Lower Duwamish Waterway NPDES Inspection Sampling Support

Technical Memorandum

Final

Prepared for

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

Prepared by

18912 North Creek Parkway, Suite 101
Bothell, Washington 98011

January 2015

Appendix H
Cadman Seattle

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.

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

Table of Contents

Page

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

H-2 Inspection and Sampling H-3
H-2.1 June 2013 Stormwater Compliance Inspection H-3
H-2.2 Stormwater Conveyance System Sampling H-3
H-2.2.1 Water Samples H-3
H-2.2.2 Solids Sample H-3

H-3 Results H-5
H-3.1 Chemical Analysis H-5
H-3.2 Inspection Results and Compliance Requirements H-5

H-4 References H-6

Figures

Figure H-1. Cadman Seattle Facility SWPPP Map

Figure H-2. Cadman Seattle Inspection and Sample Locations

Tables

Table H-1. Sampling Analytical Methods – Water

Table H-2. Water Sample Quality Data

Table H-3. Water Sample Results Compared to Criteria

Table H-4. Water Sample Results – PCB Congeners

Table H-5. Water Sample Results – Conventionals

Table H-6. Sample Analytical Methods – Solids

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

Table H-8. Solids Sample Results Compared to Organic Carbon-Normalized SMS Criteria

Attachments

Attachment H-1. Inspection Photographic Log

Attachment H-2. Field Documentation

Attachment H-3. Chain of Custody Forms

Attachment H-4. Laboratory Reports (on CD)

Attachment H-5. Ecology Inspection Report

H-1 Introduction and Background

Facility Name	**Cadman Seattle**
Address	5225 East Marginal Way S Seattle, WA 98134
NPDES Permit Type	Sand and Gravel General Permit
NPDES Permit No.	WAG503337
Permit Monitoring Requirements	TSS, turbidity, oil and grease, pH, temperature
SIC Code	3273: Ready-Mix Concrete
Inspection Date	June 5, 2013
Grab Samples	2 Water Samples, 1 Solids Sample
Sample ID(s)	CL-MH-SPS-20130605-S CL-MH-SPS-20130605-W CL-VT-EFF-20130605-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, 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

Cadman Seattle (Cadman) is located on a 5.93 acre site at 5225 East Marginal Way S. Cadman manufactures ready-mix concrete. Processed sand and gravel is stockpiled on the property. The crushed materials are used in the production of ready-mix concrete or sold to contractors for construction projects (Cadman 2012). A facility map is provided in Figure H-1.

Seventeen catch basins are present on the property (Figure H-2). Some catch basins have been sealed and stockpiles are present above the sealed catch basins. All stormwater at the facility is conveyed to a stormwater treatment vault (Cadman 2012).

Lehigh Northwest operates a cement terminal at the property. Cement powder is offloaded at the dock through pipes and transferred to silos operated by Lehigh Northwest (Cadman 2012).

H-1.1 Stormwater Conveyance and Treatment System

The facility's stormwater treatment system adjusts the pH and removes particulate matter from stormwater. The treatment system has four components (Cadman 2012):

- A pH neutralization system using gaseous carbon dioxide,
- A polymer feed system to help settle out solids within the vault,

- A below ground pump station consisting of centrifugal duplex pumps operating on level control, and
- A plug-flow, above ground detention vault.

The treatment system is designed to operate continuously and has the capacity to contain a 10-year, 24-hour storm. Stormwater from the entire property collects at catch basin 13 (CB-13) and is diverted to the pump station. The pump station pumps stormwater treated with polymer to a detention vault. Once inside the detention vault, the solids particles coagulate and flocculate due to the action of the polymer and turbulence created by the pumped flow. Decant valves located near the outlet end of the detention vault allow for removal of accumulated stormwater from the vault without disturbing underlying solids. Three 8-inch nozzles with blind flanges have been installed at the back of the detention vault to allow the reuse of stormwater in the ready mix concrete operation. The reuse of stormwater has prevented surface water discharge from occurring at the facility.

In the event the detention vault exceeds capacity, overflow is directed to the combined sewer under a discharge authorization from King County Industrial Waste. A shut off gate is in place at the terminus of the detention vault. In the event stormwater in the detention vault nears the overflow level, stormwater overflow can also be directed to the Lower Duwamish Waterway (LDW). The last reported stormwater discharge to the LDW occurred in January 2011. The detention vault is checked for solids buildup monthly. Accumulated material is re-used for ready-mix concrete or fill dirt. Additionally, process water from the cement truck wash station, tire bath, and truck washout reclaim settling pond is directed to the combined sewer (Cadman 2012).

During the June 2013 inspection, the Cadman representative indicated that a hydraulic plug was installed in manhole 14 (MH-14), downstream of the pump station, to prevent stormwater discharge to the LDW via outfall 2244. If the pump station fails during a heavy rain event, stormwater will flood the main yard and not discharge to the LDW (Ecology 2013b).

H-1.2 Recent Compliance History

Ecology conducted an unannounced stormwater compliance inspection at Cadman on January 31, 2013. No corrective actions were identified following the site walk portion of the inspection. Ecology reviewed discharge monitoring reports for 2011 and 2012, which indicated that discharge did not occur at the facility during any of the previous 8 quarters. The facility's Site Management Plan was not available to review. Ecology requested that the facility submit an updated Site Management Plan that includes a monitoring plan (Ecology 2013a).

H-2 Inspection and Sampling

H-2.1 June 2013 Stormwater Compliance Inspection

On June 5, 2013, Ecology conducted a second stormwater compliance inspection at Cadman. Leidos assisted Ecology with the inspection and sampling of the facility's stormwater conveyance system. The inspection included identifying and observing influent and effluent points at drainage structures, collecting written and photographic 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 H-2 using geographic information system software. An inspection photographic log and field documentation are presented in Attachments H-1 and H-2, respectively.

The field team inspected the following stormwater conveyance structures at Cadman (Figure H-2): CB-13, sump pump station (MH-SPS), MH-14, and an above ground detention vault (VT-EFF). The locations CB-13 and MH-14 did not contain sufficient solid material for sampling. All stormwater onsite is conveyed to the sump pump station prior to being pumped to the detention vault. A solids sample and water sample were collected from the sump pump station. Trucks leaving the facility use water pumped to the detention vault as process water for the ready mix concrete operation. A water sample was collected from the effluent of the detention vault.

H-2.2 Stormwater Conveyance System Sampling

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

H-2.2.1 Water Samples

Water sample CL-MH-SPS-20130605-W was collected from the sump pump location MH-SPS (Figure H-2, Attachment H-1). The sump pump station is located at the southern portion of the facility and receives stormwater from the entire site. Discharge from the sump did not occur during sample collection. The sample's turbidity was measured at 1212 NTU and pH was measured at 9.63.

Water sample CL-VT-EFF-20130605-W was collected from the detention vault location VT-EFF (Figure H-2, Attachment H-1). The detention vault allows reuse of stormwater in the ready-mix concrete operation. The water sample was collected from an effluent port of the detention vault. The sample's turbidity was measured at 55.9 NTU and pH was measured at 9.28.

H-2.2.2 Solids Sample

Solids sample CL-MH-SPS-20130605-S was collected from the sump pump location MH-SPS (Figure H-2, Attachment H-1). The sump pump station is located at the southern portion of the

facility and receives stormwater from the entire site. The solids sample was collected from the southern portion of the sump near the effluent pumps and is representative of storm drain solids at the facility. The sample consisted of brown silt, clay, and fine-grained sand. No 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 performed for this sample.

H-3 Results

H-3.1 Chemical Analysis

Ecology collected two water samples and one solids sample during the June 5, 2013 stormwater compliance inspection at Cadman. Analytical methods, chemical results and regulatory criteria are presented in Tables H-1 through H-8.

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).

H-3.2 Inspection Results and Compliance Requirements

During the June 2013 inspection, Ecology observed process water entering a storm drain near the main office building. The exit for the Portland cement loading area was routinely washed down and process water entered the stormwater system. A section of pavement was broken and sloped towards the waterway allowing the potential for discharge of untreated stormwater and/or process wastewater to the LDW. Ecology also observed two 275-gallon totes of liquid Hycrete W1001 stored outside without secondary containment or cover (Ecology 2013b).

Following the inspection, Ecology required the facility to perform the following corrective actions:

- Update the stormwater pollution prevention plan (SWPPP) site map to clearly and adequately map all on-site stormwater drainage and discharge structures, including the plug installed at MH-14.
- Separate all process water from stormwater on-site, or the facility will be directed to apply for a permit modification to discharge process water to surface water.
- Repair the broken pavement sloping towards the waterway to prevent surface runoff to the LDW.
- Store all chemical liquids, fluids, and petroleum products on an impervious surface surrounded by secondary containment.

The Ecology inspection report is provided as Attachment H-5.

H-4 References

Cadman Seattle (Cadman). 2012. Stormwater Pollution Prevention Plan, Cadman Seattle, Seattle, Washington. June 2012.

Ecology (Washington State Department of Ecology). 2013a. Stormwater Compliance Inspection Report, Cadman Seattle, 5225 E Marginal Way South, Seattle, WA 98134. March 12, 2013.

Ecology. 2013. Stormwater Compliance Inspection Report, Cadman Seattle, 5225 E Marginal Way South, Seattle, WA 98134. June 19, 2013b.

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.

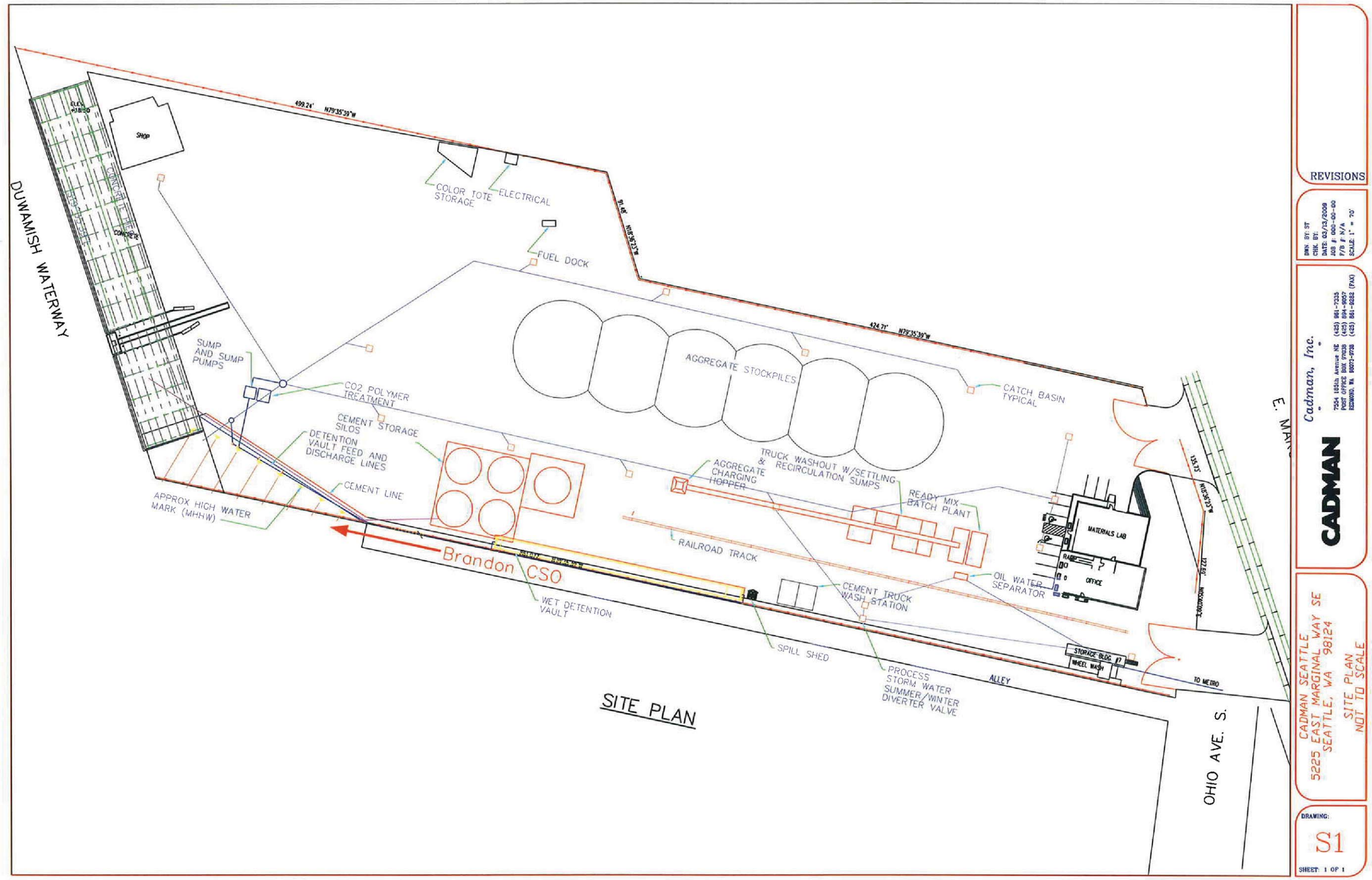
EPA, Office of Emergency and Remedial Response. June 2008. *USEPA Contract Laboratory Program, National Functional Guidelines for Organic Data Review*. EPA-540-R-08-01. Washington, DC.

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

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

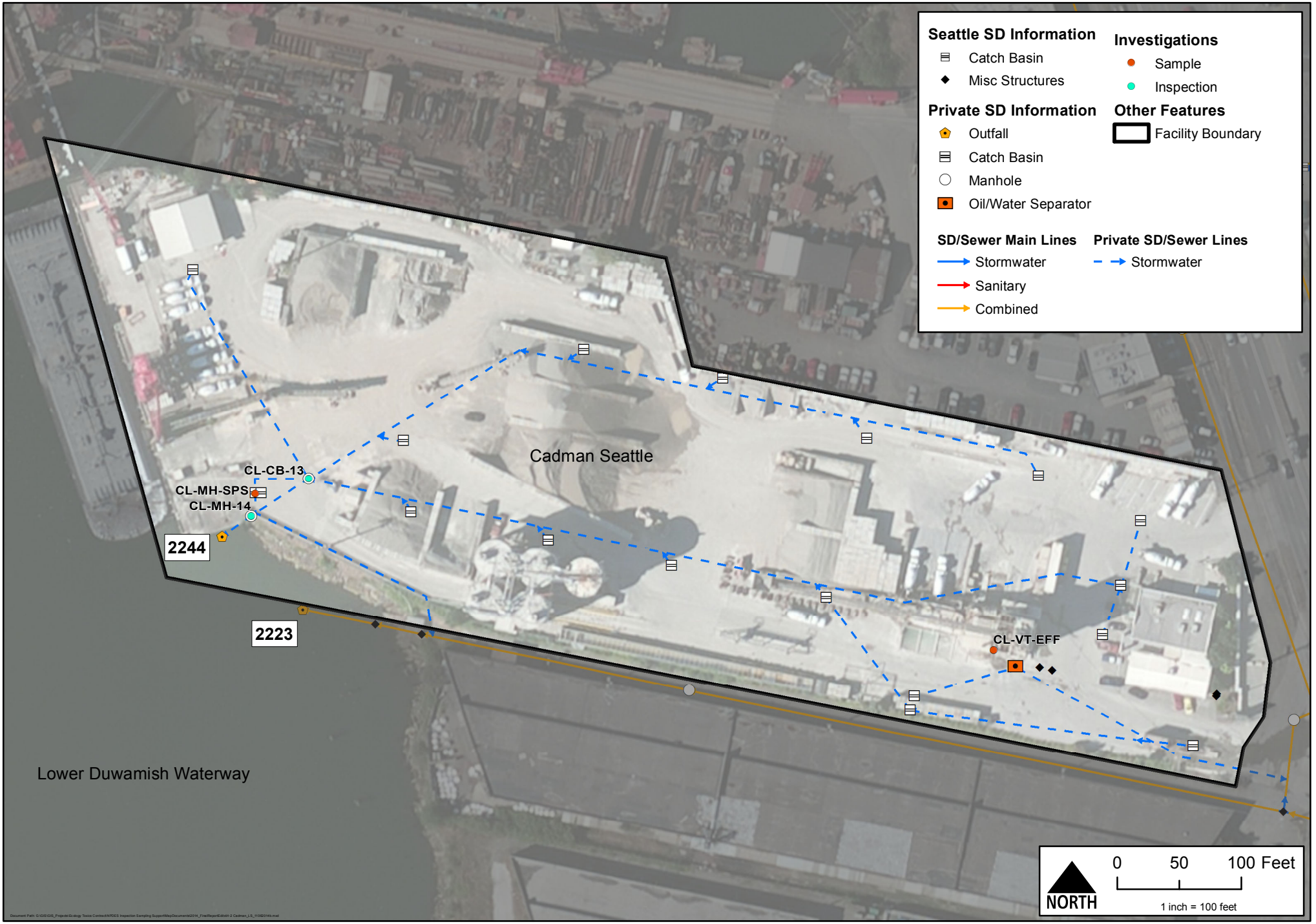
Leidos. 2014. LDW NPDES Inspection Sampling Support, Seattle, WA, Technical Memorandum. DRAFT. Prepared for Washington State Department of Ecology, Toxics Cleanup Program, Northwest Regional Office. In progress.

Figures



Source: Cadman 2012 [10438]

Figure H–1. Cadman Seattle Facility SWPPP Map



leidos

Figure H–2. Cadman Seattle Inspection and Sample Locations

DEPARTMENT OF ECOLOGY
State of Washington

Tables

Table H-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: Cadman Seattle

Location ID / Collection Date		CL-MH-SPS	CL-VT-EFF
Analyte	**Units**	**6/5/2013**	**6/5/2013**
Metals (Total)			
Antimony	µg/L	E200.8	E200.8
Arsenic	µg/L	E200.8	E200.8
Beryllium	µg/L	E200.8	E200.8
Cadmium	µg/L	E200.8	E200.8
Chromium	µg/L	E200.8	E200.8
Copper	µg/L	E200.8	E200.8
Lead	µg/L	E200.8	E200.8
Mercury	µg/L	SW7470A	SW7470A
Nickel	µg/L	E200.8	E200.8
Selenium	µg/L	E200.8	E200.8
Silver	µg/L	E200.8	E200.8
Thallium	µg/L	E200.8	E200.8
Zinc	µg/L	E200.8	E200.8
Metals (Dissolved)			
Antimony	µg/L	E200.8	E200.8
Arsenic	µg/L	E200.8	E200.8
Beryllium	µg/L	E200.8	E200.8
Cadmium	µg/L	E200.8	E200.8
Chromium	µg/L	E200.8	E200.8
Copper	µg/L	E200.8	E200.8
Lead	µg/L	E200.8	E200.8
Mercury	µg/L	SW7470A	SW7470A
Nickel	µg/L	E200.8	E200.8
Selenium	µg/L	E200.8	E200.8
Silver	µg/L	E200.8	E200.8
Thallium	µg/L	E200.8	E200.8
Zinc	µg/L	E200.8	E200.8
PAHs			
1-Methylnaphthalene	µg/L	SW8270DSIM	SW8270DSIM
2-Chloronaphthalene	µg/L	SW8270D	SW8270D
2-Methylnaphthalene	µg/L	SW8270DSIM	SW8270DSIM
Acenaphthene	µg/L	SW8270DSIM	SW8270DSIM
Acenaphthylene	µg/L	SW8270DSIM	SW8270DSIM
Anthracene	µg/L	SW8270DSIM	SW8270DSIM
Benzo(a)anthracene	µg/L	SW8270DSIM	SW8270DSIM
Benzo(a)pyrene	µg/L	SW8270DSIM	SW8270DSIM
Benzo(b)fluoranthene	µg/L	SW8270DSIM	SW8270DSIM
Benzo(g,h,i)perylene	µg/L	SW8270DSIM	SW8270DSIM
Benzo(k)fluoranthene	µg/L	SW8270DSIM	SW8270DSIM
Chrysene	µg/L	SW8270DSIM	SW8270DSIM
Dibenz(a,h)anthracene	µg/L	SW8270DSIM	SW8270DSIM
Dibenzofuran	µg/L	SW8270DSIM	SW8270DSIM
Fluoranthene	µg/L	SW8270DSIM	SW8270DSIM
Fluorene	µg/L	SW8270DSIM	SW8270DSIM

Table H-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: Cadman Seattle

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

Table H-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: Cadman Seattle

Location ID / Collection Date		CL-MH-SPS	CL-VT-EFF
Analyte	**Units**	**6/5/2013**	**6/5/2013**
3,3'-Dichlorobenzidine	µg/L	SW8270D	SW8270D
3-Nitroaniline	µg/L	SW8270D	SW8270D
4-Bromophenyl-phenylether	µg/L	SW8270D	SW8270D
4-Chloroaniline	µg/L	SW8270D	SW8270D
4-Chlorophenyl-phenylether	µg/L	SW8270D	SW8270D
4-Nitroaniline	µg/L	SW8270D	SW8270D
Aniline	µg/L	SW8270D	SW8270D
Azobenzene	µg/L	SW8270D	SW8270D
Benzoic Acid	µg/L	SW8270D	SW8270D
Benzyl Alcohol	µg/L	SW8270D	SW8270D
2,2'-Oxybis(1-Chloropropane)	µg/L	SW8270D	SW8270D
bis(2-Chloroethoxy) Methane	µg/L	SW8270D	SW8270D
Bis-(2-Chloroethyl) Ether	µg/L	SW8270D	SW8270D
Carbazole	µg/L	SW8270D	SW8270D
Hexachlorobenzene	µg/L	SW8081B	SW8081B
Hexachlorobutadiene	µg/L	SW8081B	SW8081B
Hexachlorocyclopentadiene	µg/L	SW8270D	SW8270D
Hexachloroethane	µg/L	SW8270D	SW8270D
Isophorone	µg/L	SW8270D	SW8270D
Nitrobenzene	µg/L	SW8270D	SW8270D
N-Nitrosodimethylamine	µg/L	SW8270D	SW8270D
N-Nitroso-Di-N-Propylamine	µg/L	SW8270D	SW8270D
N-Nitrosodiphenylamine	µg/L	SW8270D	SW8270D
N-Nitrosomethylethylamine	µg/L	na	na
PCB Aroclors			
PCB Aroclors	µg/L	na	na
PCB Congeners			
PCB Congeners	pg/L	1668C	1668C
Pesticides			
Pesticides	µg/L	SW8081B	SW8081B
Conventionals			
Alkalinity	mg/L CaCO3	SM2320	SM2320
Bicarbonate	mg/L CaCO3	SM2320	SM2320
Carbonate	mg/L CaCO3	SM2320	SM2320
Chloride	mg/L	EPA300.0	EPA300.0
Conductivity	µmhos/cm	EPA120.1	EPA120.1
Dissolved Organic Carbon	mg/L	SM5310B	SM5310B
Hydroxide	mg/L CaCO3	SM2320	SM2320
Nitrate + Nitrite	mg-N/L	na	na
N-Nitrate	mg-N/L	EPA300.0	EPA300.0
N-Nitrite	mg-N/L	na	na
pH	std units	SM4500H	SM4500H
Sulfate	mg/L	EPA300.0	EPA300.0
Total Organic Carbon	mg/L	SM5310B	SM5310B
Total Suspended Solids	mg/L	SM2540D	SM2540D

Table H-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: Cadman Seattle

Location ID / Collection Date		CL-MH-SPS	CL-VT-EFF
Analyte	Units	6/5/2013	6/5/2013

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

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 H-2. Water Quality Data
NPDES Inspection Sampling Support: Cadman Seattle

Location ID			CL-MH-SPS	CL-VT-EFF
Collection Date			6/5/2013	6/5/2013
Analyte	WA NPDES ISGP	Unit	Result	Result
Field Parameters				
Flow	--	Yes/No	Yes	No
pH	5.0 to 9.0	std units	**9.63**	**9.28**
Conductivity	--	mS/cm	185	178
Temperature	--	degrees C	19.8	21.6
Total Dissolved Solids	--	g/L	na	na
Turbidity	25	NTU	**1,212**	**56**
Oil & Grease	No visible sheen	Yes/No	No	No
Dissolved Oxygen	--	mg/L	na	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 H-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Cadman Seattle

Location ID						CL-MH-SPS					CL-VT-EFF				
Collection Date						6/5/2013					6/5/2013				
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	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Total Metals (µg/L)															
Antimony	--	--	--	--	--	2.0 J					2.4 J				
Arsenic	150	36	69	--	--	4.8					2.0				
Beryllium	--	--	--	--	--	0.3					< 0.2 U				
Cadmium	2.1	9.4	42	--	--	0.2					0.1				
Chromium	--	--	--	--	--	41					8.3				
Copper	14	3.7	5.8	--	--	***50.6***	14	8.7			***10.9***	2.9	1.9		
Lead	81.6	8.5	221	--	--	3.8					0.7				
Mercury	1.4	0.025	2.1	--	--	< 0.02 U					< 0.02 U				
Nickel	--	8.3	75	--	--	**32.4**	3.9				3.9				
Selenium	5	71	291	--	--	< 0.5 U					< 0.5 U				
Silver	3.8	--	2.2	--	--	< 0.2 U					< 0.2 U				
Thallium	--	--	--	--	--	< 0.2 U					< 0.2 U				
Zinc	117	86	95	--	--	77					14				
Dissolved Metals (µg/L)															
Antimony		--	--	4,300	640	4.4 J					2.7				
Arsenic		36	69	--	--	2.6					1.9				
Beryllium		--	--	--	--	< 0.2 U					< 0.2 U				
Cadmium		9.3	42	--	--	< 0.1 U					< 0.1 U				
Chromium		--	--	--	--	11.3					6.1				
Copper		3.1	4.8	--	--	2.4					***4.8***	1.5			
Lead		8.1	210	--	--	< 0.1 U					< 0.1 U				
Mercury		0.025	1.8	0.15	--	< 0.02 U					< 0.02 U				
Nickel		8.2	74	4,600	4,600	< 0.5 U					0.9				
Selenium		71	290	--	4,200	0.8					< 0.5 U				
Silver		--	1.9	--	--	< 0.2 U					< 0.2 U				
Thallium		--	--	6.3	0.47	< 0.2 U					< 0.2 U				
Zinc		81	90	--	26,000	< 4.0 U					< 4.0 U				
PAHs (µg/L)															
1-Methylnaphthalene		--	--	--	--	< 0.01 U					< 0.01 U				
2-Chloronaphthalene		--	--	--	1,600	< 1.0 U					< 1.0 U				
2-Methylnaphthalene		--	--	--	--	< 0.016 U					< 0.01 U				
Acenaphthene		--	--	--	990	0.012					< 0.01 U				
Acenaphthylene		--	--	--	--	< 0.01 U					< 0.01 U				
Anthracene		--	--	110,000	40,000	< 0.01 U					< 0.01 U				

Table H-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Cadman Seattle

Location ID						CL-MH-SPS					CL-VT-EFF				
Collection Date						6/5/2013					6/5/2013				
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	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Benzo(a)anthracene		--	--	0.031	0.018	< 0.01 U					< 0.01 U				
Benzo(a)pyrene		--	--	0.031	0.018	< 0.01 U					< 0.01 U				
Benzo(b)fluoranthene		--	--	0.031	0.018	< 0.01 U					< 0.01 U				
Benzo(g,h,i)perylene		--	--	--	--	< 0.01 U					< 0.01 U				
Benzo(k)fluoranthene		--	--	0.031	0.018	< 0.01 U					< 0.01 U				
Chrysene		--	--	0.031	0.018	< 0.01 U					< 0.01 U				
Dibenz(a,h)anthracene		--	--	0.031	0.018	< 0.01 U					< 0.01 U				
Dibenzofuran		--	--	--	--	0.011					< 0.01 U				
Fluoranthene		--	--	370	140	0.021					0.013				
Fluorene		--	--	14,000	5,300	0.024					< 0.01 U				
Indeno(1,2,3-cd)pyrene		--	--	0.031	0.018	< 0.01 U					< 0.01 U				
Naphthalene		--	--	--	--	< 0.02 U					< 0.014 U				
Phenanthrene		--	--	--	--	0.059					0.013				
Pyrene		--	--	11,000	4,000	0.027					0.015				
Total Benzofluoranthenes		--	--	--	--	< 0.02 U					< 0.02 U				
Total HPAHs		--	--	--	--	0.048					0.028				
Total LPAHs		--	--	--	--	0.095					0.013				
Total PAHs		--	--	--	--	0.14					0.041				
cPAHs, nd RL*0		--	--	--	--	< 0 U					< 0 U				
cPAHs, nd RL*0.5		--	--	--	--	< 0.0076 U					< 0.0076 U				
cPAHs, nd RL*1		--	--	--	--	< 0.015 U					< 0.015 U				
Phthalates (µg/L)															
bis(2-Ethylhexyl)phthalate		--	--	5.9	2.2	0.6 J					< 3.0 U				
Butylbenzylphthalate		--	--	--	1,900	< 1.0 U					< 1.0 U				
Di-n-Butylphthalate		--	--	12,000	4,500	< 1.0 U					< 1.0 U				
Diethylphthalate		--	--	120,000	44,000	< 1.0 U					< 1.0 U				
Dimethylphthalate		--	--	2,900,000	1,100,000	< 1.0 U					< 1.0 U				
Di-n-Octyl phthalate		--	--	--	--	< 1.0 U					< 1.0 U				
Phenols (µg/L)															
2,3,4,6-Tetrachlorophenol		--	--	--	--	< 1.0 U					< 1.0 U				
2,4,5-Trichlorophenol		--	--	--	3,600	< 5.0 U					< 5.0 U				
2,4,6-Trichlorophenol		--	--	6.5	2.4	< 3.0 U					< 3.0 U				
2,4-Dichlorophenol		--	--	790	290	< 3.0 U					< 3.0 U				
2,4-Dimethylphenol		--	--	--	850	< 3.0 U					< 3.0 U				

Table H-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Cadman Seattle

Location ID						CL-MH-SPS						CL-VT-EFF					
Collection Date						6/5/2013						6/5/2013					
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		Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO	
2,4-Dinitrophenol		--	--	14,000	5,300	< 20 U						< 20 U					
2-Chlorophenol		--	--	--	150	< 1.0 U						< 1.0 U					
2-Methylphenol		--	--	--	--	< 1.0 U						< 1.0 U					
2-Nitrophenol		--	--	--	--	< 3.0 U						< 3.0 U					
4,6-Dinitro-2-Methylphenol		--	--	765	280	< 10 U						< 10 U					
4-Chloro-3-methylphenol		--	--	--	--	< 3.0 U						< 3.0 U					
4-Methylphenol		--	--	--	--	< 2.0 U						< 2.0 U					
4-Nitrophenol		--	--	--	--	< 10 U						< 10 U					
Pentachlorophenol		7.9	13	8.2	3	**< 10 U**						**< 10 U**					
Phenol		--	--	4,600,000	860,000	< 1.0 U						< 1.0 U					
Other SVOCs (µg/L)																	
1,2,4-Trichlorobenzene		--	--	--	70	< 1.0 U						< 1.0 U					
1,2-Dichlorobenzene		--	--	17,000	1,300	< 1.0 U						< 1.0 U					
1,2-Diphenylhydrazine		--	--	0.54	0.2	**< 1.0 U**						**< 1.0 U**					
1,3-Dichlorobenzene		--	--	2,600	960	< 1.0 U						< 1.0 U					
1,4-Dichlorobenzene		--	--	2,600	190	< 1.0 U						< 1.0 U					
2,4-Dinitrotoluene		--	--	9.1	3.4	< 3.0 U						< 3.0 U					
2,6-Dinitrotoluene		--	--	--	--	< 3.0 U						< 3.0 U					
2-Nitroaniline		--	--	--	--	< 3.0 U						< 3.0 U					
3,3'-Dichlorobenzidine		--	--	0.077	0.028	**< 5.0 U**						**< 5.0 U**					
3-Nitroaniline		--	--	--	--	< 3.0 U						< 3.0 U					
4-Bromophenyl-phenylether		--	--	--	--	< 1.0 U						< 1.0 U					
4-Chloroaniline		--	--	--	--	< 5.0 U						< 5.0 U					
4-Chlorophenyl-phenylether		--	--	--	--	< 1.0 U						< 1.0 U					
4-Nitroaniline		--	--	--	--	< 3.0 U						< 3.0 U					
Aniline		--	--	--	--	1.7 J						< 1.0 U					
Azobenzene		--	--	--	--	< 1.0 U						< 1.0 U					
Benzoic Acid		--	--	--	--	< 20 U						< 20 U					
Benzyl Alcohol		--	--	--	--	< 2.0 U						< 2.0 U					
2,2'-Oxybis(1-Chloropropane)		--	--	170,000	65,000	< 1.0 U						< 1.0 U					
bis(2-Chloroethoxy) Methane		--	--	--	--	< 1.0 U						< 1.0 U					
Bis-(2-Chloroethyl) Ether		--	--	1.4	0.53	< 1.0 U						< 1.0 U					
Carbazole		--	--	--	--	< 1.0 U						< 1.0 U					
Hexachlorobenzene		--	--	0.00077	0.00029	**< 0.05 U**						**< 0.05 U**					

Table H-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Cadman Seattle

Location ID						CL-MH-SPS					CL-VT-EFF				
Collection Date						6/5/2013					6/5/2013				
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	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Hexachlorobutadiene		--	--	50	18	< 0.05 U					< 0.05 U				
Hexachlorocyclopentadiene		--	--	17,000	1,100	< 5.0 U					< 5.0 U				
Hexachloroethane		--	--	8.9	3.3	< 2.0 U					< 2.0 U				
Isophorone		--	--	600	960	< 1.0 U					< 1.0 U				
Nitrobenzene		--	--	1,900	690	< 1.0 U					< 1.0 U				
N-Nitrosodimethylamine		--	--	8.1	3	< 3.0 U					< 3.0 U				
N-Nitroso-Di-N-Propylamine		--	--	--	0.51	< 1.0 U					< 1.0 U				
N-Nitrosodiphenylamine		--	--	16	6	< 1.0 U					< 1.0 U				
PCB Aroclors (µg/L)															
Aroclor 1016		--	--	--	--	na					na				
Aroclor 1221		--	--	--	--	na					na				
Aroclor 1232		--	--	--	--	na					na				
Aroclor 1242		--	--	--	--	na					na				
Aroclor 1248		--	--	--	--	na					na				
Aroclor 1254		--	--	--	--	na					na				
Aroclor 1260		--	--	--	--	na					na				
Aroclor 1262		--	--	--	--	na					na				
Aroclor 1268		--	--	--	--	na					na				
Total PCB Aroclors		0.03	10	0.00017	0.000064	na					na				
Pesticides (µg/L)															
4,4'-DDD		--	--	0.00084	0.00031	**< 0.1 U**					**< 0.1 U**				
4,4'-DDE		--	--	0.00059	0.00022	**< 0.1 U**					**< 0.1 U**				
4,4'-DDT		--	--	0.00059	0.00022	**< 0.1 U**					**< 0.1 U**				
Total DDTs		0.001	0.13	--	--	**< 0.1 U**					**< 0.1 U**				
Aldrin		--	--	0.00014	0.00005	**< 0.05 U**					**< 0.05 U**				
alpha-BHC		--	--	0.013	0.0049	**< 0.05 U**					**< 0.05 U**				
beta-BHC		--	--	0.046	0.017	**< 0.05 U**					**< 0.05 U**				
cis-Chlordane		--	--	--	--	< 0.05 U					< 0.05 U				
delta-BHC		--	--	--	--	< 0.05 U					< 0.05 U				
Dieldrin		--	--	0.00014	0.000054	**< 0.1 U**					**< 0.1 U**				
Endosulfan I		0.0087	0.034	2.0	89	***< 0.05 U***					***< 0.05 U***				
Endosulfan II		0.0087	0.034	2.0	89	***< 0.1 U***					***< 0.1 U***				
Endosulfan Sulfate		0.0087	0.034	2.0	89	***< 0.1 U***					***< 0.1 U***				
Endrin		0.0023	0.037	0.81	0.06	***< 0.1 U***					***< 0.1 U***				

Table H-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Cadman Seattle

Location ID						CL-MH-SPS					CL-VT-EFF				
Collection Date						6/5/2013					6/5/2013				
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	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Endrin Aldehyde		--	--	0.81	0.3	< 0.1 U					< 0.1 U				
Endrin Ketone		--	--	--	--	< 0.1 U					< 0.1 U				
Heptachlor		0.0036	0.053	0.00021	0.000079	**< 0.05 U**					**< 0.05 U**				
Heptachlor Epoxide		--	--	0.00011	0.000039	**< 0.05 U**					**< 0.05 U**				
gamma-BHC (Lindane)		--	0.16	0.063	1.8	< 0.05 U					< 0.05 U				
Methoxychlor		--	--	--	--	< 0.5 U					< 0.5 U				
Toxaphene		0.0002	0.21	0.00075	0.00028	***< 5.0 U***					***< 5.0 U***				
trans-Chlordane		--	--	--	--	< 0.05 U					< 0.05 U				
Total aldrin/dieldrin		0.0019	0.71	--	--	**< 0.1 U**					**< 0.1 U**				
Total Chlordane		0.004	0.09	0.00059	0.00081	**< 0.05 U**					**< 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.
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
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 hydrocarbo
ISGP - Industrial Stormwater General Permit
J - estimated concentration
JN - estimated concentration
LPAHs - low molecular weight polycyclic aromatic hydrocarbon
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 H-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Cadman Seattle

Location ID					CL-MH-SPS						CL-VT-EFF					
Collection Date					6/5/2013						6/5/2013					
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	Result		EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
(µg/L)[a]	0.03	10	0.00017	0.000064	0.00609	CJ			36	95	0.00382	CJ			22	60
(pg/L)[a]					6,090	CJ					3,820	CJ				
Congeners (pg/L)[b]					6,130	CJ					3,950	CJ				
Total Monochlorobiphenyl (pg/L)[a]					< 1.28	U					< 1.31	U				
Estimated Total Monochlorobiphenyl (pg/L)[b]					< 1.28	U					< 1.31	U				
PCB-1					< 1.23	U					< 1.25	U				
PCB-2					< 1.29	U					< 1.32	U				
PCB-3					< 1.33	U					< 1.36	U				
Total Dichlorobiphenyl (pg/L)[a]					92.8						13.1					
Estimated Total Dichlorobiphenyl (pg/L)[b]					92.8						61.0					
PCB-4					10.1						6.97	J				
PCB-5					< 2.61	U					< 3.99	U				
PCB-6					3.05	J					< 4.03	U				
PCB-7					< 2.46	U					< 3.76	U				
PCB-8					13.4						6.14	J				
PCB-9					< 2.86	U					< 4.37	U				
PCB-10					< 2.91	U					< 3.64	U				
PCB-11					59.4						< 47.9	U				
PCB-12/13					< 2.45	CU					< 3.75	CU				
PCB-14					< 2.16	U					< 3.30	U				
PCB-15					6.89	J					< 3.74	U				
Trichlorobiphenyl					137						47.3					
Estimated Total Trichlorobiphenyl (pg/L)[b]					148	J					57.6	J				
PCB-16					13.3						< 5.98	U				
PCB-17					10.1						< 4.28	U				
PCB-18/30					22.7	C					10.9	CJ				
PCB-19					4.34	J					< 1.97	U				
PCB-20/28					27.0	C					9.94	CJ				
PCB-21/33					13.8	CJ					5.49	CJ				
PCB-22					< 10.6	U					4.37	J				
PCB-23					< 1.56	U					< 1.34	U				
PCB-24					< 1.26	U					< 1.41	U				
PCB-25					< 1.55	U					< 1.34	U				

Table H-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Cadman Seattle

Location ID					CL-MH-SPS						CL-VT-EFF					
Collection Date					6/5/2013						6/5/2013					
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	Result		EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
PCB-26/29					4.25	CJ					1.56	CJ				
PCB-27					2.91	J					< 1.35	U				
PCB-31					20.5						8.30					
PCB-32					9.30						3.20	J				
PCB-34					< 1.60	U					< 1.38	U				
PCB-35					< 1.64	U					< 1.42	U				
PCB-36					< 1.53	U					< 1.32	U				
PCB-37					8.62						3.52	J				
PCB-38					< 1.60	U					< 1.38	U				
PCB-39					< 1.45	U					< 1.25	U				
Total Tetrachlorobiphenyl (pg/L)[a]					254						79.4					
Estimated Total Tetrachlorobiphenyl (pg/L)[b]					260	J					104	J				
PCB-40/71					16.8	CJ					6.37	CJ				
PCB-41					4.09	J					< 1.56	U				
PCB-42					8.61						3.05	J				
PCB-43					< 1.39	U					< 1.55	U				
PCB-44/47/65					34.4	C					13.2	CJ				
PCB-45					5.58	J					2.20	J				
PCB-46					2.47	J					< 1.58	U				
PCB-48					6.24	J					< 1.97	U				
PCB-49/69					17.3	C					6.22	CJ				
PCB-50/53					4.50	CJ					< 1.53	U				
PCB-51					< 1.18	U					< 1.31	U				
PCB-52					56.5						< 21.6	U				
PCB-54					< 0.928	U					< 0.869	U				
PCB-55					< 1.51	U					< 1.07	U				
PCB-56					12.1						5.42	J				
PCB-57					< 1.53	U					< 1.08	U				
PCB-58					< 1.49	U					< 1.05	U				
PCB-59/62/75					< 2.69	U					1.19	CJ				
PCB-60					5.47	J					2.17	J				
PCB-61/70/74/76					44.9	C					22.0	CJ				
PCB-63					< 1.37	U					< 0.966	U				

Table H-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Cadman Seattle

Location ID					CL-MH-SPS					CL-VT-EFF				
Collection Date					6/5/2013					6/5/2013				
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	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
PCB-64					13.3					5.09 J				
PCB-66					21.4					9.89				
PCB-67					< 1.46 U					< 1.03 U				
PCB-68					< 1.38 U					< 0.976 U				
PCB-72					< 1.50 U					< 1.06 U				
PCB-73					< 0.954 U					< 1.06 U				
PCB-77					< 3.27 U					2.55 J				
PCB-78					< 1.55 U					< 1.09 U				
PCB-79					< 1.37 U					< 0.967 U				
PCB-80					< 1.32 U					< 0.935 U				
PCB-81					< 1.49 U					< 1.05 U				
Total Pentachlorobiphenyl (pg/L)[a]					758					505				
Estimated Total Pentachlorobiphenyl (pg/L)[b]					775 J					516 J				
PCB-82					< 7.84 U					7.24 J				
PCB-83					5.44 J					< 3.72 U				
PCB-84					21.3					13.4				
PCB-85/116					9.56 CJ					< 5.14 U				
PCB-86/87/97/109/119/125					64.0 C					45.5 CJ				
PCB-88					< 1.55 U					< 1.04 U				
PCB-89					< 1.47 U					< 0.993 U				
PCB-90/101/113					190 C					118 C				
PCB-91					8.36 J					4.63 J				
PCB-92					31.0					18.6				
PCB-93/100					< 1.33 CU					< 0.899 CU				
PCB-94					< 1.43 U					< 0.967 U				
PCB-95					146					89.1				
PCB-96					< 0.635 U					< 0.666 U				
PCB-98					< 1.63 U					< 1.10 U				
PCB-99					24.2					16.1				
PCB-102					< 1.89 U					< 1.14 U				
PCB-103					< 1.29 U					< 0.870 U				
PCB-104					< 0.543 U					< 0.570 U				
PCB-105					20.8					18.9				

Table H-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Cadman Seattle

Location ID					CL-MH-SPS					CL-VT-EFF				
Collection Date					6/5/2013					6/5/2013				
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	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
PCB-106					< 1.06 U					< 0.718 U				
PCB-107					10.5					6.95 J				
PCB-108/124					< 5.29 U					3.84 CJ				
PCB-110					150					107				
PCB-111					< 0.988 U					< 0.667 U				
PCB-112					< 1.01 U					< 0.682 U				
PCB-114					< 0.907 U					< 0.639 U				
PCB-115					< 0.942 U					< 0.636 U				
PCB-117					< 1.23 U					1.49 J				
PCB-118					74.0					54.0				
PCB-120					< 2.00 U					< 0.662 U				
PCB-121					< 0.99 U					< 0.668 U				
PCB-122					< 1.10 U					< 0.775 U				
PCB-123					1.11 J					< 0.638 U				
PCB-126					2.12 J					< 1.67 U				
PCB-127					< 1.04 U					< 0.748 U				
Total Hexachlorobiphenyl (pg/L)[a]					2,490					1,580				
Estimated Total Hexachlorobiphenyl (pg/L)[b]					2,500 J					1,600 J				
PCB-128/166					35.6 C					23.9 C				
PCB-129/138/163					539 C					358 C				
PCB-130					29.1					< 16.6 U				
PCB-131					4.18 J					< 2.28 U				
PCB-132					154					102				
PCB-133					8.01 J					4.35 J				
PCB-134					24.0					15.7				
PCB-135/151					221 C					133 C				
PCB-136					78.4					46.5				
PCB-137					8.60					< 3.48 U				
PCB-139/140					< 3.40 U					2.42 CJ				
PCB-141					137					88.3				
PCB-142					< 0.747 U					< 0.727 U				
PCB-143					< 0.742 U					< 0.723 U				
PCB-144					31.5					18.9				

Table H-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Cadman Seattle

Location ID					CL-MH-SPS						CL-VT-EFF					
Collection Date					6/5/2013						6/5/2013					
Analyte	WA WQC		NTR WQC	NR WQC	Result		EF				Result		EF			
	Marine		Human Health	Human Health			WA MC	WA MA	NTR HHO	NR HHO			WA MC	WA MA	NTR HHO	NR HHO
	Chronic	Acute	Organism	Organism												
PCB-145					< 0.562	U					< 0.529	U				
PCB-146					88.1						58.3					
PCB-147/149					488	C					308	C				
PCB-148					< 0.702	U					< 0.683	U				
PCB-150					< 0.532	U					< 0.501	U				
PCB-152					< 0.538	U					< 0.506	U				
PCB-153/168					505	C					327	C				
PCB-154					< 3.21	U					2.56	J				
PCB-155					< 0.51	U					< 0.479	U				
PCB-156/157					32.1	C					20.8	C				
PCB-158					43.4						29.8					
PCB-159					8.23	J					5.98	J				
PCB-160					< 0.557	U					1.29	J				
PCB-161					< 0.540	U					< 0.525	U				
PCB-162					2.55	J					< 0.809	U				
PCB-164					36.3						24.2					
PCB-165					< 0.602	U					< 0.586	U				
PCB-167					16.6						11.1					
PCB-169					< 1.14	U					< 0.907	U				
Total Heptachlorobiphenyl (pg/L)[a]					1,940						1,290					
Estimated Total Heptachlorobiphenyl (pg/L)[b]					1,940						1,290					
PCB-170					234						161					
PCB-171/173					73.8	C					46.6	C				
PCB-172					42.0						30.2					
PCB-174					268						175					
PCB-175					10.9						< 6.41	U				
PCB-176					32.3						19.2					
PCB-177					146						95.8					
PCB-178					49.2						30.6					
PCB-179					102						64.1					
PCB-180/193					498	C					346	C				
PCB-181					< 1.36	U					< 1.00	U				
PCB-182					< 1.29	U					< 0.948	U				

Table H-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Cadman Seattle

Location ID					CL-MH-SPS					CL-VT-EFF				
Collection Date					6/5/2013					6/5/2013				
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	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
PCB-183					126					86.2				
PCB-184					< 0.807 U					< 0.535 U				
PCB-185					27.9					11.4				
PCB-186					< 0.757 U					< 0.502 U				
PCB-187					259					175				
PCB-188					< 0.722 U					< 0.478 U				
PCB-189					7.36 J					5.27 J				
PCB-190					48.5					33.1				
PCB-191					10.2					7.66 J				
PCB-192					< 1.18 U					< 0.869 U				
Total Octachlorobiphenyl (pg/L)[a]					394					288				
Estimated Total Octachlorobiphenyl (pg/L)[b]					394					290 J				
PCB-194					94.0					69.9				
PCB-195					46.0					30.9				
PCB-196					49.9					38.5				
PCB-197					3.28 J					< 1.78 U				
PCB-198/199					96.5 C					73.5 C				
PCB-200					12.5					9.33				
PCB-201					11.2					8.29				
PCB-202					16.8					11.1				
PCB-203					59.0					43.2				
PCB-204					< 0.799 U					< 0.662 U				
PCB-205					4.66 J					3.41 J				
Total Nonachlorobiphenyl (pg/L)[a]					22.3					13.7				
Estimated Total Nonachlorobiphenyl (pg/L)[b]					22.2					15.7 J				
PCB-206					16.7					11.9				
PCB-207					2.28 J					1.79 J				
PCB-208					3.28 J					< 2.00 U				
Decachlorobiphenyl (pg/L)					< 3.42 U					< 4.01 U				
PCB-209					< 3.42 U					< 4.01 U				
PCB TEQ, nd SDL*0					0.217 J					0.00356 J				
PCB TEQ, nd SDL*0.5					0.234 J					0.101 J				
PCB TEQ, nd SDL*1					0.252 J					0.198 J				

Table H-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Cadman Seattle

Location ID					CL-MH-SPS					CL-VT-EFF				
Collection Date					6/5/2013					6/5/2013				
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	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 identified by SGS Analytical as "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 conc
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 H-5. Water Sample Results – Conventionals
NPDES Inspection Sampling Support: Cadman Seattle

Location ID			CL-MH-SPS	CL-VT-EFF
Collection Date			6/5/2013	6/5/2013
Analyte	WA NPDES ISGP	Unit	Result	Result
Conventionals				
Alkalinity	--	mg/L CaCO3	85.2	69.2
Bicarbonate	--	mg/L CaCO3	40.2	46
Carbonate	--	mg/L CaCO3	45	23.2
Chloride	--	mg/L	7.4	5.5
Conductivity	--	µmhos/cm	197	187
Dissolved Organic Carbon	--	mg/L	3.58	3.59
Hydroxide	--	mg/L CaCO3	< 1.0 U	< 1.0 U
N-Nitrate	--	mg-N/L	1.2	0.8
pH	5-9	std units	**9.46**	**9.15**
Sulfate	--	mg/L	24.4	18.1
Total Organic Carbon	--	mg/L	6.15	4.36
Total Suspended Solids	--	mg/L	414	48.3

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 H-6. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: Cadman Seattle

Location ID / Collection Date	CL-MH-SPS
Analyte	**6/5/2013**
Metals (Total) (mg/kg)	
Antimony	EPA200.8
Arsenic	EPA200.8
Beryllium	SW6010C
Cadmium	EPA200.8
Chromium	EPA200.8
Copper	SW6010C
Lead	EPA200.8
Mercury	SW7471A
Nickel	EPA200.8
Selenium	EPA200.8
Silver	EPA200.8
Thallium	EPA200.8
Zinc	SW6010C
PAHs (µg/kg)	
1-Methylnaphthalene	SW8270D
2-Chloronaphthalene	SW8270D
2-Methylnaphthalene	SW8270D
Acenaphthene	SW8270D
Acenaphthylene	SW8270D
Anthracene	SW8270D
Benzo(a)anthracene	SW8270D
Benzo(a)pyrene	SW8270D
Benzo(g,h,i)perylene	SW8270D
Chrysene	SW8270D
Dibenz(a,h)anthracene	SW8270DSIM
Dibenzofuran	SW8270D
Fluoranthene	SW8270D
Fluorene	SW8270D
Indeno(1,2,3-cd)pyrene	SW8270D
Naphthalene	SW8270D
Phenanthrene	SW8270D
Pyrene	SW8270D
Total Benzofluoranthenes	SW8270D
Total HPAHs	SW8270DSIM
Total LPAHs	SW8270D
Total PAHs	SW8270DSIM
cPAHs, nd RL*0	SW8270DSIM
cPAHs, nd RL*0.5	SW8270DSIM
cPAHs, nd RL*1	SW8270DSIM
Phthalates (µg/kg)	
bis(2-Ethylhexyl)phthalate	SW8270D
Butylbenzylphthalate	SW8270DSIM
Di-n-Butylphthalate	SW8270D
Diethylphthalate	SW8270DSIM

Table H-6. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: Cadman Seattle

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

Table H-6. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: Cadman Seattle

Location ID / Collection Date	CL-MH-SPS
Analyte	**6/5/2013**
N-Nitroso-Di-N-Propylamine	SW8270DSIM
N-Nitrosodiphenylamine	SW8270DSIM
PCB Aroclors (µg/kg)	
PCB Aroclors	SW8082A
Pesticides (µg/kg)	
Pesticides	SW8081B
VOCs (µg/kg)	
VOCs	SW8260C
TPHs (mg/kg)	
Gasoline-Range Hydrocarbons	NWTPHG
Diesel-Range Hydrocarbons	NWTPHD
Motor Oil-Range Hydrocarbons	NWTPHD
Dioxins and Furans (ng/kg)	
Dioxins and Furans	EPA 1613B
Grain size (%)	
Grain size	PSEP-PS
Conventionals (%)	
Total Organic Carbon	PLUMB81TC
Total Solids	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 H-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Cadman Seattle

Location ID			CL-MH-SPS		
Collection Date			6/5/2013		
Analyte	SMS Criteria		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Metals (Total) (mg/kg)					
Antimony	--	--	< 0.5 UJ		
Arsenic	57	93	5.2		
Beryllium	--	--	< 0.3 U		
Cadmium	5.1	6.7	0.4		
Chromium	260	270	27		
Copper	390	390	76.1		
Lead	450	530	10.4		
Mercury	0.41	0.59	< 0.06 U		
Nickel	--	--	24		
Selenium	--	--	< 1.0 U		
Silver	6.1	6.1	< 0.5 U		
Thallium	--	--	< 0.5 U		
Zinc	410	960	236 J		
PAHs (µg/kg)					
1-Methylnaphthalene	--	--	56		
2-Chloronaphthalene	--	--	< 37 U		
2-Methylnaphthalene	670	1,400	96		
Acenaphthene	500	730	< 37 U		
Acenaphthylene	1,300	1,300	< 37 U		
Anthracene	960	4,400	< 37 U		
Benzo(a)anthracene	1,300	1,600	52		
Benzo(a)pyrene	1,600	3,000	37		
Benzo(g,h,i)perylene	670	720	63		
Chrysene	1,400	2,800	190 J		
Dibenz(a,h)anthracene	230	540	10		
Dibenzofuran	540	700	74		
Fluoranthene	1,700	2,500	430 J		
Fluorene	540	1,000	87 J		
Indeno(1,2,3-cd)pyrene	600	690	30 J		
Naphthalene	2,100	2,400	46		
Phenanthrene	1,500	5,400	690 J		
Pyrene	2,600	3,300	320 J		
Total Benzofluoranthenes	3,200	3,600	150		
Total HPAHs	12,000	17,000	1,300 J		
Total LPAHs	5,200	13,000	820 J		
Total PAHs	--	--	2,100 J		
cPAHs, nd RL*0	1,000	--	63 J		
cPAHs, nd RL*0.5	1,000	--	63 J		
cPAHs, nd RL*1	1,000	--	63 J		
Phthalates (µg/kg)					
bis(2-Ethylhexyl)phthalate	1,300	1,900	**2,100**	1.6	1.1
Butylbenzylphthalate	63	900	33 J		
Di-n-Butylphthalate	1,400	5,100	< 37 U		
Diethylphthalate	200	1,200	< 14 U		
Dimethylphthalate	71	160	13		
Di-n-Octyl phthalate	6,200	--	100		

Table H-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Cadman Seattle

Location ID			CL-MH-SPS		
Collection Date			6/5/2013		
Analyte	SMS Criteria		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Phenols (µg/kg)					
2,4,5-Trichlorophenol	--	--	< 180 UJ		
2,4,6-Trichlorophenol	--	--	< 180 UJ		
2,4-Dichlorophenol	--	--	< 370 UJ		
2,4-Dimethylphenol	29	29	**110**	3.8	3.8
2,4-Dinitrophenol	--	--	< 1,600 UJ		
2-Chlorophenol	--	--	< 37 UJ		
2-Methylphenol	63	63	< 9.3 U		
2-Nitrophenol	--	--	< 180 UJ		
4,6-Dinitro-2-Methylphenol	--	--	< 370 UJ		
4-Chloro-3-methylphenol	--	--	< 180 UJ		
4-Methylphenol	670	670	270 J		
4-Nitrophenol	--	--	R		
Pentachlorophenol	360	690	< 93 UJ		
Phenol	420	1,200	**880 J**	2.1	
Other SVOCs (µg/kg)					
1,2,4-Trichlorobenzene	31	51	< 9.3 U		
1,2-Dichlorobenzene	35	50	< 2.1 U		
1,3-Dichlorobenzene	--	--	< 2.1 U		
1,4-Dichlorobenzene	110	120	< 2.1 U		
2,4-Dinitrotoluene	--	--	< 180 U		
2,6-Dinitrotoluene	--	--	< 180 U		
2-Nitroaniline	--	--	< 180 U		
3,3'-Dichlorobenzidine	--	--	R		
3-Nitroaniline	--	--	< 180 UJ		
4-Bromophenyl-phenylether	--	--	< 37 U		
4-Chloroaniline	--	--	R		
4-Chlorophenyl-phenylether	--	--	< 37 U		
4-Nitroaniline	--	--	< 180 U		
Aniline	--	--	R		
Benzoic Acid	650	650	R		
Benzyl Alcohol	57	73	< 37 UJ		
2,2'-Oxybis(1-Chloropropane)	--	--	< 37 U		
bis(2-Chloroethoxy) Methane	--	--	< 37 U		
Bis-(2-Chloroethyl) Ether	--	--	< 37 U		
Carbazole	--	--	< 37 U		
Hexachlorobenzene	22	70	< 5 U		
Hexachlorobutadiene	11	120	< 5 U		
Hexachlorocyclopentadiene	--	--	R		
Hexachloroethane	--	--	< 37 U		
Isophorone	--	--	< 37 U		
Nitrobenzene	--	--	< 37 U		
N-Nitrosodimethylamine	--	--	< 46 U		
N-Nitroso-Di-N-Propylamine	--	--	< 22 U		
N-Nitrosodiphenylamine	28	40	**92**	3.3	2.3
PCB Aroclors (µg/kg)					
Aroclor 1016	--	--	< 4.0 U		

Table H-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Cadman Seattle

Location ID			CL-MH-SPS		
Collection Date			6/5/2013		
Analyte	SMS Criteria		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Aroclor 1221	--	--	< 4.0 U		
Aroclor 1232	--	--	< 5.9 U		
Aroclor 1242	--	--	< 4.0 U		
Aroclor 1248	--	--	< 4.0 U		
Aroclor 1254	--	--	< 20 U		
Aroclor 1260	--	--	62		
Aroclor 1262	--	--	< 4.0 U		
Aroclor 1268	--	--	< 4.0 U		
Total PCB Aroclors	130	1,000	62		
Pesticides (µg/kg)					
4,4'-DDD	--	--	< 5.0 UJ		
4,4'-DDE	--	--	< 5.0 U		
4,4'-DDT	--	--	< 12 U		
Total DDTs	--	--	< 12 U		
Aldrin	--	--	< 2.5 U		
alpha-BHC	--	--	< 2.5 UJ		
beta-BHC	--	--	< 3.4 U		
cis-Chlordane	--	--	< 2.5 UJ		
delta-BHC	--	--	< 2.5 UJ		
Dieldrin	--	--	< 5.0 U		
Endosulfan I	--	--	< 2.5 U		
Endosulfan II	--	--	< 5.0 U		
Endosulfan Sulfate	--	--	< 13 UJ		
Endrin	--	--	< 8.6 U		
Endrin Aldehyde	--	--	< 5.0 U		
Endrin Ketone	--	--	< 24 U		
Heptachlor	--	--	< 2.5 UJ		
Heptachlor Epoxide	--	--	< 5.0 U		
gamma-BHC (Lindane)	--	--	< 2.5 U		
Methoxychlor	--	--	< 25 U		
Toxaphene	--	--	< 500 UJ		
trans-Chlordane	--	--	< 45 U		
Total aldrin/dieldrin	--	--	< 5.0 U		
Total Chlordane	--	--	< 45 U		
VOCs (µg/kg)					
1,1,1,2-Tetrachloroethane	--	--	< 2.1 U		
1,1,1-Trichloroethane	--	--	< 2.1 U		
1,1,2,2-Tetrachloroethane	--	--	< 2.1 U		
1,1,2-Trichloro-1,2,2-trifluoroetha	--	--	< 4.1 U		
1,1,2-Trichloroethane	--	--	< 2.1 U		
1,1-Dichloroethane	--	--	< 2.1 U		
1,1-Dichloroethene	--	--	< 2.1 UJ		
1,1-Dichloropropene	--	--	< 2.1 U		
1,2,3-Trichlorobenzene	--	--	< 10 U		
1,2,3-Trichloropropane	--	--	< 4.1 U		
1,2,4-Trimethylbenzene	--	--	44		
1,2-Dibromo-3-chloropropane	--	--	< 10 U		

Table H-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Cadman Seattle

Location ID			CL-MH-SPS		
Collection Date			6/5/2013		
Analyte	SMS Criteria		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
1,2-Dibromoethane	--	--	< 2.1 U		
1,2-Dichloroethane	--	--	< 2.1 U		
1,2-Dichloropropane	--	--	< 2.1 U		
1,3,5-Trimethylbenzene	--	--	15		
1,3-Dichloropropane	--	--	< 2.1 U		
2,2-Dichloropropane	--	--	< 2.1 U		
2-Chloroethylvinylether	--	--	< 10 U		
2-Chlorotoluene	--	--	< 2.1 U		
2-Hexanone	--	--	< 10 U		
4-Chlorotoluene	--	--	< 2.1 U		
Acetone	--	--	940		
Acrolein	--	--	< 100 UJ		
Acrylonitrile	--	--	< 10 U		
Benzene	--	--	2.0 J		
Bromobenzene	--	--	< 2.1 U		
Bromochloromethane	--	--	< 2.1 U		
Bromoethane	--	--	< 4.1 UJ		
Bromoform	--	--	< 2.1 U		
Bromomethane	--	--	< 2.1 U		
Carbon Disulfide	--	--	6.6		
Carbon Tetrachloride	--	--	< 2.1 U		
Chlorobenzene	--	--	< 2.1 U		
Dibromochloromethane	--	--	< 2.1 U		
Chloroethane	--	--	< 2.1 U		
Chloroform	--	--	4.9		
Chloromethane	--	--	< 2.1 U		
cis-1,2-Dichloroethene	--	--	< 2.1 U		
cis-1,3-Dichloropropene	--	--	< 2.1 U		
Dibromomethane	--	--	< 2.1 U		
Bromodichloromethane	--	--	< 2.1 U		
Dichlorodifluoromethane	--	--	< 2.1 U		
Ethylbenzene	--	--	2.4		
Isopropylbenzene	--	--	< 2.1 U		
m,p-Xylene	--	--	18		
2-Butanone	--	--	85		
Iodomethane	--	--	< 2.1 UJ		
4-Methyl-2-Pentanone (MIBK)	--	--	90		
Methyl tert-Butyl Ether	--	--	< 2.1 U		
Methylene Chloride	--	--	< 9 U		
n-Butylbenzene	--	--	< 2.1 U		
n-Propylbenzene	--	--	3.2		
o-Xylene	--	--	7.5		
4-Isopropyltoluene	--	--	< 2.1 U		
sec-Butylbenzene	--	--	3.4		
Styrene	--	--	< 2.1 U		
tert-Butylbenzene	--	--	< 2.1 U		
Tetrachloroethene	--	--	< 2.1 U		

Table H-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Cadman Seattle

Location ID			CL-MH-SPS		
Collection Date			6/5/2013		
Analyte	SMS Criteria		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Toluene	--	--	2.5		
Total Xylenes	--	--	26		
trans-1,2-Dichloroethene	--	--	< 2.1 U		
trans-1,3-Dichloropropene	--	--	< 2.1 U		
trans-1,4-Dichloro-2-butene	--	--	< 10 UJ		
Trichloroethene	--	--	< 2.1 U		
Trichlorofluoromethane	--	--	< 2.1 U		
Vinyl Acetate	--	--	< 10 UJ		
Vinyl Chloride	--	--	< 2.1 U		
TPH (mg/kg)					
Gasoline-Range Hydrocarbons	30/100	--	< 18 U		
Diesel-Range Hydrocarbons	2,000	--	1,700		
Motor Oil-Range Hydrocarbons	2,000	--	**3,600**	1.8	
Dioxins and Furans (ng/kg)					
2,3,7,8-TCDD	--	--	< 0.236 U		
1,2,3,7,8-PeCDD	--	--	0.762 J		
1,2,3,4,7,8-HxCDD	--	--	1.02		
1,2,3,6,7,8-HxCDD	--	--	2.2		
1,2,3,7,8,9-HxCDD	--	--	2.0		
1,2,3,4,6,7,8-HpCDD	--	--	50.9		
OCDD	--	--	374		
2,3,7,8-TCDF	--	--	< 0.526 U		
1,2,3,7,8-PeCDF	--	--	< 0.54 U		
2,3,4,7,8-PeCDF	--	--	0.612 J		
1,2,3,4,7,8-HxCDF	--	--	< 1.01 U		
1,2,3,6,7,8-HxCDF	--	--	0.974 J		
1,2,3,7,8,9-HxCDF	--	--	0.416 J		
2,3,4,6,7,8-HxCDF	--	--	1.19		
1,2,3,4,6,7,8-HpCDF	--	--	13.6 J		
1,2,3,4,7,8,9-HpCDF	--	--	1.04		
OCDF	--	--	28.1		
Dioxin/Furan TEQ, nd SDL*0	25	--	2.5 J		
Dioxin/Furan TEQ, nd SDL*0.5	25	--	2.7 J		
Dioxin/Furan TEQ, nd SDL*1	25	--	2.91 J		
Total TCDD	--	--	1.82 J		
Total TCDF	--	--	6.61 J		
Total PeCDD	--	--	3.69 J		
Total PeCDF	--	--	13.8 J		
Total HxCDD	--	--	20 J		
Total HxCDF	--	--	17.8 J		
Total HpCDD	--	--	129		
Total HpCDF	--	--	30.3 J		
Grain size (%)					
> 10 Phi Clay	--	--	2.6		
8-9 Phi Clay	--	--	0.8		
9-10 Phi Clay	--	--	0.7		
Very Fine Silt	--	--	1.8		

Table H-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Cadman Seattle

Location ID			CL-MH-SPS		
Collection Date			6/5/2013		
Analyte	SMS Criteria		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Fine Silt	--	--	3.2		
Medium Silt	--	--	33.1		
Coarse Silt	--	--	1.6		
Total Fines	--	--	43.8		
Very Fine Sand	--	--	10.9		
Fine Sand	--	--	12.8		
Medium Sand	--	--	18		
Coarse Sand	--	--	9.7		
Very Coarse Sand	--	--	3.7		
Gravel	--	--	1.1		
Conventionals (%)					
Total Organic Carbon	--	--	2.62		
Total Solids	--	--	33.96		

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
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
nd - non-detect
ng/kg - nanograms per kilogram
NPDES - National Pollutant Discharge Elimination System
OC - organic carbon
PCBs - polychlorinated biphenyls
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

Table H-8. Solids Sample Results Compared to Organic Carbon-Normalized SMS Criteria
NPDES Inspection Sampling Support: Cadman Seattle

Location ID			CL-MH-SPS		
Collection Date			6/5/2013		
Analyte	SMS Criteria		Result	EF	
	SQS	CSL		SQS	CSL
PAHs (mg/kg OC)					
2-Methylnaphthalene	38	64	3.7		
Acenaphthene	16	57	< 1.4 U		
Acenaphthylene	66	66	< 1.4 U		
Anthracene	220	1,200	< 1.4 U		
Benzo(a)anthracene	110	270	2.0		
Benzo(a)pyrene	99	210	1.4		
Benzo(g,h,i)perylene	31	78	2.4		
Chrysene	110	460	7.3 J		
Dibenz(a,h)anthracene	12	33	0.38		
Dibenzofuran	15	58	2.8		
Fluoranthene	160	1,200	16 J		
Fluorene	23	79	3.3 J		
Indeno(1,2,3-cd)pyrene	34	88	1.1 J		
Naphthalene	99	170	1.8		
Phenanthrene	100	480	26 J		
Pyrene	1,000	1,400	12 J		
Total Benzofluoranthenes	230	450	5.7		
Total HPAHs	960	5,300	48 J		
Total LPAHs	370	780	31 J		
Phthalates (mg/kg OC)					
bis(2-Ethylhexyl)phthalate	47	78	**80**	1.7	1.0
Butylbenzylphthalate	4.9	64	1.3 J		
Di-n-Butylphthalate	220	1,700	< 1.4 U		
Diethylphthalate	61	110	< 0.53 U		
Dimethylphthalate	53	53	0.5		
Di-n-Octyl phthalate	58	4,500	3.8		
Other SVOCs (mg/kg OC)					
1,2,4-Trichlorobenzene	0.81	1.8	< 0.35 U		
1,2-Dichlorobenzene	2.3	2.3	< 0.08 U		
1,4-Dichlorobenzene	3.1	9	< 0.08 U		
Hexachlorobenzene	0.38	2.3	< 0.19 U		
Hexachlorobutadiene	3.9	6.2	< 0.19 U		
N-Nitrosodiphenylamine	11	11	3.5		
PCB Aroclors (mg/kg OC)					
Total PCB Aroclors	12	65	2.4		

Only samples with TOC content between 0.5 and 4.0% are OC-normalized for comparison with SMS OC-normalized criteria.

Exceedance Factors (EFs) are presented for detected concentrations that exceed the SMS criteria 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.

Table H-8. Solids Sample Results Compared to Organic Carbon-Normalized SMS Criteria
NPDES Inspection Sampling Support: Cadman Seattle

Results in **bold** exceed the SQS.
Results in **bold and shaded gray** exceed the CSL.

< - not detected
CSL - Cleanup Screening Level
EF - exceedance factor (sample result/criteria value)
J - estimated concentration
mg/kg - milligrams per kilogram
NPDES - National Pollutant Discharge Elimination System
OC - organic carbon
PAHs - polycyclic aromatic hydrocarbons
PCBs - polychlorinated biphenyls
SMS - Washington State Sediment Management Standards
SQS - Sediment Quality Standard
SVOCs - semivolatile organic compounds
TOC - total organic carbon
U - not detected

Attachment H-1
Inspection Photographic Log

Conveyance Structure Information	
Structure Identification Number: CL-MH-SPS	**N↑**
Structure Type: Wet Vault/Pump Station	
General Location: Southwestern portion of facility	
Characteristics: 8-foot square well 3,830 gallons	
Pump Capacity (gpm): 1,400	
Design Storm: 10 year, 24 hour storm Peak 10 minute flow: 1,387 gpm	
Access: Sealed manhole cover	
Volume Gauge: No	
Sample ID: CL-MH-SPS-20130605-W CL-MH-SPS-20130605-S	
Drainage Information:	
The pump station receives stormwater from CB-13 where stormwater is adjusted for pH and polymer is added. The pump station is equipped with two submersible pumps that are capable of pumping the peak flow from a 10 year, 24 hour storm. Stormwater is pumped from the pump station to an aboveground detention vault and reused in cement production. If the system exceeds capacity, overflow is conveyed to the sanitary sewer. According to facility personnel, an overflow pipe that previously discharged to MH-14 and on to the LDW has been plugged.	**N↑**

Conveyance Structure Information	
Structure Identification Number: CL-MH-14	N↑
Structure Type: Manhole	
General Location: Southwestern portion of facility	
Characteristics: n/a	
Pump Capacity (gpm): n/a	
Design Storm: n/a	
Access: Sealed manhole cover	
Volume Gauge: No	
Sample ID: No sampleable material	
Drainage Information:	
In the event the pump station exceeds capacity, overflow is conveyed to the sanitary sewer. According to facility personnel, an overflow pipe that previously discharged to MH-14 and on to the LDW has been plugged.	N➔

Conveyance Structure Information	
Structure Identification Number: CL-CB-13	**N↓**
Structure Type: Catch Basin	
General Location: Southwestern portion of facility	
Characteristics: 6-foot-diameter grit chamber	
Pump Capacity (gpm): n/a	
Design Storm: n/a	
Access: Catch basin grate	
Volume Gauge: No	
Sample ID: No sampleable material	
Drainage Information	
Runoff from the entire site flows to CB-13. Stormwater in the grit chamber is treated with carbon dioxide for pH regulation and a “fish safe” polymer additive for sediment particulate coagulation. Stormwater is conveyed to MH-SPS following treatment.	**N↑**

Conveyance Structure Information	
Structure Identification Number: CL-VT-EFF	N↑
Structure Type: Above ground Detention Vault	
General Location: East central portion of facility near entrance	
Characteristics: Piping allows for reuse of stormwater in detention vault for ready mix cement production	
Pump Capacity (gpm): n/a	
Design Storm: n/a	
Access: Removable fence fabric on top of detention vault for removal of accumulated sediments	
Volume Gauge: No	
Sample ID: CL-VT-EFF-20130605-W	
Drainage Information	
Treated stormwater from the pump station (CL-MH-SPS) is pumped to the above ground detention vault. Decant valves located near the outlet end of the sedimentation structure allow for removal of accumulated stormwater from the vault without disturbing sediment. Stormwater stored in the above ground detention vault is reused in ready mix cement production.	

Attachment H-2
Field Documentation

SAIC
From Science to Solutions

SURFACE WATER SAMPLING FORM

Client: Department of Ecology **Site:** Cadman Lehigh **Job #:** 209977

Sample ID	TIME	DATE	Flow	pH	Electrical Conductivity	Temp (°C)	Total Dissolved Solids	Turbidity (NTU)	Oil & Grease (visible?)	COMMENTS
CL-M4-SPS-20130605-w	1122	6/5/13	Low	9.63	185 ☒ m S/cm	19.8	NA	10.2	No	Cad/Lehigh pH 7.4 Calibrated every couple of months
CL-VT-EFF-20130605-w	1349	6/5/13	—	9.28	178 ☒ m S/cm	21.63	NA	55.9	No	→ Storage vault used to fill cement trucks w/ water
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					
					☐ S/cm					

Sample Date: 6 / 5 /2013

SAIC
From Science to Solutions

Sediment Collection Form

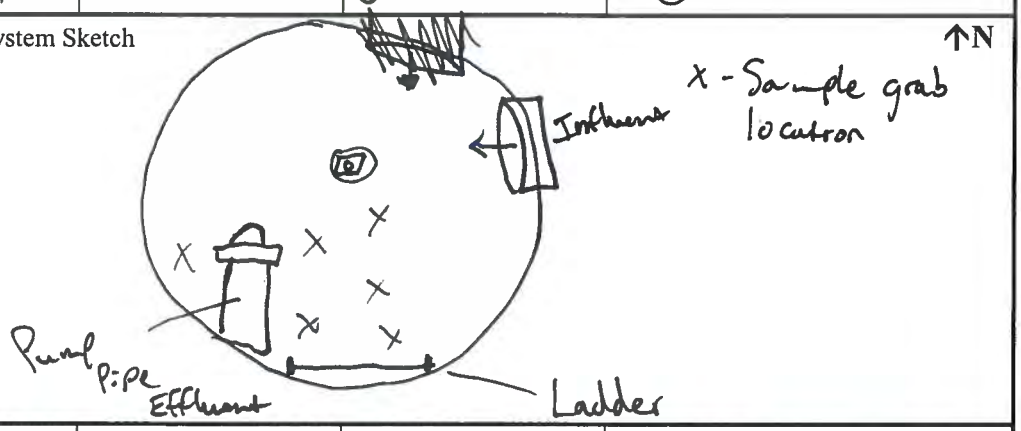
Project: NPDES Sampling Support **Location ID:** CL-MH-SPS

Facility Name: Cadman Lehigh **Sample ID:** CL-MH-SPS-20130605-S

Sampled By: CW CN **Date:** 6 / 5 / 2013 **Time:** 1207

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

Conveyance System Sketch



Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: Y / N
~9 ft	~7.5 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): CL-MH-SPS
Debris	Tan	H_2S	GPS ID: CL-MH-SPS
		Petroleum	

NOTES: Sample was collected from Sump Pump Station that is located downstream of treatment.
Split Sample w/ Cadman Lehigh

Recorded By/Date: CW 6/5/13 **Reviewed By/Date:** _____

Version2 -030311

NPDES Sampling Support 6/5/13

Cadman/Lehigh

0635 CW Arrive at field warehouse

0645 CN arrive at field warehouse and begin to load truck and discuss sampling plan for the day. Collect Metals and SVOCs, ~~EB for~~ and PCB Congeners EB for water sampling equipment

0756 QC-EB-02-20130605-W

0814 Collect Metals, SVOCs, + PCB Aroclors EB for Sediment Sampling equipment QC-EB-03-20130605-W

0847 Depart Field office for Cadman Lehigh

0859 Arrive Cadman LeHigh. Ken Waldo present upon arrival.

Bob Wright inside w/ Site Manager

Met w/ King County Real Estate Services

Bill Eckel

Alex Jones

they (K.C.) has requested dates when received and any maps created during the report, prior to any field work, STC has been asked to wait until Jason (Cadman) Adcox arrives

6/5/13 CADMAN LEHIGH

Meeting w/ Cadman

1007 H&S Meeting

Site walk w/ Jason, Confirming construction of CO2 CB and SPS Vault.

1122 Collection of CL-MH-SPS-20130605-W begins

Turb 1212 NTU

1143 Water Quality Readings

Cad/Lehigh Treatment

Temp: 19.80C. pH 7.4

185 uS/cm

8.22 DO mg/L

9.63 pH

45.3 ORP

Model GLI 63

Jason indicated he calibrates pH monitor "every couple of months"

~1145 Bob Wright offsite for day

1207 Collection of CL-MH-SPS-20130605-S

Decon equipment

~~Bob Wright~~ ov

CADMAN LEHIGH 6-5-13

1301 SAIC offsite for more sample bottles and ice

1330 SAIC Back on site to collect water sample

1344 Prep to sample location at vault effluent where trucks are filled w/ water

GPS ID: CL-VT-EFF

1349 Collect sample

Collect Parameters

Turb 55.9 NTU

Temp 21.63°C

Cond 178 mS/cm

DO 7.83

pH 9.28

ORP -26.5

1422 Signed over COCs to Cadman Lehigh Plant Maintenance Supervisor Jason Adcox

Decon equipment

Load truck, verify COC.

Quick planning for next weeks sampling event.

1452 MOB offsite to field office.

1502 Arrive at Field Office

6/5/13 CADMAN LeHigh

1604 Take a lunch break

1646 ~~Back to field office to pick up vehicle~~ w/ MOB to laboratory to drop off samples.

1700 Arrive @ AK1

1707 Depart AK1

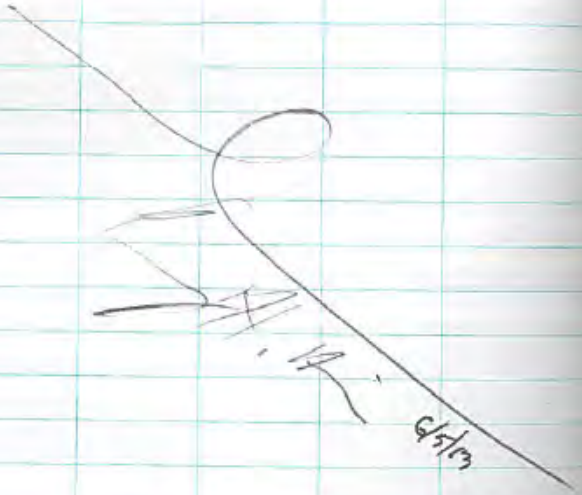
1709 Stop for fuel for Field Vehicle

1713 MOB back to field office

1731 Nancarrow departs.

1736 CW added additional ice to coolers containing PCB Congener Samples.

1740 Secured field office and left site.



Attachment H-3
Chain of Custody Forms

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 1390	Turn-around Requested: Standard 3 week	Date: 6-5-13
ARI Client Company: **SAIC**	Phone: **206.300.2144** nancarrowc@saic.com	Page: 1 of 1
Client Contact: **Christine Nancarrow**		No. of Coolers: 1 Cooler Temps: 4.1, 6.0
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 (EPA 8270)	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: VOCs (8260)	Notes/Comments: TPH-Dx (NWTPH-Dx)
CL-MH-SPS-20130605-W	6/5/13	1122	Water	10	X	X	X	X	X	X	X	X	X	X	X	X		
CL-VT-EFF-20130605-W	6/5/13	1349	Water	9	X	X	X	X	X	X	X	X	X	X	X	X		
~~CL-QC-TB-VT-20130605-W~~																		
CL-QC-TB-20130605-W	6/5/13	1200	Water	1													X	X

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Please do not dispose of samples w/out prior written authorization from SAIC PM.	Printed Name: CNancarrow	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: SAIC	Company: ARI	Company:	Company:
	Date & Time: 6/5/13 @1704	Date & Time: 6/5/13 1704	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: W0591	Turn-around Requested: Standard	Page: 1 of 1	
ARI Client Company: SAIC	Phone: 206-300-2144 christine.nancarrow@saic.com	Date: 6/5/13	Ice Present? Yes
Client Contact: Christine Nancarrow		No. of Coolers: 2	Cooler Temps: 4.1, 6.0
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 8260)	SVOCs/PAHs (8270/8270 SIM)	Pesticides (EPA 8081)	Dioxin/Furans (EPA 1613B)	TPH-Diesel (NWTPH-Dx)	VOCs (EPA 8260)	Metals (EPA 6010/200.8)	Mercury (EPA 7471)	TOC (Plumb 1981)	Total Solids (SM 2540B)	Particle Size Distribution (Sedigraph)	TPH-Gas (NWTPH-Gx)	Notes/Comments
CL-MH-SPS-20130605-S	6-5-13	1207	Sediment	11	X	X	X	X	X	X	X	X	X	X	X	X	

Comments/Special Instructions
Please do not dispose of any samples w/out prior written authorization from the SAIC PM. Thanks!

	Relinquished by:	Received by:	Relinquished by:	Received by:
(Signature)	CNancarrow			
Printed Name:	CNancarrow	Jennifer Millsap		
Company:	SAIC	ARI		
Date & Time:	6/5/13 @ 1704	6/5/13 1704		

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: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Attachment H-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 WS90, WS92

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	26
Semivolatile Analysis		
Report and Summary QC Forms	27	52
SIM PAH Analysis		
Report and Summary QC Forms	53	66
Pesticide Analysis		
Report and Summary QC Forms	67	87
PCB Analysis		
Report and Summary QC Forms	88	109
Metals Analysis		
Report and Summary QC Forms	110	152
Mercury Analysis		
Report and Summary QC Forms	153	172
General Chemistry Analysis		
Report and Summary QC Forms	173	180
Semivolatile Raw Data		
Extractions Bench Sheets and Notes	181	184
Initial Calibration	185	344
Run Logs, Continuing Calibrations, and Raw Data	345	422
SIM PAH Raw Data		
Extractions Bench Sheets and Notes	423	425
Initial Calibration	426	479
Run Logs, Continuing Calibrations, and Raw Data	480	565
Pesticide Raw Data		
Extractions Bench Sheets and Notes	566	569
Initial Calibration	570	617
Run Logs, Continuing Calibrations, and Raw Data	618	652

JC

Signature

June-24-2013

Date

Table of Contents: ARI Job WS90, WS92

Client: SAIC

Project: 209977 NPDES Sampling Support

	Page From:	Page To:
PCB Raw Data		
Extractions Bench Sheets and Notes	653	655
Initial Calibration	656	762
Run Logs, Continuing Calibrations, and Raw Data	763	800
Metals Raw Data		
Preparation Bench Sheets and Notes	801	808
Run Logs, Calibrations, and Raw Data	809	986
Mercury Raw Data		
Preparation Bench Sheets and Notes	987	990
Run Logs, Continuing Calibrations, and Raw Data	991	1002
General Chemistry Raw Data		
Analyst Notes and Raw Data	1003	1149

BC
Signature

June-24-2013
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

June 26, 2013

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

RE: Project: NPDES Sampling Support, 209977
ARI Job Nos.: WS90 & WS92

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 WS90_WS92

Enclosures

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

Chain of Custody Documentation

ARI Job ID: WS90, WS92

Chain of Custody Record & Laboratory Analysis Request

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

ARI Assigned Number: W390	Turn-around Requested: Standard 3 week
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: 6-5-13
Page: 1 of 1
No. of Coolers: 2 Cooler Temps: 4.1 / 6.0

Analysis Requested (Aqueous Sample)

Sample ID	Date	Time	Matrix	No Containers	SVOCs (EPA 8270)	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)	VOCs (8260)	TPH-6x (NWTPH-6x)
CL-MH-SFS-20130605-W	6/5/13	1122	Water	10	x	x	x	x	x	x	x	x	x	x	x	x		
CL-VT-EFF-20130605-W	6/5/13	1349	Water	9	x	x	x	x	x	x	x	x	x	x	x	x		
~~CL-QC-TB-VT-20130605~~ CW																		
CL-QC-TB-20130605-W	6/5/13	1200	Water	1													X	X

CW 6/5/13

Comments/Special Instructions	Relinquished by (Signature)	Received by (Signature)	Relinquished by (Signature)	Received by: (Signature)
Please do not dispose of samples w/out prior written authorization from SAIC PM.	C Nancarrow	[signature]		
	Printed Name: C Nancarrow	Printed Name: Jennifer Millsep	Printed Name:	Printed Name:
	Company: SAIC	Company: ARI	Company:	Company:
	Date & Time: 6/5/13 @1704	Date & Time: 6/5/13 1704	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: WS90	Turn-around Requested	Date: 6-5-13	
ARI Client Company: **SAIC**	Phone: **206.300.2144** nancarrowc@saic.com	Page: 1 of 1	
Client Contact **Christine Nancarrow**		No. of Coolers: 1	Cooler Temps: 4.1, 6.0
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 (EPA 8270D)	Mercury (EPA 7470A)	Other Metals EPA 6010B/200.8)					Notes/Comments
					Analysis Requested (Rinsate Blank)								
QC-EB-02-20130605-W	6/5/13	0756	Water	4		X	X	X					Analyze per SAP/QAPP, provided under separate cover
QC-EB-03-20130606-W	6/15/13	0819	Water	6	X	X	X	X					
													RINSATE BLANK

Comments/Special Instructions	Relinquished by (Signature)	Received by (Signature)	Relinquished by (Signature)	Received by (Signature)
Please do not dispose of any sample w/out prior written authorization from SAIC PM.	C. Nancarrow			
	Printed Name: C. NANCARROW	Printed Name: Jennifer Millsap	Printed Name	Printed Name
	Company: SAIC	Company: ARI	Company	Company
	Date & Time: 6/5/13 @ 1704	Date & Time: 6/5/13 1704	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: WS90 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)	4.1 6.0	
If cooler temperature is out of compliance fill out form 00070F	Temp Gun ID#:	90877952

Cooler Accepted by JM (AV) Date: 6/5/13 Time: 1704

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) JM	(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)		

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

Samples Logged by: JM Date: 6/6/13 Time: 946

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

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
QC-EB-03-20130605-W	QC-EB-03-20130606-W		

Additional Notes, Discrepancies, & Resolutions:
No sample volume for TOC or DOC received, Split some volume into 1-L Amber.

By: JM Date: 6/6/13

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm

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

WS90 : 000005

PRESERVATION VERIFICATION 06/06/13
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **WS90**

PC: Cheronne
VTSR: 06/05/13

Inquiry Number: NONE
Analysis Requested: 06/06/13
Contact: Nancarrow, Christine
Client: SAIC
Logged by: JM
Sample Set Used: Yes-481
Validatable Package: LV4
Deliverables:

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

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
13-12078 **WS90A**	CL-MH-SPS-20130605-W						TOT P					F										
13-12079 **WS90B**	CL-VT-EFF-20130605-W						TOT P					F										
13-12080 **WS90C**	QC-EB-02-20130605-W						TOT P					F										
13-12081 **WS90D**	QC-EB-03-20130605-W						TOT P					F										
13-12082 **WS90E**	CL-MH-SPS-20130605-W						DIS F									N			<2	MP2452	4mL	6 6 13 DM
13-12083 **WS90F**	CL-VT-EFF-20130605-W						DIS F									N			↓	↓	↓	↓
13-12084 **WS90G**	QC-EB-02-20130605-W						DIS F									N			↓	↓	↓	↓
13-12085 **WS90H**	QC-EB-03-20130605-W						DIS F									N			↓	↓	↓	↓

P = Pass, F = fail

TOC + DOC Share a Container.
TOC needs preserved
DOC needs filtered + preserved.

Filtered Samples E-H
6/6/13 DM

Checked By JM Date 6/5/13

WS90 : 00005

PRESERVATION VERIFICATION 06/06/13
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **WS90**

Inquiry Number: NONE
Analysis Requested: 06/06/13
Contact: Nancarrow, Christine
Client: SAIC
Logged by: JM
Sample Set Used: Yes-481
Validatable Package: LV4
Deliverables:

PC: Cheronne
VTSR: 06/05/13

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

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
13-12078 **WS90A**	CL-MH-SPS-20130605-W						TOT P					F						TOC/DOC*	<2	9806 H2SO4	1ml	6-6-13 cm
13-12079 **WS90B**	CL-VT-EFF-20130605-W						TOT P					F						↓ ↓	↓	↓	↓	↓
13-12080 **WS90C**	QC-EB-02-20130605-W						TOT P					P	JM									
13-12081 **WS90D**	QC-EB-03-20130605-W						TOT P					P										
13-12082 **WS90E**	CL-MH-SPS-20130605-W						DIS F									N						
13-12083 **WS90F**	CL-VT-EFF-20130605-W						DIS F									N						
13-12084 **WS90G**	QC-EB-02-20130605-W						DIS F									N						
13-12085 **WS90H**	QC-EB-03-20130605-W						DIS F									N						

P=Pass, F=fail

TOC & DOC Share a Container.
TOC needs Preserved
DOC needs filtered & preserved.
* DOC Volume filtered and preserved.
6-6-13 cm

Checked By JM Date 6/5/13

1209977 : 05SAIC

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 WS92 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)	4.1 6.0	

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877952

Cooler Accepted by JM (AV) Date: 6/5/13 Time: 1704

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)		

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

Samples Logged by: JM Date: 6/6/13 Time: 1006

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

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
QC-EB-03-20130605-W	QC-EB-03-20130605-W		

Additional Notes, Discrepancies, & Resolutions:

By: JM Date: 6/6/13

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

PRESERVATION VERIFICATION 06/06/13
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **WS92**

PC: Cheronne
VTSR: 06/05/13

Inquiry Number: NONE
Analysis Requested: 06/06/13
Contact: Nancarrow, Christine
Client: SAIC
Logged by: JM
Sample Set Used: Yes-481
Validatable Package: LV4
Deliverables:

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

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
13-12092 **WS92A**	CL-MH-SPS-02-20130605-W						TOT P															
13-12093 **WS92B**	CL-VT-EFF-202130605-W						TOT P															
13-12094 **WS92C**	QC-EB-02-20130605-W						TOT P															
13-12095 **WS92D**	QC-EB-03-20130605-W						TOT P															
13-12096 **WS92E**	CL-MH-SPS-20130605-W						DIS F									N			<2	MP2452	4mL	6-6-13 DM
13-12097 **WS92F**	CL-VT-EFF-20130605-W						DIS F									N			↓	↓	↓	↓
13-12098 **WS92G**	QC-EB-02-20130605-W						DIS F									N			↓	↓	↓	↓
13-12099 **WS92H**	QC-EB-03-20130605-W						DIS F									N			↓	↓	↓	↓

P= Pass , F= Fail

Filtered Samples E-H
6/6/13 DM

Checked By JM Date 6/5/13

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: WS90, WS92

Case Narrative

Client: SAIC
Project: NPDES Sampling Support, 209977
ARI Job Nos.: WS90 & WS92

Sample Receipt

Four water samples were received on June 5, 2013 under ARI jobs WS90 and WS92. The cooler temperatures measured by IR thermometer following ARI SOP were 4.1 and 6.0°C. For further details regarding sample receipt, please refer to the Cooler Receipt Form.

Semivolatiles by SW8270D

The samples were extracted and analyzed within recommended holding times.

Initial calibrations were within method requirements.

The continuing calibration (CCAL) fell outside the 20% control limit low for 2,2-Oxybis(1-Chloropropane), Benzo(g,h,i)perylene, and Aniline. The CCAL was outside the control limit high for 3-Nitroaniline and 4-Nitroaniline. All detected results for these compounds 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.

The method blank was clean at the reporting limits.

The LCS and LCSD percent recoveries of 4-Chloroaniline and 3-Nitroaniline were outside the control limits high for **LCS-061013**. All other percent recoveries were within control limits. No corrective action was taken.

Low-Level PAHs by SW8270D-SIM

The samples were 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 samples were extracted and analyzed within recommended holding times.

Initial calibrations were within method requirements.

The opening and closing continuing calibrations were outside the 20% control limit high for several compounds on both columns. Associated samples were non-detected for all requested compounds. 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 and LCSD percent recoveries were within control limits.

Aroclor PCBs by SW8082

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 limit. The LCS and LCSD percent recoveries were within control limits.

Total and Dissolved Metals

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

The total antimony result was less than the dissolved antimony result for sample **CL-MH-SPS-20130605-W**. Both the total and dissolved fractions for this sample were re-digested and re-analyzed with comparable results. Only the re-analysis results have been reported. No further corrective action was taken.

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

The matrix spike percent recovery of antimony fell outside the control limits low for sample **CL-MH-SPS-20130605-W**. A post digestion spike was performed and the recovery was

within control limits. All relevant data have been flagged with an "N" qualifier on the appropriate Form V. No further corrective action was taken.

The duplicate RPDs were within control limits.

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.

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

General Chemistry

The samples and associated laboratory QC were initially 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: WS90
Client: SAIC
Project Event: 209977
Project Name: NPDES Sampling Support

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	CL-MH-SPS-20130605-W	WS90A	13-12078	Water	06/05/13 11:22	06/05/13 17:04
2.	CL-VT-EFF-20130605-W	WS90B	13-12079	Water	06/05/13 13:49	06/05/13 17:04
3.	QC-EB-02-20130605-W	WS90C	13-12080	Water	06/05/13 07:56	06/05/13 17:04
4.	QC-EB-03-20130605-W	WS90D	13-12081	Water	06/05/13 08:19	06/05/13 17:04
5.	CL-MH-SPS-20130605-W	WS90E	13-12082	Water	06/05/13 11:22	06/05/13 17:04
6.	CL-VT-EFF-20130605-W	WS90F	13-12083	Water	06/05/13 13:49	06/05/13 17:04
7.	QC-EB-02-20130605-W	WS90G	13-12084	Water	06/05/13 07:56	06/05/13 17:04
8.	QC-EB-03-20130605-W	WS90H	13-12085	Water	06/05/13 08:19	06/05/13 17:04

WS90 : 00014

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: WS92
Client: SAIC
Project Event: 209977
Project Name: NPDES Sampling Support

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	CL-MH-SPS-20130605-W	WS92A	13-12092	Water	06/05/13 11:22	06/05/13 17:04
2.	CL-VT-EFF-20130605-W	WS92B	13-12093	Water	06/05/13 13:49	06/05/13 17:04
3.	QC-EB-02-20130605-W	WS92C	13-12094	Water	06/05/13 07:56	06/05/13 17:04
4.	QC-EB-03-20130605-W	WS92D	13-12095	Water	06/05/13 08:19	06/05/13 17:04
5.	CL-MH-SPS-20130605-W	WS92E	13-12096	Water	06/05/13 11:22	06/05/13 17:04
6.	CL-VT-EFF-20130605-W	WS92F	13-12097	Water	06/05/13 13:49	06/05/13 17:04
7.	QC-EB-02-20130605-W	WS92G	13-12098	Water	06/05/13 07:56	06/05/13 17:04
8.	QC-EB-03-20130605-W	WS92H	13-12099	Water	06/05/13 08:19	06/05/13 17:04

WS92:209915

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).

USGS : 00015

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

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

Continuous Liquid-Liquid (EPA Method 3520C, Bench Sheet 3006F) or Separatory Funnel (EPA method 3510C, Bench Sheet 3010F) extraction using 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	**0.445**	**0.5**	**1**	26 – 112	≤ 40
Bis(2-Chloroethyl)ether	**0.257**	**0.5**	**1**	51 – **100**	≤ 40
2-Chlorophenol	**0.246**	**0.5**	**1**	50 – **100**	≤ 40
1,3-Dichlorobenzene	**0.499**	**0.5**	**1**	27 – **100**	≤ 40
1,4-Dichlorobenzene	**0.470**	**0.5**	**1**	29 – **100**	≤ 40
1,2-Dichlorobenzene	**0.436**	**0.5**	**1**	32 – **100**	≤ 40
Benzyl alcohol	**0.409**	**1.0**	**2**	**10** - 128	≤ 40
2,2'-oxybis(1-Chloropropane)	**0.221**	**0.5**	**1**	39 - 101	≤ 40
2-Methylphenol	**0.329**	**0.5**	**1**	47 – **100**	≤ 40
Hexachloroethane	**0.610**	**1.0**	**2**	19 – **100**	≤ 40
N-Nitroso-di-n-propylamine	**0.365**	**0.5**	**1**	46 – **100**	≤ 40
4-Methylphenol	**0.536**	**1.0**	**2**	46 – **100**	≤ 40
Nitrobenzene	**0.490**	**0.5**	**1**	46 – 103	≤ 40
Isophorone	**0.258**	**0.5**	**1**	62 – 105	≤ 40
2-Nitrophenol	**0.979**	**1.5**	**3**	32 – 116	≤ 40
2,4-Dimethylphenol	**0.627**	**1.5**	**3**	15 – **100**	≤ 40
Bis(2-Chloroethoxy)methane	**0.252**	**0.5**	**1**	44 – **100**	≤ 40
2,4-Dichlorophenol	**1.109**	**1.5**	**3**	35 – 114	≤ 40
1,2,4-Trichlorobenzene	**0.495**	**0.5**	**1**	34 – **100**	≤ 40
Naphthalene	**0.326**	**0.5**	**1**	48 – **100**	≤ 40
Benzoic acid	**8.647**	**10**	**20**	**10** - 172	≤ 40
4-Chloroaniline	**1.733**	**2.5**	**5**	**10** - 153	≤ 40
2,6-Dinitrotoluene	**1.300**	**1.5**	**3**	32 – 129	≤ 40
Hexachlorobutadiene	**0.604**	**1.5**	**3**	22 – **100**	≤ 40
4-Chloro-3-methylphenol	**0.919**	**1.5**	**3**	33 – 123	≤ 40
Hexachlorocyclopentadiene	**1.862**	**2.5**	**5**	**10** – **100**	≤ 40
2,4,6-Trichlorophenol	**1.235**	**1.5**	**3**	37 – 120	≤ 40
2,4,5-Trichlorophenol	**1.706**	**2.5**	**5**	37 – 124	≤ 40
2-Chloronaphthalene	**0.340**	**0.5**	**1**	49 – **100**	≤ 40
2-Nitroaniline	**0.784**	**1.5**	**3**	18 – 140	≤ 40
Acenaphthylene	**0.274**	**0.5**	**1**	47 – 110	≤ 40
Dimethylphthalate	**0.264**	**0.5**	**1**	60 – 106	≤ 40
Acenaphthene	**0.347**	**0.5**	**1**	55 – 101	≤ 40

USSO - 00015

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

Continuous Liquid-Liquid (EPA Method 3520C, Bench Sheet 3006F) or Separatory Funnel (EPA method 3510C, Bench Sheet 3010F) extraction using 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	**1.140**	**1.5**	**3**	**10** – 208	≤ 40
2-Methylnaphthalene	**0.241**	**0.5**	**1**	38 – **100**	≤ 40
2,4-Dinitrophenol	**5.474**	**10**	**20**	**10** – 224	≤ 40
Dibenzofuran	**0.198**	**0.5**	**1**	46 – 108	≤ 40
4-Nitrophenol	**2.895**	**5.0**	**10**	**10** – 103	≤ 40
2,4-Dinitrotoluene	**1.277**	**1.5**	**3**	33 – 134	≤ 40
Fluorene	**0.266**	**0.5**	**1**	59 – 108	≤ 40
4-Chlorophenyl-phenylether	**0.342**	**0.5**	**1**	54 – 104	≤ 40
Diethylphthalate	**0.407**	**0.5**	**1**	60 - 108	≤ 40
4-Nitroaniline	**1.366**	**1.5**	**3**	13 – 144	≤ 40
4,6-Dinitro-2-methylphenol	**4.928**	**5.0**	**10**	**10** – 190	≤ 40
N-Nitrosodiphenylamine	**0.392**	**0.5**	**1**	39 – 100	≤ 40
4-Bromophenyl-phenylether	**0.262**	**0.5**	**1**	56 – 105	≤ 40
Hexachlorobenzene	**0.335**	**0.5**	**1**	54 – 108	≤ 40
Pentachlorophenol	**2.746**	**5.0**	**10**	25 – 144	≤ 40
Phenanthrene	**0.283**	**0.5**	**1**	64 – 115	≤ 40
Anthracene	**0.303**	**0.5**	**1**	59 – 107	≤ 40
Carbazole	**0.251**	**0.5**	**1**	36 – 123	≤ 40
Di-n-butylphthalate	**0.304**	**0.5**	**1**	62 – 110	≤ 40
Fluoranthene	**0.290**	**0.5**	**1**	63 – 119	≤ 40
Pyrene	**0.379**	**0.5**	**1**	57 – 117	≤ 40
Butylbenzylphthalate	**0.402**	**0.5**	**1**	49 – 118	≤ 40
Benzo(a)anthracene	**0.373**	**0.5**	**1**	61 – 113	≤ 40
3,3'-Dichlorobenzidine	**1.553**	**2.5**	**5**	**10** – 151	≤ 40
Chrysene	**0.397**	**0.5**	**1**	62 – 115	≤ 40
bis(2-Ethylhexyl)phthalate	**1.050**	**1.5**	**3**	47 – 127	≤ 40
Di-n-octylphthalate	**0.331**	**0.5**	**1**	60 – 106	≤ 40
Benzo(b)fluoranthene	**0.298**	**0.5**	**1**	61 – 120	≤ 40
Benzo(k)fluoranthene	**0.487**	**0.5**	**1**	59 – 120	≤ 40
Benzo(a)pyrene	**0.425**	**0.5**	**1**	46 – 105	≤ 40
Indeno(1,2,3-cd)pyrene	**0.435**	**0.5**	**1**	42 – 134	≤ 40
Dibenzo(a,h)anthracene	**0.437**	**0.5**	**1**	46 – 132	≤ 40
Benzo(g,h,i)perylene	**0.464**	**0.5**	**1**	33 – 135	≤ 40
N-Nitrosodimethylamine	**1.209**	**1.5**	**3**	17 - 106	≤ 40

US98 : 00019

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

Continuous Liquid-Liquid (EPA Method 3520C, Bench Sheet 3006F) or Separatory Funnel (EPA method 3510C, Bench Sheet 3010F) extraction using 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	**0.470**	**0.5**	**1**	**10** – 113	≤ 40
1-methylnaphthalene	**0.199**	**0.5**	**1**	43 – **100**	≤ 40
Azobenzene (1,2-DP-Hydrazine)	**0.214**	**0.5**	**1**	52 – 111	≤ 40
Benzofluoranthenes, Total	**2.317**	**2.5**	**5**	60 – 130[5]	≤ 40
Surrogate Standard Recovery			**MB / LCS**	**Samples**	**RPD**
2-Fluorophenol			33 – 100	23 – **100**	≤ 40
Phenol-d_5			15 - 121	16 – 106	≤ 40
2-Chlorophenol-d_4			46 – 102	33 – 100	≤ 40
1,2-Dichlorobenzene-d_4			40 – **100**	27 – **100**	≤ 40
Nitrobenzene-d_5			50 – **100**	34 – 101	≤ 40
2-Fluorobiphenyl			51 – **100**	38 – **100**	≤ 40
2,4,6-Tribromophenol			46 – 125	31 – 128	≤ 40
p-Terphenyl-d_{14}			54 – 117	27 – 122	≤ 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 8/1/10 through 7/31/11.
(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.

USGS : 000128

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

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

USGS : 000022

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Quality Control Criteria for Analysis of Aqueous and Tissue Samples for Aroclors (Polychlorinated Biphenyls – PCB) EPA Method 8082B

ARI Bench Sheet	Extraction	DL[1]	LOD[1]	LOQ[1]	Analyte	Spike Recovery Control Limits (%)[2,3]			RPD[4]
						LCS	MB/LCS Surrogate	Sample Surrogate	
01-3018F	500 to 5 mL	0.130 µg/L	0.5 µg/L	1 µg/L	Aroclor 1016	45 – 121	--	--	≤ 40
		0.147 µg/L	0.5 µg/L	1 µg/L	Aroclor 1260	54 – 129	--	--	
		--	--	--	TCMX	--	40 – 118	38 – 118	
		--	--	--	DCBP	--	41 – 111	29 – 118	
02-3021F	500 to 1 mL	0.0175 µg/L	0.05 µg/L	0.1 µg/L	Aroclor 1016	36 – **100**	--	--	≤ 40
		0.0174 µg/L	0.05 µg/L	0.1 µg/L	Aroclor 1260	41 – 113	--	--	
		--	--	--	TCMX	--	29 – **100**	25 – **100**	
		--	--	--	DCBP	--	39 – 116	**10** – 128	
03-3022F	1000 to 0.5 mL[5]	0.00248 µg/L	0.005 µg/L	0.01 µg/L	Aroclor 1016	44 – 117	--	--	≤ 40
		0.00276 µg/L	0.005 µg/L	0.01 µg/L	Aroclor 1260	46 – 131	--	--	
		--	--	--	TCMX	--	31 – **100**	21 – **100**	
		--	--	--	DCBP	--	32 – 108	19 – 111	
04-3023F	100 to 10 mL	1.30 µg/L[8]	5 µg/L	10 µg/L	Aroclor 1016	30 – 160	--	--	≤ 40
		1.47 µg/L[8]	5 µg/L	10 µg/L	Aroclor 1260	30 – 160	--	--	
		--	--	--	TCMX	--	30 – 160	30 – 160	
		--	--	--	DCBP	--	30 – 160	30 – 160	
09-3029F	10 g to 5 mL	2.92 µg/kg[6]	25 µg/kg	50 µg/kg	Aroclor 1016	30 – 160			≤ 40
		3.91 µg/kg[6]	25 µg/kg	50 µg/kg	Aroclor 1260	30 – 160			
		--	--	--	TCMX		30 – 160	30 – 160	
		--	--	--	DCBP		30 – 160	30 – 160	
10-3027F	25 g to 5 mL	2.37 µg/kg[7]	10 µg/kg	20 µg/kg	Aroclor 1016	30 – 160			≤ 40
		1.06 µg/kg[7]	10 µg/kg	20 µg/kg	Aroclor 1260	30 – 160			
		--	--	--	TCMX		30 – 160	30 – 160	
		--	--	--	DCBP		30 – 160	30 – 160	
11-3030F	25 g to 1 mL	2.37[7] µg/kg	2 µg/kg	4 µg/kg	Aroclor 1016	30 – 160			≤ 40
		1.06[7] µg/kg	2 µg/kg	4 µg/kg	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) Low level extraction solvent is hexane instead of Methylene Chloride.
(6) LOD Study SM10
(7) MDL Study QZ25
(8) Based on 500 to 5 mL water extraction until sufficient TCLP data is collected to calculate LOD.

