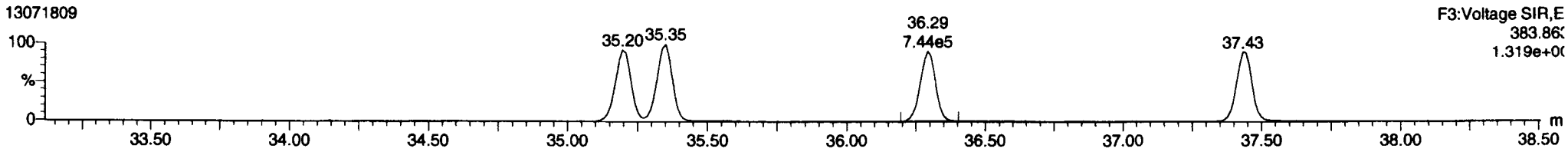
Printed: Friday, July 19, 2013 10:17:13 Pacific Daylight Time

ID: CS5, Name: 13071809, Date: 18-Jul-2013, Time: 19:02:18, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



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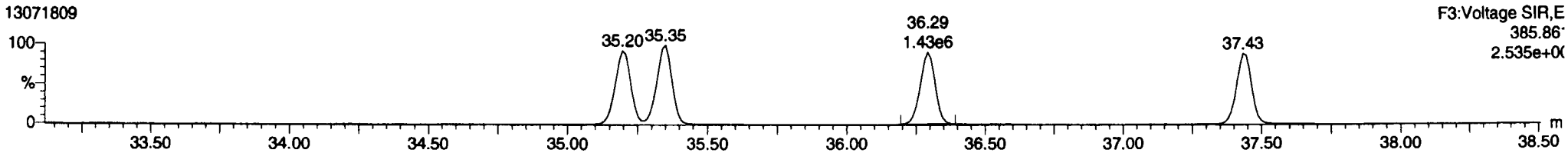
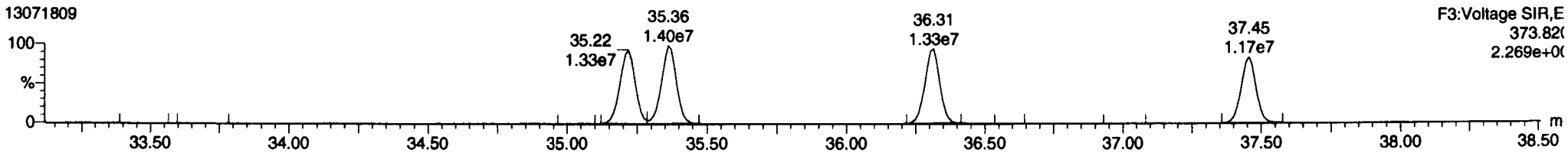


Total-hexafurans



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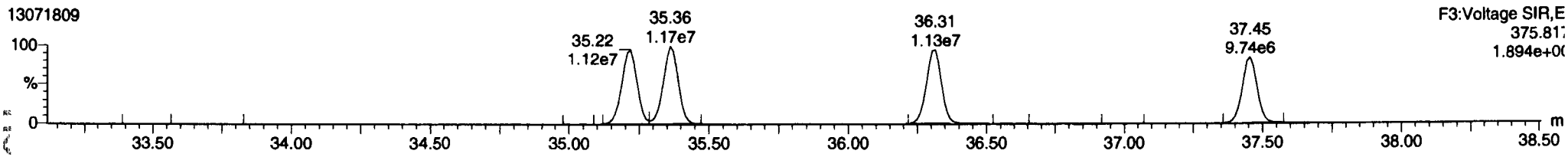
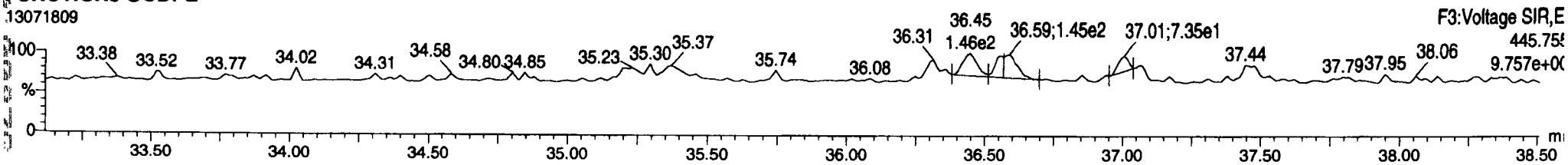


FUNCTION3 OCDPE



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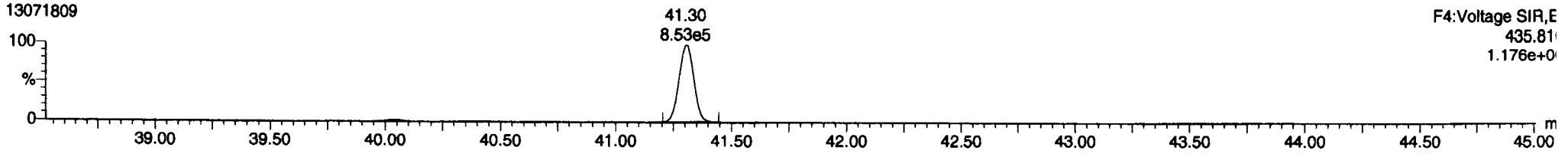
Printed: Friday, July 19, 2013 10:17:13 Pacific Daylight Time

ID: CS5, Name: 13071809, Date: 18-Jul-2013, Time: 19:02:18, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD



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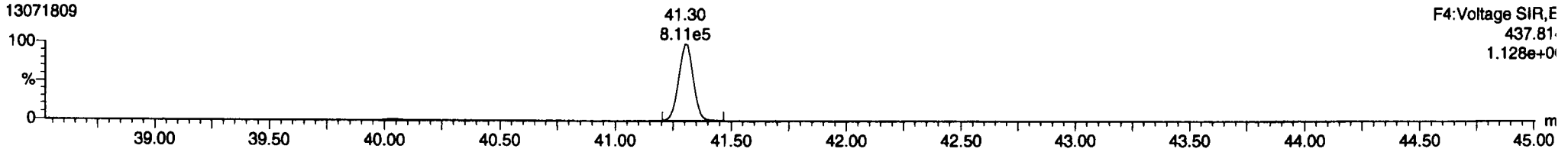
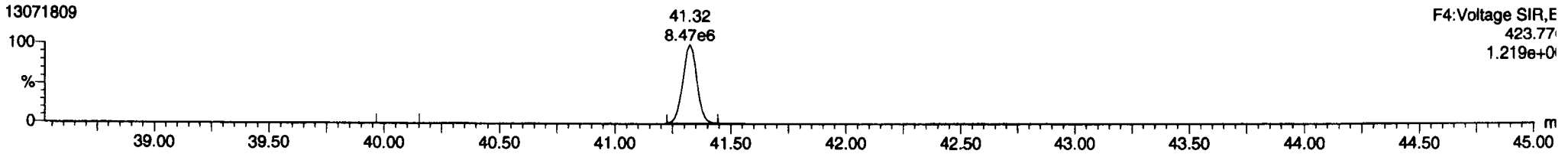


Total-heptadioxins



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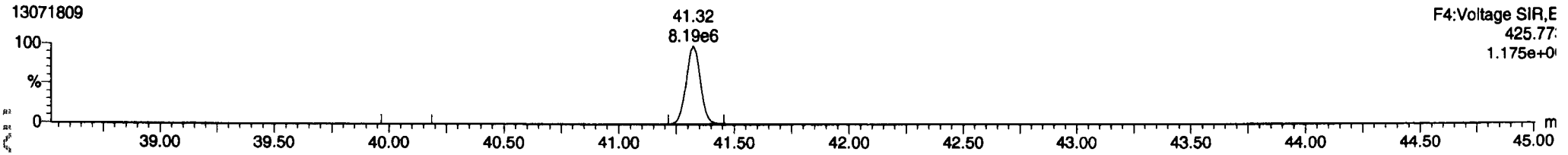
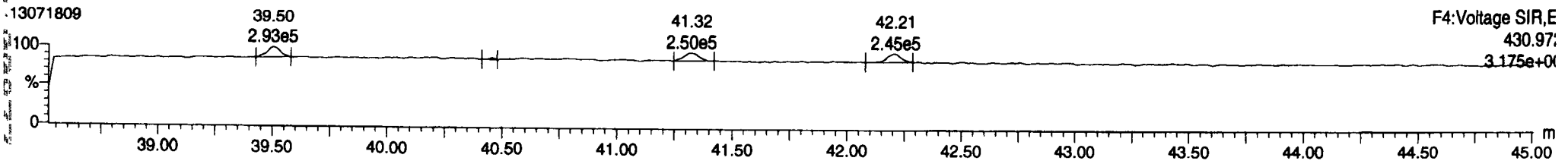


FUNCTION4 PFK



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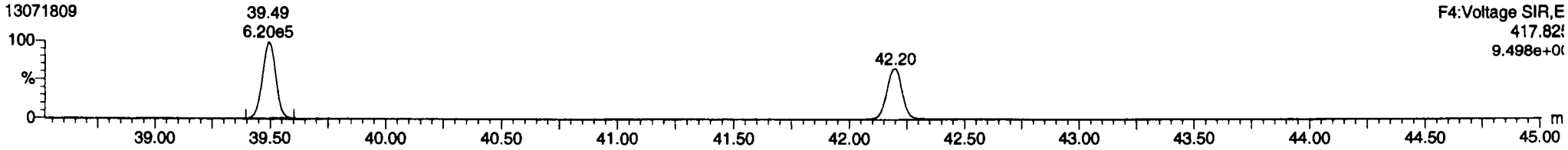
ID: CS5, Name: 13071809, Date: 18-Jul-2013, Time: 19:02:18, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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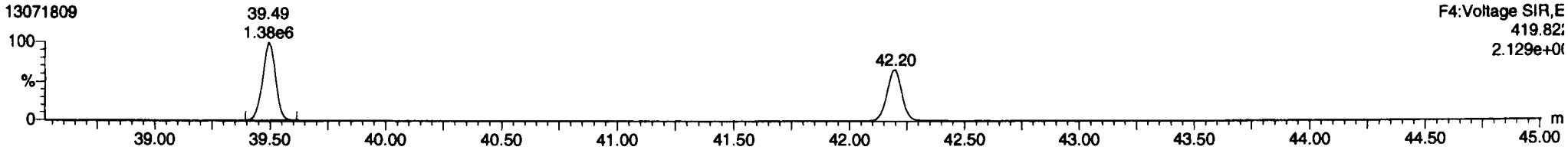
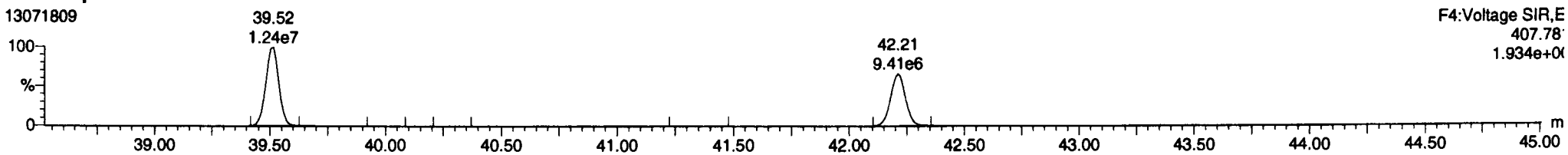


Total-heptafurans



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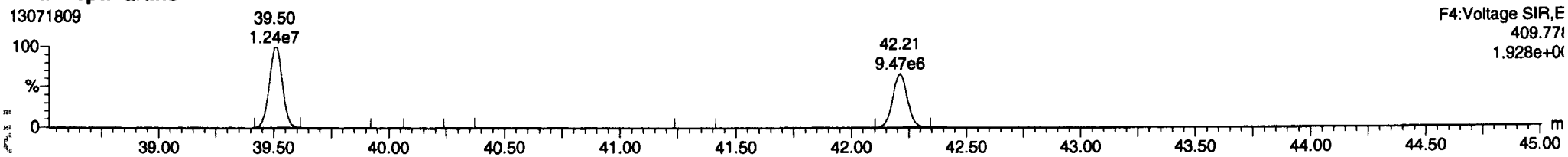
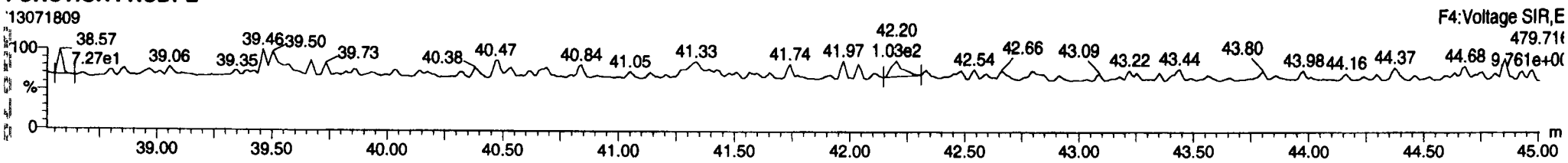


FUNCTION4 NCDPE



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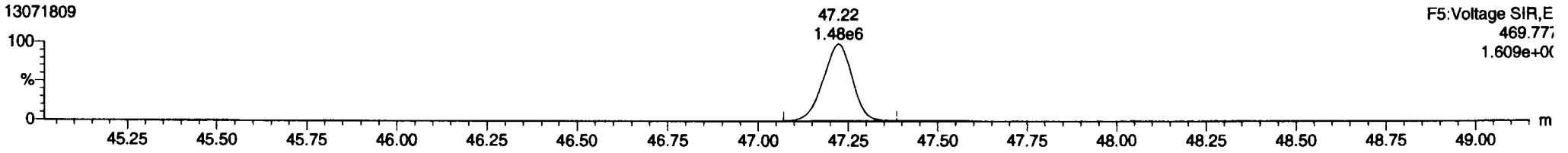
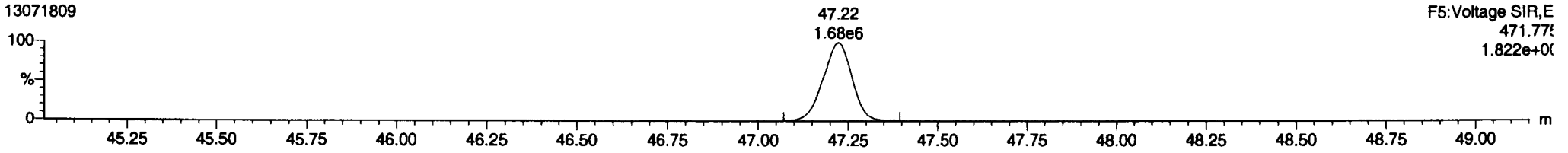
Printed: Friday, July 19, 2013 10:17:13 Pacific Daylight Time

ID: CS5, Name: 13071809, Date: 18-Jul-2013, Time: 19:02:18, Conditions: AUTOSPEC01, User: pk

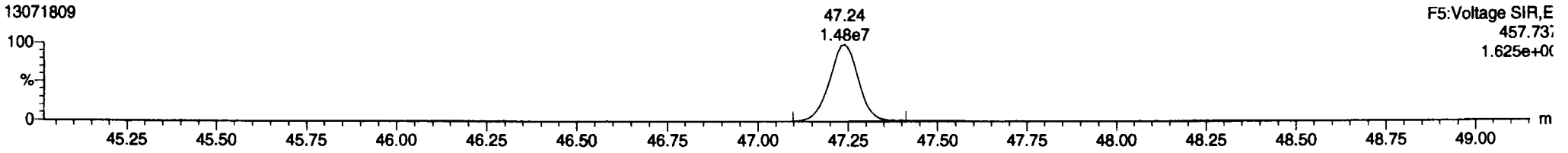
13C-OCDD



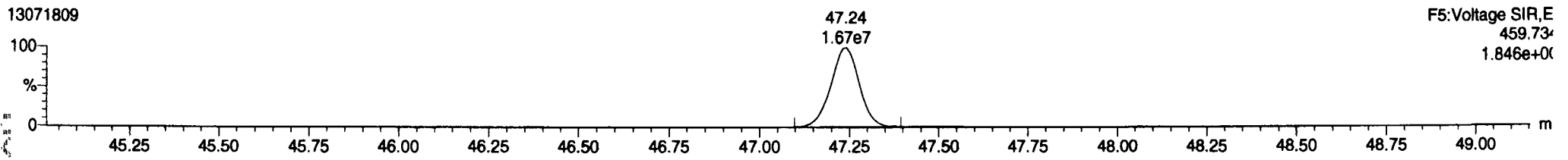
13C-OCDD



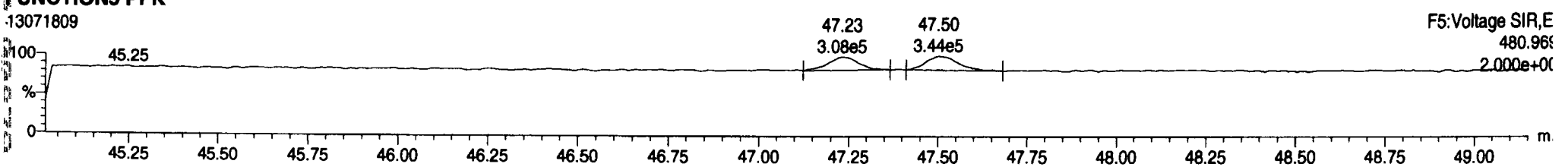
OCDD



OCDD



FUNCTION5 PFK



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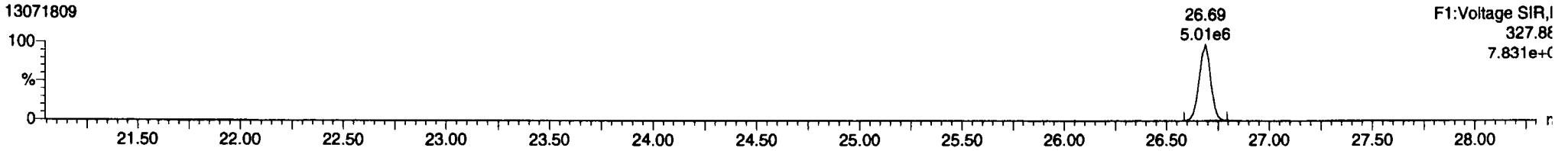
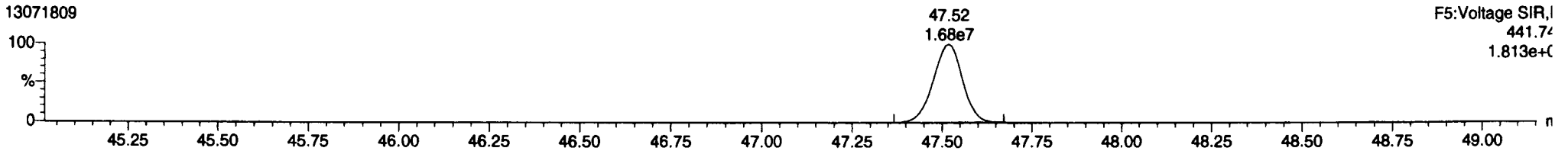
ID: CS5, Name: 13071809, Date: 18-Jul-2013, Time: 19:02:18, Conditions: AUTOSPEC01, User: pk

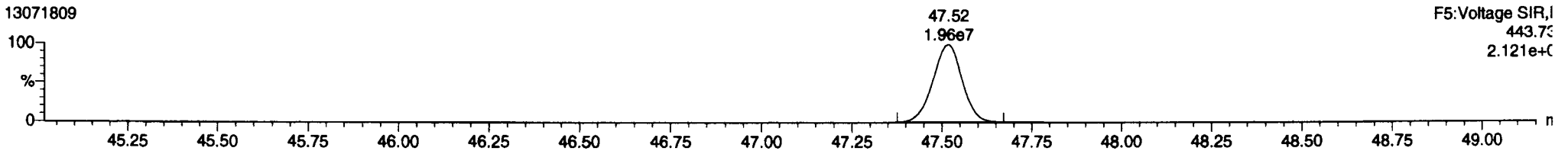
37CL-2378-TCDD



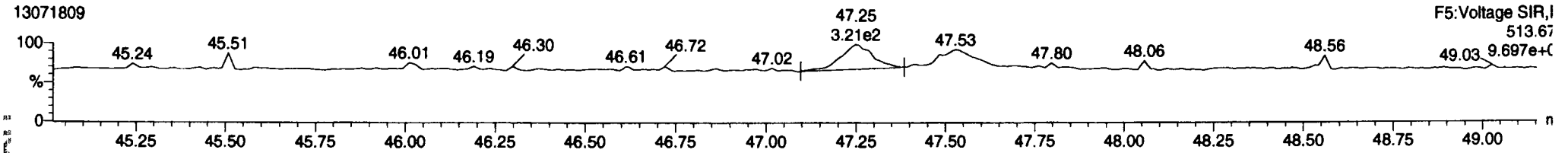
OCDF



OCDF



FUNCTION5 DCDPE



Dataset: P:\DIOXIN8290.PRO\130718ICV.qld
Last Altered: Friday, July 19, 2013 10:18:10 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:18:37 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130716.mdb 18 Jul 2013 10:49:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

ID: ICV, Name: 13071810, Date: 18-Jul-2013, Time: 19:54:25, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.048	1.001	7.31e4	1.01e5	0.867	0.724	0.770	1008.9	NO	10.330	10.330
12378-PeCDF	30.189	1.001	4.63e5	3.15e5	0.875	1.468	1.550	2380.0	NO	55.239	55.239
23478-PeCDF	31.538	1.001	4.30e5	2.92e5	0.880	1.472	1.550	2227.4	NO	51.140	51.140
123478-HxCDF	35.209	1.000	3.87e5	3.26e5	1.048	1.190	1.240	2321.8	NO	55.042	55.042
234678-HxCDF	36.305	1.001	3.70e5	3.20e5	1.088	1.156	1.240	2224.4	NO	49.609	49.609
123678-HxCDF	35.362	1.001	3.99e5	3.42e5	1.025	1.167	1.240	2325.1	NO	52.680	52.680
123789-HxCDF	37.445	1.000	3.34e5	2.83e5	0.959	1.179	1.240	2015.7	NO	58.147	58.147
1234678-HpCDF	39.506	1.001	3.51e5	3.54e5	1.215	0.994	1.050	2642.8	NO	53.793	53.793
1234789-HpCDF	42.202	1.000	2.63e5	2.72e5	1.200	0.967	1.050	1727.9	NO	50.716	50.716
OCDF	47.501	1.006	4.23e5	5.00e5	1.064	0.845	0.890	2548.2	NO	113.169	113.169
2378-TCDD	26.691	1.001	6.16e4	7.96e4	0.994	0.774	0.770	1097.7	NO	10.132	10.132
12378-PeCDD	31.789	1.001	3.29e5	2.12e5	0.976	1.552	1.550	4425.8	NO	46.950	46.950
123478-HxCDD	36.437	1.000	2.93e5	2.36e5	0.967	1.244	1.240	3364.0	NO	51.868	51.868
123678-HxCDD	36.568	1.001	2.83e5	2.26e5	0.902	1.255	1.240	3107.5	NO	57.456	57.456
123789-HxCDD	36.996	1.012	3.07e5	2.49e5	0.914	1.234	1.240	3430.4	NO	59.654	59.654
1234678-HpCDD	41.314	1.000	2.53e5	2.47e5	0.999	1.022	1.050	2490.4	NO	51.049	51.049
OCDD	47.215	1.000	3.88e5	4.47e5	0.979	0.868	0.890	3364.3	NO	111.331	111.331
13C-2378-TCDF	26.033	1.007	8.54e5	1.09e6	1.419	0.784	0.770	4677.8	NO		87.395
13C-12378-PeCDF	30.167	1.167	9.87e5	6.24e5	1.158	1.582	1.550	7415.6	NO		88.702
13C-23478-PeCDF	31.515	1.219	9.83e5	6.24e5	1.127	1.575	1.550	7352.7	NO		91.015
13C-123478-HxCDF	35.198	0.952	4.17e5	8.19e5	1.206	0.509	0.510	2629.8	NO		92.223
13C-123678-HxCDF	35.341	0.956	4.70e5	9.03e5	1.266	0.520	0.510	2961.1	NO		97.640
13C-234678-HxCDF	36.283	0.981	4.33e5	8.43e5	1.155	0.514	0.510	2740.0	NO		99.532
13C-123789-HxCDF	37.434	1.012	3.80e5	7.27e5	1.121	0.524	0.510	2471.1	NO		88.939
13C-1234678-HpCDF	39.484	1.068	3.37e5	7.43e5	1.040	0.453	0.440	3181.4	NO		93.464
13C-1234789-HpCDF	42.191	1.141	2.72e5	6.07e5	0.789	0.448	0.440	2256.9	NO		100.277
13C-1234-TCDD	25.854	0.000	6.92e5	8.76e5	1.000	0.790	0.770	3689.6	NO		100.000
13C-2378-TCDD	26.676	1.032	6.14e5	7.88e5	0.962	0.779	0.770	3131.8	NO		92.972
13C-12378-PeCDD	31.767	1.229	7.16e5	4.63e5	0.746	1.547	1.550	8769.7	NO		100.776
13C-123478-HxCDD	36.426	0.985	5.88e5	4.66e5	1.003	1.264	1.240	4431.2	NO		94.646
13C-123678-HxCDD	36.546	0.988	5.46e5	4.36e5	1.052	1.251	1.240	4004.7	NO		84.097
13C-1234678-HpCDD	41.303	1.117	5.01e5	4.79e5	0.880	1.045	1.050	3798.1	NO		100.328
13C-OCDD	47.206	1.277	7.21e5	8.12e5	0.775	0.889	0.890	5758.1	NO		178.181

Last Altered: Friday, July 19, 2013 10:18:10 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:18:37 Pacific Daylight Time

ID: ICV, Name: 13071810, Date: 18-Jul-2013, Time: 19:54:25, Conditions: AUTOSPEC01, User: pk

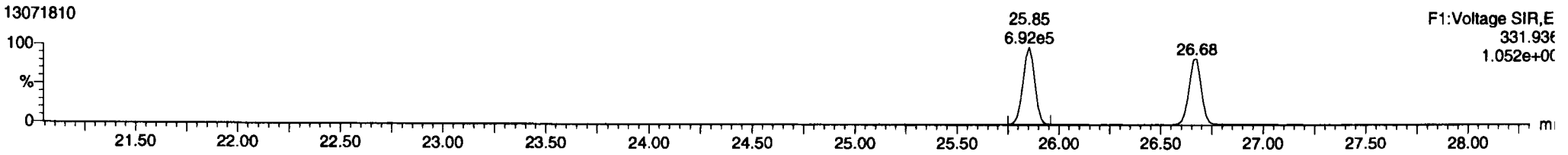
13C-123789-HxCDD	36.974	0.000	6.17e5	4.93e5	1.000	1.251	1.240	4465.1	NO		100.000
Total-tetrafurans			7.36e4		0.867						10.435
Total-penta1			0.00e0								
Total-pentafurans			9.03e5		0.877						107.357
Total-hexafurans			1.49e6		1.030						215.502
Total-heptafurans			6.16e5		1.207						104.693
Total-Furans			3.50e6		1.022						551.156
Total-tetradioxins			6.19e4		0.994						10.161
Total-pentadioxins			3.29e5		0.976						46.994
Total-hexadioxins			8.83e5		0.928						169.002
Total-heptadioxins			2.54e5		0.999						51.294
Total-Dioxins			1.92e6		0.962						388.781
Total-TEQ			5.42e6								939.938
37CL-2378-TCDD	26.691	1.032	1.53e5		1.091			1549.0			8.932
FUNCTION1 PFK			5.44e7								
FUNCTION2 PFK			0.00e0								
FUNCTION3 PFK			8.10e5								0.000
FUNCTION4 PFK			1.87e4								
FUNCTION5 PFK			2.64e6								
FUNCTION1 HXCDPE			3.55e2								0.000
FUNCTION1 HPCDPE			1.70e3								0.000
FUNCTION2 HPCDPE			2.58e2								0.000
FUNCTION3 OCDPE			0.00e0								
FUNCTION4 NCDPE			7.37e1								0.000
FUNCTION5 DCDPE			0.00e0								

Last Altered: Friday, July 19, 2013 10:18:10 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:18:37 Pacific Daylight Time

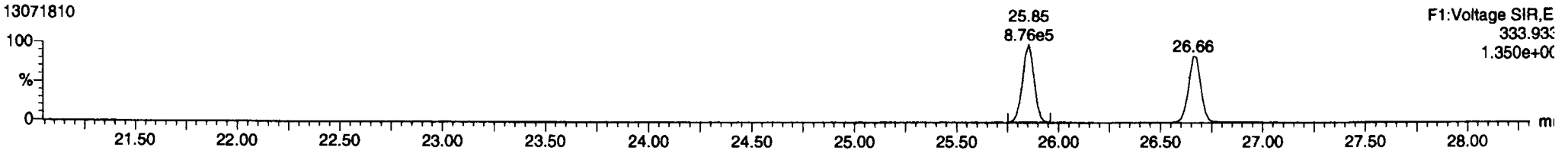
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130716.mdb 18 Jul 2013 10:49:00
Calibration: P:\DIOXIN8290.PRO\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

ID: ICV, Name: 13071810, Date: 18-Jul-2013, Time: 19:54:25, Conditions: AUTOSPEC01, User: pk

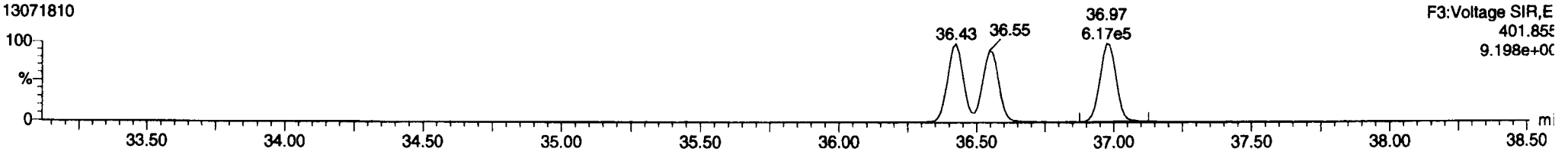
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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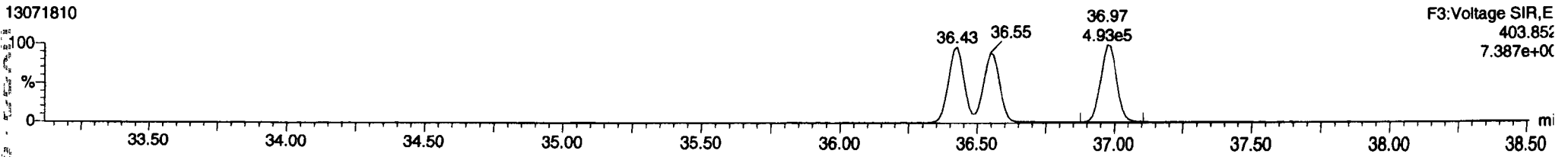
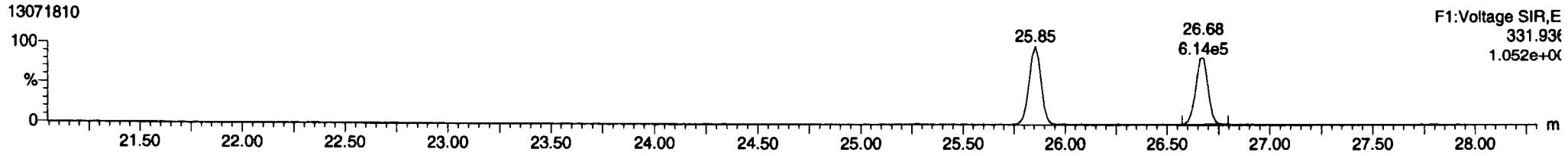


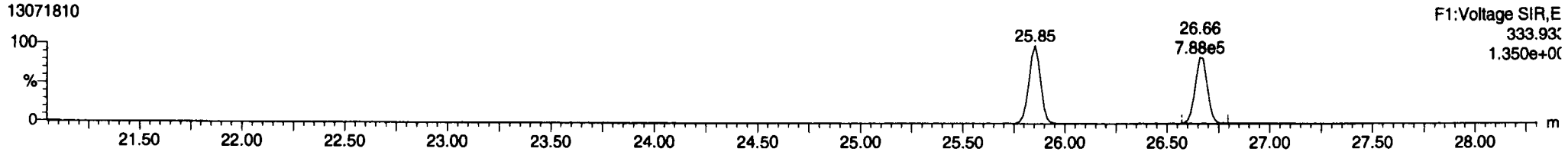
Last Altered: Friday, July 19, 2013 10:18:10 Pacific Daylight Time
Printed: Friday, July 19, 2013 10:18:37 Pacific Daylight Time

ID: ICV, Name: 13071810, Date: 18-Jul-2013, Time: 19:54:25, Conditions: AUTOSPEC01, User: pk

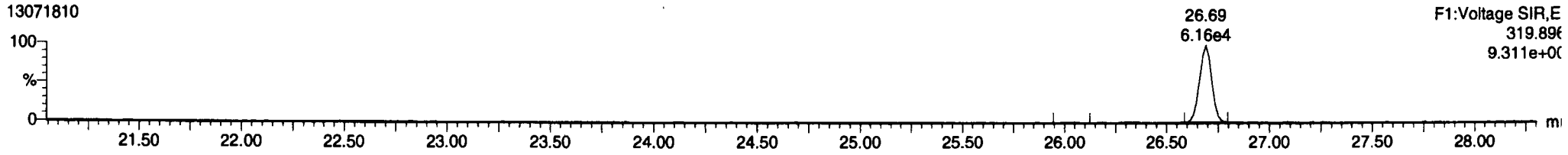
13C-2378-TCDD



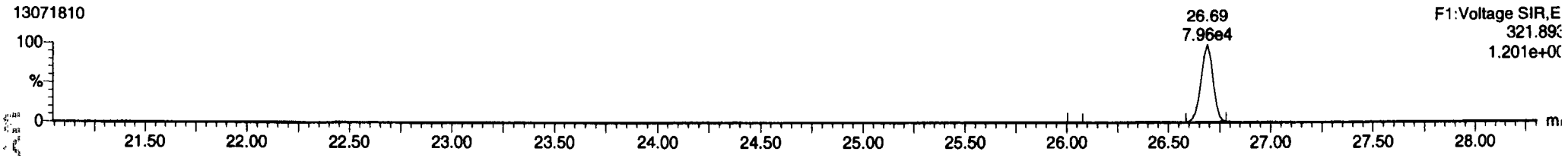
13C-2378-TCDD



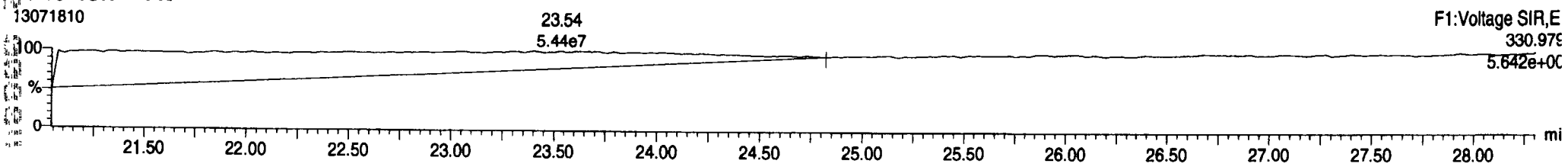
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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Printed: Friday, July 19, 2013 10:18:37 Pacific Daylight Time

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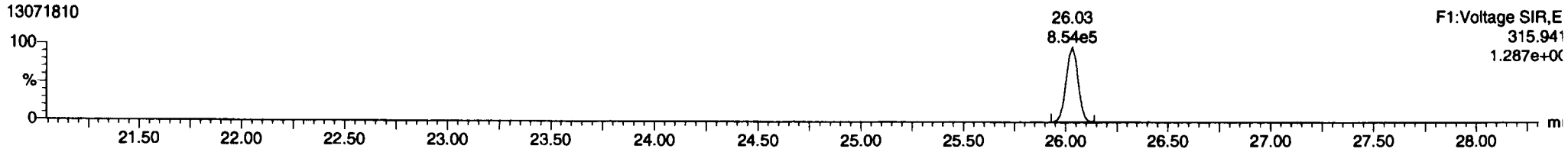
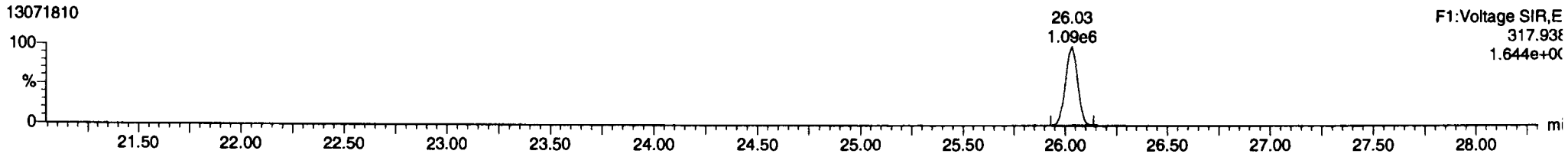
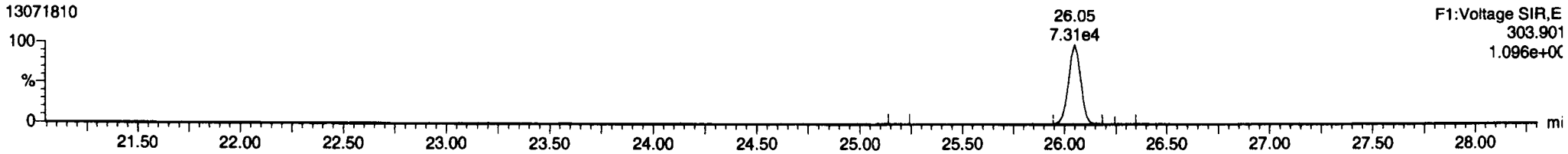
13C-2378-TCDF



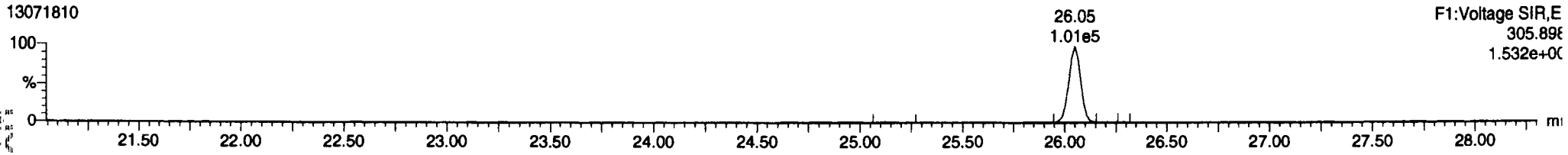
13C-2378-TCDF



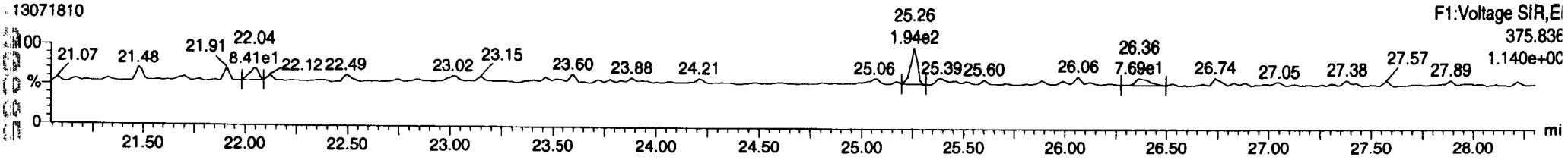
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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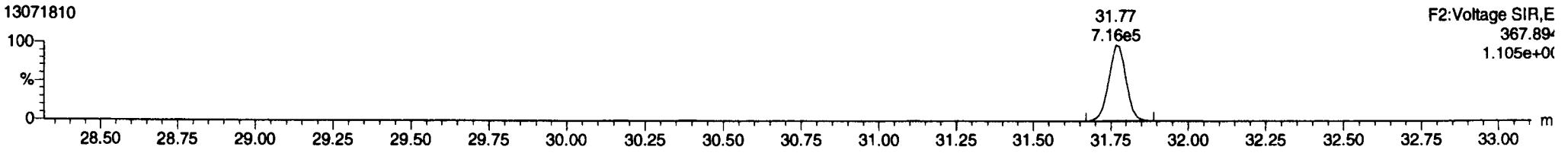
13C-12378-PeCDD



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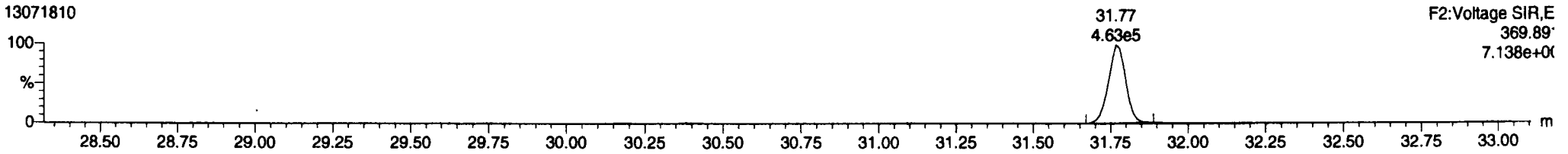
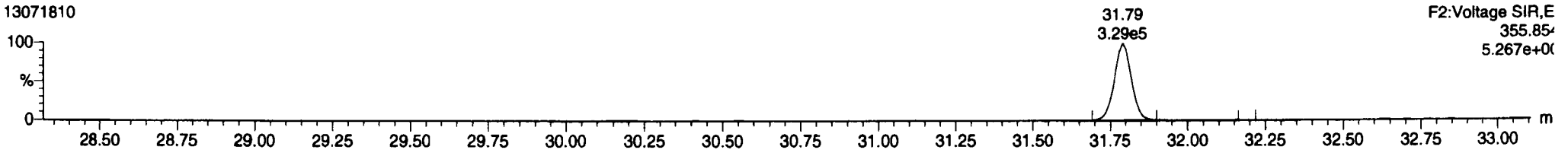
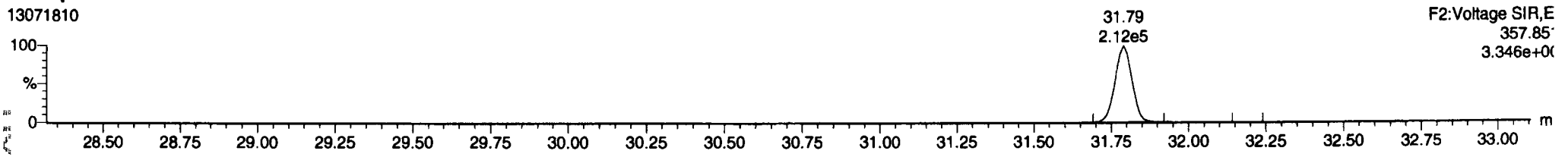


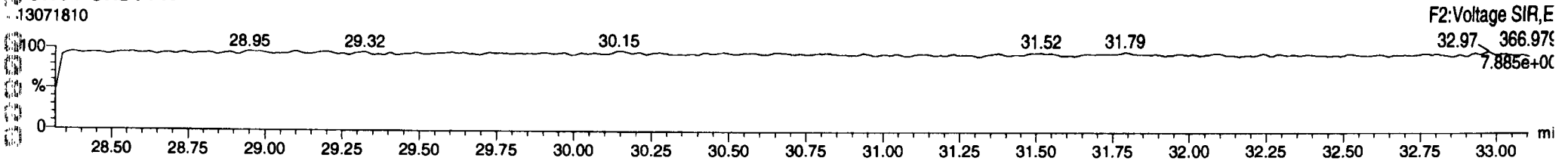
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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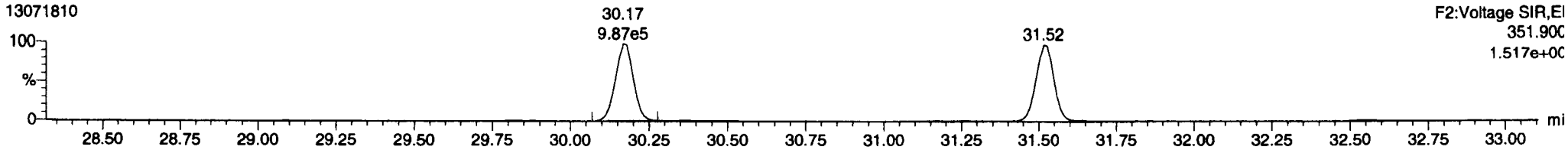
13C-12378-PeCDF



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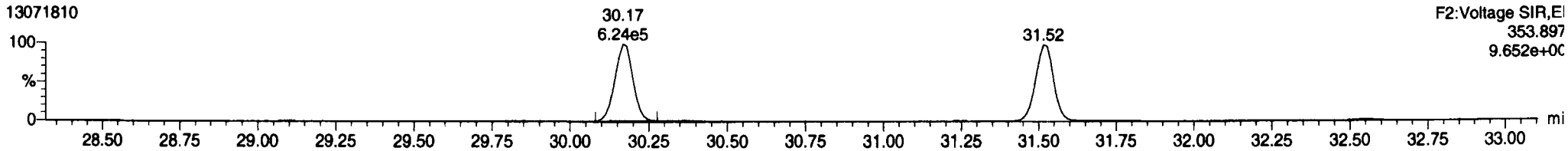

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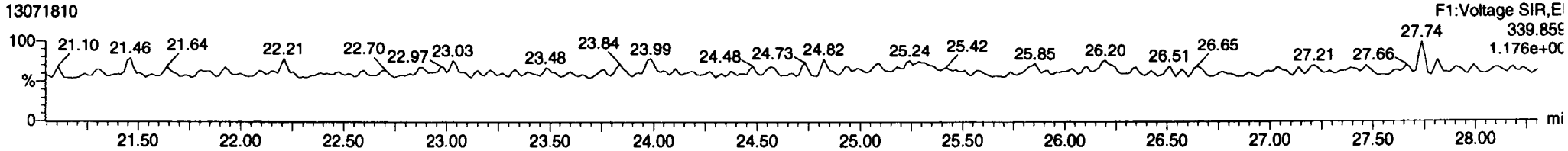

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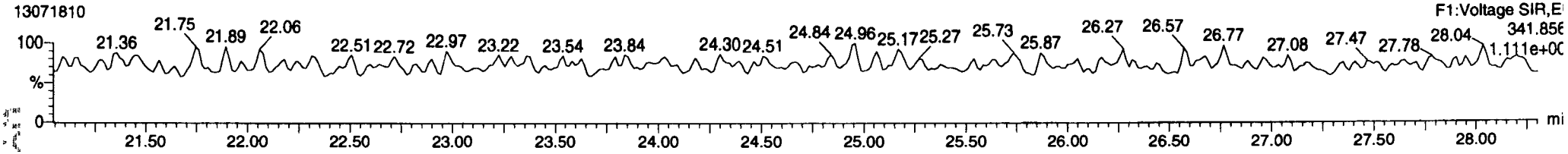
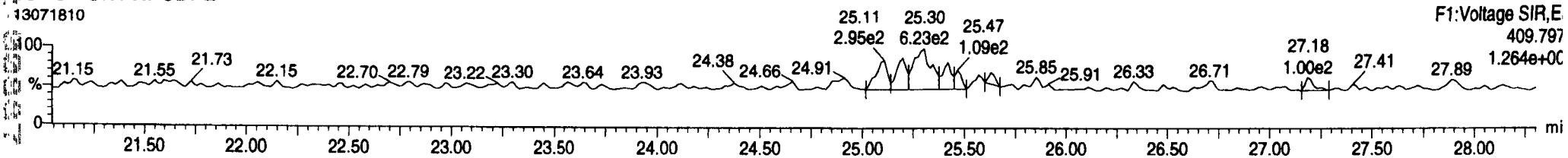


FUNCTION1 HPCDPE



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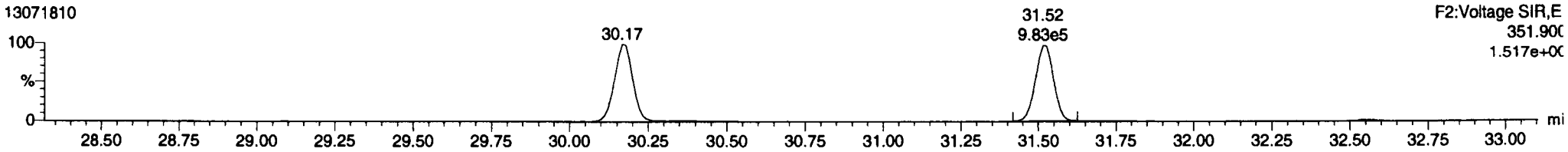
13C-23478-PeCDF



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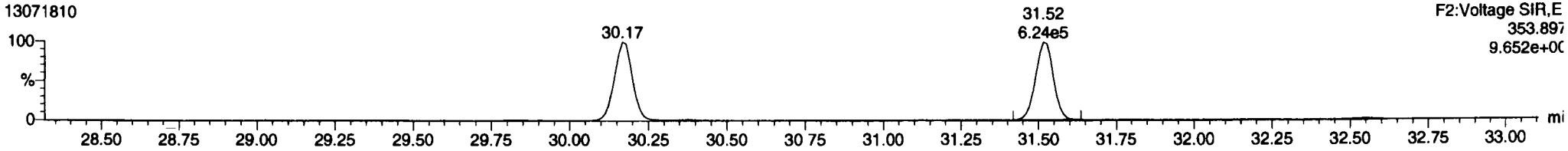
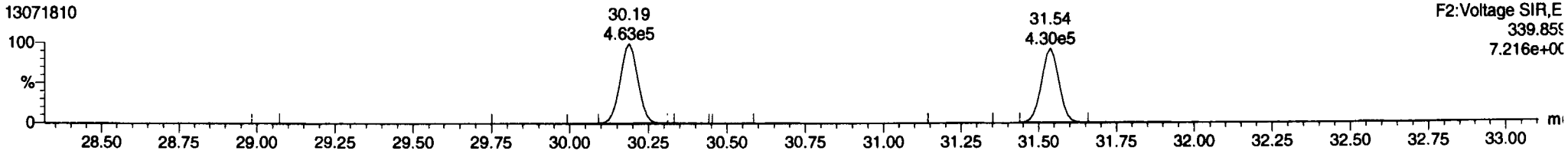
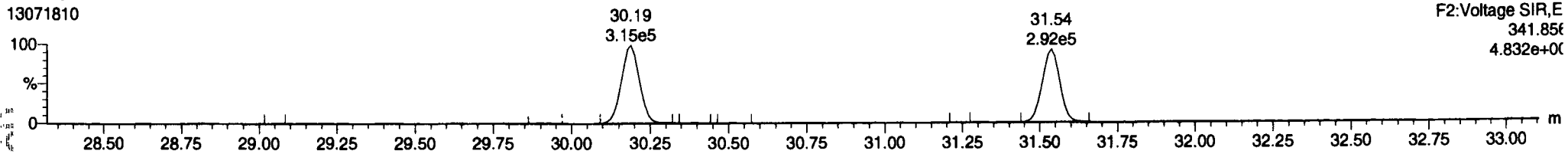


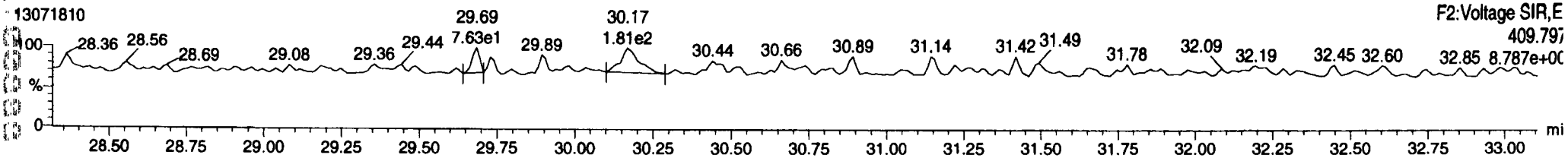
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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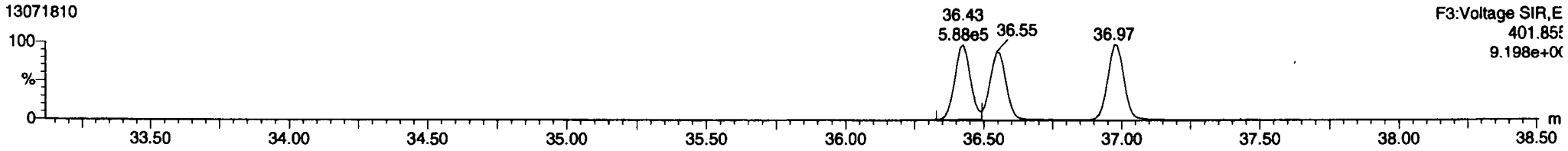
13C-123478-HxCDD



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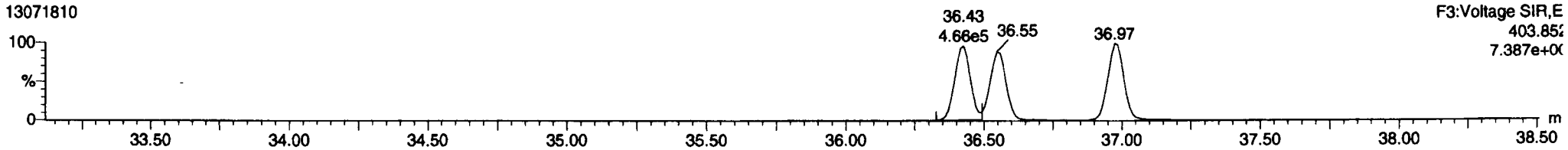
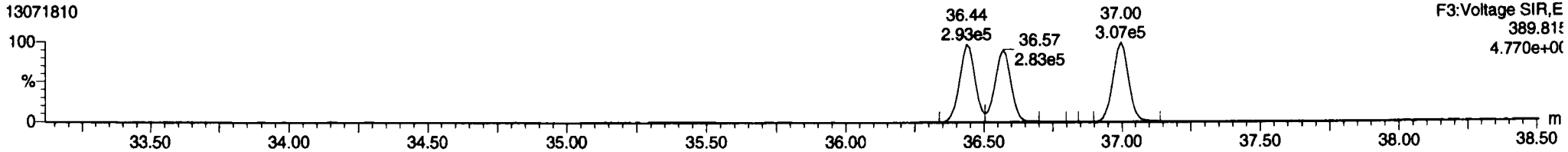
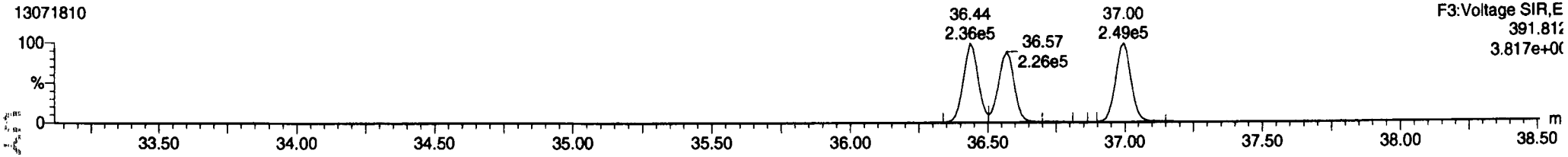


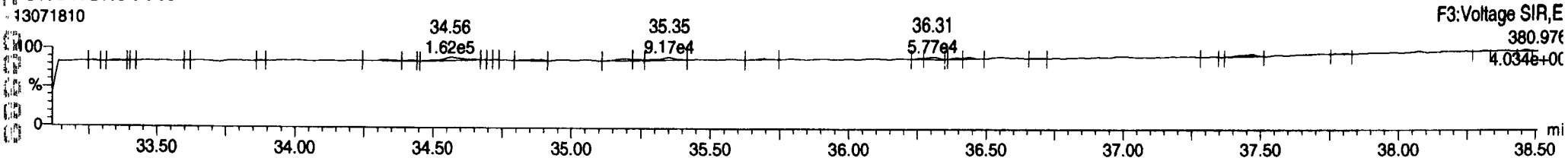
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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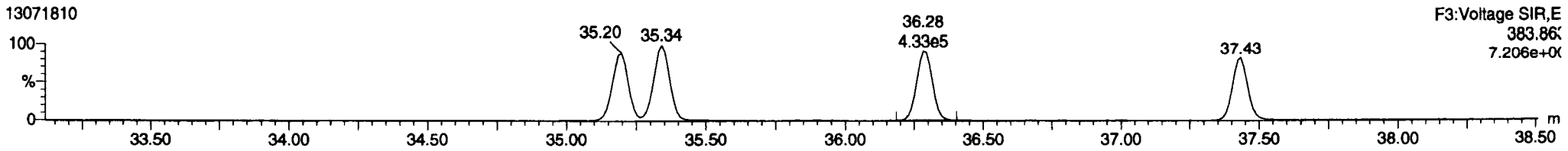
13C-234678-HxCDF



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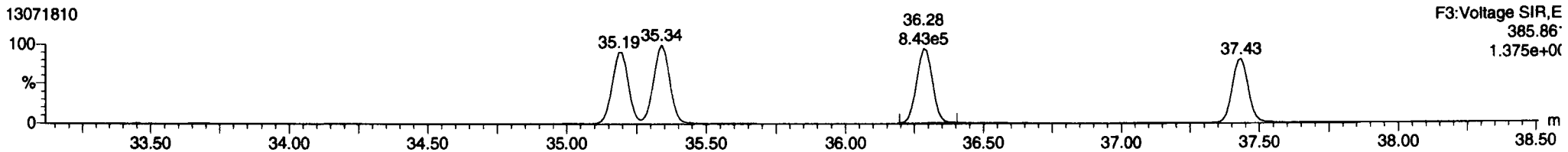
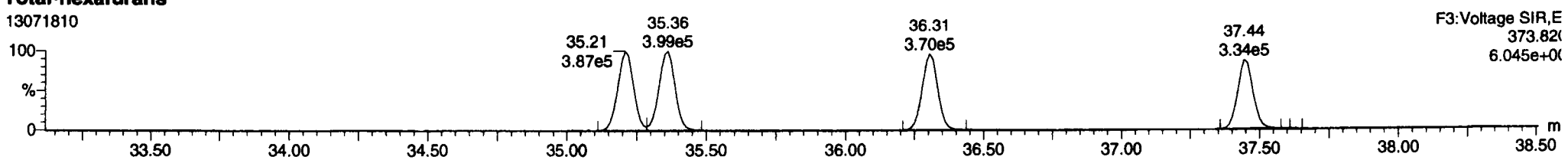
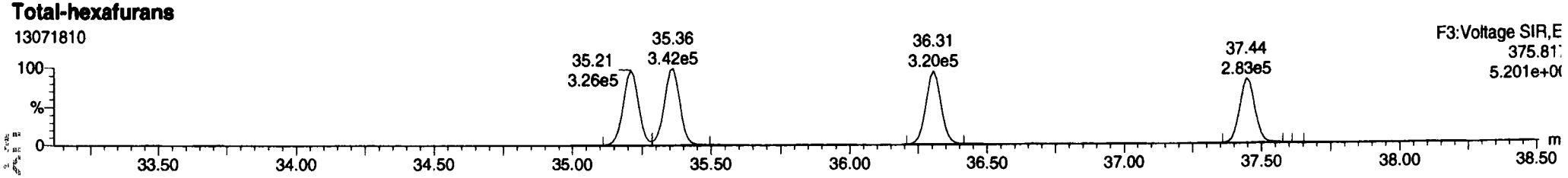


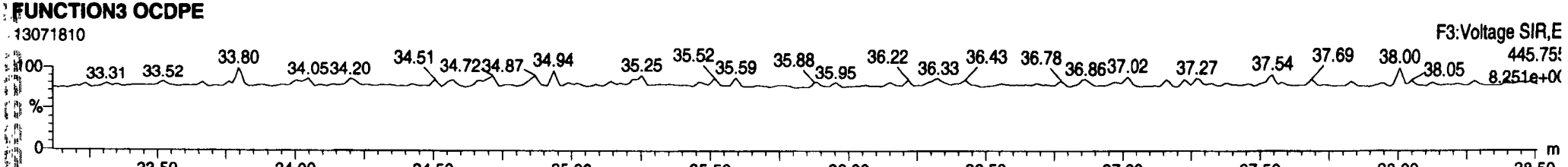
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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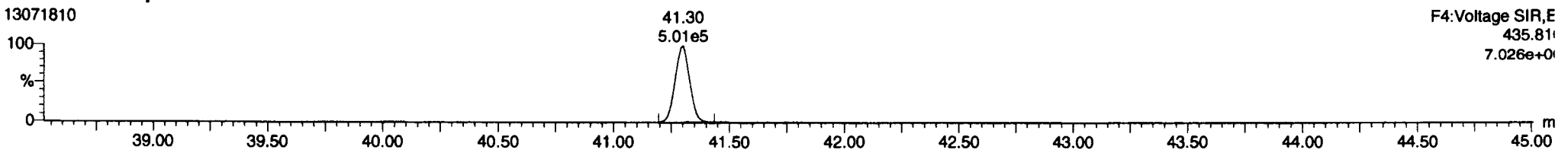
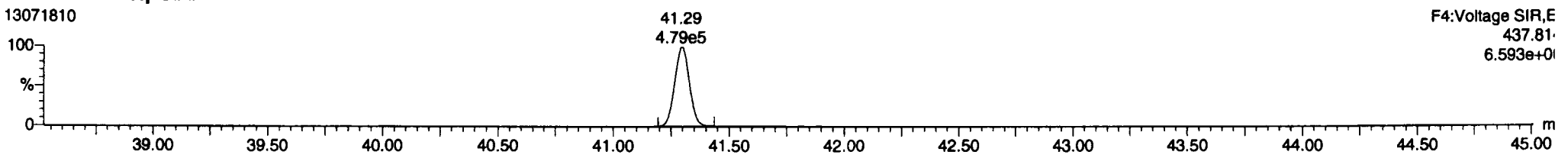
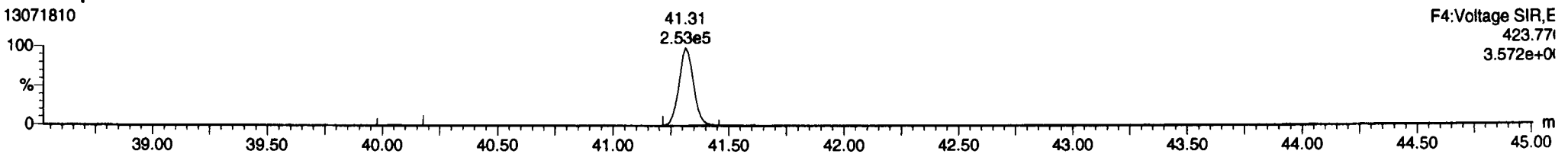
13C-1234678-HpCDD



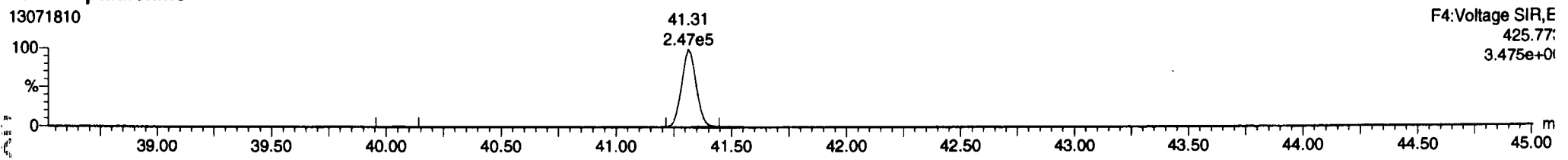
13C-1234678-HpCDD



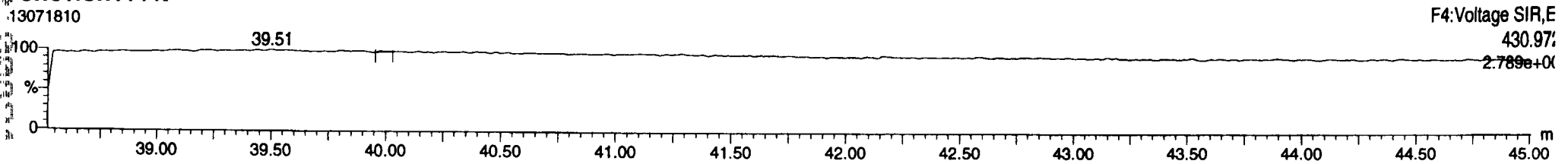
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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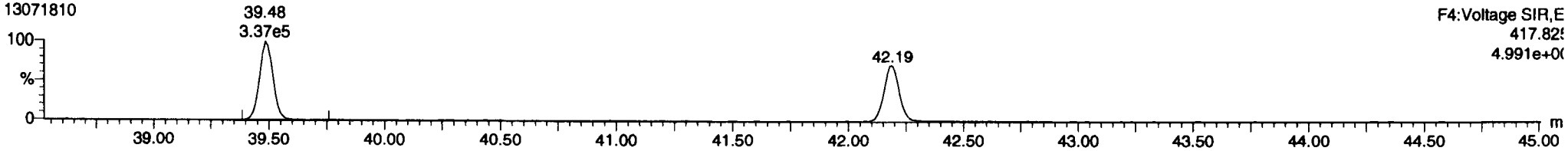

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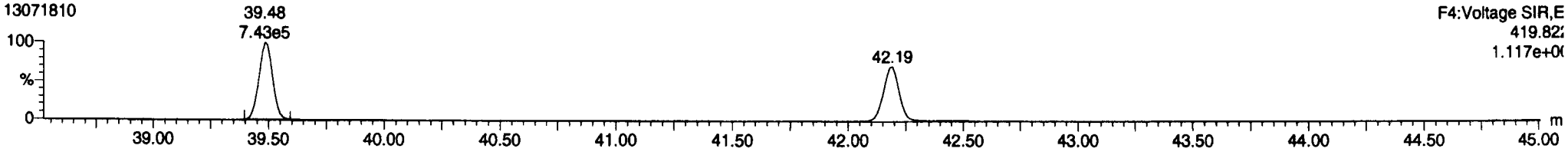
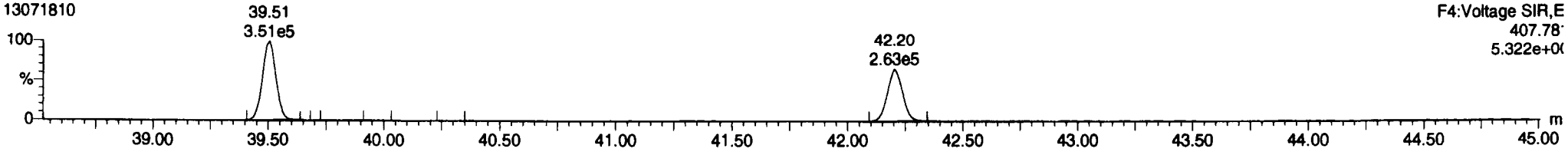
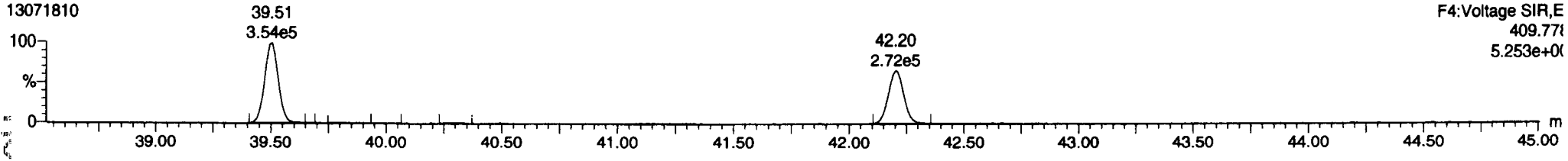


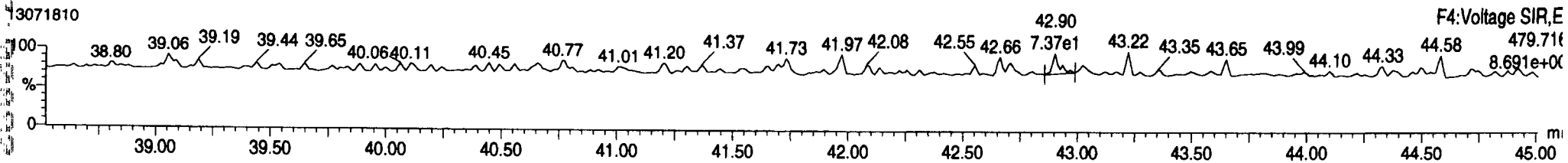
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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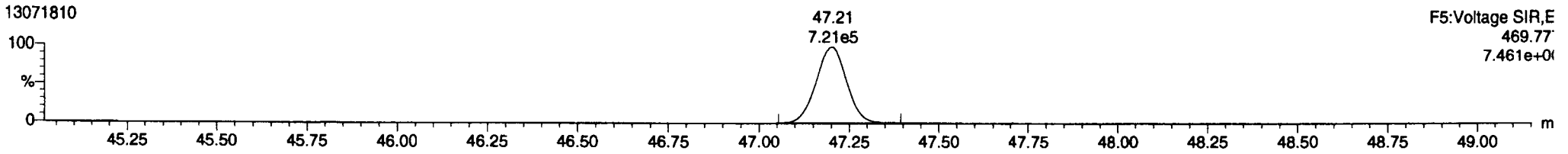
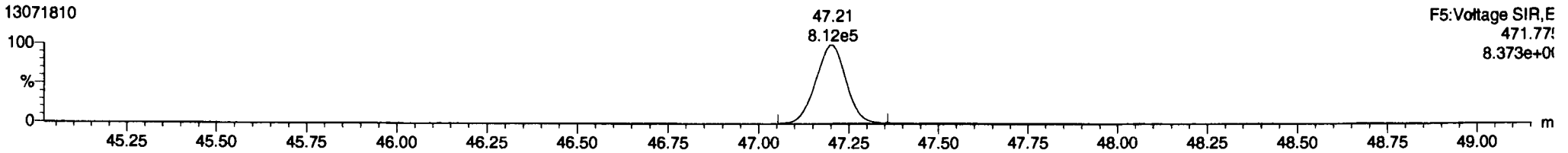
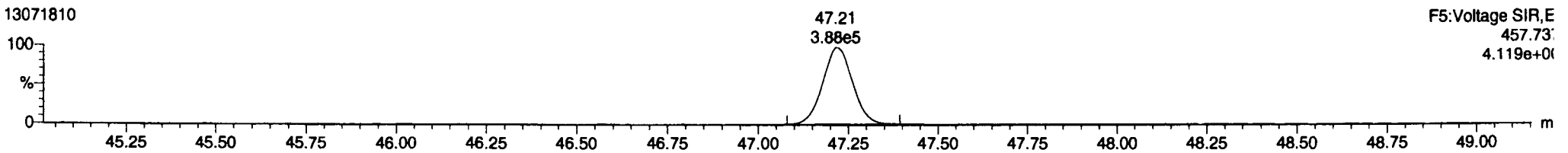
13C-OCDD



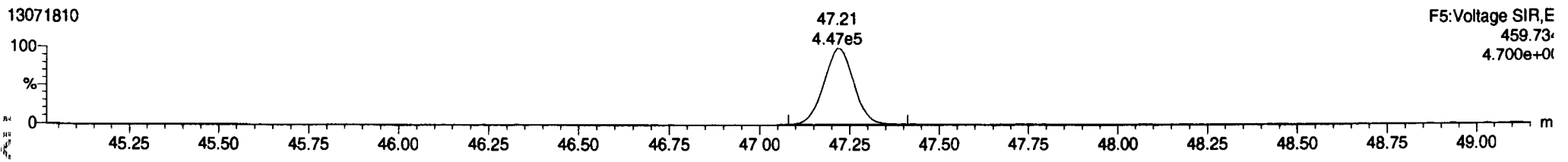
13C-OCDD



OCDD



OCDD



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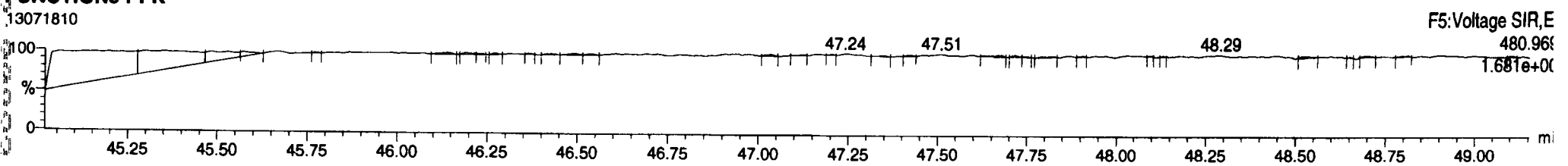

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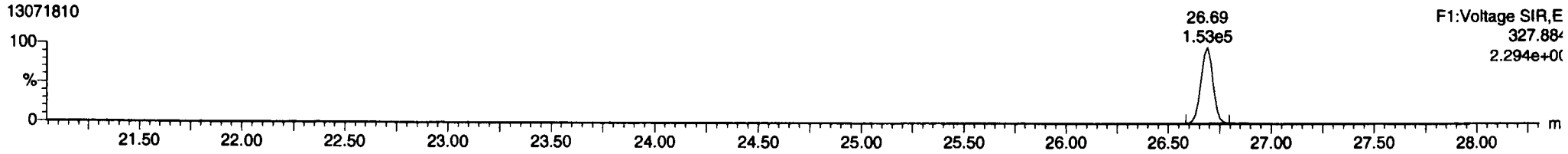

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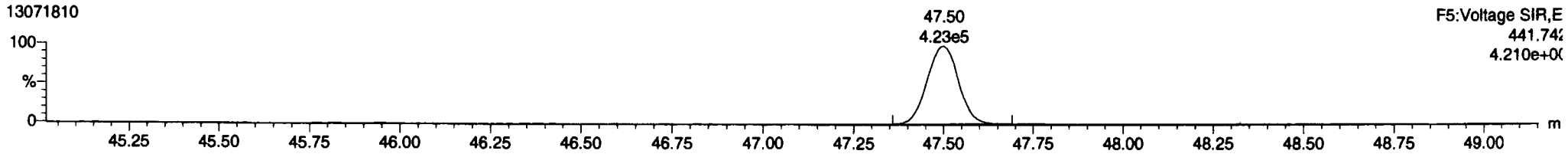

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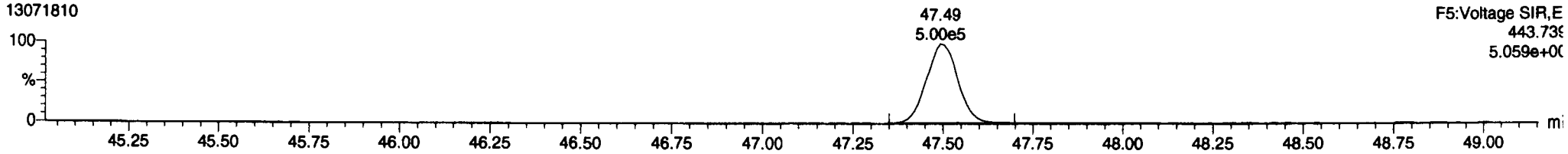

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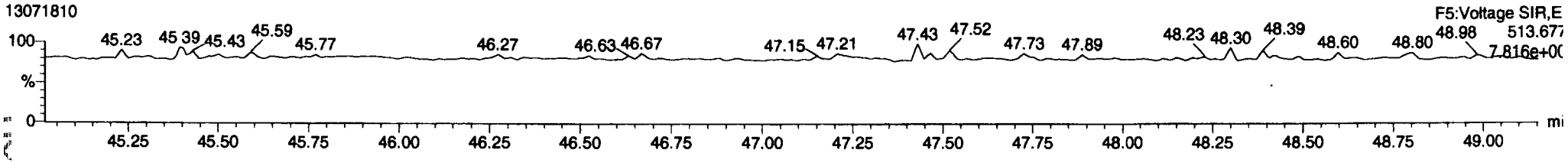

Dioxin Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WY32, WY33

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

HR-GC/MS Analyst Notes / Data Review Checklist

ARI Work Order: WY932 Client ID: SAIC

METHOD: **1613B** (Dioxins) **8290A** (Dioxins)

Instrument: **AutoSpec01**

Curve Date: 7/18/13 Analysis Start Date: 8/1/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Resolution Check > 10,000ppm	(Y) / N / ✓	Signal / Noise ≥ 2.5?	(Y) / N / ✓
TCDD / TCDF Resolution ≤ 25%	(Y) / N / ✓	Extraction STD Limits Met?	(Y) / N / ✓
PCDF Windows Verified	(Y) / N / ✓	Cleanup STD Limits Met?	(Y) / N / ✓
CCV Meets %D Limits?	(Y) / N / ✓	Method Blank in Control?	(Y) / N / ✓
CCV Ion Ratios within Limits?	(Y) / N / ✓	OPR Recovery Limits Met?	(Y) / N / ✓
CCV RRT within Limits?	(Y) / N / ✓	Values Exceeding Curve Range?	(Y) / N / ✓
Manual Integrations for Samples?	(Y) / N / ✓	Samples Diluted?	Y / (N) / OCDD
Special Analysis Request?	Y / N / ____	Duplicate Sample RPD ≤ 25%?	NA / ____

Detail problems, corrective actions and/or other pertinent information below:

Ok

(Review 1)Analyst: [signature] **Date:** 8/7/13

(Review 2)Reviewer: [signature] **Date:** 8/9

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 8/1/13 Analysis: Dioxins Analyst: MK

GC Program: 8290C Column No: I7822 Column Type: RTX-Dioxin2

Inj Vol: 1ul Instrument Tune (IPR): Jul16B 1-5 Detector Voltage: 350

Resolution Check Files: 10:14, 20:05, 04:07 Curve Date: 7/18/13

IS/SS	Ical/Ccal	LCS/ICV
I8144	I7708 1999-3	

1	01-Aug-13	10:15:29	13080102	CS3
2	01-Aug-13	11:10:12	13080103	ISC01
3	01-Aug-13	12:03:56	13080104	WY44MBS
4	01-Aug-13	12:54:23	13080105	WY44OPR
5	01-Aug-13	13:53:10	13080106	WY44SRM
6	01-Aug-13	14:43:28	13080107	WY54A
7	01-Aug-13	15:35:56	13080108	WY54B
8	01-Aug-13	16:28:11	13080109	WY32A
9	01-Aug-13	17:20:31	13080110	WY56A
10	01-Aug-13	18:12:47	13080111	WY56F
11	01-Aug-13	19:05:06	13080112	CS3
12	01-Aug-13	20:05:35	13080113	WY44A
13	01-Aug-13	21:01:03	13080114	WY44B
14	01-Aug-13	21:53:19	13080115	WY44C
15	01-Aug-13	22:45:38	13080116	WY44D
16	01-Aug-13	23:38:08	13080117	WY44E
17	02-Aug-13	00:30:29	13080118	WY44F
18	02-Aug-13	01:22:44	13080119	WY44G
19	02-Aug-13	02:15:04	13080120	WY44H
20	02-Aug-13	03:07:19	13080121	CS3
21	02-Aug-13	04:07:50	13080122	TOL 53177

MK 8/7/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Printed: Thursday, August 01, 2013 10:14:25 Pacific Daylight Time

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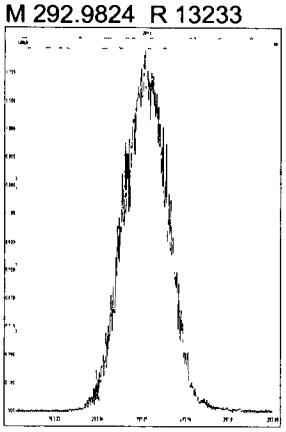

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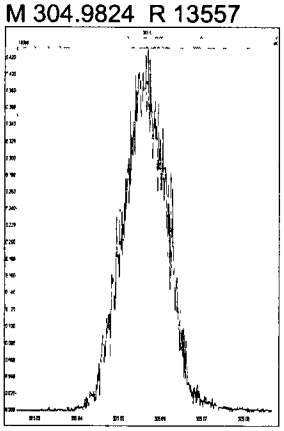

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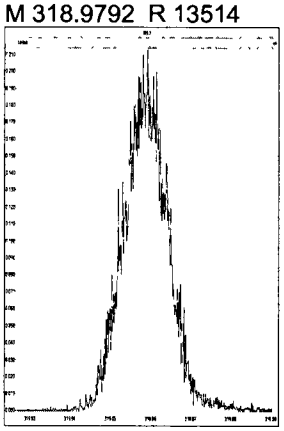

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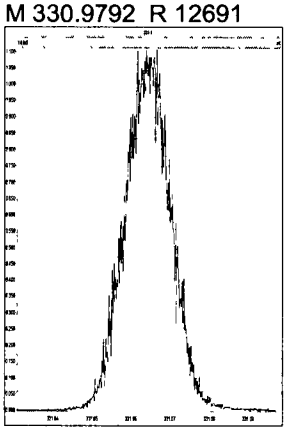

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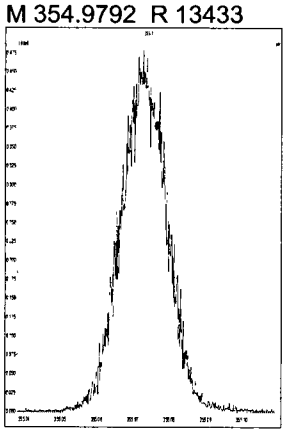

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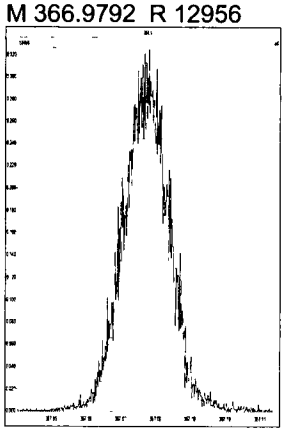

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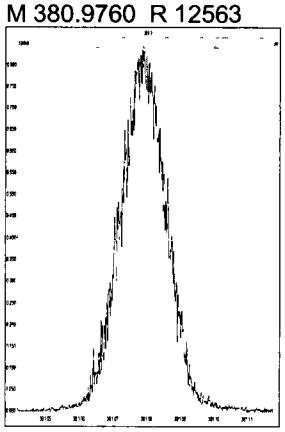

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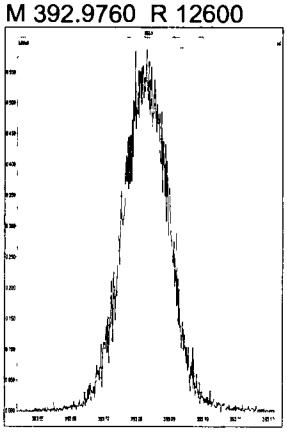

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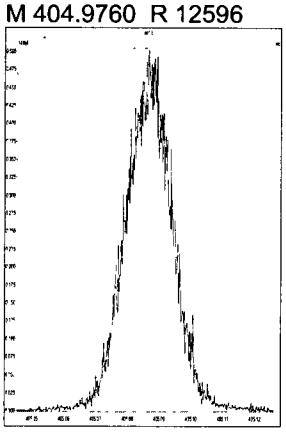

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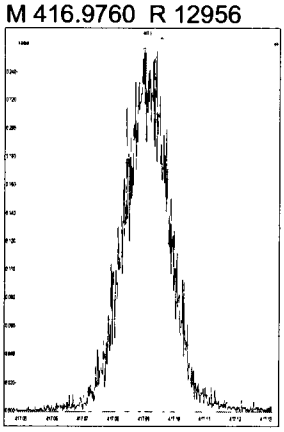

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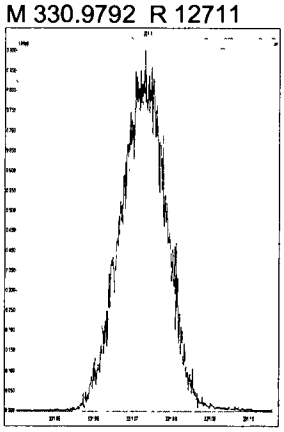

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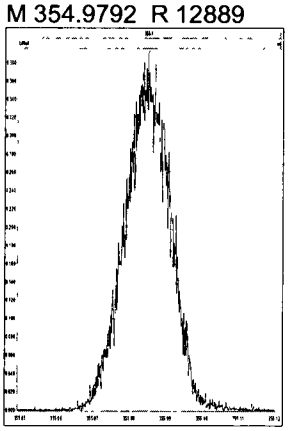

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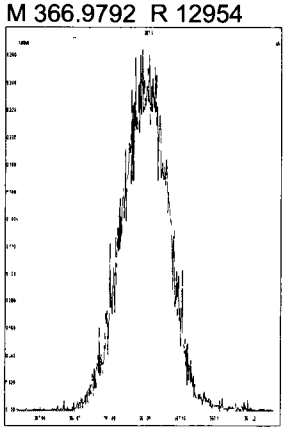

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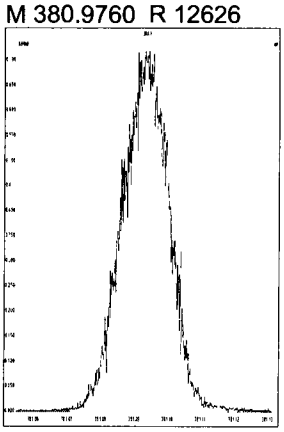

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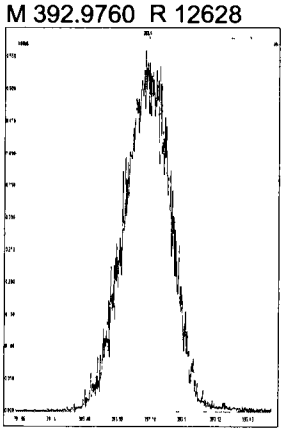

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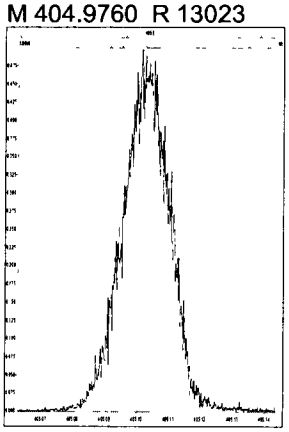

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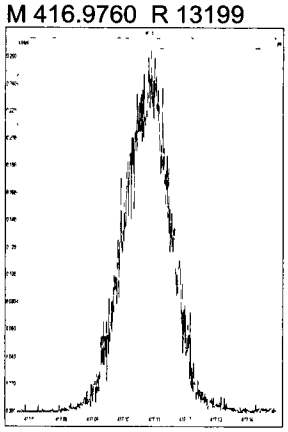

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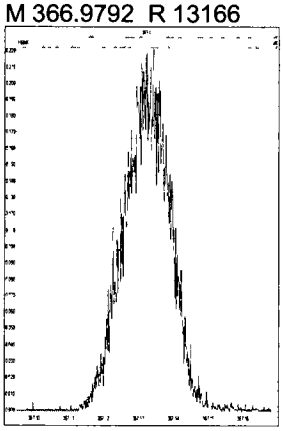

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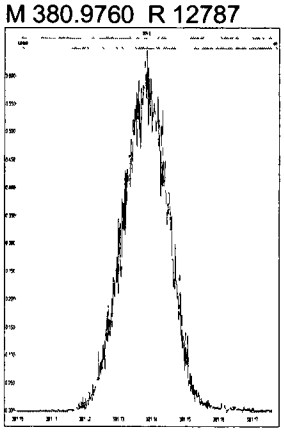

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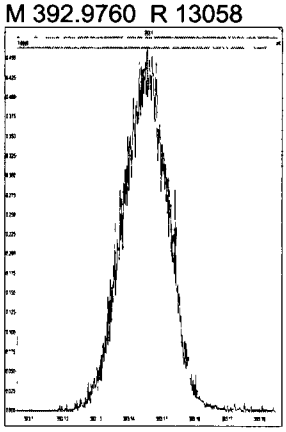

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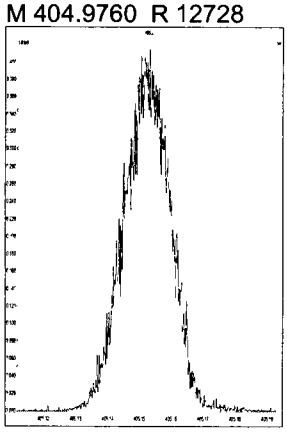

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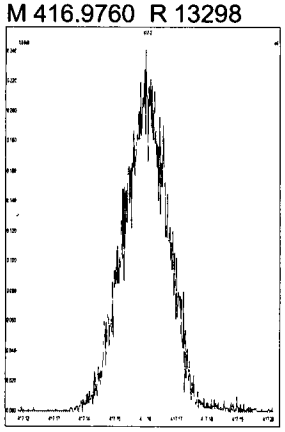

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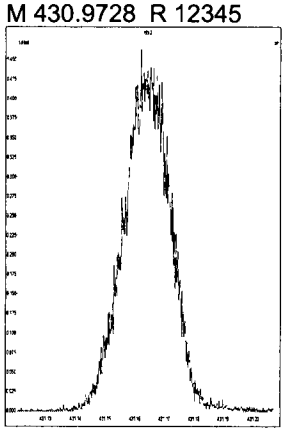

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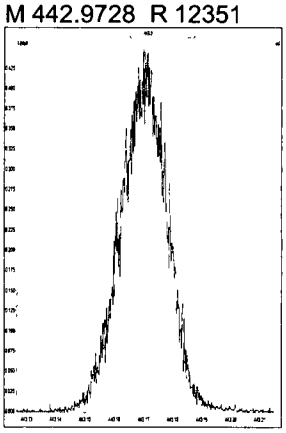

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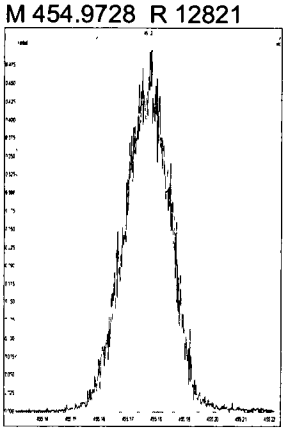

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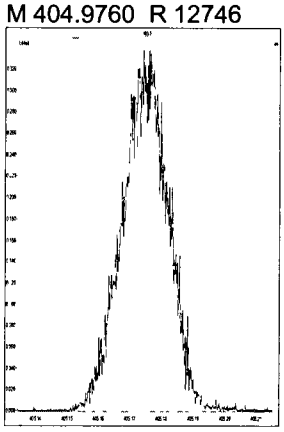

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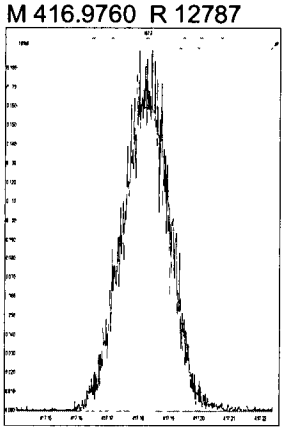

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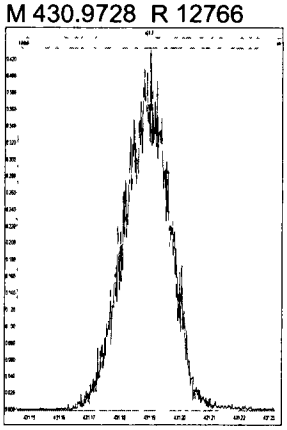

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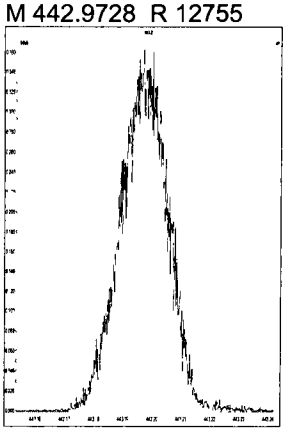

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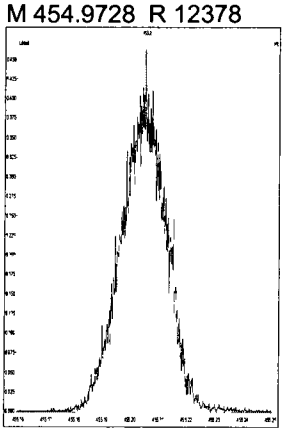

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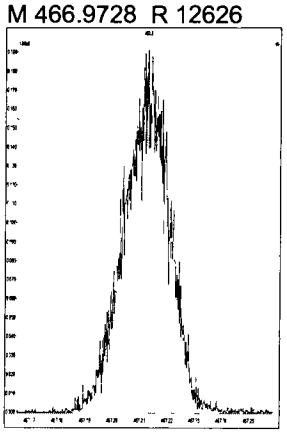

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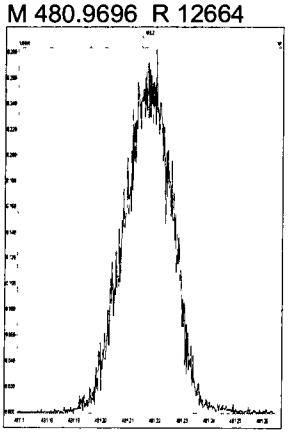

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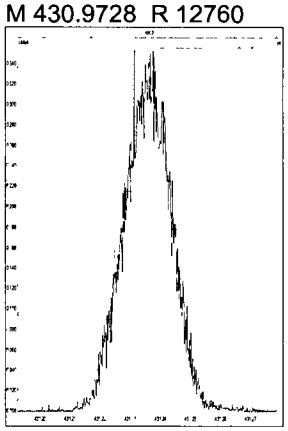

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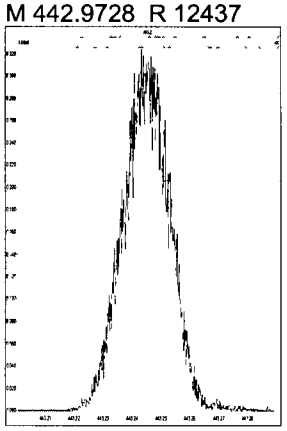

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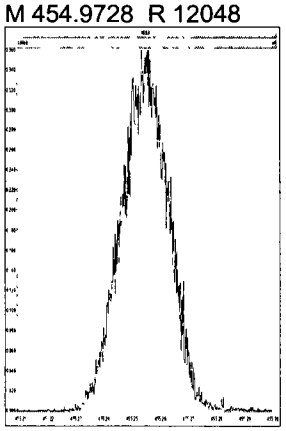

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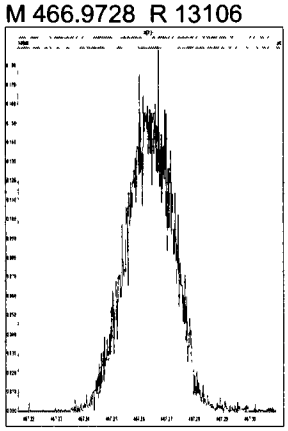

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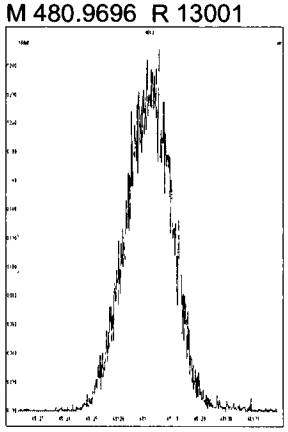
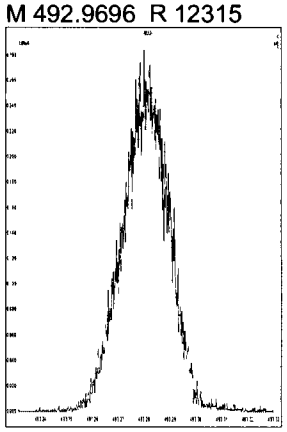
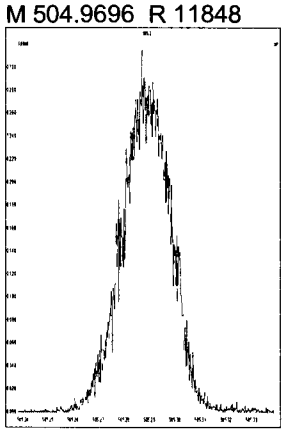


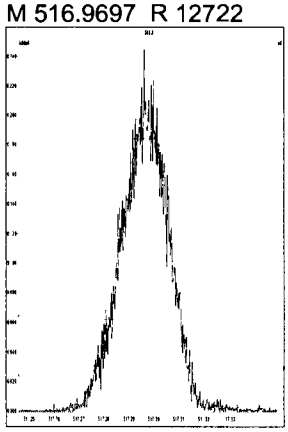
M 492.9696 R 12315

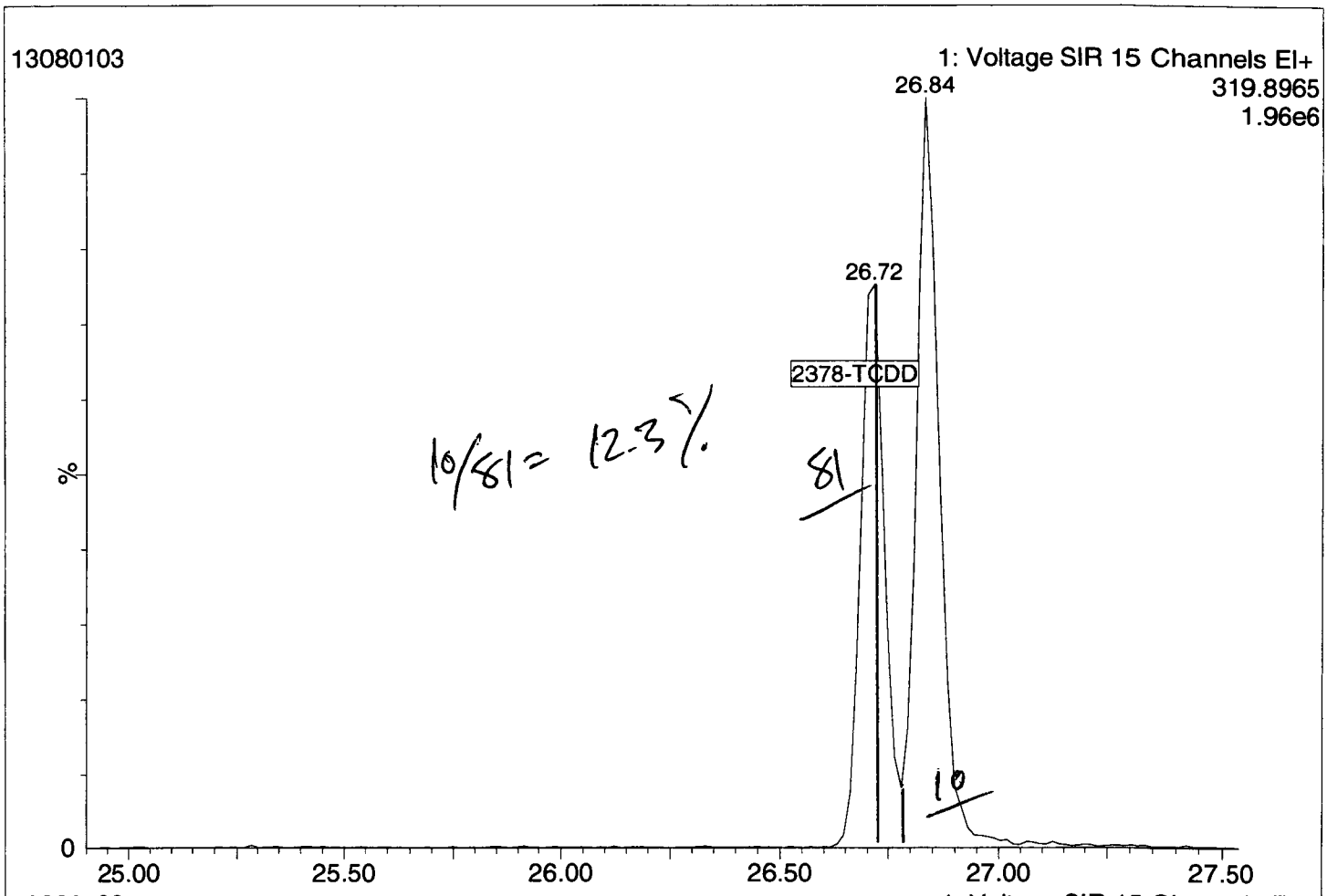


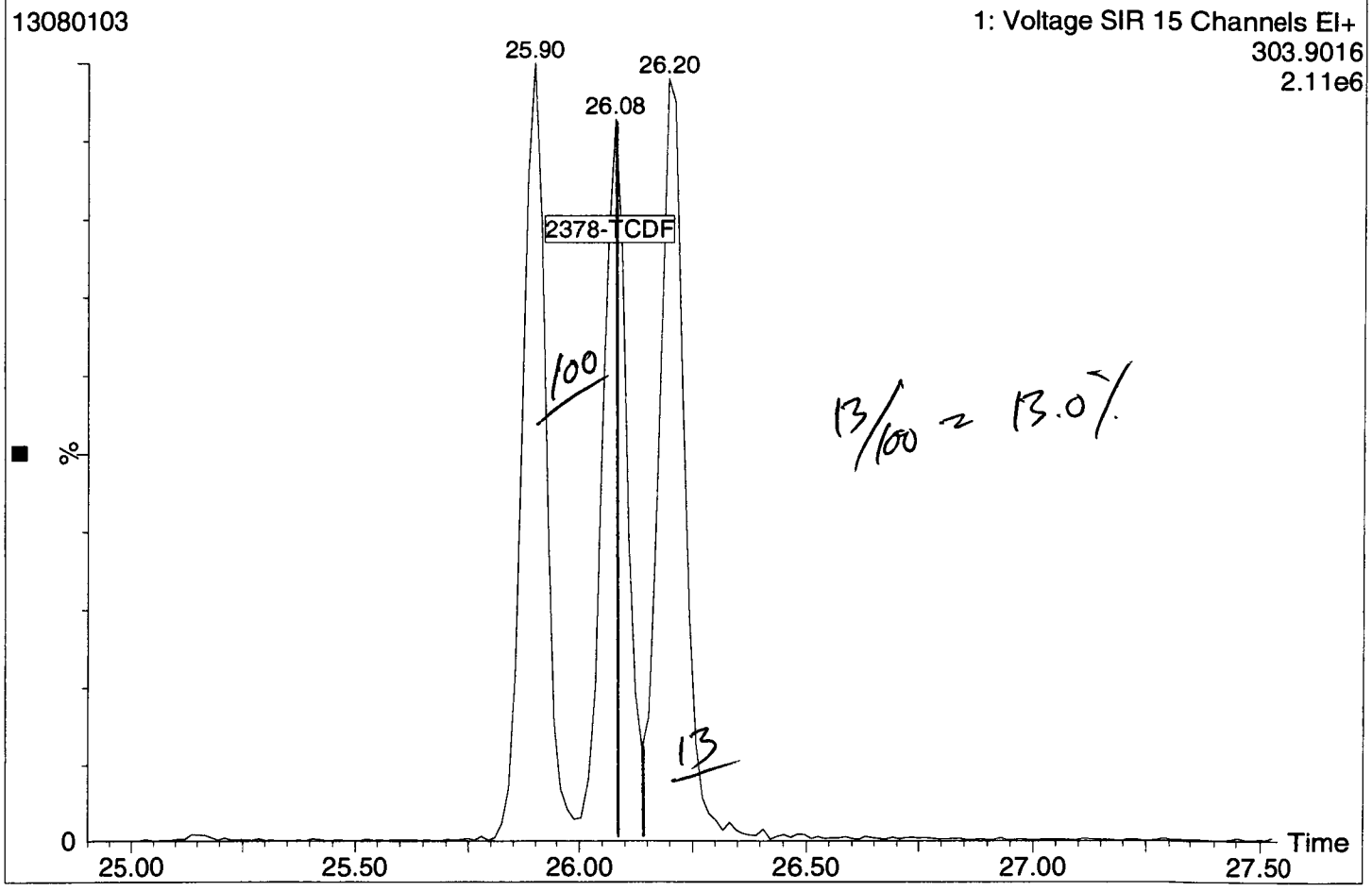
M 504.9696 R 11848

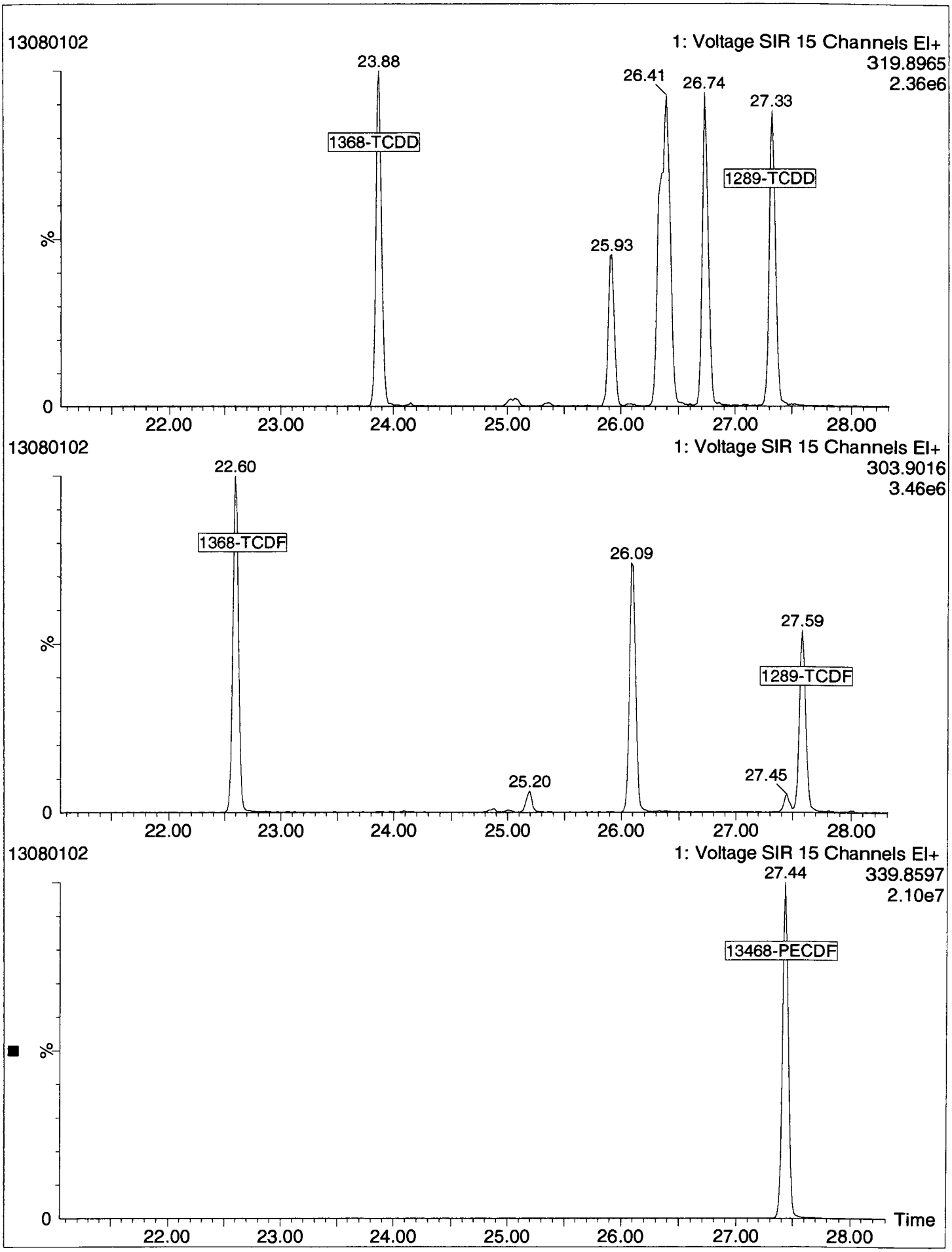


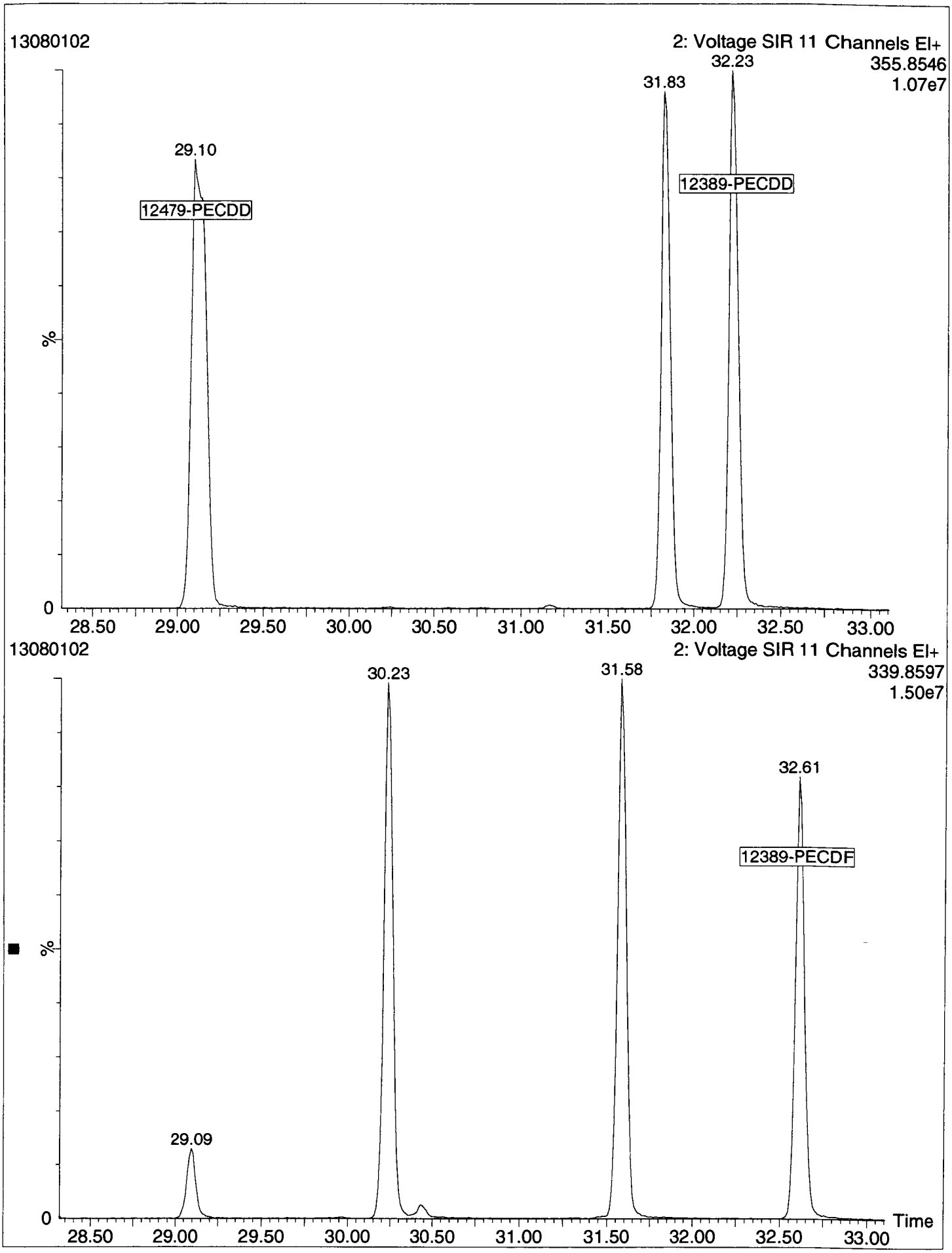
M 516.9697 R 12722

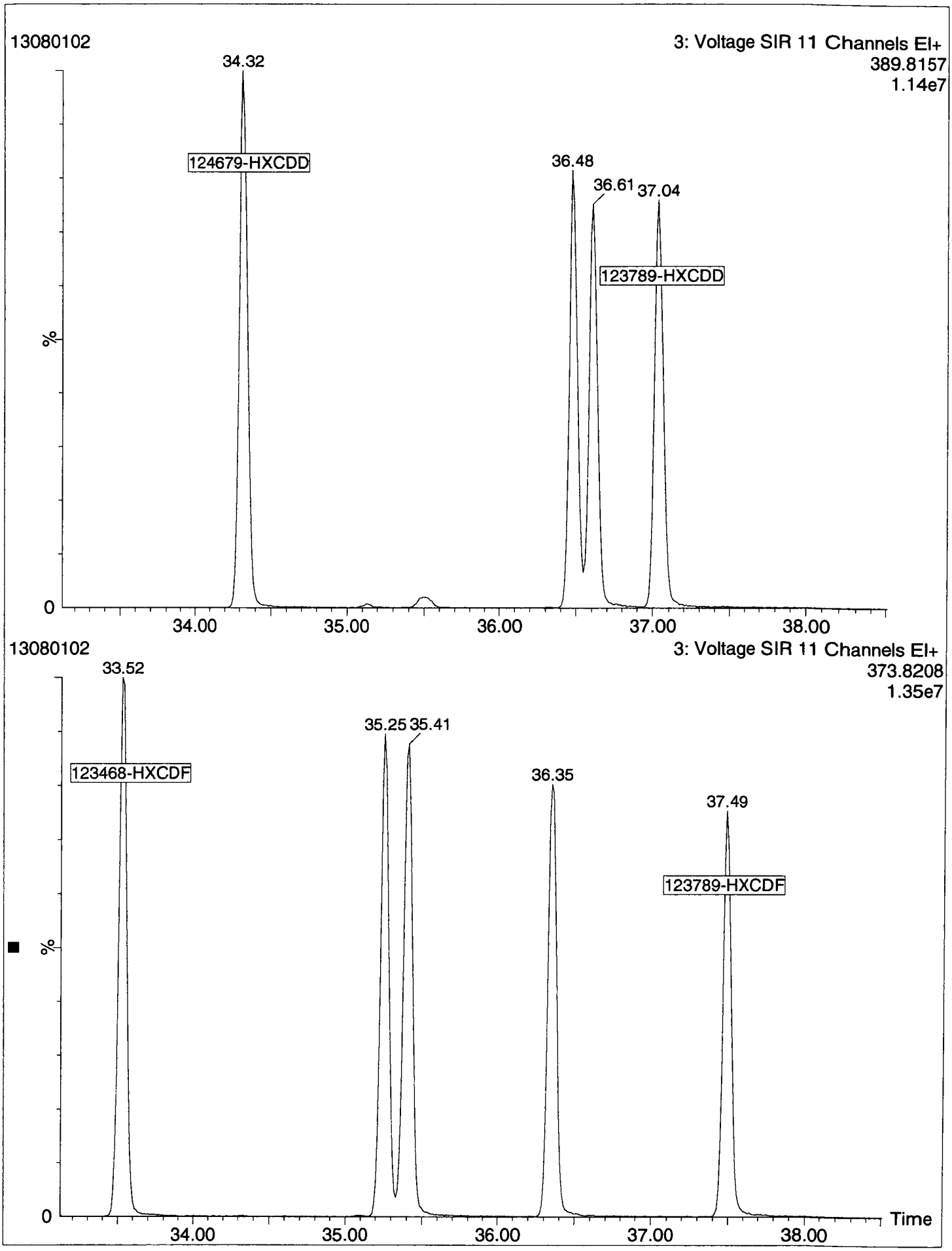


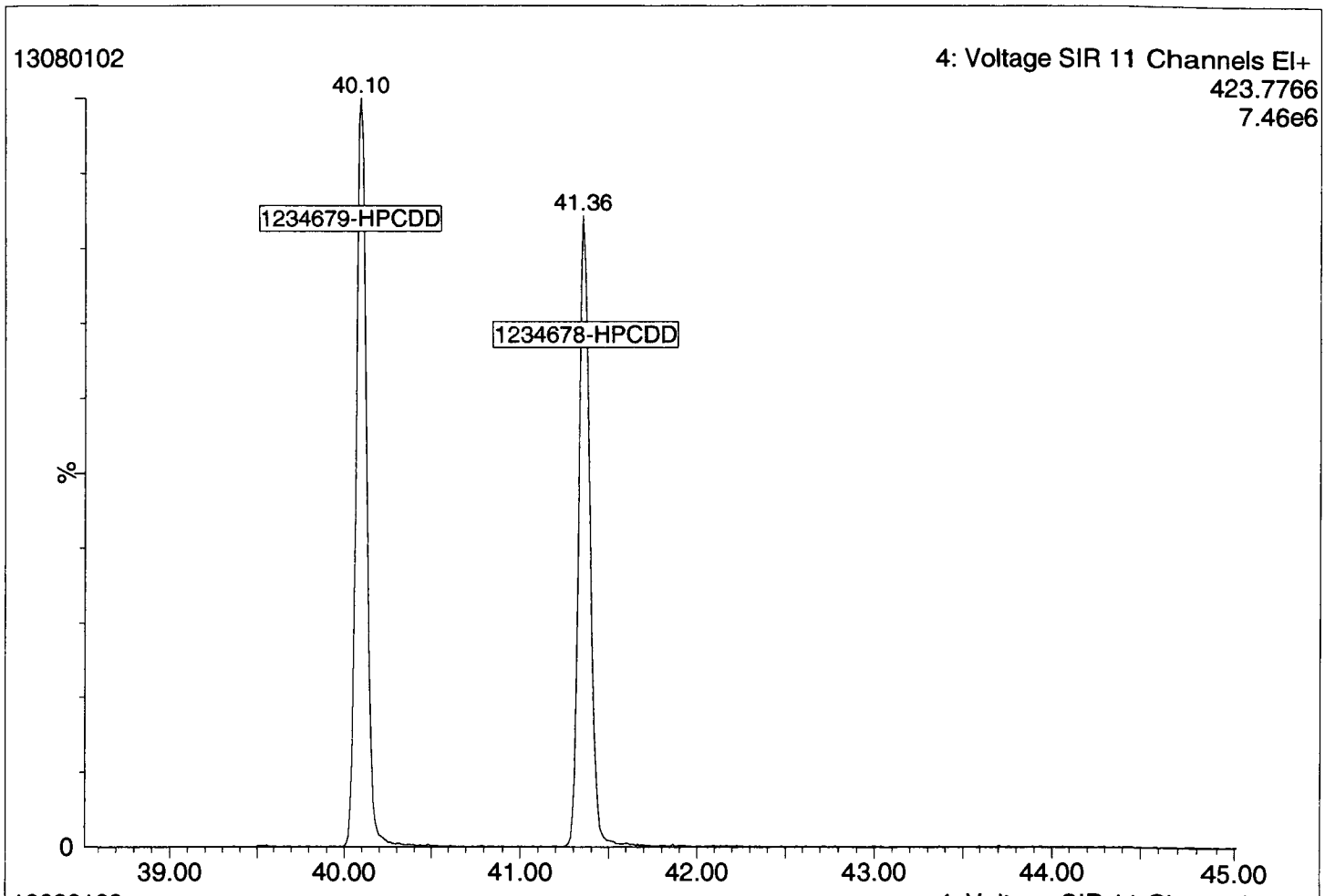

13080103
1: Voltage SIR 15 Channels EI+
319.8965
1.96e6
26.84
26.72
2378-TCDD
10/81 = 12.3%
81
10
%
0
25.00
25.50
26.00
26.50
27.00
27.50

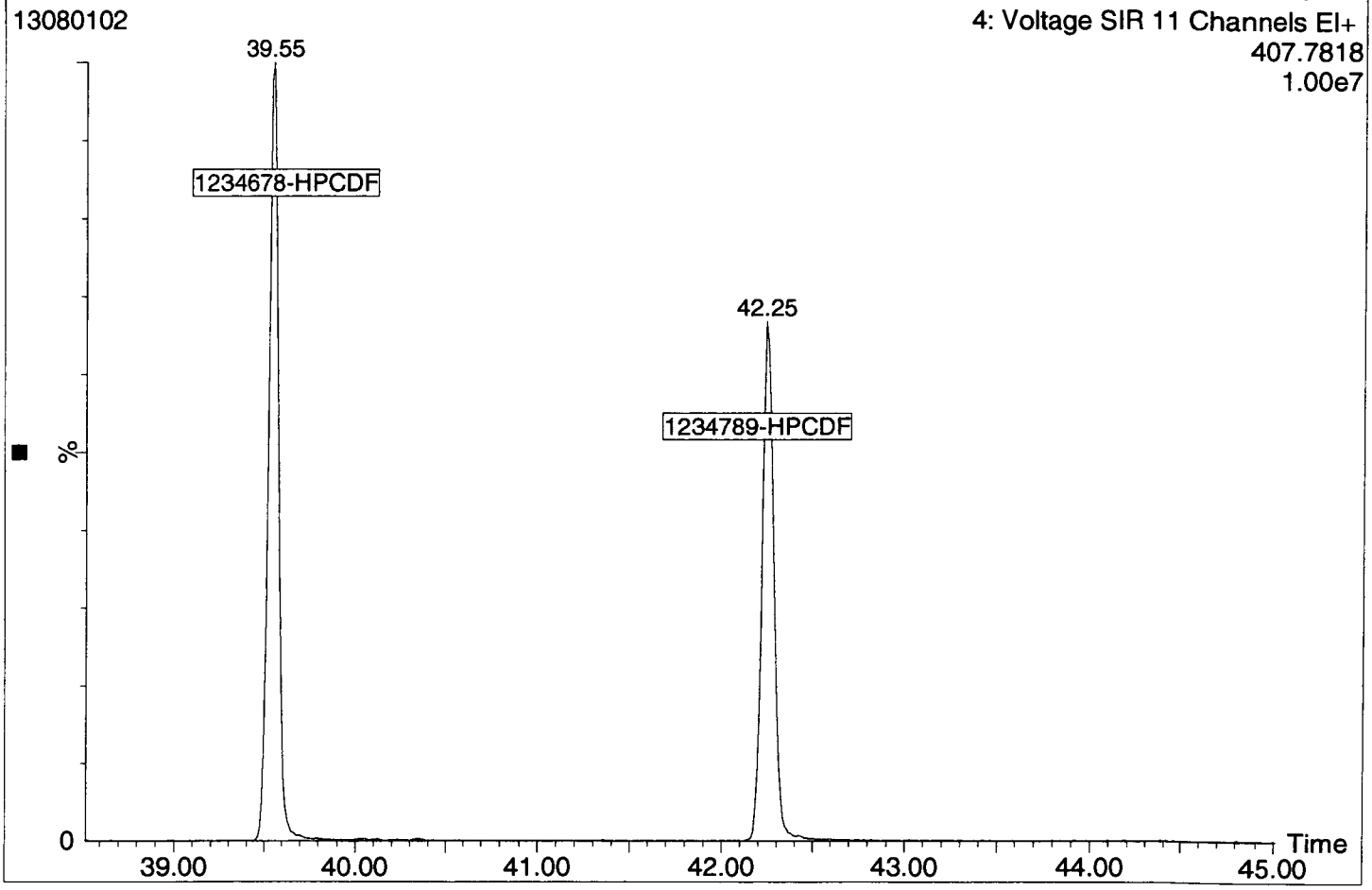

13080103
1: Voltage SIR 15 Channels EI+
303.9016
2.11e6
25.90
26.20
26.08
2378-TCDF
100
13/100 = 13.0%
13
%
0
Time
25.00
25.50
26.00
26.50
27.00
27.50


13080102
1: Voltage SIR 15 Channels EI+
319.8965
2.36e6
23.88
1368-TCDD
26.41
26.74
27.33
1289-TCDD
25.93
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
13080102
1: Voltage SIR 15 Channels EI+
303.9016
3.46e6
22.60
1368-TCDF
26.09
27.59
1289-TCDF
25.20
27.45
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
13080102
1: Voltage SIR 15 Channels EI+
339.8597
2.10e7
27.44
13468-PECDF
%
0
Time
22.00
23.00
24.00
25.00
26.00
27.00
28.00


13080102
2: Voltage SIR 11 Channels EI+
355.8546
1.07e7
32.23
31.83
29.10
12389-PECDD
12479-PECDD
%
0
28.50
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
13080102
2: Voltage SIR 11 Channels EI+
339.8597
1.50e7
30.23
31.58
32.61
12389-PECDF
29.09
%
0
Time
28.50
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00


13080102
3: Voltage SIR 11 Channels EI+
389.8157
1.14e7
34.32
124679-HXCDD
36.48
36.61
37.04
123789-HXCDD
%
0
34.00
35.00
36.00
37.00
38.00
13080102
3: Voltage SIR 11 Channels EI+
373.8208
1.35e7
33.52
123468-HXCDF
35.25
35.41
36.35
37.49
123789-HXCDF
%
0
Time
34.00
35.00
36.00
37.00
38.00


13080102
4: Voltage SIR 11 Channels EI+
423.7766
7.46e6
40.10
1234679-HPCDD
41.36
1234678-HPCDD
%
0
39.00
40.00
41.00
42.00
43.00
44.00
45.00


13080102
4: Voltage SIR 11 Channels EI+
407.7818
1.00e7
39.55
1234678-HPCDF
42.25
1234789-HPCDF
%
0
Time
39.00
40.00
41.00
42.00
43.00
44.00
45.00

Dataset: P:\DIOXIN8290.PRO\130801OPEN.qld
Last Altered: Thursday, August 01, 2013 11:08:01 Pacific Daylight Time
Printed: Thursday, August 01, 2013 11:30:28 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130716.mdb 24 Jul 2013 13:56:23
Calibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

ID: CS3, Name: 13080102, Date: 01-Aug-2013, Time: 10:15:29, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.093	1.001	1.61e5	2.22e5	0.867	0.728	0.770	1496.2	NO	10.373	10.373
12378-PeCDF	30.234	1.000	8.95e5	6.18e5	0.875	1.447	1.550	5210.5	NO	50.580	50.580
23478-PeCDF	31.582	1.000	8.80e5	6.05e5	0.880	1.454	1.550	5194.2	NO	50.727	50.727
123478-HxCDF	35.254	1.001	7.31e5	6.17e5	1.048	1.185	1.240	2472.9	NO	50.653	50.653
234678-HxCDF	36.350	1.001	7.16e5	6.01e5	1.088	1.192	1.240	2275.0	NO	51.053	51.053
123678-HxCDF	35.408	1.001	7.56e5	6.37e5	1.025	1.187	1.240	2419.2	NO	49.807	49.807
123789-HxCDF	37.490	1.000	6.41e5	5.26e5	0.959	1.220	1.240	2077.8	NO	51.555	51.555
1234678-HpCDF	39.551	1.001	6.39e5	6.47e5	1.215	0.987	1.050	5326.3	NO	50.529	50.529
1234789-HpCDF	42.247	1.000	5.01e5	5.01e5	1.200	1.001	1.050	3550.8	NO	50.295	50.295
OCDF	47.558	1.006	7.71e5	8.99e5	1.064	0.857	0.890	4032.3	NO	104.518	104.518
2378-TCDD	26.736	1.001	1.25e5	1.63e5	0.994	0.766	0.770	1340.1	NO	9.805	9.805
12378-PeCDD	31.834	1.000	6.33e5	4.12e5	0.976	1.538	1.550	2244.3	NO	49.041	49.041
123478-HxCDD	36.482	1.000	5.60e5	4.40e5	0.967	1.274	1.240	3403.3	NO	51.310	51.310
123678-HxCDD	36.613	1.001	5.41e5	4.35e5	0.902	1.242	1.240	3178.7	NO	50.528	50.528
123789-HxCDD	37.041	1.012	5.36e5	4.34e5	0.914	1.236	1.240	3157.5	NO	51.028	51.028
1234678-HpCDD	41.359	1.001	4.52e5	4.27e5	0.999	1.059	1.050	2412.7	NO	50.281	50.281
OCDD	47.279	1.001	6.97e5	7.83e5	0.979	0.890	0.890	3123.0	NO	100.618	100.618
13C-2378-TCDF	26.078	1.007	1.86e6	2.40e6	1.419	0.772	0.770	10006.4	NO		100.895
13C-12378-PeCDF	30.223	1.167	2.09e6	1.33e6	1.158	1.571	1.550	8228.8	NO		99.284
13C-23478-PeCDF	31.571	1.219	2.02e6	1.30e6	1.127	1.552	1.550	7922.7	NO		99.315
13C-123478-HxCDF	35.232	0.952	8.60e5	1.68e6	1.206	0.512	0.510	2961.9	NO		106.626
13C-123678-HxCDF	35.386	0.956	9.21e5	1.81e6	1.266	0.509	0.510	3146.6	NO		109.305
13C-234678-HxCDF	36.328	0.981	8.11e5	1.56e6	1.155	0.520	0.510	2720.1	NO		104.063
13C-123789-HxCDF	37.479	1.012	8.14e5	1.55e6	1.121	0.526	0.510	2796.1	NO		106.778
13C-1234678-HpCDF	39.529	1.068	6.44e5	1.45e6	1.040	0.444	0.440	4651.9	NO		102.148
13C-1234789-HpCDF	42.236	1.141	5.15e5	1.15e6	0.789	0.449	0.440	3265.9	NO		106.657
13C-1234-TCDD	25.899	0.000	1.31e6	1.66e6	1.000	0.790	0.770	5299.5	NO		100.000
13C-2378-TCDD	26.721	1.032	1.30e6	1.66e6	0.962	0.784	0.770	5078.1	NO		103.463
13C-12378-PeCDD	31.823	1.229	1.33e6	8.48e5	0.746	1.574	1.550	9098.2	NO		98.271
13C-123478-HxCDD	36.471	0.985	1.13e6	8.85e5	1.003	1.275	1.240	7055.8	NO		101.850
13C-123678-HxCDD	36.591	0.988	1.18e6	9.65e5	1.052	1.219	1.240	7316.6	NO		103.219
13C-1234678-HpCDD	41.338	1.117	9.00e5	8.50e5	0.880	1.059	1.050	5507.7	NO		100.808
13C-OCDD	47.252	1.276	1.42e6	1.59e6	0.775	0.894	0.890	5980.9	NO		196.581

Dataset: P:\DIOXIN8290.PRO\130801OPEN.qld
Last Altered: Thursday, August 01, 2013 11:08:01 Pacific Daylight Time
Printed: Thursday, August 01, 2013 11:30:28 Pacific Daylight Time

ID: CS3, Name: 13080102, Date: 01-Aug-2013, Time: 10:15:29, Conditions: AUTOSPEC01, User: pk

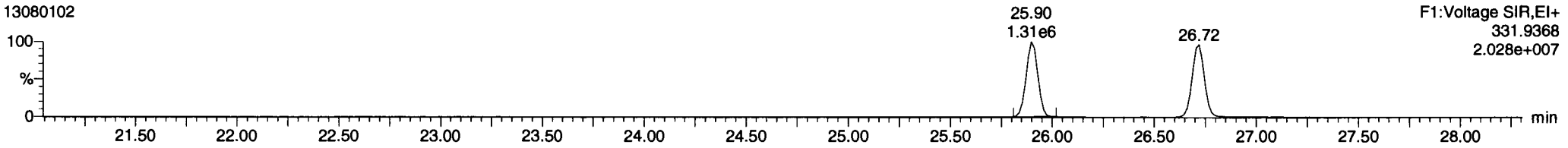
13C-123789-HxCDD	37.019	0.000	1.09e6	8.84e5	1.000	1.231	1.240	6675.1	NO		100.000
Total-tetrafurans			5.01e5		0.867						32.337
Total-penta1			1.25e6								66.382
Total-pentafurans			2.68e6		0.877						152.573
Total-hexafurans			3.67e6		1.030						262.158
Total-heptafurans			1.14e6		1.207						100.977
Total-Furans			1.00e7		1.022						718.945
Total-tetradioxins			6.94e5		0.994						54.053
Total-pentadioxins			2.17e6		0.976						167.553
Total-hexadioxins			2.35e6		0.928						220.161
Total-heptadioxins			9.57e5		0.999						107.300
Total-Dioxins			6.87e6		0.962						649.686
Total-TEQ			1.69e7								1368.631
37CL-2378-TCDD	26.736	1.032	3.21e5		1.091			2459.6			9.902
FUNCTION1 PFK			4.12e6								
FUNCTION2 PFK			2.13e5								0.000
FUNCTION3 PFK			3.96e5								0.000
FUNCTION4 PFK			8.00e5								
FUNCTION5 PFK			3.79e5								
FUNCTION1 HXCDPE			3.14e2								0.000
FUNCTION1 HPCDPE			2.29e3								0.000
FUNCTION2 HPCDPE			1.69e3								0.000
FUNCTION3 OCDPE			0.00e0								
FUNCTION4 NCDPE			2.90e2								0.000
FUNCTION5 DCDPE			0.00e0								

Dataset: P:\DIOXIN8290.PRO\130801OPEN.qld
Last Altered: Thursday, August 01, 2013 11:08:01 Pacific Daylight Time
Printed: Thursday, August 01, 2013 11:30:28 Pacific Daylight Time

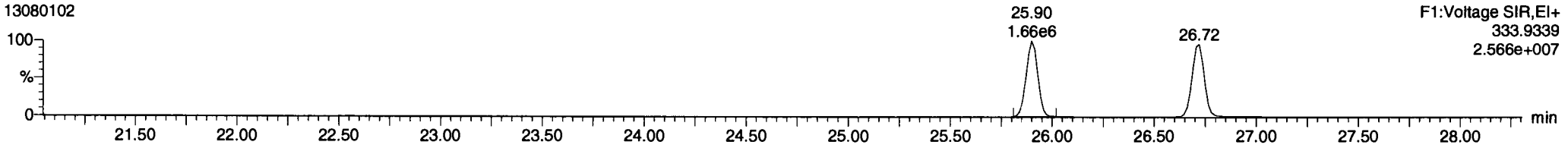
Method: P:\DIOXIN8290.pro\MethDB\Dioxin130716.mdb 24 Jul 2013 13:56:23
Calibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

ID: CS3, Name: 13080102, Date: 01-Aug-2013, Time: 10:15:29, Conditions: AUTOSPEC01, User: pk

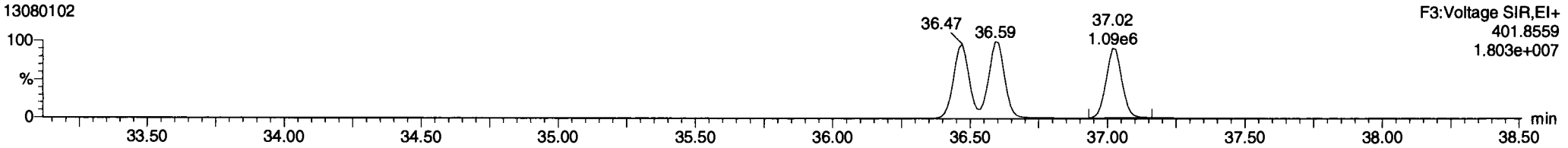
13C-1234-TCDD



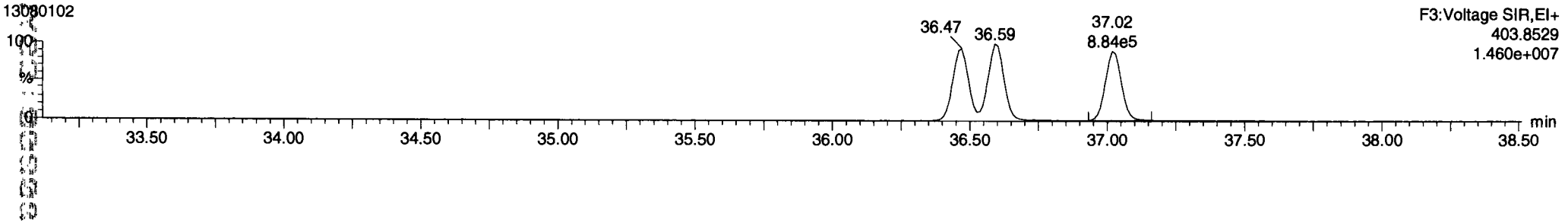
13C-1234-TCDD



13C-123789-HxCDD

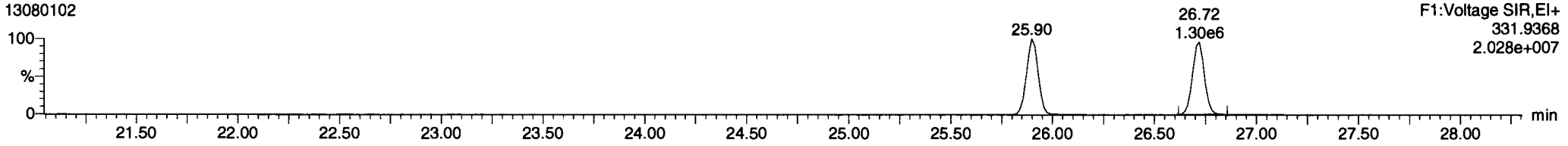


13C-123789-HxCDD

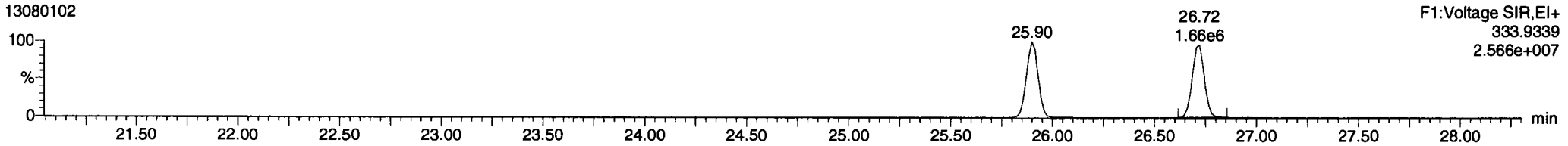


ID: CS3, Name: 13080102, Date: 01-Aug-2013, Time: 10:15:29, Conditions: AUTOSPEC01, User: pk

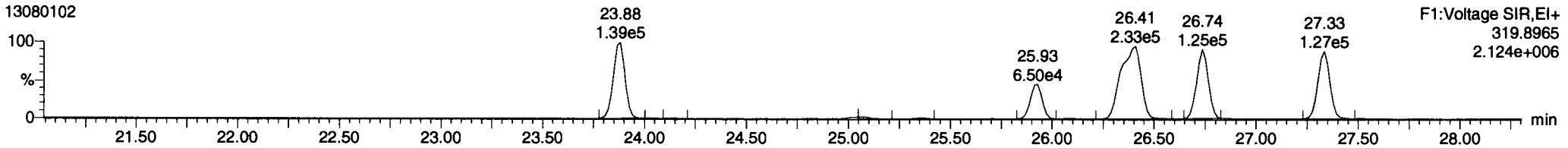
13C-2378-TCDD



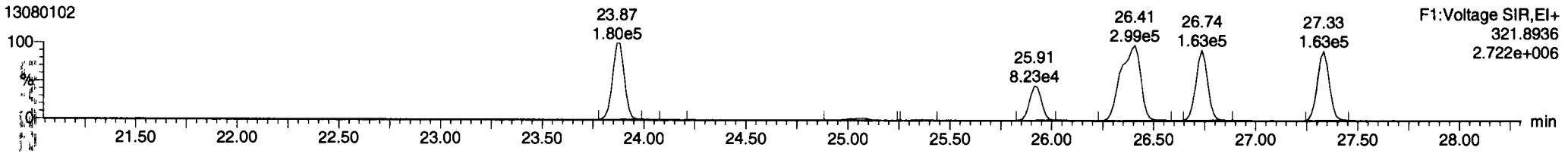
13C-2378-TCDD



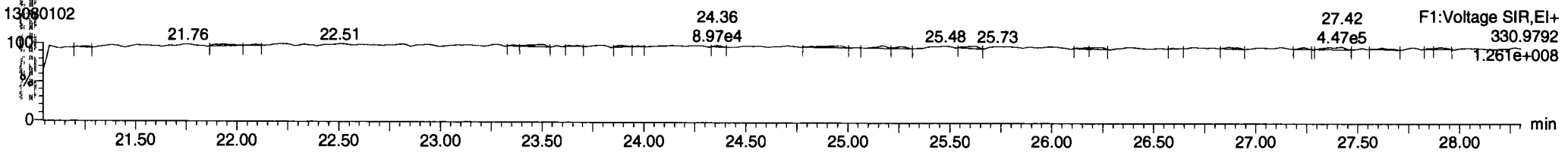
Total-tetradioxins



Total-tetradioxins



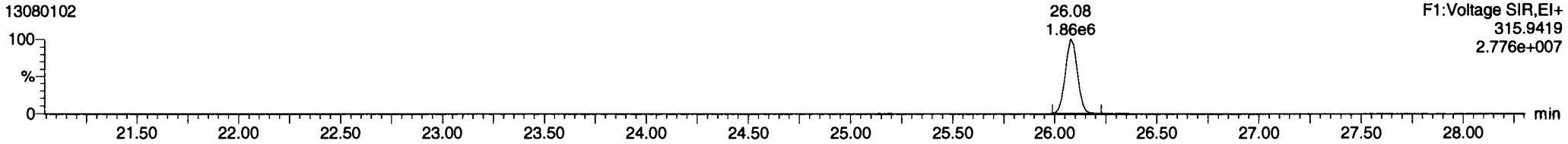
FUNCTION1 PFK



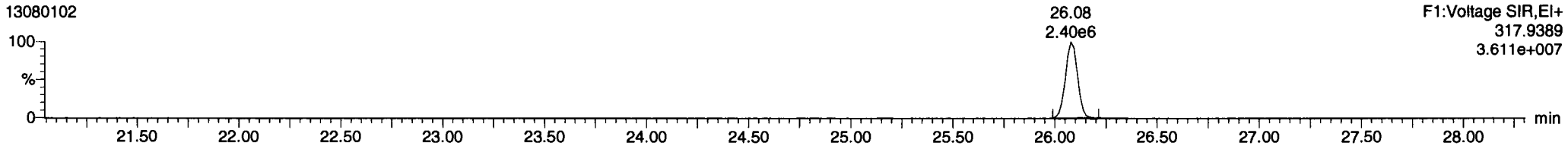
Dataset: P:\DIOXIN8290.PRO\130801OPEN.qld
Last Altered: Thursday, August 01, 2013 11:08:01 Pacific Daylight Time
Printed: Thursday, August 01, 2013 11:30:28 Pacific Daylight Time

ID: CS3, Name: 13080102, Date: 01-Aug-2013, Time: 10:15:29, Conditions: AUTOSPEC01, User: pk

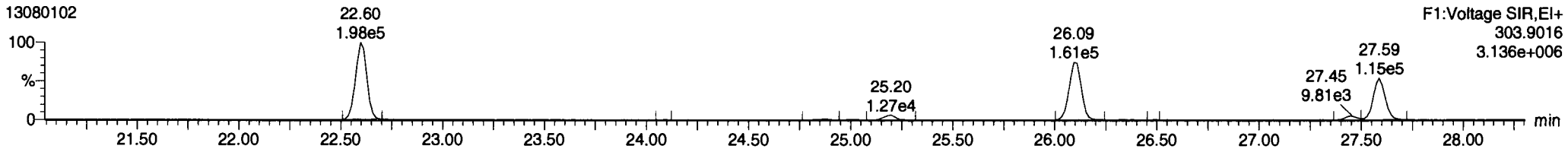
13C-2378-TCDF



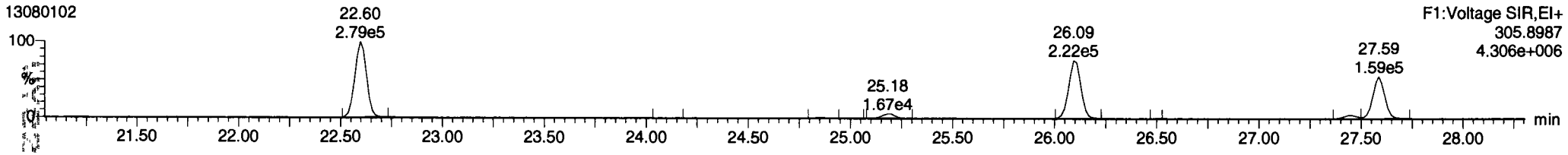
13C-2378-TCDF



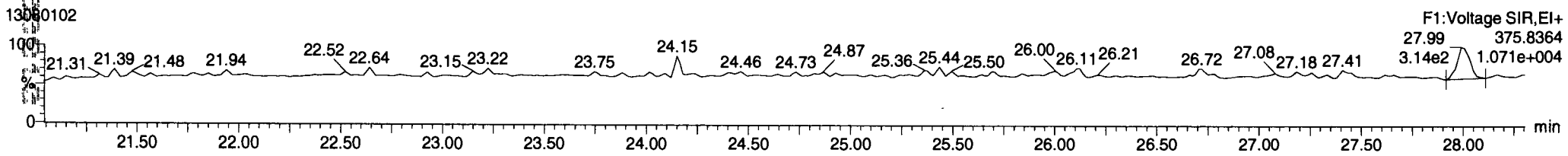
Total-tetrafurans



Total-tetrafurans



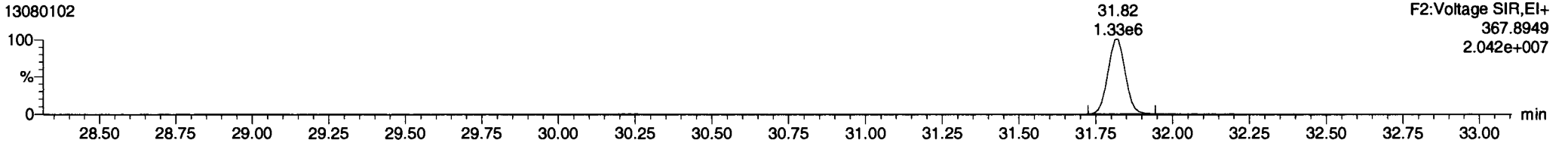
FUNCTION1 HXCDPE



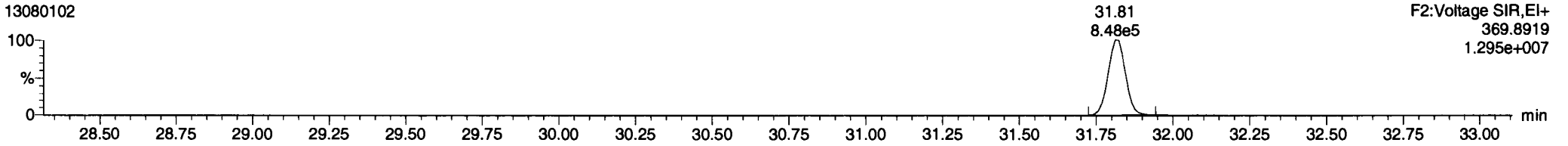
Dataset: P:\DIOXIN8290.PRO\130801OPEN.qld
Last Altered: Thursday, August 01, 2013 11:08:01 Pacific Daylight Time
Printed: Thursday, August 01, 2013 11:30:28 Pacific Daylight Time

ID: CS3, Name: 13080102, Date: 01-Aug-2013, Time: 10:15:29, Conditions: AUTOSPEC01, User: pk

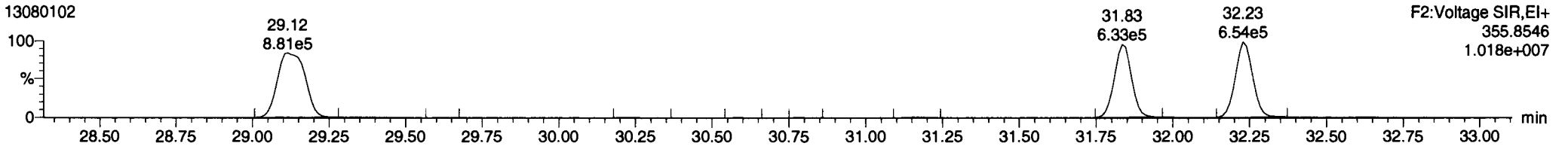
13C-12378-PeCDD



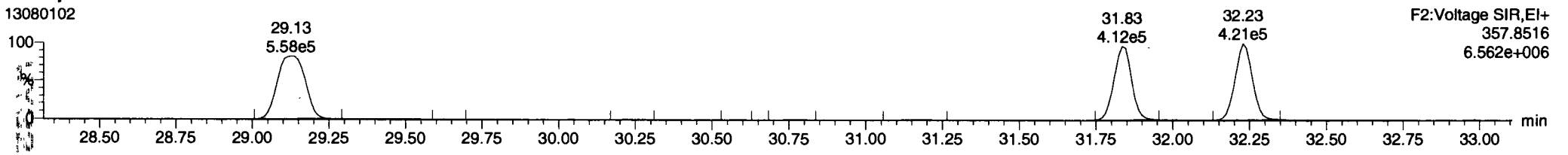
13C-12378-PeCDD



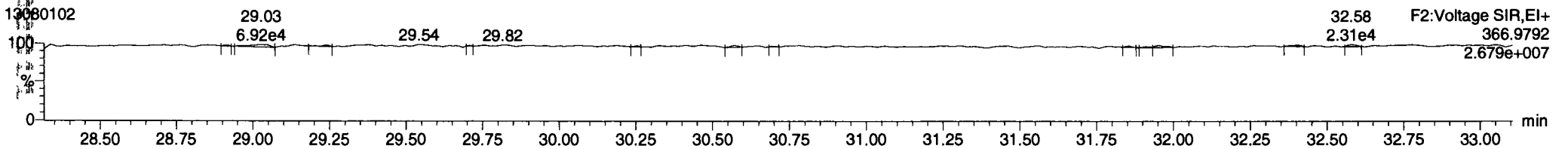
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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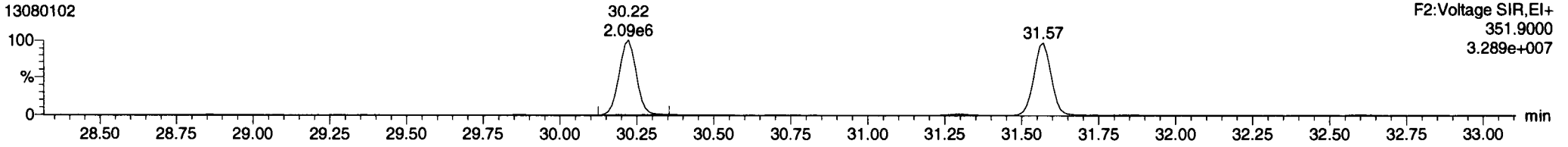
13C-12378-PeCDF



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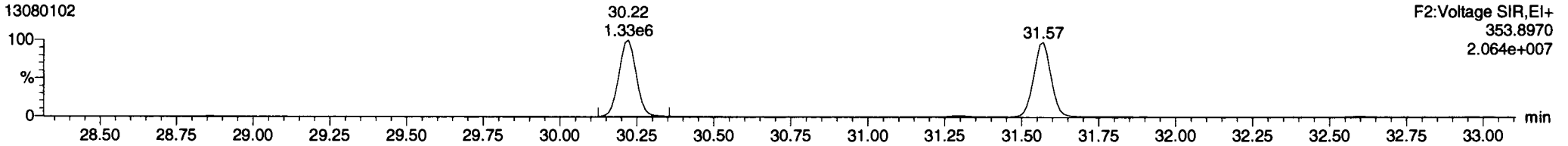

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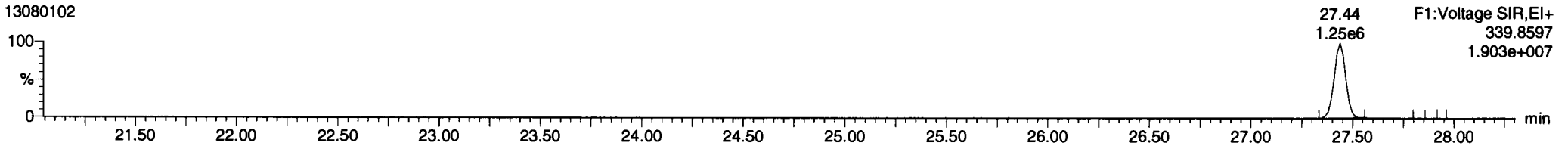

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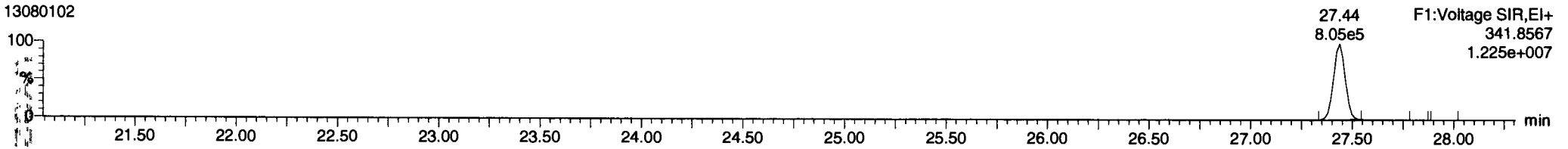
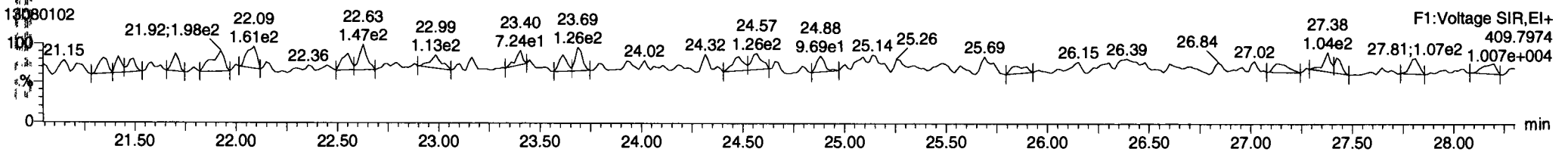


FUNCTION1 HPCDPE



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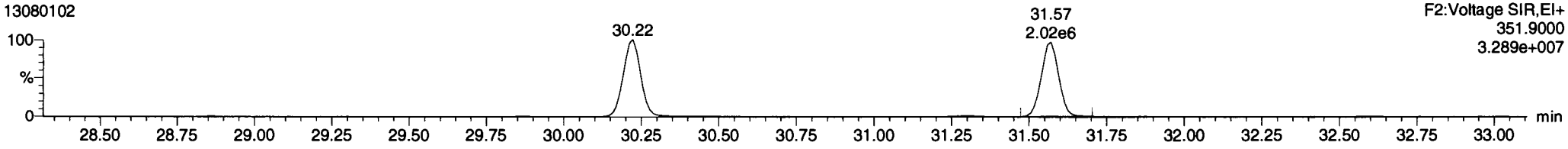
13C-23478-PeCDF



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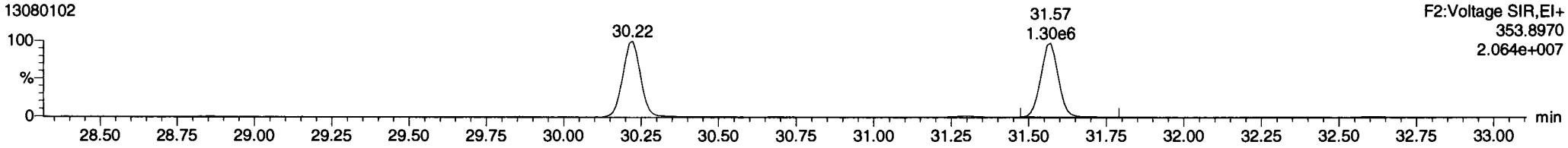
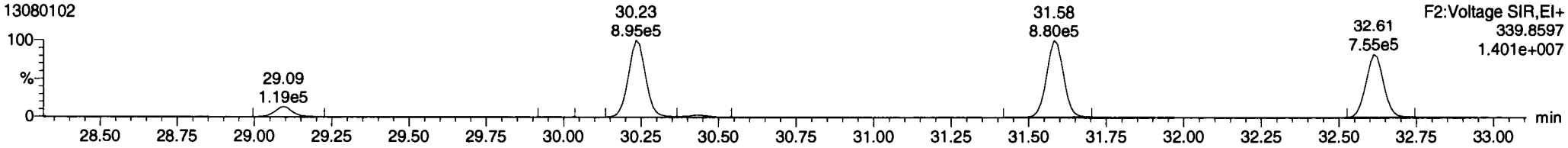


Total-pentafurans



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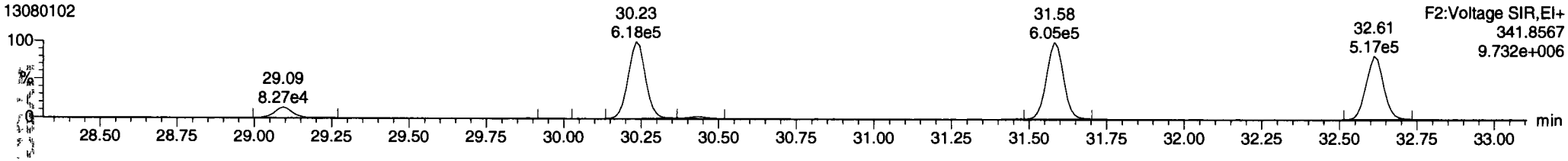

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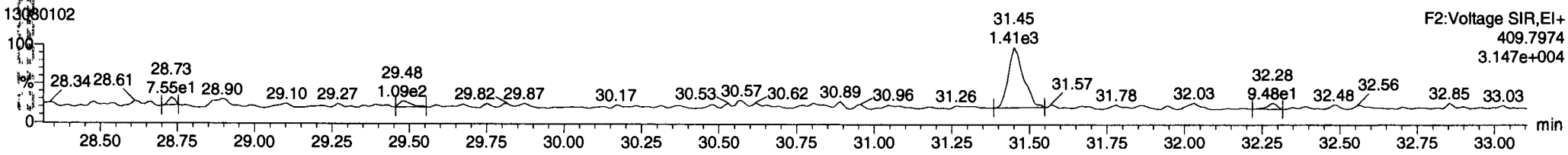

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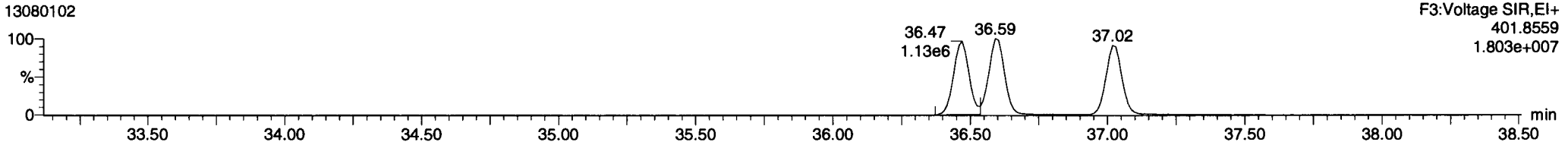
13C-123478-HxCDD



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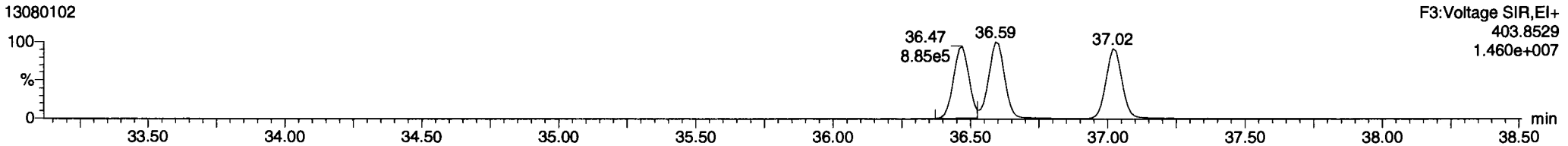
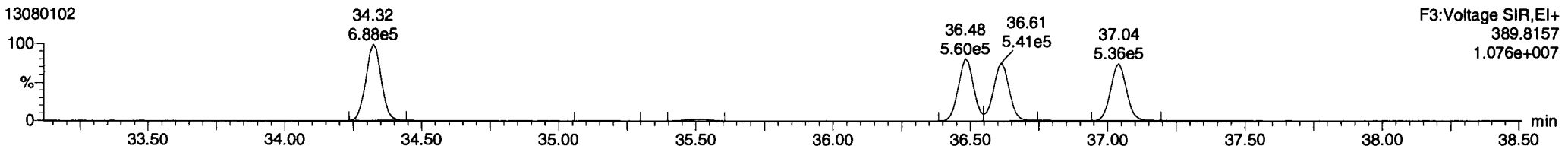


Total-hexadioxins



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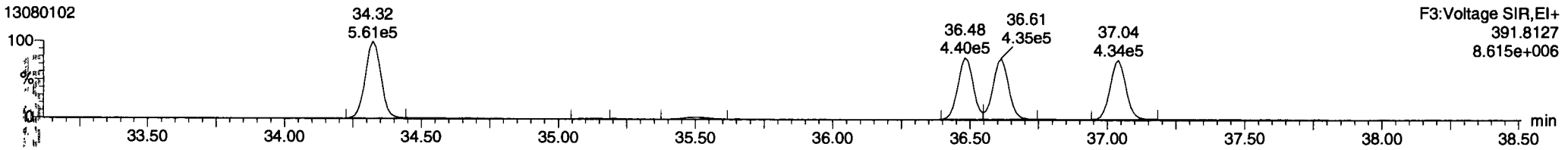
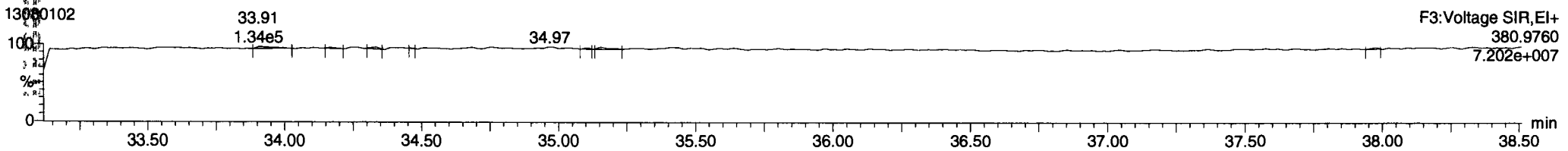


FUNCTION3 PFK



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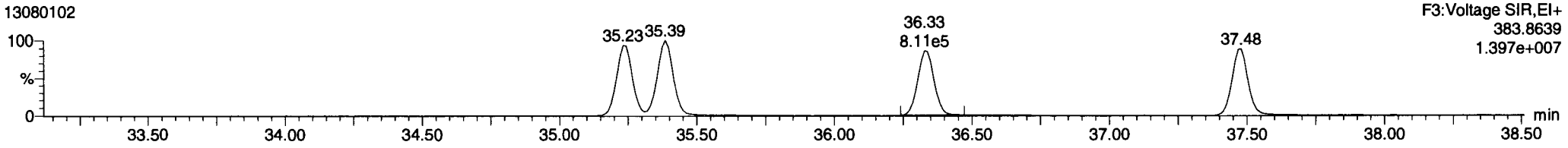
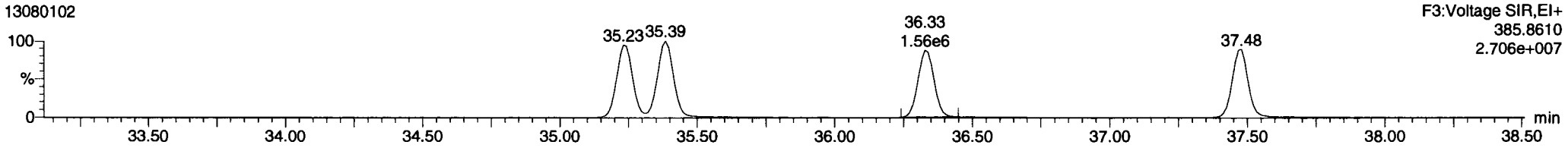
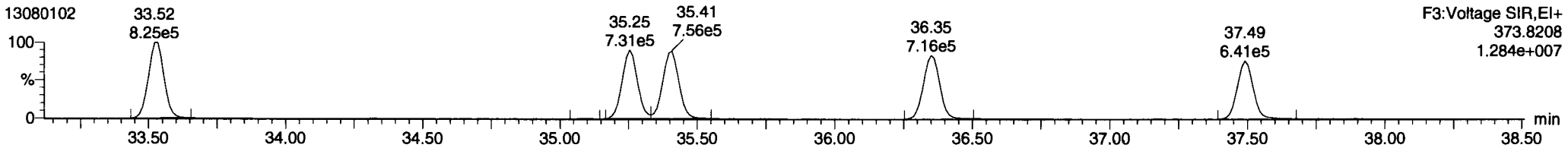
13C-234678-HxCDF



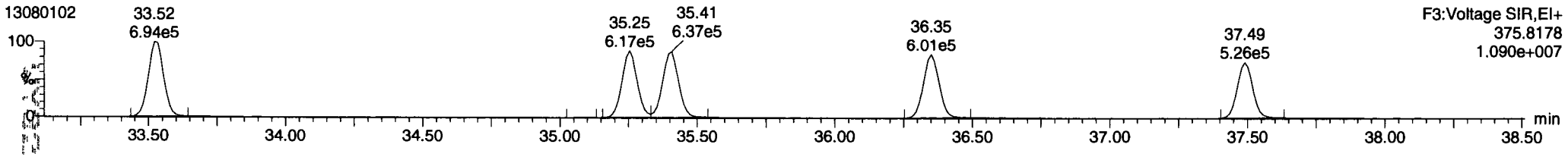
13C-234678-HxCDF



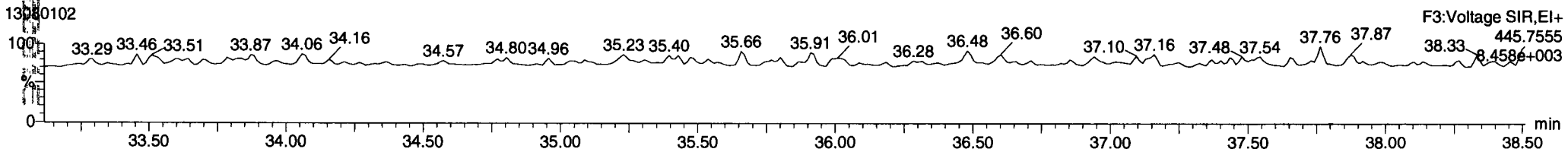
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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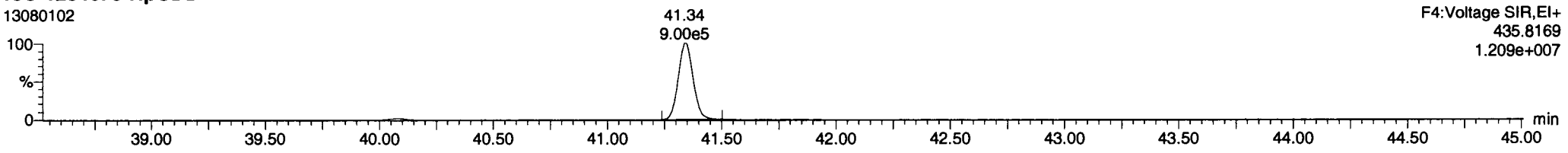
13C-1234678-HpCDD



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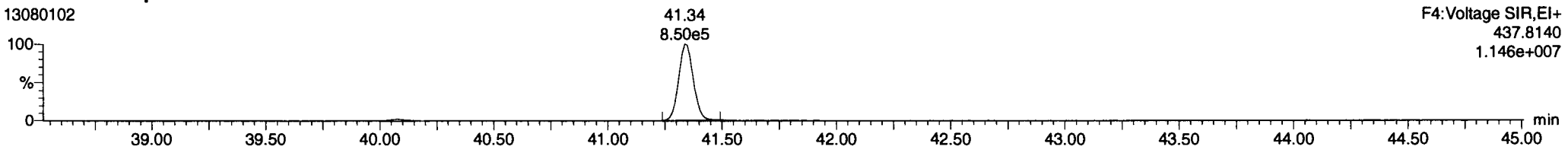
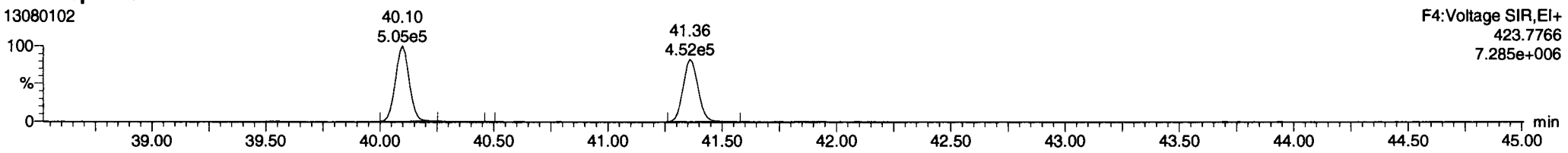
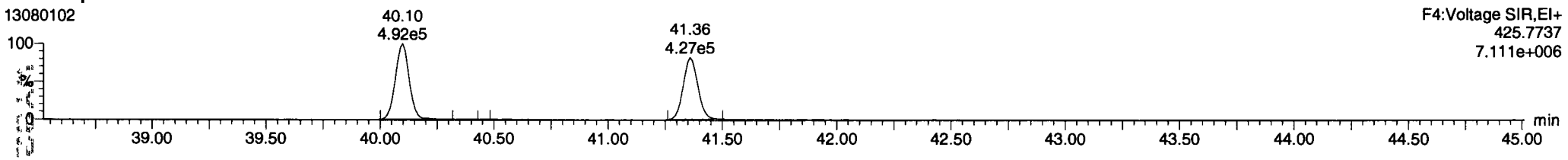


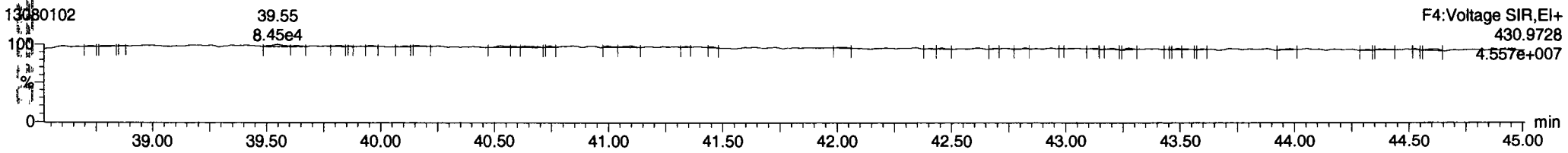
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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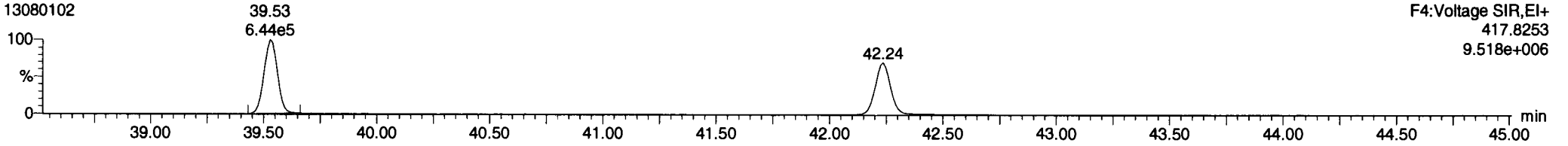
13C-1234678-HpCDF



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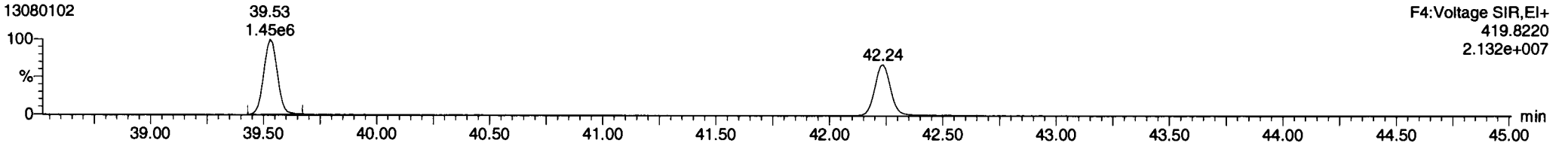
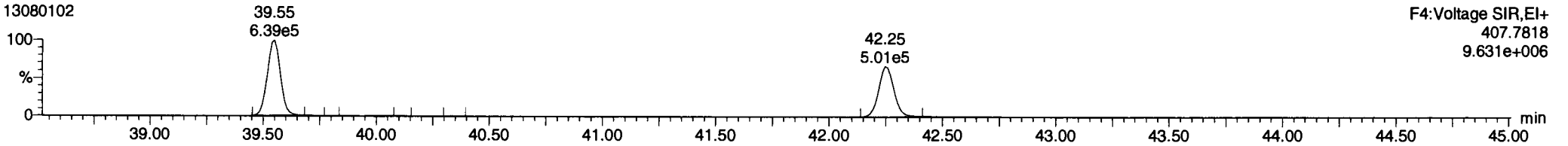


Total-heptafurans



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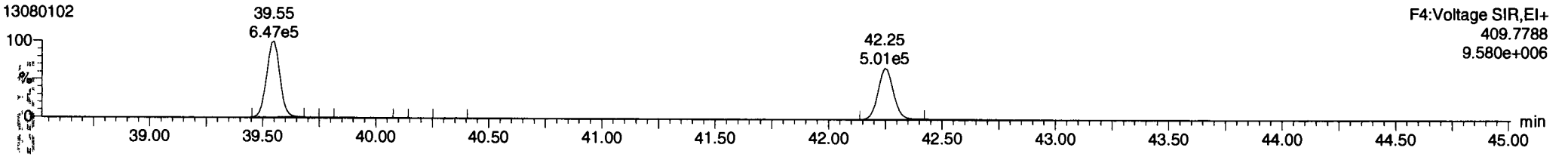
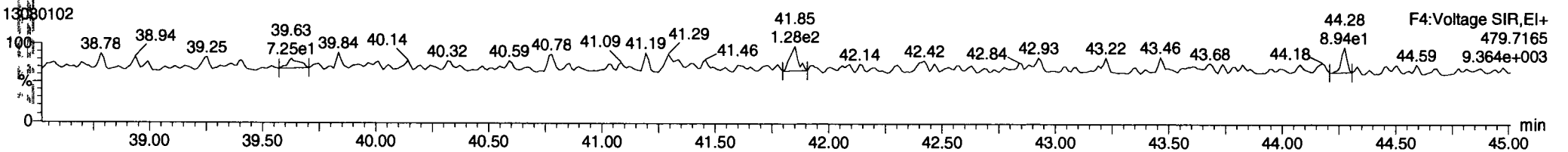


FUNCTION4 NCDPE



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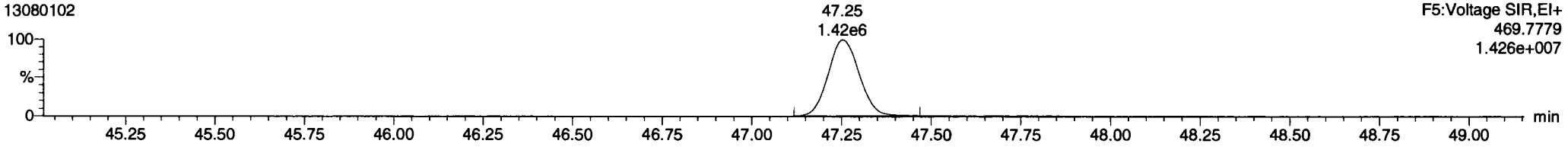
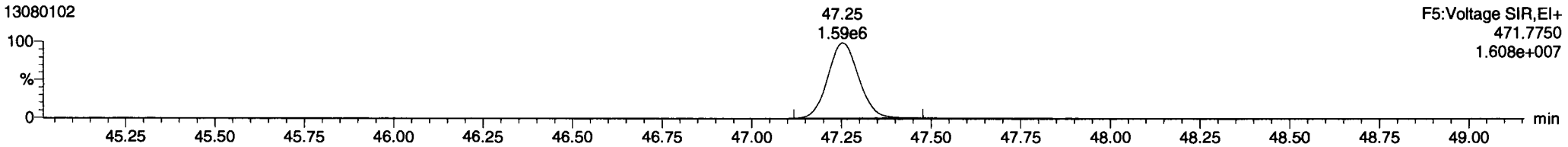
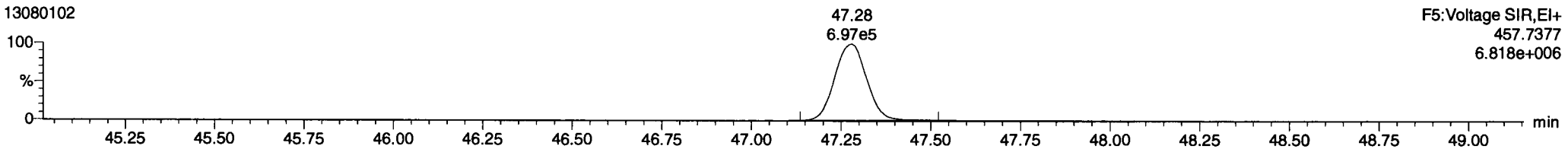
13C-OCDD



13C-OCDD



OCDD



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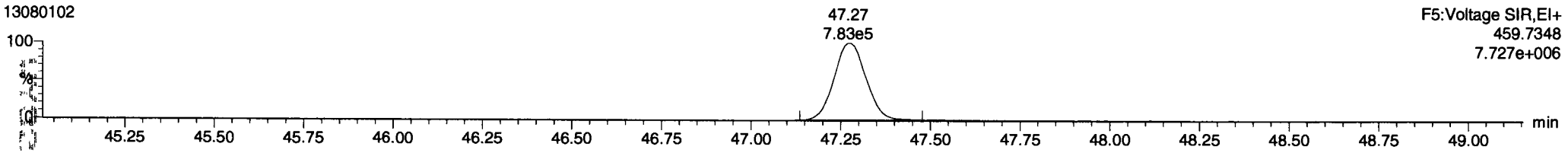
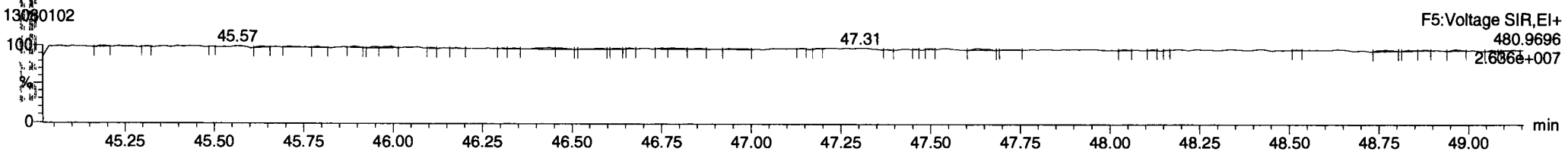


FUNCTION5 PFK



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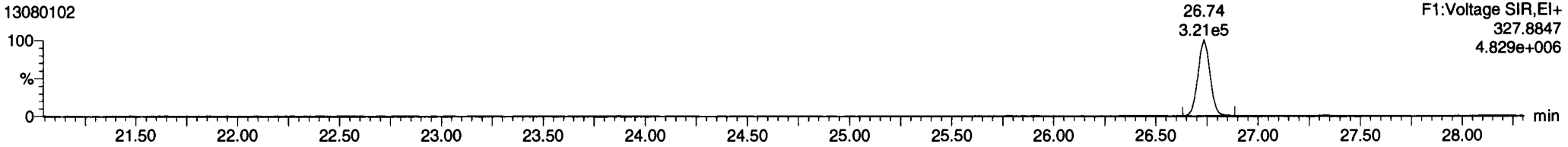
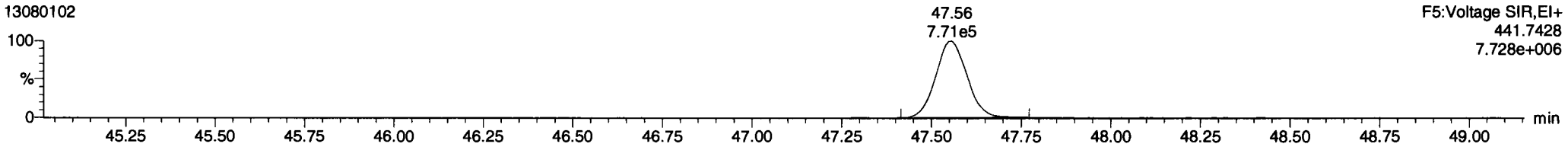
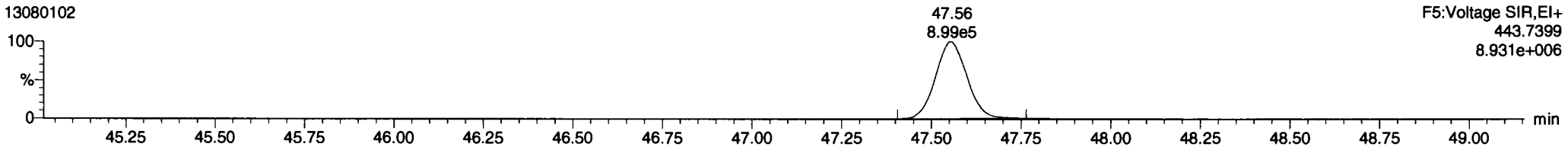
37CL-2378-TCDD



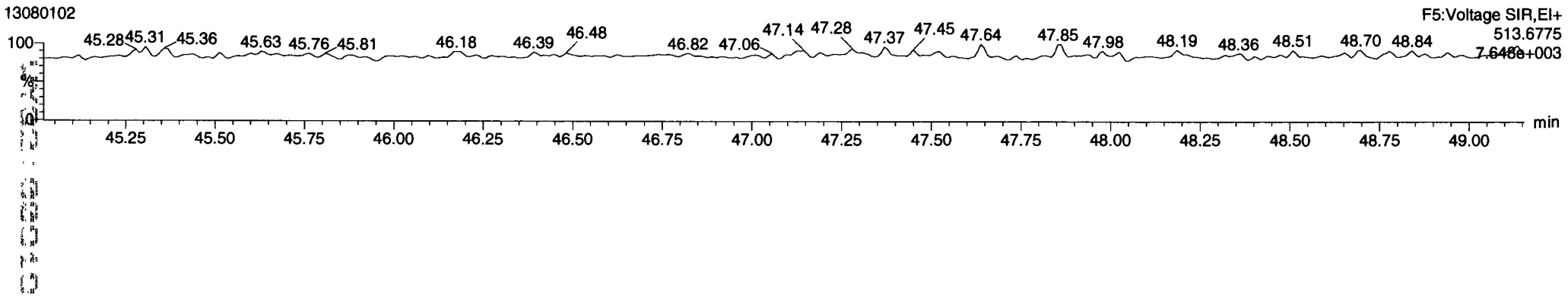
OCDF



OCDF



FUNCTION5 DCDPE



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MR 8/1/13

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130716.mdb 24 Jul 2013 13:56:23
Calibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

ID: WY44MBS, Name: 13080104, Date: 01-Aug-2013, Time: 12:03:56, Conditions: AUTOSPEC01, User: pk

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12378-PeCDF	30.201	1.000	7.13e2	7.55e2	0.875	0.944	1.550	7.6	1200	1603	9.08e3	8.59e3	YES	0.056	0.071
23478-PeCDF	31.571	1.001	3.34e2	2.77e2	0.880	1.208	1.550	4.7	1200	1603	5.66e3	8.15e3	YES	0.030	0.033
123478-HxCDF	35.200	1.000	1.47e2	9.66e1	1.048	1.524	1.240	6.0	625	778	3.72e3	3.55e3	YES	0.013	0.014
234678-HxCDF	36.318	1.000	1.71e2	1.61e2	1.088	1.064	1.240	5.2	625	778	3.28e3	3.75e3	NO	0.020	0.020
123678-HxCDF	35.375	1.001	3.05e2	1.80e2	1.025	1.694	1.240	8.2	625	778	5.15e3	5.22e3	YES	0.023	0.028
123789-HxCDF	37.479	1.001	3.39e2	2.53e2	0.959	1.341	1.240	11.3	625	778	7.09e3	4.09e3	NO	0.043	0.043
1234678-HpCDF	39.518	1.000	3.64e2	1.99e2	1.215	1.834	1.050	18.1	477	491	8.61e3	3.62e3	YES	0.027	0.038
1234789-HpCDF					1.200		1.050		477	491					
OCDF	47.504	1.006	3.06e2	2.54e2	1.064	1.207	0.890	15.0	515	903	7.74e3	4.43e3	YES	0.057	0.067
2378-TCDD	26.706	1.001	2.81e2	1.44e3	0.994	0.195	0.770	4.8	776	1201	3.69e3	2.09e4	YES	0.035	0.093
12378-PeCDD	31.801	1.000	3.94e2	3.21e2	0.976	1.227	1.550	4.6	1493	748	6.91e3	5.90e3	YES	0.048	0.053
123478-HxCDD	36.471	1.001	3.50e2	2.98e2	0.967	1.176	1.240	6.7	985	835	6.61e3	5.60e3	NO	0.051	0.051
123678-HxCDD	36.570	1.000	4.98e2	2.66e2	0.902	1.872	1.240	9.5	985	835	9.39e3	4.77e3	YES	0.048	0.061
123789-HxCDD	36.997	1.012	6.94e2	5.03e2	0.914	1.380	1.240	11.0	985	835	1.08e4	9.61e3	NO	0.097	0.097
1234678-HpCDD	41.327	1.000	4.14e3	3.82e3	0.999	1.083	1.050	113.9	519	501	5.91e4	5.41e4	NO	0.748	0.748
OCDD	47.253	1.001	1.25e4	1.41e4	0.979	0.890	0.890	368.0	352	1068	1.30e5	1.34e5	NO	3.465	3.465
13C-2378-TCDF	26.048	1.007	1.24e6	1.61e6	1.419	0.768	0.770	6499.3	2900	1848	1.88e7	2.42e7	NO		91.401
13C-12378-PeCDF	30.190	1.167	1.46e6	9.23e5	1.158	1.578	1.550	5047.1	4501	2705	2.27e7	1.42e7	NO		93.614
13C-23478-PeCDF	31.538	1.219	1.28e6	8.14e5	1.127	1.575	1.550	4483.4	4501	2705	2.02e7	1.28e7	NO		84.835
13C-123478-HxCDF	35.211	0.952	5.48e5	1.06e6	1.206	0.515	0.510	2309.1	3566	3688	8.23e6	1.60e7	NO		96.050
13C-123678-HxCDF	35.353	0.956	5.81e5	1.12e6	1.266	0.520	0.510	2442.6	3566	3688	8.71e6	1.69e7	NO		96.453
13C-234678-HxCDF	36.307	0.981	5.16e5	9.84e5	1.155	0.524	0.510	2203.2	3566	3688	7.86e6	1.51e7	NO		93.424
13C-123789-HxCDF	37.446	1.012	4.93e5	9.37e5	1.121	0.525	0.510	2147.0	3566	3688	7.66e6	1.46e7	NO		91.755
13C-1234678-HpCDF	39.507	1.068	3.78e5	8.43e5	1.040	0.448	0.440	3041.6	1838	3129	5.59e6	1.25e7	NO		84.451
13C-1234789-HpCDF	42.215	1.141	2.90e5	6.57e5	0.789	0.441	0.440	2064.7	1838	3129	3.79e6	8.47e6	NO		86.317
13C-1234-TCDD	25.869	0.000	9.70e5	1.22e6	1.000	0.792	0.770	4321.4	3470	2264	1.50e7	1.88e7	NO		100.000
13C-2378-TCDD	26.676	1.031	8.16e5	1.05e6	0.962	0.779	0.770	3560.6	3470	2264	1.24e7	1.58e7	NO		88.272
13C-12378-PeCDD	31.790	1.229	8.49e5	5.42e5	0.746	1.565	1.550	5877.1	2230	1978	1.31e7	8.44e6	NO		84.914
13C-123478-HxCDD	36.438	0.985	7.35e5	5.73e5	1.003	1.284	1.240	4787.3	2411	1583	1.15e7	8.98e6	NO		93.843
13C-123678-HxCDD	36.570	0.988	7.64e5	6.17e5	1.052	1.238	1.240	4844.1	2411	1583	1.17e7	9.40e6	NO		94.439
13C-1234678-HpCDD	41.316	1.117	5.44e5	5.21e5	0.880	1.044	1.050	3661.7	2058	2295	7.54e6	7.20e6	NO		86.992
13C-OCDD	47.226	1.276	7.38e5	8.29e5	0.775	0.890	0.890	6098.1	1192	2412	7.27e6	8.22e6	NO		145.501

Dataset: P:\DIOXIN8290.PRO\130801MB.qld
Last Altered: Thursday, August 01, 2013 13:20:25 Pacific Daylight Time
Printed: Thursday, August 01, 2013 13:21:27 Pacific Daylight Time

ID: WY44MBS, Name: 13080104, Date: 01-Aug-2013, Time: 12:03:56, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	36.997	0.000	7.66e5	6.24e5	1.000	1.229	1.240	4818.0	2411	1583	1.16e7	9.36e6	NO	100.000
Total-tetrafurans			5.73e2		0.867				853		9.80e3			0.041
Total-penta1			0.00e0						823		0.00e0			
Total-pentafurans			1.05e3		0.877				1200		1.47e4			0.104
Total-hexafurans			9.62e2		1.030				625		1.92e4			0.106
Total-heptafurans			3.64e2		1.207				477		8.61e3			0.038
Total-Furans			3.37e3		1.022				853		6.36e4			0.362
Total-tetradioxins			2.81e2		0.994				776		3.69e3			0.093
Total-pentadioxins			1.78e3		0.976				1493		3.63e4			0.197
Total-hexadioxins			6.10e3		0.928				985		1.08e5			0.849
Total-heptadioxins			1.13e4		0.999				519		1.62e5			2.062
Total-Dioxins			3.20e4		0.962				776		4.39e5			6.667
Total-TEQ			3.53e4						776		5.03e5			7.029
37CL-2378-TCDD	26.706	1.032	8.31e5		1.091			7478.3	1684		1.26e7			34.715
FUNCTION1 PFK			2.84e7						1383741		3.34e8			
FUNCTION2 PFK			1.08e6						385800		2.29e7			0.000
FUNCTION3 PFK			1.43e6						562810		3.37e7			0.000
FUNCTION4 PFK			2.63e6						293002		2.40e7			
FUNCTION5 PFK			3.21e6						266567		4.31e7			
FUNCTION1 HXCDPE			0.00e0						410		0.00e0			
FUNCTION1 HPCDPE			6.64e2						721		1.24e4			0.000
FUNCTION2 HPCDPE			1.55e2						908		2.99e3			0.000
FUNCTION3 OCDPE			7.16e1						545		2.34e3			0.000
FUNCTION4 NCDPE			1.54e2						773		3.71e3			0.000
FUNCTION5 DCDPE			0.00e0						267		0.00e0			

Dataset: P:\DIOXIN8290.PRO\130801MB.qld
Last Altered: Thursday, August 01, 2013 13:20:25 Pacific Daylight Time
Printed: Thursday, August 01, 2013 13:21:27 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130716.mdb 24 Jul 2013 13:56:23
Calibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

ID: WY44MBS, Name: 13080104, Date: 01-Aug-2013, Time: 12:03:56, Conditions: AUTOSPEC01, User: pk

TF

	1 2378-TCDF	303.9016	26.08	509.645	0.867	0.021	0.018	1.03	0.77	YES	4.9
	35 Total-tetrafurans	303.9016	25.90	492.685	0.867	0.020		1.76	0.77	YES	6.5

PP

PF

	3 23478-PeCDF	339.8597	31.57	611.157	0.880	0.033	0.030	1.21	1.55	YES	4.7
	2 12378-PeCDF	339.8597	30.20	1467.818	0.875	0.071	0.056	0.94	1.55	YES	7.6

HF

	7 123789-HxCDF	373.8208	37.48	591.498	0.959	0.043	0.043	1.34	1.24	NO	11.3
	5 234678-HxCDF	373.8208	36.32	331.630	1.088	0.020	0.020	1.06	1.24	NO	5.2
	6 123678-HxCDF	373.8208	35.38	484.305	1.025	0.028	0.023	1.69	1.24	YES	8.2
	4 123478-HxCDF	373.8208	35.20	243.890	1.048	0.014	0.013	1.52	1.24	YES	6.0

HPF

	8 1234678-HpCDF	407.7818	39.52	563.092	1.215	0.038	0.027	1.83	1.05	YES	18.1

Furans,TF,PP,PF,HF,HPF,OF

	1 2378-TCDF	303.9016	26.08	509.645	0.867	0.021	0.018	1.03	0.77	YES	4.9
	35 Total-tetrafurans	303.9016	25.90	492.685	0.867	0.020		1.76	0.77	YES	6.5
	40 Total-Furans	303.9016	21.51	196.770	1.022	0.007		1.63	0.77	YES	4.1
	3 23478-PeCDF	339.8597	31.57	611.157	0.880	0.033	0.030	1.21	1.55	YES	4.7
	2 12378-PeCDF	339.8597	30.20	1467.818	0.875	0.071	0.056	0.94	1.55	YES	7.6
	7 123789-HxCDF	373.8208	37.48	591.498	0.959	0.043	0.043	1.34	1.24	NO	11.3
	5 234678-HxCDF	373.8208	36.32	331.630	1.088	0.020	0.020	1.06	1.24	NO	5.2
	6 123678-HxCDF	373.8208	35.38	484.305	1.025	0.028	0.023	1.69	1.24	YES	8.2
	4 123478-HxCDF	373.8208	35.20	243.890	1.048	0.014	0.013	1.52	1.24	YES	6.0
	8 1234678-HpCDF	407.7818	39.52	563.092	1.215	0.038	0.027	1.83	1.05	YES	18.1
	10 OCDF	441.7428	47.50	559.718	1.064	0.067	0.057	1.21	0.89	YES	15.0

TD

	11 2378-TCDD	319.8965	26.71	1723.698	0.994	0.093	0.035	0.19	0.77	YES	4.8

ID: WY44MBS, Name: 13080104, Date: 01-Aug-2013, Time: 12:03:56, Conditions: AUTOSPEC01, User: pk

PD

	42 Total-pentadioxins	355.8546	30.54	385.194	0.976	0.028		3.07	1.55	YES	4.7
	42 Total-pentadioxins	355.8546	29.62	465.632	0.976	0.034		2.02	1.55	YES	3.3
	42 Total-pentadioxins	355.8546	29.12	481.088	0.976	0.035		1.79	1.55	YES	5.5
	42 Total-pentadioxins	355.8546	29.05	628.329	0.976	0.046		3.06	1.55	YES	6.2
	12 12378-PeCDD	355.8546	31.80	714.070	0.976	0.053	0.048	1.23	1.55	YES	4.6

HD

	43 Total-hexadioxins	389.8157	34.29	3891.236	0.928	0.312		1.50	1.24	YES	35.7
	15 123789-HxCDD	389.8157	37.00	1197.249	0.914	0.097	0.097	1.38	1.24	NO	11.0
	43 Total-hexadioxins	389.8157	36.77	601.257	0.928	0.048		0.79	1.24	YES	5.1
	14 123678-HxCDD	389.8157	36.57	763.696	0.902	0.061	0.048	1.87	1.24	YES	9.5
	13 123478-HxCDD	389.8157	36.47	647.947	0.967	0.051	0.051	1.18	1.24	NO	6.7
	43 Total-hexadioxins	389.8157	35.61	367.918	0.928	0.029		0.74	1.24	YES	2.7
	43 Total-hexadioxins	389.8157	35.50	911.852	0.928	0.073		1.12	1.24	NO	12.5
	43 Total-hexadioxins	389.8157	35.45	1335.962	0.928	0.107		1.95	1.24	YES	17.2
	43 Total-hexadioxins	389.8157	35.10	866.047	0.928	0.069		1.05	1.24	YES	9.0

HPD

	16 1234678-HpCDD	423.7766	41.33	7952.828	0.999	0.748	0.748	1.08	1.05	NO	113.9
	44 Total-heptadioxins	423.7766	40.07	13971.669	0.999	1.314		1.05	1.05	NO	198.2

Dioxins,TD,PD,HD,HPD,OD

	11 2378-TCDD	319.8965	26.71	1723.698	0.994	0.093	0.035	0.19	0.77	YES	4.8
	42 Total-pentadioxins	355.8546	30.54	385.194	0.976	0.028		3.07	1.55	YES	4.7
	42 Total-pentadioxins	355.8546	29.62	465.632	0.976	0.034		2.02	1.55	YES	3.3
	42 Total-pentadioxins	355.8546	29.12	481.088	0.976	0.035		1.79	1.55	YES	5.5
	42 Total-pentadioxins	355.8546	29.05	628.329	0.976	0.046		3.06	1.55	YES	6.2
	43 Total-hexadioxins	389.8157	34.29	3891.236	0.928	0.312		1.50	1.24	YES	35.7
	12 12378-PeCDD	355.8546	31.80	714.070	0.976	0.053	0.048	1.23	1.55	YES	4.6
	15 123789-HxCDD	389.8157	37.00	1197.249	0.914	0.097	0.097	1.38	1.24	NO	11.0
	43 Total-hexadioxins	389.8157	36.77	601.257	0.928	0.048		0.79	1.24	YES	5.1
	14 123678-HxCDD	389.8157	36.57	763.696	0.902	0.061	0.048	1.87	1.24	YES	9.5
	13 123478-HxCDD	389.8157	36.47	647.947	0.967	0.051	0.051	1.18	1.24	NO	6.7
	43 Total-hexadioxins	389.8157	35.61	367.918	0.928	0.029		0.74	1.24	YES	2.7
	43 Total-hexadioxins	389.8157	35.50	911.852	0.928	0.073		1.12	1.24	NO	12.5
	43 Total-hexadioxins	389.8157	35.45	1335.962	0.928	0.107		1.95	1.24	YES	17.2
	43 Total-hexadioxins	389.8157	35.10	866.047	0.928	0.069		1.05	1.24	YES	9.0
	16 1234678-HpCDD	423.7766	41.33	7952.828	0.999	0.748	0.748	1.08	1.05	NO	113.9
	44 Total-heptadioxins	423.7766	40.07	13971.669	0.999	1.314		1.05	1.05	NO	198.2
	17 OCDD	457.7377	47.25	26586.037	0.979	3.465	3.465	0.89	0.89	NO	368.0

Dataset: P:\DIOXIN8290.PRO\130801MB.qld
Last Altered: Thursday, August 01, 2013 13:20:25 Pacific Daylight Time
Printed: Thursday, August 01, 2013 13:21:27 Pacific Daylight Time

ID: WY44MBS, Name: 13080104, Date: 01-Aug-2013, Time: 12:03:56, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	1 2378-TCDF	303.9016	26.08	509.645	0.867	0.021	0.018	1.03	0.77	YES	4.9
	35 Total-tetrafurans	303.9016	25.90	492.685	0.867	0.020		1.76	0.77	YES	6.5
	40 Total-Furans	303.9016	21.51	196.770	1.022	0.007		1.63	0.77	YES	4.1
	3 23478-PeCDF	339.8597	31.57	611.157	0.880	0.033	0.030	1.21	1.55	YES	4.7
	2 12378-PeCDF	339.8597	30.20	1467.818	0.875	0.071	0.056	0.94	1.55	YES	7.6
	7 123789-HxCDF	373.8208	37.48	591.498	0.959	0.043	0.043	1.34	1.24	NO	11.3
	5 234678-HxCDF	373.8208	36.32	331.630	1.088	0.020	0.020	1.06	1.24	NO	5.2
	6 123678-HxCDF	373.8208	35.38	484.305	1.025	0.028	0.023	1.69	1.24	YES	8.2
	4 123478-HxCDF	373.8208	35.20	243.890	1.048	0.014	0.013	1.52	1.24	YES	6.0
	8 1234678-HpCDF	407.7818	39.52	563.092	1.215	0.038	0.027	1.83	1.05	YES	18.1
	10 OCDF	441.7428	47.50	559.718	1.064	0.067	0.057	1.21	0.89	YES	15.0
	11 2378-TCDD	319.8965	26.71	1723.698	0.994	0.093	0.035	0.19	0.77	YES	4.8
	42 Total-pentadioxins	355.8546	30.54	385.194	0.976	0.028		3.07	1.55	YES	4.7
	42 Total-pentadioxins	355.8546	29.62	465.632	0.976	0.034		2.02	1.55	YES	3.3
	42 Total-pentadioxins	355.8546	29.12	481.088	0.976	0.035		1.79	1.55	YES	5.5
	42 Total-pentadioxins	355.8546	29.05	628.329	0.976	0.046		3.06	1.55	YES	6.2
	43 Total-hexadioxins	389.8157	34.29	3891.236	0.928	0.312		1.50	1.24	YES	35.7
	12 12378-PeCDD	355.8546	31.80	714.070	0.976	0.053	0.048	1.23	1.55	YES	4.6
	15 123789-HxCDD	389.8157	37.00	1197.249	0.914	0.097	0.097	1.38	1.24	NO	11.0
	43 Total-hexadioxins	389.8157	36.77	601.257	0.928	0.048		0.79	1.24	YES	5.1
	14 123678-HxCDD	389.8157	36.57	763.696	0.902	0.061	0.048	1.87	1.24	YES	9.5
	13 123478-HxCDD	389.8157	36.47	647.947	0.967	0.051	0.051	1.18	1.24	NO	6.7
	43 Total-hexadioxins	389.8157	35.61	367.918	0.928	0.029		0.74	1.24	YES	2.7
	43 Total-hexadioxins	389.8157	35.50	911.852	0.928	0.073		1.12	1.24	NO	12.5
	43 Total-hexadioxins	389.8157	35.45	1335.962	0.928	0.107		1.95	1.24	YES	17.2
	43 Total-hexadioxins	389.8157	35.10	866.047	0.928	0.069		1.05	1.24	YES	9.0
	16 1234678-HpCDD	423.7766	41.33	7952.828	0.999	0.748	0.748	1.08	1.05	NO	113.9
	44 Total-heptadioxins	423.7766	40.07	13971.669	0.999	1.314		1.05	1.05	NO	198.2
	17 OCDD	457.7377	47.25	26586.037	0.979	3.465	3.465	0.89	0.89	NO	368.0

ID: WY44MBS, Name: 13080104, Date: 01-Aug-2013, Time: 12:03:56, Conditions: AUTOSPEC01, User: pk

PFK1

	48	FUNCTION1	PFK	330.9792	21.18	0.000					2.6
	48	FUNCTION1	PFK	330.9792	23.05	0.000					1.6
	48	FUNCTION1	PFK	330.9792	22.93	0.000					2.9
	48	FUNCTION1	PFK	330.9792	22.81	0.000					3.2
	48	FUNCTION1	PFK	330.9792	22.75	0.000					4.8
	48	FUNCTION1	PFK	330.9792	22.69	0.000					4.3
	48	FUNCTION1	PFK	330.9792	22.48	0.000					5.0
	48	FUNCTION1	PFK	330.9792	22.40	0.000					5.3
	48	FUNCTION1	PFK	330.9792	22.31	0.000					6.0
	48	FUNCTION1	PFK	330.9792	22.25	0.000					6.2
	48	FUNCTION1	PFK	330.9792	22.19	0.000					7.1
	48	FUNCTION1	PFK	330.9792	22.16	0.000					6.7
	48	FUNCTION1	PFK	330.9792	22.06	0.000					7.5
	48	FUNCTION1	PFK	330.9792	21.78	0.000					13.0
	48	FUNCTION1	PFK	330.9792	21.70	0.000					17.6
	48	FUNCTION1	PFK	330.9792	21.61	0.000					22.7
	48	FUNCTION1	PFK	330.9792	21.42	0.000					11.7
	48	FUNCTION1	PFK	330.9792	25.54	0.000					2.0
	48	FUNCTION1	PFK	330.9792	25.45	0.000					1.6
	48	FUNCTION1	PFK	330.9792	25.30	0.000					1.6
	48	FUNCTION1	PFK	330.9792	25.17	0.000					1.6
	48	FUNCTION1	PFK	330.9792	25.00	0.000					1.4
	48	FUNCTION1	PFK	330.9792	24.96	0.000					1.3
	48	FUNCTION1	PFK	330.9792	24.90	0.000					1.1
	48	FUNCTION1	PFK	330.9792	24.61	0.000					0.7
	48	FUNCTION1	PFK	330.9792	24.49	0.000					1.6
	48	FUNCTION1	PFK	330.9792	24.30	0.000					7.7
	48	FUNCTION1	PFK	330.9792	23.96	0.000					0.3
	48	FUNCTION1	PFK	330.9792	23.82	0.000					1.6
	48	FUNCTION1	PFK	330.9792	23.66	0.000					0.9
	48	FUNCTION1	PFK	330.9792	23.48	0.000					3.0
	48	FUNCTION1	PFK	330.9792	23.24	0.000					0.3
	48	FUNCTION1	PFK	330.9792	23.14	0.000					4.7
	48	FUNCTION1	PFK	330.9792	27.09	0.000					6.3
	48	FUNCTION1	PFK	330.9792	26.97	0.000					1.8
	48	FUNCTION1	PFK	330.9792	26.87	0.000					3.1
	48	FUNCTION1	PFK	330.9792	26.75	0.000					1.5
	48	FUNCTION1	PFK	330.9792	26.71	0.000					1.8
	48	FUNCTION1	PFK	330.9792	26.57	0.000					2.4
	48	FUNCTION1	PFK	330.9792	26.54	0.000					2.5
	48	FUNCTION1	PFK	330.9792	26.41	0.000					1.4
	48	FUNCTION1	PFK	330.9792	26.36	0.000					1.7
	48	FUNCTION1	PFK	330.9792	26.32	0.000					1.4
	48	FUNCTION1	PFK	330.9792	26.21	0.000					1.6
	48	FUNCTION1	PFK	330.9792	26.06	0.000					3.9
	48	FUNCTION1	PFK	330.9792	26.02	0.000					5.2
	48	FUNCTION1	PFK	330.9792	25.84	0.000					1.7
	48	FUNCTION1	PFK	330.9792	25.79	0.000					1.9
	48	FUNCTION1	PFK	330.9792	25.63	0.000					0.8

Dataset: P:\DIOXIN8290.PRO\130801MB.qld
Last Altered: Thursday, August 01, 2013 13:20:25 Pacific Daylight Time
Printed: Thursday, August 01, 2013 13:21:27 Pacific Daylight Time

ID: WY44MBS, Name: 13080104, Date: 01-Aug-2013, Time: 12:03:56, Conditions: AUTOSPEC01, User: pk

PFK1

[redacted]	48	FUNCTION1 PFK	330.9792	28.20	0.000						1.6
[redacted]	48	FUNCTION1 PFK	330.9792	28.17	0.000						1.7
[redacted]	48	FUNCTION1 PFK	330.9792	28.07	0.000						1.2
[redacted]	48	FUNCTION1 PFK	330.9792	27.92	0.000						10.0
[redacted]	48	FUNCTION1 PFK	330.9792	27.83	0.000						3.9
[redacted]	48	FUNCTION1 PFK	330.9792	27.75	0.000						5.3
[redacted]	48	FUNCTION1 PFK	330.9792	27.56	0.000						8.1
[redacted]	48	FUNCTION1 PFK	330.9792	27.42	0.000						1.8
[redacted]	48	FUNCTION1 PFK	330.9792	27.30	0.000						3.1
[redacted]	48	FUNCTION1 PFK	330.9792	27.20	0.000						5.7

ID: WY44MBS, Name: 13080104, Date: 01-Aug-2013, Time: 12:03:56, Conditions: AUTOSPEC01, User: pk

PFK2

[redacted]	49 FUNCTION2 PFK	366.9792	28.79	0.000	0.000					0.9
[redacted]	49 FUNCTION2 PFK	366.9792	28.73	0.000	0.000					1.1
[redacted]	49 FUNCTION2 PFK	366.9792	28.60	0.000	0.000					1.2
[redacted]	49 FUNCTION2 PFK	366.9792	28.56	0.000	0.000					2.0
[redacted]	49 FUNCTION2 PFK	366.9792	28.46	0.000	0.000					7.5
[redacted]	49 FUNCTION2 PFK	366.9792	30.41	0.000	0.000					1.3
[redacted]	49 FUNCTION2 PFK	366.9792	30.35	0.000	0.000					1.3
[redacted]	49 FUNCTION2 PFK	366.9792	30.31	0.000	0.000					1.1
[redacted]	49 FUNCTION2 PFK	366.9792	30.22	0.000	0.000					1.6
[redacted]	49 FUNCTION2 PFK	366.9792	29.91	0.000	0.000					1.8
[redacted]	49 FUNCTION2 PFK	366.9792	29.81	0.000	0.000					1.0
[redacted]	49 FUNCTION2 PFK	366.9792	29.78	0.000	0.000					1.1
[redacted]	49 FUNCTION2 PFK	366.9792	29.65	0.000	0.000					0.6
[redacted]	49 FUNCTION2 PFK	366.9792	29.59	0.000	0.000					0.6
[redacted]	49 FUNCTION2 PFK	366.9792	29.51	0.000	0.000					1.4
[redacted]	49 FUNCTION2 PFK	366.9792	29.33	0.000	0.000					0.3
[redacted]	49 FUNCTION2 PFK	366.9792	29.19	0.000	0.000					0.4
[redacted]	49 FUNCTION2 PFK	366.9792	29.05	0.000	0.000					0.5
[redacted]	49 FUNCTION2 PFK	366.9792	29.02	0.000	0.000					0.9
[redacted]	49 FUNCTION2 PFK	366.9792	28.94	0.000	0.000					1.2
[redacted]	49 FUNCTION2 PFK	366.9792	28.90	0.000	0.000					0.9
[redacted]	49 FUNCTION2 PFK	366.9792	32.17	0.000	0.000					1.1
[redacted]	49 FUNCTION2 PFK	366.9792	31.98	0.000	0.000					0.5
[redacted]	49 FUNCTION2 PFK	366.9792	31.83	0.000	0.000					0.8
[redacted]	49 FUNCTION2 PFK	366.9792	31.79	0.000	0.000					1.0
[redacted]	49 FUNCTION2 PFK	366.9792	31.71	0.000	0.000					1.3
[redacted]	49 FUNCTION2 PFK	366.9792	31.43	0.000	0.000					0.5
[redacted]	49 FUNCTION2 PFK	366.9792	31.38	0.000	0.000					0.9
[redacted]	49 FUNCTION2 PFK	366.9792	31.29	0.000	0.000					1.2
[redacted]	49 FUNCTION2 PFK	366.9792	31.19	0.000	0.000					1.3
[redacted]	49 FUNCTION2 PFK	366.9792	31.11	0.000	0.000					0.5
[redacted]	49 FUNCTION2 PFK	366.9792	31.07	0.000	0.000					1.8
[redacted]	49 FUNCTION2 PFK	366.9792	30.84	0.000	0.000					0.5
[redacted]	49 FUNCTION2 PFK	366.9792	30.61	0.000	0.000					1.1
[redacted]	49 FUNCTION2 PFK	366.9792	30.53	0.000	0.000					1.7
[redacted]	49 FUNCTION2 PFK	366.9792	30.49	0.000	0.000					3.7
[redacted]	49 FUNCTION2 PFK	366.9792	30.45	0.000	0.000					2.9
[redacted]	49 FUNCTION2 PFK	366.9792	33.00	0.000	0.000					0.3
[redacted]	49 FUNCTION2 PFK	366.9792	32.96	0.000	0.000					0.8
[redacted]	49 FUNCTION2 PFK	366.9792	32.89	0.000	0.000					1.2
[redacted]	49 FUNCTION2 PFK	366.9792	32.74	0.000	0.000					0.5
[redacted]	49 FUNCTION2 PFK	366.9792	32.69	0.000	0.000					0.5
[redacted]	49 FUNCTION2 PFK	366.9792	32.61	0.000	0.000					0.6
[redacted]	49 FUNCTION2 PFK	366.9792	32.46	0.000	0.000					0.9
[redacted]	49 FUNCTION2 PFK	366.9792	32.38	0.000	0.000					1.5
[redacted]	49 FUNCTION2 PFK	366.9792	32.33	0.000	0.000					1.3
[redacted]	49 FUNCTION2 PFK	366.9792	32.25	0.000	0.000					1.2
[redacted]	49 FUNCTION2 PFK	366.9792	32.20	0.000	0.000					1.1

ID: WY44MBS, Name: 13080104, Date: 01-Aug-2013, Time: 12:03:56, Conditions: AUTOSPEC01, User: pk

PFK3

[redacted]	50 FUNCTION3 PFK	380.9760	33.60	0.000	0.000	1.5
[redacted]	50 FUNCTION3 PFK	380.9760	33.38	0.000	0.000	0.9
[redacted]	50 FUNCTION3 PFK	380.9760	33.29	0.000	0.000	3.2
[redacted]	50 FUNCTION3 PFK	380.9760	33.20	0.000	0.000	2.1
[redacted]	50 FUNCTION3 PFK	380.9760	35.45	0.000	0.000	1.2
[redacted]	50 FUNCTION3 PFK	380.9760	35.35	0.000	0.000	1.9
[redacted]	50 FUNCTION3 PFK	380.9760	35.13	0.000	0.000	1.4
[redacted]	50 FUNCTION3 PFK	380.9760	35.07	0.000	0.000	2.1
[redacted]	50 FUNCTION3 PFK	380.9760	34.96	0.000	0.000	2.9
[redacted]	50 FUNCTION3 PFK	380.9760	34.86	0.000	0.000	1.9
[redacted]	50 FUNCTION3 PFK	380.9760	34.81	0.000	0.000	1.9
[redacted]	50 FUNCTION3 PFK	380.9760	34.64	0.000	0.000	1.7
[redacted]	50 FUNCTION3 PFK	380.9760	34.61	0.000	0.000	1.4
[redacted]	50 FUNCTION3 PFK	380.9760	34.54	0.000	0.000	1.6
[redacted]	50 FUNCTION3 PFK	380.9760	34.37	0.000	0.000	0.7
[redacted]	50 FUNCTION3 PFK	380.9760	34.21	0.000	0.000	0.3
[redacted]	50 FUNCTION3 PFK	380.9760	34.03	0.000	0.000	1.6
[redacted]	50 FUNCTION3 PFK	380.9760	33.95	0.000	0.000	1.5
[redacted]	50 FUNCTION3 PFK	380.9760	33.85	0.000	0.000	2.3
[redacted]	50 FUNCTION3 PFK	380.9760	33.74	0.000	0.000	1.1
[redacted]	50 FUNCTION3 PFK	380.9760	37.19	0.000	0.000	0.9
[redacted]	50 FUNCTION3 PFK	380.9760	37.13	0.000	0.000	1.1
[redacted]	50 FUNCTION3 PFK	380.9760	37.01	0.000	0.000	0.9
[redacted]	50 FUNCTION3 PFK	380.9760	36.90	0.000	0.000	0.5
[redacted]	50 FUNCTION3 PFK	380.9760	36.83	0.000	0.000	0.3
[redacted]	50 FUNCTION3 PFK	380.9760	36.60	0.000	0.000	0.6
[redacted]	50 FUNCTION3 PFK	380.9760	36.47	0.000	0.000	1.0
[redacted]	50 FUNCTION3 PFK	380.9760	36.31	0.000	0.000	2.1
[redacted]	50 FUNCTION3 PFK	380.9760	36.25	0.000	0.000	1.8
[redacted]	50 FUNCTION3 PFK	380.9760	36.20	0.000	0.000	1.1
[redacted]	50 FUNCTION3 PFK	380.9760	36.12	0.000	0.000	2.1
[redacted]	50 FUNCTION3 PFK	380.9760	36.09	0.000	0.000	1.8
[redacted]	50 FUNCTION3 PFK	380.9760	36.03	0.000	0.000	1.2
[redacted]	50 FUNCTION3 PFK	380.9760	35.97	0.000	0.000	1.4
[redacted]	50 FUNCTION3 PFK	380.9760	35.61	0.000	0.000	1.1
[redacted]	50 FUNCTION3 PFK	380.9760	35.56	0.000	0.000	1.9
[redacted]	50 FUNCTION3 PFK	380.9760	38.47	0.000	0.000	1.3
[redacted]	50 FUNCTION3 PFK	380.9760	38.31	0.000	0.000	0.4
[redacted]	50 FUNCTION3 PFK	380.9760	38.27	0.000	0.000	0.8
[redacted]	50 FUNCTION3 PFK	380.9760	38.03	0.000	0.000	0.5
[redacted]	50 FUNCTION3 PFK	380.9760	37.65	0.000	0.000	0.9
[redacted]	50 FUNCTION3 PFK	380.9760	37.60	0.000	0.000	1.3
[redacted]	50 FUNCTION3 PFK	380.9760	37.46	0.000	0.000	1.7

Dataset: P:\DIOXIN8290.PRO\130801MB.qld
Last Altered: Thursday, August 01, 2013 13:20:25 Pacific Daylight Time
Printed: Thursday, August 01, 2013 13:21:27 Pacific Daylight Time

ID: WY44MBS, Name: 13080104, Date: 01-Aug-2013, Time: 12:03:56, Conditions: AUTOSPEC01, User: pk

PFK4

[redacted]	51 FUNCTION4 PFK	430.9728	39.52	0.000						1.2
[redacted]	51 FUNCTION4 PFK	430.9728	39.47	0.000						1.8
[redacted]	51 FUNCTION4 PFK	430.9728	39.23	0.000						3.7
[redacted]	51 FUNCTION4 PFK	430.9728	39.16	0.000						5.5
[redacted]	51 FUNCTION4 PFK	430.9728	38.98	0.000						10.8
[redacted]	51 FUNCTION4 PFK	430.9728	38.92	0.000						12.0
[redacted]	51 FUNCTION4 PFK	430.9728	38.67	0.000						17.7
[redacted]	51 FUNCTION4 PFK	430.9728	38.63	0.000						18.6
[redacted]	51 FUNCTION4 PFK	430.9728	43.53	0.000						1.5
[redacted]	51 FUNCTION4 PFK	430.9728	43.09	0.000						1.5
[redacted]	51 FUNCTION4 PFK	430.9728	42.48	0.000						1.4
[redacted]	51 FUNCTION4 PFK	430.9728	42.03	0.000						1.1
[redacted]	51 FUNCTION4 PFK	430.9728	41.21	0.000						1.6
[redacted]	51 FUNCTION4 PFK	430.9728	39.84	0.000						2.1
[redacted]	51 FUNCTION4 PFK	430.9728	39.69	0.000						1.3

ID: WY44MBS, Name: 13080104, Date: 01-Aug-2013, Time: 12:03:56, Conditions: AUTOSPEC01, User: pk

PFK5

	52 FUNCTION5 PFK	480.9696	45.90	0.000						0.6
	52 FUNCTION5 PFK	480.9696	45.69	0.000						6.1
	52 FUNCTION5 PFK	480.9696	45.52	0.000						12.1
	52 FUNCTION5 PFK	480.9696	45.40	0.000						16.0
	52 FUNCTION5 PFK	480.9696	45.34	0.000						18.0
	52 FUNCTION5 PFK	480.9696	45.21	0.000						23.0
	52 FUNCTION5 PFK	480.9696	45.11	0.000						25.0
	52 FUNCTION5 PFK	480.9696	45.07	0.000						27.1
	52 FUNCTION5 PFK	480.9696	47.24	0.000						0.4
	52 FUNCTION5 PFK	480.9696	47.19	0.000						0.9
	52 FUNCTION5 PFK	480.9696	47.15	0.000						1.0
	52 FUNCTION5 PFK	480.9696	47.10	0.000						1.7
	52 FUNCTION5 PFK	480.9696	47.02	0.000						1.3
	52 FUNCTION5 PFK	480.9696	46.97	0.000						1.4
	52 FUNCTION5 PFK	480.9696	46.82	0.000						0.6
	52 FUNCTION5 PFK	480.9696	46.79	0.000						1.1
	52 FUNCTION5 PFK	480.9696	46.70	0.000						1.4
	52 FUNCTION5 PFK	480.9696	46.67	0.000						1.1
	52 FUNCTION5 PFK	480.9696	46.47	0.000						0.7
	52 FUNCTION5 PFK	480.9696	46.43	0.000						1.3
	52 FUNCTION5 PFK	480.9696	46.27	0.000						0.6
	52 FUNCTION5 PFK	480.9696	46.18	0.000						0.5
	52 FUNCTION5 PFK	480.9696	46.07	0.000						0.7
	52 FUNCTION5 PFK	480.9696	46.03	0.000						1.0
	52 FUNCTION5 PFK	480.9696	49.03	0.000						1.7
	52 FUNCTION5 PFK	480.9696	48.99	0.000						1.7
	52 FUNCTION5 PFK	480.9696	48.76	0.000						1.2
	52 FUNCTION5 PFK	480.9696	48.64	0.000						1.1
	52 FUNCTION5 PFK	480.9696	48.51	0.000						0.5
	52 FUNCTION5 PFK	480.9696	48.47	0.000						1.3
	52 FUNCTION5 PFK	480.9696	48.39	0.000						0.5
	52 FUNCTION5 PFK	480.9696	48.28	0.000						1.2
	52 FUNCTION5 PFK	480.9696	48.01	0.000						1.5
	52 FUNCTION5 PFK	480.9696	47.93	0.000						1.2
	52 FUNCTION5 PFK	480.9696	47.90	0.000						1.1
	52 FUNCTION5 PFK	480.9696	47.85	0.000						1.0
	52 FUNCTION5 PFK	480.9696	47.76	0.000						0.8
	52 FUNCTION5 PFK	480.9696	47.73	0.000						1.2
	52 FUNCTION5 PFK	480.9696	47.53	0.000						0.7
	52 FUNCTION5 PFK	480.9696	47.41	0.000						0.7
	52 FUNCTION5 PFK	480.9696	49.11	0.000						0.8

ETHERS1

ID: WY44MBS, Name: 13080104, Date: 01-Aug-2013, Time: 12:03:56, Conditions: AUTOSPEC01, User: pk

ETHERS2

[redacted]	54	FUNCTION1 HPCD...	409.7974	25.96	0.000	0.000					1.1
[redacted]	54	FUNCTION1 HPCD...	409.7974	23.79	0.000	0.000					2.7
[redacted]	54	FUNCTION1 HPCD...	409.7974	22.87	0.000	0.000					2.1
[redacted]	54	FUNCTION1 HPCD...	409.7974	22.63	0.000	0.000					4.3
[redacted]	54	FUNCTION1 HPCD...	409.7974	22.45	0.000	0.000					2.4
[redacted]	54	FUNCTION1 HPCD...	409.7974	21.92	0.000	0.000					2.4
[redacted]	54	FUNCTION1 HPCD...	409.7974	21.42	0.000	0.000					2.2

ETHERS3

[redacted]	55	FUNCTION2 HPCD...	409.7974	30.71	0.000	0.000					1.7
[redacted]	55	FUNCTION2 HPCD...	409.7974	29.10	0.000	0.000					1.6

ETHERS4

[redacted]	56	FUNCTION3 OCDPE	445.7555	33.94	0.000	0.000					4.3

ETHERS5

[redacted]	57	FUNCTION4 NCDPE	479.7165	41.48	0.000	0.000					2.5
[redacted]	57	FUNCTION4 NCDPE	479.7165	39.12	0.000	0.000					2.3

ETHERS6

[redacted]											

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Calibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

ID: WY44MBS, Name: 13080104, Date: 01-Aug-2013, Time: 12:03:56, Conditions: AUTOSPEC01, User: pk

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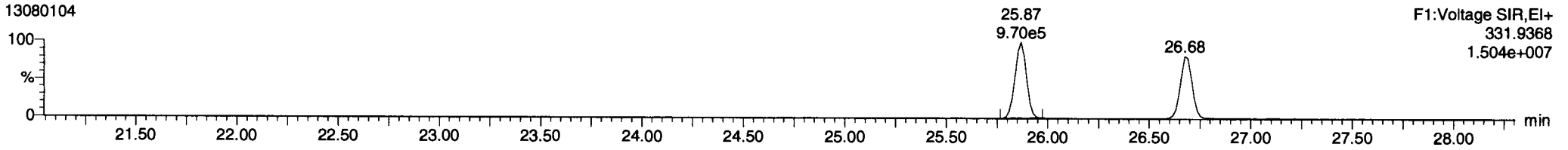

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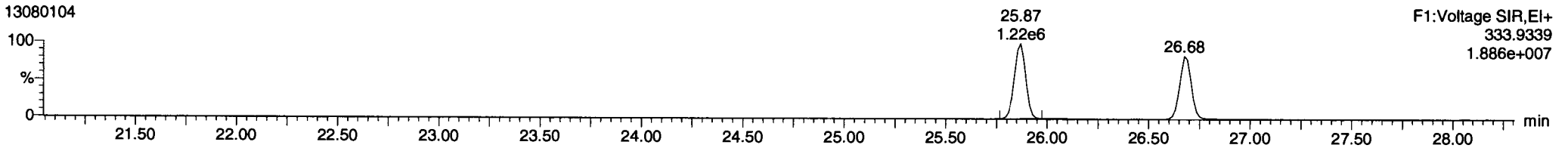

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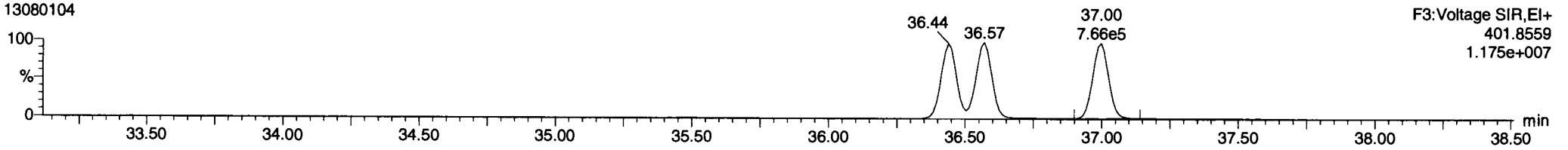

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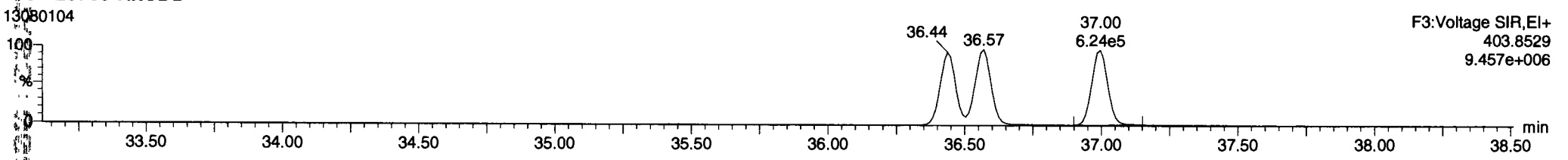

Dataset: P:\DIOXIN8290.PRO\130801MB.qld
Last Altered: Thursday, August 01, 2013 13:20:25 Pacific Daylight Time
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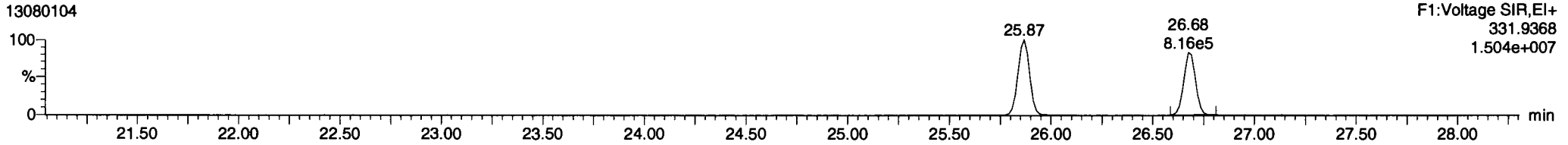
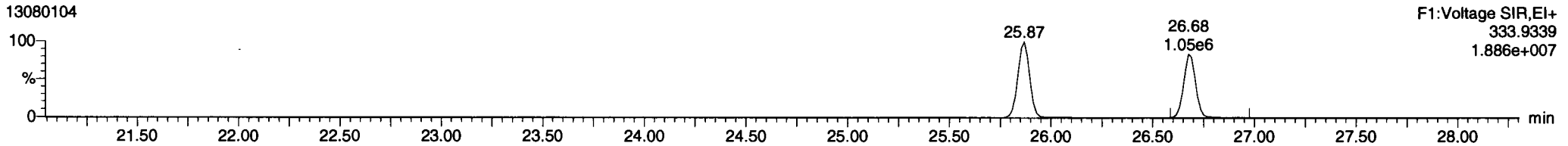
ID: WY44MBS, Name: 13080104, Date: 01-Aug-2013, Time: 12:03:56, Conditions: AUTOSPEC01, User: pk

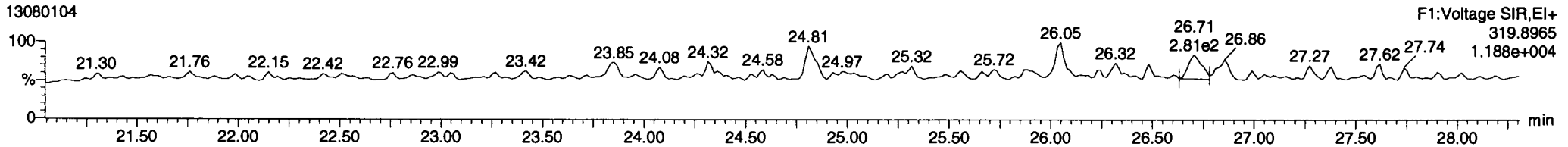
13C-2378-TCDD



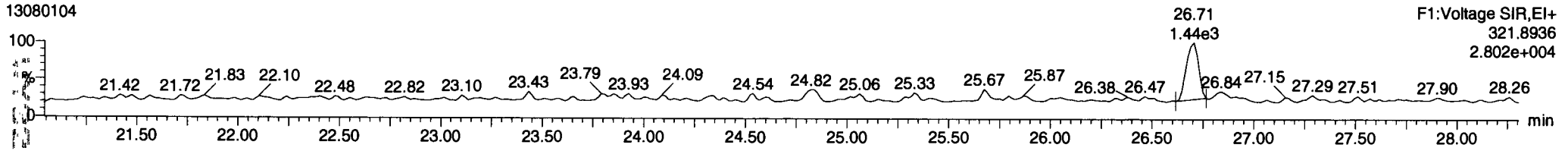
13C-2378-TCDD



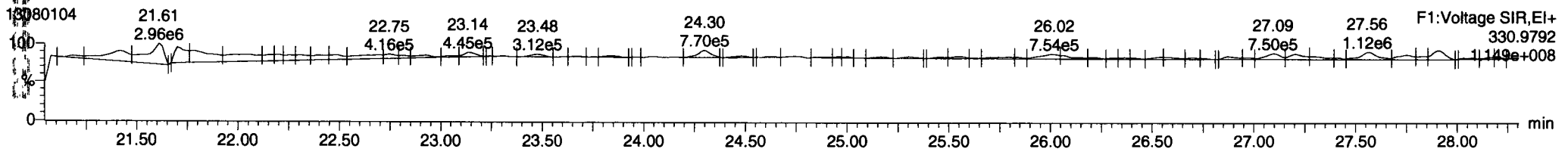
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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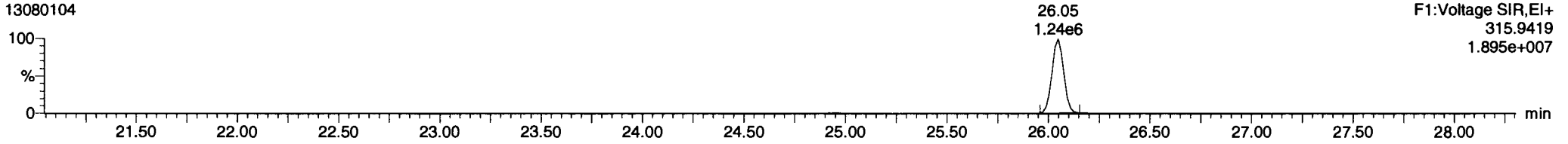
Printed: Thursday, August 01, 2013 13:21:27 Pacific Daylight Time

ID: WY44MBS, Name: 13080104, Date: 01-Aug-2013, Time: 12:03:56, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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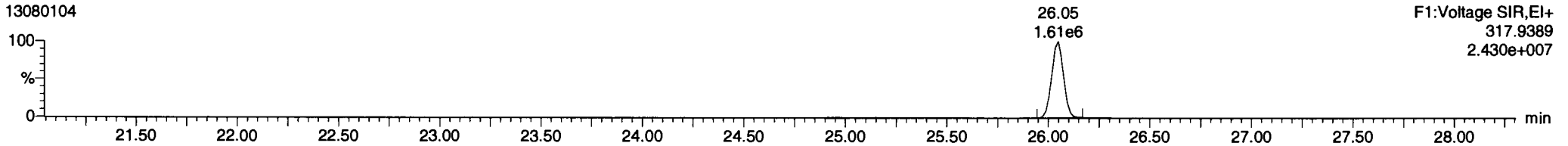
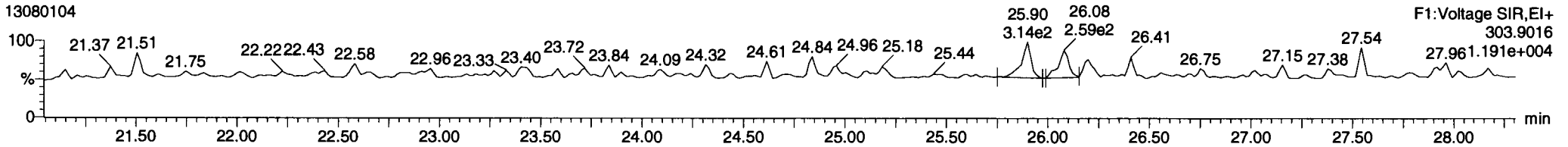
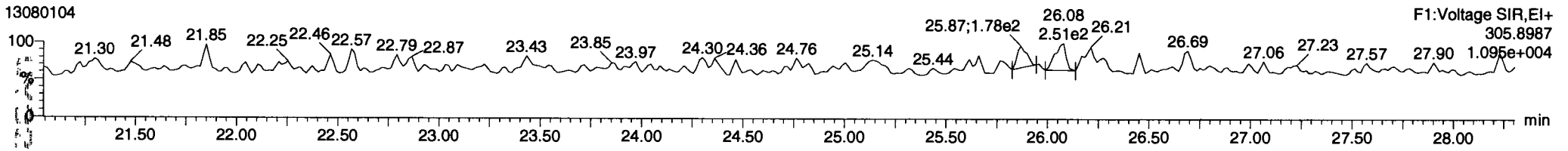


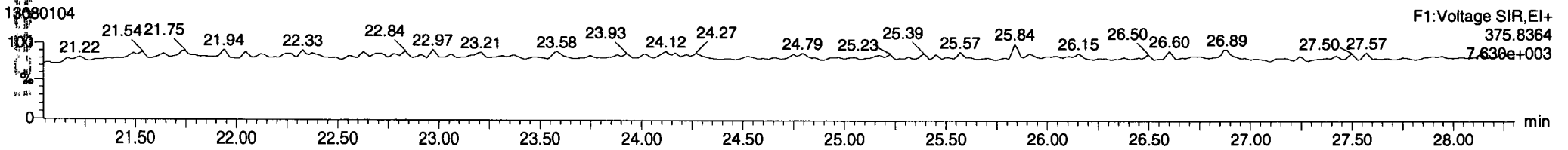
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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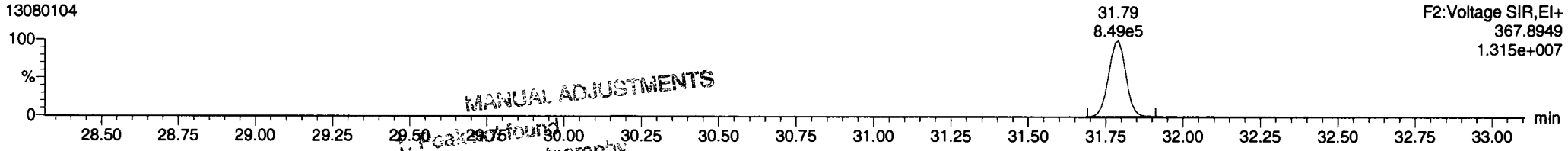
13C-12378-PeCDD



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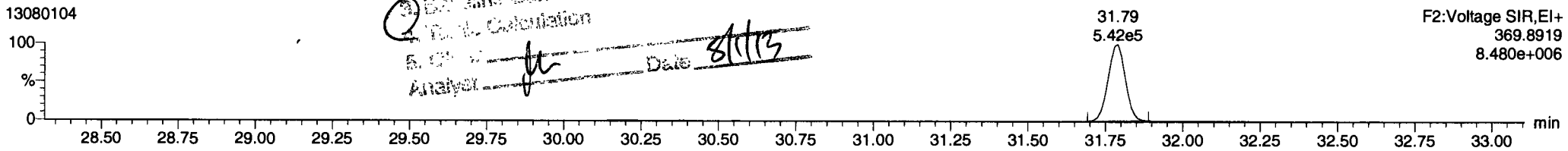
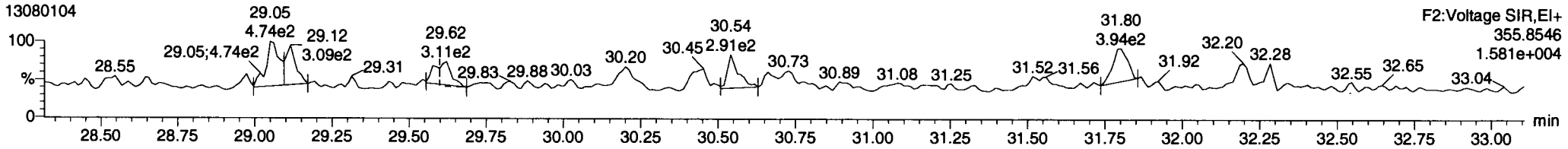
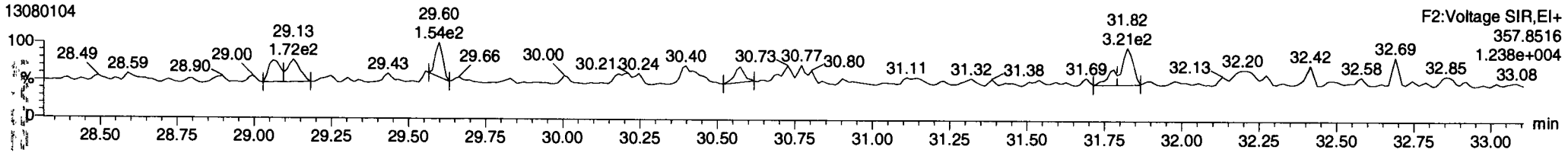


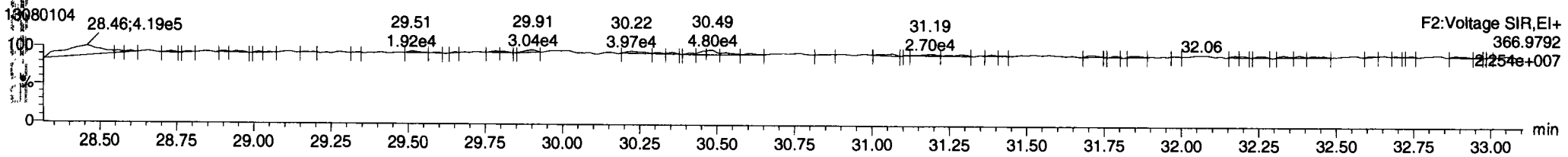
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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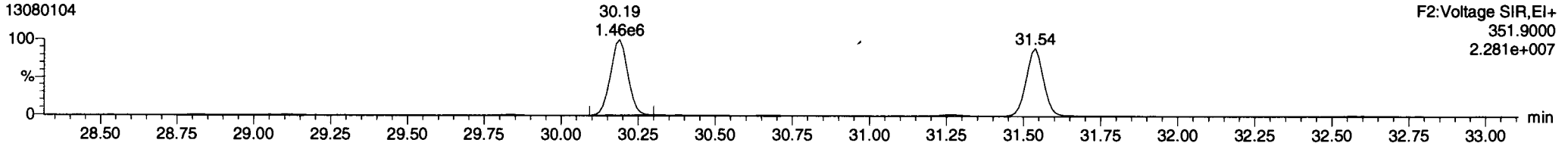

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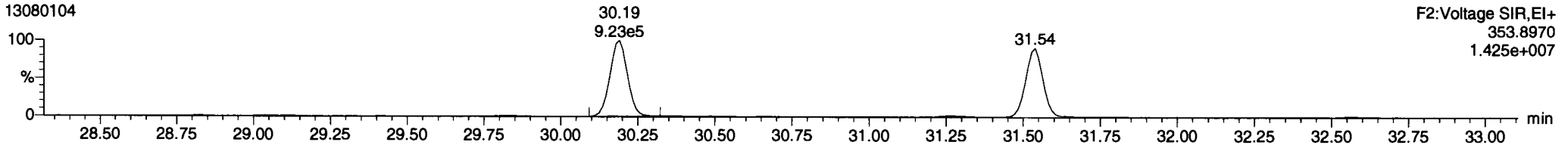

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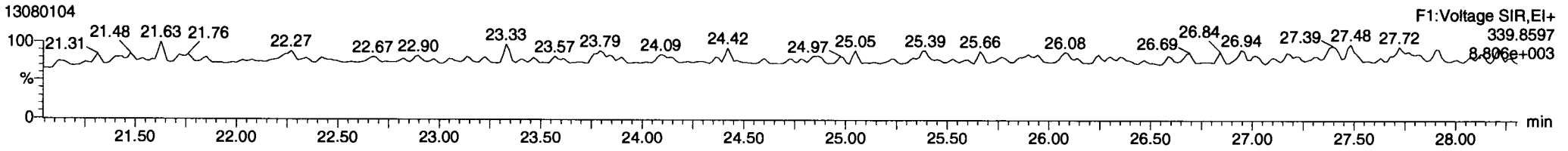
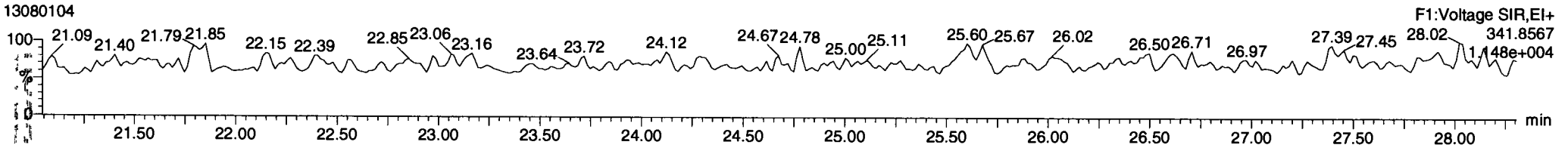
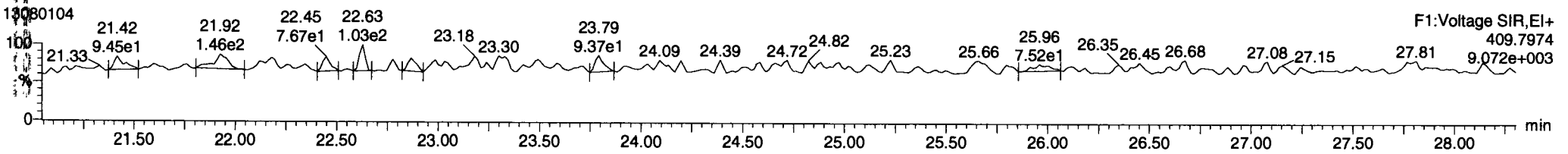


Total-penta1



FUNCTION1 HPCDPE



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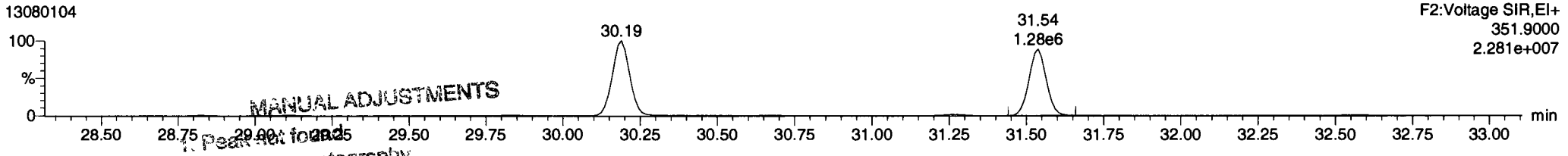
13C-23478-PeCDF



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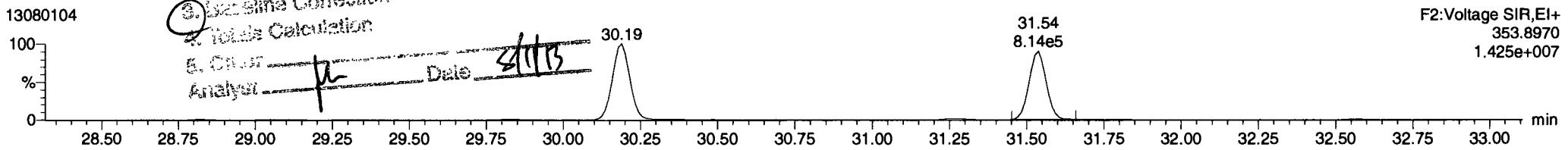
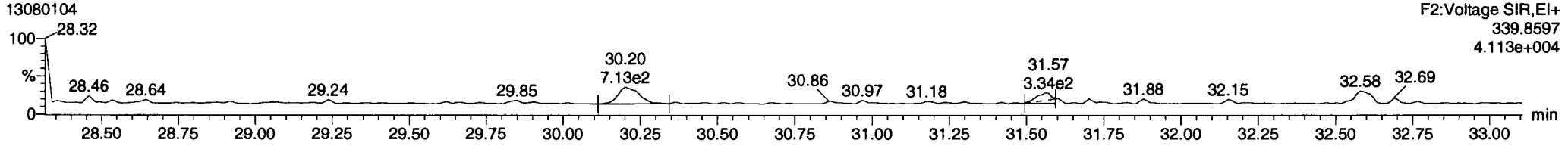
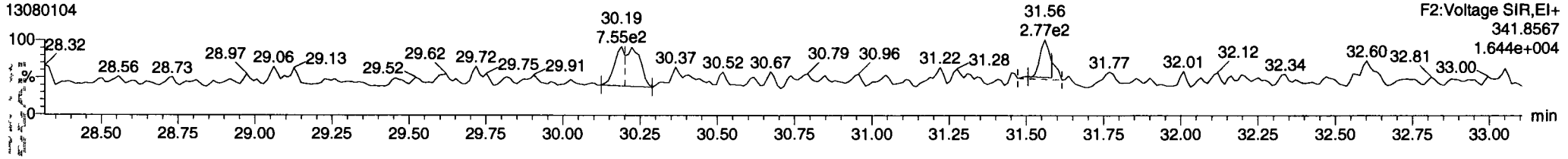


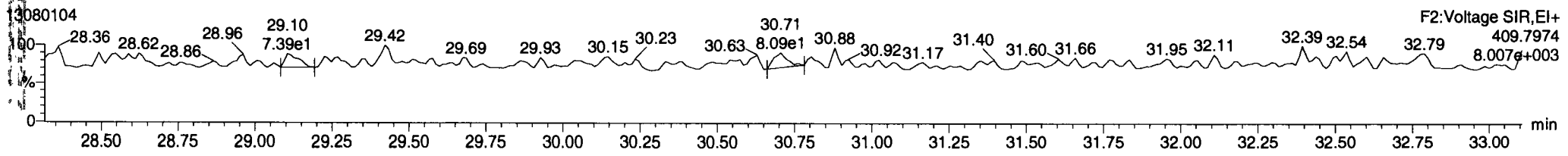
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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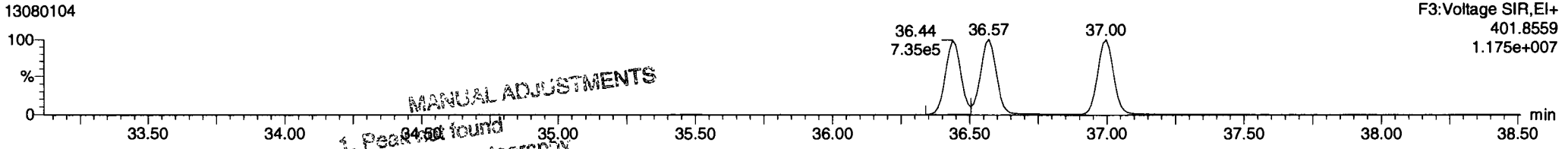
ID: WY44MBS, Name: 13080104, Date: 01-Aug-2013, Time: 12:03:56, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD



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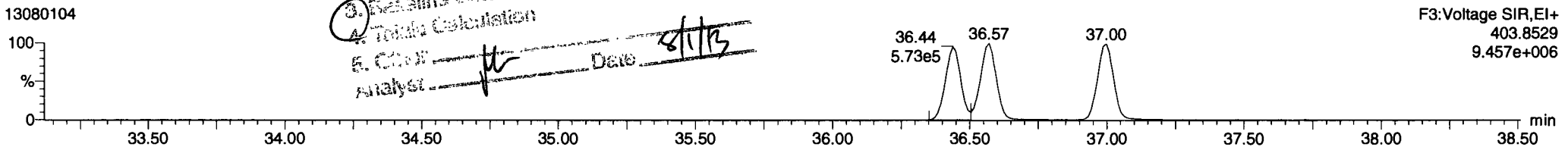
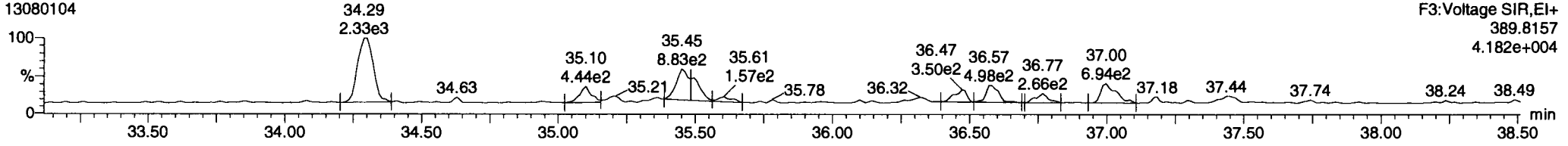
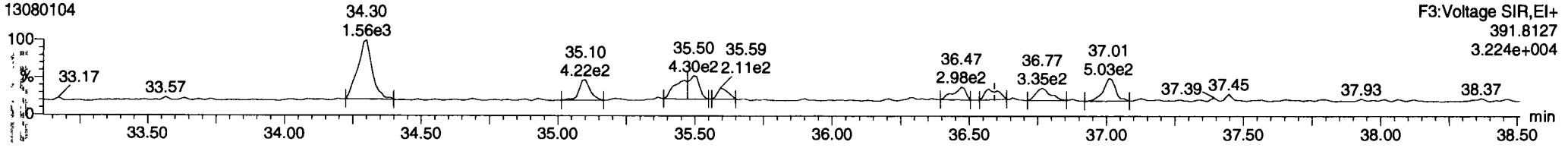


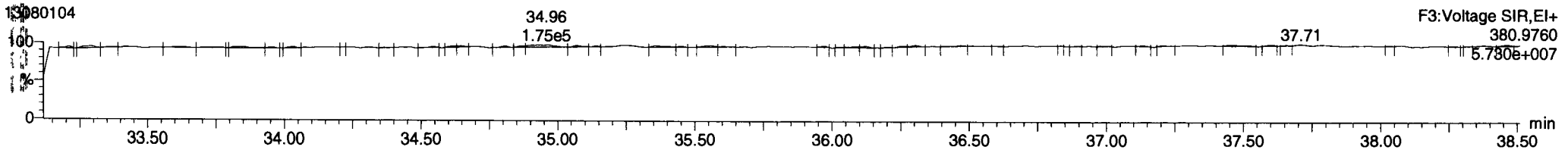
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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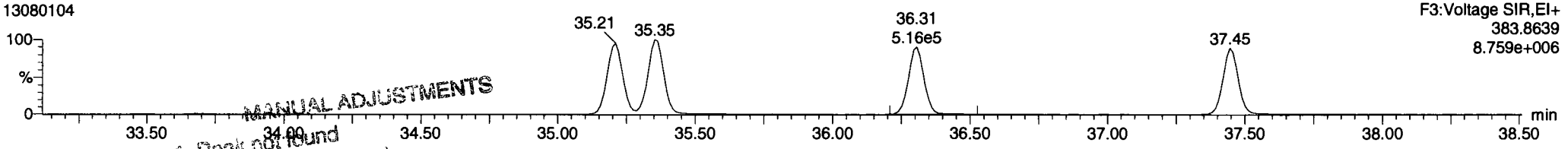
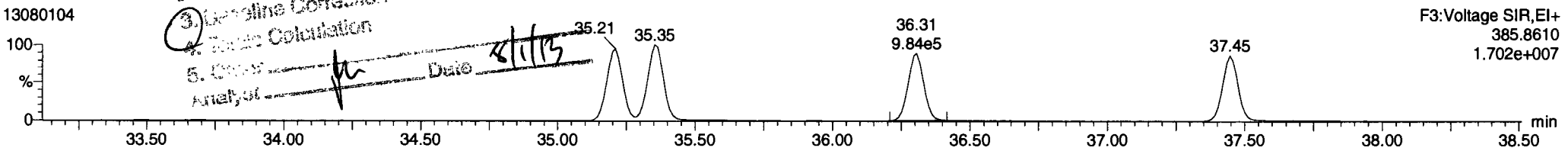
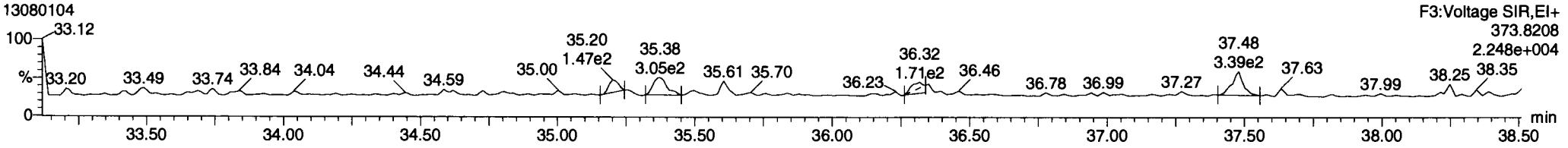
13C-234678-HxCDF



13C-234678-HxCDF



Total-hexafurans



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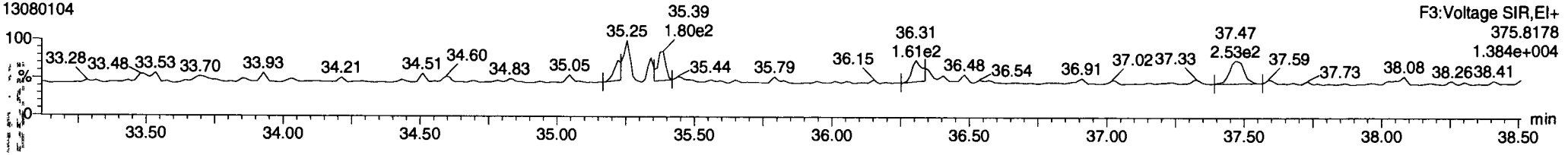
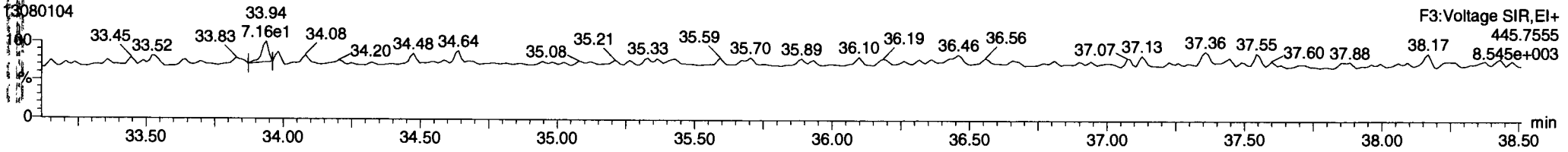


FUNCTION3 OCDPE



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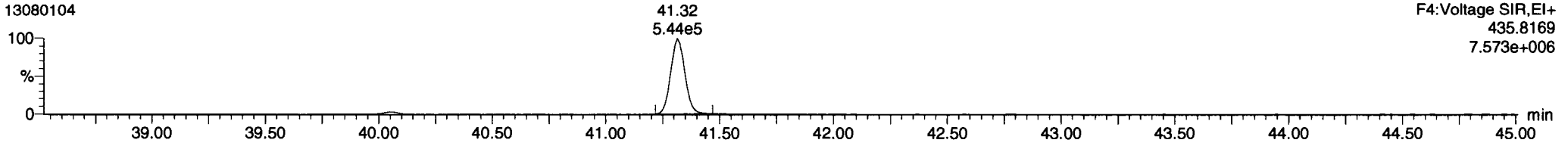
13C-1234678-HpCDD



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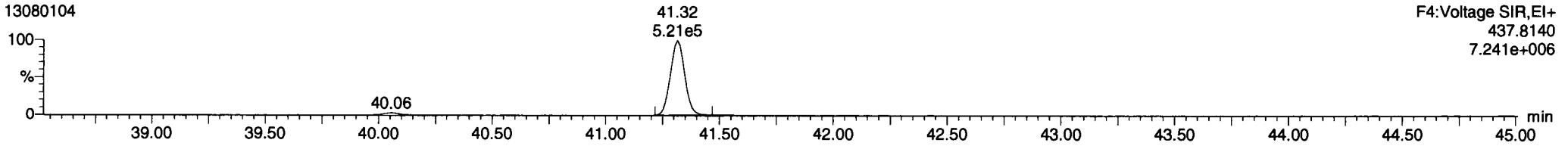
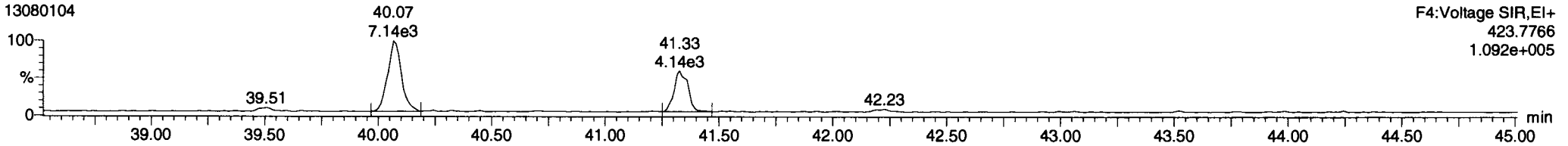
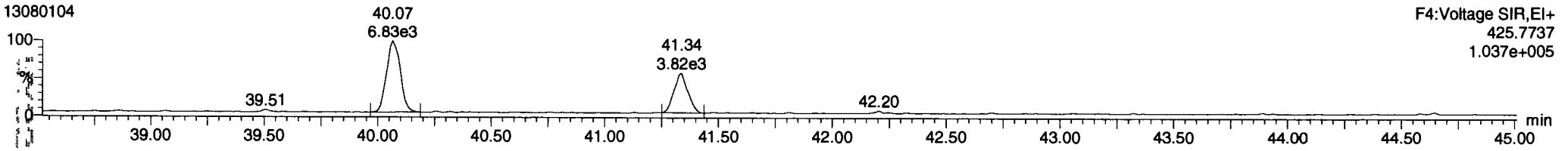


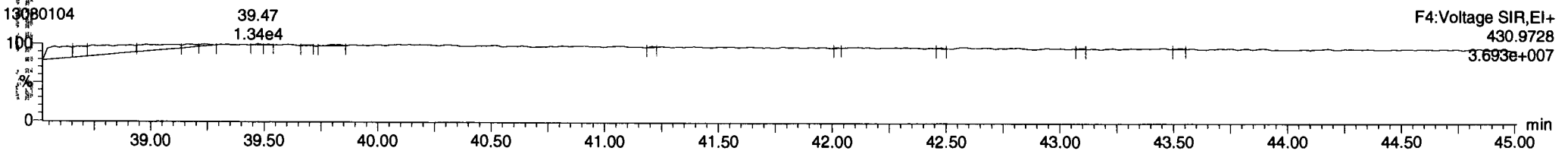
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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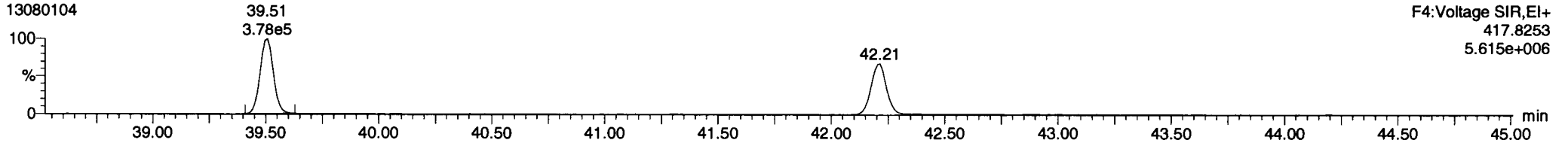
13C-1234678-HpCDF



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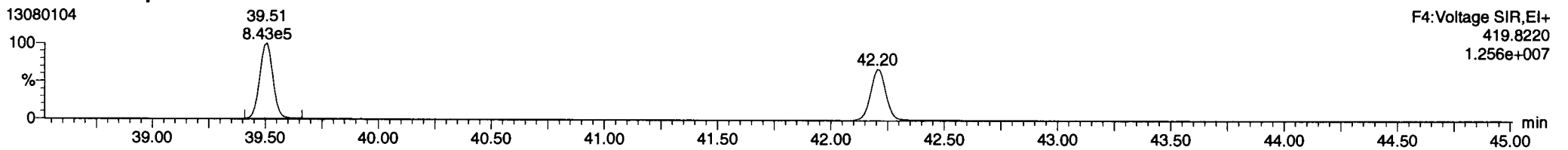
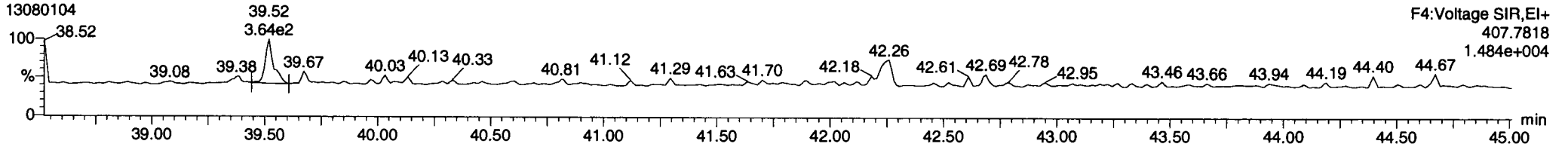
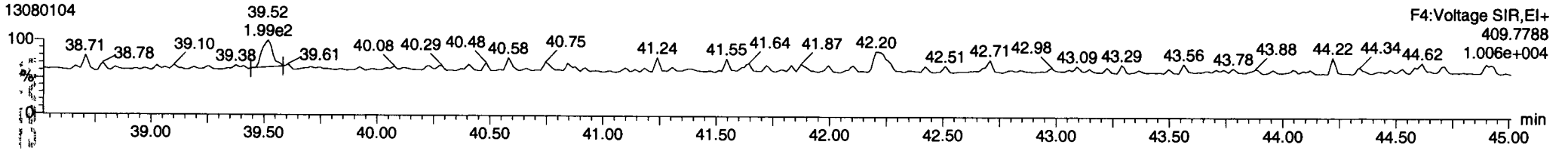


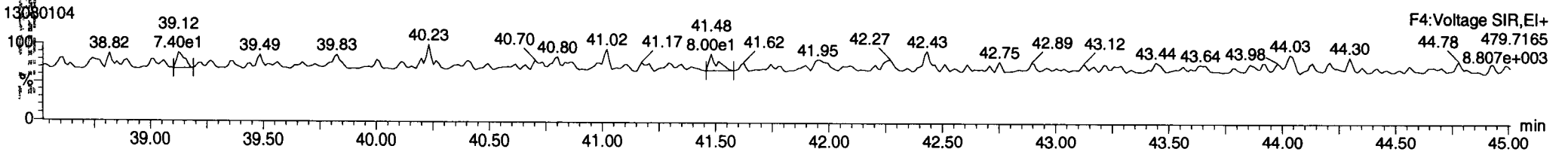
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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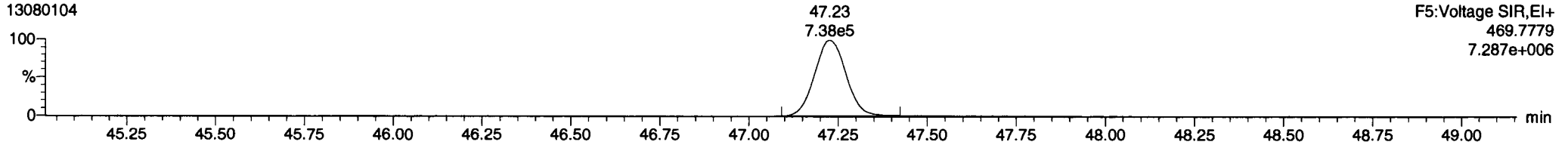
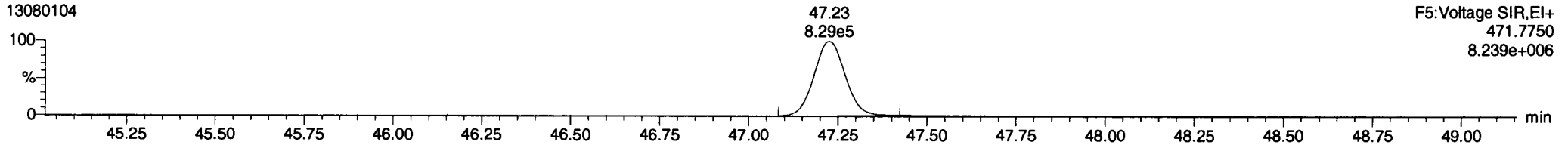
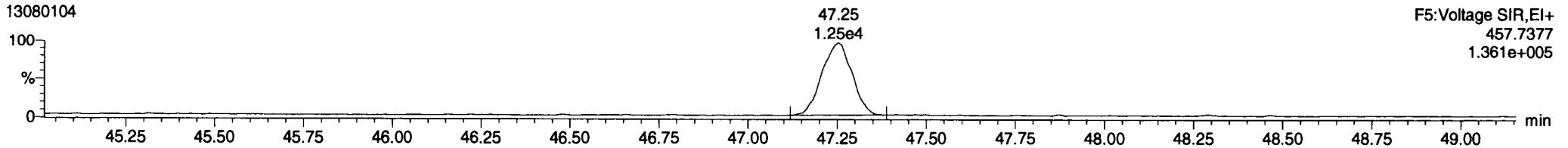
13C-OCDD



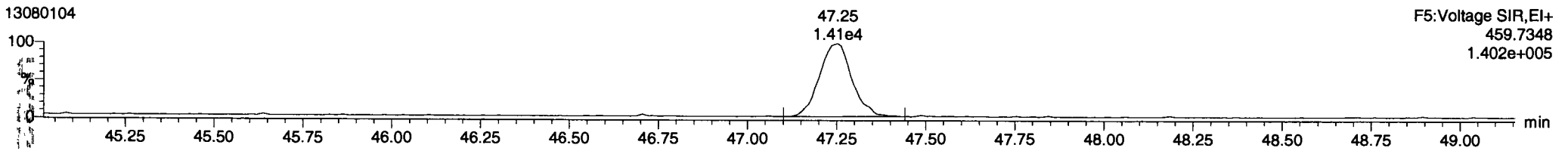
13C-OCDD



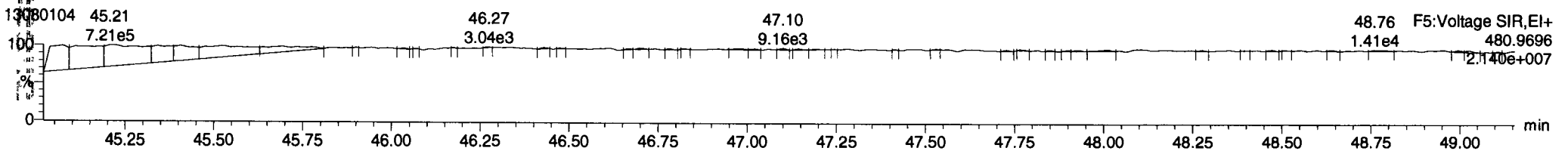
OCDD



OCDD



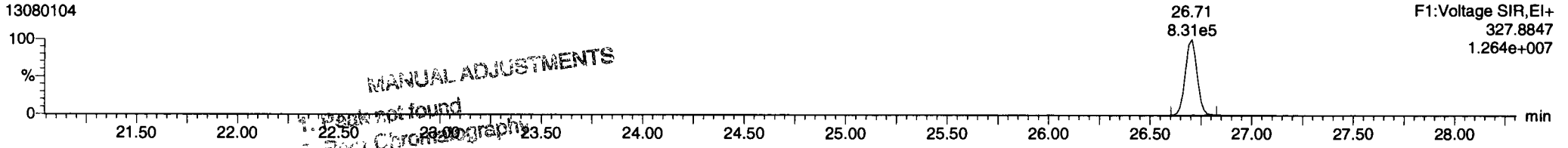
FUNCTION5 PFK



Dataset: P:\DIOXIN8290.PRO\130801MB.qld
Last Altered: Thursday, August 01, 2013 13:20:25 Pacific Daylight Time
Printed: Thursday, August 01, 2013 13:21:27 Pacific Daylight Time

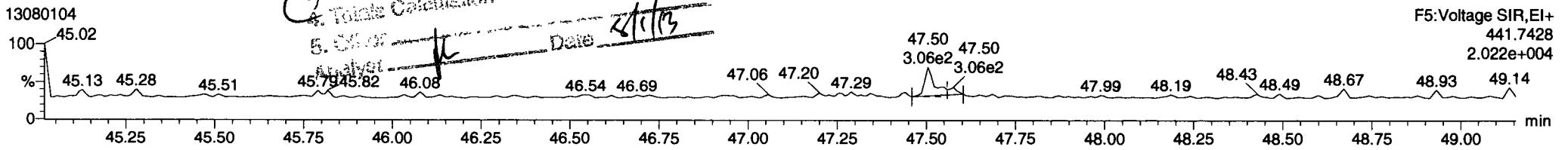
ID: WY44MBS, Name: 13080104, Date: 01-Aug-2013, Time: 12:03:56, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD

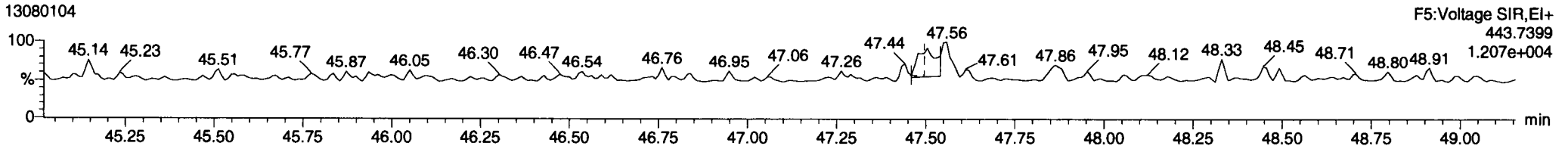


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst Date 8/1/13

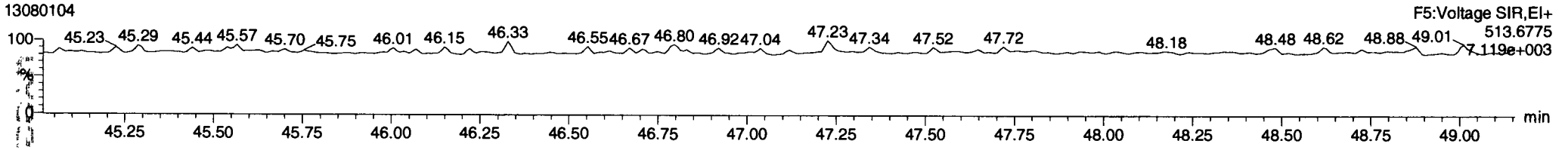
OCDF



OCDF



FUNCTION5 DCDPE



ARI
CDD/CDF EDL DATA
HIGH RESOLUTION

Lab.Sample ID: WY44MBS
Lab.File ID: 13080104
Date Analysed: 01-Aug-13

Target Analytes	Selected Ions	Peak RT	Conc	EMPC	EDL
2378-TCDD	320/322	26.71	0.0931	0.0350	
12378-PeCDD	356/358	31.80	0.0526	0.0480	
123478-HxCDD	390/392	36.47	0.0512		
123678-HxCDD	390/392	36.57	0.0613	0.0480	
123789-HxCDD	390/392	37.00	0.0974		
1234678-HpCDD	424/426	41.33	0.748		
OCDD	458/460	47.25	3.47		
2378-TCDF	304/306	26.08	0.0207	0.0180	
12378-PeCDF	340/342	30.20	0.0705	0.0560	
23478-PeCDF	340/342	31.57	0.0331	0.0300	
123478-HxCDF	374/376	35.20	0.0144	0.0130	
234678-HxCDF	374/376	36.32	0.0203		
123678-HxCDF	374/376	35.38	0.0278	0.0230	
123789-HxCDF	374/376	37.48	0.0431		
1234678-HpCDF	408/410	39.52	0.0380	0.0270	
1234789-HpCDF	408/410	0.00			0.016
OCDF	442/444	47.50	0.0671	0.0570	

Note: EDLs are on column values. Final EDL values are corrected for final volume of the extract (normally 20ul) and amount of sample extracted.