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	0.25	**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_O=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	0.0021	0.0125	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 $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$

US90 : 00025

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%

USGS : 090025

Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: WS90, WS92

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: CL-MH-SPS-20130605-W
SAMPLE

Lab Sample ID: WS90A
LIMS ID: 13-12078
Matrix: Water
Data Release Authorized:
Reported: 06/18/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/10/13
Date Analyzed: 06/17/13 18:53
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
Page 2 of 2

Sample ID: CL-MH-SPS-20130605-W
SAMPLE

Lab Sample ID: WS90A
LIMS ID: 13-12078
Matrix: Water
Date Analyzed: 06/17/13 18:53

QC Report No: WS90-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**	**0.6 J**
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**	**1.7 Q**
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	62.4%	2-Fluorobiphenyl	71.6%
d14-p-Terphenyl	70.4%	d4-1,2-Dichlorobenzene	60.8%
d5-Phenol	31.5%	2-Fluorophenol	38.7%
2,4,6-Tribromophenol	87.5%	d4-2-Chlorophenol	62.9%

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: CL-VT-EFF-20130605-W
SAMPLE

Lab Sample ID: WS90B
LIMS ID: 13-12079
Matrix: Water
Data Release Authorized:
Reported: 06/18/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/10/13
Date Analyzed: 06/17/13 19:27
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

Lab Sample ID: WS90B
LIMS ID: 13-12079
Matrix: Water
Date Analyzed: 06/17/13 19:27

QC Report No: WS90-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	53.6%	2-Fluorobiphenyl	59.6%
d14-p-Terphenyl	59.6%	d4-1,2-Dichlorobenzene	55.2%
d5-Phenol	27.7%	2-Fluorophenol	36.0%
2,4,6-Tribromophenol	77.6%	d4-2-Chlorophenol	57.9%

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: QC-EB-02-20130605-W
SAMPLE

Lab Sample ID: WS90C
LIMS ID: 13-12080
Matrix: Water
Data Release Authorized:
Reported: 06/18/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/10/13
Date Analyzed: 06/17/13 20:02
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

Lab Sample ID: WS90C
LIMS ID: 13-12080
Matrix: Water
Date Analyzed: 06/17/13 20:02

QC Report No: WS90-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
84-66-2	**Diethylphthalate**	**0.29**	**1.0**	**3.0**
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	52.4%	2-Fluorobiphenyl	60.4%
d14-p-Terphenyl	66.4%	d4-1,2-Dichlorobenzene	52.0%
d5-Phenol	26.7%	2-Fluorophenol	34.7%
2,4,6-Tribromophenol	80.3%	d4-2-Chlorophenol	54.1%

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
Page 1 of 2

Sample ID: QC-EB-03-20130605-W
SAMPLE

Lab Sample ID: WS90D
LIMS ID: 13-12081
Matrix: Water
Data Release Authorized:
Reported: 06/18/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/10/13
Date Analyzed: 06/17/13 20:36
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: QC-EB-03-20130605-W
SAMPLE

Lab Sample ID: WS90D
LIMS ID: 13-12081
Matrix: Water
Date Analyzed: 06/17/13 20:36

QC Report No: WS90-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
84-66-2	**Diethylphthalate**	**0.29**	**1.0**	**2.4**
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	59.2%	2-Fluorobiphenyl	65.6%
d14-p-Terphenyl	66.8%	d4-1,2-Dichlorobenzene	58.0%
d5-Phenol	30.4%	2-Fluorophenol	40.8%
2,4,6-Tribromophenol	81.6%	d4-2-Chlorophenol	60.8%

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

SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WS90-SAIC
Project: NPDES Sampling Support
209977

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-061013	72.8%	76.8%	82.4%	70.8%	38.1%	49.6%	96.8%	76.0%	0
LCS-061013	72.4%	82.0%	83.2%	66.8%	36.5%	49.6%	105%	72.8%	0
LCSD-061013	72.4%	82.0%	89.6%	67.2%	37.6%	48.8%	110%	72.5%	0
CL-MH-SPS-20130605	62.4%	71.6%	70.4%	60.8%	31.5%	38.7%	87.5%	62.9%	0
CL-VT-EFF-20130605	53.6%	59.6%	59.6%	55.2%	27.7%	36.0%	77.6%	57.9%	0
QC-EB-02-20130605-	52.4%	60.4%	66.4%	52.0%	26.7%	34.7%	80.3%	54.1%	0
QC-EB-03-20130605-	59.2%	65.6%	66.8%	58.0%	30.4%	40.8%	81.6%	60.8%	0

	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: 13-12078 to 13-12081

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-061013
LCS/LCSD

Lab Sample ID: LCS-061013
LIMS ID: 13-12078
Matrix: Water
Data Release Authorized:
Reported: 06/18/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted LCS/LCSD: 06/10/13

Sample Amount LCS: 500 mL
LCSD: 500 mL

Date Analyzed LCS: 06/17/13 17:09
LCSD: 06/17/13 18:18

Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL

Instrument/Analyst LCS: NT6/JZ
LCSD: NT6/JZ

Dilution Factor LCS: 1.00
LCSD: 1.00

GPC Cleanup: NO

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	9.6	25.0	38.4%	10.4	25.0	41.6%	8.0%
Bis-(2-Chloroethyl) Ether	17.6	25.0	70.4%	18.2	25.0	72.8%	3.4%
2-Chlorophenol	19.4	25.0	77.6%	19.8	25.0	79.2%	2.0%
1,3-Dichlorobenzene	15.2	25.0	60.8%	15.5	25.0	62.0%	2.0%
1,4-Dichlorobenzene	15.8	25.0	63.2%	16.2	25.0	64.8%	2.5%
Benzyl Alcohol	16.6	25.0	66.4%	17.4	25.0	69.6%	4.7%
1,2-Dichlorobenzene	15.6	25.0	62.4%	16.0	25.0	64.0%	2.5%
2-Methylphenol	16.5	25.0	66.0%	17.6	25.0	70.4%	6.5%
2,2'-Oxybis(1-Chloropropane)	13.9 Q	25.0	55.6%	14.5 Q	25.0	58.0%	4.2%
4-Methylphenol	33.2	50.0	66.4%	35.5	50.0	71.0%	6.7%
N-Nitroso-Di-N-Propylamine	15.2	25.0	60.8%	16.0	25.0	64.0%	5.1%
Hexachloroethane	13.0	25.0	52.0%	13.3	25.0	53.2%	2.3%
Nitrobenzene	18.4	25.0	73.6%	19.1	25.0	76.4%	3.7%
Isophorone	18.3	25.0	73.2%	19.7	25.0	78.8%	7.4%
2-Nitrophenol	21.3	25.0	85.2%	22.4	25.0	89.6%	5.0%
2,4-Dimethylphenol	46.5	75.0	62.0%	50.0	75.0	66.7%	7.3%
Benzoic Acid	45.3	138	32.8%	46.7	138	33.8%	3.0%
bis(2-Chloroethoxy) Methane	17.8	25.0	71.2%	18.7	25.0	74.8%	4.9%
2,4-Dichlorophenol	63.2	75.0	84.3%	64.9	75.0	86.5%	2.7%
1,2,4-Trichlorobenzene	16.8	25.0	67.2%	17.4	25.0	69.6%	3.5%
Naphthalene	19.8	25.0	79.2%	20.5	25.0	82.0%	3.5%
4-Chloroaniline	129	75.0	172%	131	75.0	175%	1.5%
Hexachlorobutadiene	15.0	25.0	60.0%	15.5	25.0	62.0%	3.3%
4-Chloro-3-methylphenol	60.1	75.0	80.1%	62.8	75.0	83.7%	4.4%
2-Methylnaphthalene	20.1	25.0	80.4%	21.3	25.0	85.2%	5.8%
Hexachlorocyclopentadiene	34.1	75.0	45.5%	33.8	75.0	45.1%	0.9%
2,4,6-Trichlorophenol	67.2	75.0	89.6%	68.5	75.0	91.3%	1.9%
2,4,5-Trichlorophenol	71.4	75.0	95.2%	72.8	75.0	97.1%	1.9%
2-Chloronaphthalene	24.6	25.0	98.4%	25.6	25.0	102%	4.0%
2-Nitroaniline	67.3	75.0	89.7%	69.5	75.0	92.7%	3.2%
Dimethylphthalate	21.0	25.0	84.0%	21.8	25.0	87.2%	3.7%
Acenaphthylene	22.3	25.0	89.2%	23.2	25.0	92.8%	4.0%
3-Nitroaniline	167 Q	75.0	223%	176 Q	75.0	235%	5.2%
Acenaphthene	21.4	25.0	85.6%	22.4	25.0	89.6%	4.6%
2,4-Dinitrophenol	101	138	73.2%	107	138	77.5%	5.8%
4-Nitrophenol	31.8	75.0	42.4%	32.8	75.0	43.7%	3.1%
Dibenzofuran	24.1	25.0	96.4%	25.4	25.0	102%	5.3%
2,6-Dinitrotoluene	67.9	75.0	90.5%	69.6	75.0	92.8%	2.5%
2,4-Dinitrotoluene	65.7	75.0	87.6%	68.9	75.0	91.9%	4.8%
Diethylphthalate	21.8	25.0	87.2%	22.9	25.0	91.6%	4.9%
4-Chlorophenyl-phenylether	22.4	25.0	89.6%	23.7	25.0	94.8%	5.6%
Fluorene	25.2	25.0	101%	26.4	25.0	106%	4.7%
4-Nitroaniline	92.6 Q	75.0	123%	98.3 Q	75.0	131%	6.0%
4,6-Dinitro-2-Methylphenol	106	138	76.8%	112	138	81.2%	5.5%
N-Nitrosodiphenylamine	19.3	25.0	77.2%	20.0	25.0	80.0%	3.6%

WS90:00037

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: LCS-061013**
Page 2 of 2 **LCS/LCSD**

Lab Sample ID: LCS-061013 QC Report No: WS90-SAIC
LIMS ID: 13-12078 Project: NPDES Sampling Support
Matrix: Water 209977
Date Analyzed LCS: 06/17/13 17:09
LCSD: 06/17/13 18:18

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
4-Bromophenyl-phenylether	20.6	25.0	82.4%	21.8	25.0	87.2%	5.7%
Hexachlorobenzene	19.5	25.0	78.0%	21.0	25.0	84.0%	7.4%
Pentachlorophenol	70.2	75.0	93.6%	73.6	75.0	98.1%	4.7%
Phenanthrene	20.9	25.0	83.6%	22.1	25.0	88.4%	5.6%
Carbazole	27.7	25.0	111%	29.2	25.0	117%	5.3%
Anthracene	20.4	25.0	81.6%	21.5	25.0	86.0%	5.3%
Di-n-Butylphthalate	18.9	25.0	75.6%	20.1	25.0	80.4%	6.2%
Fluoranthene	23.5	25.0	94.0%	24.2	25.0	96.8%	2.9%
Pyrene	21.8	25.0	87.2%	23.8	25.0	95.2%	8.8%
Butylbenzylphthalate	18.6	25.0	74.4%	20.6	25.0	82.4%	10.2%
3,3'-Dichlorobenzidine	63.6	75.0	84.8%	66.6	75.0	88.8%	4.6%
Benzo(a)anthracene	24.5	25.0	98.0%	26.2	25.0	105%	6.7%
bis(2-Ethylhexyl)phthalate	21.2	25.0	84.8%	22.1	25.0	88.4%	4.2%
Chrysene	23.3	25.0	93.2%	24.6	25.0	98.4%	5.4%
Di-n-Octyl phthalate	22.1	25.0	88.4%	23.3	25.0	93.2%	5.3%
Benzo(a)pyrene	21.7	25.0	86.8%	23.4	25.0	93.6%	7.5%
Indeno(1,2,3-cd)pyrene	18.0	25.0	72.0%	18.9	25.0	75.6%	4.9%
Dibenz(a,h)anthracene	17.7	25.0	70.8%	18.3	25.0	73.2%	3.3%
Benzo(g,h,i)perylene	16.2 Q	25.0	64.8%	17.1 Q	25.0	68.4%	5.4%
Aniline	49.8 Q	75.0	66.4%	49.7 Q	75.0	66.3%	0.2%
1,2-Diphenylhydrazine	19.8	25.0	79.2%	21.2	25.0	84.8%	6.8%
N-Nitrosodimethylamine	27.7	75.0	36.9%	28.4	75.0	37.9%	2.5%
Azobenzene	19.8	25.0	79.2%	21.2	25.0	84.8%	6.8%
2,3,4,6-Tetrachlorophenol	25.5	25.0	102%	27.3	25.0	109%	6.8%
1-Methylnaphthalene	20.1	25.0	80.4%	21.2	25.0	84.8%	5.3%
Total Benzofluoranthenes	44.4	50.0	88.8%	47.4	50.0	94.8%	6.5%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	72.4%	72.4%
2-Fluorobiphenyl	82.0%	82.0%
d14-p-Terphenyl	83.2%	89.6%
d4-1,2-Dichlorobenzene	66.8%	67.2%
d5-Phenol	36.5%	37.6%
2-Fluorophenol	49.6%	48.8%
2,4,6-Tribromophenol	105%	110%
d4-2-Chlorophenol	72.8%	72.5%

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

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WS90MBW1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WS90

Project: NPDES SAMPLING SUPPO

Lab File ID: 06171303

Date Extracted: 06/10/13

Instrument ID: NT6

Date Analyzed: 06/17/13

Matrix: LIQUID

Time Analyzed: 1744

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WS90LCSW1	WS90LCSW1	06171302	06/17/13
02	WS90LCSDW1	WS90LCSDW1	06171304	06/17/13
03	CL-MH-SPS-201306	WS90A	06171305	06/17/13
04	CL-VT-EFF-201306	WS90B	06171306	06/17/13
05	QC-EB-02-2013060	WS90C	06171307	06/17/13
06	QC-EB-03-2013060	WS90D	06171308	06/17/13
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MB-061013
METHOD BLANK

Lab Sample ID: MB-061013
LIMS ID: 13-12078
Matrix: Water
Data Release Authorized:
Reported: 06/18/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/10/13
Date Analyzed: 06/17/13 17:44
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 **Sample ID: MB-061013**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-061013 QC Report No: WS90-SAIC
LIMS ID: 13-12078 Project: NPDES Sampling Support
Matrix: Water 209977
Date Analyzed: 06/17/13 17:44

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	72.8%	2-Fluorobiphenyl	76.8%
d14-p-Terphenyl	82.4%	d4-1,2-Dichlorobenzene	70.8%
d5-Phenol	38.1%	2-Fluorophenol	49.6%
2,4,6-Tribromophenol	96.8%	d4-2-Chlorophenol	76.0%

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: 03/06/13 DFTPP Injection Time: 1216

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	44.1
68	Less than 2.0% of mass 69	0.5 (1.2)1
69	Mass 69 relative abundance	40.7
70	Less than 2.0% of mass 69	0.1 (0.1)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	6.3
275	10.0 - 60.0% of mass 198	24.2
365	Greater than 1.0% of mass 198	3.15
441	0.0 - 24.0% of mass 442	11.9 (14.1)2
442	50.0 - 200.0% of mass 198	84.3
443	15.0 - 24.0% of mass 442	16.6 (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	IC250306	IC250306	03061301	03/06/13	1216
02	IC020306	IC020306	03061302	03/06/13	1251
03	IC10306	IC10306	03061303	03/06/13	1325
04	IC50306	IC50306	03061304	03/06/13	1400
05	IC100306	IC100306	03061305	03/06/13	1434
06	IC400306	IC40306	03061306	03/06/13	1509
07	IC600306	IC60306	03061307	03/06/13	1543
08	IC800306	IC80306	03061308	03/06/13	1618
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

4598 : 00042

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: 06/17/13 DFTPP Injection Time: 1608

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	37.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	37.6
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	10.0 - 80.0% of mass 198	47.1
197	Less than 2.0% of mass 198	0.3
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	24.7
365	Greater than 1.0% of mass 198	2.85
441	0.0 - 24.0% of mass 442	14.6 (14.8)2
442	50.0 - 200.0% of mass 198	98.8
443	15.0 - 24.0% of mass 442	18.7 (19.0)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	CC0617	CC0617	06171301	06/17/13	1608
02	WS90LCSW1	WS90LCSW1	06171302	06/17/13	1709
03	WS90MBW1	WS90MBW1	06171303	06/17/13	1744
04	WS90LCSDW1	WS90LCSDW1	06171304	06/17/13	1818
05	CL-MH-SPS-201306	WS90A	06171305	06/17/13	1853
06	CL-VT-EFF-201306	WS90B	06171306	06/17/13	1927
07	QC-EB-02-2013060	WS90C	06171307	06/17/13	2002
08	QC-EB-03-2013060	WS90D	06171308	06/17/13	2036
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS90 Project: NPDES SAMPLING SUPPORT

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

Method = SW846030613.m
Cal levels = 8

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

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

<- 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: WS90 Project: NPDES SAMPLING SUPPORT

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

Method = SW846030613.m
Cal levels = 8

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

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

(1) Cannot be seperated from Diphenylamine

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

WS90 : 88015

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS90 Project: NPDES SAMPLING SUPPORT

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

Method = SW846030613.m
Cal levels = 8

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

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

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

WS90 : 000115

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS90 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT6 Cont. Calib. Date: 06/17/13

Init. Calib. Date: 03/05/13 Cont. Calib. Time: 1608

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	1.597	1.515	0.800	AVRG	-5.1	
Bis(2-Chloroethyl)ether	1.387	1.258	0.700	AVRG	-9.3	
2-Chlorophenol	1.278	1.215	0.800	AVRG	-4.9	
1,3-Dichlorobenzene	1.492	1.428	0.010	AVRG	-4.3	
1,4-Dichlorobenzene	1.453	1.415	0.010	AVRG	-2.6	
1,2-Dichlorobenzene	1.389	1.261	0.010	AVRG	-9.2	
Benzyl alcohol	0.870	0.697	0.010	AVRG	-19.9	
2,2'-oxybis(1-Chloropropane)	2.204	1.632	0.010	AVRG	-26.0	<-
2-Methylphenol	1.211	1.092	0.700	AVRG	-9.8	
Hexachloroethane	0.588	0.492	0.300	AVRG	-16.3	
N-Nitroso-di-n-propylamine	1.041	0.853	0.500	AVRG	-18.0	
4-Methylphenol	1.198	1.138	0.600	AVRG	-5.0	
Nitrobenzene	0.384	0.356	0.200	AVRG	-7.3	
Isophorone	0.670	0.572	0.400	AVRG	-14.6	
2-Nitrophenol	0.178	0.180	0.100	AVRG	1.1	
2,4-Dimethylphenol	0.336	0.304	0.200	AVRG	-9.5	
Bis(2-Chloroethoxy)methane	0.439	0.394	0.300	AVRG	-10.2	
2,4-Dichlorophenol	0.259	0.269	0.200	AVRG	3.9	
1,2,4-Trichlorobenzene	0.322	0.305	0.010	AVRG	-5.3	
Naphthalene	25.00	24.93	0.700	2ORDR	-0.3	
Benzoic acid	0.291	0.296	0.010	AVRG	1.7	
4-Chloroaniline	25.00	29.22	0.010	2ORDR	16.9	
Hexachlorobutadiene	0.196	0.196	0.010	AVRG	0.0	
4-Chloro-3-methylphenol	0.275	0.266	0.200	AVRG	-3.3	
2-Methylnaphthalene	0.486	0.478	0.400	AVRG	-1.6	
Hexachlorocyclopentadiene	0.321	0.264	0.050	AVRG	-17.8	
2,4,6-Trichlorophenol	0.336	0.346	0.200	AVRG	3.0	
2,4,5-Trichlorophenol	0.332	0.362	0.200	AVRG	9.0	
2-Chloronaphthalene	25.00	28.38	0.800	2ORDR	13.5	
2-Nitroaniline	0.296	0.293	0.010	AVRG	-1.0	
Acenaphthylene	1.578	1.547	0.900	AVRG	-2.0	
Dimethylphthalate	1.204	1.145	0.010	AVRG	-4.9	
2,6-Dinitrotoluene	0.257	0.290	0.200	AVRG	12.8	
Acenaphthene	1.021	0.976	0.900	AVRG	-4.4	
3-Nitroaniline	25.00	31.88	0.010	2ORDR	27.5	<-
2,4-Dinitrophenol	0.184	0.172	0.010	AVRG	-6.5	
Dibenzofuran	1.336	1.355	0.800	AVRG	1.4	

<- Exceeds QC limit of 20% D

* RF less than minimum RF

WS90 : 00017

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS90 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT6 Cont. Calib. Date: 06/17/13

Init. Calib. Date: 03/05/13 Cont. Calib. Time: 1608

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
4-Nitrophenol	0.130	0.131	0.010	AVRG	0.8	
2,4-Dinitrotoluene	0.348	0.376	0.200	AVRG	8.0	
Fluorene	25.00	26.44	0.900	2ORDR	5.8	
4-Chlorophenyl-phenylether	0.586	0.628	0.400	AVRG	7.2	
Diethylphthalate	1.115	1.059	0.010	AVRG	-5.0	
4-Nitroaniline	0.196	0.253	0.010	AVRG	29.1	<-
4,6-Dinitro-2-methylphenol	0.144	0.137	0.010	AVRG	-4.9	
N-Nitrosodiphenylamine(1)	0.544	0.504	0.010	AVRG	-7.4	
4-Bromophenyl-phenylether	0.219	0.211	0.100	AVRG	-3.6	
Hexachlorobenzene	0.226	0.221	0.100	AVRG	-2.2	
Pentachlorophenol	0.134	0.133	0.050	AVRG	-0.7	
Phenanthrene	0.989	0.866	0.700	AVRG	-12.4	
Anthracene	0.991	0.870	0.700	AVRG	-12.2	
Carbazole	25.00	28.09	0.010	2ORDR	12.4	
Di-n-butylphthalate	1.249	1.023	0.010	AVRG	-18.1	
Fluoranthene	1.041	0.976	0.600	AVRG	-6.2	
Pyrene	1.092	0.964	0.600	AVRG	-11.7	
Butylbenzylphthalate	0.534	0.440	0.010	AVRG	-17.6	
Benzo(a)anthracene	0.912	0.901	0.800	AVRG	-1.2	
3,3'-Dichlorobenzidine	0.251	0.278	0.010	AVRG	10.8	
Chrysene	0.931	0.879	0.700	AVRG	-5.6	
bis(2-Ethylhexyl)phthalate	0.589	0.532	0.010	AVRG	-9.7	
Di-n-octylphthalate	0.944	0.874	0.010	AVRG	-7.4	
Benzo(b)fluoranthene	25.00	23.27	0.700	2ORDR	-6.9	
Benzo(k)fluoranthene	25.00	24.13	0.700	2ORDR	-3.5	
Benzo(a)pyrene	0.855	0.808	0.700	AVRG	-5.5	
Indeno(1,2,3-cd)pyrene	1.029	0.846	0.500	AVRG	-17.8	
Dibenzo(a,h)anthracene	0.810	0.699	0.400	AVRG	-13.7	
Benzo(g,h,i)perylene	0.880	0.678	0.500	AVRG	-23.0	<-
N-Nitrosodimethylamine	0.942	0.786	0.010	AVRG	-16.6	
Aniline	1.770	1.389	0.010	AVRG	-21.5	<-
Benzidine	0.097	0.166	0.010	AVRG	71.1	<-
Pyridine	1.494	1.326	0.010	AVRG	-11.2	
1-methylnaphthalene	0.494	0.470	0.010	AVRG	-4.8	
Azobenzene (1,2-DP-Hydrazine	1.267	1.170	0.010	AVRG	-7.6	
2,3,4,6-Tetrachlorophenol	0.285	0.308	0.010	AVRG	8.1	

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

WS90 : 00048

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS90 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT6 Cont. Calib. Date: 06/17/13

Init. Calib. Date: 03/05/13 Cont. Calib. Time: 1608

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
1,2,4,5-Tetrachlorobenzene	0.488	0.500	0.010	AVRG	2.4
Total Benzofluoranthenes	0.921	0.845	0.010	AVRG	-8.2
2-Fluorophenol	1.296	1.130	0.010	AVRG	-12.8
Phenol-d5	1.517	1.440	0.010	AVRG	-5.1
2-Chlorophenol-d4	1.282	1.138	0.010	AVRG	-11.2
1,2-Dichlorobenzene-d4	0.902	0.802	0.010	AVRG	-11.1
Nitrobenzene-d5	0.401	0.333	0.010	AVRG	-17.0
2-Fluorobiphenyl	1.262	1.150	0.010	AVRG	-8.9
2,4,6-Tribromophenol	0.158	0.184	0.010	AVRG	16.4
Terphenyl-d14	0.702	0.594	0.010	AVRG	-15.4

<- Exceeds QC limit of 20% D

* RF less than minimum RF

WS90:00019

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS90 Project: NPDES SAMPLING SUPPORT

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

Instrument ID: NT6 Cont. Cal Date: 06/17/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	458117	8.39	1718341	10.42	1010041	13.29
	UPPER LIMIT	916234		3436682		2020082	
	LOWER LIMIT	229058		859170		505020	
	CCAL	513642	7.55	1915863	9.59	1090179	12.43
	UPPER LIMIT		8.05		10.09		12.93
	LOWER LIMIT		7.05		9.09		11.93
01	WS90LCSW1	320422	7.55	1149264	9.59	624306	12.43
02	WS90MBW1	314284	7.55	1133622	9.58	663690	12.42
03	WS90LCSDW1	325965	7.55	1178186	9.59	661024	12.43
04	CL-MH-SPS-20	307676	7.55	1108365	9.58	639232	12.42
05	CL-VT-EFF-20	330460	7.55	1200098	9.59	696067	12.42
06	QC-EB-02-201	347415	7.54	1249197	9.59	722127	12.42
07	QC-EB-03-201	342191	7.55	1224299	9.58	712678	12.42
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
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.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS90 Project: NPDES SAMPLING SUPPORT

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

Instrument ID: NT6 Cont. Cal Date: 06/17/13

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	ICAL MIDPT	1666734		15.66		1675752		19.98		1637524		22.14	
	UPPER LIMIT	3333468				3351504				3275048			
	LOWER LIMIT	833367				837876				818762			
	CCAL	1943321		14.78		2036892		19.05		2298631		21.19	
	UPPER LIMIT			15.28				19.55				21.69	
	LOWER LIMIT			14.28				18.55				20.69	
01	WS90LCSW1	1085910		14.78		1157515		19.05		1340097		21.18	
02	WS90MBW1	1077671		14.77		1230002		19.04		1186200		21.17	
03	WS90LCSDW1	1158110		14.77		1172359		19.04		1347828		21.18	
04	CL-MH-SPS-20	1051666		14.77		1184737		19.04		1218000		21.18	
05	CL-VT-EFF-20	1145667		14.77		1294962		19.04		1316416		21.17	
06	QC-EB-02-201	1187879		14.77		1348024		19.04		1369724		21.17	
07	QC-EB-03-201	1160744		14.77		1315381		19.03		1327254		21.17	
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
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.

WS90:00051

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS90 Project: NPDES SAMPLING SUPPORT

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

Instrument ID: NT6 Cont. Cal Date: 06/17/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	2026355	21.09				
	UPPER LIMIT	4052710					
	LOWER LIMIT	1013178					
	CCAL	2239392	20.24				
	UPPER LIMIT		20.74				
	LOWER LIMIT		19.74				
01	WS90LCSW1	1273869	20.24				
02	WS90MBW1	1324061	20.23				
03	WS90LCSDW1	1353129	20.24				
04	CL-MH-SPS-20	1321454	20.23				
05	CL-VT-EFF-20	1442385	20.23				
06	QC-EB-02-201	1494269	20.23				
07	QC-EB-03-201	1441879	20.23				
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
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.

USGS : 00052

SIM PAH Analysis
Report and Summary QC Forms

ARI Job ID: WS90, WS92

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: CL-MH-SPS-20130605-W**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: WS90A
LIMS ID: 13-12078
Matrix: Water
Data Release Authorized: MW
Reported: 06/13/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/08/13
Date Analyzed: 06/12/13 22:02
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**	**0.020**
91-57-6	**2-Methylnaphthalene**	**0.00072**	**0.010**	**0.016**
90-12-0	**1-Methylnaphthalene**	**0.00088**	**0.010**	**0.010**
208-96-8	Acenaphthylene	0.00081	0.010	< 0.010 U
83-32-9	**Acenaphthene**	**0.00083**	**0.010**	**0.012**
86-73-7	**Fluorene**	**0.0014**	**0.010**	**0.024**
85-01-8	**Phenanthrene**	**0.0010**	**0.010**	**0.059**
120-12-7	Anthracene	0.00058	0.010	< 0.010 U
206-44-0	**Fluoranthene**	**0.00092**	**0.010**	**0.021**
129-00-0	**Pyrene**	**0.00070**	**0.010**	**0.027**
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**	**0.011**
TOTBFA	Total Benzofluoranthenes	0.0025	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	87.0%
d10-2-Methylnaphthalene	75.3%
d14-Dibenzo(a,h)anthracen	78.3%

WS90 : 00054

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: CL-VT-EFF-20130605-W**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: WS90B
LIMS ID: 13-12079
Matrix: Water
Data Release Authorized:
Reported: 06/13/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/08/13
Date Analyzed: 06/12/13 22:31
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**	**0.014**
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**	**0.013**
120-12-7	Anthracene	0.00058	0.010	< 0.010 U
206-44-0	**Fluoranthene**	**0.00092**	**0.010**	**0.013**
129-00-0	**Pyrene**	**0.00070**	**0.010**	**0.015**
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	89.3%
d10-2-Methylnaphthalene	76.3%
d14-Dibenzo(a,h)anthracen	85.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: QC-EB-02-20130605-W**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: WS90C
LIMS ID: 13-12080
Matrix: Water
Data Release Authorized: MW
Reported: 06/13/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/08/13
Date Analyzed: 06/12/13 23:00
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**	**0.11**
91-57-6	**2-Methylnaphthalene**	**0.00072**	**0.010**	**0.040**
90-12-0	**1-Methylnaphthalene**	**0.00088**	**0.010**	**0.022**
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	87.0%
d10-2-Methylnaphthalene	78.0%
d14-Dibenzo(a,h)anthracen	70.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: QC-EB-03-20130605-W**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: WS90D
LIMS ID: 13-12081
Matrix: Water
Data Release Authorized: MW
Reported: 06/13/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/08/13
Date Analyzed: 06/12/13 23:29
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**	**0.11**
91-57-6	**2-Methylnaphthalene**	**0.00072**	**0.010**	**0.039**
90-12-0	**1-Methylnaphthalene**	**0.00088**	**0.010**	**0.022**
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	86.7%
d10-2-Methylnaphthalene	76.7%
d14-Dibenzo(a,h)anthracen	71.7%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WS90-SAIC
Project: NPDES Sampling Support
209977

Client ID	FLN	MNP	DBA	TOT OUT
MB-060813	81.3%	74.0%	83.0%	0
LCS-060813	85.7%	82.0%	88.3%	0
LCSD-060813	88.3%	82.3%	87.7%	0
CL-MH-SPS-20130605-W	87.0%	75.3%	78.3%	0
CL-VT-EFF-20130605-W	89.3%	76.3%	85.0%	0
QC-EB-02-20130605-W	87.0%	78.0%	70.7%	0
QC-EB-03-20130605-W	86.7%	76.7%	71.7%	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: 13-12078 to 13-12081

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: LCS-060813**
Page 1 of 1 **LAB CONTROL SAMPLE**

Lab Sample ID: LCS-060813
LIMS ID: 13-12078
Matrix: Water
Data Release Authorized:
Reported: 06/13/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 06/08/13
Date Analyzed LCS: 06/12/13 19:37
LCSD: 06/12/13 20:06
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	0.231	0.300	77.0%	0.234	0.300	78.0%	1.3%
2-Methylnaphthalene	0.242	0.300	80.7%	0.246	0.300	82.0%	1.6%
1-Methylnaphthalene	0.238	0.300	79.3%	0.239	0.300	79.7%	0.4%
Acenaphthylene	0.244	0.300	81.3%	0.249	0.300	83.0%	2.0%
Acenaphthene	0.234	0.300	78.0%	0.240	0.300	80.0%	2.5%
Fluorene	0.252	0.300	84.0%	0.257	0.300	85.7%	2.0%
Phenanthrene	0.236	0.300	78.7%	0.238	0.300	79.3%	0.8%
Anthracene	0.240	0.300	80.0%	0.247	0.300	82.3%	2.9%
Fluoranthene	0.236	0.300	78.7%	0.248	0.300	82.7%	5.0%
Pyrene	0.241	0.300	80.3%	0.246	0.300	82.0%	2.1%
Benzo(a)anthracene	0.255	0.300	85.0%	0.265	0.300	88.3%	3.8%
Chrysene	0.250	0.300	83.3%	0.255	0.300	85.0%	2.0%
Benzo(b)fluoranthene	0.262	0.300	87.3%	0.266	0.300	88.7%	1.5%
Benzo(k)fluoranthene	0.264	0.300	88.0%	0.266	0.300	88.7%	0.8%
Benzo(a)pyrene	0.234	0.300	78.0%	0.241	0.300	80.3%	2.9%
Indeno(1,2,3-cd)pyrene	0.259	0.300	86.3%	0.260	0.300	86.7%	0.4%
Dibenz(a,h)anthracene	0.267	0.300	89.0%	0.270	0.300	90.0%	1.1%
Benzo(g,h,i)perylene	0.250	0.300	83.3%	0.250	0.300	83.3%	0.0%
Dibenzofuran	0.239	0.300	79.7%	0.246	0.300	82.0%	2.9%
Total Benzofluoranthenes	0.790	0.900	87.8%	0.794	0.900	88.2%	0.5%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-Fluoranthene	85.7%	88.3%
d10-2-Methylnaphthalene	82.0%	82.3%
d14-Dibenzo(a,h)anthracene	88.3%	87.7%

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WS97MBW1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WS90

Project: NPDES SAMPLING SUPPORT

Lab File ID: WS97MB

Date Extracted: 06/08/13

Instrument ID: NT11

Date Analyzed: 06/12/13

Matrix: LIQUID

Time Analyzed: 1908

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WS97LCSW1	WS97LCSW1	WS97SB	06/12/13
02	WS97LCSDW1	WS97LCSDW1	WS97SBD	06/12/13
03	CL-MH-SPS-201306	WS90A	WS90A	06/12/13
04	CL-VT-EFF-201306	WS90B	WS90B	06/12/13
05	QC-EB-02-2013060	WS90C	WS90C	06/12/13
06	QC-EB-03-2013060	WS90D	WS90D	06/12/13
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

WS90:00050

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MB-060813**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-060813
LIMS ID: 13-12078
Matrix: Water
Data Release Authorized:
Reported: 06/13/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/08/13
Date Analyzed: 06/12/13 19:08
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	81.3%
d10-2-Methylnaphthalene	74.0%
d14-Dibenzo(a,h)anthracen	83.0%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT11 Project: NPDES SAMPLING SUPPORT

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	WS97MBW1	WS97MBW1	WS97MB	06/12/13	1908
08	WS97LCSW1	WS97LCSW1	WS97SB	06/12/13	1937
09	WS97LCSDW1	WS97LCSDW1	WS97SBD	06/12/13	2006
10	CL-MH-SPS-201306	WS90A	WS90A	06/12/13	2202
11	CL-VT-EFF-201306	WS90B	WS90B	06/12/13	2231
12	QC-EB-02-2013060	WS90C	WS90C	06/12/13	2300
13	QC-EB-03-2013060	WS90D	WS90D	06/12/13	2329
14					
15					
16					
17					
18					
19					
20					
21					
22					

USGS : 00052

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS90 Project: NPDES SAMPLING SUPPORT

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

WS90 : 00063

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS90 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT11 Cont. Calib. Date: 06/12/13

Init. Calib. Date: 06/12/13 Cont. Calib. Time: 1546

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Naphthalene	0.990	0.974	0.700	AVRG	-1.6
2-Methylnaphthalene	0.605	0.624	0.400	AVRG	3.1
Acenaphthylene	1.543	1.581	0.900	AVRG	2.5
Acenaphthene	1.045	1.038	0.900	AVRG	-0.7
Dibenzofuran	1.549	1.559	0.800	AVRG	0.6
Fluorene	1.105	1.121	0.900	AVRG	1.4
Phenanthrene	1.134	1.104	0.700	AVRG	-2.6
Anthracene	0.961	1.005	0.700	AVRG	4.6
Fluoranthene	1.204	1.186	0.600	AVRG	-1.5
Pyrene	1.547	1.449	0.600	AVRG	-6.3
Benzo(a)anthracene	1.275	1.271	0.800	AVRG	-0.3
Chrysene	1.443	1.402	0.700	AVRG	-2.8
Benzo(b)fluoranthene	1.499	1.502	0.700	AVRG	0.2
Benzo(k)fluoranthene	1.541	1.540	0.700	AVRG	-0.1
Benzo(j)fluoranthene	1.734	1.689	0.010	AVRG	-2.6
Benzo(a)pyrene	1.246	1.260	0.700	AVRG	1.1
Indeno(1,2,3-cd)pyrene	1.657	1.708	0.500	AVRG	3.1
Dibenzo(a,h)anthracene	1.269	1.333	0.400	AVRG	5.0
Benzo(g,h,i)perylene	1.482	1.463	0.500	AVRG	-1.3
1-methylnaphthalene	0.620	0.630	0.010	AVRG	1.6
Perylene	1.465	1.445	0.010	AVRG	-1.4
2-Methylnaphthalene-d10	0.606	0.617	0.010	AVRG	1.8
Dibenzo(a,h)anthracene-d14	1.101	1.158	0.010	AVRG	5.2
Fluoranthene-d10	1.033	1.060	0.010	AVRG	2.6

<- 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: WS90 Project: NPDES SAMPLING SUPPORT

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

Instrument ID: NT11 Cont. Cal Date: 06/12/13

		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	270479	5.98	156669	8.94	244223	11.57
	UPPER LIMIT		6.48		9.44		12.07
	LOWER LIMIT		5.48		8.44		11.07
01	WS97MBW1	270075	5.98	147902	8.94	250461	11.57
02	WS97LCSW1	269794	5.98	156461	8.94	251349	11.57
03	WS97LCSDW1	283697	5.98	162216	8.94	264618	11.57
04	CL-MH-SPS-20	285000	5.98	167156	8.94	275580	11.57
05	CL-VT-EFF-20	284887	5.98	168729	8.94	276129	11.57
06	QC-EB-02-201	294815	5.98	178304	8.94	280260	11.57
07	QC-EB-03-201	288239	5.98	173065	8.94	272368	11.57
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
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.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS90 Project: NPDES SAMPLING SUPPORT

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

Instrument ID: NT11 Cont. Cal Date: 06/12/13

		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	194330	16.28	162839	18.81		
	UPPER LIMIT		16.78		19.31		
	LOWER LIMIT		15.78		18.31		
01	WS97MBW1	176331	16.28	141530	18.81		
02	WS97LCSW1	187674	16.28	148361	18.81		
03	WS97LCSDW1	202470	16.28	163502	18.81		
04	CL-MH-SPS-20	207520	16.28	177029	18.81		
05	CL-VT-EFF-20	208482	16.28	178699	18.81		
06	QC-EB-02-201	211800	16.28	177409	18.81		
07	QC-EB-03-201	203221	16.27	170713	18.81		
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
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: WS90, WS92

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: CL-MH-SPS-20130605-W**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: WS90A
LIMS ID: 13-12078
Matrix: Water
Data Release Authorized:
Reported: 06/21/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/11/13
Date Analyzed: 06/18/13 13:21
Instrument/Analyst: ECD6/JGR
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: Yes

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	58.8%
Tetrachlorometaxylene	59.0%

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
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: CL-VT-EFF-20130605-W**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: WS90B
LIMS ID: 13-12079
Matrix: Water
Data Release Authorized:
Reported: 06/21/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/11/13
Date Analyzed: 06/18/13 13:39
Instrument/Analyst: ECD6/JGR
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: Yes

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	68.0%
Tetrachlorometaxylene	62.2%

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: WS90-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP	TCMX	TOT OUT
MB-061113	48.2%	63.8%	0
LCS-061113	52.2%	59.5%	0
LCSD-061113	66.0%	57.5%	0
CL-MH-SPS-20130605-W	58.8%	59.0%	0
CL-VT-EFF-20130605-W	68.0%	62.2%	0

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

Prep Method: SW3510C
Log Number Range: 13-12078 to 13-12079

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: LCS-061113**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-061113 QC Report No: WS90-SAIC
LIMS ID: 13-12078 Project: NPDES Sampling Support
Matrix: Water 209977
Data Release Authorized: Date Sampled: 06/05/13
Reported: 06/21/13 Date Received: 06/05/13

Date Extracted LCS/LCSD: 06/11/13 Sample Amount LCS: 500 mL
LCSD: 500 mL
Date Analyzed LCS: 06/18/13 12:28 Final Extract Volume LCS: 5.0 mL
LCSD: 06/18/13 12:46 LCSD: 5.0 mL
Instrument/Analyst LCS: ECD6/JGR Dilution Factor LCS: 1.00
LCSD: ECD6/JGR LCSD: 1.00
GPC Cleanup: No Sulfur Cleanup: Yes
Florisil Cleanup: No Silica Gel: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
alpha-BHC	0.171	0.200	85.5%	0.170	0.200	85.0%	0.6%
beta-BHC	0.176	0.200	88.0%	0.176	0.200	88.0%	0.0%
delta-BHC	0.196	0.200	98.0%	0.192	0.200	96.0%	2.1%
gamma-BHC (Lindane)	0.180	0.200	90.0%	0.180	0.200	90.0%	0.0%
Heptachlor	0.168	0.200	84.0%	0.165	0.200	82.5%	1.8%
Aldrin	0.164	0.200	82.0%	0.162	0.200	81.0%	1.2%
Heptachlor Epoxide	0.201	0.200	100%	0.206	0.200	103%	2.5%
Endosulfan I	0.193	0.200	96.5%	0.196	0.200	98.0%	1.5%
Dieldrin	0.397	0.400	99.2%	0.405	0.400	101%	2.0%
4,4'-DDE	0.434	0.400	108%	0.426	0.400	106%	1.9%
Endrin	0.370	0.400	92.5%	0.370	0.400	92.5%	0.0%
Endosulfan II	0.357	0.400	89.2%	0.353	0.400	88.2%	1.1%
4,4'-DDD	0.329	0.400	82.2%	0.328	0.400	82.0%	0.3%
Endosulfan Sulfate	0.352	0.400	88.0%	0.335	0.400	83.8%	4.9%
4,4'-DDT	0.341	0.400	85.2%	0.329	0.400	82.2%	3.6%
Methoxychlor	1.61	2.00	80.5%	1.57	2.00	78.5%	2.5%
Endrin Ketone	0.342	0.400	85.5%	0.332	0.400	83.0%	3.0%
Endrin Aldehyde	0.273	0.400	68.2%	0.268	0.400	67.0%	1.8%
trans-Chlordane	0.197	0.200	98.5%	0.198	0.200	99.0%	0.5%
cis-Chlordane	0.194	0.200	97.0%	0.196	0.200	98.0%	1.0%
Hexachlorobenzene	0.153	0.200	76.5%	0.150	0.200	75.0%	2.0%
Hexachlorobutadiene	0.0966	0.200	48.3%	0.0955	0.200	47.8%	1.1%

Pest/PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	52.2%	66.0%
Tetrachlorometaxylene	59.5%	57.5%

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

FORM 4
PESTICIDE METHOD BLANK SUMMARY

BLANK NO.

WS90MBW1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WS90
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WS90MBW1
Lab File ID: 0618A007

Date Extracted: 06/11/13
Matrix: LIQUID

Date Analyzed: 06/18/13
Instrument ID: ECD6

Time Analyzed: 1210
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	WS90LCSW1	WS90LCSW1	06/18/13
02	WS90LCSDW1	WS90LCSDW1	06/18/13
03	CL-MH-SPS-20130605-	WS90A	06/18/13
04	CL-VT-EFF-20130605-	WS90B	06/18/13

ALL RUNS ARE DUAL COLUMN

WS90 : 000072

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: MB-061113**
Extraction Method: SW3510C **METHOD BLANK**

Page 1 of 1
Lab Sample ID: MB-061113 QC Report No: WS90-SAIC
LIMS ID: 13-12078 Project: NPDES Sampling Support
Matrix: Water 209977
Data Release Authorized: Date Sampled: NA
Reported: 06/21/13 Date Received: NA

Date Extracted: 06/11/13 Sample Amount: 500 mL
Date Analyzed: 06/18/13 12:10 Final Extract Volume: 5.0 mL
Instrument/Analyst: ECD6/JGR Dilution Factor: 1.00
GPC Cleanup: No Silica Gel: Yes
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	48.2%
Tetrachlorometaxylene	63.8%

6D

8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS90 Project: NPDES

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

Calibration Date: 05/14/13

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	4.33	4.33	4.33	4.33	4.28	4.33	4.33	4.32	4.23	4.33
beta-BHC	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.59	4.69
delta-BHC	4.86	4.86	4.86	4.86	4.81	4.86	4.86	4.85	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	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.25	5.35
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	6.90	6.90	6.90	6.90	6.90	6.90	6.90	6.90	6.85	6.95
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	6.99	6.99	6.99	6.99	6.99	6.99	6.99	6.99	6.94	7.04
Methoxychlor	7.42	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	7.92	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	6.12	6.12	6.12	6.12	6.12	6.12	6.12	6.12	6.07	6.17
Hexachlorobutadiene	2.34	2.34	2.34	2.34	2.31	2.34	2.34	2.34	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	3.84	3.84	3.84	3.84	3.80	3.84	3.83	3.83	3.75	3.85
Decachlorobiphenyl	8.77	8.77	8.77	8.77	8.77	8.77	8.77	8.77	8.72	8.82

WS90 : 000714

6D

8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS90 Project: NPDES

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

Calibration Date: 05/14/13

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	4.76	4.76	4.76	4.75	4.71	4.75	4.75	4.75	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)	5.06	5.06	5.06	5.06	5.06	5.06	5.06	5.06	5.01	5.11
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	7.36	7.36	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	7.54	7.54	7.49	7.59
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	8.14	8.14	8.14	8.14	8.09	8.14	8.13	8.13	8.04	8.14
4,4'-DDT	7.75	7.75	7.75	7.75	7.69	7.74	7.74	7.74	7.64	7.74
Methoxychlor	8.33	8.33	8.33	8.33	8.28	8.33	8.33	8.32	8.23	8.33
Endrin ketone	8.63	8.63	8.63	8.63	8.58	8.63	8.63	8.62	8.53	8.63
Endrin aldehyde	7.90	7.90	7.89	7.89	7.84	7.89	7.89	7.89	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	4.64	4.64	4.64	4.63	4.58	4.63	4.63	4.63	4.53	4.63
Tetrachloro-m-xylene	4.17	4.17	4.17	4.17	4.13	4.17	4.17	4.16	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.: WS90 Project: NPDES

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

Calibration Date: 05/14/13

COMPOUND	CALIBRATION FACTORS LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	R^2 %RSD
alpha-BHC	1.5968	1.5392	1.5872	1.6901	1.7297	1.7443	2.0426	1.7043	9.9
beta-BHC	0.7301	0.6823	0.6738	0.6482	0.6413	0.6319	0.7220	0.6756	5.7
delta-BHC	1.2786	1.2619	1.3188	1.4477	1.4389	1.4775	1.7328	1.4223	11.4
gamma-BHC (Lindane)	1.3776	1.3221	1.3739	1.4737	1.5045	1.5173	1.7699	1.4770	10.1
Heptachlor	1.4402	1.3545	1.3699	1.4447	1.4364	1.4095	1.5937	1.4356	5.4
Aldrin	1.3391	1.3219	1.3589	1.4306	1.4442	1.4284	1.6236	1.4210	7.2
Heptachlor epoxide b	1.3188	1.2294	1.2355	1.2904	1.2630	1.2402	1.3930	1.2815	4.6
Endosulfan I	1.3372	1.2241	1.1948	1.2064	1.1670	1.1231	1.2589	1.2159	5.6
Dieldrin	1.2814	1.2331	1.2629	1.3180	1.2916	1.2529	1.4056	1.2922	4.4
4,4'-DDE	1.0790	0.9920	0.9834	1.0026	1.0023	1.0038	1.1801	1.0347	6.9
Endrin	1.0004	0.9514	0.9880	1.0588	1.0584	1.0706	1.2004	1.0468	7.7
Endosulfan II	1.1252	1.0889	1.0545	1.1510	1.1162	1.1303	1.2764	1.1346	6.2
4,4'-DDD	1.2252	1.1470	1.1595	1.2032	1.1608	1.1774	1.3268	1.2000	5.2
Endosulfan sulfate	1.0443	0.9656	0.9745	1.0088	0.9846	1.0061	1.1424	1.0180	6.0
4,4'-DDT	1.0032	0.9598	0.9927	1.0672	1.0551	1.1004	1.2648	1.0633	9.5
Methoxychlor	0.5427	0.5024	0.4926	0.4960	0.4752	0.4831	0.5639	0.5080	6.4
Endrin ketone	1.4418	1.2742	1.2510	1.2600	1.2054	1.2244	1.3916	1.2926	6.9
Endrin aldehyde	1.0145	0.9294	0.9220	0.9490	0.9087	0.9217	1.0364	0.9545	5.3
gamma-Chlordane	1.3433	1.2904	1.3019	1.3866	1.3786	1.3702	1.5490	1.3743	6.2
alpha-Chlordane	1.2651	1.1864	1.2049	1.2783	1.2847	1.2776	1.4501	1.2782	6.7
Hexachlorobutadiene	1.7932	1.6939	1.7496	1.7815	1.7512	1.7130	1.9878	1.7814	5.5
Hexachlorobenzene	1.4975	1.3905	1.3345	1.3248	1.2691	1.2270	1.3907	1.3477	6.6
Tetrachloro-m-xylene	1.0573	1.0250	1.0491	1.0957	1.1043	1.0784	1.2256	1.0908	6.0
Decachlorobiphenyl	1.3691	1.1703	1.1864	1.0954	1.0150	0.9957	1.1297	1.1374	11.0

6E

8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS90 Project: NPDES

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

Calibration Date: 05/14/13

COMPOUND	CALIBRATION FACTORS LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	R^2 %RSD
alpha-BHC	1.5964	1.6078	1.7179	1.8556	1.8716	1.8406	2.0861	1.7966	9.6
beta-BHC	0.6754	0.6491	0.6617	0.6966	0.7003	0.6895	0.7649	0.6911	5.4
delta-BHC	1.2504	1.2562	1.3640	1.5177	1.5783	1.5735	1.7885	1.4755	13.3
gamma-BHC (Lindane)	1.4128	1.3982	1.4757	1.5963	1.6109	1.5910	1.8271	1.5588	9.5
Heptachlor	1.5214	1.4662	1.5073	1.5651	1.5171	1.4171	1.4920	1.4980	3.1
Aldrin	1.3673	1.3404	1.3839	1.4765	1.4663	1.3818	1.4814	1.4139	4.2
Heptachlor epoxide b	1.3111	1.1809	1.2247	1.2731	1.2517	1.1802	1.2468	1.2384	3.8
Endosulfan I	1.1289	1.0916	1.1276	1.1988	1.1753	1.1147	1.1712	1.1440	3.4
Dieldrin	1.2194	1.2005	1.1957	1.2291	1.1560	1.0591	1.1010	1.1658	5.5
4,4'-DDE	1.2420	1.2138	1.2482	1.2889	1.2055	1.1204	1.1599	1.2112	4.7
Endrin	1.5490	1.4864	1.5394	1.5891	1.5221	1.4268	1.4967	1.5156	3.4
Endosulfan II	1.8235	1.7385	1.7960	1.8865	1.7723	1.6578	1.7732	1.7782	4.0
4,4'-DDD	1.8815	1.7757	1.8133	1.8367	1.7370	1.6484	1.7986	1.7844	4.2
Endosulfan sulfate	1.4746	1.3972	1.4421	1.4952	1.4478	1.4024	1.5233	1.4546	3.2
4,4'-DDT	1.4079	1.3584	1.4277	1.5130	1.4495	1.4659	1.6656	1.4697	6.7
Methoxychlor	0.6750	0.6230	0.6058	0.5795	0.5179	0.4760	0.4876	0.5664	13.2
Endrin ketone	1.7032	1.5827	1.5941	1.6097	1.5259	1.4661	1.6076	1.5842	4.7
Endrin aldehyde	1.5133	1.4032	1.4138	1.4303	1.3655	1.3052	1.4070	1.4055	4.5
gamma-Chlordane	1.2795	1.2138	1.2586	1.3396	1.3316	1.2796	1.3829	1.2979	4.4
alpha-Chlordane	1.1495	1.1150	1.1611	1.2432	1.2285	1.1863	1.2871	1.1958	5.0
Hexachlorobutadiene	1.6005	1.4941	1.4733	1.5378	1.4342	1.4100	1.5669	1.5024	4.6
Hexachlorobenzene	1.9113	1.8141	1.8472	1.9384	1.8917	1.8032	1.9964	1.8860	3.7
Tetrachloro-m-xylene	1.3675	1.3120	1.3324	1.3607	1.2884	1.2131	1.2297	1.3005	4.7
Decachlorobiphenyl	1.8027	1.6202	1.5938	1.5991	1.5250	1.4884	1.6834	1.6161	6.4

WS90 : 00077

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date: 18-JUN-2013 11:14 Init. Calib. Date: 14-MAY-2013

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

COMPOUND	RT	AREA
4,4'-DDE	6.180	93227
Endrin	6.696	6795225
4,4'-DDD	6.737	518044
4,4'-DDT	6.994	6507421
Endrin ketone	7.924	416698
Endrin aldehyde	7.279	174367

DDT Percent Breakdown = 8.6 %
((93227+518044) * 100)/(93227+518044+6507421)

Endrin Percent Breakdown = 8.0 %
((174367+416698) * 100)/(174367+416698+6795225)

JL 06/21/13

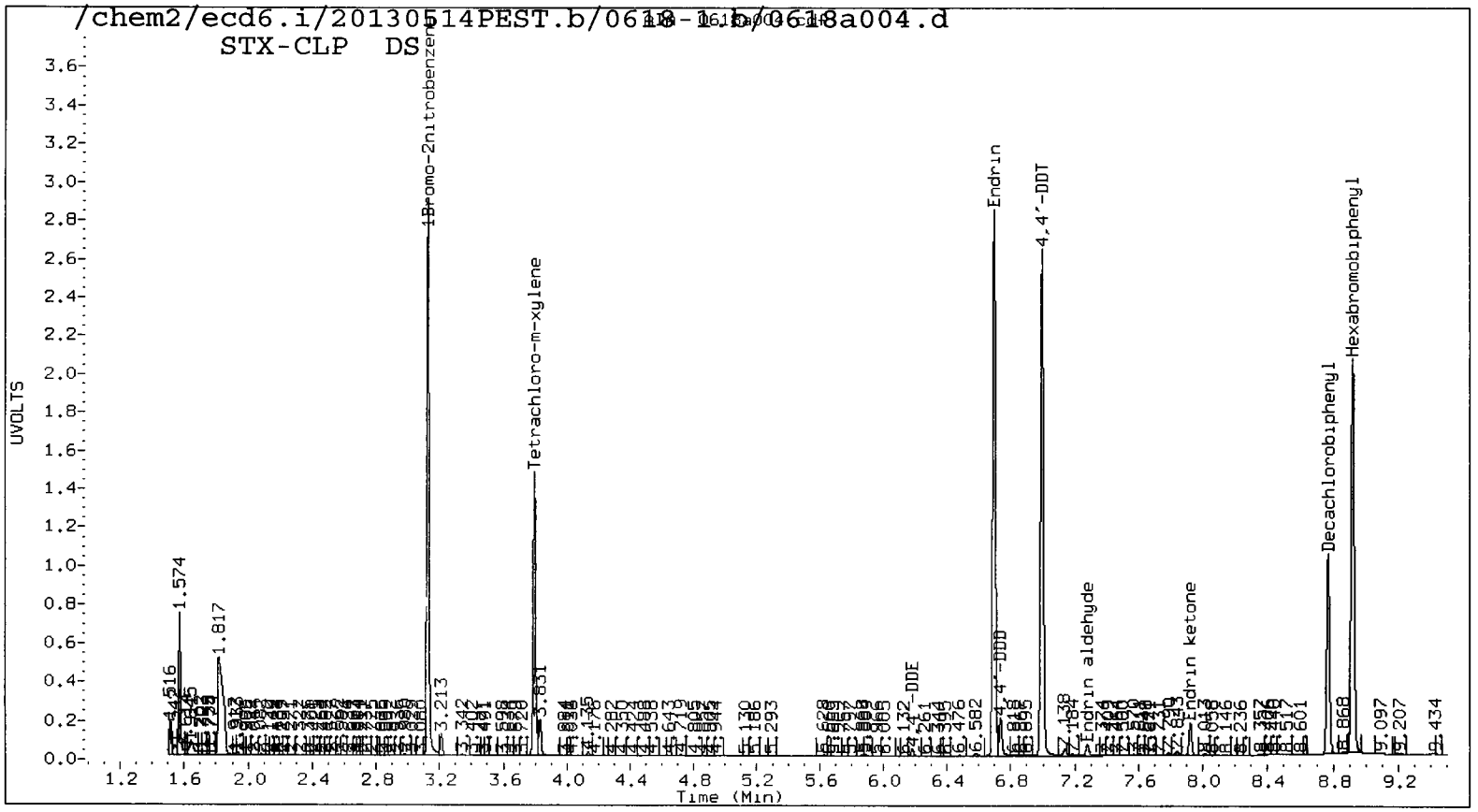
GC Column: STX-CLP2 ID: 0.53(mm)

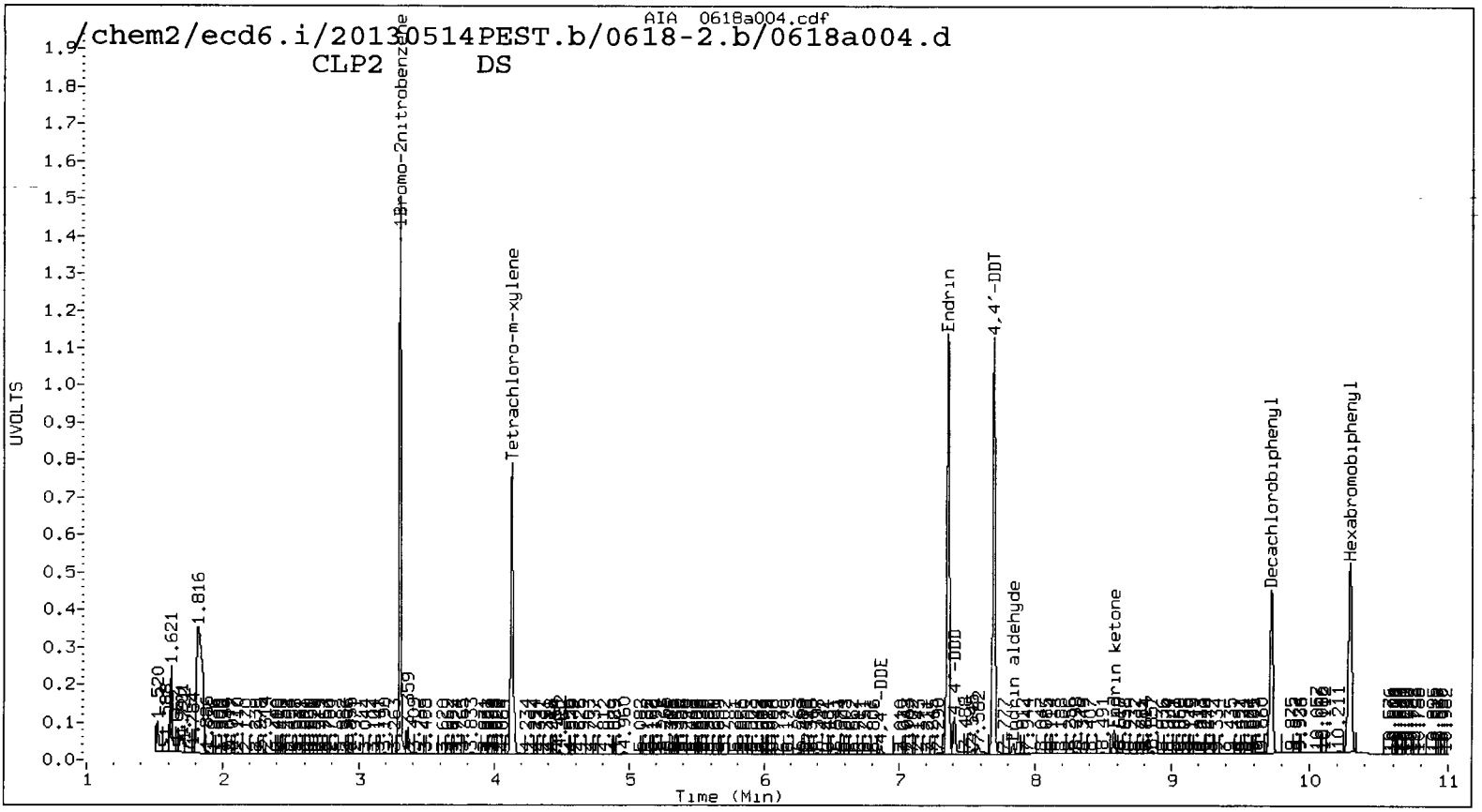
COMPOUND	RT	AREA
4,4'-DDE	6.867	498766
Endrin	7.354	28249586
4,4'-DDD	7.405	2780502
4,4'-DDT	7.693	26766115
Endrin ketone	8.576	1502192
Endrin aldehyde	7.840	746791

DDT Percent Breakdown = 10.9 %
((498766+2780502) * 100)/(498766+2780502+26766115)

Endrin Percent Breakdown = 7.4 %
((746791+1502192) * 100)/(746791+1502192+28249586)

Form VII Pest-1


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a004.d
STX-CLP DS
UVOLTS
Time (Min)
1.574
1.817
3.213
3.831
Bromo-2nitrobenzene
Tetrachloro-m-xylene
4,4'-DDE
4,4'-DDD
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0618a004.cdf
/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a004.d
CLP2 DS
UVOLTS
Time (Min)
1.621
1.816
Bromo-2nitrobenzene
Tetrachloro-m-xylene
4,4'-DDE
4,4'-DDD
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.: WS90 Project: NPDES

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

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/18/13,1132

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
alpha-BHC	4.28	4.23	4.33	23.6	20.0	17.9	
beta-BHC	4.64	4.59	4.69	21.9	20.0	9.6	
delta-BHC	4.81	4.76	4.86	23.7	20.0	18.4	
gamma-BHC (Lindane)	4.57	4.52	4.62	24.4	20.0	22.0	<-
Heptachlor	5.01	4.96	5.06	23.2	20.0	16.2	
Aldrin	5.31	5.25	5.35	24.2	20.0	20.9	<-
Heptachlor epoxide b	5.88	5.83	5.93	24.2	20.0	20.9	<-
Endosulfan I	6.26	6.21	6.31	23.5	20.0	17.3	
Dieldrin	6.48	6.43	6.53	47.6	40.0	19.1	
4,4'-DDE	6.18	6.13	6.23	43.2	40.0	8.0	
Endrin	6.70	6.65	6.75	46.0	40.0	14.9	
Endosulfan II	6.90	6.85	6.95	41.8	40.0	4.4	
4,4'-DDD	6.74	6.69	6.79	40.0	40.0	0.1	
Endosulfan sulfate	7.67	7.62	7.72	41.4	40.0	3.4	
4,4'-DDT	6.99	6.94	7.04	42.1	40.0	5.2	
Methoxychlor	7.42	7.37	7.47	196.2	200.0	-1.9	
Endrin ketone	7.92	7.88	7.98	40.8	40.0	2.1	
Endrin aldehyde	7.28	7.23	7.33	38.5	40.0	-3.8	
gamma-Chlordane	6.00	5.95	6.05	23.5	20.0	17.5	
alpha-Chlordane	6.12	6.07	6.17	24.2	20.0	21.1	<-
Hexachlorobutadiene	2.31	2.26	2.36	22.5	20.0	12.4	
Hexachlorobenzene	4.14	4.09	4.19	21.9	20.0	9.3	
Tetrachloro-m-xylene	3.80	3.75	3.85	46.8	40.0	17.0	
Decachlorobiphenyl	8.77	8.72	8.82	37.6	40.0	-6.0	

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS90 Project: NPDES

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

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/18/13,1132

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	24.0	20.0	20.2	<-
beta-BHC	5.14	5.09	5.19	24.9	20.0	24.5	<-
delta-BHC	5.45	5.40	5.50	24.8	20.0	23.8	<-
gamma-BHC (Lindane)	5.06	5.01	5.11	24.0	20.0	20.0	
Heptachlor	5.53	5.48	5.58	23.8	20.0	18.8	
Aldrin	5.87	5.82	5.92	25.0	20.0	25.2	<-
Heptachlor epoxide b	6.42	6.37	6.47	25.7	20.0	28.4	<-
Endosulfan I	6.81	6.76	6.86	24.8	20.0	24.1	<-
Dieldrin	7.07	7.02	7.12	47.7	40.0	19.2	
4,4'-DDE	6.87	6.82	6.92	46.3	40.0	15.7	
Endrin	7.35	7.31	7.41	43.9	40.0	9.7	
Endosulfan II	7.54	7.49	7.59	40.6	40.0	1.5	
4,4'-DDD	7.41	7.36	7.46	40.5	40.0	1.3	
Endosulfan sulfate	8.09	8.04	8.14	40.1	40.0	0.2	
4,4'-DDT	7.69	7.64	7.74	42.0	40.0	4.9	
Methoxychlor	8.28	8.23	8.33	189.7	200.0	-5.1	
Endrin ketone	8.58	8.53	8.63	38.7	40.0	-3.3	
Endrin aldehyde	7.84	7.79	7.89	37.8	40.0	-5.6	
gamma-Chlordane	6.60	6.55	6.65	24.8	20.0	24.0	<-
alpha-Chlordane	6.74	6.69	6.79	24.9	20.0	24.4	<-
Hexachlorobutadiene	2.47	2.42	2.52	16.9	20.0	-15.4	
Hexachlorobenzene	4.58	4.53	4.63	23.7	20.0	18.4	
Tetrachloro-m-xylene	4.13	4.08	4.18	45.8	40.0	14.5	
Decachlorobiphenyl	9.72	9.67	9.77	40.7	40.0	1.8	

WS90 : 00281

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date: 18-JUN-2013 15:48 Init. Calib. Date: 14-MAY-2013

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

COMPOUND	RT	AREA
4,4'-DDE	6.179	150258
Endrin	6.695	7352110
4,4'-DDD	6.736	571292
4,4'-DDT	6.994	7136078
Endrin ketone	7.923	483422
Endrin aldehyde	7.278	212956

DDT Percent Breakdown = 9.2 %
((150258+571292) * 100)/(150258+571292+7136078)

Endrin Percent Breakdown = 8.7 %
((212956+483422) * 100)/(212956+483422+7352110)

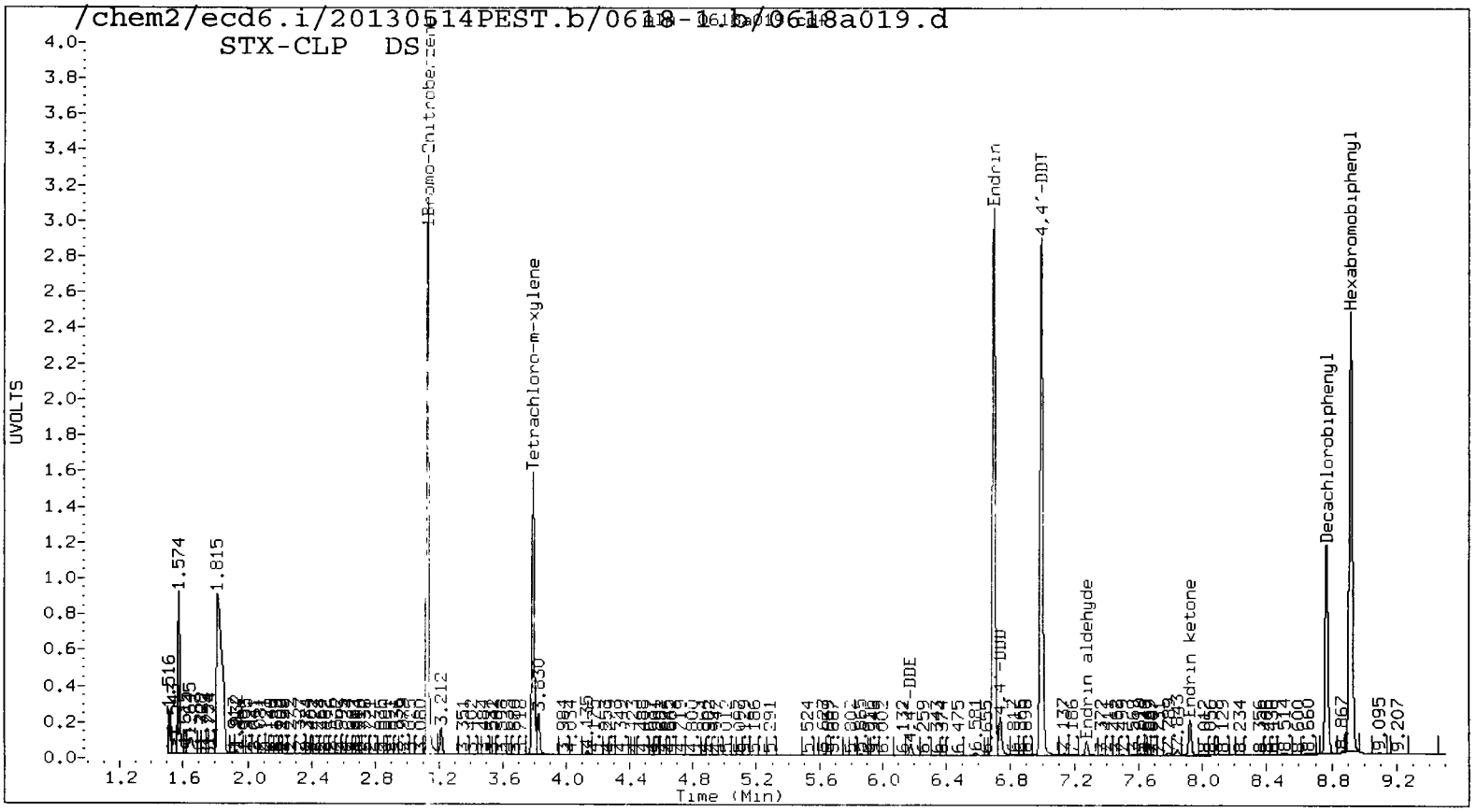
GC Column: STX-CLP2 ID: 0.53(mm)

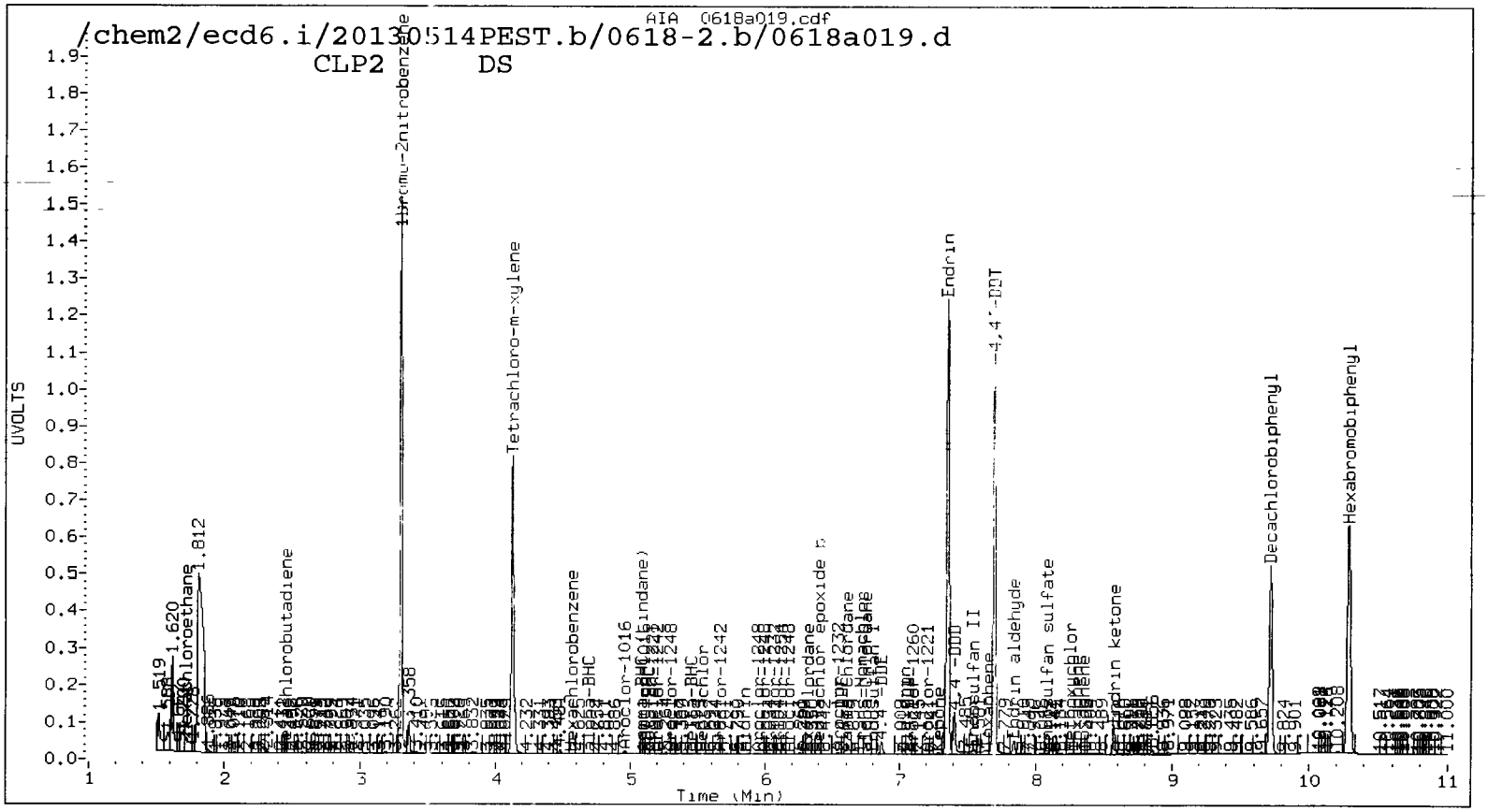
COMPOUND	RT	AREA
4,4'-DDE	6.867	797984
Endrin	7.353	30655540
4,4'-DDD	7.404	3084167
4,4'-DDT	7.692	26235149
Endrin ketone	8.574	1835868
Endrin aldehyde	7.840	979815

DDT Percent Breakdown = 12.9 %
((797984+3084167) * 100)/(797984+3084167+26235149)

Endrin Percent Breakdown = 8.4 %
((979815+1835868) * 100)/(979815+1835868+30655540)

Form VII Pest-1


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a019.d
STX-CLP DS
UVOLTS
Time (Min)
1.574
1.815
3.212
3.830
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0618a019.cdf
/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a019.d
CLP2 DS
UVOLTS
Time (Min)
1.812
Tetrachloro-m-xylene
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.: WS90 Project: NPDES

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

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/18/13,1606

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	24.3	20.0	21.6	<-
beta-BHC	5.13	5.09	5.19	25.0	20.0	25.0	<-
delta-BHC	5.45	5.40	5.50	25.0	20.0	24.9	<-
gamma-BHC (Lindane)	5.06	5.01	5.11	24.2	20.0	21.0	<-
Heptachlor	5.53	5.48	5.58	24.0	20.0	19.8	
Aldrin	5.86	5.82	5.92	25.2	20.0	25.8	<-
Heptachlor epoxide b	6.42	6.37	6.47	26.4	20.0	31.9	<-
Endosulfan I	6.81	6.76	6.86	25.5	20.0	27.4	<-
Dieldrin	7.06	7.02	7.12	49.6	40.0	24.0	<-
4,4'-DDE	6.87	6.82	6.92	47.4	40.0	18.4	
Endrin	7.35	7.31	7.41	43.2	40.0	8.1	
Endosulfan II	7.54	7.49	7.59	40.5	40.0	1.3	
4,4'-DDD	7.40	7.36	7.46	39.7	40.0	-0.6	
Endosulfan sulfate	8.08	8.04	8.14	41.0	40.0	2.5	
4,4'-DDT	7.69	7.64	7.74	42.8	40.0	6.9	
Methoxychlor	8.27	8.23	8.33	186.2	200.0	-6.9	
Endrin ketone	8.58	8.53	8.63	39.7	40.0	-0.9	
Endrin aldehyde	7.84	7.79	7.89	38.3	40.0	-4.3	
gamma-Chlordane	6.60	6.55	6.65	25.4	20.0	27.1	<-
alpha-Chlordane	6.74	6.69	6.79	25.6	20.0	28.1	<-
Hexachlorobutadiene	2.47	2.42	2.52	16.5	20.0	-17.4	
Hexachlorobenzene	4.58	4.53	4.63	23.8	20.0	18.8	
Tetrachloro-m-xylene	4.12	4.08	4.18	45.8	40.0	14.5	
Decachlorobiphenyl	9.72	9.67	9.77	41.4	40.0	3.5	

WS90 : 00284

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS90 Project: NPDES

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

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/18/13,1606

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
alpha-BHC	4.28	4.23	4.33	23.4	20.0	17.1	
beta-BHC	4.64	4.59	4.69	21.7	20.0	8.4	
delta-BHC	4.81	4.76	4.86	23.3	20.0	16.6	
gamma-BHC (Lindane)	4.56	4.52	4.62	24.2	20.0	20.8	<-
Heptachlor	5.01	4.96	5.06	23.2	20.0	16.0	
Aldrin	5.30	5.25	5.35	23.8	20.0	19.0	
Heptachlor epoxide b	5.88	5.83	5.93	24.0	20.0	20.0	
Endosulfan I	6.25	6.21	6.31	23.2	20.0	15.8	
Dieldrin	6.48	6.43	6.53	46.9	40.0	17.2	
4,4'-DDE	6.18	6.13	6.23	42.0	40.0	5.1	
Endrin	6.69	6.65	6.75	45.9	40.0	14.7	
Endosulfan II	6.90	6.85	6.95	41.0	40.0	2.5	
4,4'-DDD	6.73	6.69	6.79	39.6	40.0	-1.1	
Endosulfan sulfate	7.67	7.62	7.72	41.5	40.0	3.7	
4,4'-DDT	6.99	6.94	7.04	42.9	40.0	7.1	
Methoxychlor	7.42	7.37	7.47	198.4	200.0	-0.8	
Endrin ketone	7.92	7.88	7.98	41.0	40.0	2.5	
Endrin aldehyde	7.28	7.23	7.33	38.1	40.0	-4.6	
gamma-Chlordane	6.00	5.95	6.05	23.3	20.0	16.5	
alpha-Chlordane	6.12	6.07	6.17	23.9	20.0	19.6	
Hexachlorobutadiene	2.31	2.26	2.36	22.5	20.0	12.7	
Hexachlorobenzene	4.14	4.09	4.19	21.5	20.0	7.4	
Tetrachloro-m-xylene	3.79	3.75	3.85	46.3	40.0	15.7	
Decachlorobiphenyl	8.77	8.72	8.82	37.8	40.0	-5.5	

USGS 00095

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS90 Project: NPDES

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

Init. Calib. Date: 05/14/13

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

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	5500669	3.162	5319006	8.997
	UPPER LIMIT	11001338	3.212	10638012	9.047
	LOWER LIMIT	2750334	3.112	2659503	8.947

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		DS	05/14/13	1417	5564401	3.162	5015229	8.993
02		INDAE	05/14/13	1437	5500669	3.162	5319006	8.997
03		INDAA	05/14/13	1457	5276720	3.162	5051117	8.998
04		INDAB	05/14/13	1517	5534770	3.162	5379091	8.998
05		INDAC	05/14/13	1537	5478422	3.161	5322227	8.999
06		INDAD	05/14/13	1556	5395940	3.160	5185525	8.998
07		INDAF	05/14/13	1616	5385380	3.161	5022010	8.999
08		INDAG	05/14/13	1634	4447256	3.160	4183112	8.999
09	ZZZZZ	ZZZZZ	05/14/13	1654	5229139	3.162	5072678	9.001
10		TOXAPH	05/14/13	1712	5170972	3.160	5171544	8.999
11		DS	06/18/13	1114	5311960	3.127	5356704	8.919*
12		INDAE	06/18/13	1132	4928229	3.128	5175154	8.920*
13		TOXAPH	06/18/13	1152	5774499	3.128	6439257	8.922*
14	WS90MBW1	WS90MBW1	06/18/13	1210	6837396	3.126	7147800	8.918*
15	WS90LCSW1	WS90LCSW1	06/18/13	1228	7142940	3.127	7311519	8.918*
16	WS90LCSDW1	WS90LCSDW1	06/18/13	1246	7623637	3.126	7771454	8.917*
17	ZZZZZ	ZZZZZ	06/18/13	1303	5976130	3.126	6049532	8.918*
18	CL-MH-SPS-20	WS90A	06/18/13	1321	6636100	3.126	6735705	8.917*
19	CL-VT-EFF-20	WS90B	06/18/13	1339	6749563	3.126	6905449	8.917*
20		DS	06/18/13	1548	5779804	3.126	6405594	8.918*
21		INDAE	06/18/13	1606	5270968	3.127	5535875	8.918*
22		TOXAPH	06/18/13	1624	5808987	3.126	6374042	8.918*

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.: WS90 Project: NPDES

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

Init. Calib. Date: 05/14/13

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

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	29060499	3.331	16515704	10.370
	UPPER LIMIT	58120998	3.381	33031408	10.421
	LOWER LIMIT	14530250	3.281	8257852	10.320

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		DS	05/14/13	1417	27868012	3.331	15069896	10.368
02		INDAE	05/14/13	1437	29060499	3.331	16515704	10.370
03		INDAA	05/14/13	1457	28661245	3.331	16075431	10.370
04		INDAB	05/14/13	1517	30201103	3.331	17146317	10.371
05		INDAC	05/14/13	1537	29972511	3.330	16795593	10.372
06		INDAD	05/14/13	1556	29160968	3.329	16527116	10.370
07		INDAF	05/14/13	1616	29405183	3.330	16433920	10.372
08		INDAG	05/14/13	1634	24971444	3.329	13819406	10.371
09	ZZZZZ	ZZZZZ	05/14/13	1654	29203550	3.331	16453002	10.372
10		TOXAPH	05/14/13	1712	29085221	3.329	16639283	10.371
11		DS	06/18/13	1114	28282920	3.297	17107079	10.287*
12		INDAE	06/18/13	1132	25203156	3.298	15873251	10.287*
13		TOXAPH	06/18/13	1152	27844917	3.297	18278161	10.288*
14	WS90MBW1	WS90MBW1	06/18/13	1210	29285630	3.296	19988398	10.285*
15	WS90LCSW1	WS90LCSW1	06/18/13	1228	29590651	3.297	19506327	10.286*
16	WS90LCSDW1	WS90LCSDW1	06/18/13	1246	31146105	3.297	20932018	10.285*
17	ZZZZZ	ZZZZZ	06/18/13	1303	25909496	3.296	17405065	10.285*
18	CL-MH-SPS-20	WS90A	06/18/13	1321	27855581	3.296	18613286	10.284*
19	CL-VT-EFF-20	WS90B	06/18/13	1339	29955195	3.297	20439039	10.284*
20		DS	06/18/13	1548	29015614	3.296	20979641	10.285*
21		INDAE	06/18/13	1606	26872349	3.297	18281546	10.286*
22		TOXAPH	06/18/13	1624	29086569	3.297	20610335	10.285*

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: WS90, WS92

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082A
Extraction Method: SW3510C
Page 1 of 1

Sample ID: QC-EB-03-20130605-W
SAMPLE

Lab Sample ID: WS90D
LIMS ID: 13-12081
Matrix: Water
Data Release Authorized:
Reported: 06/17/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/11/13
Date Analyzed: 06/15/13 16:17
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

CAS Number	Analyte	DL	LOQ	Result
12674-11-2	Aroclor 1016	0.0025	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.0028	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.0028	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.0028	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.0028	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.0028	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.0028	0.010	< 0.010 U
37324-23-5	Aroclor 1262	0.0028	0.010	< 0.010 U
11100-14-4	Aroclor 1268	0.0028	0.010	< 0.010 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	60.0%
Tetrachlorometaxylene	62.8%

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WS90-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-061113	82.0%	32-108	66.8%	31-100	0
LCS-061113	74.2%	32-108	60.0%	31-100	0
LCSD-061113	78.0%	32-108	67.8%	31-100	0
QC-EB-03-20130605-W	60.0%	19-111	62.8%	21-100	0

Prep Method: SW3510C
Log Number Range: 13-12081 to 13-12081

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082A **Sample ID: LCS-061113**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-061113 QC Report No: WS90-SAIC
LIMS ID: 13-12081 Project: NPDES Sampling Support
Matrix: Water 209977
Data Release Authorized: Date Sampled: NA
Reported: 06/17/13 Date Received: NA

Date Extracted LCS/LCSD: 06/11/13 Sample Amount LCS: 1000 mL
LCSD: 1000 mL
Date Analyzed LCS: 06/15/13 15:17 Final Extract Volume LCS: 0.50 mL
LCSD: 06/15/13 15:37 LCSD: 0.50 mL
Instrument/Analyst LCS: ECD5/JGR Dilution Factor LCS: 1.00
LCSD: ECD5/JGR LCSD: 1.00
GPC Cleanup: No Silica Gel: Yes
Sulfur Cleanup: Yes Acid Cleanup: Yes

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	0.042	0.050	84.0%	0.047	0.050	94.0%	11.2%
Aroclor 1260	0.045	0.050	90.0%	0.052	0.050	104%	14.4%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	74.2%	78.0%
Tetrachlorometaxylene	60.0%	67.8%

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

4

PCB METHOD BLANK SUMMARY

BLANK NO.

WS90MBW1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No.: WS90

Project: NPDES SAMPLING SUPPO

Lab Sample ID: WS90MBW1

Lab File ID: 0615B006

Date Extracted: 06/11/13

Matrix: LIQUID

Date Analyzed: 06/15/13

Instrument ID: ECD5

Time Analyzed: 1457

GC Columns: ZB5/ZB35

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WS90LCSW1	WS90LCSW1	06/15/13
02	WS90LCSDW1	WS90LCSDW1	06/15/13
03	QC-EB-03-20130605-W	WS90D	06/15/13

ALL RUNS ARE DUAL COLUMN

WS90 : 000092

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD Method SW8082A **Sample ID: MB-061113**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-061113
LIMS ID: 13-12081
Matrix: Water
Data Release Authorized:
Reported: 06/17/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/11/13
Date Analyzed: 06/15/13 14:57
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes

Sample Amount: 1000 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00
Silica Gel: Yes
Acid Cleanup: Yes

CAS Number	Analyte	DL	LOQ	Result
12674-11-2	Aroclor 1016	0.0025	0.010	< 0.010 U
53469-21-9	Aroclor 1242	0.0028	0.010	< 0.010 U
12672-29-6	Aroclor 1248	0.0028	0.010	< 0.010 U
11097-69-1	Aroclor 1254	0.0028	0.010	< 0.010 U
11096-82-5	Aroclor 1260	0.0028	0.010	< 0.010 U
11104-28-2	Aroclor 1221	0.0028	0.010	< 0.010 U
11141-16-5	Aroclor 1232	0.0028	0.010	< 0.010 U
37324-23-5	Aroclor 1262	0.0028	0.010	< 0.010 U
11100-14-4	Aroclor 1268	0.0028	0.010	< 0.010 U

Reported in µg/L (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	82.0%
Tetrachlorometaxylene	66.8%

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS90 Project: NPDES

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 05/07/13

SURROGATES

	RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX	4.31- 4.51	1.2778	1.2769	1.3021	1.2444	1.1977	1.1434	1.2404	4.8
DCB	12.72-12.92	1.4525	1.2874	1.2269	1.1209	1.0641	1.0185	1.1950	13.5

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	5.96- 6.16	0.0419	0.0392	0.0380	0.0346	0.0323	0.0304	0.0361	12.1
2	6.37- 6.57	0.1293	0.1202	0.1174	0.1063	0.0998	0.0934	0.1111	12.2
3	6.52- 6.72	0.0588	0.0546	0.0526	0.0473	0.0442	0.0411	0.0498	13.5
4	6.63- 6.83	0.0432	0.0407	0.0393	0.0352	0.0334	0.0312	0.0372	12.4

AROCLOR AVERAGE %RSD = 12.6

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	9.86-10.06	0.0809	0.0714	0.0687	0.0624	0.0572	0.0524	0.0655	15.7
2	10.18-10.38	0.0749	0.0676	0.0659	0.0605	0.0560	0.0517	0.0628	11.1
3	10.56-10.76	0.1738	0.1618	0.1583	0.1468	0.1383	0.1296	0.1514	8.8
4	10.96-11.16	0.0842	0.0787	0.0766	0.0716	0.0683	0.0640	0.0739	8.2
5	11.15-11.35	0.0430	0.0421	0.0415	0.0388	0.0375	0.0354	0.0397	5.7

AROCLOR AVERAGE %RSD = 9.9

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS90 Project: NPDES

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 05/07/13

SURROGATES

RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX 4.31- 4.51	1.1379	1.1032	1.0970	1.0870	1.0583	1.0077	1.0818	4.1
DCB 13.10-13.30	1.4388	1.2455	1.1622	1.0676	1.0239	0.9694	1.1512	14.9

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 6.06- 6.26	0.0514	0.0510	0.0486	0.0445	0.0410	0.0373	0.0456	12.5
2 6.70- 6.90	0.1117	0.1063	0.1043	0.0972	0.0916	0.0843	0.0992	10.2
3 7.08- 7.28	0.0278	0.0270	0.0274	0.0257	0.0247	0.0232	0.0259	6.9
4 7.25- 7.45	0.0276	0.0258	0.0256	0.0233	0.0223	0.0204	0.0242	10.9

AROCLOR AVERAGE %RSD = 10.1

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 10.16-10.36	0.0846	0.0784	0.0760	0.0710	0.0656	0.0598	0.0726	12.4
2 10.61-10.81	0.0966	0.0905	0.0885	0.0844	0.0782	0.0718	0.0850	10.5
3 10.88-11.08	0.1687	0.1671	0.1641	0.1571	0.1479	0.1368	0.1569	7.9
4 11.40-11.60	0.0485	0.0457	0.0437	0.0415	0.0392	0.0366	0.0425	10.2

AROCLOR AVERAGE %RSD = 10.3

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS90 Project: NPDES

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 05/07/13

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	5.064	4.96- 5.16	0.03259
2	6.468	6.37- 6.57	0.00997
3	7.878	7.78- 7.98	0.01408

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	6.060	5.96- 6.16	0.01482
2	6.469	6.37- 6.57	0.04536
3	7.442	7.34- 7.54	0.02357
4	7.874	7.77- 7.97	0.02708

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.058	5.96- 6.16	0.02881
2	6.467	6.37- 6.57	0.08837
3	6.616	6.52- 6.72	0.03943
4	7.871	7.77- 7.97	0.04869

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.462	6.36- 6.56	0.05630
2	7.438	7.34- 7.54	0.06332
3	7.869	7.77- 7.97	0.08051
4	8.105	8.01- 8.21	0.05614

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS90 Project: NPDES

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 05/07/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.189	8.09- 8.29	0.07461
2	8.562	8.46- 8.66	0.04925
3	8.697	8.60- 8.80	0.10267
4	9.050	8.95- 9.15	0.10574
5	9.359	9.26- 9.46	0.03999

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	10.283	10.18-10.38	0.07490
2	10.659	10.56-10.76	0.17600
3	11.059	10.96-11.16	0.05574
4	11.247	11.15-11.35	0.07824
5	11.918	11.82-12.02	0.06005

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	11.175	11.08-11.28	0.16835
2	11.246	11.15-11.35	0.18617
3	11.632	11.53-11.73	0.13825
4	12.422	12.32-12.52	0.38949

U599:00097

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS90 Project: NPDES

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 05/07/13

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	3.694	3.59- 3.79	0.00820
2	5.095	4.99- 5.19	0.01373
3	5.345	5.25- 5.45	0.00748
4	5.460	5.36- 5.56	0.02352

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	6.165	6.07- 6.27	0.02053
2	6.801	6.70- 6.90	0.04099
3	7.011	6.91- 7.11	0.01709
4	8.239	8.14- 8.34	0.01434

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.162	6.06- 6.26	0.03645
2	6.801	6.70- 6.90	0.08006
3	7.008	6.91- 7.11	0.03345
4	8.235	8.13- 8.33	0.02802

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.793	6.69- 6.89	0.05013
2	7.700	7.60- 7.80	0.04157
3	8.233	8.13- 8.33	0.04304
4	8.579	8.48- 8.68	0.05593

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS90 Project: NPDES

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 05/07/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.295	8.19- 8.39	0.03879
2	8.471	8.37- 8.57	0.04792
3	8.993	8.89- 9.09	0.03671
4	9.143	9.04- 9.24	0.07862
5	9.930	9.83-10.03	0.04427

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	10.260	10.16-10.36	0.11065
2	10.710	10.61-10.81	0.10118
3	10.985	10.89-11.09	0.18978
4	11.567	11.47-11.67	0.12335
5	12.306	12.21-12.41	0.05956

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	11.507	11.41-11.61	0.19311
2	11.573	11.47-11.67	0.18203
3	11.969	11.87-12.07	0.14408
4	12.792	12.69-12.89	0.37318

WS90 : 00099

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS90 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/15/13

Lab Standard ID: AR1254 Time Analyzed :1416

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	8.19	8.09	8.29	266.0	250.0	6.4
Aroclor-1254-2	8.56	8.46	8.66	235.3	250.0	-5.9
Aroclor-1254-3	8.70	8.60	8.80	261.1	250.0	4.4
Aroclor-1254-4	9.05	8.95	9.15	275.8	250.0	10.3
Aroclor-1254-5	9.36	9.26	9.46	287.5	250.0	15.0

AVERAGE %D = 8.4

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS90 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/15/13

Lab Standard ID: AR1254 Time Analyzed :1416

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	8.29	8.19	8.39	250.3	250.0	0.1
Aroclor-1254-2	8.47	8.37	8.57	251.5	250.0	0.6
Aroclor-1254-3	8.99	8.89	9.09	259.0	250.0	3.6
Aroclor-1254-4	9.14	9.04	9.24	250.9	250.0	0.3
Aroclor-1254-5	9.93	9.83	10.03	271.3	250.0	8.5

AVERAGE %D = 2.6

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS90 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/15/13

Lab Standard ID: AR1660 Time Analyzed :1437

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.06	5.96	6.16	250.1	250.0	0.0
Aroclor-1016-2	6.47	6.37	6.57	254.1	250.0	1.6
Aroclor-1016-3	6.61	6.52	6.72	246.5	250.0	-1.4
Aroclor-1016-4	6.72	6.63	6.83	251.0	250.0	0.4

AVERAGE %D = 0.8

Date Analyzed :06/15/13

Lab Standard ID: AR1660 Time Analyzed :1437

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.96	9.86	10.06	237.0	250.0	-5.2
Aroclor-1260-2	10.28	10.18	10.38	239.6	250.0	-4.2
Aroclor-1260-3	10.66	10.56	10.76	244.9	250.0	-2.0
Aroclor-1260-4	11.06	10.96	11.16	259.3	250.0	3.7
Aroclor-1260-5	11.24	11.15	11.35	266.8	250.0	6.7

AVERAGE %D = 4.4

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS90 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/15/13

Lab Standard ID: AR1660 Time Analyzed :1437

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.16	6.06	6.26	236.9	250.0	-5.2
Aroclor-1016-2	6.80	6.70	6.90	238.7	250.0	-4.5
Aroclor-1016-3	7.18	7.08	7.28	240.3	250.0	-3.9
Aroclor-1016-4	7.35	7.25	7.45	233.5	250.0	-6.6

AVERAGE %D = 5.0

Date Analyzed :06/15/13

Lab Standard ID: AR1660 Time Analyzed :1437

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.26	10.16	10.36	212.8	250.0	-14.9
Aroclor-1260-2	10.71	10.61	10.81	222.2	250.0	-11.1
Aroclor-1260-3	10.98	10.88	11.08	233.0	250.0	-6.8
Aroclor-1260-4	11.50	11.40	11.60	248.6	250.0	-0.6

AVERAGE %D = 8.3

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS90 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/15/13

Lab Standard ID: AR1248 Time Analyzed :1919

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	6.46	6.36	6.56	262.9	250.0	5.1
Aroclor-1248-2	7.44	7.34	7.54	257.4	250.0	3.0
Aroclor-1248-3	7.87	7.77	7.97	257.4	250.0	3.0
Aroclor-1248-4	8.11	8.01	8.21	278.8	250.0	11.5

AVERAGE %D = 5.7

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS90 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/15/13

Lab Standard ID: AR1248 Time Analyzed :1919

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	6.79	6.69	6.89	253.3	250.0	1.3
Aroclor-1248-2	7.70	7.60	7.80	252.3	250.0	0.9
Aroclor-1248-3	8.23	8.13	8.33	254.9	250.0	2.0
Aroclor-1248-4	8.58	8.48	8.68	254.5	250.0	1.8

AVERAGE %D = 1.5

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS90 Project: NPDES

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/15/13

Lab Standard ID: AR1660 Time Analyzed :1939

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.06	5.96	6.16	247.4	250.0	-1.0
Aroclor-1016-2	6.46	6.37	6.57	248.9	250.0	-0.4
Aroclor-1016-3	6.61	6.52	6.72	243.5	250.0	-2.6
Aroclor-1016-4	6.72	6.63	6.83	244.5	250.0	-2.2

AVERAGE %D = 1.6

Date Analyzed :06/15/13

Lab Standard ID: AR1660 Time Analyzed :1939

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.96	9.86	10.06	230.6	250.0	-7.8
Aroclor-1260-2	10.28	10.18	10.38	233.7	250.0	-6.5
Aroclor-1260-3	10.66	10.56	10.76	240.1	250.0	-4.0
Aroclor-1260-4	11.06	10.96	11.16	254.9	250.0	2.0
Aroclor-1260-5	11.24	11.15	11.35	264.4	250.0	5.8

AVERAGE %D = 5.2

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS90 Project: NPDES

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/15/13

Lab Standard ID: AR1660 Time Analyzed :1939

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.16	6.06	6.26	238.1	250.0	-4.7
Aroclor-1016-2	6.80	6.70	6.90	241.1	250.0	-3.6
Aroclor-1016-3	7.18	7.08	7.28	247.9	250.0	-0.8
Aroclor-1016-4	7.35	7.25	7.45	239.9	250.0	-4.0

AVERAGE %D = 3.3

Date Analyzed :06/15/13

Lab Standard ID: AR1660 Time Analyzed :1939

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.26	10.16	10.36	210.2	250.0	-15.9
Aroclor-1260-2	10.71	10.61	10.81	219.9	250.0	-12.0
Aroclor-1260-3	10.98	10.88	11.08	230.2	250.0	-7.9
Aroclor-1260-4	11.50	11.40	11.60	244.4	250.0	-2.2

AVERAGE %D = 9.5

WS90 : 00187

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS90 Project: NPDES

GC Column: ZB5 ID: 0.53(mm) Instrument ID: ECD5

Init. Calib. Date: 05/07/13

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

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	48977254	2.250	50004151	13.191
	UPPER LIMIT	97954508	2.350	100008302	13.291
	LOWER LIMIT	24488627	2.150	25002076	13.091

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	05/07/13	1619	48807947	2.249	51001521	13.191
02		0.25PPMAR166	05/07/13	1639	48977254	2.250	50004151	13.191
03		0.02PPMAR166	05/07/13	1659	49978735	2.250	50389911	13.191
04		0.05PPMAR166	05/07/13	1719	50752482	2.250	53170067	13.191
05		1PPMAR1660	05/07/13	1739	49361946	2.249	53269354	13.189
06		0.1PPMAR1660	05/07/13	1759	51692067	2.249	53692342	13.191
07		0.5PPMAR1660	05/07/13	1819	50537542	2.249	53291913	13.190
08		AR1242	05/07/13	1839	51594521	2.248	55145987	13.190
09		AR1248	05/07/13	1859	52790343	2.249	57162764	13.190
10		AR1254	05/07/13	1920	52930034	2.249	57859101	13.190
11		AR2162	05/07/13	1940	53739671	2.248	58323154	13.191
12		AR3268	05/07/13	2000	53262724	2.248	57460185	13.191
13	ZZZZZ	ZZZZZ	05/07/13	2021	54248541	2.248	60099807	13.190
14	ZZZZZ	ZZZZZ	05/07/13	2041	53651835	2.248	60660565	13.190
15	ZZZZZ	ZZZZZ	05/07/13	2101	53642771	2.248	58188446	13.191
16	ZZZZZ	ZZZZZ	05/07/13	2121	54355833	2.249	58930522	13.190
17	ZZZZZ	ZZZZZ	05/07/13	2142	54884040	2.249	58566252	13.190
18	ZZZZZ	ZZZZZ	05/07/13	2202	54747539	2.248	60316622	13.190
19		AR1254	06/15/13	1416	61610068	2.245	75941822	13.188
20		AR1660	06/15/13	1437	57050796	2.245	70630033	13.187
21	WS90MBW1	WS90MBW1	06/15/13	1457	65065602	2.243	67773403	13.185
22	WS90LCSW1	WS90LCSW1	06/15/13	1517	58566639	2.246	70212962	13.186
23	WS90LCSDW1	WS90LCSDW1	06/15/13	1537	57995276	2.243	71805204	13.185
24	ZZZZZ	ZZZZZ	06/15/13	1557	58180597	2.244	73412450	13.185
25	QC-EB-03-201	WS90D	06/15/13	1617	57455169	2.244	71259831	13.183
26		AR1248	06/15/13	1919	60601122	2.246	72359630	13.187
27		AR1660	06/15/13	1939	60200493	2.245	73683845	13.186

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.: WS90 Project: NPDES

GC Column: ZB35 ID: 0.53(mm) Instrument ID: ECD5

Init. Calib. Date: 05/07/13

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

			IS1 AREA	RT	IS2 AREA	RT
		ICAL MIDPT	14839715	2.727	9345340	14.074
		UPPER LIMIT	29679430	2.827	18690680	14.174
		LOWER LIMIT	7419858	2.627	4672670	13.974

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	05/07/13	1619	15184482	2.727	9588268	14.075
02		0.25PPMAR166	05/07/13	1639	14839715	2.727	9345340	14.074
03		0.02PPMAR166	05/07/13	1659	14776833	2.727	9354827	14.073
04		0.05PPMAR166	05/07/13	1719	15017003	2.726	9808139	14.073
05		1PPMAR1660	05/07/13	1739	14864205	2.727	9909484	14.072
06		0.1PPMAR1660	05/07/13	1759	15354151	2.725	9856374	14.073
07		0.5PPMAR1660	05/07/13	1819	14890872	2.725	9751846	14.073
08		AR1242	05/07/13	1839	15094795	2.728	10120992	14.073
09		AR1248	05/07/13	1859	15297537	2.725	10392760	14.073
10		AR1254	05/07/13	1920	15196733	2.725	10477901	14.072
11		AR2162	05/07/13	1940	15340978	2.724	10583916	14.072
12		AR3268	05/07/13	2000	15239954	2.725	10518547	14.073
13	ZZZZZ	ZZZZZ	05/07/13	2021	15658755	2.725	10888882	14.072
14	ZZZZZ	ZZZZZ	05/07/13	2041	15441440	2.724	10952020	14.072
15	ZZZZZ	ZZZZZ	05/07/13	2101	15360402	2.725	10510294	14.073
16	ZZZZZ	ZZZZZ	05/07/13	2121	15522820	2.725	10608758	14.073
17	ZZZZZ	ZZZZZ	05/07/13	2142	15378234	2.725	10470042	14.073
18	ZZZZZ	ZZZZZ	05/07/13	2202	15307215	2.724	10773388	14.074
19		AR1254	06/15/13	1416	17406396	2.719	14092422	14.068
20		AR1660	06/15/13	1437	16175505	2.720	13031972	14.069
21	WS90MBW1	WS90MBW1	06/15/13	1457	15549398	2.720	12589759	14.068
22	WS90LCSW1	WS90LCSW1	06/15/13	1517	16356459	2.720	12941410	14.068
23	WS90LCSDW1	WS90LCSDW1	06/15/13	1537	16565970	2.721	13121829	14.067
24	ZZZZZ	ZZZZZ	06/15/13	1557	16832354	2.720	13420772	14.069
25	QC-EB-03-201	WS90D	06/15/13	1617	16330506	2.719	13070076	14.067
26		AR1248	06/15/13	1919	16649224	2.721	12958538	14.069
27		AR1660	06/15/13	1939	16599434	2.721	13226344	14.068

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

Metals Analysis
Report and Summary QC Forms

ARI Job ID: WS90, WS92

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS90

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
CL-MH-SPS-20130605	WS90A	13-12078	
CL-MH-SPS-20130605D	WS90ADUP	13-12078	
CL-MH-SPS-20130605S	WS90ASPK	13-12078	
CL-VT-EFF-20130605	WS90B	13-12079	
QC-EB-02-20130605-	WS90C	13-12080	
QC-EB-03-20130605-	WS90D	13-12081	
PBW	WS90MB1	13-12081	
LCSW	WS90MB1SPK	13-12081	
CL-MH-SPS-20130605	WS90E	13-12082	
CL-MH-SPS-20130605D	WS90EDUP	13-12082	
CL-MH-SPS-20130605S	WS90ESPK	13-12082	
CL-VT-EFF-20130605	WS90F	13-12083	
QC-EB-02-20130605-	WS90G	13-12084	
QC-EB-03-20130605-	WS90H	13-12085	
PBW	WS90MB2	13-12085	
LCSW	WS90MB2SPK	13-12085	
CL-MH-SPS-20130605	WS90RA	13-12078	R
CL-MH-SPS-20130605D	WS90RADUP	13-12078	R
CL-MH-SPS-20130605S	WS90RASPK	13-12078	R
PBW	WS90RMB1	13-12078	R
LCSW	WS90RMB1SPK	13-12078	R

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: Eric Larson for Name: Jay Kuhn

Date: 6-19-13 Title: Inorganics Director

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS90

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
CL-MH-SPS-20130605	WS90RE	13-12082	R
CL-MH-SPS-20130605D	WS90REDUP	13-12082	R
CL-MH-SPS-20130605S	WS90RESPK	13-12082	R
PBW	WS90RMB2	13-12082	R
LCSW	WS90RMB2SPK	13-12082	R

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: Eric Larsa for Name: Jay Kuhn

Date: 6-19-13 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: CL-MH-SPS-20130605-W
SAMPLE

Lab Sample ID: WS90A
LIMS ID: 13-12078
Matrix: Water
Data Release Authorized:
Reported: 06/19/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
200.8	06/17/13	200.8	06/18/13	**7440-36-0**	**Antimony**	0.010	0.2	**2.0**	
200.8	06/17/13	200.8	06/18/13	**7440-38-2**	**Arsenic**	0.048	0.2	**4.8**	
200.8	06/17/13	200.8	06/18/13	**7440-41-7**	**Beryllium**	0.021	0.2	**0.3**	
200.8	06/17/13	200.8	06/18/13	**7440-43-9**	**Cadmium**	0.010	0.1	**0.2**	
200.8	06/17/13	200.8	06/18/13	**7440-47-3**	**Chromium**	0.22	2	**41**	
200.8	06/17/13	200.8	06/18/13	**7440-50-8**	**Copper**	0.158	0.5	**50.6**	
200.8	06/17/13	200.8	06/18/13	**7439-92-1**	**Lead**	0.046	0.1	**3.8**	
200.8	06/17/13	200.8	06/18/13	**7440-02-0**	**Nickel**	0.079	0.5	**32.4**	
200.8	06/17/13	200.8	06/18/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	06/17/13	200.8	06/18/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/17/13	200.8	06/18/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/17/13	200.8	06/18/13	**7440-66-6**	**Zinc**	0.50	4	**77**	

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: CL-VT-EFF-20130605-W
SAMPLE

Lab Sample ID: WS90B
LIMS ID: 13-12079
Matrix: Water
Data Release Authorized:
Reported: 06/19/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
200.8	06/11/13	200.8	06/12/13	**7440-36-0**	**Antimony**	0.010	0.2	**2.4**	
200.8	06/11/13	200.8	06/12/13	**7440-38-2**	**Arsenic**	0.048	0.2	**2.0**	
200.8	06/11/13	200.8	06/12/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	**7440-43-9**	**Cadmium**	0.010	0.1	**0.1**	
200.8	06/11/13	200.8	06/12/13	**7440-47-3**	**Chromium**	0.045	0.5	**8.3**	
200.8	06/11/13	200.8	06/12/13	**7440-50-8**	**Copper**	0.158	0.5	**10.9**	
200.8	06/11/13	200.8	06/12/13	**7439-92-1**	**Lead**	0.046	0.1	**0.7**	
200.8	06/11/13	200.8	06/12/13	**7440-02-0**	**Nickel**	0.079	0.5	**3.9**	
200.8	06/11/13	200.8	06/12/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	**7440-66-6**	**Zinc**	0.50	4	**14**	

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: QC-EB-02-20130605-W
SAMPLE

Lab Sample ID: WS90C
LIMS ID: 13-12080
Matrix: Water
Data Release Authorized:
Reported: 06/19/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
200.8	06/11/13	200.8	06/12/13	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-38-2	Arsenic	0.048	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	06/11/13	200.8	06/12/13	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7440-50-8	Copper	0.158	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	06/11/13	200.8	06/12/13	7440-02-0	Nickel	0.079	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	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
TOTAL METALS
Page 1 of 1

Sample ID: QC-EB-03-20130605-W
SAMPLE

Lab Sample ID: WS90D
LIMS ID: 13-12081
Matrix: Water
Data Release Authorized:
Reported: 06/19/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
200.8	06/11/13	200.8	06/12/13	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-38-2	Arsenic	0.048	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	06/11/13	200.8	06/12/13	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7440-50-8	Copper	0.158	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	06/11/13	200.8	06/12/13	7440-02-0	Nickel	0.079	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	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
TOTAL METALS
Page 1 of 1

Sample ID: CL-MH-SPS-20130605-W
MATRIX SPIKE

Lab Sample ID: WS90A
LIMS ID: 13-12078
Matrix: Water
Data Release Authorized:
Reported: 06/19/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/05/13
Date Received: 06/05/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	2.0	9.8	25.0	31.2%	N
Arsenic	200.8	4.8	28.0	25.0	92.8%	
Beryllium	200.8	0.3	22.3	25.0	88.0%	
Cadmium	200.8	0.2	23.0	25.0	91.2%	
Chromium	200.8	41	64	25	92.0%	
Copper	200.8	50.6	74.1	25.0	94.0%	
Lead	200.8	3.8	27.3	25.0	94.0%	
Nickel	200.8	32.4	56.6	25.0	96.8%	
Selenium	200.8	0.5 U	73.5	80.0	91.9%	
Silver	200.8	0.2 U	22.2	25.0	88.8%	
Thallium	200.8	0.2 U	21.7	25.0	86.8%	
Zinc	200.8	77	148	80	88.8%	

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: CL-MH-SPS-20130605-W
DUPLICATE

Lab Sample ID: WS90A
LIMS ID: 13-12078
Matrix: Water
Data Release Authorized:
Reported: 06/19/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/05/13
Date Received: 06/05/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	2.0	1.8	10.5%	+/- 20%	
Arsenic	200.8	4.8	5.1	6.1%	+/- 20%	
Beryllium	200.8	0.3	0.3	0.0%	+/- 0.2	L
Cadmium	200.8	0.2	0.2	0.0%	+/- 0.1	L
Chromium	200.8	41	42	2.4%	+/- 20%	
Copper	200.8	50.6	52.3	3.3%	+/- 20%	
Lead	200.8	3.8	4.0	5.1%	+/- 20%	
Nickel	200.8	32.4	33.5	3.3%	+/- 20%	
Selenium	200.8	0.5 U	0.5 U	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	77	80	3.8%	+/- 20%	

Reported in µg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WS90LCS
LIMS ID: 13-12078
Matrix: Water
Data Release Authorized:
Reported: 06/19/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	25.0	25.0	100%	
Arsenic	200.8	25.6	25.0	102%	
Beryllium	200.8	25.0	25.0	100%	
Cadmium	200.8	25.7	25.0	103%	
Chromium	200.8	25.8	25.0	103%	
Copper	200.8	27.3	25.0	109%	
Lead	200.8	26.9	25.0	108%	
Nickel	200.8	27.3	25.0	109%	
Selenium	200.8	83.1	80.0	104%	
Silver	200.8	25.2	25.0	101%	
Thallium	200.8	24.8	25.0	99.2%	
Zinc	200.8	85	80	106%	