Dataset: P:\DIOXIN8290.PRO\130801OPR.qld
Last Altered: Thursday, August 01, 2013 13:57:25 Pacific Daylight Time
Printed: Thursday, August 01, 2013 13:58:35 Pacific Daylight Time

8/1/13

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130716.mdb 24 Jul 2013 13:56:23
Calibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

ID: WY44OPR, Name: 13080105, Date: 01-Aug-2013, Time: 12:54:23, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.063	1.001	1.41e5	1.97e5	0.867	0.716	0.770	2019.4	1036	1391	2.09e6	3.03e6	NO	11.162	11.162
12378-PeCDF	30.211	1.001	8.44e5	5.74e5	0.875	1.470	1.550	6141.6	2103	3346	1.29e7	8.89e6	NO	54.341	54.341
23478-PeCDF	31.559	1.001	7.74e5	5.28e5	0.880	1.465	1.550	5771.8	2103	3346	1.21e7	8.14e6	NO	55.359	55.359
123478-HxCDF	35.231	1.001	6.12e5	5.14e5	1.048	1.192	1.240	3111.8	3021	3375	9.40e6	7.68e6	NO	53.751	53.751
234678-HxCDF	36.327	1.001	6.11e5	5.15e5	1.088	1.187	1.240	3125.9	3021	3375	9.44e6	7.85e6	NO	54.427	54.427
123678-HxCDF	35.374	1.000	6.49e5	5.39e5	1.025	1.203	1.240	3185.8	3021	3375	9.62e6	8.10e6	NO	53.058	53.058
123789-HxCDF	37.467	1.000	5.12e5	4.23e5	0.959	1.210	1.240	2690.2	3021	3375	8.13e6	6.69e6	NO	53.809	53.809
1234678-HpCDF	39.528	1.001	5.64e5	5.65e5	1.215	0.998	1.050	3619.9	2375	2228	8.60e6	8.48e6	NO	61.101	61.101
1234789-HpCDF	42.224	1.000	3.86e5	3.96e5	1.200	0.975	1.050	2140.9	2375	2228	5.09e6	5.09e6	NO	54.696	54.696
OCDF	47.530	1.006	5.26e5	6.11e5	1.064	0.859	0.890	3794.9	1441	2223	5.47e6	6.25e6	NO	107.172	107.172
2378-TCDD	26.705	1.001	1.09e5	1.46e5	0.994	0.749	0.770	1808.4	932	1277	1.68e6	2.26e6	NO	10.793	10.793
12378-PeCDD	31.812	1.001	5.71e5	3.67e5	0.976	1.557	1.550	4275.5	2081	1332	8.90e6	5.67e6	NO	53.045	53.045
123478-HxCDD	36.459	1.000	5.04e5	3.98e5	0.967	1.266	1.240	4151.9	1911	1373	7.94e6	6.30e6	NO	55.810	55.810
123678-HxCDD	36.590	1.001	4.81e5	3.86e5	0.902	1.248	1.240	3887.2	1911	1373	7.43e6	5.89e6	NO	54.078	54.078
123789-HxCDD	37.018	1.012	4.75e5	3.91e5	0.914	1.214	1.240	3802.1	1911	1373	7.27e6	5.80e6	NO	54.877	54.877
1234678-HpCDD	41.336	1.000	3.78e5	3.67e5	0.999	1.029	1.050	2545.4	2081	1602	5.30e6	5.11e6	NO	53.803	53.803
OCDD	47.252	1.000	5.05e5	5.65e5	0.979	0.895	0.890	3562.3	1453	1785	5.17e6	5.71e6	NO	109.669	109.669
13C-2378-TCDF	26.048	1.007	1.54e6	1.97e6	1.419	0.781	0.770	5957.5	3962	2241	2.36e7	3.05e7	NO		87.438
13C-12378-PeCDF	30.189	1.167	1.83e6	1.16e6	1.158	1.576	1.550	8407.5	3419	2687	2.87e7	1.82e7	NO		91.250
13C-23478-PeCDF	31.538	1.219	1.64e6	1.04e6	1.127	1.577	1.550	7474.4	3419	2687	2.56e7	1.61e7	NO		84.026
13C-123478-HxCDF	35.209	0.952	6.76e5	1.32e6	1.206	0.511	0.510	1999.9	5098	4735	1.02e7	2.00e7	NO		91.355
13C-123678-HxCDF	35.363	0.956	7.48e5	1.44e6	1.266	0.520	0.510	2222.8	5098	4735	1.13e7	2.16e7	NO		95.196
13C-234678-HxCDF	36.306	0.981	6.48e5	1.25e6	1.155	0.517	0.510	1923.3	5098	4735	9.81e6	1.93e7	NO		90.721
13C-123789-HxCDF	37.456	1.012	6.18e5	1.19e6	1.121	0.518	0.510	1876.0	5098	4735	9.56e6	1.85e7	NO		89.153
13C-1234678-HpCDF	39.506	1.068	4.72e5	1.05e6	1.040	0.450	0.440	2922.5	2438	2601	7.12e6	1.59e7	NO		80.706
13C-1234789-HpCDF	42.213	1.141	3.70e5	8.22e5	0.789	0.450	0.440	1956.4	2438	2601	4.77e6	1.07e7	NO		83.318
13C-1234-TCDD	25.869	0.000	1.24e6	1.58e6	1.000	0.785	0.770	5119.7	3779	2251	1.93e7	2.47e7	NO		100.000
13C-2378-TCDD	26.676	1.031	1.05e6	1.33e6	0.962	0.786	0.770	4100.5	3779	2251	1.55e7	2.01e7	NO		87.522
13C-12378-PeCDD	31.789	1.229	1.11e6	7.02e5	0.746	1.579	1.550	9676.6	1800	1501	1.74e7	1.11e7	NO		85.872
13C-123478-HxCDD	36.448	0.985	9.35e5	7.37e5	1.003	1.268	1.240	4884.2	2967	2610	1.45e7	1.14e7	NO		91.913
13C-123678-HxCDD	36.569	0.988	9.83e5	7.95e5	1.052	1.236	1.240	5065.8	2967	2610	1.50e7	1.23e7	NO		93.197
13C-1234678-HpCDD	41.326	1.117	7.11e5	6.76e5	0.880	1.051	1.050	4017.4	2476	2369	9.95e6	9.26e6	NO		86.875
13C-OCDD	47.234	1.277	9.44e5	1.05e6	0.775	0.899	0.890	5594.2	1717	1828	9.60e6	1.07e7	NO		141.882

Dataset: P:\DIOXIN8290.PRO\130801OPR.qld
Last Altered: Thursday, August 01, 2013 13:57:25 Pacific Daylight Time
Printed: Thursday, August 01, 2013 13:58:35 Pacific Daylight Time

ID: WY44OPR, Name: 13080105, Date: 01-Aug-2013, Time: 12:54:23, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	36.996	0.000	1.00e6	8.10e5	1.000	1.239	1.240	5163.4	2967	2610	1.53e7	1.25e7	NO	100.000
Total-tetrafurans			1.53e5		0.867				1036		2.28e6			12.067
Total-penta1			0.00e0						706		0.00e0			
Total-pentafurans			1.67e6		0.877				2103		2.59e7			113.294
Total-hexafurans			2.40e6		1.030				3021		3.68e7			216.079
Total-heptafurans			9.56e5		1.207				2375		1.38e7			116.501
Total-Furans			5.70e6		1.022				1036		8.42e7			565.114
Total-tetradioxins			1.14e5		0.994				932		1.74e6			11.211
Total-pentadioxins			5.76e5		0.976				2081		8.98e6			53.523
Total-hexadioxins			1.47e6		0.928				1911		2.27e7			165.355
Total-heptadioxins			3.91e5		0.999				2081		5.50e6			55.692
Total-Dioxins			3.05e6		0.962				932		4.41e7			395.451
Total-TEQ			8.76e6						932		1.28e8			960.565
37CL-2378-TCDD	26.705	1.032	1.09e6		1.091			10808.5	1548		1.67e7			35.243
FUNCTION1 PFK			4.15e7						1323711		3.25e8			
FUNCTION2 PFK			0.00e0						322137		0.00e0			
FUNCTION3 PFK			6.28e5						488284		1.69e7			0.000
FUNCTION4 PFK			1.25e4						288637		5.14e5			
FUNCTION5 PFK			2.15e5						201571		8.51e6			
FUNCTION1 HXCDPE			0.00e0						358		0.00e0			
FUNCTION1 HPCDPE			4.18e2						661		7.91e3			0.000
FUNCTION2 HPCDPE			2.19e2						939		4.09e3			0.000
FUNCTION3 OCDPE			0.00e0						463		0.00e0			
FUNCTION4 NCDPE			8.57e1						632		2.04e3			0.000
FUNCTION5 DCDPE			0.00e0						393		0.00e0			

ethod: P:\DIOXIN8290.pro\MethDB\Dioxin130716.mdb 24 Jul 2013 13:56:23
alibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

: WY44OPR, Name: 13080105, Date: 01-Aug-2013, Time: 12:54:23, Conditions: AUTOSPEC01, User: pk

:

	35 Total-tetrafurans	303.9016	26.30	914.524	0.867	0.030		2.14	0.77	YES	6.6
	1 2378-TCDF	303.9016	26.06	338922.672	0.867	11.162	11.162	0.72	0.77	NO	2019.4
	35 Total-tetrafurans	303.9016	25.88	1043.836	0.867	0.034		0.70	0.77	NO	7.5
	35 Total-tetrafurans	303.9016	25.15	4598.303	0.867	0.151		0.71	0.77	NO	29.1
	35 Total-tetrafurans	303.9016	24.97	15848.965	0.867	0.522		0.70	0.77	NO	102.9
	35 Total-tetrafurans	303.9016	24.82	3845.229	0.867	0.127		0.93	0.77	YES	28.3
	35 Total-tetrafurans	303.9016	23.58	904.881	0.867	0.030		0.42	0.77	YES	4.3
	35 Total-tetrafurans	303.9016	23.42	336.724	0.867	0.011		0.79	0.77	NO	3.2

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	3 23478-PeCDF	339.8597	31.56	1301662.563	0.880	55.359	55.359	1.46	1.55	NO	5771.8
	37 Total-pentafurans	339.8597	31.27	1953.417	0.877	0.079		2.13	1.55	YES	10.5
	37 Total-pentafurans	339.8597	30.41	30554.319	0.877	1.231		2.00	1.55	YES	145.4
	2 12378-PeCDF	339.8597	30.21	1418487.938	0.875	54.341	54.341	1.47	1.55	NO	6141.6
	37 Total-pentafurans	339.8597	29.85	17764.046	0.877	0.716		1.58	1.55	NO	69.8
	37 Total-pentafurans	339.8597	29.13	18018.334	0.877	0.726		1.68	1.55	NO	77.1
	37 Total-pentafurans	339.8597	29.06	10173.327	0.877	0.410		1.05	1.55	YES	50.0
	37 Total-pentafurans	339.8597	32.59	10689.903	0.877	0.431		1.50	1.55	NO	42.9

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	7 123789-HxCDF	373.8208	37.47	935185.062	0.959	53.809	53.809	1.21	1.24	NO	2690.2
	5 234678-HxCDF	373.8208	36.33	1125951.844	1.088	54.427	54.427	1.19	1.24	NO	3125.9
	6 123678-HxCDF	373.8208	35.37	1188311.188	1.025	53.058	53.058	1.20	1.24	NO	3185.8
	4 123478-HxCDF	373.8208	35.23	1126467.656	1.048	53.751	53.751	1.19	1.24	NO	3111.8
	38 Total-hexafurans	373.8208	35.08	2289.228	1.030	0.113		1.21	1.24	NO	8.1
	38 Total-hexafurans	373.8208	33.71	13004.681	1.030	0.639		1.25	1.24	NO	33.9
	38 Total-hexafurans	373.8208	33.50	5741.250	1.030	0.282		1.17	1.24	NO	17.2

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	8 1234678-HpCDF	407.7818	39.53	1129429.688	1.215	61.101	61.101	1.00	1.05	NO	3619.9
	9 1234789-HpCDF	407.7818	42.22	782624.751	1.200	54.696	54.696	0.97	1.05	NO	2140.9
	39 Total-heptafurans	407.7818	40.32	6413.392	1.207	0.391		0.99	1.05	NO	19.8
	39 Total-heptafurans	407.7818	40.00	5129.808	1.207	0.313		1.09	1.05	NO	16.0

ıtaset: P:\DIOXIN8290.PRO\130801OPR.qld
ıst Altered: Thursday, August 01, 2013 13:57:25 Pacific Daylight Time
inted: Thursday, August 01, 2013 13:58:35 Pacific Daylight Time

: WY44OPR, Name: 13080105, Date: 01-Aug-2013, Time: 12:54:23, Conditions: AUTOSPEC01, User: pk

ırans,TF,PP,PF,HF,HPF,OF

	35 Total-tetrafurans	303.9016	26.30	914.524	0.867	0.030		2.14	0.77	YES	6.6
	1 2378-TCDF	303.9016	26.06	338922.672	0.867	11.162	11.162	0.72	0.77	NO	2019.4
	35 Total-tetrafurans	303.9016	25.88	1043.836	0.867	0.034		0.70	0.77	NO	7.5
	35 Total-tetrafurans	303.9016	25.15	4598.303	0.867	0.151		0.71	0.77	NO	29.1
	35 Total-tetrafurans	303.9016	24.97	15848.965	0.867	0.522		0.70	0.77	NO	102.9
	35 Total-tetrafurans	303.9016	24.82	3845.229	0.867	0.127		0.93	0.77	YES	28.3
	35 Total-tetrafurans	303.9016	23.58	904.881	0.867	0.030		0.42	0.77	YES	4.3
	35 Total-tetrafurans	303.9016	23.42	336.724	0.867	0.011		0.79	0.77	NO	3.2
	3 23478-PeCDF	339.8597	31.56	1301662.563	0.880	55.359	55.359	1.46	1.55	NO	5771.8
	37 Total-pentafurans	339.8597	31.27	1953.417	0.877	0.079		2.13	1.55	YES	10.5
	37 Total-pentafurans	339.8597	30.41	30554.319	0.877	1.231		2.00	1.55	YES	145.4
	2 12378-PeCDF	339.8597	30.21	1418487.938	0.875	54.341	54.341	1.47	1.55	NO	6141.6
	37 Total-pentafurans	339.8597	29.85	17764.046	0.877	0.716		1.58	1.55	NO	69.8
	37 Total-pentafurans	339.8597	29.13	18018.334	0.877	0.726		1.68	1.55	NO	77.1
	37 Total-pentafurans	339.8597	29.06	10173.327	0.877	0.410		1.05	1.55	YES	50.0
	37 Total-pentafurans	339.8597	32.59	10689.903	0.877	0.431		1.50	1.55	NO	42.9
	7 123789-HxCDF	373.8208	37.47	935185.062	0.959	53.809	53.809	1.21	1.24	NO	2690.2
	5 234678-HxCDF	373.8208	36.33	1125951.844	1.088	54.427	54.427	1.19	1.24	NO	3125.9
	6 123678-HxCDF	373.8208	35.37	1188311.188	1.025	53.058	53.058	1.20	1.24	NO	3185.8
	4 123478-HxCDF	373.8208	35.23	1126467.656	1.048	53.751	53.751	1.19	1.24	NO	3111.8
	38 Total-hexafurans	373.8208	35.08	2289.228	1.030	0.113		1.21	1.24	NO	8.1
	38 Total-hexafurans	373.8208	33.71	13004.681	1.030	0.639		1.25	1.24	NO	33.9
	38 Total-hexafurans	373.8208	33.50	5741.250	1.030	0.282		1.17	1.24	NO	17.2
	8 1234678-HpCDF	407.7818	39.53	1129429.688	1.215	61.101	61.101	1.00	1.05	NO	3619.9
	9 1234789-HpCDF	407.7818	42.22	782624.751	1.200	54.696	54.696	0.97	1.05	NO	2140.9
	39 Total-heptafurans	407.7818	40.32	6413.392	1.207	0.391		0.99	1.05	NO	19.8
	39 Total-heptafurans	407.7818	40.00	5129.808	1.207	0.313		1.09	1.05	NO	16.0
	10 OCDF	441.7428	47.53	1136945.000	1.064	107.172	107....	0.86	0.89	NO	3794.9

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	41 Total-tetradioxins	319.8965	27.26	496.704	0.994	0.021		0.50	0.77	YES	3.5
	11 2378-TCDD	319.8965	26.71	255022.086	0.994	10.793	10.793	0.75	0.77	NO	1808.4
	41 Total-tetradioxins	319.8965	26.30	7480.563	0.994	0.317		0.87	0.77	NO	44.7
	41 Total-tetradioxins	319.8965	25.33	1138.060	0.994	0.048		0.70	0.77	NO	5.4
	41 Total-tetradioxins	319.8965	24.81	769.244	0.994	0.033		1.13	0.77	YES	7.1

)

	42 Total-pentadioxins	355.8546	31.13	2086.548	0.976	0.118		1.68	1.55	NO	9.7
	42 Total-pentadioxins	355.8546	30.56	926.470	0.976	0.052		2.05	1.55	YES	6.7
	42 Total-pentadioxins	355.8546	30.42	2026.915	0.976	0.115		1.72	1.55	NO	7.8
	42 Total-pentadioxins	355.8546	30.21	2434.167	0.976	0.138		1.70	1.55	NO	12.1
	42 Total-pentadioxins	355.8546	32.21	972.025	0.976	0.055		1.16	1.55	YES	4.7
	12 12378-PeCDD	355.8546	31.81	937313.875	0.976	53.045	53.045	1.56	1.55	NO	4275.5

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ıst Altered: Thursday, August 01, 2013 13:57:25 Pacific Daylight Time
inted: Thursday, August 01, 2013 13:58:35 Pacific Daylight Time

: WY44OPR, Name: 13080105, Date: 01-Aug-2013, Time: 12:54:23, Conditions: AUTOSPEC01, User: pk

D

	15	123789-HxCDD	389.8157	37.02	865463.001	0.914	54.877	54.877	1.21	1.24	NO	3802.1
	43	Total-hexadioxins	389.8157	36.74	586.691	0.928	0.037		3.63	1.24	YES	3.6
	14	123678-HxCDD	389.8157	36.59	867052.313	0.902	54.078	54.078	1.25	1.24	NO	3887.2
	13	123478-HxCDD	389.8157	36.46	902600.781	0.967	55.810	55.810	1.27	1.24	NO	4151.9
	43	Total-hexadioxins	389.8157	35.48	3025.659	0.928	0.189		1.14	1.24	NO	12.5
	43	Total-hexadioxins	389.8157	35.45	1522.786	0.928	0.095		0.67	1.24	YES	8.2
	43	Total-hexadioxins	389.8157	35.10	1139.332	0.928	0.071		1.32	1.24	NO	6.5
	43	Total-hexadioxins	389.8157	34.29	3170.152	0.928	0.198		1.49	1.24	YES	17.8

PD

	44	Total-heptadioxins	423.7766	40.08	26172.445	0.999	1.890		1.07	1.05	NO	95.0
	16	1234678-HpCDD	423.7766	41.34	745218.125	0.999	53.803	53.803	1.03	1.05	NO	2545.4

oxins,TD,PD,HD,HPD,OD

	41	Total-tetradioxins	319.8965	27.26	496.704	0.994	0.021		0.50	0.77	YES	3.5
	11	2378-TCDD	319.8965	26.71	255022.086	0.994	10.793	10.793	0.75	0.77	NO	1808.4
	41	Total-tetradioxins	319.8965	26.30	7480.563	0.994	0.317		0.87	0.77	NO	44.7
	41	Total-tetradioxins	319.8965	25.33	1138.060	0.994	0.048		0.70	0.77	NO	5.4
	41	Total-tetradioxins	319.8965	24.81	769.244	0.994	0.033		1.13	0.77	YES	7.1
	42	Total-pentadioxins	355.8546	31.13	2086.548	0.976	0.118		1.68	1.55	NO	9.7
	42	Total-pentadioxins	355.8546	30.56	926.470	0.976	0.052		2.05	1.55	YES	6.7
	42	Total-pentadioxins	355.8546	30.42	2026.915	0.976	0.115		1.72	1.55	NO	7.8
	42	Total-pentadioxins	355.8546	30.21	2434.167	0.976	0.138		1.70	1.55	NO	12.1
	42	Total-pentadioxins	355.8546	32.21	972.025	0.976	0.055		1.16	1.55	YES	4.7
	12	12378-PeCDD	355.8546	31.81	937313.875	0.976	53.045	53.045	1.56	1.55	NO	4275.5
	15	123789-HxCDD	389.8157	37.02	865463.001	0.914	54.877	54.877	1.21	1.24	NO	3802.1
	43	Total-hexadioxins	389.8157	36.74	586.691	0.928	0.037		3.63	1.24	YES	3.6
	14	123678-HxCDD	389.8157	36.59	867052.313	0.902	54.078	54.078	1.25	1.24	NO	3887.2
	13	123478-HxCDD	389.8157	36.46	902600.781	0.967	55.810	55.810	1.27	1.24	NO	4151.9
	43	Total-hexadioxins	389.8157	35.48	3025.659	0.928	0.189		1.14	1.24	NO	12.5
	43	Total-hexadioxins	389.8157	35.45	1522.786	0.928	0.095		0.67	1.24	YES	8.2
	43	Total-hexadioxins	389.8157	35.10	1139.332	0.928	0.071		1.32	1.24	NO	6.5
	43	Total-hexadioxins	389.8157	34.29	3170.152	0.928	0.198		1.49	1.24	YES	17.8
	44	Total-heptadioxins	423.7766	40.08	26172.445	0.999	1.890		1.07	1.05	NO	95.0
	16	1234678-HpCDD	423.7766	41.34	745218.125	0.999	53.803	53.803	1.03	1.05	NO	2545.4
	17	OCDD	457.7377	47.25	1070326.000	0.979	109.669	109....	0.89	0.89	NO	3562.3

: WY44OPR, Name: 13080105, Date: 01-Aug-2013, Time: 12:54:23, Conditions: AUTOSPEC01, User: pk

ɔtalTEQ,Furans,Dioxins

	35 Total-tetrafurans	303.9016	26.30	914.524	0.867	0.030		2.14	0.77	YES	6.6
	1 2378-TCDF	303.9016	26.06	338922.672	0.867	11.162	11.162	0.72	0.77	NO	2019.4
	35 Total-tetrafurans	303.9016	25.88	1043.836	0.867	0.034		0.70	0.77	NO	7.5
	35 Total-tetrafurans	303.9016	25.15	4598.303	0.867	0.151		0.71	0.77	NO	29.1
	35 Total-tetrafurans	303.9016	24.97	15848.965	0.867	0.522		0.70	0.77	NO	102.9
	35 Total-tetrafurans	303.9016	24.82	3845.229	0.867	0.127		0.93	0.77	YES	28.3
	35 Total-tetrafurans	303.9016	23.58	904.881	0.867	0.030		0.42	0.77	YES	4.3
	35 Total-tetrafurans	303.9016	23.42	336.724	0.867	0.011		0.79	0.77	NO	3.2
	3 23478-PeCDF	339.8597	31.56	1301662.563	0.880	55.359	55.359	1.46	1.55	NO	5771.8
	37 Total-pentafurans	339.8597	31.27	1953.417	0.877	0.079		2.13	1.55	YES	10.5
	37 Total-pentafurans	339.8597	30.41	30554.319	0.877	1.231		2.00	1.55	YES	145.4
	2 12378-PeCDF	339.8597	30.21	1418487.938	0.875	54.341	54.341	1.47	1.55	NO	6141.6
	37 Total-pentafurans	339.8597	29.85	17764.046	0.877	0.716		1.58	1.55	NO	69.8
	37 Total-pentafurans	339.8597	29.13	18018.334	0.877	0.726		1.68	1.55	NO	77.1
	37 Total-pentafurans	339.8597	29.06	10173.327	0.877	0.410		1.05	1.55	YES	50.0
	37 Total-pentafurans	339.8597	32.59	10689.903	0.877	0.431		1.50	1.55	NO	42.9
	7 123789-HxCDF	373.8208	37.47	935185.062	0.959	53.809	53.809	1.21	1.24	NO	2690.2
	5 234678-HxCDF	373.8208	36.33	1125951.844	1.088	54.427	54.427	1.19	1.24	NO	3125.9
	6 123678-HxCDF	373.8208	35.37	1188311.188	1.025	53.058	53.058	1.20	1.24	NO	3185.8
	4 123478-HxCDF	373.8208	35.23	1126467.656	1.048	53.751	53.751	1.19	1.24	NO	3111.8
	38 Total-hexafurans	373.8208	35.08	2289.228	1.030	0.113		1.21	1.24	NO	8.1
	38 Total-hexafurans	373.8208	33.71	13004.681	1.030	0.639		1.25	1.24	NO	33.9
	38 Total-hexafurans	373.8208	33.50	5741.250	1.030	0.282		1.17	1.24	NO	17.2
	8 1234678-HpCDF	407.7818	39.53	1129429.688	1.215	61.101	61.101	1.00	1.05	NO	3619.9
	9 1234789-HpCDF	407.7818	42.22	782624.751	1.200	54.696	54.696	0.97	1.05	NO	2140.9
	39 Total-heptafurans	407.7818	40.32	6413.392	1.207	0.391		0.99	1.05	NO	19.8
	39 Total-heptafurans	407.7818	40.00	5129.808	1.207	0.313		1.09	1.05	NO	16.0
	10 OCDF	441.7428	47.53	1136945.000	1.064	107.172	107....	0.86	0.89	NO	3794.9
	41 Total-tetradioxins	319.8965	27.26	496.704	0.994	0.021		0.50	0.77	YES	3.5
	11 2378-TCDD	319.8965	26.71	255022.086	0.994	10.793	10.793	0.75	0.77	NO	1808.4
	41 Total-tetradioxins	319.8965	26.30	7480.563	0.994	0.317		0.87	0.77	NO	44.7
	41 Total-tetradioxins	319.8965	25.33	1138.060	0.994	0.048		0.70	0.77	NO	5.4
	41 Total-tetradioxins	319.8965	24.81	769.244	0.994	0.033		1.13	0.77	YES	7.1
	42 Total-pentadioxins	355.8546	31.13	2086.548	0.976	0.118		1.68	1.55	NO	9.7
	42 Total-pentadioxins	355.8546	30.56	926.470	0.976	0.052		2.05	1.55	YES	6.7
	42 Total-pentadioxins	355.8546	30.42	2026.915	0.976	0.115		1.72	1.55	NO	7.8
	42 Total-pentadioxins	355.8546	30.21	2434.167	0.976	0.138		1.70	1.55	NO	12.1
	42 Total-pentadioxins	355.8546	32.21	972.025	0.976	0.055		1.16	1.55	YES	4.7
	12 12378-PeCDD	355.8546	31.81	937313.875	0.976	53.045	53.045	1.56	1.55	NO	4275.5
	15 123789-HxCDD	389.8157	37.02	865463.001	0.914	54.877	54.877	1.21	1.24	NO	3802.1
	43 Total-hexadioxins	389.8157	36.74	586.691	0.928	0.037		3.63	1.24	YES	3.6
	14 123678-HxCDD	389.8157	36.59	867052.313	0.902	54.078	54.078	1.25	1.24	NO	3887.2
	13 123478-HxCDD	389.8157	36.46	902600.781	0.967	55.810	55.810	1.27	1.24	NO	4151.9
	43 Total-hexadioxins	389.8157	35.48	3025.659	0.928	0.189		1.14	1.24	NO	12.5
	43 Total-hexadioxins	389.8157	35.45	1522.786	0.928	0.095		0.67	1.24	YES	8.2
	43 Total-hexadioxins	389.8157	35.10	1139.332	0.928	0.071		1.32	1.24	NO	6.5
	43 Total-hexadioxins	389.8157	34.29	3170.152	0.928	0.198		1.49	1.24	YES	17.8
	44 Total-heptadioxins	423.7766	40.08	26172.445	0.999	1.890		1.07	1.05	NO	95.0
	16 1234678-HpCDD	423.7766	41.34	745218.125	0.999	53.803	53.803	1.03	1.05	NO	2545.4

): WY44OPR, Name: 13080105, Date: 01-Aug-2013, Time: 12:54:23, Conditions: AUTOSPEC01, User: pk

otalTEQ,Furans,Dioxins

	17 OCDD	457.7377	47.25	1070326.000	0.979	109.669	109....	0.89	0.89	NO	3562.3

FK1

	48 FUNCTION1 PFK	330.9792	22.43	0.000							7.5
	48 FUNCTION1 PFK	330.9792	22.22	0.000							9.7
	48 FUNCTION1 PFK	330.9792	21.95	0.000							10.8
	48 FUNCTION1 PFK	330.9792	21.72	0.000							19.6
	48 FUNCTION1 PFK	330.9792	21.61	0.000							33.7
	48 FUNCTION1 PFK	330.9792	21.51	0.000							25.0
	48 FUNCTION1 PFK	330.9792	21.43	0.000							27.1
	48 FUNCTION1 PFK	330.9792	21.12	0.000							29.0
	48 FUNCTION1 PFK	330.9792	25.00	0.000							0.9
	48 FUNCTION1 PFK	330.9792	24.85	0.000							0.3
	48 FUNCTION1 PFK	330.9792	24.78	0.000							1.1
	48 FUNCTION1 PFK	330.9792	24.61	0.000							0.4
	48 FUNCTION1 PFK	330.9792	24.57	0.000							0.7
	48 FUNCTION1 PFK	330.9792	24.51	0.000							1.8
	48 FUNCTION1 PFK	330.9792	24.30	0.000							6.9
	48 FUNCTION1 PFK	330.9792	24.14	0.000							2.0
	48 FUNCTION1 PFK	330.9792	23.96	0.000							1.9
	48 FUNCTION1 PFK	330.9792	23.54	0.000							1.9
	48 FUNCTION1 PFK	330.9792	23.24	0.000							1.7
	48 FUNCTION1 PFK	330.9792	23.13	0.000							5.8
	48 FUNCTION1 PFK	330.9792	23.02	0.000							4.3
	48 FUNCTION1 PFK	330.9792	22.90	0.000							5.1
	48 FUNCTION1 PFK	330.9792	22.64	0.000							7.0
	48 FUNCTION1 PFK	330.9792	22.57	0.000							6.1
	48 FUNCTION1 PFK	330.9792	27.57	0.000							2.8
	48 FUNCTION1 PFK	330.9792	27.48	0.000							0.8
	48 FUNCTION1 PFK	330.9792	27.20	0.000							1.9
	48 FUNCTION1 PFK	330.9792	27.09	0.000							2.7
	48 FUNCTION1 PFK	330.9792	26.87	0.000							0.9
	48 FUNCTION1 PFK	330.9792	26.68	0.000							1.3
	48 FUNCTION1 PFK	330.9792	26.60	0.000							1.5
	48 FUNCTION1 PFK	330.9792	26.54	0.000							2.0
	48 FUNCTION1 PFK	330.9792	26.35	0.000							2.4
	48 FUNCTION1 PFK	330.9792	26.23	0.000							1.0
	48 FUNCTION1 PFK	330.9792	26.08	0.000							2.7
	48 FUNCTION1 PFK	330.9792	25.88	0.000							1.4
	48 FUNCTION1 PFK	330.9792	25.75	0.000							1.8
	48 FUNCTION1 PFK	330.9792	25.32	0.000							0.6
	48 FUNCTION1 PFK	330.9792	25.20	0.000							1.9
	48 FUNCTION1 PFK	330.9792	25.12	0.000							2.4
	48 FUNCTION1 PFK	330.9792	28.02	0.000							0.9
	48 FUNCTION1 PFK	330.9792	27.90	0.000							3.4
	48 FUNCTION1 PFK	330.9792	27.75	0.000							2.4

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: WY44OPR, Name: 13080105, Date: 01-Aug-2013, Time: 12:54:23, Conditions: AUTOSPEC01, User: pk

FK2

FK3

	50 FUNCTION3 PFK	380.9760	36.00	0.000	0.000					2.3
	50 FUNCTION3 PFK	380.9760	35.14	0.000	0.000					2.1
	50 FUNCTION3 PFK	380.9760	34.95	0.000	0.000					1.7
	50 FUNCTION3 PFK	380.9760	34.87	0.000	0.000					2.1
	50 FUNCTION3 PFK	380.9760	34.22	0.000	0.000					2.1
	50 FUNCTION3 PFK	380.9760	33.99	0.000	0.000					0.7
	50 FUNCTION3 PFK	380.9760	33.88	0.000	0.000					0.7
	50 FUNCTION3 PFK	380.9760	33.70	0.000	0.000					1.7
	50 FUNCTION3 PFK	380.9760	33.41	0.000	0.000					2.6
	50 FUNCTION3 PFK	380.9760	33.32	0.000	0.000					0.6
	50 FUNCTION3 PFK	380.9760	33.18	0.000	0.000					0.6
	50 FUNCTION3 PFK	380.9760	38.46	0.000	0.000					1.3
	50 FUNCTION3 PFK	380.9760	38.07	0.000	0.000					1.5
	50 FUNCTION3 PFK	380.9760	37.98	0.000	0.000					1.4
	50 FUNCTION3 PFK	380.9760	37.62	0.000	0.000					1.4
	50 FUNCTION3 PFK	380.9760	37.57	0.000	0.000					1.2
	50 FUNCTION3 PFK	380.9760	37.28	0.000	0.000					1.5
	50 FUNCTION3 PFK	380.9760	36.52	0.000	0.000					0.6
	50 FUNCTION3 PFK	380.9760	36.35	0.000	0.000					2.0
	50 FUNCTION3 PFK	380.9760	36.32	0.000	0.000					2.8
	50 FUNCTION3 PFK	380.9760	36.22	0.000	0.000					2.1
	50 FUNCTION3 PFK	380.9760	36.03	0.000	0.000					1.5

FK4

	51 FUNCTION4 PFK	430.9728	41.67	0.000						1.8

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st Altered: Thursday, August 01, 2013 13:57:25 Pacific Daylight Time
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FK5

	52 FUNCTION5 PFK	480.9696	45.27	0.000						1.2
	52 FUNCTION5 PFK	480.9696	45.20	0.000						2.3
	52 FUNCTION5 PFK	480.9696	47.06	0.000						2.0
	52 FUNCTION5 PFK	480.9696	46.91	0.000						1.3
	52 FUNCTION5 PFK	480.9696	46.87	0.000						0.9
	52 FUNCTION5 PFK	480.9696	46.79	0.000						0.6
	52 FUNCTION5 PFK	480.9696	46.60	0.000						1.0
	52 FUNCTION5 PFK	480.9696	46.56	0.000						1.3
	52 FUNCTION5 PFK	480.9696	46.32	0.000						1.4
	52 FUNCTION5 PFK	480.9696	46.28	0.000						1.1
	52 FUNCTION5 PFK	480.9696	46.09	0.000						1.0
	52 FUNCTION5 PFK	480.9696	45.91	0.000						1.6
	52 FUNCTION5 PFK	480.9696	45.88	0.000						1.0
	52 FUNCTION5 PFK	480.9696	45.67	0.000						0.9
	52 FUNCTION5 PFK	480.9696	45.64	0.000						1.6
	52 FUNCTION5 PFK	480.9696	45.56	0.000						0.9
	52 FUNCTION5 PFK	480.9696	45.43	0.000						1.5
	52 FUNCTION5 PFK	480.9696	45.30	0.000						2.0
	52 FUNCTION5 PFK	480.9696	48.74	0.000						0.6
	52 FUNCTION5 PFK	480.9696	48.46	0.000						1.5
	52 FUNCTION5 PFK	480.9696	48.35	0.000						1.9
	52 FUNCTION5 PFK	480.9696	48.04	0.000						2.5
	52 FUNCTION5 PFK	480.9696	47.91	0.000						0.6
	52 FUNCTION5 PFK	480.9696	47.86	0.000						1.9
	52 FUNCTION5 PFK	480.9696	47.75	0.000						1.4
	52 FUNCTION5 PFK	480.9696	47.67	0.000						1.4
	52 FUNCTION5 PFK	480.9696	47.58	0.000						0.9
	52 FUNCTION5 PFK	480.9696	47.39	0.000						0.5
	52 FUNCTION5 PFK	480.9696	47.34	0.000						1.5
	52 FUNCTION5 PFK	480.9696	47.20	0.000						2.5
	52 FUNCTION5 PFK	480.9696	47.11	0.000						1.6

THERS1

THERS2

	54 FUNCTION1 HPCD...	409.7974	21.85	0.000	0.000					4.8
	54 FUNCTION1 HPCD...	409.7974	27.33	0.000	0.000					2.0
	54 FUNCTION1 HPCD...	409.7974	24.91	0.000	0.000					2.6
	54 FUNCTION1 HPCD...	409.7974	22.06	0.000	0.000					2.5

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: WY44OPR, Name: 13080105, Date: 01-Aug-2013, Time: 12:54:23, Conditions: AUTOSPEC01, User: pk

HERS3

	55 FUNCTION2 HPCD...	409.7974	31.80	0.000	0.000	1.6
	55 FUNCTION2 HPCD...	409.7974	30.34	0.000	0.000	2.8

HERS4

HERS5

	57 FUNCTION4 NCDPE	479.7165	43.80	0.000	0.000	3.2

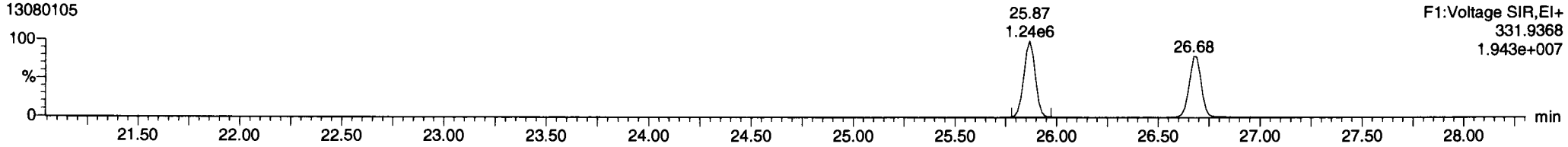
HERS6

Dataset: P:\DIOXIN8290.PRO\130801OPR.qld
Last Altered: Thursday, August 01, 2013 13:57:25 Pacific Daylight Time
Printed: Thursday, August 01, 2013 13:58:35 Pacific Daylight Time

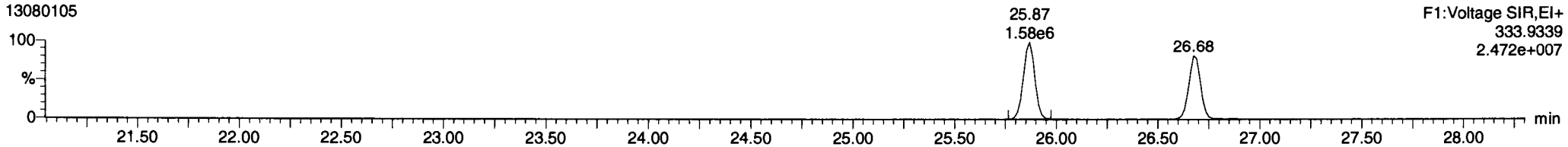
Method: P:\DIOXIN8290.pro\MethDB\Dioxin130716.mdb 24 Jul 2013 13:56:23
Calibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

ID: WY44OPR, Name: 13080105, Date: 01-Aug-2013, Time: 12:54:23, Conditions: AUTOSPEC01, User: pk

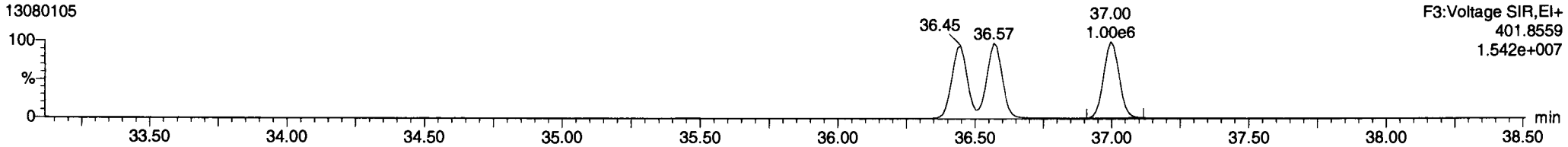
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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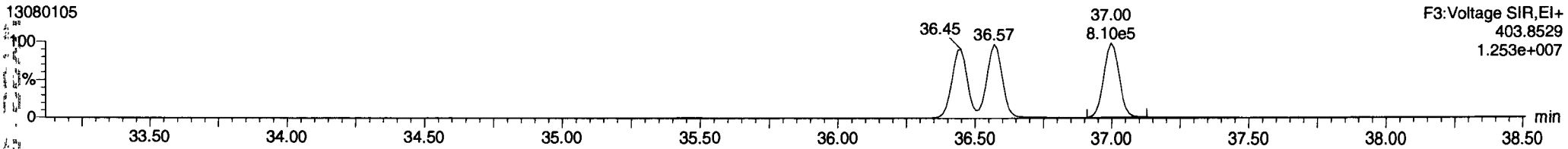

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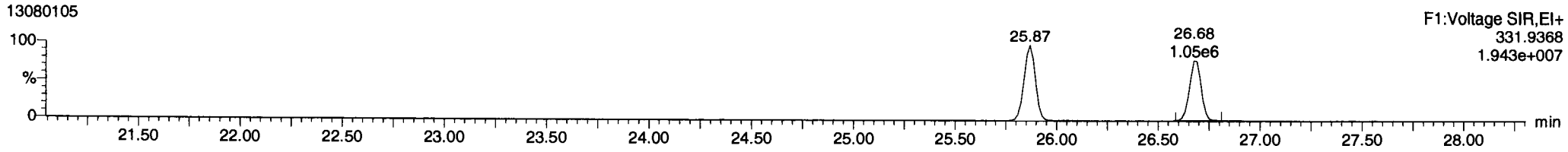
Last Altered: Thursday, August 01, 2013 13:57:25 Pacific Daylight Time
Printed: Thursday, August 01, 2013 13:58:35 Pacific Daylight Time

ID: WY44OPR, Name: 13080105, Date: 01-Aug-2013, Time: 12:54:23, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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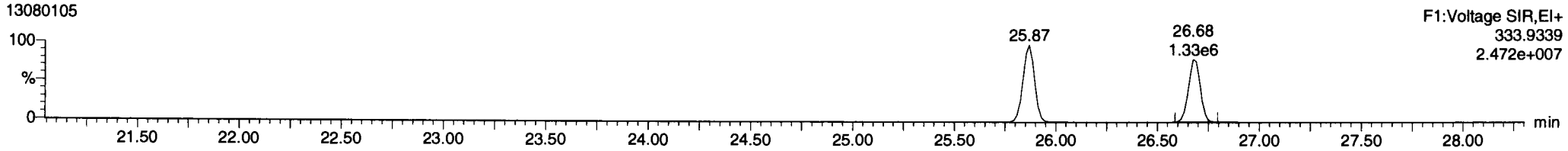
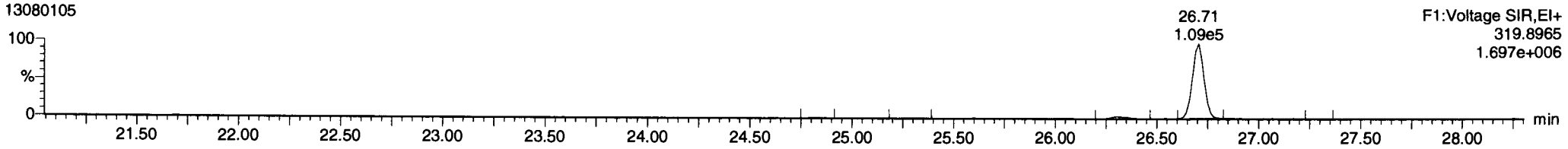
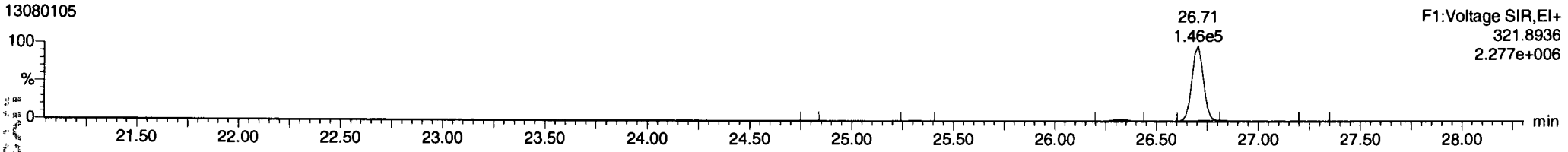


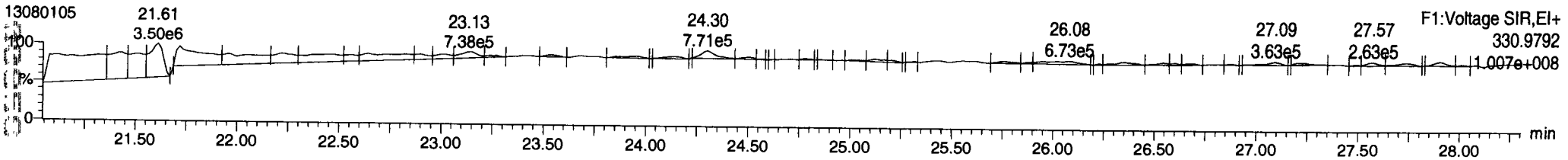
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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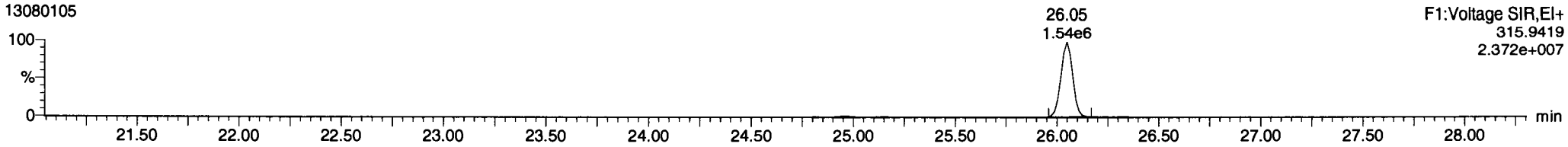
ID: WY44OPR, Name: 13080105, Date: 01-Aug-2013, Time: 12:54:23, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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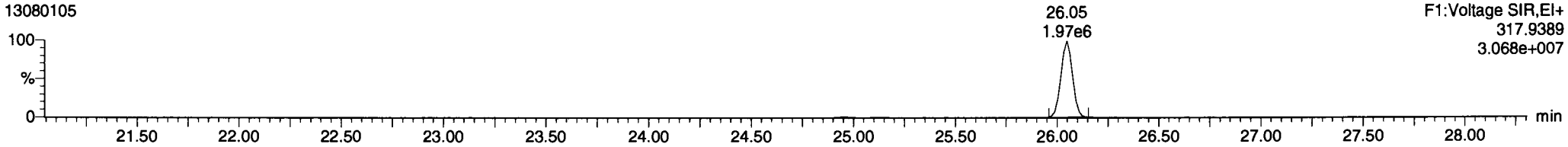
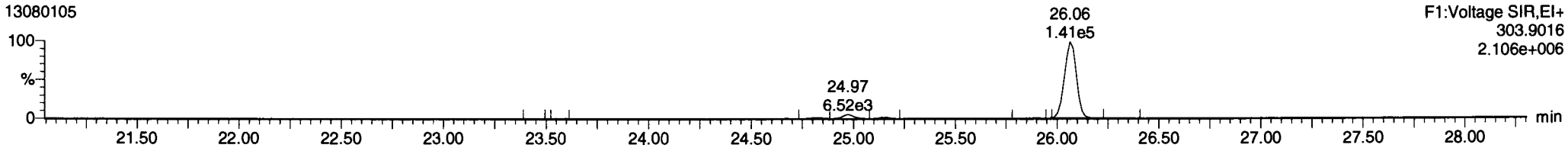
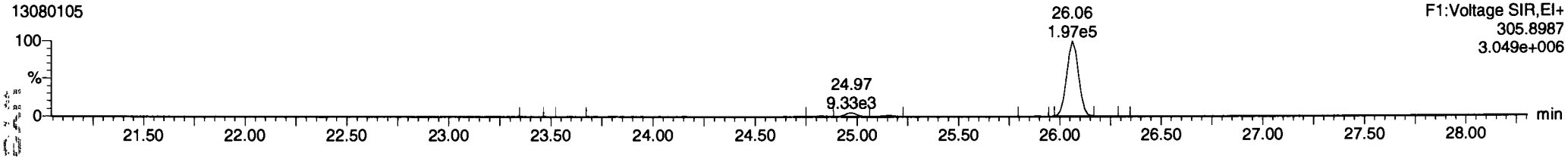


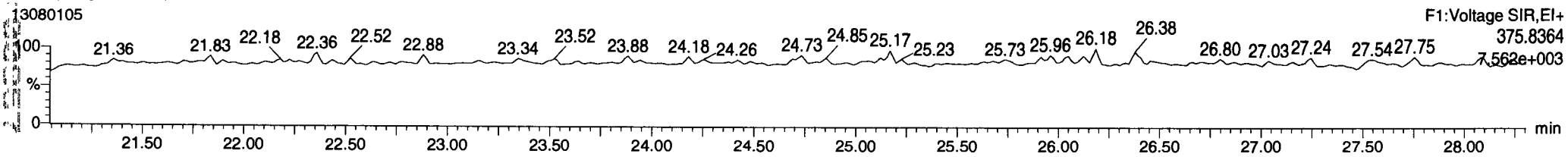
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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Last Altered: Thursday, August 01, 2013 13:57:25 Pacific Daylight Time
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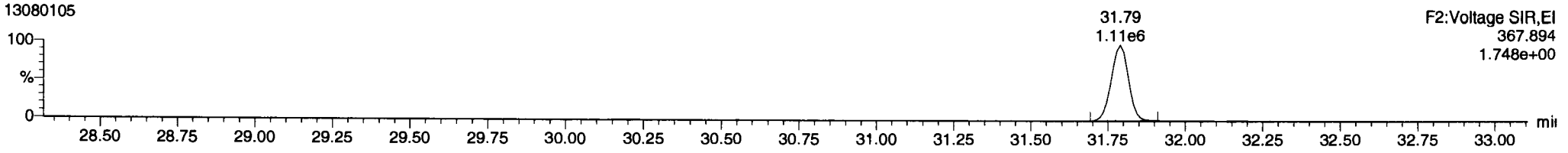
ID: WY44OPR, Name: 13080105, Date: 01-Aug-2013, Time: 12:54:23, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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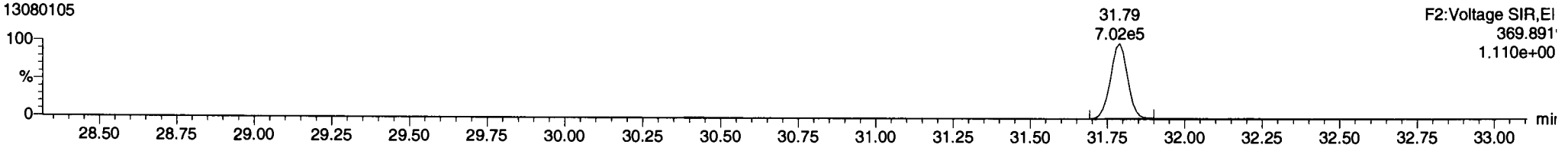
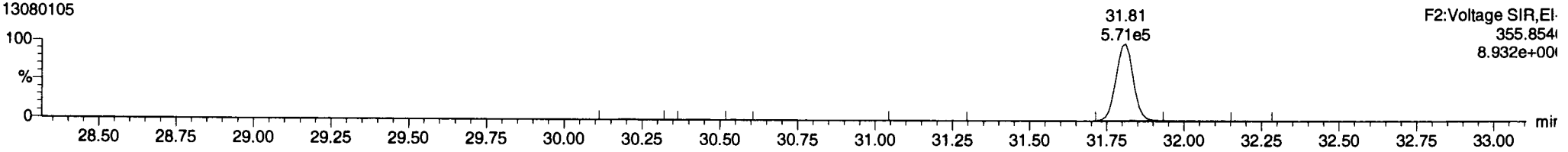
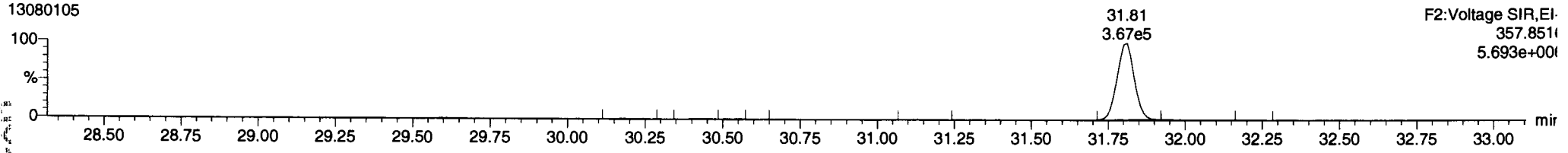


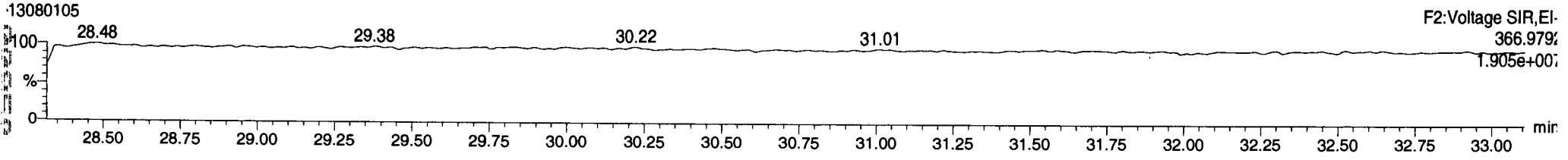
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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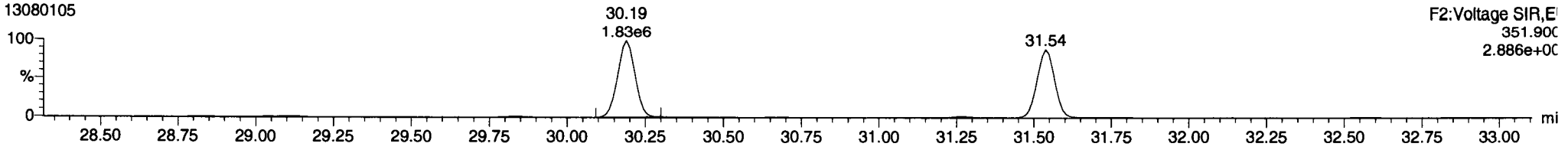
Last Altered: Thursday, August 01, 2013 13:57:25 Pacific Daylight Time
Printed: Thursday, August 01, 2013 13:58:35 Pacific Daylight Time

ID: WY44OPR, Name: 13080105, Date: 01-Aug-2013, Time: 12:54:23, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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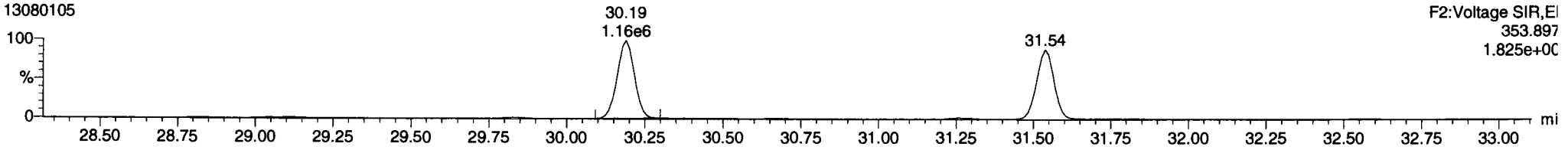

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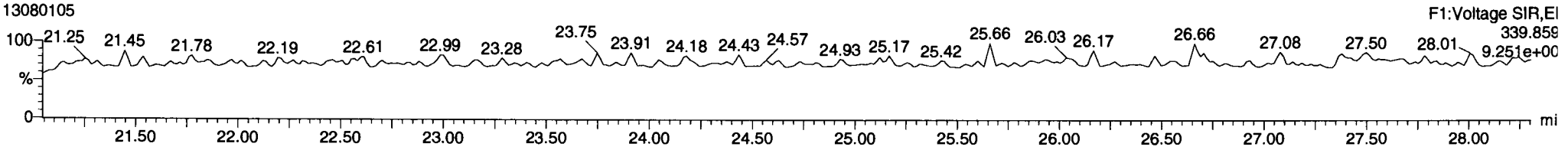

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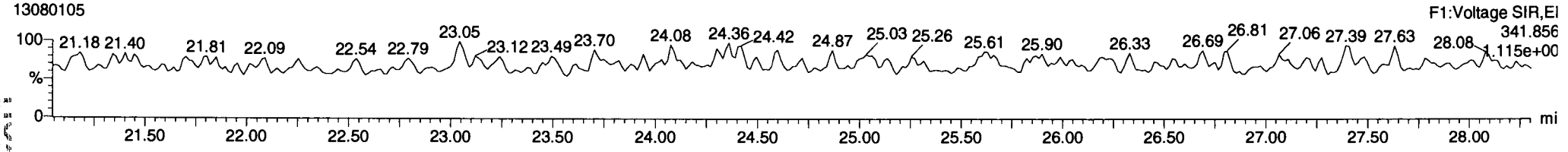
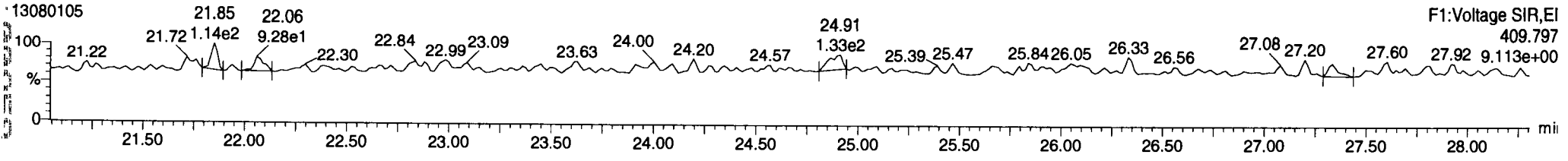


FUNCTION1 HPCDPE



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ID: WY44OPR, Name: 13080105, Date: 01-Aug-2013, Time: 12:54:23, Conditions: AUTOSPEC01, User: pk

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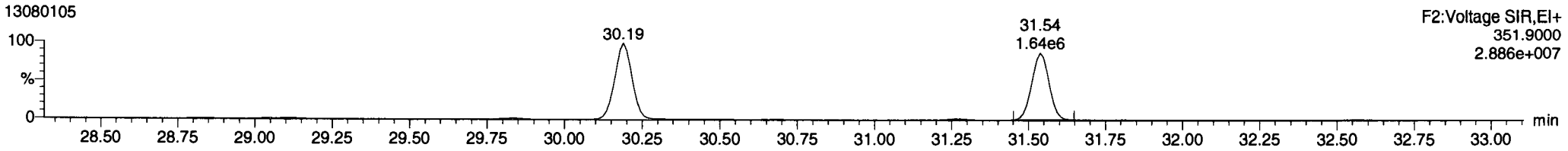

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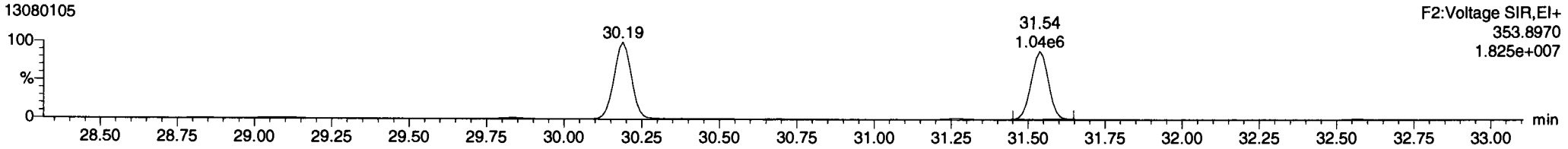
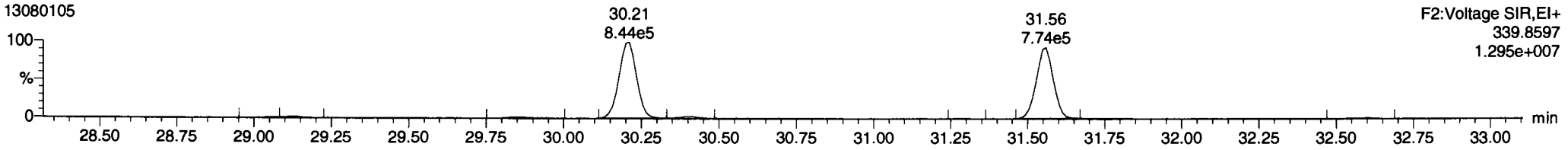


Total-pentafurans



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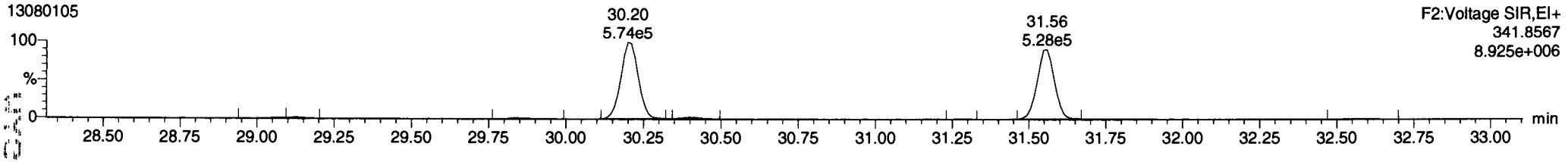

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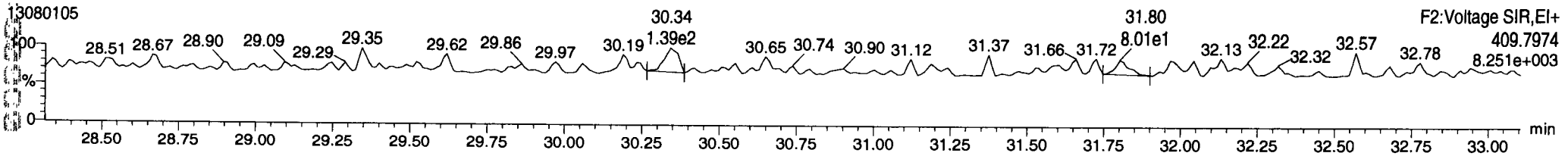

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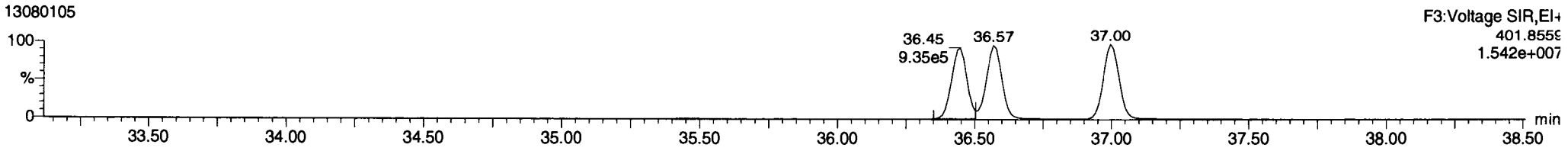
13C-123478-HxCDD



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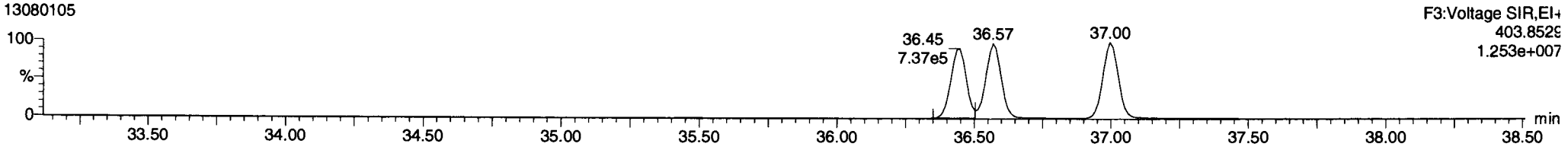
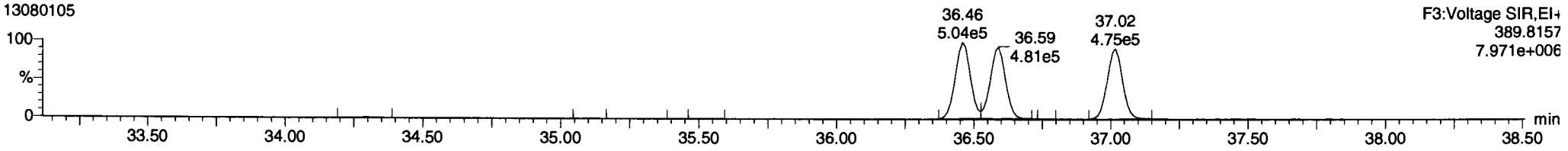
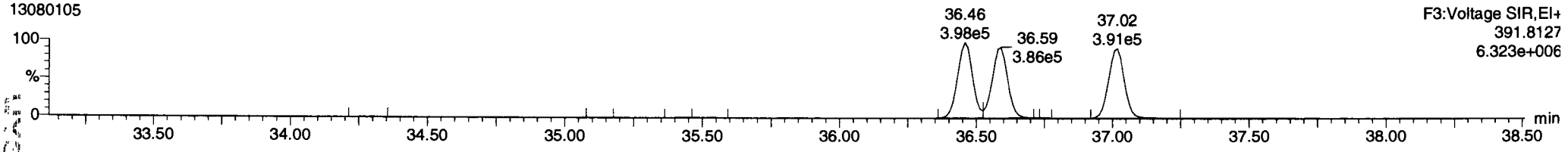


Total-hexadioxins



Total-hexadioxins



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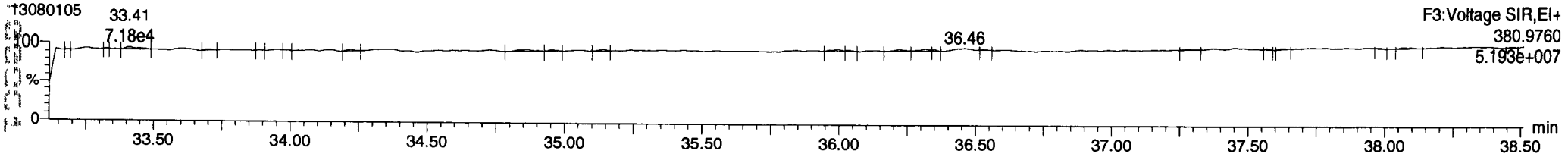

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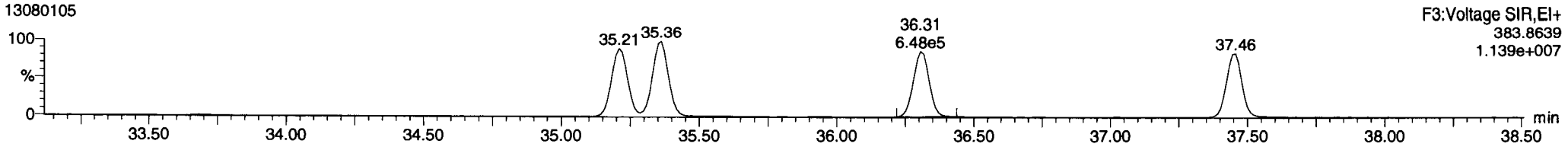
13C-234678-HxCDF



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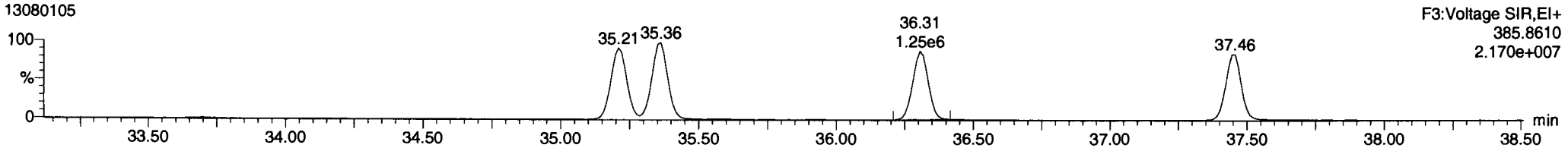
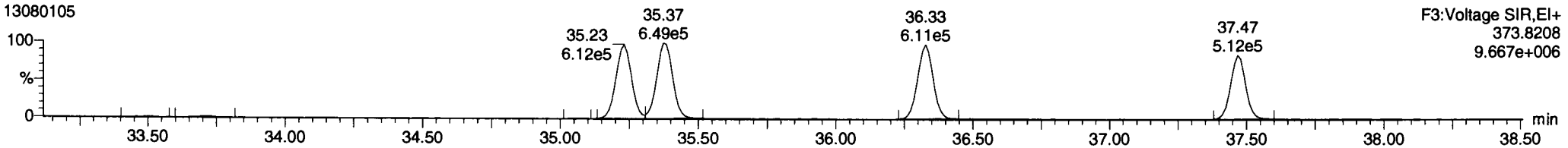
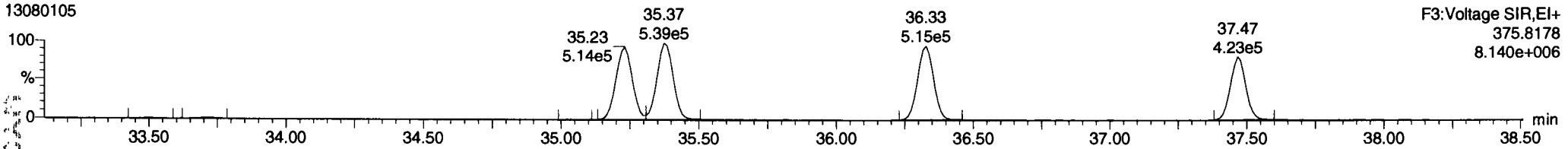


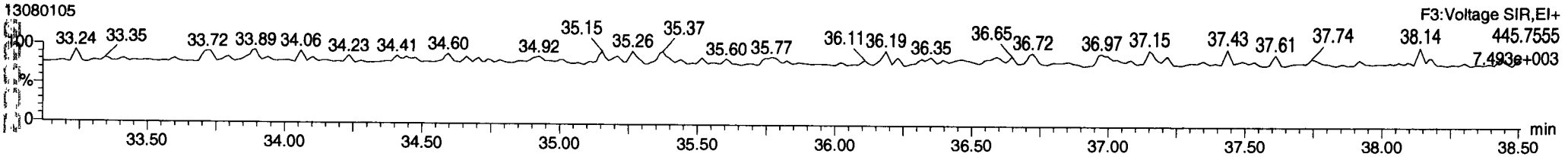
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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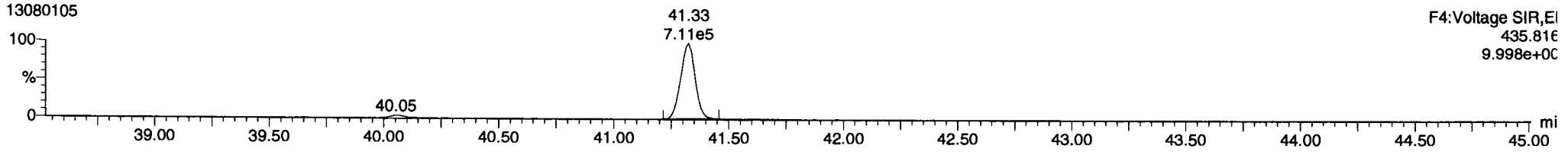
13C-1234678-HpCDD



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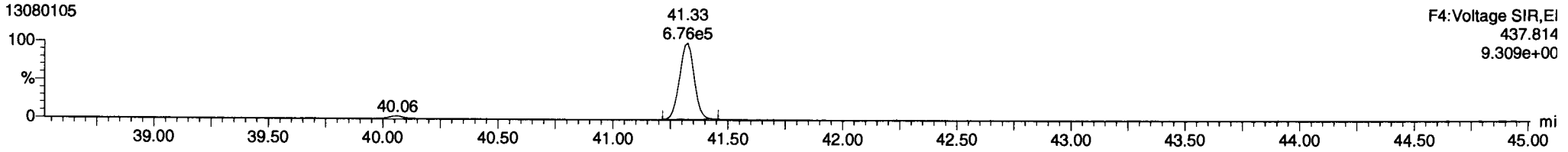
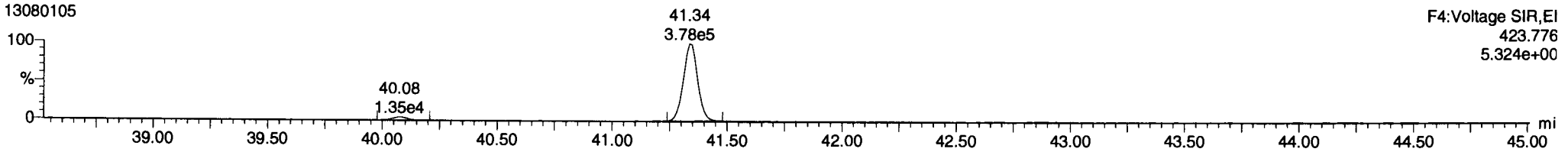
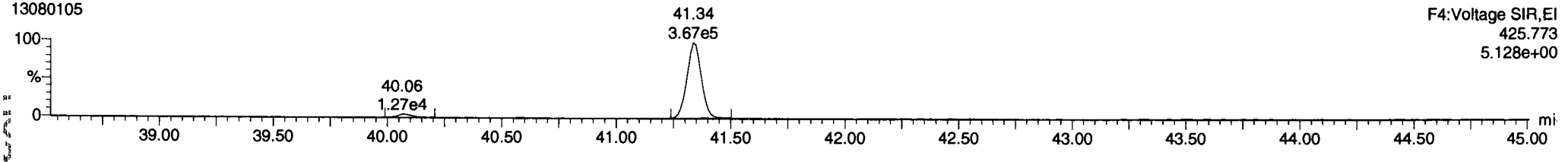


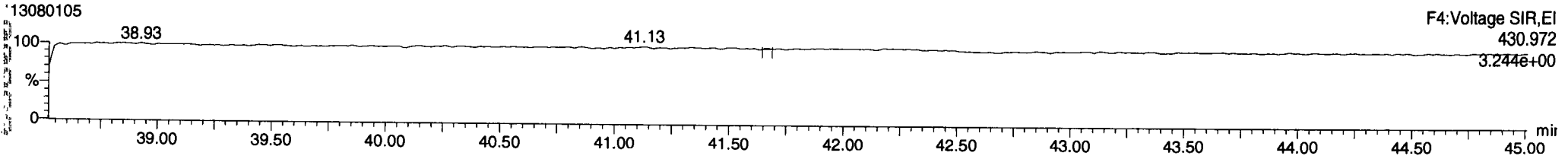
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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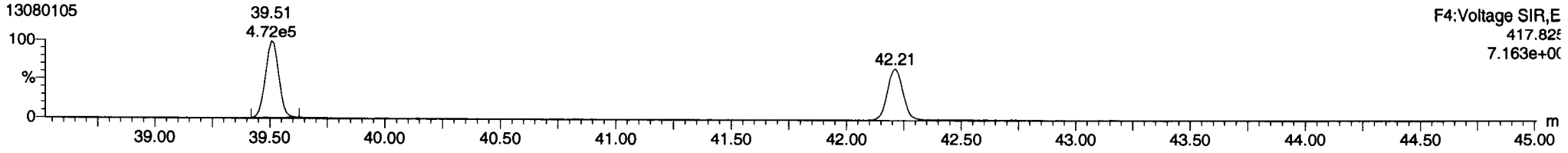
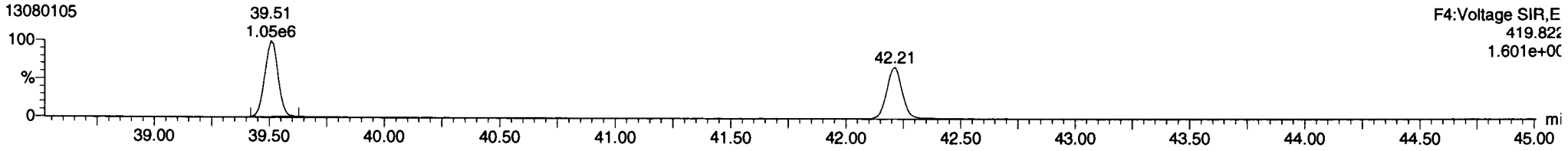
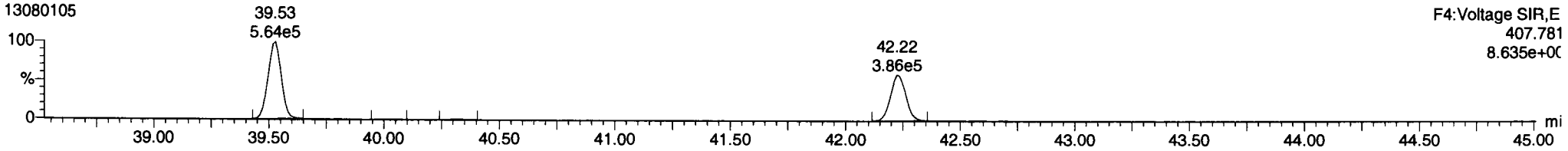


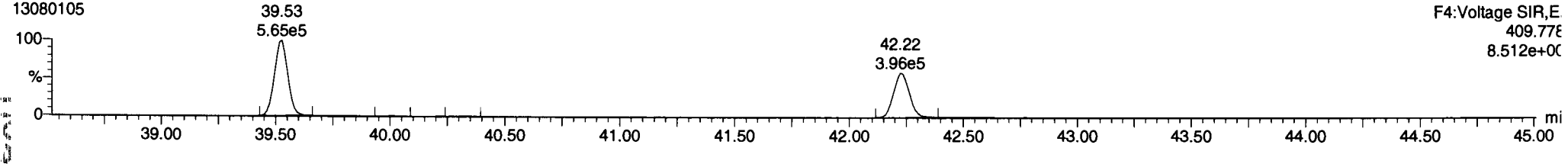
13C-1234678-HpCDF



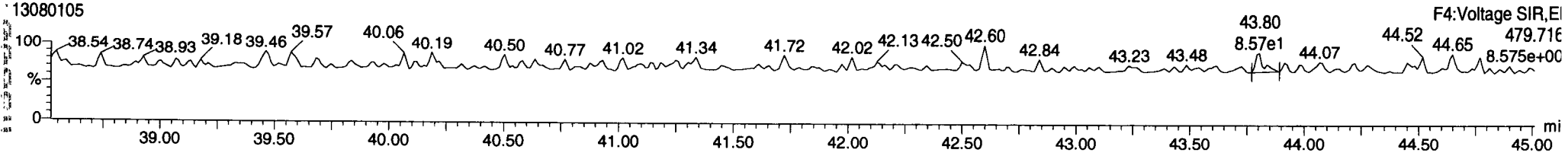
Total-heptafurans



Total-heptafurans



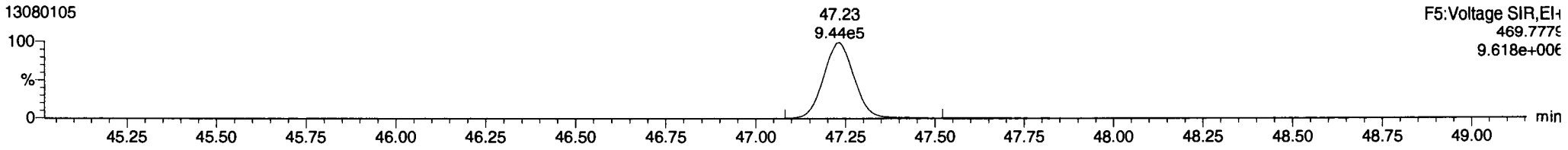
FUNCTION4 NCDPE



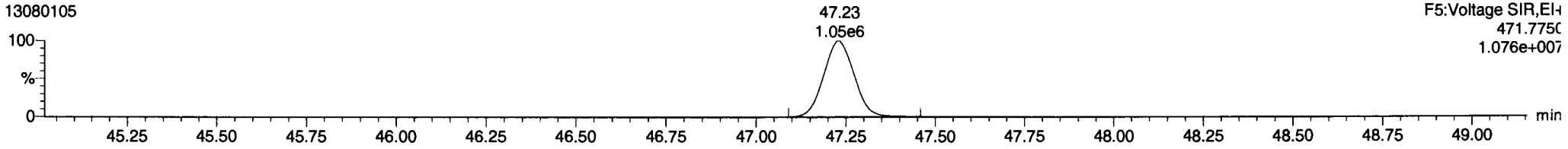
Dataset: P:\DIOXIN8290.PRO\130801OPR.qld
Last Altered: Thursday, August 01, 2013 13:57:25 Pacific Daylight Time
Printed: Thursday, August 01, 2013 13:58:35 Pacific Daylight Time

ID: WY44OPR, Name: 13080105, Date: 01-Aug-2013, Time: 12:54:23, Conditions: AUTOSPEC01, User: pk

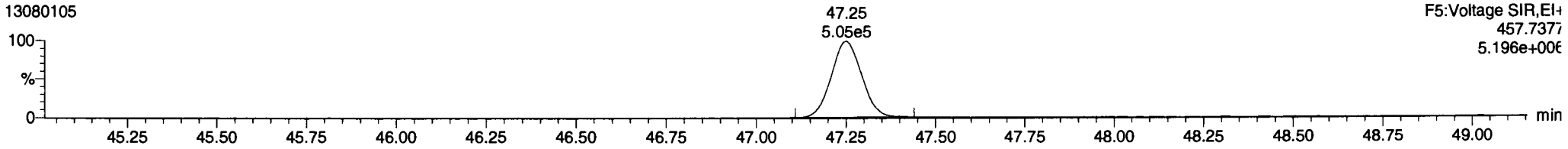
13C-OCDD



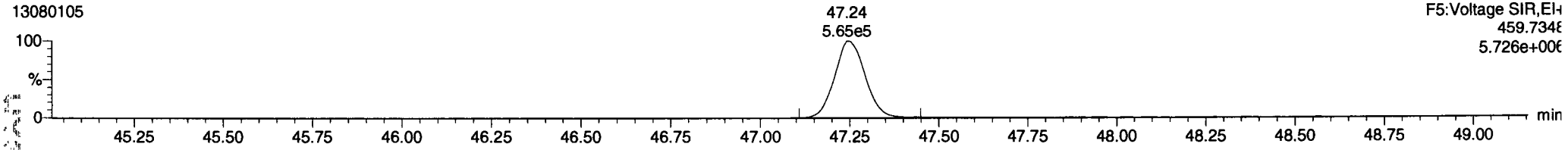
13C-OCDD



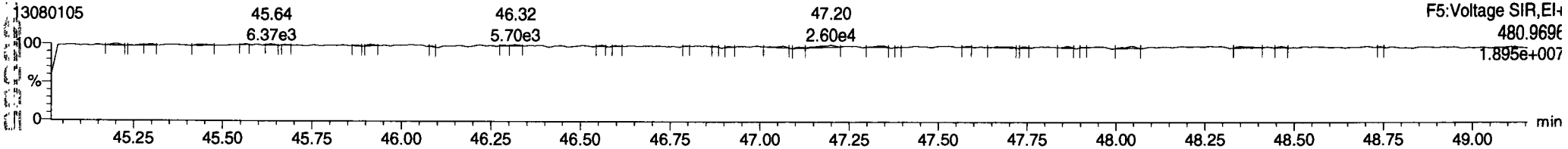
OCDD



OCDD



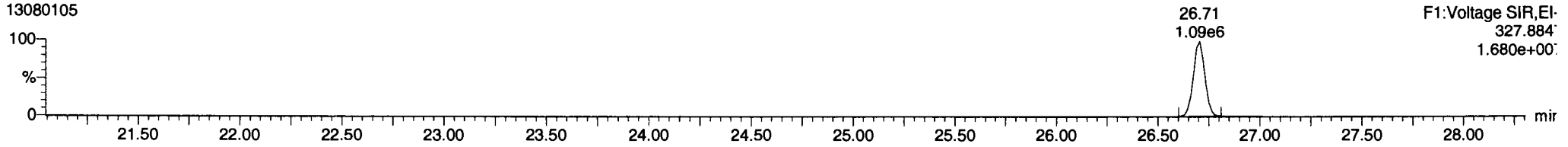
FUNCTION5 PFK



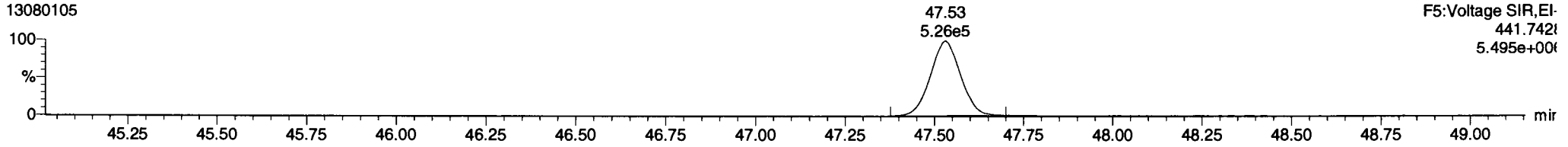
Dataset: P:\DIOXIN8290.PRO\130801OPR.qld
Last Altered: Thursday, August 01, 2013 13:57:25 Pacific Daylight Time
Printed: Thursday, August 01, 2013 13:58:35 Pacific Daylight Time

ID: WY44OPR, Name: 13080105, Date: 01-Aug-2013, Time: 12:54:23, Conditions: AUTOSPEC01, User: pk

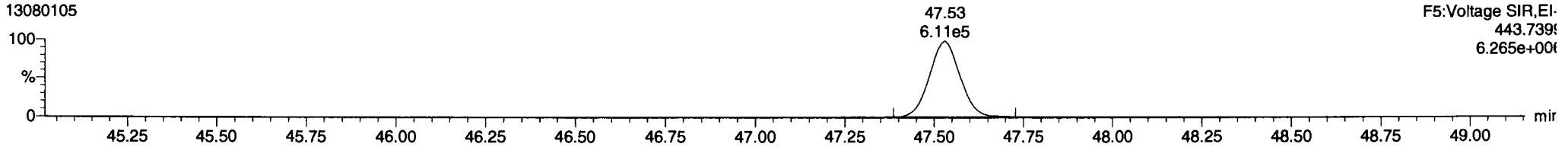
37CL-2378-TCDD



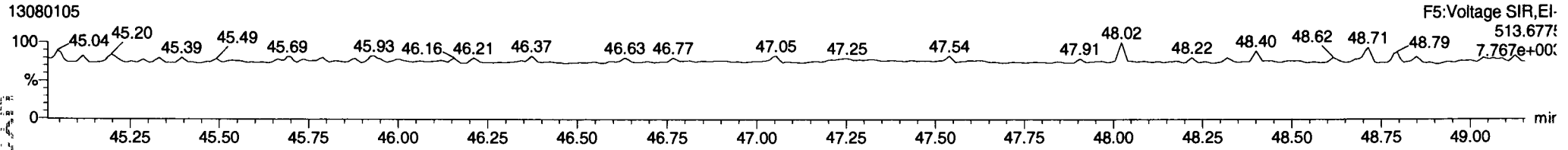
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130801SRM.qld
Last Altered: Thursday, August 01, 2013 14:46:04 Pacific Daylight Time
Printed: Thursday, August 01, 2013 14:46:49 Pacific Daylight Time

8/1/13

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130716.mdb 24 Jul 2013 13:56:23
Calibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

ID: WY44SRM, Name: 13080106, Date: 01-Aug-2013, Time: 13:53:10, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.093	1.001	6.80e3	9.62e3	0.867	0.707	0.770	82.7	1259	1569	1.04e5	1.52e5	NO	0.531	0.531
12378-PeCDF	30.222	1.000	1.01e4	6.96e3	0.875	1.447	1.550	134.8	1058	1999	1.43e5	1.09e5	NO	0.620	0.620
23478-PeCDF	31.581	1.001	7.18e3	4.30e3	0.880	1.669	1.550	104.1	1058	1999	1.10e5	6.90e4	NO	0.433	0.433
123478-HxCDF	35.264	1.001	2.20e4	1.86e4	1.048	1.184	1.240	254.2	1370	1897	3.48e5	2.86e5	NO	1.631	1.631
234678-HxCDF	36.360	1.000	1.62e4	1.38e4	1.088	1.173	1.240	125.1	1370	1897	1.71e5	1.57e5	NO	1.148	1.148
123678-HxCDF	35.418	1.001	7.50e3	6.88e3	1.025	1.090	1.240	81.7	1370	1897	1.12e5	9.11e4	NO	0.580	0.580
123789-HxCDF	37.467	1.000	6.29e3	4.56e3	0.959	1.380	1.240	71.6	1370	1897	9.81e4	6.94e4	NO	0.357	0.357
1234678-HpCDF	39.561	1.001	1.12e5	1.17e5	1.215	0.964	1.050	913.5	1785	1004	1.63e6	1.69e6	NO	10.490	10.490
1234789-HpCDF	42.257	1.001	8.29e3	8.86e3	1.200	0.936	1.050	63.6	1785	1004	1.13e5	1.13e5	NO	0.961	0.961
OCDF	47.584	1.006	1.90e5	2.26e5	1.064	0.842	0.890	1647.1	1124	1385	1.85e6	2.27e6	NO	37.171	37.171
2378-TCDD	26.720	1.001	5.28e3	8.78e3	0.994	0.601	0.770	97.9	849	865	8.31e4	1.37e5	YES	0.504	0.584
12378-PeCDD	31.822	1.000	7.15e3	4.53e3	0.976	1.576	1.550	90.7	1185	1176	1.07e5	6.77e4	NO	0.618	0.618
123478-HxCDD	36.514	1.001	9.54e3	7.40e3	0.967	1.288	1.240	68.1	2148	1913	1.46e5	1.13e5	NO	0.821	0.821
123678-HxCDD	36.645	1.001	2.20e4	1.74e4	0.902	1.263	1.240	144.9	2148	1913	3.11e5	2.55e5	NO	2.100	2.100
123789-HxCDD	37.062	1.012	1.51e4	1.30e4	0.914	1.163	1.240	107.4	2148	1913	2.31e5	2.06e5	NO	1.462	1.462
1234678-HpCDD	41.369	1.001	4.54e5	4.39e5	0.999	1.034	1.050	1937.0	3254	4176	6.30e6	6.11e6	NO	51.189	51.189
OCDD	47.306	1.001	2.11e6	2.35e6	0.979	0.898	0.890	8962.4	2380	2810	2.13e7	2.38e7	NO	434.714	434.714
13C-2378-TCDF	26.063	1.007	1.57e6	2.00e6	1.419	0.786	0.770	8263.1	2906	2743	2.40e7	3.06e7	NO		83.208
13C-12378-PeCDF	30.211	1.167	1.92e6	1.22e6	1.158	1.582	1.550	8194.4	3697	3580	3.03e7	1.88e7	NO		89.683
13C-23478-PeCDF	31.559	1.219	1.84e6	1.17e6	1.127	1.575	1.550	7924.4	3697	3580	2.93e7	1.84e7	NO		88.378
13C-123478-HxCDF	35.242	0.951	8.08e5	1.57e6	1.206	0.516	0.510	5195.6	2390	3774	1.24e7	2.41e7	NO		86.076
13C-123678-HxCDF	35.396	0.955	8.29e5	1.59e6	1.266	0.520	0.510	5151.9	2390	3774	1.23e7	2.37e7	NO		83.656
13C-234678-HxCDF	36.360	0.981	8.25e5	1.58e6	1.155	0.521	0.510	5012.2	2390	3774	1.20e7	2.33e7	NO		91.095
13C-123789-HxCDF	37.467	1.011	1.08e6	2.09e6	1.121	0.515	0.510	7795.5	2390	3774	1.86e7	3.61e7	NO		123.587
13C-1234678-HpCDF	39.539	1.067	5.52e5	1.25e6	1.040	0.443	0.440	3876.3	2135	1833	8.28e6	1.86e7	NO		75.588
13C-1234789-HpCDF	42.236	1.140	4.57e5	1.03e6	0.789	0.444	0.440	2841.6	2135	1833	6.07e6	1.35e7	NO		82.422
13C-1234-TCDD	25.883	0.000	1.34e6	1.69e6	1.000	0.795	0.770	7593.6	2778	1796	2.11e7	2.67e7	NO		100.000
13C-2378-TCDD	26.705	1.032	1.07e6	1.36e6	0.962	0.785	0.770	5858.1	2778	1796	1.63e7	2.06e7	NO		83.253
13C-12378-PeCDD	31.811	1.229	1.19e6	7.51e5	0.746	1.578	1.550	10059.5	1870	1456	1.88e7	1.17e7	NO		85.813
13C-123478-HxCDD	36.492	0.985	1.19e6	9.41e5	1.003	1.266	1.240	4474.2	4033	1648	1.80e7	1.42e7	NO		92.978
13C-123678-HxCDD	36.623	0.988	1.15e6	9.28e5	1.052	1.243	1.240	4310.0	4033	1648	1.74e7	1.40e7	NO		86.543
13C-1234678-HpCDD	41.347	1.116	8.91e5	8.55e5	0.880	1.042	1.050	4973.2	2510	2298	1.25e7	1.20e7	NO		86.715
13C-OCDD	47.279	1.276	9.84e5	1.12e6	0.775	0.881	0.890	6402.4	1550	2542	9.92e6	1.11e7	NO		118.510

Dataset: P:\DIOXIN8290.PRO\130801SRM.qld
Last Altered: Thursday, August 01, 2013 14:46:04 Pacific Daylight Time
Printed: Thursday, August 01, 2013 14:46:49 Pacific Daylight Time

ID: WY44SRM, Name: 13080106, Date: 01-Aug-2013, Time: 13:53:10, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.051	0.000	1.27e6	1.02e6	1.000	1.239	1.240	4781.6	4033	1648	1.93e7	1.55e7	NO	100.000
Total-tetrafurans			8.00e4		0.867				1259		1.17e6			6.112
Total-penta1			6.17e4						611		9.04e5			3.555
Total-pentafurans			8.06e4		0.877				1058		1.20e6			4.996
Total-hexafurans			2.21e5		1.030				1370		3.27e6			15.394
Total-heptafurans			3.67e5		1.207				1785		5.31e6			36.783
Total-Furans			1.00e6		1.022				1259		1.37e7			104.025
Total-tetradioxins			3.00e4		0.994				849		4.60e5			2.899
Total-pentadioxins			4.59e4		0.976				1185		7.03e5			3.959
Total-hexadioxins			1.87e5		0.928				2148		2.48e6			17.279
Total-heptadioxins			1.11e6		0.999				3254		1.57e7			125.240
Total-Dioxins			3.49e6		0.962				849		4.07e7			584.126
Total-TEQ			4.49e6						849		5.44e7			688.150
37CL-2378-TCDD	26.720	1.032	1.08e6		1.091			11106.0	1521		1.69e7			32.818
FUNCTION1 PFK			6.04e7						8759867		3.15e8			
FUNCTION2 PFK			0.00e0						274034		0.00e0			
FUNCTION3 PFK			1.30e6						715217		2.19e7			0.000
FUNCTION4 PFK			7.30e5						517866		1.48e7			
FUNCTION5 PFK			0.00e0						332783		0.00e0			
FUNCTION1 HXCDPE			9.41e1						493		2.04e3			0.000
FUNCTION1 HPCDPE			8.18e2						910		1.63e4			0.000
FUNCTION2 HPCDPE			1.90e2						945		4.31e3			0.000
FUNCTION3 OCDPE			8.28e1						513		2.54e3			0.000
FUNCTION4 NCDPE			3.53e4						672		5.61e5			0.000
FUNCTION5 DCDPE			0.00e0						464		0.00e0			

Dataset: P:\DIOXIN8290.PRO\130801SRM.qld
Last Altered: Thursday, August 01, 2013 14:46:04 Pacific Daylight Time
Printed: Thursday, August 01, 2013 14:46:49 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130716.mdb 24 Jul 2013 13:56:23
Calibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

ID: WY44SRM, Name: 13080106, Date: 01-Aug-2013, Time: 13:53:10, Conditions: AUTOSPEC01, User: pk

TF

	35 Total-tetrafurans	303.9016	24.32	6284.963	0.867	0.203		0.72	0.77	NO	37.1
	35 Total-tetrafurans	303.9016	24.20	5239.506	0.867	0.169		0.87	0.77	NO	31.1
	35 Total-tetrafurans	303.9016	24.08	7543.664	0.867	0.244		0.75	0.77	NO	39.3
	35 Total-tetrafurans	303.9016	23.91	3147.995	0.867	0.102		0.64	0.77	YES	15.5
	35 Total-tetrafurans	303.9016	23.84	8686.253	0.867	0.281		0.72	0.77	NO	41.5
	35 Total-tetrafurans	303.9016	23.73	10045.951	0.867	0.325		0.77	0.77	NO	46.9
	35 Total-tetrafurans	303.9016	23.61	5699.324	0.867	0.184		0.77	0.77	NO	28.5
	35 Total-tetrafurans	303.9016	23.55	4126.307	0.867	0.133		0.41	0.77	YES	19.8
	35 Total-tetrafurans	303.9016	23.42	19240.135	0.867	0.622		0.75	0.77	NO	86.8
	35 Total-tetrafurans	303.9016	22.85	4529.399	0.867	0.146		0.77	0.77	NO	25.5
	35 Total-tetrafurans	303.9016	22.58	3418.690	0.867	0.110		0.65	0.77	YES	17.9
	35 Total-tetrafurans	303.9016	26.30	11347.480	0.867	0.367		0.71	0.77	NO	57.0
	35 Total-tetrafurans	303.9016	26.21	4801.072	0.867	0.155		0.62	0.77	YES	21.7
	1 2378-TCDF	303.9016	26.09	16420.427	0.867	0.531	0.531	0.71	0.77	NO	82.7
	35 Total-tetrafurans	303.9016	25.84	14078.996	0.867	0.455		0.75	0.77	NO	51.6
	35 Total-tetrafurans	303.9016	25.72	471.306	0.867	0.015		0.82	0.77	NO	3.1
	35 Total-tetrafurans	303.9016	25.58	3048.833	0.867	0.099		0.80	0.77	NO	16.8
	35 Total-tetrafurans	303.9016	25.39	3266.142	0.867	0.106		1.12	0.77	YES	20.0
	35 Total-tetrafurans	303.9016	25.17	18498.412	0.867	0.598		0.78	0.77	NO	97.2
	35 Total-tetrafurans	303.9016	24.99	11899.949	0.867	0.385		0.74	0.77	NO	59.6
	35 Total-tetrafurans	303.9016	24.84	17543.777	0.867	0.567		0.72	0.77	NO	89.0
	35 Total-tetrafurans	303.9016	24.75	9804.350	0.867	0.317		0.68	0.77	NO	41.7

PP

	36 Total-penta1	339.8597	27.68	286.338		0.010		0.77	1.55	YES	5.2
	36 Total-penta1	339.8597	27.50	99992.445		3.545		1.60	1.55	NO	1473.6

ID: WY44SRM, Name: 13080106, Date: 01-Aug-2013, Time: 13:53:10, Conditions: AUTOSPEC01, User: pk

PF

	37 Total-pentafurans	339.8597	30.52	1865.163	0.877	0.069		1.26	1.55	YES	17.1
	37 Total-pentafurans	339.8597	30.42	7309.798	0.877	0.271		1.36	1.55	NO	62.6
	2 12378-PeCDF	339.8597	30.22	17042.612	0.875	0.620	0.620	1.45	1.55	NO	134.8
	37 Total-pentafurans	339.8597	29.88	15819.000	0.877	0.586		1.60	1.55	NO	84.7
	37 Total-pentafurans	339.8597	29.75	2194.460	0.877	0.081		1.25	1.55	YES	19.5
	37 Total-pentafurans	339.8597	29.65	1570.763	0.877	0.058		5.52	1.55	YES	19.6
	37 Total-pentafurans	339.8597	29.45	1402.845	0.877	0.052		1.51	1.55	NO	13.7
	37 Total-pentafurans	339.8597	29.15	32680.685	0.877	1.211		1.46	1.55	NO	293.3
	37 Total-pentafurans	339.8597	29.08	16031.987	0.877	0.594		1.50	1.55	NO	162.5
	37 Total-pentafurans	339.8597	28.95	11618.616	0.877	0.431		1.46	1.55	NO	86.2
	37 Total-pentafurans	339.8597	28.85	1667.758	0.877	0.062		1.43	1.55	NO	20.9
	37 Total-pentafurans	339.8597	32.61	1067.857	0.877	0.040		0.87	1.55	YES	8.7
	3 23478-PeCDF	339.8597	31.58	11479.878	0.880	0.433	0.433	1.67	1.55	NO	104.1
	37 Total-pentafurans	339.8597	31.43	7482.137	0.877	0.277		1.34	1.55	NO	62.2
	37 Total-pentafurans	339.8597	31.30	5655.106	0.877	0.210		1.38	1.55	NO	42.8

HF

	38 Total-hexafurans	373.8208	33.52	40498.112	1.030	1.516		1.22	1.24	NO	250.5
	7 123789-HxCDF	373.8208	37.47	10846.421	0.959	0.357	0.357	1.38	1.24	NO	71.6
	5 234678-HxCDF	373.8208	36.36	30080.007	1.088	1.148	1.148	1.17	1.24	NO	125.1
	38 Total-hexafurans	373.8208	35.79	1691.591	1.030	0.063		1.23	1.24	NO	10.0
	6 123678-HxCDF	373.8208	35.42	14383.935	1.025	0.580	0.580	1.09	1.24	NO	81.7
	4 123478-HxCDF	373.8208	35.26	40621.947	1.048	1.631	1.631	1.18	1.24	NO	254.2
	38 Total-hexafurans	373.8208	35.09	6787.626	1.030	0.254		1.13	1.24	NO	40.9
	38 Total-hexafurans	373.8208	34.61	143975.461	1.030	5.390		1.18	1.24	NO	855.5
	38 Total-hexafurans	373.8208	34.29	3709.621	1.030	0.139		1.02	1.24	YES	20.1
	38 Total-hexafurans	373.8208	33.74	115253.106	1.030	4.315		1.17	1.24	NO	679.3

HPF

	9 1234789-HpCDF	407.7818	42.26	17158.935	1.200	0.961	0.961	0.94	1.05	NO	63.6
	39 Total-heptafurans	407.7818	41.36	620.070	1.207	0.031		1.28	1.05	YES	3.1
	39 Total-heptafurans	407.7818	40.35	494776.812	1.207	24.953		0.96	1.05	NO	1966.9
	39 Total-heptafurans	407.7818	40.04	6883.224	1.207	0.347		0.97	1.05	NO	27.5
	8 1234678-HpCDF	407.7818	39.56	229005.110	1.215	10.490	10.490	0.96	1.05	NO	913.5

Dataset: P:\DIOXIN8290.PRO\130801SRM.qld
Last Altered: Thursday, August 01, 2013 14:46:04 Pacific Daylight Time
Printed: Thursday, August 01, 2013 14:46:49 Pacific Daylight Time

ID: WY44SRM, Name: 13080106, Date: 01-Aug-2013, Time: 13:53:10, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	35 Total-tetrafurans	303.9016	24.32	6284.963	0.867	0.203		0.72	0.77	NO	37.1
	35 Total-tetrafurans	303.9016	24.20	5239.506	0.867	0.169		0.87	0.77	NO	31.1
	35 Total-tetrafurans	303.9016	24.08	7543.664	0.867	0.244		0.75	0.77	NO	39.3
	35 Total-tetrafurans	303.9016	23.91	3147.995	0.867	0.102		0.64	0.77	YES	15.5
	35 Total-tetrafurans	303.9016	23.84	8686.253	0.867	0.281		0.72	0.77	NO	41.5
	35 Total-tetrafurans	303.9016	23.73	10045.951	0.867	0.325		0.77	0.77	NO	46.9
	35 Total-tetrafurans	303.9016	23.61	5699.324	0.867	0.184		0.77	0.77	NO	28.5
	35 Total-tetrafurans	303.9016	23.55	4126.307	0.867	0.133		0.41	0.77	YES	19.8
	35 Total-tetrafurans	303.9016	23.42	19240.135	0.867	0.622		0.75	0.77	NO	86.8
	35 Total-tetrafurans	303.9016	22.85	4529.399	0.867	0.146		0.77	0.77	NO	25.5
	35 Total-tetrafurans	303.9016	22.58	3418.690	0.867	0.110		0.65	0.77	YES	17.9
	40 Total-Furans	303.9016	28.20	485.294	1.022	0.013		2.78	0.77	YES	4.2
	35 Total-tetrafurans	303.9016	26.30	11347.480	0.867	0.367		0.71	0.77	NO	57.0
	35 Total-tetrafurans	303.9016	26.21	4801.072	0.867	0.155		0.62	0.77	YES	21.7
	1 2378-TCDF	303.9016	26.09	16420.427	0.867	0.531	0.531	0.71	0.77	NO	82.7
	35 Total-tetrafurans	303.9016	25.84	14078.996	0.867	0.455		0.75	0.77	NO	51.6
	35 Total-tetrafurans	303.9016	25.72	471.306	0.867	0.015		0.82	0.77	NO	3.1
	35 Total-tetrafurans	303.9016	25.58	3048.833	0.867	0.099		0.80	0.77	NO	16.8
	35 Total-tetrafurans	303.9016	25.39	3266.142	0.867	0.106		1.12	0.77	YES	20.0
	35 Total-tetrafurans	303.9016	25.17	18498.412	0.867	0.598		0.78	0.77	NO	97.2
	35 Total-tetrafurans	303.9016	24.99	11899.949	0.867	0.385		0.74	0.77	NO	59.6
	35 Total-tetrafurans	303.9016	24.84	17543.777	0.867	0.567		0.72	0.77	NO	89.0
	35 Total-tetrafurans	303.9016	24.75	9804.350	0.867	0.317		0.68	0.77	NO	41.7
	37 Total-pentafurans	339.8597	30.52	1865.163	0.877	0.069		1.26	1.55	YES	17.1
	37 Total-pentafurans	339.8597	30.42	7309.798	0.877	0.271		1.36	1.55	NO	62.6
	2 12378-PeCDF	339.8597	30.22	17042.612	0.875	0.620	0.620	1.45	1.55	NO	134.8
	37 Total-pentafurans	339.8597	29.88	15819.000	0.877	0.586		1.60	1.55	NO	84.7
	37 Total-pentafurans	339.8597	29.75	2194.460	0.877	0.081		1.25	1.55	YES	19.5
	37 Total-pentafurans	339.8597	29.65	1570.763	0.877	0.058		5.52	1.55	YES	19.6
	37 Total-pentafurans	339.8597	29.45	1402.845	0.877	0.052		1.51	1.55	NO	13.7
	37 Total-pentafurans	339.8597	29.15	32680.685	0.877	1.211		1.46	1.55	NO	293.3
	37 Total-pentafurans	339.8597	29.08	16031.987	0.877	0.594		1.50	1.55	NO	162.5
	37 Total-pentafurans	339.8597	28.95	11618.616	0.877	0.431		1.46	1.55	NO	86.2
	37 Total-pentafurans	339.8597	28.85	1667.758	0.877	0.062		1.43	1.55	NO	20.9
	37 Total-pentafurans	339.8597	32.61	1067.857	0.877	0.040		0.87	1.55	YES	8.7
	3 23478-PeCDF	339.8597	31.58	11479.878	0.880	0.433	0.433	1.67	1.55	NO	104.1
	37 Total-pentafurans	339.8597	31.43	7482.137	0.877	0.277		1.34	1.55	NO	62.2
	37 Total-pentafurans	339.8597	31.30	5655.106	0.877	0.210		1.38	1.55	NO	42.8
	38 Total-hexafurans	373.8208	33.52	40498.112	1.030	1.516		1.22	1.24	NO	250.5
	7 123789-HxCDF	373.8208	37.47	10846.421	0.959	0.357	0.357	1.38	1.24	NO	71.6
	5 234678-HxCDF	373.8208	36.36	30080.007	1.088	1.148	1.148	1.17	1.24	NO	125.1
	38 Total-hexafurans	373.8208	35.79	1691.591	1.030	0.063		1.23	1.24	NO	10.0
	6 123678-HxCDF	373.8208	35.42	14383.935	1.025	0.580	0.580	1.09	1.24	NO	81.7
	4 123478-HxCDF	373.8208	35.26	40621.947	1.048	1.631	1.631	1.18	1.24	NO	254.2
	38 Total-hexafurans	373.8208	35.09	6787.626	1.030	0.254		1.13	1.24	NO	40.9
	38 Total-hexafurans	373.8208	34.61	143975.461	1.030	5.390		1.18	1.24	NO	855.5
	38 Total-hexafurans	373.8208	34.29	3709.621	1.030	0.139		1.02	1.24	YES	20.1
	38 Total-hexafurans	373.8208	33.74	115253.106	1.030	4.315		1.17	1.24	NO	679.3
	9 1234789-HpCDF	407.7818	42.26	17158.935	1.200	0.961	0.961	0.94	1.05	NO	63.6

ID: WY44SRM, Name: 13080106, Date: 01-Aug-2013, Time: 13:53:10, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	39 Total-heptafurans	407.7818	41.36	620.070	1.207	0.031		1.28	1.05	YES	3.1
	39 Total-heptafurans	407.7818	40.35	494776.812	1.207	24.953		0.96	1.05	NO	1966.9
	39 Total-heptafurans	407.7818	40.04	6883.224	1.207	0.347		0.97	1.05	NO	27.5
	8 1234678-HpCDF	407.7818	39.56	229005.110	1.215	10.490	10.490	0.96	1.05	NO	913.5
	10 OCDF	441.7428	47.58	415343.938	1.064	37.171	37.171	0.84	0.89	NO	1647.1
	36 Total-penta1	339.8597	27.68	286.338		0.010		0.77	1.55	YES	5.2
	36 Total-penta1	339.8597	27.50	99992.445		3.545		1.60	1.55	NO	1473.6

TD

	41 Total-tetradioxins	319.8965	25.69	1841.750	0.994	0.077		1.08	0.77	YES	11.1
	41 Total-tetradioxins	319.8965	25.33	8419.971	0.994	0.350		0.74	0.77	NO	67.7
	41 Total-tetradioxins	319.8965	25.05	2992.565	0.994	0.124		1.00	0.77	YES	18.3
	41 Total-tetradioxins	319.8965	24.85	7727.472	0.994	0.321		0.89	0.77	YES	71.6
	41 Total-tetradioxins	319.8965	24.34	1586.442	0.994	0.066		0.76	0.77	NO	14.6
	41 Total-tetradioxins	319.8965	24.12	5891.459	0.994	0.245		0.79	0.77	NO	51.5
	41 Total-tetradioxins	319.8965	23.85	9105.405	0.994	0.378		0.79	0.77	NO	78.4
	41 Total-tetradioxins	319.8965	27.30	1612.589	0.994	0.067		0.55	0.77	YES	7.8
	41 Total-tetradioxins	319.8965	26.85	2219.117	0.994	0.092		0.76	0.77	NO	18.6
	11 2378-TCDD	319.8965	26.72	14054.507	0.994	0.584	0.504	0.60	0.77	YES	97.9
	41 Total-tetradioxins	319.8965	26.35	4574.200	0.994	0.190		0.82	0.77	NO	28.5
	41 Total-tetradioxins	319.8965	25.91	9752.077	0.994	0.405		0.75	0.77	NO	76.1

PD

	42 Total-pentadioxins	355.8546	30.76	7146.319	0.976	0.378		1.74	1.55	NO	42.7
	42 Total-pentadioxins	355.8546	30.58	6892.180	0.976	0.364		1.57	1.55	NO	58.8
	42 Total-pentadioxins	355.8546	30.44	10943.766	0.976	0.579		1.56	1.55	NO	72.4
	42 Total-pentadioxins	355.8546	30.23	7961.600	0.976	0.421		1.63	1.55	NO	59.5
	42 Total-pentadioxins	355.8546	29.62	6015.152	0.976	0.318		1.60	1.55	NO	50.7
	42 Total-pentadioxins	355.8546	29.13	11551.975	0.976	0.611		1.79	1.55	YES	99.6
	42 Total-pentadioxins	355.8546	29.09	7923.394	0.976	0.419		1.21	1.55	YES	79.6
	42 Total-pentadioxins	355.8546	32.22	2080.080	0.976	0.110		1.08	1.55	YES	16.7
	12 12378-PeCDD	355.8546	31.82	11680.100	0.976	0.618	0.618	1.58	1.55	NO	90.7
	42 Total-pentadioxins	355.8546	31.14	2675.728	0.976	0.141		2.30	1.55	YES	22.3

HD

	15 123789-HxCDD	389.8157	37.06	28177.417	0.914	1.462	1.462	1.16	1.24	NO	107.4
	43 Total-hexadioxins	389.8157	36.82	7065.021	0.928	0.361		1.38	1.24	NO	26.0
	14 123678-HxCDD	389.8157	36.65	39426.326	0.902	2.100	2.100	1.26	1.24	NO	144.9
	13 123478-HxCDD	389.8157	36.51	16941.011	0.967	0.821	0.821	1.29	1.24	NO	68.1
	43 Total-hexadioxins	389.8157	35.65	11123.583	0.928	0.569		1.10	1.24	NO	43.7
	43 Total-hexadioxins	389.8157	35.54	110689.933	0.928	5.661		1.30	1.24	NO	281.3
	43 Total-hexadioxins	389.8157	35.14	24250.560	0.928	1.240		1.11	1.24	NO	94.0
	43 Total-hexadioxins	389.8157	34.32	98999.473	0.928	5.063		1.24	1.24	NO	390.7

Dataset: P:\DIOXIN8290.PRO\130801SRM.qld
Last Altered: Thursday, August 01, 2013 14:46:04 Pacific Daylight Time
Printed: Thursday, August 01, 2013 14:46:49 Pacific Daylight Time

ID: WY44SRM, Name: 13080106, Date: 01-Aug-2013, Time: 13:53:10, Conditions: AUTOSPEC01, User: pk

HPD

	16 1234678-HpCDD	423.7766	41.37	892412.750	0.999	51.189	51.189	1.03	1.05	NO	1937.0
	44 Total-heptadioxins	423.7766	40.10	1290993.876	0.999	74.051		1.04	1.05	NO	2887.1

Dioxins,TD,PD,HD,HPD,OD

	41 Total-tetradioxins	319.8965	25.69	1841.750	0.994	0.077		1.08	0.77	YES	11.1
	41 Total-tetradioxins	319.8965	25.33	8419.971	0.994	0.350		0.74	0.77	NO	67.7
	41 Total-tetradioxins	319.8965	25.05	2992.565	0.994	0.124		1.00	0.77	YES	18.3
	41 Total-tetradioxins	319.8965	24.85	7727.472	0.994	0.321		0.89	0.77	YES	71.6
	41 Total-tetradioxins	319.8965	24.34	1586.442	0.994	0.066		0.76	0.77	NO	14.6
	41 Total-tetradioxins	319.8965	24.12	5891.459	0.994	0.245		0.79	0.77	NO	51.5
	41 Total-tetradioxins	319.8965	23.85	9105.405	0.994	0.378		0.79	0.77	NO	78.4
	45 Total-Dioxins	319.8965	27.57	777.803	0.962	0.033		0.95	0.77	YES	6.2
	41 Total-tetradioxins	319.8965	27.30	1612.589	0.994	0.067		0.55	0.77	YES	7.8
	41 Total-tetradioxins	319.8965	26.85	2219.117	0.994	0.092		0.76	0.77	NO	18.6
	11 2378-TCDD	319.8965	26.72	14054.507	0.994	0.584	0.504	0.60	0.77	YES	97.9
	41 Total-tetradioxins	319.8965	26.35	4574.200	0.994	0.190		0.82	0.77	NO	28.5
	41 Total-tetradioxins	319.8965	25.91	9752.077	0.994	0.405		0.75	0.77	NO	76.1
	42 Total-pentadioxins	355.8546	30.76	7146.319	0.976	0.378		1.74	1.55	NO	42.7
	42 Total-pentadioxins	355.8546	30.58	6892.180	0.976	0.364		1.57	1.55	NO	58.8
	42 Total-pentadioxins	355.8546	30.44	10943.766	0.976	0.579		1.56	1.55	NO	72.4
	42 Total-pentadioxins	355.8546	30.23	7961.600	0.976	0.421		1.63	1.55	NO	59.5
	42 Total-pentadioxins	355.8546	29.62	6015.152	0.976	0.318		1.60	1.55	NO	50.7
	42 Total-pentadioxins	355.8546	29.13	11551.975	0.976	0.611		1.79	1.55	YES	99.6
	42 Total-pentadioxins	355.8546	29.09	7923.394	0.976	0.419		1.21	1.55	YES	79.6
	42 Total-pentadioxins	355.8546	32.22	2080.080	0.976	0.110		1.08	1.55	YES	16.7
	12 12378-PeCDD	355.8546	31.82	11680.100	0.976	0.618	0.618	1.58	1.55	NO	90.7
	42 Total-pentadioxins	355.8546	31.14	2675.728	0.976	0.141		2.30	1.55	YES	22.3
	15 123789-HxCDD	389.8157	37.06	28177.417	0.914	1.462	1.462	1.16	1.24	NO	107.4
	43 Total-hexadioxins	389.8157	36.82	7065.021	0.928	0.361		1.38	1.24	NO	26.0
	14 123678-HxCDD	389.8157	36.65	39426.326	0.902	2.100	2.100	1.26	1.24	NO	144.9
	13 123478-HxCDD	389.8157	36.51	16941.011	0.967	0.821	0.821	1.29	1.24	NO	68.1
	43 Total-hexadioxins	389.8157	35.65	11123.583	0.928	0.569		1.10	1.24	NO	43.7
	43 Total-hexadioxins	389.8157	35.54	110689.933	0.928	5.661		1.30	1.24	NO	281.3
	43 Total-hexadioxins	389.8157	35.14	24250.560	0.928	1.240		1.11	1.24	NO	94.0
	43 Total-hexadioxins	389.8157	34.32	98999.473	0.928	5.063		1.24	1.24	NO	390.7
	16 1234678-HpCDD	423.7766	41.37	892412.750	0.999	51.189	51.189	1.03	1.05	NO	1937.0
	44 Total-heptadioxins	423.7766	40.10	1290993.876	0.999	74.051		1.04	1.05	NO	2887.1
	17 OCDD	457.7377	47.31	4468644.750	0.979	434.714	434....	0.90	0.89	NO	8962.4

Dataset: P:\DIOXIN8290.PRO\130801SRM.qld
Last Altered: Thursday, August 01, 2013 14:46:04 Pacific Daylight Time
Printed: Thursday, August 01, 2013 14:46:49 Pacific Daylight Time

ID: WY44SRM, Name: 13080106, Date: 01-Aug-2013, Time: 13:53:10, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	35 Total-tetrafurans	303.9016	24.32	6284.963	0.867	0.203		0.72	0.77	NO	37.1
	35 Total-tetrafurans	303.9016	24.20	5239.506	0.867	0.169		0.87	0.77	NO	31.1
	35 Total-tetrafurans	303.9016	24.08	7543.664	0.867	0.244		0.75	0.77	NO	39.3
	35 Total-tetrafurans	303.9016	23.91	3147.995	0.867	0.102		0.64	0.77	YES	15.5
	35 Total-tetrafurans	303.9016	23.84	8686.253	0.867	0.281		0.72	0.77	NO	41.5
	35 Total-tetrafurans	303.9016	23.73	10045.951	0.867	0.325		0.77	0.77	NO	46.9
	35 Total-tetrafurans	303.9016	23.61	5699.324	0.867	0.184		0.77	0.77	NO	28.5
	35 Total-tetrafurans	303.9016	23.55	4126.307	0.867	0.133		0.41	0.77	YES	19.8
	35 Total-tetrafurans	303.9016	23.42	19240.135	0.867	0.622		0.75	0.77	NO	86.8
	35 Total-tetrafurans	303.9016	22.85	4529.399	0.867	0.146		0.77	0.77	NO	25.5
	35 Total-tetrafurans	303.9016	22.58	3418.690	0.867	0.110		0.65	0.77	YES	17.9
	40 Total-Furans	303.9016	28.20	485.294	1.022	0.013		2.78	0.77	YES	4.2
	35 Total-tetrafurans	303.9016	26.30	11347.480	0.867	0.367		0.71	0.77	NO	57.0
	35 Total-tetrafurans	303.9016	26.21	4801.072	0.867	0.155		0.62	0.77	YES	21.7
	1 2378-TCDF	303.9016	26.09	16420.427	0.867	0.531	0.531	0.71	0.77	NO	82.7
	35 Total-tetrafurans	303.9016	25.84	14078.996	0.867	0.455		0.75	0.77	NO	51.6
	35 Total-tetrafurans	303.9016	25.72	471.306	0.867	0.015		0.82	0.77	NO	3.1
	35 Total-tetrafurans	303.9016	25.58	3048.833	0.867	0.099		0.80	0.77	NO	16.8
	35 Total-tetrafurans	303.9016	25.39	3266.142	0.867	0.106		1.12	0.77	YES	20.0
	35 Total-tetrafurans	303.9016	25.17	18498.412	0.867	0.598		0.78	0.77	NO	97.2
	35 Total-tetrafurans	303.9016	24.99	11899.949	0.867	0.385		0.74	0.77	NO	59.6
	35 Total-tetrafurans	303.9016	24.84	17543.777	0.867	0.567		0.72	0.77	NO	89.0
	35 Total-tetrafurans	303.9016	24.75	9804.350	0.867	0.317		0.68	0.77	NO	41.7
	37 Total-pentafurans	339.8597	30.52	1865.163	0.877	0.069		1.26	1.55	YES	17.1
	37 Total-pentafurans	339.8597	30.42	7309.798	0.877	0.271		1.36	1.55	NO	62.6
	2 12378-PeCDF	339.8597	30.22	17042.612	0.875	0.620	0.620	1.45	1.55	NO	134.8
	37 Total-pentafurans	339.8597	29.88	15819.000	0.877	0.586		1.60	1.55	NO	84.7
	37 Total-pentafurans	339.8597	29.75	2194.460	0.877	0.081		1.25	1.55	YES	19.5
	37 Total-pentafurans	339.8597	29.65	1570.763	0.877	0.058		5.52	1.55	YES	19.6
	37 Total-pentafurans	339.8597	29.45	1402.845	0.877	0.052		1.51	1.55	NO	13.7
	37 Total-pentafurans	339.8597	29.15	32680.685	0.877	1.211		1.46	1.55	NO	293.3
	37 Total-pentafurans	339.8597	29.08	16031.987	0.877	0.594		1.50	1.55	NO	162.5
	37 Total-pentafurans	339.8597	28.95	11618.616	0.877	0.431		1.46	1.55	NO	86.2
	37 Total-pentafurans	339.8597	28.85	1667.758	0.877	0.062		1.43	1.55	NO	20.9
	37 Total-pentafurans	339.8597	32.61	1067.857	0.877	0.040		0.87	1.55	YES	8.7
	3 23478-PeCDF	339.8597	31.58	11479.878	0.880	0.433	0.433	1.67	1.55	NO	104.1
	37 Total-pentafurans	339.8597	31.43	7482.137	0.877	0.277		1.34	1.55	NO	62.2
	37 Total-pentafurans	339.8597	31.30	5655.106	0.877	0.210		1.38	1.55	NO	42.8
	38 Total-hexafurans	373.8208	33.52	40498.112	1.030	1.516		1.22	1.24	NO	250.5
	7 123789-HxCDF	373.8208	37.47	10846.421	0.959	0.357	0.357	1.38	1.24	NO	71.6
	5 234678-HxCDF	373.8208	36.36	30080.007	1.088	1.148	1.148	1.17	1.24	NO	125.1
	38 Total-hexafurans	373.8208	35.79	1691.591	1.030	0.063		1.23	1.24	NO	10.0
	6 123678-HxCDF	373.8208	35.42	14383.935	1.025	0.580	0.580	1.09	1.24	NO	81.7
	4 123478-HxCDF	373.8208	35.26	40621.947	1.048	1.631	1.631	1.18	1.24	NO	254.2
	38 Total-hexafurans	373.8208	35.09	6787.626	1.030	0.254		1.13	1.24	NO	40.9
	38 Total-hexafurans	373.8208	34.61	143975.461	1.030	5.390		1.18	1.24	NO	855.5
	38 Total-hexafurans	373.8208	34.29	3709.621	1.030	0.139		1.02	1.24	YES	20.1
	38 Total-hexafurans	373.8208	33.74	115253.106	1.030	4.315		1.17	1.24	NO	679.3
	9 1234789-HpCDF	407.7818	42.26	17158.935	1.200	0.961	0.961	0.94	1.05	NO	63.6

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Last Altered: Thursday, August 01, 2013 14:46:04 Pacific Daylight Time
Printed: Thursday, August 01, 2013 14:46:49 Pacific Daylight Time

ID: WY44SRM, Name: 13080106, Date: 01-Aug-2013, Time: 13:53:10, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	39 Total-heptafurans	407.7818	41.36	620.070	1.207	0.031		1.28	1.05	YES	3.1
	39 Total-heptafurans	407.7818	40.35	494776.812	1.207	24.953		0.96	1.05	NO	1966.9
	39 Total-heptafurans	407.7818	40.04	6883.224	1.207	0.347		0.97	1.05	NO	27.5
	8 1234678-HpCDF	407.7818	39.56	229005.110	1.215	10.490	10.490	0.96	1.05	NO	913.5
	10 OCDF	441.7428	47.58	415343.938	1.064	37.171	37.171	0.84	0.89	NO	1647.1
	36 Total-penta1	339.8597	27.68	286.338		0.010		0.77	1.55	YES	5.2
	36 Total-penta1	339.8597	27.50	99992.445		3.545		1.60	1.55	NO	1473.6
	41 Total-tetradioxins	319.8965	25.69	1841.750	0.994	0.077		1.08	0.77	YES	11.1
	41 Total-tetradioxins	319.8965	25.33	8419.971	0.994	0.350		0.74	0.77	NO	67.7
	41 Total-tetradioxins	319.8965	25.05	2992.565	0.994	0.124		1.00	0.77	YES	18.3
	41 Total-tetradioxins	319.8965	24.85	7727.472	0.994	0.321		0.89	0.77	YES	71.6
	41 Total-tetradioxins	319.8965	24.34	1586.442	0.994	0.066		0.76	0.77	NO	14.6
	41 Total-tetradioxins	319.8965	24.12	5891.459	0.994	0.245		0.79	0.77	NO	51.5
	41 Total-tetradioxins	319.8965	23.85	9105.405	0.994	0.378		0.79	0.77	NO	78.4
	45 Total-Dioxins	319.8965	27.57	777.803	0.962	0.033		0.95	0.77	YES	6.2
	41 Total-tetradioxins	319.8965	27.30	1612.589	0.994	0.067		0.55	0.77	YES	7.8
	41 Total-tetradioxins	319.8965	26.85	2219.117	0.994	0.092		0.76	0.77	NO	18.6
	11 2378-TCDD	319.8965	26.72	14054.507	0.994	0.584	0.504	0.60	0.77	YES	97.9
	41 Total-tetradioxins	319.8965	26.35	4574.200	0.994	0.190		0.82	0.77	NO	28.5
	41 Total-tetradioxins	319.8965	25.91	9752.077	0.994	0.405		0.75	0.77	NO	76.1
	42 Total-pentadioxins	355.8546	30.76	7146.319	0.976	0.378		1.74	1.55	NO	42.7
	42 Total-pentadioxins	355.8546	30.58	6892.180	0.976	0.364		1.57	1.55	NO	58.8
	42 Total-pentadioxins	355.8546	30.44	10943.766	0.976	0.579		1.56	1.55	NO	72.4
	42 Total-pentadioxins	355.8546	30.23	7961.600	0.976	0.421		1.63	1.55	NO	59.5
	42 Total-pentadioxins	355.8546	29.62	6015.152	0.976	0.318		1.60	1.55	NO	50.7
	42 Total-pentadioxins	355.8546	29.13	11551.975	0.976	0.611		1.79	1.55	YES	99.6
	42 Total-pentadioxins	355.8546	29.09	7923.394	0.976	0.419		1.21	1.55	YES	79.6
	42 Total-pentadioxins	355.8546	32.22	2080.080	0.976	0.110		1.08	1.55	YES	16.7
	12 12378-PeCDD	355.8546	31.82	11680.100	0.976	0.618	0.618	1.58	1.55	NO	90.7
	42 Total-pentadioxins	355.8546	31.14	2675.728	0.976	0.141		2.30	1.55	YES	22.3
	15 123789-HxCDD	389.8157	37.06	28177.417	0.914	1.462	1.462	1.16	1.24	NO	107.4
	43 Total-hexadioxins	389.8157	36.82	7065.021	0.928	0.361		1.38	1.24	NO	26.0
	14 123678-HxCDD	389.8157	36.65	39426.326	0.902	2.100	2.100	1.26	1.24	NO	144.9
	13 123478-HxCDD	389.8157	36.51	16941.011	0.967	0.821	0.821	1.29	1.24	NO	68.1
	43 Total-hexadioxins	389.8157	35.65	11123.583	0.928	0.569		1.10	1.24	NO	43.7
	43 Total-hexadioxins	389.8157	35.54	110689.933	0.928	5.661		1.30	1.24	NO	281.3
	43 Total-hexadioxins	389.8157	35.14	24250.560	0.928	1.240		1.11	1.24	NO	94.0
	43 Total-hexadioxins	389.8157	34.32	98999.473	0.928	5.063		1.24	1.24	NO	390.7
	16 1234678-HpCDD	423.7766	41.37	892412.750	0.999	51.189	51.189	1.03	1.05	NO	1937.0
	44 Total-heptadioxins	423.7766	40.10	1290993.876	0.999	74.051		1.04	1.05	NO	2887.1
	17 OCDD	457.7377	47.31	4468644.750	0.979	434.714	434....	0.90	0.89	NO	8962.4

ID: WY44SRM, Name: 13080106, Date: 01-Aug-2013, Time: 13:53:10, Conditions: AUTOSPEC01, User: pk

PFK1

48	FUNCTION1 PFK	330.9792	22.76	0.000		2.1
48	FUNCTION1 PFK	330.9792	22.54	0.000		2.8
48	FUNCTION1 PFK	330.9792	21.66	0.000		5.9
48	FUNCTION1 PFK	330.9792	21.57	0.000		5.6
48	FUNCTION1 PFK	330.9792	21.51	0.000		5.9
48	FUNCTION1 PFK	330.9792	21.42	0.000		6.2
48	FUNCTION1 PFK	330.9792	21.21	0.000		0.2
48	FUNCTION1 PFK	330.9792	21.15	0.000		0.1
48	FUNCTION1 PFK	330.9792	27.95	0.000		0.4
48	FUNCTION1 PFK	330.9792	27.77	0.000		1.0
48	FUNCTION1 PFK	330.9792	27.54	0.000		0.5
48	FUNCTION1 PFK	330.9792	27.48	0.000		0.3
48	FUNCTION1 PFK	330.9792	27.42	0.000		0.1
48	FUNCTION1 PFK	330.9792	26.08	0.000		0.7
48	FUNCTION1 PFK	330.9792	25.79	0.000		0.3
48	FUNCTION1 PFK	330.9792	25.14	0.000		0.2
48	FUNCTION1 PFK	330.9792	24.96	0.000		0.1
48	FUNCTION1 PFK	330.9792	24.33	0.000		0.2
48	FUNCTION1 PFK	330.9792	24.20	0.000		0.1
48	FUNCTION1 PFK	330.9792	24.02	0.000		0.2
48	FUNCTION1 PFK	330.9792	23.21	0.000		0.7
48	FUNCTION1 PFK	330.9792	23.10	0.000		1.1
48	FUNCTION1 PFK	330.9792	23.05	0.000		1.2

PFK2

PFK3

50	FUNCTION3 PFK	380.9760	37.59	0.000	0.000	7.3
50	FUNCTION3 PFK	380.9760	37.48	0.000	0.000	8.3
50	FUNCTION3 PFK	380.9760	37.39	0.000	0.000	11.8
50	FUNCTION3 PFK	380.9760	36.50	0.000	0.000	3.2

ID: WY44SRM, Name: 13080106, Date: 01-Aug-2013, Time: 13:53:10, Conditions: AUTOSPEC01, User: pk

PFK4

	51 FUNCTION4 PFK	430.9728	41.05	0.000						0.5
	51 FUNCTION4 PFK	430.9728	40.95	0.000						0.9
	51 FUNCTION4 PFK	430.9728	40.73	0.000						1.5
	51 FUNCTION4 PFK	430.9728	40.66	0.000						0.7
	51 FUNCTION4 PFK	430.9728	40.36	0.000						0.7
	51 FUNCTION4 PFK	430.9728	40.21	0.000						1.3
	51 FUNCTION4 PFK	430.9728	40.05	0.000						3.8
	51 FUNCTION4 PFK	430.9728	39.88	0.000						0.4
	51 FUNCTION4 PFK	430.9728	39.81	0.000						1.5
	51 FUNCTION4 PFK	430.9728	39.24	0.000						4.4
	51 FUNCTION4 PFK	430.9728	44.63	0.000						1.7
	51 FUNCTION4 PFK	430.9728	43.98	0.000						0.5
	51 FUNCTION4 PFK	430.9728	43.58	0.000						0.7
	51 FUNCTION4 PFK	430.9728	43.15	0.000						1.5
	51 FUNCTION4 PFK	430.9728	42.64	0.000						1.9
	51 FUNCTION4 PFK	430.9728	42.52	0.000						1.4
	51 FUNCTION4 PFK	430.9728	42.12	0.000						1.9
	51 FUNCTION4 PFK	430.9728	41.42	0.000						1.0
	51 FUNCTION4 PFK	430.9728	41.35	0.000						1.2
	51 FUNCTION4 PFK	430.9728	41.16	0.000						1.2

PFK5

ETHERS1

	53 FUNCTION1 HXCD...	375.8364	23.93	0.000	0.000					4.1

ETHERS2

	54 FUNCTION1 HPCD...	409.7974	24.67	0.000	0.000					1.0
	54 FUNCTION1 HPCD...	409.7974	24.11	0.000	0.000					5.8
	54 FUNCTION1 HPCD...	409.7974	27.84	0.000	0.000					2.7
	54 FUNCTION1 HPCD...	409.7974	27.24	0.000	0.000					2.4
	54 FUNCTION1 HPCD...	409.7974	25.90	0.000	0.000					1.9
	54 FUNCTION1 HPCD...	409.7974	25.78	0.000	0.000					1.4
	54 FUNCTION1 HPCD...	409.7974	25.06	0.000	0.000					2.8

ETHERS3

	55 FUNCTION2 HPCD...	409.7974	31.82	0.000	0.000					1.7
	55 FUNCTION2 HPCD...	409.7974	30.20	0.000	0.000					2.9

ID: WY44SRM, Name: 13080106, Date: 01-Aug-2013, Time: 13:53:10, Conditions: AUTOSPEC01, User: pk

ETHERS4

	56 FUNCTION3 OCDPE	445.7555	36.77	0.000	0.000		4.9

ETHERS5

	57 FUNCTION4 NCDPE	479.7165	39.14	0.000	0.000		831.3
	57 FUNCTION4 NCDPE	479.7165	38.90	0.000	0.000		3.5

ETHERS6

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Last Altered: Thursday, August 01, 2013 14:46:04 Pacific Daylight Time
Printed: Thursday, August 01, 2013 14:46:49 Pacific Daylight Time

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Calibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

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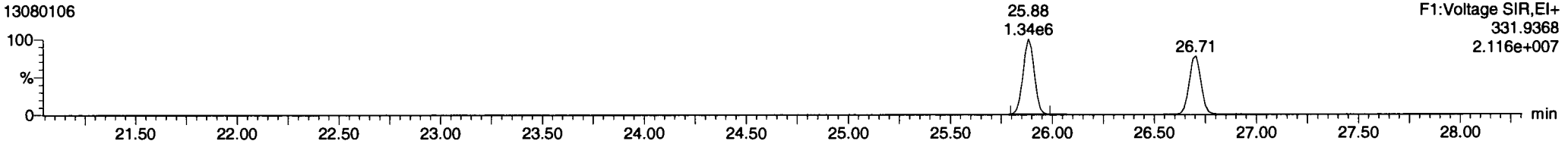

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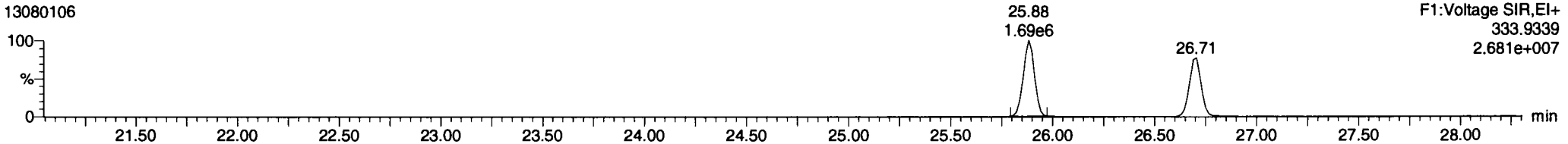

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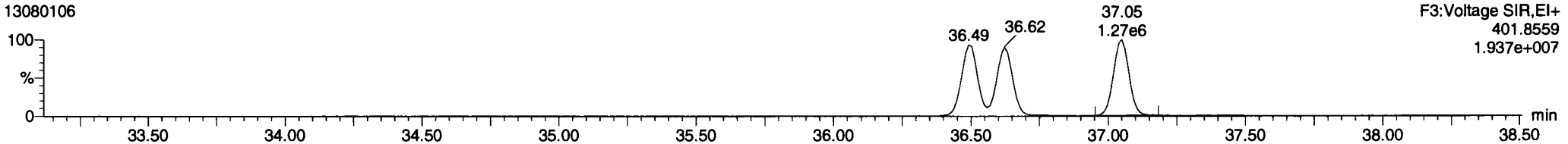

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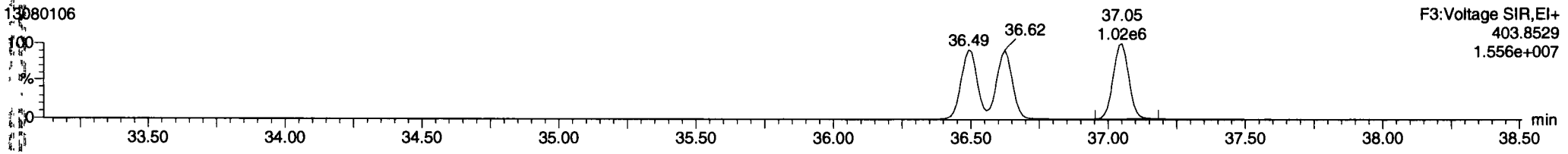

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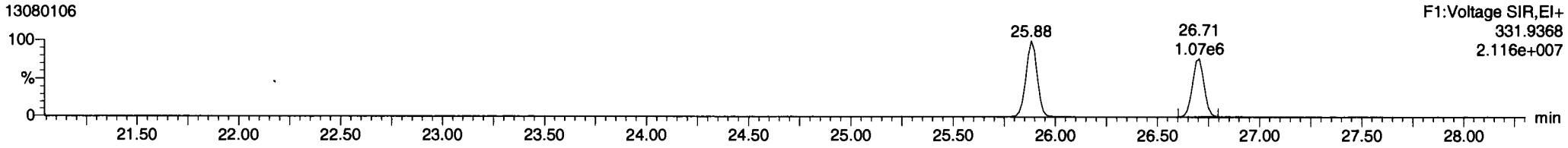

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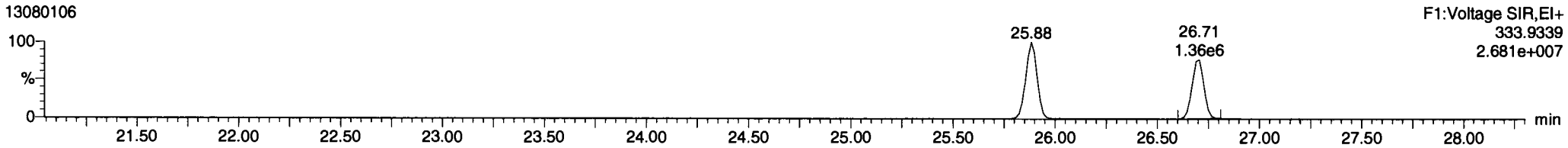
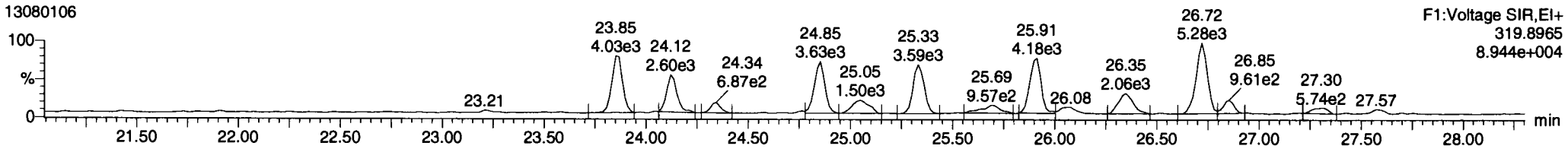
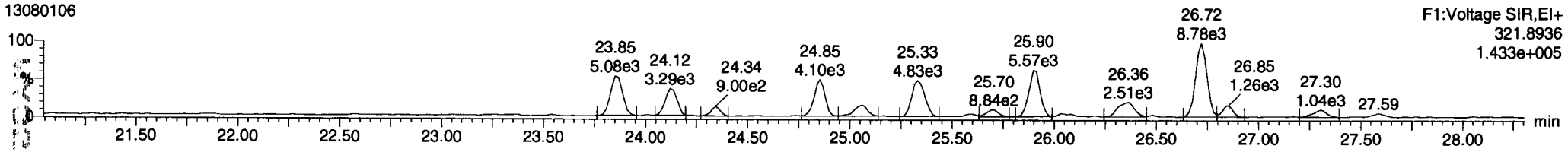


Total-tetradioxins



Total-tetradioxins



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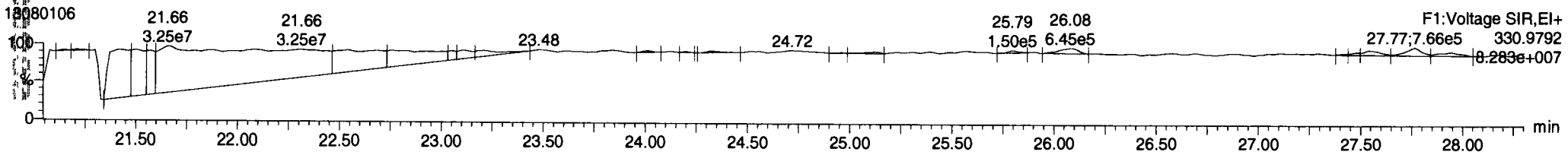

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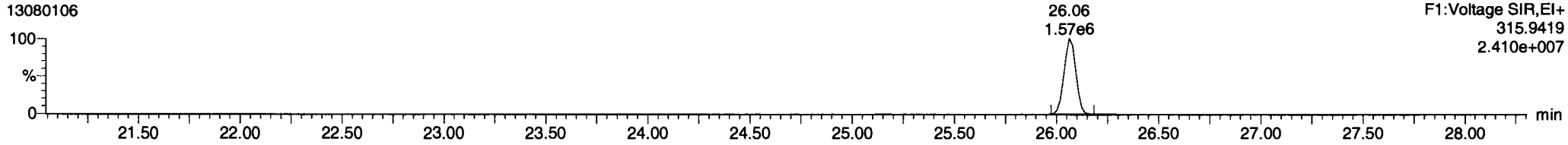

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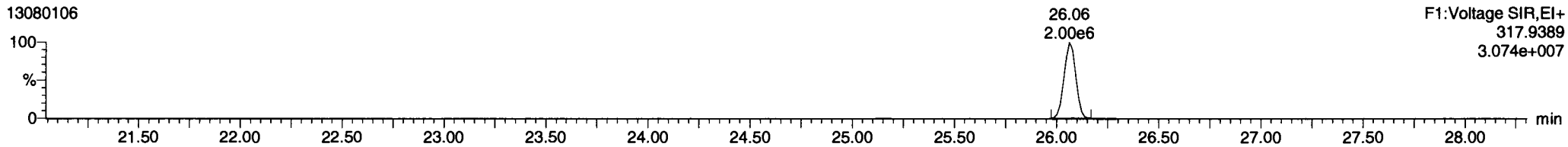

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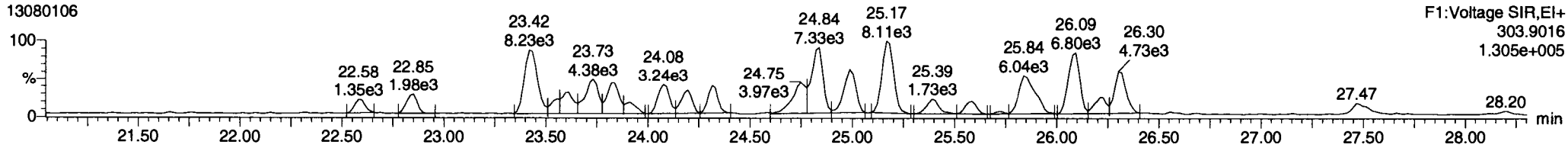
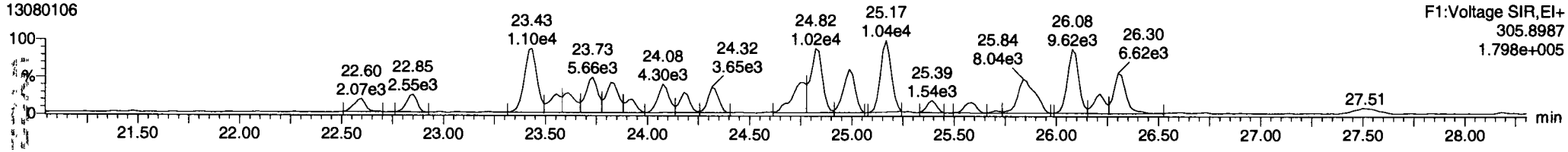


Total-tetrafurans



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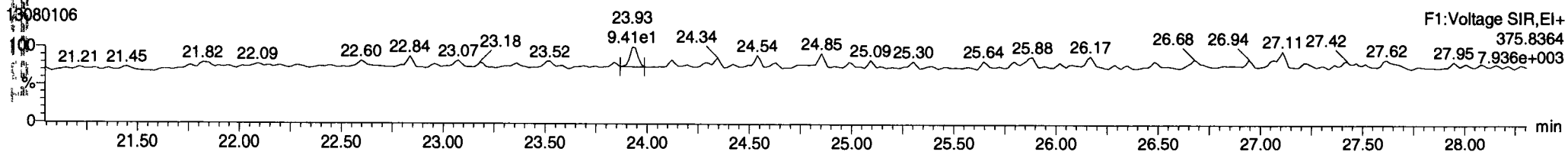

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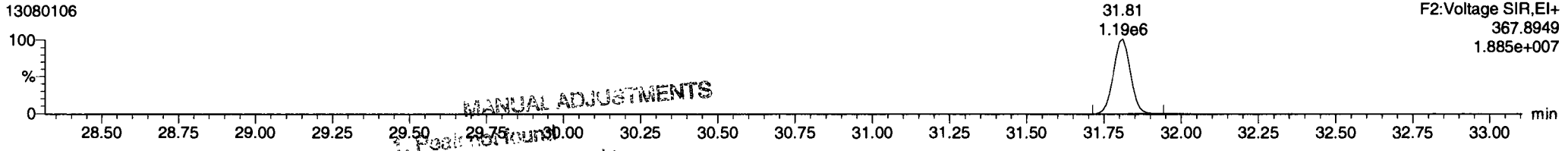
13C-12378-PeCDD



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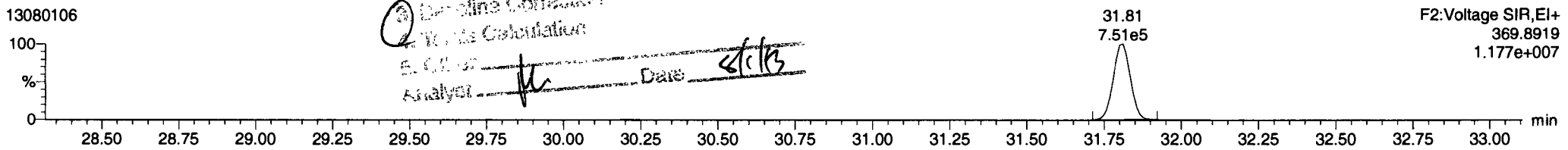
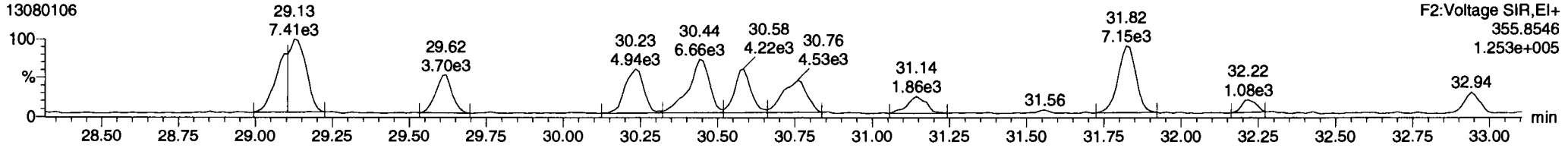
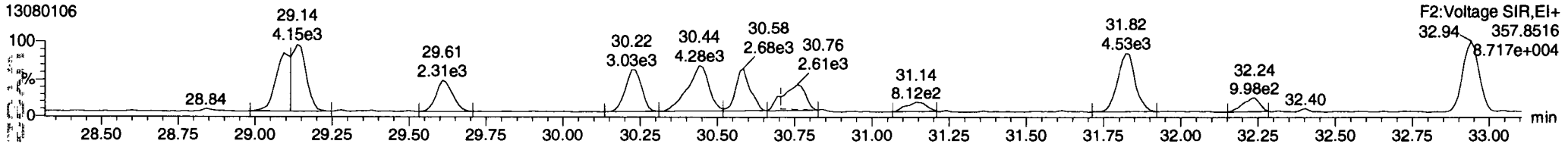


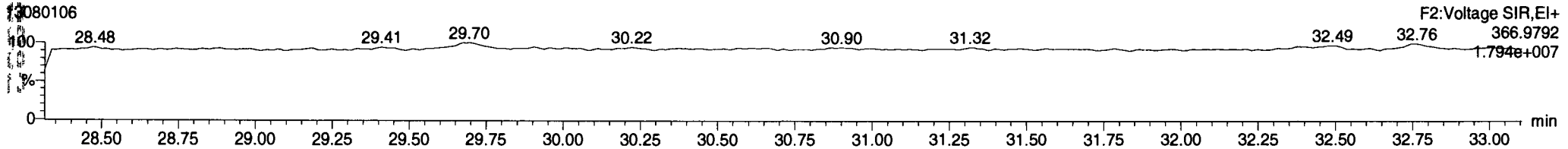
Total-pentadioxins



Total-pentadioxins

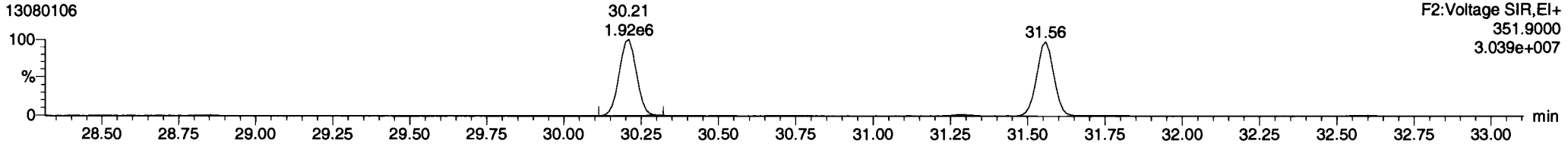


FUNCTION2 PFK



ID: WY44SRM, Name: 13080106, Date: 01-Aug-2013, Time: 13:53:10, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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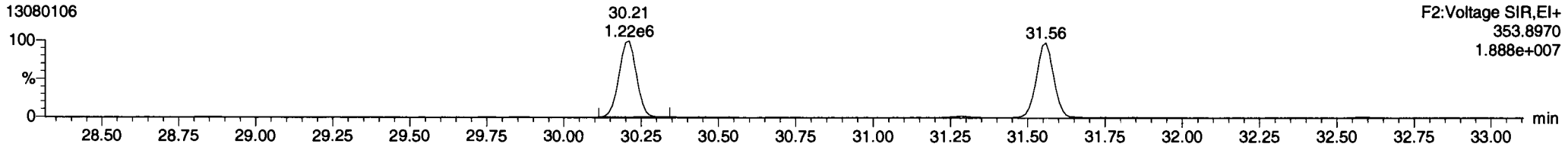
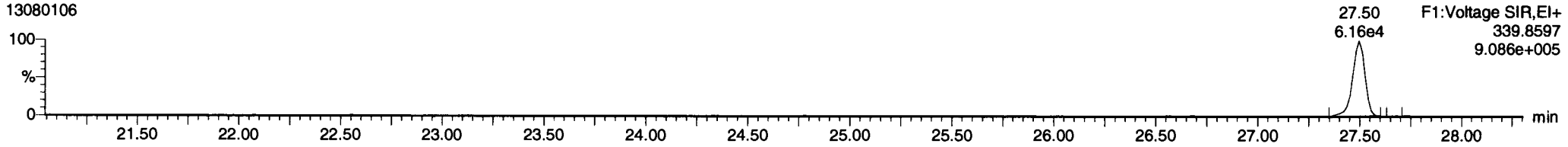
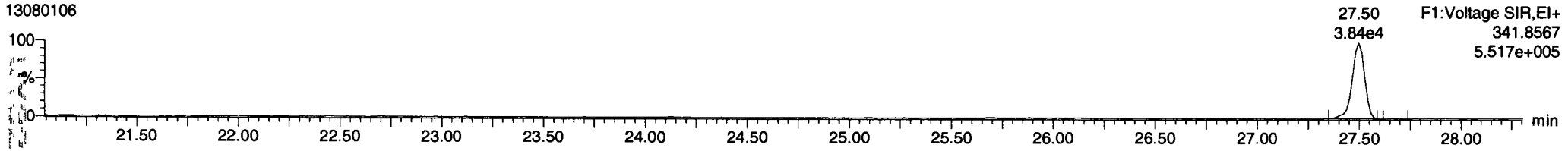


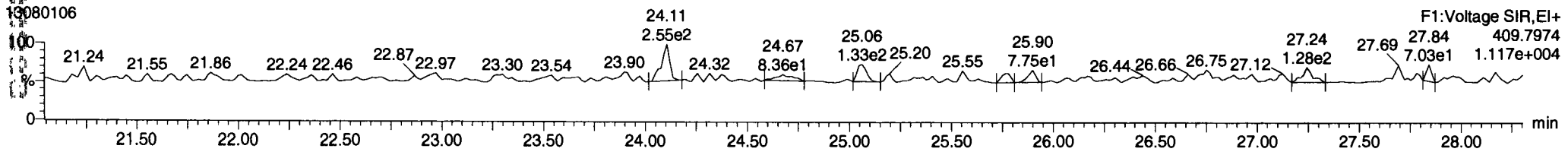
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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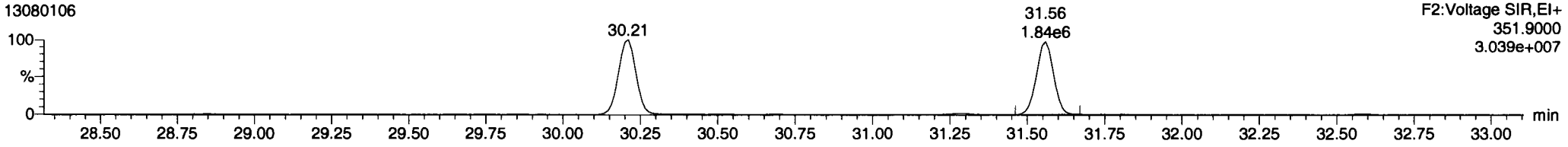
13C-23478-PeCDF



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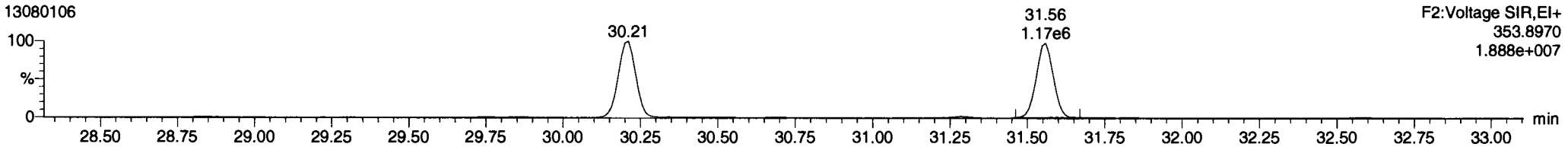
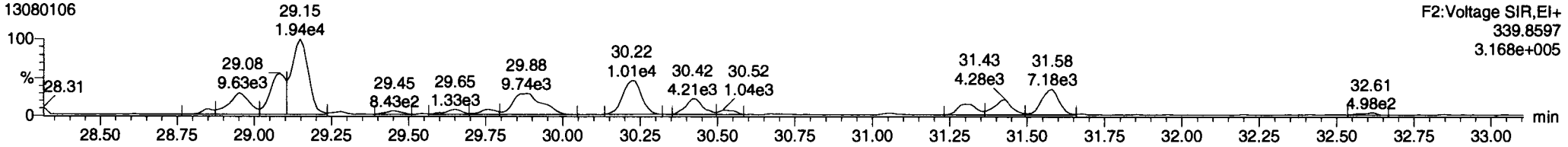
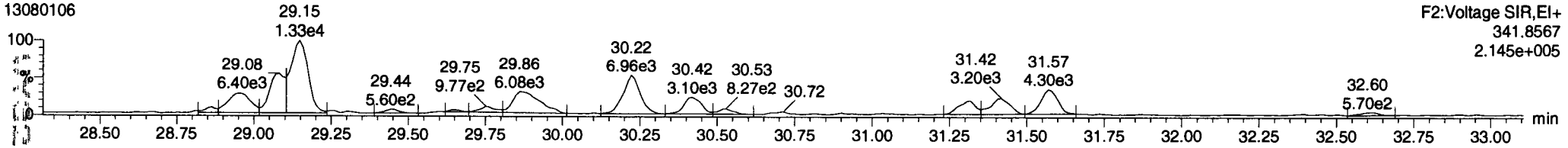


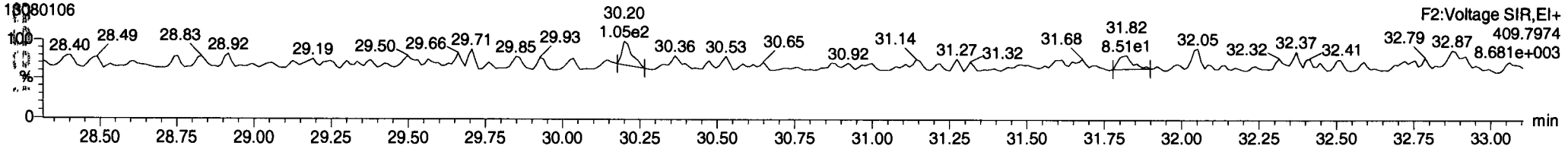
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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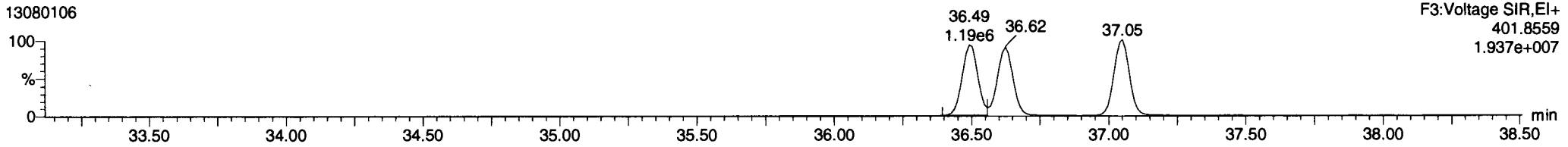
13C-123478-HxCDD



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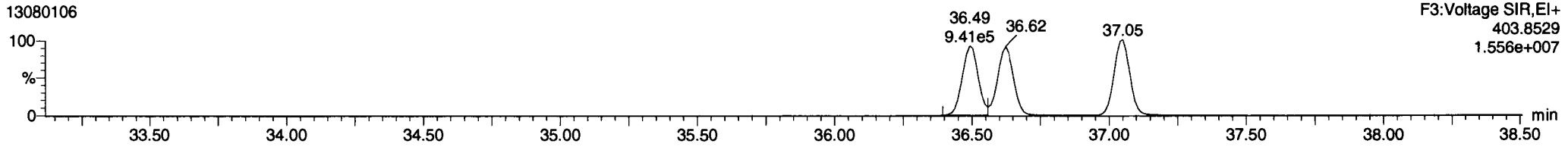
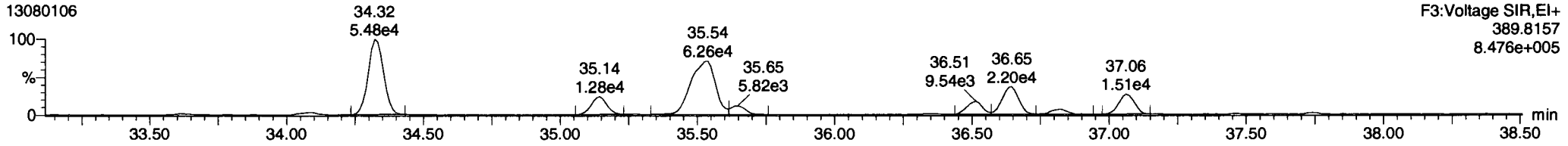
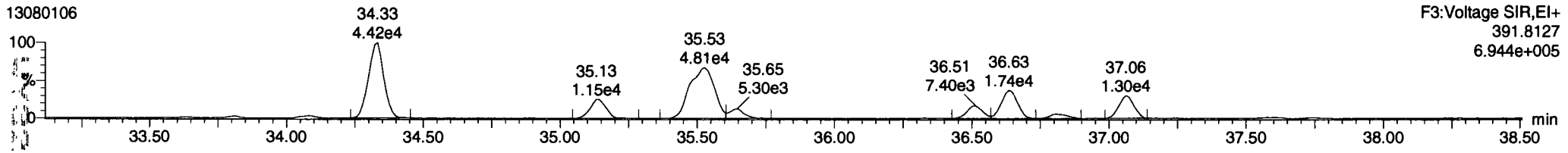


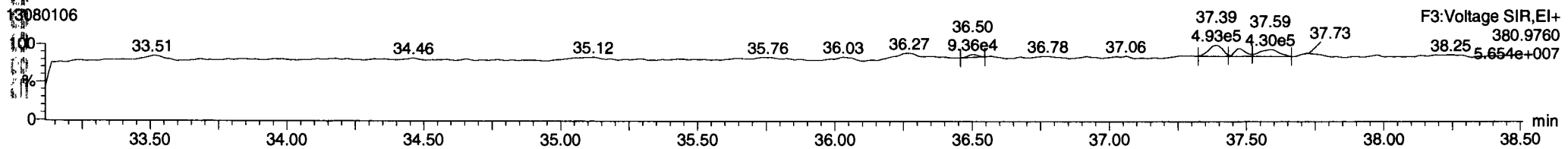
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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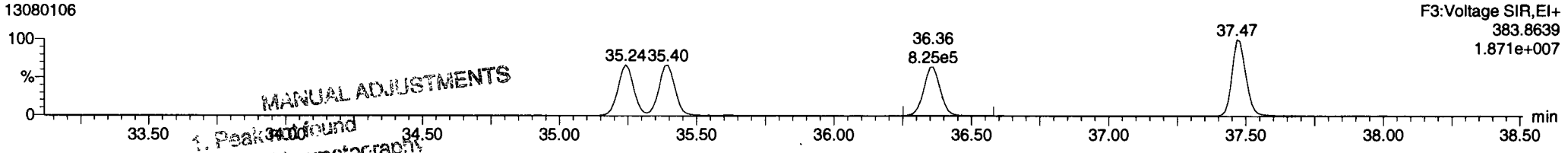

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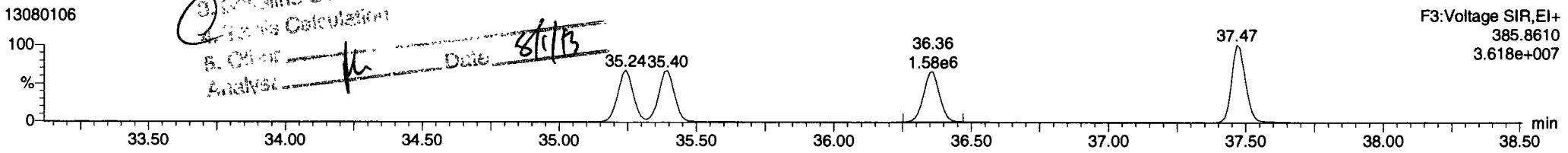
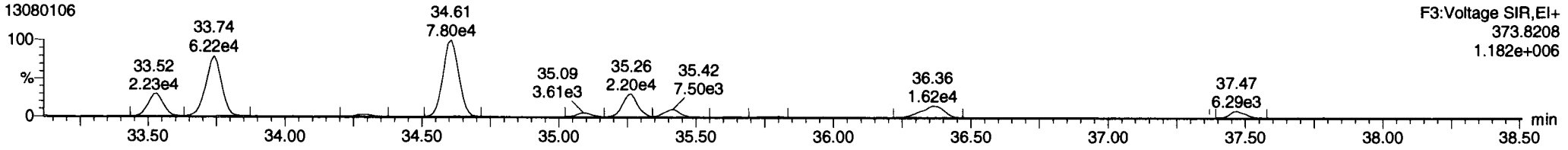
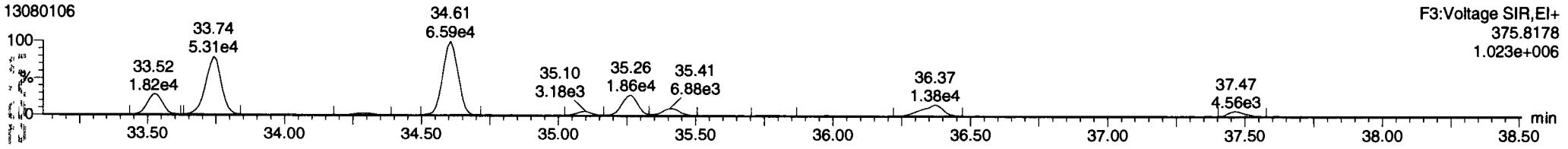


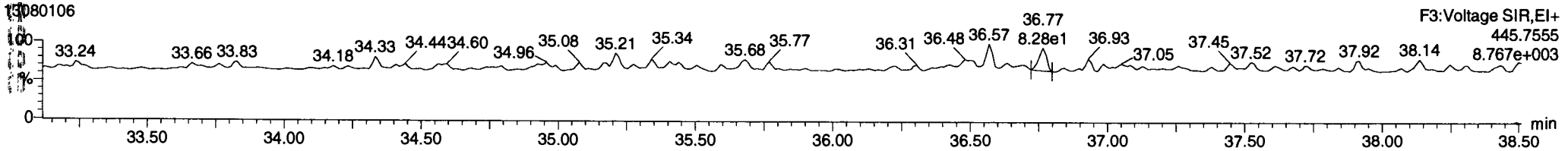
Total-hexafurans



Total-hexafurans

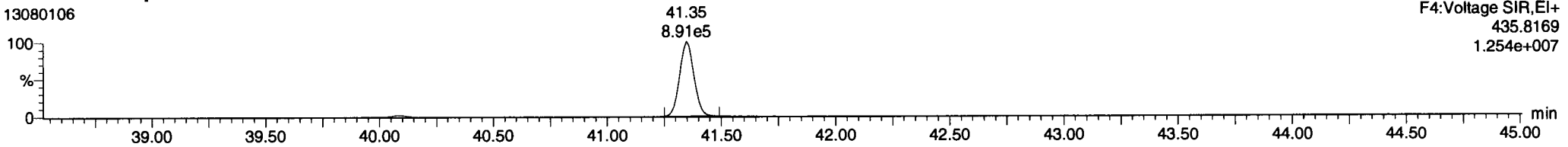


FUNCTION3 OCDPE



ID: WY44SRM, Name: 13080106, Date: 01-Aug-2013, Time: 13:53:10, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD



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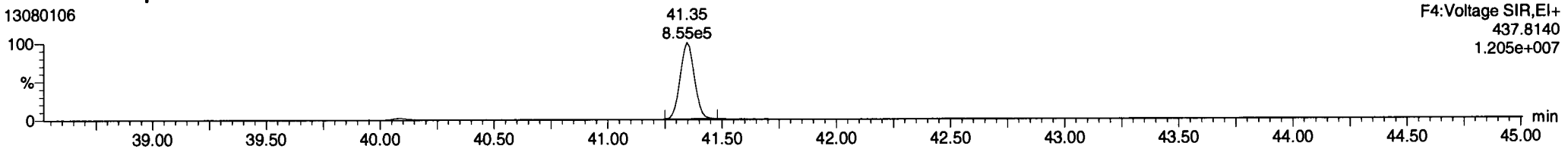
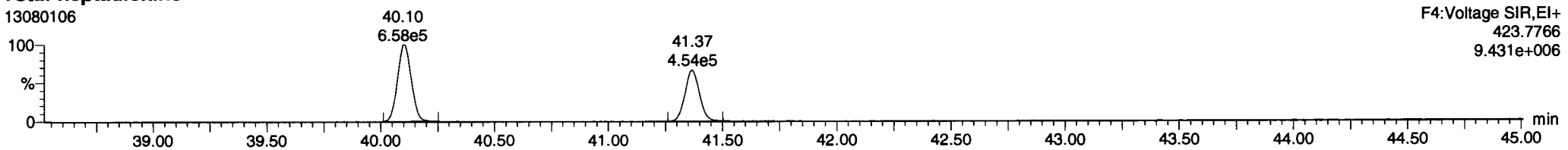
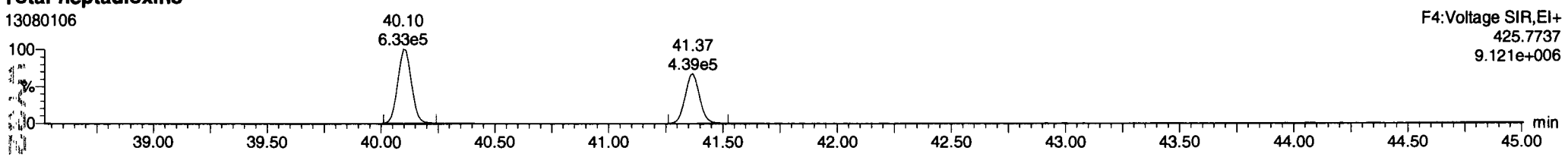


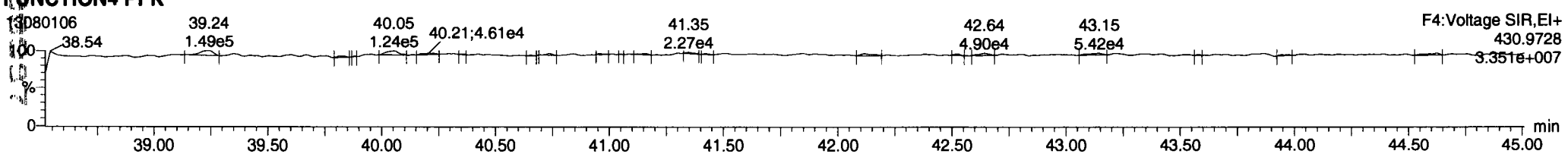
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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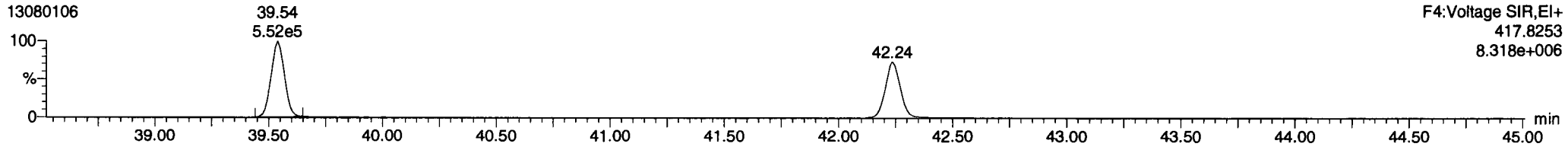
Printed: Thursday, August 01, 2013 14:46:49 Pacific Daylight Time

ID: WY44SRM, Name: 13080106, Date: 01-Aug-2013, Time: 13:53:10, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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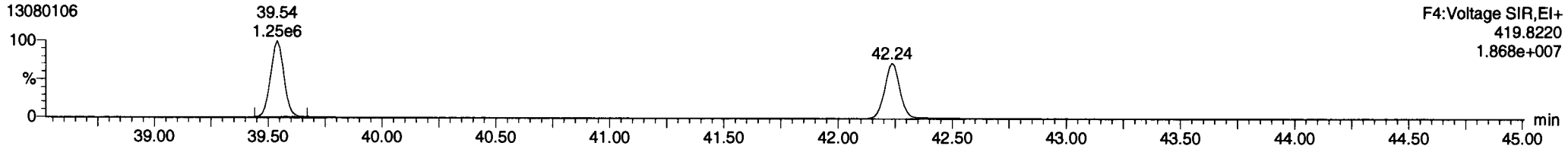
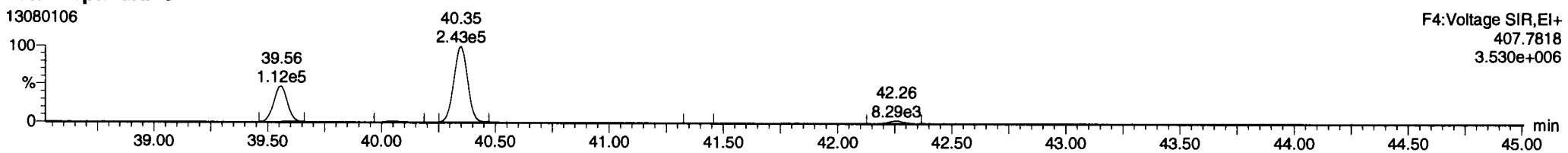
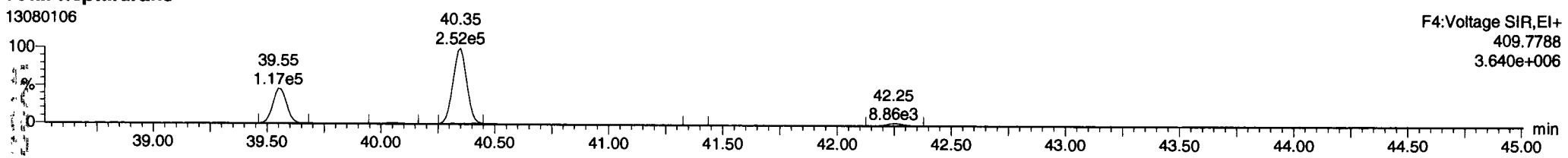


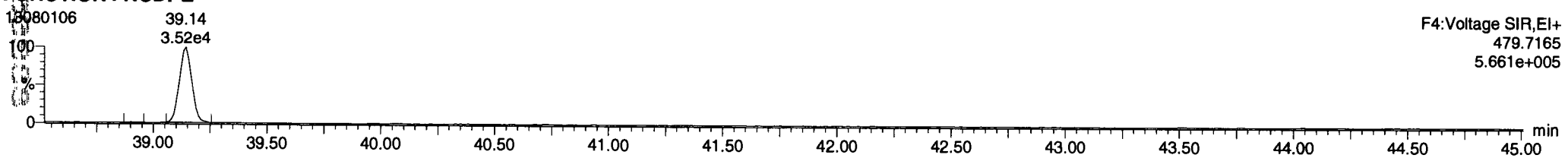
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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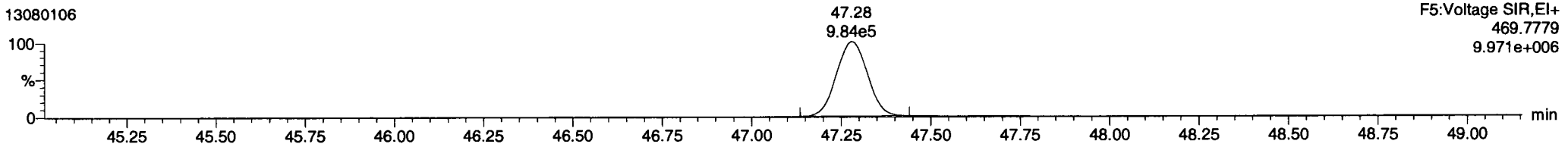
ID: WY44SRM, Name: 13080106, Date: 01-Aug-2013, Time: 13:53:10, Conditions: AUTOSPEC01, User: pk

13C-OCDD



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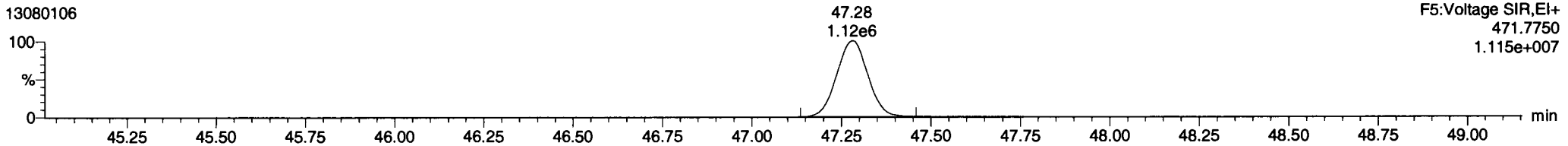
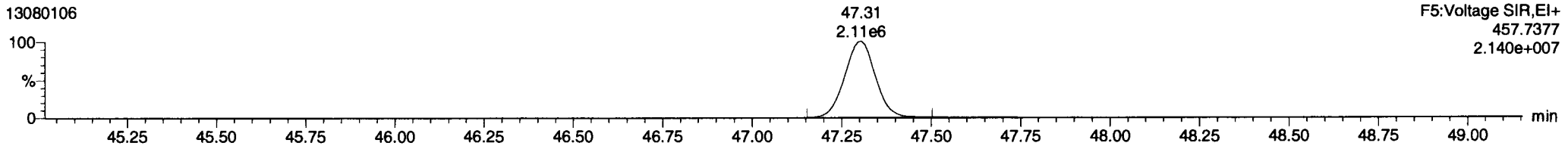
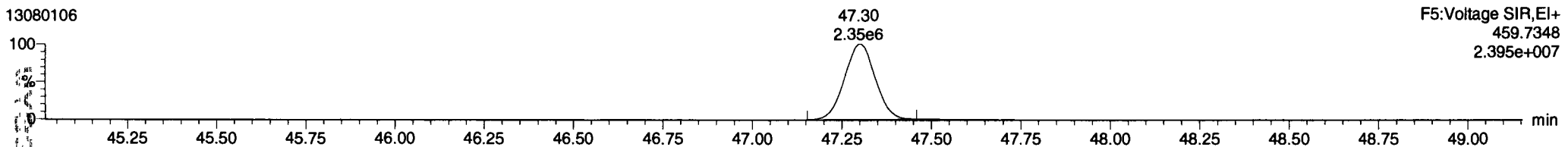


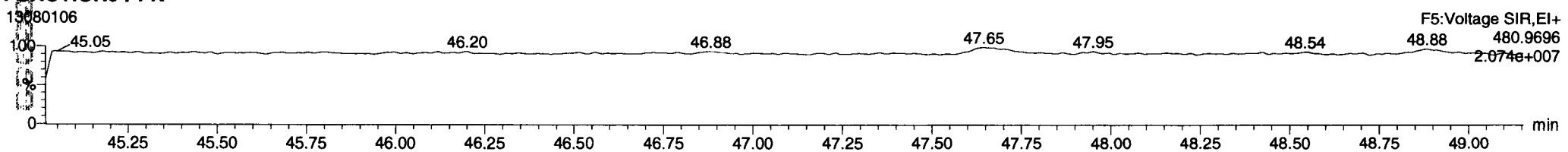
OCDD



OCDD



FUNCTION5 PFK



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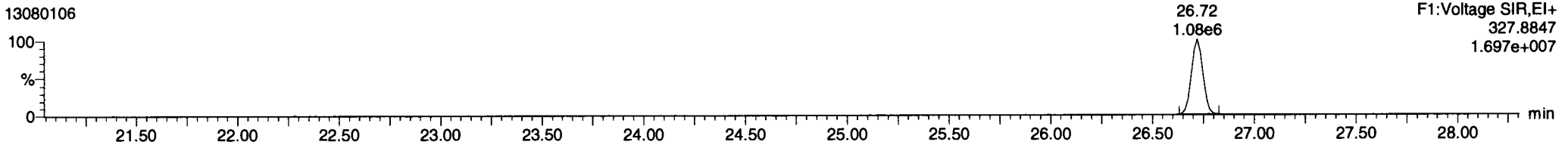
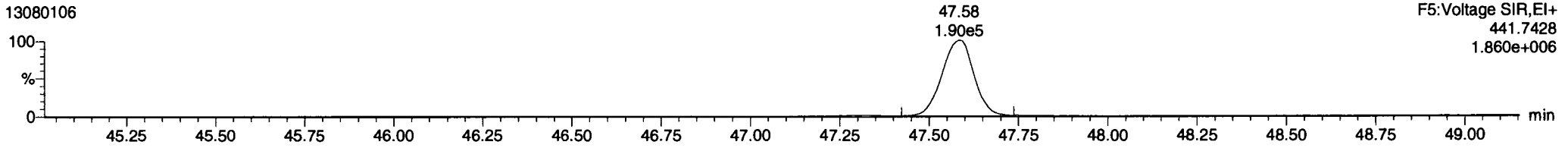
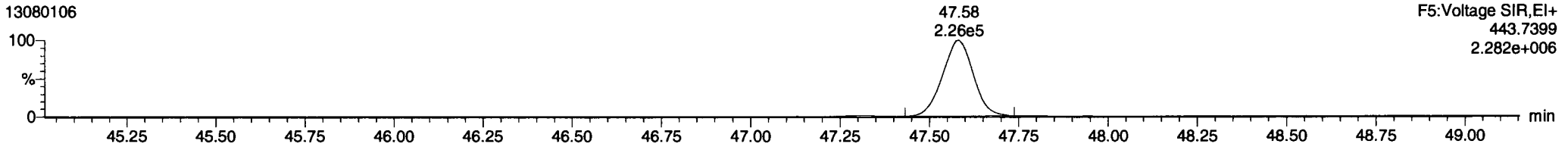
37CL-2378-TCDD



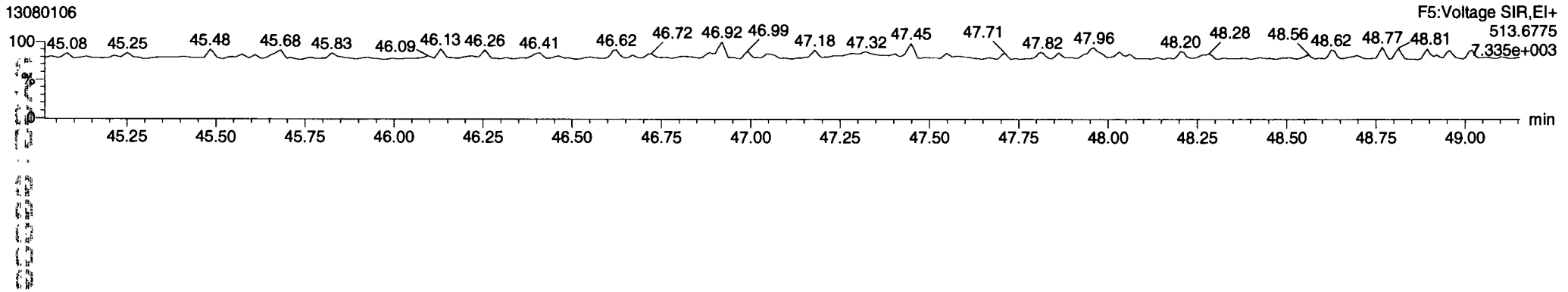
OCDF



OCDF



FUNCTION5 DCDPE



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Printed: Wednesday, August 07, 2013 11:22:31 Pacific Daylight Time

JL 8/7/13

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130716.mdb 24 Jul 2013 13:56:23
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ID: WY32A, Name: 13080109, Date: 01-Aug-2013, Time: 16:28:11, Conditions: AUTOSPEC01, User: pk

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12378-PeCDF	30.222	1.001	2.56e4	1.68e4	0.875	1.528	1.550	134.0	2929	2707	3.92e5	2.64e5	NO	1.131	1.131	X
23478-PeCDF	31.570	1.000	4.05e4	2.84e4	0.880	1.426	1.550	210.1	2929	2707	6.15e5	4.26e5	NO	1.862	1.862	
123478-HxCDF	35.264	1.001	7.79e4	6.71e4	1.048	1.161	1.240	347.5	3417	2830	1.19e6	1.01e6	NO	4.562	4.562	
234678-HxCDF	36.339	1.000	5.96e4	5.23e4	1.088	1.140	1.240	165.1	3417	2830	5.64e5	5.12e5	NO	3.599	3.599	
123678-HxCDF	35.407	1.000	4.35e4	3.55e4	1.025	1.226	1.240	199.7	3417	2830	6.82e5	5.63e5	NO	2.444	2.444	
123789-HxCDF	37.467	1.000	2.15e4	1.75e4	0.959	1.229	1.240	89.5	3417	2830	3.06e5	2.37e5	NO	1.442	1.442	
1234678-HpCDF	39.583	1.001	6.95e5	6.90e5	1.215	1.007	1.050	3224.1	3212	2714	1.04e7	1.02e7	NO	55.644	55.644	
1234789-HpCDF	42.291	1.001	4.22e4	4.29e4	1.200	0.984	1.050	165.3	3212	2714	5.31e5	5.55e5	NO	4.254	4.254	
OCDF	47.620	1.006	1.14e6	1.33e6	1.064	0.855	0.890	5226.8	2206	1684	1.15e7	1.36e7	NO	210.689	210.689	
2378-TCDD	26.705	1.001	5.61e3	8.38e3	0.994	0.670	0.770	30.6	2668	1956	8.17e4	1.34e5	NO	0.440	0.440	B
12378-PeCDD	31.823	1.001	3.39e4	2.20e4	0.976	1.538	1.550	200.4	2270	1935	4.55e5	3.17e5	NO	1.942	1.942	
123478-HxCDD	36.503	1.001	3.97e4	3.10e4	0.967	1.282	1.240	156.1	3772	2805	5.89e5	4.84e5	NO	2.809	2.809	
123678-HxCDD	36.624	1.001	1.55e5	1.26e5	0.902	1.231	1.240	604.9	3772	2805	2.28e6	1.87e6	NO	11.552	11.552	
123789-HxCDD	37.051	1.012	8.10e4	6.41e4	0.914	1.265	1.240	326.7	3772	2805	1.23e6	9.82e5	NO	5.991	5.991	
1234678-HpCDD	41.403	1.001	2.95e6	2.84e6	0.999	1.038	1.050	4588.2	8777	8376	4.03e7	3.84e7	NO	309.275	309.275	
OCDD	47.351	1.000	1.65e7	1.87e7	0.979	0.886	0.890	55505.1	3073	3883	1.71e8	1.93e8	NO	3257.563	3257.563	
13C-2378-TCDF	26.063	1.007	1.56e6	2.00e6	1.419	0.780	0.770	4215.5	5541	4434	2.34e7	2.99e7	NO		46.306	
13C-12378-PeCDF	30.200	1.167	2.62e6	1.66e6	1.158	1.578	1.550	12691.1	3136	4573	3.98e7	2.53e7	NO		68.264	
13C-23478-PeCDF	31.559	1.219	2.57e6	1.63e6	1.127	1.575	1.550	12767.0	3136	4573	4.00e7	2.54e7	NO		68.882	
13C-123478-HxCDF	35.243	0.952	1.03e6	2.00e6	1.206	0.514	0.510	3596.4	4356	4609	1.57e7	3.01e7	NO		68.793	
13C-123678-HxCDF	35.396	0.956	1.07e6	2.08e6	1.266	0.516	0.510	3663.6	4356	4609	1.60e7	3.10e7	NO		68.235	
13C-234678-HxCDF	36.349	0.982	9.83e5	1.88e6	1.155	0.524	0.510	3309.4	4356	4609	1.44e7	2.76e7	NO		67.720	
13C-123789-HxCDF	37.479	1.012	9.70e5	1.85e6	1.121	0.523	0.510	3455.1	4356	4609	1.50e7	2.90e7	NO		68.951	
13C-1234678-HpCDF	39.561	1.068	6.38e5	1.41e6	1.040	0.452	0.440	2986.8	3162	2534	9.44e6	2.10e7	NO		53.957	
13C-1234789-HpCDF	42.269	1.141	5.12e5	1.16e6	0.789	0.444	0.440	2077.1	3162	2534	6.57e6	1.48e7	NO		57.840	
13C-1234-TCDD	25.884	0.000	2.40e6	3.02e6	1.000	0.796	0.770	9749.3	3681	2644	3.59e7	4.50e7	NO		100.000	
13C-2378-TCDD	26.691	1.031	1.40e6	1.79e6	0.962	0.783	0.770	5891.8	3681	2644	2.17e7	2.77e7	NO		61.364	
13C-12378-PeCDD	31.801	1.229	1.80e6	1.15e6	0.746	1.564	1.550	8383.6	3302	1958	2.77e7	1.78e7	NO		72.976	
13C-123478-HxCDD	36.481	0.985	1.45e6	1.15e6	1.003	1.257	1.240	11102.7	1963	2189	2.18e7	1.74e7	NO		70.979	
13C-123678-HxCDD	36.602	0.988	1.50e6	1.20e6	1.052	1.246	1.240	11275.3	1963	2189	2.21e7	1.80e7	NO		70.225	
13C-1234678-HpCDD	41.381	1.118	9.60e5	9.15e5	0.880	1.050	1.050	5740.8	2288	1988	1.31e7	1.25e7	NO		58.307	
13C-OCDD	47.333	1.278	1.04e6	1.17e6	0.775	0.891	0.890	6292.1	1691	1618	1.06e7	1.18e7	NO		78.001	

Dataset: P:\DIOXIN8290.PRO\130801DATA1.qld
Last Altered: Wednesday, August 07, 2013 11:20:26 Pacific Daylight Time
Printed: Wednesday, August 07, 2013 11:22:31 Pacific Daylight Time

ID: WY32A, Name: 13080109, Date: 01-Aug-2013, Time: 16:28:11, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.029	0.000	2.02e6	1.63e6	1.000	1.235	1.240	15555.7	1963	2189	3.05e7	2.48e7	NO	100.000
Total-tetrafurans			3.96e5		0.867				3961		5.54e6			30.065
Total-penta1			3.85e5						1936		5.38e6			16.347
Total-pentafurans			5.40e5		0.877				2929		7.71e6			24.546
Total-hexafurans			1.47e6		1.030				3417		2.21e7			88.689
Total-heptafurans			2.37e6		1.207				3212		3.39e7			205.020
Total-Furans			6.30e6		1.022				3961		8.61e7			575.357
Total-tetradioxins			9.86e4		0.994				2668		1.40e6			7.069
Total-pentadioxins			2.52e5		0.976				2270		3.32e6			14.443
Total-hexadioxins			1.22e6		0.928				3772		1.61e7			90.243
Total-heptadioxins			7.42e6		0.999				8777		1.05e8			778.895
Total-Dioxins			2.55e7		0.962				2668		2.96e8			4148.213
Total-TEQ			3.18e7						2668		3.82e8			4723.569
37CL-2378-TCDD	26.705	1.032	1.68e6		1.091			8578.4	2894		2.48e7			28.413
FUNCTION1 PFK			9.92e5						830288		1.99e7			
FUNCTION2 PFK			1.47e4						197613		6.44e5			0.000
FUNCTION3 PFK			1.11e7						565911		9.36e7			0.000
FUNCTION4 PFK			7.03e5						283329		1.53e7			
FUNCTION5 PFK			2.20e5						253424		9.31e6			
FUNCTION1 HXCDPE			9.23e3						1077		1.59e5			0.000
FUNCTION1 HPCDPE			3.67e3						951		5.35e4			0.000
FUNCTION2 HPCDPE			4.14e3						1759		7.16e4			0.000
FUNCTION3 OCDPE			1.17e3						1633		2.37e4			0.000
FUNCTION4 NCDPE			1.65e3						1350		2.95e4			0.000
FUNCTION5 DCDPE			3.31e2						850		8.35e3			0.000

Dataset: P:\DIOXIN8290.PRO\130801DATA1.qld
Last Altered: Wednesday, August 07, 2013 11:20:26 Pacific Daylight Time
Printed: Wednesday, August 07, 2013 11:22:31 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130716.mdb 24 Jul 2013 13:56:23
Calibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

ID: WY32A, Name: 13080109, Date: 01-Aug-2013, Time: 16:28:11, Conditions: AUTOSPEC01, User: pk

TF

	35	Total-tetrafurans	303.9016	24.73	81874.442	0.867	2.654		0.68	0.77	NO	99.5
	35	Total-tetrafurans	303.9016	24.32	21355.587	0.867	0.692		0.78	0.77	NO	35.7
	35	Total-tetrafurans	303.9016	24.17	29795.064	0.867	0.966		0.85	0.77	NO	51.1
	35	Total-tetrafurans	303.9016	24.06	31493.129	0.867	1.021		0.76	0.77	NO	50.7
	35	Total-tetrafurans	303.9016	23.91	13863.641	0.867	0.449		0.80	0.77	NO	25.6
	35	Total-tetrafurans	303.9016	23.82	29636.739	0.867	0.961		0.76	0.77	NO	51.8
	35	Total-tetrafurans	303.9016	23.72	73407.155	0.867	2.379		0.72	0.77	NO	98.6
	35	Total-tetrafurans	303.9016	23.60	22004.841	0.867	0.713		0.96	0.77	YES	42.0
	35	Total-tetrafurans	303.9016	23.54	24219.720	0.867	0.785		0.73	0.77	NO	43.7
	35	Total-tetrafurans	303.9016	23.42	78302.192	0.867	2.538		0.82	0.77	NO	118.5
	35	Total-tetrafurans	303.9016	22.84	20596.993	0.867	0.668		0.71	0.77	NO	34.3
	35	Total-tetrafurans	303.9016	22.57	14451.066	0.867	0.468		0.71	0.77	NO	23.6
	35	Total-tetrafurans	303.9016	27.50	11246.312	0.867	0.365		0.78	0.77	NO	12.9
	35	Total-tetrafurans	303.9016	26.59	2030.361	0.867	0.066		0.70	0.77	NO	3.6
	35	Total-tetrafurans	303.9016	26.30	66876.426	0.867	2.168		0.72	0.77	NO	101.7
	35	Total-tetrafurans	303.9016	26.20	34498.154	0.867	1.118		0.72	0.77	NO	57.8
	1	2378-TCDF	303.9016	26.08	44072.598	0.867	1.428	1.428	0.71	0.77	NO	72.1
	35	Total-tetrafurans	303.9016	25.84	134864.117	0.867	4.371		0.72	0.77	NO	169.7
	35	Total-tetrafurans	303.9016	25.57	34934.615	0.867	1.132		0.68	0.77	NO	55.2
	35	Total-tetrafurans	303.9016	25.38	21311.797	0.867	0.691		0.78	0.77	NO	32.8
	35	Total-tetrafurans	303.9016	25.15	50791.893	0.867	1.646		0.77	0.77	NO	83.4
	35	Total-tetrafurans	303.9016	24.99	59577.100	0.867	1.931		0.74	0.77	NO	88.3
	35	Total-tetrafurans	303.9016	24.84	26407.613	0.867	0.856		0.78	0.77	NO	46.2

PP

	36	Total-penta1	339.8597	27.50	636221.437		16.347		1.54	1.55	NO	2776.8

ID: WY32A, Name: 13080109, Date: 01-Aug-2013, Time: 16:28:11, Conditions: AUTOSPEC01, User: pk

PF

	37	Total-pentafurans	339.8597	30.42	57834.629	0.877	1.554		1.36	1.55	NO	178.8
	2	12378-PeCDF	339.8597	30.22	42392.334	0.875	1.131	1.131	1.53	1.55	NO	134.0
	37	Total-pentafurans	339.8597	29.87	138545.707	0.877	3.722		1.43	1.55	NO	260.0
	37	Total-pentafurans	339.8597	29.75	8055.335	0.877	0.216		1.91	1.55	YES	28.0
	37	Total-pentafurans	339.8597	29.64	25290.570	0.877	0.679		1.42	1.55	NO	68.0
	37	Total-pentafurans	339.8597	29.45	6283.125	0.877	0.169		1.37	1.55	NO	19.1
	37	Total-pentafurans	339.8597	29.28	4851.499	0.877	0.130		1.53	1.55	NO	14.3
	37	Total-pentafurans	339.8597	29.15	215318.281	0.877	5.784		1.37	1.55	NO	651.4
	37	Total-pentafurans	339.8597	29.08	108558.090	0.877	2.916		1.72	1.55	NO	403.0
	37	Total-pentafurans	339.8597	28.95	96295.090	0.877	2.587		1.43	1.55	NO	226.7
	37	Total-pentafurans	339.8597	28.87	19514.340	0.877	0.524		1.51	1.55	NO	70.6
	37	Total-pentafurans	339.8597	32.60	5741.672	0.877	0.154		1.75	1.55	NO	15.4
	3	23478-PeCDF	339.8597	31.57	68872.515	0.880	1.862	1.862	1.43	1.55	NO	210.1
	37	Total-pentafurans	339.8597	31.42	41064.102	0.877	1.103		1.44	1.55	NO	124.8
	37	Total-pentafurans	339.8597	31.31	50795.691	0.877	1.365		1.38	1.55	NO	154.4
	37	Total-pentafurans	339.8597	31.07	3738.763	0.877	0.100		1.31	1.55	YES	10.9
	37	Total-pentafurans	339.8597	30.70	2153.496	0.877	0.058		1.13	1.55	YES	6.9
	37	Total-pentafurans	339.8597	30.53	18276.615	0.877	0.491		1.38	1.55	NO	57.6

HF

	7	123789-HxCDF	373.8208	37.47	39028.037	0.959	1.442	1.442	1.23	1.24	NO	89.5
	5	234678-HxCDF	373.8208	36.34	111926.984	1.088	3.599	3.599	1.14	1.24	NO	165.1
	38	Total-hexafurans	373.8208	35.99	4926.273	1.030	0.161		1.29	1.24	NO	13.2
	38	Total-hexafurans	373.8208	35.77	7709.230	1.030	0.252		1.03	1.24	YES	15.2
	38	Total-hexafurans	373.8208	35.64	3182.500	1.030	0.104		1.32	1.24	NO	9.9
	6	123678-HxCDF	373.8208	35.41	79030.226	1.025	2.444	2.444	1.23	1.24	NO	199.7
	4	123478-HxCDF	373.8208	35.26	144990.727	1.048	4.562	4.562	1.16	1.24	NO	347.5
	38	Total-hexafurans	373.8208	35.10	44109.795	1.030	1.443		1.15	1.24	NO	103.8
	38	Total-hexafurans	373.8208	34.61	1149741.250	1.030	37.620		1.19	1.24	NO	2816.6
	38	Total-hexafurans	373.8208	34.29	18839.483	1.030	0.616		1.23	1.24	NO	45.2
	38	Total-hexafurans	373.8208	34.00	5026.539	1.030	0.164		0.94	1.24	YES	10.4
	38	Total-hexafurans	373.8208	33.74	853613.187	1.030	27.930		1.18	1.24	NO	2018.3
	38	Total-hexafurans	373.8208	33.53	255221.141	1.030	8.351		1.19	1.24	NO	626.8

HPF

	9	1234789-HpCDF	407.7818	42.29	85111.719	1.200	4.254	4.254	0.98	1.05	NO	165.3
	39	Total-heptafurans	407.7818	41.39	2565.168	1.207	0.114		1.54	1.05	YES	7.9
	39	Total-heptafurans	407.7818	40.37	3223309.750	1.207	143.682		1.00	1.05	NO	7092.3
	39	Total-heptafurans	407.7818	40.07	29732.439	1.207	1.325		1.04	1.05	NO	59.9
	8	1234678-HpCDF	407.7818	39.58	1384966.501	1.215	55.644	55.644	1.01	1.05	NO	3224.1

Dataset: P:\DIOXIN8290.PRO\130801DATA1.qld
Last Altered: Wednesday, August 07, 2013 11:20:26 Pacific Daylight Time
Printed: Wednesday, August 07, 2013 11:22:31 Pacific Daylight Time

ID: WY32A, Name: 13080109, Date: 01-Aug-2013, Time: 16:28:11, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	35	Total-tetrafurans	303.9016	24.73	81874.442	0.867	2.654		0.68	0.77	NO	99.5
	35	Total-tetrafurans	303.9016	24.32	21355.587	0.867	0.692		0.78	0.77	NO	35.7
	35	Total-tetrafurans	303.9016	24.17	29795.064	0.867	0.966		0.85	0.77	NO	51.1
	35	Total-tetrafurans	303.9016	24.06	31493.129	0.867	1.021		0.76	0.77	NO	50.7
	35	Total-tetrafurans	303.9016	23.91	13863.641	0.867	0.449		0.80	0.77	NO	25.6
	35	Total-tetrafurans	303.9016	23.82	29636.739	0.867	0.961		0.76	0.77	NO	51.8
	35	Total-tetrafurans	303.9016	23.72	73407.155	0.867	2.379		0.72	0.77	NO	98.6
	35	Total-tetrafurans	303.9016	23.60	22004.841	0.867	0.713		0.96	0.77	YES	42.0
	35	Total-tetrafurans	303.9016	23.54	24219.720	0.867	0.785		0.73	0.77	NO	43.7
	35	Total-tetrafurans	303.9016	23.42	78302.192	0.867	2.538		0.82	0.77	NO	118.5
	35	Total-tetrafurans	303.9016	22.84	20596.993	0.867	0.668		0.71	0.77	NO	34.3
	35	Total-tetrafurans	303.9016	22.57	14451.066	0.867	0.468		0.71	0.77	NO	23.6
	35	Total-tetrafurans	303.9016	27.50	11246.312	0.867	0.365		0.78	0.77	NO	12.9
	35	Total-tetrafurans	303.9016	26.59	2030.361	0.867	0.066		0.70	0.77	NO	3.6
	35	Total-tetrafurans	303.9016	26.30	66876.426	0.867	2.168		0.72	0.77	NO	101.7
	35	Total-tetrafurans	303.9016	26.20	34498.154	0.867	1.118		0.72	0.77	NO	57.8
	1	2378-TCDF	303.9016	26.08	44072.598	0.867	1.428	1.428	0.71	0.77	NO	72.1
	35	Total-tetrafurans	303.9016	25.84	134864.117	0.867	4.371		0.72	0.77	NO	169.7
	35	Total-tetrafurans	303.9016	25.57	34934.615	0.867	1.132		0.68	0.77	NO	55.2
	35	Total-tetrafurans	303.9016	25.38	21311.797	0.867	0.691		0.78	0.77	NO	32.8
	35	Total-tetrafurans	303.9016	25.15	50791.893	0.867	1.646		0.77	0.77	NO	83.4
	35	Total-tetrafurans	303.9016	24.99	59577.100	0.867	1.931		0.74	0.77	NO	88.3
	35	Total-tetrafurans	303.9016	24.84	26407.613	0.867	0.856		0.78	0.77	NO	46.2
	37	Total-pentafurans	339.8597	30.42	57834.629	0.877	1.554		1.36	1.55	NO	178.8
	2	12378-PeCDF	339.8597	30.22	42392.334	0.875	1.131	1.131	1.53	1.55	NO	134.0
	37	Total-pentafurans	339.8597	29.87	138545.707	0.877	3.722		1.43	1.55	NO	260.0
	37	Total-pentafurans	339.8597	29.75	8055.335	0.877	0.216		1.91	1.55	YES	28.0
	37	Total-pentafurans	339.8597	29.64	25290.570	0.877	0.679		1.42	1.55	NO	68.0
	37	Total-pentafurans	339.8597	29.45	6283.125	0.877	0.169		1.37	1.55	NO	19.1
	37	Total-pentafurans	339.8597	29.28	4851.499	0.877	0.130		1.53	1.55	NO	14.3
	37	Total-pentafurans	339.8597	29.15	215318.281	0.877	5.784		1.37	1.55	NO	651.4
	37	Total-pentafurans	339.8597	29.08	108558.090	0.877	2.916		1.72	1.55	NO	403.0
	37	Total-pentafurans	339.8597	28.95	96295.090	0.877	2.587		1.43	1.55	NO	226.7
	37	Total-pentafurans	339.8597	28.87	19514.340	0.877	0.524		1.51	1.55	NO	70.6
	37	Total-pentafurans	339.8597	32.60	5741.672	0.877	0.154		1.75	1.55	NO	15.4
	3	23478-PeCDF	339.8597	31.57	68872.515	0.880	1.862	1.862	1.43	1.55	NO	210.1
	37	Total-pentafurans	339.8597	31.42	41064.102	0.877	1.103		1.44	1.55	NO	124.8
	37	Total-pentafurans	339.8597	31.31	50795.691	0.877	1.365		1.38	1.55	NO	154.4
	37	Total-pentafurans	339.8597	31.07	3738.763	0.877	0.100		1.31	1.55	YES	10.9
	37	Total-pentafurans	339.8597	30.70	2153.496	0.877	0.058		1.13	1.55	YES	6.9
	37	Total-pentafurans	339.8597	30.53	18276.615	0.877	0.491		1.38	1.55	NO	57.6
	7	123789-HxCDF	373.8208	37.47	39028.037	0.959	1.442	1.442	1.23	1.24	NO	89.5
	5	234678-HxCDF	373.8208	36.34	111926.984	1.088	3.599	3.599	1.14	1.24	NO	165.1
	38	Total-hexafurans	373.8208	35.99	4926.273	1.030	0.161		1.29	1.24	NO	13.2
	38	Total-hexafurans	373.8208	35.77	7709.230	1.030	0.252		1.03	1.24	YES	15.2
	38	Total-hexafurans	373.8208	35.64	3182.500	1.030	0.104		1.32	1.24	NO	9.9
	6	123678-HxCDF	373.8208	35.41	79030.226	1.025	2.444	2.444	1.23	1.24	NO	199.7
	4	123478-HxCDF	373.8208	35.26	144990.727	1.048	4.562	4.562	1.16	1.24	NO	347.5
	38	Total-hexafurans	373.8208	35.10	44109.795	1.030	1.443		1.15	1.24	NO	103.6

ID: WY32A, Name: 13080109, Date: 01-Aug-2013, Time: 16:28:11, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	38	Total-hexafurans	373.8208	34.61	1149741.250	1.030	37.620		1.19	1.24	NO	2816.6
	38	Total-hexafurans	373.8208	34.29	18839.483	1.030	0.616		1.23	1.24	NO	45.2
	38	Total-hexafurans	373.8208	34.00	5026.539	1.030	0.164		0.94	1.24	YES	10.4
	38	Total-hexafurans	373.8208	33.74	853613.187	1.030	27.930		1.18	1.24	NO	2018.3
	38	Total-hexafurans	373.8208	33.53	255221.141	1.030	8.351		1.19	1.24	NO	626.8
	9	1234789-HpCDF	407.7818	42.29	85111.719	1.200	4.254	4.254	0.98	1.05	NO	165.3
	39	Total-heptafurans	407.7818	41.39	2565.168	1.207	0.114		1.54	1.05	YES	7.9
	39	Total-heptafurans	407.7818	40.37	3223309.750	1.207	143.682		1.00	1.05	NO	7092.3
	39	Total-heptafurans	407.7818	40.07	29732.439	1.207	1.325		1.04	1.05	NO	59.9
	8	1234678-HpCDF	407.7818	39.58	1384966.501	1.215	55.644	55.644	1.01	1.05	NO	3224.1
	10	OCDF	441.7428	47.62	2474785.875	1.064	210.689	210....	0.86	0.89	NO	5226.8
	36	Total-penta1	339.8597	27.50	636221.437		16.347		1.54	1.55	NO	2776.8

TD

	41	Total-tetradioxins	319.8965	25.69	10799.406	0.994	0.340		0.77	0.77	NO	27.8
	41	Total-tetradioxins	319.8965	25.58	2485.510	0.994	0.078		1.09	0.77	YES	6.6
	41	Total-tetradioxins	319.8965	25.33	21769.364	0.994	0.685		0.80	0.77	NO	49.4
	41	Total-tetradioxins	319.8965	25.05	16210.938	0.994	0.510		0.86	0.77	NO	33.9
	41	Total-tetradioxins	319.8965	24.84	3704.613	0.994	0.117		0.97	0.77	YES	9.3
	41	Total-tetradioxins	319.8965	24.33	5557.020	0.994	0.175		0.64	0.77	YES	11.7
	41	Total-tetradioxins	319.8965	24.12	44714.508	0.994	1.407		0.78	0.77	NO	110.4
	41	Total-tetradioxins	319.8965	23.85	55735.721	0.994	1.754		0.77	0.77	NO	141.3
	41	Total-tetradioxins	319.8965	27.30	6062.209	0.994	0.191		0.71	0.77	NO	11.4
	41	Total-tetradioxins	319.8965	26.84	12031.193	0.994	0.379		0.84	0.77	NO	27.6
	11	2378-TCDD	319.8965	26.71	13996.592	0.994	0.440	0.440	0.67	0.77	NO	30.6
	41	Total-tetradioxins	319.8965	26.33	21346.272	0.994	0.672		0.77	0.77	NO	36.2
	41	Total-tetradioxins	319.8965	26.03	2268.266	0.994	0.071		1.14	0.77	YES	7.1
	41	Total-tetradioxins	319.8965	25.90	7998.918	0.994	0.252		0.77	0.77	NO	20.3

PD

	42	Total-pentadioxins	355.8546	31.14	21915.198	0.976	0.761		1.41	1.55	NO	75.9
	42	Total-pentadioxins	355.8546	30.76	45680.805	0.976	1.586		1.57	1.55	NO	133.6
	42	Total-pentadioxins	355.8546	30.58	45232.285	0.976	1.570		1.57	1.55	NO	195.8
	42	Total-pentadioxins	355.8546	30.44	45011.043	0.976	1.562		1.53	1.55	NO	185.1
	42	Total-pentadioxins	355.8546	30.23	53913.397	0.976	1.871		1.57	1.55	NO	227.1
	42	Total-pentadioxins	355.8546	29.61	25474.556	0.976	0.884		1.62	1.55	NO	102.2
	42	Total-pentadioxins	355.8546	29.13	106863.692	0.976	3.709		1.51	1.55	NO	280.7
	42	Total-pentadioxins	355.8546	32.23	16075.979	0.976	0.558		1.46	1.55	NO	63.2
	12	12378-PeCDD	355.8546	31.82	55952.826	0.976	1.942	1.942	1.54	1.55	NO	200.4

D: WY32A, Name: 13080109, Date: 01-Aug-2013, Time: 16:28:11, Conditions: AUTOSPEC01, User: pk

HD

	15 123789-HxCDD	389.8157	37.05	145107.457	0.914	5.991	5.991	1.26	1.24	NO	326.7
	43 Total-hexadioxins	389.8157	36.81	47950.984	0.928	1.951		1.30	1.24	NO	102.5
	14 123678-HxCDD	389.8157	36.62	281076.141	0.902	11.552	11.552	1.23	1.24	NO	604.9
	13 123478-HxCDD	389.8157	36.50	70651.685	0.967	2.809	2.809	1.28	1.24	NO	156.1
	43 Total-hexadioxins	389.8157	35.65	121693.379	0.928	4.951		1.26	1.24	NO	273.3
	43 Total-hexadioxins	389.8157	35.53	787061.344	0.928	32.020		1.24	1.24	NO	1141.4
	43 Total-hexadioxins	389.8157	35.14	161687.821	0.928	6.578		1.23	1.24	NO	349.3
	43 Total-hexadioxins	389.8157	34.33	599540.625	0.928	24.391		1.22	1.24	NO	1323.1

HPD

	16 1234678-HpCDD	423.7766	41.40	5790517.000	0.999	309.275	309....	1.04	1.05	NO	4588.2
	44 Total-heptadioxins	423.7766	40.13	8792658.000	0.999	469.621		1.03	1.05	NO	7319.9

Dataset: P:\DIOXIN8290.PRO\130801DATA1.qld
Last Altered: Wednesday, August 07, 2013 11:20:26 Pacific Daylight Time
Printed: Wednesday, August 07, 2013 11:22:31 Pacific Daylight Time

D: WY32A, Name: 13080109, Date: 01-Aug-2013, Time: 16:28:11, Conditions: AUTOSPEC01, User: pk

Dioxins,TD,PD,HD,HPD,OD

	41	Total-tetradioxins	319.8965	25.69	10799.406	0.994	0.340		0.77	0.77	NO	27.8
	41	Total-tetradioxins	319.8965	25.58	2485.510	0.994	0.078		1.09	0.77	YES	6.6
	41	Total-tetradioxins	319.8965	25.33	21769.364	0.994	0.685		0.80	0.77	NO	49.4
	41	Total-tetradioxins	319.8965	25.05	16210.938	0.994	0.510		0.86	0.77	NO	33.9
	41	Total-tetradioxins	319.8965	24.84	3704.613	0.994	0.117		0.97	0.77	YES	9.3
	41	Total-tetradioxins	319.8965	24.33	5557.020	0.994	0.175		0.64	0.77	YES	11.7
	41	Total-tetradioxins	319.8965	24.12	44714.508	0.994	1.407		0.78	0.77	NO	110.4
	41	Total-tetradioxins	319.8965	23.85	55735.721	0.994	1.754		0.77	0.77	NO	141.3
	41	Total-tetradioxins	319.8965	27.30	6062.209	0.994	0.191		0.71	0.77	NO	11.4
	41	Total-tetradioxins	319.8965	26.84	12031.193	0.994	0.379		0.84	0.77	NO	27.6
	11	2378-TCDD	319.8965	26.71	13996.592	0.994	0.440	0.440	0.67	0.77	NO	30.6
	41	Total-tetradioxins	319.8965	26.33	21346.272	0.994	0.672		0.77	0.77	NO	36.2
	41	Total-tetradioxins	319.8965	26.03	2268.266	0.994	0.071		1.14	0.77	YES	7.1
	41	Total-tetradioxins	319.8965	25.90	7998.918	0.994	0.252		0.77	0.77	NO	20.3
	42	Total-pentadioxins	355.8546	31.14	21915.198	0.976	0.761		1.41	1.55	NO	75.9
	42	Total-pentadioxins	355.8546	30.76	45680.805	0.976	1.586		1.57	1.55	NO	133.6
	42	Total-pentadioxins	355.8546	30.58	45232.285	0.976	1.570		1.57	1.55	NO	195.8
	42	Total-pentadioxins	355.8546	30.44	45011.043	0.976	1.562		1.53	1.55	NO	185.1
	42	Total-pentadioxins	355.8546	30.23	53913.397	0.976	1.871		1.57	1.55	NO	227.1
	42	Total-pentadioxins	355.8546	29.61	25474.556	0.976	0.884		1.62	1.55	NO	102.2
	42	Total-pentadioxins	355.8546	29.13	106863.692	0.976	3.709		1.51	1.55	NO	280.7
	42	Total-pentadioxins	355.8546	32.23	16075.979	0.976	0.558		1.46	1.55	NO	63.2
	12	12378-PeCDD	355.8546	31.82	55952.826	0.976	1.942	1.942	1.54	1.55	NO	200.4
	15	123789-HxCDD	389.8157	37.05	145107.457	0.914	5.991	5.991	1.26	1.24	NO	326.7
	43	Total-hexadioxins	389.8157	36.81	47950.984	0.928	1.951		1.30	1.24	NO	102.5
	14	123678-HxCDD	389.8157	36.62	281076.141	0.902	11.552	11.552	1.23	1.24	NO	604.9
	13	123478-HxCDD	389.8157	36.50	70651.685	0.967	2.809	2.809	1.28	1.24	NO	156.1
	43	Total-hexadioxins	389.8157	35.65	121693.379	0.928	4.951		1.26	1.24	NO	273.3
	43	Total-hexadioxins	389.8157	35.53	787061.344	0.928	32.020		1.24	1.24	NO	1141.4
	43	Total-hexadioxins	389.8157	35.14	161687.821	0.928	6.578		1.23	1.24	NO	349.3
	43	Total-hexadioxins	389.8157	34.33	599540.625	0.928	24.391		1.22	1.24	NO	1323.1
	16	1234678-HpCDD	423.7766	41.40	5790517.000	0.999	309.275	309....	1.04	1.05	NO	4588.2
	44	Total-heptadioxins	423.7766	40.13	8792658.000	0.999	469.621		1.03	1.05	NO	7319.9
	17	OCDD	457.7377	47.35	35201552....	0.979	3257.5...	3257...	0.89	0.89	NO	55505.1

Dataset: P:\DIOXIN8290.PRO\130801DATA1.qld
Last Altered: Wednesday, August 07, 2013 11:20:26 Pacific Daylight Time
Printed: Wednesday, August 07, 2013 11:22:31 Pacific Daylight Time

ID: WY32A, Name: 13080109, Date: 01-Aug-2013, Time: 16:28:11, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	35	Total-tetrafurans	303.9016	24.73	81874.442	0.867	2.654		0.68	0.77	NO	99.5
	35	Total-tetrafurans	303.9016	24.32	21355.587	0.867	0.692		0.78	0.77	NO	35.7
	35	Total-tetrafurans	303.9016	24.17	29795.064	0.867	0.966		0.85	0.77	NO	51.1
	35	Total-tetrafurans	303.9016	24.06	31493.129	0.867	1.021		0.76	0.77	NO	50.7
	35	Total-tetrafurans	303.9016	23.91	13863.641	0.867	0.449		0.80	0.77	NO	25.6
	35	Total-tetrafurans	303.9016	23.82	29636.739	0.867	0.961		0.76	0.77	NO	51.8
	35	Total-tetrafurans	303.9016	23.72	73407.155	0.867	2.379		0.72	0.77	NO	98.6
	35	Total-tetrafurans	303.9016	23.60	22004.841	0.867	0.713		0.96	0.77	YES	42.0
	35	Total-tetrafurans	303.9016	23.54	24219.720	0.867	0.785		0.73	0.77	NO	43.7
	35	Total-tetrafurans	303.9016	23.42	78302.192	0.867	2.538		0.82	0.77	NO	118.5
	35	Total-tetrafurans	303.9016	22.84	20596.993	0.867	0.668		0.71	0.77	NO	34.3
	35	Total-tetrafurans	303.9016	22.57	14451.066	0.867	0.468		0.71	0.77	NO	23.6
	35	Total-tetrafurans	303.9016	27.50	11246.312	0.867	0.365		0.78	0.77	NO	12.9
	35	Total-tetrafurans	303.9016	26.59	2030.361	0.867	0.066		0.70	0.77	NO	3.6
	35	Total-tetrafurans	303.9016	26.30	66876.426	0.867	2.168		0.72	0.77	NO	101.7
	35	Total-tetrafurans	303.9016	26.20	34498.154	0.867	1.118		0.72	0.77	NO	57.8
	1	2378-TCDF	303.9016	26.08	44072.598	0.867	1.428	1.428	0.71	0.77	NO	72.1
	35	Total-tetrafurans	303.9016	25.84	134864.117	0.867	4.371		0.72	0.77	NO	169.7
	35	Total-tetrafurans	303.9016	25.57	34934.615	0.867	1.132		0.68	0.77	NO	55.2
	35	Total-tetrafurans	303.9016	25.38	21311.797	0.867	0.691		0.78	0.77	NO	32.8
	35	Total-tetrafurans	303.9016	25.15	50791.893	0.867	1.646		0.77	0.77	NO	83.4
	35	Total-tetrafurans	303.9016	24.99	59577.100	0.867	1.931		0.74	0.77	NO	88.3
	35	Total-tetrafurans	303.9016	24.84	26407.613	0.867	0.856		0.78	0.77	NO	46.2
	37	Total-pentafurans	339.8597	30.42	57834.629	0.877	1.554		1.36	1.55	NO	178.8
	2	12378-PeCDF	339.8597	30.22	42392.334	0.875	1.131	1.131	1.53	1.55	NO	134.0
	37	Total-pentafurans	339.8597	29.87	138545.707	0.877	3.722		1.43	1.55	NO	260.0
	37	Total-pentafurans	339.8597	29.75	8055.335	0.877	0.216		1.91	1.55	YES	28.0
	37	Total-pentafurans	339.8597	29.64	25290.570	0.877	0.679		1.42	1.55	NO	68.0
	37	Total-pentafurans	339.8597	29.45	6283.125	0.877	0.169		1.37	1.55	NO	19.1
	37	Total-pentafurans	339.8597	29.28	4851.499	0.877	0.130		1.53	1.55	NO	14.3
	37	Total-pentafurans	339.8597	29.15	215318.281	0.877	5.784		1.37	1.55	NO	651.4
	37	Total-pentafurans	339.8597	29.08	108558.090	0.877	2.916		1.72	1.55	NO	403.0
	37	Total-pentafurans	339.8597	28.95	96295.090	0.877	2.587		1.43	1.55	NO	226.7
	37	Total-pentafurans	339.8597	28.87	19514.340	0.877	0.524		1.51	1.55	NO	70.6
	37	Total-pentafurans	339.8597	32.60	5741.672	0.877	0.154		1.75	1.55	NO	15.4
	3	23478-PeCDF	339.8597	31.57	68872.515	0.880	1.862	1.862	1.43	1.55	NO	210.1
	37	Total-pentafurans	339.8597	31.42	41064.102	0.877	1.103		1.44	1.55	NO	124.8
	37	Total-pentafurans	339.8597	31.31	50795.691	0.877	1.365		1.38	1.55	NO	154.4
	37	Total-pentafurans	339.8597	31.07	3738.763	0.877	0.100		1.31	1.55	YES	10.9
	37	Total-pentafurans	339.8597	30.70	2153.496	0.877	0.058		1.13	1.55	YES	6.9
	37	Total-pentafurans	339.8597	30.53	18276.615	0.877	0.491		1.38	1.55	NO	57.6
	7	123789-HxCDF	373.8208	37.47	39028.037	0.959	1.442	1.442	1.23	1.24	NO	89.5
	5	234678-HxCDF	373.8208	36.34	111926.984	1.088	3.599	3.599	1.14	1.24	NO	165.1
	38	Total-hexafurans	373.8208	35.99	4926.273	1.030	0.161		1.29	1.24	NO	13.2
	38	Total-hexafurans	373.8208	35.77	7709.230	1.030	0.252		1.03	1.24	YES	15.2
	38	Total-hexafurans	373.8208	35.64	3182.500	1.030	0.104		1.32	1.24	NO	9.9
	6	123678-HxCDF	373.8208	35.41	79030.226	1.025	2.444	2.444	1.23	1.24	NO	199.7
	4	123478-HxCDF	373.8208	35.26	144990.727	1.048	4.562	4.562	1.16	1.24	NO	347.5
	38	Total-hexafurans	373.8208	35.10	44109.795	1.030	1.443		1.15	1.24	NO	108.6

Dataset: P:\DIOXIN8290.PRO\130801DATA1.qld
Last Altered: Wednesday, August 07, 2013 11:20:26 Pacific Daylight Time
Printed: Wednesday, August 07, 2013 11:22:31 Pacific Daylight Time

ID: WY32A, Name: 13080109, Date: 01-Aug-2013, Time: 16:28:11, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	38	Total-hexafurans	373.8208	34.61	1149741.250	1.030	37.620		1.19	1.24	NO	2816.6
	38	Total-hexafurans	373.8208	34.29	18839.483	1.030	0.616		1.23	1.24	NO	45.2
	38	Total-hexafurans	373.8208	34.00	5026.539	1.030	0.164		0.94	1.24	YES	10.4
	38	Total-hexafurans	373.8208	33.74	853613.187	1.030	27.930		1.18	1.24	NO	2018.3
	38	Total-hexafurans	373.8208	33.53	255221.141	1.030	8.351		1.19	1.24	NO	626.8
	9	1234789-HpCDF	407.7818	42.29	85111.719	1.200	4.254	4.254	0.98	1.05	NO	165.3
	39	Total-heptafurans	407.7818	41.39	2565.168	1.207	0.114		1.54	1.05	YES	7.9
	39	Total-heptafurans	407.7818	40.37	3223309.750	1.207	143.682		1.00	1.05	NO	7092.3
	39	Total-heptafurans	407.7818	40.07	29732.439	1.207	1.325		1.04	1.05	NO	59.9
	8	1234678-HpCDF	407.7818	39.58	1384966.501	1.215	55.644	55.644	1.01	1.05	NO	3224.1
	10	OCDF	441.7428	47.62	2474785.875	1.064	210.689	210....	0.86	0.89	NO	5226.8
	36	Total-penta1	339.8597	27.50	636221.437		16.347		1.54	1.55	NO	2776.8
	41	Total-tetradioxins	319.8965	25.69	10799.406	0.994	0.340		0.77	0.77	NO	27.8
	41	Total-tetradioxins	319.8965	25.58	2485.510	0.994	0.078		1.09	0.77	YES	6.6
	41	Total-tetradioxins	319.8965	25.33	21769.364	0.994	0.685		0.80	0.77	NO	49.4
	41	Total-tetradioxins	319.8965	25.05	16210.938	0.994	0.510		0.86	0.77	NO	33.9
	41	Total-tetradioxins	319.8965	24.84	3704.613	0.994	0.117		0.97	0.77	YES	9.3
	41	Total-tetradioxins	319.8965	24.33	5557.020	0.994	0.175		0.64	0.77	YES	11.7
	41	Total-tetradioxins	319.8965	24.12	44714.508	0.994	1.407		0.78	0.77	NO	110.4
	41	Total-tetradioxins	319.8965	23.85	55735.721	0.994	1.754		0.77	0.77	NO	141.3
	41	Total-tetradioxins	319.8965	27.30	6062.209	0.994	0.191		0.71	0.77	NO	11.4
	41	Total-tetradioxins	319.8965	26.84	12031.193	0.994	0.379		0.84	0.77	NO	27.6
	11	2378-TCDD	319.8965	26.71	13996.592	0.994	0.440	0.440	0.67	0.77	NO	30.6
	41	Total-tetradioxins	319.8965	26.33	21346.272	0.994	0.672		0.77	0.77	NO	36.2
	41	Total-tetradioxins	319.8965	26.03	2268.266	0.994	0.071		1.14	0.77	YES	7.1
	41	Total-tetradioxins	319.8965	25.90	7998.918	0.994	0.252		0.77	0.77	NO	20.3
	42	Total-pentadioxins	355.8546	31.14	21915.198	0.976	0.761		1.41	1.55	NO	75.9
	42	Total-pentadioxins	355.8546	30.76	45680.805	0.976	1.586		1.57	1.55	NO	133.6
	42	Total-pentadioxins	355.8546	30.58	45232.285	0.976	1.570		1.57	1.55	NO	195.8
	42	Total-pentadioxins	355.8546	30.44	45011.043	0.976	1.562		1.53	1.55	NO	185.1
	42	Total-pentadioxins	355.8546	30.23	53913.397	0.976	1.871		1.57	1.55	NO	227.1
	42	Total-pentadioxins	355.8546	29.61	25474.556	0.976	0.884		1.62	1.55	NO	102.2
	42	Total-pentadioxins	355.8546	29.13	106863.692	0.976	3.709		1.51	1.55	NO	280.7
	42	Total-pentadioxins	355.8546	32.23	16075.979	0.976	0.558		1.46	1.55	NO	63.2
	12	12378-PeCDD	355.8546	31.82	55952.826	0.976	1.942	1.942	1.54	1.55	NO	200.4
	15	123789-HxCDD	389.8157	37.05	145107.457	0.914	5.991	5.991	1.26	1.24	NO	326.7
	43	Total-hexadioxins	389.8157	36.81	47950.984	0.928	1.951		1.30	1.24	NO	102.5
	14	123678-HxCDD	389.8157	36.62	281076.141	0.902	11.552	11.552	1.23	1.24	NO	604.9
	13	123478-HxCDD	389.8157	36.50	70651.685	0.967	2.809	2.809	1.28	1.24	NO	156.1
	43	Total-hexadioxins	389.8157	35.65	121693.379	0.928	4.951		1.26	1.24	NO	273.3
	43	Total-hexadioxins	389.8157	35.53	787061.344	0.928	32.020		1.24	1.24	NO	1141.4
	43	Total-hexadioxins	389.8157	35.14	161687.821	0.928	6.578		1.23	1.24	NO	349.3
	43	Total-hexadioxins	389.8157	34.33	599540.625	0.928	24.391		1.22	1.24	NO	1323.1
	16	1234678-HpCDD	423.7766	41.40	5790517.000	0.999	309.275	309....	1.04	1.05	NO	4588.2
	44	Total-heptadioxins	423.7766	40.13	8792658.000	0.999	469.621		1.03	1.05	NO	7319.9
	17	OCDD	457.7377	47.35	35201552....	0.979	3257.5...	3257...	0.89	0.89	NO	55505.1

ID: WY32A, Name: 13080109, Date: 01-Aug-2013, Time: 16:28:11, Conditions: AUTOSPEC01, User: pk

PFK1

	48 FUNCTION1 PFK	330.9792	26.35	0.000						1.0
	48 FUNCTION1 PFK	330.9792	26.02	0.000						0.4
	48 FUNCTION1 PFK	330.9792	25.42	0.000						0.5
	48 FUNCTION1 PFK	330.9792	25.30	0.000						1.3
	48 FUNCTION1 PFK	330.9792	24.33	0.000						0.9
	48 FUNCTION1 PFK	330.9792	23.66	0.000						0.5
	48 FUNCTION1 PFK	330.9792	22.76	0.000						1.6
	48 FUNCTION1 PFK	330.9792	22.28	0.000						0.4
	48 FUNCTION1 PFK	330.9792	22.22	0.000						0.6
	48 FUNCTION1 PFK	330.9792	22.13	0.000						1.7
	48 FUNCTION1 PFK	330.9792	21.83	0.000						1.4
	48 FUNCTION1 PFK	330.9792	21.52	0.000						1.4
	48 FUNCTION1 PFK	330.9792	21.27	0.000						0.6
	48 FUNCTION1 PFK	330.9792	28.11	0.000						0.7
	48 FUNCTION1 PFK	330.9792	28.01	0.000						2.2
	48 FUNCTION1 PFK	330.9792	27.81	0.000						1.1
	48 FUNCTION1 PFK	330.9792	27.51	0.000						3.1
	48 FUNCTION1 PFK	330.9792	27.47	0.000						3.0
	48 FUNCTION1 PFK	330.9792	27.35	0.000						0.6
	48 FUNCTION1 PFK	330.9792	26.69	0.000						1.0

PFK2

	49 FUNCTION2 PFK	366.9792	29.03	0.000	0.000					1.7
	49 FUNCTION2 PFK	366.9792	28.65	0.000	0.000					1.6

Dataset: P:\DIOXIN8290.PRO\130801DATA1.qld
Last Altered: Wednesday, August 07, 2013 11:20:26 Pacific Daylight Time
Printed: Wednesday, August 07, 2013 11:22:31 Pacific Daylight Time

D: WY32A, Name: 13080109, Date: 01-Aug-2013, Time: 16:28:11, Conditions: AUTOSPEC01, User: pk

PFK3

	50 FUNCTION3 PFK	380.9760	33.87	0.000	0.000					10.3
	50 FUNCTION3 PFK	380.9760	33.43	0.000	0.000					26.3
	50 FUNCTION3 PFK	380.9760	33.31	0.000	0.000					31.4
	50 FUNCTION3 PFK	380.9760	33.25	0.000	0.000					33.6
	50 FUNCTION3 PFK	380.9760	33.20	0.000	0.000					35.4
	50 FUNCTION3 PFK	380.9760	38.04	0.000	0.000					1.3
	50 FUNCTION3 PFK	380.9760	37.91	0.000	0.000					1.0
	50 FUNCTION3 PFK	380.9760	37.82	0.000	0.000					1.1
	50 FUNCTION3 PFK	380.9760	37.68	0.000	0.000					1.4
	50 FUNCTION3 PFK	380.9760	37.03	0.000	0.000					1.5
	50 FUNCTION3 PFK	380.9760	36.95	0.000	0.000					0.7
	50 FUNCTION3 PFK	380.9760	36.71	0.000	0.000					0.8
	50 FUNCTION3 PFK	380.9760	36.63	0.000	0.000					1.2
	50 FUNCTION3 PFK	380.9760	36.54	0.000	0.000					1.1
	50 FUNCTION3 PFK	380.9760	35.78	0.000	0.000					1.8
	50 FUNCTION3 PFK	380.9760	35.53	0.000	0.000					0.4
	50 FUNCTION3 PFK	380.9760	34.86	0.000	0.000					0.7
	50 FUNCTION3 PFK	380.9760	34.78	0.000	0.000					1.4
	50 FUNCTION3 PFK	380.9760	34.67	0.000	0.000					1.1
	50 FUNCTION3 PFK	380.9760	34.05	0.000	0.000					3.4
	50 FUNCTION3 PFK	380.9760	33.99	0.000	0.000					5.9
	50 FUNCTION3 PFK	380.9760	38.48	0.000	0.000					1.1
	50 FUNCTION3 PFK	380.9760	38.36	0.000	0.000					1.7
	50 FUNCTION3 PFK	380.9760	38.23	0.000	0.000					1.0

Dataset: P:\DIOXIN8290.PRO\130801DATA1.qld
Last Altered: Wednesday, August 07, 2013 11:20:26 Pacific Daylight Time
Printed: Wednesday, August 07, 2013 11:22:31 Pacific Daylight Time

D: WY32A, Name: 13080109, Date: 01-Aug-2013, Time: 16:28:11, Conditions: AUTOSPEC01, User: pk

PFK4

[redacted]	51 FUNCTION4 PFK	430.9728	40.55	0.000							2.0
[redacted]	51 FUNCTION4 PFK	430.9728	40.49	0.000							2.9
[redacted]	51 FUNCTION4 PFK	430.9728	40.27	0.000							1.1
[redacted]	51 FUNCTION4 PFK	430.9728	39.90	0.000							1.0
[redacted]	51 FUNCTION4 PFK	430.9728	39.77	0.000							1.0
[redacted]	51 FUNCTION4 PFK	430.9728	39.71	0.000							2.0
[redacted]	51 FUNCTION4 PFK	430.9728	39.29	0.000							1.8
[redacted]	51 FUNCTION4 PFK	430.9728	39.17	0.000							0.4
[redacted]	51 FUNCTION4 PFK	430.9728	38.97	0.000							2.1
[redacted]	51 FUNCTION4 PFK	430.9728	38.88	0.000							3.7
[redacted]	51 FUNCTION4 PFK	430.9728	38.75	0.000							2.7
[redacted]	51 FUNCTION4 PFK	430.9728	38.61	0.000							0.7
[redacted]	51 FUNCTION4 PFK	430.9728	43.50	0.000							1.9
[redacted]	51 FUNCTION4 PFK	430.9728	43.38	0.000							3.0
[redacted]	51 FUNCTION4 PFK	430.9728	43.04	0.000							1.0
[redacted]	51 FUNCTION4 PFK	430.9728	42.26	0.000							0.9
[redacted]	51 FUNCTION4 PFK	430.9728	41.97	0.000							0.7
[redacted]	51 FUNCTION4 PFK	430.9728	41.91	0.000							1.4
[redacted]	51 FUNCTION4 PFK	430.9728	41.81	0.000							0.8
[redacted]	51 FUNCTION4 PFK	430.9728	41.56	0.000							1.6
[redacted]	51 FUNCTION4 PFK	430.9728	41.47	0.000							0.8
[redacted]	51 FUNCTION4 PFK	430.9728	41.44	0.000							0.6
[redacted]	51 FUNCTION4 PFK	430.9728	41.25	0.000							0.7
[redacted]	51 FUNCTION4 PFK	430.9728	41.10	0.000							1.2
[redacted]	51 FUNCTION4 PFK	430.9728	41.01	0.000							2.0
[redacted]	51 FUNCTION4 PFK	430.9728	40.93	0.000							0.9
[redacted]	51 FUNCTION4 PFK	430.9728	40.90	0.000							1.5
[redacted]	51 FUNCTION4 PFK	430.9728	40.60	0.000							2.1
[redacted]	51 FUNCTION4 PFK	430.9728	44.86	0.000							2.2
[redacted]	51 FUNCTION4 PFK	430.9728	44.70	0.000							0.8
[redacted]	51 FUNCTION4 PFK	430.9728	44.64	0.000							1.1
[redacted]	51 FUNCTION4 PFK	430.9728	44.59	0.000							0.9
[redacted]	51 FUNCTION4 PFK	430.9728	44.55	0.000							1.2
[redacted]	51 FUNCTION4 PFK	430.9728	44.00	0.000							1.0
[redacted]	51 FUNCTION4 PFK	430.9728	43.92	0.000							0.9
[redacted]	51 FUNCTION4 PFK	430.9728	43.89	0.000							1.6
[redacted]	51 FUNCTION4 PFK	430.9728	43.80	0.000							1.8

Dataset: P:\DIOXIN8290.PRO\130801DATA1.qld
Last Altered: Wednesday, August 07, 2013 11:20:26 Pacific Daylight Time
Printed: Wednesday, August 07, 2013 11:22:31 Pacific Daylight Time

D: WY32A, Name: 13080109, Date: 01-Aug-2013, Time: 16:28:11, Conditions: AUTOSPEC01, User: pk

PFK5

	52	FUNCTION5	PFK	480.9696	45.82	0.000					0.9
	52	FUNCTION5	PFK	480.9696	45.65	0.000					0.8
	52	FUNCTION5	PFK	480.9696	45.53	0.000					0.6
	52	FUNCTION5	PFK	480.9696	45.49	0.000					0.9
	52	FUNCTION5	PFK	480.9696	45.40	0.000					0.9
	52	FUNCTION5	PFK	480.9696	45.37	0.000					1.3
	52	FUNCTION5	PFK	480.9696	47.47	0.000					1.1
	52	FUNCTION5	PFK	480.9696	47.43	0.000					0.5
	52	FUNCTION5	PFK	480.9696	47.39	0.000					0.8
	52	FUNCTION5	PFK	480.9696	47.27	0.000					1.6
	52	FUNCTION5	PFK	480.9696	47.06	0.000					1.3
	52	FUNCTION5	PFK	480.9696	47.03	0.000					0.6
	52	FUNCTION5	PFK	480.9696	46.99	0.000					1.3
	52	FUNCTION5	PFK	480.9696	46.91	0.000					1.6
	52	FUNCTION5	PFK	480.9696	46.88	0.000					1.9
	52	FUNCTION5	PFK	480.9696	46.82	0.000					1.1
	52	FUNCTION5	PFK	480.9696	46.67	0.000					0.8
	52	FUNCTION5	PFK	480.9696	46.59	0.000					1.2
	52	FUNCTION5	PFK	480.9696	46.44	0.000					0.6
	52	FUNCTION5	PFK	480.9696	46.09	0.000					0.8
	52	FUNCTION5	PFK	480.9696	46.01	0.000					0.4
	52	FUNCTION5	PFK	480.9696	45.95	0.000					0.9
	52	FUNCTION5	PFK	480.9696	49.02	0.000					1.3
	52	FUNCTION5	PFK	480.9696	48.95	0.000					0.9
	52	FUNCTION5	PFK	480.9696	48.87	0.000					1.7
	52	FUNCTION5	PFK	480.9696	48.82	0.000					1.7
	52	FUNCTION5	PFK	480.9696	48.75	0.000					1.3
	52	FUNCTION5	PFK	480.9696	48.65	0.000					0.8
	52	FUNCTION5	PFK	480.9696	48.62	0.000					0.5
	52	FUNCTION5	PFK	480.9696	48.58	0.000					0.6
	52	FUNCTION5	PFK	480.9696	48.42	0.000					0.5
	52	FUNCTION5	PFK	480.9696	48.31	0.000					1.1
	52	FUNCTION5	PFK	480.9696	48.20	0.000					0.8
	52	FUNCTION5	PFK	480.9696	48.11	0.000					0.7
	52	FUNCTION5	PFK	480.9696	47.99	0.000					0.3
	52	FUNCTION5	PFK	480.9696	47.89	0.000					0.7
	52	FUNCTION5	PFK	480.9696	47.56	0.000					1.7
	52	FUNCTION5	PFK	480.9696	47.50	0.000					0.5

Dataset: P:\DIOXIN8290.PRO\130801DATA1.qld
Last Altered: Wednesday, August 07, 2013 11:20:26 Pacific Daylight Time
Printed: Wednesday, August 07, 2013 11:22:31 Pacific Daylight Time

ID: WY32A, Name: 13080109, Date: 01-Aug-2013, Time: 16:28:11, Conditions: AUTOSPEC01, User: pk

OTHERS1

	53	FUNCTION1 HXCD...	375.8364	26.50	0.000	0.000				2.4
	53	FUNCTION1 HXCD...	375.8364	26.47	0.000	0.000				2.4
	53	FUNCTION1 HXCD...	375.8364	26.21	0.000	0.000				1.3
	53	FUNCTION1 HXCD...	375.8364	26.11	0.000	0.000				2.3
	53	FUNCTION1 HXCD...	375.8364	25.75	0.000	0.000				3.3
	53	FUNCTION1 HXCD...	375.8364	25.57	0.000	0.000				1.5
	53	FUNCTION1 HXCD...	375.8364	25.08	0.000	0.000				11.1
	53	FUNCTION1 HXCD...	375.8364	24.37	0.000	0.000				1.9
	53	FUNCTION1 HXCD...	375.8364	24.08	0.000	0.000				3.7
	53	FUNCTION1 HXCD...	375.8364	23.93	0.000	0.000				68.2
	53	FUNCTION1 HXCD...	375.8364	23.66	0.000	0.000				1.4
	53	FUNCTION1 HXCD...	375.8364	22.55	0.000	0.000				3.4
	53	FUNCTION1 HXCD...	375.8364	22.52	0.000	0.000				3.3
	53	FUNCTION1 HXCD...	375.8364	22.45	0.000	0.000				3.5
	53	FUNCTION1 HXCD...	375.8364	21.79	0.000	0.000				6.1
	53	FUNCTION1 HXCD...	375.8364	28.06	0.000	0.000				14.6
	53	FUNCTION1 HXCD...	375.8364	27.63	0.000	0.000				2.5
	53	FUNCTION1 HXCD...	375.8364	27.56	0.000	0.000				2.5
	53	FUNCTION1 HXCD...	375.8364	27.38	0.000	0.000				1.3
	53	FUNCTION1 HXCD...	375.8364	27.09	0.000	0.000				2.2
	53	FUNCTION1 HXCD...	375.8364	26.87	0.000	0.000				1.7
	53	FUNCTION1 HXCD...	375.8364	26.81	0.000	0.000				2.6
	53	FUNCTION1 HXCD...	375.8364	26.72	0.000	0.000				2.3
	53	FUNCTION1 HXCD...	375.8364	26.63	0.000	0.000				1.6

OTHERS2

	54	FUNCTION1 HPCD...	409.7974	25.08	0.000	0.000				13.0
	54	FUNCTION1 HPCD...	409.7974	24.15	0.000	0.000				2.2
	54	FUNCTION1 HPCD...	409.7974	23.90	0.000	0.000				2.0
	54	FUNCTION1 HPCD...	409.7974	23.61	0.000	0.000				22.5
	54	FUNCTION1 HPCD...	409.7974	22.36	0.000	0.000				7.1
	54	FUNCTION1 HPCD...	409.7974	21.22	0.000	0.000				2.1
	54	FUNCTION1 HPCD...	409.7974	28.26	0.000	0.000				2.4
	54	FUNCTION1 HPCD...	409.7974	27.56	0.000	0.000				1.7
	54	FUNCTION1 HPCD...	409.7974	26.71	0.000	0.000				1.9
	54	FUNCTION1 HPCD...	409.7974	25.81	0.000	0.000				1.3

D: WY32A, Name: 13080109, Date: 01-Aug-2013, Time: 16:28:11, Conditions: AUTOSPEC01, User: pk

ETHERS3

	55	FUNCTION2 HPCD...	409.7974	32.38	0.000	0.000					1.8
	55	FUNCTION2 HPCD...	409.7974	30.98	0.000	0.000					1.8
	55	FUNCTION2 HPCD...	409.7974	30.45	0.000	0.000					1.7
	55	FUNCTION2 HPCD...	409.7974	30.19	0.000	0.000					15.6
	55	FUNCTION2 HPCD...	409.7974	29.87	0.000	0.000					2.4
	55	FUNCTION2 HPCD...	409.7974	29.63	0.000	0.000					7.0
	55	FUNCTION2 HPCD...	409.7974	29.59	0.000	0.000					3.3
	55	FUNCTION2 HPCD...	409.7974	29.41	0.000	0.000					2.1
	55	FUNCTION2 HPCD...	409.7974	29.27	0.000	0.000					4.9

ETHERS4

	56	FUNCTION3 OCDPE	445.7555	33.42	0.000	0.000					7.7
	56	FUNCTION3 OCDPE	445.7555	36.88	0.000	0.000					2.0
	56	FUNCTION3 OCDPE	445.7555	35.17	0.000	0.000					1.7
	56	FUNCTION3 OCDPE	445.7555	34.54	0.000	0.000					3.2

ETHERS5

	57	FUNCTION4 NCDPE	479.7165	42.84	0.000	0.000					5.1
	57	FUNCTION4 NCDPE	479.7165	42.77	0.000	0.000					8.6
	57	FUNCTION4 NCDPE	479.7165	41.38	0.000	0.000					5.0
	57	FUNCTION4 NCDPE	479.7165	40.10	0.000	0.000					3.1

ETHERS6

	58	FUNCTION5 DCDPE	513.6775	47.38	0.000	0.000					2.9
	58	FUNCTION5 DCDPE	513.6775	47.35	0.000	0.000					3.0
	58	FUNCTION5 DCDPE	513.6775	47.17	0.000	0.000					3.9

Dataset: P:\DIOXIN8290.PRO\130801DATA1.qld
Last Altered: Wednesday, August 07, 2013 11:20:26 Pacific Daylight Time
Printed: Wednesday, August 07, 2013 11:22:31 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130716.mdb 24 Jul 2013 13:56:23
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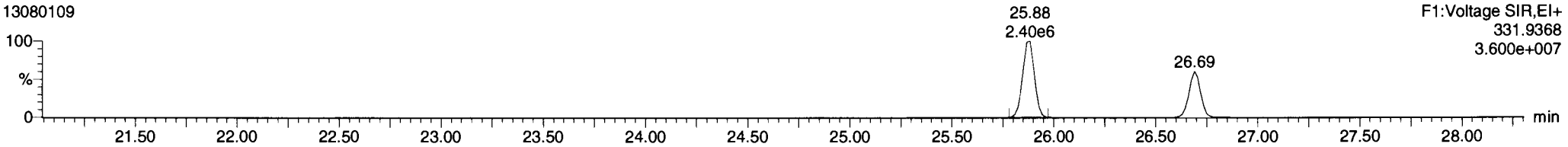
ID: WY32A, Name: 13080109, Date: 01-Aug-2013, Time: 16:28:11, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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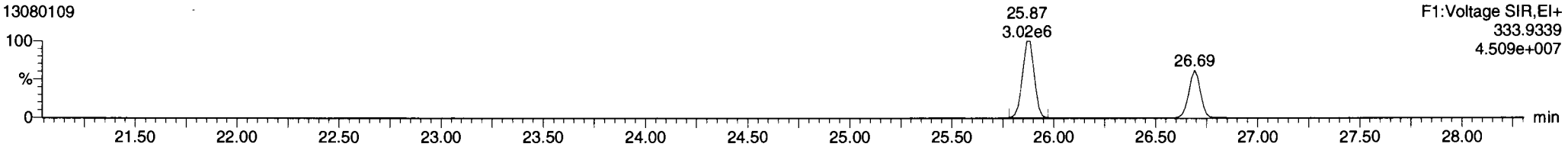

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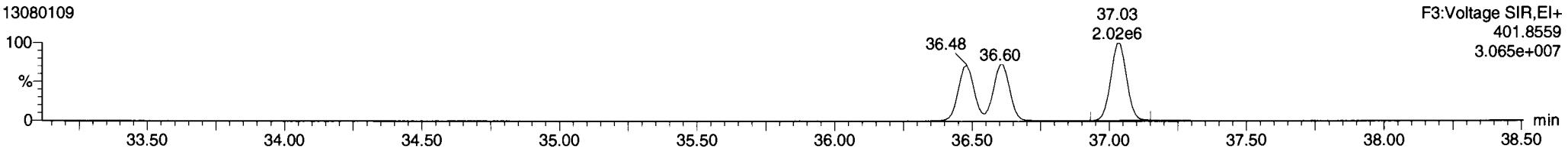

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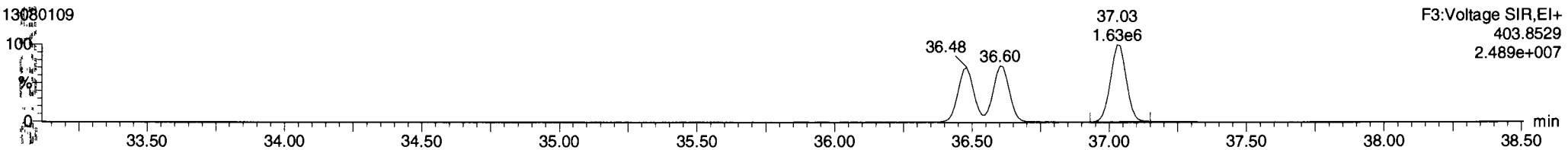

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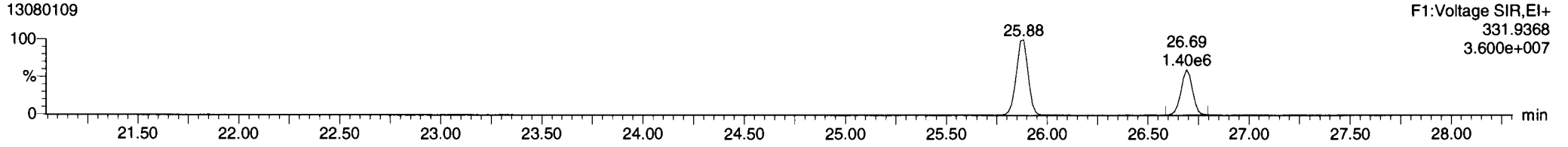
ID: WY32A, Name: 13080109, Date: 01-Aug-2013, Time: 16:28:11, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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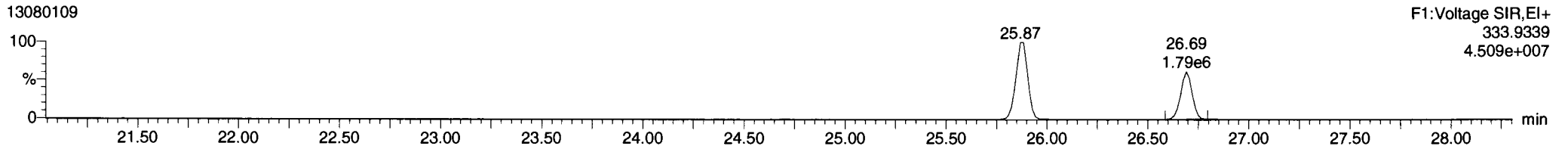
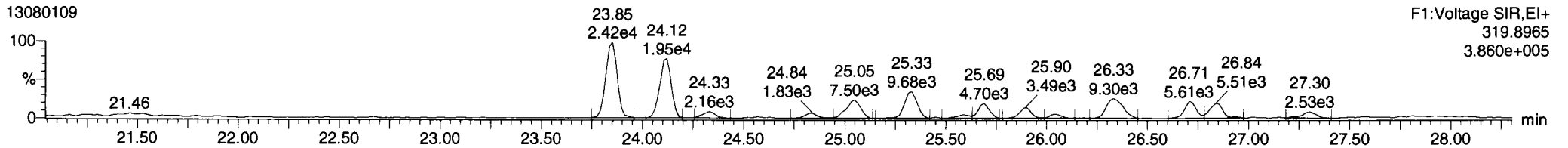
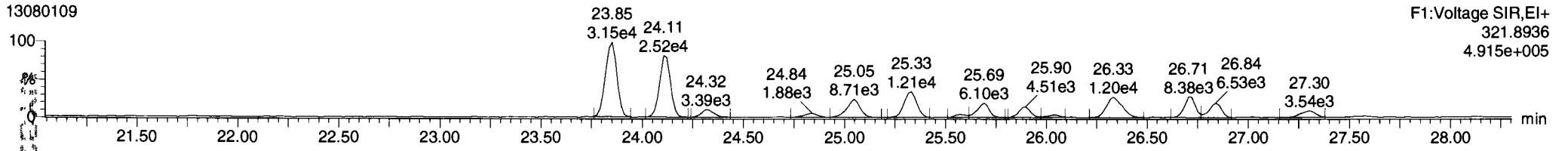


Total-tetradioxins



Total-tetradioxins



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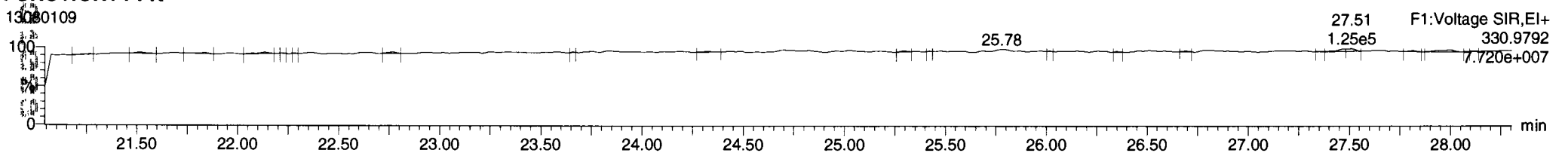

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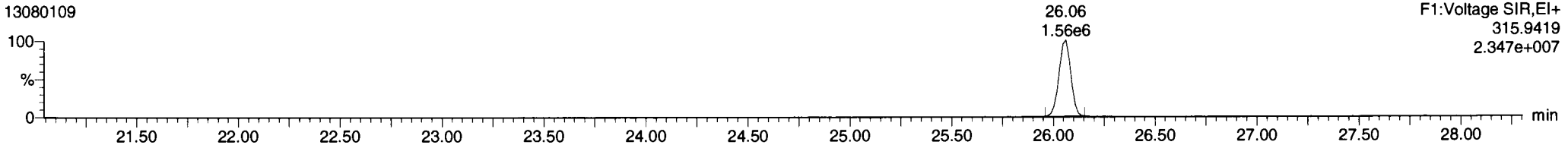
ID: WY32A, Name: 13080109, Date: 01-Aug-2013, Time: 16:28:11, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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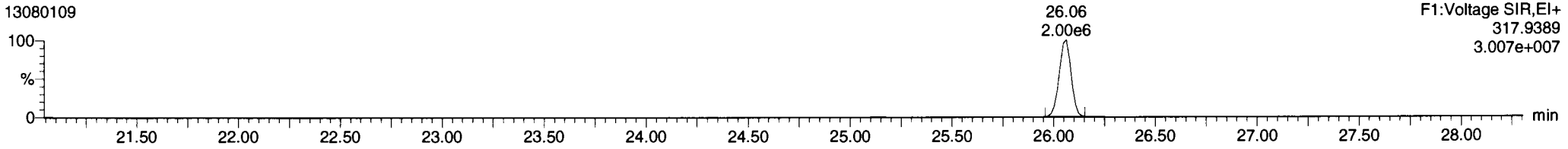

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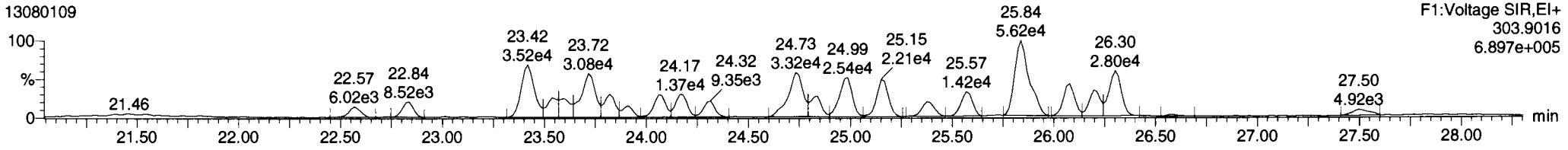
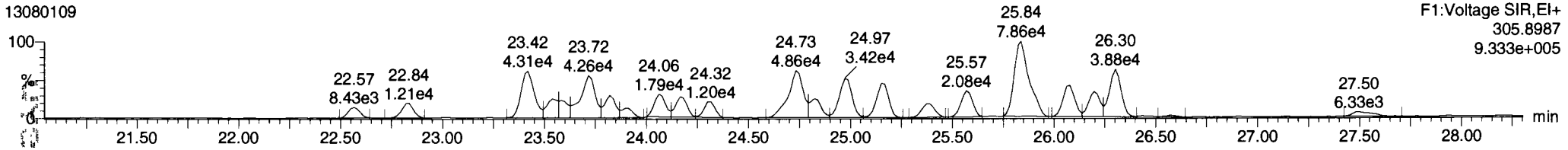


Total-tetrafurans



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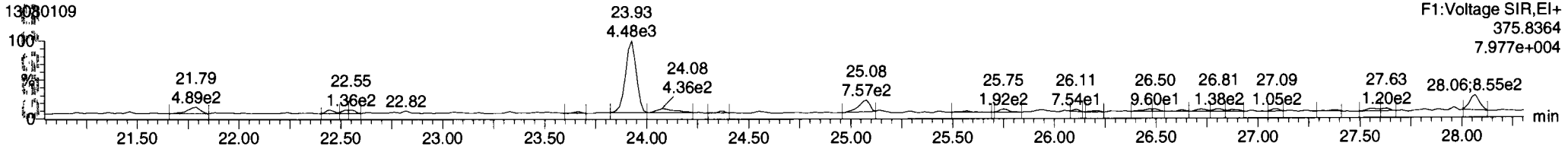

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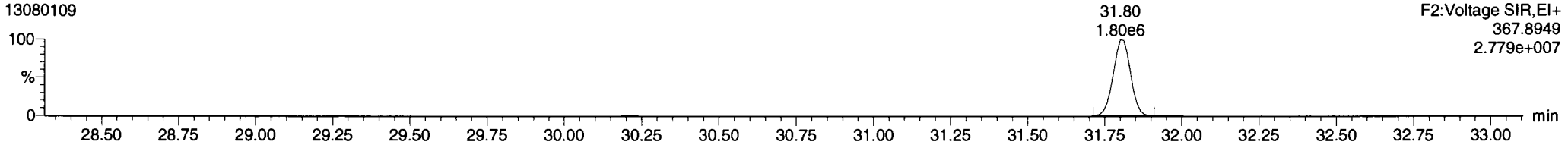
13C-12378-PeCDD



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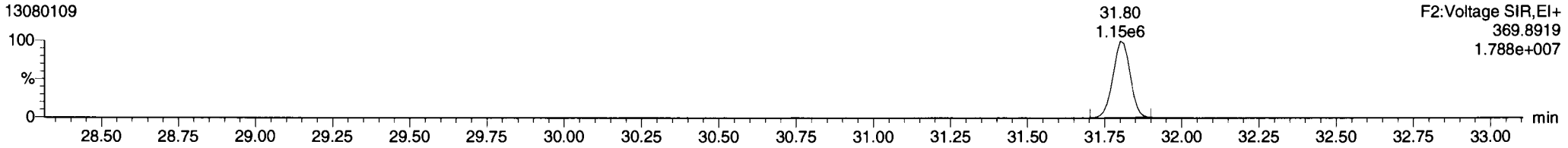

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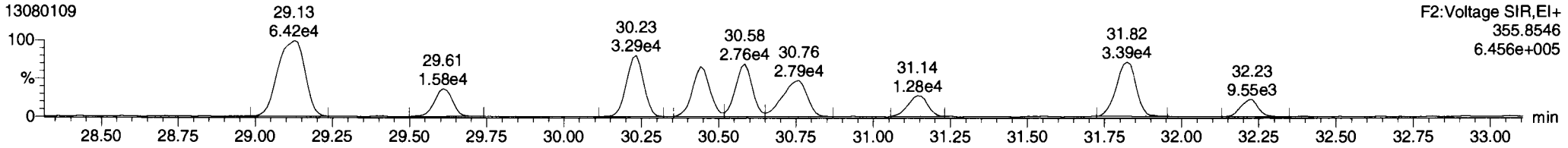
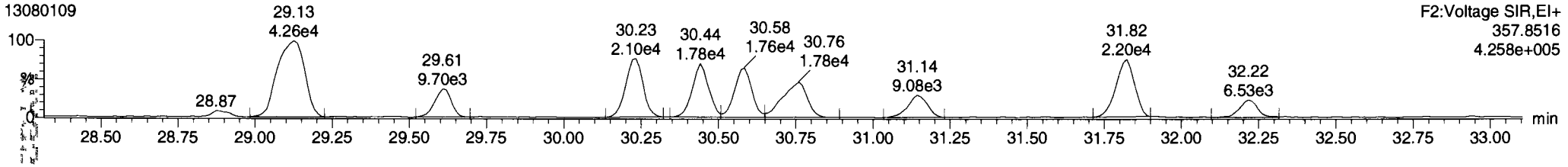


Total-pentadioxins



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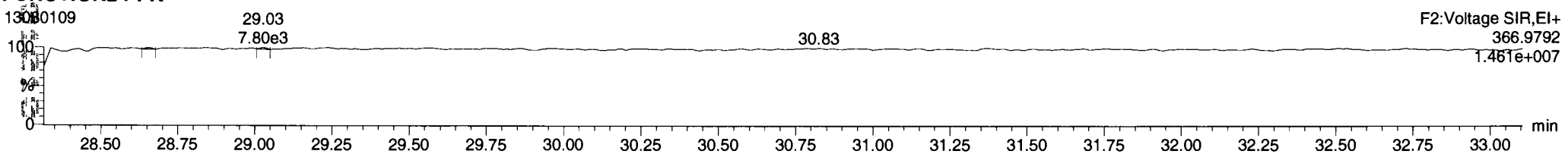

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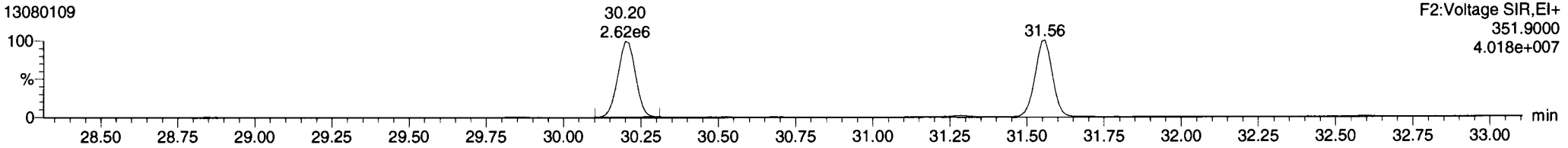
13C-12378-PeCDF



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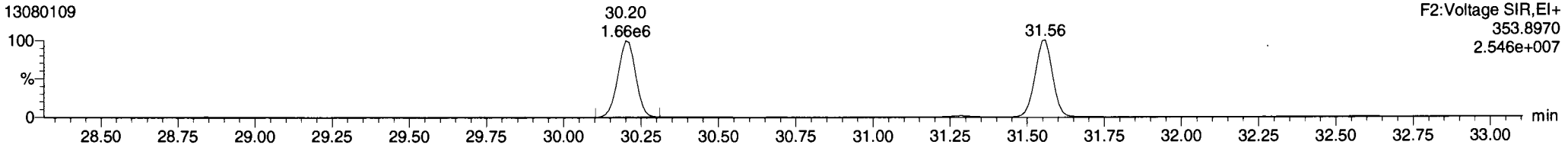

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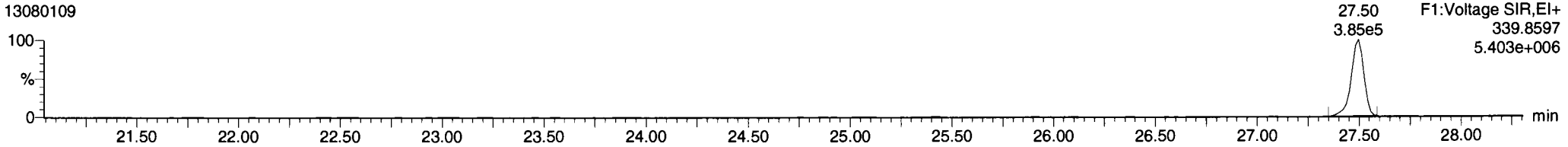

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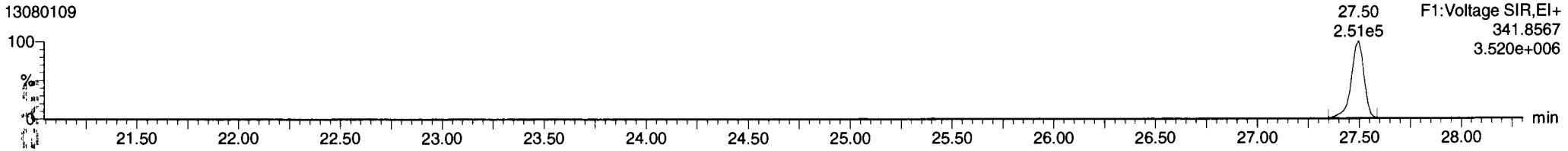

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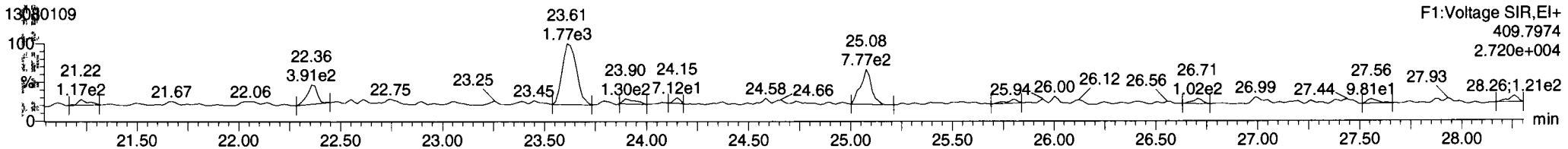

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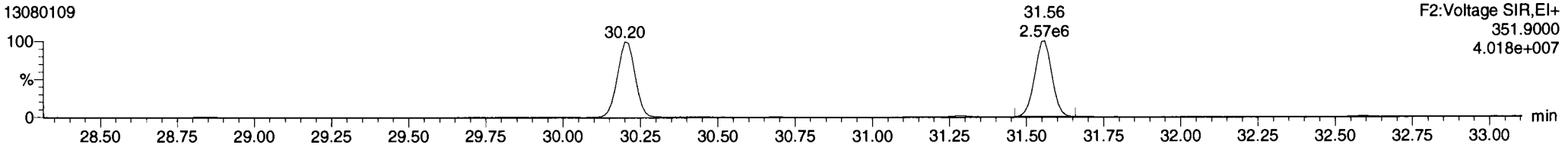
13C-23478-PeCDF



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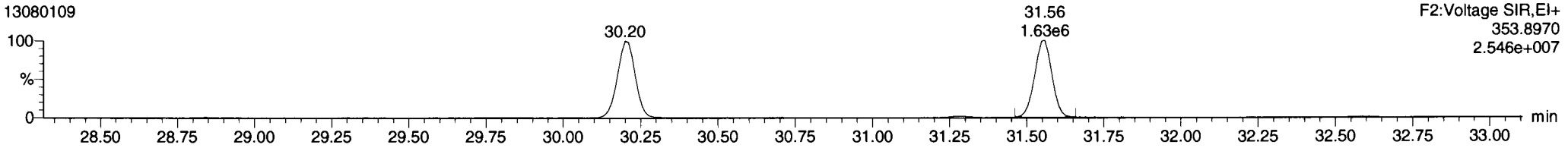
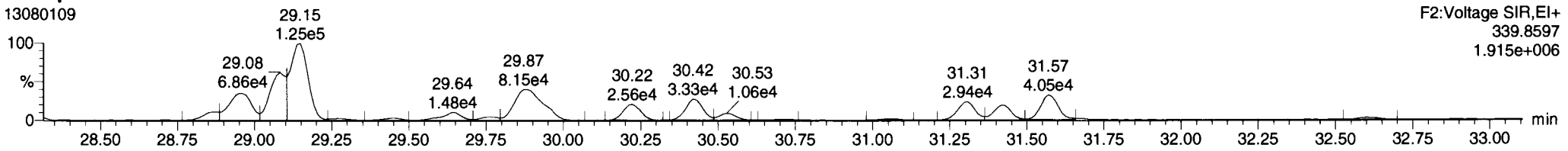


Total-pentafurans



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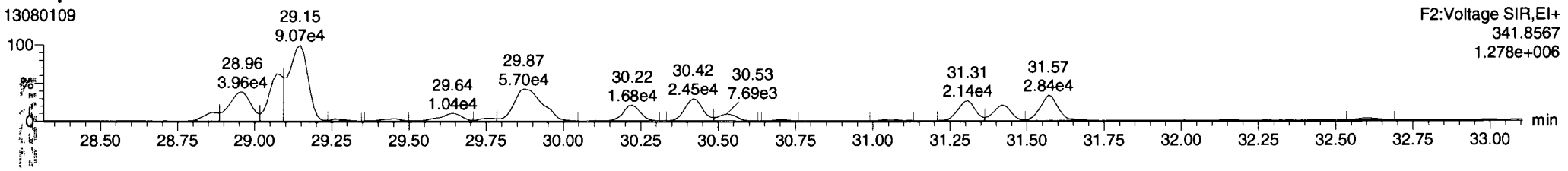

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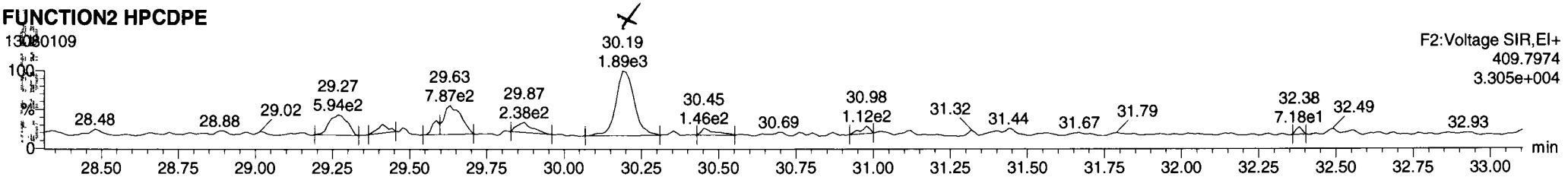

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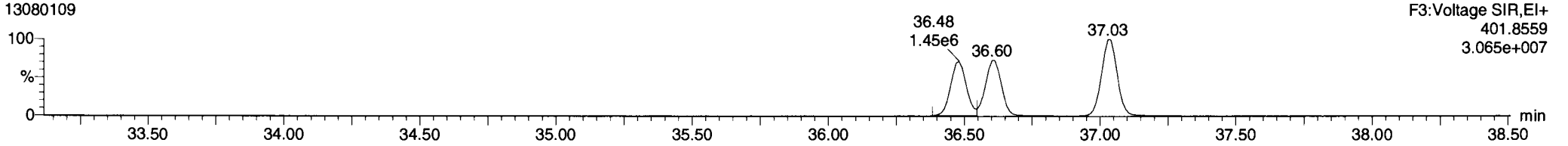
13C-123478-HxCDD



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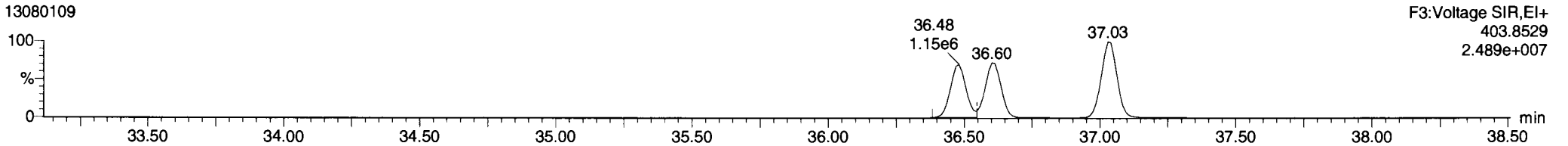

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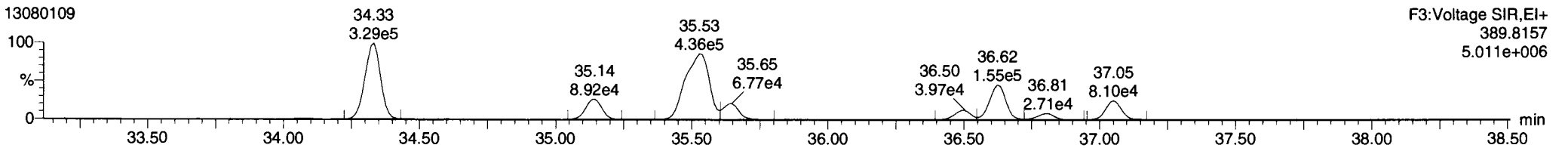

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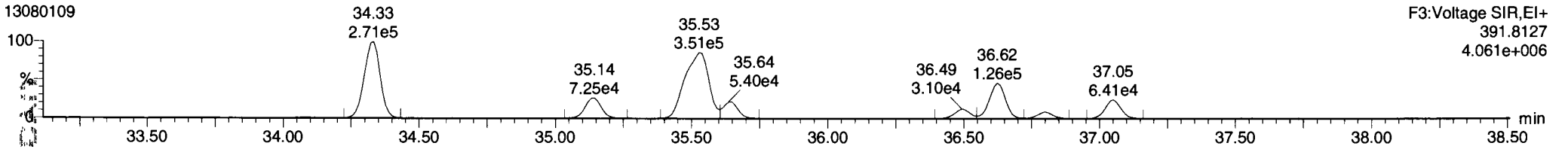

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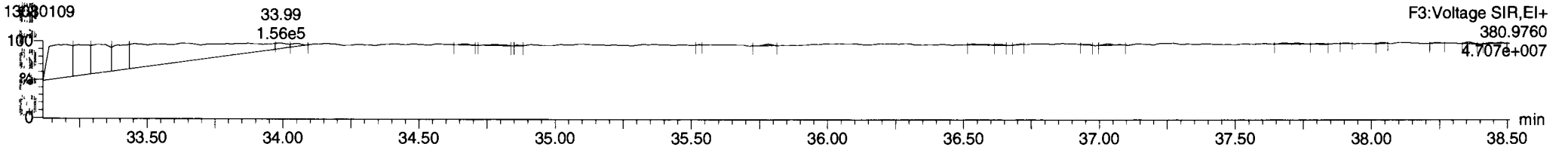

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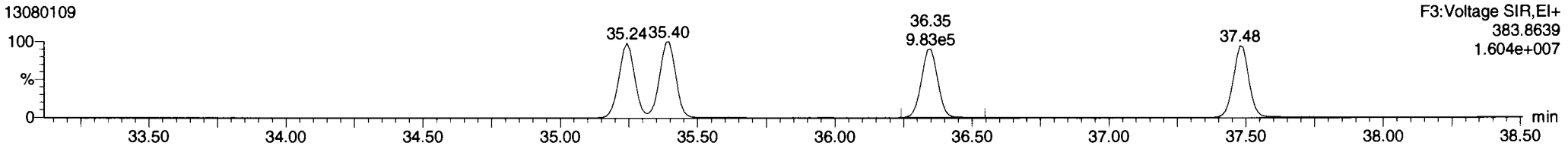
13C-234678-HxCDF



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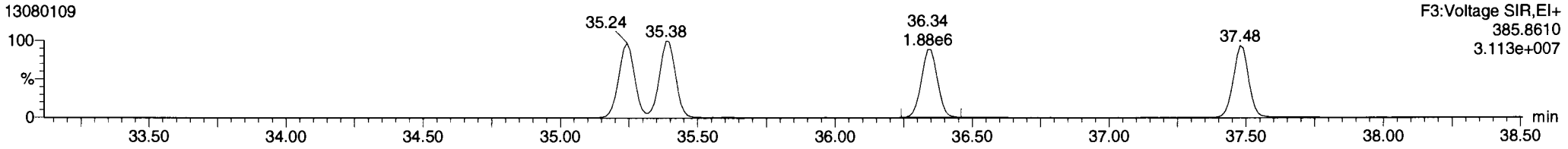
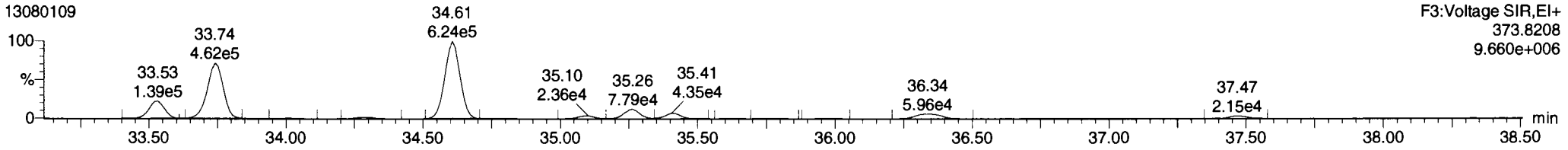


Total-hexafurans



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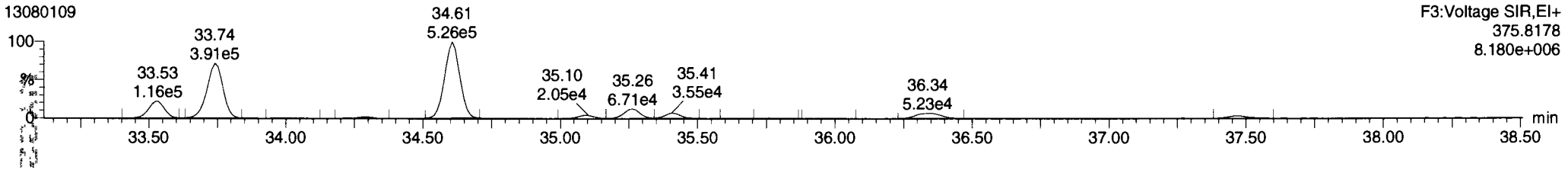
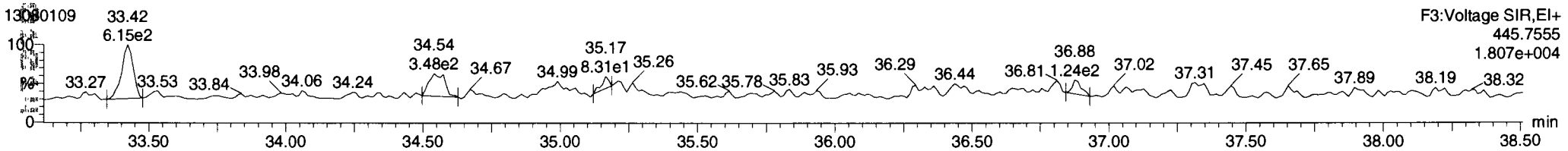


FUNCTION3 OCDPE



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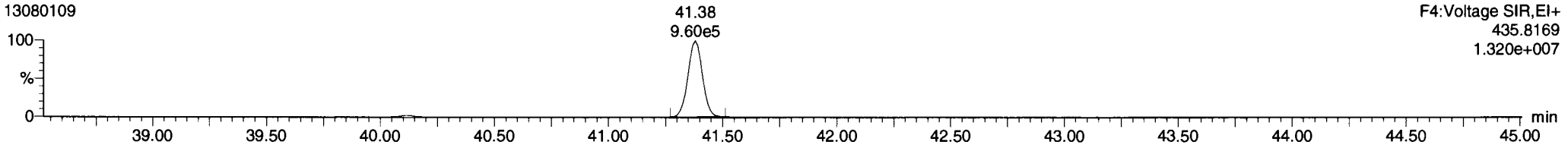
13C-1234678-HpCDD



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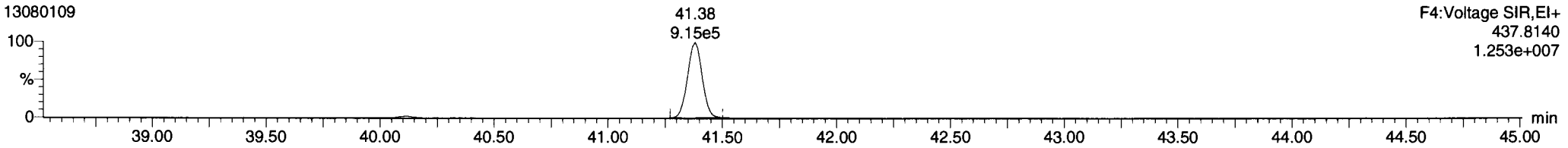

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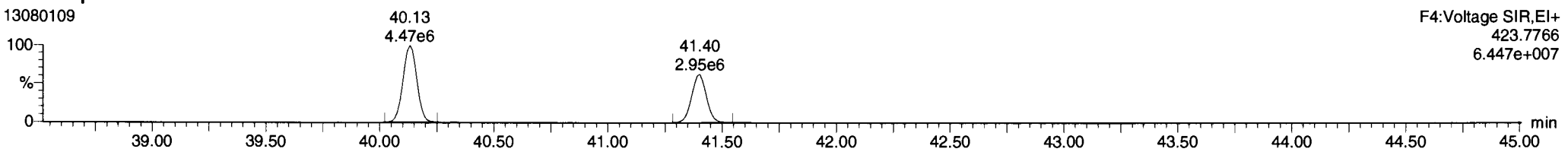

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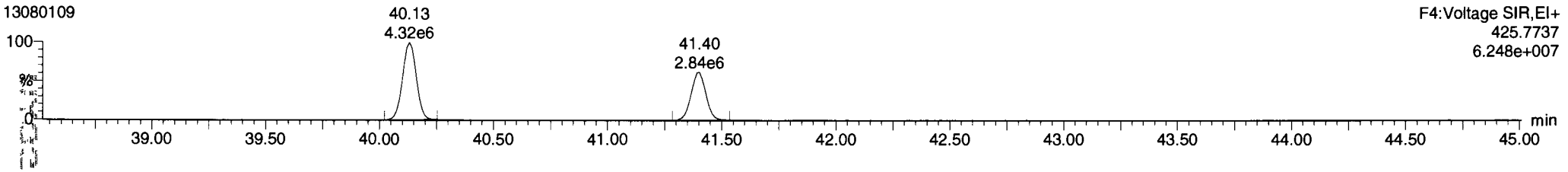
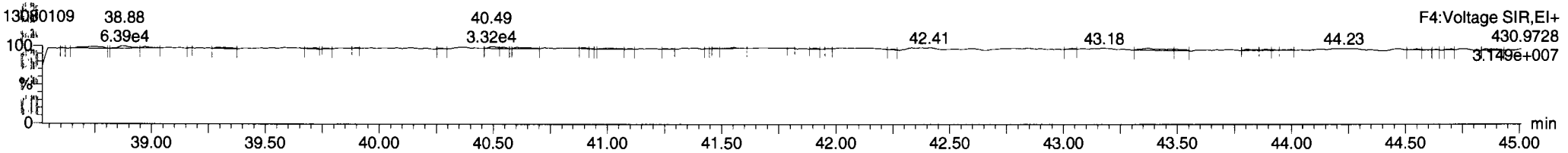


FUNCTION4 PFK



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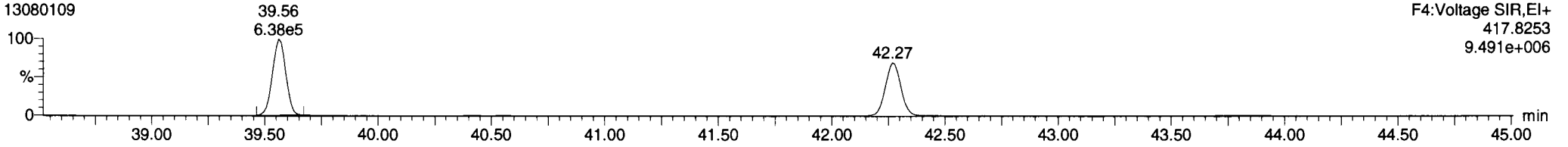
13C-1234678-HpCDF



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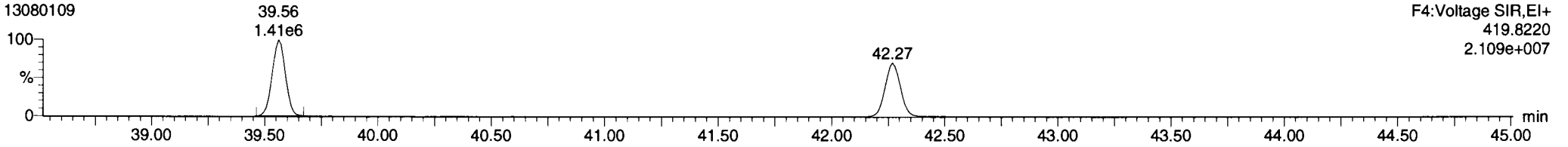
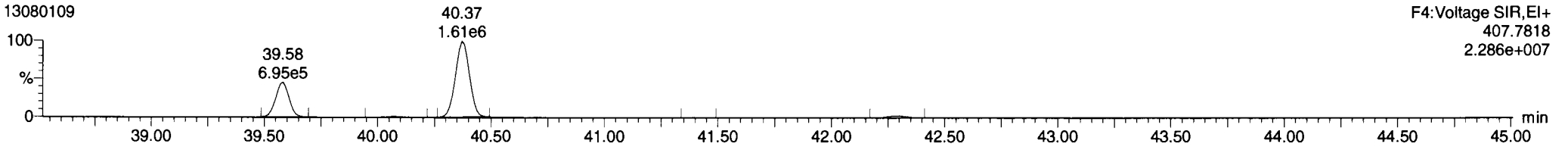


Total-heptafurans



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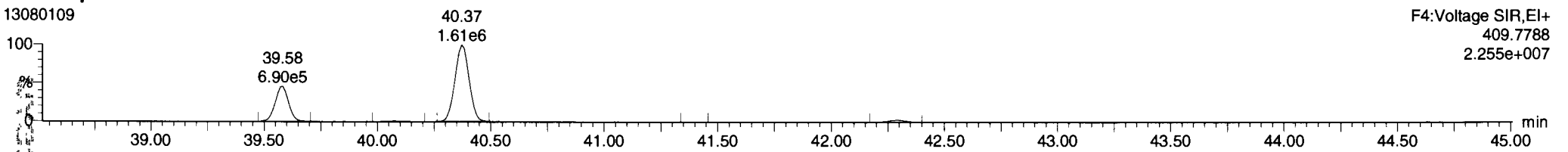
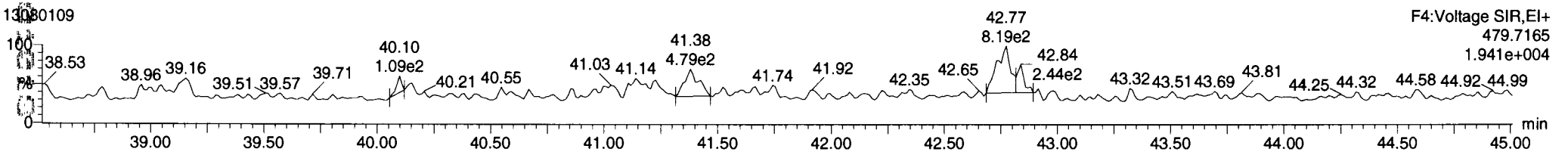


FUNCTION4 NCDPE



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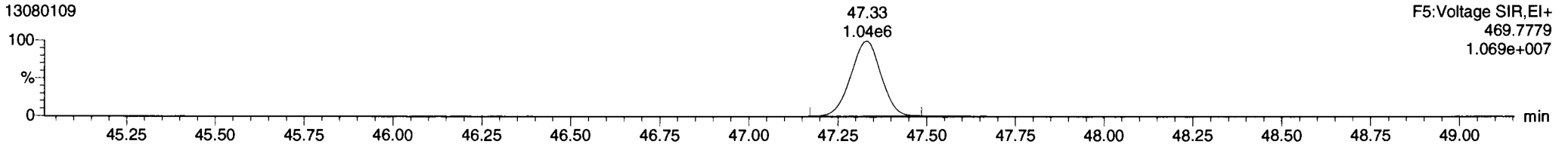
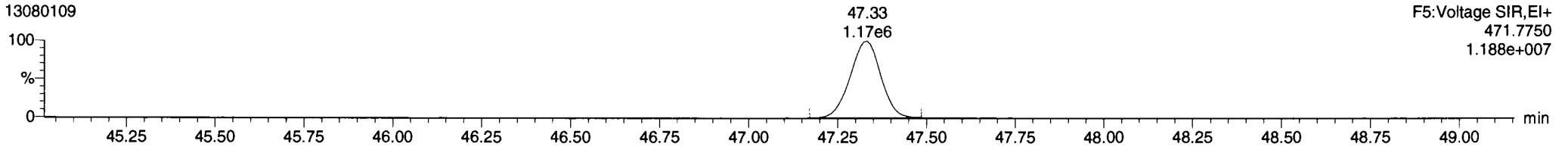
13C-OCDD



13C-OCDD



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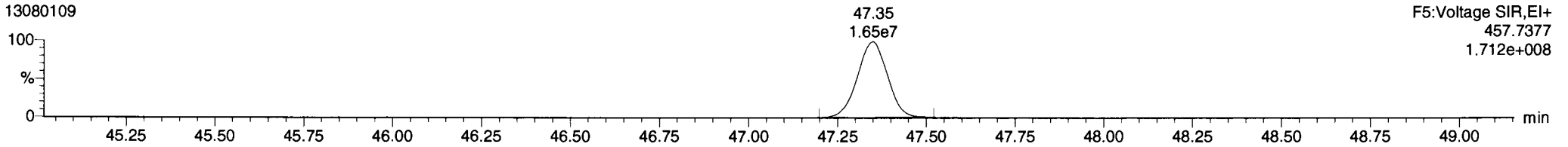

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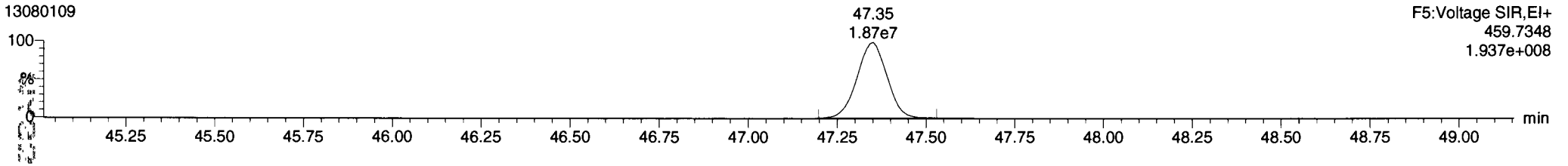
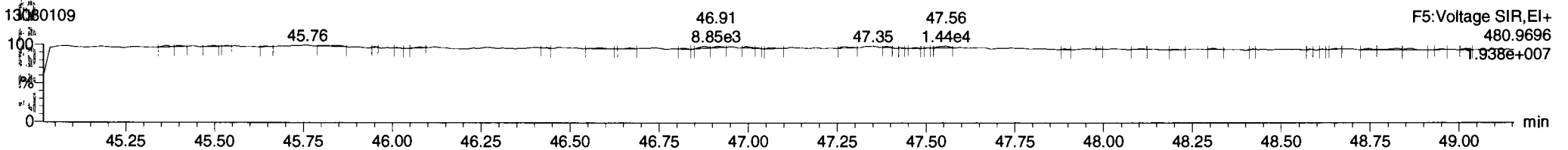


FUNCTION5 PFK



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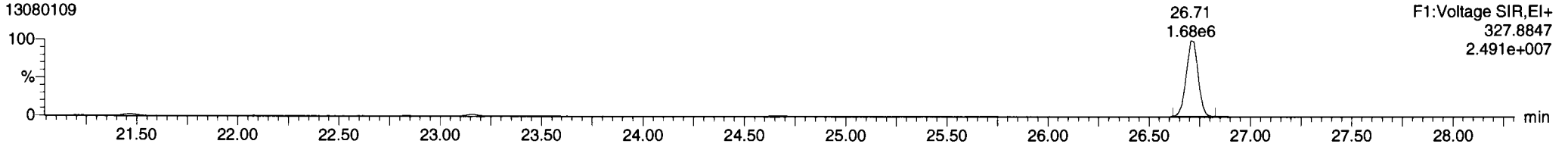
37CL-2378-TCDD



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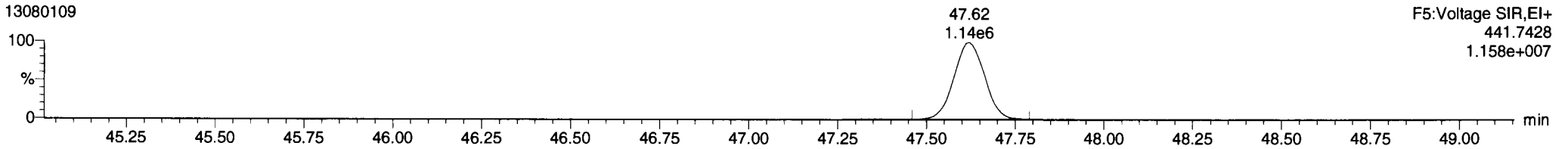

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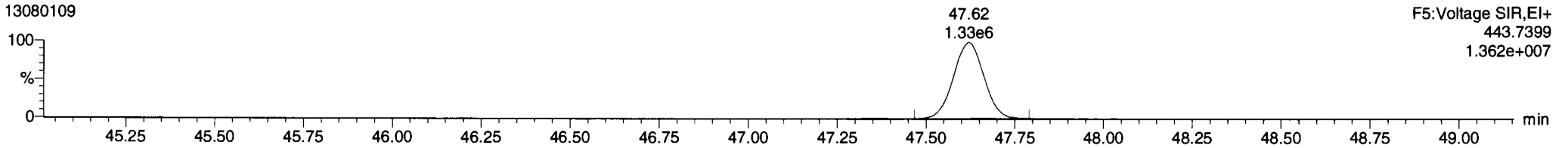
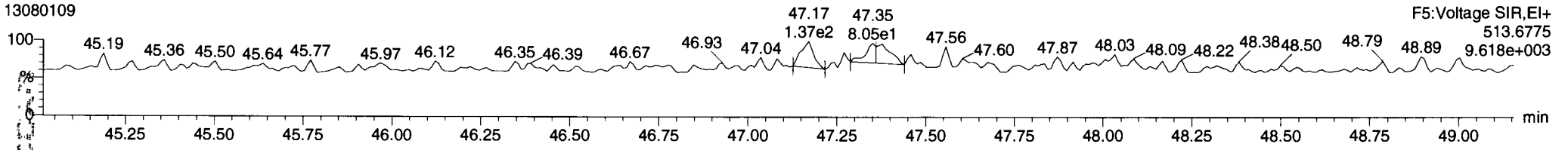


FUNCTION5 DCDPE



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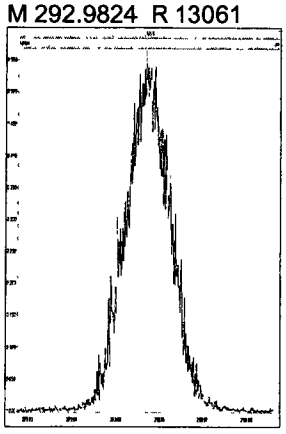

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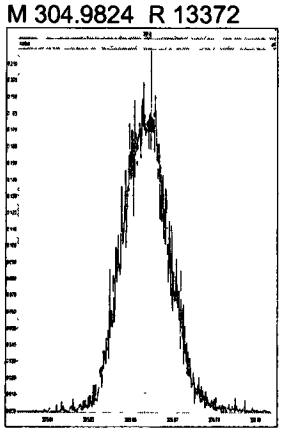

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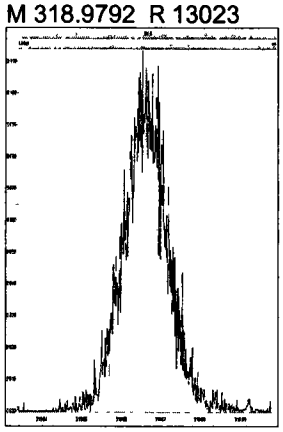

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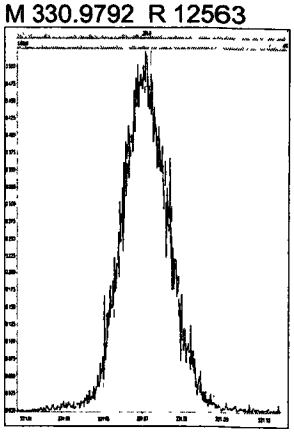

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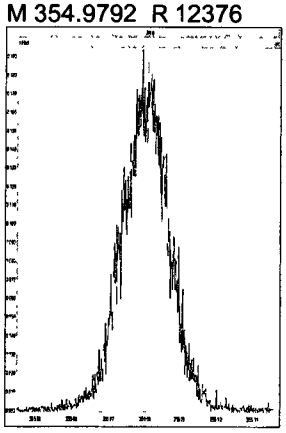

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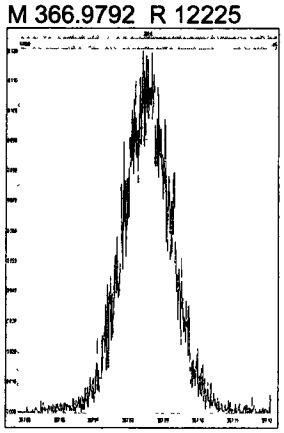

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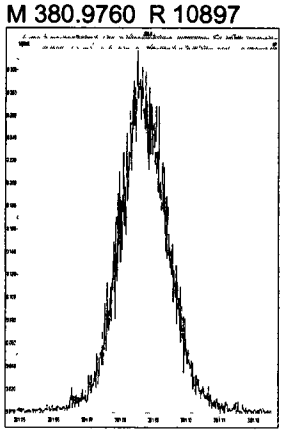

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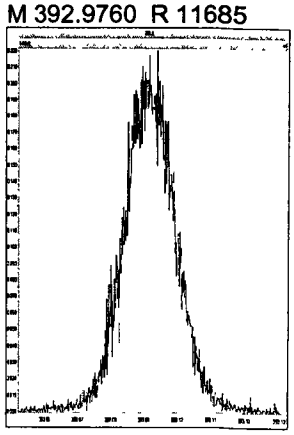

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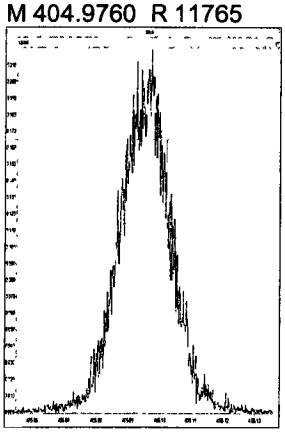

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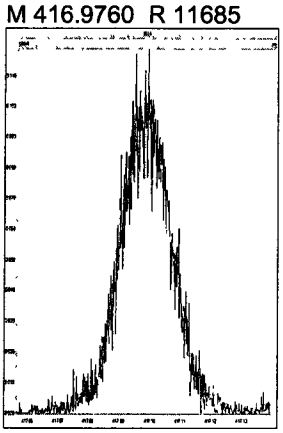

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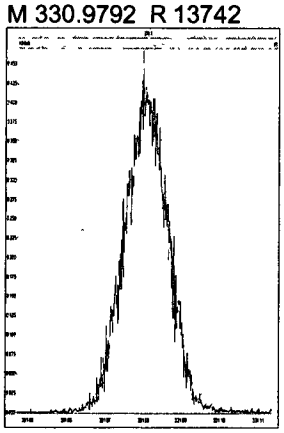

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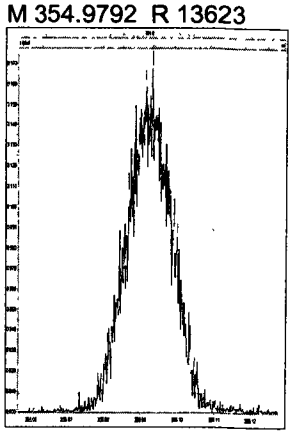

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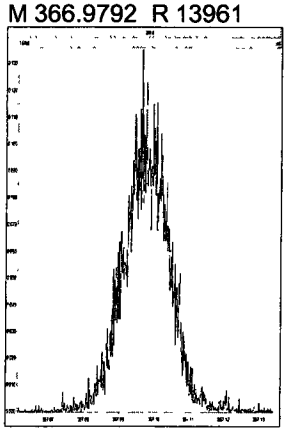

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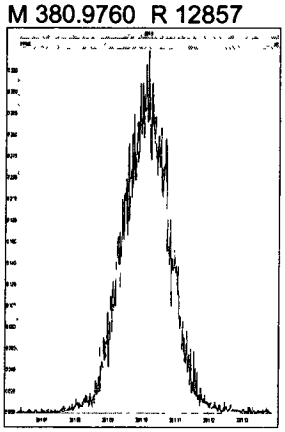

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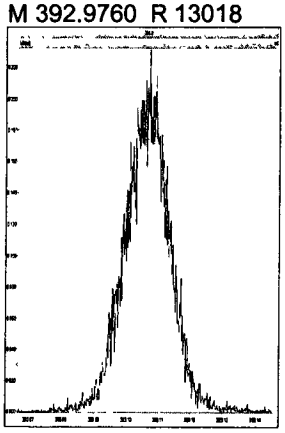

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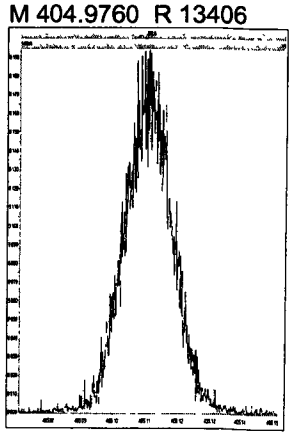

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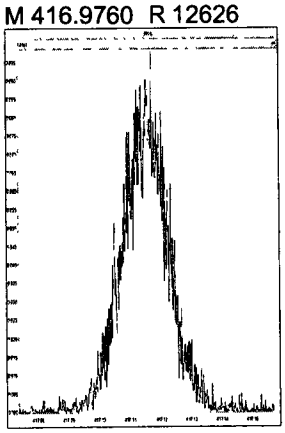

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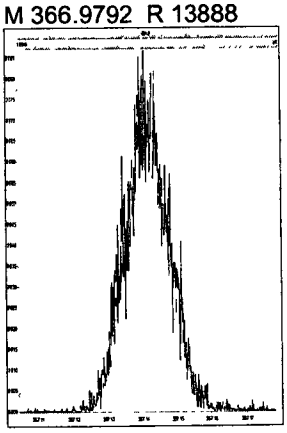

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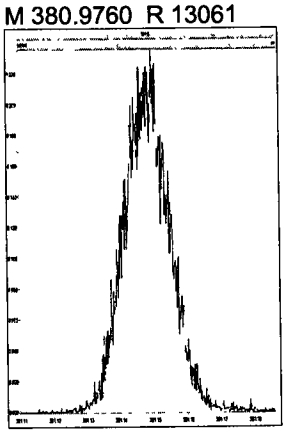

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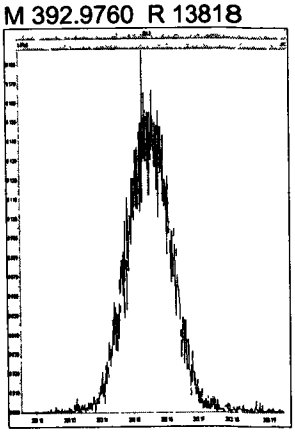

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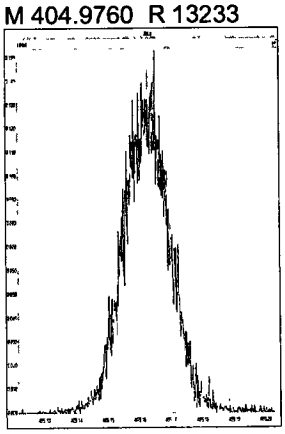

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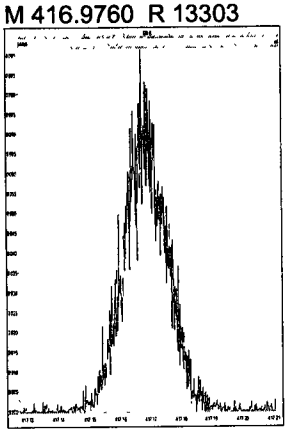

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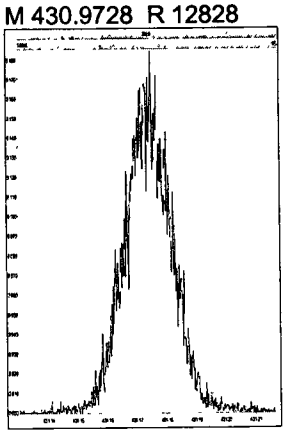

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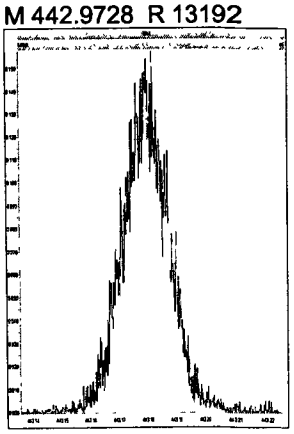

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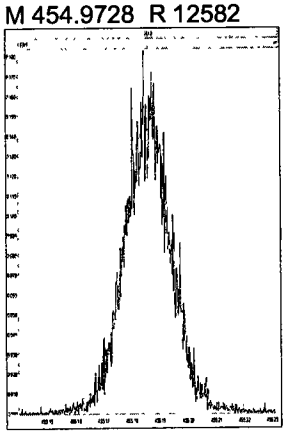

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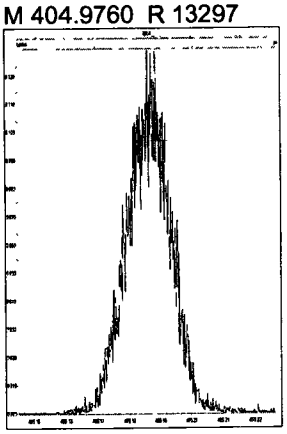

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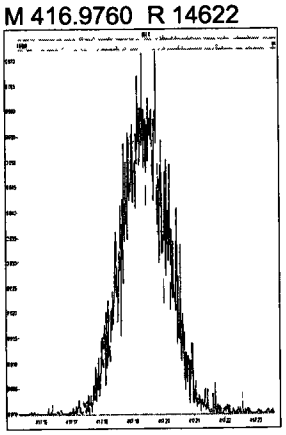

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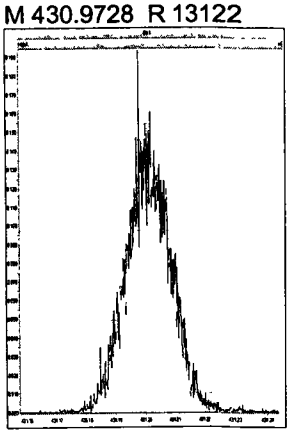

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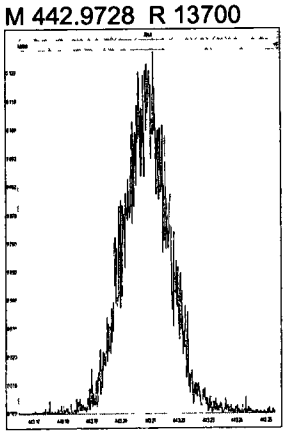

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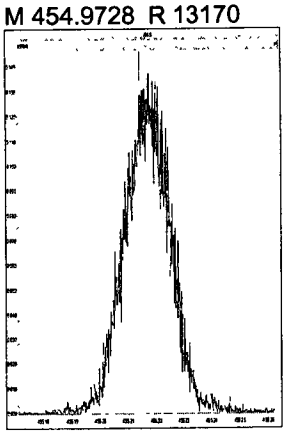

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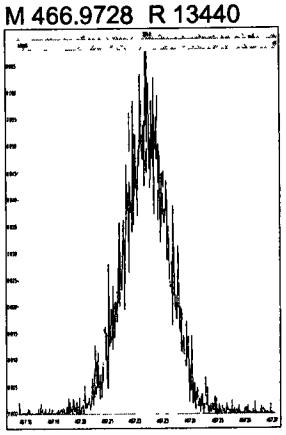

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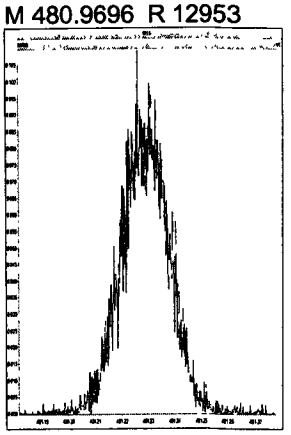

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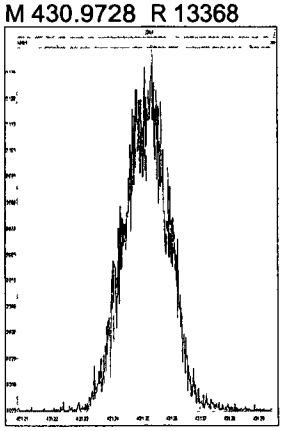

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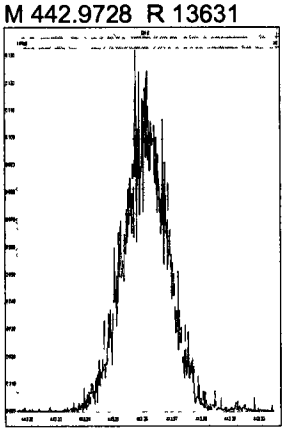

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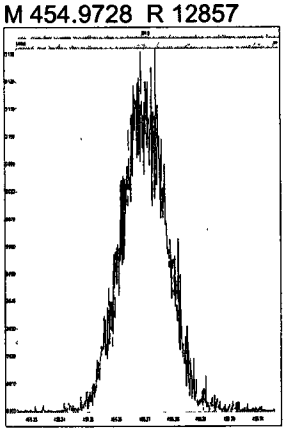

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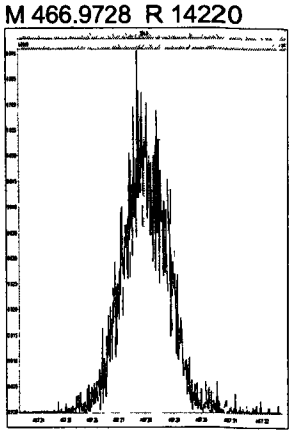

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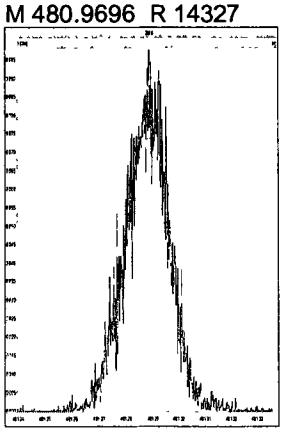

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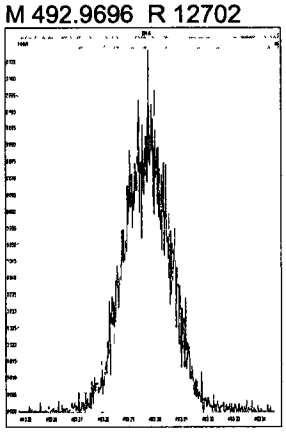

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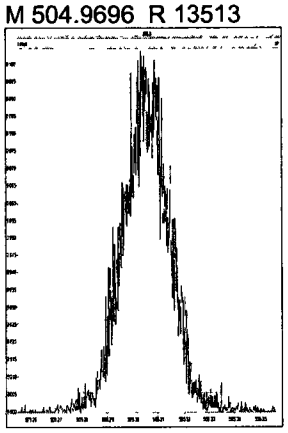

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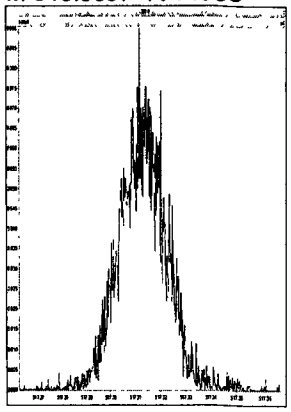

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23478-PeCDF	31.560	1.000	8.93e5	5.99e5	0.880	1.491	1.550	2846.5	NO	52.161	52.161
123478-HxCDF	35.243	1.001	7.53e5	6.29e5	1.048	1.197	1.240	3039.8	NO	50.733	50.733
234678-HxCDF	36.339	1.001	7.43e5	6.21e5	1.088	1.196	1.240	2976.6	NO	51.169	51.169
123678-HxCDF	35.385	1.000	7.58e5	6.30e5	1.025	1.203	1.240	3060.3	NO	50.302	50.302
123789-HxCDF	37.479	1.000	6.49e5	5.45e5	0.959	1.190	1.240	2639.4	NO	51.202	51.202
1234678-HpCDF	39.540	1.001	6.97e5	7.01e5	1.215	0.994	1.050	4446.8	NO	50.676	50.676
1234789-HpCDF	42.247	1.001	5.66e5	5.55e5	1.200	1.019	1.050	3176.2	NO	51.046	51.046
OCDF	47.549	1.006	8.66e5	9.93e5	1.064	0.872	0.890	4798.6	NO	104.783	104.783
2378-TCDD	26.706	1.001	1.17e5	1.50e5	0.994	0.778	0.770	1137.4	NO	10.136	10.136
12378-PeCDD	31.812	1.000	6.31e5	4.06e5	0.976	1.554	1.550	3641.8	NO	50.018	50.018
123478-HxCDD	36.471	1.001	5.87e5	4.66e5	0.967	1.260	1.240	5287.0	NO	52.199	52.199
123678-HxCDD	36.602	1.001	5.59e5	4.55e5	0.902	1.228	1.240	5002.5	NO	50.523	50.523
123789-HxCDD	37.030	1.012	5.73e5	4.66e5	0.914	1.230	1.240	5090.5	NO	52.682	52.682
1234678-HpCDD	41.359	1.001	5.01e5	4.82e5	0.999	1.040	1.050	2649.0	NO	49.593	49.593
OCDD	47.271	1.000	7.84e5	8.76e5	0.979	0.895	0.890	5162.8	NO	101.689	101.689
13C-2378-TCDF	26.048	1.007	1.75e6	2.26e6	1.419	0.776	0.770	7222.1	NO		102.429
13C-12378-PeCDF	30.201	1.167	2.06e6	1.30e6	1.158	1.587	1.550	8311.2	NO		105.245
13C-23478-PeCDF	31.549	1.220	1.99e6	1.26e6	1.127	1.576	1.550	8244.0	NO		104.715
13C-123478-HxCDF	35.221	0.952	8.85e5	1.71e6	1.206	0.517	0.510	5130.0	NO		101.750
13C-123678-HxCDF	35.375	0.956	9.24e5	1.77e6	1.266	0.523	0.510	5329.5	NO		100.450
13C-234678-HxCDF	36.317	0.981	8.36e5	1.61e6	1.155	0.518	0.510	4876.9	NO		100.132
13C-123789-HxCDF	37.468	1.012	8.36e5	1.60e6	1.121	0.524	0.510	4816.8	NO		102.483
13C-1234678-HpCDF	39.518	1.068	7.05e5	1.57e6	1.040	0.450	0.440	4989.1	NO		103.204
13C-1234789-HpCDF	42.225	1.141	5.71e5	1.26e6	0.789	0.453	0.440	3570.3	NO		109.601
13C-1234-TCDD	25.869	0.000	1.21e6	1.54e6	1.000	0.786	0.770	5143.8	NO		100.000
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13C-12378-PeCDD	31.801	1.229	1.29e6	8.29e5	0.746	1.562	1.550	5282.7	NO		103.185
13C-123478-HxCDD	36.449	0.985	1.15e6	9.30e5	1.003	1.241	1.240	7142.5	NO		98.142
13C-123678-HxCDD	36.580	0.988	1.24e6	9.90e5	1.052	1.248	1.240	7609.8	NO		100.010
13C-1234678-HpCDD	41.337	1.117	1.02e6	9.68e5	0.880	1.049	1.050	5340.2	NO		106.479
13C-OCDD	47.252	1.277	1.56e6	1.77e6	0.775	0.884	0.890	5657.8	NO		203.301

Dataset: P:\DIOXIN8290.PRO\130801DATA1.qld
Last Altered: Wednesday, August 07, 2013 11:20:26 Pacific Daylight Time
Printed: Wednesday, August 07, 2013 11:21:13 Pacific Daylight Time

D: CS3, Name: 13080112, Date: 01-Aug-2013, Time: 19:05:06, Conditions: AUTOSPEC01, User: pk

3C-123789-HxCDD	37.008	0.000	1.17e6	9.46e5	1.000	1.237	1.240	7293.9	NO	100.000
otal-tetrafurans			4.75e5		0.867					32.312
otal-penta1			1.12e6							61.017
otal-pentafurans			2.73e6		0.877					157.404
otal-hexafurans			3.72e6		1.030					261.027
otal-heptafurans			1.27e6		1.207					101.895
otal-Furans			1.02e7		1.022					718.469
otal-tetradioxins			6.51e5		0.994					56.414
otal-pentadioxins			2.18e6		0.976					172.322
otal-hexadioxins			2.42e6		0.928					219.346
otal-heptadioxins			1.07e6		0.999					105.934
otal-Dioxins			7.10e6		0.962					655.712
otal-TEQ			1.73e7							1374.181
7CL-2378-TCDD	26.706	1.032	2.93e5		1.091			2726.1		9.740
UNCTION1 PFK			2.14e6							
UNCTION2 PFK			1.28e5							0.000
UNCTION3 PFK			4.20e5							0.000
UNCTION4 PFK			2.85e5							
UNCTION5 PFK			2.89e5							
UNCTION1 HXCDPE			8.15e2							0.000
UNCTION1 HPCDPE			5.81e2							0.000
UNCTION2 HPCDPE			1.38e3							0.000
UNCTION3 OCDPE			7.97e1							0.000
UNCTION4 NCDPE			0.00e0							
UNCTION5 DCDPE			0.00e0							

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Printed: Wednesday, August 07, 2013 11:21:13 Pacific Daylight Time

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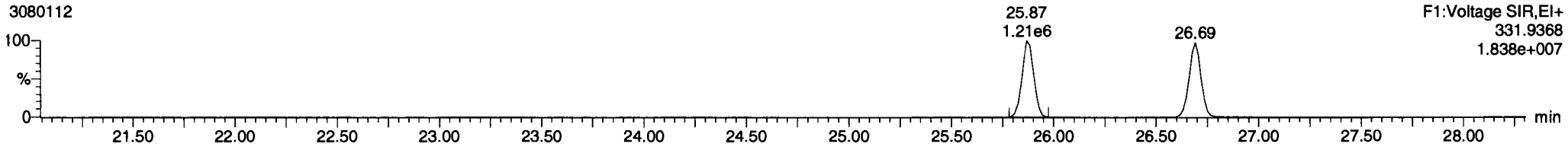
3C-1234-TCDD



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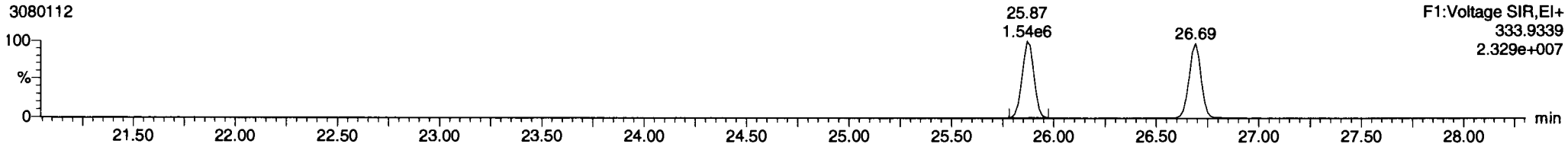

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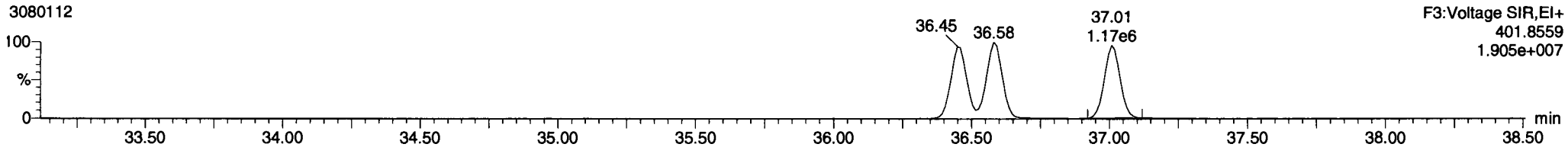

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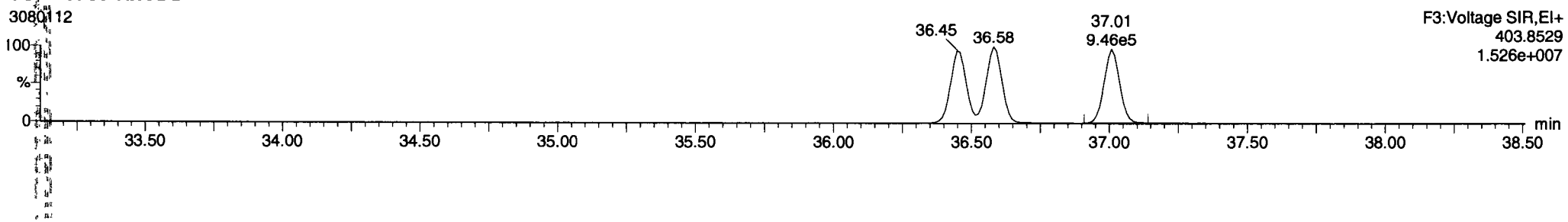

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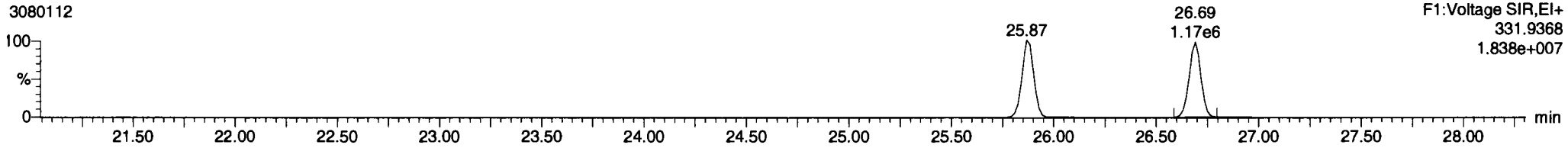

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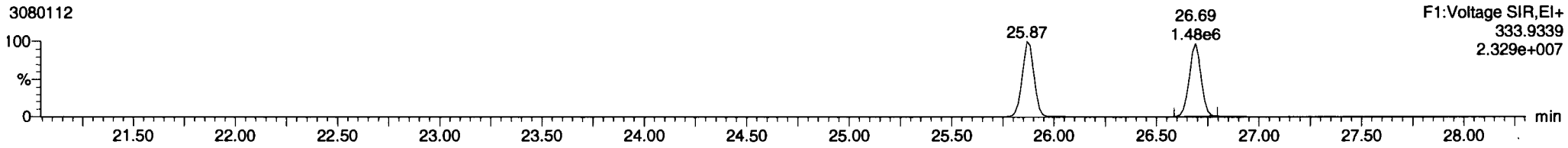

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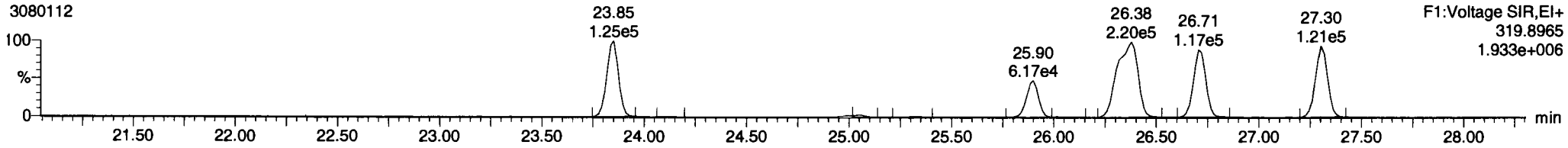

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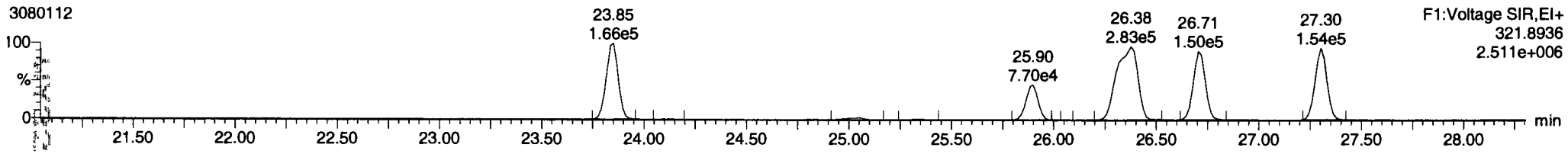

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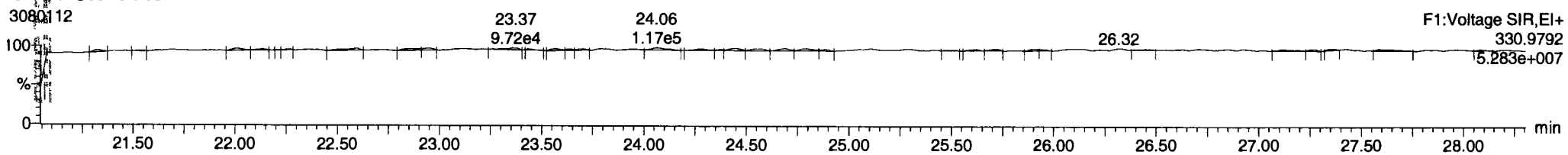

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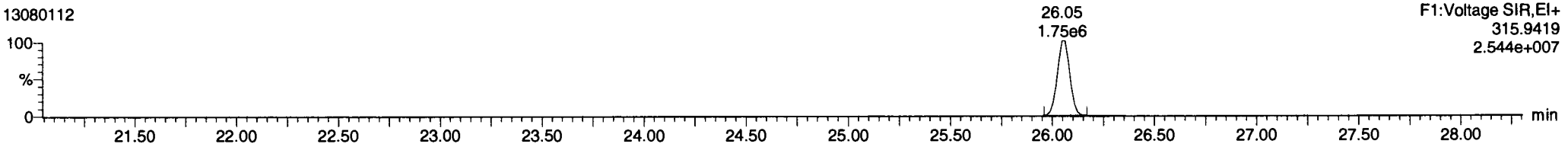
ID: CS3, Name: 13080112, Date: 01-Aug-2013, Time: 19:05:06, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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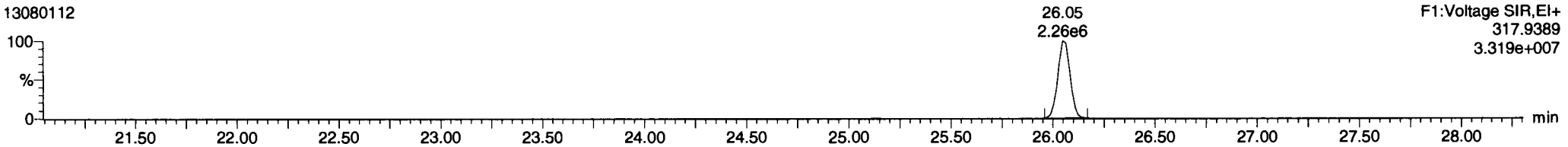
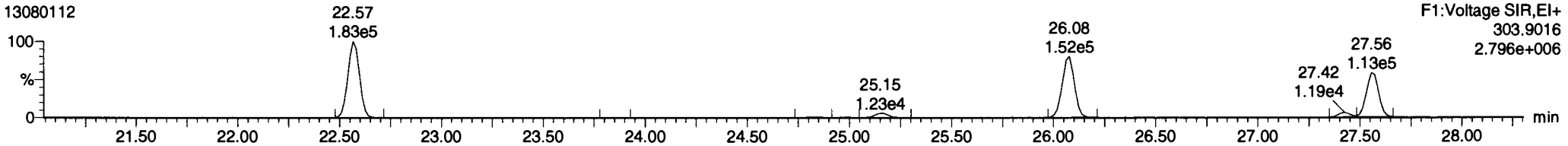
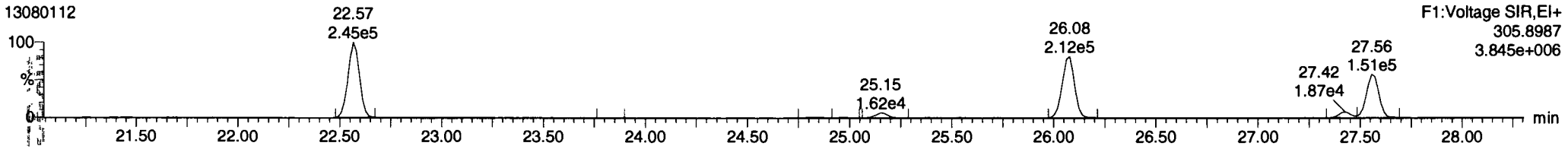


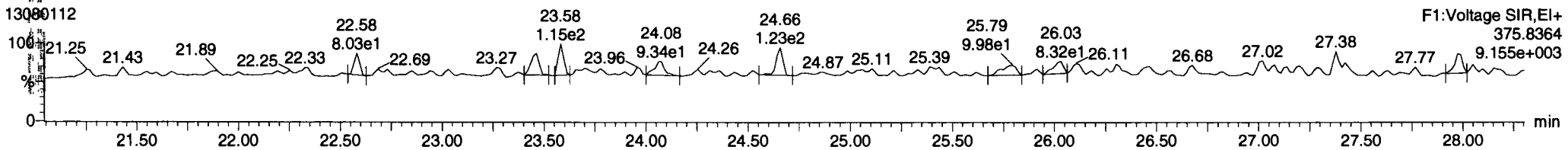
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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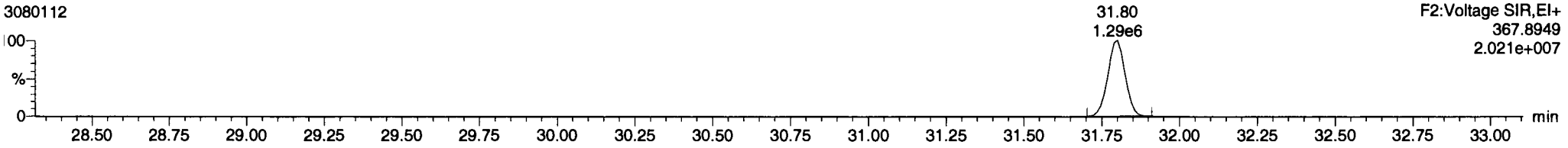
3C-12378-PeCDD



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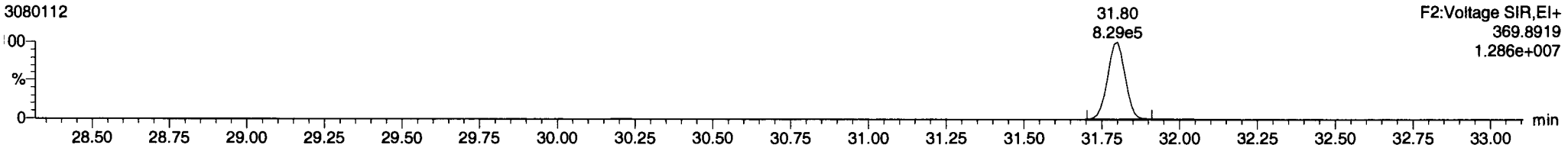
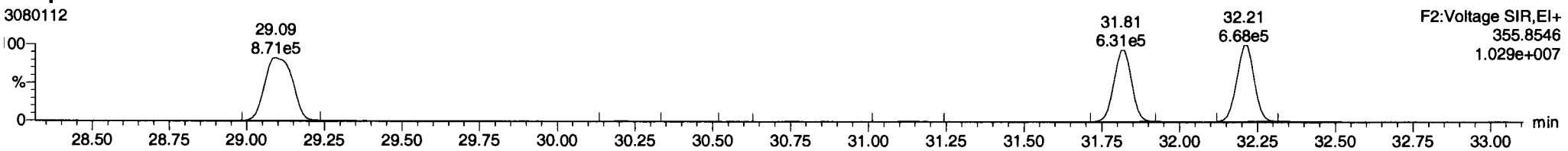


Total-pentadioxins



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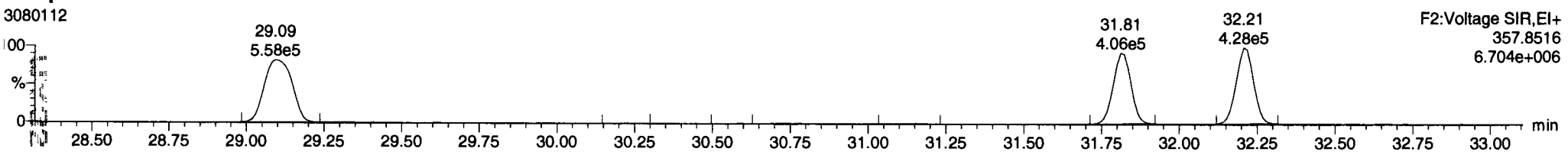
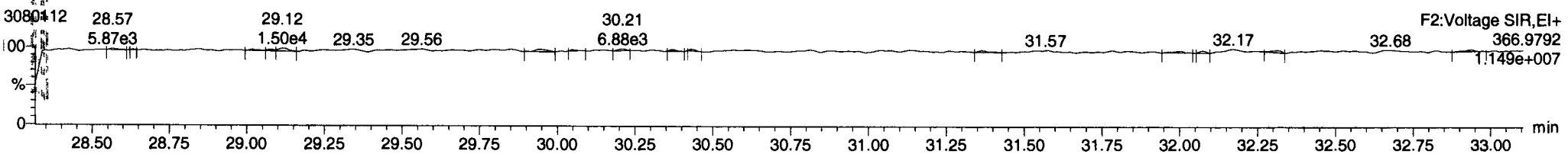


FUNCTION2 PFK



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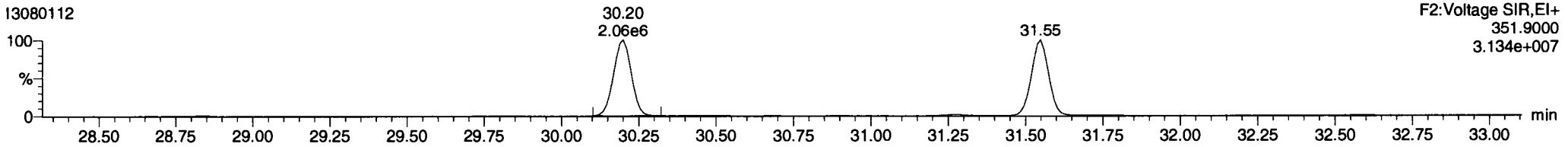
13C-12378-PeCDF



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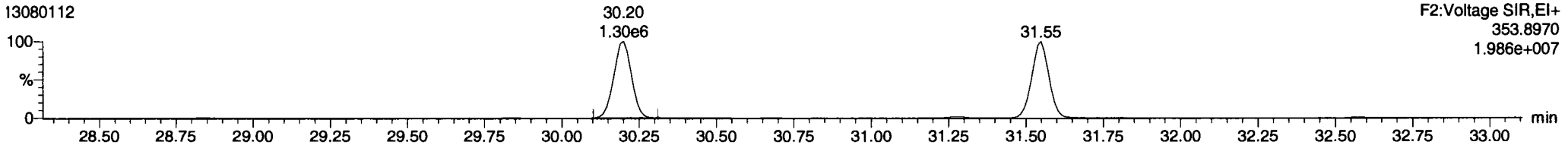

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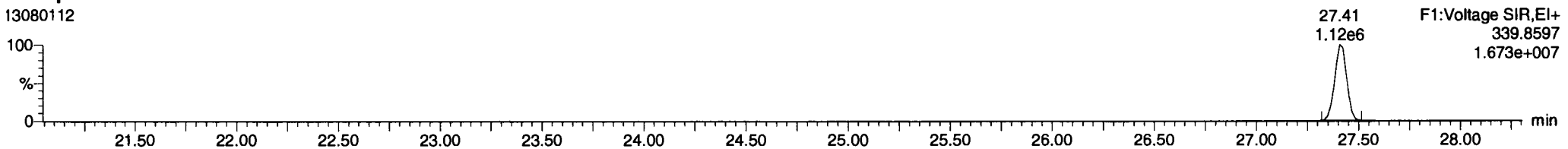
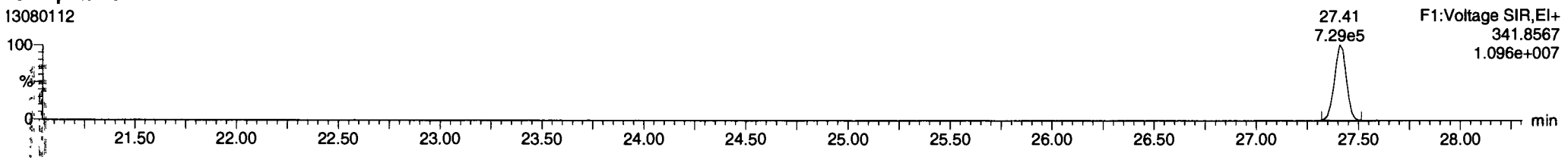
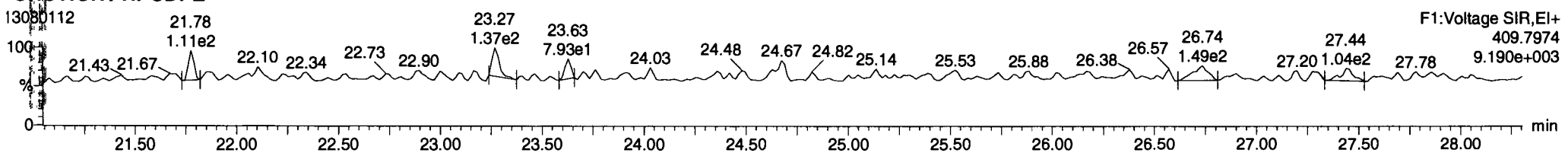


Total-penta1



FUNCTION1 HPCDPE



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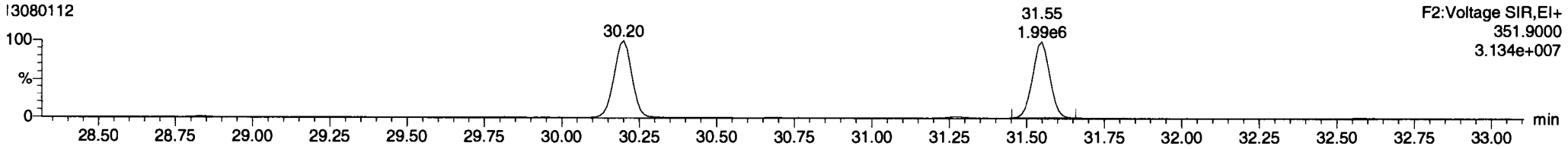
13C-23478-PeCDF



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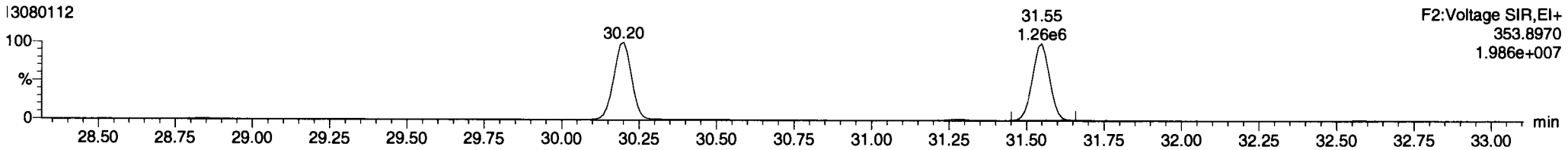
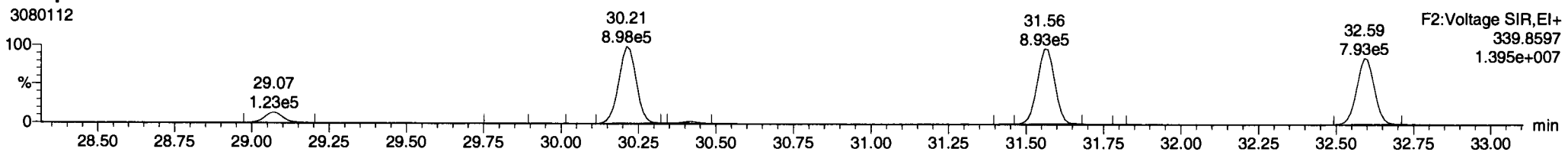


Total-pentafurans



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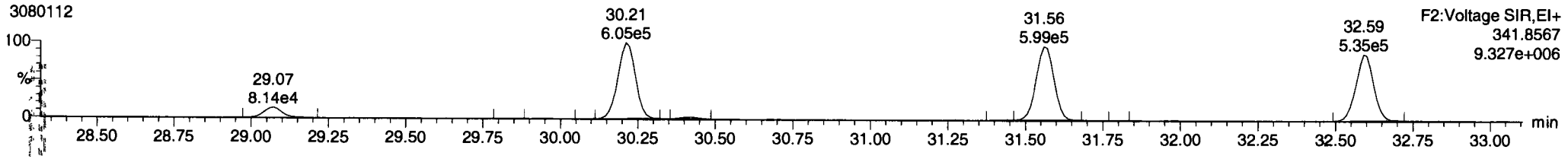

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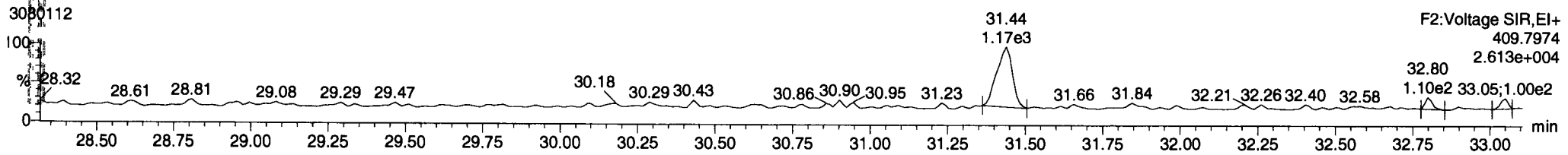

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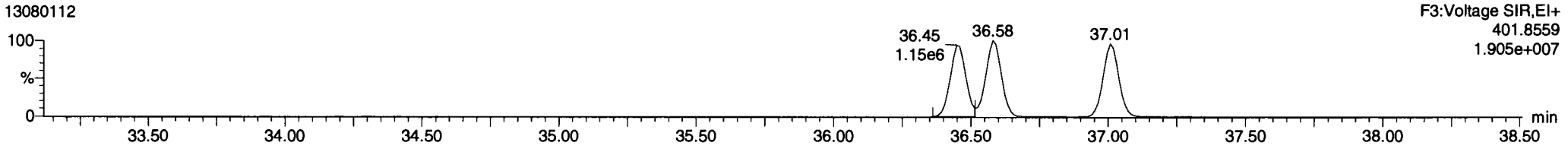
13C-123478-HxCDD



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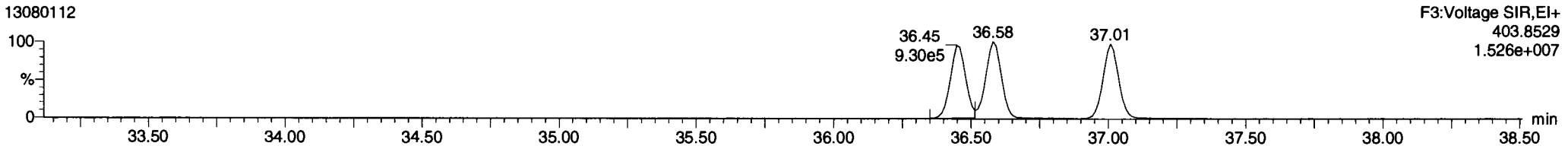
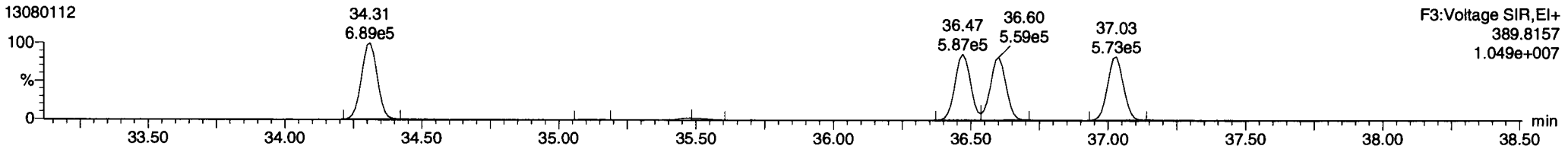
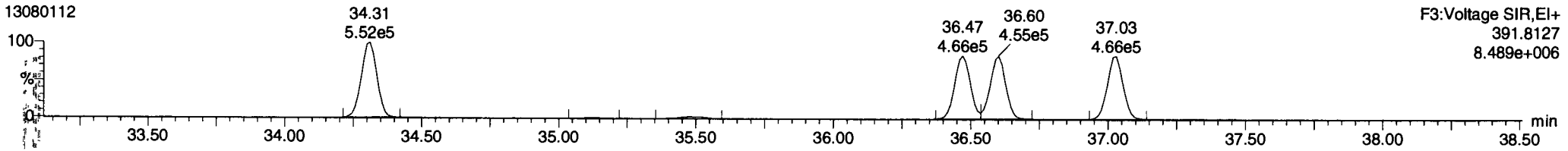


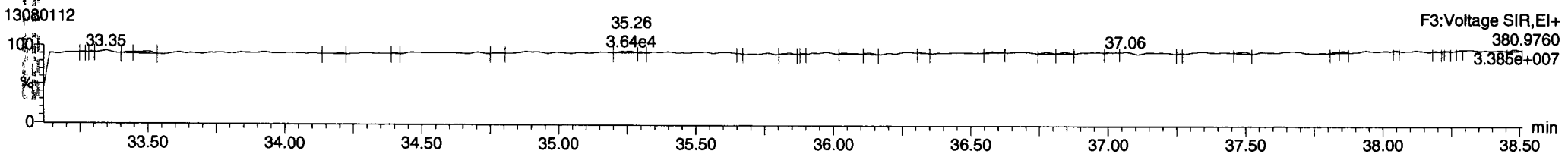
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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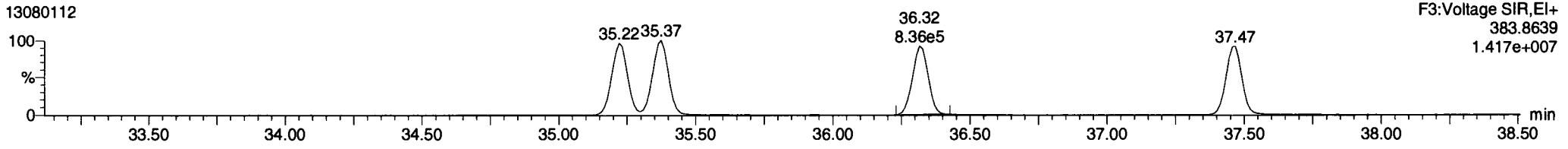

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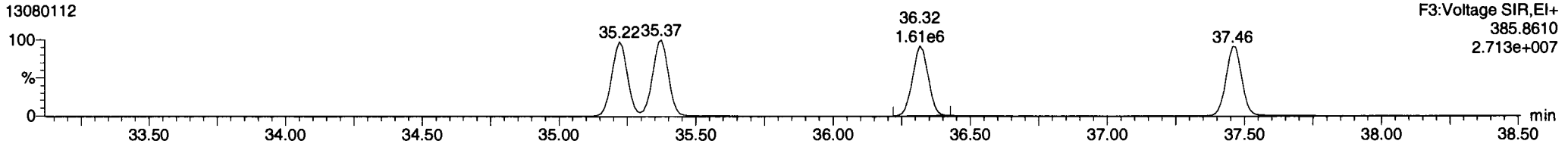

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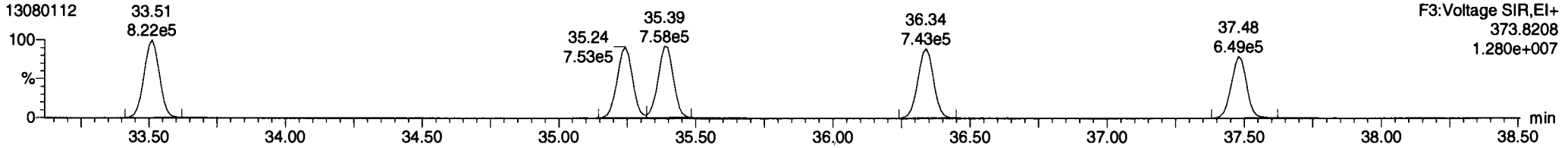

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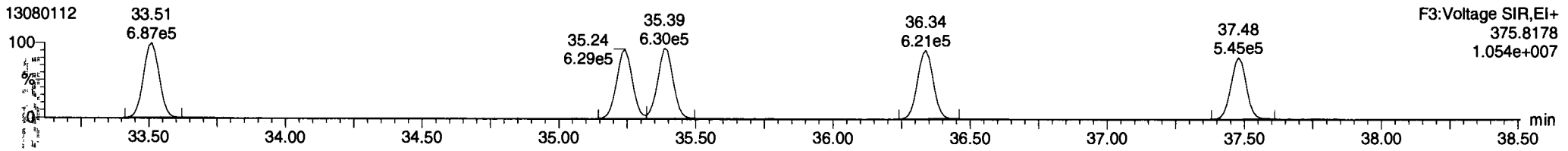
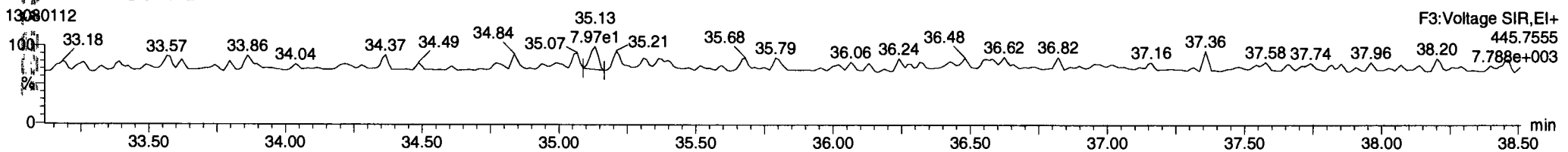


FUNCTION3 OCDPE



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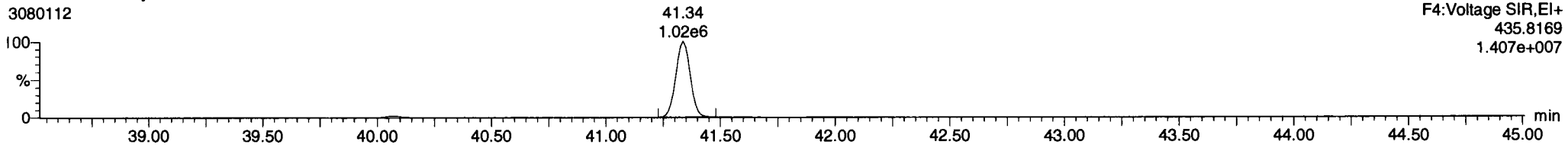

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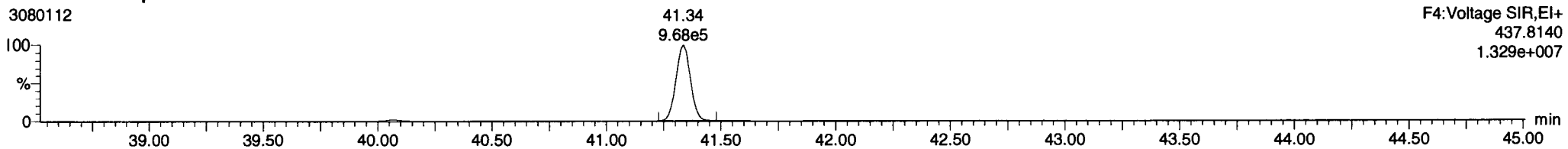

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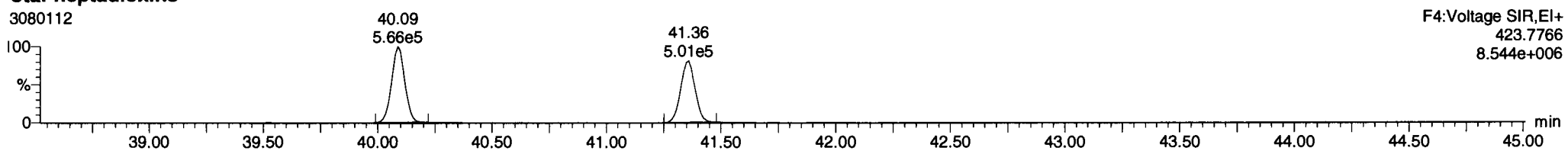

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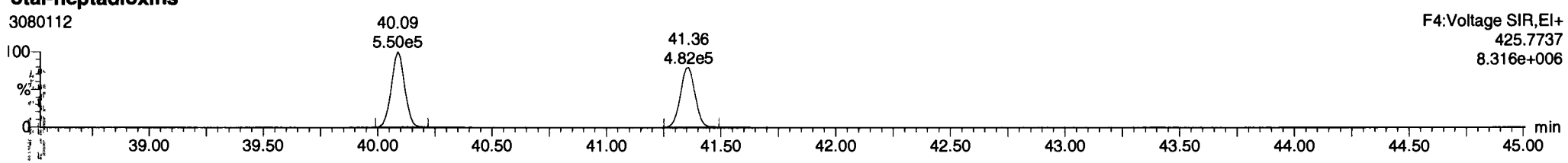

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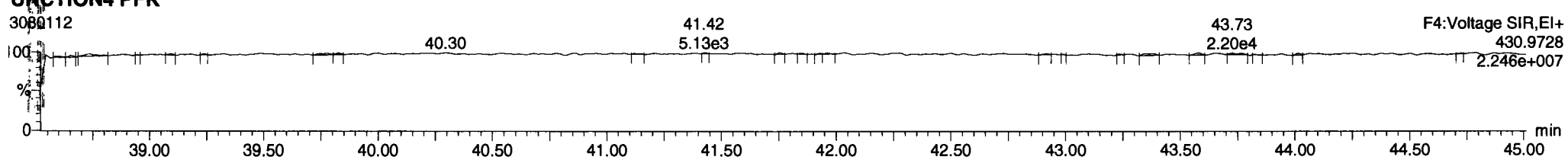

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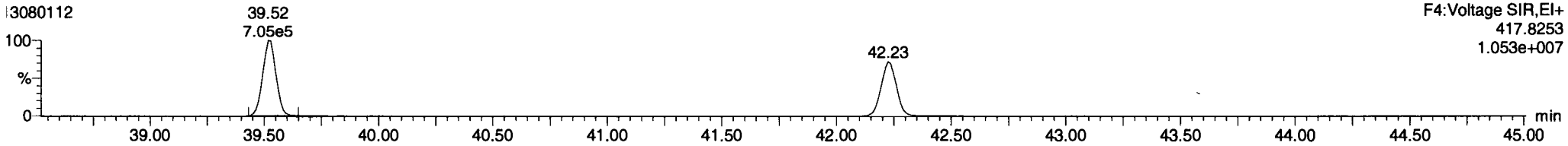

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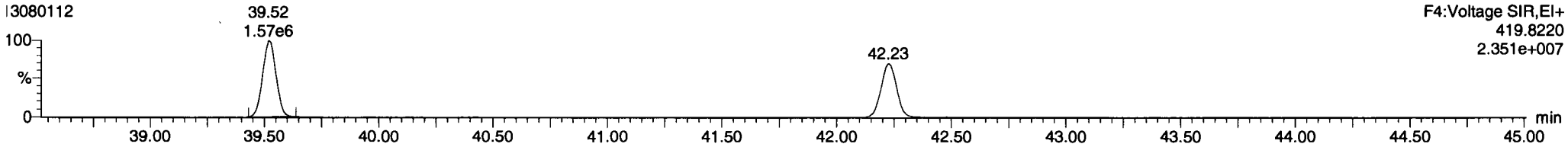

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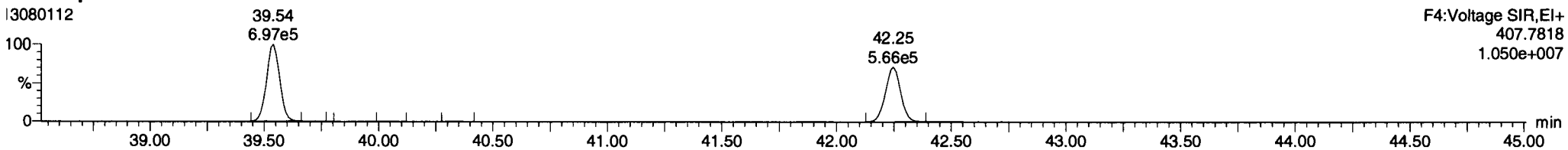

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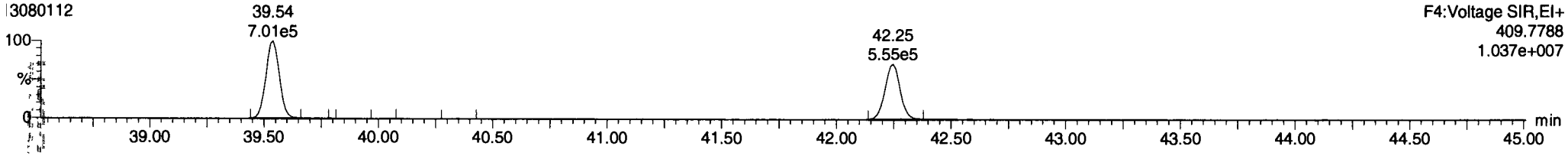

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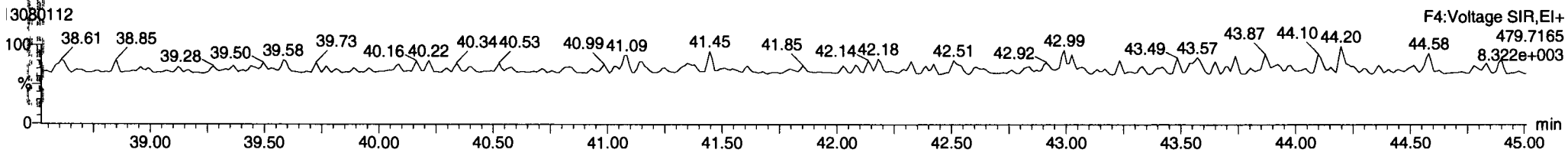

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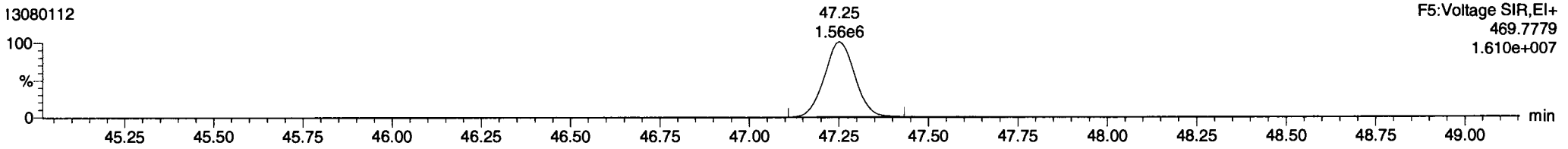

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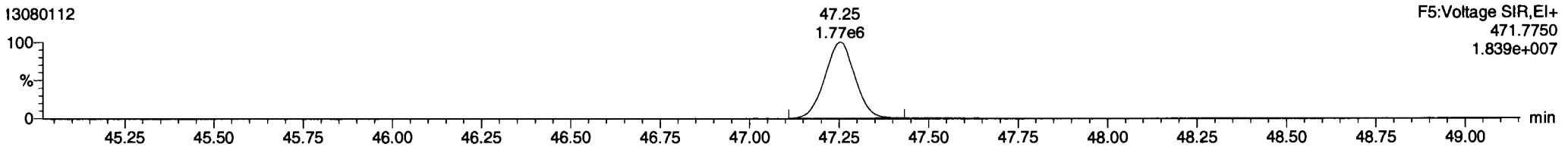

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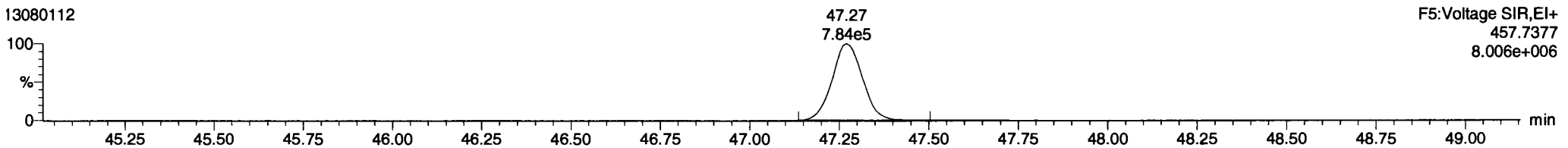

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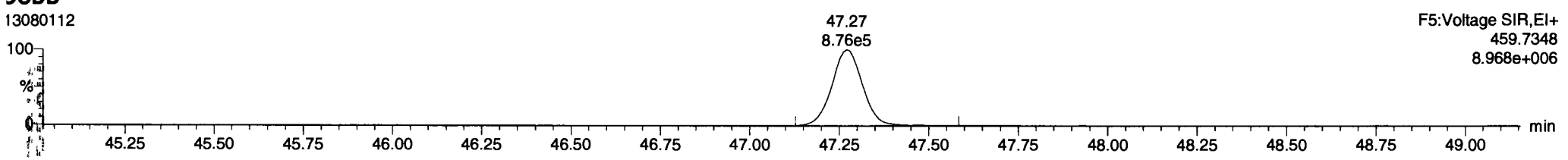

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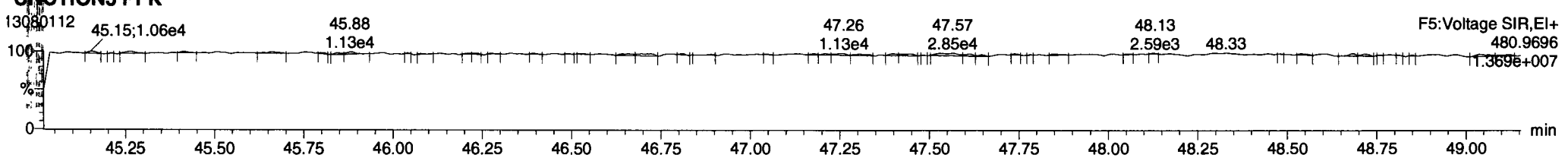

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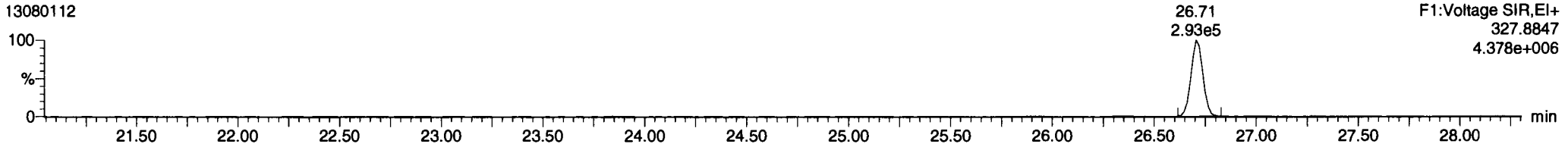
Printed: Wednesday, August 07, 2013 11:21:13 Pacific Daylight Time

ID: CS3, Name: 13080112, Date: 01-Aug-2013, Time: 19:05:06, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD



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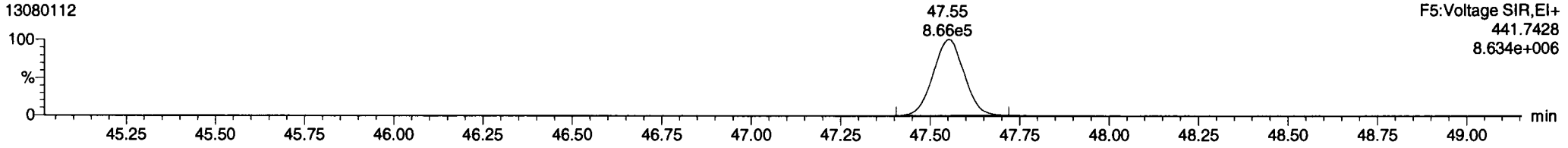

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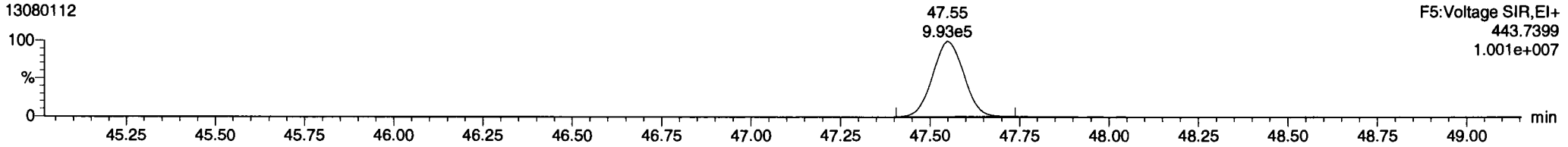

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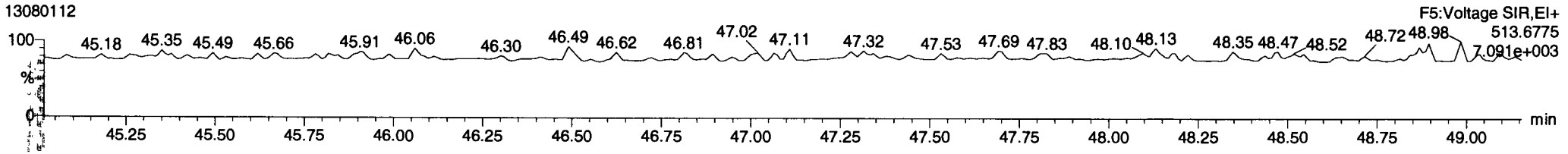

Pesticide Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WY32, WY33

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8081B) Pest PSDDA – Soil(Sed)
Microwave (3546) (SOP # 3304S)

Preparation Test Pest # 5 PSDDA (1-2ppb)

ARI Job No(s) WY32 Page 1 of 1 Batch set up by: JH

Bottle #	ARI Sample I.D.	Weight Extracted (eq. to 12.5 dry wt)	(Opt)(REQ) GPC (1:1) 1 or 2 (Y) / N	(REQ) Sulfur Clean 2mL+0.5mL Ethyl Acetate 1 2 3 very High sulfur	(REQ) Silica Gel Clean (1:2.5)	Final Effective Volume	Volume to Lab	Comment	Verify Client ID CT 7/25/13 Analyst/Date
	WY32 MBS	12.5g	(1:1) (Y) / N	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	Microwave 1 (2) 3 CT 7/25/13 Analyst/Date
	↓ SBS	12.5g	(1:1) (Y) / N	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	
	~~SBS Dup.~~	~~12.5g~~	(1:1) Y / N	~~2.5mL~~	~~(1:2.5)~~ 1mL	~~2.5mL~~	~~1mL~~	~~(10g Actual Wt)~~	Pre GPC KD 100°C (No exchange) 3 4 5 6 7/29/13 Analyst/Date
	WY32 QLS	12.5g	(1:1) (Y) / N	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	
5	A	19.04	(1:1) (Y) / N	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
4	B	15.05	(1:1) (Y) / N	2.5mL	(1:2.5) 1mL	2.5mL	1mL		TurboVap 1 (2) 3 Pre-GPC TH 7/29/30 Analyst/Date
4	C	18.05	(1:1) (Y) / N	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
4	Cms	18.06	(1:1) (Y) / N	2.5mL	(1:2.5) 1mL	2.5mL	1mL		Post GPC KD 80-85°C Hex X (2X20mL) 100°C 1 2 3 4 5 6 Analyst/Date 7/30/13
4	↓ Cmsd	18.07	(1:1) (Y) / N	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
			(1:1) Y / N	2.5mL	(1:2.5) 1mL	2.5mL	1mL	—	
			(1:1) Y / N	2.5mL	(1:2.5) 1mL	2.5mL	1mL		TurboVap 1 (2) 3 Pre-Cleanups 7/30/13 Analyst/Date
			(1:1) Y / N	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
			(1:1) Y / N	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
			(1:1) Y / N	~~2.5mL~~	~~(1:2.5)~~ 1mL	~~2.5mL~~	~~1mL~~	—	TurboVap 1 2 (3) Post Cleanups 7/30/13 Analyst/Date
Analyst/Date CT 7/25/13			TH 7/29/13	7/30/13	7/30/13	7/30/13	7/30/13	Reviewed by/Date 7/30/13	

Standard	Standard ID (B##1153)	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N (~~B##157~~)	2µg/mL	50µL	4/30/14	CT	AC
Spike	3 (B##1244)	0.5/1/5µg/mL	100µL	12/14/13	CT	AC
QLS Spike	10 (B##567)	0.25-2.5µg/mL	25µL	12/14/13	CT	AC
Extraction Time: 13:05			Balance ID: B139298002			

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessels. 3. Add 1:1 Hex/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-re-homogenize while hot then let cool 15 min in cold water. Re-homogenize while cool. 7. Decant 1:1 Hex/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing neutral glasswool. 8. Rinse with Hexane 9. Microwave a 2nd time using 8:2 Hex/Ace (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with Hexane. 11. ~~IF NO GPC~~: KD (Small ~~or large~~ drying column) to 5mL at 100°C. 12. ~~Exchange to Hexane (2 X with 20mL).~~ 13. IF GPC REQ: KD at 100°C (No Hexane Exchange). 14. TurboVap. 15. GPC. 16. AfterGPC: KD at 80-85°C. 17. Exchange to Hexane at 100°C (2 X with 20mL). 18. TurboVap. 19. Cleanups. 20. Vial in Hexane.