Reported in µg/L

N-Control limit not met
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: WS90MB
LIMS ID: 13-12078
Matrix: Water
Data Release Authorized:
Reported: 06/19/13

QC Report No: WS90-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	06/17/13	200.8	06/18/13	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	06/17/13	200.8	06/18/13	7440-38-2	Arsenic	0.048	0.2	0.2	U
200.8	06/17/13	200.8	06/18/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	06/17/13	200.8	06/18/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	06/17/13	200.8	06/18/13	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	06/17/13	200.8	06/18/13	7440-50-8	Copper	0.158	0.5	0.5	U
200.8	06/17/13	200.8	06/18/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	06/17/13	200.8	06/18/13	7440-02-0	Nickel	0.079	0.5	0.5	U
200.8	06/17/13	200.8	06/18/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	06/17/13	200.8	06/18/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/17/13	200.8	06/18/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/17/13	200.8	06/18/13	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
TOTAL METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WS90LCS
LIMS ID: 13-12081
Matrix: Water
Data Release Authorized:
Reported: 06/19/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	25.0	25.0	100%	
Arsenic	200.8	25.5	25.0	102%	
Beryllium	200.8	24.9	25.0	99.6%	
Cadmium	200.8	25.9	25.0	104%	
Chromium	200.8	23.8	25.0	95.2%	
Copper	200.8	26.5	25.0	106%	
Lead	200.8	25.3	25.0	101%	
Nickel	200.8	25.9	25.0	104%	
Selenium	200.8	82.6	80.0	103%	
Silver	200.8	26.8	25.0	107%	
Thallium	200.8	24.4	25.0	97.6%	
Zinc	200.8	82	80	102%	

Reported in µg/L

N-Control limit not met
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: WS90MB
LIMS ID: 13-12081
Matrix: Water
Data Release Authorized:
Reported: 06/19/13

QC Report No: WS90-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	06/11/13	200.8	06/12/13	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-38-2	Arsenic	0.048	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	06/11/13	200.8	06/12/13	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7440-50-8	Copper	0.158	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	06/11/13	200.8	06/12/13	7440-02-0	Nickel	0.079	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	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
Page 1 of 1

Sample ID: CL-MH-SPS-20130605-W
SAMPLE

Lab Sample ID: WS90E
LIMS ID: 13-12082
Matrix: Water
Data Release Authorized:
Reported: 06/19/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	06/17/13	200.8	06/18/13	**7440-36-0**	**Antimony**	0.010	0.2	**4.4**	
200.8	06/17/13	200.8	06/18/13	**7440-38-2**	**Arsenic**	0.048	0.2	**2.6**	
200.8	06/17/13	200.8	06/18/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	06/17/13	200.8	06/18/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	06/17/13	200.8	06/18/13	**7440-47-3**	**Chromium**	0.045	0.5	**11.3**	
200.8	06/17/13	200.8	06/18/13	**7440-50-8**	**Copper**	0.158	0.5	**2.4**	
200.8	06/17/13	200.8	06/18/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	06/17/13	200.8	06/18/13	7440-02-0	Nickel	0.079	0.5	0.5	U
200.8	06/17/13	200.8	06/18/13	**7782-49-2**	**Selenium**	0.127	0.5	**0.8**	
200.8	06/17/13	200.8	06/18/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/17/13	200.8	06/18/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/17/13	200.8	06/18/13	7440-66-6	Zinc	0.50	4	4	U

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: CL-VT-EFF-20130605-W
SAMPLE

Lab Sample ID: WS90F
LIMS ID: 13-12083
Matrix: Water
Data Release Authorized:
Reported: 06/19/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	06/11/13	200.8	06/12/13	**7440-36-0**	**Antimony**	0.010	0.2	**2.7**	
200.8	06/11/13	200.8	06/12/13	**7440-38-2**	**Arsenic**	0.048	0.2	**1.9**	
200.8	06/11/13	200.8	06/12/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	06/11/13	200.8	06/12/13	**7440-47-3**	**Chromium**	0.045	0.5	**6.1**	
200.8	06/11/13	200.8	06/12/13	**7440-50-8**	**Copper**	0.158	0.5	**4.8**	
200.8	06/11/13	200.8	06/12/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	06/11/13	200.8	06/13/13	**7440-02-0**	**Nickel**	0.079	0.5	**0.9**	
200.8	06/11/13	200.8	06/12/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-66-6	Zinc	0.50	4	4	U

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: QC-EB-02-20130605-W
SAMPLE

Lab Sample ID: WS90G
LIMS ID: 13-12084
Matrix: Water
Data Release Authorized:
Reported: 06/19/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	06/11/13	200.8	06/12/13	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-38-2	Arsenic	0.048	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	06/11/13	200.8	06/12/13	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7440-50-8	Copper	0.158	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	06/11/13	200.8	06/12/13	7440-02-0	Nickel	0.079	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-66-6	Zinc	0.50	4	4	U

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: QC-EB-03-20130605-W
SAMPLE

Lab Sample ID: WS90H
LIMS ID: 13-12085
Matrix: Water
Data Release Authorized:
Reported: 06/19/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	06/11/13	200.8	06/12/13	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-38-2	Arsenic	0.048	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	06/11/13	200.8	06/12/13	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7440-50-8	Copper	0.158	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	06/11/13	200.8	06/12/13	7440-02-0	Nickel	0.079	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-66-6	Zinc	0.50	4	4	U

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: CL-MH-SPS-20130605-W
MATRIX SPIKE

Lab Sample ID: WS90E
LIMS ID: 13-12082
Matrix: Water
Data Release Authorized:
Reported: 06/19/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	4.4	27.3	25.0	91.6%	
Arsenic	200.8	2.6	26.2	25.0	94.4%	
Beryllium	200.8	0.2 U	23.3	25.0	93.2%	
Cadmium	200.8	0.1 U	23.3	25.0	93.2%	
Chromium	200.8	11.3	34.2	25.0	91.6%	
Copper	200.8	2.4	26.5	25.0	96.4%	
Lead	200.8	0.1 U	24.2	25.0	96.8%	
Nickel	200.8	0.5 U	24.4	25.0	97.6%	
Selenium	200.8	0.8	73.2	80.0	90.5%	
Silver	200.8	0.2 U	23.2	25.0	92.8%	
Thallium	200.8	0.2 U	22.3	25.0	89.2%	
Zinc	200.8	4 U	69	80.0	86.2%	

Reported in µg/L

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
DISSOLVED METALS
Page 1 of 1

Sample ID: CL-MH-SPS-20130605-W
DUPLICATE

Lab Sample ID: WS90E
LIMS ID: 13-12082
Matrix: Water
Data Release Authorized:
Reported: 06/19/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/05/13
Date Received: 06/05/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	4.4	4.4	0.0%	+/- 20%	
Arsenic	200.8	2.6	2.6	0.0%	+/- 20%	
Beryllium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Cadmium	200.8	0.1 U	0.1 U	0.0%	+/- 0.1	L
Chromium	200.8	11.3	11.5	1.8%	+/- 20%	
Copper	200.8	2.4	2.4	0.0%	+/- 0.5	L
Lead	200.8	0.1 U	0.1 U	0.0%	+/- 0.1	L
Nickel	200.8	0.5 U	0.5 U	0.0%	+/- 0.5	L
Selenium	200.8	0.8	0.6	28.6%	+/- 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	4 U	4 U	0.0%	+/- 4	L

Reported in µg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS **Sample ID: LAB CONTROL**

Lab Sample ID: WS90LCS
LIMS ID: 13-12082
Matrix: Water
Data Release Authorized:
Reported: 06/19/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	24.5	25.0	98.0%	
Arsenic	200.8	24.4	25.0	97.6%	
Beryllium	200.8	24.8	25.0	99.2%	
Cadmium	200.8	24.8	25.0	99.2%	
Chromium	200.8	25.4	25.0	102%	
Copper	200.8	26.9	25.0	108%	
Lead	200.8	26.3	25.0	105%	
Nickel	200.8	26.8	25.0	107%	
Selenium	200.8	76.8	80.0	96.0%	
Silver	200.8	24.9	25.0	99.6%	
Thallium	200.8	23.9	25.0	95.6%	
Zinc	200.8	81	80	101%	

Reported in µg/L

N-Control limit not met
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: WS90MB
LIMS ID: 13-12082
Matrix: Water
Data Release Authorized:
Reported: 06/19/13

QC Report No: WS90-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	06/17/13	200.8	06/18/13	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	06/17/13	200.8	06/18/13	7440-38-2	Arsenic	0.048	0.2	0.2	U
200.8	06/17/13	200.8	06/18/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	06/17/13	200.8	06/18/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	06/17/13	200.8	06/18/13	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	06/17/13	200.8	06/18/13	7440-50-8	Copper	0.158	0.5	0.5	U
200.8	06/17/13	200.8	06/18/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	06/17/13	200.8	06/18/13	7440-02-0	Nickel	0.079	0.5	0.5	U
200.8	06/17/13	200.8	06/18/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	06/17/13	200.8	06/18/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/17/13	200.8	06/18/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/17/13	200.8	06/18/13	7440-66-6	Zinc	0.50	4	4	U

Reported In µg/L (ppb)
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

WS90:00130

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WS90LCS
LIMS ID: 13-12085
Matrix: Water
Data Release Authorized:
Reported: 06/19/13

QC Report No: WS90-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	23.6	25.0	94.4%	
Arsenic	200.8	24.6	25.0	98.4%	
Beryllium	200.8	24.1	25.0	96.4%	
Cadmium	200.8	24.1	25.0	96.4%	
Chromium	200.8	23.1	25.0	92.4%	
Copper	200.8	25.9	25.0	104%	
Lead	200.8	23.7	25.0	94.8%	
Nickel	200.8	25.4	25.0	102%	
Selenium	200.8	76.9	80.0	96.1%	
Silver	200.8	26.5	25.0	106%	
Thallium	200.8	23.1	25.0	92.4%	
Zinc	200.8	76	80	95.0%	

Reported in µg/L

N-Control limit not met
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS **Sample ID: METHOD BLANK**

Lab Sample ID: WS90MB
LIMS ID: 13-12085
Matrix: Water
Data Release Authorized:
Reported: 06/19/13

QC Report No: WS90-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	06/11/13	200.8	06/12/13	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-38-2	Arsenic	0.048	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	06/11/13	200.8	06/12/13	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7440-50-8	Copper	0.158	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	06/11/13	200.8	06/12/13	7440-02-0	Nickel	0.079	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	06/11/13	200.8	06/12/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/11/13	200.8	06/12/13	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

SDG: WS90

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Antimony	SB	PMS	MS061211	50.0	50.80	**101.6**	50.0	48.83	**97.7**	49.79	**99.6**	50.65	**101.3**	49.41	**98.8**	49.66	**99.3**
Arsenic	AS	PMS	MS061211	50.0	49.23	**98.5**	50.0	49.15	**98.3**	50.06	**100.1**	51.00	**102.0**	50.34	**100.7**	49.58	**99.2**
Beryllium	BE	PMS	MS061211	50.0	49.51	**99.0**	50.0	48.95	**97.9**	49.53	**99.1**	49.94	**99.9**	48.85	**97.7**	49.50	**99.0**
Cadmium	CD	PMS	MS061211	50.0	49.48	**99.0**	50.0	49.75	**99.5**	51.33	**102.7**	52.25	**104.5**	50.61	**101.2**	50.98	**102.0**
Chromium	CR	PMS	MS061211	50.0	48.67	**97.3**	50.0	47.57	**95.1**	48.21	**96.4**	47.25	**94.5**	46.49	**93.0**	46.02	**92.0**
Copper	CU	PMS	MS061211	50.0	51.10	**102.2**	50.0	49.91	**99.8**	50.37	**100.7**	50.58	**101.2**	50.75	**101.5**	49.70	**99.4**
Lead	PB	PMS	MS061211	50.0	49.44	**98.9**	50.0	48.42	**96.8**	48.11	**96.2**	48.53	**97.1**	47.47	**94.9**	47.55	**95.1**
Nickel	NI	PMS	MS061211	50.0	50.20	**100.4**	50.0	49.12	**98.2**	49.71	**99.4**	50.16	**100.3**	49.67	**99.3**	49.20	**98.4**
Selenium	SE	PMS	MS061211	80.0	77.16	**96.5**	50.0	50.27	**100.5**	51.56	**103.1**	53.35	**106.7**	53.73	**107.5**	52.37	**104.7**
Silver	AG	PMS	MS061211	50.0	51.04	**102.1**	50.0	49.80	**99.6**	50.06	**100.1**	52.19	**104.4**	51.71	**103.4**	50.53	**101.1**
Thallium	TL	PMS	MS061211	50.0	47.61	**95.2**	50.0	47.34	**94.7**	47.23	**94.5**	51.08	**102.2**	48.08	**96.2**	48.30	**96.6**
Zinc	ZN	PMS	MS061211	50.0	49.28	**98.6**	50.0	49.26	**98.5**	50.19	**100.4**	51.53	**103.1**	49.99	**100.0**	49.45	**98.9**

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS90

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Nickel	NI	PMS	MS061312	50.0	49.81	**99.6**	50.0	48.28	**96.6**	50.53	**101.1**	49.35	**98.7**				

Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (1)

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS90

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Antimony	SB	PMS	MS061811	50.0	50.73	**101.5**	50.0	50.15	**100.3**	49.23	**98.5**	50.11	**100.2**	50.98	**102.0**	49.22	**98.4**
Arsenic	AS	PMS	MS061811	50.0	50.99	**102.0**	50.0	50.96	**101.9**	49.60	**99.2**	50.51	**101.0**	50.46	**100.9**	50.53	**101.1**
Beryllium	BE	PMS	MS061811	50.0	50.90	**101.8**	50.0	49.69	**99.4**	48.50	**97.0**	49.70	**99.4**	49.96	**99.9**	50.16	**100.3**
Cadmium	CD	PMS	MS061811	50.0	48.89	**97.8**	50.0	51.01	**102.0**	49.02	**98.0**	50.40	**100.8**	50.82	**101.6**	49.53	**99.1**
Chromium	CR	PMS	MS061811	50.0	51.30	**102.6**	50.0	49.77	**99.5**	47.95	**95.9**	49.63	**99.3**	49.49	**99.0**	48.18	**96.4**
Copper	CU	PMS	MS061811	50.0	51.66	**103.3**	50.0	51.71	**103.4**	49.23	**98.5**	49.88	**99.8**	49.71	**99.4**	49.38	**98.8**
Lead	PB	PMS	MS061811	50.0	51.13	**102.3**	50.0	50.78	**101.6**	49.02	**98.0**	50.37	**100.7**	51.11	**102.2**	49.40	**98.8**
Nickel	NI	PMS	MS061811	50.0	52.17	**104.3**	50.0	51.36	**102.7**	49.31	**98.6**	50.12	**100.2**	50.48	**101.0**	50.54	**101.1**
Selenium	SE	PMS	MS061811	80.0	79.85	**99.8**	50.0	51.61	**103.2**	50.64	**101.3**	51.89	**103.8**	51.76	**103.5**	51.77	**103.5**
Silver	AG	PMS	MS061811	50.0	49.50	**99.0**	50.0	49.66	**99.3**	48.14	**96.3**	49.41	**98.8**	48.79	**97.6**	46.65	**93.3**
Thallium	TL	PMS	MS061811	50.0	46.58	**93.2**	50.0	47.32	**94.6**	45.28	**90.6**	46.33	**92.7**	47.01	**94.0**	45.42	**90.8**
Zinc	ZN	PMS	MS061811	50.0	51.41	**102.8**	50.0	52.18	**104.4**	50.61	**101.2**	50.45	**100.9**	50.93	**101.9**	49.97	**99.9**

Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (1)

WS90:00135

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ug/L

SDG: WS90

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	MS061211	0.2	0.23	**115.0**										
Arsenic	AS	PMS	MS061211	0.2	0.20	**100.0**										
Beryllium	BE	PMS	MS061211	0.2	0.20	**100.0**										
Cadmium	CD	PMS	MS061211	0.1	0.11	**110.0**										
Chromium	CR	PMS	MS061211	0.5	0.47	**94.0**										
Copper	CU	PMS	MS061211	0.5	0.49	**98.0**										
Lead	PB	PMS	MS061211	0.1	0.10	**100.0**										
Nickel	NI	PMS	MS061211	0.5	0.52	**104.0**										
Selenium	SE	PMS	MS061211	0.5	0.49	**98.0**										
Silver	AG	PMS	MS061211	0.2	0.21	**105.0**										
Thallium	TL	PMS	MS061211	0.2	0.20	**100.0**										
Zinc	ZN	PMS	MS061211	4.0	3.91	**97.8**										

Control Limits: no control limits have been established by the EPA at this time.

FORM II (2)

WS90:00135

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ug/L

SDG: WS90

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
Nickel	NI	PMS	MS061312	0.5	0.51	**102.0**										
Antimony	SB	PMS	MS061811	0.2	0.24	**120.0**										
Arsenic	AS	PMS	MS061811	0.2	0.21	**105.0**										
Beryllium	BE	PMS	MS061811	0.2	0.21	**105.0**										
Cadmium	CD	PMS	MS061811	0.1	0.11	**110.0**										
Chromium	CR	PMS	MS061811	0.5	0.46	**92.0**										
Copper	CU	PMS	MS061811	0.5	0.52	**104.0**										
Lead	PB	PMS	MS061811	0.1	0.11	**110.0**										
Nickel	NI	PMS	MS061811	0.5	0.51	**102.0**										
Selenium	SE	PMS	MS061811	0.5	0.47	**94.0**										
Silver	AG	PMS	MS061811	0.2	0.21	**105.0**										
Thallium	TL	PMS	MS061811	0.2	0.20	**100.0**										
Zinc	ZN	PMS	MS061811	4.0	4.22	**105.5**										

Control Limits: no control limits have been established by the EPA at this time.

FORM II (2)

USGS : 00137

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS90

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Antimony	SB	PMS	MS061211	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	MS061211	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	MS061211	5.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Cadmium	CD	PMS	MS061211	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	MS061211	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Copper	CU	PMS	MS061211	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	MS061211	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS061211	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	MS061211	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	MS061211	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	MS061211	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	MS061211	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS90

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Nickel	NI	PMS	MS061312	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U				

US90.00139

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS90

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Antimony	SB	PMS	MS061811	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	MS061811	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	MS061811	5.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Cadmium	CD	PMS	MS061811	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	MS061811	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Copper	CU	PMS	MS061811	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	MS061811	3.0	0.1	0.1	U	0.1	U	0.1	U	0.3	B	0.1	U	0.1	U
Nickel	NI	PMS	MS061811	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	MS061811	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	MS061811	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	MS061811	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	MS061811	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U

0170 · 0554

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS90

ICS SOURCE: I.V.

RUNID: MS061211

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	19.7	**98.5**						
Cadmium		20	0.1	19.7	**98.5**						
Chromium		20	0.5	19.2	**96.0**						
Cobalt		20	0.0	18.7	**93.5**						
Copper		20	1.1	20.8	**104.0**						
Manganese		20	0.1	18.9	**94.5**						
Molybdenum	400	400	444.0	451.0	**112.8**						
Nickel		20	0.3	20.1	**100.5**						
Selenium			-0.2	-0.3							
Silver		20	0.0	19.9	**99.5**						
Vanadium			0.1	0.1							
Zinc		20	0.4	19.5	**97.5**						

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ICS SOURCE: I.V.

PROJECT: NPDES Sampling Suppo

RUNID: MS061312

SDG: WS90

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Arsenic		20	0.1	19.3	**96.5**						
Cadmium		20	0.2	19.4	**97.0**						
Chromium		20	0.6	19.8	**99.0**						
Cobalt		20	0.0	18.8	**94.0**						
Copper		20	1.0	20.5	**102.5**						
Manganese		20	0.0	19.4	**97.0**						
Molybdenum	400	400	414.9	417.8	**104.5**						
Nickel		20	0.3	20.0	**100.0**						
Selenium			-0.2	-0.2							
Silver		20	0.0	18.8	**94.0**						
Vanadium			0.1	0.2							
Zinc		20	0.7	19.4	**97.0**						

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS90

ICS SOURCE: I.V.

RUNID: MS061811

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	20.0	**100.0**						
Cadmium		20	0.2	19.9	**99.5**						
Chromium		20	0.6	20.5	**102.5**						
Cobalt		20	0.0	19.7	**98.5**						
Copper		20	1.0	20.7	**103.5**						
Manganese		20	0.1	18.7	**93.5**						
Molybdenum	400	400	421.1	420.1	**105.0**						
Nickel		20	0.3	20.5	**102.5**						
Selenium			-0.3	-0.2							
Silver		20	0.0	19.2	**96.0**						
Zinc		20	1.2	20.1	**100.5**						

Post Digest Spike Sample Recovery

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

ANALYSIS METHOD: PMS

SDG: WS90

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	RUNID	SPIKED SAMPLE RESULT	C	SAMPLE RESULT	C	SPIKE ADDED	MATRIX	%R
Antimony	CL-MH-SPS-20130605	WS90RAPOS	MS061811	51.82	B	3.94	B	50	Water	**95.8**

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS90

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		
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		
Lead	PB	PMS	NEXION 300D MS	0.00		3	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		

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS90

ANALYSIS METHOD: PMS

ARI PREP CODE: REN

PREPDATE: 6/11/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
CL-MH-SPS-20130605	WS90A	0.000	50.0	25.0
CL-MH-SPS-20130605D	WS90ADUP	0.000	50.0	25.0
CL-MH-SPS-20130605S	WS90ASPK	0.000	50.0	25.0
CL-VT-EFF-20130605	WS90B	0.000	50.0	25.0
QC-EB-02-20130605-	WS90C	0.000	50.0	25.0
QC-EB-03-20130605-	WS90D	0.000	50.0	25.0
CL-MH-SPS-20130605	WS90E	0.000	50.0	25.0
CL-MH-SPS-20130605D	WS90EDUP	0.000	50.0	25.0
CL-MH-SPS-20130605S	WS90ESPK	0.000	50.0	25.0
CL-VT-EFF-20130605	WS90F	0.000	50.0	25.0
QC-EB-02-20130605-	WS90G	0.000	50.0	25.0
QC-EB-03-20130605-	WS90H	0.000	50.0	25.0
PBW	WS90MB1	0.000	50.0	25.0
LCSW	WS90MB1SPK	0.000	50.0	25.0
PBW	WS90MB2	0.000	50.0	25.0
LCSW	WS90MB2SPK	0.000	50.0	25.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS90

ANALYSIS METHOD: PMS

ARI PREP CODE: REN

PREPDATE: 6/17/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
CL-MH-SPS-20130605	WS90RA	0.000	50.0	25.0
CL-MH-SPS-20130605D	WS90RADUP	0.000	50.0	25.0
CL-MH-SPS-20130605S	WS90RASPK	0.000	50.0	25.0
CL-MH-SPS-20130605	WS90RE	0.000	50.0	25.0
CL-MH-SPS-20130605D	WS90REDUP	0.000	50.0	25.0
CL-MH-SPS-20130605S	WS90RESPK	0.000	50.0	25.0
PBW	WS90RMB1	0.000	50.0	25.0
LCSW	WS90RMB1SPK	0.000	50.0	25.0
PBW	WS90RMB2	0.000	50.0	25.0
LCSW	WS90RMB2SPK	0.000	50.0	25.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: NEXION 300D MS | START DATE: 6/12/2013

SDG: WS90 | RUNID: MS061211 | METHOD: PMS | END DATE: 6/12/2013

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	09070		X		X			X		X		X	X								X	X	X	X				X			X
S1	S1	1.00	09110		X		X			X		X		X	X								X	X	X	X				X			X
S2	S2	1.00	09150		X		X			X		X		X	X								X	X	X	X				X			X
S3	S3	1.00	09190		X		X			X		X		X	X								X	X	X	X				X			X
S4	S4	1.00	09240		X		X			X		X		X	X								X	X	X	X				X			X
S5	S5	1.00	09290																														
ZZZZZZ	Rinse samp1	1.00	09350																														
ICV	MICV	1.00	09410		X		X			X		X		X	X								X	X	X	X				X			X
ICB	ICB	1.00	09480		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV1	1.00	09520		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB1	1.00	09590		X		X			X		X		X	X								X	X	X	X				X			X
CRI	MCRI	1.00	10030		X		X			X		X		X	X								X	X	X	X				X			X
ICSA	ICSAI	1.00	10070		X		X			X		X		X	X								X	X	X	X				X			X
ICSAB	ICSABI	1.00	10140		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	LR200	1.00	10210																														
ZZZZZZ	LR300	1.00	10280																														
ZZZZZZ	B1	1.00	10340																														
CCV	MCCV2	1.00	10400		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB2	1.00	10470		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV2	1.00	10520		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB2	1.00	10590		X		X			X		X		X	X								X	X	X	X				X			X
PBW	WS90MB1	2.00	11050																														
CL-MH-SPS-20130605D	WS90ADUP	2.00	11090																														
CL-MH-SPS-20130605	WS90A	2.00	11130																														
CL-MH-SPS-20130605S	WS90ASPK	2.00	11170																														
ZZZZZZ	ZZZZZZ	2.00	11210																														
CL-MH-SPS-20130605D	WS90EDUP	2.00	11250																														
CL-MH-SPS-20130605	WS90E	2.00	11300																														
CL-MH-SPS-20130605S	WS90ESPK	2.00	11340																														
ZZZZZZ	ZZZZZZ	2.00	11380																														
LCSW	WS90MB1SPK	2.00	11420																														
CCV	MCCV3	1.00	11470		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB3	1.00	11540		X		X			X		X		X	X								X	X	X	X				X			X
PBW	WS90MB2	2.00	12000																														
CL-MH-SPS-20130605	WS90E	2.00	12040																														

FORM XIV

6/12/2013 9:05:51 AM

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: NEXION 300D MS | START DATE: 6/12/2013

SDG: WS90 | RUNID: MS061211 | METHOD: PMS | END DATE: 6/12/2013

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
CL-VT-EFF-20130605	WS90B	2.00	12090		X		X			X		X		X	X								X	X	X	X				X			X
QC-EB-02-20130605-	WS90C	2.00	12130																														
QC-EB-03-20130605-	WS90D	2.00	12170																														
CL-VT-EFF-20130605	WS90F	2.00	12210		X		X			X		X		X	X									X	X	X				X			X
QC-EB-02-20130605-	WS90G	2.00	12250		X		X			X		X		X	X								X	X	X	X				X			X
QC-EB-03-20130605-	WS90H	2.00	12290		X		X			X		X		X	X								X	X	X	X				X			X
LCSW	WS90MB2SPK	2.00	12330																														
CCV	MCCV4	1.00	12370		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB4	1.00	12440		X		X			X		X		X	X								X	X	X	X				X			X
QC-EB-02-20130605-	WS90C	2.00	12500		X		X			X		X		X	X								X	X	X	X				X			X
QC-EB-03-20130605-	WS90D	2.00	12550		X		X			X		X		X	X								X	X	X	X				X			X
CL-MH-SPS-20130605D	WS90ADUP	5.00	12590																														
CL-MH-SPS-20130605	WS90A	5.00	13030																														
CL-MH-SPS-20130605S	WS90ASPK	5.00	13070																														
CL-MH-SPS-20130605A	WS90APOST	2.00	13120																														
LCSW	WS90MB2SPK	2.00	13160																														
CCV	MCCV5	1.00	13200		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB5	1.00	13270		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: NEXION 300D MS START DATE: 6/13/2013

SDG: WS90 RUNID: MS061312 METHOD: PMS END DATE: 6/13/2013

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	10250																				X										
S1	S1	1.00	10290																				X										
S2	S2	1.00	10330																				X										
S3	S3	1.00	10380																				X										
S4	S4	1.00	10420																				X										
S5	S5	1.00	10470																														
ZZZZZZ	Rinse sampl	1.00	10530																														
ICV	MICV	1.00	11000																				X										
ICB	ICB	1.00	11070																				X										
CCV	MCCV1	1.00	11110																				X										
CCB	CCB1	1.00	11170																				X										
CRI	MCRI	1.00	11210																				X										
ICSA	ICSAI	1.00	11260																				X										
ICSAB	ICSABI	1.00	11320																				X										
ZZZZZZ	LR200	1.00	11390																														
ZZZZZZ	LR300	1.00	11460																														
ZZZZZZ	B1	1.00	11530																														
CCV	MCCV2	1.00	12010																				X										
CCB	CCB2	1.00	12080																				X										
ZZZZZZ	WS30MB1	20.00	12150																														
CL-VT-EFF-20130605	WS90F	2.00	12190																				X										
ZZZZZZ	WS61AaDUP	1.00	12230																														
ZZZZZZ	WS61Aa	1.00	12270																														
ZZZZZZ	WS61AaSPK	20.00	12310																														
ZZZZZZ	WS30IDUP	20.00	12350																														
ZZZZZZ	WS30I	20.00	12390																														
ZZZZZZ	WS30ISPK	20.00	12440																														
ZZZZZZ	WS30REF1	50.00	12480																														
ZZZZZZ	WS30MB1SPK	20.00	12520																														
CCV	MCCV3	1.00	12570																				X										
CCB	CCB3	1.00	13040																				X										

WS90:00150

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: NEXION 300D MS | START DATE: 6/18/2013

SDG: WS90 | RUNID: MS061811 | METHOD: PMS | END DATE: 6/18/2013

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	09100		X		X			X		X		X	X								X	X	X	X				X			X
S1	S1	1.00	09140		X		X			X		X		X	X								X	X	X	X				X			X
S2	S2	1.00	09180		X		X			X		X		X	X								X	X	X	X				X			X
S3	S3	1.00	09220		X		X			X		X		X	X								X	X	X	X				X			X
S4	S4	1.00	09270		X		X			X		X		X	X								X	X	X	X				X			X
S5	S5	1.00	09320																														
ZZZZZZ	Rinse sampl	1.00	09370																														
ICV	MICV	1.00	09440		X		X			X		X		X	X								X	X	X	X				X			X
ICB	ICB	1.00	09510		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV1	1.00	09550		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB1	1.00	10020		X		X			X		X		X	X								X	X	X	X				X			X
CRI	MCRI	1.00	10060		X		X			X		X		X	X								X	X	X	X				X			X
ICSA	ICSAI	1.00	10100		X		X			X		X		X	X								X	X	X	X				X			X
ICSAB	ICSABI	1.00	10170		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	LR200	1.00	10230																														
ZZZZZZ	LR300	1.00	10300																														
ZZZZZZ	B1	1.00	10370																														
CCV	MCCV2	1.00	10430		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB2	1.00	10500		X		X			X		X		X	X								X	X	X	X				X			X
PBW	WS90RMB1	2.00	10580																														
PBW	WS90RMB2	2.00	11020																														
CL-MH-SPS-20130605D	WS90RADUP	2.00	11060																														
CL-MH-SPS-20130605	WS90RA	2.00	11100																														
CL-MH-SPS-20130605S	WS90RASPK	2.00	11140																														
CL-MH-SPS-20130605D	WS90REDUP	2.00	11180																														
CL-MH-SPS-20130605	WS90RE	2.00	11220																														
CL-MH-SPS-20130605S	WS90RESPK	2.00	11260																														
LCSW	WS90RMB1SPK	2.00	11310																														
LCSW	WS90RMB2SPK	2.00	11350																														
CCV	MCCV3	1.00	11400		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB3	1.00	11470		X		X			X		X		X	X								X	X	X	X				X			X
PBW	WS90RMB1	2.00	11570																														
CL-MH-SPS-20130605D	WS90RADUP	10.00	12180											X																			
CL-MH-SPS-20130605	WS90RA	10.00	12220											X																			
CL-MH-SPS-20130605S	WS90RASPK	10.00	12270											X																			

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo INSTRUMENT ID: NEXION 300D MS START DATE: 6/18/2013

SDG: WS90 RUNID: MS061811 METHOD: PMS END DATE: 6/18/2013

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
CL-MH-SPS-20130605A	WS90RAPOST	2.00	12310																						X								
ZZZZZZ	WT51ADUP	20.00	12350																														
ZZZZZZ	WT51A	20.00	12390																														
ZZZZZZ	WT51ASPK	20.00	12430																														
ZZZZZZ	WT51B	20.00	12470																														
ZZZZZZ	WT30J	.0000.00	12510																														
CCV	MCCV4	1.00	12570		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB4	1.00	13030		X		X			X		X		X	X								X	X	X	X				X			X
PBW	WS90RMB1	2.00	13080		X		X			X		X		X	X								X	X	X	X				X			X
PBW	WS90RMB2	2.00	13120		X		X			X		X		X	X								X	X	X	X				X			X
CL-MH-SPS-20130605D	WS90RADUP	2.00	13160		X		X			X		X			X								X	X	X	X				X			X
CL-MH-SPS-20130605	WS90RA	2.00	13200		X		X			X		X			X								X	X	X	X				X			X
CL-MH-SPS-20130605S	WS90RASPK	2.00	13240		X		X			X		X			X								X	X	X	X				X			X
CL-MH-SPS-20130605D	WS90REDUP	2.00	13280		X		X			X		X		X	X								X	X	X	X				X			X
CL-MH-SPS-20130605	WS90RE	2.00	13330		X		X			X		X		X	X								X	X	X	X				X			X
CL-MH-SPS-20130605S	WS90RESPK	2.00	13370		X		X			X		X		X	X								X	X	X	X				X			X
LCSW	WS90RMB1SPK	2.00	13410		X		X			X		X		X	X								X	X	X	X				X			X
LCSW	WS90RMB2SPK	2.00	13450		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV5	1.00	13500		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB5	1.00	13570		X		X			X		X		X	X								X	X	X	X				X			X

US90:00152

Mercury Analysis
Report and Summary QC Forms

ARI Job ID: WS90, WS92

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS92

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
CL-MH-SPS-02-20130	WS92A	13-12092	
CL-VT-EFF-20213060	WS92B	13-12093	
CL-VT-EFF-20213060D	WS92BDUP	13-12093	
CL-VT-EFF-20213060S	WS92BSPK	13-12093	
QC-EB-02-20130605-	WS92C	13-12094	
QC-EB-03-20130605-	WS92D	13-12095	
PBW	WS92MB1	13-12095	
LCSW	WS92MB1SPK	13-12095	
CL-MH-SPS-20130605	WS92E	13-12096	
CL-VT-EFF-20130605	WS92F	13-12097	
CL-VT-EFF-20130605D	WS92FDUP	13-12097	
CL-VT-EFF-20130605S	WS92FSPK	13-12097	
QC-EB-02-20130605-	WS92G	13-12098	
QC-EB-03-20130605-	WS92H	13-12099	
PBW	WS92MB2	13-12099	
LCSW	WS92MB2SPK	13-12099	

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: Eric Larson for Name: Jay Kuhn

Date: 6-12-13 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
Total Mercury by Method SW7470A

Data Release Authorized:
Reported: 06/12/13
Date Received: 06/05/13
Page 1 of 1

QC Report No: WS92-SAIC
Project: NPDES Sampling Support
209977

Client/ ARI ID	Date Sampled	Matrix	Prep Date Anal Date	RL	Result
CL-MH-SPS-20130605-W WS92A 13-12092	06/05/13	Water	06/11/13 06/11/13	20.0	20.0 U
CL-VT-EFF-20130605-W WS92B 13-12093	06/05/13	Water	06/11/13 06/11/13	20.0	20.0 U
QC-EB-02-20130605-W WS92C 13-12094	06/05/13	Water	06/11/13 06/11/13	20.0	20.0 U
QC-EB-03-20130605-W WS92D 13-12095	06/05/13	Water	06/11/13 06/11/13	20.0	20.0 U
MB-061113 Method Blank	NA	Water	06/11/13 06/11/13	20.0	20.0 U

Reported in ng/L

RL-Analytical reporting limit
U-Undetected at reported detection limit

WS92 : 06155

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: CL-VT-EFF-20130605-W
MATRIX SPIKE

Lab Sample ID: WS92B
LIMS ID: 13-12093
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WS92-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Mercury	7470A	20.0 U	111	100	111%	

Reported in ng/L

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

Sample ID: CL-VT-EFF-20130605-W DUPLICATE

Lab Sample ID: WS92B
LIMS ID: 13-12093
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WS92-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Mercury	7470A	20.0 U	20.0 U	0.0%	+/- 20.0	L

Reported in ng/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: WS92LCS
LIMS ID: 13-12095
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WS92-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Mercury	7470A	196	200	98.0%	

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: 06/12/13
Date Received: 06/05/13
Page 1 of 1

QC Report No238: WS92-SAIC
Project: NPDES Sampling Support
209977

Client/ ARI ID	Date Sampled	Matrix	Prep Date Anal Date	RL	Result
CL-MH-SPS-20130605-W WS92E 13-12096	06/05/13	Water	06/11/13 06/11/13	20.0	20.0 U
CL-VT-EFF-20130605-W WS92F 13-12097	06/05/13	Water	06/11/13 06/11/13	20.0	20.0 U
QC-EB-02-20130605-W WS92G 13-12098	06/05/13	Water	06/11/13 06/11/13	20.0	20.0 U
QC-EB-03-20130605-W WS92H 13-12099	06/05/13	Water	06/11/13 06/11/13	20.0	20.0 U
MB-061113 Method Blank	NA	Water	06/11/13 06/11/13	20.0	20.0 U

Reported in ng/L

RL-Analytical reporting limit
U-Undetected at reported detection limit

WS92 : 00159

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: CL-VT-EFF-20130605-W
MATRIX SPIKE

Lab Sample ID: WS92F
LIMS ID: 13-12097
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WS92-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Mercury	7470A	20.0 U	107	100	107%	

Reported in ng/L

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
DISSOLVED METALS
Page 1 of 1

Sample ID: CL-VT-EFF-20130605-W DUPLICATE

Lab Sample ID: WS92F
LIMS ID: 13-12097
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WS92-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Mercury	7470A	20.0 U	20.0 U	0.0%	+/- 20.0	L

Reported in ng/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WS92LCS
LIMS ID: 13-12099
Matrix: Water
Data Release Authorized:
Reported: 06/12/13

QC Report No: WS92-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Mercury	7470A	204	200	102%	

Reported in ng/L

N-Control limit not met
Control Limits: 80-120%

US98:80152

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS92

UNITS:ng/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Mercury	HG	CVL	HG061101	500.0	469.00	**93.8**	500.0	490.00	**98.0**	496.00	**99.2**	513.00	**102.6**	510.00	**102.0**	511.00	**102.2**

Control Limits: Mercury 80-120; Other Metals 90-110

SDG: WS92

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS:ng/L

SDG: WS92

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Mercury	HG	CVL	HG061101	500.0	514.00	**102.8**	523.00	**104.6**								

Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (1)

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS:ng/L

SDG: WS92

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	HG061101	20.0		16.60	**83.0**										

Control Limits: no control limits have been established by the EPA at this time.

FORM II (2)

4590:00165

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS:ng/L

SDG: WS92

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Mercury	HG	CVL	HG061101	25.0	20.0	20.0	U	20.0	U	20.0	U	20.0	U	20.0	U	20.0	U

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ng/L

SDG: WS92

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Mercury	HG	CVL	HG061101	25.0	20.0	20.0	U	20.0	U								

WS90:00157

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS92 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: WS92

ANALYSIS METHOD: CVL

ARI PREP CODE: DLM

PREPDATE: 6/11/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
CL-MH-SPS-20130605	WS92E	0.000	20.0	20.0
CL-VT-EFF-20130605	WS92F	0.000	20.0	20.0
CL-VT-EFF-20130605D	WS92FDUP	0.000	20.0	20.0
CL-VT-EFF-20130605S	WS92FSPK	0.000	20.0	20.0
QC-EB-02-20130605-	WS92G	0.000	20.0	20.0
QC-EB-03-20130605-	WS92H	0.000	20.0	20.0
PBW	WS92MB2	0.000	20.0	20.0
LCSW	WS92MB2SPK	0.000	20.0	20.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS92

ANALYSIS METHOD: CVL

ARI PREP CODE: TLM

PREPDATE: 6/11/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
CL-MH-SPS-02-20130	WS92A	0.000	20.0	20.0
CL-VT-EFF-20213060	WS92B	0.000	20.0	20.0
CL-VT-EFF-20213060D	WS92BDUP	0.000	20.0	20.0
CL-VT-EFF-20213060S	WS92BSPK	0.000	20.0	20.0
QC-EB-02-20130605-	WS92C	0.000	20.0	20.0
QC-EB-03-20130605-	WS92D	0.000	20.0	20.0
PBW	WS92MB1	0.000	20.0	20.0
LCSW	WS92MB1SPK	0.000	20.0	20.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 6/11/2013

SDG: WS92 | RUNID: HG061101 | METHOD: CVL | END DATE: 6/11/2013

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	11551														X																
S20	S20	1.00	11580														X																
S50	S50	1.00	12004														X																
S100	S100	1.00	12032														X																
S200	S200	1.00	12060														X																
S400	S400	1.00	12085														X																
S1000	S1000	1.00	12113														X																
ICV	AICV	1.00	12153														X																
ICB	ICB	1.00	12181														X																
CCV	ACCV1	1.00	12210														X																
CCB	CCB1	1.00	12234														X																
CRA	CRA	1.00	12262														X																
ZZZZZZ	WS01MB1	1.00	12290																														
ZZZZZZ	WS01MB1SPK	1.00	12314																														
ZZZZZZ	WS01A	1.00	12343																														
ZZZZZZ	WS01ADUP	1.00	12371																														
ZZZZZZ	WS01ASPK	1.00	12395																														
ZZZZZZ	WS01MB2	1.00	12423																														
ZZZZZZ	WS01MB2SPK	1.00	12451																														
ZZZZZZ	WS01B	1.00	12480																														
ZZZZZZ	WS01BDUP	1.00	12504																														
CCV	ACCV2	1.00	12532														X																
CCB	CCB2	1.00	12561														X																
ZZZZZZ	WS01BSPK	1.00	12585																														
CCV	ACCV3	1.00	13013														X																
CCB	CCB3	1.00	13042														X																
ZZZZZZ	WS03MB	1.00	13070																														
ZZZZZZ	WS03MBSPK	1.00	13094																														
ZZZZZZ	WS03A	1.00	13122																														
ZZZZZZ	WS03B	1.00	13150																														
ZZZZZZ	WS03BDUP	1.00	13175																														
ZZZZZZ	WS03BSPK	1.00	13203																														
ZZZZZZ	WS03C	1.00	13231																														
ZZZZZZ	WS23MB	1.00	13255																														
ZZZZZZ	WS23MBSPK	1.00	13283																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 6/11/2013

SDG: WS92 | RUNID: HG061101 | METHOD: CVL | END DATE: 6/11/2013

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	WS23A	1.00	13312																														
CCV	ACCV4	1.00	13340														X																
CCB	CCB4	1.00	13365														X																
ZZZZZZ	WS23B	1.00	13393																														
ZZZZZZ	WS23BDUP	1.00	13421																														
ZZZZZZ	WS23BSPK	1.00	13445																														
ZZZZZZ	WS23C	1.00	13474																														
ZZZZZZ	WS23D	1.00	13502																														
ZZZZZZ	WS23E	1.00	13530																														
CCV	ACCV5	1.00	13554														X																
CCB	CCB5	1.00	13583														X																
PBW	WS92MB1	1.00	14014														X																
LCSW	WS92MB1SPK	1.00	14042														X																
CL-MH-SPS-02-20130	WS92A	1.00	14070														X																
CL-VT-EFF-20213060	WS92B	1.00	14094														X																
CL-VT-EFF-20213060D	WS92BDUP	1.00	14122														X																
CL-VT-EFF-20213060S	WS92BSPK	1.00	14150														X																
QC-EB-02-20130605-	WS92C	1.00	14174														X																
QC-EB-03-20130605-	WS92D	1.00	14202														X																
PBW	WS92MB2	1.00	14231														X																
LCSW	WS92MB2SPK	1.00	14255														X																
CCV	ACCV6	1.00	14283														X																
CCB	CCB6	1.00	14312														X																
CL-MH-SPS-20130605	WS92E	1.00	14340														X																
CL-VT-EFF-20130605	WS92F	1.00	14365														X																
CL-VT-EFF-20130605D	WS92FDUP	1.00	14393														X																
CL-VT-EFF-20130605S	WS92FSPK	1.00	14421														X																
QC-EB-02-20130605-	WS92G	1.00	14445														X																
QC-EB-03-20130605-	WS92H	1.00	14473														X																
CCV	ACCV7	1.00	14501														X																
CCB	CCB7	1.00	14530														X																

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: WS90, WS92

SAMPLE RESULTS-CONVENTIONALS
WS90-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: MR
Reported: 06/24/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Client ID: CL-MH-SPS-20130605-W
ARI ID: 13-12078 WS90A

Analyte	Date Batch	Method	Units	RL	Sample
pH	06/05/13 060513#1	SM4500H	std units	0.01	9.46
Alkalinity	06/14/13 061413#1	SM 2320	mg/L CaCO3	1.0	85.2
Carbonate	06/14/13	SM 2320	mg/L CaCO3	1.0	45.0
Bicarbonate	06/14/13	SM 2320	mg/L CaCO3	1.0	40.2
Hydroxide	06/14/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Conductivity	06/11/13 061113#1	EPA 120.1	umhos/cm	1.00	197
Total Suspended Solids	06/10/13 061013#1	SM2540D	mg/L	8.3	414
Chloride	06/10/13 061013#1	EPA 300.0	mg/L	0.2	7.4
N-Nitrate	06/06/13 060613#1	EPA 300.0	mg-N/L	0.1	1.2
Sulfate	06/10/13 061013#1	EPA 300.0	mg/L	0.5	24.4
Total Organic Carbon	06/18/13 061813#1	SM5310B	mg/L	3.75	6.15
Dissolved Organic Carbon	06/13/13 061313#1	SM5310B	mg/L	1.50	3.58

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
WS90-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: JK
Reported: 06/24/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Client ID: CL-VT-EFF-20130605-W
ARI ID: 13-12079 WS90B

Analyte	Date Batch	Method	Units	RL	Sample
pH	06/05/13 060513#1	SM4500H	std units	0.01	9.15
Alkalinity	06/14/13 061413#1	SM 2320	mg/L CaCO3	1.0	69.2
Carbonate	06/14/13	SM 2320	mg/L CaCO3	1.0	23.2
Bicarbonate	06/14/13	SM 2320	mg/L CaCO3	1.0	46.0
Hydroxide	06/14/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Conductivity	06/11/13 061113#1	EPA 120.1	umhos/cm	1.00	187
Total Suspended Solids	06/10/13 061013#1	SM2540D	mg/L	2.1	48.3
Chloride	06/10/13 061013#1	EPA 300.0	mg/L	0.2	5.5
N-Nitrate	06/06/13 060613#1	EPA 300.0	mg-N/L	0.1	0.8
Sulfate	06/10/13 061013#1	EPA 300.0	mg/L	0.5	18.1
Total Organic Carbon	06/18/13 061813#1	SM5310B	mg/L	1.50	4.36
Dissolved Organic Carbon	06/13/13 061313#1	SM5310B	mg/L	1.50	3.59

RL Analytical reporting limit
U Undetected at reported detection limit

MS/MSD RESULTS-CONVENTIONALS
WS90-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/24/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: WS90A Client ID: CL-MH-SPS-20130605-W							
Chloride	EPA 300.0	06/10/13	mg/L	7.4	17.0	10.0	96.0%
N-Nitrate	EPA 300.0	06/06/13	mg-N/L	1.2	3.2	2.0	100.0%
Sulfate	EPA 300.0	06/10/13	mg/L	24.4	42.0	20.0	88.0%

REPLICATE RESULTS-CONVENTIONALS
WS90-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/24/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: WS90A Client ID: CL-MH-SPS-20130605-W						
pH	SM4500H	06/05/13	std units	9.46	9.47	0.01
Alkalinity	SM 2320	06/14/13	mg/L CaCO3	85.2	86.1	1.1%
Carbonate	SM 2320	06/14/13	mg/L CaCO3	45.0	45.0	0.0%
Bicarbonate	SM 2320	06/14/13	mg/L CaCO3	40.2	41.1	2.2%
Hydroxide	SM 2320	06/14/13	mg/L CaCO3	< 1.0	< 1.0	NA
Conductivity	EPA 120.1	06/11/13	umhos/cm	197	199	1.0%
Total Suspended Solids	SM2540D	06/10/13	mg/L	414	411	0.7%
Chloride	EPA 300.0	06/10/13	mg/L	7.4	7.4	0.0%
N-Nitrate	EPA 300.0	06/06/13	mg-N/L	1.2	1.2	0.0%
Sulfate	EPA 300.0	06/10/13	mg/L	24.4	24.4	0.0%

pH is evaluated as the Absolute Difference between the values rather than Relative Percent Difference

WS90 : 00177

LAB CONTROL RESULTS-CONVENTIONALS
WS90-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: JB
Reported: 06/24/13

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	06/05/13	std units	6.99	7.00	0.01
Total Suspended Solids SM2540D	ICVL	06/10/13	mg/L	49.8	50.0	99.6%

pH is evaluated as the Absolute Difference between the values rather than Percent Recovery.

METHOD BLANK RESULTS-CONVENTIONALS
WS90-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: BR
Reported: 06/24/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Conductivity	EPA 120.1	06/11/13	umhos/cm	< 1.00 U	
Total Suspended Solids	SM2540D	06/10/13	mg/L	< 1.0 U	
Chloride	EPA 300.0	06/10/13	mg/L	< 0.1 U	
N-Nitrate	EPA 300.0	06/06/13	mg-N/L	< 0.1 U	
Sulfate	EPA 300.0	06/10/13	mg/L	< 0.1 U	
Total Organic Carbon	SM5310B	06/18/13	mg/L	< 1.50 U	
Dissolved Organic Carbon	SM5310B	06/13/13	mg/L	< 1.50 U	
		06/13/13		< 1.50 U	FB
		06/13/13		< 1.50 U	FB

FB Filtration Blank

STANDARD REFERENCE RESULTS-CONVENTIONALS
WS90-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: MP
Reported: 06/24/13

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	06/14/13	mg/L CaCO3	32.3	32.1	100.6%
Conductivity Ricca #4110724	EPA 120.1	06/11/13	umhos/cm	985	1,000	98.5%
Chloride ERA 210312	EPA 300.0	06/10/13	mg/L	3.0	3.0	100.0%
N-Nitrate EAR 230511	EPA 300.0	06/06/13	mg-N/L	3.0	3.0	100.0%
Sulfate ERA 240312	EPA 300.0	06/10/13	mg/L	3.0	3.0	100.0%
Total Organic Carbon ERA 0409-12-01	SM5310B	06/18/13	mg/L	21.4	20.0	107.0%
Dissolved Organic Carbon ERA 0409-12-01	SM5310B	06/13/13	mg/L	18.8	20.0	94.0%

Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WS90, WS92

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) WS90 Page 1 of 1 Batch set up by SP

Bottle #	Extraction Requirements	Volume Extracted	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	WS90 MBW	500mL	0.5mL	0.5mL		AR 06/10/13
	SBW	500mL	0.5mL	0.5mL		
	SBW Dup	500mL	0.5mL	0.5mL		
	~~QLS~~	~~500mL~~	~~0.5mL~~	~~0.5mL~~		
6	WS90 A	500mL	0.5mL	0.5mL		
6	B	500mL	0.5mL	0.5mL		Analyst/Date
3	C	500mL	0.5mL	0.5mL		KD 80-85°C 1 2 3 4 5 6
5	D	500mL	0.5mL	0.5mL		YL 06/14/13
		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
		500mL	0.5mL	0.5mL		TurboVap 1 2 3
		500mL	0.5mL	0.5mL		SP 6-17-13
		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		
Analyst/Date	AR 06/10/13	SP 6/17/13	SP 6/17/13	Reviewed by AR 6/17/13		Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (2053-4)	100/150µg/mL	125µL	7/2/13	AR	~~AC~~
Full List Spike (Freezer)	7 (2065-5)	100µg/mL	125µL	1/29/14	AR	AC
Base Spike	56 (2065-2)	200µg/mL	125µL	7/31/13	AR	AC
~~Benzidine Spike~~	~~39 ( )~~	~~500µg/mL~~	~~125µL~~			
Acid Spike	38 (2051-4)	100/200µg/mL	125µL	2/28/14	AC	AC
~~QLS Spike (Freezer)~~	~~14 (B004538)~~	~~10-100µg/mL~~	~~50µL~~	~~1/31/14~~	~~AR~~	
Extraction Time: 13:45						

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)

WS90 : 00102

(8270D) BAN –Water
Separatory Funnel (3510C) (SOP # 3311S)

ARI Job No(s) WS 90

(8270D) BAN Aqueous:	Analyst/Date
Separatory Funnel Station: Methylene Chloride: (I# 8270) 1:1 Sulfuric Acid/DI H20: (H# 189) 10 N Sodium Hydroxide: (H# 49) Anhydrous Sodium Sulfate: (I# 8/30 + jar date 05/13/13)	Sep. Funnel AR 06/10/13
KD Station: Methylene Chloride: (I# 8279)	KD RR/YL 06/14/13
Vialing Station: Methylene Chloride: (I# 8279)	Vialing SP 6/17/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WS90 Client ID: SAIC

Parameter: BAN Client Project: NPDE 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 WS90 samples C, D	AR 06/10/13
☑ Turbid/Color= WS90 samples A, tan, turbid B, light tan, turbid	AR 06/10/13
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

WS90 : 0018U

Semivolatile Raw Data
Initial Calibration

ARI Job ID: WS90, WS92

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): 3/6/13 Internal Standard ID 1998-2 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	ICV Exceeding ±30%?	YES / NO
ICal Meets %RSD & r^2 Criteria?	YES / NO	Linear Fits Used?	YES / NO
Q flag applied?	N/A / 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	2053-2	8/31/13	Supelco	2056-1	8/13/13
↓	2054-1	12/31/13	↓	2057-1	12/31/13
↓	2055-1	12/5/13	↓	2058-1	12/5/13
in house stock	2061-1	12/5/13	in house stock	2061-1	12/5/13
Cambridge	28031	1/23/14	Cambridge	28031	1/23/14
SPEX & Restex	2027-2	10/15/13	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 used: Butylatedhydroxytoluene, Tributyl Phosphate, Biphenyl, Naphthalene, 4-chloroaniline, 2-chloronaphthalene, 3-Nitroaniline, Fluorene, Carbazole, Benzo(b,K) fluoranthene, ~~& BS~~

1ppm point dropped: Benzoic Acid, 2,4-Dinitrophenol, 4-Nitrophenol, Diethylphthalate, 4,6-Dinitro-2-methylphenol, PCP, & Benzidine

80ppm point dropped: Naphthalene, 4-chloroaniline, phenanthrene, Anthracene, Di-n-butylphthalene

Benzidine: didn't met min response factor and out of QC limit on ~~ICV~~ ICV.

Analyst: [signature] **Date:** 03/07/13

Reviewer: [signature] **Date:** 3/7/13

US90 00185

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing
Curve Type : Average

Calibration File Names:
Level 1: /chem2/nt6.i/20130306.b/03061303.D
Level 2: /chem2/nt6.i/20130306.b/03061304.D
Level 3: /chem2/nt6.i/20130306.b/03061305.D
Level 4: /chem2/nt6.i/20130306.b/03061301.D
Level 5: /chem2/nt6.i/20130306.b/03061306.D
Level 6: /chem2/nt6.i/20130306.b/03061307.D
Level 7: /chem2/nt6.i/20130306.b/03061308.D
Level 8: /chem2/nt6.i/20130306.b/03061302.D

03/07/13

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	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
186 Carbaryl	0.39701	0.47535	0.56117	0.49062	0.46459	0.42558		
	0.42067	+++++					0.46214	11.884
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 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	0.20000 Level 8						
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
177 p-Benzoquinone	0.05008	0.07043	0.09004	0.08723	0.08034	0.07949		
	0.07703	+++++					0.07638	17.383
168 Pentachlorobenzene	0.54002	0.44946	0.48381	0.42999	0.39543	0.37082		
	0.39690	+++++					0.43806	13.414
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 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	0.20000 Level 8							
135 2,3,5,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
136 2,3,4,5-tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
133 Butylatedhydroxytoluene	1.14333	0.98886	1.01757	0.90348	0.73978	0.64214			
	0.61393	+++++					0.86416	23.429	<-
132 3,6-Dimethylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	

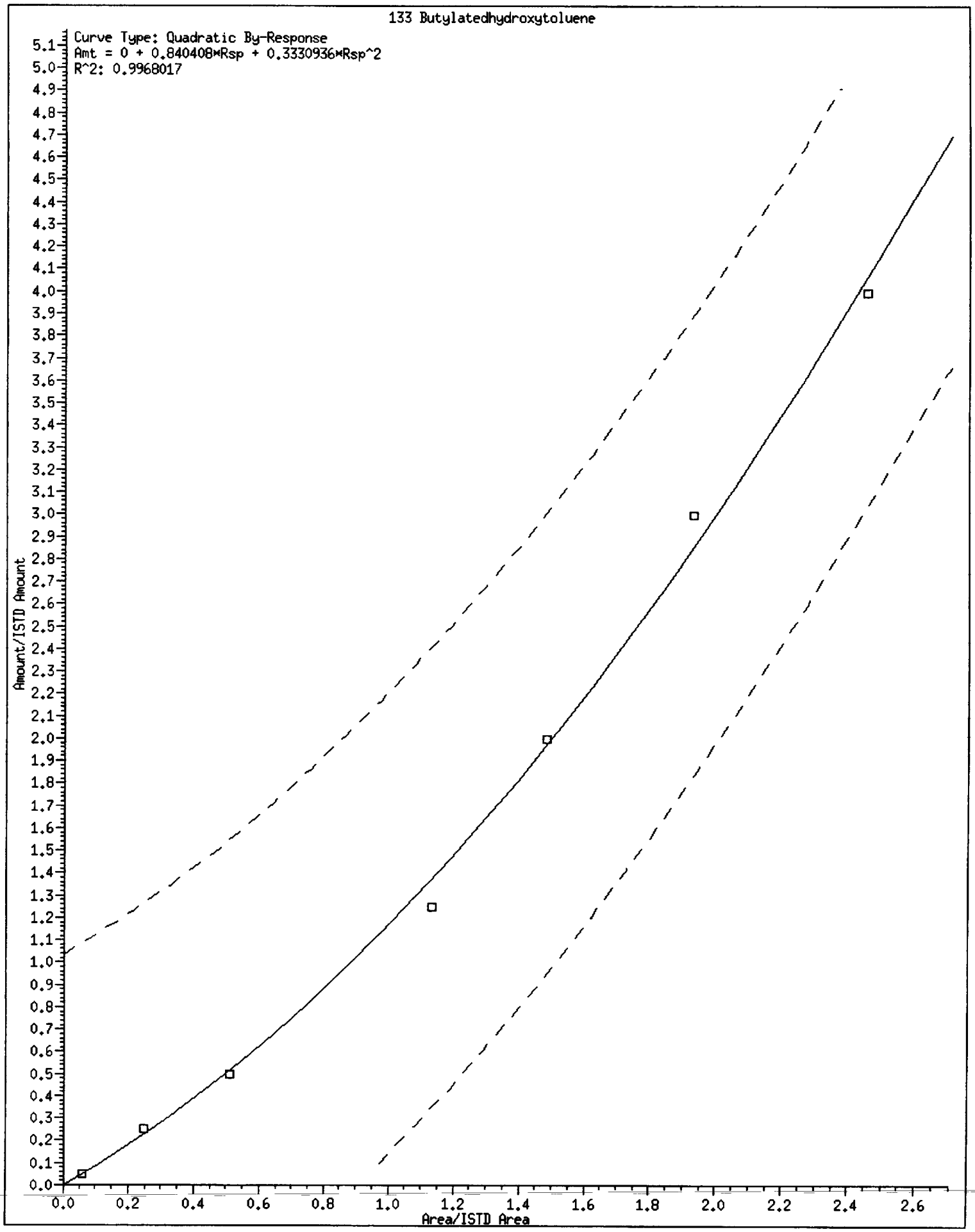
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing

DZ 03/07/13

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	0.2000 Level 8									
135 2,3,5,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
136 2,3,4,5-tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
133 Butylatedhydroxytoluene	55856	240649	644369	1140696	1474910	1855173					
	2177090	+++++					QUAD	0.000e+00	0.84041	0.33309	0.99680
132 3,6-Dimethylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00


133 Butylatedhydroxytoluene
Curve Type: Quadratic By-Response
Amt = 0 + 0.840408*Rsp + 0.3330936*Rsp^2
R^2: 0.9968017
Amount/ISTD Amount
Area/ISTD Area

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 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	0.20000 Level 8						
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
144 alpha-Terpineol	0.29935	0.28907	0.28287	0.25012	0.23154	0.21632		
	0.21106	+++++					0.25433	14.269
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
123 Acetophenone	2.14833	1.97774	2.14601	1.85029	1.73200	1.63910		
	1.68468	+++++					1.88259	11.294
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
143 1,4-Dioxane	0.70789	0.62615	0.68743	0.61563	0.60104	0.58481		
	0.62088	0.74708					0.64887	8.913
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
120 2,3,4,6-Tetrachlorophenol	0.21112	0.27662	0.33189	0.30795	0.30141	0.27621		
	0.29312	+++++					0.28547	13.312

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 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	0.20000 Level 8							
178 2-Benzyl-4-Chlorophenol	0.15564	0.16773	0.19566	0.17601	0.15696	0.14827			
	0.15928	+++++					0.16565	9.643	
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
118 Triphenyl Phosphate	0.17525	0.16342	0.19227	0.18313	0.17027	0.16645			
	0.17518	+++++					0.17514	5.680	
117 Butyl Diphenyl Phosphate	0.21332	0.19997	0.21022	0.18688	0.17012	0.15561			
	0.15293	+++++					0.18415	13.621	
116 Dibutyl Phenyl Phosphate	0.56961	0.57941	0.64769	0.57421	0.51114	0.49019			
	0.32986	+++++					0.52887	19.190	
115 Tributyl Phosphate	1.07204	0.94669	0.98668	0.84143	0.73508	0.63101			
	0.65635	+++++					0.83847	20.377	<-
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
113 Diphenyl Oxide	0.97304	0.82674	0.87158	0.78098	0.69512	0.65045			
	0.65225	+++++					0.77860	15.566	
112 Biphenyl	1.50584	1.36472	1.24623	1.05635	0.90153	0.79289			
	0.81967	+++++					1.09818	25.495	<-

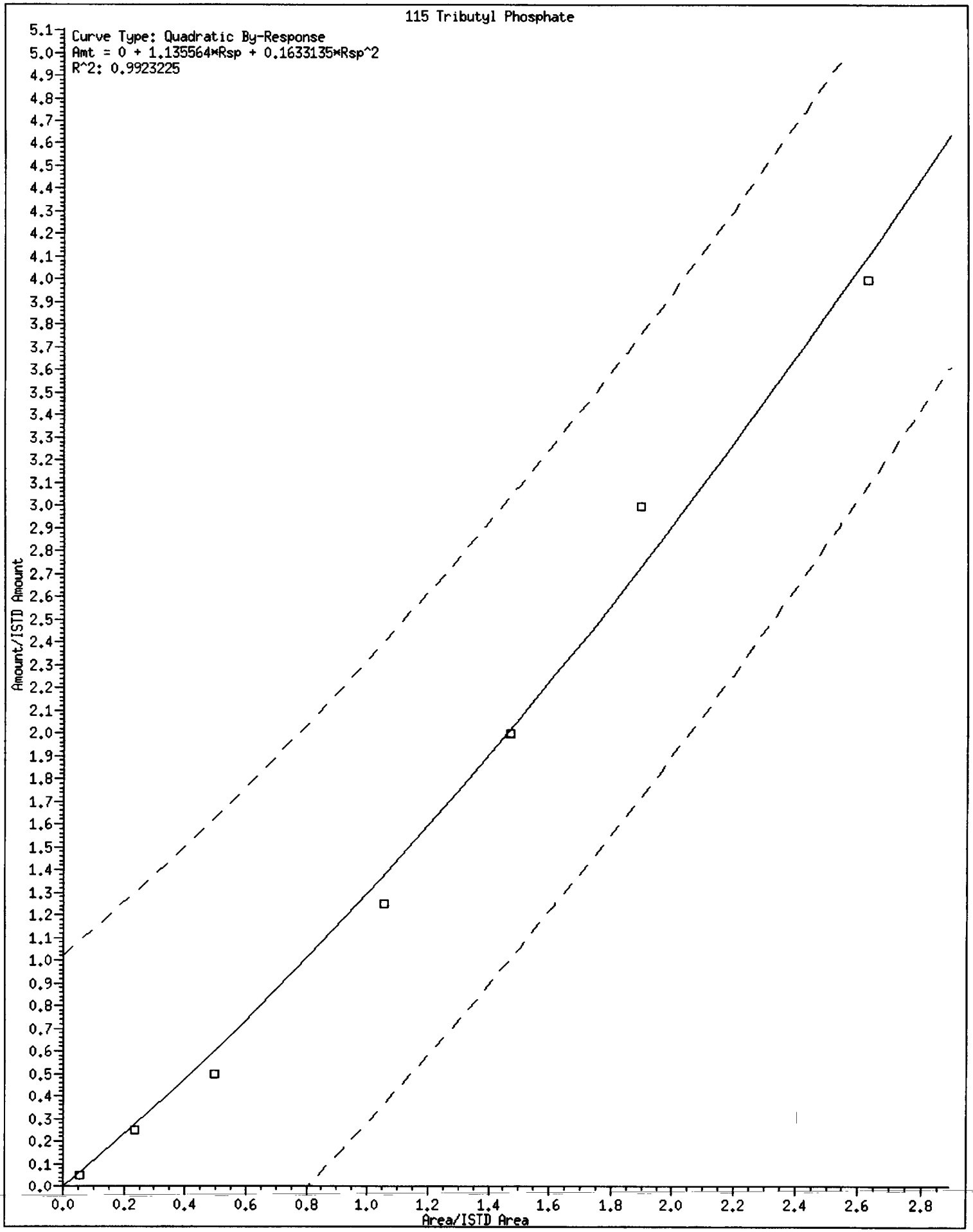
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

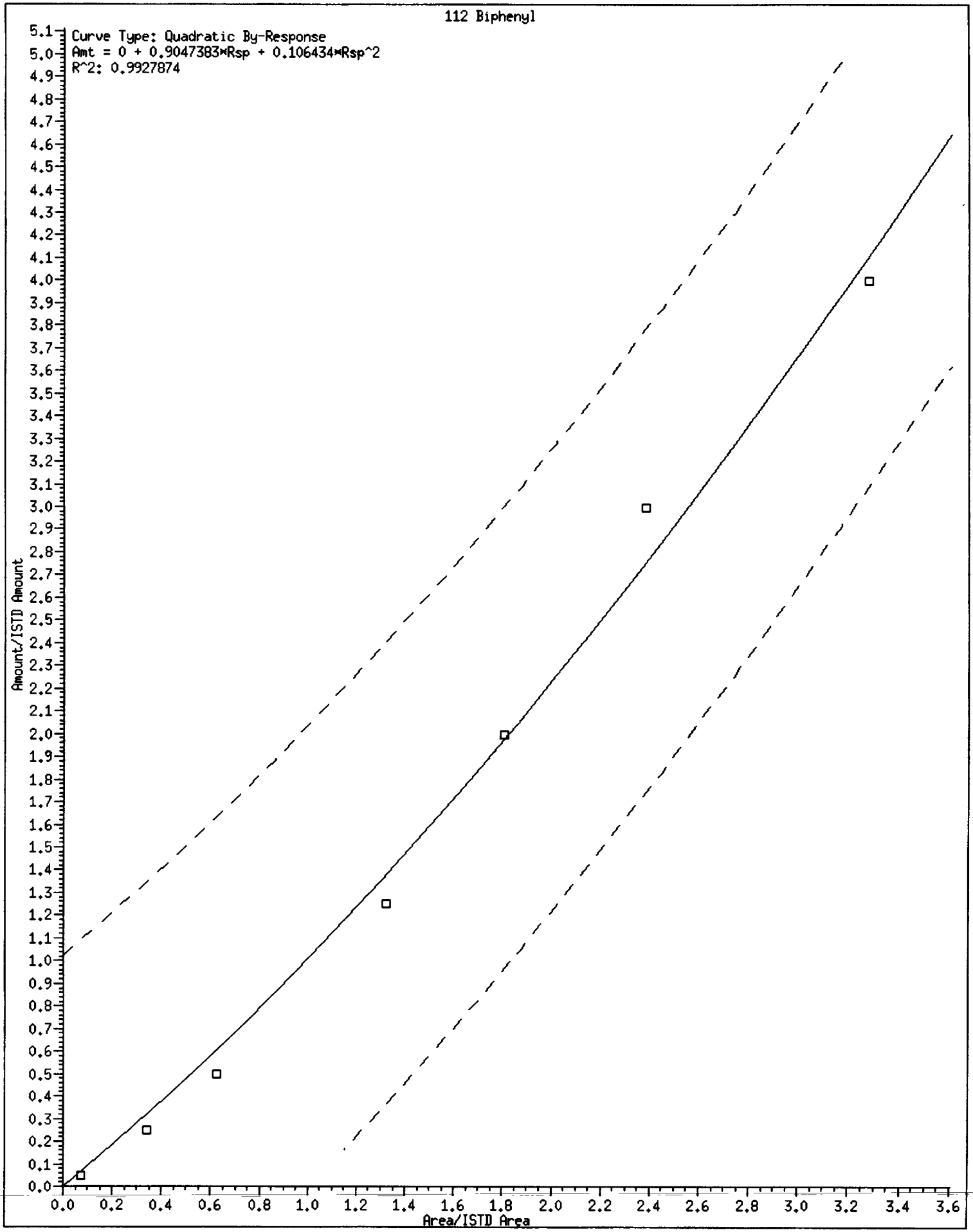
Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing

03/07/13

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	0.2000 Level 8									
117 Butyl Diphenyl Phosphate	0.21332	0.19997	0.21022	0.18688	0.17012	0.15561					
	0.15293	+++++					AVRG		0.18415		13.62056
116 Dibutyl Phenyl Phosphate	0.56961	0.57941	0.64769	0.57421	0.51114	0.49019					
	0.32986	+++++					AVRG		0.52887		19.19001
115 Tributyl Phosphate	82254	364951	993217	1753043	2401166	3026027					
	3817283	+++++					QUAD	0.000e+00	1.13556	0.16331	0.99232
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
113 Diphenyl Oxide	0.97304	0.82674	0.87158	0.78098	0.69512	0.65045					
	0.65225	+++++					AVRG		0.77860		15.56612
112 Biphenyl	73566	332118	789168	1333701	1797394	2290712					
	2906690	+++++					QUAD	0.000e+00	0.90474	0.10643	0.99279
111 Azobenzene (1,2-DP-Hydrazine)	1.59819	1.41911	1.45514	1.24383	1.12998	1.02761					
	0.99651	+++++					AVRG		1.26720		18.16759


115 Tributyl Phosphate
Curve Type: Quadratic By-Response
Amt = 0 + 1.135564*Rsp + 0.1633135*Rsp^2
R^2: 0.9923225
Amount/ISTD Amount
Area/ISTD Area

WS90 : 00195


112 Biphenyl
Curve Type: Quadratic By-Response
Amt = 0 + 0.9047383*Rsp + 0.106434*Rsp^2
R^2: 0.9927874
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
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 2.9 3.0 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 3.9 4.0 4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9 5.0 5.1

USSG : 00196

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 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	0.20000 Level 8						
111 Azobenzene (1,2-DP-Hydrazine)	1.59819	1.41911	1.45514	1.24383	1.12998	1.02761		
	0.99651	+++++					1.26720	18.168
110 Tetrachloroguaiacol	0.10144	0.10936	0.12483	0.10869	0.10075	0.09321		
	0.09632	+++++					0.10494	10.074
109 3,4,5-Trichloroguaiacol	0.11477	0.11815	0.12746	0.12229	0.10934	0.09910		
	0.10860	+++++					0.11425	8.305
181 3,4,6-Trichloroguaiacol	0.43141	0.47417	0.53018	0.50138	0.41933	0.41537		
	0.42275	+++++					0.45637	10.040
108 4,5,6-Trichloroguaiacol	0.16930	0.18527	0.21198	0.20697	0.18460	0.17184		
	0.17943	+++++					0.18706	8.817
184 3,4-Dichloroguaiacol	0.43918	0.42819	0.49791	0.46649	0.40627	0.38479		
	0.40939	+++++					0.43317	8.937
107 4,5-Dichloroguaiacol	0.24196	0.24929	0.27603	0.26392	0.23066	0.21900		
	0.23005	+++++					0.24442	8.269
182 4,6-Dichloroguaiacol	0.49926	0.53426	0.61321	0.57613	0.50603	0.47974		
	0.49129	+++++					0.52856	9.333
185 4-Chloroguaiacol	0.48657	0.54944	0.65015	0.62373	0.55846	0.49724		
	0.56809	+++++					0.56195	10.695

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 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	0.20000 Level 8						
106 Guaiacol	1.24586	1.15918	1.23291	1.07310	0.91138	0.81234		
	0.84782	+++++					1.04037	17.558
105 1-methylnaphthalene	0.61050	0.56976	0.56450	0.48433	0.43716	0.40010		
	0.39230	+++++					0.49409	17.868
151 1,2,4,5-Tetrachlorobenzene	0.59727	0.49980	0.53345	0.47181	0.44897	0.42889		
	0.43944	+++++					0.48852	12.333
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 : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 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	0.20000 Level 8						
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
3 Phenol	1.76224	1.73918	1.83003	1.55412	1.48613	1.36745		
	1.44212	+++++					1.59733	11.217
4 Bis(2-Chloroethyl)ether	1.60048	1.46370	1.59535	1.35339	1.28082	1.18687		
	1.22983	+++++					1.38721	12.206
6 2-Chlorophenol	1.37831	1.35510	1.48160	1.27414	1.21027	1.10283		
	1.14376	+++++					1.27800	10.632
7 1,3-Dichlorobenzene	1.81681	1.60019	1.72092	1.47702	1.37550	1.23803		
	1.21973	+++++					1.49260	15.521
9 1,4-Dichlorobenzene	1.82032	1.55518	1.67185	1.43038	1.32574	1.19194		
	1.17353	+++++					1.45271	16.773
11 Benzyl alcohol	0.87814	0.94410	0.96815	0.88893	0.80130	0.76972		
	0.84099	+++++					0.87019	8.282
12 1,2-Dichlorobenzene	1.75726	1.52316	1.60555	1.35410	1.23587	1.09413		
	1.15115	+++++					1.38875	17.850
13 2-Methylphenol	1.25131	1.27565	1.40693	1.22918	1.16820	1.08763		
	1.05956	+++++					1.21121	9.799

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 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	0.20000 Level 8						
14 2,2'-oxybis(1-Chloropropane)	2.65572	2.34667	2.53456	2.16149	2.04249	1.89075		
	1.79656	+++++					2.20404	14.652
15 4-Methylphenol	1.24172	1.26860	1.42287	1.24234	1.15506	1.05073		
	1.00274	+++++					1.19772	11.861
16 N-Nitroso-di-n-propylamine	1.19534	1.07425	1.16253	1.02032	0.96375	0.91446		
	0.95659	+++++					1.04103	10.318
17 Hexachloroethane	0.69948	0.61914	0.67843	0.57825	0.54358	0.50067		
	0.49368	+++++					0.58761	13.924
19 Nitrobenzene	0.47644	0.42369	0.44826	0.37521	0.34533	0.30829		
	0.31169	+++++					0.38413	17.393
20 Isophorone	0.78131	0.68897	0.74735	0.63483	0.61575	0.59471		
	0.62384	+++++					0.66954	10.685
21 2-Nitrophenol	0.14475	0.18211	0.21326	0.18617	0.18391	0.16934		
	0.16463	+++++					0.17774	11.981
22 2,4-Dimethylphenol	0.36124	0.35541	0.38736	0.33105	0.32305	0.30039		
	0.29443	+++++					0.33613	10.045
23 Bis(2-Chloroethoxy)methane	0.54133	0.46642	0.49900	0.42377	0.39795	0.37399		
	0.37262	+++++					0.43930	14.803

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 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	0.20000 Level 8							
24 Benzoic acid	+++++	0.21032	0.31862	0.30681	0.30884	0.29513			
	0.30610	+++++					0.29097	13.821	
25 2,4-Dichlorophenol	0.24056	0.27100	0.31317	0.27389	0.24851	0.23391			
	0.23074	+++++					0.25883	11.350	
26 1,2,4-Trichlorobenzene	0.40472	0.33988	0.36900	0.30997	0.29325	0.26919			
	0.26929	+++++					0.32219	15.982	
28 Naphthalene	1.25818	1.04449	1.06870	0.85731	0.76662	0.67606			
	+++++	+++++					0.94522	22.941	<-
29 4-Chloroaniline	0.40601	0.41245	0.37680	0.25657	0.23831	0.21446			
	+++++	+++++					0.31743	28.516	<-
30 Hexachlorobutadiene	0.23409	0.20453	0.22348	0.19224	0.18055	0.16813			
	0.16943	+++++					0.19606	13.193	
31 4-Chloro-3-methylphenol	0.24514	0.28452	0.33097	0.28692	0.27737	0.24791			
	0.25165	+++++					0.27493	11.055	
32 2-Methylnaphthalene	0.59617	0.57361	0.56565	0.48068	0.42538	0.38709			
	0.37604	+++++					0.48637	19.091	
33 Hexachlorocyclopentadiene	0.23396	0.28456	0.36132	0.34785	0.33400	0.33313			
	0.35447	+++++					0.32133	14.309	

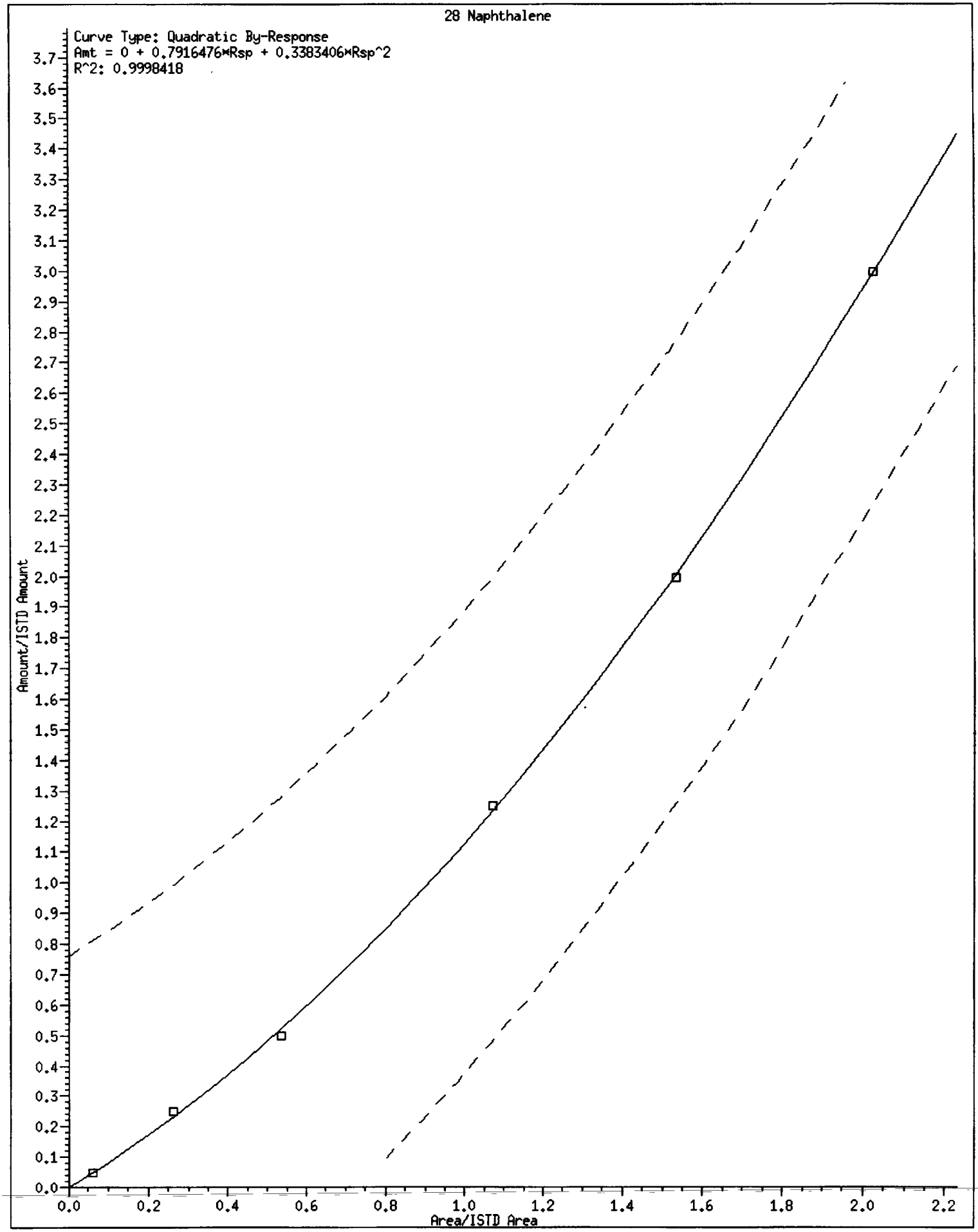
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

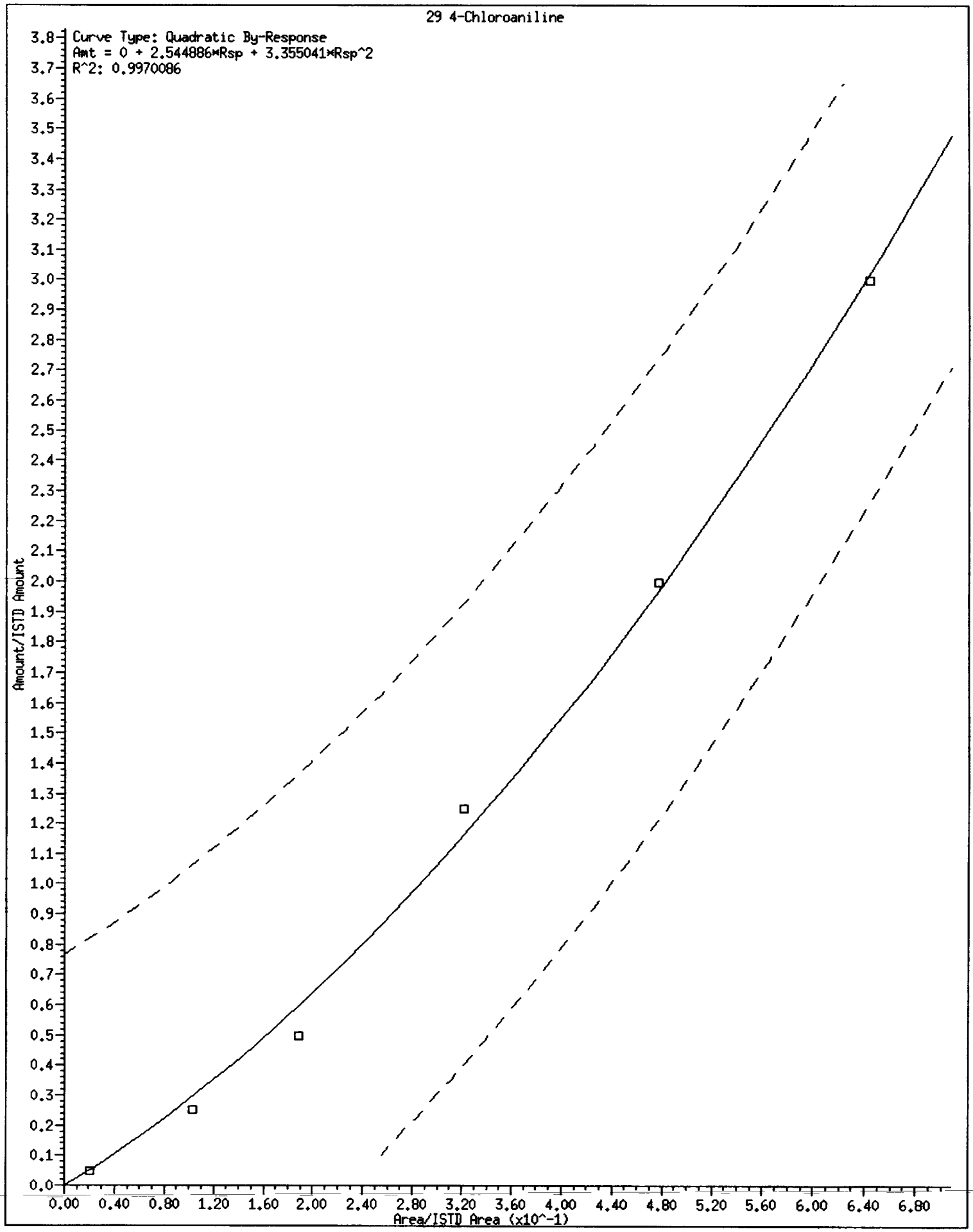
Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing

03/07/13

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	0.2000 Level 8									
22 2,4-Dimethylphenol	0.36124	0.35541	0.38736	0.33105	0.32305	0.30039					
	0.29443	+++++					AVRG		0.33613		10.04487
23 Bis(2-Chloroethoxy)methane	0.54133	0.46642	0.49900	0.42377	0.39795	0.37399					
	0.37262	+++++					AVRG		0.43930		14.80298
24 Benzoic acid	+++++	0.21032	0.31862	0.30681	0.30884	0.29513					
	0.30610	+++++					AVRG		0.29097		13.82096
25 2,4-Dichlorophenol	0.24056	0.27100	0.31317	0.27389	0.24851	0.23391					
	0.23074	+++++					AVRG		0.25883		11.35002
26 1,2,4-Trichlorobenzene	0.40472	0.33988	0.36900	0.30997	0.29325	0.26919					
	0.26929	+++++					AVRG		0.32219		15.98220
28 Naphthalene	106156	433038	1122405	1841435	2641007	3435418					
	+++++	+++++					QUAD	0.000e+00	0.79165	0.33834	0.99984
29 4-Chloroaniline	34256	171000	395736	551083	820986	1089759					
	+++++	+++++					QUAD	0.000e+00	2.54489	3.35504	0.99701


28 Naphthalene
Curve Type: Quadratic By-Response
Amt = 0 + 0.7916476*Rsp + 0.3383406*Rsp^2
R^2: 0.9998418
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
0.1
0.3
0.5
0.7
0.9
1.1
1.3
1.5
1.7
1.9
2.1
2.3
2.4
2.5
2.6
2.7
2.8
2.9
3.0
3.1
3.2
3.3
3.4
3.5
3.6
3.7

4598 : 00283


29 4-Chloroaniline
Curve Type: Quadratic By-Response
Amt = 0 + 2.544886*Rsp + 3.355041*Rsp^2
R^2: 0.9970086
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
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
2.9
3.0
3.1
3.2
3.3
3.4
3.5
3.6
3.7
3.8
0.00
0.40
0.80
1.20
1.60
2.00
2.40
2.80
3.20
3.60
4.00
4.40
4.80
5.20
5.60
6.00
6.40
6.80

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 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	0.20000 Level 8							
34 2,4,6-Trichlorophenol	0.28509	0.32769	0.36550	0.34273	0.34257	0.33960			
	0.35029	+++++					0.33621	7.521	
35 2,4,5-Trichlorophenol	0.23683	0.34153	0.40172	0.34946	0.34780	0.32623			
	0.31812	+++++					0.33167	14.969	
37 2-Chloronaphthalene	1.30198	1.09706	1.09950	0.90253	0.81425	0.74840			
	0.76882	+++++					0.96179	21.687	<-
38 2-Nitroaniline	0.21098	0.31500	0.33889	0.31514	0.29714	0.29154			
	0.30102	+++++					0.29567	13.698	
39 Dimethylphthalate	1.47783	1.26016	1.34236	1.16190	1.10101	1.00418			
	1.07862	+++++					1.20372	13.790	
40 Acenaphthylene	2.05852	1.77956	1.81983	1.50838	1.37166	1.24430			
	1.26069	+++++					1.57756	19.869	
41 2,6-Dinitrotoluene	0.24764	0.27592	0.30131	0.26038	0.24504	0.22578			
	0.24419	+++++					0.25718	9.659	
43 3-Nitroaniline	0.21873	0.26028	0.21928	0.19165	0.17183	0.14368			
	0.14011	+++++					0.19222	22.831	<-
44 Acenaphthene	1.34077	1.11343	1.14570	0.97612	0.89996	0.83034			
	0.84339	+++++					1.02139	18.356	

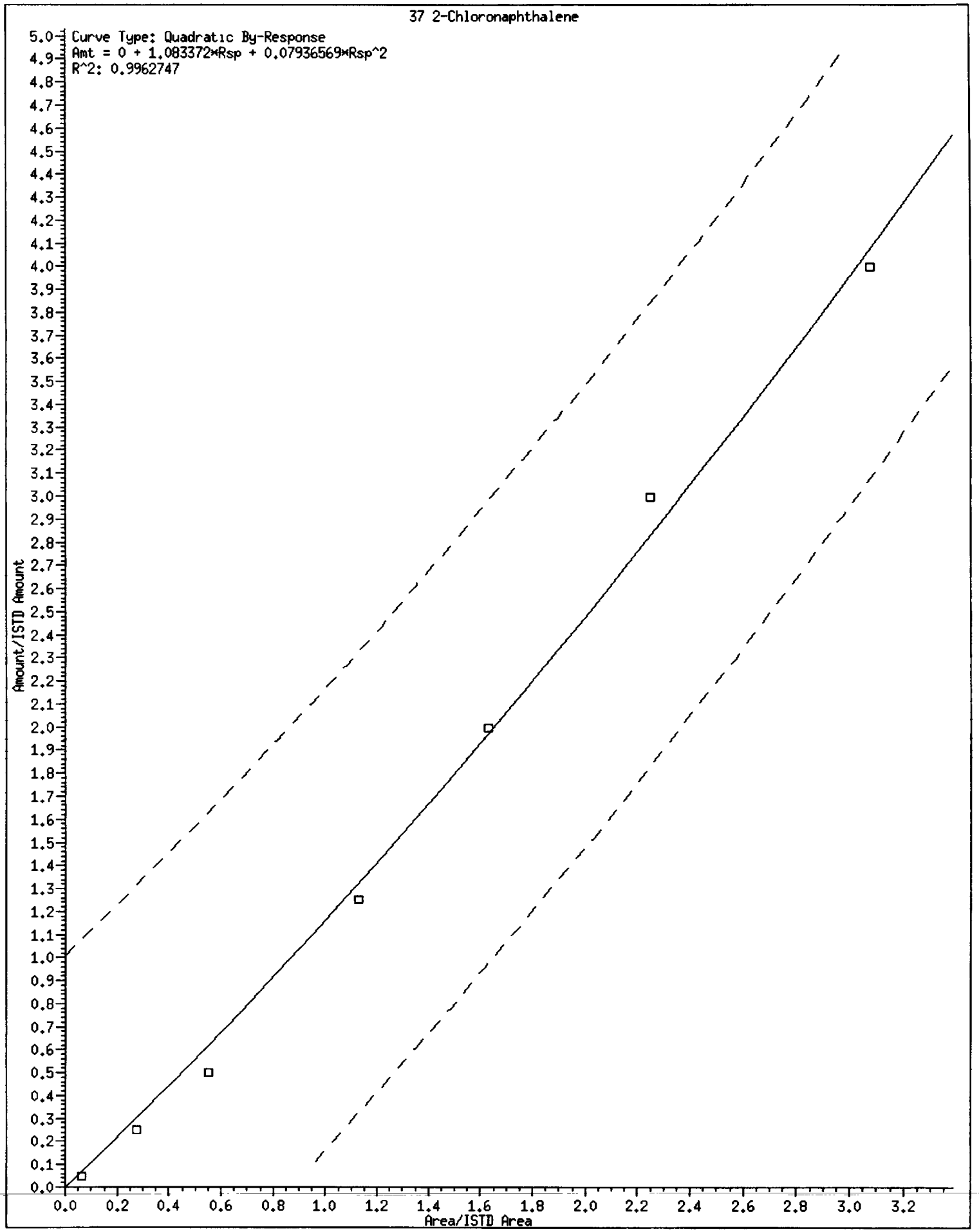
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing

03/07/13

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	0.2000 Level 8									
30 Hexachlorobutadiene	0.23409	0.20453	0.22348	0.19224	0.18055	0.16813					
	0.16943	+++++					AVRG		0.19606		13.19319
31 4-Chloro-3-methylphenol	0.24514	0.28452	0.33097	0.28692	0.27737	0.24791					
	0.25165	+++++					AVRG		0.27493		11.05467
32 2-Methylnaphthalene	0.59617	0.57361	0.56565	0.48068	0.42538	0.38709					
	0.37604	+++++					AVRG		0.48637		19.09150
33 Hexachlorocyclopentadiene	0.23396	0.28456	0.36132	0.34785	0.33400	0.33313					
	0.35447	+++++					AVRG		0.32133		14.30942
34 2,4,6-Trichlorophenol	0.28509	0.32769	0.36550	0.34273	0.34257	0.33960					
	0.35029	+++++					AVRG		0.33621		7.52054
35 2,4,5-Trichlorophenol	0.23683	0.34153	0.40172	0.34946	0.34780	0.32623					
	0.31812	+++++					AVRG		0.33167		14.96876
37 2-Chloronaphthalene	63607	266980	696255	1139487	1623373	2162175					
	2726374	+++++					QUAD	0.000e+00	1.08337	0.07937	0.99627


37 2-Chloronaphthalene
Curve Type: Quadratic By-Response
Amt = 0 + 1.083372*Rsp + 0.07936569*Rsp^2
R^2: 0.9962747
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
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 2.9 3.0 3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8 3.9 4.0 4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9 5.0

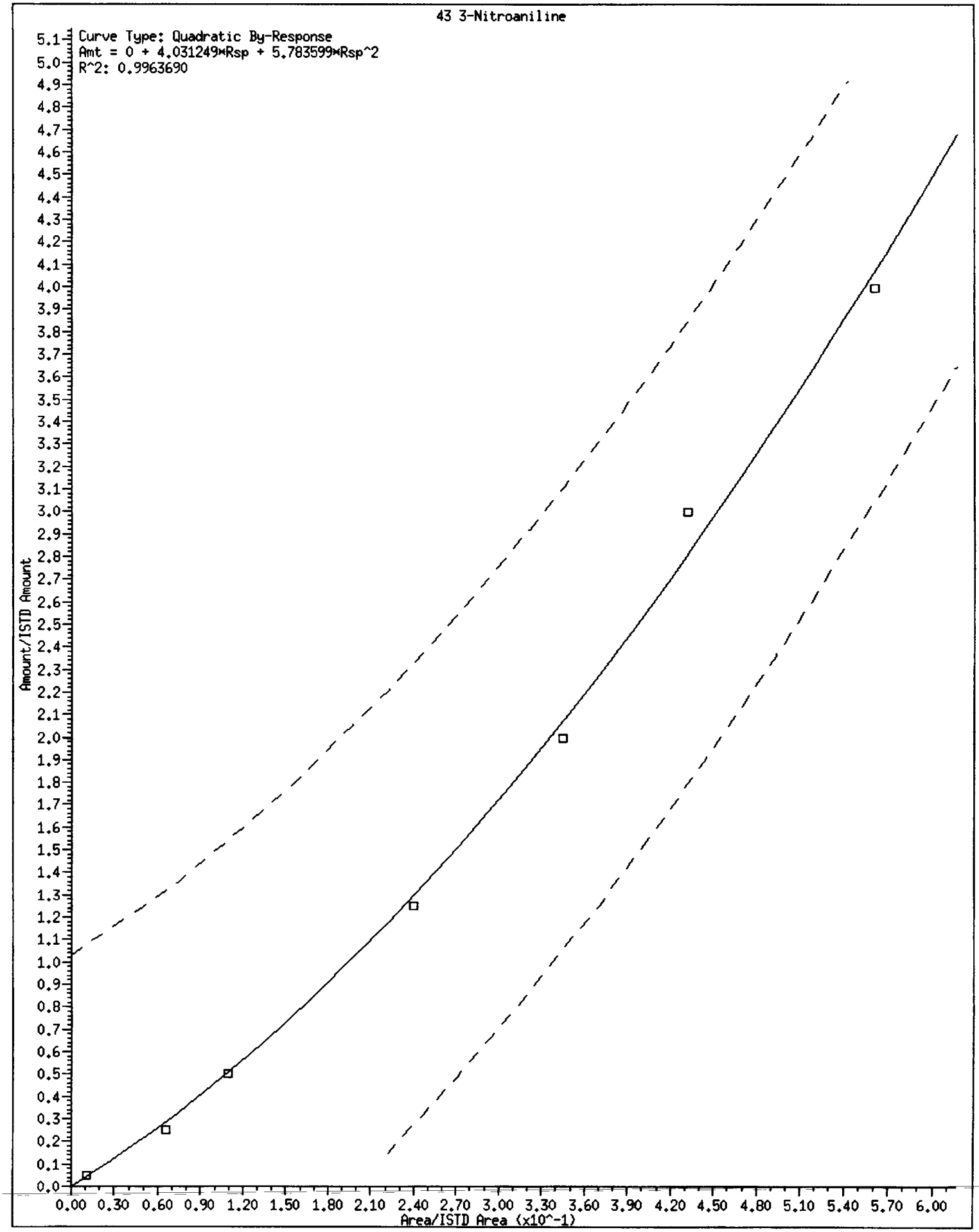
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing

03/07/13

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	0.2000 Level 8									
38 2-Nitroaniline	0.21098	0.31500	0.33889	0.31514	0.29714	0.29154					
	0.30102	+++++					AVRG		0.29567		13.69777
39 Dimethylphthalate	1.47783	1.26016	1.34236	1.16190	1.10101	1.00418					
	1.07862	+++++					AVRG		1.20372		13.78953
40 Acenaphthylene	2.05852	1.77956	1.81983	1.50838	1.37166	1.24430					
	1.26069	+++++					AVRG		1.57756		19.86859
41 2,6-Dinitrotoluene	0.24764	0.27592	0.30131	0.26038	0.24504	0.22578					
	0.24419	+++++					AVRG		0.25718		9.65852
43 3-Nitroaniline	10686	63342	138858	241966	342573	415090					
	496848	+++++					QUAD	0.000e+00	4.03125	5.78360	0.99637
44 Acenaphthene	1.34077	1.11343	1.14570	0.97612	0.89996	0.83034					
	0.84339	+++++					AVRG		1.02139		18.35615
45 2,4-Dinitrophenol	+++++	0.11131	0.20259	0.19675	0.19419	0.19201					
	0.20527	+++++					AVRG		0.18369		19.49624


43 3-Nitroaniline
Curve Type: Quadratic By-Response
Amt = 0 + 4.031249*Rsp + 5.783599*Rsp^2
R^2: 0.9963690
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
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 5.10 5.40 5.70 6.00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 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	0.20000 Level 8							
45 2,4-Dinitrophenol	+++++	0.11131	0.20259	0.19675	0.19419	0.19201			
	0.20527	+++++					0.18369	19.496	
46 Dibenzofuran	1.67966	1.55463	1.52214	1.31107	1.18525	1.02741			
	1.07080	+++++					1.33585	19.072	
47 4-Nitrophenol	+++++	0.11044	0.14933	0.14144	0.13184	0.12815			
	0.12271	+++++					0.13065	10.521	
48 2,4-Dinitrotoluene	0.30384	0.35458	0.41176	0.35836	0.34621	0.32554			
	0.33475	+++++					0.34786	9.712	
49 Fluorene	1.42570	1.19230	1.22127	1.02020	0.88746	0.80652			
	0.82304	+++++					1.05379	22.212	<-
50 Diethylphthalate	+++++	1.33641	1.34532	1.10884	1.03680	0.94432			
	0.91979	+++++					1.11525	16.797	
51 4-Chlorophenyl-phenylether	0.75781	0.64324	0.66581	0.56719	0.51639	0.45871			
	0.49545	+++++					0.58637	18.257	
52 4-Nitroaniline	0.19716	0.22394	0.18022	0.17911	0.19621	0.19748			
	0.19900	+++++					0.19616	7.581	
53 4,6-Dinitro-2-methylphenol	+++++	0.12093	0.16337	0.14567	0.14760	0.14183			
	0.14470	+++++					0.14402	9.462	

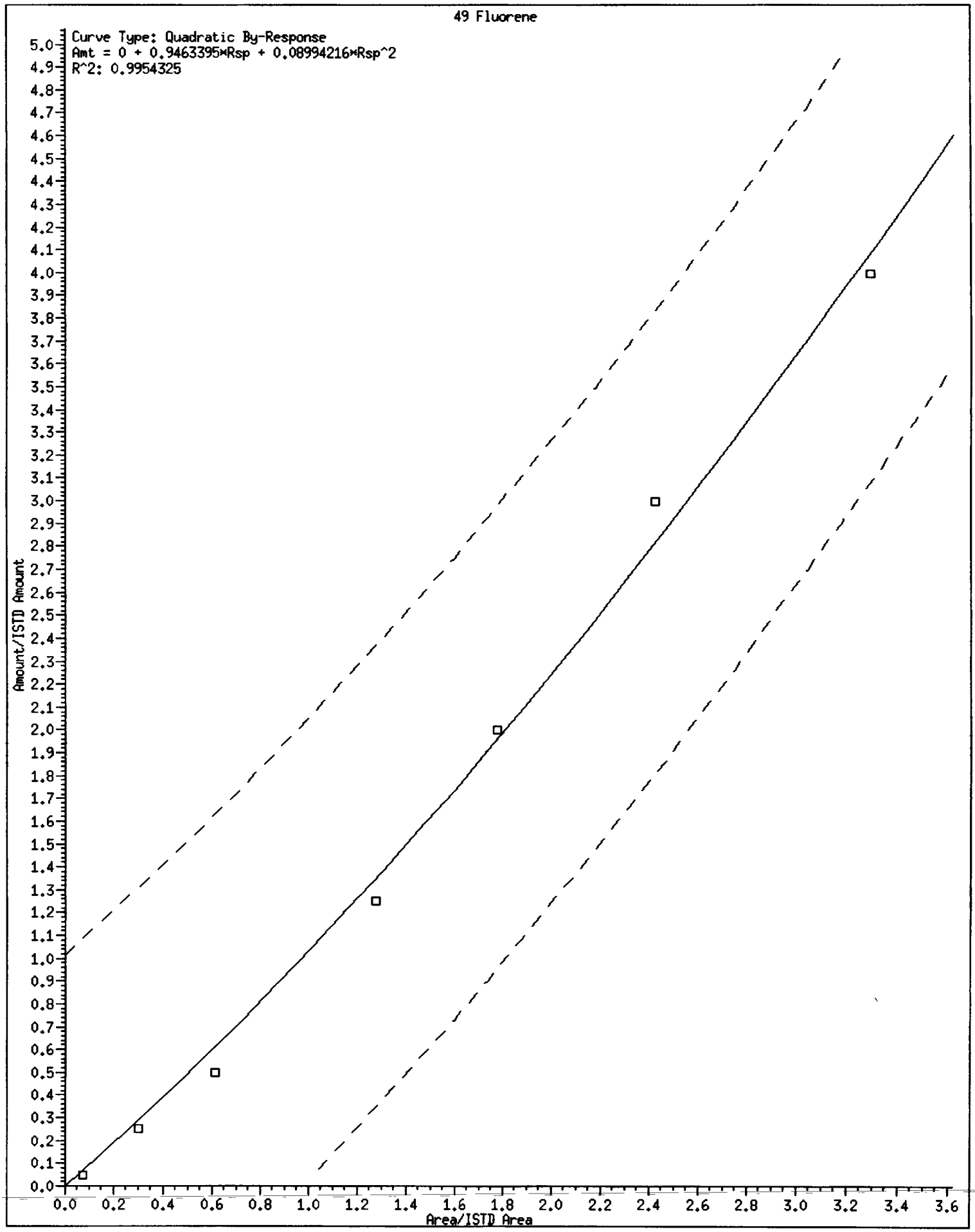
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing

03/07/13

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	0.2000 Level 8									
46 Dibenzofuran	1.67966	1.55463	1.52214	1.31107	1.18525	1.02741					
	1.07080	+++++					AVRG		1.33585		19.07199
47 4-Nitrophenol	+++++	0.11044	0.14933	0.14144	0.13184	0.12815					
	0.12271	+++++					AVRG		0.13065		10.52089
48 2,4-Dinitrotoluene	0.30384	0.35458	0.41176	0.35836	0.34621	0.32554					
	0.33475	+++++					AVRG		0.34786		9.71205
49 Fluorene	69651	290158	773364	1288051	1769346	2330094					
	2918650	+++++					QUAD	0.000e+00	0.94634	0.08994	0.99543
50 Diethylphthalate	+++++	1.33641	1.34532	1.10884	1.03680	0.94432					
	0.91979	+++++					AVRG		1.11525		16.79699
51 4-Chlorophenyl-phenylether	0.75781	0.64324	0.66581	0.56719	0.51639	0.45871					
	0.49545	+++++					AVRG		0.58637		18.25714
52 4-Nitroaniline	0.19716	0.22394	0.18022	0.17911	0.19621	0.19748					
	0.19900	+++++					AVRG		0.19616		7.58115


49 Fluorene
Curve Type: Quadratic By-Response
Amt = 0 + 0.9463395*Rsp + 0.08994216*Rsp^2
R^2: 0.9954325
Amount/ISTD Amount
Area/ISTD Area

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 14:11 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	0.20000 Level 8							
54 N-Nitrosodiphenylamine	0.68117	0.59351	0.63351	0.52168	0.48269	0.44490			
	0.44875	+++++					0.54375	17.192	
56 4-Bromophenyl-phenylether	0.25180	0.22762	0.25074	0.21253	0.20583	0.18453			
	0.20347	+++++					0.21950	11.466	
57 Hexachlorobenzene	0.27367	0.23383	0.25499	0.21336	0.20543	0.18963			
	0.21317	+++++					0.22630	13.064	
58 Pentachlorophenol	+++++	0.10881	0.15047	0.13607	0.13563	0.12677			
	0.14329	+++++					0.13351	10.854	
60 Phenanthrene	1.28894	1.06840	1.10242	0.86833	0.83569	0.77325			
	+++++	+++++					0.98950	19.894	
61 Anthracene	1.19069	1.07644	1.15760	0.93304	0.84037	0.74643			
	+++++	+++++					0.99076	18.100	
62 Carbazole	1.14209	0.91469	0.79902	0.66574	0.70348	0.69029			
	0.71834	+++++					0.80481	21.285	<-
63 Di-n-butylphthalate	1.54066	1.38246	1.45272	1.15876	1.04056	0.91923			
	+++++	+++++					1.24906	19.764	
64 Fluoranthene	1.25483	1.12929	1.24063	1.02750	0.93710	0.85018			
	0.84693	+++++					1.04092	16.567	

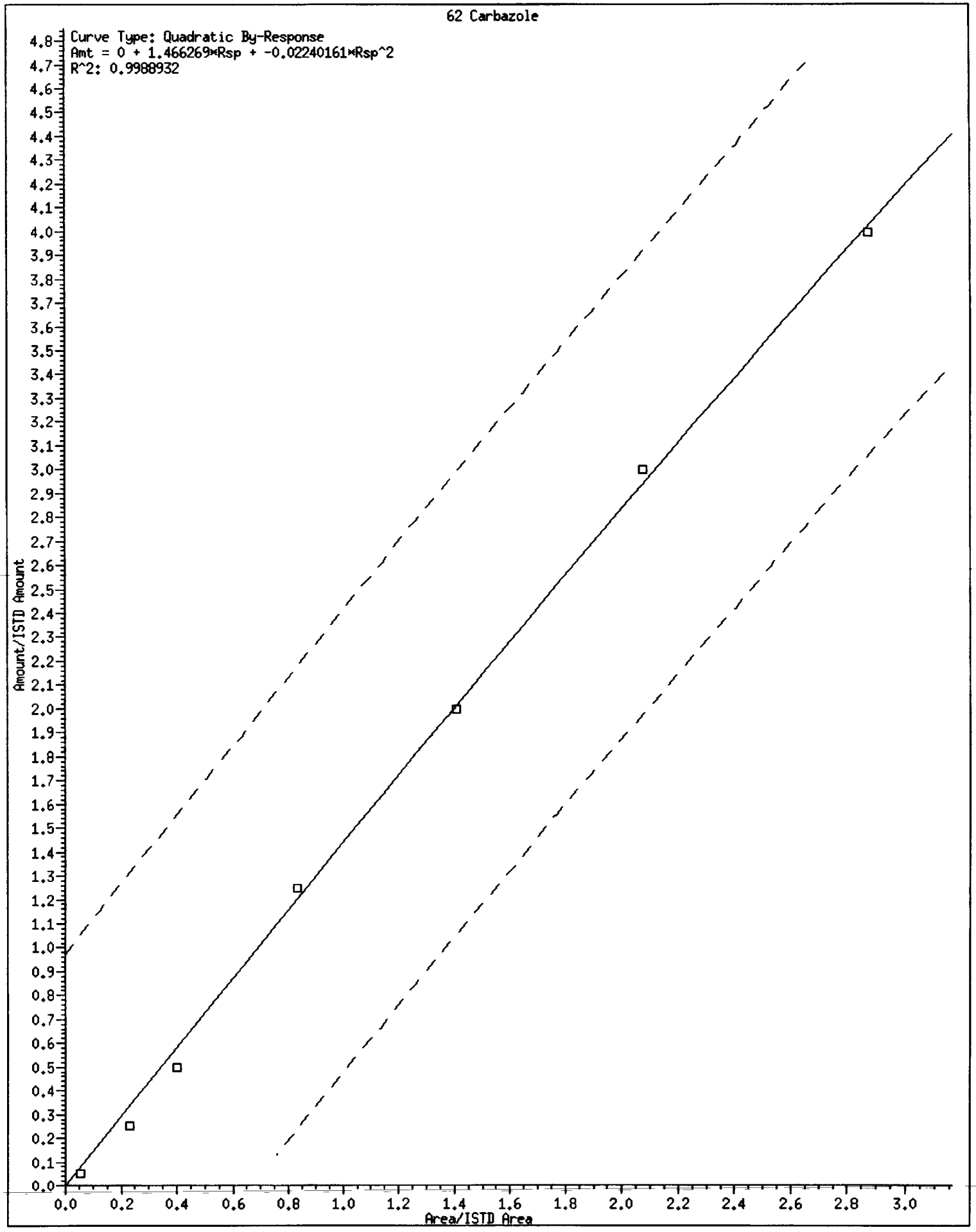
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing

03/07/13

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	0.2000 Level 8									
62 Carbazole	87629	352615	804312	1387020	2297956	3310342					
	4177813	+++++					QUAD	0.000e+00	1.46627	-0.02240	0.99889
63 Di-n-butylphthalate	1.54066	1.38246	1.45272	1.15876	1.04056	0.91923					
	+++++	+++++					AVRG		1.24906		19.76433
64 Fluoranthene	1.25483	1.12929	1.24063	1.02750	0.93710	0.85018					
	0.84693	+++++					AVRG		1.04092		16.56672
65 Pyrene	1.38441	1.18057	1.25832	1.05458	0.97355	0.89088					
	0.90359	+++++					AVRG		1.09227		17.22487
67 Butylbenzylphthalate	0.59155	0.58245	0.62877	0.53378	0.50169	0.44980					
	0.45073	+++++					AVRG		0.53411		13.17416
68 Benzo(a)anthracene	1.07054	0.96307	1.03562	0.88663	0.83466	0.77690					
	0.81543	+++++					AVRG		0.91184		12.44208
70 3,3'-Dichlorobenzidine	0.26639	0.28674	0.29446	0.23996	0.23070	0.21759					
	0.22026	+++++					AVRG		0.25087		12.60238


62 Carbazole
Curve Type: Quadratic By-Response
Amt = 0 + 1.466269*Rsp + -0.02240161*Rsp^2
R^2: 0.9988932
Amount/ISTD Amount
Area/ISTD Area

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 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	0.20000 Level 8							
65 Pyrene	1.38441	1.18057	1.25832	1.05458	0.97355	0.89088			
	0.90359	+++++					1.09227	17.225	
67 Butylbenzylphthalate	0.59155	0.58245	0.62877	0.53378	0.50169	0.44980			
	0.45073	+++++					0.53411	13.174	
68 Benzo(a)anthracene	1.07054	0.96307	1.03562	0.88663	0.83466	0.77690			
	0.81543	+++++					0.91184	12.442	
70 3,3'-Dichlorobenzidine	0.26639	0.28674	0.29446	0.23996	0.23070	0.21759			
	0.22026	+++++					0.25087	12.602	
71 Chrysene	1.14947	1.00652	1.08941	0.89575	0.83974	0.76132			
	0.77370	+++++					0.93085	16.505	
72 bis(2-Ethylhexyl)phthalate	0.64692	0.60690	0.67888	0.58952	0.55677	0.51803			
	0.52262	+++++					0.58852	10.344	
73 Di-n-octylphthalate	1.12999	0.97646	1.03547	0.93501	0.88820	0.82066			
	0.82450	+++++					0.94433	11.973	
74 Benzo(b)fluoranthene	0.89938	0.85526	1.04183	0.95727	0.83840	0.81423			
	0.79806	+++++					0.88635	9.839	
75 Benzo(k)fluoranthene	1.39296	1.25661	1.25986	0.96283	0.96180	0.80306			
	0.80825	+++++					1.06362	22.310	<-

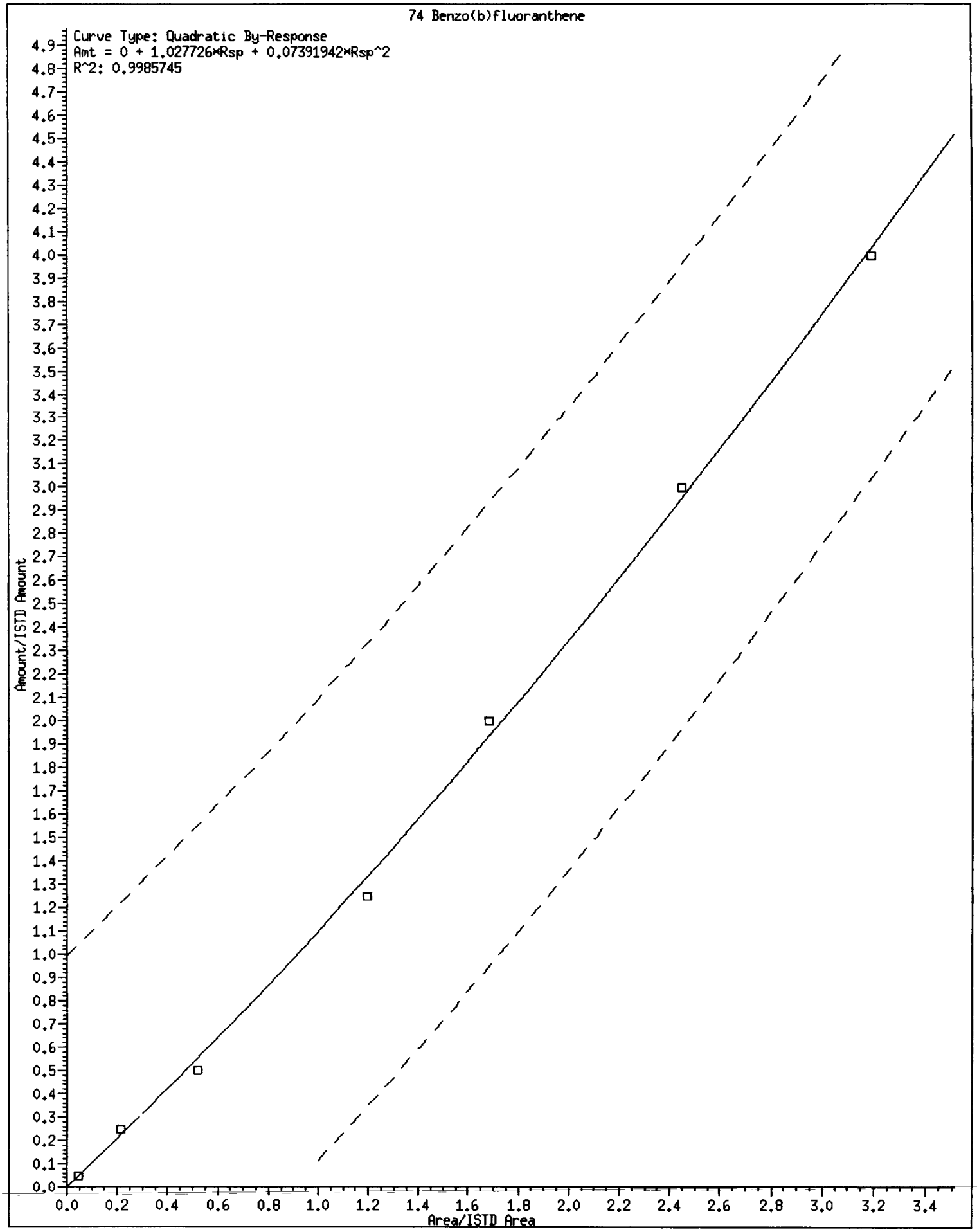
Analytical Resources, Inc.

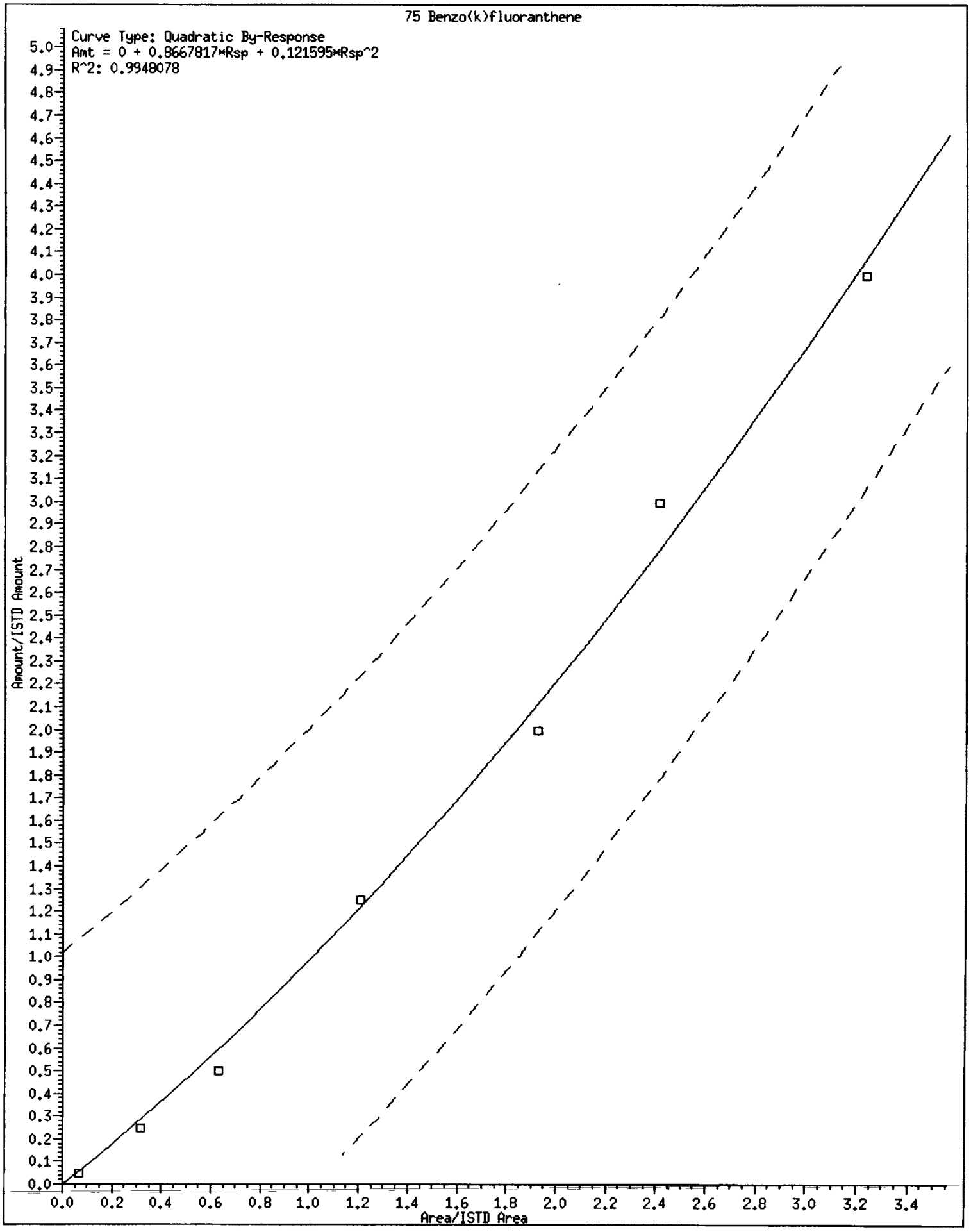
INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing

03/07/13

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	0.2000 Level 8									
71 Chrysene	1.14947	1.00652	1.08941	0.89575	0.83974	0.76132					
	0.77370	+++++					AVRG		0.93085		16.50541
72 bis(2-Ethylhexyl)phthalate	0.64692	0.60690	0.67888	0.58952	0.55677	0.51803					
	0.52262	+++++					AVRG		0.58852		10.34369
73 Di-n-octylphthalate	1.12999	0.97646	1.03547	0.93501	0.88820	0.82066					
	0.82450	+++++					AVRG		0.94433		11.97291
74 Benzo(b)fluoranthene	60045	314216	1040205	1959445	2694359	3947727					
	4864908	+++++					QUAD	0.000e+00	1.02773	0.07392	0.99857
75 Benzo(k)fluoranthene	92998	461669	1257901	1970824	3090941	3893557					
	4926982	+++++					QUAD	0.000e+00	0.86678	0.12160	0.99481
76 Benzo(a)pyrene	0.92501	0.86150	1.02405	0.86112	0.82038	0.74537					
	0.74649	+++++					AVRG		0.85485		11.55589
78 Indeno(1,2,3-cd)pyrene	1.04859	1.01895	1.20212	1.02187	0.99965	0.93988					
	0.97035	+++++					AVRG		1.02877		8.20489


74 Benzo(b)fluoranthene
Curve Type: Quadratic By-Response
Amt = 0 + 1.027726*Rsp + 0.07391942*Rsp^2
R^2: 0.9985745
Amount/ISTD Amount
Area/ISTD Area


75 Benzo(k)fluoranthene
Curve Type: Quadratic By-Response
Amt = 0 + 0.8667817*Rsp + 0.121595*Rsp^2
R^2: 0.9948078
Amount/ISTD Amount
Area/ISTD Area

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 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	0.20000 Level 8						
76 Benzo(a)pyrene	0.92501	0.86150	1.02405	0.86112	0.82038	0.74537		
	0.74649	+++++					0.85485	11.556
78 Indeno(1,2,3-cd)pyrene	1.04859	1.01895	1.20212	1.02187	0.99965	0.93988		
	0.97035	+++++					1.02877	8.205
79 Dibenzo(a,h)anthracene	0.72560	0.81926	0.97643	0.82797	0.79605	0.75327		
	0.77178	+++++					0.81005	10.093
80 Benzo(g,h,i)perylene	0.82862	0.85803	1.02707	0.88731	0.88688	0.82365		
	0.84702	+++++					0.87980	7.918
90 N-Nitrosodimethylamine	0.99632	0.92450	1.01613	0.92945	0.90446	0.88103		
	0.94094	+++++					0.94183	5.136
91 Aniline	2.22343	2.10141	1.97052	1.66965	1.48467	1.39278		
	1.54639	+++++					1.76984	18.445
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
93 Benzidine	+++++	+++++	0.10900	0.08219	0.08858	0.10253		
	0.10411	+++++					0.09728	11.663
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

9/7/13

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 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	0.20000 Level 8						
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
98 Retene	0.53443	0.49274	0.52286	0.47522	0.43428	0.41626		
	0.42376	+++++					0.47136	10.167
99 Perylene	0.89315	0.82306	0.85562	0.73941	0.68087	0.63164		
	0.61789	+++++					0.74881	14.764
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
103 Pyridine	1.43098	1.46786	1.75118	1.62729	1.38945	1.33587		
	1.45312	+++++					1.49368	9.708
187 Total Benzofluoranthenes	1.07820	1.02709	1.10775	0.89502	0.83617	0.75745		
	0.74383	+++++					0.92079	16.402
188 2,6-Dichlorophenol	+++++	0.96091	1.01753	0.96424	0.81971	0.76745		
	0.78343	+++++					0.88554	12.162

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 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	0.20000 Level 8						
189 N-Nitrosomethylethylamine	+++++	0.66719	0.69607	0.68402	0.62566	0.63220		
	0.65967	+++++					0.66080	4.214
$ 1 2-Fluorophenol	1.39745	1.38536	1.43699	1.22316	1.19684	1.13577		
	+++++	+++++					1.29593	9.697
$ 137 d8-1,4-Dioxane	0.67499	0.59708	0.66029	0.60426	0.58702	0.54859		
	0.57883	+++++					0.60730	7.416
$ 2 Phenol-d5	1.70898	1.71151	1.70189	1.39938	1.32653	1.25371		
	+++++	+++++					1.51700	14.086
$ 5 2-Chlorophenol-d4	1.46722	1.39820	1.43146	1.20537	1.12780	1.06397		
	+++++	+++++					1.28234	13.386
$ 10 1,2-Dichlorobenzene-d4	1.12248	1.02541	1.00084	0.82678	0.76090	0.67878		
	+++++	+++++					0.90253	19.127
$ 18 Nitrobenzene-d5	0.46223	0.43430	0.44112	0.37325	0.35728	0.33980		
	+++++	+++++					0.40133	12.653
$ 36 2-Fluorobiphenyl	1.60650	1.45970	1.33685	1.11210	1.06628	0.99323		
	+++++	+++++					1.26244	19.285
$ 55 2,4,6-Tribromophenol	0.14826	0.17093	0.17863	0.15638	0.14826	0.14641		
	+++++	+++++					0.15815	8.575

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 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	0.20000 Level 8						
$ 66 Terphenyl-d14	0.83641	0.80990	0.75366	0.63080	0.60631	0.57508		
	+++++	+++++					0.70203	15.953
$ 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 : 05-MAR-2013 18:33
End Cal Date : 06-MAR-2013 16:18
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130306.b/SW846030613.m
Cal Date : 07-Mar-2013 12:52 jianqing

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/nt6.i/20130306.b

ARI Job No.: IC25 Method: SW846030613.m Instrument: nt6.i Date: 06-MAR-2013

03/07/13

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1216	03061301.D	IC250306	IC250306	1	N-Nitrosodiphenylamine,
1251	03061302.D	IC020306	IC020306	1	NO MANUAL INTEGRATION
1325	03061303.D	IC10306	IC10306	1	3-Nitroaniline, 4-Nitrophenol, 4,6-Dinitro-2-methylphenol, Benzo(k)fluoranthene, Benzidine, Total Benzofluoranthenes,
1400	03061304.D	IC50306	IC50306	1	Benzoic acid, 4-Nitrophenol,
1434	03061305.D	IC100306	IC100306	1	NO MANUAL INTEGRATION
1509	03061306.D	IC40306	IC400306	1	4-Chloroaniline, 3-Nitroaniline, N-Nitrosodiphenylamine,
1543	03061307.D	IC60306	IC600306	1	Benzoic acid, 3-Nitroaniline, N-Nitrosodiphenylamine, Phenanthrene,
1618	03061308.D	IC80306	IC800306	1	Benzoic acid, 3-Nitroaniline, N-Nitrosodiphenylamine,
1652	03061309.D	ICV0306	ICV0306	1	NO MANUAL INTEGRATION

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Batch File: /chem2/nt6.i/20130306.b
Inst ID: nt6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	03061301	03061302	03061303	03061304	03061305	03061306	03061307	03061308
INJ.DATE:	06-MAR-2013	06-MAR-2013	06-MAR-2013	06-MAR-2013	06-MAR-2013	06-MAR-2013	06-MAR-2013	06-MAR-2013
INJ.TIME:	12:16	12:51	13:25	14:00	14:34	15:09	15:43	16:18

3/7/13

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.432	+++++	6.425	6.429	6.432	6.434	6.442	+++++	6.432	3.432-9.432	6.432	0.006
186 Carbaryl	16.459	+++++	16.447	16.445	16.448	16.462	16.470	16.473	16.459	13.459-19.459	16.458	0.011
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	7.083	+++++	7.082	7.080	7.078	7.086	7.089	7.092	7.083	4.083-10.083	7.085	0.005
168 Pentachlorobenzene	13.638	+++++	13.627	13.630	13.633	13.641	13.644	13.647	13.638	10.638-16.638	13.637	0.008
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: 3/7/13

SW8260B

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Batch File: /chem2/nt6.i/20130306.b
Inst ID: nt6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	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	3.039	+++++	3.060	3.047	3.050	3.047	3.061	3.086	3.039	0.039-6.039	3.056	0.015
* 134 Di-n-octylphthalate-d4	21.085	21.077	21.079	21.077	21.074	21.072	21.074	21.078	21.085	18.085-24.085	21.077	0.004
133 Butylatedhydroxytoluen	13.440	+++++	13.440	13.438	13.435	13.443	13.446	13.450	13.440	10.440-16.440	13.442	0.005
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	10.470	+++++	10.464	10.462	10.465	10.473	10.481	10.485	10.470	7.470-13.470	10.471	0.009
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.166	49.166-55.166	+++++	+++++

2013 03 08 09:54

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Batch File: /chem2/nt6.i/20130306.b
Inst ID: nt6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.617	47.617-53.617	+++++	+++++
123 Acetophenone	9.076	+++++	9.064	9.068	9.071	9.079	9.087	9.090	9.076	6.076-12.076	9.076	0.010
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.467	40.467-46.467	+++++	+++++
143 1,4-Dioxane	3.103	3.117	3.113	3.106	3.109	3.106	3.125	3.145	3.103	0.103-6.103	3.115	0.014
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.500	51.500-57.500	+++++	+++++
120 2,3,4,6-Tetrachlorophe	13.873	+++++	13.867	13.865	13.868	13.871	13.879	13.882	13.873	10.873-16.873	13.872	0.006
178 2-Benzyl-4-Chloropheno	16.411	+++++	16.399	16.397	16.400	16.413	16.421	16.425	16.411	13.411-19.411	16.410	0.011
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.069	44.069-50.069	+++++	+++++
118 Triphenyl Phosphate	19.482	+++++	19.476	19.474	19.472	19.480	19.482	19.486	19.482	16.482-22.482	19.479	0.005
117 Butyl Diphenyl Phospha	17.880	+++++	17.874	17.872	17.869	17.877	17.880	17.878	17.880	14.880-20.880	17.876	0.004
116 Dibutyl Phenyl Phospha	16.192	+++++	16.185	16.183	16.186	16.194	16.192	16.190	16.192	13.192-19.192	16.189	0.004
115 Tributyl Phosphate	14.461	+++++	14.444	14.442	14.450	14.469	14.477	14.486	14.461	11.461-17.461	14.461	0.017
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.950	45.950-51.950	+++++	+++++
113 Diphenyl Oxide	12.538	+++++	12.531	12.529	12.532	12.535	12.538	12.541	12.538	9.538-15.538	12.535	0.004
112 Biphenyl	12.345	+++++	12.339	12.337	12.340	12.343	12.351	12.349	12.345	9.345-15.345	12.343	0.005
111 Azobenzene (1,2-DP-Hyd	14.423	+++++	14.412	14.415	14.413	14.426	14.429	14.438	14.423	11.423-17.423	14.422	0.010
110 Tetrachloroguaiacol	15.599	+++++	15.592	15.590	15.593	15.601	15.609	15.613	15.599	12.599-18.599	15.600	0.009
109 3,4,5-Trichloroguaiaco	13.969	+++++	13.963	13.961	13.959	13.967	13.975	13.978	13.969	10.969-16.969	13.967	0.007
181 3,4,6-Trichloroguaiaco	14.087	+++++	14.081	14.079	14.082	14.090	14.092	14.096	14.087	11.087-17.087	14.087	0.007
108 4,5,6-Trichloroguaiaco	15.000	+++++	14.994	14.992	14.990	14.998	15.000	15.004	15.000	12.000-18.000	14.997	0.005
184 3,4-Dichloroguaiacol	12.425	+++++	12.425	12.423	12.420	12.423	12.431	12.435	12.425	9.425-15.425	12.426	0.005
107 4,5-Dichloroguaiacol	13.205	+++++	13.194	13.197	13.200	13.208	13.216	13.220	13.205	10.205-16.205	13.206	0.010
182 4,6-Dichloroguaiacol	13.205	+++++	13.194	13.197	13.200	13.208	13.216	13.220	13.205	10.205-16.205	13.206	0.010
185 4-Chloroguaiacol	11.336	+++++	11.329	11.333	11.330	11.338	11.341	11.345	11.336	8.336-14.336	11.336	0.006

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Batch File: /chem2/nt6.i/20130306.b
Inst ID: nt6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
106	Guaiacol	9.332	+++++	9.326	9.324	9.327	9.335	9.343	9.347	9.332	6.332-12.332	9.334	0.009
105	1-methylnaphthalene	11.747	+++++	11.741	11.739	11.742	11.744	11.747	11.751	11.747	8.747-14.747	11.744	0.004
151	1,2,4,5-Tetrachloroben	11.907	+++++	11.901	11.904	11.902	11.910	11.913	11.911	11.907	8.907-14.907	11.907	0.005
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	7.933	+++++	7.921	7.925	7.927	7.936	7.949	+++++	7.933	4.933-10.933	7.932	0.010
3	Phenol	7.954	+++++	7.942	7.941	7.943	7.957	7.970	7.969	7.954	4.954-10.954	7.954	0.012
4	Bis(2-Chloroethyl)ethe	8.050	+++++	8.044	8.047	8.045	8.053	8.061	8.059	8.050	5.050-11.050	8.051	0.007
5	2-Chlorophenol-d4	8.082	+++++	8.081	8.079	8.082	8.085	8.093	+++++	8.082	5.082-11.082	8.084	0.005

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Batch File: /chem2/nt6.i/20130306.b
Inst ID: nt6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	6 2-Chlorophenol	8.109	+++++	8.103	8.101	8.104	8.112	8.114	8.118	8.109	5.109-11.109	8.109	0.007
	7 1,3-Dichlorobenzene	8.328	+++++	8.322	8.320	8.323	8.325	8.328	8.332	8.328	5.328-11.328	8.325	0.004
*	8 1,4-Dichlorobenzene-d4	8.387	8.384	8.381	8.384	8.382	8.384	8.387	8.385	8.387	5.387-11.387	8.384	0.002
	9 1,4-Dichlorobenzene	8.408	+++++	8.407	8.405	8.408	8.411	8.414	8.417	8.408	5.408-11.408	8.410	0.004
$	10 1,2-Dichlorobenzene-d4	8.681	+++++	8.680	8.683	8.681	8.683	8.686	+++++	8.681	5.681-11.681	8.682	0.002
	11 Benzyl alcohol	8.654	+++++	8.648	8.651	8.649	8.662	8.665	8.674	8.654	5.654-11.654	8.657	0.010
	12 1,2-Dichlorobenzene	8.707	+++++	8.701	8.704	8.702	8.705	8.707	8.706	8.707	5.707-11.707	8.705	0.002
	13 2-Methylphenol	8.878	+++++	8.872	8.870	8.873	8.886	8.889	8.898	8.878	5.878-11.878	8.881	0.010
	14 2,2'-oxybis(1-Chloropr	8.916	+++++	8.909	8.907	8.910	8.913	8.916	8.919	8.916	5.916-11.916	8.913	0.004
	15 4-Methylphenol	9.108	+++++	9.096	9.100	9.103	9.116	9.124	9.128	9.108	6.108-12.108	9.111	0.012
	16 N-Nitroso-di-n-propyla	9.135	+++++	9.118	9.121	9.124	9.137	9.151	9.155	9.135	6.135-12.135	9.134	0.014
	17 Hexachloroethane	9.193	+++++	9.193	9.191	9.188	9.191	9.194	9.192	9.193	6.193-12.193	9.192	0.002
$	18 Nitrobenzene-d5	9.311	+++++	9.305	9.303	9.306	9.314	9.316	+++++	9.311	6.311-12.311	9.309	0.005
	19 Nitrobenzene	9.343	+++++	9.331	9.330	9.332	9.346	9.354	9.358	9.343	6.343-12.343	9.342	0.011
	20 Isophorone	9.717	+++++	9.705	9.709	9.706	9.720	9.733	9.742	9.717	6.717-12.717	9.719	0.014
	21 2-Nitrophenol	9.851	+++++	9.850	9.848	9.845	9.853	9.856	9.860	9.851	6.851-12.851	9.852	0.005
	22 2,4-Dimethylphenol	9.947	+++++	9.940	9.939	9.941	9.949	9.952	9.961	9.947	6.947-12.947	9.947	0.008
	23 Bis(2-Chloroethoxy)met	10.096	+++++	10.090	10.093	10.091	10.099	10.107	10.111	10.096	7.096-13.096	10.098	0.008
	24 Benzoic acid	10.198	+++++	10.031	10.083	10.144	10.249	10.294	10.330	10.198	7.198-13.198	10.190	0.110
	25 2,4-Dichlorophenol	10.230	+++++	10.224	10.222	10.219	10.233	10.235	10.239	10.230	7.230-13.230	10.229	0.007
	26 1,2,4-Trichlorobenzene	10.363	+++++	10.357	10.361	10.358	10.366	10.369	10.367	10.363	7.363-13.363	10.363	0.005
*	27 Naphthalene-d8	10.422	10.419	10.421	10.419	10.422	10.425	10.428	10.426	10.422	7.422-13.422	10.423	0.003
	28 Naphthalene	10.454	+++++	10.448	10.451	10.449	10.457	10.460	10.463	10.454	7.454-13.454	10.455	0.006
	29 4-Chloroaniline	10.588	+++++	10.582	10.585	10.582	10.591	10.599	10.602	10.588	7.588-13.588	10.590	0.008

SDG 14 SDG 15 SDG 16

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Batch File: /chem2/nt6.i/20130306.b
Inst ID: nt6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	30 Hexachlorobutadiene	10.764	+++++	10.763	10.761	10.764	10.767	10.764	10.768	10.764	7.764-13.764	10.764	0.002
	31 4-Chloro-3-methylpheno	11.384	+++++	11.377	11.376	11.378	11.387	11.389	11.393	11.384	8.384-14.384	11.383	0.007
	32 2-Methylnaphthalene	11.571	+++++	11.564	11.563	11.565	11.568	11.576	11.580	11.571	8.571-14.571	11.570	0.006
	33 Hexachlorocyclopentadi	11.950	+++++	11.944	11.947	11.945	11.947	11.950	11.948	11.950	8.950-14.950	11.947	0.002
	34 2,4,6-Trichlorophenol	12.078	+++++	12.077	12.070	12.073	12.081	12.084	12.087	12.078	9.078-15.078	12.079	0.006
	35 2,4,5-Trichlorophenol	12.137	+++++	12.131	12.129	12.126	12.134	12.137	12.141	12.137	9.137-15.137	12.134	0.005
$	36 2-Fluorobiphenyl	12.212	+++++	12.206	12.204	12.206	12.209	12.212	+++++	12.212	9.212-15.212	12.208	0.003
	37 2-Chloronaphthalene	12.356	+++++	12.344	12.348	12.345	12.359	12.361	12.360	12.356	9.356-15.356	12.353	0.007
	38 2-Nitroaniline	12.580	+++++	12.569	12.567	12.570	12.583	12.586	12.595	12.580	9.580-15.580	12.579	0.010
	39 Dimethylphthalate	12.949	+++++	12.937	12.935	12.938	12.952	12.960	12.969	12.949	9.949-15.949	12.949	0.013
	40 Acenaphthylene	13.034	+++++	13.028	13.026	13.024	13.032	13.035	13.038	13.034	10.034-16.034	13.031	0.005
	41 2,6-Dinitrotoluene	13.045	+++++	13.034	13.032	13.040	13.048	13.056	13.060	13.045	10.045-16.045	13.045	0.011
*	42 Acenaphthene-d10	13.286	13.277	13.279	13.277	13.280	13.283	13.286	13.289	13.286	10.286-16.286	13.282	0.004
	43 3-Nitroaniline	13.264	+++++	13.247	13.245	13.254	13.262	13.270	13.273	13.264	10.264-16.264	13.259	0.011
	44 Acenaphthene	13.334	+++++	13.327	13.325	13.328	13.336	13.339	13.348	13.334	10.334-16.334	13.334	0.008
	45 2,4-Dinitrophenol	13.424	+++++	13.413	13.411	13.414	13.433	13.441	13.455	13.424	10.424-16.424	13.427	0.017
	46 Dibenzofuran	13.595	+++++	13.589	13.587	13.590	13.598	13.606	13.610	13.595	10.595-16.595	13.597	0.009
	47 4-Nitrophenol	13.547	+++++	13.536	13.534	13.537	13.545	13.558	13.567	13.547	10.547-16.547	13.546	0.013
	48 2,4-Dinitrotoluene	13.676	+++++	13.664	13.662	13.665	13.678	13.686	13.690	13.676	10.676-16.676	13.674	0.011
	49 Fluorene	14.156	+++++	14.145	14.143	14.146	14.154	14.156	14.165	14.156	11.156-17.156	14.152	0.008
	50 Diethylphthalate	14.098	+++++	14.086	14.089	14.092	14.106	14.108	14.112	14.098	11.098-17.098	14.099	0.010
	51 4-Chlorophenyl-phenyle	14.172	+++++	14.166	14.164	14.167	14.170	14.172	14.176	14.172	11.172-17.172	14.170	0.004
	52 4-Nitroaniline	14.252	+++++	14.241	14.234	14.242	14.261	14.274	14.288	14.252	11.252-17.252	14.256	0.020
	53 4,6-Dinitro-2-methylph	14.333	+++++	14.316	14.314	14.317	14.341	14.349	14.358	14.333	11.333-17.333	14.332	0.018

ARI 15254

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Batch File: /chem2/nt6.i/20130306.b
Inst ID: nt6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	54 N-Nitrosodiphenylamine	14.375	+++++	14.364	14.362	14.365	14.378	14.386	14.390	14.375	11.375-17.375	14.374	0.011
$	55 2,4,6-Tribromophenol	14.573	+++++	14.567	14.565	14.568	14.576	14.578	+++++	14.573	11.573-17.573	14.571	0.005
	56 4-Bromophenyl-phenylet	14.952	+++++	14.946	14.944	14.947	14.950	14.952	14.956	14.952	11.952-17.952	14.950	0.004
	57 Hexachlorobenzene	15.182	+++++	15.170	15.174	15.171	15.179	15.182	15.186	15.182	12.182-18.182	15.178	0.006
	58 Pentachlorophenol	15.470	+++++	15.470	15.462	15.465	15.473	15.476	15.480	15.470	12.470-18.470	15.471	0.006
*	59 Phenanthrene-d10	15.663	15.655	15.657	15.655	15.658	15.660	15.663	15.667	15.663	12.663-18.663	15.659	0.004
	60 Phenanthrene	15.700	+++++	15.694	15.692	15.690	15.703	15.706	15.709	15.700	12.700-18.700	15.699	0.007
	61 Anthracene	15.770	+++++	15.763	15.761	15.764	15.772	15.780	15.784	15.770	12.770-18.770	15.771	0.009
	62 Carbazole	16.047	+++++	16.041	16.039	16.037	16.045	16.053	16.057	16.047	13.047-19.047	16.046	0.007
	63 Di-n-butylphthalate	16.747	+++++	16.741	16.739	16.737	16.745	16.747	16.751	16.747	13.747-19.747	16.744	0.005
	64 Fluoranthene	17.639	+++++	17.628	17.626	17.629	17.631	17.639	17.643	17.639	14.639-20.639	17.634	0.007
	65 Pyrene	17.992	+++++	17.986	17.984	17.987	17.995	17.997	18.001	17.992	14.992-20.992	17.992	0.007
$	66 Terphenyl-d14	18.291	+++++	18.290	18.288	18.286	18.289	18.291	+++++	18.291	15.291-21.291	18.289	0.002
	67 Butylbenzylphthalate	19.167	+++++	19.161	19.159	19.157	19.159	19.162	19.171	19.167	16.167-22.167	19.162	0.005
	68 Benzo(a)anthracene	19.953	+++++	19.941	19.939	19.942	19.950	19.953	19.956	19.953	16.953-22.953	19.948	0.007
*	69 Chrysene-d12	19.979	19.971	19.968	19.971	19.969	19.977	19.979	19.983	19.979	16.979-22.979	19.975	0.006
	70 3,3'-Dichlorobenzidine	19.953	+++++	19.941	19.939	19.937	19.945	19.947	19.951	19.953	16.953-22.953	19.945	0.006
	71 Chrysene	20.017	+++++	20.005	20.008	20.006	20.014	20.022	20.026	20.017	17.017-23.017	20.014	0.008
	72 bis(2-Ethylhexyl)phtha	20.150	+++++	20.149	20.147	20.140	20.142	20.145	20.149	20.150	17.150-23.150	20.146	0.004
	73 Di-n-octylphthalate	21.096	+++++	21.089	21.088	21.085	21.088	21.090	21.089	21.096	18.096-24.096	21.089	0.003
	74 Benzo(b)fluoranthene	21.609	+++++	21.592	21.595	21.593	21.606	21.609	21.618	21.609	18.609-24.609	21.603	0.010
	75 Benzo(k)fluoranthene	21.641	+++++	21.629	21.627	21.625	21.638	21.646	21.655	21.641	18.641-24.641	21.637	0.011
	76 Benzo(a)pyrene	22.057	+++++	22.046	22.044	22.041	22.049	22.057	22.066	22.057	19.057-25.057	22.052	0.009
	77 Perylene-d12	22.137	22.129	22.131	22.129	22.132	22.130	22.132	22.136	22.137	19.137-25.137	22.132	0.003

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Batch File: /chem2/nt6.i/20130306.b
Inst ID: nt6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
78 Indeno(1,2,3-cd)pyrene	23.767	+++++	23.755	23.748	23.745	23.759	23.767	23.781	23.767	20.767-26.767	23.760	0.012
79 Dibenzo(a,h)anthracene	23.788	+++++	23.766	23.764	23.767	23.786	23.799	23.808	23.788	20.788-26.788	23.782	0.017
80 Benzo(g,h,i)perylene	24.226	+++++	24.199	24.202	24.205	24.224	24.237	24.251	24.226	21.226-27.226	24.221	0.020
$ 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	3.889	+++++	3.893	3.891	3.894	3.902	3.921	3.962	3.889	0.889-6.889	3.907	0.026
91 Aniline	7.938	+++++	7.937	7.935	7.938	7.941	7.943	7.947	7.938	4.938-10.938	7.940	0.004
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
93 Benzidine	17.874	+++++	17.874	17.872	17.864	17.872	17.869	17.873	17.874	14.874-20.874	17.871	0.004
$ 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	18.548	+++++	18.541	18.534	18.537	18.540	18.548	18.546	18.548	15.548-21.548	18.542	0.005
99 Perylene	22.175	+++++	22.158	22.161	22.159	22.167	22.175	22.179	22.175	19.175-25.175	22.168	0.009
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	3.851	+++++	3.898	3.870	3.862	3.854	3.867	3.914	3.851	0.851-6.851	3.874	0.023
187 Total Benzofluoranthen	21.641	+++++	21.629	21.627	21.625	21.638	21.646	21.655	21.641	18.641-24.641	21.637	0.011
188 2,6-Dichlorophenol	10.598	+++++	10.592	10.596	10.593	10.601	10.604	10.613	10.598	7.598-13.598	10.600	0.007
189 N-Nitrosomethylethylam	5.620	+++++	5.635	5.627	5.625	5.622	5.625	5.634	5.620	2.620-8.620	5.627	0.006

Analytical Resources Inc.: Organics Instrument Log
NT-6 Serial No.:GC=US00036167, MS=US81221575

Date: 3/6/13 Analysis: 8270D Analyst: [illegible]

GC Program: [illegible] Column No: 234149 Column Type: ZB-[illegible]

Instrument Tune (.U or .CT.): 121019 EM Voltage: 1647

Calibration File: 03061301 Curve Date: 3/6/13 Injection Vol.: [illegible]

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2053-1, 2054-1	2056-1, 2057-1
	2055-1, 2061-1	2058-1, 2061-1
	18031, 2027-2	18031 2058-1
	2058-2	2058-2

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem2/nt6.i/20130306.b

	Time	Filename	LabID	ClientId	DF								
1	1216	03061301.D	IC250306	IC250306	1	8.39	458117	10.42	1718341	13.29	1010041	15.66	1666734	19.98	1675752	22.14	1637524	21.09	2026355
2	1251	03061302.D	IC020306	IC020306	1	8.38	469293	10.42	1660759	13.28	977166	15.65	1519395	19.97	1581424	22.13	1491578	21.08	2063915
3	1325	03061303.D	IC10306	IC10306	1	8.38	473521	10.42	1687458	13.28	977079	15.66	1534533	19.97	1440155	22.13	1335257	21.08	1913979
4	1400	03061304.D	IC50306	IC50306	1	8.38	454719	10.42	1658379	13.28	973436	15.65	1542012	19.97	1542109	22.13	1469575	21.08	2051585
5	1434	03061305.D	IC100306	IC100306	1	8.38	570088	10.42	2100513	13.28	1266491	15.66	2013244	19.97	2072136	22.13	1996890	21.07	2636581
6	1509	03061306.D	IC40306	IC400306	1	8.38	462843	10.42	1722510	13.28	996854	15.66	1633268	19.98	1604385	22.13	1606852	21.07	1904606
7	1543	03061307.D	IC60306	IC600306	1	8.39	453135	10.43	1693833	13.29	963022	15.66	1598516	19.98	1561828	22.13	1616143	21.07	1777444
8	1618	03061308.D	IC80306	IC800306	1	8.39	415136	10.43	1588502	13.29	886542	15.67	1453987	19.98	1394767	22.14	1523971	21.08	1577157
9	1652	03061309.D	ICV0306	ICV0306	1	8.38	436336	10.42	1601740	13.28	939966	15.65	1479267	19.97	1476943	22.12	1464482	21.07	1837060

[illegible] 03/07/13

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

Data File: /chem2/nt6.i/20130306.b/tune.b/03061301.D

Date : 06-MAR-2013 12:16

Client ID: DFTPP0306

Instrument: nt6.i

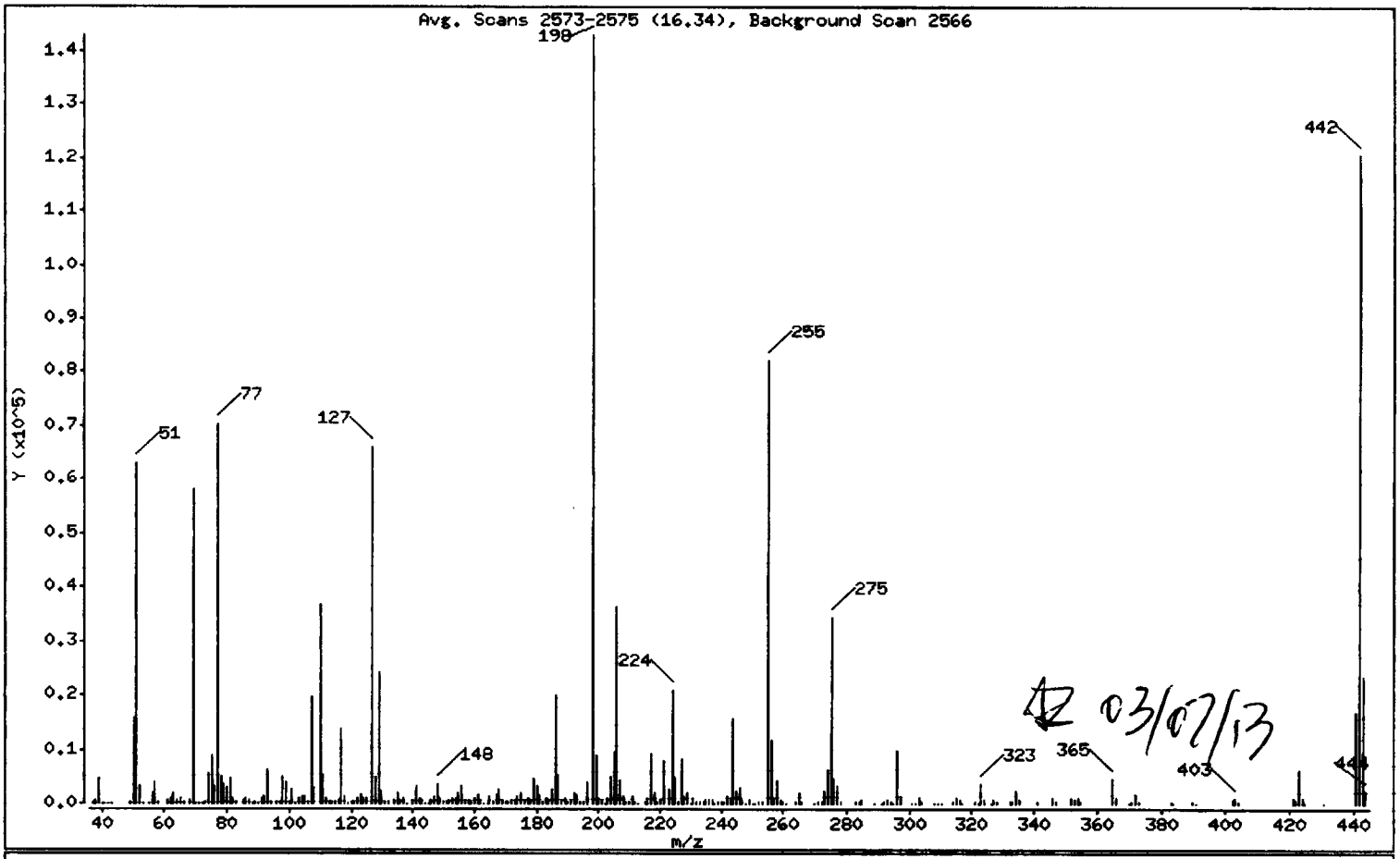
Sample Info: DFTPP0306

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	44.13
68	Less than 2.00% of mass 69	0.49 (1.20)
69	Mass 69 relative abundance	40.66
70	Less than 2.00% of mass 69	0.05 (0.13)
127	10.00 - 80.00% of mass 198	46.23
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.29
275	10.00 - 60.00% of mass 198	24.23
365	Greater than 1.00% of mass 198	3.15
441	0.01 - 24.00% of mass 442	11.89 (14.10)
442	50.00 - 200.00% of mass 198	84.31
443	15.00 - 24.00% of mass 442	16.57 (19.65)

Data File: /chem2/nt6.i/20130306.b/tune.b/03061301.D

Date : 06-MAR-2013 12:16

Client ID: DFTPP0306

Instrument: nt6.i

Sample Info: DFTPP0306

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

Data File: 03061301.D

Spectrum: Avg. Scans 2573-2575 (16.34), Background Scan 2566

Location of Maximum: 198.00

Number of points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	435	119.00	66	193.00	1619	273.00	2434
38.00	626	120.00	258	194.00	443	274.00	6355
39.00	4620	121.00	165	195.00	168	275.00	34624
40.00	86	122.00	886	196.00	3989	276.00	4716
41.00	135	123.00	1661	198.00	142912	277.00	3135
42.00	51	124.00	828	199.00	8988	278.00	473
43.00	28	125.00	867	200.00	881	283.00	323
45.00	136	127.00	66064	201.00	717	284.00	313
49.00	481	128.00	4907	202.00	116	285.00	557
50.00	15922	129.00	24440	203.00	1035	289.00	56
51.00	63072	130.00	2373	204.00	4827	291.00	57
52.00	3191	131.00	431	205.00	9390	292.00	177
53.00	162	132.00	298	206.00	36344	293.00	733
55.00	98	134.00	652	207.00	4326	294.00	208
56.00	1869	135.00	2095	208.00	1180	295.00	158
57.00	3936	136.00	536	209.00	372	296.00	9810
58.00	169	137.00	984	210.00	177	297.00	1471
61.00	642	138.00	123	211.00	1258	301.00	70
62.00	970	140.00	542	212.00	284	302.00	154
63.00	1956	141.00	3143	213.00	60	303.00	1095
64.00	580	142.00	1094	215.00	376	304.00	380
65.00	1013	143.00	721	216.00	827	308.00	75
66.00	210	144.00	116	217.00	9098	309.00	59
68.00	697	145.00	163	218.00	2040	310.00	77
69.00	58112	146.00	509	219.00	416	314.00	465
70.00	77	147.00	1412	220.00	540	315.00	1124
71.00	81	148.00	3677	221.00	7971	316.00	582
72.00	69	149.00	1042	223.00	2475	317.00	55
73.00	438	150.00	197	224.00	21088	321.00	316
74.00	5646	151.00	325	225.00	4987	322.00	65
75.00	8887	152.00	661	226.00	376	323.00	3459
76.00	3385	153.00	989	227.00	8225	324.00	632
77.00	70280	154.00	1118	228.00	1216	326.00	53
78.00	4804	155.00	1872	229.00	1823	327.00	643
79.00	3594	156.00	3281	230.00	87	328.00	319

Data File: /chem2/nt6.i/20130306.b/tune.b/03061301.D

Date : 06-MAR-2013 12:16

Client ID: DFTPP0306

Instrument: nt6.i

Sample Info: DFTPP0306

Operator: JZ

Column phase: ZB-5ms1

Column diameter: 0.32

Data File: 03061301.D
Spectrum: Avg. Scans 2573-2575 (16.34), Background Scan 2566
Location of Maximum: 198.00
Number of points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	3059	157.00	522	231.00	872	332.00	237
81.00	4436	158.00	528	232.00	224	333.00	301
82.00	972	159.00	466	233.00	206	334.00	2192
83.00	492	160.00	1036	234.00	485	335.00	686
85.00	751	161.00	1744	235.00	636	341.00	443
86.00	1051	162.00	516	236.00	521	346.00	856
87.00	634	163.00	117	237.00	702	347.00	183
88.00	127	164.00	129	238.00	55	352.00	952
89.00	252	165.00	1368	239.00	302	353.00	644
90.00	99	166.00	343	240.00	249	354.00	998
91.00	1049	167.00	1586	241.00	491	355.00	189
92.00	1155	168.00	2662	242.00	1253	365.00	4506
93.00	6399	169.00	656	243.00	1142	366.00	833
94.00	256	170.00	233	244.00	15704	370.00	54
96.00	212	171.00	359	245.00	2359	371.00	348
97.00	186	172.00	631	246.00	3012	372.00	1688
98.00	5046	173.00	729	247.00	819	373.00	481
99.00	4074	174.00	1277	248.00	77	383.00	453
100.00	397	175.00	1888	249.00	591	384.00	67
101.00	2639	176.00	773	250.00	59	390.00	264
102.00	93	177.00	1015	251.00	80	391.00	143
103.00	823	178.00	604	252.00	207	392.00	131
104.00	1234	179.00	4701	253.00	456	402.00	763
105.00	1408	180.00	3447	255.00	81992	403.00	990
106.00	237	181.00	1714	256.00	11952	404.00	418
107.00	19712	182.00	468	257.00	849	421.00	881
108.00	2948	183.00	943	258.00	4194	422.00	805
110.00	36840	184.00	660	259.00	769	423.00	6078
111.00	5315	185.00	2694	260.00	200	424.00	1104
112.00	1126	186.00	19928	261.00	83	425.00	146
113.00	289	187.00	5334	264.00	247	431.00	55
114.00	222	188.00	665	265.00	1902	441.00	16992
115.00	192	189.00	1117	266.00	328	442.00	120496
116.00	686	190.00	270	270.00	68	443.00	23680
117.00	13830	191.00	589	271.00	192	444.00	2214

US9B : 88237

Date : 06-MAR-2013 12:16

Client ID: DFTPP0306 Instrument: nt6.i

Sample Info: DFTPP0306

Operator: JZ

Column phase: ZB-5msi Column diameter: 0.32

Data File: 03061301.D
Spectrum: Avg. Scans 2573-2575 (16.34), Background Scan 2566
Location of Maximum: 198.00
Number of points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
118.00	1156	192.00	1832	272.00	311		

Data File: /chem2/nt6.i/20130306.b/tune.b/03061301.D

Date : 06-MAR-2013 12:16

Client ID: DFTPP0306

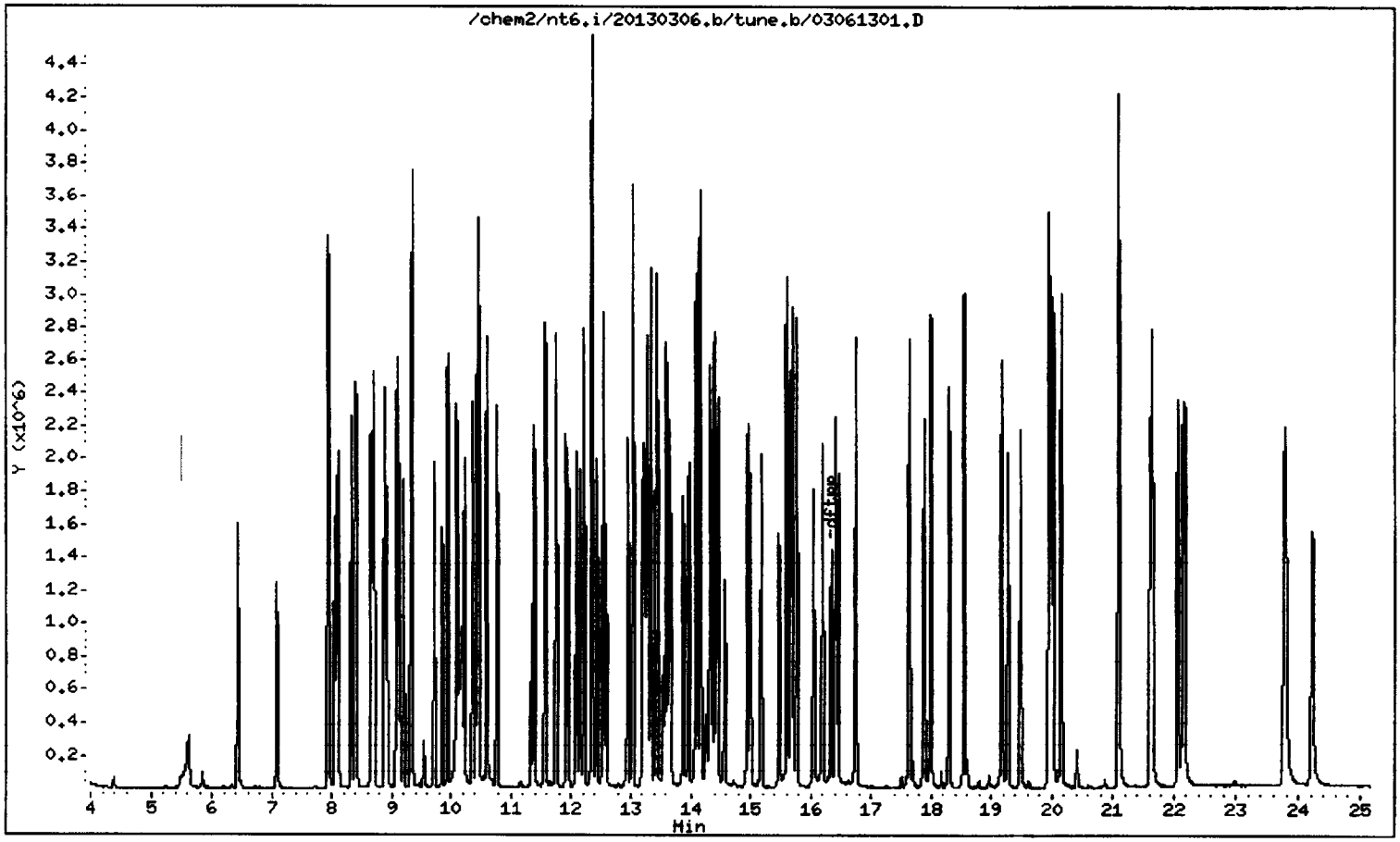
Instrument: nt6.i

Sample Info: DFTPP0306

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/20130306.b/ddt.b/03061301.D ARI ID: DDT0306
Method: /chem2/nt6.i/20130306.b/ddt.b/sw846ddt.m Misc: 13-
Analysis Date: 06-MAR-2013 12:16 Instrument: nt6.i

COMPOUND	RT	AREA
Pentachlorophenol	15.470	294213
Benzidine	17.874	166212
4,4'-DDE	----	----
4,4'-DDD	18.799	12007
4,4'-DDT	19.274	647493

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

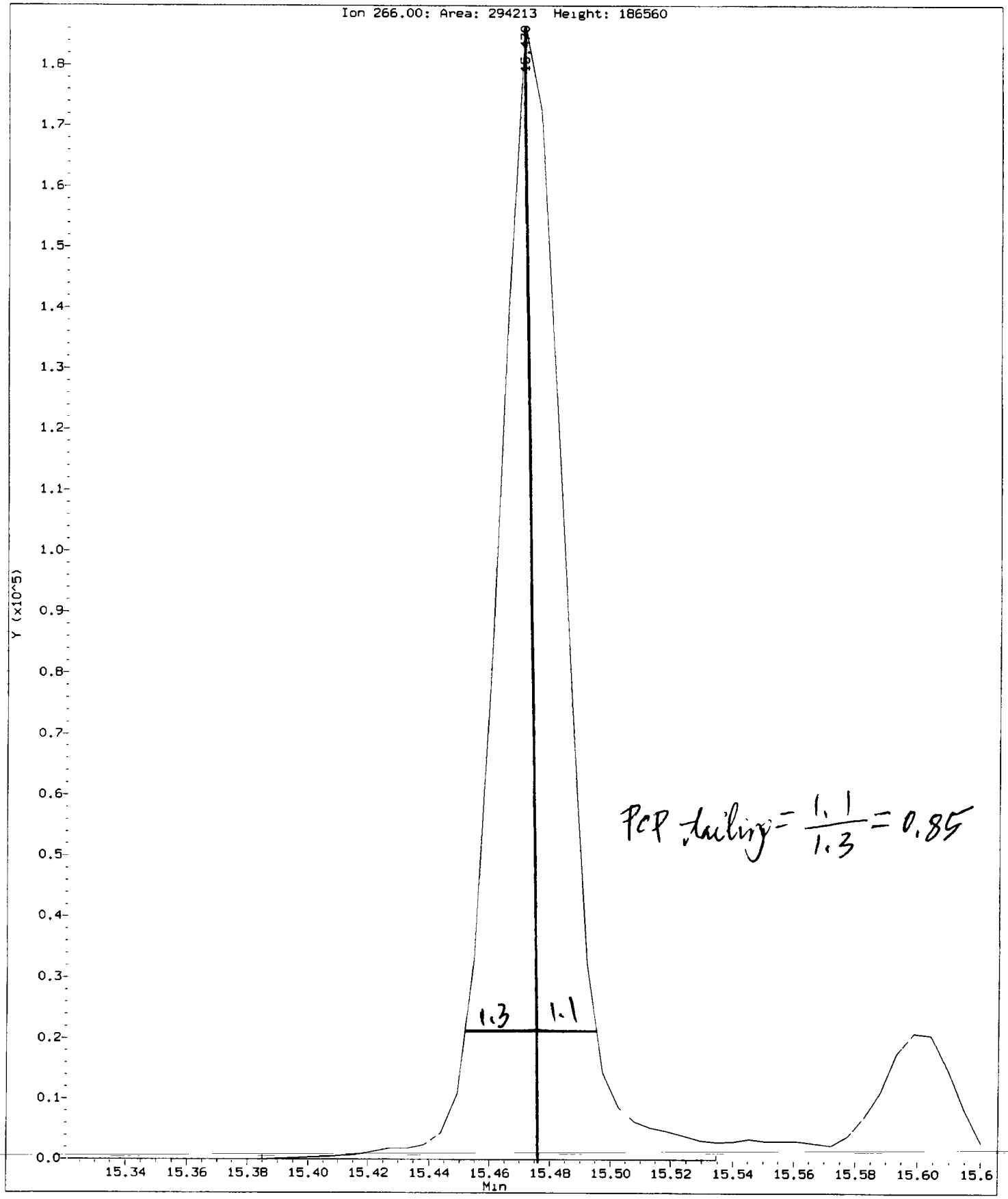
$$\text{DDT Percent Breakdown} = \frac{(0 + 12007) * 100}{(0 + 12007 + 647493)}$$

DDT Percent Breakdown = 1.8 %

OK [illegible] 03/07/13

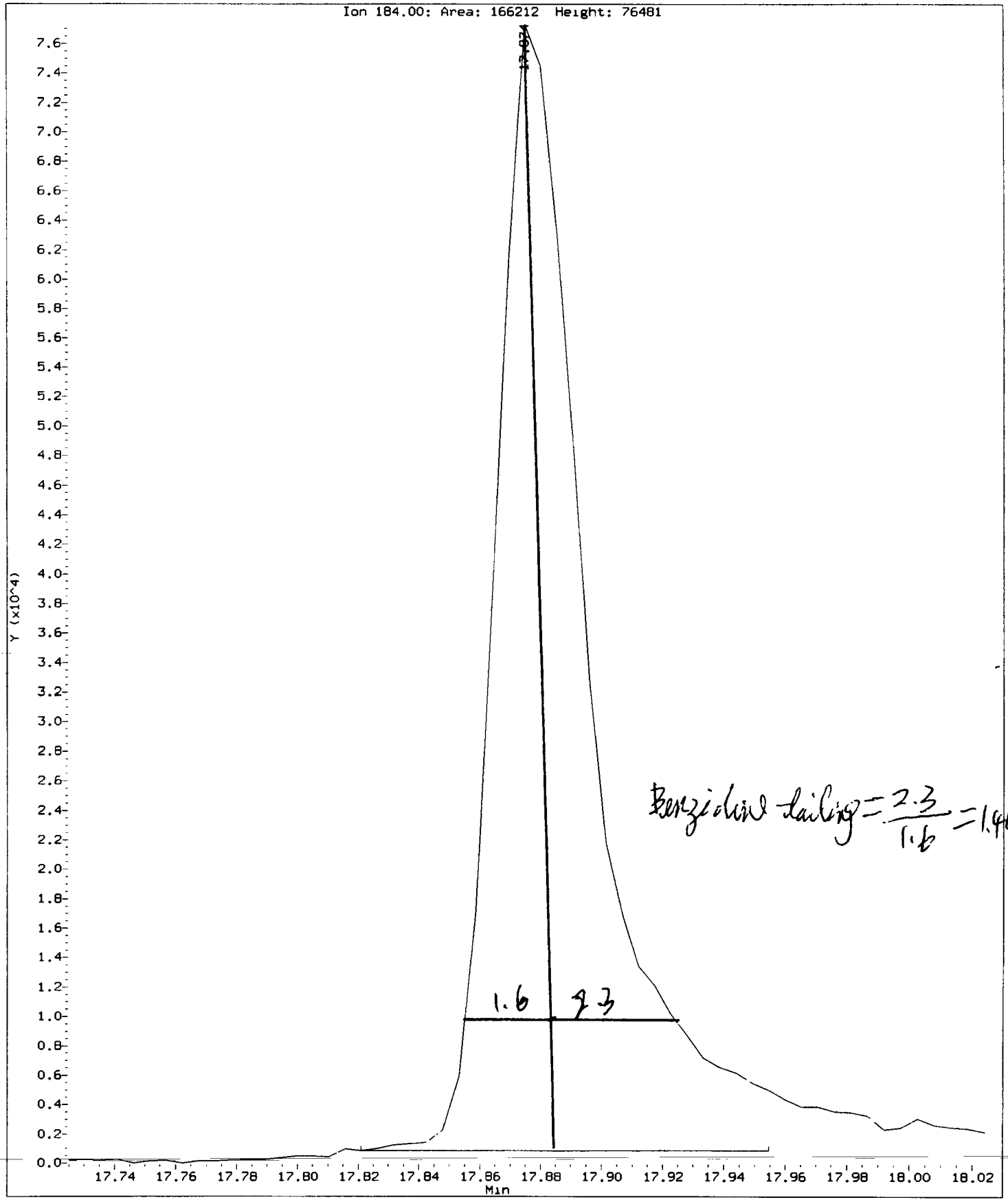
Data File: /chem2/nt6.i/20130306.b/ddt.b/03061301.D
Injection Date: 06-MAR-2013 12:16
Instrument: nt6.i
Client Sample ID: DDT0306

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem2/nt6.1/20130306.b/ddt.b/03061301.D
Injection Date: 06-MAR-2013 12:16
Instrument: nt6.1
Client Sample ID: DDT0306

Compound: Benzidine
CAS Number:



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130306.b/03061302.D
Lab Smp Id: IC020306 Client Smp ID: IC020306
Inj Date : 06-MAR-2013 12:51
Operator : JZ Inst ID: nt6.i
Smp Info : IC020306,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130306.b/SW846030613.m
Meth Date : 07-Mar-2013 11:55 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 2 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

03/07/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	Compound Not Detected.					
$	2 Phenol-d5	99	Compound Not Detected.					
	3 Phenol	94	Compound Not Detected.					
$	5 2-Chlorophenol-d4	132	Compound Not Detected.					
	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	8.384	8.387	(1.000)	469293	20.0000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
	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.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	Compound Not Detected.					
	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	10.419	10.422	(1.000)	1660759	20.0000	
	28 Naphthalene	128	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	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	Compound Not Detected.					
	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	13.277	13.286	(1.000)	977166	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	Compound Not Detected.					
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	15.655	15.663	(1.000)	1519395	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.					
	64 Fluoranthene	202	Compound Not Detected.					
	65 Pyrene	202	Compound Not Detected.					
$	66 Terphenyl-d14	244	Compound Not Detected.					
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	19.971	19.979	(1.000)	1581424	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	21.077	21.085	(1.000)	2063915	20.0000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	74 Benzo(b)fluoranthene	252	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
75	Benzo(k)fluoranthene	252	Compound Not Detected.					
187	Total Benzofluoranthenes	252	Compound Not Detected.					
76	Benzo(a)pyrene	252	Compound Not Detected.					
* 77	Perylene-d12	264	22.129	22.137	(1.000)	1491578	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.					
103	Pyridine	79	Compound Not Detected.					
91	Aniline	93	Compound Not Detected.					
105	1-methylnaphthalene	141	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
143	1,4-Dioxane	88	3.117	3.103	(0.372)	3506	0.20000	0.2303
$ 137	d8-1,4-Dioxane	96	Compound Not Detected.					
144	alpha-Terpineol	59	Compound Not Detected.					
177	p-Benzoquinone	82	Compound Not Detected.					
98	Retene	219	Compound Not Detected.					
99	Perylene	252	Compound Not Detected.					
133	Butylatedhydroxytoluene	205	Compound Not Detected.					
115	Tributyl Phosphate	99	Compound Not Detected.					
116	Dibutyl Phenyl Phosphate	175	Compound Not Detected.					
117	Butyl Diphenyl Phosphate	94	Compound Not Detected.					
118	Triphenyl Phosphate	326	Compound Not Detected.					
123	Acetophenone	105	Compound Not Detected.					
168	Pentachlorobenzene	250	Compound Not Detected.					
113	Diphenyl Oxide	170	Compound Not Detected.					
112	Biphenyl	154	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					
151	1,2,4,5-Tetrachlorobenzene	216	Compound Not Detected.					
110	Tetrachloroguaiacol	247	Compound Not Detected.					
109	3,4,5-Trichloroguaiacol	213	Compound Not Detected.					
181	3,4,6-Trichloroguaiacol	211	Compound Not Detected.					
108	4,5,6-Trichloroguaiacol	213	Compound Not Detected.					
184	3,4-Dichloroguaiacol	192	Compound Not Detected.					
107	4,5-Dichloroguaiacol	192	Compound Not Detected.					
182	4,6-Dichloroguaiacol	192	Compound Not Detected.					
185	4-Chloroguaiacol	115	Compound Not Detected.					
186	Carbaryl	144	Compound Not Detected.					
178	2-Benzyl-4-Chlorophenol	218	Compound Not Detected.					
106	Guaiacol	124	Compound Not Detected.					
188	2,6-Dichlorophenol	162	Compound Not Detected.					
189	N-Nitrosomethylethylamine	88	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 03061302.D
Lab Smp Id: IC020306
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC020306
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	469293	2.44
27 Naphthalene-d8	1718341	859170	3436682	1660759	-3.35
42 Acenaphthene-d10	1010041	505020	2020082	977166	-3.25
59 Phenanthrene-d10	1666734	833367	3333468	1519395	-8.84
69 Chrysene-d12	1675752	837876	3351504	1581424	-5.63
134 Di-n-octylphthala	2026355	1013178	4052710	2063915	1.85
77 Perylene-d12	1637524	818762	3275048	1491578	-8.91

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.38	-0.03
27 Naphthalene-d8	10.42	9.92	10.92	10.42	-0.03
42 Acenaphthene-d10	13.29	12.79	13.79	13.28	-0.06
59 Phenanthrene-d10	15.66	15.16	16.16	15.65	-0.05
69 Chrysene-d12	19.98	19.48	20.48	19.97	-0.04
134 Di-n-octylphthala	21.09	20.59	21.59	21.08	-0.04
77 Perylene-d12	22.14	21.64	22.64	22.13	-0.04

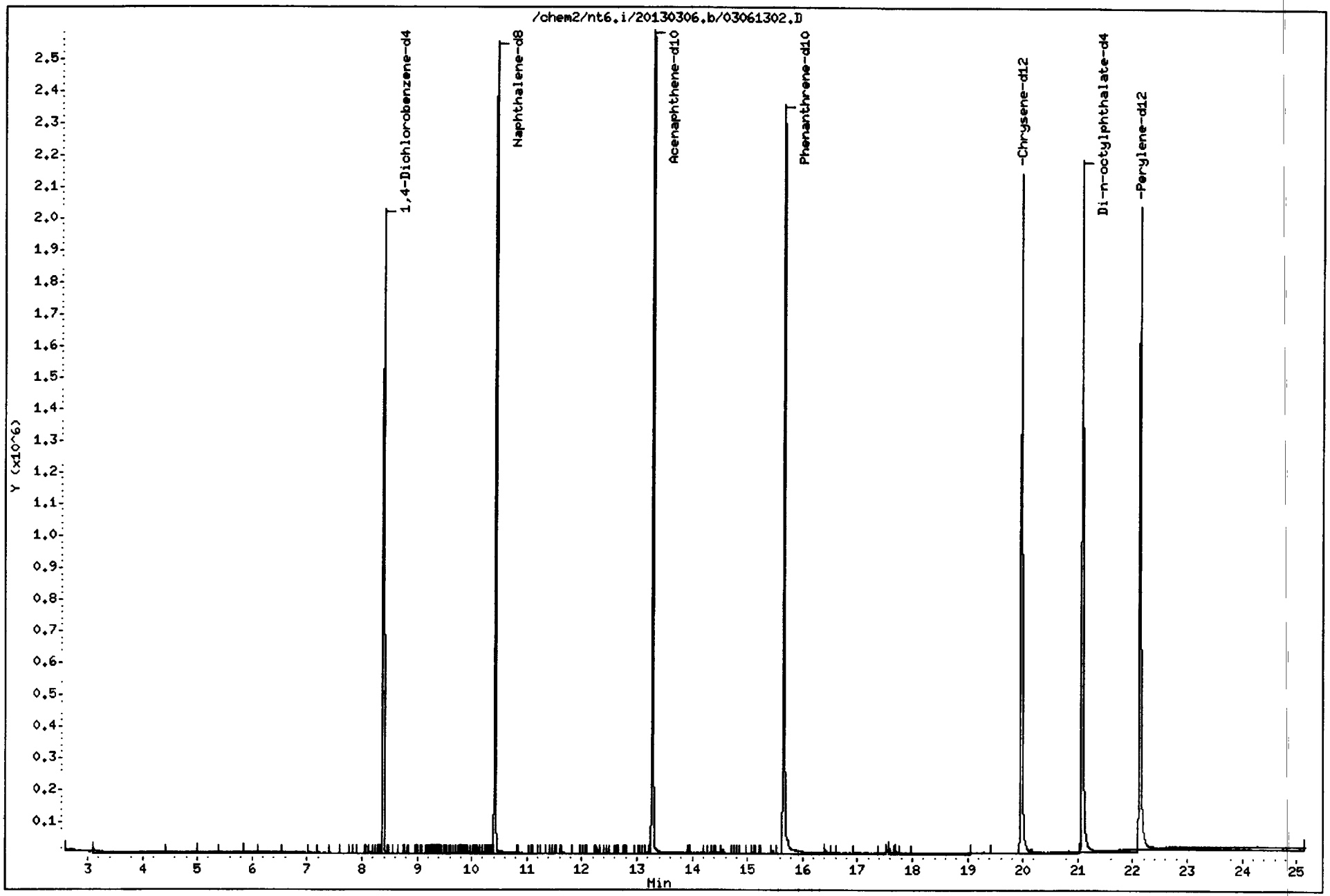
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061302.D
Date : 06-MAR-2013 12:51
Client ID: IC020306
Sample Info: IC020306,

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - 03061302.D

Lab ID: IC020306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130306.b/03061303.D
Lab Smp Id: IC10306 Client Smp ID: IC10306
Inj Date : 06-MAR-2013 13:25
Operator : JZ Inst ID: nt6.i
Smp Info : IC10306,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130306.b/SW846030613.m
Meth Date : 07-Mar-2013 11:55 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

03/07/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.425	6.432	(0.767)	33086	1.00000	1.078
$	2 Phenol-d5	99	7.921	7.933	(0.945)	40462	1.00000	1.127
	3 Phenol	94	7.942	7.954	(0.948)	41723	1.00000	1.103
$	5 2-Chlorophenol-d4	132	8.081	8.082	(0.964)	34738	1.00000	1.144
	4 Bis(2-Chloroethyl)ether	93	8.044	8.050	(0.960)	37893	1.00000	1.154
	6 2-Chlorophenol	128	8.103	8.109	(0.967)	32633	1.00000	1.078
	7 1,3-Dichlorobenzene	146	8.322	8.328	(0.993)	43015	1.00000	1.217
*	8 1,4-Dichlorobenzene-d4	152	8.381	8.387	(1.000)	473521	20.0000	
	9 1,4-Dichlorobenzene	146	8.407	8.408	(1.003)	43098	1.00000	1.253
$	10 1,2-Dichlorobenzene-d4	152	8.680	8.681	(1.036)	26576	1.00000	1.244
	12 1,2-Dichlorobenzene	146	8.701	8.707	(1.038)	41605	1.00000	1.265
	11 Benzyl alcohol	108	8.648	8.654	(1.032)	20791	1.00000	1.009
	14 2,2'-oxybis(1-Chloropropane)	45	8.909	8.916	(1.063)	62877	1.00000	1.205
	13 2-Methylphenol	108	8.872	8.878	(1.059)	29626	1.00000	1.033
	17 Hexachloroethane	117	9.193	9.193	(1.097)	16561	1.00000	1.190
	16 N-Nitroso-di-n-propylamine	70	9.118	9.135	(1.088)	28301	1.00000	1.148
	15 4-Methylphenol	108	9.096	9.108	(1.085)	29399	1.00000	1.037
$	18 Nitrobenzene-d5	82	9.305	9.311	(0.893)	39000	1.00000	1.152
	19 Nitrobenzene	77	9.331	9.343	(0.895)	40199	1.00000	1.240
	20 Isophorone	82	9.705	9.717	(0.931)	65921	1.00000	1.167
	21 2-Nitrophenol	139	9.850	9.851	(0.945)	12213	1.00000	0.8144
	22 2,4-Dimethylphenol	107	9.940	9.947	(0.954)	30479	1.00000	1.075
	23 Bis(2-Chloroethoxy)methane	93	10.090	10.096	(0.968)	45674	1.00000	1.232
	24 Benzoic acid	105	10.031	10.198	(0.963)	14014	2.00000	0.5712
	25 2,4-Dichlorophenol	162	10.224	10.230	(0.981)	20297	1.00000	0.9294
	26 1,2,4-Trichlorobenzene	180	10.357	10.363	(0.994)	34147	1.00000	1.256
*	27 Naphthalene-d8	136	10.421	10.422	(1.000)	1687458	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
28	Naphthalene	128	10.448	10.454	(1.003)	106156	1.00000	1.023
29	4-Chloroaniline	127	10.582	10.588	(1.015)	34256	1.00000	1.061
30	Hexachlorobutadiene	225	10.763	10.764	(1.033)	19751	1.00000	1.194
31	4-Chloro-3-methylphenol	107	11.377	11.384	(1.092)	20683	1.00000	0.8916
32	2-Methylnaphthalene	141	11.564	11.571	(1.110)	50301	1.00000	1.226
33	Hexachlorocyclopentadiene	237	11.944	11.950	(0.899)	11430	1.00000	0.7281
34	2,4,6-Trichlorophenol	196	12.077	12.078	(0.909)	13928	1.00000	0.8480
35	2,4,5-Trichlorophenol	196	12.131	12.137	(0.914)	11570	1.00000	0.7141
$ 36	2-Fluorobiphenyl	172	12.206	12.212	(0.919)	78484	1.00000	1.273
37	2-Chloronaphthalene	162	12.344	12.356	(0.930)	63607	1.00000	1.417
38	2-Nitroaniline	65	12.569	12.580	(0.946)	10307	1.00000	0.7135
39	Dimethylphthalate	163	12.937	12.949	(0.974)	72198	1.00000	1.228
40	Acenaphthylene	152	13.028	13.034	(0.981)	100567	1.00000	1.305
41	2,6-Dinitrotoluene	165	13.034	13.045	(0.981)	12098	1.00000	0.9629
* 42	Acenaphthene-d10	164	13.279	13.286	(1.000)	977079	20.0000	
43	3-Nitroaniline	138	13.247	13.264	(0.998)	10686	1.00000	0.9026(M)
44	Acenaphthene	153	13.327	13.334	(1.004)	65502	1.00000	1.313
45	2,4-Dinitrophenol	184	13.413	13.424	(1.010)	2331	2.00000	0.2598
46	Dibenzofuran	168	13.589	13.595	(1.023)	82058	1.00000	1.257
47	4-Nitrophenol	109	13.536	13.547	(1.019)	3036	1.00000	0.4756(M)
48	2,4-Dinitrotoluene	165	13.664	13.676	(1.029)	14844	1.00000	0.8735
50	Diethylphthalate	149	14.086	14.098	(1.061)	78847	1.00000	1.447
49	Fluorene	166	14.145	14.156	(1.065)	69651	1.00000	1.358
51	4-Chlorophenyl-phenylether	204	14.166	14.172	(1.067)	37022	1.00000	1.292
52	4-Nitroaniline	138	14.241	14.252	(1.072)	9632	1.00000	1.005
53	4,6-Dinitro-2-methylphenol	198	14.316	14.333	(0.914)	9300	2.00000	0.8416(M)
54	N-Nitrosodiphenylamine	169	14.364	14.375	(0.917)	52264	1.00000	1.217
$ 55	2,4,6-Tribromophenol	330	14.567	14.573	(1.097)	7243	1.00000	0.9375
56	4-Bromophenyl-phenylether	248	14.946	14.952	(0.955)	19320	1.00000	1.147
57	Hexachlorobenzene	284	15.170	15.182	(0.969)	20998	1.00000	1.209
58	Pentachlorophenol	266	15.470	15.470	(0.988)	4992	1.00000	0.4874
* 59	Phenanthrene-d10	188	15.657	15.663	(1.000)	1534533	20.0000	
60	Phenanthrene	178	15.694	15.700	(1.002)	98896	1.00000	1.303
61	Anthracene	178	15.763	15.770	(1.007)	91358	1.00000	1.202
62	Carbazole	167	16.041	16.047	(1.025)	87629	1.00000	1.673
63	Di-n-butylphthalate	149	16.741	16.747	(1.069)	118210	1.00000	1.233
64	Fluoranthene	202	17.628	17.639	(1.126)	96279	1.00000	1.205
65	Pyrene	202	17.986	17.992	(0.901)	99688	1.00000	1.267
$ 66	Terphenyl-d14	244	18.290	18.291	(0.916)	60228	1.00000	1.191
67	Butylbenzylphthalate	149	19.161	19.167	(0.960)	42596	1.00000	1.108
68	Benzo(a)anthracene	228	19.941	19.953	(0.999)	77087	1.00000	1.174
* 69	Chrysene-d12	240	19.968	19.979	(1.000)	1440155	20.0000	
70	3,3'-Dichlorobenzidine	252	19.941	19.953	(0.999)	19182	1.00000	1.062
71	Chrysene	228	20.005	20.017	(1.002)	82771	1.00000	1.235
72	bis(2-Ethylhexyl)phthalate	149	20.149	20.150	(0.956)	61910	1.00000	1.099
* 134	Di-n-octylphthalate-d4	153	21.079	21.085	(1.000)	1913979	20.0000	
73	Di-n-octylphthalate	149	21.089	21.096	(1.000)	108139	1.00000	1.197

	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	21.592	21.609	(0.976)	60045	1.00000	0.9273
75	Benzo(k)fluoranthene	252	21.629	21.641	(0.977)	92998	1.00000	1.219(M)
187	Total Benzofluoranthenes	252	21.629	21.641	(0.977)	143967	2.00000	2.341(M)
76	Benzo(a)pyrene	252	22.046	22.057	(0.996)	61756	1.00000	1.082
* 77	Perylene-d12	264	22.131	22.137	(1.000)	1335257	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.755	23.767	(1.073)	70007	1.00000	1.019
79	Dibenzo(a,h)anthracene	278	23.766	23.788	(1.074)	48443	1.00000	0.8957
80	Benzo(g,h,i)perylene	276	24.199	24.226	(1.093)	55321	1.00000	0.9418
90	N-Nitrosodimethylamine	74	3.893	3.889	(0.465)	23589	1.00000	1.058
103	Pyridine	79	3.898	3.851	(0.465)	33880	1.00000	0.9580
91	Aniline	93	7.937	7.938	(0.947)	52642	1.00000	1.256
105	1-methylnaphthalene	141	11.741	11.747	(1.127)	51510	1.00000	1.236
93	Benzidine	184	17.874	17.874	(0.895)	22120	1.00000	3.150(M)
111	Azobenzene (1,2-DP-Hydrazine)	77	14.412	14.423	(1.085)	78078	1.00000	1.261
143	1,4-Dioxane	88	3.113	3.103	(0.371)	16760	1.00000	1.091
$ 137	d8-1,4-Dioxane	96	3.060	3.039	(0.365)	15981	1.00000	1.111
144	alpha-Terpineol	59	10.464	10.470	(1.004)	25257	1.00000	1.177
177	p-Benzoquinone	82	7.082	7.083	(0.680)	4225	1.00000	0.6556
98	Retene	219	18.541	18.548	(0.929)	38483	1.00000	1.134
99	Perylene	252	22.158	22.175	(1.001)	59629	1.00000	1.193
133	Butylatedhydroxytoluene	205	13.440	13.440	(1.012)	55856	1.00000	0.9826
115	Tributyl Phosphate	99	14.444	14.461	(0.923)	82254	1.00000	1.227
116	Dibutyl Phenyl Phosphate	175	16.185	16.192	(1.034)	43704	1.00000	1.077
117	Butyl Diphenyl Phosphate	94	17.874	17.880	(0.895)	15361	1.00000	1.158
118	Triphenyl Phosphate	326	19.476	19.482	(0.975)	12619	1.00000	1.001
123	Acetophenone	105	9.064	9.076	(1.082)	50864	1.00000	1.141
168	Pentachlorobenzene	250	13.627	13.638	(1.026)	26382	1.00000	1.233
113	Diphenyl Oxide	170	12.531	12.538	(0.944)	47537	1.00000	1.250
112	Biphenyl	154	12.339	12.345	(0.929)	73566	1.00000	1.374
120	2,3,4,6-Tetrachlorophenol	232	13.867	13.873	(1.044)	10314	1.00000	0.7395
151	1,2,4,5-Tetrachlorobenzene	216	11.901	11.907	(0.896)	29179	1.00000	1.223
110	Tetrachloroguaiacol	247	15.592	15.599	(0.996)	15567	2.00000	1.933
109	3,4,5-Trichloroguaiacol	213	13.963	13.969	(0.892)	8806	1.00000	1.005
181	3,4,6-Trichloroguaiacol	211	14.081	14.087	(1.680)	10214	1.00000	0.9453
108	4,5,6-Trichloroguaiacol	213	14.994	15.000	(1.129)	8271	1.00000	0.9051
184	3,4-Dichloroguaiacol	192	12.425	12.425	(1.483)	10398	1.00000	1.014
107	4,5-Dichloroguaiacol	192	13.194	13.205	(0.994)	23641	2.00000	1.980
182	4,6-Dichloroguaiacol	192	13.194	13.205	(1.574)	23641	2.00000	1.889
185	4-Chloroguaiacol	115	11.329	11.336	(1.352)	5760	0.50000	0.4329
186	Carbaryl	144	16.447	16.459	(1.050)	30461	1.00000	0.8591
178	2-Benzyl-4-Chlorophenol	218	16.399	16.411	(1.047)	11942	1.00000	0.9396
106	Guaiacol	124	9.326	9.332	(1.113)	29497	1.00000	1.198
188	2,6-Dichlorophenol	162	10.592	10.598	(1.264)	22124	2.00000	1.055
189	N-Nitrosomethylethylamine	88	5.635	5.620	(0.672)	14520	2.00000	0.9281

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: 03061303.D
Lab Smp Id: IC10306
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC10306
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	473521	3.36
27 Naphthalene-d8	1718341	859170	3436682	1687458	-1.80
42 Acenaphthene-d10	1010041	505020	2020082	977079	-3.26
59 Phenanthrene-d10	1666734	833367	3333468	1534533	-7.93
69 Chrysene-d12	1675752	837876	3351504	1440155	-14.06
134 Di-n-octylphthala	2026355	1013178	4052710	1913979	-5.55
77 Perylene-d12	1637524	818762	3275048	1335257	-18.46

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.38	-0.07
27 Naphthalene-d8	10.42	9.92	10.92	10.42	-0.01
42 Acenaphthene-d10	13.29	12.79	13.79	13.28	-0.05
59 Phenanthrene-d10	15.66	15.16	16.16	15.66	-0.04
69 Chrysene-d12	19.98	19.48	20.48	19.97	-0.06
134 Di-n-octylphthala	21.09	20.59	21.59	21.08	-0.03
77 Perylene-d12	22.14	21.64	22.64	22.13	-0.03

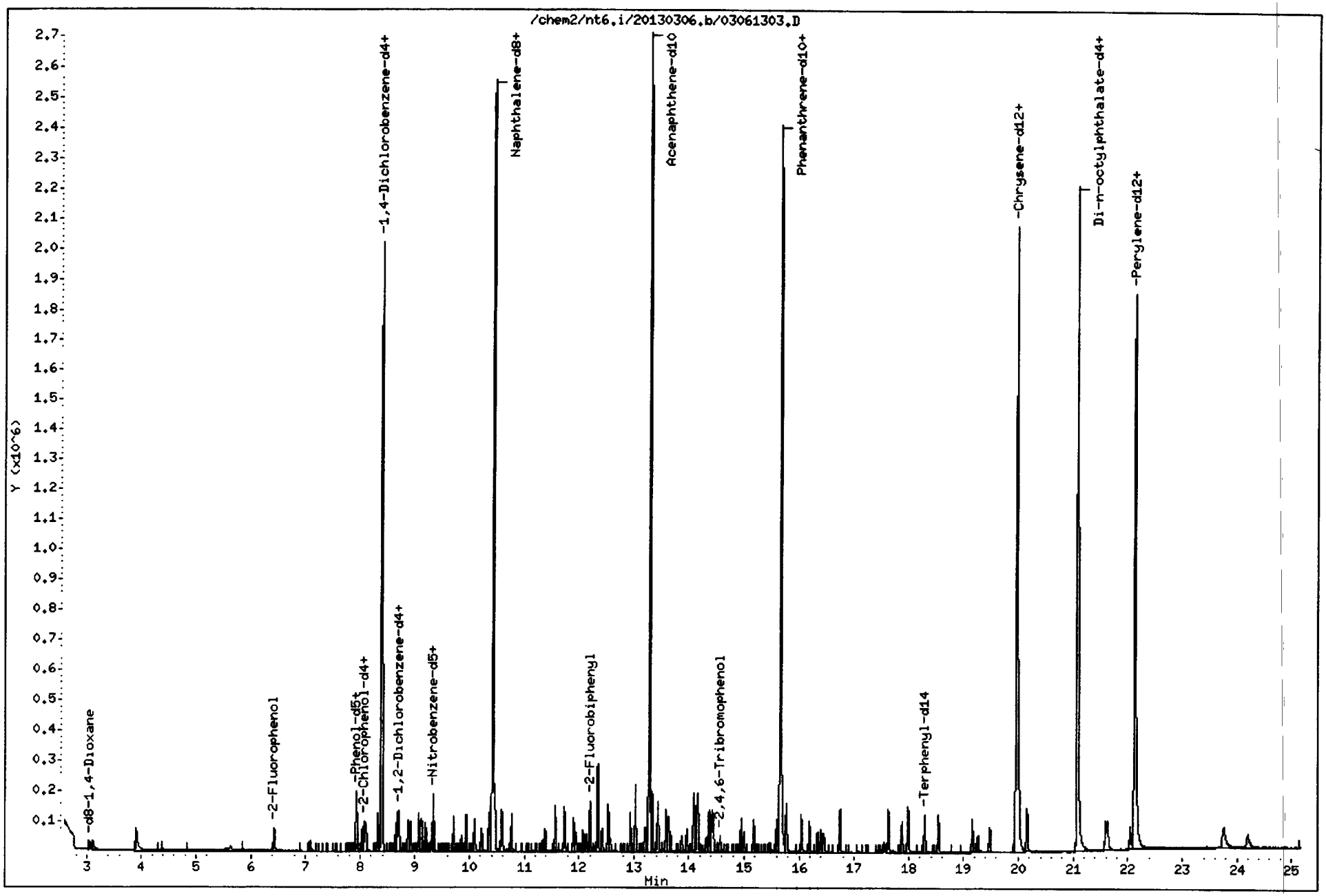
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061303.D
Date : 06-MAR-2013 13:25
Client ID: IC10306
Sample Info: IC10306,

Instrument: nt6.i

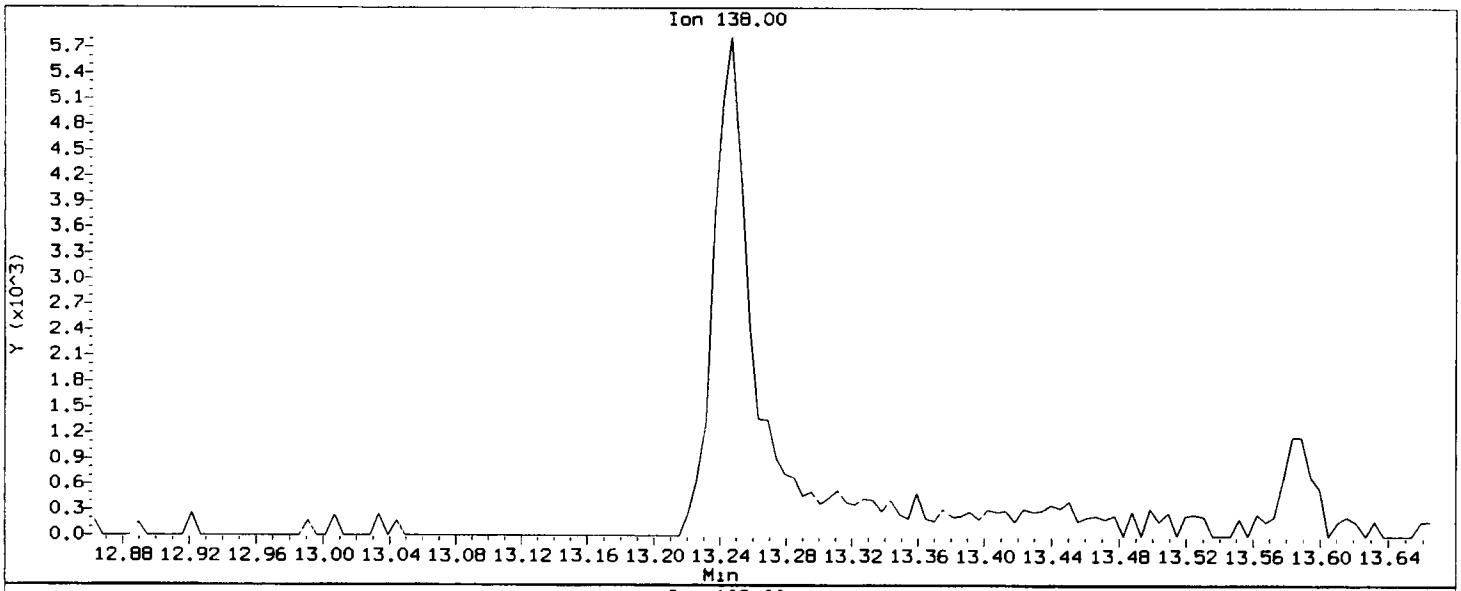
Operator: JZ
Column diameter: 0.32

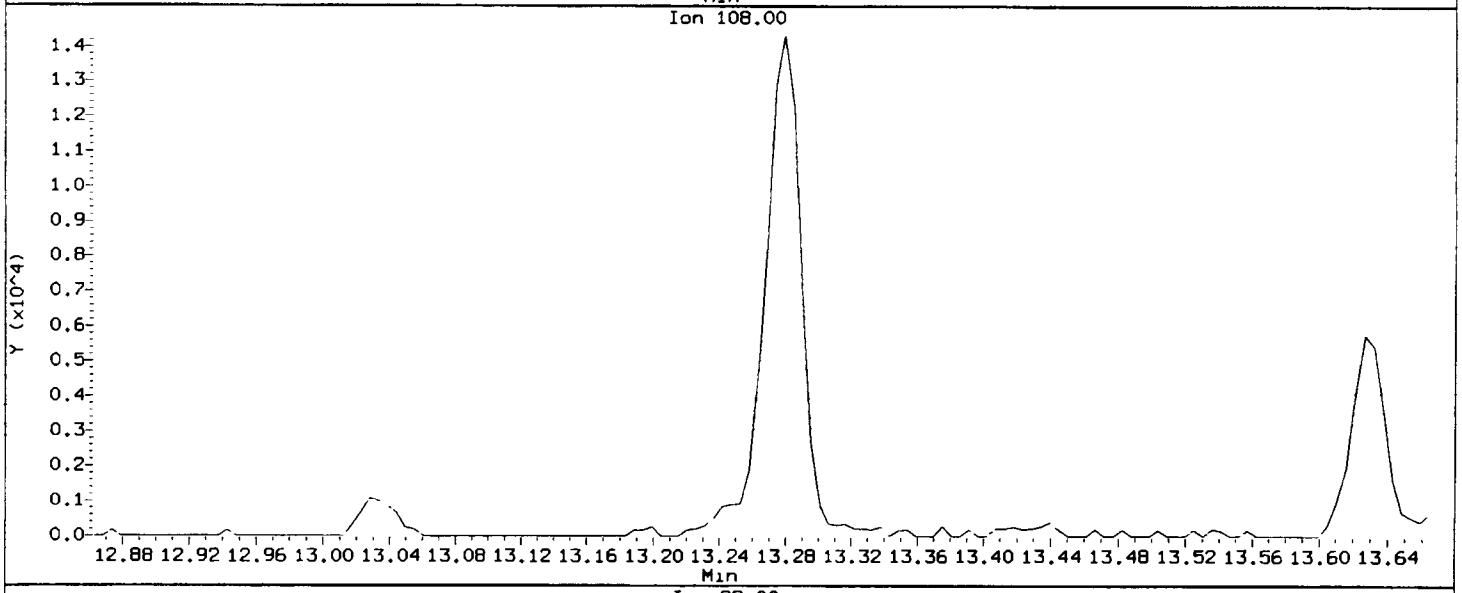
Column phase: ZB-5msi

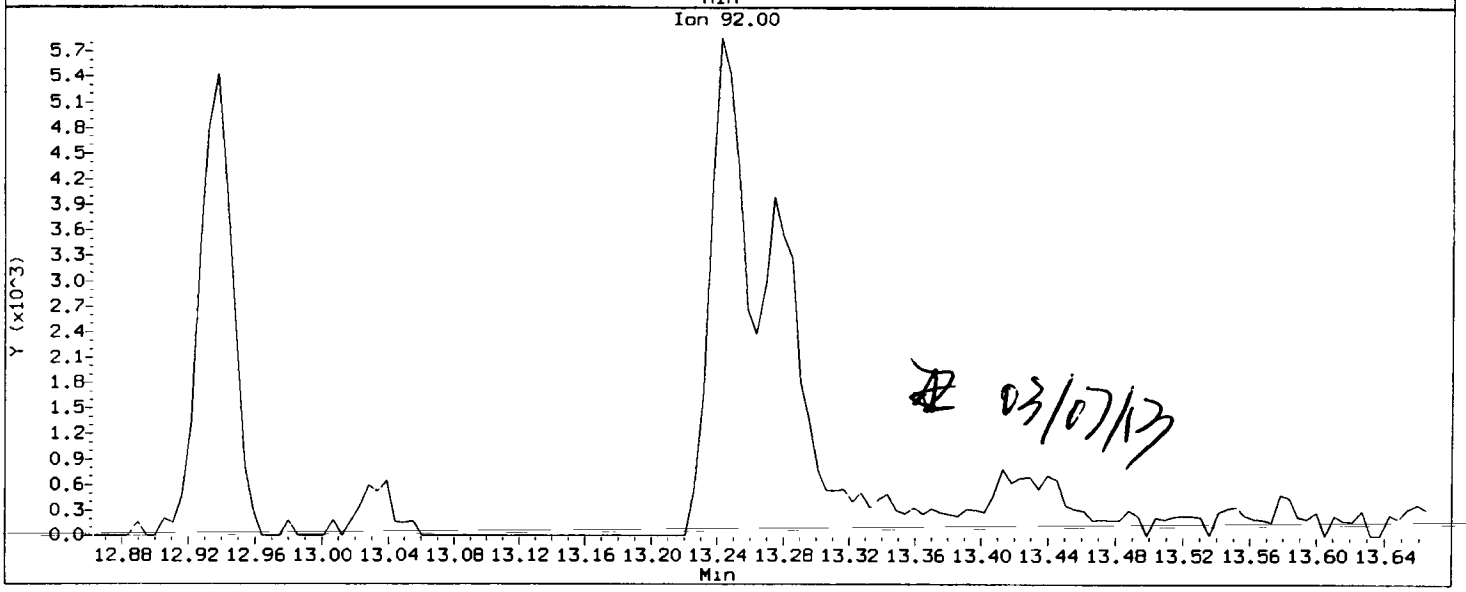


Data File: /chem2/nt6.i/20130306.b/03061303.D
Injection Date: 06-MAR-2013 13:25
Instrument: nt6.i
Client Sample ID: IC10306

Compound: 3-Nitroaniline
CAS Number: 99-09-2



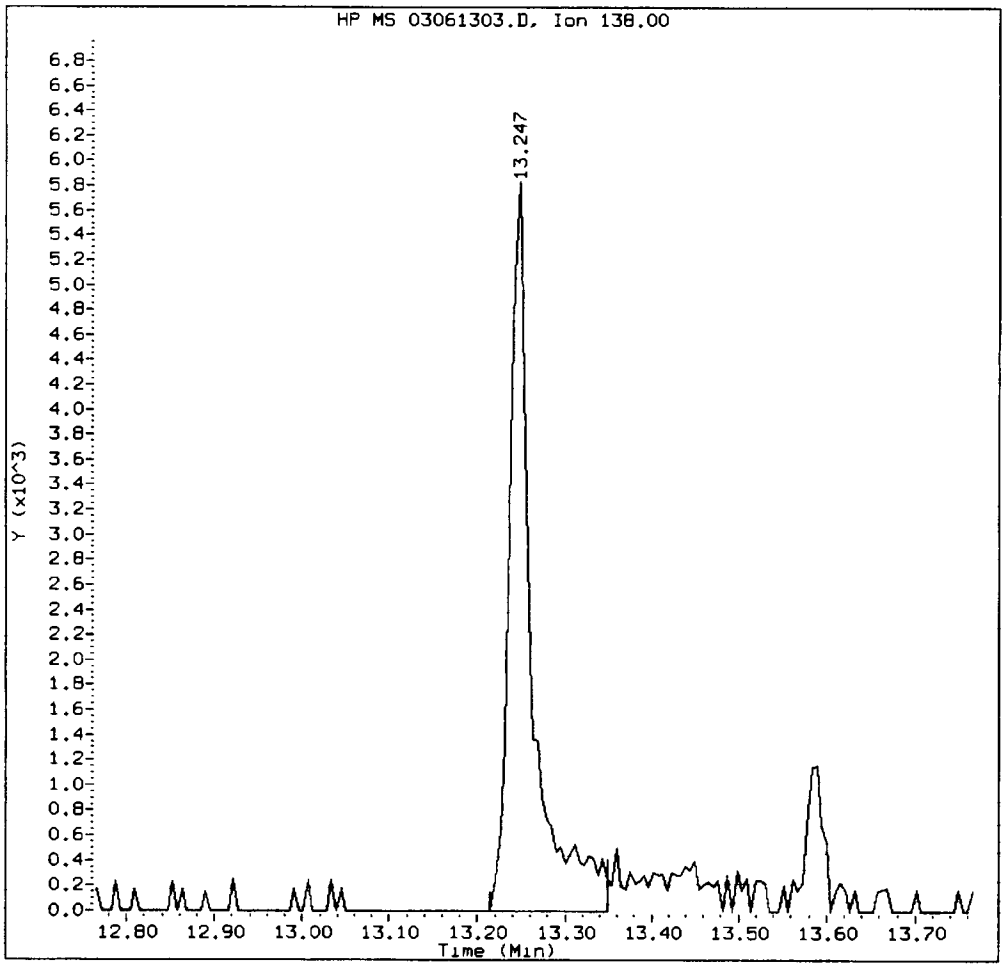




03/07/13

IC10306, /chem2/nt6.i/20130306.b/03061303.D

3-Nitroaniline Amount: 0.90 Area: 10686



MANUAL INTEGRATION for 3-Nitroaniline

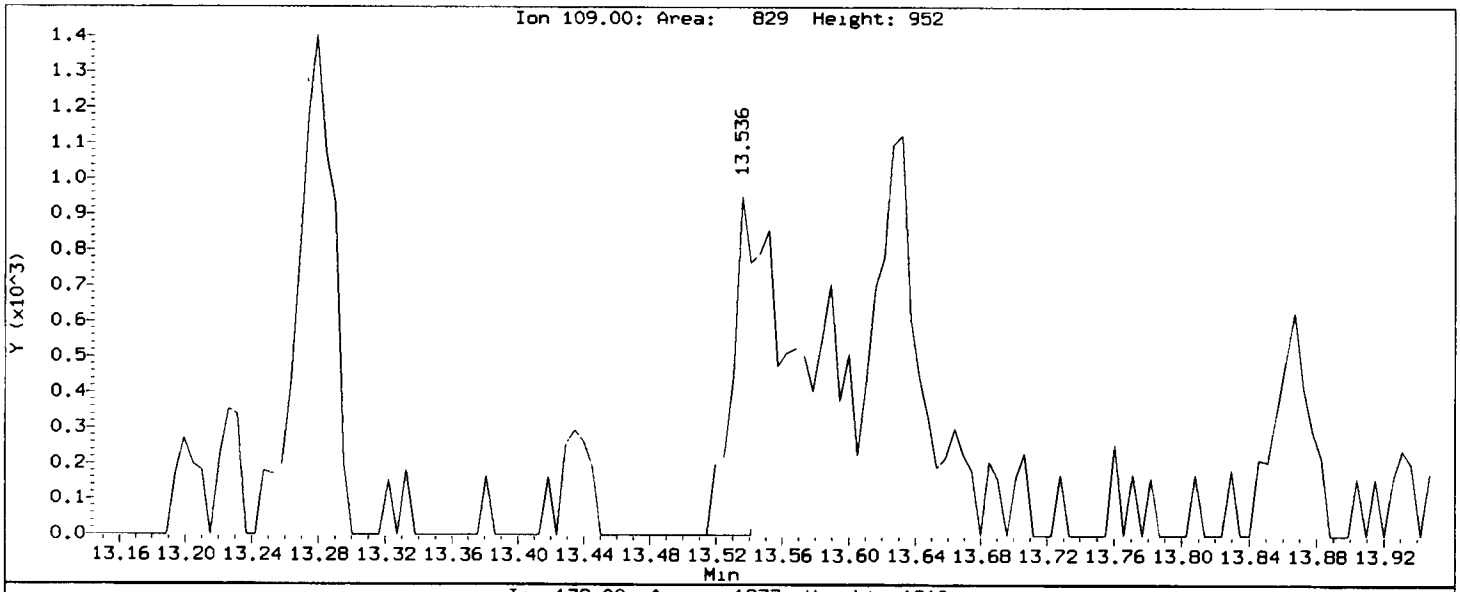
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

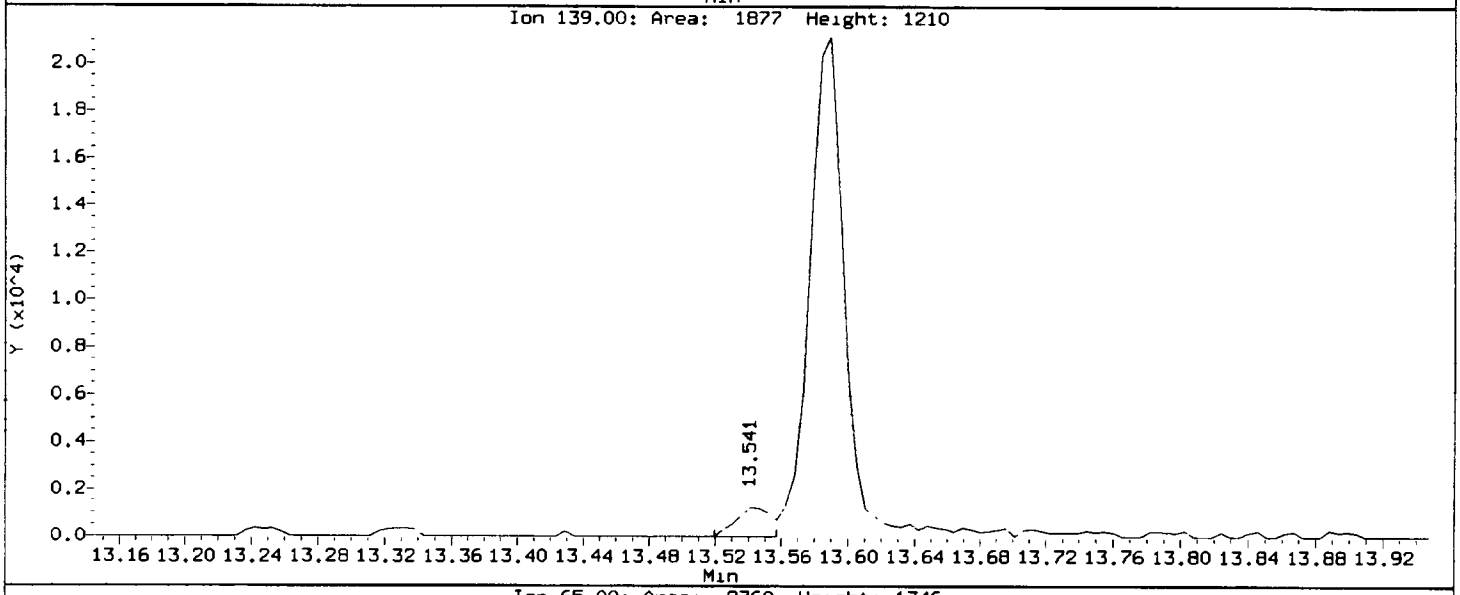
5. Other _____

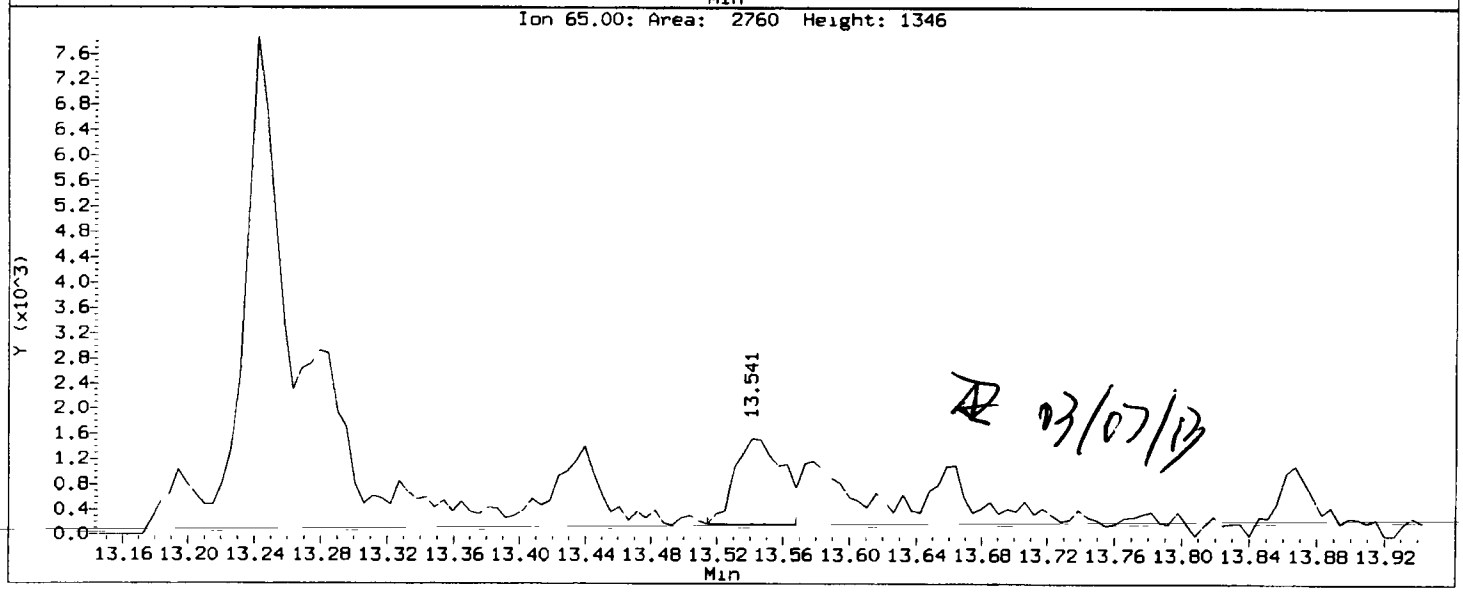
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061303.D
Injection Date: 06-MAR-2013 13:25
Instrument: nt6.i
Client Sample ID: IC10306