A. Need Total Solids Y (N) B. Archive/Freeze Y (N)

WY32-082907

Organic Extractions
Reagent and Solutions Identification

(8081B) Pest PSDDA – Soil/(Sed)
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WY32

(8081B) Pest PSDDA Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station: Anhydrous Sodium Sulfate: (9185 7/5/13) Neutral Glasswool: (7978 6/14/13) 1:1 Hexane/Acetone: (B001123) 80:20 Hexane/Acetone: (B001133) Hexane: (B001174)	Microwave CT 7/25/13 Analyst/Date
Pre GPC KD Station: Hexane: (B001174) Anhydrous Sodium Sulfate: (8271 7/18/13) Neutral Glasswool: (7998 6/25/13)	Pre-GPC KD YL 7/29/13 Analyst/Date
GPC Filter Prep: Methylene Chloride: (B001148)	GPC Filter Prep TH 7/29/13 Analyst/Date
GPC Station: Acetone: (B000946) Methylene Chloride: (B001148)	GPC TH 7/29/13 Analyst/Date
Post GPC KD Station: Methylene Chloride: (B001095) Hexane: (B001174)	Post GPC KD KR/SR 7/30/13 Analyst/Date
Vialing Station: Hexane: (B001147) Ethyl Acetate: (B001183) Tetrabutylammoniumhydrogensulfate (TBAS): (B000925) Sodium Sulfite: (B001180) Silica Gel (SPE) Darts: (I8127)	Vialing WW 7/30/13 Analyst/Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WY32 Client ID: SAIC

Parameter: Pest PSDDA Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☒ Standing Water Decanted (Not shared)= B, C	M 7/24/13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)= ~~M 7/24/13~~ ~~A~~ ~~B~~ ~~C~~ A	7/24/13 M
☒ Oily, obvious fuel/sulfur odors= ~~M 7/24/13~~ A - C has real light fuel odor smells like a	M 7/24/13
☒ Other (Details)= Samples ID Check this Job WY32, but Sample B, C has no Client Label ID on the Jar and Verified the Lims sheet with our Label Matched.	M 7/24/13
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions). GC analyst,	
(Centrifuge#1 used for all Centrifugations) Sample pre-screens indicate	
possible aroclor activity.	JH 7/25/13
- Temperature Log didn't print during Microwave (Run 1:2)	YL 7/25/13

Pesticide Raw Data
Initial Calibration

ARI Job ID: WY32, WY33

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 08/06/13 Internal Standard ID B454 Expiration 7/23/14

Endrin/DDT Breakdown <15%? YES / NO / NA		ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria	YES / NO	ICV Exceeding ±30%?	YES / NO
Manual Integrations for ICal?	YES / NO	Linear Fits Used?	YES / NO
Minimum Response S/N Met	YES / NO	Quadratic Fits Used?	YES / NO
		Calibration Points Dropped?	YES / NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Restek	B370	08/29/13	Supelco	2023-1	5/16/13
	B339	12/10/13	UCT19	2062-1	02/17/14
	B553	5/29/14			
	B559*	7/27/13			

Detail problems, corrective actions and/or other pertinent information below:

* B559 standart : only Mirex is expired on 7/27/13.

Analyst: YZ **Date:** 8/8/13

Reviewer: [signature] **Date:** 8/16/13

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 08/06/13 Analysis: Pest Analyst: YZ/JR

Column 1 Serial No.: 1085624 Column Type: CLP

Column 2 Serial No.: 109 4709 Column Type: CLP

GC Method: Pest (2.mm) ICal Date: 08/06/13

IS	Ical/Ccal	ICV
B054	B339 B558	2083-1
	B559 B370	2084-1.

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130806pest.b/ical-1.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	06-AUG-2013 14:14	0806a004.d	1	IB	
2	06-AUG-2013 14:31	0806a005.d	1	DS	
3	06-AUG-2013 14:49	0806a006.d	1	INDAE	
4	06-AUG-2013 15:07	0806a007.d	1	INDAA	
5	06-AUG-2013 15:25	0806a008.d	1	INDAB	
6	06-AUG-2013 15:43	0806a009.d	1	INDAC	
7	06-AUG-2013 16:00	0806a010.d	1	INDAD	
8	06-AUG-2013 16:18	0806a011.d	1	INDAF	
9	06-AUG-2013 16:36	0806a012.d	1	INDAG	
10	06-AUG-2013 16:54	0806a013.d	1	WNDE	
11	06-AUG-2013 17:12	0806a014.d	1	WNDA	
12	06-AUG-2013 17:29	0806a015.d	1	WNDB	
13	06-AUG-2013 17:47	0806a016.d	1	WNDC	
14	06-AUG-2013 18:05	0806a017.d	1	WNDD	
15	06-AUG-2013 18:23	0806a018.d	1	WNDF	
16	06-AUG-2013 18:41	0806a019.d	1	WNDG	
17	06-AUG-2013 18:58	0806a020.d	1	TOXAPHENE	
18	06-AUG-2013 19:16	0806a021.d	1	INDA ICV	
19	06-AUG-2013 19:34	0806a022.d	1	WND ICV	
20	06-AUG-2013 19:52	0806a023.d	1	HCB/HCBD ICV	
21	06-AUG-2013 20:10	0806a024.d	1	INDAE#1	
22	06-AUG-2013 20:27	0806a025.d	1	WNDE#1	
23	06-AUG-2013 20:45	0806a026.d	1	TOXAP#1	
24	06-AUG-2013 21:03	0806a027.d	1	WY84MBW1	
25	06-AUG-2013 21:21	0806a028.d	1	WY84LCSW1	
26	06-AUG-2013 21:38	0806a029.d	1	WY84QLS	
27	06-AUG-2013 21:56	0806a030.d	1	WY84C	
28	06-AUG-2013 22:14	0806a031.d	1	WY84D	
29	06-AUG-2013 22:32	0806a032.d	1	WY84DMS	
30	06-AUG-2013 22:50	0806a033.d	1	WY44MBS1	
31	06-AUG-2013 23:07	0806a034.d	1	WY44LCSS1	
32	06-AUG-2013 23:25	0806a035.d	1	WY44A	5
33	06-AUG-2013 23:43	0806a036.d	1	WY44AMS	5
34	07-AUG-2013 00:01	0806a037.d	1	WY44AMSD	5
35	07-AUG-2013 00:19	0806a038.d	1	INDAE#2	
36	07-AUG-2013 00:36	0806a039.d	1	WNDE#2	
37	07-AUG-2013 00:54	0806a040.d	1	TOXAP#2	
38	07-AUG-2013 01:12	0806a041.d	1	WY44B	5
39	07-AUG-2013 01:30	0806a042.d	1	WY44C	5
40	07-AUG-2013 01:48	0806a043.d	1	WY44D	5
41	07-AUG-2013 02:05	0806a044.d	1	WY44E	5
42	07-AUG-2013 02:23	0806a045.d	1	WY44F	5
43	07-AUG-2013 02:41	0806a046.d	1	WY44G	5
44	07-AUG-2013 02:59	0806a047.d	1	WY44H	
45	07-AUG-2013 03:17	0806a048.d	1	WY54A	5
46	07-AUG-2013 03:34	0806a049.d	1	WY54B	5
47	07-AUG-2013 03:52	0806a050.d	1	INDAE#3	
48	07-AUG-2013 04:10	0806a051.d	1	WNDE#3	
49	07-AUG-2013 04:28	0806a052.d	1	TOXAP#3	

YZ 8/8/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130806pest.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130806pest.b/ical-2.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0806a006	0806a007	0806a008	0806a009	0806a010	0806a011	0806a012
INJ.DATE:	06-AUG-2013	06-AUG-2013	06-AUG-2013	06-AUG-2013	06-AUG-2013	06-AUG-2013	06-AUG-2013
INJ.TIME:	14:49	15:07	15:25	15:43	16:00	16:18	16:36

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	2.464	2.464	2.464	2.464	2.464	2.464	2.464	2.464	2.414-2.514	2.464	0.000
* 52 1Bromo-2nitrobenzene	3.300	3.301	3.300	3.300	3.299	3.300	3.297	3.300	3.250-3.350	3.300	0.001
* 55 Hexabromobiphenyl	10.280	10.279	10.280	10.280	10.280	10.279	10.279	10.280	10.230-10.330	10.280	0.001
$ 2 Tetrachloro-m-xylene	4.129	4.131	4.130	4.130	4.129	4.128	4.127	4.129	4.079-4.179	4.129	0.002
3 Hexachlorobenzene	4.589	4.593	4.592	4.591	4.590	4.588	4.584	4.589	4.539-4.639	4.590	0.003
4 alpha-BHC	4.710	4.712	4.712	4.711	4.710	4.711	4.707	4.710	4.660-4.760	4.710	0.002
5 gamma-BHC (Lindane)	5.066	5.068	5.067	5.066	5.066	5.066	5.062	5.066	5.016-5.116	5.066	0.002
6 beta-BHC	5.141	5.146	5.144	5.143	5.141	5.140	5.136	5.141	5.091-5.191	5.142	0.003
7 delta-BHC	5.450	5.455	5.454	5.452	5.451	5.450	5.446	5.450	5.401-5.500	5.451	0.003
8 Heptachlor	5.527	5.530	5.529	5.528	5.527	5.528	5.524	5.527	5.477-5.577	5.528	0.002
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.538-14.638	+++++	+++++
9 Aldrin	5.865	5.867	5.866	5.866	5.865	5.865	5.862	5.865	5.815-5.915	5.865	0.002
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.630-12.730	+++++	+++++
11 Heptachlor epoxide b	6.418	6.420	6.419	6.419	6.417	6.418	6.416	6.418	6.368-6.468	6.418	0.001
12 gamma-Chlordane	6.601	6.603	6.602	6.602	6.601	6.601	6.599	6.601	6.551-6.651	6.602	0.001
13 alpha-Chlordane	6.738	6.740	6.739	6.738	6.738	6.738	6.736	6.738	6.688-6.788	6.738	0.001
14 Endosulfan I	6.805	6.807	6.806	6.805	6.805	6.805	6.803	6.805	6.755-6.855	6.805	0.001

Reviewer 1 YZ Date: 8/8/13
Reviewer 2 Date: 8/16/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130806pest.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130806pest.b/ical-2.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
15	4,4'-DDE	6.866	6.870	6.869	6.868	6.866	6.866	6.865	6.866	6.816-6.916	6.867	0.002
16	Dieldrin	7.062	7.064	7.063	7.062	7.061	7.062	7.061	7.062	7.013-7.112	7.062	0.001
17	Endrin	7.351	7.352	7.352	7.352	7.351	7.351	7.349	7.351	7.301-7.401	7.351	0.001
18	4,4'-DDD	7.405	7.408	7.407	7.407	7.406	7.404	7.401	7.405	7.355-7.455	7.405	0.002
19	Endosulfan II	7.541	7.542	7.542	7.541	7.540	7.540	7.539	7.541	7.491-7.591	7.541	0.001
20	4,4'-DDT	7.691	7.693	7.693	7.692	7.691	7.690	7.689	7.691	7.641-7.741	7.691	0.001
21	Endrin aldehyde	7.838	7.839	7.838	7.838	7.838	7.837	7.835	7.838	7.788-7.888	7.838	0.001
22	Endosulfan sulfate	8.082	8.084	8.083	8.083	8.082	8.082	8.081	8.082	8.032-8.132	8.082	0.001
23	Methoxychlor	8.273	8.274	8.274	8.274	8.273	8.273	8.273	8.273	8.223-8.323	8.273	0.000
24	Endrin ketone	8.572	8.573	8.573	8.572	8.572	8.572	8.570	8.572	8.522-8.622	8.572	0.001
$ 25	Decachlorobiphenyl	9.715	9.715	9.716	9.715	9.715	9.716	9.714	9.715	9.665-9.765	9.715	0.001
26	Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.130-4.230	+++++	+++++
27	Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.001-5.101	+++++	+++++
28	Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.121-5.221	+++++	+++++
29	Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.920-5.020	+++++	+++++
30	Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.235-5.335	+++++	+++++
31	Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.918-6.018	+++++	+++++
32	Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.717-6.817	+++++	+++++
33	Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.664-9.764	+++++	+++++
34	Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.741-11.841	+++++	+++++
35	Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.285	7.235-7.335	+++++	+++++
38	2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.575	6.525-6.625	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130806pest.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130806pest.b/ical-1.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0806a006	0806a007	0806a008	0806a009	0806a010	0806a011	0806a012
INJ.DATE:	06-AUG-2013	06-AUG-2013	06-AUG-2013	06-AUG-2013	06-AUG-2013	06-AUG-2013	06-AUG-2013
INJ.TIME:	14:49	15:07	15:25	15:43	16:00	16:18	16:36

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	2.302	2.302	2.302	2.302	2.302	2.303	2.302	2.302	2.252-2.352	2.302	0.000
*	54 1Bromo-2nitrobenzene	3.125	3.126	3.125	3.125	3.125	3.125	3.123	3.125	3.075-3.175	3.125	0.001
*	58 Hexabromobiphenyl	8.908	8.908	8.908	8.908	8.908	8.908	8.907	8.908	8.858-8.958	8.908	0.000
$	2 Tetrachloro-m-xylene	3.796	3.799	3.798	3.797	3.796	3.795	3.792	3.796	3.746-3.846	3.796	0.002
	3 Hexachlorobenzene	4.138	4.142	4.141	4.139	4.139	4.136	4.133	4.138	4.088-4.188	4.138	0.003
	4 alpha-BHC	4.281	4.283	4.282	4.281	4.281	4.280	4.277	4.281	4.231-4.331	4.281	0.002
	5 gamma-BHC (Lindane)	4.563	4.565	4.564	4.563	4.563	4.562	4.558	4.563	4.513-4.613	4.563	0.002
	6 beta-BHC	4.642	4.648	4.646	4.644	4.643	4.640	4.636	4.642	4.592-4.692	4.643	0.004
	7 delta-BHC	4.811	4.817	4.815	4.813	4.812	4.809	4.805	4.811	4.761-4.861	4.812	0.004
	8 Heptachlor	5.007	5.009	5.008	5.007	5.007	5.006	5.002	5.007	4.957-5.057	5.006	0.002
	9 Aldrin	5.298	5.300	5.299	5.298	5.298	5.297	5.294	5.298	5.248-5.348	5.298	0.002
	38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.577-13.677	+++++	+++++
	10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.819-10.919	+++++	+++++
	11 Heptachlor epoxide b	5.870	5.872	5.871	5.870	5.870	5.869	5.867	5.870	5.820-5.920	5.870	0.002
	12 gamma-Chlordane	5.990	5.993	5.992	5.991	5.990	5.990	5.987	5.990	5.940-6.040	5.990	0.002
	13 alpha-Chlordane	6.114	6.116	6.115	6.113	6.113	6.112	6.110	6.114	6.064-6.164	6.113	0.002
	14 Endosulfan I	6.245	6.248	6.247	6.246	6.246	6.245	6.243	6.245	6.195-6.295	6.246	0.001

Reviewer 1 _____ Date: 8/8/13
Reviewer 2 _____ Date: 8/16/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130806pest.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130806pest.b/ical-1.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	15 4,4'-DDE	6.171	6.177	6.175	6.173	6.171	6.170	6.169	6.171	6.121-6.221	6.172	0.003
	16 Dieldrin	6.467	6.469	6.468	6.468	6.467	6.467	6.464	6.467	6.417-6.517	6.467	0.002
	17 Endrin	6.685	6.687	6.686	6.685	6.685	6.684	6.682	6.685	6.635-6.735	6.685	0.001
	18 4,4'-DDD	6.729	6.735	6.734	6.733	6.732	6.727	6.723	6.729	6.679-6.779	6.730	0.004
	19 Endosulfan II	6.891	6.894	6.893	6.892	6.891	6.890	6.888	6.891	6.841-6.941	6.891	0.002
	20 4,4'-DDT	6.984	6.988	6.987	6.987	6.986	6.982	6.980	6.984	6.934-7.034	6.985	0.003
	21 Endrin aldehyde	7.266	7.269	7.268	7.268	7.267	7.265	7.263	7.266	7.216-7.316	7.267	0.002
	22 Methoxychlor	7.410	7.412	7.412	7.412	7.411	7.408	7.406	7.410	7.360-7.460	7.410	0.002
	23 Endosulfan sulfate	7.656	7.657	7.657	7.656	7.656	7.654	7.653	7.656	7.606-7.706	7.656	0.001
	24 Endrin ketone	7.910	7.911	7.911	7.910	7.910	7.909	7.908	7.910	7.860-7.960	7.910	0.001
$	25 Decachlorobiphenyl	8.754	8.754	8.754	8.754	8.754	8.753	8.753	8.754	8.704-8.804	8.754	0.001
	26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.831-4.931	+++++	+++++
	28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.309-5.409	+++++	+++++
	29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.368-4.468	+++++	+++++
	31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.207-5.307	+++++	+++++
	32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	5.995-6.095	+++++	+++++
	33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.251-8.351	+++++	+++++
	34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.209-11.309	+++++	+++++
	35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.958	6.908-7.008	+++++	+++++
	39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.861	5.811-5.911	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130806pest.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130806pest.b/ical-1.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0806a013	0806a014	0806a015	0806a016	0806a017	0806a018	0806a019
INJ.DATE:	06-AUG-2013	06-AUG-2013	06-AUG-2013	06-AUG-2013	06-AUG-2013	06-AUG-2013	06-AUG-2013
INJ.TIME:	16:54	17:12	17:29	17:47	18:05	18:23	18:41

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.302	2.252-2.352	+++++	+++++
*	54 1Bromo-2nitrobenzene	3.124	3.124	3.123	3.123	3.123	3.123	3.122	3.124	3.074-3.174	3.123	0.001
*	58 Hexabromobiphenyl	8.908	8.909	8.909	8.909	8.908	8.907	8.906	8.908	8.858-8.958	8.908	0.001
$	2 Tetrachloro-m-xylene	3.794	3.796	3.795	3.794	3.794	3.792	3.792	3.792	3.742-3.842	3.794	0.001
	3 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.133	4.083-4.183	+++++	+++++
	4 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.277	4.227-4.327	+++++	+++++
	5 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.558	4.508-4.608	+++++	+++++
	6 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.636	4.586-4.686	+++++	+++++
	7 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.805	4.755-4.855	+++++	+++++
	8 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.002	4.952-5.052	+++++	+++++
	9 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.294	5.244-5.344	+++++	+++++
	38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.577-13.677	+++++	+++++
	10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.819-10.919	+++++	+++++
	11 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.867	5.817-5.917	+++++	+++++
	12 gamma-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.987	5.937-6.037	+++++	+++++
	13 alpha-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.110	6.060-6.160	+++++	+++++
	14 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.243	6.193-6.293	+++++	+++++

Reviewer 1 YZ Date: 8/8/13
Reviewer 2 Date: 8/16/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130806pest.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130806pest.b/ical-1.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	15 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.169	6.119-6.219	+++++	+++++
	16 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.464	6.414-6.514	+++++	+++++
	17 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.682	6.632-6.732	+++++	+++++
	18 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.723	6.673-6.773	+++++	+++++
	19 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.888	6.838-6.938	+++++	+++++
	20 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.980	6.930-7.030	+++++	+++++
	21 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.263	7.213-7.313	+++++	+++++
	22 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.406	7.356-7.456	+++++	+++++
	23 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.653	7.603-7.703	+++++	+++++
	24 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.908	7.858-7.958	+++++	+++++
$	25 Decachlorobiphenyl	8.754	8.754	8.755	8.754	8.753	8.752	8.752	8.753	8.703-8.803	8.754	0.001
	26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.831-4.931	+++++	+++++
	28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.309-5.409	+++++	+++++
	29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.368-4.468	+++++	+++++
	31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.207-5.307	+++++	+++++
	32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	5.995-6.095	+++++	+++++
	33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.251-8.351	+++++	+++++
	34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.209-11.309	+++++	+++++
	35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.958	6.908-7.008	+++++	+++++
	39 2,4-DDE	5.853	5.856	5.855	5.855	5.853	5.849	5.848	5.853	5.803-5.903	5.853	0.003

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130806pest.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130806pest.b/ical-1.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	6.338	6.342	6.341	6.340	6.338	6.335	6.334	6.338	6.288-6.388	6.338	0.003
41 2,4-DDT	6.573	6.576	6.576	6.575	6.573	6.572	6.571	6.573	6.523-6.623	6.574	0.002
42 Hexachloroethane	1.768	1.768	1.768	1.768	1.769	1.769	1.769	1.768	1.718-1.818	1.768	0.001
43 Oxychlordane	5.774	5.774	5.773	5.773	5.773	5.772	5.771	5.774	5.724-5.824	5.773	0.001
44 trans-Nonachlor	6.096	6.097	6.096	6.096	6.095	6.094	6.094	6.096	6.046-6.146	6.095	0.001
45 cis-Nonachlor	6.710	6.712	6.711	6.711	6.710	6.709	6.709	6.710	6.660-6.760	6.710	0.001
46 Mirex	7.580	7.582	7.581	7.581	7.580	7.580	7.580	7.580	7.530-7.630	7.581	0.001
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.106-20.206	+++++	+++++
59 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.935	4.885-4.985	+++++	+++++
48 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.269-6.369	+++++	+++++
49 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.886-9.986	+++++	+++++
50 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.841-11.941	+++++	+++++
51 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.777-14.877	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.700-9.800	+++++	+++++
55 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.057-9.157	+++++	+++++
56 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.201-10.301	+++++	+++++
60 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.581	6.531-6.631	+++++	+++++
61 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.903-7.003	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130806pest.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130806pest.b/ical-2.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0806a013	0806a014	0806a015	0806a016	0806a017	0806a018	0806a019
INJ.DATE:	06-AUG-2013	06-AUG-2013	06-AUG-2013	06-AUG-2013	06-AUG-2013	06-AUG-2013	06-AUG-2013
INJ.TIME:	16:54	17:12	17:29	17:47	18:05	18:23	18:41

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.464	2.414-2.514	+++++	+++++
* 52 1Bromo-2nitrobenzene	3.298	3.299	3.297	3.298	3.297	3.297	3.296	3.298	3.248-3.348	3.297	0.001
* 55 Hexabromobiphenyl	10.279	10.279	10.281	10.280	10.279	10.279	10.278	10.279	10.229-10.329	10.279	0.001
$ 2 Tetrachloro-m-xylene	4.127	4.128	4.126	4.126	4.126	4.125	4.125	4.127	4.077-4.177	4.126	0.001
3 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.584	4.534-4.634	+++++	+++++
4 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.707	4.657-4.757	+++++	+++++
5 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.062	5.012-5.112	+++++	+++++
6 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.136	5.086-5.186	+++++	+++++
7 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.446	5.396-5.496	+++++	+++++
8 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.524	5.474-5.574	+++++	+++++
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.538-14.638	+++++	+++++
9 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.862	5.812-5.912	+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.630-12.730	+++++	+++++
11 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.416	6.366-6.466	+++++	+++++
12 gamma-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.599	6.549-6.649	+++++	+++++
13 alpha-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.736	6.686-6.786	+++++	+++++
14 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.803	6.753-6.853	+++++	+++++

Reviewer 1 VL Date: 8/8/13
Reviewer 2 [signature] Date: 8/6/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130806pest.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130806pest.b/ical-2.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	15 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.865	6.815-6.915	+++++	+++++
	16 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.061	7.011-7.111	+++++	+++++
	17 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.349	7.299-7.399	+++++	+++++
	18 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.401	7.351-7.451	+++++	+++++
	19 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.539	7.489-7.589	+++++	+++++
	20 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.689	7.639-7.739	+++++	+++++
	21 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.835	7.785-7.885	+++++	+++++
	22 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.081	8.031-8.131	+++++	+++++
	23 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.273	8.223-8.323	+++++	+++++
	24 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.570	8.521-8.620	+++++	+++++
$	25 Decachlorobiphenyl	9.714	9.715	9.716	9.716	9.715	9.715	9.714	9.714	9.664-9.764	9.715	0.001
	26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.130-4.230	+++++	+++++
	27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.001-5.101	+++++	+++++
	28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.121-5.221	+++++	+++++
	29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.920-5.020	+++++	+++++
	30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.235-5.335	+++++	+++++
	31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.918-6.018	+++++	+++++
	32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.717-6.817	+++++	+++++
	33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.664-9.764	+++++	+++++
	34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.741-11.841	+++++	+++++
	35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.285	7.235-7.335	+++++	+++++
	38 2,4-DDE	6.578	6.580	6.580	6.579	6.578	6.577	6.575	6.578	6.528-6.628	6.578	0.002

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130806pest.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130806pest.b/ical-2.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
39 2,4-DDD	7.062	7.065	7.064	7.064	7.063	7.061	7.061	7.062	7.012-7.112	7.063	0.002
40 2,4-DDT	7.347	7.349	7.349	7.349	7.348	7.347	7.347	7.347	7.297-7.397	7.348	0.001
41 Hexachloroethane	1.719	1.719	1.719	1.720	1.720	1.720	1.719	1.719	1.669-1.769	1.719	0.001
42 Oxychlordane	6.326	6.327	6.327	6.326	6.327	6.326	6.326	6.326	6.276-6.376	6.327	0.001
43 trans-Nonachlor	6.683	6.685	6.684	6.684	6.683	6.683	6.683	6.683	6.633-6.733	6.684	0.001
44 cis-Nonachlor	7.407	7.408	7.408	7.408	7.407	7.407	7.407	7.407	7.357-7.457	7.407	0.000
45 Mirex	8.557	8.558	8.558	8.557	8.557	8.557	8.557	8.557	8.507-8.607	8.557	0.000
46 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.449-21.549	+++++	+++++
56 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.378	5.328-5.428	+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.821-4.921	+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.590-6.690	+++++	+++++
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.065-8.165	+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.236-11.336	+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.477-6.577	+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.292-6.392	+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.791-6.891	+++++	+++++
57 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.286-7.386	+++++	+++++
58 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.695-7.795	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-AUG-2013 14:49
End Cal Date : 06-AUG-2013 18:58
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130806pest.b/PEST0619.m
Cal Date : 08-Aug-2013 14:52 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a014.d
Level 2: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a015.d
Level 3: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a016.d
Level 4: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a017.d
Level 5: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a020.d
Level 6: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a018.d
Level 7: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a019.d

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7							
1 Hexachlorobutadiene	1.76820	1.76722	1.70876	1.71982	1.65647	1.67523		
	1.66530						1.70871	2.705
3 Hexachlorobenzene	1.28803	1.34548	1.21901	1.21565	1.16413	1.16557		
	1.12917						1.21815	6.243
4 alpha-BHC	1.43288	1.46676	1.49411	1.58560	1.59981	1.66755		
	1.65099						1.55681	5.934
5 gamma-BHC (Lindane)	1.34825	1.37449	1.37724	1.44642	1.44436	1.49060		
	1.47134						1.42181	3.845
6 beta-BHC	0.66242	0.65146	0.61244	0.61782	0.59821	0.60358		
	0.58649						0.61892	4.527
7 delta-BHC	1.26159	1.16996	1.18526	1.30588	1.34328	1.41352		
	1.41530						1.29926	7.673

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-AUG-2013 14:49
End Cal Date : 06-AUG-2013 18:58
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130806pest.b/PEST0619.m
Cal Date : 08-Aug-2013 14:52 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7							
8 Heptachlor	1.36773	1.36942	1.35926	1.39829	1.36752	1.37576		
	1.31986						1.36541	1.724
9 Aldrin	1.34269	1.35051	1.34688	1.39771	1.38296	1.40355		
	1.34823						1.36750	1.924
38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
11 Heptachlor epoxide b	1.26872	1.26436	1.23581	1.26520	1.22135	1.21971		
	1.15546						1.23295	3.249
12 gamma-Chlordane	1.30158	1.30155	1.27695	1.31565	1.29580	1.32235		
	1.27873						1.29894	1.312
13 alpha-Chlordane	1.26097	1.25142	1.21722	1.24916	1.22965	1.25159		
	1.20926						1.23847	1.596
14 Endosulfan I	1.27239	1.24053	1.18493	1.17776	1.12222	1.10460		
	1.05217						1.16494	6.650
15 4,4'-DDE	0.96518	0.94546	0.90714	0.91866	0.91214	0.93662		
	0.92635						0.93022	2.196

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-AUG-2013 14:49
End Cal Date : 06-AUG-2013 18:58
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130806pest.b/PEST0619.m
Cal Date : 08-Aug-2013 14:52 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7							
16 Dieldrin	1.22032	1.25004	1.23226	1.26103	1.22273	1.21494		
	1.16267						1.22343	2.579
17 Endrin	1.06490	1.08745	1.06751	1.10264	1.07598	1.06218		
	1.03245						1.07044	2.057
18 4,4'-DDD	1.08006	1.09668	1.07461	1.03762	1.02534	1.04403		
	1.02219						1.05436	2.772
19 Endosulfan II	1.13440	1.12774	1.10373	1.14055	1.09736	1.07932		
	1.04529						1.10406	3.077
20 4,4'-DDT	1.01706	1.03905	1.03273	1.07789	1.06222	1.07356		
	1.06622						1.05268	2.193
21 Endrin aldehyde	0.97122	0.94926	0.92288	0.93814	0.89809	0.88686		
	0.85326						0.91710	4.405
22 Methoxychlor	0.54423	0.53467	0.50217	0.49584	0.45838	0.46155		
	0.46694						0.49483	7.048
23 Endosulfan sulfate	0.96397	0.96282	0.93927	0.97260	0.95142	0.95360		
	0.93550						0.95417	1.412
24 Endrin ketone	1.32472	1.29758	1.24031	1.25413	1.19998	1.19253		
	1.16160						1.23869	4.740

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-AUG-2013 14:49
End Cal Date : 06-AUG-2013 18:58
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130806pest.b/PEST0619.m
Cal Date : 08-Aug-2013 14:52 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7							
35 Toxaphene(1)	+++++	+++++	+++++	+++++	0.04976	+++++		
	+++++						0.04976	0.000
(2)	+++++	+++++	+++++	+++++	0.03540	+++++		
	+++++						0.03540	0.000
(3)	+++++	+++++	+++++	+++++	0.05631	+++++		
	+++++						0.05631	0.000
(4)	+++++	+++++	+++++	+++++	0.02961	+++++		
	+++++						0.02961	0.000
(5)	+++++	+++++	+++++	+++++	0.05685	+++++		
	+++++						0.05685	0.000
(6)	+++++	+++++	+++++	+++++	0.03221	+++++		
	+++++						0.03221	0.000
39 2,4-DDE	0.87366	0.87770	0.85761	0.83223	0.82718	0.80049		
	0.74543						0.83061	5.599
40 2,4-DDD	0.76039	0.76067	0.71197	0.69316	0.69864	0.68999		
	0.66929						0.71202	4.983
41 2,4-DDT	0.84165	0.86078	0.84046	0.82574	0.82806	0.81862		
	0.78911						0.82920	2.702

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-AUG-2013 14:49
End Cal Date : 06-AUG-2013 18:58
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130806pest.b/PEST0619.m
Cal Date : 08-Aug-2013 14:52 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7							
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
43 Oxychlordane	1.04374	1.06501	1.04177	1.00484	1.00684	0.98313		
	0.93930						1.01209	4.211
44 trans-Nonachlor	1.26650	1.32886	1.31558	1.26412	1.29121	1.27739		
	1.24810						1.28454	2.268
45 cis-Nonachlor	1.39788	1.44140	1.43056	1.38788	1.41972	1.41533		
	1.39262						1.41220	1.427
46 Mirex	0.93264	0.92977	0.88918	0.84603	0.83514	0.82877		
	0.81383						0.86791	5.660
47 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
59 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-AUG-2013 14:49
End Cal Date : 06-AUG-2013 18:58
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130806pest.b/PEST0619.m
Cal Date : 08-Aug-2013 14:52 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7							
$ 2 Tetrachloro-m-xylene	1.01726	1.02125	1.01283	1.04451	1.02736	1.03163		
	0.99954						1.02205	1.406
$ 25 Decachlorobiphenyl	1.04416	1.02563	0.98005	0.97435	0.90864	0.93280		
	0.91137						0.96814	5.543

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-AUG-2013 14:49
End Cal Date : 07-AUG-2013 04:28
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130806pest.b/PEST0619B.m
Cal Date : 08-Aug-2013 14:53 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a014.d
Level 2: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a015.d
Level 3: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a016.d
Level 4: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a017.d
Level 5: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a020.d
Level 6: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a018.d
Level 7: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a019.d
Level 8: /chem2/ecd6.i/20130806pest.b/0806-2.b/0806a052.d

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
1 Hexachlorobutadiene	1.42112	1.41569	1.36595	1.39439	1.33558	1.30118		
	1.26460	+++++					1.35693	4.375
3 Hexachlorobenzene	1.73854	1.78698	1.67910	1.74791	1.70084	1.69147		
	1.63899	+++++					1.71198	2.879
4 alpha-BHC	1.45758	1.57895	1.56941	1.69038	1.67065	1.70989		
	1.64973	+++++					1.61808	5.475
5 gamma-BHC (Lindane)	1.26750	1.34923	1.38432	1.48141	1.46878	1.49558		
	1.48526	+++++					1.41887	6.148
6 beta-BHC	0.59991	0.61489	0.61021	0.63015	0.62310	0.63769		
	0.61429	+++++					0.61861	2.056
7 delta-BHC	1.10587	1.19219	1.26760	1.39721	1.40515	1.44730		
	1.43995	+++++					1.32218	10.180

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-AUG-2013 14:49
End Cal Date : 07-AUG-2013 04:28
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130806pest.b/PEST0619B.m
Cal Date : 08-Aug-2013 14:53 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
8 Heptachlor	1.31547	1.36667	1.36783	1.41444	1.36034	1.33095		
	1.23065	+++++					1.34091	4.314
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
9 Aldrin	1.29598	1.28180	1.29007	1.32861	1.28874	1.28540		
	1.20224	+++++					1.28183	2.996
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Heptachlor epoxide b	1.07102	1.11951	1.11047	1.15586	1.12025	1.10343		
	1.02216	+++++					1.10039	3.879
12 gamma-Chlordane	1.07973	1.12471	1.12868	1.17614	1.15199	1.15620		
	1.09295	+++++					1.13006	3.071
13 alpha-Chlordane	1.00401	1.04826	1.05406	1.09835	1.07076	1.07371		
	1.01652	+++++					1.05224	3.140
14 Endosulfan I	0.97174	1.01646	1.02025	1.06432	1.03172	1.01725		
	0.94241	+++++					1.00916	3.974
15 4,4'-DDE	0.99110	1.05110	1.05952	1.08497	1.02652	1.00746		
	0.90265	+++++					1.01762	5.885

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-AUG-2013 14:49
End Cal Date : 07-AUG-2013 04:28
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130806pest.b/PEST0619B.m
Cal Date : 08-Aug-2013 14:53 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
16 Dieldrin	1.06947	1.09824	1.08324	1.09370	1.02060	0.97873		
	0.87352	+++++					1.03107	7.949
17 Endrin	1.55017	1.59453	1.56987	1.61944	1.54530	1.47443		
	1.34938	+++++					1.52902	5.976
18 4,4'-DDD	1.56555	1.62868	1.62223	1.67577	1.61085	1.58529		
	1.49502	+++++					1.59763	3.574
19 Endosulfan II	1.70330	1.74001	1.71345	1.76284	1.66936	1.63180		
	1.51289	+++++					1.67624	5.014
20 4,4'-DDT	1.37860	1.43728	1.43567	1.52061	1.48354	1.44655		
	1.45367	+++++					1.45085	3.030
21 Endrin aldehyde	1.38370	1.38985	1.35478	1.39878	1.33317	1.30436		
	1.20577	+++++					1.33863	5.047
22 Endosulfan sulfate	1.30689	1.35298	1.33636	1.41346	1.37613	1.35720		
	1.27435	+++++					1.34534	3.377
23 Methoxychlor	0.64241	0.63588	0.59674	0.56992	0.50628	0.47533		
	0.40236	+++++					0.54699	16.304
24 Endrin ketone	1.59802	1.57663	1.52834	1.56861	1.47135	1.46010		
	1.37758	+++++					1.51152	5.227

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-AUG-2013 14:49
End Cal Date : 07-AUG-2013 04:28
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130806pest.b/PEST0619B.m
Cal Date : 08-Aug-2013 14:53 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
34 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
35 Toxaphene(1)	+++++	+++++	+++++	+++++	0.05690	+++++		
	+++++	+++++					0.05690	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-AUG-2013 14:49
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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130806pest.b/PEST0619B.m
Cal Date : 08-Aug-2013 14:53 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	0.08349	+++++		
	+++++	+++++					0.08349	0.000
(3)	+++++	+++++	+++++	+++++	0.09082	+++++		
	+++++	+++++					0.09082	0.000
(4)	+++++	+++++	+++++	+++++	0.06482	+++++		
	+++++	+++++					0.06482	0.000
(5)	+++++	+++++	+++++	+++++	0.08470	+++++		
	+++++	+++++					0.08470	0.000
38 2,4-DDE	0.67917	0.70245	0.70402	0.69965	0.66764	0.64059		
	0.59452	+++++					0.66972	6.016
39 2,4-DDD	1.14249	1.19507	1.20041	1.18697	1.16601	1.13442		
	1.05670	+++++					1.15458	4.338
40 2,4-DDT	1.17313	1.24495	1.26538	1.28103	1.25131	1.22627		
	1.14601	+++++					1.22687	4.044
41 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
42 Oxychlordane	0.84948	0.90391	0.91493	0.91855	0.89041	0.89416		
	0.87428	+++++					0.89225	2.707

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-AUG-2013 14:49
End Cal Date : 07-AUG-2013 04:28
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130806pest.b/PEST0619B.m
Cal Date : 08-Aug-2013 14:53 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
43 trans-Nonachlor	2.07662	2.19338	2.21996	2.17532	2.15160	2.10614		
	1.93896	+++++					2.12314	4.477
44 cis-Nonachlor	2.10955	2.26549	2.28542	2.25212	2.21444	2.16204		
	1.97022	+++++					2.17990	5.098
45 Mirex	1.14376	1.15199	1.09596	1.04010	1.01817	1.02099		
	0.98886	+++++					1.06569	6.090
46 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
56 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-AUG-2013 14:49
End Cal Date : 07-AUG-2013 04:28
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130806pest.b/PEST0619B.m
Cal Date : 08-Aug-2013 14:53 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
57 Kepone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
58 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 2 Tetrachloro-m-xylene	1.18740	1.22645	1.21209	1.23475	1.17233	1.14872		
	0.99652	+++++					1.16832	6.988
$ 25 Decachlorobiphenyl	1.43423	1.41754	1.35387	1.35668	1.29192	1.29839		
	1.25874	+++++					1.34448	4.884

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date: 06-AUG-2013 14:31 Init. Calib. Date: 06-AUG-2013

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.179	211419
Endrin	6.686	7479859
4,4'-DDD	6.732	384674
4,4'-DDT	6.987	7693337
Endrin ketone	7.911	372622
Endrin aldehyde	7.268	290490

DDT Percent Breakdown = 7.2 %
((211419+384674) * 100)/(211419+384674+7693337)

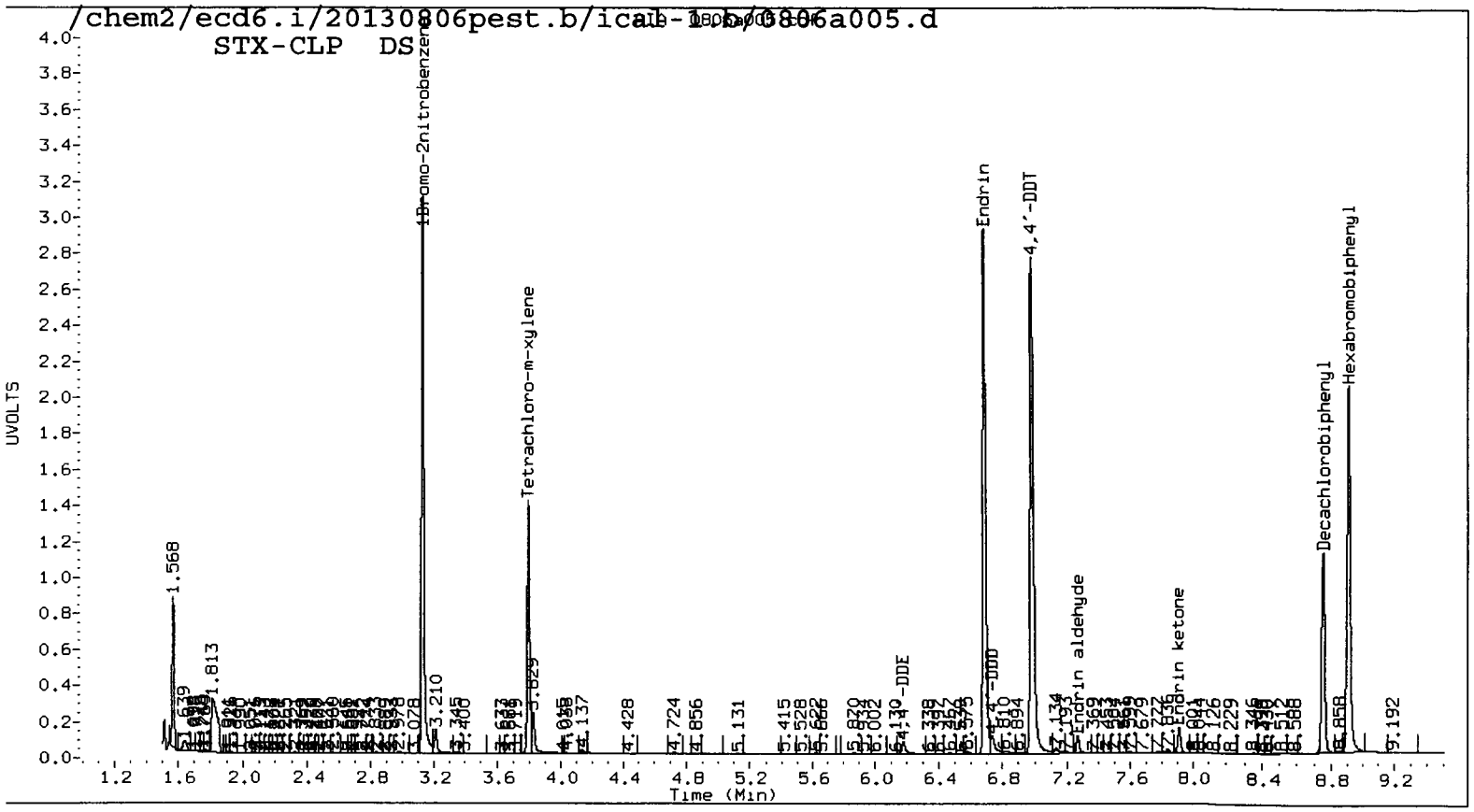
Endrin Percent Breakdown = 8.1 %
((290490+372622) * 100)/(290490+372622+7479859)

GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.870	930272
Endrin	7.352	28239343
4,4'-DDD	7.407	1907120
4,4'-DDT	7.692	28727620
Endrin ketone	8.572	1209944
Endrin aldehyde	7.838	1165081

DDT Percent Breakdown = 9.0 %
((930272+1907120) * 100)/(930272+1907120+28727620)

Endrin Percent Breakdown = 7.8 %
((1165081+1209944) * 100)/(1165081+1209944+28239343)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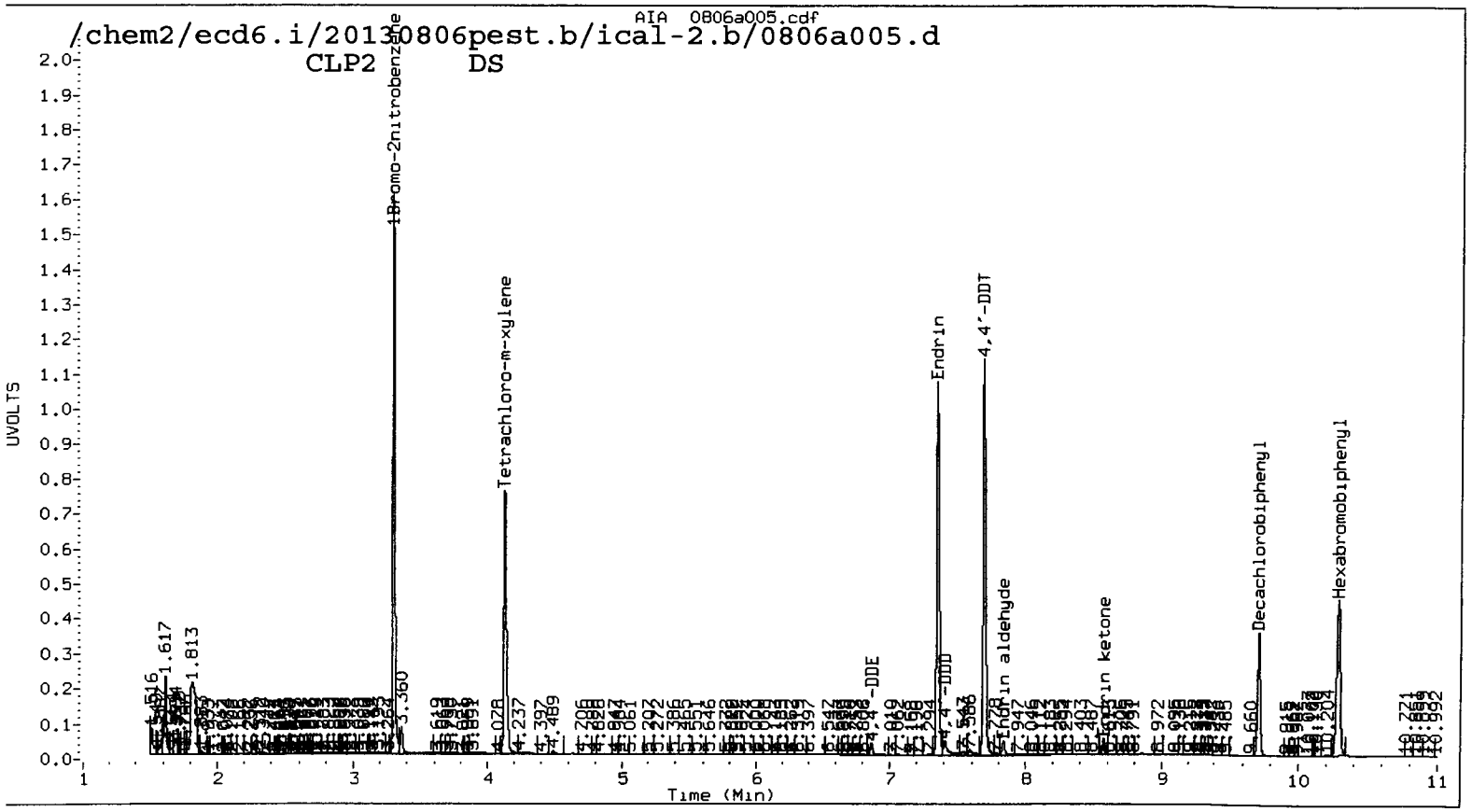
STX-CLP DS
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
4,4'-DDE
1.568
1.813
3.210
3.629
9.192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CLP2 DS
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
4,4'-DDE
1.617
1.813
3.360

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 08/08/13

Data file 1: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a006.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a006.d Client ID:
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 06-AUG-2013 14:49
Compound Sublist: INDA Report Date: 08/08/2013 14:52
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.125	0.002	6543663	3.300	0.002	32480641	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.281	0.004	2617161	4.710	0.004	13565956	20.0000	20.6498	3.2	alpha-BHC
4.642	0.006	978623	5.141	0.005	5059645	20.0000	20.1452	0.7	beta-BHC
4.811	0.006	2197498	5.450	0.004	11410049	20.0000	21.2550	6.1	delta-BHC
4.563	0.004	2362854	5.066	0.004	11926718	20.0000	20.7035	3.5	gamma-BHC (Lindane)
5.007	0.004	2237155	5.527	0.003	11046185	20.0000	20.2899	1.4	Heptachlor
5.298	0.004	2262408	5.865	0.003	10464805	20.0000	20.1078	0.5	Aldrin
5.870	0.004	1998027	6.418	0.003	9096623	20.0000	20.3611	1.8	Heptachlor epoxide b
6.245	0.003	1835861	6.805	0.003	8377700	20.0000	20.4470	2.2	Endosulfan I
6.467	0.003	4000574	7.062	0.002	16574936	40.0000	39.5939	1.0	Dieldrin
6.171	0.002	2984370	6.866	0.001	16671053	40.0000	40.3500	0.9	4,4'-DDE
6.685	0.002	3306388	7.351	0.002	12579702	40.0000	40.4260	1.1	Endrin
6.891	0.003	3372091	7.541	0.002	13589627	40.0000	39.8359	0.4	Endosulfan II
6.729	0.006	3150765	7.405	0.004	13113299	40.0000	40.3310	0.8	4,4'-DDD
7.656	0.002	2923620	8.082	0.002	11202543	40.0000	40.9155	2.3	Endosulfan sulfate
6.984	0.004	3264106	7.691	0.002	12076962	40.0000	40.9015	2.2	4,4'-DDT
7.410	0.004	7042724	8.273	0.000	20607179	200.0000	185.1152	7.7	Methoxychlor
7.910	0.003	3687436	8.572	0.001	11977740	40.0000	38.9371	2.7	Endrin ketone
7.266	0.003	2759734	7.838	0.002	10852846	40.0000	39.8369	0.4	Endrin aldehyde
5.990	0.003	2119816	6.601	0.003	9354305	20.0000	20.3881	1.9	gamma-Chlordane
6.114	0.004	2011607	6.738	0.002	8694743	20.0000	20.3520	1.7	alpha-Chlordane
2.302	0.000	2709845	2.464	0.000	10845103	20.0000	19.6853	1.6	Hexachlorobutadiene
4.138	0.005	1904419	4.589	0.005	13811092	20.0000	19.8699	0.7	Hexachlorobenzene
8.908	0.001	6145816	10.280	0.001	16281238	80.0000	80.0000	0.0	Hexabromobiphenyl
3.796	0.004	3361349	4.129	0.002	19038975	40.0000	40.1371	0.3	Tetrachloro-m-xylen
8.754	0.001	2792155	9.715	0.001	10517061	40.0000	38.4363	4.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	100.0	100.3	100.0~	115- 0
Decachlorobiphenyl	100.0	96.1	96.1~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

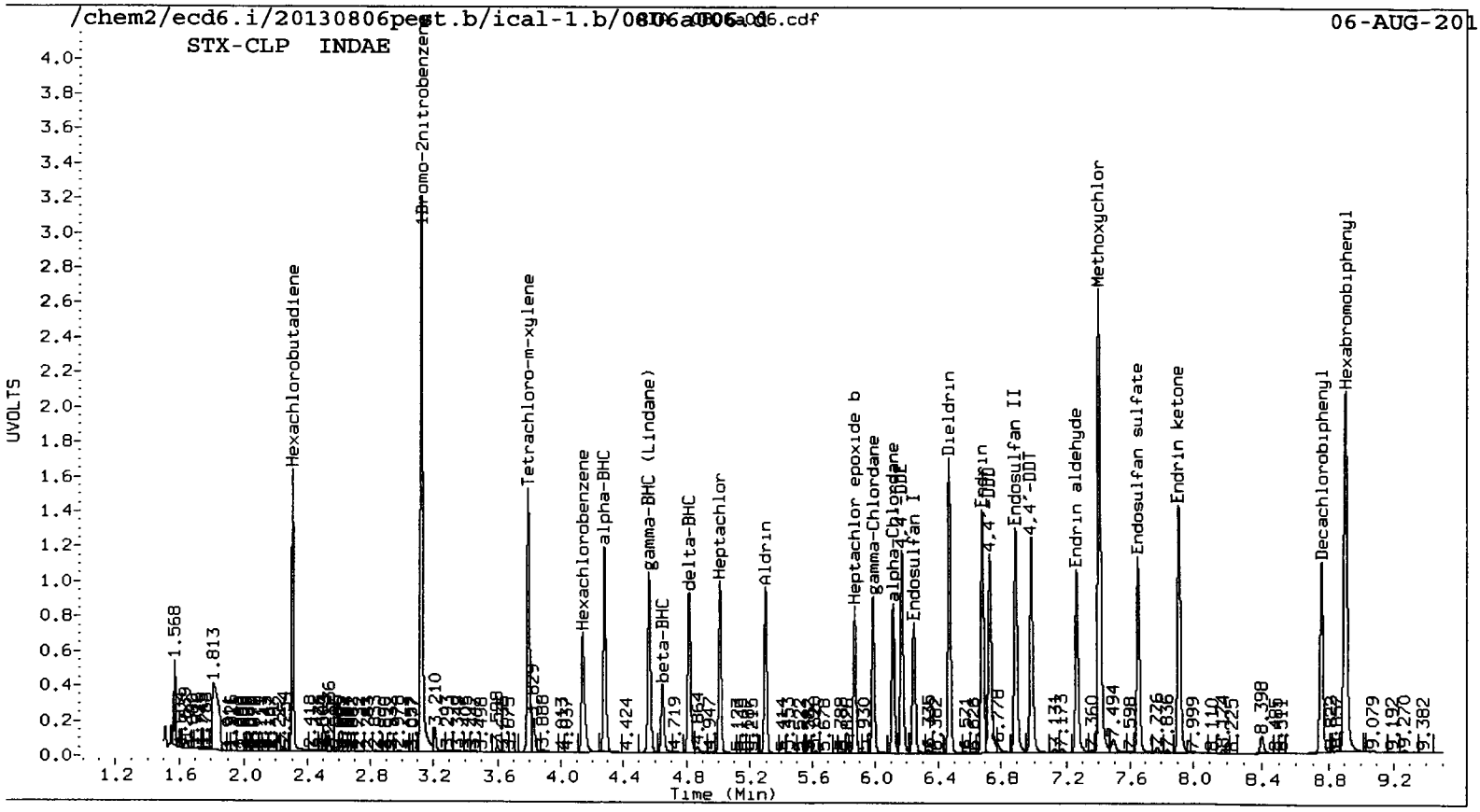
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	6543663	0.0
Hexabromobiphenyl	6145816	6145816	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	32480641	0.0
Hexabromobiphenyl	16281238	16281238	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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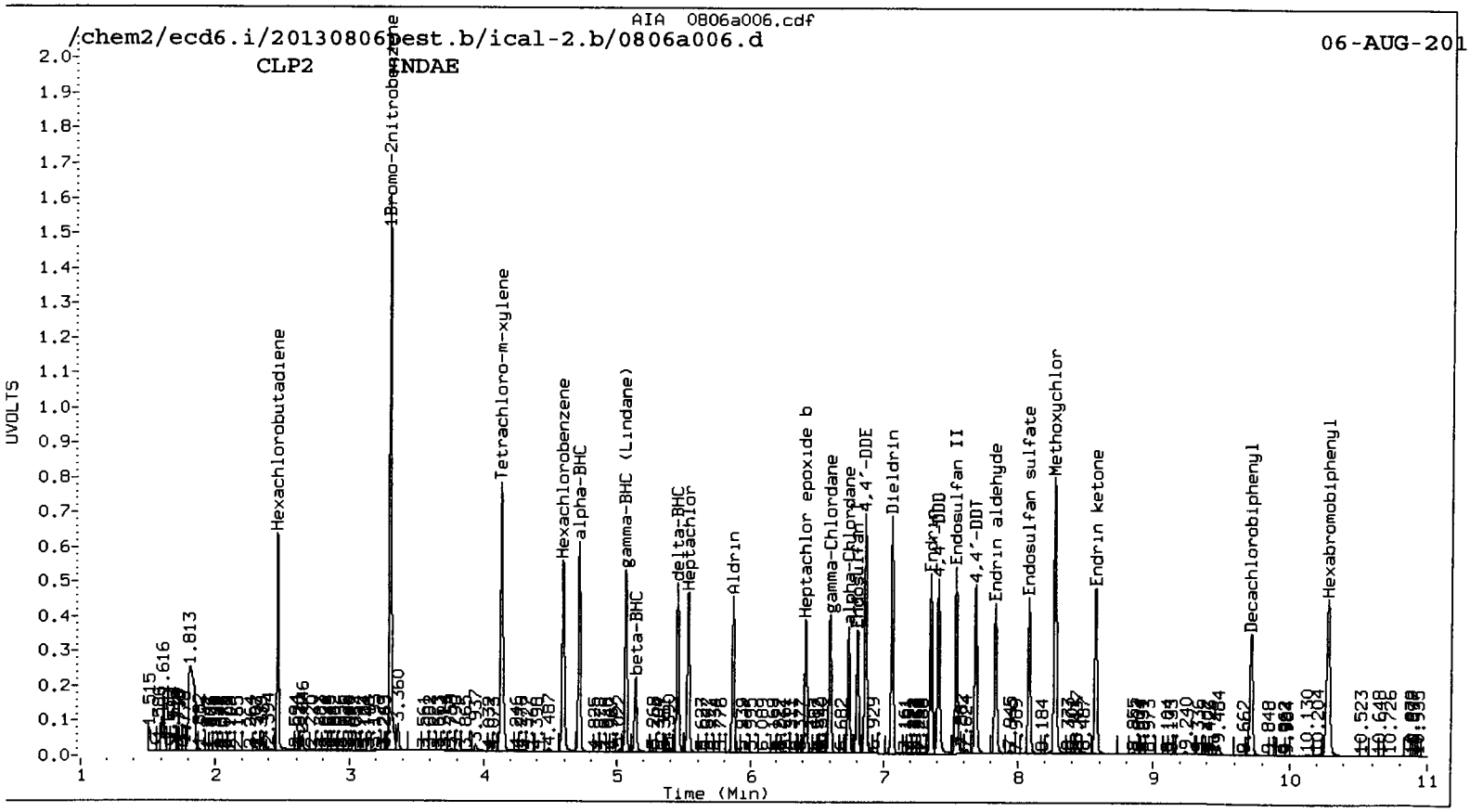
06-AUG-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.568
1.813
Hexachlorobutadiene
3.210
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
4.424
gamma-BHC (Lindane)
beta-BHC
4.719
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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06-AUG-201
CLP2 INDAE
UVOLTS
Time (Min)
1.813
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a007.d ARI ID: INDAA
Data file 2: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a007.d Client ID:
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 06-AUG-2013 15:07
Report Date: 08/08/2013 14:52
Matrix: NONE
Dilution Factor: 1.000

YZ 08/08/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.126	0.003	6716330	3.301	0.004	33285043	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.283	0.006	150370	4.712	0.006	758054	1.1812	1.1260	4.8	alpha-BHC
4.648	0.013	69516	5.146	0.011	311998	1.3137	1.2122	8.0	beta-BHC
4.817	0.012	132395	5.455	0.009	575139	1.2108	1.0455	14.7	delta-BHC
4.565	0.007	141489	5.068	0.006	659199	1.2070	1.1166	7.8	gamma-BHC (Lindane)
5.009	0.006	143533	5.530	0.006	684148	1.2501	1.2263	1.9	Heptachlor
5.300	0.006	140905	5.867	0.005	674011	1.2315	1.2638	2.6	Aldrin
5.872	0.005	133143	6.420	0.004	557016	1.2738	1.2166	4.6	Heptachlor epoxide b
6.248	0.005	133528	6.807	0.004	505379	1.3284	1.2036	9.9	Endosulfan I
6.469	0.005	256127	7.064	0.003	1112422	2.4975	2.5931	3.8	Dieldrin
6.177	0.009	202577	6.870	0.005	1030903	2.5706	2.4349	5.4	4,4'-DDE
6.687	0.004	211427	7.352	0.003	810094	2.4871	2.5346	1.9	Endrin
6.894	0.006	225227	7.542	0.003	890119	2.5415	2.5404	0.0	Endosulfan II
6.735	0.012	214438	7.408	0.007	818134	2.5650	2.4498	4.6	4,4'-DDD
7.657	0.004	191389	8.084	0.003	682958	2.5164	2.4285	3.6	Endosulfan sulfate
6.988	0.008	201930	7.693	0.004	720434	2.4457	2.3755	2.9	4,4'-DDT
7.412	0.007	540266	8.274	0.001	1678575	13.5704	14.6807	7.9	Methoxychlor
7.911	0.003	263013	8.573	0.002	835100	2.6235	2.6431	0.7	Endrin ketone
7.269	0.005	192828	7.839	0.003	723102	2.5978	2.5842	0.5	Endrin aldehyde
5.993	0.006	136591	6.603	0.005	561544	1.2528	1.1943	4.8	gamma-Chlordane
6.116	0.006	132330	6.740	0.004	522163	1.2657	1.1927	5.9	alpha-Chlordane
2.302	0.000	185560	2.464	0.000	739094	1.2908	1.3091	1.4	Hexachlorobutadiene
4.142	0.010	135169	4.593	0.009	904178	1.3132	1.2694	3.4	Hexachlorobenzene
8.908	0.001	6353355	10.279	0.000	16722696	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.007	213508	4.131	0.005	1235083	2.4877	2.5408	2.1	Tetrachloro-m-xylene
8.754	0.002	207310	9.715	0.001	749507	2.6735	2.6669	0.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	6.2	6.4	6.2~	115- 0
Decachlorobiphenyl	6.7	6.7	6.7~	115- 0

~ Indicates recovery outside QC Limits

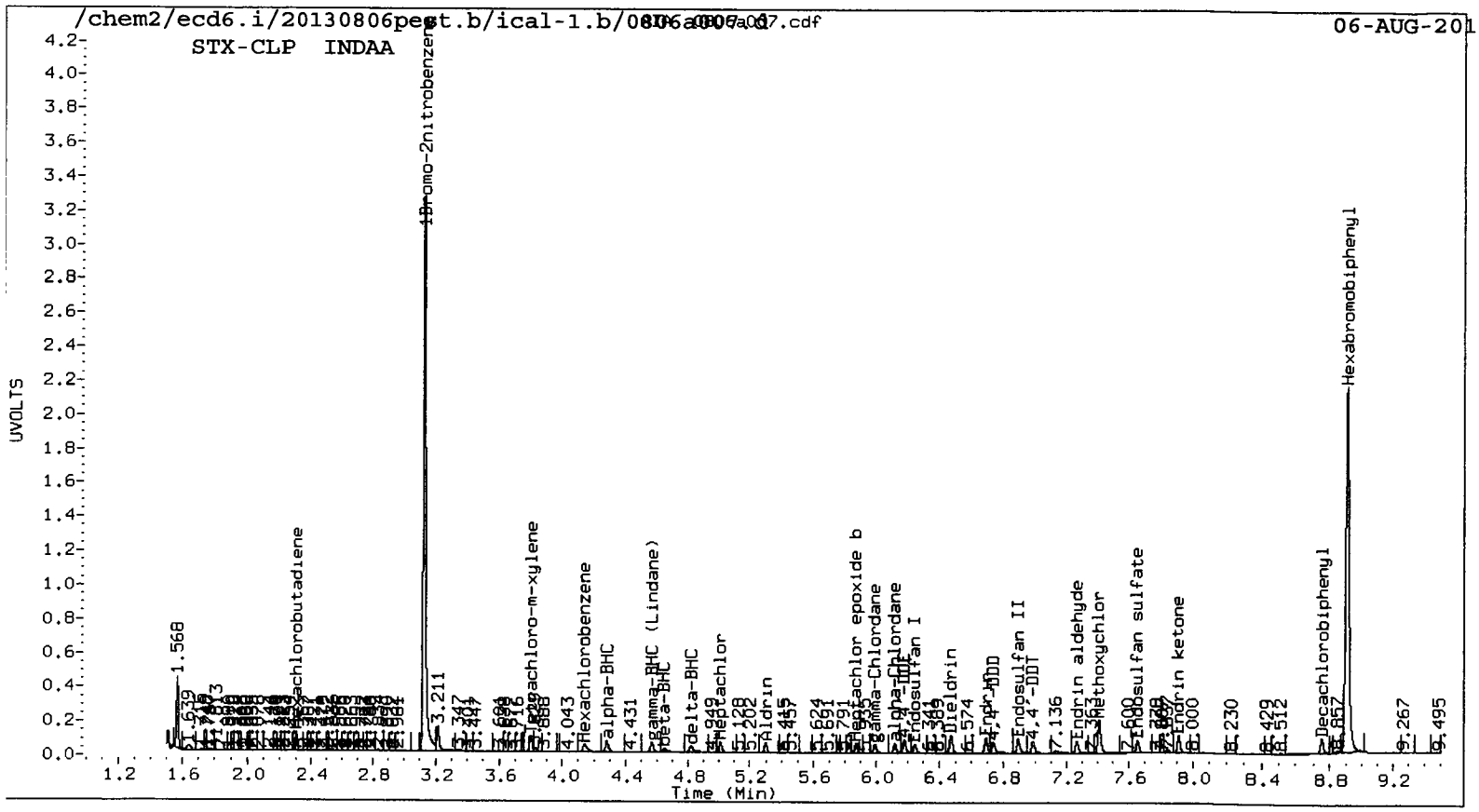
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	6543663	6716330	2.6
Hexabromobiphenyl	6145816	6353355	3.4

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	32480641	33285043	2.5
Hexabromobiphenyl	16281238	16722696	2.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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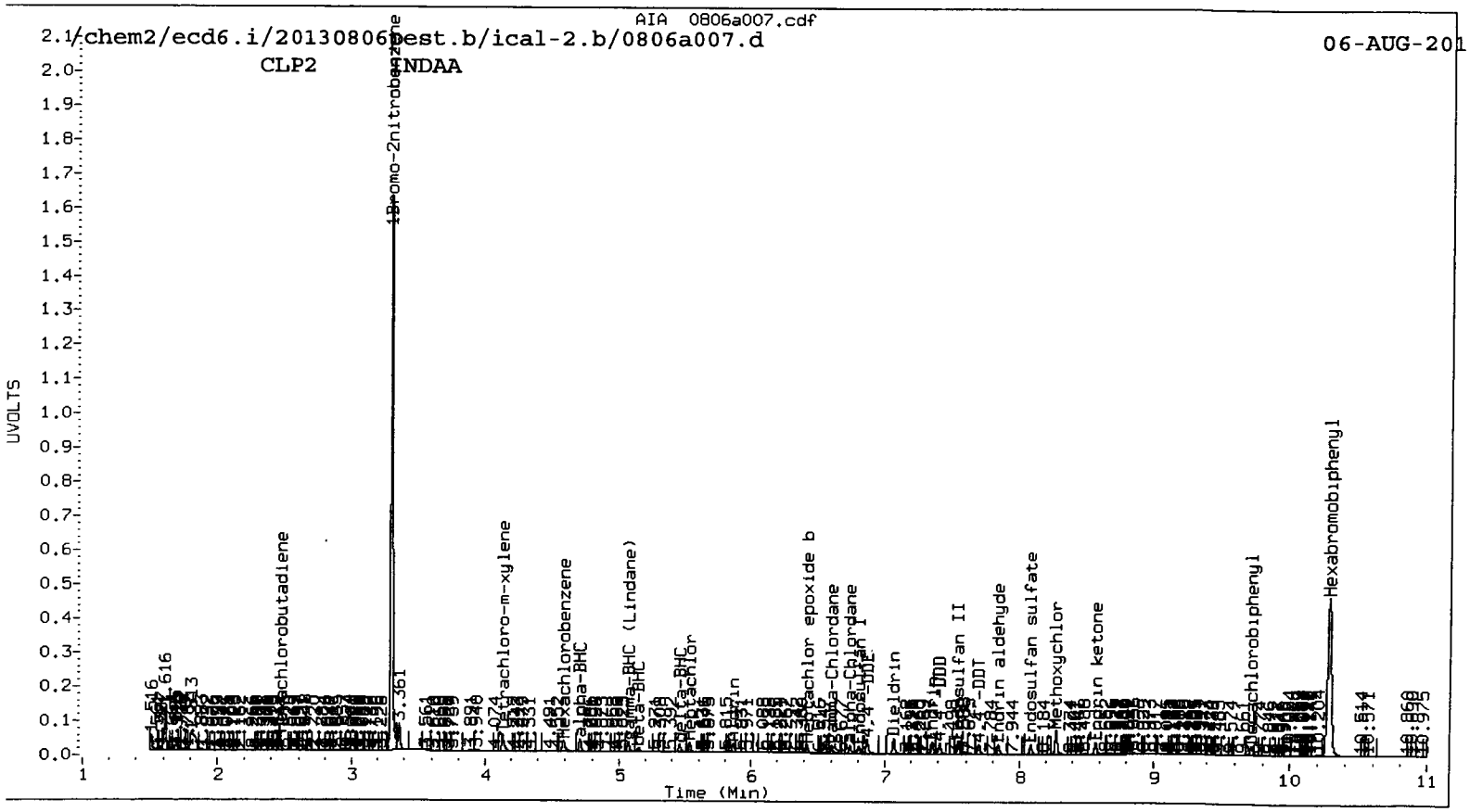
06-AUG-201
STX-CLP INDAA
UVOLTS
Time (Min)
1.568
3.211
4.043
4.431
4.949
5.128
5.445
5.624
5.691
5.935
6.574
7.136
7.600
8.230
8.429
8.512
8.857
9.267
9.495
1Bromo-2nitrobenzene
Hexachlorobutadiene
m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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06-AUG-201
CLP2 INDAA
UVOLTS
Time (Min)
3.361
1Bromo-2nitrobenzene
Hexachlorobutadiene
m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

12 08/08/13

Data file 1: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a008.d ARI ID: INDAB
Data file 2: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a008.d Client ID:
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m
Injection Date: 06-AUG-2013 15:25
Compound Sublist: INDA
Report Date: 08/08/2013 14:52
Instrument, Inj. Vol.: ecd6.i, 1ul
Matrix: NONE
Operator: ar
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.125	0.002	6761013	3.300	0.003	32938676	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.282	0.005	309899	4.712	0.005	1625266	2.4449	2.4395	0.2	alpha-BHC
4.646	0.010	137642	5.144	0.009	632930	2.5553	2.4850	2.8	beta-BHC
4.815	0.010	247192	5.454	0.007	1227160	2.3245	2.2542	3.1	delta-BHC
4.564	0.006	290404	5.067	0.005	1388811	2.4738	2.3773	4.0	gamma-BHC (Lindane)
5.008	0.005	289333	5.529	0.005	1406760	2.5022	2.5480	1.8	Heptachlor
5.299	0.005	285337	5.866	0.004	1319400	2.4849	2.4999	0.6	Aldrin
5.871	0.004	267137	6.419	0.004	1152354	2.5257	2.5435	0.7	Heptachlor epoxide b
6.247	0.004	262102	6.806	0.003	1046275	2.5595	2.5181	1.6	Endosulfan I
6.468	0.004	528222	7.063	0.002	2260913	5.0772	5.3257	4.8	Dieldrin
6.175	0.006	399515	6.869	0.004	2163858	5.0241	5.1645	2.8	4,4'-DDE
6.686	0.004	432391	7.352	0.002	1662406	5.0527	5.2142	3.1	Endrin
6.893	0.005	448414	7.542	0.003	1814089	5.0353	5.1902	3.0	Endosulfan II
6.734	0.011	436064	7.407	0.006	1698015	5.1374	5.0972	0.8	4,4'-DDD
7.657	0.004	382836	8.083	0.002	1410576	5.0178	5.0284	0.2	Endosulfan sulfate
6.987	0.008	413148	7.693	0.004	1498462	4.9981	4.9532	0.9	4,4'-DDT
7.412	0.006	1062985	8.274	0.000	3314750	26.0853	29.0627	10.8	Methoxychlor
7.911	0.003	515945	8.573	0.002	1643749	5.0922	5.2154	2.4	Endrin ketone
7.268	0.004	377445	7.838	0.003	1449014	5.0518	5.1913	2.7	Endrin aldehyde
5.992	0.005	274993	6.602	0.003	1157700	2.5037	2.4882	0.6	gamma-Chlordane
6.115	0.005	264402	6.739	0.003	1079013	2.5082	2.4906	0.7	alpha-Chlordane
2.302	0.000	373382	2.464	0.000	1457218	2.5529	2.6083	2.1	Hexachlorobutadiene
4.141	0.008	284276	4.592	0.008	1839400	2.6572	2.6095	1.8	Hexachlorobenzene
8.908	0.001	6361933	10.280	0.001	16681138	80.0000	80.0000	0.0	Hexabromobiphenyl
3.798	0.006	431541	4.130	0.004	2524843	4.9965	5.2487	4.9	Tetrachloro-m-xylene
8.754	0.002	407811	9.716	0.002	1477888	5.1653	5.2717	2.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	12.5	13.1	12.5~	115- 0
Decachlorobiphenyl	12.9	13.2	12.9~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

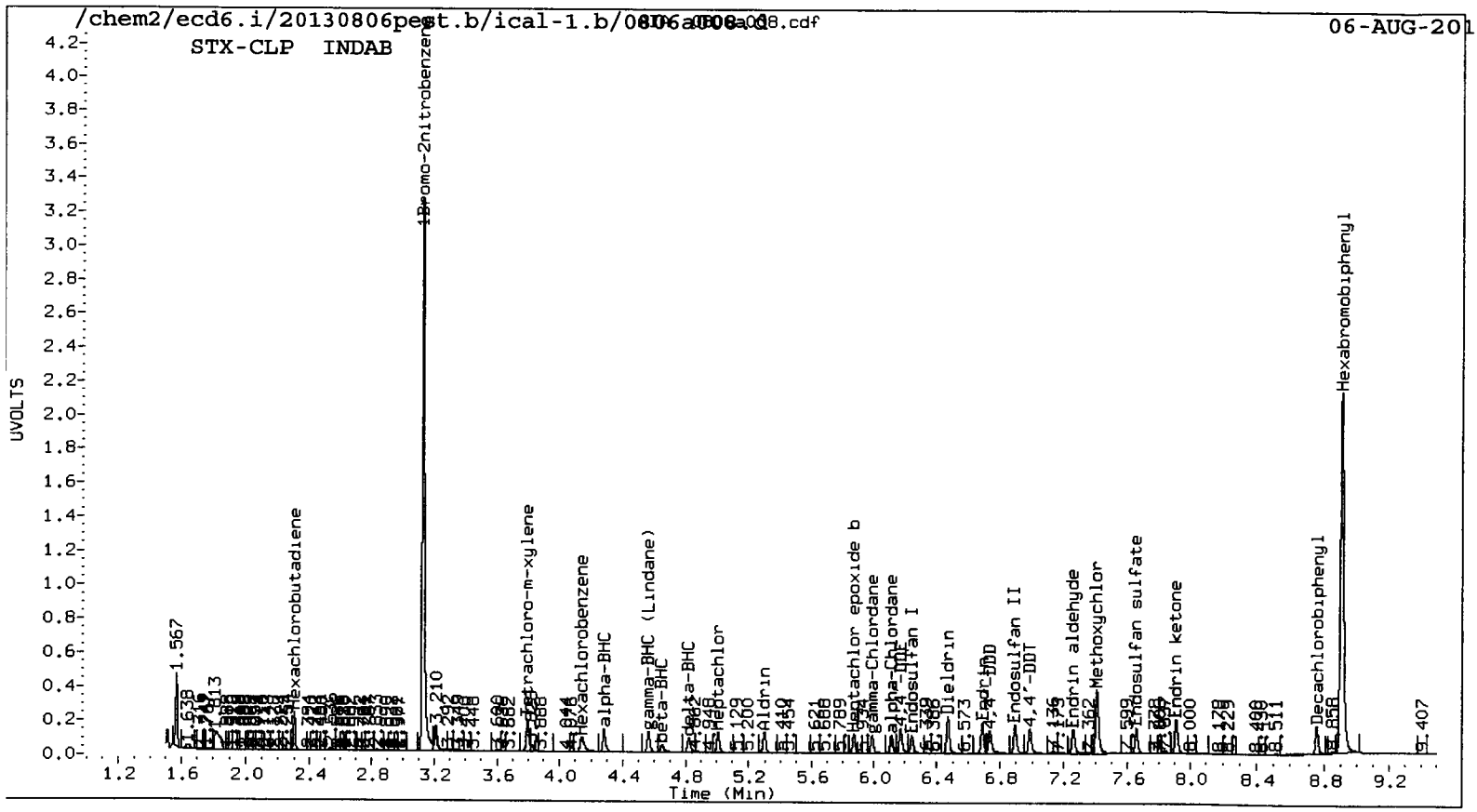
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	6761013	3.3
Hexabromobiphenyl	6145816	6361933	3.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	32938676	1.4
Hexabromobiphenyl	16281238	16681138	2.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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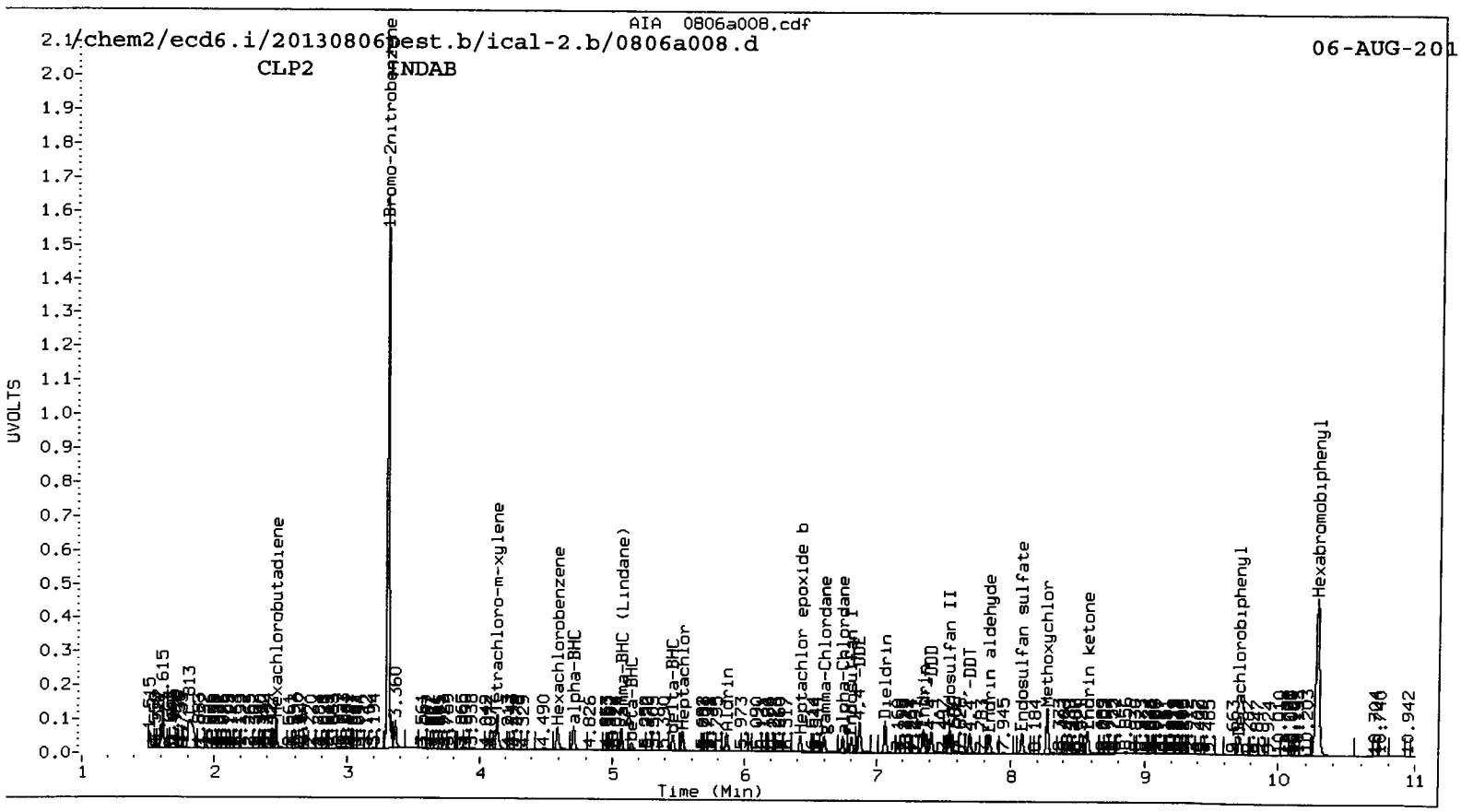
STX-CLP INDAB
UVOLTS
Time (Min)
1.567
3.210
Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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06-AUG-201
CLP2 INDAB
UVOLTS
Time (Min)
3.360
Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a009.d ARI ID: INDAC
Data file 2: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a009.d Client ID:
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 06-AUG-2013 15:43
Compound Sublist: INDA Report Date: 08/08/2013 14:52
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.125	0.002	6654949	3.300	0.003	32580583	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.281	0.004	621453	4.711	0.004	3195759	4.9857	4.8496	2.8	alpha-BHC
4.644	0.008	254733	5.143	0.007	1242566	4.8519	4.9321	1.6	beta-BHC
4.813	0.008	492991	5.452	0.006	2581198	4.7792	4.7936	0.3	delta-BHC
4.563	0.005	572842	5.066	0.004	2818872	4.9681	4.8782	1.8	gamma-BHC (Lindane)
5.007	0.004	565362	5.528	0.004	2785291	4.9754	5.1004	2.5	Heptachlor
5.298	0.004	560215	5.866	0.004	2626955	4.9673	5.0321	1.3	Aldrin
5.870	0.004	514017	6.419	0.003	2261233	4.9529	5.0458	1.9	Heptachlor epoxide b
6.246	0.003	492855	6.805	0.003	2077516	4.9167	5.0549	2.8	Endosulfan I
6.468	0.003	1025079	7.062	0.002	4411584	10.0075	10.5060	4.9	Dieldrin
6.173	0.004	754621	6.868	0.003	4314960	9.7283	10.4117	6.8	4,4'-DDE
6.685	0.003	838105	7.352	0.002	3243431	9.9399	10.2672	3.2	Endrin
6.892	0.004	866542	7.541	0.002	3540072	9.8917	10.2220	3.3	Endosulfan II
6.733	0.010	843682	7.407	0.006	3351599	10.0509	10.1540	1.0	4,4'-DDD
7.656	0.003	737425	8.083	0.002	2760984	9.8418	9.9333	0.9	Endosulfan sulfate
6.987	0.007	810804	7.692	0.003	2966161	9.9515	9.8954	0.6	4,4'-DDT
7.412	0.006	1971280	8.274	0.000	6164449	49.2456	54.5475	10.2	Methoxychlor
7.910	0.003	973772	8.572	0.002	3157617	9.7998	10.1113	3.1	Endrin ketone
7.268	0.004	724558	7.838	0.002	2799035	9.8666	10.1206	2.5	Endrin aldehyde
5.991	0.004	531128	6.602	0.004	2298315	4.9342	4.9939	1.2	gamma-Chlordane
6.113	0.004	506283	6.738	0.003	2146366	4.9089	5.0086	2.0	alpha-Chlordane
2.302	0.000	710730	2.464	0.000	2781466	4.9524	5.0332	1.6	Hexachlorobutadiene
4.139	0.007	507027	4.591	0.007	3419136	4.8598	4.9040	0.9	Hexachlorobenzene
8.908	0.001	6280845	10.280	0.001	16528373	80.0000	80.0000	0.0	Hexabromobiphenyl
3.797	0.005	842542	4.130	0.003	4936345	9.9329	10.3747	4.4	Tetrachloro-m-xylene
8.754	0.002	769445	9.715	0.001	2797162	9.9033	10.0698	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	24.8	25.9	24.8~	115- 0
Decachlorobiphenyl	24.8	25.2	24.8~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

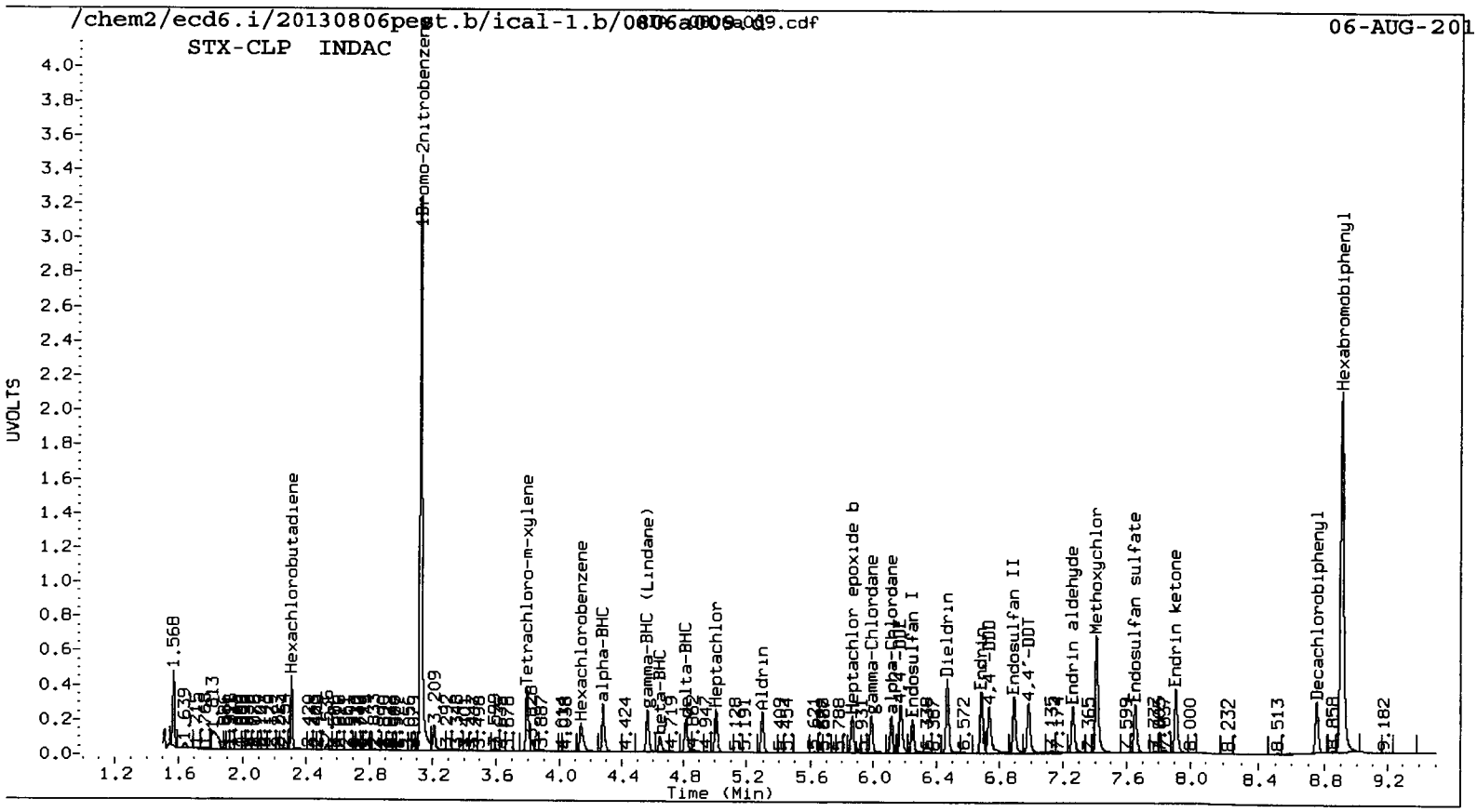
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	6654949	1.7
Hexabromobiphenyl	6145816	6280845	2.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	32580583	0.3
Hexabromobiphenyl	16281238	16528373	1.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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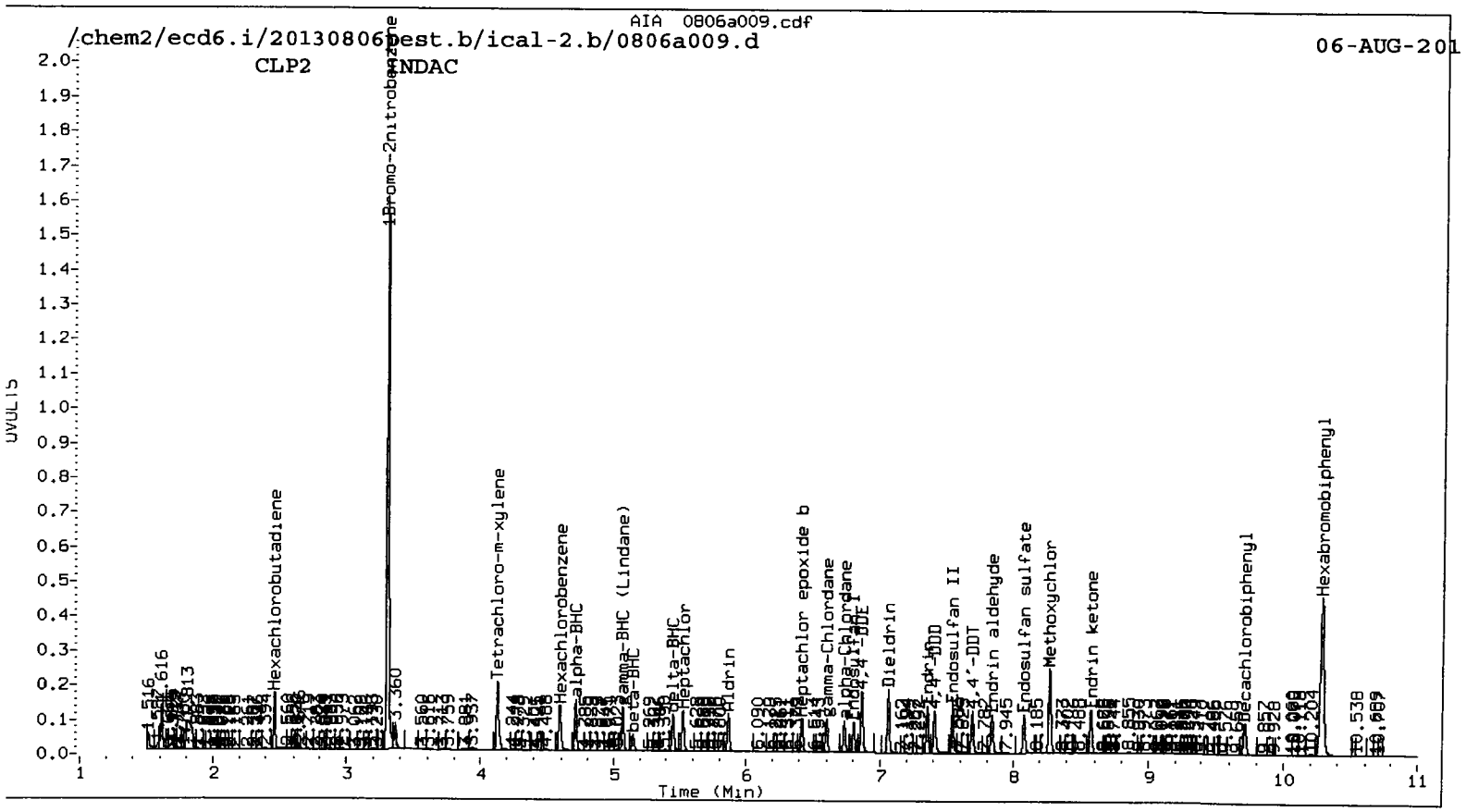
0806a009.cdf
06-AUG-201
STX-CLP INDAC
UVOLTS
Time (Min)
1.568
Hexachlorobutadiene
3.209
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
4.424
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
5.572
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
8.232
8.513
Decachlorobiphenyl
Hexabromobiphenyl
9.182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06-AUG-201
CLP2 INDAC
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
3.360
Tetrachloro-m-xylene
Hexachlorobutadiene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
7.945
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a010.d ARI ID: INDAD
Data file 2: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a010.d Client ID:
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 06-AUG-2013 16:00
Report Date: 08/08/2013 14:52
Matrix: NONE
Dilution Factor: 1.000

YL 08/08/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.125	0.002	6555754	3.299	0.002	32255555	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.281	0.004	1299349	4.710	0.003	6815519	10.4603	10.4468	0.1	alpha-BHC
4.643	0.007	506282	5.141	0.006	2540747	9.8305	10.1867	3.6	beta-BHC
4.812	0.007	1070131	5.451	0.004	5633461	10.4204	10.5674	1.4	delta-BHC
4.563	0.005	1185295	5.066	0.004	5972969	10.3452	10.4408	0.9	gamma-BHC (Lindane)
5.007	0.004	1145857	5.527	0.003	5702941	10.1883	10.5484	3.5	Heptachlor
5.298	0.004	1145379	5.865	0.003	5356870	10.2460	10.3649	1.2	Aldrin
5.870	0.003	1036793	6.417	0.002	4660374	10.1128	10.5041	3.8	Heptachlor epoxide b
6.246	0.003	965137	6.805	0.003	4291261	9.8182	10.5465	7.2	Endosulfan I
6.467	0.003	2066751	7.061	0.001	8819492	20.3840	21.2148	4.0	Dieldrin
6.171	0.003	1505622	6.866	0.001	8749092	19.7621	21.3238	7.6	4,4'-DDE
6.685	0.002	1691331	7.351	0.001	6576850	20.4250	21.1828	3.6	Endrin
6.891	0.004	1749488	7.540	0.002	7159214	20.3533	21.0333	3.3	Endosulfan II
6.732	0.009	1591592	7.406	0.005	6805615	19.5250	20.9783	7.2	4,4'-DDD
7.656	0.002	1491866	8.082	0.001	5740301	20.3045	21.0127	3.4	Endosulfan sulfate
6.986	0.006	1653365	7.691	0.003	6175480	20.6138	20.9617	1.7	4,4'-DDT
7.411	0.005	3802803	8.273	-0.001	11572752	97.7871	104.1922	6.3	Methoxychlor
7.910	0.003	1923703	8.572	0.001	6370405	19.8541	20.7554	4.4	Endrin ketone
7.267	0.004	1439012	7.838	0.002	5680704	20.0476	20.8987	4.2	Endrin aldehyde
5.990	0.004	1078137	6.601	0.003	4742132	10.1336	10.4078	2.7	gamma-Chlordane
6.113	0.004	1023647	6.738	0.002	4428501	10.0602	10.4382	3.7	alpha-Chlordane
2.302	0.000	1409336	2.464	0.000	5622104	9.9752	10.2761	3.0	Hexachlorobutadiene
4.139	0.006	996185	4.590	0.006	7047477	9.7528	10.2099	4.6	Hexachlorobenzene
8.908	0.001	6135575	10.280	0.001	16244730	80.0000	80.0000	0.0	Hexabromobiphenyl
3.796	0.004	1711892	4.129	0.002	9956884	20.3879	21.1371	3.6	Tetrachloro-m-xylene
8.754	0.002	1494557	9.715	0.001	5509724	19.7525	20.1814	2.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	51.0	52.8	51.0~	115- 0
Decachlorobiphenyl	49.4	50.5	49.4~	115- 0

~ Indicates recovery outside QC Limits

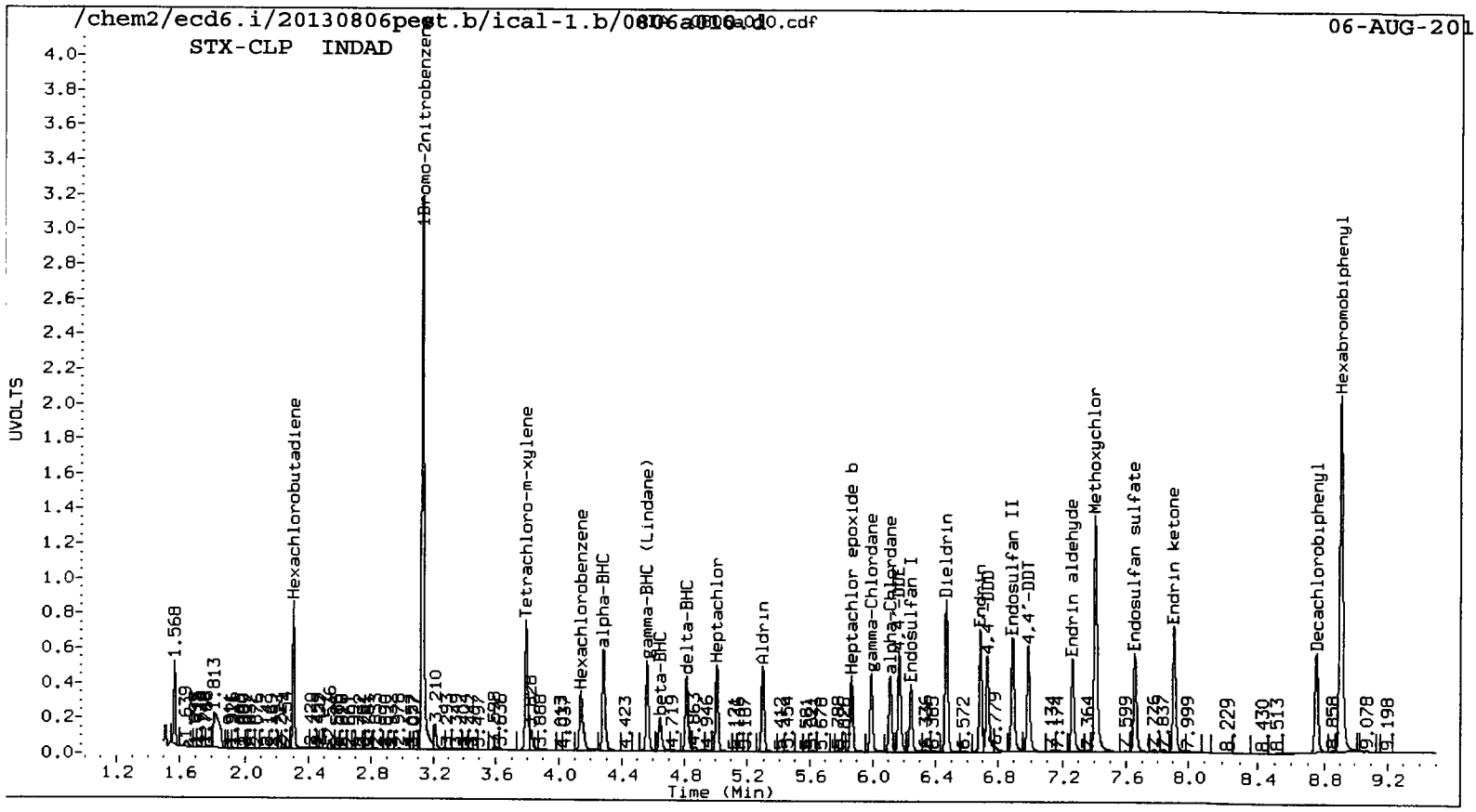
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	6543663	6555754	0.2
Hexabromobiphenyl	6145816	6135575	-0.2

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	32480641	32255555	-0.7
Hexabromobiphenyl	16281238	16244730	-0.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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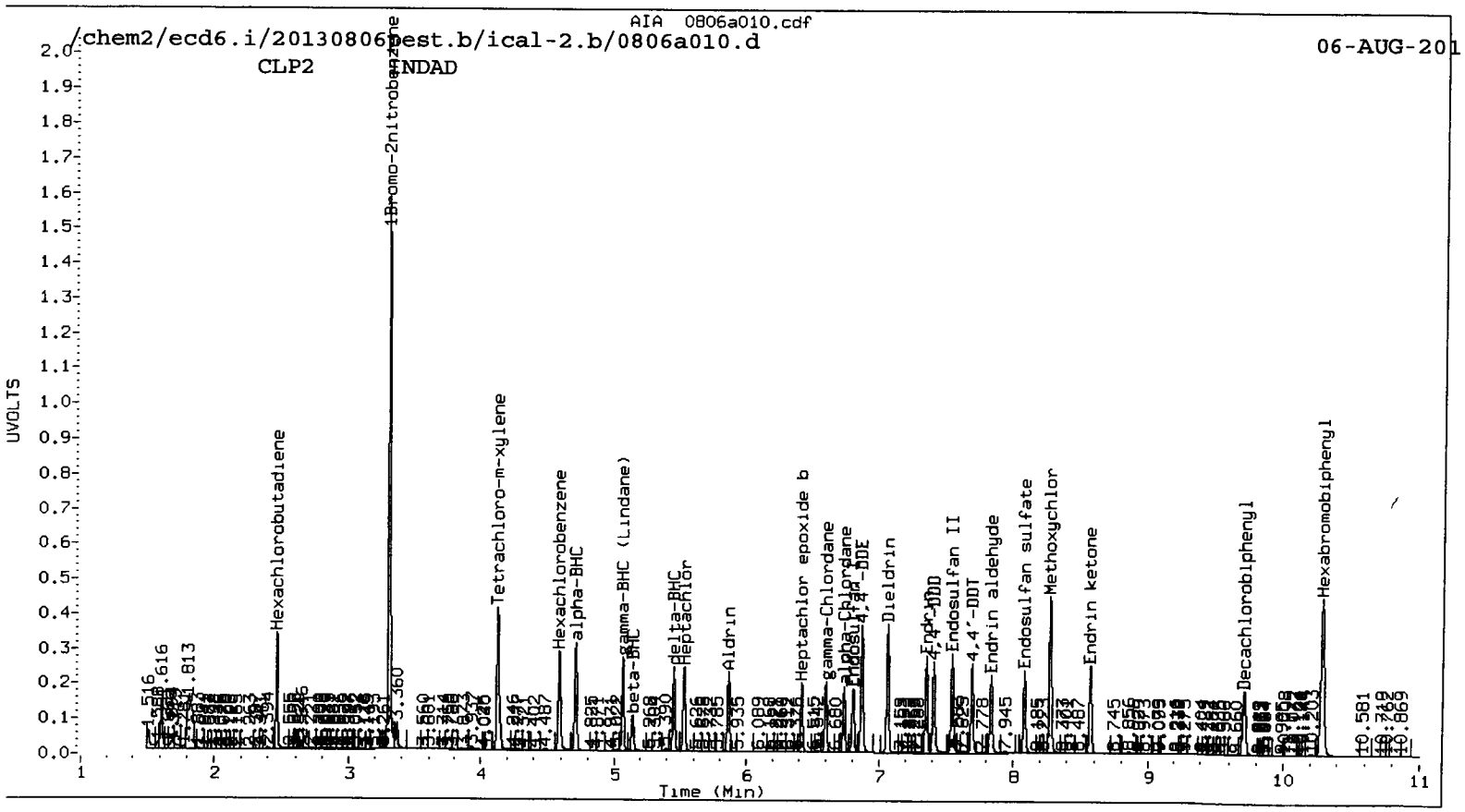
06-AUG-201
STX-CLP INDAD
UVOLTS
Time (Min)
1.568
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDE
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 INDAD
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a011.d ARI ID: INDAF
Data file 2: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a011.d Client ID:
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m
Injection Date: 06-AUG-2013 16:18
Compound Sublist: INDA
Report Date: 08/08/2013 14:52
Instrument, Inj. Vol.: ecd6.i, 1ul
Matrix: NONE
Operator: ar
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.125	0.002	6566625	3.300	0.002	32181454	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.280	0.004	5475072	4.711	0.004	27513389	43.2814	42.2695	2.4	alpha-BHC
4.640	0.004	1981727	5.140	0.004	10260869	38.6709	41.2339	6.4	beta-BHC
4.809	0.004	4641043	5.450	0.004	23288120	44.1755	43.7852	0.9	delta-BHC
4.562	0.004	4894095	5.066	0.004	24065042	42.1800	42.1627	0.0	gamma-BHC (Lindane)
5.006	0.003	4517044	5.528	0.004	21415916	40.0805	39.7029	0.9	Heptachlor
5.297	0.003	4608308	5.865	0.003	20682978	40.9583	40.1112	2.1	Aldrin
5.869	0.003	4004684	6.418	0.003	17754985	39.1604	40.1106	2.4	Heptachlor epoxide
6.245	0.002	3626741	6.805	0.003	16368324	37.3257	40.3207	7.7	Endosulfan I
6.467	0.002	7978028	7.062	0.002	31496999	78.7926	75.9389	3.7	Dieldrin
6.170	0.002	6150457	6.866	0.001	32421396	80.4948	79.2012	1.6	4,4'-DDE
6.684	0.002	6601623	7.351	0.002	23958481	78.9158	77.1437	2.3	Endrin
6.890	0.002	6708140	7.540	0.001	26515755	77.5199	77.8793	0.5	Endosulfan II
6.727	0.004	6488778	7.404	0.003	25759988	78.8150	79.3823	0.7	4,4'-DDD
7.654	0.001	5926786	8.082	0.002	22053557	79.6927	80.7052	1.3	Endosulfan sulfate
6.982	0.003	6672332	7.690	0.002	23505573	81.7623	79.7633	2.5	4,4'-DDT
7.408	0.002	14342960	8.273	0.000	38619128	369.6285	347.5979	6.1	Methoxychlor
7.909	0.002	7411784	8.572	0.001	23725752	76.2281	77.2787	1.4	Endrin ketone
7.265	0.002	5511989	7.837	0.002	21194954	76.4750	77.9517	1.9	Endrin aldehyde
5.990	0.003	4341690	6.601	0.003	18604124	40.6154	40.9254	0.8	gamma-Chlordane
6.112	0.003	4109369	6.738	0.003	17276820	40.2656	40.8163	1.4	alpha-Chlordane
2.303	0.001	5500299	2.464	0.001	20936927	39.0508	38.3566	1.8	Hexachlorobutadiene
4.136	0.004	3826938	4.588	0.005	27216979	37.8132	39.5209	4.4	Hexachlorobenzene
8.908	0.001	6215153	10.279	0.000	16249363	80.0000	80.0000	0.0	Hexabromobiphenyl
3.795	0.003	6774319	4.128	0.002	36967337	80.4541	78.6575	2.3	Tetrachloro-m-xylen
8.753	0.001	5797480	9.716	0.002	21097931	76.3333	77.2571	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	201.1	196.6	196.6~	115- 0
Decachlorobiphenyl	190.8	193.1	190.8~	115- 0

~ Indicates recovery outside QC Limits

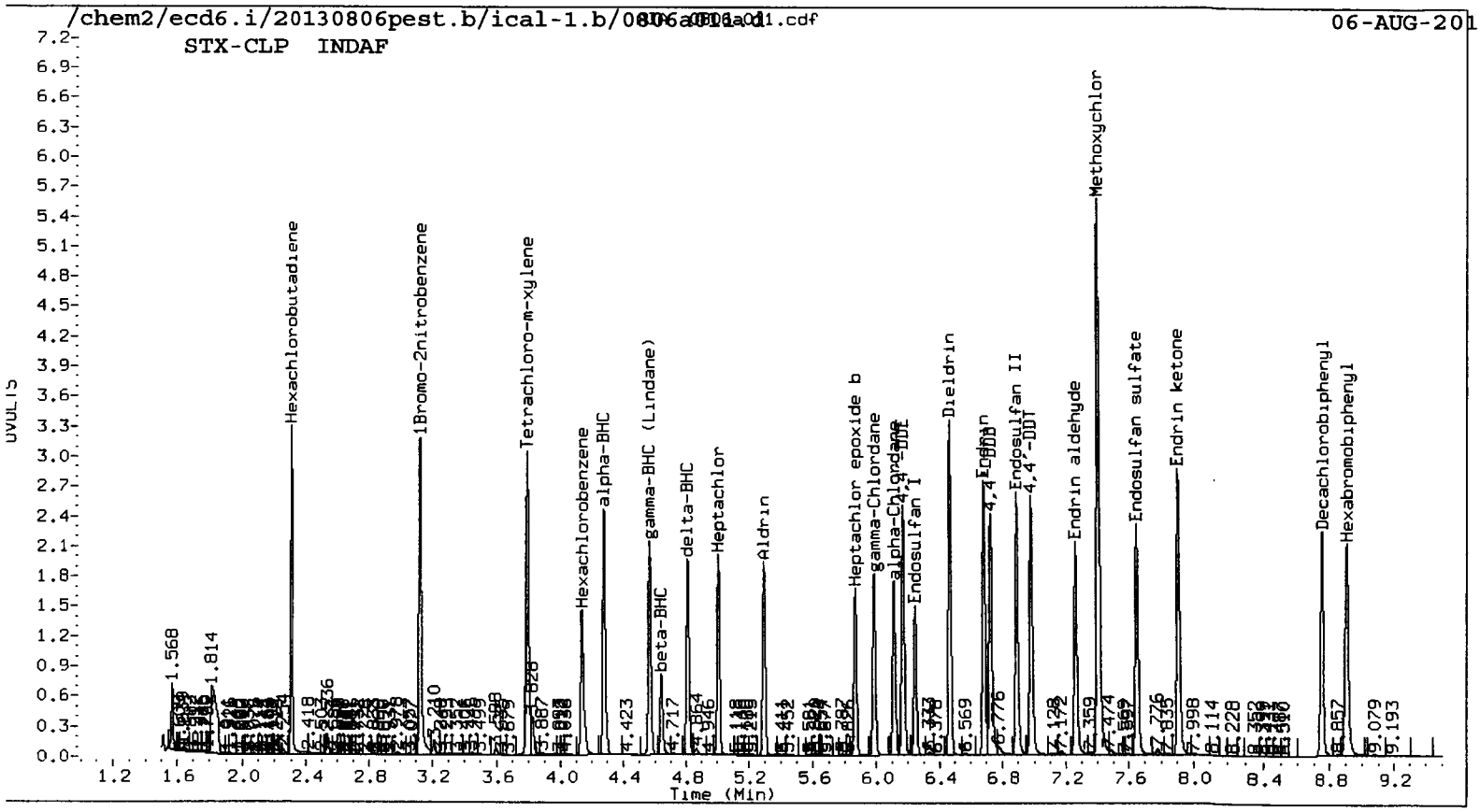
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	6543663	6566625	0.4
Hexabromobiphenyl	6145816	6215153	1.1

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	32480641	32181454	-0.9
Hexabromobiphenyl	16281238	16249363	-0.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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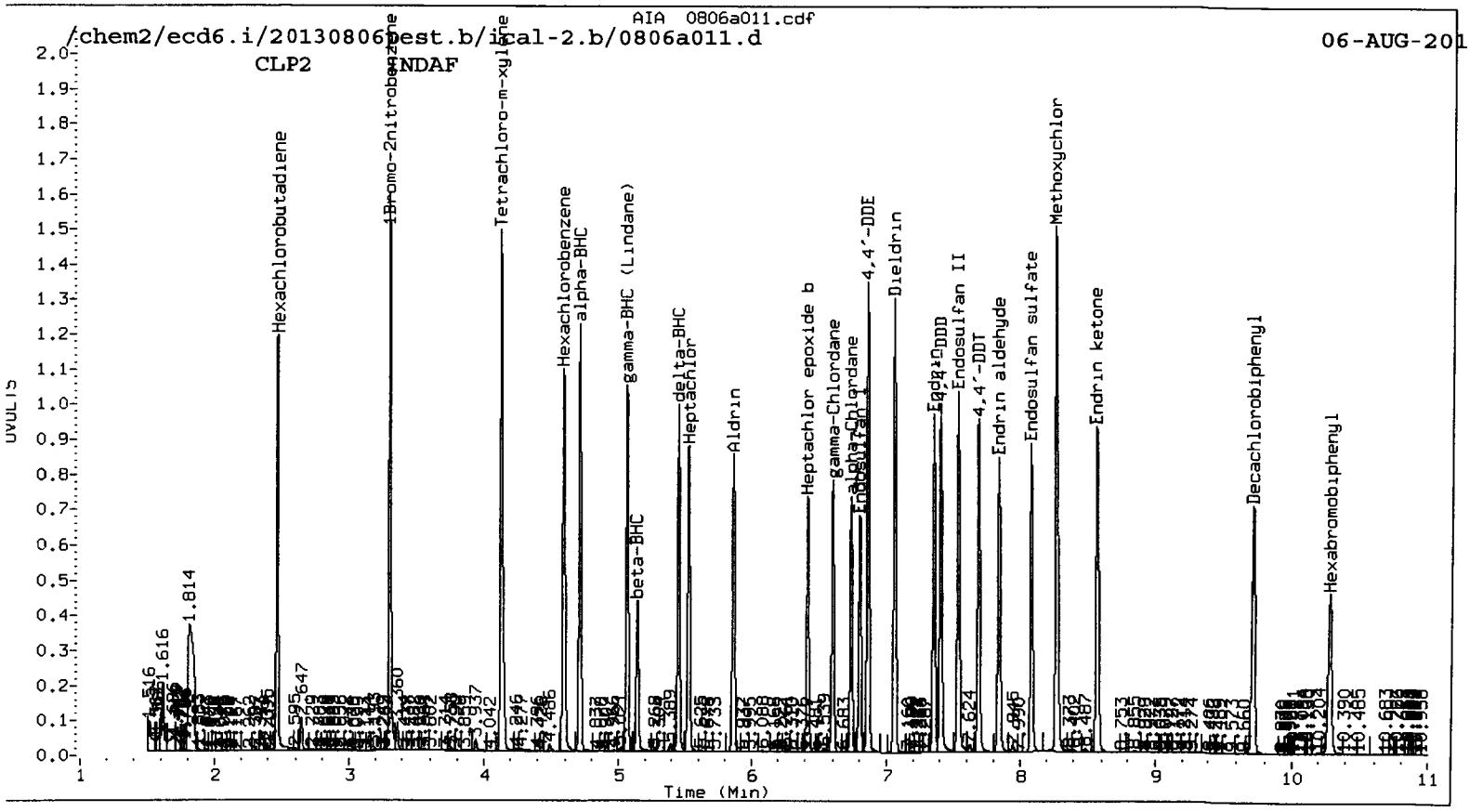
06-AUG-201
UVULIS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 INDAF
06-AUG-201
UVULIS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a012.d ARI ID: INDAG
Data file 2: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a012.d Client ID:
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 06-AUG-2013 16:36
Compound Sublist: INDA Report Date: 08/08/2013 14:52
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

YL 08/08/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.123	0.000	6550783	3.297	0.000	31840350	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.277	0.000	10815291	4.707	0.000	52527918	84.8395	81.5646	3.9	alpha-BHC
4.636	0.000	3841972	5.136	0.000	19559362	75.8088	79.4424	4.7	beta-BHC
4.805	0.000	9271310	5.446	0.000	45848623	87.1450	87.1259	0.0	delta-BHC
4.558	0.000	9638421	5.062	0.000	47291323	82.7866	83.7435	1.1	gamma-BHC (Lindane)
5.002	0.000	8646146	5.524	0.000	39184318	77.3317	73.4219	5.2	Heptachlor
5.294	0.000	8831965	5.862	0.000	38279645	78.8725	75.0323	5.0	Aldrin
5.867	0.000	7569156	6.416	0.000	32545877	74.9722	74.3126	0.9	Heptachlor epoxide
6.243	0.000	6892551	6.803	0.000	30006673	72.2556	74.7083	3.3	Endosulfan I
6.464	0.000	15232778	7.061	0.000	55626124	152.0540	135.5506	11.5	Dieldrin
6.169	0.000	12136677	6.865	0.000	57481584	159.3347	141.9242	11.6	4,4'-DDE
6.682	0.000	12638010	7.349	0.000	43306696	154.3207	141.2028	8.9	Endrin
6.888	0.000	12795261	7.539	0.000	48554041	151.4838	144.4078	4.8	Endosulfan II
6.723	0.000	12512521	7.401	0.000	47980513	155.1187	149.7236	3.5	4,4'-DDD
7.653	0.000	11451266	8.081	0.000	40898547	156.8691	151.5576	3.4	Endosulfan sulfat
6.980	0.000	13051487	7.689	0.000	46653578	162.0592	160.3114	1.1	4,4'-DDT
7.406	0.000	28578811	8.273	0.000	64566493	754.9200	588.4763	24.8	Methoxychlor
7.908	0.000	14219024	8.570	0.000	44211672	150.0425	145.8223	2.9	Endrin ketone
7.263	0.000	10444667	7.835	0.000	38697668	148.8626	144.1202	3.2	Endrin aldehyde
5.987	0.000	8376710	6.599	0.000	34799963	78.7553	77.3732	1.8	gamma-Chlordane
6.110	0.000	7921618	6.736	0.000	32366320	78.1134	77.2842	1.1	alpha-Chlordane
2.302	0.000	10909047	2.464	0.000	40265264	77.9676	74.5565	4.5	Hexachlorobutadien
4.133	0.000	7396927	4.584	0.000	52186075	74.1563	76.5894	3.2	Hexachlorobenzene
8.907	0.000	6120423	10.279	0.000	16046830	80.0000	80.0000	0.0	Hexabromobiphenyl
3.792	0.000	13095536	4.127	0.000	63459077	156.4755	136.4720	13.7	Tetrachloro-m-xyl
8.753	0.000	11155890	9.714	0.000	40397651	150.6169	149.7965	0.5	Decachlorobipheny

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	391.2	341.2	341.2~	115- 0
Decachlorobiphenyl	376.5	374.5	374.5~	115- 0

~ Indicates recovery outside QC Limits

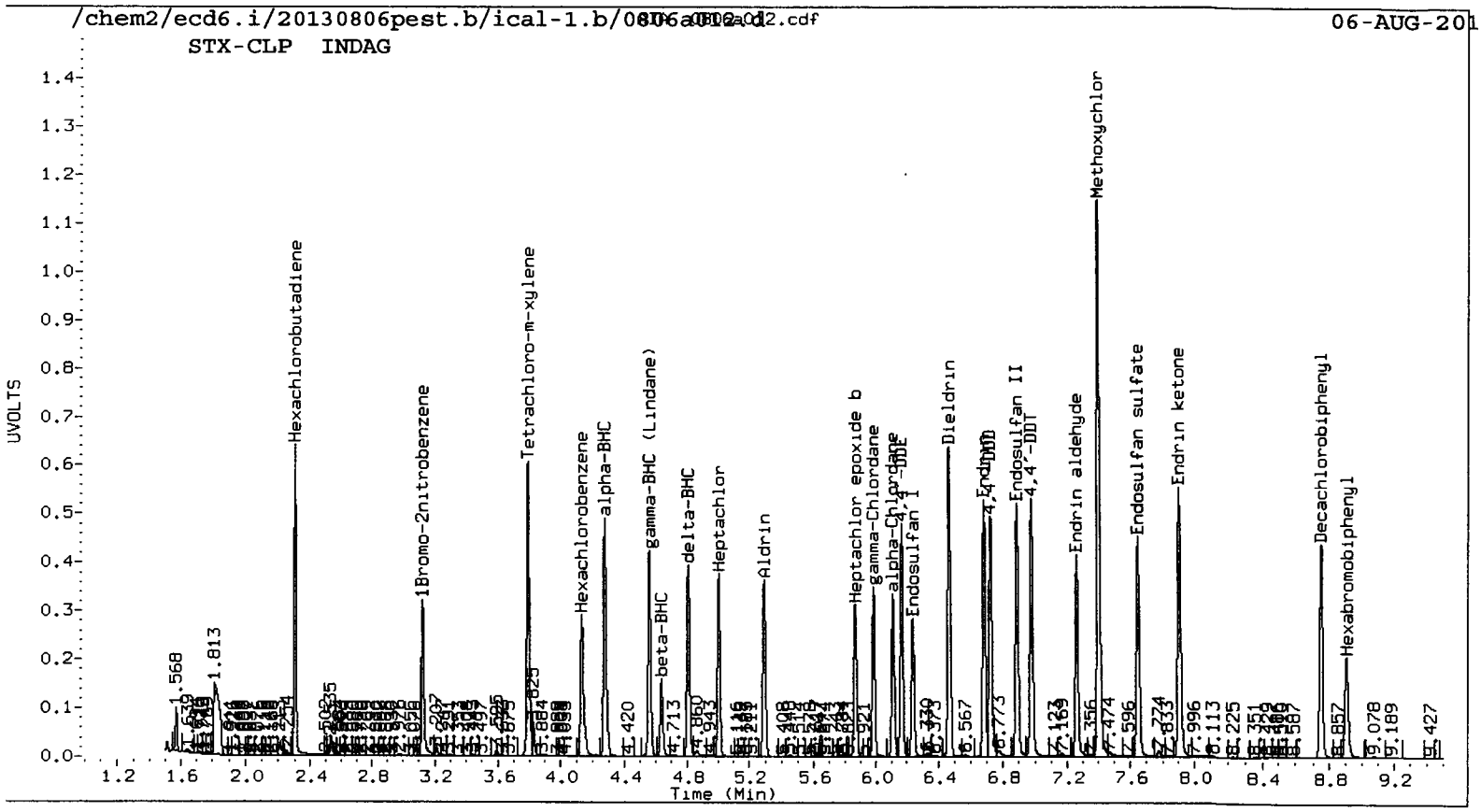
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	6543663	6550783	0.1
Hexabromobiphenyl	6145816	6120423	-0.4

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	32480641	31840350	-2.0
Hexabromobiphenyl	16281238	16046830	-1.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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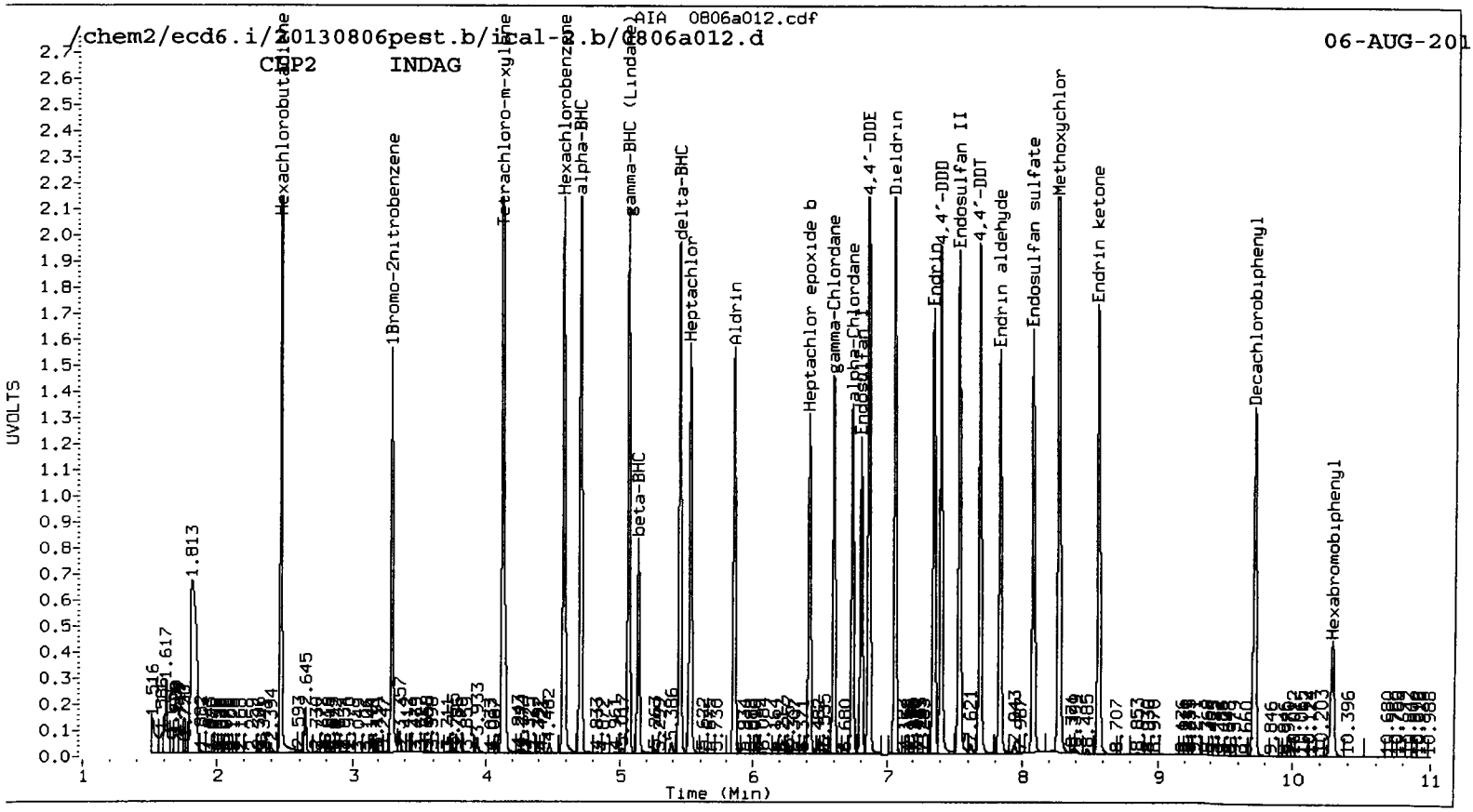
06-AUG-201
STX-CLP INDAG
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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AIA 0806a012.cdf
06-AUG-201
CLP2 INDAG
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a013.d ARI ID: WNDE
Data file 2: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a013.d Client ID:
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 06-AUG-2013 16:54
Compound Sublist: WND Report Date: 08/08/2013 14:52
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.768	-0.001	1051	1.719	0.000	836739	0.0000	0.0000	---	Hexachloroethane
3.124	0.001	6469590	3.298	0.001	32387396	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.774	0.002	3063551	6.326	0.000	14419038	40.0000	39.9177	0.2	Oxychlordane
5.853	0.005	2516888	6.578	0.002	10811511	40.0000	39.8756	0.3	2,4-DDE
6.096	0.002	3928811	6.683	0.000	17007234	40.0000	40.5362	1.3	trans-Nonachlor
6.338	0.004	2125786	7.062	0.002	9216695	40.0000	40.3960	1.0	2,4-DDD
6.573	0.003	2519560	7.347	0.001	9890937	40.0000	40.7969	2.0	2,4-DDT
6.710	0.001	4319822	7.407	0.000	17503980	40.0000	40.6338	1.6	cis-Nonachlor
7.580	0.000	2541096	8.557	0.000	8048092	40.0000	38.2164	4.6	Mirex
8.908	0.001	6085456	10.279	0.000	15808947	80.0000	80.0000	0.0	Hexabromobiphenyl
3.794	0.002	3094918	4.127	0.000	18691082	37.4445	39.5172	5.4	Tetrachloro-m-xylen
8.754	0.001	2808494	9.714	0.000	10544607	38.1357	39.6883	4.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	93.6	98.8	93.6~	150- 0
Decachlorobiphenyl	95.3	99.2	95.3~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

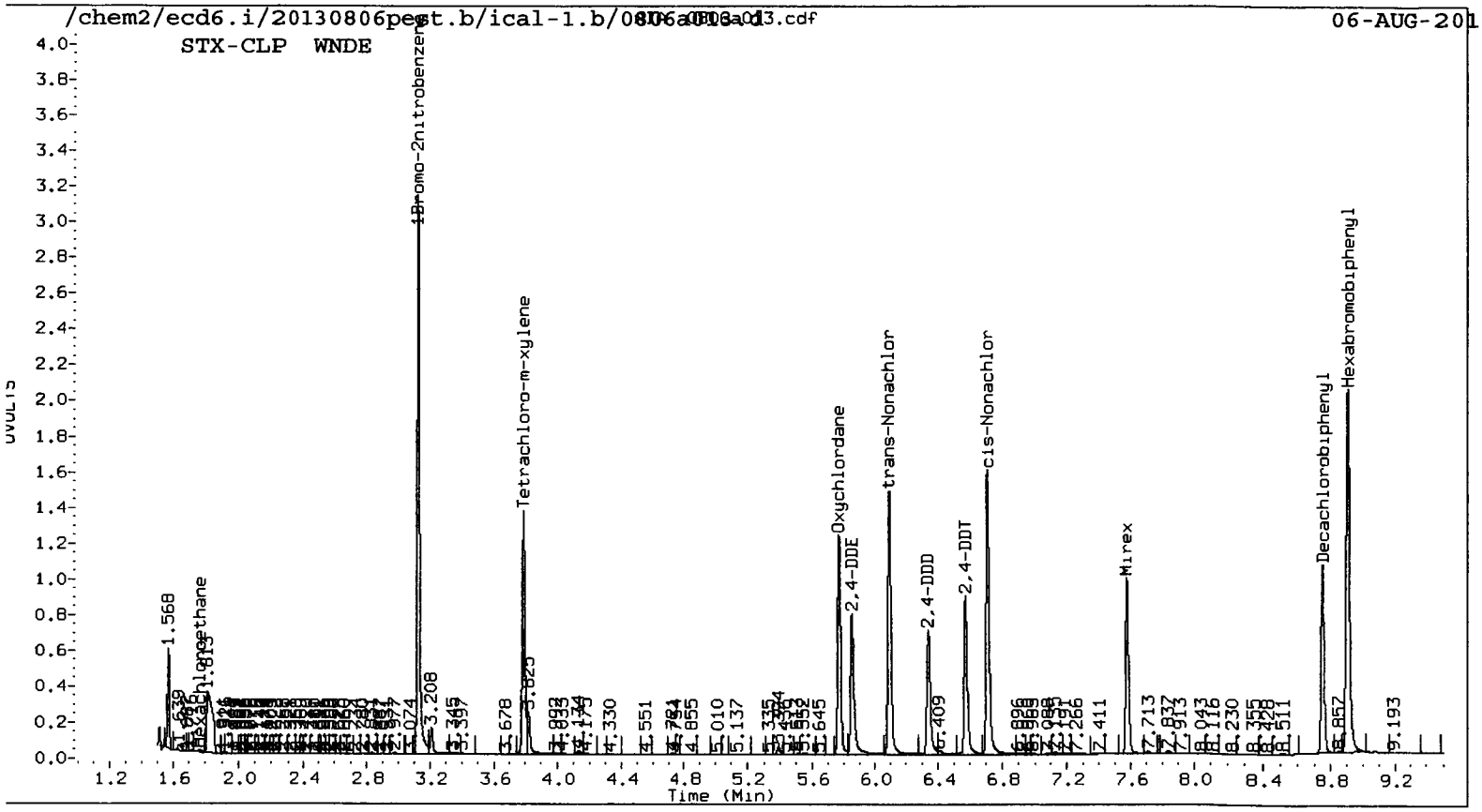
	Column 1		
	Standard	Sample	
Standard Cpnd	Area*	Area	%D
Bromo-Nitrobenzene	6543663	6469590	-1.1
Hexabromobiphenyl	6145816	6085456	-1.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	32387396	-0.3
Hexabromobiphenyl	16281238	15808947	-2.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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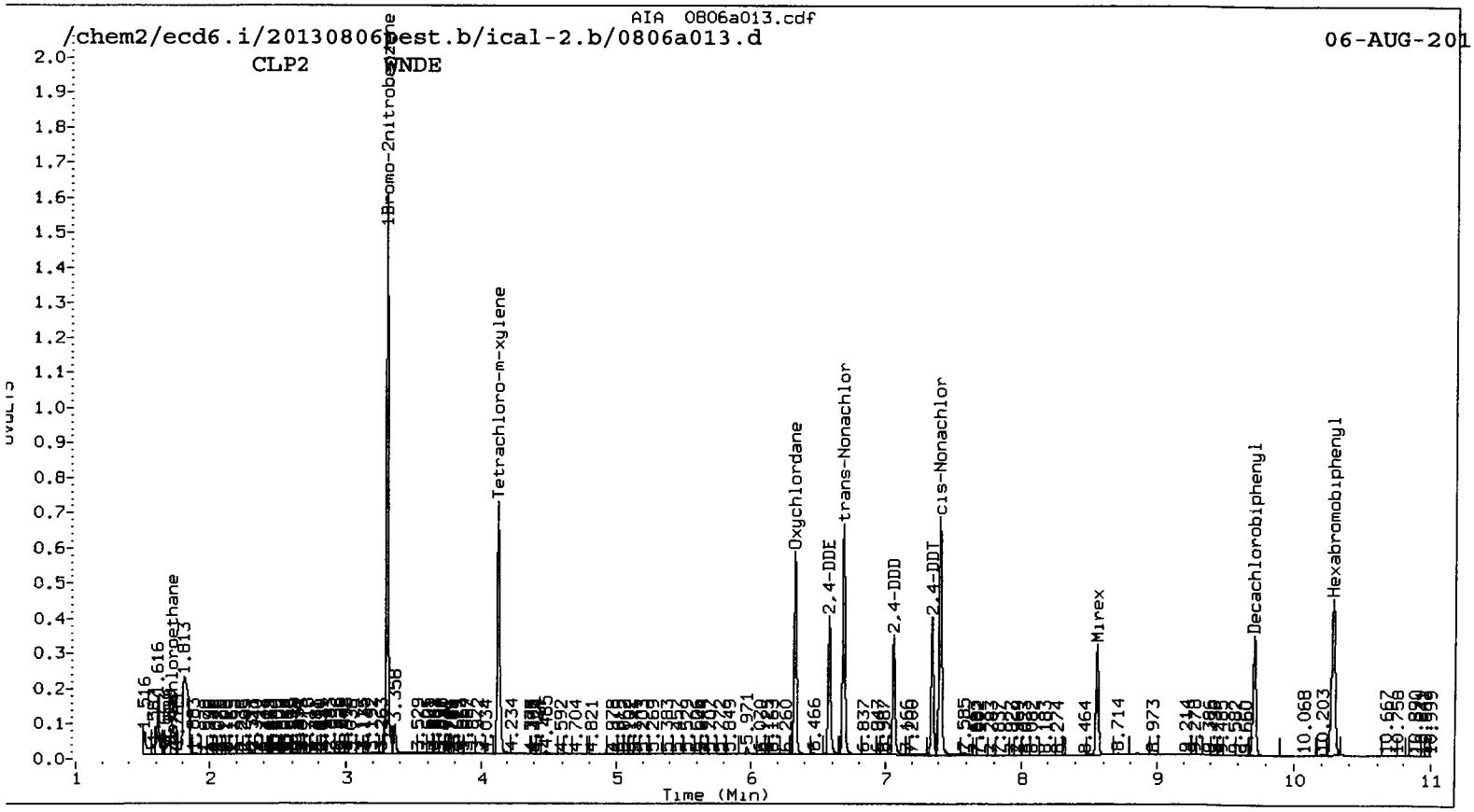
STX-CLP WNDE
1.568
Hexachloroethane
1.813
1Bromo-2nitrobenzene
3.208
Tetrachloro-m-xylene
3.625
Oxychlordane
2.4-DDE
trans-Nonachlor
2.4-DDD
2.4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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06-AUG-201
CLP2 WNDE
1Bromo-2nitrobenzene
3.358
Tetrachloro-m-xylene
4.234
Oxychlordane
6.466
2.4-DDE
trans-Nonachlor
2.4-DDD
2.4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a014.d ARI ID: WNDA
Data file 2: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a014.d Client ID:
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 06-AUG-2013 17:12
Compound Sublist: WND Report Date: 08/08/2013 14:52
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

YZ 08/09/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.768	-0.001	549	1.719	0.001	105016	0.0000	0.0000	---	Hexachloroethane
3.124	0.001	6566209	3.299	0.001	33187310	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.774	0.003	202397	6.327	0.001	881003	2.5450	2.3802	6.7	Oxychlordane
5.856	0.009	169415	6.580	0.005	704368	2.5683	2.5353	1.3	2,4-DDE
6.097	0.003	245593	6.685	0.002	1051399	2.4758	2.4452	1.2	trans-Nonachlor
6.342	0.008	147451	7.065	0.004	578446	2.6058	2.4738	5.2	2,4-DDD
6.576	0.006	163208	7.349	0.002	593962	2.5204	2.3905	5.3	2,4-DDT
6.712	0.003	271069	7.408	0.001	1068074	2.4806	2.4193	2.5	cis-Nonachlor
7.582	0.001	180852	8.558	0.001	579091	2.6379	2.6831	1.7	Mirex
8.909	0.002	6205260	10.279	0.000	16201723	80.0000	80.0000	0.0	Hexabromobiphenyl
3.796	0.004	193863	4.128	0.001	1224309	2.3110	2.5261	8.9	Tetrachloro-m-xylene
8.754	0.002	180102	9.715	0.001	726103	2.3983	2.6667	10.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	5.8	6.3	5.8~	150- 0
Decachlorobiphenyl	6.0	6.7	6.0~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

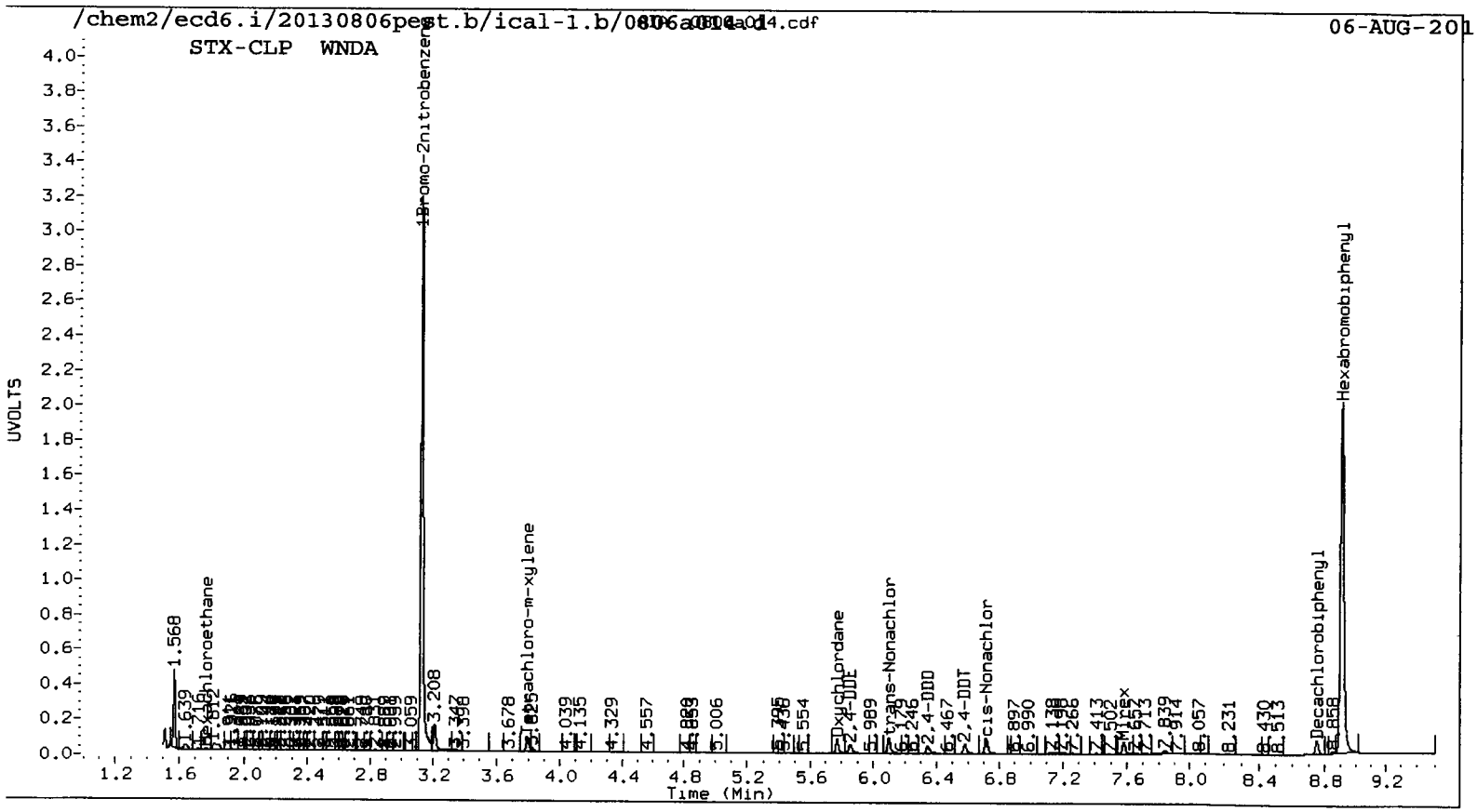
	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	6566209	0.3
Hexabromobiphenyl	6145816	6205260	1.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	33187310	2.2
Hexabromobiphenyl	16281238	16201723	-0.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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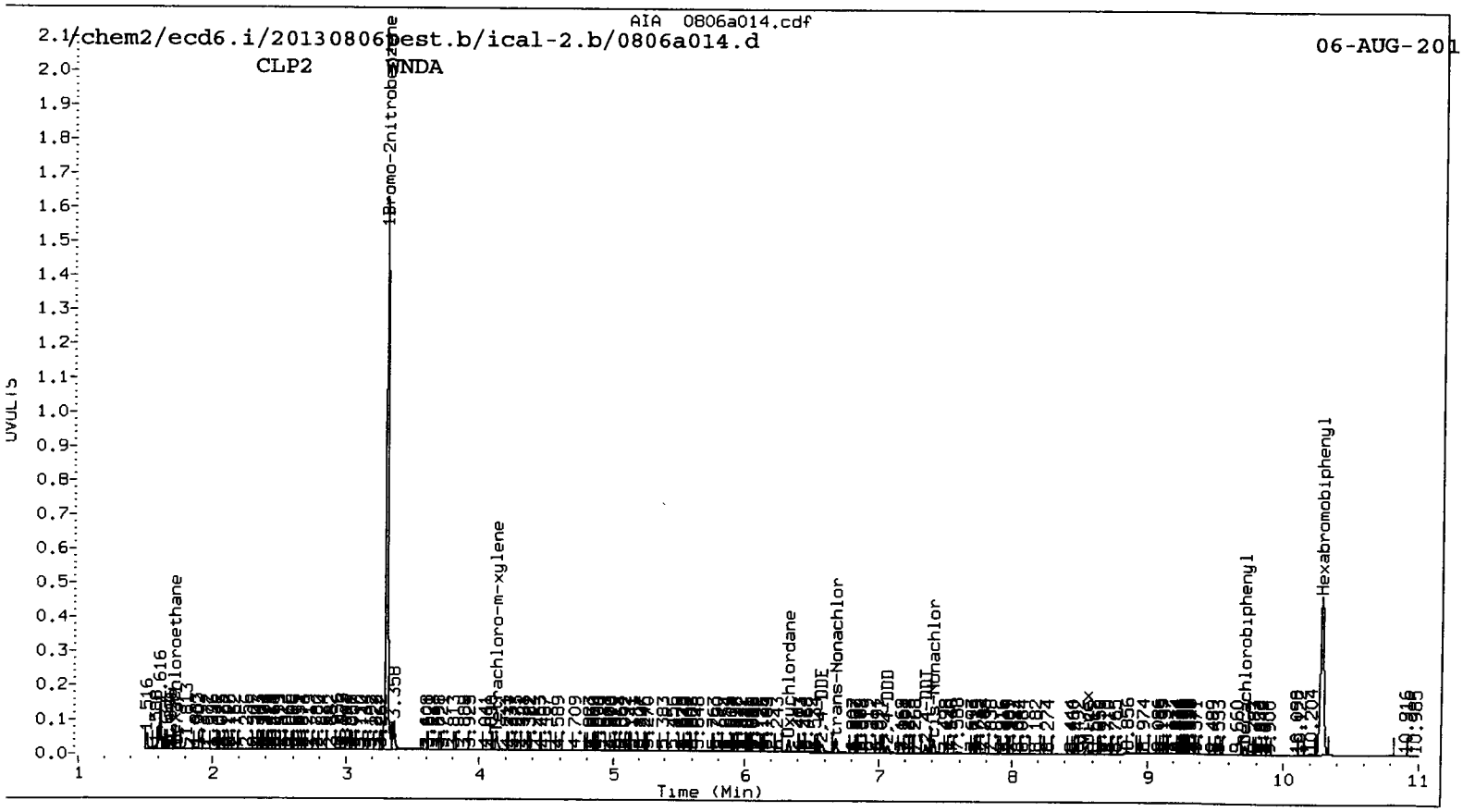
STX-CLP WNDA
06-AUG-201
UVOLTS
Time (Min)
1.568
Dichloroethane
3.208
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 WNDA
06-AUG-201
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
trans-Nonachlor
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a015.d ARI ID: WNDB
Data file 2: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a015.d Client ID:
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 06-AUG-2013 17:29
Compound Sublist: WND Report Date: 08/08/2013 14:52
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

YZ 08/08/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.768	-0.001	603	1.719	0.001	125296	0.0000	0.0000	---	Hexachloroethane
3.123	0.000	6434092	3.297	0.000	32530095	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.773	0.002	402417	6.327	0.001	1837762	5.1275	5.0653	1.2	Oxychlordane
5.855	0.007	331639	6.580	0.004	1428180	5.1058	5.2444	2.7	2,4-DDE
6.096	0.002	502113	6.684	0.001	2185876	5.1287	5.1654	0.7	trans-Nonachlor
6.341	0.007	287421	7.064	0.004	1190979	5.1404	5.1753	0.7	2,4-DDD
6.576	0.005	325246	7.349	0.003	1240690	5.1024	5.0737	0.6	2,4-DDT
6.711	0.002	544635	7.408	0.001	2257744	5.0765	5.1963	2.3	cis-Nonachlor
7.581	0.001	351315	8.558	0.001	1148048	5.1701	5.4049	4.4	Mirex
8.909	0.002	6045618	10.281	0.002	15945266	80.0000	80.0000	0.0	Hexabromobiphenyl
3.795	0.003	385467	4.126	-0.001	2452397	4.6894	5.1622	9.6	Tetrachloro-m-xylene
8.755	0.002	372866	9.716	0.002	1442325	5.0964	5.3823	5.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	11.7	12.9	11.7~	150- 0
Decachlorobiphenyl	12.7	13.5	12.7~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

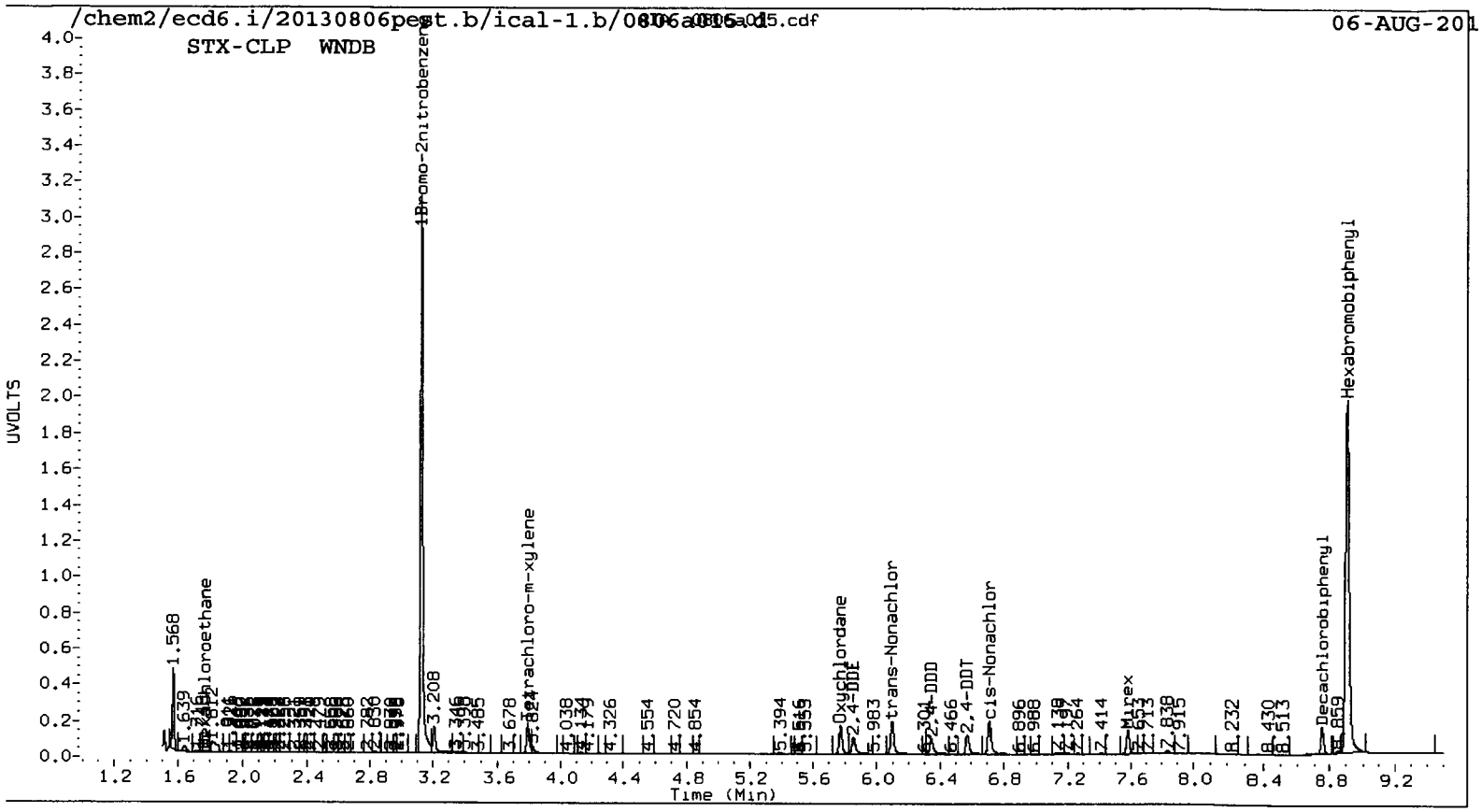
	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	6434092	-1.7
Hexabromobiphenyl	6145816	6045618	-1.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	32530095	0.2
Hexabromobiphenyl	16281238	15945266	-2.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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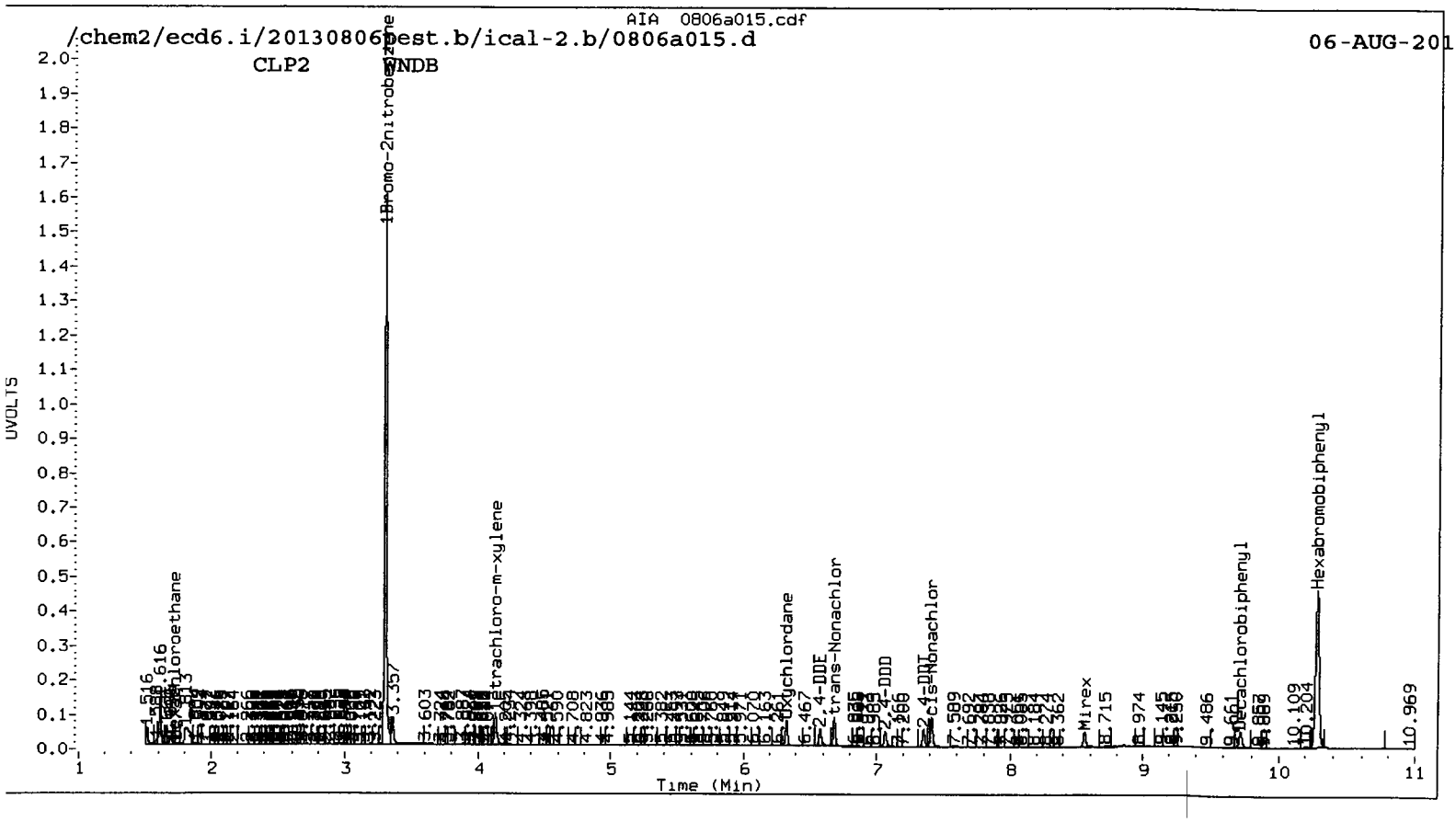
06-AUG-201
STX-CLP WNDB
UVOLTS
Time (Min)
1.568
Hexachloroethane
3.208
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl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06-AUG-201
CLP2 WNDB
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
3.357
Hexachloroethane
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
10.969

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a016.d ARI ID: WNDC YZ 08/08/13
Data file 2: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a016.d Client ID:
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 06-AUG-2013 17:47
Compound Sublist: WND Report Date: 08/08/2013 14:52
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.768	-0.002	604	1.720	0.001	169405	0.0000	0.0000	---	Hexachloroethane
3.123	0.000	6381041	3.298	0.000	32759740	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.773	0.002	788317	6.326	0.000	3746607	10.0233	10.2542	2.3	Oxychlordane
5.855	0.007	648960	6.579	0.004	2882919	9.9833	10.5121	5.2	2,4-DDE
6.096	0.002	995516	6.684	0.001	4456944	10.1157	10.4560	3.3	trans-Nonachlor
6.340	0.006	538758	7.064	0.003	2410023	9.7142	10.3969	6.8	2,4-DDD
6.575	0.005	635985	7.349	0.002	2540455	9.9730	10.3139	3.4	2,4-DDT
6.711	0.002	1082525	7.408	0.001	4588364	10.0575	10.4841	4.2	cis-Nonachlor
7.581	0.001	672856	8.557	0.001	2200328	9.9164	10.2841	3.6	Mirex
8.909	0.002	6053695	10.280	0.001	16061354	80.0000	80.0000	0.0	Hexabromobiphenyl
3.794	0.002	767221	4.126	-0.001	4983540	9.4112	10.4166	10.1	Tetrachloro-m-xylene
8.754	0.002	738235	9.716	0.002	2828855	10.0769	10.4801	3.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	23.5	26.0	23.5~	150- 0
Decachlorobiphenyl	25.2	26.2	25.2~	150- 0

~ Indicates recovery outside QC Limits

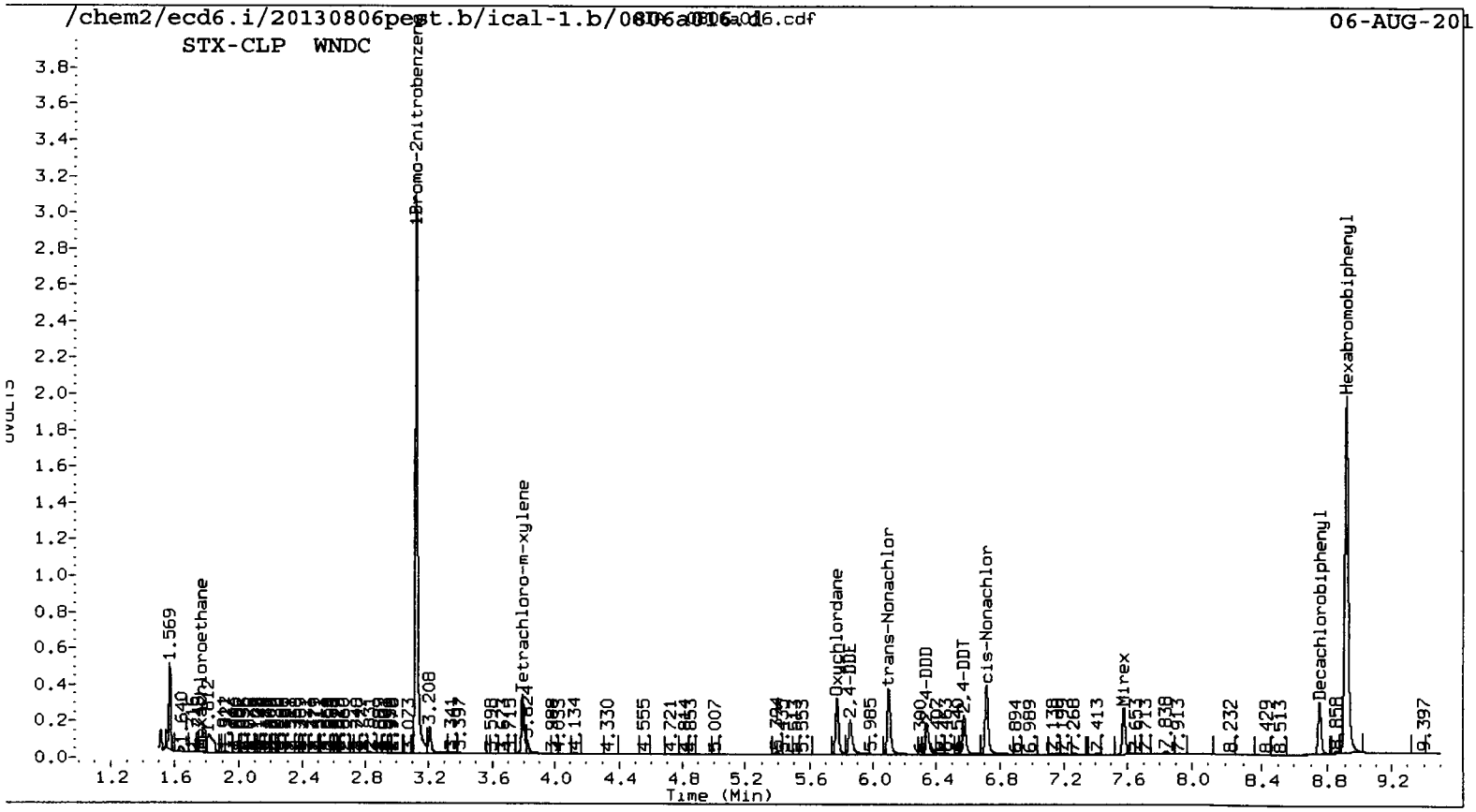
INTERNAL STANDARD SUMMARY

	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	6381041	-2.5
Hexabromobiphenyl	6145816	6053695	-1.5

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	32759740	0.9
Hexabromobiphenyl	16281238	16061354	-1.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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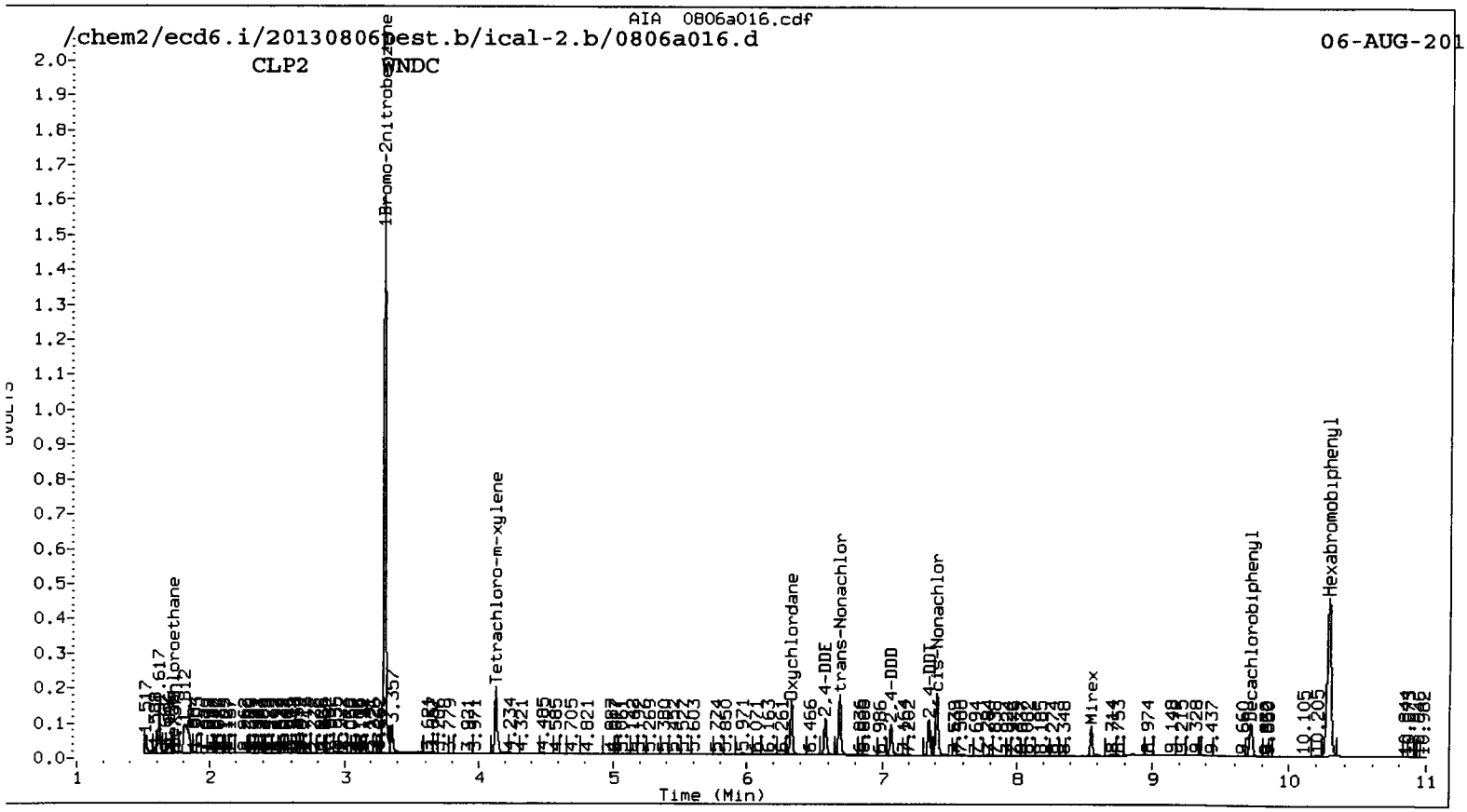
STX-CLP WNDC
06-AUG-201
1.569
Hexachloroethane
3.208
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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CLP2 WNDC
06-AUG-201
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
Mirex
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a017.d ARI ID: WNDD
Data file 2: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a017.d Client ID:
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 06-AUG-2013 18:05
Compound Sublist: WND Report Date: 08/08/2013 14:52
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.769	0.000	745	1.720	0.001	464154	0.0000	0.0000	---	Hexachloroethane
3.123	0.000	6387695	3.297	0.000	32623400	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.773	0.001	1544839	6.327	0.001	7491553	19.4654	20.5896	5.6	Oxychlordane
5.853	0.005	1279457	6.578	0.003	5706264	19.4975	20.8939	6.9	2,4-DDE
6.095	0.001	1943447	6.683	0.000	8843424	19.5494	20.4915	4.7	trans-Nonachlor
6.338	0.004	1065663	7.063	0.002	4825430	19.1225	20.5610	7.2	2,4-DDD
6.573	0.003	1269486	7.348	0.001	5207853	19.6760	20.8830	6.0	2,4-DDT
6.710	0.001	2133719	7.407	0.000	9155666	19.6099	20.6626	5.2	cis-Nonachlor
7.580	0.000	1300686	8.557	0.001	4228358	19.0859	19.5197	2.2	Mirex
8.908	0.001	6149571	10.279	0.000	16261404	80.0000	80.0000	0.0	Hexabromobiphenyl
3.794	0.002	1512173	4.126	-0.001	9734933	18.5299	20.4330	9.8	Tetrachloro-m-xylene
8.753	0.001	1436361	9.715	0.001	5583041	19.3005	20.4290	5.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	46.3	51.1	46.3~	150- 0
Decachlorobiphenyl	48.3	51.1	48.3~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

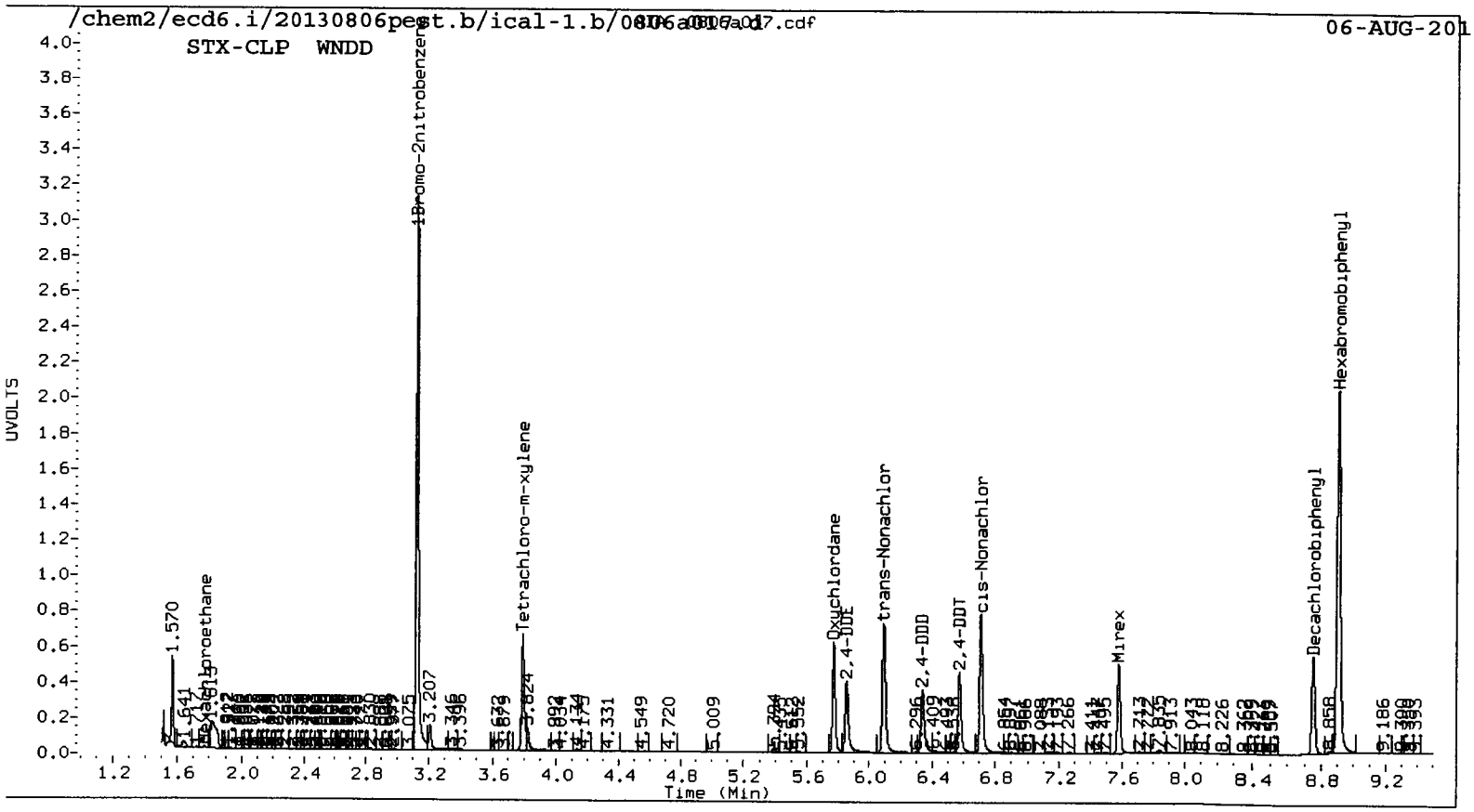
	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	6387695	-2.4
Hexabromobiphenyl	6145816	6149571	0.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	32623400	0.4
Hexabromobiphenyl	16281238	16261404	-0.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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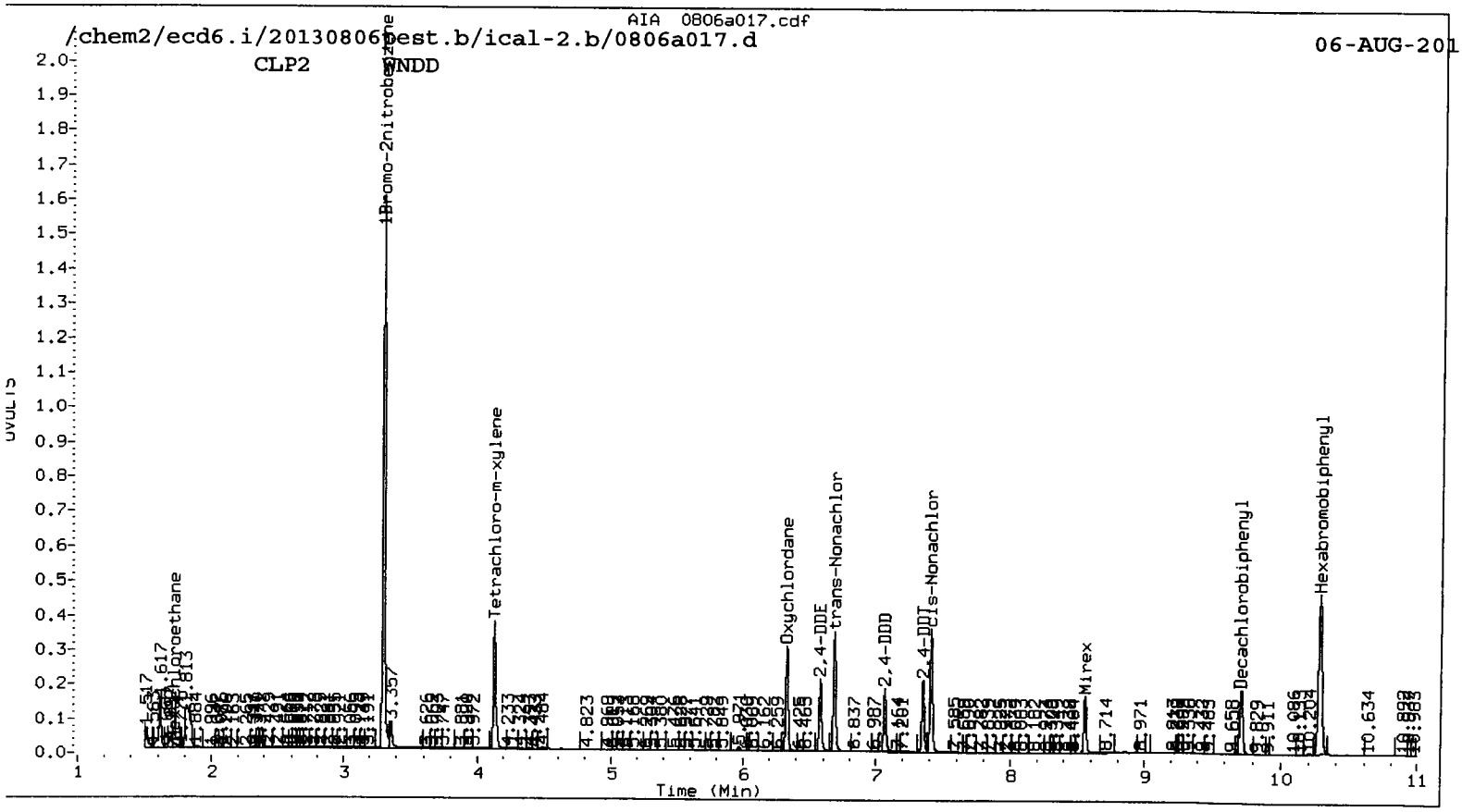
STX-CLP WNDD
06-AUG-201
UVOLTS
Time (Min)
1.570
Hexachloroethane
1Bromo-2nitrobenzene
3.207
Tetrachloro-m-xylene
3.824
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 WNDD
06-AUG-201
UVOLTS
Time (Min)
Hexachloroethane
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a018.d ARI ID: WNDF
Data file 2: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a018.d Client ID:
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 06-AUG-2013 18:23
Compound Sublist: WND Report Date: 08/08/2013 14:52
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.769	0.000	1757	1.720	0.001	1203662	0.0000	0.0000	---	Hexachloroethane
3.123	0.000	6297916	3.297	0.000	32055300	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.772	0.000	5886592	6.326	0.000	28662692	76.7901	80.1720	4.3	Oxychlordane
5.849	0.001	4793030	6.577	0.001	20534330	75.8032	76.5205	0.9	2,4-DDE
6.094	0.000	7648505	6.683	0.000	33533027	79.1803	79.3596	0.2	trans-Nonachlor
6.335	0.001	4131371	7.061	0.000	18061739	76.7570	78.6032	2.4	2,4-DDD
6.572	0.001	4901608	7.347	0.000	19524074	78.3481	79.9608	2.0	2,4-DDT
6.709	0.000	8474477	7.407	0.000	34423015	79.9927	79.3446	0.8	cis-Nonachlor
7.580	0.000	4962373	8.557	0.001	16255790	75.6074	76.6447	1.4	Mirex
8.907	0.000	5987613	10.279	0.000	15921548	80.0000	80.0000	0.0	Hexabromobiphenyl
3.792	0.000	6145196	4.125	-0.002	36764806	76.3757	78.5344	2.8	Tetrachloro-m-xylen
8.752	0.000	5532676	9.715	0.001	21159912	76.3541	79.0794	3.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	190.9	196.3	190.9~	150- 0
Decachlorobiphenyl	190.9	197.7	190.9~	150- 0

~ Indicates recovery outside QC Limits

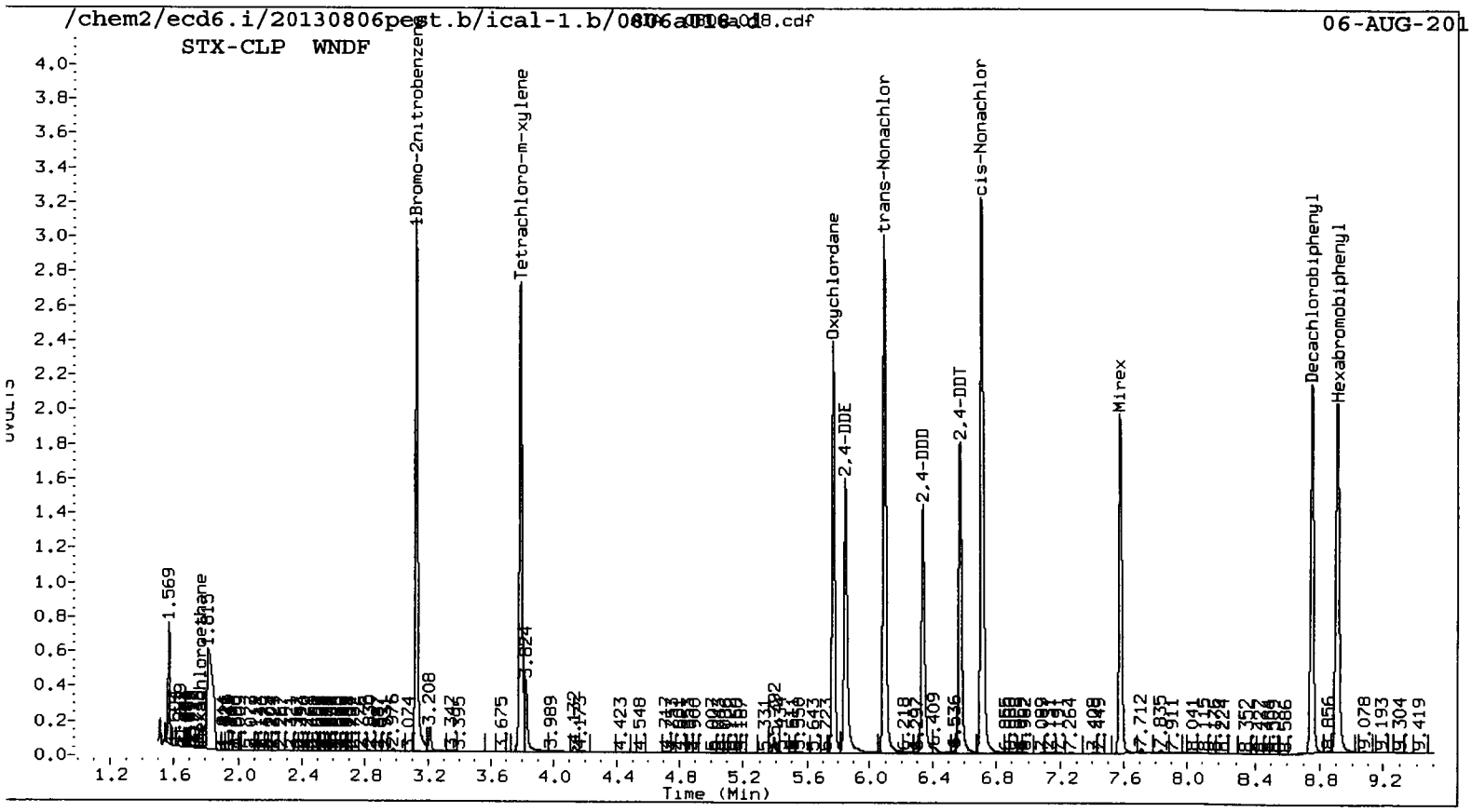
INTERNAL STANDARD SUMMARY

	Column 1		
	Standard	Sample	
Standard Cpnd	Area*	Area	%D
Bromo-Nitrobenzene	6543663	6297916	-3.8
Hexabromobiphenyl	6145816	5987613	-2.6

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	32055300	-1.3
Hexabromobiphenyl	16281238	15921548	-2.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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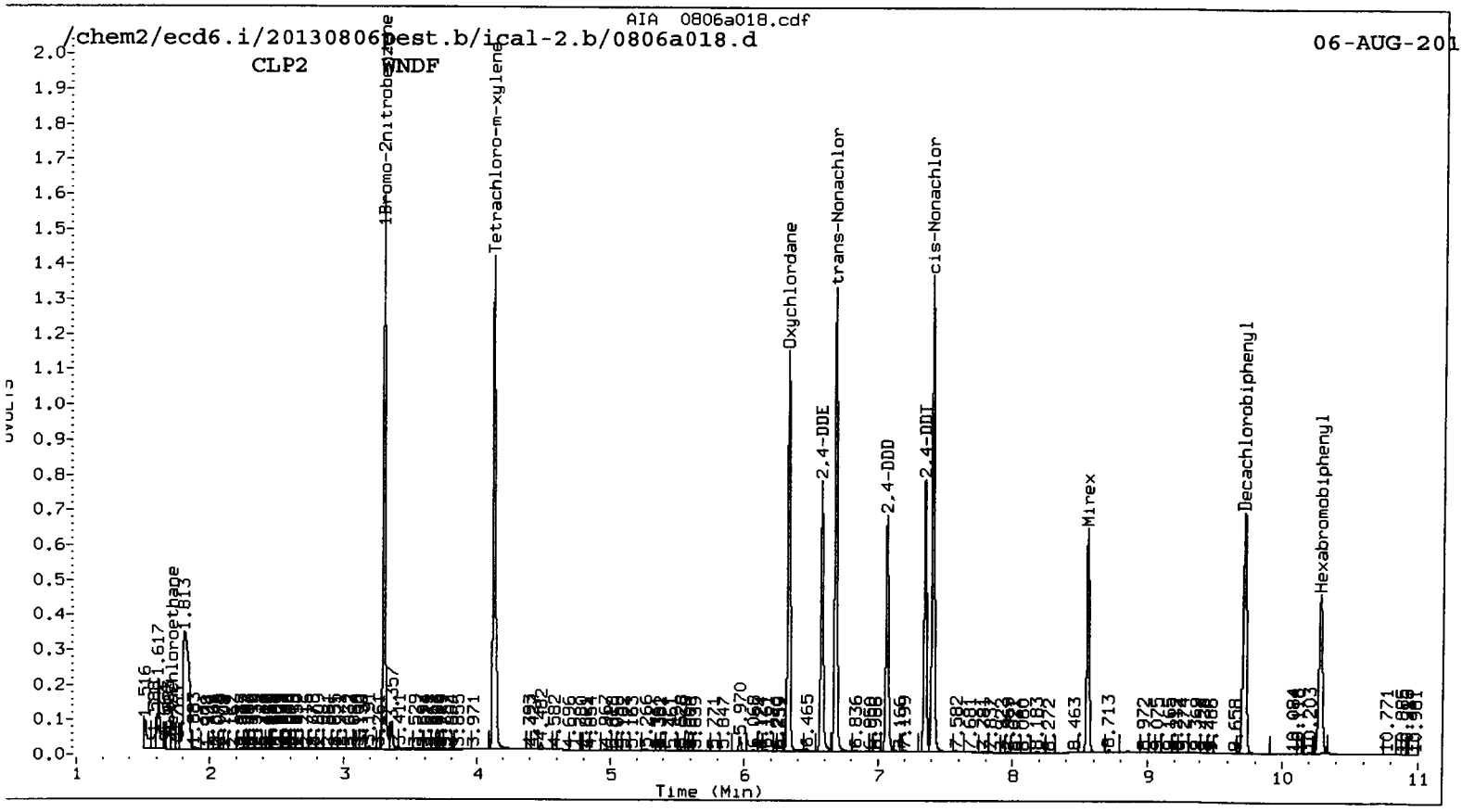
06-AUG-201
STX-CLP WNDF
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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06-AUG-201
CLP2 WNDF
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 08/08/13

Data file 1: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a019.d ARI ID: WNDG
Data file 2: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a019.d Client ID:
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 06-AUG-2013 18:41
Compound Sublist: WND Report Date: 08/08/2013 14:52
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.769	0.000	3247	1.719	0.000	1169933	0.0000	0.0000	---	Hexachloroethane
3.122	-0.001	6201370	3.296	-0.001	30833839	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.771	0.000	11061043	6.326	0.000	53914587	148.4928	156.7776	5.4	Oxychlordane
5.848	0.000	8778065	6.575	0.000	36662679	143.5917	142.0344	1.1	2,4-DDE
6.094	0.000	14697370	6.683	0.000	60360637	155.4612	146.1200	6.2	trans-Nonachlor
6.334	0.000	7881426	7.061	0.000	32895654	150.3985	146.4362	2.7	2,4-DDD
6.571	0.000	9292443	7.347	0.000	35675780	152.2643	149.4548	1.9	2,4-DDT
6.709	0.000	16399198	7.407	0.000	61334009	157.7814	144.6103	8.7	cis-Nonachlor
7.580	0.000	9583448	8.557	0.000	30783589	150.0296	148.4645	1.0	Mirex
8.906	-0.001	5887904	10.278	-0.001	15565243	80.0000	80.0000	0.0	Hexabromobiphenyl
3.792	0.000	11839626	4.125	-0.002	63844090	149.4399	141.7818	5.3	Tetrachloro-m-xyl
8.752	0.000	10667222	9.714	0.000	40210102	149.7068	153.7143	2.6	Decachlorobipheny

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	373.6	354.5	354.5~	150- 0
Decachlorobiphenyl	374.3	384.3	374.3~	150- 0

~ Indicates recovery outside QC Limits

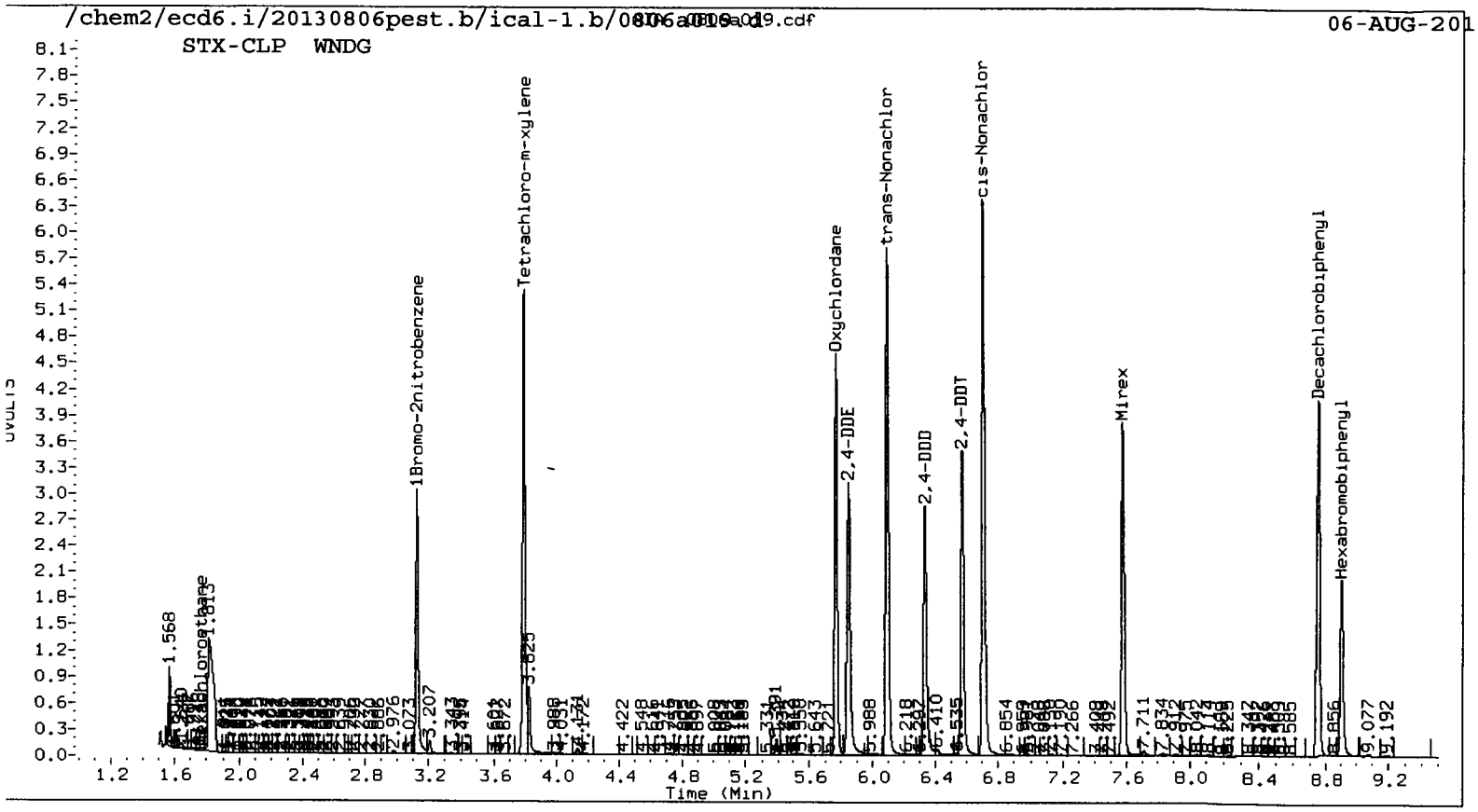
INTERNAL STANDARD SUMMARY

	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	6201370	-5.2
Hexabromobiphenyl	6145816	5887904	-4.2

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	30833839	-5.1
Hexabromobiphenyl	16281238	15565243	-4.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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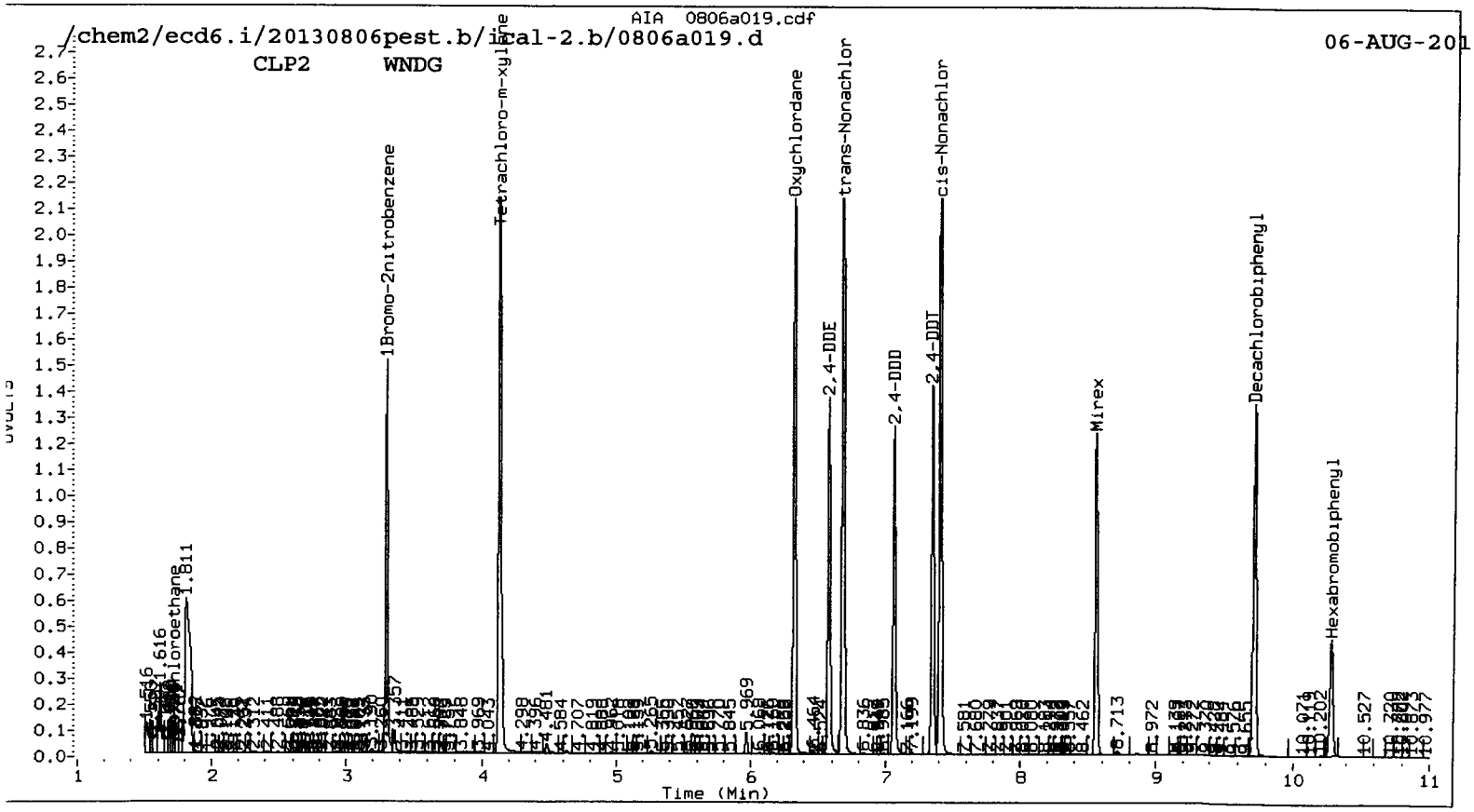
06-AUG-201
STX-CLP WNDG
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)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06-AUG-201
CLP2 WNDG
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a020.d ARI ID: TOXAPHENE
Data file 2: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a020.d Client ID:
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 06-AUG-2013 18:58
Compound Sublist: TOXAPH Report Date: 08/08/2013 14:53
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.123	0.000	6548179	3.297	0.000	32786474	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.907	0.000	6422616	10.279	0.000	17237151	80.0000	80.0000	0.0	Hexabromobiphenyl
3.793	0.001	2696271	4.125	-0.001	17367811	32.2299	36.2725	11.8	Tetrachloro-m-xylen
8.753	0.001	2896558	9.714	0.000	11099499	37.2667	38.3153	2.8	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	80.6	90.7	80.6~	150- 0
Decachlorobiphenyl	93.2	95.8	93.2~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

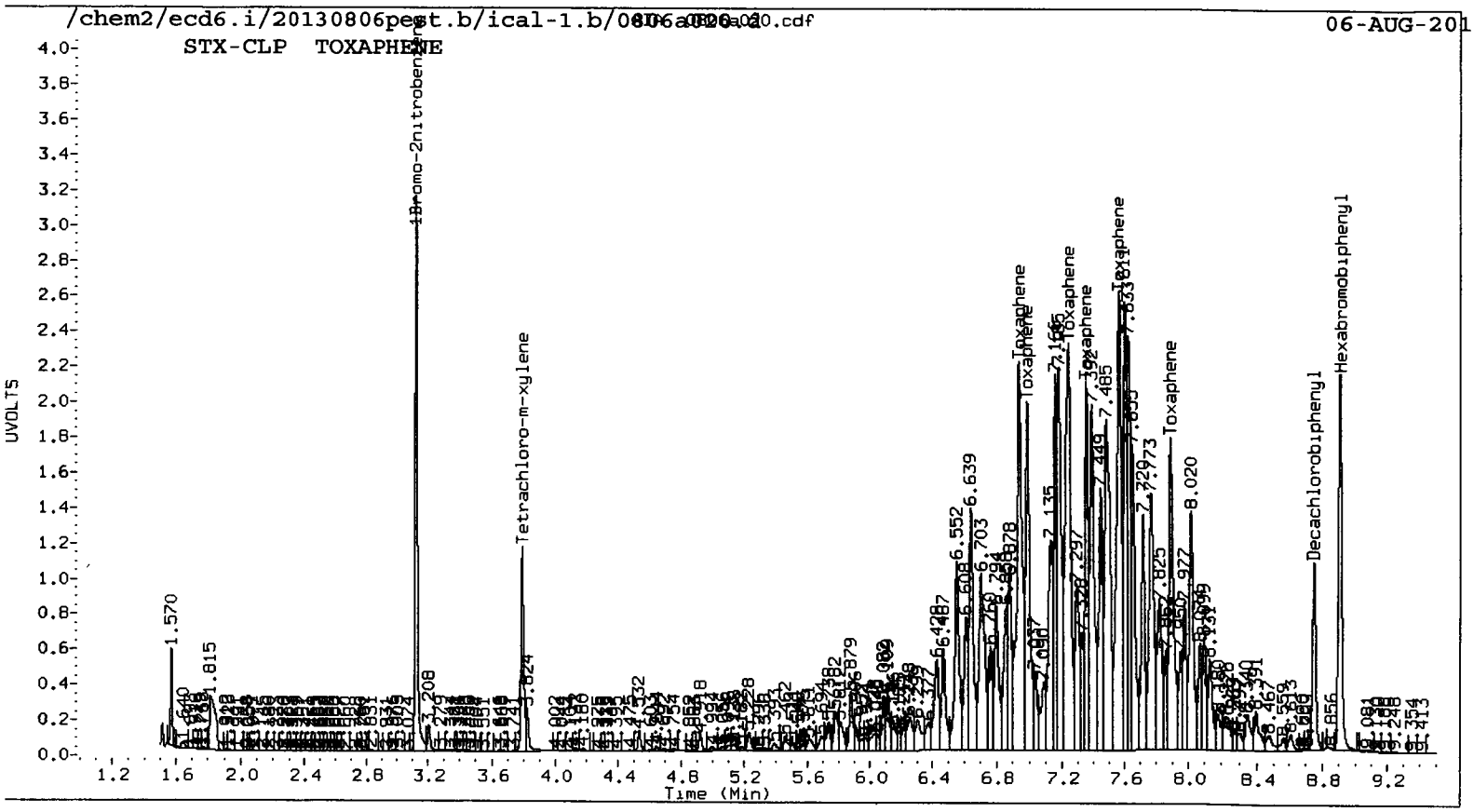
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	6548179	0.1
Hexabromobiphenyl	6145816	6422616	4.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	32786474	0.9
Hexabromobiphenyl	16281238	17237151	5.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.940	0.000	9986754	2500.0	1	7.285	0.000	30648031	2500.0	
Toxaphene	2	6.991	0.000	7104218	2500.0	2	7.610	0.000	44974159	2500.0	
Toxaphene	3	7.247	0.000	11301161	2500.0	3	7.840	0.000	48921727	2500.0	
Toxaphene	4	7.358	0.000	5943842	2500.0	4	8.307	0.000	34917227	2500.0	
Toxaphene	5	7.572	0.000	11409493	2500.0	5	8.346	0.000	45622726	2500.0	
Toxaphene	6	7.891	0.000	6465382	2500.0	NS	---			----	
Total STX-CLPAve (6 peaks): 2500.000						Total CLP2Ave (5 peaks): 2500.000				RPD = 0	
Corrected Ave (6 peaks): 2500.000						Corrected Ave (5 peaks): 2500.000				RPD = 0	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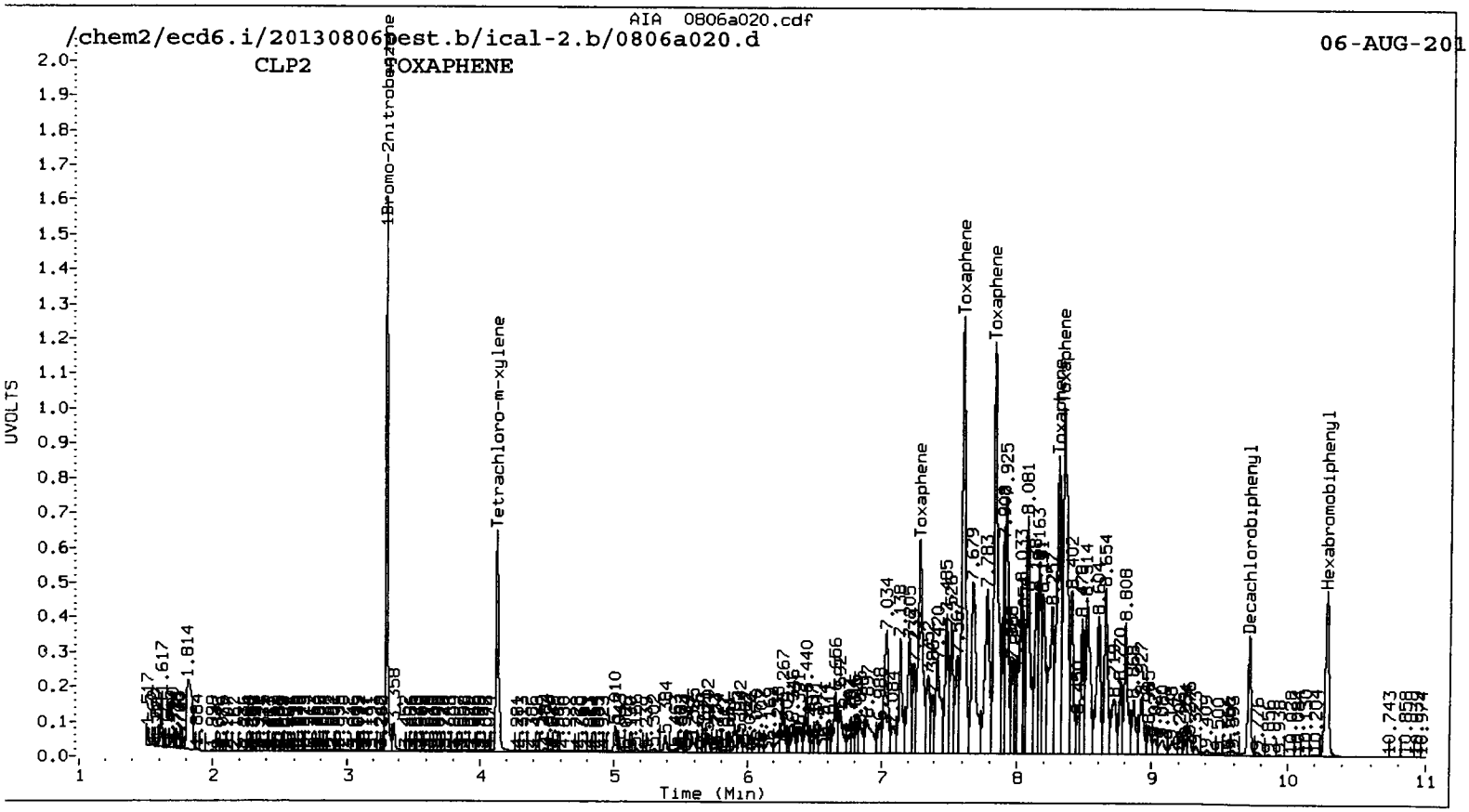
06-AUG-201
STX-CLP TOXAPHENE
UVOLTS
Time (Min)
1.570
1.815
3.208
3.824
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl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06-AUG-201
CLP2 TOXAPHENE
UVOLTS
Time (Min)
1.617
1.814
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a021.d ARI ID: INDA ICV YZ 08/09/13
Data file 2: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a021.d Client ID:
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 06-AUG-2013 19:16
Compound Sublist: INDA Report Date: 08/08/2013 14:53
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.123	0.000	6726068	3.297	0.000	33483016	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.276	0.000	5771218	4.705	-0.001	29590980	44.0920	43.6942	0.9	alpha-BHC
4.638	0.003	2140531	5.137	0.001	11376631	41.1357	43.9405	6.6	beta-BHC
4.808	0.003	4955532	5.448	0.001	24552599	45.3653	44.3682	2.2	delta-BHC
4.558	0.000	5087990	5.062	-0.001	25828202	42.5630	43.4928	2.2	gamma-BHC (Lindane)
5.002	0.000	4664519	5.524	0.000	22890558	40.6325	40.7871	0.4	Heptachlor
5.293	-0.001	4930151	5.861	0.000	22597568	42.8806	42.1207	1.8	Aldrin
5.866	0.000	4196458	6.415	0.000	19080503	40.4825	41.4295	2.3	Heptachlor epoxide
6.242	0.000	4201897	6.803	0.000	17454531	42.9012	41.3250	3.7	Endosulfan I
6.464	0.000	4367091	7.060	-0.001	18407337	42.4564	42.6547	0.5	Dieldrin
6.174	0.005	4131815	6.867	0.001	18644313	52.8303	43.7751	18.7	4,4'-DDE
6.683	0.000	3527881	7.349	-0.001	13701740	40.6323	40.5571	0.2	Endrin
6.890	0.002	3582143	7.539	0.000	15209784	40.0011	41.0668	2.6	Endosulfan II
6.730	0.007	3646582	7.404	0.003	14736993	42.6400	41.7481	2.1	4,4'-DDD
7.654	0.001	3221409	8.081	0.000	12759253	41.6238	42.9237	3.1	Endosulfan sulfate
6.984	0.004	3508054	7.690	0.001	12958221	41.0858	40.4229	1.6	4,4'-DDT
7.409	0.003	1673339	8.272	-0.002	5546899	41.6920	45.8960	9.6	Methoxychlor
7.908	0.001	3904796	8.570	0.000	13481038	38.8647	40.3657	3.8	Endrin ketone
7.265	0.002	2919406	7.836	0.000	11826024	39.2462	39.9835	1.9	Endrin aldehyde
5.987	0.001	4532055	6.600	0.001	19713804	41.4986	41.6808	0.4	gamma-Chlordane
6.110	0.001	4311229	6.736	0.000	18541641	41.4043	42.1016	1.7	alpha-Chlordane
2.286	-0.016	3389	2.450	-0.014	38818	0.0236	0.0684	97.4*	Hexachlorobutadiene
4.132	-0.001	54631	4.582	-0.002	81653	0.5334	0.1140	129.6*	Hexachlorobenzene
8.908	0.001	6488870	10.280	0.001	17676118	80.0000	80.0000	0.0	Hexabromobiphenyl
3.793	0.001	3419095	4.124	-0.002	20697534	39.7893	42.3274	6.2	Tetrachloro-m-xylen
8.753	0.001	3131498	9.714	0.000	12161589	39.8781	40.9391	2.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	99.5	105.8	99.5~	115- 0
Decachlorobiphenyl	99.7	102.3	99.7~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

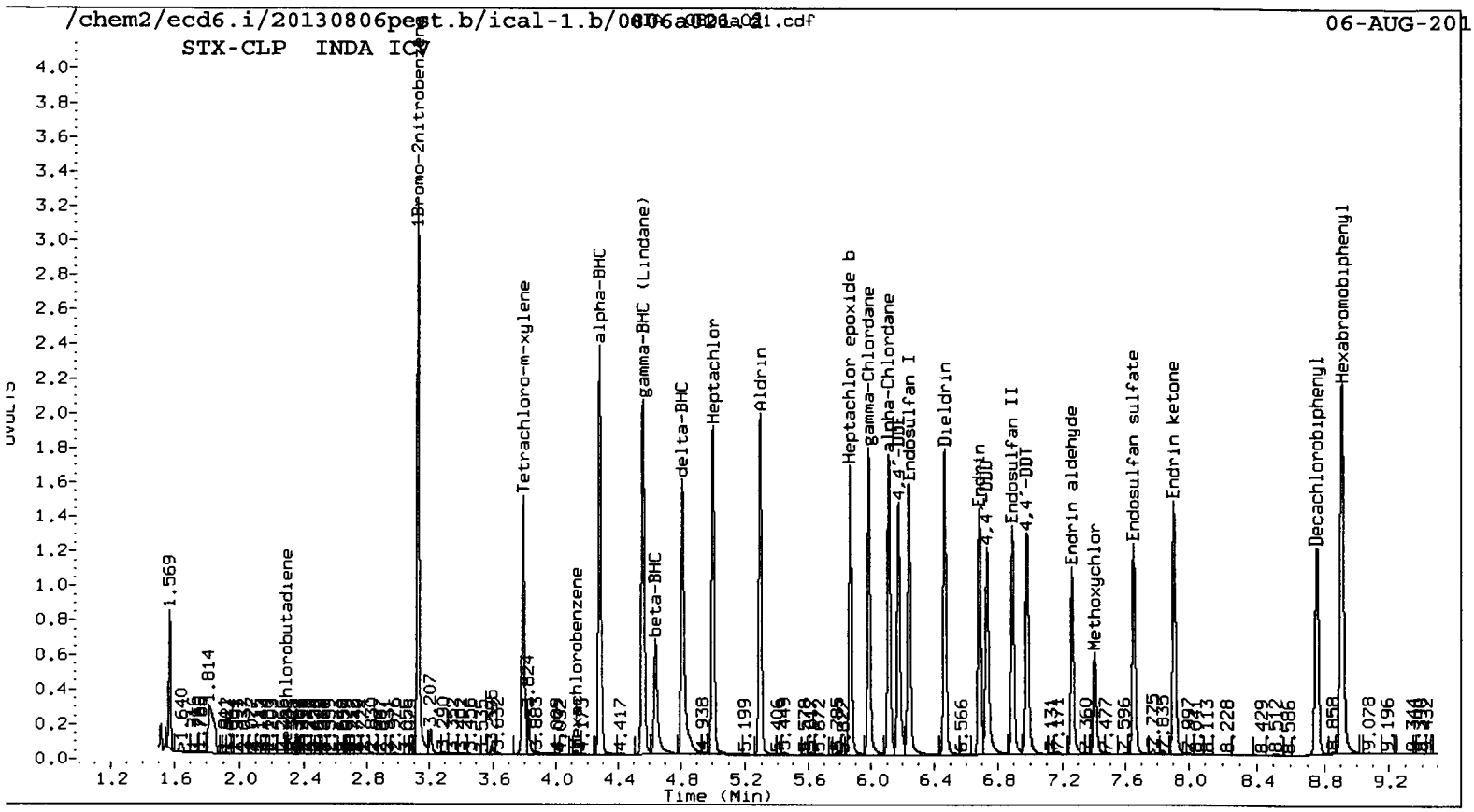
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	6726068	2.8
Hexabromobiphenyl	6145816	6488870	5.6

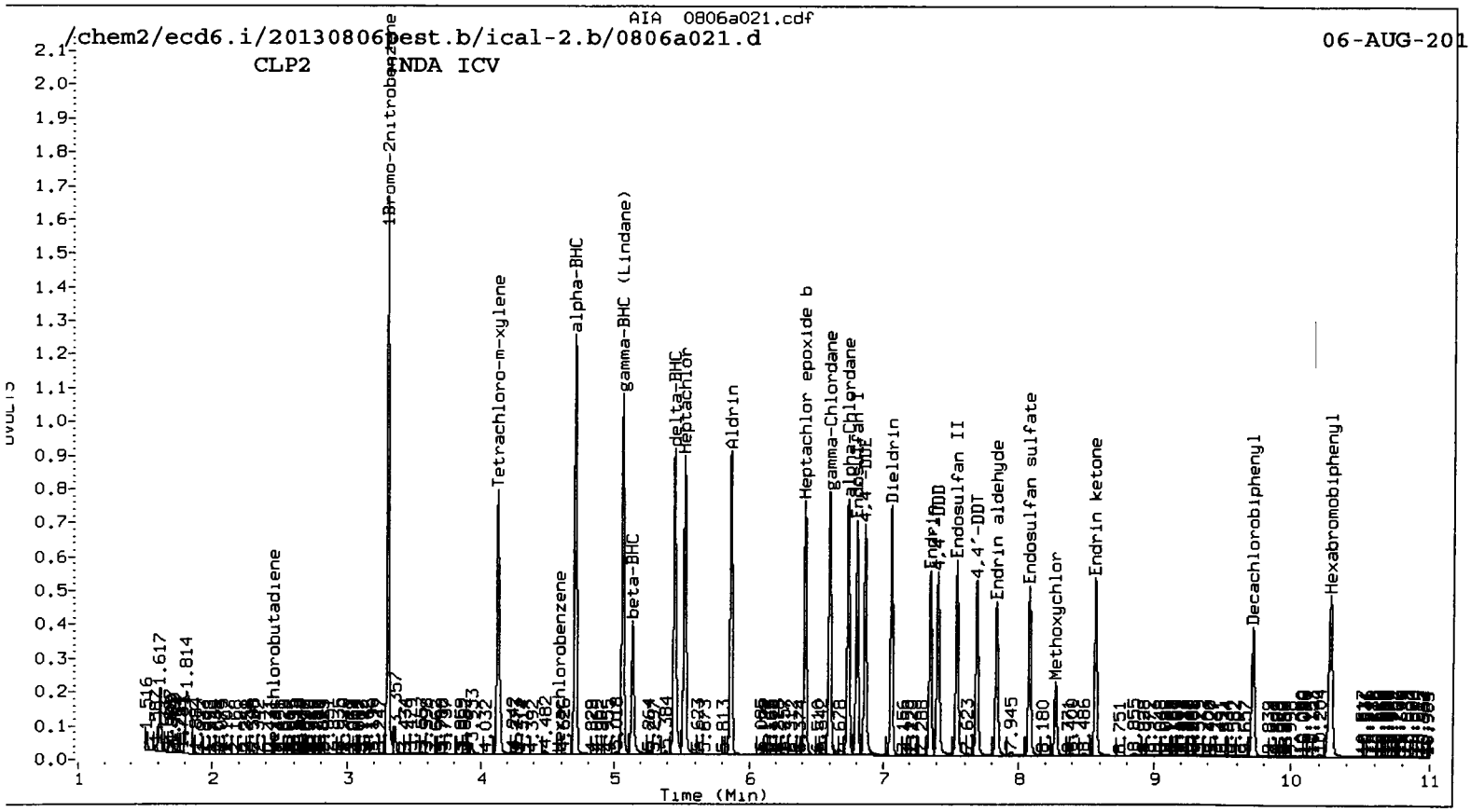
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	33483016	3.1
Hexabromobiphenyl	16281238	17676118	8.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130806pest.b/ical-1.b/0806a021.d
STX-CLP INDA ICV
06-AUG-201
1.569
1.640
1.814
Hexachlorobutadiene
1Bromo-2nitrobenzene
3.207
Tetrachloro-m-xylene
3.824
Nitrochlorobenzene
alpha-BHC
4.417
gamma-BHC (Lindane)
beta-BHC
delta-BHC
4.938
Heptachlor
5.199
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
5.566
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)


AIA 0806a021.cdf
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CLP2 INDA ICV
06-AUG-201
1.516
1.617
1.814
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Nitrochlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
7.945
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130806pest.b/ical-1.b/0806a022.d ARI ID: WND ICV Y2 08/09/13
Data file 2: /chem2/ecd6.i/20130806pest.b/ical-2.b/0806a022.d Client ID:
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 06-AUG-2013 19:34
Compound Sublist: WND Report Date: 08/08/2013 14:53
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.770	0.001	1253	1.720	0.001	229046	0.0000	0.0000	---	Hexachloroethane
3.122	-0.001	6626203	3.296	-0.001	32606050	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.770	-0.001	4032524	6.325	-0.001	17700871	47.4994	48.6745 OK	2.4	Oxychlordane
5.845	-0.003	3309011	6.574	-0.002	14395768	47.4931	52.7399	10.5	2,4-DDE
6.093	-0.001	4629669	6.682	-0.001	19303671	42.9669	41.5768 OK	3.3	trans-Nonachlor
6.331	-0.003	3040800	7.059	-0.002	12628411	50.9129	50.0166 OK	1.8	2,4-DDD
6.569	-0.002	3536639	7.346	-0.001	14030098	50.8464	52.2940 OK	2.8	2,4-DDT
6.708	-0.001	5078204	7.406	-0.001	20041440	42.8691	42.0419 OK	1.9	cis-Nonachlor
7.580	0.000	1931	8.566	0.009	20286	0.0265	0.0870	106.5*	Mirex
8.901	-0.006	6710570	10.275	-0.004	17494470	80.0000	80.0000	0.0	Hexabromobiphenyl
3.789	-0.003	17701	4.122	-0.005	94242	0.2091	0.1979	5.5	Tetrachloro-m-xylene
8.752	0.000	24789	9.711	-0.003	106121	0.3053	0.3609	16.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower Limits
Tetrachloro-m-xylene	0.5	0.5	0.5~ 150- 0
Decachlorobiphenyl	0.8	0.9	0.8~ 150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

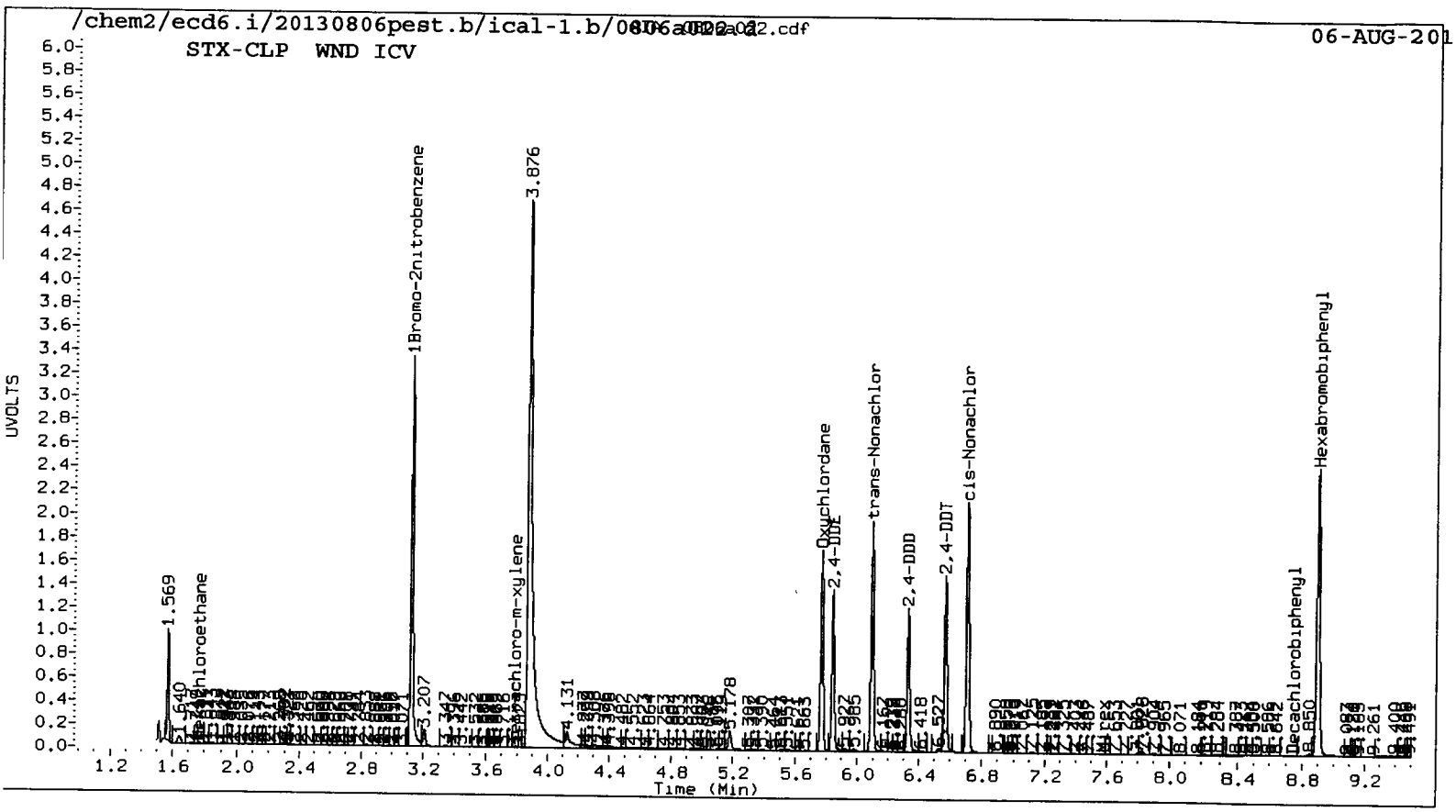
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	6626203	1.3
Hexabromobiphenyl	6145816	6710570	9.2

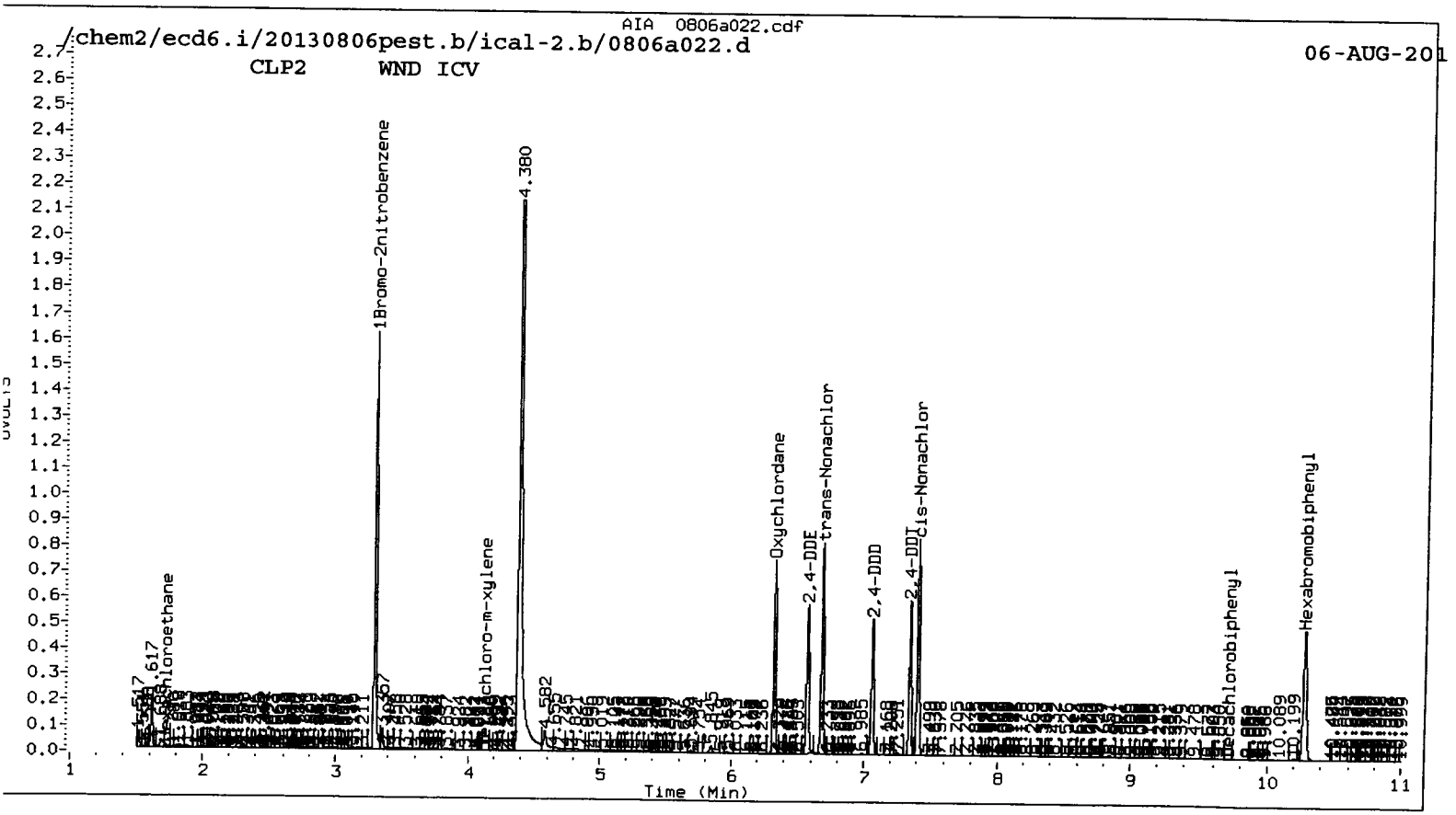
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	32606050	0.4
Hexabromobiphenyl	16281238	17494470	7.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130806pest.b/ical-1.b/0806a022.d
STX-CLP WND ICV
06-AUG-201
UVOLTS
1.569
1.640
Chloroethane
3.207
1Bromo-2nitrobenzene
3.876
chloro-m-xylene
4.131
5.178
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)


AIA 0806a022.cdf
/chem2/ecd6.i/20130806pest.b/ical-2.b/0806a022.d
CLP2 WND ICV
06-AUG-201
1.617
Chloroethane
1Bromo-2nitrobenzene
chloro-m-xylene
4.380
4.582
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Pesticide Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WY32, WY33

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WY32 Client ID: SAIC

METHOD: **8082A**(~~PCB~~) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date: 08/06/13 Analysis Start Date: 08/14/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / Y / N / ✓	Method Blank in Control?	Y / N / ✓
Retention times within Windows?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / ✓
CCAL met %D Criteria?	Y / N / ✓	LCS / LCSD RPD ≤30%?	NA / ___
Surrogate Recovery in Control?	Y / N - OK per LCS	MS / MSD Recovery in Control?	Y / N / ✓
Internal STD. within 50-200%?	NA / Y / N / B, C, Cms/Cmsd	MS / MSD RPD ≤30%?	NA / ✓
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / 5-x
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ✓

Detail problems, corrective actions and/or other pertinent information below

- Samples were run @ 5x dilution
- Samples were run on 07/31/13 and 08/01/13. Samples were re-run again on 8/14/13 with a new IS and new curve due to low spike recovery in LCS.
- All three times closing CCALs failed due to matrix effect.
- 08/14/13 run: — LCS: TCMX recovery ~~low~~ OK per spk - okay.
  — Samples B, C, Cms/Cmsd: BNB IS failed on CCF_2 column due to matrix effect. OK
  — Sample A: TCMX is ~~high~~ due to matrix interference.
  — Closing CCALs: OS - okay on both columns. Toxaphene - okay on CCF, BNB IS failed low on CCF_2.
  - Only Endosulfan I, Dieldrin and α-Chlordane failed on CCF. Almost all INDA analytes failed on CCF_2.

(Review 1) Analyst: YZ **Date:** 8/16/13

(Review 2) Reviewer: B **Date:** 8/16/13

Form 4060F Version 008 02/28/13

Matrix effect - !!!

WY32:8A120

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 8/14/13 Analysis: Pest Analyst: YE

Column 1 Serial No.: 1085824 Column Type: CLP

Column 2 Serial No.: 1094709 Column Type: CLP

GC Method: Pest ICal Date: 08/06/13

IS	Ical/Ccal	ICV
B1154	B339 B558	
	B559 B370	

Document All Maintenance Tasks In StarLIMS

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130806pest.b/0814-1.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	14-AUG-2013 15:54	0814a002.d	1	DS	
2	14-AUG-2013 16:12	0814a003.d	1	INDAE	
3	14-AUG-2013 16:29	0814a004.d	1	TOXAPH	
4	14-AUG-2013 16:47	0814a005.d	1	TOXAPH LP	
5	14-AUG-2013 17:05	0814a006.d	1	XA46MBS1	
6	14-AUG-2013 17:23	0814a007.d	1	XA46A	LOD1
7	14-AUG-2013 17:41	0814a008.d	1	XA46B	LOD2
8	14-AUG-2013 17:58	0814a009.d	1	XA46C	LOD3
9	14-AUG-2013 18:16	0814a010.d	1	XA46D	LOD4
10	14-AUG-2013 18:34	0814a011.d	1	XA46E	LOD5
11	14-AUG-2013 18:52	0814a012.d	1	XA46F	LOD6
12	14-AUG-2013 19:10	0814a013.d	1	XA46G	LOD7
13	14-AUG-2013 19:27	0814a014.d	1	XA46H	LOD8
14	14-AUG-2013 19:45	0814a015.d	1	XA46I	LOD9
15	14-AUG-2013 20:03	0814a016.d	1	XA46J	LOD10
16	14-AUG-2013 20:21	0814a017.d	1	XA46K	LOD11
17	14-AUG-2013 20:39	0814a018.d	1	TOXAPH LP	
18	14-AUG-2013 20:56	0814a019.d	1	DS	
19	14-AUG-2013 21:14	0814a020.d	1	INDAE	
20	14-AUG-2013 21:32	0814a021.d	1	TOXAPH	
21	14-AUG-2013 21:50	0814a022.d	1	WY32MBS1	WY32MBS1
22	14-AUG-2013 22:08	0814a023.d	1	WY32LCSS1	WY32LCSS1
23	14-AUG-2013 22:25	0814a024.d	5	WY32A	UP-CB-B8-20130626-S
24	14-AUG-2013 22:43	0814a025.d	5	WY32B	UP-MHF-165-20130626
25	14-AUG-2013 23:01	0814a026.d	5	WY32C	UP-CB-A6-20130626-S
26	14-AUG-2013 23:19	0814a027.d	5	WY32CMS	UP-CB-A6-201306 MS
27	14-AUG-2013 23:37	0814a028.d	5	WY32CMSD	UP-CB-A6-201306 MSD
28	14-AUG-2013 23:54	0814a029.d	1	DS	
29	15-AUG-2013 00:12	0814a030.d	1	INDAE	
30	15-AUG-2013 00:30	0814a031.d	1	TOXAPH	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 8/16/13

Data file 1: /chem2/ecd6.i/20130806pest.b/0814-1.b/0814a020.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130806pest.b/0814-2.b/0814a020.d Client ID:
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 14-AUG-2013 21:14
Compound Sublist: INDA Report Date: 08/15/2013 12:41
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.121	-0.002	6042633	3.295	-0.002	29484318	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.273	-0.004	2384373	4.702	-0.005	12597172	20.2769	21.1238	4.1	alpha-BHC
4.634	-0.002	883908	5.133	-0.003	4764851	18.9077	20.8994	10.0	beta-BHC
4.803	-0.002	1982248	5.443	-0.004	10576208	20.1988	21.7039	7.2	delta-BHC
4.555	-0.004	2138729	5.058	-0.005	11110759	19.9148	21.2471	6.5	gamma-BHC (Lindane)
4.998	-0.004	2029618	5.520	-0.004	10396168	19.6796	21.0365	6.7	Heptachlor
5.289	-0.005	2038991	5.857	-0.005	9997474	19.7401	21.1620	7.0	Aldrin
5.862	-0.005	1849835	6.411	-0.004	9055445	19.8634	22.3287	11.7	Heptachlor epoxide b
6.238	-0.005	1673579	6.799	-0.004	8414497	19.0198	22.6238	17.3	Endosulfan I
6.460	-0.004	3705156	7.056	-0.005	17111926	40.0952	45.0307	11.6	Dieldrin
6.164	-0.005	2663985	6.860	-0.005	16535677	37.9148	44.0896	15.1	4,4'-DDE
6.678	-0.005	2996258	7.345	-0.005	12938366	34.9157	33.5472	4.0	Endrin
6.884	-0.003	3135649	7.534	-0.004	14662662	35.4275	34.6790	2.1	Endosulfan II
6.724	0.001	3098871	7.400	-0.001	13830874	36.6622	34.3213	6.6	4,4'-DDD
7.649	-0.004	2721441	8.077	-0.004	12425783	35.5778	36.6170	2.9	Endosulfan sulfate
6.978	-0.002	2963277	7.686	-0.003	12220798	35.1141	33.3939	5.0	4,4'-DDT
7.405	-0.001	6662877	8.268	-0.006	22391567	167.9635	162.2912	3.4	Methoxychlor
7.904	-0.003	3486738	8.567	-0.004	14047931	35.1124	36.8458	4.8	Endrin ketone
7.260	-0.003	2569377	7.832	-0.004	11711325	34.9474	34.6845	0.8	Endrin aldehyde
5.983	-0.004	1943084	6.594	-0.004	9209434	19.8045	22.1122	11.0	gamma-Chlordane
6.106	-0.004	1841360	6.732	-0.004	8662658	19.6842	22.3375	12.6	alpha-Chlordane
2.302	-0.001	2425652	2.462	-0.002	8802458	18.7942	17.6013	6.6	Hexachlorobutadiene
4.132	-0.001	1691903	4.581	-0.003	12579837	18.3882	19.9377	8.1	Hexachlorobenzene
8.904	-0.003	6413353	10.274	-0.005	20179042	80.0000	80.0000	0.0	Hexabromobiphenyl
3.790	-0.002	2851113	4.122	-0.004	17110083	36.9321	39.7364	7.3	Tetrachloro-m-xylen
8.749	-0.004	2738336	9.709	-0.005	13542119	35.2819	39.9320	12.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	92.3	99.3	92.3~	115- 0
Decachlorobiphenyl	88.2	99.8	88.2~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

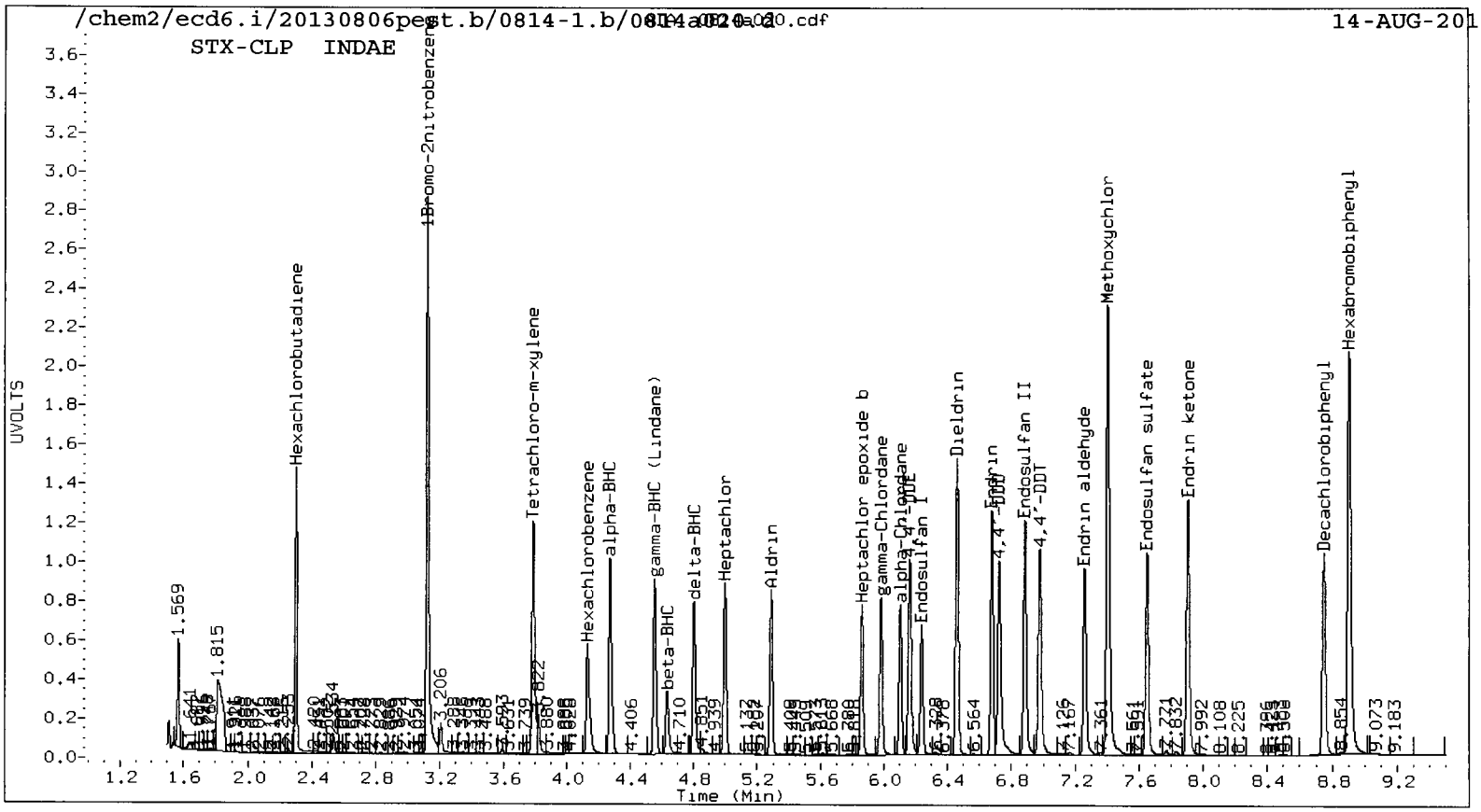
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	6042633	-7.7
Hexabromobiphenyl	6145816	6413353	4.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	29484318	-9.2
Hexabromobiphenyl	16281238	20179042	23.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount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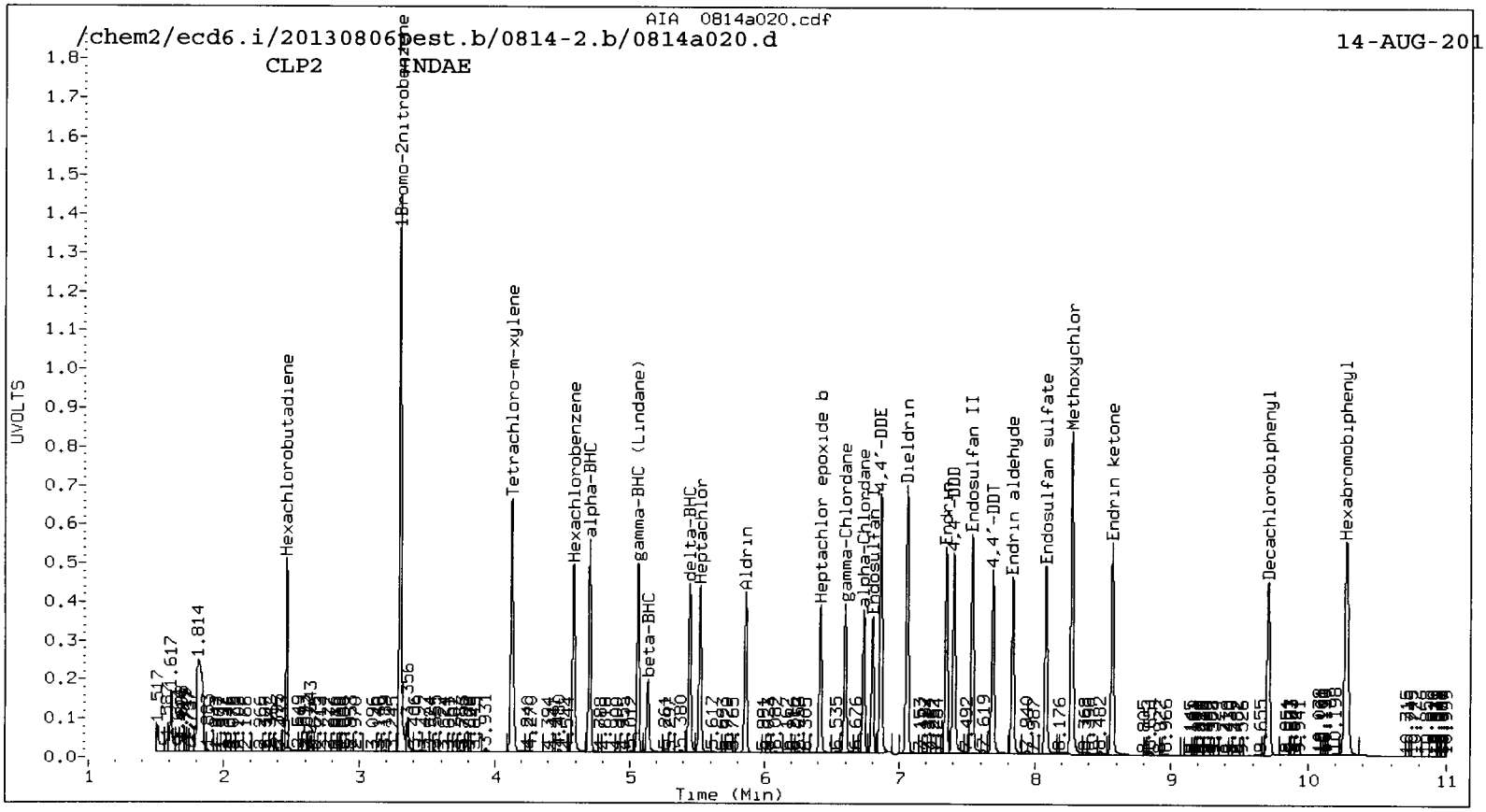
AIA 0814a020.cdf
14-AUG-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.569
1.815
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


/chem2/ecd6.i/20130806pest.b/0814-2.b/0814a020.d
AIA 0814a020.cdf
14-AUG-201
CLP2 INDAE
UVOLTS
Time (Min)
1.814
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130806pest.b/0814-1.b/0814a021.d ARI ID: TOXAPH YZ 8/16/13
Data file 2: /chem2/ecd6.i/20130806pest.b/0814-2.b/0814a021.d Client ID:
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 14-AUG-2013 21:32
Compound Sublist: TOXAPH Report Date: 08/15/2013 12:41
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.121	-0.002	5680248	3.296	-0.002	28661157	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.905	-0.002	6161982	10.275	-0.004	19515649	80.0000	80.0000	0.0	Hexabromobiphenyl
3.791	-0.001	2230666	4.122	-0.004	15519830	30.7386	37.0784	18.7	Tetrachloro-m-xylen
8.749	-0.003	2692395	9.709	-0.005	13250952	36.1052	40.4016	11.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	76.8	92.7	76.8~	150- 0
Decachlorobiphenyl	90.3	101.0	90.3~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

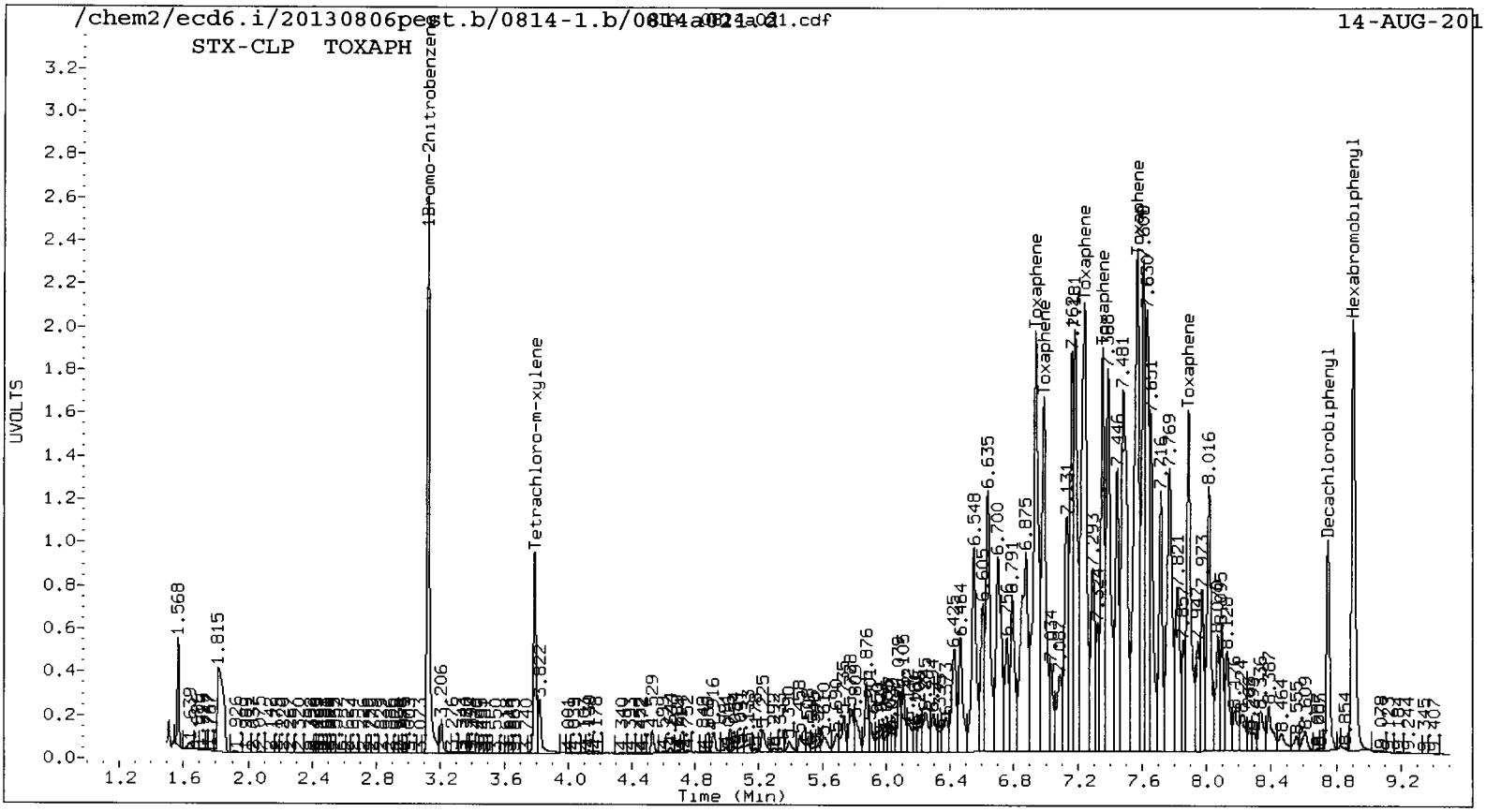
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	5680248	-13.2
Hexabromobiphenyl	6145816	6161982	0.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	28661157	-11.8
Hexabromobiphenyl	16281238	19515649	19.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.936	-0.004	8957205	2337.1	1	7.281	-0.004	30516077	2198.6
Toxaphene	2	6.987	-0.004	6148298	2255.1	2	7.606	-0.004	44930714	2206.0
Toxaphene	3	7.243	-0.004	10297955	2374.4	3	7.836	-0.003	49170871	2219.4
Toxaphene	4	7.354	-0.004	5351664	2346.1	4	8.303	-0.004	35939933	2272.8
Toxaphene	5	7.568	-0.004	10115517	2310.2	5	8.343	-0.003	46506233	2250.9
Toxaphene	6	7.887	-0.004	5913692	2383.4	NS	---			----
Total STX-CLPAve (6 peaks): 2334.403						Total CLP2Ave (5 peaks): 2229.527				RPD = 5
Corrected Ave (6 peaks): 2334.403						Corrected Ave (5 peaks): 2229.527				RPD = 5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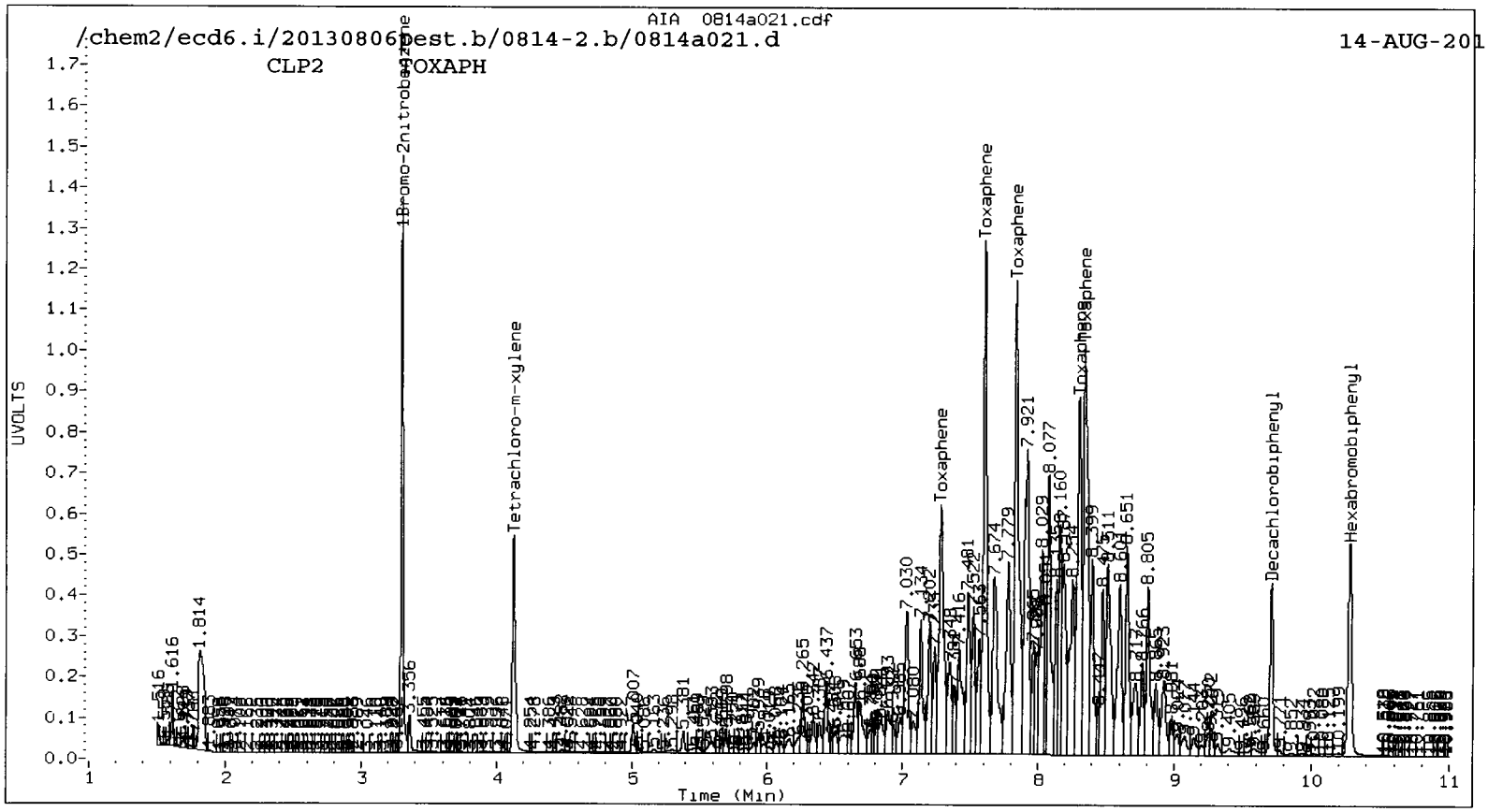
STX-CLP TOXAPH
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl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14-AUG-201
CLP2 TOXAPH
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 8/14/13

Data file 1: /chem2/ecd6.i/20130806pest.b/0814-1.b/0814a022.d ARI ID: WY32MBS1
Data file 2: /chem2/ecd6.i/20130806pest.b/0814-2.b/0814a022.d Client ID: WY32MBS1
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 14-AUG-2013 21:50
Compound Sublist: wpest Report Date: 08/15/2013 12:42
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.120	-0.003	5934062	3.294	-0.003	27367441	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.270	-0.007	19958	4.712	0.005	246396	~~0.1728~~	~~0.4451~~	88.1*	alpha-BHC
4.642	0.006	30240	5.131	-0.004	195205	0.6587	0.9224	33.4	beta-BHC
4.787	-0.019	27413	5.479	0.032	367259	0.2844	0.8120	96.2*	delta-BHC
4.545	-0.013	46083	5.054	-0.008	153239	0.4370	0.3157	32.2	gamma-BHC (Lindane)
4.974	-0.028	26630	5.523	-0.001	359763	0.2629	0.7843	99.6*	Heptachlor
5.289	-0.005	4043	5.839	-0.023	1511078	0.0399	3.4460	195.4*	Aldrin
5.873	0.006	468260	6.392	-0.024	3057782	5.1201	8.1230	45.3*	Heptachlor epoxide b
6.232	-0.011	7552	6.782	-0.020	82990	0.0874	0.2404	93.4*	Endosulfan I
6.461	-0.004	9753	----			0.1075	0.0000	---	Dieldrin
6.138	-0.031	36250	6.859	-0.006	102651	0.5254	0.2949	56.2*	4,4'-DDE
----			7.364	0.015	77331	0.0000	0.2179	---	Endrin
6.867	-0.021	5345	7.495	-0.044	151965	0.0630	0.3906	144.4*	Endosulfan II
6.750	0.027	47391	7.394	-0.007	83734	0.5853	0.2258	88.6*	4,4'-DDD
7.650	-0.004	21506	8.078	-0.003	105630	0.2935	0.3383	14.2	Endosulfan sulfate
6.972	-0.008	20092	7.699	0.011	107431	0.2486	0.3190	24.8	4,4'-DDT
7.400	-0.006	18294	8.265	-0.008	93878	0.4814	0.7394	42.3*	Methoxychlor
7.902	-0.006	48712	----			0.5121	0.0000	---	Endrin ketone
7.254	-0.010	20725	7.830	-0.006	115499	0.2943	0.3717	23.3	Endrin aldehyde
5.980	-0.007	51840	6.604	0.006	126337	0.5380	0.3268	48.8*	gamma-Chlordane
6.108	-0.002	7450	6.756	0.021	75015	0.0811	0.2084	87.9*	alpha-Chlordane
2.301	-0.001	16885	2.466	0.002	83570	0.1332	0.1800	29.9	Hexachlorobutadiene
4.128	-0.005	60395	4.603	0.019	464377	0.6684	0.7929	17.0	Hexachlorobenzene
5.763	-0.008	24494	6.321	-0.005	117558	0.3152	0.3851	20.0	Oxychlordane
5.828	-0.020	5829	6.557	-0.019	165926	0.0914	0.7242	155.2*	2,4-DDE
6.055	-0.039	23526	6.685	0.002	178877	0.2385	0.3630	41.4*	trans-Nonachlor
6.344	0.010	20558	7.059	-0.002	185880	0.3760	0.6936	59.4*	2,4-DDD
6.532	-0.039	6276	----			0.0986	0.0000	---	2,4-DDT
6.691	-0.018	10126	7.441	0.034	100277	0.0934	0.1982	71.9*	cis-Nonachlor
7.586	0.006	23387	8.556	0.000	273849	~~0.3509~~	~~1.1071~~	103.7*	Mirex
8.899	-0.008	6143263	10.271	-0.008	18569283	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.770	0.000	61967	1.715	-0.003	15948424	~~0.0000~~	~~0.0000~~	---	Hexachloroethane
6.574	-0.007	3763	7.322	-0.014	76616	~~0.0000~~	~~0.0000~~	---	Kepone
3.788	-0.004	1871322	4.121	-0.006	9125678	~~24.6838~~	~~22.8328~~	7.8	Tetrachloro-m-xylene
8.747	-0.005	2645504	9.708	-0.006	12695447	35.5844	40.6806	13.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	61.7	57.1	57.1	42-112
Decachlorobiphenyl	89.0	101.7	89.0	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

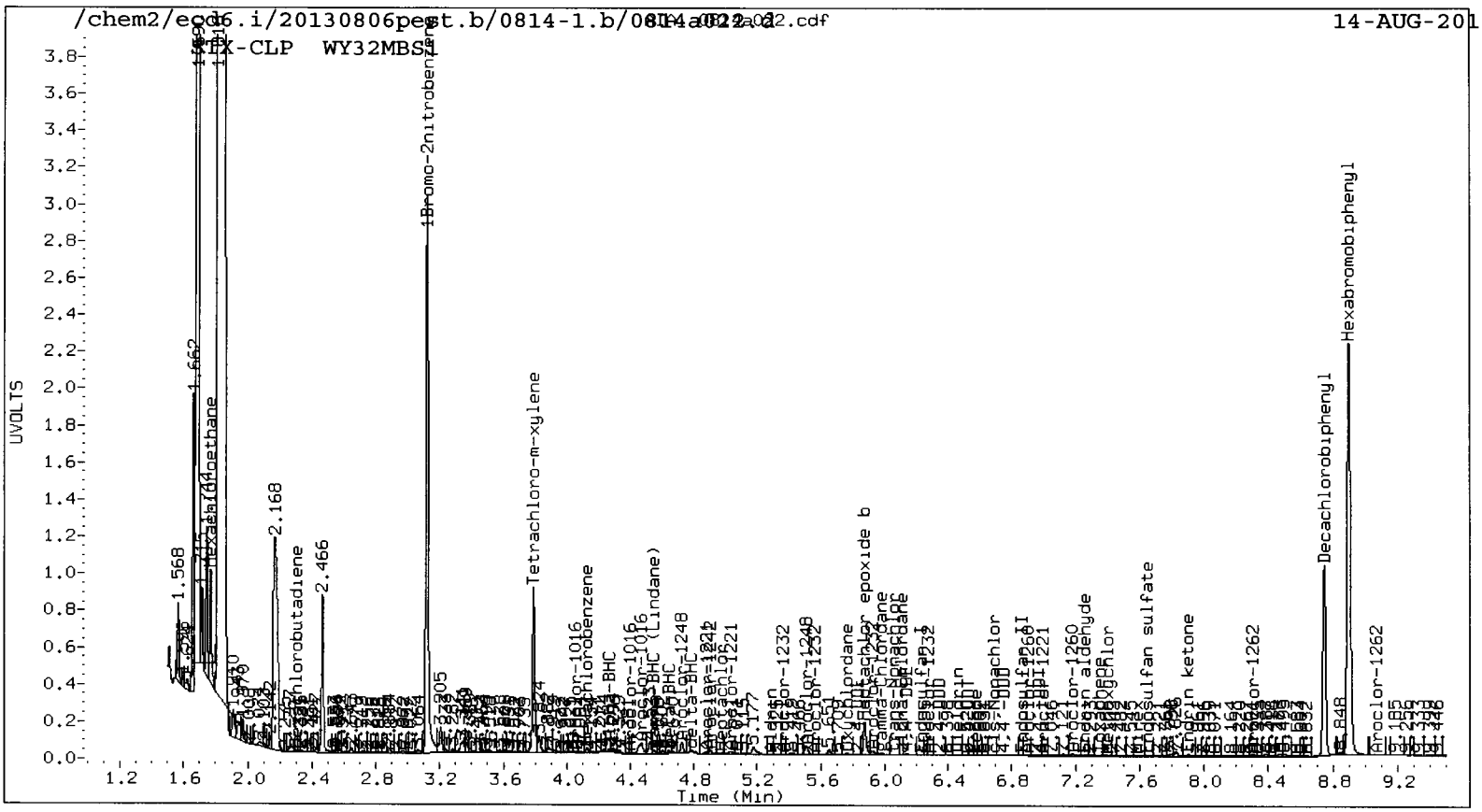
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	5934062	-9.3
Hexabromobiphenyl	6145816	6143263	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	27367441	-15.7
Hexabromobiphenyl	16281238	18569283	14.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.972	0.032	20092	5.3	1	7.288	0.003	23995	1.8
Toxaphene	2	6.994	0.003	10094	3.7	2	7.619	0.009	59507	3.1
Toxaphene	3	7.254	0.007	20725	4.8	3	7.830	-0.010	115499	5.5
Toxaphene	4	7.348	-0.010	17778	7.8	4	8.323	0.015	29024	1.9
Toxaphene	5	7.586	0.014	23387	5.4	5	8.357	0.011	71775	3.7
Toxaphene	6	7.902	0.010	48712	19.7	NS	---			----
Total STX-CLPAve (6 peaks): 7.772						Total CLP2Ave (5 peaks): 3.189			RPD = 84*	
Corrected Ave (5 peaks): 5.388						Corrected Ave (4 peaks): 2.617			RPD = 69*	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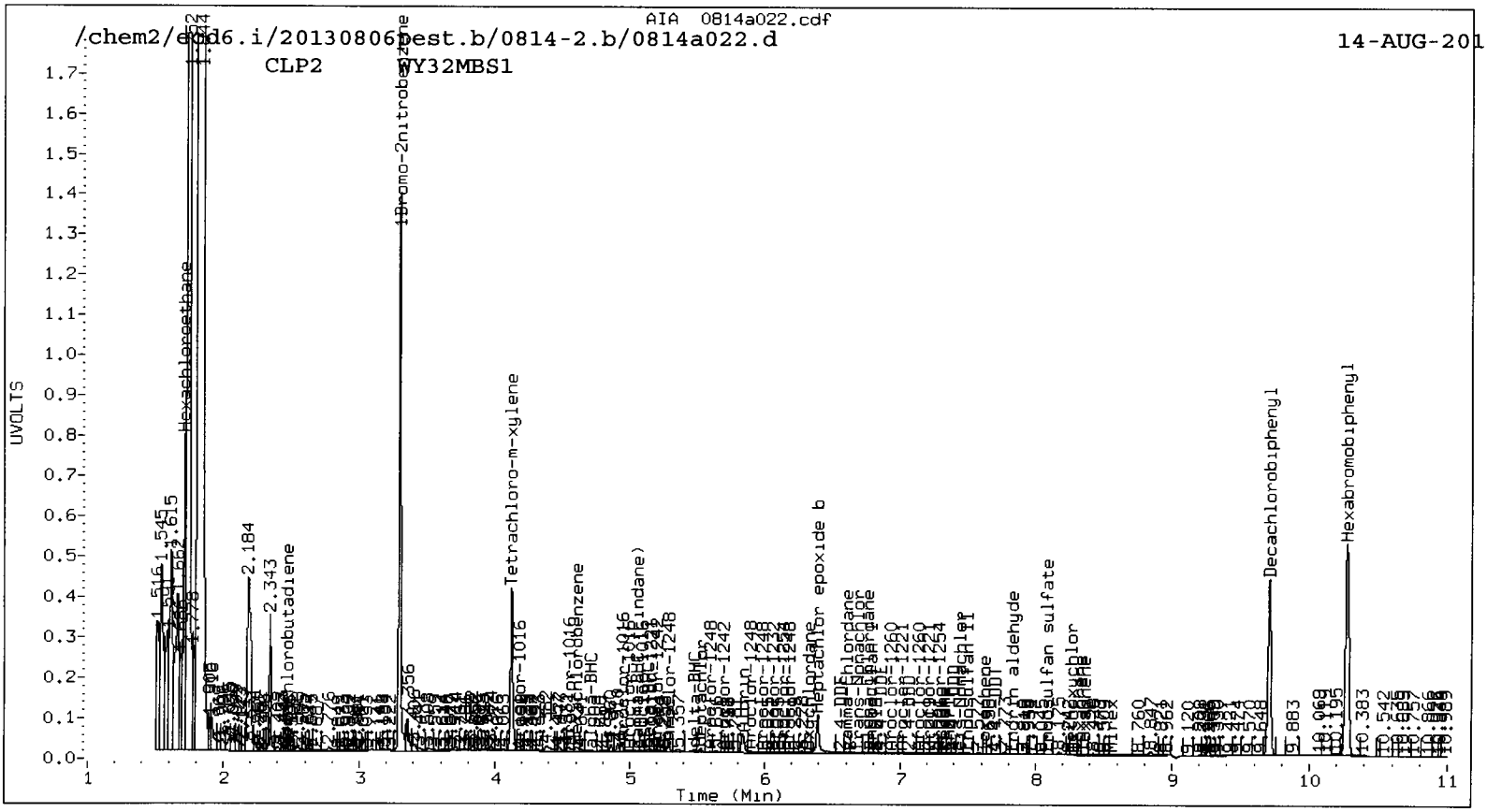
14-AUG-201
TFX-CLP WY32MBS1
UVOLTS
Time (Min)
1.568
1.662
2.168
2.466
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl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14-AUG-201
CLP2 WY32MBS1
UVOLTS
Time (Min)
Hexachloroethane
2.184
2.343
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YE 8/16/13

Data file 1: /chem2/ecd6.i/20130806pest.b/0814-1.b/0814a023.d ARI ID: WY32LCSS1
Data file 2: /chem2/ecd6.i/20130806pest.b/0814-2.b/0814a023.d Client ID: WY32LCSS1
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 14-AUG-2013 22:08
Compound Sublist: wpest Report Date: 08/15/2013 12:42
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.119	-0.004	6582865	3.294	-0.003	29287669	80.0000	80.0000	0.0	1Bromo-2nitrobenzen IS
4.272	-0.005	1859362	4.701	-0.006	8944198	14.5145	15.0989	3.9	alpha-BHC
4.632	-0.004	793101	5.132	-0.004	3836760	15.5730	16.9416	8.4	beta-BHC
4.801	-0.004	1837639	5.442	-0.005	9207442	17.1886	19.0219	10.1	delta-BHC
4.553	-0.005	1854673	5.057	-0.006	8499920	15.8526	16.3635	3.2	gamma-BHC (Lindane)
4.997	-0.005	1629529	5.519	-0.005	7750241	14.5036	15.7878	8.5	Heptachlor
5.289	-0.005	1622765	5.857	-0.005	7771105	14.4212	16.5598	13.8	Aldrin
5.861	-0.005	1762918	6.411	-0.005	7971249	17.3765	19.7873	13.0	Heptachlor epoxide b
6.238	-0.005	1722163	6.798	-0.004	7313265	17.9657	19.7950	9.7	Endosulfan I
6.459	-0.005	3567795	7.055	-0.006	15633752	35.4403	41.4170	15.6	Dieldrin N
6.164	-0.005	3234703	6.860	-0.005	14386934	42.2594	38.6179	9.0	4,4'-DDE
6.677	-0.005	3041385	7.344	-0.005	12276822	34.0421	32.0371	6.1	Endrin
6.884	-0.004	3138106	7.534	-0.005	12238499	34.0553	29.1322	15.6	Endosulfan II
6.720	-0.003	2903544	7.397	-0.004	12691450	32.9949	31.6968	4.0	4,4'-DDD N
7.648	-0.005	2775829	8.076	-0.005	11852078	34.8559	35.1515	0.8	Endosulfan sulfate
6.976	-0.004	2817456	7.684	-0.005	10548027	32.0679	29.0088	10.0	4,4'-DDT
7.400	-0.005	6489663	8.266	-0.008	21644519	157.1370	157.8880	0.5	Methoxychlor
7.902	-0.005	3490221	8.566	-0.004	13889820	33.7596	36.6660	8.3	Endrin ketone
7.259	-0.005	1580732	7.831	-0.005	6889141	20.6514	20.5345	0.6	Endrin aldehyde
5.981	-0.005	1818676	6.594	-0.004	8041293	17.0153	19.4371	13.3	gamma-Chlordane
6.105	-0.005	1731241	6.731	-0.004	7375262	16.9882	19.1456	11.9	alpha-Chlordane
2.300	-0.002	1523324	2.461	-0.003	5646936	10.8342	11.3674	4.8	Hexachlorobutadiene
4.129	-0.004	1261962	4.579	-0.005	8331040	12.5899	13.2925	5.4	Hexachlorobenzene
5.776	0.005	38169	6.280	-0.047	79650	0.4519	0.3438	59.8*	Oxychlordane
----			6.535	-0.041	104227	0.0000	0.4251	---	2,4-DDE
----			6.680	-0.003	55093	0.0000	0.1035	---	trans-Nonachlor
6.327	-0.007	44442	7.055	-0.006	15633752	0.7478	54.0280	194.5*	2,4-DDD
6.563	-0.008	36387	----			0.5258	0.0000	---	2,4-DDT
----			7.397	-0.010	12691450	0.0000	23.2303	---	cis-Nonachlor
7.590	0.010	37046	8.520	-0.037	177088	0.5114	0.6630	25.8	Mirex
8.898	-0.009	6677007	10.270	-0.009	20049791	80.0000	80.0000	0.0	Hexabromobiphenyl IS
1.768	-0.001	56981	1.690	-0.029	10879633	0.0000	0.0000	---	Hexachloroethane
----			----			0.0000	0.0000	---	Kepone
3.788	-0.004	1680810	4.120	-0.006	8315698	19.9857	19.4420	2.8	Tetrachloro-m-xylene
8.747	-0.006	2364913	9.708	-0.006	11670233	29.2674	34.6342	16.8	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	50.0	48.6	48.6	42-112
Decachlorobiphenyl	73.2	86.6	73.2	59-123
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	1361684.1	1281.5	1281.5~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	1282715.4	1160.4	1160.4~	0- 0
Endrin ketone	0.0	0.0	0.0~	0- 0
Endrin aldehyde	0.0	0.0	0.0~	0- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

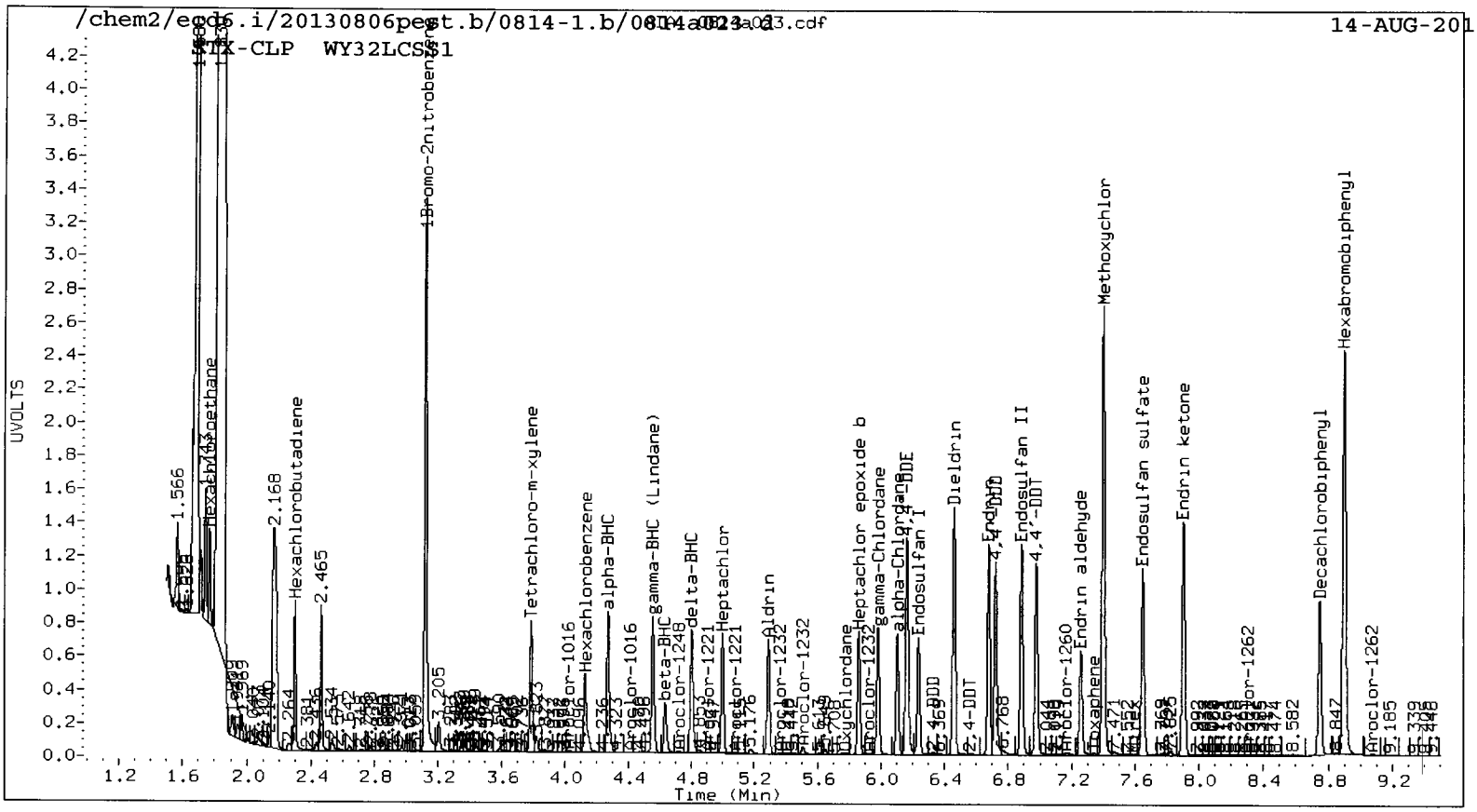
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	6582865	0.6
Hexabromobiphenyl	6145816	6677007	8.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	29287669	-9.8
Hexabromobiphenyl	16281238	20049791	23.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.976	0.036	2817456	678.4	1	7.281	-0.004	55303	3.9	
Toxaphene	2	---			0.000	2	7.617	0.006	549742	26.3	
Toxaphene	3	7.259	0.011	1580732	336.4	3	7.831	-0.009	6889141	302.7	
Toxaphene	4	7.342	-0.016	56065	22.7	4	8.266	-0.041	21644519	1332.3	
Toxaphene	5	7.590	0.018	37046	7.8	5	8.366	-0.020	351097	16.5	
Toxaphene	6	7.902	0.011	3490221	1298.2	N8	---			----	
Total STX-CLPAve (5 peaks): 468.688						Total CLP2Ave (5 peaks): 336.332				RPD = 33	
Corrected Ave (4 peaks): 261.320						Corrected Ave (4 peaks): 87.338				RPD = 100*	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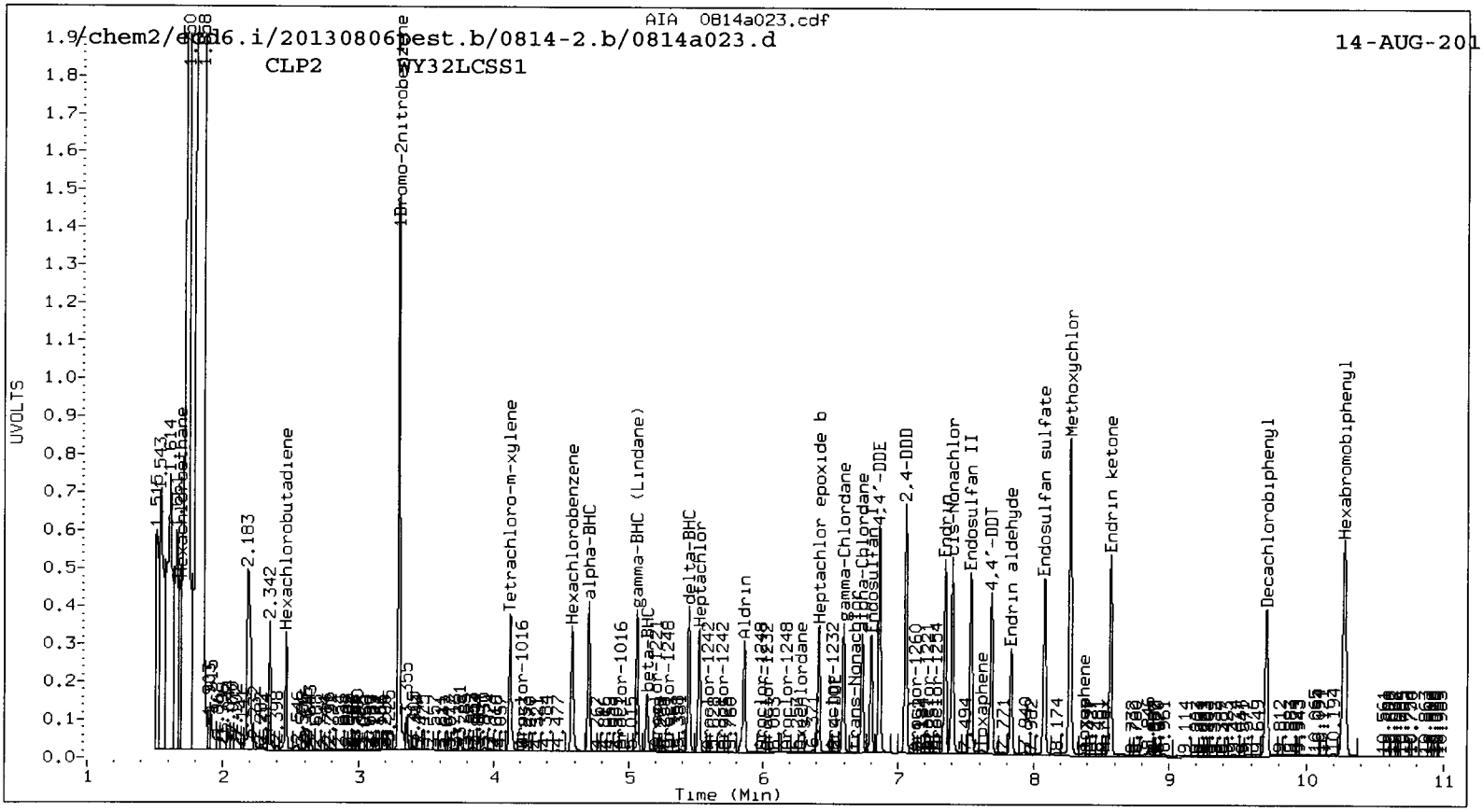
TX-CLP WY32LCSS1
UVOLTS
Time (Min)
1.566
2.168
2.465
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
2,4-DDD
Dieldrin
4,4'-DDT
Endrin
Endosulfan II
Methoxychlor
Endrin aldehyde
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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14-AUG-201
CLP2 WY32LCSS1
UVOLTS
Time (Min)
2.183
2.342
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
4,4'-DDE
2,4-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 8/16/13

Data file 1: /chem2/ecd6.i/20130806pest.b/0814-1.b/0814a024.d ARI ID: WY32A
Data file 2: /chem2/ecd6.i/20130806pest.b/0814-2.b/0814a024.d Client ID: UP-CB-B8-20130626-S
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 14-AUG-2013 22:25
Compound Sublist: wpest Report Date: 08/15/2013 12:42
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 5.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.117	-0.006	5488162	3.292	-0.006	17227250	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.259	-0.017	401343	4.692	-0.015	851561	3.7579	2.4439 Y	42.4*	alpha-BHC RPD, matrix
4.632	-0.004	135388	5.152	0.016	1804825	3.1887	13.5486 Y	123.8*	beta-BHC
4.790	-0.015	597852	5.448	0.002	2221694	6.7075	7.8031 Y	15.1	delta-BHC
4.559	0.001	368886	5.056	-0.006	1644761	3.7819	5.3831 Y	34.9	gamma-BHC (Lindane)
4.988	-0.014	761285	5.529	0.005	3243122	8.1273	11.2315 Y	32.1	Heptachlor
5.306	0.012	1012875	5.836	-0.026	7378666	10.7967	26.7313 Y	84.9*	Aldrin
5.878	0.012	2383747	6.404	-0.011	16013791	28.1825	67.5807 Y	82.3*	Heptachlor epoxide
6.245	0.002	594145	6.802	0.000	2043449	7.4345	9.4032 Y	23.4	Endosulfan I overlay coel, matrix interference
6.462	-0.002	18263525	7.061	0.000	17066912	217.6054	76.8669 Y	95.6*	Dieldrin
6.171	0.003	730084	6.862	-0.003	1329015	11.4406	6.0648 Y	61.4*	4,4'-DDE
6.650	-0.032	398670	7.371	0.022	1798960	5.2574	9.2186 Y	54.7*	Endrin
6.889	0.002	64787	7.542	0.003	3391623	0.8284	15.8535	180.1*	Endosulfan II
6.725	0.002	1740436	7.404	0.003	1751145	23.3016	8.5882 Y	92.3*	4,4'-DDD
7.675	0.021	254211	8.049	-0.031	4494246	3.7609	26.1746 Y	149.7*	Endosulfan sulfate
6.968	-0.012	797615	7.705	0.016	1213898	10.6959	6.5556 Y	48.0*	4,4'-DDT
7.418	0.012	397749	8.264	-0.010	2286951	11.3468	32.7591	97.1*	Methoxychlor
7.906	-0.002	500053	8.589	0.018	2551349	5.6986	13.2254 Y	79.5*	Endrin ketone
7.233	-0.030	254058	7.832	-0.003	210627	3.9105	1.2328	104.1*	Endrin aldehyde
5.987	0.000	1268836	6.601	0.002	7115688	14.2390	29.2409 Y	69.0*	gamma-Chlordane
6.099	-0.010	2052250	6.759	0.023	1078867	24.1551	4.7613 Y	134.1*	alpha-Chlordane
2.298	-0.005	60031	2.471	0.007	291515	0.5121	0.9276	64.3*	Hexachlorobutadiene
4.127	-0.008	582557	4.563	-0.021	2521281	6.9711	6.8391 Y	1.9	Hexachlorobenzene RTS
5.809	0.038	167766	6.309	-0.018	3292088	2.3399	17.1341	151.9*	Oxychlordane matrix
5.838	-0.010	512876	6.567	-0.008	1420209	8.7163	9.8477	12.2	2,4-DDE
----			6.710	0.027	4347797	0.0000	16.0452	---	trans-Nonachlor
6.331	-0.003	2077695	7.096	0.036	1435744	41.1916	9.7433	123.5*	2,4-DDD
6.542	-0.029	689182	----			11.7325	0.0000	---	2,4-DDT
----			7.448	0.041	331836	0.0000	1.1927	---	cis-Nonachlor
7.578	-0.003	617963	8.544	-0.013	798956	10.0509	5.8742	52.5*	Mirex
8.948	0.041	5667249	10.302	0.023	10210246	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.763	-0.006	189544	1.737	0.018	64062516	0.0000	0.0000	---	Hexachloroethane
6.592	0.011	157349	7.350	0.014	941346	0.0000	0.0000	---	Kepone
3.794	0.002	798098	4.120	-0.007	5155788	11.3827	20.4930 NR	57.2*	Tetrachloro-m-xylene
8.776	0.023	3360099	9.743	0.029	1291937	48.9926	7.5290	146.7*	Decachlorobiphenyl

NR

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	28.5	51.2	28.5~	42-112
Decachlorobiphenyl	122.5	18.8	18.8~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

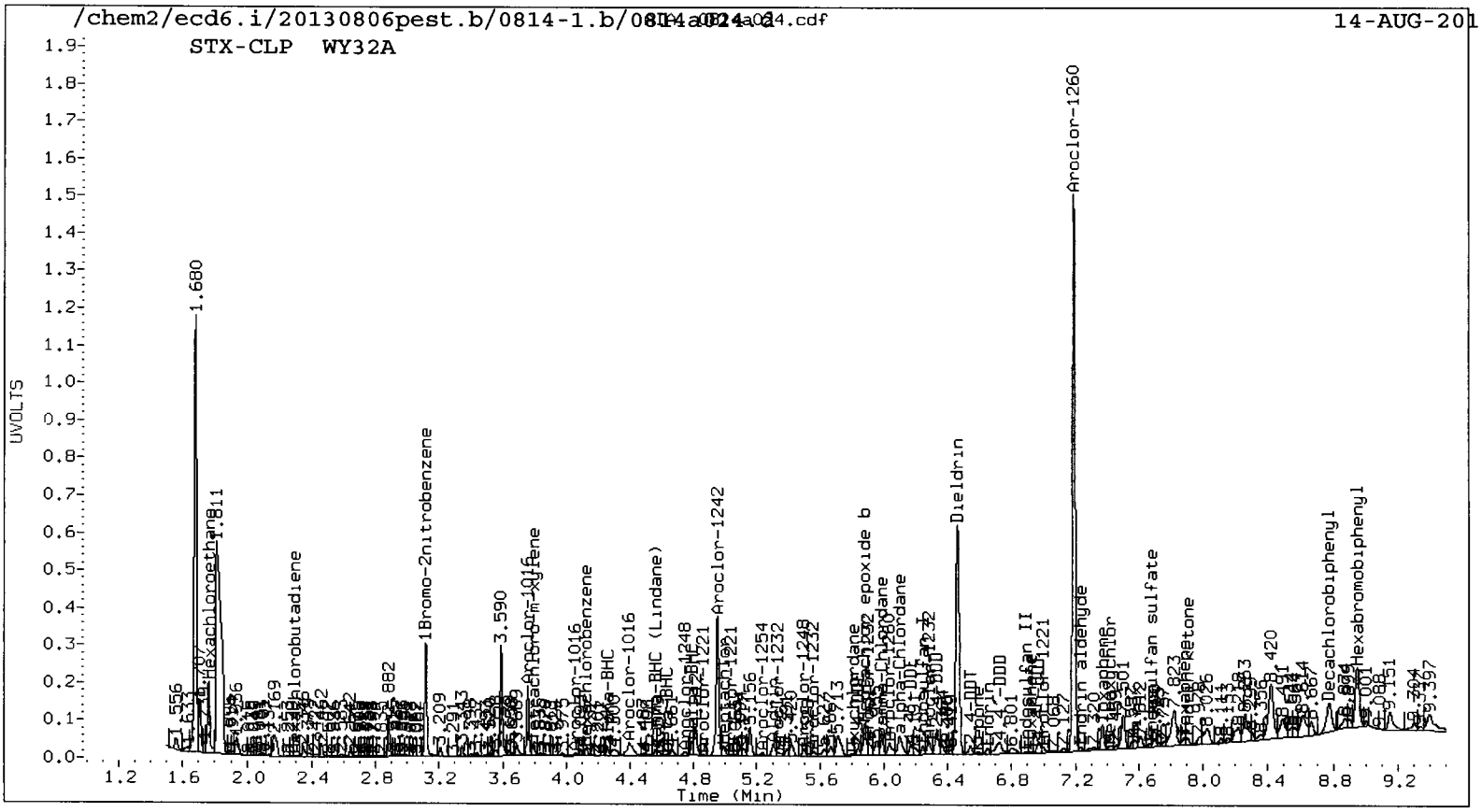
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	5488162	-16.1
Hexabromobiphenyl	6145816	5667249	-7.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	17227250	-47.0
Hexabromobiphenyl	16281238	10210246	-37.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.919	-0.021	99648	28.3	1	7.277	-0.007	20347249	2802.0
Toxaphene	2	6.994	0.003	493541	196.8	2	7.619	0.009	1776945	166.8
Toxaphene	3	7.233	-0.014	254058	63.7	3	7.832	-0.007	210627	18.2
Toxaphene	4	7.371	0.013	1816589	865.9	4	8.329	0.022	2628618	317.7
Toxaphene	5	7.578	0.005	617963	153.5	5	---			0.0
Toxaphene	6	7.882	-0.009	603946	264.7	NS	---			----
Total STX-CLPAve (6 peaks): 262.134						Total CLP2Ave (4 peaks): 826.171				RPD = 104*
Corrected Ave (5 peaks): 141.380						Corrected Ave (3 peaks): 167.552				RPD = 17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14-AUG-201
STX-CLP WY32A
UVOLTS
Time (Min)
1.680
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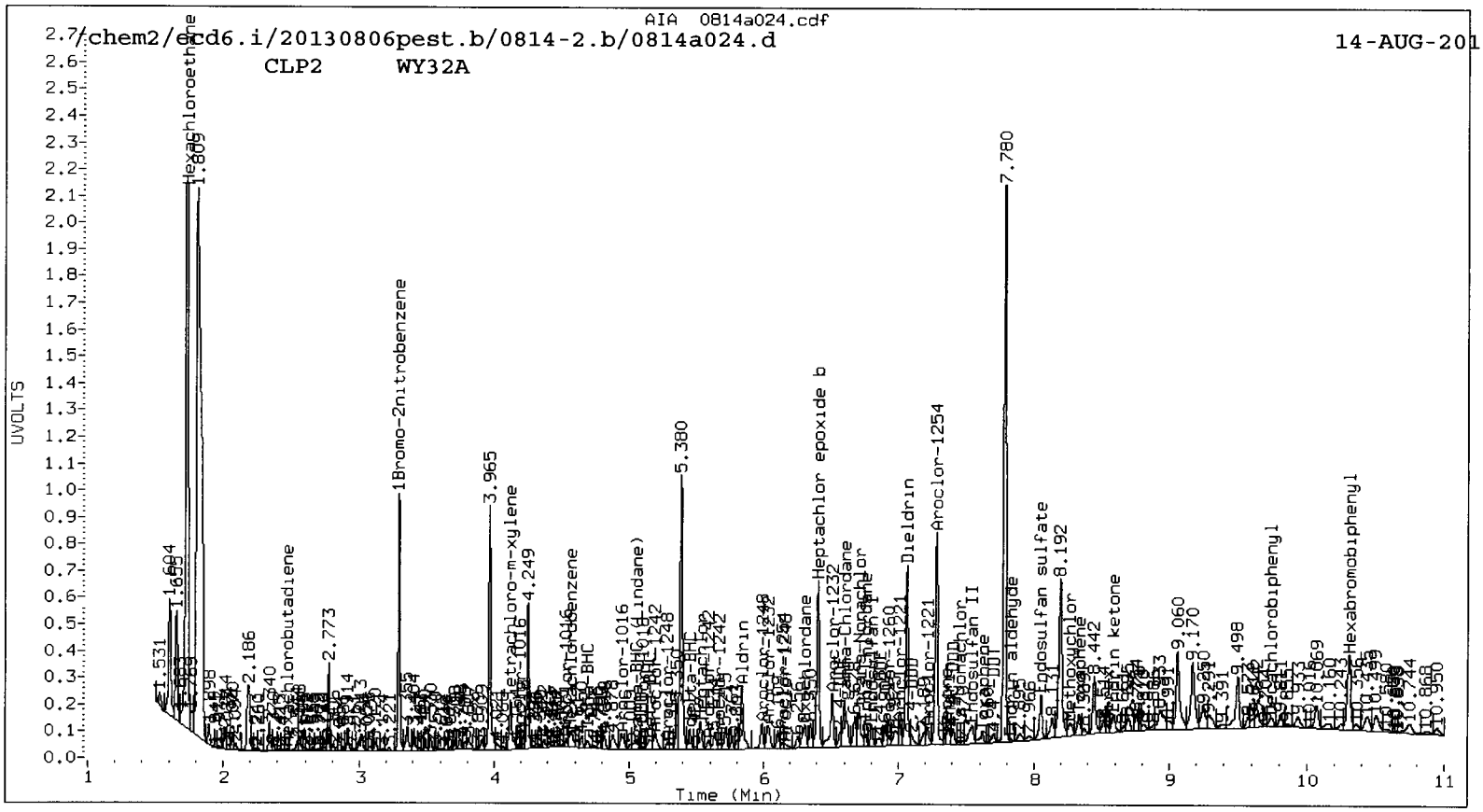
1Bromo-2nitrobenzene
3.590
Aroclor-1260
Dieldrin
Decachlorobiphenyl
Hexabromobiphenyl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CLP2 WY32A
UVOLTS
Time (Min)
Hexachloroethane
1.809
1Bromo-2nitrobenzene
3.965
5.380
7.780
Heptachlor epoxide b
Dieldrin
Aroclor-1254
8.192
9.060
9.170
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 8/16/13

Data file 1: /chem2/ecd6.i/20130806pest.b/0814-1.b/0814a025.d ARI ID: WY32B
Data file 2: /chem2/ecd6.i/20130806pest.b/0814-2.b/0814a025.d Client ID: UP-MHF-165-20130626
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 14-AUG-2013 22:43
Compound Sublist: wpest Report Date: 08/15/2013 12:42
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 5.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.118	-0.005	5758102	3.293	-0.004	13194377	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.261	-0.016	256102	4.699	-0.008	225181	~~2.2855~~	0.8438	92.1*	alpha-BHC
----			5.139	0.004	112455	~~0.0000~~	1.1022	---	beta-BHC
4.783	-0.022	11060774	5.448	0.002	626005	~~118.2771~~	~~2.8~~707	190.5*	delta-BHC
----			5.046	-0.016	286778	0.0000	~~1.2255~~	---	gamma-BHC (Lindane)
5.028	0.026	8821404	5.525	0.001	167224	~~89.7608~~	0.7561	196.7*	Heptachlor
----			5.836	-0.026	5388547	~~0.0000~~	~~25.4883~~	---	Aldrin
5.902	0.036	134515	6.402	-0.014	2038246	~~1.~~5158	11.2308	152.4*	Heptachlor epoxide b
6.246	0.003	63765	6.805	0.002	231476	0.7605	1.3907	58.6*	Endosulfan I
6.462	-0.002	184232	7.059	-0.002	355666	~~2.0922~~	2.0915	0.0	Dieldrin
6.169	0.000	74518	6.855	-0.010	257669	~~1.1130~~	1.5352	31.9	4,4'-DDE
6.702	0.019	168151	7.368	0.019	359333	~~2.0524~~	~~1.9974~~	2.7	Endrin
6.885	-0.003	132912	7.526	-0.013	963562	~~1.5729~~	4.8858	102.6*	Endosulfan II
6.752	0.029	9261	----			0.1148	0.0000	---	4,4'-DDD
7.665	0.012	85818	8.108	0.027	258016	1.1751	1.~~6301~~	32.4	Endosulfan sulfate
6.992	0.013	296472	7.656	-0.033	5560668	~~3.6797~~	32.5759	159.4*	4,4'-DDT
7.420	0.014	77939	8.278	0.005	444167	2.0579	6.9017	108.1*	Methoxychlor
7.940	0.032	44878	8.587	0.016	1000210	0.4734	5.6243	168.9*	Endrin ketone
7.311	0.047	132399	7.834	-0.002	279012	1.8862	1.7715	6.3	Endrin aldehyde
5.987	0.000	88396	6.601	0.002	857357	0.9455	4.6001	131.8*	gamma-Chlordane
6.094	-0.015	130545	6.736	0.000	98360	1.4645	0.5668	88.4*	alpha-Chlordane
2.283	-0.019	124070	2.447	-0.017	458979	1.0088	2.0509	68.1*	Hexachlorobutadiene
4.125	-0.008	408783	4.580	-0.004	972018	4.6623	3.4425	30.1	Hexachlorobenzene
5.807	0.035	25419	6.311	-0.015	727219	0.3281	4.9418	175.1*	Oxychlordane
5.878	0.030	363957	6.564	-0.011	624085	5.7249	5.6500	1.3	2,4-DDE
6.056	-0.037	195926	6.678	-0.005	719777	1.9928	2.8814	36.5	trans-Nonachlor
6.365	0.030	159836	7.093	0.032	111050	2.9329	0.8175	112.8*	2,4-DDD
6.537	-0.034	88978	----			1.4020	0.0000	---	2,4-DDT
----			7.413	0.006	341979	0.0000	1.3334	---	cis-Nonachlor
7.601	0.021	372412	8.535	-0.022	475856	~~5.6062~~	3.7952	38.5	Mirex
8.925	0.018	6123081	10.288	0.009	9412375	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.766	-0.003	71336	1.741	0.023	81064252	0.0000	0.0000	---	Hexachloroethane
6.590	0.009	86171	7.346	0.010	334814	0.0000	0.0000	---	Kepone
3.788	-0.004	472923	4.120	-0.007	1539917	6.4288	7.9916	21.7	Tetrachloro-m-xylene
8.760	0.008	1997590	9.727	0.013	737925	26.9580	4.6650	141.0*	Decachlorobiphenyl

MR

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	16.1	20.0	16.1~	42-112
Decachlorobiphenyl	67.4	11.7	11.7~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

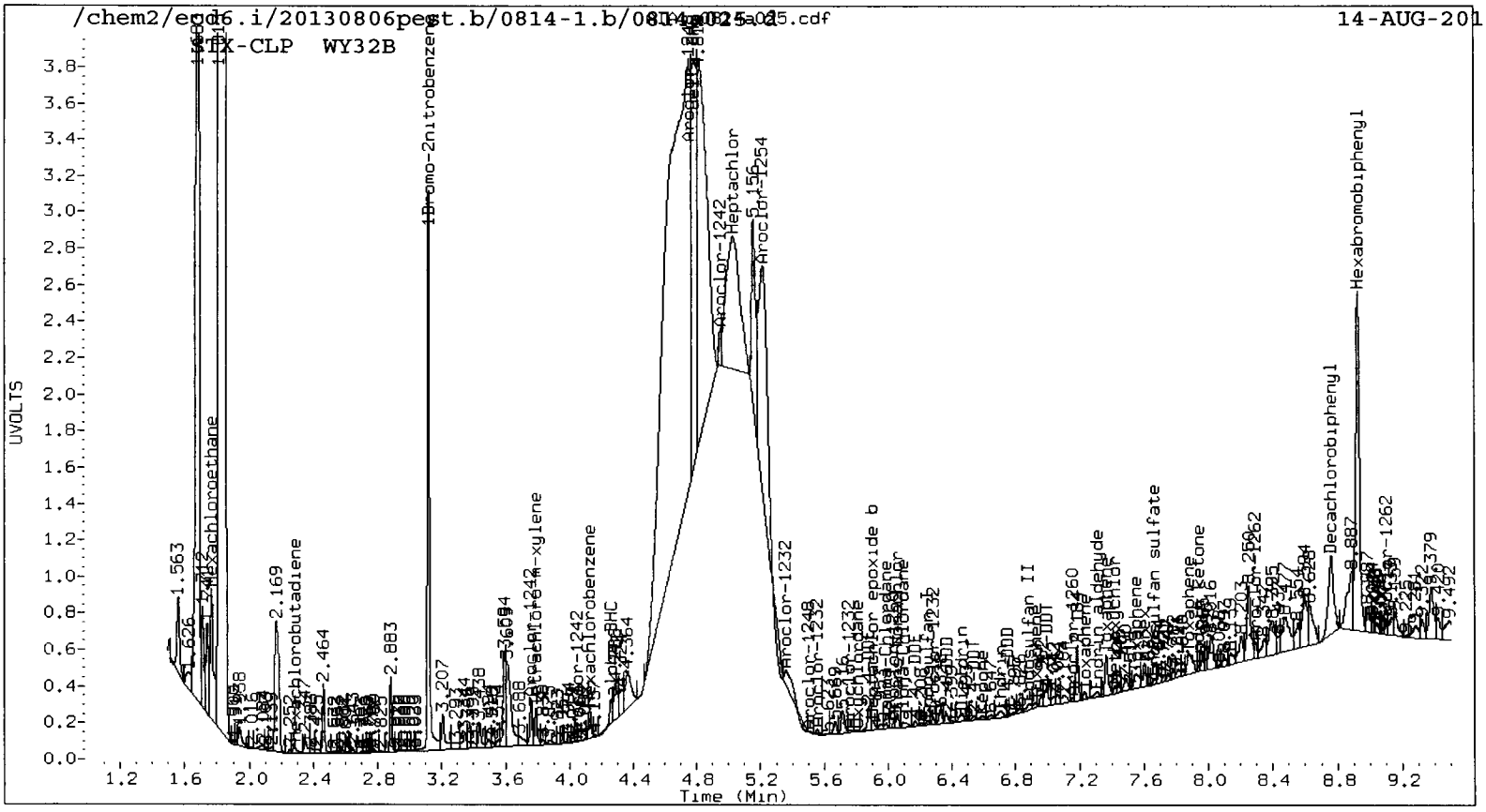
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	5758102	-12.0
Hexabromobiphenyl	6145816	6123081	-0.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	13194377	-59.4 <-
Hexabromobiphenyl	16281238	9412375	-42.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.924	-0.016	80754	21.2	1	7.279	-0.006	623779	93.2
Toxaphene	2	6.992	0.002	296472	109.4	2	7.656	0.046	5560668	566.1
Toxaphene	3	7.230	-0.017	122914	28.5	3	7.834	-0.006	279012	26.1
Toxaphene	4	7.365	0.007	636659	280.9	4	8.326	0.019	817002	107.1
Toxaphene	5	7.548	-0.024	389369	89.5	5	---			0.0
Toxaphene	6	7.878	-0.014	540408	219.2	NS	---			----
Total STX-CLPAve (6 peaks): 124.786						Total CLP2Ave (4 peaks): 198.122				RPD = 45*
Corrected Ave (4 peaks): 62.162						Corrected Ave (3 peaks): 75.473				RPD = 19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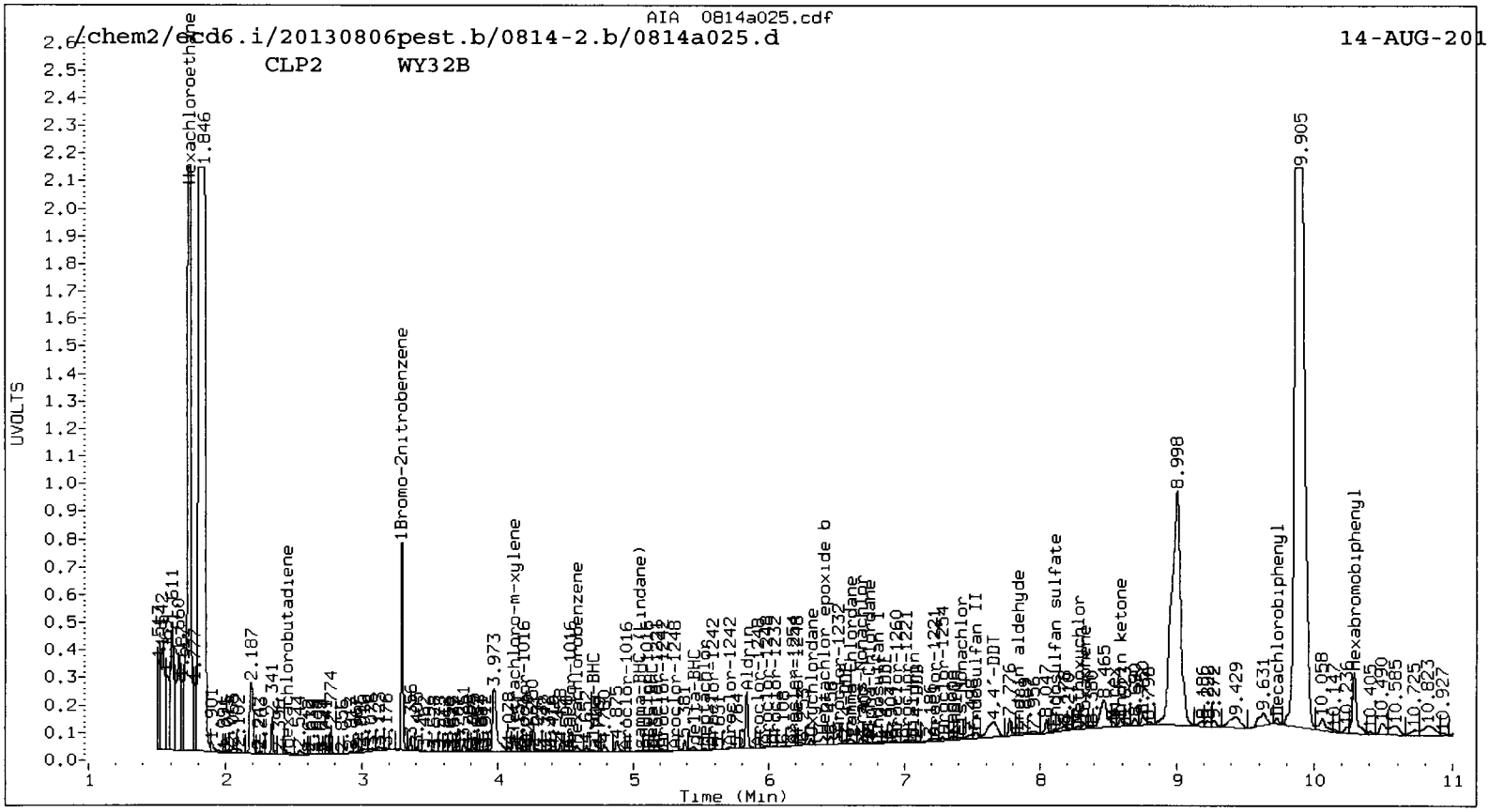
TX-CLP WY32B
UVOLTS
Time (Min)
1.563
2.169
2.464
2.883
3.207
1Bromo-2nitrobenzene
Hexachloroethane
Hexachlorobutadiene
Aroclor-1242
Heptachlor
Aroclor-1254
Aroclor-1232
Decachlorobiphenyl
Hexabromobiphenyl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14-AUG-201
CLP2 WY32B
UVOLTS
Time (Min)
Hexachloroethane
1.846
2.187
1Bromo-2nitrobenzene
3.973
8.998
9.905
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 8/16/13

Data file 1: /chem2/ecd6.i/20130806pest.b/0814-1.b/0814a026.d ARI ID: WY32C
Data file 2: /chem2/ecd6.i/20130806pest.b/0814-2.b/0814a026.d Client ID: UP-CB-A6-20130626-S
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 14-AUG-2013 23:01
Compound Sublist: wpest Report Date: 08/15/2013 12:42
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 5.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.117	-0.007	5308386	3.291	-0.006	15948319	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.259	-0.017	330168	4.690	-0.016	382376	~~3.1961~~	~~1.1854~~	91.8*	alpha-BHC
4.662	0.026	702537	5.153	0.018	995566	17.1067	8.0729 Y	71.8*	beta-BHC
4.790	-0.015	737168	5.450	0.004	1867347	8.5506	7.0845 Y	18.8	delta-BHC
4.559	0.001	351023	5.057	-0.006	1371156	3.7207	4.8475 Y	26.3	gamma-BHC (Lindane)
4.989	-0.013	602475	5.531	0.007	2371130	6.6497	8.8702 Y	28.6	Heptachlor
5.308	0.015	857225	5.839	-0.023	8235357	9.4470	32.2274 Y	109.3*	Aldrin
5.905	0.039	945764	6.404	-0.012	2701897	11.5602	12.3168 Y	6.3	Heptachlor epoxide b
6.214	-0.029	125753	6.811	0.009	814539	~~1.6268~~	~~4.0488~~	85.3*	Endosulfan I
6.470	0.006	2304960	7.063	0.003	2896543	28.3931	14.0918 Y	67.3*	Dieldrin average
6.177	0.008	614489	6.866	0.001	477774	~~9.9553~~	~~2.3551~~	123.5*	4,4'-DDE
6.659	-0.024	119727	----			~~1.3933~~	~~0.0000~~	---	Endrin
6.907	0.020	551234	7.539	0.000	1689603	6.2197	9.3167 Y	39.9	Endosulfan II
----			7.409	0.008	807279	~~0.0000~~	~~4.6705~~	---	4,4'-DDD
----			8.056	-0.025	3335002	~~0.0000~~	~~22.9127~~	---	Endosulfan sulfate
7.004	0.024	638461	7.711	0.022	260367	~~7.5555~~	~~1.6587~~	128.0*	4,4'-DDT
7.441	0.035	221313	8.278	0.005	1595919	~~5.5716~~	~~26.9676~~	131.5*	Methoxychlor
7.915	0.008	552521	8.547	-0.024	1731650	5.5566	10.5891 Y	62.3*	Endrin ketone
7.289	0.026	130712	7.845	0.010	273608	~~1.7755~~	~~1.8892~~	6.2	Endrin aldehyde
5.956	-0.030	422834	6.604	0.005	2750209	4.9058	12.2079 Y	85.3*	gamma-Chlordane
----			----			~~0.0000~~	~~0.0000~~	---	alpha-Chlordane
2.296	-0.006	54842	2.466	0.002	204680	~~0.4837~~	~~0.7566~~	44.0*	Hexachlorobutadiene
4.125	-0.007	805234	4.566	-0.018	2238709	9.9621	6.5596 Y	41.2*	Hexachlorobenzene RT RPD's
5.809	0.037	185518	6.310	-0.017	1492005	~~2.2834~~	~~8.3880~~	114.4*	Oxychlordane
5.881	0.033	1291496	6.572	-0.003	624352	19.3695	4.6764	122.2*	2,4-DDE
6.112	0.018	1112459	6.715	0.032	4030345	10.7885	17.5459	47.7*	trans-Nonachlor
6.337	0.003	1969696	7.016	-0.045	858345	34.4614	6.8715	133.5*	2,4-DDD
6.548	-0.022	373723	7.378	0.031	897273	5.6145	6.7599	18.5	2,4-DDT
6.728	0.020	854702	----			~~7.5395~~	~~0.0000~~	---	cis-Nonachlor
7.624	0.044	2279059	8.597	0.040	4004044	~~32.7119~~	~~34.7279~~	6.0	Mirex
8.976	0.069	6421935	10.323	0.044	8655237	80.0000	80.0000 IS	0.0	Hexabromobiphenyl M
1.758	-0.012	131678	1.748	0.030	108983119	~~0.0000~~	~~0.0000~~	---	Hexachloroethane
6.600	0.019	274590	7.312	-0.025	732432	~~0.0000~~	~~0.0000~~	---	Kepone
3.793	0.001	877402	4.120	-0.007	2213225	12.9376	9.5025	30.6	Tetrachloro-m-xylene
8.796	0.043	5678912	9.757	0.043	764646	73.0718	5.2567	173.2*	Decachlorobiphenyl

VR

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	32.3	23.8	23.8~	42-112
Decachlorobiphenyl	182.7	13.1	13.1~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

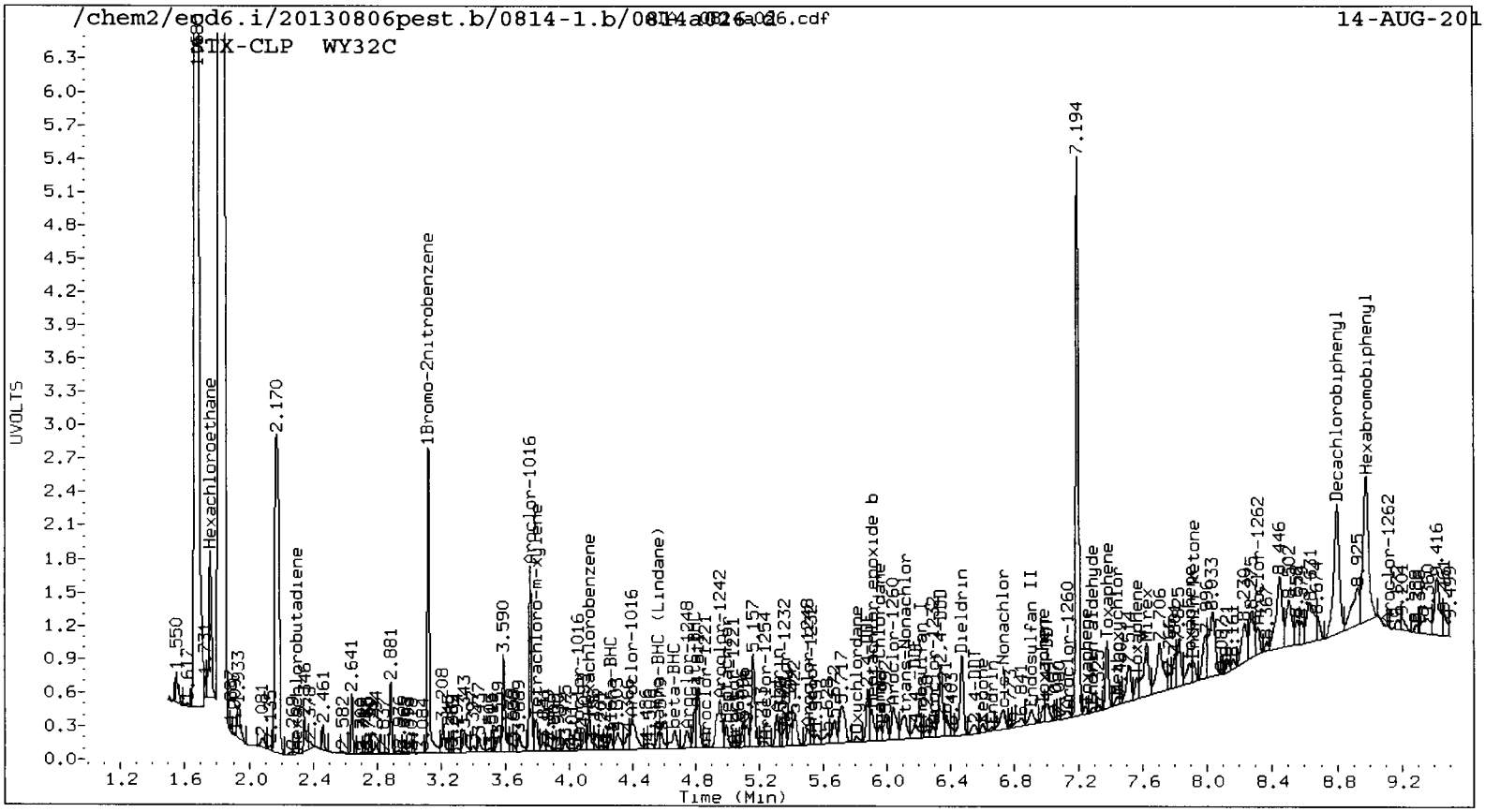
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	5308386	-18.9
Hexabromobiphenyl	6145816	6421935	4.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	15948319	-50.9 <-
Hexabromobiphenyl	16281238	8655237	-46.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.907	-0.033	551234	138.0	1	7.312	0.027	732432	119.0
Toxaphene	2	6.979	-0.012	396281	139.5	2	7.625	0.015	1356937	150.2
Toxaphene	3	7.245	-0.002	202674	44.8	3	7.845	0.006	273608	27.8
Toxaphene	4	7.378	0.021	1618814	681.0	4	8.335	0.028	2692920	384.0
Toxaphene	5	7.564	-0.009	503038	110.2	5	---			0.0
Toxaphene	6	7.892	0.001	670870	259.4	NS	---			----
Total STX-CLPAve (6 peaks): 228.823						Total CLP2Ave (4 peaks): 170.257				RPD = 29
Corrected Ave (5 peaks): 138.397						Corrected Ave (3 peaks): 99.016				RPD = 33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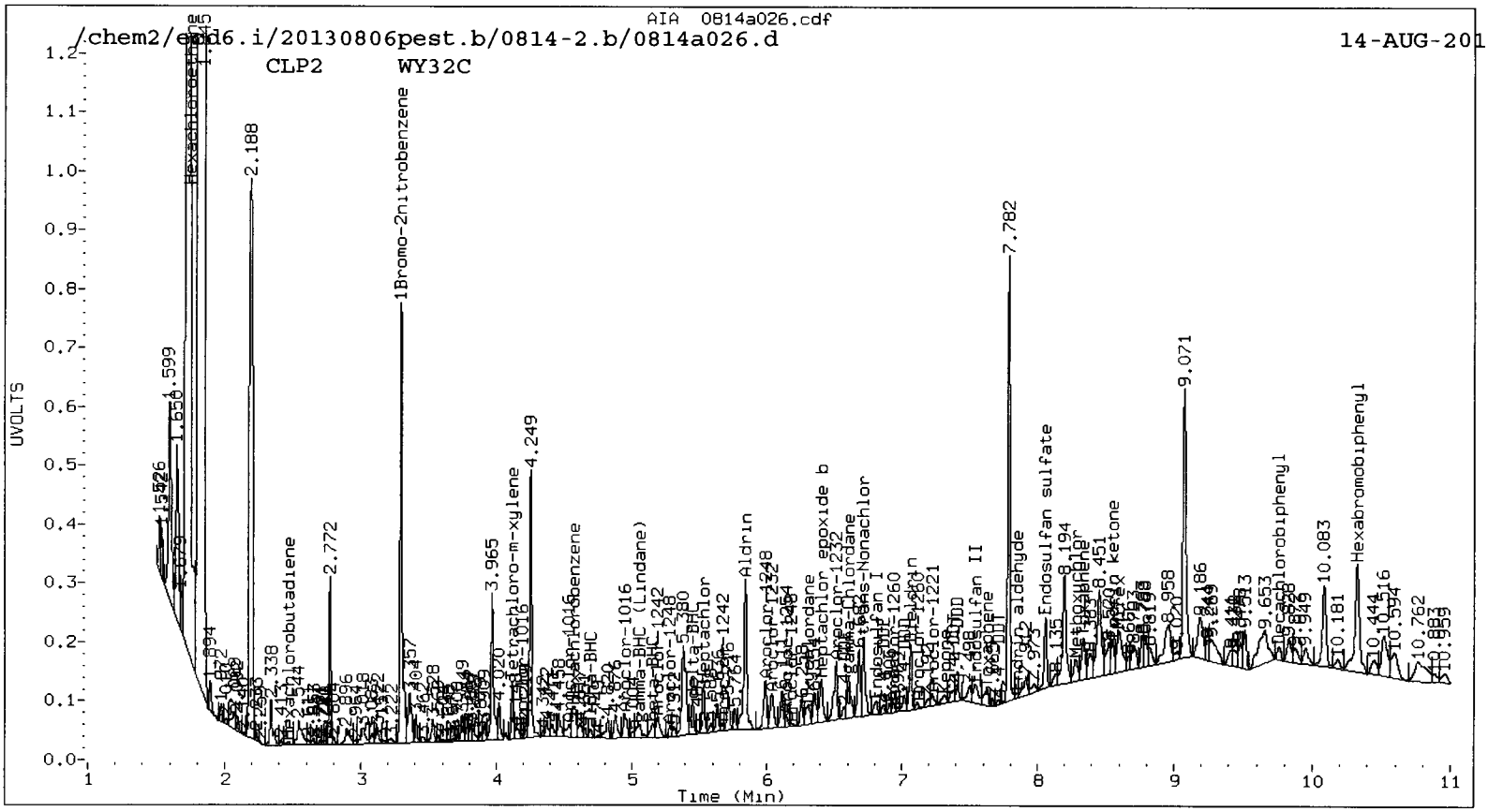
TX-CLP WY32C
UVOLTS
Time (Min)
Hexachloroethane
2.170
1Bromo-2nitrobenzene
7.194
Decachlorobiphenyl
Hexabromobiphenyl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14-AUG-201
CLP2 WY32C
UVOLTS
Time (Min)
Hexachloroethane
2.188
1Bromo-2nitrobenzene
4.249
7.782
9.071
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

8/26/13

Data file 1: /chem2/ecd6.i/20130806pest.b/0814-1.b/0814a027.d ARI ID: WY32CMS
Data file 2: /chem2/ecd6.i/20130806pest.b/0814-2.b/0814a027.d Client ID: UP-CB-A6-201306 MS
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 14-AUG-2013 23:19
Compound Sublist: wpest Report Date: 08/16/2013 10:52
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 5.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.117	-0.007	5015507	3.291	-0.006	14324778	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.265	-0.012	506600	4.699	-0.007	1033782	5.1904	3.5680	37.0	alpha-BHC
4.632	-0.003	244394	5.151	0.015	1095144	6.2985	9.8869	44.3*	beta-BHC
4.810	0.005	2662103	5.448	0.001	2164866	32.6817	9.1441	112.6*	delta-BHC
4.557	-0.001	492897	5.058	-0.004	2123096	5.5295	8.3566	40.7*	gamma-BHC (Lindane)
4.993	-0.009	1162457	5.531	0.007	2069315	13.5797	8.6185	44.7*	Heptachlor
5.307	0.013	1768945	5.838	-0.024	7324205	20.6329	31.9103	42.9*	Aldrin
5.879	0.013	1774857	6.405	-0.011	2752811	22.9612	13.9712	48.7*	Heptachlor epoxide b
6.248	0.005	434767	6.808	0.005	1035724	5.9529	5.7317	3.8	Endosulfan I
6.470	0.006	2319808	7.064	0.003	3236147	30.2447	17.5283	53.2*	Dieldrin
6.176	0.008	1041990	6.868	0.003	1257621	17.8670	6.9019	88.5*	4,4'-DDE
6.690	0.008	498929	----			4.5153	0.0000	---	Endrin
6.899	0.011	936701	7.542	0.003	1969293	8.2189	10.5165	24.5	Endosulfan II
6.733	0.010	995079	7.409	0.008	1489077	9.1427	8.3433	9.1	4,4'-DDD
7.662	0.009	645098	8.056	-0.025	3532139	6.5495	23.5020	112.8*	Endosulfan sulfate
6.998	0.018	1319342	7.699	0.010	518089	12.1414	3.1965	116.6*	4,4'-DDT
7.423	0.018	1139030	8.280	0.007	1979198	22.2992	32.3898	36.9	Methoxychlor
7.915	0.007	1077954	8.550	-0.021	1203912	8.4303	7.1298	16.7	Endrin ketone
7.276	0.012	226740	7.841	0.006	198352	2.3951	1.3264	57.4*	Endrin aldehyde
5.991	0.004	850535	6.603	0.004	3299609	10.4442	16.3066	43.8*	gamma-Chlordane
6.114	0.004	1202199	6.731	-0.004	991162	15.4834	5.2606	98.6*	alpha-Chlordane N
2.297	-0.005	327747	2.459	-0.005	1073352	3.0595	4.4176	36.3	Hexachlorobutadiene
4.127	-0.006	610181	4.578	-0.006	2028152	7.9898	6.6161	18.8	Hexachlorobenzene
5.808	0.037	200456	6.311	-0.015	1363537	~~1.9187~~	~~8.5~~346	126.6*	Oxychlordane
----			6.571	-0.004	540588	0.~~0000~~	4.5079	---	2,4-DDE
----			6.715	0.032	3044497	0.0000	12.8361	---	trans-Nonachlor
6.336	0.002	1770166	7.110	0.050	209732	24.0841	1.6261	174.7*	2,4-DDD
6.548	-0.023	238139	7.312	-0.035	999834	2.7821	7.2950	89.6*	2,4-DDT
----			----			~~0.0000~~	0.0000	---	cis-Nonachlor
7.563	-0.018	605870	8.582	0.025	3224122	~~6.7626~~	~~27.0818~~	120.1*	Mirex
8.972	0.065	8258163	10.320	0.041	8937019	80.0000	80.0000	0.0	Hexabromobiphenyl
1.758	-0.012	110697	1.748	0.030	113099901	~~0.0000~~	~~0.0000~~	---	Hexachloroethane
6.599	0.018	298680	7.355	0.018	1696459	~~0.0000~~	0.0000	---	Kepone
3.795	0.003	795623	4.120	-0.007	1831417	12.4168	8.7544	34.6	Tetrachloro-m-xylene
8.792	0.040	6368663	9.756	0.042	855291	63.7259	5.6945	167.2*	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	31.0	21.9	21.9~	42-112
Decachlorobiphenyl	159.3	14.2	14.2~	59-123
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	903050.6	0.0	0.0~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	2428281.0	127.9	127.9~	0- 0
Endrin ketone	0.0	0.0	0.0~	0- 0
Endrin aldehyde	0.0	0.0	0.0~	0- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

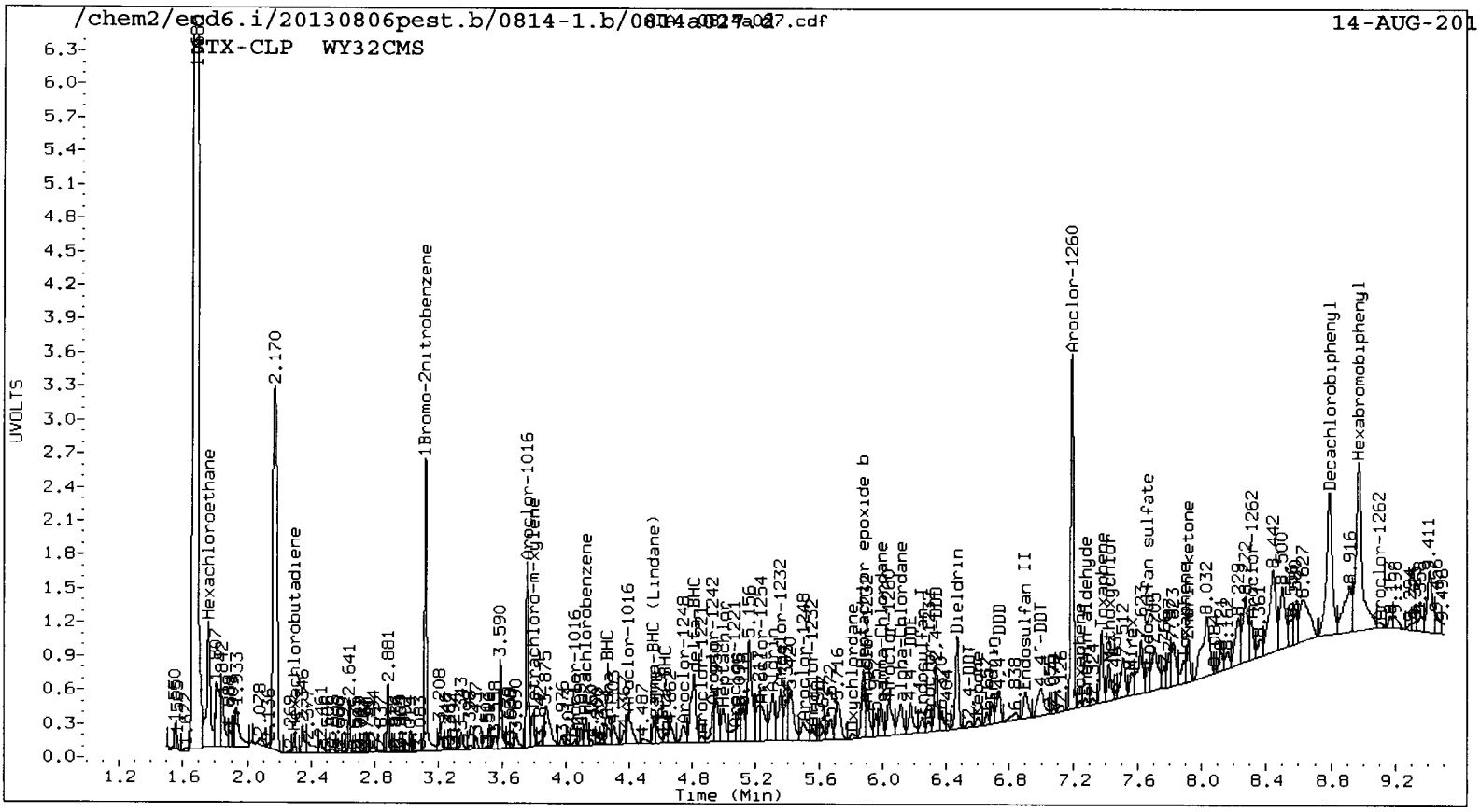
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	5015507	-23.4
Hexabromobiphenyl	6145816	8258163	34.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	14324778	-55.9 <-
Hexabromobiphenyl	16281238	8937019	-45.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.899	-0.041	936701	182.4	1	7.312	0.027	999834	157.3	
Toxaphene	2	6.998	0.007	1319342	361.1	2	7.624	0.014	1248213	133.8	
Toxaphene	3	7.241	-0.006	150321	25.9	3	7.841	0.002	198352	19.6	
Toxaphene	4	7.377	0.020	1754130	573.8	4	8.280	-0.027	1979198	273.3	
Toxaphene	5	7.563	-0.010	605870	103.2	5	8.335	-0.011	1732117	183.1	
Toxaphene	6	7.889	-0.003	724223	217.8	NS	---			----	
Total STX-CLPAve (6 peaks): 244.027						Total CLP2Ave (5 peaks): 153.412				RPD = 46*	
Corrected Ave (5 peaks): 178.071						Corrected Ave (4 peaks): 123.436				RPD = 36	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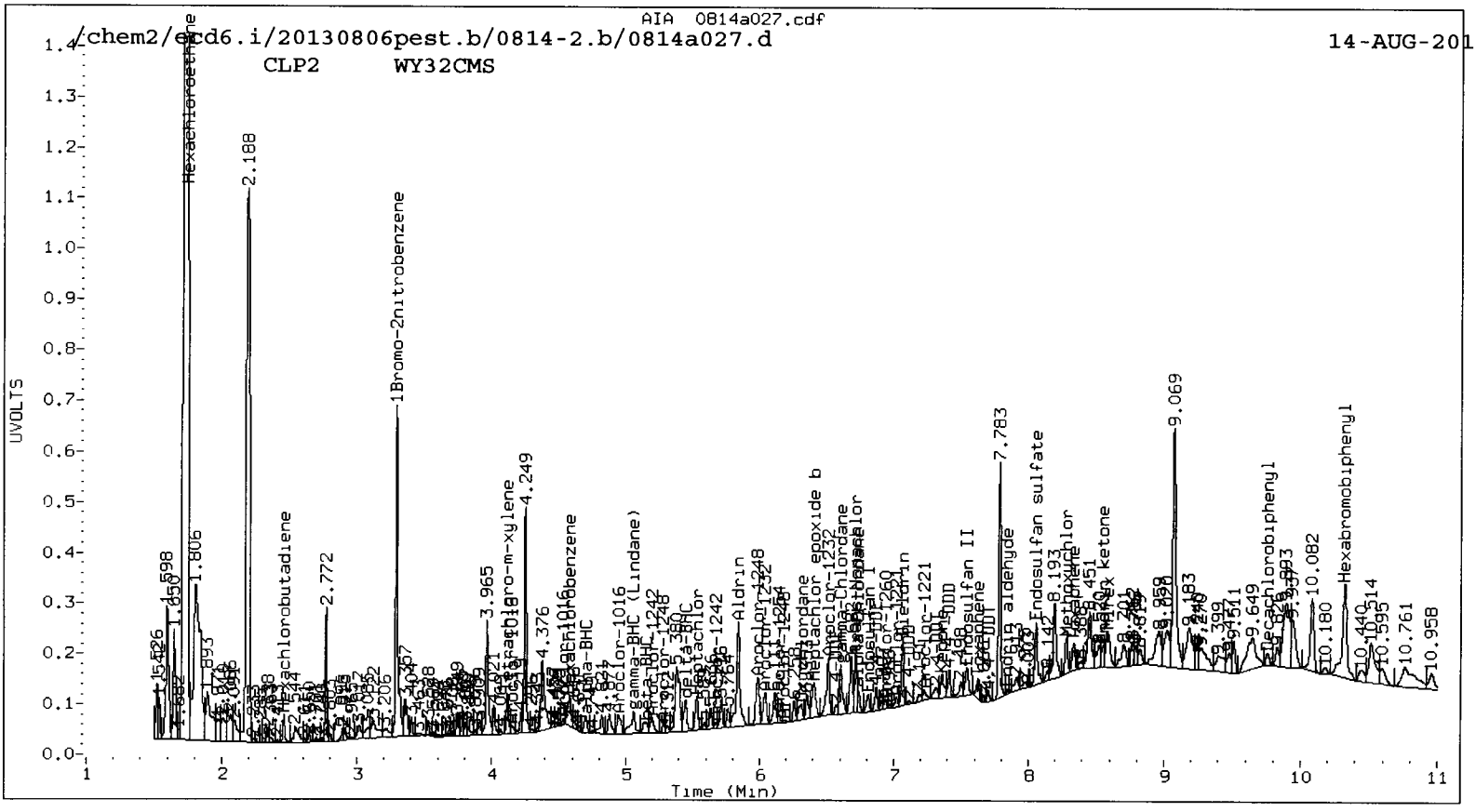
TX-CLP WY32CMS
UVOLTS
Time (Min)
Hexachloroethane
2.170
Hexachlorobutadiene
1Bromo-2nitrobenzene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
Hexabromobiphenyl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14-AUG-201
CLP2 WY32CMS
UVOLTS
Time (Min)
Hexachloroethane
2.188
Hexachlorobutadiene
1Bromo-2nitrobenzene
4.249
Aroclor-1016
Aroclor-1260
7.783
9.069
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 8/16/13

Data file 1: /chem2/ecd6.i/20130806pest.b/0814-1.b/0814a028.d ARI ID: WY32CMSD
Data file 2: /chem2/ecd6.i/20130806pest.b/0814-2.b/0814a028.d Client ID: UP-CB-A6-201306 MSD
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 14-AUG-2013 23:37
Compound Sublist: wpest Report Date: 08/15/2013 12:42
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 5.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.116	-0.007	4952143	3.291	-0.006	14856773	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.262	-0.015	635517	4.698	-0.008	1378343	6.5946	4.5869	35.9	alpha-BHC
4.632	-0.004	250244	5.134	-0.002	479894	6.5317	4.1773	44.0*	beta-BHC
4.792	-0.014	827634	5.447	0.001	2278457	10.2906	9.2793	10.3	delta-BHC
4.556	-0.002	488621	5.057	-0.005	1818923	5.5517	6.9030	21.7	gamma-BHC (Lindane)
4.991	-0.011	976489	5.531	0.007	2427195	11.5532	9.7470	17.0	Heptachlor
5.307	0.013	1415769	5.837	-0.025	7594492	16.7248	31.9031	62.4*	Aldrin
5.879	0.012	1869580	6.404	-0.011	2975425	24.4961	14.5603	50.9*	Heptachlor epoxide b
6.247	0.004	231309	6.808	0.006	1098152	3.2076	5.8596	58.5*	Endosulfan I
6.470	0.005	2565848	7.063	0.002	3452222	33.8805	18.0291	61.1*	Dieldrin
6.176	0.008	736958	6.868	0.003	1205475	12.7983	6.3788	66.9*	4,4'-DDE
6.689	0.007	502092	7.316	-0.033	1135401	5.1547	7.2373	33.6	Endrin
6.900	0.013	1059720	7.542	0.003	3219910	10.5483	18.7218	55.8*	Endosulfan II
6.733	0.010	1101661	7.408	0.007	1481268	11.4826	9.0364	23.8	4,4'-DDD
7.662	0.008	479891	8.083	0.002	265139	5.5271	1.9208	96.8*	Endosulfan sulfate
7.001	0.022	1433538	7.700	0.011	461765	14.9657	3.1020	131.3*	4,4'-DDT
7.407	0.002	2744455	8.280	0.007	2682423	60.9518	47.7956	24.2	Methoxychlor
7.916	0.009	917544	8.547	-0.023	2334577	8.1404	15.0534	59.6*	Endrin ketone
7.275	0.011	147472	7.883	0.048	545554	1.7672	3.9721	76.8*	Endrin aldehyde
5.956	-0.031	375403	6.603	0.004	3016102	4.6688	14.3718	101.9*	gamma-Chlordane
6.114	0.004	978125	6.733	-0.003	779293	12.7587	3.9880	104.7*	alpha-Chlordane N
2.297	-0.005	347494	2.459	-0.005	1137046	3.2853	4.5122	31.5	Hexachlorobutadiene
4.127	-0.006	669645	4.578	-0.006	3050528	8.8806	9.5949	7.7	Hexachlorobenzene
5.808	0.037	168296	6.310	-0.016	1562419	1.8274	9.4293	135.1*	Oxychlordane
----			6.571	-0.004	547627	0.0000	4.4031	---	2,4-DDE
----			6.714	0.031	3356053	0.0000	15.4060	---	trans-Nonachlor
6.336	0.002	1784262	7.110	0.049	342734	27.5391	2.8932	162.0*	2,4-DDD
6.549	-0.022	239813	7.377	0.030	407934	3.1783	3.2406	1.9	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.562	-0.018	464346	8.581	0.024	3299317	5.8796	30.1740	134.8*	Mirex
8.974	0.067	7279610	10.321	0.042	8208249	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.759	-0.011	165280	1.748	0.030	121255202	0.0000	0.0000	---	Hexachloroethane
6.601	0.020	285519	7.354	0.018	1186568	0.0000	0.0000	---	Kepone
3.794	0.002	868624	4.119	-0.007	1840914	13.7295	8.4847	47.2*	Tetrachloro-m-xylene
8.792	0.039	7090208	9.759	0.045	10044111	80.4825	7.2811	166.8*	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	34.3	21.2	21.2~	42-112
Decachlorobiphenyl	201.2	18.2	18.2~	59-123
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	1030936.7	289.5	289.5~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	2993133.6	124.1	124.1~	0- 0
Endrin ketone	0.0	0.0	0.0~	0- 0
Endrin aldehyde	0.0	0.0	0.0~	0- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	4952143	-24.3
Hexabromobiphenyl	6145816	7279610	18.4

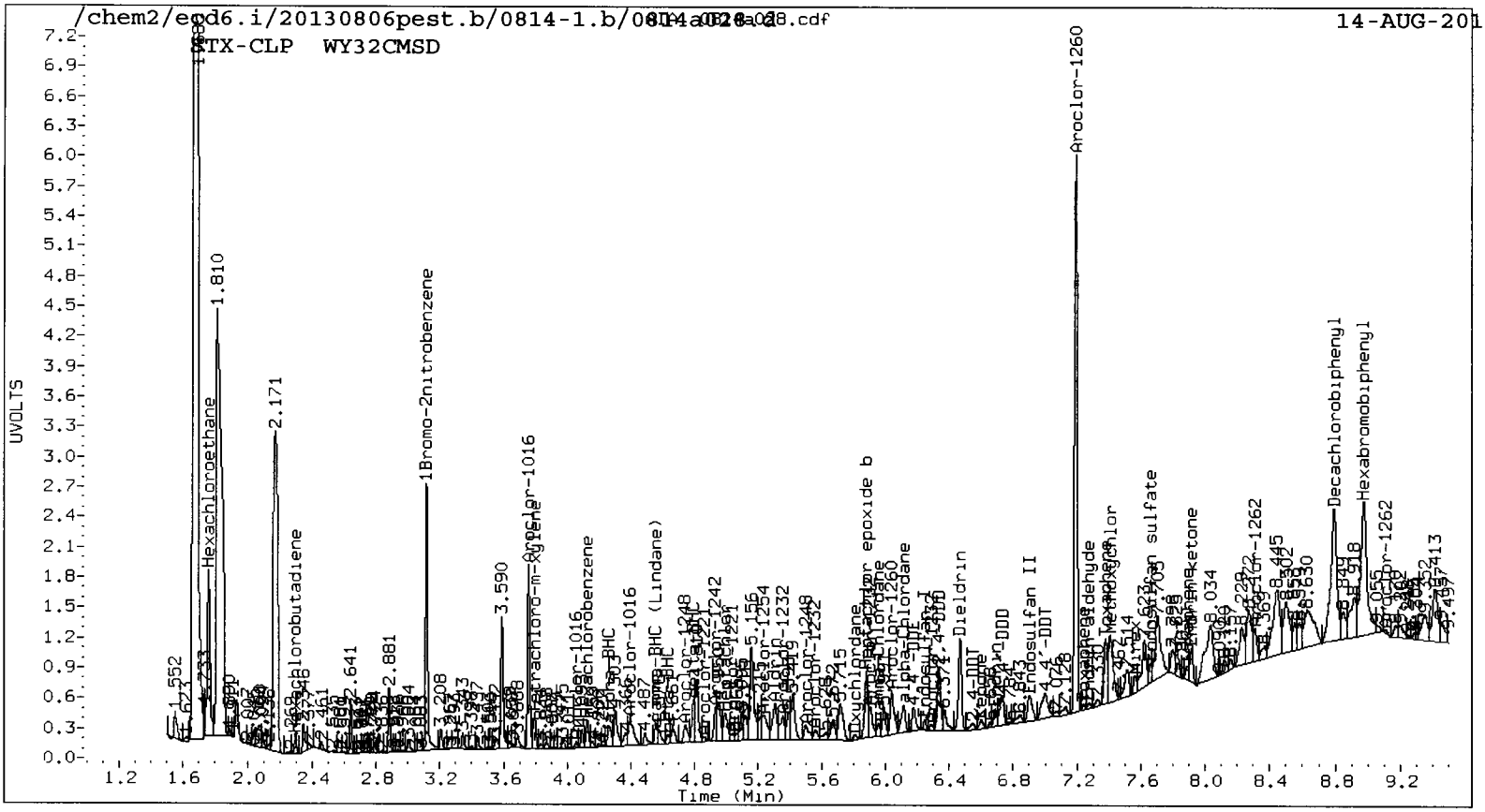
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	14856773	-54.3 <-
Hexabromobiphenyl	16281238	8208249	-49.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.900	-0.039	1059720	234.1	1	7.316	0.031	1135401	194.5
Toxaphene	2	7.001	0.010	1433538	445.1	2	7.624	0.014	1698100	198.2
Toxaphene	3	7.242	-0.005	130701	25.5	3	7.839	0.000	221979	23.8
Toxaphene	4	7.378	0.021	1687412	626.2	4	8.280	-0.027	2682423	403.3
Toxaphene	5	7.562	-0.010	464346	89.8	5	8.351	0.005	5194683	597.8
Toxaphene	6	7.890	-0.002	359666	122.7	NS	---			----

Total STX-CLPAve (6 peaks): 257.214 Total CLP2Ave (5 peaks): 283.524 RPD = 10
Corrected Ave (4 peaks): 118.007 Corrected Ave (4 peaks): 204.963 RPD = 54*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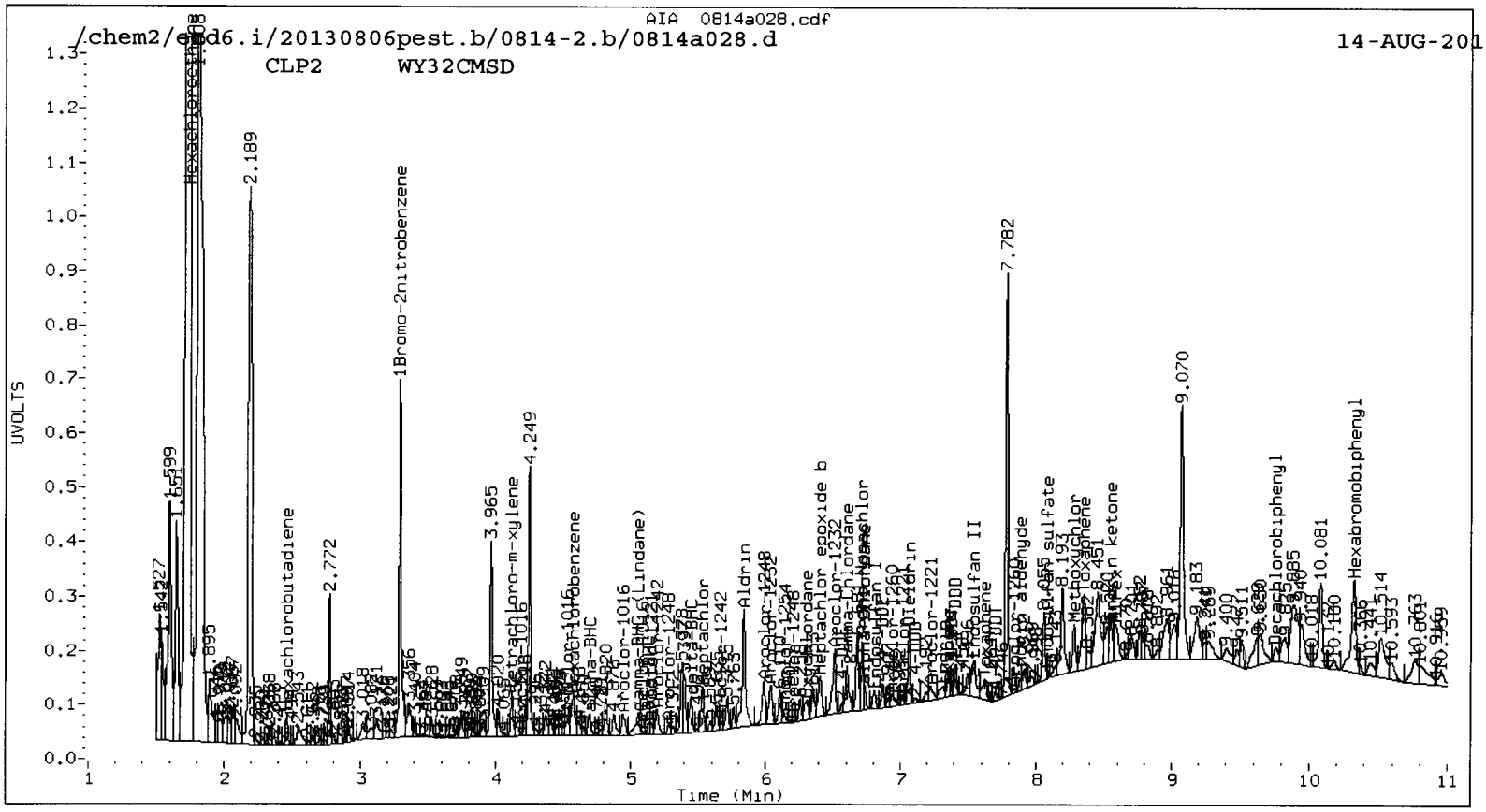
STX-CLP WY32CMSD
UVOLTS
Time (Min)
Hexachloroethane
1.810
2.171
Hexachlorobutadiene
1Bromo-2nitrobenzene
2.881
3.590
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
Hexabromobiphenyl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14-AUG-201
CLP2 WY32CMSD
UVOLTS
Time (Min)
Hexachloroethane
2.189
Hexachlorobutadiene
1Bromo-2nitrobenzene
2.772
3.965
Tetrachloro-m-xylene
4.249
Aldrin
7.782
9.070
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 8/16/13

Data file 1: /chem2/ecd6.i/20130806pest.b/0814-1.b/0814a030.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130806pest.b/0814-2.b/0814a030.d Client ID:
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 15-AUG-2013 00:12
Compound Sublist: INDA Report Date: 08/15/2013 12:42
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.121	-0.003	6157914	3.295	-0.002	27079738	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.273	-0.004	2274963	4.703	-0.004	7737393	18.9843	14.1267	29.3	alpha-BHC
4.634	-0.002	807479	5.134	-0.002	2728719	16.9495	13.0314	26.1	beta-BHC
4.803	-0.002	1835240	5.443	-0.003	5792903	18.3507	12.9435	34.6	delta-BHC
4.555	-0.004	1985169	5.058	-0.004	6585451	18.1389	13.7116	27.8	gamma-BHC (Lindane)
4.998	-0.004	1828467	5.520	-0.004	5405498	17.3973	11.9092	37.5	Heptachlor
5.290	-0.004	1828318	5.858	-0.004	4528369	17.3692	10.4365	49.9*	Aldrin
5.862	-0.004	1561567	6.412	-0.004	3677142	16.4541	9.8721	50.0*	Heptachlor epoxide b
6.239	-0.004	1428353	6.799	-0.004	2710519	15.9289	7.9348	67.0*	Endosulfan I
6.460	-0.004	2990511	7.056	-0.004	6298849	31.7558	18.0475	55.0*	Dieldrin
6.165	-0.004	2523016	6.860	-0.005	5543947	35.2363	16.0946	74.6*	4,4'-DDE
6.678	-0.004	2472512	7.346	-0.004	4421014	40.1611	24.5921	48.1*	Endrin
6.885	-0.003	2383478	7.535	-0.003	4550025	37.5362	23.0868	47.7*	Endosulfan II
6.723	0.000	2523241	7.399	-0.002	4602639	41.6102	24.5029	51.8*	4,4'-DDD
7.650	-0.003	1990763	8.077	-0.004	4004375	36.2765	25.3157	35.6	Endosulfan sulfate
6.978	-0.002	1947734	7.685	-0.003	3568980	32.1710	20.9223	42.4*	4,4'-DDT
7.403	-0.002	5080567	8.268	-0.006	8016225	178.5216	124.6456	35.5	Methoxychlor
7.904	-0.003	2581596	8.567	-0.003	4698759	36.2372	26.4396	31.3	Endrin ketone
7.260	-0.003	1878328	7.832	-0.003	3469351	35.6110	22.0431	47.1*	Endrin aldehyde
5.983	-0.004	1609674	6.595	-0.004	3622930	16.0992	9.4712	51.8*	gamma-Chlordane
6.106	-0.003	1499918	6.732	-0.004	2889713	15.7340	8.1131	63.9*	alpha-Chlordane
2.301	-0.001	2441337	2.462	-0.002	8528452	18.5616	18.5677	0.0	Hexachlorobutadiene
4.131	-0.002	1635760	4.582	-0.002	7671869	17.4452	13.2388	27.4	Hexachlorobenzene
8.902	-0.005	4601078	10.273	-0.006	9405980	80.0000	80.0000	0.0	Hexabromobiphenyl
3.790	-0.002	2937429	4.122	-0.004	10715675	37.3379	27.0958	31.8	Tetrachloro-m-xylen
8.748	-0.005	1994155	9.709	-0.005	5914463	35.8138	37.4150	4.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	93.3	67.7	67.7~	115- 0
Decachlorobiphenyl	89.5	93.5	89.5~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

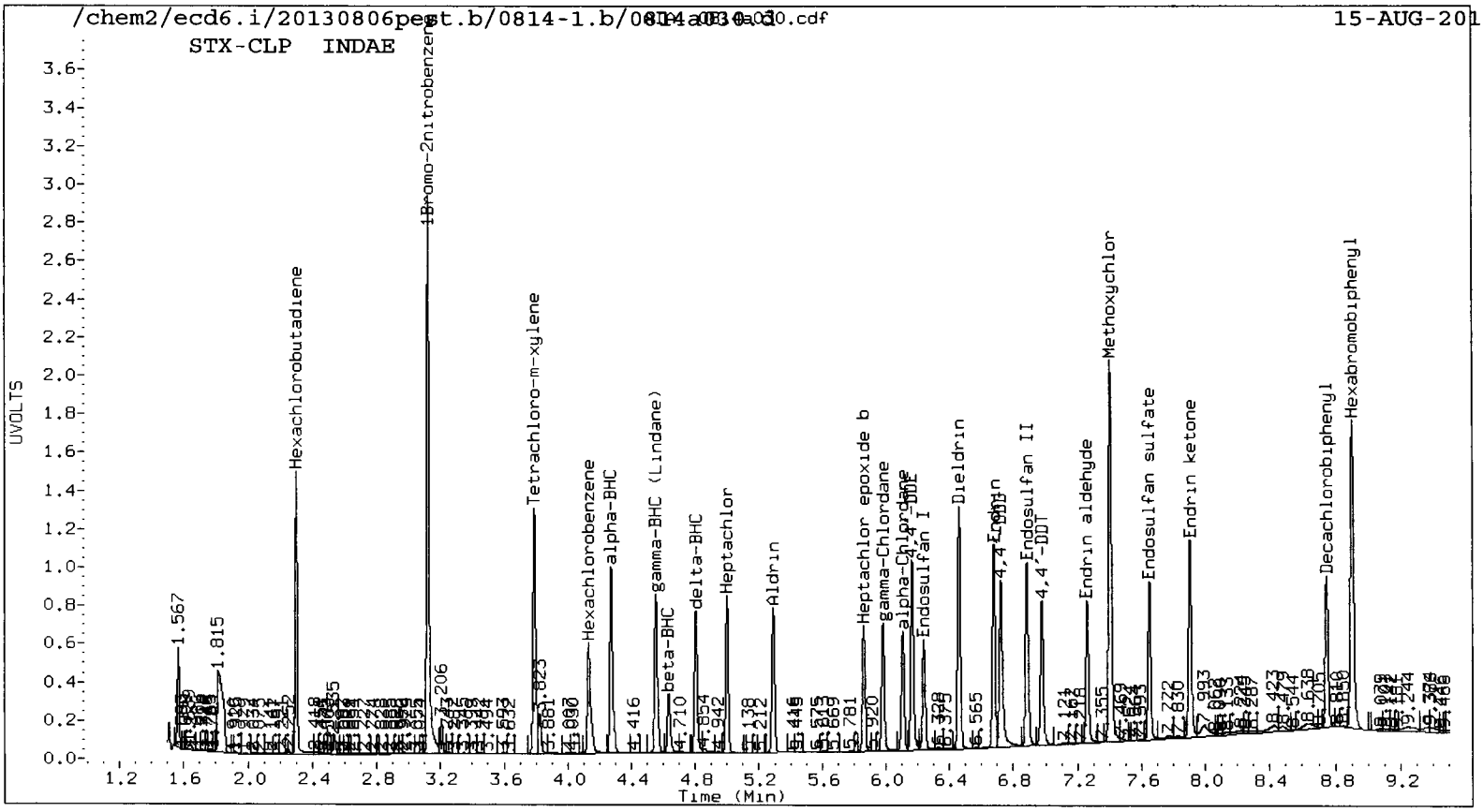
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	6157914	-5.9
Hexabromobiphenyl	6145816	4601078	-25.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	27079738	-16.6
Hexabromobiphenyl	16281238	9405980	-42.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount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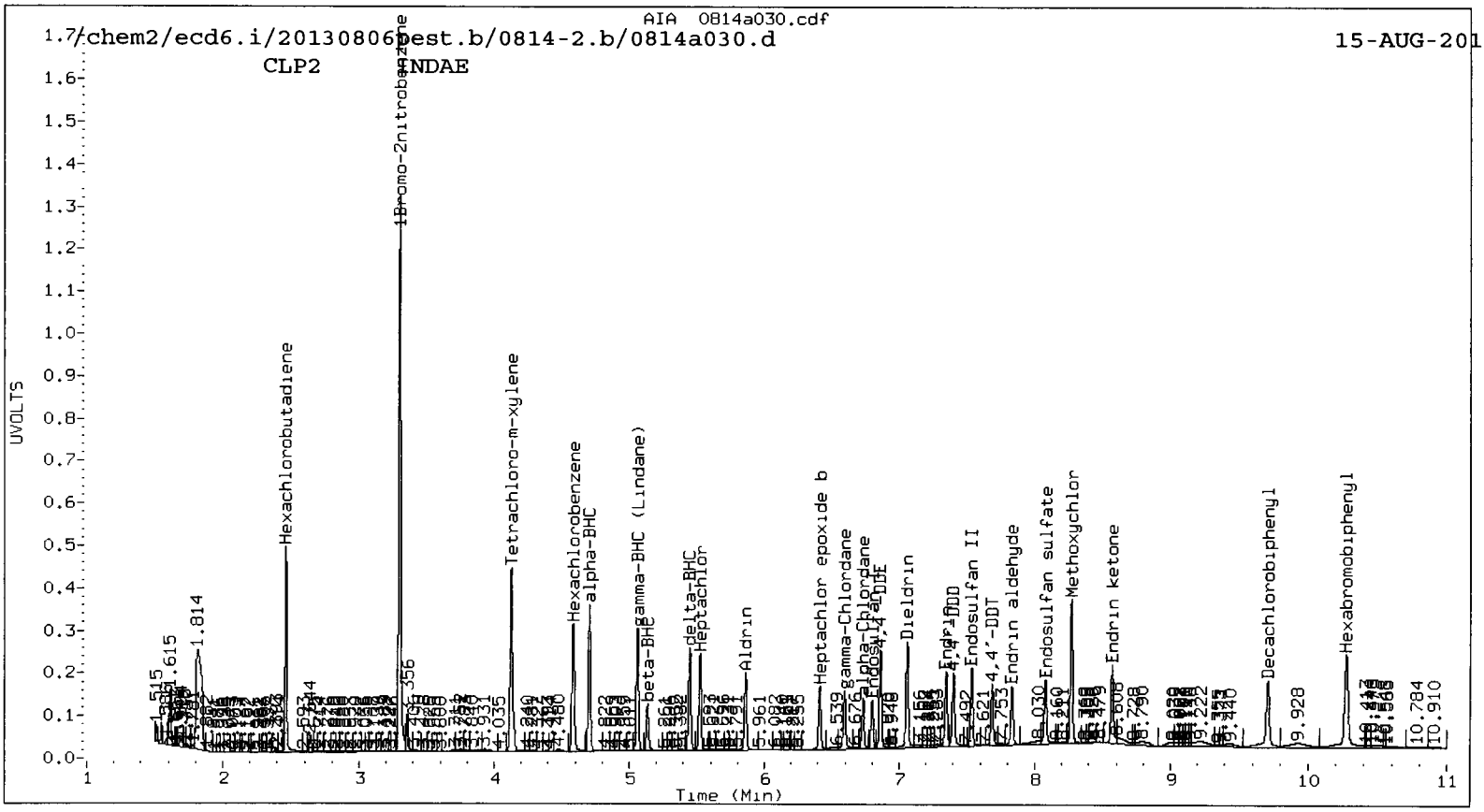
15-AUG-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.567
1.815
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl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15-AUG-201
CLP2 INDAE
UVOLTS
Time (Min)
1.814
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 8/16/13

Data file 1: /chem2/ecd6.i/20130806pest.b/0814-1.b/0814a031.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130806pest.b/0814-2.b/0814a031.d Client ID:
Method: /chem2/ecd6.i/20130806pest.b/PEST0619.m Injection Date: 15-AUG-2013 00:30
Compound Sublist: TOXAPH Report Date: 08/15/2013 12:42
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.121	-0.002	5966970	3.295	-0.002	26538848	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.902	-0.005	4961834	10.273	-0.006	8139522	80.0000	80.0000	0.0	Hexabromobiphenyl
3.790	-0.002	2413264	4.122	-0.004	13865958	31.6568	35.7763	12.2	Tetrachloro-m-xylen
8.748	-0.004	2348168	9.709	-0.005	5263480	39.1055	38.4777	1.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	79.1	89.4	79.1~	150- 0
Decachlorobiphenyl	97.8	96.2	96.2~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

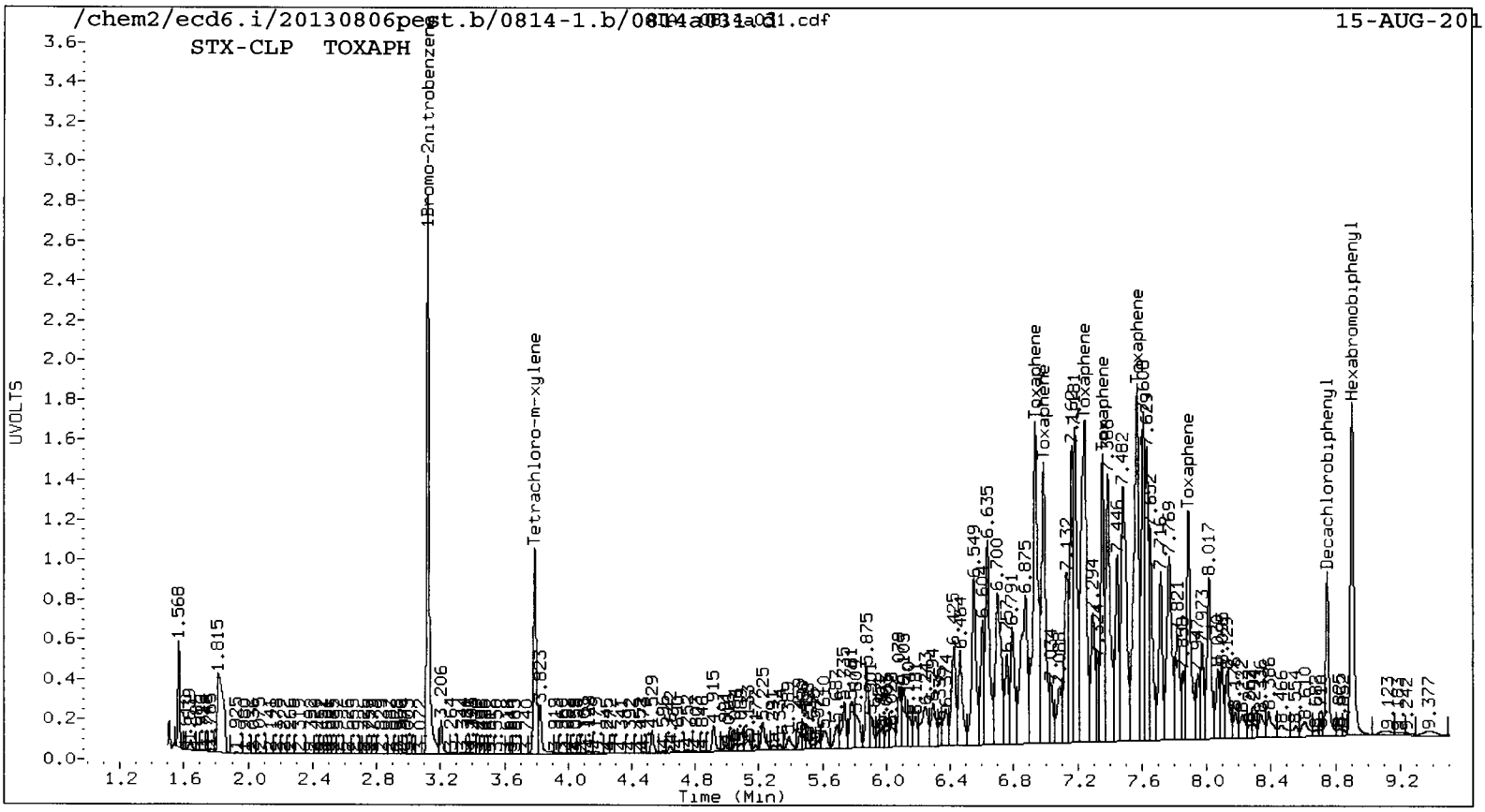
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	6543663	5966970	-8.8
Hexabromobiphenyl	6145816	4961834	-19.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	32480641	26538848	-18.3
Hexabromobiphenyl	16281238	8139522	-50.0 <-

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 06-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.936	-0.004	6959527	2255.1	1	7.282	-0.003	12810247	2212.9	
Toxaphene	2	6.987	-0.004	5023783	2288.4	2	7.606	-0.004	18978384	2234.1	
Toxaphene	3	7.244	-0.003	7666846	2195.3	3	7.836	-0.004	18636909	2016.9	
Toxaphene	4	7.354	-0.003	3994634	2174.8	4	8.304	-0.003	12760857	1934.8	
Toxaphene	5	7.569	-0.004	7503697	2128.2	5	8.343	-0.003	16162039	1875.5	
Toxaphene	6	7.888	-0.004	4046454	2025.3	NS	---			----	
Total STX-CLPAve (6 peaks): 2177.857						Total CLP2Ave (5 peaks): 2054.848				RPD = 6	
Corrected Ave (6 peaks): 2177.857						Corrected Ave (5 peaks): 2054.848				RPD = 6	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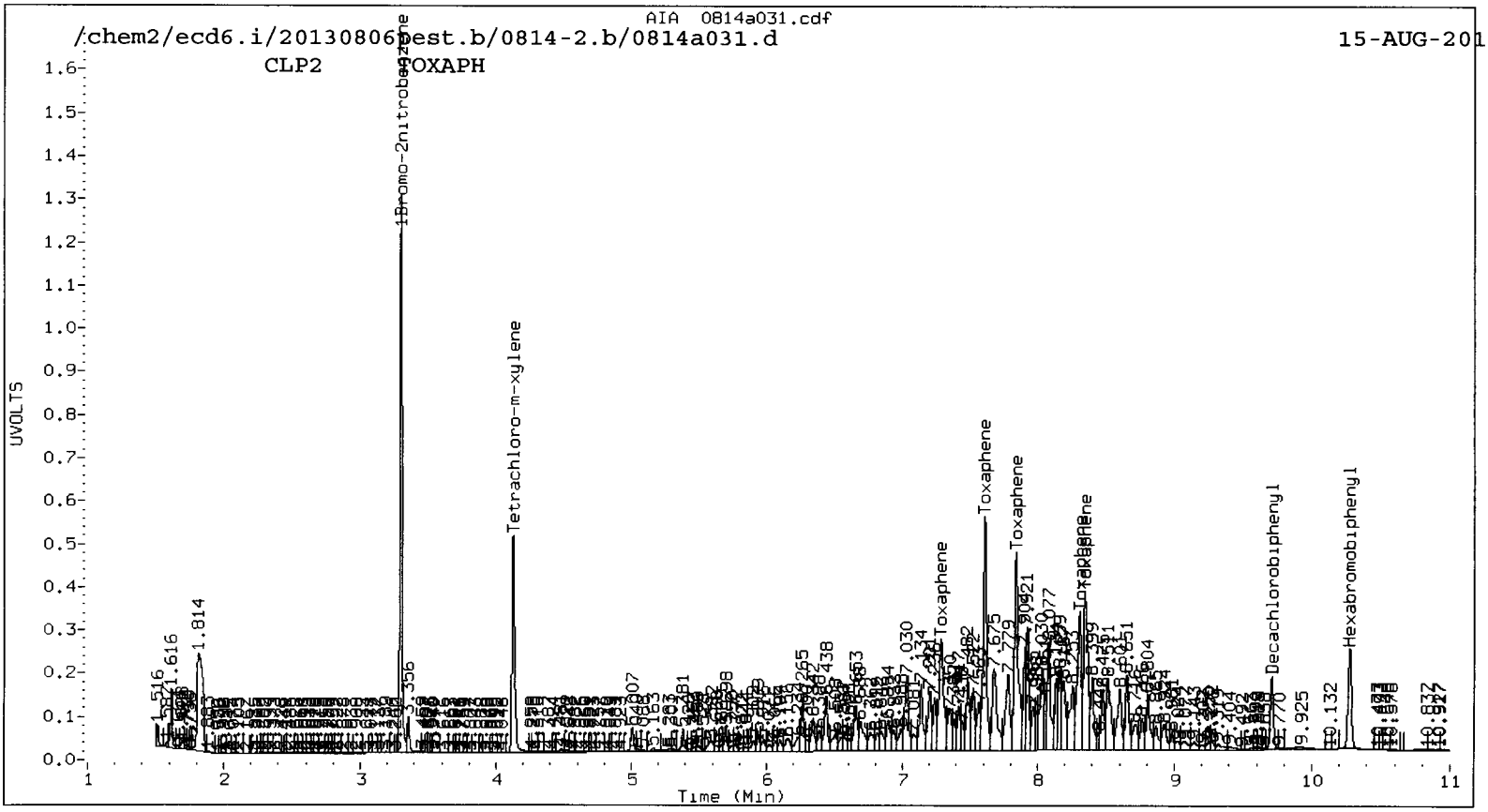
15-AUG-201
STX-CLP TOXAPH
UVOLTS
Time (Min)
1.568
1.815
2.206
3.823
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl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15-AUG-201
CLP2 TOXAPH
UVOLTS
Time (Min)
1.814
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

PCB Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WY32, WY33

Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8082A) PCB – Soil / Sediment
Microwave (3546) (SOP # 3304S)

Preparation Test PCB PSDDA # 19 (PCBSDMP4)

ARI Job No(s) WY32 Page 1 of 1 PSDDA (4ppb) Batch set up by: JH

Bottle #	ARI Sample ID	Weight Extracted (eq to 12.5g dry wt)	(REQ) Acid Clean (2.5mL)	(REQ) Sulfur Clean (2.5mL) very High 1 2 3 3-4 hrs	(REQ) Silica Gel Clean (1:2.5)	Extraction Final Volume	Volume to Lab	Comments	Verify Client ID
	MBS WY32	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual W)	M 07/25/13 Analyst/Date
	SBS	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual Wt)	Microwave 1 2 3 M 07/25/13 Analyst/Date
	~~SBSDup~~	~~12.50g~~	~~2.5mL~~	~~2.5mL~~	~~1mL~~	~~2.5mL~~	~~1mL~~	~~(10g Actual Wt)~~	
	WY32 QLS	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual Wt)	
5	A	19.16	2.5mL	2.5mL	1mL	2.5mL	1mL		KD 100°C Hexane Exchange (2 X 20mL) 1 2 3 4 5 6 YL 07/29/13 Analyst/Date
4	B	15.18	2.5mL	2.5mL	1mL	2.5mL	1mL		
4	BMS	15.23	2.5mL	2.5mL	1mL	2.5mL	1mL		
4	BMSD	15.10	2.5mL	2.5mL	1mL	2.5mL	1mL		
4	C	18.14	2.5mL	2.5mL	1mL	~~2.5mL~~ 5.0mL	1mL	see notes	TurboVap 1 2 3 Pre-Cleanups AC 7-30-13 Analyst/Date
			2.5mL	2.5mL	1mL	2.5mL	1mL		
			2.5mL	2.5mL	1mL	2.5mL	1mL		
			2.5mL	2.5mL	1mL	2.5mL	1mL		
			2.5mL	2.5mL	1mL	2.5mL	1mL		TurboVap 1 2 Post Cleanups AC 7-30-13 Analyst/Date
			2.5mL	2.5mL	1mL	2.5mL	1mL		
			2.5mL	2.5mL	1mL	2.5mL	1mL		
Analyst/Date		NL 07/25/13	AC 7-30-13	AC 7-30-13	AC 7-30-13	AC 7-30-13	AC 7-30-13	Reviewed by AC 7-30-13	

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N(B04115:3)	2µg/mL	50µL	4/24/14	M	AC
Spike	1 (24774-4)	20µg/mL	63µL	10/31/13	M	AC
QLS Spike	5 (24888-3)	2µg/mL	25µL	10/31/13	M	AC

Extraction Time: 13.25 Balance ID: B139298002

SPECIAL INSTRUCTIONS: 1. Weigh soil/sed into beakers-lightly dry with sodium sulfate.
2. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels).
3. Add 1:1 Hexane/Acetone until the solvent layer is 3" inches above the soil layer after homogenization. 4. Add surr/spike.
5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then cool vessels in cold water 15 minutes. Re-homogenize while cool. 7. Decant 1:1 Hex/Ace into E. flask with sodium sulfate in bottom+ funnel with neutral glasswool plug. 8. Rinse with Hexane. 9. Add 8:2 Hexane/Acetone to the vessel 3"inches above the soil layer after homogenization. Microwave a 2nd time. 10. Let cool and decant solvent then empty the soil into the funnel and rinse with Hexane. 11. KD (Small ~~or Large~~ Drying Column) on 100° bath. (Blanks=only 5g Sodium Sulfate).
12. Exchange (2 X with 20mL) Hexane. 13. TurboVap. 14. Clean-ups. 15. TurboVap. 16. Vial with Hexane.

A. Need Total Solids Y / (N) B. ~~Archive~~/Freeze (Y) / N

Reagent and Solutions Identification

(8082A) PCB – Soil (Sediment)
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WY32

(8082A) PCB PSDDA (4ppb) Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station:	Microwave
Anhydrous Sodium Sulfate: (I# 8271+ jar date 7/11/13)	MC 7/25/13
Neutral Glasswool: (I# ~~B00112~~ 7998 jar date 6/25/13)	
1:1 Hexane/Acetone: (H# B001123)	
80:20 Hexane/Acetone: (H# B001061)	
Hexane: (I# B000974)	
KD Station:	KD
Hexane: (I# ~~B00974~~)	YC
Anhydrous Sodium Sulfate: (I# 8271+ jar date 7/18/13)	7/29/13
Neutral Glasswool: (I# 7998+ jar date 6/25/13)	
Vialing Station:	Vialing
Hexane: (I# B000674)	AC
Concentrated Sulfuric Acid: (I# B000905)	
Tetrabutylammonium hydrogensulfate (TBAS): (H# B000925)	7-30-13
Sodium Sulfite: (I# B001496)	
Silica Gel (SPE) Darts: (I# 8127)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Extract Dilution Bench Sheet

ARI Job#: _____ Client ID: _____
Analyst: JR Date: 07/31/13

ARI Sample ID	Primary Dilution				Secondary Dilution			
	Extract Volume (uL)	Diluent/Diluent ID	Diluent Volume (uL)	Dilution Factor	Primary Dilution (uL)	Diluent/Diluent ID	Diluent Volume (uL)	Final Dilution Factor
WY3ZA	100	Hexane	400	5				
B								
Bms								
Bmsd								
C								

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WY32 Client ID: SAIC

Parameter: PCB PSDDA (4ppb) Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☒ Standing Water Decanted (Not shared)= B, C	M 07/24/13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☒ Organics (Leaves/sticks/grass)= ~~A~~ ~~B~~ ~~C~~ M 07/24/13 M 7/24/13 A	07/24/13 M
☒ Oily, obvious fuel/sulfur odors= A - C has real light fuel odor smells like	M 7/24/13
☒ Other (Details)= Samples ID Check this Job WY32, but Sample B, C has no client Label ID on the Jar and verified the Lims sheet with our Label matched.	M 07/24/13
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions). GC analyst, (Centrifuge#1 used for all Centrifugations) Sample pre-screens indicate possible aroclor activity. hazy emulsion after sulfur clean. Samples were centrifuged. Could only recover 500µL for sample 'C' for SPE clean. 'C' vialed @ 1mL after SPE.	~~SH~~ 7/25/13 AC 7-30-13 ↓

WY32: 8145

PCB Raw Data
Initial Calibration

ARI Job ID: WY32, WY33

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 07/25/13 Internal Standard ID B001154 Expiration 07/23/14

Endrin/DDT Breakdown <15%? YES / NO / NA		ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria	YES / NO	ICV Exceeding ±30%?	YES / NO
Manual Integrations for ICal?	YES / NO	Linear Fits Used?	YES / NO
Minimum Response S/N Met	YES / NO	Quadratic Fits Used?	YES / NO
		Calibration Points Dropped?	YES /NO

Primary Source ↔	Standard #	Expiration	Secondary Source ↔	Standard #	Expiration
B000161	AR1660	04/30/14	B000182	AR1660	04/30/14
B000163	AR1242	04/30/14	B000190	AR1242	04/30/14
B000172	AR1248	04/30/14	B000191	AR1248	04/30/14
B000173	AR1254	04/30/14	B000192	AR1254	04/30/14
B000174	AR1262	04/30/14	B000193	AR1262	04/30/14
B000175	AR1268	04/30/14	B000194	AR3268	04/30/14
1991-2	DDT	05/16/13			
B000370 B001237	DS IB	08/29/13 04/30/14			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: _____ **Date:** 07/26/13

Reviewer: _____ **Date:** 7-26-13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd7.i/20130725.b/PCB1.m
Batch File: /chem2/ecd7.i/20130725.b/ical-1.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0725a014	0725a015	0725a016	0725a017	0725a018	0725a019
INJ.DATE:	25-JUL-2013	25-JUL-2013	25-JUL-2013	25-JUL-2013	25-JUL-2013	25-JUL-2013
INJ.TIME:	15:06	15:28	15:50	16:12	16:33	16:55

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	2.784	2.784	2.786	2.786	2.786	2.783	2.787	2.687-2.887	2.785	0.001
$ 1 Tetrachloro-m-xylene	5.731	5.732	5.733	5.734	5.732	5.731	5.734	5.634-5.834	5.732	0.001
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	6.187	6.087-6.287	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	7.740	7.640-7.840	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	6.521	6.421-6.621	+++++	+++++
7 Aroclor-1016	7.741	7.741	7.742	7.742	7.741	7.739	7.739	7.639-7.839	7.741	0.001
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	8.254	8.154-8.354	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	10.225	10.125-10.325	+++++	+++++
9 Aroclor-1260	12.041	12.043	12.043	12.042	12.042	12.042	12.042	11.942-12.142	12.042	0.001
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	12.358	12.258-12.458	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	13.236	13.136-13.336	+++++	+++++
$ 13 Decachlorobiphenyl	14.589	14.590	14.590	14.590	14.590	14.590	14.590	14.490-14.690	14.590	0.000
* 12 IS-HBBP	14.849	14.849	14.850	14.849	14.850	14.849	14.849	14.749-14.949	14.849	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	10.189	10.139-10.239	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	10.763	10.713-10.813	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	11.282	11.232-11.332	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	10.640	10.540-10.740	+++++	+++++

Reviewer 1 _____ Date: 07/26/13
Reviewer 2 _____ Date: 7/26/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd7.i/20130725.b/PCB1.m
Batch File: /chem2/ecd7.i/20130725.b/ical-1.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	11.227	11.127-11.327	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	11.748	11.648-11.848	+++++	+++++
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.842	1.742-1.942	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	6.708	6.608-6.808	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd7.i/20130725.b/PCB2.m
Batch File: /chem2/ecd7.i/20130725.b/ical-2.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0725a014	0725a015	0725a016	0725a017	0725a018	0725a019
INJ.DATE:	25-JUL-2013	25-JUL-2013	25-JUL-2013	25-JUL-2013	25-JUL-2013	25-JUL-2013
INJ.TIME:	15:06	15:28	15:50	16:12	16:33	16:55

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BNB	3.194	3.194	3.195	3.195	3.195	3.193	3.196	3.096-3.296	3.194	0.001
$ 2 Tetrachloro-m-xylene	5.381	5.381	5.382	5.382	5.382	5.379	5.383	5.283-5.483	5.381	0.001
1 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	6.204	6.104-6.304	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	6.638	6.538-6.738	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	6.635	6.535-6.735	+++++	+++++
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	7.513	7.413-7.613	+++++	+++++
7 Aroclor-1016	6.636	6.637	6.637	6.636	6.637	6.635	6.635	6.535-6.735	6.636	0.001
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	10.037	9.937-10.137	+++++	+++++
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	12.484	12.384-12.584	+++++	+++++
9 Aroclor-1260	11.941	11.941	11.942	11.942	11.941	11.941	11.941	11.841-12.041	11.941	0.000
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	13.260	13.160-13.360	+++++	+++++
$ 13 Decachlorobiphenyl	14.622	14.622	14.622	14.622	14.622	14.621	14.621	14.521-14.721	14.622	0.000
* 12 IS-HBBP	15.217	15.217	15.217	15.217	15.217	15.217	15.218	15.118-15.318	15.217	0.000
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	10.313	10.263-10.363	+++++	+++++
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	10.714	10.664-10.764	+++++	+++++
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	11.021	10.921-11.121	+++++	+++++
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	11.491	11.391-11.591	+++++	+++++

Reviewer 1 _____ Date: 07/26/13

Reviewer 2 _____ Date: 7/26/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd7.i/20130725.b/PCB2.m
Batch File: /chem2/ecd7.i/20130725.b/ical-2.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	11.926	11.826-12.026	+++++	+++++
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.703	1.603-1.803	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	7.117	7.017-7.217	+++++	+++++

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd7.i/20130725.b/ical-1.b

ARI Job No.: IB Method: PCB1.m Instrument: ecd7.i Date: 25-JUL-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1444	0725a013.d	IB		1	NO MANUAL INTEGRATION
1506	0725a014.d	0.25PPMAR1660		1	NO MANUAL INTEGRATION
1528	0725a015.d	0.02PPMAR1660		1	NO MANUAL INTEGRATION
1550	0725a016.d	0.05PPMAR1660		1	NO MANUAL INTEGRATION
1612	0725a017.d	1PPMAR1660		1	NO MANUAL INTEGRATION
1633	0725a018.d	0.1PPMAR1660		1	NO MANUAL INTEGRATION
1655	0725a019.d	0.5PPMAR1660		1	NO MANUAL INTEGRATION
1717	0725a020.d	AR1242		1	NO MANUAL INTEGRATION
1739	0725a021.d	AR1248		1	NO MANUAL INTEGRATION
1801	0725a022.d	AR1254		1	NO MANUAL INTEGRATION
1823	0725a023.d	AR2162		1	NO MANUAL INTEGRATION
1845	0725a024.d	AR3268		1	NO MANUAL INTEGRATION
1907	0725a025.d	AR1660ICV		1	NO MANUAL INTEGRATION
1929	0725a026.d	AR1242ICV		1	NO MANUAL INTEGRATION
1951	0725a027.d	AR1248ICV		1	NO MANUAL INTEGRATION
2013	0725a028.d	AR1254ICV		1	NO MANUAL INTEGRATION
2035	0725a029.d	AR2162ICV		1	NO MANUAL INTEGRATION
2057	0725a030.d	AR3268ICV		1	NO MANUAL INTEGRATION
2119	0725a031.d	DDT		1	NO MANUAL INTEGRATION
2141	0725a032.d	DDT BD		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd7.i/20130725.b/ical-2.b

ARI Job No.: IB Method: PCB2.m Instrument: ecd7.i Date: 25-JUL-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1444	0725a013.d	IB		1	NO MANUAL INTEGRATION
1506	0725a014.d	0.25PPMAR1660		1	NO MANUAL INTEGRATION
1528	0725a015.d	0.02PPMAR1660		1	NO MANUAL INTEGRATION
1550	0725a016.d	0.05PPMAR1660		1	NO MANUAL INTEGRATION
1612	0725a017.d	1PPMAR1660		1	NO MANUAL INTEGRATION
1633	0725a018.d	0.1PPMAR1660		1	NO MANUAL INTEGRATION
1655	0725a019.d	0.5PPMAR1660		1	NO MANUAL INTEGRATION
1717	0725a020.d	AR1242		1	NO MANUAL INTEGRATION
1739	0725a021.d	AR1248		1	NO MANUAL INTEGRATION
1801	0725a022.d	AR1254		1	NO MANUAL INTEGRATION
1823	0725a023.d	AR2162		1	NO MANUAL INTEGRATION
1845	0725a024.d	AR3268		1	NO MANUAL INTEGRATION
1907	0725a025.d	AR1660ICV		1	NO MANUAL INTEGRATION
1929	0725a026.d	AR1242ICV		1	NO MANUAL INTEGRATION
1951	0725a027.d	AR1248ICV		1	NO MANUAL INTEGRATION
2013	0725a028.d	AR1254ICV		1	NO MANUAL INTEGRATION
2035	0725a029.d	AR2162ICV		1	NO MANUAL INTEGRATION
2057	0725a030.d	AR3268ICV		1	NO MANUAL INTEGRATION
2119	0725a031.d	DDT		1	NO MANUAL INTEGRATION
2141	0725a032.d	DDT BD		1	NO MANUAL INTEGRATION

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2013 15:06
End Cal Date : 25-JUL-2013 21:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130725.b/PCB1.m
Cal Date : 26-Jul-2013 09:53 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd7.i/20130725.b/ical-1.b/0725a015.d
Level 2: /chem2/ecd7.i/20130725.b/ical-1.b/0725a016.d
Level 3: /chem2/ecd7.i/20130725.b/ical-1.b/0725a018.d
Level 4: /chem2/ecd7.i/20130725.b/ical-1.b/0725a014.d
Level 5: /chem2/ecd7.i/20130725.b/ical-1.b/0725a019.d
Level 6: /chem2/ecd7.i/20130725.b/ical-1.b/0725a017.d
Level 7: /chem2/ecd7.i/20130725.b/ical-1.b/0725a024.d
Level 8: /chem2/ecd7.i/20130725.b/ddt-1.b/0725a031.d

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00946	+++++					0.00946	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00816	+++++					0.00816	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02388	+++++					0.02388	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01902	+++++					0.01902	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06498	+++++					0.06498	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02513	+++++					0.02513	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2013 15:06
End Cal Date : 25-JUL-2013 21:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130725.b/PCB1.m
Cal Date : 26-Jul-2013 09:53 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.02377	+++++	0.02377	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.01568	+++++	0.01568	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.00950	+++++	0.00950	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03176	+++++	0.03176	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.01248	+++++	0.01248	0.000
7 Aroclor-1016(1)	0.02421	0.02445	0.02416	0.02372	0.02349	0.02263	+++++	+++++	0.02378	2.788
(2)	0.07919	0.08046	0.08172	0.08196	0.08172	0.07943	+++++	+++++	0.08075	1.528
(3)	0.03130	0.03181	0.03188	0.03149	0.03139	0.03024	+++++	+++++	0.03135	1.893
(4)	0.01933	0.01939	0.01902	0.01832	0.01792	0.01725	+++++	+++++	0.01854	4.619

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Integrator : HP Genie
Method file : /chem2/ecd7.i/20130725.b/PCB1.m
Cal Date : 26-Jul-2013 09:53 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04049	+++++					0.04049	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02652	+++++					0.02652	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03757	+++++					0.03757	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04839	+++++					0.04839	0.000
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05017	+++++					0.05017	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03103	+++++					0.03103	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06115	+++++					0.06115	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06306	+++++					0.06306	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06184	+++++					0.06184	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2013 15:06
End Cal Date : 25-JUL-2013 21:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130725.b/PCB1.m
Cal Date : 26-Jul-2013 09:53 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
9 Aroclor-1260(1)	0.06305	0.06288	0.06352	0.06308	0.06137	0.05919		
	+++++	+++++					0.06218	2.640
(2)	0.06310	0.06350	0.06476	0.06486	0.06370	0.06167		
	+++++	+++++					0.06360	1.855
(3)	0.15012	0.15121	0.15549	0.15685	0.15400	0.14897		
	+++++	+++++					0.15278	2.059
(4)	0.07595	0.07820	0.08080	0.08229	0.08180	0.08006		
	+++++	+++++					0.07985	3.000
(5)	0.03335	0.03421	0.03508	0.03525	0.03502	0.03415		
	+++++	+++++					0.03451	2.128
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.08548	+++++					0.08548	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.19880	+++++					0.19880	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06440	+++++					0.06440	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07700	+++++					0.07700	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2013 15:06
End Cal Date : 25-JUL-2013 21:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130725.b/PCB1.m
Cal Date : 26-Jul-2013 09:53 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.06047	+++++	0.06047	0.000
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.21605	+++++	0.21605	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.19163	+++++	0.19163	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.16079	+++++	0.16079	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.42440	+++++	0.42440	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	725	725	0.000
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	685	685	0.000
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	823	823	0.000
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1199	1199	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2013 15:06
End Cal Date : 25-JUL-2013 21:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130725.b/PCB1.m
Cal Date : 26-Jul-2013 09:53 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1041	1041	0.000
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1059	1059	0.000
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 Tetrachloro-m-xylene	0.82115	0.86103	0.91007	0.94734	0.97003	0.96567	+++++	+++++	0.91255	6.639
$ 13 Decachlorobiphenyl	1.16201	1.15685	1.15446	1.11720	1.09877	1.06249	+++++	+++++	1.12530	3.534

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2013 15:06
End Cal Date : 25-JUL-2013 21:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130725.b/PCB2.m
Cal Date : 26-Jul-2013 09:48 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd7.i/20130725.b/ical-2.b/0725a015.d
Level 2: /chem2/ecd7.i/20130725.b/ical-2.b/0725a016.d
Level 3: /chem2/ecd7.i/20130725.b/ical-2.b/0725a018.d
Level 4: /chem2/ecd7.i/20130725.b/ical-2.b/0725a014.d
Level 5: /chem2/ecd7.i/20130725.b/ical-2.b/0725a019.d
Level 6: /chem2/ecd7.i/20130725.b/ical-2.b/0725a017.d
Level 7: /chem2/ecd7.i/20130725.b/ical-2.b/0725a024.d
Level 8: /chem2/ecd7.i/20130725.b/ddt-2.b/0725a031.d

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
1 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.01352	+++++	0.01352	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.00781	+++++	0.00781	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02366	+++++	0.02366	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.00825	+++++	0.00825	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.01674	+++++	0.01674	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01901	+++++	0.01901	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2013 15:06
End Cal Date : 25-JUL-2013 21:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130725.b/PCB2.m
Cal Date : 26-Jul-2013 09:48 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03629	+++++	0.03629	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.01190	+++++	0.01190	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.01598	+++++	0.01598	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.03309	+++++	0.03309	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.06934	+++++	0.06934	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.02755	+++++	0.02755	0.000
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.01646	+++++	0.01646	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04512	+++++	0.04512	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03303	+++++	0.03303	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2013 15:06
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Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130725.b/PCB2.m
Cal Date : 26-Jul-2013 09:48 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04741	+++++					0.04741	0.000
7 Aroclor-1016(1)	0.02318	0.02168	0.02013	0.01814	0.01691	0.01545		
	+++++	+++++					0.01925	15.291
(2)	0.05171	0.04856	0.04500	0.04085	0.03819	0.03516		
	+++++	+++++					0.04324	14.610
(3)	0.10549	0.09769	0.09184	0.08575	0.08240	0.07811		
	+++++	+++++					0.09021	11.297
(4)	0.03268	0.03025	0.02777	0.02491	0.02338	0.02163		
	+++++	+++++					0.02677	15.798
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03060	+++++					0.03060	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03896	+++++					0.03896	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06521	+++++					0.06521	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06641	+++++					0.06641	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Cal Date : 26-Jul-2013 09:48 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.04811	+++++	0.04811	0.000
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.10703	+++++	0.10703	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.21287	+++++	0.21287	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.09271	+++++	0.09271	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.14001	+++++	0.14001	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.07064	+++++	0.07064	0.000
9 Aroclor-1260(1)	0.13413	0.12265	0.11561	0.10674	0.10046	0.09480	+++++	+++++	0.11240	13.027
(2)	0.11097	0.10149	0.09395	0.08637	0.08071	0.07593	+++++	+++++	0.09157	14.406
(3)	0.20292	0.18978	0.18239	0.17038	0.16407	0.15716	+++++	+++++	0.17778	9.629

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2013 15:06
End Cal Date : 25-JUL-2013 21:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130725.b/PCB2.m
Cal Date : 26-Jul-2013 09:48 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	___ RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	0.13746	0.13027	0.12392	0.11424	0.10859	0.10289		
	+++++	+++++					0.11956	11.100
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.22079	+++++					0.22079	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.20697	+++++					0.20697	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.16702	+++++					0.16702	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.44661	+++++					0.44661	0.000
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	677					677	0.000
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1102					1102	0.000
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	630					630	0.000
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	838					838	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2013 15:06
End Cal Date : 25-JUL-2013 21:19
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130725.b/PCB2.m
Cal Date : 26-Jul-2013 09:48 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	951					951	0.000
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 2 Tetrachloro-m-xylene	1.13338	1.05895	1.03066	0.99932	0.98910	0.96437		
	+++++	+++++					1.02930	5.901
$ 13 Decachlorobiphenyl	1.39658	1.33448	1.28063	1.19684	1.14955	1.11142		
	+++++	+++++					1.24492	8.910

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/ical-1.b/0725a013.d
Data file 2: 20130725.b/ical-2.b/0725a013.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 25-JUL-2013 14:44
Report Date: 07/26/2013 10:04
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.730	-0.004	3452328	5.379	-0.004	4834218	41.2	38.1	7.8	Tetrachloro-m-xylene
14.590	0.000	2588588	14.620	-0.001	3104381	38.0	36.0	5.2	Decachlorobiphenyl

Indicates RPD > 40%
Indicates Column 1 peak was manually integrated
Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	103.0	95.2
Decachlorobiphenyl	94.9	90.0

7/26/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7344066	2.2
Hexabromobiphenyl	4753836	4849223	2.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	9861880	0.2
Hexabromobiphenyl	5491228	5539359	0.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

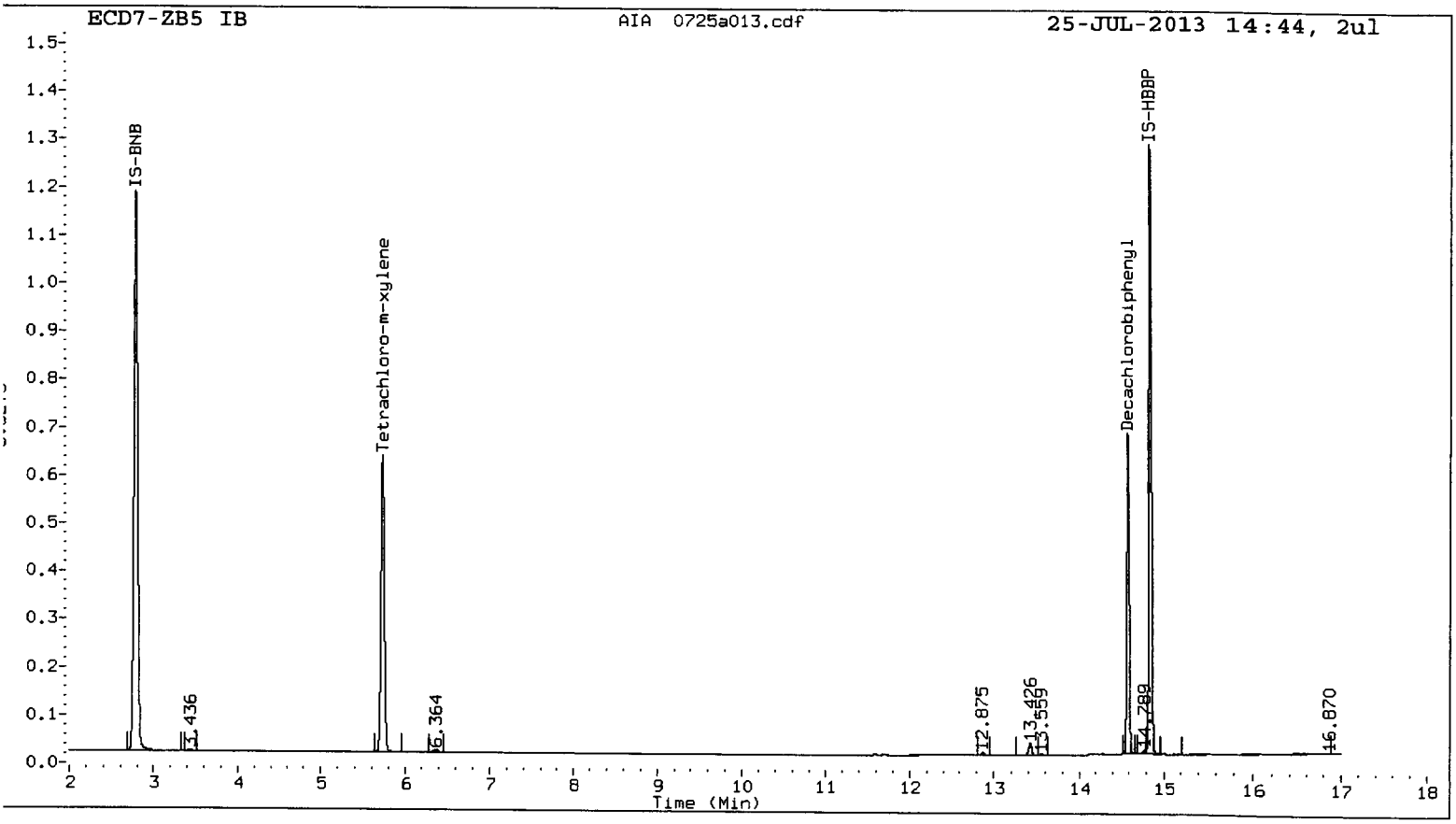
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	6.207	0.003	66948	40.2
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	6.622	-0.014	13477	4.6
Aroclor-1221	NS	---			----	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	6.622	-0.014	13477	6.8
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	9.439	0.046	11286	3.3
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1262	1	---			0.0	1	12.522	0.037	19946	2.7
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
Aroclor-1262	5	---			0.0	5	13.979	0.034	16582	3.4
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.834 - 14.490) = 203034 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (5.483 - 14.521) = 406376 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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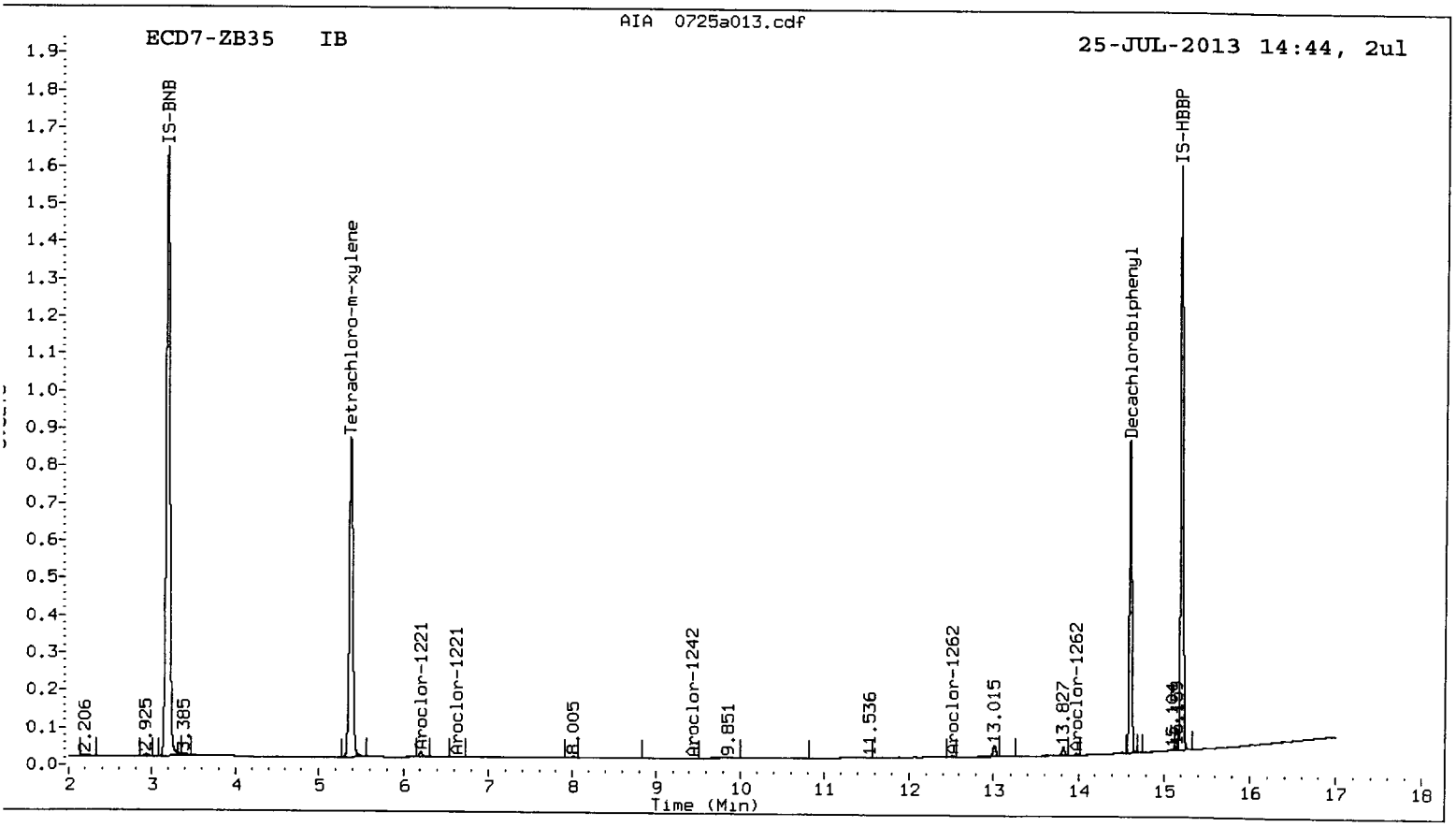
AIA 0725a013.cdf
25-JUL-2013 14:44, 2ul
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
3.436
6.364
12.875
13.426
13.559
14.289
16.870
Time (Min)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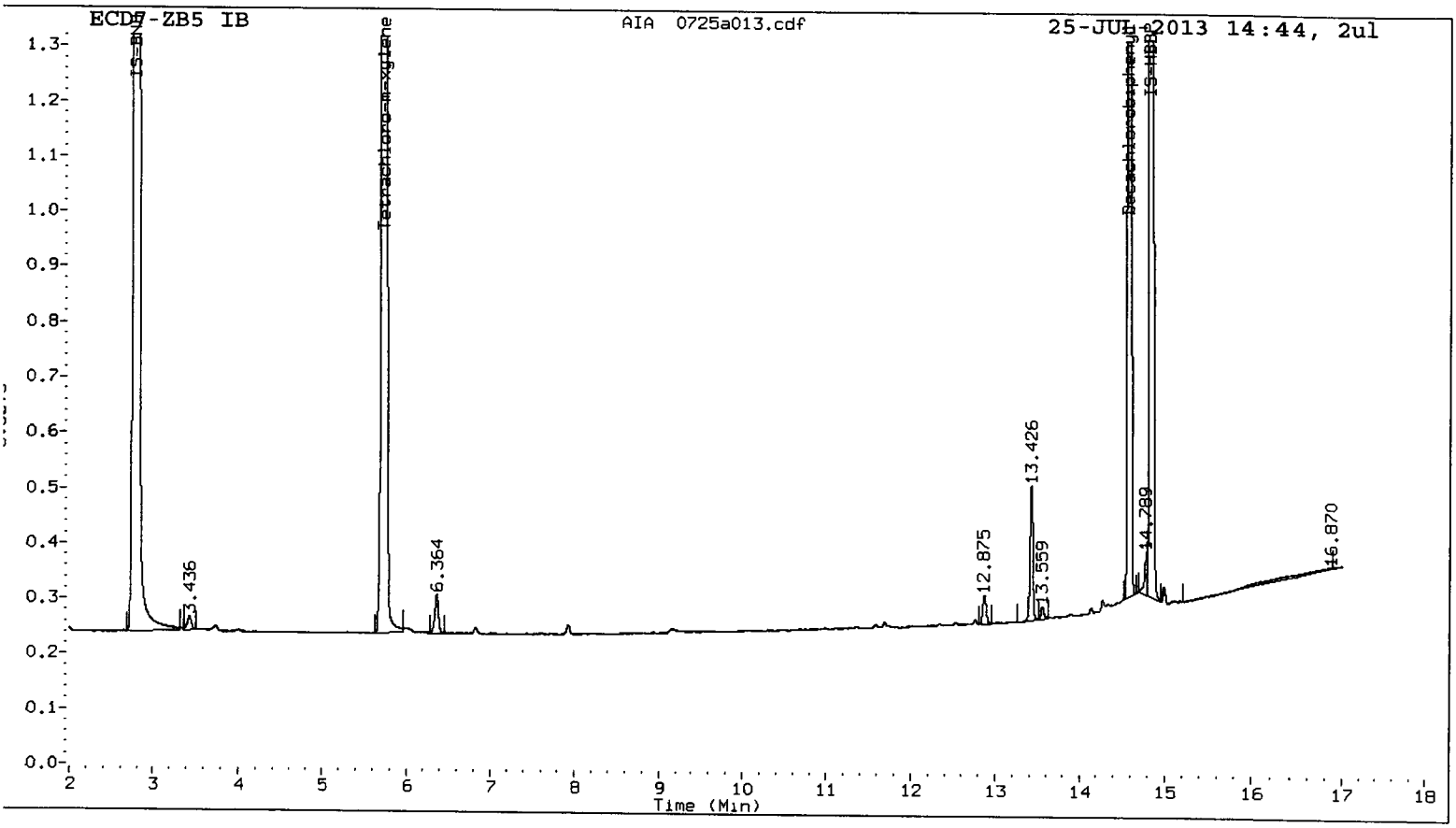
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
2.206
2.925
3.385
Aroclor-1221
Aroclor-1221
8.005
Aroclor-1242
9.851
11.536
Aroclor-1262
13.015
13.827
Aroclor-1262
Time (Min)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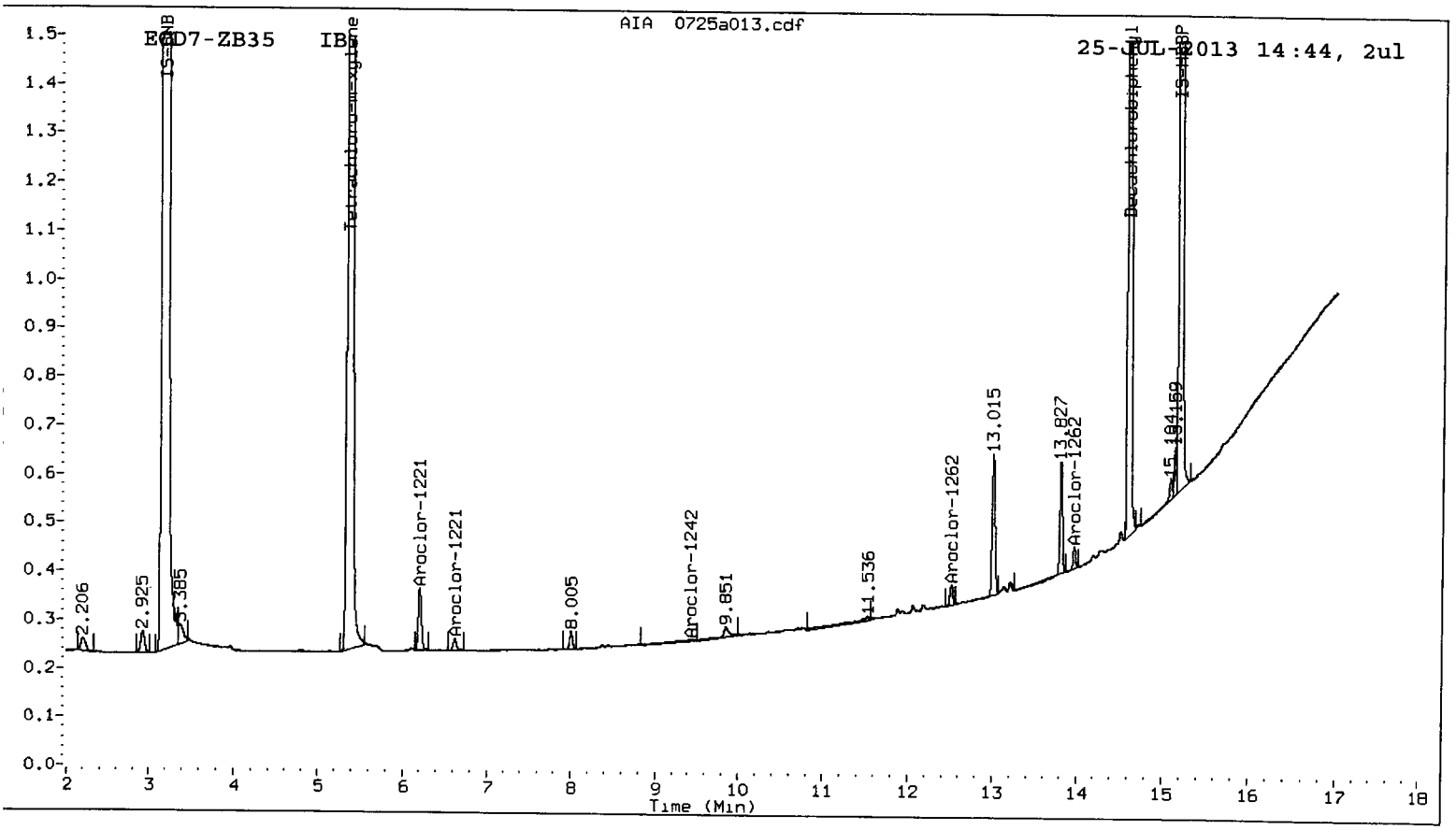
AIA 0725a013.cdf
25-JUL-2013 14:44, 2ul
IS-HBB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBP
3.436
6.364
12.875
13.426
13.559
14.289
16.870
Time (Min)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25-JUL-2013 14:44, 2ul
IS-HBB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBP
2.206
2.925
3.385
Aroclor-1221
Aroclor-1221
8.005
Aroclor-1242
9.851
11.536
Aroclor-1262
13.015
13.827
Aroclor-1262
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/ical-1.b/0725a014.d
Data file 2: 20130725.b/ical-2.b/0725a014.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1660
Client ID:
Injection Date: 25-JUL-2013 15:06
Report Date: 07/26/2013 10:04
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.731	-0.002	1701848	5.381	-0.002	2457791	20.8	19.4	6.7	Tetrachloro-m-xylene
14.589	0.000	1327750	14.622	0.000	1643034	19.9	19.2	3.2	Decachlorobiphenyl

Indicates RPD > 40%
Indicates Column 1 peak was manually integrated
Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	51.9	48.5
Decachlorobiphenyl	49.6	48.1

JK 07/26/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7185814	0.0
Hexabromobiphenyl	4753836	4753836	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	9837847	0.0
Hexabromobiphenyl	5491228	5491228	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

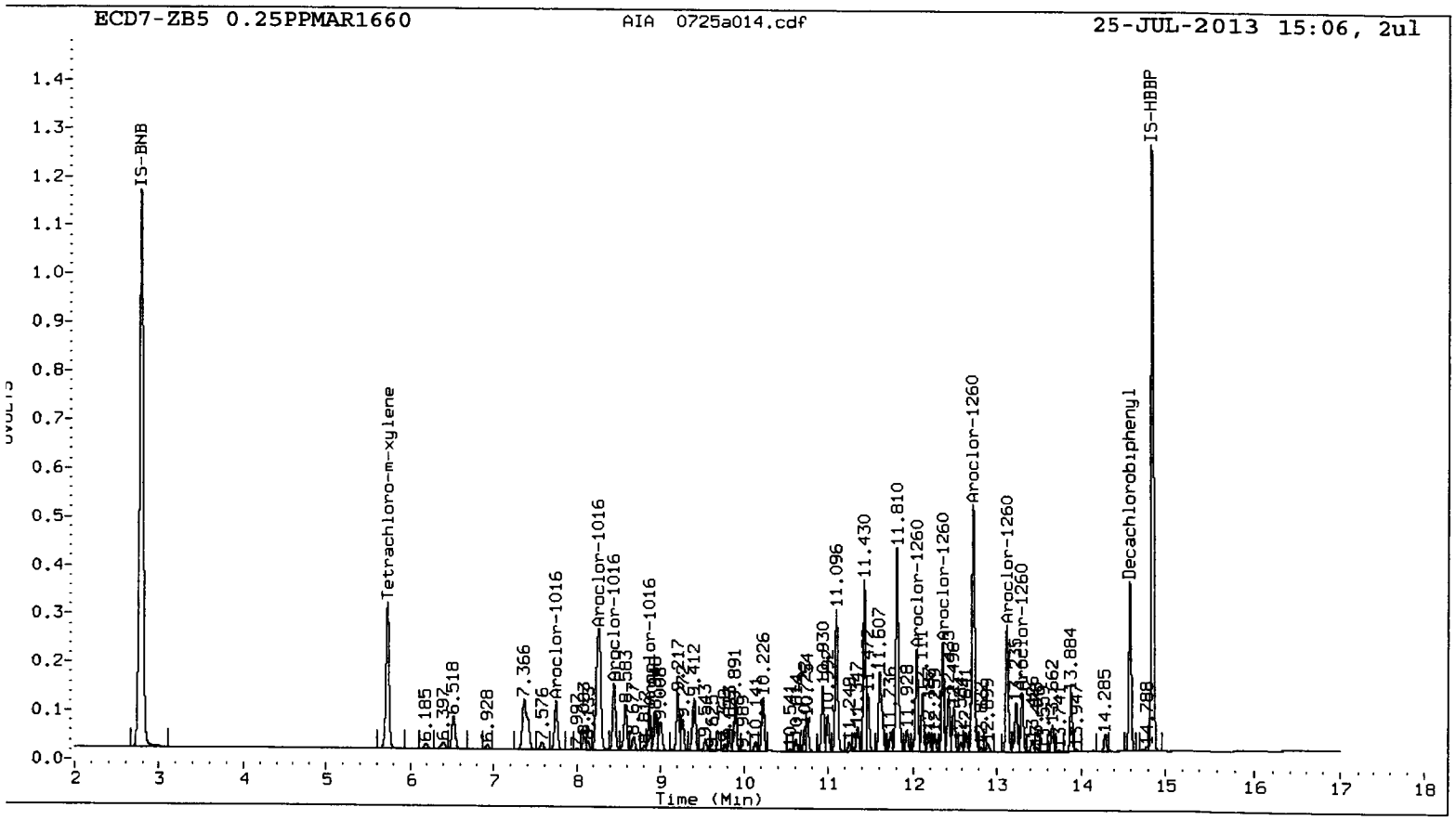
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.741	0.002	532710	249.4	1	6.636	0.001	557709	235.6
Aroclor-1016	2	8.261	0.001	1840524	253.8	2	7.515	0.002	1255897	236.2
Aroclor-1016	3	8.447	0.000	707078	251.1	3	8.326	0.000	2636293	237.6
Aroclor-1016	4	8.873	0.001	411363	247.0	4	8.926	0.000	765740	232.6
Total Col1Ave (4 peaks):					250.3	Total Col2Ave (4 peaks):				235.5 RPD = 6
Corrected Ave (3 peaks):					249.2	Corrected Ave (3 peaks):				234.8 RPD = 6
Aroclor-1260	1	12.041	-0.001	937051	253.6	1	11.941	0.000	1831632	237.4
Aroclor-1260	2	12.359	0.000	963602	255.0	2	12.485	0.001	1482057	235.8
Aroclor-1260	3	12.728	-0.001	2330157	256.7	3	12.754	0.000	2923755	239.6
Aroclor-1260	4	13.125	0.000	1222495	257.6	4	13.314	-0.001	1960367	238.9
Aroclor-1260	5	13.304	0.000	523638	255.3	NS	---			----
Total Col1Ave (5 peaks):					255.6	Total Col2Ave (4 peaks):				237.9 RPD = 7
Corrected Ave (4 peaks):					255.1	Corrected Ave (3 peaks):				237.4 RPD = 7

Total PCB Area Col1 (5.834 - 14.490) = 27143316 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.483 - 14.521) = 38307301 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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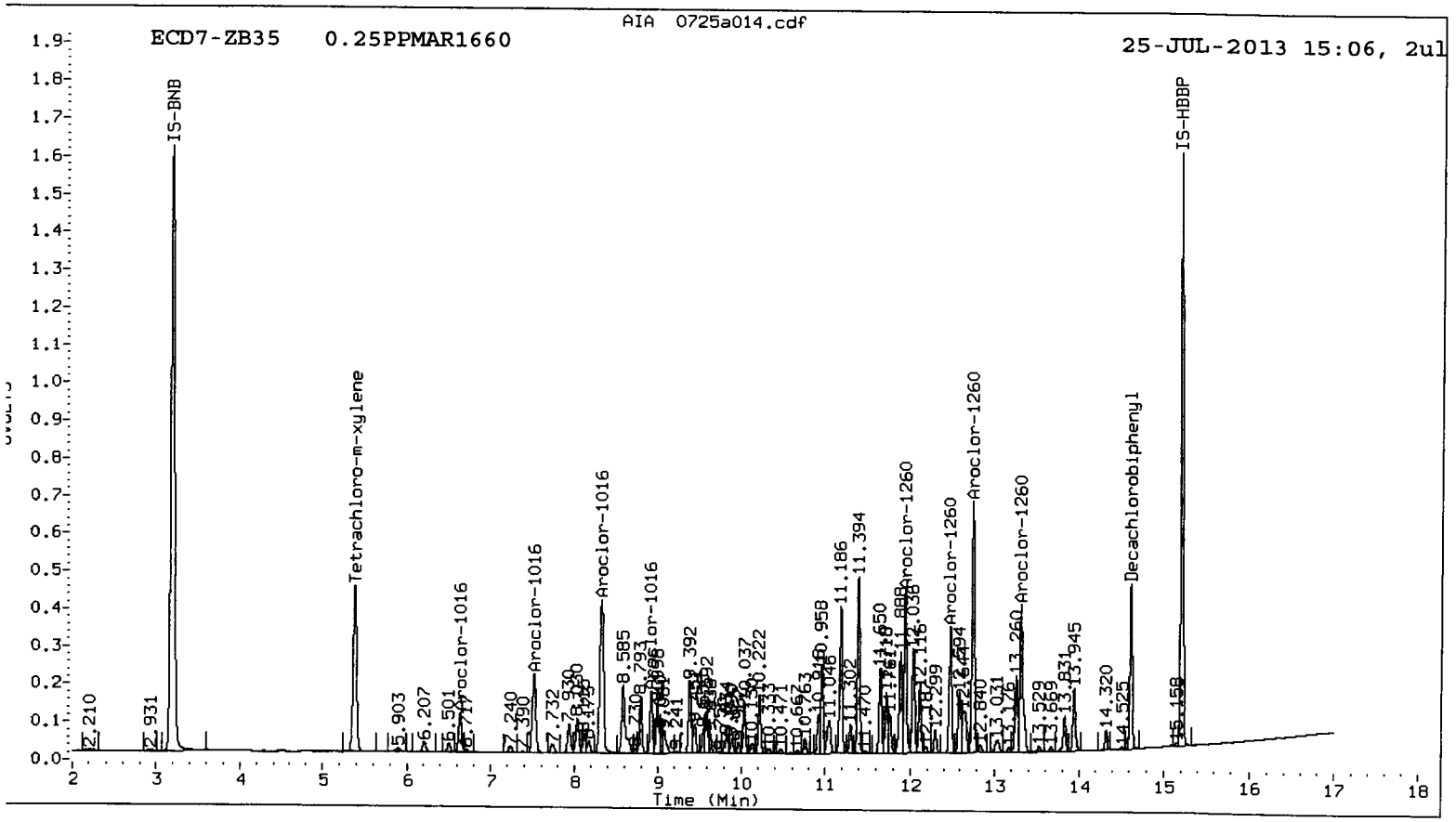
25-JUL-2013 15:06, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)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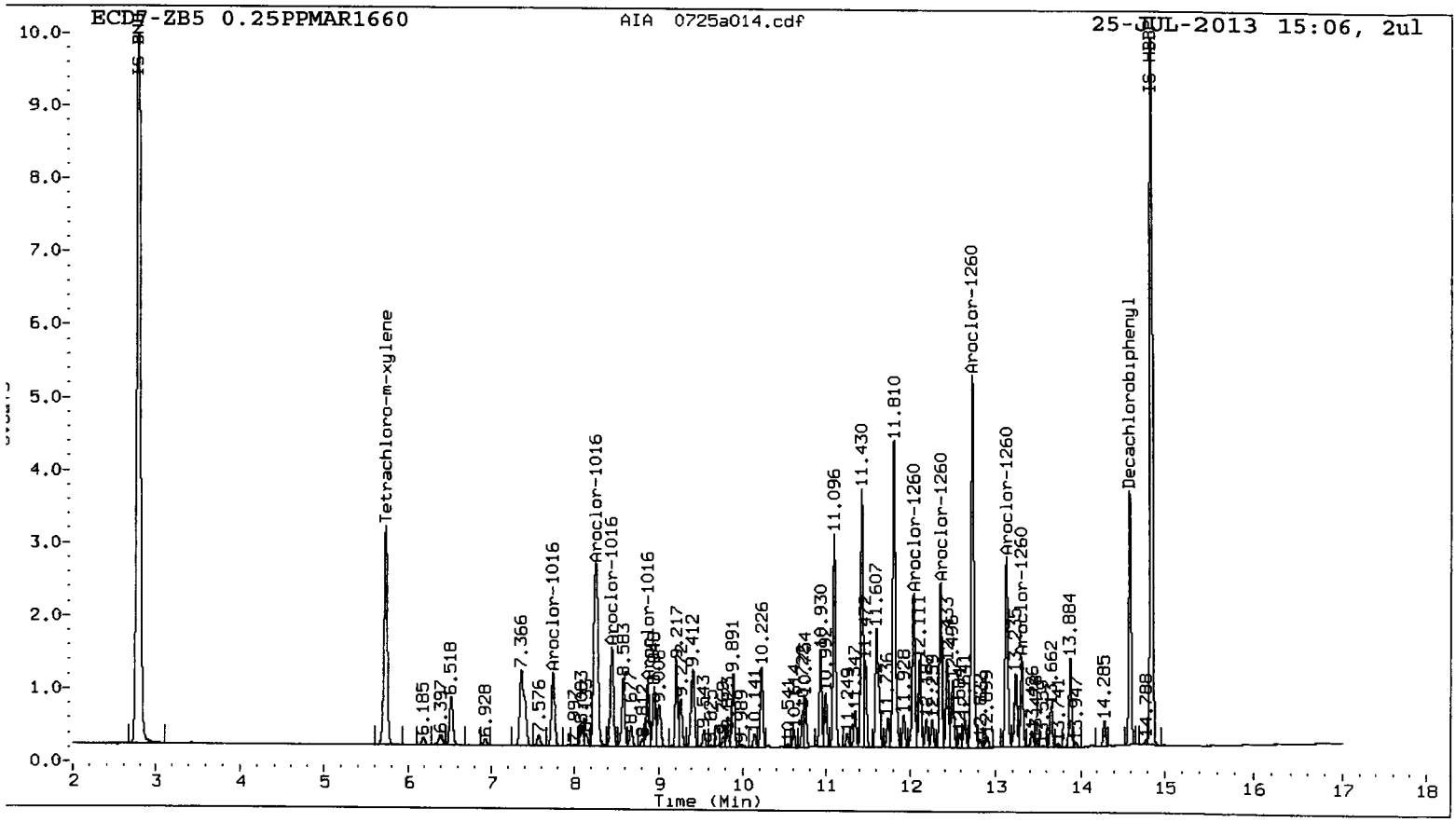
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)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IS HBB
Tetrachloro-m-xylene
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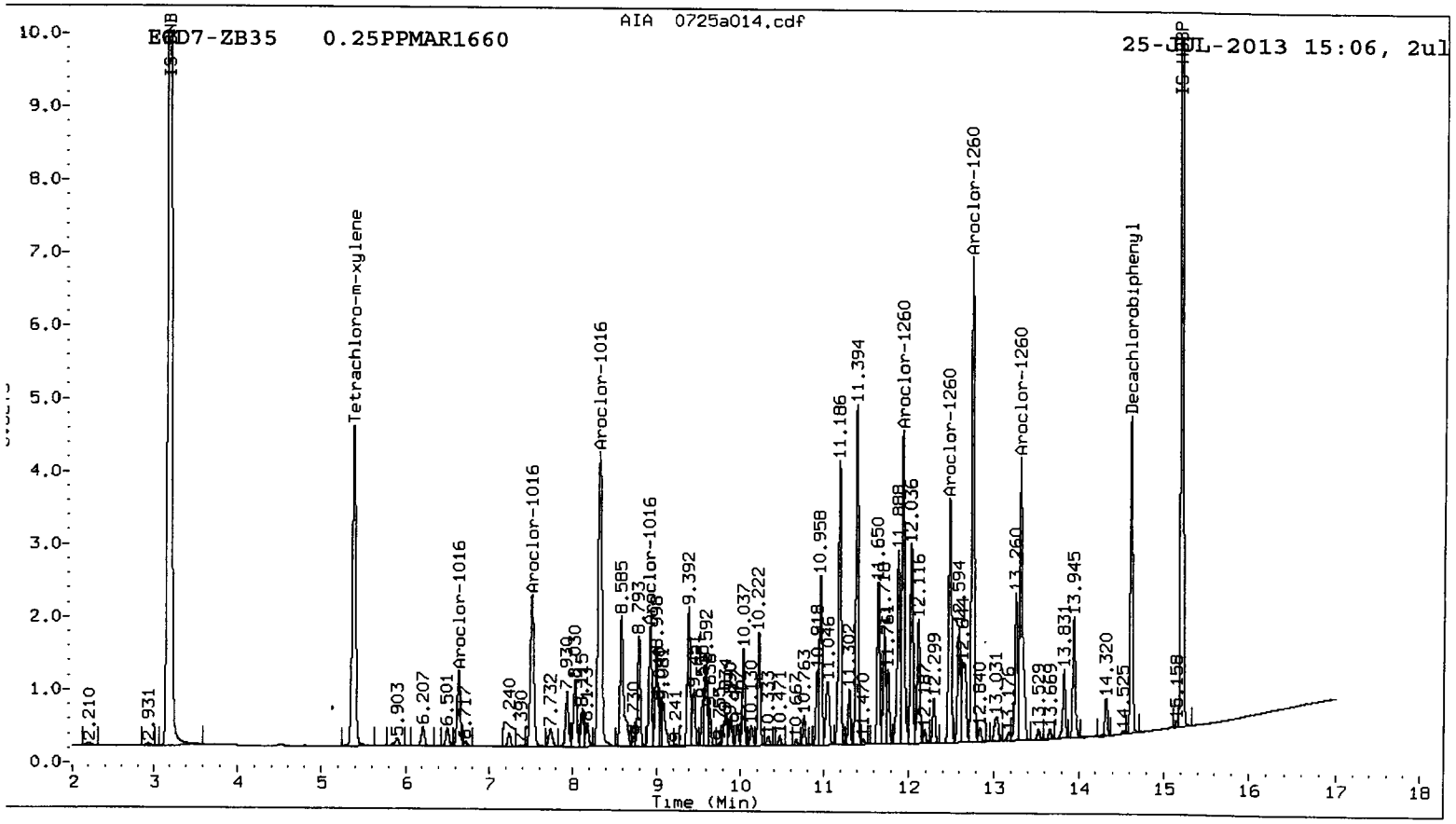
Aroclor-1260
Decachlorobiphenyl
Time (Min)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AIA 0725a014.cdf
25-JUL-2013 15:06, 2ul
IS HBB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/ical-1.b/0725a015.d
Data file 2: 20130725.b/ical-2.b/0725a015.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPMAR1660
Client ID:
Injection Date: 25-JUL-2013 15:28
Report Date: 07/26/2013 10:04
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.732	-0.002	119359	5.381	-0.001	225449	1.4	1.8	20.1	Tetrachloro-m-xylene
14.590	0.000	113250	14.622	0.001	157076	1.7	1.8	8.3	Decachlorobiphenyl

Indicates RPD > 40%
[Indicates Column 1 peak was manually integrated
[Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	3.6	4.4
Decachlorobiphenyl	4.1	4.5

07/26/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7267768	1.1
Hexabromobiphenyl	4753836	4873020	2.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	9945886	1.1
Hexabromobiphenyl	5491228	5623589	2.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

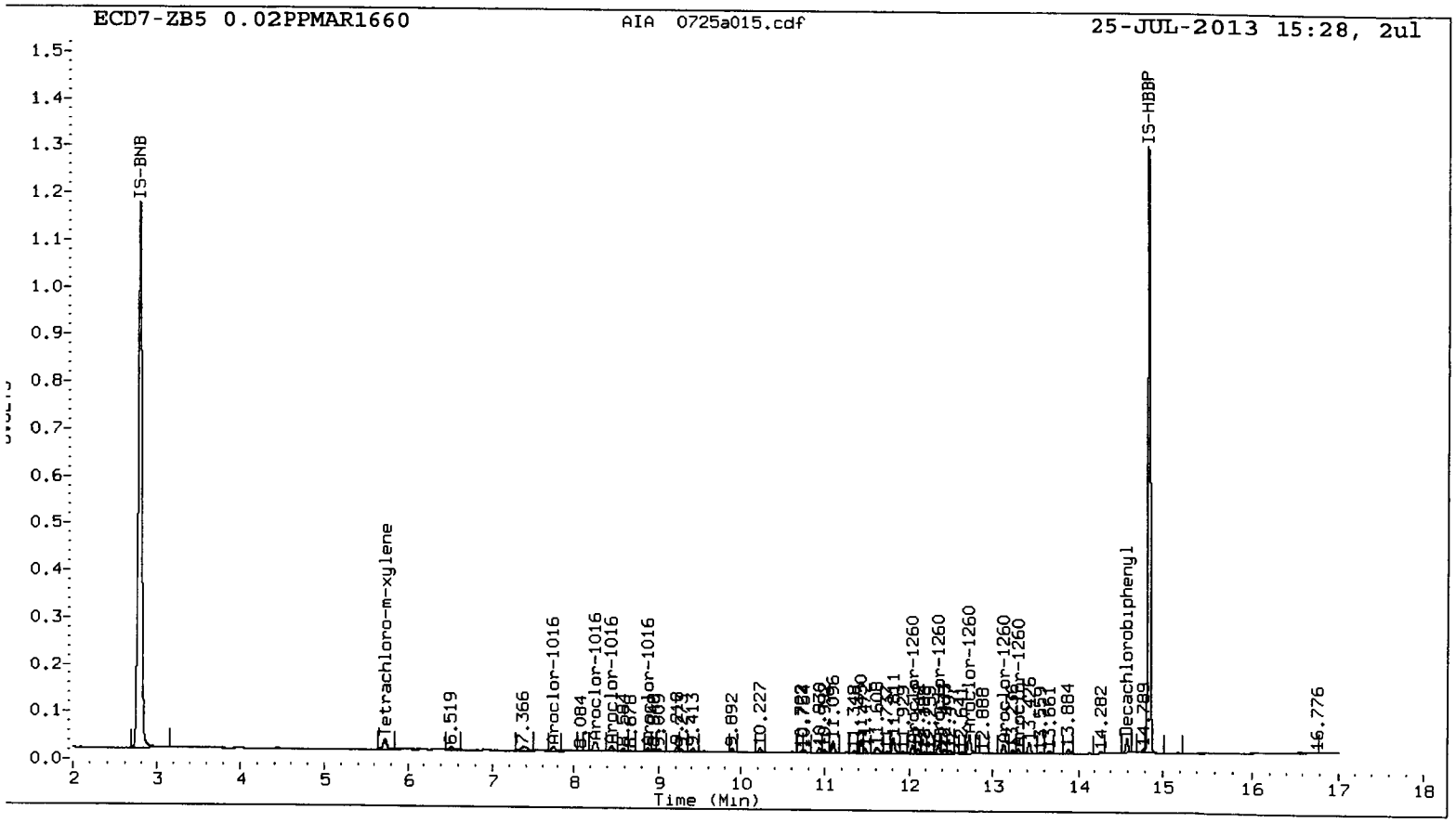
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.741	0.002	43995	20.4	1	6.637	0.002	57634	24.1
Aroclor-1016	2	8.263	0.003	143888	19.6	2	7.514	0.001	128569	23.9
Aroclor-1016	3	8.449	0.002	56876	20.0	3	8.326	0.000	262299	23.4
Aroclor-1016	4	8.874	0.002	35119	20.9	4	8.927	0.001	81262	24.4
Total Col1Ave (4 peaks):					20.2	Total Col2Ave (4 peaks):				24.0 RPD = 17
Corrected Ave (3 peaks):					20.0	Corrected Ave (3 peaks):				23.8 RPD = 17
Aroclor-1260	1	12.043	0.001	76808	20.3	1	11.941	0.000	188571	23.9
Aroclor-1260	2	12.359	0.000	76872	19.8	2	12.485	0.001	156018	24.2
Aroclor-1260	3	12.730	0.000	182882	19.7	3	12.754	0.000	285290	22.8
Aroclor-1260	4	13.125	0.000	92524	19.0	4	13.315	0.000	193259	23.0
Aroclor-1260	5	13.304	-0.001	40627	19.3	NS	---			----
Total Col1Ave (5 peaks):					19.6	Total Col2Ave (4 peaks):				23.5 RPD = 18
Corrected Ave (4 peaks):					19.5	Corrected Ave (3 peaks):				23.2 RPD = 18

Total PCB Area Col1 (5.834 - 14.490) = 2231158 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (5.483 - 14.521) = 4082720 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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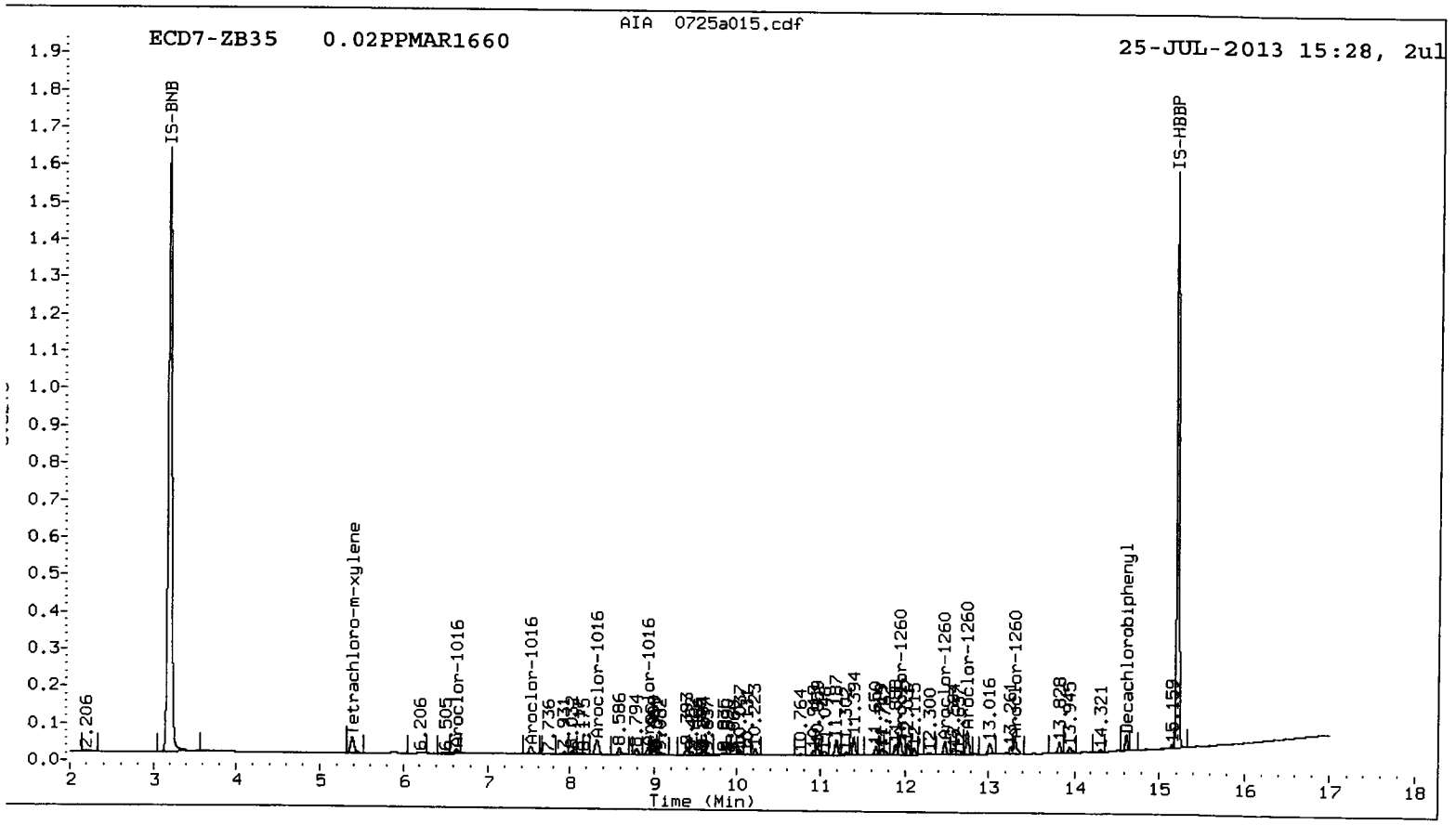
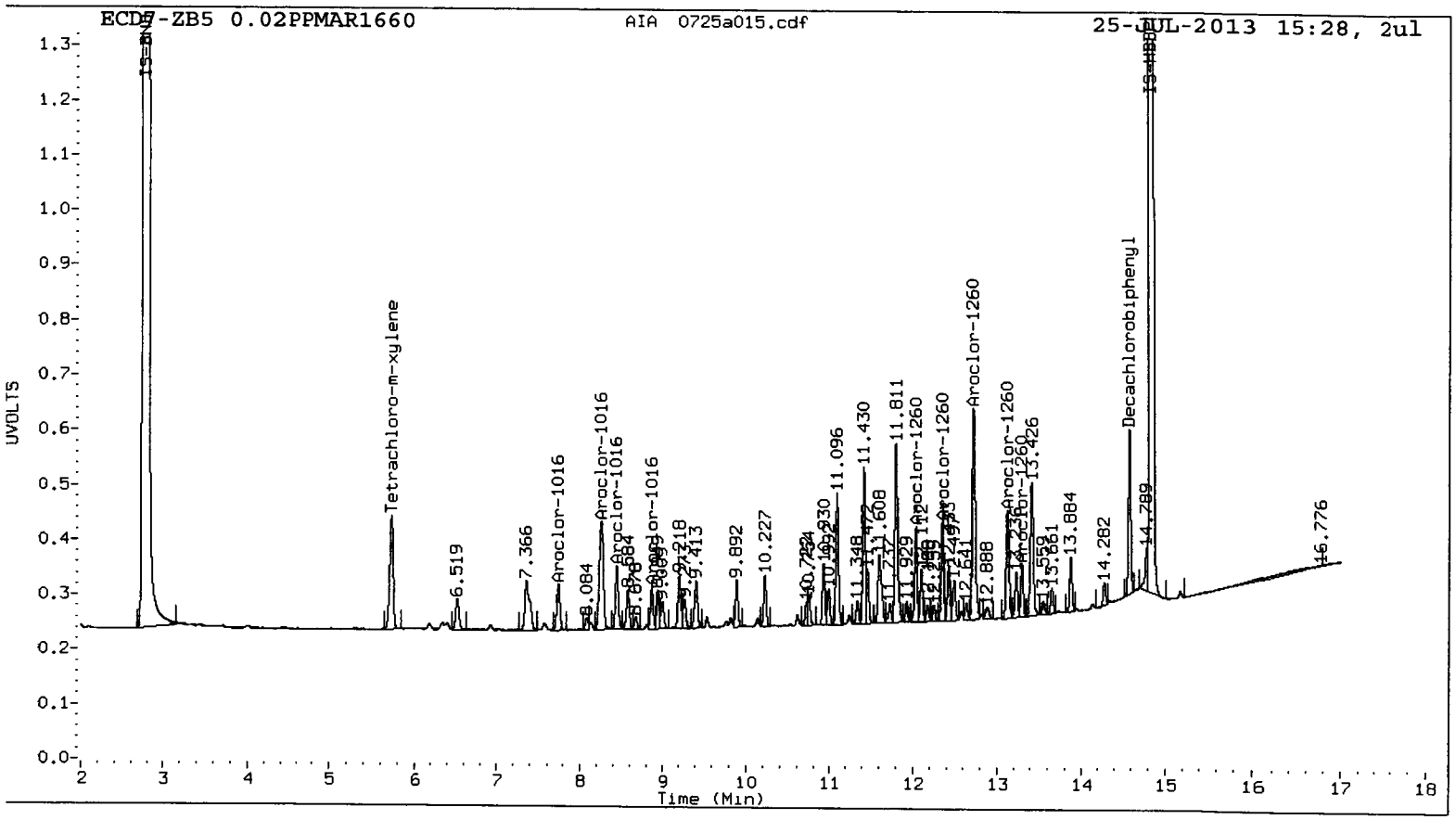
AIA 0725a015.cdf
25-JUL-2013 15:28, 2ul
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Time (Min)


ECD7-ZB35 0.02PPMAR1660
AIA 0725a015.cdf
25-JUL-2013 15:28, 2ul
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Time (Min)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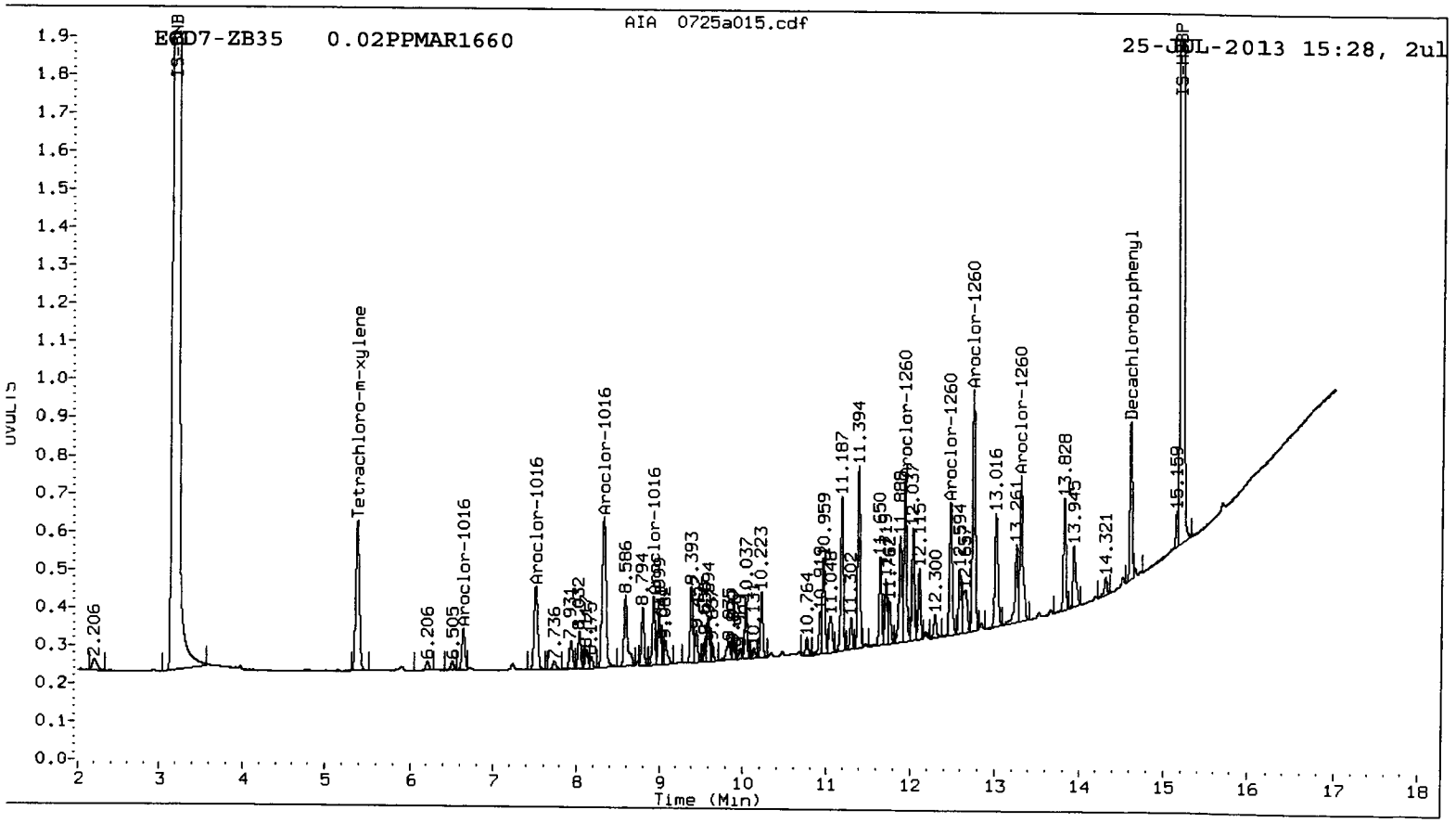
AIA 0725a015.cdf
25-JUL-2013 15:28, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260
6.519
7.366
9.892
10.227
11.096
11.430
11.811
12.888
13.426
13.884
14.282
14.789
16.776


AIA 0725a015.cdf
ECD7-ZB35 0.02PPMAR1660
25-JUL-2013 15:28, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260
2.206
6.206
6.505
7.736
8.586
8.794
9.393
10.223
10.764
10.959
11.187
11.394
12.300
13.016
13.261
13.828
13.945
14.321
15.159

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/ical-1.b/0725a016.d
Data file 2: 20130725.b/ical-2.b/0725a016.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPMAR1660
Client ID:
Injection Date: 25-JUL-2013 15:50
Report Date: 07/26/2013 10:04
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.733	-0.001	299012	5.382	-0.001	505491	3.8	4.1	8.6	Tetrachloro-m-xylene
14.590	0.000	269415	14.622	0.001	359789	4.1	4.3	4.2	Decachlorobiphenyl

Indicates RPD > 40%
Indicates Column 1 peak was manually integrated
Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	9.4	10.3
Decachlorobiphenyl	10.3	10.7

07/26/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	6945459	-3.3
Hexabromobiphenyl	4753836	4657741	-2.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	9546991	-3.0
Hexabromobiphenyl	5491228	5392217	-1.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

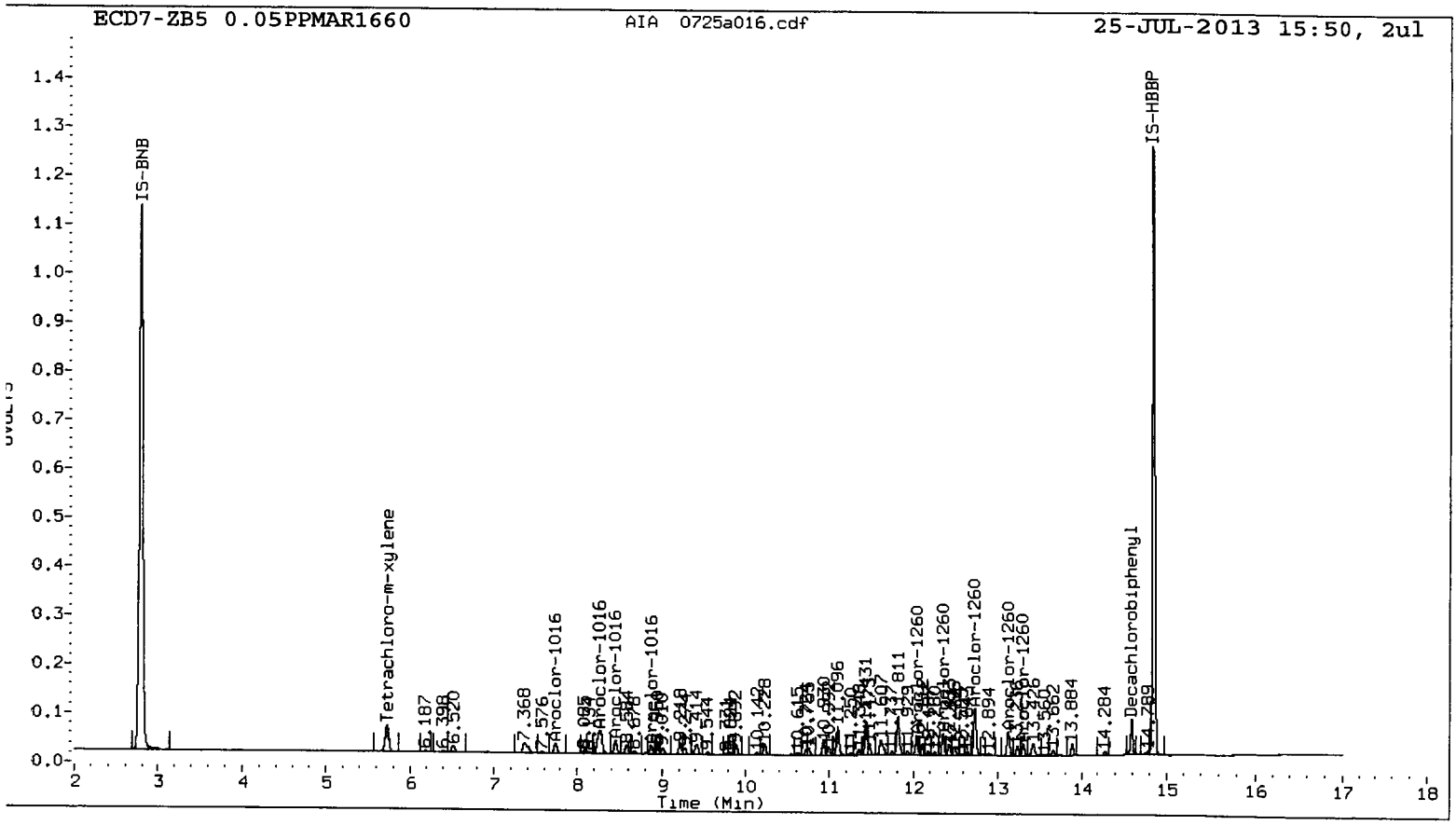
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.742	0.002	106142	51.4	1	6.637	0.002	129373	56.3
Aroclor-1016	2	8.263	0.003	349264	49.8	2	7.517	0.004	289743	56.1
Aroclor-1016	3	8.449	0.002	138097	50.7	3	8.328	0.002	582917	54.1
Aroclor-1016	4	8.874	0.002	84173	52.3	4	8.927	0.001	180496	56.5
Total Col1Ave (4 peaks):					51.1	Total Col2Ave (4 peaks):				55.8 RPD = 9
Corrected Ave (3 peaks):					50.7	Corrected Ave (3 peaks):				55.5 RPD = 9
Aroclor-1260	1	12.043	0.001	183060	50.6	1	11.942	0.000	413361	54.6
Aroclor-1260	2	12.359	0.000	184845	49.9	2	12.485	0.001	342024	55.4
Aroclor-1260	3	12.729	0.000	440195	49.5	3	12.754	-0.001	639589	53.4
Aroclor-1260	4	13.125	0.000	227634	49.0	4	13.315	0.000	439021	54.5
Aroclor-1260	5	13.304	0.000	99598	49.6	NS	---			----
Total Col1Ave (5 peaks):					49.7	Total Col2Ave (4 peaks):				54.5 RPD = 9
Corrected Ave (4 peaks):					49.5	Corrected Ave (3 peaks):				54.1 RPD = 9

Total PCB Area Col1 (5.834 - 14.490) = 5348594 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (5.483 - 14.521) = 8904225 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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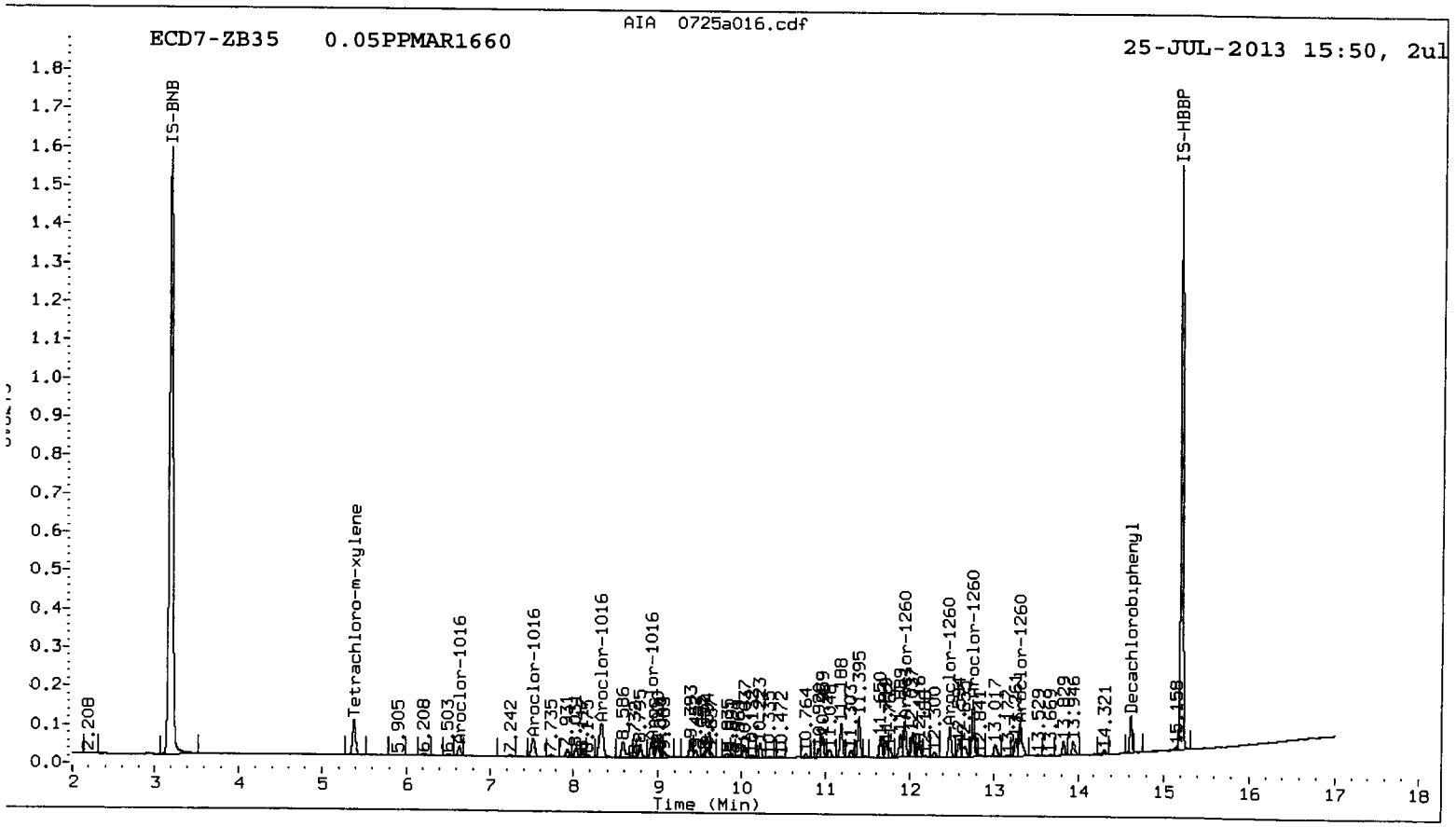
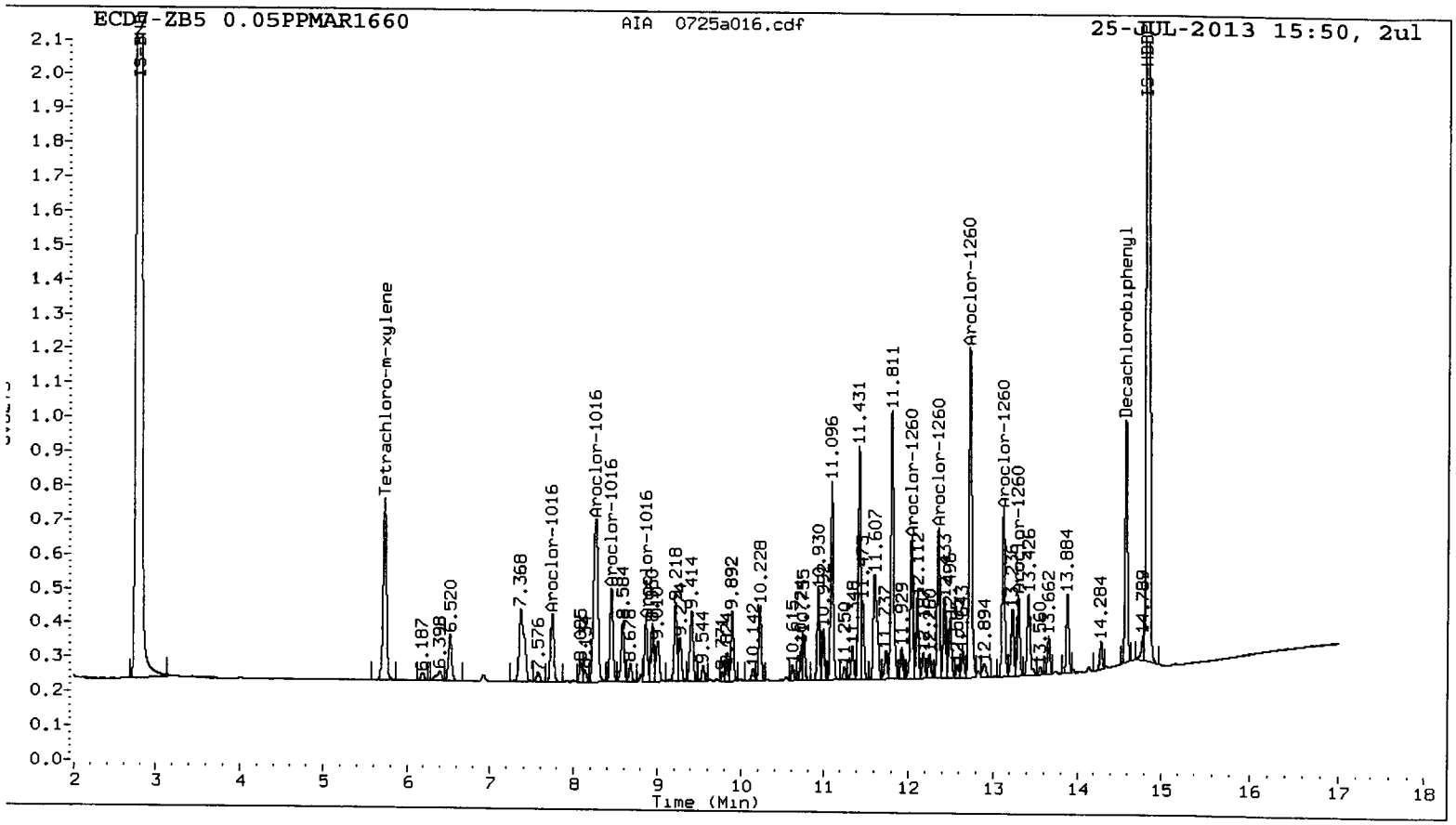
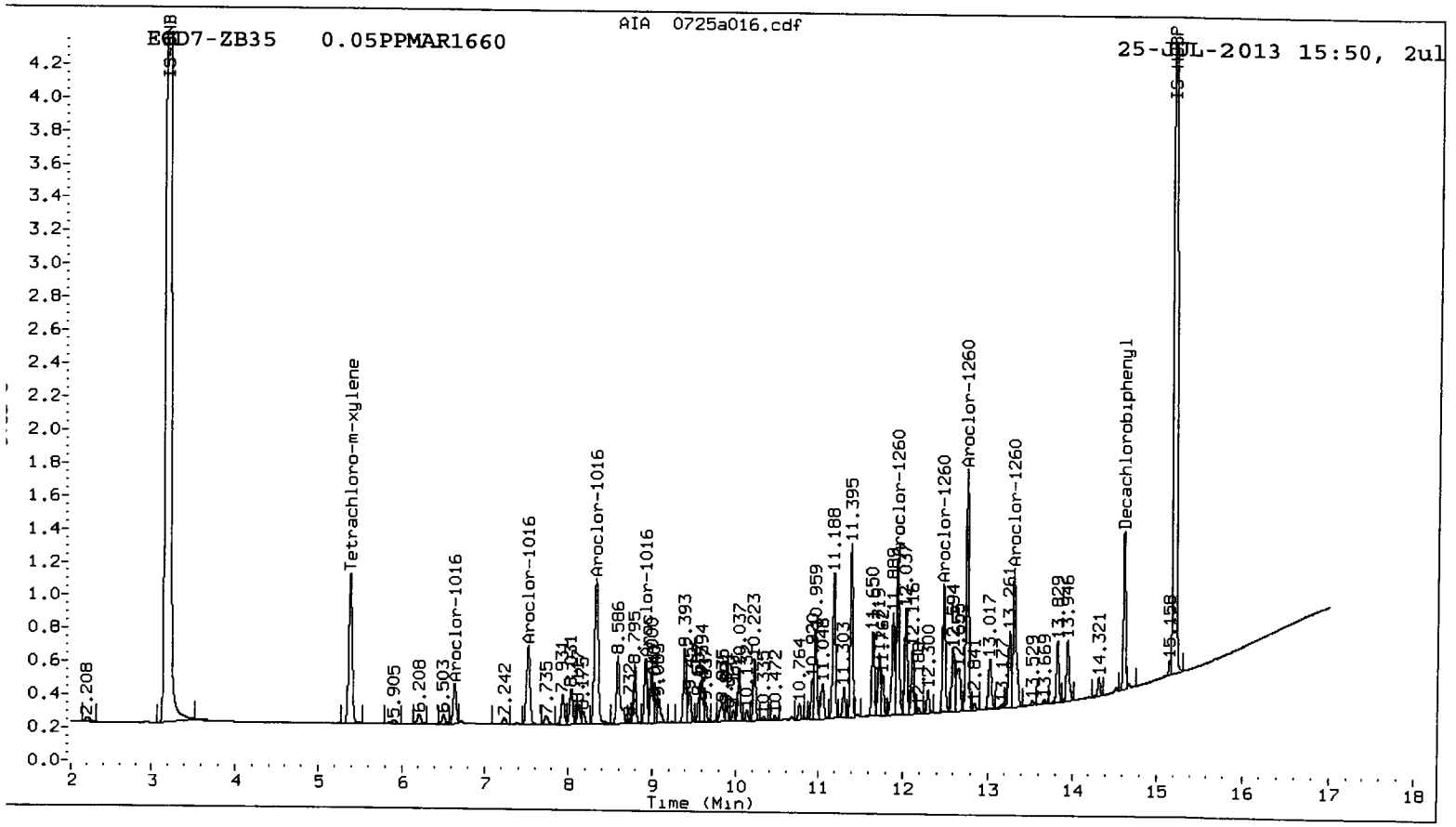
AIA 0725a016.cdf
25-JUL-2013 15:50, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


AIA 0725a016.cdf
ECD7-ZB35 0.05PPMAR1660
25-JUL-2013 15:50, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD7-ZB5 0.05PPMAR1660
AIA 0725a016.cdf
25-JUL-2013 15:50, 2ul
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
Time (Min)


ECD7-ZB35 0.05PPMAR1660
AIA 0725a016.cdf
25-JUL-2013 15:50, 2ul
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/ical-1.b/0725a017.d
Data file 2: 20130725.b/ical-2.b/0725a017.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 1PPMAR1660
Client ID:
Injection Date: 25-JUL-2013 16:12
Report Date: 07/26/2013 10:04
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.734	0.000	6856182	5.382	-0.001	9405530	84.7	75.0	12.2	Tetrachloro-m-xylene
14.590	0.000	5120609	14.622	0.000	6230845	75.5	71.4	5.6	Decachlorobiphenyl

Indicates RPD > 40%
Indicates Column 1 peak was manually integrated
Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	211.6	187.4
Decachlorobiphenyl	188.8	178.6

JR 07/26/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7099903	-1.2
Hexabromobiphenyl	4753836	4819445	1.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	9753051	-0.9
Hexabromobiphenyl	5491228	5606193	2.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

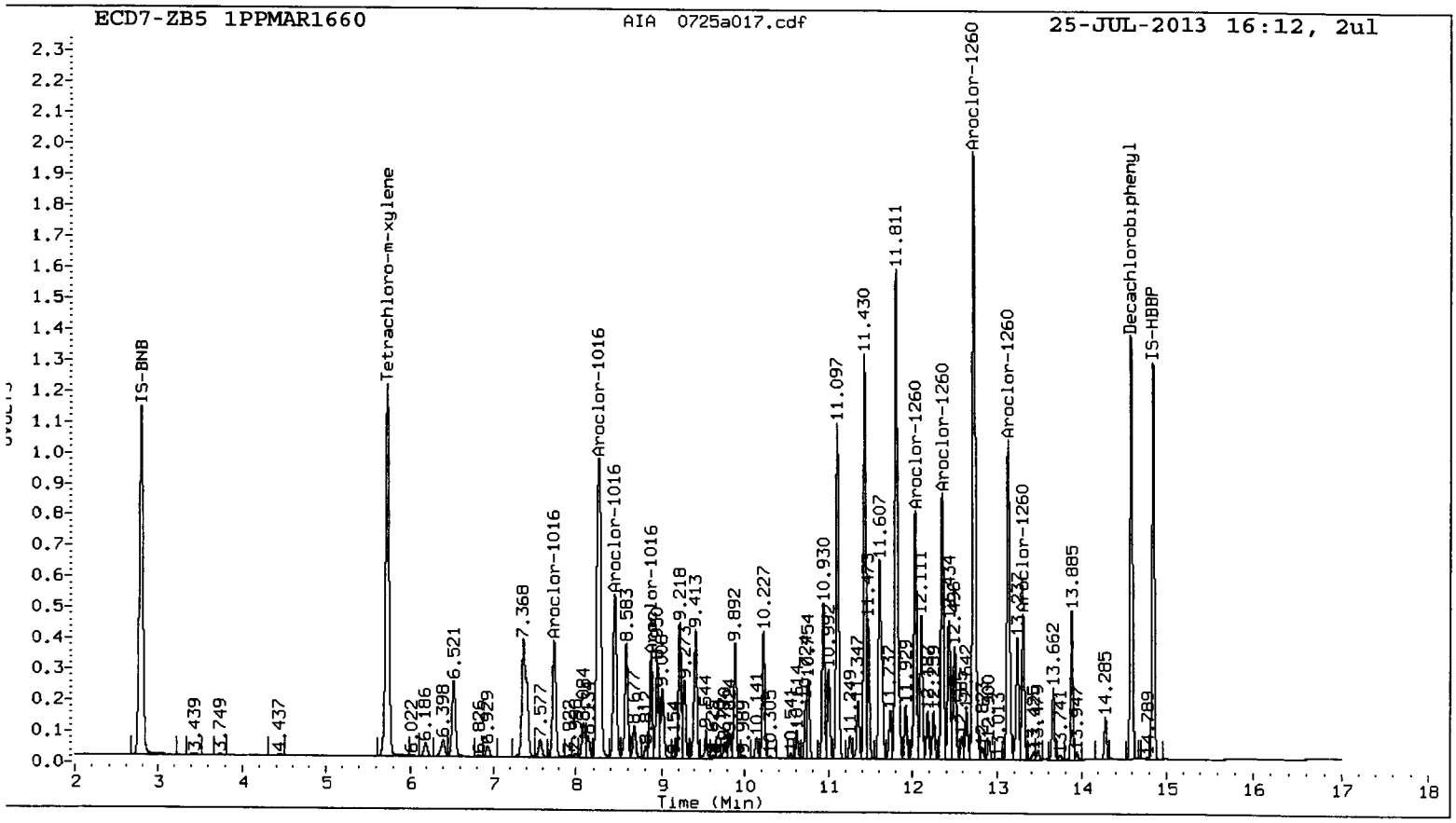
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.742	0.002	2008279	951.6	1	6.636	0.002	1882975	802.5
Aroclor-1016	2	8.261	0.002	7049229	983.7	2	7.516	0.003	4286205	813.0
Aroclor-1016	3	8.448	0.002	2683379	964.4	3	8.328	0.002	9523011	865.9
Aroclor-1016	4	8.874	0.002	1530904	930.5	4	8.926	0.000	2637141	808.1
Total Col1Ave (4 peaks):					957.5	Total Col2Ave (4 peaks):			822.3	RPD = 15
Corrected Ave (3 peaks):					948.8	Corrected Ave (3 peaks):			807.8	RPD = 16
Aroclor-1260	1	12.042	0.000	3565571	951.9	1	11.942	0.000	6643535	843.5
Aroclor-1260	2	12.360	0.001	3714951	969.6	2	12.484	0.000	5321087	829.2
Aroclor-1260	3	12.730	0.000	8974685	975.1	3	12.755	0.001	11013393	884.0
Aroclor-1260	4	13.126	0.001	4823282	1002.7	4	13.315	-0.001	7210172	860.5
Aroclor-1260	5	13.305	0.000	2057403	989.6	NS	---			----
Total Col1Ave (5 peaks):					977.8	Total Col2Ave (4 peaks):			854.3	RPD = 13
Corrected Ave (4 peaks):					971.6	Corrected Ave (3 peaks):			844.4	RPD = 14

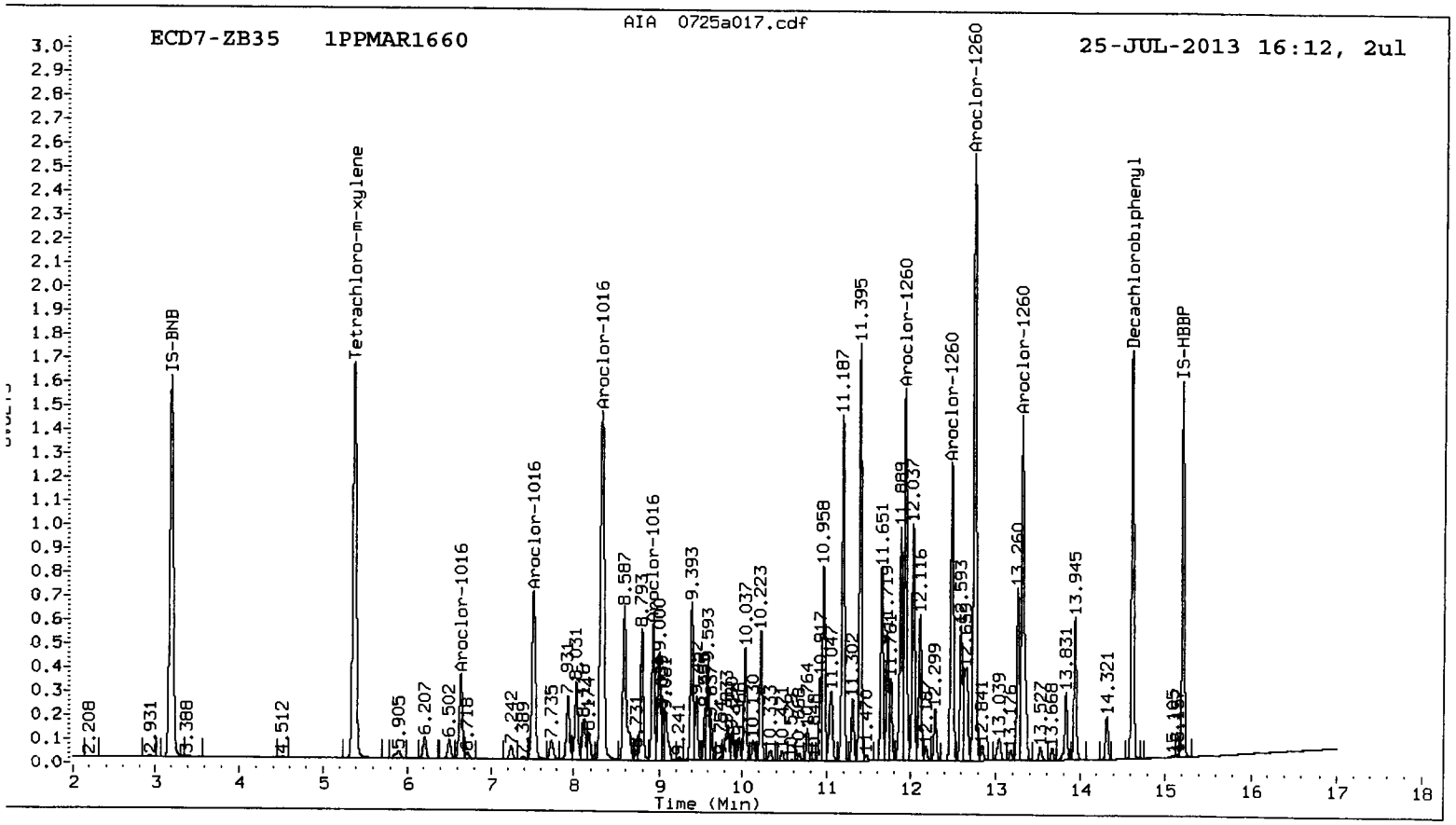
Total PCB Area Col1 (5.834 - 14.490) = 103703875 Col1 Total PCB = 1.9 ppm*

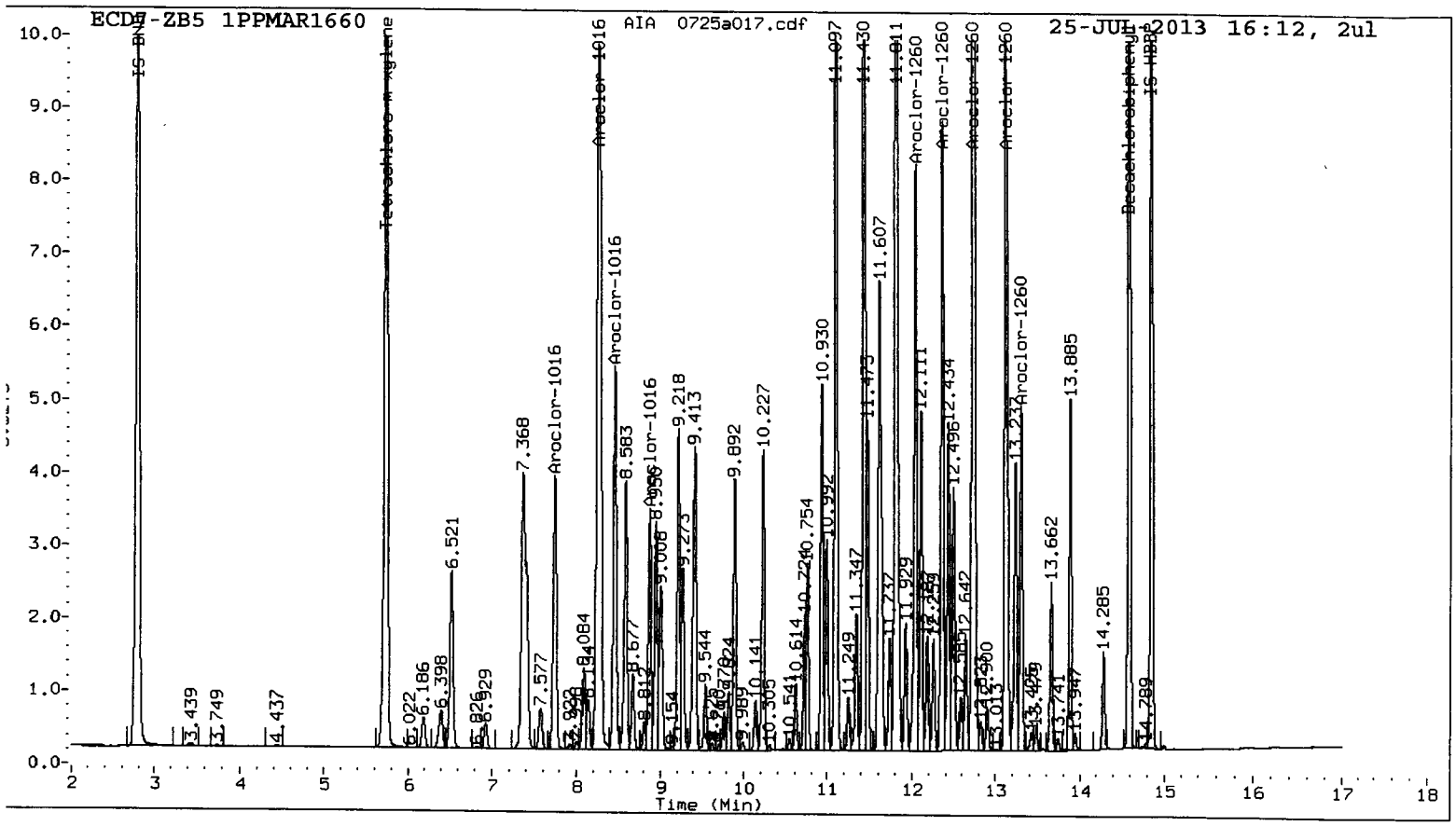
Total PCB Area Col2 (5.483 - 14.521) = 134835573 Col2 Total PCB = 1.8 ppm*

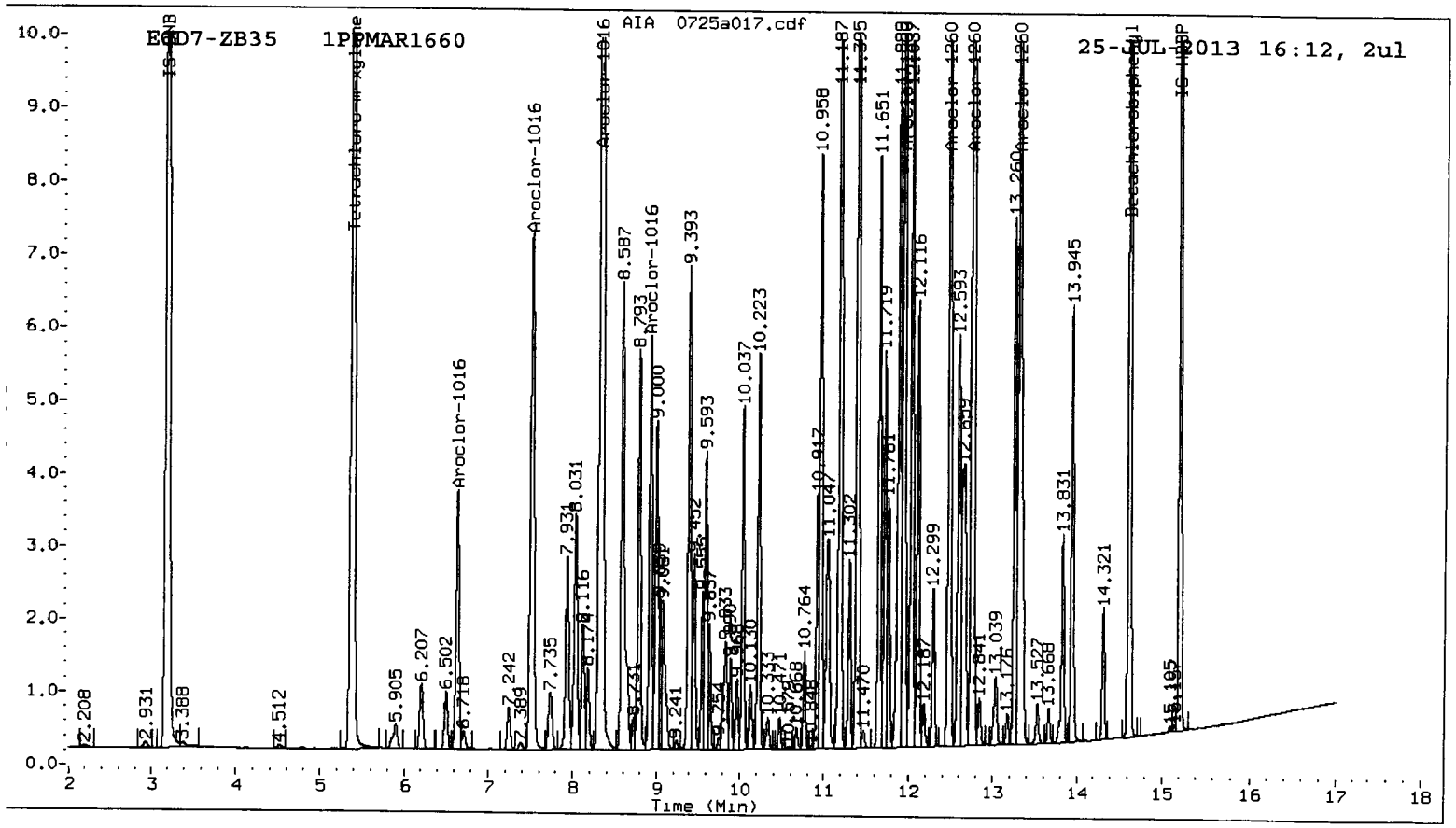
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD7-ZB5 1PPMAR1660
AIA 0725a017.cdf
25-JUL-2013 16:12, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD7-ZB35 1PPMAR1660
AIA 0725a017.cdf
25-JUL-2013 16:12, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD7-ZB5 1PPMAR1660
AIA 0725a017.cdf
25-JUL-2013 16:12, 2ul
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
Time (Min)


ECD7-ZB35 1PPMAR1660
AIA 0725a017.cdf
25-JUL-2013 16:12, 2ul
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/ical-1.b/0725a018.d
Data file 2: 20130725.b/ical-2.b/0725a018.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPMAR1660
Client ID:
Injection Date: 25-JUL-2013 16:33
Report Date: 07/26/2013 10:04
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.732	-0.002	674674	5.382	-0.001	1055150	8.0	8.0	0.4	Tetrachloro-m-xylene
14.590	0.000	570708	14.622	0.001	730878	8.2	8.2	0.3	Decachlorobiphenyl

Indicates RPD > 40%
Indicates Column 1 peak was manually integrated
Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	19.9	20.0
Decachlorobiphenyl	20.5	20.6

JK 07/26/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7413451	3.2
Hexabromobiphenyl	4753836	4943526	4.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	10237659	4.1
Hexabromobiphenyl	5491228	5707164	3.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

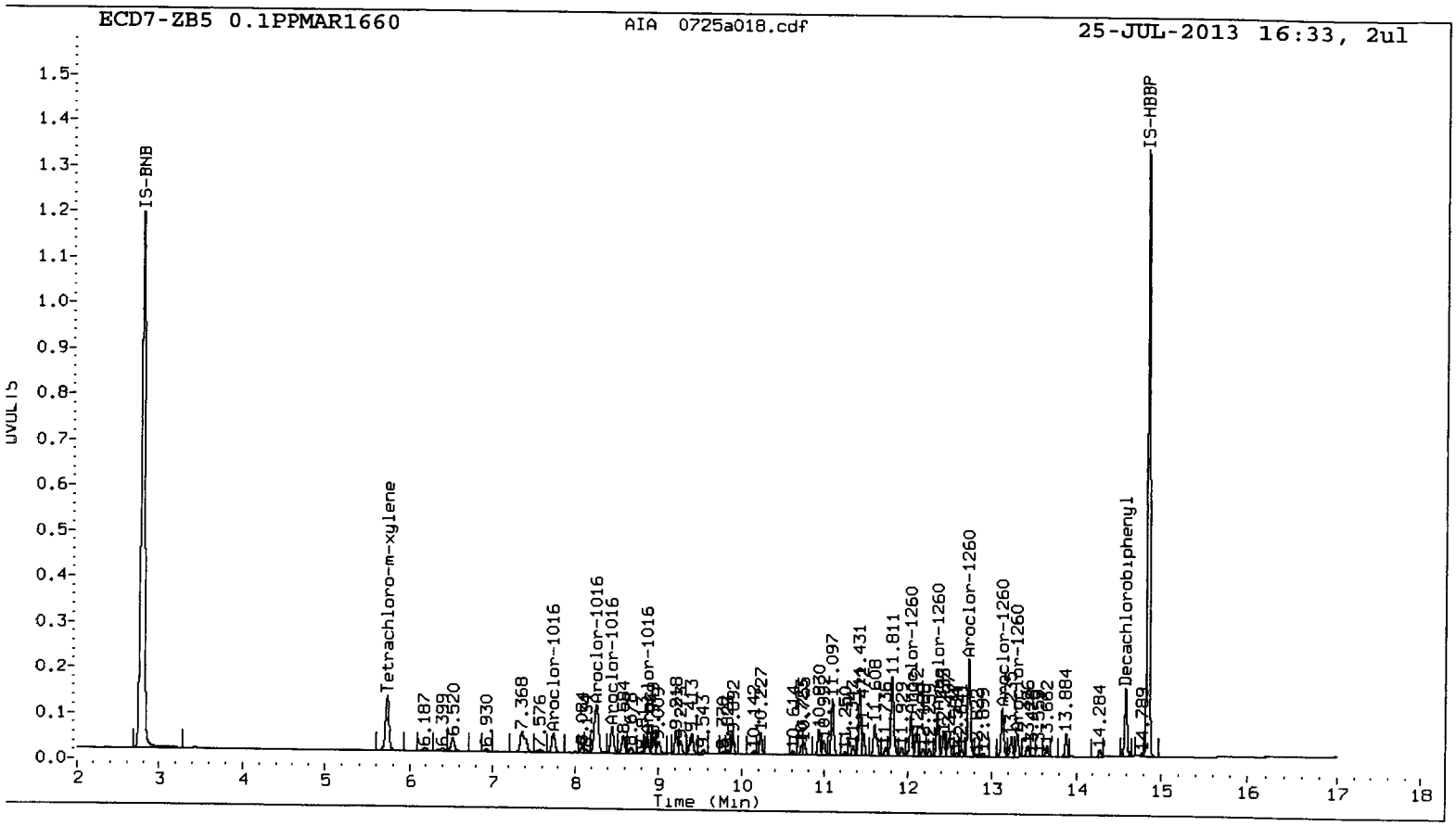
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.741	0.002	223913	101.6	1	6.637	0.002	257584	104.6
Aroclor-1016	2	8.262	0.002	757309	101.2	2	7.516	0.003	575894	104.1
Aroclor-1016	3	8.448	0.002	295444	101.7	3	8.327	0.001	1175259	101.8
Aroclor-1016	4	8.874	0.002	176246	102.6	4	8.927	0.001	355319	103.7
Total Col1Ave (4 peaks):				101.8		Total Col2Ave (4 peaks):			103.5	RPD = 2
Corrected Ave (3 peaks):				101.5		Corrected Ave (3 peaks):			103.2	RPD = 2
Aroclor-1260	1	12.042	0.000	392530	102.2	1	11.941	-0.001	824726	102.9
Aroclor-1260	2	12.360	0.001	400199	101.8	2	12.484	0.000	670229	102.6
Aroclor-1260	3	12.730	0.000	960847	101.8	3	12.754	-0.001	1301166	102.6
Aroclor-1260	4	13.126	0.001	499324	101.2	4	13.314	-0.001	884019	103.6
Aroclor-1260	5	13.305	0.000	216766	101.6	NS	---			----
Total Col1Ave (5 peaks):				101.7		Total Col2Ave (4 peaks):			102.9	RPD = 1
Corrected Ave (4 peaks):				101.6		Corrected Ave (3 peaks):			102.7	RPD = 1

Total PCB Area Col1 (5.834 - 14.490) = 11370521 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.483 - 14.521) = 17535641 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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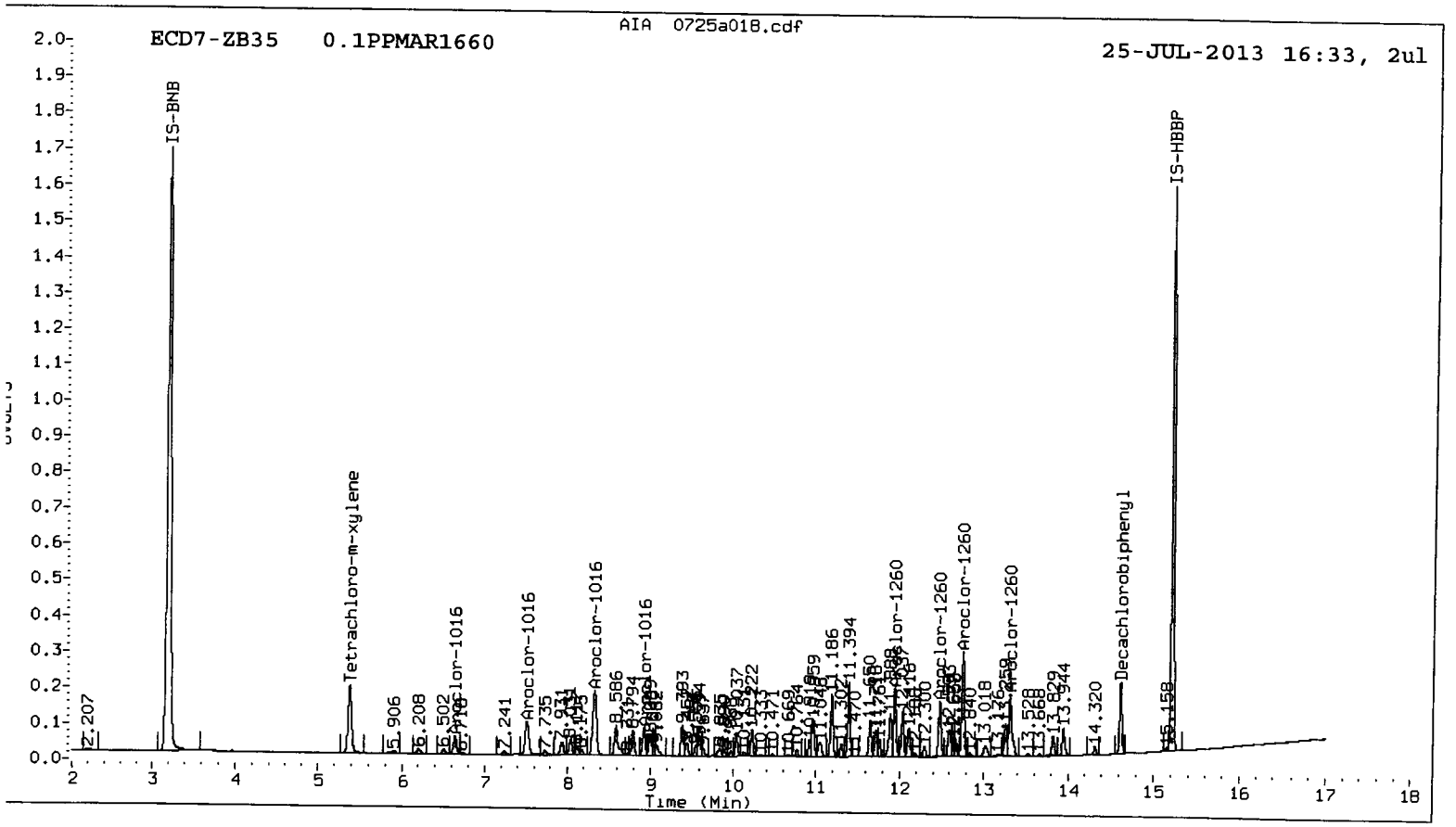
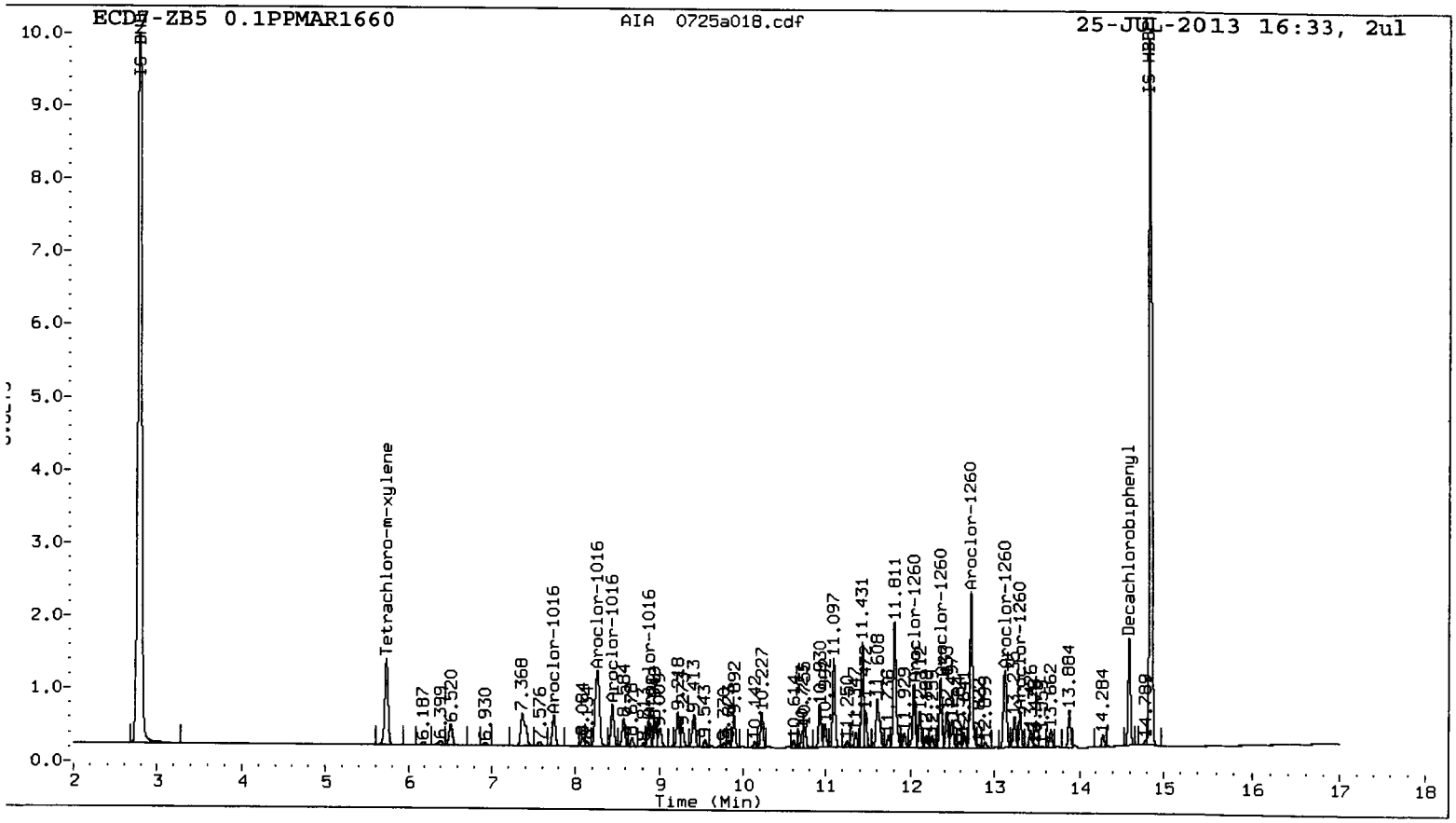
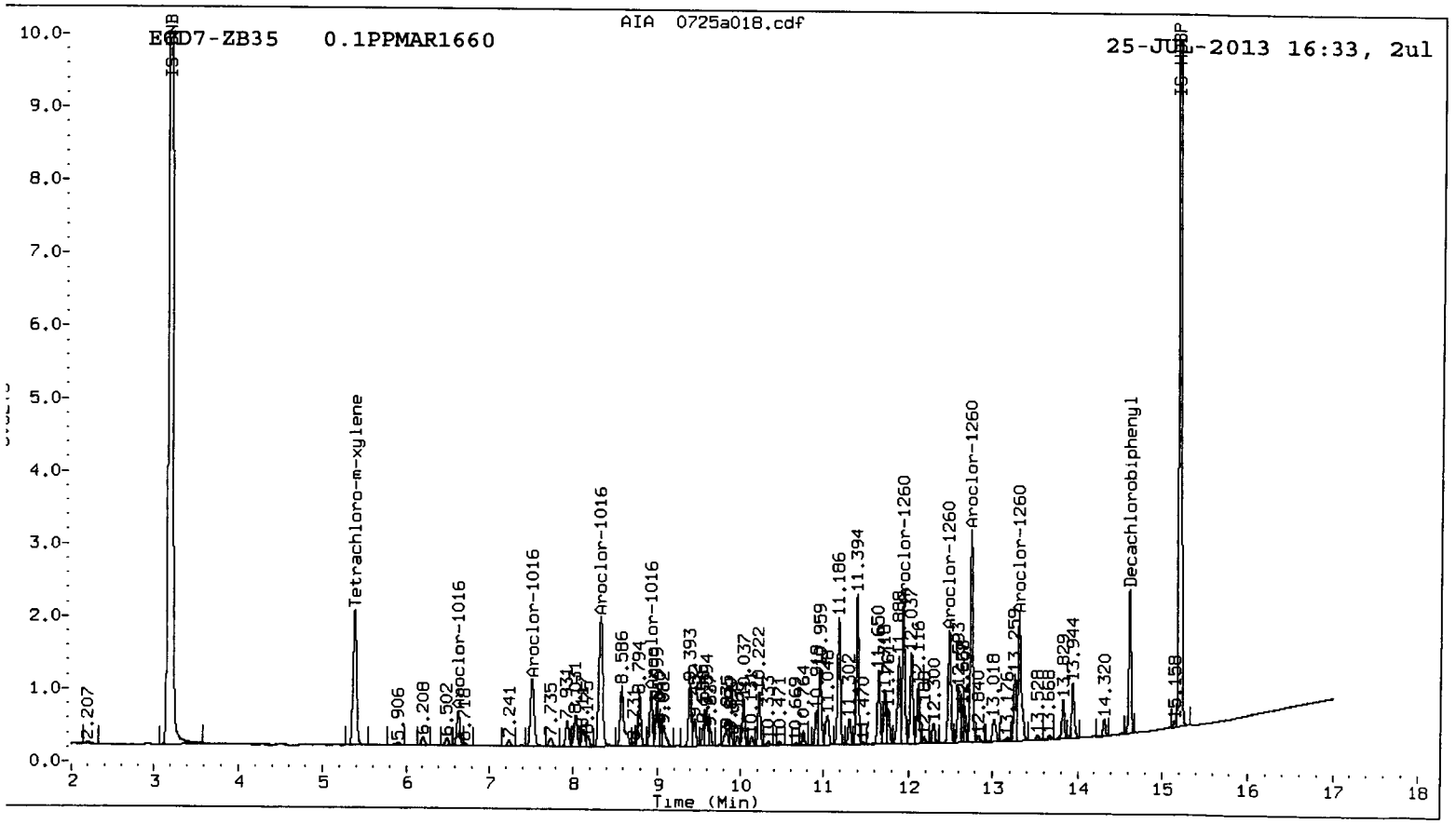
AIA 0725a018.cdf
25-JUL-2013 16:33, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


AIA 0725a018.cdf
ECD7-ZB35 0.1PPMAR1660
25-JUL-2013 16:33, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD7-ZB5 0.1PPMAR1660
AIA 0725a018.cdf
25-JUL-2013 16:33, 2ul
IS DNB
IS HBB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
Time (Min)


ECD7-ZB35 0.1PPMAR1660
AIA 0725a018.cdf
25-JUL-2013 16:33, 2ul
IS DNB
IS HBB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/ical-1.b/0725a019.d
Data file 2: 20130725.b/ical-2.b/0725a019.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5PPMAR1660
Client ID:
Injection Date: 25-JUL-2013 16:55
Report Date: 07/26/2013 10:04
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.731	-0.003	3445961	5.379	-0.004	4842902	42.5	38.4	10.1	Tetrachloro-m-xylene
14.590	0.000	2641469	14.621	0.000	3200649	39.1	36.9	5.6	Decachlorobiphenyl

Indicates RPD > 40%
Indicates Column 1 peak was manually integrated
Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	106.3	96.1
Decachlorobiphenyl	97.6	92.3

JK 07/26/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7104865	-1.1
Hexabromobiphenyl	4753836	4808040	1.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	9792543	-0.5
Hexabromobiphenyl	5491228	5568508	1.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

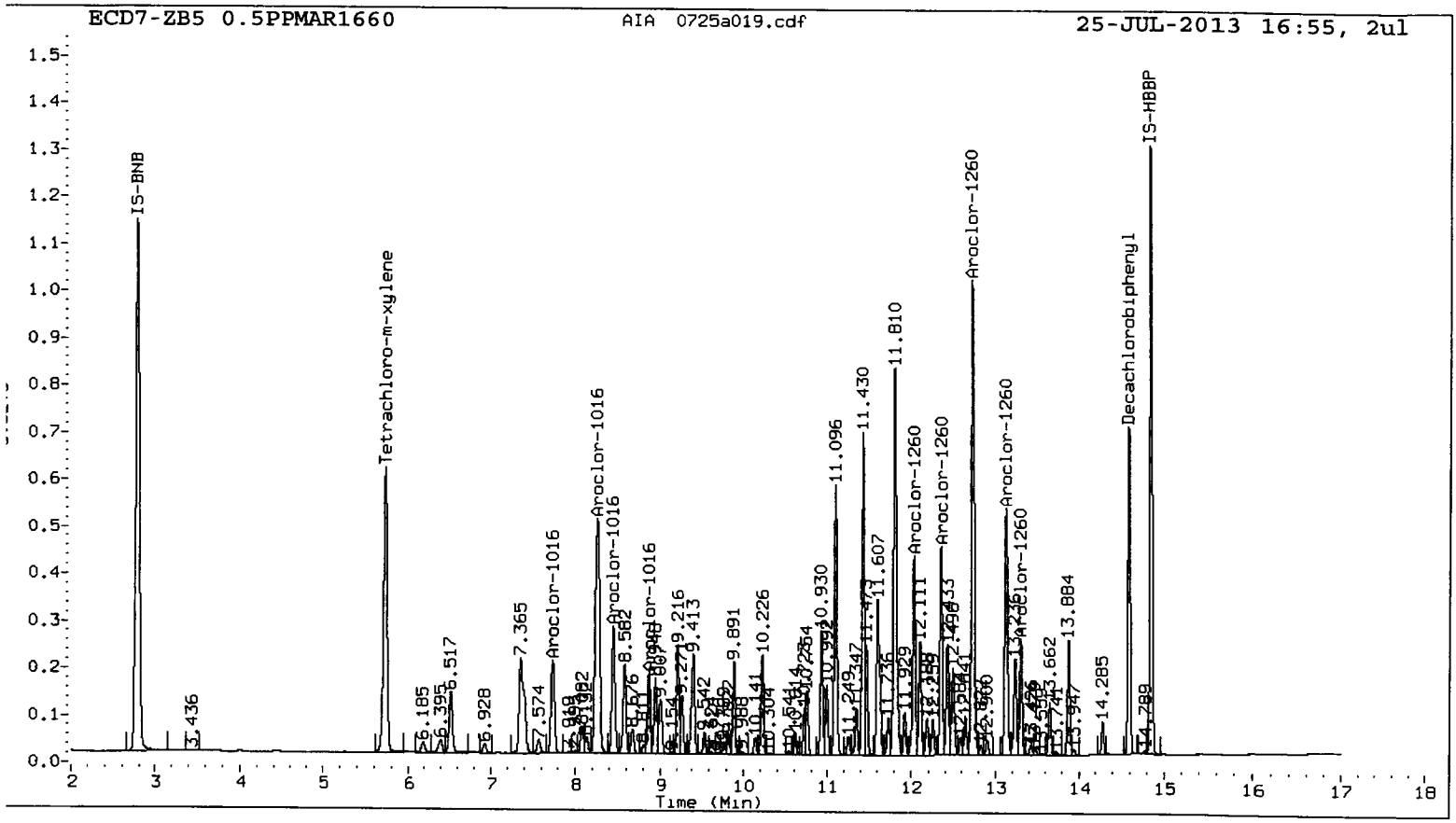
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.739	0.000	1043163	494.0	1	6.635	0.000	1034879	439.3
Aroclor-1016	2	8.260	0.000	3628815	506.0	2	7.513	0.000	2337479	441.6
Aroclor-1016	3	8.447	0.000	1394102	500.7	3	8.326	0.000	5043120	456.7
Aroclor-1016	4	8.872	0.000	795965	483.4	4	8.926	0.000	1430891	436.7
Total Col1Ave (4 peaks):					496.0	Total Col2Ave (4 peaks):				443.5 RPD = 11
Corrected Ave (3 peaks):					492.7	Corrected Ave (3 peaks):				439.2 RPD = 11
Aroclor-1260	1	12.042	0.000	1844048	493.4	1	11.941	0.000	3496242	446.9
Aroclor-1260	2	12.359	0.000	1914103	500.8	2	12.484	0.000	2808987	440.7
Aroclor-1260	3	12.729	0.000	4627782	504.0	3	12.755	0.000	5710244	461.4
Aroclor-1260	4	13.125	0.000	2458185	512.2	4	13.315	0.000	3779403	454.1
Aroclor-1260	5	13.305	0.000	1052424	507.4	NS	---			----
Total Col1Ave (5 peaks):					503.6	Total Col2Ave (4 peaks):				450.8 RPD = 11
Corrected Ave (4 peaks):					501.4	Corrected Ave (3 peaks):				447.2 RPD = 11

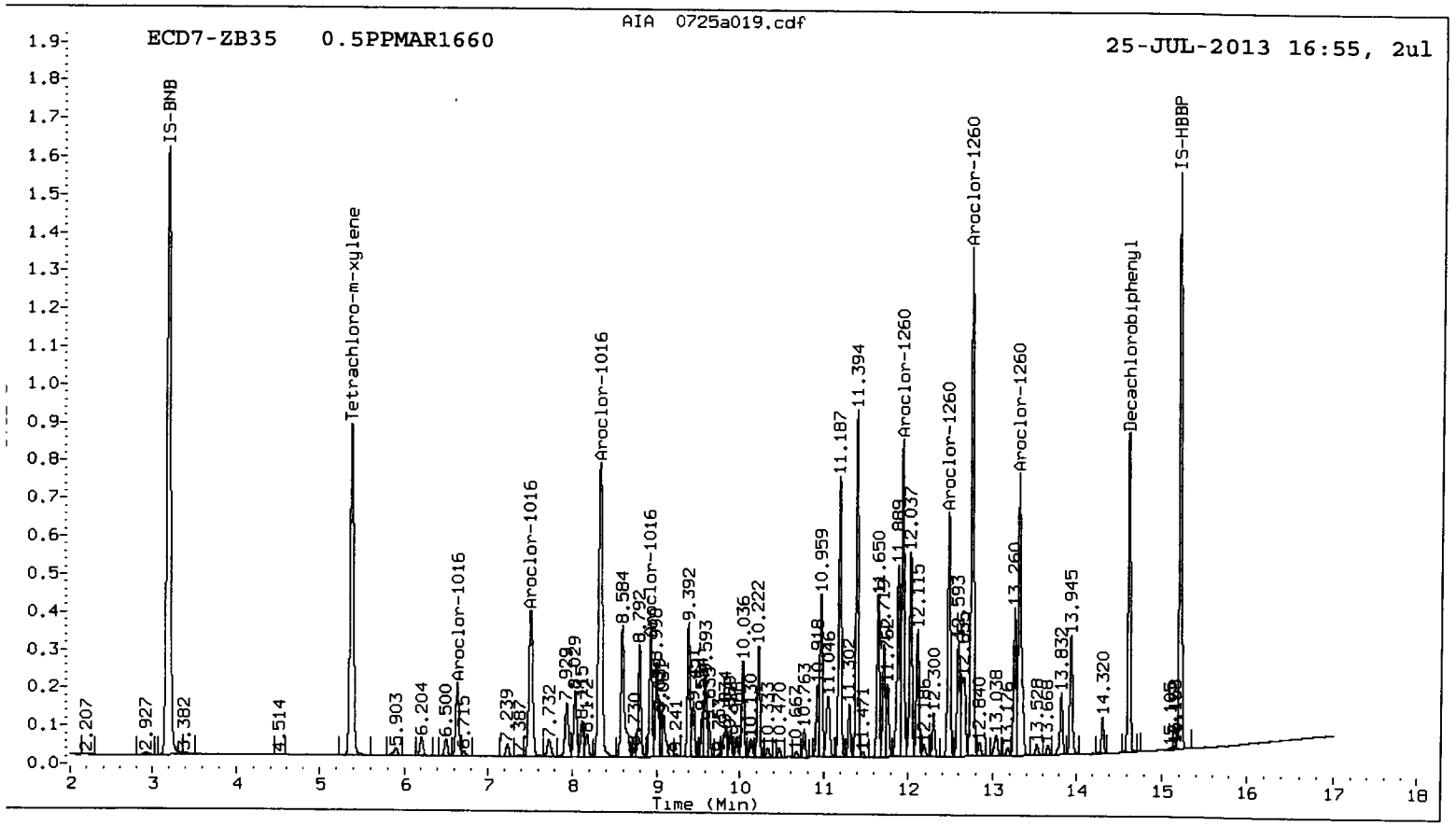
Total PCB Area Col1 (5.834 - 14.490) = 53509327 Col1 Total PCB = 1.0 ppm*

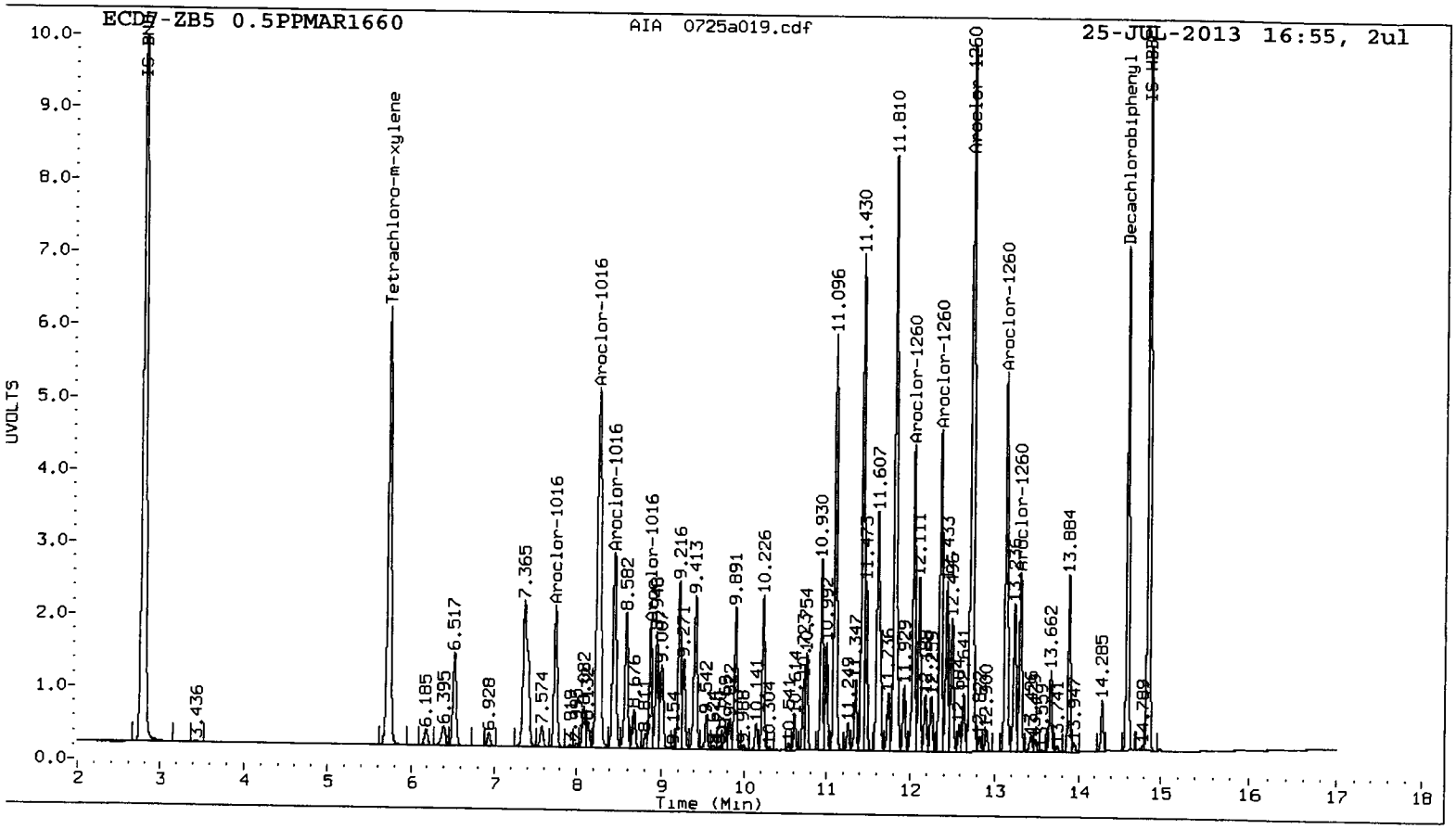
Total PCB Area Col2 (5.483 - 14.521) = 72125226 Col2 Total PCB = 0.9 ppm*

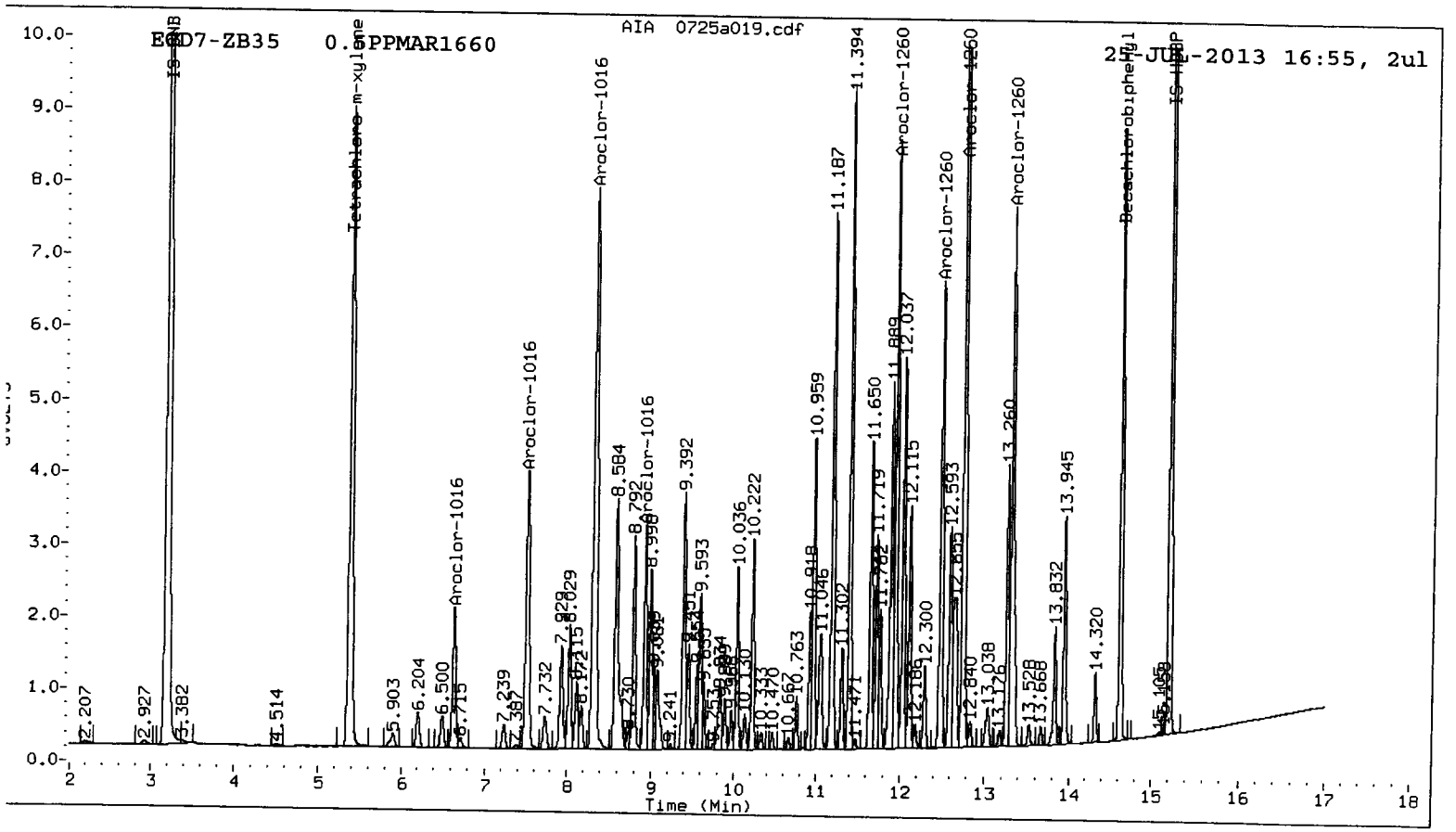
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD7-ZB5 0.5PPMAR1660
AIA 0725a019.cdf
25-JUL-2013 16:55, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


AIA 0725a019.cdf
ECD7-ZB35 0.5PPMAR1660
25-JUL-2013 16:55, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD7-ZB5 0.5PPMAR1660
AIA 0725a019.cdf
25-JUL-2013 16:55, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS HBB


ECD7-ZB35 0.5PPMAR1660
AIA 0725a019.cdf
25-JUL-2013 16:55, 2ul
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS HBB

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/ical-1.b/0725a020.d
Data file 2: 20130725.b/ical-2.b/0725a020.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 25-JUL-2013 17:17
Report Date: 07/26/2013 10:04
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.732	-0.002	3514067	5.381	-0.001	4963968	42.4	38.7	9.2	Tetrachloro-m-xylene
14.590	0.000	2820591	14.621	0.000	3406138	41.0	38.7	5.8	Decachlorobiphenyl

Indicates RPD > 40%
Indicates Column 1 peak was manually integrated
Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	106.0	96.7
Decachlorobiphenyl	102.5	96.7

JK 07/26/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7266838	1.1
Hexabromobiphenyl	4753836	4892863	2.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	9976265	1.4
Hexabromobiphenyl	5491228	5658004	3.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1242	1	7.740	0.000	431832	250.0	1	6.635	0.000	498241	250.0
Aroclor-1242	2	8.261	0.000	1475659	250.0	2	7.514	0.000	1031508	250.0
Aroclor-1242	3	8.447	0.000	570603	250.0	3	8.326	0.000	2161857	250.0
Aroclor-1242	4	9.413	0.000	539879	250.0	4	9.393	0.000	858760	250.0

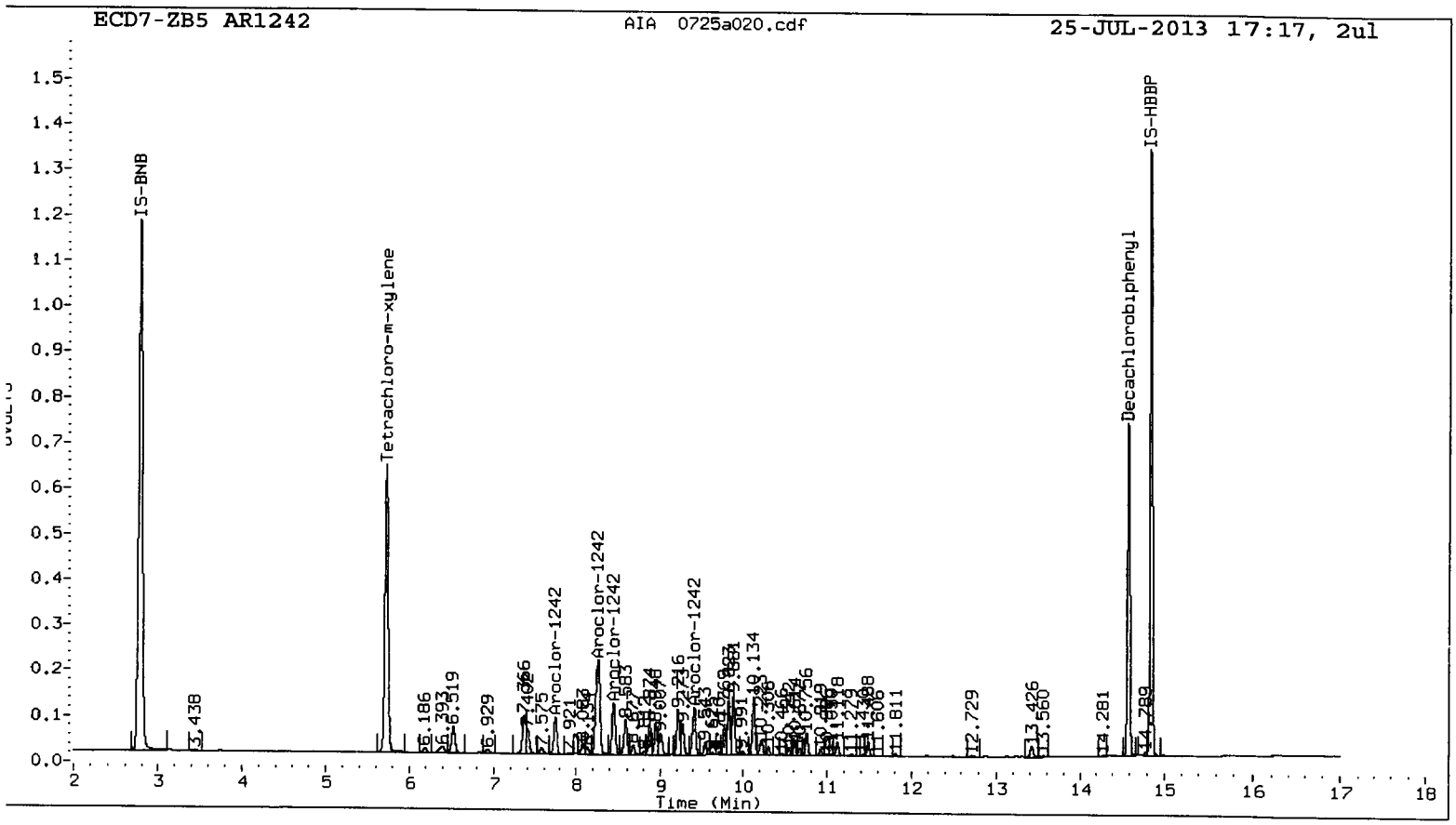
Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

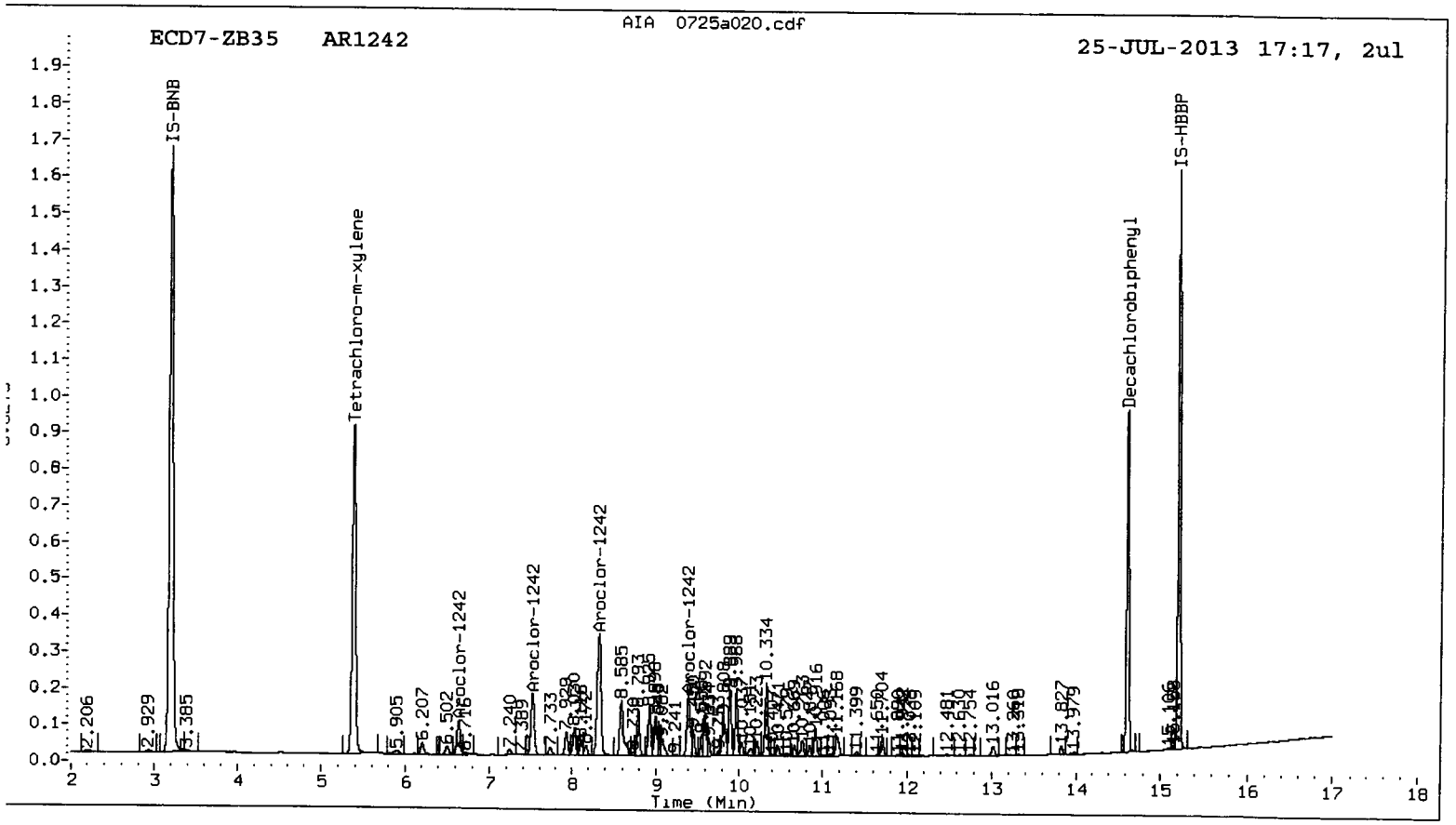
Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

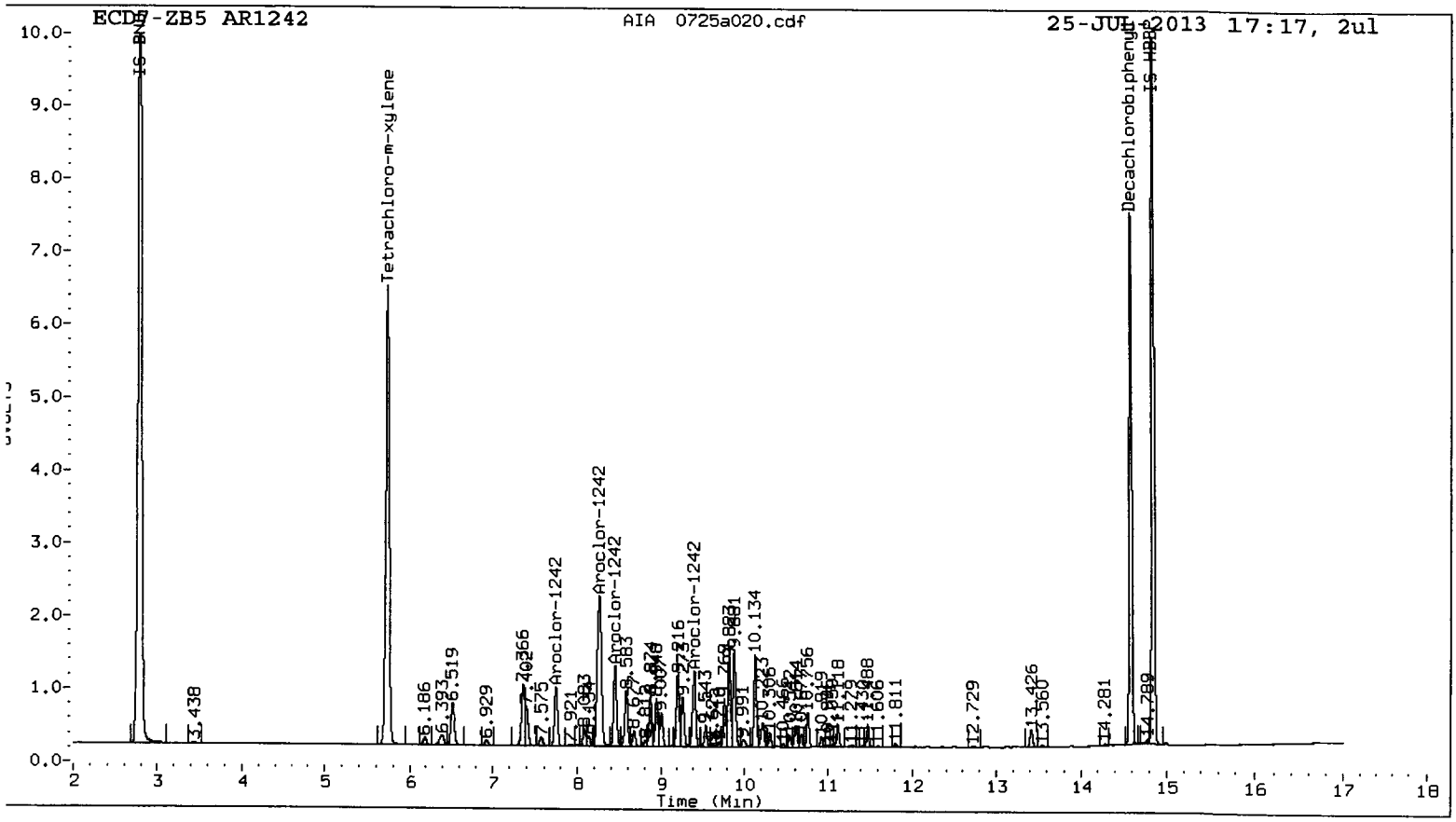
Total PCB Area Col1 (5.834 - 14.490) = 10134337 Col1 Total PCB = 0.2 ppm*

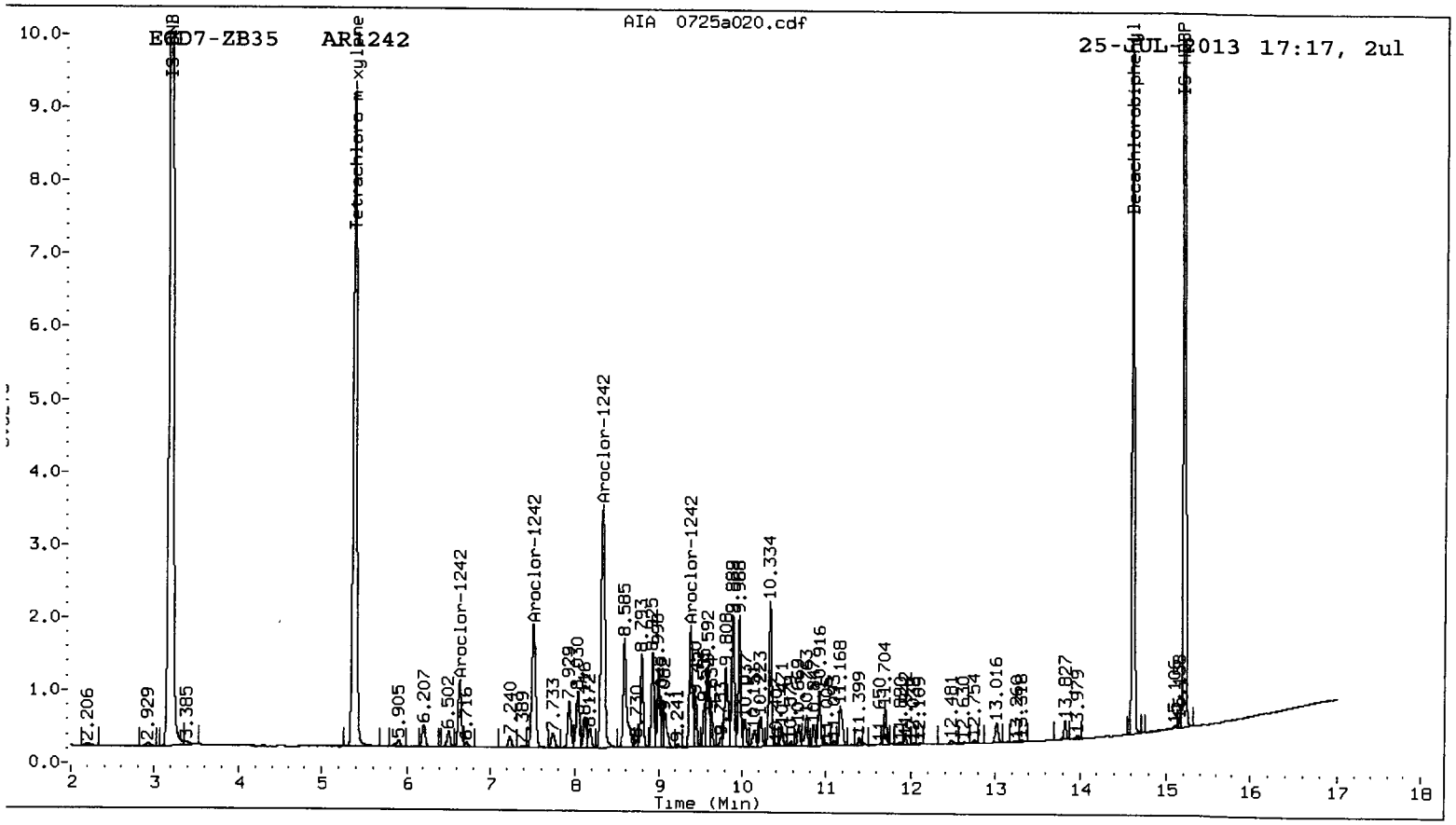
Total PCB Area Col2 (5.483 - 14.521) = 16117772 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD7-ZB5 AR1242
AIA 0725a020.cdf
25-JUL-2013 17:17, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD7-ZB35 AR1242
AIA 0725a020.cdf
25-JUL-2013 17:17, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD7-ZB5 AR1242
AIA 0725a020.cdf
25-JUL-2013 17:17, 2ul
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1242
Time (Min)


ECD7-ZB35 AR1242
AIA 0725a020.cdf
25-JUL-2013 17:17, 2ul
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1242
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/ical-1.b/0725a021.d
Data file 2: 20130725.b/ical-2.b/0725a021.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 25-JUL-2013 17:39
Report Date: 07/26/2013 10:04
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.732	-0.002	3417835	5.382	-0.001	4843361	41.6	38.2	8.6	Tetrachloro-m-xylene
14.590	0.001	2620391	14.621	0.000	3148760	38.2	36.0	5.9	Decachlorobiphenyl

Indicates RPD > 40%
Indicates Column 1 peak was manually integrated
Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	104.0	95.4
Decachlorobiphenyl	95.6	90.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7203526	0.2
Hexabromobiphenyl	4753836	4871116	2.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	9862115	0.2
Hexabromobiphenyl	5491228	5614176	2.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.254	0.000	911544	250.0	1	7.513	0.000	507345	250.0
Aroclor-1248	2	8.873	0.000	597064	250.0	2	8.323	0.000	1390556	250.0
Aroclor-1248	3	9.412	0.000	845753	250.0	3	8.926	0.000	1017949	250.0
Aroclor-1248	4	9.882	0.000	1089347	250.0	4	10.333	0.000	1461255	250.0

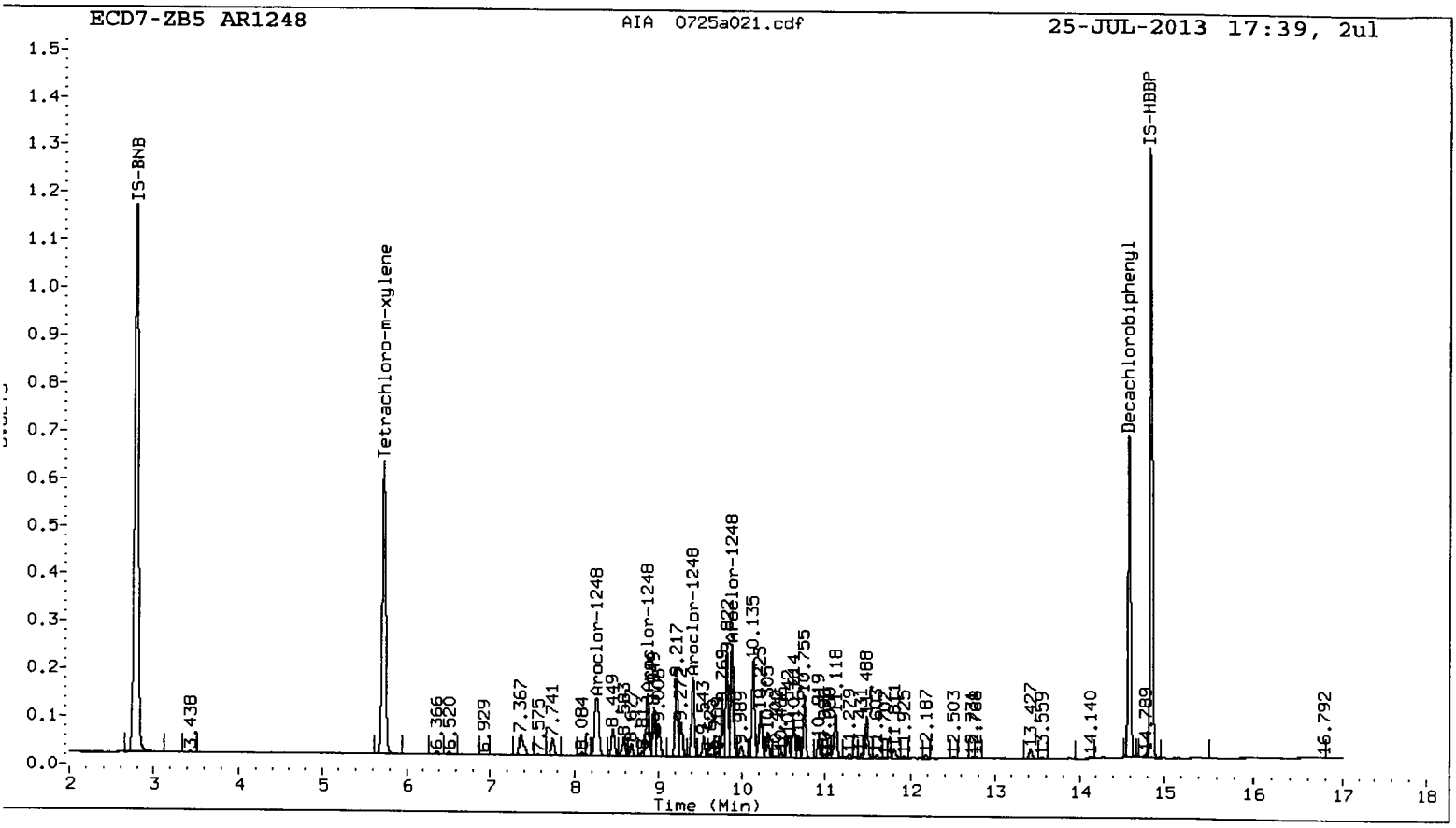
Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

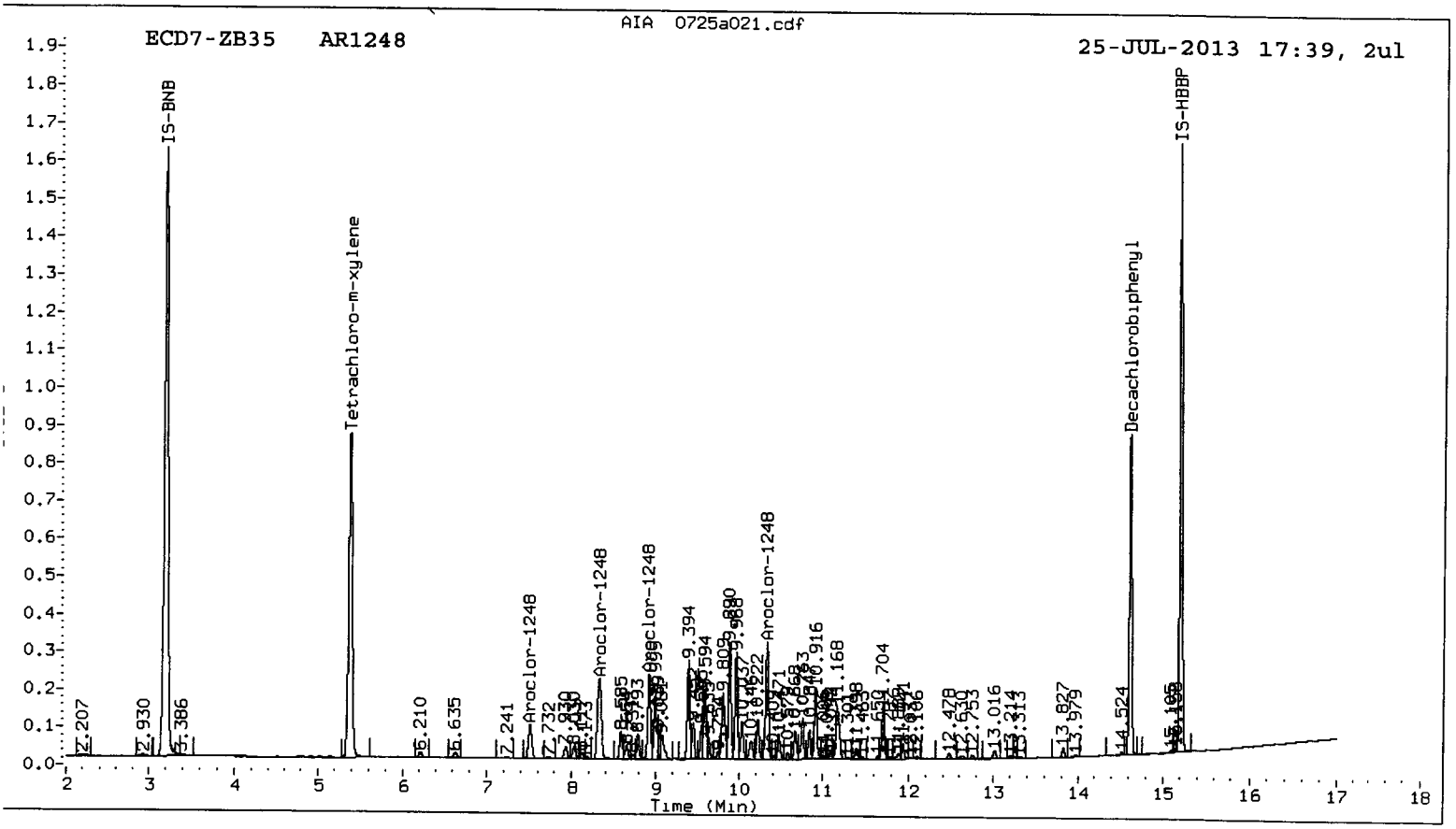
Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

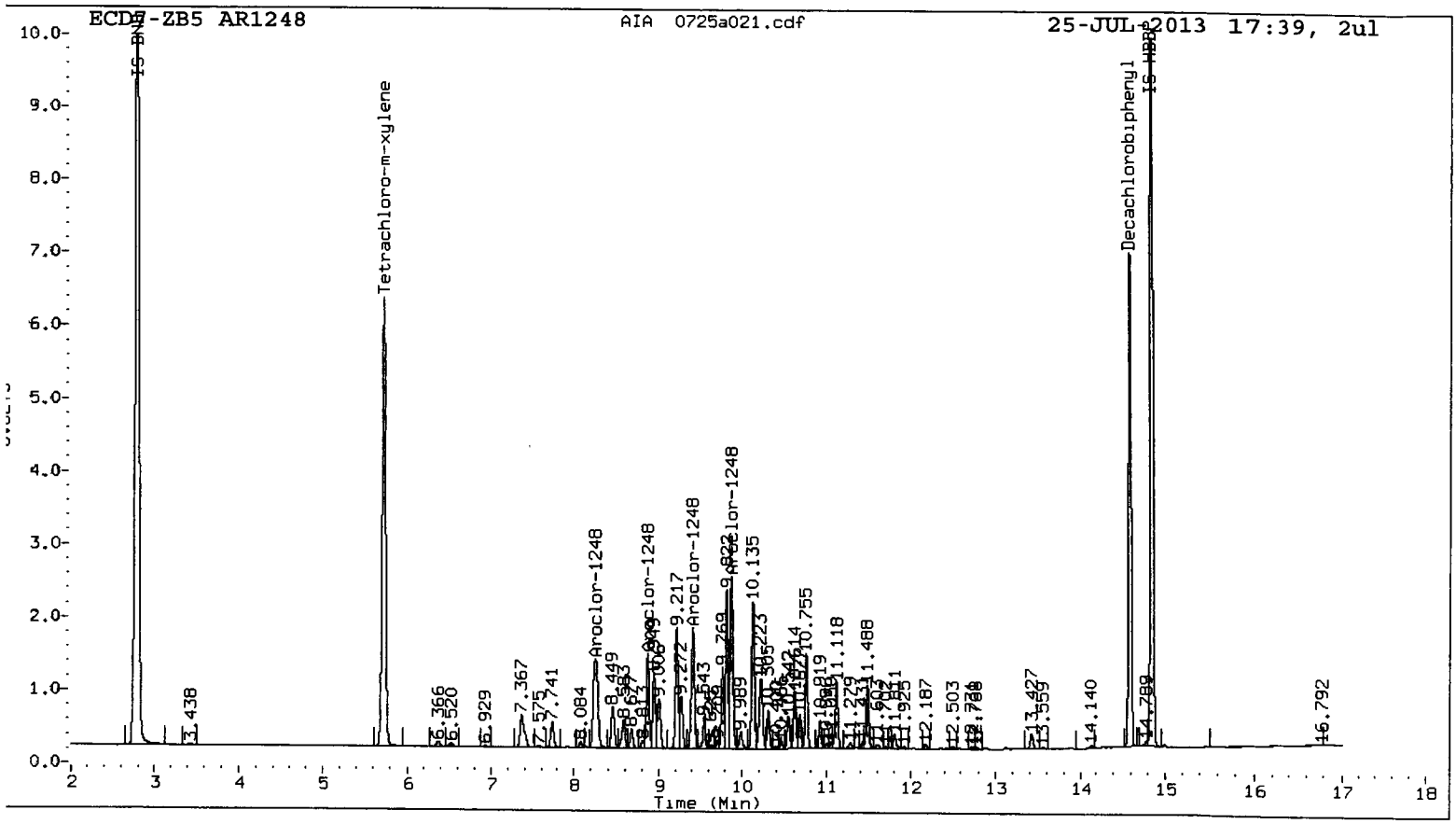
Total PCB Area Col1 (5.834 - 14.490) = 12814078 Col1 Total PCB = 0.2 ppm*

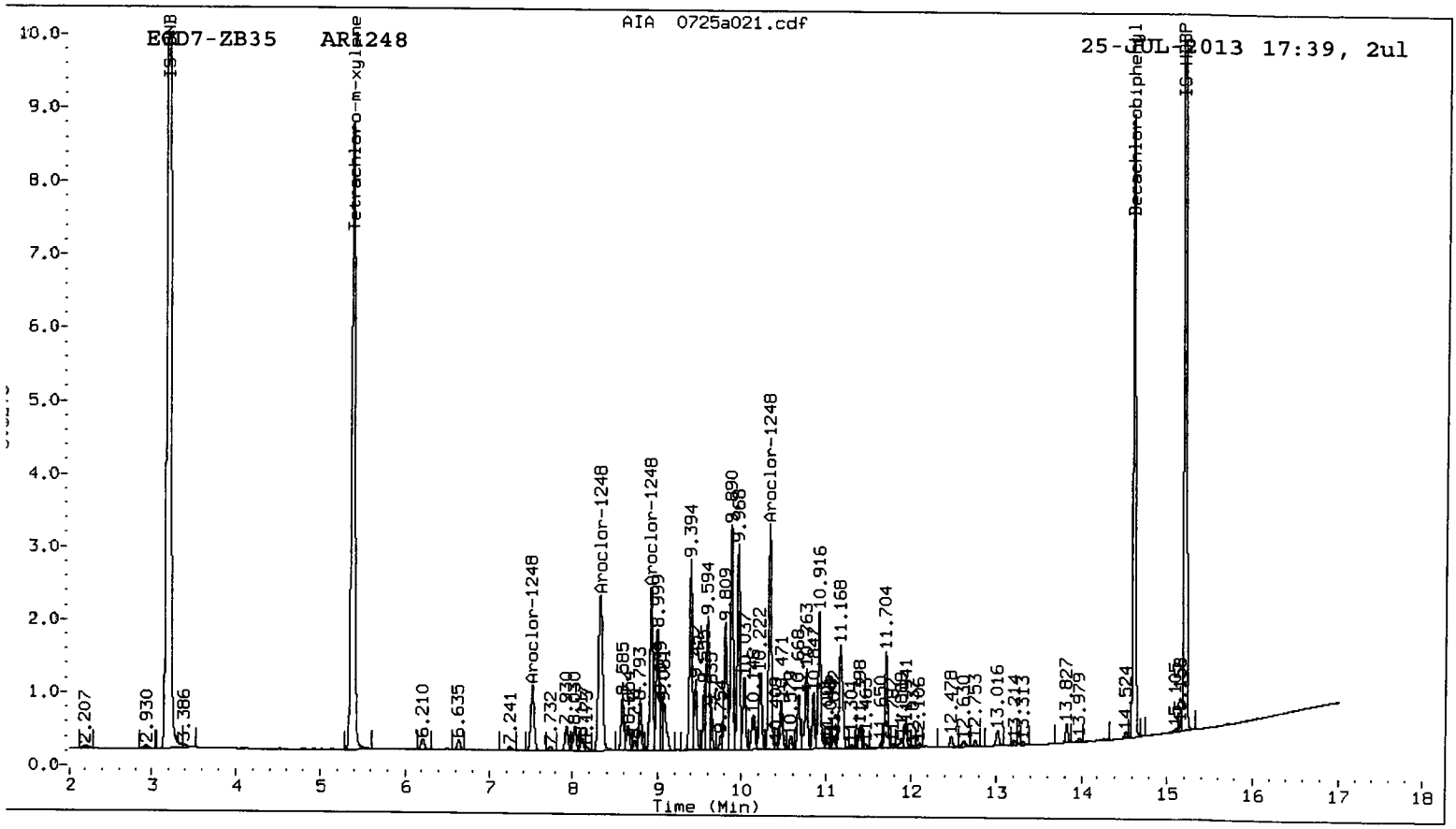
Total PCB Area Col2 (5.483 - 14.521) = 19638750 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD7-ZB5 AR1248
AIA 0725a021.cdf
25-JUL-2013 17:39, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD7-ZB35 AR1248
AIA 0725a021.cdf
25-JUL-2013 17:39, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD7-ZB5 AR1248
AIA 0725a021.cdf
25-JUL-2013 17:39, 2ul
IS-DNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1248
Time (Min)


ECD7-ZB35 AR1248
AIA 0725a021.cdf
25-JUL-2013 17:39, 2ul
IS-DNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1248
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/ical-1.b/0725a022.d
Data file 2: 20130725.b/ical-2.b/0725a022.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 25-JUL-2013 18:01
Report Date: 07/26/2013 10:04
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.734	0.000	3456985	5.383	0.000	4868493	41.4	37.9	8.9	Tetrachloro-m-xylene
14.589	-0.001	2671358	14.621	0.000	3183864	38.3	36.2	5.8	Decachlorobiphenyl

Indicates RPD > 40%
Indicates Column 1 peak was manually integrated
Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	103.5	94.7
Decachlorobiphenyl	95.9	90.5

07/26/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7320093	1.9
Hexabromobiphenyl	4753836	4953324	4.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	9991725	1.6
Hexabromobiphenyl	5491228	5653884	3.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	10.225	0.000	1147613	250.0	1	10.037	0.000	955491	250.0
Aroclor-1254	2	10.614	0.000	709725	250.0	2	10.222	0.000	1216600	250.0
Aroclor-1254	3	10.755	0.000	1398835	250.0	3	10.916	0.000	2036026	250.0
Aroclor-1254	4	11.115	0.000	1442497	250.0	4	11.172	0.000	2073692	250.0
Aroclor-1254	5	11.811	0.000	1414517	250.0	5	11.941	0.000	1502333	250.0

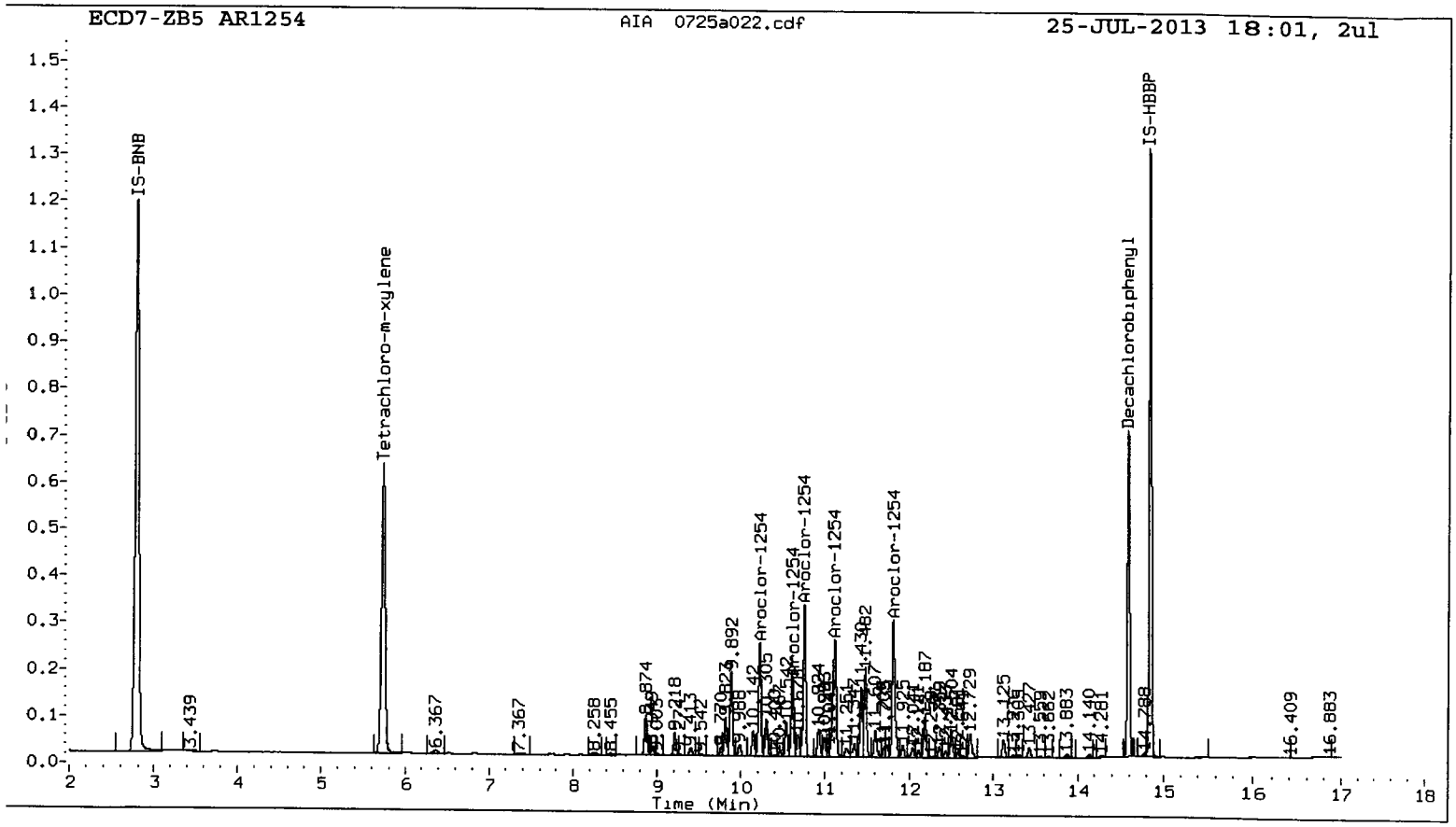
Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0

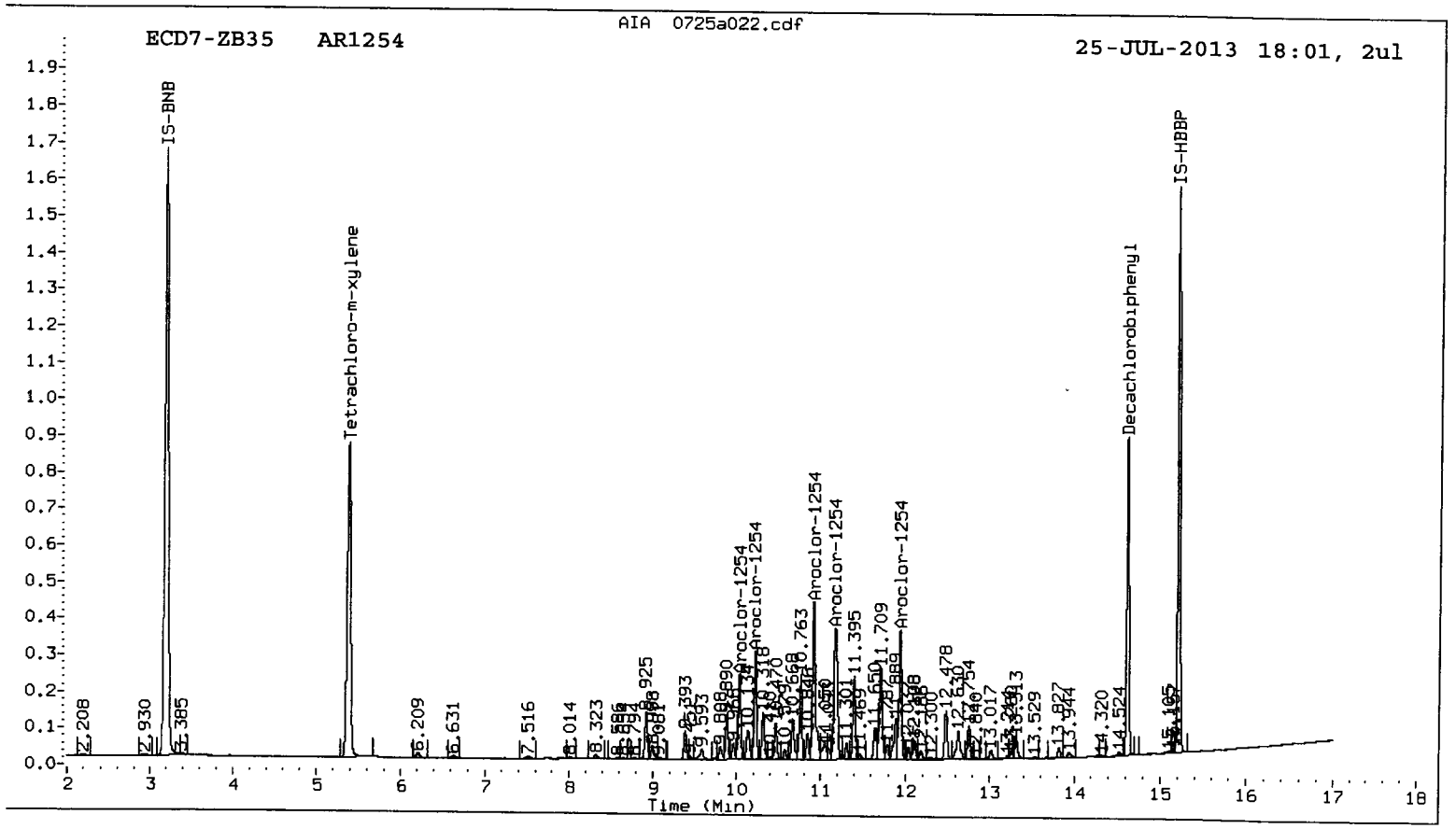
Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

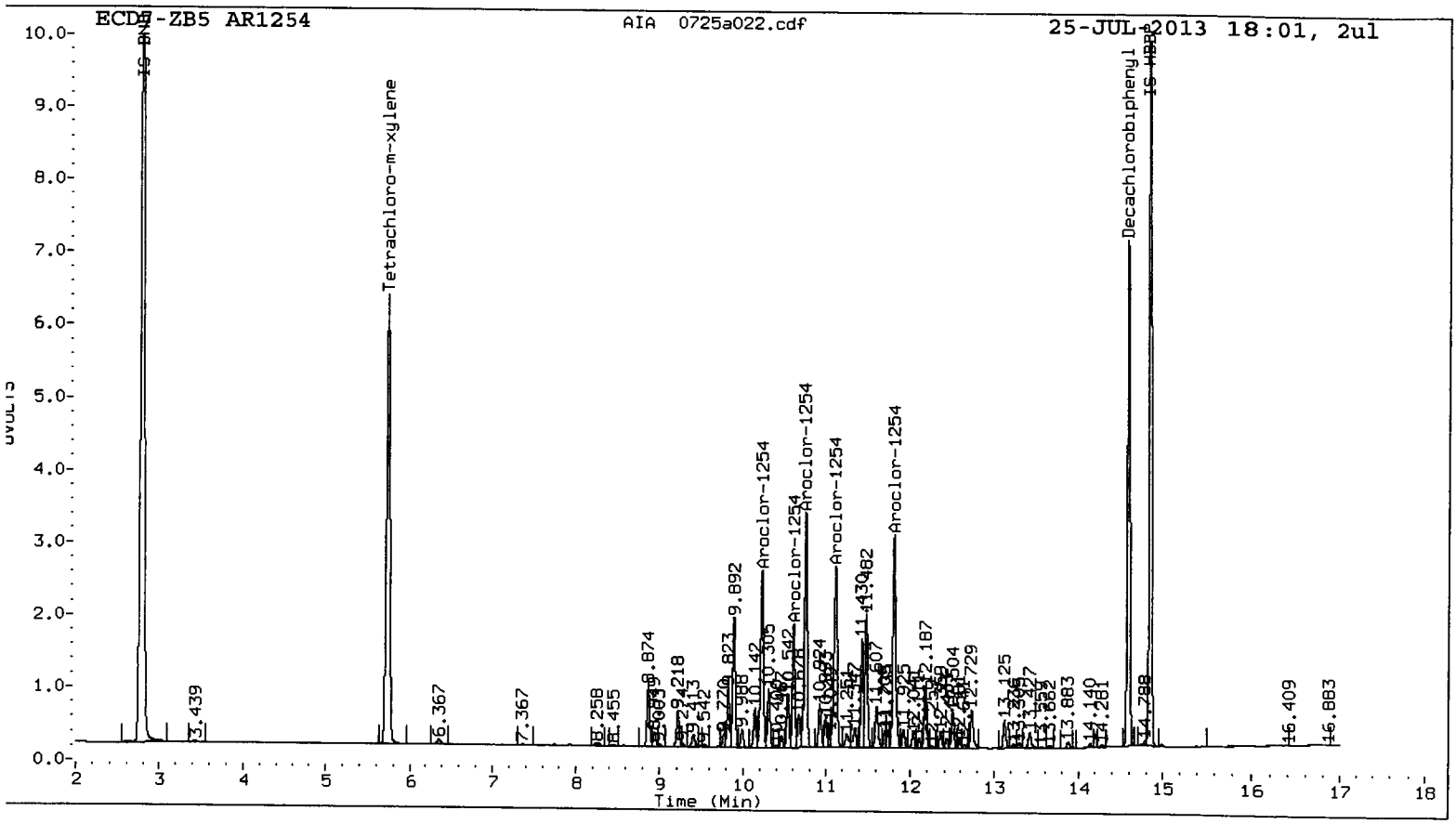
Total PCB Area Col1 (5.834 - 14.490) = 13946824 Col1 Total PCB = 0.3 ppm*

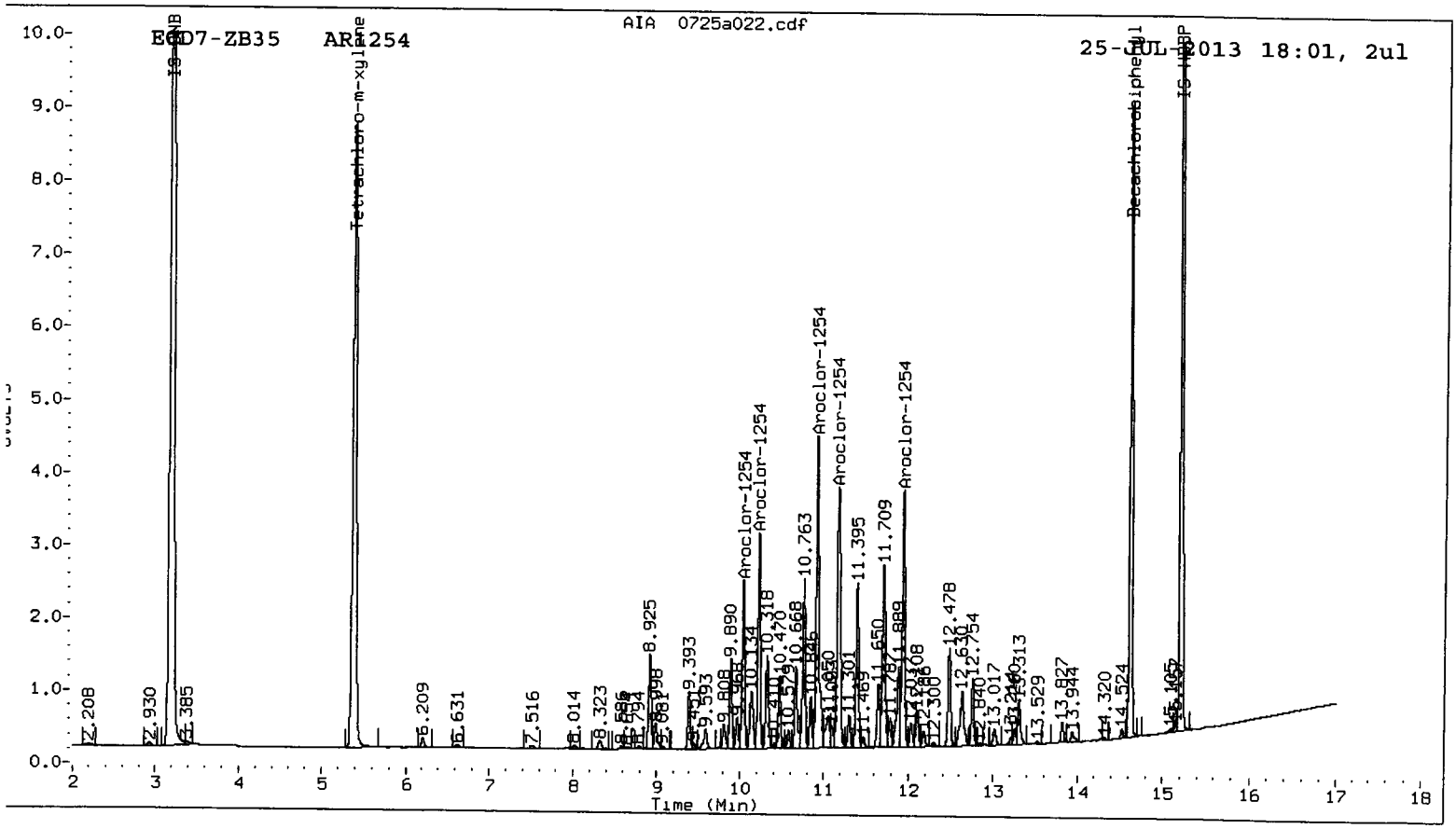
Total PCB Area Col2 (5.483 - 14.521) = 20208188 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD7-ZB5 AR1254
AIA 0725a022.cdf
25-JUL-2013 18:01, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD7-ZB35 AR1254
AIA 0725a022.cdf
25-JUL-2013 18:01, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD7-ZB5 AR1254
AIA 0725a022.cdf
25-JUL-2013 18:01, 2ul
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1254
Time (Min)


ECD7-ZB35 AR1254
AIA 0725a022.cdf
25-JUL-2013 18:01, 2ul
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1254
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/ical-1.b/0725a023.d
Data file 2: 20130725.b/ical-2.b/0725a023.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: AR2162
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162
Client ID:
Injection Date: 25-JUL-2013 18:23
Report Date: 07/26/2013 10:04
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.732	-0.002	3526897	5.382	-0.001	4866614	43.1	39.3	9.0	Tetrachloro-m-xylene
14.589	0.000	2668613	14.621	0.000	3195202	39.2	37.0	5.7	Decachlorobiphenyl

Indicates RPD > 40%
Indicates Column 1 peak was manually integrated
Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	107.6	98.4
Decachlorobiphenyl	97.9	92.5

7/26/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7180582	-0.1
Hexabromobiphenyl	4753836	4843454	1.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	9613689	-2.3
Hexabromobiphenyl	5491228	5551599	1.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

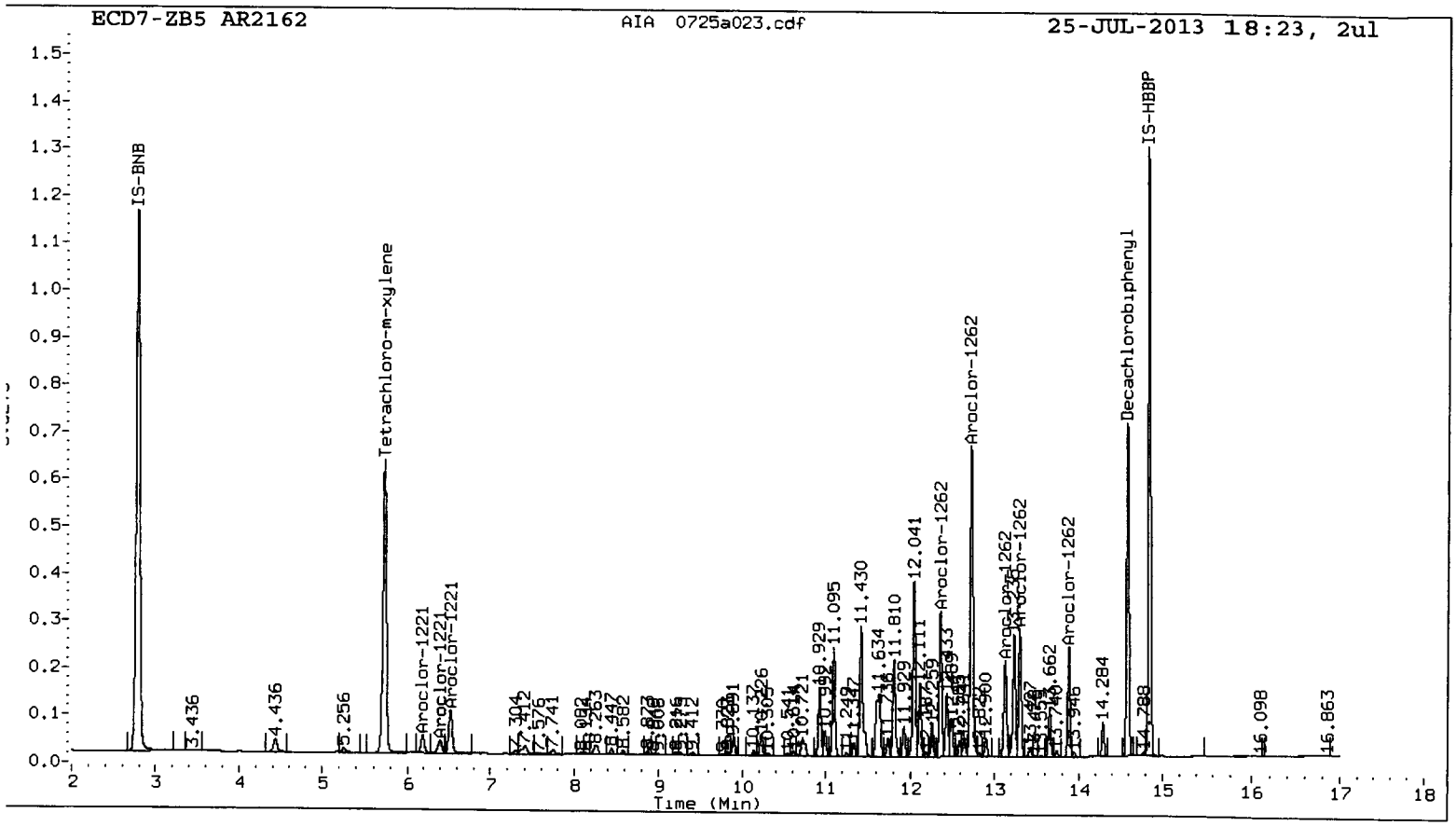
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	6.187	0.000	212210	250.0	1	6.204	0.000	406250	250.0
Aroclor-1221	2	6.396	0.000	183204	250.0	2	6.501	0.000	234570	250.0
Aroclor-1221	3	6.519	0.000	535871	250.0	3	6.636	0.000	710896	250.0
Aroclor-1221	NS	---			----	4	7.529	0.000	247771	250.0
Total Col1Ave (3 peaks): 250.0						Total Col2Ave (4 peaks): 250.0 RPD = 0				
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks): 250.0				
Aroclor-1262	1	12.358	0.000	1293838	250.0	1	12.484	0.000	1856847	250.0
Aroclor-1262	2	12.729	0.000	3009056	250.0	2	12.753	0.000	3693050	250.0
Aroclor-1262	3	13.126	0.000	974795	250.0	3	13.260	0.000	1608380	250.0
Aroclor-1262	4	13.303	0.000	1165386	250.0	4	13.317	0.000	2428984	250.0
Aroclor-1262	5	13.884	0.000	915305	250.0	5	13.944	0.000	1225538	250.0
Total Col1Ave (5 peaks): 250.0						Total Col2Ave (5 peaks): 250.0 RPD = 0				
Corrected Ave (4 peaks): 250.0						Corrected Ave (4 peaks): 250.0 RPD = 0				

Total PCB Area Col1 (5.834 - 14.490) = 21486689 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (5.483 - 14.521) = 29305320 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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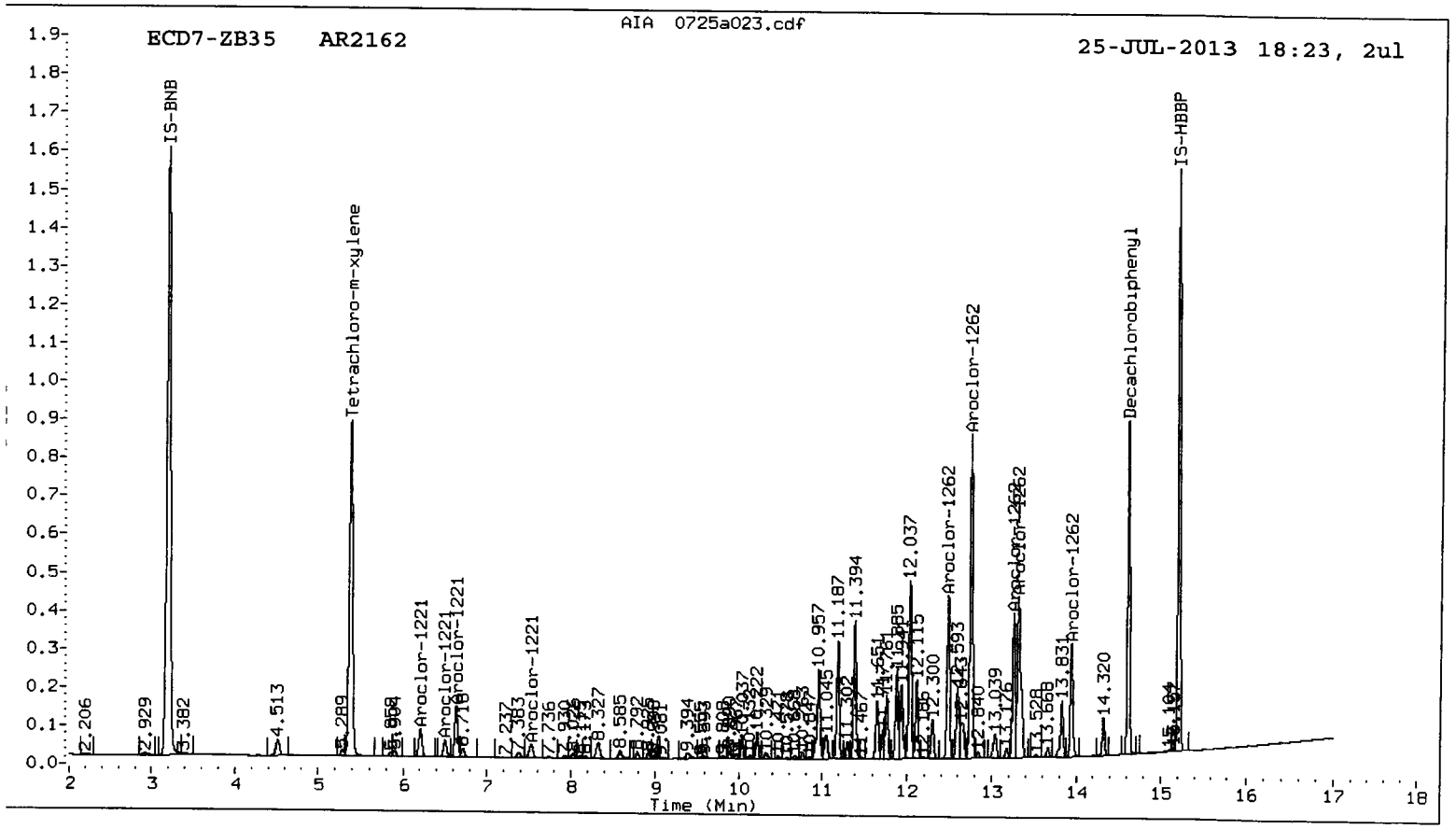
AIA 0725a023.cdf
25-JUL-2013 18:23, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1221
Aroclor-1221
Aroclor-1262
Aroclor-1262
Aroclor-1262
Aroclor-1262
Decachlorobiphenyl
IS-HBBP
Time (Min)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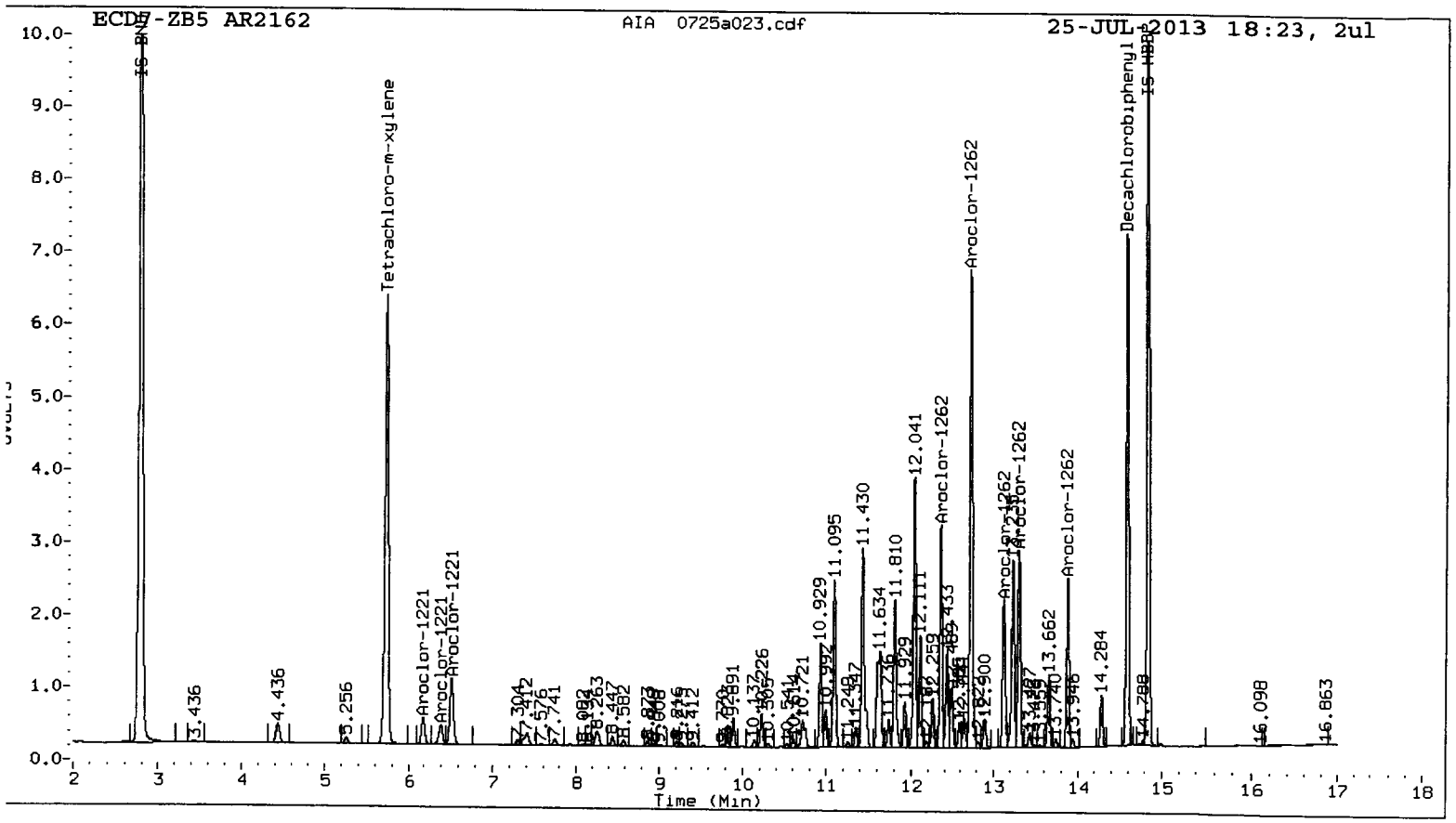
Aroclor-1221
Aroclor-1221
Aroclor-1262
Aroclor-1262
Aroclor-1262
Aroclor-1262
Decachlorobiphenyl
IS-HBBP
Time (Min)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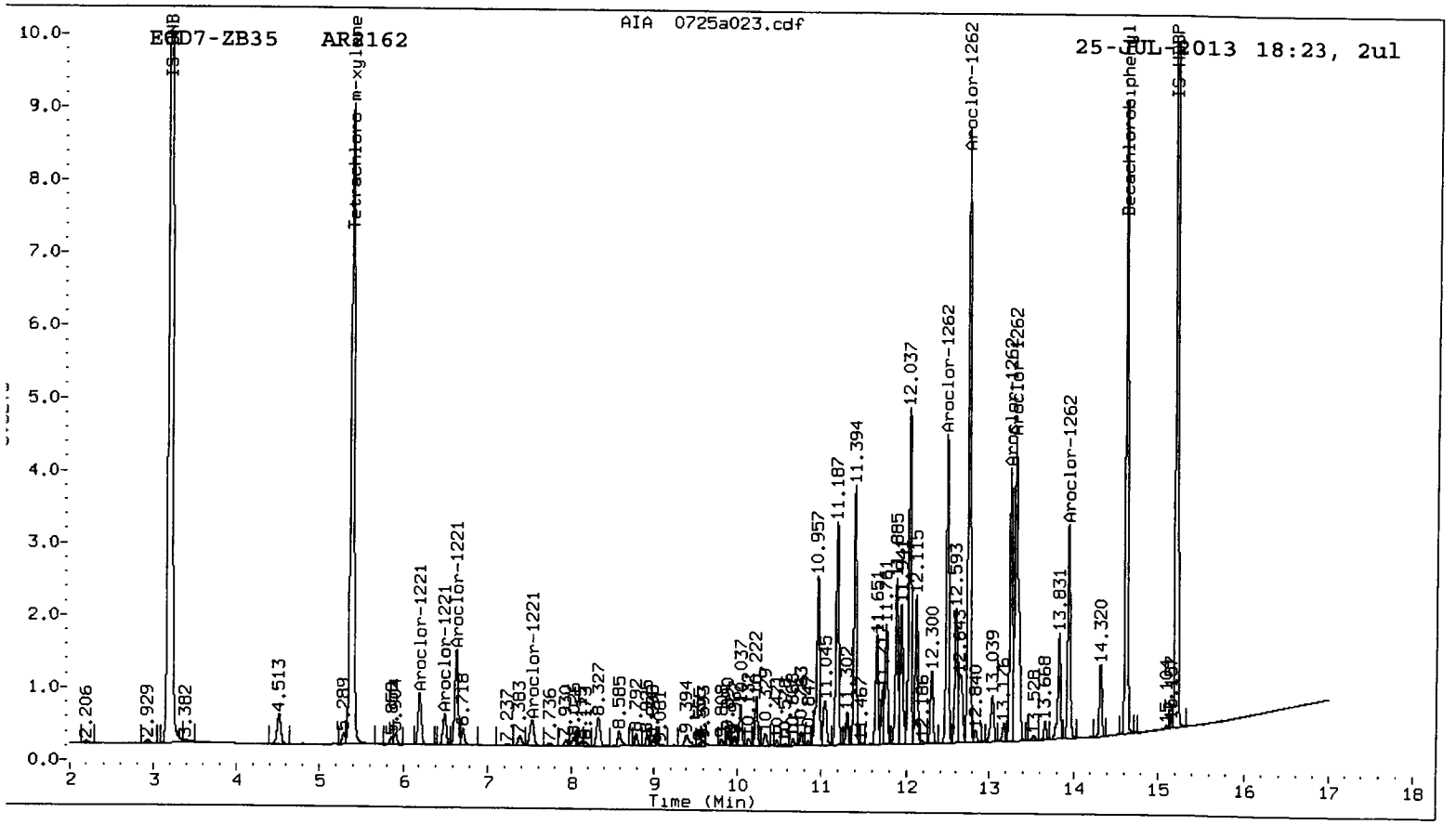
25-JUL-2013 18:23, 2ul
IS-DCB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1221
Aroclor-1221
Aroclor-1262
Aroclor-1262
Aroclor-1262
Aroclor-1262
Aroclor-1262
Decachlorobiphenyl
IS-HBB
3.436
4.436
5.256
7.304
7.412
7.576
7.741
10.137
10.226
10.421
10.929
10.997
11.095
11.248
11.347
11.430
11.634
11.736
11.810
11.929
12.041
12.111
12.259
12.433
12.485
12.900
13.662
13.740
13.946
14.284
14.288
16.098
16.863
Time (Min)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IS-DCB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1221
Aroclor-1221
Aroclor-1262
Aroclor-1262
Aroclor-1262
Aroclor-1262
Aroclor-1262
Decachlorobiphenyl
IS-HBB
2.206
2.929
3.382
4.513
5.289
6.718
7.237
7.383
7.736
8.327
8.585
8.792
10.957
11.045
11.187
11.302
11.394
11.467
11.651
11.885
12.037
12.115
12.186
12.300
12.593
12.840
13.039
13.126
13.528
13.668
13.831
14.320
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/ical-1.b/0725a024.d
Data file 2: 20130725.b/ical-2.b/0725a024.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: AR3268
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268
Client ID:
Injection Date: 25-JUL-2013 18:45
Report Date: 07/26/2013 10:04
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.734	0.000	3479247	5.383	0.000	4848918	42.2	38.6	8.9	Tetrachloro-m-xylene
14.590	0.000	3825964	14.621	0.000	4587710	55.8	52.4	6.2	Decachlorobiphenyl

Indicates RPD > 40%
Indicates Column 1 peak was manually integrated
Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	105.6	96.6
Decachlorobiphenyl	139.4	131.0

JM 07/26/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7219784	0.5
Hexabromobiphenyl	4753836	4877532	2.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	9751183	-0.9
Hexabromobiphenyl	5491228	5626585	2.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

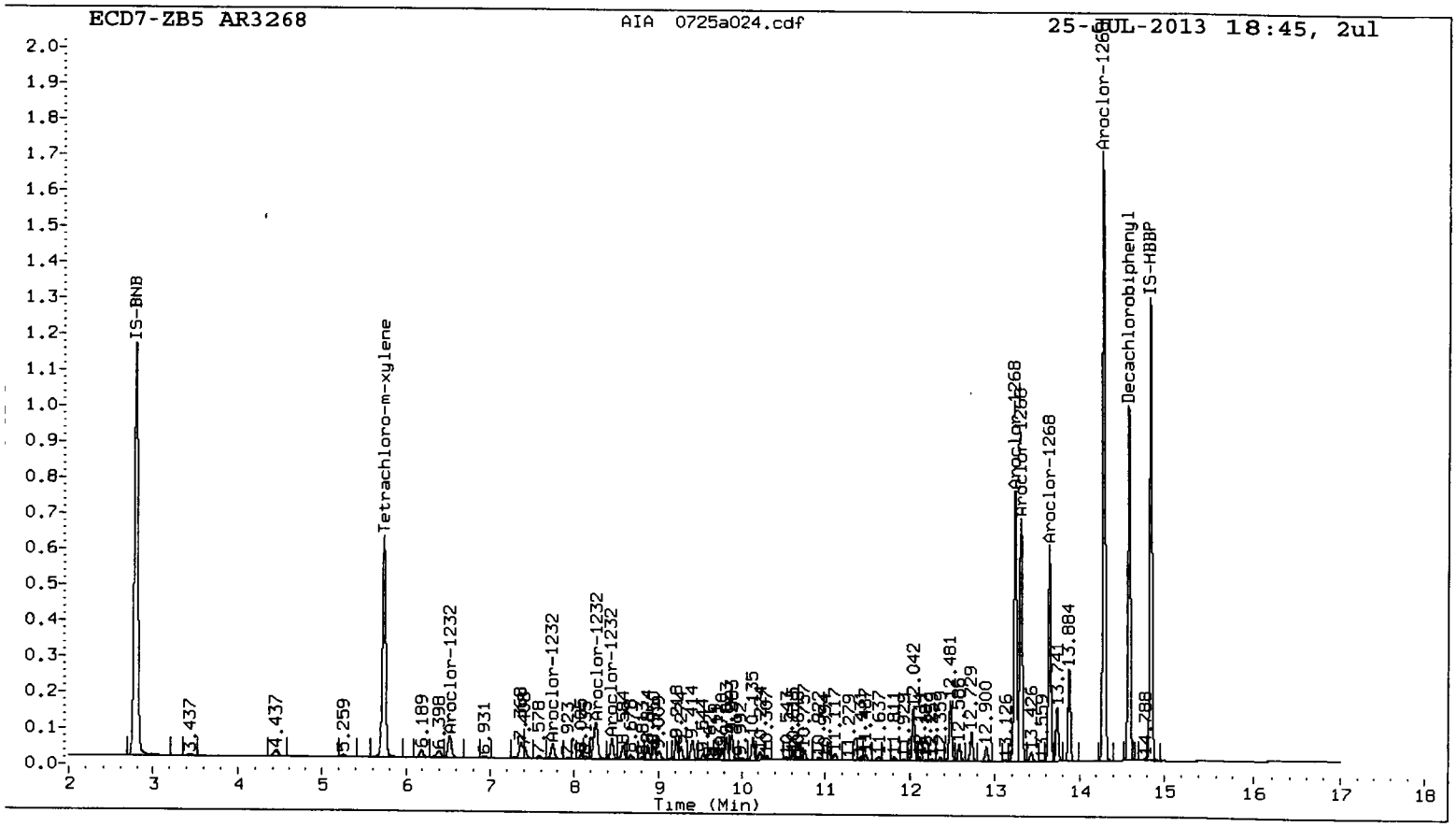
Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	6.521	0.000	353769	250.0	1	6.638	0.000	509988	250.0
Aroclor-1232	2	7.742	0.000	214309	250.0	2	7.517	0.000	579196	250.0
Aroclor-1232	3	8.264	0.000	716626	250.0	3	8.328	0.000	1105792	250.0
Aroclor-1232	4	8.449	0.000	281578	250.0	4	8.927	0.000	362680	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0
Aroclor-1268	1	13.236	0.000	3293048	250.0	1	13.260	0.000	3882180	250.0
Aroclor-1268	2	13.303	0.000	2920869	250.0	2	13.321	0.000	3639109	250.0
Aroclor-1268	3	13.648	0.000	2450737	250.0	3	13.669	0.000	2936741	250.0
Aroclor-1268	4	14.285	0.000	6468760	250.0	4	14.320	0.000	7852737	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.834 - 14.490) = 24820686 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.483 - 14.521) = 33469353 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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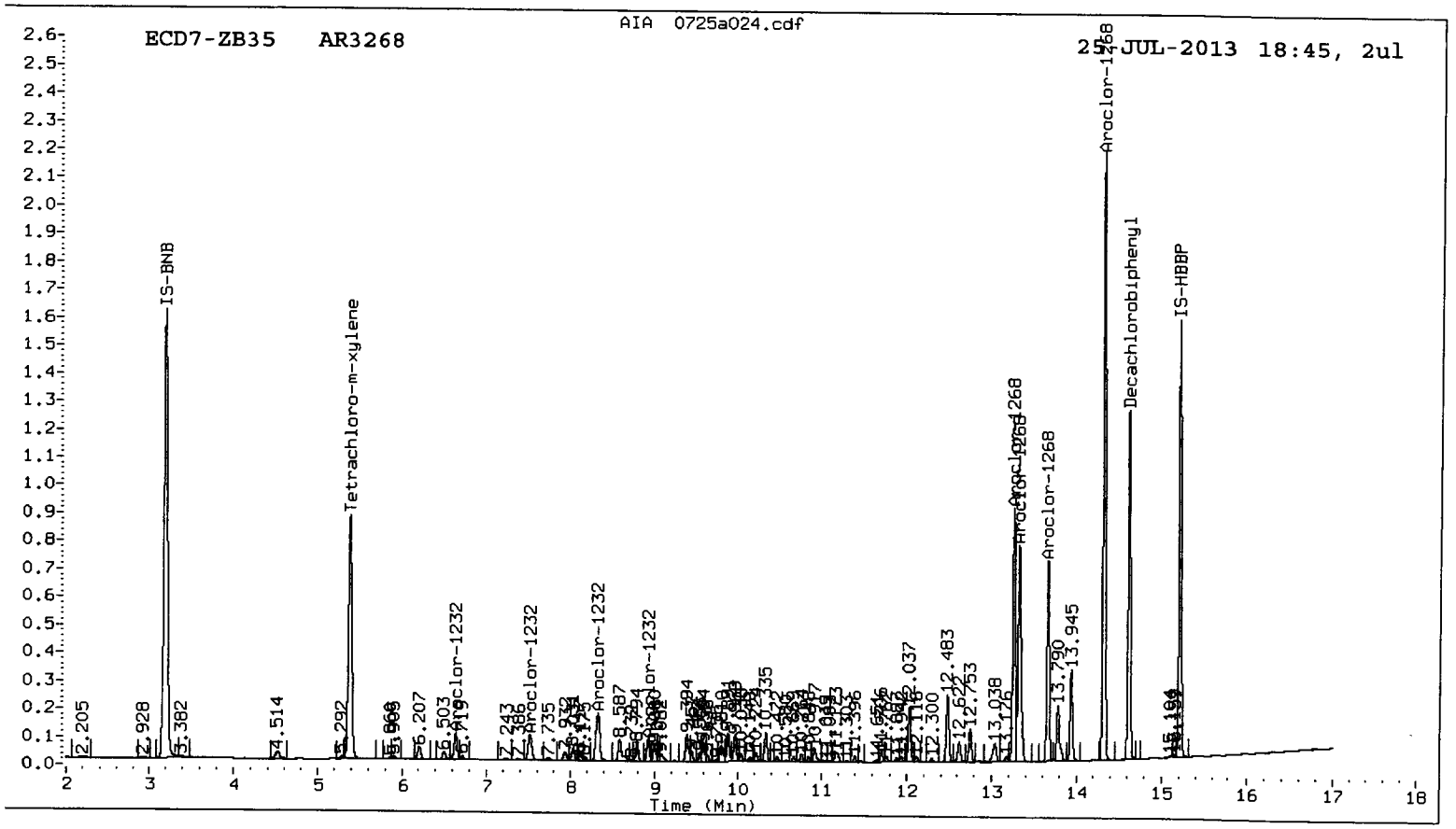
AIA 0725a024.cdf
25-JUL-2013 18:45, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
Time (Min)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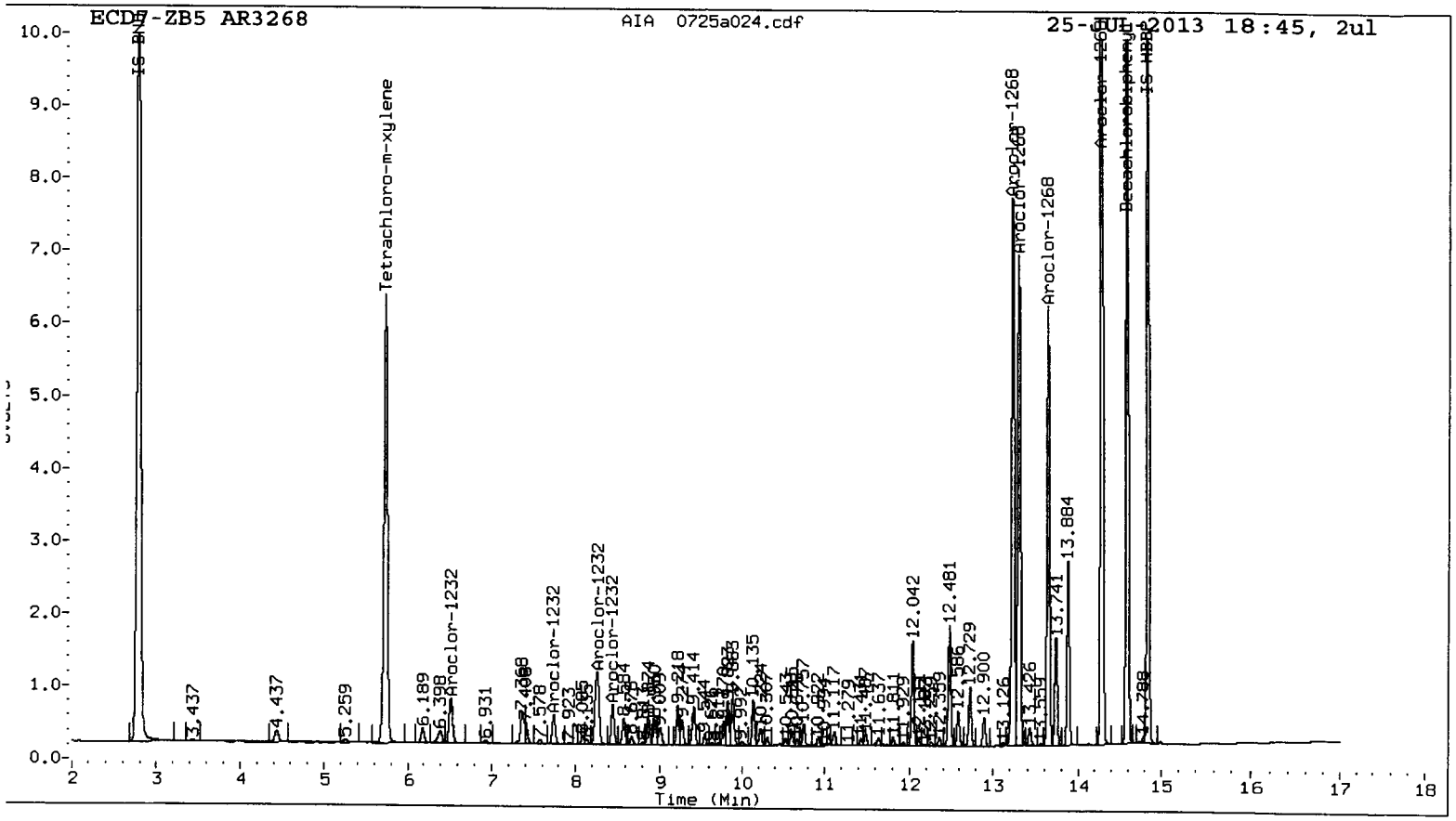
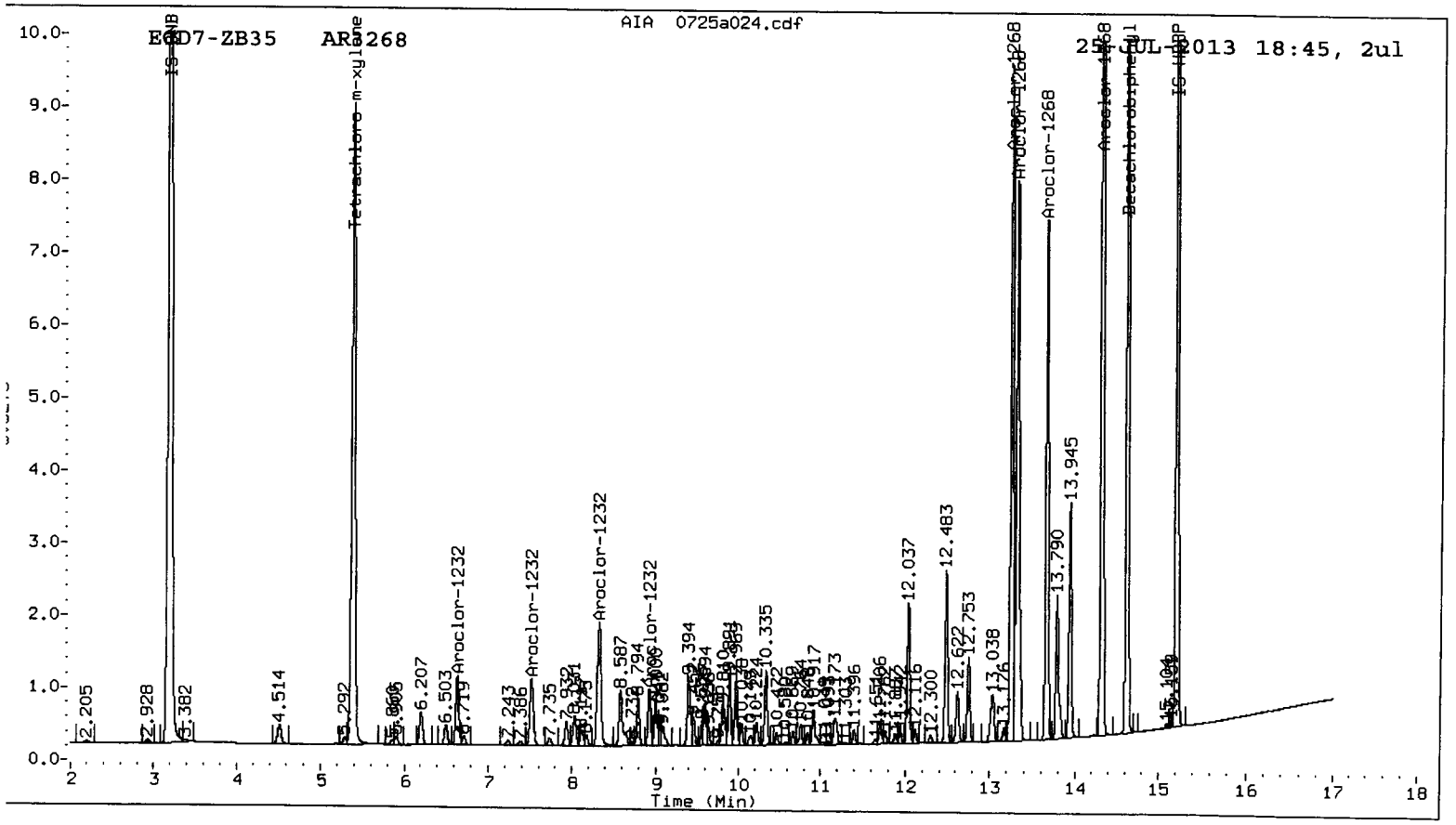
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD7-ZB5 AR3268
AIA 0725a024.cdf
25-JUL-2013 18:45, 2ul
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS HBB
12.042
12.481
13.884
13.741
Time (Min)


ECD7-ZB35 AR3268
AIA 0725a024.cdf
25-JUL-2013 18:45, 2ul
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS HBB
12.037
12.483
13.945
13.790
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/ical-1.b/0725a025.d
Data file 2: 20130725.b/ical-2.b/0725a025.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV
Client ID:
Injection Date: 25-JUL-2013 19:07
Report Date: 07/26/2013 10:05
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.733	-0.001	3359119	5.383	0.000	4748317	40.9	37.3	9.3	Tetrachloro-m-xylene
14.589	0.000	2610032	14.621	0.000	3161628	37.8	35.7	5.7	Decachlorobiphenyl

Indicates RPD > 40%
Indicates Column 1 peak was manually integrated
Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	102.3	93.2
Decachlorobiphenyl	94.6	89.3

7/26/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7194873	0.1
Hexabromobiphenyl	4753836	4906190	3.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	9900417	0.6
Hexabromobiphenyl	5491228	5686619	3.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

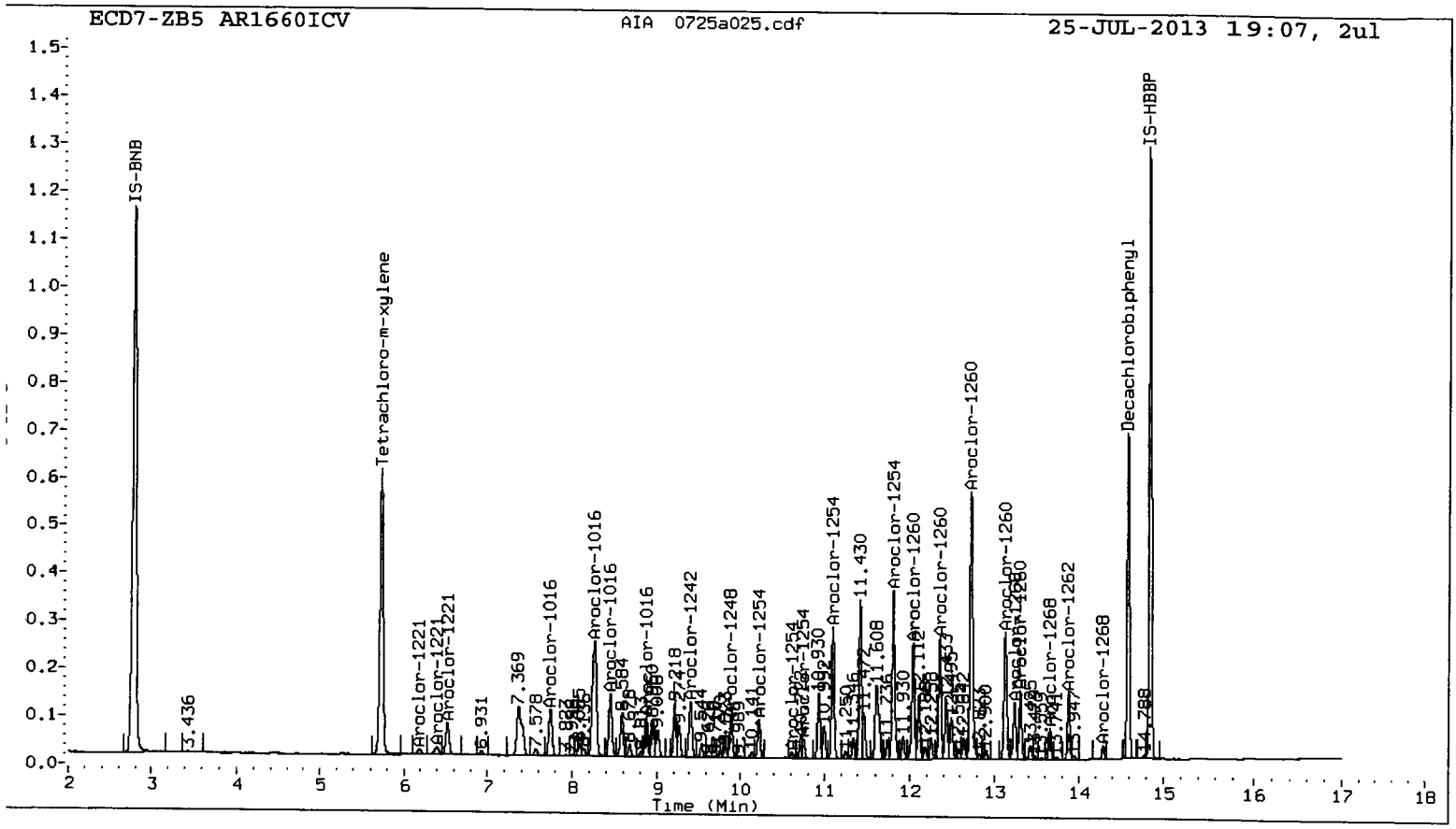
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount	
Aroclor-1016	1	7.742	0.003	508536	237.8	1	6.637	0.002	575685	241.7	
Aroclor-1016	2	8.263	0.003	1743848	240.1	2	7.517	0.004	1217535	227.5	
Aroclor-1016	3	8.449	0.002	674446	239.2	3	8.328	0.002	2517468	225.5	
Aroclor-1016	4	8.875	0.002	384374	230.5	4	8.927	0.001	723468	218.4	
Total Col1Ave (4 peaks):					236.9	Total Col2Ave (4 peaks):				228.3	RPD = 4
Corrected Ave (3 peaks):					235.8	Corrected Ave (3 peaks):				223.8	RPD = 5
Aroclor-1221	1	6.187	0.000	68871	81.0	1	6.208	0.004	184107	110.0	
Aroclor-1221	2	6.396	0.000	115253	157.0	2	6.503	0.002	134534	139.2	
Aroclor-1221	3	6.520	0.001	383276	178.5	3	6.637	0.001	575685	196.6	
Aroclor-1221	NS	---			----	4	7.517	-0.012	1217535	1192.9	
Total Col1Ave (3 peaks):					138.8	Total Col2Ave (4 peaks):				409.7	RPD = 99*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				148.6	
Aroclor-1232	1	6.520	-0.001	383276	271.8	1	6.637	-0.001	575685	278.0	
Aroclor-1232	2	7.742	0.000	508536	595.3	2	7.517	0.000	1217535	517.6	
Aroclor-1232	3	8.263	-0.002	1743848	610.5	3	8.328	-0.001	2517468	560.6	
Aroclor-1232	4	8.449	0.000	674446	600.9	4	8.927	0.000	723468	491.2	
Total Col1Ave (4 peaks):					519.6	Total Col2Ave (4 peaks):				461.8	RPD = 12
Corrected Ave (3 peaks):					489.3	Corrected Ave (3 peaks):				428.9	RPD = 13
Aroclor-1242	1	7.742	0.002	508536	297.4	1	6.637	0.002	575685	291.1	
Aroclor-1242	2	8.263	0.001	1743848	298.4	2	7.517	0.003	1217535	297.3	
Aroclor-1242	3	8.449	0.001	674446	298.5	3	8.328	0.002	2517468	293.4	
Aroclor-1242	4	9.413	0.000	610947	285.7	4	9.393	0.000	904377	265.3	
Total Col1Ave (4 peaks):					295.0	Total Col2Ave (4 peaks):				286.8	RPD = 3
Corrected Ave (3 peaks):					293.8	Corrected Ave (3 peaks):				283.2	RPD = 4
Aroclor-1248	1	8.263	0.009	1743848	478.8	1	7.517	0.004	1217535	597.6	
Aroclor-1248	2	8.875	0.001	384374	161.1	2	8.328	0.004	2517468	450.8	
Aroclor-1248	3	9.413	0.001	610947	180.8	3	8.927	0.001	723468	177.0	
Aroclor-1248	4	9.891	0.009	372304	85.5	4	10.334	0.001	44712	7.6	
Total Col1Ave (4 peaks):					226.6	Total Col2Ave (4 peaks):				308.3	RPD = 31
Corrected Ave (3 peaks):					142.5	Corrected Ave (3 peaks):				211.8	RPD = 39
Aroclor-1254	1	10.227	0.002	342375	75.9	1	10.037	0.000	467319	123.4	
Aroclor-1254	2	10.614	0.000	47576	17.1	2	10.223	0.001	490988	101.8	
Aroclor-1254	3	10.752	-0.003	152122	27.7	3	10.959	0.043	1248782	154.7	
Aroclor-1254	4	11.096	-0.019	1163266	205.1	4	11.188	0.016	1550564	188.7	
Aroclor-1254	5	11.810	-0.001	1653348	297.3	5	11.942	0.001	1545234	259.5	
Total Col1Ave (5 peaks):					124.6	Total Col2Ave (5 peaks):				165.6	RPD = 28
Corrected Ave (4 peaks):					81.4	Corrected Ave (4 peaks):				142.2	RPD = 54*
Aroclor-1260	1	12.042	0.000	1065205	279.3	1	11.942	0.000	1545234	193.4	
Aroclor-1260	2	12.359	0.000	1064647	273.0	2	12.485	0.001	1555467	239.0	
Aroclor-1260	3	12.729	0.000	2560862	273.3	3	12.754	-0.001	3224872	255.2	
Aroclor-1260	4	13.125	0.000	1249762	255.2	4	13.316	0.001	2119054	249.3	
Aroclor-1260	5	13.304	0.000	625361	295.5	NS	---			----	
Total Col1Ave (5 peaks):					275.3	Total Col2Ave (4 peaks):				234.2	RPD = 16
Corrected Ave (4 peaks):					270.2	Corrected Ave (3 peaks):				227.2	RPD = 17
Aroclor-1262	1	12.359	0.000	1064647	203.1	1	12.485	0.001	1555467	204.5	
Aroclor-1262	2	12.729	0.000	2560862	210.0	2	12.754	0.000	3224872	213.1	
Aroclor-1262	3	13.125	0.000	1249762	316.4	3	13.260	0.001	942696	143.0	
Aroclor-1262	4	13.304	0.001	625361	132.4	4	13.316	-0.001	2119054	212.9	
Aroclor-1262	5	13.884	0.000	555847	149.9	5	13.945	0.000	799124	159.1	
Total Col1Ave (5 peaks):					202.4	Total Col2Ave (5 peaks):				186.5	RPD = 8
Corrected Ave (4 peaks):					173.9	Corrected Ave (4 peaks):				179.9	RPD = 3
Aroclor-1268	1	13.236	0.000	530489	40.0	1	13.260	0.001	942696	60.1	