Compound: 4-Nitrophenol
CAS Number: 100-02-7



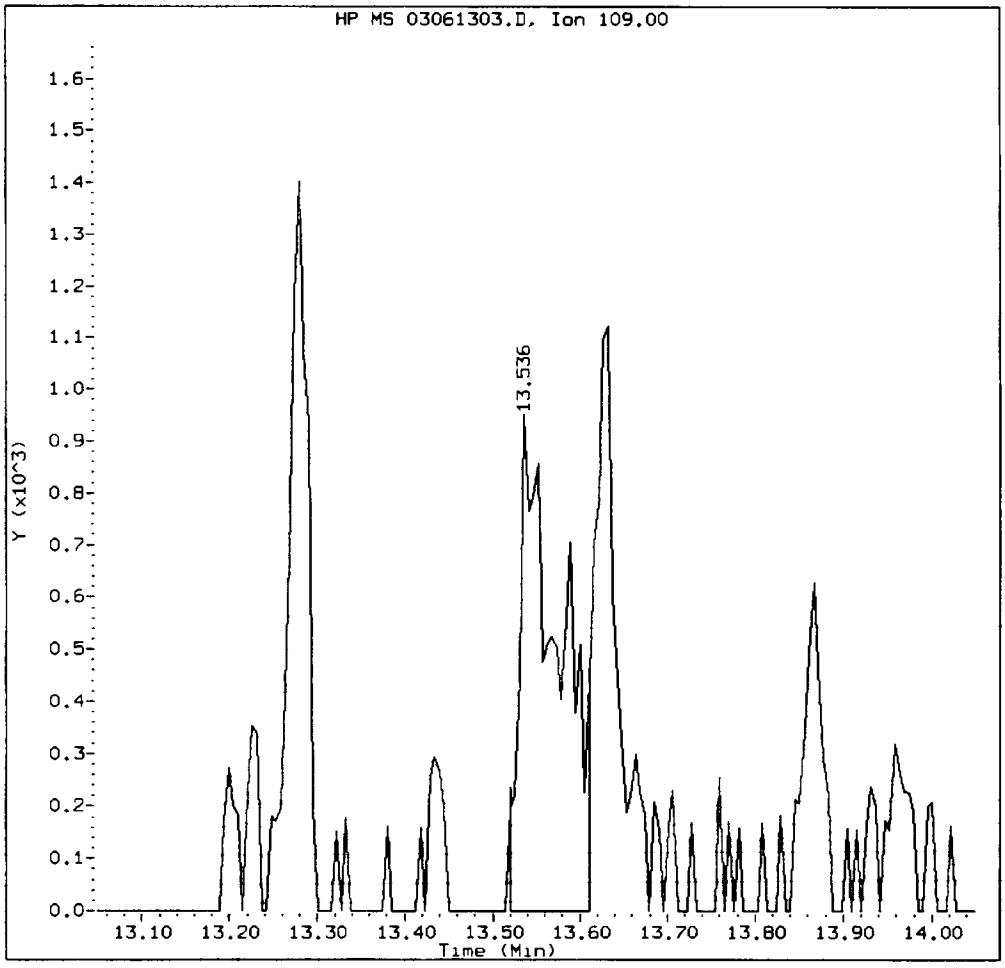




AR 03/07/13

IC10306, /chem2/nt6.i/20130306.b/03061303.D

4-Nitrophenol Amount: 0.48 Area: 3036



MANUAL INTEGRATION for 4-Nitrophenol

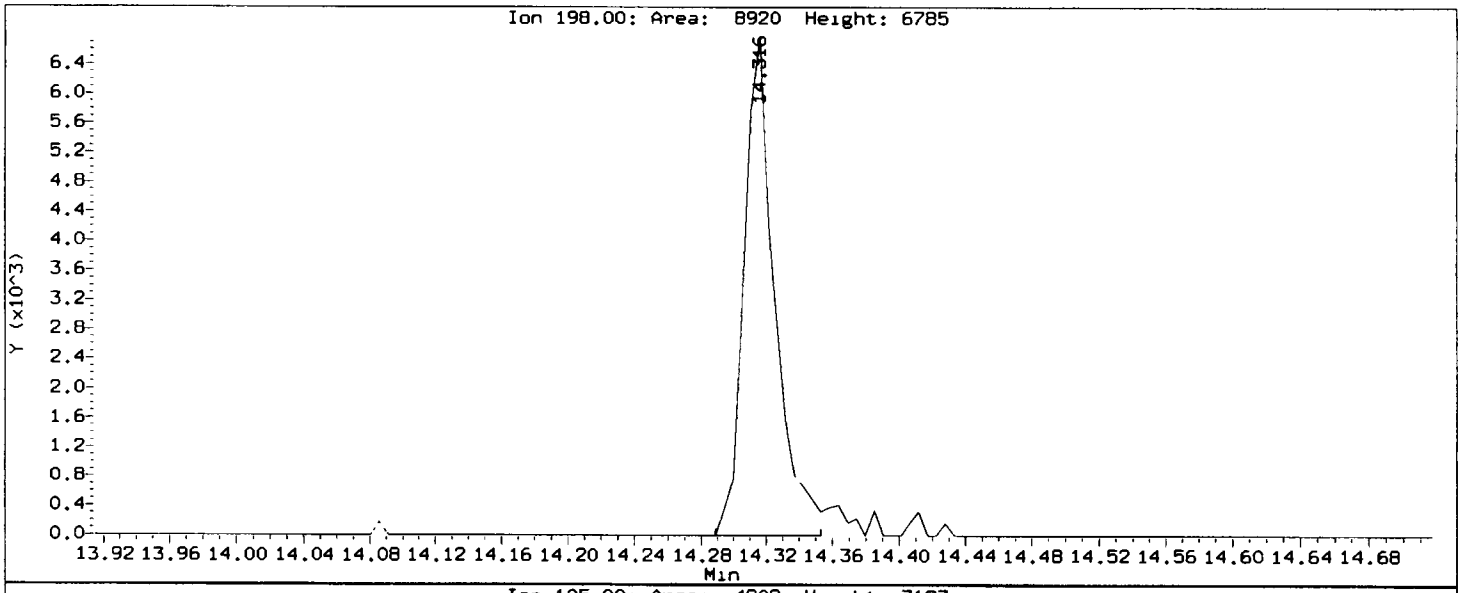
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

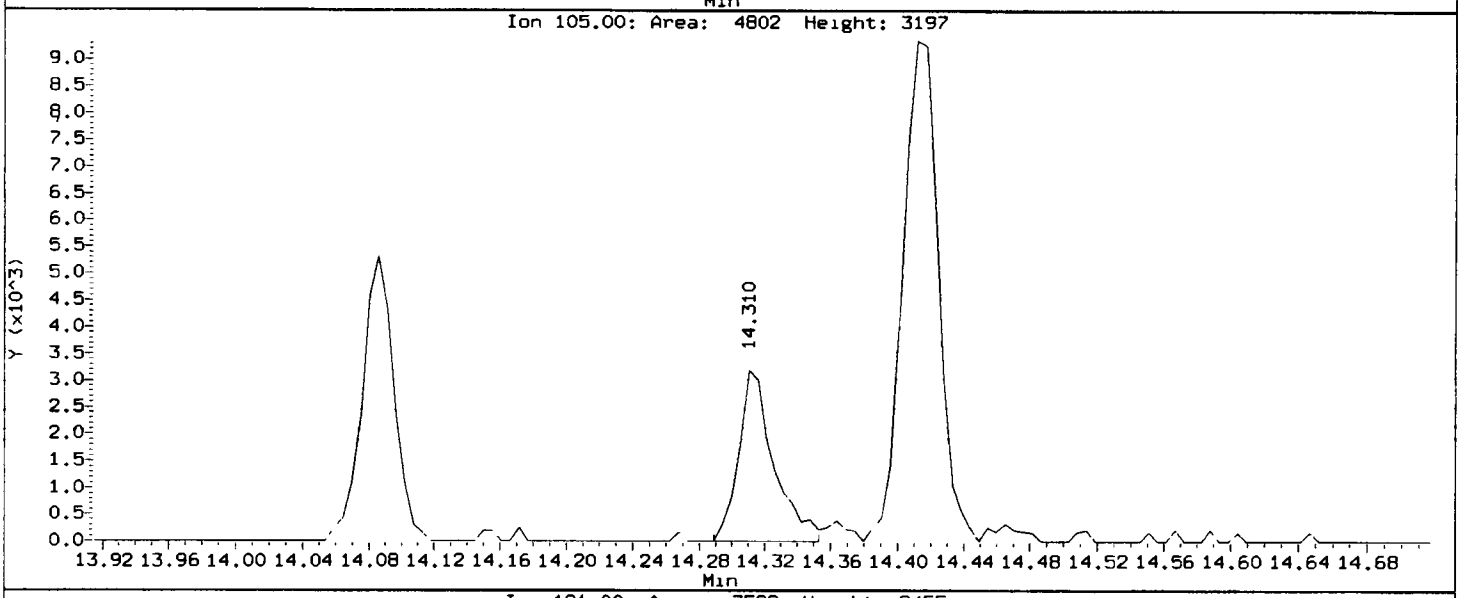
5. Other _____

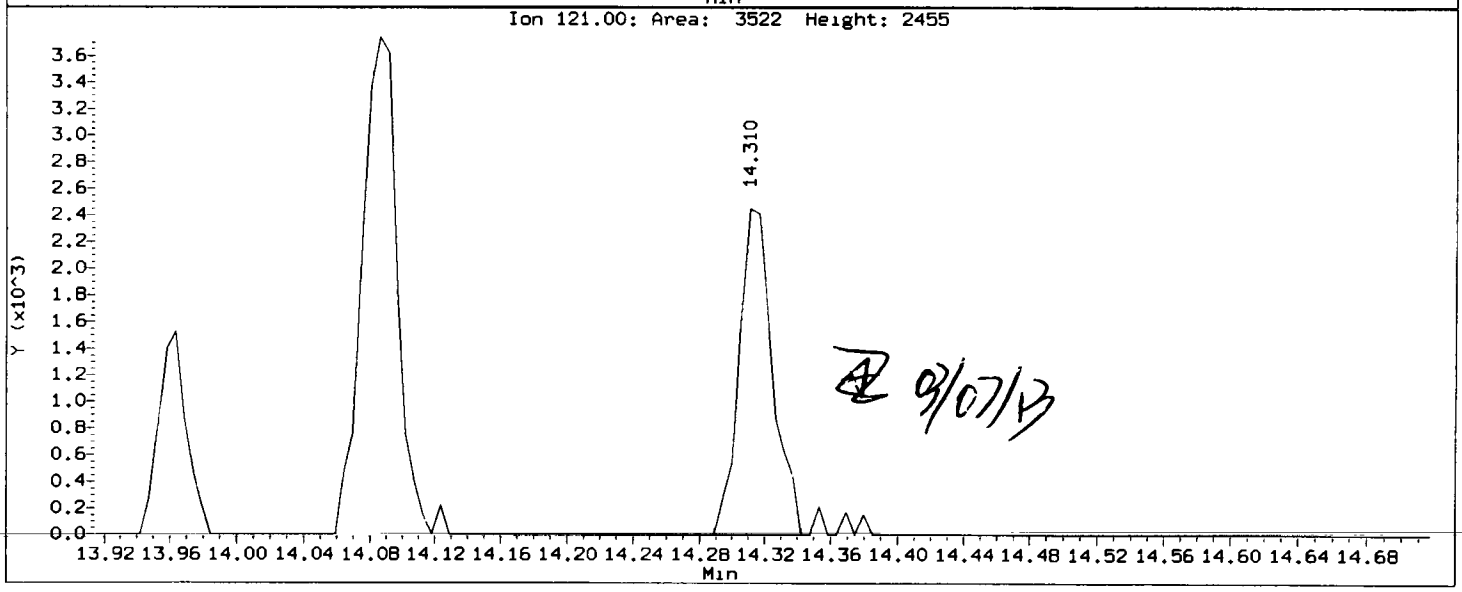
Analyst: [signature] Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061303.D
Injection Date: 06-MAR-2013 13:25
Instrument: nt6.i
Client Sample ID: IC10306

Compound: 4,6-Dinitro-2-methylphenol
CAS Number: 534-52-1



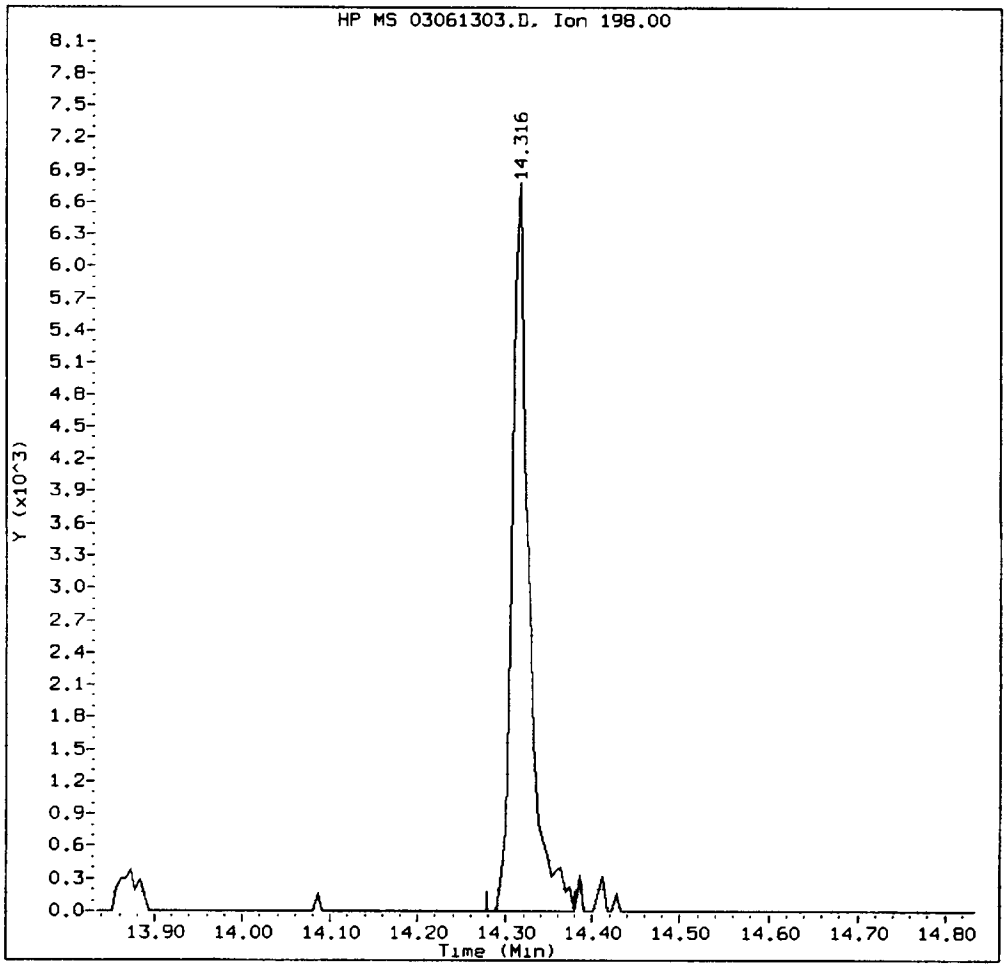




9/07/13

IC10306, /chem2/nt6.i/20130306.b/03061303.D

4,6-Dinitro-2-methylphenol Amount: 0.84 Area: 9300



MANUAL INTEGRATION for 4,6-Dinitro-2-methylphenol

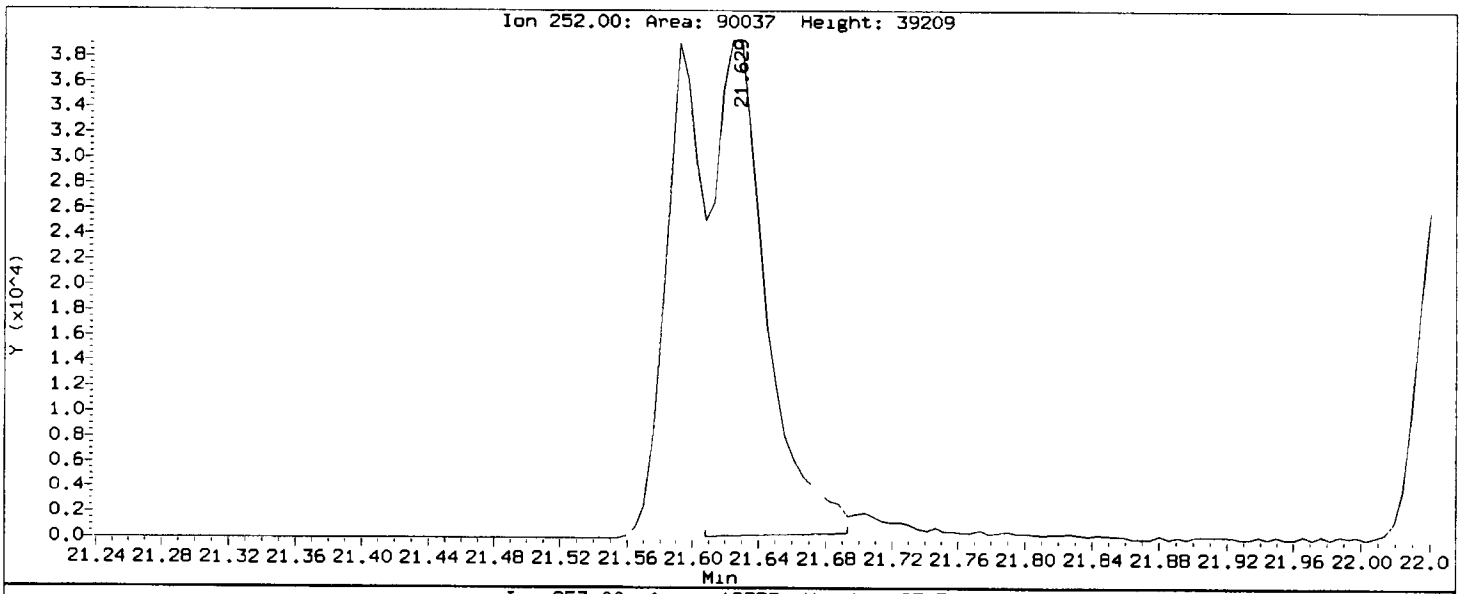
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

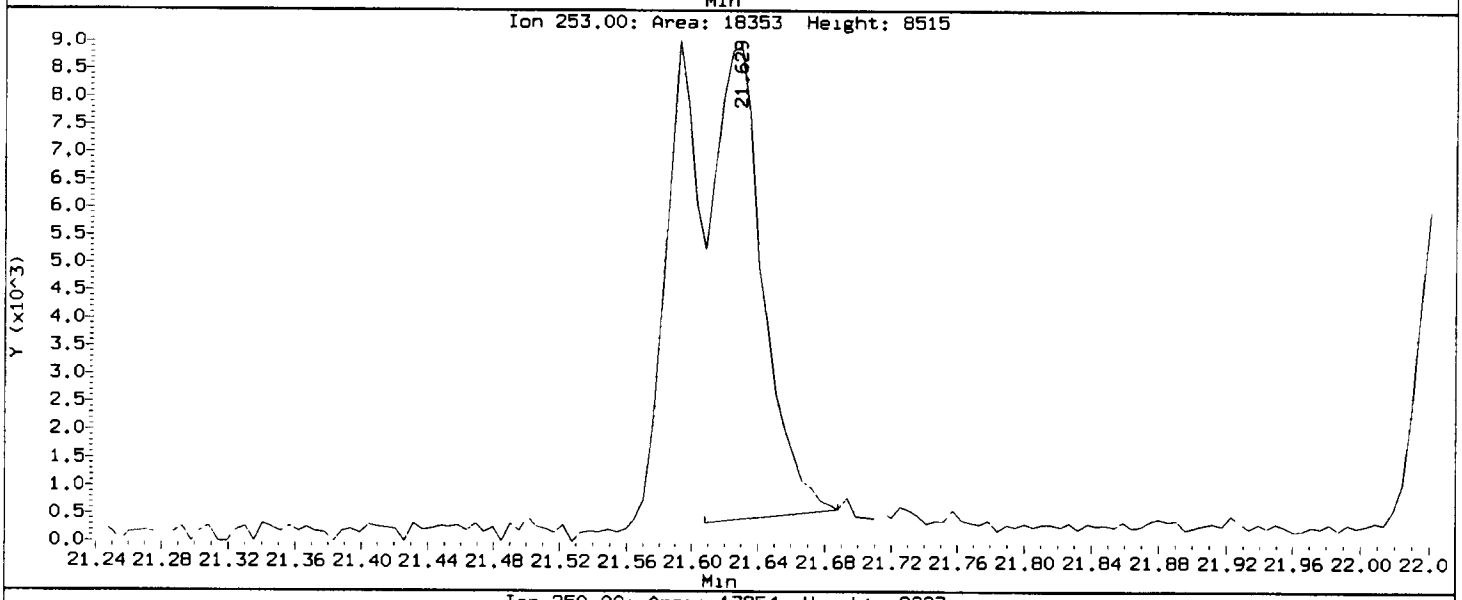
5. Other _____

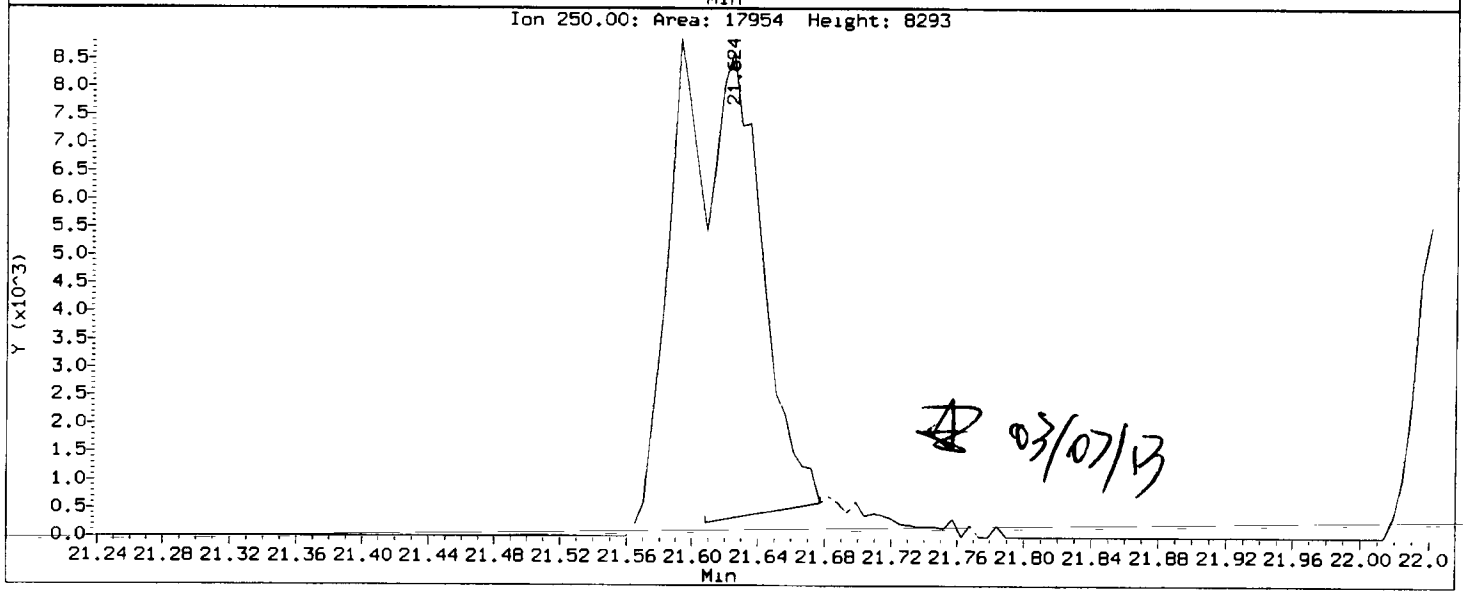
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061303.D
Injection Date: 06-MAR-2013 13:25
Instrument: nt6.i
Client Sample ID: IC10306

Compound: Benzo(k)fluoranthene
CAS Number: 207-08-9



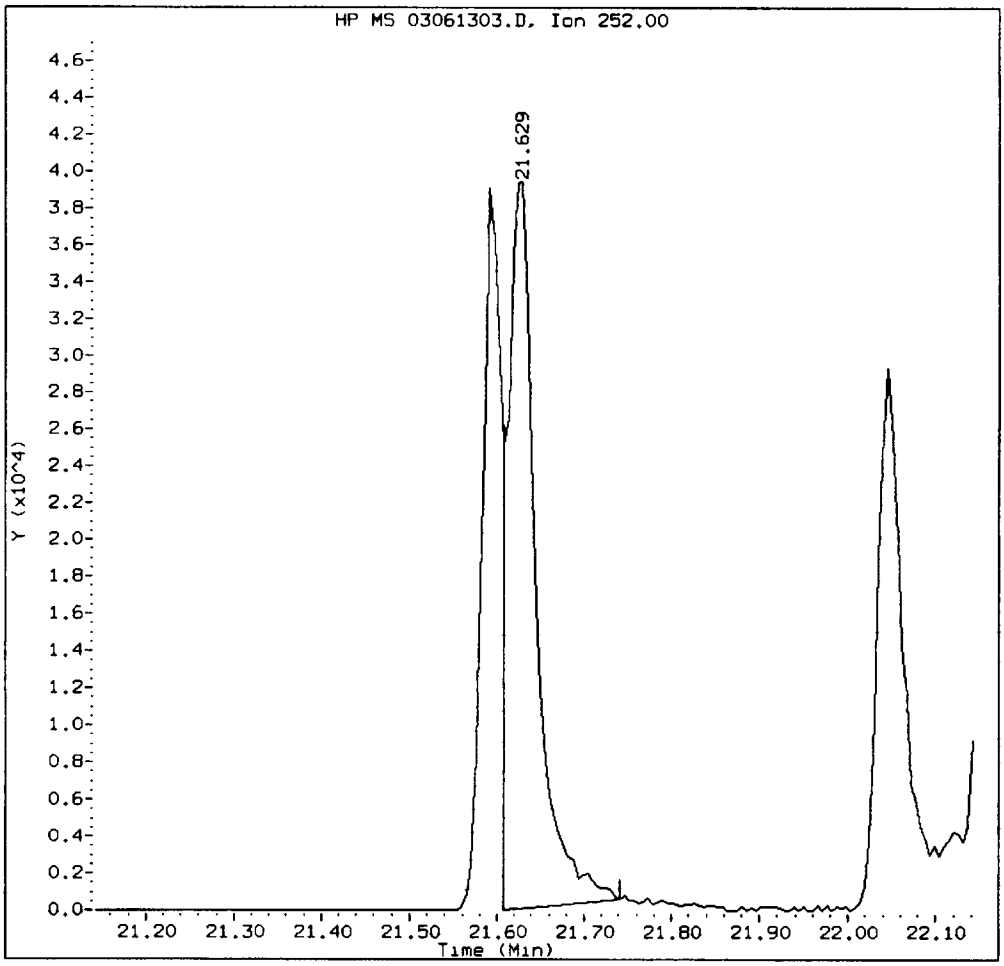




03/07/13

IC10306, /chem2/nt6.i/20130306.b/03061303.D

Benzo(k)fluoranthene Amount: 1.22 Area: 92998



MANUAL INTEGRATION for Benzo(k)fluoranthene

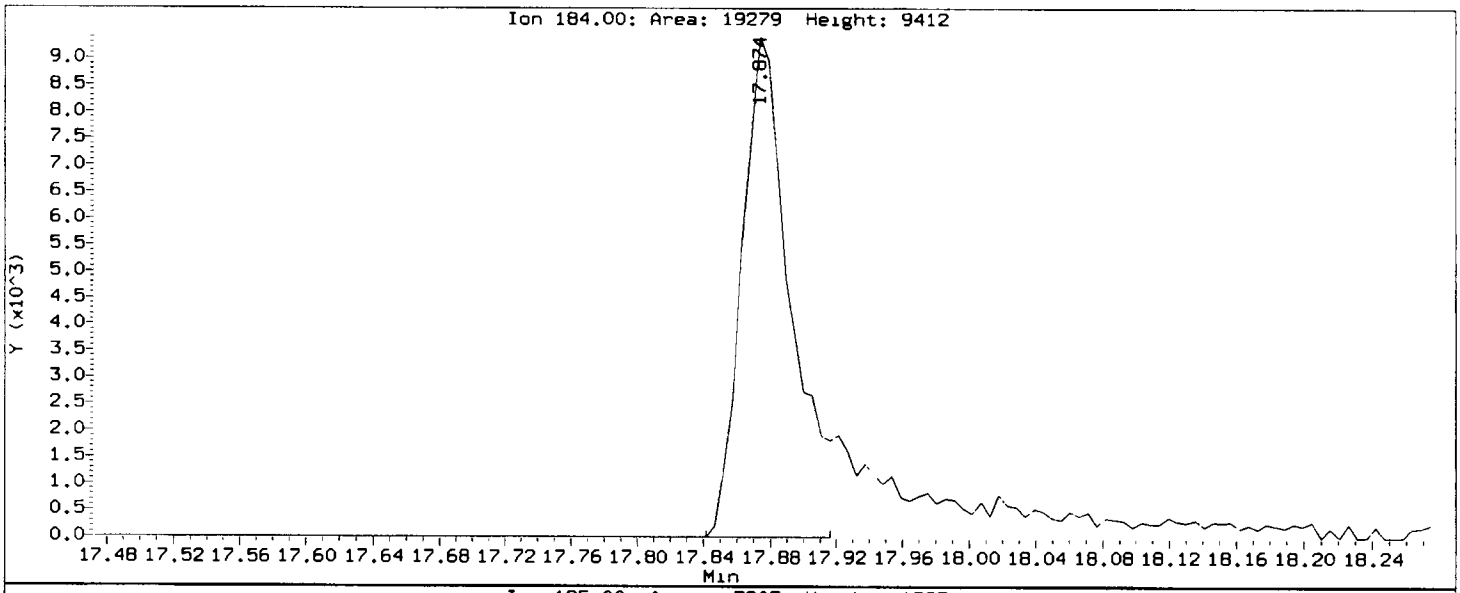
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

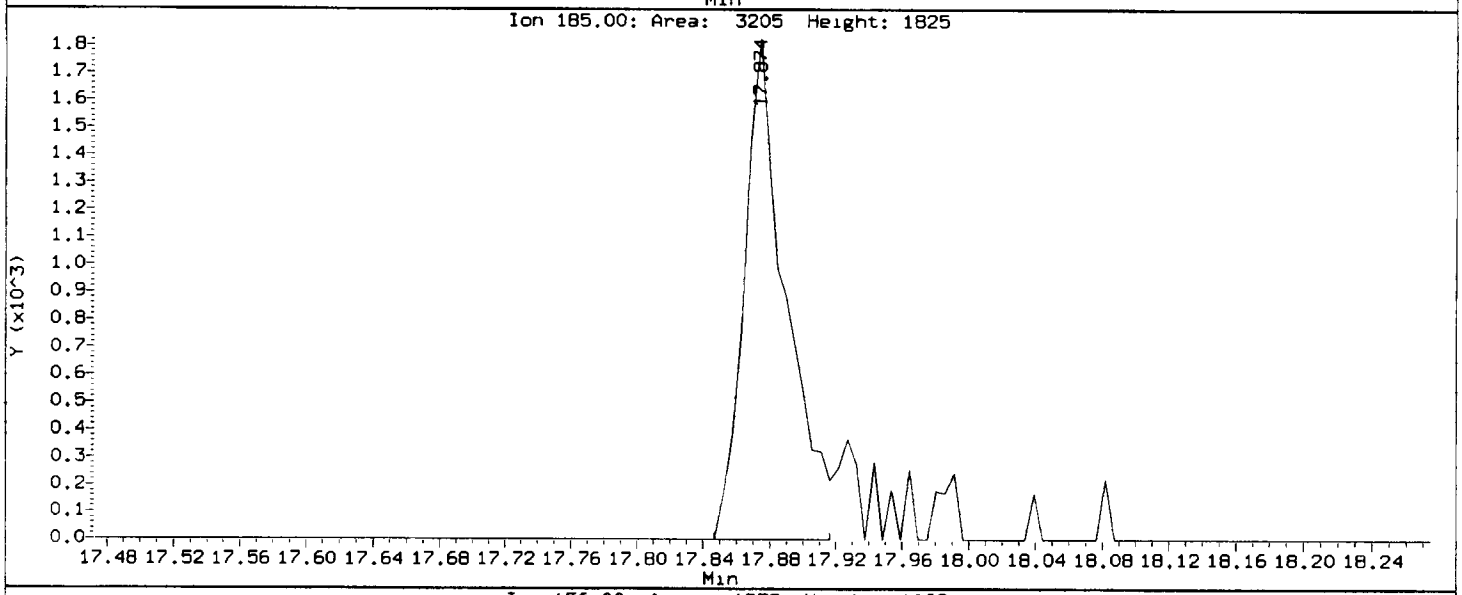
5. Other _____

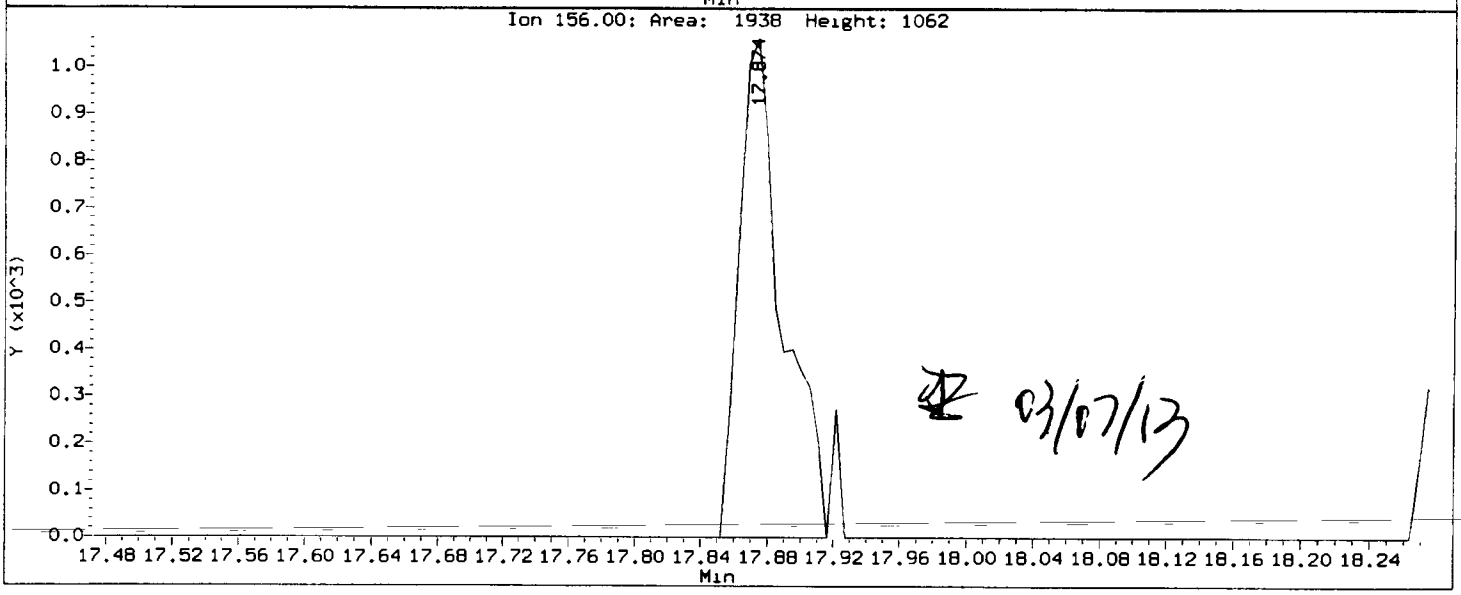
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061303.D
Injection Date: 06-MAR-2013 13:25
Instrument: nt6.i
Client Sample ID: IC10306

Compound: Benzidine
CAS Number:



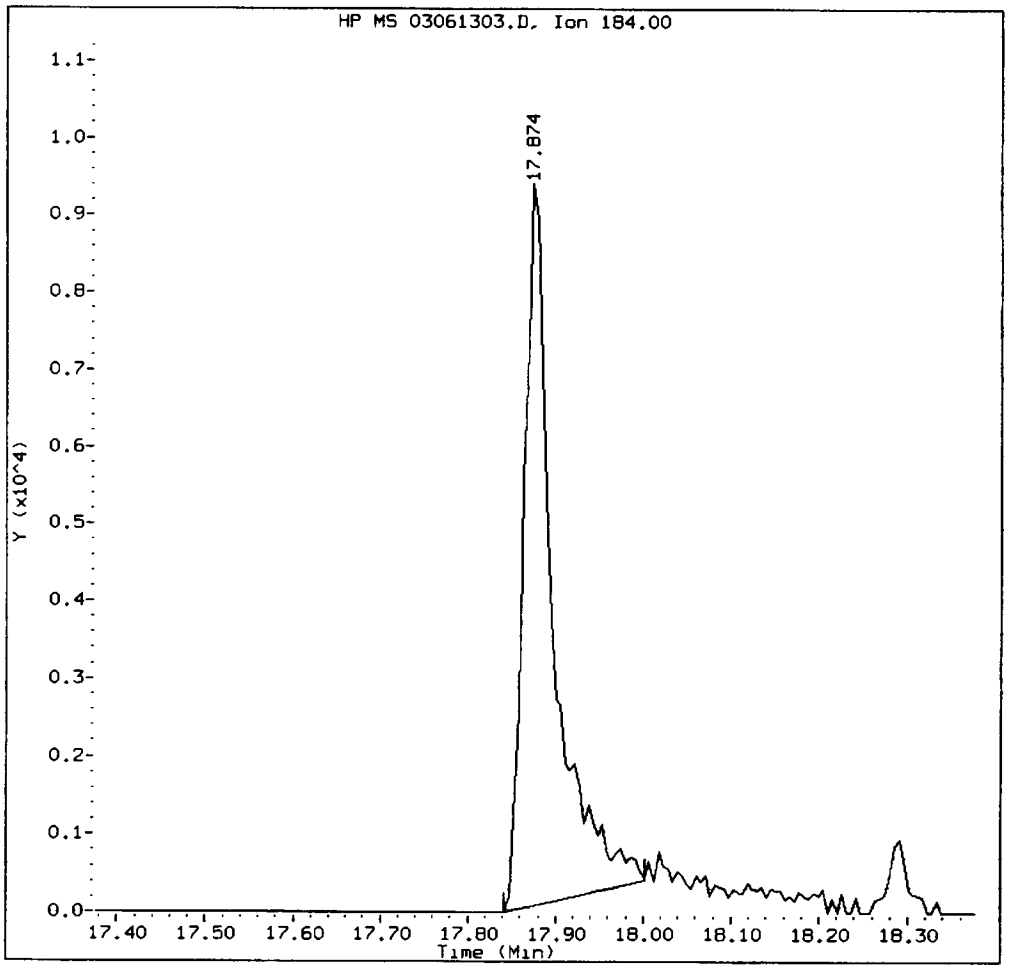




03/07/13

IC10306, /chem2/nt6.i/20130306.b/03061303.D

Benzidine Amount: 3.15 Area: 22120



MANUAL INTEGRATION for Benzidine

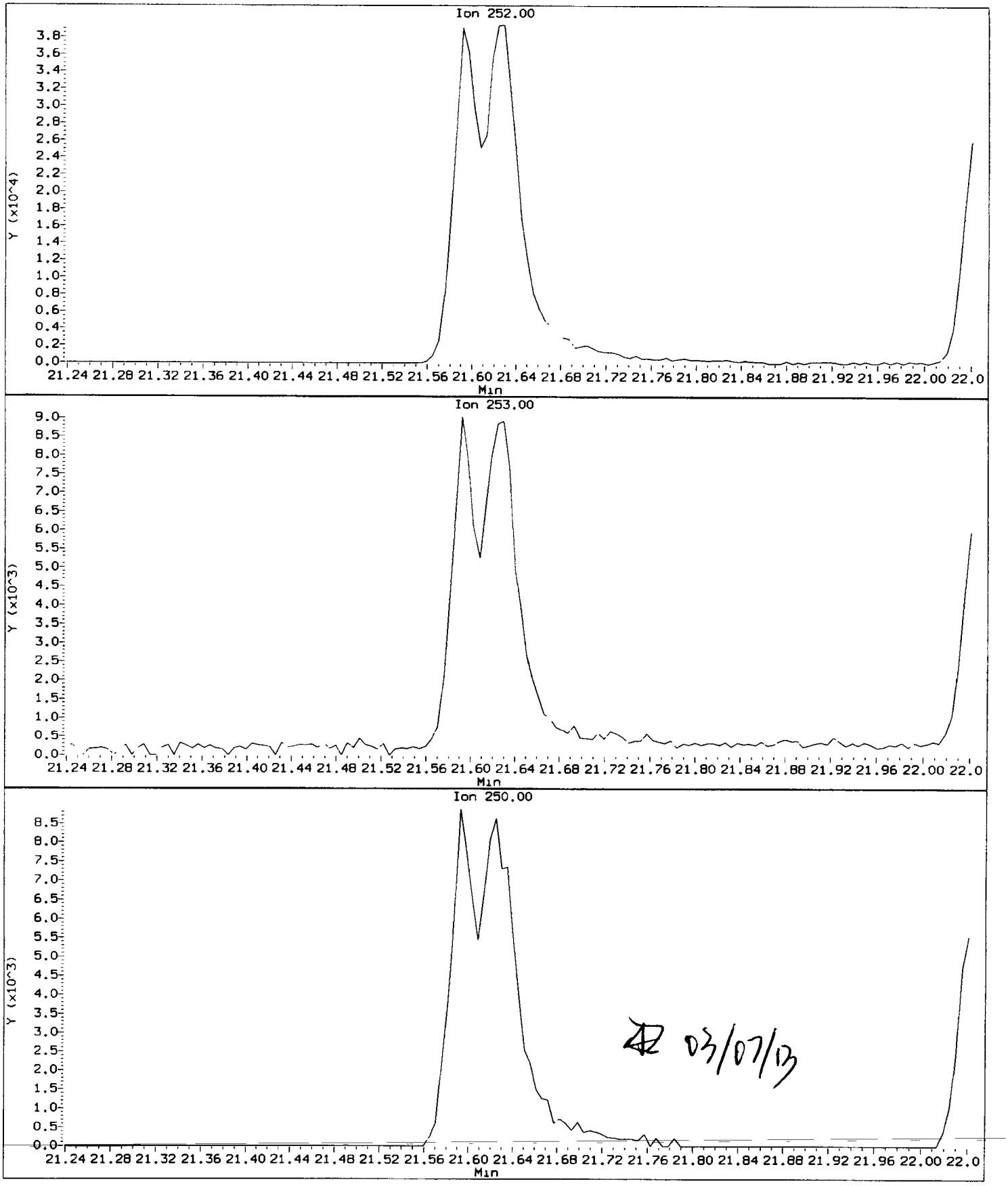
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 03/07/13

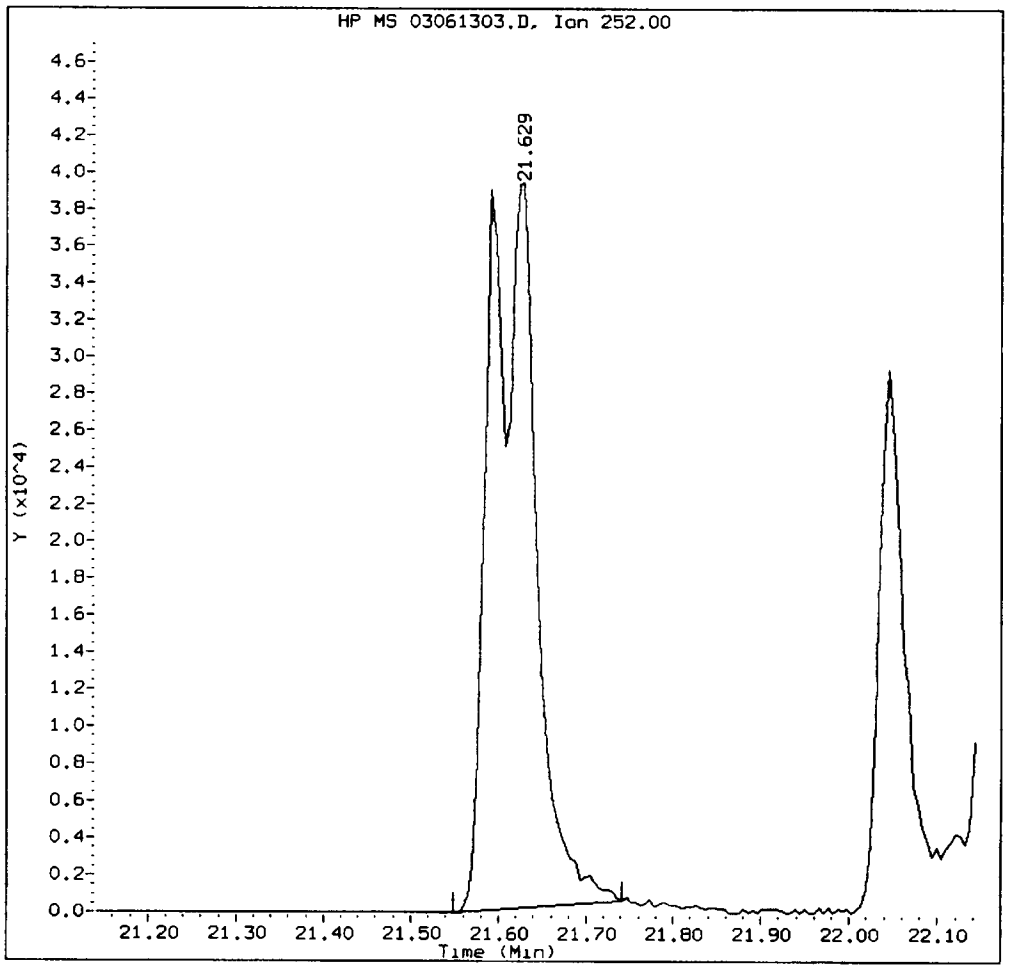
Data File: /chem2/nt6.i/20130306.b/03061303.D
Injection Date: 06-MAR-2013 13:25
Instrument: nt6.i
Client Sample ID: IC10306

Compound: Total Benzofluoranthenes
CAS Number:



IC10306, /chem2/nt6.i/20130306.b/03061303.D

Total Benzofluoranthenes Amount: 2.34 Area: 143967



MANUAL INTEGRATION for Total Benzofluoranthenes

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: [signature] Date: 03/07/13

CO-ELUTION SUMMARY FOR FILE - 03061303.D

Lab ID: IC10306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS
19.941	3,3'-Dichlorobenzidine and Benzo(a)anthracene

checked OK

OK 03/07/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130306.b/03061304.D
Lab Smp Id: IC50306 Client Smp ID: IC50306
Inj Date : 06-MAR-2013 14:00
Operator : JZ Inst ID: nt6.i
Smp Info : IC50306,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130306.b/SW846030613.m
Meth Date : 07-Mar-2013 11:55 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

03/07/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
1	2-Fluorophenol	112	6.429	6.432	(0.767)	157487	5.00000	5.345
2	Phenol-d5	99	7.925	7.933	(0.945)	194564	5.00000	5.641
3	Phenol	94	7.941	7.954	(0.947)	197710	5.00000	5.444
5	2-Chlorophenol-d4	132	8.079	8.082	(0.964)	158947	5.00000	5.452
4	Bis(2-Chloroethyl)ether	93	8.047	8.050	(0.960)	166393	5.00000	5.276
6	2-Chlorophenol	128	8.101	8.109	(0.966)	154047	5.00000	5.302
7	1,3-Dichlorobenzene	146	8.320	8.328	(0.992)	181909	5.00000	5.360
8	1,4-Dichlorobenzene-d4	152	8.384	8.387	(1.000)	454719	20.0000	
9	1,4-Dichlorobenzene	146	8.405	8.408	(1.003)	176793	5.00000	5.353
10	1,2-Dichlorobenzene-d4	152	8.683	8.681	(1.036)	116568	5.00000	5.681
12	1,2-Dichlorobenzene	146	8.704	8.707	(1.038)	173153	5.00000	5.484
11	Benzyl alcohol	108	8.651	8.654	(1.032)	107325	5.00000	5.425
14	2,2'-oxybis(1-Chloropropane)	45	8.907	8.916	(1.062)	266769	5.00000	5.324
13	2-Methylphenol	108	8.870	8.878	(1.058)	145016	5.00000	5.266
17	Hexachloroethane	117	9.191	9.193	(1.096)	70384	5.00000	5.268
16	N-Nitroso-di-n-propylamine	70	9.121	9.135	(1.088)	122120	5.00000	5.160
15	4-Methylphenol	108	9.100	9.108	(1.085)	144214	5.00000	5.296
18	Nitrobenzene-d5	82	9.303	9.311	(0.893)	180057	5.00000	5.411
19	Nitrobenzene	77	9.330	9.343	(0.895)	175660	5.00000	5.515
20	Isophorone	82	9.709	9.717	(0.932)	285645	5.00000	5.145
21	2-Nitrophenol	139	9.848	9.851	(0.945)	75503	5.00000	5.123
22	2,4-Dimethylphenol	107	9.939	9.947	(0.954)	147352	5.00000	5.287
23	Bis(2-Chloroethoxy)methane	93	10.093	10.096	(0.969)	193375	5.00000	5.309
24	Benzoic acid	105	10.083	10.198	(0.968)	174391	10.0000	7.233 (M)
25	2,4-Dichlorophenol	162	10.222	10.230	(0.981)	112355	5.00000	5.235
26	1,2,4-Trichlorobenzene	180	10.361	10.363	(0.994)	140913	5.00000	5.275
27	Naphthalene-d8	136	10.419	10.422	(1.000)	1658379	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	10.451	10.454	(1.003)	433038	5.00000	4.596
29	4-Chloroaniline	127	10.585	10.588	(1.016)	171000	5.00000	5.962
30	Hexachlorobutadiene	225	10.761	10.764	(1.033)	84797	5.00000	5.216
31	4-Chloro-3-methylphenol	107	11.376	11.384	(1.092)	117962	5.00000	5.175
32	2-Methylnaphthalene	141	11.563	11.571	(1.110)	237814	5.00000	5.897
33	Hexachlorocyclopentadiene	237	11.947	11.950	(0.900)	69251	5.00000	4.428
34	2,4,6-Trichlorophenol	196	12.070	12.078	(0.909)	79746	5.00000	4.873
35	2,4,5-Trichlorophenol	196	12.129	12.137	(0.913)	83114	5.00000	5.149
36	2-Fluorobiphenyl	172	12.204	12.212	(0.919)	355231	5.00000	5.781
37	2-Chloronaphthalene	162	12.348	12.356	(0.930)	266980	5.00000	6.062
38	2-Nitroaniline	65	12.567	12.580	(0.946)	76657	5.00000	5.327
39	Dimethylphthalate	163	12.935	12.949	(0.974)	306672	5.00000	5.234
40	Acenaphthylene	152	13.026	13.034	(0.981)	433072	5.00000	5.640
41	2,6-Dinitrotoluene	165	13.032	13.045	(0.981)	67148	5.00000	5.364
42	Acenaphthene-d10	164	13.277	13.286	(1.000)	973436	20.0000	
43	3-Nitroaniline	138	13.245	13.264	(0.998)	63342	5.00000	5.771
44	Acenaphthene	153	13.325	13.334	(1.004)	270963	5.00000	5.451
45	2,4-Dinitrophenol	184	13.411	13.424	(1.010)	54175	10.0000	6.060
46	Dibenzofuran	168	13.587	13.595	(1.023)	378333	5.00000	5.819
47	4-Nitrophenol	109	13.534	13.547	(1.019)	26876	5.00000	4.226 (M)
48	2,4-Dinitrotoluene	165	13.662	13.676	(1.029)	86291	5.00000	5.097
50	Diethylphthalate	149	14.089	14.098	(1.061)	325228	5.00000	5.992
49	Fluorene	166	14.143	14.156	(1.065)	290158	5.00000	5.801
51	4-Chlorophenyl-phenylether	204	14.164	14.172	(1.067)	156539	5.00000	5.485
52	4-Nitroaniline	138	14.234	14.252	(1.072)	54497	5.00000	5.708
53	4,6-Dinitro-2-methylphenol	198	14.314	14.333	(0.914)	93237	10.0000	8.397
54	N-Nitrosodiphenylamine	169	14.362	14.375	(0.917)	228800	5.00000	5.303
$ 55	2,4,6-Tribromophenol	330	14.565	14.573	(1.097)	41598	5.00000	5.404
56	4-Bromophenyl-phenylether	248	14.944	14.952	(0.955)	87747	5.00000	5.185
57	Hexachlorobenzene	284	15.174	15.182	(0.969)	90144	5.00000	5.166
58	Pentachlorophenol	266	15.462	15.470	(0.988)	41947	5.00000	4.076
* 59	Phenanthrene-d10	188	15.655	15.663	(1.000)	1542012	20.0000	
60	Phenanthrene	178	15.692	15.700	(1.002)	411870	5.00000	5.399
61	Anthracene	178	15.761	15.770	(1.007)	414969	5.00000	5.432
62	Carbazole	167	16.039	16.047	(1.025)	352615	5.00000	6.682
63	Di-n-butylphthalate	149	16.739	16.747	(1.069)	532943	5.00000	5.534
64	Fluoranthene	202	17.626	17.639	(1.126)	435344	5.00000	5.424
65	Pyrene	202	17.984	17.992	(0.900)	455140	5.00000	5.404
$ 66	Terphenyl-d14	244	18.288	18.291	(0.916)	312240	5.00000	5.768
67	Butylbenzylphthalate	149	19.159	19.167	(0.959)	224551	5.00000	5.453
68	Benzo(a)anthracene	228	19.939	19.953	(0.998)	371290	5.00000	5.281
* 69	Chrysene-d12	240	19.971	19.979	(1.000)	1542109	20.0000	
70	3,3'-Dichlorobenzidine	252	19.939	19.953	(0.998)	110548	5.00000	5.715
71	Chrysene	228	20.008	20.017	(1.002)	388039	5.00000	5.406
72	bis(2-Ethylhexyl)phthalate	149	20.147	20.150	(0.956)	311275	5.00000	5.156
* 134	Di-n-octylphthalate-d4	153	21.077	21.085	(1.000)	2051585	20.0000	
73	Di-n-octylphthalate	149	21.088	21.096	(1.000)	500822	5.00000	5.170

	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	21.595	21.609	(0.976)	314216	5.00000	4.462
75	Benzo(k)fluoranthene	252	21.627	21.641	(0.977)	461669	5.00000	5.686
187	Total Benzofluoranthenes	252	21.627	21.641	(0.977)	754693	10.0000	11.15
76	Benzo(a)pyrene	252	22.044	22.057	(0.996)	316511	5.00000	5.039
77	Perylene-d12	264	22.129	22.137	(1.000)	1469575	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.748	23.767	(1.073)	374355	5.00000	4.952
79	Dibenzo(a,h)anthracene	278	23.764	23.788	(1.074)	300992	5.00000	5.057
80	Benzo(g,h,i)perylene	276	24.202	24.226	(1.094)	315235	5.00000	4.876
90	N-Nitrosodimethylamine	74	3.891	3.889	(0.464)	105097	5.00000	4.908
103	Pyridine	79	3.870	3.851	(0.462)	166866	5.00000	4.914
91	Aniline	93	7.935	7.938	(0.946)	238888	5.00000	5.937
105	1-methylnaphthalene	141	11.739	11.747	(1.127)	236218	5.00000	5.766
93	Benzidine	184	17.872	17.874	(0.895)	81370	5.00000	10.82
111	Azobenzene (1,2-DP-Hydrazine)	77	14.415	14.423	(1.086)	345354	5.00000	5.599
143	1,4-Dioxane	88	3.106	3.103	(0.370)	71181	5.00000	4.825
137	d8-1,4-Dioxane	96	3.047	3.039	(0.363)	67876	5.00000	4.916
144	alpha-Terpineol	59	10.462	10.470	(1.004)	119847	5.00000	5.683
177	p-Benzoquinone	82	7.080	7.083	(0.680)	29200	5.00000	4.611
98	Retene	219	18.534	18.548	(0.928)	189965	5.00000	5.227
99	Perylene	252	22.161	22.175	(1.001)	302388	5.00000	5.496
133	Butylatedhydroxytoluene	205	13.438	13.440	(1.012)	240649	5.00000	4.562
115	Tributyl Phosphate	99	14.442	14.461	(0.923)	364951	5.00000	5.558
116	Dibutyl Phenyl Phosphate	175	16.183	16.192	(1.034)	223364	5.00000	5.478
117	Butyl Diphenyl Phosphate	94	17.872	17.880	(0.895)	77092	5.00000	5.429
118	Triphenyl Phosphate	326	19.474	19.482	(0.975)	63004	5.00000	4.666
123	Acetophenone	105	9.068	9.076	(1.082)	224829	5.00000	5.253
168	Pentachlorobenzene	250	13.630	13.638	(1.027)	109379	5.00000	5.130
113	Diphenyl Oxide	170	12.529	12.538	(0.944)	201195	5.00000	5.309
112	Biphenyl	154	12.337	12.345	(0.929)	332118	5.00000	6.421
120	2,3,4,6-Tetrachlorophenol	232	13.865	13.873	(1.044)	67318	5.00000	4.845
151	1,2,4,5-Tetrachlorobenzene	216	11.904	11.907	(0.897)	121631	5.00000	5.115
110	Tetrachloroguaiacol	247	15.590	15.599	(0.996)	84319	10.0000	10.42
109	3,4,5-Trichloroguaiacol	213	13.961	13.969	(0.892)	45547	5.00000	5.171
181	3,4,6-Trichloroguaiacol	211	14.079	14.087	(1.679)	53903	5.00000	5.195
108	4,5,6-Trichloroguaiacol	213	14.992	15.000	(1.129)	45087	5.00000	4.952
184	3,4-Dichloroguaiacol	192	12.423	12.425	(1.482)	48676	5.00000	4.941
107	4,5-Dichloroguaiacol	192	13.197	13.205	(0.994)	121336	10.0000	10.20
182	4,6-Dichloroguaiacol	192	13.197	13.205	(1.574)	121468	10.0000	10.11
185	4-Chloroguaiacol	115	11.333	11.336	(1.352)	31230	2.50000	2.444
186	Carbaryl	144	16.445	16.459	(1.050)	183249	5.00000	5.143
178	2-Benzyl-4-Chlorophenol	218	16.397	16.411	(1.047)	64662	5.00000	5.063
106	Guaiacol	124	9.324	9.332	(1.112)	131775	5.00000	5.571
188	2,6-Dichlorophenol	162	10.596	10.598	(1.264)	109236	5.00000	5.426
189	N-Nitrosomethylethylamine	88	5.627	5.620	(0.671)	75846	5.00000	5.048

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: 03061304.D
Lab Smp Id: IC50306
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC50306
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	454719	-0.74
27 Naphthalene-d8	1718341	859170	3436682	1658379	-3.49
42 Acenaphthene-d10	1010041	505020	2020082	973436	-3.62
59 Phenanthrene-d10	1666734	833367	3333468	1542012	-7.48
69 Chrysene-d12	1675752	837876	3351504	1542109	-7.98
134 Di-n-octylphthala	2026355	1013178	4052710	2051585	1.25
77 Perylene-d12	1637524	818762	3275048	1469575	-10.26

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.38	-0.03
27 Naphthalene-d8	10.42	9.92	10.92	10.42	-0.03
42 Acenaphthene-d10	13.29	12.79	13.79	13.28	-0.06
59 Phenanthrene-d10	15.66	15.16	16.16	15.65	-0.05
69 Chrysene-d12	19.98	19.48	20.48	19.97	-0.04
134 Di-n-octylphthala	21.09	20.59	21.59	21.08	-0.04
77 Perylene-d12	22.14	21.64	22.64	22.13	-0.04

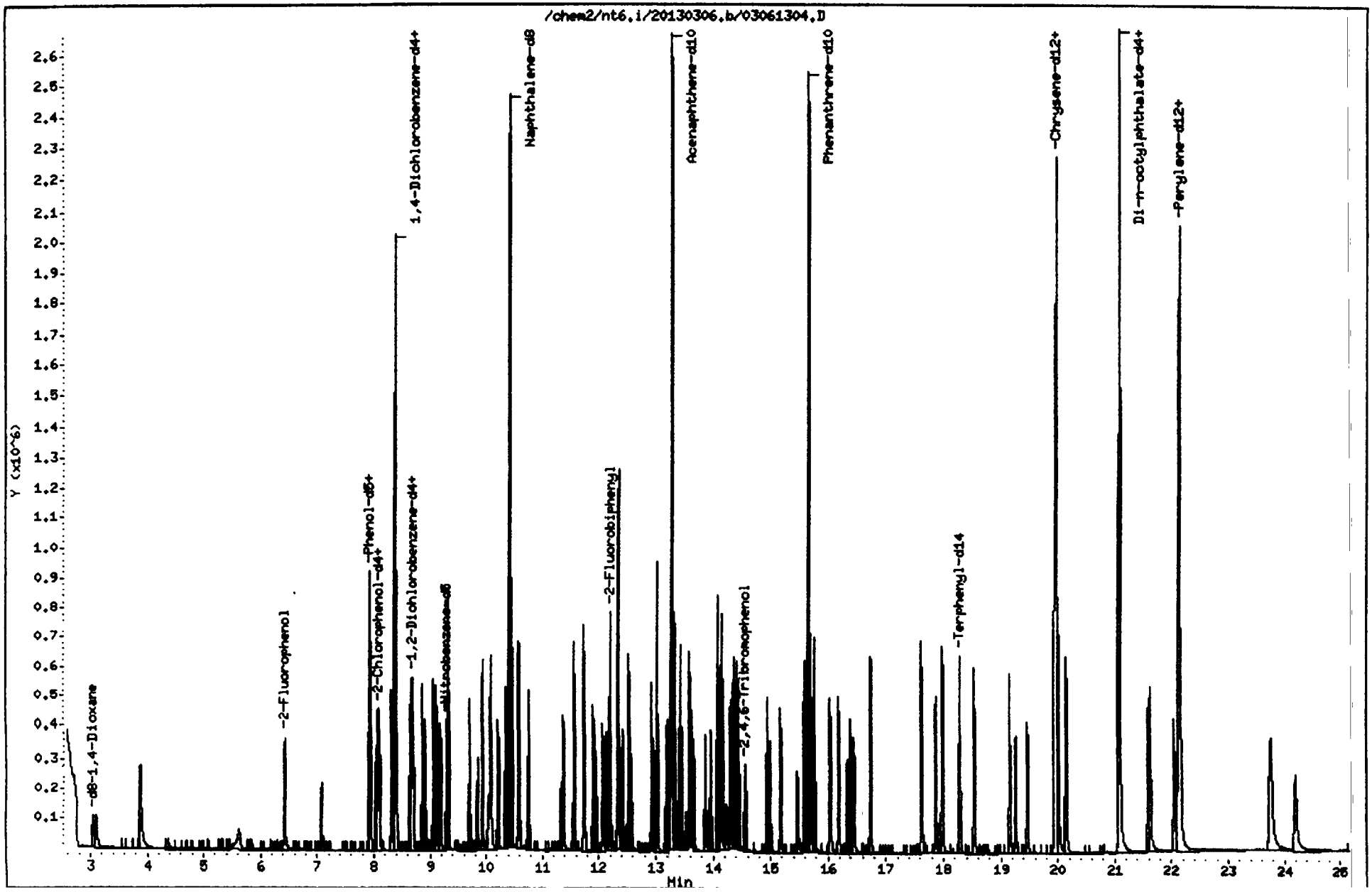
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061304.D
Date : 06-MAR-2013 14:00
Client ID: IC50306
Sample Info: IC50306,

Instrument: nt6.i

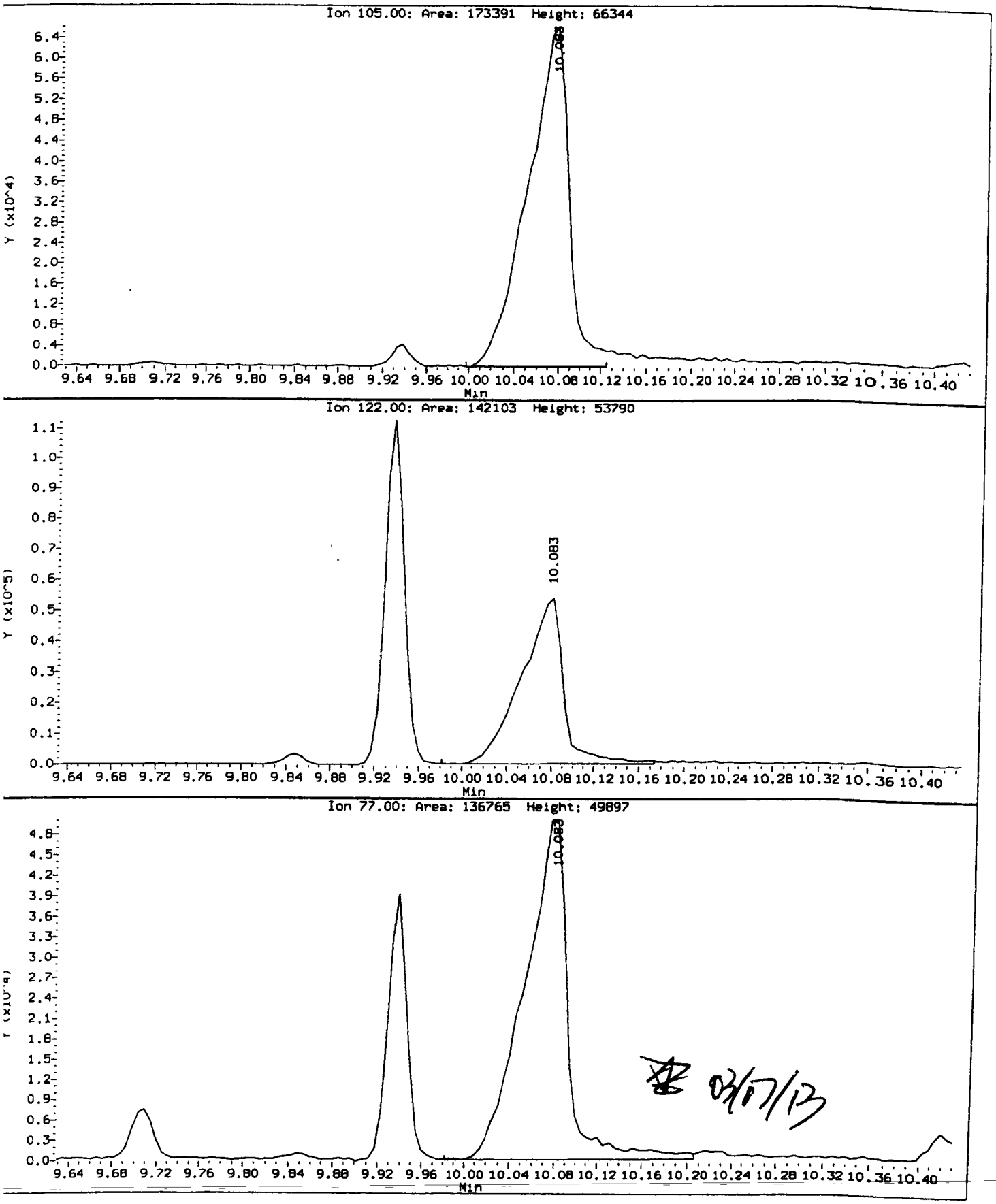
Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



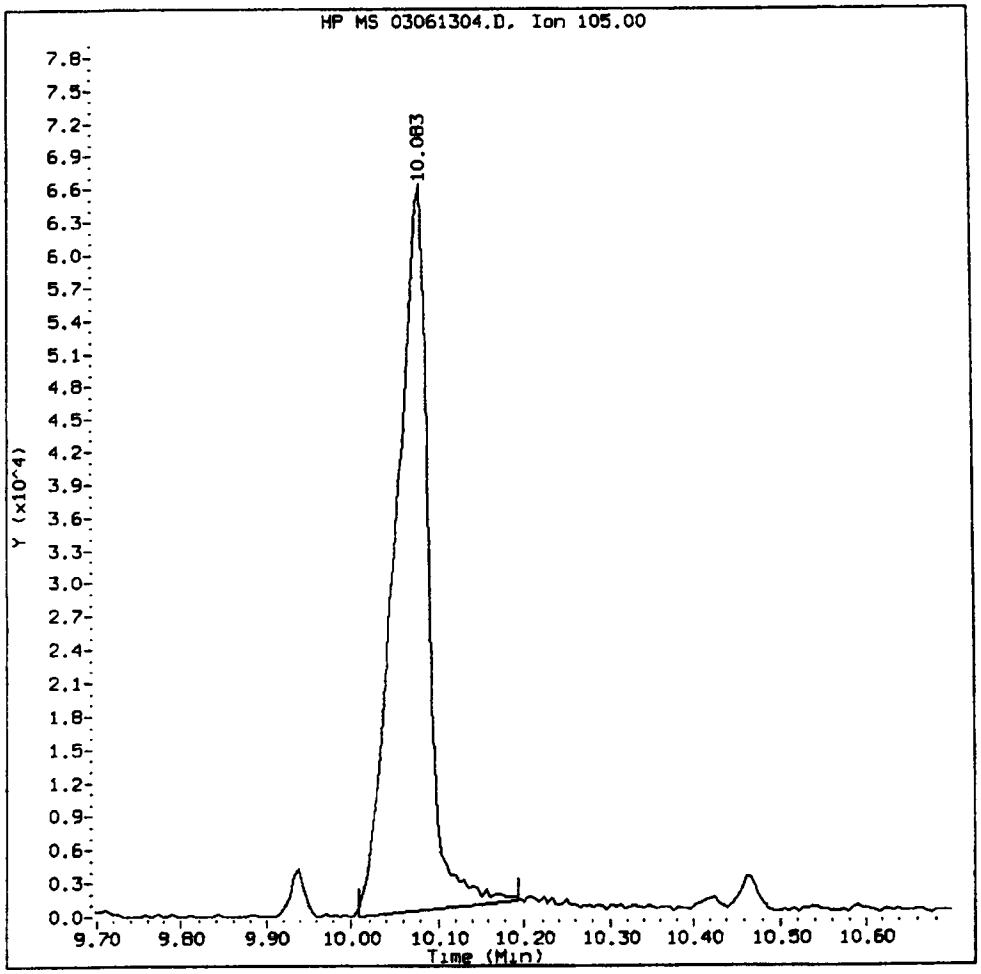
Data File: /chem2/nt6.i/20130306.b/03061304.D
Injection Date: 06-MAR-2013 14:00
Instrument: nt6.i
Client Sample ID: IC50306

Compound: Benzoic acid
CAS Number: 65-85-0



IC50306, /chem2/nt6.i/20130306.b/03061304.D

Benzoic acid Amount: 7.23 Area: 174391



MANUAL INTEGRATION for Benzoic acid

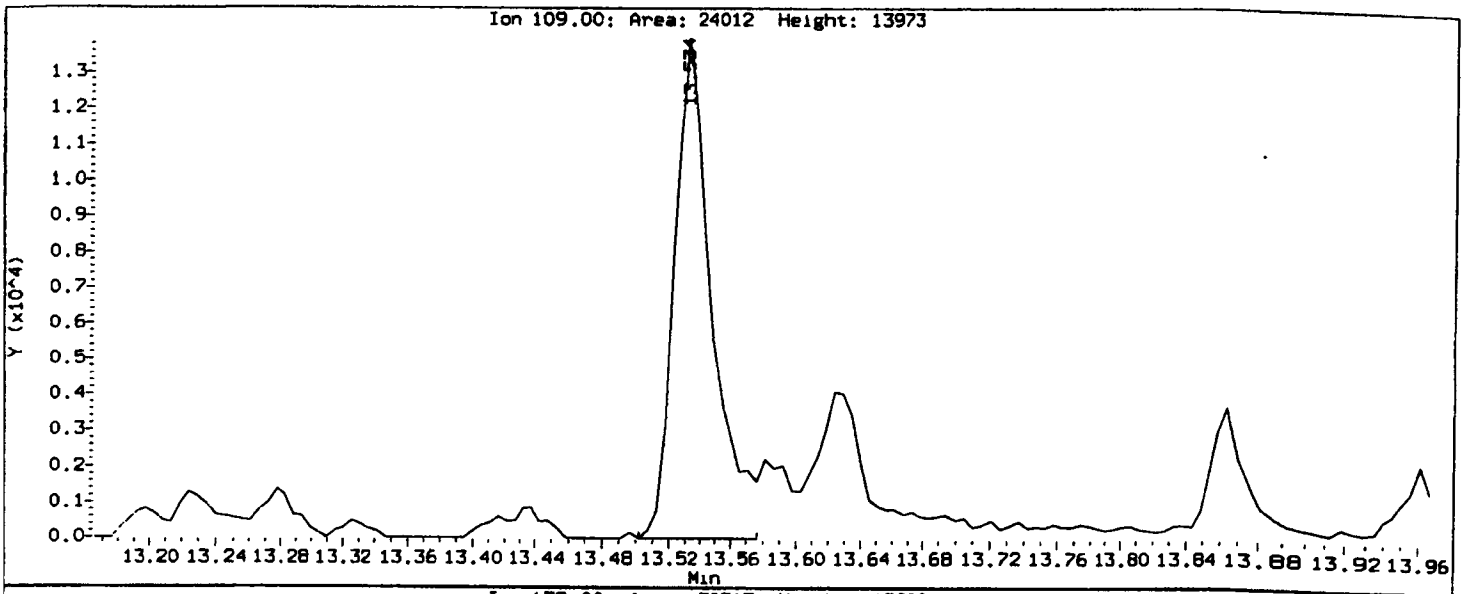
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

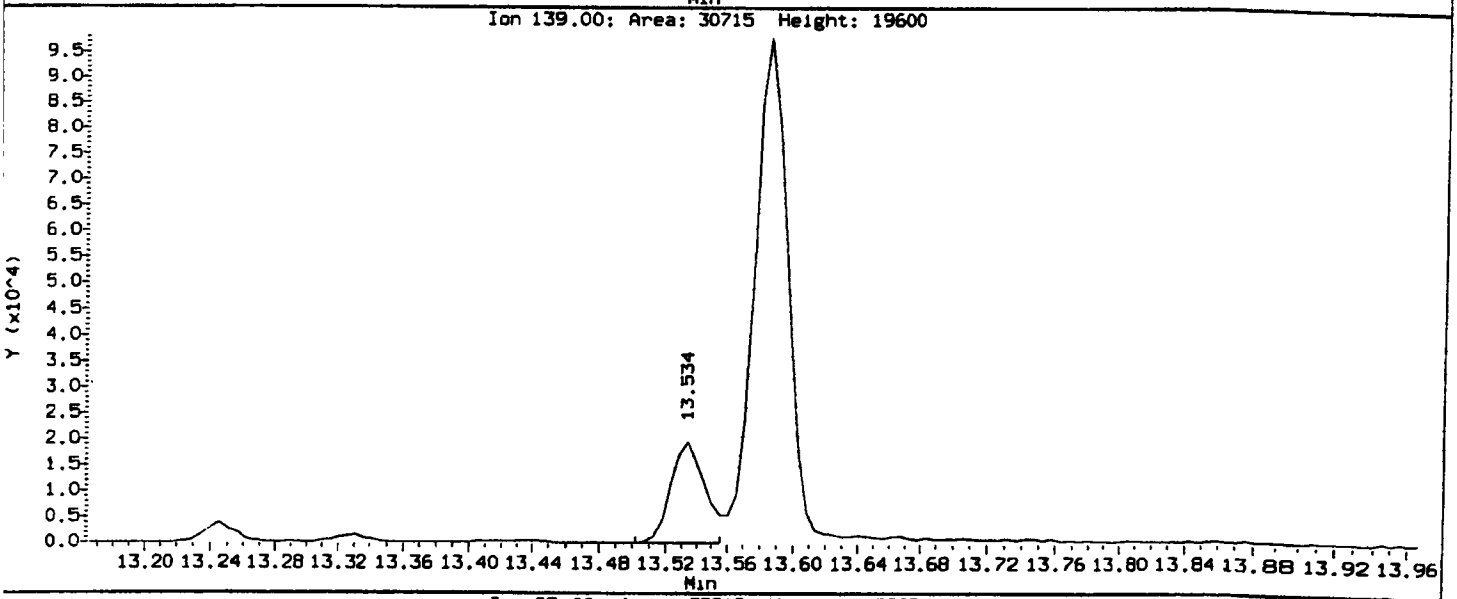
5. Other _____

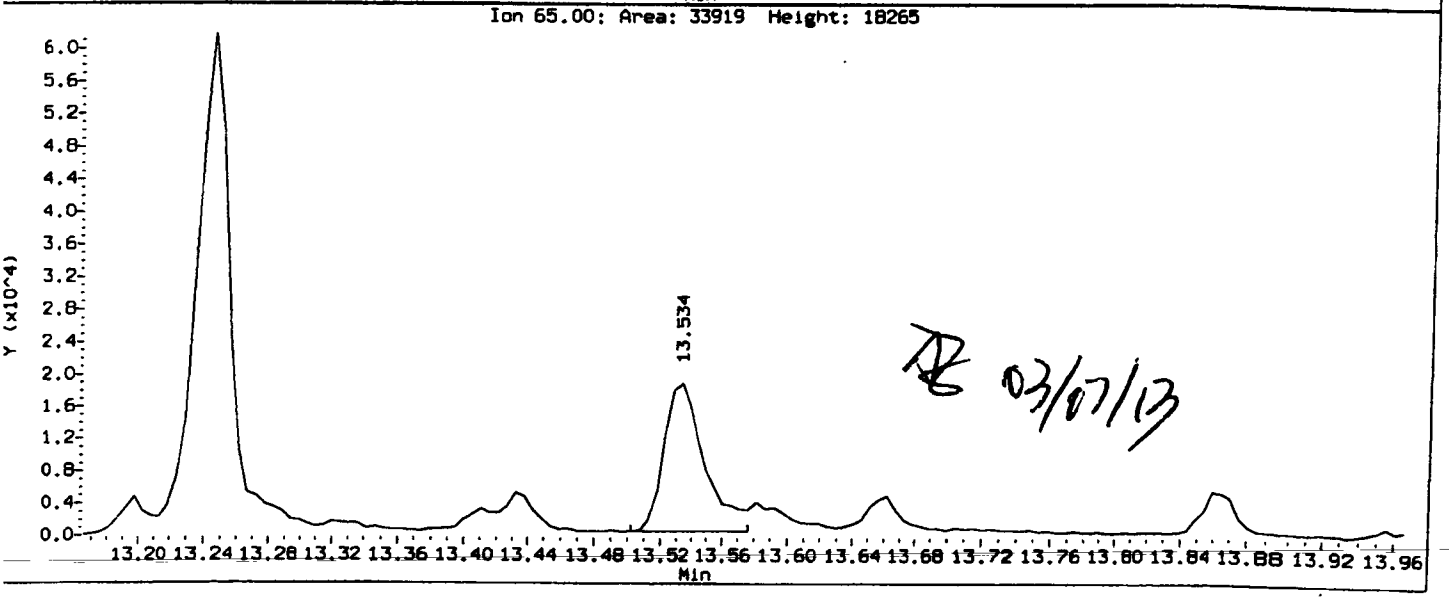
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061304.D
Injection Date: 06-MAR-2013 14:00
Instrument: nt6.i
Client Sample ID: IC50306

Compound: 4-Nitrophenol
CAS Number: 100-02-7



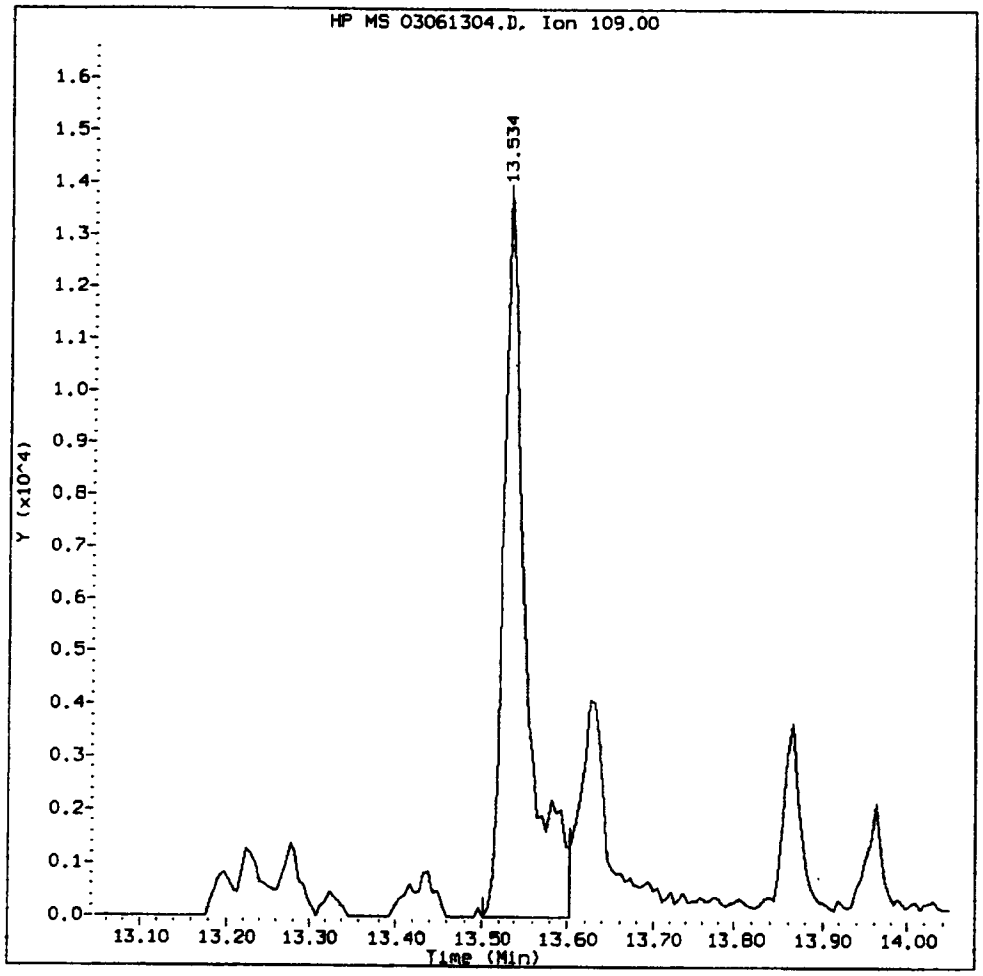




03/07/13

IC50306, /chem2/nt6.i/20130306.b/03061304.D

4-Nitrophenol Amount: 4.23 Area: 26876



MANUAL INTEGRATION for 4-Nitrophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 03/07/13

:O-ELUTION SUMMARY FOR FILE - 03061304.D

ıab ID: IC50306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS
19.939	3,3'-Dichlorobenzidine and Benzo(a)anthracene

checked ok

03/07/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130306.b/03061305.D
Lab Smp Id: IC100306 Client Smp ID: IC100306
Inj Date : 06-MAR-2013 14:34
Operator : JZ Inst ID: nt6.i
Smp Info : IC100306,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130306.b/SW846030613.m
Meth Date : 07-Mar-2013 11:55 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

JZ 03/07/13

AMOUNTS

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
1 2-Fluorophenol	112	6.432	6.432	(0.767)	409606	10.0000	11.09
2 Phenol-d5	99	7.927	7.933	(0.946)	485114	10.0000	11.22
3 Phenol	94	7.943	7.954	(0.948)	521638	10.0000	11.46
5 2-Chlorophenol-d4	132	8.082	8.082	(0.964)	408030	10.0000	11.16
4 Bis(2-Chloroethyl)ether	93	8.045	8.050	(0.960)	454744	10.0000	11.50
6 2-Chlorophenol	128	8.104	8.109	(0.967)	422320	10.0000	11.59
7 1,3-Dichlorobenzene	146	8.323	8.328	(0.993)	490538	10.0000	11.53
8 1,4-Dichlorobenzene-d4	152	8.382	8.387	(1.000)	570088	20.0000	
9 1,4-Dichlorobenzene	146	8.408	8.408	(1.003)	476551	10.0000	11.51
10 1,2-Dichlorobenzene-d4	152	8.681	8.681	(1.036)	285284	10.0000	11.09
12 1,2-Dichlorobenzene	146	8.702	8.707	(1.038)	457651	10.0000	11.56
11 Benzyl alcohol	108	8.649	8.654	(1.032)	275965	10.0000	11.13
14 2,2'-oxybis(1-Chloropropane)	45	8.910	8.916	(1.063)	722460	10.0000	11.50
13 2-Methylphenol	108	8.873	8.878	(1.059)	401038	10.0000	11.62
17 Hexachloroethane	117	9.188	9.193	(1.096)	193382	10.0000	11.55
16 N-Nitroso-di-n-propylamine	70	9.124	9.135	(1.089)	331372	10.0000	11.17
15 4-Methylphenol	108	9.103	9.108	(1.086)	405580	10.0000	11.88
18 Nitrobenzene-d5	82	9.306	9.311	(0.893)	463288	10.0000	10.99
19 Nitrobenzene	77	9.332	9.343	(0.895)	470788	10.0000	11.67
20 Isophorone	82	9.706	9.717	(0.931)	784907	10.0000	11.16
21 2-Nitrophenol	139	9.845	9.851	(0.945)	223980	10.0000	12.00
22 2,4-Dimethylphenol	107	9.941	9.947	(0.954)	406831	10.0000	11.52
23 Bis(2-Chloroethoxy)methane	93	10.091	10.096	(0.968)	524076	10.0000	11.36
24 Benzoic acid	105	10.144	10.198	(0.973)	669262	20.0000	21.92
25 2,4-Dichlorophenol	162	10.219	10.230	(0.981)	328904	10.0000	12.10
26 1,2,4-Trichlorobenzene	180	10.358	10.363	(0.994)	387548	10.0000	11.45
27 Naphthalene-d8	136	10.422	10.422	(1.000)	2100513	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	10.449	10.454	(1.003)	1122405	10.0000	10.39
29	4-Chloroaniline	127	10.582	10.588	(1.015)	395736	10.0000	11.97
30	Hexachlorobutadiene	225	10.764	10.764	(1.033)	234707	10.0000	11.40
31	4-Chloro-3-methylphenol	107	11.378	11.384	(1.092)	347605	10.0000	12.04
32	2-Methylnaphthalene	141	11.565	11.571	(1.110)	594073	10.0000	11.63
33	Hexachlorocyclopentadiene	237	11.945	11.950	(0.899)	228802	10.0000	11.24
34	2,4,6-Trichlorophenol	196	12.073	12.078	(0.909)	231449	10.0000	10.87
35	2,4,5-Trichlorophenol	196	12.126	12.137	(0.913)	254387	10.0000	12.11
; 36	2-Fluorobiphenyl	172	12.206	12.212	(0.919)	846552	10.0000	10.59
37	2-Chloronaphthalene	162	12.345	12.356	(0.930)	696255	10.0000	12.39
38	2-Nitroaniline	65	12.570	12.580	(0.946)	214601	10.0000	11.46
39	Dimethylphthalate	163	12.938	12.949	(0.974)	850044	10.0000	11.15
40	Acenaphthylene	152	13.024	13.034	(0.981)	1152396	10.0000	11.54
41	2,6-Dinitrotoluene	165	13.040	13.045	(0.982)	190803	10.0000	11.72
* 42	Acenaphthene-d10	164	13.280	13.286	(1.000)	1266491	20.0000	
43	3-Nitroaniline	138	13.254	13.264	(0.998)	138858	10.0000	10.28
44	Acenaphthene	153	13.328	13.334	(1.004)	725512	10.0000	11.22
45	2,4-Dinitrophenol	184	13.414	13.424	(1.010)	256578	20.0000	22.06
46	Dibenzofuran	168	13.590	13.595	(1.023)	963887	10.0000	11.39
47	4-Nitrophenol	109	13.537	13.547	(1.019)	94565	10.0000	11.43
48	2,4-Dinitrotoluene	165	13.665	13.676	(1.029)	260744	10.0000	11.84
50	Diethylphthalate	149	14.092	14.098	(1.061)	851918	10.0000	12.06
49	Fluorene	166	14.146	14.156	(1.065)	773364	10.0000	12.23
51	4-Chlorophenyl-phenylether	204	14.167	14.172	(1.067)	421621	10.0000	11.35
52	4-Nitroaniline	138	14.242	14.252	(1.072)	114126	10.0000	9.188
53	4,6-Dinitro-2-methylphenol	198	14.317	14.333	(0.914)	328910	20.0000	22.69
54	N-Nitrosodiphenylamine	169	14.365	14.375	(0.917)	637709	10.0000	11.32
; 55	2,4,6-Tribromophenol	330	14.568	14.573	(1.097)	113119	10.0000	11.30
56	4-Bromophenyl-phenylether	248	14.947	14.952	(0.955)	252399	10.0000	11.42
57	Hexachlorobenzene	284	15.171	15.182	(0.969)	256679	10.0000	11.27
58	Pentachlorophenol	266	15.465	15.470	(0.988)	151470	10.0000	11.27
* 59	Phenanthrene-d10	188	15.658	15.663	(1.000)	2013244	20.0000	
60	Phenanthrene	178	15.690	15.700	(1.002)	1109716	10.0000	11.14
61	Anthracene	178	15.764	15.770	(1.007)	1165266	10.0000	11.68
62	Carbazole	167	16.037	16.047	(1.024)	804312	10.0000	11.64
63	Di-n-butylphthalate	149	16.737	16.747	(1.069)	1462335	10.0000	11.63
64	Fluoranthene	202	17.629	17.639	(1.126)	1248849	10.0000	11.92
65	Pyrene	202	17.987	17.992	(0.901)	1303708	10.0000	11.52
; 66	Terphenyl-d14	244	18.286	18.291	(0.916)	780843	10.0000	10.74
67	Butylbenzylphthalate	149	19.157	19.167	(0.959)	651451	10.0000	11.77
68	Benzo(a)anthracene	228	19.942	19.953	(0.999)	1072977	10.0000	11.36
* 69	Chrysene-d12	240	19.969	19.979	(1.000)	2072136	20.0000	
70	3,3'-Dichlorobenzidine	252	19.937	19.953	(0.998)	305076	10.0000	11.74
71	Chrysene	228	20.006	20.017	(1.002)	1128707	10.0000	11.70
72	bis(2-Ethylhexyl)phthalate	149	20.140	20.150	(0.956)	894958	10.0000	11.54
* 134	Di-n-octylphthalate-d4	153	21.074	21.085	(1.000)	2636581	20.0000	
73	Di-n-octylphthalate	149	21.085	21.096	(1.000)	1365050	10.0000	10.97

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	21.593	21.609	(0.976)	1040205	10.0000	11.11
75	Benzo(k)fluoranthene	252	21.625	21.641	(0.977)	1257901	10.0000	11.89
187	Total Benzofluoranthenes	252	21.625	21.641	(0.977)	2212064	20.0000	24.05
76	Benzo(a)pyrene	252	22.041	22.057	(0.996)	1022456	10.0000	11.98
77	Perylene-d12	264	22.132	22.137	(1.000)	1996890	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.745	23.767	(1.073)	1200253	10.0000	11.68
79	Dibenzo(a,h)anthracene	278	23.767	23.788	(1.074)	974913	10.0000	12.05
80	Benzo(g,h,i)perylene	276	24.205	24.226	(1.094)	1025473	10.0000	11.67
90	N-Nitrosodimethylamine	74	3.894	3.889	(0.465)	289642	10.0000	10.79
103	Pyridine	79	3.862	3.851	(0.461)	499164	10.0000	11.72
91	Aniline	93	7.938	7.938	(0.947)	561686	10.0000	11.13
105	1-methylnaphthalene	141	11.742	11.747	(1.127)	592868	10.0000	11.42
93	Benzidine	184	17.864	17.874	(0.895)	112934	10.0000	11.18
111	Azobenzene (1,2-DP-Hydrazine)	77	14.413	14.423	(1.085)	921459	10.0000	11.48
143	1,4-Dioxane	88	3.109	3.103	(0.371)	195949	10.0000	10.59
137	d8-1,4-Dioxane	96	3.050	3.039	(0.364)	188211	10.0000	10.87
144	alpha-Terpineol	59	10.465	10.470	(1.004)	297085	10.0000	11.12
177	p-Benzoquinone	82	7.078	7.083	(0.679)	94569	10.0000	11.79
98	Retene	219	18.537	18.548	(0.928)	541721	10.0000	11.09
99	Perylene	252	22.159	22.175	(1.001)	854294	10.0000	11.43
133	Butylatedhydroxytoluene	205	13.435	13.440	(1.012)	644369	10.0000	10.28
115	Tributyl Phosphate	99	14.450	14.461	(0.923)	993217	10.0000	12.00
116	Dibutyl Phenyl Phosphate	175	16.186	16.192	(1.034)	651979	10.0000	12.25
117	Butyl Diphenyl Phosphate	94	17.869	17.880	(0.895)	217805	10.0000	11.42
118	Triphenyl Phosphate	326	19.472	19.482	(0.975)	199203	10.0000	10.98
123	Acetophenone	105	9.071	9.076	(1.082)	611708	10.0000	11.40
168	Pentachlorobenzene	250	13.633	13.638	(1.027)	306373	10.0000	11.04
113	Diphenyl Oxide	170	12.532	12.538	(0.944)	551926	10.0000	11.19
112	Biphenyl	154	12.340	12.345	(0.929)	789168	10.0000	12.10
120	2,3,4,6-Tetrachlorophenol	232	13.868	13.873	(1.044)	210165	10.0000	11.63
151	1,2,4,5-Tetrachlorobenzene	216	11.902	11.907	(0.896)	337802	10.0000	10.92
110	Tetrachloroguaiacol	247	15.593	15.599	(0.996)	251305	20.0000	23.79
109	3,4,5-Trichloroguaiacol	213	13.959	13.969	(0.892)	128306	10.0000	11.16
181	3,4,6-Trichloroguaiacol	211	14.082	14.087	(1.680)	151124	10.0000	11.62
108	4,5,6-Trichloroguaiacol	213	14.990	15.000	(1.129)	134238	10.0000	11.33
184	3,4-Dichloroguaiacol	192	12.420	12.425	(1.482)	141925	10.0000	11.49
107	4,5-Dichloroguaiacol	192	13.200	13.205	(0.994)	349586	20.0000	22.59
182	4,6-Dichloroguaiacol	192	13.200	13.205	(1.575)	349586	20.0000	23.21
185	4-Chloroguaiacol	115	11.330	11.336	(1.352)	92661	5.00000	5.785
186	Carbaryl	144	16.448	16.459	(1.050)	564889	10.0000	12.14
178	2-Benzyl-4-Chlorophenol	218	16.400	16.411	(1.047)	196958	10.0000	11.81
106	Guaiacol	124	9.327	9.332	(1.113)	351433	10.0000	11.85
188	2,6-Dichlorophenol	162	10.593	10.598	(1.264)	290040	10.0000	11.49
189	N-Nitrosomethylethylamine	88	5.625	5.620	(0.671)	198410	10.0000	10.53

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 03061305.D
Lab Smp Id: IC100306
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC100306
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	570088	24.44
27 Naphthalene-d8	1718341	859170	3436682	2100513	22.24
42 Acenaphthene-d10	1010041	505020	2020082	1266491	25.39
59 Phenanthrene-d10	1666734	833367	3333468	2013244	20.79
69 Chrysene-d12	1675752	837876	3351504	2072136	23.65
134 Di-n-octylphthala	2026355	1013178	4052710	2636581	30.11
77 Perylene-d12	1637524	818762	3275048	1996890	21.95

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.38	-0.06
27 Naphthalene-d8	10.42	9.92	10.92	10.42	0.00
42 Acenaphthene-d10	13.29	12.79	13.79	13.28	-0.04
59 Phenanthrene-d10	15.66	15.16	16.16	15.66	-0.03
69 Chrysene-d12	19.98	19.48	20.48	19.97	-0.05
134 Di-n-octylphthala	21.09	20.59	21.59	21.07	-0.05
77 Perylene-d12	22.14	21.64	22.64	22.13	-0.02

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.