Aroclor-1268	2	13.304	0.002	625361	53.2	2	13.316	-0.005	2119054	144.0
Aroclor-1268	3	13.662	0.013	268143	27.2	3	13.669	0.001	30661	2.6
Aroclor-1268	4	14.284	-0.001	107521	4.1	4	14.321	0.001	150934	4.8
Total Col1Ave (4 peaks):					31.1	Total Col2Ave (4 peaks):			52.9	RPD = 52*
Corrected Ave (3 peaks):					23.8	Corrected Ave (3 peaks):			22.5	RPD = 6

Total PCB Area Col1 (5.834 - 14.490) = 26718293 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.483 - 14.521) = 37911033 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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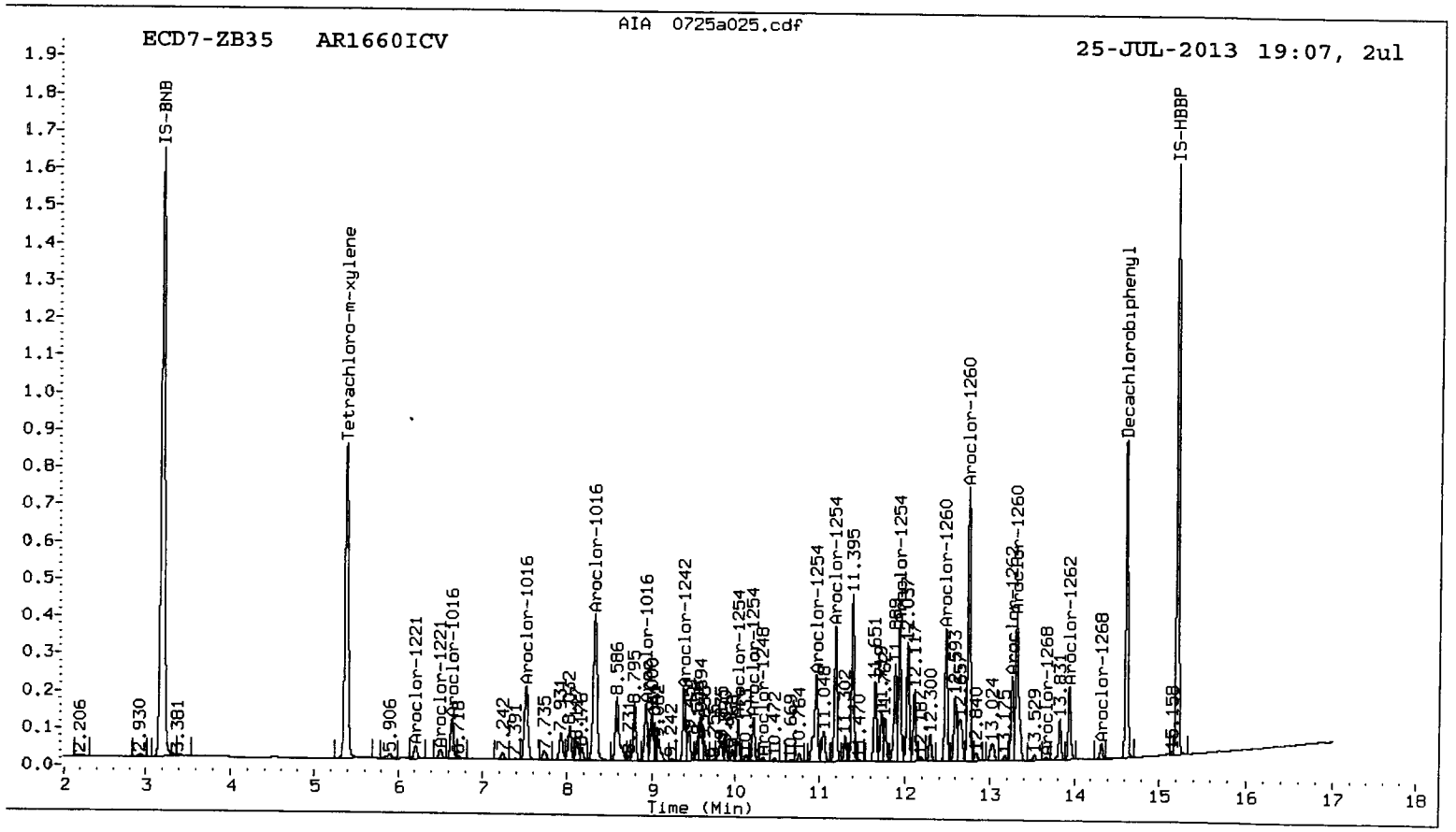
AIA 0725a025.cdf
25-JUL-2013 19:07, 2ul
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Time (Min)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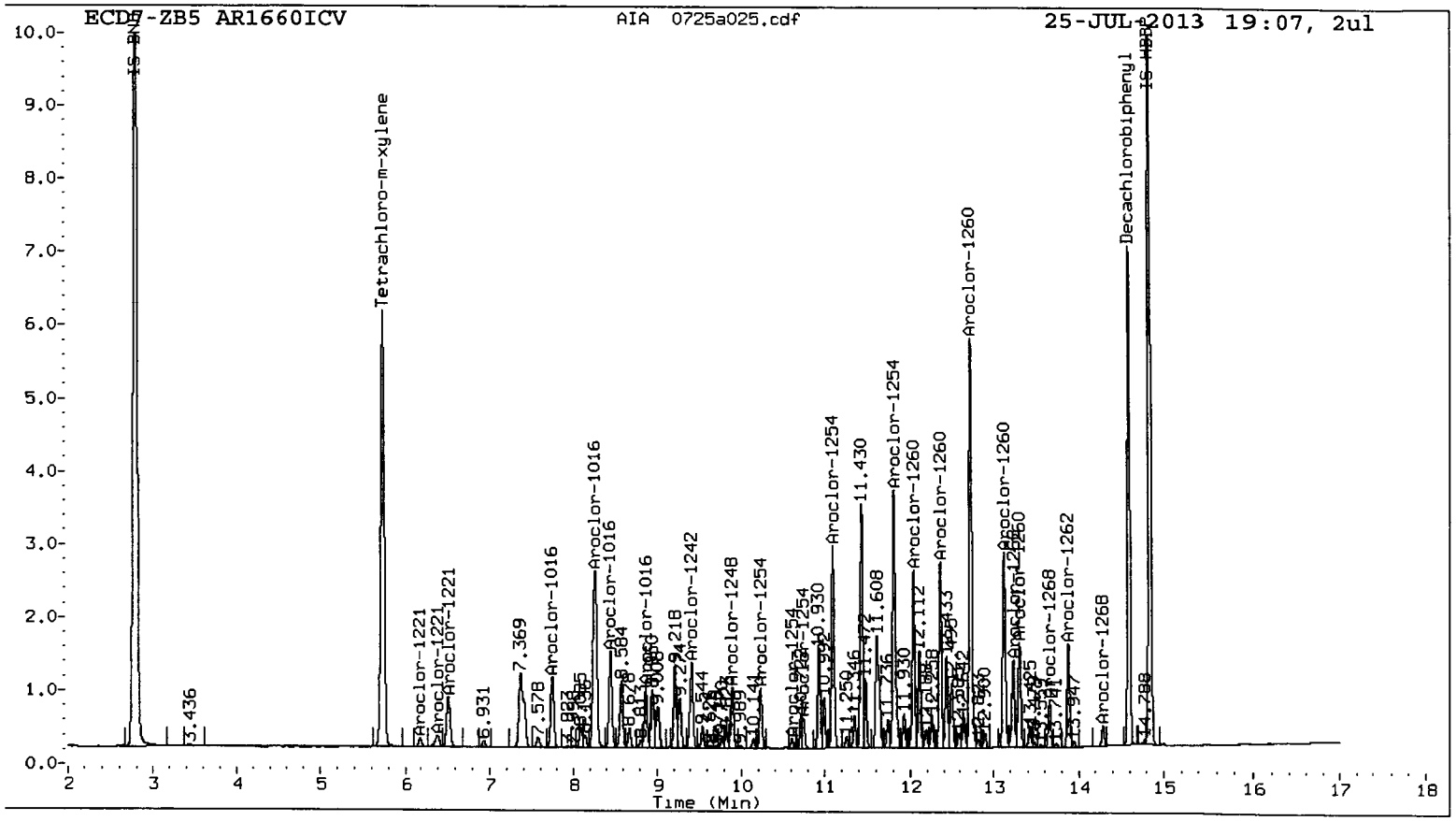
25-JUL-2013 19:07, 2ul
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Time (Min)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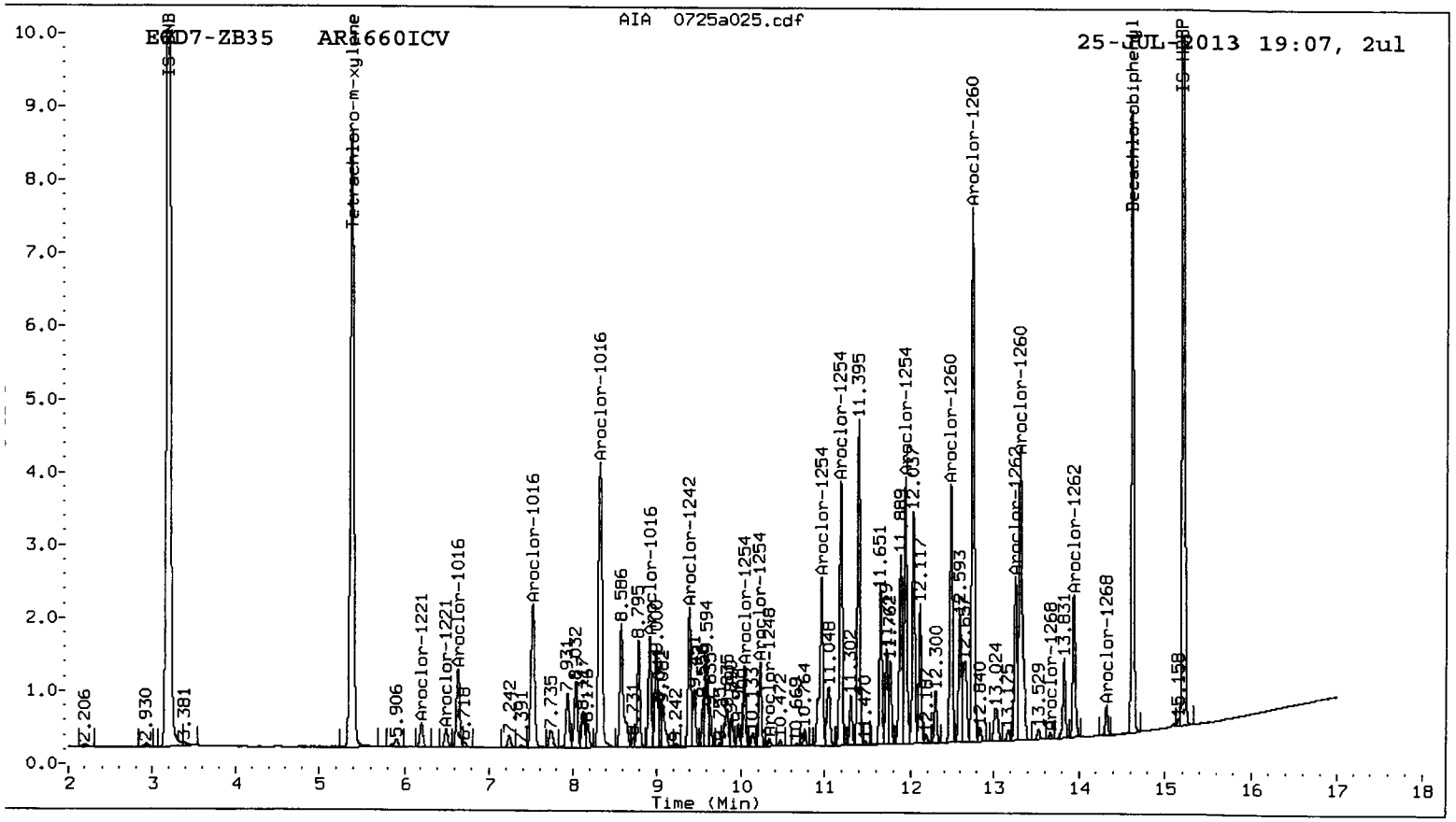
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Time (Min)


ECD7-ZB35 AR1660ICV
AIA 0725a025.cdf
25-JUL-2013 19:07, 2ul
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/ical-1.b/0725a026.d
Data file 2: 20130725.b/ical-2.b/0725a026.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242ICV
Client ID:
Injection Date: 25-JUL-2013 19:29
Report Date: 07/26/2013 10:05
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.731	-0.003	3399557	5.381	-0.002	4821498	41.6	37.8	9.6	Tetrachloro-m-xylene
14.590	0.000	2590815	14.622	0.000	3138152	37.9	35.7	5.9	Decachlorobiphenyl

Indicates RPD > 40%
Indicates Column 1 peak was manually integrated
Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	104.1	94.6
Decachlorobiphenyl	94.7	89.2

07/26/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7157074	-0.4
Hexabromobiphenyl	4753836	4863830	2.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	9902336	0.7
Hexabromobiphenyl	5491228	5649279	2.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.740	0.001	393835	185.1	1	6.636	0.001	455607	191.2
Aroclor-1016	2	8.263	0.003	1333723	184.6	2	7.515	0.001	962781	179.9
Aroclor-1016	3	8.447	0.001	519125	185.1	3	8.325	-0.001	1980466	177.4
Aroclor-1016	4	8.873	0.001	314637	189.7	4	8.926	0.000	597361	180.3
Total Col1Ave (4 peaks):		186.1				Total Col2Ave (4 peaks):		182.2	RPD = 2	
Corrected Ave (3 peaks):		184.9				Corrected Ave (3 peaks):		179.2	RPD = 3	
Aroclor-1221	1	6.185	-0.002	53646	63.4	1	6.206	0.002	157728	94.2
Aroclor-1221	2	6.394	-0.002	100144	137.1	2	6.502	0.001	104863	108.5
Aroclor-1221	3	6.518	-0.001	297964	139.5	3	6.636	0.000	455607	155.6
Aroclor-1221	NS	---			----	4	7.515	-0.014	962781	943.1
Total Col1Ave (3 peaks):		113.3				Total Col2Ave (4 peaks):		325.4	RPD = 97*	
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):		119.4		
Aroclor-1232	1	6.518	-0.003	297964	212.4	1	6.636	-0.002	455607	219.9
Aroclor-1232	2	7.740	-0.002	393835	463.5	2	7.515	-0.002	962781	409.2
Aroclor-1232	3	8.263	-0.002	1333723	469.4	3	8.325	-0.003	1980466	440.9
Aroclor-1232	4	8.447	-0.002	519125	464.9	4	8.926	-0.001	597361	405.5
Total Col1Ave (4 peaks):		402.5				Total Col2Ave (4 peaks):		368.9	RPD = 9	
Corrected Ave (3 peaks):		380.3				Corrected Ave (3 peaks):		344.9	RPD = 10	
Aroclor-1242	1	7.740	0.000	393835	231.5	1	6.636	0.001	455607	230.3
Aroclor-1242	2	8.263	0.001	1333723	229.4	2	7.515	0.000	962781	235.1
Aroclor-1242	3	8.447	0.000	519125	230.9	3	8.325	-0.001	1980466	230.7
Aroclor-1242	4	9.412	-0.001	495620	233.0	4	9.393	0.000	784383	230.1
Total Col1Ave (4 peaks):		231.2				Total Col2Ave (4 peaks):		231.5	RPD = 0	
Corrected Ave (3 peaks):		230.6				Corrected Ave (3 peaks):		230.4	RPD = 0	
Aroclor-1248	1	8.263	0.009	1333723	368.2	1	7.515	0.001	962781	472.5
Aroclor-1248	2	8.873	0.000	314637	132.6	2	8.325	0.002	1980466	354.6
Aroclor-1248	3	9.412	0.000	495620	147.5	3	8.926	0.000	597361	146.1
Aroclor-1248	4	9.882	0.000	552504	127.6	4	10.335	0.001	794146	135.3
Total Col1Ave (4 peaks):		194.0				Total Col2Ave (4 peaks):		277.1	RPD = 35	
Corrected Ave (3 peaks):		135.9				Corrected Ave (3 peaks):		212.0	RPD = 44*	
Aroclor-1254	1	10.224	-0.001	220602	49.2	1	10.037	0.001	217770	57.5
Aroclor-1254	2	10.614	0.001	145215	52.3	2	10.223	0.001	241023	50.0
Aroclor-1254	3	10.755	0.000	243923	44.6	3	10.917	0.000	401160	49.7
Aroclor-1254	4	11.118	0.003	202693	35.9	4	11.170	-0.002	408550	49.7
Aroclor-1254	5	11.812	0.001	103489	18.7	5	11.941	0.001	148205	24.9
Total Col1Ave (5 peaks):		40.1				Total Col2Ave (5 peaks):		46.4	RPD = 14	
Corrected Ave (4 peaks):		37.1				Corrected Ave (4 peaks):		43.6	RPD = 16	
Aroclor-1260	1	---			0.0	1	11.941	0.000	148205	18.7
Aroclor-1260	2	---			0.0	2	12.479	-0.005	61460	9.5
Aroclor-1260	3	12.768	0.039	131811	14.2	3	12.754	-0.001	37435	3.0
Aroclor-1260	4	13.125	0.000	12105	2.5	4	13.315	-0.001	25135	3.0
Aroclor-1260	5	---			0.0	NS	---			----
Col1Ave: <3 Quant Peaks						Col2Ave:		8.5		
Aroclor-1262	1	---			0.0	1	12.479	-0.005	61460	8.1
Aroclor-1262	2	12.768	0.040	131811	10.9	2	12.754	0.001	37435	2.5
Aroclor-1262	3	13.125	0.000	12105	3.1	3	13.214	-0.045	235588	36.0
Aroclor-1262	4	---			0.0	4	13.315	-0.002	25135	2.5
Aroclor-1262	5	13.873	-0.012	35339	9.6	5	13.979	0.034	24824	5.0
Total Col1Ave (3 peaks):		7.9				Total Col2Ave (5 peaks):		10.8	RPD = 32	
Corrected Ave: < 3 Peaks						Corrected Ave (4 peaks):		4.5		
Aroclor-1268	1	---			0.0	1	13.214	-0.045	235588	15.1
Aroclor-1268	2	---			0.0	2	13.315	-0.006	25135	1.7

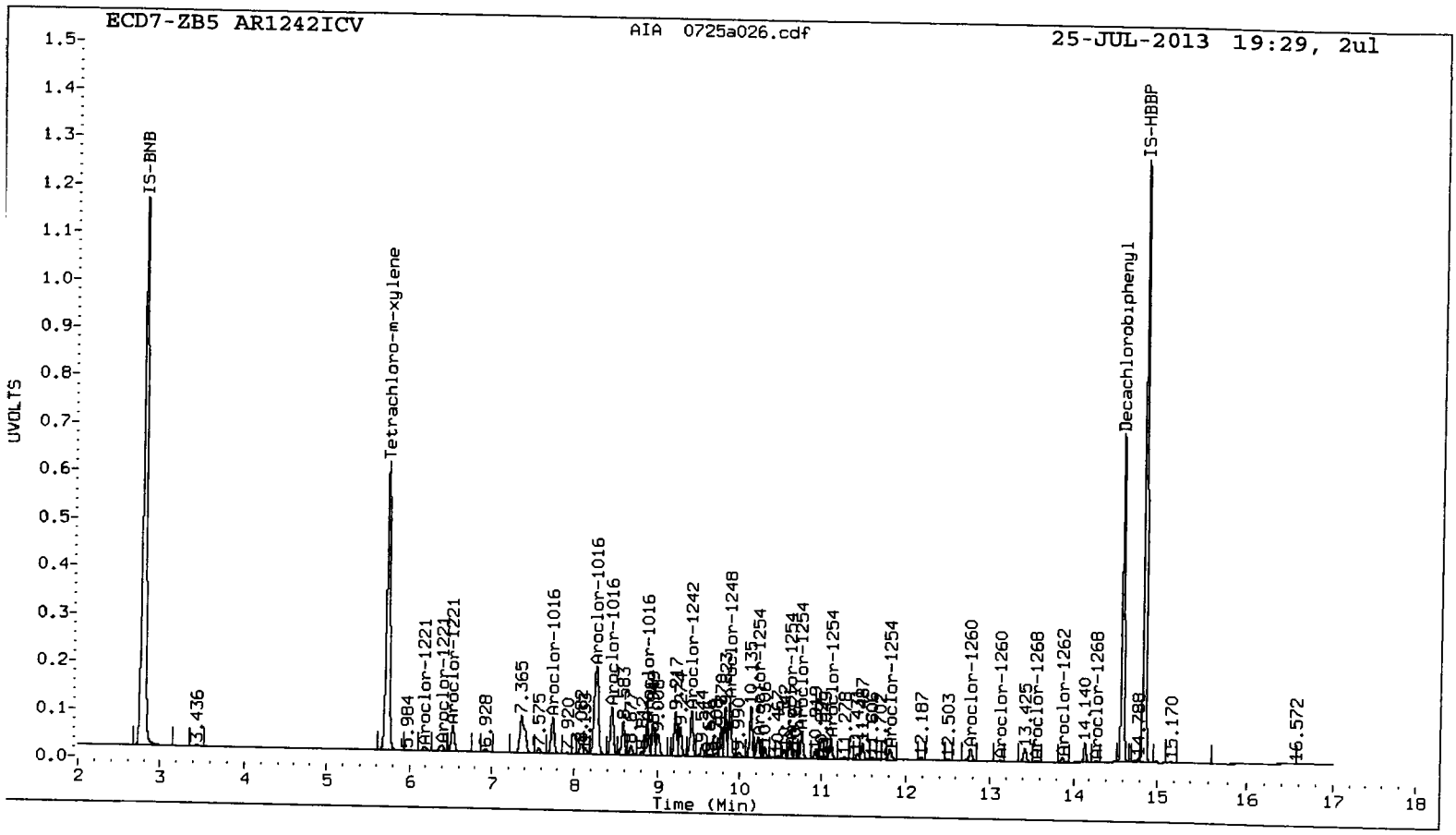
Aroclor-1268	3	13.560	-0.088	13725	1.4	3	---			0.0
Aroclor-1268	4	14.281	-0.004	11662	0.5	4	14.273	-0.048	70855	2.2

Col1Ave: <3 Quant Peaks Col2Ave: 6.4

Total PCB Area Col1 (5.834 - 14.490) = 10173207 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.483 - 14.521) = 16186255 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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25-JUL-2013 19:29, 2ul
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Time (Min)
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Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
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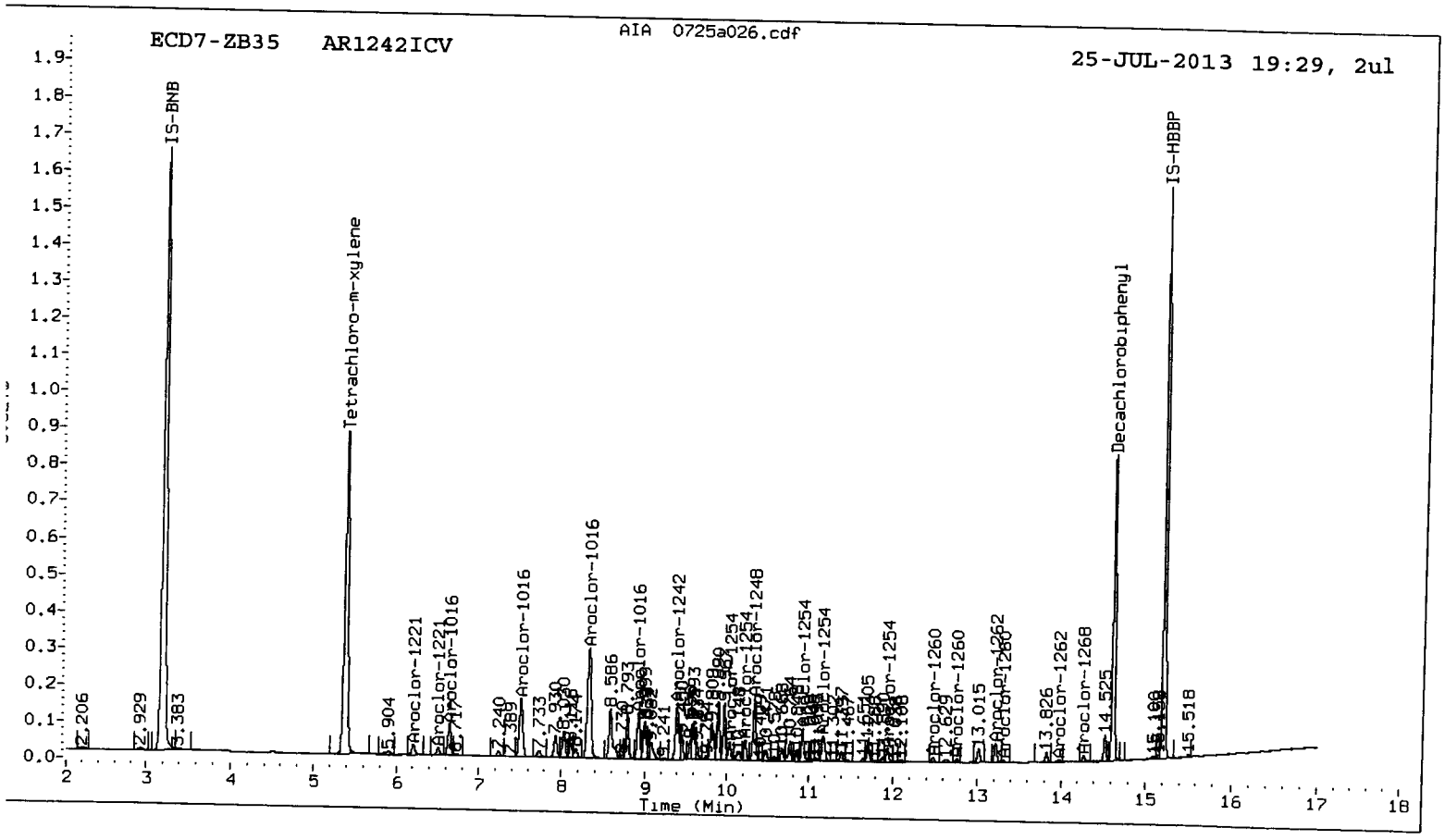
16.572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IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
2.206
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8.586
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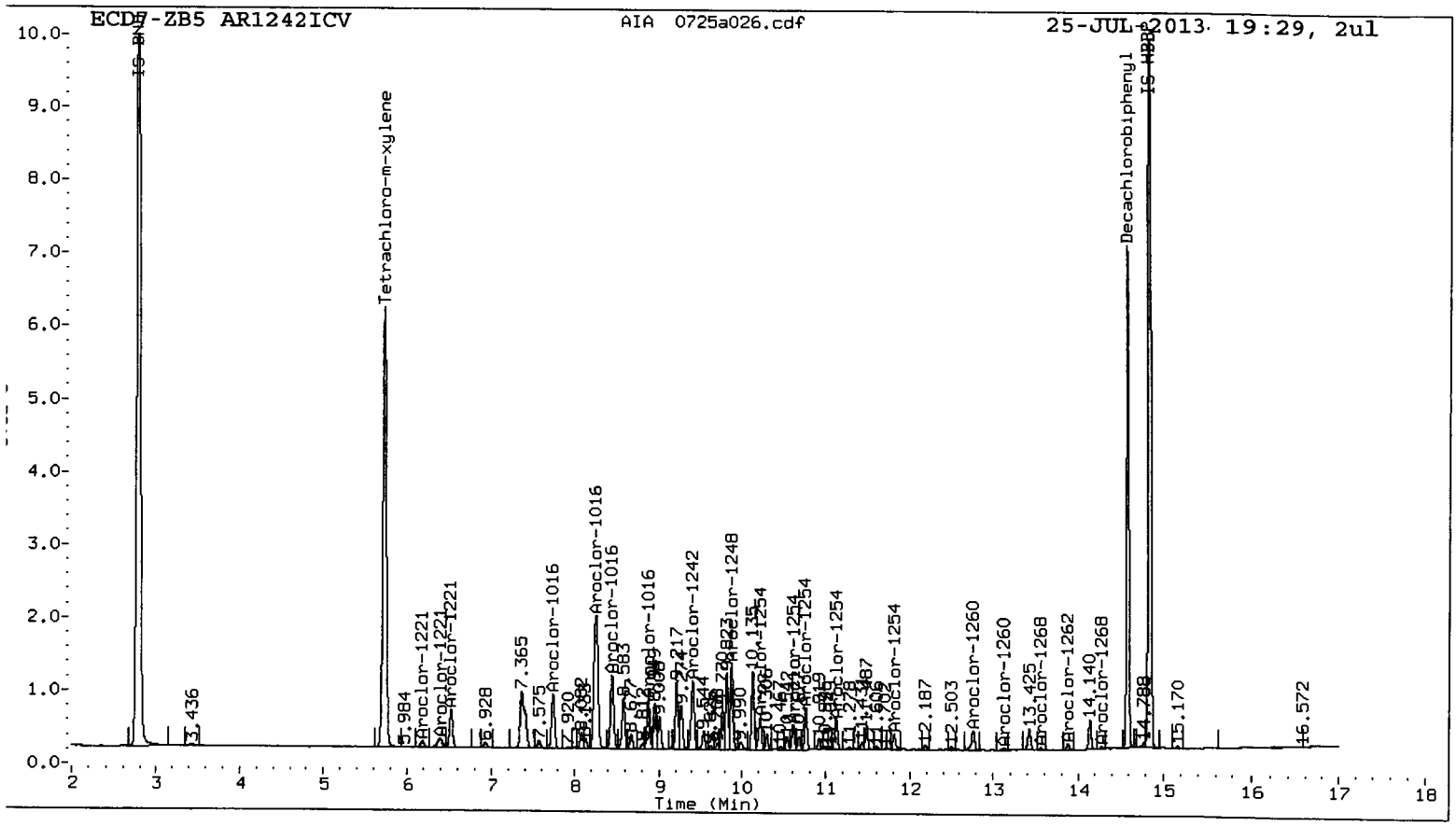
13.015
13.826
15.518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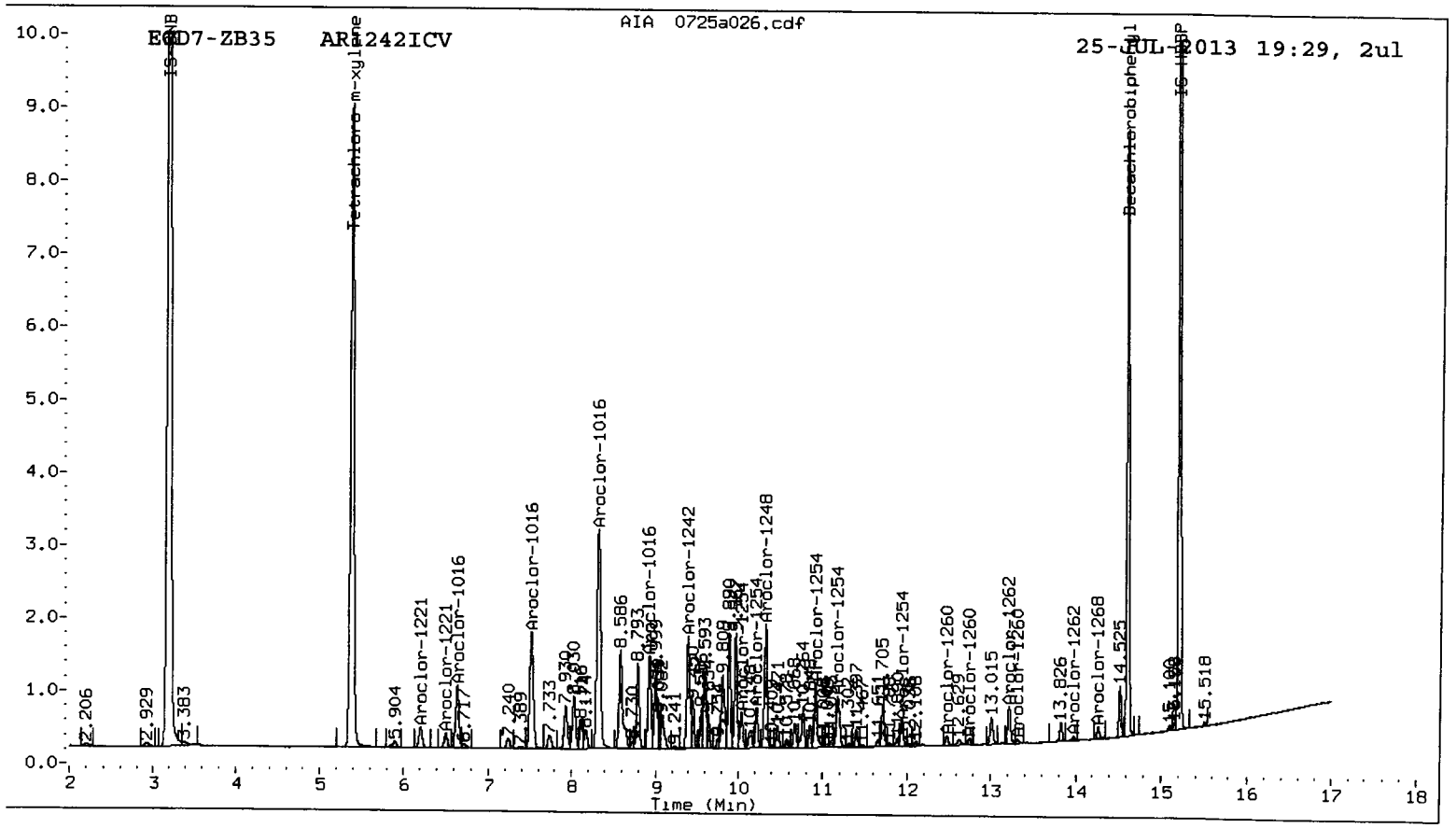
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-DCBP
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Time (Min)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25-JUL-2013 19:29, 2ul
IS-DCB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-DCBP
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/ical-1.b/0725a027.d
Data file 2: 20130725.b/ical-2.b/0725a027.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248ICV
Client ID:
Injection Date: 25-JUL-2013 19:51
Report Date: 07/26/2013 10:05
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.732	-0.002	3308985	5.382	-0.001	4707395	38.7	35.5	8.5	Tetrachloro-m-xylene
14.590	0.000	2551479	14.622	0.001	3096991	35.8	33.8	5.5	Decachlorobiphenyl

. Indicates RPD > 40%
[Indicates Column 1 peak was manually integrated
[Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.6	88.8
Decachlorobiphenyl	89.4	84.6

JR 07/26/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7504609	4.4
Hexabromobiphenyl	4753836	5071708	6.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	10304870	4.7
Hexabromobiphenyl	5491228	5880558	7.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

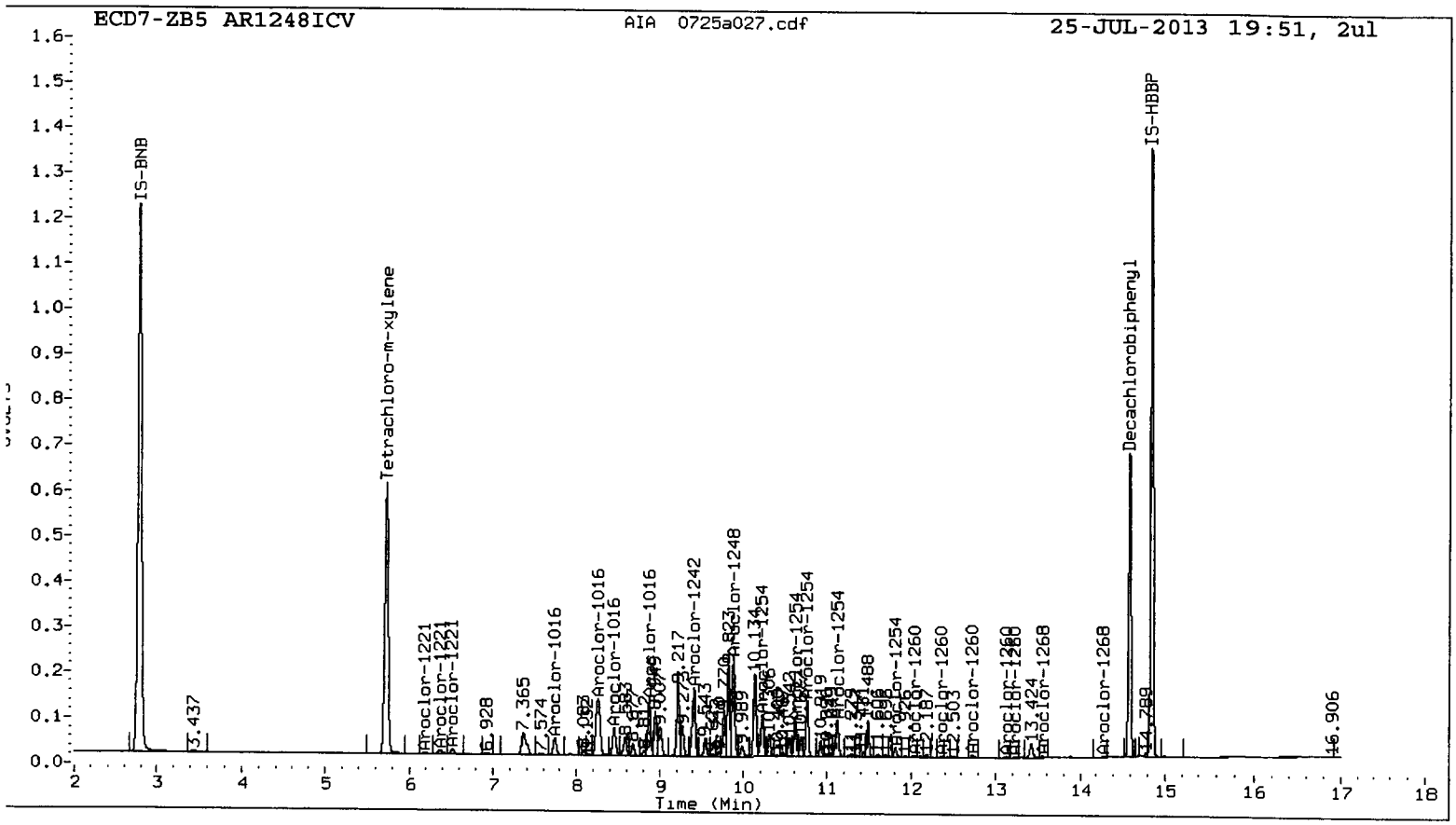
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.741	0.002	197282	88.4	1	6.635	0.001	117953	47.6
Aroclor-1016	2	8.256	-0.004	906882	119.7	2	7.512	-0.001	538934	96.7
Aroclor-1016	3	8.449	0.003	315805	107.4	3	8.323	-0.003	1388589	119.5
Aroclor-1016	4	8.873	0.001	564544	324.6	4	8.925	0.000	965125	279.9
Total Col1Ave (4 peaks):				160.0		Total Col2Ave (4 peaks):			135.9	RPD = 16
Corrected Ave (3 peaks):				105.2		Corrected Ave (3 peaks):			87.9	RPD = 18
Aroclor-1221	1	6.186	-0.002	10279	11.6	1	6.209	0.005	82207	47.2
Aroclor-1221	2	6.367	-0.029	51144	66.8	2	6.502	0.001	20607	20.5
Aroclor-1221	3	6.519	0.000	61726	27.6	3	6.635	0.000	117953	38.7
Aroclor-1221	NS	---			----	4	7.512	-0.016	538934	507.3
Total Col1Ave (3 peaks):				35.3		Total Col2Ave (4 peaks):			153.4	RPD = 125*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			35.5	
Aroclor-1232	1	6.519	-0.002	61726	42.0	1	6.635	-0.002	117953	54.7
Aroclor-1232	2	7.741	-0.001	197282	221.4	2	7.512	-0.004	538934	220.1
Aroclor-1232	3	8.256	-0.008	906882	304.4	3	8.323	-0.005	1388589	297.1
Aroclor-1232	4	8.449	0.000	315805	269.7	4	8.925	-0.001	965125	629.5
Total Col1Ave (4 peaks):				209.4		Total Col2Ave (4 peaks):			300.4	RPD = 36
Corrected Ave (3 peaks):				177.7		Corrected Ave (3 peaks):			190.6	RPD = 7
Aroclor-1242	1	7.741	0.001	197282	110.6	1	6.635	0.000	117953	57.3
Aroclor-1242	2	8.256	-0.006	906882	148.8	2	7.512	-0.002	538934	126.5
Aroclor-1242	3	8.449	0.002	315805	134.0	3	8.323	-0.003	1388589	155.5
Aroclor-1242	4	9.412	-0.001	773186	346.7	4	9.393	0.000	1105819	311.7
Total Col1Ave (4 peaks):				185.0		Total Col2Ave (4 peaks):			162.7	RPD = 13
Corrected Ave (3 peaks):				131.1		Corrected Ave (3 peaks):			113.1	RPD = 15
Aroclor-1248	1	8.256	0.002	906882	238.7	1	7.512	-0.001	538934	254.2
Aroclor-1248	2	8.873	0.000	564544	226.9	2	8.323	0.000	1388589	238.9
Aroclor-1248	3	9.412	0.000	773186	219.4	3	8.925	0.000	965125	226.8
Aroclor-1248	4	9.883	0.001	992776	218.7	4	10.334	0.001	1335940	218.7
Total Col1Ave (4 peaks):				225.9		Total Col2Ave (4 peaks):			234.7	RPD = 4
Corrected Ave (3 peaks):				281.7		Corrected Ave (3 peaks):			228.2	RPD = 3
Aroclor-1254	1	10.223	-0.002	458761	97.5	1	10.037	0.000	413209	104.8
Aroclor-1254	2	10.615	0.001	311673	107.1	2	10.223	0.000	443278	88.3
Aroclor-1254	3	10.755	0.000	509590	88.8	3	10.917	0.001	760182	90.5
Aroclor-1254	4	11.118	0.004	381872	64.6	4	11.168	-0.003	758659	88.7
Aroclor-1254	5	11.811	0.000	100808	17.4	5	11.943	0.002	142112	22.9
Total Col1Ave (5 peaks):				75.1		Total Col2Ave (5 peaks):			79.1	RPD = 5
Corrected Ave (4 peaks):				67.1		Corrected Ave (4 peaks):			72.6	RPD = 8
Aroclor-1260	1	12.042	0.000	17113	4.3	1	11.943	0.001	142112	17.2
Aroclor-1260	2	12.359	0.001	12423	3.1	2	12.481	-0.003	73062	10.9
Aroclor-1260	3	12.729	0.000	29065	3.0	3	12.755	0.000	55439	4.2
Aroclor-1260	4	13.126	0.000	11559	2.3	4	13.317	0.002	34120	3.9
Aroclor-1260	5	13.236	-0.069	10261	4.7	NS	---			----
Total Col1Ave (5 peaks):				3.5		Total Col2Ave (4 peaks):			9.0	RPD = 89*
Corrected Ave (4 peaks):				3.2		Corrected Ave (3 peaks):			6.3	RPD = 66*
Aroclor-1262	1	12.359	0.001	12423	2.3	1	12.481	-0.003	73062	9.3
Aroclor-1262	2	12.729	0.000	29065	2.3	2	12.755	0.001	55439	3.5
Aroclor-1262	3	13.126	0.000	11559	2.8	3	13.260	0.000	23473	3.4
Aroclor-1262	4	13.236	-0.067	10261	2.1	4	13.317	0.000	34120	3.3
Aroclor-1262	5	---			0.0	5	13.980	0.035	35164	6.8
Total Col1Ave (4 peaks):				2.4		Total Col2Ave (5 peaks):			5.3	RPD = 75*
Corrected Ave (3 peaks):				2.2		Corrected Ave (4 peaks):			4.3	RPD = 63*
Aroclor-1268	1	13.236	0.000	10261	0.7	1	13.260	0.000	23473	1.4

Aroclor-1268 2	---			0.0	2	13.317	-0.004	34120	2.2
Aroclor-1268 3	13.559	-0.089	14872	1.5	3	---			0.0
Aroclor-1268 4	14.280	-0.005	10885	0.4	4	14.320	-0.001	11461	0.3
Total Col1Ave (3 peaks):			0.9	Total Col2Ave (3 peaks):				1.3	RPD = 43*
Corrected Ave: < 3 Peaks				Corrected Ave: < 3 Peaks					

Total PCB Area Col1 (5.834 - 14.490) = 12247549 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.483 - 14.521) = 18940145 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
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Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
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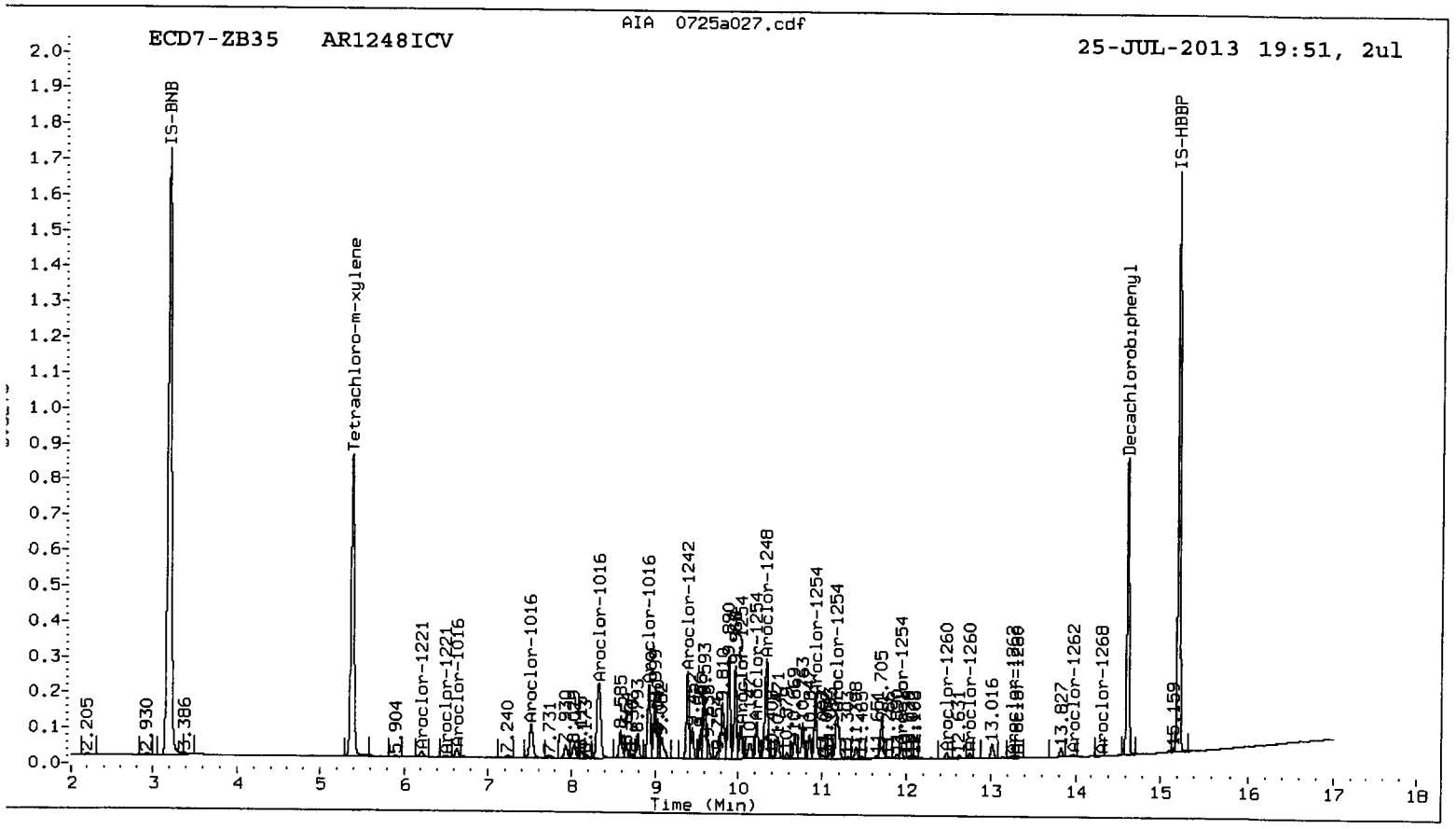
Time (Min)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Tetrachloro-m-xylene
Decachlorobiphenyl
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Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
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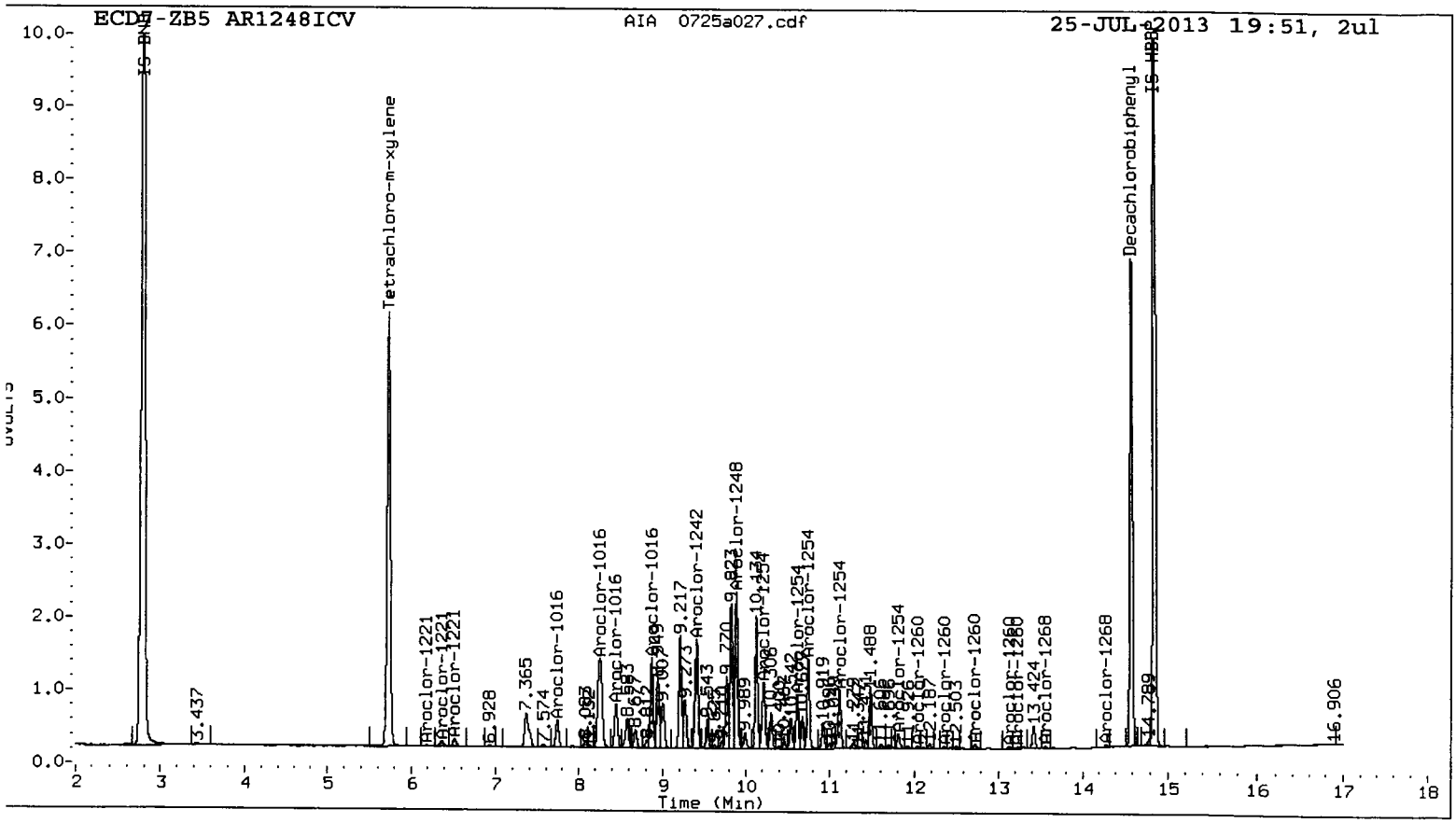
5.904
7.240
7.731
12.631
13.016
13.827
15.159
Time (Min)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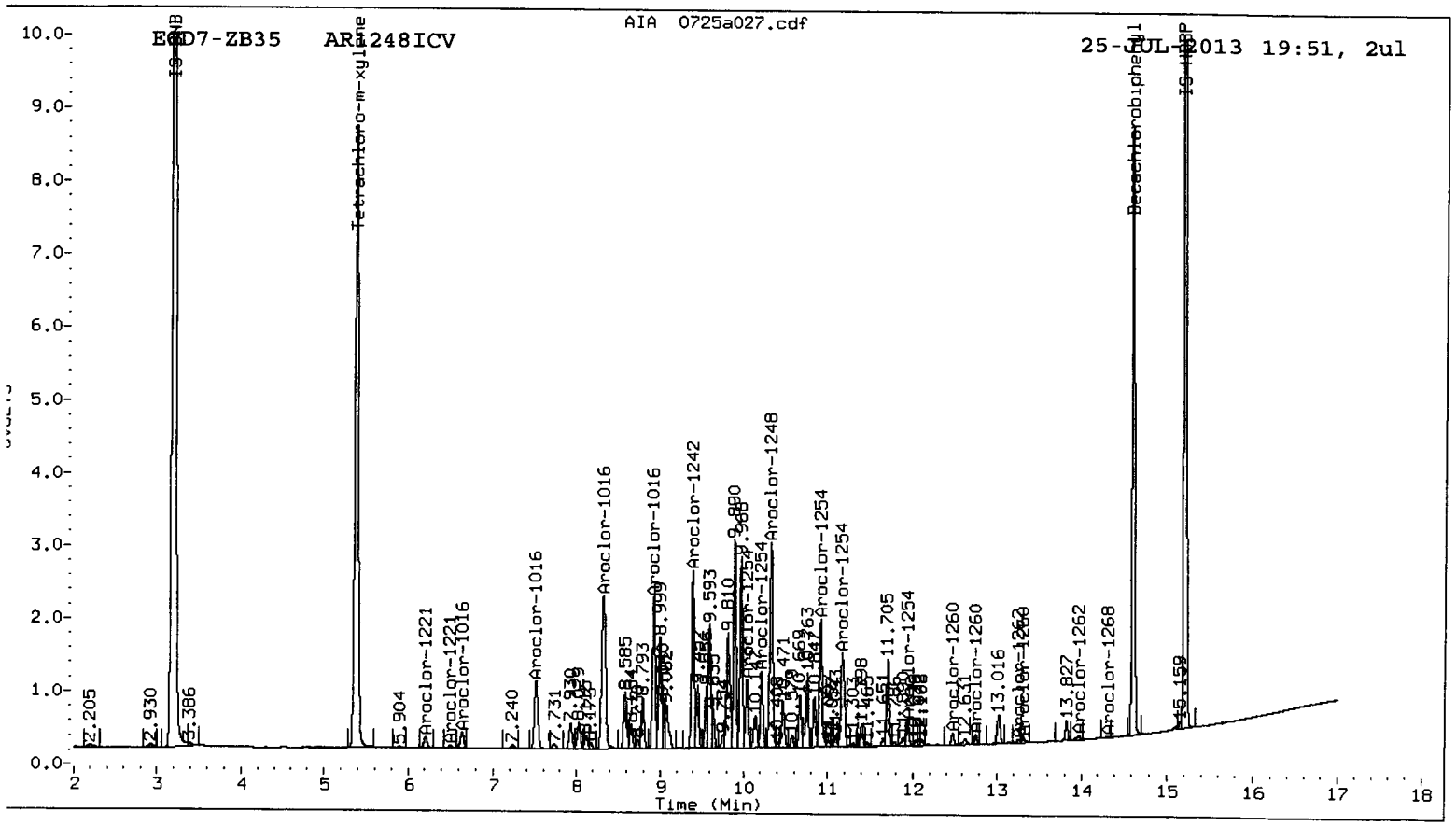
AIA 0725a027.cdf
25-JUL-2013 19:51, 2ul
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Time (Min)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AIA 0725a027.cdf
25-JUL-2013 19:51, 2ul
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/ical-1.b/0725a028.d
Data file 2: 20130725.b/ical-2.b/0725a028.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV
Client ID:
Injection Date: 25-JUL-2013 20:13
Report Date: 07/26/2013 10:05
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.734	0.001	3362871	5.384	0.001	4813227	39.7	36.4	8.6	Tetrachloro-m-xylene
14.590	0.000	2629232	14.620	-0.001	3187946	36.5	34.5	5.6	Decachlorobiphenyl

Indicates RPD > 40%
Indicates Column 1 peak was manually integrated
Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	99.2	91.0
Decachlorobiphenyl	91.4	86.4

JL 07/26/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7429197	3.4
Hexabromobiphenyl	4753836	5114156	7.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	10278986	4.5
Hexabromobiphenyl	5491228	5929902	8.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

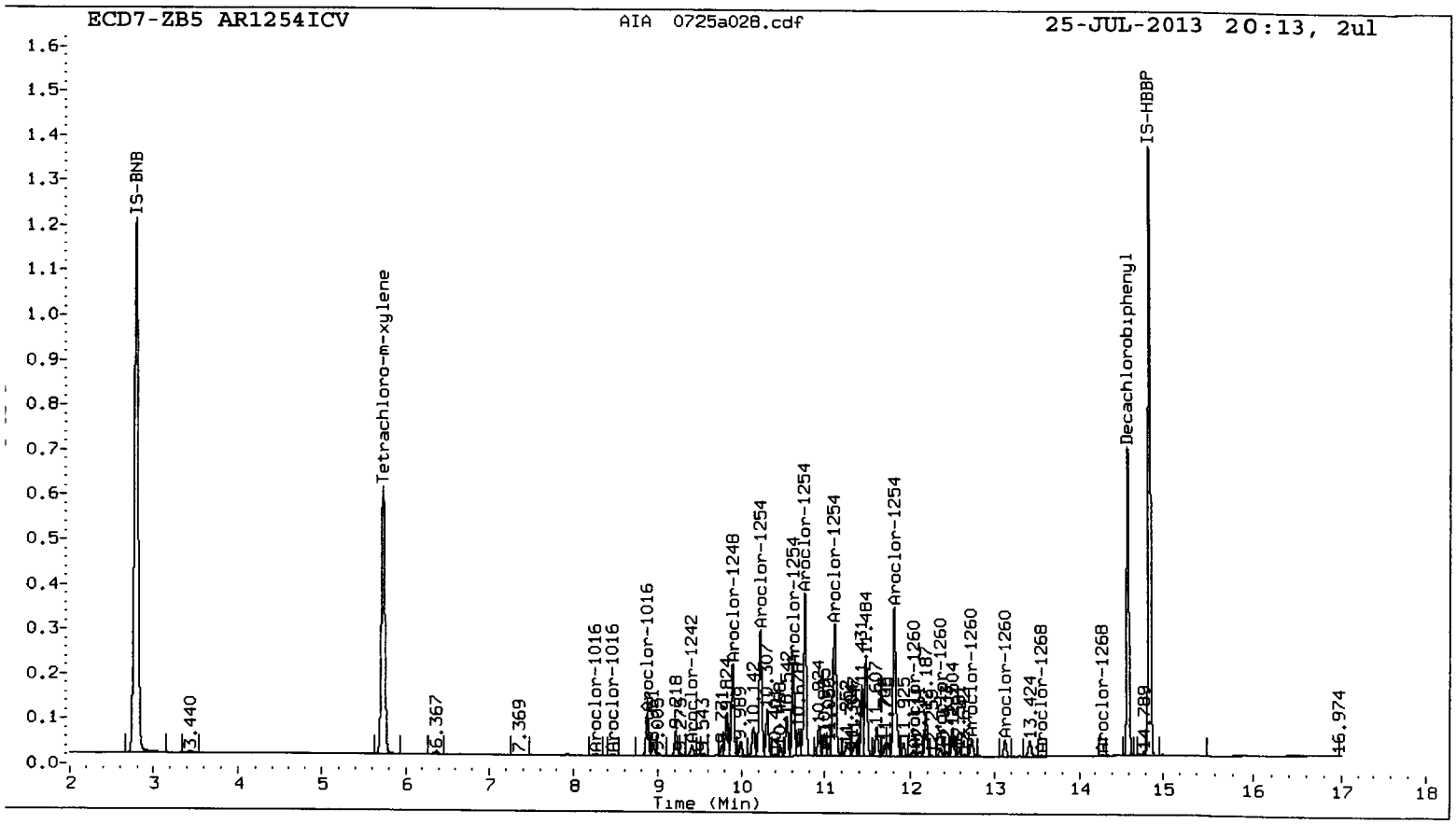
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	---			0.0	1	6.630	-0.005	20026	8.1
Aroclor-1016	2	8.252	-0.008	27234	3.6	2	7.516	0.003	19613	3.5
Aroclor-1016	3	8.458	0.011	14716	5.1	3	8.323	-0.003	59734	5.2
Aroclor-1016	4	8.874	0.002	432547	251.2	4	8.926	0.000	646029	187.8
	Total Col1Ave (3 peaks):				86.6	Total Col2Ave (4 peaks):				51.2 RPD = 52*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				5.6
Aroclor-1221	1	---			0.0	1	6.211	0.007	69185	39.8
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	6.630	-0.006	20026	6.6
Aroclor-1221	NS	---			----	4	7.516	-0.012	19613	18.5
	Col1Ave: <3 Quant Peaks					Col2Ave: 21.6				
Aroclor-1232	1	---			0.0	1	6.630	-0.008	20026	9.3
Aroclor-1232	2	---			0.0	2	7.516	0.000	19613	8.0
Aroclor-1232	3	8.252	-0.012	27234	9.2	3	8.323	-0.006	59734	12.8
Aroclor-1232	4	8.458	0.009	14716	12.7	4	8.926	-0.001	646029	422.5
	Col1Ave: <3 Quant Peaks					Col2Ave: 113.2				
Aroclor-1242	1	---			0.0	1	6.630	-0.006	20026	9.8
Aroclor-1242	2	8.252	-0.010	27234	4.5	2	7.516	0.002	19613	4.6
Aroclor-1242	3	8.458	0.010	14716	6.3	3	8.323	-0.003	59734	6.7
Aroclor-1242	4	9.414	0.001	107522	48.7	4	9.394	0.001	392932	111.0
	Total Col1Ave (3 peaks):				19.8	Total Col2Ave (4 peaks):				33.0 RPD = 50*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				7.0
Aroclor-1248	1	8.252	-0.002	27234	7.2	1	7.516	0.003	19613	9.3
Aroclor-1248	2	8.874	0.001	432547	175.6	2	8.323	-0.001	59734	10.3
Aroclor-1248	3	9.414	0.002	107522	30.8	3	8.926	0.000	646029	152.2
Aroclor-1248	4	9.893	0.010	892765	198.7	4	10.320	-0.013	732039	120.2
	Total Col1Ave (4 peaks):				103.1	Total Col2Ave (4 peaks):				73.0 RPD = 34
	Corrected Ave (3 peaks):				71.2	Corrected Ave (3 peaks):				46.6 RPD = 42*
Aroclor-1254	1	10.226	0.001	1318349	283.0	1	10.038	0.002	1088548	276.9
Aroclor-1254	2	10.615	0.001	847413	294.1	2	10.224	0.001	1402835	280.2
Aroclor-1254	3	10.756	0.000	1578655	278.0	3	10.918	0.002	2294961	273.9
Aroclor-1254	4	11.116	0.002	1662546	283.9	4	11.172	0.000	2419236	283.5
Aroclor-1254	5	11.812	0.001	1611359	280.6	5	11.942	0.001	1718961	278.1
	Total Col1Ave (5 peaks):				283.9	Total Col2Ave (5 peaks):				278.5 RPD = 2
	Corrected Ave (4 peaks):				281.4	Corrected Ave (4 peaks):				277.8 RPD = 1
Aroclor-1260	1	12.041	-0.001	69614	17.5	1	11.942	0.001	1718961	206.3
Aroclor-1260	2	12.360	0.001	81277	20.0	2	12.478	-0.006	655720	96.6
Aroclor-1260	3	12.729	0.000	174626	17.9	3	12.755	0.000	359840	27.3
Aroclor-1260	4	13.125	0.000	170946	33.5	4	13.312	-0.003	242922	27.4
Aroclor-1260	5	---			0.0	NS	---			----
	Total Col1Ave (4 peaks):				22.2	Total Col2Ave (4 peaks):				89.4 RPD = 120*
	Corrected Ave (3 peaks):				18.5	Corrected Ave (3 peaks):				50.4 RPD = 93*
Aroclor-1262	1	12.360	0.001	81277	14.9	1	12.478	-0.006	655720	82.7
Aroclor-1262	2	12.729	0.000	174626	13.7	2	12.755	0.001	359840	22.8
Aroclor-1262	3	13.125	0.000	170946	41.5	3	13.261	0.002	50760	7.4
Aroclor-1262	4	---			0.0	4	13.312	-0.004	242922	23.4
Aroclor-1262	5	---			0.0	5	13.979	0.035	34636	6.6
	Total Col1Ave (3 peaks):				23.4	Total Col2Ave (5 peaks):				28.6 RPD = 20
	Corrected Ave: < 3 Peaks					Corrected Ave (4 peaks):				15.1
Aroclor-1268	1	---			0.0	1	13.261	0.002	50760	3.1
Aroclor-1268	2	---			0.0	2	13.312	-0.009	242922	15.8
Aroclor-1268	3	13.560	-0.089	15510	1.5	3	---			0.0

Aroclor-1268	4	14.279	-0.006	12344	0.5	4	---	0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks		

Total PCB Area Col1 (5.834 - 14.490) = 15890721 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (5.483 - 14.521) = 23125879 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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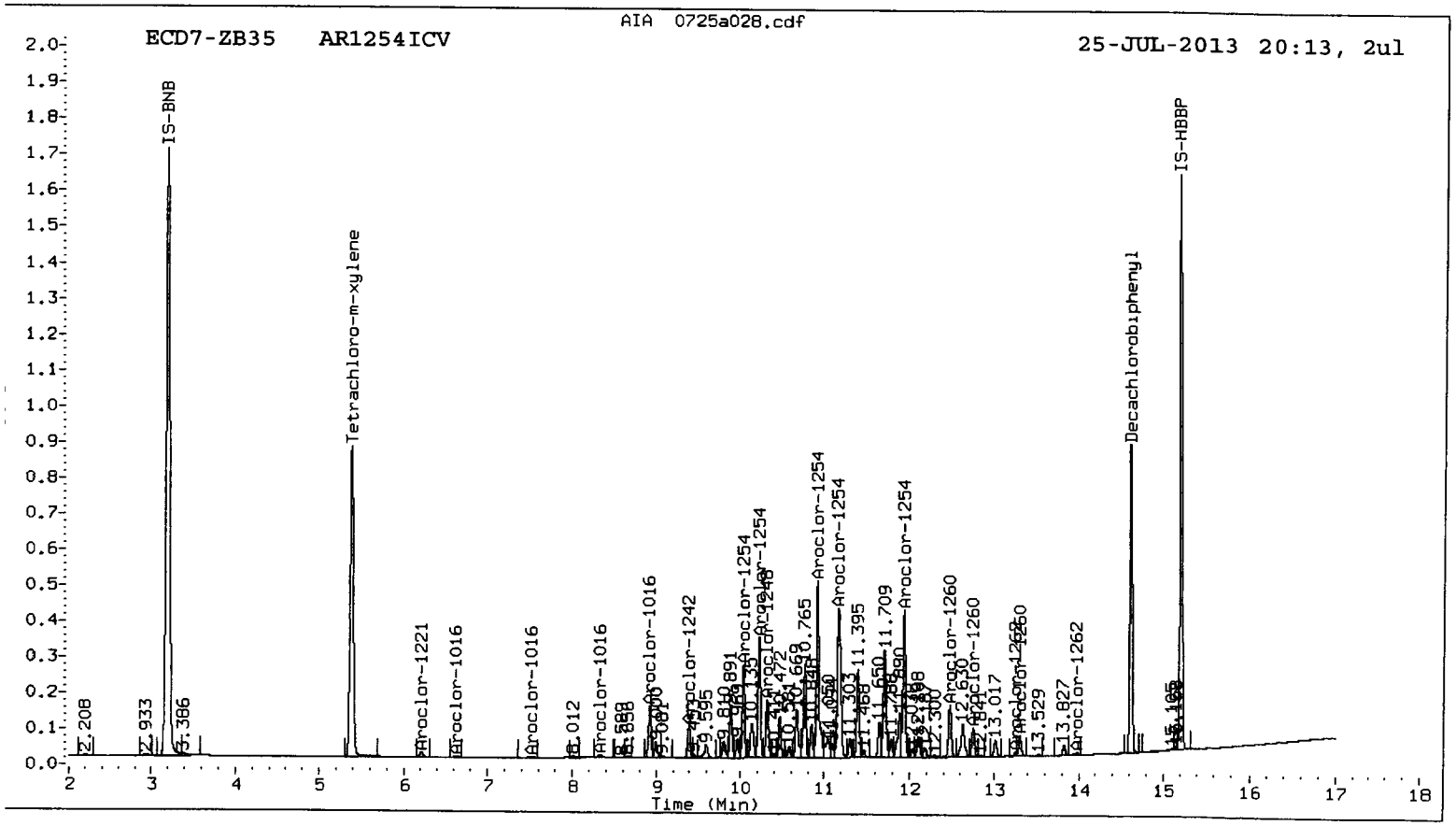
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1268
Time (Min)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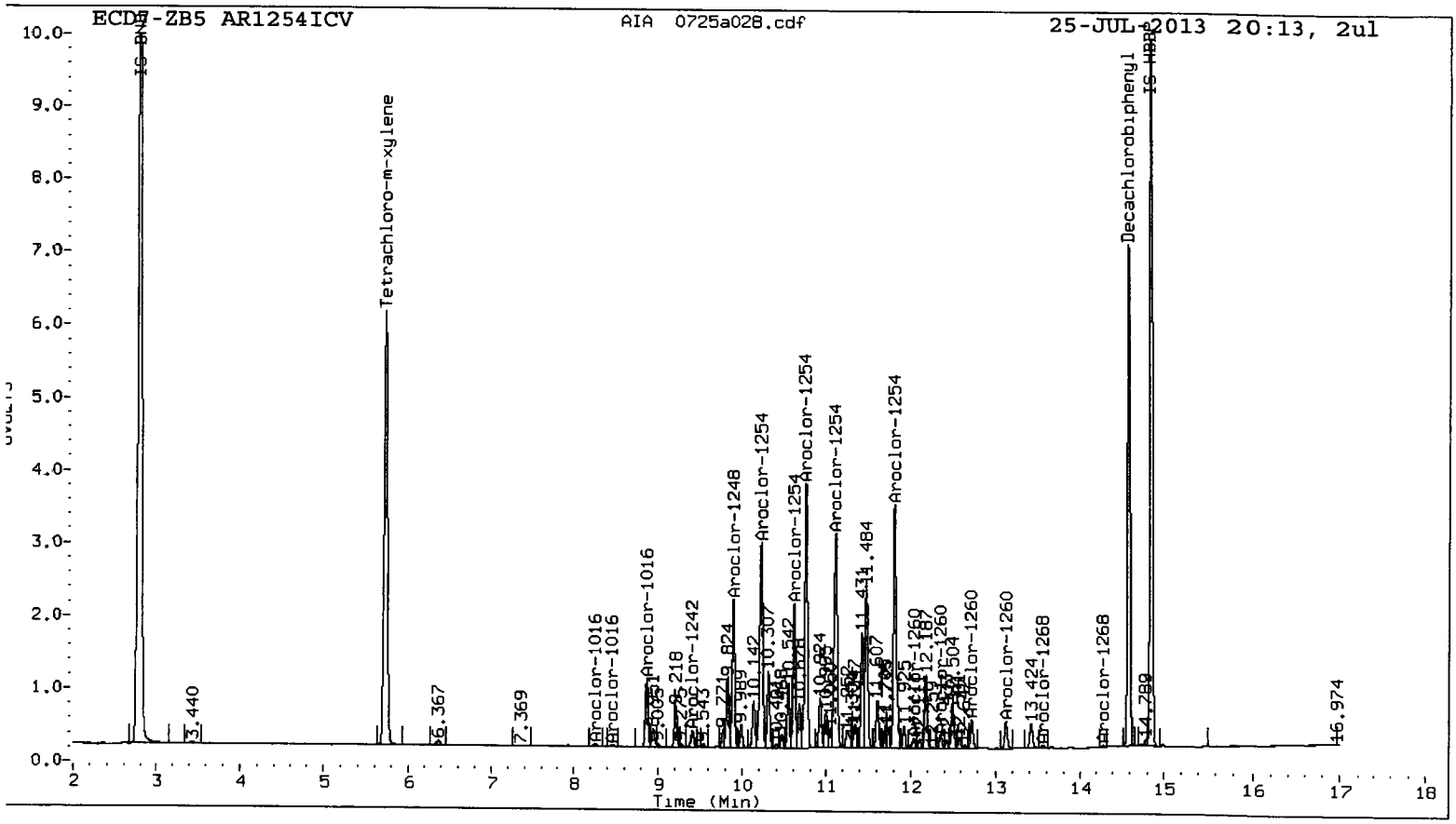
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Time (Min)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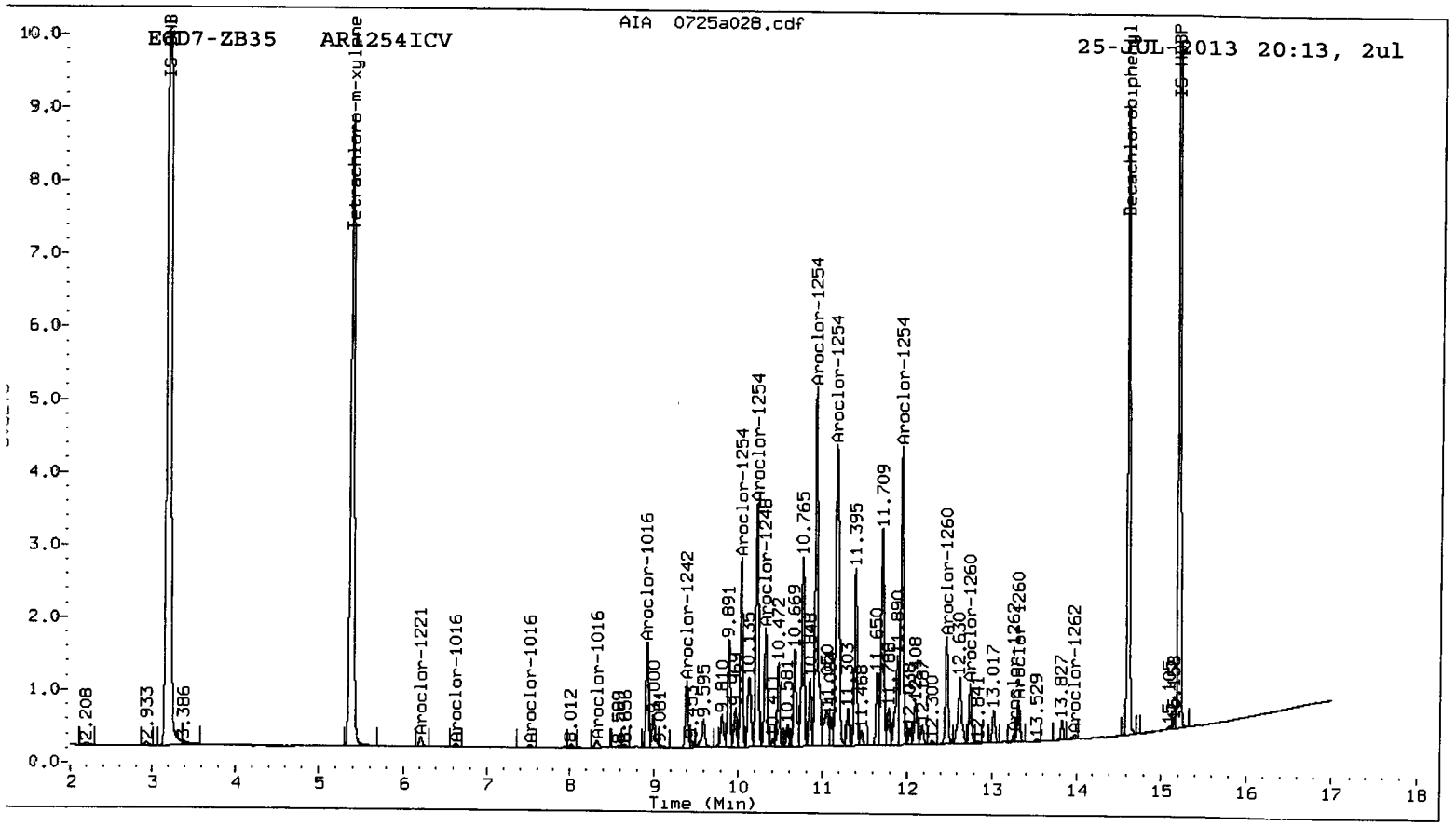
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1268
Time (Min)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25-JUL-2013 20:13, 2ul
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/ical-1.b/0725a029.d
Data file 2: 20130725.b/ical-2.b/0725a029.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162ICV
Client ID:
Injection Date: 25-JUL-2013 20:35
Report Date: 07/26/2013 10:05
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.733	-0.001	3409479	5.383	0.000	4772500	41.7	37.9	9.4	Tetrachloro-m-xylene
14.590	0.000	2615515	14.622	0.000	3172133	38.1	36.0	5.5	Decachlorobiphenyl

Indicates RPD > 40%
[Indicates Column 1 peak was manually integrated
[Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	104.2	94.8
Decachlorobiphenyl	95.1	90.0

7/26/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7173741	-0.2
Hexabromobiphenyl	4753836	4886739	2.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	9777525	-0.6
Hexabromobiphenyl	5491228	5661156	3.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.743	0.004	42410	19.9	1	6.639	0.004	733139	311.7
Aroclor-1016	2	8.265	0.005	114689	15.8	2	7.532	0.019	231619	43.8
Aroclor-1016	3	8.448	0.002	51704	18.4	3	8.329	0.003	216085	19.6
Aroclor-1016	4	8.875	0.003	27407	16.5	4	8.926	0.001	61344	18.7
	Total Col1Ave (4 peaks):			17.7		Total Col2Ave (4 peaks):			98.5	RPD = 139*
	Corrected Ave (3 peaks):			16.9		Corrected Ave (3 peaks):			27.4	RPD = 47*
Aroclor-1221	1	6.190	0.002	217217	256.1	1	6.206	0.002	419847	254.0
Aroclor-1221	2	6.399	0.003	182636	249.5	2	6.503	0.001	244675	256.4
Aroclor-1221	3	6.522	0.003	537771	251.1	3	6.639	0.003	733139	253.5
Aroclor-1221	NS	---			----	4	7.532	0.003	231619	229.8
	Total Col1Ave (3 peaks):			252.2		Total Col2Ave (4 peaks):			248.4	RPD = 2
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):			245.8	
Aroclor-1232	1	6.522	0.001	537771	382.5	1	6.639	0.001	733139	358.4
Aroclor-1232	2	7.743	0.001	42410	49.8	2	7.532	0.015	231619	99.7
Aroclor-1232	3	8.265	0.001	114689	40.3	3	8.329	0.001	216085	48.7
Aroclor-1232	4	8.448	-0.001	51704	46.2	4	8.926	0.000	61344	42.2
	Total Col1Ave (4 peaks):			129.7		Total Col2Ave (4 peaks):			137.3	RPD = 6
	Corrected Ave (3 peaks):			45.4		Corrected Ave (3 peaks):			63.5	RPD = 33
Aroclor-1242	1	7.743	0.003	42410	24.9	1	6.639	0.004	733139	375.3
Aroclor-1242	2	8.265	0.003	114689	19.7	2	7.532	0.018	231619	57.3
Aroclor-1242	3	8.448	0.001	51704	22.9	3	8.329	0.003	216085	25.5
Aroclor-1242	4	9.413	0.000	22723	10.7	4	9.396	0.003	91994	27.3
	Total Col1Ave (4 peaks):			19.5		Total Col2Ave (4 peaks):			121.4	RPD = 145*
	Corrected Ave (3 peaks):			17.8		Corrected Ave (3 peaks):			36.7	RPD = 70*
Aroclor-1248	1	8.265	0.011	114689	31.6	1	7.532	0.019	231619	115.1
Aroclor-1248	2	8.875	0.002	27407	11.5	2	8.329	0.006	216085	39.2
Aroclor-1248	3	9.413	0.001	22723	6.7	3	8.926	0.001	61344	15.2
Aroclor-1248	4	9.892	0.010	157268	36.2	4	10.330	-0.003	74279	12.8
	Total Col1Ave (4 peaks):			21.5		Total Col2Ave (4 peaks):			45.6	RPD = 72*
	Corrected Ave (3 peaks):			16.6		Corrected Ave (3 peaks):			22.4	RPD = 30
Aroclor-1254	1	10.227	0.002	178036	39.6	1	10.038	0.001	233293	62.4
Aroclor-1254	2	10.615	0.002	33902	12.2	2	10.223	0.001	275123	57.8
Aroclor-1254	3	10.722	-0.033	235140	42.9	3	10.959	0.042	1108240	139.1
Aroclor-1254	4	11.097	-0.018	937501	165.8	4	11.188	0.016	1280379	157.7
Aroclor-1254	5	11.811	-0.001	860902	155.3	5	11.943	0.002	828105	140.8
	Total Col1Ave (5 peaks):			83.1		Total Col2Ave (5 peaks):			111.6	RPD = 29
	Corrected Ave (4 peaks):			62.5		Corrected Ave (4 peaks):			100.0	RPD = 46*
Aroclor-1260	1	12.042	0.000	1548775	407.8	1	11.943	0.002	828105	104.1
Aroclor-1260	2	12.359	0.001	1281406	329.8	2	12.485	0.001	1864944	287.8
Aroclor-1260	3	12.729	0.000	2835183	303.8	3	12.755	0.000	3539111	281.3
Aroclor-1260	4	13.126	0.001	924006	189.4	4	13.318	0.003	2397698	283.4
Aroclor-1260	5	13.305	0.000	1147245	544.2	NS	---			----
	Total Col1Ave (5 peaks):			355.0		Total Col2Ave (4 peaks):			239.2	RPD = 39
	Corrected Ave (4 peaks):			307.7		Corrected Ave (3 peaks):			222.9	RPD = 32
Aroclor-1262	1	12.359	0.001	1281406	245.4	1	12.485	0.001	1864944	246.2
Aroclor-1262	2	12.729	0.000	2835183	233.5	2	12.755	0.001	3539111	234.9
Aroclor-1262	3	13.126	0.001	924006	234.9	3	13.260	0.001	1609317	245.3
Aroclor-1262	4	13.305	0.002	1147245	243.9	4	13.318	0.001	2397698	242.0
Aroclor-1262	5	13.885	0.001	878124	237.7	5	13.945	0.001	1197933	239.6
	Total Col1Ave (5 peaks):			239.1		Total Col2Ave (5 peaks):			241.6	RPD = 1
	Corrected Ave (4 peaks):			237.5		Corrected Ave (4 peaks):			240.5	RPD = 1
Aroclor-1268	1	13.237	0.001	1152135	87.3	1	13.260	0.001	1609317	103.0

Aroclor-1268	2	13.305	0.002	1147245	98.0	2	13.318	-0.003	2397698	163.7
Aroclor-1268	3	13.662	0.014	430631	43.8	3	13.669	0.001	111039	9.4
Aroclor-1268	4	14.285	0.000	291811	11.3	4	14.321	0.000	396267	12.5

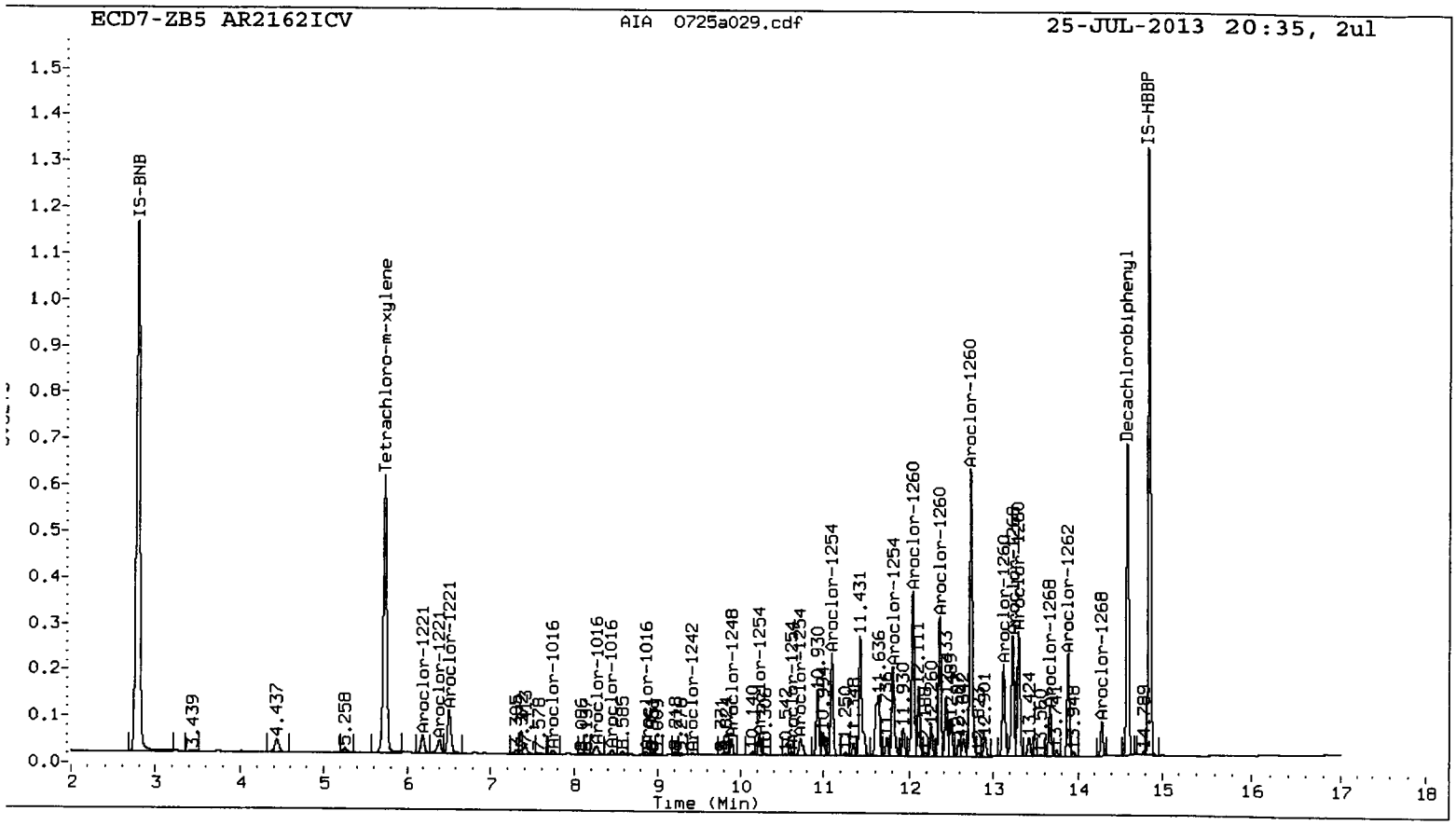
Total Col1Ave (4 peaks): 60.1 Total Col2Ave (4 peaks): 72.2 RPD = 18

Corrected Ave (3 peaks): 47.5 Corrected Ave (3 peaks): 41.6 RPD = 13

Total PCB Area Col1 (5.834 - 14.490) = 20689287 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (5.483 - 14.521) = 28824411 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical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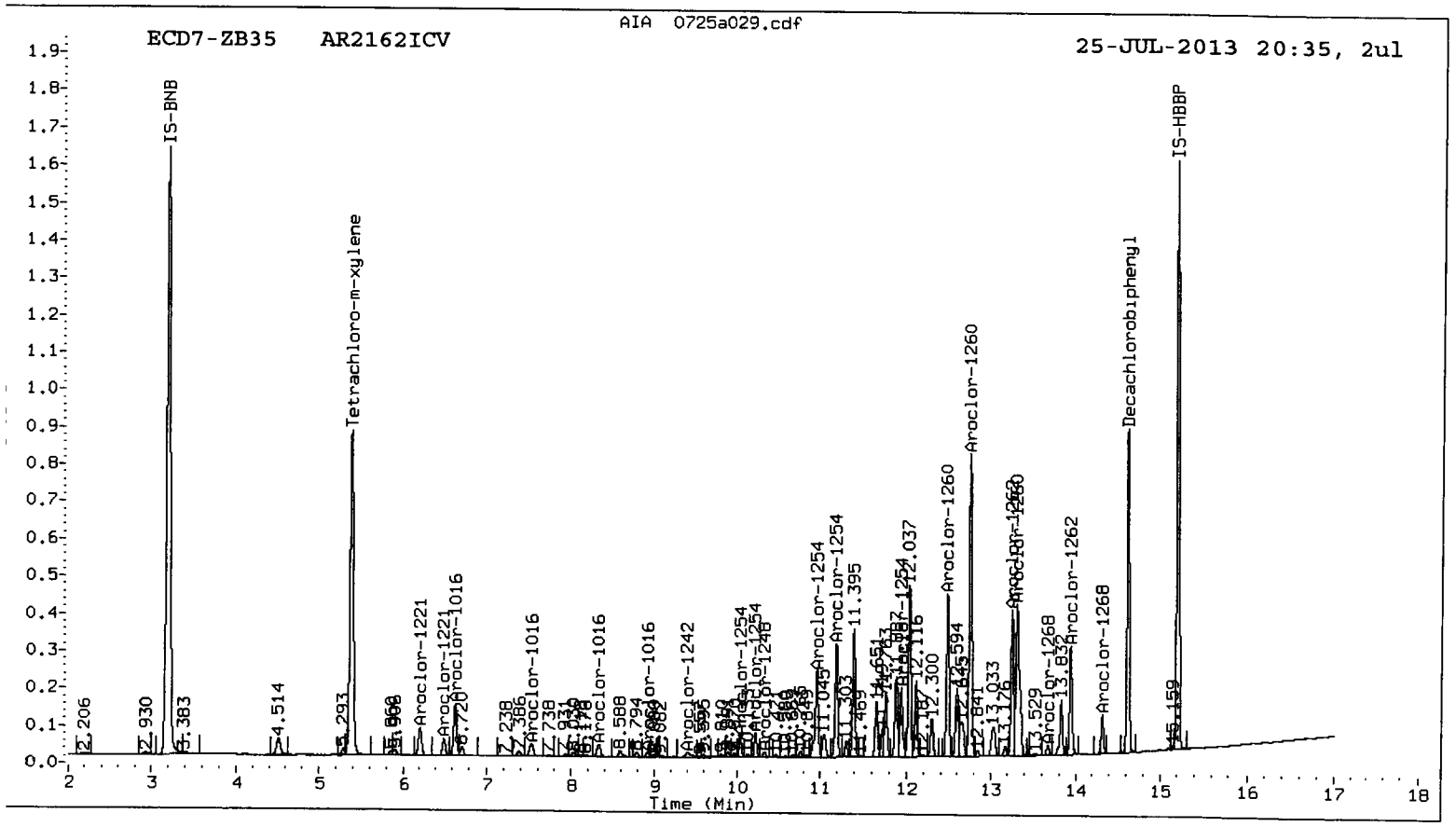
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Time (Min)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25-JUL-2013 20:35, 2ul
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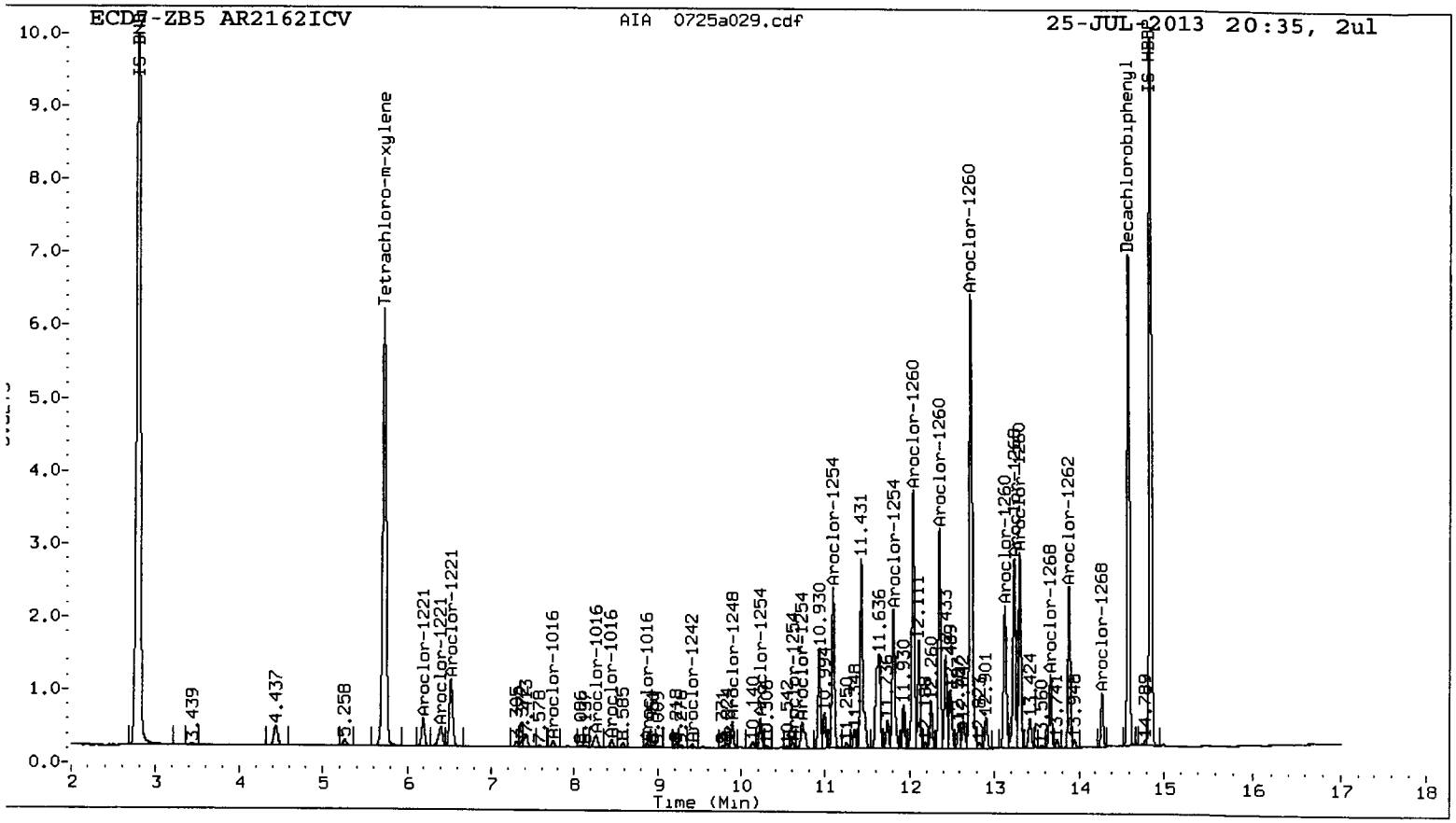
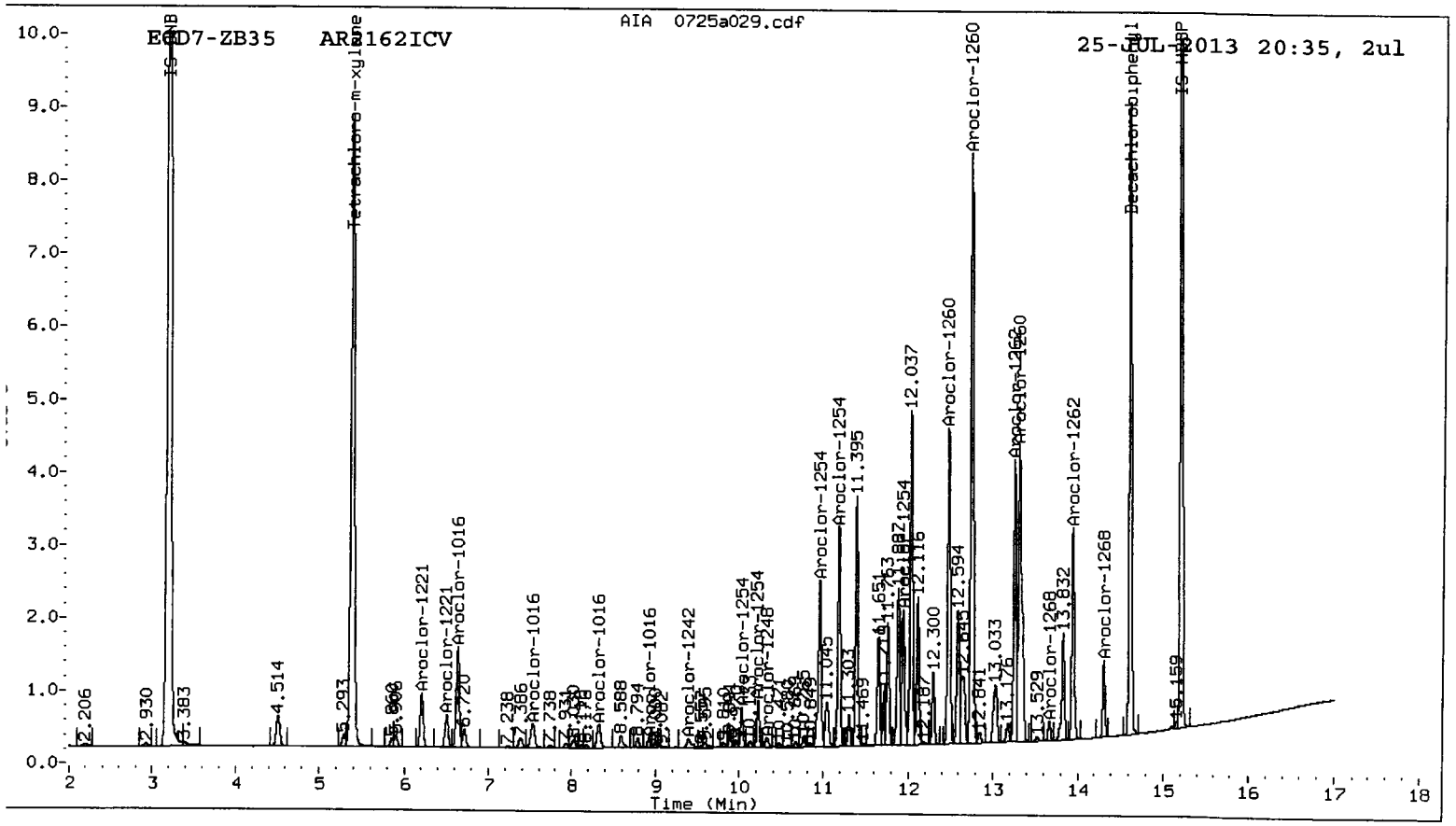
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Time (Min)


ECD7-ZB5 AR2162ICV
AIA 0725a029.cdf
25-JUL-2013 20:35, 2ul
IS-BN
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBB
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Time (Min)


ECD7-ZB35 AR2162ICV
AIA 0725a029.cdf
25-JUL-2013 20:35, 2ul
IS-BN
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBB
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/ical-1.b/0725a030.d
Data file 2: 20130725.b/ical-2.b/0725a030.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268ICV
Client ID:
Injection Date: 25-JUL-2013 20:57
Report Date: 07/26/2013 10:05
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.734	0.000	3400763	5.383	0.000	4835853	40.7	37.4	8.4	Tetrachloro-m-xylene
14.589	0.000	3481185	14.621	0.000	4192474	50.3	47.1	6.5	Decachlorobiphenyl

P Indicates RPD > 40%
1 Indicates Column 1 peak was manually integrated
2 Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	101.8	93.6
Decachlorobiphenyl	125.7	117.8

JL 07/26/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7321504	1.9
Hexabromobiphenyl	4753836	4924098	3.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	10043103	2.1
Hexabromobiphenyl	5491228	5718970	4.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.743	0.003	232302	106.7	1	6.639	0.004	595951	246.6
Aroclor-1016	2	8.263	0.004	768075	103.9	2	7.519	0.006	634432	116.9
Aroclor-1016	3	8.450	0.004	301727	105.2	3	8.329	0.003	1190382	105.1
Aroclor-1016	4	8.875	0.003	160443	94.6	4	8.927	0.001	322964	96.1
	Total Col1Ave (4 peaks):				102.6	Total Col2Ave (4 peaks):				141.2 RPD = 32
	Corrected Ave (3 peaks):				101.2	Corrected Ave (3 peaks):				106.0 RPD = 5
Aroclor-1221	1	6.190	0.003	127049	146.8	1	6.207	0.003	278682	164.2
Aroclor-1221	2	6.398	0.002	134860	180.5	2	6.504	0.002	165951	169.3
Aroclor-1221	3	6.522	0.002	411946	188.5	3	6.639	0.003	595951	200.6
Aroclor-1221	NS	---			----	4	7.519	-0.009	634432	612.8
	Total Col1Ave (3 peaks):				171.9	Total Col2Ave (4 peaks):				286.7 RPD = 50*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				178.0
Aroclor-1232	1	6.522	0.001	411946	287.1	1	6.639	0.001	595951	283.6
Aroclor-1232	2	7.743	0.000	232302	267.2	2	7.519	0.002	634432	265.9
Aroclor-1232	3	8.263	-0.001	768075	264.2	3	8.329	0.000	1190382	261.3
Aroclor-1232	4	8.450	0.001	301727	264.2	4	8.927	0.000	322964	216.2
	Total Col1Ave (4 peaks):				270.7	Total Col2Ave (4 peaks):				256.7 RPD = 5
	Corrected Ave (3 peaks):				265.2	Corrected Ave (3 peaks):				247.8 RPD = 7
Aroclor-1242	1	7.743	0.002	232302	133.5	1	6.639	0.004	595951	297.0
Aroclor-1242	2	8.263	0.002	768075	129.2	2	7.519	0.005	634432	152.7
Aroclor-1242	3	8.450	0.003	301727	131.2	3	8.329	0.003	1190382	136.7
Aroclor-1242	4	9.414	0.001	256065	117.7	4	9.394	0.001	458468	132.6
	Total Col1Ave (4 peaks):				127.9	Total Col2Ave (4 peaks):				179.8 RPD = 34
	Corrected Ave (3 peaks):				126.0	Corrected Ave (3 peaks):				140.7 RPD = 11
Aroclor-1248	1	8.263	0.000	768075	207.3	1	7.519	0.006	634432	307.0
Aroclor-1248	2	8.875	0.001	160443	66.1	2	8.329	0.005	1190382	210.2
Aroclor-1248	3	9.414	0.002	256065	74.5	3	8.927	0.001	322964	77.9
Aroclor-1248	4	9.883	0.000	280564	63.4	4	10.336	0.003	434141	72.9
	Total Col1Ave (4 peaks):				102.8	Total Col2Ave (4 peaks):				167.0 RPD = 48*
	Corrected Ave (3 peaks):				68.0	Corrected Ave (3 peaks):				120.3 RPD = 56*
Aroclor-1254	1	10.225	0.000	84822	18.5	1	10.038	0.001	94663	24.6
Aroclor-1254	2	10.615	0.001	50136	17.7	2	10.223	0.001	100383	20.5
Aroclor-1254	3	10.756	0.000	94187	16.8	3	10.917	0.001	151042	18.5
Aroclor-1254	4	11.105	-0.010	107151	18.6	4	11.184	0.013	205551	24.7
Aroclor-1254	5	11.811	0.000	62476	11.0	5	11.942	0.001	78652	13.0
	Total Col1Ave (5 peaks):				16.5	Total Col2Ave (5 peaks):				20.3 RPD = 20
	Corrected Ave (4 peaks):				16.0	Corrected Ave (4 peaks):				19.2 RPD = 18
Aroclor-1260	1	12.043	0.001	840354	219.6	1	11.942	0.001	78652	9.8
Aroclor-1260	2	12.359	0.000	113190	28.9	2	12.485	0.001	1232197	188.2
Aroclor-1260	3	12.729	0.000	674196	71.7	3	12.754	-0.001	821268	64.6
Aroclor-1260	4	13.127	0.002	47626	9.7	4	13.323	0.008	4256930	498.1
Aroclor-1260	5	13.303	-0.002	3388170	1595.1	NS	---			----
	Total Col1Ave (5 peaks):				385.0	Total Col2Ave (4 peaks):				190.2 RPD = 68*
	Corrected Ave (4 peaks):				82.5	Corrected Ave (3 peaks):				87.5 RPD = 6
Aroclor-1262	1	12.359	0.000	113190	21.5	1	12.485	0.000	1232197	161.0
Aroclor-1262	2	12.729	0.000	674196	55.1	2	12.754	0.000	821268	54.0
Aroclor-1262	3	13.127	0.001	47626	12.0	3	13.260	0.000	4279368	645.7
Aroclor-1262	4	13.303	0.000	3388170	714.9	4	13.323	0.006	4256930	425.3
Aroclor-1262	5	13.883	-0.001	1091968	293.4	5	13.945	0.000	1369929	271.3
	Total Col1Ave (5 peaks):				219.4	Total Col2Ave (5 peaks):				311.5 RPD = 35
	Corrected Ave (4 peaks):				95.5	Corrected Ave (4 peaks):				227.9 RPD = 82*
Aroclor-1268	1	13.236	0.001	3469920	260.9	1	13.260	0.000	4279368	271.1

Aroclor-1268 2	13.303	0.000	3388170	287.3	2	13.323	0.002	4256930	287.7
Aroclor-1268 3	13.648	0.000	2303045	232.7	3	13.668	-0.001	2746403	230.0
Aroclor-1268 4	14.285	0.000	5642119	216.0	4	14.321	0.000	6933567	217.2

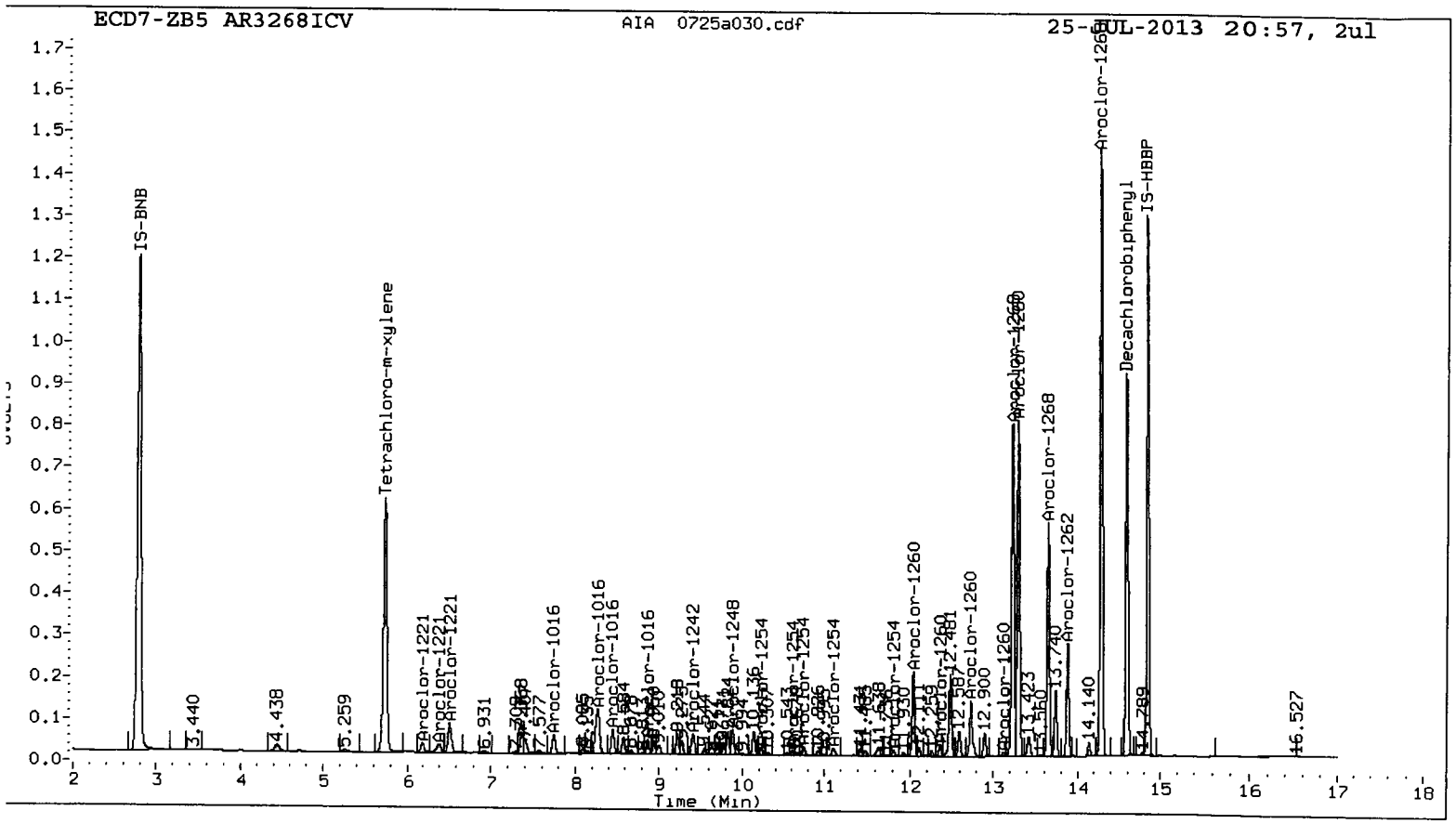
Total Col1Ave (4 peaks): 249.2 Total Col2Ave (4 peaks): 251.5 RPD = 1

Corrected Ave (3 peaks): 236.5 Corrected Ave (3 peaks): 239.4 RPD = 1

Total PCB Area Col1 (5.834 - 14.490) = 25837313 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.483 - 14.521) = 35027909 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical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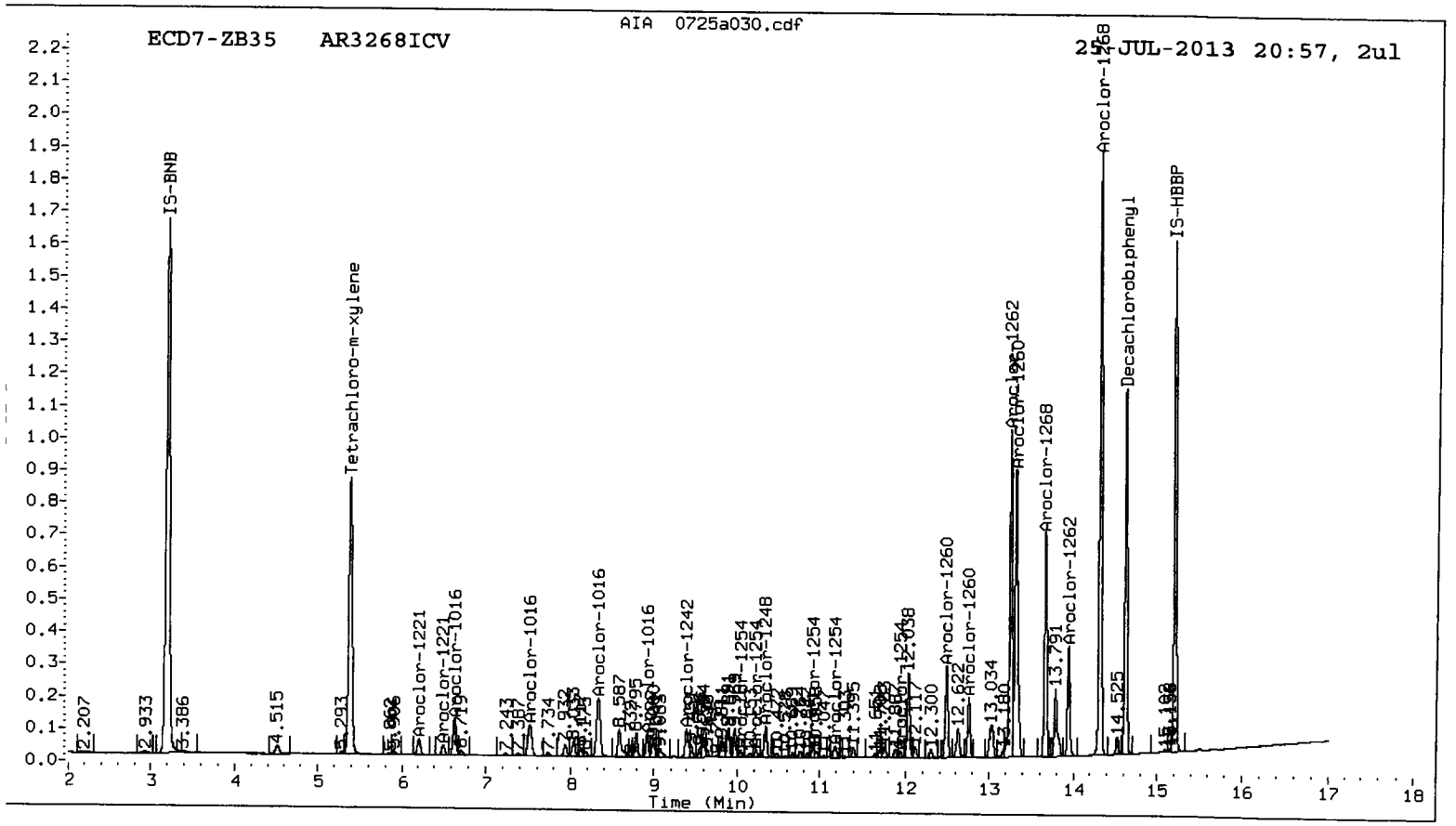
25-JUL-2013 20:57, 2ul
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Time (Min)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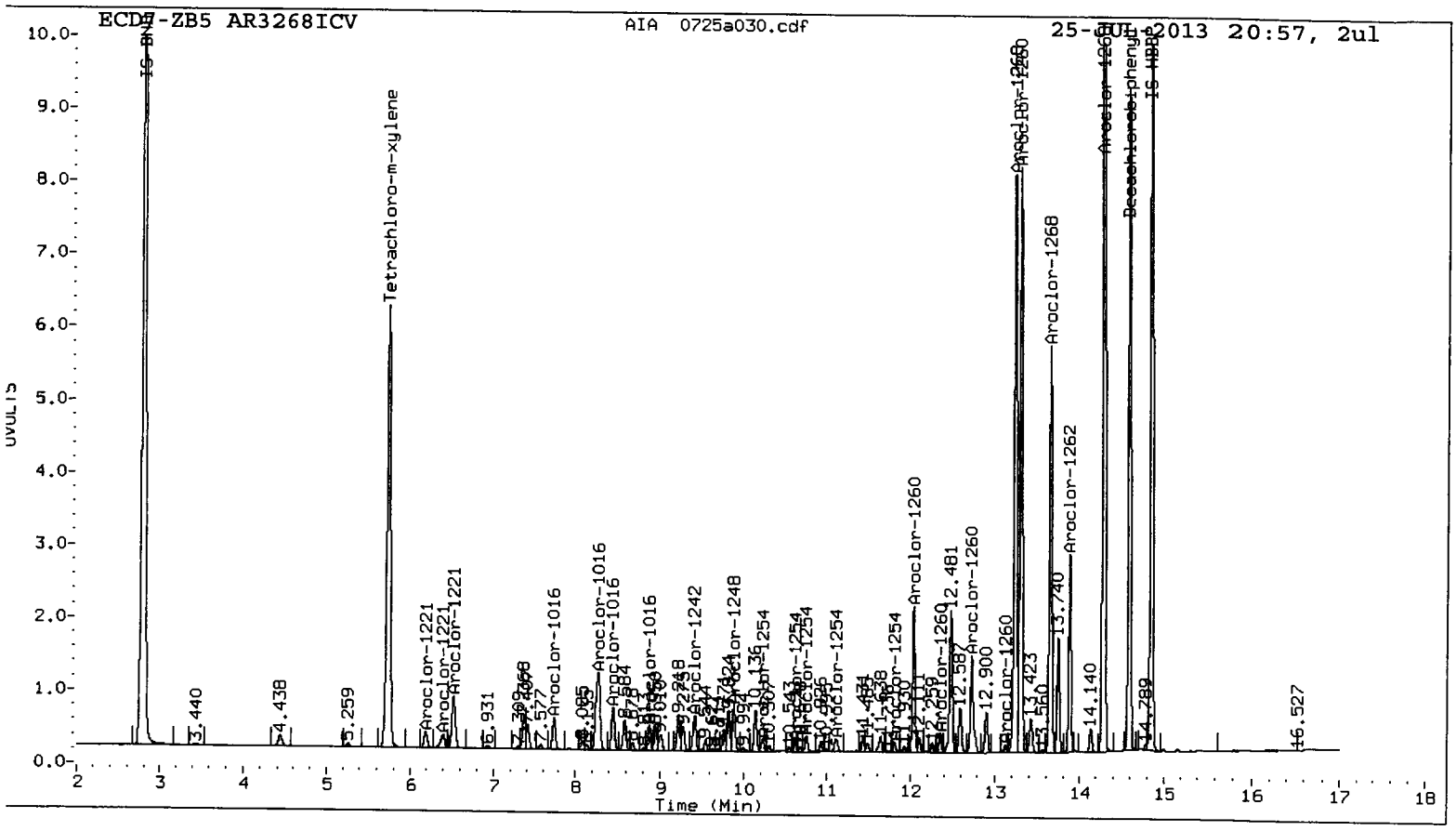
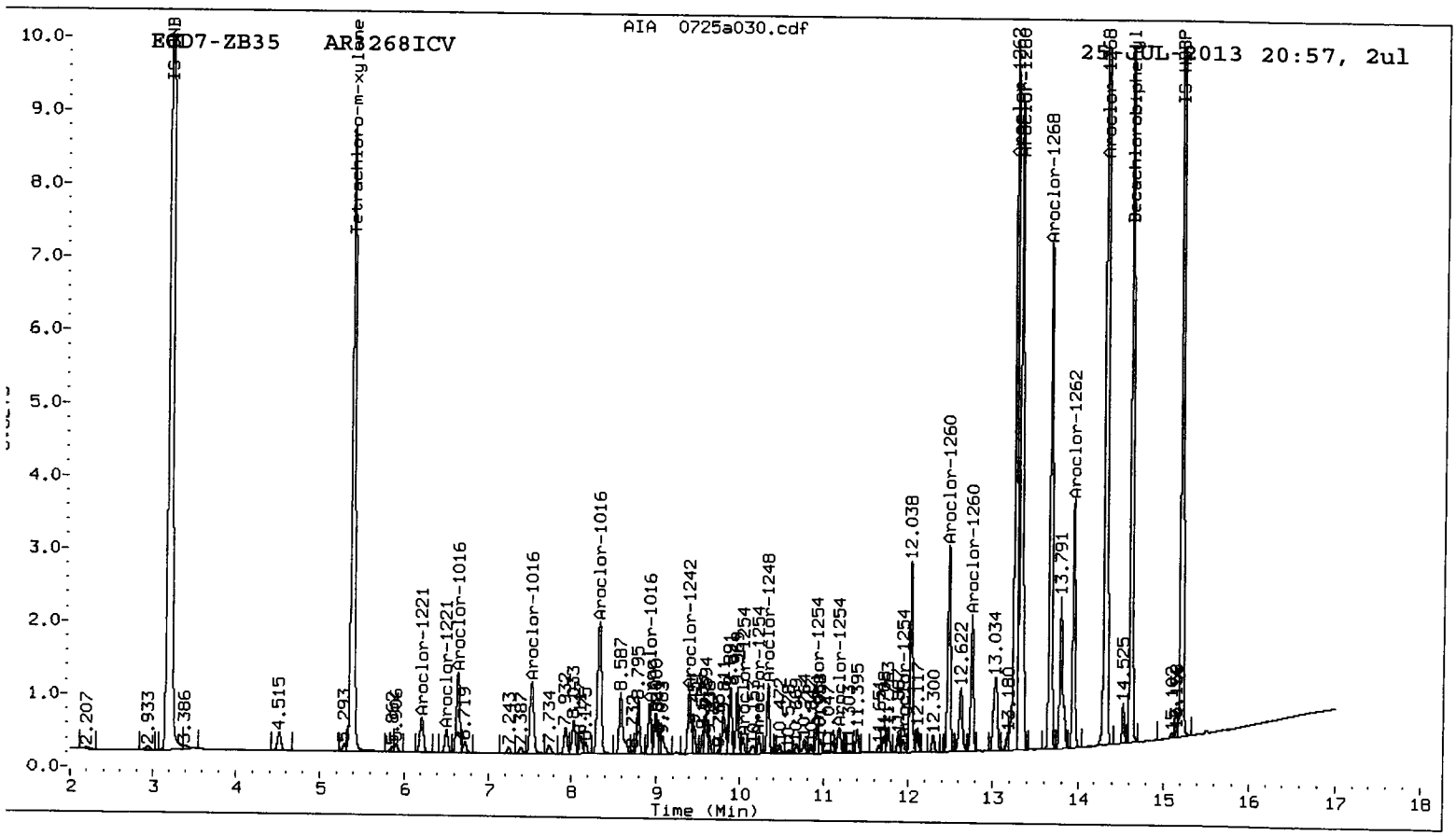
AIA 0725a030.cdf
25-JUL-2013 20:57, 2ul
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Time (Min)


ECD7-ZB5 AR3268ICV
AIA 0725a030.cdf
25-JUL-2013 20:57, 2ul
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS HBB
Time (Min)


ECD7-ZB35 AR3268ICV
AIA 0725a030.cdf
25-JUL-2013 20:57, 2ul
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Time (Min)

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: 20130725.b/ddt-1.b/0725a031.d ARI ID: DDT

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
10.189	0.000	6573044	10.313	0.000	8450454	0.100	0.100	0.0	2,4-DDE
10.763	0.000	6207586	10.714	0.000	13749427	0.100	0.100	0.0	2,4-DDD
11.282	0.000	7461968	11.491	0.000	20912307	0.100	0.200#	66.7*	2,4-DDT
10.640	0.000	10862350	11.021	0.000	7865809	0.100	0.100	0.0	4,4-DDE
11.227	0.000	9438830	11.491	0.000	20912307	0.100	0.200#	66.7*	4,4-DDD
11.748	0.000	9595911	11.926	0.000	11861379	0.100	0.100	0.0	4,4-DDT

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

7/26/13

7E

8082 DDT BREAKDOWN VERIFICATION SUMMARY

Lab ID: DDT BD
Instrument: ecd7.i Data File: 20130725.b/ddt-1.b/0725a032.d
Analysis Date: 25-JUL-2013 21:41 Init. Calib. Date: 25-JUL-2013

GC Column: ZB5 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	10.639	36770
4,4-DDD	11.229	301498
4,4-DDT	11.749	9609874

Col 1: 4,4-DDT Percent Breakdown = 3.4 %

GC Column: ZB35 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	11.021	----
4,4-DDD/2,4-DDT	11.493	564968
4,4-DDT	11.926	12846321

Col 2: 4,4-DDT Percent Breakdown = 4.2 %

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

07/26/13

PCB Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WY32, WY33

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WY32 Client ID: NPDES

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date: 07/25/13 Analysis Start Date: 07/31/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / Y / N / ✓	Method Blank in Control?	Y / N / ✓
Retention times within Windows?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / ✓
CCAL met %D Criteria?	Y / N / ✓	LCS / LCSD RPD ≤30%?	NA / LCS only
Surrogate Recovery in Control?	Y / N / ✓	MS / MSD Recovery in Control?	Y / N / ✓
Internal STD. within 50-200%? NA / Y / N / ✓		MS / MSD RPD ≤30%?	NA / ✓ 10%
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N ✓
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N ✓

Detail problems, corrective actions and/or other pertinent information below

went w/ best fit ~~could~~ could be a 47/49/54/62 mix
8/2/13

diluted due to oily matrix

(Review 1) Analyst: _____ **Date:** 08/02/13

(Review 2) Reviewer: _____ **Date:** 8/2/13

WY32:0127S

Analytical Resources Inc.: Organics Instrument Log

ECD-7 Serial No.: US00003975

Date: 07/31/13 Analysis: PCB Analyst: JL

Column 1 Serial No.: ~~213234~~ 213234 8/01/13 Column Type: ZB5

Column 2 Serial No.: 175338 Column Type: ZB35

GC Method: PCB52 ICal Date: 07/25/13 Injection Volume: 2µL

IS	Ical/Ccal	ICV
B1154	B161	B162
	163	190
	172	191
	173	192
	174	193
	175	194
	207	

Document All Maintenance Tasks In StarLIMS

1	31-JUL-2013	14:27	0731a001.d	1 DDT
2	31-JUL-2013	14:48	0731a002.d	1 BD
3	31-JUL-2013	15:10	0731a003.d	1 AR1242
4	31-JUL-2013	15:32	0731a004.d	1 AR1660
5	31-JUL-2013	15:54	0731a005.d	1 WY42MBW1
6	31-JUL-2013	16:16	0731a006.d	1 WY42LCSW
7	31-JUL-2013	16:38	0731a007.d	1 WY42LCSD
8	31-JUL-2013	17:00	0731a008.d	1 WY42A
9	31-JUL-2013	17:22	0731a009.d	1 WY42B
10	31-JUL-2013	17:44	0731a010.d	1 WY42C
11	31-JUL-2013	18:06	0731a011.d	1 WY42D
12	31-JUL-2013	18:28	0731a012.d	1 WY54C
13	31-JUL-2013	18:50	0731a013.d	1 AR1248
14	31-JUL-2013	19:12	0731a014.d	1 AR1660
15	31-JUL-2013	19:34	0731a015.d	1 WY32MBS1
16	31-JUL-2013	19:55	0731a016.d	1 WY32LCSS
17	31-JUL-2013	20:17	0731a017.d	1 WY32LS
18	31-JUL-2013	20:39	0731a018.d	5 WY32A
19	31-JUL-2013	21:01	0731a019.d	5 WY32B
20	31-JUL-2013	21:23	0731a020.d	5 WY32BMS
21	31-JUL-2013	21:45	0731a021.d	5 WY32BMSD
22	31-JUL-2013	22:07	0731a022.d	5 WY32C
23	31-JUL-2013	22:29	0731a023.d	1 AR1254
24	31-JUL-2013	22:51	0731a024.d	1 AR1660

8/01/13

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd7.i/20130725.b/0731-1.b

ARI Job No.: DDT Method: PCB1.m Instrument: ecd7.i Date: 31-JUL-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1427	0731a001.d	DDT		1	NO MANUAL INTEGRATION
1448	0731a002.d	BD		1	NO MANUAL INTEGRATION
1510	0731a003.d	AR1242		1	NO MANUAL INTEGRATION
1532	0731a004.d	AR1660		1	NO MANUAL INTEGRATION
1554	0731a005.d	WY42MBW1		1	NO MANUAL INTEGRATION
1616	0731a006.d	WY42LCSW1		1	NO MANUAL INTEGRATION
1638	0731a007.d	WY42LCSDW1		1	NO MANUAL INTEGRATION
1700	0731a008.d	WY42A		1	NO MANUAL INTEGRATION
1722	0731a009.d	WY42B		1	NO MANUAL INTEGRATION
1744	0731a010.d	WY42C		1	NO MANUAL INTEGRATION
1806	0731a011.d	WY42D		1	NO MANUAL INTEGRATION
1828	0731a012.d	WY54C		1	NO MANUAL INTEGRATION
1850	0731a013.d	AR1248		1	NO MANUAL INTEGRATION
1912	0731a014.d	AR1660		1	NO MANUAL INTEGRATION
1934	0731a015.d	WY32MBS1		1	NO MANUAL INTEGRATION
1955	0731a016.d	WY32LCSS1		1	NO MANUAL INTEGRATION
2017	0731a017.d	WY32QLS		1	NO MANUAL INTEGRATION
2039	0731a018.d	WY32A		5	NO MANUAL INTEGRATION
2101	0731a019.d	WY32B		5	Aroclor-1260, Aroclor-1262, Aroclor-1268,
2123	0731a020.d	WY32BMS		5	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd7.i/20130725.b/0731-1.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2207	0731a022.d	WY32C	5	NO	MANUAL INTEGRATION
2229	0731a023.d	AR1254	1	NO	MANUAL INTEGRATION
2251	0731a024.d	AR1660	1	NO	MANUAL INTEGRATION

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/0731-1.b/0731a013.d
Data file 2: 20130725.b/0731-2.b/0731a013.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 31-JUL-2013 18:50
Report Date: 08/01/2013 12:42
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.733	-0.002	3521113	5.380	-0.003	4842175	41.9	39.0	7.1	Tetrachloro-m-xylene
14.589	0.001	2771918	14.620	0.001	3344689	38.3	36.9	3.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	104.7	97.5
Decachlorobiphenyl	95.7	92.2

08/01/13
08/01/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7371831	2.6
Hexabromobiphenyl	4753836	5147325	8.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	9647666	-1.9
Hexabromobiphenyl	5491228	5830372	6.2

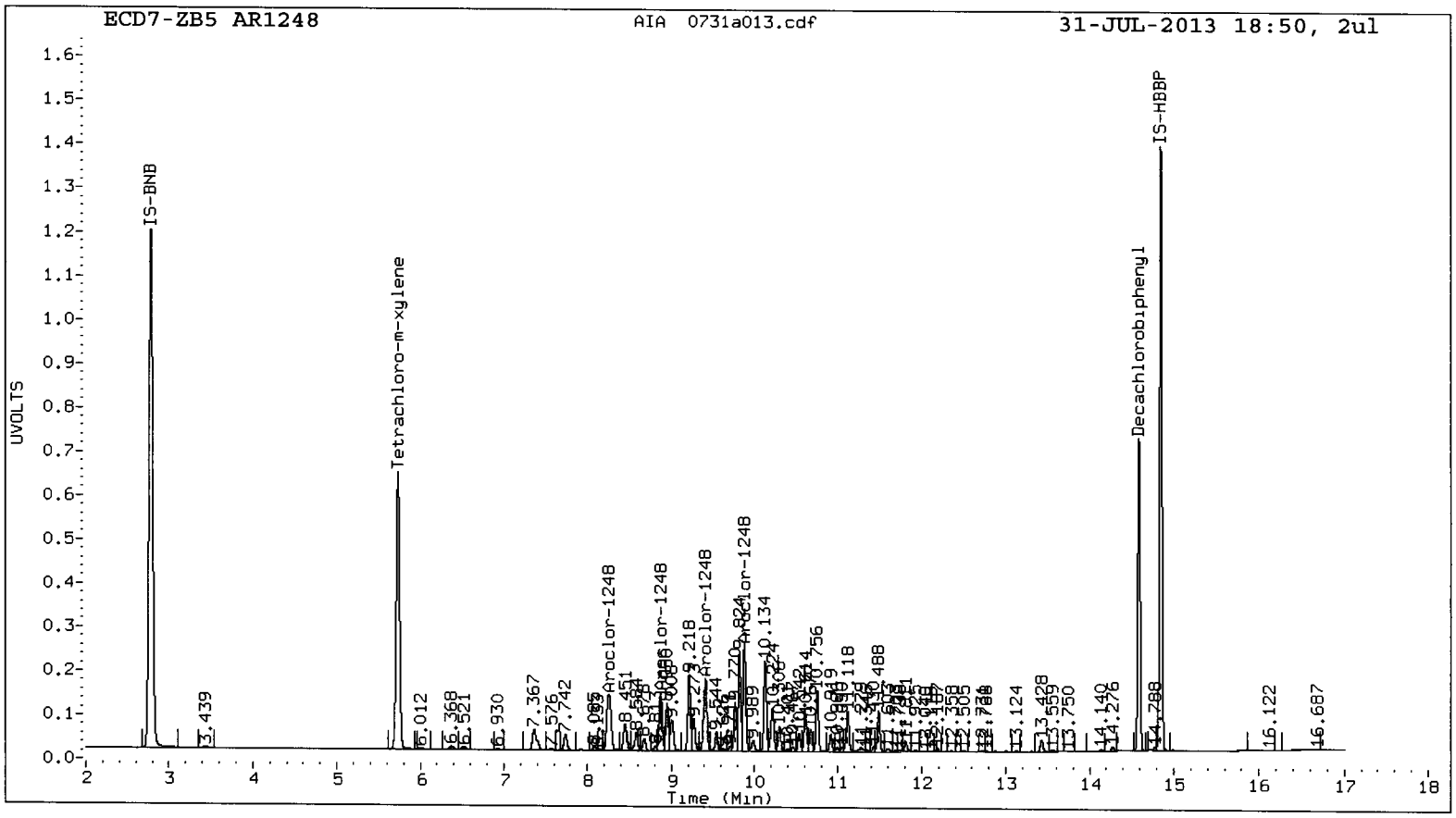
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1248	1	8.256	0.000	940107	251.9	1	7.511	0.000	509156	256.5
Aroclor-1248	2	8.874	0.000	616457	252.2	2	8.322	0.000	1359048	249.8
Aroclor-1248	3	9.412	0.000	874741	252.7	3	8.924	0.000	1021298	256.4
Aroclor-1248	4	9.883	0.000	1123070	251.9	4	10.333	0.000	1477545	258.4
Total Col1Ave (4 peaks):					252.2	Total Col2Ave (4 peaks):				255.3 RPD = 1
Corrected Ave (3 peaks):					252.0	Corrected Ave (3 peaks):				254.2 RPD = 1

Total PCB Area Col1 (5.835 - 14.489) = 13625020 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.483 - 14.519) = 19915498 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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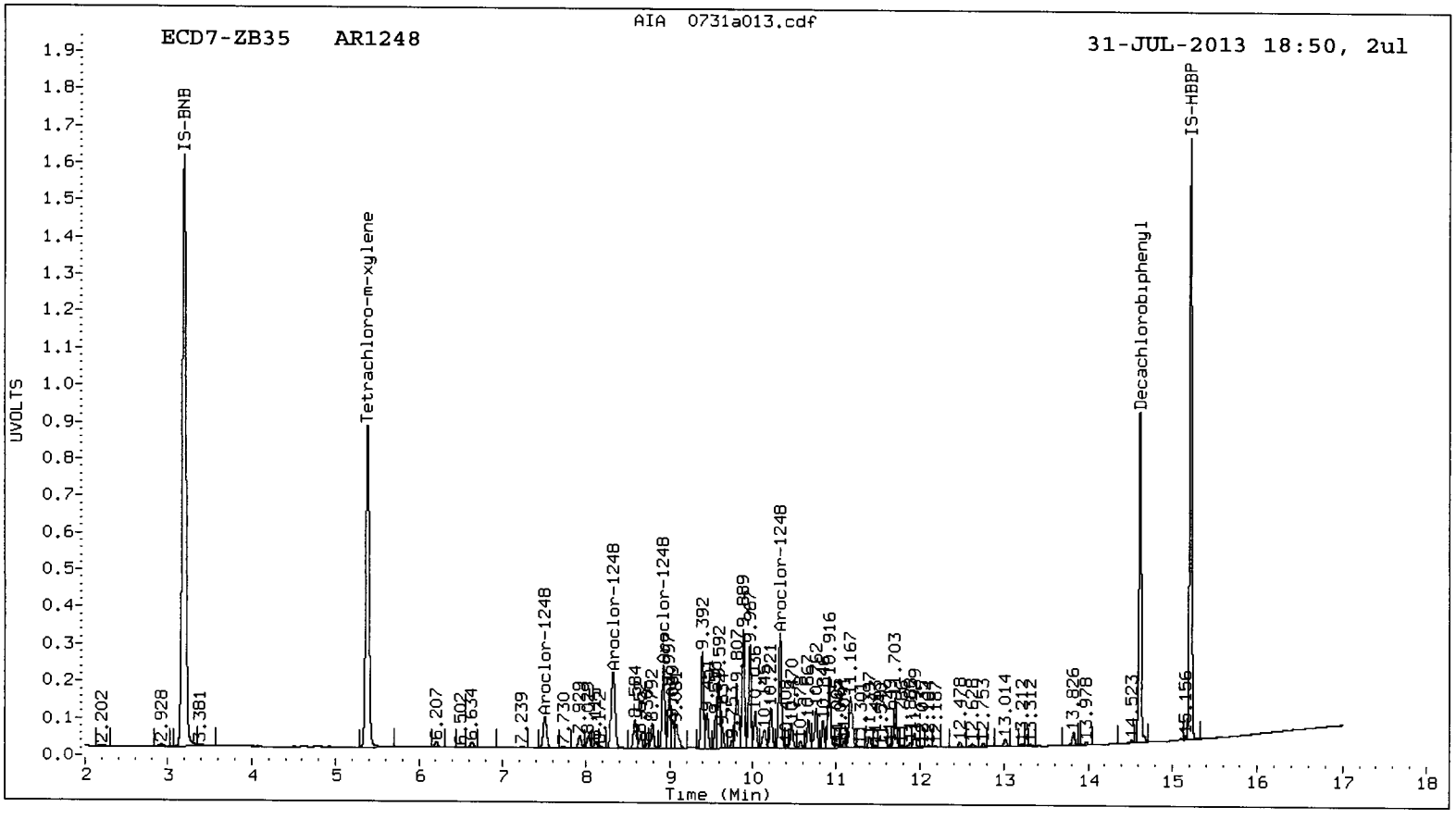
AIA 0731a013.cdf
31-JUL-2013 18:50, 2ul
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1248
UVOLTS
Time (Min)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31-JUL-2013 18:50, 2ul
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1248
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/0731-1.b/0731a014.d
Data file 2: 20130725.b/0731-2.b/0731a014.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 31-JUL-2013 19:12
Report Date: 08/01/2013 12:42
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.732	-0.003	3775597	5.380	-0.003	5176972	41.5	37.7	9.5	Tetrachloro-m-xylene
14.589	0.000	2944501	14.621	0.001	3570735	38.2	36.8	3.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	103.6	94.2
Decachlorobiphenyl	95.5	92.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7985041	11.1
Hexabromobiphenyl	4753836	5478975	15.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	10679039	8.6
Hexabromobiphenyl	5491228	6230282	13.5

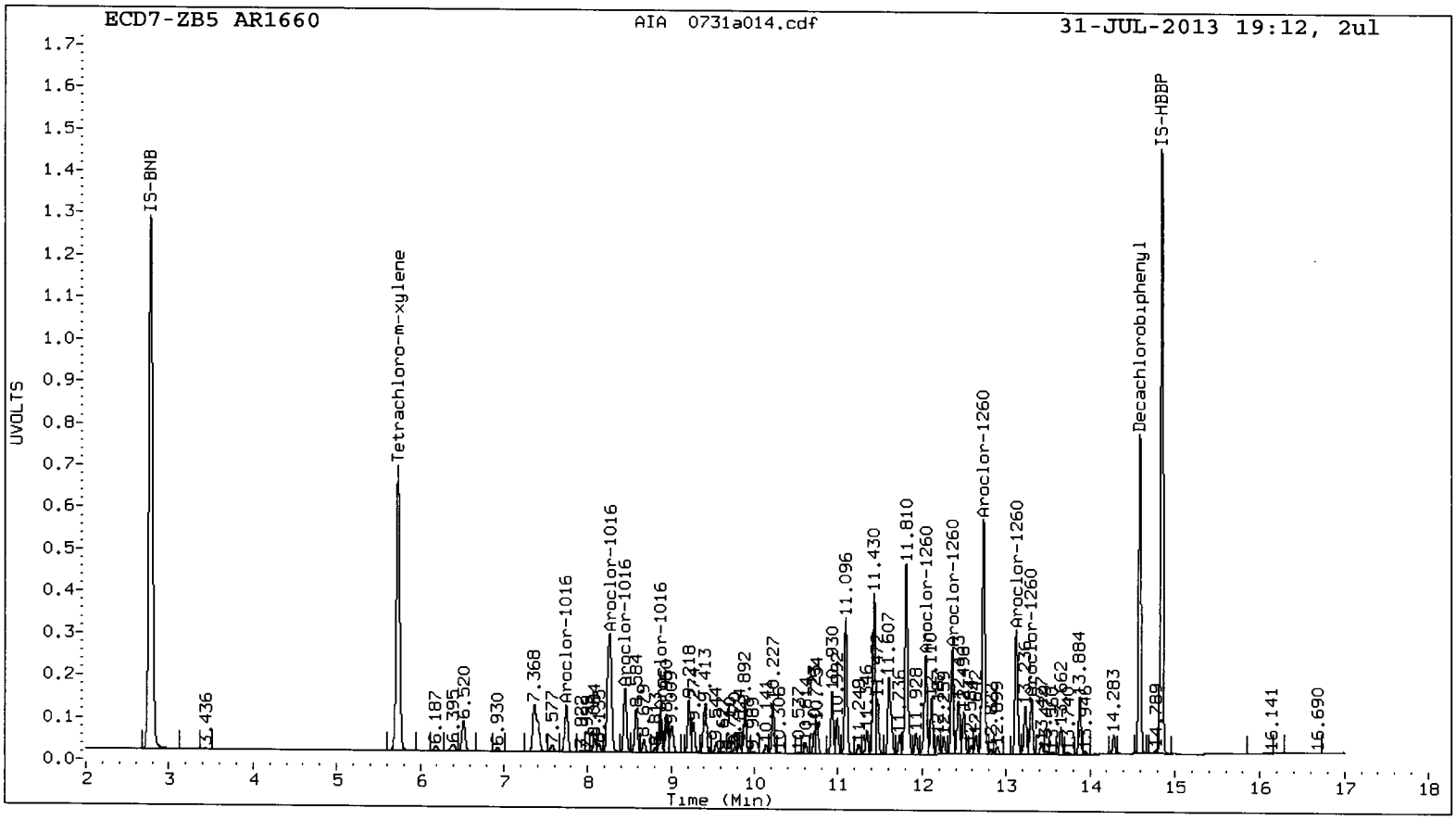
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

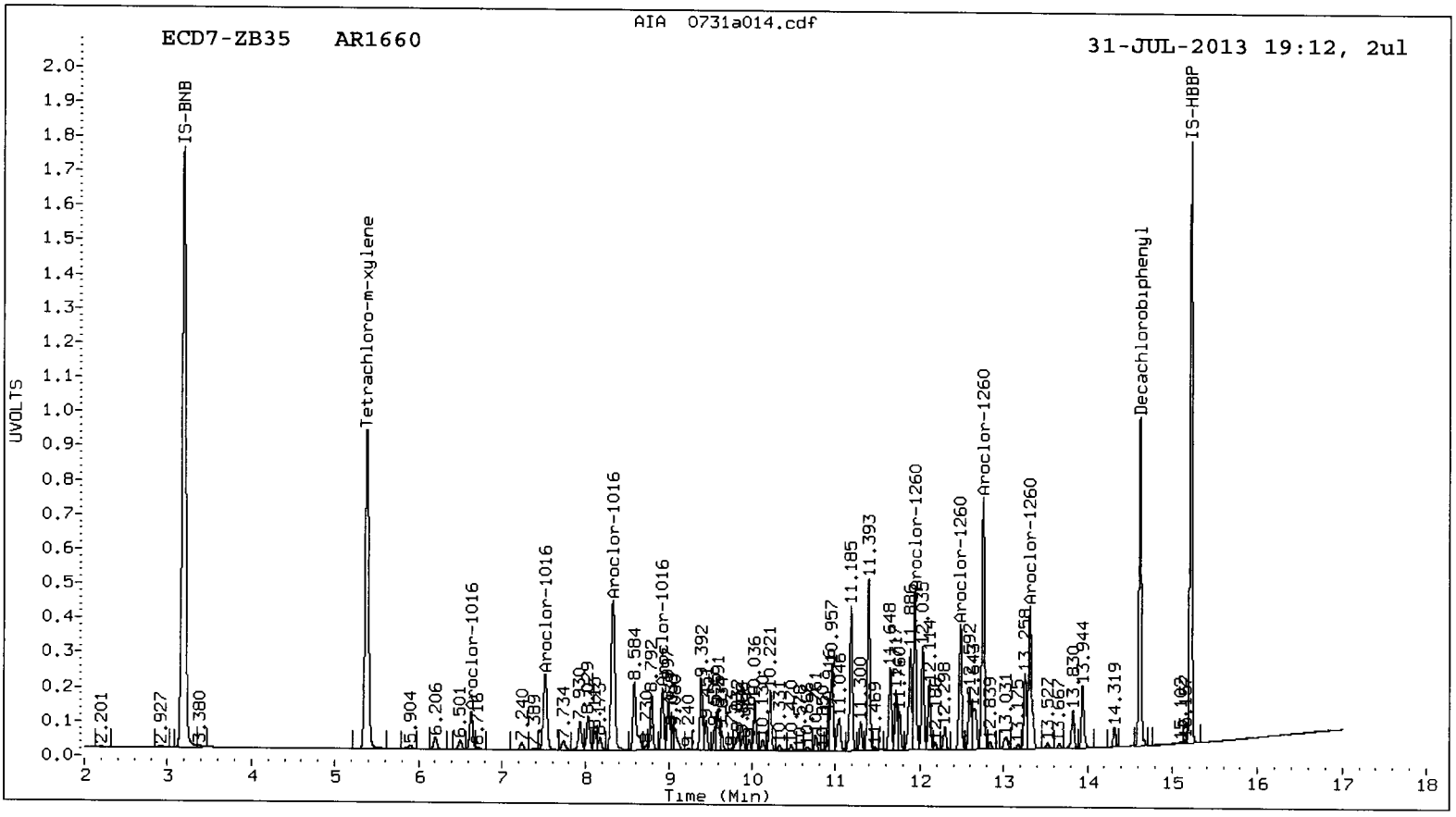
	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.742	-0.002	581309	244.9	1	6.635	-0.002	599418	233.3
Aroclor-1016	2	8.264	0.000	2007524	249.1	2	7.515	-0.001	1340221	232.2
Aroclor-1016	3	8.448	-0.002	771828	246.6	3	8.325	-0.002	2820684	234.2
Aroclor-1016	4	8.874	-0.002	450290	243.3	4	8.925	-0.002	824369	230.7
Total Col1Ave (4 peaks):					246.0	Total Col2Ave (4 peaks):				232.6 RPD = 6
Corrected Ave (3 peaks):					245.0	Corrected Ave (3 peaks):				232.1 RPD = 5
Aroclor-1260	1	12.041	-0.001	1030452	242.0	1	11.940	-0.001	1973163	225.4
Aroclor-1260	2	12.359	0.000	1061552	243.7	2	12.483	-0.001	1597428	224.0
Aroclor-1260	3	12.729	-0.001	2554749	244.2	3	12.752	-0.001	3180247	229.7
Aroclor-1260	4	13.125	-0.001	1354961	247.8	4	13.313	-0.001	2143882	230.2
Aroclor-1260	5	13.305	0.000	580661	245.7	NS	---			----
Total Col1Ave (5 peaks):					244.7	Total Col2Ave (4 peaks):				227.3 RPD = 7
Corrected Ave (4 peaks):					243.9	Corrected Ave (3 peaks):				226.4 RPD = 7

Total PCB Area Col1 (5.835 - 14.489) = 29979636 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.483 - 14.519) = 41797585 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD7-ZB5 AR1660
AIA 0731a014.cdf
31-JUL-2013 19:12, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


ECD7-ZB35 AR1660
AIA 0731a014.cdf
31-JUL-2013 19:12, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/0731-1.b/0731a015.d
Data file 2: 20130725.b/0731-2.b/0731a015.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: WY32MBS1
Client ID:
Injection Date: 31-JUL-2013 19:34
Report Date: 08/01/2013 12:42
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.734	-0.001	2533126	5.381	-0.002	3508757	28.6	26.4	8.1	Tetrachloro-m-xylene
14.590	0.001	2791452	14.620	0.001	3310723	35.8	34.1	4.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	71.6	66.1
Decachlorobiphenyl	89.6	85.4

08/01/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7751168	7.9
Hexabromobiphenyl	4753836	5539837	16.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	10321893	4.9
Hexabromobiphenyl	5491228	6230593	13.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

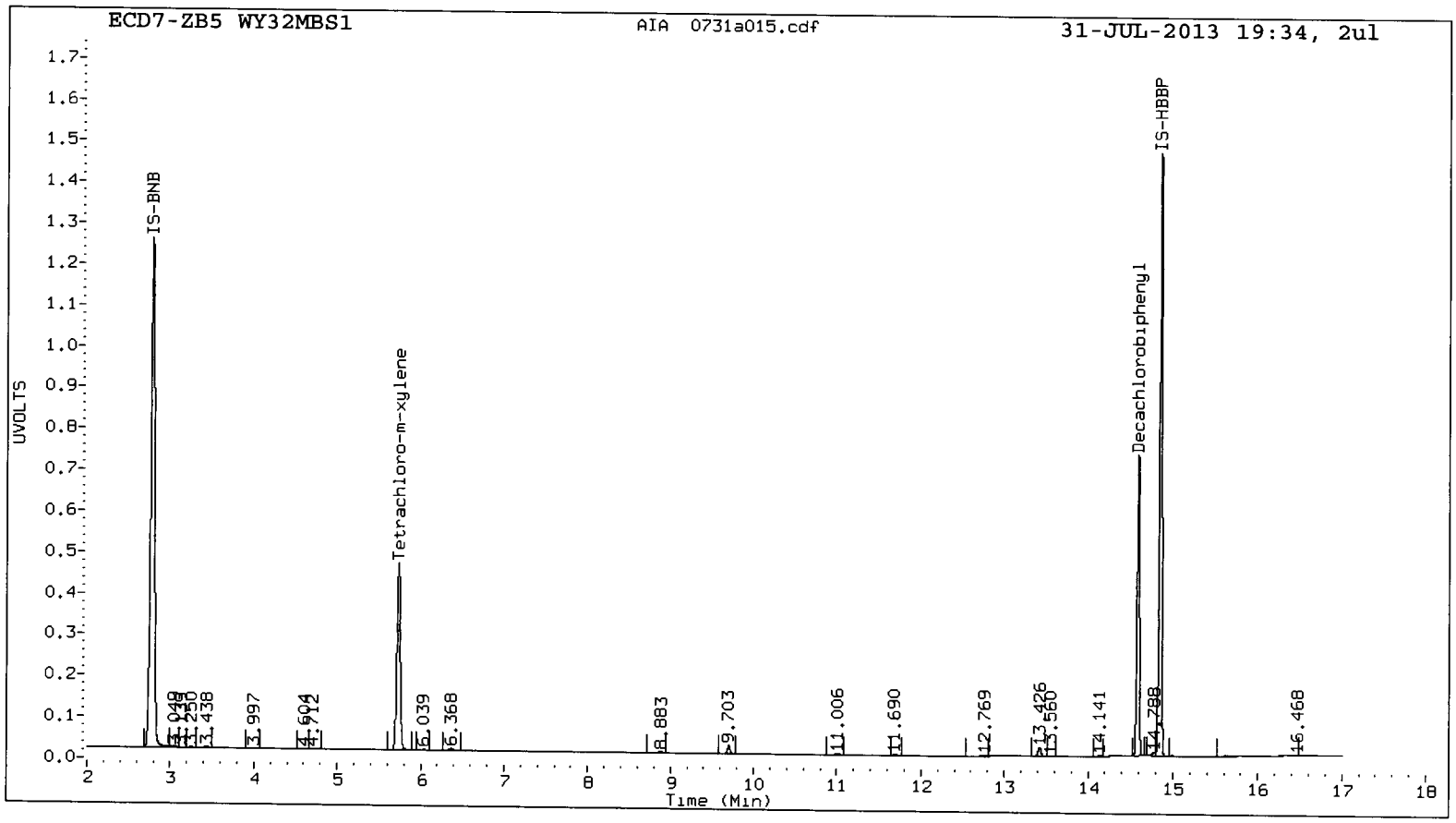
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	6.208	0.004	54825	31.4
Aroclor-1221	2	---			0.0	2	6.511	0.010	17817	17.7
Aroclor-1221	3	---			0.0	3	6.625	-0.011	14735	4.8
Aroclor-1221	NS	---			----	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: 18.0			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	6.625	-0.002	14735	7.1
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	9.385	-0.001	14949	4.2
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	13.213	-0.046	26754	3.7
Aroclor-1262	4	---			0.0	4	---			0.0
Aroclor-1262	5	---			0.0	5	13.978	0.034	20637	3.8
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	13.213	-0.047	26754	1.6
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	13.652	-0.016	12724	1.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.835 - 14.489) = 368856 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (5.483 - 14.519) = 689790 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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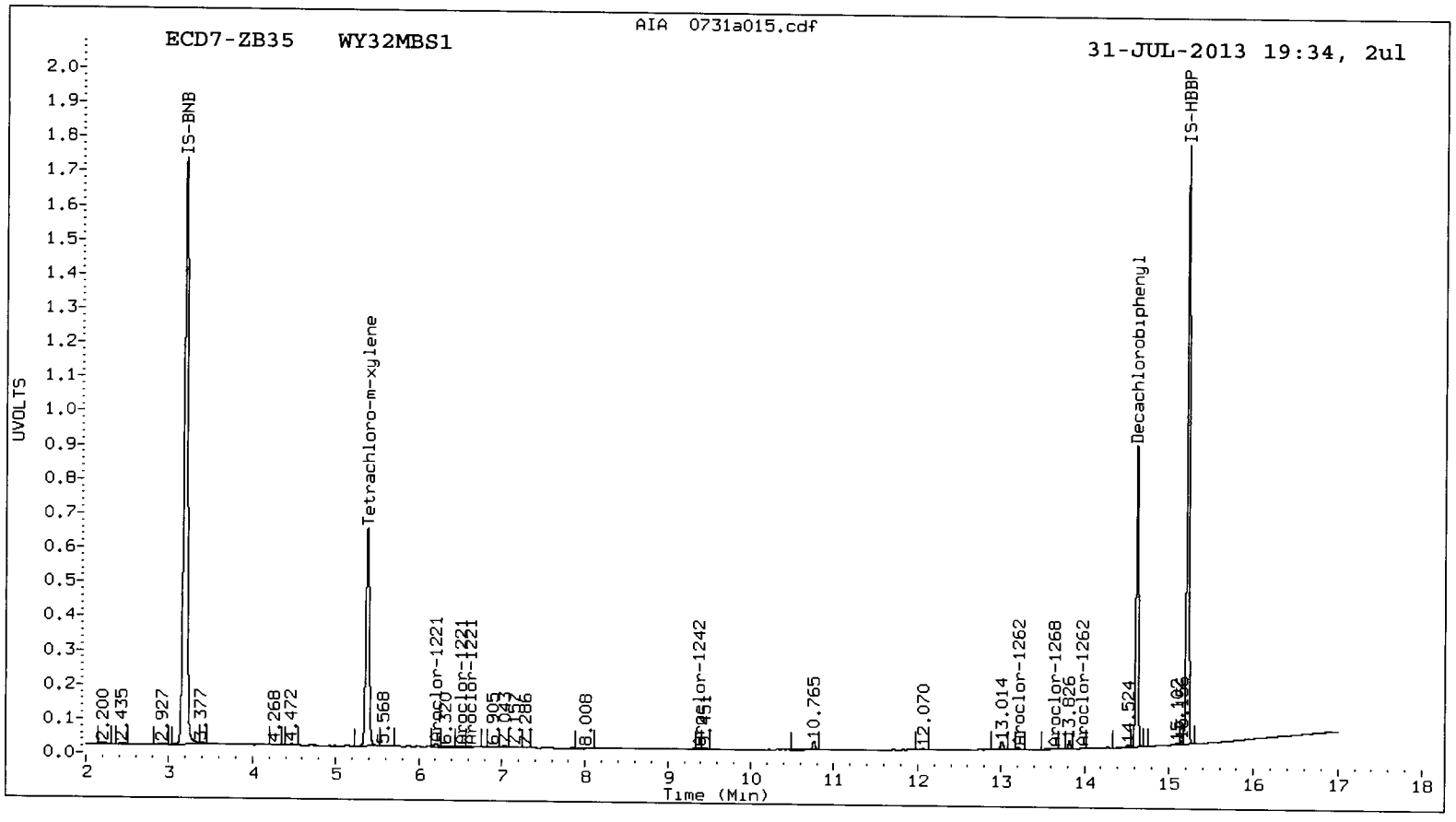
AIA 0731a015.cdf
31-JUL-2013 19:34, 2ul
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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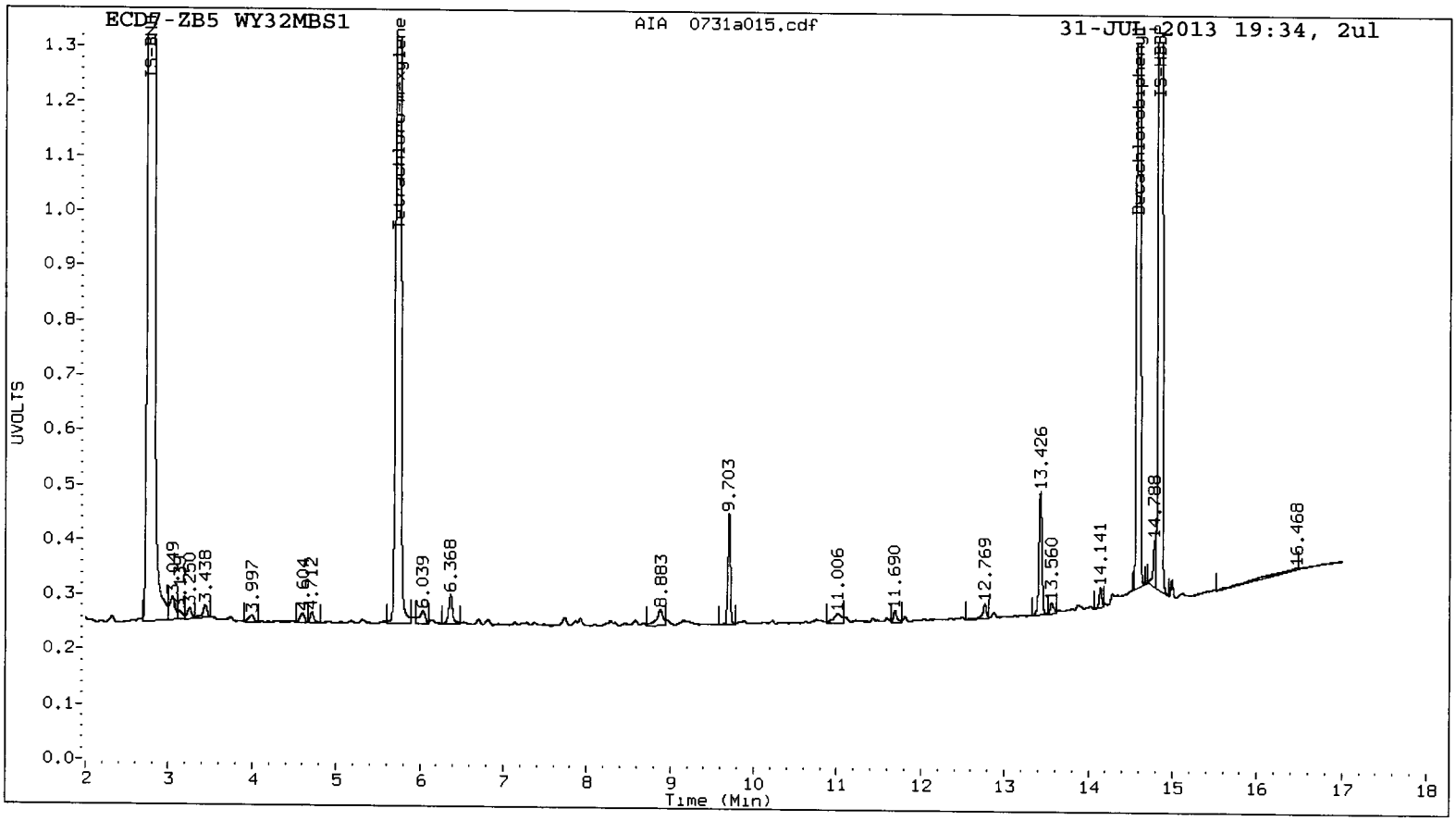
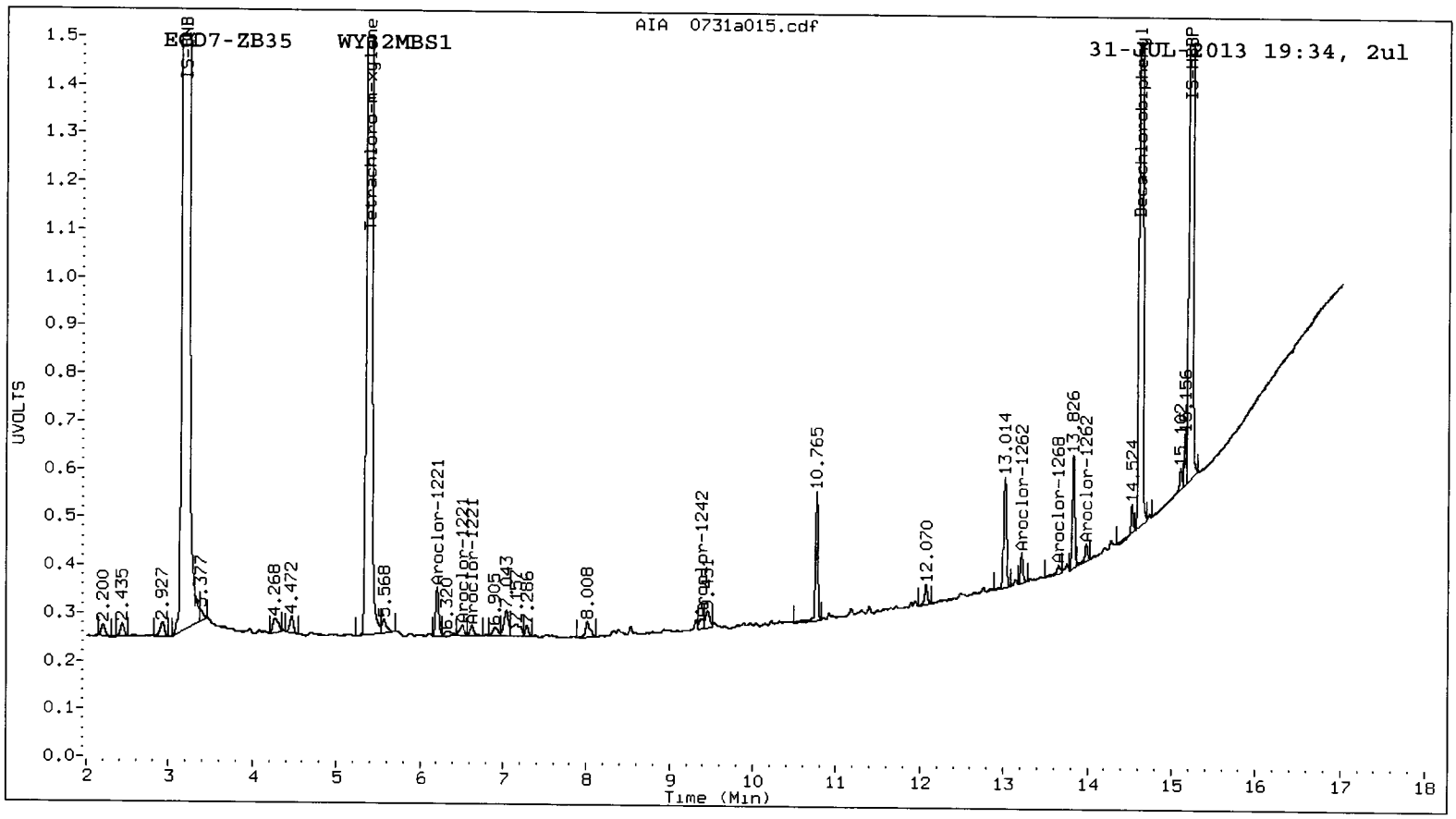
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)


ECD7-ZB5 WY32MBS1
AIA 0731a015.cdf
31-JUL-2013 19:34, 2ul
IS-DNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
9.703
13.426
14.788
14.141
16.468
UVOLTS
Time (Min)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AIA 0731a015.cdf
31-JUL-2013 19:34, 2ul
IS-DNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1242
Aroclor-1262
Aroclor-1268
10.765
13.014
13.826
14.524
12.070
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/0731-1.b/0731a016.d
Data file 2: 20130725.b/0731-2.b/0731a016.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: WY32LCSS1
Client ID:
Injection Date: 31-JUL-2013 19:55
Report Date: 08/01/2013 12:42
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.732	-0.003	2740886	5.380	-0.003	3703397	30.9	27.6	11.1	Tetrachloro-m-xylene
14.589	0.000	2757305	14.620	0.001	3305858	35.3	33.7	4.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	77.1	69.0
Decachlorobiphenyl	88.3	84.3

8/01/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7788738	8.4
Hexabromobiphenyl	4753836	5552091	16.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	10427135	6.0
Hexabromobiphenyl	5491228	6298833	14.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.741	-0.003	982811	424.5	1	6.635	-0.002	897529	357.8
Aroclor-1016	2	8.263	0.000	3474002	441.9	2	7.514	-0.002	2101143	372.8
Aroclor-1016	3	8.448	-0.002	1351119	442.6	3	8.324	-0.003	4678242	397.9
Aroclor-1016	4	8.874	-0.003	796294	441.2	4	8.925	-0.001	1350113	387.0
Total Col1Ave (4 peaks):					437.6	Total Col2Ave (4 peaks):				378.8 RPD = 14
Corrected Ave (3 peaks):					435.9	Corrected Ave (3 peaks):				372.5 RPD = 16
Aroclor-1221	1	6.186	-0.001	117614	127.7	1	6.205	0.001	223633	126.9
Aroclor-1221	2	6.398	0.002	165271	207.9	2	6.500	-0.001	206959	203.4
Aroclor-1221	3	6.519	0.000	662298	284.9	3	6.635	-0.001	897529	291.0
Aroclor-1221	NS	---			----	4	7.514	-0.014	2101143	1954.7
Total Col1Ave (3 peaks):					206.8	Total Col2Ave (4 peaks):				644.0 RPD = 103*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				207.1
Aroclor-1232	1	6.519	-0.002	662298	433.8	1	6.635	-0.003	897529	411.5
Aroclor-1232	2	7.741	-0.001	982811	1062.7	2	7.514	-0.003	2101143	848.1
Aroclor-1232	3	8.263	-0.001	3474002	1123.4	3	8.324	-0.004	4678242	989.1
Aroclor-1232	4	8.448	-0.001	1351119	1112.0	4	8.925	-0.002	1350113	870.3
Total Col1Ave (4 peaks):					933.0	Total Col2Ave (4 peaks):				779.8 RPD = 18
Corrected Ave (3 peaks):					869.5	Corrected Ave (3 peaks):				710.0 RPD = 20
Aroclor-1242	1	7.741	0.007	982811	530.9	1	6.635	0.009	897529	430.9
Aroclor-1242	2	8.263	0.009	3474002	549.1	2	7.514	0.008	2101143	487.2
Aroclor-1242	3	8.448	0.007	1351119	552.3	3	8.324	0.009	4678242	517.6
Aroclor-1242	4	9.412	0.004	1145757	495.0	4	9.391	0.005	1635862	455.6
Total Col1Ave (4 peaks):					531.8	Total Col2Ave (4 peaks):				472.8 RPD = 12
Corrected Ave (3 peaks):					525.0	Corrected Ave (3 peaks):				457.9 RPD = 14
Aroclor-1248	1	8.263	0.008	3474002	881.2	1	7.514	0.003	2101143	979.3
Aroclor-1248	2	8.874	0.000	796294	308.4	2	8.324	0.002	4678242	795.5
Aroclor-1248	3	9.412	0.000	1145757	313.2	3	8.925	0.001	1350113	313.6
Aroclor-1248	4	9.891	0.008	867703	184.2	4	10.331	-0.002	122187	19.8
Total Col1Ave (4 peaks):					421.7	Total Col2Ave (4 peaks):				527.0 RPD = 22
Corrected Ave (3 peaks):					268.6	Corrected Ave (3 peaks):				376.3 RPD = 33
Aroclor-1254	1	10.226	0.000	926105	189.6	1	10.035	-0.001	1030490	258.4
Aroclor-1254	2	10.614	-0.001	192718	63.8	2	10.221	-0.001	1185334	233.4
Aroclor-1254	3	10.754	-0.002	586653	98.5	3	10.915	0.000	657533	77.4
Aroclor-1254	4	11.096	-0.018	2577264	419.8	4	11.185	0.014	3238061	374.1
Aroclor-1254	5	11.811	-0.001	4093330	679.9	5	11.939	-0.001	3601160	574.2
Total Col1Ave (5 peaks):					290.3	Total Col2Ave (5 peaks):				303.5 RPD = 4
Corrected Ave (4 peaks):					192.9	Corrected Ave (4 peaks):				235.8 RPD = 20
Aroclor-1260	1	12.042	-0.001	1940925	449.8	1	11.939	-0.001	3601160	406.9
Aroclor-1260	2	12.359	-0.001	2027393	459.3	2	12.483	0.000	2924596	405.6
Aroclor-1260	3	12.729	-0.001	4933784	465.3	3	12.752	-0.001	5994054	428.2
Aroclor-1260	4	13.124	-0.001	2641184	476.6	4	13.313	-0.001	3997087	424.6
Aroclor-1260	5	13.304	0.000	1135696	474.2	NS	---			----
Total Col1Ave (5 peaks):					465.0	Total Col2Ave (4 peaks):				416.3 RPD = 11
Corrected Ave (4 peaks):					462.2	Corrected Ave (3 peaks):				412.4 RPD = 11
Aroclor-1262	1	12.359	0.000	2027393	341.7	1	12.483	-0.001	2924596	347.0
Aroclor-1262	2	12.729	0.000	4933784	357.6	2	12.752	-0.001	5994054	357.6
Aroclor-1262	3	13.124	-0.001	2641184	590.9	3	13.258	-0.001	1674020	229.3
Aroclor-1262	4	13.304	0.001	1135696	212.5	4	13.313	-0.004	3997087	362.6
Aroclor-1262	5	13.884	0.000	1061075	252.8	5	13.944	-0.001	1374705	247.2
Total Col1Ave (5 peaks):					351.1	Total Col2Ave (5 peaks):				308.8 RPD = 13
Corrected Ave (4 peaks):					291.2	Corrected Ave (4 peaks):				295.3 RPD = 1
Aroclor-1268	1	13.236	0.000	981671	65.5	1	13.258	-0.001	1674020	96.3

Aroclor-1268	2	13.304	0.002	1135696	85.4	2	13.313	-0.008	3997087	245.3
Aroclor-1268	3	13.662	0.013	532475	47.7	3	13.667	-0.001	115409	8.8
Aroclor-1268	4	14.284	-0.001	293147	10.0	4	14.319	-0.002	393004	11.2

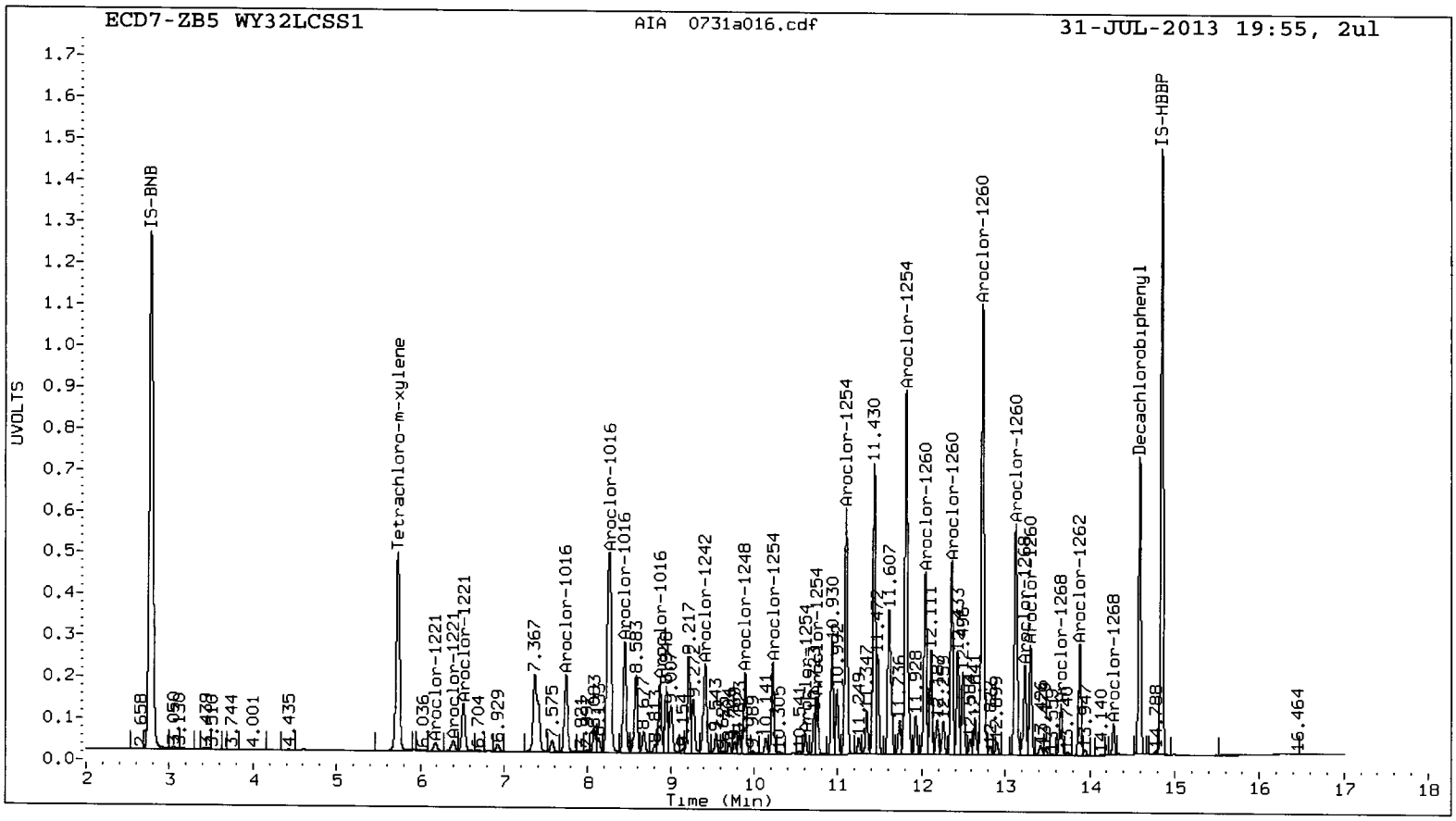
Total Col1Ave (4 peaks): 52.1 Total Col2Ave (4 peaks): 90.4 RPD = 54*

Corrected Ave (3 peaks): 41.0 Corrected Ave (3 peaks): 38.7 RPD = 6

Total PCB Area Col1 (5.835 - 14.489) = 55315124 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (5.483 - 14.519) = 72235853 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical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UVOLTS
Time (Min)
IS-BNB
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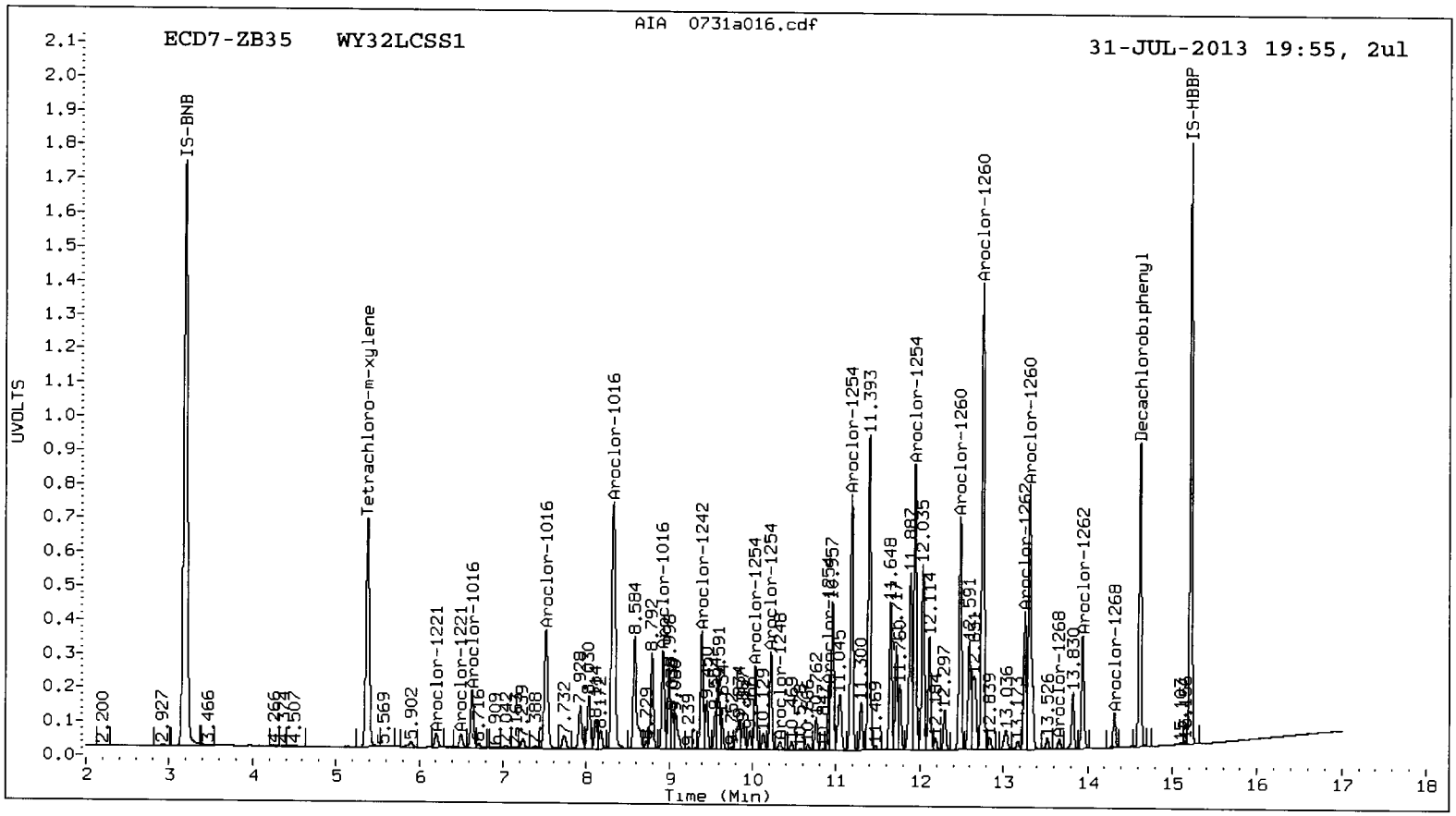
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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IS-BNB
Tetrachloro-m-xylene
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Aroclor-1016
Aroclor-1242
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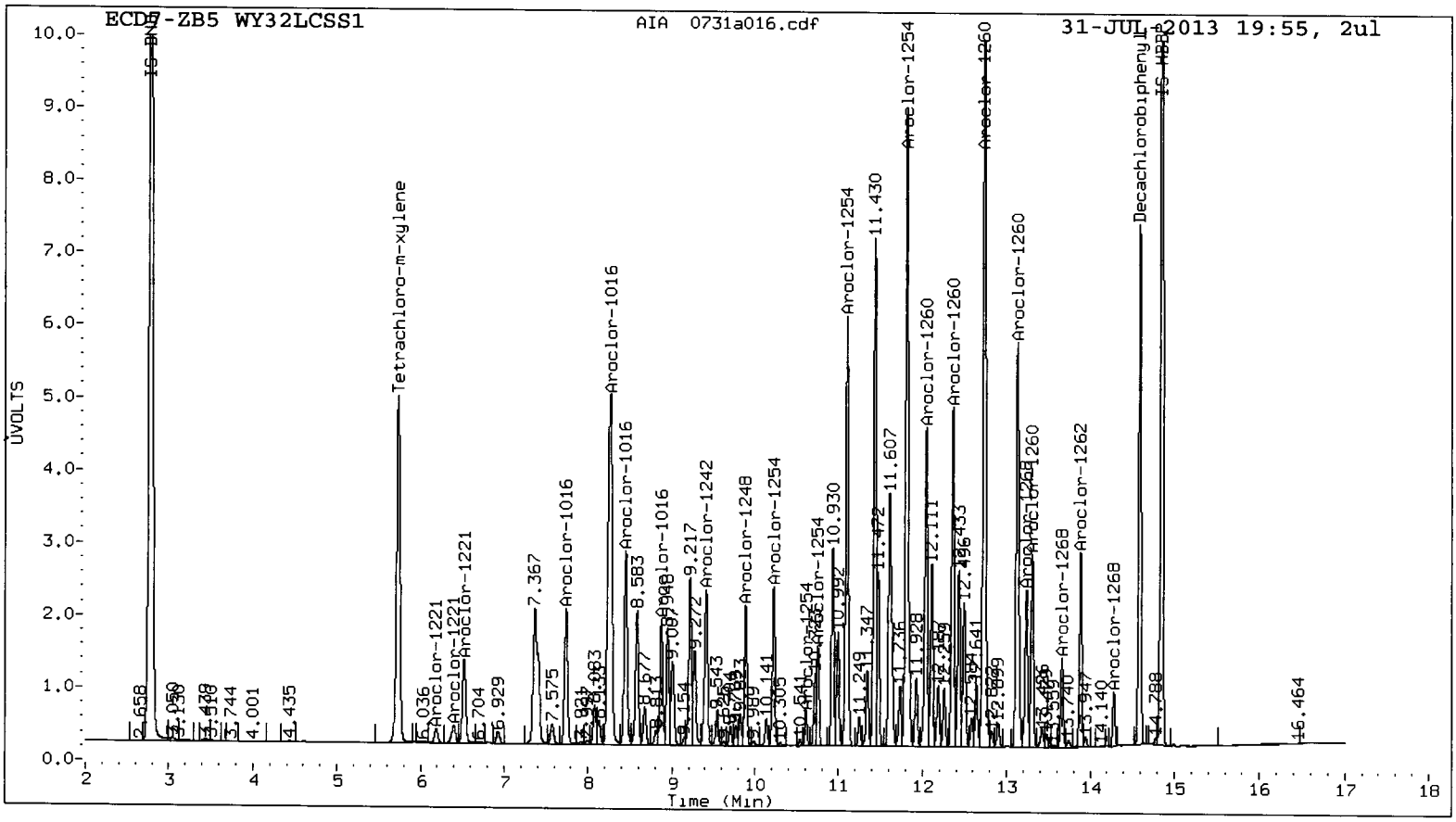
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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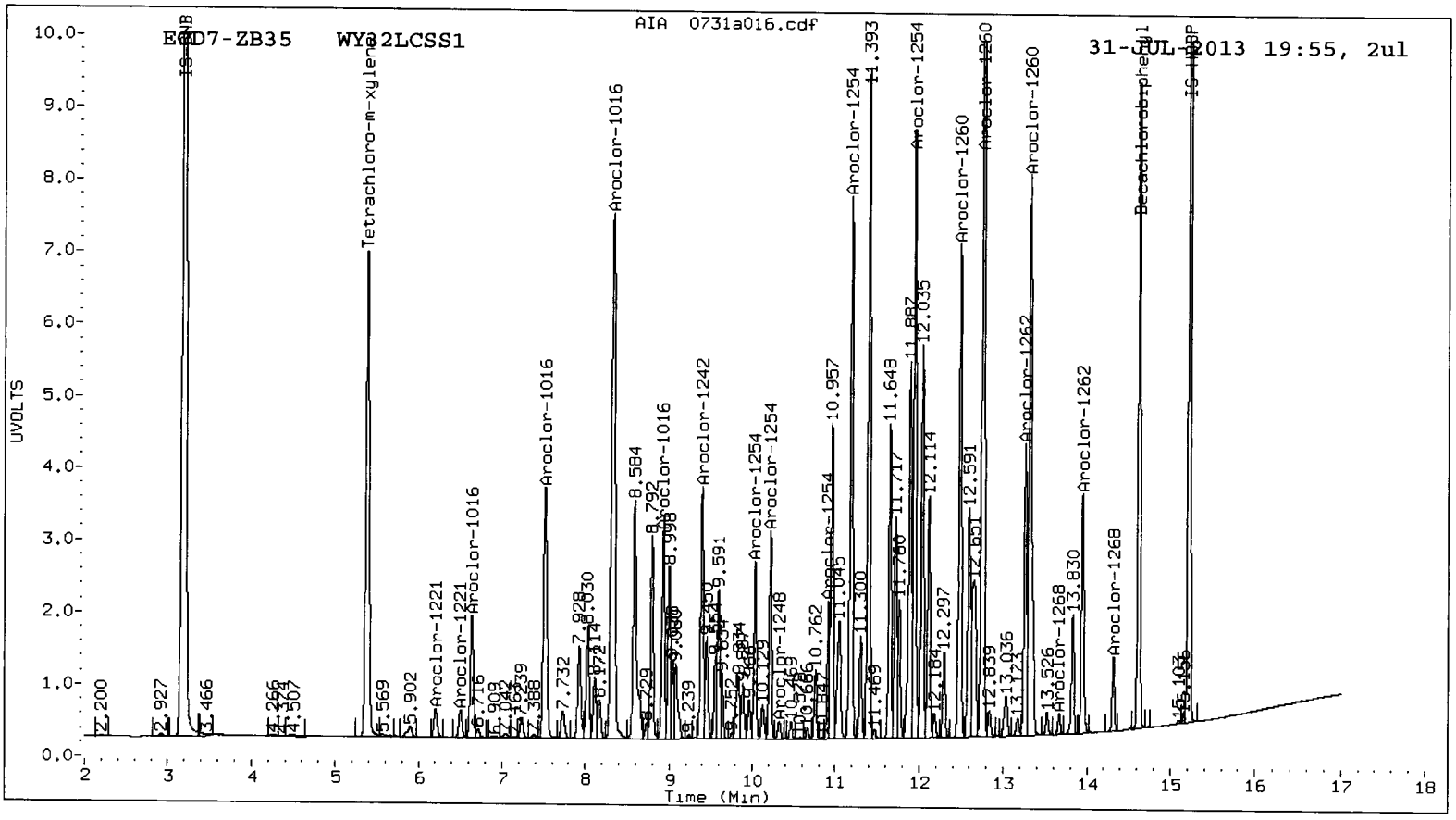
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/0731-1.b/0731a018.d
Data file 2: 20130725.b/0731-2.b/0731a018.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: WY32A
Client ID:
Injection Date: 31-JUL-2013 20:39
Report Date: 08/01/2013 12:42
Matrix: NONE
Dilution Factor: 5.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.734	-0.001	566131	5.383	0.000	790471	6.9	6.9	0.9	Tetrachloro-m-xylene
14.595	0.006	825902	14.624	0.004	870415	13.7	11.0	21.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	86.7	85.9
Decachlorobiphenyl	~~171.0~~	~~137.6~~

08/01/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7155590	-0.4
Hexabromobiphenyl	4753836	4290999	-9.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	8935614	-9.2
Hexabromobiphenyl	5491228	5082383	-7.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

WY32:8A20A

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount	
Aroclor-1016	1	7.743	-0.001	310104	145.8	1	6.649	0.012	462337	215.1	
Aroclor-1016	2	8.265	0.001	1305346	180.7	2	7.517	0.001	585272	121.2	
Aroclor-1016	3	8.449	-0.001	453543	161.7	3	8.330	0.002	1552677	154.1	
Aroclor-1016	4	8.876	0.000	417249	251.6	4	8.926	0.000	631875	211.3	
Total Col1Ave (4 peaks):					185.0	Total Col2Ave (4 peaks):				175.4	RPD = 5
Corrected Ave (3 peaks):					162.8	Corrected Ave (3 peaks):				162.2	RPD = 0
Aroclor-1221	1	6.189	0.001	35843	42.4	1	6.212	0.008	81063	53.7	
Aroclor-1221	2	6.400	0.004	54446	74.6	2	6.512	0.011	605234	694.0	
Aroclor-1221	3	6.521	0.002	173474	81.2	3	6.649	0.013	462337	174.9	
Aroclor-1221	NS	---			----	4	7.517	-0.012	585272	635.4	
Total Col1Ave (3 peaks):					66.0	Total Col2Ave (4 peaks):				389.5	RPD = 142*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				288.0	
Aroclor-1232	1	6.521	0.000	173474	123.7	1	6.649	0.012	462337	247.3	
Aroclor-1232	2	7.743	0.001	310104	365.0	2	7.517	0.000	585272	275.7	
Aroclor-1232	3	8.265	0.001	1305346	459.5	3	8.330	0.001	1552677	383.1	
Aroclor-1232	4	8.449	0.000	453543	406.3	4	8.926	0.000	631875	475.3	
Total Col1Ave (4 peaks):					338.6	Total Col2Ave (4 peaks):				345.3	RPD = 2
Corrected Ave (3 peaks):					298.3	Corrected Ave (3 peaks):				302.0	RPD = 1
Aroclor-1242	1	7.743	0.009	310104	182.3	1	6.649	0.023	462337	259.0	
Aroclor-1242	2	8.265	0.010	1305346	224.6	2	7.517	0.011	585272	158.4	
Aroclor-1242	3	8.449	0.008	453543	201.8	3	8.330	0.015	1552677	200.5	
Aroclor-1242	4	9.414	0.006	688083	323.6	4	9.394	0.008	1004608	326.5	
Total Col1Ave (4 peaks):					233.1	Total Col2Ave (4 peaks):				236.1	RPD = 1
Corrected Ave (3 peaks):					202.9	Corrected Ave (3 peaks):				205.9	RPD = 1
Aroclor-1248	1	8.265	0.009	1305346	360.4	1	7.517	0.006	585272	318.3	
Aroclor-1248	2	8.876	0.002	417249	175.9	2	8.330	0.007	1552677	308.1	
Aroclor-1248	3	9.414	0.002	688083	204.8	3	8.926	0.002	631875	171.3	
Aroclor-1248	4	9.886	0.003	891750	206.0	4	10.344	0.011	1795160	339.0	
Total Col1Ave (4 peaks):					236.8	Total Col2Ave (4 peaks):				284.2	RPD = 18
Corrected Ave (3 peaks):					195.6	Corrected Ave (3 peaks):				265.9	RPD = 30
Aroclor-1254	1	10.224	-0.001	779985	173.8	1	10.038	0.002	503448	147.3	
Aroclor-1254	2	10.632	0.017	1042454	275.6	2	10.231	0.010	1133070	260.4	
Aroclor-1254	3	10.759	0.003	1048325	191.7	3	10.919	0.003	1047481	143.8	
Aroclor-1254	4	11.118	0.004	1173631	208.1	4	11.175	0.004	1460240	196.9	
Aroclor-1254	5	11.815	0.003	980241	177.2	5	11.943	0.002	1123821	209.1	
Total Col1Ave (5 peaks):					225.3	Total Col2Ave (5 peaks):				191.5	RPD = 16
Corrected Ave (4 peaks):					187.7	Corrected Ave (4 peaks):				174.3	RPD = 7
Aroclor-1260	1	12.046	0.003	287379	86.2	1	11.943	0.002	1123821	157.4	
Aroclor-1260	2	12.364	0.004	259414	76.0	2	12.485	0.001	506546	87.1	
Aroclor-1260	3	12.774	0.044	4520503	531.7	3	12.759	0.006	717097	63.5	
Aroclor-1260	4	13.130	0.004	319246	74.5	4	13.319	0.005	505065	66.5	
Aroclor-1260	5	13.310	0.005	179400	96.9	NS	---			----	
Total Col1Ave (5 peaks):					177.1	Total Col2Ave (4 peaks):				93.6	RPD = 62*
Corrected Ave (4 peaks):					183.4	Corrected Ave (3 peaks):				72.4	RPD = 14
Aroclor-1262	1	12.364	0.005	259414	56.6	1	12.485	0.000	506546	74.5	
Aroclor-1262	2	12.774	0.045	4520503	423.9	2	12.759	0.006	717097	53.0	
Aroclor-1262	3	13.130	0.004	319246	92.4	3	13.217	-0.042	5126897	870.5	
Aroclor-1262	4	13.310	0.007	179400	43.4	4	13.319	0.002	505065	56.8	
Aroclor-1262	5	13.879	-0.005	1172475	361.5	5	13.949	0.004	228814	51.0	
Total Col1Ave (5 peaks):					195.6	Total Col2Ave (5 peaks):				221.2	RPD = 12
Corrected Ave (4 peaks):					138.5	Corrected Ave (4 peaks):				58.8	RPD = 81*
Aroclor-1268	1	13.241	0.005	218306	18.8	1	13.217	-0.042	5126897	365.5	

Aroclor-1268	2	13.310	0.007	179400	17.5	2	13.319	-0.002	505065	38.4
Aroclor-1268	3	13.657	0.009	190452	22.1	3	13.672	0.003	174110	16.4
Aroclor-1268	4	14.290	0.005	314510	13.8	4	14.323	0.003	374027	13.2

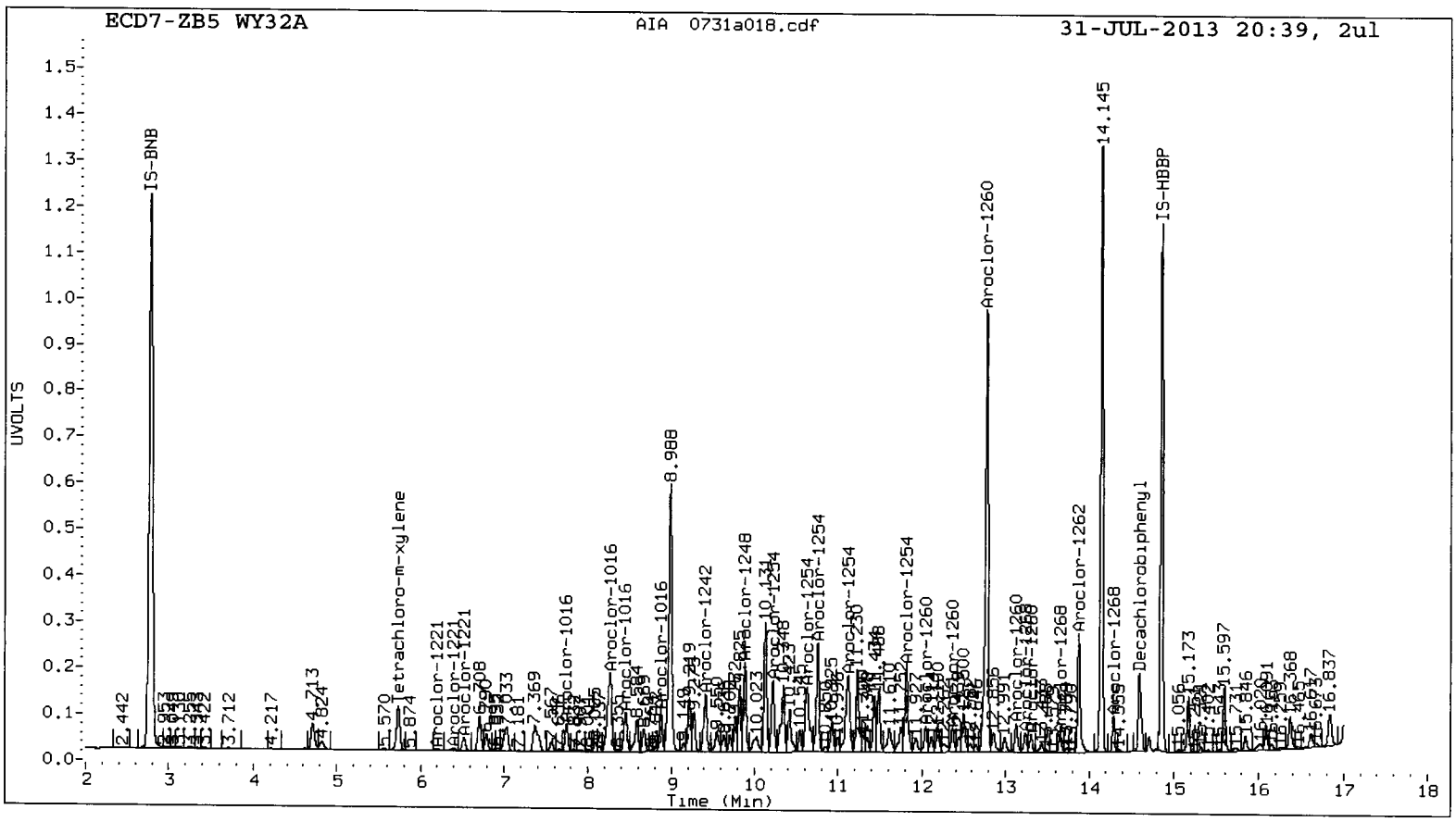
Total Col1Ave (4 peaks): 18.0 Total Col2Ave (4 peaks): 108.4 RPD = 143*

Corrected Ave (3 peaks): 16.7 Corrected Ave (3 peaks): 22.7 RPD = 30

Total PCB Area Col1 (5.835 - 14.489) = 39320264 Col1 Total PCB = 0.7 ppm*

Total PCB Area Col2 (5.483 - 14.519) = 43753315 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
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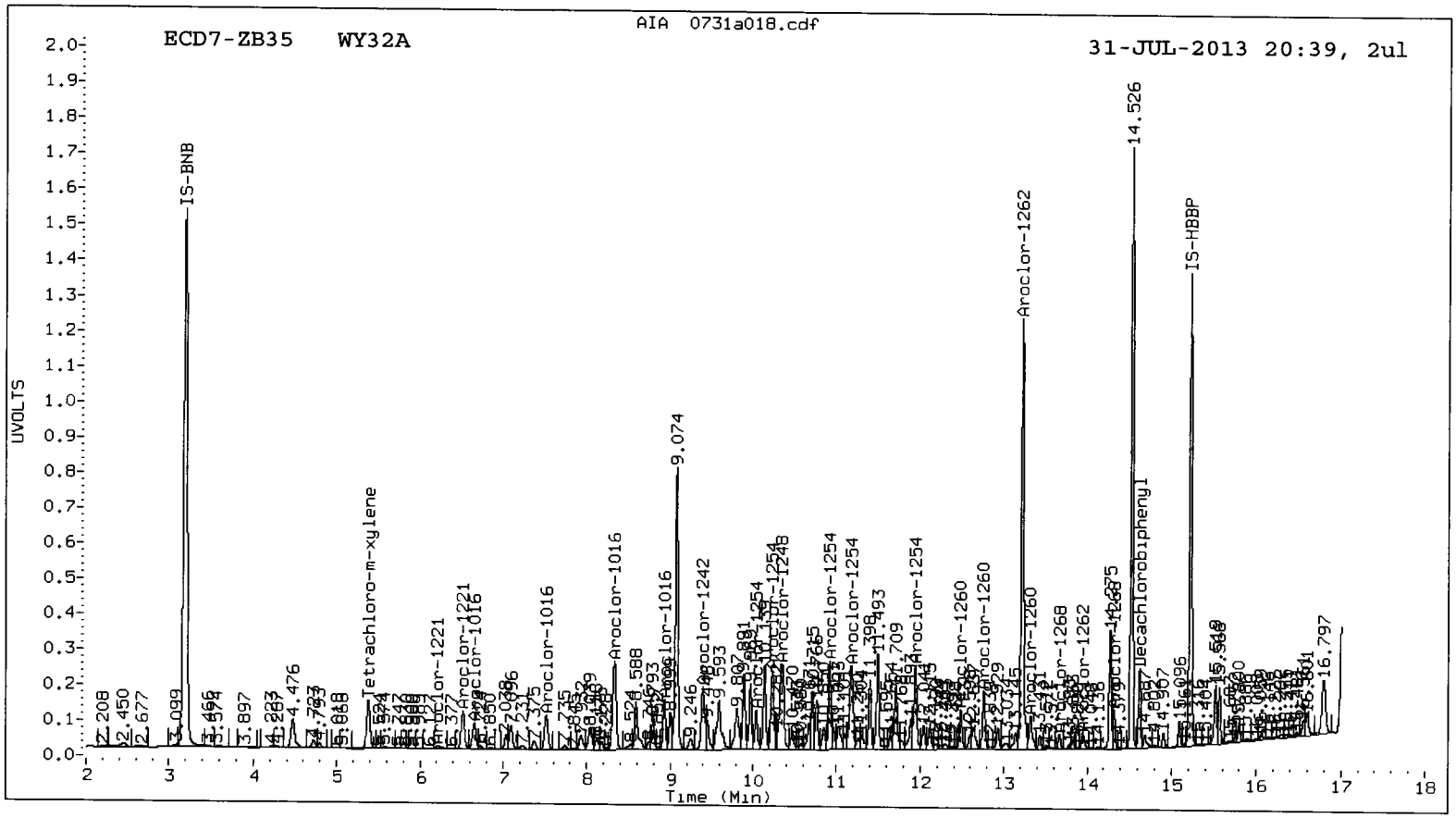
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Time (Min)
IS-BNB
Tetrachloro-m-xylene
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Aroclor-1221
Aroclor-1242
Aroclor-1248
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Decachlorobiphenyl
IS-HBBP
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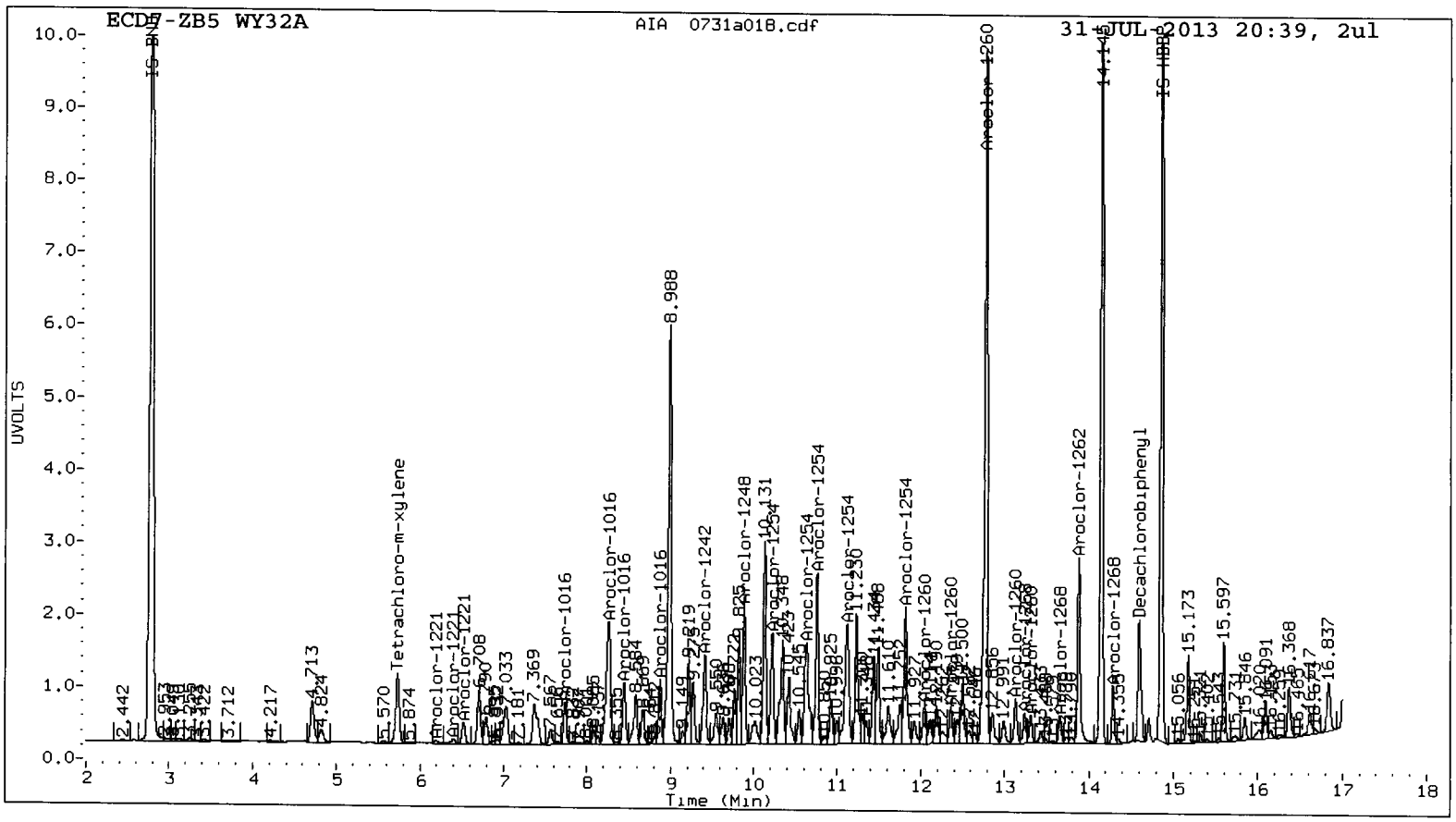
14.526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UVOLTS
Time (Min)
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IS-HXBP
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
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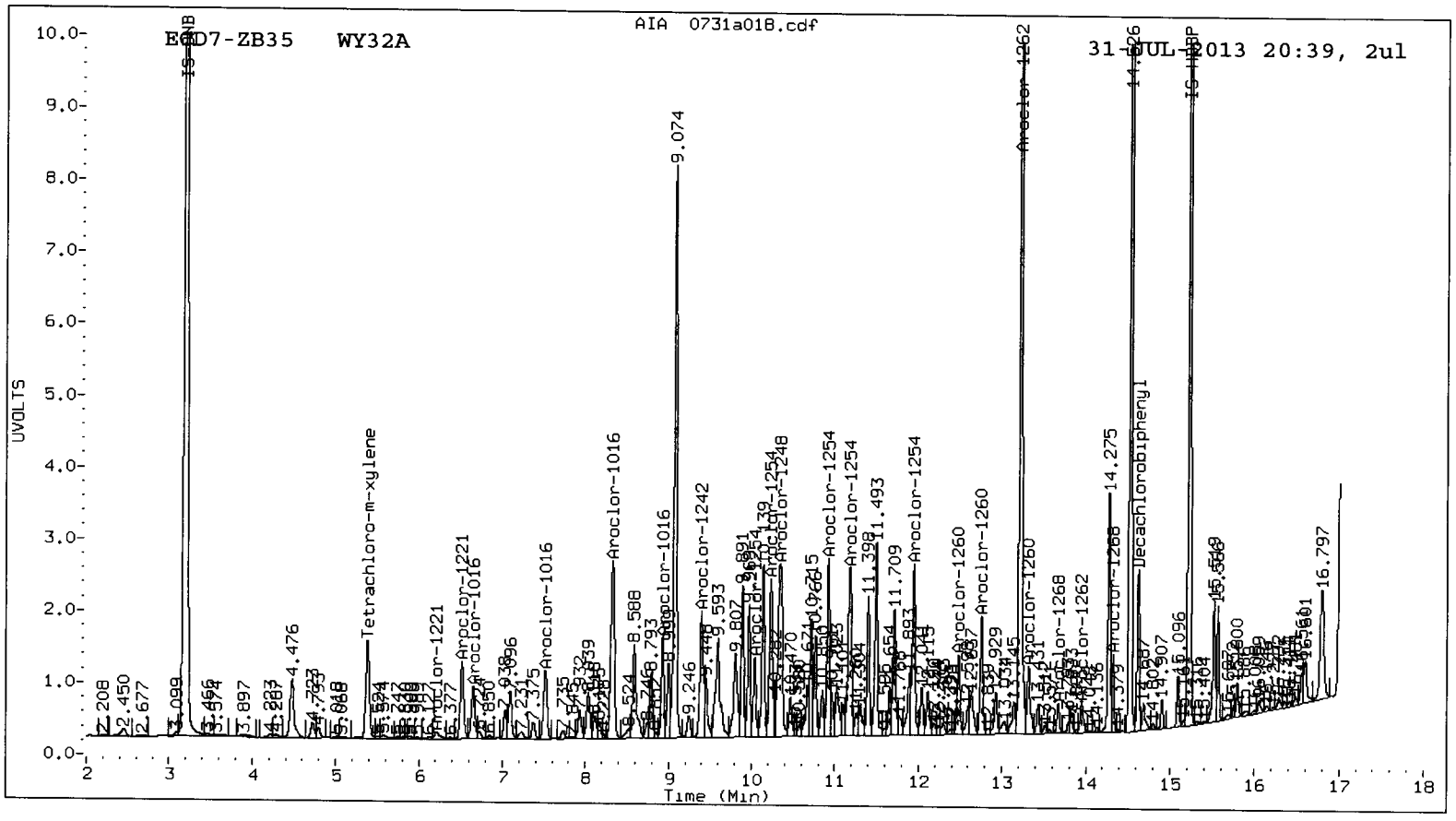
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl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Tetrachloro-m-xylene
Aroclor-1016
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Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/0731-1.b/0731a019.d
Data file 2: 20130725.b/0731-2.b/0731a019.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: WY32B
Client ID:
Injection Date: 31-JUL-2013 21:01
Report Date: 08/01/2013 12:42
Matrix: NONE
Dilution Factor: 5.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.733	-0.002	502353	5.380	-0.003	702987	6.3	6.3	0.0	Tetrachloro-m-xylene
14.590	0.001	367543	14.621	0.001	538276	6.7	7.3	7.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	78.3	78.4
Decachlorobiphenyl	84.3	90.7

8/01/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7028149	-2.2
Hexabromobiphenyl	4753836	3876511	-18.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	8715432	-11.4
Hexabromobiphenyl	5491228	4766092	-13.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount	
Aroclor-1016	1	7.743	-0.001	29673	14.2	1	6.655	0.017	349157	166.5	
Aroclor-1016	2	8.266	0.002	127876	18.0	2	7.519	0.003	60054	12.7	
Aroclor-1016	3	8.452	0.002	32036	11.6	3	8.329	0.002	124923	12.7	
Aroclor-1016	4	8.875	-0.001	54162	33.3	4	8.924	-0.002	102733	35.2	
Total Col1Ave (4 peaks):					19.3	Total Col2Ave (4 peaks):				56.8	RPD = 99*
Corrected Ave (3 peaks):					14.6	Corrected Ave (3 peaks):				20.2	RPD = 32
Aroclor-1221	1	---			0.0	1	6.218	0.014	19877	13.5	
Aroclor-1221	2	---			0.0	2	6.511	0.010	272748	320.6	
Aroclor-1221	3	---			0.0	3	6.655	0.019	349157	135.4	
Aroclor-1221	NS	---			----	4	7.519	-0.009	60054	66.8	
Col1Ave: <3 Quant Peaks						Col2Ave: 134.1					
Aroclor-1232	1	---			0.0	1	6.655	0.017	349157	191.5	
Aroclor-1232	2	7.743	0.001	29673	35.6	2	7.519	0.002	60054	29.0	
Aroclor-1232	3	8.266	0.002	127876	45.8	3	8.329	0.001	124923	31.6	
Aroclor-1232	4	8.452	0.003	32036	29.2	4	8.924	-0.003	102733	79.2	
Total Col1Ave (3 peaks):					36.9	Total Col2Ave (4 peaks):				82.8	RPD = 77*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				46.6	
Aroclor-1242	1	7.743	0.009	29673	17.8	1	6.655	0.028	349157	200.5	
Aroclor-1242	2	8.266	0.011	127876	22.4	2	7.519	0.013	60054	16.7	
Aroclor-1242	3	8.452	0.011	32036	14.5	3	8.329	0.014	124923	16.5	
Aroclor-1242	4	9.411	0.002	81564	39.1	4	9.388	0.002	150192	50.0	
Total Col1Ave (4 peaks):					23.4	Total Col2Ave (4 peaks):				70.9	RPD = 101*
Corrected Ave (3 peaks):					18.2	Corrected Ave (3 peaks):				27.7	RPD = 41*
Aroclor-1248	1	8.266	0.010	127876	35.9	1	7.519	0.008	60054	33.5	
Aroclor-1248	2	8.875	0.001	54162	23.2	2	8.329	0.007	124923	25.4	
Aroclor-1248	3	9.411	-0.002	81564	24.7	3	8.924	0.000	102733	28.5	
Aroclor-1248	4	9.887	0.005	108895	25.6	4	10.333	0.001	198231	38.4	
Total Col1Ave (4 peaks):					27.4	Total Col2Ave (4 peaks):				31.5	RPD = 14
Corrected Ave (3 peaks):					24.5	Corrected Ave (3 peaks):				29.1	RPD = 17
Aroclor-1254	1	10.224	-0.002	111898	25.4	1	10.037	0.001	95781	28.7	
Aroclor-1254	2	10.620	0.005	86254	31.6	2	10.228	0.006	158413	37.3	
Aroclor-1254	3	10.756	0.000	170628	31.8	3	10.916	0.000	188045	26.5	
Aroclor-1254	4	11.103	-0.012	198362	35.8	4	11.182	0.011	230953	31.9	
Aroclor-1254	5	11.812	0.001	226363	41.7	5	11.940	-0.001	216764	41.4	
Total Col1Ave (5 peaks):					33.3	Total Col2Ave (5 peaks):				33.2	RPD = 0
Corrected Ave (4 peaks):					31.2	Corrected Ave (4 peaks):				31.1	RPD = 0
Aroclor-1260	1	12.043	0.000	99607	33.1	1	11.940	-0.001	216764	32.4	
Aroclor-1260	2	12.363	0.004	110401	35.8	2	12.481	-0.002	113001	20.7	
Aroclor-1260	3	12.731	0.001	61741	8.3	3	12.755	0.002	200866	19.0	
Aroclor-1260	4	13.122	-0.004	134514	34.8	4	13.320	0.006	43762	6.1	
Aroclor-1260	5	13.302	-0.002	53011	31.7	NS	---			----	
Total Col1Ave (5 peaks):					28.7	Total Col2Ave (4 peaks):				19.6	RPD = 38
Corrected Ave (4 peaks):					27.0	Corrected Ave (3 peaks):				15.3	RPD = 55*
Aroclor-1262	1	12.363	0.004	110401	26.7	1	12.481	-0.003	113001	17.7	
Aroclor-1262	2	12.731	0.002	61741	6.4	2	12.755	0.001	200866	15.8	
Aroclor-1262	3	13.122	-0.003	134514	43.1	3	13.217	-0.042	80423	14.6	
Aroclor-1262	4	13.302	-0.001	53011	14.2	4	13.320	0.003	43762	5.2	
Aroclor-1262	5	13.878	-0.006	70260	24.0	5	13.949	0.004	91885	21.8	
Total Col1Ave (5 peaks):					22.9	Total Col2Ave (5 peaks):				15.0	RPD = 41*
Corrected Ave (4 peaks):					17.8	Corrected Ave (4 peaks):				13.3	RPD = 29
Aroclor-1268	1	13.235	0.000	59824	5.7	1	13.217	-0.043	80423	6.1	
Aroclor-1268	2	13.302	0.000	53011	5.7	2	13.320	-0.002	43762	3.5	

Aroclor-1268	3	13.658	0.010	36438	4.7	3	---		0.0
Aroclor-1268	4	14.287	0.002	26585	1.3	4	14.320	-0.001	28439	1.1

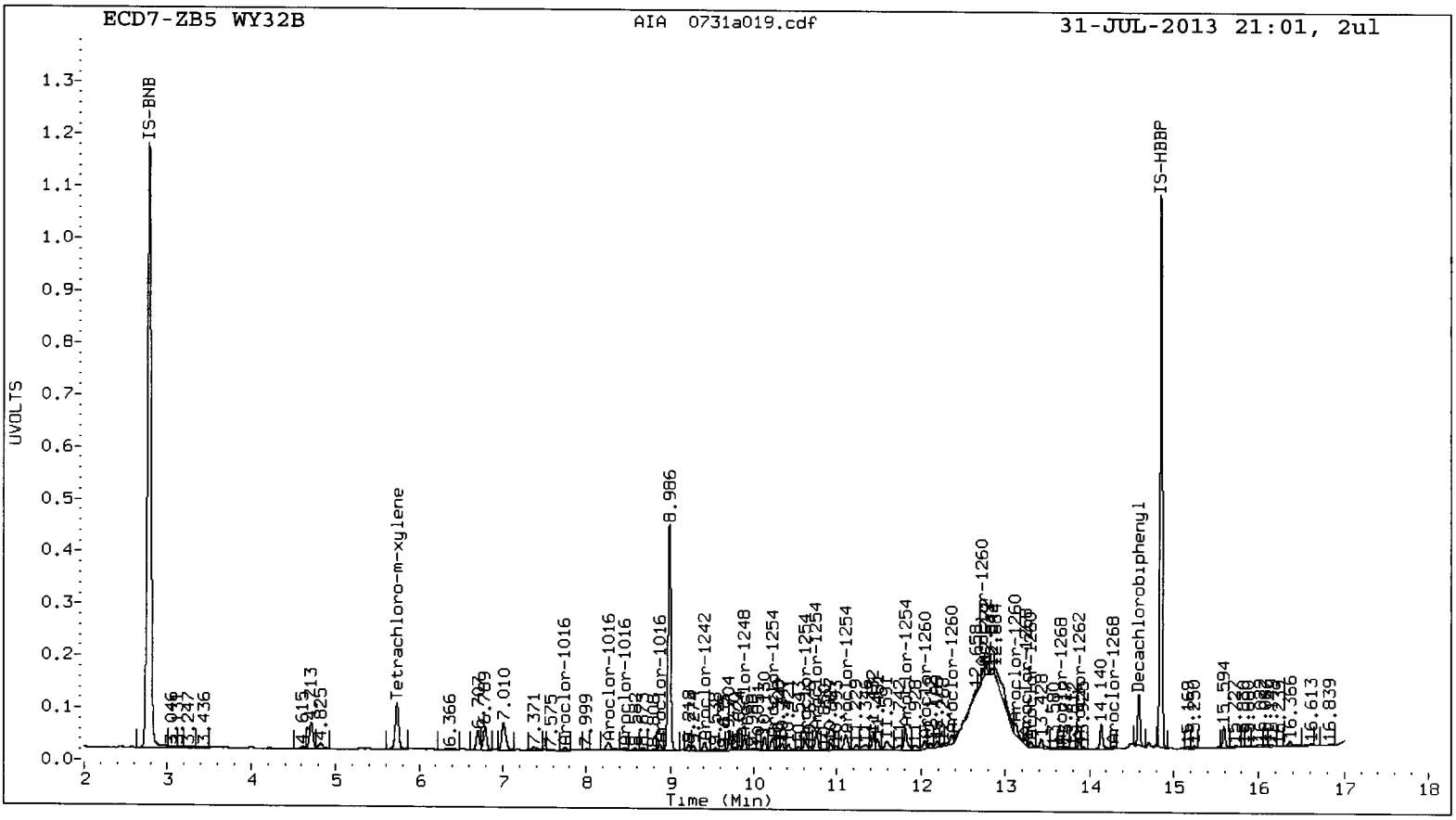
Total Col1Ave (4 peaks): 4.3 Total Col2Ave (3 peaks): 3.6 RPD = 19

Corrected Ave (3 peaks): 3.9 Corrected Ave: < 3 Peaks

Total PCB Area Col1 (5.835 - 14.489) = 7501962 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (5.483 - 14.519) = 9655264 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical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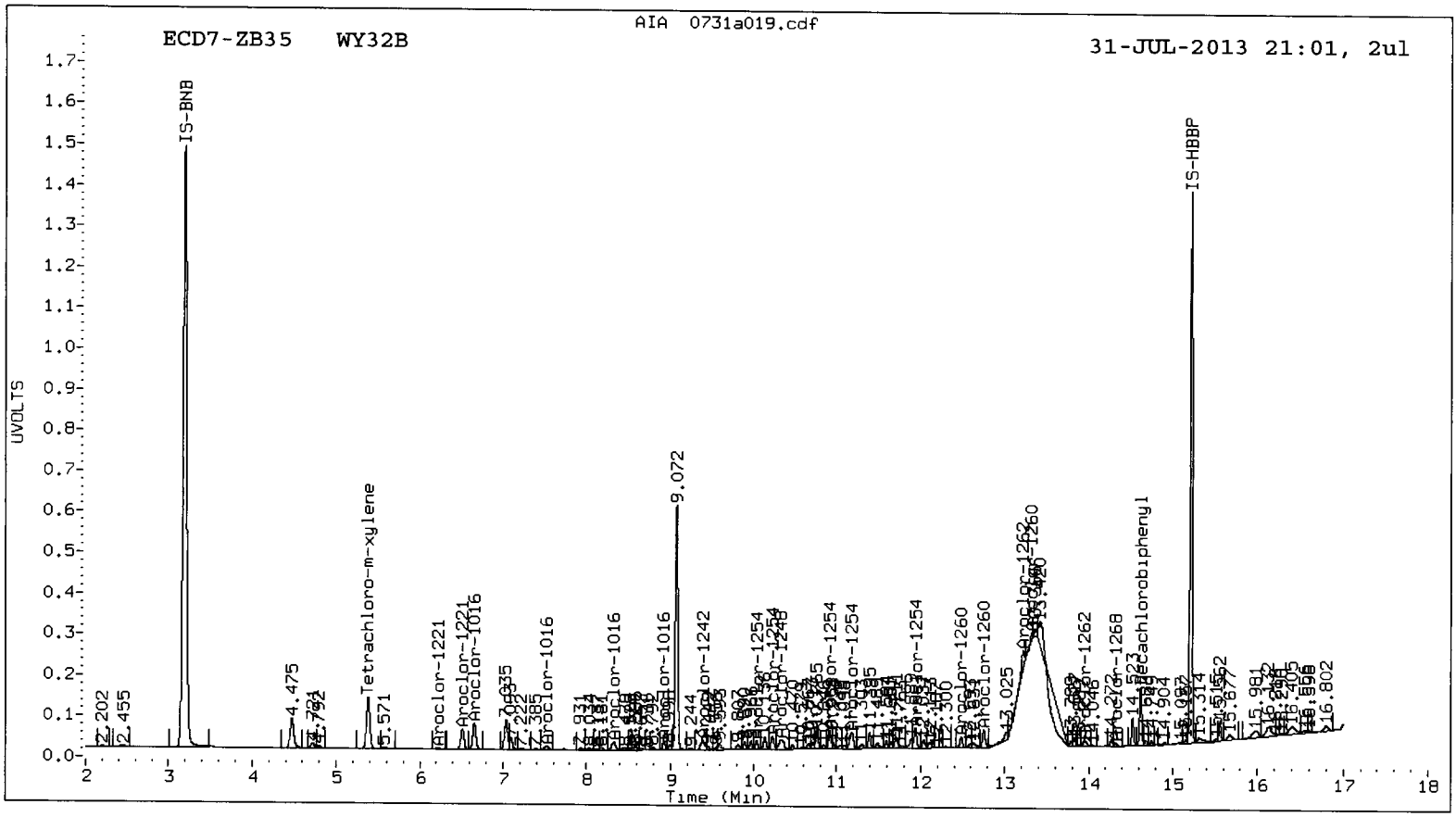
Tetrachloro-m-xylene
8.986
IS-HBBP
Decachlorobiphenyl
UVOLTS
Time (Min)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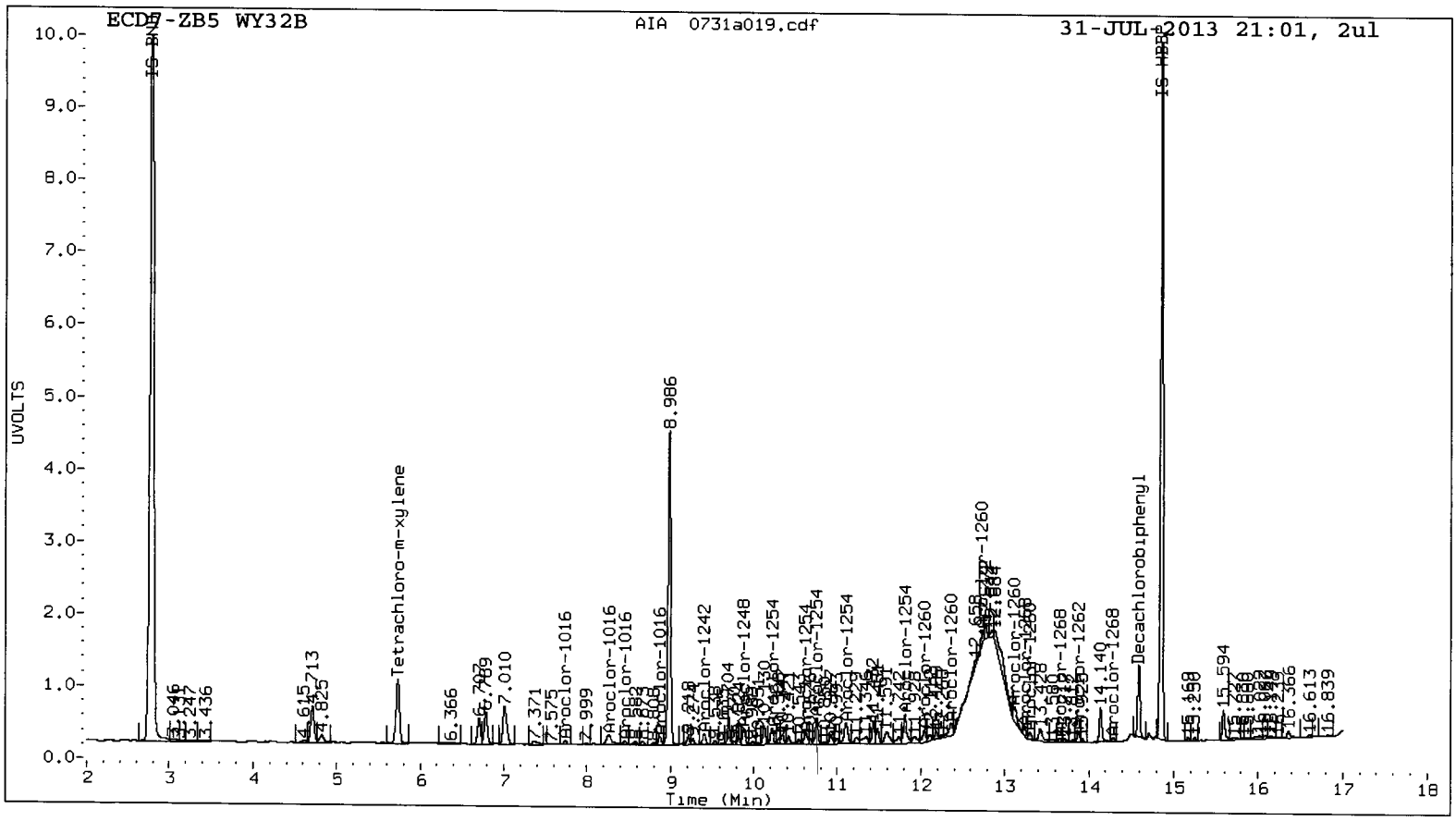
IS-HBBP
Decachlorobiphenyl
UVOLTS
Time (Min)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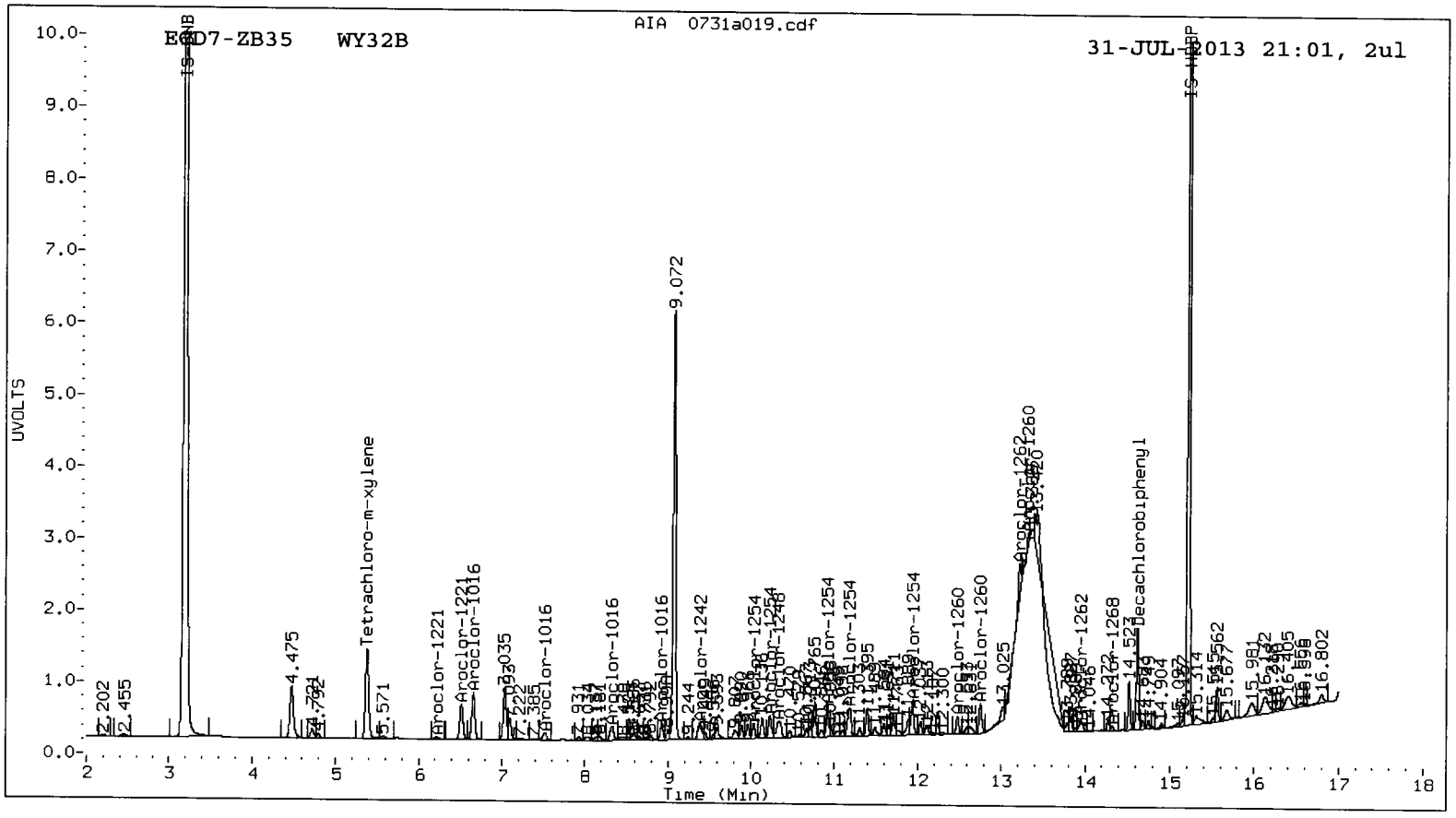
UVOLTS
Time (Min)
IS-DNB
Tetrachloro-m-xylene
8.986
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HXBP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IS-DNB
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Tetrachloro-m-xylene
5.571
Aroclor-1221
Aroclor-1016
9.072
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HXBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/0731-1.b/0731a020.d
Data file 2: 20130725.b/0731-2.b/0731a020.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: WY32BMS
Client ID:
Injection Date: 31-JUL-2013 21:23
Report Date: 08/01/2013 12:42
Matrix: NONE
Dilution Factor: 5.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.734	-0.001	547555	5.382	0.000	730457	6.9	6.6	4.4	Tetrachloro-m-xylene
14.590	0.001	407658	14.621	0.002	567299	7.9	8.3	4.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	86.8	83.1
Decachlorobiphenyl	99.0	103.1

08/01/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	6914592	-3.8
Hexabromobiphenyl	4753836	3658574	-23.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	8544007	-13.2
Hexabromobiphenyl	5491228	4417894	-19.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	7.743	-0.001	226009	110.0	1	6.651	0.014	527987	256.9
Aroclor-1016	2	8.264	0.000	748551	107.3	2	7.516	0.000	473043	102.4
Aroclor-1016	3	8.449	-0.001	277958	102.6	3	8.326	-0.002	946062	98.2
Aroclor-1016	4	8.875	-0.001	200327	125.0	4	8.926	-0.001	346068	121.0
Total Col1Ave (4 peaks):					111.2	Total Col2Ave (4 peaks):				144.6 RPD = 26
Corrected Ave (3 peaks):					106.6	Corrected Ave (3 peaks):				107.2 RPD = 1
Aroclor-1221	1	6.187	0.000	28922	35.4	1	6.209	0.005	57297	39.7
Aroclor-1221	2	6.400	0.004	43462	61.6	2	6.512	0.011	296048	355.0
Aroclor-1221	3	6.521	0.001	147075	71.3	3	6.651	0.016	527987	208.9
Aroclor-1221	NS	---			----	4	7.516	-0.012	473043	537.1
Total Col1Ave (3 peaks):					56.1	Total Col2Ave (4 peaks):				285.2 RPD = 134*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				201.2
Aroclor-1232	1	6.521	0.000	147075	108.5	1	6.651	0.014	527987	295.4
Aroclor-1232	2	7.743	0.001	226009	275.3	2	7.516	0.000	473043	233.0
Aroclor-1232	3	8.264	0.000	748551	272.7	3	8.326	-0.003	946062	244.1
Aroclor-1232	4	8.449	0.000	277958	257.7	4	8.926	-0.001	346068	272.3
Total Col1Ave (4 peaks):					228.5	Total Col2Ave (4 peaks):				261.2 RPD = 13
Corrected Ave (3 peaks):					213.0	Corrected Ave (3 peaks):				249.8 RPD = 16
Aroclor-1242	1	7.743	0.009	226009	137.5	1	6.651	0.025	527987	309.3
Aroclor-1242	2	8.264	0.009	748551	133.3	2	7.516	0.010	473043	133.9
Aroclor-1242	3	8.449	0.008	277958	128.0	3	8.326	0.011	946062	127.7
Aroclor-1242	4	9.413	0.005	270024	131.4	4	9.392	0.006	417344	141.9
Total Col1Ave (4 peaks):					132.5	Total Col2Ave (4 peaks):				178.2 RPD = 29
Corrected Ave (3 peaks):					130.9	Corrected Ave (3 peaks):				134.5 RPD = 3
Aroclor-1248	1	8.264	0.008	748551	213.9	1	7.516	0.005	473043	269.1
Aroclor-1248	2	8.875	0.001	200327	87.4	2	8.326	0.003	946062	196.3
Aroclor-1248	3	9.413	0.000	270024	83.2	3	8.926	0.002	346068	98.1
Aroclor-1248	4	9.891	0.008	257426	61.5	4	10.334	0.001	202827	40.1
Total Col1Ave (4 peaks):					111.5	Total Col2Ave (4 peaks):				150.9 RPD = 30
Corrected Ave (3 peaks):					77.4	Corrected Ave (3 peaks):				111.5 RPD = 36
Aroclor-1254	1	10.227	0.002	274688	63.3	1	10.037	0.001	259787	79.5
Aroclor-1254	2	10.617	0.002	116941	43.6	2	10.225	0.003	361797	86.9
Aroclor-1254	3	10.756	0.000	322947	61.1	3	10.916	0.001	291133	41.8
Aroclor-1254	4	11.098	-0.016	588281	107.9	4	11.186	0.015	743384	104.8
Aroclor-1254	5	11.812	0.001	815557	152.6	5	11.940	0.000	769140	149.7
Total Col1Ave (5 peaks):					85.7	Total Col2Ave (5 peaks):				92.5 RPD = 8
Corrected Ave (4 peaks):					69.0	Corrected Ave (4 peaks):				78.3 RPD = 13
Aroclor-1260	1	12.043	0.001	369910	130.1	1	11.940	0.000	769140	123.9
Aroclor-1260	2	12.360	0.001	373497	128.4	2	12.484	0.000	547847	108.3
Aroclor-1260	3	12.731	0.001	1042522	149.2	3	12.754	0.001	1101279	112.2
Aroclor-1260	4	13.127	0.001	460958	126.2	4	13.315	0.001	821672	124.4
Aroclor-1260	5	13.305	0.001	205421	130.2	NS	---			----
Total Col1Ave (5 peaks):					132.8	Total Col2Ave (4 peaks):				117.2 RPD = 12
Corrected Ave (4 peaks):					128.7	Corrected Ave (3 peaks):				114.8 RPD = 11
Aroclor-1262	1	12.360	0.001	373497	95.5	1	12.484	-0.001	547847	92.7
Aroclor-1262	2	12.731	0.002	1042522	114.7	2	12.754	0.001	1101279	93.7
Aroclor-1262	3	13.127	0.001	460958	156.5	3	13.260	0.000	343147	67.0
Aroclor-1262	4	13.305	0.002	205421	58.3	4	13.315	-0.002	821672	106.3
Aroclor-1262	5	13.885	0.000	252407	91.3	5	13.945	0.001	300173	76.9
Total Col1Ave (5 peaks):					103.3	Total Col2Ave (5 peaks):				87.3 RPD = 17
Corrected Ave (4 peaks):					90.0	Corrected Ave (4 peaks):				82.6 RPD = 9
Aroclor-1268	1	13.237	0.002	199256	20.2	1	13.260	0.000	343147	28.1

Aroclor-1268 2	13.305	0.003	205421	23.4	2	13.315	-0.006	821672	71.9
Aroclor-1268 3	13.663	0.015	99009	13.5	3	13.670	0.001	35221	3.8
Aroclor-1268 4	14.286	0.001	60683	3.1	4	14.320	-0.001	79538	3.2

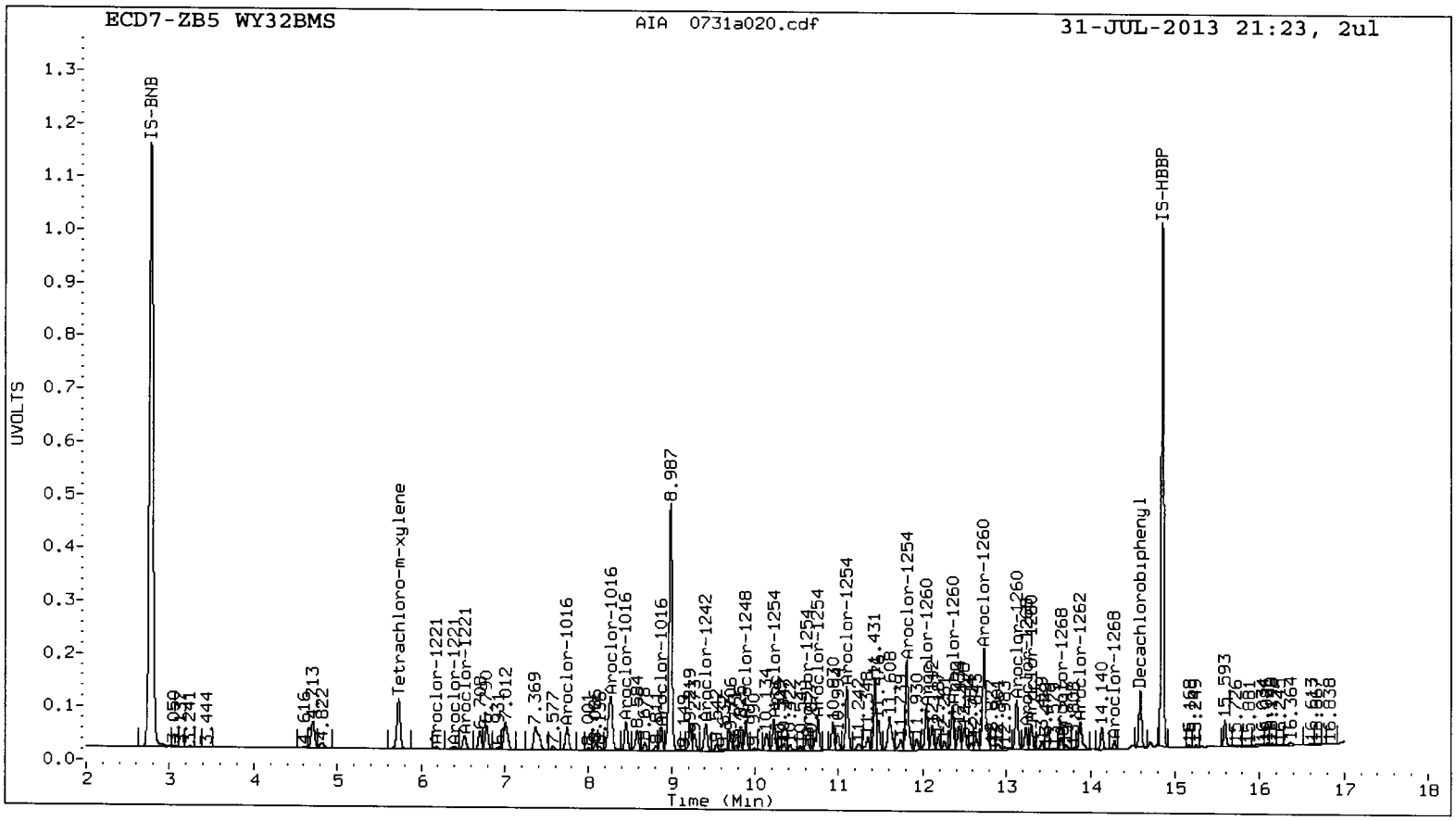
Total Col1Ave (4 peaks): 15.0 Total Col2Ave (4 peaks): 26.8 RPD = 56*

Corrected Ave (3 peaks): 12.3 Corrected Ave (3 peaks): 11.7 RPD = 4

Total PCB Area Col1 (5.835 - 14.489) = 15999294 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (5.483 - 14.519) = 20854948 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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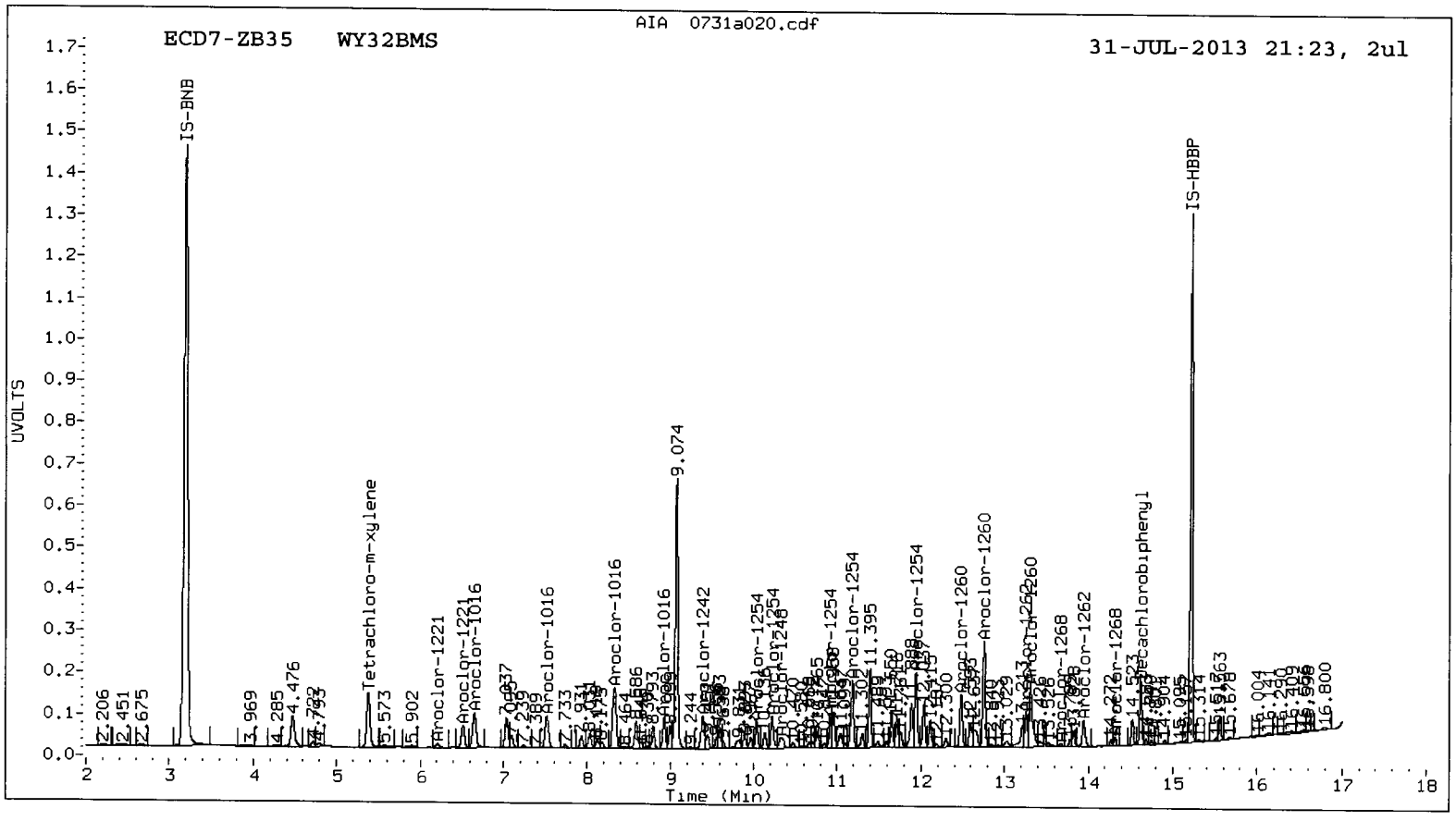
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Time (Min)
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Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
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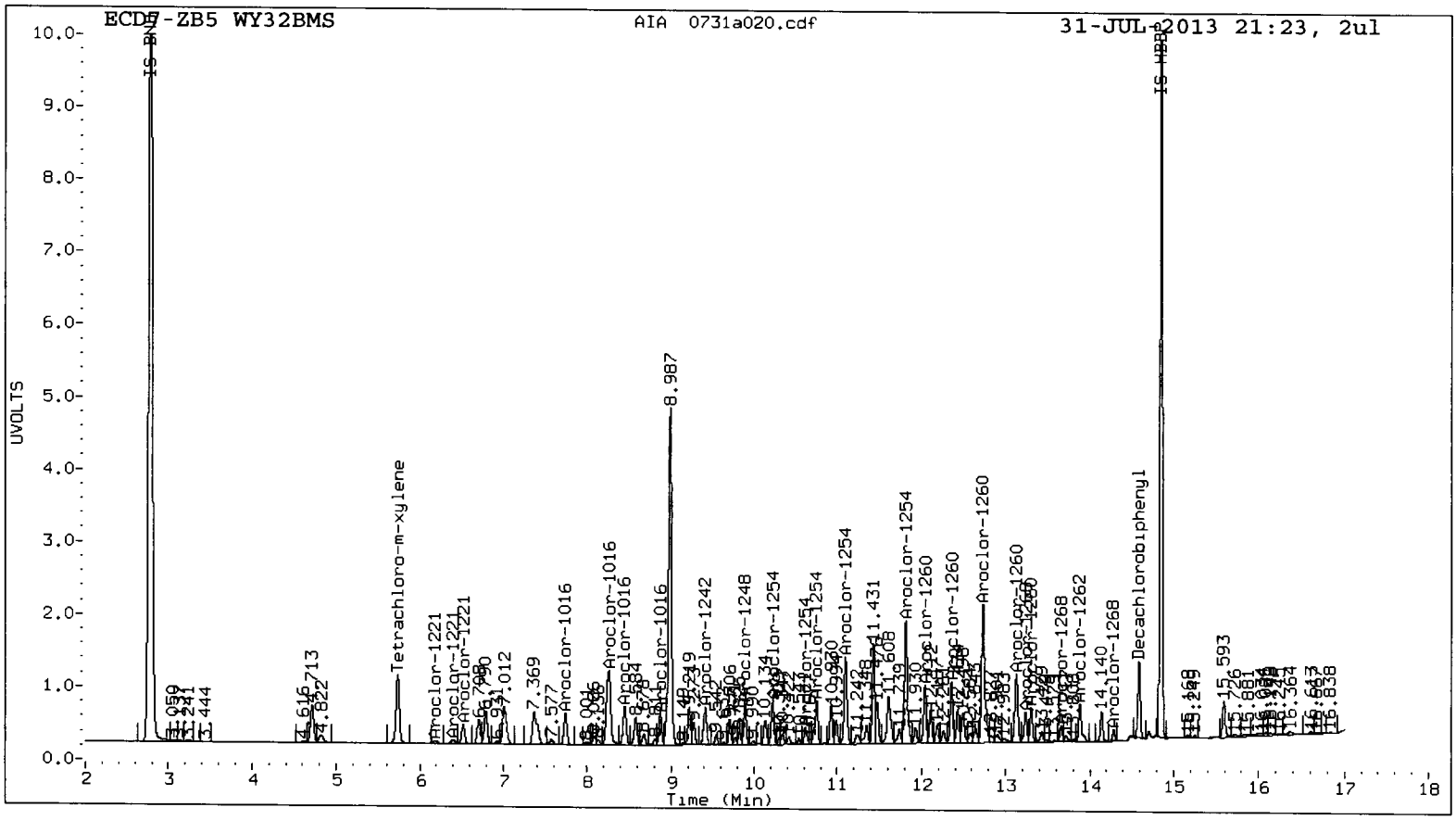
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
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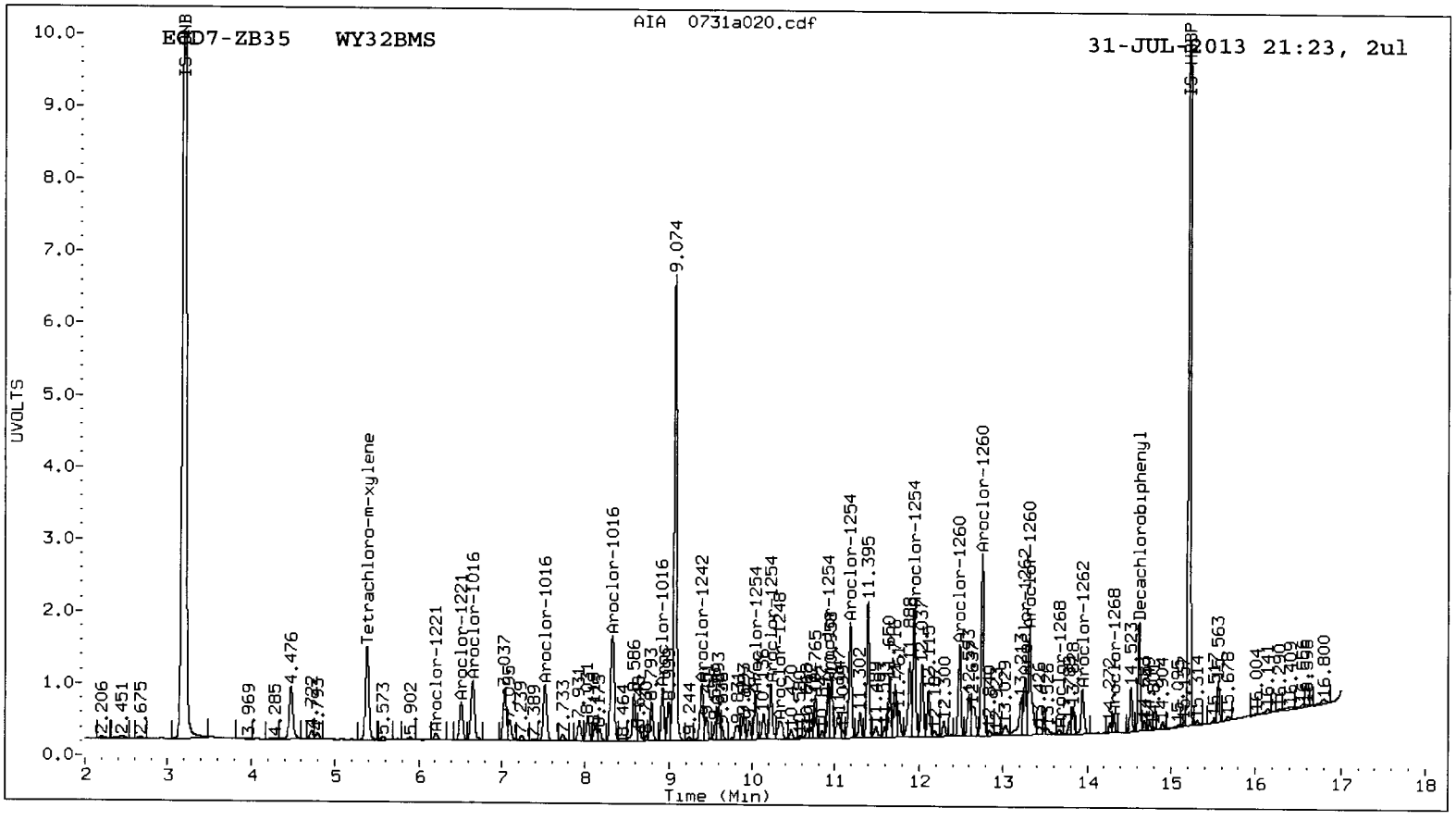
Decachlorobiphenyl
8.987
14.140
UVOLTS
Time (Min)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IS HBBP
Tetrachloro-m-xylene
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Aroclor-1016
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Aroclor-1260
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Aroclor-1268
Decachlorobiphenyl
9.074
11.395
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/0731-1.b/0731a021.d
Data file 2: 20130725.b/0731-2.b/0731a021.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: WY32BMSD
Client ID:
Injection Date: 31-JUL-2013 21:45
Report Date: 08/01/2013 12:42
Matrix: NONE
Dilution Factor: 5.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.734	-0.001	550082	5.381	-0.002	740032	6.8	6.5	4.1	Tetrachloro-m-xylene
14.590	0.001	395647	14.621	0.001	585127	7.4	8.3	10.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	85.3	81.8
Decachlorobiphenyl	92.9	103.2

JA 08/01/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7069600	-1.6
Hexabromobiphenyl	4753836	3784451	-20.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	8784777	-10.7
Hexabromobiphenyl	5491228	4552804	-17.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

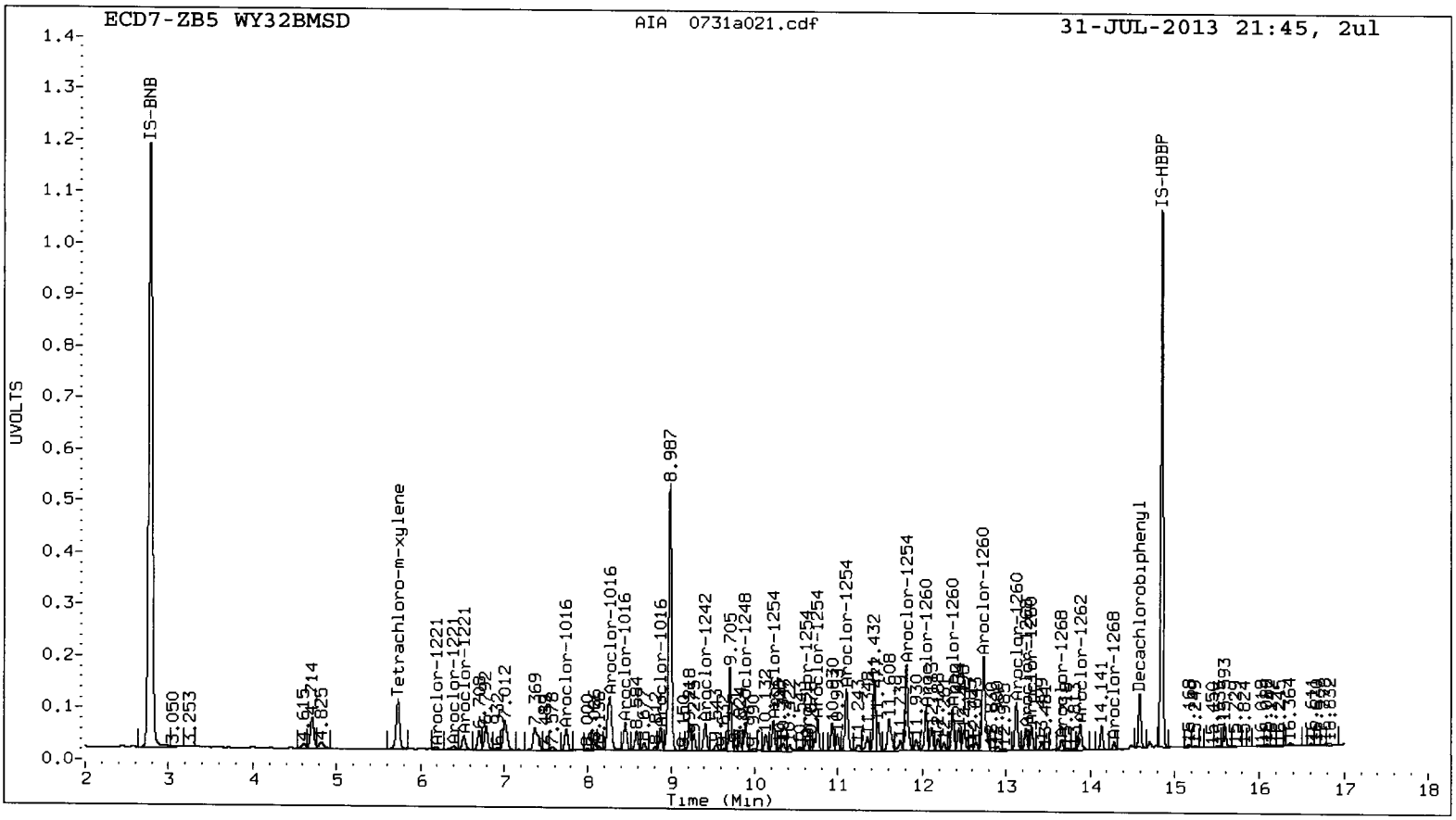
Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	7.744	-0.001	218826	104.1	1	6.652	0.014	515653	244.0
Aroclor-1016	2	8.265	0.001	774541	108.5	2	7.516	0.000	462885	97.5
Aroclor-1016	3	8.450	0.000	280764	101.3	3	8.328	0.001	936576	94.5
Aroclor-1016	4	8.875	-0.001	200797	122.6	4	8.926	0.000	339312	115.4
Total Col1Ave (4 peaks):					109.1	Total Col2Ave (4 peaks):				137.9 RPD = 23
Corrected Ave (3 peaks):					104.7	Corrected Ave (3 peaks):				102.5 RPD = 2
Aroclor-1221	1	6.188	0.001	27540	33.0	1	6.208	0.004	57674	38.8
Aroclor-1221	2	6.401	0.005	41828	58.0	2	6.512	0.011	311815	363.7
Aroclor-1221	3	6.521	0.002	146159	69.3	3	6.652	0.016	515653	198.5
Aroclor-1221	NS	---			----	4	7.516	-0.012	462885	511.1
Total Col1Ave (3 peaks):					53.4	Total Col2Ave (4 peaks):				278.0 RPD = 136*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				200.3
Aroclor-1232	1	6.521	0.000	146159	105.5	1	6.652	0.014	515653	280.6
Aroclor-1232	2	7.744	0.001	218826	260.7	2	7.516	0.000	462885	221.8
Aroclor-1232	3	8.265	0.001	774541	275.9	3	8.328	0.000	936576	235.0
Aroclor-1232	4	8.450	0.001	280764	254.6	4	8.926	-0.001	339312	259.6
Total Col1Ave (4 peaks):					224.2	Total Col2Ave (4 peaks):				249.3 RPD = 11
Corrected Ave (3 peaks):					206.9	Corrected Ave (3 peaks):				238.8 RPD = 14
Aroclor-1242	1	7.744	0.009	218826	130.2	1	6.652	0.025	515653	293.8
Aroclor-1242	2	8.265	0.011	774541	134.9	2	7.516	0.010	462885	127.4
Aroclor-1242	3	8.450	0.009	280764	126.4	3	8.328	0.013	936576	123.0
Aroclor-1242	4	9.413	0.005	272006	129.5	4	9.393	0.007	423100	139.9
Total Col1Ave (4 peaks):					130.3	Total Col2Ave (4 peaks):				171.0 RPD = 27
Corrected Ave (3 peaks):					128.7	Corrected Ave (3 peaks):				130.1 RPD = 1
Aroclor-1248	1	8.265	0.010	774541	216.4	1	7.516	0.005	462885	256.1
Aroclor-1248	2	8.875	0.001	200797	85.7	2	8.328	0.006	936576	189.0
Aroclor-1248	3	9.413	0.000	272006	81.9	3	8.926	0.002	339312	93.6
Aroclor-1248	4	9.892	0.009	260324	60.9	4	10.333	0.000	232161	44.6
Total Col1Ave (4 peaks):					111.2	Total Col2Ave (4 peaks):				145.8 RPD = 27
Corrected Ave (3 peaks):					76.2	Corrected Ave (3 peaks):				109.1 RPD = 36
Aroclor-1254	1	10.227	0.001	272644	61.5	1	10.037	0.001	260509	77.5
Aroclor-1254	2	10.617	0.002	116870	42.6	2	10.225	0.003	352481	82.4
Aroclor-1254	3	10.756	0.000	324200	60.0	3	10.917	0.001	290728	40.6
Aroclor-1254	4	11.098	-0.016	583835	104.8	4	11.186	0.015	737246	101.1
Aroclor-1254	5	11.812	0.001	806163	147.5	5	11.941	0.001	754724	142.8
Total Col1Ave (5 peaks):					83.3	Total Col2Ave (5 peaks):				88.9 RPD = 7
Corrected Ave (4 peaks):					67.2	Corrected Ave (4 peaks):				75.4 RPD = 11
Aroclor-1260	1	12.044	0.001	364109	123.8	1	11.941	0.001	754724	118.0
Aroclor-1260	2	12.361	0.001	357545	118.8	2	12.484	0.000	543267	104.2
Aroclor-1260	3	12.731	0.001	994215	137.6	3	12.754	0.001	1072624	106.0
Aroclor-1260	4	13.126	0.000	447899	118.6	4	13.315	0.001	759123	111.6
Aroclor-1260	5	13.306	0.001	198377	121.5	NS	---			----
Total Col1Ave (5 peaks):					124.1	Total Col2Ave (4 peaks):				110.0 RPD = 12
Corrected Ave (4 peaks):					120.7	Corrected Ave (3 peaks):				107.3 RPD = 12
Aroclor-1262	1	12.361	0.002	357545	88.4	1	12.484	-0.001	543267	89.2
Aroclor-1262	2	12.731	0.002	994215	105.7	2	12.754	0.001	1072624	88.5
Aroclor-1262	3	13.126	0.000	447899	147.0	3	13.260	0.000	318930	60.4
Aroclor-1262	4	13.306	0.001	198377	54.5	4	13.315	-0.002	759123	95.3
Aroclor-1262	5	13.884	0.000	243534	85.1	5	13.946	0.001	286856	71.4
Total Col1Ave (5 peaks):					96.1	Total Col2Ave (5 peaks):				81.0 RPD = 17
Corrected Ave (4 peaks):					83.4	Corrected Ave (4 peaks):				77.4 RPD = 8
Aroclor-1268	1	13.237	0.001	193275	18.9	1	13.260	0.000	318930	25.4

Aroclor-1268 2	13.306	0.003	198377	21.9	2	13.315	-0.006	759123	64.5
Aroclor-1268 3	13.662	0.014	98244	12.9	3	13.669	0.000	31360	3.3
Aroclor-1268 4	14.285	0.000	58846	2.9	4	14.320	-0.001	74968	2.9
Total Col1Ave (4 peaks):			14.2		Total Col2Ave (4 peaks):			24.0	RPD = 52*
Corrected Ave (3 peaks):			11.6		Corrected Ave (3 peaks):			10.5	RPD = 9

Total PCB Area Col1 (5.835 - 14.489) = 16484987 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (5.483 - 14.519) = 21321930 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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Time (Min)
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Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
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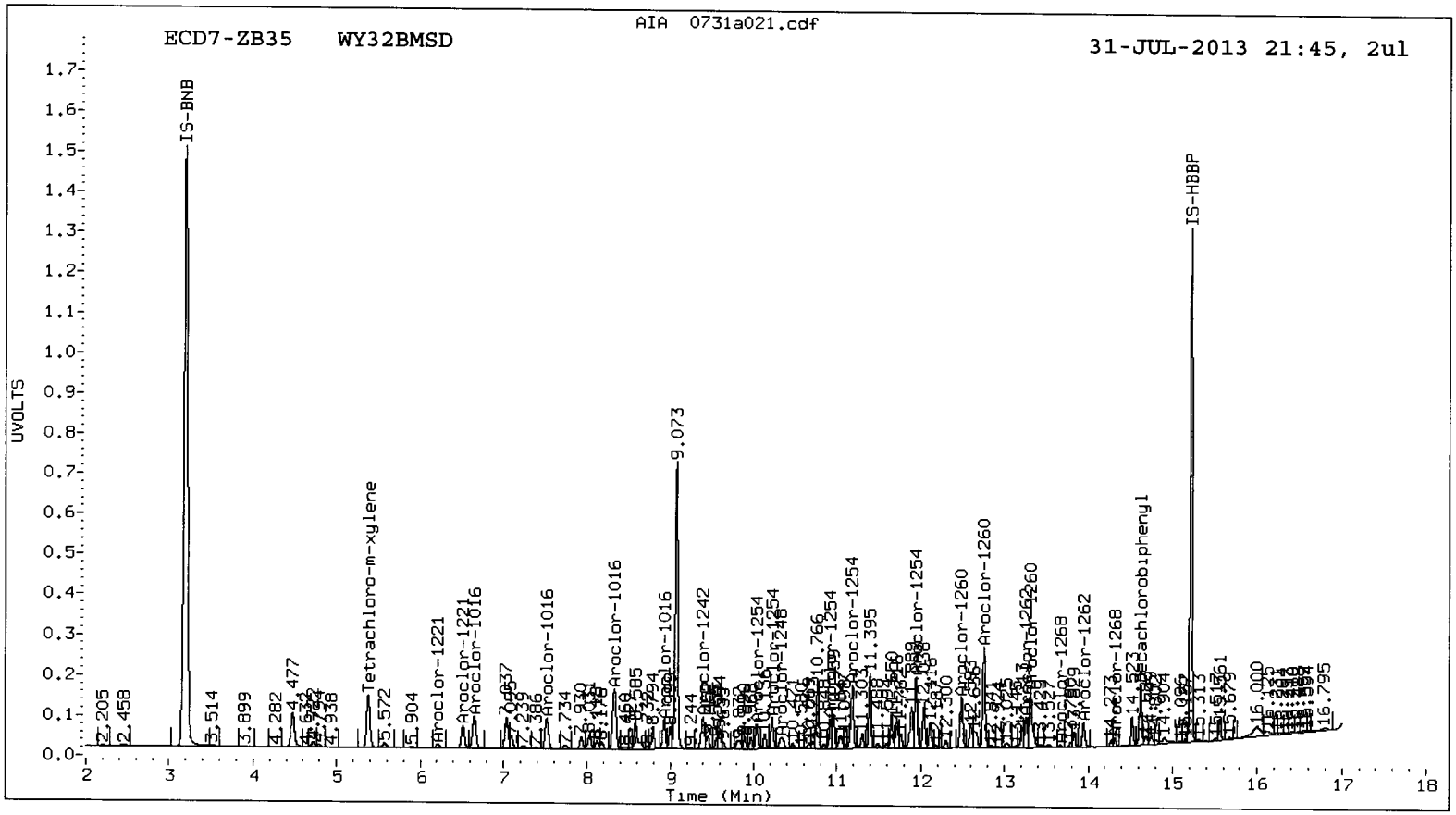
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
8.987
9.705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Aroclor-1242
Aroclor-1248
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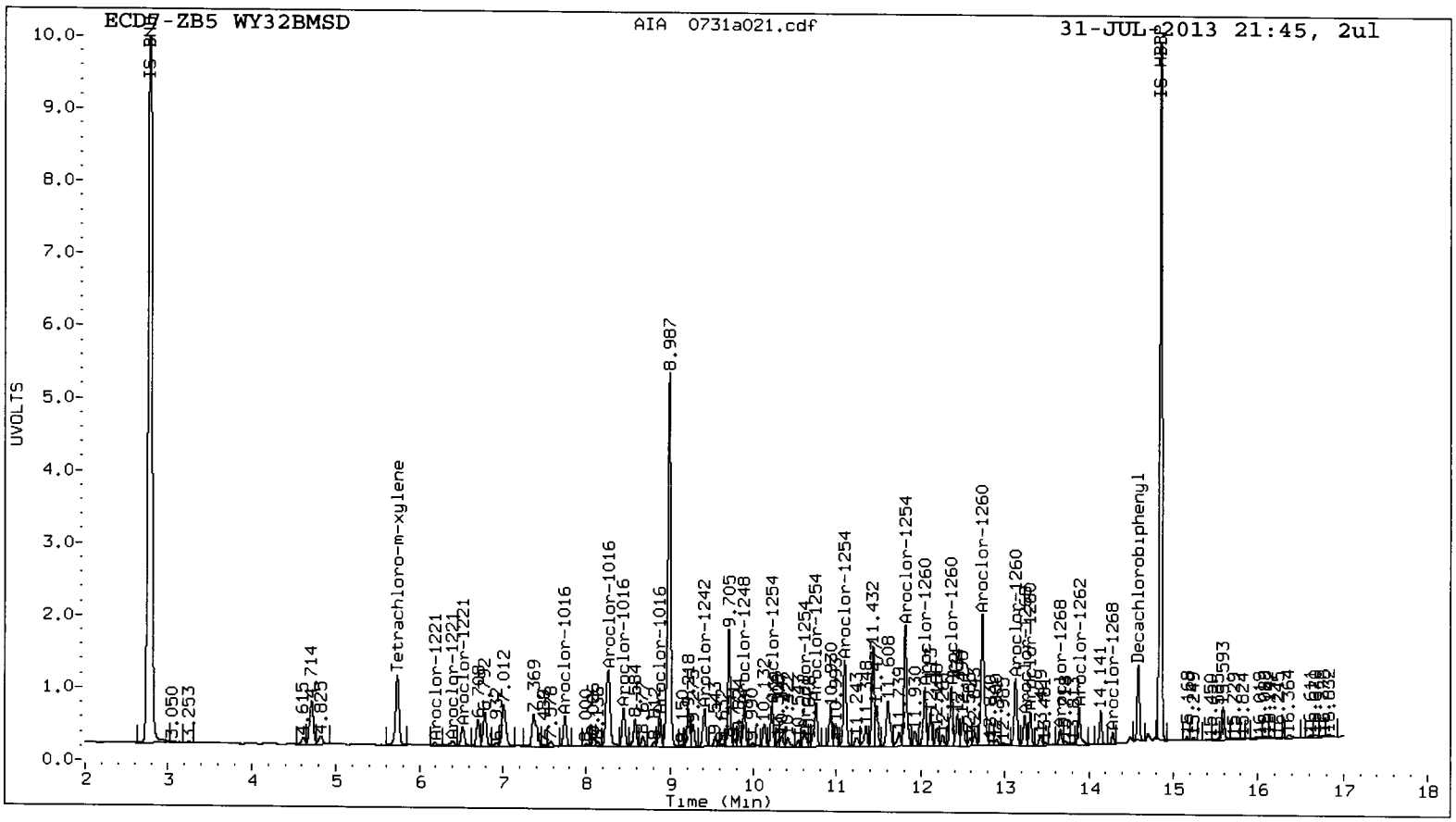
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
9.073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Time (Min)
IS-DCB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
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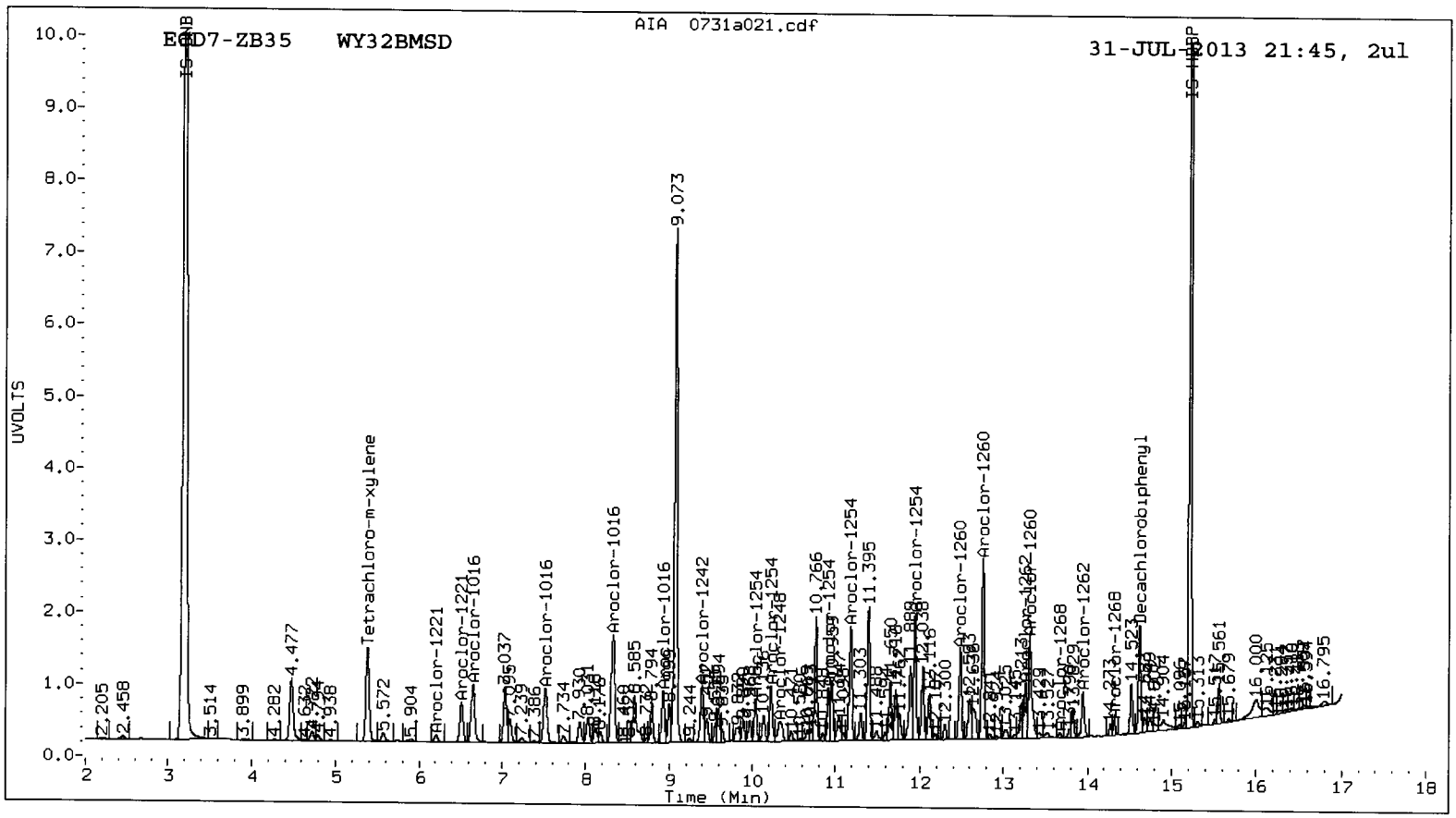
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
8.987
9.705
11.432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Time (Min)
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IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
9.073
11.395

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/0731-1.b/0731a022.d
Data file 2: 20130725.b/0731-2.b/0731a022.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: WY32C
Client ID:
Injection Date: 31-JUL-2013 22:07
Report Date: 08/01/2013 12:42
Matrix: NONE
Dilution Factor: 5.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.732	-0.003	288034	5.381	-0.001	403620	3.5	3.4	3.3	Tetrachloro-m-xylene
14.593	0.004	215314	14.623	0.004	283795	4.2	4.1	0.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	43.4	42.0
Decachlorobiphenyl	52.0	51.7

JH 08/01/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7272780	1.2
Hexabromobiphenyl	4753836	3680423	-22.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	9341648	-5.0
Hexabromobiphenyl	5491228	4405214	-19.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

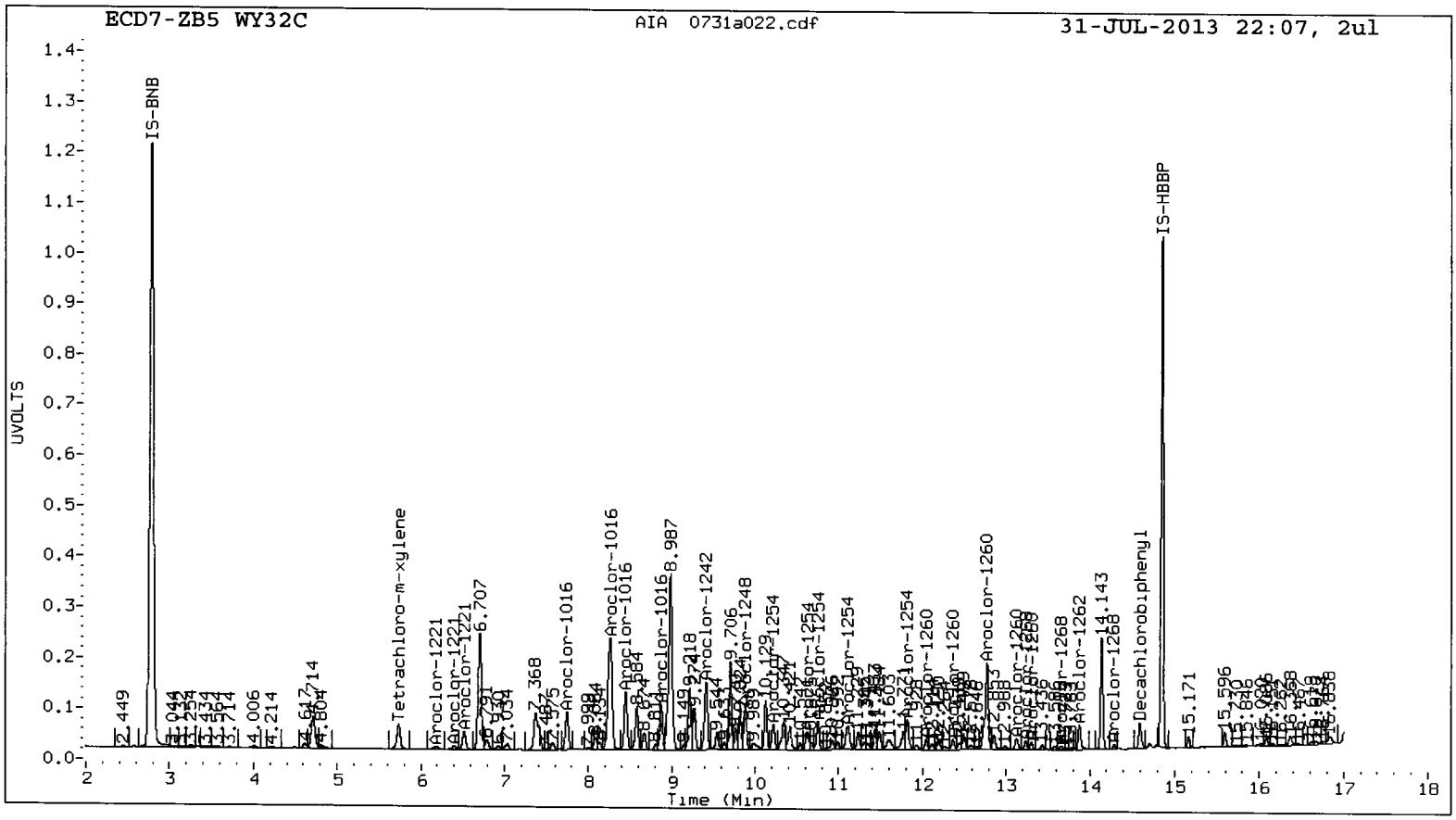
Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	7.742	-0.002	387951	179.5	1	6.640	0.003	363911	161.9
Aroclor-1016	2	8.263	-0.001	1609627	219.3	2	7.513	-0.003	769817	152.4
Aroclor-1016	3	8.448	-0.002	588529	206.5	3	8.325	-0.002	2003029	190.1
Aroclor-1016	4	8.875	-0.001	411340	244.1	4	8.925	-0.001	656571	210.0
	Total Col1Ave (4 peaks):				212.3		Total Col2Ave (4 peaks):			178.6 RPD = 17
	Corrected Ave (3 peaks):				201.7		Corrected Ave (3 peaks):			168.2 RPD = 18
Aroclor-1221	1	6.187	0.000	35731	41.6	1	6.207	0.003	68208	43.2
Aroclor-1221	2	6.399	0.004	45320	61.1	2	6.512	0.010	1677517	1839.9
Aroclor-1221	3	6.520	0.000	188030	86.6	3	6.640	0.004	363911	131.7
Aroclor-1221	NS	---			----	4	7.513	-0.015	769817	799.4
	Total Col1Ave (3 peaks):				63.1		Total Col2Ave (4 peaks):			703.5 RPD = 167*
	Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			324.8
Aroclor-1232	1	6.520	-0.001	188030	131.9	1	6.640	0.002	363911	186.2
Aroclor-1232	2	7.742	0.000	387951	449.3	2	7.513	-0.003	769817	346.8
Aroclor-1232	3	8.263	-0.001	1609627	557.4	3	8.325	-0.003	2003029	472.7
Aroclor-1232	4	8.448	-0.001	588529	518.7	4	8.925	-0.002	656571	472.4
	Total Col1Ave (4 peaks):				414.3		Total Col2Ave (4 peaks):			369.5 RPD = 11
	Corrected Ave (3 peaks):				366.6		Corrected Ave (3 peaks):			335.2 RPD = 9
Aroclor-1242	1	7.742	0.008	387951	224.4	1	6.640	0.014	363911	195.0
Aroclor-1242	2	8.263	0.009	1609627	272.5	2	7.513	0.007	769817	199.3
Aroclor-1242	3	8.448	0.007	588529	257.6	3	8.325	0.010	2003029	247.4
Aroclor-1242	4	9.413	0.005	705493	326.4	4	9.392	0.006	953231	296.4
	Total Col1Ave (4 peaks):				270.2		Total Col2Ave (4 peaks):			234.5 RPD = 14
	Corrected Ave (3 peaks):				251.5		Corrected Ave (3 peaks):			213.9 RPD = 16
Aroclor-1248	1	8.263	0.007	1609627	437.3	1	7.513	0.003	769817	400.5
Aroclor-1248	2	8.875	0.001	411340	170.6	2	8.325	0.003	2003029	380.2
Aroclor-1248	3	9.413	0.001	705493	206.6	3	8.925	0.001	656571	170.2
Aroclor-1248	4	9.885	0.002	401055	91.2	4	10.356	0.023	601278	108.6
	Total Col1Ave (4 peaks):				226.4		Total Col2Ave (4 peaks):			264.9 RPD = 16
	Corrected Ave (3 peaks):				156.1		Corrected Ave (3 peaks):			219.7 RPD = 34
Aroclor-1254	1	10.222	-0.003	259703	56.9	1	10.037	0.001	245835	68.8
Aroclor-1254	2	10.628	0.013	219171	77.7	2	10.233	0.012	516267	113.5
Aroclor-1254	3	10.757	0.001	251814	45.3	3	10.917	0.001	300111	39.4
Aroclor-1254	4	11.114	0.000	318825	55.6	4	11.165	-0.006	616661	79.5
Aroclor-1254	5	11.813	0.002	309410	55.0	5	11.942	0.002	344805	61.4
	Total Col1Ave (5 peaks):				58.1		Total Col2Ave (5 peaks):			72.5 RPD = 22
	Corrected Ave (4 peaks):				53.2		Corrected Ave (4 peaks):			62.3 RPD = 16
Aroclor-1260	1	12.045	0.002	95802	33.5	1	11.942	0.002	344805	55.7
Aroclor-1260	2	12.362	0.003	97965	33.5	2	12.484	0.000	200335	39.7
Aroclor-1260	3	12.772	0.042	919287	100.8	3	12.756	0.003	301275	30.8
Aroclor-1260	4	13.128	0.002	116405	31.7	4	13.317	0.004	248659	37.8
Aroclor-1260	5	13.309	0.004	62374	39.3	NS	---			----
	Total Col1Ave (5 peaks):				53.7		Total Col2Ave (4 peaks):			41.0 RPD = 27
	Corrected Ave (4 peaks):				34.5		Corrected Ave (3 peaks):			36.1 RPD = 5
Aroclor-1262	1	12.362	0.003	97965	24.9	1	12.484	-0.001	200335	34.0
Aroclor-1262	2	12.772	0.043	919287	100.5	2	12.756	0.003	301275	25.7
Aroclor-1262	3	13.128	0.003	116405	39.3	3	13.215	-0.045	1077309	211.0
Aroclor-1262	4	13.309	0.005	62374	17.6	4	13.317	0.000	248659	32.3
Aroclor-1262	5	13.878	-0.006	228881	82.3	5	13.948	0.004	98615	25.4
	Total Col1Ave (5 peaks):				52.9		Total Col2Ave (5 peaks):			65.7 RPD = 21
	Corrected Ave (4 peaks):				41.0		Corrected Ave (4 peaks):			29.3 RPD = 33
Aroclor-1268	1	13.241	0.005	82866	8.3	1	13.215	-0.045	1077309	88.6

Aroclor-1268	2	13.309	0.006	62374	7.1	2	13.317	-0.004	248659	21.8
Aroclor-1268	3	13.662	0.014	30218	4.1	3	13.671	0.002	20087	2.2
Aroclor-1268	4	14.288	0.003	35360	1.8	4	14.322	0.002	37254	1.5
Total Col1Ave (4 peaks):				5.3		Total Col2Ave (4 peaks):			28.5	RPD = 137*
Corrected Ave (3 peaks):				4.3		Corrected Ave (3 peaks):			8.5	RPD = 65*

Total PCB Area Col1 (5.835 - 14.489) = 19194629 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (5.483 - 14.519) = 24413736 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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IS-BNB
Tetrachloro-m-xylene
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Aroclor-1016
Aroclor-1016
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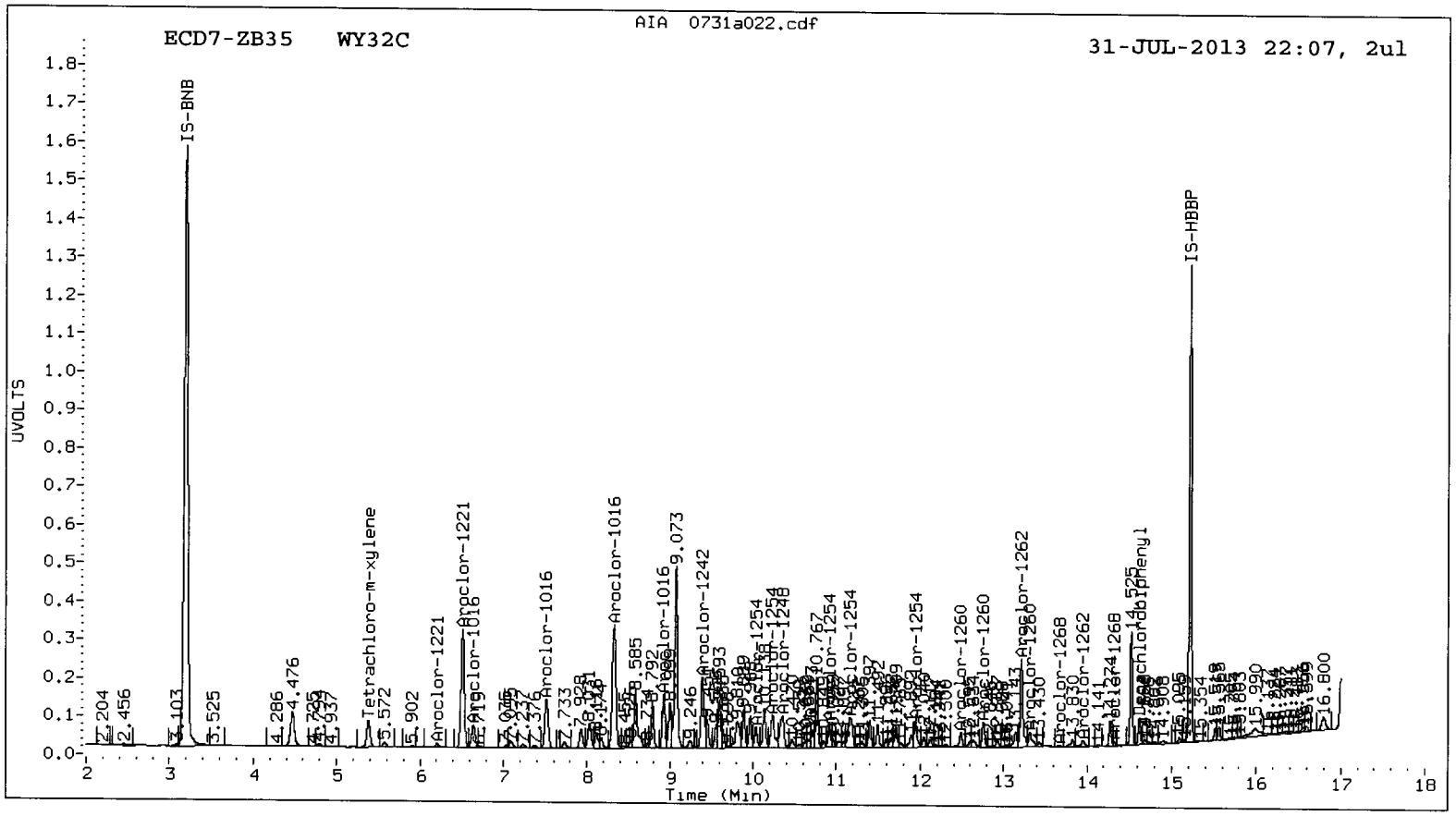
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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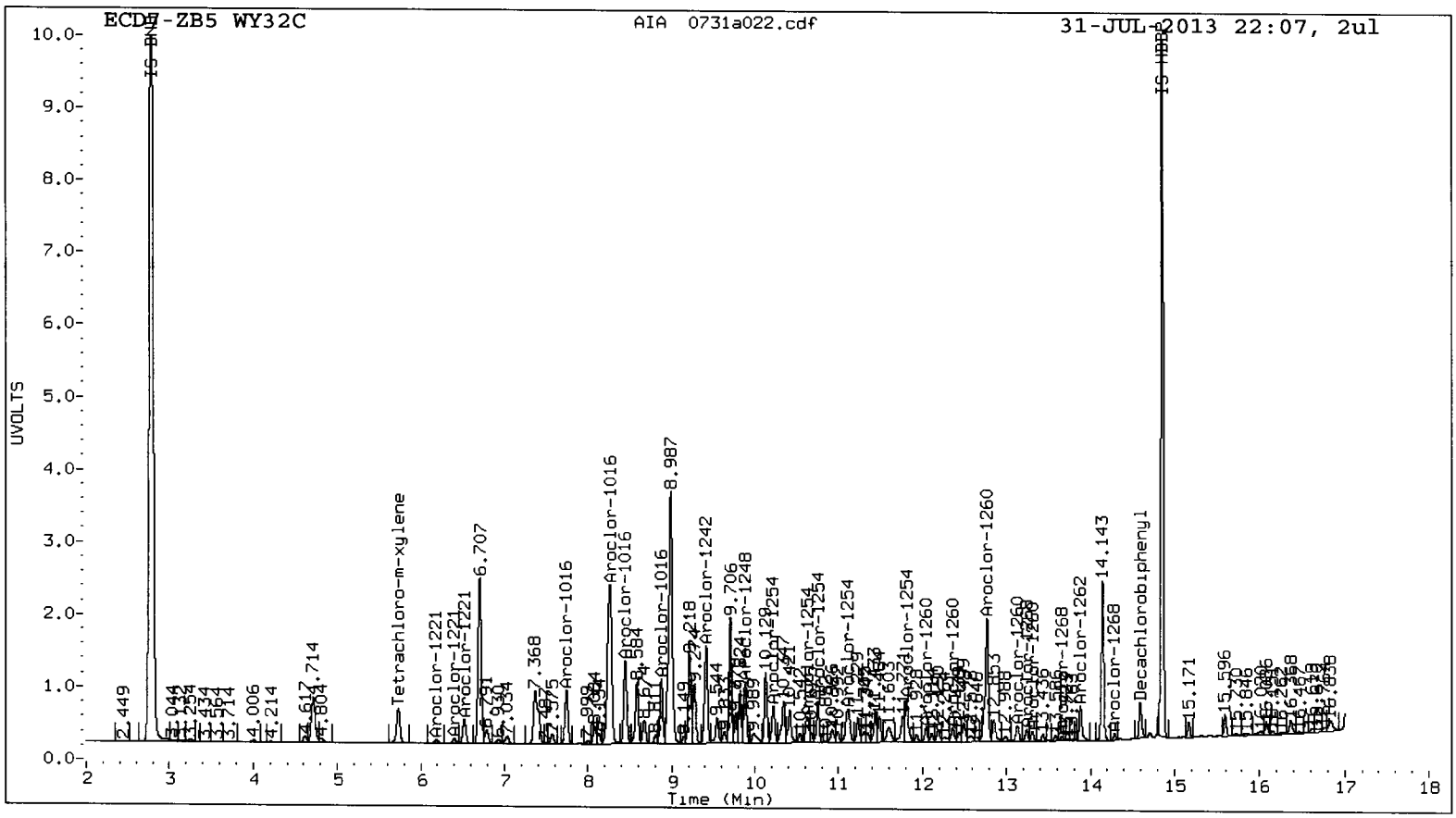
IS-HBBP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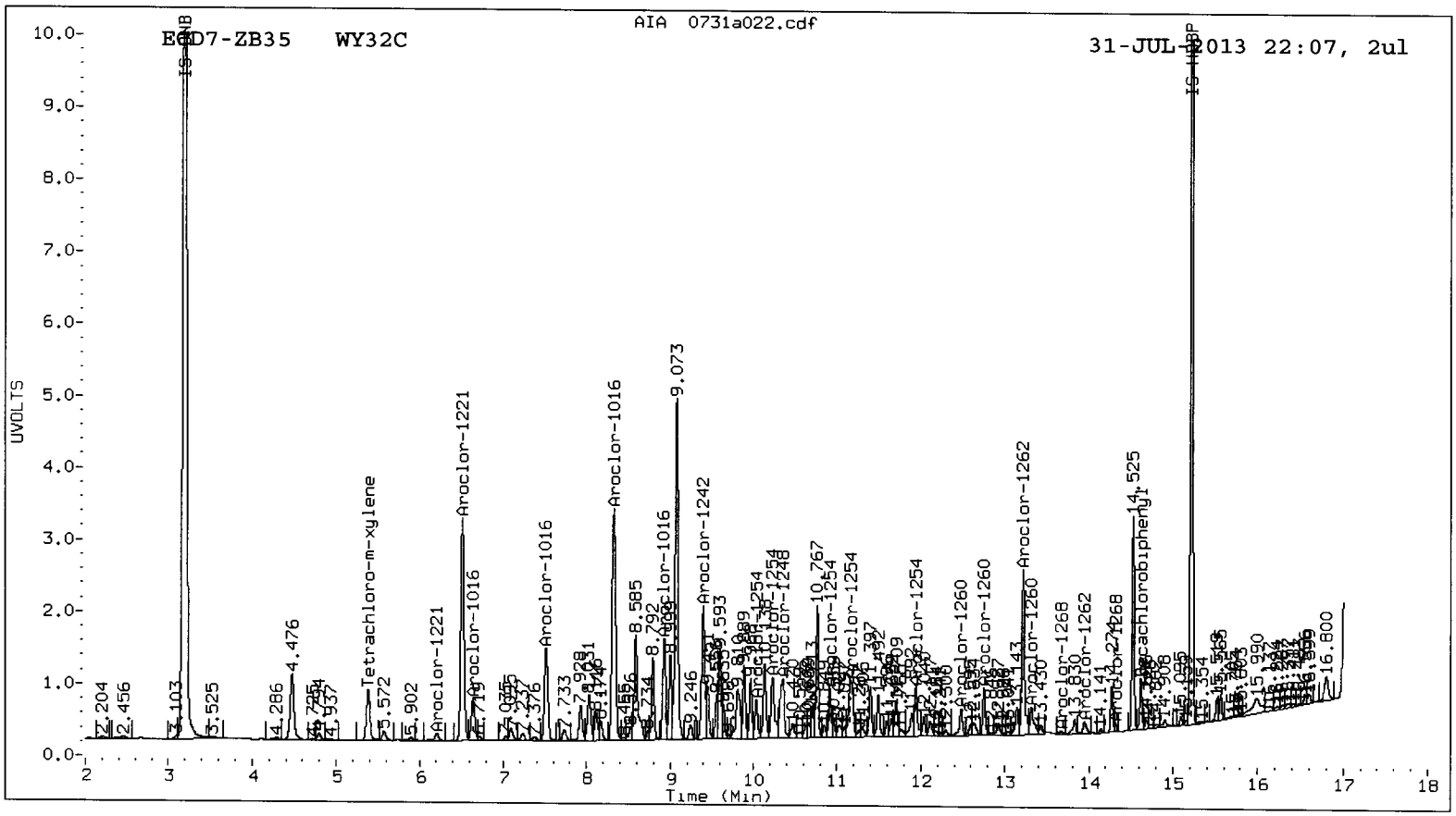
Aroclor-1268
Decachlorobiphenyl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Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/0731-1.b/0731a023.d
Data file 2: 20130725.b/0731-2.b/0731a023.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 31-JUL-2013 22:29
Report Date: 08/01/2013 12:42
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.735	0.000	3573259	5.381	-0.001	4887473	41.8	38.5	8.1	Tetrachloro-m-xylene
14.589	0.000	2061967	14.620	0.001	2632078	38.3	36.3	5.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	104.5	96.3
Decachlorobiphenyl	95.8	90.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7496198	4.3
Hexabromobiphenyl	4753836	3825994	-19.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	9860005	0.2
Hexabromobiphenyl	5491228	4664045	-15.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1254	1	10.226	0.000	1075286	228.7	1	10.036	0.000	865336	229.4
Aroclor-1254	2	10.615	0.000	654075	225.0	2	10.221	0.000	1095742	228.2
Aroclor-1254	3	10.756	0.000	1279686	223.3	3	10.916	0.000	1786105	222.2
Aroclor-1254	4	11.114	0.000	1286304	217.7	4	11.171	0.000	1791604	218.9
Aroclor-1254	5	11.811	0.000	1214504	209.6	5	11.940	0.000	1245008	209.9

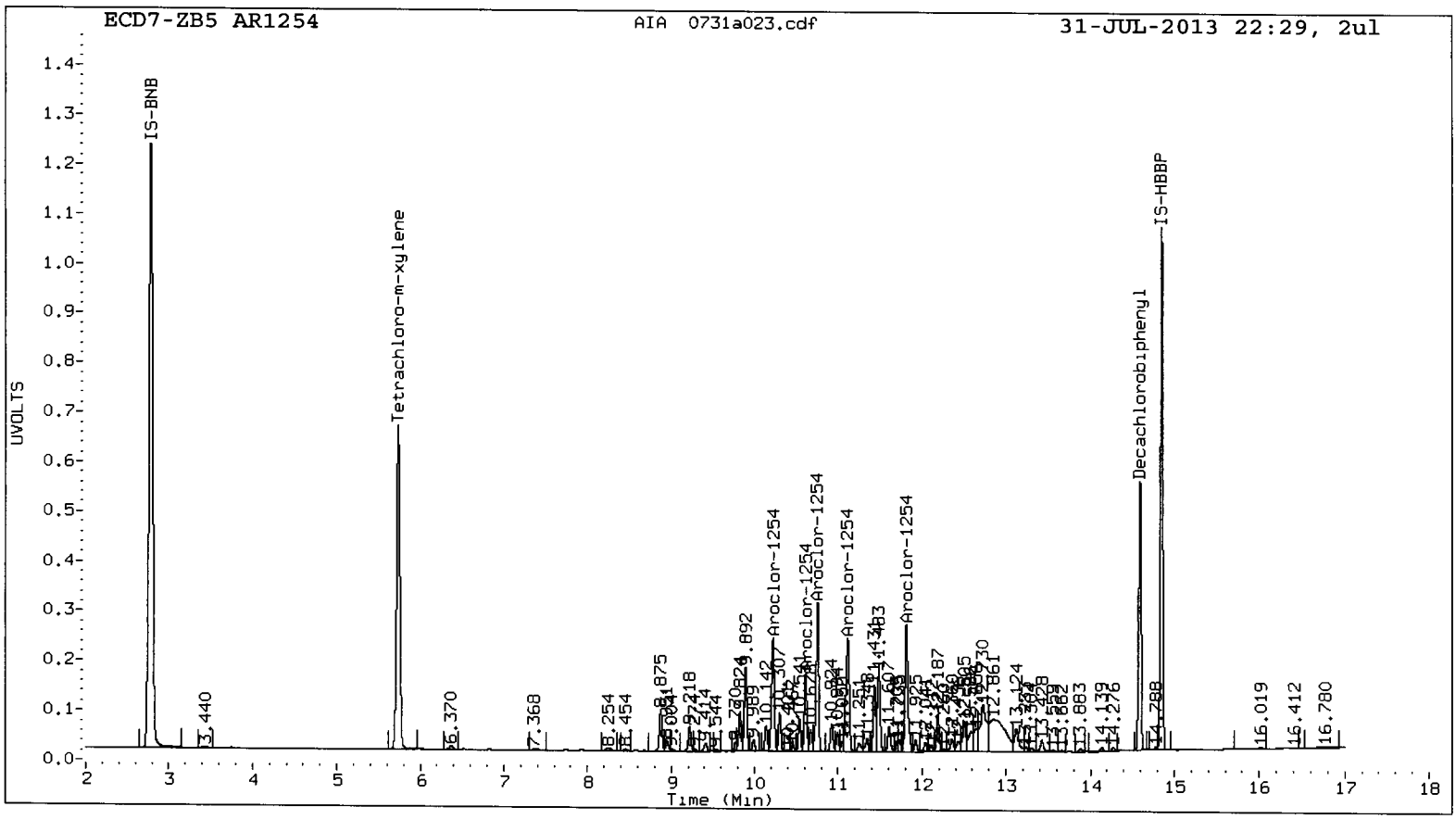
Total Col1Ave (5 peaks): 220.9 Total Col2Ave (5 peaks): 221.7 RPD = 0

Corrected Ave (4 peaks): 218.9 Corrected Ave (4 peaks): 219.8 RPD = 0

Total PCB Area Col1 (5.835 - 14.489) = 16294944 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (5.483 - 14.519) = 22860894 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical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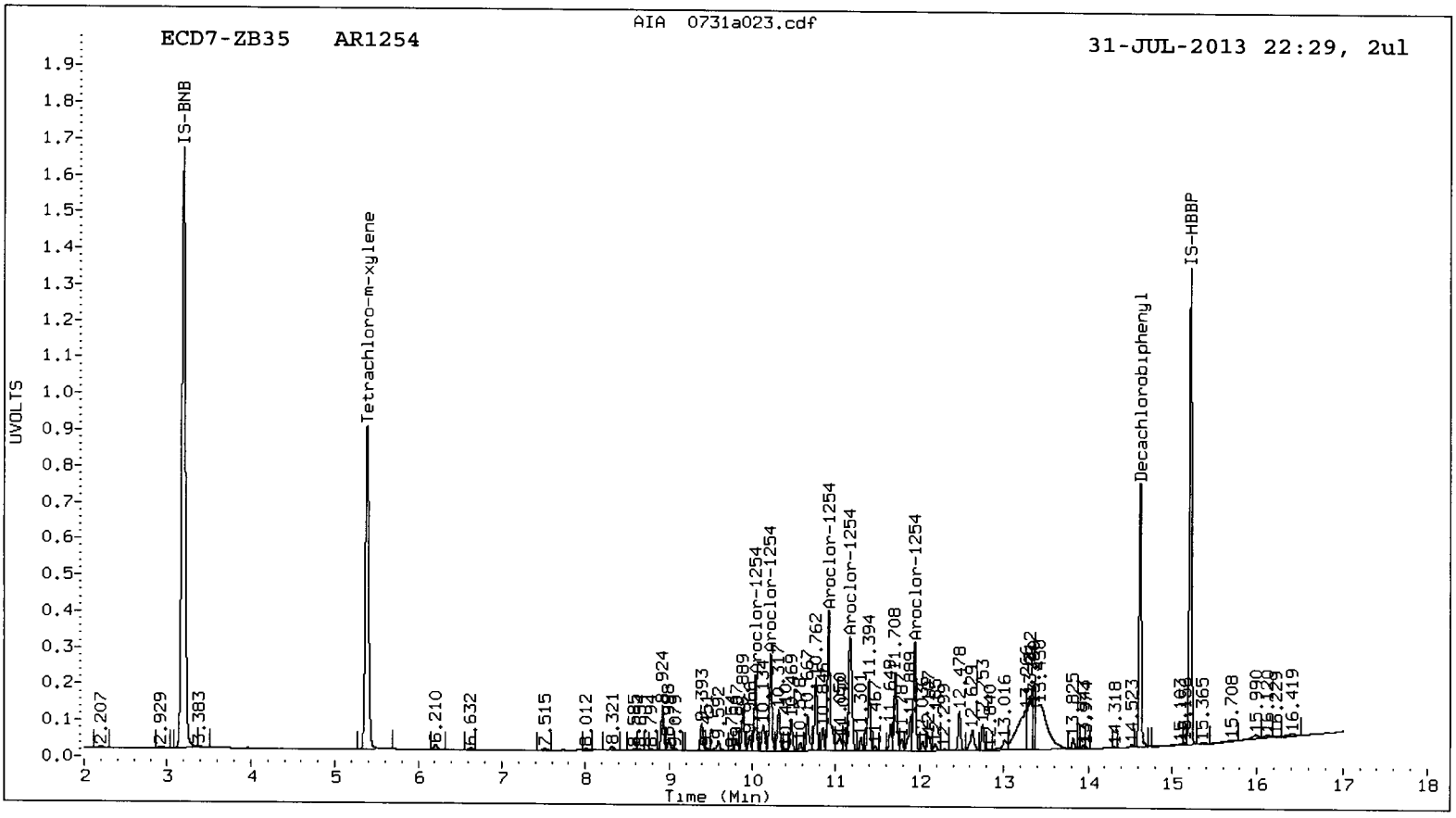
31-JUL-2013 22:29, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP


ECD7-ZB35 AR1254
AIA 0731a023.cdf
31-JUL-2013 22:29, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130725.b/0731-1.b/0731a024.d
Data file 2: 20130725.b/0731-2.b/0731a024.d
Method: /chem2/ecd7.i/20130725.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 31-JUL-2013 22:51
Report Date: 08/01/2013 12:42
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.735	0.000	3655658	5.383	0.000	5000470	41.6	38.4	8.0	Tetrachloro-m-xylene
14.589	0.000	2165471	14.619	0.000	2741150	38.5	36.4	5.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	103.9	95.9
Decachlorobiphenyl	96.2	91.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	7185814	7709525	7.3
Hexabromobiphenyl	4753836	4000408	-15.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9837847	10130405	3.0
Hexabromobiphenyl	5491228	4835275	-11.9

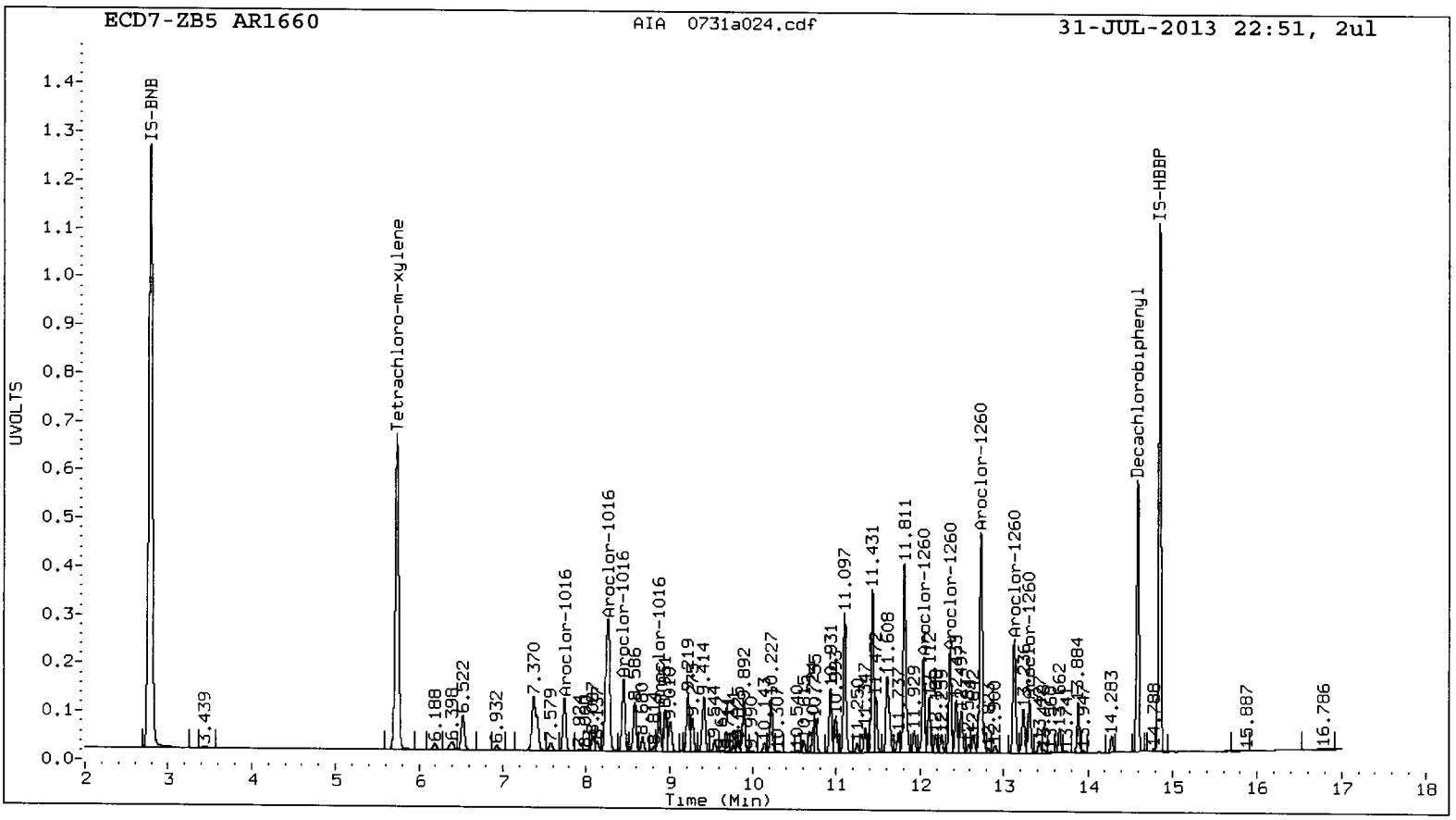
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 25-JUL-2013
<- Indicates standard response outside Limits (-50 to +100%)

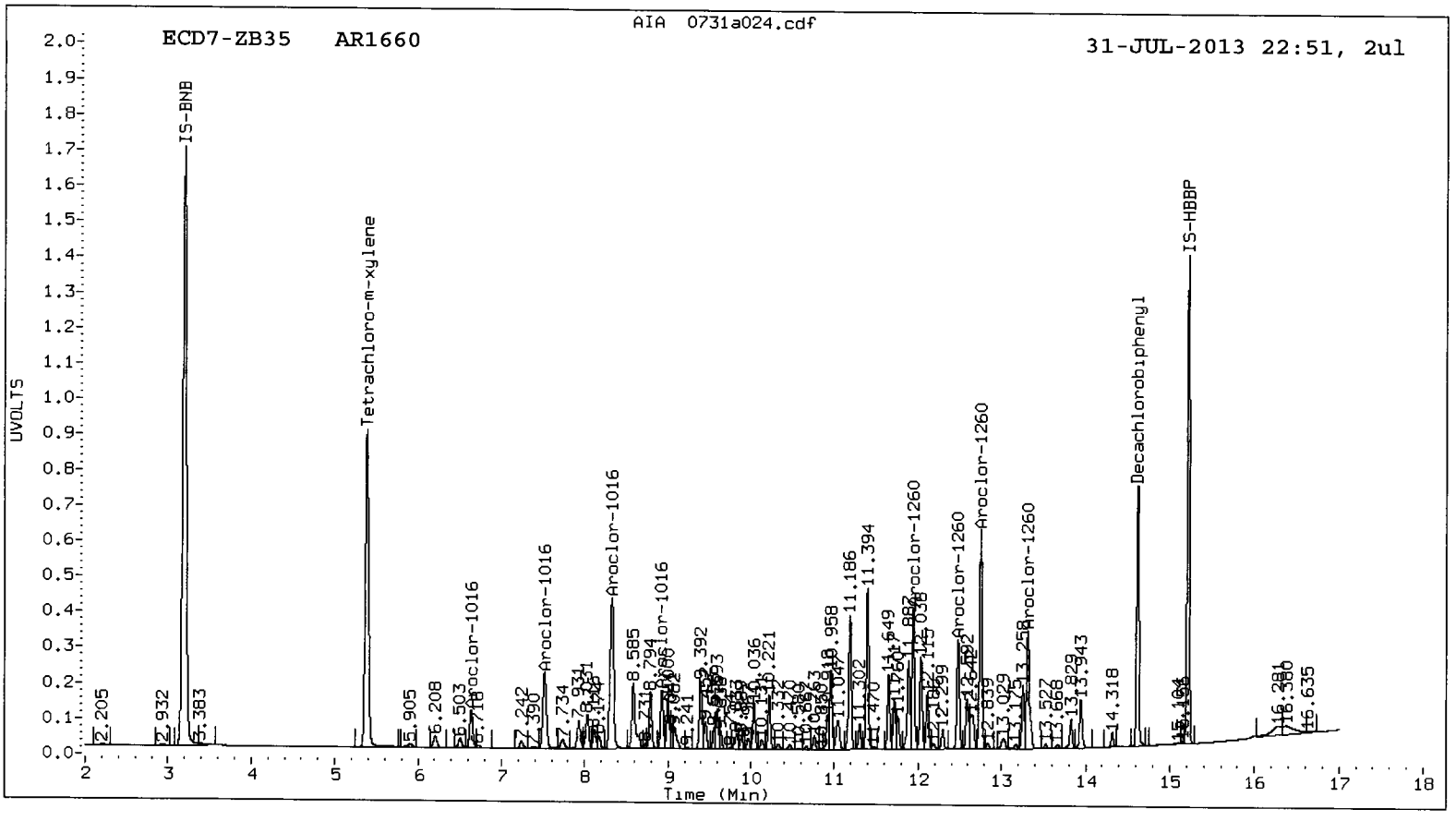
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.744	0.000	565446	246.8	1	6.637	0.000	578171	237.2
Aroclor-1016	2	8.264	0.000	1949731	250.6	2	7.516	0.000	1285390	234.7
Aroclor-1016	3	8.450	0.000	746754	247.2	3	8.327	0.000	2692668	235.7
Aroclor-1016	4	8.876	0.000	432711	242.2	4	8.926	0.000	773247	228.1
Total Col1Ave (4 peaks):					246.7	Total Col2Ave (4 peaks):				233.9 RPD = 5
Corrected Ave (3 peaks):					245.4	Corrected Ave (3 peaks):				232.8 RPD = 5
Aroclor-1260	1	12.043	0.000	882246	283.7	1	11.940	0.000	1674106	246.4
Aroclor-1260	2	12.359	0.000	896236	281.8	2	12.483	0.000	1320366	238.6
Aroclor-1260	3	12.730	0.000	2101234	275.0	3	12.753	0.000	2610727	243.0
Aroclor-1260	4	13.126	0.000	1094980	274.2	4	13.314	0.000	1708223	236.4
Aroclor-1260	5	13.305	0.000	467169	270.7	NS	---			----
Total Col1Ave (5 peaks):					277.1	Total Col2Ave (4 peaks):				241.1 RPD = 14
Corrected Ave (4 peaks):					275.5	Corrected Ave (3 peaks):				239.3 RPD = 14

Total PCB Area Col1 (5.835 - 14.489) = 26679049 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.483 - 14.519) = 36356346 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD7-ZB5 AR1660
AIA 0731a024.cdf
31-JUL-2013 22:51, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


ECD7-ZB35 AR1660
AIA 0731a024.cdf
31-JUL-2013 22:51, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

TPHD Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WY32, WY33

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8015C) NWTPHD-Soil/Sediment
Microwave (3546) (SOP # 3304S)

Preparation Test TPHD # 5
ARI Job No(s) WY32

Page 1 of 1

In-House (50 ppm)
Batch set up by: SH

Bottle #	Extraction Requirements	Weight Extracted (wet wt)	Acid Clean (1:5) (2mL) Y /(N)	Silica Gel Clean (1:2) (1mL) Y /(N)	Final Effective Volume	Volume to Lab	Comments	Verifty Client ID
	MBS WY32	10.00g	(1:5) (2mL) Y (N)	(1:2) (1mL) Y (N)	10mL	1mL		M 07/25/13 Analyst/Date
	SBS ↓	10.00g	(1:5) (2mL) Y (N)	(1:2) (1mL) Y (N)	10mL	1mL		
	~~SBS Dup~~	~~10.00g~~	~~(1:5) (2mL) Y / N~~	~~(1:2) (1mL) Y / N~~	~~10mL~~	~~1mL~~		
	QLS WY32	10.00g	(1:5) (2mL) Y (N)	(1:2) (1mL) Y (N)	10mL	1mL		Microwave 1 2 3
5	A	10.16	(1:5) (2mL) Y (N)	(1:2) (1mL) Y /(N)	10mL	1mL	see Analyst Notes	M 07/25/13 Analyst/Date
4	B	10.08	(1:5) (2mL) Y (N)	(1:2) (1mL) Y (N)	10mL	1mL		
4	BMS	10.06	(1:5) (2mL) Y (N)	(1:2) (1mL) Y (N)	10mL	1mL		
4	BMSD	10.10	(1:5) (2mL) Y (N)	(1:2) (1mL) Y (N)	10mL	1mL		TurboVap 1 2 3 ~~Pre-Acid/Silica Clean~~ ww 7/25/13 Analyst/Date
4	C	10.15	(1:5) (2mL) Y /(N)	(1:2) (1mL) Y /(N)	10mL	1mL		
		10.	(1:5) (2mL) Y / N	(1:2) (1mL) Y / N	10mL	1mL		
		10.	(1:5) (2mL) Y / N	(1:2) (1mL) Y / N	10mL	1mL		
		10.	(1:5) (2mL) Y / N	(1:2) (1mL) Y / N	10mL	1mL		TurboVap 1 2 3 Post Acid/Silica Clean Analyst/Date
		10.	(1:5) (2mL) Y / N	(1:2) (1mL) Y / N	~~10mL~~	~~1mL~~		
Analyst/Date	M 07/25/13				ww 7/25/13	ww 7/25/13	**Reviewed by/Date** ww 7/25/13	**Analyst/Date**

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	**P** (B~~~232)	2250µg/mL	**200**µL	11/19/13	M	AC
Spike	**11** (B~~~176)	15000µg/mL	**1000**µL	5/01/14	M	AC
QLS Spike	**18**(B~~~179)	1000µg/mL	**500**µL	4/11/14	M	AC
Extraction Time: 11:25				**Balance ID:**		

SPECIAL INSTRUCTIONS: 1. Weigh into 100mL beakers-dry with Sodium Sulfate. 2. Transfer to microwave vessel. 3. Add DCM to the vessel until the solvent is 1" above soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then let cool 15 min. in cold water bath. Re-homogenize while cool. 7. Collect into turbo tube with sm. funnel containing glasswool and 1" sodium sulfate. 8. Add (2) 10mL DCM rinses to vessel and transfer to turbo tube. 9. TurboVap. 10. Acid/Silica Clean-up=Y(N)? 11. TurboVap. 12. Vial in DCM.

A. Need Total Solids Y (N) **B. Archive/Freeze Y (N)**

WY32: 84333

Reagent and Solutions Identification

(8015C) NWTPHD-Soil/Sediment
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WY32

(8015C) NWTPHD Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station:	Microwave
Methylene Chloride: (I# 001095)	M 7/25/13
Anhydrous Sodium Sulfate: (I# 8271 + jar date 7/11/13)	
Neutral Glasswool: (I# 7998 + jar date 6/25/13)	
Vialing Station:	Vialing
Methylene Chloride: (I# B008979)	ww
Concentrated Sulfuric Acid: (I#)	7/29/13
Silica Gel (SPE) Darts: (I#)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Extract Dilution Bench Sheet

ARI Job#: WY10 / WY32 Client ID: N/A
Analyst: JD Date: 7/26/12

ARI Sample ID	Primary Dilution				Secondary Dilution			
	Extract Volume (uL)	Diluent/Diluent ID	Diluent Volume (uL)	Dilution Factor	Primary Dilution (uL)	Diluent/Diluent ID	Diluent Volume (uL)	Final Dilution Factor
WY10 A	100	DCM/B000975	400	5x				
B	↓	↓	↓	↓				
WY32 A								
B								
BMS								
BMSD								
C	↓	↓	↓	↓				

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WY32 Client ID: SAIC

Parameter: TPHD Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☒ Standing Water Decanted (Not shared)= B, C	M 07/24/13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)= ~~M 07/24/13~~ ~~A~~ ~~B~~ ~~C~~ M 07/24/13 A	07/24/13 M
☒ Oily, obvious fuel/sulfur odors= A - C has real light fuel odor smells	Used M 7/24/13
☒ Other (Details)= Samples ID Check this Job WY32, but Sample B, C has no client Label ID on the Jar and verified the Lims sheet with our Label matched.	M 07/24/13
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions). Extracted (Centrifuge#1 used for all Centrifugations) Samples to a 1.0mL Final Volume, based on Sample pre-screens.	JH 7/25/13

WY32 · 61808

TPHD Raw Data
Initial Calibration

ARI Job ID: WY32, WY33

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 4/13/13 Internal Standard ID N/A Expiration 11/27/13

Endrin/DDT Breakdown <15%? YES / NO / NA		ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria	YES / NO	ICV Exceeding ±30%?	YES / NO
Manual Integrations for ICal?	YES / NO	Linear Fits Used?	YES / NO
Minimum Response S/N Met	YES / NO	Quadratic Fits Used?	YES / NO
		Calibration Points Dropped?	YES / NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Diesel/AK102	2091-2	3/15/14	Diesel/AK102	2043-1	10/20/13
Motor Oil	2041-4	11/27/13	Motor Oil	2043-2	10/19/13
RT	2043-4	10/20/13			
IB	2043-3	10/20/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: JW **Date:** 4/16/13

Reviewer: [signature] **Date:** 4/16/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130413.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130413.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0413a006	0413a007	0413a008	0413a009	0413a010	0413a011
INJ.DATE:	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013
INJ.TIME:	11:53	12:13	12:34	12:54	13:15	13:35

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.914	0.814-1.014	+++++	+++++
40	Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.023	0.973-1.073	+++++	+++++
39	Creosote	+++++	+++++	+++++	+++++	+++++	+++++	0.542	0.492-0.592	+++++	+++++
36	JetA	+++++	+++++	+++++	+++++	+++++	+++++	0.794	0.744-0.844	+++++	+++++
37	Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.729	0.679-0.779	+++++	+++++
38	Hydraulic Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.197	1.147-1.247	+++++	+++++
2	C8	1.165	1.136	1.132	1.133	1.135	1.134	1.134	1.034-1.234	1.139	0.013
3	C10	2.960	2.962	2.962	2.963	2.963	2.966	2.966	2.916-3.016	2.963	0.002
4	C12	3.905	3.904	3.905	3.906	3.907	3.910	3.910	3.860-3.960	3.906	0.002
5	C14	4.587	4.584	4.586	4.586	4.588	4.594	4.594	4.544-4.644	4.588	0.003
6	C16	5.170	5.167	5.168	5.171	5.171	5.178	5.178	5.128-5.228	5.171	0.004
7	C18	5.716	5.713	5.715	5.717	5.720	5.727	5.727	5.677-5.777	5.718	0.005
$ 8	o-terph	5.859	5.858	5.865	5.874	5.884	5.903	5.903	5.853-5.953	5.874	0.017
9	C20	6.268	6.263	6.265	6.266	6.268	6.274	6.274	6.224-6.324	6.267	0.004
10	C22	6.810	6.805	6.806	6.806	6.807	6.808	6.808	6.758-6.858	6.807	0.002
11	C24	7.324	7.320	7.319	7.321	7.318	7.319	7.319	7.269-7.369	7.320	0.002
12	C25	7.573	7.567	7.564	7.566	7.567	7.566	7.566	7.516-7.616	7.567	0.003

Reviewer 1 _____ Date: 4/16/13
Reviewer 2 _____ Date: 4/16/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130413.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130413.b
Inst ID: fid4a.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
13 C26	7.811	7.808	7.806	7.827	7.833	7.827	7.827	7.777-7.877	7.819	0.012
14 C28	8.266	8.260	8.259	8.261	8.261	8.258	8.258	8.208-8.308	8.261	0.003
$ 15 Triacon Surr	8.706	8.710	8.706	8.711	8.712	8.700	8.700	8.650-8.750	8.707	0.004
16 C32	9.093	9.097	9.073	9.082	9.094	9.090	9.090	9.040-9.140	9.088	0.009
17 C34	9.462	9.465	9.462	9.469	9.468	9.458	9.458	9.408-9.508	9.464	0.004
18 Filter Peak	11.449	11.438	11.447	11.432	11.448	11.449	11.449	11.349-11.549	11.444	0.007
19 C36	9.835	9.834	9.819	9.827	9.827	9.824	9.824	9.774-9.874	9.828	0.006
20 C38	10.178	10.182	10.193	10.156	10.189	10.179	10.179	10.129-10.229	10.179	0.013
21 C40	10.533	10.531	10.533	10.538	10.535	10.541	10.541	10.491-10.591	10.535	0.004
31 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
32 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.683	0.633-0.733	+++++	+++++
42 Cal(IT) Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.499	0.449-0.549	+++++	+++++
33 AK Dies 102	+++++	+++++	+++++	+++++	+++++	+++++	0.662	0.612-0.712	+++++	+++++
30 NW MOil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 CRUDE	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 AK MOil 103	+++++	+++++	+++++	+++++	+++++	+++++	0.615	0.565-0.665	+++++	+++++
41 ABUNKERC	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130413.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130413.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0413a013	0413a014	0413a015	0413a016	0413a017	0413a018
INJ.DATE:	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013
INJ.TIME:	14:16	14:36	14:57	15:17	15:38	15:58

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.914	0.814-1.014	+++++	+++++
	40 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.023	0.973-1.073	+++++	+++++
	39 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	0.542	0.492-0.592	+++++	+++++
	36 JetA	+++++	+++++	+++++	+++++	+++++	+++++	0.794	0.744-0.844	+++++	+++++
	37 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.729	0.679-0.779	+++++	+++++
	38 Hydraulic Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.197	1.147-1.247	+++++	+++++
	2 C8	1.180	1.166	1.100	1.178	1.128	1.143	1.143	1.044-1.244	1.149	0.032
	3 C10	2.964	2.961	2.963	2.963	2.962	2.962	2.962	2.912-3.012	2.963	0.001
	4 C12	3.904	3.903	3.904	3.904	3.903	3.905	3.905	3.854-3.954	3.904	0.001
	5 C14	4.585	4.583	4.603	4.569	4.583	4.584	4.584	4.534-4.634	4.585	0.011
	6 C16	5.184	5.188	5.164	5.167	5.183	5.166	5.166	5.116-5.216	5.175	0.011
	7 C18	5.729	5.730	5.730	5.733	5.731	5.734	5.734	5.684-5.784	5.731	0.002
$	8 o-terph	5.903	5.902	5.900	5.902	5.899	5.904	5.904	5.854-5.955	5.902	0.002
	9 C20	6.285	6.273	6.281	6.283	6.280	6.287	6.287	6.237-6.336	6.281	0.005
	10 C22	6.807	6.807	6.806	6.805	6.804	6.808	6.808	6.758-6.857	6.806	0.002
	11 C24	7.321	7.329	7.314	7.320	7.321	7.311	7.311	7.261-7.361	7.319	0.006
	12 C25	7.577	7.569	7.572	7.563	7.556	7.572	7.572	7.522-7.622	7.568	0.008

Reviewer 1 _____ Date: 4/16/13
Reviewer 2 _____ Date: 4/16/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130413.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130413.b
Inst ID: fid4a.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
13 C26	7.813	7.831	7.834	7.825	7.819	7.830	7.830	7.779-7.880	7.825	0.008
14 C28	8.258	8.257	8.247	8.256	8.257	8.258	8.258	8.209-8.309	8.255	0.004
$ 15 Triacon Surr	8.669	8.677	8.684	8.696	8.719	8.747	8.747	8.697-8.797	8.698	0.029
16 C32	9.082	9.091	9.091	9.090	9.084	9.095	9.095	9.045-9.145	9.089	0.005
17 C34	9.463	9.455	9.460	9.455	9.454	9.449	9.449	9.399-9.499	9.456	0.005
18 Filter Peak	11.443	11.451	11.444	11.452	11.438	11.443	11.443	11.343-11.543	11.445	0.005
19 C36	9.816	9.824	9.820	9.830	9.816	9.820	9.820	9.770-9.870	9.821	0.005
20 C38	10.173	10.184	10.178	10.178	10.168	10.185	10.185	10.136-10.236	10.178	0.007
21 C40	10.541	10.538	10.543	10.539	10.542	10.543	10.543	10.493-10.593	10.541	0.002
31 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
32 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.683	0.633-0.733	+++++	+++++
42 Cal(IT) Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.499	0.449-0.549	+++++	+++++
33 AK Dies 102	+++++	+++++	+++++	+++++	+++++	+++++	0.662	0.612-0.712	+++++	+++++
30 NW MOil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 CRUDE	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 AK MOil 103	+++++	+++++	+++++	+++++	+++++	+++++	0.615	0.565-0.665	+++++	+++++
41 ABUNKERC	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++

GC LOG SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130413.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	13-APR-2013 09:47	0413a001.d	1	RINSE	
2	13-APR-2013 10:07	0413a002.d	1	RT0413	
3	13-APR-2013 10:27	0413a003.d	1	IB0413	
4	13-APR-2013 10:47	0413a004.d	1	DIESEL#1	
5	13-APR-2013 11:07	0413a005.d	1	MOIL#1	
6	13-APR-2013 11:53	0413a006.d	1	DIESEL50	
7	13-APR-2013 12:13	0413a007.d	1	DIESEL100	
8	13-APR-2013 12:34	0413a008.d	1	DIESEL250	
9	13-APR-2013 12:54	0413a009.d	1	DIESEL500	
10	13-APR-2013 13:15	0413a010.d	1	DIESEL1000	
11	13-APR-2013 13:35	0413a011.d	1	DIESEL2500	
12	13-APR-2013 13:56	0413a012.d	1	DIESELICV250	
13	13-APR-2013 14:16	0413a013.d	1	MOIL100	
14	13-APR-2013 14:36	0413a014.d	1	MOIL250	
15	13-APR-2013 14:57	0413a015.d	1	MOIL500	
16	13-APR-2013 15:17	0413a016.d	1	MOIL1000	
17	13-APR-2013 15:38	0413a017.d	1	MOIL2500	
18	13-APR-2013 15:58	0413a018.d	1	MOIL5000	
19	13-APR-2013 16:19	0413a019.d	1	MOILICV500	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130413.b

ARI Job No.: RINS Method: ftphfid4a.m Instrument: fid4a.i Date: 13-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0947	0413a001.d	RINSE		1	NO MANUAL INTEGRATION
1007	0413a002.d	RT0413		1	Toluene,
1027	0413a003.d	IB0413		1	NO MANUAL INTEGRATION
1047	0413a004.d	DIESEL#1		1	o-terph,
1107	0413a005.d	MOIL#1		1	NO MANUAL INTEGRATION
1153	0413a006.d	DIESEL50		1	o-terph,
1213	0413a007.d	DIESEL100		1	o-terph,
1234	0413a008.d	DIESEL250		1	o-terph,
1254	0413a009.d	DIESEL500		1	o-terph,
1315	0413a010.d	DIESEL1000		1	o-terph,
1335	0413a011.d	DIESEL2500		1	o-terph,
1356	0413a012.d	DIESELICV250		1	o-terph,
1416	0413a013.d	MOIL100		1	Triacon Surr,
1436	0413a014.d	MOIL250		1	Triacon Surr,
1457	0413a015.d	MOIL500		1	Triacon Surr,
1517	0413a016.d	MOIL1000		1	Triacon Surr,
1538	0413a017.d	MOIL2500		1	Triacon Surr,
1558	0413a018.d	MOIL5000		1	Triacon Surr,
1619	0413a019.d	MOILICV500		1	Triacon Surr,

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130413 Project:

Instrument ID: FID4A GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 5.86 TRIAC: 8.70

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	04/13/13	0947	5.87	8.70
02		RT0413	04/13/13	1007	5.86	8.70
03		IB0413	04/13/13	1027	5.86	8.69
04		DIESEL#1	04/13/13	1047	5.87	8.69
05		MOIL#1	04/13/13	1107	5.85	8.69
06		DIESEL50	04/13/13	1153	5.86	8.71
07		DIESEL100	04/13/13	1213	5.86	8.71
08		DIESEL250	04/13/13	1234	5.87	8.71
09		DIESEL500	04/13/13	1254	5.87	8.71
10		DIESEL1000	04/13/13	1315	5.88	8.71
11		DIESEL2500	04/13/13	1335	5.90	8.70
12		DIESELICV250	04/13/13	1356	5.86	8.70
13		MOIL100	04/13/13	1416	5.90	8.67
14		MOIL250	04/13/13	1436	5.90	8.68
15		MOIL500	04/13/13	1457	5.90	8.68
16		MOIL1000	04/13/13	1517	5.90	8.70
17		MOIL2500	04/13/13	1538	5.90	8.72
18		MOIL5000	04/13/13	1558	5.90	8.75
19		MOILICV500	04/13/13	1619	5.90	8.68

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

6a
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: 20130413

Instrument: FID4A.I Project:

Calibration Date: 13-APR-2013 SDG No.: 20130413

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	15188	15021	14479	14279	14226	13910	14517	3.4
AK Diesel	17981	17836	17184	16948	16866	16485	17217	3.4
OR Diesel	18067	17904	17254	17021	16941	16562	17291	3.4
Cal Diesel	17937	17789	17145	16910	16821	16447	17175	3.4
o-Terph	20876	20737	19497	18356	18320	17911	19283	6.7

<- Indicates %RSD outside limits
Surrogate areas are not included in Diesel RF calculation.

Quant Ranges : WA Diesel C12-C24 (3.908-7.326)
AK Diesel C10-C25 (2.967-7.574)
OR Diesel C10-C28 (2.967-8.269)
Cal Diesel C10-C24 (2.967-7.326)

Calibration Files	Analysis Time
0413a006.d	13-APR-2013 11:53
0413a007.d	13-APR-2013 12:13
0413a008.d	13-APR-2013 12:34
0413a009.d	13-APR-2013 12:54
0413a010.d	13-APR-2013 13:15
0413a011.d	13-APR-2013 13:35

FORM VI-Diesel

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a002.d ARI ID: RT0413
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 10:07
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.914	0.000	523273	404181	WATPHG	(Tol-C12)	1601919	103.09
C8	1.147	0.000	383436	378901	WATPHD	(C12-C24)	2482020	171.00
C10	2.967	0.000	554691	384061	WATPHM	(C24-C38)	3731338	274.28
C12	3.908	0.000	599973	392136	AK102	(C10-C25)	3297127	191.53
C14	4.587	0.000	632883	391482	AK103	(C25-C36)	3275864	355.99
C16	5.171	0.000	554416	390514				
C18	5.717	0.000	457643	373684				
C20	6.268	0.000	500619	352912				
C22	6.810	0.000	449542	363990	MIN.OIL	(C24-C38)	3731338	218.73
C24	7.326	0.000	451103	374543				
C25	7.574	0.000	428467	368739				
C26	7.826	0.000	1071962	1140709				
C28	8.269	0.000	451113	396216				
C32	9.081	0.000	434660	405330				
C34	9.457	0.000	423148	399566				
Filter Peak	11.442	0.000	2220	3573	CREOSOT	(C12-C22)	2071520	949.41 M
C36	9.823	0.000	376532	406269				
C38	10.179	0.000	384689	395168				
C40	10.533	0.000	339686	388792				
o-terph	5.861	0.000	933117	821007				
Triacon Surr	8.698	0.000	991072	1035385				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	821007	42.6	94.6
Triacontane	1035385	56.9	126.4

M Indicates the peak was manually integrated

JW 4/16/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

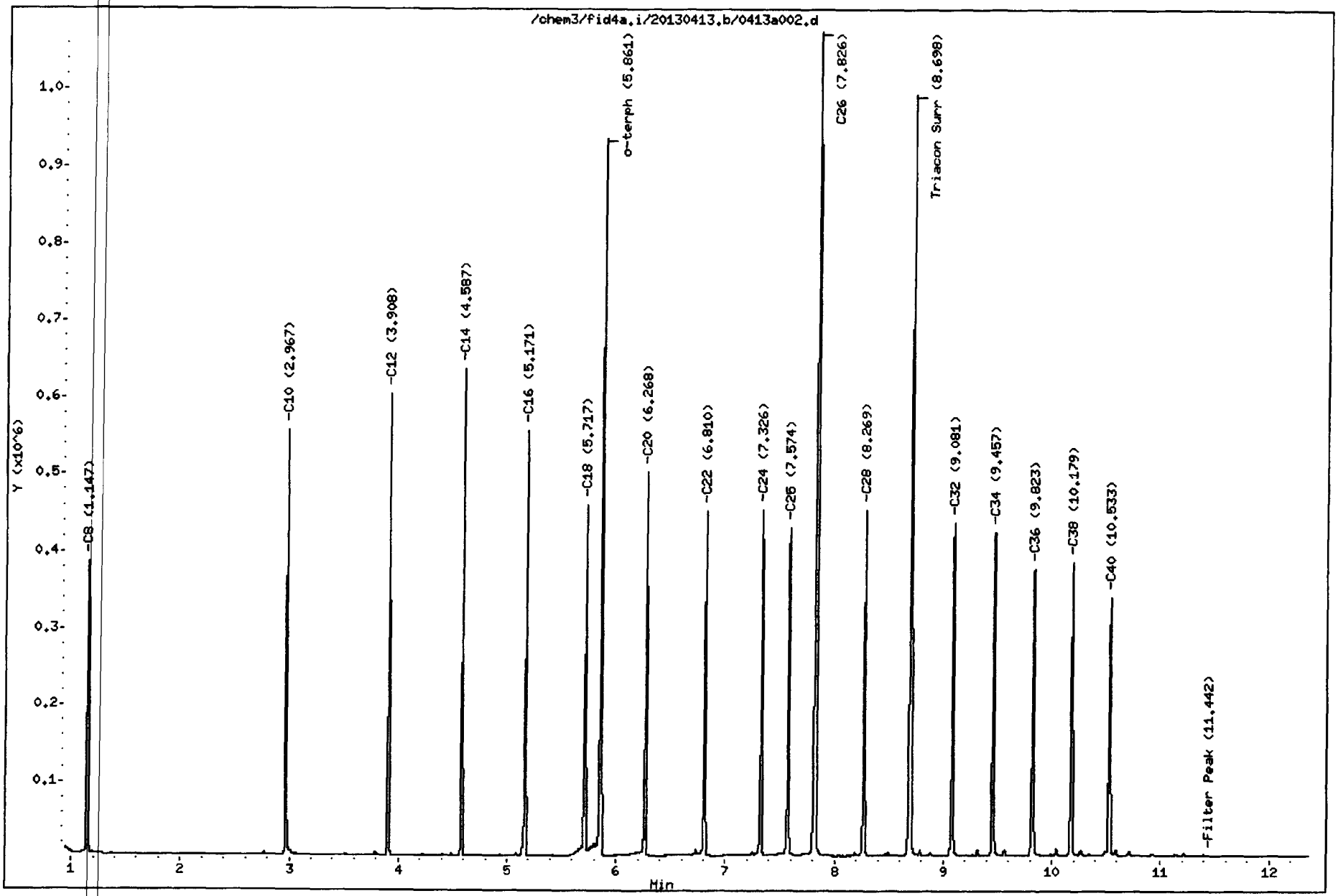
Data File: /chem3/fid4a.i/20130413.b/0413a002.d
Date : 13-APR-2013 10:07
Client ID:
Sample Info: RT0413

Column phase: RTX-1

Instrument: fid4a.i

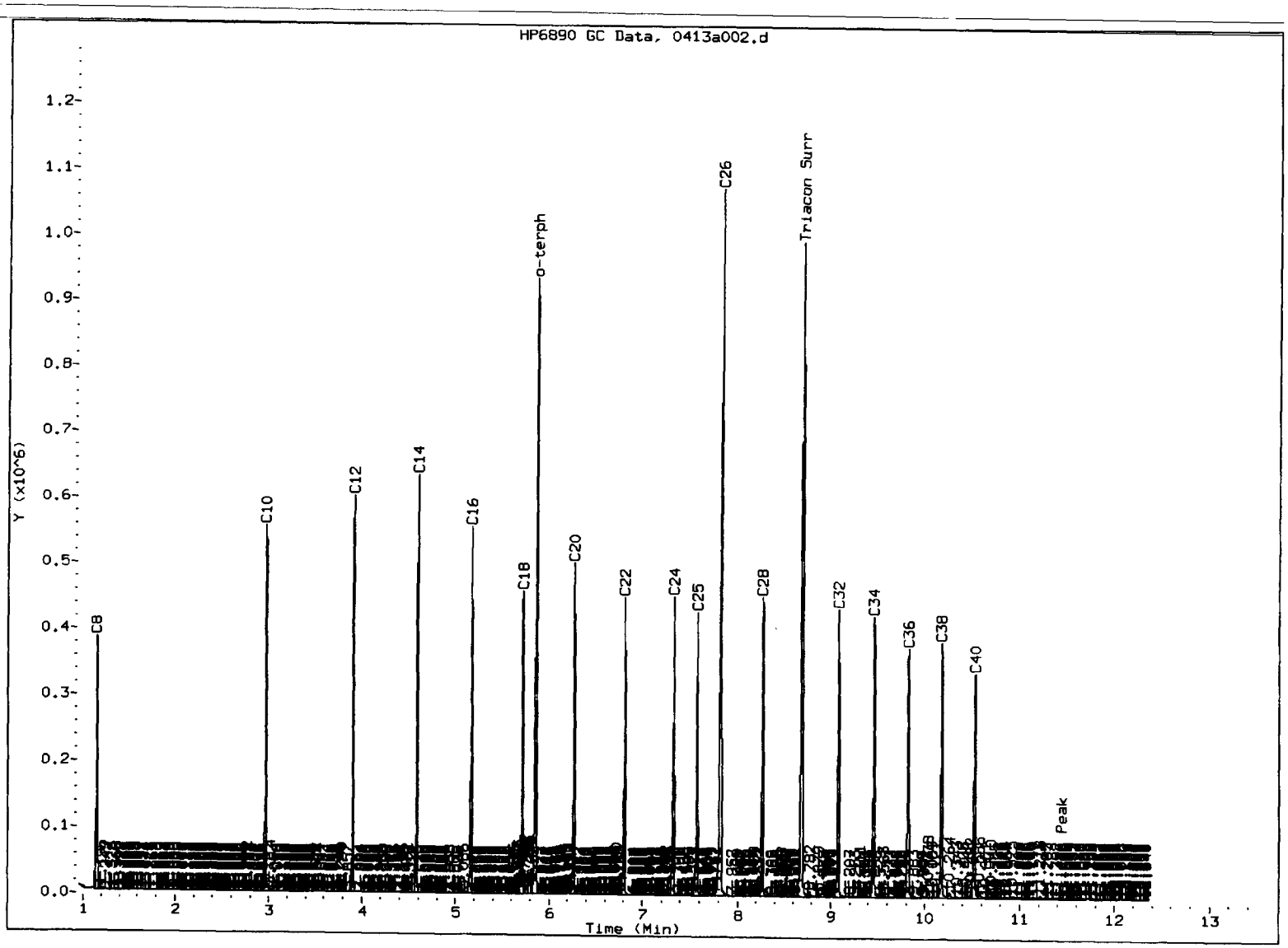
Operator: JR/VTS/JW
Column diameter: 0.25

SLC 11/14/13



FID:4A-2C/RTX-1 RT0413

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a003.d
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 04/15/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: IB0413
Client ID:
Injection: 13-APR-2013 10:27

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	17733	1.14
C8	1.102	-0.046	1135	2331	WATPHD	(C12-C24)	47239	3.25
C10	2.964	-0.004	232	237	WATPHM	(C24-C38)	117547	8.64
C12	3.905	-0.003	174	136	AK102	(C10-C25)	54060	3.14
C14	4.585	-0.003	110	101	AK103	(C25-C36)	90176	9.80
C16	5.167	-0.004	108	79				
C18	5.715	-0.002	160	177				
C20	6.261	-0.007	154	176				
C22	6.802	-0.008	133	182	MIN.OIL	(C24-C38)	117547	6.89
C24	7.321	-0.005	163	306				
C25	7.566	-0.008	139	147				
C26	7.807	-0.019	275	355				
C28	8.260	-0.009	813	902				
C32	9.055	-0.026	10958	9907				
C34	9.455	-0.002	490	696				
Filter Peak	11.440	-0.002	1869	927	CREOSOT	(C12-C22)	43412	19.90 M
C36	9.840	0.016	828	1744				
C38	10.165	-0.014	843	1177				
C40	10.527	-0.005	1196	569				
o-terph	5.863	0.002	1144381	871534				
Triacon Surr	8.687	-0.011	878761	820967				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	871534	45.2	100.4
Triacontane	820967	45.1	100.3

4/16/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130413.b/0413a003.d

Date : 13-APR-2013 10:27

Client ID:

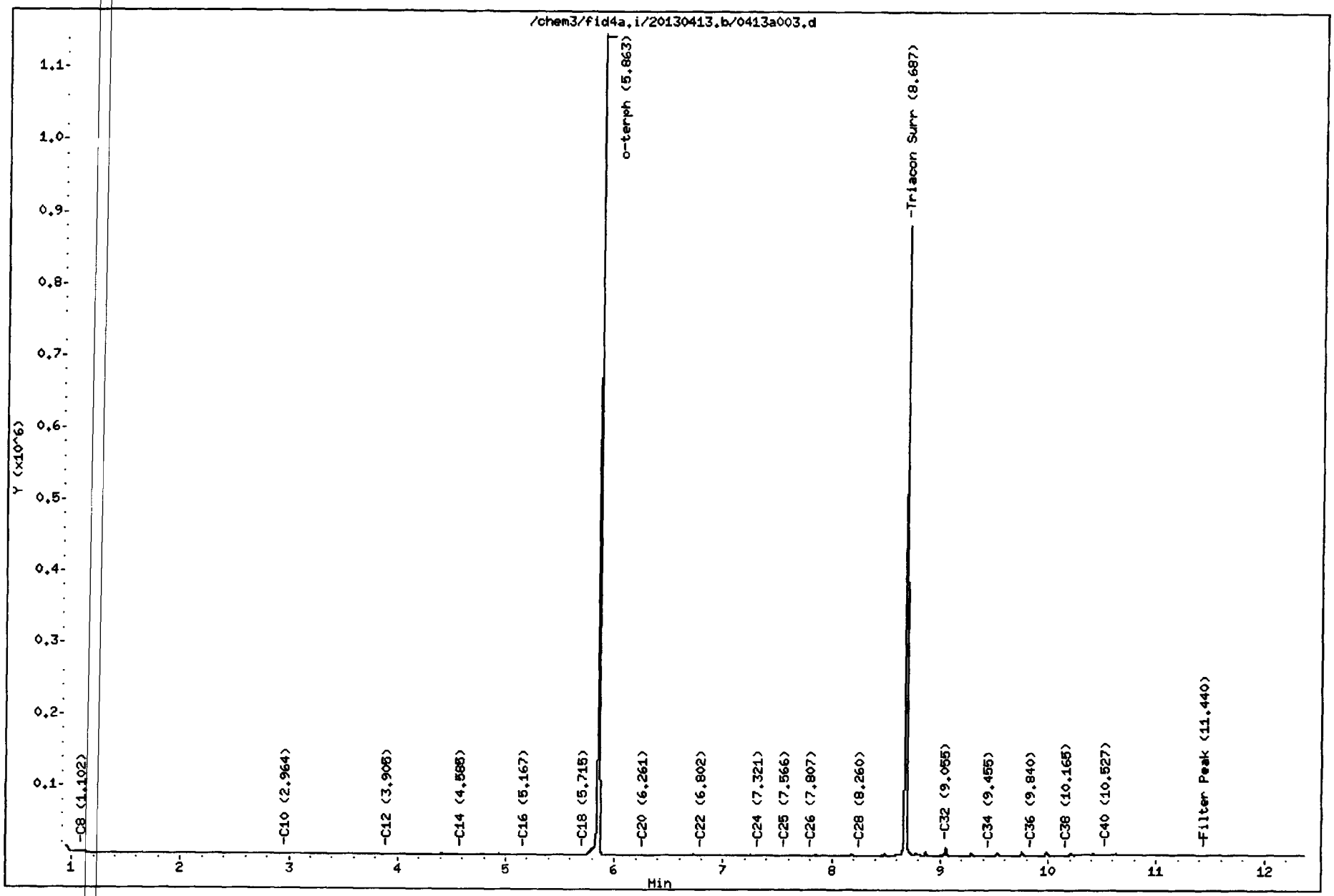
Sample Info: IB0413

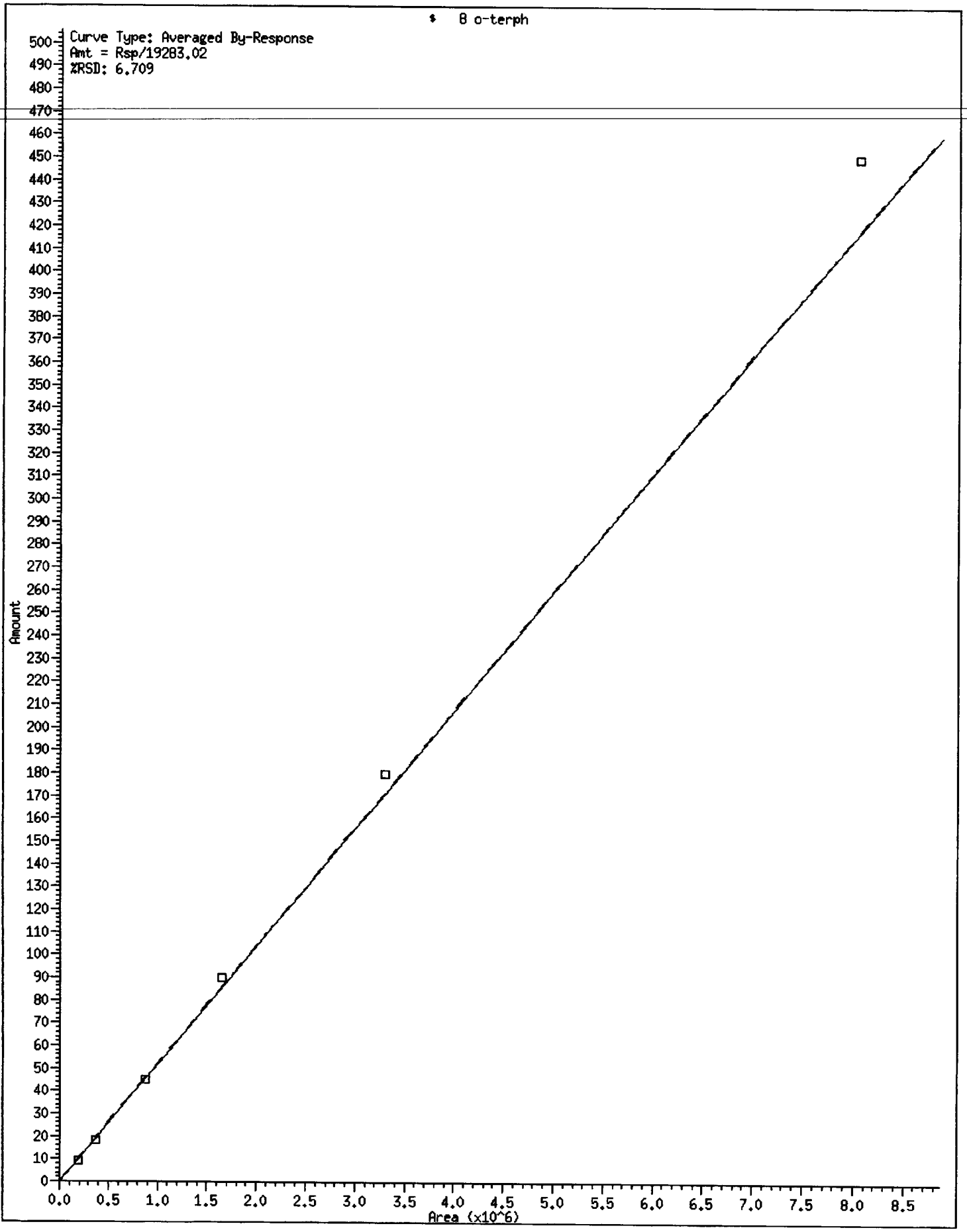
Column phase: RTX-1

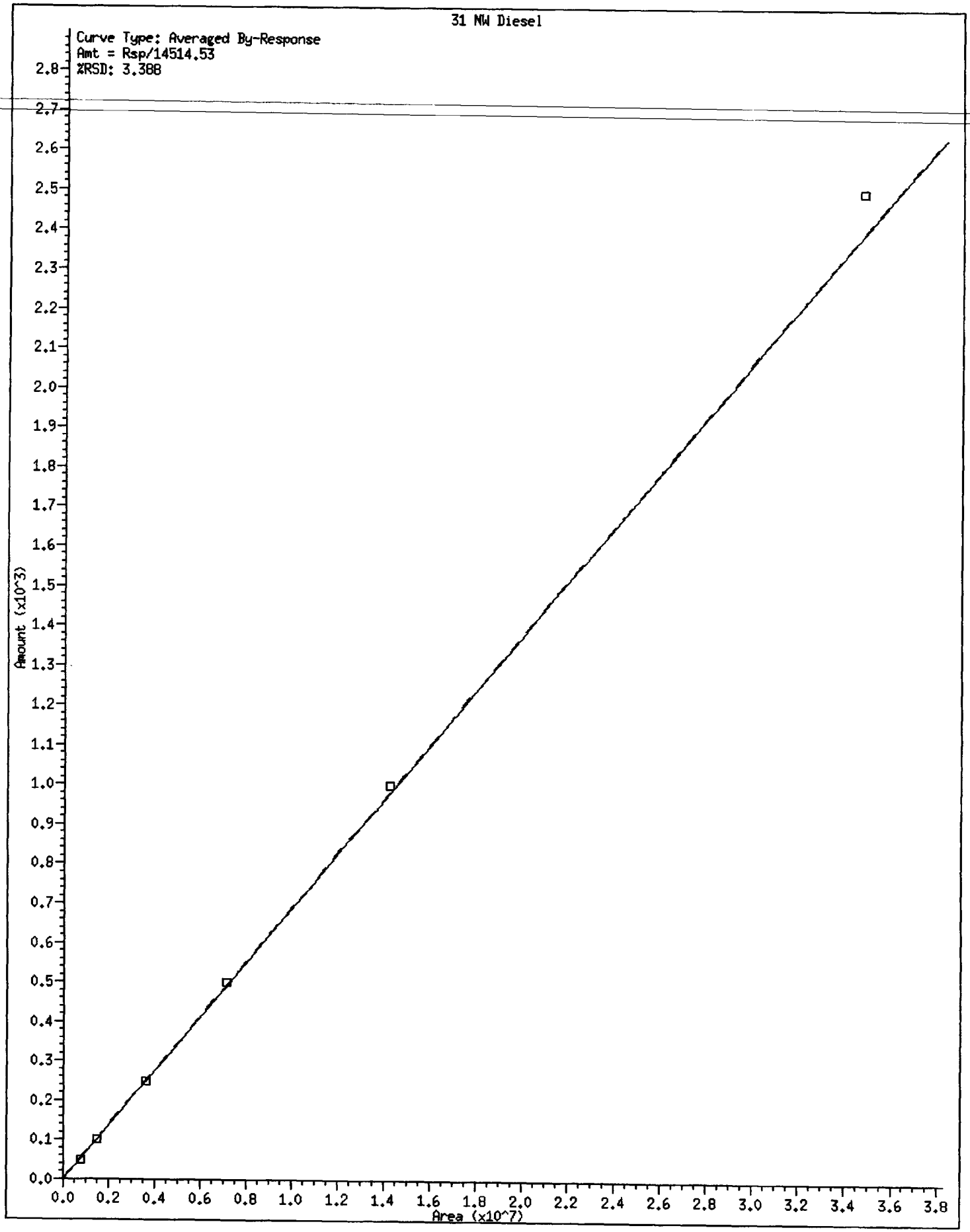
Instrument: fid4a.i

Operator: JR/VTS/JW

Column diameter: 0.25




$ B o-terph
Curve Type: Averaged By-Response
Amt = Rsp/19283.02
%RSD: 6.709
Amount
Area (x10^6)


31 NW Diesel
Curve Type: Averaged By-Response
Amt = Rsp/14514.53
%RSD: 3.388
Amount (x10^3)
Area (x10^7)
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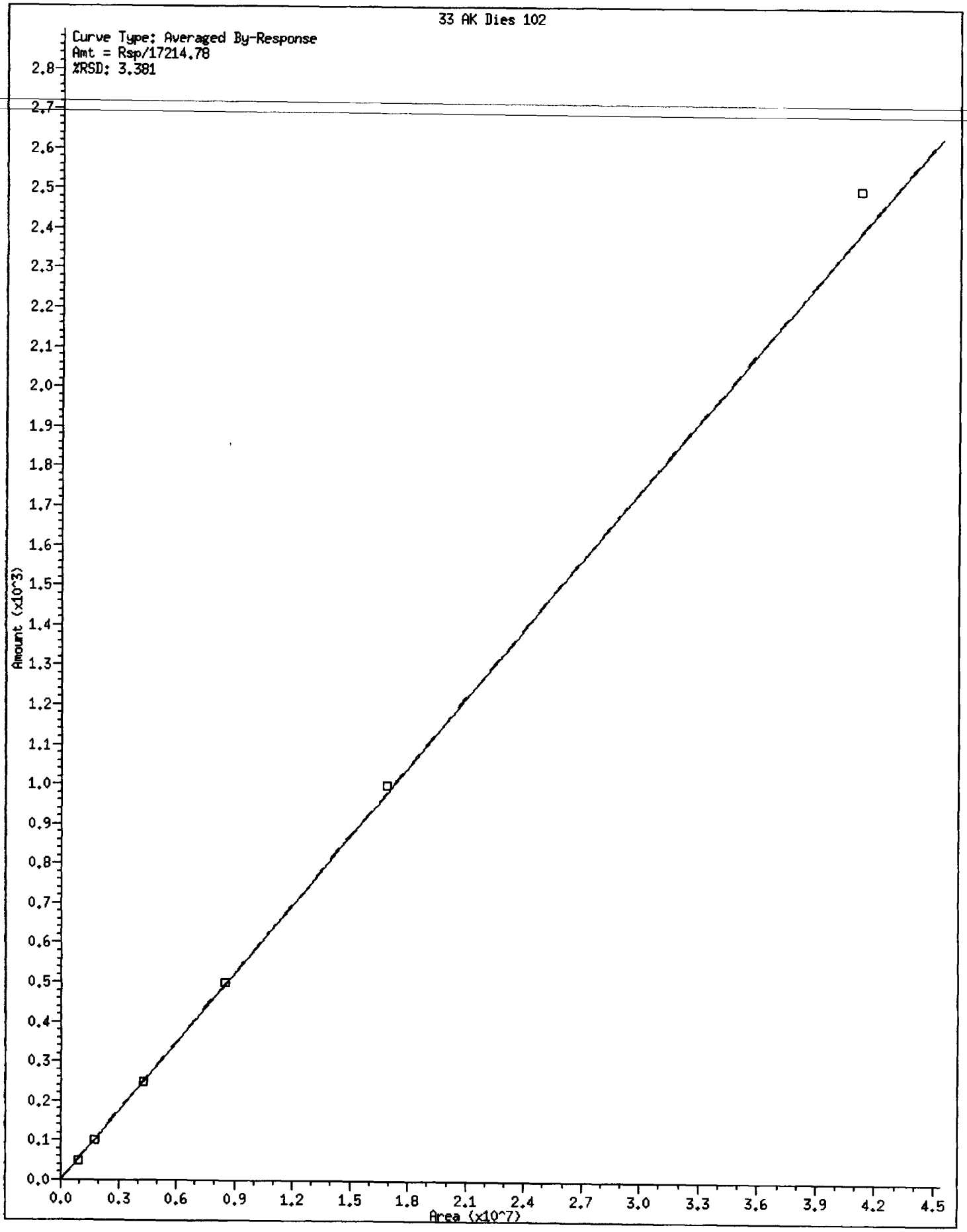
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8


33 AK Dies 102
Curve Type: Averaged By-Response
Amt = Rsp/17214.78
%RSD: 3.381
Amount (x10^3)
Area (x10^7)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
0.0
0.3
0.6
0.9
1.2
1.5
1.8
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3.0
3.3
3.6
3.9
4.2
4.5

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a006.d ARI ID: DIESEL50
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 11:53
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	215268	13.85
C8	1.165	0.018	806	2277	WATPHD	(C12-C24)	759390	52.32
C10	2.960	-0.007	6459	4378	WATPHM	(C24-C38)	46996	3.45
C12	3.905	-0.003	11694	9658	AK102	(C10-C25)	899046	52.23
C14	4.587	0.000	16140	16680	AK103	(C25-C36)	27960	3.04
C16	5.170	-0.001	27596	20440				
C18	5.716	-0.001	21356	18380				
C20	6.268	0.000	14791	13160				
C22	6.810	0.000	6671	6517	MIN.OIL	(C24-C38)	46996	2.75
C24	7.324	-0.002	1715	1968				
C25	7.573	-0.001	706	926				
C26	7.811	-0.015	292	348				
C28	8.266	-0.003	63	56				
C32	9.093	0.012	127	99				
C34	9.462	0.005	225	183				
Filter Peak	11.449	0.007	1566	2590	CREOSOT	(C12-C22)	735404	337.05 M
C36	9.835	0.012	564	945				
C38	10.178	-0.001	736	362				
C40	10.533	0.000	1052	1464				
o-terph	5.859	-0.002	284403	187888				
Triacon Surr	8.706	0.008	114	152				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	187888	9.7	21.7 M
Triacontane	152	0.0	0.0

JW 4/16/13

M Indicates the peak was manually integrated

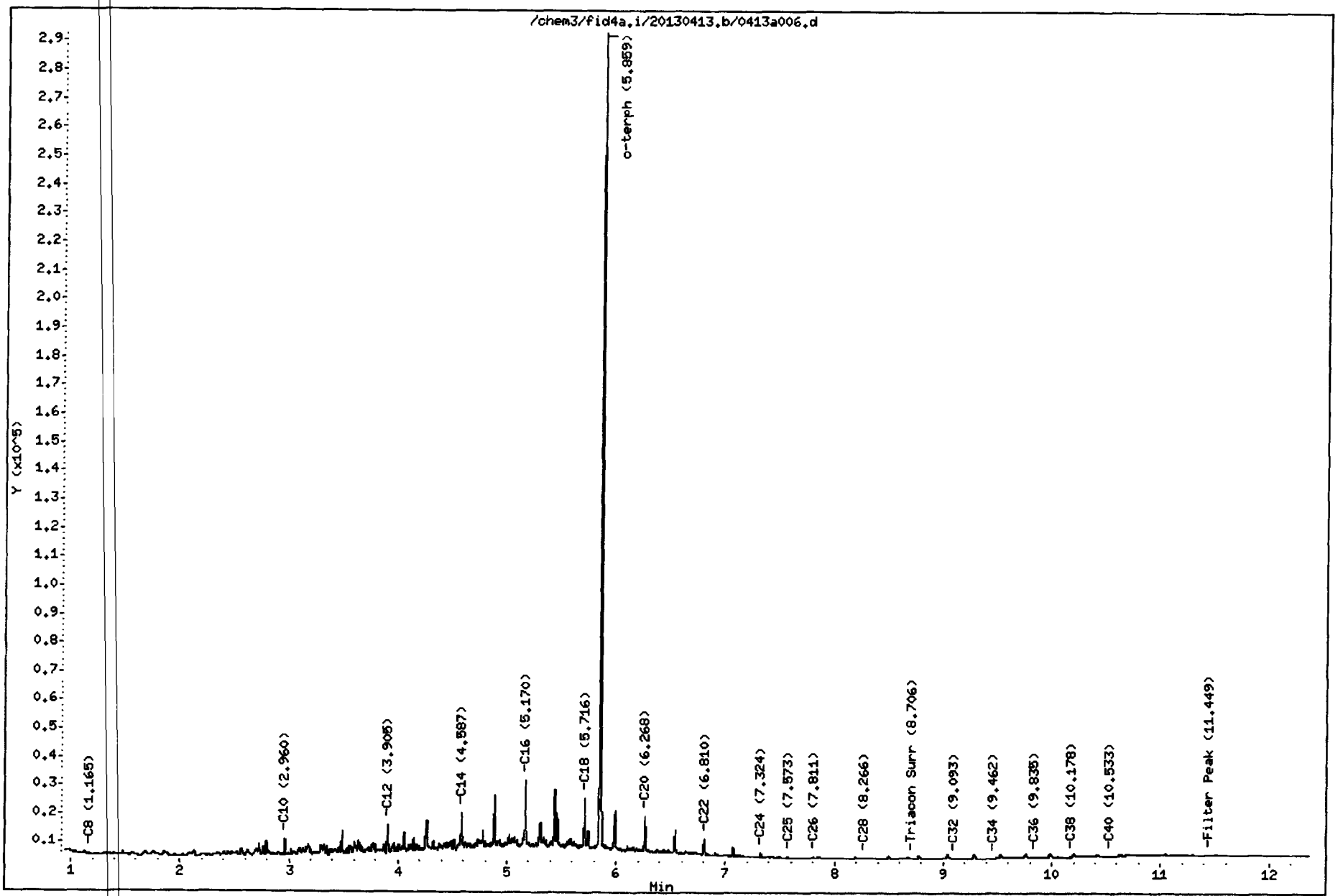
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130413.b/0413a006.d
Date : 13-APR-2013 11:53
Client ID:
Sample Info: DIESEL50

Column phase: RTX-1

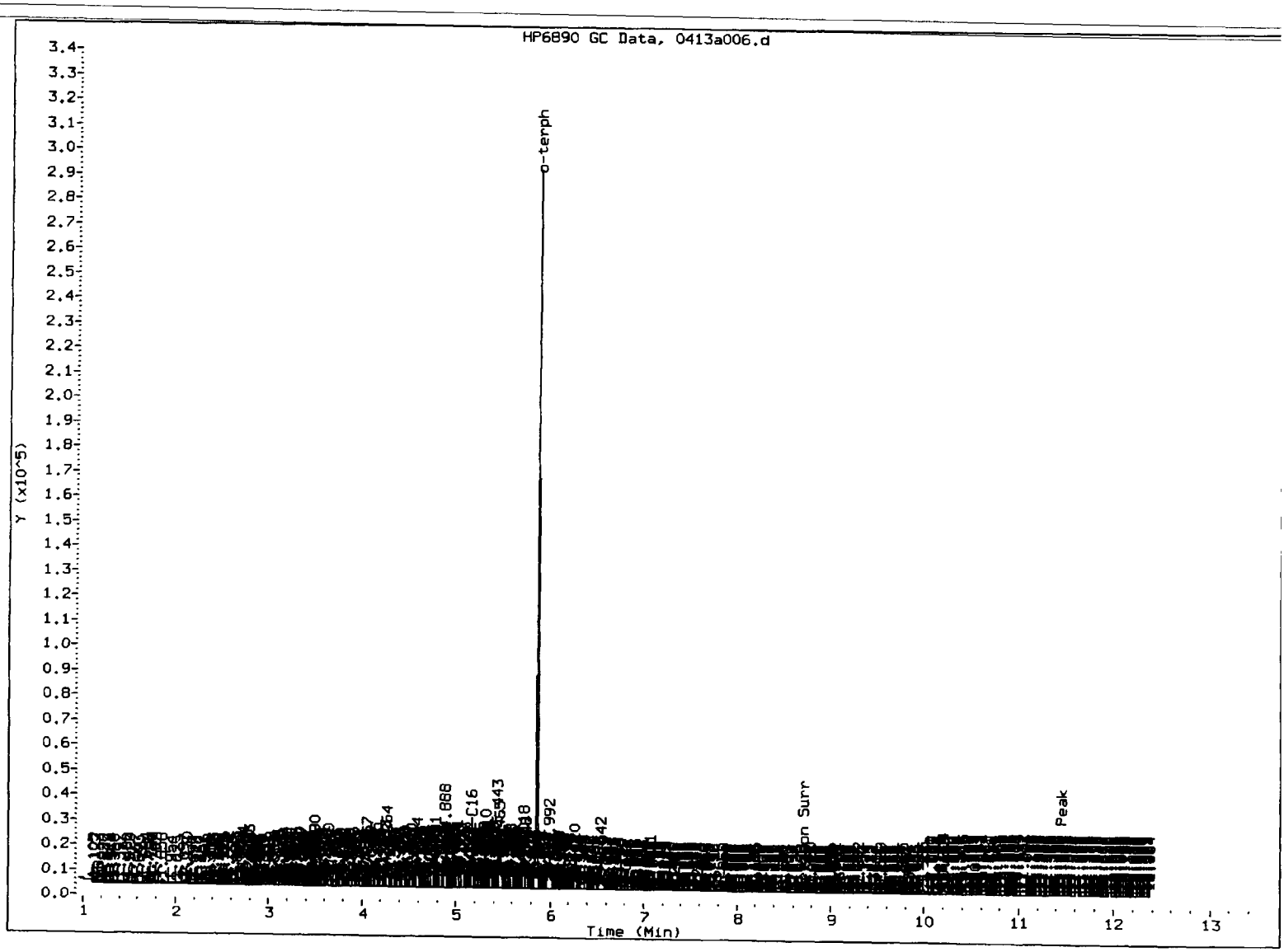
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



FID:4A-2C/RTX-1 DIESEL50

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a007.d ARI ID: DIESEL100
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 12:13
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	417109	26.84
C8	1.136	-0.011	1941	3621	WATPHD	(C12-C24)	1502097	103.49
C10	2.962	-0.006	12519	8727	WATPHM	(C24-C38)	33140	2.44
C12	3.904	-0.005	20914	18536	AK102	(C10-C25)	1783636	103.61
C14	4.584	-0.003	33061	32735	AK103	(C25-C36)	20259	2.20
C16	5.167	-0.004	55285	41238				
C18	5.713	-0.004	42269	37534				
C20	6.263	-0.005	27729	25804				
C22	6.805	-0.005	12584	15117	MIN.OIL	(C24-C38)	33140	1.94
C24	7.320	-0.007	3636	4226				
C25	7.567	-0.007	1377	1724				
C26	7.808	-0.019	569	662				
C28	8.260	-0.009	83	67				
C32	9.097	0.016	105	158				
C34	9.465	0.008	182	122				
Filter Peak	11.438	-0.004	1449	1863	CREOSOT	(C12-C22)	1453523	666.17 M
C36	9.834	0.010	329	216				
C38	10.182	0.003	520	346				
C40	10.531	-0.002	816	1416				
o-terph	5.858	-0.003	557960	373271				
Triacon Surr	8.710	0.012	49	51				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	373271	19.4	43.0 M
Triacontane	51	0.0	0.0

JR 4/16/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

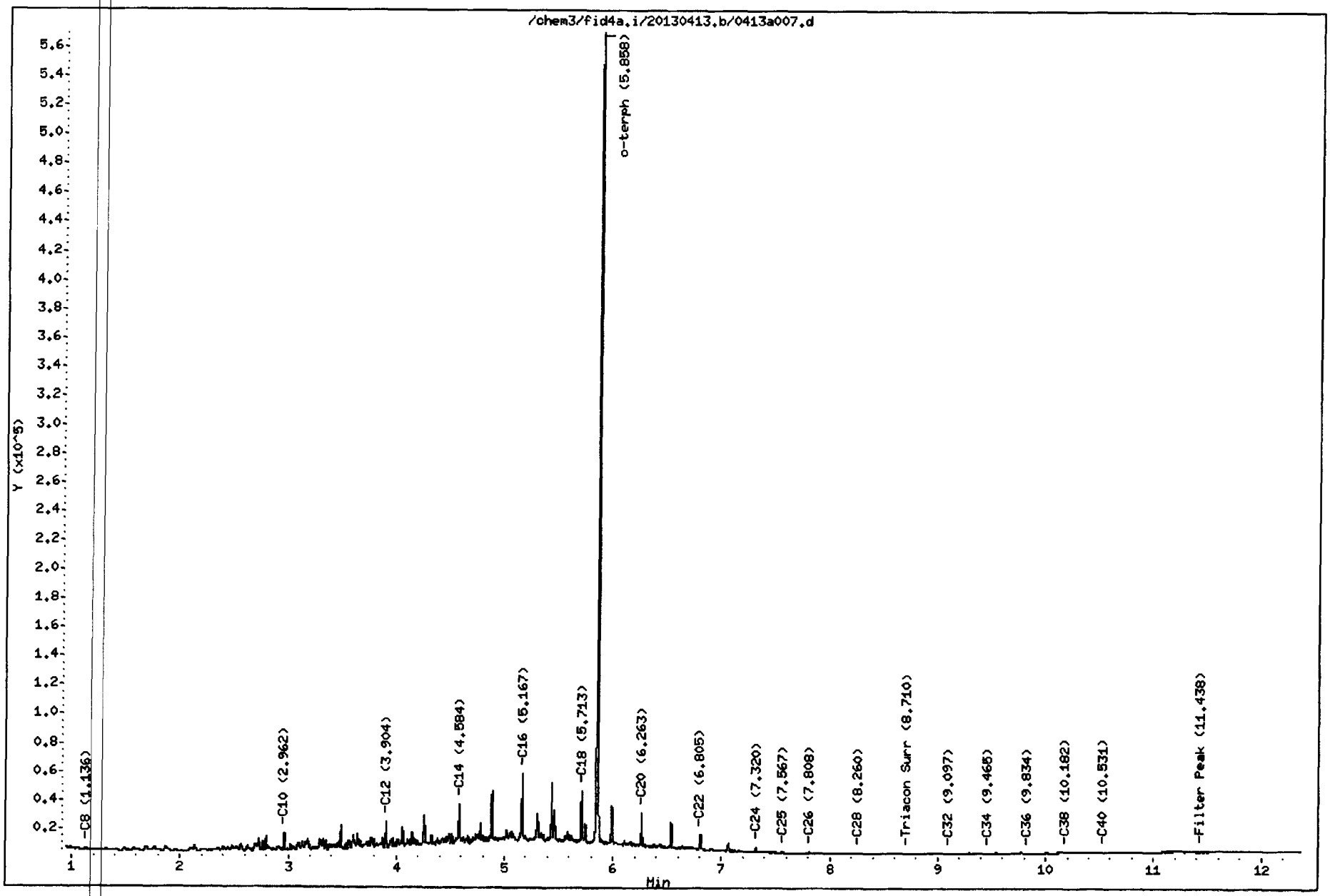
Data File: /chem3/fid4a.i/20130413.b/0413a007.d
Date : 13-APR-2013 12:13
Client ID:
Sample Info: DIESEL100

Column phase: RTX-1

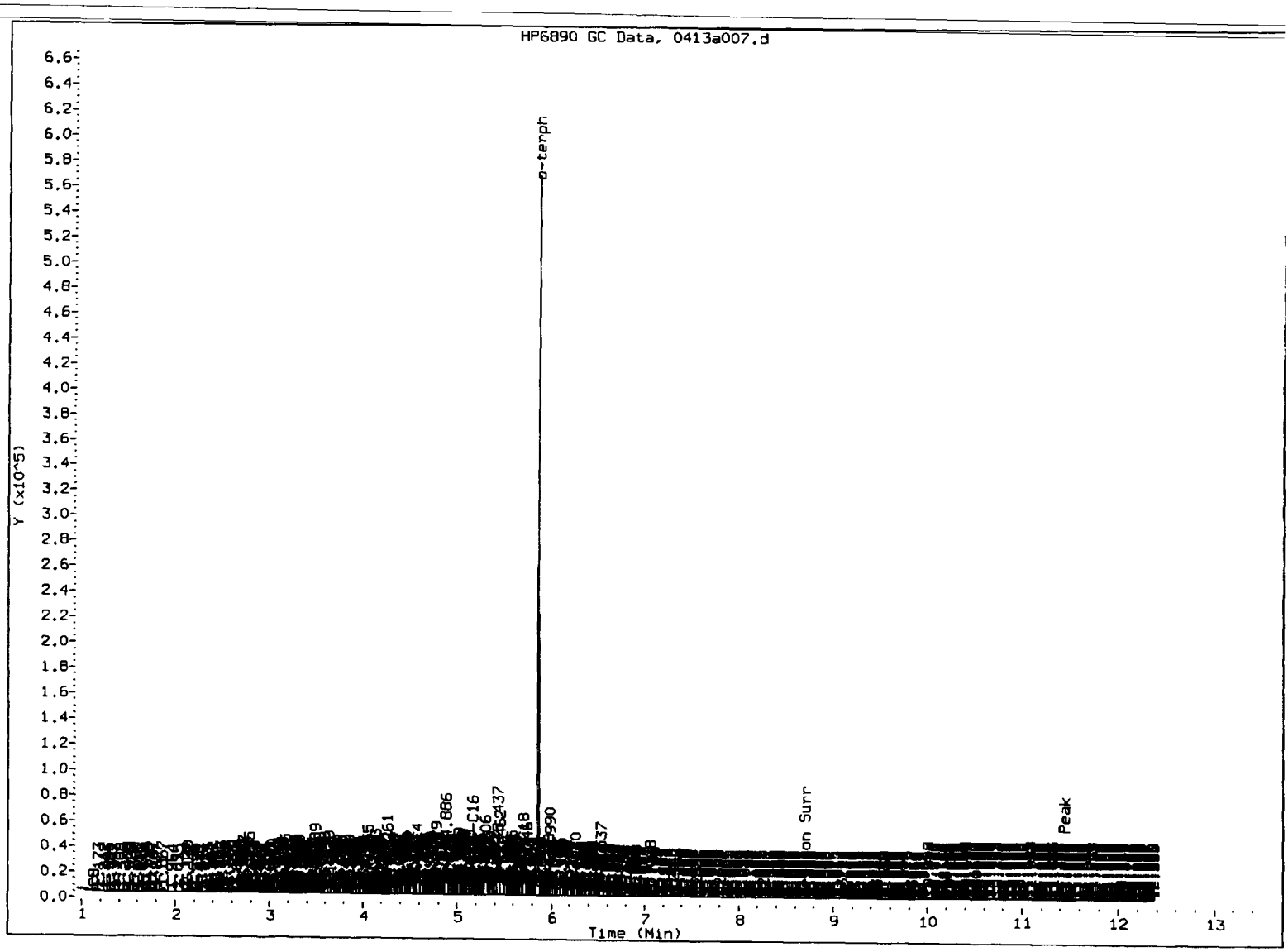
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

JR 4/16/13



FID:4A-2C/RTX-1 DIESEL100 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JH Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a008.d ARI ID: DIESEL250
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 12:34
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	986529	63.49
C8	1.132	-0.015	3781	5720	WATPHD	(C12-C24)	3619636	249.38
C10	2.962	-0.005	30152	20850	WATPHM	(C24-C38)	50857	3.74
C12	3.905	-0.003	49975	43741	AK102	(C10-C25)	4295925	249.55
C14	4.586	-0.002	76514	63530	AK103	(C25-C36)	30121	3.27
C16	5.168	-0.003	117704	98659				
C18	5.715	-0.002	94445	95631				
C20	6.265	-0.002	60449	59524				
C22	6.806	-0.004	28706	35806	MIN.OIL	(C24-C38)	50857	2.98
C24	7.319	-0.007	8050	9800				
C25	7.564	-0.010	3537	4263				
C26	7.806	-0.020	1367	1552				
C28	8.259	-0.010	179	167				
C32	9.073	-0.007	82	95				
C34	9.462	0.005	187	107				
Filter Peak	11.447	0.006	1441	1346	CREOSOT	(C12-C22)	3511755	1609.49 M
C36	9.819	-0.004	351	301				
C38	10.193	0.014	656	259				
C40	10.533	0.000	894	615				
o-terph	5.865	0.004	1088756	877347				
Triacon Surr	8.706	0.008	36	15				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	877347	45.5	101.1 M
Triacontane	15	0.0	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

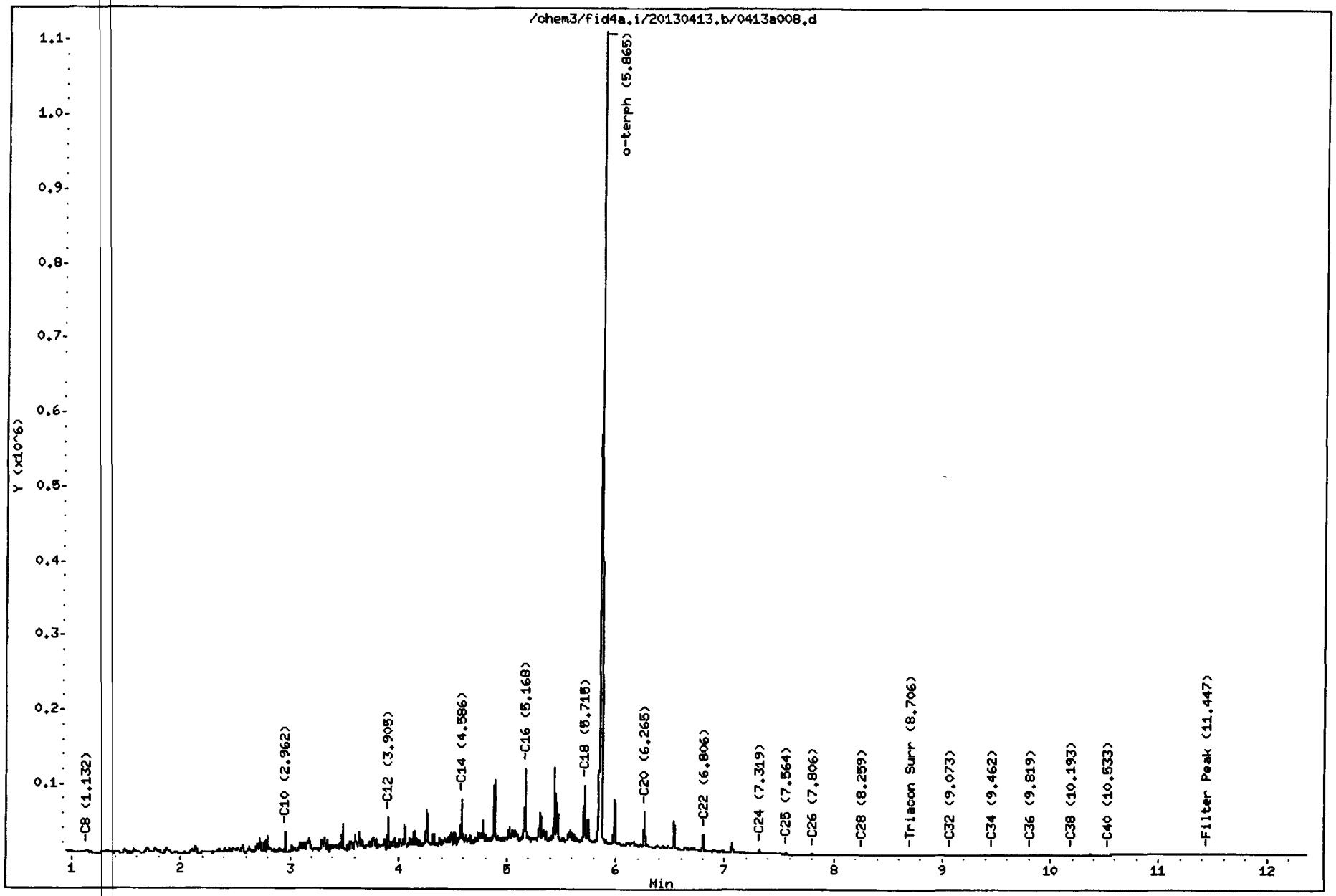
4/16/13

Data File: /chem3/fid4a.i/20130413.b/0413a008.d
Date : 13-APR-2013 12:34
Client ID:
Sample Info: DIESEL250

Instrument: fid4a.i

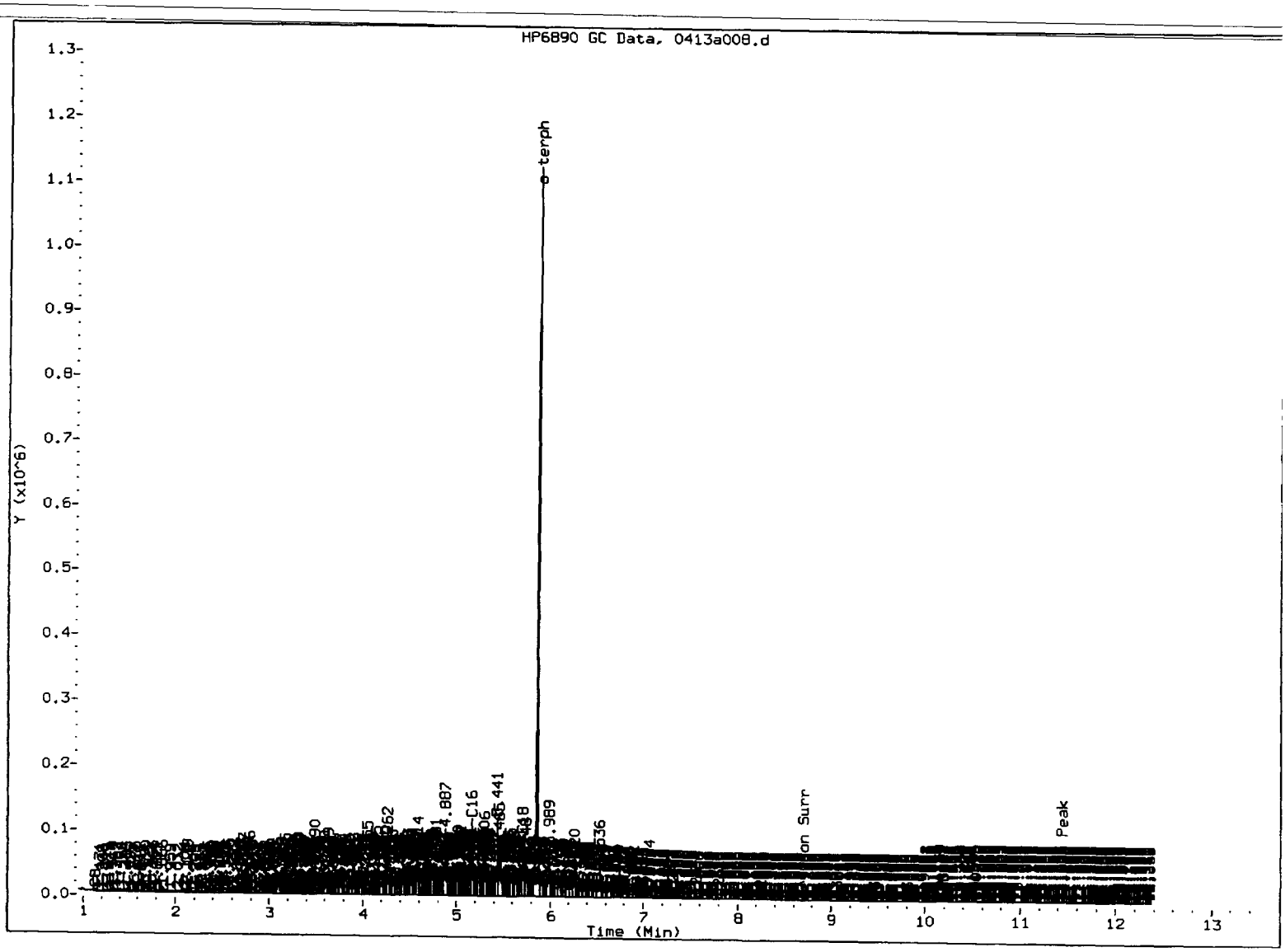
Operator: JR/VTS/JW
Column diameter: 0.25

Column phase: RTX-1



FID:4A-2C/RTX-1 DIESEL250

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a009.d ARI ID: DIESEL500
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 12:54
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	1938503	124.75
C8	1.133	-0.014	6656	8984	WATPHD	(C12-C24)	7139483	491.89
C10	2.963	-0.005	60617	41059	WATPHM	(C24-C38)	73614	5.41
C12	3.906	-0.002	95786	86973	AK102	(C10-C25)	8473912	492.25
C14	4.586	-0.001	150874	130101	AK103	(C25-C36)	46507	5.05
C16	5.171	-0.001	221742	168860				
C18	5.717	0.000	183930	171594				
C20	6.266	-0.002	125277	138952				
C22	6.806	-0.004	61289	73010	MIN.OIL	(C24-C38)	73614	4.32
C24	7.321	-0.006	17056	16948				
C25	7.566	-0.008	7181	8056				
C26	7.827	0.001	795	590				
C28	8.261	-0.008	383	489				
C32	9.082	0.001	63	54				
C34	9.469	0.012	136	160				
Filter Peak	11.432	-0.010	1383	1663	CREOSOT	(C12-C22)	6912274	3168.01 M
C36	9.827	0.003	301	238				
C38	10.156	-0.023	477	399				
C40	10.538	0.005	798	1290				
o-terph	5.874	0.013	1524427	1652081				
Triacon Surr	8.711	0.013	30	9				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1652081	85.7	190.4 M
Triacontane	9	0.0	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

JW 4/16/13

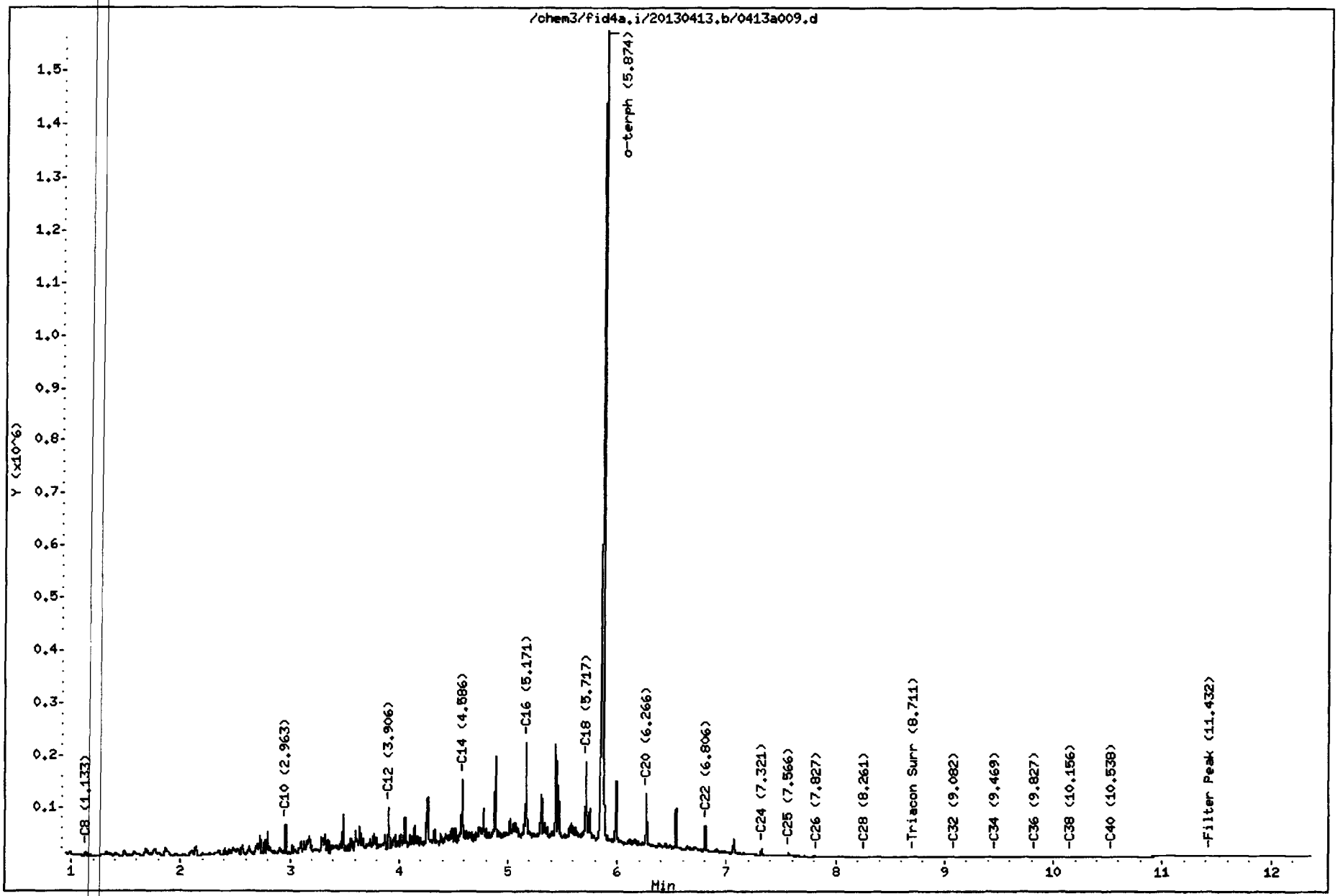
Data File: /chem3/fid4a.i/20130413.b/0413a009.d
Date : 13-APR-2013 12:54
Client ID:
Sample Info: DIESEL500

Column phase: RTX-1

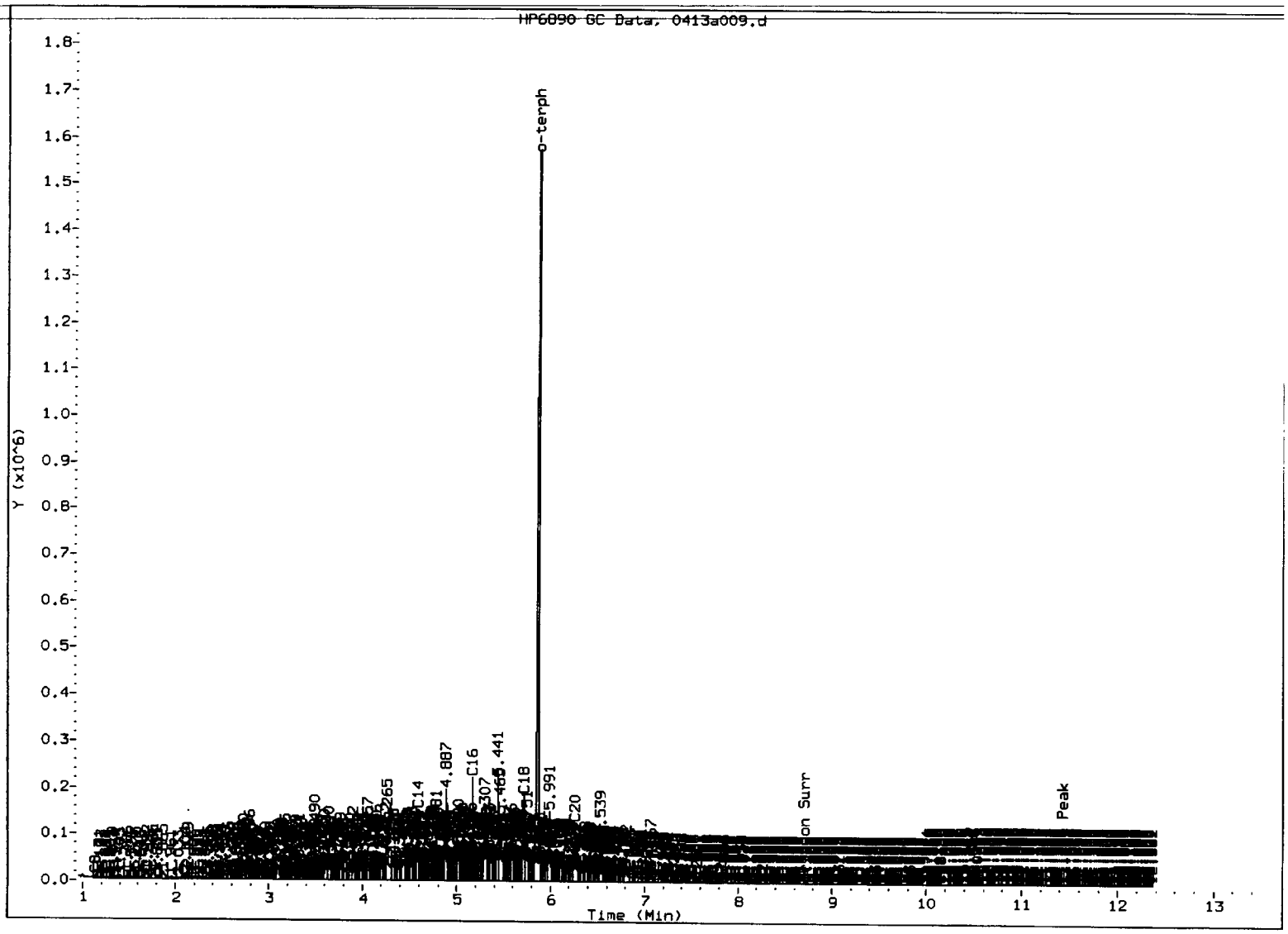
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

TLV 4/16/13



FID:4A-2C/RTX-1 DIESEL500 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: SC Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a010.d ARI ID: DIESEL1000
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 13:15
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	3811929	245.31
C8	1.135	-0.013	12353	15129	WATPHD	(C12-C24)	14226320	980.14
C10	2.963	-0.004	115392	81567	WATPHM	(C24-C38)	139793	10.28
C12	3.907	-0.001	182454	170588	AK102	(C10-C25)	16866110	979.75
C14	4.588	0.001	281773	291443	AK103	(C25-C36)	86469	9.40
C16	5.171	0.000	434741	342755				
C18	5.720	0.003	345674	355731				
C20	6.268	0.001	228816	234559				
C22	6.807	-0.003	107722	108430	MIN.OIL	(C24-C38)	139793	8.19
C24	7.318	-0.008	31969	37766				
C25	7.567	-0.007	13295	16308				
C26	7.833	0.007	1443	522				
C28	8.261	-0.008	722	1112				
C32	9.094	0.014	29	7				
C34	9.468	0.011	112	107				
Filter Peak	11.448	0.007	1248	2720	CREOSOT	(C12-C22)	13802524	6325.92 M
C36	9.827	0.004	263	425				
C38	10.189	0.010	1014	1935				
C40	10.535	0.002	722	341				
o-terph	5.884	0.023	2512098	3297656				
Triacon Surr	8.712	0.014	48	18				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	3297656	171.0	380.0 M
Triacontane	18	0.0	0.0

M Indicates the peak was manually integrated

JC 11/16/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130413.b/0413a010.d

Date : 13-APR-2013 13:15

Client ID:

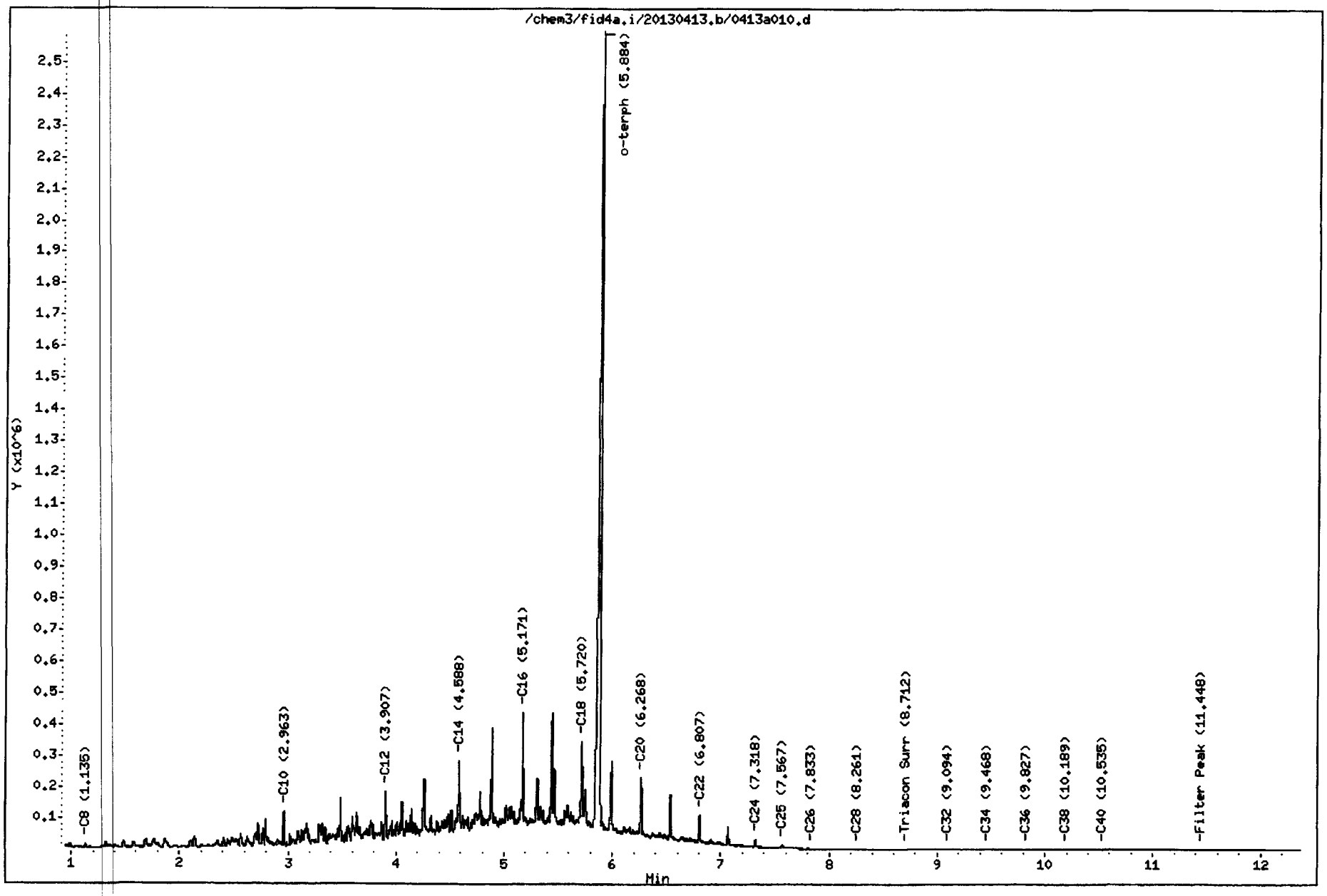
Sample Info: DIESEL1000

Column phase: RTX-1

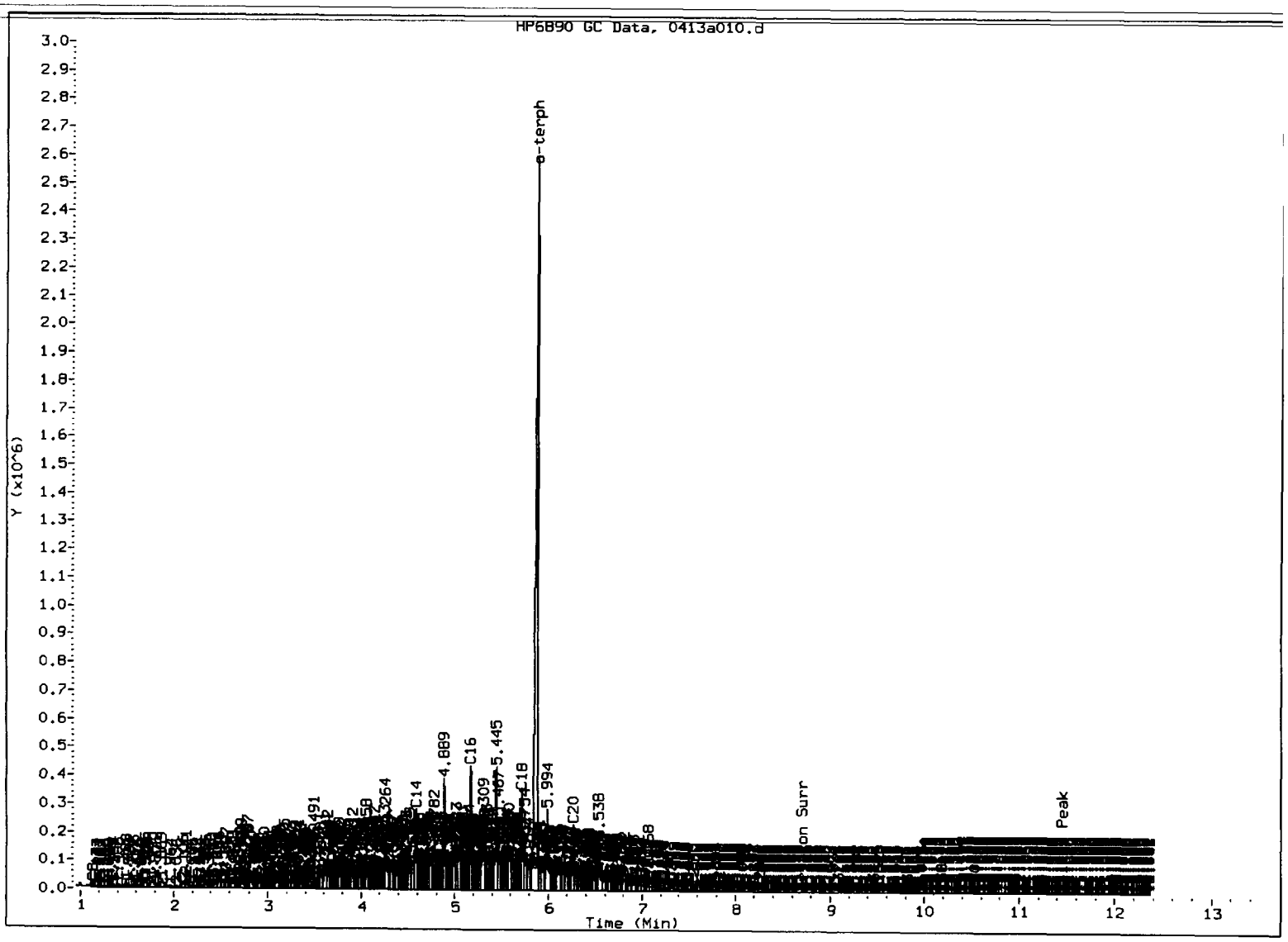
Instrument: fid4a.i

Operator: JR/VTS/JW

Column diameter: 0.25



FID:4A-2C/RTX-1 DIESEL1000 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a011.d ARI ID: DIESEL2500
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 13:35
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	9276455	596.96
C8	1.134	-0.014	24908	33472	WATPHD	(C12-C24)	34774294	2395.83
C10	2.966	-0.002	252738	198288	WATPHM	(C24-C38)	305862	22.48
C12	3.910	0.001	400759	415390	AK102	(C10-C25)	41212082	2393.99
C14	4.594	0.006	611687	862603	AK103	(C25-C36)	206426	22.43
C16	5.178	0.006	943821	808157				
C18	5.727	0.010	671328	895926				
C20	6.274	0.006	489579	628809				
C22	6.808	-0.002	247196	289857	MIN.OIL	(C24-C38)	305862	17.93
C24	7.319	-0.007	75373	82766				
C25	7.566	-0.008	34345	42458				
C26	7.827	0.000	4044	3418				
C28	8.258	-0.012	1977	3055				
C32	9.090	0.009	48	61				
C34	9.458	0.000	70	50				
Filter Peak	11.449	0.007	1134	1190	CREOSOT	(C12-C22)	33616551	15407.01 M
C36	9.824	0.000	185	139				
C38	10.179	0.000	554	1390				
C40	10.541	0.008	631	435				
o-terph	5.903	0.042	4136741	8059957				
Triacon Surr	8.700	0.002	141	189				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	8059957	418.0	928.8 M
Triacontane	189	0.0	0.0

M Indicates the peak was manually integrated

JW 4/16/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

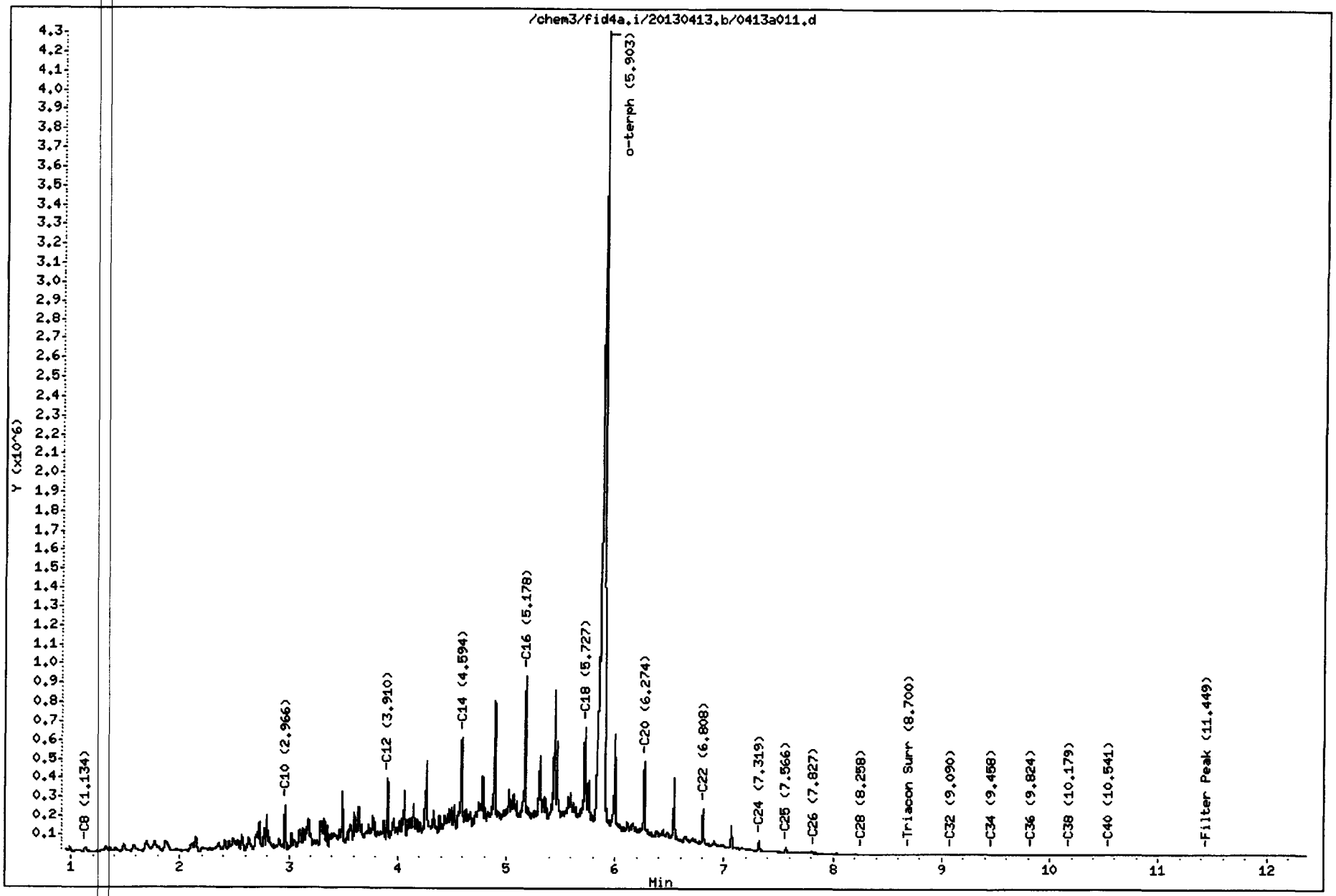
Data File: /chem3/fid4a.i/20130413.b/0413a011.d
Date : 13-APR-2013 13:35
Client ID:
Sample Info: DIESEL2500

Column phase: RTX-1

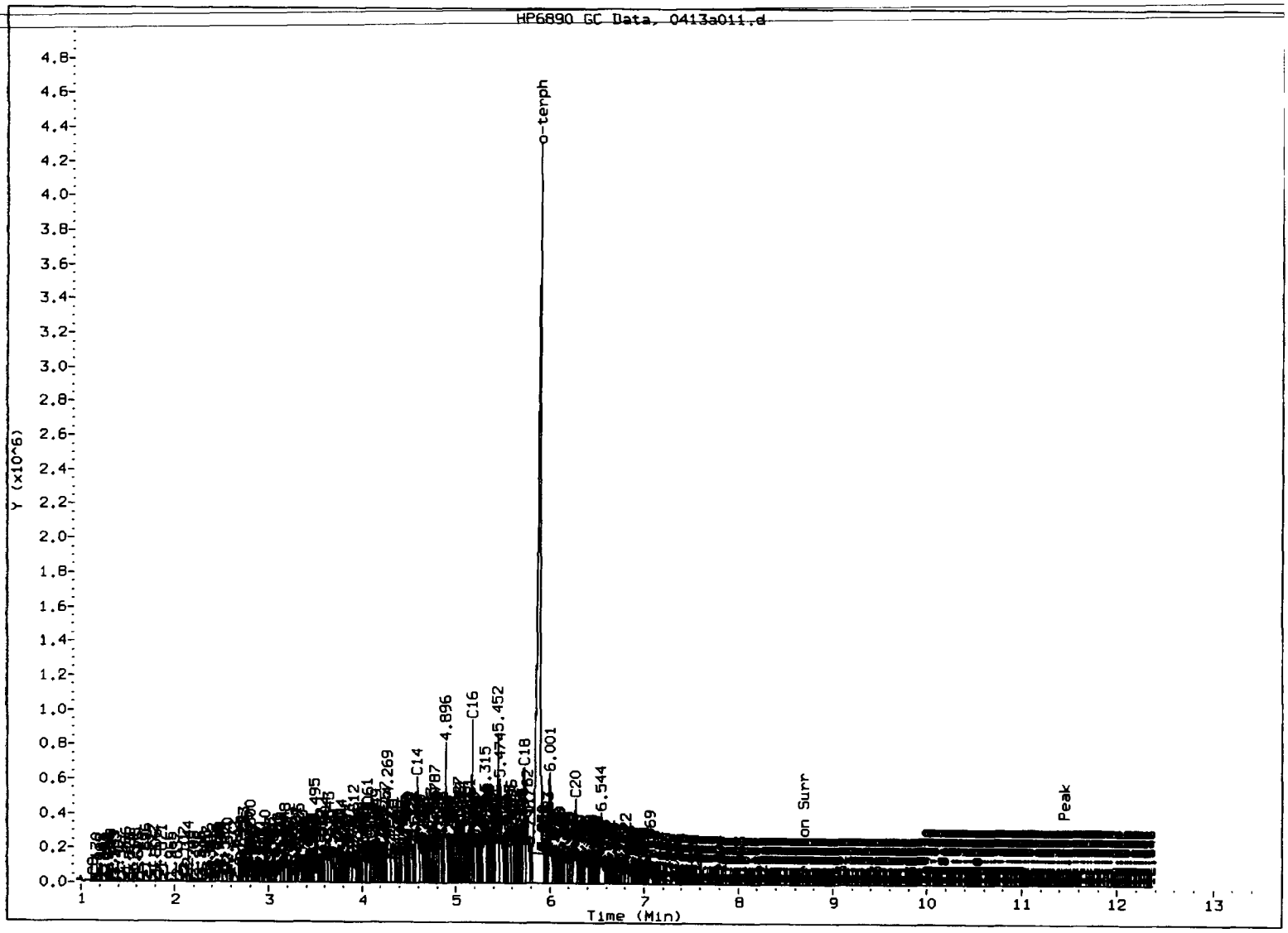
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

JW 4/16/13



FID:4A-2C/RTX-1 DIESEL2500 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a012.d ARI ID: DIESELICV250
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 13:56
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	1350128	86.88
C8	1.140	-0.007	5894	7549	WATPHD	(C12-C24)	3336568	229.88
C10	2.964	-0.004	74183	48425	WATPHM	(C24-C38)	48278	3.55
C12	3.904	-0.004	80279	63955	AK102	(C10-C25)	4352962	252.86
C14	4.584	-0.004	91502	86727	AK103	(C25-C36)	29685	3.23
C16	5.167	-0.004	92428	91538				
C18	5.712	-0.005	64635	71687				
C20	6.261	-0.007	38864	46617				
C22	6.800	-0.010	19895	20409	MIN.OIL	(C24-C38)	48278	2.83
C24	7.317	-0.010	6621	7048				
C25	7.563	-0.011	3543	3438				
C26	7.839	0.013	511	944				
C28	8.257	-0.012	249	388				
C32	9.086	0.005	66	27				
C34	9.457	0.000	126	85				
Filter Peak	11.447	0.005	1300	1415	CREOSOT	(C12-C22)	3246102	1487.74 M
C36	9.826	0.003	279	175				
C38	10.165	-0.014	702	1540				
C40	10.542	0.010	811	690				
o-terph	5.863	0.002	1066499	883180				
Triacon Surr	8.703	0.005	33	42				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	883180	45.8	101.8 M
Triacontane	42	0.0	0.0

M Indicates the peak was manually integrated

JW
4/16/13

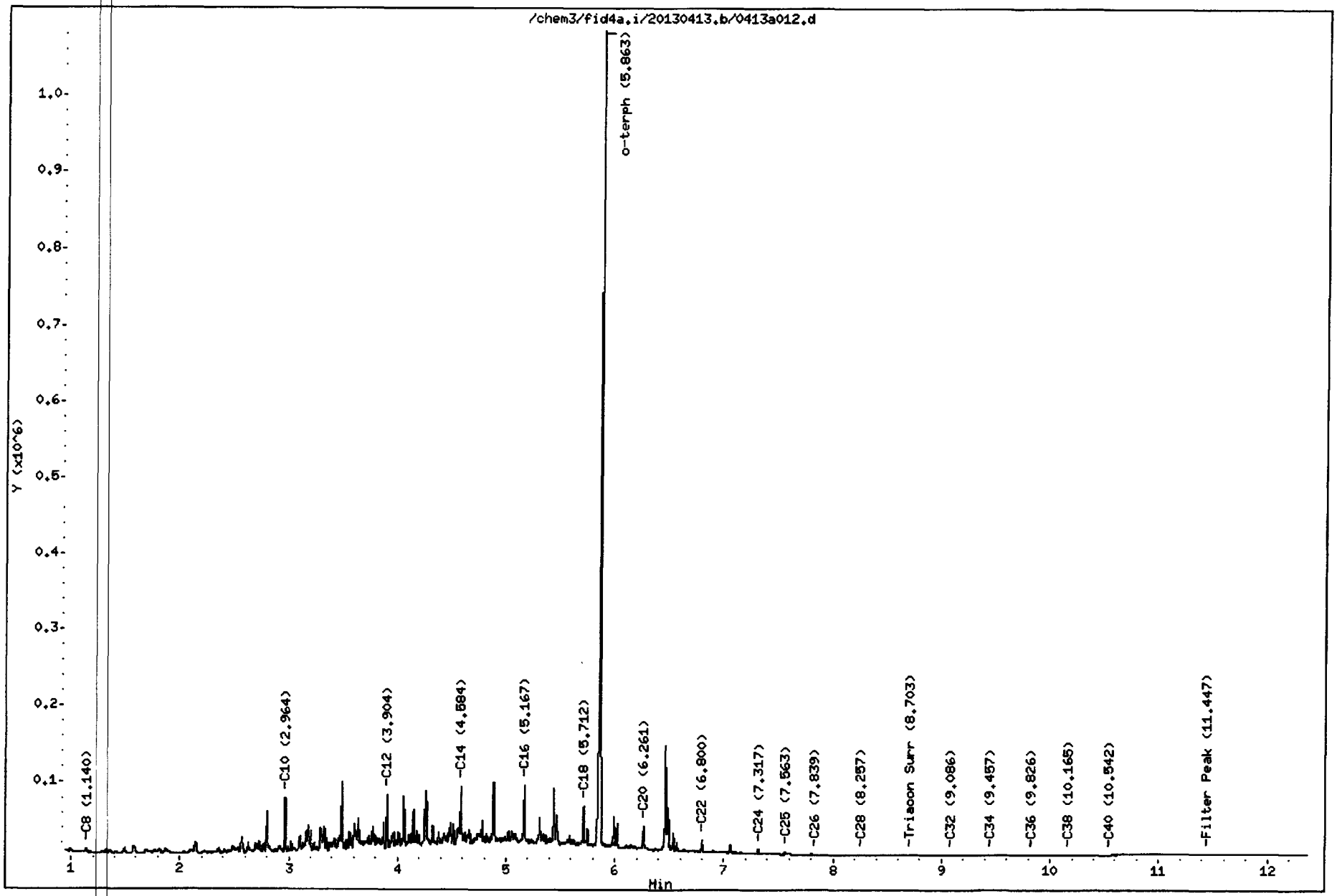
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130413.b/0413a012.d
Date : 13-APR-2013 13:56
Client ID:
Sample Info: DIESELICV250

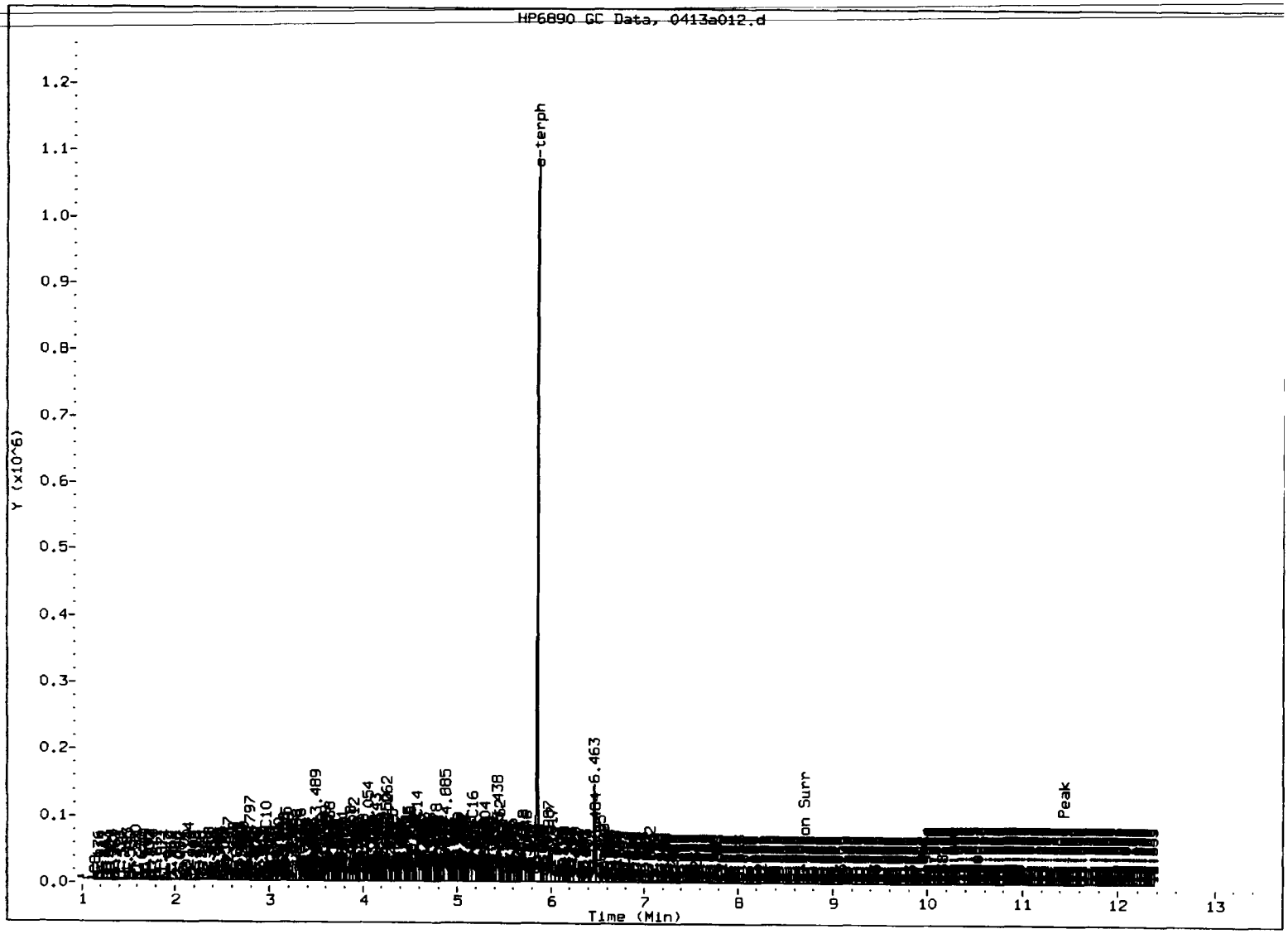
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

Column phase: RTX-1



FID:4A-2C/RTX-1 DIESELICV250 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ~~ECD-5~~ ECD-6 ECD-7 ECD-8

Curve Date(s): 5/22/13 Internal Standard ID N/A Expiration 11/27/13

Endrin/DDT Breakdown <15%? YES / NO / NA		ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria	YES / NO	ICV Exceeding ±30%?	YES / NO
Manual Integrations for ICal?	YES / NO	Linear Fits Used?	YES / NO
Minimum Response S/N Met	YES / NO	Quadratic Fits Used?	YES / NO
		Calibration Points Dropped?	YES / NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Motor oil	2041-4	11/27/13	Motor oil	2043-2	11/19/13
RT	2043-4	10/20/13			
IB	2043-3	10/20/13			

Detail problems, corrective actions and/or other pertinent information below:
High pt has triac surr outside QC shift allowance, but surr never spk @ this level, no corrective action taken

Analyst: JW **Date:** 5/23/13

Reviewer: [signature] **Date:** 5/23/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130520.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0520a016	0520a017	0520a018	0520a019	0520a020	0520a021
INJ.DATE:	20-MAY-2013	20-MAY-2013	20-MAY-2013	20-MAY-2013	20-MAY-2013	20-MAY-2013
INJ.TIME:	17:53	18:13	18:34	18:55	19:15	19:36

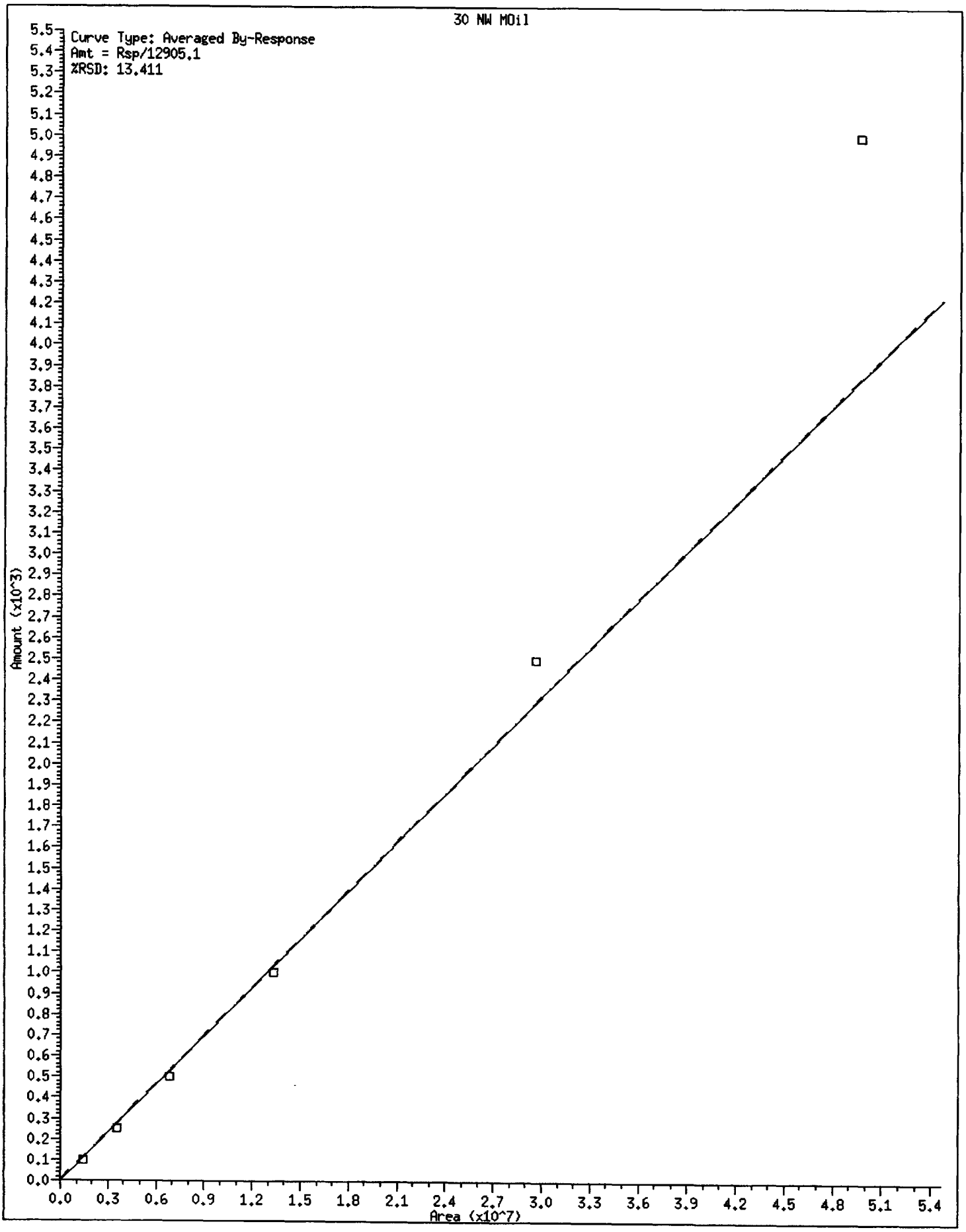
	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.745	0.645-0.845	+++++	+++++
	40 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.023	0.973-1.073	+++++	+++++
	39 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	0.542	0.492-0.592	+++++	+++++
	36 JetA	+++++	+++++	+++++	+++++	+++++	+++++	0.794	0.744-0.844	+++++	+++++
	37 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.729	0.679-0.779	+++++	+++++
	38 Hydraulic Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.197	1.147-1.247	+++++	+++++
	2 C8	+++++	+++++	+++++	+++++	+++++	+++++	0.944	0.844-1.044	+++++	+++++
	3 C10	2.810	2.809	2.808	2.809	2.808	2.807	2.807	2.757-2.857	2.809	0.001
	4 C12	3.785	3.785	3.783	3.784	3.785	3.784	3.784	3.734-3.834	3.784	0.001
	5 C14	4.470	4.467	4.467	4.465	4.466	4.466	4.466	4.416-4.516	4.467	0.002
	6 C16	5.042	5.046	5.048	5.047	5.048	5.047	5.047	4.997-5.097	5.046	0.002
	7 C18	5.586	5.581	5.582	5.580	5.581	5.582	5.582	5.532-5.632	5.582	0.002
$	8 o-terph	5.707	5.708	5.706	5.705	5.706	5.705	5.705	5.655-5.755	5.706	0.001
	9 C20	6.137	6.124	6.124	6.122	6.121	6.122	6.122	6.072-6.172	6.125	0.006
	10 C22	6.658	6.654	6.660	6.661	6.662	6.657	6.657	6.607-6.707	6.659	0.003
	11 C24	7.173	7.171	7.171	7.163	7.166	7.182	7.182	7.132-7.232	7.171	0.007
	12 C25	7.429	7.431	7.433	7.434	7.422	7.419	7.419	7.369-7.469	7.428	0.006

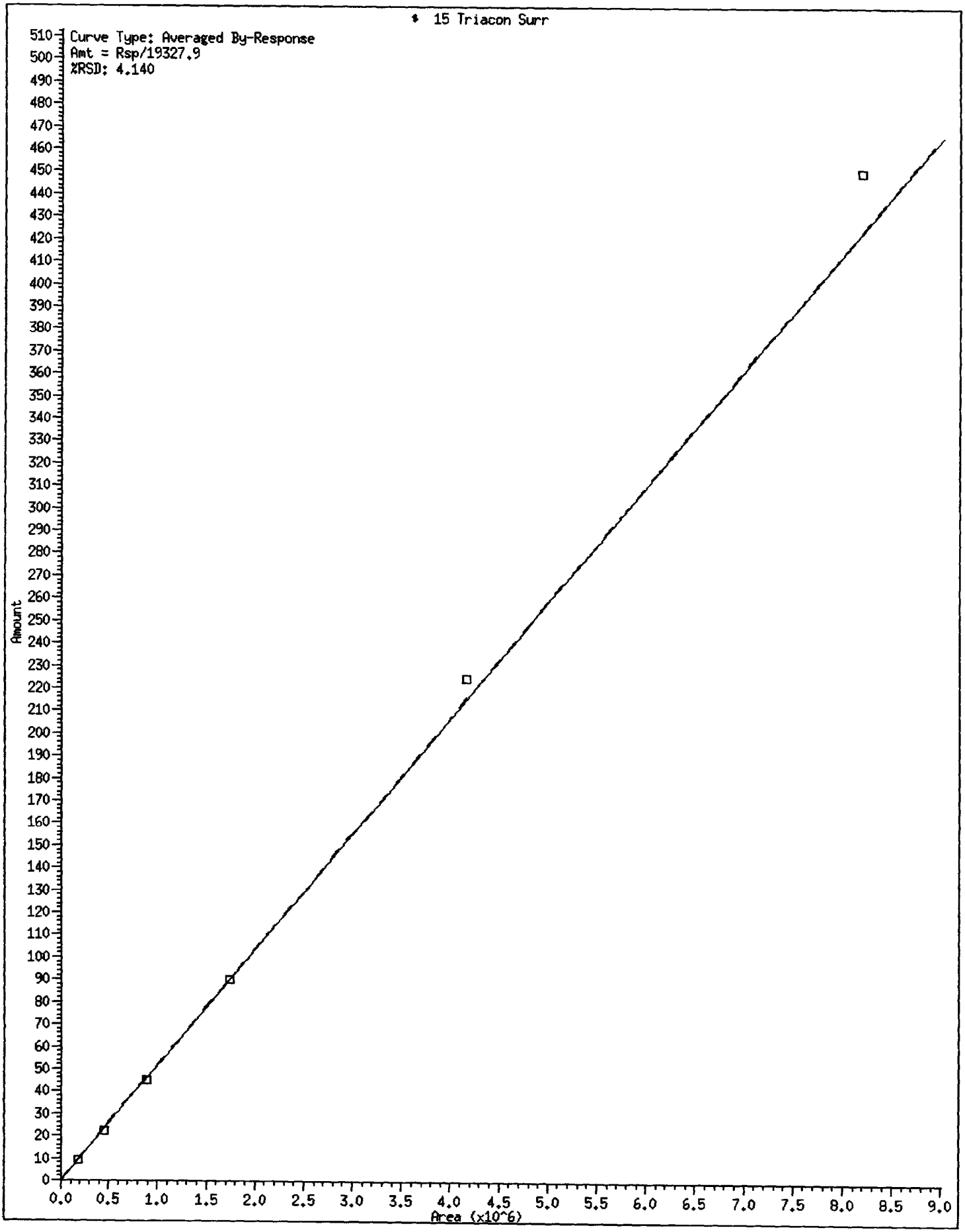
Reviewer 1 _____ Date: 5/23/13
Reviewer 2 _____ Date: 5/23/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130520.b
Inst ID: fid4a.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
13 C26	7.671	7.673	7.671	7.671	7.666	7.676	7.676	7.626-7.726	7.672	0.003
14 C28	8.109	8.113	8.110	8.112	8.101	8.117	8.117	8.067-8.167	8.110	0.005
$ 15 Triacon Surr	8.527	8.535	8.542	8.555	8.581	8.607	8.607	8.557-8.657	8.558	0.031
16 C32	8.903	8.909	8.907	8.910	8.921	8.913	8.913	8.863-8.963	8.911	0.006
17 C34	9.266	9.264	9.264	9.270	9.259	9.278	9.278	9.228-9.328	9.267	0.007
18 Filter Peak	11.425	11.424	11.423	11.412	11.420	11.424	11.424	11.324-11.524	11.421	0.005
19 C36	9.624	9.610	9.627	9.618	9.619	9.599	9.599	9.549-9.649	9.616	0.010
20 C38	9.959	9.953	9.958	9.960	9.966	9.956	9.956	9.906-10.006	9.959	0.004
21 C40	10.287	10.288	10.286	10.282	10.292	10.282	10.282	10.232-10.332	10.286	0.004
31 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
32 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.683	0.633-0.733	+++++	+++++
42 Cal(IT) Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.499	0.449-0.549	+++++	+++++
33 AK Dies 102	+++++	+++++	+++++	+++++	+++++	+++++	0.662	0.612-0.712	+++++	+++++
30 NW MOil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 CRUDE	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 AK MOil 103	+++++	+++++	+++++	+++++	+++++	+++++	0.615	0.565-0.665	+++++	+++++
41 ABUNKERC	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++


30 NW MOil
Curve Type: Averaged By-Response
Amt = Rsp/12905.1
%RSD: 13.411
Amount (x10^3)
Area (x10^7)
0.0 0.3 0.6 0.9 1.2 1.5 1.8 2.1 2.4 2.7 3.0 3.3 3.6 3.9 4.2 4.5 4.8 5.1 5.4


* 15 Triacon Surr
Curve Type: Averaged By-Response
Amt = Rsp/19327.9
%RSD: 4.140
Amount
Area (x10^6)
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10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
210
220
230
240
250
260
270
280
290
300
310
320
330
340
350
360
370
380
390
400
410
420
430
440
450
460
470
480
490
500
510
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0

6a

NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: 20130520

Instrument: FID4A.I Project:

Calibration Date: 20-MAY-2013 SDG No.: 20130520

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	14505	14238	13594	13326	11838	9930	12905	13.4
Triac Surr	19882	20137	19857	19391	18502	18199	19328	4.1

<- Indicates %RSD outside limits
Surrogate areas are not included in Motor Oil RF calculation.

Calibration Files	Analysis Time
0520a016.d	20-MAY-2013 17:53
0520a017.d	20-MAY-2013 18:13
0520a018.d	20-MAY-2013 18:34
0520a019.d	20-MAY-2013 18:55
0520a020.d	20-MAY-2013 19:15
0520a021.d	20-MAY-2013 19:36

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130520 Project:

Instrument ID: FID4A GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 5.72 TRIAC: 8.54

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		MOIL 100	05/20/13	1753	5.71	8.53
02		MOIL 250	05/20/13	1813	5.71	8.54
03		MOIL 500	05/20/13	1834	5.71	8.54
04		MOIL 1000	05/20/13	1855	5.71	8.56
05		MOIL 2500	05/20/13	1915	5.71	8.58
06		MOIL 5000	05/20/13	1936	5.71	8.61*
07		MOIL ICV 500	05/20/13	1956	5.71	8.54

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130520.b/0520a005.d
Method: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/21/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: RT0520
Client ID:
Injection: 20-MAY-2013 12:23

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.745	0.000	458429	349936	WATPHG	(Tol-C12)	1329385	85.55
C8	0.944	0.000	250830	222442	WATPHD	(C12-C24)	2498653	172.15
C10	2.812	0.000	400263	330597	WATPHM	(C24-C38)	3674499	284.73
C12	3.787	0.000	510504	364559	AK102	(C10-C25)	3259418	189.34
C14	4.468	0.000	574937	369237	AK103	(C25-C36)	3264297	354.73
C16	5.050	0.000	511037	372681				
C18	5.585	0.000	421748	368573				
C20	6.126	0.000	446977	354696				
C22	6.660	0.000	446724	377771				
C24	7.174	0.000	445628	382138	MSPIRIT	(Tol-C12)	1329385	68.64
C25	7.421	0.000	433616	373615				
C26	7.670	0.000	1018783	1111203				
C28	8.114	0.000	425575	381899				
C32	8.912	0.000	394760	372027				
C34	9.273	0.000	423272	372307				
Filter Peak	11.428	0.000	2599	3049	CREOSOT	(C12-C22)	2051345	940.16 M
C36	9.618	0.000	333678	362304				
C38	9.955	0.000	361786	347994				
C40	10.282	0.000	290487	301460				
o-terph	5.715	0.000	931297	818561				
Triacon Surr	8.540	0.000	816029	971316				

Range Times: NW Diesel(3.787 - 7.174) AK102(2.81 - 7.42) Jet A(2.81 - 5.59)
NW M.Oil(7.17 - 9.96) AK103(7.42 - 9.62) OR Diesel(2.81 - 8.11)

Surrogate	Area	Amount	%Rec
o-Terphenyl	818561	42.4	94.3
Triacontane	971316	50.3	111.7

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

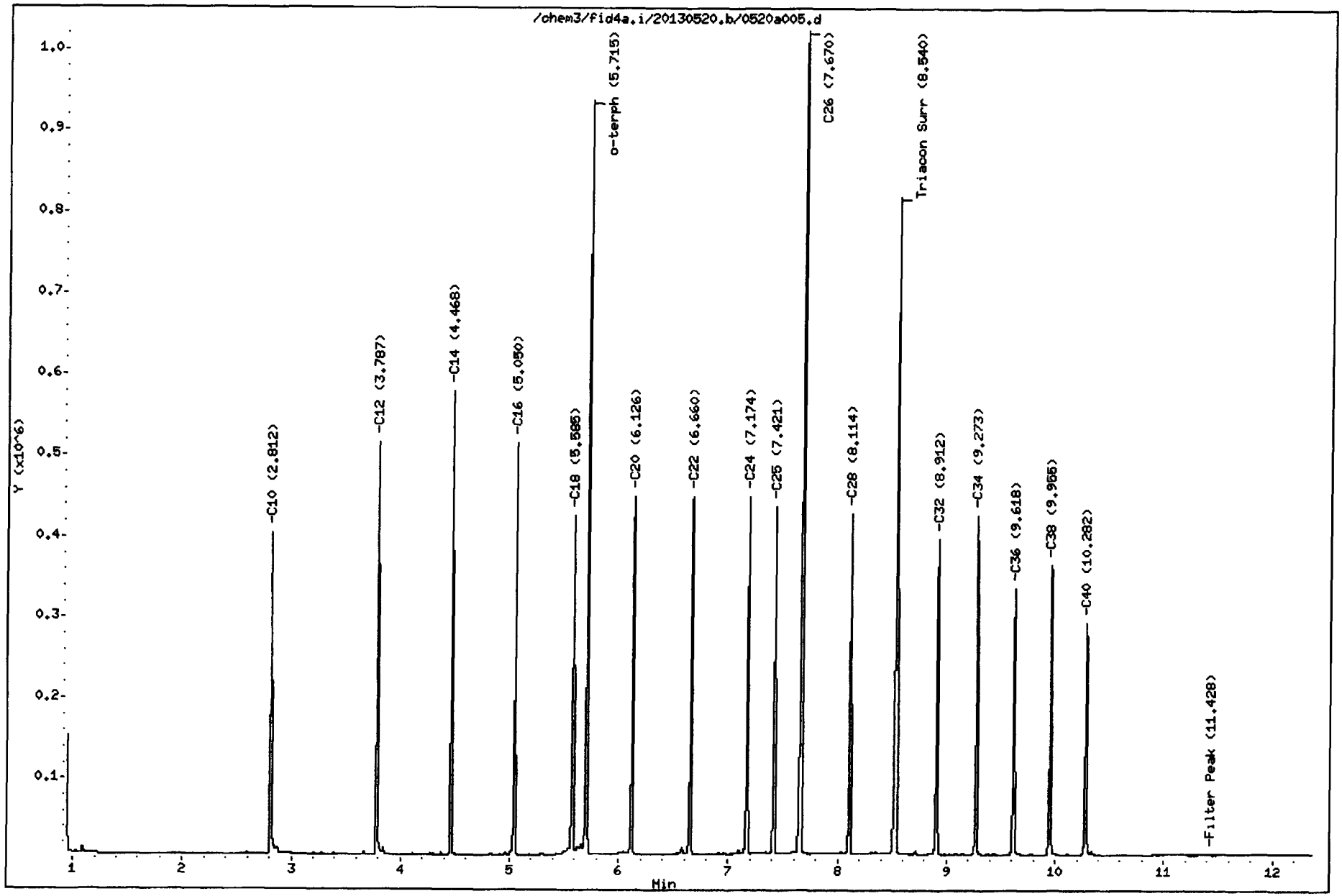
JC 5/23/13

Data File: /chem3/fid4a.i/20130520.b/0520a005.d
Date : 20-MAY-2013 12:23
Client ID:
Sample Info: RT0520

Column phase: RTX-1

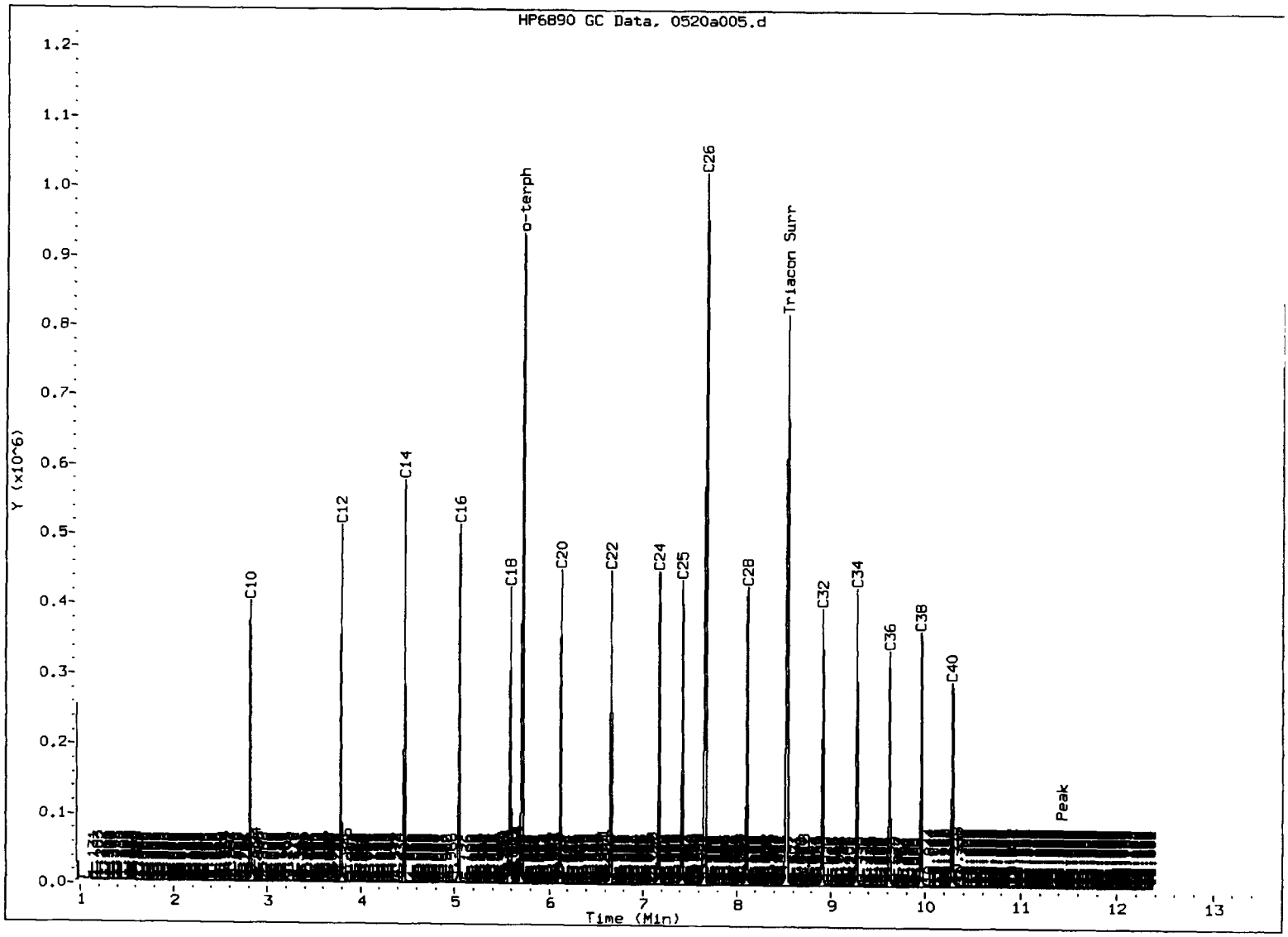
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



FID:4A-2C/RTX-1 RT0520

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JLV Date: 5/23/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130520.b/0520a006.d
Method: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/21/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: IB0520
Client ID:
Injection: 20-MAY-2013 12:44

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	19455	1.25
C8	----				WATPHD	(C12-C24)	62411	4.30
C10	2.808	-0.004	644	685	WATPHM	(C24-C38)	111363	8.63
C12	3.784	-0.003	856	924	AK102	(C10-C25)	74545	4.33
C14	4.465	-0.003	1058	915	AK103	(C25-C36)	91693	9.96
C16	5.046	-0.004	1093	1041				
C18	5.579	-0.006	1118	1209				
C20	6.119	-0.007	1147	1356				
C22	6.653	-0.007	1104	1411				
C24	7.168	-0.006	1108	1417	MSPIRIT	(Tol-C12)	19455	1.00
C25	7.412	-0.009	1103	2120				
C26	7.652	-0.018	2660	3149				
C28	8.109	-0.005	1699	2863				
C32	8.909	-0.003	10617	11568				
C34	9.275	0.002	1445	2670				
Filter Peak	11.428	0.000	2375	3260	CREOSOT	(C12-C22)	52395	24.01 M
C36	9.628	0.010	1784	4636				
C38	9.946	-0.009	926	440				
C40	10.263	-0.019	1175	746				
o-terph	5.714	-0.001	971656	886821				
Triacon Surr	8.538	-0.002	788091	788120				

Range Times: NW Diesel(3.787 - 7.174) AK102(2.81 - 7.42) Jet A(2.81 - 5.59)
NW M.Oil(7.17 - 9.96) AK103(7.42 - 9.62) OR Diesel(2.81 - 8.11)

Surrogate	Area	Amount	%Rec
o-Terphenyl	886821	46.0	102.2
Triacontane	788120	40.8	90.6

M Indicates the peak was manually integrated

JW 5/23/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130520.b/0520a006.d

Date : 20-MAY-2013 12:44

Client ID:

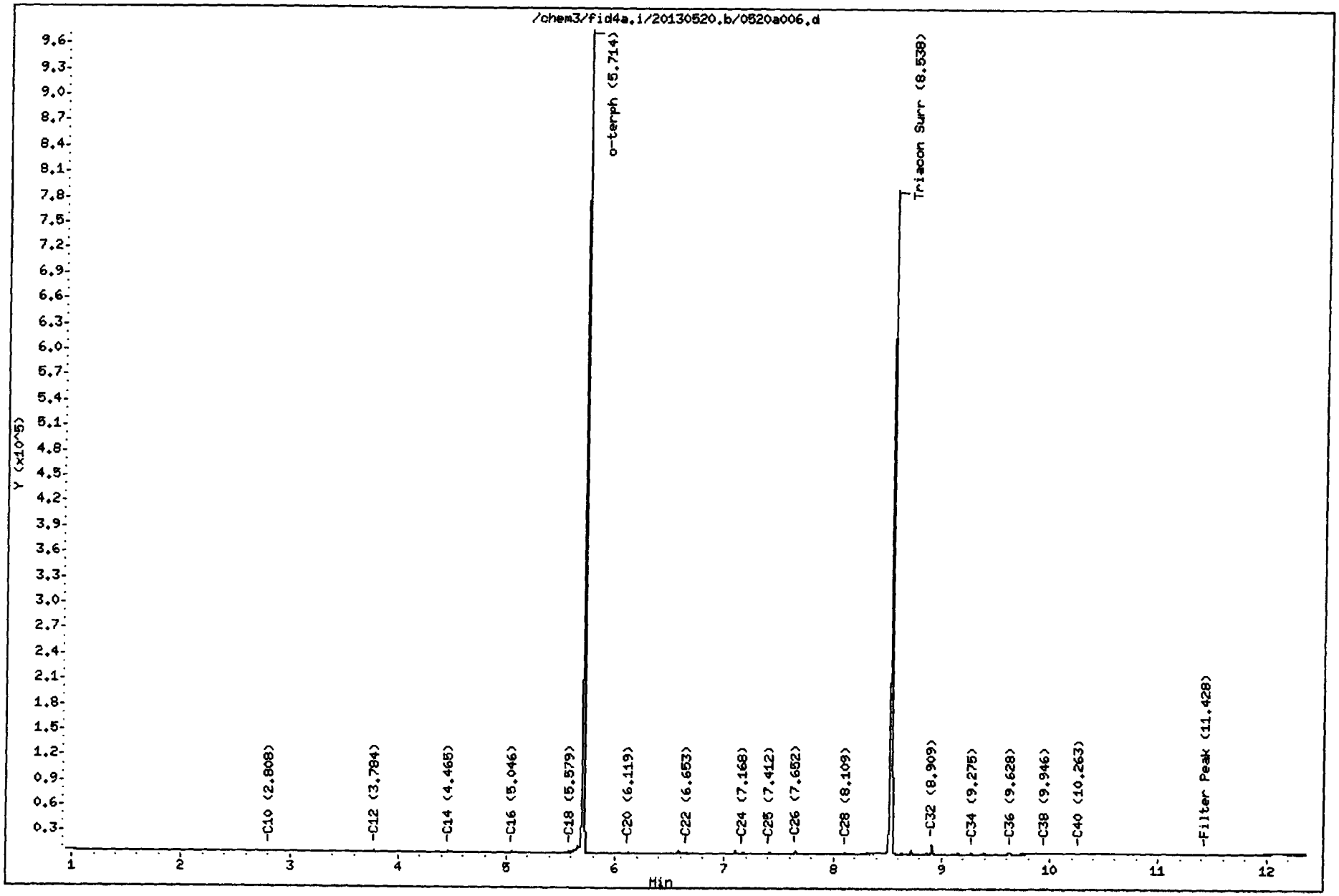
Sample Info: IB0520

Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130520.b/0520a016.d
Method: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/21/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: MOIL 100
Client ID:
Injection: 20-MAY-2013 17:53

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	24175	1.56
C8	----				WATPHD	(C12-C24)	154034	10.61
C10	2.810	0.003	839	810	WATPHM	(C24-C38)	1450456	112.39
C12	3.785	0.001	280	287	AK102	(C10-C25)	205374	11.93
C14	4.470	0.003	106	119	AK103	(C25-C36)	1225986	133.23
C16	5.042	-0.006	98	112				
C18	5.586	0.004	173	270				
C20	6.137	0.015	374	145				
C22	6.658	0.000	1324	1202				
C24	7.173	-0.009	4926	6400	MSPIRIT	(Tol-C12)	24175	1.25
C25	7.429	0.010	57591	54800				
C26	7.671	-0.005	7704	5552				
C28	8.109	-0.008	8377	3449				
C32	8.903	-0.011	12259	13445				
C34	9.266	-0.012	10827	10349				
Filter Peak	11.425	0.001	1630	2427	CREOSOT	(C12-C22)	45869	21.02 M
C36	9.624	0.024	10200	15651				
C38	9.959	0.003	8744	11586				
C40	10.287	0.005	6623	3488				
o-terph	5.707	0.001	3717	2762				
Triacon Surr	8.527	-0.080	224693	178935				

Range Times: NW Diesel(3.784 - 7.182) AK102(2.81 - 7.42) Jet A(2.81 - 5.58)
NW M.Oil(7.18 - 9.96) AK103(7.42 - 9.60) OR Diesel(2.81 - 8.12)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2762	0.1	0.3
Triacontane	178935	9.3	20.6 M

M Indicates the peak was manually integrated

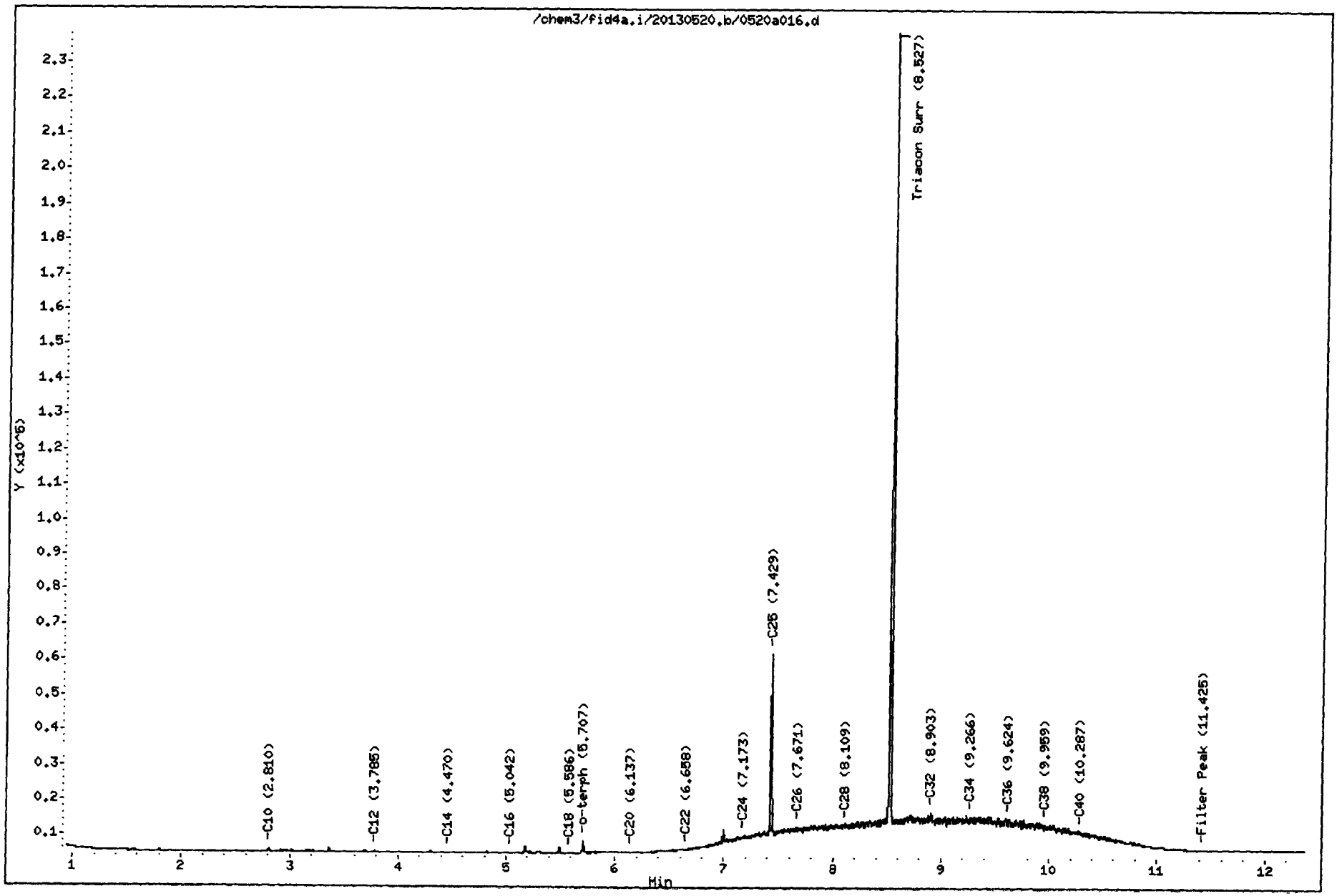
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130520.b/0520a016.d
Date : 20-MAY-2013 17:53
Client ID:
Sample Info: MOIL 100

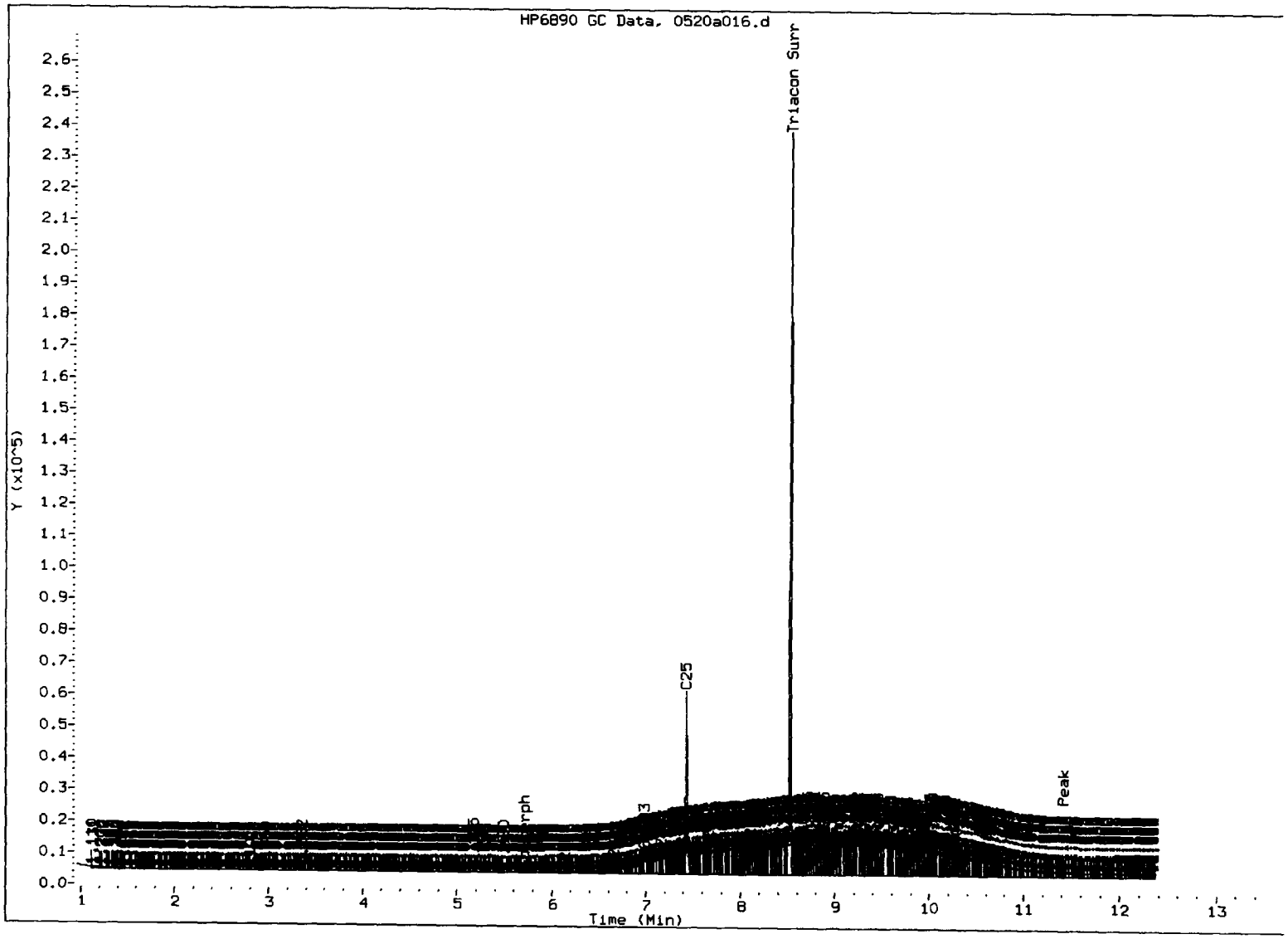
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



FID:4A-2C/RTX-1 MOIL 100 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/28/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130520.b/0520a017.d
Method: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/21/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: MOIL 250
Client ID:
Injection: 20-MAY-2013 18:13

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	15929	1.03
C8	----				WATPHD	(C12-C24)	355546	24.50
C10	2.809	0.001	248	299	WATPHM	(C24-C38)	3559558	275.83
C12	3.785	0.000	144	202	AK102	(C10-C25)	466103	27.08
C14	4.467	0.001	123	173	AK103	(C25-C36)	3038440	330.19
C16	5.046	-0.001	150	206				
C18	5.581	-0.001	313	424				
C20	6.124	0.002	851	976				
C22	6.654	-0.004	3205	2443				
C24	7.171	-0.011	11736	7509	MSPIRIT	(Tol-C12)	15929	0.82
C25	7.431	0.012	48032	71633				
C26	7.673	-0.003	18408	11317				
C28	8.113	-0.005	21350	11785				
C32	8.909	-0.005	33359	52688				
C34	9.264	-0.014	27373	35026				
Filter Peak	11.424	-0.001	1989	4930	CREOSOT	(C12-C22)	92145	42.23 M
C36	9.610	0.010	24082	31276				
C38	9.953	-0.004	20049	7424				
C40	10.288	0.005	16492	11133				
o-terph	5.708	0.002	1347	2100				
Triacon Surr	8.535	-0.072	490945	453086				

Range Times: NW Diesel(3.784 - 7.182) AK102(2.81 - 7.42) Jet A(2.81 - 5.58)
NW M.Oil(7.18 - 9.96) AK103(7.42 - 9.60) OR Diesel(2.81 - 8.12)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2100	0.1	0.2
Triacontane	453086	23.4	52.1 M

JLi 5/23/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

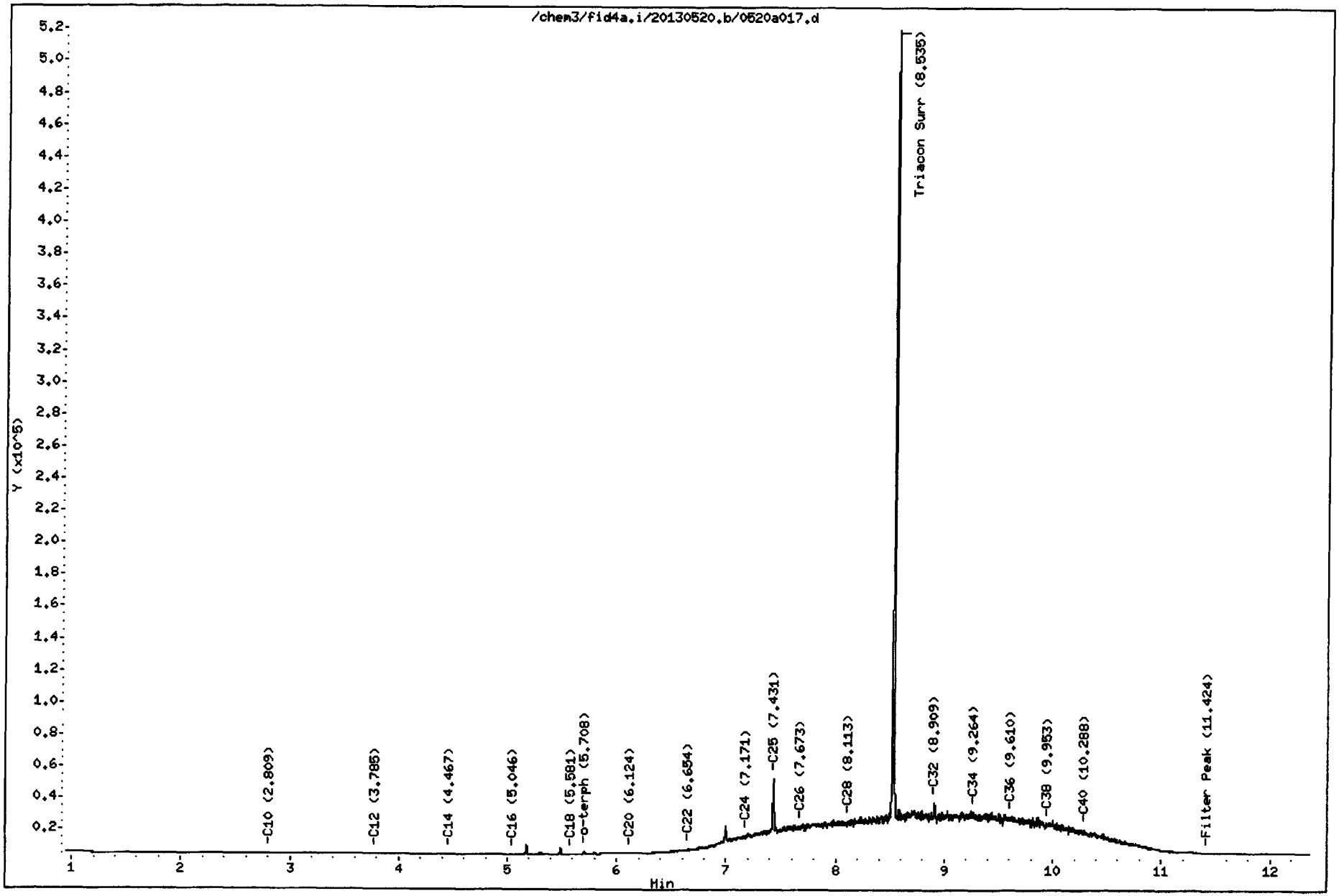
Data File: /chem3/fid4a.i/20130520.b/0520a017.d
Date : 20-MAY-2013 18:13
Client ID:
Sample Info: MOIL 250

Column phase: RTX-1

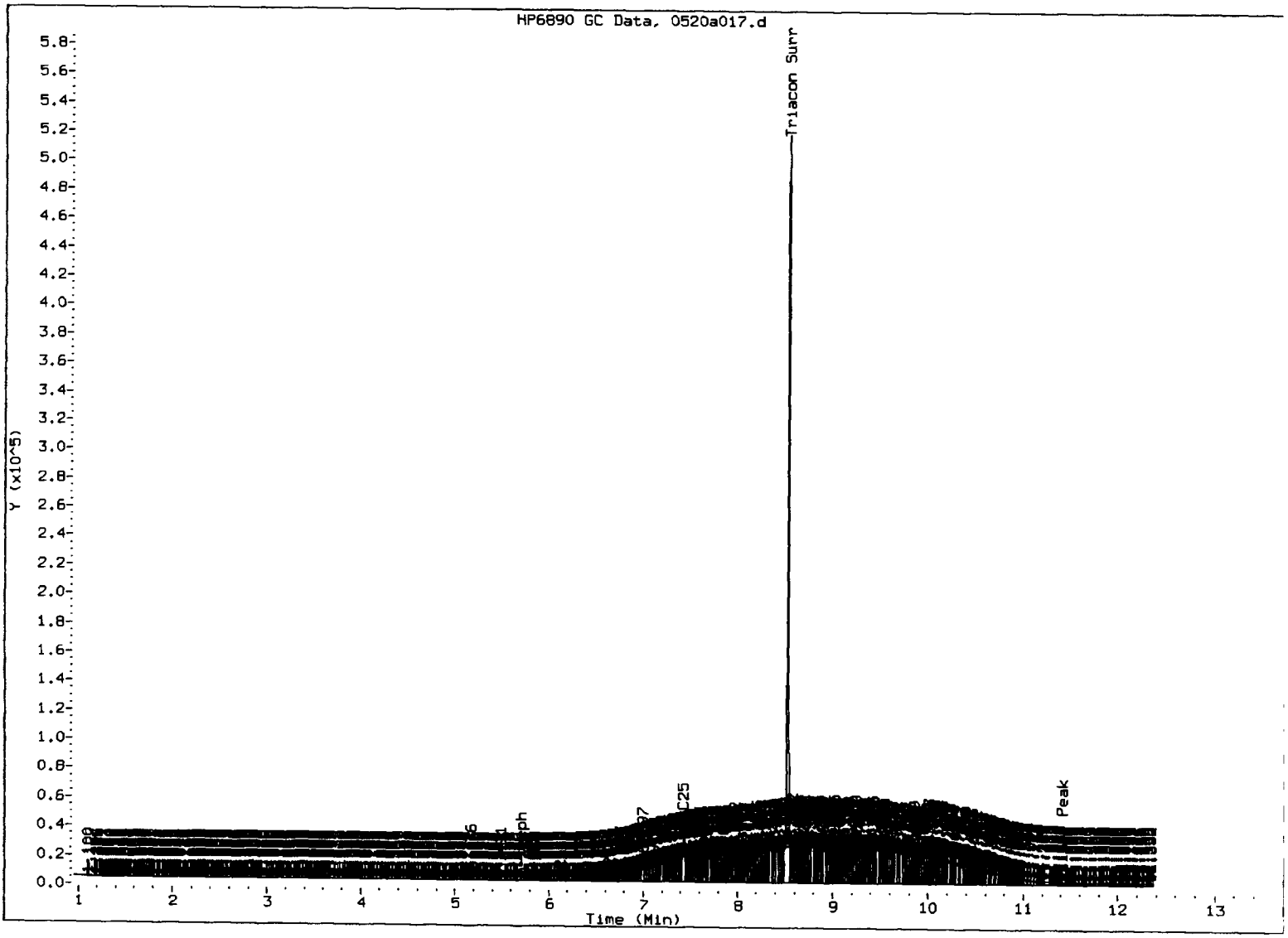
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

5/13/13



FID:4A-2C/RTX-1 MOIL 250 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JD Date: 5/23/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130520.b/0520a018.d
Method: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/21/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: MOIL 500
Client ID:
Injection: 20-MAY-2013 18:34

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	15567	1.00
C8	----				WATPHD	(C12-C24)	659844	45.46
C10	2.808	0.001	213	325	WATPHM	(C24-C38)	6797046	526.69
C12	3.783	-0.001	159	221	AK102	(C10-C25)	879485	51.09
C14	4.467	0.001	146	157	AK103	(C25-C36)	5767745	626.79
C16	5.048	0.001	219	247				
C18	5.582	0.000	589	874				
C20	6.124	0.002	1619	3260				
C22	6.660	0.003	6277	5710				
C24	7.171	-0.011	21659	12421	MSPIRIT	(Tol-C12)	15567	0.80
C25	7.433	0.014	97462	128308				
C26	7.671	-0.005	36765	19602				
C28	8.110	-0.007	42734	29194				
C32	8.907	-0.006	65803	143228				
C34	9.264	-0.014	58749	78583				
Filter Peak	11.423	-0.001	1976	2833	CREOSOT	(C12-C22)	180967	82.94 M
C36	9.627	0.027	43817	17074				
C38	9.958	0.002	40488	64989				
C40	10.286	0.004	25874	17280				
o-terph	5.706	0.000	1267	2262				
Triacon Surr	8.542	-0.065	803149	893545				

Range Times: NW Diesel(3.784 - 7.182) AK102(2.81 - 7.42) Jet A(2.81 - 5.58)
NW M.Oil(7.18 - 9.96) AK103(7.42 - 9.60) OR Diesel(2.81 - 8.12)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2262	0.1	0.3
Triacontane	893545	46.2	102.7 M

VTS 5/23/13

M Indicates the peak was manually integrated

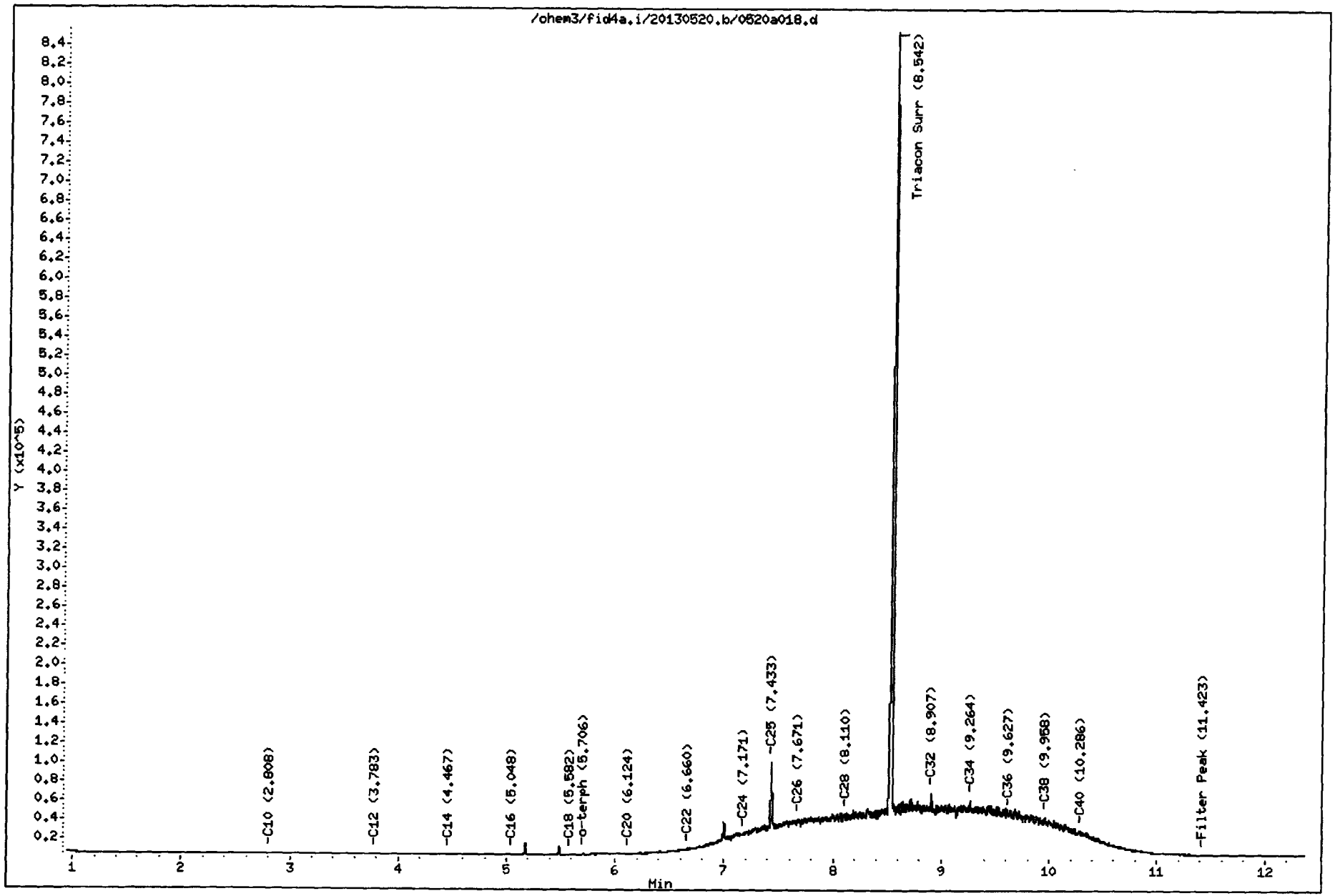
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130520.b/0520a018.d
Date : 20-MAY-2013 18:34
Client ID:
Sample Info: MOIL 500

Column phase: RTX-1

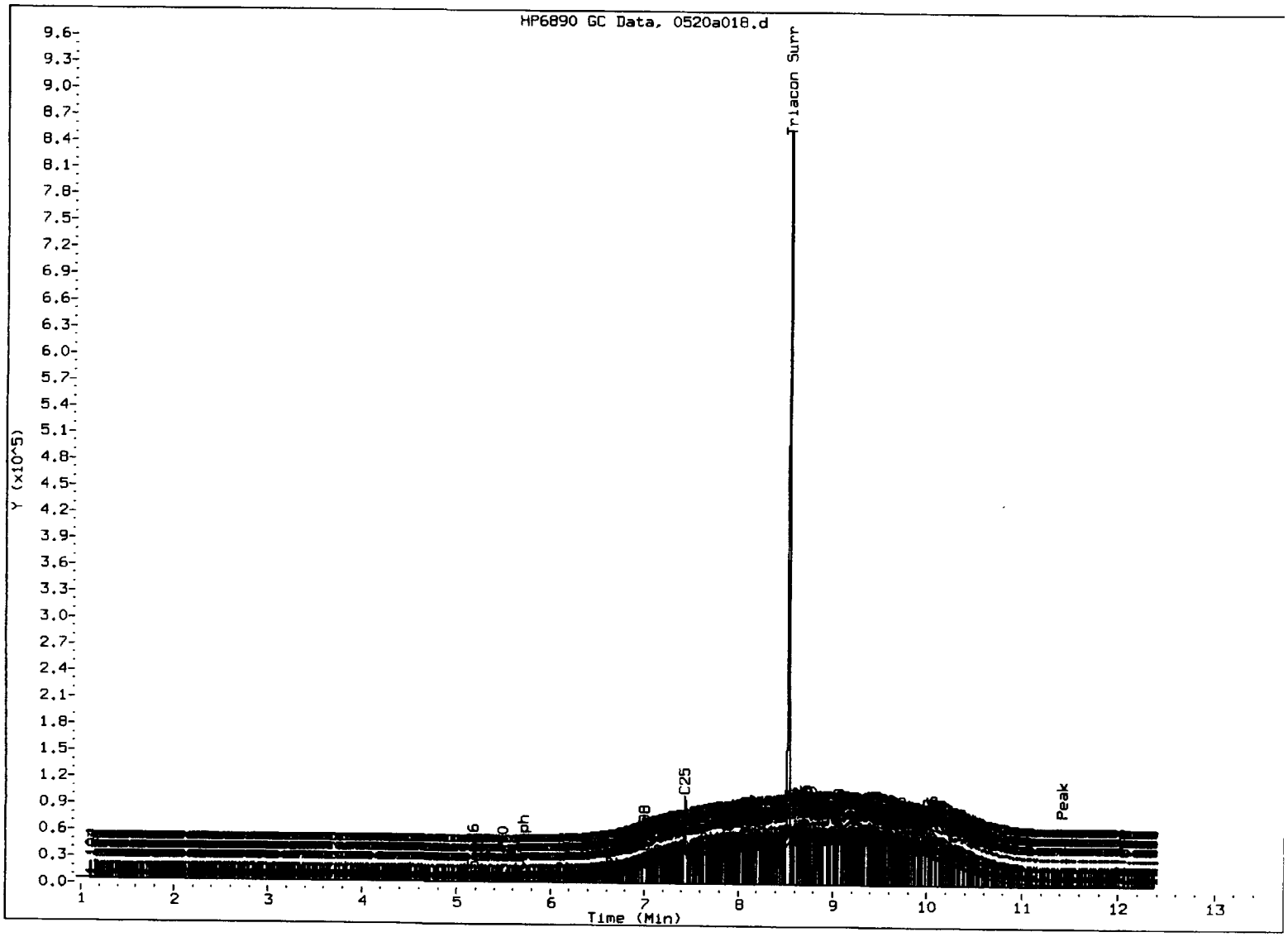
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



FID:4A-2C/RTX-1 MOIL 500

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/23/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130520.b/0520a019.d
Method: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/21/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: MOIL 1000
Client ID:
Injection: 20-MAY-2013 18:55

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	17350	1.12
C8	----				WATPHD	(C12-C24)	1319892	90.94
C10	2.809	0.002	352	424	WATPHM	(C24-C38)	13325548	1032.58
C12	3.784	0.000	230	282	AK102	(C10-C25)	1790438	104.01
C14	4.465	-0.001	221	280	AK103	(C25-C36)	11532902	1253.29
C16	5.047	0.000	387	463				
C18	5.580	-0.002	989	1282				
C20	6.122	0.000	3397	7259				
C22	6.661	0.004	12270	7034				
C24	7.163	-0.019	46208	71041	MSPIRIT	(Tol-C12)	17350	0.90
C25	7.434	0.015	171873	249495				
C26	7.671	-0.005	67256	26289				
C28	8.112	-0.005	80777	37301				
C32	8.910	-0.003	124446	153622				
C34	9.270	-0.008	103096	131348				
Filter Peak	11.412	-0.012	2616	4789	CREOSOT	(C12-C22)	352836	161.71 M
C36	9.618	0.019	84748	39229				
C38	9.960	0.004	57815	59677				
C40	10.282	0.000	19968	29452				
o-terph	5.705	0.000	2163	3566				
Triacon Surr	8.555	-0.052	1341772	1745193				

Range Times: NW Diesel(3.784 - 7.182) AK102(2.81 - 7.42) Jet A(2.81 - 5.58)
NW M.Oil(7.18 - 9.96) AK103(7.42 - 9.60) OR Diesel(2.81 - 8.12)

Surrogate	Area	Amount	%Rec
o-Terphenyl	3566	0.2	0.4
Triacontane	1745193	90.3	200.7 M

JL 5/23/13

M Indicates the peak was manually integrated

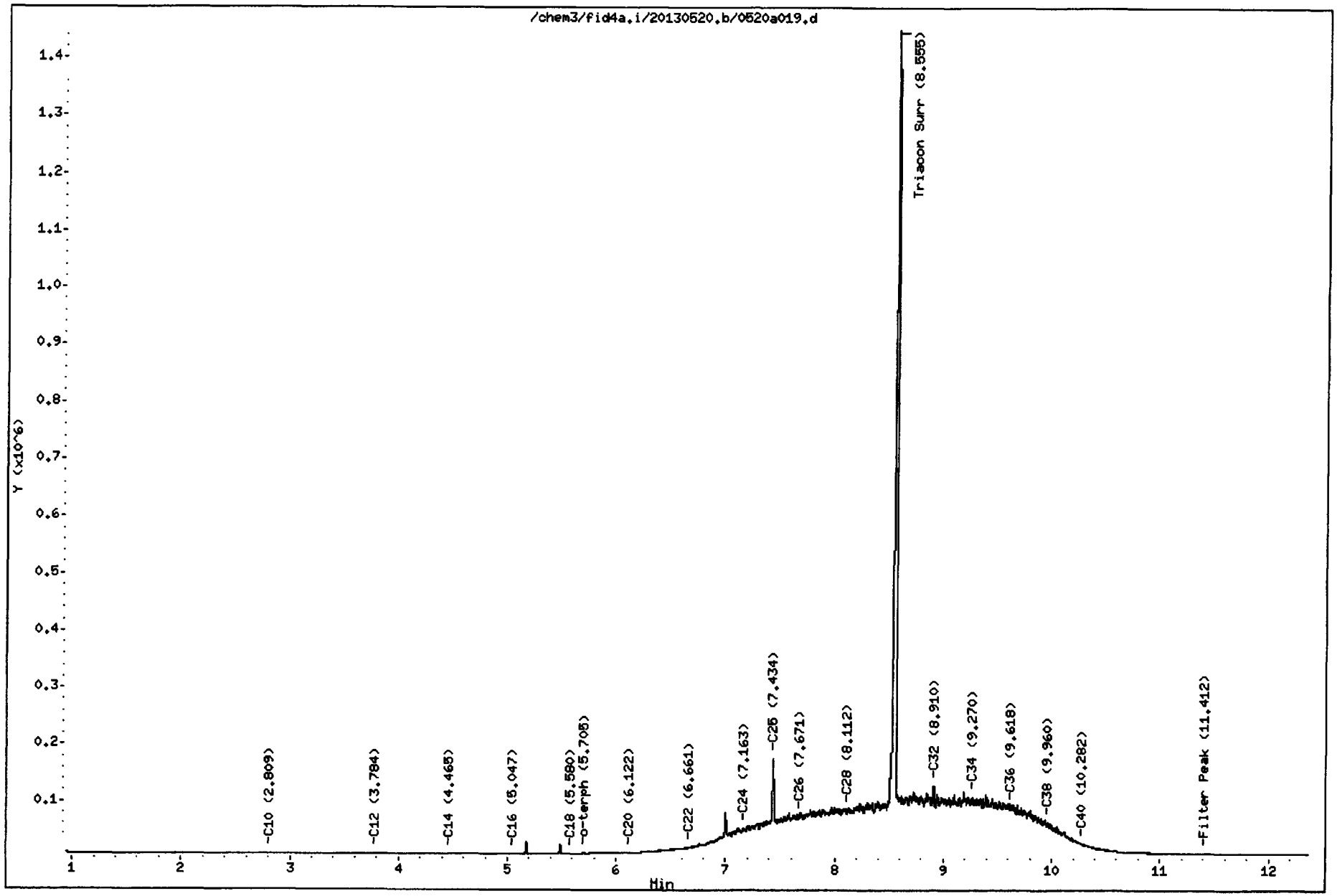
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130520.b/0520a019.d
Date : 20-MAY-2013 18:55
Client ID:
Sample Info: MOIL 1000

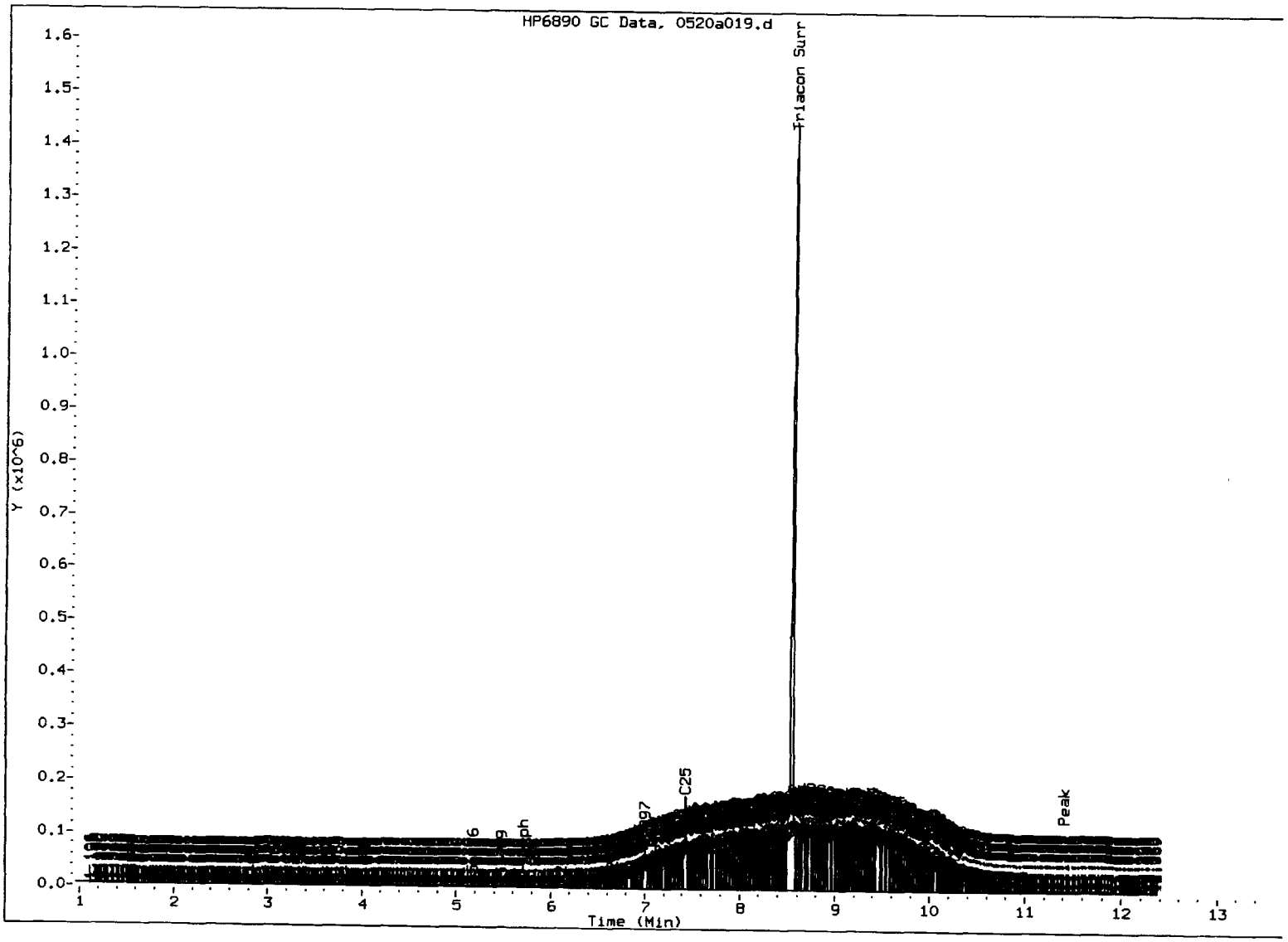
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



FID:4A-2C/RTX-1 MOIL 1000 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
2. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/23/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130520.b/0520a020.d
Method: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/21/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: MOIL 2500
Client ID:
Injection: 20-MAY-2013 19:15

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	22896	1.47
C8	----				WATPHD	(C12-C24)	3182500	219.26
C10	2.808	0.001	728	889	WATPHM	(C24-C38)	29595565	2293.32
C12	3.785	0.001	215	274	AK102	(C10-C25)	4325726	251.28
C14	4.466	0.000	391	603	AK103	(C25-C36)	27414450	2979.16
C16	5.048	0.001	740	817				
C18	5.581	-0.001	2484	3604				
C20	6.121	-0.001	7642	9147				
C22	6.662	0.005	30689	31483				
C24	7.166	-0.016	111904	258300	MSPIRIT	(Tol-C12)	22896	1.18
C25	7.422	0.003	147494	83678				
C26	7.666	-0.010	173085	95317				
C28	8.101	-0.016	211796	369604				
C32	8.921	0.008	300754	572969				
C34	9.259	-0.019	234207	255186				
Filter Peak	11.420	-0.004	4557	9083	CREOSOT	(C12-C22)	828825	379.86 M
C36	9.619	0.020	127280	203181				
C38	9.966	0.010	29143	46278				
C40	10.292	0.010	11624	9653				
o-terph	5.706	0.001	4905	9021				
Triacon Surr	8.581	-0.026	2329349	4162846				

Range Times: NW Diesel(3.784 - 7.182) AK102(2.81 - 7.42) Jet A(2.81 - 5.58)
NW M.Oil(7.18 - 9.96) AK103(7.42 - 9.60) OR Diesel(2.81 - 8.12)

Surrogate	Area	Amount	%Rec
o-Terphenyl	9021	0.5	1.0
Triacontane	4162846	215.4	478.6 M

JW 5/21/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

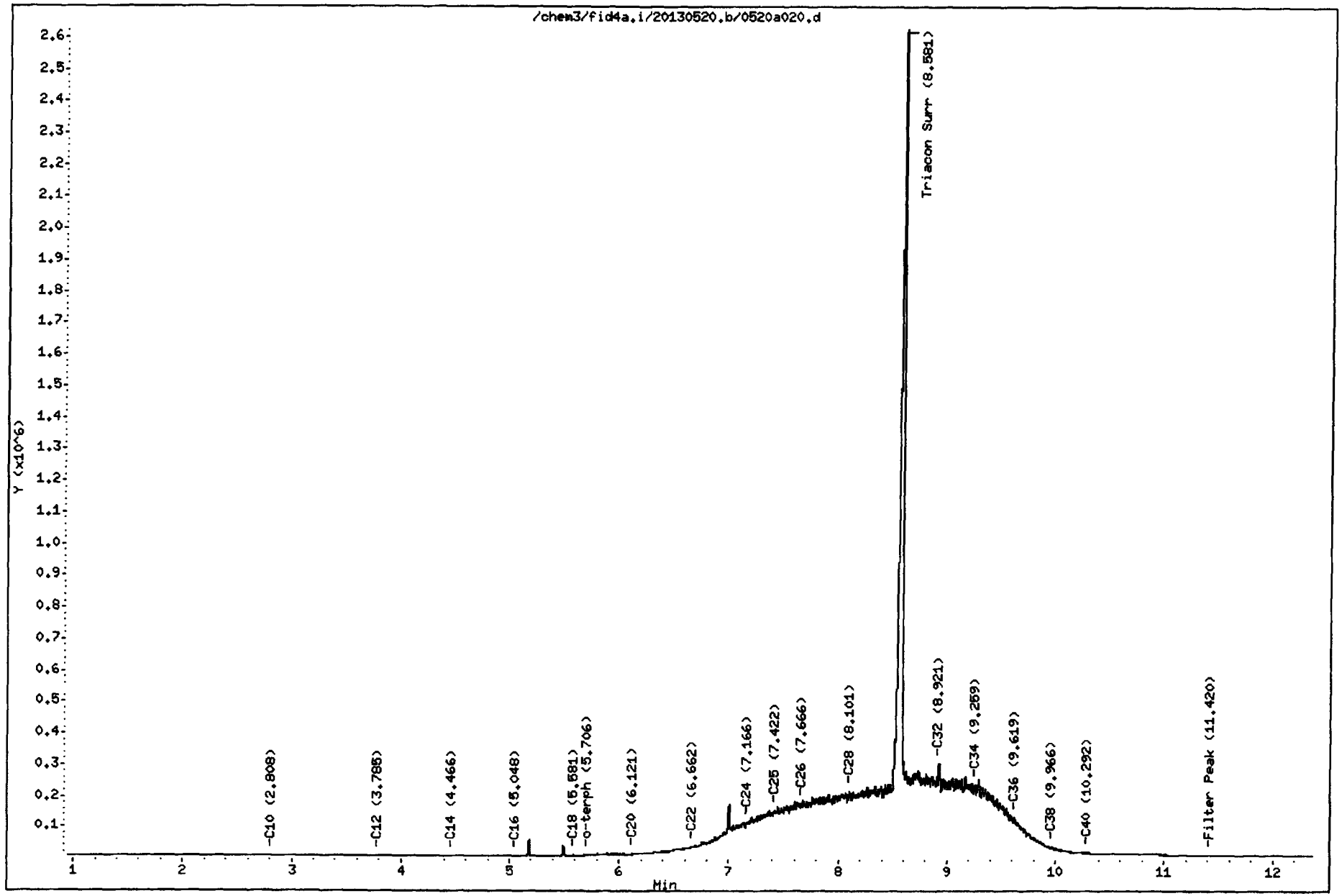
Data File: /chem3/fid4a.i/20130520.b/0520a020.d
Date : 20-MAY-2013 19:15
Client ID:
Sample Info: MOIL 2500

Column phase: RTX-1

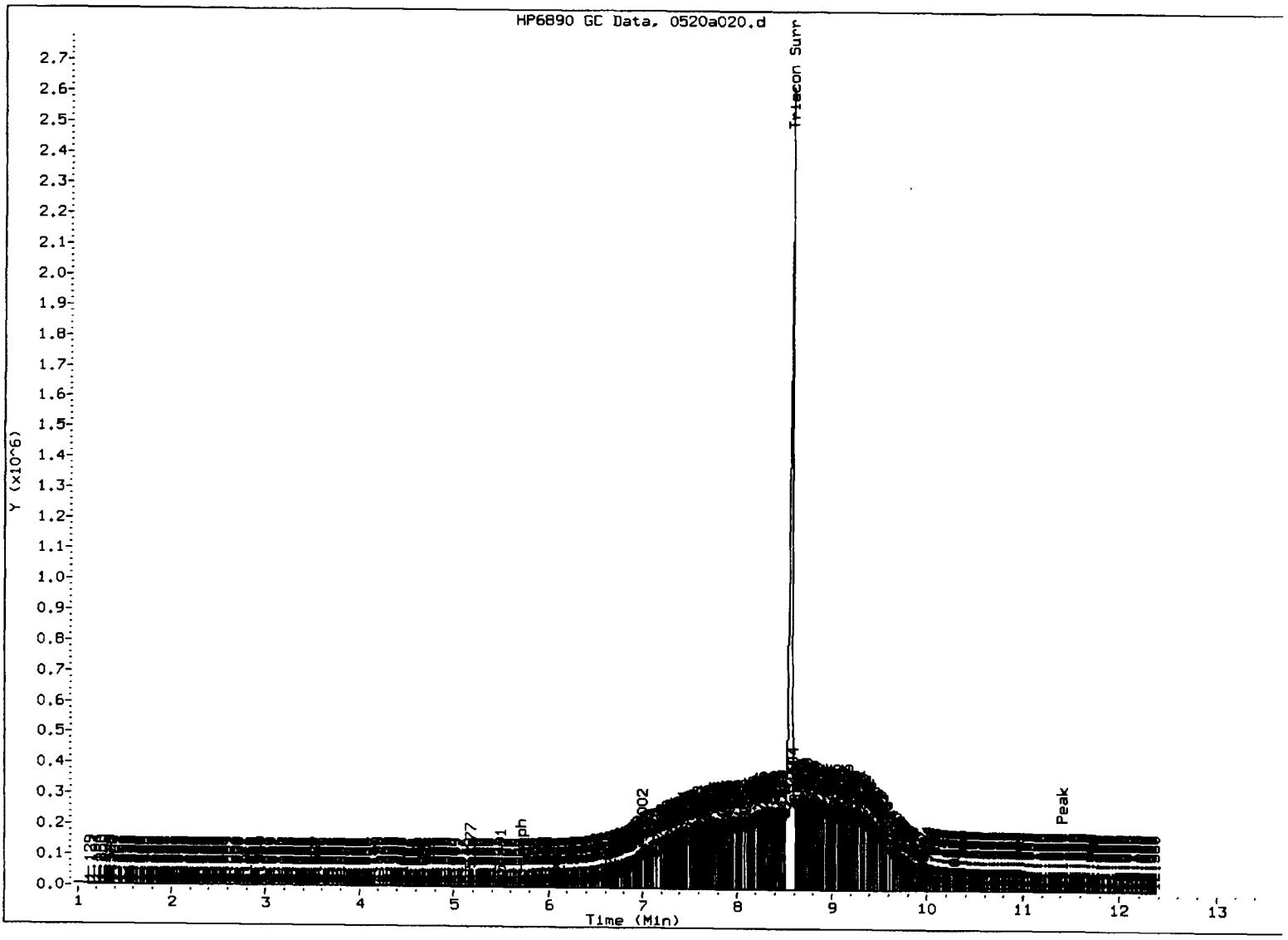
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

TJ 5/23/13



FID:4A-2C/RTX-1 MOIL 2500 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/23/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130520.b/0520a021.d
Method: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/21/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: MOIL 5000
Client ID:
Injection: 20-MAY-2013 19:36

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	36257	2.33
C8	----				WATPHD	(C12-C24)	6411801	441.75
C10	2.807	0.000	1267	1387	WATPHM	(C24-C38)	49649760	3847.30
C12	3.784	0.000	346	662	AK102	(C10-C25)	8386271	487.16
C14	4.466	0.000	721	1093	AK103	(C25-C36)	47071074	5115.27
C16	5.047	0.000	1442	1871				
C18	5.582	0.000	4780	4551				
C20	6.122	0.000	15200	15315				
C22	6.657	0.000	57089	32638				
C24	7.182	0.000	221919	252645	MSPIRIT	(Tol-C12)	36257	1.87
C25	7.419	0.000	298731	540419				
C26	7.676	0.000	348000	200434				
C28	8.117	0.000	402579	478996				
C32	8.913	0.000	462445	343691				
C34	9.278	0.000	233604	319943				
Filter Peak	11.424	0.000	8515	4748	CREOSOT	(C12-C22)	1658361	760.05 M
C36	9.599	0.000	58832	93060				
C38	9.956	0.000	23917	8060				
C40	10.282	0.000	18735	19357				
o-terph	5.705	0.000	9307	22785				
Triacon Surr	8.607	0.000	3266655	8189752				

Range Times: NW Diesel(3.784 - 7.182) AK102(2.81 - 7.42) Jet A(2.81 - 5.58)
NW M.Oil(7.18 - 9.96) AK103(7.42 - 9.60) OR Diesel(2.81 - 8.12)

Surrogate	Area	Amount	%Rec
o-Terphenyl	22785	1.2	2.6
Triacontane	8189752	423.7	941.6 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

JW 5/23/13

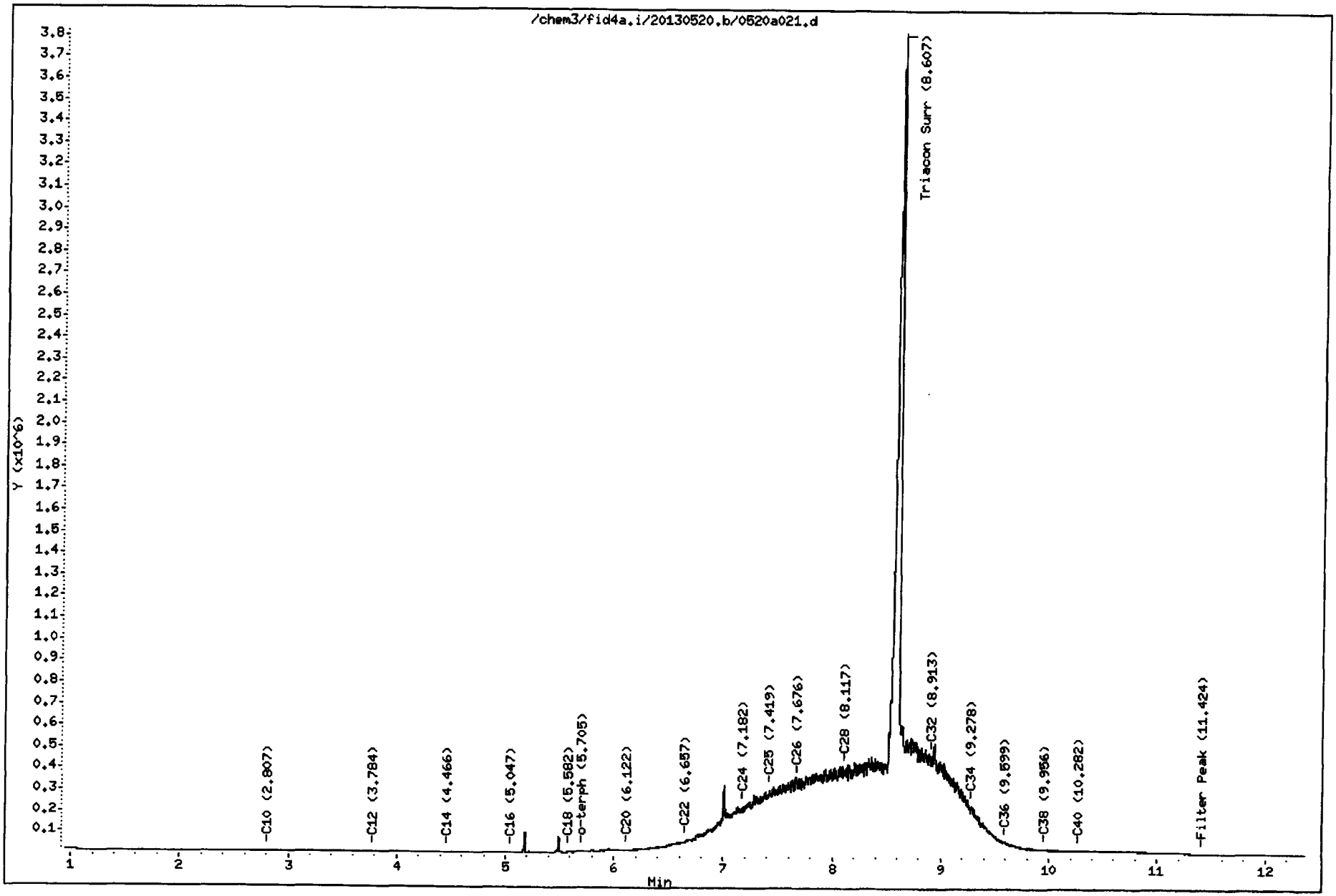
Data File: /chem3/fid4a.i/20130520.b/0520a021.d
Date : 20-MAY-2013 19:36
Client ID:
Sample Info: MOIL 5000

Column phase: RTX-1

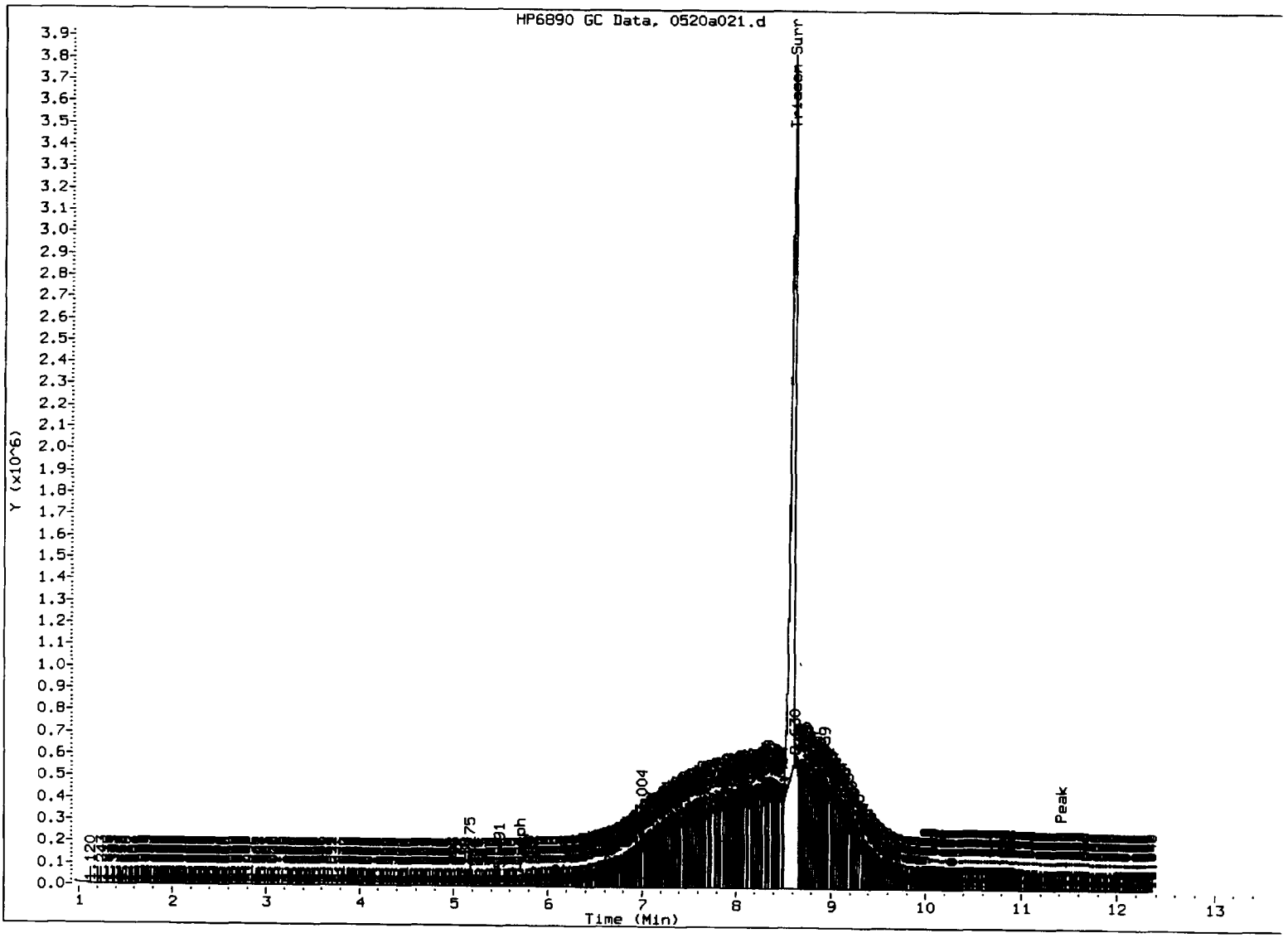
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

JW 5/22 3/13



FID:4A-2C/RTX-1 MOIL 5000 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 5/23/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130520.b/0520a022.d
Method: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/21/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: MOIL ICV 500
Client ID:
Injection: 20-MAY-2013 19:56

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	15771	1.01
C8	----				WATPHD	(C12-C24)	829880	57.18
C10	2.808	0.001	189	281	WATPHM	(C24-C38)	6674027	517.16
C12	3.784	-0.001	161	290	AK102	(C10-C25)	1068263	62.06
C14	4.465	-0.001	162	205	AK103	(C25-C36)	5572936	605.62
C16	5.046	-0.002	377	503				
C18	5.580	-0.002	835	1055				
C20	6.119	-0.003	1833	1822				
C22	6.651	-0.006	8261	5977				
C24	7.195	0.013	27115	53273	MSPIRIT	(Tol-C12)	15771	0.81
C25	7.413	-0.006	30803	22615				
C26	7.675	-0.002	34939	22778				
C28	8.113	-0.004	39970	57399				
C32	8.906	-0.008	57932	87155				
C34	9.282	0.003	48734	36271				
Filter Peak	11.414	-0.010	2959	5095	CREOSOT	(C12-C22)	248124	113.72 M
C36	9.597	-0.003	48854	35842				
C38	9.951	-0.005	36991	20913				
C40	10.279	-0.003	26781	24957				
o-terph	5.705	0.000	1096	1201				
Triacon Surr	8.541	-0.066	889882	879328				

Range Times: NW Diesel(3.784 - 7.182) AK102(2.81 - 7.42) Jet A(2.81 - 5.58)
NW M.Oil(7.18 - 9.96) AK103(7.42 - 9.60) OR Diesel(2.81 - 8.12)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1201	0.1	0.1
Triacontane	879328	45.5	101.1 M

M Indicates the peak was manually integrated

JW 5/23/13

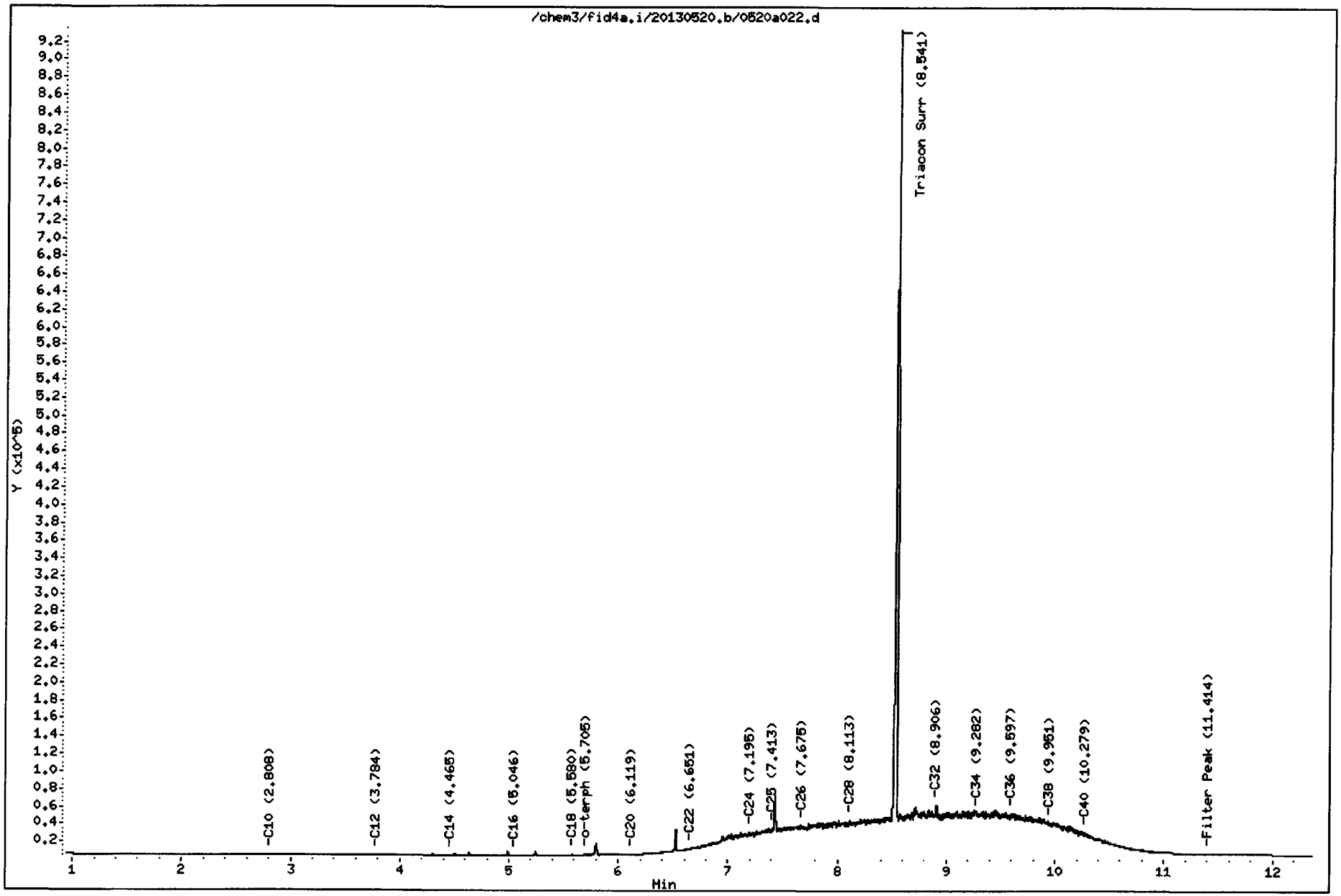
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130520.b/0520a022.d
Date : 20-MAY-2013 19:56
Client ID:
Sample Info: MOIL ICV 500

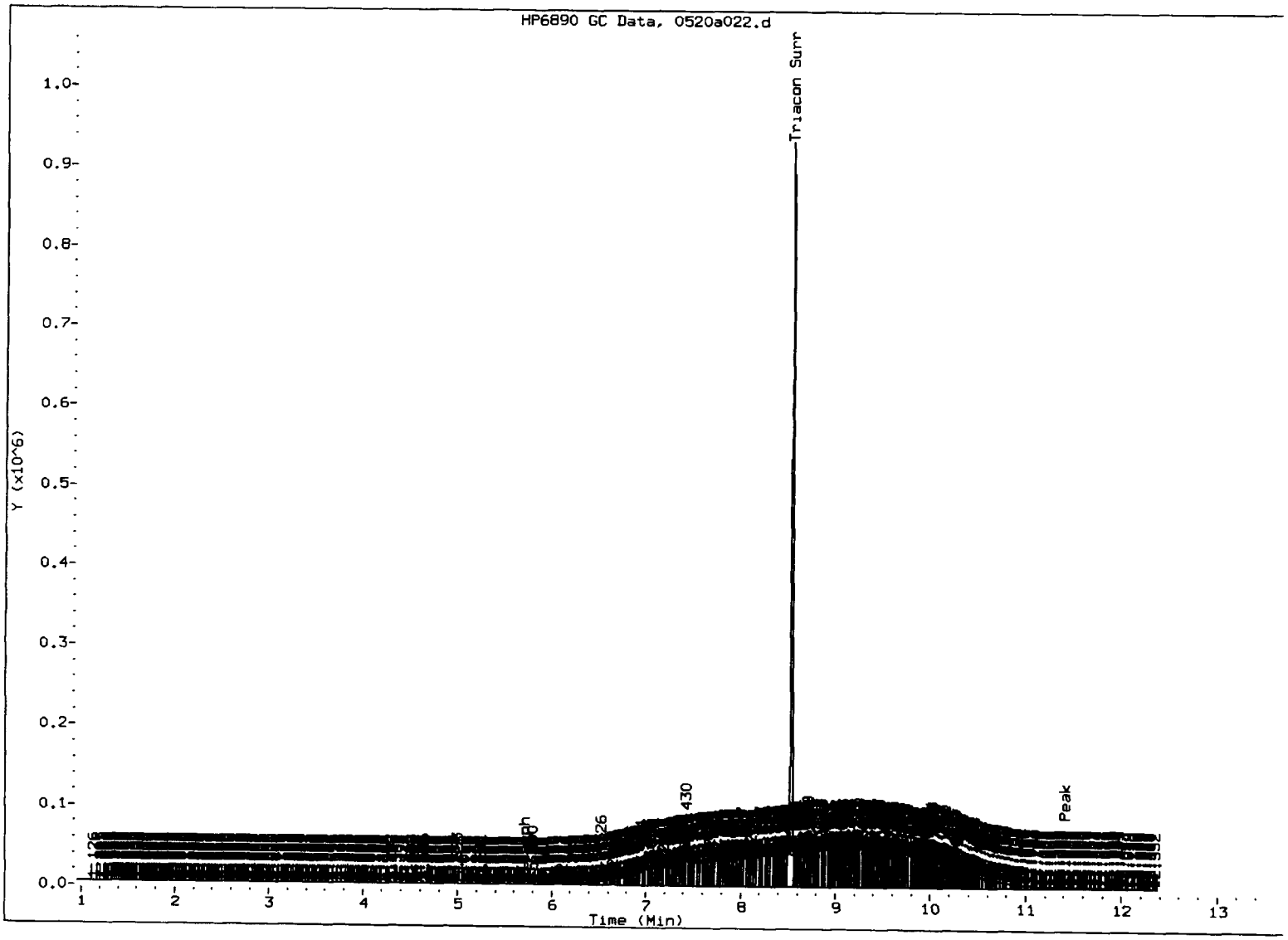
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

Column phase: RTX-1



FID:4A-2C/RTX-1 MOIL ICV 500 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 5/23/10

TPHD Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WY32, WY33

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WY32 Client ID: SAIC

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date: 4/13/12 & 5/20/13 Analysis Start Date: 7/24/12

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / Y / N / ✓	Method Blank in Control?	Y / N / ✓
Retention times within Windows?	Y / N /	LCS / LCSD Recovery in Control?	Y / N /
CCAL met %D Criteria?	Y / N / ✓	LCS / LCSD RPD ≤30%?	NA / LCS only
Surrogate Recovery in Control?	Y / N / ✓	MS / MSD Recovery in Control?	Y / N / ✓
Internal STD. within 50-200%?	NA / Y / N / ✓	MS / MSD RPD ≤30%?	NA / <5%
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / ✓
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ✓

Detail problems, corrective actions and/or other pertinent information below

Samples contain diesel and motor oil.

A-C run @ 5x dilution.

(Review 1) Analyst: JW **Date:** 7/29/12

(Review 2) Reviewer: [signature] **Date:** 7/29/12

Analytical Resources Inc.: Organics Instrument Log

FID-4A Serial No.: US00003247

Date: 7/26/13 Analysis: TPHD Analyst: JW

Column 1 Serial No.: 1022005 Column Type: RTX-1

Column 2 Serial No.: — Column Type: —

GC Method: TPH ICal Date: 4/18/13 5/20/13 Injection Volume: 1uL

IS	Ical/Ccal	ICV
	2043-3,4	
	2091-2	
	2041-4	

Document All Maintenance Tasks In StarLIMS

GC LOG SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130726.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	26-JUL-2013 08:10	0726a001.d	1	RINSE	
2	26-JUL-2013 08:30	0726a002.d	1	RT0726	
3	26-JUL-2013 08:51	0726a003.d	1	IB0726	
4	26-JUL-2013 09:11	0726a004.d	1	DIESEL#1	Duwamish Ship Supp
5	26-JUL-2013 09:32	0726a005.d	1	MOIL#1	Duwamish Ship Supp
6	26-JUL-2013 09:54	0726a006.d	1	WY42MBW1	WY42MBW1
7	26-JUL-2013 10:14	0726a007.d	1	WY42LCSW1	WY42LCSW1
8	26-JUL-2013 10:35	0726a008.d	1	WY42LCSDW1	WY42LCSDW1
9	26-JUL-2013 10:56	0726a009.d	1	WY42A	DSIP2-SP-01-072213
10	26-JUL-2013 11:16	0726a010.d	1	WY42B	DSIP2-SP-02-072213
11	26-JUL-2013 11:37	0726a011.d	1	WY42C	DSIP2-SP-52-072213
12	26-JUL-2013 11:58	0726a012.d	1	WY10MBS1	WY10MBS1
13	26-JUL-2013 12:18	0726a013.d	1	WY10LCSS1	WY10LCSS1
14	26-JUL-2013 12:39	0726a014.d	1	WY10LCSDS1	WY10LCSDS1
15	26-JUL-2013 13:00	0726a015.d	1	WY10QLS	
16	26-JUL-2013 13:20	0726a016.d	5	WY10A	EX-9-17.0
17	26-JUL-2013 13:41	0726a017.d	1	WY10B	EX-11-17.0
18	26-JUL-2013 14:01	0726a018.d	1	WY10C	EX-12-16.0
19	26-JUL-2013 14:22	0726a019.d	1	DIESEL#2	Duwamish Ship Supp
20	26-JUL-2013 14:42	0726a020.d	1	MOIL#2	Duwamish Ship Supp
21	26-JUL-2013 15:03	0726a021.d	1	WY32MBS1	WY32MBS1
22	26-JUL-2013 15:24	0726a022.d	1	WY32LCSS1	WY32LCSS1
23	26-JUL-2013 15:44	0726a023.d	1	WY32QLS	
24	26-JUL-2013 16:05	0726a024.d	5	WY32A	UP-CB-B8-20130626-S
25	26-JUL-2013 16:25	0726a025.d	5	WY32B	UP-MHF-165-20130626
26	26-JUL-2013 16:45	0726a026.d	5	WY32BMS	UP-MHF-165-2013 MS
27	26-JUL-2013 17:06	0726a027.d	5	WY32BMSD	UP-MHF-165-2013 MSD
28	26-JUL-2013 17:26	0726a028.d	5	WY32C	UP-CB-A6-20130626-S
29	26-JUL-2013 17:47	0726a029.d	1	DIESEL#3	
30	26-JUL-2013 18:07	0726a030.d	1	MOIL#3	
31	26-JUL-2013 18:28	0726a031.d	1	WY29MBS1	WY29MBS1
32	26-JUL-2013 18:49	0726a032.d	1	WY29A	LOD Verification
33	26-JUL-2013 19:10	0726a033.d	1	WY26MBW1	WY26MBW1
34	26-JUL-2013 19:30	0726a034.d	1	WY26A	LOD Verification
35	26-JUL-2013 19:51	0726a035.d	1	WY28MBS1	WY28MBS1
36	26-JUL-2013 20:12	0726a036.d	1	WY28A	LOD Verification
37	26-JUL-2013 20:32	0726a037.d	1	DIESEL#4	
38	26-JUL-2013 20:53	0726a038.d	1	MOIL#4	

JW 7/29/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130726.b

ARI Job No.: RT07 Method: ftphfid4a.m Instrument: fid4a.i Date: 26-JUL-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0830	0726a002.d	RT0726		1	NO MANUAL INTEGRATION
0851	0726a003.d	IB0726		1	NO MANUAL INTEGRATION
1422	0726a019.d	DIESEL#2	Duwamish S	1	o-terph,
1442	0726a020.d	MOIL#2	Duwamish S	1	Triacon Surr,
1503	0726a021.d	WY32MBS1	WY32MBS1	1	NO MANUAL INTEGRATION
1524	0726a022.d	WY32LCSS1	WY32LCSS1	1	o-terph,
1605	0726a024.d	WY32A	UP-CB-B8-2	5	o-terph, Triacon Surr,
1625	0726a025.d	WY32B	UP-MHF-165	5	o-terph, Triacon Surr,
1645	0726a026.d	WY32BMS	UP-MHF-165	5	o-terph, Triacon Surr,
1706	0726a027.d	WY32BMSD	UP-MHF-165	5	o-terph, Triacon Surr,
1726	0726a028.d	WY32C	UP-CB-A6-2	5	o-terph, Triacon Surr,
1747	0726a029.d	DIESEL#3		1	o-terph,
1807	0726a030.d	MOIL#3		1	Triacon Surr,

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130726.b/0726a002.d
Method: /chem3/fid4a.i/20130726.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 07/29/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: RT0726
Client ID:
Injection: 26-JUL-2013 08:30

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.345	0.000	371524	376267	WATPHG	(Tol-C12)	1569439	101.00
C8	1.666	0.000	244154	336738	WATPHD	(C12-C24)	2682821	184.84
C10	3.337	0.000	619521	374876	WATPHM	(C24-C38)	3784598	293.26
C12	4.237	0.000	632049	400103	AK102	(C10-C25)	3512058	204.01
C14	4.917	0.000	624832	406742	AK103	(C25-C36)	3491275	379.40
C16	5.511	0.000	599233	407340				
C18	6.093	0.000	537916	415053				
C20	6.669	0.000	548731	412719				
C22	7.228	0.000	570144	427072				
C24	7.757	0.000	551252	425497				
C25	8.008	0.000	541230	414588				
C26	8.263	0.000	1254394	1245684				
C28	8.710	0.000	549425	431104				
C32	9.550	0.000	518289	429560				
C34	9.948	0.000	472719	409696				
Filter Peak	11.468	0.000	2716	2482	BUNKERC	(C10-C38)	7284796	732.30
C36	10.333	0.000	395415	346319				
C38	10.709	0.000	252939	235167				
C40	11.078	0.000	90664	98262				
o-terph	6.253	0.000	1095360	917554				
Triacon Surr	9.150	0.000	1131637	1122656				

Range Times: NW Diesel(4.237 - 7.757) AK102(3.34 - 8.01) Jet A(3.34 - 6.09)
NW M.Oil(7.76 - 10.71) AK103(8.01 - 10.33) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	917554	47.6	105.7
Triacontane	1122656	58.1	129.1

M Indicates the peak was manually integrated

JV 7/29/13

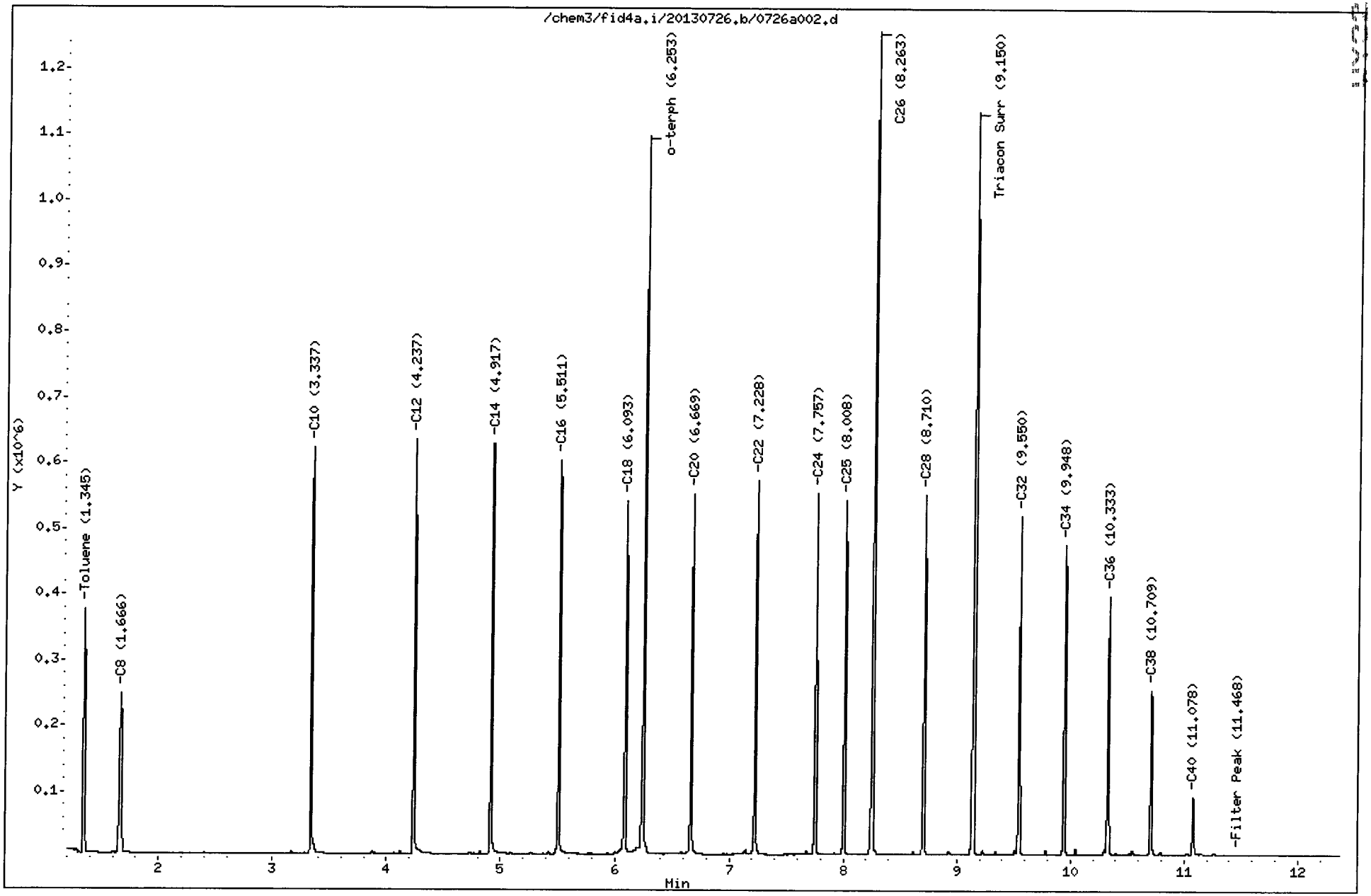
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Bunker C	9947.9	18-JUL-2013

Data File: /chem3/fid4a.i/20130726.b/0726a002.d
Date : 26-JUL-2013 08:30
Client ID:
Sample Info: RT0726

Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130726.b/0726a003.d
Method: /chem3/fid4a.i/20130726.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 07/29/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: IB0726
Client ID:
Injection: 26-JUL-2013 08:51

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.344	-0.001	1068	2522	WATPHG	(Tol-C12)	30859	1.99
C8	1.662	-0.004	312	792	WATPHD	(C12-C24)	146097	10.07
C10	3.335	-0.002	615	901	WATPHM	(C24-C38)	187689	14.54
C12	4.238	0.001	455	1090	AK102	(C10-C25)	166904	9.70
C14	4.917	0.000	703	2217	AK103	(C25-C36)	142248	15.46
C16	5.510	-0.001	796	1966				
C18	6.088	-0.005	1029	1739				
C20	6.668	-0.001	794	1810				
C22	7.224	-0.004	828	1636				
C24	7.750	-0.007	885	1884				
C25	8.003	-0.005	802	1259				
C26	8.280	0.017	1446	2668				
C28	8.702	-0.008	1496	2141				
C32	9.541	-0.009	8066	15869				
C34	9.945	-0.002	1326	3012				
Filter Peak	11.470	0.002	2448	4128	BUNKERC	(C10-C38)	351510	35.34
C36	10.333	0.001	1588	3801				
C38	10.711	0.002	2014	5298				
C40	11.082	0.004	2496	4738				
o-terph	6.254	0.000	1111364	904244				
Triacon Surr	9.143	-0.007	930422	865667				

Range Times: NW Diesel(4.237 - 7.757) AK102(3.34 - 8.01) Jet A(3.34 - 6.09)
NW M.Oil(7.76 - 10.71) AK103(8.01 - 10.33) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	904244	46.9	104.2
Triacontane	865667	44.8	99.5

M Indicates the peak was manually integrated

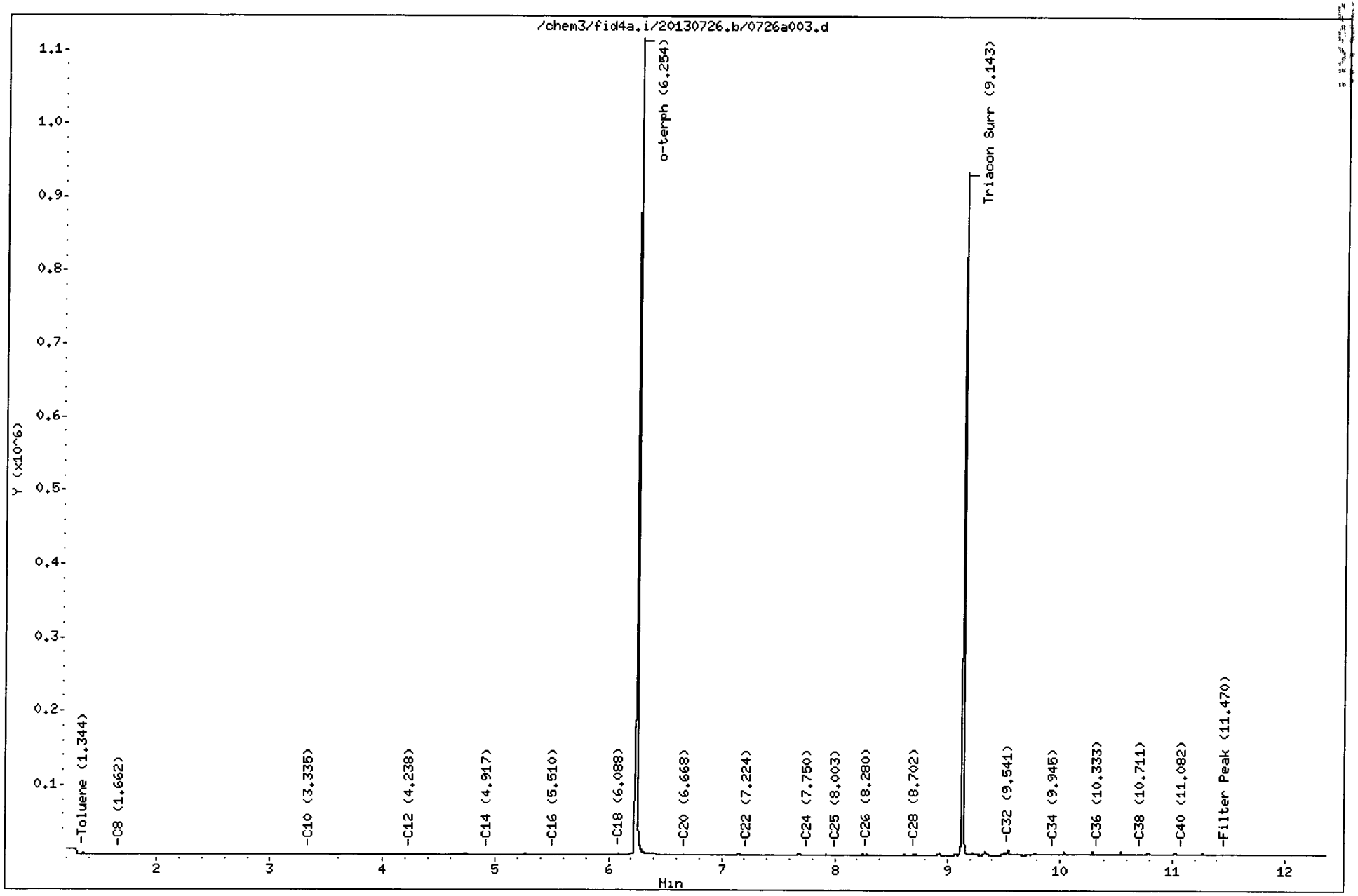
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Bunker C	9947.9	18-JUL-2013

7/29/13

Data File: /chem3/fid4a.i/20130726.b/0726a003.d
Date : 26-JUL-2013 08:51
Client ID:
Sample Info: IB0726

Instrument: fid4a.i

Operator: JR/VTS/JW
Column phase: RTX-1
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130726.b/0726a019.d
Method: /chem3/fid4a.i/20130726.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 07/29/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: DIESEL#2
Client ID: NPDES Sampling Supp
Injection: 26-JUL-2013 14:22

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.340	-0.005	2290	2995	WATPHG	(Tol-C12)	958067	61.65
C8	1.655	-0.011	2127	3444	WATPHD	(C12-C24)	3866077	266.36
C10	3.334	-0.003	24093	15546	WATPHM	(C24-C38)	142148	11.01
C12	4.236	-0.002	42518	42626	AK102	(C10-C25)	4547590	264.17
C14	4.915	-0.002	75888	74041	AK103	(C25-C36)	102317	11.12
C16	5.509	-0.002	116095	124392				
C18	6.089	-0.003	97292	113106				
C20	6.664	-0.005	64141	69975				
C22	7.222	-0.006	31265	35963				
C24	7.750	-0.007	7954	14125				
C25	8.003	-0.005	3358	9141				
C26	8.249	-0.014	1527	2474				
C28	8.711	0.001	539	1362				
C32	9.557	0.007	617	1286				
C34	9.954	0.007	716	589				
Filter Peak	11.468	0.000	1835	399	BUNKERC	(C10-C38)	4674191	469.87
C36	10.322	-0.011	2551	3914				
C38	10.704	-0.005	1195	592				
C40	11.058	-0.020	2014	6436				
o-terph	6.255	0.001	1131378	895478				
Triacon Surr	9.143	-0.006	1171	2589				

Range Times: NW Diesel(4.237 - 7.757) AK102(3.34 - 8.01) Jet A(3.34 - 6.09)
NW M.Oil(7.76 - 10.71) AK103(8.01 - 10.33) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	895478	46.4	103.2 M
Triacontane	2589	0.1	0.3

7/29/13

M Indicates the peak was manually integrated

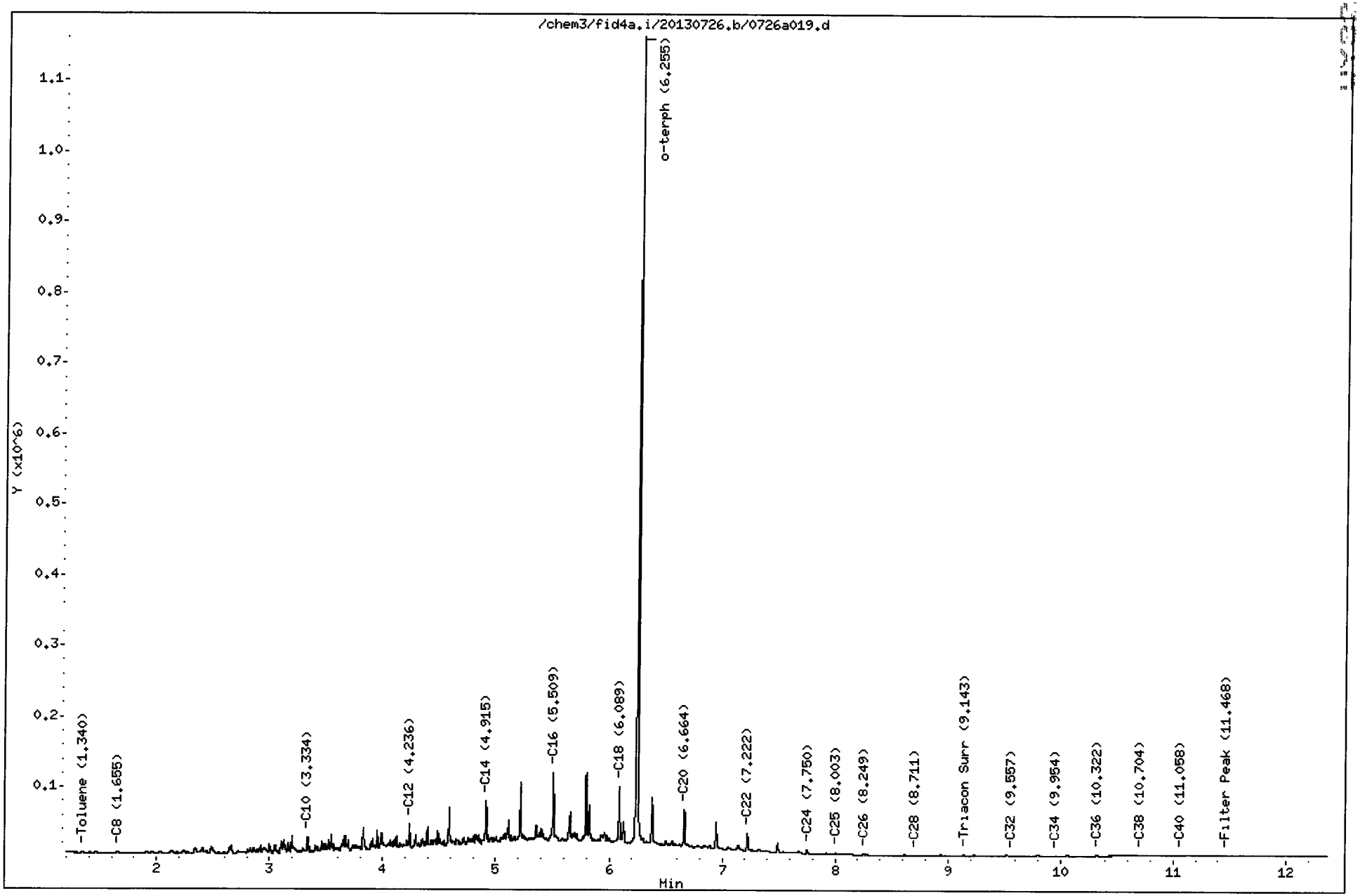
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Bunker C	9947.9	18-JUL-2013

Data File: /chem3/fid4a.i/20130726.b/0726a019.d
Date : 26-JUL-2013 14:22
Client ID: Duwamish Ship Supp
Sample Info: DIESEL#2

Instrument: fid4a.i

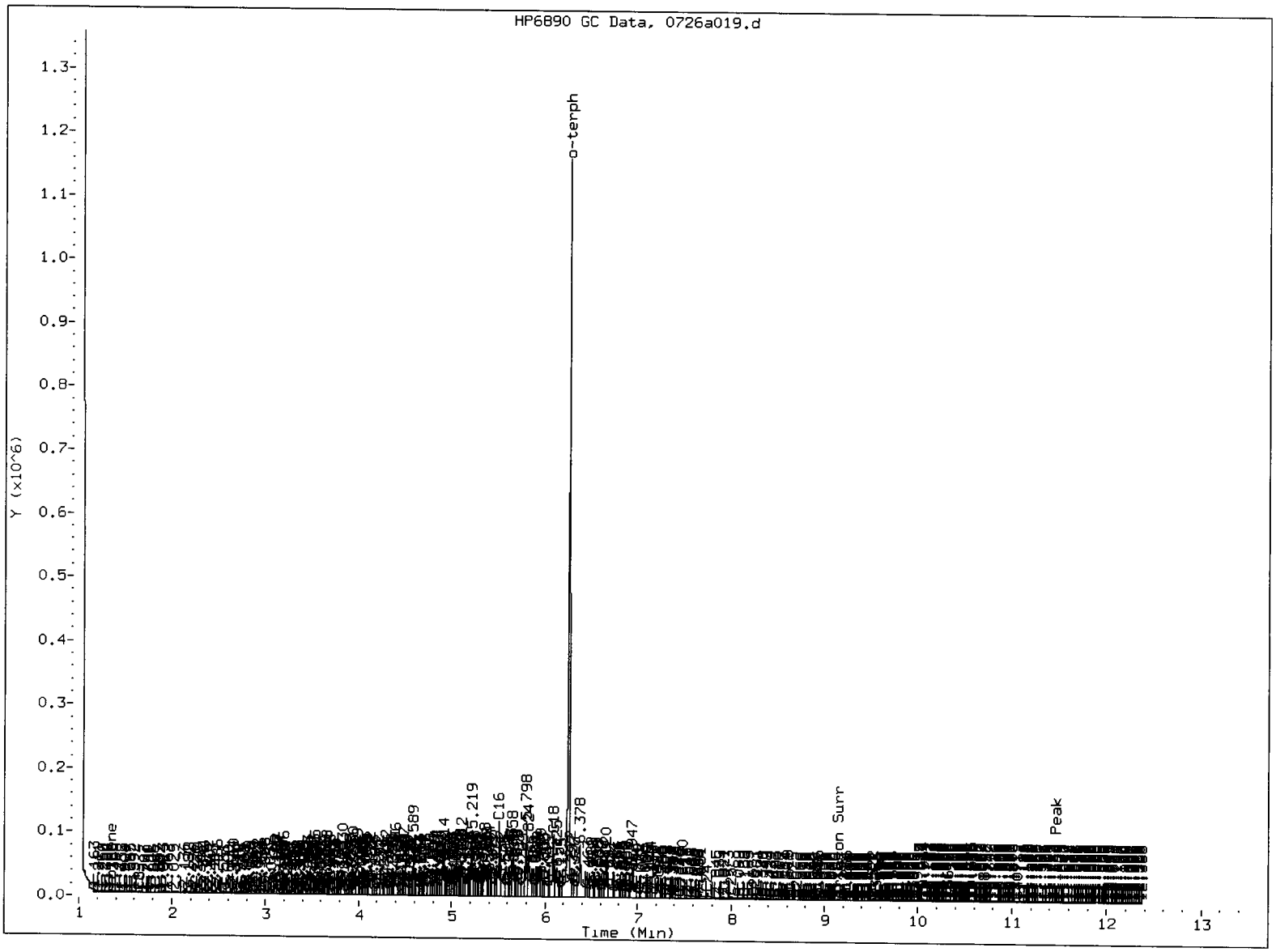
Operator: JR/VTS/JW
Column diameter: 0.25

Column phase: RTX-1



FID:4A-2C/RTX-1 DIESEL#2

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW

Date: 7/29/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130726.b/0726a020.d
Method: /chem3/fid4a.i/20130726.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 07/29/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: MOIL#2
Client ID: NPDES Sampling Supp
Injection: 26-JUL-2013 14:42

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.333	-0.012	1261	5818	WATPHG	(Tol-C12)	41010	2.64
C8	1.654	-0.012	312	650	WATPHD	(C12-C24)	692601	47.72
C10	3.336	-0.001	387	370	WATPHM	(C24-C38)	5980076	463.39
C12	4.237	0.000	514	793	AK102	(C10-C25)	907773	52.73
C14	4.907	-0.010	677	1054	AK103	(C25-C36)	5258169	571.41
C16	5.510	-0.001	655	783				
C18	6.089	-0.004	809	1502				
C20	6.664	-0.005	1773	3954				
C22	7.223	-0.004	5621	9138				
C24	7.756	-0.001	21224	27014				
C25	8.002	-0.006	28598	35883				
C26	8.265	0.002	34211	34040				
C28	8.722	0.012	39383	52536				
C32	9.556	0.007	54585	95904				
C34	9.961	0.013	42732	118280				
Filter Peak	11.476	0.008	3450	8378	BUNKERC	(C10-C38)	6693083	672.82
C36	10.341	0.008	32417	16039				
C38	10.716	0.007	20285	32104				
C40	11.089	0.011	8703	15377				
o-terph	6.243	-0.010	2928	4672				
Triacon Surr	9.156	0.006	942554	877957				

Range Times: NW Diesel(4.237 - 7.757) AK102(3.34 - 8.01) Jet A(3.34 - 6.09)
NW M.Oil(7.76 - 10.71) AK103(8.01 - 10.33) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	4672	0.2	0.5
Triacontane	877957	45.4	100.9 M

M Indicates the peak was manually integrated

7/29/13

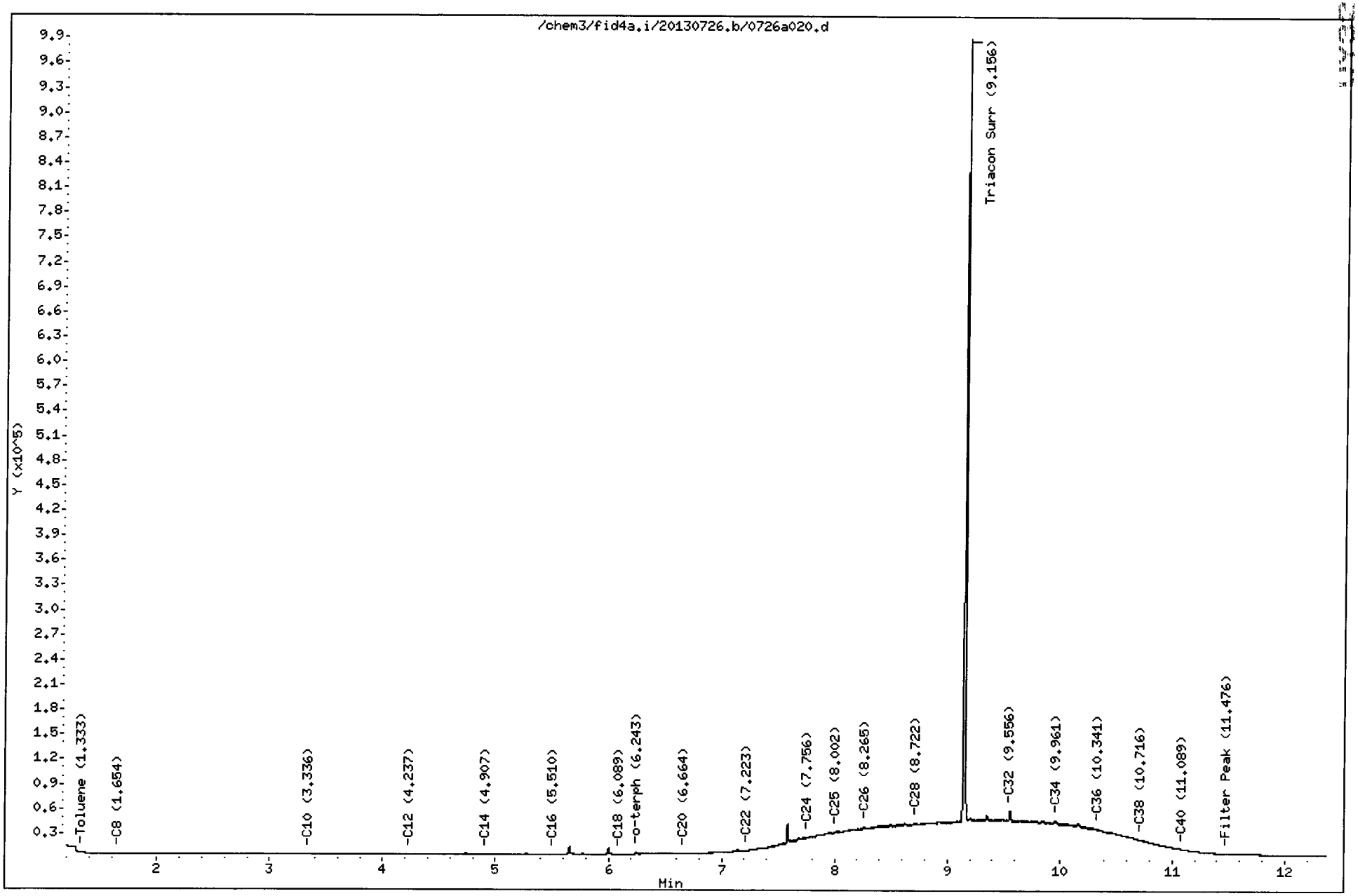
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Bunker C	9947.9	18-JUL-2013

Data File: /chem3/fid4a.i/20130726.b/0726a020.d
Date : 26-JUL-2013 14:42
Client ID: Duwamish Ship Supp
Sample Info: MOIL#2

Instrument: fid4a.i

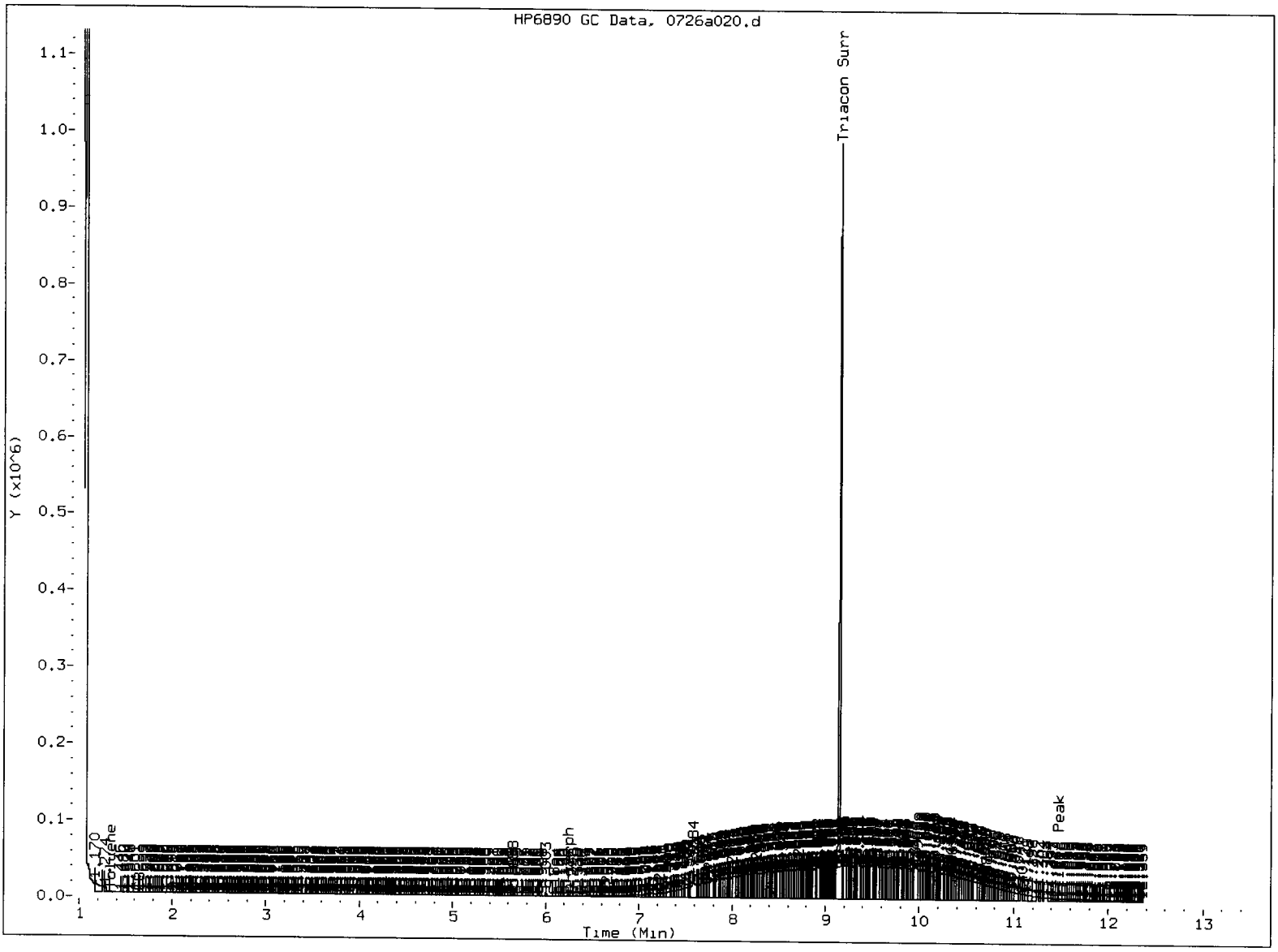
Operator: JR/VTS/JW
Column diameter: 0.25

Column phase: RTX-1



FID:4A-2C/RTX-1 MOIL#2

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW

Date: 7/29/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130726.b/0726a021.d
Method: /chem3/fid4a.i/20130726.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 07/29/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WY32MBS1
Client ID: WY32MBS1
Injection: 26-JUL-2013 15:03

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.341	-0.004	1932	3064	WATPHG	(Tol-C12)	31748	2.04
C8	1.650	-0.016	299	351	WATPHD	(C12-C24)	106365	7.33
C10	3.334	-0.003	300	479	WATPHM	(C24-C38)	106144	8.22
C12	4.235	-0.002	364	231	AK102	(C10-C25)	122822	7.13
C14	4.912	-0.006	481	812	AK103	(C25-C36)	82228	8.94
C16	5.508	-0.003	427	861				
C18	6.090	-0.003	368	437				
C20	6.667	-0.002	406	751				
C22	7.224	-0.003	291	107				
C24	7.752	-0.005	295	291				
C25	8.010	0.002	287	132				
C26	8.248	-0.015	331	660				
C28	8.708	-0.002	800	1237				
C32	9.538	-0.012	1041	1233				
C34	9.946	-0.002	699	826				
Filter Peak	11.471	0.003	1762	667	BUNKERC	(C10-C38)	226778	22.80
C36	10.331	-0.001	869	878				
C38	10.707	-0.002	1110	857				
C40	11.080	0.002	1463	810				
o-terph	6.254	0.000	1088920	885023				
Triacon Surr	9.161	0.011	914812	858266				

Range Times: NW Diesel(4.237 - 7.757) AK102(3.34 - 8.01) Jet A(3.34 - 6.09)
NW M.Oil(7.76 - 10.71) AK103(8.01 - 10.33) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	885023	45.9	102.0
Triacontane	858266	44.4	98.7

VTS 7/29/13

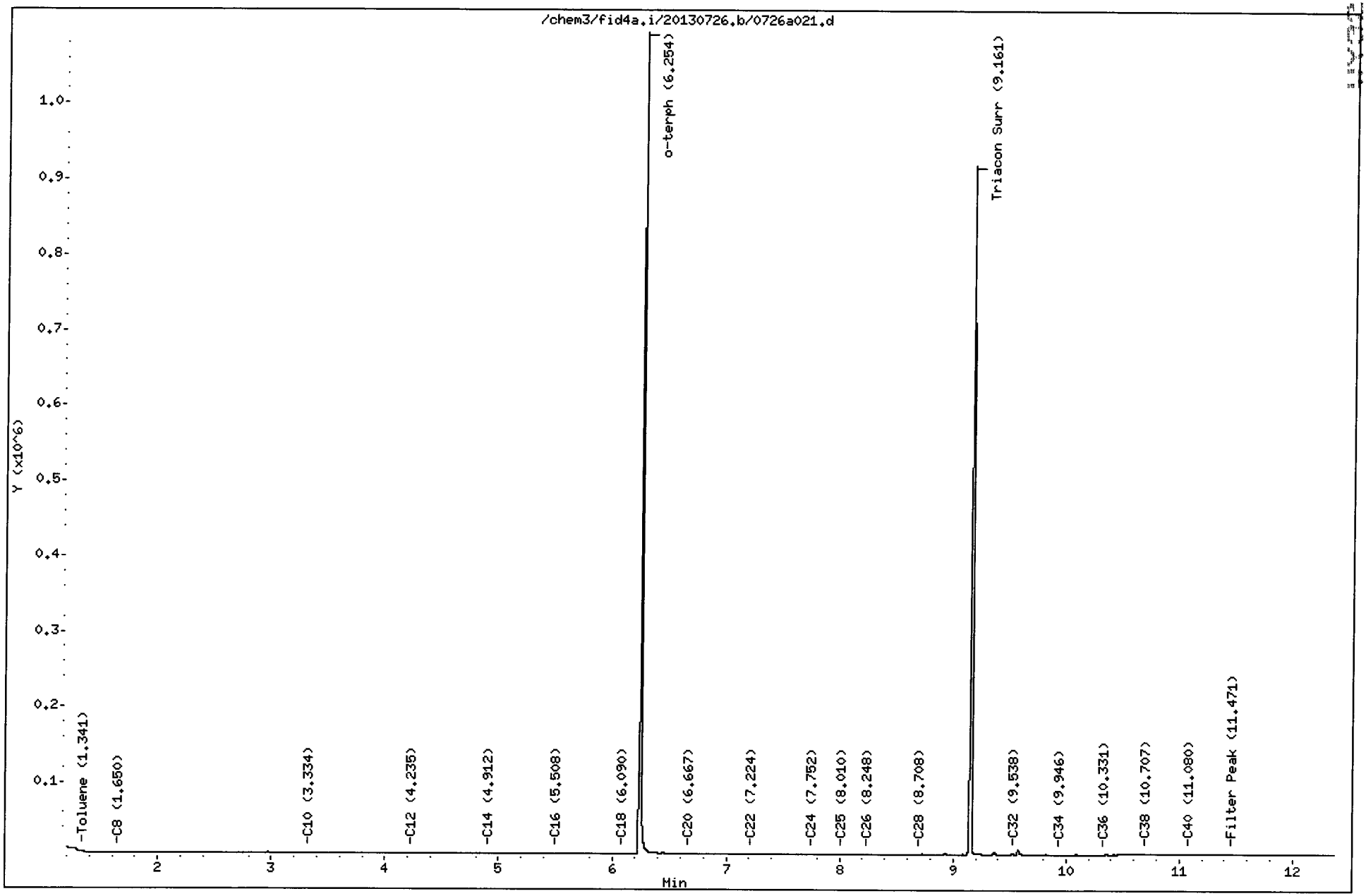
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Bunker C	9947.9	18-JUL-2013

Data File: /chem3/fid4a.i/20130726.b/0726a021.d
Date : 26-JUL-2013 15:03
Client ID: WY32MBS1
Sample Info: WY32MBS1

Instrument: fid4a.i
Operator: JR/VTS/JW
Column diameter: 0.25

Column phase: RTX-1



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130726.b/0726a022.d
Method: /chem3/fid4a.i/20130726.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 07/29/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WY32LCSS1
Client ID: WY32LCSS1
Injection: 26-JUL-2013 15:24

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.359	0.014	11061	12129	WATPHG	(Tol-C12)	5233745	336.80
C8	1.673	0.007	13120	20562	WATPHD	(C12-C24)	21281518	1466.22
C10	3.338	0.001	116818	77936	WATPHM	(C24-C38)	317585	24.61
C12	4.239	0.002	213322	232416	AK102	(C10-C25)	25066717	1456.12
C14	4.920	0.003	382852	419916	AK103	(C25-C36)	222689	24.20
C16	5.515	0.004	547690	642935				
C18	6.097	0.004	514203	648858				
C20	6.670	0.001	311786	354442				
C22	7.224	-0.003	148131	159495				
C24	7.750	-0.007	49399	50788				
C25	8.001	-0.007	25527	33421				
C26	8.281	0.018	4026	8745				
C28	8.704	-0.006	2843	4413				
C32	9.558	0.009	7344	10251				
C34	9.941	-0.007	294	270				
Filter Peak	11.467	-0.001	1192	1729	BUNKERC	(C10-C38)	25301972	2543.46
C36	10.326	-0.006	1719	2262				
C38	10.708	-0.001	631	413				
C40	11.065	-0.013	1269	4785				
o-terph	6.259	0.006	1120545	888641				
Triacon Surr	9.153	0.004	938258	876344				

Range Times: NW Diesel(4.237 - 7.757) AK102(3.34 - 8.01) Jet A(3.34 - 6.09)
NW M.Oil(7.76 - 10.71) AK103(8.01 - 10.33) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	888641	46.1	102.4 M
Triacontane	876344	45.3	100.8

JW 7/29/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Bunker C	9947.9	18-JUL-2013

WY32-81410

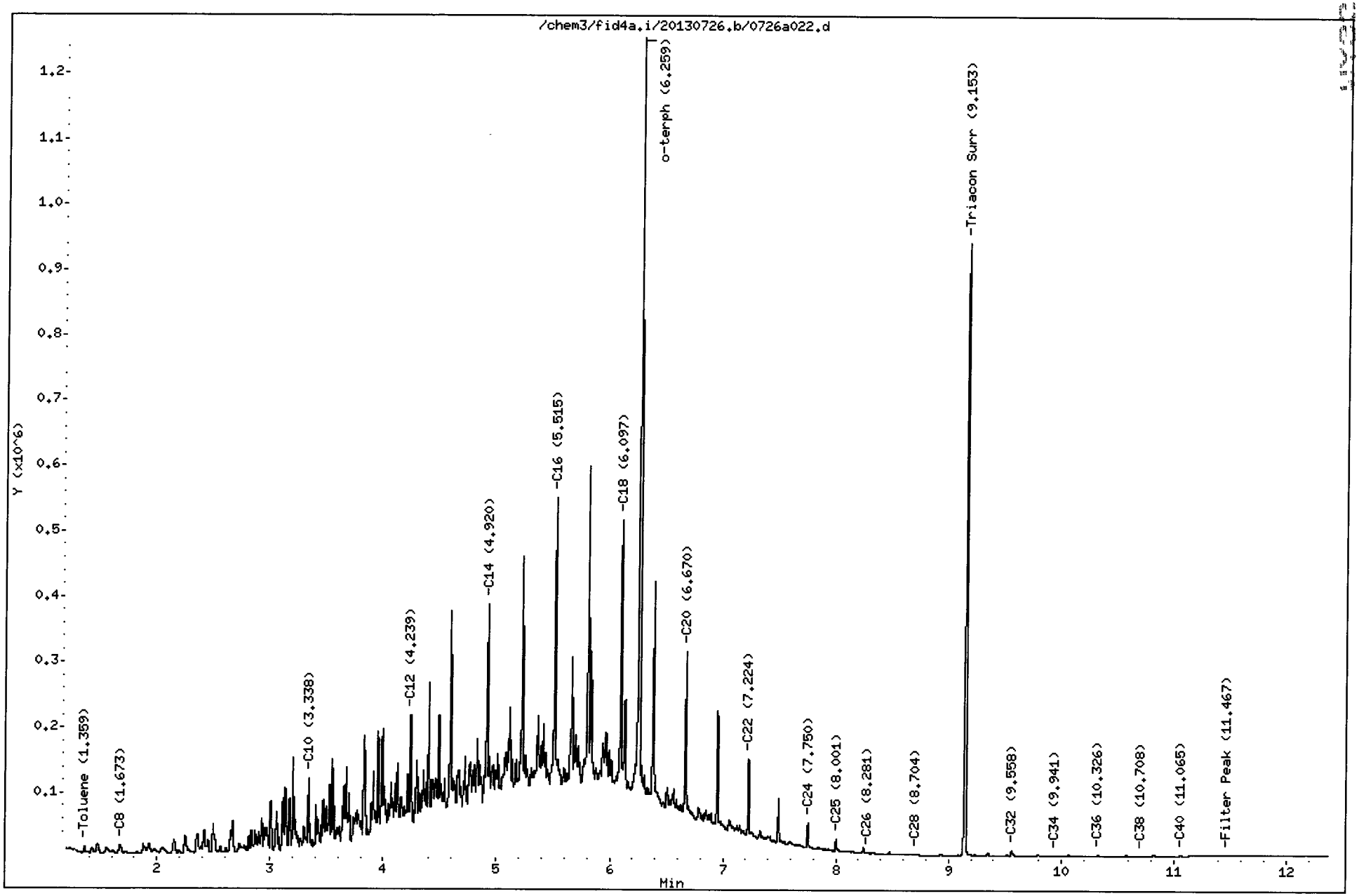
Data File: /chem3/fid4a.i/20130726.b/0726a022.d
Date : 26-JUL-2013 15:24
Client ID: WY32LCSS1
Sample Info: WY32LCSS1

Column phase: RTX-1

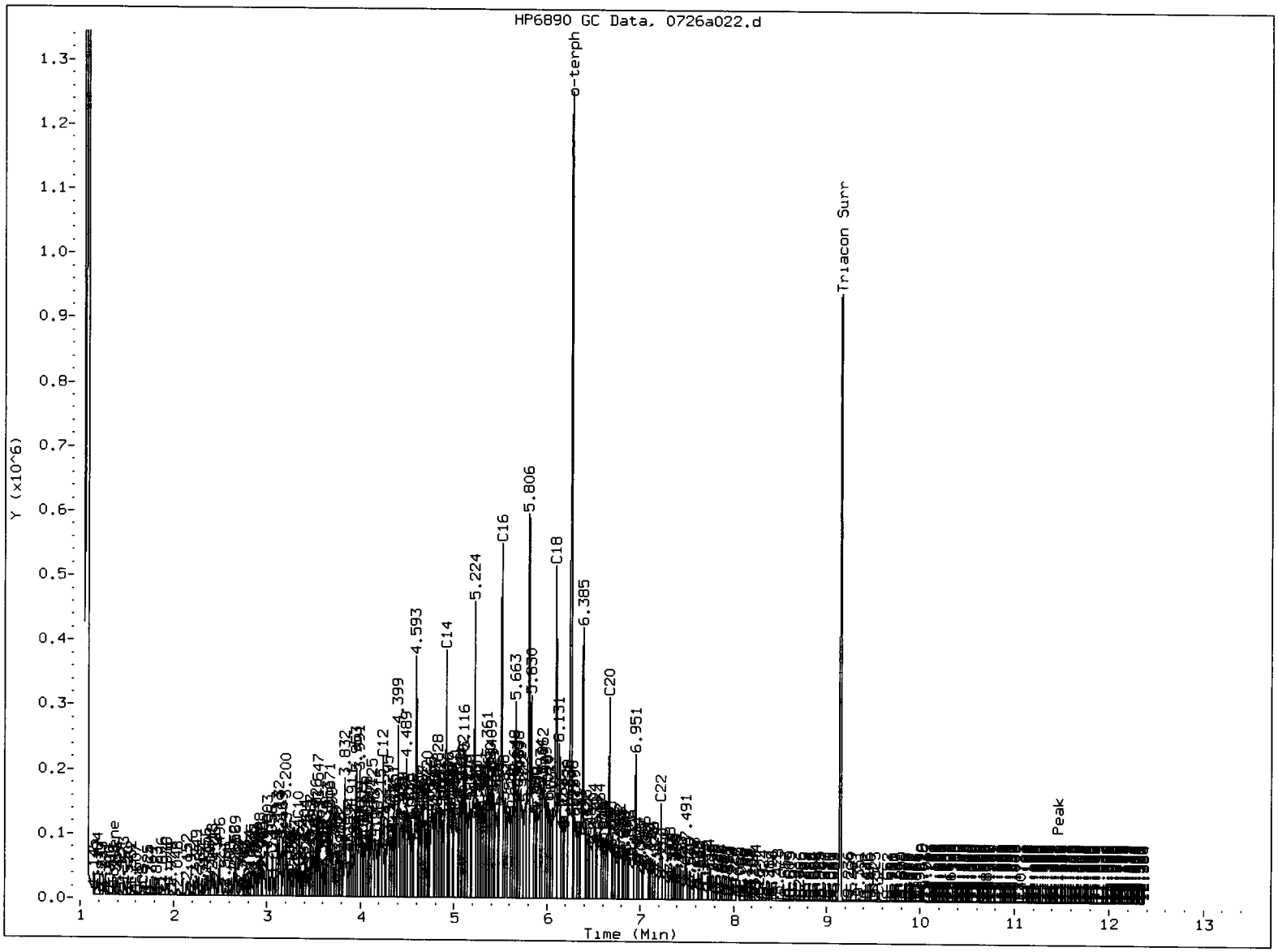
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

JW 7/29/13



FID:4A-2C/RTX-1 WY32LCSS1 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: JW Date: 7/29/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130726.b/0726a024.d
Method: /chem3/fid4a.i/20130726.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 07/29/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WY32A
Client ID: UP-CB-B8-20130626-S
Injection: 26-JUL-2013 16:05

Dilution Factor: 5

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.347	0.002	6220	9139	WATPHG	(Tol-C12)	133297	8.58
C8	1.663	-0.003	694	1653	WATPHD	(C12-C24)	6330116	436.12
C10	3.335	-0.002	1230	945	WATPHM	(C24-C38)	17569619	1361.45
C12	4.236	-0.001	5509	6976	AK102	(C10-C25)	7234343	420.24
C14	4.916	-0.001	12885	19036	AK103	(C25-C36)	16212810	1761.86
C16	5.508	-0.003	20467	16101				
C18	6.088	-0.005	26238	31870				
C20	6.664	-0.005	32302	46841				
C22	7.221	-0.007	58528	68429				
C24	7.755	-0.002	101536	133535				
C25	7.995	-0.013	107188	82396				
C26	8.254	-0.009	128552	152977				
C28	8.710	0.000	150987	221192				
C32	9.554	0.004	119473	77613				
C34	9.957	0.010	91333	30832				
Filter Peak	11.467	-0.001	4824	6982	BUNKERC	(C10-C38)	23989957	2411.57
C36	10.325	-0.008	54084	94218				
C38	10.695	-0.014	19642	41877				
C40	11.065	-0.013	7229	8395				
o-terph	6.246	-0.008	256111	158584				
Triacon Surr	9.162	0.012	222766	161188				

Range Times: NW Diesel(4.237 - 7.757) AK102(3.34 - 8.01) Jet A(3.34 - 6.09)
NW M.Oil(7.76 - 10.71) AK103(8.01 - 10.33) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	158584	8.2	91.4 M
Triacontane	161188	8.3	92.7 M

JW 7/29/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Bunker C	9947.9	18-JUL-2013

Data File: /chem3/fid4a.i/20130726.b/0726a024.d

Date : 26-JUL-2013 16:05

Client ID: UP-CB-B8-20130626-S

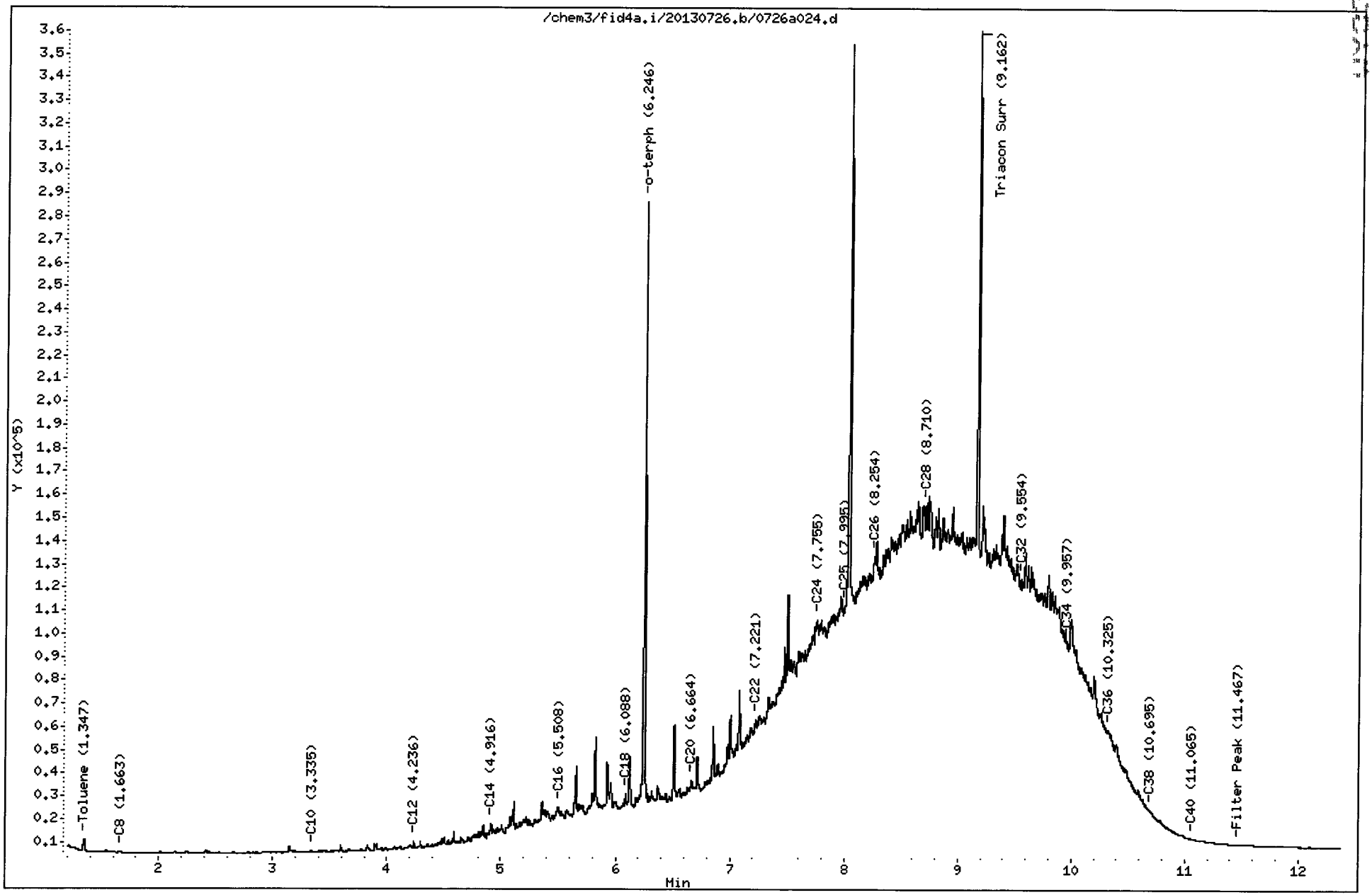
Sample Info: WY32A,5

Column phase: RTX-1

Instrument: fid4a.i

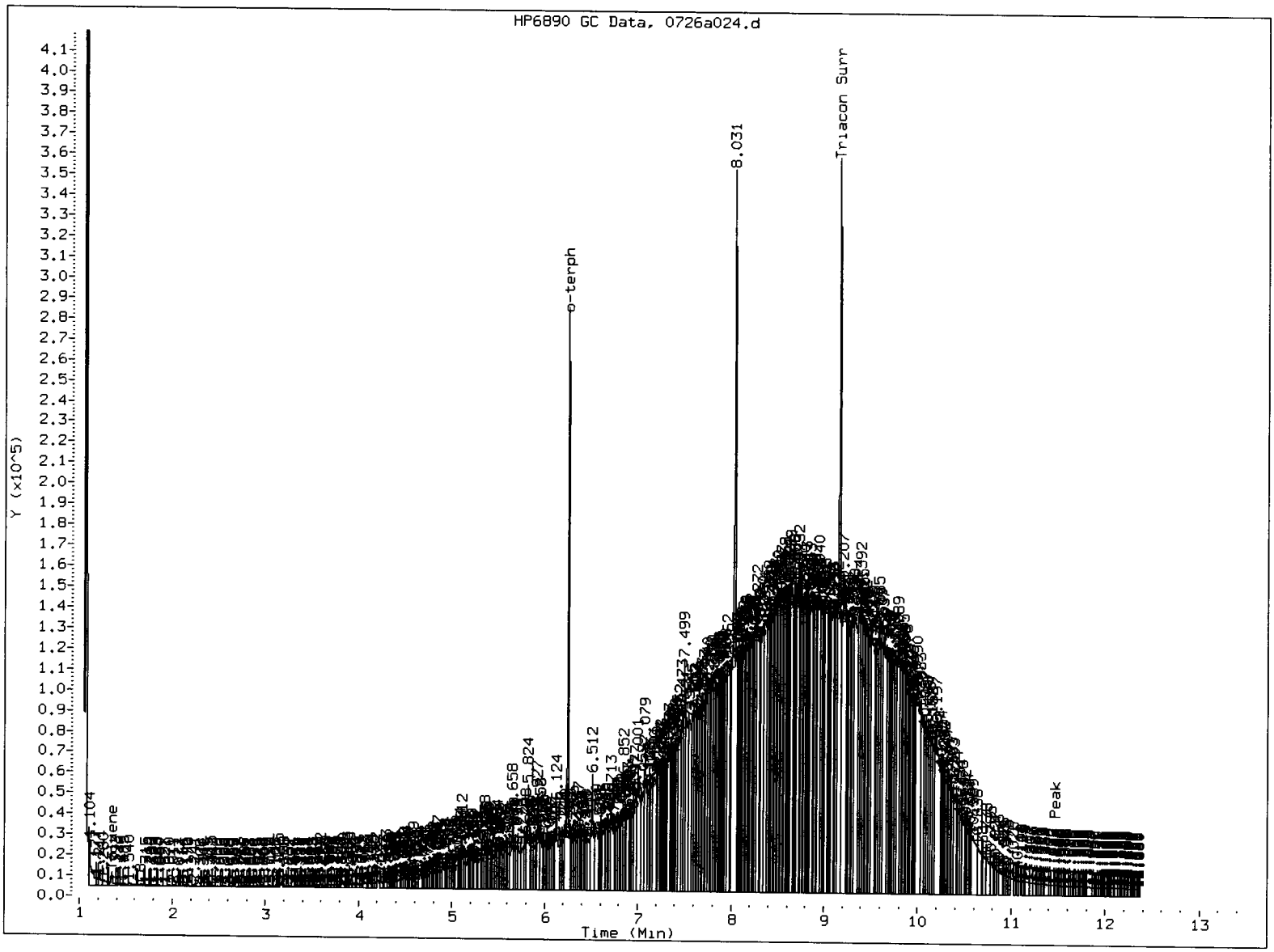
Operator: JR/VTS/JW

Column diameter: 0.25



FID:4A-2C/RTX-1 WY32A

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: JW Date: 7/29/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130726.b/0726a025.d
Method: /chem3/fid4a.i/20130726.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 07/29/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WY32B
Client ID: UP-MHF-165-20130626
Injection: 26-JUL-2013 16:25

Dilution Factor: 5

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.338	-0.007	1332	1625	WATPHG	(Tol-C12)	157842	10.16
C8	1.658	-0.008	331	1000	WATPHD	(C12-C24)	3674747	253.18
C10	3.335	-0.002	1659	1285	WATPHM	(C24-C38)	9006203	697.88
C12	4.236	-0.001	6966	8824	AK102	(C10-C25)	4287975	249.09
C14	4.915	-0.002	12271	15359	AK103	(C25-C36)	8056064	875.46
C16	5.508	-0.003	17568	28559				
C18	6.088	-0.005	19191	22898				
C20	6.663	-0.006	23563	56324				
C22	7.222	-0.005	35399	64443				
C24	7.755	-0.002	49652	61447				
C25	8.004	-0.004	54574	30135				
C26	8.260	-0.003	61203	99911				
C28	8.704	-0.006	74748	95913				
C32	9.567	0.017	63492	108556				
C34	9.943	-0.005	47579	35750				
Filter Peak	11.461	-0.007	6112	10541	BUNKERC	(C10-C38)	12806130	1287.33
C36	10.332	-0.001	34567	36864				
C38	10.682	-0.027	20972	60034				
C40	11.072	-0.006	9918	13221				
o-terph	6.246	-0.008	273965	176465				
Triacon Surr	9.150	0.000	232932	169939				

Range Times: NW Diesel(4.237 - 7.757) AK102(3.34 - 8.01) Jet A(3.34 - 6.09)
NW M.Oil(7.76 - 10.71) AK103(8.01 - 10.33) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	176465	9.2	101.7 M
Triacontane	169939	8.8	97.7 M

JW 7/29/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Bunker C	9947.9	18-JUL-2013

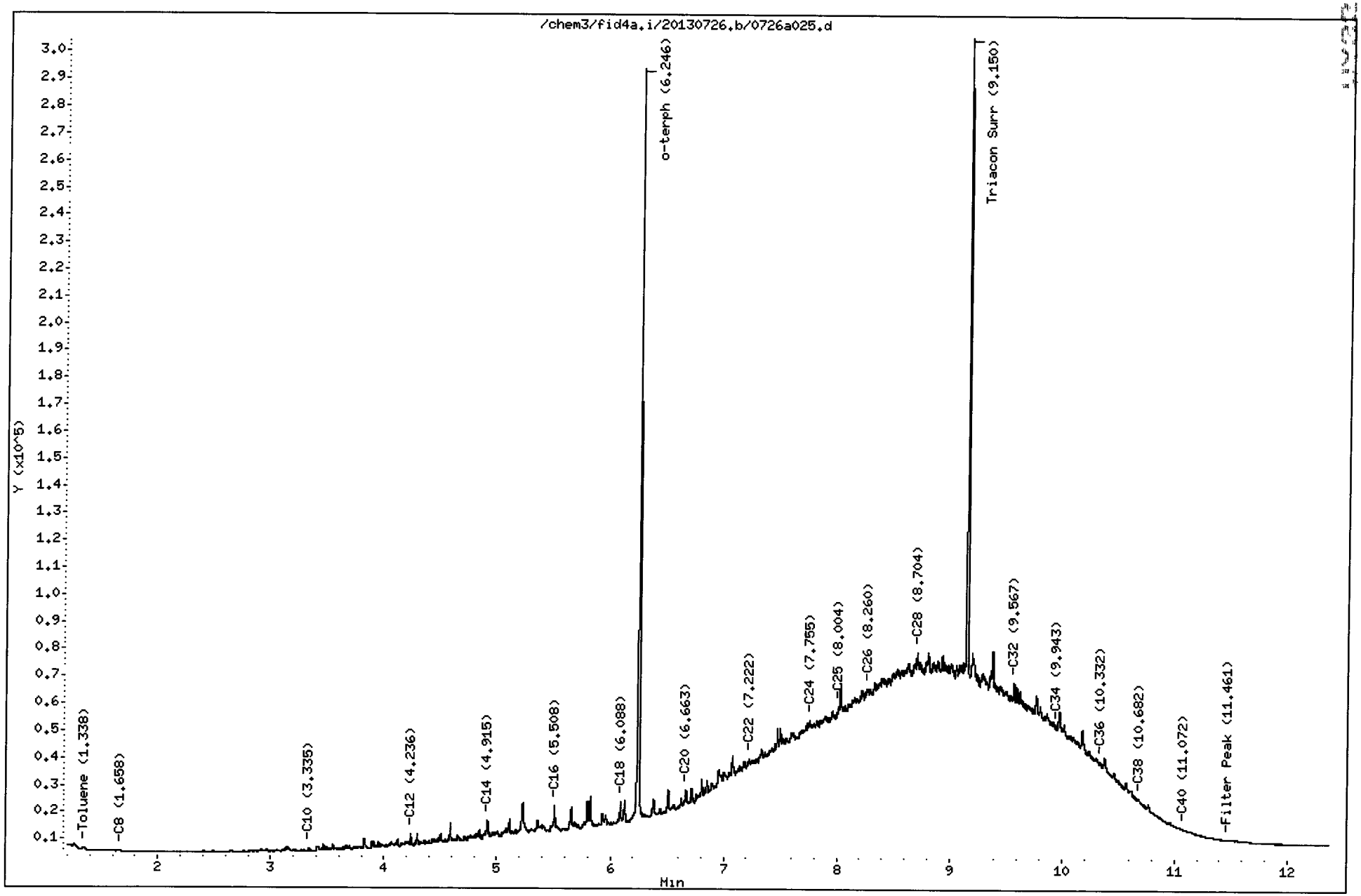
Data File: /chem3/fid4a.i/20130726.b/0726a025.d
Date : 26-JUL-2013 16:25
Client ID: UP-MHF-165-20130626
Sample Info: WY32B,5

Column phase: RTX-1

Instrument: fid4a.i

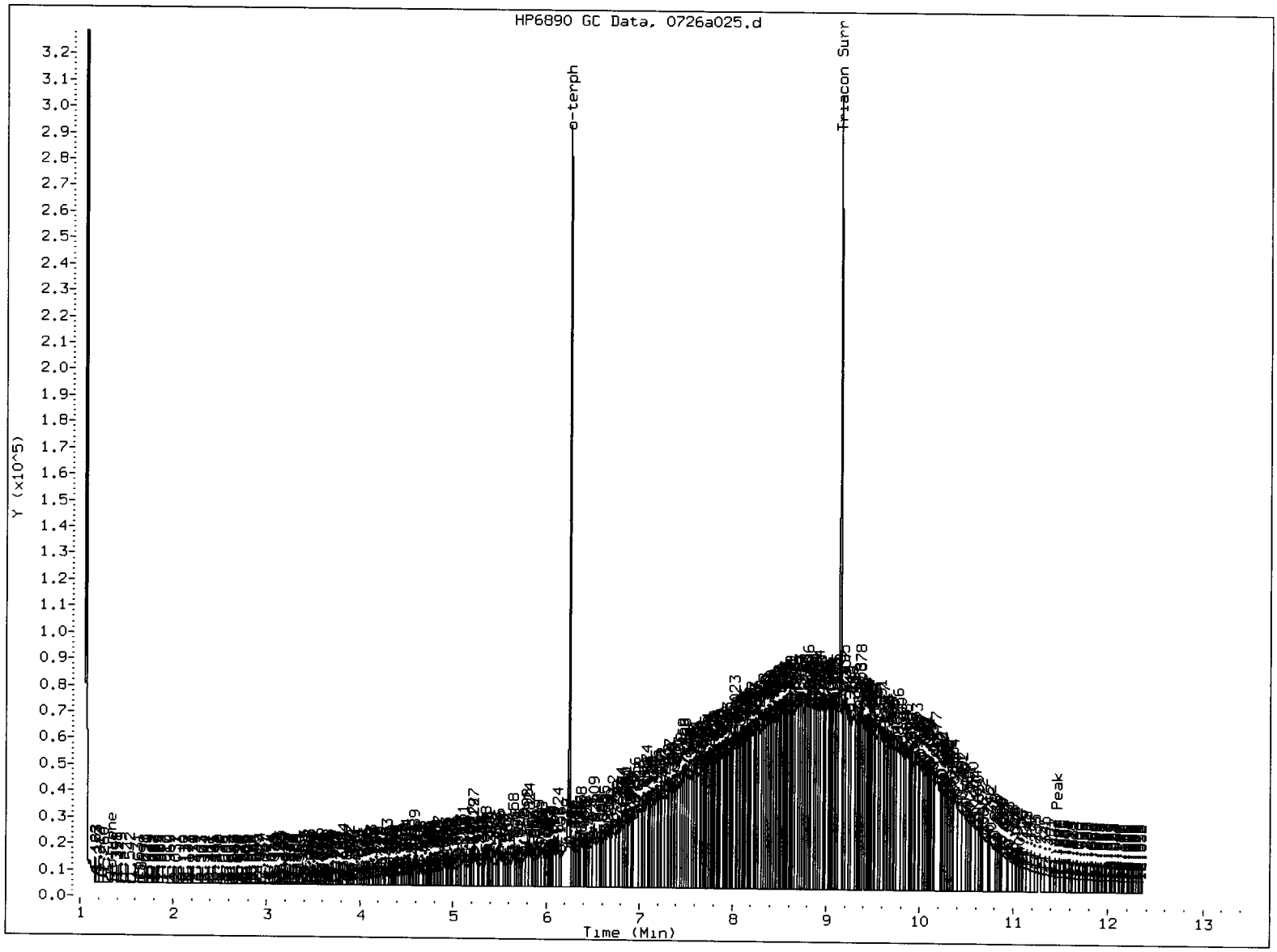
Operator: JR/VTS/JW
Column diameter: 0.25

JW 7/26/13



FID:4A-2C/RTX-1 WY32B

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: JW Date: 7/29/15

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130726.b/0726a026.d
Method: /chem3/fid4a.i/20130726.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 07/29/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WY32BMS
Client ID: UP-MHF-165-2013 MS
Injection: 26-JUL-2013 16:45

Dilution Factor: 5

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.342	-0.003	2968	5953	WATPHG	(Tol-C12)	1180300	75.95
C8	1.655	-0.011	2727	5030	WATPHD	(C12-C24)	7859645	541.50
C10	3.334	-0.003	23020	15469	WATPHM	(C24-C38)	8308211	643.79
C12	4.236	-0.001	49415	54762	AK102	(C10-C25)	9161820	532.21
C14	4.917	-0.001	85803	98674	AK103	(C25-C36)	7346062	798.30
C16	5.510	-0.001	122198	154393				
C18	6.090	-0.003	124531	151100				
C20	6.666	-0.003	83069	141218				
C22	7.224	-0.004	60948	104111				
C24	7.752	-0.005	54400	118690				
C25	8.005	-0.003	55090	96590				
C26	8.265	0.002	56444	67252				
C28	8.708	-0.002	68243	102747				
C32	9.545	-0.005	53786	98603				
C34	9.937	-0.010	45050	77142				
Filter Peak	11.474	0.006	6186	9797	BUNKERC	(C10-C38)	17023861	1711.31
C36	10.327	-0.006	33624	66463				
C38	10.700	-0.009	19383	43875				
C40	11.069	-0.009	9809	6234				
o-terph	6.247	-0.006	265424	174745				
Triacon Surr	9.158	0.008	229690	168493				

Range Times: NW Diesel(4.237 - 7.757) AK102(3.34 - 8.01) Jet A(3.34 - 6.09)
NW M.Oil(7.76 - 10.71) AK103(8.01 - 10.33) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	174745	9.1	100.7 M
Triacontane	168493	8.7	96.9 M

JW 7/29/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Bunker C	9947.9	18-JUL-2013

Data File: /chem3/fid4a.i/20130726.b/0726a026.d

Date : 26-JUL-2013 16:45

Client ID: UP-MHF-165-2013 MS

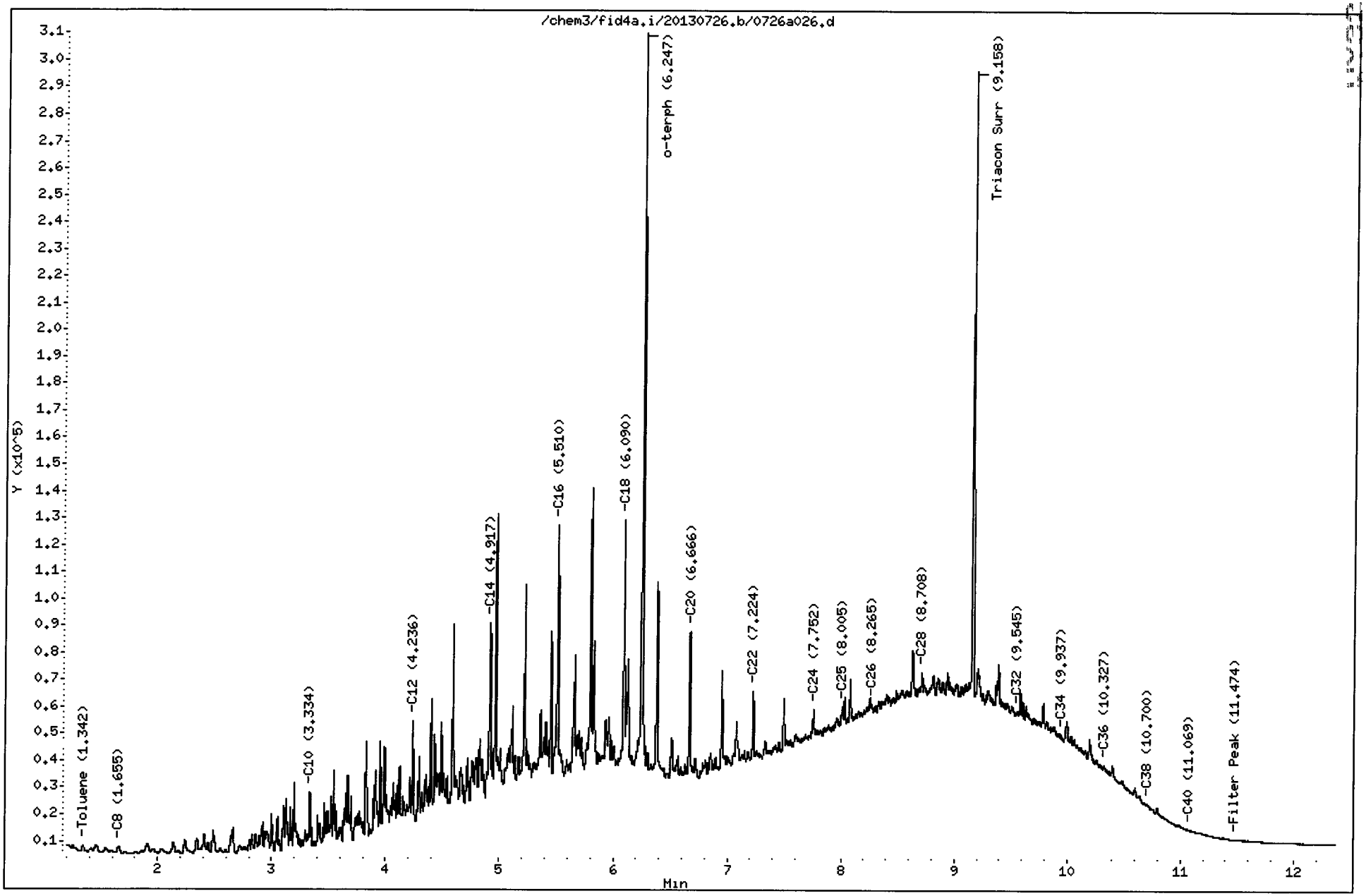
Sample Info: WY32BMS,5

Instrument: fid4a.i

Operator: JR/VTS/JW

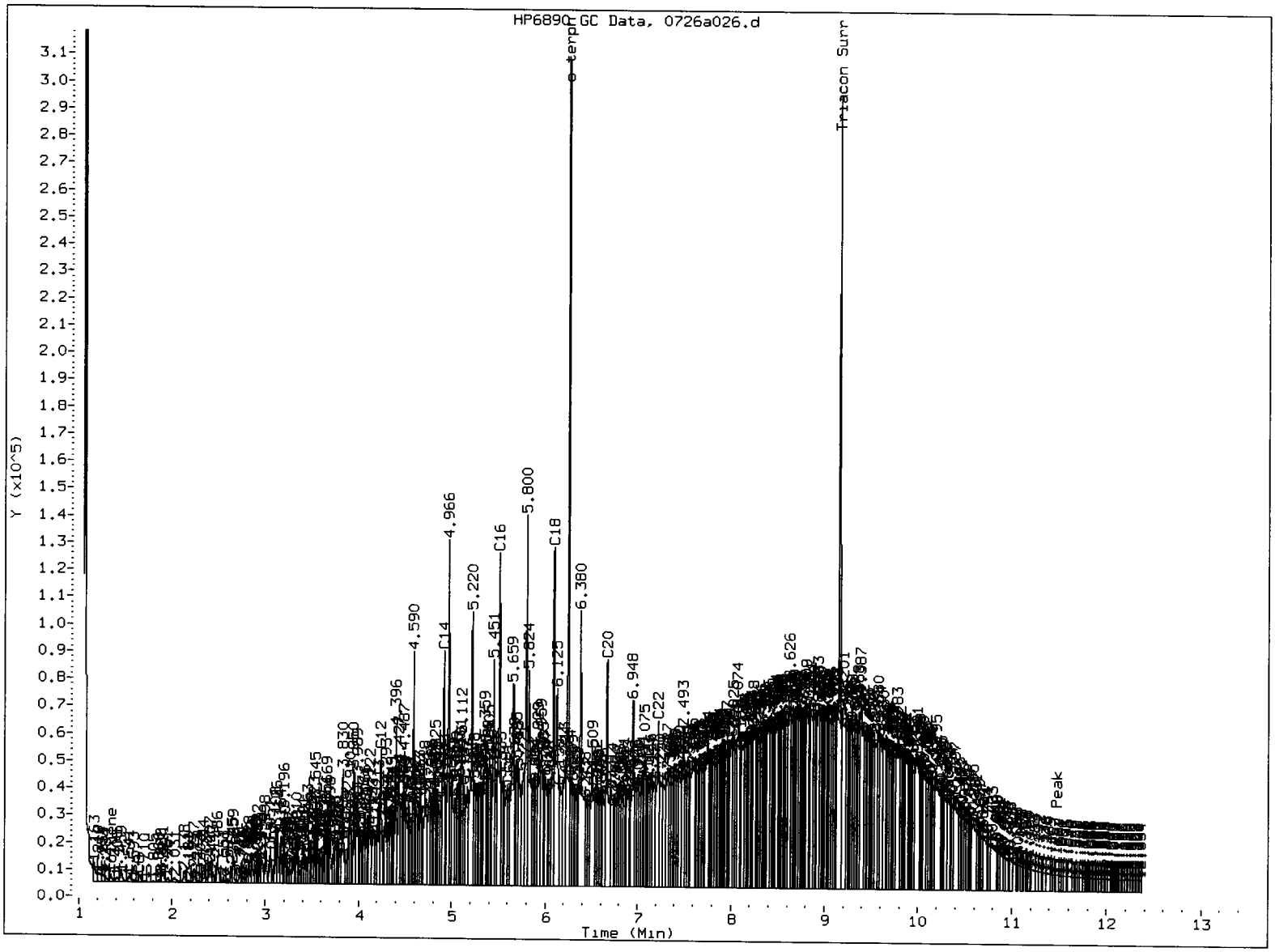
Column phase: RTX-1

Column diameter: 0.25



FID:4A-2C/RTX-1 WY32BMS

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: JW Date: 7/22/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130726.b/0726a027.d
Method: /chem3/fid4a.i/20130726.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 07/29/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WY32BMSD
Client ID: UP-MHF-165-2013 MSD
Injection: 26-JUL-2013 17:06

Dilution Factor: 5

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.341	-0.004	3233	5972	WATPHG	(Tol-C12)	1166853	75.09
C8	1.655	-0.011	2715	4815	WATPHD	(C12-C24)	7847540	540.67
C10	3.334	-0.003	22114	15004	WATPHM	(C24-C38)	8452686	654.99
C12	4.236	-0.001	50074	53770	AK102	(C10-C25)	9066522	526.67
C14	4.916	-0.001	87769	97713	AK103	(C25-C36)	7608857	826.86
C16	5.510	-0.001	128311	155189				
C18	6.090	-0.003	129018	177558				
C20	6.667	-0.002	84942	115660				
C22	7.224	-0.004	61259	107486				
C24	7.751	-0.006	55413	98197				
C25	8.005	-0.003	56326	109736				
C26	8.263	0.000	57466	77863				
C28	8.703	-0.006	69265	103377				
C32	9.537	-0.012	55536	36508				
C34	9.939	-0.009	45201	27694				
Filter Peak	11.467	-0.001	6558	6369	BUNKERC	(C10-C38)	17146243	1723.61
C36	10.329	-0.003	32039	25348				
C38	10.696	-0.013	17622	23178				
C40	11.077	-0.001	9414	14083				
o-terph	6.247	-0.006	278314	172545				
Triacon Surr	9.147	-0.002	241451	169626				

Range Times: NW Diesel(4.237 - 7.757) AK102(3.34 - 8.01) Jet A(3.34 - 6.09)
NW M.Oil(7.76 - 10.71) AK103(8.01 - 10.33) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	172545	8.9	99.4 M
Triacontane	169626	8.8	97.5 M

JW 7/29/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Bunker C	9947.9	18-JUL-2013

WY32-BMSD

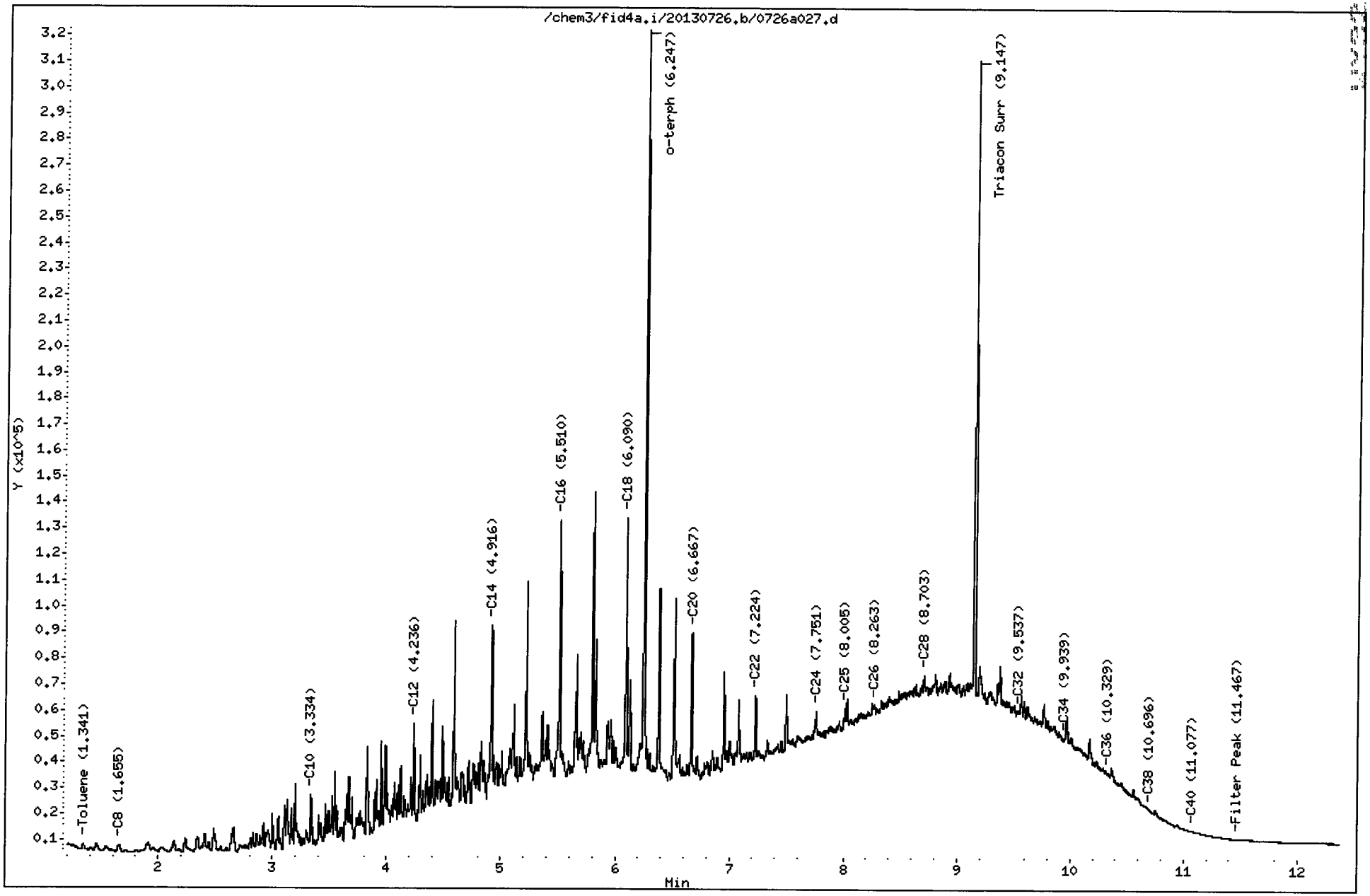
Data File: /chem3/fid4a.i/20130726.b/0726a027.d
Date : 26-JUL-2013 17:06
Client ID: UP-MHF-165-2013 MSD
Sample Info: WY32BMSD,5

Column phase: RTX-1

Instrument: fid4a.i

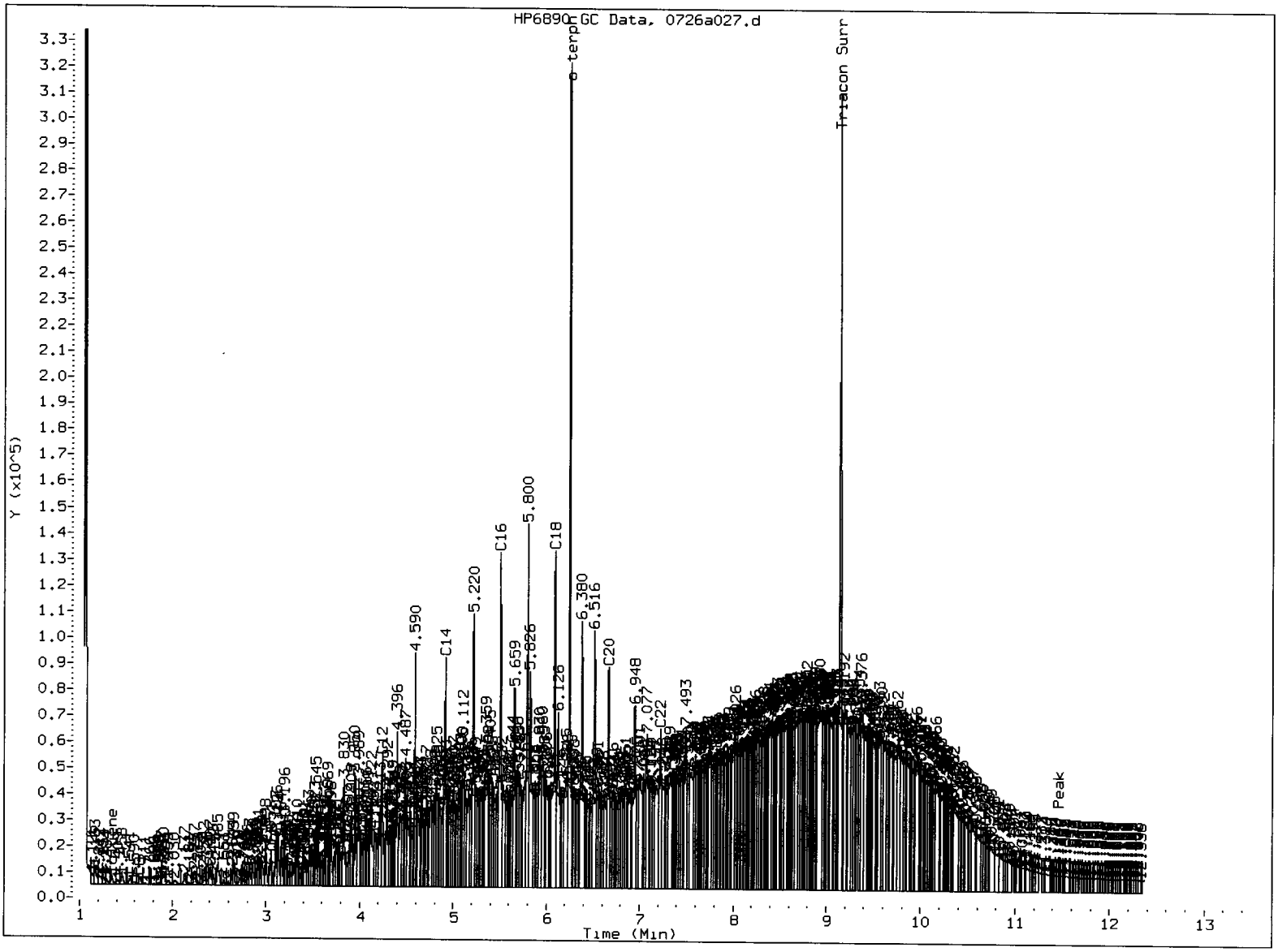
Operator: JR/VTS/JW
Column diameter: 0.25

JW 7/27/10



FID:4A-2C/RTX-1 WY32BMSD

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 7/27/12

WY32:B4:102

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130726.b/0726a028.d
Method: /chem3/fid4a.i/20130726.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 07/29/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WY32C
Client ID: UP-CB-A6-20130626-S
Injection: 26-JUL-2013 17:26

Dilution Factor: 5

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.342	-0.003	2052	5383	WATPHG	(Tol-C12)	112637	7.25
C8	1.663	-0.003	523	1527	WATPHD	(C12-C24)	7550327	520.19
C10	3.335	-0.002	715	707	WATPHM	(C24-C38)	25609917	1984.48
C12	4.236	-0.002	2343	3318	AK102	(C10-C25)	9028732	524.48
C14	4.915	-0.002	6164	8147	AK103	(C25-C36)	23918787	2599.28
C16	5.509	-0.002	15140	13314				
C18	6.089	-0.004	23753	24626				
C20	6.665	-0.004	39872	85408				
C22	7.225	-0.003	86664	166574				
C24	7.757	0.000	153957	163595				
C25	8.010	0.002	183434	187187				
C26	8.255	-0.008	206694	236022				
C28	8.716	0.007	243024	398091				
C32	9.554	0.005	188321	133546				
C34	9.930	-0.018	110228	132396				
Filter Peak	11.465	-0.003	9186	9456	BUNKERC	(C10-C38)	33229822	3340.40
C36	10.352	0.020	31404	24951				
C38	10.710	0.001	12306	5352				
C40	11.081	0.003	9898	3927				
o-terph	6.246	-0.007	255769	160386				
Triacon Surr	9.163	0.013	206750	155315				

Range Times: NW Diesel(4.237 - 7.757) AK102(3.34 - 8.01) Jet A(3.34 - 6.09)
NW M.Oil(7.76 - 10.71) AK103(8.01 - 10.33) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	160386	8.3	92.4 M
Triacontane	155315	8.0	89.3 M

JW 7/29/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Bunker C	9947.9	18-JUL-2013

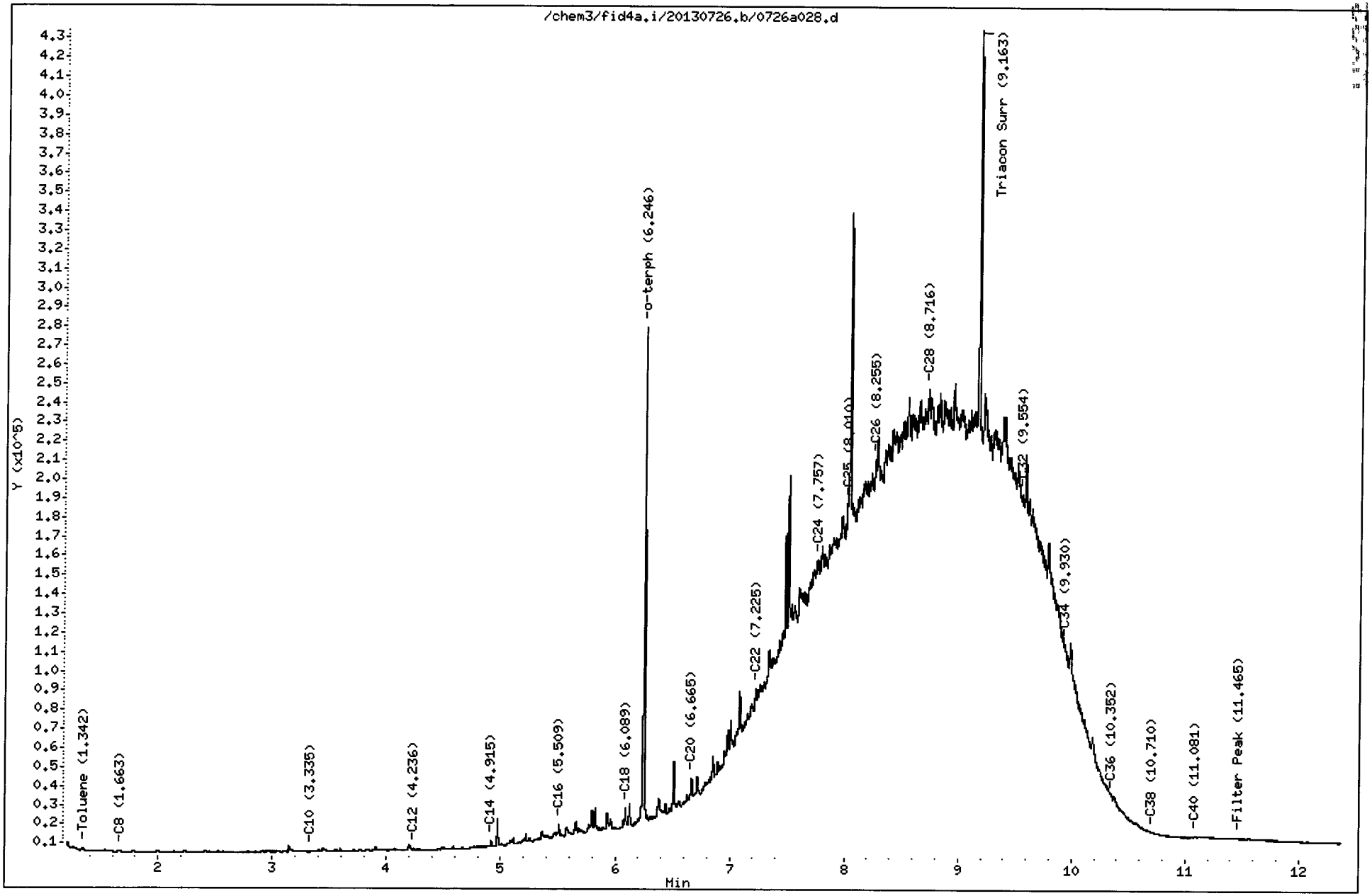
Data File: /chem3/fid4a.i/20130726.b/0726a028.d
Date : 26-JUL-2013 17:26
Client ID: UP-CB-A6-20130626-S
Sample Info: WY32C,5

Column phase: RTX-1

Instrument: fid4a.i

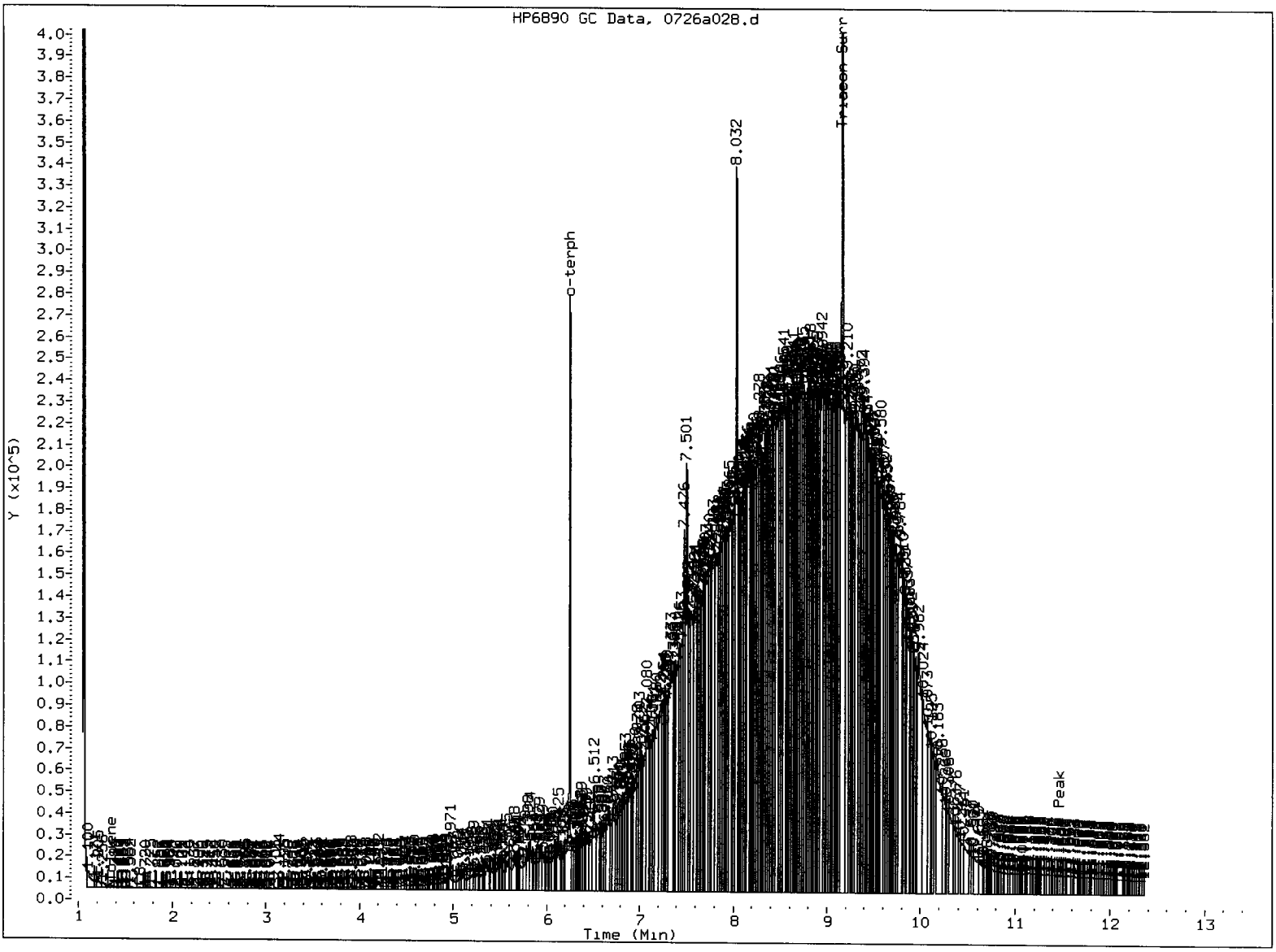
Operator: JR/VTS/JW
Column diameter: 0.25

JW 7/29/13



FID:4A-2C/RTX-1 WY32C

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 7/29/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130726.b/0726a029.d
Method: /chem3/fid4a.i/20130726.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 07/29/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: DIESEL#3
Client ID:
Injection: 26-JUL-2013 17:47

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.341	-0.004	2053	3532	WATPHG	(Tol-C12)	972678	62.59
C8	1.655	-0.011	1958	3430	WATPHD	(C12-C24)	3968490	273.42
C10	3.334	-0.003	24157	15820	WATPHM	(C24-C38)	371069	28.75
C12	4.236	-0.001	43453	44358	AK102	(C10-C25)	4666878	271.10
C14	4.916	-0.001	78242	74633	AK103	(C25-C36)	268887	29.22
C16	5.509	-0.002	120255	124339				
C18	6.090	-0.003	99303	111001				
C20	6.665	-0.004	66907	70291				
C22	7.222	-0.005	34033	38882				
C24	7.750	-0.007	9236	18632				
C25	8.002	-0.006	4251	7846				
C26	8.247	-0.016	2344	4004				
C28	8.706	-0.004	1420	2131				
C32	9.545	-0.004	1934	764				
C34	9.943	-0.004	2477	1032				
Filter Peak	11.467	-0.001	4973	1878	BUNKERC	(C10-C38)	5017245	504.35
C36	10.319	-0.013	4536	8830				
C38	10.709	0.000	3687	1985				
C40	11.092	0.014	4825	2113				
o-terph	6.256	0.003	1165291	923256				
Triacon Surr	9.140	-0.010	2499	6542				

Range Times: NW Diesel(4.237 - 7.757) AK102(3.34 - 8.01) Jet A(3.34 - 6.09)
NW M.Oil(7.76 - 10.71) AK103(8.01 - 10.33) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	923256	47.9	106.4 M
Triacontane	6542	0.3	0.8

JW 7/29/13

M Indicates the peak was manually integrated

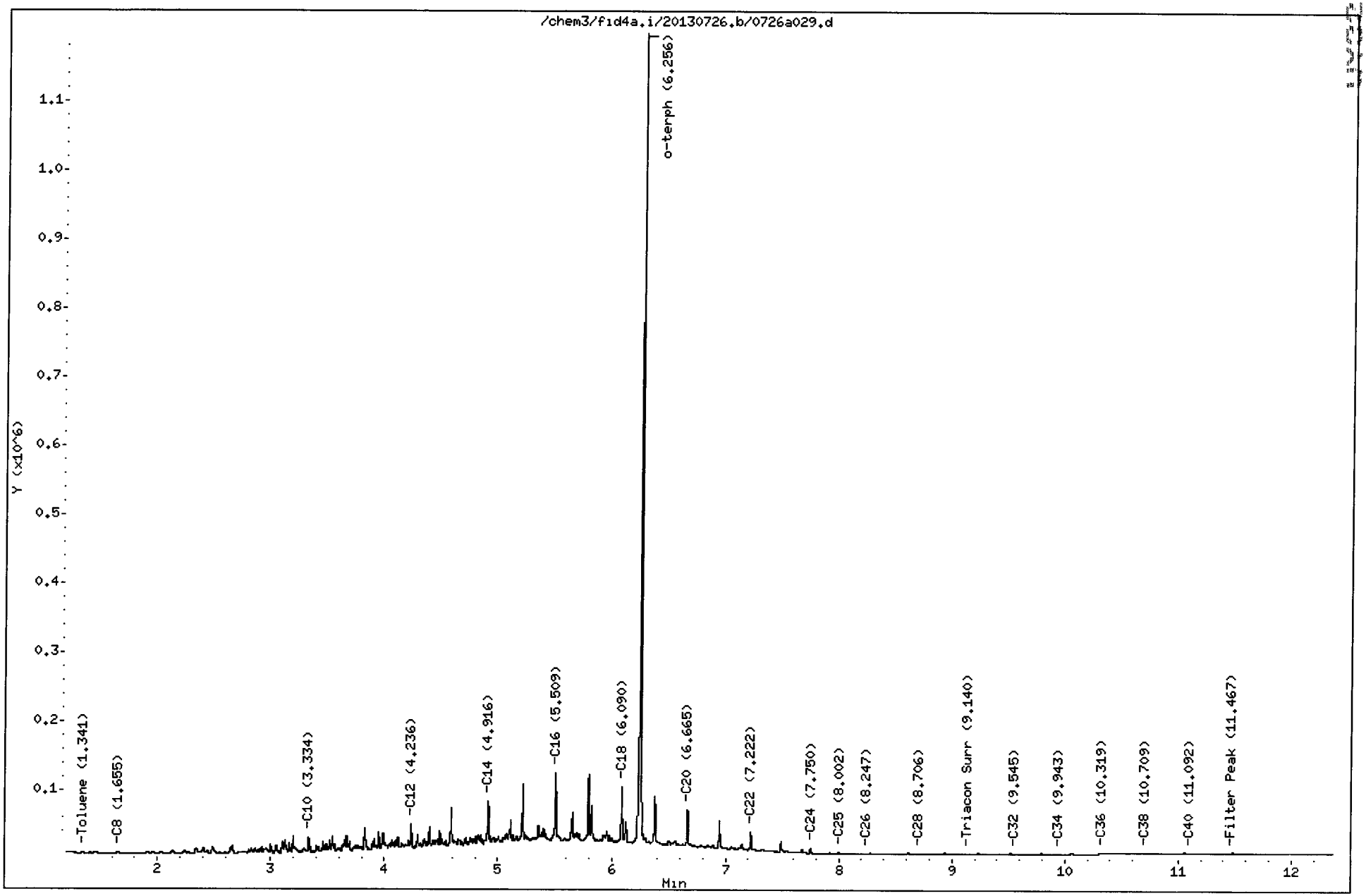
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Bunker C	9947.9	18-JUL-2013

Data File: /chem3/fid4a.i/20130726.b/0726a029.d
Date : 26-JUL-2013 17:47
Client ID:
Sample Info: DIESEL#3

Column phase: RTX-1

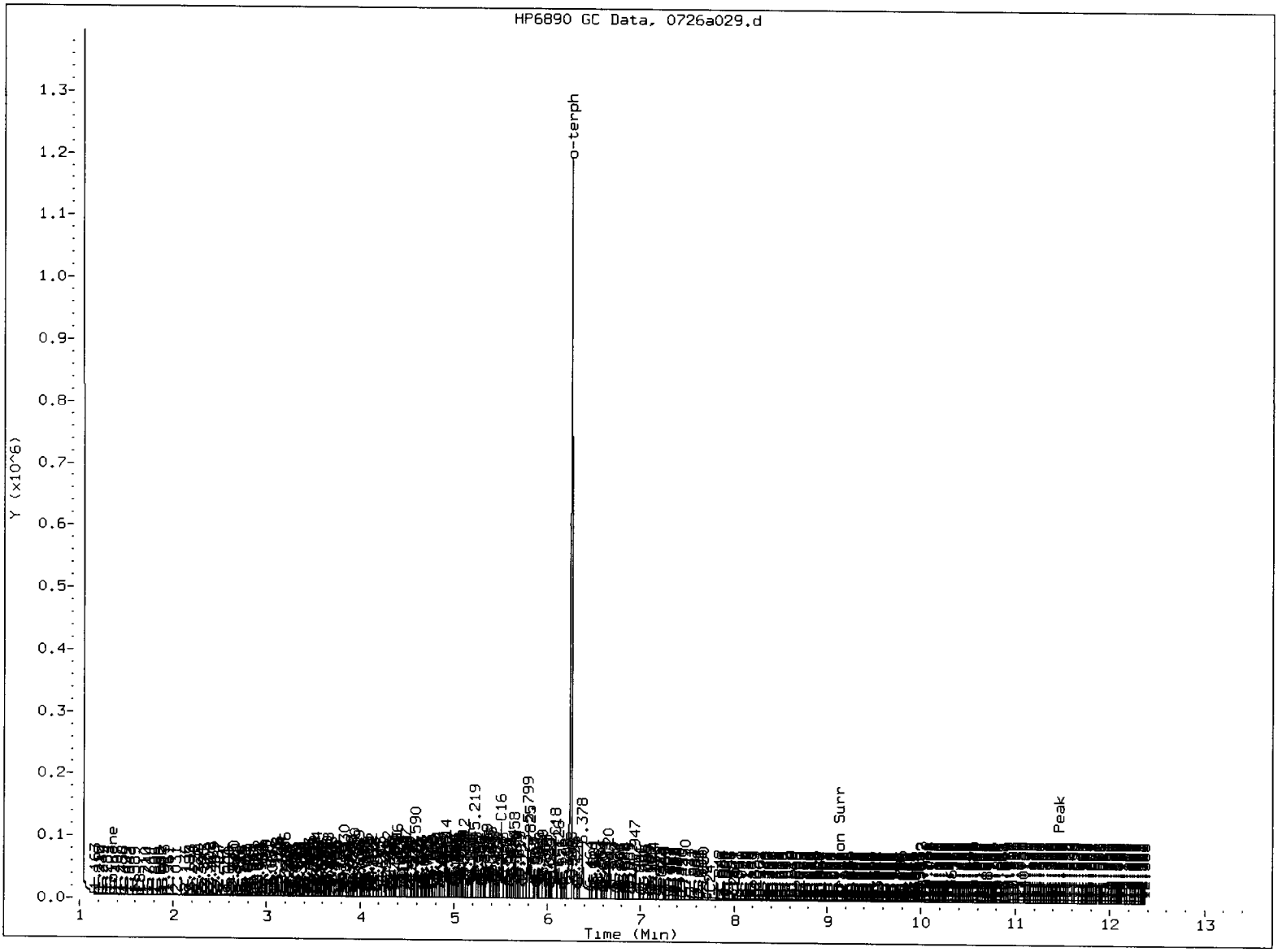
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



FID:4A-2C/RTX-1 DIESEL#3

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: JD Date: 7/29/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130726.b/0726a030.d
Method: /chem3/fid4a.i/20130726.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 07/29/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: MOIL#3
Client ID:
Injection: 26-JUL-2013 18:07

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.343	-0.002	1172	5031	WATPHG	(Tol-C12)	41514	2.67
C8	1.664	-0.002	266	351	WATPHD	(C12-C24)	713661	49.17
C10	3.335	-0.002	420	409	WATPHM	(C24-C38)	5805808	449.88
C12	4.239	0.002	511	698	AK102	(C10-C25)	966498	56.14
C14	4.916	-0.001	710	1420	AK103	(C25-C36)	5248481	570.36
C16	5.509	-0.002	752	2790				
C18	6.090	-0.002	897	1732				
C20	6.664	-0.005	1884	3597				
C22	7.223	-0.005	5787	5933				
C24	7.758	0.001	21864	27865				
C25	8.010	0.002	29570	57500				
C26	8.262	-0.001	35896	59846				
C28	8.715	0.005	40813	69939				
C32	9.547	-0.002	56331	99416				
C34	9.945	-0.003	41792	119668				
Filter Peak	11.473	0.005	4770	6902	BUNKERC	(C10-C38)	6540009	657.43
C36	10.326	-0.007	27675	10394				
C38	10.721	0.012	13427	14293				
C40	11.068	-0.010	7004	17197				
o-terph	6.244	-0.009	4094	5920				
Triacon Surr	9.151	0.002	982358	896227				

Range Times: NW Diesel(4.237 - 7.757) AK102(3.34 - 8.01) Jet A(3.34 - 6.09)
NW M.Oil(7.76 - 10.71) AK103(8.01 - 10.33) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	5920	0.3	0.7
Triacontane	896227	46.4	103.0 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Bunker C	9947.9	18-JUL-2013

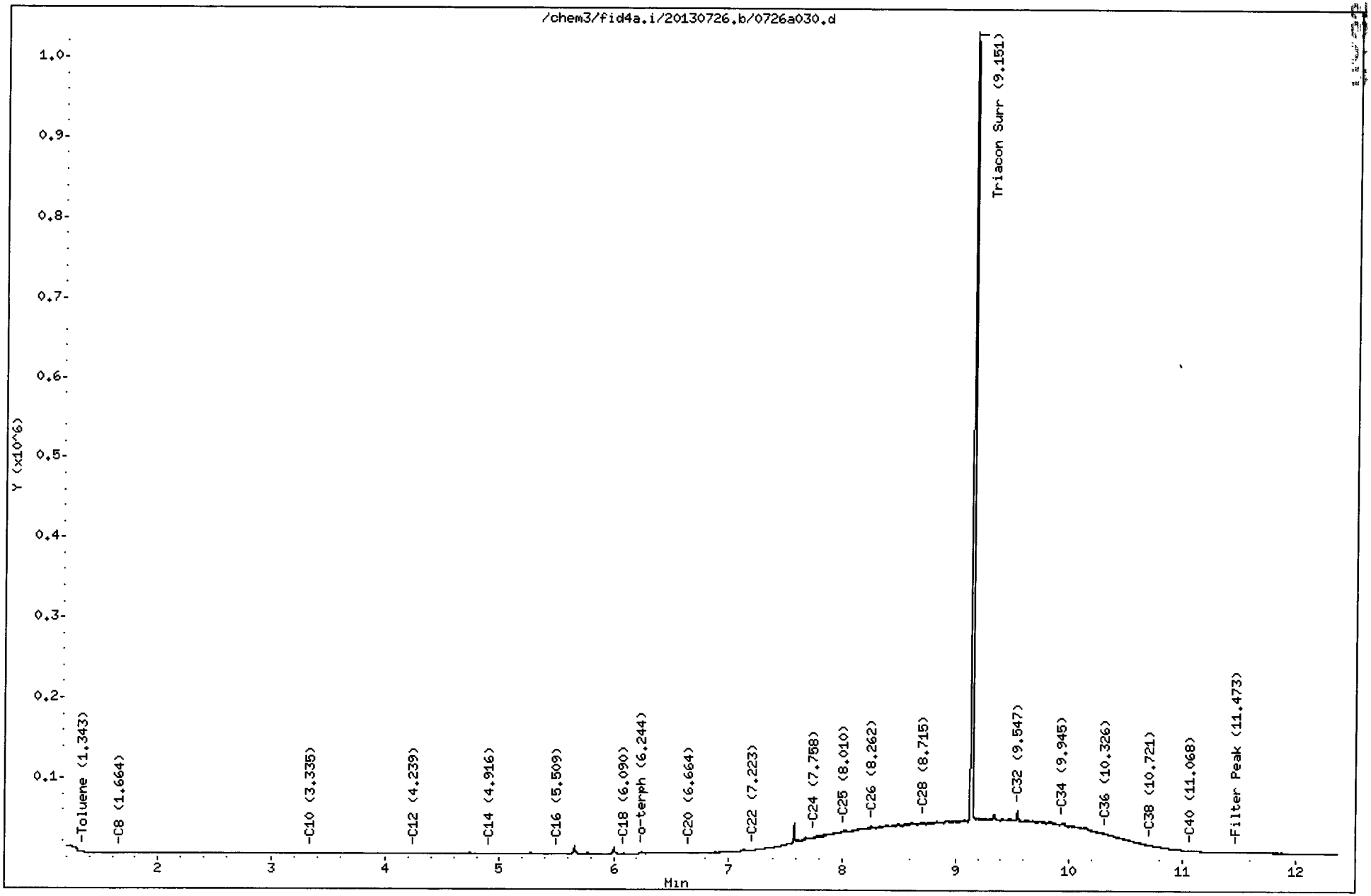
7/29/13

Data File: /chem3/fid4a.i/20130726.b/0726a030.d
Date : 26-JUL-2013 18:07
Client ID:
Sample Info: MOIL#3

Column phase: RTX-1

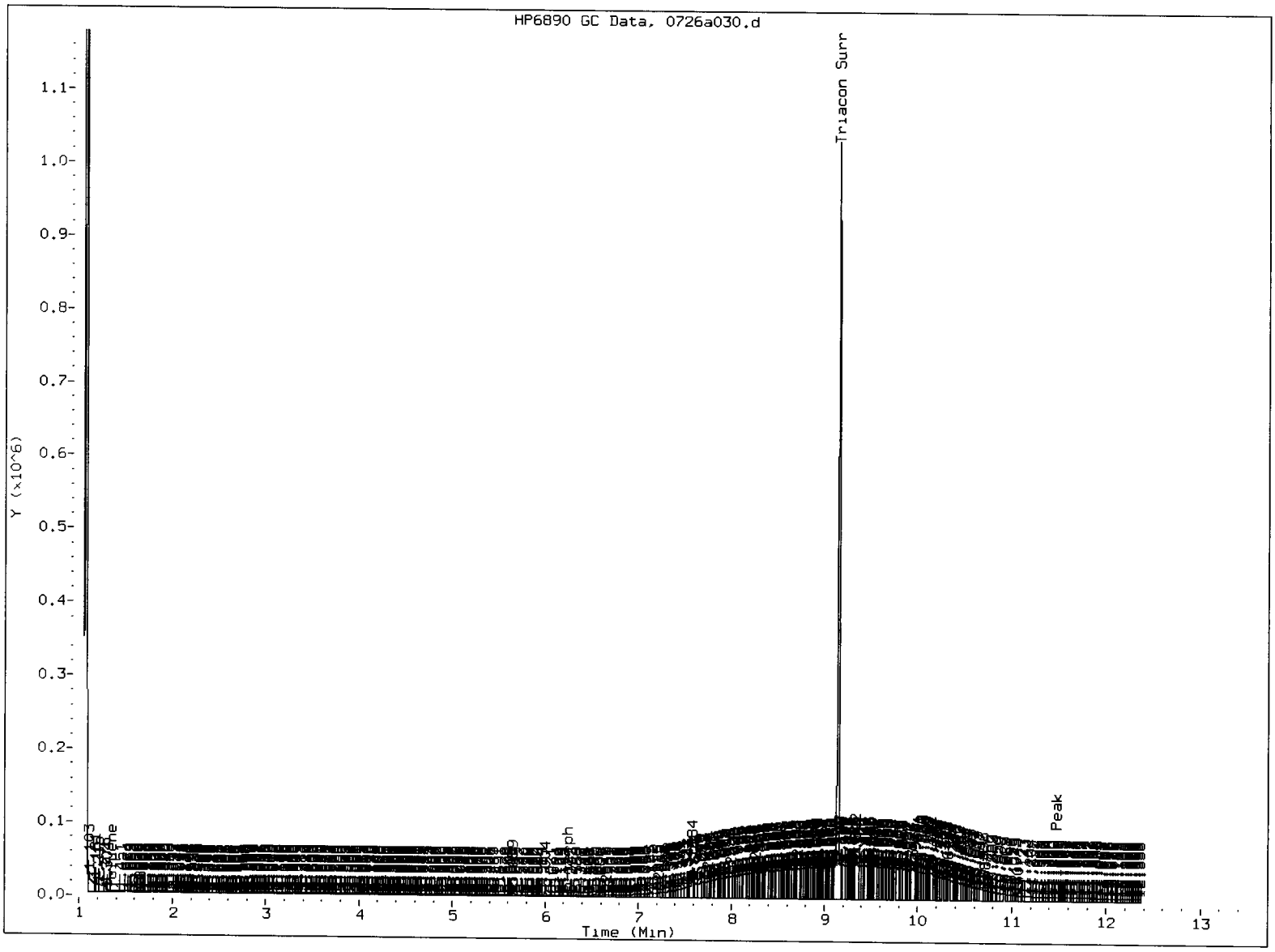
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



FID:4A-2C/RTX-1 MOIL#3

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 7/29/13

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: WY32, WY33

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: DM

Date: 7-23-13

Final Volume 50

Final Volume (Hg): 50

Sample ID NY52 PBSPK, MB13SPK, MB13SPD

		Prepcode:	SWL		
		Spike Solution:	ICP Routine	ICP No GFA	GFA
		Standard No.:	BS07		
		Vol Added (mL):	1.0		
	Ag		50		2.0
S	Al		200	200	
T	As		200		10
O	Ba		200	200	
C	Be		50 ✓	50	
K	Ca		1000	1000	
	Cd		50		2.0
	Co		50	50	
C	Cr		50	50	
O	Cu		50 ✓	50	
N	Fe		200	200	
C	K		1000	1000	
E	Mg		1000	1000	
N	Mn		50	50	
T	Na		1000	1000	
R	Ni		50	50	
A	Pb		200		10
T	Se		200		10
I	Sr		50	50	
O	Tl		200		10
N	V		50	50	
	Zn		50 ✓	50	

	SWN	SWN	
	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
	BS10	BS11	
	1.0	1.0	
Ag	25 ✓		
Al			500
As	25 ✓		
Ba	25		
Be	25		
Ca			500
Cd	25 ✓		
Co	25		
Cr	25 ✓		
Cu	25		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25 ✓		
Pb	25 ✓		
Sb		25 ✓	
Se	80 ✓		
Tl	25 ✓		
U	25		
V	25		
Zn	80		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg	SHM	CVA	1.0	0.05	3007-13
Hg MBSPK	↓	CVA	1.0	0.1	↓
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: 3MM
Analyst: DM
Bath Temp: 95°C
Start Time: 1030
Matrix: Soil
Date: 7-23-13
End Time: 1100

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
~~TEST~~ REF 1	D079	—	0.202	50.0	1	N	
" " 2	D079	—	0.204		1		
" " 3	D079	—	0.203		1		
" " MB	—	—	—	50.0	1	N	
W432 A	1	—	0.242		8/5 1	(Y)	
" AOUP	1	—	0.245		1		
" ASPK	1	—	0.244		1		
" B	1	—	0.255		1		
" C	1	—	0.250		1		
" MB1	—	—	—		1		
" MB1SPK	—	—	—		1		
" MB1SPD	—	—	—	50.0	1	(Y)	

7-23-13 DM

Chemical/Reagent ID:

HNO_3: IB149
H_2SO_4: IB044
HCl: —
5% $K_2S_2O_8$: MP2491
5% $KMnO_4$: MP2502
Digest Tube Lot: MLDTKK03

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: DM Date: 7-23-13 Time: 1030

Matrix: Soil Block ID: #4 Block Temp: 94°C Thermometer: MP52

ARI Sample ID	Btl #	pH<2	Prep Code: SWL Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWL Final Vol (mL)	Prep Code: SWN Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWN Final Vol (mL)	Comments
WY32 A	1	—	1.049	50.0	1.064	50.0	
" ADUP	1	—	1.051		1.059		
" ASPK	1	—	1.049		1.063		
" B	1	—	1.097		1.026		
" C	1	—	1.042		1.050		
" MB1	—	—	—		—		
" MB1SPK	—	—	—		—		
" MBFPD	—	—	—	50.0	—	50.0	

7-23 13 DM

Chemical/Reagent ID: HNO3: MP2519 IB222 H2O2: IB135 HCl: IB213 TUBE LOT # MJH29KK06

Analytical Resources,Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: CB

Date: 7-25-13

Final Volume 25.0

Final Volume (Hg):

Sample ID WY32 DSPK, MB25NS, MB25SD MB35PS, MB35AD

	Prepcode:			
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:			
	Vol Added (mL):			
STOCK CONCENTRATION	Ag	50		2.0
	Al	200	200	
	As	200		10
	Ba	200	200	
	Be	50	50	
	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
	Cr	50	50	
	Cu	50	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50	50	
	Pb	200		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50	50	

	REN	REN	
	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
	B510	B511	
	0.05	0.05	
Ag	25 J		
Al			500
As	25 J		
Ba	25		
Be	25 J		
Ca			500
Cd	25 J		
Co	25		
Cr	25 J		
Cu	25 J		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25 J		
Pb	25 J		
Sb		25 J	
Se	80 J		
Tl	25 J		
U	25		
V	25		
Zn	80 J		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg		CVA	1.0		
Hg MBSPK		CVA	1.0		
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: CB Date: 7-25-13 Time: 0705

Matrix: WATER Block ID: #12 Block Temp: 95°C Thermometer: MP58

ARI Sample ID	Btl #	pH<2	Prep Code: REN Initial Wt (g) Vol (mL)	Prep Code: REN Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
WY45 A	1	J	50.0	25.0			
" B	1	J					
" MB	-	-					
" MB50K	-	-					
WY32 D	3	J					
" DDup	3	J					
" D50K	3	J					
" MB1	-	-					
" MB250K	-	-					
" MB250D	-	-					
WY32 E	2	J					
" MB3	-	-					
" MB350K	-	-					
" MB350D	-	-	50.0	25.0			
				eB			
				7-25-13			

Chemical/Reagent ID: HNO_3: MP2596 H_2O_2: I8135 Tube lot #: MH21KK06

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	WY32
Unacceptable Blank:	☐	Date of Event:	7-25-13
Unacceptable Duplicate:	☑	Client ID:	SAIC
Unacceptable Spike:	☐	Method/Element:	ICP
Unacceptable Reference:	☐	Prep Code:	SWC

Details of Problem/Recommended Corrective Action:
ADUP/A : Cu wide RPD (Numbers attached)

Samples Affected:

Corrective Action Taken:

Analyst Initials: BA **Supervisor:** Sandy

Date: 7-25-13 **Date:** 7-26-13

5049F

Revision 007
6/11/10

WY 32

MATRIX DUPLICATE AND MATRIX SPIKE WORKSHEET (FOR SAMPLES >5 IDL)

DUPLICATION:

	DUP	BKGD
VOLUME	100	100
SAMP WT	1.051	1.049

ELEMENT	DUP	BKGD	% RPD
	mg/L		
Ag			#DIV/0!
Al			#DIV/0!
As			#DIV/0!
B			#DIV/0!
Ba			#DIV/0!
Be	0.0005	0.00051	2.17
Ca			#DIV/0!
Cd			#DIV/0!
Co			#DIV/0!
Cr			#DIV/0!
Cu	0.3101	0.2371	26.49
Fe			#DIV/0!
K			#DIV/0!
Mg			#DIV/0!
Mn			#DIV/0!
Mo			#DIV/0!
Na			#DIV/0!
Ni			#DIV/0!
Pb			#DIV/0!
Sb			#DIV/0!
Se			#DIV/0!
Si			#DIV/0!
Sn			#DIV/0!
Sr			#DIV/0!
Ti			#DIV/0!
Tl			#DIV/0!
V			#DIV/0!
Zn	2.952	2.833	3.92

SPIKE RECOVERY:

	SPIKE	BKGD
VOLUME	100	100
SAMP WT	1.049	1.0490

ELEMENT	SPIKE	BKGD	SPK'D CONC	% RECOV
	mg/L	mg/L	mg/L	
Ag			0.5	0.0
Al			2	0.0
As			2	0.0
B			0.5	0.0
Ba			2	0.0
Be	0.1779	0.00051	0.2	88.7
Ca			10	0.0
Cd			0.5	0.0
Co			0.5	0.0
Cr			0.5	0.0
Cu	0.4217	0.2371	0.20	92.3
Fe			2	0.0
K			10	0.0
Mg			10	0.0
Mn			0.5	0.0
Mo			0.5	0.0
Na			10	0.0
Ni			0.5	0.0
Pb			2	0.0
Sb			2	0.0
Se			2	0.0
Si			10	0.0
Sn			0.5	0.0
Sr			0.5	0.0
Ti			2	0.0
Tl			2	0.0
V			0.5	0.0
Zn	2.879	2.833	0.2	23.0

STL

TABLE 6

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	WY32
Unacceptable Blank:	☐	Date of Event:	7-29-13
Unacceptable Duplicate:	☐	Client ID:	SAIC
Unacceptable Spike:	☑	Method/Element:	ICPMS
Unacceptable Reference:	☐	Prep Code:	EWN

Details of Problem/Recommended Corrective Action:

ASPK/A = Sb ↓, Pb ↑ (Numbers attached)

Samples Affected:

Corrective Action Taken:

Analyst Initials: ZA **Supervisor:** [signature]

Date: 7-30-13 **Date:** 7-30-13

WY32

MATRIX DUPLICATE AND MATRIX SPIKE WORKSHEET (FOR SAMPLES >5 IDL)									
		icpms							
DUPLICATION:					SPIKE RECOVERY:				
	DUP	BKGD				SPIKE	BKGD		
VOLUME	100	100			VOLUME	100	100		
SAMP WT	1.059	1.064			SAMP WT	1.063	1.0640		
ELEMENT	DUP	BKGD	% RPD		ELEMENT	SPIKE	BKGD	SPK'D CONC	% RECOV
	ug/l	ug/l				ug/l	ug/l	mg/L	
Be			#DIV/0!		Be			25	0
Na			#DIV/0!		Na			5000	0
Mg			#DIV/0!		Mg			5000	0
Al			#DIV/0!		Al			5000	0
K			#DIV/0!		K			5000	0
Ca			#DIV/0!		Ca			5000	0
V			#DIV/0!		V			25	0
Cr	30.827	34.817	11.69		Cr	57.844	34.817	25	92.238891
Fe			#DIV/0!		Fe			5000	0
Mn			#DIV/0!		Mn			25	0
Co			#DIV/0!		Co			25	0
Ni	25.737	25.248	2.39		Ni	50.261	25.248	25	100.14692
Cu			#DIV/0!		Cu			25	0
Zn			#DIV/0!		Zn			80	0
As	5.355	5.869	8.69		As	27.584	5.869	25	86.882064
Se	0	0	#DIV/0!		Se	74.264	0	80	92.83
Mo			#DIV/0!		Mo			25	0
Ag	0.266	0.227	16.29		Ag	23.029	0.227	25	91.208853
Cd	0.926	0.975	4.68		Cd	24.333	0.975	25	93.435665
Sb	0	0	#DIV/0!		Sb	0.841	0	25	3.364
Ba			#DIV/0!		Ba			25	0
Tl	0	0	#DIV/0!		Tl	22.28	0	25	89.12
Pb	59	69.579	15.99		Pb	113.545	69.579	25	176.12558

TABLE 6

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	WY32
Unacceptable Blank:	☐	Date of Event:	7-29-13
Unacceptable Duplicate:	☐	Client ID:	SAIC
Unacceptable Spike:	☑	Method/Element:	ICPMS
Unacceptable Reference:	☐	Prep Code:	REN

Details of Problem/Recommended Corrective Action:

DSPK/D : Ag ↓

DSPK : 17.394 ng/L
D : 0 ng/L => ~70% rec.