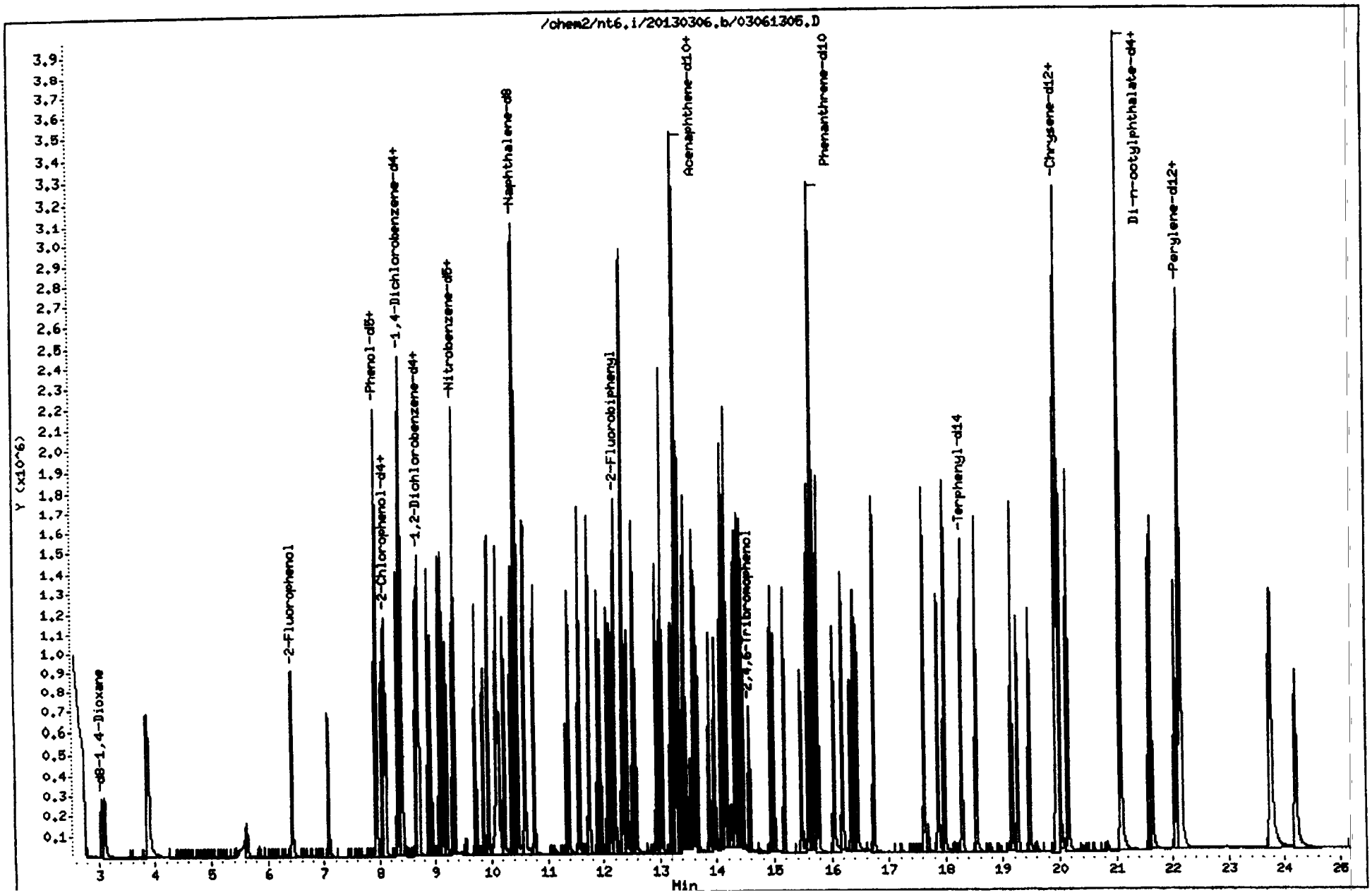
Data File: /chem2/nt6.i/20130306.b/03061305.D
Date : 06-MAR-2013 14:34
Client ID: IC100306
Sample Info: IC100306,

Instrument: nt6.i

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 03061305.D

Lab ID: IC100306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130306.b/03061301.D
Lab Smp Id: IC250306 Client Smp ID: IC250306
Inj Date : 06-MAR-2013 12:16
Operator : JZ Inst ID: nt6.i
Smp Info : IC250306
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130306.b/SW846030613.m
Meth Date : 07-Mar-2013 11:55 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

JZ 03/07/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
1	2-Fluorophenol	112	6.432	6.432	(0.767)	700440	25.0000	23.60
2	Phenol-d5	99	7.933	7.933	(0.946)	801352	25.0000	23.06
3	Phenol	94	7.954	7.954	(0.948)	889960	25.0000	24.32
5	2-Chlorophenol-d4	132	8.082	8.082	(0.964)	690249	25.0000	23.50
4	Bis(2-Chloroethyl)ether	93	8.050	8.050	(0.960)	775014	25.0000	24.39
6	2-Chlorophenol	128	8.109	8.109	(0.967)	729630	25.0000	24.92
7	1,3-Dichlorobenzene	146	8.328	8.328	(0.993)	845812	25.0000	24.74
8	1,4-Dichlorobenzene-d4	152	8.387	8.387	(1.000)	458117	20.0000	
9	1,4-Dichlorobenzene	146	8.408	8.408	(1.003)	819102	25.0000	24.62
10	1,2-Dichlorobenzene-d4	152	8.681	8.681	(1.035)	473455	25.0000	22.90 (H)
12	1,2-Dichlorobenzene	146	8.707	8.707	(1.038)	775420	25.0000	24.38
11	Benzyl alcohol	108	8.654	8.654	(1.032)	509044	25.0000	25.54
14	2,2'-oxybis(1-Chloropropane)	45	8.916	8.916	(1.063)	1237768	25.0000	24.52
13	2-Methylphenol	108	8.878	8.878	(1.059)	703888	25.0000	25.37
17	Hexachloroethane	117	9.193	9.193	(1.096)	331130	25.0000	24.60
16	N-Nitroso-di-n-propylamine	70	9.135	9.135	(1.089)	584280	25.0000	24.50
15	4-Methylphenol	108	9.108	9.108	(1.086)	711421	25.0000	25.93
18	Nitrobenzene-d5	82	9.311	9.311	(0.893)	801723	25.0000	23.25
19	Nitrobenzene	77	9.343	9.343	(0.896)	805918	25.0000	24.42
20	Isophorone	82	9.717	9.717	(0.932)	1363565	25.0000	23.70
21	2-Nitrophenol	139	9.851	9.851	(0.945)	399887	25.0000	26.19
22	2,4-Dimethylphenol	107	9.947	9.947	(0.954)	711080	25.0000	24.62
23	Bis(2-Chloroethoxy)methane	93	10.096	10.096	(0.969)	910222	25.0000	24.12
24	Benzoic acid	105	10.198	10.198	(0.978)	1318002	50.0000	52.76
25	2,4-Dichlorophenol	162	10.230	10.230	(0.982)	588303	25.0000	26.46
26	1,2,4-Trichlorobenzene	180	10.363	10.363	(0.994)	665788	25.0000	24.05
27	Naphthalene-d8	136	10.422	10.422	(1.000)	1718341	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	10.454	10.454	(1.003)	1841435	25.0000	24.74
29	4-Chloroaniline	127	10.588	10.588	(1.016)	551083	25.0000	23.22
30	Hexachlorobutadiene	225	10.764	10.764	(1.033)	412907	25.0000	24.51
31	4-Chloro-3-methylphenol	107	11.384	11.384	(1.092)	616289	25.0000	26.09
32	2-Methylnaphthalene	141	11.571	11.571	(1.110)	1032469	25.0000	24.71
33	Hexachlorocyclopentadiene	237	11.950	11.950	(0.899)	439183	25.0000	27.06
34	2,4,6-Trichlorophenol	196	12.078	12.078	(0.909)	432718	25.0000	25.48
35	2,4,5-Trichlorophenol	196	12.137	12.137	(0.914)	441206	25.0000	26.34
$ 36	2-Fluorobiphenyl	172	12.212	12.212	(0.919)	1404089	25.0000	22.02
37	2-Chloronaphthalene	162	12.356	12.356	(0.930)	1139487	25.0000	26.46
38	2-Nitroaniline	65	12.580	12.580	(0.947)	397884	25.0000	26.65
39	Dimethylphthalate	163	12.949	12.949	(0.975)	1466956	25.0000	24.13
40	Acenaphthylene	152	13.034	13.034	(0.981)	1904411	25.0000	23.90
41	2,6-Dinitrotoluene	165	13.045	13.045	(0.982)	328738	25.0000	25.31
* 42	Acenaphthene-d10	164	13.286	13.286	(1.000)	1010041	20.0000	
43	3-Nitroaniline	138	13.264	13.264	(0.998)	241966	25.0000	26.00
44	Acenaphthene	153	13.334	13.334	(1.004)	1232398	25.0000	23.89
45	2,4-Dinitrophenol	184	13.424	13.424	(1.010)	496821	50.0000	53.56
46	Dibenzofuran	168	13.595	13.595	(1.023)	1655296	25.0000	24.54
47	4-Nitrophenol	109	13.547	13.547	(1.020)	178575	25.0000	27.06
48	2,4-Dinitrotoluene	165	13.676	13.676	(1.029)	452448	25.0000	25.75
50	Diethylphthalate	149	14.098	14.098	(1.061)	1399966	25.0000	24.86
49	Fluorene	166	14.156	14.156	(1.066)	1288051	25.0000	27.06
51	4-Chlorophenyl-phenylether	204	14.172	14.172	(1.067)	716110	25.0000	24.18
52	4-Nitroaniline	138	14.252	14.252	(1.073)	226139	25.0000	22.83
53	4,6-Dinitro-2-methylphenol	198	14.333	14.333	(0.915)	606968	50.0000	50.57
54	N-Nitrosodiphenylamine	169	14.375	14.375	(0.918)	1086875	25.0000	23.31 (M)
$ 55	2,4,6-Tribromophenol	330	14.573	14.573	(1.097)	197436	25.0000	24.72
56	4-Bromophenyl-phenylether	248	14.952	14.952	(0.955)	442782	25.0000	24.21
57	Hexachlorobenzene	284	15.182	15.182	(0.969)	444526	25.0000	23.57
58	Pentachlorophenol	266	15.470	15.470	(0.988)	283481	25.0000	25.48
* 59	Phenanthrene-d10	188	15.663	15.663	(1.000)	1666734	20.0000	
60	Phenanthrene	178	15.700	15.700	(1.002)	1809085	25.0000	21.94
61	Anthracene	178	15.770	15.770	(1.007)	1943905	25.0000	23.54
62	Carbazole	167	16.047	16.047	(1.025)	1387020	25.0000	24.09
63	Di-n-butylphthalate	149	16.747	16.747	(1.069)	2414175	25.0000	23.19
64	Fluoranthene	202	17.639	17.639	(1.126)	2140710	25.0000	24.68
65	Pyrene	202	17.992	17.992	(0.901)	2209020	25.0000	24.14
$ 66	Terphenyl-d14	244	18.291	18.291	(0.916)	1321332	25.0000	22.46
67	Butylbenzylphthalate	149	19.167	19.167	(0.959)	1118097	25.0000	24.98
68	Benzo(a)anthracene	228	19.953	19.953	(0.999)	1857209	25.0000	24.31
* 69	Chrysene-d12	240	19.979	19.979	(1.000)	1675752	20.0000	
70	3,3'-Dichlorobenzidine	252	19.953	19.953	(0.999)	502648	25.0000	23.91
71	Chrysene	228	20.017	20.017	(1.002)	1876324	25.0000	24.06
72	bis(2-Ethylhexyl)phthalate	149	20.150	20.150	(0.956)	1493223	25.0000	25.04
* 134	Di-n-octylphthalate-d4	153	21.085	21.085	(1.000)	2026355	20.0000	
73	Di-n-octylphthalate	149	21.096	21.096	(1.000)	2368328	25.0000	24.75

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
	74 Benzo(b)fluoranthene	252	21.609	21.609	(0.976)	1959445	25.0000	26.71 (H)
	75 Benzo(k)fluoranthene	252	21.641	21.641	(0.978)	1970824	25.0000	24.39
	187 Total Benzofluoranthenes	252	21.641	21.641	(0.978)	3664023	50.0000	48.58
	76 Benzo(a)pyrene	252	22.057	22.057	(0.996)	1762639	25.0000	25.18
*	77 Perylene-d12	264	22.137	22.137	(1.000)	1637524	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	23.767	23.767	(1.074)	2091673	25.0000	24.83
	79 Dibenzo(a,h)anthracene	278	23.788	23.788	(1.075)	1694786	25.0000	25.55
	80 Benzo(g,h,i)perylene	276	24.226	24.226	(1.094)	1816240	25.0000	25.21
	90 N-Nitrosodimethylamine	74	3.889	3.889	(0.464)	532245	25.0000	24.67
	103 Pyridine	79	3.851	3.851	(0.459)	931862	25.0000	27.24
	91 Aniline	93	7.938	7.938	(0.946)	956121	25.0000	23.58
	105 1-methylnaphthalene	141	11.747	11.747	(1.127)	1040306	25.0000	24.51
	93 Benzidine	184	17.874	17.874	(0.895)	172170	25.0000	21.07
	111 Azobenzene (1,2-DP-Hydrazine)	77	14.423	14.423	(1.086)	1570394	25.0000	24.54
	143 1,4-Dioxane	88	3.103	3.103	(0.370)	352540	25.0000	23.72
$	137 d8-1,4-Dioxane	96	3.039	3.039	(0.362)	346030	25.0000	24.88
	144 alpha-Terpineol	59	10.470	10.470	(1.005)	537237	25.0000	24.59
	177 p-Benzoquinone	82	7.083	7.083	(0.680)	187368	25.0000	28.55
	98 Retene	219	18.548	18.548	(0.928)	995435	25.0000	25.20
	99 Perylene	252	22.175	22.175	(1.002)	1513496	25.0000	24.69
	133 Butylatedhydroxytoluene	205	13.440	13.440	(1.012)	1140696	25.0000	27.48
	115 Tributyl Phosphate	99	14.461	14.461	(0.923)	1753043	25.0000	27.50
	116 Dibutyl Phenyl Phosphate	175	16.192	16.192	(1.034)	1196318	25.0000	27.14
	117 Butyl Diphenyl Phosphate	94	17.880	17.880	(0.895)	391455	25.0000	25.37
	118 Triphenyl Phosphate	326	19.482	19.482	(0.975)	383597	25.0000	26.14
	123 Acetophenone	105	9.076	9.076	(1.082)	1059559	25.0000	24.57
	168 Pentachlorobenzene	250	13.638	13.638	(1.027)	542883	25.0000	24.54
	113 Diphenyl Oxide	170	12.538	12.538	(0.944)	986027	25.0000	25.08
	112 Biphenyl	154	12.345	12.345	(0.929)	1333701	25.0000	27.60
	120 2,3,4,6-Tetrachlorophenol	232	13.873	13.873	(1.044)	388804	25.0000	26.97
	151 1,2,4,5-Tetrachlorobenzene	216	11.907	11.907	(0.896)	595688	25.0000	24.15
	110 Tetrachloroguaiacol	247	15.599	15.599	(0.996)	452880	50.0000	51.78
	109 3,4,5-Trichloroguaiacol	213	13.969	13.969	(0.892)	254783	25.0000	26.76
	181 3,4,6-Trichloroguaiacol	211	14.087	14.087	(1.680)	287113	25.0000	27.47
	108 4,5,6-Trichloroguaiacol	213	15.000	15.000	(1.129)	261306	25.0000	27.66
	184 3,4-Dichloroguaiacol	192	12.425	12.425	(1.482)	267135	25.0000	26.92
	107 4,5-Dichloroguaiacol	192	13.205	13.205	(0.994)	666413	50.0000	54.00
	182 4,6-Dichloroguaiacol	192	13.205	13.205	(1.575)	659838	50.0000	54.51
	185 4-Chloroguaiacol	115	11.336	11.336	(1.352)	178588	12.5000	13.87
	186 Carbaryl	144	16.459	16.459	(1.051)	1022156	25.0000	26.54
	178 2-Benzyl-4-Chlorophenol	218	16.411	16.411	(1.048)	366709	25.0000	26.56
	106 Guaiacol	124	9.332	9.332	(1.113)	614508	25.0000	25.79
	188 2,6-Dichlorophenol	162	10.598	10.598	(1.264)	552166	25.0000	27.22
	189 N-Nitrosomethylethylamine	88	5.620	5.620	(0.670)	391699	25.0000	25.88

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

[nstrument ID: nt6.i
.ab File ID: 03061301.D
.ab Smp Id: IC250306
Analysis Type: SV
)uant Type: ISTD
)perator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC250306
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	458117	0.00
27 Naphthalene-d8	1718341	859170	3436682	1718341	0.00
42 Acenaphthene-d10	1010041	505020	2020082	1010041	0.00
59 Phenanthrene-d10	1666734	833367	3333468	1666734	0.00
69 Chrysene-d12	1675752	837876	3351504	1675752	0.00
134 Di-n-octylphthala	2026355	1013178	4052710	2026355	0.00
77 Perylene-d12	1637524	818762	3275048	1637524	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.39	0.00
27 Naphthalene-d8	10.42	9.92	10.92	10.42	0.00
42 Acenaphthene-d10	13.29	12.79	13.79	13.29	0.00
59 Phenanthrene-d10	15.66	15.16	16.16	15.66	0.00
69 Chrysene-d12	19.98	19.48	20.48	19.98	0.00
134 Di-n-octylphthala	21.09	20.59	21.59	21.09	0.00
77 Perylene-d12	22.14	21.64	22.64	22.14	0.00

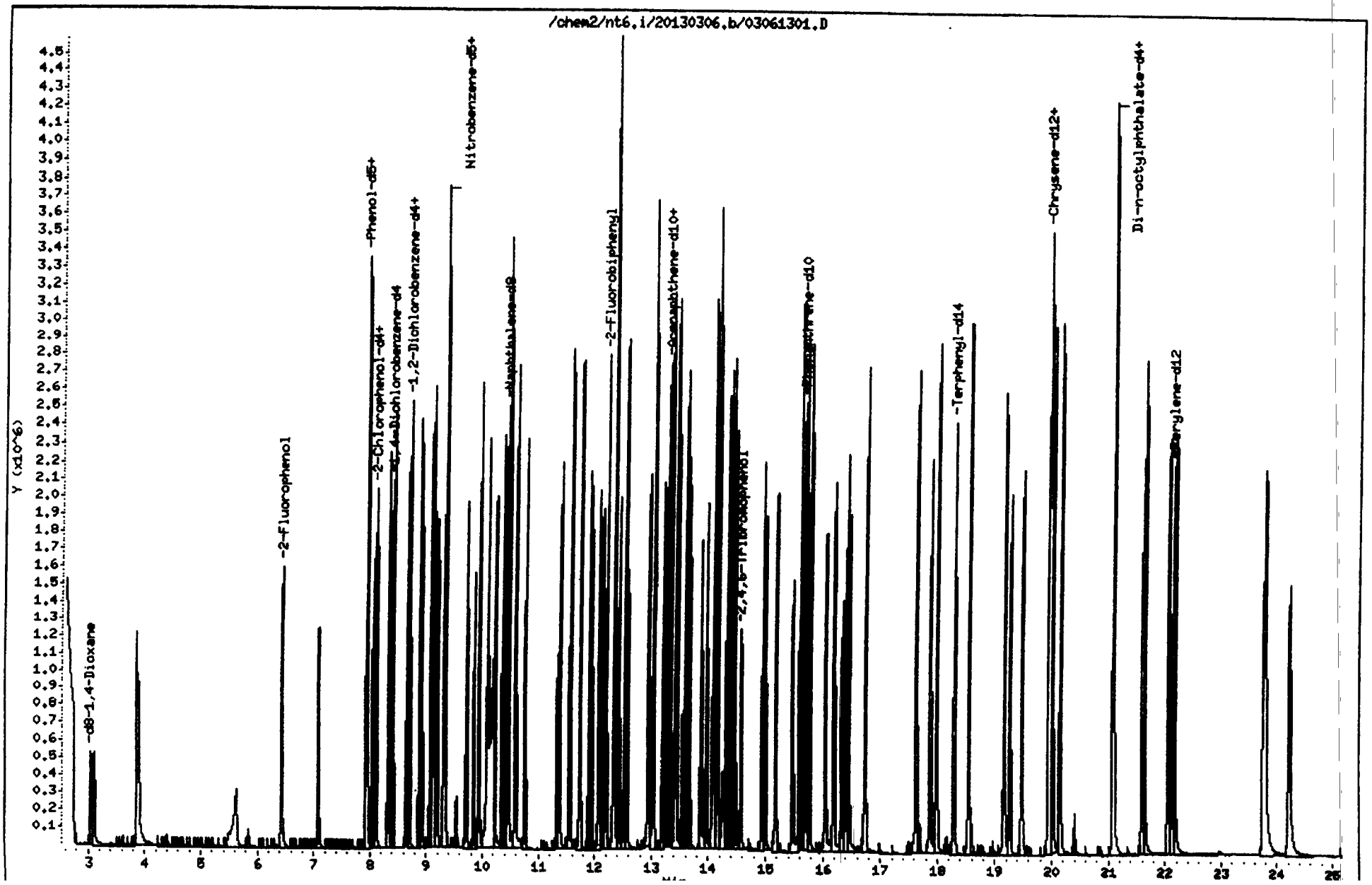
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061301.D
Date : 06-MAR-2013 12:16
Client ID: IC250306
Sample Info: IC250306

Instrument: nt6.i

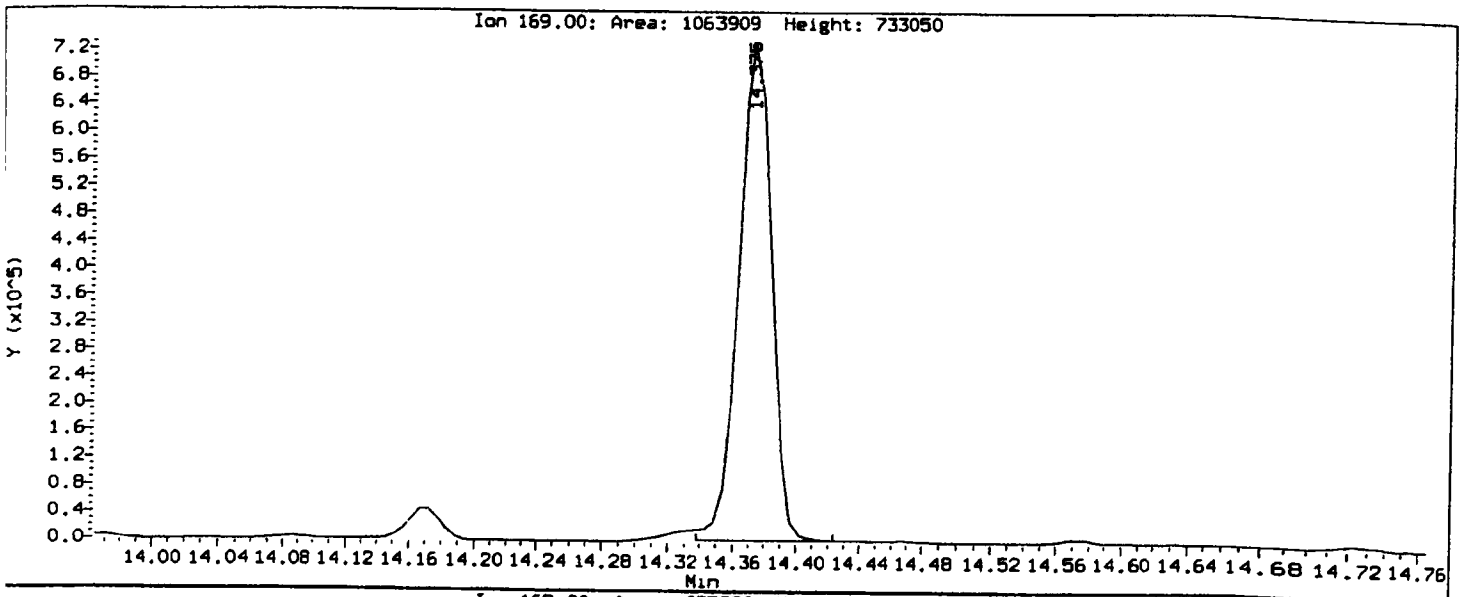
Operator: JZ
Column diameter: 0.32

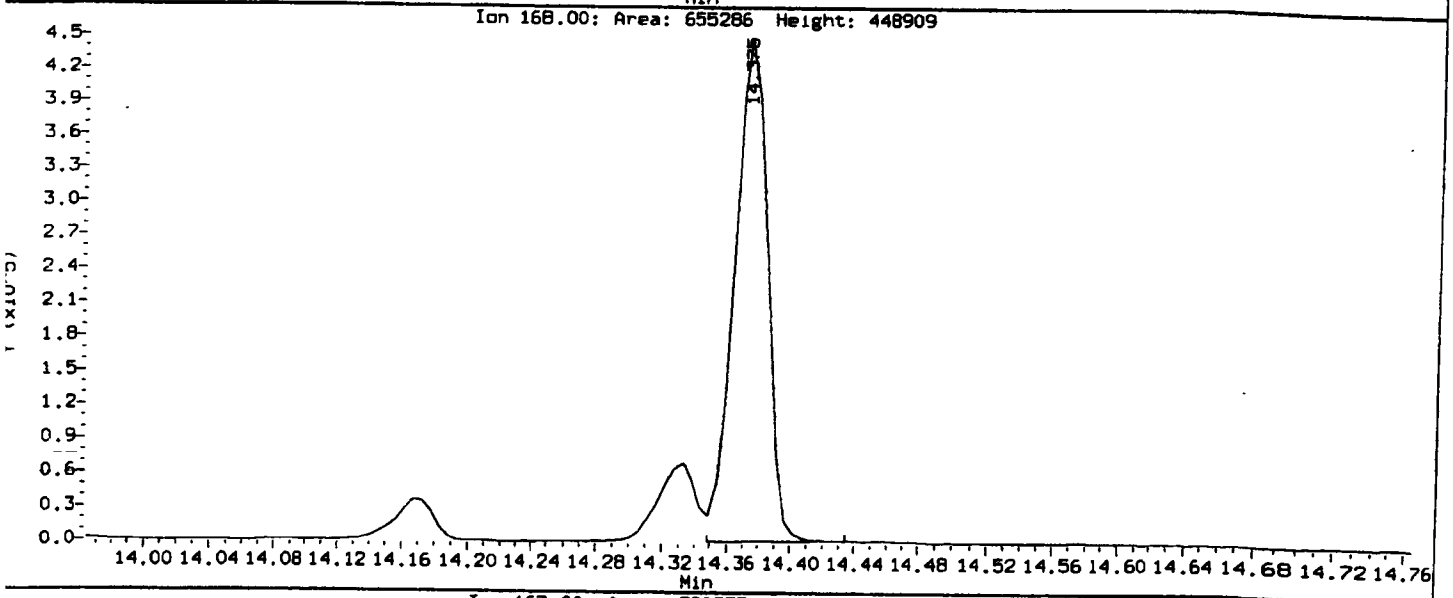
Column phase: ZB-5msi

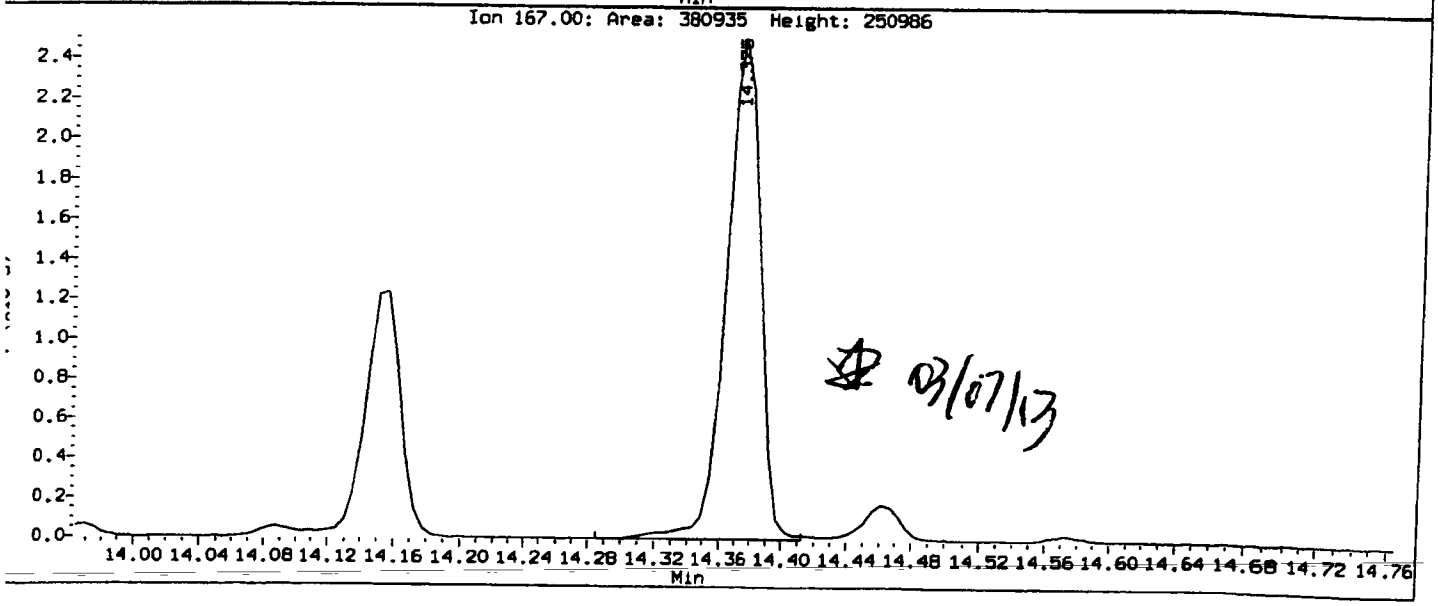


Data File: /chem2/nt6.i/20130306.b/03061301.D
Injection Date: 06-MAR-2013 12:16
Instrument: nt6.i
Client Sample ID: IC250306

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6



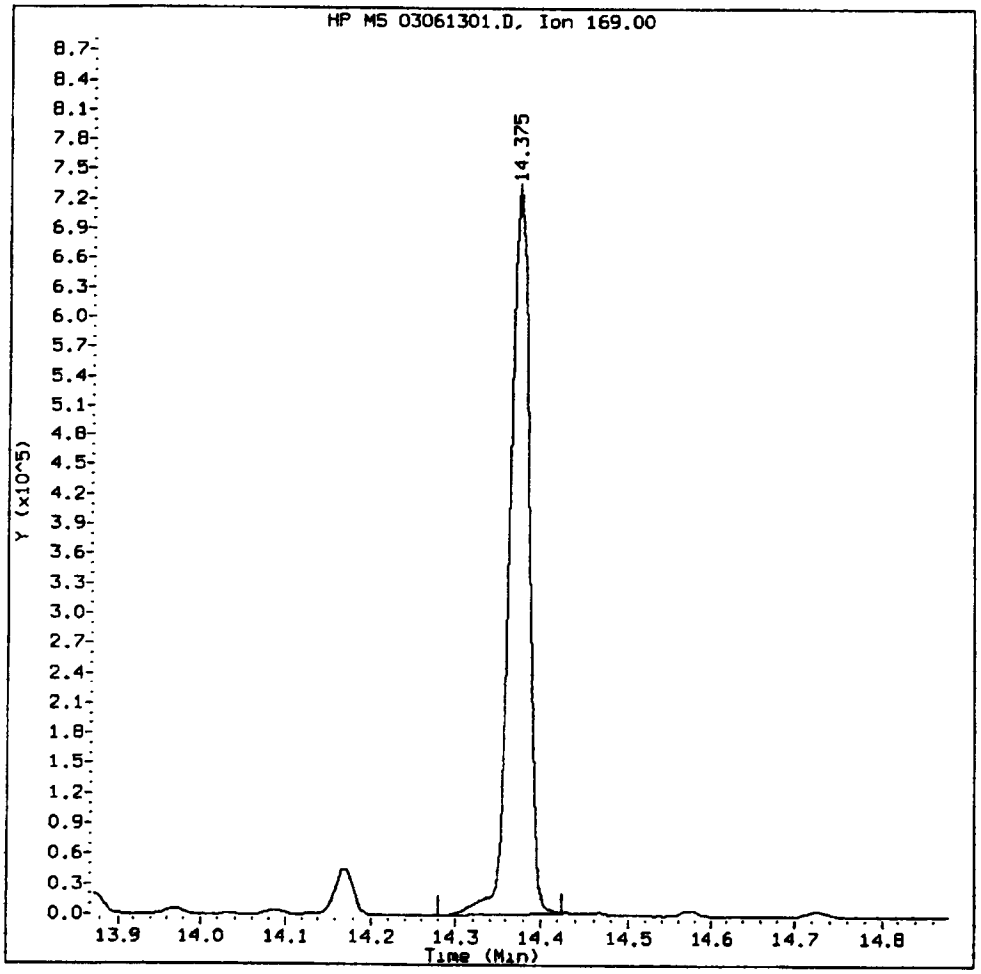




03/07/13

IC250306, /chem2/nt6.i/20130306.b/03061301.D

N-Nitrosodiphenylamine Amount: 23.31 Area: 1086875



MANUAL INTEGRATION for N-Nitrosodiphenylamine

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 03/07/13

CO-ELUTION SUMMARY FOR FILE - 03061301.D

Lab ID: IC250306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS
19.953	3,3'-Dichlorobenzidine and Benzo(a)anthracene

Checked OK

✱ 03/07/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130306.b/03061306.D
Lab Smp Id: IC40306 Client Smp ID: IC400306
Inj Date : 06-MAR-2013 15:09
Operator : JZ Inst ID: nt6.i
Smp Info : IC40306,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130306.b/SW846030613.m
Meth Date : 07-Mar-2013 11:55 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

03/07/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.434	6.432	(0.767)	1107900	40.0000	36.94
$	2 Phenol-d5	99	7.936	7.933	(0.946)	1227948	40.0000	34.98
	3 Phenol	94	7.957	7.954	(0.949)	1375693	40.0000	37.22
$	5 2-Chlorophenol-d4	132	8.085	8.082	(0.964)	1043987	40.0000	35.18
	4 Bis(2-Chloroethyl)ether	93	8.053	8.050	(0.960)	1185638	40.0000	36.93
	6 2-Chlorophenol	128	8.112	8.109	(0.968)	1120333	40.0000	37.88
	7 1,3-Dichlorobenzene	146	8.325	8.328	(0.993)	1273280	40.0000	36.86
*	8 1,4-Dichlorobenzene-d4	152	8.384	8.387	(1.000)	462843	20.0000	
	9 1,4-Dichlorobenzene	146	8.411	8.408	(1.003)	1227217	40.0000	36.50
$	10 1,2-Dichlorobenzene-d4	152	8.683	8.681	(1.036)	704353	40.0000	33.72
	12 1,2-Dichlorobenzene	146	8.705	8.707	(1.038)	1144025	40.0000	35.60
	11 Benzyl alcohol	108	8.662	8.654	(1.033)	741756	40.0000	36.83
	14 2,2'-oxybis(1-Chloropropane)	45	8.913	8.916	(1.063)	1890709	40.0000	37.07
	13 2-Methylphenol	108	8.886	8.878	(1.060)	1081384	40.0000	38.58
	17 Hexachloroethane	117	9.191	9.193	(1.096)	503186	40.0000	37.00
	16 N-Nitroso-di-n-propylamine	70	9.137	9.135	(1.090)	892126	40.0000	37.03
	15 4-Methylphenol	108	9.116	9.108	(1.087)	1069226	40.0000	38.58
$	18 Nitrobenzene-d5	82	9.314	9.311	(0.893)	1230848	40.0000	35.61
	19 Nitrobenzene	77	9.346	9.343	(0.896)	1189654	40.0000	35.96
	20 Isophorone	82	9.720	9.717	(0.932)	2121281	40.0000	36.79
	21 2-Nitrophenol	139	9.853	9.851	(0.945)	633587	40.0000	41.39
	22 2,4-Dimethylphenol	107	9.949	9.947	(0.954)	1112897	40.0000	38.44
	23 Bis(2-Chloroethoxy)methane	93	10.099	10.096	(0.969)	1370952	40.0000	36.24
	24 Benzoic acid	105	10.249	10.198	(0.983)	2127913	80.0000	84.97
	25 2,4-Dichlorophenol	162	10.233	10.230	(0.982)	856137	40.0000	38.41
	26 1,2,4-Trichlorobenzene	180	10.366	10.363	(0.994)	1010268	40.0000	36.41
*	27 Naphthalene-d8	136	10.425	10.422	(1.000)	1722510	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
28	Naphthalene	128	10.457	10.454	(1.003)	2641007	40.0000	40.18
29	4-Chloroaniline	127	10.591	10.588	(1.016)	820986	40.0000	39.50 (M)
30	Hexachlorobutadiene	225	10.767	10.764	(1.033)	622003	40.0000	36.84
31	4-Chloro-3-methylphenol	107	11.387	11.384	(1.092)	955539	40.0000	40.36
32	2-Methylnaphthalene	141	11.568	11.571	(1.110)	1465439	40.0000	34.98
33	Hexachlorocyclopentadiene	237	11.947	11.950	(0.899)	665905	40.0000	41.58
34	2,4,6-Trichlorophenol	196	12.081	12.078	(0.910)	682992	40.0000	40.76
35	2,4,5-Trichlorophenol	196	12.134	12.137	(0.914)	693411	40.0000	41.95
$ 36	2-Fluorobiphenyl	172	12.209	12.212	(0.919)	2125857	40.0000	33.78
37	2-Chloronaphthalene	162	12.359	12.356	(0.930)	1623373	40.0000	39.49
38	2-Nitroaniline	65	12.583	12.580	(0.947)	592401	40.0000	40.20
39	Dimethylphthalate	163	12.952	12.949	(0.975)	2195089	40.0000	36.59
40	Acenaphthylene	152	13.032	13.034	(0.981)	2734694	40.0000	34.78
41	2,6-Dinitrotoluene	165	13.048	13.045	(0.982)	488547	40.0000	38.11
* 42	Acenaphthene-d10	164	13.283	13.286	(1.000)	996854	20.0000	
43	3-Nitroaniline	138	13.262	13.264	(0.998)	342573	40.0000	41.36 (M)
44	Acenaphthene	153	13.336	13.334	(1.004)	1794261	40.0000	35.24
45	2,4-Dinitrophenol	184	13.433	13.424	(1.011)	774315	80.0000	84.57
46	Dibenzofuran	168	13.598	13.595	(1.024)	2363050	40.0000	35.49
47	4-Nitrophenol	109	13.545	13.547	(1.020)	262854	40.0000	40.36
48	2,4-Dinitrotoluene	165	13.678	13.676	(1.030)	690237	40.0000	39.81
50	Diethylphthalate	149	14.106	14.098	(1.062)	2067081	40.0000	37.19
49	Fluorene	166	14.154	14.156	(1.066)	1769346	40.0000	39.26
51	4-Chlorophenyl-phenylether	204	14.170	14.172	(1.067)	1029522	40.0000	35.23
52	4-Nitroaniline	138	14.261	14.252	(1.074)	391191	40.0000	40.01
53	4,6-Dinitro-2-methylphenol	198	14.341	14.333	(0.916)	964307	80.0000	81.99
54	N-Nitrosodiphenylamine	169	14.378	14.375	(0.918)	1576736	40.0000	34.50 (M)
; 55	2,4,6-Tribromophenol	330	14.576	14.573	(1.097)	295587	40.0000	37.50
56	4-Bromophenyl-phenylether	248	14.950	14.952	(0.955)	672353	40.0000	37.51
57	Hexachlorobenzene	284	15.179	15.182	(0.969)	671036	40.0000	36.31
58	Pentachlorophenol	266	15.473	15.470	(0.988)	443042	40.0000	40.64
' 59	Phenanthrene-d10	188	15.660	15.663	(1.000)	1633268	20.0000	
60	Phenanthrene	178	15.703	15.700	(1.003)	2729819	40.0000	33.78
61	Anthracene	178	15.772	15.770	(1.007)	2745113	40.0000	33.93
62	Carbazole	167	16.045	16.047	(1.025)	2297956	40.0000	40.37
63	Di-n-butylphthalate	149	16.745	16.747	(1.069)	3399020	40.0000	33.32
64	Fluoranthene	202	17.631	17.639	(1.126)	3061055	40.0000	36.01
65	Pyrene	202	17.995	17.992	(0.901)	3123892	40.0000	35.65
66	Terphenyl-d14	244	18.289	18.291	(0.915)	1945507	40.0000	34.55
67	Butylbenzylphthalate	149	19.159	19.167	(0.959)	1609814	40.0000	37.57
68	Benzo(a)anthracene	228	19.950	19.953	(0.999)	2678240	40.0000	36.61
69	Chrysene-d12	240	19.977	19.979	(1.000)	1604385	20.0000	
70	3,3'-Dichlorobenzidine	252	19.945	19.953	(0.998)	740264	40.0000	36.78
71	Chrysene	228	20.014	20.017	(1.002)	2694539	40.0000	36.09
72	bis(2-Ethylhexyl)phthalate	149	20.142	20.150	(0.956)	2120847	40.0000	37.84
134	Di-n-octylphthalate-d4	153	21.072	21.085	(1.000)	1904606	20.0000	
73	Di-n-octylphthalate	149	21.088	21.096	(1.001)	3383339	40.0000	37.62

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	21.606	21.609	(0.976)	2694359	40.0000	38.62
75 Benzo(k)fluoranthene	252	21.638	21.641	(0.978)	3090941	40.0000	42.35
187 Total Benzofluoranthenes	252	21.638	21.641	(0.978)	5374417	80.0000	72.61
76 Benzo(a)pyrene	252	22.049	22.057	(0.996)	2636463	40.0000	38.39
77 Perylene-d12	264	22.130	22.137	(1.000)	1606852	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	23.759	23.767	(1.074)	3212593	40.0000	38.87
79 Dibenzo(a,h)anthracene	278	23.786	23.788	(1.075)	2558263	40.0000	39.31
80 Benzo(g,h,i)perylene	276	24.224	24.226	(1.095)	2850182	40.0000	40.32
90 N-Nitrosodimethylamine	74	3.902	3.889	(0.465)	837250	40.0000	38.41
103 Pyridine	79	3.854	3.851	(0.460)	1286192	40.0000	37.21
91 Aniline	93	7.941	7.938	(0.947)	1374340	40.0000	33.56
105 1-methylnaphthalene	141	11.744	11.747	(1.127)	1506021	40.0000	35.39
93 Benzidine	184	17.872	17.874	(0.895)	284218	40.0000	36.33
111 Azobenzene (1,2-DP-Hydrazine)	77	14.426	14.423	(1.086)	2252849	40.0000	35.67
143 1,4-Dioxane	88	3.106	3.103	(0.370)	556372	40.0000	37.05
137 d8-1,4-Dioxane	96	3.047	3.039	(0.363)	543400	40.0000	38.66
144 alpha-Terpineol	59	10.473	10.470	(1.005)	797649	40.0000	36.41
177 p-Benzoquinone	82	7.086	7.083	(0.680)	276763	40.0000	42.07
98 Retene	219	18.540	18.548	(0.928)	1393516	40.0000	36.85
99 Perylene	252	22.167	22.175	(1.002)	2188116	40.0000	36.37
133 Butylatedhydroxytoluene	205	13.443	13.440	(1.012)	1474910	40.0000	39.45
115 Tributyl Phosphate	99	14.469	14.461	(0.924)	2401166	40.0000	40.45
116 Dibutyl Phenyl Phosphate	175	16.194	16.192	(1.034)	1669656	40.0000	38.66
117 Butyl Diphenyl Phosphate	94	17.877	17.880	(0.895)	545870	40.0000	36.95
118 Triphenyl Phosphate	326	19.480	19.482	(0.975)	546364	40.0000	38.89
123 Acetophenone	105	9.079	9.076	(1.083)	1603289	40.0000	36.80
168 Pentachlorobenzene	250	13.641	13.638	(1.027)	788366	40.0000	36.11
113 Diphenyl Oxide	170	12.535	12.538	(0.944)	1385867	40.0000	35.71
112 Biphenyl	154	12.343	12.345	(0.929)	1797394	40.0000	39.55
120 2,3,4,6-Tetrachlorophenol	232	13.871	13.873	(1.044)	600924	40.0000	42.23
151 1,2,4,5-Tetrachlorobenzene	216	11.910	11.907	(0.897)	895114	40.0000	36.76
110 Tetrachloroguaiacol	247	15.601	15.599	(0.996)	658192	80.0000	76.80
109 3,4,5-Trichloroguaiacol	213	13.967	13.969	(0.892)	357175	40.0000	38.28
181 3,4,6-Trichloroguaiacol	211	14.090	14.087	(1.680)	388170	40.0000	36.75
108 4,5,6-Trichloroguaiacol	213	14.998	15.000	(1.129)	368030	40.0000	39.47
184 3,4-Dichloroguaiacol	192	12.423	12.425	(1.482)	376077	40.0000	37.51
107 4,5-Dichloroguaiacol	192	13.208	13.205	(0.994)	919744	80.0000	75.51
182 4,6-Dichloroguaiacol	192	13.208	13.205	(1.575)	936857	80.0000	76.60
185 4-Chloroguaiacol	115	11.338	11.336	(1.352)	258479	20.0000	19.88
186 Carbaryl	144	16.462	16.459	(1.051)	1517584	40.0000	40.21
178 2-Benzyl-4-Chlorophenol	218	16.413	16.411	(1.048)	512701	40.0000	37.90
106 Guaiacol	124	9.335	9.332	(1.113)	843648	40.0000	35.04
188 2,6-Dichlorophenol	162	10.601	10.598	(1.264)	758794	40.0000	37.03
189 N-Nitrosomethylethylamine	88	5.622	5.620	(0.671)	579162	40.0000	37.87

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: 03061306.D
Lab Smp Id: IC40306
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC400306
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	462843	1.03
27 Naphthalene-d8	1718341	859170	3436682	1722510	0.24
42 Acenaphthene-d10	1010041	505020	2020082	996854	-1.31
59 Phenanthrene-d10	1666734	833367	3333468	1633268	-2.01
69 Chrysene-d12	1675752	837876	3351504	1604385	-4.26
134 Di-n-octylphthala	2026355	1013178	4052710	1904606	-6.01
77 Perylene-d12	1637524	818762	3275048	1606852	-1.87

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.38	-0.03
27 Naphthalene-d8	10.42	9.92	10.92	10.42	0.03
42 Acenaphthene-d10	13.29	12.79	13.79	13.28	-0.02
59 Phenanthrene-d10	15.66	15.16	16.16	15.66	-0.02
69 Chrysene-d12	19.98	19.48	20.48	19.98	-0.01
134 Di-n-octylphthala	21.09	20.59	21.59	21.07	-0.06
77 Perylene-d12	22.14	21.64	22.64	22.13	-0.04

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.

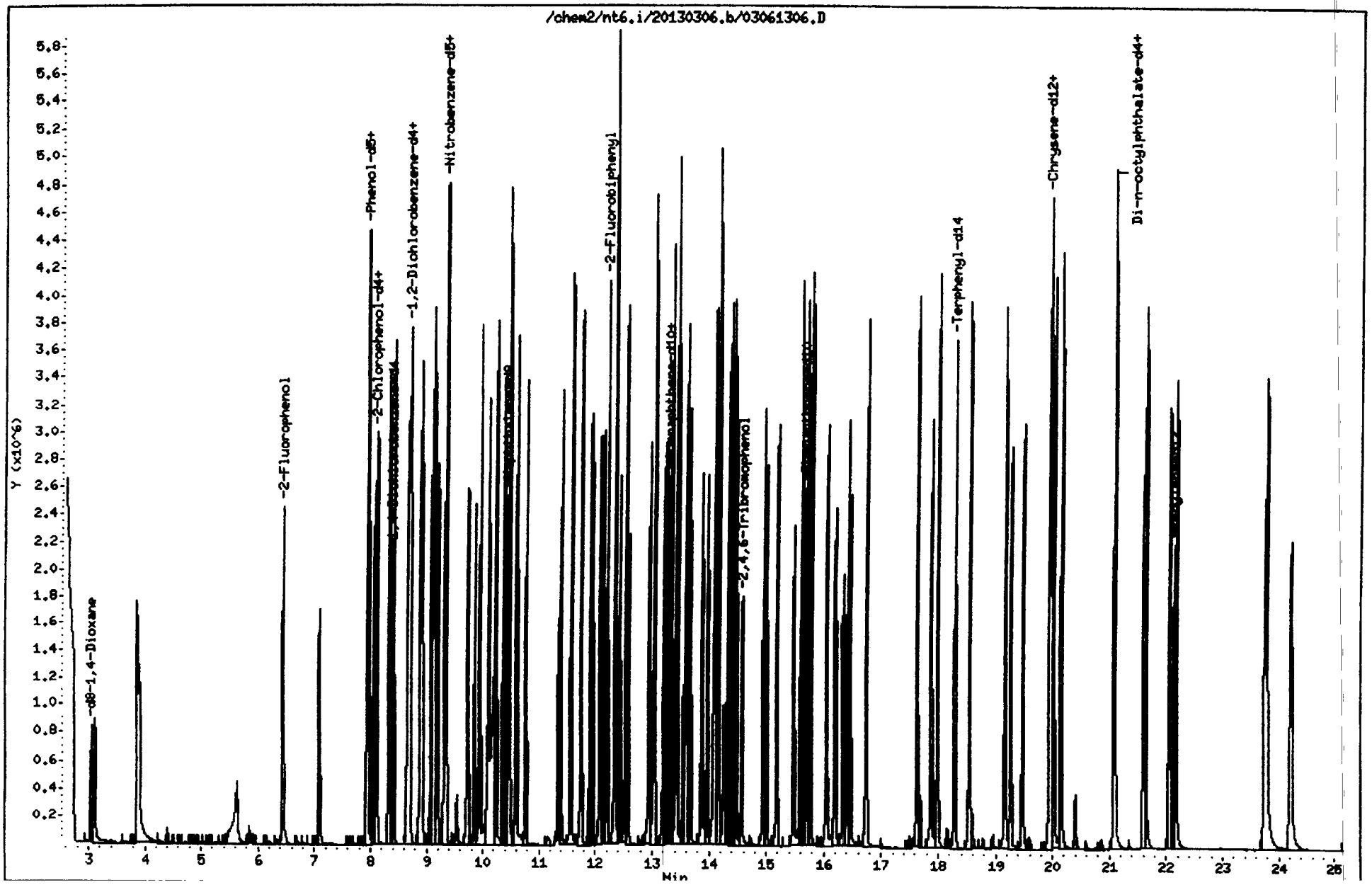
Data File: /chem2/nt6.i/20130306.b/03061306.D
Date : 06-MAR-2013 15:09
Client ID: IC400306
Sample Info: IC40306,

Column phase: ZB-5msi

Instrument: nt6.i

Operator: JZ

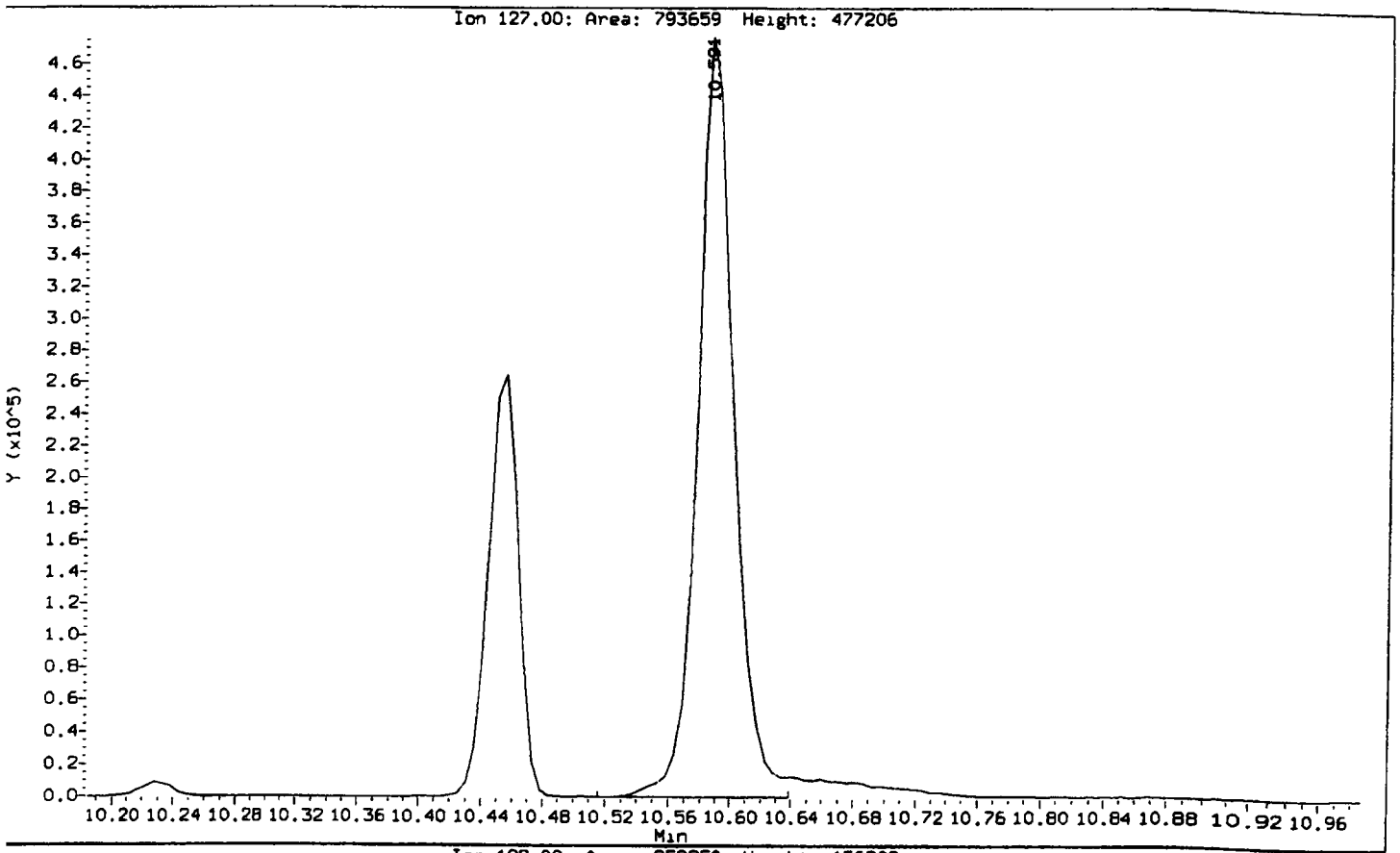
Column diameter: 0.32

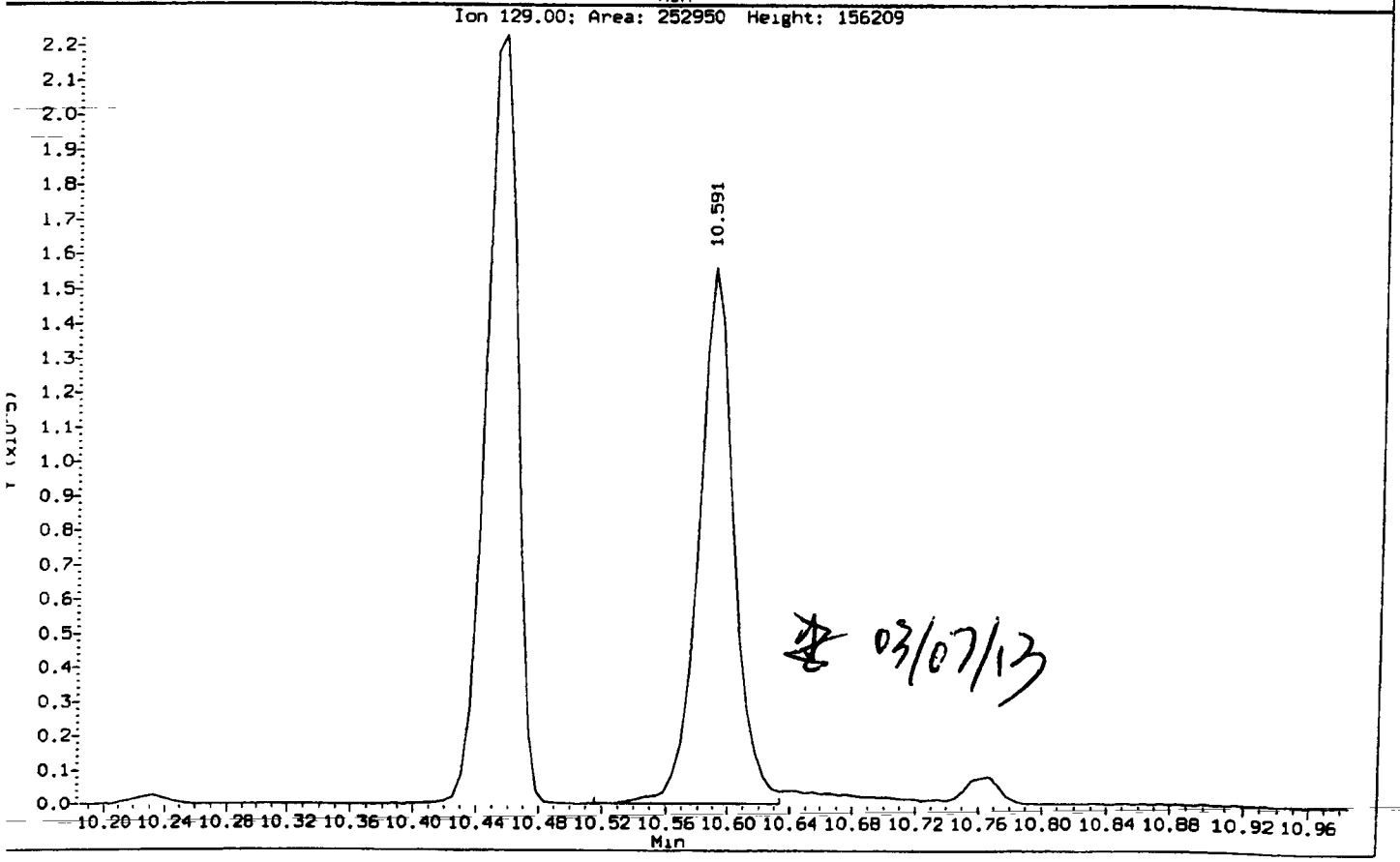


USGS : 00299

Data File: /chem2/nt6.i/20130306.b/03061306.D
Injection Date: 06-MAR-2013 15:09
Instrument: nt6.i
Client Sample ID: IC400306

Compound: 4-Chloroaniline
CAS Number: 106-47-8



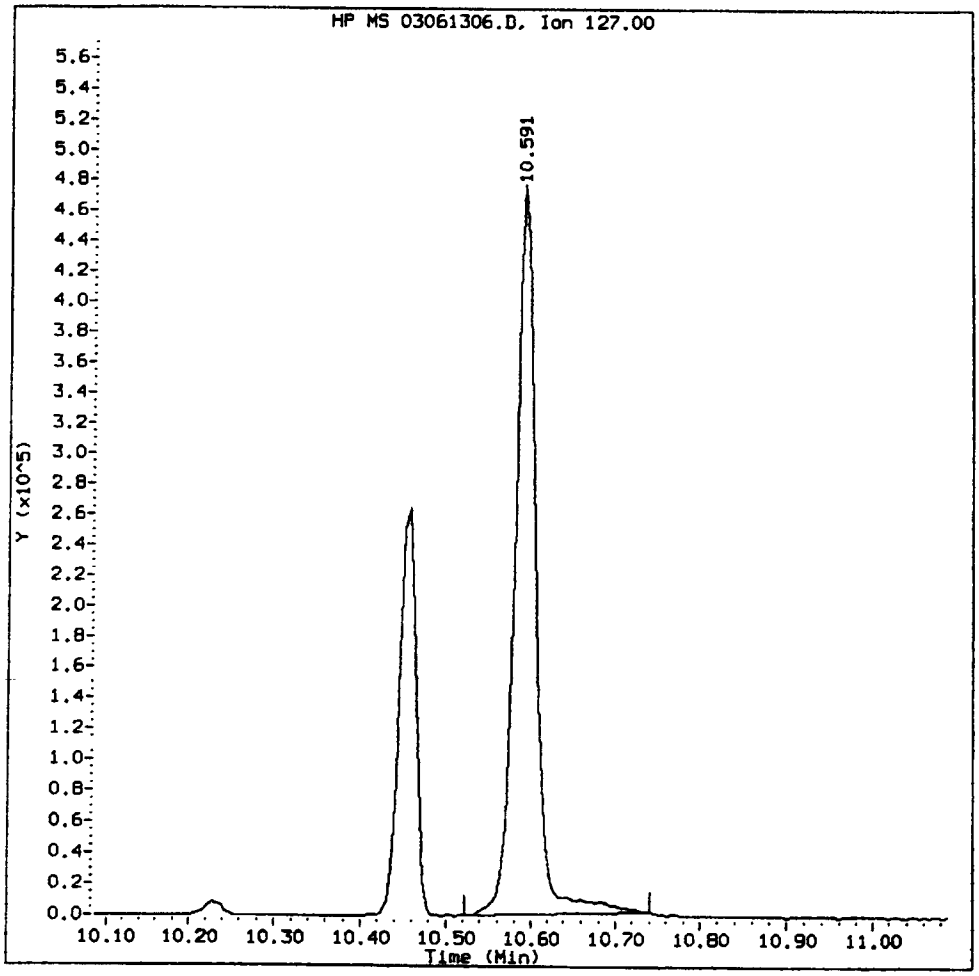


03/07/13

US90 : 00300

IC40306, /chem2/nt6.i/20130306.b/03061306.D

4-Chloroaniline Amount: 39.50 Area: 820986



MANUAL INTEGRATION for 4-Chloroaniline

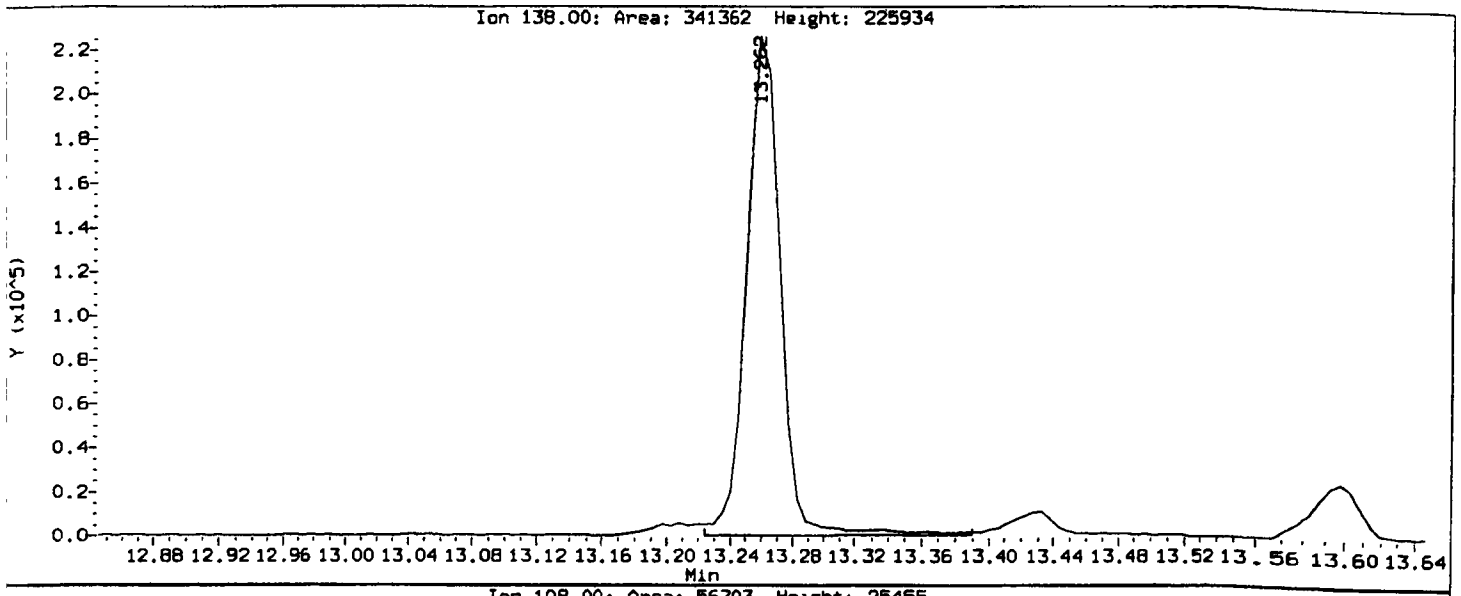
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

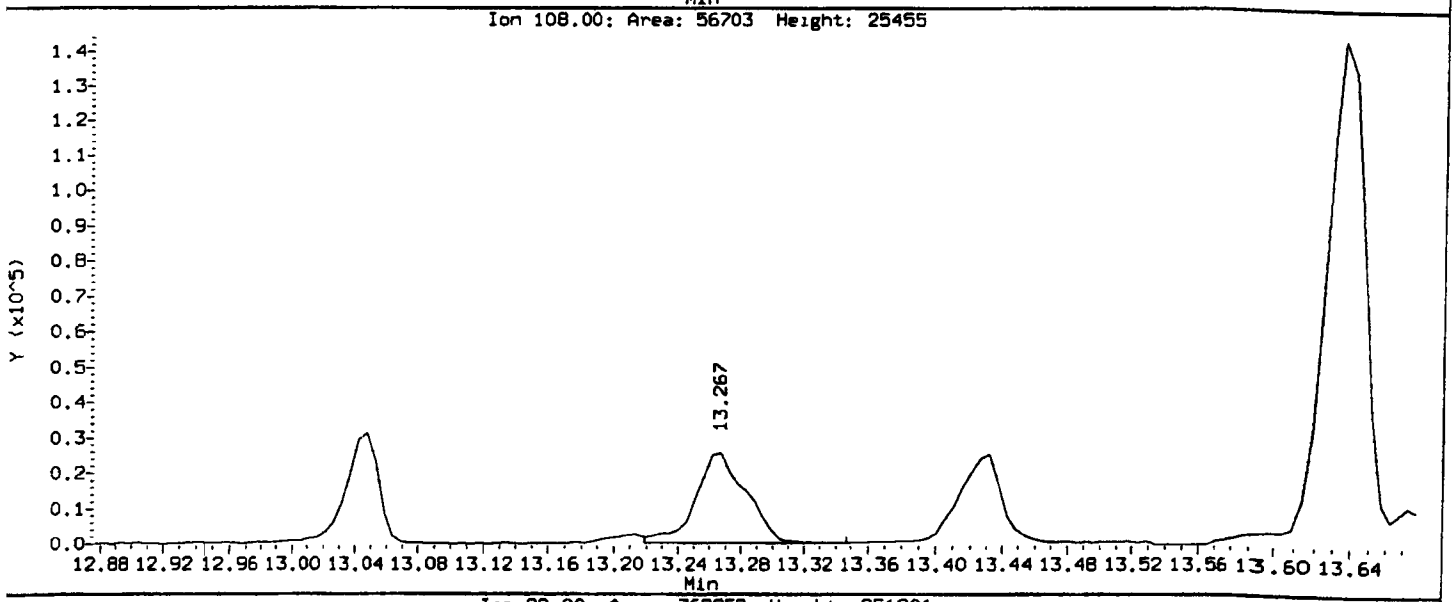
5. Other _____

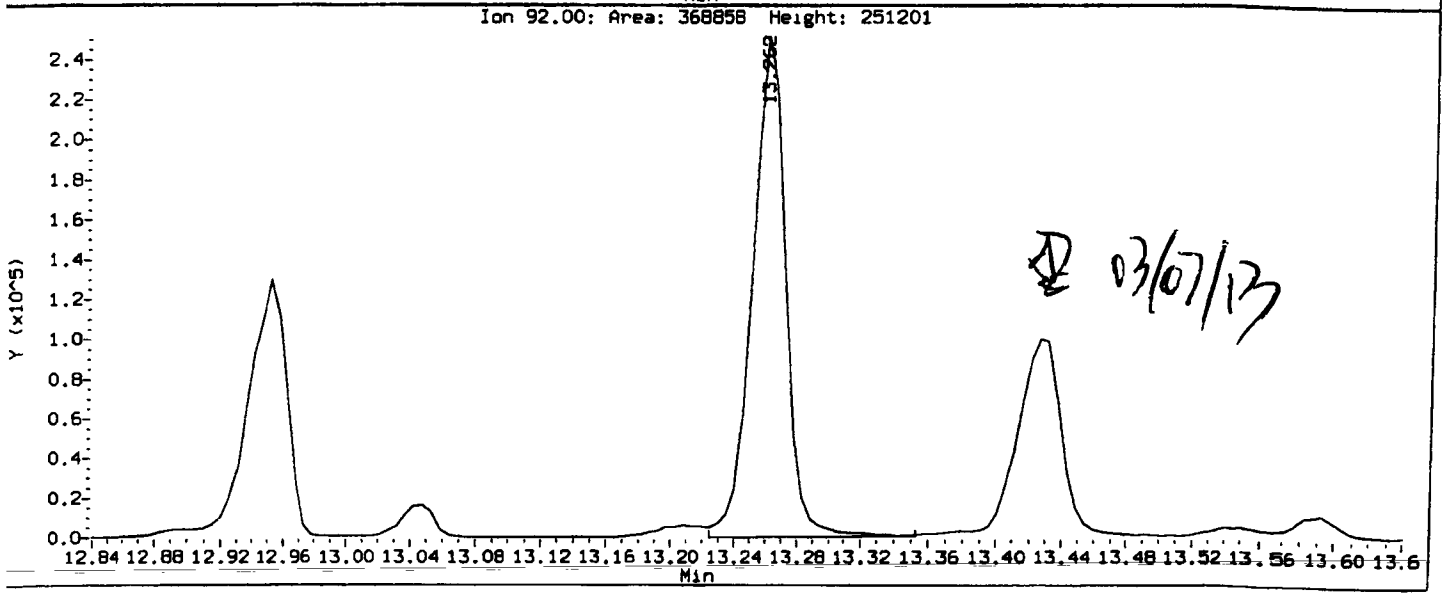
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061306.D
Injection Date: 06-MAR-2013 15:09
Instrument: nt6.i
Client Sample ID: IC400306

Compound: 3-Nitroaniline
CAS Number: 99-09-2



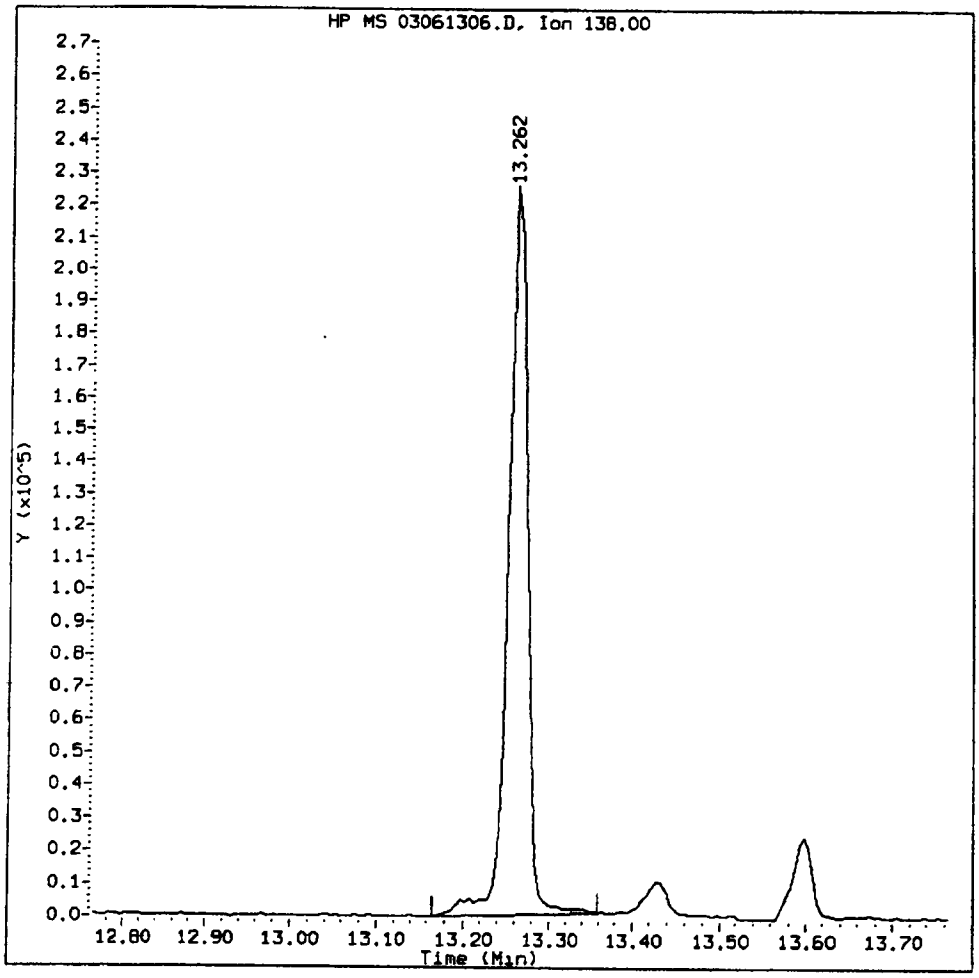




03/07/13

IC40306, /chem2/nt6.i/20130306.b/03061306.D

3-Nitroaniline Amount: 41.36 Area: 342573



MANUAL INTEGRATION for 3-Nitroaniline

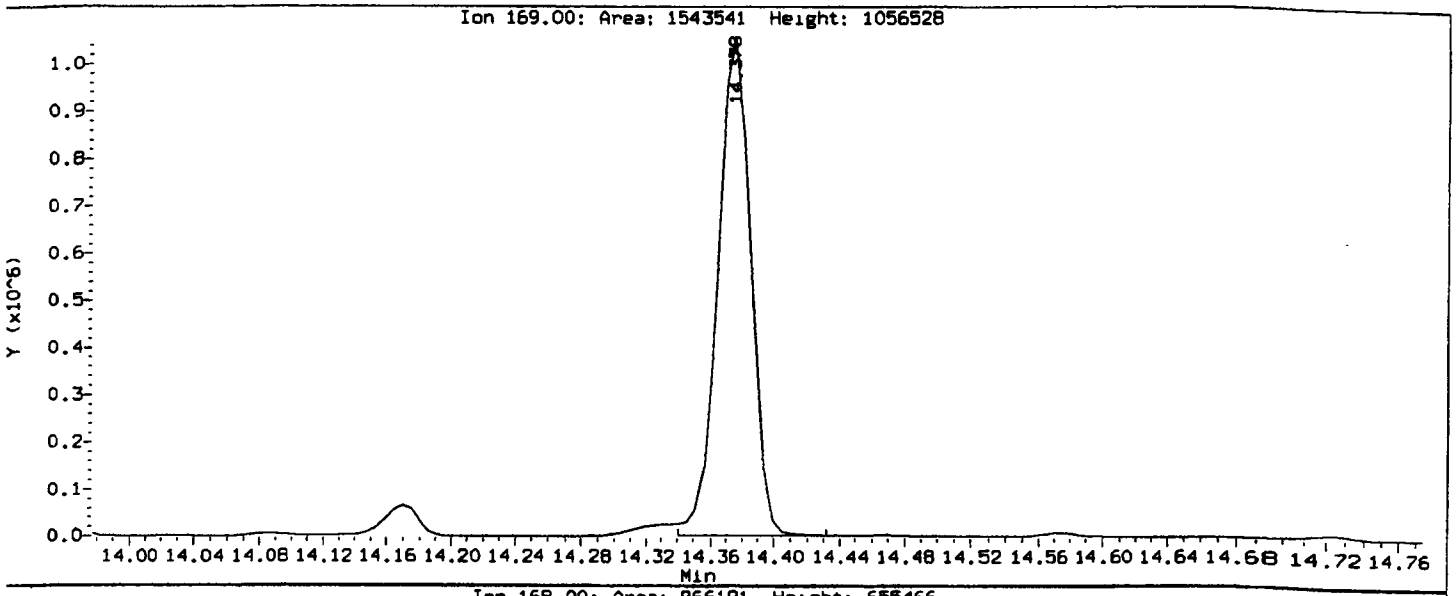
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

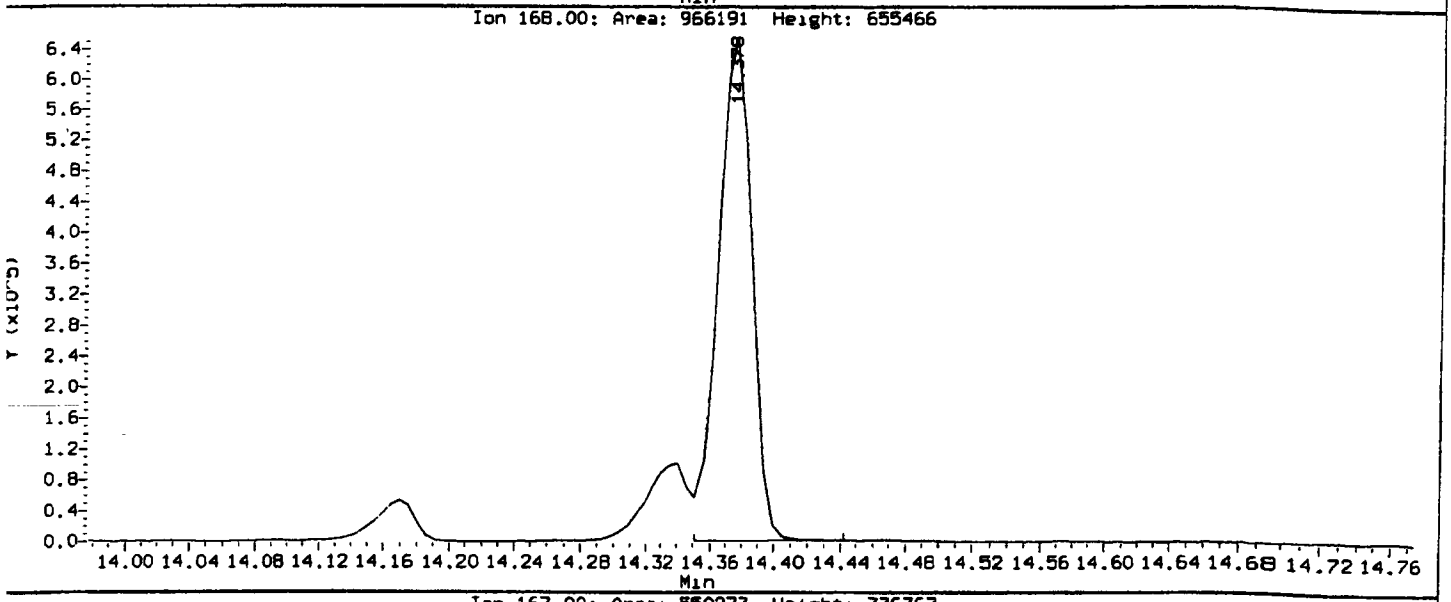
5. Other _____

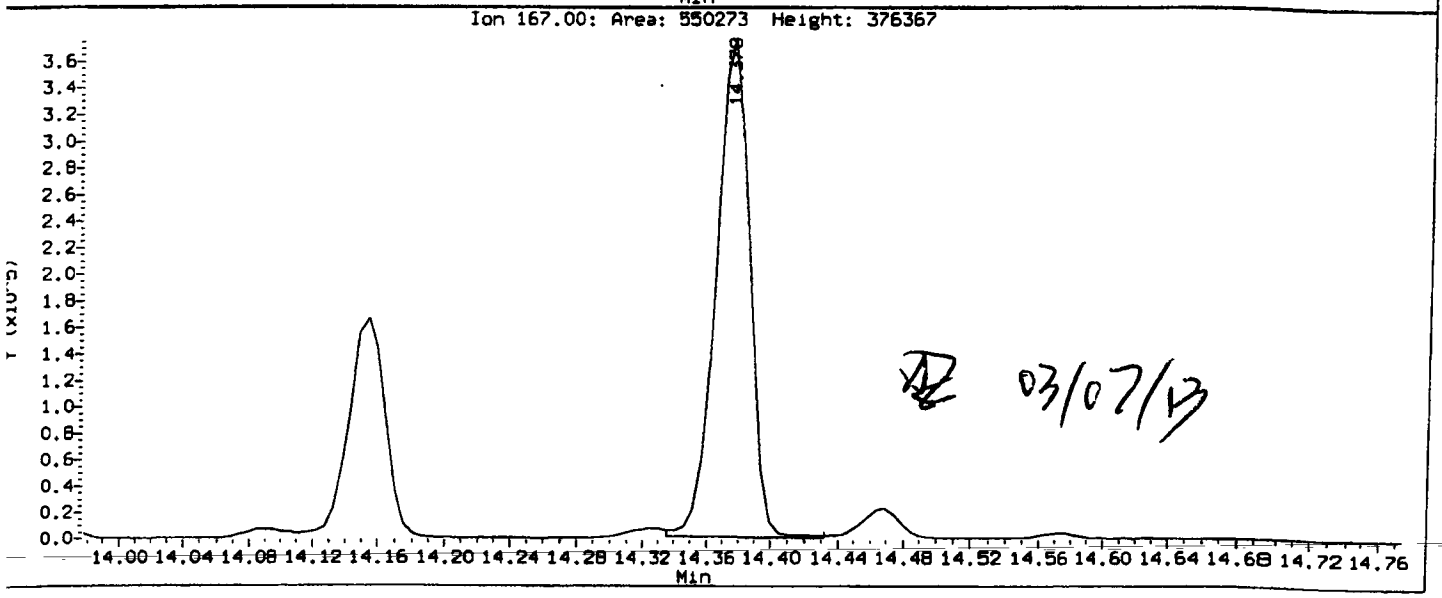
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061306.D
Injection Date: 06-MAR-2013 15:09
Instrument: nt6.i
Client Sample ID: IC400306

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6



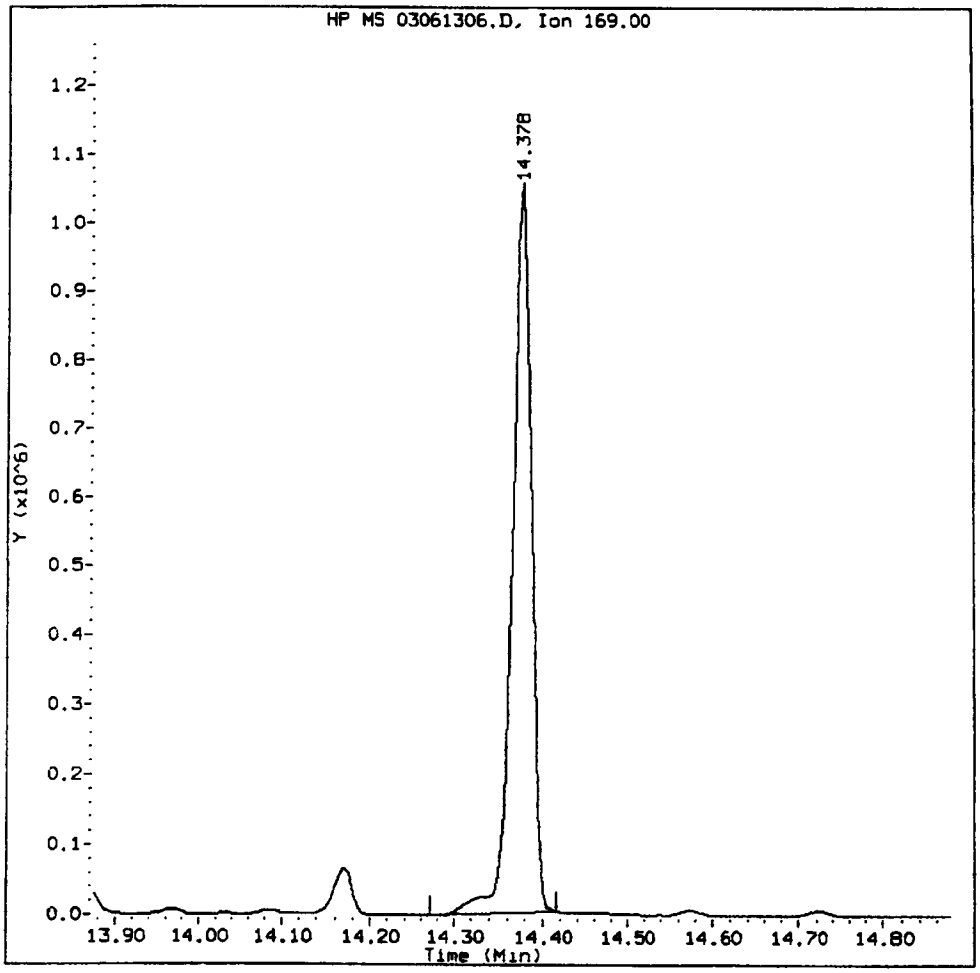




03/07/13

IC40306, /chem2/nt6.i/20130306.b/03061306.D

N-Nitrosodiphenylamine Amount: 34.50 Area: 1576736



MANUAL INTEGRATION for N-Nitrosodiphenylamine

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 03/07/13

CO-ELUTION SUMMARY FOR FILE - 03061306.D

Lab ID: IC40306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

)ata file : /chem2/nt6.i/20130306.b/03061307.D
,ab Smp Id: IC60306 Client Smp ID: IC600306
:nj Date : 06-MAR-2013 15:43
)perator : JZ Inst ID: nt6.i
;mp Info : IC60306,
[isc Info : 13-
:omment : 1ul Injection
[ethod : /chem2/nt6.i/20130306.b/SW846030613.m
[eth Date : 07-Mar-2013 11:55 jianqing Quant Type: ISTD
:al Date : 06-MAR-2013 16:18 Cal File: 03061308.D
.ls bottle: 7 Calibration Sample, Level: 6
)il Factor: 1.00000
.ntegrator: HP RTE Compound Sublist: ICALS.sub
'arget Version: 3.50

JZ 03/07/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
1	2-Fluorophenol	112	6.442	6.432	(0.768)	1543969	60.0000	52.58
2	Phenol-d5	99	7.949	7.933	(0.948)	1704303	60.0000	49.59
3	Phenol	94	7.970	7.954	(0.950)	1858925	60.0000	51.37
5	2-Chlorophenol-d4	132	8.093	8.082	(0.965)	1446368	60.0000	49.78
4	Bis(2-Chloroethyl)ether	93	8.061	8.050	(0.961)	1613442	60.0000	51.34
6	2-Chlorophenol	128	8.114	8.109	(0.968)	1499188	60.0000	51.78
7	1,3-Dichlorobenzene	146	8.328	8.328	(0.993)	1682990	60.0000	49.77
8	1,4-Dichlorobenzene-d4	152	8.387	8.387	(1.000)	453135	20.0000	
9	1,4-Dichlorobenzene	146	8.414	8.408	(1.003)	1620328	60.0000	49.23
10	1,2-Dichlorobenzene-d4	152	8.686	8.681	(1.036)	922731	60.0000	45.12
12	1,2-Dichlorobenzene	146	8.707	8.707	(1.038)	1487370	60.0000	47.27
11	Benzyl alcohol	108	8.665	8.654	(1.033)	1046357	60.0000	53.07
14	2,2'-oxybis(1-Chloropropane)	45	8.916	8.916	(1.063)	2570296	60.0000	51.47
13	2-Methylphenol	108	8.889	8.878	(1.060)	1478529	60.0000	53.88
17	Hexachloroethane	117	9.194	9.193	(1.096)	680617	60.0000	51.12
16	N-Nitroso-di-n-propylamine	70	9.151	9.135	(1.091)	1243123	60.0000	52.71
15	4-Methylphenol	108	9.124	9.108	(1.088)	1428361	60.0000	52.64
18	Nitrobenzene-d5	82	9.316	9.311	(0.893)	1726673	60.0000	50.80
19	Nitrobenzene	77	9.354	9.343	(0.897)	1566587	60.0000	48.15
20	Isophorone	82	9.733	9.717	(0.933)	3022002	60.0000	53.29
21	2-Nitrophenol	139	9.856	9.851	(0.945)	860516	60.0000	57.17
22	2,4-Dimethylphenol	107	9.952	9.947	(0.954)	1526425	60.0000	53.62
23	Bis(2-Chloroethoxy)methane	93	10.107	10.096	(0.969)	1900431	60.0000	51.08
24	Benzoic acid	105	10.294	10.198	(0.987)	2999389	120.000	121.8 (M)
25	2,4-Dichlorophenol	162	10.235	10.230	(0.982)	1188590	60.0000	54.22
26	1,2,4-Trichlorobenzene	180	10.369	10.363	(0.994)	1367908	60.0000	50.13
27	Naphthalene-d8	136	10.428	10.422	(1.000)	1693833	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	10.460	10.454	(1.003)	3435418	60.0000	59.95
	29 4-Chloroaniline	127	10.599	10.588	(1.016)	1089759	60.0000	60.52
	30 Hexachlorobutadiene	225	10.764	10.764	(1.032)	854336	60.0000	51.45
	31 4-Chloro-3-methylphenol	107	11.389	11.384	(1.092)	1259730	60.0000	54.10
	32 2-Methylnaphthalene	141	11.576	11.571	(1.110)	1966974	60.0000	47.75
	33 Hexachlorocyclopentadiene	237	11.950	11.950	(0.899)	962426	60.0000	62.20
	34 2,4,6-Trichlorophenol	196	12.084	12.078	(0.910)	981135	60.0000	60.61
	35 2,4,5-Trichlorophenol	196	12.137	12.137	(0.914)	942506	60.0000	59.02
$	36 2-Fluorobiphenyl	172	12.212	12.212	(0.919)	2869518	60.0000	47.21
	37 2-Chloronaphthalene	162	12.361	12.356	(0.930)	2162175	60.0000	56.65
	38 2-Nitroaniline	65	12.586	12.580	(0.947)	842270	60.0000	59.16
	39 Dimethylphthalate	163	12.960	12.949	(0.975)	2901139	60.0000	50.05
	40 Acenaphthylene	152	13.035	13.034	(0.981)	3594874	60.0000	47.32
	41 2,6-Dinitrotoluene	165	13.056	13.045	(0.983)	652291	60.0000	52.67
*	42 Acenaphthene-d10	164	13.286	13.286	(1.000)	963022	20.0000	
	43 3-Nitroaniline	138	13.270	13.264	(0.999)	415090	60.0000	56.15 (M)
	44 Acenaphthene	153	13.339	13.334	(1.004)	2398903	60.0000	48.78
	45 2,4-Dinitrophenol	184	13.441	13.424	(1.012)	1109465	120.000	125.4
	46 Dibenzofuran	168	13.606	13.595	(1.024)	2968241	60.0000	46.15
	47 4-Nitrophenol	109	13.558	13.547	(1.020)	370235	60.0000	58.85
	48 2,4-Dinitrotoluene	165	13.686	13.676	(1.030)	940513	60.0000	56.15
	50 Diethylphthalate	149	14.108	14.098	(1.062)	2728210	60.0000	50.80
	49 Fluorene	166	14.156	14.156	(1.066)	2330094	60.0000	56.33
	51 4-Chlorophenyl-phenylether	204	14.172	14.172	(1.067)	1325257	60.0000	46.94
	52 4-Nitroaniline	138	14.274	14.252	(1.074)	570540	60.0000	60.40
	53 4,6-Dinitro-2-methylphenol	198	14.349	14.333	(0.916)	1360341	120.000	118.2
	54 N-Nitrosodiphenylamine	169	14.386	14.375	(0.918)	2133517	60.0000	47.70 (M)
$	55 2,4,6-Tribromophenol	330	14.578	14.573	(1.097)	422991	60.0000	55.55
	56 4-Bromophenyl-phenylether	248	14.952	14.952	(0.955)	884941	60.0000	50.44
	57 Hexachlorobenzene	284	15.182	15.182	(0.969)	909402	60.0000	50.28
	58 Pentachlorophenol	266	15.476	15.470	(0.988)	607951	60.0000	56.98
*	59 Phenanthrene-d10	188	15.663	15.663	(1.000)	1598516	20.0000	
	60 Phenanthrene	178	15.706	15.700	(1.003)	3708136	60.0000	46.89 (M)
	61 Anthracene	178	15.780	15.770	(1.008)	3579517	60.0000	45.20
	62 Carbazole	167	16.053	16.047	(1.025)	3310342	60.0000	58.81
	63 Di-n-butylphthalate	149	16.747	16.747	(1.069)	4408198	60.0000	44.16
	64 Fluoranthene	202	17.639	17.639	(1.126)	4077087	60.0000	49.01
	65 Pyrene	202	17.997	17.992	(0.901)	4174219	60.0000	48.94
	66 Terphenyl-d14	244	18.291	18.291	(0.916)	2694546	60.0000	49.15
	67 Butylbenzylphthalate	149	19.162	19.167	(0.959)	2107544	60.0000	50.53
	68 Benzo(a)anthracene	228	19.953	19.953	(0.999)	3640168	60.0000	51.12
	69 Chrysene-d12	240	19.979	19.979	(1.000)	1561828	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.947	19.953	(0.998)	1019524	60.0000	52.04
	71 Chrysene	228	20.022	20.017	(1.002)	3567166	60.0000	49.07
	72 bis(2-Ethylhexyl)phthalate	149	20.145	20.150	(0.956)	2762285	60.0000	52.81
	134 Di-n-octylphthalate-d4	153	21.074	21.085	(1.000)	1777444	20.0000	
	73 Di-n-octylphthalate	149	21.090	21.096	(1.001)	4376021	60.0000	52.14

	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	21.609	21.609	(0.976)	3947727	60.0000	59.03
75	Benzo(k)fluoranthene	252	21.646	21.641	(0.978)	3893557	60.0000	55.88 (H)
187	Total Benzofluoranthenes	252	21.646	21.641	(0.978)	7344864	120.000	98.66
76	Benzo(a)pyrene	252	22.057	22.057	(0.997)	3613860	60.0000	52.32
* 77	Perylene-d12	264	22.132	22.137	(1.000)	1616143	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.767	23.767	(1.074)	4556930	60.0000	54.82
79	Dibenzo(a,h)anthracene	278	23.799	23.788	(1.075)	3652156	60.0000	55.79
80	Benzo(g,h,i)perylene	276	24.237	24.226	(1.095)	3993414	60.0000	56.17
90	N-Nitrosodimethylamine	74	3.921	3.889	(0.467)	1197674	60.0000	56.13
103	Pyridine	79	3.867	3.851	(0.461)	1815991	60.0000	53.66
91	Aniline	93	7.943	7.938	(0.947)	1893346	60.0000	47.22
105	1-methylnaphthalene	141	11.747	11.747	(1.127)	2033113	60.0000	48.59
93	Benzidine	184	17.869	17.874	(0.894)	480405	60.0000	63.08
111	Azobenzene (1,2-DP-Hydrazine)	77	14.429	14.423	(1.086)	2968844	60.0000	48.66
143	1,4-Dioxane	88	3.125	3.103	(0.373)	794994	60.0000	54.08
$ 137	d8-1,4-Dioxane	96	3.061	3.039	(0.365)	745761	60.0000	54.20
144	alpha-Terpineol	59	10.481	10.470	(1.005)	1099224	60.0000	51.03
177	p-Benzoquinone	82	7.089	7.083	(0.680)	403946	60.0000	62.45
98	Retene	219	18.548	18.548	(0.928)	1950387	60.0000	52.99
99	Perylene	252	22.175	22.175	(1.002)	3062481	60.0000	50.61
133	Butylatedhydroxytoluene	205	13.446	13.440	(1.012)	1855173	60.0000	57.10
115	Tributyl Phosphate	99	14.477	14.461	(0.924)	3026027	60.0000	54.70
116	Dibutyl Phenyl Phosphate	175	16.192	16.192	(1.034)	2350712	60.0000	55.61
117	Butyl Diphenyl Phosphate	94	17.880	17.880	(0.895)	729085	60.0000	50.70
118	Triphenyl Phosphate	326	19.482	19.482	(0.975)	779896	60.0000	57.02
123	Acetophenone	105	9.087	9.076	(1.083)	2228195	60.0000	52.24
168	Pentachlorobenzene	250	13.644	13.638	(1.027)	1071312	60.0000	50.79
113	Diphenyl Oxide	170	12.538	12.538	(0.944)	1879194	60.0000	50.12
112	Biphenyl	154	12.351	12.345	(0.930)	2290712	60.0000	55.09
120	2,3,4,6-Tetrachlorophenol	232	13.879	13.873	(1.045)	798003	60.0000	58.05
151	1,2,4,5-Tetrachlorobenzene	216	11.913	11.907	(0.897)	1239101	60.0000	52.68
110	Tetrachloroguaiacol	247	15.609	15.599	(0.997)	894026	120.000	106.6
109	3,4,5-Trichloroguaiacol	213	13.975	13.969	(0.892)	475254	60.0000	52.05
181	3,4,6-Trichloroguaiacol	211	14.092	14.087	(1.680)	564659	60.0000	54.61
108	4,5,6-Trichloroguaiacol	213	15.000	15.000	(1.129)	496468	60.0000	55.12
184	3,4-Dichloroguaiacol	192	12.431	12.425	(1.482)	523084	60.0000	53.28
107	4,5-Dichloroguaiacol	192	13.216	13.205	(0.995)	1265428	120.000	107.5
182	4,6-Dichloroguaiacol	192	13.216	13.205	(1.576)	1304327	120.000	108.9
185	4-Chloroguaiacol	115	11.341	11.336	(1.352)	337977	30.0000	26.55
186	Carbaryl	144	16.470	16.459	(1.052)	2040898	60.0000	55.25
178	2-Benzyl-4-Chlorophenol	218	16.421	16.411	(1.048)	711018	60.0000	53.70
106	Guaiacol	124	9.343	9.332	(1.114)	1104296	60.0000	46.85
188	2,6-Dichlorophenol	162	10.604	10.598	(1.264)	1043274	60.0000	52.00
189	N-Nitrosomethylethylamine	88	5.625	5.620	(0.671)	859420	60.0000	57.40

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: 03061307.D
Lab Smp Id: IC60306
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC600306
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

	COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8	1,4-Dichlorobenze	458117	229058	916234	453135	-1.09
27	Naphthalene-d8	1718341	859170	3436682	1693833	-1.43
42	Acenaphthene-d10	1010041	505020	2020082	963022	-4.66
59	Phenanthrene-d10	1666734	833367	3333468	1598516	-4.09
69	Chrysene-d12	1675752	837876	3351504	1561828	-6.80
134	Di-n-octylphthala	2026355	1013178	4052710	1777444	-12.28
77	Perylene-d12	1637524	818762	3275048	1616143	-1.31

	COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8	1,4-Dichlorobenze	8.39	7.89	8.89	8.39	0.00
27	Naphthalene-d8	10.42	9.92	10.92	10.43	0.05
42	Acenaphthene-d10	13.29	12.79	13.79	13.29	0.00
59	Phenanthrene-d10	15.66	15.16	16.16	15.66	0.00
69	Chrysene-d12	19.98	19.48	20.48	19.98	0.00
134	Di-n-octylphthala	21.09	20.59	21.59	21.07	-0.05
77	Perylene-d12	22.14	21.64	22.64	22.13	-0.02

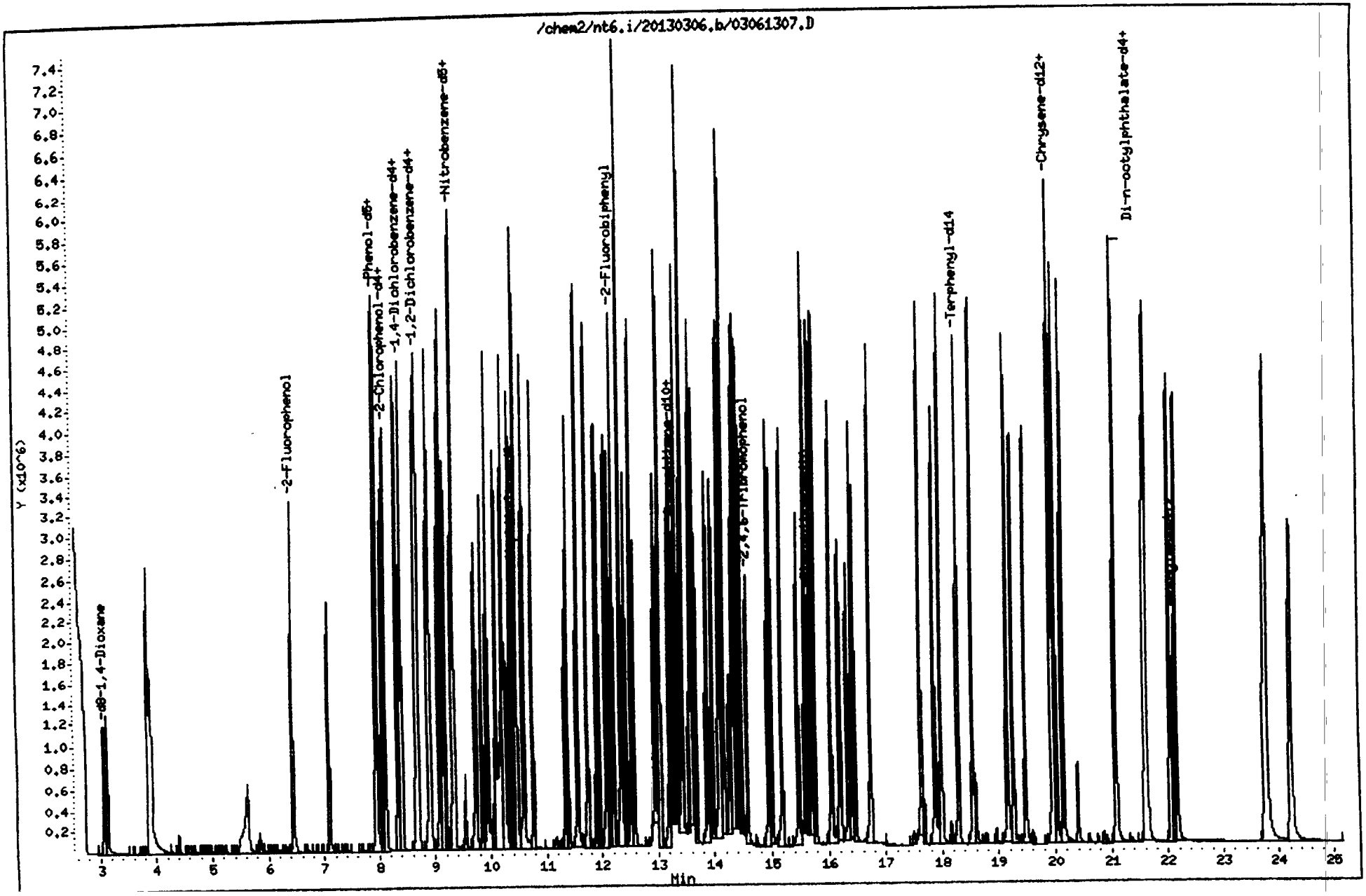
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061307.D
Date : 06-MAR-2013 15:43
Client ID: IC600306
Sample Info: IC60306,

Instrument: nt6.i

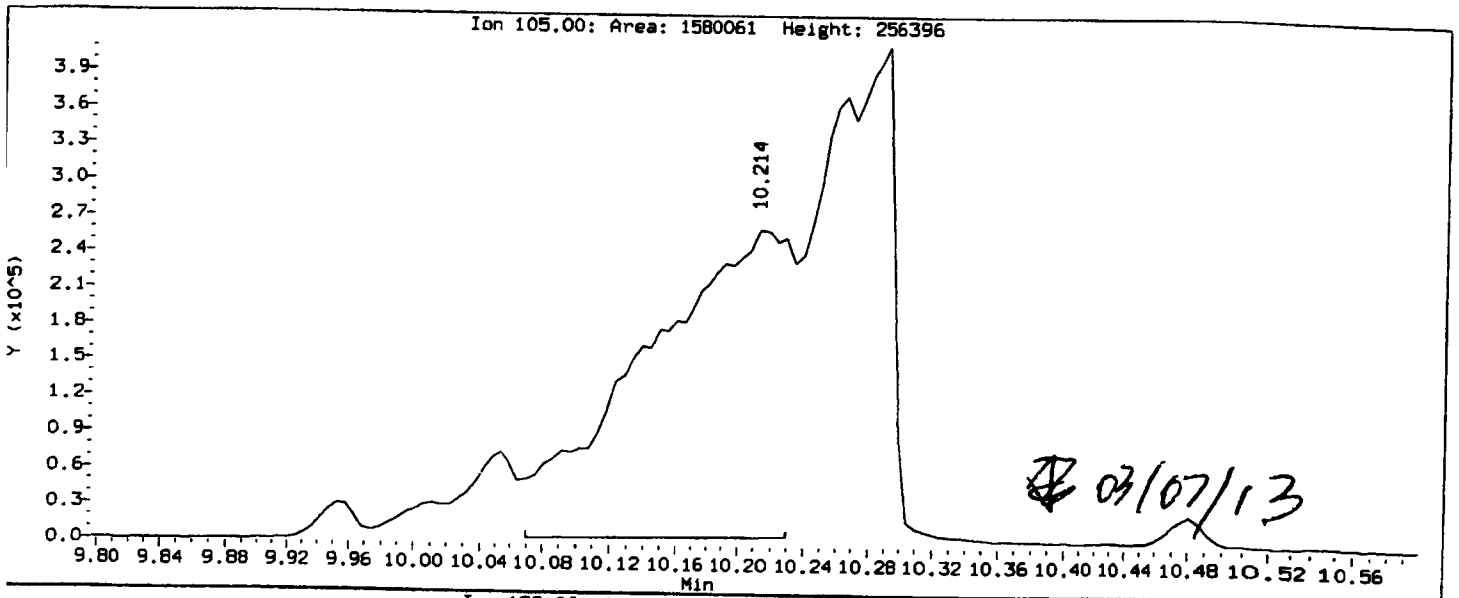
Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi

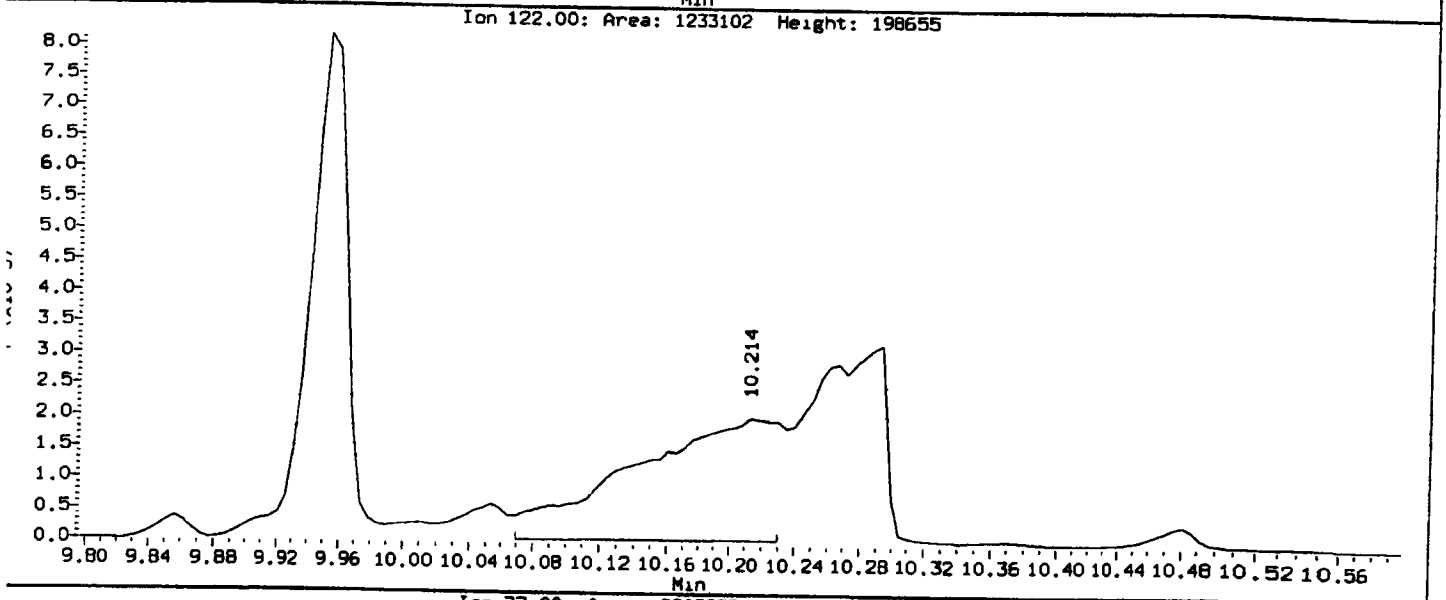


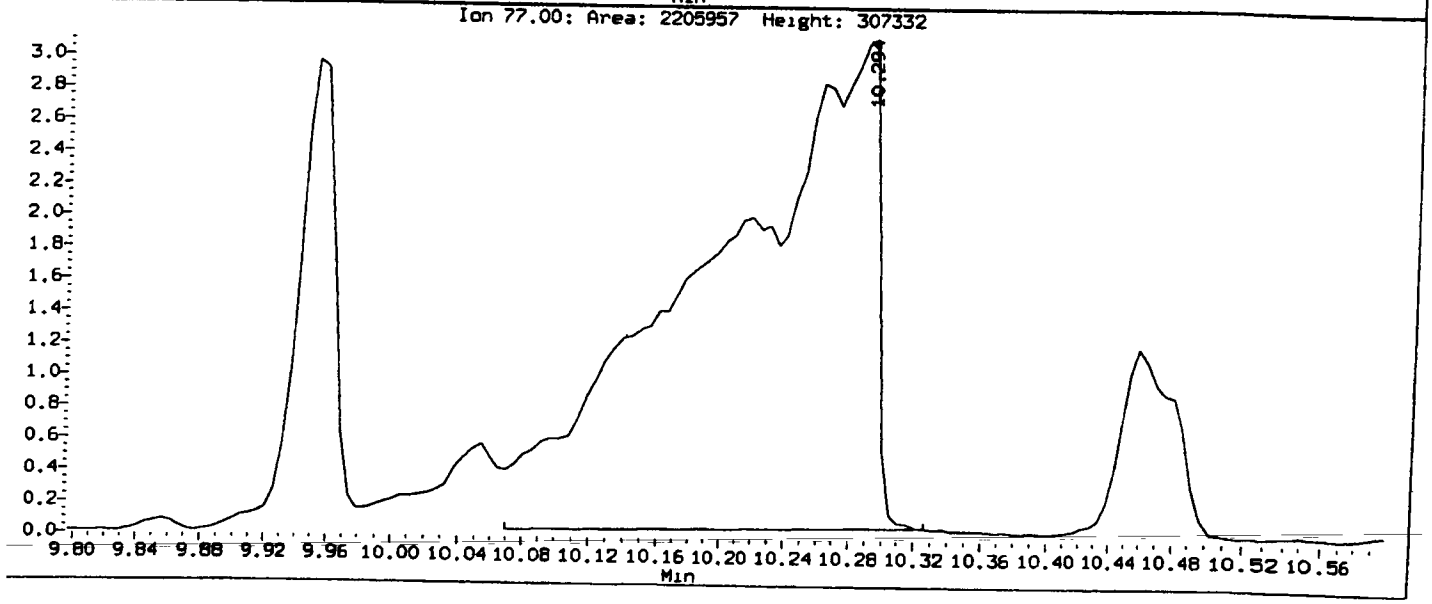
Data File: /chem2/nt6.i/20130306A.b/03061307.D
Injection Date: 06-MAR-2013 15:43
Instrument: nt6.i
Client Sample ID: IC600306

Compound: Benzoic acid
CAS Number: 65-85-0



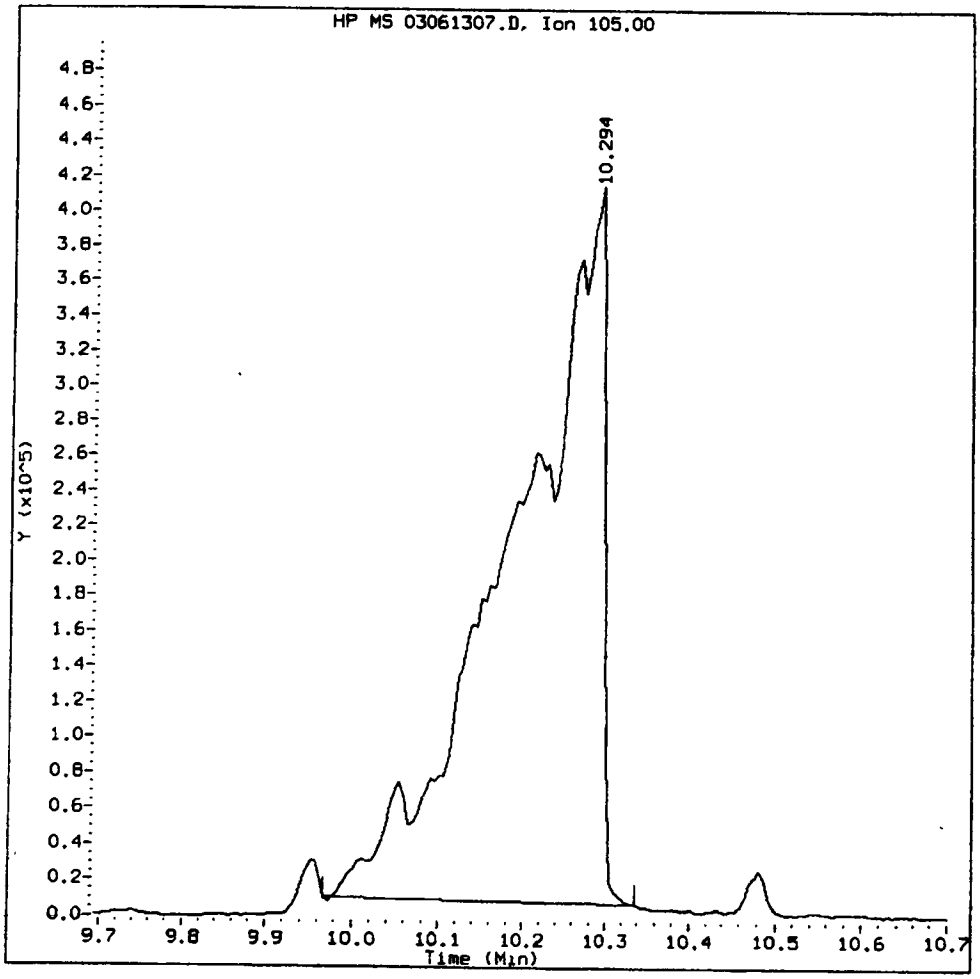
03/07/13





IC60306, /chem2/nt6.i/20130306.b/03061307.D

Benzoic acid Amount: 121.80 Area: 2999389



MANUAL INTEGRATION for Benzoic acid

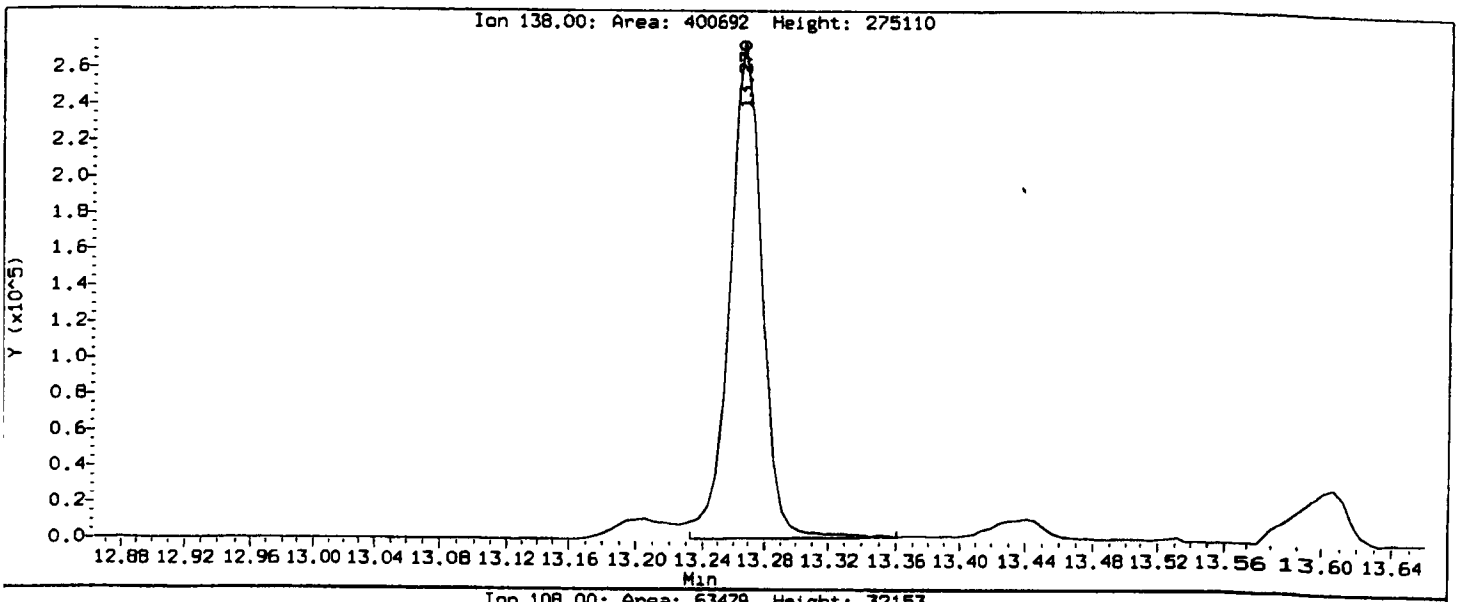
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

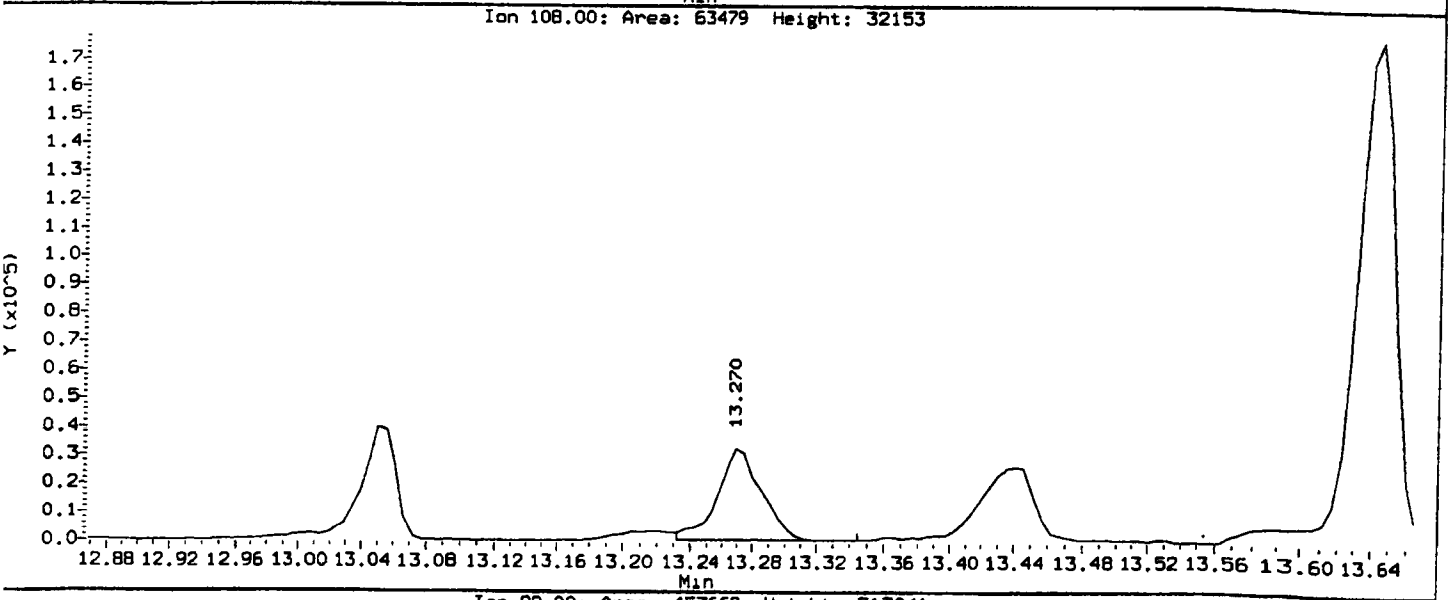
5. Other _____

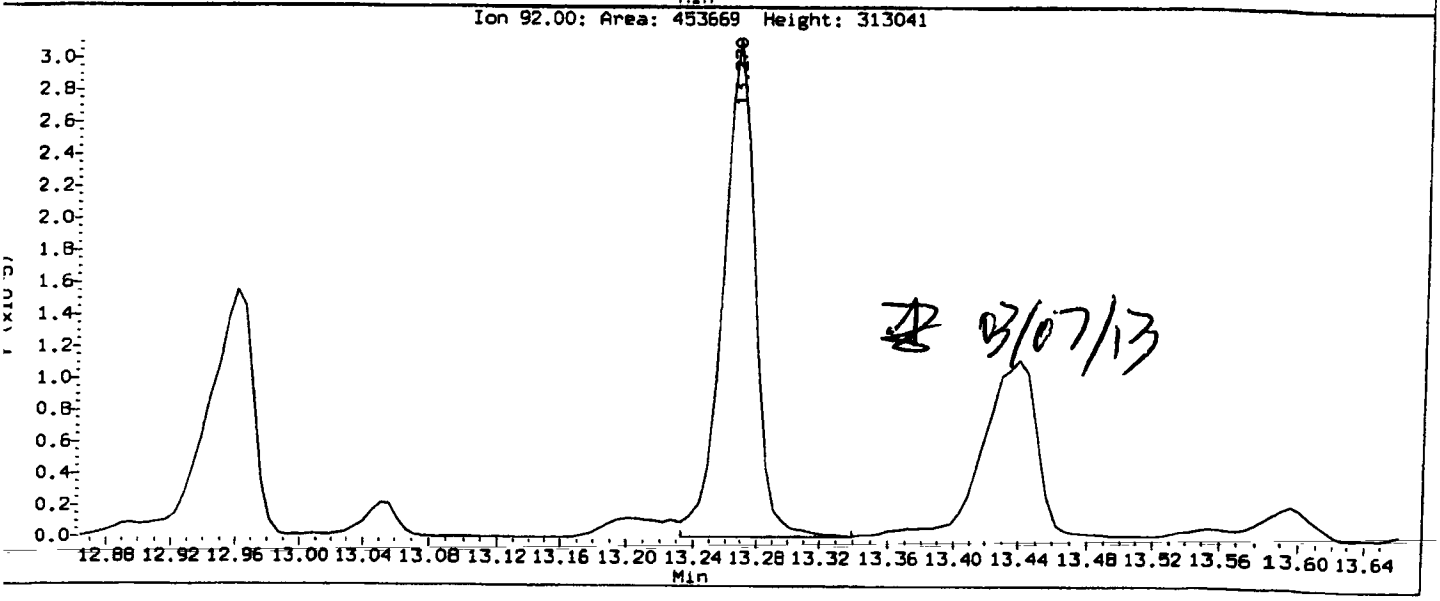
Analyst: _____ Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061307.D
Injection Date: 06-MAR-2013 15:43
Instrument: nt6.i
Client Sample ID: IC600306