Samples Affected:

Corrective Action Taken:

Analyst Initials: BA **Supervisor:**

Date: 7-29-13 **Date:** 7-30-13

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: WY32, WY33

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: (ICP) ICP-MS GFA CVA **Analysis Date:** 7-25-13

ICP2	Analyst 3A 7-26-13	Peer 7-26-13	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	
ICB/CCB	✓	✓	See log
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	✓	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	WY17
Matrix Duplicates	✓	✓	WY32
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	CAF - WY32, WY17

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 6-10-13 Analysis Date: 7-25-13 Analyst: BA

LR Date: 6-10-13 Page: 1 of 5

All corrections made by analyst unless otherwise noted. BA 7-25-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			B1042
		2			B1142
		3			B1143
		4			B1144
		5			B1145
		ICV			B323
		ICB			
		CRI			
zzz		~~ICSA~~ zzzzzz			Bad
		ICSA			Bad
		ICSAB			
		CCV1			
		CCB1			
		WY21 MB1	TWC		
		ADUP		✓	
		A			
		ASPK		✓	Al, Fe STL
	✓	B		2	Al, Fe, Mn > LR
	✓	C		↓	CO.?
		D		↓	
		E			
	✓	F		2	Al, Fe > LR
		MB1SPK	↓		
		CCV2			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 7-25-13 Analyst: BA

LR Date: — Page: 2 of 5

All corrections made by analyst unless otherwise noted. BA 7-25-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		CCB2			Cu↑ (0.00329 mg/L)
		WY21 MB2	TWC		
		MB3			
		GDUP		✓	
		G			
		GSPK		✓	
		H			
		I			
		J			
		MB2SPK		✓	
		MB3SPK		✓	
		CCV3			
		CCB3			Cu↑ (0.00203 mg/L)
		SID 0			
zzz		~~CCV4 zzzzzz~~ CCV4			SCR noisy, 3 multiple failures
		CCB4			
		WY32 MB1	SWC	2	
		WY21 K	TWC		
	✓	WY32 ADUP	SWC	2	Fe > LR
	✓	A			
	✓	ASPK			
		B			
		C			
		MB1SPK		✓	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 7-25-13 Analyst: BA

LR Date: — Page: 3 of 5

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		WY32 MBSPD	SWC	2 ✓	
		CCV5			
		CCB5			
		WY21 C	TWC	2	
		B		20	
		F			
		WY32 ADUP	SWC	5 ✓	Cu ↑ RPD (CAF)
		A			
		ASPK		✓	Zn STL
		CCV6			
		CCB6			End Pkg (WY21, WY32)
		WY15 MB	TWC		
		ADUP		✓	
		A			
		ASPK		✓	
		MBSPK		✓	
		CCV7	BA	7/25/13	
		CCB7			
		WY17 MB3	SWC	2	
	✓	GDUP			Mn, Fe > LR
	✓	G			
	✓	GSPK			
	✓	H			Ca, Mn > LR
		I			

Nebulizer Parameters: Hg_ReAlign

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

7/25/2013 7:54:26 AM Hg ReAlign... Actual peak offset (nm): 0.003
Drift (nm): 0.000 Slit adjustment: 0

Analysis Begun

Start Time: 7/25/2013 7:57:04 AM **Plasma On Time: 7/25/2013 7:05:01 AM**
Logged In Analyst: Metals **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\pe\metals\Sample Information\BLKS.sif
Batch ID:
Results Data Set: I2130725
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Method Loaded
Method Name: 7300bcESI2FAST **Method Last Saved: 8/13/2012 7:13:22 AM**
IEC File: IEC061013.iec **MSF File:**
Method Description: 12Axial Elements

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

Sequence No.: 1 **Autosampler Location: 1**
Sample ID: B1 **Date Collected: 7/25/2013 7:57:10 AM**
Data Type: Original

Dilution: 1.000000X

BA

Nebulizer Parameters: B1

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

7/25/13

Analysis Begun

Start Time: 7/25/2013 8:19:08 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 7/25/2013 7:05:01 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETb.sif
Batch ID:
Results Data Set: I2130725
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: Calib Blank 1
Autosampler Location: 1
Date Collected: 7/25/2013 8:19:09 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2662940.6	2435.12	0.09%	100.0	%
ScR 361.383	336184.9	1760.60	0.52%	100.0	%
Ag 328.068†	-88.1	20.08	22.78%	[0.00]	mg/L
Al 308.215†	155.7	3.06	1.96%	[0.00]	mg/L
As 188.979†	-8.1	3.29	40.91%	[0.00]	mg/L
B 249.677†	-4.7	3.28	69.28%	[0.00]	mg/L
Ba 233.527†	29.5	3.40	11.53%	[0.00]	mg/L
Be 313.042†	702.8	4.81	0.68%	[0.00]	mg/L
Ca 317.933†	73.5	7.33	9.97%	[0.00]	mg/L
Cd 228.802†	233.4	2.02	0.86%	[0.00]	mg/L
Co 228.616†	-70.6	3.63	5.13%	[0.00]	mg/L
Cr 267.716†	-120.9	1.64	1.36%	[0.00]	mg/L
Cu 324.752†	2743.1	62.91	2.29%	[0.00]	mg/L
Fe 273.955†	20.5	1.88	9.18%	[0.00]	mg/L
K 766.490†	355.3	24.83	6.99%	[0.00]	mg/L
Mg 279.077†	42.5	4.18	9.82%	[0.00]	mg/L
Mn 257.610†	156.5	4.22	2.69%	[0.00]	mg/L
Mo 202.031†	48.8	1.45	2.97%	[0.00]	mg/L
Na 589.592†	-375.8	32.77	8.72%	[0.00]	mg/L
Na 330.237†	-115.4	3.22	2.79%	[0.00]	mg/L
Ni 231.604†	6.3	1.16	18.23%	[0.00]	mg/L
Pb 220.353†	3.6	8.05	225.94%	[0.00]	mg/L
Sb 206.836†	34.6	0.91	2.64%	[0.00]	mg/L
Se 196.026†	-31.0	1.65	5.30%	[0.00]	mg/L
Si 288.158†	75.5	17.27	22.87%	[0.00]	mg/L
Sn 189.927†	-1.4	1.00	70.69%	[0.00]	mg/L
Sr 421.552†	242.4	16.47	6.79%	[0.00]	mg/L
Ti 334.903†	-74.4	5.54	7.45%	[0.00]	mg/L
Tl 190.801†	-25.2	1.03	4.08%	[0.00]	mg/L
V 292.402†	121.8	7.60	6.23%	[0.00]	mg/L
Zn 206.200†	-4.1	2.24	55.34%	[0.00]	mg/L

Sequence No.: 2
Sample ID: STD2
Autosampler Location: 2
Date Collected: 7/25/2013 8:23:24 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: STD2

Mean Corrected	Calib

Analyte	Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	2693834.8	7691.33	0.29%	101.2	%
ScR 361.383	338104.6	1486.80	0.44%	100.6	%
Ba 233.527†	46828.1	396.35	0.85%	[10]	mg/L
Cd 228.802†	229370.9	834.49	0.36%	[10]	mg/L
Co 228.616†	354276.5	1282.43	0.36%	[10]	mg/L
Cr 267.716†	64507.3	157.25	0.24%	[10]	mg/L
Cu 324.752†	2823646.9	12082.11	0.43%	[10]	mg/L
Mn 257.610†	383093.1	1474.48	0.38%	[10]	mg/L
V 292.402†	1216164.9	6364.30	0.52%	[10]	mg/L

Sequence No.: 3 **Autosampler Location: 3**
Sample ID: STD3 **Date Collected: 7/25/2013 8:25:26 AM**
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2670330.9	16630.26	0.62%	100.3	%
ScR 361.383	332465.2	2047.32	0.62%	98.89	%
Ag 328.068†	209427.6	293.53	0.14%	[1.0]	mg/L
As 188.979†	13295.9	101.74	0.77%	[10]	mg/L
B 249.677†	74631.7	419.66	0.56%	[10]	mg/L
Be 313.042†	2778793.9	17678.23	0.64%	[5.0]	mg/L
Na 589.592†	748667.8	2581.58	0.34%	[50]	mg/L
Ni 231.604†	40693.6	223.43	0.55%	[10]	mg/L
Pb 220.353†	73730.0	583.04	0.79%	[10]	mg/L
Se 196.026†	12414.4	155.24	1.25%	[10]	mg/L
Sr 421.552†	5102870.9	19496.45	0.38%	[5]	mg/L
Tl 190.801†	18820.6	124.71	0.66%	[10]	mg/L
Zn 206.200†	34040.2	263.71	0.77%	[10]	mg/L

Sequence No.: 4 **Autosampler Location: 4**
Sample ID: STD4 **Date Collected: 7/25/2013 8:27:59 AM**
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2694524.3	6168.86	0.23%	101.2	%
ScR 361.383	343526.4	1297.52	0.38%	102.2	%
Mo 202.031†	171721.0	1222.36	0.71%	[10]	mg/L
Sb 206.836†	28241.9	121.08	0.43%	[10]	mg/L
Si 288.158†	18446.6	190.98	1.04%	[10]	mg/L
Sn 189.927†	31925.0	285.59	0.89%	[10]	mg/L
Ti 334.903†	215079.3	380.97	0.18%	[10]	mg/L

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: STD5 **Date Collected: 7/25/2013 8:30:14 AM**
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2524285.4	2875.95	0.11%	94.79	%
ScR 361.383	335996.1	848.65	0.25%	99.94	%
Al 308.215†	43060.7	121.02	0.28%	[30]	mg/L
Ca 317.933†	334333.6	945.84	0.28%	[30]	mg/L
Fe 273.955†	128815.0	1248.27	0.97%	[100]	mg/L
K 766.490†	251559.3	792.53	0.32%	[100]	mg/L
Mg 279.077†	30611.0	47.85	0.16%	[30]	mg/L
Na 330.237†	2929.4	14.44	0.49%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	209400	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1435	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1330	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	7463	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	4683	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	555800	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	11140	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	22940	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	35430	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	6451	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	282400	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1288	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2516	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1020	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	38310	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	17170	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	14970	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	29.29	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	4069	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	7373	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	2824	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1241	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	1845	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3193	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	1021000	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	21510	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	1882	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	121600	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	3404	0.00000	1.000000	

Analysis Begun

Start Time: 7/25/2013 8:32:28 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 7/25/2013 7:05:01 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETb.sif
Batch ID:
Results Data Set: I2130725
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: ICV
Autosampler Location: 7
Date Collected: 7/25/2013 8:32:29 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2670640.4	100.3	%	0.33				0.33%
ScR 361.383	332958.1	99.04	%	0.557				0.56%
Ag 328.068†	220463.2	1.053	mg/L	0.0088	1.053	mg/L	0.0088	0.84%
Al 308.215†	3010.5	2.064	mg/L	0.0129	2.064	mg/L	0.0129	0.62%
As 188.979†	2681.3	2.045	mg/L	0.0035	2.045	mg/L	0.0035	0.17%
B 249.677†	7587.4	1.016	mg/L	0.0062	1.016	mg/L	0.0062	0.61%
Ba 233.527†	4836.9	1.032	mg/L	0.0039	1.032	mg/L	0.0039	0.38%
Be 313.042†	559371.0	1.006	mg/L	0.0054	1.006	mg/L	0.0054	0.53%
Ca 317.933†	23320.7	2.093	mg/L	0.0048	2.093	mg/L	0.0048	0.23%
Cd 228.802†	24040.7	1.038	mg/L	0.0069	1.038	mg/L	0.0069	0.67%
Co 228.616†	35638.0	1.004	mg/L	0.0096	1.004	mg/L	0.0096	0.95%
Cr 267.716†	6785.4	1.051	mg/L	0.0047	1.051	mg/L	0.0047	0.45%
Cu 324.752†	290166.2	1.027	mg/L	0.0022	1.027	mg/L	0.0022	0.21%
Fe 273.955†	2723.9	2.108	mg/L	0.0141	2.108	mg/L	0.0141	0.67%
K 766.490†	50860.1	20.22	mg/L	0.070	20.22	mg/L	0.070	0.35%
Mg 279.077†	2046.9	2.013	mg/L	0.0084	2.013	mg/L	0.0084	0.42%
Mn 257.610†	38189.8	0.9972	mg/L	0.00269	0.9972	mg/L	0.00269	0.27%
Mo 202.031†	16909.4	0.9846	mg/L	0.01046	0.9846	mg/L	0.01046	1.06%
Na 589.592†	757083.4	50.56	mg/L	0.179	50.56	mg/L	0.179	0.35%
Na 330.237†	1530.6	52.22	mg/L	0.157	52.22	mg/L	0.157	0.30%
Ni 231.604†	4178.4	1.027	mg/L	0.0072	1.027	mg/L	0.0072	0.70%
Pb 220.353†	14493.8	1.967	mg/L	0.0187	1.967	mg/L	0.0187	0.95%
Sb 206.836†	5853.8	2.072	mg/L	0.0074	2.072	mg/L	0.0074	0.36%
Se 196.026†	2529.3	2.036	mg/L	0.0097	2.036	mg/L	0.0097	0.48%
Si 288.158†	3765.2	2.046	mg/L	0.0516	2.046	mg/L	0.0516	2.52%
Sn 189.927†	3168.4	0.9940	mg/L	0.00693	0.9940	mg/L	0.00693	0.70%
Sr 421.552†	1027206.0	1.006	mg/L	0.0011	1.006	mg/L	0.0011	0.11%
Ti 334.903†	21810.6	1.013	mg/L	0.0008	1.013	mg/L	0.0008	0.08%
Tl 190.801†	3932.9	2.081	mg/L	0.0075	2.081	mg/L	0.0075	0.36%
V 292.402†	124472.5	1.028	mg/L	0.0084	1.028	mg/L	0.0084	0.82%
Zn 206.200†	3451.7	1.014	mg/L	0.0054	1.014	mg/L	0.0054	0.53%

User canceled analysis.

Analysis Begun

Start Time: 7/25/2013 8:36:40 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 7/25/2013 7:05:01 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\0725.sif
Batch ID:
Results Data Set: I2130725
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

BA 7/25/13

Sequence No.: 1
Sample ID: CV

Autosampler Location: 7
Date Collected: 7/25/2013 8:36:42 AM
Data Type: Original

BA 7/25/13

Dilution: 1.000000X
User canceled analysis.

Analysis Begun

Start Time: 7/25/2013 8:37:04 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202

Plasma On Time: 7/25/2013 7:05:01 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\0725.sif
Batch ID:
Results Data Set: I2130725
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 2
Sample ID: ICB

Autosampler Location: 1
Date Collected: 7/25/2013 8:37:04 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2701346.3	101.4	%	0.22				0.21%
ScR 361.383	341102.0	101.5	%	0.18				0.18%
Ag 328.068†	65.5	0.00031	mg/L	0.000171	0.00031	mg/L	0.000171	54.65%
Al 308.215†	1.6	0.00111	mg/L	0.003157	0.00111	mg/L	0.003157	285.64%
As 188.979†	-0.9	-0.00061	mg/L	0.001174	-0.00061	mg/L	0.001174	191.38%
B 249.677†	16.0	0.00214	mg/L	0.000806	0.00214	mg/L	0.000806	37.67%
Ba 233.527†	-3.0	-0.00064	mg/L	0.000321	-0.00064	mg/L	0.000321	50.28%
Be 313.042†	25.0	0.00004	mg/L	0.000021	0.00004	mg/L	0.000021	45.97%
Ca 317.933†	3.1	0.00028	mg/L	0.000879	0.00028	mg/L	0.000879	318.51%
Cd 228.802†	2.9	0.00013	mg/L	0.000098	0.00013	mg/L	0.000098	74.29%
Co 228.616†	7.6	0.00021	mg/L	0.000082	0.00021	mg/L	0.000082	38.60%
Cr 267.716†	6.6	0.00102	mg/L	0.000442	0.00102	mg/L	0.000442	43.33%
Cu 324.752†	78.4	0.00028	mg/L	0.000033	0.00028	mg/L	0.000033	11.93%
Fe 273.955†	-0.1	-0.00005	mg/L	0.001646	-0.00005	mg/L	0.001646	>999.9%
K 766.490†	-3.8	-0.00152	mg/L	0.009580	-0.00152	mg/L	0.009580	631.09%
Mg 279.077†	0.7	0.00067	mg/L	0.004077	0.00067	mg/L	0.004077	612.09%
Mn 257.610†	1.6	0.00004	mg/L	0.000082	0.00004	mg/L	0.000082	202.29%
Mo 202.031†	24.5	0.00143	mg/L	0.000220	0.00143	mg/L	0.000220	15.36%
Na 589.592†	210.6	0.01407	mg/L	0.001374	0.01407	mg/L	0.001374	9.77%
Na 330.237†	2.4	0.08278	mg/L	0.168138	0.08278	mg/L	0.168138	203.12%
Ni 231.604†	1.7	0.00042	mg/L	0.000620	0.00042	mg/L	0.000620	148.55%
Pb 220.353†	5.6	0.00076	mg/L	0.000655	0.00076	mg/L	0.000655	86.75%
Sb 206.836†	25.7	0.00911	mg/L	0.000072	0.00911	mg/L	0.000072	0.79%
Se 196.026†	6.1	0.00491	mg/L	0.002216	0.00491	mg/L	0.002216	45.16%
Si 288.158†	-3.8	-0.00209	mg/L	0.009673	-0.00209	mg/L	0.009673	463.74%
Sn 189.927†	1.3	0.00040	mg/L	0.000786	0.00040	mg/L	0.000786	196.71%
Sr 421.552†	68.2	0.00007	mg/L	0.000035	0.00007	mg/L	0.000035	51.64%
Ti 334.903†	24.0	0.00111	mg/L	0.000348	0.00111	mg/L	0.000348	31.18%
Tl 190.801†	2.7	0.00143	mg/L	0.000750	0.00143	mg/L	0.000750	52.56%
V 292.402†	11.5	0.00010	mg/L	0.000179	0.00010	mg/L	0.000179	181.23%
Zn 206.200†	0.9	0.00027	mg/L	0.000515	0.00027	mg/L	0.000515	191.57%

Sequence No.: 3
Sample ID: CRI

Autosampler Location: 301
Date Collected: 7/25/2013 8:41:24 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2674943.3	100.5	%	0.42				0.42%
ScR 361.383	336344.3	100.0	%	0.58				0.58%
Ag 328.068†	619.8	0.00296	mg/L	0.000170	0.00296	mg/L	0.000170	5.75%
Al 308.215†	75.3	0.05232	mg/L	0.003785	0.05232	mg/L	0.003785	7.23%
As 188.979†	67.3	0.05076	mg/L	0.000872	0.05076	mg/L	0.000872	1.72%
B 249.677†	157.0	0.02104	mg/L	0.001623	0.02104	mg/L	0.001623	7.72%
Ba 233.527†	9.8	0.00207	mg/L	0.000375	0.00207	mg/L	0.000375	18.10%
Be 313.042†	530.6	0.00095	mg/L	0.000007	0.00095	mg/L	0.000007	0.74%
Ca 317.933†	539.1	0.04838	mg/L	0.001309	0.04838	mg/L	0.001309	2.71%
Cd 228.802†	53.8	0.00208	mg/L	0.000156	0.00208	mg/L	0.000156	7.50%
Co 228.616†	111.0	0.00312	mg/L	0.000068	0.00312	mg/L	0.000068	2.17%
Cr 267.716†	35.8	0.00554	mg/L	0.000531	0.00554	mg/L	0.000531	9.57%
Cu 324.752†	610.9	0.00216	mg/L	0.000126	0.00216	mg/L	0.000126	5.81%
Fe 273.955†	65.7	0.05100	mg/L	0.001500	0.05100	mg/L	0.001500	2.94%
K 766.490†	1325.1	0.5268	mg/L	0.00239	0.5268	mg/L	0.00239	0.45%
Mg 279.077†	50.1	0.04911	mg/L	0.011670	0.04911	mg/L	0.011670	23.76%
Mn 257.610†	37.3	0.00098	mg/L	0.000080	0.00098	mg/L	0.000080	8.20%
Mo 202.031†	93.3	0.00544	mg/L	0.000288	0.00544	mg/L	0.000288	5.31%
Na 589.592†	7443.5	0.4971	mg/L	0.00319	0.4971	mg/L	0.00319	0.64%
Na 330.237†	13.6	0.4626	mg/L	0.07725	0.4626	mg/L	0.07725	16.70%
Ni 231.604†	46.1	0.01134	mg/L	0.001736	0.01134	mg/L	0.001736	15.32%
Pb 220.353†	150.9	0.02049	mg/L	0.000728	0.02049	mg/L	0.000728	3.55%
Sb 206.836†	145.3	0.05146	mg/L	0.001929	0.05146	mg/L	0.001929	3.75%
Se 196.026†	63.5	0.05115	mg/L	0.003123	0.05115	mg/L	0.003123	6.11%
Si 288.158†	105.0	0.05692	mg/L	0.006849	0.05692	mg/L	0.006849	12.03%
Sn 189.927†	28.9	0.00907	mg/L	0.001183	0.00907	mg/L	0.001183	13.04%
Sr 421.552†	963.8	0.00094	mg/L	0.000026	0.00094	mg/L	0.000026	2.76%
Ti 334.903†	129.3	0.00600	mg/L	0.000177	0.00600	mg/L	0.000177	2.95%
Tl 190.801†	95.0	0.05044	mg/L	0.001402	0.05044	mg/L	0.001402	2.78%
V 292.402†	352.1	0.00291	mg/L	0.000054	0.00291	mg/L	0.000054	1.85%
Zn 206.200†	33.8	0.00995	mg/L	0.000455	0.00995	mg/L	0.000455	4.57%

Sequence No.: 4
Sample ID: ~~ICSA~~ ZZZZZZ
BA 7/25/13
Dilution: 1.000000X

Autosampler Location: 302
Date Collected: 7/25/2013 8:45:40 AM
Data Type: Original

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2589214.6	97.23	%	0.253				0.26%
ScR 361.383	331460.4	98.59	%	0.201				0.20%
Ag 328.068†	-227.9	-0.00109	mg/L	0.000093	-0.00109	mg/L	0.000093	8.59%
Al 308.215†	291046.0	202.8	mg/L	0.63	202.8	mg/L	0.63	0.31%
As 188.979†	38.4	0.02175	mg/L	0.002820	0.02175	mg/L	0.002820	12.96%
B 249.677†	-49.2	-0.00659	mg/L	0.000675	-0.00659	mg/L	0.000675	10.24%
Ba 233.527†	128.0	-0.00693	mg/L	0.000594	-0.00693	mg/L	0.000594	8.58%
Be 313.042†	-14.9	-0.00003	mg/L	0.000016	-0.00003	mg/L	0.000016	54.91%
Ca 317.933†	1124938.0	100.9	mg/L	0.49	100.9	mg/L	0.49	0.49%
Cd 228.802†	17.9	0.00062	mg/L	0.000247	0.00062	mg/L	0.000247	39.89%
Co 228.616†	69.9	-0.00049	mg/L	0.000230	-0.00049	mg/L	0.000230	47.21%
Cr 267.716†	1.1	-0.00131	mg/L	0.001102	-0.00131	mg/L	0.001102	84.20%
Cu 324.752†	-2143.1	0.00084	mg/L	0.000094	0.00084	mg/L	0.000094	11.29%
Fe 273.955†	262079.7	203.5	mg/L	1.07	203.5	mg/L	1.07	0.52%
K 766.490†	26.3	0.01046	mg/L	0.004467	0.01046	mg/L	0.004467	42.70%
Mg 279.077†	106826.6	104.6	mg/L	0.56	104.6	mg/L	0.56	0.53%
Mn 257.610†	71.6	0.00119	mg/L	0.000364	0.00119	mg/L	0.000364	30.65%
Mo 202.031†	73.1	0.00297	mg/L	0.000048	0.00297	mg/L	0.000048	1.60%
Na 589.592†	93.2	0.00622	mg/L	0.000824	0.00622	mg/L	0.000824	13.23%
Na 330.237†	2.6	-0.3465	mg/L	0.07972	-0.3465	mg/L	0.07972	23.01%
Ni 231.604†	2.7	0.00068	mg/L	0.000989	0.00068	mg/L	0.000989	145.32%
Pb 220.353†	-308.1	-0.00490	mg/L	0.001040	-0.00490	mg/L	0.001040	21.22%
Sb 206.836†	39.3	0.01371	mg/L	0.001581	0.01371	mg/L	0.001581	11.53%
Se 196.026†	47.1	0.01575	mg/L	0.006279	0.01575	mg/L	0.006279	39.87%
Si 288.158†	-26.5	-0.00252	mg/L	0.007520	-0.00252	mg/L	0.007520	298.34%
Sn 189.927†	-91.5	-0.01568	mg/L	0.000785	-0.01568	mg/L	0.000785	5.00%
Sr 421.552†	5400.2	0.00529	mg/L Conc.	0.000059	0.00529	mg/L	0.000059	1.12%
Ti 334.903†	181.5	0.00215	mg/L	0.000317	0.00215	mg/L	0.000317	14.70%
Tl 190.801†	-52.6	-0.00007	mg/L	0.001190	-0.00007	mg/L	0.001190	>999.9%
V 292.402†	1096.7	-0.00177	mg/L	0.000394	-0.00177	mg/L	0.000394	22.28%
Zn 206.200†	7.7	0.00101	mg/L	0.001150	0.00101	mg/L	0.001150	113.94%

User canceled analysis.

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Analysis Begun

Start Time: 7/25/2013 8:50:59 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 7/25/2013 7:05:01 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\0725.sif
Batch ID:
Results Data Set: I2130725
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 4
Sample ID: ICSA
Autosampler Location: 302
Date Collected: 7/25/2013 8:51:00 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2618146.9	98.32	%	0.488				0.50%
ScR 361.383	327124.5	97.30	%	0.348				0.36%
Ag 328.068†	-253.9	-0.00121	mg/L	0.000263	-0.00121	mg/L	0.000263	21.73%
Al 308.215†	291399.3	203.0	mg/L	0.89	203.0	mg/L	0.89	0.44%
As 188.979†	36.4	0.02025	mg/L	0.004270	0.02025	mg/L	0.004270	21.09%
B 249.677†	-42.4	-0.00568	mg/L	0.000829	-0.00568	mg/L	0.000829	14.59%
Ba 233.527†	128.1	-0.00674	mg/L	0.000862	-0.00674	mg/L	0.000862	12.79%
Be 313.042†	4.6	0.00001	mg/L	0.000015	0.00001	mg/L	0.000015	244.72%
Ca 317.933†	1130358.6	101.4	mg/L	0.52	101.4	mg/L	0.52	0.51%
Cd 228.802†	17.9	0.00063	mg/L	0.000214	0.00063	mg/L	0.000214	33.89%
Co 228.616†	75.0	-0.00033	mg/L	0.000117	-0.00033	mg/L	0.000117	35.66%
Cr 267.716†	-5.9	-0.00261	mg/L	0.001495	-0.00261	mg/L	0.001495	57.34%
Cu 324.752†	-2183.3	0.00064	mg/L	0.000152	0.00064	mg/L	0.000152	23.92%
Fe 273.955†	260724.2	202.4	mg/L	1.30	202.4	mg/L	1.30	0.64%
K 766.490†	43.8	0.01741	mg/L	0.017222	0.01741	mg/L	0.017222	98.91%
Mg 279.077†	108682.0	106.4	mg/L	0.55	106.4	mg/L	0.55	0.52%
Mn 257.610†	81.2	0.00143	mg/L	0.000250	0.00143	mg/L	0.000250	17.49%
Mo 202.031†	81.3	0.00344	mg/L	0.000080	0.00344	mg/L	0.000080	2.33%
Na 589.592†	88.1	0.00588	mg/L	0.001358	0.00588	mg/L	0.001358	23.07%
Na 330.237†	2.3	-0.3590	mg/L	0.05828	-0.3590	mg/L	0.05828	16.23%
Ni 231.604†	5.8	0.00145	mg/L	0.001026	0.00145	mg/L	0.001026	70.72%
Pb 220.353†	-317.2	-0.00603	mg/L	0.001237	-0.00603	mg/L	0.001237	20.51%
Sb 206.836†	33.1	0.01153	mg/L	0.004530	0.01153	mg/L	0.004530	39.28%
Se 196.026†	44.1	0.01329	mg/L	0.006621	0.01329	mg/L	0.006621	49.82%
Si 288.158†	-30.4	-0.00446	mg/L	0.009715	-0.00446	mg/L	0.009715	217.70%
Sn 189.927†	-86.4	-0.01402	mg/L	0.001127	-0.01402	mg/L	0.001127	8.04%
Sr 421.552†	5450.9	0.00534	mg/L Cont.	0.000023	0.00534	mg/L	0.000023	0.43%
Ti 334.903†	193.4	0.00268	mg/L	0.000353	0.00268	mg/L	0.000353	13.16%
Tl 190.801†	-43.8	0.00449	mg/L	0.001152	0.00449	mg/L	0.001152	25.66%
V 292.402†	1138.5	-0.00137	mg/L	0.000626	-0.00137	mg/L	0.000626	45.65%
Zn 206.200†	8.2	0.00114	mg/L	0.000883	0.00114	mg/L	0.000883	77.61%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 7/25/2013 8:55:17 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2605944.7	97.86	%	0.348				0.36%
ScR 361.383	329498.9	98.01	%	0.305				0.31%
Ag 328.068†	223929.8	1.070	mg/L	0.0050	1.070	mg/L	0.0050	0.47%
Al 308.215†	290437.6	202.3	mg/L	0.48	202.3	mg/L	0.48	0.24%
As 188.979†	1406.2	1.050	mg/L	0.0042	1.050	mg/L	0.0042	0.40%
B 249.677†	-48.3	-0.00855	mg/L	0.000351	-0.00855	mg/L	0.000351	4.11%
Ba 233.527†	4938.7	1.021	mg/L	0.0027	1.021	mg/L	0.0027	0.26%
Be 313.042†	545649.7	0.9816	mg/L	0.00960	0.9816	mg/L	0.00960	0.98%
Ca 317.933†	1124955.7	100.9	mg/L	0.53	100.9	mg/L	0.53	0.52%
Cd 228.802†	24710.6	1.072	mg/L	0.0046	1.072	mg/L	0.0046	0.42%
Co 228.616†	35189.6	0.9906	mg/L	0.00203	0.9906	mg/L	0.00203	0.21%
Cr 267.716†	6612.7	1.023	mg/L	0.0013	1.023	mg/L	0.0013	0.13%
Cu 324.752†	301911.8	1.078	mg/L	0.0033	1.078	mg/L	0.0033	0.31%
Fe 273.955†	259318.2	201.3	mg/L	0.87	201.3	mg/L	0.87	0.43%
K 766.490†	54.4	0.02163	mg/L	0.007334	0.02163	mg/L	0.007334	33.91%
Mg 279.077†	103733.9	101.5	mg/L	0.24	101.5	mg/L	0.24	0.24%
Mn 257.610†	37405.8	0.9759	mg/L	0.00345	0.9759	mg/L	0.00345	0.35%
Mo 202.031†	72.8	0.00291	mg/L	0.000404	0.00291	mg/L	0.000404	13.89%
Na 589.592†	-12.1	-0.00081	mg/L	0.001579	-0.00081	mg/L	0.001579	196.06%
Na 330.237†	11.0	-0.3597	mg/L	0.03007	-0.3597	mg/L	0.03007	8.36%
Ni 231.604†	4015.6	0.9870	mg/L	0.00158	0.9870	mg/L	0.00158	0.16%
Pb 220.353†	6959.7	0.9812	mg/L	0.00432	0.9812	mg/L	0.00432	0.44%
Sb 206.836†	2885.8	1.012	mg/L	0.0045	1.012	mg/L	0.0045	0.44%
Se 196.026†	1324.1	1.043	mg/L	0.0040	1.043	mg/L	0.0040	0.38%
Si 288.158†	-39.5	-0.00521	mg/L	0.005351	-0.00521	mg/L	0.005351	102.79%
Sn 189.927†	-87.7	-0.01398	mg/L	0.001096	-0.01398	mg/L	0.001096	7.84%
Sr 421.552†	5327.5	0.00522	mg/L Cont.	0.000024	0.00522	mg/L	0.000024	0.45%
Ti 334.903†	186.5	0.00219	mg/L	0.000412	0.00219	mg/L	0.000412	18.79%
Tl 190.801†	1750.8	0.9479	mg/L	0.00611	0.9479	mg/L	0.00611	0.64%
V 292.402†	122460.8	1.000	mg/L	0.0038	1.000	mg/L	0.0038	0.38%
Zn 206.200†	3343.3	0.9810	mg/L	0.00124	0.9810	mg/L	0.00124	0.13%

Sequence No.: 6
Sample ID: CV

Autosampler Location: 7
Date Collected: 7/25/2013 8:59:20 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2682533.0	100.7	%	0.04				0.04%
ScR 361.383	336716.4	100.2	%	0.44				0.44%
Ag 328.068†	224026.8	1.070	mg/L	0.0047	1.070	mg/L	0.0047	0.43%
Al 308.215†	3028.0	2.075	mg/L	0.0059	2.075	mg/L	0.0059	0.28%
As 188.979†	2741.3	2.090	mg/L	0.0025	2.090	mg/L	0.0025	0.12%
B 249.677†	7605.1	1.018	mg/L	0.0039	1.018	mg/L	0.0039	0.38%
Ba 233.527†	4938.0	1.054	mg/L	0.0055	1.054	mg/L	0.0055	0.52%
Be 313.042†	563023.4	1.013	mg/L	0.0051	1.013	mg/L	0.0051	0.50%
Ca 317.933†	22588.1	2.027	mg/L	0.0062	2.027	mg/L	0.0062	0.30%
Cd 228.802†	24490.2	1.057	mg/L	0.0034	1.057	mg/L	0.0034	0.32%
Co 228.616†	36582.9	1.031	mg/L	0.0022	1.031	mg/L	0.0022	0.21%
Cr 267.716†	6876.4	1.066	mg/L	0.0031	1.066	mg/L	0.0031	0.29%
Cu 324.752†	290171.7	1.027	mg/L	0.0012	1.027	mg/L	0.0012	0.12%
Fe 273.955†	2757.7	2.134	mg/L	0.0086	2.134	mg/L	0.0086	0.41%
K 766.490†	50737.9	20.17	mg/L	0.052	20.17	mg/L	0.052	0.26%
Mg 279.077†	2086.7	2.052	mg/L	0.0096	2.052	mg/L	0.0096	0.47%
Mn 257.610†	38451.6	1.004	mg/L	0.0065	1.004	mg/L	0.0065	0.64%
Mo 202.031†	17222.7	1.003	mg/L	0.0041	1.003	mg/L	0.0041	0.41%
Na 589.592†	756514.0	50.52	mg/L	0.133	50.52	mg/L	0.133	0.26%
Na 330.237†	1529.3	52.17	mg/L	0.123	52.17	mg/L	0.123	0.23%
Ni 231.604†	4259.8	1.047	mg/L	0.0029	1.047	mg/L	0.0029	0.28%
Pb 220.353†	14853.0	2.015	mg/L	0.0060	2.015	mg/L	0.0060	0.30%
Sb 206.836†	5973.2	2.114	mg/L	0.0076	2.114	mg/L	0.0076	0.36%
Se 196.026†	2577.8	2.075	mg/L	0.0042	2.075	mg/L	0.0042	0.20%
Si 288.158†	3762.7	2.045	mg/L	0.0353	2.045	mg/L	0.0353	1.72%
Sn 189.927†	3237.0	1.016	mg/L	0.0076	1.016	mg/L	0.0076	0.75%
Sr 421.552†	1026953.9	1.006	mg/L	0.0027	1.006	mg/L	0.0027	0.27%
Ti 334.903†	21895.4	1.017	mg/L	0.0013	1.017	mg/L	0.0013	0.12%
Tl 190.801†	4011.8	2.123	mg/L	0.0006	2.123	mg/L	0.0006	0.03%
V 292.402†	126756.4	1.046	mg/L	0.0027	1.046	mg/L	0.0027	0.26%
Zn 206.200†	3540.4	1.040	mg/L	0.0034	1.040	mg/L	0.0034	0.33%

Sequence No.: 7
Sample ID: CB

Autosampler Location: 1
Date Collected: 7/25/2013 9:03:25 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2700317.2	101.4	%	0.70				0.69%
ScR 361.383	341855.0	101.7	%	0.76				0.75%
Ag 328.068†	27.4	0.00013	mg/L	0.000153	0.00013	mg/L	0.000153	116.96%
Al 308.215†	6.9	0.00476	mg/L	0.002501	0.00476	mg/L	0.002501	52.57%
As 188.979†	-1.1	-0.00080	mg/L	0.000717	-0.00080	mg/L	0.000717	90.22%
B 249.677†	9.9	0.00133	mg/L	0.001524	0.00133	mg/L	0.001524	114.62%
Ba 233.527†	-0.2	-0.00005	mg/L	0.000389	-0.00005	mg/L	0.000389	833.43%
Be 313.042†	30.9	0.00006	mg/L	0.000004	0.00006	mg/L	0.000004	7.38%
Ca 317.933†	35.7	0.00320	mg/L	0.000526	0.00320	mg/L	0.000526	16.41%
Cd 228.802†	8.1	0.00036	mg/L	0.000115	0.00036	mg/L	0.000115	32.00%
Co 228.616†	12.0	0.00034	mg/L	0.000439	0.00034	mg/L	0.000439	129.47%
Cr 267.716†	-5.5	-0.00085	mg/L	0.000374	-0.00085	mg/L	0.000374	44.24%
Cu 324.752†	103.9	0.00037	mg/L	0.000169	0.00037	mg/L	0.000169	46.08%
Fe 273.955†	7.2	0.00557	mg/L	0.000438	0.00557	mg/L	0.000438	7.86%
K 766.490†	54.3	0.02159	mg/L	0.006488	0.02159	mg/L	0.006488	30.05%
Mg 279.077†	1.8	0.00176	mg/L	0.004221	0.00176	mg/L	0.004221	239.70%
Mn 257.610†	4.7	0.00012	mg/L	0.000031	0.00012	mg/L	0.000031	25.00%
Mo 202.031†	35.1	0.00205	mg/L	0.001003	0.00205	mg/L	0.001003	48.99%
Na 589.592†	201.7	0.01347	mg/L	0.004751	0.01347	mg/L	0.004751	35.26%
Na 330.237†	2.4	0.08223	mg/L	0.128251	0.08223	mg/L	0.128251	155.97%
Ni 231.604†	3.7	0.00091	mg/L	0.000617	0.00091	mg/L	0.000617	67.90%
Pb 220.353†	1.9	0.00026	mg/L	0.001626	0.00026	mg/L	0.001626	636.76%
Sb 206.836†	42.8	0.01519	mg/L	0.004270	0.01519	mg/L	0.004270	28.11%
Se 196.026†	2.9	0.00234	mg/L	0.002024	0.00234	mg/L	0.002024	86.54%
Si 288.158†	-6.3	-0.00342	mg/L	0.009964	-0.00342	mg/L	0.009964	291.57%
Sn 189.927†	3.2	0.00102	mg/L	0.000644	0.00102	mg/L	0.000644	63.08%
Sr 421.552†	43.1	0.00004	mg/L	0.000013	0.00004	mg/L	0.000013	30.78%
Ti 334.903†	8.5	0.00039	mg/L	0.000480	0.00039	mg/L	0.000480	122.53%
Tl 190.801†	2.2	0.00117	mg/L	0.001319	0.00117	mg/L	0.001319	112.77%
V 292.402†	21.5	0.00017	mg/L	0.000164	0.00017	mg/L	0.000164	93.98%
Zn 206.200†	0.7	0.00020	mg/L	0.000295	0.00020	mg/L	0.000295	149.55%

Sequence No.: 8
Sample ID: WY21 MB1 TWC

Autosampler Location: 304
Date Collected: 7/25/2013 9:07:40 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WY21 MB1 TWC

Analyte	Back Pressure	Flow
All	232.0 kPa	0.75 L/min

Mean Data: WY21 MB1 TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2705567.7	101.6	%	0.09				0.08%
ScR 361.383	341833.4	101.7	%	0.48				0.48%
Ag 328.068†	13.3	0.00006	mg/L	0.000054	0.00006	mg/L	0.000054	85.30%
Al 308.215†	7.4	0.00517	mg/L	0.008868	0.00517	mg/L	0.008868	171.37%
As 188.979†	-1.3	-0.00099	mg/L	0.002549	-0.00099	mg/L	0.002549	258.23%
B 249.677†	7.6	0.00101	mg/L	0.000865	0.00101	mg/L	0.000865	85.23%
Ba 233.527†	0.4	0.00008	mg/L	0.001011	0.00008	mg/L	0.001011	>999.9%
Be 313.042†	-15.6	-0.00003	mg/L	0.000014	-0.00003	mg/L	0.000014	50.98%
Ca 317.933†	53.9	0.00483	mg/L	0.000743	0.00483	mg/L	0.000743	15.38%
Cd 228.802†	-0.9	-0.00003	mg/L	0.000044	-0.00003	mg/L	0.000044	137.92%
Co 228.616†	-3.3	-0.00009	mg/L	0.000112	-0.00009	mg/L	0.000112	120.14%
Cr 267.716†	-5.3	-0.00082	mg/L	0.000478	-0.00082	mg/L	0.000478	58.17%
Cu 324.752†	81.2	0.00029	mg/L	0.000142	0.00029	mg/L	0.000142	49.54%
Fe 273.955†	1.9	0.00144	mg/L	0.001367	0.00144	mg/L	0.001367	94.74%
K 766.490†	27.7	0.01102	mg/L	0.004498	0.01102	mg/L	0.004498	40.83%
Mg 279.077†	3.9	0.00379	mg/L	0.004853	0.00379	mg/L	0.004853	127.98%
Mn 257.610†	1.4	0.00004	mg/L	0.000057	0.00004	mg/L	0.000057	150.60%
Mo 202.031†	4.5	0.00026	mg/L	0.000070	0.00026	mg/L	0.000070	26.71%
Na 589.592†	72.8	0.00486	mg/L	0.004217	0.00486	mg/L	0.004217	86.73%
Na 330.237†	-5.5	-0.1864	mg/L	0.10202	-0.1864	mg/L	0.10202	54.72%
Ni 231.604†	-0.2	-0.00004	mg/L	0.000640	-0.00004	mg/L	0.000640	>999.9%
Pb 220.353†	4.7	0.00064	mg/L	0.000701	0.00064	mg/L	0.000701	110.09%
Sb 206.836†	5.0	0.00177	mg/L	0.000977	0.00177	mg/L	0.000977	55.08%
Se 196.026†	1.3	0.00106	mg/L	0.003082	0.00106	mg/L	0.003082	289.77%
Si 288.158†	89.6	0.04859	mg/L	0.005206	0.04859	mg/L	0.005206	10.71%
Sn 189.927†	1.2	0.00038	mg/L	0.001594	0.00038	mg/L	0.001594	420.66%
Sr 421.552†	-31.6	-0.00003	mg/L	0.000012	-0.00003	mg/L	0.000012	38.78%
Ti 334.903†	9.1	0.00042	mg/L	0.000296	0.00042	mg/L	0.000296	70.10%
Tl 190.801†	-0.9	-0.00047	mg/L	0.000338	-0.00047	mg/L	0.000338	72.04%
V 292.402†	-1.8	-0.00002	mg/L	0.000105	-0.00002	mg/L	0.000105	583.20%
Zn 206.200†	0.2	0.00007	mg/L	0.000840	0.00007	mg/L	0.000840	>999.9%

Sequence No.: 9
Sample ID: WY21 ADUP TWC

Autosampler Location: 305
Date Collected: 7/25/2013 9:11:57 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WY21 ADUP TWC

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: WY21 ADUP TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2677885.9	100.6	%	0.23				0.23%
ScR 361.383	343025.4	102.0	%	0.34				0.33%
Ag 328.068†	22.3	0.00016	mg/L	0.000117	0.00016	mg/L	0.000117	74.15%
Al 308.215†	151304.0	105.4	mg/L	0.34	105.4	mg/L	0.34	0.32%
As 188.979†	-142.3	0.00889	mg/L	0.001043	0.00889	mg/L	0.001043	11.73%
B 249.677†	47.3	0.00620	mg/L	0.000803	0.00620	mg/L	0.000803	12.94%
Ba 233.527†	3440.8	0.7225	mg/L	0.00730	0.7225	mg/L	0.00730	1.01%
Be 313.042†	926.7	0.00159	mg/L	0.000018	0.00159	mg/L	0.000018	1.14%
Ca 317.933†	419045.4	37.60	mg/L	0.155	37.60	mg/L	0.155	0.41%
Cd 228.802†	830.6	0.03693	mg/L	0.000127	0.03693	mg/L	0.000127	0.34%
Co 228.616†	2499.8	0.06323	mg/L	0.000311	0.06323	mg/L	0.000311	0.49%
Cr 267.716†	674.0	0.1047	mg/L	0.00036	0.1047	mg/L	0.00036	0.35%
Cu 324.752†	2453668.8	8.692	mg/L	0.0275	8.692	mg/L	0.0275	0.32%
Fe 273.955†	93114.2	72.28	mg/L	0.671	72.28	mg/L	0.671	0.93%
K 766.490†	16482.2	6.552	mg/L	0.0208	6.552	mg/L	0.0208	0.32%
Mg 279.077†	27777.5	27.18	mg/L	0.121	27.18	mg/L	0.121	0.44%
Mn 257.610†	54281.5	1.416	mg/L	0.0077	1.416	mg/L	0.0077	0.55%
Mo 202.031†	158.3	0.00873	mg/L	0.000332	0.00873	mg/L	0.000332	3.80%
Na 589.592†	133484.4	8.915	mg/L	0.0307	8.915	mg/L	0.0307	0.34%
Na 330.237†	279.4	9.234	mg/L	0.0673	9.234	mg/L	0.0673	0.73%
Ni 231.604†	644.7	0.1584	mg/L	0.00097	0.1584	mg/L	0.00097	0.61%
Pb 220.353†	349.0	0.05610	mg/L	0.000639	0.05610	mg/L	0.000639	1.14%
Sb 206.836†	12.6	0.00660	mg/L	0.000580	0.00660	mg/L	0.000580	8.78%
Se 196.026†	28.6	0.01137	mg/L	0.004051	0.01137	mg/L	0.004051	35.61%
Si 288.158†	17629.3	9.560	mg/L	0.0496	9.560	mg/L	0.0496	0.52%
Sn 189.927†	-61.0	-0.01350	mg/L	0.000534	-0.01350	mg/L	0.000534	3.95%
Sr 421.552†	282180.0	0.2765	mg/L	0.00085	0.2765	mg/L	0.00085	0.31%
Ti 334.903†	79426.9	3.691	mg/L	0.0139	3.691	mg/L	0.0139	0.38%
Tl 190.801†	-15.8	0.00045	mg/L	0.001830	0.00045	mg/L	0.001830	402.60%
V 292.402†	21638.2	0.1727	mg/L	0.00065	0.1727	mg/L	0.00065	0.37%
Zn 206.200†	13307.6	3.911	mg/L	0.0127	3.911	mg/L	0.0127	0.33%

Sequence No.: 10
Sample ID: WY21 A TWC

Autosampler Location: 306
Date Collected: 7/25/2013 9:15:58 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WY21 A TWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WY21 A TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2670173.2	100.3	%	0.51				0.51%
ScR 361.383	341934.4	101.7	%	0.37				0.36%
Ag 328.068†	41.2	0.00025	mg/L	0.000248	0.00025	mg/L	0.000248	99.12%
Al 308.215†	156694.7	109.2	mg/L	0.53	109.2	mg/L	0.53	0.49%
As 188.979†	-151.0	0.00821	mg/L	0.004463	0.00821	mg/L	0.004463	54.33%
B 249.677†	44.5	0.00582	mg/L	0.000694	0.00582	mg/L	0.000694	11.93%
Ba 233.527†	3589.7	0.7539	mg/L	0.00194	0.7539	mg/L	0.00194	0.26%
Be 313.042†	972.0	0.00166	mg/L	0.000022	0.00166	mg/L	0.000022	1.35%
Ca 317.933†	435540.3	39.08	mg/L	0.066	39.08	mg/L	0.066	0.17%
Cd 228.802†	845.8	0.03763	mg/L	0.000185	0.03763	mg/L	0.000185	0.49%
Co 228.616†	2558.6	0.06453	mg/L	0.000554	0.06453	mg/L	0.000554	0.86%
Cr 267.716†	691.8	0.1075	mg/L	0.00015	0.1075	mg/L	0.00015	0.14%
Cu 324.752†	2493026.4	8.832	mg/L	0.0098	8.832	mg/L	0.0098	0.11%
Fe 273.955†	96952.8	75.26	mg/L	0.372	75.26	mg/L	0.372	0.49%
K 766.490†	17042.0	6.775	mg/L	0.0410	6.775	mg/L	0.0410	0.60%
Mg 279.077†	28889.9	28.26	mg/L	0.112	28.26	mg/L	0.112	0.40%
Mn 257.610†	55855.3	1.458	mg/L	0.0033	1.458	mg/L	0.0033	0.23%
Mo 202.031†	168.7	0.00932	mg/L	0.000427	0.00932	mg/L	0.000427	4.58%
Na 589.592†	140697.8	9.397	mg/L	0.0457	9.397	mg/L	0.0457	0.49%
Na 330.237†	301.4	10.00	mg/L	0.098	10.00	mg/L	0.098	0.98%
Ni 231.604†	668.4	0.1643	mg/L	0.00123	0.1643	mg/L	0.00123	0.75%
Pb 220.353†	347.6	0.05644	mg/L	0.001048	0.05644	mg/L	0.001048	1.86%
Sb 206.836†	7.7	0.00499	mg/L	0.003255	0.00499	mg/L	0.003255	65.22%
Se 196.026†	26.0	0.00886	mg/L	0.002529	0.00886	mg/L	0.002529	28.54%
Si 288.158†	74375.7	40.32	mg/L	0.246	40.32	mg/L	0.246	0.61%
Sn 189.927†	-69.9	-0.01607	mg/L	0.000156	-0.01607	mg/L	0.000156	0.97%
Sr 421.552†	294768.1	0.2888	mg/L	0.00158	0.2888	mg/L	0.00158	0.55%
Ti 334.903†	83455.6	3.878	mg/L	0.0158	3.878	mg/L	0.0158	0.41%
Tl 190.801†	-12.8	0.00238	mg/L	0.002446	0.00238	mg/L	0.002446	102.69%
V 292.402†	22547.9	0.1799	mg/L	0.00077	0.1799	mg/L	0.00077	0.43%
Zn 206.200†	13618.6	4.007	mg/L	0.0181	4.007	mg/L	0.0181	0.45%

Sequence No.: 11
Sample ID: WY21 ASPK TWC

Autosampler Location: 307
Date Collected: 7/25/2013 9:19:59 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WY21 ASPK TWC

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: WY21 ASPK TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2646524.5	99.38	%	0.439				0.44%
ScR 361.383	336551.4	100.1	%	0.37				0.37%
Ag 328.068†	107696.6	0.5144	mg/L	0.00412	0.5144	mg/L	0.00412	0.80%
Al 308.215†	156532.0	109.0	mg/L	0.18	109.0	mg/L	0.18	0.16%
As 188.979†	2601.0	2.071	mg/L	0.0122	2.071	mg/L	0.0122	0.59%
B 249.677†	41.7	0.00438	mg/L	0.000984	0.00438	mg/L	0.000984	22.47%
Ba 233.527†	13319.0	2.831	mg/L	0.0153	2.831	mg/L	0.0153	0.54%
Be 313.042†	266984.5	0.4802	mg/L	0.00198	0.4802	mg/L	0.00198	0.41%
Ca 317.933†	531383.3	47.68	mg/L	0.046	47.68	mg/L	0.046	0.10%
Cd 228.802†	13314.4	0.5702	mg/L	0.00459	0.5702	mg/L	0.00459	0.80%
Co 228.616†	20460.0	0.5699	mg/L	0.00252	0.5699	mg/L	0.00252	0.44%
Cr 267.716†	4017.5	0.6220	mg/L	0.00036	0.6220	mg/L	0.00036	0.06%
Cu 324.752†	2666896.6	9.447	mg/L	0.0274	9.447	mg/L	0.0274	0.29%
Fe 273.955†	96627.0	75.01	mg/L	0.545	75.01	mg/L	0.545	0.73%
K 766.490†	41926.8	16.67	mg/L	0.030	16.67	mg/L	0.030	0.18%
Mg 279.077†	39118.5	38.29	mg/L	0.044	38.29	mg/L	0.044	0.12%
Mn 257.610†	74274.7	1.939	mg/L	0.0091	1.939	mg/L	0.0091	0.47%
Mo 202.031†	170.6	0.00930	mg/L	0.000360	0.00930	mg/L	0.000360	3.87%
Na 589.592†	284007.0	18.97	mg/L	0.026	18.97	mg/L	0.026	0.14%
Na 330.237†	592.2	19.67	mg/L	0.285	19.67	mg/L	0.285	1.45%
Ni 231.604†	2649.9	0.6504	mg/L	0.00269	0.6504	mg/L	0.00269	0.41%
Pb 220.353†	15118.9	2.060	mg/L	0.0071	2.060	mg/L	0.0071	0.34%
Sb 206.836†	23.3	0.00531	mg/L	0.002940	0.00531	mg/L	0.002940	55.35%
Se 196.026†	2586.5	2.071	mg/L	0.0096	2.071	mg/L	0.0096	0.46%
Si 288.158†	35374.5	19.18	mg/L	0.076	19.18	mg/L	0.076	0.39%
Sn 189.927†	-65.0	-0.01340	mg/L	0.001338	-0.01340	mg/L	0.001338	9.98%
Sr 421.552†	792590.5	0.7766	mg/L	0.00178	0.7766	mg/L	0.00178	0.23%
Ti 334.903†	79179.2	3.678	mg/L	0.0075	3.678	mg/L	0.0075	0.20%
Tl 190.801†	3659.7	1.949	mg/L	0.0107	1.949	mg/L	0.0107	0.55%
V 292.402†	82859.6	0.6781	mg/L	0.00665	0.6781	mg/L	0.00665	0.98%
Zn 206.200†	15453.8	4.543	mg/L	0.0087	4.543	mg/L	0.0087	0.19%

Sequence No.: 12
Sample ID: WY21 B TWC

Del

Dilution: 2.000000X

Autosampler Location: 308
Date Collected: 7/25/2013 9:23:18 AM
Data Type: Original

Nebulizer Parameters: WY21 B TWC

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: WY21 B TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2696752.4	101.3	%	0.52				0.51%
ScR 361.383	352049.6	104.7	%	0.43				0.41%
Ag 328.068†	-263.2	-0.00052	mg/L	0.000123	-0.00105	mg/L	0.000246	23.43%
Al 308.215†	2122036.1	1478	mg/L	4.31	2957	mg/L	8.62	0.29%
As 188.979†	-1443.7	0.3188	mg/L	0.01962	0.6375	mg/L	0.03925	6.16%
B 249.677†	400.5	0.05135	mg/L	0.002615	0.1027	mg/L	0.00523	5.09%
Ba 233.527†	49955.6	10.41	mg/L	0.053	20.83	mg/L	0.107	0.51%
Be 313.042†	12449.7	0.02134	mg/L	0.000072	0.04267	mg/L	0.000143	0.34%
Ca 317.933†	3432824.4	308.0	mg/L	3.56	616.1	mg/L	7.13	1.16%
Cd 228.802†	1057.6	0.05517	mg/L	0.000338	0.1103	mg/L	0.00068	0.61%
Co 228.616†	40515.2	1.047	mg/L	0.0060	2.095	mg/L	0.0120	0.57%
Cr 267.716†	10954.5	1.718	mg/L	0.0020	3.436	mg/L	0.0041	0.12%
Cu 324.752†	4270507.5	15.18	mg/L	0.020	30.36	mg/L	0.040	0.13%
Fe 273.955†	1939450.2	1506	mg/L	11.51	3011	mg/L	23.03	0.76%
K 766.490†	345444.6	137.3	mg/L	0.41	274.6	mg/L	0.81	0.30%
Mg 279.077†	465676.8	455.4	mg/L	3.23	910.9	mg/L	6.47	0.71%
Mn 257.610†	1231488.0	32.14	mg/L	0.236	64.29	mg/L	0.472	0.73%
Mo 202.031†	1522.4	0.08466	mg/L	0.001230	0.1693	mg/L	0.00246	1.45%
Na 589.592†	1012532.2	67.62	mg/L	0.161	135.2	mg/L	0.32	0.24%
Na 330.237†	1723.4	68.21	mg/L	0.545	136.4	mg/L	1.09	0.80%
Ni 231.604†	14662.7	3.603	mg/L	0.0160	7.207	mg/L	0.0321	0.44%
Pb 220.353†	11737.5	1.841	mg/L	0.0120	3.683	mg/L	0.0240	0.65%
Sb 206.836†	236.4	0.1069	mg/L	0.01103	0.2137	mg/L	0.02206	10.32%
Se 196.026†	264.9	0.04934	mg/L	0.006859	0.09868	mg/L	0.013718	13.90%
Si 288.158†	82488.2	44.77	mg/L	0.150	89.54	mg/L	0.299	0.33%
Sn 189.927†	-126.6	0.00923	mg/L	0.002545	0.01845	mg/L	0.005091	27.59%
Sr 421.552†	2512174.6	2.462	mg/L	0.0038	4.923	mg/L	0.0075	0.15%
Ti 334.903†	955628.9	44.41	mg/L	0.221	88.82	mg/L	0.442	0.50%
Tl 190.801†	-406.5	-0.02588	mg/L	0.004797	-0.05176	mg/L	0.009594	18.53%
V 292.402†	308345.9	2.443	mg/L	0.0046	4.885	mg/L	0.0093	0.19%
Zn 206.200†	22612.6	6.647	mg/L	0.0069	13.29	mg/L	0.014	0.10%

Sequence No.: 13
Sample ID: WY21 C TWC

Dil C.O.?

Dilution: 2.000000X

Autosampler Location: 309
Date Collected: 7/25/2013 9:25:41 AM
Data Type: Original

Nebulizer Parameters: WY21 C TWC

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: WY21 C TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2724014.2	102.3	%	0.35				0.34%
ScR 361.383	347343.4	103.3	%	0.26				0.25%
Ag 328.068†	54.7	0.00036	mg/L	0.000056	0.00072	mg/L	0.000113	15.68%
Al 308.215†	309114.6	215.3	mg/L	0.47	430.7	mg/L	0.93	0.22%
As 188.979†	-291.8	0.00147	mg/L	0.002837	0.00294	mg/L	0.005674	192.82%
B 249.677†	51.6	0.00657	mg/L	0.000153	0.01314	mg/L	0.000306	2.33%
Ba 233.527†	5745.1	1.196	mg/L	0.0009	2.392	mg/L	0.0018	0.07%
Be 313.042†	2201.9	0.00381	mg/L	0.000012	0.00762	mg/L	0.000025	0.32%
Ca 317.933†	500981.6	44.95	mg/L	0.143	89.91	mg/L	0.287	0.32%
Cd 228.802†	609.6	0.02815	mg/L	0.000337	0.05630	mg/L	0.000674	1.20%
Co 228.616†	6257.8	0.1622	mg/L	0.00109	0.3245	mg/L	0.00217	0.67%
Cr 267.716†	1836.6	0.2873	mg/L	0.00113	0.5746	mg/L	0.00226	0.39%
Cu 324.752†	2584902.7	9.161	mg/L	0.0283	18.32	mg/L	0.057	0.31%
Fe 273.955†	235088.7	182.5	mg/L	0.58	365.0	mg/L	1.17	0.32%
K 766.490†	41363.7	16.44	mg/L	0.056	32.89	mg/L	0.111	0.34%
Mg 279.077†	53236.2	52.06	mg/L	0.040	104.1	mg/L	0.08	0.08%
Mn 257.610†	164799.4	4.301	mg/L	0.0088	8.602	mg/L	0.0177	0.21%
Mo 202.031†	453.1	0.02580	mg/L	0.000348	0.05160	mg/L	0.000695	1.35%
Na 589.592†	179702.2	12.00	mg/L	0.015	24.00	mg/L	0.030	0.13%
Na 330.237†	346.8	12.44	mg/L	0.082	24.87	mg/L	0.163	0.66%
Ni 231.604†	1765.2	0.4338	mg/L	0.00090	0.8676	mg/L	0.00179	0.21%
Pb 220.353†	713.5	0.1252	mg/L	0.00087	0.2504	mg/L	0.00174	0.69%
Sb 206.836†	31.9	0.01437	mg/L	0.002118	0.02874	mg/L	0.004237	14.74%
Se 196.026†	47.7	0.01451	mg/L	0.003449	0.02902	mg/L	0.006898	23.77%
Si 288.158†	16868.8	9.151	mg/L	0.1510	18.30	mg/L	0.302	1.65%
Sn 189.927†	-61.3	-0.01196	mg/L	0.001521	-0.02392	mg/L	0.003042	12.72%
Sr 421.552†	365346.2	0.3580	mg/L	0.00087	0.7160	mg/L	0.00174	0.24%
Ti 334.903†	150188.5	6.980	mg/L	0.0123	13.96	mg/L	0.025	0.18%
Tl 190.801†	-36.4	0.00334	mg/L	0.005572	0.00667	mg/L	0.011144	167.02%
V 292.402†	41666.8	0.3309	mg/L	0.00232	0.6617	mg/L	0.00465	0.70%
Zn 206.200†	13421.2	3.944	mg/L	0.0162	7.888	mg/L	0.0323	0.41%

Sequence No.: 14
Sample ID: WY21 D TWC

Autosampler Location: 310
Date Collected: 7/25/2013 9:29:43 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WY21 D TWC

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: WY21 D TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2723025.7	102.3	%	0.72				0.71%
ScR 361.383	347173.9	103.3	%	0.30				0.29%
Ag 328.068†	73.6	0.00045	mg/L	0.000099	0.00090	mg/L	0.000199	21.97%
Al 308.215†	311144.6	216.8	mg/L	0.39	433.5	mg/L	0.78	0.18%
As 188.979†	-290.7	0.00619	mg/L	0.003533	0.01238	mg/L	0.007065	57.09%
B 249.677†	54.5	0.00695	mg/L	0.000400	0.01391	mg/L	0.000801	5.76%
Ba 233.527†	5748.3	1.197	mg/L	0.0079	2.393	mg/L	0.0157	0.66%
Be 313.042†	2219.1	0.00384	mg/L	0.000010	0.00767	mg/L	0.000019	0.25%
Ca 317.933†	508164.4	45.60	mg/L	0.105	91.20	mg/L	0.210	0.23%
Cd 228.802†	608.1	0.02808	mg/L	0.000634	0.05617	mg/L	0.001269	2.26%
Co 228.616†	6238.1	0.1615	mg/L	0.00153	0.3229	mg/L	0.00306	0.95%
Cr 267.716†	1853.9	0.2899	mg/L	0.00220	0.5798	mg/L	0.00440	0.76%
Cu 324.752†	2580306.5	9.145	mg/L	0.0223	18.29	mg/L	0.045	0.24%
Fe 273.955†	234818.8	182.3	mg/L	2.20	364.6	mg/L	4.40	1.21%
K 766.490†	41596.7	16.54	mg/L	0.079	33.07	mg/L	0.157	0.47%
Mg 279.077†	53854.7	52.67	mg/L	0.078	105.3	mg/L	0.16	0.15%
Mn 257.610†	163096.3	4.257	mg/L	0.0302	8.514	mg/L	0.0604	0.71%
Mo 202.031†	449.7	0.02559	mg/L	0.000118	0.05119	mg/L	0.000237	0.46%
Na 589.592†	183547.5	12.26	mg/L	0.039	24.52	mg/L	0.078	0.32%
Na 330.237†	363.1	13.02	mg/L	0.081	26.04	mg/L	0.163	0.62%
Ni 231.604†	1790.6	0.4400	mg/L	0.00178	0.8801	mg/L	0.00357	0.41%
Pb 220.353†	699.9	0.1237	mg/L	0.00054	0.2475	mg/L	0.00108	0.44%
Sb 206.836†	23.4	0.01145	mg/L	0.000698	0.02290	mg/L	0.001397	6.10%
Se 196.026†	47.9	0.01455	mg/L	0.007434	0.02910	mg/L	0.014867	51.09%
Si 288.158†	12794.0	6.942	mg/L	0.0307	13.88	mg/L	0.061	0.44%
Sn 189.927†	-60.5	-0.01163	mg/L	0.001946	-0.02326	mg/L	0.003891	16.73%
Sr 421.552†	372424.2	0.3649	mg/L	0.00096	0.7298	mg/L	0.00192	0.26%
Ti 334.903†	152852.6	7.104	mg/L	0.0208	14.21	mg/L	0.042	0.29%
Tl 190.801†	-39.0	0.00191	mg/L	0.003672	0.00381	mg/L	0.007344	192.60%
V 292.402†	42223.2	0.3354	mg/L	0.00212	0.6708	mg/L	0.00423	0.63%
Zn 206.200†	13513.3	3.970	mg/L	0.0139	7.941	mg/L	0.0278	0.35%

Sequence No.: 15
Sample ID: WY21 E TWC

Autosampler Location: 311
Date Collected: 7/25/2013 9:33:45 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WY21 E TWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WY21 E TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2755001.8	103.5	%	0.52				0.50%
ScR 361.383	345724.5	102.8	%	0.35				0.34%
Ag 328.068†	1.7	0.00001	mg/L	0.000134	0.00001	mg/L	0.000134	>999.9%
Al 308.215†	54.7	0.03808	mg/L	0.003046	0.03808	mg/L	0.003046	8.00%
As 188.979†	-1.6	-0.00102	mg/L	0.002321	-0.00102	mg/L	0.002321	228.24%
B 249.677†	16.4	0.00219	mg/L	0.000281	0.00219	mg/L	0.000281	12.80%
Ba 233.527†	-0.5	-0.00012	mg/L	0.000705	-0.00012	mg/L	0.000705	609.00%
Be 313.042†	19.8	0.00004	mg/L	0.000008	0.00004	mg/L	0.000008	21.39%
Ca 317.933†	173.9	0.01560	mg/L	0.000927	0.01560	mg/L	0.000927	5.94%
Cd 228.802†	3.7	0.00017	mg/L	0.000103	0.00017	mg/L	0.000103	60.76%
Co 228.616†	7.3	0.00019	mg/L	0.000096	0.00019	mg/L	0.000096	49.43%
Cr 267.716†	-1.7	-0.00027	mg/L	0.001116	-0.00027	mg/L	0.001116	413.78%
Cu 324.752†	1687.9	0.00598	mg/L	0.000719	0.00598	mg/L	0.000719	12.03%
Fe 273.955†	39.3	0.03052	mg/L	0.002135	0.03052	mg/L	0.002135	7.00%
K 766.490†	80.0	0.03181	mg/L	0.008154	0.03181	mg/L	0.008154	25.63%
Mg 279.077†	11.9	0.01163	mg/L	0.002043	0.01163	mg/L	0.002043	17.57%
Mn 257.610†	32.3	0.00084	mg/L	0.000116	0.00084	mg/L	0.000116	13.82%
Mo 202.031†	3.9	0.00023	mg/L	0.000064	0.00023	mg/L	0.000064	28.43%
Na 589.592†	5565.0	0.3717	mg/L	0.00402	0.3717	mg/L	0.00402	1.08%
Na 330.237†	11.9	0.4090	mg/L	0.16551	0.4090	mg/L	0.16551	40.47%
Ni 231.604†	2.6	0.00064	mg/L	0.001106	0.00064	mg/L	0.001106	171.81%
Pb 220.353†	-1.2	-0.00016	mg/L	0.000225	-0.00016	mg/L	0.000225	142.68%
Sb 206.836†	-2.4	-0.00084	mg/L	0.001311	-0.00084	mg/L	0.001311	156.64%
Se 196.026†	3.8	0.00306	mg/L	0.002406	0.00306	mg/L	0.002406	78.58%
Si 288.158†	437.5	0.2372	mg/L	0.03574	0.2372	mg/L	0.03574	15.07%
Sn 189.927†	-0.7	-0.00022	mg/L	0.000952	-0.00022	mg/L	0.000952	438.65%
Sr 421.552†	109.2	0.00011	mg/L	0.000019	0.00011	mg/L	0.000019	17.93%
Ti 334.903†	138.1	0.00642	mg/L	0.002221	0.00642	mg/L	0.002221	34.60%
Tl 190.801†	-0.1	-0.00006	mg/L	0.000715	-0.00006	mg/L	0.000715	>999.9%
V 292.402†	0.4	-0.00000	mg/L	0.000101	-0.00000	mg/L	0.000101	>999.9%
Zn 206.200†	4.5	0.00135	mg/L	0.000260	0.00135	mg/L	0.000260	19.25%

Sequence No.: 16
Sample ID: WY21 F TWC

Del

Dilution: 2.000000X

Autosampler Location: 312
Date Collected: 7/25/2013 9:38:00 AM
Data Type: Original

Nebulizer Parameters: WY21 F TWC

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: WY21 F TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2791793.4	104.8	%	0.15				0.14%
ScR 361.383	363448.3	108.1	%	0.77				0.71%
Ag 328.068†	-773.3	-0.00289	mg/L	0.000227	-0.00577	mg/L	0.000454	7.86%
Al 308.215†	1445639.2	1007	mg/L	0.16	2014	mg/L	0.33	0.02%
As 188.979†	-1370.0	0.02671	mg/L	0.012598	0.05342	mg/L	0.025197	47.17%
B 249.677†	961.5	0.1275	mg/L	0.00362	0.2550	mg/L	0.00723	2.84%
Ba 233.527†	53134.6	11.13	mg/L	0.117	22.26	mg/L	0.235	1.06%
Be 313.042†	10500.8	0.01788	mg/L	0.000158	0.03576	mg/L	0.000316	0.88%
Ca 317.933†	3758215.4	337.2	mg/L	1.59	674.5	mg/L	3.19	0.47%
Cd 228.802†	1285.9	0.06223	mg/L	0.000702	0.1245	mg/L	0.00140	1.13%
Co 228.616†	23737.4	0.5953	mg/L	0.00084	1.191	mg/L	0.0017	0.14%
Cr 267.716†	8264.4	1.290	mg/L	0.0105	2.580	mg/L	0.0211	0.82%
Cu 324.752†	1623148.6	5.797	mg/L	0.0153	11.59	mg/L	0.031	0.26%
Fe 273.955†	1668848.0	1296	mg/L	14.45	2591	mg/L	28.90	1.12%
K 766.490†	391423.9	155.6	mg/L	0.50	311.2	mg/L	1.00	0.32%
Mg 279.077†	486895.9	476.4	mg/L	1.93	952.7	mg/L	3.87	0.41%
Mn 257.610†	1066755.5	27.84	mg/L	0.202	55.69	mg/L	0.404	0.73%
Mo 202.031†	1187.2	0.06478	mg/L	0.001938	0.1296	mg/L	0.00388	2.99%
Na 589.592†	2039607.3	136.2	mg/L	0.49	272.4	mg/L	0.99	0.36%
Na 330.237†	3906.1	138.2	mg/L	1.03	276.4	mg/L	2.06	0.75%
Ni 231.604†	3251.1	0.7990	mg/L	0.00492	1.598	mg/L	0.0098	0.62%
Pb 220.353†	2268.4	0.4705	mg/L	0.00156	0.9409	mg/L	0.00312	0.33%
Sb 206.836†	167.0	0.08008	mg/L	0.007170	0.1602	mg/L	0.01434	8.95%
Se 196.026†	183.6	0.03555	mg/L	0.013775	0.07110	mg/L	0.027550	38.75%
Si 288.158†	71418.2	38.77	mg/L	0.320	77.54	mg/L	0.641	0.83%
Sn 189.927†	-117.3	0.01359	mg/L	0.001545	0.02717	mg/L	0.003090	11.37%
Sr 421.552†	2919016.3	2.860	mg/L	0.0026	5.720	mg/L	0.0051	0.09%
Ti 334.903†	724564.1	33.67	mg/L	0.061	67.33	mg/L	0.123	0.18%
Tl 190.801†	-357.9	-0.02686	mg/L	0.019195	-0.05373	mg/L	0.038390	71.45%
V 292.402†	339543.2	2.714	mg/L	0.0062	5.428	mg/L	0.0125	0.23%
Zn 206.200†	37133.6	10.91	mg/L	0.094	21.82	mg/L	0.188	0.86%

Sequence No.: 17
Sample ID: WY21 MB1SPK TWC

Autosampler Location: 313
Date Collected: 7/25/2013 9:40:23 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WY21 MB1SPK TWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WY21 MB1SPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2745877.6	103.1	%	0.16				0.16%
ScR 361.383	345004.4	102.6	%	1.05				1.03%
Ag 328.068†	109053.3	0.5209	mg/L	0.00246	0.5209	mg/L	0.00246	0.47%
Al 308.215†	2983.9	2.071	mg/L	0.0122	2.071	mg/L	0.0122	0.59%
As 188.979†	2787.8	2.096	mg/L	0.0089	2.096	mg/L	0.0089	0.42%
B 249.677†	9.2	0.00014	mg/L	0.000671	0.00014	mg/L	0.000671	471.03%
Ba 233.527†	10031.3	2.142	mg/L	0.0251	2.142	mg/L	0.0251	1.17%
Be 313.042†	268952.1	0.4838	mg/L	0.00171	0.4838	mg/L	0.00171	0.35%
Ca 317.933†	113160.7	10.15	mg/L	0.012	10.15	mg/L	0.012	0.12%
Cd 228.802†	12252.7	0.5231	mg/L	0.00218	0.5231	mg/L	0.00218	0.42%
Co 228.616†	18323.5	0.5169	mg/L	0.00241	0.5169	mg/L	0.00241	0.47%
Cr 267.716†	3488.1	0.5396	mg/L	0.00459	0.5396	mg/L	0.00459	0.85%
Cu 324.752†	145097.2	0.5140	mg/L	0.00112	0.5140	mg/L	0.00112	0.22%
Fe 273.955†	2787.0	2.160	mg/L	0.0032	2.160	mg/L	0.0032	0.15%
K 766.490†	24927.6	9.909	mg/L	0.0279	9.909	mg/L	0.0279	0.28%
Mg 279.077†	10835.8	10.62	mg/L	0.091	10.62	mg/L	0.091	0.86%
Mn 257.610†	19303.2	0.5042	mg/L	0.00201	0.5042	mg/L	0.00201	0.40%
Mo 202.031†	25.3	0.00132	mg/L	0.000122	0.00132	mg/L	0.000122	9.30%
Na 589.592†	147515.6	9.852	mg/L	0.0214	9.852	mg/L	0.0214	0.22%
Na 330.237†	300.0	10.04	mg/L	0.285	10.04	mg/L	0.285	2.84%
Ni 231.604†	2090.7	0.5129	mg/L	0.00400	0.5129	mg/L	0.00400	0.78%
Pb 220.353†	14957.6	2.029	mg/L	0.0086	2.029	mg/L	0.0086	0.42%
Sb 206.836†	14.4	-0.00028	mg/L	0.001937	-0.00028	mg/L	0.001937	686.43%
Se 196.026†	2570.6	2.070	mg/L	0.0112	2.070	mg/L	0.0112	0.54%
Si 288.158†	720.4	0.3941	mg/L	0.17153	0.3941	mg/L	0.17153	43.53%
Sn 189.927†	-25.2	-0.00652	mg/L	0.001329	-0.00652	mg/L	0.001329	20.38%
Sr 421.552†	499744.4	0.4897	mg/L	0.00153	0.4897	mg/L	0.00153	0.31%
Ti 334.903†	386.7	0.01724	mg/L	0.008105	0.01724	mg/L	0.008105	47.01%
Tl 190.801†	3874.3	2.054	mg/L	0.0033	2.054	mg/L	0.0033	0.16%
V 292.402†	62753.9	0.5181	mg/L	0.00179	0.5181	mg/L	0.00179	0.34%
Zn 206.200†	1785.1	0.5245	mg/L	0.00395	0.5245	mg/L	0.00395	0.75%

Sequence No.: 18
Sample ID: CV 2

Autosampler Location: 7
Date Collected: 7/25/2013 9:44:23 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2724260.0	102.3	%	0.17				0.17%
ScR 361.383	339391.5	101.0	%	0.22				0.22%
Ag 328.068†	226719.7	1.083	mg/L	0.0071	1.083	mg/L	0.0071	0.66%
Al 308.215†	3032.3	2.078	mg/L	0.0062	2.078	mg/L	0.0062	0.30%
As 188.979†	2780.5	2.120	mg/L	0.0052	2.120	mg/L	0.0052	0.24%
B 249.677†	7661.9	1.026	mg/L	0.0053	1.026	mg/L	0.0053	0.52%
Ba 233.527†	5038.3	1.075	mg/L	0.0061	1.075	mg/L	0.0061	0.57%
Be 313.042†	564036.7	1.015	mg/L	0.0015	1.015	mg/L	0.0015	0.15%
Ca 317.933†	22928.3	2.057	mg/L	0.0027	2.057	mg/L	0.0027	0.13%
Cd 228.802†	24621.1	1.063	mg/L	0.0082	1.063	mg/L	0.0082	0.77%
Co 228.616†	37142.4	1.047	mg/L	0.0059	1.047	mg/L	0.0059	0.56%
Cr 267.716†	6972.2	1.080	mg/L	0.0042	1.080	mg/L	0.0042	0.39%
Cu 324.752†	290355.2	1.028	mg/L	0.0024	1.028	mg/L	0.0024	0.23%
Fe 273.955†	2790.7	2.160	mg/L	0.0019	2.160	mg/L	0.0019	0.09%
K 766.490†	51106.2	20.32	mg/L	0.059	20.32	mg/L	0.059	0.29%
Mg 279.077†	2124.4	2.089	mg/L	0.0083	2.089	mg/L	0.0083	0.40%
Mn 257.610†	38642.0	1.009	mg/L	0.0071	1.009	mg/L	0.0071	0.71%
Mo 202.031†	17261.6	1.005	mg/L	0.0043	1.005	mg/L	0.0043	0.43%
Na 589.592†	756972.3	50.55	mg/L	0.143	50.55	mg/L	0.143	0.28%
Na 330.237†	1524.7	52.00	mg/L	0.128	52.00	mg/L	0.128	0.25%
Ni 231.604†	4344.1	1.068	mg/L	0.0050	1.068	mg/L	0.0050	0.47%
Pb 220.353†	15063.4	2.044	mg/L	0.0161	2.044	mg/L	0.0161	0.79%
Sb 206.836†	5966.5	2.112	mg/L	0.0088	2.112	mg/L	0.0088	0.42%
Se 196.026†	2598.2	2.091	mg/L	0.0043	2.091	mg/L	0.0043	0.20%
Si 288.158†	3998.8	2.173	mg/L	0.0852	2.173	mg/L	0.0852	3.92%
Sn 189.927†	3262.3	1.023	mg/L	0.0016	1.023	mg/L	0.0016	0.16%
Sr 421.552†	1024219.0	1.004	mg/L	0.0021	1.004	mg/L	0.0021	0.21%
Ti 334.903†	22015.6	1.022	mg/L	0.0029	1.022	mg/L	0.0029	0.28%
Tl 190.801†	4056.5	2.147	mg/L	0.0052	2.147	mg/L	0.0052	0.24%
V 292.402†	128474.3	1.061	mg/L	0.0082	1.061	mg/L	0.0082	0.78%
Zn 206.200†	3639.8	1.070	mg/L	0.0040	1.070	mg/L	0.0040	0.37%

Sequence No.: 19
Sample ID: CB 2

Autosampler Location: 1
Date Collected: 7/25/2013 9:48:28 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2734316.5	102.7	%	0.14				0.14%
ScR 361.383	340885.0	101.4	%	0.39				0.38%
Ag 328.068†	8.2	0.00004	mg/L	0.000207	0.00004	mg/L	0.000207	525.69%
Al 308.215†	12.7	0.00880	mg/L	0.001919	0.00880	mg/L	0.001919	21.80%
As 188.979†	-0.3	-0.00016	mg/L	0.001159	-0.00016	mg/L	0.001159	712.40%
B 249.677†	14.1	0.00190	mg/L	0.000534	0.00190	mg/L	0.000534	28.15%
Ba 233.527†	-5.0	-0.00106	mg/L	0.000487	-0.00106	mg/L	0.000487	46.02%
Be 313.042†	13.5	0.00002	mg/L	0.000025	0.00002	mg/L	0.000025	104.11%
Ca 317.933†	23.8	0.00213	mg/L	0.000942	0.00213	mg/L	0.000942	44.14%
Cd 228.802†	6.8	0.00030	mg/L	0.000236	0.00030	mg/L	0.000236	78.55%
Co 228.616†	3.0	0.00008	mg/L	0.000126	0.00008	mg/L	0.000126	151.60%
Cr 267.716†	-2.8	-0.00043	mg/L	0.001577	-0.00043	mg/L	0.001577	366.77%
Cu 324.752†	928.5	0.00329	mg/L	0.000144	0.00329	mg/L	0.000144	4.38%
Fe 273.955†	9.0	0.00701	mg/L	0.001042	0.00701	mg/L	0.001042	14.87%
K 766.490†	33.8	0.01345	mg/L	0.013018	0.01345	mg/L	0.013018	96.77%
Mg 279.077†	4.6	0.00450	mg/L	0.004470	0.00450	mg/L	0.004470	99.38%
Mn 257.610†	9.9	0.00026	mg/L	0.000071	0.00026	mg/L	0.000071	27.55%
Mo 202.031†	28.2	0.00164	mg/L	0.000460	0.00164	mg/L	0.000460	28.00%
Na 589.592†	165.5	0.01105	mg/L	0.002319	0.01105	mg/L	0.002319	20.99%
Na 330.237†	-4.9	-0.1673	mg/L	0.12172	-0.1673	mg/L	0.12172	72.78%
Ni 231.604†	3.9	0.00098	mg/L	0.000712	0.00098	mg/L	0.000712	72.96%
Pb 220.353†	2.2	0.00029	mg/L	0.000414	0.00029	mg/L	0.000414	143.53%
Sb 206.836†	35.8	0.01268	mg/L	0.002699	0.01268	mg/L	0.002699	21.29%
Se 196.026†	4.5	0.00358	mg/L	0.002625	0.00358	mg/L	0.002625	73.23%
Si 288.158†	107.2	0.05809	mg/L	0.038496	0.05809	mg/L	0.038496	66.27%
Sn 189.927†	2.3	0.00072	mg/L	0.000907	0.00072	mg/L	0.000907	125.70%
Sr 421.552†	-1.3	-0.00000	mg/L	0.000039	-0.00000	mg/L	0.000039	>999.9%
Ti 334.903†	29.5	0.00137	mg/L	0.000871	0.00137	mg/L	0.000871	63.60%
Tl 190.801†	4.5	0.00239	mg/L	0.001114	0.00239	mg/L	0.001114	46.58%
V 292.402†	19.3	0.00016	mg/L	0.000163	0.00016	mg/L	0.000163	103.97%
Zn 206.200†	1.1	0.00034	mg/L	0.000502	0.00034	mg/L	0.000502	145.66%

Sequence No.: 20
Sample ID: WY21 MB2 TWC

Autosampler Location: 314
Date Collected: 7/25/2013 9:52:43 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WY21 MB2 TWC

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: WY21 MB2 TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2727148.4	102.4	%	0.47				0.46%
ScR 361.383	342498.9	101.9	%	0.38				0.37%
Ag 328.068†	12.8	0.00006	mg/L	0.000256	0.00006	mg/L	0.000256	418.21%
Al 308.215†	54.7	0.03810	mg/L	0.001554	0.03810	mg/L	0.001554	4.08%
As 188.979†	0.1	0.00009	mg/L	0.002194	0.00009	mg/L	0.002194	>999.9%
B 249.677†	58.4	0.00782	mg/L	0.000685	0.00782	mg/L	0.000685	8.76%
Ba 233.527†	11.9	0.00255	mg/L	0.000053	0.00255	mg/L	0.000053	2.10%
Be 313.042†	-24.5	-0.00004	mg/L	0.000003	-0.00004	mg/L	0.000003	6.92%
Ca 317.933†	450.1	0.04039	mg/L	0.001050	0.04039	mg/L	0.001050	2.60%
Cd 228.802†	2.7	0.00012	mg/L	0.000218	0.00012	mg/L	0.000218	185.61%
Co 228.616†	-3.7	-0.00011	mg/L	0.000030	-0.00011	mg/L	0.000030	28.58%
Cr 267.716†	-7.3	-0.00114	mg/L	0.000693	-0.00114	mg/L	0.000693	61.02%
Cu 324.752†	780.6	0.00276	mg/L	0.000058	0.00276	mg/L	0.000058	2.09%
Fe 273.955†	7.9	0.00609	mg/L	0.001645	0.00609	mg/L	0.001645	27.00%
K 766.490†	24.8	0.00987	mg/L	0.013507	0.00987	mg/L	0.013507	136.85%
Mg 279.077†	6.9	0.00675	mg/L	0.006864	0.00675	mg/L	0.006864	101.68%
Mn 257.610†	11.2	0.00029	mg/L	0.000063	0.00029	mg/L	0.000063	21.44%
Mo 202.031†	6.6	0.00038	mg/L	0.000131	0.00038	mg/L	0.000131	34.40%
Na 589.592†	173.6	0.01160	mg/L	0.002593	0.01160	mg/L	0.002593	22.36%
Na 330.237†	-4.3	-0.1483	mg/L	0.17365	-0.1483	mg/L	0.17365	117.06%
Ni 231.604†	0.9	0.00022	mg/L	0.000986	0.00022	mg/L	0.000986	455.91%
Pb 220.353†	2.9	0.00040	mg/L	0.000785	0.00040	mg/L	0.000785	198.02%
Sb 206.836†	3.9	0.00140	mg/L	0.001435	0.00140	mg/L	0.001435	102.68%
Se 196.026†	1.5	0.00119	mg/L	0.001997	0.00119	mg/L	0.001997	168.19%
Si 288.158†	187.2	0.1015	mg/L	0.02856	0.1015	mg/L	0.02856	28.15%
Sn 189.927†	-1.5	-0.00048	mg/L	0.000256	-0.00048	mg/L	0.000256	53.88%
Sr 421.552†	294.6	0.00029	mg/L	0.000025	0.00029	mg/L	0.000025	8.49%
Ti 334.903†	16.4	0.00076	mg/L	0.000238	0.00076	mg/L	0.000238	31.24%
Tl 190.801†	-2.0	-0.00106	mg/L	0.000876	-0.00106	mg/L	0.000876	82.60%
V 292.402†	-3.0	-0.00003	mg/L	0.000129	-0.00003	mg/L	0.000129	436.79%
Zn 206.200†	2.5	0.00075	mg/L	0.000594	0.00075	mg/L	0.000594	78.99%

Sequence No.: 21
Sample ID: WY21 MB3 TWC

Autosampler Location: 315
Date Collected: 7/25/2013 9:56:59 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WY21 MB3 TWC

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: WY21 MB3 TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2735972.4	102.7	%	0.15				0.15%
ScR 361.383	343094.2	102.1	%	0.23				0.22%
Ag 328.068†	-9.2	-0.00004	mg/L	0.000053	-0.00004	mg/L	0.000053	120.39%
Al 308.215†	14.4	0.01005	mg/L	0.002931	0.01005	mg/L	0.002931	29.17%
As 188.979†	-0.4	-0.00031	mg/L	0.001461	-0.00031	mg/L	0.001461	467.22%
B 249.677†	6.2	0.00083	mg/L	0.000566	0.00083	mg/L	0.000566	68.28%
Ba 233.527†	4.2	0.00090	mg/L	0.000451	0.00090	mg/L	0.000451	50.09%
Be 313.042†	-7.1	-0.00001	mg/L	0.000001	-0.00001	mg/L	0.000001	9.23%
Ca 317.933†	39.0	0.00350	mg/L	0.000595	0.00350	mg/L	0.000595	17.01%
Cd 228.802†	2.1	0.00009	mg/L	0.000063	0.00009	mg/L	0.000063	66.64%
Co 228.616†	2.3	0.00006	mg/L	0.000081	0.00006	mg/L	0.000081	129.50%
Cr 267.716†	-3.3	-0.00051	mg/L	0.000491	-0.00051	mg/L	0.000491	96.66%
Cu 324.752†	703.1	0.00249	mg/L	0.000106	0.00249	mg/L	0.000106	4.25%
Fe 273.955†	6.0	0.00463	mg/L	0.001073	0.00463	mg/L	0.001073	23.14%
K 766.490†	36.5	0.01449	mg/L	0.011140	0.01449	mg/L	0.011140	76.86%
Mg 279.077†	5.3	0.00515	mg/L	0.006589	0.00515	mg/L	0.006589	127.96%
Mn 257.610†	5.1	0.00013	mg/L	0.000091	0.00013	mg/L	0.000091	67.91%
Mo 202.031†	2.3	0.00014	mg/L	0.000164	0.00014	mg/L	0.000164	120.35%
Na 589.592†	49.4	0.00330	mg/L	0.000443	0.00330	mg/L	0.000443	13.43%
Na 330.237†	-3.3	-0.1112	mg/L	0.09975	-0.1112	mg/L	0.09975	89.72%
Ni 231.604†	1.7	0.00043	mg/L	0.000396	0.00043	mg/L	0.000396	93.06%
Pb 220.353†	-3.4	-0.00047	mg/L	0.000834	-0.00047	mg/L	0.000834	177.45%
Sb 206.836†	3.6	0.00127	mg/L	0.000172	0.00127	mg/L	0.000172	13.51%
Se 196.026†	-0.3	-0.00024	mg/L	0.001472	-0.00024	mg/L	0.001472	604.58%
Si 288.158†	134.3	0.07278	mg/L	0.021192	0.07278	mg/L	0.021192	29.12%
Sn 189.927†	-1.2	-0.00038	mg/L	0.000565	-0.00038	mg/L	0.000565	147.71%
Sr 421.552†	-4.3	-0.00000	mg/L	0.000008	-0.00000	mg/L	0.000008	195.90%
Ti 334.903†	12.7	0.00059	mg/L	0.000126	0.00059	mg/L	0.000126	21.41%
Tl 190.801†	-3.1	-0.00167	mg/L	0.001483	-0.00167	mg/L	0.001483	88.70%
V 292.402†	5.9	0.00005	mg/L	0.000101	0.00005	mg/L	0.000101	219.38%
Zn 206.200†	3.1	0.00092	mg/L	0.000832	0.00092	mg/L	0.000832	90.66%

Sequence No.: 22
Sample ID: WY21 GDUP TWC

Autosampler Location: 316
Date Collected: 7/25/2013 10:01:14 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WY21 GDUP TWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WY21 GDUP TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2723284.9	102.3	%	0.25				0.25%
ScR 361.383	343655.3	102.2	%	0.27				0.27%
Ag 328.068†	82.8	0.00040	mg/L	0.000083	0.00040	mg/L	0.000083	20.96%
Al 308.215†	5598.4	3.900	mg/L	0.0302	3.900	mg/L	0.0302	0.77%
As 188.979†	15.4	0.01032	mg/L	0.002557	0.01032	mg/L	0.002557	24.77%
B 249.677†	22.6	0.00297	mg/L	0.000318	0.00297	mg/L	0.000318	10.69%
Ba 233.527†	281.8	0.05977	mg/L	0.001385	0.05977	mg/L	0.001385	2.32%
Be 313.042†	178.5	0.00032	mg/L	0.000006	0.00032	mg/L	0.000006	1.97%
Ca 317.933†	204875.3	18.38	mg/L	0.041	18.38	mg/L	0.041	0.22%
Cd 228.802†	738.0	0.03213	mg/L	0.000194	0.03213	mg/L	0.000194	0.60%
Co 228.616†	1062.4	0.02995	mg/L	0.000110	0.02995	mg/L	0.000110	0.37%
Cr 267.716†	3.4	0.00007	mg/L	0.000471	0.00007	mg/L	0.000471	655.68%
Cu 324.752†	1693214.6	5.997	mg/L	0.0087	5.997	mg/L	0.0087	0.14%
Fe 273.955†	3099.6	2.406	mg/L	0.0112	2.406	mg/L	0.0112	0.47%
K 766.490†	4618.9	1.836	mg/L	0.0209	1.836	mg/L	0.0209	1.14%
Mg 279.077†	4495.7	4.402	mg/L	0.0249	4.402	mg/L	0.0249	0.56%
Mn 257.610†	29512.8	0.7703	mg/L	0.00486	0.7703	mg/L	0.00486	0.63%
Mo 202.031†	33.6	0.00172	mg/L	0.000217	0.00172	mg/L	0.000217	12.58%
Na 589.592†	27152.2	1.813	mg/L	0.0056	1.813	mg/L	0.0056	0.31%
Na 330.237†	89.1	1.894	mg/L	0.2212	1.894	mg/L	0.2212	11.68%
Ni 231.604†	78.3	0.01925	mg/L	0.000545	0.01925	mg/L	0.000545	2.83%
Pb 220.353†	50.0	-0.00092	mg/L	0.000787	-0.00092	mg/L	0.000787	85.85%
Sb 206.836†	-2.9	-0.00116	mg/L	0.000855	-0.00116	mg/L	0.000855	73.54%
Se 196.026†	8.0	0.00602	mg/L	0.002600	0.00602	mg/L	0.002600	43.22%
Si 288.158†	12551.8	6.805	mg/L	0.0838	6.805	mg/L	0.0838	1.23%
Sn 189.927†	-40.9	-0.01045	mg/L	0.001084	-0.01045	mg/L	0.001084	10.38%
Sr 421.552†	95888.1	0.09396	mg/L	0.000401	0.09396	mg/L	0.000401	0.43%
Ti 334.903†	46.4	0.00101	mg/L	0.000194	0.00101	mg/L	0.000194	19.14%
Tl 190.801†	5.6	0.00311	mg/L	0.000854	0.00311	mg/L	0.000854	27.46%
V 292.402†	-53.5	-0.00045	mg/L	0.000039	-0.00045	mg/L	0.000039	8.81%
Zn 206.200†	11850.0	3.482	mg/L	0.0220	3.482	mg/L	0.0220	0.63%

Sequence No.: 23
Sample ID: WY21 G TWC

Autosampler Location: 317
Date Collected: 7/25/2013 10:05:15 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WY21 G TWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WY21 G TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2710044.6	101.8	%	0.35				0.34%
ScR 361.383	343681.1	102.2	%	0.83				0.81%
Ag 328.068†	95.0	0.00045	mg/L	0.000066	0.00045	mg/L	0.000066	14.48%
Al 308.215†	5614.0	3.911	mg/L	0.0282	3.911	mg/L	0.0282	0.72%
As 188.979†	16.1	0.01086	mg/L	0.002441	0.01086	mg/L	0.002441	22.47%
B 249.677†	25.2	0.00331	mg/L	0.001111	0.00331	mg/L	0.001111	33.54%
Ba 233.527†	286.1	0.06069	mg/L	0.000395	0.06069	mg/L	0.000395	0.65%
Be 313.042†	162.5	0.00029	mg/L	0.000025	0.00029	mg/L	0.000025	8.41%
Ca 317.933†	206067.8	18.49	mg/L	0.076	18.49	mg/L	0.076	0.41%
Cd 228.802†	745.8	0.03246	mg/L	0.000340	0.03246	mg/L	0.000340	1.05%
Co 228.616†	1077.1	0.03036	mg/L	0.000197	0.03036	mg/L	0.000197	0.65%
Cr 267.716†	8.5	0.00085	mg/L	0.000236	0.00085	mg/L	0.000236	27.71%
Cu 324.752†	1709909.6	6.056	mg/L	0.0178	6.056	mg/L	0.0178	0.29%
Fe 273.955†	3104.3	2.410	mg/L	0.0284	2.410	mg/L	0.0284	1.18%
K 766.490†	4675.5	1.859	mg/L	0.0050	1.859	mg/L	0.0050	0.27%
Mg 279.077†	4524.8	4.431	mg/L	0.0393	4.431	mg/L	0.0393	0.89%
Mn 257.610†	29767.5	0.7769	mg/L	0.00526	0.7769	mg/L	0.00526	0.68%
Mo 202.031†	26.3	0.00129	mg/L	0.000462	0.00129	mg/L	0.000462	35.67%
Na 589.592†	27254.6	1.820	mg/L	0.0063	1.820	mg/L	0.0063	0.35%
Na 330.237†	89.8	1.911	mg/L	0.1929	1.911	mg/L	0.1929	10.10%
Ni 231.604†	74.6	0.01832	mg/L	0.000832	0.01832	mg/L	0.000832	4.54%
Pb 220.353†	54.5	-0.00039	mg/L	0.000597	-0.00039	mg/L	0.000597	152.34%
Sb 206.836†	-0.4	-0.00027	mg/L	0.000819	-0.00027	mg/L	0.000819	306.57%
Se 196.026†	6.6	0.00489	mg/L	0.001676	0.00489	mg/L	0.001676	34.31%
Si 288.158†	12513.4	6.784	mg/L	0.0609	6.784	mg/L	0.0609	0.90%
Sn 189.927†	-42.8	-0.01103	mg/L	0.001522	-0.01103	mg/L	0.001522	13.79%
Sr 421.552†	96773.2	0.09482	mg/L	0.000090	0.09482	mg/L	0.000090	0.09%
Ti 334.903†	49.5	0.00115	mg/L	0.000273	0.00115	mg/L	0.000273	23.72%
Tl 190.801†	5.9	0.00329	mg/L	0.001174	0.00329	mg/L	0.001174	35.73%
V 292.402†	-31.3	-0.00026	mg/L	0.000036	-0.00026	mg/L	0.000036	13.88%
Zn 206.200†	11918.8	3.502	mg/L	0.0164	3.502	mg/L	0.0164	0.47%

Sequence No.: 24
Sample ID: WY21 GSPK TWC

Autosampler Location: 318
Date Collected: 7/25/2013 10:09:16 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WY21 GSPK TWC

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: WY21 GSPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2679288.3	100.6	%	0.28				0.28%
ScR 361.383	338964.3	100.8	%	0.69				0.69%
Ag 328.068†	110082.5	0.5258	mg/L	0.00245	0.5258	mg/L	0.00245	0.47%
Al 308.215†	8652.3	6.020	mg/L	0.0324	6.020	mg/L	0.0324	0.54%
As 188.979†	2809.3	2.111	mg/L	0.0108	2.111	mg/L	0.0108	0.51%
B 249.677†	33.4	0.00334	mg/L	0.000343	0.00334	mg/L	0.000343	10.25%
Ba 233.527†	10276.6	2.194	mg/L	0.0176	2.194	mg/L	0.0176	0.80%
Be 313.042†	267600.4	0.4814	mg/L	0.00351	0.4814	mg/L	0.00351	0.73%
Ca 317.933†	319238.9	28.65	mg/L	0.138	28.65	mg/L	0.138	0.48%
Cd 228.802†	12958.7	0.5538	mg/L	0.00236	0.5538	mg/L	0.00236	0.43%
Co 228.616†	19130.3	0.5397	mg/L	0.00076	0.5397	mg/L	0.00076	0.14%
Cr 267.716†	3454.1	0.5339	mg/L	0.00134	0.5339	mg/L	0.00134	0.25%
Cu 324.752†	1835912.9	6.502	mg/L	0.0038	6.502	mg/L	0.0038	0.06%
Fe 273.955†	5783.0	4.486	mg/L	0.0098	4.486	mg/L	0.0098	0.22%
K 766.490†	30092.2	11.96	mg/L	0.066	11.96	mg/L	0.066	0.55%
Mg 279.077†	15307.2	15.00	mg/L	0.071	15.00	mg/L	0.071	0.47%
Mn 257.610†	48722.4	1.272	mg/L	0.0054	1.272	mg/L	0.0054	0.42%
Mo 202.031†	48.3	0.00242	mg/L	0.000293	0.00242	mg/L	0.000293	12.10%
Na 589.592†	178189.5	11.90	mg/L	0.075	11.90	mg/L	0.075	0.63%
Na 330.237†	407.8	12.55	mg/L	0.111	12.55	mg/L	0.111	0.89%
Ni 231.604†	2131.1	0.5228	mg/L	0.00359	0.5228	mg/L	0.00359	0.69%
Pb 220.353†	14874.1	2.010	mg/L	0.0021	2.010	mg/L	0.0021	0.10%
Sb 206.836†	15.1	-0.00005	mg/L	0.001934	-0.00005	mg/L	0.001934	>999.9%
Se 196.026†	2555.4	2.057	mg/L	0.0029	2.057	mg/L	0.0029	0.14%
Si 288.158†	12569.5	6.818	mg/L	0.0540	6.818	mg/L	0.0540	0.79%
Sn 189.927†	-58.7	-0.01464	mg/L	0.000850	-0.01464	mg/L	0.000850	5.81%
Sr 421.552†	603550.9	0.5914	mg/L	0.00306	0.5914	mg/L	0.00306	0.52%
Ti 334.903†	69.3	0.00134	mg/L	0.000242	0.00134	mg/L	0.000242	18.16%
Tl 190.801†	3853.0	2.043	mg/L	0.0095	2.043	mg/L	0.0095	0.46%
V 292.402†	62748.0	0.5180	mg/L	0.00295	0.5180	mg/L	0.00295	0.57%
Zn 206.200†	13814.4	4.059	mg/L	0.0126	4.059	mg/L	0.0126	0.31%

Sequence No.: 25
Sample ID: WY21 H TWC

Autosampler Location: 319
Date Collected: 7/25/2013 10:13:17 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WY21 H TWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WY21 H TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2688992.3	101.0	%	0.30				0.30%
ScR 361.383	338888.6	100.8	%	0.22				0.22%
Ag 328.068†	11.1	0.00005	mg/L	0.000127	0.00005	mg/L	0.000127	237.59%
Al 308.215†	134.4	0.09155	mg/L	0.002497	0.09155	mg/L	0.002497	2.73%
As 188.979†	5.5	0.00330	mg/L	0.000632	0.00330	mg/L	0.000632	19.17%
B 249.677†	125.8	0.01700	mg/L	0.000252	0.01700	mg/L	0.000252	1.48%
Ba 233.527†	35.7	0.00761	mg/L	0.000309	0.00761	mg/L	0.000309	4.06%
Be 313.042†	-14.1	-0.00003	mg/L	0.000010	-0.00003	mg/L	0.000010	37.84%
Ca 317.933†	69098.5	6.200	mg/L	0.0385	6.200	mg/L	0.0385	0.62%
Cd 228.802†	6.7	0.00027	mg/L	0.000126	0.00027	mg/L	0.000126	46.46%
Co 228.616†	11.0	0.00032	mg/L	0.000343	0.00032	mg/L	0.000343	106.31%
Cr 267.716†	2.8	0.00023	mg/L	0.000391	0.00023	mg/L	0.000391	171.12%
Cu 324.752†	2040.8	0.00718	mg/L	0.000647	0.00718	mg/L	0.000647	9.02%
Fe 273.955†	45.4	0.03527	mg/L	0.000883	0.03527	mg/L	0.000883	2.50%
K 766.490†	11588.0	4.606	mg/L	0.0281	4.606	mg/L	0.0281	0.61%
Mg 279.077†	1807.7	1.772	mg/L	0.0064	1.772	mg/L	0.0064	0.36%
Mn 257.610†	5591.7	0.1459	mg/L	0.00088	0.1459	mg/L	0.00088	0.60%
Mo 202.031†	2214.8	0.1289	mg/L	0.00082	0.1289	mg/L	0.00082	0.64%
Na 589.592†	373457.5	24.94	mg/L	0.051	24.94	mg/L	0.051	0.20%
Na 330.237†	745.5	25.42	mg/L	0.312	25.42	mg/L	0.312	1.23%
Ni 231.604†	4.1	0.00102	mg/L	0.000611	0.00102	mg/L	0.000611	60.10%
Pb 220.353†	4.0	0.00055	mg/L	0.000366	0.00055	mg/L	0.000366	66.55%
Sb 206.836†	-3.7	-0.00137	mg/L	0.001261	-0.00137	mg/L	0.001261	91.79%
Se 196.026†	4.0	0.00319	mg/L	0.005053	0.00319	mg/L	0.005053	158.44%
Si 288.158†	7729.7	4.191	mg/L	0.0104	4.191	mg/L	0.0104	0.25%
Sn 189.927†	-19.2	-0.00523	mg/L	0.001101	-0.00523	mg/L	0.001101	21.06%
Sr 421.552†	34088.1	0.03340	mg/L	0.000092	0.03340	mg/L	0.000092	0.28%
Ti 334.903†	42.8	0.00148	mg/L	0.000208	0.00148	mg/L	0.000208	14.05%
Tl 190.801†	5.2	0.00299	mg/L	0.002735	0.00299	mg/L	0.002735	91.51%
V 292.402†	49.9	0.00050	mg/L	0.000132	0.00050	mg/L	0.000132	26.34%
Zn 206.200†	4.1	0.00181	mg/L	0.000546	0.00181	mg/L	0.000546	30.15%

Sequence No.: 26
Sample ID: WY21 I TWC

Autosampler Location: 320
Date Collected: 7/25/2013 10:17:32 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WY21 I TWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WY21 I TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2686493.7	100.9	%	0.34				0.34%
ScR 361.383	340856.6	101.4	%	0.39				0.38%
Ag 328.068†	44.8	0.00021	mg/L	0.000052	0.00021	mg/L	0.000052	24.43%
Al 308.215†	35.7	0.02475	mg/L	0.004596	0.02475	mg/L	0.004596	18.57%
As 188.979†	16.1	0.01082	mg/L	0.000838	0.01082	mg/L	0.000838	7.75%
B 249.677†	33.5	0.00437	mg/L	0.000877	0.00437	mg/L	0.000877	20.08%
Ba 233.527†	280.5	0.05896	mg/L	0.000732	0.05896	mg/L	0.000732	1.24%
Be 313.042†	-24.3	-0.00004	mg/L	0.000011	-0.00004	mg/L	0.000011	24.85%
Ca 317.933†	207331.1	18.60	mg/L	0.015	18.60	mg/L	0.015	0.08%
Cd 228.802†	247.3	0.01072	mg/L	0.000161	0.01072	mg/L	0.000161	1.50%
Co 228.616†	2011.7	0.05671	mg/L	0.000282	0.05671	mg/L	0.000282	0.50%
Cr 267.716†	5.6	0.00049	mg/L	0.000822	0.00049	mg/L	0.000822	167.53%
Cu 324.752†	50371.6	0.1786	mg/L	0.00117	0.1786	mg/L	0.00117	0.66%
Fe 273.955†	7186.6	5.579	mg/L	0.0395	5.579	mg/L	0.0395	0.71%
K 766.490†	14261.2	5.669	mg/L	0.0401	5.669	mg/L	0.0401	0.71%
Mg 279.077†	5122.3	5.015	mg/L	0.0159	5.015	mg/L	0.0159	0.32%
Mn 257.610†	105433.1	2.752	mg/L	0.0138	2.752	mg/L	0.0138	0.50%
Mo 202.031†	115.7	0.00650	mg/L	0.000037	0.00650	mg/L	0.000037	0.56%
Na 589.592†	142141.0	9.493	mg/L	0.0154	9.493	mg/L	0.0154	0.16%
Na 330.237†	304.6	9.803	mg/L	0.0968	9.803	mg/L	0.0968	0.99%
Ni 231.604†	62.2	0.01529	mg/L	0.000283	0.01529	mg/L	0.000283	1.85%
Pb 220.353†	-3.3	-0.00097	mg/L	0.000510	-0.00097	mg/L	0.000510	52.81%
Sb 206.836†	0.6	0.00007	mg/L	0.001381	0.00007	mg/L	0.001381	>999.9%
Se 196.026†	7.5	0.00597	mg/L	0.001612	0.00597	mg/L	0.001612	26.99%
Si 288.158†	14101.1	7.645	mg/L	0.0195	7.645	mg/L	0.0195	0.25%
Sn 189.927†	-43.0	-0.01110	mg/L	0.000719	-0.01110	mg/L	0.000719	6.48%
Sr 421.552†	130516.9	0.1279	mg/L	0.00014	0.1279	mg/L	0.00014	0.11%
Ti 334.903†	44.8	0.00092	mg/L	0.000294	0.00092	mg/L	0.000294	32.00%
Tl 190.801†	-1.0	-0.00011	mg/L	0.000840	-0.00011	mg/L	0.000840	779.12%
V 292.402†	-28.4	-0.00010	mg/L	0.000166	-0.00010	mg/L	0.000166	159.76%
Zn 206.200†	5692.8	1.673	mg/L	0.0074	1.673	mg/L	0.0074	0.44%

Sequence No.: 27
Sample ID: WY21 J TWC

Autosampler Location: 321
Date Collected: 7/25/2013 10:21:32 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WY21 J TWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WY21 J TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2686159.9	100.9	%	0.23				0.23%
ScR 361.383	340484.1	101.3	%	0.23				0.22%
Ag 328.068†	26.0	0.00012	mg/L	0.000102	0.00012	mg/L	0.000102	81.96%
Al 308.215†	36.1	0.02501	mg/L	0.000793	0.02501	mg/L	0.000793	3.17%
As 188.979†	16.3	0.01097	mg/L	0.002434	0.01097	mg/L	0.002434	22.20%
B 249.677†	34.8	0.00455	mg/L	0.001082	0.00455	mg/L	0.001082	23.79%
Ba 233.527†	281.2	0.05910	mg/L	0.000653	0.05910	mg/L	0.000653	1.11%
Be 313.042†	-10.5	-0.00002	mg/L	0.000010	-0.00002	mg/L	0.000010	55.36%
Ca 317.933†	209848.2	18.83	mg/L	0.083	18.83	mg/L	0.083	0.44%
Cd 228.802†	251.9	0.01092	mg/L	0.000197	0.01092	mg/L	0.000197	1.80%
Co 228.616†	2023.0	0.05702	mg/L	0.000408	0.05702	mg/L	0.000408	0.72%
Cr 267.716†	6.1	0.00057	mg/L	0.000348	0.00057	mg/L	0.000348	60.94%
Cu 324.752†	51536.0	0.1827	mg/L	0.00042	0.1827	mg/L	0.00042	0.23%
Fe 273.955†	7319.5	5.682	mg/L	0.0243	5.682	mg/L	0.0243	0.43%
K 766.490†	14411.6	5.729	mg/L	0.0359	5.729	mg/L	0.0359	0.63%
Mg 279.077†	5186.1	5.077	mg/L	0.0161	5.077	mg/L	0.0161	0.32%
Mn 257.610†	107258.0	2.800	mg/L	0.0092	2.800	mg/L	0.0092	0.33%
Mo 202.031†	116.5	0.00655	mg/L	0.000266	0.00655	mg/L	0.000266	4.06%
Na 589.592†	143628.5	9.592	mg/L	0.0424	9.592	mg/L	0.0424	0.44%
Na 330.237†	311.7	10.04	mg/L	0.227	10.04	mg/L	0.227	2.26%
Ni 231.604†	61.6	0.01514	mg/L	0.000759	0.01514	mg/L	0.000759	5.01%
Pb 220.353†	4.3	0.00005	mg/L	0.000471	0.00005	mg/L	0.000471	959.39%
Sb 206.836†	-0.1	-0.00017	mg/L	0.001092	-0.00017	mg/L	0.001092	624.97%
Se 196.026†	4.8	0.00385	mg/L	0.001265	0.00385	mg/L	0.001265	32.82%
Si 288.158†	13818.7	7.492	mg/L	0.0360	7.492	mg/L	0.0360	0.48%
Sn 189.927†	-42.8	-0.01098	mg/L	0.001243	-0.01098	mg/L	0.001243	11.32%
Sr 421.552†	132272.7	0.1296	mg/L	0.00016	0.1296	mg/L	0.00016	0.12%
Ti 334.903†	41.3	0.00074	mg/L	0.000368	0.00074	mg/L	0.000368	49.69%
Tl 190.801†	1.9	0.00146	mg/L	0.000432	0.00146	mg/L	0.000432	29.63%
V 292.402†	-27.0	-0.00009	mg/L	0.000207	-0.00009	mg/L	0.000207	230.24%
Zn 206.200†	5730.2	1.684	mg/L	0.0051	1.684	mg/L	0.0051	0.30%

Sequence No.: 28
Sample ID: WY21 MB2SPK TWC

Autosampler Location: 322
Date Collected: 7/25/2013 10:25:32 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WY21 MB2SPK TWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WY21 MB2SPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2680201.1	100.6	%	0.25				0.25%
ScR 361.383	341212.0	101.5	%	0.79				0.77%
Ag 328.068†	110087.5	0.5258	mg/L	0.00204	0.5258	mg/L	0.00204	0.39%
Al 308.215†	2995.7	2.079	mg/L	0.0304	2.079	mg/L	0.0304	1.46%
As 188.979†	2753.1	2.070	mg/L	0.0072	2.070	mg/L	0.0072	0.35%
B 249.677†	57.8	0.00667	mg/L	0.000650	0.00667	mg/L	0.000650	9.74%
Ba 233.527†	9895.5	2.113	mg/L	0.0247	2.113	mg/L	0.0247	1.17%
Be 313.042†	264380.3	0.4756	mg/L	0.00407	0.4756	mg/L	0.00407	0.86%
Ca 317.933†	110333.2	9.900	mg/L	0.0317	9.900	mg/L	0.0317	0.32%
Cd 228.802†	12159.8	0.5191	mg/L	0.00387	0.5191	mg/L	0.00387	0.75%
Co 228.616†	18182.7	0.5130	mg/L	0.00211	0.5130	mg/L	0.00211	0.41%
Cr 267.716†	3431.5	0.5309	mg/L	0.00582	0.5309	mg/L	0.00582	1.10%
Cu 324.752†	146893.9	0.5203	mg/L	0.00222	0.5203	mg/L	0.00222	0.43%
Fe 273.955†	2658.2	2.060	mg/L	0.0212	2.060	mg/L	0.0212	1.03%
K 766.490†	25074.2	9.968	mg/L	0.0098	9.968	mg/L	0.0098	0.10%
Mg 279.077†	10592.2	10.38	mg/L	0.104	10.38	mg/L	0.104	1.00%
Mn 257.610†	18729.5	0.4892	mg/L	0.00236	0.4892	mg/L	0.00236	0.48%
Mo 202.031†	28.1	0.00148	mg/L	0.000107	0.00148	mg/L	0.000107	7.21%
Na 589.592†	149239.8	9.967	mg/L	0.0319	9.967	mg/L	0.0319	0.32%
Na 330.237†	312.8	10.48	mg/L	0.283	10.48	mg/L	0.283	2.70%
Ni 231.604†	2044.0	0.5014	mg/L	0.00497	0.5014	mg/L	0.00497	0.99%
Pb 220.353†	14828.5	2.012	mg/L	0.0073	2.012	mg/L	0.0073	0.36%
Sb 206.836†	11.1	-0.00135	mg/L	0.001028	-0.00135	mg/L	0.001028	75.98%
Se 196.026†	2531.9	2.039	mg/L	0.0082	2.039	mg/L	0.0082	0.40%
Si 288.158†	314.0	0.1738	mg/L	0.06153	0.1738	mg/L	0.06153	35.41%
Sn 189.927†	-28.1	-0.00744	mg/L	0.001241	-0.00744	mg/L	0.001241	16.68%
Sr 421.552†	504801.0	0.4946	mg/L	0.00151	0.4946	mg/L	0.00151	0.31%
Ti 334.903†	28.5	0.00061	mg/L	0.000149	0.00061	mg/L	0.000149	24.58%
Tl 190.801†	3856.0	2.044	mg/L	0.0133	2.044	mg/L	0.0133	0.65%
V 292.402†	62955.9	0.5197	mg/L	0.00286	0.5197	mg/L	0.00286	0.55%
Zn 206.200†	1712.4	0.5031	mg/L	0.00482	0.5031	mg/L	0.00482	0.96%

Sequence No.: 29
Sample ID: WY21 MB3SPK TWC

Autosampler Location: 323
Date Collected: 7/25/2013 10:29:33 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WY21 MB3SPK TWC

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: WY21 MB3SPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2729253.8	102.5	%	0.26				0.25%
ScR 361.383	342569.1	101.9	%	0.65				0.64%
Ag 328.068†	104444.5	0.4989	mg/L	0.00120	0.4989	mg/L	0.00120	0.24%
Al 308.215†	2958.2	2.053	mg/L	0.0156	2.053	mg/L	0.0156	0.76%
As 188.979†	2732.8	2.054	mg/L	0.0060	2.054	mg/L	0.0060	0.29%
B 249.677†	9.6	0.00022	mg/L	0.001134	0.00022	mg/L	0.001134	517.81%
Ba 233.527†	9928.8	2.120	mg/L	0.0081	2.120	mg/L	0.0081	0.38%
Be 313.042†	264852.0	0.4764	mg/L	0.00266	0.4764	mg/L	0.00266	0.56%
Ca 317.933†	110363.8	9.903	mg/L	0.0183	9.903	mg/L	0.0183	0.19%
Cd 228.802†	12118.4	0.5174	mg/L	0.00145	0.5174	mg/L	0.00145	0.28%
Co 228.616†	18050.4	0.5092	mg/L	0.00167	0.5092	mg/L	0.00167	0.33%
Cr 267.716†	3440.6	0.5323	mg/L	0.00359	0.5323	mg/L	0.00359	0.67%
Cu 324.752†	139843.7	0.4954	mg/L	0.00135	0.4954	mg/L	0.00135	0.27%
Fe 273.955†	2663.6	2.065	mg/L	0.0251	2.065	mg/L	0.0251	1.21%
K 766.490†	25198.3	10.02	mg/L	0.032	10.02	mg/L	0.032	0.32%
Mg 279.077†	10619.1	10.41	mg/L	0.082	10.41	mg/L	0.082	0.79%
Mn 257.610†	18893.6	0.4935	mg/L	0.00252	0.4935	mg/L	0.00252	0.51%
Mo 202.031†	24.9	0.00130	mg/L	0.000176	0.00130	mg/L	0.000176	13.58%
Na 589.592†	149294.2	9.971	mg/L	0.0429	9.971	mg/L	0.0429	0.43%
Na 330.237†	304.9	10.21	mg/L	0.151	10.21	mg/L	0.151	1.48%
Ni 231.604†	2050.9	0.5031	mg/L	0.00468	0.5031	mg/L	0.00468	0.93%
Pb 220.353†	14720.8	1.997	mg/L	0.0080	1.997	mg/L	0.0080	0.40%
Sb 206.836†	14.8	-0.00005	mg/L	0.000367	-0.00005	mg/L	0.000367	811.54%
Se 196.026†	2528.9	2.036	mg/L	0.0033	2.036	mg/L	0.0033	0.16%
Si 288.158†	155.8	0.08799	mg/L	0.029552	0.08799	mg/L	0.029552	33.58%
Sn 189.927†	-27.7	-0.00734	mg/L	0.000482	-0.00734	mg/L	0.000482	6.56%
Sr 421.552†	505704.8	0.4955	mg/L	0.00188	0.4955	mg/L	0.00188	0.38%
Ti 334.903†	32.9	0.00081	mg/L	0.000403	0.00081	mg/L	0.000403	49.60%
Tl 190.801†	3825.3	2.028	mg/L	0.0038	2.028	mg/L	0.0038	0.19%
V 292.402†	62820.4	0.5186	mg/L	0.00225	0.5186	mg/L	0.00225	0.43%
Zn 206.200†	1718.4	0.5049	mg/L	0.00488	0.5049	mg/L	0.00488	0.97%

Sequence No.: 30
Sample ID: CV 3

Autosampler Location: 7
Date Collected: 7/25/2013 10:33:33 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2683341.5	100.8	%	0.45				0.45%
ScR 361.383	335733.8	99.87	%	0.393				0.39%
Ag 328.068†	225228.5	1.076	mg/L	0.0045	1.076	mg/L	0.0045	0.42%
Al 308.215†	3020.8	2.071	mg/L	0.0146	2.071	mg/L	0.0146	0.71%
As 188.979†	2708.3	2.066	mg/L	0.0156	2.066	mg/L	0.0156	0.75%
B 249.677†	7623.8	1.020	mg/L	0.0070	1.020	mg/L	0.0070	0.69%
Ba 233.527†	4994.3	1.066	mg/L	0.0077	1.066	mg/L	0.0077	0.72%
Be 313.042†	554794.4	0.9980	mg/L	0.00666	0.9980	mg/L	0.00666	0.67%
Ca 317.933†	22407.8	2.011	mg/L	0.0078	2.011	mg/L	0.0078	0.39%
Cd 228.802†	24187.9	1.044	mg/L	0.0068	1.044	mg/L	0.0068	0.65%
Co 228.616†	36309.8	1.023	mg/L	0.0039	1.023	mg/L	0.0039	0.39%
Cr 267.716†	6882.9	1.067	mg/L	0.0059	1.067	mg/L	0.0059	0.55%
Cu 324.752†	291683.4	1.033	mg/L	0.0024	1.033	mg/L	0.0024	0.23%
Fe 273.955†	2695.3	2.086	mg/L	0.0074	2.086	mg/L	0.0074	0.35%
K 766.490†	51085.2	20.31	mg/L	0.063	20.31	mg/L	0.063	0.31%
Mg 279.077†	2075.5	2.041	mg/L	0.0072	2.041	mg/L	0.0072	0.35%
Mn 257.610†	38117.3	0.9953	mg/L	0.00296	0.9953	mg/L	0.00296	0.30%
Mo 202.031†	17003.8	0.9901	mg/L	0.00292	0.9901	mg/L	0.00292	0.29%
Na 589.592†	763569.8	51.00	mg/L	0.018	51.00	mg/L	0.018	0.03%
Na 330.237†	1531.7	52.25	mg/L	0.188	52.25	mg/L	0.188	0.36%
Ni 231.604†	4262.7	1.048	mg/L	0.0070	1.048	mg/L	0.0070	0.67%
Pb 220.353†	14714.1	1.997	mg/L	0.0056	1.997	mg/L	0.0056	0.28%
Sb 206.836†	5875.3	2.080	mg/L	0.0055	2.080	mg/L	0.0055	0.26%
Se 196.026†	2537.4	2.043	mg/L	0.0214	2.043	mg/L	0.0214	1.05%
Si 288.158†	3849.1	2.092	mg/L	0.0446	2.092	mg/L	0.0446	2.13%
Sn 189.927†	3168.9	0.9942	mg/L	0.00893	0.9942	mg/L	0.00893	0.90%
Sr 421.552†	1030515.8	1.010	mg/L	0.0018	1.010	mg/L	0.0018	0.18%
Ti 334.903†	21868.6	1.016	mg/L	0.0010	1.016	mg/L	0.0010	0.10%
Tl 190.801†	3990.1	2.112	mg/L	0.0086	2.112	mg/L	0.0086	0.41%
V 292.402†	126831.2	1.047	mg/L	0.0043	1.047	mg/L	0.0043	0.41%
Zn 206.200†	3515.1	1.033	mg/L	0.0049	1.033	mg/L	0.0049	0.48%

Sequence No.: 31
Sample ID: CB 3

Autosampler Location: 1
Date Collected: 7/25/2013 10:37:37 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2708721.0	101.7	%	0.23				0.23%
ScR 361.383	342165.8	101.8	%	0.74				0.72%
Ag 328.068†	49.4	0.00024	mg/L	0.000108	0.00024	mg/L	0.000108	45.68%
Al 308.215†	8.4	0.00582	mg/L	0.003084	0.00582	mg/L	0.003084	52.97%
As 188.979†	0.3	0.00027	mg/L	0.002085	0.00027	mg/L	0.002085	761.01%
B 249.677†	7.1	0.00096	mg/L	0.000405	0.00096	mg/L	0.000405	42.36%
Ba 233.527†	-1.6	-0.00035	mg/L	0.000702	-0.00035	mg/L	0.000702	199.86%
Be 313.042†	3.5	0.00001	mg/L	0.000027	0.00001	mg/L	0.000027	440.73%
Ca 317.933†	14.3	0.00129	mg/L	0.000285	0.00129	mg/L	0.000285	22.15%
Cd 228.802†	7.8	0.00034	mg/L	0.000135	0.00034	mg/L	0.000135	39.90%
Co 228.616†	5.3	0.00015	mg/L	0.000249	0.00015	mg/L	0.000249	168.58%
Cr 267.716†	0.2	0.00003	mg/L	0.000876	0.00003	mg/L	0.000876	>999.9%
Cu 324.752†	572.6	0.00203	mg/L	0.000088	0.00203	mg/L	0.000088	4.35%
Fe 273.955†	4.7	0.00362	mg/L	0.001372	0.00362	mg/L	0.001372	37.92%
K 766.490†	27.1	0.01077	mg/L	0.006766	0.01077	mg/L	0.006766	62.80%
Mg 279.077†	2.5	0.00247	mg/L	0.004257	0.00247	mg/L	0.004257	172.40%
Mn 257.610†	4.3	0.00011	mg/L	0.000152	0.00011	mg/L	0.000152	134.77%
Mo 202.031†	32.9	0.00192	mg/L	0.000443	0.00192	mg/L	0.000443	23.14%
Na 589.592†	138.6	0.00926	mg/L	0.001609	0.00926	mg/L	0.001609	17.38%
Na 330.237†	3.3	0.1132	mg/L	0.27277	0.1132	mg/L	0.27277	240.89%
Ni 231.604†	-1.6	-0.00038	mg/L	0.001331	-0.00038	mg/L	0.001331	353.81%
Pb 220.353†	7.8	0.00106	mg/L	0.000455	0.00106	mg/L	0.000455	43.03%
Sb 206.836†	40.4	0.01431	mg/L	0.002639	0.01431	mg/L	0.002639	18.44%
Se 196.026†	4.2	0.00338	mg/L	0.002938	0.00338	mg/L	0.002938	86.82%
Si 288.158†	54.4	0.02948	mg/L	0.020901	0.02948	mg/L	0.020901	70.89%
Sn 189.927†	3.6	0.00114	mg/L	0.000376	0.00114	mg/L	0.000376	32.91%
Sr 421.552†	20.5	0.00002	mg/L	0.000021	0.00002	mg/L	0.000021	104.12%
Ti 334.903†	17.3	0.00080	mg/L	0.000051	0.00080	mg/L	0.000051	6.31%
Tl 190.801†	0.9	0.00046	mg/L	0.001764	0.00046	mg/L	0.001764	379.78%
V 292.402†	5.2	0.00004	mg/L	0.000080	0.00004	mg/L	0.000080	182.37%
Zn 206.200†	1.2	0.00037	mg/L	0.000516	0.00037	mg/L	0.000516	141.44%

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Analysis Begun

Start Time: 7/25/2013 10:43:34 AM **Plasma On Time: 7/25/2013 7:05:01 AM**
Logged In Analyst: Metals **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\pe\metals\Sample Information\0725.sif
Batch ID:
Results Data Set: I2130725
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: Calib Blank 1 **Date Collected: 7/25/2013 10:43:35 AM**
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2700848.2	4158.01	0.15%	101.4	%
ScR 361.383	341073.3	1623.85	0.48%	101.5	%
Ag 328.068†	-87.4	29.98	34.29%	[0.00]	mg/L
Al 308.215†	167.2	1.73	1.03%	[0.00]	mg/L
As 188.979†	-8.9	0.75	8.44%	[0.00]	mg/L
B 249.677†	-3.1	5.17	164.72%	[0.00]	mg/L
Ba 233.527†	25.4	1.45	5.71%	[0.00]	mg/L
Be 313.042†	705.8	9.80	1.39%	[0.00]	mg/L
Ca 317.933†	82.2	7.07	8.60%	[0.00]	mg/L
Cd 228.802†	239.9	3.14	1.31%	[0.00]	mg/L
Co 228.616†	-68.9	4.20	6.09%	[0.00]	mg/L
Cr 267.716†	-118.6	4.42	3.73%	[0.00]	mg/L
Cu 324.752†	3208.2	61.98	1.93%	[0.00]	mg/L
Fe 273.955†	22.8	1.33	5.82%	[0.00]	mg/L
K 766.490†	365.0	24.89	6.82%	[0.00]	mg/L
Mg 279.077†	41.5	1.24	3.00%	[0.00]	mg/L
Mn 257.610†	159.3	2.92	1.83%	[0.00]	mg/L
Mo 202.031†	54.7	1.46	2.67%	[0.00]	mg/L
Na 589.592†	-343.7	4.37	1.27%	[0.00]	mg/L
Na 330.237†	-120.7	5.64	4.67%	[0.00]	mg/L
Ni 231.604†	6.7	3.20	47.94%	[0.00]	mg/L
Pb 220.353†	5.7	4.13	72.23%	[0.00]	mg/L
Sb 206.836†	36.9	3.28	8.89%	[0.00]	mg/L
Se 196.026†	-28.6	3.87	13.51%	[0.00]	mg/L
Si 288.158†	155.5	33.47	21.53%	[0.00]	mg/L
Sn 189.927†	-2.8	0.57	20.55%	[0.00]	mg/L
Sr 421.552†	231.8	16.99	7.33%	[0.00]	mg/L
Ti 334.903†	-65.3	7.57	11.58%	[0.00]	mg/L
Tl 190.801†	-24.9	4.00	16.05%	[0.00]	mg/L
V 292.402†	117.2	18.78	16.02%	[0.00]	mg/L
Zn 206.200†	-1.7	0.50	28.87%	[0.00]	mg/L

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Analysis Begun

Start Time: 7/25/2013 10:48:48 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202

Plasma On Time: 7/25/2013 7:05:01 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\0725.sif
Batch ID:
Results Data Set: I2130725
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: CV 222222 RA 7/25/13

Autosampler Location: 7
Date Collected: 7/25/2013 10:48:49 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
A11	232.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2604858.1	97.82	%	0.345				0.35%
ScR 361.383	402890.9	119.8	%	36.54				30.49%
Ag 328.068†	234399.9	1.120	mg/L	0.0120	1.120	mg/L	0.0120	1.07%
Al 308.215†	2719.0	1.859	mg/L	0.5220	1.859	mg/L	0.5220	28.07%
As 188.979†	2807.0	2.136	mg/L	0.0106	2.136	mg/L	0.0106	0.50%
B 249.677†	6675.0	0.8933	mg/L	0.23377	0.8933	mg/L	0.23377	26.17%
Saturated within auto integration window (code 4)								
Ba 233.527†	4479.2	0.9560	mg/L	0.24998	0.9560	mg/L	0.24998	26.15%
Be 313.042†	198155.0	0.3563	mg/L	0.09335	0.3563	mg/L	0.09335	26.20%
Saturated within auto integration window (code 4)								
Ca 317.933†	20263.2	1.818	mg/L	0.5245	1.818	mg/L	0.5245	28.85%
Cd 228.802†	24996.8	1.079	mg/L	0.0060	1.079	mg/L	0.0060	0.56%
Co 228.616†	37589.9	1.059	mg/L	0.0107	1.059	mg/L	0.0107	1.01%
Cr 267.716†	6142.3	0.9517	mg/L	0.24310	0.9517	mg/L	0.24310	25.54%
Cu 324.752†	301185.7	1.066	mg/L	0.0024	1.066	mg/L	0.0024	0.23%
Fe 273.955†	2433.5	1.882	mg/L	0.5007	1.882	mg/L	0.5007	26.60%
K 766.490†	45064.9	17.91	mg/L	5.264	17.91	mg/L	5.264	29.38%
Mg 279.077†	1902.5	1.871	mg/L	0.5015	1.871	mg/L	0.5015	26.80%
Mn 257.610†	34217.5	0.8936	mg/L	0.26052	0.8936	mg/L	0.26052	29.15%
Mo 202.031†	17506.7	1.019	mg/L	0.0119	1.019	mg/L	0.0119	1.17%
Na 589.592†	612042.5	40.88	mg/L	19.360	40.88	mg/L	19.360	47.36%
Saturated within auto integration window (code 4)								
Na 330.237†	1396.3	47.63	mg/L	11.344	47.63	mg/L	11.344	23.82%
Ni 231.604†	3836.7	0.9431	mg/L	0.24685	0.9431	mg/L	0.24685	26.17%
Pb 220.353†	15181.1	2.060	mg/L	0.0178	2.060	mg/L	0.0178	0.87%
Sb 206.836†	6073.1	2.152	mg/L	0.0232	2.152	mg/L	0.0232	1.08%
Se 196.026†	2625.7	2.114	mg/L	0.0098	2.114	mg/L	0.0098	0.47%
Si 288.158†	3359.7	1.826	mg/L	0.5256	1.826	mg/L	0.5256	28.78%
Sn 189.927†	3271.8	1.026	mg/L	0.0078	1.026	mg/L	0.0078	0.76%
Sr 421.552†	824248.7	0.8076	mg/L	0.38621	0.8076	mg/L	0.38621	47.82%
Ti 334.903†	19546.3	0.9075	mg/L	0.25895	0.9075	mg/L	0.25895	28.53%
Tl 190.801†	4126.1	2.184	mg/L	0.0235	2.184	mg/L	0.0235	1.08%
V 292.402†	131504.7	1.085	mg/L	0.0105	1.085	mg/L	0.0105	0.97%
Zn 206.200†	3175.0	0.9330	mg/L	0.24234	0.9330	mg/L	0.24234	25.98%

Analysis Begun

Start Time: 7/25/2013 10:53:56 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 7/25/2013 7:05:01 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\0725.sif
Batch ID:
Results Data Set: I2130725
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: CV 4
Autosampler Location: 7
Date Collected: 7/25/2013 10:53:57 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2660174.6	99.90	%	0.505				0.51%
ScR 361.383	335024.6	99.65	%	0.439				0.44%
Ag 328.068†	226278.0	1.081	mg/L	0.0093	1.081	mg/L	0.0093	0.86%
Al 308.215†	3012.1	2.064	mg/L	0.0110	2.064	mg/L	0.0110	0.53%
As 188.979†	2718.9	2.073	mg/L	0.0102	2.073	mg/L	0.0102	0.49%
B 249.677†	7636.1	1.022	mg/L	0.0024	1.022	mg/L	0.0024	0.24%
Ba 233.527†	4975.8	1.062	mg/L	0.0063	1.062	mg/L	0.0063	0.59%
Be 313.042†	552778.7	0.9944	mg/L	0.00816	0.9944	mg/L	0.00816	0.82%
Ca 317.933†	23427.0	2.102	mg/L	0.0112	2.102	mg/L	0.0112	0.53%
Cd 228.802†	24156.5	1.043	mg/L	0.0074	1.043	mg/L	0.0074	0.71%
Co 228.616†	36373.0	1.025	mg/L	0.0081	1.025	mg/L	0.0081	0.79%
Cr 267.716†	6849.2	1.061	mg/L	0.0050	1.061	mg/L	0.0050	0.48%
Cu 324.752†	290941.3	1.030	mg/L	0.0020	1.030	mg/L	0.0020	0.19%
Fe 273.955†	2693.6	2.085	mg/L	0.0175	2.085	mg/L	0.0175	0.84%
K 766.490†	51179.1	20.34	mg/L	0.084	20.34	mg/L	0.084	0.41%
Mg 279.077†	2066.9	2.032	mg/L	0.0140	2.032	mg/L	0.0140	0.69%
Mn 257.610†	37753.0	0.9858	mg/L	0.00426	0.9858	mg/L	0.00426	0.43%
Mo 202.031†	17013.0	0.9907	mg/L	0.00497	0.9907	mg/L	0.00497	0.50%
Na 589.592†	762836.4	50.95	mg/L	0.137	50.95	mg/L	0.137	0.27%
Na 330.237†	1539.3	52.51	mg/L	0.230	52.51	mg/L	0.230	0.44%
Ni 231.604†	4260.0	1.047	mg/L	0.0063	1.047	mg/L	0.0063	0.60%
Pb 220.353†	14680.3	1.992	mg/L	0.0153	1.992	mg/L	0.0153	0.77%
Sb 206.836†	5928.8	2.099	mg/L	0.0095	2.099	mg/L	0.0095	0.45%
Se 196.026†	2534.6	2.040	mg/L	0.0102	2.040	mg/L	0.0102	0.50%
Si 288.158†	3720.9	2.022	mg/L	0.0252	2.022	mg/L	0.0252	1.25%
Sn 189.927†	3165.3	0.9931	mg/L	0.00494	0.9931	mg/L	0.00494	0.50%
Sr 421.552†	1028050.9	1.007	mg/L	0.0024	1.007	mg/L	0.0024	0.23%
Ti 334.903†	21765.0	1.011	mg/L	0.0033	1.011	mg/L	0.0033	0.33%
Tl 190.801†	3998.9	2.116	mg/L	0.0145	2.116	mg/L	0.0145	0.69%
V 292.402†	127131.4	1.050	mg/L	0.0092	1.050	mg/L	0.0092	0.87%
Zn 206.200†	3496.3	1.027	mg/L	0.0050	1.027	mg/L	0.0050	0.49%

Sequence No.: 2
Sample ID: CB 4

Autosampler Location: 1
Date Collected: 7/25/2013 10:58:00 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
A11	234.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2707660.2	101.7	%	0.23				0.23%
ScR 361.383	344210.1	102.4	%	0.65				0.64%
Ag 328.068†	52.0	0.00025	mg/L	0.000128	0.00025	mg/L	0.000128	51.41%
Al 308.215†	-6.1	-0.00430	mg/L	0.005748	-0.00430	mg/L	0.005748	133.62%
As 188.979†	2.0	0.00154	mg/L	0.000166	0.00154	mg/L	0.000166	10.73%
B 249.677†	10.9	0.00147	mg/L	0.000844	0.00147	mg/L	0.000844	57.61%
Ba 233.527†	2.4	0.00052	mg/L	0.000323	0.00052	mg/L	0.000323	62.54%
Be 313.042†	7.5	0.00001	mg/L	0.000013	0.00001	mg/L	0.000013	96.40%
Ca 317.933†	5.1	0.00046	mg/L	0.000404	0.00046	mg/L	0.000404	88.69%
Cd 228.802†	0.8	0.00003	mg/L	0.000275	0.00003	mg/L	0.000275	>999.9%
Co 228.616†	2.3	0.00006	mg/L	0.000284	0.00006	mg/L	0.000284	443.51%
Cr 267.716†	-0.9	-0.00013	mg/L	0.000122	-0.00013	mg/L	0.000122	91.47%
Cu 324.752†	23.4	0.00008	mg/L	0.000051	0.00008	mg/L	0.000051	61.28%
Fe 273.955†	0.4	0.00031	mg/L	0.001068	0.00031	mg/L	0.001068	349.18%
K 766.490†	28.9	0.01148	mg/L	0.012860	0.01148	mg/L	0.012860	112.03%
Mg 279.077†	5.6	0.00554	mg/L	0.002608	0.00554	mg/L	0.002608	47.05%
Mn 257.610†	-1.6	-0.00004	mg/L	0.000075	-0.00004	mg/L	0.000075	184.12%
Mo 202.031†	27.8	0.00162	mg/L	0.000369	0.00162	mg/L	0.000369	22.84%
Na 589.592†	150.4	0.01004	mg/L	0.001795	0.01004	mg/L	0.001795	17.87%
Na 330.237†	3.8	0.1284	mg/L	0.08099	0.1284	mg/L	0.08099	63.07%
Ni 231.604†	-0.1	-0.00002	mg/L	0.000185	-0.00002	mg/L	0.000185	865.51%
Pb 220.353†	6.1	0.00083	mg/L	0.000237	0.00083	mg/L	0.000237	28.71%
Sb 206.836†	40.0	0.01416	mg/L	0.001989	0.01416	mg/L	0.001989	14.05%
Se 196.026†	4.1	0.00334	mg/L	0.002995	0.00334	mg/L	0.002995	89.79%
Si 288.158†	-58.3	-0.03158	mg/L	0.015476	-0.03158	mg/L	0.015476	49.00%
Sn 189.927†	1.8	0.00058	mg/L	0.000796	0.00058	mg/L	0.000796	137.69%
Sr 421.552†	19.6	0.00002	mg/L	0.000010	0.00002	mg/L	0.000010	52.01%
Ti 334.903†	15.0	0.00070	mg/L	0.000622	0.00070	mg/L	0.000622	89.43%
Tl 190.801†	1.6	0.00084	mg/L	0.002100	0.00084	mg/L	0.002100	250.39%
V 292.402†	10.7	0.00009	mg/L	0.000013	0.00009	mg/L	0.000013	14.74%
Zn 206.200†	-1.0	-0.00030	mg/L	0.000544	-0.00030	mg/L	0.000544	179.91%

Sequence No.: 3
Sample ID: WY32 MB1 SWC

Autosampler Location: 324
Date Collected: 7/25/2013 11:02:15 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WY32 MB1 SWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WY32 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2752865.1	103.4	%	0.55				0.53%
ScR 361.383	347210.6	103.3	%	0.07				0.07%
Ag 328.068†	22.8	0.00011	mg/L	0.000209	0.00022	mg/L	0.000418	192.27%
Al 308.215†	128.7	0.08969	mg/L	0.001193	0.1794	mg/L	0.00239	1.33%
As 188.979†	0.9	0.00076	mg/L	0.001825	0.00152	mg/L	0.003649	240.67%
B 249.677†	4.2	0.00057	mg/L	0.000789	0.00114	mg/L	0.001578	138.91%
Ba 233.527†	0.4	0.00007	mg/L	0.000232	0.00015	mg/L	0.000465	317.08%
Be 313.042†	-34.9	-0.00006	mg/L	0.000012	-0.00013	mg/L	0.000025	19.68%
Ca 317.933†	1183.6	0.1062	mg/L	0.00145	0.2124	mg/L	0.00291	1.37%
Cd 228.802†	-4.7	-0.00021	mg/L	0.000089	-0.00042	mg/L	0.000177	42.27%
Co 228.616†	-2.1	-0.00006	mg/L	0.000144	-0.00013	mg/L	0.000288	226.44%
Cr 267.716†	-0.6	-0.00010	mg/L	0.000328	-0.00019	mg/L	0.000656	341.47%
Cu 324.752†	-16.4	-0.00006	mg/L	0.000057	-0.00012	mg/L	0.000113	98.20%
Fe 273.955†	32.5	0.02519	mg/L	0.000897	0.05039	mg/L	0.001794	3.56%
K 766.490†	6.4	0.00253	mg/L	0.000524	0.00507	mg/L	0.001048	20.68%
Mg 279.077†	44.5	0.04358	mg/L	0.004934	0.08716	mg/L	0.009868	11.32%
Mn 257.610†	7.7	0.00020	mg/L	0.000043	0.00040	mg/L	0.000085	21.29%
Mo 202.031†	1.7	0.00010	mg/L	0.000286	0.00020	mg/L	0.000572	293.04%
Na 589.592†	79.8	0.00533	mg/L	0.001542	0.01066	mg/L	0.003084	28.91%
Na 330.237†	5.3	0.1810	mg/L	0.02412	0.3620	mg/L	0.04823	13.32%
Ni 231.604†	5.1	0.00125	mg/L	0.000581	0.00250	mg/L	0.001163	46.55%
Pb 220.353†	-3.5	-0.00045	mg/L	0.000363	-0.00090	mg/L	0.000727	80.95%
Sb 206.836†	6.3	0.00225	mg/L	0.001862	0.00450	mg/L	0.003725	82.81%
Se 196.026†	-0.5	-0.00039	mg/L	0.002860	-0.00079	mg/L	0.005720	728.59%
Si 288.158†	1.6	0.00087	mg/L	0.009597	0.00174	mg/L	0.019193	>999.9%
Sn 189.927†	1.8	0.00057	mg/L	0.001063	0.00115	mg/L	0.002126	184.88%
Sr 421.552†	67.7	0.00007	mg/L	0.000017	0.00013	mg/L	0.000033	24.96%
Ti 334.903†	44.9	0.00208	mg/L	0.000247	0.00416	mg/L	0.000494	11.87%
Tl 190.801†	2.9	0.00154	mg/L	0.001145	0.00309	mg/L	0.002290	74.22%
V 292.402†	-3.8	-0.00003	mg/L	0.000144	-0.00007	mg/L	0.000288	423.83%
Zn 206.200†	5.5	0.00162	mg/L	0.000032	0.00324	mg/L	0.000063	1.95%

Sequence No.: 4
Sample ID: WY21 K TWC

Autosampler Location: 325
Date Collected: 7/25/2013 11:06:30 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: WY21 K TWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WY21 K TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2746502.3	103.1	%	0.05				0.05%
ScR 361.383	344987.1	102.6	%	0.59				0.58%
Ag 328.068†	19.6	0.00009	mg/L	0.000223	0.00009	mg/L	0.000223	238.27%
Al 308.215†	-6.6	-0.00462	mg/L	0.001020	-0.00462	mg/L	0.001020	22.09%
As 188.979†	0.3	0.00023	mg/L	0.001145	0.00023	mg/L	0.001145	492.39%
B 249.677†	338.1	0.04531	mg/L	0.000079	0.04531	mg/L	0.000079	0.17%
Ba 233.527†	2.3	0.00048	mg/L	0.001039	0.00048	mg/L	0.001039	215.24%
Be 313.042†	-30.4	-0.00005	mg/L	0.000021	-0.00005	mg/L	0.000021	38.09%
Ca 317.933†	309.9	0.02780	mg/L	0.000624	0.02780	mg/L	0.000624	2.24%
Cd 228.802†	-4.7	-0.00021	mg/L	0.000110	-0.00021	mg/L	0.000110	53.25%
Co 228.616†	-5.5	-0.00016	mg/L	0.000072	-0.00016	mg/L	0.000072	46.03%
Cr 267.716†	3.5	0.00055	mg/L	0.000383	0.00055	mg/L	0.000383	69.76%
Cu 324.752†	-7.4	-0.00003	mg/L	0.000141	-0.00003	mg/L	0.000141	538.30%
Fe 273.955†	-2.3	-0.00177	mg/L	0.002713	-0.00177	mg/L	0.002713	153.26%
K 766.490†	14.3	0.00570	mg/L	0.005564	0.00570	mg/L	0.005564	97.54%
Mg 279.077†	4.8	0.00468	mg/L	0.007027	0.00468	mg/L	0.007027	150.26%
Mn 257.610†	4.1	0.00011	mg/L	0.000057	0.00011	mg/L	0.000057	53.71%
Mo 202.031†	-3.1	-0.00018	mg/L	0.000158	-0.00018	mg/L	0.000158	87.09%
Na 589.592†	353.9	0.02363	mg/L	0.002107	0.02363	mg/L	0.002107	8.92%
Na 330.237†	8.7	0.2962	mg/L	0.13597	0.2962	mg/L	0.13597	45.90%
Ni 231.604†	1.4	0.00035	mg/L	0.000273	0.00035	mg/L	0.000273	77.67%
Pb 220.353†	0.1	0.00001	mg/L	0.000587	0.00001	mg/L	0.000587	>999.9%
Sb 206.836†	-1.5	-0.00055	mg/L	0.001239	-0.00055	mg/L	0.001239	224.94%
Se 196.026†	1.9	0.00154	mg/L	0.003505	0.00154	mg/L	0.003505	228.07%
Si 288.158†	3083.3	1.671	mg/L	0.0021	1.671	mg/L	0.0021	0.13%
Sn 189.927†	1.2	0.00037	mg/L	0.000860	0.00037	mg/L	0.000860	233.45%
Sr 421.552†	75.4	0.00007	mg/L	0.000018	0.00007	mg/L	0.000018	24.04%
Ti 334.903†	2.2	0.00010	mg/L	0.000299	0.00010	mg/L	0.000299	297.06%
Tl 190.801†	-2.7	-0.00144	mg/L	0.000629	-0.00144	mg/L	0.000629	43.57%
V 292.402†	-0.7	-0.00000	mg/L	0.000070	-0.00000	mg/L	0.000070	>999.9%
Zn 206.200†	0.3	0.00039	mg/L	0.000274	0.00039	mg/L	0.000274	71.03%

Sequence No.: 5
Sample ID: WY32 ADUP SWC

Dilution: 2.000000X

Del

Autosampler Location: 326
Date Collected: 7/25/2013 11:10:45 AM
Data Type: Original

Nebulizer Parameters: WY32 ADUP SWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WY32 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2714109.5	101.9	%	0.60				0.59%
ScR 361.383	345954.2	102.9	%	0.40				0.39%
Ag 328.068†	118.3	0.00074	mg/L	0.000190	0.00149	mg/L	0.000379	25.46%
Al 308.215†	139891.7	97.43	mg/L	0.274	194.9	mg/L	0.55	0.28%
As 188.979†	-443.4	0.01600	mg/L	0.004391	0.03200	mg/L	0.008782	27.44%
B 249.677†	727.0	0.09725	mg/L	0.001363	0.1945	mg/L	0.00273	1.40%
Ba 233.527†	8078.7	1.681	mg/L	0.0187	3.362	mg/L	0.0375	1.11%
Be 313.042†	901.8	0.00136	mg/L	0.000035	0.00272	mg/L	0.000071	2.61%
Ca 317.933†	698368.0	62.67	mg/L	0.216	125.3	mg/L	0.43	0.34%
Cd 228.802†	231.1	0.01213	mg/L	0.000133	0.02426	mg/L	0.000266	1.10%
Co 228.616†	3421.0	0.07422	mg/L	0.000298	0.1484	mg/L	0.00060	0.40%
Cr 267.716†	2674.3	0.4216	mg/L	0.00338	0.8432	mg/L	0.00676	0.80%
Cu 324.752†	221986.4	0.7955	mg/L	0.00415	1.591	mg/L	0.0083	0.52%
Fe 273.955†	336227.6	261.0	mg/L	1.38	522.0	mg/L	2.76	0.53%
K 766.490†	18197.9	7.234	mg/L	0.0258	14.47	mg/L	0.052	0.36%
Mg 279.077†	36519.0	35.63	mg/L	0.331	71.25	mg/L	0.662	0.93%
Mn 257.610†	108966.7	2.845	mg/L	0.0050	5.690	mg/L	0.0100	0.18%
Mo 202.031†	749.9	0.04285	mg/L	0.000279	0.08570	mg/L	0.000558	0.65%
Na 589.592†	101968.0	6.810	mg/L	0.0111	13.62	mg/L	0.022	0.16%
Na 330.237†	207.9	7.738	mg/L	0.0290	15.48	mg/L	0.058	0.38%
Ni 231.604†	1175.1	0.2888	mg/L	0.00355	0.5776	mg/L	0.00711	1.23%
Pb 220.353†	5135.1	0.7055	mg/L	0.00068	1.411	mg/L	0.0014	0.10%
Sb 206.836†	54.0	0.02513	mg/L	0.000215	0.05026	mg/L	0.000429	0.85%
Se 196.026†	27.6	0.01115	mg/L	0.009417	0.02229	mg/L	0.018834	84.49%
Si 288.158†	1740.8	0.9480	mg/L	0.01212	1.896	mg/L	0.0242	1.28%
Sn 189.927†	32.6	0.02057	mg/L	0.000554	0.04115	mg/L	0.001108	2.69%
Sr 421.552†	352027.0	0.3449	mg/L	0.00027	0.6899	mg/L	0.00055	0.08%
Ti 334.903†	237264.9	11.03	mg/L	0.030	22.05	mg/L	0.061	0.27%
Tl 190.801†	-51.8	0.00538	mg/L	0.001865	0.01076	mg/L	0.003729	34.64%
V 292.402†	75691.8	0.6045	mg/L	0.00320	1.209	mg/L	0.0064	0.53%
Zn 206.200†	24982.3	7.338	mg/L	0.0853	14.68	mg/L	0.171	1.16%

Sequence No.: 6
Sample ID: WY32 A SWC

DJ

Dilution: 2.000000X

Autosampler Location: 327
Date Collected: 7/25/2013 11:14:46 AM
Data Type: Original

Nebulizer Parameters: WY32 A SWC

Analyte	Back Pressure	Flow
All	235.0 kPa	0.75 L/min

Mean Data: WY32 A SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2712190.6	101.8	%	0.12				0.12%
ScR 361.383	346821.0	103.2	%	0.66				0.64%
Ag 328.068†	53.0	0.00043	mg/L	0.000284	0.00087	mg/L	0.000568	65.44%
Al 308.215†	134424.6	93.62	mg/L	0.321	187.2	mg/L	0.64	0.34%
As 188.979†	-433.9	0.01235	mg/L	0.003429	0.02470	mg/L	0.006857	27.77%
B 249.677†	1041.7	0.1394	mg/L	0.00060	0.2789	mg/L	0.00120	0.43%
Ba 233.527†	8583.0	1.789	mg/L	0.0150	3.578	mg/L	0.0301	0.84%
Be 313.042†	961.8	0.00147	mg/L	0.000027	0.00294	mg/L	0.000055	1.86%
Ca 317.933†	762376.6	68.41	mg/L	0.255	136.8	mg/L	0.51	0.37%
Cd 228.802†	246.2	0.01280	mg/L	0.000178	0.02559	mg/L	0.000356	1.39%
Co 228.616†	3279.4	0.07077	mg/L	0.000194	0.1415	mg/L	0.00039	0.27%
Cr 267.716†	2295.1	0.3629	mg/L	0.00362	0.7258	mg/L	0.00723	1.00%
Cu 324.752†	168451.7	0.6059	mg/L	0.00285	1.212	mg/L	0.0057	0.47%
Fe 273.955†	334911.1	260.0	mg/L	1.52	520.0	mg/L	3.03	0.58%
K 766.490†	17559.2	6.980	mg/L	0.0096	13.96	mg/L	0.019	0.14%
Mg 279.077†	34597.3	33.74	mg/L	0.281	67.49	mg/L	0.561	0.83%
Mn 257.610†	109351.9	2.855	mg/L	0.0153	5.710	mg/L	0.0305	0.53%
Mo 202.031†	875.0	0.05007	mg/L	0.000300	0.1001	mg/L	0.00060	0.60%
Na 589.592†	101605.4	6.786	mg/L	0.0234	13.57	mg/L	0.047	0.34%
Na 330.237†	202.3	7.492	mg/L	0.2858	14.98	mg/L	0.572	3.81%
Ni 231.604†	1387.4	0.3410	mg/L	0.00387	0.6819	mg/L	0.00773	1.13%
Pb 220.353†	5014.5	0.6885	mg/L	0.00142	1.377	mg/L	0.0028	0.21%
Sb 206.836†	47.1	0.02323	mg/L	0.001226	0.04645	mg/L	0.002453	5.28%
Se 196.026†	23.1	0.00793	mg/L	0.002377	0.01585	mg/L	0.004755	30.00%
Si 288.158†	1698.0	0.9246	mg/L	0.01082	1.849	mg/L	0.0216	1.17%
Sn 189.927†	33.3	0.02147	mg/L	0.000973	0.04294	mg/L	0.001947	4.53%
Sr 421.552†	371939.9	0.3644	mg/L	0.00101	0.7289	mg/L	0.00203	0.28%
Ti 334.903†	230312.8	10.70	mg/L	0.039	21.41	mg/L	0.078	0.36%
Tl 190.801†	-53.4	0.00443	mg/L	0.003814	0.00886	mg/L	0.007629	86.15%
V 292.402†	76373.4	0.6101	mg/L	0.00334	1.220	mg/L	0.0067	0.55%
Zn 206.200†	24300.4	7.138	mg/L	0.0661	14.28	mg/L	0.132	0.93%

Sequence No.: 7
Sample ID: WY32 ASPK SWC

Del

Dilution: 2.000000X

Autosampler Location: 328
Date Collected: 7/25/2013 11:18:47 AM
Data Type: Original

Nebulizer Parameters: WY32 ASPK SWC

Analyte	Back Pressure	Flow
A11	234.0 kPa	0.75 L/min

Mean Data: WY32 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2705781.1	101.6	%	0.23				0.22%
ScR 361.383	342391.2	101.8	%	0.61				0.60%
Ag 328.068†	101281.9	0.4839	mg/L	0.00219	0.9678	mg/L	0.00438	0.45%
Al 308.215†	144442.5	100.6	mg/L	0.48	201.2	mg/L	0.96	0.48%
As 188.979†	2129.7	1.935	mg/L	0.0113	3.870	mg/L	0.0226	0.58%
B 249.677†	674.3	0.08920	mg/L	0.001264	0.1784	mg/L	0.00253	1.42%
Ba 233.527†	18356.3	3.878	mg/L	0.0322	7.756	mg/L	0.0644	0.83%
Be 313.042†	249016.3	0.4477	mg/L	0.00173	0.8954	mg/L	0.00347	0.39%
Ca 317.933†	821925.1	73.75	mg/L	0.231	147.5	mg/L	0.46	0.31%
Cd 228.802†	11996.7	0.5148	mg/L	0.00136	1.030	mg/L	0.0027	0.26%
Co 228.616†	20133.9	0.5467	mg/L	0.00193	1.093	mg/L	0.0039	0.35%
Cr 267.716†	5325.6	0.8311	mg/L	0.00487	1.662	mg/L	0.0097	0.59%
Cu 324.752†	300326.7	1.072	mg/L	0.0085	2.145	mg/L	0.0169	0.79%
Fe 273.955†	318811.4	247.5	mg/L	0.59	495.0	mg/L	1.18	0.24%
K 766.490†	42014.9	16.70	mg/L	0.083	33.40	mg/L	0.166	0.50%
Mg 279.077†	44426.4	43.38	mg/L	0.174	86.77	mg/L	0.349	0.40%
Mn 257.610†	122981.4	3.211	mg/L	0.0065	6.422	mg/L	0.0130	0.20%
Mo 202.031†	651.6	0.03696	mg/L	0.000401	0.07393	mg/L	0.000801	1.08%
Na 589.592†	256313.6	17.12	mg/L	0.061	34.24	mg/L	0.122	0.36%
Na 330.237†	516.3	18.08	mg/L	0.185	36.15	mg/L	0.370	1.02%
Ni 231.604†	2924.0	0.7178	mg/L	0.00464	1.436	mg/L	0.0093	0.65%
Pb 220.353†	18197.4	2.479	mg/L	0.0092	4.958	mg/L	0.0184	0.37%
Sb 206.836†	53.9	0.02085	mg/L	0.003087	0.04169	mg/L	0.006175	14.81%
Se 196.026†	2416.8	1.935	mg/L	0.0153	3.870	mg/L	0.0306	0.79%
Si 288.158†	1420.3	0.7774	mg/L	0.01145	1.555	mg/L	0.0229	1.47%
Sn 189.927†	17.0	0.01709	mg/L	0.001952	0.03418	mg/L	0.003904	11.42%
Sr 421.552†	912549.9	0.8942	mg/L	0.00275	1.788	mg/L	0.0055	0.31%
Ti 334.903†	226870.7	10.54	mg/L	0.028	21.09	mg/L	0.057	0.27%
Tl 190.801†	3328.9	1.795	mg/L	0.0101	3.590	mg/L	0.0202	0.56%
V 292.402†	131123.3	1.063	mg/L	0.0064	2.126	mg/L	0.0128	0.60%
Zn 206.200†	25023.5	7.351	mg/L	0.0497	14.70	mg/L	0.099	0.68%

Sequence No.: 8
Sample ID: WY32 B SWC

Autosampler Location: 329
Date Collected: 7/25/2013 11:22:51 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WY32 B SWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WY32 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2719428.2	102.1	%	0.13				0.13%
ScR 361.383	348720.3	103.7	%	0.84				0.81%
Ag 328.068†	-183.0	-0.00075	mg/L	0.000102	-0.00150	mg/L	0.000204	13.54%
Al 308.215†	162096.7	112.9	mg/L	0.27	225.8	mg/L	0.54	0.24%
As 188.979†	-253.7	0.04672	mg/L	0.001222	0.09345	mg/L	0.002444	2.62%
B 249.677†	117.2	0.01556	mg/L	0.000514	0.03112	mg/L	0.001028	3.30%
Ba 233.527†	3538.6	0.7213	mg/L	0.00634	1.443	mg/L	0.0127	0.88%
Be 313.042†	990.4	0.00160	mg/L	0.000025	0.00321	mg/L	0.000051	1.58%
Ca 317.933†	660307.5	59.25	mg/L	0.205	118.5	mg/L	0.41	0.35%
Cd 228.802†	206.6	0.01023	mg/L	0.000130	0.02046	mg/L	0.000261	1.27%
Co 228.616†	2878.7	0.06572	mg/L	0.000112	0.1314	mg/L	0.00022	0.17%
Cr 267.716†	2131.4	0.3345	mg/L	0.00272	0.6689	mg/L	0.00544	0.81%
Cu 324.752†	159260.2	0.5714	mg/L	0.00235	1.143	mg/L	0.0047	0.41%
Fe 273.955†	261777.7	203.2	mg/L	2.65	406.4	mg/L	5.31	1.31%
K 766.490†	22711.0	9.028	mg/L	0.0386	18.06	mg/L	0.077	0.43%
Mg 279.077†	44275.5	43.26	mg/L	0.190	86.53	mg/L	0.380	0.44%
Mn 257.610†	97791.6	2.553	mg/L	0.0229	5.106	mg/L	0.0458	0.90%
Mo 202.031†	431.9	0.02438	mg/L	0.000212	0.04876	mg/L	0.000423	0.87%
Na 589.592†	116558.0	7.784	mg/L	0.0167	15.57	mg/L	0.033	0.22%
Na 330.237†	238.7	8.387	mg/L	0.0886	16.77	mg/L	0.177	1.06%
Ni 231.604†	912.9	0.2244	mg/L	0.00227	0.4487	mg/L	0.00454	1.01%
Pb 220.353†	4998.9	0.6937	mg/L	0.00248	1.387	mg/L	0.0050	0.36%
Sb 206.836†	55.2	0.02296	mg/L	0.002611	0.04592	mg/L	0.005222	11.37%
Se 196.026†	31.9	0.01305	mg/L	0.006278	0.02609	mg/L	0.012555	48.12%
Si 288.158†	1312.1	0.7165	mg/L	0.01076	1.433	mg/L	0.0215	1.50%
Sn 189.927†	10.5	0.01251	mg/L	0.001302	0.02502	mg/L	0.002603	10.40%
Sr 421.552†	363308.3	0.3560	mg/L	0.00074	0.7120	mg/L	0.00148	0.21%
Ti 334.903†	162109.7	7.533	mg/L	0.0157	15.07	mg/L	0.031	0.21%
Tl 190.801†	-37.3	0.00598	mg/L	0.001142	0.01197	mg/L	0.002284	19.08%
V 292.402†	51279.0	0.4084	mg/L	0.00231	0.8168	mg/L	0.00462	0.57%
Zn 206.200†	18496.0	5.433	mg/L	0.0425	10.87	mg/L	0.085	0.78%

Sequence No.: 9
Sample ID: WY32 C SWC

Autosampler Location: 330
Date Collected: 7/25/2013 11:26:52 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WY32 C SWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WY32 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2725990.8	102.4	%	0.07				0.06%
ScR 361.383	348730.3	103.7	%	0.69				0.66%
Ag 328.068†	73.5	0.00050	mg/L	0.000293	0.00101	mg/L	0.000586	58.25%
Al 308.215†	155492.6	108.3	mg/L	0.58	216.6	mg/L	1.16	0.54%
As 188.979†	-370.4	0.01087	mg/L	0.003313	0.02174	mg/L	0.006625	30.48%
B 249.677†	327.1	0.04369	mg/L	0.000251	0.08738	mg/L	0.000503	0.58%
Ba 233.527†	6184.0	1.284	mg/L	0.0092	2.569	mg/L	0.0184	0.71%
Be 313.042†	842.0	0.00129	mg/L	0.000003	0.00259	mg/L	0.000007	0.27%
Ca 317.933†	695877.9	62.44	mg/L	0.095	124.9	mg/L	0.19	0.15%
Cd 228.802†	174.9	0.00937	mg/L	0.000344	0.01873	mg/L	0.000688	3.67%
Co 228.616†	3047.5	0.06749	mg/L	0.000248	0.1350	mg/L	0.00050	0.37%
Cr 267.716†	2904.2	0.4550	mg/L	0.00381	0.9100	mg/L	0.00761	0.84%
Cu 324.752†	578999.0	2.058	mg/L	0.0034	4.116	mg/L	0.0067	0.16%
Fe 273.955†	276011.8	214.3	mg/L	0.96	428.5	mg/L	1.93	0.45%
K 766.490†	18529.0	7.366	mg/L	0.0115	14.73	mg/L	0.023	0.16%
Mg 279.077†	40121.5	39.18	mg/L	0.151	78.37	mg/L	0.302	0.39%
Mn 257.610†	96776.1	2.526	mg/L	0.0147	5.053	mg/L	0.0294	0.58%
Mo 202.031†	705.0	0.04024	mg/L	0.000829	0.08048	mg/L	0.001659	2.06%
Na 589.592†	107711.1	7.194	mg/L	0.0187	14.39	mg/L	0.037	0.26%
Na 330.237†	247.9	7.973	mg/L	0.2412	15.95	mg/L	0.482	3.03%
Ni 231.604†	1096.1	0.2694	mg/L	0.00201	0.5387	mg/L	0.00402	0.75%
Pb 220.353†	5902.4	0.8127	mg/L	0.00041	1.625	mg/L	0.0008	0.05%
Sb 206.836†	40.7	0.01810	mg/L	0.000239	0.03619	mg/L	0.000478	1.32%
Se 196.026†	33.4	0.01465	mg/L	0.004262	0.02930	mg/L	0.008524	29.10%
Si 288.158†	1616.4	0.8810	mg/L	0.02096	1.762	mg/L	0.0419	2.38%
Sn 189.927†	59.5	0.02860	mg/L	0.001394	0.05719	mg/L	0.002788	4.87%
Sr 421.552†	356134.1	0.3490	mg/L	0.00127	0.6979	mg/L	0.00254	0.36%
Ti 334.903†	197140.1	9.162	mg/L	0.0493	18.32	mg/L	0.099	0.54%
Tl 190.801†	-38.8	0.00626	mg/L	0.003041	0.01251	mg/L	0.006081	48.60%
V 292.402†	64261.4	0.5141	mg/L	0.00102	1.028	mg/L	0.0020	0.20%
Zn 206.200†	31590.6	9.280	mg/L	0.0894	18.56	mg/L	0.179	0.96%

Sequence No.: 10
Sample ID: WY32 MB1SPK SWC

Autosampler Location: 331
Date Collected: 7/25/2013 11:30:54 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WY32 MB1SPK SWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WY32 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2717309.1	102.0	%	0.34				0.33%
ScR 361.383	346600.0	103.1	%	0.17				0.17%
Ag 328.068†	110447.0	0.5275	mg/L	0.00333	1.055	mg/L	0.0067	0.63%
Al 308.215†	3050.7	2.117	mg/L	0.0029	4.235	mg/L	0.0058	0.14%
As 188.979†	2757.5	2.073	mg/L	0.0093	4.147	mg/L	0.0185	0.45%
B 249.677†	1.0	-0.00095	mg/L	0.000410	-0.00190	mg/L	0.000821	43.22%
Ba 233.527†	10043.8	2.144	mg/L	0.0019	4.289	mg/L	0.0038	0.09%
Be 313.042†	263358.3	0.4737	mg/L	0.00186	0.9475	mg/L	0.00371	0.39%
Ca 317.933†	110910.5	9.952	mg/L	0.0072	19.90	mg/L	0.014	0.07%
Cd 228.802†	12267.2	0.5238	mg/L	0.00333	1.048	mg/L	0.0067	0.63%
Co 228.616†	18284.1	0.5158	mg/L	0.00318	1.032	mg/L	0.0064	0.62%
Cr 267.716†	3458.3	0.5350	mg/L	0.00178	1.070	mg/L	0.0036	0.33%
Cu 324.752†	146928.5	0.5205	mg/L	0.00405	1.041	mg/L	0.0081	0.78%
Fe 273.955†	2787.7	2.161	mg/L	0.0085	4.322	mg/L	0.0170	0.39%
K 766.490†	25161.4	10.00	mg/L	0.039	20.00	mg/L	0.077	0.39%
Mg 279.077†	10683.5	10.47	mg/L	0.031	20.94	mg/L	0.061	0.29%
Mn 257.610†	18928.9	0.4944	mg/L	0.00226	0.9889	mg/L	0.00451	0.46%
Mo 202.031†	17.2	0.00085	mg/L	0.000328	0.00170	mg/L	0.000655	38.47%
Na 589.592†	149560.9	9.988	mg/L	0.0213	19.98	mg/L	0.043	0.21%
Na 330.237†	308.8	10.34	mg/L	0.192	20.69	mg/L	0.385	1.86%
Ni 231.604†	2075.8	0.5092	mg/L	0.00133	1.018	mg/L	0.0027	0.26%
Pb 220.353†	14926.5	2.025	mg/L	0.0139	4.050	mg/L	0.0277	0.69%
Sb 206.836†	2.3	-0.00453	mg/L	0.002792	-0.00905	mg/L	0.005585	61.69%
Se 196.026†	2569.5	2.069	mg/L	0.0106	4.138	mg/L	0.0213	0.51%
Si 288.158†	-48.6	-0.02280	mg/L	0.006875	-0.04559	mg/L	0.013750	30.16%
Sn 189.927†	-28.4	-0.00753	mg/L	0.000649	-0.01505	mg/L	0.001297	8.62%
Sr 421.552†	506146.3	0.4959	mg/L	0.00141	0.9919	mg/L	0.00282	0.28%
Ti 334.903†	229.8	0.00996	mg/L	0.002598	0.01993	mg/L	0.005197	26.08%
Tl 190.801†	3870.2	2.051	mg/L	0.0050	4.103	mg/L	0.0100	0.24%
V 292.402†	62872.6	0.5190	mg/L	0.00408	1.038	mg/L	0.0082	0.79%
Zn 206.200†	1752.7	0.5149	mg/L	0.00148	1.030	mg/L	0.0030	0.29%

Sequence No.: 11
Sample ID: WY32 MB1SPD SWC

Autosampler Location: 332
Date Collected: 7/25/2013 11:34:55 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WY32 MB1SPD SWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WY32 MB1SPD SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2706938.0	101.7	%	0.60				0.59%
ScR 361.383	344988.3	102.6	%	0.53				0.52%
Ag 328.068†	110225.4	0.5265	mg/L	0.00411	1.053	mg/L	0.0082	0.78%
Al 308.215†	2979.4	2.068	mg/L	0.0105	4.135	mg/L	0.0210	0.51%
As 188.979†	2759.1	2.074	mg/L	0.0076	4.148	mg/L	0.0151	0.36%
B 249.677†	9.9	0.00025	mg/L	0.000474	0.00050	mg/L	0.000949	189.93%
Ba 233.527†	10029.7	2.141	mg/L	0.0104	4.283	mg/L	0.0207	0.48%
Be 313.042†	264025.8	0.4749	mg/L	0.00111	0.9499	mg/L	0.00222	0.23%
Ca 317.933†	110399.3	9.906	mg/L	0.0106	19.81	mg/L	0.021	0.11%
Cd 228.802†	12155.2	0.5189	mg/L	0.00499	1.038	mg/L	0.0100	0.96%
Co 228.616†	18154.1	0.5121	mg/L	0.00460	1.024	mg/L	0.0092	0.90%
Cr 267.716†	3443.5	0.5327	mg/L	0.00376	1.065	mg/L	0.0075	0.71%
Cu 324.752†	146247.1	0.5181	mg/L	0.00506	1.036	mg/L	0.0101	0.98%
Fe 273.955†	2628.5	2.037	mg/L	0.0146	4.075	mg/L	0.0291	0.71%
K 766.490†	25289.1	10.05	mg/L	0.025	20.11	mg/L	0.051	0.25%
Mg 279.077†	10637.1	10.42	mg/L	0.052	20.85	mg/L	0.103	0.50%
Mn 257.610†	18764.9	0.4902	mg/L	0.00135	0.9803	mg/L	0.00270	0.28%
Mo 202.031†	22.5	0.00116	mg/L	0.000095	0.00232	mg/L	0.000190	8.21%
Na 589.592†	149762.9	10.00	mg/L	0.011	20.00	mg/L	0.022	0.11%
Na 330.237†	316.5	10.61	mg/L	0.330	21.22	mg/L	0.661	3.12%
Ni 231.604†	2060.4	0.5055	mg/L	0.00388	1.011	mg/L	0.0078	0.77%
Pb 220.353†	14785.4	2.006	mg/L	0.0225	4.012	mg/L	0.0451	1.12%
Sb 206.836†	9.8	-0.00183	mg/L	0.001646	-0.00365	mg/L	0.003292	90.17%
Se 196.026†	2567.9	2.068	mg/L	0.0086	4.135	mg/L	0.0172	0.41%
Si 288.158†	-47.9	-0.02247	mg/L	0.006400	-0.04493	mg/L	0.012800	28.49%
Sn 189.927†	-25.8	-0.00671	mg/L	0.000823	-0.01343	mg/L	0.001646	12.26%
Sr 421.552†	505981.0	0.4958	mg/L	0.00018	0.9916	mg/L	0.00037	0.04%
Ti 334.903†	68.1	0.00245	mg/L	0.000298	0.00489	mg/L	0.000595	12.17%
Tl 190.801†	3861.3	2.047	mg/L	0.0033	4.094	mg/L	0.0066	0.16%
V 292.402†	62425.0	0.5154	mg/L	0.00420	1.031	mg/L	0.0084	0.81%
Zn 206.200†	1728.6	0.5078	mg/L	0.00343	1.016	mg/L	0.0069	0.68%

Sequence No.: 12
Sample ID: CV 5

Autosampler Location: 7
Date Collected: 7/25/2013 11:38:56 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2699828.5	101.4	%	0.46				0.45%
ScR 361.383	338150.2	100.6	%	0.90				0.89%
Ag 328.068†	224903.6	1.074	mg/L	0.0045	1.074	mg/L	0.0045	0.41%
Al 308.215†	3015.2	2.067	mg/L	0.0176	2.067	mg/L	0.0176	0.85%
As 188.979†	2716.0	2.071	mg/L	0.0191	2.071	mg/L	0.0191	0.92%
B 249.677†	7654.3	1.025	mg/L	0.0098	1.025	mg/L	0.0098	0.96%
Ba 233.527†	5015.4	1.070	mg/L	0.0105	1.070	mg/L	0.0105	0.98%
Be 313.042†	551793.7	0.9926	mg/L	0.00854	0.9926	mg/L	0.00854	0.86%
Ca 317.933†	22267.8	1.998	mg/L	0.0099	1.998	mg/L	0.0099	0.50%
Cd 228.802†	23949.5	1.034	mg/L	0.0012	1.034	mg/L	0.0012	0.11%
Co 228.616†	36165.2	1.019	mg/L	0.0042	1.019	mg/L	0.0042	0.42%
Cr 267.716†	6894.5	1.068	mg/L	0.0104	1.068	mg/L	0.0104	0.97%
Cu 324.752†	289733.4	1.026	mg/L	0.0021	1.026	mg/L	0.0021	0.20%
Fe 273.955†	2694.6	2.085	mg/L	0.0189	2.085	mg/L	0.0189	0.91%
K 766.490†	51050.2	20.29	mg/L	0.026	20.29	mg/L	0.026	0.13%
Mg 279.077†	2071.6	2.037	mg/L	0.0163	2.037	mg/L	0.0163	0.80%
Mn 257.610†	37689.9	0.9842	mg/L	0.00359	0.9842	mg/L	0.00359	0.37%
Mo 202.031†	16824.4	0.9797	mg/L	0.00080	0.9797	mg/L	0.00080	0.08%
Na 589.592†	761587.0	50.86	mg/L	0.121	50.86	mg/L	0.121	0.24%
Na 330.237†	1538.8	52.49	mg/L	0.148	52.49	mg/L	0.148	0.28%
Ni 231.604†	4284.7	1.053	mg/L	0.0093	1.053	mg/L	0.0093	0.88%
Pb 220.353†	14571.2	1.977	mg/L	0.0027	1.977	mg/L	0.0027	0.14%
Sb 206.836†	5873.6	2.079	mg/L	0.0111	2.079	mg/L	0.0111	0.54%
Se 196.026†	2541.6	2.046	mg/L	0.0168	2.046	mg/L	0.0168	0.82%
Si 288.158†	3679.0	1.999	mg/L	0.0238	1.999	mg/L	0.0238	1.19%
Sn 189.927†	3165.2	0.9930	mg/L	0.00958	0.9930	mg/L	0.00958	0.96%
Sr 421.552†	1025632.3	1.005	mg/L	0.0019	1.005	mg/L	0.0019	0.19%
Ti 334.903†	21776.9	1.011	mg/L	0.0031	1.011	mg/L	0.0031	0.30%
Tl 190.801†	3993.5	2.113	mg/L	0.0086	2.113	mg/L	0.0086	0.41%
V 292.402†	126395.6	1.043	mg/L	0.0036	1.043	mg/L	0.0036	0.34%
Zn 206.200†	3518.5	1.034	mg/L	0.0090	1.034	mg/L	0.0090	0.87%

Sequence No.: 13
Sample ID: CB 5

Autosampler Location: 1
Date Collected: 7/25/2013 11:43:01 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2732470.2	102.6	%	0.50				0.49%
ScR 361.383	346317.4	103.0	%	0.24				0.23%
Ag 328.068†	21.9	0.00010	mg/L	0.000003	0.00010	mg/L	0.000003	2.45%
Al 308.215†	-2.7	-0.00194	mg/L	0.006620	-0.00194	mg/L	0.006620	342.12%
As 188.979†	0.7	0.00055	mg/L	0.001747	0.00055	mg/L	0.001747	319.25%
B 249.677†	10.7	0.00143	mg/L	0.000685	0.00143	mg/L	0.000685	47.85%
Ba 233.527†	0.3	0.00005	mg/L	0.001083	0.00005	mg/L	0.001083	>999.9%
Be 313.042†	10.0	0.00002	mg/L	0.000005	0.00002	mg/L	0.000005	28.72%
Ca 317.933†	15.4	0.00139	mg/L	0.000855	0.00139	mg/L	0.000855	61.69%
Cd 228.802†	3.4	0.00015	mg/L	0.000282	0.00015	mg/L	0.000282	193.83%
Co 228.616†	2.7	0.00008	mg/L	0.000219	0.00008	mg/L	0.000219	285.99%
Cr 267.716†	-6.4	-0.00099	mg/L	0.000563	-0.00099	mg/L	0.000563	56.72%
Cu 324.752†	-30.6	-0.00011	mg/L	0.000159	-0.00011	mg/L	0.000159	145.87%
Fe 273.955†	6.0	0.00467	mg/L	0.000558	0.00467	mg/L	0.000558	11.95%
K 766.490†	14.2	0.00565	mg/L	0.007448	0.00565	mg/L	0.007448	131.85%
Mg 279.077†	-1.7	-0.00161	mg/L	0.003067	-0.00161	mg/L	0.003067	190.09%
Mn 257.610†	1.9	0.00005	mg/L	0.000016	0.00005	mg/L	0.000016	32.29%
Mo 202.031†	27.1	0.00158	mg/L	0.000657	0.00158	mg/L	0.000657	41.59%
Na 589.592†	128.9	0.00861	mg/L	0.002290	0.00861	mg/L	0.002290	26.59%
Na 330.237†	6.8	0.2312	mg/L	0.16410	0.2312	mg/L	0.16410	70.97%
Ni 231.604†	1.1	0.00028	mg/L	0.000159	0.00028	mg/L	0.000159	57.69%
Pb 220.353†	2.9	0.00040	mg/L	0.000502	0.00040	mg/L	0.000502	126.96%
Sb 206.836†	33.5	0.01189	mg/L	0.001300	0.01189	mg/L	0.001300	10.94%
Se 196.026†	1.4	0.00115	mg/L	0.002711	0.00115	mg/L	0.002711	236.50%
Si 288.158†	-76.3	-0.04135	mg/L	0.010306	-0.04135	mg/L	0.010306	24.92%
Sn 189.927†	2.7	0.00085	mg/L	0.000391	0.00085	mg/L	0.000391	46.07%
Sr 421.552†	21.7	0.00002	mg/L	0.000027	0.00002	mg/L	0.000027	124.70%
Ti 334.903†	11.5	0.00053	mg/L	0.000221	0.00053	mg/L	0.000221	41.54%
Tl 190.801†	1.3	0.00068	mg/L	0.001844	0.00068	mg/L	0.001844	270.82%
V 292.402†	-1.0	-0.00001	mg/L	0.000135	-0.00001	mg/L	0.000135	>999.9%
Zn 206.200†	-1.4	-0.00042	mg/L	0.000684	-0.00042	mg/L	0.000684	164.19%

Analysis Begun

Start Time: 7/25/2013 11:47:39 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 7/25/2013 7:05:01 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\0725.sif
Batch ID:
Results Data Set: I2130725
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: WY21 C TWC
Autosampler Location: 334
Date Collected: 7/25/2013 11:47:40 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WY21 C TWC

Analyte	Back Pressure	Flow
All	233.0 kPa	0.75 L/min

Mean Data: WY21 C TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2703488.9	101.5	%	0.15				0.15%
ScR 361.383	349565.7	104.0	%	0.73				0.70%
Ag 328.068†	99.3	0.00057	mg/L	0.000109	0.00114	mg/L	0.000217	19.02%
Al 308.215†	308885.8	215.2	mg/L	0.21	430.4	mg/L	0.42	0.10%
As 188.979†	-285.8	0.00305	mg/L	0.002412	0.00611	mg/L	0.004824	78.99%
B 249.677†	47.8	0.00606	mg/L	0.000065	0.01213	mg/L	0.000130	1.07%
Ba 233.527†	5690.4	1.186	mg/L	0.0059	2.372	mg/L	0.0118	0.50%
Be 313.042†	2116.5	0.00366	mg/L	0.000035	0.00731	mg/L	0.000069	0.95%
Ca 317.933†	484736.3	43.50	mg/L	0.122	86.99	mg/L	0.244	0.28%
Cd 228.802†	588.6	0.02720	mg/L	0.000151	0.05440	mg/L	0.000302	0.56%
Co 228.616†	6149.2	0.1594	mg/L	0.00047	0.3189	mg/L	0.00095	0.30%
Cr 267.716†	1793.6	0.2804	mg/L	0.00108	0.5608	mg/L	0.00215	0.38%
Cu 324.752†	2589121.6	9.176	mg/L	0.0071	18.35	mg/L	0.014	0.08%
Fe 273.955†	223584.5	173.6	mg/L	0.82	347.1	mg/L	1.63	0.47%
K 766.490†	41312.3	16.42	mg/L	0.034	32.84	mg/L	0.068	0.21%
Mg 279.077†	51658.7	50.52	mg/L	0.108	101.0	mg/L	0.22	0.21%
Mn 257.610†	159387.4	4.160	mg/L	0.0107	8.320	mg/L	0.0214	0.26%
Mo 202.031†	439.3	0.02501	mg/L	0.000454	0.05003	mg/L	0.000908	1.82%
Na 589.592†	180394.0	12.05	mg/L	0.033	24.10	mg/L	0.066	0.27%
Na 330.237†	361.0	12.95	mg/L	0.221	25.91	mg/L	0.441	1.70%
Ni 231.604†	1722.0	0.4232	mg/L	0.00145	0.8464	mg/L	0.00290	0.34%
Pb 220.353†	693.6	0.1229	mg/L	0.00085	0.2458	mg/L	0.00170	0.69%
Sb 206.836†	24.2	0.01163	mg/L	0.001980	0.02326	mg/L	0.003960	17.03%
Se 196.026†	39.9	0.00830	mg/L	0.002733	0.01660	mg/L	0.005466	32.92%
Si 288.158†	15331.7	8.317	mg/L	0.0695	16.63	mg/L	0.139	0.84%
Sn 189.927†	-57.7	-0.01104	mg/L	0.000811	-0.02207	mg/L	0.001623	7.35%
Sr 421.552†	363224.0	0.3559	mg/L	0.00045	0.7118	mg/L	0.00090	0.13%
Ti 334.903†	148148.0	6.885	mg/L	0.0038	13.77	mg/L	0.008	0.06%
Tl 190.801†	-39.2	0.00068	mg/L	0.005682	0.00136	mg/L	0.011364	837.95%
V 292.402†	41060.0	0.3264	mg/L	0.00077	0.6527	mg/L	0.00153	0.24%
Zn 206.200†	12828.5	3.770	mg/L	0.0168	7.539	mg/L	0.0337	0.45%

Sequence No.: 2
Sample ID: WY21 B TWC

Autosampler Location: 335
Date Collected: 7/25/2013 11:51:44 AM
Data Type: Original

Dilution: 20.000000X

Nebulizer Parameters: WY21 B TWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WY21 B TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2711283.4	101.8	%	0.32				0.31%
ScR 361.383	349720.5	104.0	%	0.74				0.71%
Ag 328.068†	-46.5	-0.00014	mg/L	0.000115	-0.00280	mg/L	0.002303	82.14%
Al 308.215†	218062.6	151.9	mg/L	0.46	3038	mg/L	9.12	0.30%
As 188.979†	-174.9	0.02152	mg/L	0.000607	0.4305	mg/L	0.01214	2.82%
B 249.677†	34.8	0.00438	mg/L	0.000411	0.08770	mg/L	0.008214	9.37%
Ba 233.527†	5612.6	1.170	mg/L	0.0060	23.40	mg/L	0.120	0.51%
Be 313.042†	1304.9	0.00223	mg/L	0.000018	0.04460	mg/L	0.000354	0.79%
Ca 317.933†	374507.5	33.60	mg/L	0.078	672.1	mg/L	1.55	0.23%
Cd 228.802†	104.6	0.00563	mg/L	0.000182	0.1127	mg/L	0.00365	3.24%
Co 228.616†	5001.9	0.1306	mg/L	0.00072	2.612	mg/L	0.0144	0.55%
Cr 267.716†	1220.9	0.1919	mg/L	0.00087	3.837	mg/L	0.0174	0.45%
Cu 324.752†	411014.9	1.462	mg/L	0.0021	29.24	mg/L	0.043	0.15%
Fe 273.955†	219385.2	170.3	mg/L	1.64	3406	mg/L	32.72	0.96%
K 766.490†	35529.7	14.12	mg/L	0.039	282.5	mg/L	0.78	0.28%
Mg 279.077†	48638.8	47.56	mg/L	0.167	951.2	mg/L	3.35	0.35%
Mn 257.610†	136556.6	3.564	mg/L	0.0213	71.29	mg/L	0.427	0.60%
Mo 202.031†	223.3	0.01257	mg/L	0.000462	0.2514	mg/L	0.00924	3.68%
Na 589.592†	104509.6	6.980	mg/L	0.0070	139.6	mg/L	0.14	0.10%
Na 330.237†	193.5	7.617	mg/L	0.2425	152.3	mg/L	4.85	3.18%
Ni 231.604†	1675.6	0.4118	mg/L	0.00355	8.235	mg/L	0.0710	0.86%
Pb 220.353†	1451.4	0.2219	mg/L	0.00080	4.437	mg/L	0.0161	0.36%
Sb 206.836†	15.0	0.00765	mg/L	0.002804	0.1531	mg/L	0.05608	36.64%
Se 196.026†	35.1	0.01137	mg/L	0.002088	0.2274	mg/L	0.04176	18.37%
Si 288.158†	8219.9	4.462	mg/L	0.0293	89.23	mg/L	0.586	0.66%
Sn 189.927†	-63.7	-0.01462	mg/L	0.001710	-0.2924	mg/L	0.03420	11.70%
Sr 421.552†	266486.6	0.2611	mg/L	0.00018	5.222	mg/L	0.0035	0.07%
Ti 334.903†	104134.0	4.840	mg/L	0.0096	96.79	mg/L	0.192	0.20%
Tl 190.801†	-36.7	0.00198	mg/L	0.001288	0.03958	mg/L	0.025755	65.08%
V 292.402†	34524.5	0.2735	mg/L	0.00225	5.469	mg/L	0.0450	0.82%
Zn 206.200†	2571.5	0.7558	mg/L	0.00518	15.12	mg/L	0.104	0.69%

Sequence No.: 3
Sample ID: WY21 F TWC

Autosampler Location: 336
Date Collected: 7/25/2013 11:55:45 AM
Data Type: Original

Dilution: 20.000000X

Nebulizer Parameters: WY21 F TWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WY21 F TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2725393.2	102.3	%	0.29				0.28%
ScR 361.383	348809.8	103.8	%	0.15				0.14%
Ag 328.068†	-93.1	-0.00035	mg/L	0.000100	-0.00705	mg/L	0.001991	28.23%
Al 308.215†	150600.5	104.9	mg/L	0.30	2098	mg/L	6.01	0.29%
As 188.979†	-160.3	-0.00360	mg/L	0.002474	-0.07207	mg/L	0.049480	68.66%
B 249.677†	94.4	0.01249	mg/L	0.000388	0.2497	mg/L	0.00775	3.10%
Ba 233.527†	6010.4	1.258	mg/L	0.0032	25.17	mg/L	0.064	0.26%
Be 313.042†	1130.0	0.00192	mg/L	0.000007	0.03837	mg/L	0.000142	0.37%
Ca 317.933†	413881.1	37.14	mg/L	0.209	742.8	mg/L	4.18	0.56%
Cd 228.802†	124.7	0.00616	mg/L	0.000105	0.1232	mg/L	0.00210	1.70%
Co 228.616†	2944.2	0.07476	mg/L	0.000358	1.495	mg/L	0.0072	0.48%
Cr 267.716†	928.2	0.1453	mg/L	0.00113	2.907	mg/L	0.0227	0.78%
Cu 324.752†	165307.5	0.5911	mg/L	0.00211	11.82	mg/L	0.042	0.36%
Fe 273.955†	191899.7	149.0	mg/L	1.03	2979	mg/L	20.62	0.69%
K 766.490†	40217.5	15.99	mg/L	0.078	319.7	mg/L	1.56	0.49%
Mg 279.077†	51405.0	50.29	mg/L	0.150	1006	mg/L	3.01	0.30%
Mn 257.610†	120226.3	3.138	mg/L	0.0201	62.76	mg/L	0.402	0.64%
Mo 202.031†	178.9	0.00994	mg/L	0.000344	0.1988	mg/L	0.00689	3.47%
Na 589.592†	211735.1	14.14	mg/L	0.028	282.8	mg/L	0.56	0.20%
Na 330.237†	423.1	14.97	mg/L	0.144	299.3	mg/L	2.87	0.96%
Ni 231.604†	382.7	0.09406	mg/L	0.001313	1.881	mg/L	0.0263	1.40%
Pb 220.353†	282.3	0.05458	mg/L	0.000784	1.092	mg/L	0.0157	1.44%
Sb 206.836†	19.0	0.00893	mg/L	0.001700	0.1786	mg/L	0.03401	19.04%
Se 196.026†	21.8	0.00584	mg/L	0.006760	0.1167	mg/L	0.13520	115.85%
Si 288.158†	7255.5	3.939	mg/L	0.0331	78.78	mg/L	0.662	0.84%
Sn 189.927†	-58.2	-0.01268	mg/L	0.000677	-0.2535	mg/L	0.01355	5.34%
Sr 421.552†	315951.9	0.3096	mg/L	0.00040	6.192	mg/L	0.0080	0.13%
Ti 334.903†	80148.7	3.724	mg/L	0.0130	74.48	mg/L	0.259	0.35%
Tl 190.801†	-28.9	0.00340	mg/L	0.001862	0.06792	mg/L	0.037242	54.84%
V 292.402†	38682.4	0.3092	mg/L	0.00144	6.183	mg/L	0.0288	0.47%
Zn 206.200†	4272.2	1.255	mg/L	0.0034	25.11	mg/L	0.068	0.27%

Sequence No.: 4
Sample ID: WY32 ADUP SWC

Autosampler Location: 348
Date Collected: 7/25/2013 11:59:45 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WY32 ADUP SWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WY32 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2721543.9	102.2	%	0.25				0.24%
ScR 361.383	349866.6	104.1	%	0.29				0.27%
Ag 328.068†	74.6	0.00043	mg/L	0.000276	0.00214	mg/L	0.001379	64.42%
Al 308.215†	54539.6	37.98	mg/L	0.063	189.9	mg/L	0.31	0.16%
As 188.979†	-185.7	-0.00122	mg/L	0.004072	-0.00611	mg/L	0.020359	333.20%
B 249.677†	279.8	0.03743	mg/L	0.000529	0.1871	mg/L	0.00264	1.41%
Ba 233.527†	3220.7	0.6698	mg/L	0.00646	3.349	mg/L	0.0323	0.96%
Be 313.042†	336.8	0.00050	mg/L	0.000011	0.00251	mg/L	0.000057	2.28%
Ca 317.933†	279674.3	25.10	mg/L	0.014	125.5	mg/L	0.07	0.06%
Cd 228.802†	86.3	0.00462	mg/L	0.000098	0.02309	mg/L	0.000490	2.12%
Co 228.616†	1397.7	0.03057	mg/L	0.000166	0.1528	mg/L	0.00083	0.54%
Cr 267.716†	1067.9	0.1684	mg/L	0.00084	0.8422	mg/L	0.00421	0.50%
Cu 324.752†	86480.0	0.3101	mg/L	0.00064	1.550	mg/L	0.0032	0.21%
Fe 273.955†	136624.0	106.1	mg/L	0.33	530.3	mg/L	1.63	0.31%
K 766.490†	7090.2	2.819	mg/L	0.0069	14.09	mg/L	0.034	0.24%
Mg 279.077†	14450.0	14.09	mg/L	0.059	70.47	mg/L	0.297	0.42%
Mn 257.610†	43838.0	1.145	mg/L	0.0034	5.723	mg/L	0.0169	0.29%
Mo 202.031†	314.1	0.01796	mg/L	0.000136	0.08982	mg/L	0.000678	0.75%
Na 589.592†	39794.9	2.658	mg/L	0.0096	13.29	mg/L	0.048	0.36%
Na 330.237†	87.6	3.231	mg/L	0.1280	16.15	mg/L	0.640	3.96%
Ni 231.604†	475.3	0.1168	mg/L	0.00087	0.5840	mg/L	0.00433	0.74%
Pb 220.353†	2086.9	0.2864	mg/L	0.00221	1.432	mg/L	0.0111	0.77%
Sb 206.836†	14.4	0.00739	mg/L	0.000685	0.03697	mg/L	0.003427	9.27%
Se 196.026†	11.5	0.00496	mg/L	0.002161	0.02481	mg/L	0.010806	43.55%
Si 288.158†	658.1	0.3585	mg/L	0.02218	1.792	mg/L	0.1109	6.19%
Sn 189.927†	-7.8	0.00169	mg/L	0.000280	0.00845	mg/L	0.001400	16.56%
Sr 421.552†	138718.2	0.1359	mg/L	0.00039	0.6796	mg/L	0.00194	0.29%
Ti 334.903†	93995.1	4.369	mg/L	0.0067	21.84	mg/L	0.034	0.15%
Tl 190.801†	-19.0	0.00330	mg/L	0.002315	0.01651	mg/L	0.011577	70.11%
V 292.402†	30206.2	0.2412	mg/L	0.00063	1.206	mg/L	0.0032	0.26%
Zn 206.200†	10051.1	2.952	mg/L	0.0144	14.76	mg/L	0.072	0.49%

Sequence No.: 5
Sample ID: WY32 A SWC

Autosampler Location: 349
Date Collected: 7/25/2013 12:03:47 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WY32 A SWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WY32 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2700367.8	101.4	%	0.79				0.78%
ScR 361.383	346298.2	103.0	%	0.39				0.38%
Ag 328.068†	-11.0	0.00002	mg/L	0.000103	0.00010	mg/L	0.000514	517.64%
Al 308.215†	53023.6	36.93	mg/L	0.026	184.6	mg/L	0.13	0.07%
As 188.979†	-180.3	-0.00083	mg/L	0.000575	-0.00414	mg/L	0.002874	69.39%
B 249.677†	413.4	0.05533	mg/L	0.000565	0.2767	mg/L	0.00282	1.02%
Ba 233.527†	3391.2	0.7065	mg/L	0.00304	3.533	mg/L	0.0152	0.43%
Be 313.042†	340.7	0.00051	mg/L	0.000023	0.00255	mg/L	0.000113	4.46%
Ca 317.933†	302255.4	27.12	mg/L	0.122	135.6	mg/L	0.61	0.45%
Cd 228.802†	94.2	0.00496	mg/L	0.000108	0.02481	mg/L	0.000541	2.18%
Co 228.616†	1342.0	0.02920	mg/L	0.000291	0.1460	mg/L	0.00146	1.00%
Cr 267.716†	908.3	0.1437	mg/L	0.00052	0.7184	mg/L	0.00259	0.36%
Cu 324.752†	65895.8	0.2371	mg/L	0.00181	1.186	mg/L	0.0090	0.76%
Fe 273.955†	134413.4	104.3	mg/L	0.35	521.7	mg/L	1.74	0.33%
K 766.490†	6933.8	2.756	mg/L	0.0144	13.78	mg/L	0.072	0.52%
Mg 279.077†	13577.4	13.24	mg/L	0.062	66.20	mg/L	0.311	0.47%
Mn 257.610†	43741.6	1.142	mg/L	0.0032	5.710	mg/L	0.0161	0.28%
Mo 202.031†	361.7	0.02071	mg/L	0.000117	0.1035	mg/L	0.00059	0.57%
Na 589.592†	40065.0	2.676	mg/L	0.0054	13.38	mg/L	0.027	0.20%
Na 330.237†	90.8	3.337	mg/L	0.0906	16.68	mg/L	0.453	2.71%
Ni 231.604†	563.6	0.1385	mg/L	0.00093	0.6925	mg/L	0.00467	0.67%
Pb 220.353†	2032.0	0.2788	mg/L	0.00216	1.394	mg/L	0.0108	0.77%
Sb 206.836†	15.5	0.00804	mg/L	0.000816	0.04020	mg/L	0.004080	10.15%
Se 196.026†	12.3	0.00570	mg/L	0.005465	0.02850	mg/L	0.027324	95.88%
Si 288.158†	619.8	0.3376	mg/L	0.01382	1.688	mg/L	0.0691	4.09%
Sn 189.927†	-8.9	0.00160	mg/L	0.000713	0.00800	mg/L	0.003564	44.56%
Sr 421.552†	148198.7	0.1452	mg/L	0.00023	0.7261	mg/L	0.00116	0.16%
Ti 334.903†	91653.6	4.260	mg/L	0.0026	21.30	mg/L	0.013	0.06%
Tl 190.801†	-18.3	0.00342	mg/L	0.000823	0.01709	mg/L	0.004115	24.08%
V 292.402†	30433.2	0.2431	mg/L	0.00200	1.215	mg/L	0.0100	0.82%
Zn 206.200†	9646.1	2.833	mg/L	0.0127	14.17	mg/L	0.063	0.45%

Sequence No.: 6
Sample ID: WY32 ASPK SWC

Autosampler Location: 350
Date Collected: 7/25/2013 12:07:47 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WY32 ASPK SWC

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: WY32 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2700055.4	101.4	%	0.24				0.24%
ScR 361.383	345314.0	102.7	%	0.61				0.59%
Ag 328.068†	40215.5	0.1922	mg/L	0.00074	0.9608	mg/L	0.00372	0.39%
Al 308.215†	56667.2	39.46	mg/L	0.053	197.3	mg/L	0.27	0.13%
As 188.979†	828.6	0.7555	mg/L	0.00508	3.777	mg/L	0.0254	0.67%
B 249.677†	266.9	0.03529	mg/L	0.000407	0.1765	mg/L	0.00203	1.15%
Ba 233.527†	7234.7	1.528	mg/L	0.0133	7.641	mg/L	0.0663	0.87%
Be 313.042†	98948.9	0.1779	mg/L	0.00049	0.8895	mg/L	0.00247	0.28%
Ca 317.933†	324675.2	29.13	mg/L	0.146	145.7	mg/L	0.73	0.50%
Cd 228.802†	4749.4	0.2039	mg/L	0.00057	1.019	mg/L	0.0028	0.28%
Co 228.616†	8200.0	0.2229	mg/L	0.00111	1.114	mg/L	0.0055	0.50%
Cr 267.716†	2094.5	0.3269	mg/L	0.00129	1.634	mg/L	0.0064	0.39%
Cu 324.752†	118084.7	0.4217	mg/L	0.00097	2.109	mg/L	0.0049	0.23%
Fe 273.955†	127383.9	98.89	mg/L	0.617	494.4	mg/L	3.08	0.62%
K 766.490†	16352.7	6.501	mg/L	0.0283	32.50	mg/L	0.142	0.44%
Mg 279.077†	18128.8	17.70	mg/L	0.081	88.52	mg/L	0.405	0.46%
Mn 257.610†	48761.2	1.273	mg/L	0.0064	6.366	mg/L	0.0321	0.50%
Mo 202.031†	275.9	0.01568	mg/L	0.000173	0.07841	mg/L	0.000864	1.10%
Na 589.592†	100286.2	6.698	mg/L	0.0098	33.49	mg/L	0.049	0.15%
Na 330.237†	206.8	7.252	mg/L	0.0483	36.26	mg/L	0.241	0.67%
Ni 231.604†	1155.9	0.2837	mg/L	0.00122	1.419	mg/L	0.0061	0.43%
Pb 220.353†	7372.6	1.004	mg/L	0.0028	5.021	mg/L	0.0139	0.28%
Sb 206.836†	25.4	0.00968	mg/L	0.001037	0.04840	mg/L	0.005186	10.72%
Se 196.026†	939.7	0.7523	mg/L	0.00103	3.761	mg/L	0.0052	0.14%
Si 288.158†	496.0	0.2719	mg/L	0.00668	1.359	mg/L	0.0334	2.46%
Sn 189.927†	-16.4	-0.00047	mg/L	0.001131	-0.00237	mg/L	0.005654	238.43%
Sr 421.552†	359710.1	0.3525	mg/L	0.00009	1.762	mg/L	0.0004	0.03%
Ti 334.903†	90106.7	4.188	mg/L	0.0065	20.94	mg/L	0.032	0.15%
Tl 190.801†	1374.1	0.7406	mg/L	0.00073	3.703	mg/L	0.0037	0.10%
V 292.402†	52708.2	0.4273	mg/L	0.00167	2.137	mg/L	0.0084	0.39%
Zn 206.200†	9802.6	2.879	mg/L	0.0177	14.40	mg/L	0.088	0.61%

Sequence No.: 7
Sample ID: CV 6

Autosampler Location: 7
Date Collected: 7/25/2013 12:11:47 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2719676.1	102.1	%	0.43				0.42%
ScR 361.383	334536.0	99.51	%	0.287				0.29%
Ag 328.068†	223968.6	1.070	mg/L	0.0072	1.070	mg/L	0.0072	0.68%
Al 308.215†	3048.7	2.090	mg/L	0.0106	2.090	mg/L	0.0106	0.51%
As 188.979†	2670.8	2.037	mg/L	0.0158	2.037	mg/L	0.0158	0.78%
B 249.677†	7741.2	1.036	mg/L	0.0065	1.036	mg/L	0.0065	0.63%
Ba 233.527†	5080.9	1.084	mg/L	0.0040	1.084	mg/L	0.0040	0.37%
Be 313.042†	552480.5	0.9938	mg/L	0.00662	0.9938	mg/L	0.00662	0.67%
Ca 317.933†	22360.1	2.006	mg/L	0.0073	2.006	mg/L	0.0073	0.37%
Cd 228.802†	23724.4	1.024	mg/L	0.0109	1.024	mg/L	0.0109	1.06%
Co 228.616†	35989.6	1.014	mg/L	0.0061	1.014	mg/L	0.0061	0.61%
Cr 267.716†	6973.3	1.081	mg/L	0.0048	1.081	mg/L	0.0048	0.45%
Cu 324.752†	288504.0	1.022	mg/L	0.0017	1.022	mg/L	0.0017	0.17%
Fe 273.955†	2722.9	2.107	mg/L	0.0107	2.107	mg/L	0.0107	0.51%
K 766.490†	51172.4	20.34	mg/L	0.075	20.34	mg/L	0.075	0.37%
Mg 279.077†	2100.3	2.065	mg/L	0.0068	2.065	mg/L	0.0068	0.33%
Mn 257.610†	37854.0	0.9885	mg/L	0.00230	0.9885	mg/L	0.00230	0.23%
Mo 202.031†	16744.5	0.9750	mg/L	0.00748	0.9750	mg/L	0.00748	0.77%
Na 589.592†	764502.7	51.06	mg/L	0.100	51.06	mg/L	0.100	0.20%
Na 330.237†	1550.1	52.88	mg/L	0.071	52.88	mg/L	0.071	0.13%
Ni 231.604†	4347.9	1.069	mg/L	0.0023	1.069	mg/L	0.0023	0.22%
Pb 220.353†	14551.7	1.975	mg/L	0.0143	1.975	mg/L	0.0143	0.72%
Sb 206.836†	5779.1	2.045	mg/L	0.0144	2.045	mg/L	0.0144	0.70%
Se 196.026†	2492.0	2.006	mg/L	0.0151	2.006	mg/L	0.0151	0.75%
Si 288.158†	3730.5	2.027	mg/L	0.0484	2.027	mg/L	0.0484	2.39%
Sn 189.927†	3111.7	0.9762	mg/L	0.00464	0.9762	mg/L	0.00464	0.48%
Sr 421.552†	1028115.3	1.007	mg/L	0.0014	1.007	mg/L	0.0014	0.14%
Ti 334.903†	21845.8	1.014	mg/L	0.0018	1.014	mg/L	0.0018	0.18%
Tl 190.801†	3939.0	2.084	mg/L	0.0107	2.084	mg/L	0.0107	0.51%
V 292.402†	125693.7	1.038	mg/L	0.0065	1.038	mg/L	0.0065	0.63%
Zn 206.200†	3558.7	1.046	mg/L	0.0039	1.046	mg/L	0.0039	0.37%

Sequence No.: 8
Sample ID: CB 6

Autosampler Location: 1
Date Collected: 7/25/2013 12:15:51 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	234.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2718940.2	102.1	%	0.06				0.06%
ScR 361.383	345916.9	102.9	%	0.13				0.13%
Ag 328.068†	55.1	0.00026	mg/L	0.000098	0.00026	mg/L	0.000098	37.09%
Al 308.215†	-2.5	-0.00177	mg/L	0.001036	-0.00177	mg/L	0.001036	58.59%
As 188.979†	-0.7	-0.00046	mg/L	0.001240	-0.00046	mg/L	0.001240	268.80%
B 249.677†	7.6	0.00101	mg/L	0.000859	0.00101	mg/L	0.000859	84.75%
Ba 233.527†	1.9	0.00040	mg/L	0.000426	0.00040	mg/L	0.000426	106.31%
Be 313.042†	14.9	0.00003	mg/L	0.000011	0.00003	mg/L	0.000011	39.16%
Ca 317.933†	8.0	0.00072	mg/L	0.000568	0.00072	mg/L	0.000568	79.09%
Cd 228.802†	2.3	0.00010	mg/L	0.000219	0.00010	mg/L	0.000219	213.67%
Co 228.616†	6.2	0.00017	mg/L	0.000371	0.00017	mg/L	0.000371	214.59%
Cr 267.716†	-4.4	-0.00068	mg/L	0.000651	-0.00068	mg/L	0.000651	95.58%
Cu 324.752†	32.5	0.00011	mg/L	0.000146	0.00011	mg/L	0.000146	127.58%
Fe 273.955†	3.7	0.00284	mg/L	0.001542	0.00284	mg/L	0.001542	54.21%
K 766.490†	11.1	0.00442	mg/L	0.012622	0.00442	mg/L	0.012622	285.84%
Mg 279.077†	4.0	0.00391	mg/L	0.005653	0.00391	mg/L	0.005653	144.66%
Mn 257.610†	4.6	0.00012	mg/L	0.000025	0.00012	mg/L	0.000025	21.19%
Mo 202.031†	26.5	0.00154	mg/L	0.000855	0.00154	mg/L	0.000855	55.39%
Na 589.592†	117.1	0.00782	mg/L	0.002369	0.00782	mg/L	0.002369	30.30%
Na 330.237†	3.2	0.1107	mg/L	0.12496	0.1107	mg/L	0.12496	112.85%
Ni 231.604†	2.5	0.00062	mg/L	0.000407	0.00062	mg/L	0.000407	65.49%
Pb 220.353†	1.4	0.00019	mg/L	0.000684	0.00019	mg/L	0.000684	355.69%
Sb 206.836†	35.7	0.01267	mg/L	0.003557	0.01267	mg/L	0.003557	28.08%
Se 196.026†	0.2	0.00020	mg/L	0.000707	0.00020	mg/L	0.000707	360.64%
Si 288.158†	-65.5	-0.03552	mg/L	0.011218	-0.03552	mg/L	0.011218	31.58%
Sn 189.927†	3.4	0.00109	mg/L	0.000380	0.00109	mg/L	0.000380	34.98%
Sr 421.552†	27.7	0.00003	mg/L	0.000027	0.00003	mg/L	0.000027	101.28%
Ti 334.903†	25.8	0.00120	mg/L	0.000340	0.00120	mg/L	0.000340	28.31%
Tl 190.801†	1.6	0.00087	mg/L	0.002785	0.00087	mg/L	0.002785	319.00%
V 292.402†	28.1	0.00023	mg/L	0.000029	0.00023	mg/L	0.000029	12.80%
Zn 206.200†	-0.9	-0.00026	mg/L	0.000616	-0.00026	mg/L	0.000616	234.93%

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP (ICP-MS) GFA CVA **Analysis Date:** 7-29-13

MS2 (ms2230729.raw)	Analyst BA 7-30-13	Peer [illegible] 7-30-13	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	
ICB/CCB	✓	✓	See log
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	See log
ICSA/ICSAB	✓	✓	↓
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	WY32
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	CAF-WY32

WY32 : 84545

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 7-29-13 **Analyst:** BA **Page:** 1 of 3

All corrections made by analyst unless otherwise noted. m2230729.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			B1146
		1			B1134
		2			B1139
		3			B1140
		4			B1239
		5			B1141
		Rinse sample			
		ICV			B523
		ICB			^{62}Ni ↑
		CCV1			
		CCB1			^{62}Ni, Th ↑
		Low Check			^{62}Ni ↑
		ICSA			V2, ^{53}Cr, ^{62}Ni, ^{63}Cu, ^{67}Zn, ^{114}Cd ↑
		ICSAB			V2, ^{62}Ni, ^{67}Zn ↑
		LR200			
		LR300			
		B1			
		CCV2			
		CCB2			^{62}Ni, Th ↑
		WY32 MB2	REN	2	
		MB3			
		E			Zn > LR (BA Sx)
		DDUP			
		D			

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Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 7-29-13 **Analyst:** BA **Page:** 2 **of** 3

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		WY32 DSPK	REN	2	Zn > LR (BRSN) Ag↓ (CAF)
		MB2SPK			
		MB2SPD			
		MB3SPK			
		MB3SPD			
		CCV3			
		CCB3			^{62}Ni, Th↑
		DI Check			
		ERA P197		10	
		WY32 MB1	SWN	20	
		B			
		C			
		ADUP			
		A			
		ASPK			Sb↓, Pb↑ (CAF)
		MB1SPK			
		MB1SPD			
		CCV4			
		CCB4			^{62}Ni, Th↑
		WY90 MB	SWN	20	
		WY32 E	REN	5	Zn
		DDUP			
		D			
		DSPK			

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ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 7-29-13 **Analyst:** BA **Page:** 3 of 3

All corrections made by analyst unless otherwise noted. BA 7-30-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		WY90 A	SWN	20	✓
		↓ MBSPK	↓	↓	
		CCV5			
		CCB5			^{62}Ni, Th ↑ End WY32
		~~WY52 MBI~~	~~SWN~~	~~20~~	
		B			
	✓	C			As > LR (AR 100x)
		D			
		E			
		ADUP			✓
		A			
		ASPK			✓
zzz		~~zzzzzz APOST~~	BA		
		↓ MBISPK	7/30/13	↓	✓
		CCV6			
		CCB6			^{62}Ni, Th ↑ End Pkg (WY52)
		Rinse / DI			
		BA 7/30/13			

WY32 : 91513

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Monday, July 29, 2013 12:26:35
Sample Description:
Method File: C:\NexION Data\Method\Daily Performancenew.mth
Dataset File: C:\NexION Data\Dataset\Default\Daily Performance Check.2378
MassCal File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 60
Current Dead Time (ns): 60
Torch Z position (mm). 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	248.0	248.004	3.682	1.5	Standard
	Mg	24.0	8380.4	8380.413	125.728	1.5	Standard
	In	114.9	5902.0	5902.023	75.725	1.3	Standard
	Pb	208.0	3283.2	3283.247	40.615	1.2	Standard
	U	238.1	4436.8	4436.781	34.014	0.8	Standard
⌈	CeO	155.9	55.8	0.009	0.001	7.7	Standard
| >	Ce	139.9	6432.5	6432.549	91.040	1.4	Standard
⌊	Ce++	70.0	328.4	0.051	0.001	2.0	Standard
	Bkgd	220.0	0.1	0.100	0.149	149.1	Standard

Current Conditions File Data

Current Value	Description
1.06	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12.00	Deflector Voltage
1600.00	ICP RF Power
-1675.00	Analog Stage Voltage
1050.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15.00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.06	DRC Mode NEB
-8.00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15.00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4.00	KED Cell Gas B
0.00	KED RPa

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 7/29/2013 12:26:34 PM
nd Time: 7/29/2013 12:42:38 PM

aily Performance Check - [Failed]
Obtained Intensity (Be 9.0122): 248.00 - <Target not achieved>
Obtained Intensity (Mg 23.985): 8380.41 - <Target not achieved>
Obtained Intensity (In 114.904): 5902.02 - <Target not achieved>
Obtained Intensity (Pb 207.977): 3283.25 - <Target not achieved>
Obtained Intensity (U 238.05): 4436.78 - <Target not achieved>
Obtained Intensity (Bkgd 220): 0.10
Obtained Formula (CeO 155.9 / Ce 139.905): 0.009 (=55.80 / 6432.55)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.051 (=328.41 / 6432.55) - <Target not achieved>

orch Alignment - [Passed]

Vertical	Horizontal	Intensity
0.02 mm	-0.98 mm	12737.73

ebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 1.08
Obtained Intensity (In 114.904): 56394.17
Obtained Formula (CeO 155.9 / Ce 139.905): 0.016 (=936.05 / 58832.95)

lass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.075), Target/Obtained resolution (0.7/0.705)
Target/Obtained mass (23.985/23.925), Target/Obtained resolution (0.7/0.719)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.695)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.716)

utoLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.997; Intercept = -11.51

aily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 3299.92
Obtained Intensity (Mg 23.985): 27879.90
Obtained Intensity (In 114.904): 62545.71
Obtained Intensity (Pb 207.977): 29668.99
Obtained Intensity (U 238.05): 50532.90
Obtained Intensity (Bkgd 220): 0.20
Obtained Formula (CeO 155.9 / Ce 139.905): 0.015 (=974.26 / 63265.05)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.015 (=945.25 / 63265.05)

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 13:08:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens RSD
Li	6		ug/L				850074	0
Be	9		ug/L				22	9
C	13		ug/L				58981	2
Cl	37		ug/L				3868617	1
Sc	45		ug/L				823285	1
V	51		ug/L				7453	0
V-1	51		ug/L				116	2
Cr	52		ug/L				22166	0
Cr	53		ug/L				158	11
Mn	55		ug/L				635	1
Co	59		ug/L				154	3
Ge	72		ug/L				530780	2
Ni	60		ug/L				38	5
Ni	62		ug/L				586	1
Cu	63		ug/L				535	1
Cu	65		ug/L				79	5
Zn	66		ug/L				365	2
Zn	67		ug/L				57	7
Zn	68		ug/L				609	6
As	75		ug/L				-31	52
As-1	75		ug/L				11982	0
Se	82		ug/L				6	81
Se	78		ug/L				12160	1
Mo	98		ug/L				9	38
Y	89		ug/L				303911	1
Kr	83		ug/L				216	8
In	115		ug/L				784570	1
Ag	107		ug/L				14	25
Cd	111		ug/L				64	5
Cd	114		ug/L				34	19
Sb	121		ug/L				45	24
Sb	123		ug/L				29	31
Ba	135		ug/L				27	8
Ba	137		ug/L				31	14
Tb	159		ug/L				946533	1
Tl	205		ug/L				29	8
Pb	208		ug/L				204	7
Bi	209		ug/L				2333295	1
Th	232		ug/L				105	16
U	238		ug/L				6	88

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 13:12:15
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
[>	Li	6		ug/L			850074	848196	2
[	Be	9	0.200	ug/L	0 012	6	22	535	3
	C	13		ug/L			58981	55782	1
	Cl	37		ug/L			3868617	3998530	1
[>	Sc	45		ug/L			823285	816516	0
[	V	51	0.200	ug/L	0.005	2	7453	10842	1
[	V-1	51	0.500	ug/L	0.016	3	116	3723	3
[	Cr	52	0.500	ug/L	0 026	5	22166	29432	0
[	Cr	53	0.500	ug/L	0.011	2	158	1049	2
[	Mn	55	0.500	ug/L	0.011	2	635	11202	1
[	Co	59	0.200	ug/L	0.003	1	154	3543	0
[>	Ge	72		ug/L			530780	542921	0
[	Ni	60	0.500	ug/L	0.018	3	38	1752	3
[	Ni	62	0.500	ug/L	0.014	2	586	820	0
[	Cu	63	0.500	ug/L	0.019	3	535	4537	3
[	Cu	65	0.500	ug/L	0.017	3	79	1888	3
[	Zn	66	4.000	ug/L	0.026	0	365	8998	0
[	Zn	67	4.000	ug/L	0.063	1	57	1354	1
[	Zn	68	4.000	ug/L	0.060	1	609	6511	1
[	As	75	0.200	ug/L	0.007	3	-31	313	3
[	As-1	75	0.200	ug/L	0.377	188	11982	12331	0
[	Se	82	0.500	ug/L	0.028	5	6	100	5
[	Se	78	0.500	ug/L	1.754	350	12160	12402	0
[	Mo	98	0.200	ug/L	0.001	0	9	777	0
	Y	89		ug/L			303911	305938	1
	Kr	83		ug/L			216	215	4
[>	In	115		ug/L			784570	781994	0
[	Ag	107	0.200	ug/L	0.002	0	14	1941	1
[	Cd	111	0.100	ug/L	0.004	4	64	484	3
[	Cd	114	0.100	ug/L	0.002	2	34	1066	1
[	Sb	121	0.200	ug/L	0.002	0	45	2250	1
[	Sb	123	0.200	ug/L	0.002	0	29	1741	1
[	Ba	135	0.500	ug/L	0.014	2	27	1820	3
[	Ba	137	0.500	ug/L	0.014	2	31	3118	2
[>	Tb	159		ug/L			946533	933490	0
[	Tl	205	0.200	ug/L	0.001	0	29	6600	0
[	Pb	208	0.100	ug/L	0.002	2	204	4645	2
[	Bi	209		ug/L			2333295	2306822	1
[	Th	232	0.200	ug/L	0.078	38	105	3575	37
[	U	238	0.200	ug/L	0.002	1	6	8395	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 13:16:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	831633	0
	Be	9	10.000	ug/L	0.080	0	22	26065	1
	C	13		ug/L			58981	54637	5
	Cl	37		ug/L			3868617	3927673	0
>	Sc	45		ug/L			823285	837059	1
	V	51	10.000	ug/L	0.323	3	7453	189052	2
	V-1	51	10.015	ug/L	0.306	3	116	182249	3
	Cr	52	10.000	ug/L	0.514	5	22166	178295	2
	Cr	53	9.999	ug/L	0.198	1	158	17971	0
	Mn	55	10.000	ug/L	0.251	2	635	216545	1
	Co	59	10.000	ug/L	0.339	3	154	167336	1
>	Ge	72		ug/L			530780	539556	1
	Ni	60	10.001	ug/L	0.150	1	38	35690	1
	Ni	62	10.004	ug/L	0.225	2	586	5720	0
	Cu	63	10.000	ug/L	0.286	2	535	81108	2
	Cu	65	10.001	ug/L	0.297	2	79	36889	1
	Zn	66	10.347	ug/L	0.290	2	365	28669	1
	Zn	67	10.465	ug/L	0.196	1	57	4806	2
	Zn	68	10.420	ug/L	0.195	1	609	21282	0
	As	75	10.000	ug/L	0.066	0	-31	18526	1
	As-1	75	10.003	ug/L	0.156	1	11982	31098	0
	Se	82	10.000	ug/L	0.186	1	6	1867	2
	Se	78	10.029	ug/L	0.607	6	12160	17447	0
	Mo	98	10.000	ug/L	0.362	3	9	38580	2
	Y	89		ug/L			303911	301069	1
	Kr	83		ug/L			216	222	7
>	In	115		ug/L			784570	783065	0
	Ag	107	10.000	ug/L	0.186	1	14	95462	1
	Cd	111	10.000	ug/L	0.127	1	64	40354	0
	Cd	114	10.000	ug/L	0.097	0	34	102158	0
	Sb	121	10.000	ug/L	0.064	0	45	112671	0
	Sb	123	10.000	ug/L	0.111	1	29	86149	0
	Ba	135	10.001	ug/L	0.081	0	27	36824	0
	Ba	137	10.001	ug/L	0.017	0	31	63207	0
>	Tb	159		ug/L			946533	947381	0
	Tl	205	10.000	ug/L	0.070	0	29	325954	0
	Pb	208	10.000	ug/L	0.047	0	204	444383	0
	Bi	209		ug/L			2333295	2336505	1
	Th	232	10.002	ug/L	0.332	3	105	348869	3
	U	238	10.000	ug/L	0.104	1	6	429989	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 13:20:47
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	837366	0
	Be	9	19.977	ug/L	0.111	0	22	52167	0
	C	13		ug/L			58981	54949	3
	Cl	37		ug/L			3868617	4003708	2
>	Sc	45		ug/L			823285	838873	0
	V	51	20.054	ug/L	0.416	2	7453	376292	1
	V-1	51	20.083	ug/L	0.285	1	116	372301	1
	Cr	52	19.978	ug/L	0.551	2	22166	333187	1
	Cr	53	20.056	ug/L	0.145	0	158	36373	0
	Mn	55	20.034	ug/L	0 340	1	635	437189	1
	Co	59	19.994	ug/L	0.139	0	154	334831	0
>	Ge	72		ug/L			530780	543510	0
	Ni	60	19.910	ug/L	0.135	0	38	70273	0
	Ni	62	19.887	ug/L	0.381	1	586	10636	1
	Cu	63	19.891	ug/L	0.417	2	535	158536	1
	Cu	65	19.942	ug/L	0.330	1	79	73190	1
	Zn	66	18.785	ug/L	0.368	1	365	43178	2
	Zn	67	18.887	ug/L	0.648	3	57	7300	3
	Zn	68	18.808	ug/L	0.127	0	609	31796	0
	As	75	19.920	ug/L	0.251	1	-31	36621	1
	As-1	75	19.929	ug/L	0.166	0	11982	49704	0
	Se	82	19.921	ug/L	0.172	0	6	3682	0
	Se	78	19.960	ug/L	0.256	1	12160	22574	0
	Mo	98	20.018	ug/L	0.232	1	9	78080	0
	Y	89		ug/L			303911	304789	2
	Kr	83		ug/L			216	232	7
>	In	115		ug/L			784570	774522	0
	Ag	107	20.019	ug/L	0.214	1	14	189722	1
	Cd	111	20.074	ug/L	0.117	0	64	81257	0
	Cd	114	20.038	ug/L	0.151	0	34	203974	0
	Sb	121	20.113	ug/L	0.135	0	45	229300	0
	Sb	123	20.024	ug/L	0.199	0	29	171403	0
	Ba	135	20.083	ug/L	0.064	0	27	74352	1
	Ba	137	20.090	ug/L	0.234	1	31	127865	0
>	Tb	159		ug/L			946533	940926	0
	Tl	205	20.015	ug/L	0.088	0	29	649927	0
	Pb	208	19.988	ug/L	0.171	0	204	879777	0
	Bi	209		ug/L			2333295	2295698	0
	Th	232	20.570	ug/L	0.088	0	105	804133	0
	U	238	20.030	ug/L	0.144	0	6	860595	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 13:25:19
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens RSD
[>	Li	6		ug/L			850074	835091	1
[	Be	9	49.812	ug/L	0.925	1	22	127284	1
	C	13		ug/L			58981	53467	0
	Cl	37		ug/L			3868617	4024865	1
[>	Sc	45		ug/L			823285	830876	1
[	V	51	49.925	ug/L	0.863	1	7453	909866	0
[	V-1	51	49.931	ug/L	0.525	1	116	910324	0
[	Cr	52	50.008	ug/L	1.731	3	22166	792986	2
[	Cr	53	50.016	ug/L	0.067	0	158	89754	1
[	Mn	55	49.800	ug/L	1.310	2	635	1054255	2
[	Co	59	49.927	ug/L	1.495	2	154	821905	2
[>	Ge	72		ug/L			530780	534714	0
[	Ni	60	50.079	ug/L	0.961	1	38	175218	1
[	Ni	62	49.933	ug/L	1.033	2	586	25218	2
[	Cu	63	49.923	ug/L	0 375	0	535	387667	0
[	Cu	65	50.070	ug/L	0.920	1	79	181945	1
[	Zn	66	49.466	ug/L	1.755	3	365	105799	3
[	Zn	67	49.554	ug/L	0.514	1	57	17976	1
[	Zn	68	49.446	ug/L	0.706	1	609	77129	1
[	As	75	50.084	ug/L	0.177	0	-31	91401	0
[	As-1	75	50.095	ug/L	0.322	0	11982	105530	0
[	Se	82	50.116	ug/L	0.455	0	6	9211	0
[	Se	78	50.158	ug/L	1.011	2	12160	37675	1
[	Mo	98	49.881	ug/L	0.428	0	9	189161	0
	Y	89		ug/L			303911	301649	1
	Kr	83		ug/L			216	251	4
[>	In	115		ug/L			784570	763453	0
[	Ag	107	49.795	ug/L	0.513	1	14	455791	0
[	Cd	111	49.839	ug/L	0.492	0	64	195627	1
[	Cd	114	49.805	ug/L	0.783	1	34	490127	1
[	Sb	121	49.822	ug/L	0.068	0	45	550028	0
[	Sb	123	50.004	ug/L	0.583	1	29	422048	0
[	Ba	135	49.941	ug/L	0.168	0	27	181150	0
[	Ba	137	50.036	ug/L	0.074	0	31	315007	0
[>	Tb	159		ug/L			946533	941188	0
[	Tl	205	49.886	ug/L	0.404	0	29	1601886	0
[	Pb	208	49.788	ug/L	0.244	0	204	2146146	0
[	Bi	209		ug/L			2333295	2240777	0
[	Th	232	51.179	ug/L	1.031	2	105	2268160	1
[	U	238	50.407	ug/L	0.513	1	6	2258013	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 13:30:32
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	818758	0
	Be	9	100.207	ug/L	0.574	0	22	252799	0
	C	13		ug/L			58981	56004	0
	Cl	37		ug/L			3868617	4108928	1
>	Sc	45		ug/L			823285	836028	0
	V	51	99.936	ug/L	0.565	0	7453	1821363	0
	V-1	51	99.716	ug/L	0.413	0	116	1812125	0
	Cr	52	100.070	ug/L	2.943	2	22166	1577992	2
	Cr	53	99.340	ug/L	2.255	2	158	175358	2
	Mn	55	100.539	ug/L	1.202	1	635	2180325	1
	Co	59	99.315	ug/L	1.925	1	154	1608295	1
>	Ge	72		ug/L			530780	538128	1
	Ni	60	99.128	ug/L	1.938	1	38	339124	1
	Ni	62	99.579	ug/L	0.737	0	586	49336	0
	Cu	63	99.610	ug/L	2 304	2	535	767882	1
	Cu	65	98.919	ug/L	1.874	1	79	349047	0
	Zn	66	98.685	ug/L	1.442	1	365	203199	1
	Zn	67	98.503	ug/L	2.194	2	57	34202	1
	Zn	68	98.477	ug/L	2.399	2	609	146602	2
	As	75	99.250	ug/L	1.443	1	-31	177851	0
	As-1	75	99.438	ug/L	1.942	1	11982	195391	0
	Se	82	98.446	ug/L	0.484	0	6	17309	1
	Se	78	99.222	ug/L	1.949	1	12160	61658	0
	Mo	98	99.855	ug/L	1.633	1	9	379203	0
	Y	89		ug/L			303911	300273	0
	Kr	83		ug/L			216	276	14
>	In	115		ug/L			784570	753309	0
	Ag	107	99.096	ug/L	0 789	0	14	868850	0
	Cd	111	99.494	ug/L	1.158	1	64	378867	0
	Cd	114	99.464	ug/L	1.331	1	34	948848	1
	Sb	121	99.989	ug/L	0.938	0	45	1088783	1
	Sb	123	99.892	ug/L	0.946	0	29	828895	0
	Ba	135	99.851	ug/L	1.700	1	27	355566	1
	Ba	137	100.063	ug/L	1.232	1	31	622838	0
>	Tb	159		ug/L			946533	941068	0
	Tl	205	100.788	ug/L	0.725	0	29	3323294	0
	Pb	208	100.162	ug/L	0.472	0	204	4340276	0
	Bi	209		ug/L			2333295	2175827	1
	Th	232	100.050	ug/L	0.388	0	105	4441175	0
	U	238	99.525	ug/L	1.386	1	6	4388331	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 13:36:04
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	833830	1
	Be	9	0.001	ug/L	0.002	207	22	24	24
	C	13		ug/L			58981	57529	0
	Cl	37		ug/L			3868617	4043709	1
>	Sc	45		ug/L			823285	838629	1
	V	51	-0.012	ug/L	0.009	71	7453	7364	1
	V-1	51	-0.001	ug/L	0.001	156	116	108	13
	Cr	52	-0.049	ug/L	0.035	72	22166	21808	1
	Cr	53	-0.010	ug/L	0.011	105	158	143	12
	Mn	55	0.002	ug/L	0.002	77	635	701	7
	Co	59	0.002	ug/L	0.001	55	154	193	10
>	Ge	72		ug/L			530780	548974	0
	Ni	60	0.003	ug/L	0.002	72	38	49	14
	Ni	62	0.769	ug/L	0.162	21	586	990	7
	Cu	63	0.040	ug/L	0.014	34	535	864	11
	Cu	65	0.004	ug/L	0.000	6	79	95	0
	Zn	66	0.001	ug/L	0.006	454	365	380	3
	Zn	67	0.004	ug/L	0.055	1339	57	61	31
	Zn	68	-0.029	ug/L	0.006	20	609	586	2
	As	75	-0.001	ug/L	0.006	494	-31	-34	30
	As-1	75	-0.050	ug/L	0.026	51	11982	12299	0
	Se	82	-0.017	ug/L	0 032	195	6	3	154
	Se	78	-0.194	ug/L	0.072	37	12160	12478	0
	Mo	98	0.050	ug/L	0.009	17	9	205	16
	Y	89		ug/L			303911	303920	1
	Kr	83		ug/L			216	224	0
>	In	115		ug/L			784570	776580	0
	Ag	107	0.004	ug/L	0.002	49	14	45	35
	Cd	111	0.008	ug/L	0.003	34	64	93	11
	Cd	114	0.001	ug/L	0.001	43	34	48	13
	Sb	121	0.193	ug/L	0.042	21	45	2209	21
	Sb	123	0.194	ug/L	0.048	24	29	1687	23
	Ba	135	-0.002	ug/L	0 002	109	27	20	36
	Ba	137	0.001	ug/L	0.001	83	31	40	18
>	Tb	159		ug/L			946533	931366	1
	Tl	205	0.013	ug/L	0.003	23	29	444	19
	Pb	208	0.001	ug/L	0 001	41	204	259	9
	Bi	209		ug/L			2333295	2330080	0
	Th	232	0.314	ug/L	0.057	18	105	13892	16
	U	238	0.008	ug/L	0.003	33	6	360	31

Sample Information

Sample Date/Time: Monday, July 29, 2013 13:30:32
Method File: C:\NexION Data\Method\200.8nomin.mth
Mass Calibration File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	**1.0000**	0.003	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
V	51	**1.0000**	0.022	0.20	10	20	50	100
V-1	51	**1.0000**	0.022	0.50	10	20	50	100
Cr	52	**1.0000**	0.019	0.50	10	20	50	100
Cr	53	**0.9999**	0.002	0.50	10	20	50	100
Mn	55	**0.9999**	0.026	0.50	10	20	50	100
Co	59	**0.9999**	0.019	0.20	10	20	50	100
Ge	72							
Ni	60	**0.9999**	0.006	0.50	10	20	50	100
Ni	62	**1.0000**	0.001	0.50	10	20	50	100
Cu	63	**1.0000**	0.014	0.50	10	20	50	100
Cu	65	**0.9998**	0.007	0.50	10	20	50	100
Zn	66	**0.9993**	0.004	4.00	10	20	50	100
Zn	67	**0.9992**	0.001	4.00	10	20	50	100
Zn	68	**0.9992**	0.003	4.00	10	20	50	100
As	75	**0.9999**	0.003	0.20	10	20	50	100
As-1	75	**0.9999**	0.003	0.20	10	20	50	100
Se	82	**0.9994**	0.000	0.50	10	20	50	100
Se	78	**0.9999**	0.001	0.50	10	20	50	100
Mo	98	**1.0000**	0.007	0.20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**0.9999**	0.012	0.20	10	20	50	100
Cd	111	**0.9999**	0.005	0.10	10	20	50	100
Cd	114	**0.9999**	0.013	0.10	10	20	50	100
Sb	121	**1.0000**	0.014	0.20	10	20	50	100
Sb	123	**1.0000**	0.011	0.20	10	20	50	100
Ba	135	**1.0000**	0.005	0.50	10	20	50	100
Ba	137	**1.0000**	0.008	0.50	10	20	50	100
Tb	159							
Tl	205	**0.9999**	0.035	0.20	10	20	50	100
Pb	208	**1.0000**	0.046	0.10	10	20	50	100
Bi	209							
Th	232	**0.9996**	0.047	0.20	10	20	50	100
U	238	**0.9999**	0.047	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 13:42:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	842311	0
	Be	9	50.084	ug/L	0.624	1	22	130000	1
	C	13		ug/L			58981	57507	3
	Cl	37		ug/L			3868617	4095051	1
>	Sc	45		ug/L			823285	854061	2
	V	51	50.798	ug/L	2.201	4	7453	948859	1
	V-1	51	50.841	ug/L	2.116	4	116	943190	1
	Cr	52	49.105	ug/L	2 154	4	22166	802170	2
	Cr	53	49.253	ug/L	1.979	4	158	88832	1
	Mn	55	49.591	ug/L	0.854	1	635	1098637	1
	Co	59	50.450	ug/L	1.634	3	154	834442	3
>	Ge	72		ug/L			530780	548715	1
	Ni	60	50.409	ug/L	0.520	1	38	175891	2
	Ni	62	51.209	ug/L	2.285	4	586	26155	2
	Cu	63	51.694	ug/L	0.292	0	535	406664	1
	Cu	65	50.992	ug/L	2.732	5	79	183443	3
	Zn	66	50.271	ug/L	1.117	2	365	105717	1
	Zn	67	51.567	ug/L	2.200	4	57	18281	2
	Zn	68	50.588	ug/L	1 161	2	609	77087	1
	As	75	49.669	ug/L	0.814	1	-31	90735	0
	As-1	75	50.403	ug/L	1.019	2	11982	107092	0
	Se	82	78.515	ug/L	1 423	1	6	13957	0
	Se	78	77.687	ug/L	2.129	2	12160	51946	0
	Mo	98	49.586	ug/L	1.035	2	9	192013	1
	Y	89		ug/L			303911	308721	2
	Kr	83		ug/L			216	249	6
>	In	115		ug/L			784570	771788	1
	Ag	107	50.146	ug/L	1.355	2	14	450352	1
	Cd	111	48.199	ug/L	1.050	2	64	188045	0
	Cd	114	48.070	ug/L	1.214	2	34	469746	1
	Sb	121	49.533	ug/L	0.725	1	45	552540	0
	Sb	123	49.645	ug/L	0.707	1	29	422036	0
	Ba	135	49.513	ug/L	0.774	1	27	180647	1
	Ba	137	49.734	ug/L	0.334	0	31	317171	0
>	Tb	159		ug/L			946533	945182	1
	Tl	205	48.226	ug/L	0.851	1	29	1596983	0
	Pb	208	49.668	ug/L	0.533	1	204	2161647	0
	Bi	209		ug/L			2333295	2275905	0
	Th	232	51.908	ug/L	1.444	2	105	2313904	1
	U	238	50.653	ug/L	0.689	1	6	2243140	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 13:49:49
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			850074	841200	0
	Be	9	0.001	ug/L	0.003	426	22	23	28
	C	13		ug/L			58981	56271	1
	Cl	37		ug/L			3868617	4037099	1
>	Sc	45		ug/L			823285	840277	2
	V	51	-0.003	ug/L	0.012	444	7453	7553	0
	V-1	51	-0.001	ug/L	0.000	27	116	94	9
	Cr	52	-0.018	ug/L	0.039	218	22166	22332	0
	Cr	53	-0.013	ug/L	0.002	14	158	138	5
	Mn	55	-0.000	ug/L	0 000	260	635	644	2
	Co	59	0.001	ug/L	0.001	81	154	180	9
>	Ge	72		ug/L			530780	551644	0
	Ni	60	0.001	ug/L	0.001	189	38	42	9
	Ni	62	0.671	ug/L	0.061	9	586	946	3
	Cu	63	0.036	ug/L	0.003	8	535	841	2
	Cu	65	0.001	ug/L	0.001	142	79	85	4
	Zn	66	0.005	ug/L	0.002	41	365	390	1
	Zn	67	-0.003	ug/L	0.010	399	57	59	5
	Zn	68	-0.013	ug/L	0 027	215	609	614	6
	As	75	0.019	ug/L	0.058	300	-31	2	4671
	As-1	75	-0.022	ug/L	0.080	356	11982	12410	0
	Se	82	0.087	ug/L	0.172	197	6	22	137
	Se	78	-0.086	ug/L	0.250	292	12160	12594	0
	Mo	98	0.021	ug/L	0.005	22	9	91	19
	Y	89		ug/L			303911	306965	1
	Kr	83		ug/L			216	217	9
>	In	115		ug/L			784570	772004	1
	Ag	107	0.002	ug/L	0 000	0	14	31	1
	Cd	111	0.004	ug/L	0.000	11	64	79	3
	Cd	114	0.000	ug/L	0.001	714	34	35	29
	Sb	121	0.059	ug/L	0.019	32	45	699	29
	Sb	123	0.064	ug/L	0.016	25	29	574	22
	Ba	135	-0.002	ug/L	0.001	57	27	18	27
	Ba	137	0.000	ug/L	0.001	252	31	33	16
>	Tb	159		ug/L			946533	926883	0
	Tl	205	0.006	ug/L	0.001	14	29	215	12
	Pb	208	0.001	ug/L	0.001	71	204	239	11
	Bi	209		ug/L			2333295	2336410	0
	Th	232	0.173	ug/L	0.039	22	105	7674	22
	U	238	0.004	ug/L	0.001	25	6	160	24

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 13:53:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	842665	2
	Be	9	50.056	ug/L	1.399	2	22	129911	0
	C	13		ug/L			58981	54819	2
	Cl	37		ug/L			3868617	4226909	0
>	Sc	45		ug/L			823285	856989	1
	V	51	49.620	ug/L	0.680	1	7453	930818	1
	V-1	51	49.934	ug/L	0.835	1	116	930063	0
	Cr	52	49.688	ug/L	0.858	1	22166	814903	3
	Cr	53	50.720	ug/L	1.200	2	158	91842	1
	Mn	55	49.237	ug/L	1.388	2	635	1094529	1
	Co	59	50.193	ug/L	0.652	1	154	833152	0
>	Ge	72		ug/L			530780	548347	1
	Ni	60	51.360	ug/L	0.961	1	38	179076	2
	Ni	62	50.903	ug/L	0.704	1	586	25994	1
	Cu	63	51.256	ug/L	1.262	2	535	402861	1
	Cu	65	51.260	ug/L	0.881	1	79	184351	0
	Zn	66	51.857	ug/L	1.442	2	365	108968	2
	Zn	67	52.045	ug/L	0.448	0	57	18444	0
	Zn	68	51.883	ug/L	0.696	1	609	78998	0
	As	75	50.695	ug/L	0.658	1	-31	92552	0
	As-1	75	50.752	ug/L	0.932	1	11982	107680	0
	Se	82	52.148	ug/L	0.472	0	6	9267	1
	Se	78	51.812	ug/L	1.153	2	12160	38808	0
	Mo	98	50.206	ug/L	1.064	2	9	194285	1
	Y	89		ug/L			303911	308576	0
	Kr	83		ug/L			216	246	0
>	In	115		ug/L			784570	773656	0
	Ag	107	49.500	ug/L	0.571	1	14	445698	0
	Cd	111	49.801	ug/L	0.670	1	64	194785	0
	Cd	114	50.207	ug/L	0.541	1	34	491888	0
	Sb	121	49.625	ug/L	0.474	0	45	554959	0
	Sb	123	49.651	ug/L	0.103	0	29	423148	0
	Ba	135	50.216	ug/L	0.701	1	27	183667	1
	Ba	137	49.429	ug/L	0.429	0	31	315992	0
>	Tb	159		ug/L			946533	943322	1
	Tl	205	48.623	ug/L	0.480	0	29	1607061	0
	Pb	208	49.609	ug/L	0.472	0	204	2154867	0
	Bi	209		ug/L			2333295	2285567	1
	Th	232	52.037	ug/L	1.570	3	105	2314997	1
	U	238	52.058	ug/L	0.738	1	6	2300763	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 14:00:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	844331	1
	Be	9	0.001	ug/L	0.001	98	22	24	7
	C	13		ug/L			58981	58168	1
	Cl	37		ug/L			3868617	4076746	1
>	Sc	45		ug/L			823285	852409	1
	V	51	-0.009	ug/L	0.012	132	7453	7549	1
	V-1	51	-0.002	ug/L	0.001	44	116	90	15
	Cr	52	-0.032	ug/L	0.041	127	22166	22441	1
	Cr	53	-0.008	ug/L	0.005	69	158	150	6
	Mn	55	-0.001	ug/L	0.000	13	635	641	1
	Co	59	0.001	ug/L	0.001	90	154	177	8
>	Ge	72		ug/L			530780	552346	2
	Ni	60	0.001	ug/L	0.002	218	38	42	13
	Ni	62	0.769	ug/L	0.132	17	586	995	4
	Cu	63	0.040	ug/L	0.006	14	535	870	4
	Cu	65	0.006	ug/L	0.002	40	79	102	5
	Zn	66	0.006	ug/L	0.008	128	365	393	5
	Zn	67	0.000	ug/L	0.026	7187	57	60	13
	Zn	68	-0.032	ug/L	0.012	37	609	585	5
	As	75	-0.016	ug/L	0.012	74	-31	-62	37
	As-1	75	-0.012	ug/L	0.168	1453	11982	12443	0
	Se	82	-0.002	ug/L	0.043	2276	6	6	116
	Se	78	-0.003	ug/L	0.593	19019	12160	12648	0
	Mo	98	0.024	ug/L	0.007	28	9	104	27
	Y	89		ug/L			303911	310125	2
	Kr	83		ug/L			216	214	7
>	In	115		ug/L			784570	778497	1
	Ag	107	0.002	ug/L	0.001	29	14	31	14
	Cd	111	0.003	ug/L	0.003	99	64	73	14
	Cd	114	-0.000	ug/L	0.001	195	34	31	19
	Sb	121	0.100	ug/L	0.028	28	45	1171	28
	Sb	123	0.102	ug/L	0.026	25	29	908	26
	Ba	135	-0.003	ug/L	0.001	27	27	15	22
	Ba	137	0.000	ug/L	0.000	1003	31	31	7
>	Tb	159		ug/L			946533	931305	0
	Tl	205	0.007	ug/L	0.002	27	29	242	24
	Pb	208	0.001	ug/L	0.000	66	204	232	8
	Bi	209		ug/L			2333295	2350861	1
	Th	232	0.230	ug/L	0.054	23	105	10191	23
	U	238	0.004	ug/L	0.001	30	6	167	29

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 14:04:37
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	837320	0
	Be	9	0.198	ug/L	0.007	3	22	531	2
	C	13		ug/L			58981	56063	3
	Cl	37		ug/L			3868617	4086194	2
>	Sc	45		ug/L			823285	860261	0
	V	51	0.206	ug/L	0.021	10	7453	11632	2
	V-1	51	0.197	ug/L	0.005	2	116	3807	1
	Cr	52	0.530	ug/L	0.060	11	22166	31638	2
	Cr	53	0.500	ug/L	0.008	1	158	1072	1
	Mn	55	0.499	ug/L	0.019	3	635	11792	2
	Co	59	0.209	ug/L	0.009	4	154	3650	3
>	Ge	72		ug/L			530780	565545	1
	Ni	60	0.506	ug/L	0.006	1	38	1858	0
	Ni	62	1.205	ug/L	0.108	8	586	1244	4
	Cu	63	0.544	ug/L	0 005	0	535	4976	0
	Cu	65	0.490	ug/L	0.009	1	79	1901	2
	Zn	66	4.111	ug/L	0.040	0	365	9270	1
	Zn	67	3.654	ug/L	0.079	2	57	1392	3
	Zn	68	3.952	ug/L	0.040	1	609	6806	1
	As	75	0.190	ug/L	0.015	7	-31	324	9
	As-1	75	0.093	ug/L	0.031	33	11982	12948	1
	Se	82	0.509	ug/L	0.014	2	6	100	1
	Se	78	0.115	ug/L	0.114	99	12160	13016	1
	Mo	98	0.201	ug/L	0.019	9	9	813	8
	Y	89		ug/L			303911	314718	0
	Kr	83		ug/L			216	229	7
>	In	115		ug/L			784570	786922	0
	Ag	107	0.202	ug/L	0.002	0	14	1862	1
	Cd	111	0.105	ug/L	0.007	6	64	483	6
	Cd	114	0.100	ug/L	0.001	0	34	1034	1
	Sb	121	0.223	ug/L	0.012	5	45	2580	6
	Sb	123	0.230	ug/L	0.012	5	29	2024	5
	Ba	135	0.493	ug/L	0.017	3	27	1861	3
	Ba	137	0.485	ug/L	0.006	1	31	3184	1
>	Tb	159		ug/L			946533	930483	0
	Tl	205	0.203	ug/L	0.002	1	29	6643	0
	Pb	208	0.102	ug/L	0.003	2	204	4555	3
	Bi	209		ug/L			2333295	2352371	0
	Th	232	0.150	ug/L	0.017	11	105	6703	10
	U	238	0.198	ug/L	0.003	1	6	8650	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 14:08:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	881280	2
	Be	9	-0.002	ug/L	0.001	38	22	17	14
	C	13		ug/L			58981	113539	3
	Cl	37		ug/L			3868617	10540781	3
>	Sc	45		ug/L			823285	880142	3
	V	51	0.088	ug/L	0.041	46	7453	9660	11
	V-1	51	1.103	ug/L	0.015	1	116	21239	4
	Cr	52	0.546	ug/L	0.028	5	22166	32618	2
	Cr	53	3.891	ug/L	0.111	2	158	7388	0
	Mn	55	0.068	ug/L	0.003	3	635	2226	5
	Co	59	0.023	ug/L	0.003	13	154	548	6
>	Ge	72		ug/L			530780	561945	1
	Ni	60	0.326	ug/L	0.030	9	38	1206	8
	Ni	62	4.675	ug/L	1.062	22	586	3005	16
	Cu	63	1.292	ug/L	0.130	10	535	10951	8
	Cu	65	0.402	ug/L	0.022	5	79	1565	3
	Zn	66	1.088	ug/L	0.030	2	365	2721	1
	Zn	67	8.133	ug/L	0.467	5	57	3003	4
	Zn	68	0.507	ug/L	0.025	4	609	1429	1
	As	75	0.090	ug/L	0.016	18	-31	134	22
	As-1	75	0.221	ug/L	0.102	46	11982	13110	0
	Se	82	-0.130	ug/L	0.026	19	6	-16	28
	Se	78	0.568	ug/L	0.397	69	12160	13167	0
	Mo	98	411.080	ug/L	14.718	3	9	1629841	2
	Y	89		ug/L			303911	320034	0
	Kr	83		ug/L			216	353	1
>	In	115		ug/L			784570	788487	1
	Ag	107	0.022	ug/L	0.003	13	14	218	13
	Cd	111	0.120	ug/L	0.015	12	64	543	11
	Cd	114	0.239	ug/L	0.009	3	34	2421	2
	Sb	121	0.079	ug/L	0.013	16	45	948	17
	Sb	123	0.076	ug/L	0.009	11	29	693	11
	Ba	135	0.054	ug/L	0.001	1	27	228	0
	Ba	137	0.050	ug/L	0.003	5	31	358	4
>	Tb	159		ug/L			946533	983778	1
	Tl	205	0.029	ug/L	0.002	6	29	1016	7
	Pb	208	0.043	ug/L	0.001	2	204	2156	2
	Bi	209		ug/L			2333295	2201856	1
	Th	232	0.167	ug/L	0.043	25	105	7884	26
	U	238	0.002	ug/L	0.001	54	6	99	52

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 14:15:16
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	922806	1
	Be	9	-0.003	ug/L	0.000	12	22	16	6
	C	13		ug/L			58981	117494	1
	Cl	37		ug/L			3868617	10753207	3
>	Sc	45		ug/L			823285	913000	2
	V	51	0.081	ug/L	0.232	284	7453	9904	46
	V-1	51	1.095	ug/L	0.048	4	116	21853	3
	Cr	52	19.962	ug/L	0.255	1	22166	363389	1
	Cr	53	23.222	ug/L	1.136	4	158	44884	4
	Mn	55	19.185	ug/L	0.483	2	635	454770	0
	Co	59	19.643	ug/L	0.793	4	154	347469	4
>	Ge	72		ug/L			530780	570758	0
	Ni	60	20.227	ug/L	0.264	1	38	73430	1
	Ni	62	24.637	ug/L	1.275	5	586	13424	5
	Cu	63	20.976	ug/L	0.538	2	535	171994	3
	Cu	65	19.719	ug/L	0.253	1	79	73879	1
	Zn	66	19.574	ug/L	0.188	0	365	43065	1
	Zn	67	24.146	ug/L	0.200	0	57	8940	0
	Zn	68	17.795	ug/L	0.233	1	609	28635	1
	As	75	19.590	ug/L	0.308	1	-31	37209	1
	As-1	75	19.047	ug/L	0.327	1	11982	50119	1
	Se	82	-0.184	ug/L	0.043	23	6	-26	29
	Se	78	0.051	ug/L	0.095	185	12160	13103	0
	Mo	98	416.143	ug/L	13.357	3	9	1676453	3
	Y	89		ug/L			303911	329795	0
	Kr	83		ug/L			216	388	4
>	In	115		ug/L			784570	824043	2
	Ag	107	19.902	ug/L	0.479	2	14	190915	3
	Cd	111	19.074	ug/L	0.191	1	64	79516	2
	Cd	114	18.961	ug/L	0.116	0	34	197898	2
	Sb	121	0.074	ug/L	0.008	11	45	936	12
	Sb	123	0.077	ug/L	0.012	15	29	732	17
	Ba	135	0.051	ug/L	0.005	9	27	227	6
	Ba	137	0.042	ug/L	0.001	2	31	319	4
>	Tb	159		ug/L			946533	1029626	0
	Tl	205	0.024	ug/L	0.001	4	29	910	3
	Pb	208	0.038	ug/L	0.002	4	204	2041	4
	Bi	209		ug/L			2333295	2290952	0
	Th	232	0.089	ug/L	0.026	29	105	4416	28
	U	238	0.001	ug/L	0.000	12	6	43	10

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 14:22:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	864771	1
	Be	9	193.319	ug/L	5.697	2	22	514977	2
	C	13		ug/L			58981	59743	2
	Cl	37		ug/L			3868617	4230667	1
>	Sc	45		ug/L			823285	852239	1
	V	51	203.902	ug/L	3.413	1	7453	3779705	0
	V-1	51	202.133	ug/L	5.495	2	116	3743599	1
	Cr	52	196.679	ug/L	1.953	0	22166	3139697	2
	Cr	53	190.870	ug/L	5.027	2	158	343239	1
	Mn	55	195.330	ug/L	4.030	2	635	4316844	0
	Co	59	199.327	ug/L	3.670	1	154	3289855	0
>	Ge	72		ug/L			530780	521424	0
	Ni	60	203.206	ug/L	3.571	1	38	673606	1
	Ni	62	199.515	ug/L	5.731	2	586	95196	2
	Cu	63	196.862	ug/L	2.082	1	535	1469999	0
	Cu	65	198.367	ug/L	3.289	1	79	678174	0
	Zn	66	191.751	ug/L	3.419	1	365	382231	1
	Zn	67	192.999	ug/L	1.413	0	57	64885	0
	Zn	68	191.765	ug/L	3.778	1	609	276031	1
	As	75	200.512	ug/L	0.863	0	-31	348214	0
	As-1	75	199.174	ug/L	1.322	0	11982	367448	0
	Se	82	202.717	ug/L	1.006	0	6	34240	1
	Se	78	196.084	ug/L	1.887	0	12160	106406	0
	Mo	98	214.116	ug/L	1.411	0	9	787934	0
	Y	89		ug/L			303911	302412	1
	Kr	83		ug/L			216	349	5
>	In	115		ug/L			784570	788122	1
	Ag	107	203.056	ug/L	3.110	1	14	1862374	0
	Cd	111	195.089	ug/L	0.817	0	64	777160	1
	Cd	114	196.433	ug/L	3.194	1	34	1960209	0
	Sb	121	206.740	ug/L	2.694	1	45	2354893	0
	Sb	123	194.926	ug/L	2.938	1	29	1692044	0
	Ba	135	201.365	ug/L	2.885	1	27	750115	0
	Ba	137	203.618	ug/L	2.159	1	31	1325891	0
>	Tb	159		ug/L			946533	1005238	1
	Tl	205	194.782	ug/L	1.023	0	29	6860358	0
	Pb	208	195.157	ug/L	2.165	1	204	9032336	0
	Bi	209		ug/L			2333295	2213014	0
	Th	232	188.709	ug/L	4.915	2	105	8945599	1
	U	238	188.217	ug/L	4.508	2	6	8863312	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 14:29:00
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	870223	1
	Be	9	280.231	ug/L	7.653	2	22	751193	1
	C	13		ug/L			58981	59070	0
	Cl	37		ug/L			3868617	4336098	1
>	Sc	45		ug/L			823285	831876	1
	V	51	307.190	ug/L	5.276	1	7453	5555343	2
	V-1	51	306.177	ug/L	5.889	1	116	5536647	2
	Cr	52	298.659	ug/L	3.208	1	22166	4641412	0
	Cr	53	295.343	ug/L	3.959	1	158	518500	2
	Mn	55	298.076	ug/L	8.060	2	635	6431796	3
	Co	59	305.988	ug/L	5.393	1	154	4930845	2
>	Ge	72		ug/L			530780	516981	1
	Ni	60	303.113	ug/L	1.643	0	38	996254	1
	Ni	62	296.455	ug/L	3.786	1	586	139978	1
	Cu	63	309.352	ug/L	0.596	0	535	2290121	1
	Cu	65	291.151	ug/L	4.071	1	79	986859	0
	Zn	66	278.676	ug/L	2.890	1	365	550632	1
	Zn	67	274.214	ug/L	3.375	1	57	91391	2
	Zn	68	278.742	ug/L	1.994	0	609	397602	1
	As	75	294.351	ug/L	4.555	1	-31	506779	0
	As-1	75	293.516	ug/L	5.342	1	11982	531286	0
	Se	82	288.977	ug/L	1.204	0	6	48389	1
	Se	78	284.402	ug/L	4.701	1	12160	147667	0
	Mo	98	320.065	ug/L	8.098	2	9	1167616	1
	Y	89		ug/L			303911	301317	2
	Kr	83		ug/L			216	439	3
>	In	115		ug/L			784570	771142	1
	Ag	107	308.988	ug/L	2.995	0	14	2773036	0
	Cd	111	288.540	ug/L	0.943	0	64	1124704	1
	Cd	114	301.568	ug/L	1.601	0	34	2944875	0
	Sb	121	306.913	ug/L	1.660	0	45	3420896	1
	Sb	123	307.165	ug/L	1.920	0	29	2609148	1
	Ba	135	304.905	ug/L	2.961	0	27	1111381	0
	Ba	137	314.626	ug/L	9.759	3	31	2005208	4
>	Tb	159		ug/L			946533	988170	0
	Tl	205	292.014	ug/L	1.259	0	29	10110766	0
	Pb	208	294.619	ug/L	3.396	1	204	13405527	1
	Bi	209		ug/L			2333295	2054345	5
	Th	232	281.786	ug/L	6.357	2	105	13134524	2
	U	238	282.273	ug/L	2.067	0	6	13069872	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 14:35:51
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens RSD
>	Li	6		ug/L			850074	904517	2
	Be	9	0.006	ug/L	0.002	37	22	39	16
	C	13		ug/L			58981	58677	1
	Cl	37		ug/L			3868617	4344364	2
>	Sc	45		ug/L			823285	896807	3
	V	51	-0.000	ug/L	0.017	37604	7453	8110	0
	V-1	51	0.016	ug/L	0.002	12	116	429	5
	Cr	52	-0.015	ug/L	0.052	341	22166	23869	0
	Cr	53	0.036	ug/L	0.006	16	158	240	3
	Mn	55	0.010	ug/L	0.003	29	635	926	4
	Co	59	0.003	ug/L	0.000	17	154	213	1
>	Ge	72		ug/L			530780	576834	1
	Ni	60	0.003	ug/L	0.002	64	38	51	12
	Ni	62	2.442	ug/L	0.297	12	586	1917	7
	Cu	63	0.149	ug/L	0.018	12	535	1808	8
	Cu	65	0.008	ug/L	0.002	31	79	115	6
	Zn	66	-0.073	ug/L	0.010	14	365	236	9
	Zn	67	-0.043	ug/L	0.014	31	57	46	9
	Zn	68	-0.092	ug/L	0.017	18	609	516	5
	As	75	-0.024	ug/L	0.007	29	-31	-80	18
	As-1	75	-0.241	ug/L	0.111	45	11982	12544	0
	Se	82	-0.042	ug/L	0.049	116	6	0	1384
	Se	78	-0.826	ug/L	0.393	47	12160	12773	1
	Mo	98	0.095	ug/L	0.019	20	9	396	19
	Y	89		ug/L			303911	324558	2
	Kr	83		ug/L			216	244	6
>	In	115		ug/L			784570	834540	2
	Ag	107	0.007	ug/L	0 001	8	14	86	8
	Cd	111	0.009	ug/L	0.001	7	64	107	3
	Cd	114	0.005	ug/L	0.001	28	34	90	16
	Sb	121	0.430	ug/L	0.100	23	45	5248	24
	Sb	123	0.439	ug/L	0.113	25	29	4080	26
	Ba	135	0.002	ug/L	0.001	70	27	37	12
	Ba	137	0.003	ug/L	0.001	38	31	56	16
>	Tb	159		ug/L			946533	999562	1
	Tl	205	0.040	ug/L	0.007	18	29	1439	19
	Pb	208	0.005	ug/L	0.001	11	204	456	4
	Bi	209		ug/L			2333295	2491966	0
	Th	232	0.280	ug/L	0 057	20	105	13332	21
	U	238	0.012	ug/L	0.002	20	6	579	20

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 14:41:54
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	908540	2
	Be	9	50.459	ug/L	1.022	2	22	141258	2
	C	13		ug/L			58981	56165	2
	Cl	37		ug/L			3868617	4164844	1
>	Sc	45		ug/L			823285	907040	0
	V	51	50.125	ug/L	0.237	0	7453	995262	1
	V-1	51	50.228	ug/L	0.243	0	116	990403	1
	Cr	52	48.759	ug/L	0.280	0	22166	846698	0
	Cr	53	49.101	ug/L	0.259	0	158	94122	0
	Mn	55	49.320	ug/L	0.750	1	635	1160895	2
	Co	59	50.293	ug/L	0.283	0	154	883746	1
>	Ge	72		ug/L			530780	583603	0
	Ni	60	50.006	ug/L	0.870	1	38	185589	2
	Ni	62	51.260	ug/L	0 214	0	586	27855	0
	Cu	63	49.566	ug/L	1 284	2	535	414790	3
	Cu	65	50.075	ug/L	0.203	0	79	191702	1
	Zn	66	50.528	ug/L	0.774	1	365	113041	2
	Zn	67	50.957	ug/L	0.296	0	57	19222	1
	Zn	68	49.699	ug/L	0.222	0	609	80574	1
	As	75	49.226	ug/L	0 581	1	-31	95663	2
	As-1	75	48.823	ug/L	0.592	1	11982	110769	1
	Se	82	51.462	ug/L	0.101	0	6	9734	1
	Se	78	49.351	ug/L	0.289	0	12160	39981	1
	Mo	98	48.712	ug/L	0.594	1	9	200660	2
	Y	89		ug/L			303911	325336	1
	Kr	83		ug/L			216	260	5
>	In	115		ug/L			784570	823048	1
	Ag	107	50.504	ug/L	0.525	1	14	483756	0
	Cd	111	50.401	ug/L	0.159	0	64	209726	1
	Cd	114	50.856	ug/L	0.268	0	34	530069	1
	Sb	121	49.650	ug/L	0 335	0	45	590669	1
	Sb	123	49.744	ug/L	0.433	0	29	450999	1
	Ba	135	50.363	ug/L	0.196	0	27	195964	1
	Ba	137	50.170	ug/L	0 296	0	31	341195	1
>	Tb	159		ug/L			946533	1006331	0
	Tl	205	48.118	ug/L	0.745	1	29	1696766	2
	Pb	208	49.174	ug/L	0.173	0	204	2278786	1
	Bi	209		ug/L			2333295	2427625	1
	Th	232	52.013	ug/L	1.351	2	105	2469183	3
	U	238	51.558	ug/L	0.369	0	6	2431174	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 14:48:47
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	917413	0
	Be	9	0.006	ug/L	0.001	19	22	41	8
	C	13		ug/L			58981	60161	1
	Cl	37		ug/L			3868617	4272798	2
>	Sc	45		ug/L			823285	890304	0
	V	51	-0.009	ug/L	0.010	108	7453	7879	1
	V-1	51	0.007	ug/L	0.001	13	116	256	7
	Cr	52	-0.041	ug/L	0.037	90	22166	23292	2
	Cr	53	0.012	ug/L	0.003	27	158	194	2
	Mn	55	0.005	ug/L	0.001	26	635	795	2
	Co	59	0.002	ug/L	0.000	21	154	201	4
>	Ge	72		ug/L			530780	578923	1
	Ni	60	0.001	ug/L	0.002	309	38	43	13
	Ni	62	1.515	ug/L	0.108	7	586	1436	2
	Cu	63	0.087	ug/L	0.003	3	535	1307	1
	Cu	65	0.004	ug/L	0.003	66	79	103	12
	Zn	66	0.048	ug/L	0.032	66	365	505	16
	Zn	67	0.038	ug/L	0.019	49	57	77	11
	Zn	68	0.024	ug/L	0.012	49	609	702	4
	As	75	-0.014	ug/L	0.009	69	-31	-60	28
	As-1	75	-0.217	ug/L	0.118	54	11982	12636	1
	Se	82	-0.032	ug/L	0.045	140	6	1	682
	Se	78	-0.784	ug/L	0.437	55	12160	12841	1
	Mo	98	0.036	ug/L	0.008	22	9	155	19
	Y	89		ug/L			303911	321803	1
	Kr	83		ug/L			216	233	1
>	In	115		ug/L			784570	835820	0
	Ag	107	0.003	ug/L	0.001	22	14	45	15
	Cd	111	0.005	ug/L	0.001	13	64	88	2
	Cd	114	0.001	ug/L	0.001	65	34	51	19
	Sb	121	0.153	ug/L	0.045	29	45	1889	28
	Sb	123	0.154	ug/L	0.039	25	29	1444	24
	Ba	135	-0.001	ug/L	0.000	20	27	25	4
	Ba	137	0.000	ug/L	0.001	838	31	34	22
>	Tb	159		ug/L			946533	993234	0
	Tl	205	0.016	ug/L	0.005	29	29	575	27
	Pb	208	0.002	ug/L	0.001	26	204	311	7
	Bi	209		ug/L			2333295	2499979	1
	Th	232	0.224	ug/L	0.053	23	105	10621	23
	U	238	0.004	ug/L	0.001	24	6	190	23

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 MB2 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Monday, July 29, 2013 14:53:42
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens RSD
[>	Li	6		ug/L			850074	930832	0
[	Be	9	U 0.003	ug/L	0.001	31	22	32	8
	C	13		ug/L			58981	61801	1
	Cl	37		ug/L			3868617	4246673	1
[>	Sc	45		ug/L			823285	926238	2
[	V	51	-0.004	ug/L	0.006	135	7453	8294	0
[	V-1	51	0.012	ug/L	0.001	6	116	372	3
[	Cr	52	U 0.015	ug/L	0.023	158	22166	25185	0
[	Cr	53	0.069	ug/L	0.006	8	158	312	1
[	Mn	55	0.025	ug/L	0.004	14	635	1325	4
[	Co	59	-0.002	ug/L	0.000	14	154	142	5
[>	Ge	72		ug/L			530780	586333	1
[	Ni	60	U 0.017	ug/L	0.003	20	38	104	11
[	Ni	62	1.210	ug/L	0.067	5	586	1292	0
[	Cu	63	U 0.100	ug/L	0.008	8	535	1426	2
[	Cu	65	0.039	ug/L	0.003	8	79	235	4
[	Zn	66	U 2.133	ug/L	0.063	2	365	5179	1
[	Zn	67	1.984	ug/L	0.095	4	57	812	2
[	Zn	68	2.028	ug/L	0.121	5	609	3946	3
[	As	75	U -0.026	ug/L	0.008	29	-31	-86	15
[	As-1	75	-0.241	ug/L	0.165	68	11982	12748	0
[	Se	82	U 0.006	ug/L	0 049	775	6	8	109
[	Se	78	-0.814	ug/L	0.620	76	12160	12988	0
[	Mo	98	0.035	ug/L	0.004	11	9	155	9
	Y	89		ug/L			303911	339507	0
	Kr	83		ug/L			216	223	6
[>	In	115		ug/L			784570	860815	1
[	Ag	107	U 0.003	ug/L	0.000	6	14	44	3
[	Cd	111	U 0.004	ug/L	0.002	58	64	87	12
[	Cd	114	0.001	ug/L	0.001	66	34	49	14
[	Sb	121	U 0.070	ug/L	0.023	33	45	919	33
[	Sb	123	0.073	ug/L	0.026	34	29	728	34
[	Ba	135	0.005	ug/L	0.001	20	27	48	7
[	Ba	137	0.007	ug/L	0.000	4	31	84	4
[>	Tb	159		ug/L			946533	1016205	1
[	Tl	205	U 0.067	ug/L	0.039	58	29	2440	58
[	Pb	208	U 0.013	ug/L	0 000	1	204	825	1
[	Bi	209		ug/L			2333295	2519638	2
[	Th	232	0.123	ug/L	0.017	13	105	6005	14
[	U	238	0.002	ug/L	0.000	19	6	93	19

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 MB3 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Monday, July 29, 2013 14:57:50
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	922806	1
	Be	9	U 0.004	ug/L	0.001	19	22	36	7
	C	13		ug/L			58981	62224	0
	Cl	37		ug/L			3868617	4271286	4
>	Sc	45		ug/L			823285	917148	2
	V	51	0.053	ug/L	0.009	16	7453	9348	0
	V-1	51	0.064	ug/L	0.002	2	116	1409	3
	Cr	52	J 0.189	ug/L	0.031	16	22166	27917	0
	Cr	53	0.227	ug/L	0.007	2	158	615	2
	Mn	55	0.051	ug/L	0.003	6	635	1930	3
	Co	59	0.001	ug/L	0.001	75	154	193	8
>	Ge	72		ug/L			530780	583685	1
	Ni	60	U 0.027	ug/L	0.002	6	38	141	3
	Ni	62	1.158	ug/L	0.077	6	586	1259	2
	Cu	63	J 0.385	ug/L	0.002	0	535	3806	1
	Cu	65	0.341	ug/L	0.006	1	79	1391	2
	Zn	66	J 1.568	ug/L	0.017	1	365	3897	2
	Zn	67	1.374	ug/L	0.102	7	57	580	7
	Zn	68	1.534	ug/L	0.083	5	609	3137	4
	As	75	J -0.011	ug/L	0.013	119	-31	-56	45
	As-1	75	-0.214	ug/L	0.068	31	11982	12750	1
	Se	82	U -0.007	ug/L	0.044	651	6	5	143
	Se	78	-0.763	ug/L	0.205	26	12160	12960	1
	Mo	98	0.058	ug/L	0.006	9	9	250	9
	Y	89		ug/L			303911	334206	1
	Kr	83		ug/L			216	232	8
>	In	115		ug/L			784570	848580	0
	Ag	107	U 0.002	ug/L	0.001	34	14	32	18
	Cd	111	U 0.002	ug/L	0.002	84	64	78	10
	Cd	114	0.000	ug/L	0 001	415	34	39	25
	Sb	121	U 0.049	ug/L	0.020	40	45	646	37
	Sb	123	0.044	ug/L	0.018	40	29	447	37
	Ba	135	0.197	ug/L	0.006	2	27	822	2
	Ba	137	0.198	ug/L	0.003	1	31	1425	1
>	Tb	159		ug/L			946533	1016385	0
	Tl	205	U 0.016	ug/L	0.008	48	29	605	46
	Pb	208	U 0.037	ug/L	0.001	1	204	1965	0
	Bi	209		ug/L			2333295	2485722	0
	Th	232	0.062	ug/L	0.014	22	105	3067	22
	U	238	0.002	ug/L	0.000	11	6	111	11

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 E REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Monday, July 29, 2013 15:01:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

No Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens RSD
>	Li	6		ug/L			850074	1003500	0
	Be	9	U 0.003	ug/L	0.002	74	22	34	17
	C	13		ug/L			58981	106225	4
	Cl	37		ug/L			3868617	6913670	5
>	Sc	45		ug/L			823285	948428	2
	V	51	0.859	ug/L	0.035	4	7453	26273	1
	V-1	51	1.147	ug/L	0.067	5	116	23749	3
	Cr	52	1.479	ug/L	0.072	4	22166	51604	0
	Cr	53	2.423	ug/L	0.202	8	158	5024	5
	Mn	55	353.249	ug/L	11.435	3	635	8684268	0
	Co	59	2.740	ug/L	0.102	3	154	50486	1
>	Ge	72		ug/L			530780	567819	0
	Ni	60	12.390	ug/L	0.268	2	38	44760	1
	Ni	62	34.778	ug/L	5.443	15	586	18579	14
	Cu	63	14.620	ug/L	0.421	2	535	119405	2
	Cu	65	10.527	ug/L	0 176	1	79	39272	0
	Zn	66	380.252	ug/L	1.613	0	365	825071	1
	Zn	67	340.440	ug/L	5.773	1	57	124585	1
	Zn	68	365.572	ug/L	4.966	1	609	572466	0
	As	75	1.560	ug/L	0.043	2	-31	2916	2
	As-1	75	1.501	ug/L	0.121	8	11982	15737	0
	Se	82	U 0.462	ug/L	0.021	4	6	91	5
	Se	78	0.414	ug/L	0.359	86	12160	13225	0
	Mo	98	10.065	ug/L	0.053	0	9	40344	0
	Y	89		ug/L			303911	339984	2
	Kr	83		ug/L			216	272	7
>	In	115		ug/L			784570	824160	0
	Ag	107	U 0.006	ug/L	0.001	21	14	77	18
	Cd	111	0.359	ug/L	0.006	1	64	1561	0
	Cd	114	0.375	ug/L	0.005	1	34	3951	1
	Sb	121	5.876	ug/L	0 014	0	45	70044	0
	Sb	123	5.885	ug/L	0.067	1	29	53453	1
	Ba	135	42.324	ug/L	0.050	0	27	164914	0
	Ba	137	41.872	ug/L	0.091	0	31	285169	0
>	Tb	159		ug/L			946533	1025057	1
	Tl	205	U 0.044	ug/L	0.004	8	29	1605	7
	Pb	208	0.937	ug/L	0.017	1	204	44426	0
	Bi	209		ug/L			2333295	2307780	0
	Th	232	0.062	ug/L	0.018	28	105	3128	26
	U	238	0.016	ug/L	0.001	4	6	763	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 DDUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Monday, July 29, 2013 15:06:05
Number of Replicates: 3
No Zn
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	1003557	1
	Be	9	U 0.030	ug/L	0.002	6	22	118	3
	C	13		ug/L			58981	95460	2
	Cl	37		ug/L			3868617	7175835	2
>	Sc	45		ug/L			823285	952049	2
	V	51	6.558	ug/L	0.150	2	7453	144130	1
	V-1	51	6.909	ug/L	0.162	2	116	143048	0
	Cr	52	4.688	ug/L	0.104	2	22166	108588	0
	Cr	53	5.849	ug/L	0.202	3	158	11924	1
	Mn	55	397.076	ug/L	11.796	2	635	9800604	1
	Co	59	3.518	ug/L	0 130	3	154	65029	2
>	Ge	72		ug/L			530780	563250	0
	Ni	60	14.610	ug/L	0 349	2	38	52351	1
	Ni	62	54.281	ug/L	11.621	21	586	28410	20
	Cu	63	28.415	ug/L	1 320	4	535	229650	4
	Cu	65	22.921	ug/L	0.222	0	79	84727	0
	Zn	66	521.167	ug/L	8.408	1	365	1121527	1
	Zn	67	458.737	ug/L	4.330	0	57	166513	0
	Zn	68	504.357	ug/L	10.429	2	609	783223	1
	As	75	2.122	ug/L	0.034	1	-31	3948	1
	As-1	75	2.106	ug/L	0.073	3	11982	16777	0
	Se	82	0.507	ug/L	0.080	15	6	99	15
	Se	78	0.711	ug/L	0.116	16	12160	13274	0
	Mo	98	11.319	ug/L	0.044	0	9	45003	0
	Y	89		ug/L			303911	348065	2
	Kr	83		ug/L			216	299	8
>	In	115		ug/L			784570	832345	0
	Ag	107	U 0.045	ug/L	0.002	4	14	449	4
	Cd	111	0.621	ug/L	0.011	1	64	2679	2
	Cd	114	0.604	ug/L	0.008	1	34	6397	1
	Sb	121	6.044	ug/L	0.047	0	45	72763	0
	Sb	123	6.071	ug/L	0.046	0	29	55690	0
	Ba	135	54.155	ug/L	0.398	0	27	213102	0
	Ba	137	53.555	ug/L	0.845	1	31	368345	1
>	Tb	159		ug/L			946533	1047833	0
	Tl	205	U 0.045	ug/L	0.000	0	29	1688	1
	Pb	208	13.347	ug/L	0.233	1	204	644108	0
	Bi	209		ug/L			2333295	2352695	0
	Th	232	0.125	ug/L	0.017	13	105	6309	12
	U	238	0.076	ug/L	0.001	1	6	3740	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 D REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Monday, July 29, 2013 15:10:12
Number of Replicates: 3
No Zn
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			850074	1006594	0
	Be	9	U 0.025	ug/L	0.002	6	22	105	3
	C	13		ug/L			58981	93208	2
	Cl	37		ug/L			3868617	6951254	3
>	Sc	45		ug/L			823285	943477	1
	V	51	6.322	ug/L	0.222	3	7453	137976	1
	V-1	51	6.661	ug/L	0.204	3	116	136677	1
	Cr	52	4.459	ug/L	0.163	3	22166	103587	1
	Cr	53	5.582	ug/L	0.103	1	158	11289	0
	Mn	55	386.739	ug/L	11.868	3	635	9459736	1
	Co	59	3.410	ug/L	0.111	3	154	62467	1
>	Ge	72		ug/L			530780	568953	2
	Ni	60	14.385	ug/L	0.619	4	38	52042	2
	Ni	62	65.840	ug/L	7.536	11	586	34667	9
	Cu	63	27.837	ug/L	1.301	4	535	227192	3
	Cu	65	21.912	ug/L	0.298	1	79	81810	0
	Zn	66	505.523	ug/L	5.656	1	365	1098782	1
	Zn	67	454.641	ug/L	16.092	3	57	166623	1
	Zn	68	488.969	ug/L	15.039	3	609	766762	1
	As	75	2.036	ug/L	0.040	1	-31	3823	0
	As-1	75	1.994	ug/L	0.193	9	11982	16723	0
	Se	82	U 0.479	ug/L	0.055	11	6	95	10
	Se	78	0.599	ug/L	0.583	97	12160	13345	0
	Mo	98	11.010	ug/L	0.387	3	9	44198	1
	Y	89		ug/L			303911	340889	1
	Kr	83		ug/L			216	313	6
>	In	115		ug/L			784570	829030	1
	Ag	107	U 0.034	ug/L	0.002	7	14	340	7
	Cd	111	0.602	ug/L	0.002	0	64	2591	1
	Cd	114	0.608	ug/L	0.014	2	34	6423	2
	Sb	121	5.995	ug/L	0.004	0	45	71882	1
	Sb	123	6.000	ug/L	0.034	0	29	54824	1
	Ba	135	54.177	ug/L	0.261	0	27	212338	1
	Ba	137	53.707	ug/L	0.246	0	31	367918	0
>	Tb	159		ug/L			946533	1043817	0
	Tl	205	U 0.043	ug/L	0.001	1	29	1589	1
	Pb	208	13.327	ug/L	0 069	0	204	640758	1
	Bi	209		ug/L			2333295	2347664	0
	Th	232	0.102	ug/L	0 009	8	105	5145	9
	U	238	0.072	ug/L	0.002	2	6	3534	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 DSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Monday, July 29, 2013 15:14:20
No Zn
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	1002764	2
	Be	9	21.255	ug/L	0.140	0	22	65689	1
	C	13		ug/L			58981	89122	2
	Cl	37		ug/L			3868617	7039036	2
>	Sc	45		ug/L			823285	922017	2
	V	51	30.644	ug/L	0.569	1	7453	621545	1
	V-1	51	31.289	ug/L	0.623	1	116	626951	0
	Cr	52	27.592	ug/L	0.599	2	22166	497650	1
	Cr	53	29.729	ug/L	1.143	3	158	57963	1
	Mn	55	420.409	ug/L	15.144	3	635	10046721	1
	Co	59	27.883	ug/L	1.070	3	154	497745	1
>	Ge	72		ug/L			530780	549631	0
	Ni	60	40.502	ug/L	0.468	1	38	141565	1
	Ni	62	99.017	ug/L	5.726	5	586	50124	6
	Cu	63	54.259	ug/L	0.921	1	535	427524	2
	Cu	65	47.395	ug/L	0.669	1	79	170891	2
	Zn	66	595.976	ug/L	5.835	0	365	1251553	1
	Zn	67	526.164	ug/L	9.834	1	57	186384	2
	Zn	68	569.471	ug/L	17.378	3	609	863032	3
	As	75	25.748	ug/L	0 332	1	-31	47104	1
	As-1	75	26.561	ug/L	0.443	1	11982	62406	1
	Se	82	76.076	ug/L	0.730	0	6	13548	1
	Se	78	73.484	ug/L	0.255	0	12160	49909	0
	Mo	98	36.902	ug/L	0.423	1	9	143151	0
	Y	89		ug/L			303911	342200	1
	Kr	83		ug/L			216	315	8
>	In	115		ug/L			784570	830150	2
	Ag	107	17.394	ug/L	0.175	1	14	168047	1
	Cd	111	23.926	ug/L	0.418	1	64	100432	0
	Cd	114	23.797	ug/L	0.561	2	34	250131	1
	Sb	121	27.706	ug/L	0.545	1	45	332404	0
	Sb	123	27.863	ug/L	0.543	1	29	254748	0
	Ba	135	78.829	ug/L	1.492	1	27	309284	1
	Ba	137	78.876	ug/L	1.464	1	31	540920	0
>	Tb	159		ug/L			946533	1057490	1
	Tl	205	22.536	ug/L	0.098	0	29	835062	1
	Pb	208	36.192	ug/L	0 674	1	204	1762124	0
	Bi	209		ug/L			2333295	2366313	1
	Th	232	18.111	ug/L	0.326	1	105	903320	0
	U	238	23.076	ug/L	0.012	0	6	1143446	1