Compound: 3-Nitroaniline
CAS Number: 99-09-2



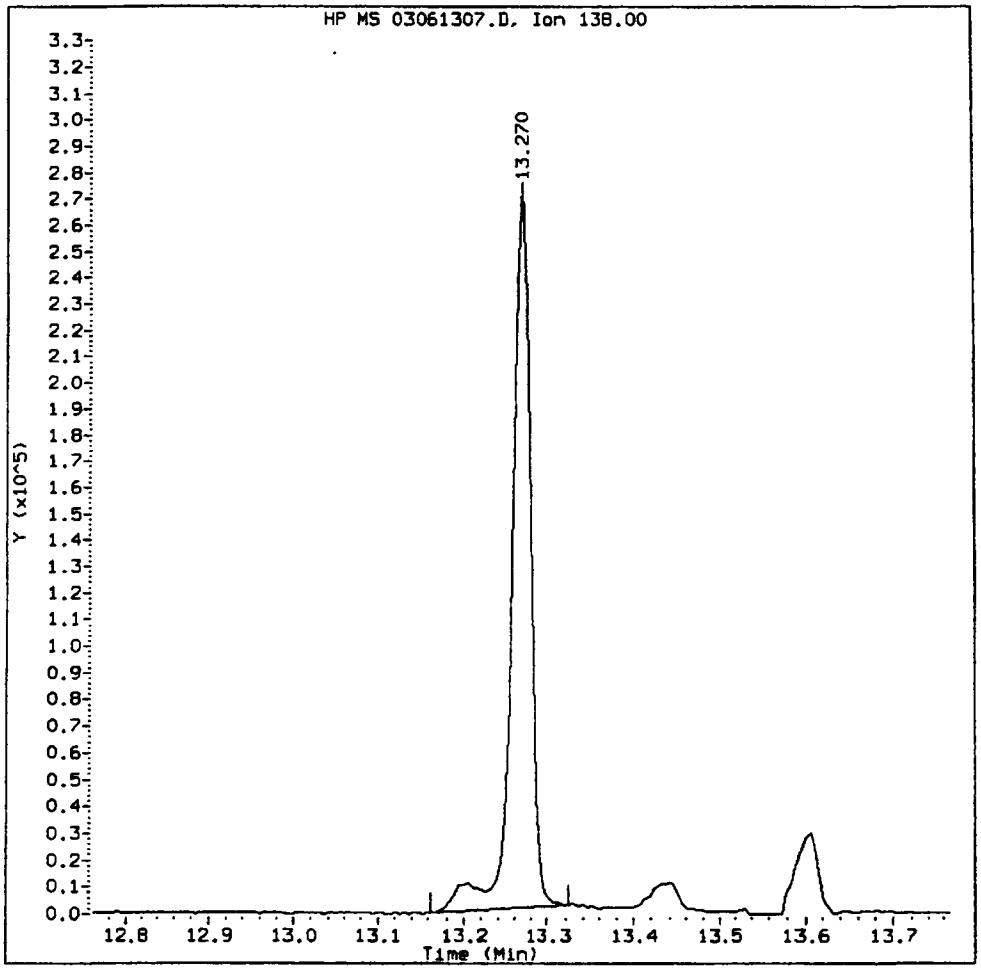




3/07/13

IC60306, /chem2/nt6.i/20130306.b/03061307.D

3-Nitroaniline Amount: 56.15 Area: 415090



MANUAL INTEGRATION for 3-Nitroaniline

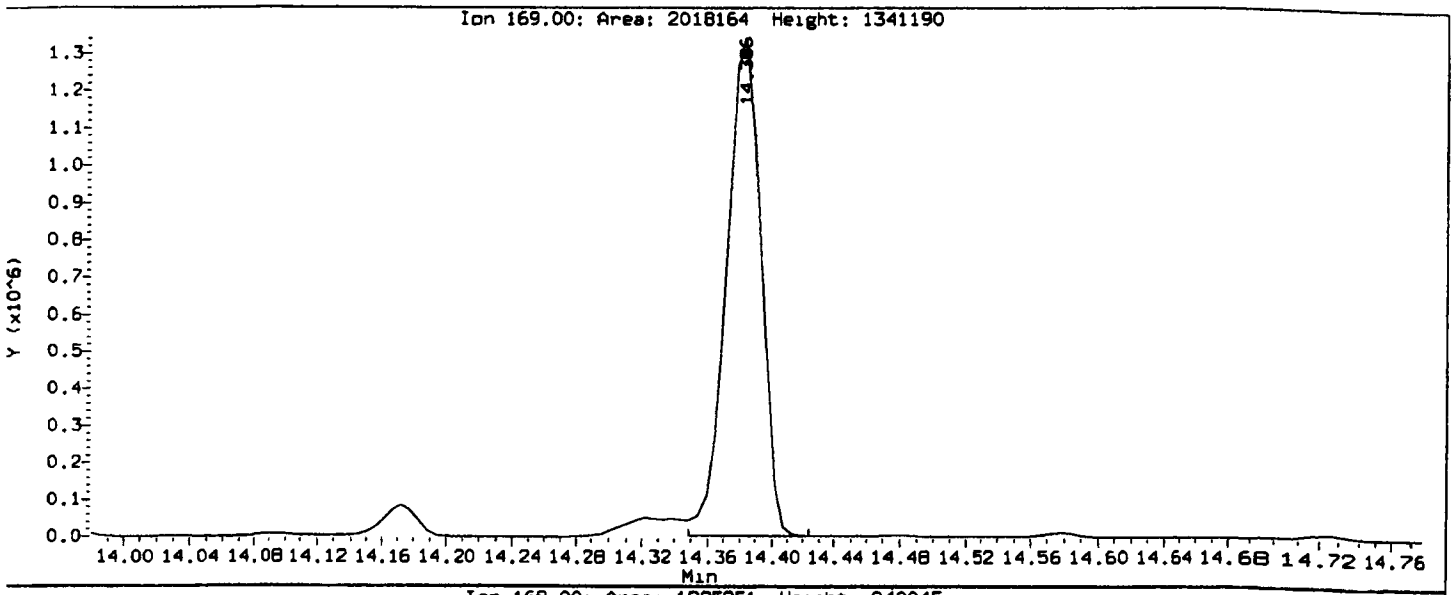
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

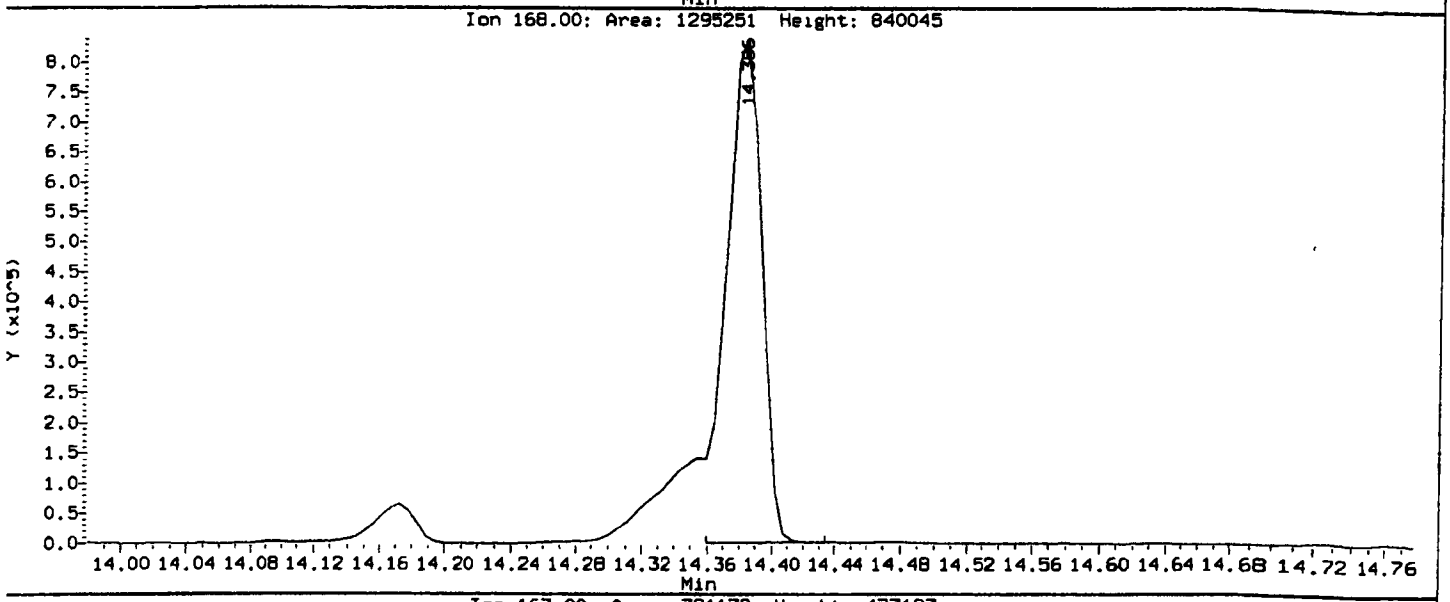
5. Other _____

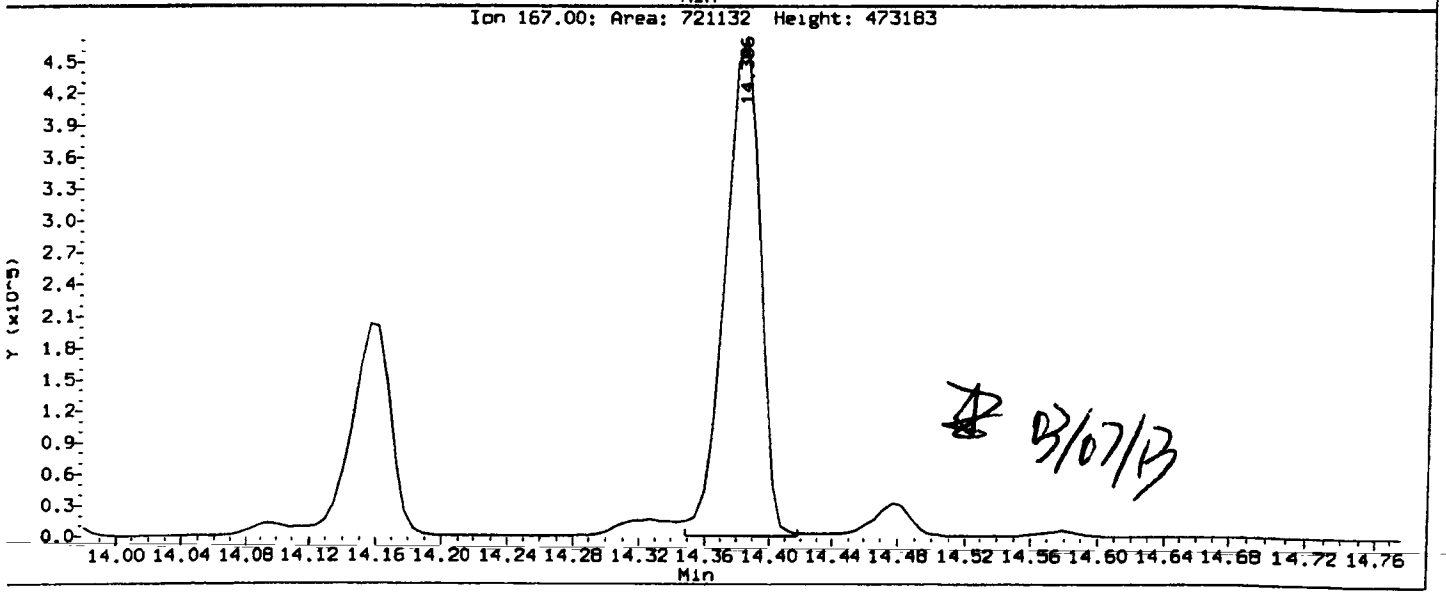
Analyst: AZ Date: 3/7/13

Data File: /chem2/nt6.i/20130306.b/03061307.D
Injection Date: 06-MAR-2013 15:43
Instrument: nt6.i
Client Sample ID: IC600306

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6



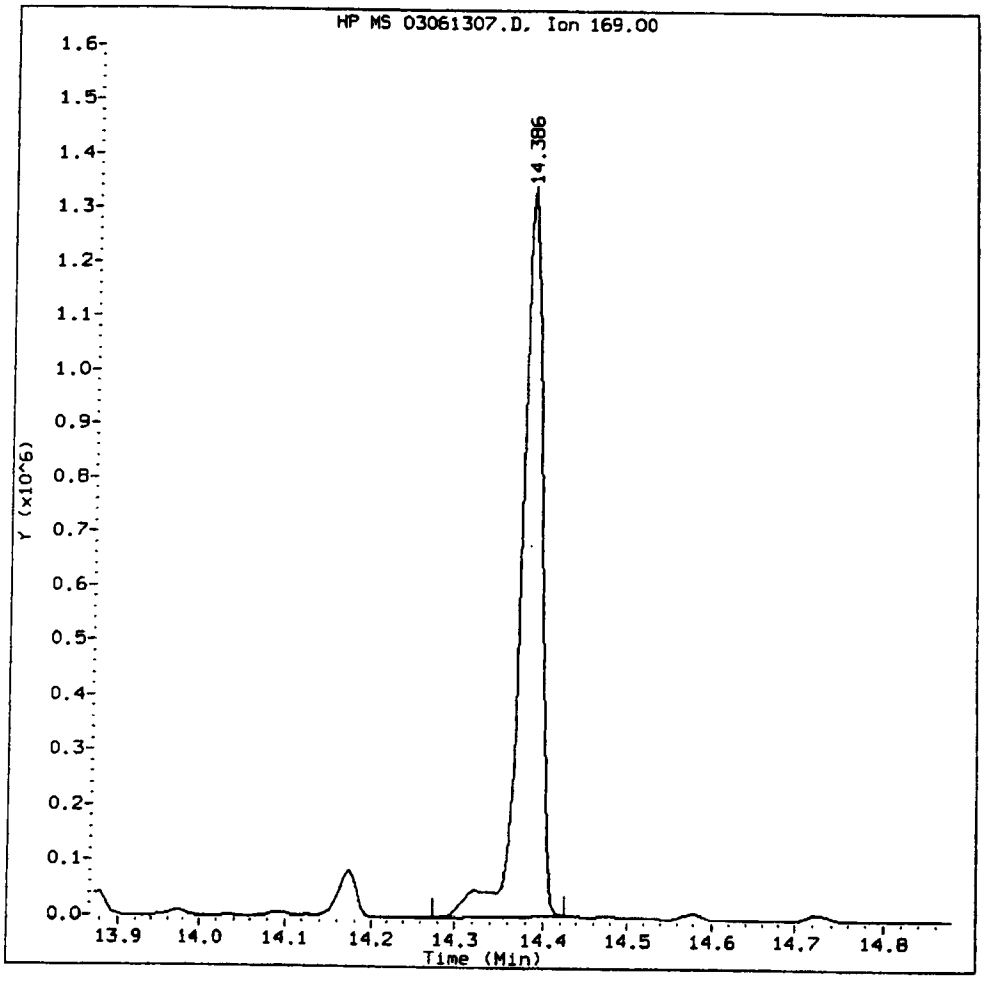




3/07/13

IC60306, /chem2/nt6.i/20130306.b/03061307.D

N-Nitrosodiphenylamine Amount: 47.70 Area: 2133517



MANUAL INTEGRATION for N-Nitrosodiphenylamine

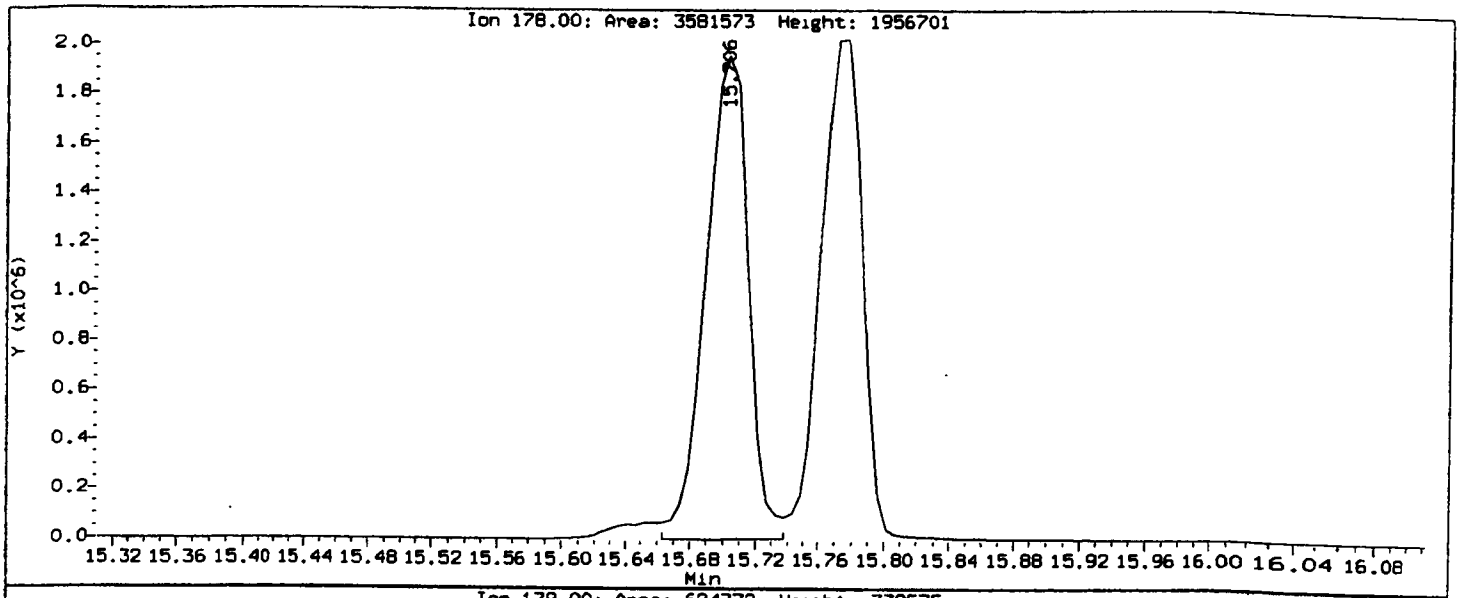
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

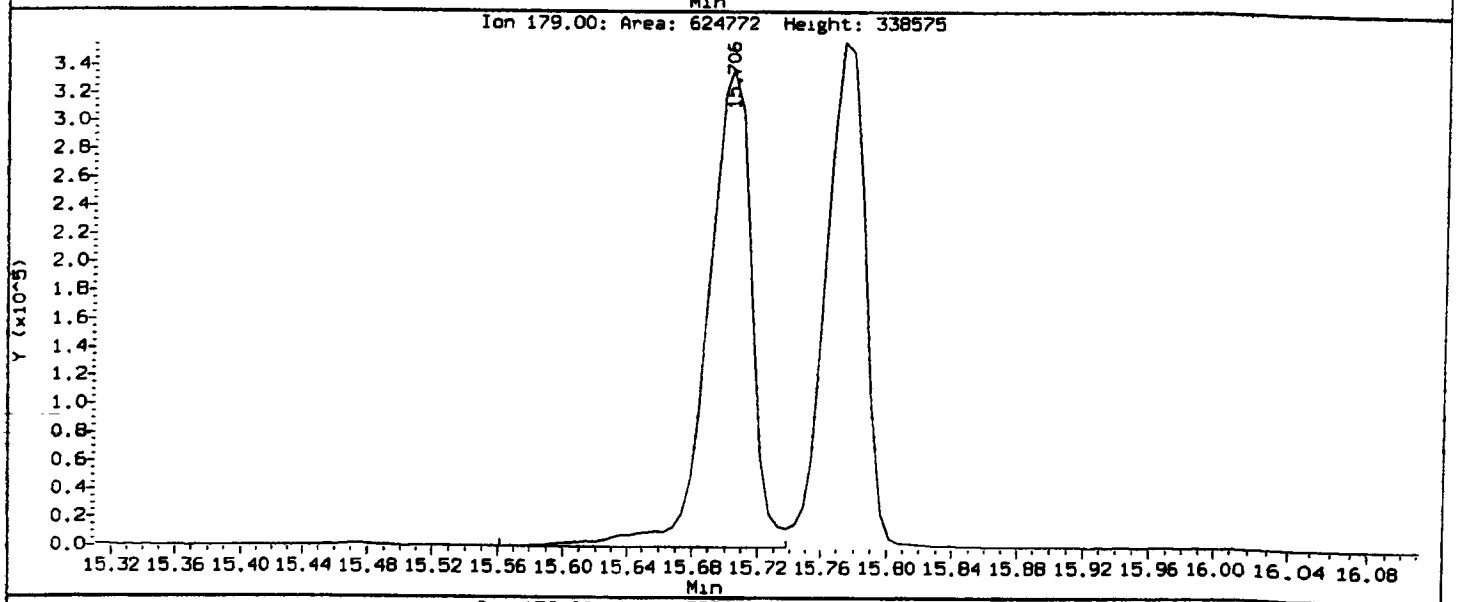
5. Other _____

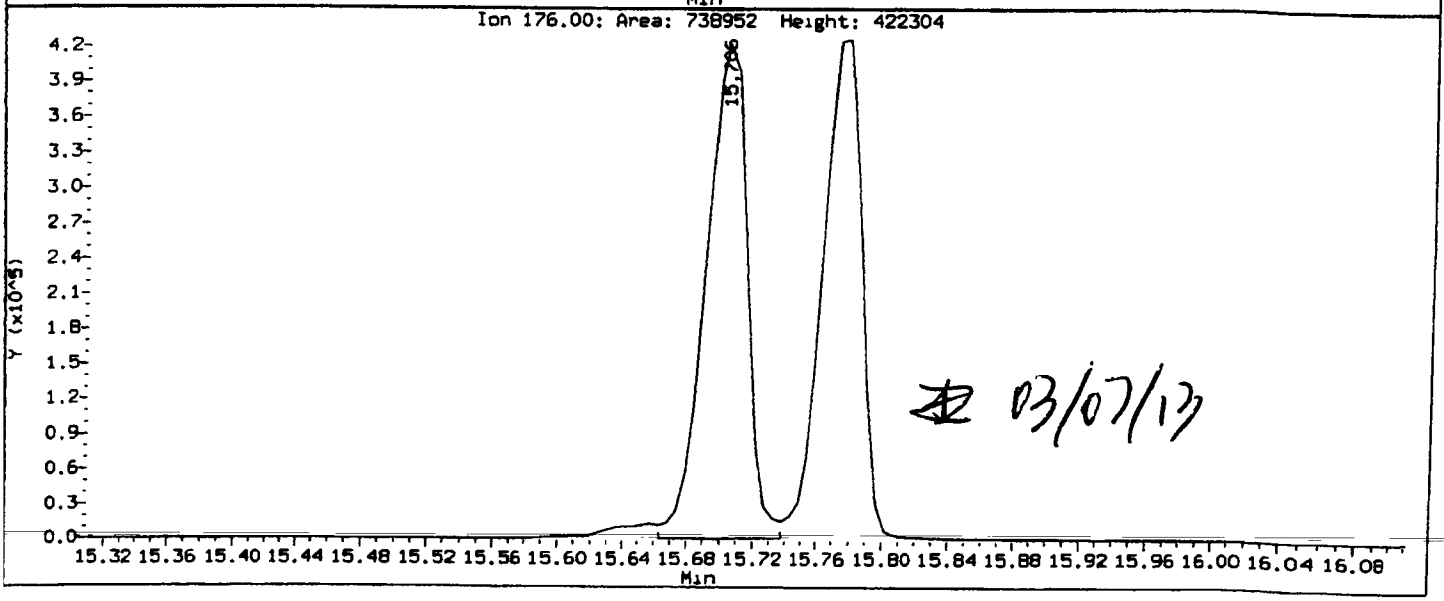
Analyst: [signature] Date: 03/07/13

Data File: /chem2/nt6.i/20130306.b/03061307.D
Injection Date: 06-MAR-2013 15:43
Instrument: nt6.i
Client Sample ID: IC600306

Compound: Phenanthrene
CAS Number: 85-01-8



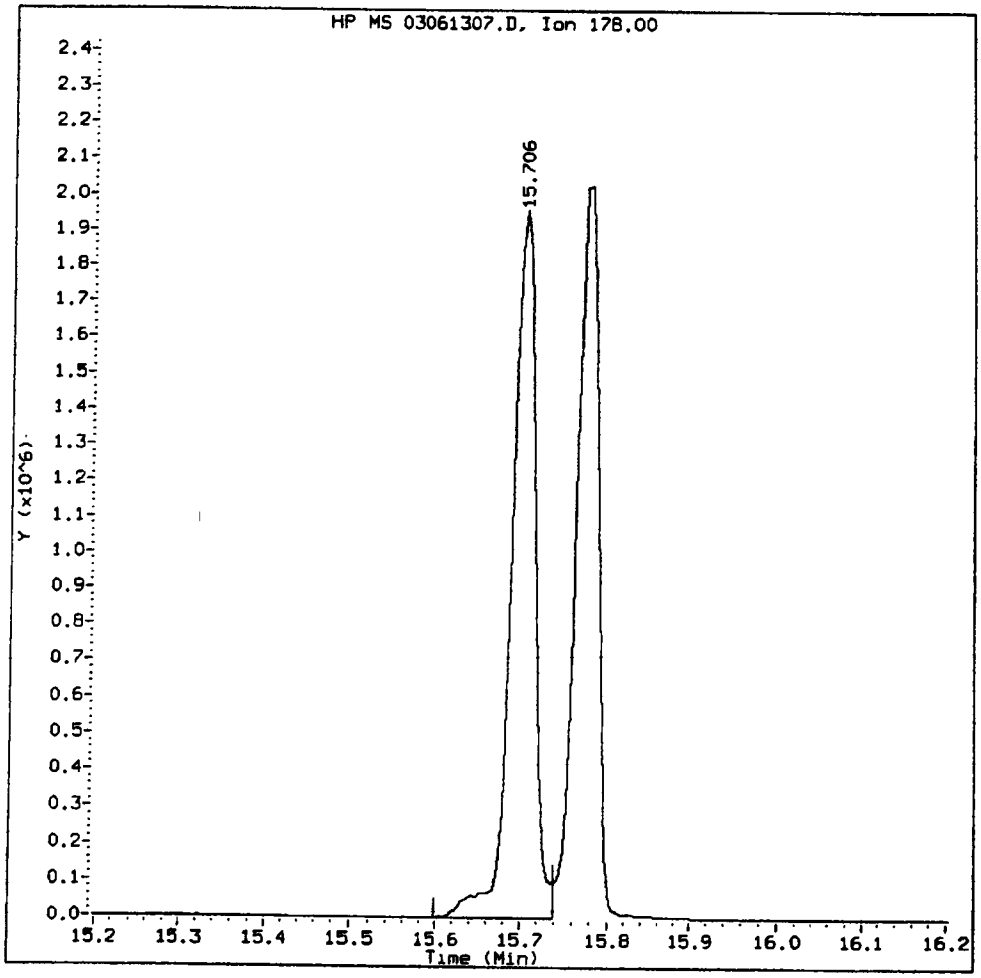




03/07/13

IC60306, /chem2/nt6.i/20130306.b/03061307.D

Phenanthrene Amount: 46.89 Area: 3708136



MANUAL INTEGRATION for Phenanthrene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 03/07/13

CO-ELUTION SUMMARY FOR FILE - 03061307.D

Lab ID: IC60306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130306.b/03061308.D
Lab Smp Id: IC80306 Client Smp ID: IC800306
Inj Date : 06-MAR-2013 16:18
Operator : JZ Inst ID: nt6.i
Smp Info : IC80306,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130306.b/SW846030613.m
Meth Date : 07-Mar-2013 11:55 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 8 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

03/07/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
;	1 2-Fluorophenol	112	Compound Not Detected.					
;	2 Phenol-d5	99	Compound Not Detected.					
	3 Phenol	94	7.969	7.954	(0.950)	2394706	80.0000	72.23
;	5 2-Chlorophenol-d4	132	Compound Not Detected.					
	4 Bis(2-Chloroethyl)ether	93	8.059	8.050	(0.961)	2042188	80.0000	70.92
	6 2-Chlorophenol	128	8.118	8.109	(0.968)	1899262	80.0000	71.60
	7 1,3-Dichlorobenzene	146	8.332	8.328	(0.994)	2025421	80.0000	65.37
*	8 1,4-Dichlorobenzene-d4	152	8.385	8.387	(1.000)	415136	20.0000	
	9 1,4-Dichlorobenzene	146	8.417	8.408	(1.004)	1948690	80.0000	64.63
;	10 1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	8.706	8.707	(1.038)	1911534	80.0000	66.31
	11 Benzyl alcohol	108	8.674	8.654	(1.034)	1396503	80.0000	77.32
	14 2,2'-oxybis(1-Chloropropane)	45	8.919	8.916	(1.064)	2983275	80.0000	65.21
	13 2-Methylphenol	108	8.898	8.878	(1.061)	1759442	80.0000	69.98
	17 Hexachloroethane	117	9.192	9.193	(1.096)	819781	80.0000	67.21
	16 N-Nitroso-di-n-propylamine	70	9.155	9.135	(1.092)	1588460	80.0000	73.51
	15 4-Methylphenol	108	9.128	9.108	(1.089)	1665095	80.0000	66.98
;	18 Nitrobenzene-d5	82	Compound Not Detected.					
	19 Nitrobenzene	77	9.358	9.343	(0.898)	1980493	80.0000	64.91
	20 Isophorone	82	9.742	9.717	(0.934)	3963893	80.0000	74.54
	21 2-Nitrophenol	139	9.860	9.851	(0.946)	1046064	80.0000	74.10
	22 2,4-Dimethylphenol	107	9.961	9.947	(0.955)	1870842	80.0000	70.08
	23 Bis(2-Chloroethoxy)methane	93	10.111	10.096	(0.970)	2367641	80.0000	67.86
	24 Benzoic acid	105	10.330	10.198	(0.991)	3889953	160.000	168.4 (M)
	25 2,4-Dichlorophenol	162	10.239	10.230	(0.982)	1466098	80.0000	71.32
	26 1,2,4-Trichlorobenzene	180	10.367	10.363	(0.994)	1711053	80.0000	66.86
*	27 Naphthalene-d8	136	10.426	10.422	(1.000)	1588502	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
	28 Naphthalene	128	10.463	10.454	(1.004)	4129583	80.0000	86.89
	29 4-Chloroaniline	127	10.602	10.588	(1.017)	1419444	80.0000	99.06
	30 Hexachlorobutadiene	225	10.768	10.764	(1.033)	1076533	80.0000	69.13
	31 4-Chloro-3-methylphenol	107	11.393	11.384	(1.093)	1599016	80.0000	73.23
	32 2-Methylnaphthalene	141	11.580	11.571	(1.111)	2389384	80.0000	61.85
	33 Hexachlorocyclopentadiene	237	11.948	11.950	(0.899)	1256994	80.0000	88.25
	34 2,4,6-Trichlorophenol	196	12.087	12.078	(0.910)	1242196	80.0000	83.35
	35 2,4,5-Trichlorophenol	196	12.141	12.137	(0.914)	1128101	80.0000	76.73
$	36 2-Fluorobiphenyl	172	Compound Not Detected.					
	37 2-Chloronaphthalene	162	12.360	12.356	(0.930)	2726374	80.0000	81.65
	38 2-Nitroaniline	65	12.595	12.580	(0.948)	1067475	80.0000	81.45
	39 Dimethylphthalate	163	12.969	12.949	(0.976)	3824957	80.0000	71.69
	40 Acenaphthylene	152	13.038	13.034	(0.981)	4470626	80.0000	63.93
	41 2,6-Dinitrotoluene	165	13.060	13.045	(0.983)	865930	80.0000	75.96
*	42 Acenaphthene-d10	164	13.289	13.286	(1.000)	886542	20.0000	
	43 3-Nitroaniline	138	13.273	13.264	(0.999)	496848	80.0000	81.26 (M)
	44 Acenaphthene	153	13.348	13.334	(1.004)	2990801	80.0000	66.06
	45 2,4-Dinitrophenol	184	13.455	13.424	(1.012)	1455877	160.000	178.8
	46 Dibenzofuran	168	13.610	13.595	(1.024)	3797229	80.0000	64.13
	47 4-Nitrophenol	109	13.567	13.547	(1.021)	435155	80.0000	75.14
	48 2,4-Dinitrotoluene	165	13.690	13.676	(1.030)	1187085	80.0000	76.98
	50 Diethylphthalate	149	14.112	14.098	(1.062)	3261747	80.0000	65.98
	49 Fluorene	166	14.165	14.156	(1.066)	2918650	80.0000	81.81
	51 4-Chlorophenyl-phenylether	204	14.176	14.172	(1.067)	1756954	80.0000	67.60
	52 4-Nitroaniline	138	14.288	14.252	(1.075)	705690	80.0000	81.16
	53 4,6-Dinitro-2-methylphenol	198	14.358	14.333	(0.916)	1683138	160.000	160.8
	54 N-Nitrosodiphenylamine	169	14.390	14.375	(0.918)	2609924	80.0000	64.16 (M)
	55 2,4,6-Tribromophenol	330	Compound Not Detected.					
	56 4-Bromophenyl-phenylether	248	14.956	14.952	(0.955)	1183353	80.0000	74.16
	57 Hexachlorobenzene	284	15.186	15.182	(0.969)	1239812	80.0000	75.36
	58 Pentachlorophenol	266	15.480	15.470	(0.988)	833386	80.0000	85.88
	59 Phenanthrene-d10	188	15.667	15.663	(1.000)	1453987	20.0000	
	60 Phenanthrene	178	15.709	15.700	(1.003)	4601992	80.0000	63.97
	61 Anthracene	178	15.784	15.770	(1.008)	4251383	80.0000	59.02
	62 Carbazole	167	16.057	16.047	(1.025)	4177813	80.0000	80.56
	63 Di-n-butylphthalate	149	16.751	16.747	(1.069)	5262499	80.0000	57.95
	64 Fluoranthene	202	17.643	17.639	(1.126)	4925676	80.0000	65.09
	65 Pyrene	202	18.001	17.992	(0.901)	5041196	80.0000	66.18
	66 Terphenyl-d14	244	Compound Not Detected.					
	67 Butylbenzylphthalate	149	19.171	19.167	(0.959)	2514680	80.0000	67.51
	68 Benzo(a)anthracene	228	19.956	19.953	(0.999)	4549328	80.0000	71.54
	69 Chrysene-d12	240	19.983	19.979	(1.000)	1394767	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.951	19.953	(0.998)	1228873	80.0000	70.24
	71 Chrysene	228	20.026	20.017	(1.002)	4316537	80.0000	66.49
	72 bis(2-Ethylhexyl)phthalate	149	20.149	20.150	(0.956)	3297035	80.0000	71.04
	134 Di-n-octylphthalate-d4	153	21.078	21.085	(1.000)	1577157	20.0000	
	73 Di-n-octylphthalate	149	21.089	21.096	(1.000)	5201474	80.0000	69.85

	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	21.618	21.609	(0.977)	4864908	80.0000	80.68
75	Benzo(k)fluoranthene	252	21.655	21.641	(0.978)	4926982	80.0000	81.46
187	Total Benzofluoranthenes	252	21.655	21.641	(0.978)	9068544	160.000	129.2
76	Benzo(a)pyrene	252	22.066	22.057	(0.997)	4550492	80.0000	69.86
* 77	Perylene-d12	264	22.136	22.137	(1.000)	1523971	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.781	23.767	(1.074)	5915162	80.0000	75.46
79	Dibenzo(a,h)anthracene	278	23.808	23.788	(1.076)	4704710	80.0000	76.22
80	Benzo(g,h,i)perylene	276	24.251	24.226	(1.096)	5163322	80.0000	77.02
90	N-Nitrosodimethylamine	74	3.962	3.889	(0.472)	1562474	80.0000	79.92
103	Pyridine	79	3.914	3.851	(0.467)	2412972	80.0000	77.83
91	Aniline	93	7.947	7.938	(0.948)	2567853	80.0000	69.90
105	1-methylnaphthalene	141	11.751	11.747	(1.127)	2492604	80.0000	63.52
93	Benzidine	184	17.873	17.874	(0.894)	580818	80.0000	85.40
111	Azobenzene (1,2-DP-Hydrazine)	77	14.438	14.423	(1.086)	3533789	80.0000	62.91
143	1,4-Dioxane	88	3.145	3.103	(0.375)	1031006	80.0000	76.55
$ 137	d8-1,4-Dioxane	96	3.086	3.039	(0.368)	961171	80.0000	76.25
144	alpha-Terpineol	59	10.485	10.470	(1.006)	1341096	80.0000	66.39
177	p-Benzoquinone	82	7.092	7.083	(0.680)	489430	80.0000	80.68
98	Retene	219	18.546	18.548	(0.928)	2364163	80.0000	71.92
99	Perylene	252	22.179	22.175	(1.002)	3766561	80.0000	66.01
133	Butylatedhydroxytoluene	205	13.450	13.440	(1.012)	2177090	80.0000	81.45
115	Tributyl Phosphate	99	14.486	14.461	(0.925)	3817283	80.0000	82.14
116	Dibutyl Phenyl Phosphate	175	16.190	16.192	(1.033)	1918467	80.0000	49.90
117	Butyl Diphenyl Phosphate	94	17.878	17.880	(0.895)	853223	80.0000	66.44
118	Triphenyl Phosphate	326	19.486	19.482	(0.975)	977320	80.0000	80.02
123	Acetophenone	105	9.090	9.076	(1.084)	2797491	80.0000	71.59
168	Pentachlorobenzene	250	13.647	13.638	(1.027)	1407461	80.0000	72.48
113	Diphenyl Oxide	170	12.541	12.538	(0.944)	2312992	80.0000	67.02
112	Biphenyl	154	12.349	12.345	(0.929)	2906690	80.0000	82.21
120	2,3,4,6-Tetrachlorophenol	232	13.882	13.873	(1.045)	1039446	80.0000	82.14
151	1,2,4,5-Tetrachlorobenzene	216	11.911	11.907	(0.896)	1558330	80.0000	71.96
110	Tetrachloroguaiacol	247	15.613	15.599	(0.997)	1120414	160.000	146.9
109	3,4,5-Trichloroguaiacol	213	13.978	13.969	(0.892)	631624	80.0000	76.05
181	3,4,6-Trichloroguaiacol	211	14.096	14.087	(1.681)	701991	80.0000	74.11
108	4,5,6-Trichloroguaiacol	213	15.004	15.000	(1.129)	636275	80.0000	76.74
184	3,4-Dichloroguaiacol	192	12.435	12.425	(1.483)	679803	80.0000	75.59
107	4,5-Dichloroguaiacol	192	13.220	13.205	(0.995)	1631611	160.000	150.6
182	4,6-Dichloroguaiacol	192	13.220	13.205	(1.577)	1631611	160.000	148.7
185	4-Chloroguaiacol	115	11.345	11.336	(1.353)	471670	40.0000	40.44
186	Carbaryl	144	16.473	16.459	(1.051)	2446617	80.0000	72.82
178	2-Benzyl-4-Chlorophenol	218	16.425	16.411	(1.048)	926358	80.0000	76.92
106	Guaiacol	124	9.347	9.332	(1.115)	1407845	80.0000	65.19
188	2,6-Dichlorophenol	162	10.613	10.598	(1.266)	1300919	80.0000	70.78
189	N-Nitrosomethylethylamine	88	5.634	5.620	(0.672)	1095419	80.0000	79.86

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: 03061308.D
Lab Smp Id: IC80306
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: IC800306
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

	COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8	1,4-Dichlorobenze	458117	229058	916234	415136	-9.38
27	Naphthalene-d8	1718341	859170	3436682	1588502	-7.56
42	Acenaphthene-d10	1010041	505020	2020082	886542	-12.23
59	Phenanthrene-d10	1666734	833367	3333468	1453987	-12.76
69	Chrysene-d12	1675752	837876	3351504	1394767	-16.77
134	Di-n-octylphthala	2026355	1013178	4052710	1577157	-22.17
77	Perylene-d12	1637524	818762	3275048	1523971	-6.93

	COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8	1,4-Dichlorobenze	8.39	7.89	8.89	8.39	-0.02
27	Naphthalene-d8	10.42	9.92	10.92	10.43	0.04
42	Acenaphthene-d10	13.29	12.79	13.79	13.29	0.03
59	Phenanthrene-d10	15.66	15.16	16.16	15.67	0.02
69	Chrysene-d12	19.98	19.48	20.48	19.98	0.02
134	Di-n-octylphthala	21.09	20.59	21.59	21.08	-0.03
77	Perylene-d12	22.14	21.64	22.64	22.14	-0.01

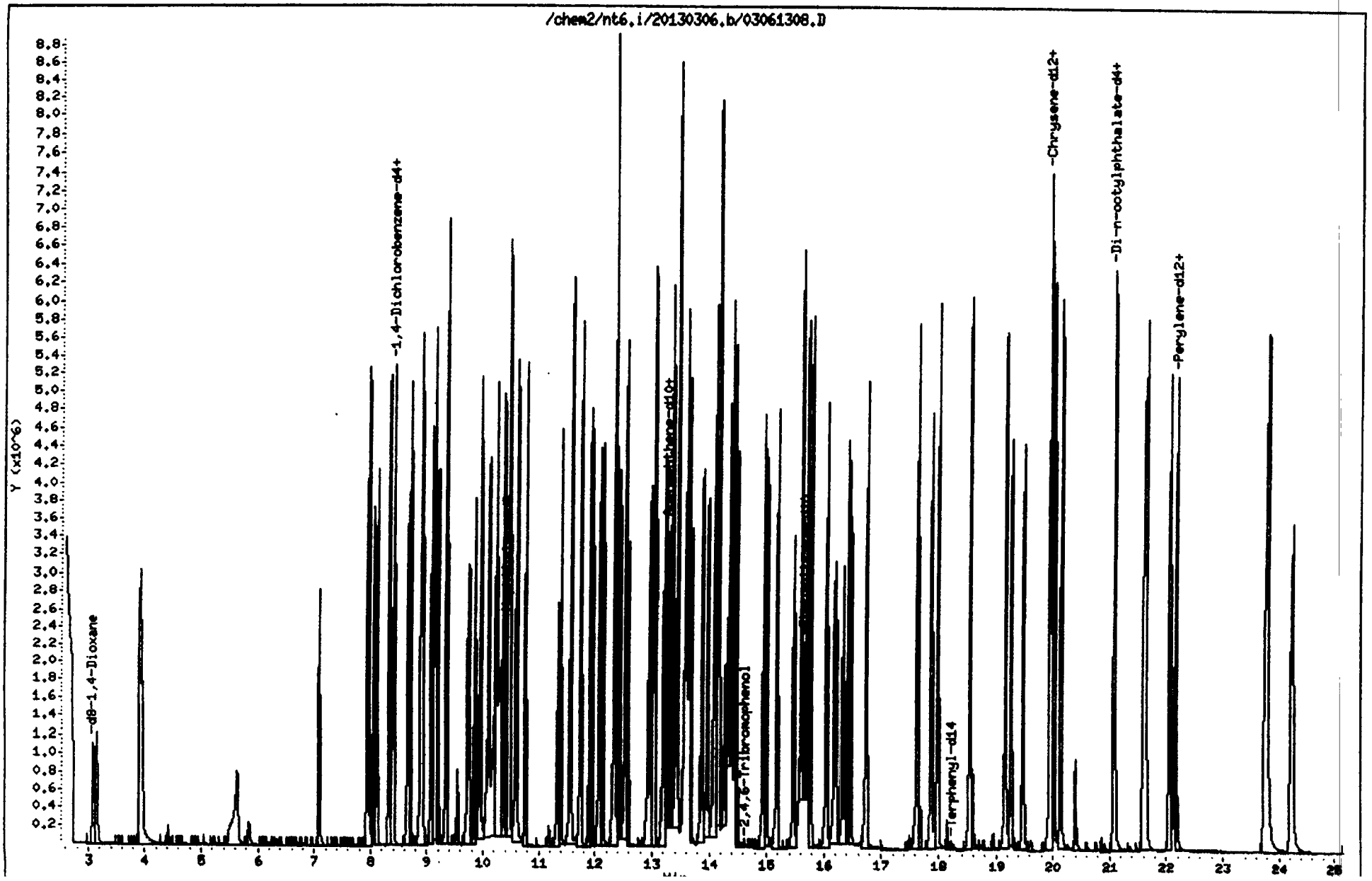
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130306.b/03061308.D
Date : 06-MAR-2013 16:18
Client ID: IC800306
Sample Info: IC80306,

Instrument: nt6.i

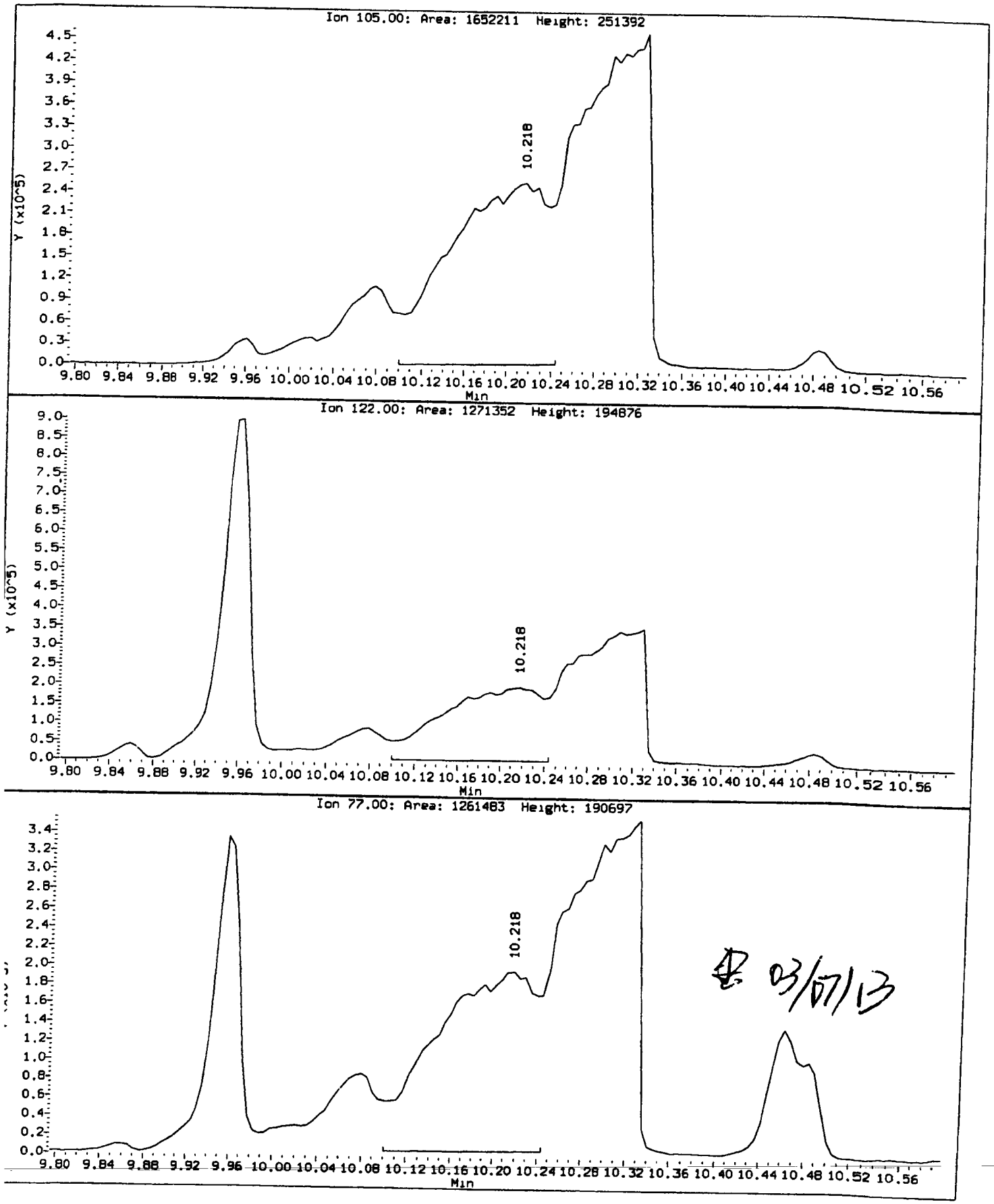
Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



Data File: /chem2/nt6.i/20130306A.b/03061308.D
Injection Date: 06-MAR-2013 16:18
Instrument: nt6.i
Client Sample ID: ICB00306

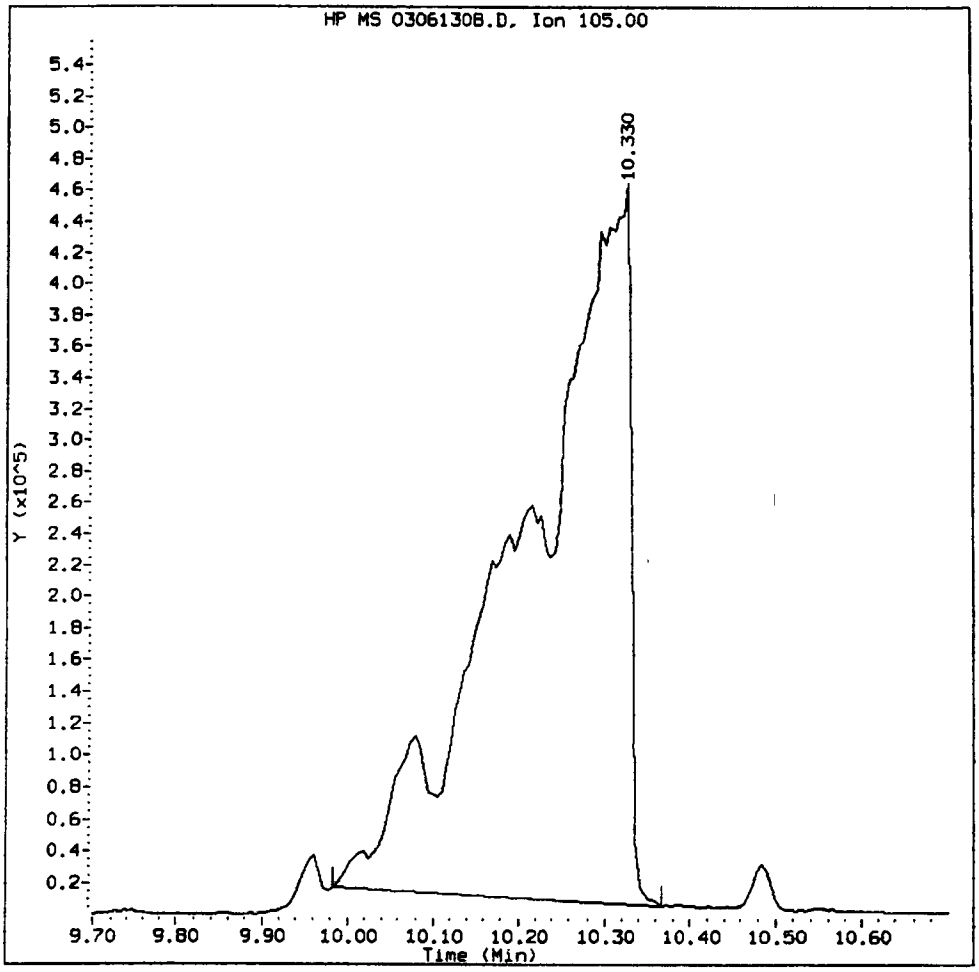
Compound: Benzoic acid
CAS Number: 65-85-0



03/07/13

IC80306, /chem2/nt6.i/20130306.b/03061308.D

Benzoic acid Amount: 168.44 Area: 3889953



MANUAL INTEGRATION for Benzoic acid

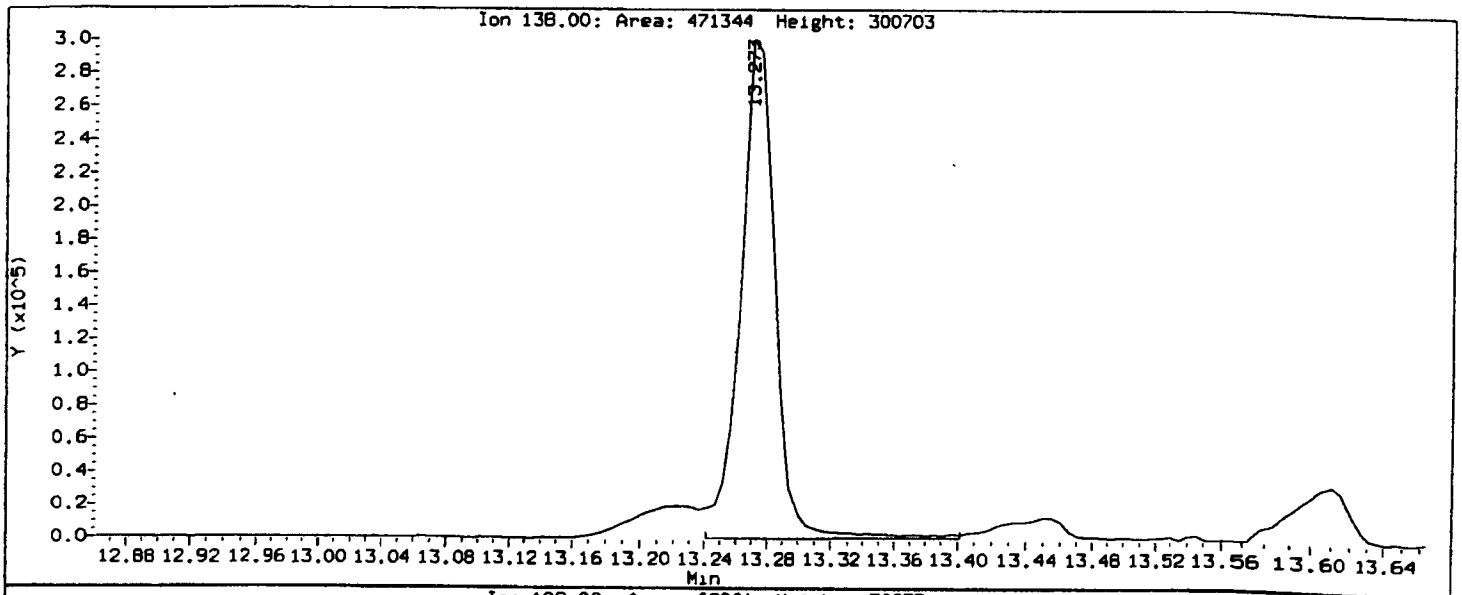
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

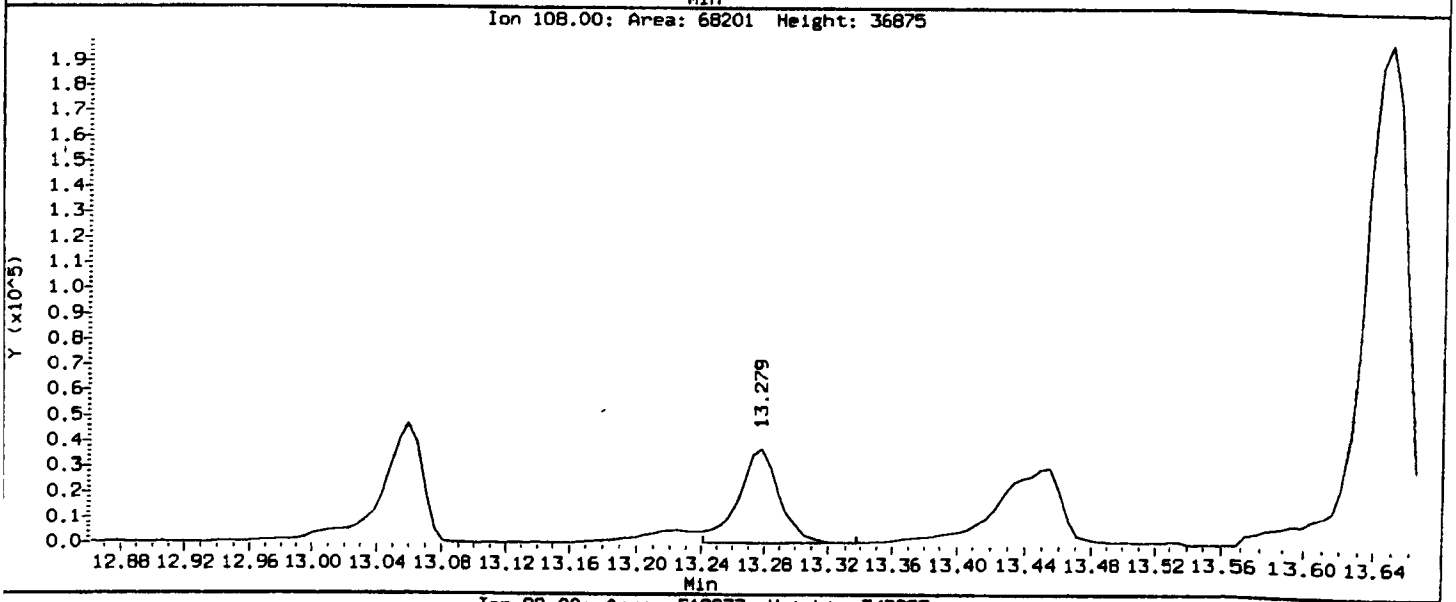
5. Other _____

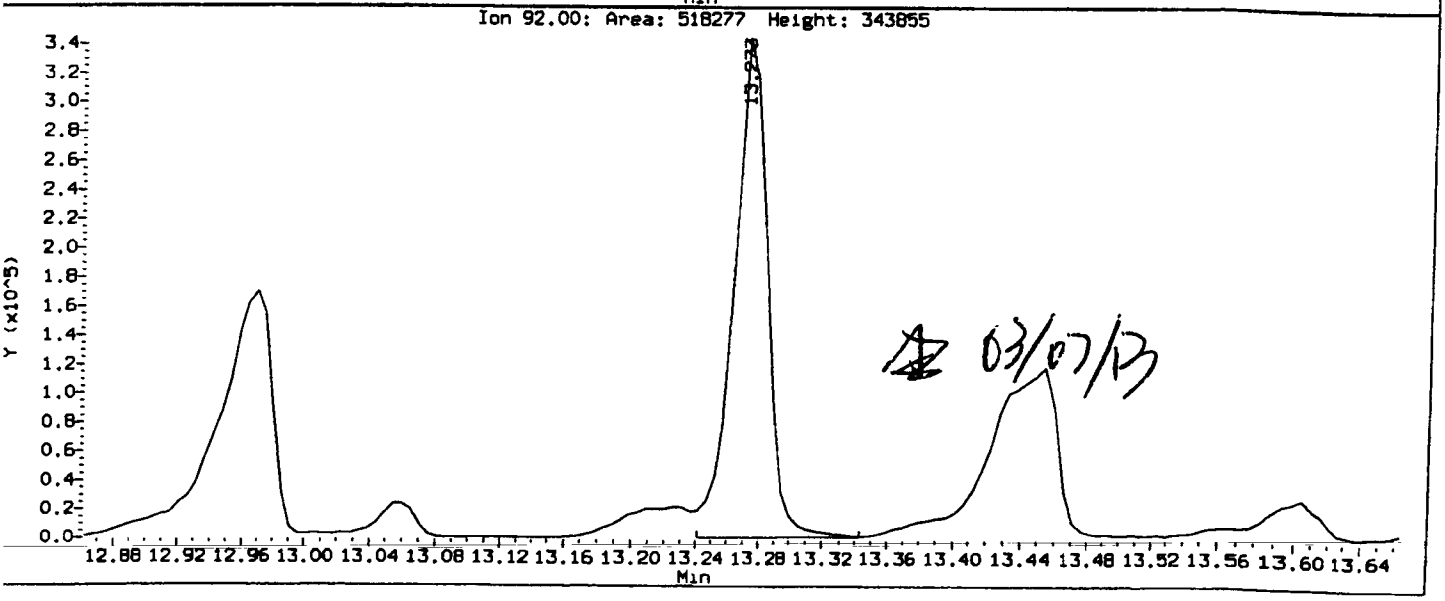
Analyst: [signature] Date: 03/07/13

Data File: /chem2/nt6.i/20130306A.b/03061308.D
Injection Date: 06-MAR-2013 16:18
Instrument: nt6.i
Client Sample ID: ICB00306

Compound: 3-Nitroaniline
CAS Number: 99-09-2



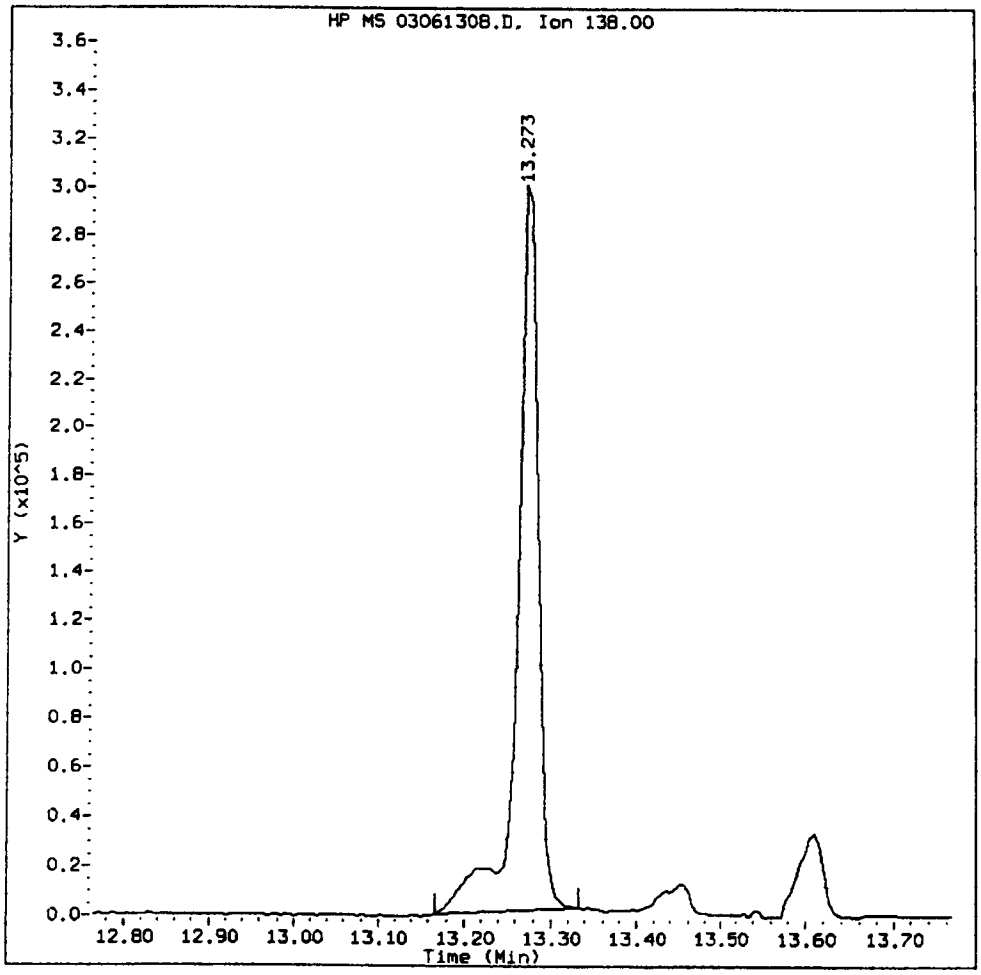




03/07/13

IC80306, /chem2/nt6.i/20130306.b/03061308.D

3-Nitroaniline Amount: 81.26 Area: 496848



MANUAL INTEGRATION for 3-Nitroaniline

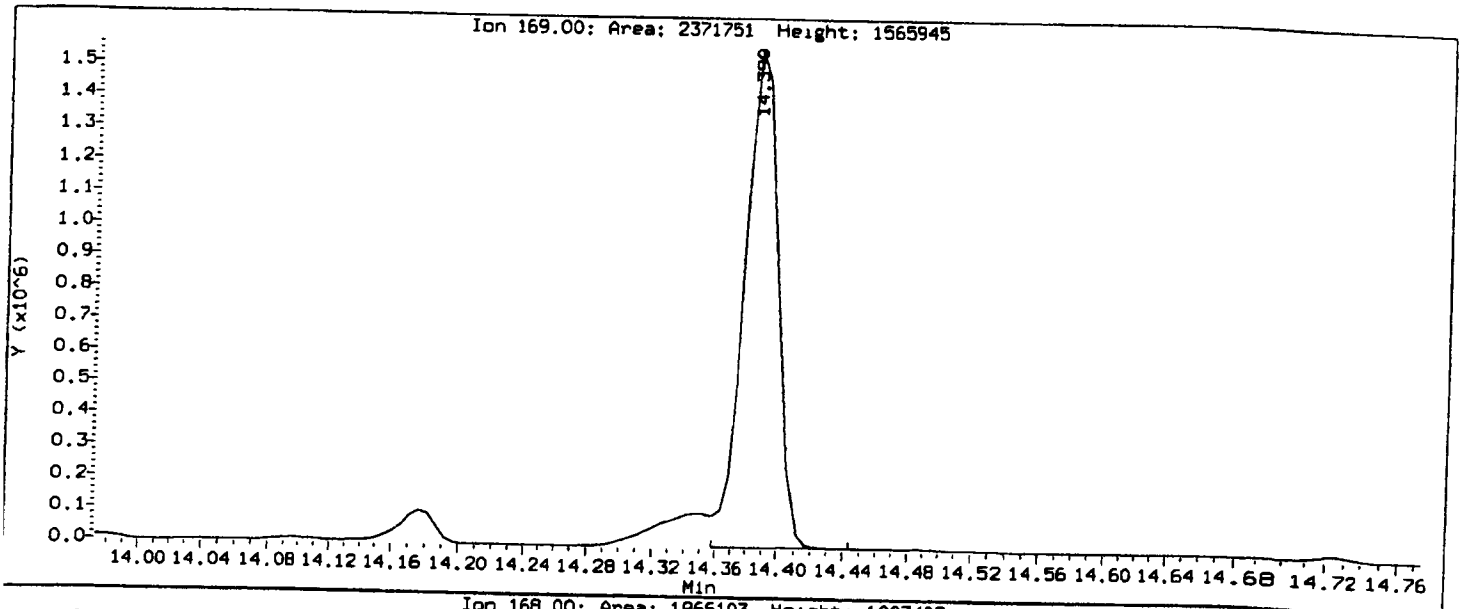
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

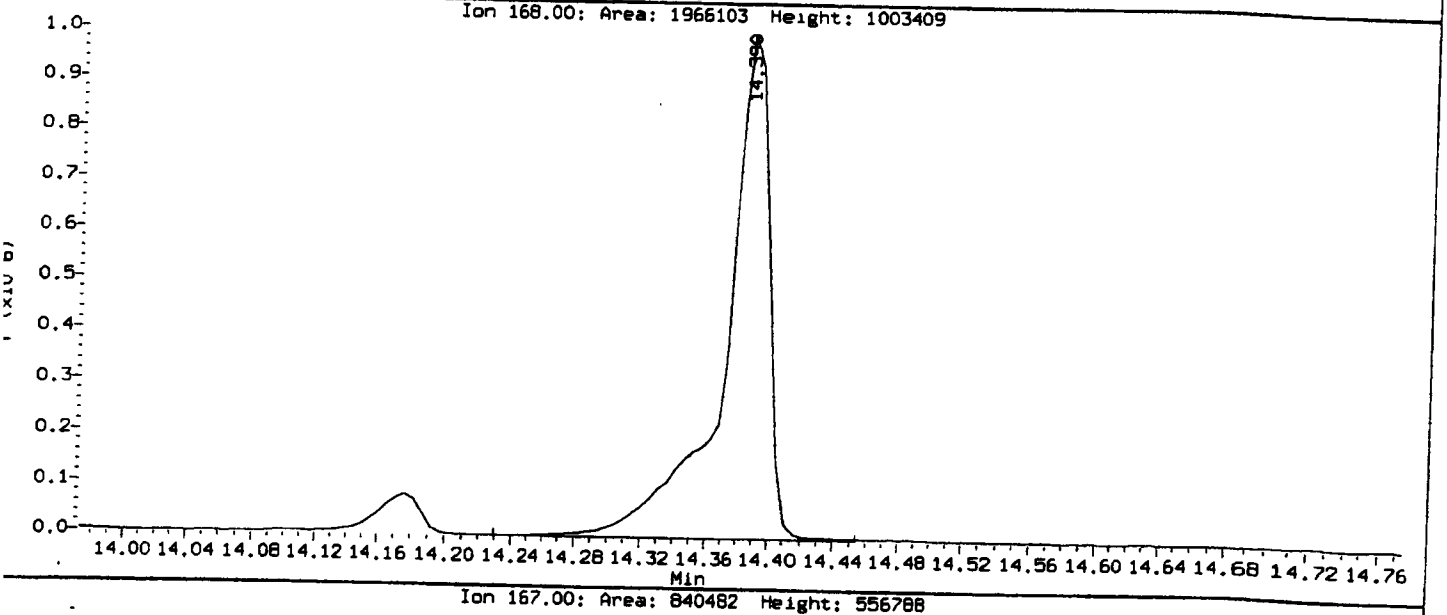
5. Other _____

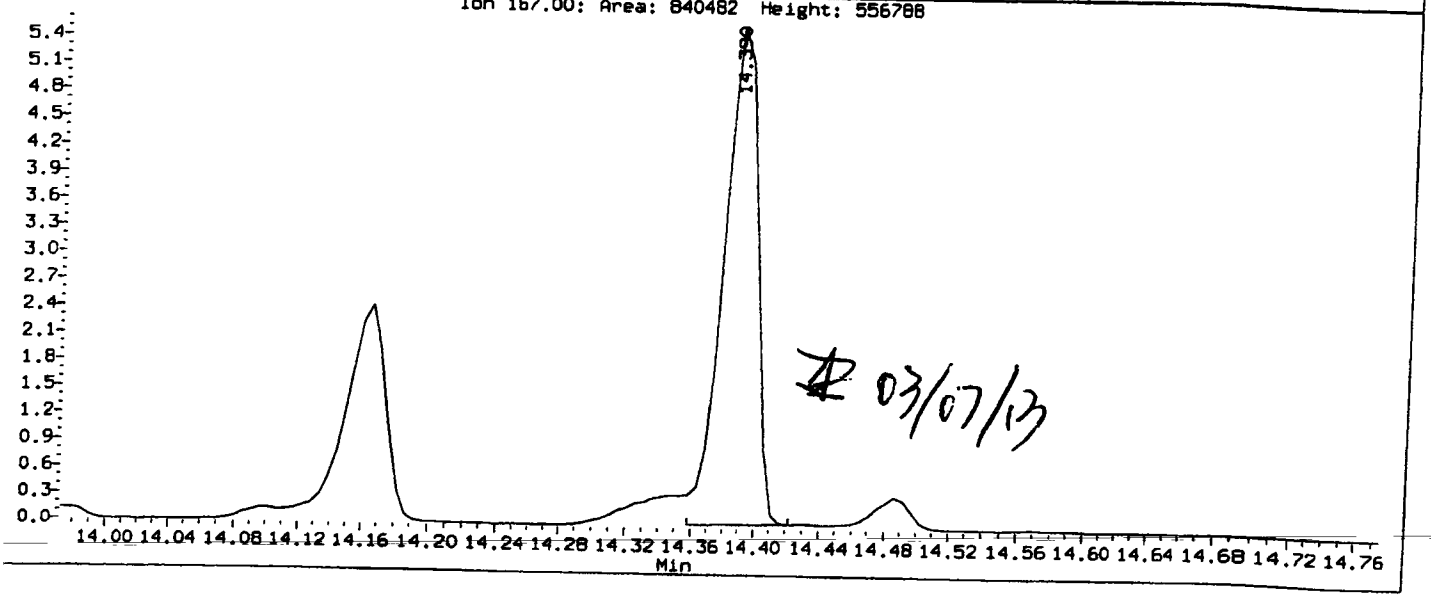
Analyst: [signature] Date: 03/07/13

Data File: /chem2/nt6.i/20130306A.b/03061308.D
Injection Date: 06-MAR-2013 16:18
Instrument: nt6.i
Client Sample ID: IC800306

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6



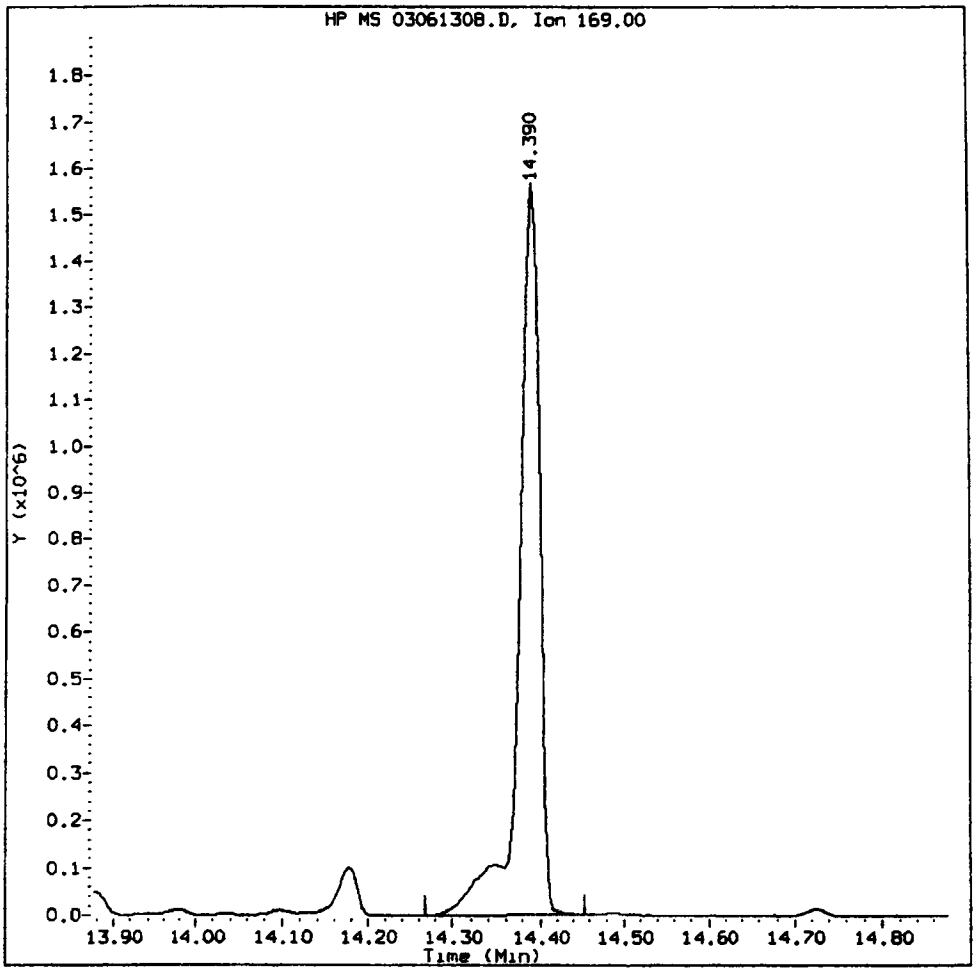




03/07/13

IC80306, /chem2/nt6.i/20130306.b/03061308.D

N-Nitrosodiphenylamine Amount: 64.16 Area: 2609924



MANUAL INTEGRATION for N-Nitrosodiphenylamine

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 03/07/13

CO-ELUTION SUMMARY FOR FILE - 03061308.D

Lab ID: IC80306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

)ata file : /chem2/nt6.i/20130306.b/03061309.D
;ab Smp Id: ICV0306 Client Smp ID: ICV0306
:nj Date : 06-MAR-2013 16:52
)perator : JZ Inst ID: nt6.i
;mp Info : ICV0306,
lisc Info : 13-
:omment : 1ul Injection
lethod : /chem2/nt6.i/20130306.b/SW846030613.m
leth Date : 07-Mar-2013 14:16 jianqing Quant Type: ISTD
:al Date : 06-MAR-2013 16:18 Cal File: 03061308.D
.ls bottle: 9 QC Sample: LCS
)il Factor: 1.00000
:ntegrator: HP RTE Compound Sublist: ICVS.sub
'arget Version: 3.50

:oncentration Formula: Amt * DF * Vt/Vo * CpndVariable 03/07/13

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

:pnd Variable Local Compound Variable

	xmpounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
1	2-Fluorophenol	112	6.429	6.432	(0.767)	680731	24.0771	24.08
2	Phenol-d5	99	7.930	7.933	(0.946)	780413	23.5802	23.58
3	Phenol	94	7.952	7.969	(0.948)	902305	25.8922	25.89
5	2-Chlorophenol-d4	132	8.080	8.082	(0.964)	662890	23.6945	23.69
4	Bis(2-Chloroethyl)ether	93	8.048	8.059	(0.960)	698741	23.0879	23.09
6	2-Chlorophenol	128	8.107	8.118	(0.967)	729337	26.1581	26.16
7	1,3-Dichlorobenzene	146	8.326	8.332	(0.993)	749128	23.0049	23.00
8	1,4-Dichlorobenzene-d4	152	8.384	8.385	(1.000)	436336	20.0000	
9	1,4-Dichlorobenzene	146	8.411	8.417	(1.003)	733836	23.1542	23.15
10	1,2-Dichlorobenzene-d4	152	8.684	8.681	(1.036)	461465	23.4361	23.44
12	1,2-Dichlorobenzene	146	8.705	8.706	(1.038)	693297	22.8826	22.88
11	Benzyl alcohol	108	8.651	8.674	(1.032)	448309	23.6141	23.61
14	2,2'-oxybis(1-Chloropropane)	45	8.908	8.919	(1.062)	1134956	23.6031	23.60
13	2-Methylphenol	108	8.876	8.898	(1.059)	723080	27.3638	27.36
17	Hexachloroethane	117	9.191	9.192	(1.096)	297182	23.1817	23.18
16	N-Nitroso-di-n-propylamine	70	9.127	9.155	(1.089)	503015	22.1475	22.15

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
15	4-Methylphenol	108	9.106	9.128	(1.086)	729199	27.9061	27.91
$ 18	Nitrobenzene-d5	82	9.309	9.311	(0.893)	772979	24.0494	24.05
19	Nitrobenzene	77	9.335	9.358	(0.896)	711278	23.1206	23.12
20	Isophorone	82	9.715	9.742	(0.932)	1353521	25.2423	25.24
21	2-Nitrophenol	139	9.848	9.860	(0.945)	393118	27.6169	27.62
22	2,4-Dimethylphenol	107	9.944	9.961	(0.954)	711827	26.4423	26.44
23	Bis(2-Chloroethoxy)methane	93	10.094	10.111	(0.969)	770762	21.9078	21.91
24	Benzoic acid	105	10.201	10.330	(0.979)	1345602	57.7442	57.74
25	2,4-Dichlorophenol	162	10.222	10.239	(0.981)	573091	27.6475	27.65
26	1,2,4-Trichlorobenzene	180	10.361	10.367	(0.994)	592045	22.9449	22.94
* 27	Naphthalene-d8	136	10.420	10.426	(1.000)	1601740	20.0000	
28	Naphthalene	128	10.452	10.463	(1.003)	1764697	25.6575	25.66
29	4-Chloroaniline	127	10.585	10.602	(1.016)	659198	32.3122	32.31
30	Hexachlorobutadiene	225	10.762	10.768	(1.033)	362788	23.1045	23.10
31	4-Chloro-3-methylphenol	107	11.381	11.393	(1.092)	612805	27.8320	27.83
32	2-Methylnaphthalene	141	11.568	11.580	(1.110)	906115	23.2622	23.26
33	Hexachlorocyclopentadiene	237	11.942	11.948	(0.899)	375240	24.8473	24.85
34	2,4,6-Trichlorophenol	196	12.076	12.087	(0.909)	427256	27.0392	27.04
35	2,4,5-Trichlorophenol	196	12.129	12.141	(0.913)	468145	30.0326	30.03
; 36	2-Fluorobiphenyl	172	12.204	12.212	(0.919)	1325851	22.3460	22.35
37	2-Chloronaphthalene	162	12.348	12.360	(0.930)	1001690	24.8929	24.89
38	2-Nitroaniline	65	12.573	12.595	(0.947)	351131	25.2684	25.27
39	Dimethylphthalate	163	12.941	12.969	(0.975)	1245240	22.0112	22.01
40	Acenaphthylene	152	13.027	13.038	(0.981)	1824648	24.6099	24.61
41	2,6-Dinitrotoluene	165	13.037	13.060	(0.982)	275947	22.8301	22.83
42	Acenaphthene-d10	164	13.278	13.289	(1.000)	939966	20.0000	
43	3-Nitroaniline	138	13.256	13.273	(0.998)	239619	28.0702	28.07
44	Acenaphthene	153	13.331	13.348	(1.004)	1129525	23.5301	23.53
45	2,4-Dinitrophenol	184	13.422	13.455	(1.011)	479725	55.5689	55.57
46	Dibenzofuran	168	13.593	13.610	(1.024)	1455003	23.1752	23.18
47	4-Nitrophenol	109	13.534	13.567	(1.019)	172005	28.0119	28.01
48	2,4-Dinitrotoluene	165	13.668	13.690	(1.029)	385311	23.5679	23.57
50	Diethylphthalate	149	14.095	14.112	(1.062)	1220857	23.2922	23.29
49	Fluorene	166	14.148	14.165	(1.066)	1223636	27.6871	27.69
51	4-Chlorophenyl-phenylether	204	14.165	14.176	(1.067)	596246	21.6357	21.64
52	4-Nitroaniline	138	14.245	14.288	(1.073)	251920	27.3255	27.33
53	4,6-Dinitro-2-methylphenol	198	14.325	14.358	(0.915)	572575	53.7527	53.75
54	N-Nitrosodiphenylamine	169	14.368	14.390	(0.918)	914372	22.7358	22.74
55	2,4,6-Tribromophenol	330	14.571	14.573	(1.097)	189554	25.5032	25.50
56	4-Bromophenyl-phenylether	248	14.944	14.956	(0.955)	377350	23.2428	23.24
57	Hexachlorobenzene	284	15.174	15.186	(0.969)	384515	22.9728	22.97
58	Pentachlorophenol	266	15.468	15.480	(0.988)	287065	29.0708	29.07
59	Phenanthrene-d10	188	15.655	15.667	(1.000)	1479267	20.0000	
60	Phenanthrene	178	15.692	15.709	(1.002)	1680027	22.9553	22.96
61	Anthracene	178	15.767	15.784	(1.007)	1755058	23.9500	23.95
62	Carbazole	167	16.040	16.057	(1.025)	1330730	26.0182	26.02
63	Di-n-butylphthalate	149	16.734	16.751	(1.069)	2030430	21.9779	21.98

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
64 Fluoranthene	202	17.626	17.643	(1.126)	1972942	25.6259	25.63
65 Pyrene	202	17.984	18.001	(0.901)	2056966	25.5013	25.50
$ 66 Terphenyl-d14	244	18.283	18.291	(0.916)	1211475	23.3683	23.37
67 Butylbenzylphthalate	149	19.154	19.171	(0.959)	908272	23.0277	23.03
68 Benzo(a)anthracene	228	19.939	19.956	(0.999)	1685817	25.0357	25.04
* 69 Chrysene-d12	240	19.966	19.983	(1.000)	1476943	20.0000	
70 3,3'-Dichlorobenzidine	252	19.939	19.951	(0.999)	451257	24.3578	24.36
71 Chrysene	228	20.009	20.026	(1.002)	1736178	25.2571	25.26
72 bis(2-Ethylhexyl)phthalate	149	20.137	20.149	(0.956)	1228581	22.7274	22.73
* 134 Di-n-octylphthalate-d4	153	21.072	21.078	(1.000)	1837060	20.0000	
73 Di-n-octylphthalate	149	21.083	21.089	(1.000)	1880578	21.6808	21.68
74 Benzo(b)fluoranthene	252	21.595	21.618	(0.976)	1566636	23.6801	23.68
75 Benzo(k)fluoranthene	252	21.627	21.655	(0.978)	1994452	28.1196	28.12
187 Total Benzofluoranthenes	252	21.627	21.655	(0.978)	3327670	49.3546	49.35
76 Benzo(a)pyrene	252	22.044	22.066	(0.996)	1613570	25.7778	25.78
* 77 Perylene-d12	264	22.124	22.136	(1.000)	1464482	20.0000	
78 Indeno(1,2,3-cd)pyrene	276	23.743	23.781	(1.073)	1965367	26.0897	26.09
79 Dibenzo(a,h)anthracene	278	23.770	23.808	(1.074)	1560578	26.3098	26.31
80 Benzo(g,h,i)perylene	276	24.202	24.251	(1.094)	1686995	26.1865	26.19
90 N-Nitrosodimethylamine	74	3.897	3.962	(0.465)	477683	23.2474	23.25
103 Pyridine	79	3.860	3.914	(0.460)	714173	21.9157	21.92
91 Aniline	93	7.941	7.947	(0.947)	926839	24.0038	24.00
105 1-methylnaphthalene	141	11.739	11.751	(1.127)	940259	23.7617	23.76
93 Benzidine	184	17.867	17.873	(0.895)	240615	33.4934	33.49 (R)
111 Azobenzene (1,2-DP-Hydrazine)	77	14.416	14.438	(1.086)	1374366	23.0768	23.08
143 1,4-Dioxane	88	3.112	3.145	(0.371)	350623	24.7683	24.77
137 d8-1,4-Dioxane	96	3.053	3.086	(0.364)	318432	24.0340	24.03
144 alpha-Terpineol	59	10.468	10.485	(1.005)	525055	25.7775	25.78
177 p-Benzoquinone	82	7.081	7.092	(0.680)	168536	27.5531	27.55
98 Retene	219	18.534	18.546	(0.928)	857189	24.6256	24.63
99 Perylene	252	22.156	22.179	(1.001)	1395665	25.4541	25.45
133 Butylatedhydroxytoluene	205	13.438	13.450	(1.012)	979147	24.7376	24.74
115 Tributyl Phosphate	99	14.453	14.486	(0.923)	1516405	26.7138	26.71
116 Dibutyl Phenyl Phosphate	175	16.189	16.190	(1.034)	1011072	25.8473	25.85
117 Butyl Diphenyl Phosphate	94	17.867	17.878	(0.895)	334533	24.6000	24.60
118 Triphenyl Phosphate	326	19.475	19.486	(0.975)	321794	24.8809	24.88
123 Acetophenone	105	9.073	9.090	(1.082)	978965	23.8352	23.84
168 Pentachlorobenzene	250	13.636	13.647	(1.027)	526515	25.5739	25.57
113 Diphenyl Oxide	170	12.530	12.541	(0.944)	860260	23.5091	23.51
112 Biphenyl	154	12.338	12.349	(0.929)	1201266	26.6016	26.60
120 2,3,4,6-Tetrachlorophenol	232	13.865	13.882	(1.044)	367023	27.3555	27.36
151 1,2,4,5-Tetrachlorobenzene	216	11.905	11.911	(0.897)	595534	25.9384	25.94
110 Tetrachloroguaiacol	247	15.596	15.613	(0.996)	430258	55.4316	55.43
109 3,4,5-Trichloroguaiacol	213	13.962	13.978	(0.892)	229733	27.1873	27.19
181 3,4,6-Trichloroguaiacol	211	14.079	14.096	(1.679)	263271	26.4421	26.44
108 4,5,6-Trichloroguaiacol	213	14.993	15.004	(1.129)	232582	26.4561	26.46
184 3,4-Dichloroguaiacol	192	12.423	12.435	(1.482)	244376	25.8587	25.86

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
107	4,5-Dichloroguaiacol	192	13.203	13.220	(0.994)	600400	52.2673	52.27
182	4,6-Dichloroguaiacol	192	13.203	13.220	(1.575)	597711	51.8329	51.83
185	4-Chloroguaiacol	115	11.333	11.345	(1.352)	158010	12.8882	12.89
186	Carbaryl	144	16.451	16.473	(1.051)	922128	26.9774	26.98
178	2-Benzyl-4-Chlorophenol	218	16.403	16.425	(1.048)	320599	26.1670	26.17
106	Guaiacol	124	9.330	9.347	(1.113)	546489	24.0770	24.08

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ata File: /chem2/nt6.i/20130306.b/03061309.D
eport Date: 07-Mar-2013 14:18

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

nstrument ID: nt6.i
ab File ID: 03061309.D
ab Smp Id: ICV0306
nalysis Type: SV
uant Type: ISTD
perator: JZ
ethod File: /chem2/nt6.i/20130306.b/SW846030613.m
isc Info: 13-

Calibration Date: 06-MAR-2013
Calibration Time: 12:16
Client Smp ID: ICV0306
Level: LOW
Sample Type: WATER

est Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	436336	-4.75
27 Naphthalene-d8	1718341	859170	3436682	1601740	-6.79
42 Acenaphthene-d10	1010041	505020	2020082	939966	-6.94
59 Phenanthrene-d10	1666734	833367	3333468	1479267	-11.25
69 Chrysene-d12	1675752	837876	3351504	1476943	-11.86
134 Di-n-octylphthala	2026355	1013178	4052710	1837060	-9.34
77 Perylene-d12	1637524	818762	3275048	1464482	-10.57

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.38	-0.03
27 Naphthalene-d8	10.42	9.92	10.92	10.42	-0.02
42 Acenaphthene-d10	13.29	12.79	13.79	13.28	-0.06
59 Phenanthrene-d10	15.66	15.16	16.16	15.65	-0.05
69 Chrysene-d12	19.98	19.48	20.48	19.97	-0.07
134 Di-n-octylphthala	21.09	20.59	21.59	21.07	-0.06
77 Perylene-d12	22.14	21.64	22.64	22.12	-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: /chem2/nt6.i/20130306.b/03061309.D
Report Date: 07-Mar-2013 14:18

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: ICV0306
Level: LOW
Data Type: MS DATA
SpikeList File: ICV.spk
Sublist File: ICVS.sub
Method File: /chem2/nt6.i/20130306.b/SW846030613.m
Misc Info: 13-

Client SDG: 20130306
Fraction: SV
Client Smp ID: ICV0306
Operator: JZ
SampleType: LCS
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
3	Phenol	25.00	25.89	103.57	70-130
4	Bis(2-Chloroethyl)	25.00	23.09	92.35	70-130
6	2-Chlorophenol	25.00	26.16	104.63	70-130
7	1,3-Dichlorobenzen	25.00	23.00	92.02	70-130
9	1,4-Dichlorobenzen	25.00	23.15	92.62	70-130
11	Benzyl alcohol	25.00	23.61	94.46	70-130
12	1,2-Dichlorobenzen	25.00	22.88	91.53	70-130
13	2-Methylphenol	25.00	27.36	109.46	70-130
14	2,2'-oxybis(1-Chlo	25.00	23.60	94.41	70-130
15	4-Methylphenol	25.00	27.91	111.62	70-130
16	N-Nitroso-di-n-pro	25.00	22.15	88.59	70-130
17	Hexachloroethane	25.00	23.18	92.73	70-130
19	Nitrobenzene	25.00	23.12	92.48	70-130
20	Isophorone	25.00	25.24	100.97	70-130
21	2-Nitrophenol	25.00	27.62	110.47	70-130
22	2,4-Dimethylphenol	25.00	26.44	105.77	70-130
23	Bis(2-Chloroethoxy	25.00	21.91	87.63	70-130
24	Benzoic acid	50.00	57.74	115.49	70-130
25	2,4-Dichlorophenol	25.00	27.65	110.59	70-130
26	1,2,4-Trichloroben	25.00	22.94	91.78	70-130
28	Naphthalene	25.00	25.66	102.63	70-130
29	4-Chloroaniline	25.00	32.31	129.25	70-130
30	Hexachlorobutadien	25.00	23.10	92.42	70-130
31	4-Chloro-3-methylp	25.00	27.83	111.33	70-130
32	2-Methylnaphthalen	25.00	23.26	93.05	70-130
33	Hexachlorocyclopen	25.00	24.85	99.39	70-130
34	2,4,6-Trichlorophe	25.00	27.04	108.16	70-130
35	2,4,5-Trichlorophe	25.00	30.03	120.13	70-130
37	2-Chloronaphthalen	25.00	24.89	99.57	70-130
38	2-Nitroaniline	25.00	25.27	101.07	70-130
39	Dimethylphthalate	25.00	22.01	88.04	70-130
40	Acenaphthylene	25.00	24.61	98.44	70-130
41	2,6-Dinitrotoluene	25.00	22.83	91.32	70-130

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
43	3-Nitroaniline	25.00	28.07	112.28	70-130
44	Acenaphthene	25.00	23.53	94.12	70-130
45	2,4-Dinitrophenol	50.00	55.57	111.14	70-130
46	Dibenzofuran	25.00	23.18	92.70	70-130
47	4-Nitrophenol	25.00	28.01	112.05	70-130
48	2,4-Dinitrotoluene	25.00	23.57	94.27	70-130
49	Fluorene	25.00	27.69	110.75	70-130
50	Diethylphthalate	25.00	23.29	93.17	70-130
51	4-Chlorophenyl-phe	25.00	21.64	86.54	70-130
52	4-Nitroaniline	25.00	27.33	109.30	70-130
53	4,6-Dinitro-2-meth	50.00	53.75	107.51	70-130
54	N-Nitrosodiphenyla	25.00	22.74	90.94	70-130
56	4-Bromophenyl-phen	25.00	23.24	92.97	70-130
57	Hexachlorobenzene	25.00	22.97	91.89	70-130
58	Pentachlorophenol	25.00	29.07	116.28	70-130
60	Phenanthrene	25.00	22.96	91.82	70-130
61	Anthracene	25.00	23.95	95.80	70-130
62	Carbazole	25.00	26.02	104.07	70-130
63	Di-n-butylphthalat	25.00	21.98	87.91	70-130
64	Fluoranthene	25.00	25.63	102.50	70-130
65	Pyrene	25.00	25.50	102.01	70-130
67	Butylbenzylphthala	25.00	23.03	92.11	70-130
68	Benzo(a)anthracene	25.00	25.04	100.14	70-130
70	3,3'-Dichlorobenzi	25.00	24.36	97.43	70-130
71	Chrysene	25.00	25.26	101.03	70-130
72	bis(2-Ethylhexyl)p	25.00	22.73	90.91	70-130
73	Di-n-octylphthalat	25.00	21.68	86.72	70-130
74	Benzo(b)fluoranthe	25.00	23.68	94.72	70-130
75	Benzo(k)fluoranthe	25.00	28.12	112.48	70-130
187	Total Benzofluoran	50.00	49.35	98.71	70-130
76	Benzo(a)pyrene	25.00	25.78	103.11	70-130
78	Indeno(1,2,3-cd)py	25.00	26.09	104.36	70-130
79	Dibenzo(a,h)anthra	25.00	26.31	105.24	70-130
80	Benzo(g,h,i)peryle	25.00	26.19	104.75	70-130
90	N-Nitrosodimethyla	25.00	23.25	92.99	70-130
103	Pyridine	25.00	21.92	87.66	70-130
91	Aniline	25.00	24.00	96.02	70-130
105	1-methylnaphthalen	25.00	23.76	95.05	70-130
93	Benzidine	25.00	33.49	133.97*	70-130
111	Azobenzene (1,2-DP	25.00	23.08	92.31	70-130
143	1,4-Dioxane	25.00	24.77	99.07	70-130
144	alpha-Terpineol	25.00	25.78	103.11	70-130
177	p-Benzoquinone	25.00	27.55	110.21	70-130
98	Retene	25.00	24.63	98.50	70-130
99	Perylene	25.00	25.45	101.82	70-130
133	Butylatedhydroxyto	25.00	24.74	98.95	70-130
115	Tributyl Phosphate	25.00	26.71	106.86	70-130

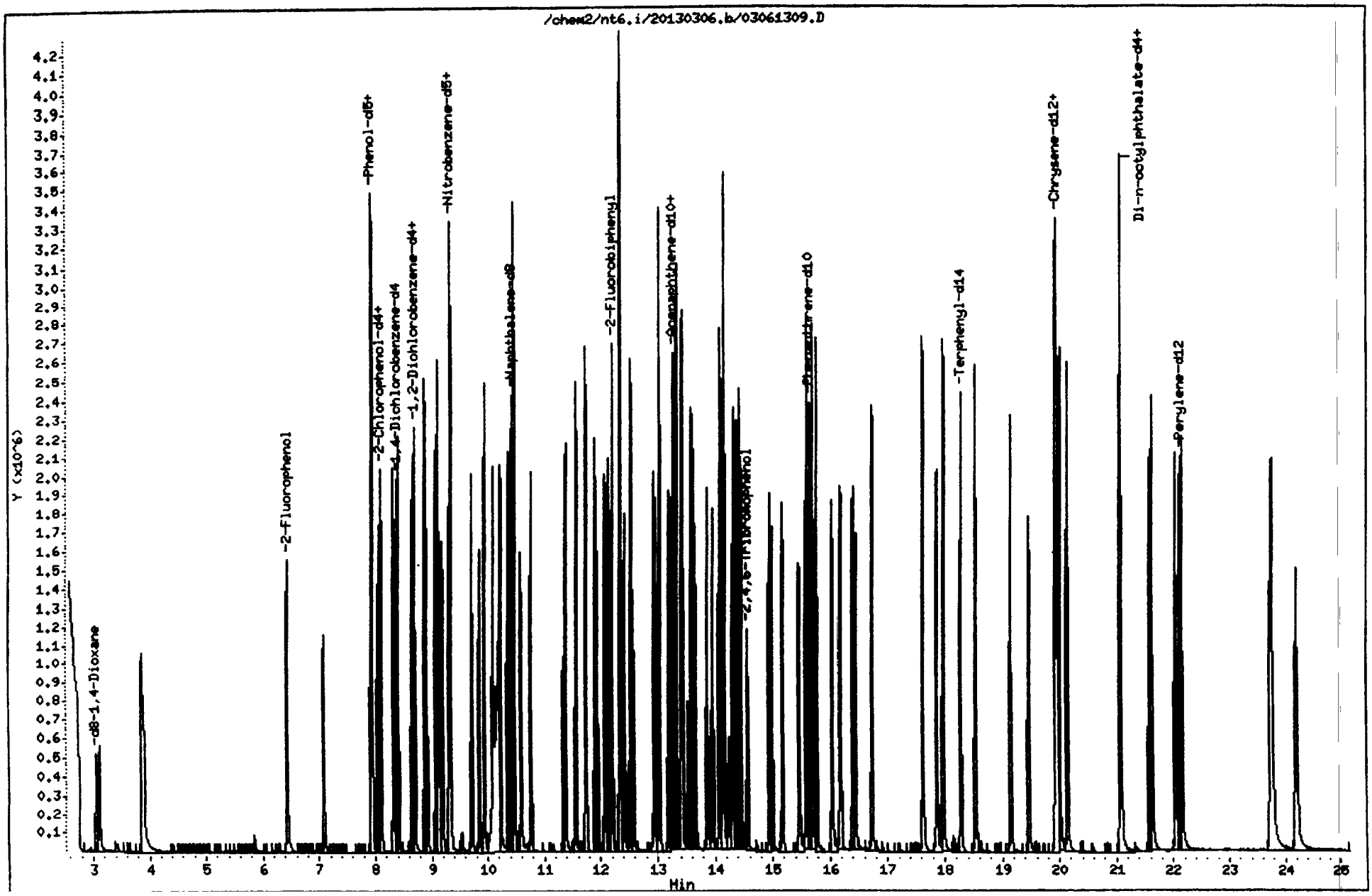
SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
116 Dibutyl Phenyl Pho	25.00	25.85	103.39	70-130
117 Butyl Diphenyl Pho	25.00	24.60	98.40	70-130
118 Triphenyl Phosphat	25.00	24.88	99.52	70-130
123 Acetophenone	25.00	23.84	95.34	70-130
168 Pentachlorobenzene	25.00	25.57	102.30	70-130
113 Diphenyl Oxide	25.00	23.51	94.04	70-130
112 Biphenyl	25.00	26.60	106.41	70-130
120 2,3,4,6-Tetrachlor	25.00	27.36	109.42	70-130
151 1,2,4,5-Tetrachlor	25.00	25.94	103.75	70-130
106 Guaiacol	25.00	24.08	96.31	70-130
186 Carbaryl	25.00	26.98	107.91	70-130
178 2-Benzyl-4-Chlorop	25.00	26.17	104.67	70-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	25.00	24.08	96.31	75-125
$ 2 Phenol-d5	25.00	23.58	94.32	75-125
$ 5 2-Chlorophenol-d4	25.00	23.69	94.78	75-125
$ 10 1,2-Dichlorobenzen	25.00	23.44	93.74	75-125
$ 18 Nitrobenzene-d5	25.00	24.05	96.20	75-125
$ 36 2-Fluorobiphenyl	25.00	22.35	89.38	75-125
$ 55 2,4,6-Tribromophen	25.00	25.50	102.01	75-125
$ 66 Terphenyl-d14	25.00	23.37	93.47	75-125
$ 137 d8-1,4-Dioxane	25.00	24.03	96.14	75-125

US98:003112

Data File: /chem2/nt6.i/20130306.b/03061309.D
Date : 06-MAR-2013 16:52
Client ID: ICV0306
Sample Info: ICV0306,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 03061309.D

Lab ID: ICV0306, Method: SW846030613.m, Instrument: nt6.i, Date: 06-MAR-2013

RT	CO-ELUTION COMPOUNDS
19.939	3,3'-Dichlorobenzidine and Benzo(a)anthracene

checked OK

DE 03/07/13

Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WS90, WS92

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WS90 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: 3/6/13 Analysis Start Date: 3/7/13

	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 / 21%
CCAL Q flag applied?	(Y) / N / ✓	MS / MSD Recovery in Control?	(NA) / Y / N / NA
Surrogate Recovery met?	(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.

Samples A-D + MB/LCS/LCSD.

LCS/LCSD: Compounds 4-chloroaniline & 3-nitroaniline recoveries out of QC limits @ high bias with samples "ND".