WY32 : 91515

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 MB2SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Monday, July 29, 2013 15:18:27
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	941008	1
	Be	9	24.408	ug/L	0.553	2	22	70784	2
	C	13		ug/L			58981	62869	0
	Cl	37		ug/L			3868617	4460308	1
>	Sc	45		ug/L			823285	893036	0
	V	51	24.970	ug/L	0.344	1	7453	492195	1
	V-1	51	25.341	ug/L	0.386	1	116	492031	1
	Cr	52	25.014	ug/L	0.250	0	22166	439372	0
	Cr	53	26.235	ug/L	0.374	1	158	49596	1
	Mn	55	25.257	ug/L	0 648	2	635	585588	2
	Co	59	26.343	ug/L	0.755	2	154	455825	3
>	Ge	72		ug/L			530780	575999	1
	Ni	60	26.147	ug/L	0.503	1	38	95777	1
	Ni	62	41.434	ug/L	4.213	10	586	22351	10
	Cu	63	27.154	ug/L	0.230	0	535	224483	0
	Cu	65	26.396	ug/L	0.790	2	79	99752	2
	Zn	66	80.709	ug/L	1.633	2	365	177925	0
	Zn	67	73.530	ug/L	1.049	1	57	27344	0
	Zn	68	77.482	ug/L	0.346	0	609	123609	1
	As	75	23.311	ug/L	0.251	1	-31	44687	0
	As-1	75	24.181	ug/L	0.295	1	11982	60701	0
	Se	82	78.114	ug/L	1.547	1	6	14576	0
	Se	78	75.132	ug/L	1.843	2	12160	53172	0
	Mo	98	25.466	ug/L	0.655	2	9	103510	1
	Y	89		ug/L			303911	328392	1
	Kr	83		ug/L			216	244	5
>	In	115		ug/L			784570	867522	1
	Ag	107	26.530	ug/L	0.101	0	14	267882	1
	Cd	111	24.924	ug/L	0.389	1	64	109343	1
	Cd	114	24.758	ug/L	0.197	0	34	272008	0
	Sb	121	24.033	ug/L	0.378	1	45	301379	1
	Sb	123	23.767	ug/L	0.299	1	29	227127	1
	Ba	135	24.605	ug/L	0.006	0	27	100927	1
	Ba	137	24.597	ug/L	0.340	1	31	176327	0
>	Tb	159		ug/L			946533	1036183	0
	Tl	205	25.008	ug/L	0.212	0	29	907976	1
	Pb	208	25.377	ug/L	0.255	1	204	1211057	1
	Bi	209		ug/L			2333295	2567902	0
	Th	232	20.382	ug/L	0.777	3	105	996169	3
	U	238	24.281	ug/L	0.114	0	6	1178932	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 MB2SPD REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Monday, July 29, 2013 15:22:35
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens	Intens. RSD
>	Li	6		ug/L			850074	962451	1
	Be	9	23.688	ug/L	0.399	1	22	70256	0
	C	13		ug/L			58981	62641	5
	Cl	37		ug/L			3868617	4397520	3
>	Sc	45		ug/L			823285	928685	0
	V	51	24.315	ug/L	0 121	0	7453	498610	0
	V-1	51	24.480	ug/L	0.139	0	116	494279	0
	Cr	52	24.230	ug/L	0.499	2	22166	443354	1
	Cr	53	24.776	ug/L	0.463	1	158	48713	1
	Mn	55	24.443	ug/L	0.324	1	635	589398	1
	Co	59	24.764	ug/L	0.160	0	154	445597	0
>	Ge	72		ug/L			530780	576233	1
	Ni	60	25.800	ug/L	0.268	1	38	94555	2
	Ni	62	32.803	ug/L	1.357	4	586	17829	4
	Cu	63	26.087	ug/L	0.667	2	535	215737	1
	Cu	65	26.192	ug/L	0.425	1	79	99024	0
	Zn	66	80.395	ug/L	1.835	2	365	177298	1
	Zn	67	73.000	ug/L	1.466	2	57	27156	0
	Zn	68	79.339	ug/L	2.544	3	609	126568	1
	As	75	23.073	ug/L	0 471	2	-31	44243	1
	As-1	75	23.926	ug/L	0.523	2	11982	60216	0
	Se	82	77.428	ug/L	1.346	1	6	14455	1
	Se	78	74.447	ug/L	1 291	1	12160	52829	0
	Mo	98	25.488	ug/L	0.584	2	9	103641	1
	Y	89		ug/L			303911	329227	1
	Kr	83		ug/L			216	252	8
>	In	115		ug/L			784570	872597	0
	Ag	107	26.176	ug/L	0 526	2	14	265835	1
	Cd	111	24.433	ug/L	0.219	0	64	107829	1
	Cd	114	24.466	ug/L	0.063	0	34	270389	0
	Sb	121	23.544	ug/L	0.102	0	45	297012	1
	Sb	123	23.488	ug/L	0.045	0	29	225796	1
	Ba	135	24.364	ug/L	0.239	0	27	100529	1
	Ba	137	24.200	ug/L	0.146	0	31	174510	0
>	Tb	159		ug/L			946533	1035306	1
	Tl	205	24.845	ug/L	0.139	0	29	901254	0
	Pb	208	25.266	ug/L	0.110	0	204	1204617	0
	Bi	209		ug/L			2333295	2597024	1
	Th	232	20.637	ug/L	0.539	2	105	1007951	3
	U	238	24.444	ug/L	0.236	0	6	1185814	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 MB3SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Monday, July 29, 2013 15:26:42
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	940662	3
	Be	9	23.872	ug/L	0.448	1	22	69216	3
	C	13		ug/L			58981	63096	0
	Cl	37		ug/L			3868617	4307766	1
>	Sc	45		ug/L			823285	908727	3
	V	51	24.704	ug/L	0.822	3	7453	495385	2
	V-1	51	24.799	ug/L	0.742	2	116	489800	3
	Cr	52	24.550	ug/L	0.473	1	22166	439112	1
	Cr	53	24.862	ug/L	0.184	0	158	47833	3
	Mn	55	24.954	ug/L	0.630	2	635	588527	2
	Co	59	25.789	ug/L	0.523	2	154	453947	2
>	Ge	72		ug/L			530780	576745	3
	Ni	60	26.561	ug/L	0.206	0	38	97439	3
	Ni	62	30.748	ug/L	0 476	1	586	16762	1
	Cu	63	27.097	ug/L	0.127	0	535	224304	3
	Cu	65	25.755	ug/L	0.268	1	79	97470	3
	Zn	66	78.292	ug/L	0.361	0	365	172852	3
	Zn	67	71.308	ug/L	1.729	2	57	26554	3
	Zn	68	76.947	ug/L	0.461	0	609	122907	2
	As	75	22.812	ug/L	0.431	1	-31	43787	3
	As-1	75	23.345	ug/L	0.381	1	11982	59119	2
	Se	82	75.360	ug/L	0.981	1	6	14080	2
	Se	78	71.370	ug/L	1.675	2	12160	51225	1
	Mo	98	25.158	ug/L	0.474	1	9	102377	1
	Y	89		ug/L			303911	329782	1
	Kr	83		ug/L			216	233	2
>	In	115		ug/L			784570	861359	1
	Ag	107	26.097	ug/L	0.825	3	14	261556	1
	Cd	111	24.488	ug/L	0.228	0	64	106678	1
	Cd	114	24.083	ug/L	0.528	2	34	262665	0
	Sb	121	23.784	ug/L	0.354	1	45	296141	1
	Sb	123	23.653	ug/L	0.204	0	29	224447	1
	Ba	135	24.915	ug/L	0.310	1	27	101466	1
	Ba	137	24.872	ug/L	0.212	0	31	177050	1
>	Tb	159		ug/L			946533	1038907	1
	Tl	205	24.707	ug/L	0.248	1	29	899364	1
	Pb	208	25.211	ug/L	0.158	0	204	1206245	1
	Bi	209		ug/L			2333295	2561252	2
	Th	232	21.178	ug/L	0.432	2	105	1038061	3
	U	238	23.897	ug/L	0.246	1	6	1163420	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 MB3SPD REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Monday, July 29, 2013 15:30:50
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens	Intens. RSD
>	Li	6		ug/L			850074	923736	2
	Be	9	24.307	ug/L	0.405	1	22	69184	1
	C	13		ug/L			58981	62244	1
	Cl	37		ug/L			3868617	4387900	1
>	Sc	45		ug/L			823285	898746	2
	V	51	25.972	ug/L	0.495	1	7453	514765	0
	V-1	51	26.067	ug/L	0.480	1	116	509236	0
	Cr	52	26.057	ug/L	0.535	2	22166	459670	3
	Cr	53	26.370	ug/L	0.429	1	158	50174	3
	Mn	55	27.089	ug/L	0.567	2	635	631877	0
	Co	59	26.415	ug/L	1.051	3	154	460005	4
>	Ge	72		ug/L			530780	558504	2
	Ni	60	27.830	ug/L	0.391	1	38	98857	3
	Ni	62	32.266	ug/L	0.674	2	586	17006	1
	Cu	63	27.329	ug/L	0.521	1	535	219025	0
	Cu	65	27.657	ug/L	0.255	0	79	101350	1
	Zn	66	91.134	ug/L	3.071	3	365	194767	3
	Zn	67	85.065	ug/L	1.567	1	57	30659	0
	Zn	68	87.754	ug/L	3.841	4	609	135597	3
	As	75	24.331	ug/L	0.314	1	-31	45222	1
	As-1	75	24.836	ug/L	0 281	1	11982	60107	1
	Se	82	78.576	ug/L	1 049	1	6	14217	1
	Se	78	74.283	ug/L	0.897	1	12160	51120	1
	Mo	98	26.960	ug/L	0.059	0	9	106279	2
	Y	89		ug/L			303911	322164	3
	Kr	83		ug/L			216	226	1
>	In	115		ug/L			784570	851499	1
	Ag	107	27.344	ug/L	0.298	1	14	270989	0
	Cd	111	25.192	ug/L	0.077	0	64	108493	1
	Cd	114	24.931	ug/L	0.194	0	34	268857	0
	Sb	121	24.400	ug/L	0.047	0	45	300354	0
	Sb	123	24.628	ug/L	0.221	0	29	231019	0
	Ba	135	25.752	ug/L	0.072	0	27	103681	0
	Ba	137	25.451	ug/L	0.130	0	31	179096	0
>	Tb	159		ug/L			946533	1029385	0
	Tl	205	25.177	ug/L	0.215	0	29	908143	1
	Pb	208	25.951	ug/L	0.244	0	204	1230166	0
	Bi	209		ug/L			2333295	2530620	1
	Th	232	22.049	ug/L	0.073	0	105	1070700	1
	U	238	24.722	ug/L	0 200	0	6	1192474	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 15:36:03
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens RSD
>	Li	6		ug/L			850074	914864	2
	Be	9	49.157	ug/L	1.481	3	22	138562	3
	C	13		ug/L			58981	54130	3
	Cl	37		ug/L			3868617	4358478	2
>	Sc	45		ug/L			823285	870848	1
	V	51	49.325	ug/L	1.881	3	7453	940128	2
	V-1	51	49.742	ug/L	1.346	2	116	941468	1
	Cr	52	49.063	ug/L	1.189	2	22166	817696	1
	Cr	53	50.437	ug/L	0.724	1	158	92828	2
	Mn	55	49.247	ug/L	0.834	1	635	1112821	2
	Co	59	50.792	ug/L	0.626	1	154	856789	0
>	Ge	72		ug/L			530780	560265	1
	Ni	60	50.032	ug/L	0.582	1	38	178230	1
	Ni	62	53.728	ug/L	0.877	1	586	27999	1
	Cu	63	50.450	ug/L	1 367	2	535	405124	1
	Cu	65	49.791	ug/L	1.281	2	79	183019	3
	Zn	66	50.395	ug/L	0.603	1	365	108220	1
	Zn	67	50.017	ug/L	1.231	2	57	18110	1
	Zn	68	51.337	ug/L	0.096	0	609	79879	1
	As	75	50.229	ug/L	0.486	0	-31	93702	1
	As-1	75	49.797	ug/L	0.501	1	11982	108197	1
	Se	82	52.050	ug/L	0.390	0	6	9451	1
	Se	78	49.849	ug/L	0.711	1	12160	38636	0
	Mo	98	51.789	ug/L	1.314	2	9	204741	1
	Y	89		ug/L			303911	322906	0
	Kr	83		ug/L			216	237	9
>	In	115		ug/L			784570	831024	1
	Ag	107	51.355	ug/L	0.779	1	14	496669	0
	Cd	111	50.425	ug/L	1.045	2	64	211825	0
	Cd	114	50.439	ug/L	0.530	1	34	530789	0
	Sb	121	49.269	ug/L	1.019	2	45	591763	1
	Sb	123	49.482	ug/L	1.041	2	29	452916	1
	Ba	135	49.975	ug/L	0.663	1	27	196322	0
	Ba	137	49.858	ug/L	0.798	1	31	342335	0
>	Tb	159		ug/L			946533	1021064	1
	Tl	205	48.431	ug/L	1.175	2	29	1732393	1
	Pb	208	49.358	ug/L	1.112	2	204	2320223	1
	Bi	209		ug/L			2333295	2445312	0
	Th	232	52.753	ug/L	2.043	3	105	2539675	2
	U	238	51.227	ug/L	1.000	1	6	2450413	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 15:42:56
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas Intens.	Intens. RSD
>	Li	6		ug/L			850074	881387	1
	Be	9	0.002	ug/L	0.001	28	22	28	6
	C	13		ug/L			58981	58199	2
	Cl	37		ug/L			3868617	4272298	0
>	Sc	45		ug/L			823285	851278	1
	V	51	-0.016	ug/L	0.015	91	7453	7411	2
	V-1	51	0.008	ug/L	0.000	6	116	260	3
	Cr	52	-0.062	ug/L	0.049	79	22166	21934	2
	Cr	53	0.016	ug/L	0.005	31	158	191	3
	Mn	55	0.011	ug/L	0 000	3	635	893	1
	Co	59	-0.000	ug/L	0.000	123	154	154	4
>	Ge	72		ug/L			530780	552493	0
	Ni	60	-0.000	ug/L	0.001	1640	38	39	10
	Ni	62	4.171	ug/L	0.111	2	586	2706	1
	Cu	63	0.189	ug/L	0.002	1	535	2051	0
	Cu	65	0.006	ug/L	0.003	44	79	103	9
	Zn	66	0.039	ug/L	0 004	9	365	463	0
	Zn	67	0.029	ug/L	0.040	137	57	70	20
	Zn	68	0.030	ug/L	0.018	61	609	679	4
	As	75	-0.010	ug/L	0.015	142	-31	-51	51
	As-1	75	-0.149	ug/L	0.117	78	11982	12190	1
	Se	82	0.038	ug/L	0.007	18	6	13	9
	Se	78	-0.509	ug/L	0.471	92	12160	12396	1
	Mo	98	0.024	ug/L	0.007	30	9	101	26
	Y	89		ug/L			303911	314670	0
	Kr	83		ug/L			216	205	5
>	In	115		ug/L			784570	810343	0
	Ag	107	0.003	ug/L	0.001	32	14	38	20
	Cd	111	0.005	ug/L	0.003	55	64	86	12
	Cd	114	0.002	ug/L	0 001	66	34	51	20
	Sb	121	0.101	ug/L	0.030	30	45	1227	28
	Sb	123	0.102	ug/L	0.030	29	29	937	28
	Ba	135	-0.002	ug/L	0.002	90	27	21	30
	Ba	137	0.002	ug/L	0.000	15	31	45	4
>	Tb	159		ug/L			946533	978611	0
	Tl	205	0.008	ug/L	0.002	22	29	304	19
	Pb	208	0.003	ug/L	0.000	12	204	329	3
	Bi	209		ug/L			2333295	2510922	0
	Th	232	0.269	ug/L	0.072	26	105	12501	26
	U	238	0.005	ug/L	0.001	21	6	243	20

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI Check
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 15:47:30
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			850074	854116	2
	Be	9	0.000	ug/L	0.001	254	22	23	8
	C	13		ug/L			58981	55727	1
	Cl	37		ug/L			3868617	4168471	1
>	Sc	45		ug/L			823285	869541	1
	V	51	-0.018	ug/L	0.011	61	7453	7525	2
	V-1	51	0.005	ug/L	0.000	5	116	221	1
	Cr	52	-0.060	ug/L	0.027	45	22166	22433	1
	Cr	53	0.017	ug/L	0.011	64	158	199	11
	Mn	55	0.026	ug/L	0.003	10	635	1249	3
	Co	59	-0.002	ug/L	0.001	30	154	123	10
>	Ge	72		ug/L			530780	560134	2
	Ni	60	0.010	ug/L	0.002	15	38	74	8
	Ni	62	3.960	ug/L	0.254	6	586	2634	2
	Cu	63	0.196	ug/L	0.008	4	535	2138	0
	Cu	65	0.023	ug/L	0 006	28	79	168	14
	Zn	66	1.364	ug/L	0.035	2	365	3302	4
	Zn	67	1.201	ug/L	0.033	2	57	494	3
	Zn	68	1.314	ug/L	0.058	4	609	2668	0
	As	75	-0.014	ug/L	0.007	46	-31	-59	19
	As-1	75	-0.298	ug/L	0.173	58	11982	12068	0
	Se	82	-0.039	ug/L	0.025	63	6	0	2339
	Se	78	-1.088	ug/L	0.639	58	12160	12264	0
	Mo	98	0.008	ug/L	0.003	42	9	40	32
	Y	89		ug/L			303911	313714	1
	Kr	83		ug/L			216	225	3
>	In	115		ug/L			784570	819492	0
	Ag	107	0.001	ug/L	0.000	38	14	26	17
	Cd	111	0.004	ug/L	0.004	107	64	81	18
	Cd	114	0.000	ug/L	0.000	121	34	39	11
	Sb	121	0.032	ug/L	0.011	34	45	431	30
	Sb	123	0.033	ug/L	0.012	36	29	325	32
	Ba	135	0.014	ug/L	0.001	8	27	84	5
	Ba	137	0.016	ug/L	0.000	1	31	142	0
>	Tb	159		ug/L			946533	981167	1
	Tl	205	0.004	ug/L	0.001	17	29	172	13
	Pb	208	0.009	ug/L	0.001	12	204	616	9
	Bi	209		ug/L			2333295	2490016	1
	Th	232	0.062	ug/L	0.014	23	105	2960	21
	U	238	0.001	ug/L	0.000	35	6	61	31

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ERA P197
Sample Dil Factor: 10
Comments:
Sample Date/Time: Monday, July 29, 2013 15:51:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas Intens	Intens RSD
> Li	6		ug/L			850074	862625	1
Be	9	6.350	ug/L	0.048	0	22	16898	0
C	13		ug/L			58981	57878	1
Cl	37		ug/L			3868617	4140322	3
> Sc	45		ug/L			823285	858727	0
V	51	53.335	ug/L	0.466	0	7453	1002043	0
V-1	51	53.592	ug/L	0 183	0	116	1000406	0
Cr	52	56.665	ug/L	1.733	3	22166	927750	2
Cr	53	57.496	ug/L	1.170	2	158	104312	1
Mn	55	47.792	ug/L	1.360	2	635	1064899	2
Co	59	94.070	ug/L	1.553	1	154	1564809	2
> Ge	72		ug/L			530780	557842	1
Ni	60	74.748	ug/L	0.449	0	38	265115	0
Ni	62	74.086	ug/L	1.407	1	586	38205	1
Cu	63	31.915	ug/L	0.459	1	535	255467	2
Cu	65	30.656	ug/L	0.742	2	79	112204	2
Zn	66	49.904	ug/L	1.777	3	365	106690	2
Zn	67	48.634	ug/L	0.518	1	57	17537	0
Zn	68	50.514	ug/L	2.037	4	609	78257	3
As	75	22.131	ug/L	0.243	1	-31	41087	1
As-1	75	21.915	ug/L	0.367	1	11982	54458	0
Se	82	33.923	ug/L	0.453	1	6	6135	2
Se	78	31.655	ug/L	0.784	2	12160	29092	0
Mo	98	57.336	ug/L	0 261	0	9	225735	0
Y	89		ug/L			303911	316751	1
Kr	83		ug/L			216	232	5
> In	115		ug/L			784570	830419	1
Ag	107	42.135	ug/L	0.260	0	14	407263	1
Cd	111	15.209	ug/L	0 190	1	64	63900	1
Cd	114	15.188	ug/L	0.138	0	34	159750	0
Sb	121	31.385	ug/L	0.317	1	45	376742	0
Sb	123	31.430	ug/L	0.327	1	29	287520	0
Ba	135	45.241	ug/L	0.504	1	27	177604	0
Ba	137	45.120	ug/L	0.388	0	31	309606	0
> Tb	159		ug/L			946533	999861	1
Tl	205	18.159	ug/L	0.406	2	29	636117	1
Pb	208	224.539	ug/L	2.309	1	204	10336750	0
Bi	209		ug/L			2333295	2525494	0
Th	232	0.027	ug/L	0 006	23	105	1382	20
U	238	0.002	ug/L	0.000	23	6	89	20

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 29, 2013 15:55:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			850074	881188	0
Be	9	0.000	ug/L	0.001	562	22	23	13
C	13		ug/L			58981	65291	2
Cl	37		ug/L			3868617	4165685	2
> Sc	45		ug/L			823285	863616	1
V	51	0.009	ug/L	0.016	173	7453	7989	3
V-1	51	0.014	ug/L	0.001	8	116	383	4
Cr	52	U 0.011	ug/L	0.054	478	22166	23427	3
Cr	53	0.027	ug/L	0.003	9	158	214	2
Mn	55	0.010	ug/L	0.001	13	635	879	2
Co	59	0.002	ug/L	0.001	46	154	193	8
> Ge	72		ug/L			530780	555552	0
Ni	60	U 0.006	ug/L	0.002	26	38	60	8
Ni	62	3.895	ug/L	0.121	3	586	2582	3
Cu	63	0.180	ug/L	0.002	0	535	1993	0
Cu	65	0.016	ug/L	0.002	13	79	140	6
Zn	66	0.214	ug/L	0.012	5	365	837	3
Zn	67	0.161	ug/L	0.023	14	57	118	7
Zn	68	0.215	ug/L	0.022	10	609	966	3
As	75	U -0.011	ug/L	0.015	130	-31	-53	51
As-1	75	-0.194	ug/L	0.063	32	11982	12172	0
Se	82	U -0.013	ug/L	0.059	472	6	4	233
Se	78	-0.671	ug/L	0.157	23	12160	12383	0
Mo	98	0.074	ug/L	0.012	15	9	301	14
Y	89		ug/L			303911	317084	1
Kr	83		ug/L			216	237	4
> In	115		ug/L			784570	835113	0
Ag	107	U 0.003	ug/L	0.001	37	14	46	24
Cd	111	U 0.003	ug/L	0.002	72	64	82	12
Cd	114	0.002	ug/L	0.001	31	34	57	11
Sb	121	U 0.067	ug/L	0.020	29	45	852	27
Sb	123	0.067	ug/L	0.020	30	29	648	28
Ba	135	0.000	ug/L	0.001	401	27	30	16
Ba	137	0.003	ug/L	0.002	77	31	52	27
> Tb	159		ug/L			946533	989636	0
Tl	205	U 0.006	ug/L	0.001	13	29	234	11
Pb	208	U 0.010	ug/L	0 002	20	204	652	13
Bi	209		ug/L			2333295	2517382	0
Th	232	0.060	ug/L	0.017	28	105	2926	27
U	238	0.001	ug/L	0.000	22	6	70	20

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 29, 2013 15:59:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			850074	911058	1
	Be	9	0.204	ug/L	0.007	3	22	597	5
	C	13		ug/L			58981	107784	0
	Cl	37		ug/L			3868617	4302891	1
>	Sc	45		ug/L			823285	966484	1
	V	51	35.637	ug/L	0.101	0	7453	756456	1
	V-1	51	35.491	ug/L	0.292	0	116	745635	0
	Cr	52	33.073	ug/L	0.207	0	22166	620306	1
	Cr	53	32.601	ug/L	1.061	3	158	66634	1
	Mn	55	259.256	ug/L	3.100	1	635	6497730	0
	Co	59	5.584	ug/L	0.133	2	154	104688	1
>	Ge	72		ug/L			530780	562567	0
	Ni	60	23.086	ug/L	0.381	1	38	82599	0
	Ni	62	27.085	ug/L	0.207	0	586	14481	1
	Cu	63	63.617	ug/L	0.913	1	535	512911	0
	Cu	65	63.028	ug/L	0.872	1	79	232548	0
	Zn	66	575.745	ug/L	7 218	1	365	1237428	0
	Zn	67	513.982	ug/L	13.252	2	57	186341	2
	Zn	68	552.857	ug/L	12.869	2	609	857426	2
	As	75	4.689	ug/L	0.068	1	-31	8752	1
	As-1	75	4.164	ug/L	0.091	2	11982	20721	0
	Se	82	U 0.154	ug/L	0.034	22	6	34	17
	Se	78	-1.117	ug/L	0.210	18	12160	12307	0
	Mo	98	2.573	ug/L	0.047	1	9	10227	2
	Y	89		ug/L			303911	442948	1
	Kr	83		ug/L			216	367	6
>	In	115		ug/L			784570	812962	0
	Ag	107	U 0.098	ug/L	0.003	2	14	945	2
	Cd	111	0.982	ug/L	0.042	4	64	4102	3
	Cd	114	0.941	ug/L	0.021	2	34	9722	1
	Sb	121	U 0.064	ug/L	0.011	17	45	796	17
	Sb	123	0.064	ug/L	0.009	14	29	601	14
	Ba	135	78.815	ug/L	1.304	1	27	302870	0
	Ba	137	78.587	ug/L	0.741	0	31	527907	0
>	Tb	159		ug/L			946533	1021694	0
	Tl	205	U 0.078	ug/L	0.003	3	29	2819	3
	Pb	208	118.203	ug/L	0.793	0	204	5560798	0
	Bi	209		ug/L			2333295	2424216	1
	Th	232	1.179	ug/L	0.042	3	105	56905	3
	U	238	0.246	ug/L	0.005	1	6	11782	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 29, 2013 16:04:00
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	910870	0
	Be	9	0.190	ug/L	0.009	4	22	558	4
	C	13		ug/L			58981	120169	3
	Cl	37		ug/L			3868617	4327097	2
>	Sc	45		ug/L			823285	967749	2
	V	51	43.356	ug/L	1.063	2	7453	919239	0
	V-1	51	43.360	ug/L	1.054	2	116	911824	0
	Cr	52	37.482	ug/L	1 540	4	22166	700036	1
	Cr	53	37.520	ug/L	1.370	3	158	76733	1
	Mn	55	249.093	ug/L	2.284	0	635	6252728	3
	Co	59	5.991	ug/L	0.161	2	154	112417	0
>	Ge	72		ug/L			530780	555826	1
	Ni	60	23.367	ug/L	0.731	3	38	82591	2
	Ni	62	28.216	ug/L	0.254	0	586	14878	0
	Cu	63	59.740	ug/L	1.653	2	535	475814	1
	Cu	65	60.472	ug/L	1.085	1	79	220436	1
	Zn	66	819.737	ug/L	21.754	2	365	1740226	1
	Zn	67	733.035	ug/L	3.895	0	57	262537	1
	Zn	68	783.018	ug/L	20.216	2	609	1199371	1
	As	75	4.343	ug/L	0.120	2	-31	8004	1
	As-1	75	4.019	ug/L	0.188	4	11982	20195	0
	Se	82	U 0.308	ug/L	0.032	10	6	62	7
	Se	78	-0.261	ug/L	0.375	143	12160	12599	1
	Mo	98	3.762	ug/L	0.040	1	9	14767	1
	Y	89		ug/L			303911	439881	2
	Kr	83		ug/L			216	369	3
>	In	115		ug/L			784570	813845	0
	Ag	107	U 0.165	ug/L	0.004	2	14	1575	2
	Cd	111	0.793	ug/L	0.027	3	64	3329	3
	Cd	114	0.701	ug/L	0.012	1	34	7263	1
	Sb	121	U 0.078	ug/L	0.009	11	45	958	10
	Sb	123	0.077	ug/L	0.009	11	29	721	10
	Ba	135	116.183	ug/L	1.815	1	27	446960	0
	Ba	137	117.362	ug/L	1.404	1	31	789208	0
>	Tb	159		ug/L			946533	1019706	0
	Tl	205	U 0.105	ug/L	0.002	1	29	3792	1
	Pb	208	72.008	ug/L	0.283	0	204	3381104	0
	Bi	209		ug/L			2333295	2434598	1
	Th	232	0.973	ug/L	0.022	2	105	46914	2
	U	238	0.267	ug/L	0.002	0	6	12781	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 29, 2013 16:08:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	891647	2
	Be	9	0.211	ug/L	0.004	2	22	601	1
	C	13		ug/L			58981	96056	5
	Cl	37		ug/L			3868617	4335165	1
>	Sc	45		ug/L			823285	939546	0
	V	51	51.346	ug/L	0.204	0	7453	1055798	0
	V-1	51	51.464	ug/L	0.083	0	116	1051125	0
	Cr	52	30.827	ug/L	0 266	0	22166	563819	0
	Cr	53	31.300	ug/L	0.572	1	158	62217	1
	Mn	55	275.907	ug/L	5.248	1	635	6723243	2
	Co	59	6.466	ug/L	0.158	2	154	117836	2
>	Ge	72		ug/L			530780	555536	1
	Ni	60	25.737	ug/L	0.742	2	38	90912	1
	Ni	62	30.750	ug/L	0.429	1	586	16152	2
	Cu	63	58.173	ug/L	0.532	0	535	463237	2
	Cu	65	58.358	ug/L	0 859	1	79	212618	0
	Zn	66	678.096	ug/L	3.680	0	365	1439177	1
	Zn	67	612.585	ug/L	12.300	2	57	219258	0
	Zn	68	650.849	ug/L	3.212	0	609	996776	2
	As	75	5.355	ug/L	0.073	1	-31	9875	1
	As-1	75	5.069	ug/L	0.257	5	11982	22182	1
	Se	82	U 0.250	ug/L	0.043	17	6	51	13
	Se	78	-0.093	ug/L	0.693	748	12160	12677	1
	Mo	98	3.582	ug/L	0.003	0	9	14052	1
	Y	89		ug/L			303911	461334	0
	Kr	83		ug/L			216	356	5
>	In	115		ug/L			784570	805124	2
	Ag	107	0.266	ug/L	0.007	2	14	2510	1
	Cd	111	0.926	ug/L	0.012	1	64	3832	0
	Cd	114	0.844	ug/L	0.042	4	34	8638	3
	Sb	121	U 0.099	ug/L	0.007	7	45	1198	4
	Sb	123	0.096	ug/L	0.008	7	29	878	5
	Ba	135	160.595	ug/L	3.623	2	27	611041	1
	Ba	137	159.501	ug/L	3.285	2	31	1060801	0
>	Tb	159		ug/L			946533	1014551	0
	Tl	205	U 0.098	ug/L	0.001	1	29	3503	1
	Pb	208	59.000	ug/L	0.144	0	204	2756392	0
	Bi	209		ug/L			2333295	2417161	0
	Th	232	0.984	ug/L	0.012	1	105	47186	0
	U	238	0.294	ug/L	0.004	1	6	13980	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 29, 2013 16:12:16
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	881894	1
	Be	9	0.220	ug/L	0.011	4	22	619	5
	C	13		ug/L			58981	104197	1
	Cl	37		ug/L			3868617	4255044	1
>	Sc	45		ug/L			823285	915365	0
	V	51	54.381	ug/L	1.253	2	7453	1089047	2
	V-1	51	54.188	ug/L	1.205	2	116	1078347	2
	Cr	52	34.817	ug/L	0.938	2	22166	617301	3
	Cr	53	34.257	ug/L	0.747	2	158	66333	2
	Mn	55	271.454	ug/L	2 442	0	635	6444036	0
	Co	59	6.627	ug/L	0.072	1	154	117649	0
>	Ge	72		ug/L			530780	544757	2
	Ni	60	25.248	ug/L	0.942	3	38	87425	1
	Ni	62	30.290	ug/L	1.034	3	586	15603	1
	Cu	63	97.661	ug/L	3.563	3	535	761833	2
	Cu	65	94.122	ug/L	1 146	1	79	336243	2
	Zn	66	866.620	ug/L	28.122	3	365	1802611	0
	Zn	67	741.616	ug/L	22.556	3	57	260200	0
	Zn	68	833.303	ug/L	16.585	1	609	1250847	1
	As	75	5.869	ug/L	0.152	2	-31	10613	1
	As-1	75	5.704	ug/L	0.276	4	11982	22934	1
	Se	82	0.304	ug/L	0.080	26	6	60	24
	Se	78	0.450	ug/L	0.450	100	12160	12703	1
	Mo	98	3.835	ug/L	0.026	0	9	14754	2
	Y	89		ug/L			303911	451454	1
	Kr	83		ug/L			216	343	5
>	In	115		ug/L			784570	794123	1
	Ag	107	0.227	ug/L	0.006	2	14	2115	2
	Cd	111	0.975	ug/L	0.018	1	64	3977	1
	Cd	114	0.880	ug/L	0 007	0	34	8887	1
	Sb	121	0.095	ug/L	0.005	5	45	1132	6
	Sb	123	0.096	ug/L	0.009	9	29	868	10
	Ba	135	187.607	ug/L	2.095	1	27	704283	1
	Ba	137	188.019	ug/L	1.161	0	31	1233713	0
>	Tb	159		ug/L			946533	1002684	0
	Tl	205	0.100	ug/L	0.002	1	29	3560	2
	Pb	208	69.579	ug/L	0.052	0	204	3212576	0
	Bi	209		ug/L			2333295	2361869	0
	Th	232	1.044	ug/L	0.008	0	105	49492	1
	U	238	0.299	ug/L	0.003	1	6	14062	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 29, 2013 16:16:23
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			850074	876975	3
	Be	9	24.562	ug/L	1.034	4	22	66320	0
	C	13		ug/L			58981	92844	1
	Cl	37		ug/L			3868617	4236673	1
>	Sc	45		ug/L			823285	956831	1
	V	51	75.496	ug/L	2.610	3	7453	1576224	1
	V-1	51	75.345	ug/L	2.986	3	116	1566431	2
	Cr	52	57.844	ug/L	1.709	2	22166	1054440	0
	Cr	53	57.416	ug/L	2.842	4	158	116019	3
	Mn	55	283.531	ug/L	2.940	1	635	7035046	0
	Co	59	28.663	ug/L	0.490	1	154	531275	1
>	Ge	72		ug/L			530780	553825	3
	Ni	60	50.261	ug/L	1.917	3	38	176827	0
	Ni	62	54.589	ug/L	2.370	4	586	28083	1
	Cu	63	104.219	ug/L	5.700	5	535	825742	1
	Cu	65	101.264	ug/L	4.837	4	79	367342	0
	Zn	66	855.375	ug/L	27.093	3	365	1808310	0
	Zn	67	744.623	ug/L	14.904	2	57	265614	2
	Zn	68	817.037	ug/L	26.911	3	609	1246179	0
	As	75	27.584	ug/L	1 427	5	-31	50786	1
	As-1	75	28.880	ug/L	1.501	5	11982	67214	1
	Se	82	74.264	ug/L	3.488	4	6	13311	1
	Se	78	73.923	ug/L	3.370	4	12160	50470	0
	Mo	98	24.382	ug/L	1 026	4	9	95209	0
	Y	89		ug/L			303911	465122	2
	Kr	83		ug/L			216	369	4
>	In	115		ug/L			784570	803411	1
	Ag	107	23.029	ug/L	0 293	1	14	215322	0
	Cd	111	24.333	ug/L	0.210	0	64	98866	0
	Cd	114	24.653	ug/L	0.201	0	34	250829	0
	Sb	121	0.841	ug/L	0.007	0	45	9812	2
	Sb	123	0.843	ug/L	0.012	1	29	7491	2
	Ba	135	180.112	ug/L	1.039	0	27	684072	1
	Ba	137	180.161	ug/L	1 557	0	31	1195952	1
>	Tb	159		ug/L			946533	1011552	0
	Tl	205	22.280	ug/L	0.236	1	29	789695	0
	Pb	208	113.545	ug/L	0.917	0	204	5288709	0
	Bi	209		ug/L			2333295	2384298	1
	Th	232	22.190	ug/L	0.015	0	105	1058875	0
	U	238	22.632	ug/L	0.392	1	6	1072650	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 29, 2013 16:20:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	879583	1
	Be	9	24.278	ug/L	0.639	2	22	65802	1
	C	13		ug/L			58981	61026	3
	Cl	37		ug/L			3868617	4095814	2
>	Sc	45		ug/L			823285	869648	0
	V	51	24.905	ug/L	0.103	0	7453	478059	0
	V-1	51	24.963	ug/L	0.156	0	116	471981	0
	Cr	52	24.713	ug/L	0.286	1	22166	423012	1
	Cr	53	24.906	ug/L	0.373	1	158	45856	1
	Mn	55	24.855	ug/L	0.572	2	635	561227	2
	Co	59	25.490	ug/L	0.265	1	154	429506	0
>	Ge	72		ug/L			530780	563866	1
	Ni	60	25.389	ug/L	0.506	1	38	91032	0
	Ni	62	27.956	ug/L	0.323	1	586	14960	1
	Cu	63	25.501	ug/L	0.179	0	535	206425	1
	Cu	65	25.363	ug/L	0.189	0	79	93847	1
	Zn	66	80.504	ug/L	1.683	2	365	173757	2
	Zn	67	74.049	ug/L	1.633	2	57	26953	0
	Zn	68	78.392	ug/L	1.844	2	609	122397	1
	As	75	23.380	ug/L	0.579	2	-31	43867	0
	As-1	75	24.527	ug/L	0.610	2	11982	60084	0
	Se	82	79.633	ug/L	2.095	2	6	14545	1
	Se	78	77.525	ug/L	1.579	2	12160	53298	0
	Mo	98	23.581	ug/L	0.280	1	9	93851	1
	Y	89		ug/L			303911	310766	1
	Kr	83		ug/L			216	246	5
>	In	115		ug/L			784570	805353	1
	Ag	107	25.757	ug/L	0.334	1	14	241406	1
	Cd	111	24.884	ug/L	0.355	1	64	101344	1
	Cd	114	24.987	ug/L	0.592	2	34	254796	0
	Sb	121	24.138	ug/L	0.298	1	45	280989	0
	Sb	123	24.185	ug/L	0.562	2	29	214525	0
	Ba	135	24.546	ug/L	0.471	1	27	93452	0
	Ba	137	24.539	ug/L	0.354	1	31	163299	1
>	Tb	159		ug/L			946533	964744	0
	Tl	205	24.301	ug/L	0 269	1	29	821438	0
	Pb	208	25.049	ug/L	0.364	1	204	1112861	0
	Bi	209		ug/L			2333295	2391815	0
	Th	232	21.363	ug/L	0.937	4	105	972377	4
	U	238	24.435	ug/L	0.364	1	6	1104525	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 MB1SPD SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 29, 2013 16:24:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	879538	0
	Be	9	24.649	ug/L	0.319	1	22	66813	0
	C	13		ug/L			58981	62407	2
	Cl	37		ug/L			3868617	4141623	1
>	Sc	45		ug/L			823285	869231	1
	V	51	25.201	ug/L	0.445	1	7453	483405	2
	V-1	51	25.201	ug/L	0.445	1	116	476230	2
	Cr	52	24.881	ug/L	0.374	1	22166	425450	0
	Cr	53	24.881	ug/L	0.433	1	158	45781	0
	Mn	55	25.195	ug/L	0.155	0	635	568565	1
	Co	59	25.331	ug/L	0.308	1	154	426622	2
>	Ge	72		ug/L			530780	555584	0
	Ni	60	26.289	ug/L	0.277	1	38	92889	0
	Ni	62	29.221	ug/L	0.379	1	586	15379	0
	Cu	63	26.169	ug/L	0.111	0	535	208711	1
	Cu	65	25.675	ug/L	0.180	0	79	93612	1
	Zn	66	81.441	ug/L	0.373	0	365	173201	0
	Zn	67	74.313	ug/L	1.362	1	57	26661	2
	Zn	68	80.074	ug/L	2.514	3	609	123208	3
	As	75	24.017	ug/L	0 556	2	-31	44417	3
	As-1	75	25.028	ug/L	0.341	1	11982	60166	1
	Se	82	81.708	ug/L	0.841	1	6	14709	1
	Se	78	78.943	ug/L	1.159	1	12160	53248	0
	Mo	98	24.550	ug/L	0.119	0	9	96273	1
	Y	89		ug/L			303911	313330	1
	Kr	83		ug/L			216	247	1
>	In	115		ug/L			784570	811976	1
	Ag	107	25.560	ug/L	0.290	1	14	241548	0
	Cd	111	24.876	ug/L	0.247	0	64	102155	1
	Cd	114	24.810	ug/L	0.276	1	34	255129	0
	Sb	121	24.452	ug/L	0.341	1	45	286983	0
	Sb	123	24.166	ug/L	0.179	0	29	216160	0
	Ba	135	24.519	ug/L	0.126	0	27	94132	0
	Ba	137	24.349	ug/L	0.462	1	31	163378	1
>	Tb	159		ug/L			946533	969876	0
	Tl	205	24.485	ug/L	0.209	0	29	832100	0
	Pb	208	25.138	ug/L	0.192	0	204	1122793	0
	Bi	209		ug/L			2333295	2430482	2
	Th	232	22.126	ug/L	0.704	3	105	1012200	2
	U	238	24.430	ug/L	0.286	1	6	1110220	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 16:29:51
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			850074	874236	0
[	Be	9	50.567	ug/L	0.557	1	22	136222	1
	C	13		ug/L			58981	56507	2
	Cl	37		ug/L			3868617	4232047	0
[>	Sc	45		ug/L			823285	866172	1
[	V	51	51.738	ug/L	0.427	0	7453	980673	0
[	V-1	51	51.829	ug/L	0.770	1	116	975788	0
[	Cr	52	49.827	ug/L	0.652	1	22166	825723	1
[	Cr	53	50.131	ug/L	1.591	3	158	91744	2
[	Mn	55	50.118	ug/L	0 892	1	635	1126313	1
[	Co	59	51.528	ug/L	1.204	2	154	864457	1
[>	Ge	72		ug/L			530780	552293	1
[	Ni	60	51.533	ug/L	1.484	2	38	180965	2
[	Ni	62	53.610	ug/L	0.880	1	586	27540	1
[	Cu	63	50.914	ug/L	1.005	1	535	403130	2
[	Cu	65	51.452	ug/L	0.503	0	79	186389	0
[	Zn	66	51.369	ug/L	0.377	0	365	108742	1
[	Zn	67	52.199	ug/L	0.428	0	57	18633	1
[	Zn	68	51.314	ug/L	1.771	3	609	78691	2
[	As	75	50.994	ug/L	0.916	1	-31	93768	1
[	As-1	75	50.843	ug/L	1.025	2	11982	108628	0
[	Se	82	53.081	ug/L	0.761	1	6	9501	1
[	Se	78	51.904	ug/L	1.130	2	12160	39135	0
[	Mo	98	50.620	ug/L	0.800	1	9	197300	0
	Y	89		ug/L			303911	309717	1
	Kr	83		ug/L			216	247	9
[>	In	115		ug/L			784570	800200	0
[	Ag	107	49.739	ug/L	0.449	0	14	463234	0
[	Cd	111	50.024	ug/L	0.640	1	64	202374	0
[	Cd	114	50.624	ug/L	0.268	0	34	513032	1
[	Sb	121	49.884	ug/L	0.610	1	45	577012	1
[	Sb	123	49.863	ug/L	0.244	0	29	439533	0
[	Ba	135	49.827	ug/L	0.202	0	27	188498	0
[	Ba	137	50.056	ug/L	0.636	1	31	330980	0
[>	Tb	159		ug/L			946533	971080	1
[	Tl	205	48.601	ug/L	0.960	1	29	1653384	0
[	Pb	208	49.557	ug/L	0.674	1	204	2215823	0
[	Bi	209		ug/L			2333295	2348410	0
[	Th	232	53.653	ug/L	0.413	0	105	2457808	2
[	U	238	53.266	ug/L	1.019	1	6	2423299	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 16:36:44
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	850943	0
	Be	9	0.004	ug/L	0.005	124	22	32	39
	C	13		ug/L			58981	58583	3
	Cl	37		ug/L			3868617	4048322	1
>	Sc	45		ug/L			823285	841412	1
	V	51	-0.012	ug/L	0.005	41	7453	7406	1
	V-1	51	0.003	ug/L	0.003	98	116	165	26
	Cr	52	-0.045	ug/L	0.011	23	22166	21953	0
	Cr	53	0.002	ug/L	0 007	387	158	165	6
	Mn	55	0.005	ug/L	0.004	82	635	755	10
	Co	59	0.003	ug/L	0.002	58	154	205	12
>	Ge	72		ug/L			530780	544463	1
	Ni	60	0.003	ug/L	0.002	71	38	48	12
	Ni	62	3.098	ug/L	0.212	6	586	2135	3
	Cu	63	0.138	ug/L	0.009	6	535	1624	4
	Cu	65	0.002	ug/L	0.000	20	79	89	2
	Zn	66	0.046	ug/L	0.013	28	365	470	6
	Zn	67	0.039	ug/L	0.013	32	57	73	7
	Zn	68	0.039	ug/L	0.006	15	609	683	1
	As	75	-0.009	ug/L	0.012	144	-31	-47	46
	As-1	75	0.011	ug/L	0.065	590	11982	12311	0
	Se	82	-0.022	ug/L	0.051	230	6	2	330
	Se	78	0.062	ug/L	0.215	348	12160	12504	0
	Mo	98	0.023	ug/L	0.006	26	9	98	23
	Y	89		ug/L			303911	304420	1
	Kr	83		ug/L			216	228	14
>	In	115		ug/L			784570	785207	0
	Ag	107	0.005	ug/L	0.004	86	14	55	65
	Cd	111	0.005	ug/L	0.001	32	64	82	7
	Cd	114	0.002	ug/L	0.002	109	34	56	42
	Sb	121	0.100	ug/L	0 026	26	45	1177	24
	Sb	123	0.098	ug/L	0.027	27	29	878	25
	Ba	135	-0.001	ug/L	0.004	638	27	25	51
	Ba	137	0.003	ug/L	0.003	90	31	52	36
>	Tb	159		ug/L			946533	933942	0
	Tl	205	0.007	ug/L	0.001	18	29	253	16
	Pb	208	0.004	ug/L	0.002	51	204	368	23
	Bi	209		ug/L			2333295	2378046	0
	Th	232	0.263	ug/L	0.064	24	105	11691	24
	U	238	0.005	ug/L	0.001	23	6	206	22

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY90 MB SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 29, 2013 16:40:53
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
> Li	6		ug/L			850074	859993	2
Be	9	-0.000	ug/L	0.002	3152	22	22	22
C	13		ug/L			58981	60277	0
Cl	37		ug/L			3868617	4082475	0
> Sc	45		ug/L			823285	852571	1
V	51	0.015	ug/L	0.007	48	7453	7997	0
V-1	51	0.008	ug/L	0.001	15	116	263	7
Cr	52	0.030	ug/L	0.027	89	22166	23420	0
Cr	53	0.005	ug/L	0.006	120	158	173	5
Mn	55	0.016	ug/L	0.001	4	635	1004	2
Co	59	0.002	ug/L	0.000	21	154	195	4
> Ge	72		ug/L			530780	553134	2
Ni	60	0.010	ug/L	0.003	27	38	76	11
Ni	62	2.865	ug/L	0.105	3	586	2051	1
Cu	63	0.149	ug/L	0.007	4	535	1735	3
Cu	65	0.022	ug/L	0.003	13	79	162	8
Zn	66	0.725	ug/L	0.020	2	365	1912	4
Zn	67	0.651	ug/L	0.034	5	57	292	5
Zn	68	0.679	ug/L	0.048	7	609	1669	4
As	75	U -0.002	ug/L	0.026	1449	-31	-36	131
As-1	75	0.124	ug/L	0.201	162	11982	12716	0
Se	82	-0.027	ug/L	0.023	84	6	1	203
Se	78	0.450	ug/L	0.753	167	12160	12897	1
Mo	98	0.010	ug/L	0.005	43	9	50	33
Y	89		ug/L			303911	311293	1
Kr	83		ug/L			216	232	5
> In	115		ug/L			784570	790083	1
Ag	107	0.002	ug/L	0.001	31	14	31	16
Cd	111	U 0.004	ug/L	0.002	42	64	80	8
Cd	114	0.001	ug/L	0.000	22	34	46	5
Sb	121	0.032	ug/L	0.011	35	45	407	32
Sb	123	0.035	ug/L	0.010	30	29	333	28
Ba	135	0.006	ug/L	0.002	36	27	49	16
Ba	137	0.006	ug/L	0.000	2	31	72	0
> Tb	159		ug/L			946533	935026	1
Tl	205	0.005	ug/L	0.001	12	29	181	11
Pb	208	U 0.018	ug/L	0.000	0	204	996	1
Bi	209		ug/L			2333295	2386607	0
Th	232	0.122	ug/L	0.031	25	105	5488	26
U	238	0.002	ug/L	0.001	24	6	108	24

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 E REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Monday, July 29, 2013 16:45:01
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	869685	1
	Be	9	0.002	ug/L	0.002	92	22	27	16
	C	13		ug/L			58981	72815	1
	Cl	37		ug/L			3868617	5080975	2
>	Sc	45		ug/L			823285	861975	1
	V	51	0.358	ug/L	0.009	2	7453	14497	2
	V-1	51	0.458	ug/L	0.027	5	116	8700	4
	Cr	52	0.581	ug/L	0.010	1	22166	32524	1
	Cr	53	0.911	ug/L	0.105	11	158	1821	9
	Mn	55	151.339	ug/L	4.259	2	635	3382786	1
	Co	59	1.141	ug/L	0 030	2	154	19201	1
>	Ge	72		ug/L			530780	546996	1
	Ni	60	5.018	ug/L	0.071	1	38	17487	1
	Ni	62	10.789	ug/L	0.727	6	586	5975	7
	Cu	63	5.562	ug/L	0.051	0	535	44108	0
	Cu	65	4.369	ug/L	0.098	2	79	15747	1
	Zn	66	169.247	ug/L	5.761	3	365	353848	1
	Zn	67	147.343	ug/L	3.070	2	57	51978	2
	Zn	68	158.497	ug/L	0.777	0	609	239460	1
	As	75	0.638	ug/L	0.026	4	-31	1128	2
	As-1	75	0.785	ug/L	0.097	12	11982	13816	0
	Se	82	0.204	ug/L	0.067	32	6	43	29
	Se	78	0.812	ug/L	0.241	29	12160	12941	0
	Mo	98	4.003	ug/L	0.121	3	9	15458	1
	Y	89		ug/L			303911	309539	2
	Kr	83		ug/L			216	237	8
>	In	115		ug/L			784570	774741	1
	Ag	107	0.003	ug/L	0.001	22	14	40	14
	Cd	111	0.160	ug/L	0.003	2	64	689	3
	Cd	114	0.164	ug/L	0.002	1	34	1640	0
	Sb	121	2.492	ug/L	0.031	1	45	27944	0
	Sb	123	2.500	ug/L	0.059	2	29	21364	1
	Ba	135	17.302	ug/L	0.257	1	27	63386	1
	Ba	137	17.152	ug/L	0.240	1	31	109812	0
>	Tb	159		ug/L			946533	962332	0
	Tl	205	0.028	ug/L	0 002	6	29	958	6
	Pb	208	0.402	ug/L	0.002	0	204	18023	0
	Bi	209		ug/L			2333295	2296207	1
	Th	232	0.071	ug/L	0.023	32	105	3321	31
	U	238	0.007	ug/L	0.000	6	6	335	6

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 DDUP REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Monday, July 29, 2013 16:49:08
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	872833	2
	Be	9	0.009	ug/L	0.004	43	22	47	21
	C	13		ug/L			58981	67515	3
	Cl	37		ug/L			3868617	4957422	0
>	Sc	45		ug/L			823285	865356	1
	V	51	2.620	ug/L	0.048	1	7453	57047	1
	V-1	51	2.858	ug/L	0.060	2	116	53878	1
	Cr	52	1.912	ug/L	0.039	2	22166	54059	1
	Cr	53	2.700	ug/L	0.074	2	158	5095	1
	Mn	55	168.059	ug/L	2.336	1	635	3771660	0
	Co	59	1.461	ug/L	0.024	1	154	24648	0
>	Ge	72		ug/L			530780	540577	0
	Ni	60	6.102	ug/L	0.036	0	38	21009	1
	Ni	62	12.346	ug/L	0.982	7	586	6666	6
	Cu	63	10.524	ug/L	0.217	2	535	81991	2
	Cu	65	9.273	ug/L	0.093	1	79	32944	0
	Zn	66	229.282	ug/L	2.641	1	365	473768	0
	Zn	67	203.876	ug/L	3.284	1	57	71058	1
	Zn	68	218.955	ug/L	4.585	2	609	326680	1
	As	75	0.868	ug/L	0 015	1	-31	1530	1
	As-1	75	1.052	ug/L	0.093	8	11982	14151	1
	Se	82	0.206	ug/L	0.035	16	6	42	14
	Se	78	0.981	ug/L	0 349	35	12160	12874	1
	Mo	98	4.392	ug/L	0.021	0	9	16764	0
	Y	89		ug/L			303911	314455	0
	Kr	83		ug/L			216	239	8
>	In	115		ug/L			784570	777073	1
	Ag	107	0.017	ug/L	0.001	8	14	170	7
	Cd	111	0.250	ug/L	0.003	1	64	1045	1
	Cd	114	0.263	ug/L	0.005	1	34	2626	2
	Sb	121	2.578	ug/L	0.017	0	45	28994	0
	Sb	123	2.559	ug/L	0.010	0	29	21936	1
	Ba	135	22.279	ug/L	0.497	2	27	81843	0
	Ba	137	21.908	ug/L	0.200	0	31	140685	0
>	Tb	159		ug/L			946533	952998	1
	Tl	205	0.028	ug/L	0.001	4	29	980	4
	Pb	208	5.766	ug/L	0.090	1	204	253159	0
	Bi	209		ug/L			2333295	2325062	1
	Th	232	0.085	ug/L	0.020	23	105	3956	24
	U	238	0.033	ug/L	0.000	0	6	1458	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 D REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Monday, July 29, 2013 16:53:16
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

Zn

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	872447	0
	Be	9	0.013	ug/L	0.004	29	22	57	18
	C	13		ug/L			58981	71216	2
	Cl	37		ug/L			3868617	5114839	2
>	Sc	45		ug/L			823285	867694	0
	V	51	2.636	ug/L	0.057	2	7453	57514	1
	V-1	51	2.927	ug/L	0 047	1	116	55317	1
	Cr	52	1.873	ug/L	0.097	5	22166	53576	2
	Cr	53	2.832	ug/L	0.043	1	158	5351	2
	Mn	55	165.409	ug/L	2.768	1	635	3722384	1
	Co	59	1.463	ug/L	0.023	1	154	24745	1
>	Ge	72		ug/L			530780	550736	0
	Ni	60	5.931	ug/L	0.117	1	38	20805	1
	Ni	62	12.827	ug/L	0.754	5	586	7033	5
	Cu	63	10.270	ug/L	0.155	1	535	81524	1
	Cu	65	8.971	ug/L	0.281	3	79	32472	2
	Zn	66	224.759	ug/L	3 590	1	365	473164	1
	Zn	67	194.461	ug/L	1.747	0	57	69052	0
	Zn	68	214.874	ug/L	3.503	1	609	326624	0
	As	75	0.851	ug/L	0.017	2	-31	1528	2
	As-1	75	0.803	ug/L	0.086	10	11982	13946	0
	Se	82	0.246	ug/L	0.050	20	6	50	18
	Se	78	0.151	ug/L	0.289	190	12160	12694	0
	Mo	98	4.295	ug/L	0.105	2	9	16702	2
	Y	89		ug/L			303911	319902	2
	Kr	83		ug/L			216	239	9
>	In	115		ug/L			784570	797925	2
	Ag	107	0.014	ug/L	0.002	15	14	147	14
	Cd	111	0.263	ug/L	0.012	4	64	1124	2
	Cd	114	0.254	ug/L	0.010	3	34	2603	4
	Sb	121	2.544	ug/L	0.050	1	45	29377	0
	Sb	123	2.525	ug/L	0.040	1	29	22220	0
	Ba	135	21.921	ug/L	0.593	2	27	82676	0
	Ba	137	21.670	ug/L	0.319	1	31	142877	0
>	Tb	159		ug/L			946533	982973	0
	Tl	205	0.028	ug/L	0.001	2	29	993	2
	Pb	208	5.669	ug/L	0.047	0	204	256774	0
	Bi	209		ug/L			2333295	2363051	1
	Th	232	0.061	ug/L	0 012	19	105	2931	19
	U	238	0.031	ug/L	0.000	0	6	1417	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY32 DSPK REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Monday, July 29, 2013 16:57:23
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

Zn

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	883270	0
	Be	9	9.645	ug/L	0.085	0	22	26267	0
	C	13		ug/L			58981	68023	4
	Cl	37		ug/L			3868617	5083944	2
>	Sc	45		ug/L			823285	878400	2
	V	51	12.200	ug/L	0.299	2	7453	240534	1
	V-1	51	12.553	ug/L	0.279	2	116	239736	1
	Cr	52	11.267	ug/L	0.295	2	22166	207617	1
	Cr	53	12.433	ug/L	0.274	2	158	23205	2
	Mn	55	173.126	ug/L	6.752	3	635	3942165	1
	Co	59	11.166	ug/L	0.156	1	154	190115	1
>	Ge	72		ug/L			530780	548958	0
	Ni	60	15.747	ug/L	0.272	1	38	54996	2
	Ni	62	24.910	ug/L	1.743	6	586	13043	6
	Cu	63	20.311	ug/L	0.232	1	535	160167	0
	Cu	65	18.763	ug/L	0.450	2	79	67604	1
	Zn	66	251.712	ug/L	8.138	3	365	528055	2
	Zn	67	224.343	ug/L	2.504	1	57	79403	1
	Zn	68	242.585	ug/L	1.207	0	609	367501	1
	As	75	10.542	ug/L	0.244	2	-31	19242	1
	As-1	75	10.810	ug/L	0.336	3	11982	32713	1
	Se	82	32.261	ug/L	0.508	1	6	5741	0
	Se	78	30.821	ug/L	0.845	2	12160	28207	0
	Mo	98	13.868	ug/L	0.162	1	9	53733	0
	Y	89		ug/L			303911	315524	1
	Kr	83		ug/L			216	251	3
>	In	115		ug/L			784570	800701	1
	Ag	107	7.186	ug/L	0.168	2	14	66971	1
	Cd	111	10.186	ug/L	0.270	2	64	41281	1
	Cd	114	10.175	ug/L	0.185	1	34	103198	0
	Sb	121	11.586	ug/L	0 256	2	45	134117	1
	Sb	123	11.569	ug/L	0.354	3	29	102043	2
	Ba	135	31.809	ug/L	0.534	1	27	120410	0
	Ba	137	31.570	ug/L	0.592	1	31	208873	0
>	Tb	159		ug/L			946533	990271	1
	Tl	205	9.483	ug/L	0.185	1	29	329024	0
	Pb	208	15.336	ug/L	0.301	1	204	699402	1
	Bi	209		ug/L			2333295	2380721	0
	Th	232	7.397	ug/L	0.049	0	105	345599	0
	U	238	9.670	ug/L	0.219	2	6	448646	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY90 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 29, 2013 17:01:31
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	864963	1
	Be	9	0.005	ug/L	0.004	90	22	34	30
	C	13		ug/L			58981	149647	2
	Cl	37		ug/L			3868617	4294888	2
>	Sc	45		ug/L			823285	842811	2
	V	51	0.323	ug/L	0.015	4	7453	13534	0
	V-1	51	0.210	ug/L	0.003	1	116	3963	1
	Cr	52	0.828	ug/L	0.039	4	22166	35660	1
	Cr	53	0.454	ug/L	0.010	2	158	969	4
	Mn	55	107.984	ug/L	2.131	1	635	2359869	0
	Co	59	0.208	ug/L	0.008	3	154	3549	1
>	Ge	72		ug/L			530780	537736	1
	Ni	60	1.926	ug/L	0.023	1	38	6622	1
	Ni	62	8.586	ug/L	0.371	4	586	4795	4
	Cu	63	1.590	ug/L	0.026	1	535	12777	0
	Cu	65	1.168	ug/L	0.027	2	79	4196	1
	Zn	66	13.896	ug/L	0.363	2	365	28906	1
	Zn	67	14.350	ug/L	0.465	3	57	5029	3
	Zn	68	14.809	ug/L	0.250	1	609	22552	0
	As	75	0.333	ug/L	0.018	5	-31	563	6
	As-1	75	0.397	ug/L	0.084	21	11982	12869	0
	Se	82	0.165	ug/L	0.058	35	6	35	28
	Se	78	0.430	ug/L	0.354	82	12160	12532	0
	Mo	98	0.252	ug/L	0.004	1	9	968	2
	Y	89		ug/L			303911	305732	1
	Kr	83		ug/L			216	227	7
>	In	115		ug/L			784570	802824	0
	Ag	107	0.004	ug/L	0.000	2	14	48	1
	Cd	111	0.052	ug/L	0.007	12	64	278	8
	Cd	114	0.045	ug/L	0.004	9	34	495	8
	Sb	121	0.058	ug/L	0.007	11	45	724	11
	Sb	123	0.060	ug/L	0.010	16	29	558	16
	Ba	135	31.189	ug/L	0.477	1	27	118383	1
	Ba	137	31.018	ug/L	0.414	1	31	205788	1
>	Tb	159		ug/L			946533	984768	1
	Tl	205	0.046	ug/L	0.005	11	29	1608	12
	Pb	208	0.346	ug/L	0.004	1	204	15911	0
	Bi	209		ug/L			2333295	2389476	1
	Th	232	0.290	ug/L	0.075	25	105	13550	24
	U	238	0.036	ug/L	0.001	2	6	1656	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WY90 MBSPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 29, 2013 17:05:38
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			850074	869457	2
	Be	9	23.804	ug/L	0 344	1	22	63770	1
	C	13		ug/L			58981	59276	3
	Cl	37		ug/L			3868617	4194989	1
>	Sc	45		ug/L			823285	830561	3
	V	51	24.048	ug/L	0.336	1	7453	441065	2
	V-1	51	24.215	ug/L	0.154	0	116	437226	2
	Cr	52	24.457	ug/L	0.601	2	22166	399874	1
	Cr	53	25.002	ug/L	0.292	1	158	43958	2
	Mn	55	24.237	ug/L	0.354	1	635	522736	4
	Co	59	24.953	ug/L	0.882	3	154	401295	1
>	Ge	72		ug/L			530780	538135	2
	Ni	60	25.266	ug/L	1.009	3	38	86421	1
	Ni	62	30.127	ug/L	0.990	3	586	15333	0
	Cu	63	25.114	ug/L	0.564	2	535	193977	1
	Cu	65	25.032	ug/L	0.942	3	79	88349	1
	Zn	66	80.059	ug/L	1 183	1	365	164883	0
	Zn	67	72.252	ug/L	1.941	2	57	25101	2
	Zn	68	78.009	ug/L	2.235	2	609	116239	2
	As	75	23.364	ug/L	0.343	1	-31	41839	1
	As-1	75	24.717	ug/L	0.559	2	11982	57695	2
	Se	82	80.286	ug/L	1.011	1	6	13996	1
	Se	78	78.868	ug/L	1.795	2	12160	51537	2
	Mo	98	0.043	ug/L	0.050	117	9	174	112
	Y	89		ug/L			303911	300408	1
	Kr	83		ug/L			216	236	6
>	In	115		ug/L			784570	787692	1
	Ag	107	25.059	ug/L	0.288	1	14	229725	1
	Cd	111	24.817	ug/L	0.421	1	64	98868	2
	Cd	114	25.213	ug/L	0.292	1	34	251510	1
	Sb	121	0.023	ug/L	0.017	74	45	307	64
	Sb	123	0.023	ug/L	0.016	72	29	227	63
	Ba	135	24.623	ug/L	0.346	1	27	91698	1
	Ba	137	24.218	ug/L	0.369	1	31	157632	1
>	Tb	159		ug/L			946533	952401	0
	Tl	205	24.193	ug/L	0.248	1	29	807407	1
	Pb	208	24.955	ug/L	0.217	0	204	1094580	1
	Bi	209		ug/L			2333295	2421455	1
	Th	232	20.601	ug/L	1 165	5	105	925699	6
	U	238	23.836	ug/L	0.413	1	6	1063774	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 17:10:51
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens RSD
>	Li	6		ug/L			850074	853884	0
	Be	9	50.754	ug/L	0 722	1	22	133540	1
	C	13		ug/L			58981	54497	1
	Cl	37		ug/L			3868617	4188156	0
>	Sc	45		ug/L			823285	864772	0
	V	51	49.868	ug/L	0.883	1	7453	943964	1
	V-1	51	49.882	ug/L	0.502	1	116	937686	0
	Cr	52	48.507	ug/L	1.204	2	22166	803132	1
	Cr	53	48.557	ug/L	0.253	0	158	88746	0
	Mn	55	48.258	ug/L	1.272	2	635	1082738	1
	Co	59	49.016	ug/L	1.106	2	154	821242	3
>	Ge	72		ug/L			530780	545108	2
	Ni	60	50.859	ug/L	1.176	2	38	176238	0
	Ni	62	53.023	ug/L	0.728	1	586	26888	0
	Cu	63	50.533	ug/L	0 815	1	535	394832	0
	Cu	65	49.571	ug/L	0.923	1	79	177211	1
	Zn	66	50.679	ug/L	0.620	1	365	105873	0
	Zn	67	49.632	ug/L	1.176	2	57	17487	2
	Zn	68	51.011	ug/L	2.023	3	609	77209	3
	As	75	50.130	ug/L	1.052	2	-31	90968	1
	As-1	75	50.156	ug/L	1.026	2	11982	105923	1
	Se	82	51.649	ug/L	0.868	1	6	9123	0
	Se	78	51.200	ug/L	0.787	1	12160	38270	1
	Mo	98	50.052	ug/L	1.419	2	9	192505	1
	Y	89		ug/L			303911	303371	1
	Kr	83		ug/L			216	248	4
>	In	115		ug/L			784570	799768	1
	Ag	107	50.831	ug/L	0.942	1	14	473092	1
	Cd	111	51.028	ug/L	1.111	2	64	206290	1
	Cd	114	50.816	ug/L	0.923	1	34	514584	0
	Sb	121	49.990	ug/L	0.457	0	45	577882	1
	Sb	123	49.918	ug/L	1 001	2	29	439694	0
	Ba	135	50.490	ug/L	0.381	0	27	190886	0
	Ba	137	50.003	ug/L	0.866	1	31	330401	0
>	Tb	159		ug/L			946533	981239	1
	Tl	205	48.483	ug/L	0.495	1	29	1666781	0
	Pb	208	49.536	ug/L	0.616	1	204	2238099	0
	Bi	209		ug/L			2333295	2371319	1
	Th	232	53.304	ug/L	1.895	3	105	2466472	2
	U	238	51.879	ug/L	0.734	1	6	2385034	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 29, 2013 17:17:44
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\072913a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			850074	839215	1
	Be	9	-0.003	ug/L	0.002	60	22	13	38
	C	13		ug/L			58981	57603	2
	Cl	37		ug/L			3868617	4215292	1
>	Sc	45		ug/L			823285	821121	1
	V	51	0.000	ug/L	0.003	5048	7453	7434	1
	V-1	51	0.007	ug/L	0.000	4	116	232	3
	Cr	52	0.002	ug/L	0.009	582	22166	22132	1
	Cr	53	0.023	ug/L	0.006	26	158	197	6
	Mn	55	0.007	ug/L	0.001	21	635	773	4
	Co	59	0.002	ug/L	0.001	40	154	180	7
>	Ge	72		ug/L			530780	523073	0
	Ni	60	0.002	ug/L	0 001	45	38	46	7
	Ni	62	3.675	ug/L	0.103	2	586	2326	2
	Cu	63	0.159	ug/L	0.003	1	535	1714	0
	Cu	65	0.004	ug/L	0.003	76	79	90	9
	Zn	66	0.053	ug/L	0.010	19	365	464	4
	Zn	67	0.072	ug/L	0.028	38	57	81	11
	Zn	68	0.036	ug/L	0.022	59	609	652	4
	As	75	-0.027	ug/L	0.011	39	-31	-78	23
	As-1	75	0.322	ug/L	0.086	26	11982	12385	0
	Se	82	-0.060	ug/L	0.062	102	6	-3	277
	Se	78	1.272	ug/L	0.305	23	12160	12598	0
	Mo	98	0.024	ug/L	0.006	24	9	97	22
	Y	89		ug/L			303911	294094	1
	Kr	83		ug/L			216	236	6
>	In	115		ug/L			784570	780211	0
	Ag	107	0.001	ug/L	0.001	72	14	26	34
	Cd	111	0.003	ug/L	0.003	116	64	75	17
	Cd	114	0.001	ug/L	0.001	92	34	46	24
	Sb	121	0.091	ug/L	0.025	26	45	1074	25
	Sb	123	0.093	ug/L	0.024	26	29	826	25
	Ba	135	-0.003	ug/L	0.001	19	27	16	14
	Ba	137	-0.001	ug/L	0.001	161	31	27	21
>	Tb	159		ug/L			946533	929625	0
	Tl	205	0.006	ug/L	0.001	18	29	230	15
	Pb	208	0.002	ug/L	0.000	22	204	279	5
	Bi	209		ug/L			2333295	2379353	1
	Th	232	0.282	ug/L	0.075	26	105	12456	25
	U	238	0.004	ug/L	0 001	35	6	159	33

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA (CVA) **Analysis Date:** 7-23-13

	Analyst 7-23 DM	Peer 7-24-13	Comment
Logbook:			
Analyst, Date, Method info	√	✓	
Sample ID's	√	✓	
Standard/QC solution ID's recorded	√	✓	
Prep codes	√	✓	
Dilution factors	√	✓	
Crossouts/Corrections/Deletions	√	✓	
Calibration:			
Blank & Standard intensities	√	✓	
Standard deviations	√	✓	
Curve fit	√	✓	
Calibration Verifications:			
ICV/CCV	√	✓	
ICB/CCB	√	✓	
Samples:			
RSD's & SD's	√	✓	
Internal Standards	–	–	
Carry-over	–	–	
Method QC:			
CRI/CRA	√	✓	
ICSA/ICSAB	–	–	
Post Spikes/Serial Dilutions	–	–	
Analytic Spikes	–	✓	
Matrix QC:			
SRM/LCS	√	✓	
Matrix Spikes	√	✓	
Matrix Duplicates	√	✓	
Method Blanks	√	✓	
Data Distribution:			
Requested elements/isotope identified	√	✓	
Correct samples identified for distribution	√	✓	
Raw data match distributed data	√	✓	
Data filename correct	√	✓	
Necessary Analysts Notes and QA's	–	–	

Mercury Analysis Log

Analyst: DM Date: 7-23-13

Instrument: CETAC Page: 1 of 3

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments	
STD	0.0	5mM	1X			
"	0.1					
"	0.5					
"	1.0					
"	2.0					
"	5.0					
"	10.0					
ICV				5.23	5ug in CLP %R=103	√
ICB				-0.01		√
CCV1				4.15	%R=104	√
CCB1				-0.01		√
CRA				0.09		√
WX42	MB1			0.00		√
"	MB1SPK			2.05	%R=103	√
"	A			0.71		
"	ADUP			0.67	RPD=5.79	√
"	ASPK			1.74	%R=103	√
"	B					
"	C					
"	D					
"	E					
CCV2				4.23	%R=106	√
CCB2				-0.02		√
WX42	F					
"	G					
"	H					
"	I					
"	J					
WX43	A					
"	B					

Chemical/Reagent ID:

10% $SnCl_2$: MP2624

14% NH_2OH/NaCl: MP2520

Standard ID:

Standard: 3236-14

ICV/CCV: 59.6

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 7-23-13

Page: 2 of 3

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
WX43 C	5MM	1X		
" D				
" E				
CCV3			4.28	%R=107 ✓
CCB3			-0.01	✓
WX43 F				
" G				
WY32 MB1			0.00	✓
" MB1SPK			2.17	%R=109 ✓
" MB1SPD			2.20	%R=110 ✓
" A			0.68	
" ADUP			0.64	RPD=6.06 ✓
" ASPK			1.77	%R=109 ✓
" B				
" C				
CCV4			4.18	%R=105 ✓
CCB4			-0.01	END CLP ✓
WX64 MB1			-0.03	✓
" MB1SPK			2.06	%R=103 ✓
" A				
" B				
" C				
WX85 MB			-0.01	✓
" MB5PK			2.02	%R=101 ✓
" A			7-24-13	
TEST REF MB		↓	-0.01	✓
" " 1		5x	7.70	NEW LOT DO79 9.52mg/kg ✓
CCV		1X	4.28	✓
CCB		1X	0.01	✓
TEST REF 2	↓	5x	7.69	NEW LOT DO79 9.42mg/kg ✓

Chemical/Reagent ID:

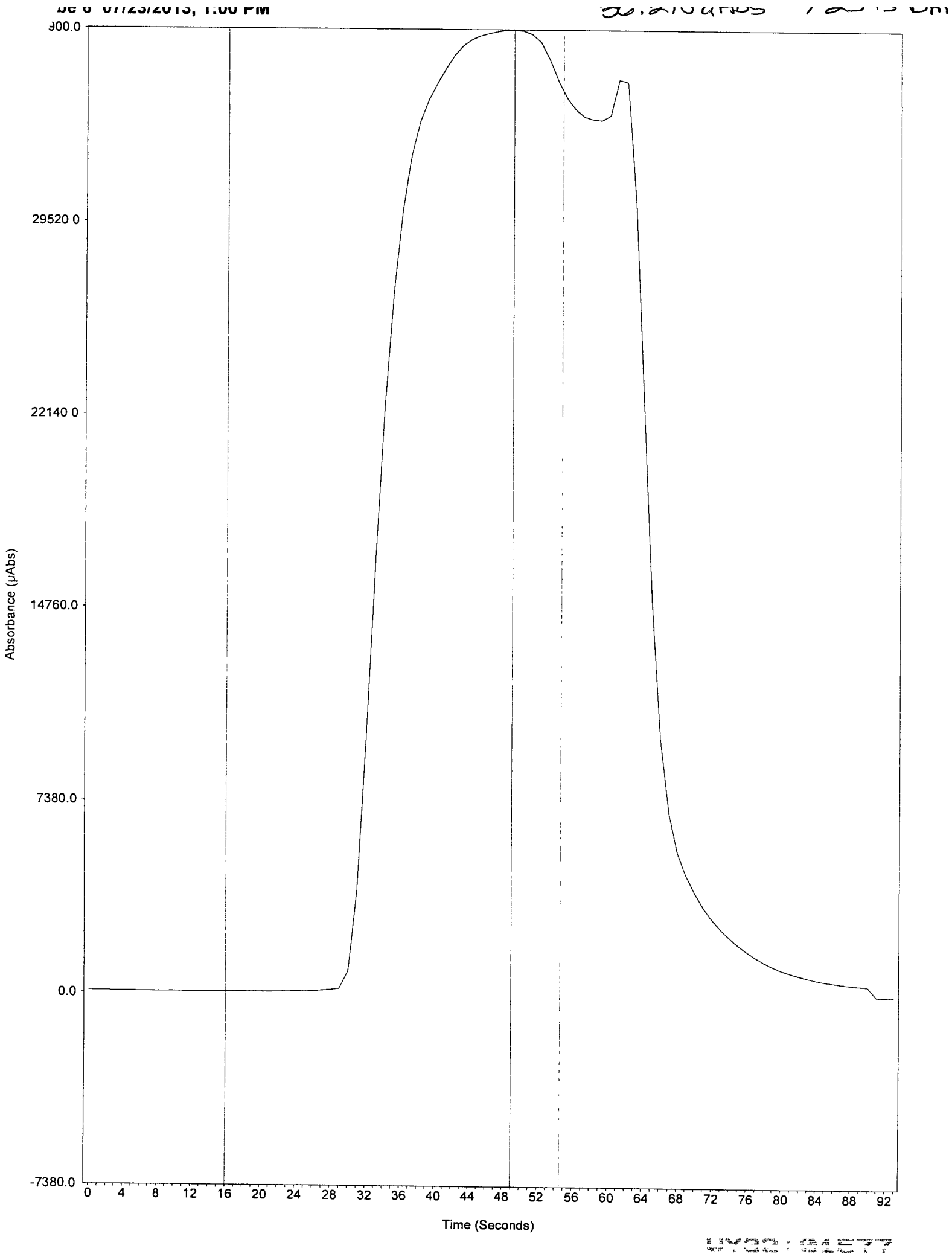
10% $SnCl_2$: MP2524

14% $NH_2OH/NaCl$: MP2520

Standard ID:

Standard: 30358-14

ICV/CCV: 59.6


900.0
29520 0
22140 0
14760.0
7380.0
0.0
-7380.0
Absorbance (µAbs)
0
4
8
12
16
20
24
28
32
36
40
44
48
52
56
60
64
68
72
76
80
84
88
92
Time (Seconds)

CETAC Hg Analysis Report - 13072300.DB - Tuesday, July 23, 2013, 2:47:36 PM

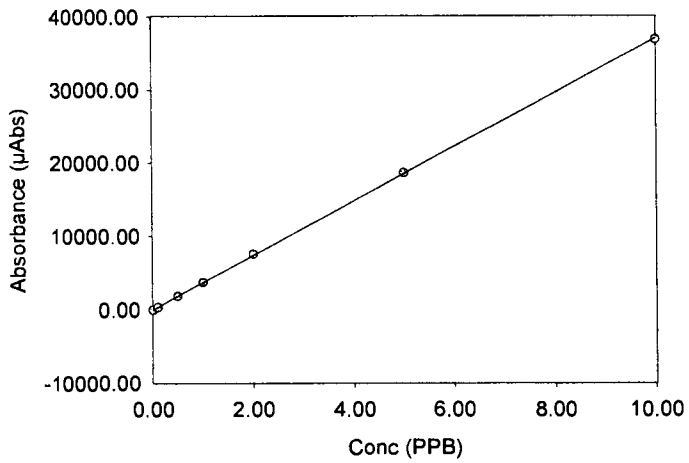
Analyst
Date Started Tuesday, July 23, 2013, 13:00:05
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Std Tube 6	23-Jul-2013, 13:00	10.00	2.10	36200.00	1.00	

Information about this calibration could not be retrieved from the Master File.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Calibration Zero	23-Jul-2013, 13:02	0.00	24.70	-11.40	1.00	
Standard #1	23-Jul-2013, 13:04	0.10	2.56	325.00	1.00	
Standard #2	23-Jul-2013, 13:05	0.50	1.89	1840.00	1.00	
Standard #3	23-Jul-2013, 13:07	1.00	1.96	3730.00	1.00	
Standard #4	23-Jul-2013, 13:08	2.00	1.32	7610.00	1.00	
Standard #5	23-Jul-2013, 13:10	5.00	1.54	18600.00	1.00	
Standard #6	23-Jul-2013, 13:12	10.00	1.64	36900.00	1.00	

Calibration Data



Int.	0.000
Slope	3698 556
Correlation	0.99997

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
ICV	23-Jul-2013, 13:16	8.23	1.86	30500.00	1.00	
ICB	23-Jul-2013, 13:18	-0.01	14.60	-41.90	1.00	

Begin CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	23-Jul-2013, 13:20	4.15	1.45	15400.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	23-Jul-2013, 13:21	-0.01	10.80	-30.80	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
CRA	23-Jul-2013, 13:23	0.09	1.65	348.00	1.00	
WX42 MB1 SMM	23-Jul-2013, 13:25	0.00	72.50	6.79	1.00	
WX42 MB1SPK SMM	23-Jul-2013, 13:26	2.05	1.97	7590.00	1.00	
WX42 A SMM	23-Jul-2013, 13:28	0.71	2.04	2630.00	1.00	
WX42 ADUP SMM	23-Jul-2013, 13:29	0.67	2.34	2460.00	1.00	
WX42 ASPK SMM	23-Jul-2013, 13:31	1.74	1.61	6430.00	1.00	
WX42 B SMM	23-Jul-2013, 13:33	0.70	1.80	2580.00	1.00	
WX42 C SMM	23-Jul-2013, 13:34	0.34	1.85	1270.00	1.00	
WX42 D SMM	23-Jul-2013, 13:36	0.66	1.48	2460.00	1.00	
WX42 E SMM	23-Jul-2013, 13:38	0.41	1.79	1510.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	23-Jul-2013, 13:39	4.23	1.60	15600.00	1.00	

CETAC Hg Analysis Report - 13072300.DB - Tuesday, July 23, 2013, 2:47:37 PM

Analyst
Date Started Tuesday, July 23, 2013, 13:41:20
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	23-Jul-2013, 13:41	-0.02	0.95	-64.60	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WX42 F SMM	23-Jul-2013, 13:42	1.16	1.63	4300.00	1.00	
WX42 G SMM	23-Jul-2013, 13:44	0.20	2.05	722.00	1.00	
WX42 H SMM	23-Jul-2013, 13:46	1.22	1.29	4530.00	1.00	
WX42 I SMM	23-Jul-2013, 13:47	0.50	1.24	1840.00	1.00	
WX42 J SMM	23-Jul-2013, 13:49	2.37	1.77	8780.00	1.00	
WX43 A SMM	23-Jul-2013, 13:50	0.26	1.42	952.00	1.00	
WX43 B SMM	23-Jul-2013, 13:52	0.96	1.53	3560.00	1.00	
WX43 ~~WX42~~ C SMM	23-Jul-2013, 13:54	0.06	2.17	231.00	1.00	
WX43 D SMM	23-Jul-2013, 13:55	0.12	0.99	430.00	1.00	
WX43 E SMM	23-Jul-2013, 13:57	0.23	1.44	839.00	1.00	

WX43 DM 7.24.13

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	23-Jul-2013, 13:59	4.28	1.73	15800.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	23-Jul-2013, 14:00	-0.01	11.60	-26.90	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WX43 F SMM	23-Jul-2013, 14:02	0.23	1.55	842.00	1.00	
WX43 G SMM	23-Jul-2013, 14:04	0.12	1.42	434.00	1.00	
WY32 MB1 SMM	23-Jul-2013, 14:05	0.00	97.50	2.92	1.00	
WY32 MB1SPK SMM	23-Jul-2013, 14:07	2.17	1.33	8030.00	1.00	
WY32 MB1SPD SMM	23-Jul-2013, 14:08	2.20	1.66	8120.00	1.00	
WY32 A SMM	23-Jul-2013, 14:10	0.68	2.11	2510.00	1.00	
WY32 ADUP SMM	23-Jul-2013, 14:12	0.64	1.38	2380.00	1.00	
WY32 ASPK SMM	23-Jul-2013, 14:13	1.77	1.60	6540.00	1.00	
WY32 B SMM	23-Jul-2013, 14:15	0.15	1.52	557.00	1.00	
WY32 C SMM	23-Jul-2013, 14:16	0.28	1.50	1050.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	23-Jul-2013, 14:18	4.18	1.97	15500.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	23-Jul-2013, 14:20	-0.01	3.56	-38.60	1.00	END CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WX64 MB1 SMM	23-Jul-2013, 14:21	-0.03	2.28	-115.00	1.00	
WX64 MB1SPK SMM	23-Jul-2013, 14:23	2.06	1.74	7620.00	1.00	
WX64 A SMM	23-Jul-2013, 14:25	0.23	1.83	857.00	1.00	
WX64 B SMM	23-Jul-2013, 14:26	0.19	1.59	716.00	1.00	
WX64 C SMM	23-Jul-2013, 14:28	0.21	2.06	772.00	1.00	
WX85 MB SMM	23-Jul-2013, 14:30	-0.01	11.00	-35.00	1 00	
WX85 MBSPK SMM	23-Jul-2013, 14:31	2.02	1.74	7460.00	1.00	
WX85 A SMM	23-Jul-2013, 14:33	0.57	1.67	2120.00	1.00	
TEST REF MB D079 SMM	23-Jul-2013, 14:34	-0.01	6.55	-38.10	1.00	
TEST REF 1 SMM	23-Jul-2013, 14:36	7.70	1.76	28500.00	5.00	- NEW LOT D079

7-24-13

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	23-Jul-2013, 14:38	4.28	1.78	15800.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	23-Jul-2013, 14:39	0.01	12.70	29.60	1.00	

Analyst	
Date Created:	Thursday, July 13, 2000
Worksheet	ARI 10ppb CALIB
Comment	
Sip Duration (Sec.):	30
Rinse Duration (Sec.):	60
Read Delay:	49
Integration Time/Replicate:	1.40
# of Replicates:	4
# of Repeats:	1
Baseline Correction Enabled:	True
Baseline Point 1 Start Time:	10
Baseline Point 1 End Time:	16
2-Point Baseline Corr. Enabled:	False
Baseline Point 2 Start Time:	
Baseline Point 2 End Time:	
Gas Flow (ml/min):	180
Calibration Algorithm:	Linear, Zero Intercept
Recalibration Frequency:	0
Reslope Frequency:	0
Reslope Standard:	5
Calibration Standard #1 Conc.:	0.10 PPB
Calibration Standard #2 Conc.:	0.50 PPB
Calibration Standard #3 Conc.:	1.00 PPB
Calibration Standard #4 Conc.:	2.00 PPB
Calibration Standard #5 Conc.:	5.00 PPB
Calibration Standard #6 Conc.:	10.00 PPB
QC Enabled:	True
QC-RSD Enabled:	True
Limit Condition & Error Action:	If %RSD > 5.0%, if µAbs. > 1500, Flag and Continue
QC-Std Enabled:	True
Limit Condition & Error Action:	If outside 80% .. 120%,Stop
QC-Blank Enabled:	True
Limit Condition & Error Action:	If outside -100 .. 100,Stop

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Standard Prep Log

Prep Code: Smm Instrument: CETAC

Analyst: CB Date: 7-19-13

Bath Temp: 95°C Start Time: 1325 End Time: 1355

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	–	0.00	50.0	0.0	3
STD1	3038-14	0.01	↓	0.1	2
STD2	↓	0.05	↓	0.5	2
STD3	↓	0.10	↓	1.0	2
STD4	↓	0.20	↓	2.0	2
STD5	↓	0.50	↓	5.0	2
STD6	↓	1.00	↓	10.0	2
CRA	↓	0.01	↓	0.1	1
ICB/CCB	–	0.00	↓	0.0	3
ICV/LCS	59-6	0.08	↓	8.0	2
CCV	↓	0.04	50.0	4.0	3

Chemical/Reagent ID:

HNO_3: I8169 H_2SO_4: I8044 HCl: –

5% $K_2S_2O_8$: mp2491 5% $KMnO_4$: mp2502

Prep Code: _____ Instrument: _____

Analyst: _____ Date: _____

Bath Temp: _____ Start Time: _____ End Time: _____

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0		0.00			
STD1					
STD2		0.05			
STD3		0.10			
STD4		0.20			
STD5		0.50			
STD6		1.00			
CRA					
ICB/CCB		0.00			
ICV/LCS					
CCV					

Chemical/Reagent ID:

HNO_3: _____ H_2SO_4: _____ HCl: _____

5% $K_2S_2O_8$: _____ 5% $KMnO_4$: _____

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: SMM
Analyst: DM
Bath Temp: 95°C
Start Time: 1030
Matrix: Soil
Date: 7.23.13
End Time: 1100

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
TEST REF 1	D079	—	0.202	50.0	1	N	
" " 2	D079	—	0.204		1		
" " 3	D079	—	0.203		1		
" " MB	—	—	—	50.0	1	N	
W432 A	1	—	0.242		2/5 1	Y	
" AOUP	1	—	0.245		1		
" AOPL	1	—	0.244		1		
" B	1	—	0.255		1		
" C	1	—	0.250		1		
" MB1	—	—	—		1		
" MB1SPK	—	—	—		1		
" MB1SPD	—	—	—	50.0	1	Y	
			7.23.13 DM				

Chemical/Reagent ID:

HNO_3: IB149
H_2SO_4: I8044
HCl: —
5% $K_2S_2O_8$: MP2491
5% $KMnO_4$: MP2502
Digest Tube Lot: MLONKK03

Mercury Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: WY32, WY33

Analytical Resources,Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: CB

Date: 7-23-13

Final Volume _____

Final Volume (Hg): 20.0

Sample ID WY33 mBlSpK, mBlSpD, mB2SpK, mB2SpD

	Prepcode:			
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:			
	Vol Added (mL):			
STOCK CONCENTRATION	Ag	50		2.0
	Al	200	200	
	As	200		10
	Ba	200	200	
	Be	50	50	
	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
	Cr	50	50	
	Cu	50	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50	50	
	Pb	200		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50	50	

	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
Ag	25		
Al			500
As	25		
Ba	25		
Be	25		
Ca			500
Cd	25		
Co	25		
Cr	25		
Cu	25		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25		
Pb	25		
Sb		25	
Se	80		
Tl	25		
U	25		
V	25		
Zn	80		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg		CVA	1.0		
Hg MBSPK	TLm	CVA	1.0	0.04	300>-14
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Matrix: WATER
Date: 7-23-13
End Time: 1120

Prep Code: TLM
Analyst: CB
Bath Temp: 95°C
Start Time: 0920

ARI Sample ID	Sample Bottle #	pH<2	Initial ~~Weight (g)~~ Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WX33 A	1	J	20.0	20.0	3/5	Y	
" mB1	"	"			"		
" mB1SPK	"	"			"		
" mB1SPD	"	"			"		
" B	2	J			"		
" mB2	"	"			"		
" mB2SPK	"	"	20.0	20.0	"	Y	
" mB2SPD	"	"					

CB
7/23/13

Chemical/Reagent ID:

HNO_3: I8165
5% $K_2S_2O_8$: mp2491
H_2SO_4: I8044
5% $KMnO_4$: mp2502
HCl: —
Digest Tube Lot: MH21KK06

Revision 007
6/18/09

5037F

Mercury Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: WY32, WY33

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA (CVA) **Analysis Date:** 7-24-13

Low Level	Analyst 7-24 DM	Peer 7-24-13	Comment
Logbook:			
Analyst, Date, Method info	√	/	
Sample ID's	√	/	
Standard/QC solution ID's recorded	√	/	
Prep codes	√	/	
Dilution factors	√	/	
Crossouts/Corrections/Deletions	√	/	
Calibration:			
Blank & Standard intensities	√	/	
Standard deviations	√	/	
Curve fit	√	/	
Calibration Verification:			
ICV/CCV	√	/	
ICB/CCB	√	/	
Samples:			
RSD's & SD's	√	/	
Internal Standards	–	—	
Carry-over	—	—	
Method QC:			
CRI/CRA	√	/	
ICSA/ICSAB	—	—	
Post Spikes/Serial Dilutions	–	—	
Analytic Spikes	–	—	
Matrix QC:			
SRM/LCS	√	/	
Matrix Spikes	—	—	
Matrix Duplicates	–	—	
Method Blanks	√	/	
Data Distribution:			
Requested elements/isotope identified	√	/	
Correct samples identified for distribution	√	/	
Raw data match distributed data	√	/	
Data filename correct	√	/	
Necessary Analytical Notes and CAR's:	—	—	

ALL CORRECTIONS
BY DM 7/24/13

Mercury Analysis Log

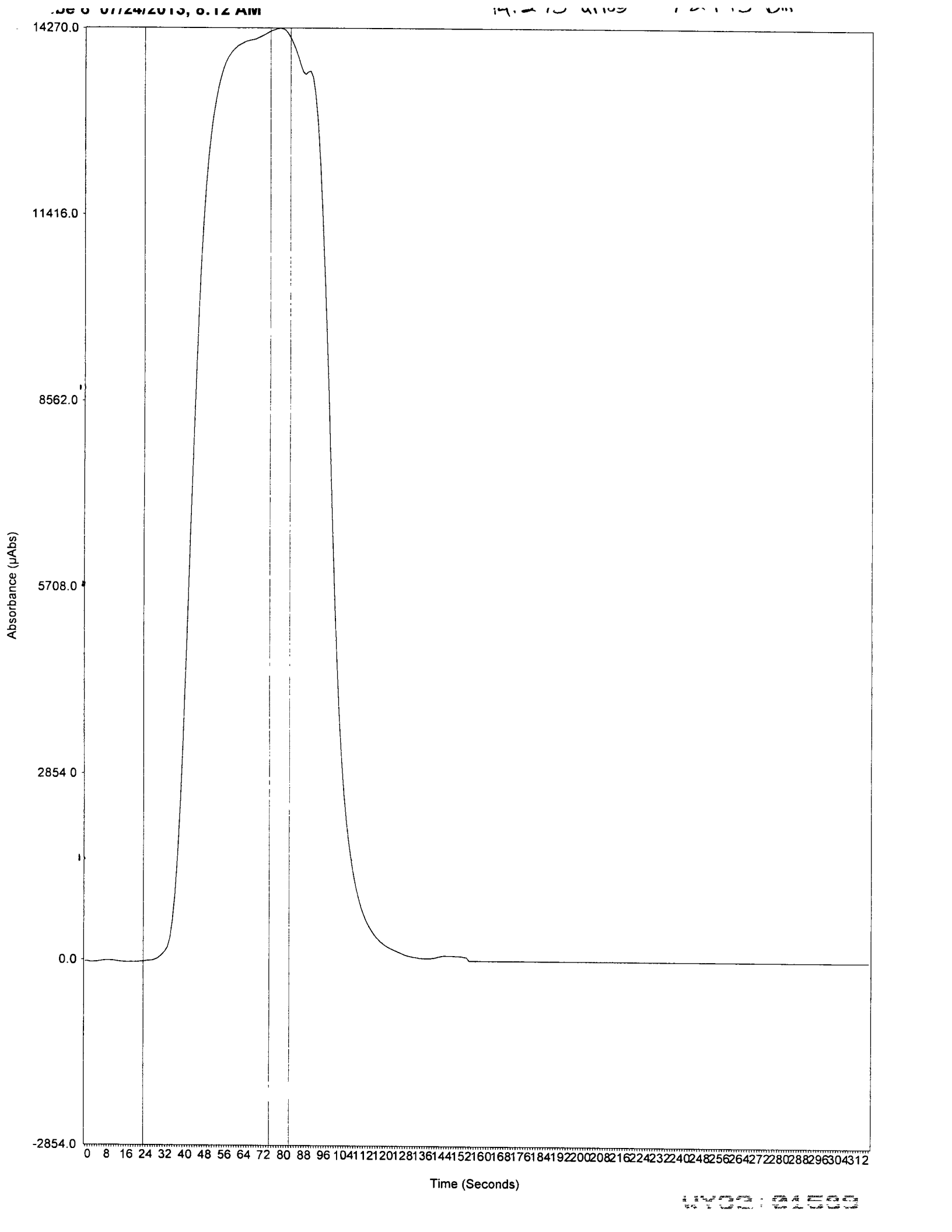
Analyst: DM Date: 7-24-13

Instrument: CETAC Page: 1 of 1

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)ppt	Comments
STD 0.0	TLM	1X		
" 20.0				
" 50.0				
" 100.0				
" 200.0				
" 400.0				
" 1000.0				
ICV			479.41	Beg. a CLP %R=96 ✓
ICB			-2.50	✓
CCV1			501.83	%R=100 ✓
CCB1			-0.50	✓
CRA			16.92	✓
WY33 MB1			-1.65	✓
" MB1SPK			205.09	%R=103 ✓
" MB1SPD			157.68	%RPD %R=94 ✓
" A				
" MB2			-2.29	✓
" MB2SPK			189.75	%R=95 ✓
" MB2SPD			193.97	%R=97 ✓
" B				
WX84 MB4			-1.64	PT Sample ✓
CCV2			516.87	%R=103 ✓
CCB2			-0.83	✓
~~WX84~~ AE				PT Sample
CCV3			617.4	~~%RPD~~ %R=103 ✓
CCB3	TLM ~~TX~~	TEM 1X	0.925	END CLP ✓
			7.24.13	

Chemical/Reagent ID:
10% $SnCl_2$: MP2528 14% NH_2OH/NaCl: MP2520

Standard ID:
Standard: 3038-16 ICV/CCV: 3039-1


14270.0
11416.0
8562.0
5708.0
2854 0
0.0
-2854.0
Absorbance (µAbs)
0 8 16 24 32 40 48 56 64 72 80 88 96 104 112 120 128 136 144 152 160 168 176 184 192 200 208 216 224 232 240 248 256 264 272 280 288 296 304 312
Time (Seconds)

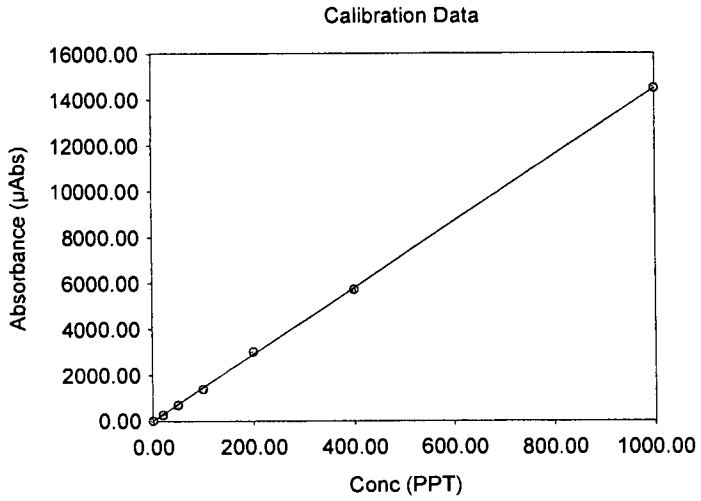
CETAC Hg Analysis Report - 13072400.DB - Wednesday, July 24, 2013, 9:25:46 AM

Analyst
Date Started Wednesday, July 24, 2013, 08:12:31
Worksheet LOW LEVEL CALIB 20 TO 1000 PPT
Comment

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
Std Tube 6	24-Jul-2013, 08:12	1000.00	0.23	14300.00	14275	14300	14297	14229	

Information about this calibration could not be retrieved from the Master File.

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
Calibration Zero	24-Jul-2013, 08:14	0.00	161.00	9.53	-8	2	17	27	
Standard #1	24-Jul-2013, 08:17	20.00	0.86	257.00	257	254	258	259	
Standard #2	24-Jul-2013, 08:20	50.00	0.26	691.00	692	692	692	689	
Standard #3	24-Jul-2013, 08:22	100.00	0.97	1380.00	1395	1393	1383	1366	
Standard #4	24-Jul-2013, 08:25	200.00	0.32	3010.00	3018	3018	3013	2997	
Standard #5	24-Jul-2013, 08:28	400.00	0.13	5730.00	5722	5732	5735	5721	
Standard #6	24-Jul-2013, 08:31	1000.00	0.27	14500.00	14500	14516	14505	14431	



Int.	0.000
Slope	14 477
Correlation	0.99993

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
ICV	24-Jul-2013, 08:35	479.00	0.15	6940.00	6928	6942	6953	6939	Begin CLP
ICB	24-Jul-2013, 08:37	-2.50	7.28	-36.20	-35	-33	-38	-38	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	24-Jul-2013, 08:40	502.00	0.26	7270.00	7240	7262	7283	7276	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	24-Jul-2013, 08:43	-0.50	54.10	-7.20	-5	-4	-9	-12	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
CRA	24-Jul-2013, 08:45	16.90	1.17	245.00	249	245	243	243	
WY33 MB1 TLM	24-Jul-2013, 08:48	-1.65	24.90	-23.90	-18	-21	-26	-31	
WY33 MB1SPK TLM	24-Jul-2013, 08:51	206.00	0.33	2980.00	2985	2984	2979	2964	
WY33 MB1SPD TLM	24-Jul-2013, 08:54	188.00	0.17	2720.00	2712	2715	2720	2722	
WY33 A TLM	24-Jul-2013, 08:56	43.30	0.43	626.00	623	626	628	629	
WY33 MB2 TLM	24-Jul-2013, 08:59	-2.29	28.00	-33.10	-21	-31	-38	-43	
WY33 MB2SPK TLM	24-Jul-2013, 09:02	190.00	0.44	2750.00	2730	2747	2758	2752	
WY33 MB2SPD TLM	24-Jul-2013, 09:04	194.00	0.12	2810.00	2805	2809	2813	2806	
WY33 B TLM	24-Jul-2013, 09:07	9.81	5.19	142.00	150	146	137	135	
WX48 MB4 TLM	24-Jul-2013, 09:10	-1.64	6.46	-23.70	-24	-24	-22	-26	PT Sample

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	24-Jul-2013, 09:12	517.00	0.17	7480.00	7492	7489	7487	7464	

CETAC Hg Analysis Report - 13072400.DB - Wednesday, July 24, 2013, 9:25:47 AM

Analyst
Date Started Wednesday, July 24, 2013, 09:15:45
Worksheet LOW LEVEL CALIB 20 TO 1000 PPT
Comment

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	24-Jul-2013, 09:15	-0.83	13.10	-12.00	-14	-11	-11	-12	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
~~WX48 AE TLM~~	24-Jul-2013, 09:18	65.60	1.52	950.00	965	960	943	933	PT Sample

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	24-Jul-2013, 09:21	517.00	0.21	7490.00	7492	7501	7503	7469	

7-24-13

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	24-Jul-2013, 09:23	-2.25	5.74	-32.60	-31	-34	-34	-31	END CLP

Analyst	
Date Created:	Wednesday, November 27, 2002
Worksheet	LOW LEVEL CALIB 20 TO 1000 PPT
Comment	
Sip Duration (Sec.):	55
Rinse Duration (Sec.):	100
Read Delay:	75
Integration Time/Replicate:	2.00
# of Replicates:	4
# of Repeats:	1
Baseline Correction Enabled:	True
Baseline Point 1 Start Time:	20
Baseline Point 1 End Time:	24
2-Point Baseline Corr. Enabled:	False
Baseline Point 2 Start Time:	148
Baseline Point 2 End Time:	152
Gas Flow (ml/min):	30
Calibration Algorithm:	Linear, Zero Intercept
Recalibration Frequency:	0
Reslope Frequency:	0
Reslope Standard:	2
Calibration Standard #1 Conc.:	20.00 PPT
Calibration Standard #2 Conc.:	50.00 PPT
Calibration Standard #3 Conc.:	100.00 PPT
Calibration Standard #4 Conc.:	200.00 PPT
Calibration Standard #5 Conc.:	400.00 PPT
Calibration Standard #6 Conc.:	1000.00 PPT
QC Enabled:	True
QC-RSD Enabled:	True
Limit Condition & Error Action:	If %RSD > 5.0%, if µAbs. > 200, Flag and Continue
QC-Std Enabled:	True
Limit Condition & Error Action:	If outside 90% .. 110%,Stop
QC-Blank Enabled:	True
Limit Condition & Error Action:	If outside -20 .. 20,Stop

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Standard Prep Log

Prep Code: TLM — Digested 20.0 mL — Instrument: CETAC

Analyst: CB — Date: 7-23-13

Bath Temp: 95°C — Start Time: 1140 — End Time: _____

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	–	0.00	100.0	0.0	1
STD1	3038-1b	0.02	↓	0.02	1
STD2	↓	0.05		0.05	1
STD3		0.10		0.10	1
STD4		0.20		0.20	1
STD5		~~0.50~~ 0.4		0.40	1
STD6		1.00		1.00	1
CRA	↓	0.02		0.02	1
ICB/CCB	–	0.00		0.0	1
ICV/LCS	3038-1	1.0	↓	0.5	1
CCV	↓	1.0	100.0	0.5	1

Chemical/Reagent ID:

HNO_3: I8109 — H_2SO_4: I8044 — HCl: –

5% $K_2S_2O_8$: MB2491 — 5% $KMnO_4$: MB2502

Prep Code: _____ — Instrument: _____

Analyst: _____ — Date: _____

Bath Temp: _____ — Start Time: _____ — End Time: _____

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0		0.00			
STD1					
STD2		0.05			
STD3		0.10			
STD4		0.20			
STD5		0.50			
STD6		1.00			
CRA					
ICB/CCB		0.00			
ICV/LCS					
CCV					

Chemical/Reagent ID:

HNO_3: _____ — H_2SO_4: _____ — HCl: _____

5% $K_2S_2O_8$: _____ — 5% $KMnO_4$: _____

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Matrix: WATER
Date: 7-23-13
End Time: 1120

Prep Code: TLM
Analyst: CB
Bath Temp: 95°C
Start Time: 0920

ARI Sample ID	Sample Bottle #	pH<2	Initial ~~Weight (g)~~ Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WY33 A	1	J	20.0	20.0	3/5,	Y	
" mB1	"	"			"		
" mB1SDK	"	"			"		
" mB1SDD	"	"			"		
" B	2	J			"		
" mB1	"	"			"		
" mB2SDK	"	"			"	Y	
" mB2SDD	"	"	20.0	20.0	"		

CB
7/23/13

Chemical/Reagent ID:

HNO_3: I9165
H_2SO_4: I8044
HCl: —
5% $K_2S_2O_8$: MP2491
5% $KMnO_4$: MP2502
Digest Tube Lot: MH21KK06

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: WY32, WY33

227-17

CONDUCTIVITY BENCHSHEET (EPA 120.1) Date / Time : 7/23/13 7:38

EPA 120.1, SM 2510 B-97, EPA 9050A Analyst : KE

Temperature compensated to 25 °C

INSTRUMENT: Orion Model 115 SN:002482 ELECTRODE: Orion 011510 SN:KU9020 K= 1 cm-1

Direct Calibration		Cell Constant Adjustment	
1413 Calibration Standard	0.01 N KCl	1413 Calibration Standard	0.01N KCl
ARI #	00613-06	ARI #	
µS/cm =	1,413	Current value / Cal Temp (°C)	
Cal Temp (°C) =	19.7	Expected	
input µS =	1277	Adjust to / Displayed	
Cell constant =	0.9916	%	

Calibration Verification Standard *Record Certified Values*

Source: RICCA CHEMICAL COMPANY µS / cm = 1000

Lot Number: # 1302913 TDS (mg/l) =

Sample Data

(NOTE: if requested, switch MODE to read TDS) Enter dilution as mL final / mL sample

ARI Number	Sample Dilution	Temp (C)	CONDUCTIVITY @ 25C (mS/cm)	(µS/cm)	TDS (mg/L)	Notes & Flags
ICB		23.3		0.5		OK!
ICV		19.9		1007		100.70%
WX77 A3		20.8		282		
WX77 A3 dup		20.8		279		RPD =1.07 %
WX77 B3		20.6		190.7		
WX78 A10		20.3		268		
WX87 A1		20.8		310		
WX87 A1 dup		20.7		311		RPD =0.32 %
WX87 B1		20.8		138.9		
WX87 C1		20.5		168.9		
WX87 D1		20.6		98.1		
WX87 E1		20.4		51.8		
CCB		23.2		0.3		OK!
CCV		20.0		1001		100.10%
WX87 F1		20.4		49.3		
WX87 G1		20.3		46.9		
WX87 H1		20.5		62.5		
WX87 I 1		20.4		93.9		
WX87 J 1		20.1		646		
WX87 K1		20.2		210		
WX87 L1		20.1		254		
WY32 D1		20.3		528		
WY32 D1 dup		20.3		532		RPD =0.75 %
CCB		23.3		0.6		OK!
CCV		19.9		1003		100.30%

2-23-13 (2)

CONDUCTIVITY BENCHSHEET (EPA 120.1) Date / Time : 2-23-13 7:38

EPA 120.1, SM 2510 B-97, EPA 9050A Analyst : (AJ)

Temperature compensated to 25 °C

INSTRUMENT: Orion Model 115 SN:002482 *ELECTRODE: Orion 011510 SN:KU9020* *K= 1 cm-1*

Direct Calibration		Cell Constant Adjustment	
1413 Calibration Standard	0.01 N KCl	1413 Calibration Standard	0.01N KCl
ARI #	00613-06	ARI #	
µS/cm =	1,413	Current value	Cal Temp (°C)
Cal Temp (°C) =	19.7		Expected
input µS =		Adjust to	Displayed
Cell constant =	0.9916		%

Calibration Verification Standard *Record Certified Values*

Source: RICCA CHEMICAL COMPANY µS / cm = 1000

Lot Number: # 1302913 TDS (mg/l) =

Sample Data

(NOTE: If requested, switch MODE to read TDS) *Enter dilution as mL final / mL sample*

ARI Number	Sample Dilution	Temp (C)	CONDUCTIVITY @ 25C (mS/cm)	CONDUCTIVITY @ 25C (µS/cm)	TDS (mg/L)	Notes & Flags
ICB		23.3		0.5		
ICV		19.9		1007		
WX77 A3		20.8		282		
" A3		20.8		279		
" B3		20.6		190.7		
WX78 A10		20.3		268		
WX87 A1		20.8		310		
" A1		20.7		311		
B1		20.8		138.9		
C1		20.5		168.9		
D1		20.6		98.1		
E1		20.4		51.8		
CCB		23.2		0.3		
CCV		20.0		1001		
WW87 F1		20.4		49.3		
G1		20.3		46.9		
H1		20.5		62.5		
I1		20.4		93.9		
J1		20.1		6046		
K1		20.2		210		
L1		20.1		254		
WW32 D1		20.3		528		
" D1		20.3		532		
			2-23-13 (2)			
CCB		23.3		0.6		
CCV		19.9		1003		

TOC Solids Prep Log

DATE: 7/24/2013

ANALYST: KE 15:26 (A)

acid purging to remove IC and drying at 70°C for TOC analysis

General notes regarding prep method and samples (identify the acid used)

HCL 10% ID:

Balance ID: Mettler Toledo (XS205 DU) SN 123230597

HCL ID:

make no entry to shaded cells, they are calculated

Sample ID		IC Test	Gravimetric Data (grams)			%	*Sample description & notes*
ARI #	Client	+ / -	Tare Wt.	Wet wt.	70°C dry wt	Solids	*(homogeneity and exclusions)*
Blank			13.3775		13.3776	0.1 mg	
WY32 A4		-	12.9850	19.8199	17.6767	68.64%	
WY32 A4 dup		-	13.0514	20.1500	18.0412	70.29%	RPD = 2.37%
WY32 A4 trip		-	13.1174	20.2582	18.0706	69.36%	RSD = 1.19%
WY32 B3		-	13.0795	21.5801	19.9453	80.77%	
WY32 C3		-	13.4505	20.6234	18.7121	73.35%	
WY43 A1		-	13.3479	19.4826	17.9207	74.54%	
WY43 B1		-	13.3690	22.8307	21.1010	81.72%	
WY43 C1		-	13.0915	18.8297	15.0601	34.31%	
WY43 C1 dup		-	13.0800	19.2230	15.3061	36.24%	RPD = 5.47%
WY43 C1 trip		-	13.3848	19.1816	15.6034	38.27%	RSD = 5.47%
WY43 D1		+-	13.4211	20.6064	19.8756	89.83%	
WY43 E1		-	13.4047	21.1775	17.4784	52.41%	
WY43 F1		-	13.4114	21.5264	19.8962	79.91%	
WY43 G1		-	13.3824	21.0227	20.6763	95.47%	
WY43 H1		-	13.4654	20.3509	20.1152	96.58%	
WY43 K1		-	13.3765	21.0092	17.8036	58.00%	
WY43 L1		-	13.4486	21.1993	16.9469	45.14%	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOC Solids Preparation Log

Acid purge to remove IC and drying 70 °C for TOC analysis
Add general notes regarding samples and preparation and identify the acid used

Analyst (T) ① 7-24-13 (W) Date 15:26 7-24-13 (A)

Sample Idenification		IC	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID	Test	Tare	Wet	70 °C		
Blank			13.3775	Ø	13.3776		
WY32 A4		–	12.9850	19.8199	17.6767		Sediment & Rock
" A4		–	13.0514	20.1500	18.0412		↓
" A4		–	13.1174	20.2582	18.0706		
B3		–	13.0795	21.5801	19.9453		Rocky Sediment
↓ C3		–	13.4505	20.6234	18.7121		Sediment & Rock
WY43 A1		–	13.3479	19.4826	17.9207		Sed-Rock & Rock
B1		–	13.3690	22.9307	21.1010		↓
C1		–	13.0915	18.8297	15.0601		Very wet Sand
" C1		–	~~13.0800~~ ④	13.0800	19.2230	15.3061	
" C1		–	13.3848	19.1816	~~15.6034~~ ⑤	15.6034	↓
D1		+–	13.4211	20.6064	19.8786		Rocky Sand
E1		–	13.4047	21.1775	17.4784		Very wet Sand
F1		–	13.4114	21.5264	19.8962		Rocky Sandy Sed
G1		–	13.3824	21.0027	20.6763		Sand & Rocks
H1		–	13.4654	20.3509	20.1152		↓
(OK) K1		–	13.3768	21.0092	17.8036		Wet Sed & Rocks
↓ (OK) L1		–	13.4486	21.1993	16.9469		Very wet Sed

7-24-13 (W)

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET DATE: 7/24/2013

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))* ANALYST: KE 14:58 (A)

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: N / A

Batch drying time		
record times as mm/dd/yy hh:mm		
5/24/2013 14:48	date/time in oven	KE
5/25/2013 7:20	date/time out	KE
elapsed hrs =	16.5	

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
if ash wt > dry wt, "Chk for Err"
*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02			
	Date & Time	7/24/13 14:23 KE	7/24/13 13:06 KE	7/25/13 7:36 KE									
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000									
	record weights to 4 places	*Cal OK!*	*Cal OK!*	*Cal OK!*									

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	TVS (%)
Blank			1.0761	1.0761			0.00							
WY32 A4		7.1100	1.1260	5.1738			4.05	**67.64%**						
WY32 A4 dup		7.0175	1.1220	5.1048			3.98	**67.56%**						
							RPD =	0.13%				RPD =		NA
WY32 A4 trp		7.3752	1.1035	5.2874			4.18	**66.71%**						
							RSD =	0.77%				RSD =		NA
WY32 B3		7.5200	1.1217	6.1995			5.08	**79.36%**						
WY32 C3		7.7161	1.1432	5.7759			4.63	**70.48%**						
WY43 A1		6.3932	1.0550	4.9405			3.89	**72.79%**						
WY43 B1		8.3009	1.1179	6.5888			5.47	**76.16%**						
WY43 C1		6.3844	1.0846	2.7718			1.69	**31.84%**						
WY43 C1 dup		6.8659	1.0919	2.9765			1.88	**32.64%**						
							RPD =	2.49%				RPD =		NA
WY43 C1 trp		6.4443	1.0785	2.7713			1.69	**31.55%**						
							RSD =	1.77%				RSD =		NA
WY43 D1		7.4111	1.1157	6.3941			5.28	**83.85%**						
WY43 E1		7.2026	1.1471	3.7690			2.62	**43.30%**						
WY43 F1		7.6509	1.0824	6.1324			5.05	**76.88%**						
WY43 G1		7.7138	1.1188	7.1257			6.01	**91.08%**						
WY43 H1		7.8062	1.0899	7.4046			6.31	**94.02%**						
WY43 K1		7.3589	1.1186	4.5142			3.40	**54.41%**						
WY43 L1		7.0745	1.0646	3.1801			2.12	**35.20%**						

TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

Analytical Resources, Incorporated
Analytical Chemists and Consultants

(A)

Analyst: (N)	Date: 7-25-13	Oven ID: 012	Muffle ID:	Balance ID: 1123230597
Time in Oven: 14:58		Time Out of Oven: 7:20		Elapsed Time (> 12 Hrs):

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TS (%) calculated as:
Final Dry Weight (g) = (Dry Weight – Tare Weight)
TS = (Final Dry Weight) / (Grams Sample – Tare Weight)

TVS (mg/kg dry weight) calculated as:
Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight)
TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000
If Ash Weight > Dry Weight then "Check for Error"
If Dry Weight – Ash Weight < 0.001 < (1/Dry Weight) * 1,000,000

Cal Weight ID	CV-02	CV-02	CV-02	CV-02	CV-02	[redacted]	CV-02	CV-02	CV-02
Date & Time:	7-24-13 14:29	7-24-13 13:26	7-25-13 7:36						
Cal Weight (10.0000):	10.0000 (M)	10.0000 (K)	10.0000 (N)						

Sample ID	Dish #	Sample	Tare	Dry Weight 104°C 1	2	3	Dry Weight grams	Ash Weight 550°C 1	2	3
BLANK	1		1.0761	1.0761						
W432 A4	2	7.1100	1.1260	5.1738						
dA4	3	7.0175	1.1220	5.1049						
dpA4	4	7.3752	1.1035	5.2874						
B3	5	7.6200	1.1217	6.1995						
C3	6	7.7161	1.1432	5.7759						
W443 A1	7	6.3932	1.0550	4.9405						
B1	8	8.3009	1.1179	6.5888						
C1	9	6.3844	1.0846	2.7718						
dC1	10	6.8659	1.0919	2.9765						
dpC1	11	6.4443	1.0785	2.7713						
D1	12	7.4111	1.1157	6.3941						
E1	13	7.2026	1.1471	3.7690						
F1	14	7.6509	1.0824	6.1324						
G1	15	7.7138	1.1188	7.1257						
H1	16	7.8062	1.0899	7.4046						
KDL1	17	7.3589	1.1186	4.5142						
JDL1	18	7.0745	1.0646	3.1801						

7-24-13 (A)

TOC, Solids Data Analysis

DATE: 7/30/2013

Instrument: Apollo 1 — ANALYST: KE 7:22

Mode: NPOC *Inlet:* Boat

Spike Std = 2,500 *ppm C* — Balance ID:

Calibration Data

Cal Curve ID: **7/15/2013 BOAT CAL** *Conc:* 5,000 *ppm*

Calibration Curve Standard: **00136-09** *Curve Date:* **07/15/13**

CalFact: ***1.387E+05*** *intercept:* **255223** *r2 :* **0.99826**

Curve Range (ppm) 200 *to* 2,500

Curve Range (µgC): **8** *to* **100** *40 µL injections of designated standard*

Verification Standard Source: ***ERA# 0409-12-01*** *Conc:* **5,000** *ppm*

dilution : 10 *mL to* 50 **1,000** *ppm*

Standard Reference Material Source: ***NIST 8704*** *Conc:* **33,510** *ppm*

Source: ***NIST 1941B*** *Conc:* **29,900** *ppm*

Silica Blanks

	Replicate determinations						Mean	RSD	condition
	13.1	20.7	10.5	9.0			10.9	19.0%	*OK*

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	*comments*
ICV				1.00		40.0	921	921	*92.10%*
Blank				1.00		40.0	-32.93	-33	*Blank OK*
~~NIST 1941B~~			-	~~1.00~~		~~0.7~~	~~23181~~	~~23,181~~	*~~77.53%~~*
NIST 1941B				1.00		1.0	29105	29,105	*97.34%*
~~WY32 A4~~			-	~~1.00~~		~~1.3~~	~~70998~~	~~70,998~~	*~~Range OK!~~*
Silica Blanks 1				1.00		52.3	13.07	13	*Low Scale*
~~Silica Blanks 2~~			-	~~1.00~~		~~54.6~~	~~20.7~~	~~21~~	*~~Low Scale~~*
Silica Blanks 3				1.00		52.3	10.54	11	*Low Scale*
Silica Blanks 4				1.00		52.9	8.97	9	*Low Scale*
WY32 A4	13.3	132.5	89.96%	9.96		2.6	9381	93,360	*Range OK!*
~~WY32 A4 dup~~	~~13.2~~	~~130.0~~	~~89.85%~~	~~9.85~~		~~2.4~~	~~12169~~	~~119,750~~	*~~RPD=24.8%~~*
WY32 A4 trp	13.3	132.8	89.98%	9.98		2.6	8853	88,299	*RSD=6%*
WY32 A4 dup	13.2	130.0	89.85%	9.85		2.4	10116	99,531	*RPD=6.4%*
WY32 A4 ms	13.3	132.5	89.96%	9.96	10	2.2	19528	194,449	*Range OK!*
Spike =	*0.025*	*mg C to*	*0.2*	*mg samp=*	*113,209*	*ppm*		*89%*	
CCV				1.00		40.0	920	920	*92.00%*
Blank				1.00		40.0	-40.99	-41	*Blank OK*

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			comments
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	
WY32 B3	13.2	131.7	89.98%	9.98		2.2	9879	98,468	*Range OK!*
WY32 C3	16.4	157.4	89.58%	9.60		2.2	11297	108,330	*Range OK!*
WX28 A1				1.00		0.8	74279	74,279	*Range OK!*
~~WX28 A1 dup~~				~~1.00~~		~~0.7~~	~~51762~~	~~51,762~~	~~*RPD=35.7%*~~
WX28 A1 dup				1.00		0.8	64923	64,923	*RPD=13.4%*
WX28 A1 trp				1.00		0.9	68156	68,156	*RSD=6.9%*
WX28 A1 ms	11.6	110.5	89.50%	9.53	10	2.4	16765	159,608	*Range OK!*
Spike =	*0.025*	*mg C to*	*0.3*	*mg samp=*	*99,228*	*ppm*		*86%*	
WX28 B1				1.00		0.9	78173	78,173	*Range OK!*
WX28 C1				1.00		0.7	61298	61,298	*Range OK!*
WY43 E1				1.00		1.9	26037	26,037	*Range OK!*
WY43 F1				1.00		2.0	21883	21,883	*Range OK!*
WY43 K1				1.00		1.5	34949	34,949	*Range OK!*
~~NIST 1941B~~				~~1.00~~		~~0.7~~	~~21911~~	~~21,911~~	~~*73.28%*~~
NIST 1941B				1.00		0.9	28001	28,001	*93.65%*
CCV				1.00		40.0	922	922	*92.20%*
Blank				1.00		40.0	-33.44	-33	*Blank OK*

① 7-30-13 (W)

TOC Solids Sample Run Log
Apollo 9000

Page 1 of 1

Set-Up Parameters MODE: NPOC			INLET: Boat Sampler	
Standards:	Source	Conc (ppm)	Analyst:	(W)
Calibration:	ARI – 00136-09	5000	Date:	7-30-13
Verification:	ERA – 0409-12-01	5000 to 1000 for CVS	Time:	7:22
SRM:	NBS 1941b or 8704	Method: PSEP 1986-MOD	Balance ID	B146454145
Sample Sequence:				

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
ICV			40			
ICB			40			
NBS 1941 B			0.7			
NBS 1941 B			1.0			
WY32 A4			1.3			
SB 1			~~52.3~~			
2			54.6			
3			~~52.3~~			
4			52.9			
WY32 A4	13.3	132.5	2.6 (2)			
dp A4	13.2	1300	2.4/2.4			
② ↓ tp A4	13.3	132.8	2.6			② dup (2.4)
MS A4	13.3	132.5	2.2			
CCV			40			
CCB			40			
WY32 B3	13.2	131.7	2.2			
C3	16.4	157.4	2.6			
WY28 A1			0.8			
dp A1			0.7			Lid & inlet Rinse
dp A1			0.8			
tp A1			0.9			
MS A1	11.6	110.5	~~0.9~~ 2.4	2500		
B1			0.9			
C1			0.7			
WY43 E1			1.9			
F1			2.0			
K1			1.5			
NBS 1941 B			0.7			
NBS 1941 B			0.9			
		7-30-13				
		(W)				

② Dup Re-run 7-30-13 (W) after trip

Detailed Analysis Report Print Date/Time: 2013/07/30 14:53:05

1-30-13 (W)

Sample ID: ICV/CCV BOAT Mode: TOC
Method: Boat Sampler Filename: 07300729
Cal. Curve: 071513 BOAT CURVE Timestamp: 2013/07/30 07:33
Operator ID: APD Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	921.0942	36.8438	5367083	33.451	34.449	156

Sample ID: ICB/CCB BOAT Mode: TOC
Method: Boat Sampler Filename: 07300736
Cal. Curve: 071513 BOAT CURVE Timestamp: 2013/07/30 07:38
Operator ID: APD Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-32.9276	-1.3171	72483	33.662	34.661	59

7-30-13 (W)

Sample ID: NBS 1941B Mode: TOC
Method: Boat Sampler Filename: 07300745
Cal. Curve: 071513 BOAT CURVE Timestamp: 2013/07/30 07:51
Operator ID: APD Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	23181.0000	16.2267	2506584	33.778	34.777	226

Last Message: Out of Calibration

Sample ID: NBS 1941B Mode: TOC
Method: Boat Sampler Filename: 07300753
Cal. Curve: 071513 BOAT CURVE Timestamp: 2013/07/30 07:59
Operator ID: APD Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	29104.5820	29.1046	4293316	33.857	34.855	283

1-30-13 (W)

Sample ID: WY32 A4 Mode: TOC
Method: Boat Sampler Filename: 07300811
Cal. Curve: 071513 BOAT CURVE Timestamp: 2013/07/30 08:15
Operator ID: APD Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	70997.5391	92.2968	12805649	33.946	34.945	200

Sample ID: Silica Blank 1 Mode: TOC
Method: Boat Sampler Filename: 07300841
Cal. Curve: 071513 BOAT CURVE Timestamp: 2013/07/30 08:46
Operator ID: APD Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	13.0715	0.6836	94851	34.847	35.845	63

Sample ID: Silica Blank 2 Mode: TOC
Method: Boat Sampler Filename: 07300909
Cal. Curve: 071513 BOAT CURVE Timestamp: 2013/07/30 09:12
Operator ID: APD Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	20.7011	1.1303	156820	36.272	37.270	65

Sample ID: Silica Blank 3
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 07300917
Timestamp: 2013/07/30 09:20
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10.5378	0.5511	76466	36.574	37.569	56

Sample ID: Silica Blank 4
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 07300934
Timestamp: 2013/07/30 09:37
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8.9738	0.4747	65864	37.193	37.288	120

Last Message: Low Sample Detected

Sample ID: WY32 A4
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 07301005
Timestamp: 2013/07/30 10:08
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9381.3281	24.3915	3384174	38.282	39.281	119

Sample ID: WY32 A4 DUP
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 07301011
Timestamp: 2013/07/30 10:14
Sample Type: Sample

7-30-13 D

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12168.5811	29.2046	4051969	38.421	39.417	122

Sample ID: WY32 A4 TRIP
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 07301016
Timestamp: 2013/07/30 10:19
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8852.9795	23.0177	3193580	38.422	39.419	112

Sample ID: WY32 A4 DUP
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 07301029
Timestamp: 2013/07/30 10:33
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10116.2207	24.2789	3368562	38.374	39.372	110

Sample ID: WY32 A4 MS
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 07301036
Timestamp: 2013/07/30 10:40
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning	Ending	Integration

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	19528.3672	42.9624	5960786	38.197	39.193	133

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 07301041
Timestamp: 2013/07/30 10:44
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	919.7176	36.7887	5359444	38.181	39.181	137

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 07301046
Timestamp: 2013/07/30 10:49
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-40.9855	-1.6394	27763	38.097	38.006	120

Last Message: Low Sample Detected

Sample ID: WY32 A3
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 07301128
Timestamp: 2013/07/30 11:31
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9879.4639	21.7348	3015581	37.079	38.077	117

Sample ID: WY32 C3
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 07301140
Timestamp: 2013/07/30 11:43
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	11296.6445	24.8526	3448158	37.368	38.365	120

WX28

Sample ID: ~~WY28~~ A1
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 07301147
Timestamp: 2013/07/30 11:52
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	74278.6562	59.4229	8244588	37.986	38.984	222

WX28

Sample ID: ~~WY28~~ A1 DUP
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 07301203
Timestamp: 2013/07/30 12:09
Sample Type: Sample

7-30-13

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	51761.8672	36.2333	5027162	40.468	41.727	301

Last Message: Max Integration Time Reached

WX28

Sample ID: ~~WY28~~ A1 DUP
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Mode: TOC
Filename: 07301212
Timestamp: 2013/07/30 12:18

WY32 : 61.087

Operator ID: APD Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	64923.3281	51.9387	7206190	42.492	43.747	301

Last Message: Max Integration Time Reached

WX28

Sample ID: ~~WI28~~ A1 TRIP Mode: TOC
Method: Boat Sampler Filename: 07301236
Cal. Curve: 071513 BOAT CURVE Timestamp: 2013/07/30 12:39
Operator ID: APD Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	68155.9844	61.3404	8510625	45.065	46.062	179

WX28

Sample ID: ~~WI28~~ A1 MS Mode: TOC
Method: Boat Sampler Filename: 07301245
Cal. Curve: 071513 BOAT CURVE Timestamp: 2013/07/30 12:49
Operator ID: APD Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	16765.2188	40.2365	5582586	44.730	45.729	120

WX28

Sample ID: ~~WI28~~ B1 Mode: TOC
Method: Boat Sampler Filename: 07301313
Cal. Curve: 071513 BOAT CURVE Timestamp: 2013/07/30 13:18
Operator ID: APD Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	78173.4922	70.3561	9761509	41.502	42.500	165

WX28

Sample ID: ~~WI28~~ C1 Mode: TOC
Method: Boat Sampler Filename: 07301320
Cal. Curve: 071513 BOAT CURVE Timestamp: 2013/07/30 13:24
Operator ID: APD Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	61297.5938	42.9083	5953281	41.195	42.190	132

WX28 WY43 (W) 9-3-13

Sample ID: ~~WI43~~ E1 Mode: TOC
Method: Boat Sampler Filename: 07301327
Cal. Curve: 071513 BOAT CURVE Timestamp: 2013/07/30 13:30
Operator ID: APD Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	26036.8008	49.4699	6863666	40.604	41.599	140

Sample ID: WY43 F1 Mode: TOC
Method: Boat Sampler Filename: 07301332
Cal. Curve: 071513 BOAT CURVE Timestamp: 2013/07/30 13:35
Operator ID: APD Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21883.4570	43.7669	6072407	40.130	41.130	138

Sample ID: WY43 K1 Mode: TOC
Method: Boat Sampler Filename: 07301347

Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Timestamp: 2013/07/30 13:51
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	34948.5078	52.4228	7273356	38.965	39.965	157

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 07301357
Timestamp: 2013/07/30 14:05
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21911.2031	15.3378	2383261	38.608	39.608	202

Last Message: Out of Calibration

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 07301416
Timestamp: 2013/07/30 14:28
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	28000.5898	25.2005	3751652	37.769	38.767	223

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 07301434
Timestamp: 2013/07/30 14:37
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	922.4896	36.8996	5374828	37.380	38.376	148

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 07301441
Timestamp: 2013/07/30 14:50
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-33.4417	-1.3377	69629	37.141	38.141	45

TOC, Aqueous Data Summary (SHIMADZU TOC-L) DATE: 7/24/13 11:00
EPA 9060 A, SM 5310 B-00 ANALYST: CDE
Analysis Mode: **NPOC** *Instrument:* ***SHIMADZU TOC-L***

Detection Limits (mgC/L)
MRL = 1.5 **upper blank =** 1.5 **lower blank =** -1.5

Calibration Data
Stock ID: ARI 00136-10 | Slope 4.022 | r^2: 1.0000
Curve Date: 7/23/2013 | intercept 0.000 | r 1.0000
Curve ID: NPOC CAL 072313

LCS, Verification Standard and Inorganic Sparge Check

	Organic Carbon			Inorganic carbon		
Source:	**ERA 0408-13-02**			**ARI # 00128-6**		
Conc:	5,000	*mg/L*		1,000	*mg/L*	
dilution:	1.00	*mL to*	mg C/ L	5.00	*mL to*	mg C/ L
Volume:	250	*mL =*	**20.0**	250	*mL =*	**20**

Sample Data

SAMPLE ID	Dilution Factor	Carbon (mg C/L) enter Form as TC, TIC, NPOC						Notes: will flag if RSD >5%
		Form	# reps	mean	stdev	Measured	Report as	
ICV	1	NPOC	3	21.66		21.66	21.7	*108.50%*
ICB	1	NPOC	3	0.1180		0.12	<1.5	*OK !*
0.5 ppm	1	NPOC	3	0.6783		0.68	<1.5	135.66%
IC Sparge Check	1	NPOC	3	21.49		21.49	21.5	*107.50%*
WY31 A2	1	NPOC	3	0.5508		0.55	<1.5	
WY31 A2 dup	1	NPOC	3	0.5336		0.53	<1.5	*RPD NA*
WY31 A2 ms	1	NPOC	3	20.54		20.54	20.5	*102.70%*
Spike at	0.200	*mL of*	2,000	*ppm Std to*	20.00	*mL =*	20.0	*mg/L*
~~WY32 D2~~	~~1~~	~~NPOC~~	~~3~~	~~64.44~~		~~64.44~~	~~64.4~~	-
~~WY32 D2 dup~~	~~1~~	~~NPOC~~	~~3~~	~~68.87~~		~~68.87~~	~~68.9~~	~~*RPD =6.8%*~~
~~WY32 D2 ms~~	~~1~~	~~NPOC~~	~~3~~	~~88.22~~		~~88.22~~	~~88.2~~	~~*118.90%*~~
~~*Spike at*~~	~~0.200~~	~~*mL of*~~	~~2,000~~	~~*ppm Std to*~~	~~20.00~~	~~*mL =*~~	~~20.0~~	~~*mg/L*~~
~~WY21 A1~~	~~1~~	~~NPOC~~	~~3~~	~~1.545~~		~~1.55~~	~~1.55~~	-
~~WY21 A1dup~~	~~1~~	~~NPOC~~	~~3~~	~~1.322~~		~~1.32~~	~~<1.5~~	~~*RPD NA*~~
CCV	1	NPOC	3	21.48		21.48	21.5	*107.50%*
CCB	1	NPOC	3	0.08916		0.09	<1.5	*OK !*
~~WY21 A1ms~~	~~1~~	~~NPOC~~	~~3~~	~~27.56~~		~~27.56~~	~~27.6~~	~~*130.08%*~~
~~*Spike at*~~	~~0.200~~	~~*mL of*~~	~~2,000~~	~~*ppm Std to*~~	~~20.00~~	~~*mL =*~~	~~20.0~~	~~*mg/L*~~
WY21 Filter Blank	1	NPOC	3	0.1625		0.16	<1.5	
WY21 B1	1	NPOC	3	7.684		7.68	7.68	
WY21 C1	1	NPOC	3	5.159		5.16	5.16	
WY21 D1	1	NPOC	3	5.117		5.12	5.12	
WY21 E1	1	NPOC	3	0.8615		0.86	<1.5	
WY32 Filter Blank	1	NPOC	3	0.1538		0.15	<1.5	
WY32 D	1	NPOC	3	64.85		64.85	64.9	
WY32 Ddup	1	NPOC	3	66.05		66.05	66.1	*RPD =1.8%*
WY32 Dms	1	NPOC	3	85.20		85.20	85.2	*101.75%*
Spike at	0.200	*mL of*	2,000	*ppm Std to*	20.00	*mL =*	20.0	*mg/L*
CCV	1	NPOC	3	21.44		21.44	21.4	*107.00%*
CCB	1	NPOC	3	0.1715		0.17	<1.5	*OK !*
WY38 E2	1	NPOC	3	45.59		45.59	45.6	
WY38 E2 dup	1	NPOC	3	46.21		46.21	46.2	*RPD =1.3%*
WY38 E2 ms	1	NPOC	3	66.05		66.05	66.1	*102.30%*
Spike at	0.200	*mL of*	2,000	*ppm Std to*	20.00	*mL =*	20.0	*mg/L*
WY38 F2	1	NPOC	3	21.65		21.65	21.7	
WY38 G2	1	NPOC	3	46.80		46.80	46.8	
~~WY38 H2~~	~~1~~	~~NPOC~~	~~3~~	~~59.29~~		~~59.29~~	~~59.3~~	-
CCV	1	NPOC	3	21.78		21.78	21.8	*109.00%*
CCB	1	NPOC	3	0.1384		0.14	<1.5	*OK !*

	Type	Analysis	Sample Nam	Sample ID	Origin	Manual Diluti	Result	Notes	Status	Date / Time	Vial
1	Unknown	NPOC		RINSE	NPOC CAL	1.000	NPOC:0.15		Completed	7/24/2013 1	1
2	Control	NPOC	CVS	CVS 20	CVS 20 pp	1.000	NPOC:21.6	Control valu	Completed	7/24/2013 1	2
3	Control	NPOC	ICB/CCB		ICB CCB.tpl	1.000	NPOC:0.11	Control valu	Completed	7/24/2013 1	3
4	Control	NPOC	DQL	0.5 mg/L	DQL.tpl	1.000	NPOC:0.67	Control valu	Completed	7/24/2013 1	4
5	Control	NPOC	Sparge Chec	Untitled	Sparge Che	1.000	NPOC:21.4	Control valu	Completed	7/24/2013 1	5
6	Unknown	NPOC	WY31	A2	NPOC CAL	1.000	NPOC:0.55		Completed	7/24/2013 1	8
7	Unknown	NPOC	WY31	A2 dup	NPOC CAL	1.000	NPOC:0.53		Completed	7/24/2013 1:	9
8	Unknown	NPOC	WY31	A2 ms	NPOC CAL	1.000	NPOC:20.5		Completed	7/24/2013 1:	10
9	Unknown	NPOC	WY32	D2	NPOC CAL	1.000	NPOC:68.4		Completed	7/24/2013 1:	11
10	Unknown	NPOC	WY32	D2 dup	NPOC CAL	1.000	NPOC:68.8		Completed	7/24/2013 2:	12
11	Unknown	NPOC	WY32	D2 ms	NPOC CAL	1.000	NPOC:88.2		Completed	7/24/2013 2:	13
12	Unknown	NPOC	WY21	A1 DOC	NPOC CAL	1.000	NPOC:1.54		Completed	7/24/2013 2:	14
13	Unknown	NPOC	WY21	A1 dup DOC	NPOC CAL	1.000	NPOC:1.32		Completed	7/24/2013 3:	15
14	Control	NPOC	CVS	CVS 20	CVS 20 pp	1.000	NPOC:21.4	Control valu	Completed	7/24/2013 3:	2
15	Control	NPOC	ICB/CCB		ICB CCB.tpl	1.000	NPOC:0.08	Control valu	Completed	7/24/2013 4:	3
16	Unknown	NPOC	WY21	A1 ms DOC	NPOC CAL	1.000	NPOC:27.5		Completed	7/24/2013 4:	16
17	Unknown	NPOC	WY21	Filter Blank	NPOC CAL	1.000	NPOC:0.16		Completed	7/24/2013 4:	17
18	Unknown	NPOC	WY21	B1 DOC	NPOC CAL	1.000	NPOC:7.68		Completed	7/24/2013 4:	18
19	Unknown	NPOC	WY21	C1 DOC	NPOC CAL	1.000	NPOC:5.15		Completed	7/24/2013 5:	19
20	Unknown	NPOC	WY21	D1 DOC	NPOC CAL	1.000	NPOC:5.11		Completed	7/24/2013 5:	20
21	Unknown	NPOC	WY21	E1 DOC	NPOC CAL	1.000	NPOC:0.86		Completed	7/24/2013 5:	21
22	Unknown	NPOC	WY32	Filter Blank	NPOC CAL	1.000	NPOC:0.15		Completed	7/24/2013 6:	22
23	Unknown	NPOC	WY32	D DOC	NPOC CAL	1.000	NPOC:64.8		Completed	7/24/2013 6:	23
24	Unknown	NPOC	WY32	D dup DOC	NPOC CAL	1.000	NPOC:66.0		Completed	7/24/2013 7:	24
25	Unknown	NPOC	WY32	D ms DOC	NPOC CAL	1.000	NPOC:85.2		Completed	7/24/2013 7:	25
26	Control	NPOC	CVS	CVS 20	CVS 20 pp	1.000	NPOC:21.4	Control valu	Completed	7/24/2013 7:	2
27	Control	NPOC	ICB/CCB		ICB CCB.tpl	1.000	NPOC:0.17	Control valu	Completed	7/24/2013 8:	3
28	Unknown	NPOC	WY38	E2 DOC	NPOC CAL	1.000	NPOC:45.5		Completed	7/24/2013 8:	26
29	Unknown	NPOC	WY38	E2 dup DOC	NPOC CAL	1.000	NPOC:46.2		Completed	7/24/2013 8:	27
30	Unknown	NPOC	WY38	E2 ms DOC	NPOC CAL	1.000	NPOC:66.0		Completed	7/24/2013 9:	28
31	Unknown	NPOC	WY38	F2 DOC	NPOC CAL	1.000	NPOC:21.6		Completed	7/24/2013 9:	29
32	Unknown	NPOC	WY38	G2 DOC	NPOC CAL	1.000	NPOC:46.8		Completed	7/24/2013 9:	30
33	Unknown	NPOC	WY38	H2 DOC	NPOC CAL	1.000	NPOC:59.2		Completed	7/24/2013 9:	31
34	Control	NPOC	CVS	CVS 20	CVS 20 pp	1.000	NPOC:21.7	Control valu	Completed	7/24/2013 1	6
35	Control	NPOC	ICB/CCB		ICB CCB.tpl	1.000	NPOC:0.13	Control valu	Completed	7/24/2013 1	7

TOC-Control L Report

CDE
2013_07_24_001.tlx

Instr.Information

Instrument Options: TOC/ASI/IC Unit/
Catalyst: Regular Sensitivity

Sample

Sample Name:
Sample ID: RINSE
Origin: NPOC CAL 072313 cal
Status: Completed
Chk. Result

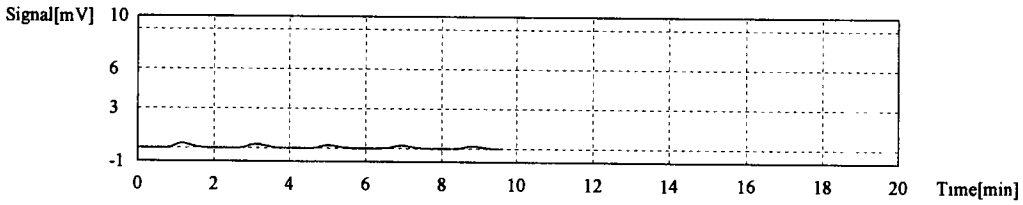
Unknown	NPOC	1 000	NPOC 0 1523mg/L

1. Det

Anal.. NPOC

1	0 9674	0 2405mg/L	50uL	1.000	E	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 11 00 33 AM
2	0 8643	0.2149mg/L	50uL	1 000	E	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 11 04 02 AM
3	0 6781	0 1686mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 11 07 32 AM
4	0 6016	0 1496mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 11 11 02 AM
5	0 5583	0 1388mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 11 14 32 AM

Mean Area 0.6127
Mean Conc. 0.1523mg/L



Control Sample

Sample Name: CVS
Sample ID: CVS 20
Method: CVS 20 ppm.tpl
Status: Completed
Chk. Result: Control value. 108.3 / Control exceeds range!

Control	NPOC	1 000	NPOC 21 66ppm

1. Det.

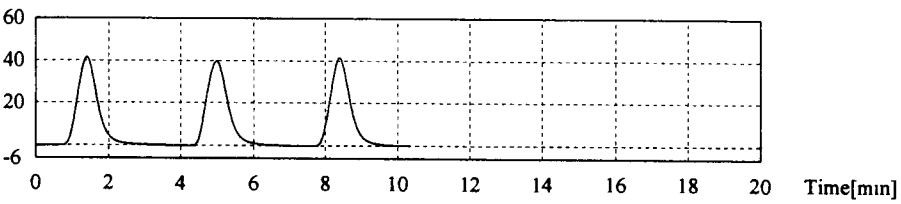
Anal.: NPOC

1	158 8	21 50ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 11 25 49 AM
2	160 6	21 75ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 11 30 12 AM
3	160 5	21 73ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 11 34 33 AM

TOC-Control L Report

CDE
2013_07_24_001.tlx

Mean Area 160.0
Mean Conc 21.66ppm



Control Sample

Sample Name: ICB/CCB
Sample ID:
Method ICB CCB.tpl
Status Completed
Chk. Result Control value: 0.1180 / Control within range!

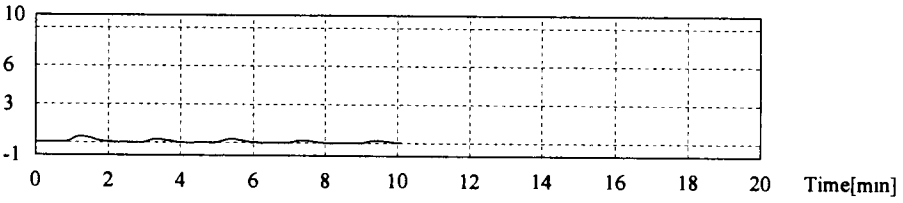
Control	NPOC	1 000	NPOC 0 1180mg/L

1 Det.

Anal.: NPOC

1	1 564	0 2118mg/L	100uL	1 000	E	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 11 44 32 AM
2	0 9244	0 1252mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 11 47 58 AM
3	0 9501	0 1286mg/L	100uL	1 000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	7/24/2013 11 51 25 AM
4	0 7406	0 1003mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 11 54 59 AM
5	0 6422	0 08695mg/L	100uL	1 000	E	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 11 58.20 AM

Mean Area 0.8717
Mean Conc. 0 1180mg/L



Control Sample

Sample Name. DQL
Sample ID: 0.5 mg/L
Method: DQL.tpl
Status Completed
Chk. Result Control value: 0 6783 / Control within range!

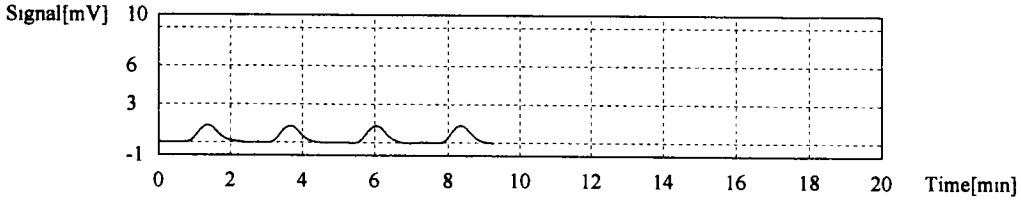
Control	NPOC	1.000	NPOC 0.6783mg/L

1. Det.

Anal.: NPOC

1	4 845	0 6560mg/L	100uL	1 000	E	NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	7/24/2013 12 08 03 PM
2	5 068	0 6862mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 12 11 19 PM
3	4 963	0 6720mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27.cal	7/24/2013 12 14 32 PM
4	4 998	0 6767mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 12 17 45 PM

Mean Area 5.010
Mean Conc. 0.6783mg/L



Control Sample

Sample Name: Sparge Check
Sample ID. Untitled
Method: Sparge Check tpl
Status Completed
Chk. Result Control value: 107.5 / Control exceeds range!

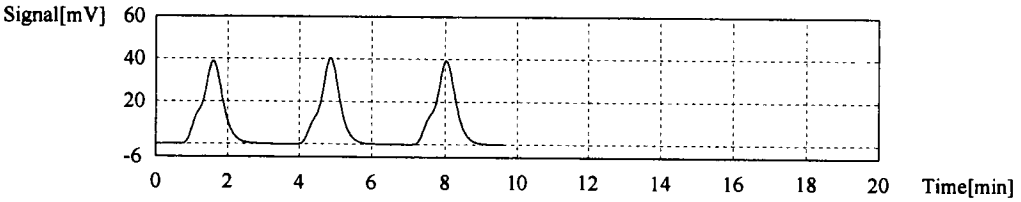
Control	NPOC	1 000	NPOC 21 49mg/L

1. Det.

Anal.: NPOC

1	159 0	21 53mg/L	100uL	1 000	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 12 28 23 PM
2	158 8	21 50mg/L	100uL	1 000	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 12 32 32 PM
3	158 4	21 45mg/L	100uL	1 000	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 12 36 44 PM

Mean Area 158.7
Mean Conc. 21.49mg/L



Sample

Sample Name: WY31
Sample ID: A2
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

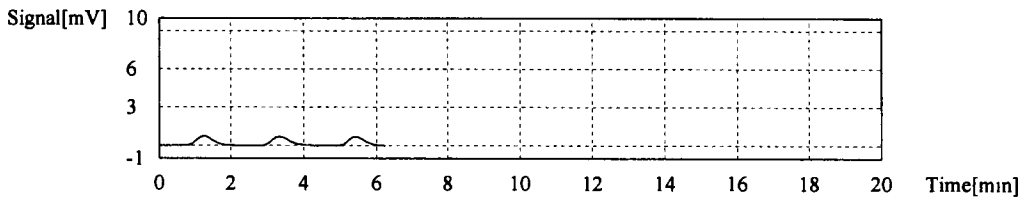
Unknown	NPOC	1 000	NPOC 0.5508mg/L

1. Det

Anal.: NPOC

1	2 269	0 5641mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 12:46 44 PM
2	2 206	0.5484mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 12 50 31 PM
3	2 171	0.5397mg/L	50uL	1.000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 12.54 14 PM

Mean Area 2 215
Mean Conc. 0.5508mg/L



Sample

Sample Name: WY31
Sample ID: A2 dup
Origin: NPOC CAL 072313 cal
Status Completed
Chk. Result

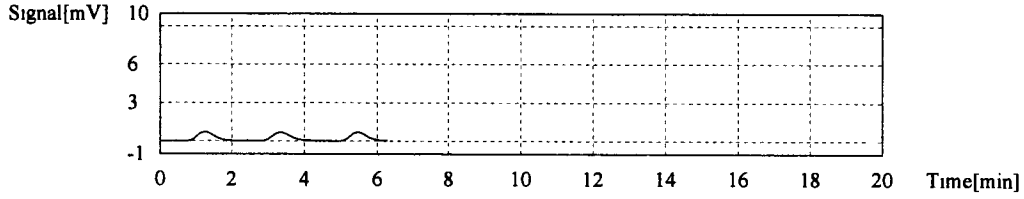
Unknown	NPOC	1 000	NPOC 0 5336mg/L

1. Det

Anal . NPOC

1	2 251	0 5596mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 1 04 03 PM
2	2 097	0 5214mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 1·07 51 PM
3	2 091	0 5199mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 1·11 34 PM

Mean Area 2.146
Mean Conc. 0.5336mg/L



Sample

Sample Name: WY31
Sample ID: A2 ms
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

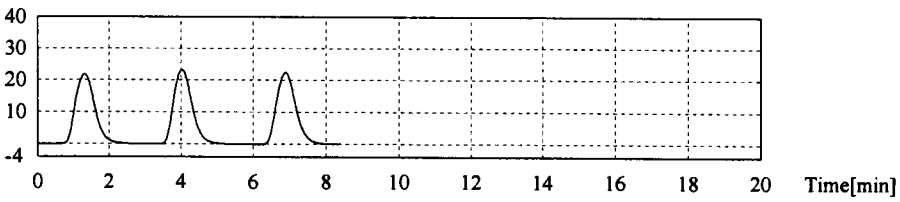
Unknown	NPOC	1 000	NPOC 20 54mg/L

1 Det

Anal.: NPOC

1	82 16	20.43mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 1 22 01 PM
2	83 07	20 65mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 1 25 54 PM
3	82 66	20 55mg/L	50uL	1.000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 1 29 42 PM

Mean Area 82 63
Mean Conc 20.54mg/L



Sample

Sample Name: WY32
Sample ID: D2
Origin NPOC CAL 072313.cal
Status Completed
Chk. Result

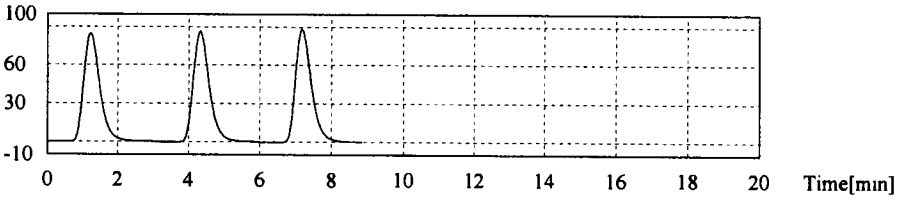
Unknown	NPOC	1 000	NPOC 68 44mg/L

1. Det

Anal.. NPOC

1	272 7	67 80mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 1 40 40 PM
2	278 0	69 12mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 1 44 34 PM
3	275 1	68 39mg/L	50uL	1.000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 1 48 24 PM

Mean Area 275.3
Mean Conc. 68 44mg/L



Sample

Sample Name: WY32
Sample ID: D2 dup
Origin. NPOC CAL 072313.cal
Status Completed
Chk. Result

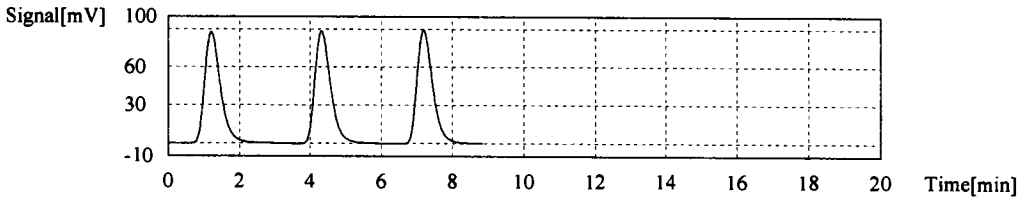
Unknown	NPOC	1.000	NPOC 68 87mg/L

1. Det

Anal.: NPOC

1	275.9	68 59mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 1.59.24 PM
2	276 9	68 84mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 2 03 15 PM
3	278 2	69 17mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28.cal	7/24/2013 2 07 06 PM

Mean Area 277.0
Mean Conc. 68.87mg/L



Sample

Sample Name WY32
Sample ID. D2 ms
Origin: NPOC CAL 072313 cal
Status Completed
Chk. Result

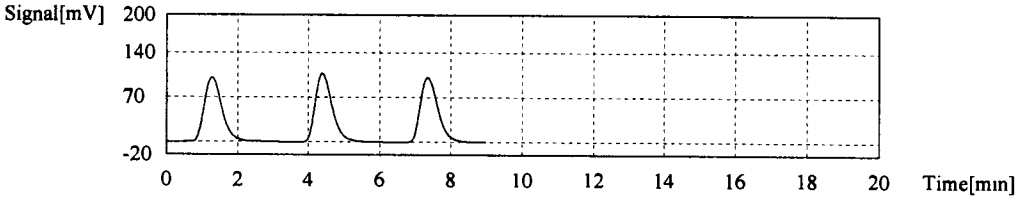
Unknown	NPOC	1 000	NPOC 88 22mg/L

1. Det

Anal.: NPOC

1	351.9	87 49mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 2 18.08 PM
2	359.8	89 45mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 2 22 04 PM
3	352 8	87 71mg/L	50uL	1 000	NPOC CAL 072313.2013_07_23_15_35_28 cal	7/24/2013 2 25 56 PM

Mean Area 354.8
Mean Conc. 88.22mg/L



Sample

Sample Name: WY21
Sample ID: A1 DOC
Origin NPOC CAL 072313.cal
Status Completed
Chk. Result

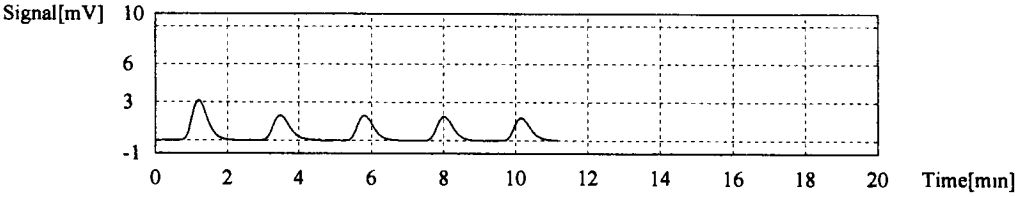
Unknown	NPOC	1 000	NPOC 1 545mg/L

1 Det

Anal.: NPOC

1	9 573	2 380mg/L	50uL	1 000	E	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 2 41 09 PM
2	6 491	1 614mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 2 44 59 PM
3	6.210	1.544mg/L	50uL	1.000		NPOC CAL 072313.2013_07_23_15_35_28.cal	7/24/2013 2 48 39 PM
4	5 942	1 477mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 2 52 24 PM
5	5 658	1 407mg/L	50uL	1 000	E	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 2 56 14 PM

Mean Area 6.214
Mean Conc. 1.545mg/L



Sample

Sample Name: WY21
Sample ID: A1 dup DOC
Origin: NPOC CAL 072313 cal
Status Completed
Chk. Result

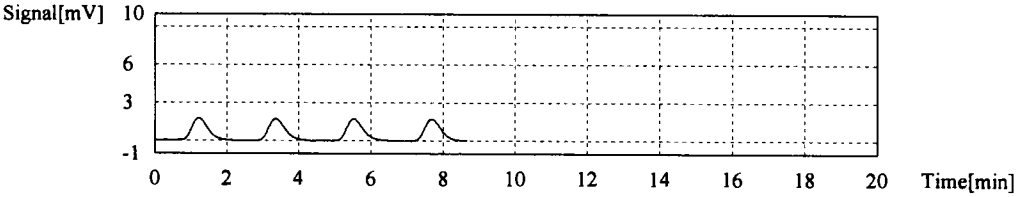
Unknown	NPOC	1 000	NPOC 1 322mg/L

1 Det

Anal.: NPOC

1	5 248	1 305mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 3 06 06 PM
2	5 464	1 358mg/L	50uL	1 000	E	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 3 09 54 PM
3	5 319	1 322mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 3 13 40 PM
4	5 391	1 340mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 3 17 29 PM

Mean Area 5.319
Mean Conc. 1.322mg/L



Control Sample

Sample Name: CVS
Sample ID: CVS 20
Method: CVS 20 ppm.tpl
Status Completed
Chk. Result Control value: 107.4 / Control exceeds range!

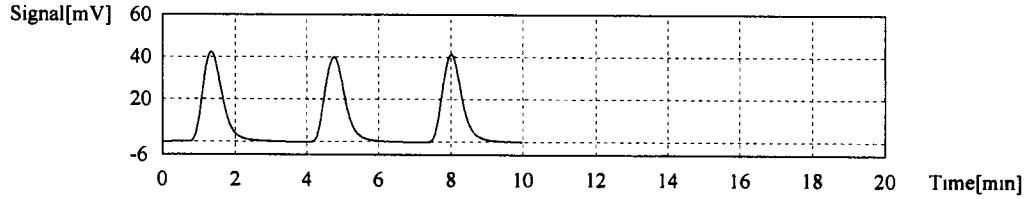
Control	NPOC	1 000	NPOC 21.48ppm

1 Det

Anal.. NPOC

1	158 7	21 49ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 3 28 43 PM
2	158 7	21 49ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 3 32 57 PM
3	158 6	21 47ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 3 37 16 PM

Mean Area 158.7
Mean Conc. 21 48ppm



Control Sample

Sample Name: ICB/CCB
Sample ID.
Method: ICB CCB.tpl
Status Completed
Chk. Result Control value. 0.08916 / Control within range!

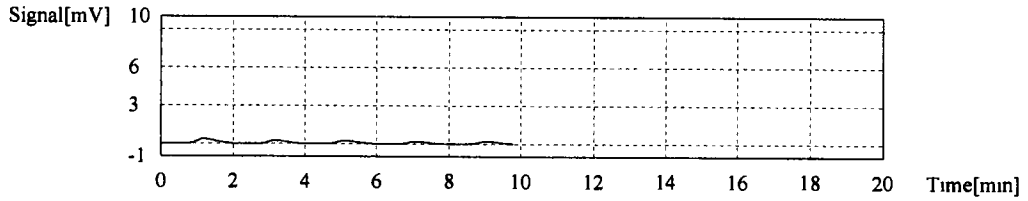
Control	NPOC	1 000	NPOC 0 08916mg/L

1 Det

Anal.: NPOC

1	1 131	0 1531mg/L	100uL	1 000	E	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 3 47 05 PM
2	0 8335	0 1129mg/L	100uL	1 000	E	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 3 50 36 PM
3	0 7327	0 09921mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 3 54.06 PM
4	0 6168	0.08351mg/L	100uL	1.000		NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	7/24/2013 3 57 35 PM
5	0 6259	0 08475mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 4 01 05 PM

Mean Area 0.6585
Mean Conc. 0.08916mg/L



Sample

Sample Name: WY21
Sample ID: A1 ms DOC
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

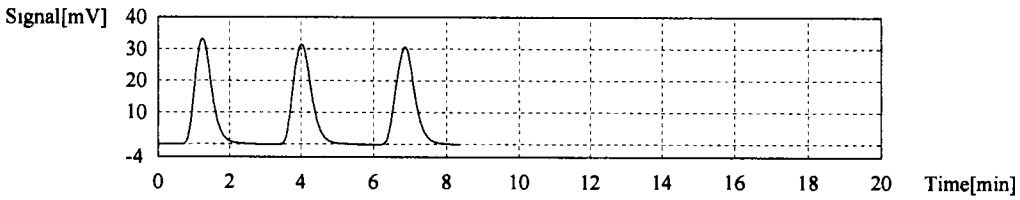
Unknown	NPOC	1 000	NPOC 27 56mg/L

1. Det

Anal.: NPOC

1	109 5	27 22mg/L	50uL	1 000		NPOC CAL 072313.2013_07_23_15_35_28 cal	7/24/2013 4 11 39 PM
2	111 8	27 80mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 4 15 31 PM
3	111 2	27 65mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28.cal	7/24/2013 4 19 21 PM

Mean Area 110.8
Mean Conc. 27 56mg/L



Sample

Sample Name: WY21
Sample ID: Filter Blank
Origin: NPOC CAL 072313 cal
Status Completed
Chk Result

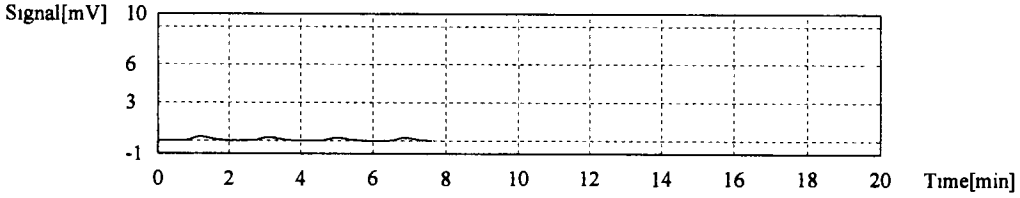
Unknown	NPOC	1 000	NPOC 0 1625mg/L

1. Det

Anal.: NPOC

1	0 8889	0 2210mg/L	50uL	1 000	E	NPOC CAL 072313 2013_07_23_15_35_28.cal	7/24/2013 4 29 08 PM
2	0 7160	0 1780mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 4 32 55 PM
3	0 6259	0 1556mg/L	50uL	1 000		NPOC CAL 072313.2013_07_23_15_35_28 cal	7/24/2013 4 36 42 PM
4	0 6194	0 1540mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 4 40 29 PM

Mean Area 0.6538
Mean Conc. 0 1625mg/L



TOC-Control L Report

CDE
2013_07_24_001.tlx

Sample

Sample Name: WY21
Sample ID: B1 DOC
Origin: NPOC CAL 072313 cal
Status Completed
Chk. Result

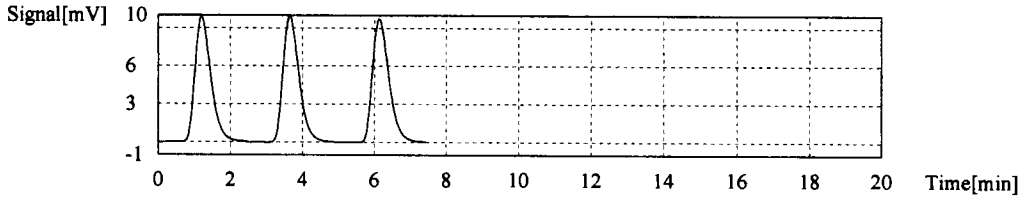
Unknown	NPOC	1 000	NPOC 7 684mg/L

1. Det

Anal.: NPOC

1	30 55	7 595mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 4 50 39 PM
2	30 99	7 705mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 4 54 28 PM
3	31 18	7.752mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 4 58 15 PM

Mean Area 30.91
Mean Conc. 7.684mg/L



Sample

Sample Name: WY21
Sample ID: C1 DOC
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

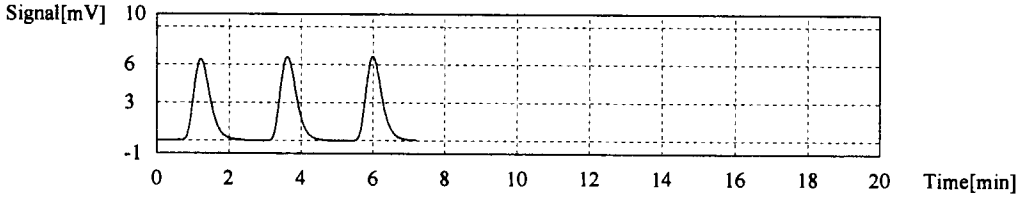
Unknown	NPOC	1 000	NPOC 5 159mg/L

1. Det

Anal.: NPOC

1	20 53	5 104mg/L	50uL	1 000		NPOC CAL 072313.2013_07_23_15_35_28 cal	7/24/2013 5 08 52 PM
2	20 82	5 176mg/L	50uL	1 000		NPOC CAL 072313.2013_07_23_15_35_28 cal	7/24/2013 5 12 36 PM
3	20 90	5 196mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 5 16 26 PM

Mean Area 20.75
Mean Conc 5 159mg/L



Sample

Sample Name: WY21
Sample ID: D1 DOC
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

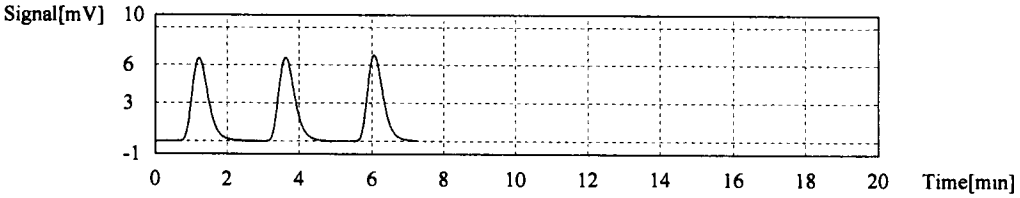
Unknown	NPOC	1 000	NPOC 5 117mg/L

1. Det

Anal.: NPOC

1	20 33	5 054mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 5.26 34 PM
2	20 70	5 146mg/L	50uL	1 000		NPOC CAL 072313.2013_07_23_15_35_28 cal	7/24/2013 5 30 22 PM
3	20 72	5 151mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 5 34 07 PM

Mean Area 20.58
Mean Conc. 5.117mg/L



Sample

Sample Name: WY21
Sample ID: E1 DOC
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

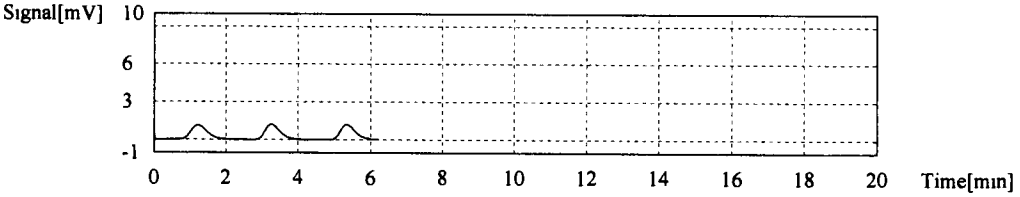
Unknown	NPOC	1 000	NPOC 0 8615mg/L

1. Det

Anal.: NPOC

1	3 412	0 8483mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 5 43 55 PM
2	3 443	0 8560mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 5 47 41 PM
3	3 541	0.8804mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 5 51 28 PM

Mean Area 3.465
Mean Conc. 0 8615mg/L



Sample

Sample Name: WY32
Sample ID: Filter Blank
Origin: NPOC CAL 072313 cal
Status Completed
Chk. Result

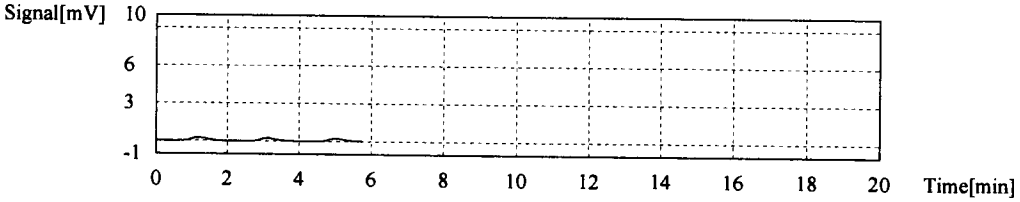
Unknown	NPOC	1.000	NPOC 0 1538mg/L

1. Det

Anal.: NPOC

1	0 7147	0 1777mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 6 01 07 PM
2	0 5690	0 1415mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 6 04 52 PM
3	0 5720	0 1422mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 6 08 39 PM

Mean Area 0.6186
Mean Conc. 0 1538mg/L



Sample

Sample Name: WY32
Sample ID: D DOC
Origin: NPOC CAL 072313 cal
Status Completed
Chk. Result

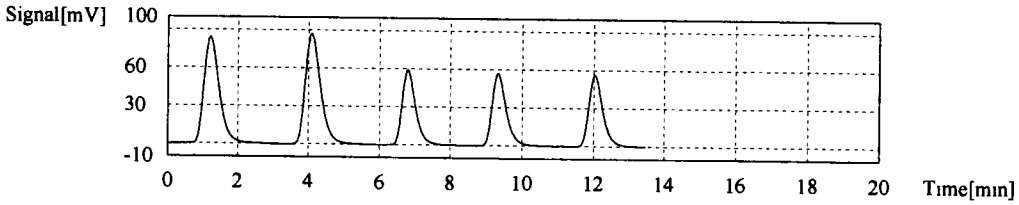
Unknown	NPOC	1.000	NPOC 64.85mg/L

1 Det

Anal.: NPOC

1	259 2	64 44mg/L	50uL	1 000	R	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 6 19 15 PM
2	265 3	65 96mg/L	50uL	1 000	R	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 6 23 01 PM
3	157 3	65 18mg/L	30uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 6 26 34 PM
4	155 4	64 39mg/L	30uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 6 30 29 PM
5	156 8	64 97mg/L	30uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 6 34 12 PM

Mean Area 156.5
Mean Conc. 64.85mg/L



Sample

Sample Name: WY32
Sample ID: D dup DOC
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

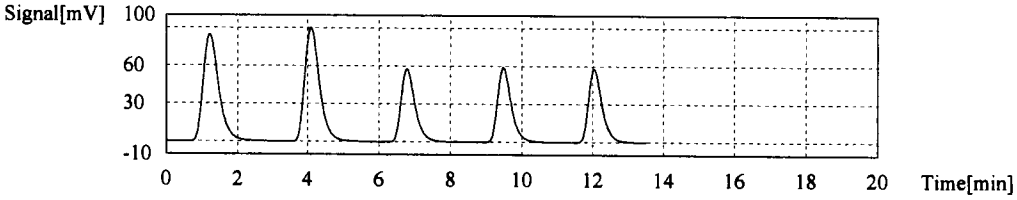
Unknown	NPOC	1 000	NPOC 66 05mg/L

1. Det

Anal.: NPOC

1	260 7	64 81mg/L	50uL	1 000	R	NPOC CAL 072313.2013_07_23_15_35_28 cal	7/24/2013 6 45 01 PM
2	265 0	65 88mg/L	50uL	1 000	R	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 6 48 46 PM
3	159 8	66 22mg/L	30uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 6 52 29 PM
4	160.9	66 67mg/L	30uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 6 56 09 PM
5	157 5	65 26mg/L	30uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 7 00 00 PM

Mean Area 159.4
Mean Conc. 66 05mg/L



Sample

Sample Name: WY32
Sample ID: D ms DOC
Origin. NPOC CAL 072313.cal
Status Completed
Chk Result

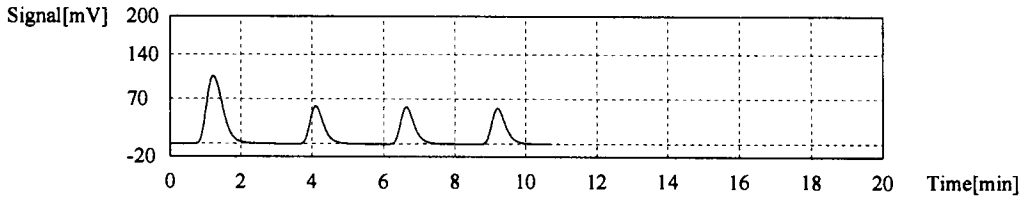
Unknown	NPOC	1 000	NPOC 85 20mg/L

1. Det

Anal.: NPOC

1	342 1	85 05mg/L	50uL	1 000	R	NPOC CAL 072313.2013_07_23_15_35_28 cal	7/24/2013 7 10 52 PM
2	159.6	86 26mg/L	23uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 7 14 23 PM
3	157 3	85 02mg/L	23uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 7 18 12 PM
4	156 0	84 31mg/L	23uL	1 000		NPOC CAL 072313.2013_07_23_15_35_28 cal	7/24/2013 7 22 02 PM

Mean Area 157.6
Mean Conc. 85.20mg/L



Control Sample

Sample Name: CVS
Sample ID: CVS 20
Method: CVS 20 ppm tpl
Status , Completed
Chk. Result Control value: 107.2 / Control exceeds range!

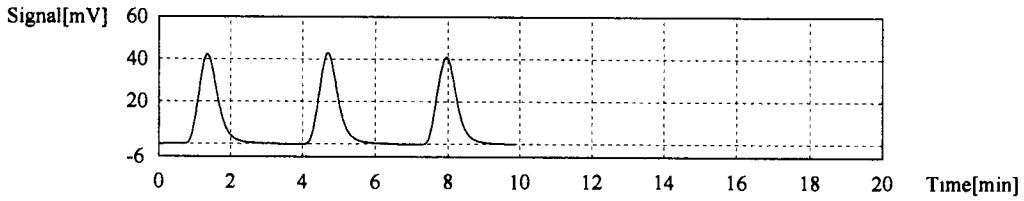
Control	NPOC	1 000	NPOC 21 44ppm	

1. Det.

Anal.: NPOC

1	158 2	21 42ppm	100uL	1 000	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 7 33 18 PM
2	159 0	21 53ppm	100uL	1 000	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 7 37 32 PM
3	157 8	21 37ppm	100uL	1 000	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 7 41 47 PM

Mean Area 158.3
Mean Conc. 21.44ppm



Control Sample

Sample Name: ICB/CCB
Sample ID:
Method: ICB CCB.tpl
Status Completed
Chk. Result Control value: 0.1715 / Control within range!

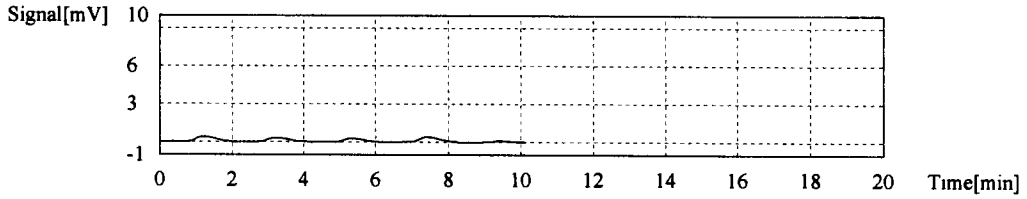
Control	NPOC	1 000	NPOC 0 1715mg/L

1. Det.

Anal.. NPOC

1	1 332	0 1804mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 7 51 38 PM
2	1 151	0 1558mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27.cal	7/24/2013 7 55 19 PM
3	1 030	0 1395mg/L	100uL	1 000	E	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 7 58 45 PM
4	1 316	0 1782mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 8 02 12 PM
5	0.2284	0.03093mg/L	100uL	1 000	E	NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	7/24/2013 8 05 34 PM

Mean Area 1.266
Mean Conc. 0.1715mg/L



Sample

Sample Name: WY38
Sample ID: E2 DOC
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

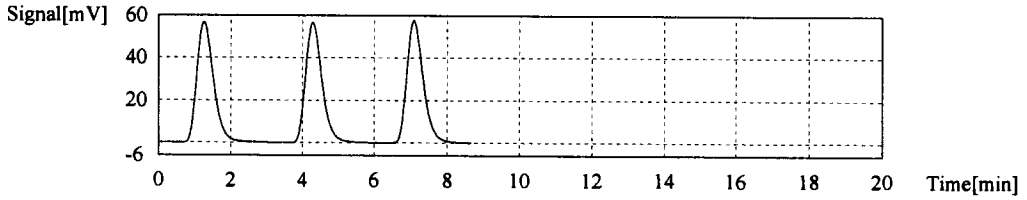
Unknown	NPOC	1 000		NPOC 45 59mg/L

1 Det

Anal.: NPOC

1	182 2	45 30mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 8 16 31 PM
2	183 7	45 67mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 8 20.20 PM
3	184 2	45 80mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 8 24 09 PM

Mean Area 183.4
Mean Conc 45.59mg/L



Sample

Sample Name: WY38
Sample ID: E2 dup DOC
Origin: NPOC CAL 072313 cal
Status Completed
Chk Result

Unknown	NPOC	1 000		NPOC 46 21mg/L

1. Det

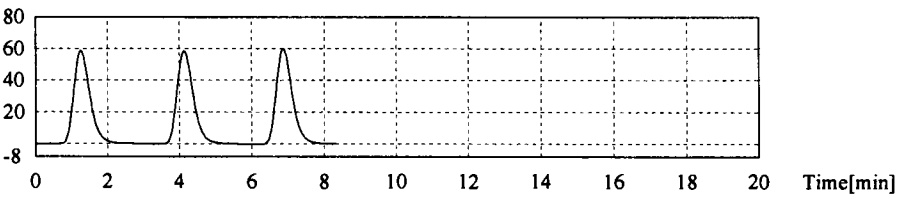
TOC-Control L Report

CDE
2013_07_24_001.tlx

Anal : NPOC

1	184 8	45 94mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 8 34 55 PM
2	185 5	46 12mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 8 38 40 PM
3	187 3	46.57mg/L	50uL	1.000		NPOC CAL 072313.2013_07_23_15_35_28.cal	7/24/2013 8 42 23 PM

Mean Area 185.9
Mean Conc. 46.21mg/L



Sample

Sample Name: WY38
Sample ID: E2 ms DOC
Origin: NPOC CAL 072313.cal
Status Completed
Chk Result

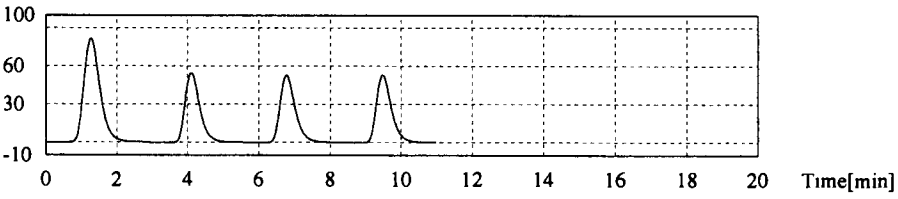
Unknown	NPOC	1 000	NPOC 66 02mg/L

1. Det

Anal.· NPOC

1	264 1	65 66mg/L	50uL	1 000	R	NPOC CAL 072313.2013_07_23_15_35_28 cal	7/24/2013 8 53 09 PM
2	160 4	66 46mg/L	30uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 8 56 48 PM
3	158 8	65 80mg/L	30uL	1 000		NPOC CAL 072313.2013_07_23_15_35_28.cal	7/24/2013 9 00.38 PM
4	158 8	65 80mg/L	30uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 9.04 24 PM

Mean Area 159.3
Mean Conc. 66 02mg/L



Sample

Sample Name: WY38
Sample ID: F2 DOC
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

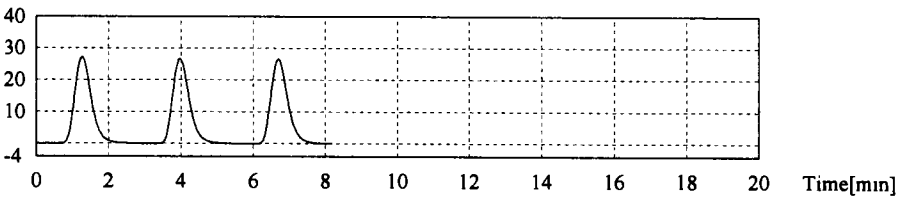
Unknown	NPOC	1 000	NPOC 21 65mg/L

1. Det

Anal.: NPOC

1	87 08	21.65mg/L	50uL	1 000	NPOC CAL 072313.2013_07_23_15_35_28.cal	7/24/2013 9.14:58 PM
2	86 84	21 59mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 9 18 45 PM
3	87 33	21 71mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 9 22 34 PM

Mean Area 87.08
Mean Conc. 21 65mg/L



Sample

Sample Name: WY38
Sample ID: G2 DOC
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

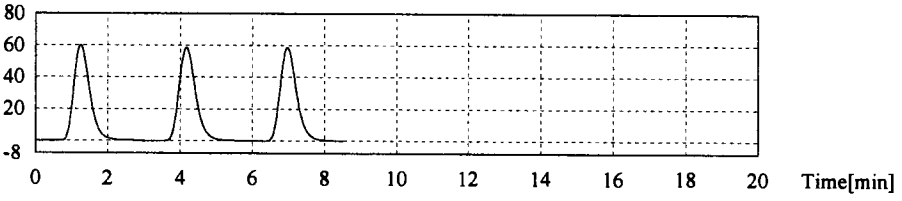
Unknown	NPOC	1 000	NPOC 46 80mg/L

1. Det

Anal.: NPOC

1	185.8	46 19mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 9 33 16 PM
2	189 9	47 21mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 9 37 04 PM
3	189 0	46 99mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 9 40 52 PM

Mean Area 188.2
Mean Conc. 46 80mg/L



Sample

Sample Name: WY38
Sample ID: H2 DOC
Origin: NPOC CAL 072313 cal
Status Completed
Chk Result

Unknown	NPOC	1 000	NPOC 59 29mg/L

TOC-Control L Report

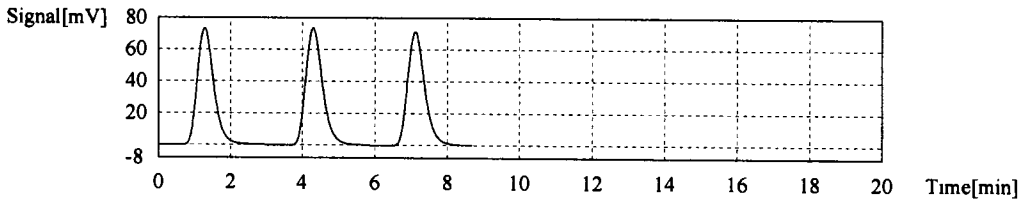
CDE
2013_07_24_001 tlx

1 Det

Anal.: NPOC

1	236 8	58 87mg/L	50uL	1.000	NPOC CAL 072313.2013_07_23_15_35_28.cal	7/24/2013 9 51.48 PM
2	240 8	59 87mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/24/2013 9:55 37 PM
3	237 8	59 12mg/L	50uL	1 000	NPOC CAL 072313.2013_07_23_15_35_28 cal	7/24/2013 9 59 28 PM

Mean Area 238.5
Mean Conc 59.29mg/L



Control Sample

Sample Name: CVS
Sample ID: CVS 20
Method. CVS 20 ppm.tpl
Status Completed
Chk. Result Control value: 108.9 / Control exceeds range!

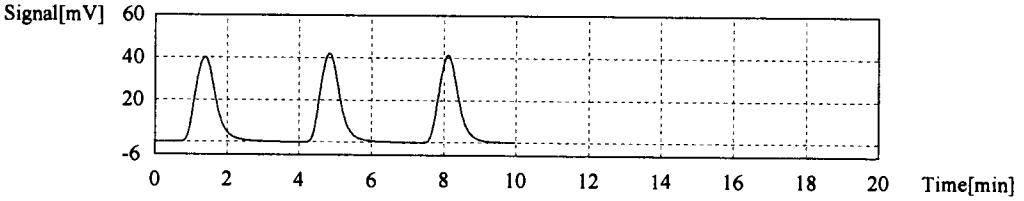
Control	NPOC	1 000	NPOC 21 78ppm

1. Det.

Anal.. NPOC

1	161 7	21 89ppm	100uL	1 000	NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	7/24/2013 10 10 50 PM
2	160 9	21 79ppm	100uL	1 000	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 10 15 04 PM
3	160 0	21 66ppm	100uL	1 000	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 10 19 18 PM

Mean Area 160.9
Mean Conc. 21.78ppm



Control Sample

Sample Name: ICB/CCB
Sample ID:
Method: ICB CCB.tpl
Status Completed
Chk. Result Control value: 0.1384 / Control within range!

TOC-Control L Report

CDE
2013_07_24_001.tlx

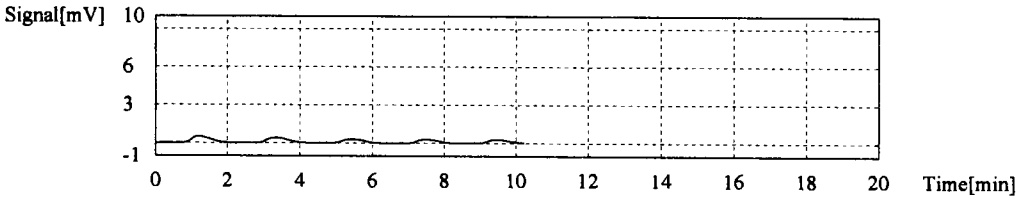
Control	NPOC	1 000	NPOC.0 1384mg/L

1. Det.

Anal.: NPOC

1	1 725	0 2336mg/L	100uL	1 000	E	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 10 29 17 PM
2	1 436	0 1944mg/L	100uL	1 000	E	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 10 32 47 PM
3	1 115	0 1510mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 10 36 17 PM
4	1 025	0 1388mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 10 39 40 PM
5	0 9258	0 1254mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/24/2013 10 43 12 PM

Mean Area 1.022
Mean Conc. 0 1384mg/L



TOC-Control L Report

2013_07_23_001.tlx

Instr.Information

Instrument Options	TOC/ASI/IC Unit/
Catalyst	Regular Sensitivity

Cal. Curve

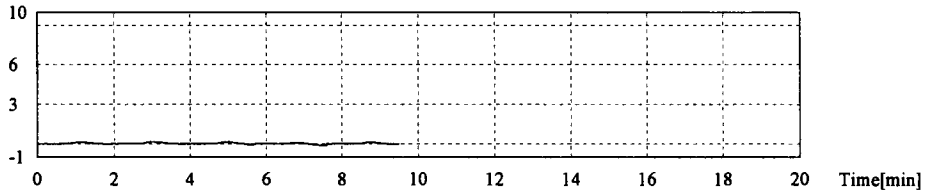
Sample Name:	NPOC CAL 072313
Sample ID:	NPOC CAL 072313
Cal. Curve:	NPOC CAL 072313.2013_07_23_15_35_28.cal
Status	Completed

Standard	NPOC

Conc: 0.000mg/L

1	0.000	50uL	1.000	*******	E	7/23/2013 3 42 30 PM
2	0 3840	50uL	1 000	*******		7/23/2013 3 46 00 PM
3	0 3599	50uL	1 000	*******		7/23/2013 3 49 30 PM
4	0 000	50uL	1 000	*******	E	7/23/2013 3 53 00 PM
5	0 2662	50uL	1 000	*******		7/23/2013 3 56 30 PM

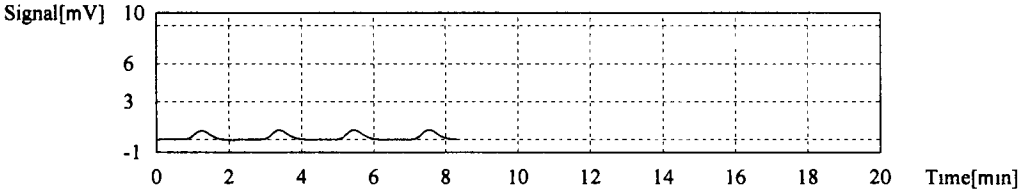
Acid Add.	1.500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	0 3367



Conc: 0.5000mg/L

1	2 126	50uL	10 00	*******	E	7/23/2013 4 06 51 PM
2	2 280	50uL	10 00	*******		7/23/2013 4 11 38 PM
3	2 373	50uL	10 00	*******		7/23/2013 4 16 31 PM
4	2 265	50uL	10.00	*******		7/23/2013 4 21 22 PM

Acid Add	1.500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	2.306



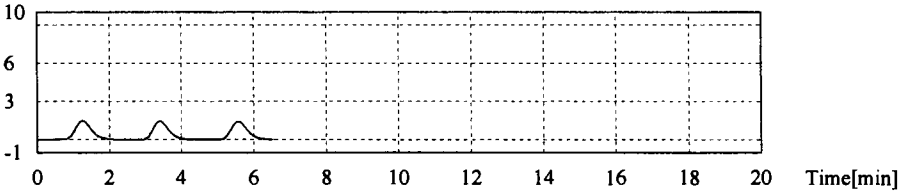
Conc: 1.000mg/L

1	4 520	50uL	5 000	*******	7/23/2013 4 29 38 PM
2	4 451	50uL	5 000	*******	7/23/2013 4 33 14 PM
3	4 526	50uL	5 000	*******	7/23/2013 4 36 56 PM

TOC-Control L Report

2013_07_23_001.tlx

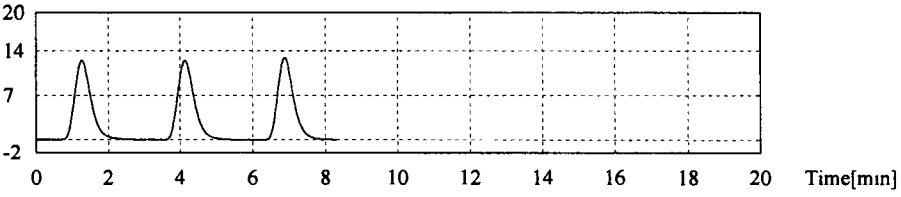
Acid Add.	1.500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	4.499



Conc: 10.00mg/L

1	40 15	50uL	5 000	*******	7/23/2013 4 48 07 PM
2	40 37	50uL	5 000	*******	7/23/2013 4 51 53 PM
3	40 68	50uL	5 000	*******	7/23/2013 4 55 32 PM

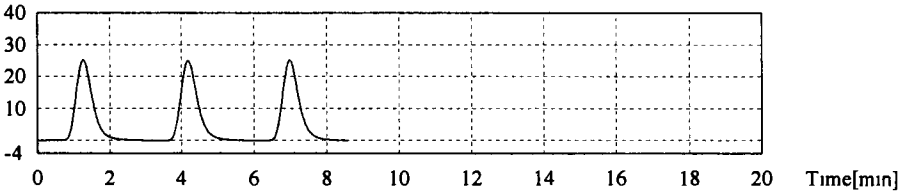
Acid Add.	1.500%
Sparge Gas Flow	80ml
Sp Time	90.00sec
Mean Area	40 40



Conc: 20.00mg/L

1	80 64	50uL	2 500	*******	7/23/2013 5.04:58 PM
2	81 10	50uL	2 500	*******	7/23/2013 5.08 46 PM
3	81 74	50uL	2 500	*******	7/23/2013 5 12 38 PM

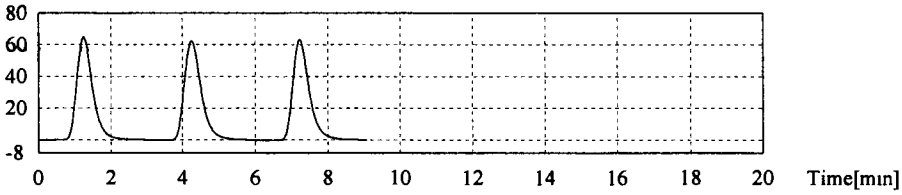
Acid Add	1.500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	81.16



Conc: 50.00mg/L

1	199 6	50uL	1 000	*******	7/23/2013 5 21 32 PM
2	202 4	50uL	1 000	*******	7/23/2013 5 25 31 PM
3	202 2	50uL	1 000	*******	7/23/2013 5 29 37 PM

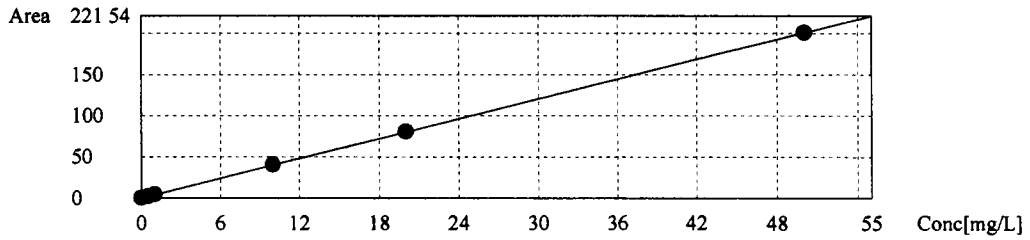
Acid Add	1.500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	201 4



TOC-Control L Report

2013_07_23_001 tlx

Slope.	4.022
Intercept	0.000
r^2	1.0000
r	1.0000
Zero Shift	Yes



8/5/13

TOC, Aqueous Data Summary (SHIMADZU TOC-L) DATE: 7/25/13 11:16

EPA 9060 A, SM 5310 B-00 ANALYST: CDE

Analysis Mode: **NPOC** *Instrument:* ***SHIMADZU TOC-L***

Detection Limits (mgC/L)

MRL = 1.5 **upper blank =** 1.5 **lower blank =** -1.5

Calibration Data

Stock ID: ARI 00136-10 | Slope 4.022 | r^2: 1.0000

Curve Date: 7/23/2013 | intercept 0.000 | r 1.0000

Curve ID: NPOC CAL 072313

LCS, Verification Standard and Inorganic Sparge Check

	Organic Carbon			Inorganic carbon		
Source:	**ERA 0408-13-02**			**ARI # 00128-6**		
Conc:	5,000	*mg/L*		1,000	*mg/L*	
dilution:	1.00	*mL to*	mg C/ L	5.00	*mL to*	mg C/ L
Volume:	250	*mL =*	**20.0**	250	*mL =*	**20**

Sample Data

SAMPLE ID	Dilution Factor	Carbon (mg C/L) *enter Form as TC, TIC, NPOC*						Notes: *will flag if RSD >5%*
		Form	# reps	mean	stdev	Measured	Report as	
ICV	1	NPOC	3	21.58		21.58	21.6	*108.00%*
ICB	1	NPOC	3	0.1471		0.15	<1.5	*OK !*
0.5 ppm	1	NPOC	3	0.6395		0.64	<1.5	127.90%
IC Sparge Check	1	NPOC	3	21.59		21.59	21.6	*108.00%*
WY32 D2	2	NPOC	3	65.73		65.73	65.7	
WY32 D2 dup	2	NPOC	3	65.57		65.57	65.6	*RPD =0.2%*
WY32 D2 ms	5	NPOC	3	112.1		112.10	112	*92.74%*
Spike at	0.100	*mL of*	2,000	*ppm Std to*	4.00	*mL =*	50.0	*mg/L*
WY21 A1	1	NPOC	3	1.371		1.37	<1.5	
WY21 A1 dup	1	NPOC	3	1.314		1.31	<1.5	*RPD NA*
WY21 A1 ms	1	NPOC	3	20.97		20.97	21	*104.85%*
Spike at	0.200	*mL of*	2,000	*ppm Std to*	20.00	*mL =*	20.0	*mg/L*
~~Filter Blank~~	~~1~~	~~NPOC~~	~~3~~	~~0.1521~~		~~0.15~~	~~<1.5~~	-
~~WY32 D~~	~~2~~	~~NPOC~~	~~3~~	~~63.36~~		~~63.36~~	~~63.4~~	-
CCV	1	NPOC	3	21.43		21.43	21.4	*107.00%*
CCB	1	NPOC	3	0.1102		0.11	<1.5	*OK !*
~~WY32 D dup~~	~~2~~	~~NPOC~~	~~3~~	~~64.21~~		~~64.21~~	~~64.2~~	~~*RPD =1.6%*~~
~~WY32 D ms~~	~~5~~	~~NPOC~~	~~3~~	~~109.7~~		~~109.70~~	~~110~~	~~*92.68%*~~
~~*Spike at*~~	~~0.100~~	~~*mL of*~~	~~2,000~~	~~*ppm Std to*~~	~~4.00~~	~~*mL =*~~	~~50.0~~	~~*mg/L*~~
~~WY38 E2~~	~~1~~	~~NPOC~~	~~3~~	~~45.66~~		~~45.66~~	~~45.7~~	-
~~WY38 E2 dup~~	~~1~~	~~NPOC~~	~~3~~	~~45.84~~		~~45.84~~	~~45.8~~	~~*RPD =0.2%*~~
~~WY38 E2 ms~~	~~1~~	~~NPOC~~	~~3~~	~~98.45~~		~~98.46~~	~~98.5~~	~~*105.58%*~~
~~*Spike at*~~	~~0.100~~	~~*mL of*~~	~~2,000~~	~~*ppm Std to*~~	~~4.00~~	~~*mL =*~~	~~50.0~~	~~*mg/L*~~
WY38 H2	1	NPOC	3	59.98		59.98	60	
WY50 A1	1	NPOC	3	4.280		4.28	4.28	
WY50 A1 dup	1	NPOC	3	4.083		4.08	4.08	*RPD =4.8%*
WY50 A1 ms	1	NPOC	3	23.89		23.89	23.9	*98.05%*
Spike at	0.200	*mL of*	2,000	*ppm Std to*	20.00	*mL =*	20.0	*mg/L*
WY50 B1	1	NPOC	3	1.492		1.49	<1.5	
CCV	1	NPOC	3	21.33		21.33	21.3	*106.50%*
CCB	1	NPOC	3	0.1362		0.14	<1.5	*OK !*
WY66 A1	1	NPOC	3	1.299		1.30	<1.5	
WY66 B1	1	NPOC	3	1.271		1.27	<1.5	
WY66 C1	1	NPOC	3	1.355		1.36	<1.5	
CCV	1	NPOC	3	21.33		21.33	21.3	*106.50%*
CCB	1	NPOC	3	0.07660		0.08	<1.5	*OK !*

	Type	Analysis	Sample Nam	Sample ID	Origin	Manual Diluti	Result	Notes	Status	Date / Time	Vial
1	Unknown	NPOC	RINSE	RINSE	NPOC CAL	1.000	NPOC:0.11		Completed	7/25/2013 1	0
2	Control	NPOC	CVS	CVS 20	CVS 20 pp	1.000	NPOC:21.5	Control valu	Completed	7/25/2013 1	1
3	Control	NPOC	ICB/CCB		ICB CCB.tpl	1.000	NPOC:0.14	Control valu	Completed	7/25/2013 1	2
4	Control	NPOC	DQL	0.5 mg/L	DQL.tpl	1.000	NPOC:0.63	Control valu	Completed	7/25/2013 1	3
5	Control	NPOC	Sparge Chec	Untitled	Sparge Che	1.000	NPOC:21.5	Control valu	Completed	7/25/2013 1	4
6	Unknown	NPOC	WY32	D2	NPOC CAL	2.000	NPOC:65.7		Completed	7/25/2013 1:	7
7	Unknown	NPOC	WY32	D2 dup	NPOC CAL	2.000	NPOC:65.5		Completed	7/25/2013 1:	8
8	Unknown	NPOC	WY32	D2 ms	NPOC CAL	5.000	NPOC:112.		Completed	7/25/2013 1:	9
9	Unknown	NPOC	WY21	A1 DOC	NPOC CAL	1.000	NPOC:1.37		Completed	7/25/2013 1:	10
10	Unknown	NPOC	WY21	A1 dup DOC	NPOC CAL	1.000	NPOC:1.31		Completed	7/25/2013 2:	11
11	Unknown	NPOC	WY21	A1 ms DOC	NPOC CAL	1.000	NPOC:20.9		Completed	7/25/2013 2:	12
12	Unknown	NPOC	WY32	Filter Blank	NPOC CAL	1.000	NPOC:0.15		Completed	7/25/2013 2:	13
13	Unknown	NPOC	WY32	D DOC	NPOC CAL	2.000	NPOC:63.3		Completed	7/25/2013 3:	14
14	Control	NPOC	CVS	CVS 20	CVS 20 pp	1.000	NPOC:21.4	Control valu	Completed	7/25/2013 3:	1
15	Control	NPOC	ICB/CCB		ICB CCB.tpl	1.000	NPOC:0.11	Control valu	Completed	7/25/2013 3:	2
16	Unknown	NPOC	WY32	D dup DOC	NPOC CAL	2.000	NPOC:64.2		Completed	7/25/2013 4:	15
17	Unknown	NPOC	WY32	D ms DOC	NPOC CAL	5.000	NPOC:109.		Completed	7/25/2013 4:	16
18	Unknown	NPOC	WY38	E2 DOC	NPOC CAL	1.000	NPOC:45.6		Completed	7/25/2013 4:	17
19	Unknown	NPOC	WY38	E2 dup DOC	NPOC CAL	1.000	NPOC:45.8		Completed	7/25/2013 5:	18
20	Unknown	NPOC	WY38	E2 ms DOC	NPOC CAL	1.000	NPOC:98.4		Completed	7/25/2013 5:	19
21	Unknown	NPOC	WY38	H2 DOC	NPOC CAL	1.000	NPOC:59.9		Completed	7/25/2013 5:	20
22	Unknown	NPOC	WY50	A1	NPOC CAL	1.000	NPOC:4.28		Completed	7/25/2013 6:	21
23	Unknown	NPOC	WY50	A1 dup	NPOC CAL	1.000	NPOC:4.08		Completed	7/25/2013 6:	22
24	Unknown	NPOC	WY50	A1 ms	NPOC CAL	1.000	NPOC:23.8		Completed	7/25/2013 6:	23
25	Unknown	NPOC	WY50	B1	NPOC CAL	1.000	NPOC:1.49		Completed	7/25/2013 7:	24
26	Control	NPOC	CVS	CVS 20	CVS 20 pp	1.000	NPOC:21.3	Control valu	Completed	7/25/2013 7:	1
27	Control	NPOC	ICB/CCB		ICB CCB.tpl	1.000	NPOC:0.13	Control valu	Completed	7/25/2013 7:	2
28	Unknown	NPOC	WY66	A1	NPOC CAL	1.000	NPOC:1.29		Completed	7/25/2013 8:	31
29	Unknown	NPOC	WY66	B1	NPOC CAL	1.000	NPOC:1.27		Completed	7/25/2013 8:	32
30	Unknown	NPOC	WY66	C1	NPOC CAL	1.000	NPOC:1.35		Completed	7/25/2013 8:	33
31	Control	NPOC	CVS	CVS 20	CVS 20 pp	1.000	NPOC:21.3	Control valu	Completed	7/25/2013 8:	5
32	Control	NPOC	ICB/CCB		ICB CCB.tpl	1.000	NPOC:0.07	Control valu	Completed	7/25/2013 9:	6

TOC-Control L Report

CDE
2013_07_25_001 tlx

Instr.Information

Instrument Options	TOC/ASI/IC Unit/
Catalyst	Regular Sensitivity

Sample

Sample Name	RINSE
Sample ID:	RINSE
Origin:	NPOC CAL 072313.cal
Status	Completed
Chk. Result	

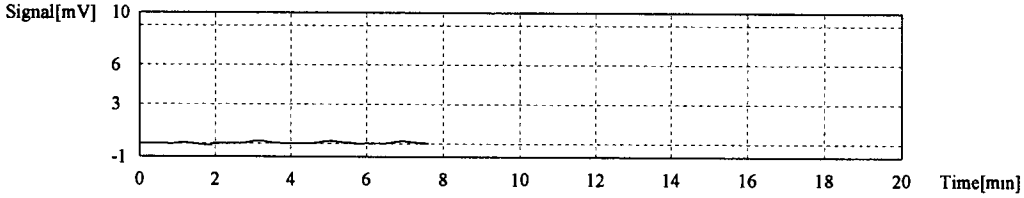
Unknown	NPOC	1 000	NPOC.0 1165mg/L

1. Det

Anal.: NPOC

1	0 2929	0 07282mg/L	50uL	1 000	E	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 11 16 56 AM
2	0 4780	0 1188mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 11 20 26 AM
3	0 4517	0 1123mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 11 23 56 AM
4	0 4759	0 1183mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 11 27 26 AM

Mean Area	0.4685
Mean Conc.	0.1165mg/L



Control Sample

Sample Name:	CVS
Sample ID:	CVS 20
Method:	CVS 20 ppm.tpl
Status	Completed
Chk. Result	Control value: 107.9 / Control exceeds range!

Control	NPOC	1 000	NPOC 21.58ppm

1. Det.

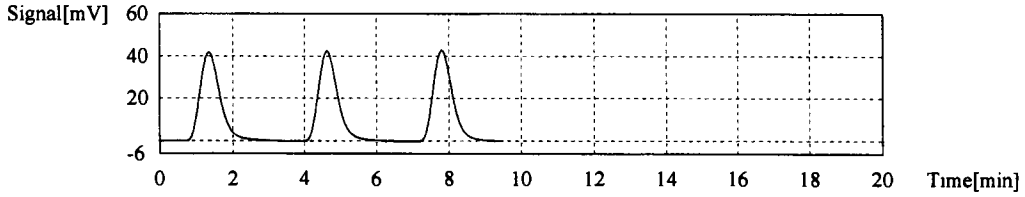
Anal.: NPOC

1	158 0	21.39ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 11 38 26 AM
2	160 3	21.70ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 11 42 37 AM
3	159 8	21 64ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 11 46 39 AM

TOC-Control L Report

CDE
2013_07_25_001 tlx

Mean Area 159.4
Mean Conc 21.58ppm



Control Sample

Sample Name:
Sample ID:
Method:
Status
Chk. Result

ICB/CCB
ICB CCB tpl
Completed
Control value: 0.1471 / Control within range!

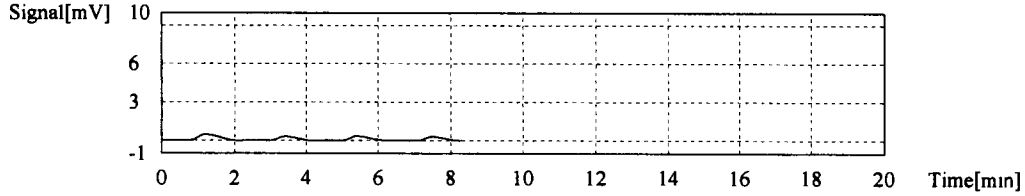
Control	NPOC	1 000	NPOC.0.1471mg/L

1. Det

Anal.: NPOC

1	1.802	0 2440mg/L	100uL	1 000	E	NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	7/25/2013 11 56:44 AM
2	1 106	0 1498mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27.cal	7/25/2013 12 00 04 PM
3	1 174	0 1590mg/L	100uL	1 000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	7/25/2013 12 03 36 PM
4	0 9789	0 1325mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 12 07 04 PM

Mean Area 1.086
Mean Conc. 0.1471mg/L



Control Sample

Sample Name:
Sample ID:
Method:
Status
Chk. Result

DQL
0.5 mg/L
DQL tpl
Completed
Control value: 0 6395 / Control within range!

Control	NPOC	1 000	NPOC 0 6395mg/L

1. Det.

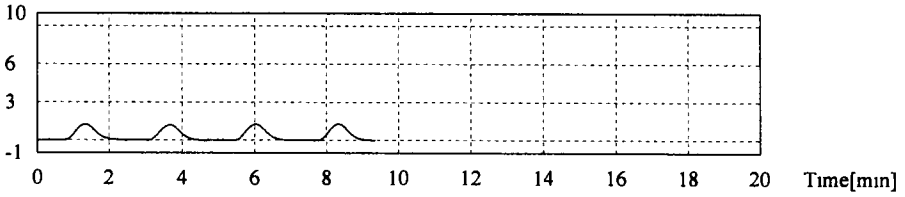
Anal.: NPOC

TOC-Control L Report

CDE
2013_07_25_001.tlx

1	4 517	0 6116mg/L	100uL	1 000	E	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 12 16 47 PM
2	4 621	0 6257mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 12 20 01 PM
3	4 743	0 6422mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 12 23 14 PM
4	4 806	0 6507mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 12 26 34 PM

Mean Area 4.723
Mean Conc 0.6395mg/L



Control Sample

Sample Name. Sparge Check
Sample ID: Untitled
Method Sparge Check.tpl
Status Completed
Chk. Result Control value: 108.0 / Control exceeds range!

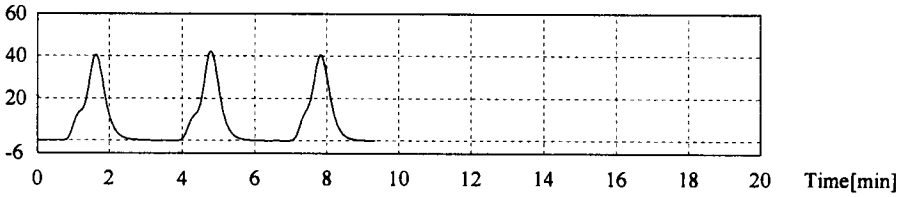
Control	NPOC	1 000	NPOC 21.59mg/L

1. Det

Anal.: NPOC

1	160 4	21 72mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 12 37.08 PM
2	159 4	21 58mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 12 41 14 PM
3	158 6	21 47mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 12 45 19 PM

Mean Area 159.5
Mean Conc. 21.59mg/L



Sample

Sample Name: WY32
Sample ID: D2
Ongin: NPOC CAL 072313 cal
Status Completed
Chk. Result

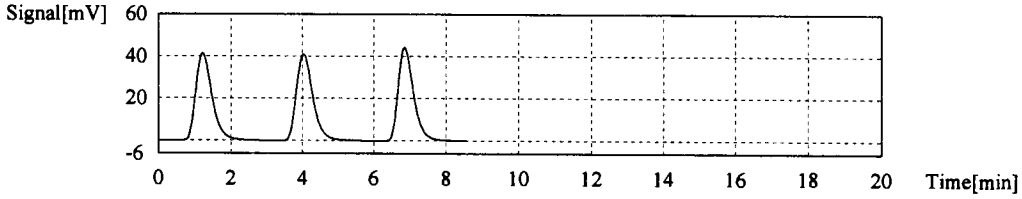
Unknown	NPOC	2 000	NPOC 65 73mg/L

1. Det

Anal.: NPOC

1	129 9	64 59mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 12 56 00 PM
2	133 8	66 53mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 12 59 52 PM
3	132 9	66 08mg/L	50uL	1 000	NPOC CAL 072313.2013_07_23_15_35_28.cal	7/25/2013 1.03.42 PM

Mean Area 132.2
Mean Conc 65 73mg/L



Sample

Sample Name: WY32
Sample ID: D2 dup
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

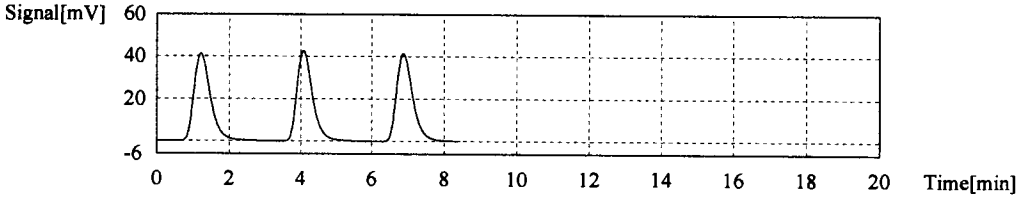
Unknown	NPOC	2 000	NPOC 65 57mg/L

1. Det

Anal.: NPOC

1	131 6	65 44mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 1 14 27 PM
2	132 5	65 88mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 1 18.15 PM
3	131 5	65 39mg/L	50uL	1 000	NPOC CAL 072313.2013_07_23_15_35_28 cal	7/25/2013 1 22 01 PM

Mean Area 131.9
Mean Conc. 65.57mg/L



Sample

Sample Name. WY32
Sample ID: D2 ms
Origin: NPOC CAL 072313 cal
Status Completed
Chk Result

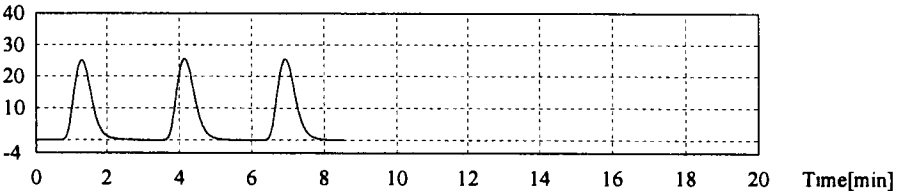
Unknown	NPOC	5 000	NPOC.112 1mg/L

1. Det

Anal.: NPOC

1	89 71	111 5mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 1 32 39 PM
2	90 04	111 9mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 1 36 27 PM
3	90 72	112 8mg/L	50uL	1.000	NPOC CAL 072313 2013_07_23_15_35_28.cal	7/25/2013 1 40.19 PM

Mean Area 90.16
Mean Conc. 112 1mg/L



Sample

Sample Name WY21
Sample ID A1 DOC
Ongin NPOC CAL 072313.cal
Status Completed
Chk. Result

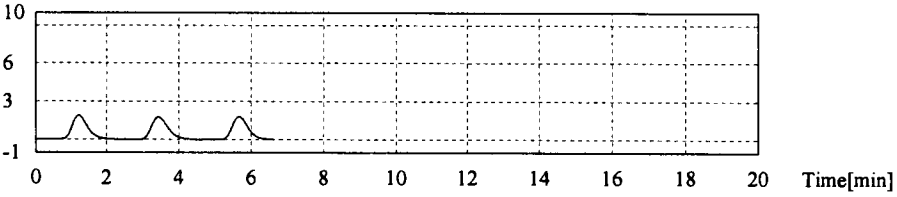
Unknown	NPOC	1 000	NPOC.1 371mg/L

1. Det

Anal.: NPOC

1	5 523	1 373mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 1.50 26 PM
2	5 558	1 382mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 1 54 14 PM
3	5.457	1 357mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 1 57 59 PM

Mean Area 5 513
Mean Conc. 1.371mg/L



Sample

Sample Name WY21
Sample ID: A1 dup DOC
Origin. NPOC CAL 072313 cal
Status Completed
Chk. Result

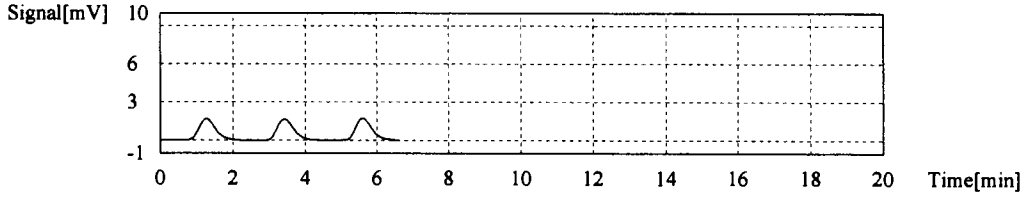
Unknown	NPOC	1 000	NPOC 1 314mg/L

1 Det

Anal.. NPOC

1	5 199	1 293mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 2 07 53 PM
2	5 280	1 313mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 2 11 41 PM
3	5 379	1.337mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 2 15 28 PM

Mean Area 5.286
Mean Conc. 1 314mg/L



Sample

Sample Name: WY21
Sample ID: A1 ms DOC
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

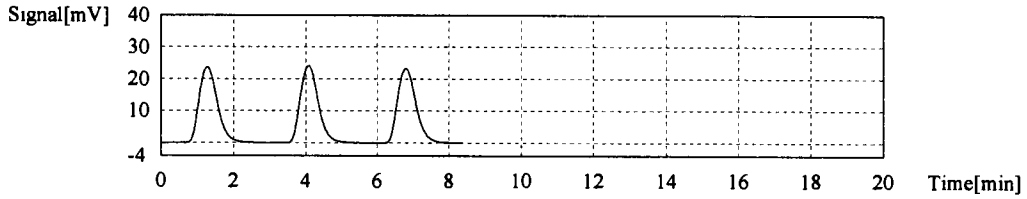
Unknown	NPOC	1 000	NPOC.20 97mg/L

1. Det

Anal.: NPOC

1	83 74	20 82mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 2 25 59 PM
2	84 76	21 07mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 2 29 42 PM
3	84 51	21 01mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 2 33 34 PM

Mean Area 84.34
Mean Conc. 20 97mg/L



Sample

Sample Name WY32
Sample ID: Filter Blank
Origin NPOC CAL 072313 cal
Status Completed
Chk. Result

Unknown	NPOC	1 000	NPOC 0 1521mg/L

1. Det

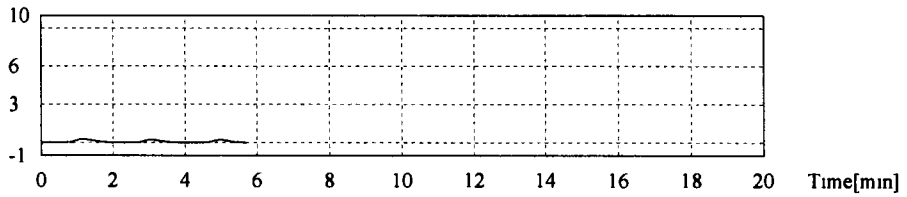
TOC-Control L Report

CDE
2013_07_25_001.tlx

Anal.: NPOC

1	0 7153	0 1778mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 2 43 21 PM
2	0 5284	0 1314mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 2 47 08 PM
3	0.5911	0.1470mg/L	50uL	1 000	NPOC CAL 072313.2013_07_23_15_35_28 cal	7/25/2013 2.50 55 PM

Mean Area 0 6116
Mean Conc. 0 1521mg/L



Sample

Sample Name: WY32
Sample ID: D DOC
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

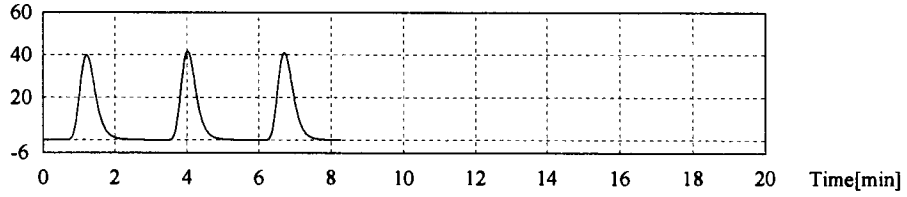
Unknown	NPOC	2 000	NPOC 63 36mg/L

1. Det

Anal : NPOC

1	126 3	62 80mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 3 01 27 PM
2	127 6	63 45mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 3 05 08 PM
3	128 4	63 84mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 3 08 58 PM

Mean Area 127.4
Mean Conc 63.36mg/L



Control Sample

Sample Name: CVS
Sample ID: CVS 20
Method: CVS 20 ppm.tpl
Status Completed
Chk. Result Control value. 107.1 / Control exceeds range!

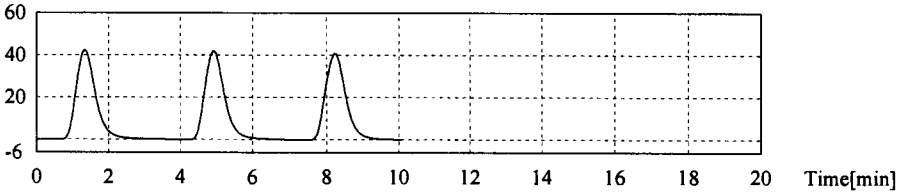
Control	NPOC	1 000	NPOC.21 43ppm

1. Det.

Anal.. NPOC

1	157 6	21 34ppm	100uL	1 000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27.cal	7/25/2013 3 20.27 PM
2	159 1	21 54ppm	100uL	1 000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	7/25/2013 3 24 43 PM
3	158 1	21 41ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 3 28 55 PM

Mean Area 158.3
Mean Conc. 21 43ppm



Control Sample

Sample Name: ICB/CCB
Sample ID:
Method: ICB CCB tpl
Status Completed
Chk Result Control value. 0.1102 / Control within range!

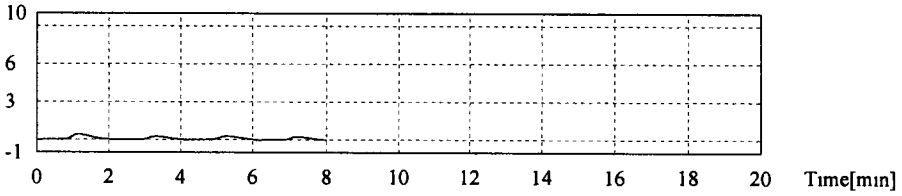
Control	NPOC	1 000	NPOC 0 1102mg/L

1. Det.

Anal NPOC

1	1 386	0 1877mg/L	100uL	1 000	E	NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	7/25/2013 3 38 55 PM
2	0 8300	0 1124mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 3 42 17 PM
3	0 8415	0 1139mg/L	100uL	1 000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	7/25/2013 3 45 44 PM
4	0 7711	0 1044mg/L	100uL	1 000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	7/25/2013 3 49 16 PM

Mean Area 0.8142
Mean Conc. 0.1102mg/L



Sample

Sample Name: WY32
Sample ID: D dup DOC
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

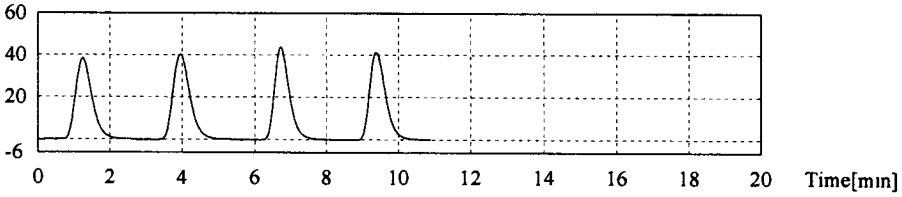
Unknown	NPOC	2 000	NPOC 64 21mg/L

1. Det

Anal · NPOC

1	124 3	61 81mg/L	50uL	1 000	E	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 3 59 50 PM
2	130 7	64 99mg/L	50uL	1.000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 4 03 42 PM
3	129 0	64 14mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 4 07 22 PM
4	127 7	63 50mg/L	50uL	1.000		NPOC CAL 072313.2013_07_23_15_35_28 cal	7/25/2013 4 11 10 PM

Mean Area 129 1
Mean Conc. 64 21mg/L



Sample

Sample Name: WY32
Sample ID: D ms DOC
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

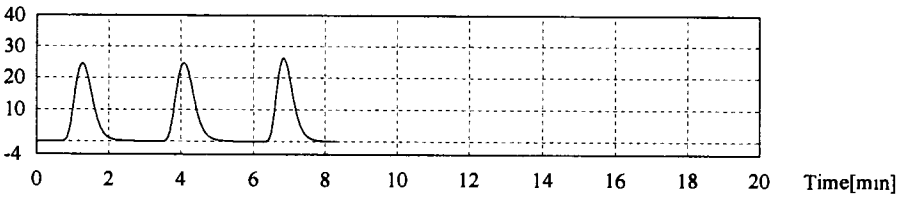
Unknown	NPOC	5 000	NPOC 109 7mg/L

1. Det

Anal.: NPOC

1	87 48	108 7mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 4 21 48 PM
2	88 81	110 4mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 4 25.35 PM
3	88 50	110 0mg/L	50uL	1.000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 4 29 18 PM

Mean Area 88 26
Mean Conc. 109.7mg/L



Sample

TOC-Control L Report

CDE
2013_07_25_001 tlx

Sample Name. WY38
Sample ID: E2 DOC
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

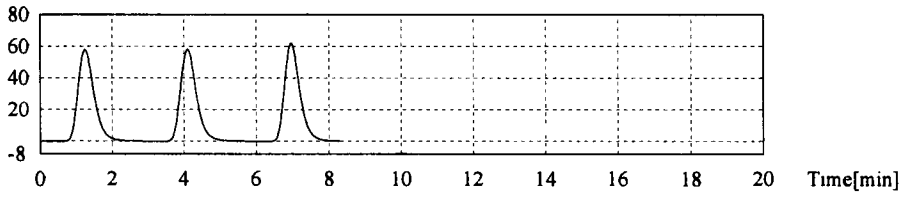
Unknown	NPOC	1 000	NPOC 45 66mg/L

1. Det

Anal.: NPOC

1	181 1	45 02mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 4 39 56 PM
2	184 7	45 92mg/L	50uL	1 000	NPOC CAL 072313.2013_07_23_15_35_28 cal	7/25/2013 4 43 48 PM
3	185 2	46 04mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 4 47 27 PM

Mean Area 183.7
Mean Conc 45.66mg/L



Sample

Sample Name WY38
Sample ID: E2 dup DOC
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

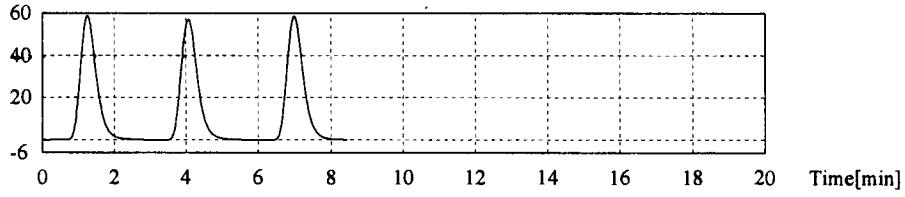
Unknown	NPOC	1 000	NPOC 45 84mg/L

1. Det

Anal.: NPOC

1	182 2	45 30mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 4.58 07 PM
2	185 6	46 14mg/L	50uL	1 000	NPOC CAL 072313.2013_07_23_15_35_28 cal	7/25/2013 5 02 01 PM
3	185 3	46 07mg/L	50uL	1 000	NPOC CAL 072313.2013_07_23_15_35_28 cal	7/25/2013 5 05 43 PM

Mean Area 184.4
Mean Conc. 45.84mg/L



Sample

TOC-Control L Report

CDE
2013_07_25_001 tlx

Sample Name: WY38
Sample ID: E2 ms DOC
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

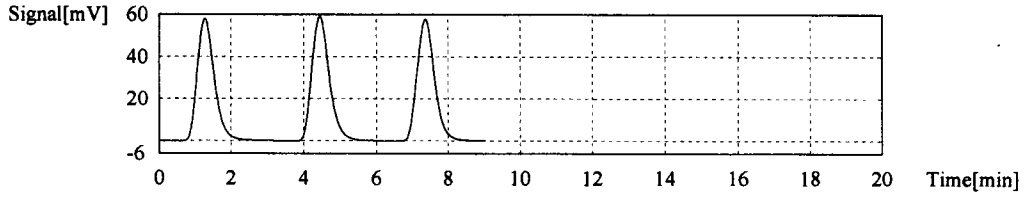
Unknown	NPOC	1 000	NPOC 98 45mg/L

1 Det

Anal : NPOC

1	194 6	96 76mg/L	50uL	2.000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 5.17 18 PM
2	200 1	99 50mg/L	50uL	2 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 5 22 01 PM
3	199 3	99 10mg/L	50uL	2 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 5.27 07 PM

Mean Area 198 0
Mean Conc. 98.45mg/L



Sample

Sample Name: WY38
Sample ID. H2 DOC
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

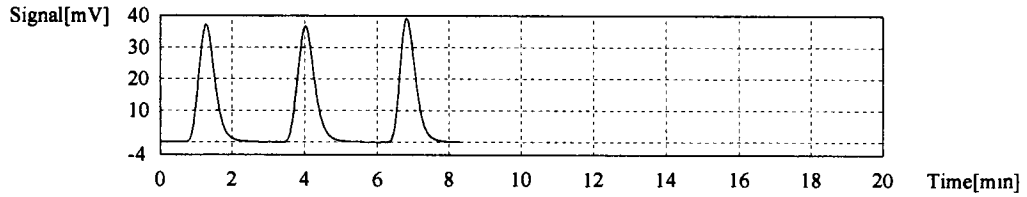
Unknown	NPOC	1.000	NPOC 59 98mg/L

1. Det

Anal.: NPOC

1	119 0	59 17mg/L	50uL	2 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 5 38 10 PM
2	121 6	60 46mg/L	50uL	2.000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 5 43 18 PM
3	121 3	60 31mg/L	50uL	2 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 5 48 09 PM

Mean Area 120.6
Mean Conc. 59.98mg/L



Sample

TOC-Control L Report

CDE
2013_07_25_001 tlx

Sample Name. WY50
Sample ID: A1
Origin: NPOC CAL 072313 cal
Status Completed
Chk. Result

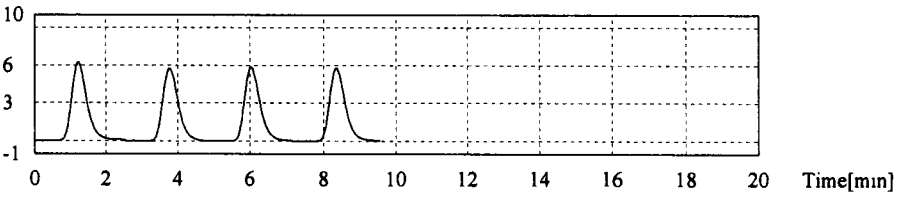
Unknown	NPOC	1.000	NPOC 4 280mg/L

1 Det

Anal.: NPOC

1	18 45	4 587mg/L	50uL	1 000	E	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 5 58 24 PM
2	17 37	4 318mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 6 01 56 PM
3	17 12	4 256mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 6.05 45 PM
4	17 15	4 264mg/L	50uL	1.000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 6 09 38 PM

Mean Area 17.21
Mean Conc. 4.280mg/L



Sample

Sample Name: WY50
Sample ID: A1 dup
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

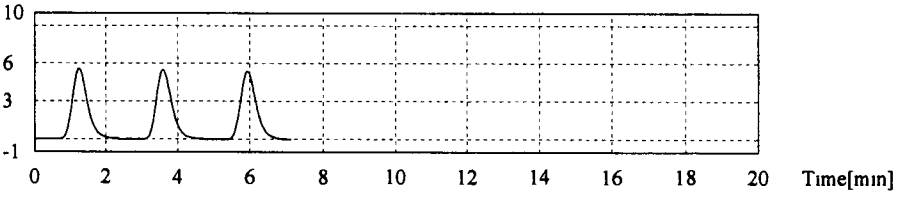
Unknown	NPOC	1 000	NPOC 4 083mg/L

1. Det

Anal.. NPOC

1	16 45	4 090mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 6 19 42 PM
2	16 42	4 082mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 6 23 28 PM
3	16 40	4 077mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 6 27 21 PM

Mean Area 16.42
Mean Conc. 4.083mg/L



TOC-Control L Report

CDE
2013_07_25_001 tlx

Sample

Sample Name: WY50
Sample ID: A1 ms
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

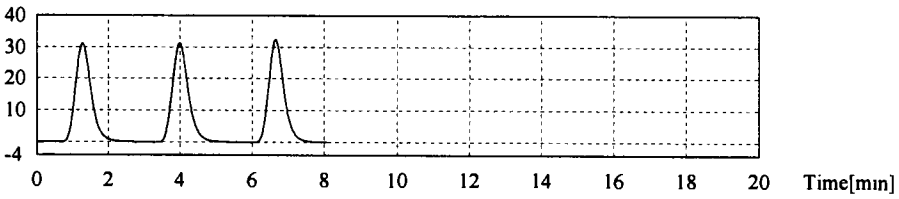
Unknown	NPOC	1 000	NPOC 23 89mg/L

1. Det

Anal.: NPOC

1	95 30	23 69mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 6 37 47 PM
2	96 30	23 94mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 6 41 31 PM
3	96 64	24 03mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 6 45 20 PM

Mean Area 96.08
Mean Conc. 23.89mg/L



Sample

Sample Name: WY50
Sample ID: B1
Origin: NPOC CAL 072313 cal
Status Completed
Chk. Result

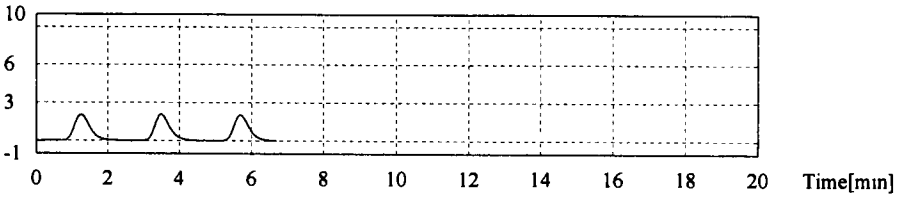
Unknown	NPOC	1 000	NPOC 1 492mg/L

1. Det

Anal : NPOC

1	6 042	1 502mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 6 55 26 PM
2	6 070	1 509mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 6 59 09 PM
3	5 893	1 465mg/L	50uL	1 000	NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 7 02 57 PM

Mean Area 6 002
Mean Conc. 1 492mg/L



TOC-Control L Report

CDE
2013_07_25_001.tlx

Control Sample

Sample Name: CVS
Sample ID: CVS 20
Method: CVS 20 ppm.tpl
Status Completed
Chk. Result Control value: 106.7 / Control exceeds range!

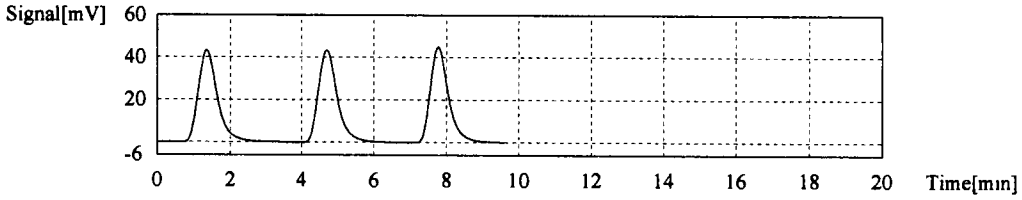
Control	NPOC	1 000	NPOC 21 33ppm

1. Det.

Anal.: NPOC

1	157 1	21 27ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 7 14 03 PM
2	157 8	21.37ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 7 18 09 PM
3	157 8	21 37ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 7 22 16 PM

Mean Area 157.6
Mean Conc. 21.33ppm



Control Sample

Sample Name: ICB/CCB
Sample ID:
Method: ICB CCB.tpl
Status Completed
Chk. Result Control value: 0 1362 / Control within range!

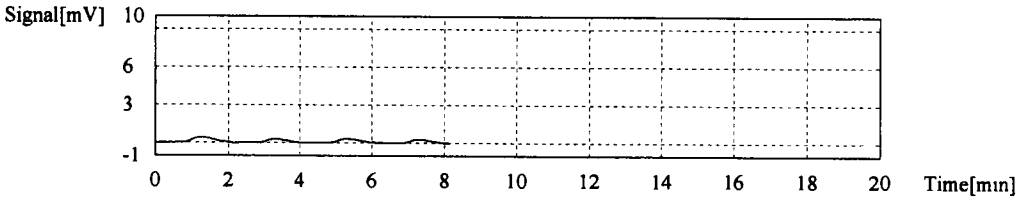
Control	NPOC	1 000	NPOC 0 1362mg/L

1. Det.

Anal.: NPOC

1	1 435	0 1943mg/L	100uL	1 000	E	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 7 32 13 PM
2	1 026	0 1389mg/L	100uL	1 000		NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	7/25/2013 7.35 40 PM
3	1 020	0.1381mg/L	100uL	1 000		NPOC Suspended 0.5 to 50 2013_05_07_12_18_27.cal	7/25/2013 7:39 08 PM
4	0 9707	0 1314mg/L	100uL	1.000		NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	7/25/2013 7.42 44 PM

Mean Area 1.006
Mean Conc. 0.1362mg/L



Sample

Sample Name: WY66
Sample ID: A1
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

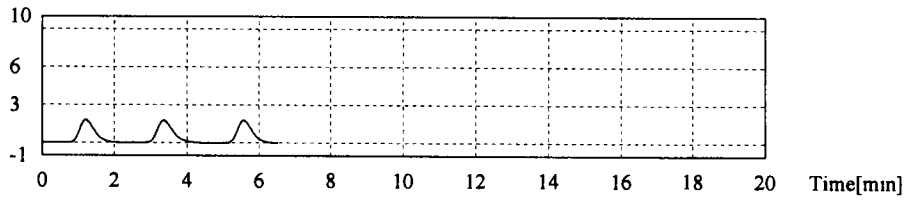
Unknown	NPOC	1 000	NPOC 1 299mg/L

1. Det

Anal : NPOC

1	5 207	1 295mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 7 52 37 PM
2	5 268	1 310mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 7:56 27 PM
3	5 199	1 293mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 8 00 12 PM

Mean Area 5 225
Mean Conc. 1 299mg/L



Sample

Sample Name: WY66
Sample ID: B1
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

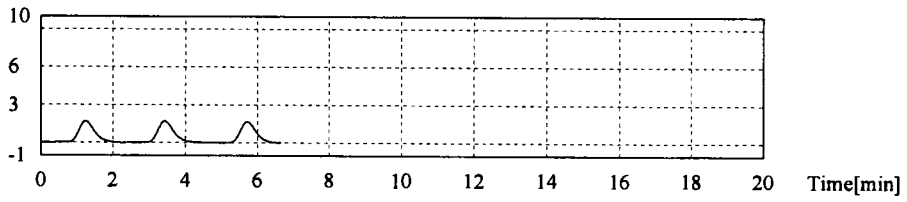
Unknown	NPOC	1 000	NPOC 1 271mg/L

1. Det

Anal.: NPOC

1	5 031	1 251mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 8.10 07 PM
2	5 199	1 293mg/L	50uL	1 000		NPOC CAL 072313.2013_07_23_15_35_28 cal	7/25/2013 8 14 00 PM
3	5 101	1 268mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 8 17 41 PM

Mean Area 5 110
Mean Conc. 1 271mg/L



Sample

Sample Name: WY66
Sample ID: C1
Origin: NPOC CAL 072313.cal
Status Completed
Chk. Result

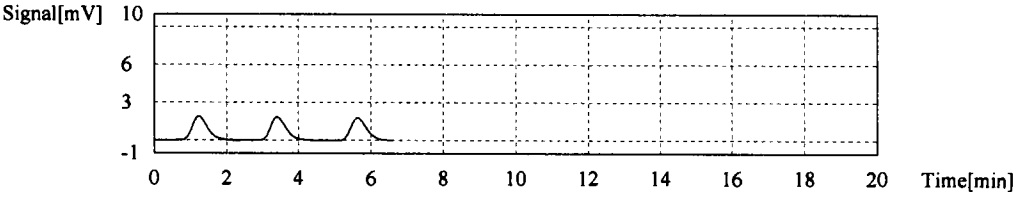
Unknown	NPOC	1 000	NPOC 1 355mg/L

1. Det

Anal.: NPOC

1	5 445	1 354mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 8 27 35 PM
2	5 509	1 370mg/L	50uL	1 000		NPOC CAL 072313.2013_07_23_15_35_28 cal	7/25/2013 8 31 26 PM
3	5 391	1 340mg/L	50uL	1 000		NPOC CAL 072313 2013_07_23_15_35_28 cal	7/25/2013 8 35 09 PM

Mean Area 5 448
Mean Conc. 1.355mg/L



Control Sample

Sample Name: CVS
Sample ID: CVS 20
Method: CVS 20 ppm.tpl
Status Completed
Chk. Result Control value: 106.7 / Control exceeds range!

Control	NPOC	1 000	NPOC 21 33ppm

1. Det.

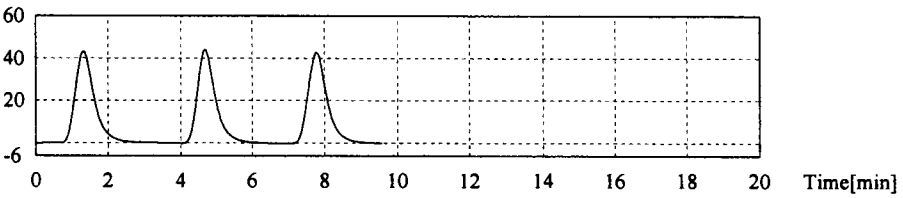
Anal.: NPOC

1	156 7	21 22ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 8 46 28 PM
2	157 8	21 37ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 8 50 32 PM
3	158 2	21 42ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 8 54 40 PM

TOC-Control L Report

CDE
2013_07_25_001 tlx

Mean Area 157.6
Mean Conc. 21.33ppm



Control Sample

Sample Name: ICB/CCB
Sample ID:
Method: ICB CCB.tpl
Status Completed
Chk. Result Control value: 0.07660 / Control within range!

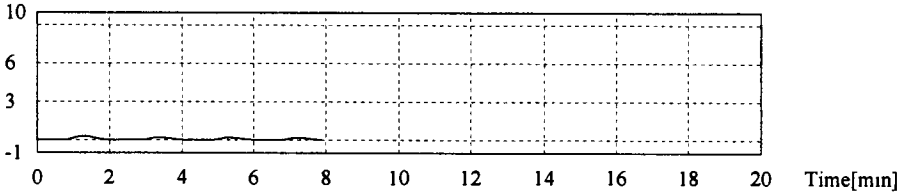
Control	NPOC	1 000	NPOC 0 07660mg/L

1. Det

Anal.: NPOC

1	1 055	0 1428mg/L	100uL	1 000	E	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 9.04 40 PM
2	0 5975	0 08090mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 9.08 02 PM
3	0 5536	0 07496mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	7/25/2013 9 11 28 PM
4	0 5461	0 07394mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27.cal	7/25/2013 9 14:59 PM

Mean Area 0.5657
Mean Conc. 0 07660mg/L



TOC-Control L Report

2013_07_23_001.tlx

Instr.Information

Instrument Options	TOC/ASI/IC Unit/
Catalyst	Regular Sensitivity

Cal. Curve

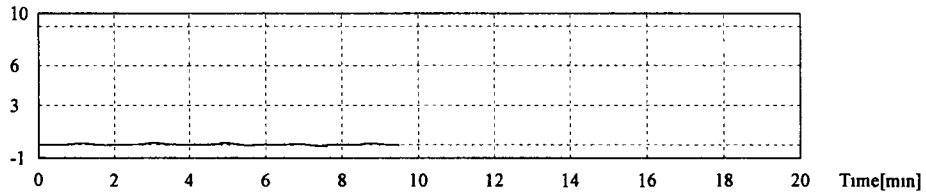
Sample Name:	NPOC CAL 072313
Sample ID:	NPOC CAL 072313
Cal. Curve:	NPOC CAL 072313.2013_07_23_15_35_28 cal
Status	Completed

Standard	NPOC

Conc: 0.000mg/L

1	0 000	50uL	1 000	*******	E	7/23/2013 3 42 30 PM
2	0 3840	50uL	1 000	*******		7/23/2013 3 46 00 PM
3	0 3599	50uL	1 000	*******		7/23/2013 3 49 30 PM
4	0 000	50uL	1 000	*******	E	7/23/2013 3 53 00 PM
5	0 2662	50uL	1 000	*******		7/23/2013 3.56 30 PM

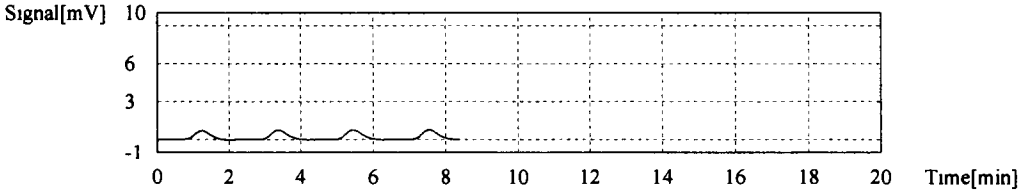
Acid Add.	1.500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	0 3367



Conc: 0.5000mg/L

1	2 126	50uL	10 00	*******	E	7/23/2013 4 06 51 PM
2	2 280	50uL	10 00	*******		7/23/2013 4 11 38 PM
3	2 373	50uL	10 00	*******		7/23/2013 4 16 31 PM
4	2 265	50uL	10 00	*******		7/23/2013 4 21 22 PM

Acid Add.	1 500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	2 306



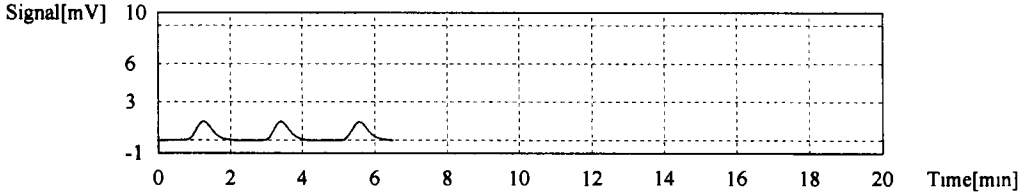
Conc: 1.000mg/L

1	4 520	50uL	5 000	*******	7/23/2013 4 29 38 PM
2	4 451	50uL	5 000	*******	7/23/2013 4 33 14 PM
3	4 526	50uL	5 000	*******	7/23/2013 4 36 56 PM

TOC-Control L Report

2013_07_23_001.tlx

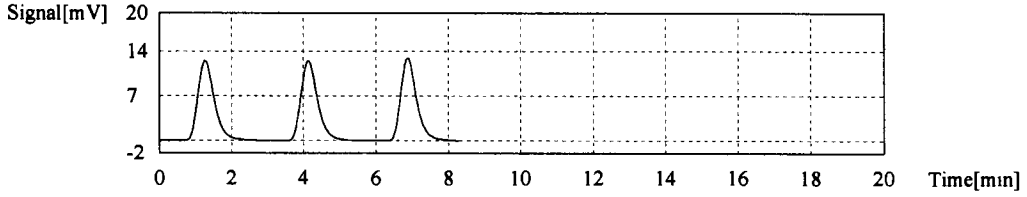
Acid Add.	1.500%
Sparge Gas Flow	80ml
Sp. Time	90 00sec
Mean Area	4.499



Conc: 10 00mg/L

1	40 15	50uL	5.000	*******	7/23/2013 4 48 07 PM
2	40 37	50uL	5 000	*******	7/23/2013 4 51.53 PM
3	40 68	50uL	5 000	*******	7/23/2013 4 55 32 PM

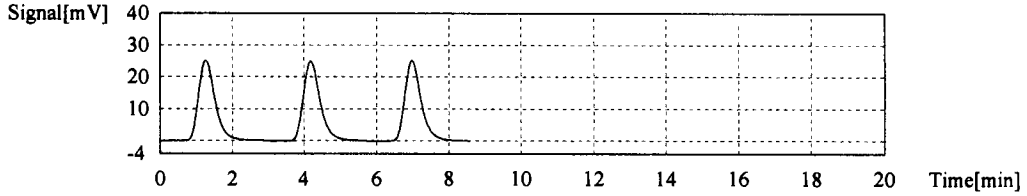
Acid Add.	1.500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	40 40



Conc: 20.00mg/L

1	80 64	50uL	2 500	*******	7/23/2013 5.04 58 PM
2	81 10	50uL	2 500	*******	7/23/2013 5.08 46 PM
3	81 74	50uL	2 500	*******	7/23/2013 5 12 38 PM

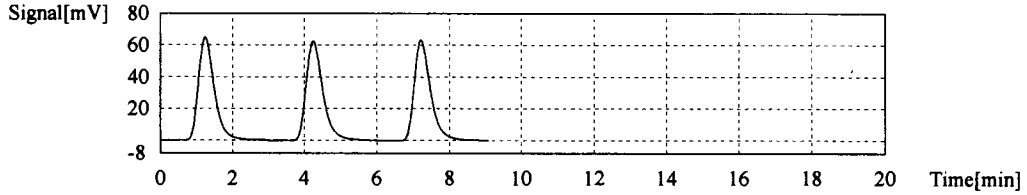
Acid Add.	1.500%
Sparge Gas Flow	80ml
Sp. Time	90 00sec
Mean Area	81 16



Conc: 50.00mg/L

1	199 6	50uL	1 000	*******	7/23/2013 5 21 32 PM
2	202 4	50uL	1 000	*******	7/23/2013 5 25 31 PM
3	202 2	50uL	1 000	*******	7/23/2013 5 29.37 PM

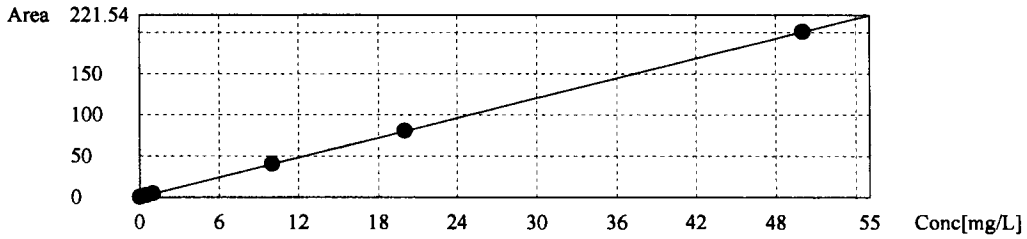
Acid Add.	1.500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	201.4



TOC-Control L Report

2013_07_23_001.tlx

Slope:	4.022
Intercept	0.000
r^2	1.0000
r	1.0000
Zero Shift	Yes



Geotechnical Raw Data
Analyst Notes and Raw Data

ARI Job ID: WY32, WY33

ANALYTICAL RESOURCES, INC.

Sieve/Sedigraph Particle Size Distribution

ARI Job No.: WY32 ARI Sample Letter: A Client Sample No.: UP-CB-BB-20130626-S

Set-up Date: 7/24/13 Sample Description: BLACK SANDY SILT W/ ORGANIC DEBRIS

SOLIDS CONTENT

Moisture Content	Initials: JA
Container No.	138
Tare Weight	1.5388 JA
Wet Weight + Tare	56.0801
Dry Weight + Tare	36.2948

Test Sample	Initials: JA
Container No.	138
Tare Weight	50.6651 JA
Wet Weight + Tare	64.5244
Dry Weight + Tare	56.2493

SIEVE ANALYSIS

Sieve Date: 7/25/13

Sieve Set #: 2 Initials: ML

Sieve Size	Weight Retained
Tare	50.6751
4	50.6751
10	51.0515
18	51.7944
35	52.7238
60	53.9050
120	55.0458
230	55.4853
PAN	0.5406

SEDIGRAPH PSD ANALYSIS

Initials LD

Date Sedigraphed 7.29.13

Suspension Liquid DI WATER

Beaker ID	34

Sample: UP-CB-B8-20130626-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WY32\WY32A_2.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 7/29/2013 1:10:06PM
Reported: 7/29/2013 1:22:16PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 106 / 84 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
971.6	0.042	86.9	0.8	117.79979
917.3	0.125	86.1	0.8	104.98917
866.0	0.208	85.3	0.8	93.57170
817.5	0.291	84.5	0.8	83.39587
771.8	0.374	83.7	0.8	74.32664
728.6	0.457	82.9	0.8	66.24369
687.9	0.540	82.0	0.8	59.03975
649.4	0.623	81.2	0.9	52.61923
613.1	0.706	80.3	0.9	46.89694
578.8	0.789	79.4	0.9	41.79694
546.4	0.872	78.4	1.0	37.25156
515.8	0.955	77.4	1.0	33.20049
487.0	1.038	76.3	1.1	29.58997
459.7	1.121	75.2	1.1	26.37209
434.0	1.204	74.1	1.1	23.50415
409.7	1.287	73.0	1.1	20.94809
386.8	1.370	71.9	1.1	18.67001
365.2	1.453	70.8	1.1	16.63966
344.7	1.536	69.6	1.1	14.83012
325.5	1.619	68.5	1.1	13.21735
307.3	1.702	67.4	1.1	11.77998
290.1	1.786	66.3	1.1	10.49892
273.8	1.869	65.1	1.1	9.35717
258.5	1.952	64.0	1.1	8.33959
244.1	2.035	62.9	1.1	7.43266
230.4	2.118	61.9	1.1	6.62437
217.5	2.201	60.8	1.1	5.90398
205.4	2.284	59.7	1.1	5.26192
193.9	2.367	58.6	1.1	4.68969
183.0	2.450	57.5	1.1	4.17969
172.8	2.533	56.5	1.1	3.72516
163.1	2.616	55.4	1.1	3.32005
154.0	2.699	54.3	1.1	2.95900
145.4	2.782	53.3	1.1	2.63721
137.2	2.865	52.2	1.1	2.35041
129.6	2.948	51.2	1.1	2.09481
122.3	3.031	50.1	1.1	1.86700
115.5	3.114	49.1	1.0	1.66397
109.0	3.197	48.1	1.0	1.48301
102.9	3.280	47.1	1.0	1.32174

Sample: UP-CB-B8-20130626-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WY32\WY32A_2.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 7/29/2013 1:10:06PM
Reported: 7/29/2013 1:22:16PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 106 / 84 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
97.16	3.363	46.1	0.9	1.17800
91.73	3.447	45.2	0.9	1.04989
86.60	3.530	44.4	0.8	0.93572
81.75	3.613	43.6	0.8	0.83396
77.18	3.696	42.9	0.7	0.74327
72.86	3.779	42.2	0.6	0.66244
68.79	3.862	41.7	0.5	0.59040
64.94	3.945	41.2	0.5	0.52619
61.31	4.028	40.9	0.3	0.46897
57.88	4.111	40.7	0.2	0.41797
54.64	4.194	40.4	0.3	0.37252
51.58	4.277	40.0	0.4	0.33200
48.70	4.360	39.4	0.5	0.29590
45.97	4.443	38.7	0.8	0.26372
43.40	4.526	37.6	1.0	0.23504
40.97	4.609	36.3	1.3	0.20948
38.68	4.692	34.8	1.6	0.18670
36.52	4.775	32.9	1.8	0.16640
34.47	4.858	30.9	2.0	0.14830
32.55	4.941	28.7	2.2	0.13217
30.73	5.024	26.3	2.3	0.11780
29.01	5.107	23.9	2.4	0.10499
27.38	5.191	21.6	2.3	0.09357
25.85	5.274	19.4	2.2	0.08340
24.41	5.357	17.4	2.0	0.07433
23.04	5.440	15.7	1.7	0.06624
21.75	5.523	14.3	1.4	0.05904
20.54	5.606	13.2	1.1	0.05262
19.39	5.689	12.4	0.8	0.04690
18.30	5.772	11.7	0.6	0.04180
17.28	5.855	11.3	0.5	0.03725
16.31	5.938	10.9	0.4	0.03320
15.40	6.021	10.5	0.4	0.02959
14.54	6.104	10.1	0.4	0.02637
13.72	6.187	9.7	0.4	0.02350
12.96	6.270	9.3	0.4	0.02095
12.23	6.353	8.9	0.4	0.01867
11.55	6.436	8.5	0.4	0.01664
10.90	6.519	8.2	0.3	0.01483
10.29	6.602	7.9	0.3	0.01322

Sample: UP-CB-B8-20130626-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WY32\WY32A_2.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 7/29/2013 1:10:06PM
Reported: 7/29/2013 1:22:16PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 106 / 84 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
9.716	6.685	7.7	0.2	0.01178
9.173	6.768	7.5	0.2	0.01050
8.660	6.851	7.3	0.2	0.00936
8.175	6.935	7.1	0.2	0.00834
7.718	7.018	6.9	0.2	0.00743
7.286	7.101	6.7	0.2	0.00662
6.879	7.184	6.5	0.2	0.00590
6.494	7.267	6.4	0.2	0.00526
6.131	7.350	6.2	0.1	0.00469
5.788	7.433	6.1	0.1	0.00418
5.464	7.516	6.1	0.1	0.00373
5.158	7.599	6.0	0.1	0.00332
4.870	7.682	5.9	0.1	0.00296
4.597	7.765	5.7	0.2	0.00264
4.340	7.848	5.4	0.3	0.00235
4.097	7.931	5.1	0.4	0.00209
3.868	8.014	4.7	0.4	0.00187
3.652	8.097	4.2	0.4	0.00166
3.447	8.180	3.9	0.4	0.00148
3.255	8.263	3.6	0.3	0.00132
3.073	8.346	3.4	0.2	0.00118
2.901	8.429	3.2	0.2	0.00105
2.738	8.512	3.1	0.1	0.00094
2.585	8.595	2.9	0.1	0.00083
2.441	8.679	2.8	0.2	0.00074
2.304	8.762	2.6	0.2	0.00066
2.175	8.845	2.4	0.2	0.00059
2.054	8.928	2.3	0.1	0.00053
1.939	9.011	2.2	0.1	0.00047
1.830	9.094	2.1	0.1	0.00042
1.728	9.177	1.9	0.1	0.00037
1.631	9.260	1.8	0.1	0.00033
1.540	9.343	1.6	0.1	0.00030
1.454	9.426	1.5	0.1	0.00026
1.372	9.509	1.4	0.1	0.00024
1.296	9.592	1.4	0.1	0.00021
1.223	9.675	1.3	0.0	0.00019
1.155	9.758	1.3	0.0	0.00017
1.090	9.841	1.4	0.0	0.00015
1.029	9.924	1.4	-0.1	0.00013

Sample: UP-CB-B8-20130626-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WY32\WY32A_2.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 7/29/2013 1:10:06PM
Reported: 7/29/2013 1:22:16PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 106 / 84 kCnts/s
Reynolds Number: 0.42

Report by Size Table

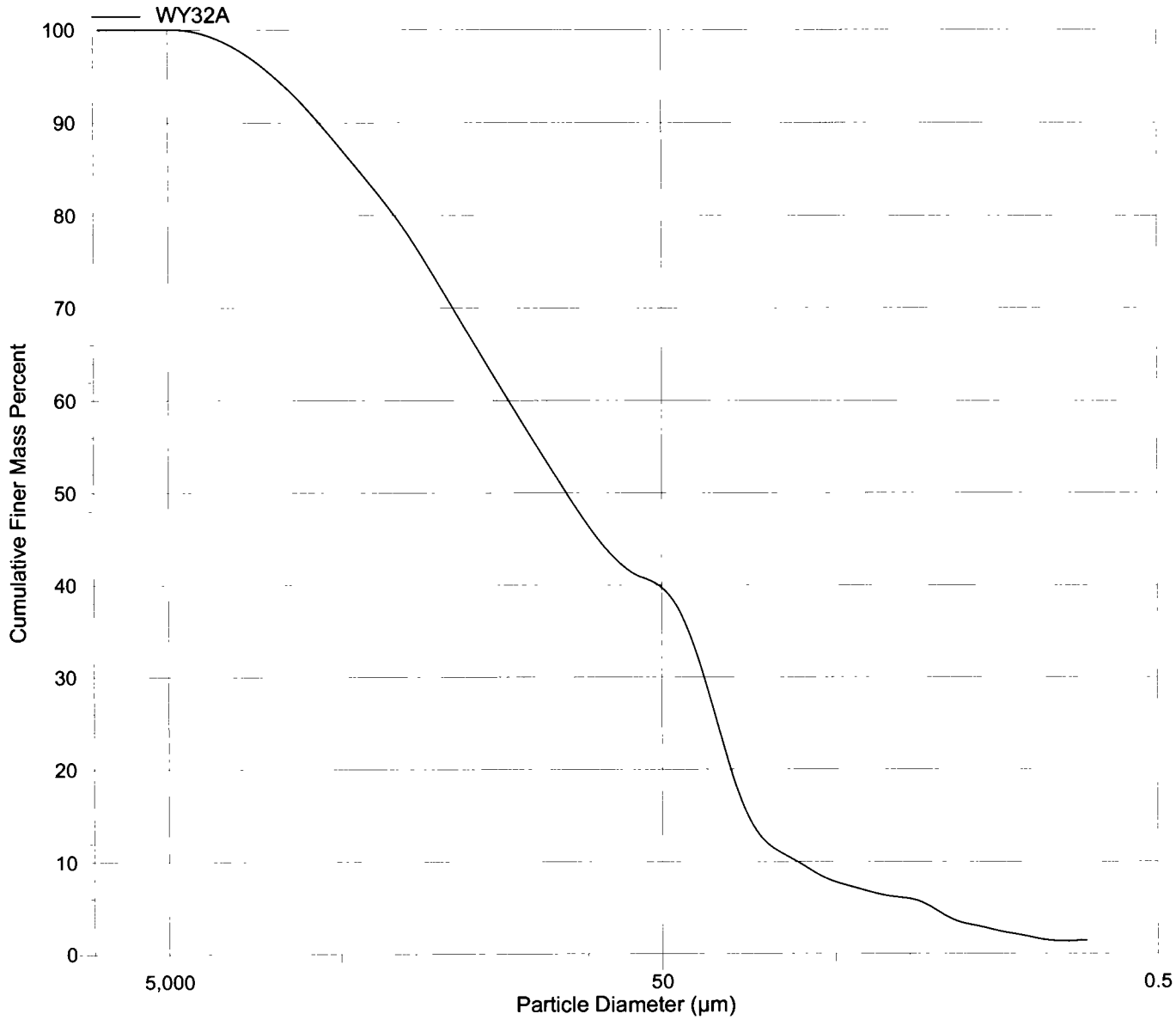
Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)
9500	100.0	0.0	63.00	41.0	9.5
4750	100.0	0.0	31.00	26.7	14.4
2000	95.7	4.3	15.60	10.6	16.1
1000	87.3	8.4	7.800	6.9	3.7
500.0	76.8	10.5	3.900	4.7	2.2
250.0	63.4	13.4	2.000	2.2	2.5
125.0	50.5	12.9	1.000	1.4	0.8

Sample: UP-CB-B8-20130626-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WY32\WY32A_2.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 7/29/2013 1:10:06PM
Reported: 7/29/2013 1:22:16PM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 106 / 84 kCnts/s
Reynolds Number: 0.42

Cumulative Finer Mass Percent vs. Diameter



ANALYTICAL RESOURCES, INC.

Sieve/Sedigraph Particle Size Distribution

ARI Job No.: WY32 ARI Sample Letter: B Client Sample No.: UP-MHF-165-20130626-S

Set-up Date: 7/24/13 Sample Description: BLACK SANDY SILT W/ ORGANIC DEBRIS

SOLIDS CONTENT

Moisture Content	Initials: JQ
Container No.	178
Tare Weight	1.5386
Wet Weight + Tare	79.2959
Dry Weight + Tare	62.4161

Test Sample	Initials: JQ
Container No.	178
Tare Weight	49.4955
Wet Weight + Tare	66.1596
Dry Weight + Tare	60.8404

SIEVE ANALYSIS

Sieve Date: 7/25/13

Sieve Set #: 1 Initials: ML

Sieve Size	Weight Retained
* Tare	49.5578
4	49.9406
10	51.7169
18	55.0951
35	59.2549
60	59.8601
120	60.3192
230	60.6249
PAN	0.2387

* Tar-like substance stuck to bottom and sides of tare dish.

SEDIGRAPH PSD ANALYSIS

Initials JQ

Date Sedigraphed 7.29.13

Suspension Liquid DI WATER

Beaker ID	23

Sample: UP-MHF-165-20130626-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WY32\WY32B.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 7/29/2013 1:39:55PM
Reported: 7/29/2013 2:05:16PM
Liquid Visc: 0.7224 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 106 / 96 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
971.6	0.042	56.6	2.1	117.81274
917.3	0.125	54.5	2.1	105.00072
866.0	0.208	52.4	2.1	93.58199
817.5	0.291	50.3	2.1	83.40503
771.8	0.374	48.3	2.1	74.33481
728.6	0.457	46.2	2.1	66.25097
687.9	0.540	44.2	2.0	59.04624
649.4	0.623	42.1	2.0	52.62502
613.1	0.706	40.1	2.0	46.90210
578.8	0.789	38.2	2.0	41.80154
546.4	0.872	36.2	1.9	37.25566
515.8	0.955	34.3	1.9	33.20414
487.0	1.038	32.5	1.9	29.59322
459.7	1.121	30.8	1.7	26.37499
434.0	1.204	29.2	1.5	23.50673
409.7	1.287	27.8	1.4	20.95040
386.8	1.370	26.6	1.3	18.67206
365.2	1.453	25.4	1.1	16.64149
344.7	1.536	24.5	1.0	14.83175
325.5	1.619	23.6	0.9	13.21881
307.3	1.702	22.9	0.7	11.78127
290.1	1.786	22.2	0.6	10.50007
273.8	1.869	21.7	0.5	9.35820
258.5	1.952	21.2	0.4	8.34050
244.1	2.035	20.9	0.4	7.43348
230.4	2.118	20.5	0.3	6.62510
217.5	2.201	20.2	0.3	5.90462
205.4	2.284	19.8	0.3	5.26250
193.9	2.367	19.5	0.3	4.69021
183.0	2.450	19.2	0.3	4.18015
172.8	2.533	18.9	0.3	3.72557
163.1	2.616	18.6	0.3	3.32041
154.0	2.699	18.4	0.3	2.95932
145.4	2.782	18.1	0.3	2.63750
137.2	2.865	17.9	0.2	2.35067
129.6	2.948	17.6	0.2	2.09504
122.3	3.031	17.4	0.2	1.86721
115.5	3.114	17.2	0.2	1.66415
109.0	3.197	17.0	0.2	1.48317
102.9	3.280	16.8	0.2	1.32188

Sample: UP-MHF-165-20130626-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WY32\WY32B.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 7/29/2013 1:39:55PM
Reported: 7/29/2013 2:05:16PM
Liquid Visc: 0.7224 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 106 / 96 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
97.16	3.363	16.5	0.2	1.17813
91.73	3.447	16.3	0.2	1.05001
86.60	3.530	16.1	0.2	0.93582
81.75	3.613	15.9	0.2	0.83405
77.18	3.696	15.7	0.2	0.74335
72.86	3.779	15.5	0.2	0.66251
68.79	3.862	15.4	0.1	0.59046
64.94	3.945	15.3	0.1	0.52625
61.31	4.028	15.2	0.1	0.46902
57.88	4.111	15.2	0.0	0.41802
54.64	4.194	15.1	0.1	0.37256
51.58	4.277	15.0	0.1	0.33204
48.70	4.360	14.8	0.2	0.29593
45.97	4.443	14.6	0.2	0.26375
43.40	4.526	14.4	0.2	0.23507
40.97	4.609	14.1	0.3	0.20950
38.68	4.692	13.7	0.4	0.18672
36.52	4.775	13.3	0.4	0.16641
34.47	4.858	12.8	0.5	0.14832
32.55	4.941	12.2	0.6	0.13219
30.73	5.024	11.6	0.6	0.11781
29.01	5.107	10.9	0.7	0.10500
27.38	5.191	10.2	0.7	0.09358
25.85	5.274	9.6	0.6	0.08341
24.41	5.357	9.0	0.6	0.07433
23.04	5.440	8.5	0.5	0.06625
21.75	5.523	8.1	0.4	0.05905
20.54	5.606	7.7	0.4	0.05263
19.39	5.689	7.3	0.4	0.04690
18.30	5.772	7.0	0.4	0.04180
17.28	5.855	6.6	0.4	0.03726
16.31	5.938	6.2	0.4	0.03320
15.40	6.021	5.9	0.3	0.02959
14.54	6.104	5.6	0.3	0.02637
13.72	6.187	5.4	0.2	0.02351
12.96	6.270	5.2	0.2	0.02095
12.23	6.353	5.0	0.2	0.01867
11.55	6.436	4.8	0.1	0.01664
10.90	6.519	4.7	0.1	0.01483
10.29	6.602	4.6	0.1	0.01322

Sample: UP-MHF-165-20130626-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WY32\WY32B.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 7/29/2013 1:39:55PM
Reported: 7/29/2013 2:05:16PM
Liquid Visc: 0.7224 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 106 / 96 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
9.716	6.685	4.5	0.1	0.01178
9.173	6.768	4.4	0.1	0.01050
8.660	6.851	4.2	0.2	0.00936
8.175	6.935	4.0	0.2	0.00834
7.718	7.018	3.8	0.2	0.00743
7.286	7.101	3.7	0.2	0.00663
6.879	7.184	3.5	0.2	0.00590
6.494	7.267	3.4	0.2	0.00526
6.131	7.350	3.2	0.2	0.00469
5.788	7.433	3.0	0.2	0.00418
5.464	7.516	2.9	0.2	0.00373
5.158	7.599	2.7	0.2	0.00332
4.870	7.682	2.5	0.2	0.00296
4.597	7.765	2.3	0.2	0.00264
4.340	7.848	2.1	0.2	0.00235
4.097	7.931	1.9	0.2	0.00210
3.868	8.014	1.7	0.2	0.00187
3.652	8.097	1.6	0.2	0.00166
3.447	8.180	1.4	0.1	0.00148
3.255	8.263	1.4	0.1	0.00132
3.073	8.346	1.3	0.0	0.00118
2.901	8.429	1.3	0.0	0.00105
2.738	8.512	1.3	0.0	0.00094
2.585	8.595	1.3	0.0	0.00083
2.441	8.679	1.3	0.0	0.00074
2.304	8.762	1.3	0.0	0.00066
2.175	8.845	1.3	0.0	0.00059
2.054	8.928	1.2	0.0	0.00053
1.939	9.011	1.2	0.1	0.00047
1.830	9.094	1.1	0.1	0.00042
1.728	9.177	1.0	0.1	0.00037
1.631	9.260	1.0	0.1	0.00033
1.540	9.343	0.9	0.0	0.00030
1.454	9.426	0.9	0.0	0.00026
1.372	9.509	1.0	0.0	0.00024
1.296	9.592	1.0	0.0	0.00021
1.223	9.675	1.1	0.0	0.00019
1.155	9.758	1.1	0.0	0.00017
1.090	9.841	1.2	-0.1	0.00015
1.029	9.924	1.3	-0.1	0.00013

Sample: UP-MHF-165-20130626-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WY32\WY32B.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 7/29/2013 1:39:55PM
Reported: 7/29/2013 2:05:16PM
Liquid Visc: 0.7224 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 106 / 96 kCnts/s
Reynolds Number: 0.42

Report by Size Table

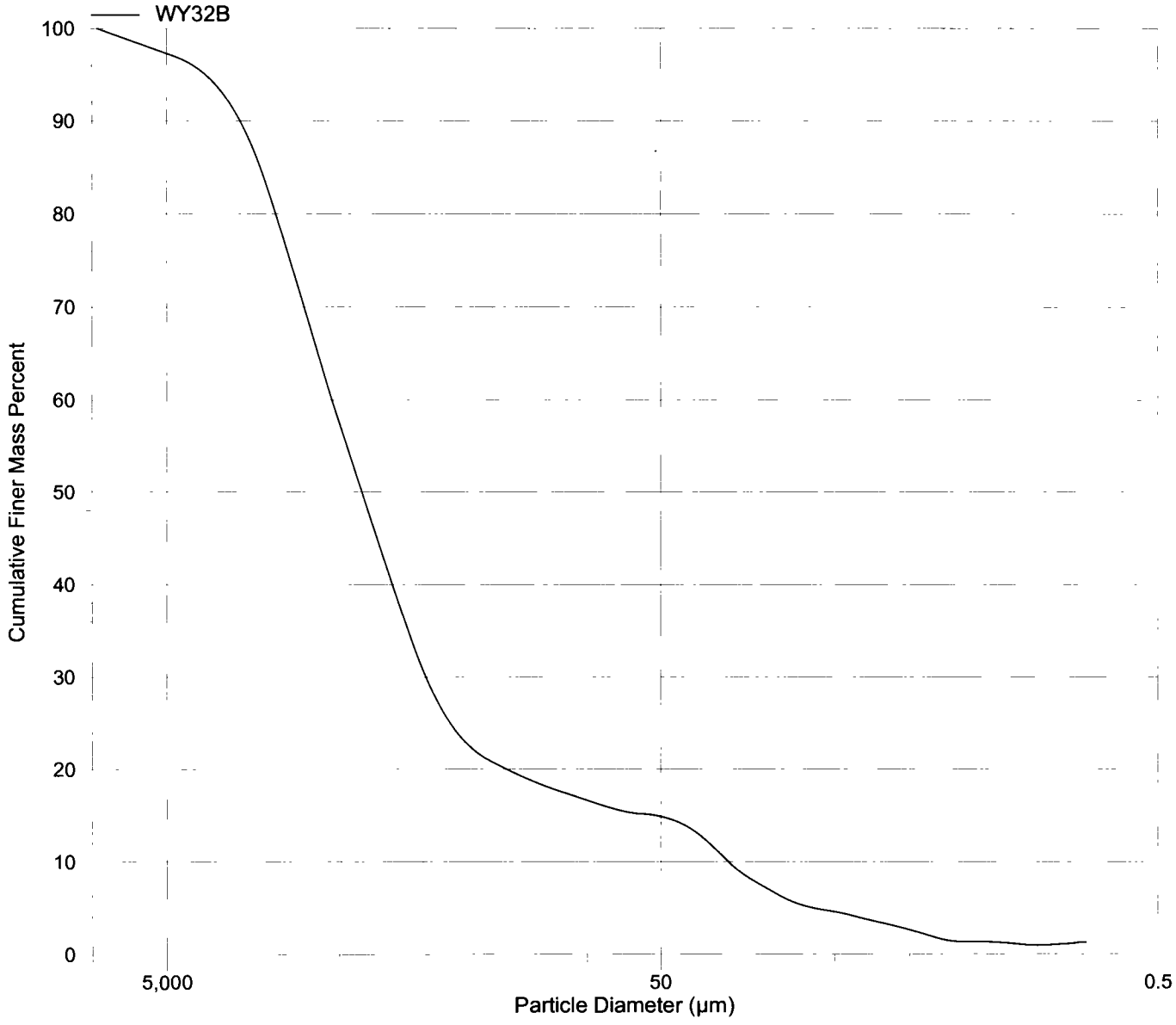
Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)
9500	100.0	0.0	63.00	15.2	2.3
4750	97.1	2.9	31.00	11.7	3.6
2000	83.5	13.6	15.60	6.0	5.7
1000	57.6	25.9	7.800	3.9	2.1
500.0	33.3	24.3	3.900	1.8	2.1
250.0	21.0	12.3	2.000	1.2	0.6
125.0	17.5	3.5	1.000	1.3	-0.1

Sample: UP-MHF-165-20130626-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WY32\WY32B.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 7/29/2013 1:39:55PM
Reported: 7/29/2013 2:05:16PM
Liquid Visc: 0.7224 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 106 / 96 kCnts/s
Reynolds Number: 0.42

Cumulative Finer Mass Percent vs. Diameter



ANALYTICAL RESOURCES, INC.

Sieve/Sedigraph Particle Size Distribution

ARI Job No.: WY32 ARI Sample Letter: C Client Sample No.: UP-CB-A6-20130626-S

Set-up Date: 7/24/13 Sample Description: BLACK SANDY SILT W/ ORGANIC DEBRIS
*BLACK RESIDUE REMAINED ON SIEVE AFTER WASHING THE SAMPLE

SOLIDS CONTENT

Moisture Content	Initials: JTA
Container No.	187
Tare Weight	1.4695
Wet Weight + Tare	50.4004
Dry Weight + Tare	33.9392

Test Sample	Initials: JTA
Container No.	187
Tare Weight	51.5938
Wet Weight + Tare	66.9299
Dry Weight + Tare	58.7622

SIEVE ANALYSIS

Sieve Date: 7/25/13

Sieve Set #: 2 Initials: ML

Sieve Size	Weight Retained
Tare	51.6124
4	51.6124
10	52.1518
18	53.1665
35	54.3274
60	55.8876
120	57.3304
230	58.2853
PAN	0.4747

SEDIGRAPH PSD ANALYSIS

Initials ~~JT~~
Date Sedigraphed ~~7.29.13~~
Suspension Liquid ~~DI WATER~~

Beaker ID	1

WY32:6166

Sample: UP-CB-A6-20130626-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WY32\WY32C.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 7/29/2013 2:17:55PM
Reported: 7/29/2013 2:27:30PM
Liquid Visc: 0.7224 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 106 / 93 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
971.6	0.042	84.3	0.9	117.82282
917.3	0.125	83.4	0.9	105.00970
866.0	0.208	82.5	0.9	93.58999
817.5	0.291	81.6	0.9	83.41217
771.8	0.374	80.7	0.9	74.34117
728.6	0.457	79.8	0.9	66.25664
687.9	0.540	78.9	0.9	59.05129
649.4	0.623	78.0	0.9	52.62952
613.1	0.706	77.0	1.0	46.90611
578.8	0.789	76.0	1.0	41.80511
546.4	0.872	75.0	1.0	37.25885
515.8	0.955	73.9	1.1	33.20698
487.0	1.038	72.8	1.1	29.59575
459.7	1.121	71.6	1.2	26.37724
434.0	1.204	70.4	1.2	23.50874
409.7	1.287	69.1	1.3	20.95219
386.8	1.370	67.8	1.3	18.67366
365.2	1.453	66.5	1.3	16.64292
344.7	1.536	65.2	1.3	14.83301
325.5	1.619	63.9	1.3	13.21994
307.3	1.702	62.6	1.3	11.78228
290.1	1.786	61.3	1.3	10.50097
273.8	1.869	60.0	1.3	9.35900
258.5	1.952	58.7	1.3	8.34122
244.1	2.035	57.5	1.2	7.43412
230.4	2.118	56.3	1.2	6.62566
217.5	2.201	55.1	1.2	5.90513
205.4	2.284	53.9	1.2	5.26295
193.9	2.367	52.7	1.2	4.69061
183.0	2.450	51.5	1.2	4.18051
172.8	2.533	50.3	1.2	3.72588
163.1	2.616	49.1	1.2	3.32070
154.0	2.699	48.0	1.2	2.95958
145.4	2.782	46.8	1.2	2.63772
137.2	2.865	45.7	1.1	2.35087
129.6	2.948	44.5	1.1	2.09522
122.3	3.031	43.4	1.1	1.86737
115.5	3.114	42.2	1.1	1.66429
109.0	3.197	41.1	1.1	1.48330
102.9	3.280	40.1	1.1	1.32199

Sample: UP-CB-A6-20130626-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WY32\WY32C.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 7/29/2013 2:17:55PM
Reported: 7/29/2013 2:27:30PM
Liquid Visc: 0.7224 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 106 / 93 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
97.16	3.363	39.1	1.0	1.17823
91.73	3.447	38.1	1.0	1.05010
86.60	3.530	37.2	0.9	0.93590
81.75	3.613	36.5	0.8	0.83412
77.18	3.696	35.8	0.7	0.74341
72.86	3.779	35.2	0.6	0.66257
68.79	3.862	34.8	0.4	0.59051
64.94	3.945	34.5	0.3	0.52630
61.31	4.028	34.4	0.1	0.46906
57.88	4.111	34.3	0.1	0.41805
54.64	4.194	34.2	0.1	0.37259
51.58	4.277	34.1	0.1	0.33207
48.70	4.360	33.9	0.2	0.29596
45.97	4.443	33.6	0.3	0.26377
43.40	4.526	33.0	0.5	0.23509
40.97	4.609	32.3	0.7	0.20952
38.68	4.692	31.4	0.9	0.18674
36.52	4.775	30.3	1.1	0.16643
34.47	4.858	29.0	1.3	0.14833
32.55	4.941	27.5	1.4	0.13220
30.73	5.024	26.1	1.5	0.11782
29.01	5.107	24.6	1.5	0.10501
27.38	5.191	23.2	1.4	0.09359
25.85	5.274	21.9	1.3	0.08341
24.41	5.357	20.8	1.2	0.07434
23.04	5.440	19.7	1.0	0.06626
21.75	5.523	18.8	0.9	0.05905
20.54	5.606	17.9	0.9	0.05263
19.39	5.689	17.0	0.9	0.04691
18.30	5.772	16.2	0.8	0.04181
17.28	5.855	15.5	0.8	0.03726
16.31	5.938	14.8	0.7	0.03321
15.40	6.021	14.2	0.6	0.02960
14.54	6.104	13.7	0.5	0.02638
13.72	6.187	13.3	0.5	0.02351
12.96	6.270	12.9	0.4	0.02095
12.23	6.353	12.5	0.4	0.01867
11.55	6.436	12.2	0.3	0.01664
10.90	6.519	11.9	0.3	0.01483
10.29	6.602	11.6	0.3	0.01322

Sample: UP-CB-A6-20130626-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WY32\WY32C.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 7/29/2013 2:17:55PM
Reported: 7/29/2013 2:27:30PM
Liquid Visc: 0.7224 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 106 / 93 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
9.716	6.685	11.3	0.3	0.01178
9.173	6.768	10.9	0.3	0.01050
8.660	6.851	10.6	0.4	0.00936
8.175	6.935	10.2	0.4	0.00834
7.718	7.018	9.9	0.3	0.00743
7.286	7.101	9.6	0.3	0.00663
6.879	7.184	9.3	0.3	0.00591
6.494	7.267	9.0	0.3	0.00526
6.131	7.350	8.6	0.3	0.00469
5.788	7.433	8.3	0.3	0.00418
5.464	7.516	7.9	0.3	0.00373
5.158	7.599	7.6	0.3	0.00332
4.870	7.682	7.3	0.3	0.00296
4.597	7.765	7.0	0.3	0.00264
4.340	7.848	6.6	0.4	0.00235
4.097	7.931	6.2	0.4	0.00210
3.868	8.014	5.7	0.5	0.00187
3.652	8.097	5.3	0.5	0.00166
3.447	8.180	4.8	0.4	0.00148
3.255	8.263	4.4	0.4	0.00132
3.073	8.346	4.1	0.3	0.00118
2.901	8.429	3.9	0.2	0.00105
2.738	8.512	3.7	0.2	0.00094
2.585	8.595	3.5	0.2	0.00083
2.441	8.679	3.4	0.1	0.00074
2.304	8.762	3.3	0.1	0.00066
2.175	8.845	3.2	0.1	0.00059
2.054	8.928	3.2	0.0	0.00053
1.939	9.011	3.1	0.0	0.00047
1.830	9.094	3.1	0.1	0.00042
1.728	9.177	2.9	0.1	0.00037
1.631	9.260	2.7	0.2	0.00033
1.540	9.343	2.6	0.2	0.00030
1.454	9.426	2.4	0.2	0.00026
1.372	9.509	2.3	0.1	0.00024
1.296	9.592	2.2	0.1	0.00021
1.223	9.675	2.2	0.0	0.00019
1.155	9.758	2.3	-0.1	0.00017
1.090	9.841	2.4	-0.2	0.00015
1.029	9.924	2.8	-0.3	0.00013

Sample: UP-CB-A6-20130626-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WY32\WY32C.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 7/29/2013 2:17:55PM
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Liquid Density: 0.9941 g/cm³
Base/Full Scale: 106 / 93 kCnts/s
Reynolds Number: 0.42

Report by Size Table

Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)
9500	100.0	0.0	63.00	34.4	9.4
4750	100.0	0.0	31.00	26.3	8.1
2000	94.7	5.3	15.60	14.3	11.9
1000	84.7	10.0	7.800	9.9	4.4
500.0	73.3	11.4	3.900	5.8	4.1
250.0	58.0	15.3	2.000	3.1	2.7
125.0	43.8	14.2	1.000	2.8	0.4

Sample: UP-CB-A6-20130626-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WY32\WY32C.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
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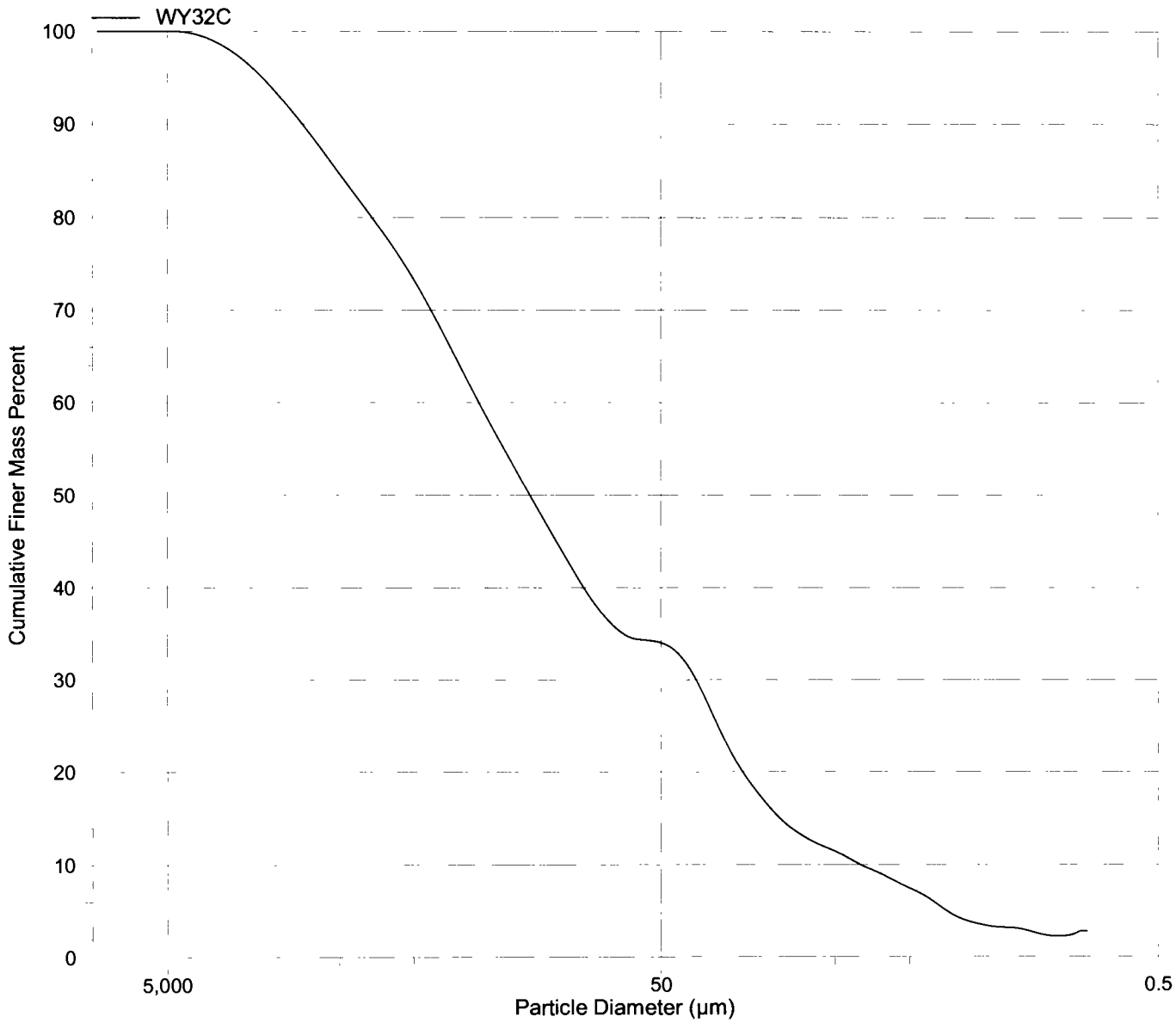
Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 106 / 93 kCnts/s
Reynolds Number: 0.42

Cumulative Finer Mass Percent vs. Diameter



Sample ID: UP-CB-B8-20130626-W

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SAIC	Matrix:	Aqueous	Project No.:	A5781	Date Received:	31-Jul-2013
Project ID:	209977	Weight/Volume:	1.04 L	Sample ID:	A5781_11231_PCB_014-D5	Date Extracted:	14-Aug-2013
Date Collected:	26-Jun-2013	pH	5	QC Batch No.:	11231	Date Analyzed:	16-Aug-2013

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	155				ES PCB-1	78.5
PCB-81 344'5-TeCB	9.02			J	ES PCB-3	82.4
PCB-105 233'44'-PeCB	509				ES PCB-4	86.7
PCB-114 2344'5-PeCB	25.9				ES PCB-15	87.2
PCB-118 23'44'5-PeCB	969				ES PCB-19	93.6
PCB-123 23'44'5'-PeCB	19				ES PCB-37	86.7
PCB-126 33'44'5-PeCB	9.49			J	ES PCB-54	92.6
PCB-156/157 233'44'5/233'44'5'-HxCB	133			C	ES PCB-77	91
PCB-167 23'44'55'-HxCB	43				ES PCB-81	92.5
PCB-169 33'44'55'-HxCB	ND	4.92			ES PCB-104	100
PCB-189 233'44'55'-HpCB	EMPC		5.81	J B	ES PCB-105	94.7
					ES PCB-114	93.7
TEQs (WHO M/H)					ES PCB-118	94
					ES PCB-123	92.1
ND = 0	1.02		1.02		ES PCB-126	87.3
ND = 0.5 x DL	1.09		1.09		ES PCB-153	85.9
ND = DL	1.17		1.17		ES PCB-155	86.5
					ES PCB-156/157	72
Totals					ES PCB-167	72.1
Mono-CBs	175				ES PCB-169	65.8
Di-CBs	3,010				ES PCB-170	77.1
Tri-CBs	10,800				ES PCB-180	81.9
Tetra-CBs	13,000		13,100		ES PCB-188	94.5
Penta-CBs	7,230		7,270		ES PCB-189	73.1
Hexa-CBs	4,560		4,610		ES PCB-202	85.4
Hepta-CBs	2,230		2,240		ES PCB-205	68.2
Octa-CBs	691		695		ES PCB-206	68.3
Nona-CBs	112				ES PCB-208	77.1
Deca-CB	18.1				ES PCB-209	59.1
					CS PCB-28	93.7
Total PCB (Mono-Deca)	41,900		42,000		CS PCB-111	103
					CS PCB-178	111

Checkcode: 843-613-MBK

SGS AP PCB 2013 Rev. 2.0

Report Created: 19-Aug-2013 12:50 Analyst: LB

SGS ANALYTICAL PERSPECTIVES

2714 Exchange Drive
Wilmington
North Carolina 28405
USA

T: 910 794-1613
F: 910 794-3919
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Sample ID: UP-CB-B8-20130626-W — Method 1668C

Client Data		**Sample Data**		**Laboratory Data**			
Name:	SAIC	Matrix:	Aqueous	Project No.:	A5781	Date Received:	31-Jul-2013
Project ID:	209977	Weight/Volume:	1.04 L	Sample ID:	A5781_11231_PCB_014-D5	Date Extracted:	14-Aug-2013
Date Collected:	26-Jun-2013	pH	5	QC Batch No.:	11231	Date Analyzed:	16-Aug-2013
		Units	pg/L	Checkcode:	843-613-MBK	Time Analyzed:	10:45:47

Mono	Conc.	Qualifiers	Tri	Conc.	Qualifiers	Tetra	Conc.	Qualifiers	Tetra	Conc.	Qualifiers
PCB-1	95.5		PCB-19	120		PCB-54	4.94	J	PCB-72	[6.47]	J EMPC
PCB-2	11.8		PCB-30/18	1,150	C	PCB-50/53	251	C	PCB-68	(4.81)	
PCB-3	67.9		PCB-17	565		PCB-45	315		PCB-57	9.75	
			PCB-27	91.9		PCB-51	79.4	B	PCB-58	(5.34)	
Conc.	175		PCB-24	23.7		PCB-46	139		PCB-67	57.2	
EMPC	175		PCB-16	590		PCB-52	1,740		PCB-63	49	
			PCB-32	412		PCB-73	6.41	J	PCB-61/70/74/76	2,090	C
Di	**Conc.**	**Qualifiers**	PCB-34	(7.71)		PCB-43	88.6		PCB-66	1,100	
PCB-4	323		PCB-23	(7.59)		PCB-69/49	1,000	C	PCB-55	31.2	
PCB-10	17.8		PCB-26/29	382	C	PCB-48	505		PCB-56	584	
PCB-9	80.7		PCB-25	175		PCB-44/47/65	1,730	C	PCB-60	304	
PCB-7	38.6		PCB-31	1,940		PCB-59/62/75	190	C	PCB-80	(4.87)	
PCB-6	255		PCB-28/20	2,180	C	PCB-42	552		PCB-79	(4.83)	
PCB-5	26.9		PCB-21/33	1,450	C	PCB-41	308		PCB-78	(5.95)	
PCB-8	1,300		PCB-22	903		PCB-71/40	958	C	PCB-81	9.02	J
PCB-14	(5.46)		PCB-36	(7.41)		PCB-64	788		PCB-77	155	
PCB-11	159		PCB-39	13.6							
PCB-13/12	101	C	PCB-38	(7.86)							
PCB-15	711		PCB-35	44.7							
			PCB-37	761							
Conc.	3,010		**Conc.**	10,800					**Conc.**	13,000	
EMPC	3,010		**EMPC**	10,800					**EMPC**	13,100	

Totals	Conc.	EMPC
Mono-Tri	14,000	14,000
Tetra-Hexa	24,800	24,900
Hepta-Deca	3,050	3,060
Mono-Deca	41,900	42,000

SGS ANALYTICAL PERSPECTIVES

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Wilmington, NC 28405, USA

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Sample ID: UP-CB-B8-20130626-W

Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(2.34)		PCB-109/119/86/97/125/87	794	C	PCB-155	(1.59)		PCB-165	(1.99)	
PCB-96	[17.4]	EMPC	PCB-117	35.7		PCB-152	(1.74)		PCB-146	155	
PCB-103	7.1	J	PCB-116/85	188	C	PCB-150	(1.7)		PCB-161	(1.84)	
PCB-94	7.72	J	PCB-110	1,280		PCB-136	107		PCB-153/168	753	C
PCB-95	830		PCB-115	31.3		PCB-145	(1.82)		PCB-141	204	
PCB-100/93	[14]	J EMPC C	PCB-82	198		PCB-148	(2.4)		PCB-130	68.9	
PCB-102	63.2		PCB-111	(3.02)		PCB-151/135	279	C	PCB-137	47.8	
PCB-98	(4.34)		PCB-120	(3.01)		PCB-154	5.62	J	PCB-164	89.8	
PCB-88	(4.63)		PCB-108/124	48.7	C	PCB-144	[39.7]	EMPC	PCB-163/138/129	1,110	C
PCB-91	160		PCB-107	73.6		PCB-147/149	774	C	PCB-160	(1.98)	
PCB-84	313		PCB-123	19		PCB-134	58.1		PCB-158	115	
PCB-89	21.9		PCB-106	(3.25)		PCB-143	(2.49)		PCB-128/166	212	C
PCB-121	(3.04)		PCB-118	969		PCB-139/140	16.3	J C	PCB-159	10.9	
PCB-92	161		PCB-122	21		PCB-131	14		PCB-162	(3.76)	
PCB-113/90/101	960	C	PCB-114	25.9		PCB-142	(2.75)		PCB-167	43	
PCB-83	57.6		PCB-105	509		PCB-132	362		PCB-156/157	133	C
PCB-99	448		PCB-127	(3.38)		PCB-133	[9.23]	J EMPC	PCB-169	(4.92)	
PCB-112	(3.04)		PCB-126	[9.49]	J						
			Conc.	7,230					**Conc.**	4,560	
			EMPC	7,270					**EMPC**	4,610	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(2.11)		PCB-174	322		PCB-202	45.3		PCB-208	22.2	
PCB-179	115		PCB-177	156		PCB-201	27.7		PCB-207	12.1	
PCB-184	(2.35)		PCB-181	(5.04)		PCB-204	(2.23)		PCB-206	77.4	
PCB-176	29.3		PCB-171/173	81.6	C	PCB-197	6.42	J			
PCB-186	(2.27)		PCB-172	47.2		PCB-200	25		**Conc.**	112	
PCB-178	50.1		PCB-192	(4.3)		PCB-198/199	188	C	**EMPC**	112	
PCB-175	12.1		PCB-180/193	570	C	PCB-196	82.2				
PCB-187	359		PCB-191	9.32	J	PCB-203	105		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(4.68)		PCB-170	239		PCB-195	61.4		PCB-209	18.1	
PCB-183	166		PCB-190	45.6		PCB-194	150				
PCB-185	30.5		PCB-189	[5.81]	J B EMPC	PCB-205	[4.49]	J EMPC			
			Conc.	2,230		**Conc.**	691				
			EMPC	2,240		**EMPC**	695				

Attachment K-5
Ecology Inspection Report

State of Washington Department of Ecology
Northwest Regional Office

STORMWATER COMPLIANCE INSPECTION REPORT

WADOE Stormwater Compliance Inspection Form (last file update 4-04.)

Facility Type: ☒ Industrial ☐ Boatyard ☐ Construction ☐ S & G

Section A: General Data

Inspection Date	NPDES Permit #	County	Receiving Waters
06/26/2013	**WAR001155**	King	Duwamish River

Discharges to: Surface Water ☒ Ground Water ☐ | Weather at time of inspection: Mostly Cloudy w/ Showers

Section B: Facility Data

Name and Location of Facility Inspected

Union Pacific Railroad - Argo Yard
402 S. Dawson Street
Seattle, WA 98108

Entry Time	Permit Effective Date
8:00 am	1-1-10
Exit Time	**Permit Expiration Date**
3:30 pm	1-1-15

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)
Damon Larkin/ Operations Superintendent/ 206-764-1443
Tracie Rohde/Manager/503-249-3051/Cell # 503-260-4176

Name, Address of Responsible Official/Title/Phone and Fax Number.
Jennifer Blaese/Manager Environmental Field Operations/503-249-3042
301 NE 2nd Avenue
Portland, OR 97232

Phone Number Fax Contacted? ☐Yes ☒ No

Other Participants:
Megan Wisdom, Seattle Public Utilities
Warren Walton, Ecology Urban Waters Inspector
Mahbub Alam, Ecology Toxics Cleanup Program

	Yes	No
Samples Taken?	☐	☒
Photos Taken?	☒	☐

Section C: Areas Evaluated During Inspection.

☒	NPDES Permit Available	☐	Wet & Dry Season Inspection Reports	☒	Operations & Maintenance	☐	Effluent/Receiving Water
☒	Storm Water Pollution Prevention Plan Available	☐	Employee Training Records	☒	Oil/Water Separator	☐	Pretreatment
☒	SPCC Plan & Equipment	☐	Compliance Schedules	☐	Solid Waste Disposal	☐	Laboratory
☐	Erosion and Sediment Control Plans	☒	Monitoring Plan	☒	Catch Basins	☐	0.5 inch Inspection Logs
☐	DMR Submittals	☒	Fuel/Chemical Storage	☒	Track out / Wheel wash	☒	Wash pad
☐		☐		☐		☐	
☐		☐		☐		☐	

Section D: Summary of Findings/Comments

Background:

This compliance inspection was conducted as part of a Department of Ecology inspection program to control the potential sources of pollutants discharged to the Duwamish waterway through storm drainage systems. The previous Department of Ecology, Water Quality Program compliance inspection at this facility was April 24, 2008. As part of this inspection, storm drain lines and structures were reviewed and compared with existing site maps and source trace samples of catch basin solids and stormwater were collected. Ecology will review sample results and consider the need to monitor for additional parameters or conduct further source tracing.

The Argo Yard is a railcar switching and intermodal station, and a maintenance facility for the railroad. Activities conducted include vehicle fueling (packer cranes, tractors, and trucks), locomotive maintenance and fueling, rail car maintenance, parts storage, and intermodal operations. Argo Yard occupies approximately 60 acres and the topography is relatively flat. The Duwamish Waterway is located approximately one-half mile to the west of the property.

Site Inspection:

We arrived at the facility at approximately 9:00 am and met with Damon Larkin, Operations Superintendent and explained the purpose of the inspection and sampling. The site map was reviewed and the first step was to establish prospective sample locations. After the first sample location was selected and the sampling contractor was set-up, I conducted a paperwork review and then a site walk-through was conducted.

The Stormwater Pollution Prevention Plan (SWPPP) was reviewed and needs to be updated to include and/or address the following; the site map must clearly label all sampling locations and include all 13 elements as required by the permit. The SWPPP makes references to the expired Industrial Stormwater General Permit. The current permit requires 8 consecutive quarterly samples that meet benchmarks in order to qualify for "Consistent Attainment". The Permit applies to all areas of the entire facility, with the exception of those areas that flow to the combined or sanitary sewer. Official SWPPP certification form was used but signed and dated by Norm Siler in 2010. It needs to be resigned and recertified. Mandatory BMPs did not seem to be clearly indentified. The Operations and Maintenance Manual for the new stormwater treatment systems must be included in the SWPPP.

Industrial activities include the Packer Maintenance Area; packer and equipment washing at a dedicated wash pad (washwater collected separately and hauled offsite for disposal) and maintenance of packer cranes at the Packer Maintenance Structure. Maintenance fluids and diesel fuel are stored in above-ground storage tanks within a containment structure. Maintenance of packer cranes and other equipment generally occurs under roof, but some activities occur outdoors for cranes that cannot fit completely under the roof.

A nearby outdoor, above-ground diesel tank is enclosed in a concrete secondary containment berm. Drainage from the containment area is controlled manually by a valve that is normally capped and locked closed. Precipitation that collects within the containment area is released on occasion, as necessary, under supervision after ensuring that the water quality complies with applicable standards. The diesel tank is regularly filled by fuel trucks that connect at the adjacent fill port. The fill port also remains capped and locked when not in service. Tractors are refueled at the fueling station located adjacent to the diesel tank.

Locate spill kits within 25 feet of all stationary fueling stations, fuel transfer stations, and mobile fueling units. At a minimum, spill kits shall include:
i) Oil absorbents capable of absorbing 15 gallons of fuel.
ii) A storm drain plug or cover kit.
iii) A non-water containment boom, a minimum of 10 feet in length with a 12 gallon absorbent capacity.
iv) A non-metallic shovel.
v) Two five-gallon buckets with lids.

The SWPPP shall include BMPs to minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff by either locating these industrial materials and activities inside or protecting them with storm resistant coverings.

The SWPPP shall include BMPs to inspect and maintain the stormwater drainage, source controls, treatment systems, and plant equipment and systems that could fail and result in contamination of stormwater. The SWPPP shall include the schedule/frequency for completing each maintenance task. The Permittee must:
a) Clean catch basins when the depth of debris reaches 60% of the sump depth. In addition, the Permittee must keep the debris surface at least 6 inches below the outlet pipe.
b) Inspect all equipment and vehicles during monthly site inspections for leaking fluids such as oil, antifreeze, etc. Take leaking equipment and vehicles out of service or prevent leaks from spilling on the ground until repaired.
c) Immediately clean up spills and leaks (e.g., using absorbents, vacuuming, etc.) to prevent the discharge of pollutants.

The Permittee shall vacuum paved surfaces with a vacuum sweeper to remove accumulated pollutants a minimum of once per quarter. Clean up leaks and spills as they occur and employ the spill plan when necessary.

Prohibit any and all wash-waters from entering storms drains or surface waters.

Store all chemical liquids, fluids, and petroleum products, on an impervious surface that is surrounded with a containment berm or dike that is capable of containing 10% of the total enclosed tank volume or 110% of the volume contained in the largest tank, whichever is greater.

Issues & Requirements:

The Stormwater Pollution Prevention Plan (SWPPP) must be updated/revised to properly include or address:

- The site map must clearly label all sampling locations and include all 13 elements as required by the permit.
- The SWPPP makes references to the expired Industrial Stormwater General Permit.
- The current permit requires 8 consecutive quarterly samples that meet benchmarks in order to qualify for "Consistent Attainment".
- Official SWPPP certification form was used but signed and dated by Norm Siler in 2010. It needs to be resigned and recertified.
- Mandatory BMPs did not seem to be clearly indentified.
- The Operations and Maintenance Manual for the new stormwater treatment systems must be included in the SWPPP.
- Store all chemical liquids, fluids, and petroleum products and wastes, on an impervious surface that is surrounded with a containment berm or dike that is capable of containing 10% of the total enclosed tank volume or 110% of the volume contained in the largest tank, whichever is greater.

The revised SWPPP must be submitted to Ecology within 30 days upon receipt of this report.

Contact Robert Wright at 206-909-6640 (e-mail rowr461@ecy.wa.gov) with any questions or concerns regarding this report.

Name(s) and Signatures of Inspector(s)	Agency/Office/Telephone	Date
Robert Wright 9-20-13	WA Dept. of Ecology/ NW Regional Office/ 425-649-7060 3190 160th Ave SE, Bellevue, WA 98008-5452	8-29-13
Signature of Management Q A Reviewer	Agency/Office/Phone and Fax Numbers WA Dept. of Ecology/NWRO/ (425) 649-7000 Fax (425) 649-7098	09/24/13

UNANNOUNCED Inspection

June 26, 2013 **Permit # WAR001155**

Union Pacific Railroad - Argo Yard, Seattle

#1. DESCRIPTION: Union Pacific Railroad triggered Level 3 corrective actions for turbidity. They are in the final stages of completing the construction of Level 3 StormwateRx sand filter treatment systems.

#2. DESCRIPTION: At the south end of the facility is the packer maintenance shop. All catch basins have filter inserts in them.

#3. DESCRIPTION: Maintenance of packer cranes and other equipment generally occurs under a roof, but some activities take place outdoors for cranes that cannot fit completely under the roof.

#4. DESCRIPTION: The shop looked to be in good condition.

June 26, 2013 **Permit # WAR001155**

Union Pacific Railroad - Argo Yard, Seattle

#5. DESCRIPTION: The wash pad is for packer and equipment washing. Washwater is collected separately and hauled offsite for disposal.

#6. DESCRIPTION: The yellow tube contains storm drain inlet protection. This storm drain is located between the wastewater tank and the wash pad.

#7. DESCRIPTION: The diesel tank is too tall to be covered. Drainage from the containment area is controlled manually by a valve that is normally capped and locked closed. Precipitation that collects within the containment area is periodically released as necessary, after ensuring that the water quality complies with applicable standards.

#8. DESCRIPTION: A Spill Kit is located here as required.

June 26, 2013 **Permit # WAR001155**

Union Pacific Railroad - Argo Yard, Seattle

#9. DESCRIPTION: The stormwater in this area is tributary to surface waters. The stormwater permit applies to all areas of the facility.

#10. DESCRIPTION: The source control BMPs and inlet protections need to be improved here.

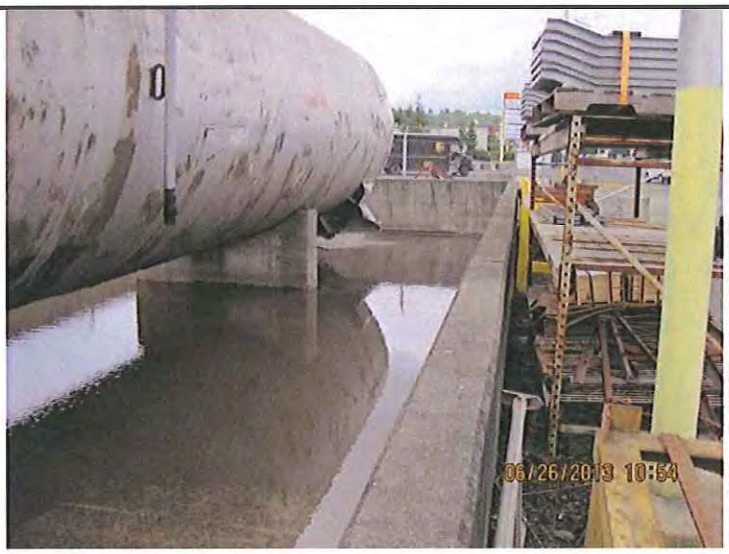
#11. DESCRIPTION: Fuel trucks transfer petroleum products and wastes at this location. The catch basin flows to the oil water separator seen in photo # 15.

#12. DESCRIPTION: The permit requires UPRR to minimize the exposure of material storage areas to rain, snow, snowmelt, and runoff by either locating these industrial materials and activities inside or protecting them with storm resistant coverings.

June 26, 2013 **Permit # WAR001155**

Union Pacific Railroad - Argo Yard, Seattle

#13. DESCRIPTION: The blue sump pump in the corner of the containment structure was being used to pump stormwater out of the structure but UPRR was not sure where to.



#14. DESCRIPTION: The SWPPP needs to include written procedures on how the accumulated stormwater within the containment structure is to be handled.

#15. DESCRIPTION: The oil/water separated is permitted by King County Industrial Waste to discharge to the sanitary sewer.

#16. DESCRIPTION: The stormwater runoff from this area needs to be properly included in the SWPPP.