Forms included

(Review 1) Analyst: [signature] Date: 6/18/13

(Review 2) Reviewer: [signature] Date: 6/18/13

Analytical Resources Inc.: Organics Instrument Log

NT-6 Serial No.:GC=US00036167, MS=US81221575

Date: 6/17/13 Analysis: 8270D Analyst: [illegible]

GC Program: [illegible] Column No: 234149 Column Type: 2B-5MS

Instrument Tune (.U or .CT.): 121019 EM Voltage: 1753

Calibration File: 06171301 Curve Date: 3/6/13 Injection Vol.: 1ml

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2053-1, 2054-1	
	2055-1, 2061-1	
	18031, 2027-2	
	2058-2	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem2/nt6.i/20130617.b

	Time	Filename	LabID	ClientId	DF																
1	1608	06171301.d	CC0617	CC0617	1	7.55	513642	9.59	1915863	12.43	1090179	14.78	1943321	19.05	2036892	21.19	2298631	20.24	2239392
2	1709	06171302.d	WS90LCSW1	WS90LCSW1	1	7.55	320422	9.59	1149264	12.43	624306	14.78	1085910	19.05	1157515	20.24	1273869	21.18	1340097
3	1744	06171303.d	WS90MBW1	WS90MBW1	1	7.55	314284	9.58	1133622	12.42	663690	14.77	1077671	19.04	1230002	20.23	1324061	21.17	1186200
4	1818	06171304.d	WS90LCSDW1	WS90LCSDW1	1	7.55	325965	9.59	1178186	12.43	661024	14.77	1158110	19.04	1172359	20.24	1353129	21.18	1347828
5	1853	06171305.d	WS90A	CL-MH-SPS-20	1	7.55	307676	9.58	1108365	12.42	639232	14.77	1051666	19.04	1184737	20.23	1321454	21.18	1218000
6	1927	06171306.d	WS90B	CL-VT-EFF-20	1	7.55	330460	9.59	1200098	12.42	696067	14.77	1145667	19.04	1294962	20.23	1442385	21.17	1316416
7	2002	06171307.d	WS90C	QC-EB-02-201	1	7.54	347415	9.59	1249197	12.42	722127	14.77	1187879	19.04	1348024	20.23	1494269	21.17	1369724
8	2036	06171308.d	WS90D	QC-EB-03-201	1	7.55	342191	9.58	1224299	12.42	712678	14.77	1160744	19.03	1315381	20.23	1441879	21.17	1327254

[illegible] 06/18/13

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/20130617.b

ARI Job No.: CC06 Method: SW846030613.m Instrument: nt6.i Date: 17-JUN-2013

AZ 06/18/13

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1608	06171301.d	CC0617	CC0617	1	NO MANUAL INTEGRATION
1709	06171302.d	WS90LCSW1	WS90LCSW1	1	NO MANUAL INTEGRATION
1744	06171303.d	WS90MBW1	WS90MBW1	1	NO MANUAL INTEGRATION
1818	06171304.d	WS90LCSDW1	WS90LCSDW1	1	NO MANUAL INTEGRATION
1853	06171305.d	WS90A	CL-MH-SPS-	1	NO MANUAL INTEGRATION
1927	06171306.d	WS90B	CL-VT-EFF-	1	NO MANUAL INTEGRATION
2002	06171307.d	WS90C	QC-EB-02-2	1	NO MANUAL INTEGRATION
2036	06171308.d	WS90D	QC-EB-03-2	1	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem2/nt6.i/20130617.b

Instrument: nt6.i Date: 17-JUN-2013 Method: SW846030613.m

INITIAL CAL: 05-MAR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 17-JUN-2013

Compound	%D
2,2'-oxybis(1-Chloropropane)	-25.9
3-Nitroaniline	27.5
4-Nitroaniline	29.2
Benzo(g,h,i)perylene	-22.9
Aniline	-21.5

AZ 06/18/13

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i
Lab File ID: 06171301.d
Analysis Type:
Lab Sample ID: CC0617
Method: /chem2/nt6.i/20130617.b/SW846030613.m

Injection Date: 17-JUN-2013 16:08
Init. Cal. Date(s): 05-MAR-2013 06-MAR-2013
Init. Cal. Times: 18:33 16:18
Quant Type: ISTD

AR 06/18/13

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.29593	1.13049	1.13049	0.010	-12.76570	20.00000	Averaged	
$ 2 Phenol-d5	1.51700	1.43953	1.43953	0.010	-5.10701	20.00000	Averaged	
3 Phenol	1.59733	1.51520	1.51520	0.010	-5.14170	20.00000	Averaged	
$ 5 2-Chlorophenol-d4	1.28234	1.13752	1.13752	0.010	-11.29321	20.00000	Averaged	
4 Bis(2-Chloroethyl)ether	1.38721	1.25794	1.25794	0.010	-9.31817	20.00000	Averaged	
6 2-Chlorophenol	1.27800	1.21518	1.21518	0.010	-4.91560	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.49260	1.42838	1.42838	0.010	-4.30237	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.45271	1.41527	1.41527	0.010	-2.57707	20.00000	Averaged	
$ 10 1,2-Dichlorobenzene-d4	0.90253	0.80203	0.80203	0.010	-11.13608	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.38875	1.26137	1.26137	0.010	-9.17234	20.00000	Averaged	
11 Benzyl alcohol	0.87019	0.69663	0.69663	0.010	-19.94501	20.00000	Averaged	
14 2,2'-oxybis(1-Chloropropane	2.20404	1.63256	1.63256	0.010	-25.92871	20.00000	Averaged	<-
13 2-Methylphenol	1.21121	1.09219	1.09219	0.010	-9.82663	20.00000	Averaged	
17 Hexachloroethane	0.58761	0.49201	0.49201	0.010	-16.26930	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	1.04103	0.85299	0.85299	0.005	-18.06269	20.00000	Averaged	
15 4-Methylphenol	1.19772	1.13817	1.13817	0.010	-4.97214	20.00000	Averaged	
$ 18 Nitrobenzene-d5	0.40133	0.33297	0.33297	0.010	-17.03449	20.00000	Averaged	
19 Nitrobenzene	0.38413	0.35643	0.35643	0.010	-7.21050	20.00000	Averaged	
20 Isophorone	0.66954	0.57186	0.57186	0.010	-14.58925	20.00000	Averaged	
21 2-Nitrophenol	0.17774	0.18005	0.18005	0.010	1.29652	20.00000	Averaged	
22 2,4-Dimethylphenol	0.33613	0.30420	0.30420	0.010	-9.49929	20.00000	Averaged	
23 Bis(2-Chloroethoxy)methane	0.43930	0.39412	0.39412	0.010	-10.28390	20.00000	Averaged	
24 Benzoic acid	0.29097	0.29654	0.29654	0.010	1.91553	20.00000	Averaged	
25 2,4-Dichlorophenol	0.25883	0.26861	0.26861	0.010	3.77881	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.32219	0.30515	0.30515	0.010	-5.28631	20.00000	Averaged	
28 Naphthalene	24.93076	25.00000	0.86238	0.010	-0.27695	20.00000	Quadratic	
29 4-Chloroaniline	29.22341	25.00000	0.30551	0.010	16.89362	20.00000	Quadratic	
30 Hexachlorobutadiene	0.19606	0.19631	0.19631	0.010	0.12516	20.00000	Averaged	
31 4-Chloro-3-methylphenol	0.27493	0.26555	0.26555	0.010	-3.41050	20.00000	Averaged	
32 2-Methylnaphthalene	0.48637	0.47797	0.47797	0.010	-1.72882	20.00000	Averaged	
33 Hexachlorocyclopentadiene	0.32133	0.26454	0.26454	0.010	-17.67224	20.00000	Averaged	
34 2,4,6-Trichlorophenol	0.33621	0.34654	0.34654	0.010	3.07158	20.00000	Averaged	
35 2,4,5-Trichlorophenol	0.33167	0.36243	0.36243	0.010	9.27346	20.00000	Averaged	
$ 36 2-Fluorobiphenyl	1.26244	1.14989	1.14989	0.010	-8.91533	20.00000	Averaged	
37 2-Chloronaphthalene	28.37596	25.00000	0.96280	0.010	13.50386	20.00000	Quadratic	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i
Lab File ID: 06171301.d
Analysis Type:
Lab Sample ID: CC0617
Method: /chem2/nt6.i/20130617.b/SW846030613.m

Injection Date: 17-JUN-2013 16:08
Init. Cal. Date(s): 05-MAR-2013 06-MAR-2013
Init. Cal. Times: 18:33 16:18
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
38 2-Nitroaniline	0.29567	0.29348	0.29348	0.010	-0.74003	20.00000	Averaged	
39 Dimethylphthalate	1.20372	1.14473	1.14473	0.010	-4.90084	20.00000	Averaged	
40 Acenaphthylene	1.57756	1.54706	1.54706	0.010	-1.93348	20.00000	Averaged	
41 2,6-Dinitrotoluene	0.25718	0.29040	0.29040	0.010	12.91710	20.00000	Averaged	
43 3-Nitroaniline	31.87914	25.00000	0.22529	0.010	27.51658	20.00000	Quadratic	<-
44 Acenaphthene	1.02139	0.97625	0.97625	0.010	-4.41923	20.00000	Averaged	
45 2,4-Dinitrophenol	0.18369	0.17218	0.17218	0.010	-6.26203	20.00000	Averaged	
46 Dibenzofuran	1.33585	1.35488	1.35488	0.010	1.42480	20.00000	Averaged	
47 4-Nitrophenol	0.13065	0.13108	0.13108	0.010	0.32956	20.00000	Averaged	
48 2,4-Dinitrotoluene	0.34786	0.37659	0.37659	0.010	8.25912	20.00000	Averaged	
50 Diethylphthalate	1.11525	1.05936	1.05936	0.010	-5.01173	20.00000	Averaged	
49 Fluorene	26.43667	25.00000	0.99889	0.010	5.74668	20.00000	Quadratic	
51 4-Chlorophenyl-phenylether	0.58637	0.62761	0.62761	0.010	7.03261	20.00000	Averaged	
52 4-Nitroaniline	0.19616	0.25348	0.25348	0.010	29.22210	20.00000	Averaged	<-
53 4,6-Dinitro-2-methylphenol	0.14402	0.13725	0.13725	0.010	-4.69621	20.00000	Averaged	
54 N-Nitrosodiphenylamine	0.54375	0.50373	0.50373	0.010	-7.35993	20.00000	Averaged	
$ 55 2,4,6-Tribromophenol	0.15815	0.18351	0.18351	0.010	16.04006	20.00000	Averaged	
56 4-Bromophenyl-phenylether	0.21950	0.21127	0.21127	0.010	-3.75004	20.00000	Averaged	
57 Hexachlorobenzene	0.22630	0.22061	0.22061	0.010	-2.51533	20.00000	Averaged	
58 Pentachlorophenol	0.13351	0.13313	0.13313	0.010	-0.28414	20.00000	Averaged	
60 Phenanthrene	0.98950	0.86589	0.86589	0.010	-12.49213	20.00000	Averaged	
61 Anthracene	0.99076	0.86980	0.86980	0.010	-12.20872	20.00000	Averaged	
62 Carbazole	28.09330	25.00000	0.77795	0.010	12.37318	20.00000	Quadratic	
63 Di-n-butylphthalate	1.24906	1.02315	1.02315	0.010	-18.08696	20.00000	Averaged	
64 Fluoranthene	1.04092	0.97593	0.97593	0.010	-6.24405	20.00000	Averaged	
65 Pyrene	1.09227	0.96412	0.96412	0.010	-11.73249	20.00000	Averaged	
$ 66 Terphenyl-d14	0.70203	0.59396	0.59396	0.010	-15.39397	20.00000	Averaged	
67 Butylbenzylphthalate	0.53411	0.43984	0.43984	0.010	-17.64942	20.00000	Averaged	
68 Benzo(a)anthracene	0.91184	0.90084	0.90084	0.010	-1.20632	20.00000	Averaged	
70 3,3'-Dichlorobenzidine	0.25087	0.27833	0.27833	0.010	10.94623	20.00000	Averaged	
71 Chrysene	0.93085	0.87890	0.87890	0.010	-5.58090	20.00000	Averaged	
72 bis(2-Ethylhexyl)phthalate	0.58852	0.53184	0.53184	0.010	-9.63105	20.00000	Averaged	
73 Di-n-octylphthalate	0.94433	0.87453	0.87453	0.010	-7.39141	20.00000	Averaged	
74 Benzo(b)fluoranthene	23.27162	25.00000	0.84201	0.010	-6.91354	20.00000	Quadratic	
75 Benzo(k)fluoranthene	24.12531	25.00000	0.95380	0.010	-3.49875	20.00000	Quadratic	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i Injection Date: 17-JUN-2013 16:08
Lab File ID: 06171301.d Init. Cal. Date(s): 05-MAR-2013 06-MAR-2013
Analysis Type: Init. Cal. Times: 18:33 16:18
Lab Sample ID: CC0617 Quant Type: ISTD
Method: /chem2/nt6.i/20130617.b/SW846030613.m

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
187 Total Benzofluoranthenes	0.92079	0.84536	0.84536	0.010	-8.19117	20.00000	Averaged	
76 Benzo(a)pyrene	0.85485	0.80788	0.80788	0.010	-5.49387	20.00000	Averaged	
78 Indeno(1,2,3-cd)pyrene	1.02877	0.84557	0.84557	0.010	-17.80823	20.00000	Averaged	
79 Dibenzo(a,h)anthracene	0.81005	0.69873	0.69873	0.010	-13.74306	20.00000	Averaged	
80 Benzo(g,h,i)perylene	0.87980	0.67831	0.67831	0.010	-22.90147	20.00000	Averaged	<-
90 N-Nitrosodimethylamine	0.94183	0.78659	0.78659	0.010	-16.48360	20.00000	Averaged	
91 Aniline	1.76984	1.38875	1.38875	0.010	-21.53225	20.00000	Averaged	<-
103 Pyridine	1.49368	1.32650	1.32650	0.010	-11.19252	20.00000	Averaged	
105 1-methylnaphthalene	0.49409	0.46967	0.46967	0.010	-4.94275	20.00000	Averaged	
111 Azobenzene (1,2-DP-Hydrazin	1.26720	1.16979	1.16979	0.010	-7.68684	20.00000	Averaged	
143 1,4-Dioxane	0.64887	0.54691	0.54691	0.010	-15.71329	20.00000	Averaged	
$ 137 d8-1,4-Dioxane	0.60730	0.52238	0.52238	0.010	-13.98196	20.00000	Averaged	
144 alpha-Terpineol	0.25433	0.22178	0.22178	0.010	-12.79907	20.00000	Averaged	
99 Perylene	0.74881	0.67912	0.67912	0.010	-9.30690	20.00000	Averaged	
120 2,3,4,6-Tetrachlorophenol	0.28547	0.30767	0.30767	0.010	7.77373	20.00000	Averaged	
151 1,2,4,5-Tetrachlorobenzene	0.48852	0.50058	0.50058	0.010	2.46914	20.00000	Averaged	

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130617.b/06171301.d
Lab Smp Id: CC0617 Client Smp ID: CC0617
Inj Date : 17-JUN-2013 16:08
Operator : JZ Inst ID: nt6.i
Smp Info : CC0617
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130617.b/SW846030613.m
Meth Date : 18-Jun-2013 12:15 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALA.sub
Target Version: 3.50

06/18/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	5.593	5.593	(0.741)	725836	25.0000	21.81
$	2 Phenol-d5	99	7.195	7.195	(0.953)	924253	25.0000	23.72
	3 Phenol	94	7.212	7.212	(0.955)	972835	25.0000	23.71
$	5 2-Chlorophenol-d4	132	7.265	7.265	(0.962)	730347	25.0000	22.18
	4 Bis(2-Chloroethyl)ether	93	7.244	7.244	(0.960)	807666	25.0000	22.67
	6 2-Chlorophenol	128	7.292	7.292	(0.966)	780208	25.0000	23.77
	7 1,3-Dichlorobenzene	146	7.484	7.484	(0.992)	917098	25.0000	23.92
*	8 1,4-Dichlorobenzene-d4	152	7.548	7.548	(1.000)	513642	20.0000	
	9 1,4-Dichlorobenzene	146	7.575	7.575	(1.004)	908676	25.0000	24.36
$	10 1,2-Dichlorobenzene-d4	152	7.847	7.847	(1.040)	514942	25.0000	22.22
	12 1,2-Dichlorobenzene	146	7.869	7.869	(1.042)	809862	25.0000	22.71
	11 Benzyl alcohol	108	7.869	7.869	(1.042)	447274	25.0000	20.01
	14 2,2'-oxybis(1-Chloropropane)	45	8.114	8.114	(1.075)	1048187	25.0000	18.52
	13 2-Methylphenol	108	8.130	8.130	(1.077)	701242	25.0000	22.54
	17 Hexachloroethane	117	8.349	8.349	(1.106)	315893	25.0000	20.93
	16 N-Nitroso-di-n-propylamine	70	8.344	8.344	(1.105)	547667	25.0000	20.48
	15 4-Methylphenol	108	8.371	8.371	(1.109)	730764	25.0000	23.76
$	18 Nitrobenzene-d5	82	8.494	8.494	(0.886)	797396	25.0000	20.74
	19 Nitrobenzene	77	8.520	8.520	(0.889)	853595	25.0000	23.20
	20 Isophorone	82	8.910	8.910	(0.929)	1369498	25.0000	21.35
	21 2-Nitrophenol	139	9.033	9.033	(0.942)	431177	25.0000	25.32
	22 2,4-Dimethylphenol	107	9.188	9.188	(0.958)	728516	25.0000	22.63
	23 Bis(2-Chloroethoxy)methane	93	9.316	9.316	(0.972)	943851	25.0000	22.43
	24 Benzoic acid	105	9.551	9.551	(0.996)	1420335	50.0000	50.96
	25 2,4-Dichlorophenol	162	9.439	9.439	(0.984)	643265	25.0000	25.94
	26 1,2,4-Trichlorobenzene	180	9.541	9.541	(0.995)	730792	25.0000	23.68
*	27 Naphthalene-d8	136	9.589	9.589	(1.000)	1915863	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	9.621	9.621	(1.003)	2065252	25.0000	24.93
	29 4-Chloroaniline	127	9.792	9.792	(1.021)	731650	25.0000	29.22
	30 Hexachlorobutadiene	225	9.947	9.947	(1.037)	470123	25.0000	25.03
	31 4-Chloro-3-methylphenol	107	10.636	10.636	(1.109)	635946	25.0000	24.15
	32 2-Methylnaphthalene	141	10.737	10.737	(1.120)	1144644	25.0000	24.57
	33 Hexachlorocyclopentadiene	237	11.117	11.117	(0.894)	360497	25.0000	20.58
	34 2,4,6-Trichlorophenol	196	11.266	11.266	(0.906)	472236	25.0000	25.77
	35 2,4,5-Trichlorophenol	196	11.330	11.330	(0.911)	493886	25.0000	27.32
$	36 2-Fluorobiphenyl	172	11.389	11.389	(0.916)	1566987	25.0000	22.77
	37 2-Chloronaphthalene	162	11.507	11.507	(0.926)	1312036	25.0000	28.38
	38 2-Nitroaniline	65	11.763	11.763	(0.946)	399936	25.0000	24.81
	39 Dimethylphthalate	163	12.148	12.148	(0.977)	1559951	25.0000	23.77
	40 Acenaphthylene	152	12.174	12.174	(0.979)	2108218	25.0000	24.52
	41 2,6-Dinitrotoluene	165	12.228	12.228	(0.984)	395734	25.0000	28.23
*	42 Acenaphthene-d10	164	12.431	12.431	(1.000)	1090179	20.0000	
	43 3-Nitroaniline	138	12.447	12.447	(1.001)	307013	25.0000	31.88
	44 Acenaphthene	153	12.479	12.479	(1.004)	1330359	25.0000	23.90
	45 2,4-Dinitrophenol	184	12.607	12.607	(1.014)	469280	50.0000	46.87
	46 Dibenzofuran	168	12.741	12.741	(1.025)	1846332	25.0000	25.36
	47 4-Nitrophenol	109	12.805	12.805	(1.030)	178630	25.0000	25.08
	48 2,4-Dinitrotoluene	165	12.853	12.853	(1.034)	513194	25.0000	27.06
	50 Diethylphthalate	149	13.291	13.291	(1.069)	1443608	25.0000	23.75
	49 Fluorene	166	13.291	13.291	(1.069)	1361210	25.0000	26.44
	51 4-Chlorophenyl-phenylether	204	13.328	13.328	(1.072)	855258	25.0000	26.76
	52 4-Nitroaniline	138	13.435	13.435	(1.081)	345428	25.0000	32.31
	53 4,6-Dinitro-2-methylphenol	198	13.505	13.505	(0.914)	666823	50.0000	47.65
	54 N-Nitrosodiphenylamine	169	13.542	13.542	(0.916)	1223627	25.0000	23.16
$	55 2,4,6-Tribromophenol	330	13.713	13.713	(1.103)	250076	25.0000	29.01
	56 4-Bromophenyl-phenylether	248	14.098	14.098	(0.954)	513209	25.0000	24.06
	57 Hexachlorobenzene	284	14.306	14.306	(0.968)	535889	25.0000	24.37
	58 Pentachlorophenol	266	14.621	14.621	(0.990)	323389	25.0000	24.93
*	59 Phenanthrene-d10	188	14.776	14.776	(1.000)	1943321	20.0000	
	60 Phenanthrene	178	14.813	14.813	(1.003)	2103384	25.0000	21.88
	61 Anthracene	178	14.888	14.888	(1.008)	2112881	25.0000	21.95
	62 Carbazole	167	15.182	15.182	(1.027)	1889750	25.0000	28.09
	63 Di-n-butylphthalate	149	15.919	15.919	(1.077)	2485377	25.0000	20.48
	64 Fluoranthene	202	16.726	16.726	(1.132)	2370673	25.0000	23.44
	65 Pyrene	202	17.073	17.073	(0.896)	2454762	25.0000	22.07
$	66 Terphenyl-d14	244	17.410	17.410	(0.914)	1512285	25.0000	21.15
	67 Butylbenzylphthalate	149	18.307	18.307	(0.961)	1119892	25.0000	20.59
	68 Benzo(a)anthracene	228	19.023	19.023	(0.999)	2293634	25.0000	24.70
*	69 Chrysene-d12	240	19.050	19.050	(1.000)	2036892	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.055	19.055	(1.000)	708670	25.0000	27.74
	71 Chrysene	228	19.092	19.092	(1.002)	2237772	25.0000	23.60
	72 bis(2-Ethylhexyl)phthalate	149	19.311	19.311	(0.954)	1488745	25.0000	22.59
*	134 Di-n-octylphthalate-d4	153	20.241	20.241	(1.000)	2239392	20.0000	
	73 Di-n-octylphthalate	149	20.252	20.252	(1.001)	2448014	25.0000	23.15

	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	20.668	20.668	(0.976)	2419338	25.0000	23.27
75	Benzo(k)fluoranthene	252	20.700	20.700	(0.977)	2740548	25.0000	24.13
187	Total Benzofluoranthenes	252	20.700	20.700	(0.977)	4857944	50.0000	45.90
76	Benzo(a)pyrene	252	21.106	21.106	(0.996)	2321276	25.0000	23.63
* 77	Perylene-d12	264	21.187	21.187	(1.000)	2298631	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	22.549	22.549	(1.064)	2429560	25.0000	20.55
79	Dibenzo(a,h)anthracene	278	22.570	22.570	(1.065)	2007642	25.0000	21.56
80	Benzo(g,h,i)perylene	276	22.891	22.891	(1.080)	1948983	25.0000	19.27
90	N-Nitrosodimethylamine	74	2.729	2.729	(0.362)	505029	25.0000	20.88
91	Aniline	93	7.121	7.121	(0.943)	891651	25.0000	19.62
103	Pyridine	79	2.687	2.687	(0.356)	851682	25.0000	22.20
105	1-methylnaphthalene	141	10.908	10.908	(1.138)	1124781	25.0000	23.76
111	Azobenzene (1,2-DP-Hydrazine)	77	13.579	13.579	(1.092)	1594098	25.0000	23.08
143	1,4-Dioxane	88	2.152	2.152	(0.285)	351143	25.0000	21.07
$ 137	d8-1,4-Dioxane	96	2.110	2.110	(0.280)	335397	25.0000	21.50
144	alpha-Terpineol	59	9.674	9.674	(1.009)	531125	25.0000	21.80
99	Perylene	252	21.224	21.224	(1.002)	1951294	25.0000	22.67
120	2,3,4,6-Tetrachlorophenol	232	13.040	13.040	(1.049)	419263	25.0000	26.94
151	1,2,4,5-Tetrachlorobenzene	216	11.074	11.074	(0.891)	682153	25.0000	25.62

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 06171301.d
Lab Smp Id: CC0617
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130617.b/SW846030613.m
Misc Info: 13-

Calibration Date: 17-JUN-2013
Calibration Time: 16:08
Client Smp ID: CC0617
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	513642	12.12
27 Naphthalene-d8	1718341	859170	3436682	1915863	11.49
42 Acenaphthene-d10	1010041	505020	2020082	1090179	7.93
59 Phenanthrene-d10	1666734	833367	3333468	1943321	16.59
69 Chrysene-d12	1675752	837876	3351504	2036892	21.55
134 Di-n-octylphthala	2026355	1013178	4052710	2239392	10.51
77 Perylene-d12	1637524	818762	3275048	2298631	40.37

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.55	7.05	8.05	7.55	0.00
27 Naphthalene-d8	9.59	9.09	10.09	9.59	0.00
42 Acenaphthene-d10	12.43	11.93	12.93	12.43	0.00
59 Phenanthrene-d10	14.78	14.28	15.28	14.78	0.00
69 Chrysene-d12	19.05	18.55	19.55	19.05	0.00
134 Di-n-octylphthala	20.24	19.74	20.74	20.24	0.00
77 Perylene-d12	21.19	20.69	21.69	21.19	0.00

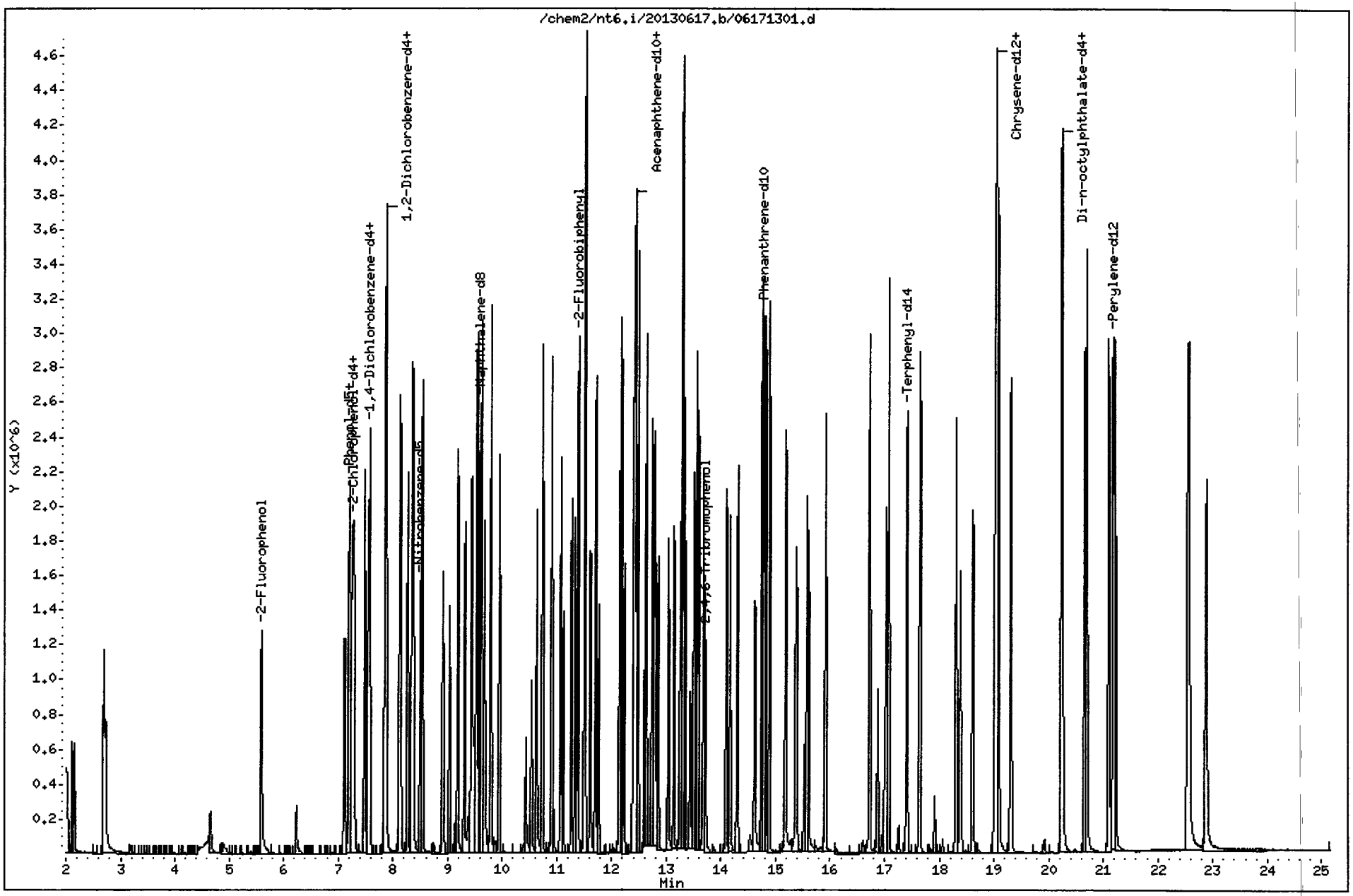
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130617.b/06171301.d
Date : 17-JUN-2013 16:08
Client ID: CC0617
Sample Info: CC0617

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - 06171301.d

Lab ID: CC0617, Method: SW846030613.m, Instrument: nt6.i, Date: 17-JUN-2013

RT	CO-ELUTION COMPOUNDS
7.869	1,2-Dichlorobenzene and Benzyl alcohol

checked ok

ok 6/18/13

Data File: /chem2/nt6.i/20130617.b/tune.b/06171301.d

Date : 17-JUN-2013 16:08

Client ID: DFTPP0617

Instrument: nt6.i

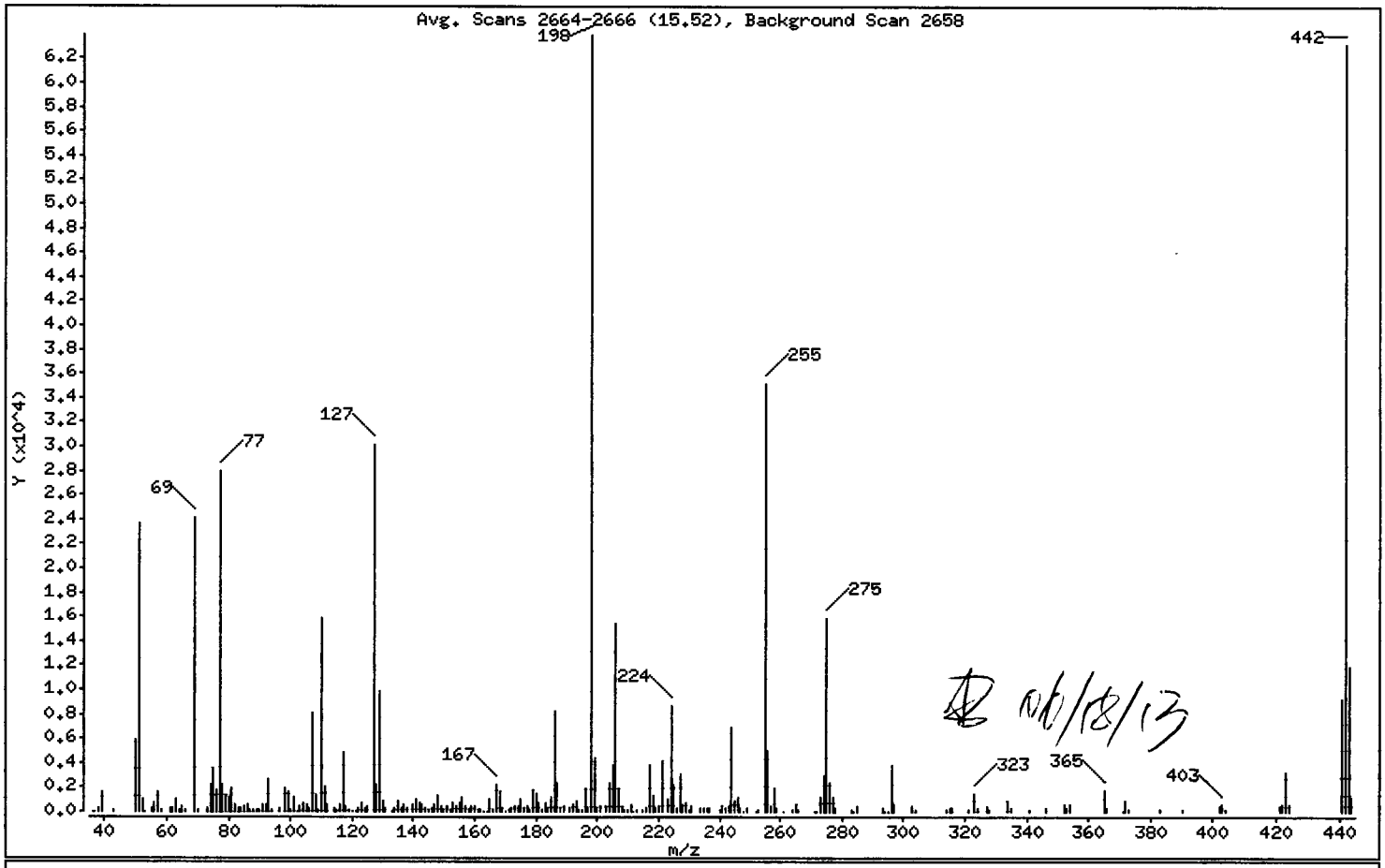
Sample Info: DFTPP0617

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	37.01
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	37.65
70	Less than 2.00% of mass 69	0.15 (0.41)
127	10.00 - 80.00% of mass 198	47.10
197	Less than 2.00% of mass 198	0.35
199	5.00 - 9.00% of mass 198	6.87
275	10.00 - 60.00% of mass 198	24.72
365	Greater than 1.00% of mass 198	2.85
441	0.01 - 24.00% of mass 442	14.60 (14.77)
442	50.00 - 200.00% of mass 198	98.82
443	15.00 - 24.00% of mass 442	18.73 (18.95)

Data File: /chem2/nt6.i/20130617.b/tune.b/06171301.d

Date : 17-JUN-2013 16:08

Client ID: DFTPP0617 Instrument: nt6.i

Sample Info: DFTPP0617

Operator: JZ

Column phase: ZB-5msi Column diameter: 0.32

Data File: 06171301.d
Spectrum: Avg. Scans 2664-2666 (15,52), Background Scan 2658
Location of Maximum: 198.00
Number of points: 246

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	52	117.00	4833	182.00	215	255.00	35152
37.00	70	118.00	416	183.00	674	256.00	5002
38.00	269	119.00	84	184.00	322	257.00	371
39.00	1634	120.00	53	185.00	1149	258.00	1845
43.00	159	121.00	55	186.00	8304	259.00	265
50.00	5838	122.00	346	187.00	2322	261.00	52
51.00	23672	123.00	738	188.00	287	264.00	123
52.00	1064	124.00	365	189.00	484	265.00	655
53.00	59	125.00	409	191.00	237	266.00	89
55.00	241	127.00	30128	192.00	581	271.00	62
56.00	707	128.00	2230	193.00	882	272.00	67
57.00	1625	129.00	9909	194.00	203	273.00	1187
58.00	203	130.00	885	195.00	137	274.00	2938
61.00	325	131.00	252	196.00	1912	275.00	15813
62.00	320	133.00	58	197.00	221	276.00	2397
63.00	1003	134.00	305	198.00	63960	277.00	1240
64.00	176	135.00	844	199.00	4391	278.00	232
65.00	499	136.00	338	200.00	316	283.00	180
66.00	84	137.00	515	201.00	499	284.00	53
69.00	24080	138.00	322	203.00	479	285.00	374
70.00	98	140.00	614	204.00	2304	293.00	285
73.00	283	141.00	1044	205.00	3797	294.00	60
74.00	2170	142.00	753	206.00	15406	295.00	59
75.00	3516	143.00	535	207.00	1838	296.00	3769
76.00	1712	144.00	308	208.00	444	297.00	587
77.00	28008	145.00	153	209.00	173	303.00	505
78.00	2158	146.00	343	210.00	164	304.00	125
79.00	1379	147.00	627	211.00	654	314.00	164
80.00	1162	148.00	1268	212.00	59	315.00	364
81.00	1845	149.00	394	213.00	194	316.00	296
82.00	583	150.00	142	215.00	162	321.00	198
83.00	361	151.00	379	216.00	245	323.00	1476
84.00	230	152.00	183	217.00	3851	324.00	280
85.00	382	153.00	710	218.00	1365	327.00	386
86.00	587	154.00	410	219.00	258	328.00	198

Data File: /chem2/nt6.i/20130617.b/tune.b/06171301.d

Date : 17-JUN-2013 16:08

Client ID: DFTPP0617

Instrument: nt6.i

Sample Info: DFTPP0617

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

Data File: 06171301.d

Spectrum: Avg. Scans 2664-2666 (15.52), Background Scan 2658

Location of Maximum: 198.00

Number of points: 246

m/z	Y	m/z	Y	m/z	Y	m/z	Y
87.00	159	155.00	732	220.00	385	334.00	845
88.00	195	156.00	1172	221.00	4052	335.00	282
89.00	133	157.00	372	223.00	1014	341.00	198
90.00	152	158.00	202	224.00	8619	346.00	300
91.00	622	159.00	378	225.00	2173	352.00	515
92.00	540	160.00	507	226.00	271	353.00	366
93.00	2613	161.00	85	227.00	3121	354.00	588
94.00	163	162.00	160	228.00	561	365.00	1821
96.00	255	163.00	70	229.00	727	366.00	263
98.00	1938	164.00	46	230.00	206	371.00	61
99.00	1673	165.00	1100	231.00	427	372.00	856
100.00	179	166.00	186	234.00	266	373.00	154
101.00	1190	167.00	2136	235.00	270	383.00	209
102.00	59	168.00	1676	236.00	262	390.00	208
103.00	455	169.00	292	237.00	306	402.00	382
104.00	682	170.00	53	240.00	110	403.00	615
105.00	528	171.00	77	241.00	469	404.00	142
106.00	342	172.00	307	242.00	349	421.00	473
107.00	8020	173.00	375	243.00	481	422.00	542
108.00	1349	174.00	381	244.00	6958	423.00	3255
109.00	102	175.00	966	245.00	865	424.00	635
110.00	15841	176.00	340	246.00	1233	441.00	9336
111.00	2008	177.00	414	247.00	273	442.00	63208
112.00	602	178.00	213	248.00	54	443.00	11981
114.00	260	179.00	1809	249.00	287	444.00	1153
115.00	186	180.00	1400	252.00	60		
116.00	625	181.00	670	253.00	153		

US90 : 00361

Data File: /chem2/nt6.i/20130617.b/tune.b/06171301.d

Date : 17-JUN-2013 16:08

Client ID: DFTPP0617

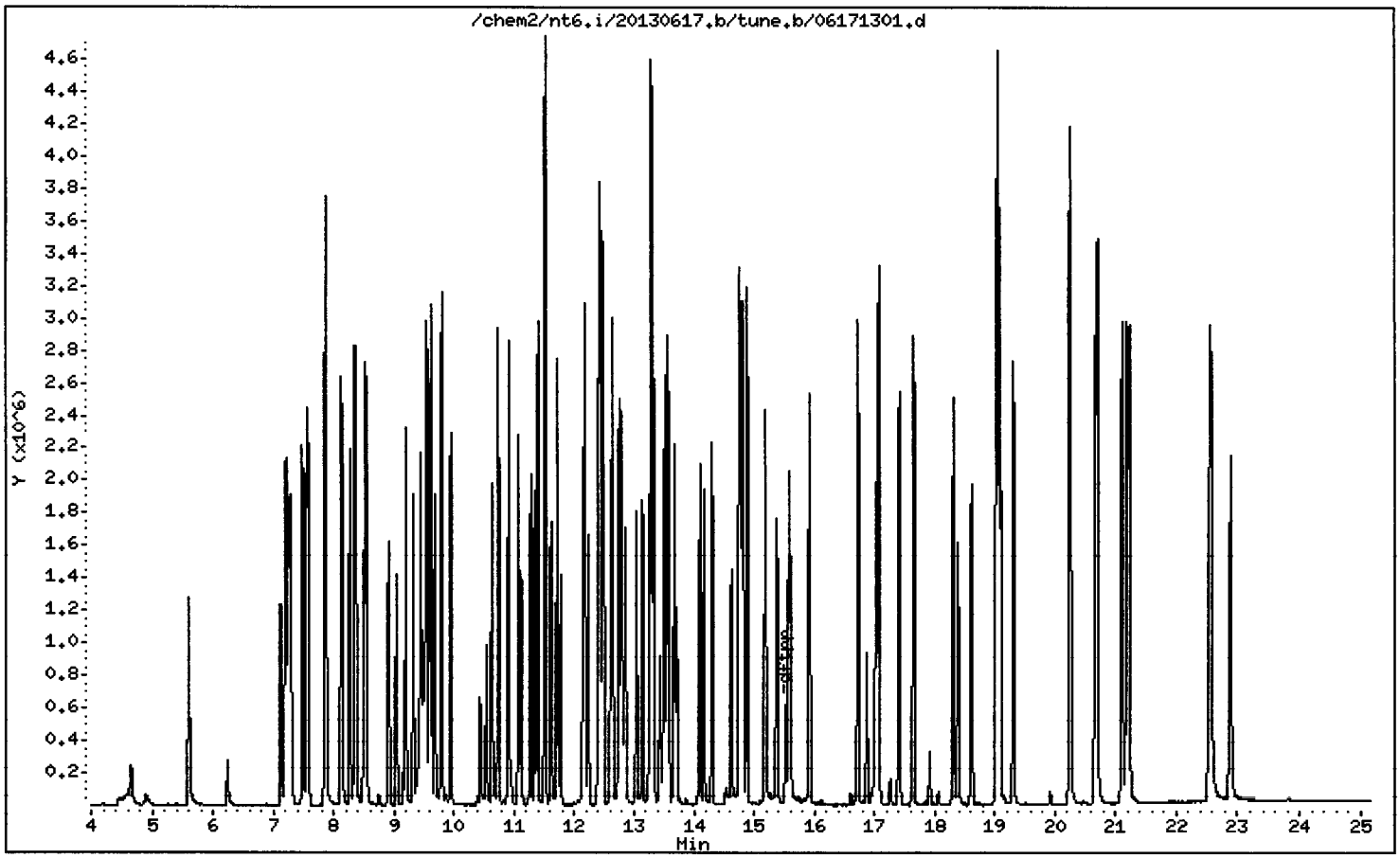
Instrument: nt6.i

Sample Info: DFTPP0617

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/20130617.b/ddt.b/06171301.d ARI ID: DDT0617
Method: /chem2/nt6.i/20130617.b/ddt.b/sw846ddt.m Misc: 13-
Analysis Date: 17-JUN-2013 16:08 Instrument: nt6.i

COMPOUND	RT	AREA
Pentachlorophenol	14.621	318535
Benzidine	17.004	418391
4,4'-DDE	----	----
4,4'-DDD	17.912	118586
4,4'-DDT	18.382	588581

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

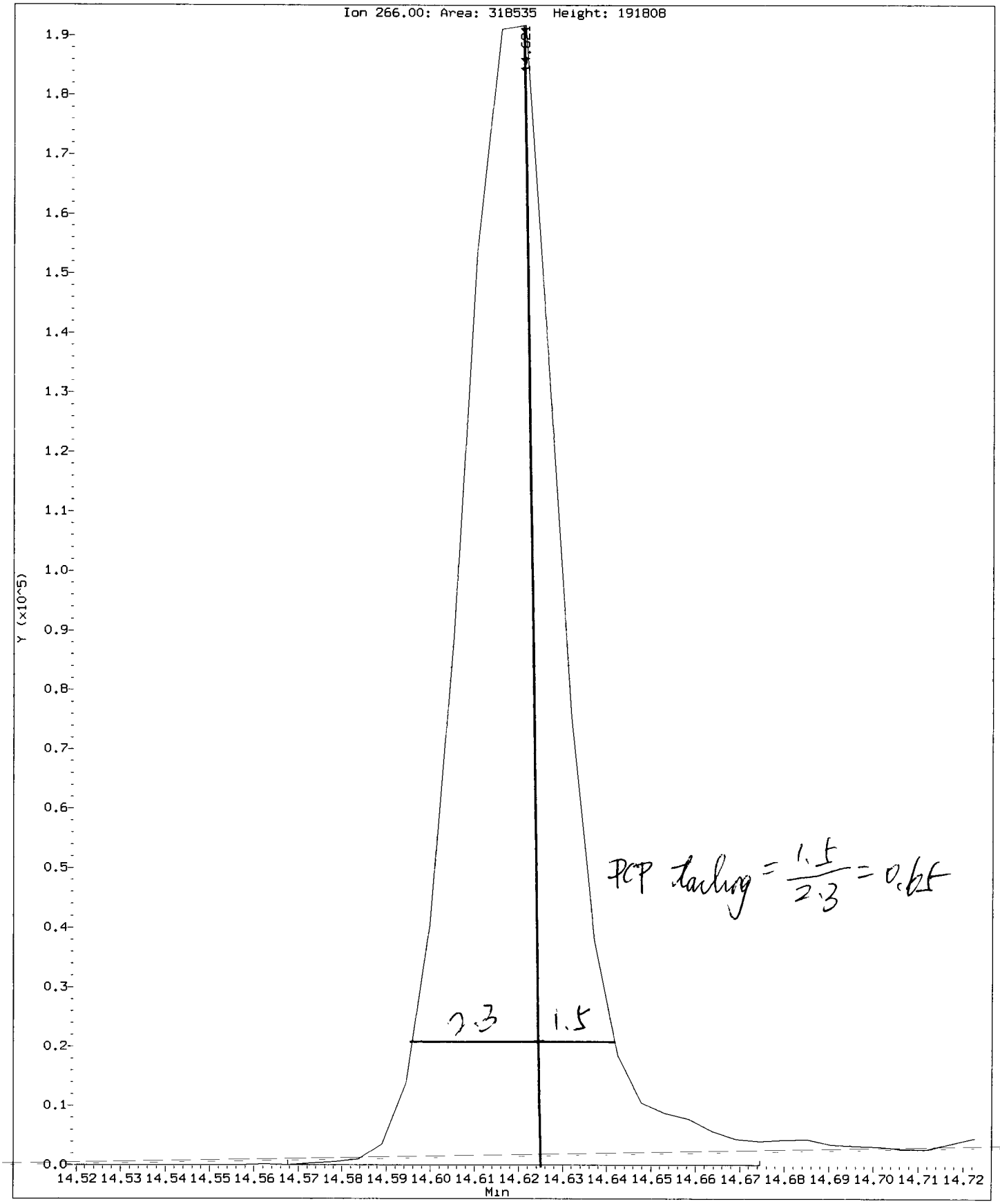
$$\text{DDT Percent Breakdown} = \frac{(0 + 118586) * 100}{(0 + 118586 + 588581)}$$

DDT Percent Breakdown = 16.8 %

ok 06/18/13

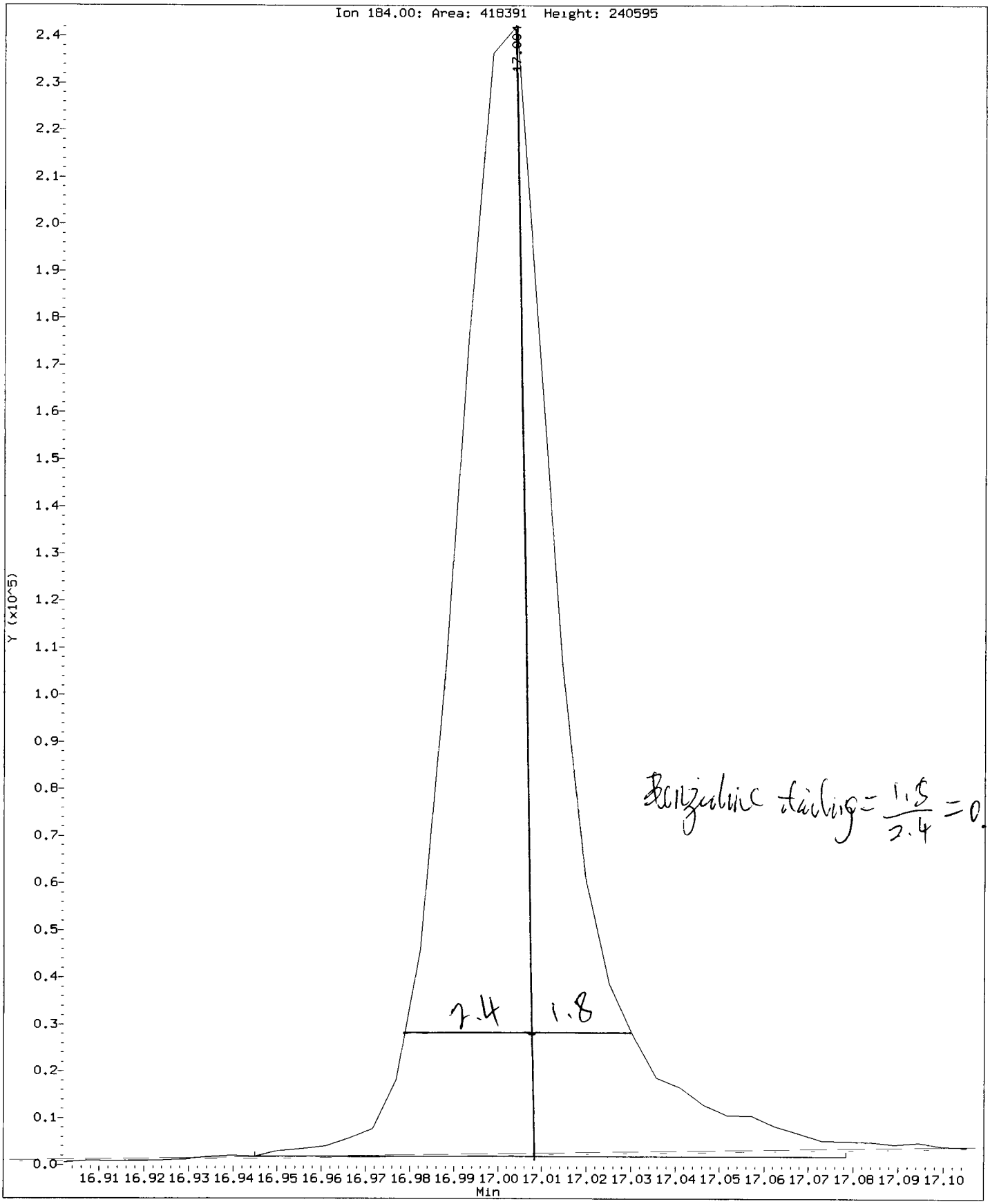
Data File: /chem2/nt6.i/20130617.b/ddt.b/06171301.d
Injection Date: 17-JUN-2013 16:08
Instrument: nt6.i
Client Sample ID: DDT0617

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem2/nt6.1/20130617.b/ddt.b/06171301.d
Injection Date: 17-JUN-2013 16:08
Instrument: nt6.1
Client Sample ID: DDT0617

Compound: Benzidine
CAS Number:



Benzidine tailing = $\frac{1.8}{2.4} = 0.75$

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130617.b/06171305.d
Lab Smp Id: WS90A Client Smp ID: CL-MH-SPS-20130605-
Inj Date : 17-JUN-2013 18:53
Operator : JZ Inst ID: nt6.i
Smp Info : WS90A
Misc Info : 13-12078
Comment : 1ul Injection
Method : /chem2/nt6.i/20130617.b/SW846030613.m
Meth Date : 18-Jun-2013 12:29 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 5
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)	FINAL (ug/L)
$	1 2-Fluorophenol	112	5.594	5.593	(0.741)	288110	14.4515	14.45
$	2 Phenol-d5	99	7.191	7.195	(0.953)	275348	11.7986	11.80
	3 Phenol	94	Compound Not Detected.					
$	5 2-Chlorophenol-d4	132	7.266	7.265	(0.962)	465174	23.5803	23.58
	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	7.549	7.548	(1.000)	307676	20.0000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	7.848	7.847	(1.040)	210933	15.1921	15.19
	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	8.484	8.494	(0.885)	346666	15.5868	15.59
	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	9.585	9.589	(1.000)	1108365	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	11.385	11.389	(0.917)	724242	17.9491	17.95
	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	12.421	12.431	(1.000)	639232	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	13.703	13.713	(1.103)	165636	32.7694	32.77
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	14.772	14.776	(1.000)	1051666	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)	FINAL (ug/L)
	64 Fluoranthene	202	Compound Not Detected.					
	65 Pyrene	202	Compound Not Detected.					
$	66 Terphenyl-d14	244	17.406	17.410	(0.914)	733248	17.6321	17.63
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	19.040	19.050	(1.000)	1184737	20.0000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	Compound Not Detected.					
	72 bis(2-Ethylhexyl)phthalate	149	19.307	19.311	(0.954)	22665	0.58287	0.5829
*	134 Di-n-octylphthalate-d4	153	20.232	20.241	(1.000)	1321454	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	21.177	21.187	(1.000)	1218000	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	7.122	7.121	(0.943)	46599	1.71151	1.712
	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: 06171305.d
Lab Smp Id: WS90A
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130617.b/SW846030613.m
Misc Info: 13-12078

Calibration Date: 17-JUN-2013
Calibration Time: 16:08
Client Smp ID: CL-MH-SPS-201306
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	307676	-32.84
27 Naphthalene-d8	1718341	859170	3436682	1108365	-35.50
42 Acenaphthene-d10	1010041	505020	2020082	639232	-36.71
59 Phenanthrene-d10	1666734	833367	3333468	1051666	-36.90
69 Chrysene-d12	1675752	837876	3351504	1184737	-29.30
134 Di-n-octylphthala	2026355	1013178	4052710	1321454	-34.79
77 Perylene-d12	1637524	818762	3275048	1218000	-25.62

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.55	7.05	8.05	7.55	0.02
27 Naphthalene-d8	9.59	9.09	10.09	9.58	-0.04
42 Acenaphthene-d10	12.43	11.93	12.93	12.42	-0.08
59 Phenanthrene-d10	14.78	14.28	15.28	14.77	-0.03
69 Chrysene-d12	19.05	18.55	19.55	19.04	-0.05
134 Di-n-octylphthala	20.24	19.74	20.74	20.23	-0.05
77 Perylene-d12	21.19	20.69	21.69	21.18	-0.04

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

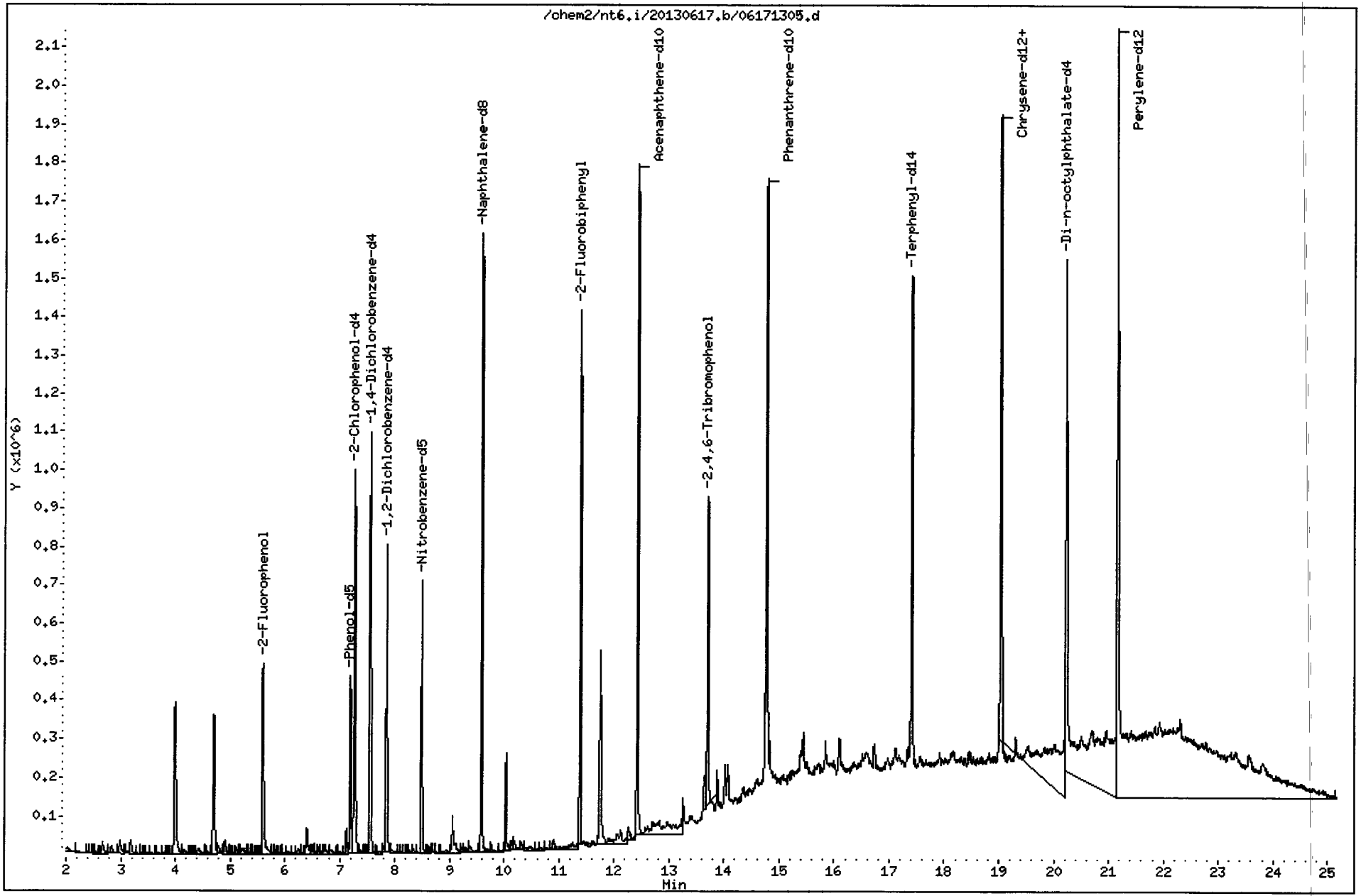
Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WS90A
Level: LOW
Data Type: MS DATA
SpikeList File: SEPAtclpLCS.spk
Sublist File: SEPAtclp.sub
Method File: /chem2/nt6.i/20130617.b/SW846030613.m
Misc Info: 13-12078

Client SDG: WS90
Fraction: SV
Client Smp ID: CL-MH-SPS-20130605-
Operator: JZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	14.45	38.54	31-100
$ 2 Phenol-d5	37.50	11.80	31.46	19-100
$ 5 2-Chlorophenol-d4	37.50	23.58	62.88	49-101
$ 10 1,2-Dichlorobenzen	25.00	15.19	60.77	40-100
$ 18 Nitrobenzene-d5	25.00	15.59	62.35	46-101
$ 36 2-Fluorobiphenyl	25.00	17.95	71.80	49-103
$ 55 2,4,6-Tribromophen	37.50	32.77	87.39	51-122
$ 66 Terphenyl-d14	25.00	17.63	70.53	57-118

Data File: /chem2/nt6.i/20130617.b/06171305.d
Date : 17-JUN-2013 18:53
Client ID: CL-MH-SPS-20130605-
Sample Info: WS90A
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



Data File: /chem2/nt6.i/20130617.b/06171305.d

Date : 17-JUN-2013 18:53

Client ID: CL-MH-SPS-20130605-

Instrument: nt6.i

Sample Info: WS90A

Volume Injected (uL): 1.0

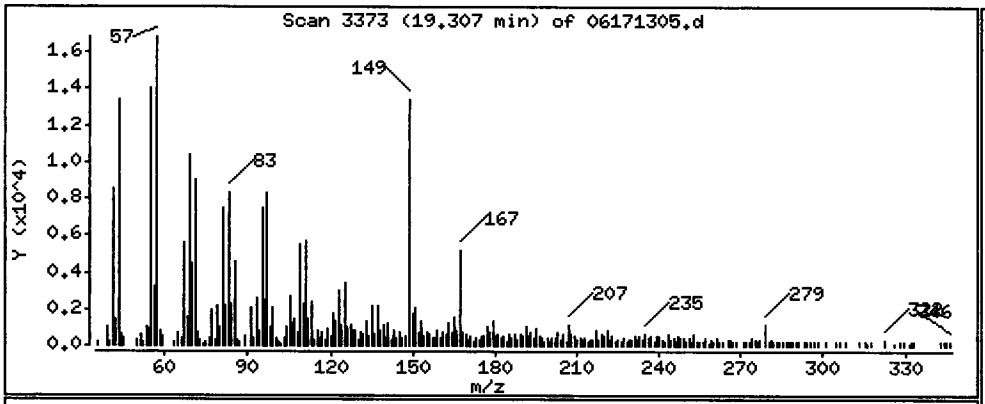
Operator: JZ

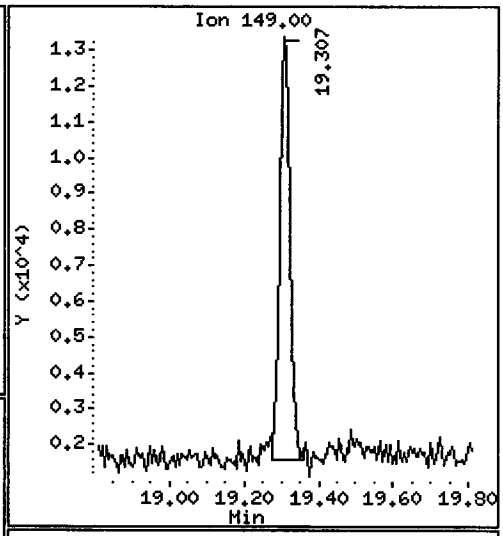
Column phase: ZB-5msi

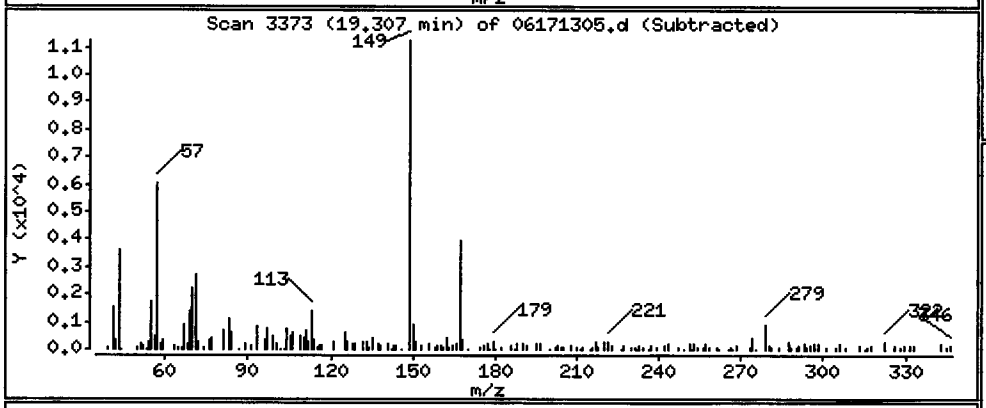
Column diameter: 0.32

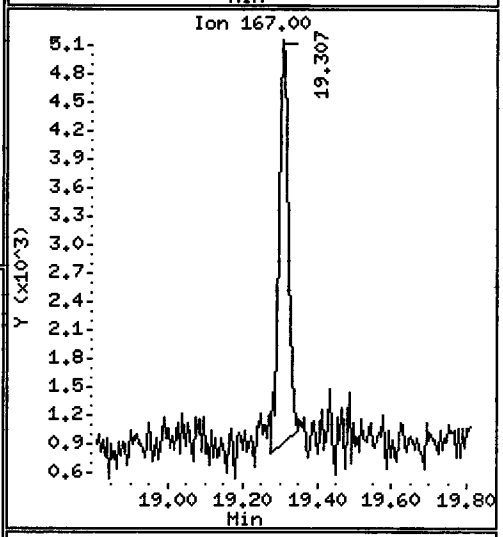
72 bis(2-Ethylhexyl)phthalate

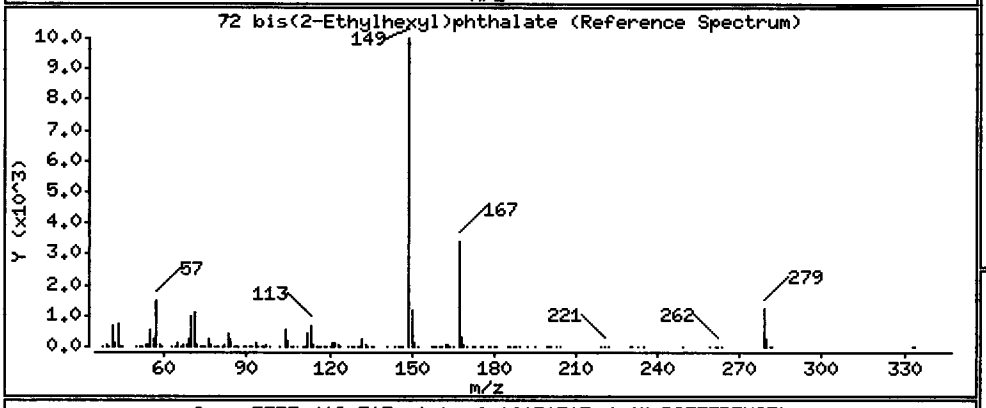
Concentration: 0.5829 ug/L

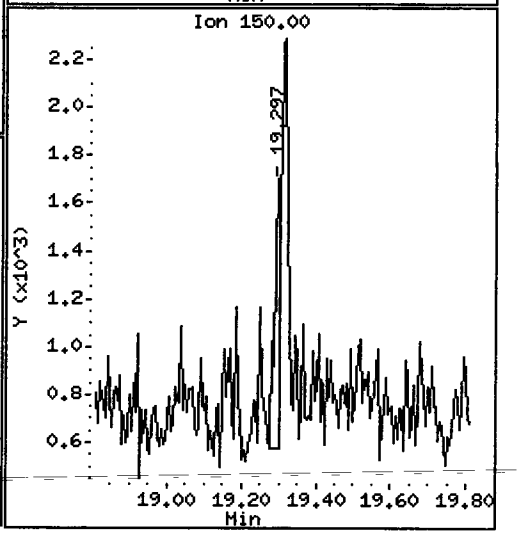


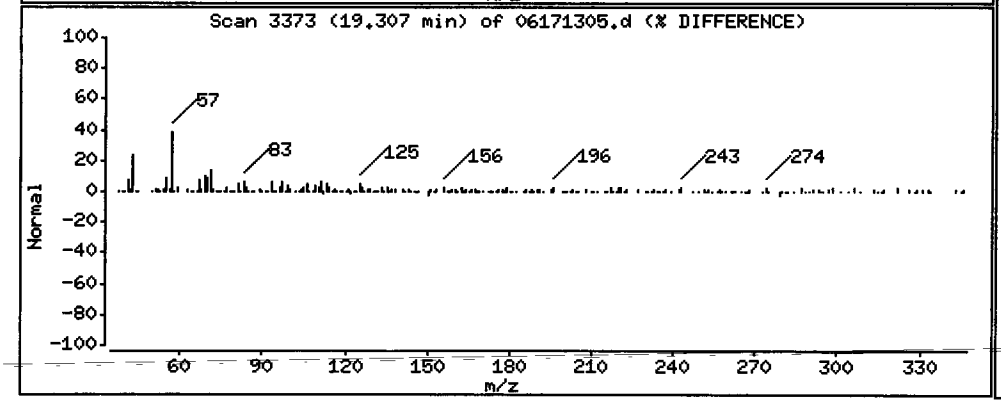












Data File: /chem2/nt6.i/20130617.b/06171305.d

Date : 17-JUN-2013 18:53

Client ID: CL-MH-SPS-20130605-

Instrument: nt6.i

Sample Info: WS90A

Volume Injected (uL): 1.0

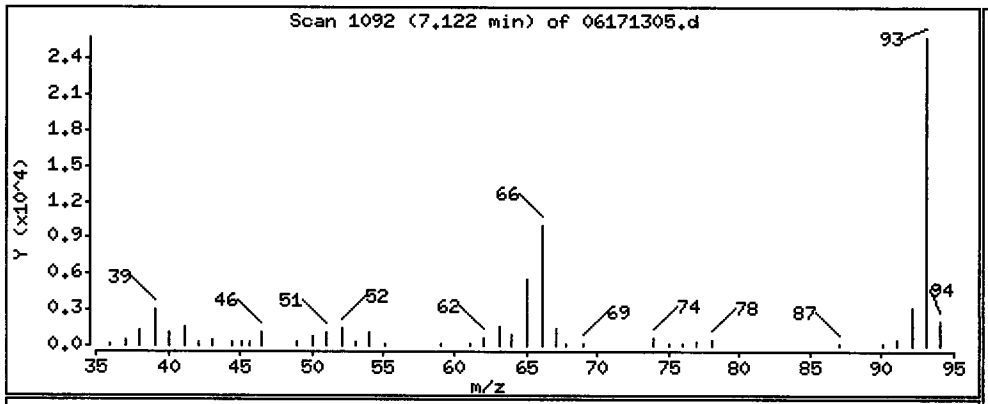
Operator: JZ

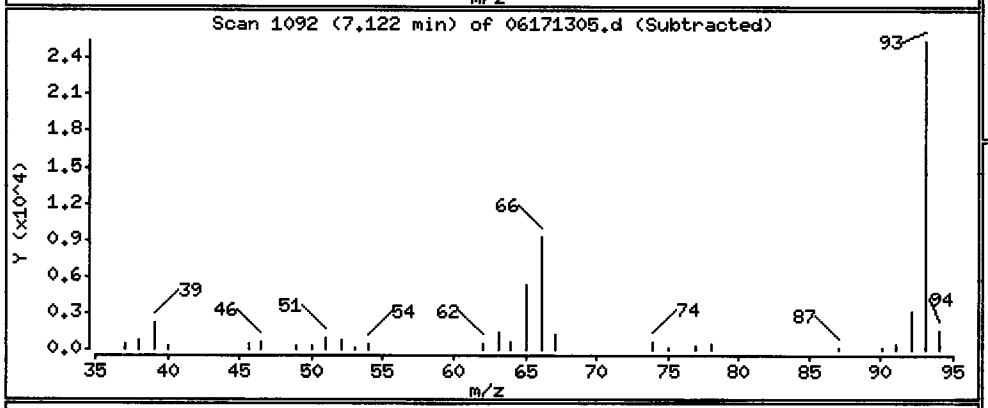
Column phase: ZB-5ms1

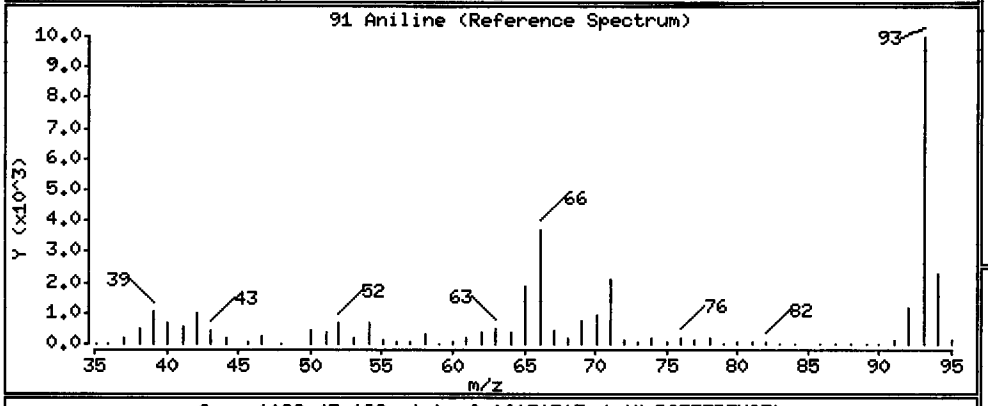
Column diameter: 0.32

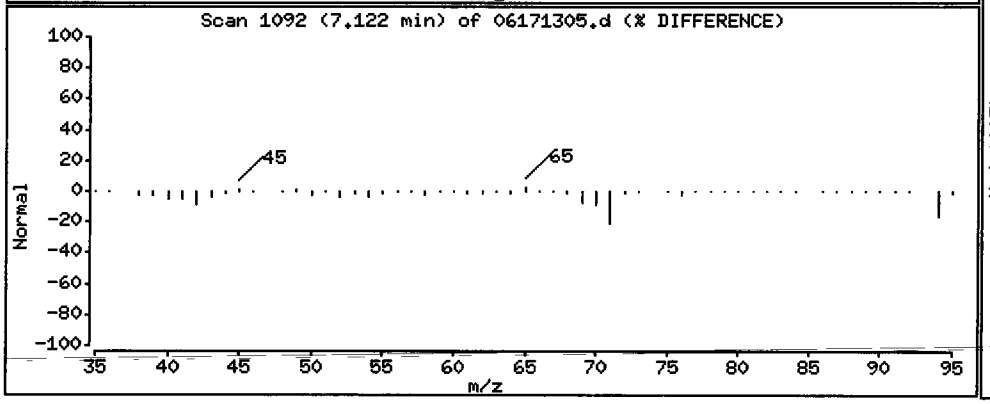
91 Aniline

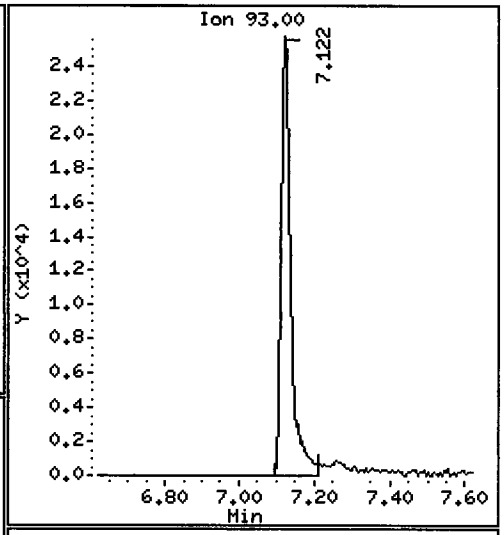
Concentration: 1.712 ug/L

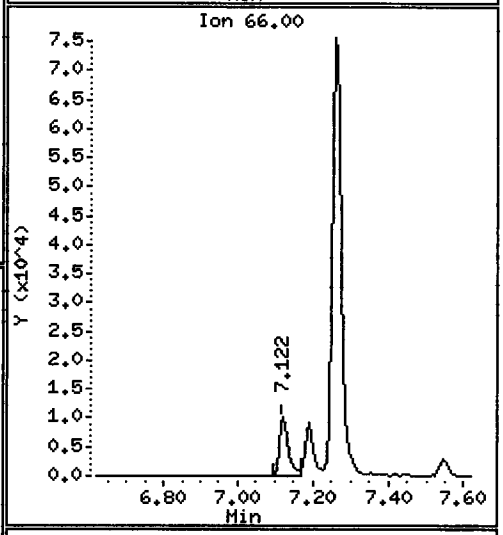


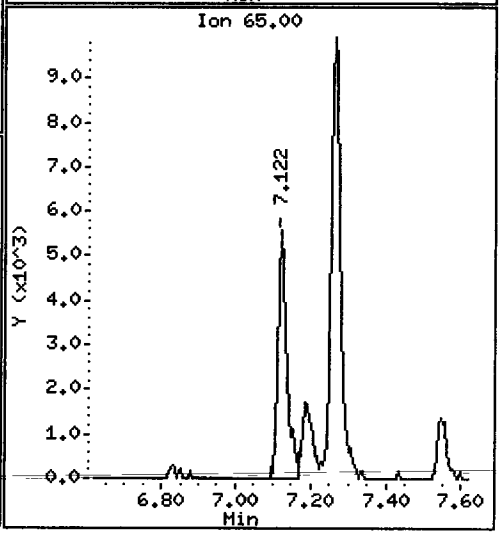












CO-ELUTION SUMMARY FOR FILE - 06171305.d

Lab ID: WS90A, Method: SW846030613.m, Instrument: nt6.i, Date: 17-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130617.b/06171306.d
Lab Smp Id: WS90B Client Smp ID: CL-VT-EFF-20130605-
Inj Date : 17-JUN-2013 19:27
Operator : JZ Inst ID: nt6.i
Smp Info : WS90B
Misc Info : 13-12079
Comment : 1ul Injection
Method : /chem2/nt6.i/20130617.b/SW846030613.m
Meth Date : 18-Jun-2013 12:29 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPAtclp.sub
Target Version: 3.50

JZ 06/18/13

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	5.596	5.593	(0.742)	288865	13.4904	13.49
$	2 Phenol-d5	99	7.193	7.195	(0.953)	261666	10.4393	10.44
	3 Phenol	94	Compound Not Detected.					
$	5 2-Chlorophenol-d4	132	7.263	7.265	(0.962)	458728	21.6503	21.65
	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	7.546	7.548	(1.000)	330460	20.0000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	7.845	7.847	(1.040)	205793	13.8000	13.80
	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	8.486	8.494	(0.885)	322353	13.3858	13.39
	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	9.586	9.589	(1.000)	1200098	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	11.381	11.389	(0.916)	655794	14.9257	14.93
	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	12.423	12.431	(1.000)	696067	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	13.705	13.713	(1.103)	160144	29.0959	29.10
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	14.768	14.776	(1.000)	1145667	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	17.407	17.410	(0.914)	677865	14.9129	14.91
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	19.037	19.050	(1.000)	1294962	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	20.233	20.241	(1.000)	1442385	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	21.174	21.187	(1.000)	1316416	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: 06171306.d
Lab Smp Id: WS90B
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130617.b/SW846030613.m
Misc Info: 13-12079

Calibration Date: 17-JUN-2013
Calibration Time: 16:08
Client Smp ID: CL-VT-EFF-201306
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	330460	-27.87
27 Naphthalene-d8	1718341	859170	3436682	1200098	-30.16
42 Acenaphthene-d10	1010041	505020	2020082	696067	-31.09
59 Phenanthrene-d10	1666734	833367	3333468	1145667	-31.26
69 Chrysene-d12	1675752	837876	3351504	1294962	-22.72
134 Di-n-octylphthala	2026355	1013178	4052710	1442385	-28.82
77 Perylene-d12	1637524	818762	3275048	1316416	-19.61

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.55	7.05	8.05	7.55	-0.03
27 Naphthalene-d8	9.59	9.09	10.09	9.59	-0.02
42 Acenaphthene-d10	12.43	11.93	12.93	12.42	-0.06
59 Phenanthrene-d10	14.78	14.28	15.28	14.77	-0.05
69 Chrysene-d12	19.05	18.55	19.55	19.04	-0.07
134 Di-n-octylphthala	20.24	19.74	20.74	20.23	-0.04
77 Perylene-d12	21.19	20.69	21.69	21.17	-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

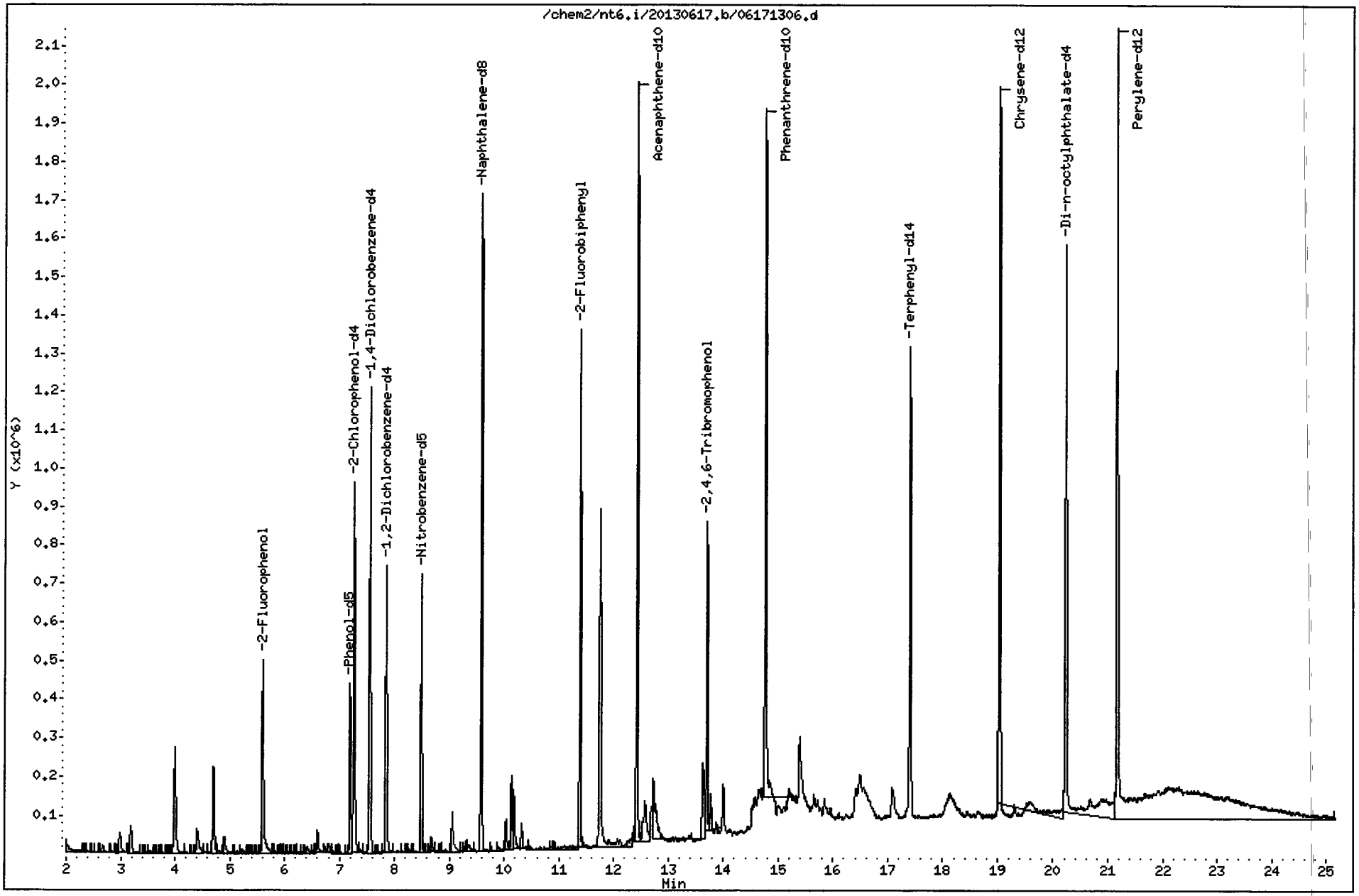
Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WS90B
Level: LOW
Data Type: MS DATA
SpikeList File: SEPAtclpLCS.spk
Sublist File: SEPAtclp.sub
Method File: /chem2/nt6.i/20130617.b/SW846030613.m
Misc Info: 13-12079

Client SDG: WS90
Fraction: SV
Client Smp ID: CL-VT-EFF-20130605-
Operator: JZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	13.49	35.97	31-100
$ 2 Phenol-d5	37.50	10.44	27.84	19-100
$ 5 2-Chlorophenol-d4	37.50	21.65	57.73	49-101
$ 10 1,2-Dichlorobenzen	25.00	13.80	55.20	40-100
$ 18 Nitrobenzene-d5	25.00	13.39	53.54	46-101
$ 36 2-Fluorobiphenyl	25.00	14.93	59.70	49-103
$ 55 2,4,6-Tribromophen	37.50	29.10	77.59	51-122
$ 66 Terphenyl-d14	25.00	14.91	59.65	57-118

Data File: /chem2/nt6.i/20130617.b/06171306.d
Date : 17-JUN-2013 19:27
Client ID: CL-VT-EFF-20130605-
Sample Info: WS90B
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 06171306.d

Lab ID: WS90B, Method: SW846030613.m, Instrument: nt6.i, Date: 17-JUN-2013

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130617.b/06171307.d
Lab Smp Id: WS90C Client Smp ID: QC-EB-02-20130605-W
Inj Date : 17-JUN-2013 20:02
Operator : JZ Inst ID: nt6.i
Smp Info : WS90C
Misc Info : 13-12080
Comment : 1ul Injection
Method : /chem2/nt6.i/20130617.b/SW846030613.m
Meth Date : 18-Jun-2013 12:29 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPAtclp.sub
Target Version: 3.50

06/18/13

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	5.595	5.593	(0.742)	292772	13.0056	13.01
$	2 Phenol-d5	99	7.187	7.195	(0.953)	263815	10.0114	10.01
	3 Phenol	94	Compound Not Detected.					
$	5 2-Chlorophenol-d4	132	7.261	7.265	(0.962)	451793	20.2824	20.28
	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	7.545	7.548	(1.000)	347415	20.0000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	7.849	7.847	(1.040)	203507	12.9807	12.98
	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)	CONCENTRATIONS FINAL (ug/L)
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	8.485	8.494	(0.885)	327164	13.0516	13.05
	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	9.585	9.589	(1.000)	1249197	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	11.380	11.389	(0.916)	686652	15.0640	15.06
	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	12.422	12.431	(1.000)	722127	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	13.271	13.291	(1.068)	121835	3.02564	3.026
	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	13.704	13.713	(1.103)	172144	30.1475	30.15
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	14.767	14.776	(1.000)	1187879	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	17.406	17.410	(0.914)	787694	16.6470	16.65
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	19.041	19.050	(1.000)	1348024	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	20.232	20.241	(1.000)	1494269	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	21.172	21.187	(1.000)	1369724	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: 06171307.d
Lab Smp Id: WS90C
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130617.b/SW846030613.m
Misc Info: 13-12080

Calibration Date: 17-JUN-2013
Calibration Time: 16:08
Client Smp ID: QC-EB-02-2013060
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	347415	-24.16
27 Naphthalene-d8	1718341	859170	3436682	1249197	-27.30
42 Acenaphthene-d10	1010041	505020	2020082	722127	-28.51
59 Phenanthrene-d10	1666734	833367	3333468	1187879	-28.73
69 Chrysene-d12	1675752	837876	3351504	1348024	-19.56
134 Di-n-octylphthala	2026355	1013178	4052710	1494269	-26.26
77 Perylene-d12	1637524	818762	3275048	1369724	-16.35

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.55	7.05	8.05	7.54	-0.05
27 Naphthalene-d8	9.59	9.09	10.09	9.59	-0.04
42 Acenaphthene-d10	12.43	11.93	12.93	12.42	-0.07
59 Phenanthrene-d10	14.78	14.28	15.28	14.77	-0.06
69 Chrysene-d12	19.05	18.55	19.55	19.04	-0.05
134 Di-n-octylphthala	20.24	19.74	20.74	20.23	-0.04
77 Perylene-d12	21.19	20.69	21.69	21.17	-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.

Analytical Resources, Inc.

RECOVERY REPORT

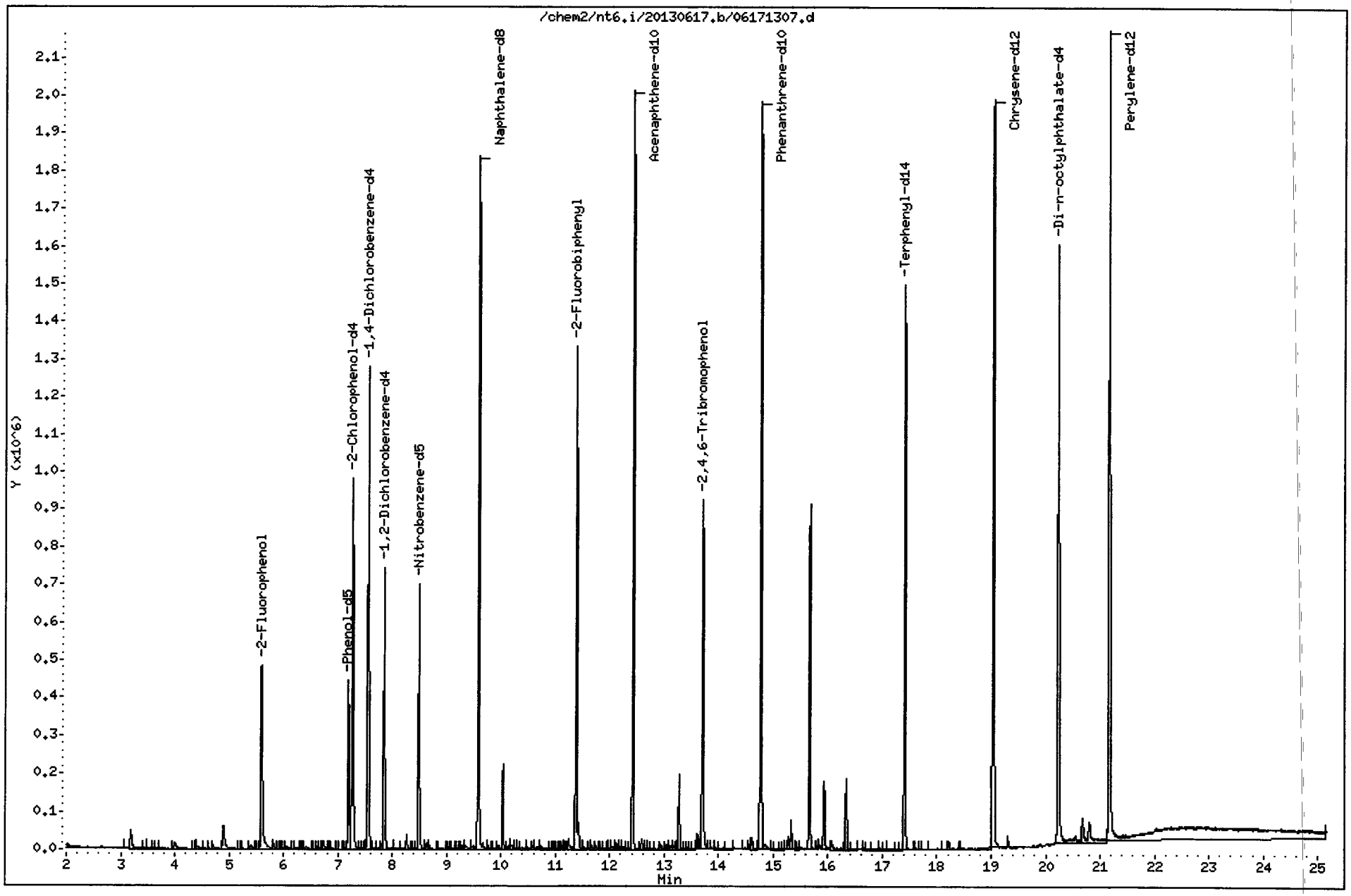
Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WS90C
Level: LOW
Data Type: MS DATA
SpikeList File: SEPAtclpLCS.spk
Sublist File: SEPAtclp.sub
Method File: /chem2/nt6.i/20130617.b/SW846030613.m
Misc Info: 13-12080

Client SDG: WS90
Fraction: SV
Client Smp ID: QC-EB-02-20130605-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	13.01	34.68	31-100
$ 2	Phenol-d5	37.50	10.01	26.70	19-100
$ 5	2-Chlorophenol-d4	37.50	20.28	54.09	49-101
$ 10	1,2-Dichlorobenzen	25.00	12.98	51.92	40-100
$ 18	Nitrobenzene-d5	25.00	13.05	52.21	46-101
$ 36	2-Fluorobiphenyl	25.00	15.06	60.26	49-103
$ 55	2,4,6-Tribromophen	37.50	30.15	80.39	51-122
$ 66	Terphenyl-d14	25.00	16.65	66.59	57-118

Data File: /chem2/nt6.i/20130617.b/06171307.d
Date : 17-JUN-2013 20:02
Client ID: QC-EB-02-20130605-W
Sample Info: WS90C
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



Data File: /chem2/nt6.i/20130617.b/06171307.d

Date : 17-JUN-2013 20:02

Client ID: QC-EB-02-20130605-W

Instrument: nt6.i

Sample Info: WS90C

Volume Injected (uL): 1.0

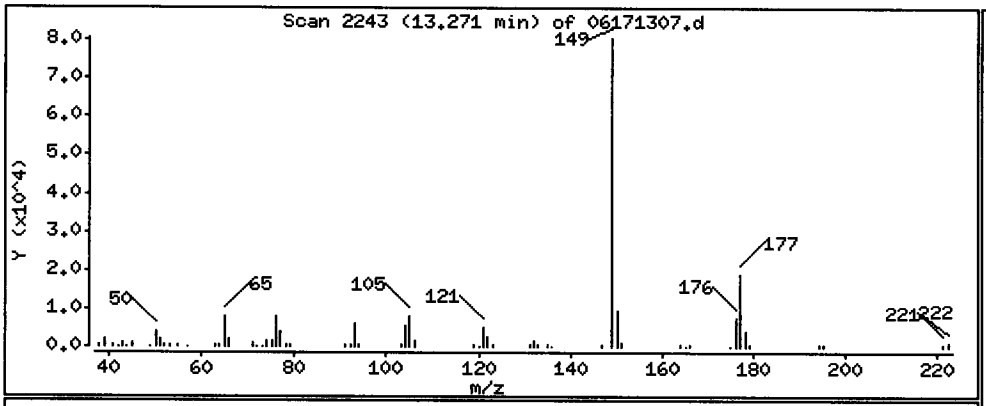
Operator: JZ

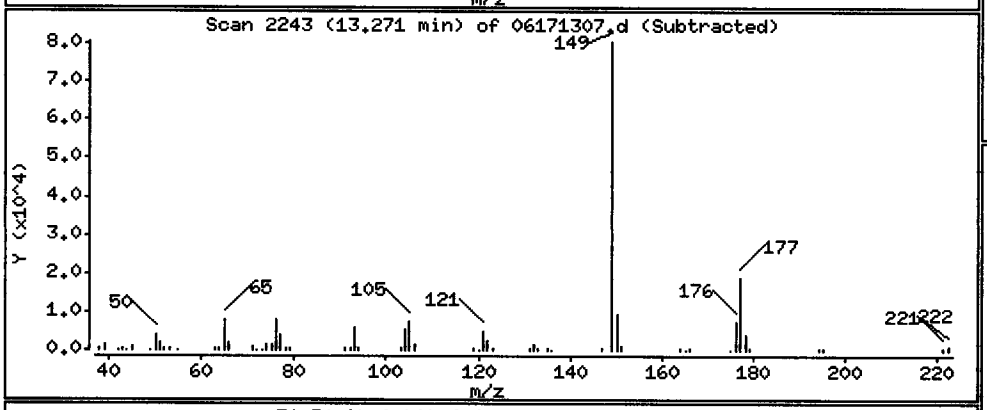
Column phase: ZB-5msi

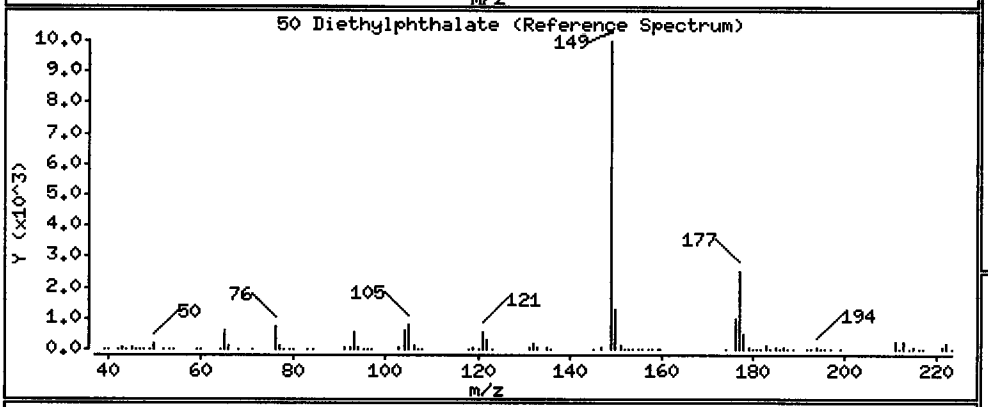
Column diameter: 0.32

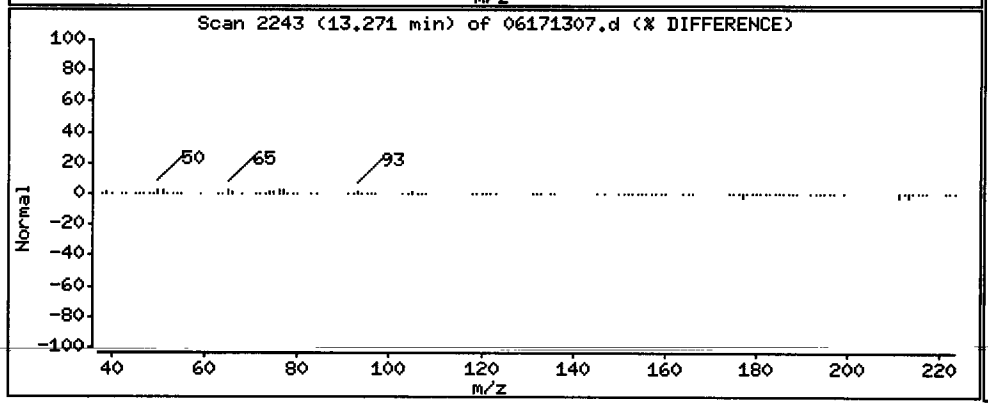
50 Diethylphthalate

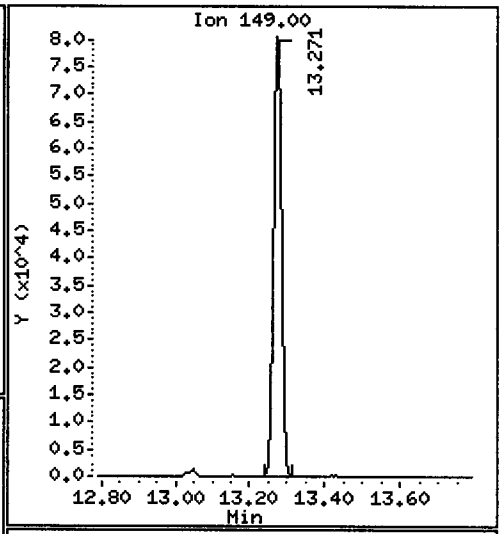
Concentration: 3.026 ug/L

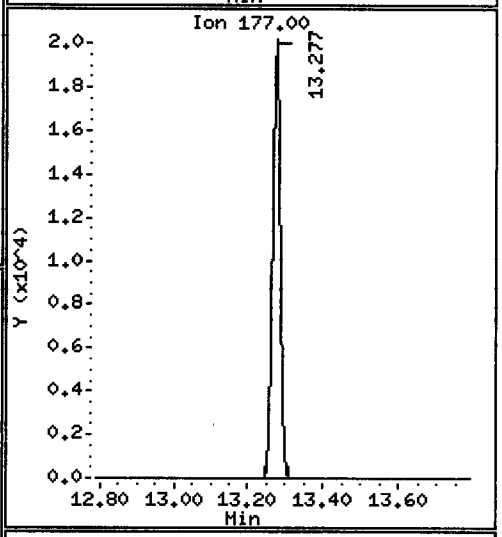


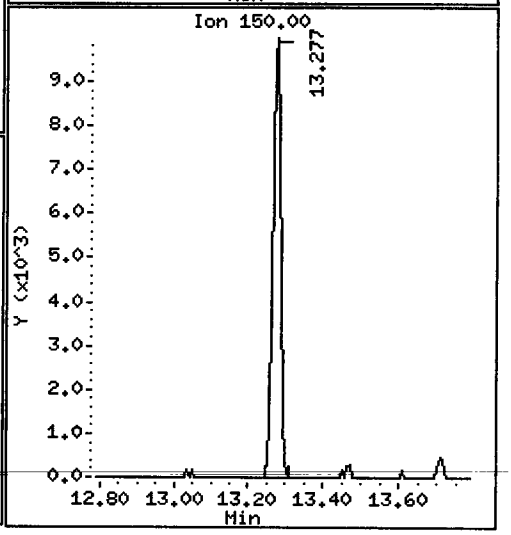












CO-ELUTION SUMMARY FOR FILE - 06171307.d

Lab ID: WS90C, Method: SW846030613.m, Instrument: nt6.i, Date: 17-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130617.b/06171308.d
Lab Smp Id: WS90D Client Smp ID: QC-EB-03-20130605-W
Inj Date : 17-JUN-2013 20:36
Operator : JZ Inst ID: nt6.i
Smp Info : WS90D
Misc Info : 13-12081
Comment : 1ul Injection
Method : /chem2/nt6.i/20130617.b/SW846030613.m
Meth Date : 18-Jun-2013 12:29 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPAtclp.sub
Target Version: 3.50

06/18/13

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	5.593	5.593	(0.741)	339023	15.2901	15.29
$	2	Phenol-d5	99	7.191	7.195	(0.953)	297122	11.4475	11.45
	3	Phenol	94	Compound Not Detected.					
$	5	2-Chlorophenol-d4	132	7.260	7.265	(0.962)	499200	22.7527	22.75
	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	7.549	7.548	(1.000)	342191	20.0000	
	9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10	1,2-Dichlorobenzene-d4	152	7.848	7.847	(1.040)	224489	14.5376	14.54
	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)	CONCENTRATIONS FINAL (ug/L)
15 4-Methylphenol	108	Compound Not Detected.					
$ 18 Nitrobenzene-d5	82	8.484	8.494	(0.885)	364604	14.8410	14.84
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	9.584	9.589	(1.000)	1224299	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	11.384	11.389	(0.917)	736343	16.3683	16.37
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	12.421	12.431	(1.000)	712678	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	13.275	13.291	(1.069)	97305	2.44850	2.449
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	13.708	13.713	(1.104)	172573	30.6233	30.62
56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
57 Hexachlorobenzene	284	Compound Not Detected.					
58 Pentachlorophenol	266	Compound Not Detected.					
* 59 Phenanthrene-d10	188	14.771	14.776	(1.000)	1160744	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	17.410	17.410	(0.915)	773349	16.7494	16.75
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	19.034	19.050	(1.000)	1315381	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	20.231	20.241	(1.000)	1441879	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	21.171	21.187	(1.000)	1327254	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: 06171308.d
Lab Smp Id: WS90D
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130617.b/SW846030613.m
Misc Info: 13-12081

Calibration Date: 17-JUN-2013
Calibration Time: 16:08
Client Smp ID: QC-EB-03-2013060
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	458117	229058	916234	342191	-25.30
27 Naphthalene-d8	1718341	859170	3436682	1224299	-28.75
42 Acenaphthene-d10	1010041	505020	2020082	712678	-29.44
59 Phenanthrene-d10	1666734	833367	3333468	1160744	-30.36
69 Chrysene-d12	1675752	837876	3351504	1315381	-21.51
134 Di-n-octylphthala	2026355	1013178	4052710	1441879	-28.84
77 Perylene-d12	1637524	818762	3275048	1327254	-18.95

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.55	7.05	8.05	7.55	0.01
27 Naphthalene-d8	9.59	9.09	10.09	9.58	-0.05
42 Acenaphthene-d10	12.43	11.93	12.93	12.42	-0.08
59 Phenanthrene-d10	14.78	14.28	15.28	14.77	-0.03
69 Chrysene-d12	19.05	18.55	19.55	19.03	-0.08
134 Di-n-octylphthala	20.24	19.74	20.74	20.23	-0.05
77 Perylene-d12	21.19	20.69	21.69	21.17	-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.

Analytical Resources, Inc.

RECOVERY REPORT

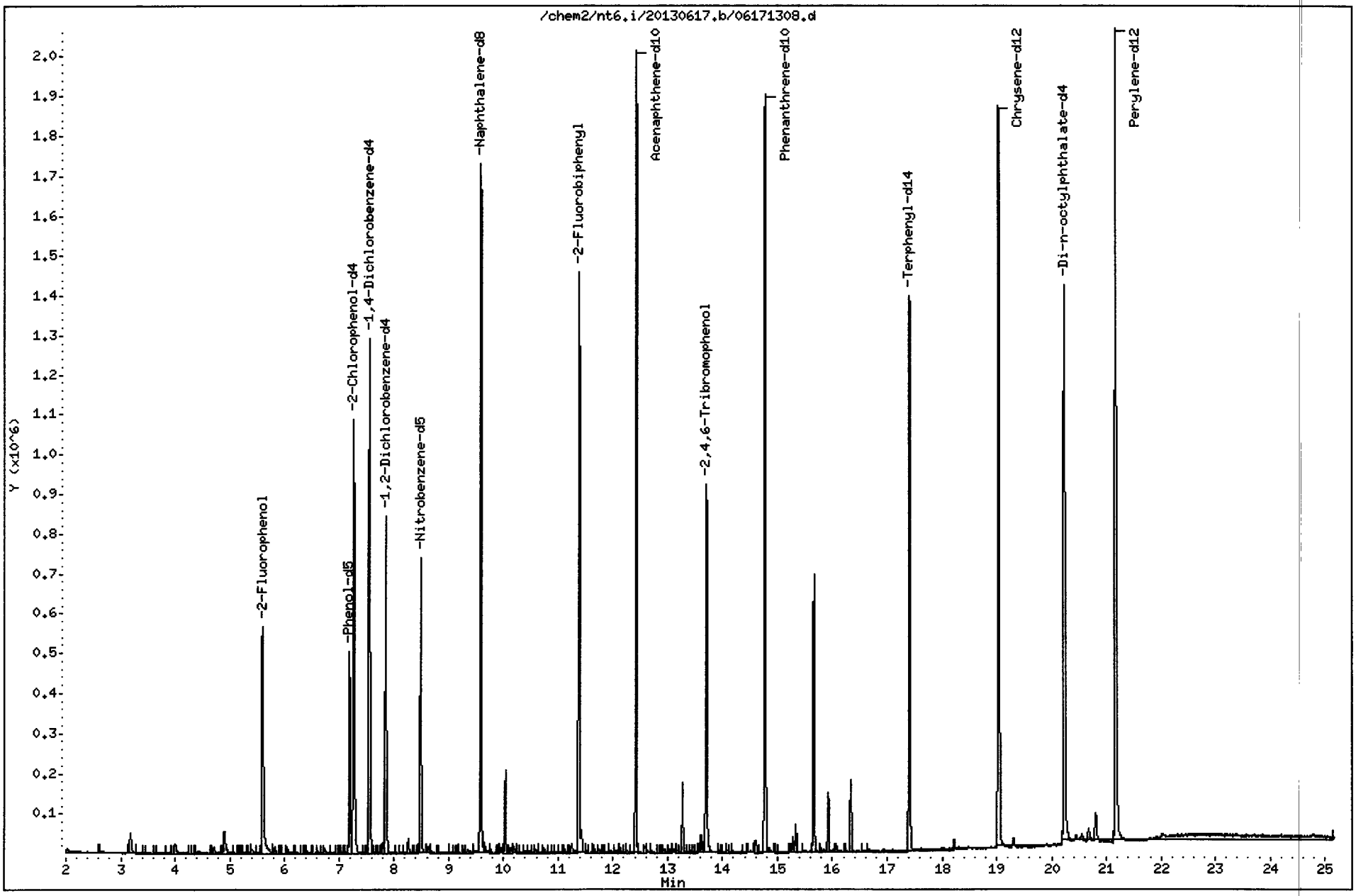
Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WS90D
Level: LOW
Data Type: MS DATA
SpikeList File: SEPAtclpLCS.spk
Sublist File: SEPAtclp.sub
Method File: /chem2/nt6.i/20130617.b/SW846030613.m
Misc Info: 13-12081

Client SDG: WS90
Fraction: SV
Client Smp ID: QC-EB-03-20130605-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	15.29	40.77	31-100
$ 2	Phenol-d5	37.50	11.45	30.53	19-100
$ 5	2-Chlorophenol-d4	37.50	22.75	60.67	49-101
$ 10	1,2-Dichlorobenzen	25.00	14.54	58.15	40-100
$ 18	Nitrobenzene-d5	25.00	14.84	59.36	46-101
$ 36	2-Fluorobiphenyl	25.00	16.37	65.47	49-103
$ 55	2,4,6-Tribromophen	37.50	30.62	81.66	51-122
$ 66	Terphenyl-d14	25.00	16.75	67.00	57-118

Data File: /chem2/nt6.i/20130617.b/06171308.d
Date : 17-JUN-2013 20:36
Client ID: QC-EB-03-20130605-W
Sample Info: WS90D
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



Data File: /chem2/nt6.i/20130617.b/06171308.d

Date : 17-JUN-2013 20:36

Client ID: QC-EB-03-20130605-W

Instrument: nt6.i

Sample Info: WS90D

Volume Injected (uL): 1.0

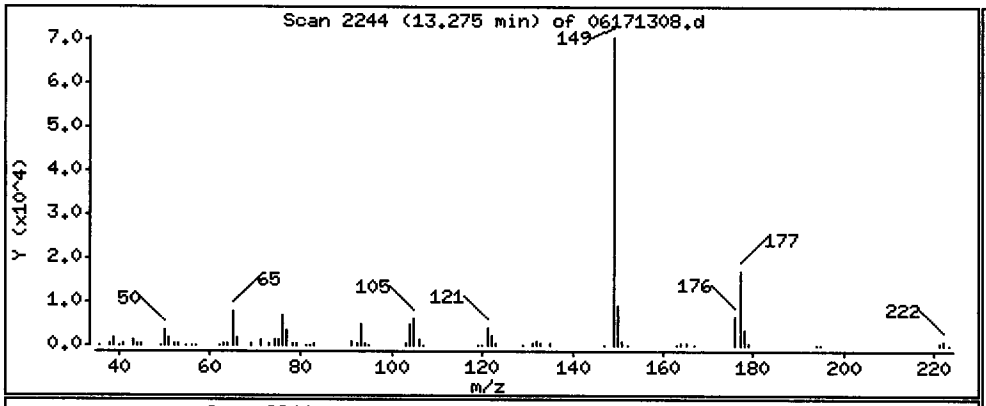
Operator: JZ

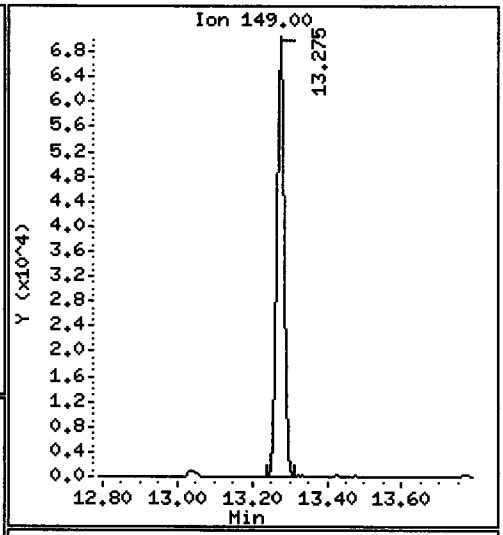
Column phase: ZB-5msi

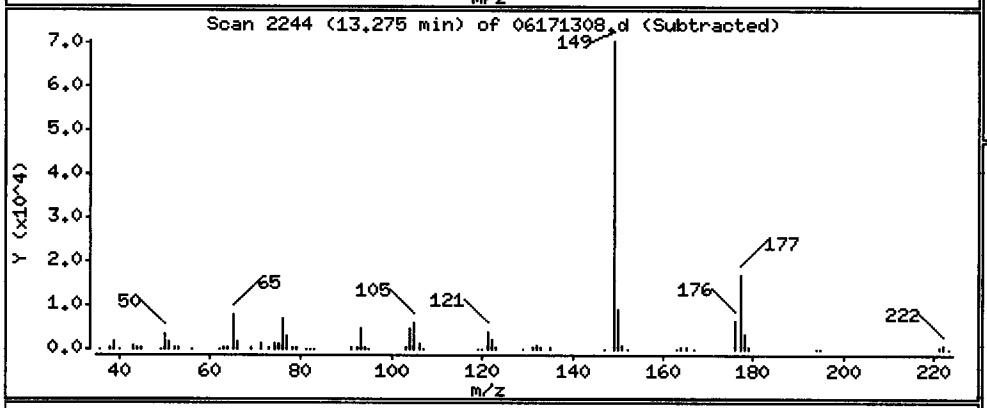
Column diameter: 0.32

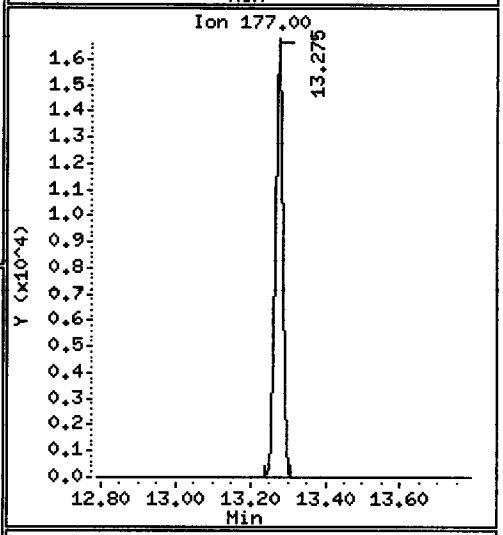
50 Diethylphthalate

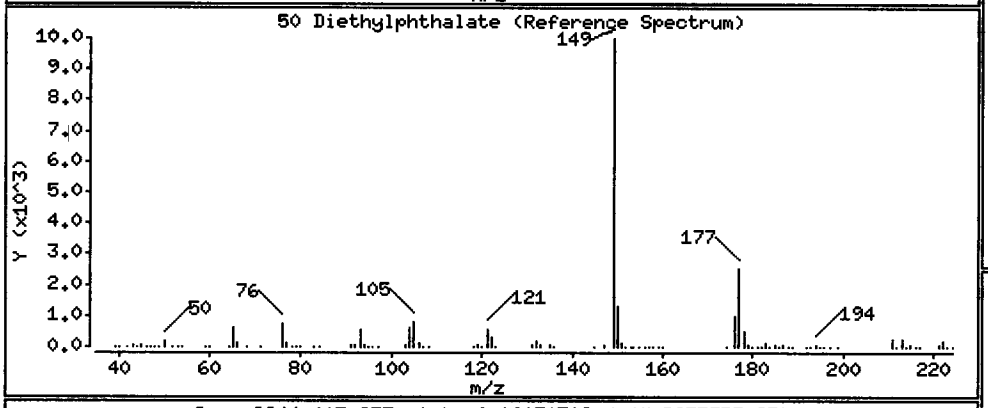
Concentration: 2.449 ug/L

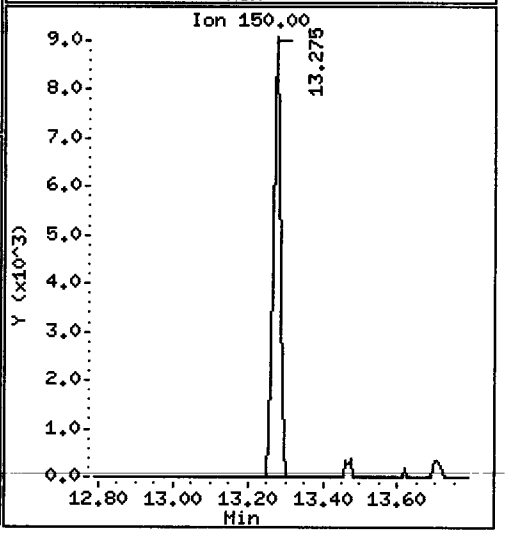


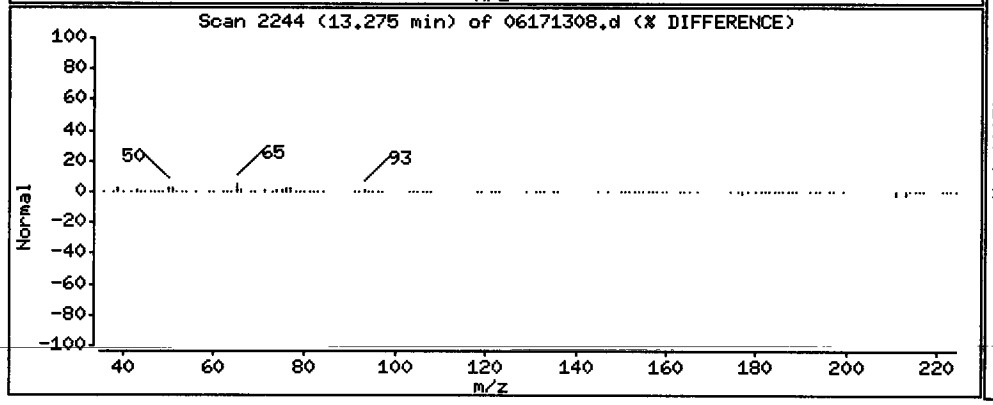












CO-ELUTION SUMMARY FOR FILE - 06171308.d

Lab ID: WS90D, Method: SW846030613.m, Instrument: nt6.i, Date: 17-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130617.b/06171303.d
Lab Smp Id: WS90MBW1 Client Smp ID: WS90MBW1
Inj Date : 17-JUN-2013 17:44
Operator : JZ Inst ID: nt6.i
Smp Info : WS90MBW1,
Misc Info : 13-12078
Comment : 1ul Injection
Method : /chem2/nt6.i/20130617.b/SW846030613.m
Meth Date : 18-Jun-2013 12:25 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPAtclpMBLCS.sub
Target Version: 3.50

06/18/13

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	5.589	5.593	(0.740)	379395	18.6302	18.63
$	2 Phenol-d5	99	7.186	7.195	(0.952)	342045	14.3484	14.35
	3 Phenol	94	Compound Not Detected.					
$	5 2-Chlorophenol-d4	132	7.261	7.265	(0.962)	574689	28.5193	28.52
	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	7.550	7.548	(1.000)	314284	20.0000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	7.843	7.847	(1.039)	250472	17.6606	17.66
	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	8.484	8.494	(0.885)	413610	18.1824	18.18
	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	9.585	9.589	(1.000)	1133622	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	11.385	11.389	(0.917)	804903	19.2130	19.21
	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	12.422	12.431	(1.000)	663690	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	13.709	13.713	(1.104)	190273	36.2564	36.26
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	14.767	14.776	(1.000)	1077671	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	17.406	17.410	(0.914)	890293	20.6207	20.62
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	19.035	19.050	(1.000)	1230002	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	20.232	20.241	(1.000)	1324061	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	21.172	21.187	(1.000)	1186200	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: 06171303.d
Lab Smp Id: WS90MBW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130617.b/SW846030613.m
Misc Info: 13-12078

Calibration Date: 17-JUN-2013
Calibration Time: 16:08
Client Smp ID: WS90MBW1
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	458117	229058	916234	314284	-31.40
27 Naphthalene-d8	1718341	859170	3436682	1133622	-34.03
42 Acenaphthene-d10	1010041	505020	2020082	663690	-34.29
59 Phenanthrene-d10	1666734	833367	3333468	1077671	-35.34
69 Chrysene-d12	1675752	837876	3351504	1230002	-26.60
134 Di-n-octylphthala	2026355	1013178	4052710	1324061	-34.66
77 Perylene-d12	1637524	818762	3275048	1186200	-27.56

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.55	7.05	8.05	7.55	0.02
27 Naphthalene-d8	9.59	9.09	10.09	9.58	-0.04
42 Acenaphthene-d10	12.43	11.93	12.93	12.42	-0.07
59 Phenanthrene-d10	14.78	14.28	15.28	14.77	-0.06
69 Chrysene-d12	19.05	18.55	19.55	19.04	-0.08
134 Di-n-octylphthala	20.24	19.74	20.74	20.23	-0.05
77 Perylene-d12	21.19	20.69	21.69	21.17	-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.

Analytical Resources, Inc.

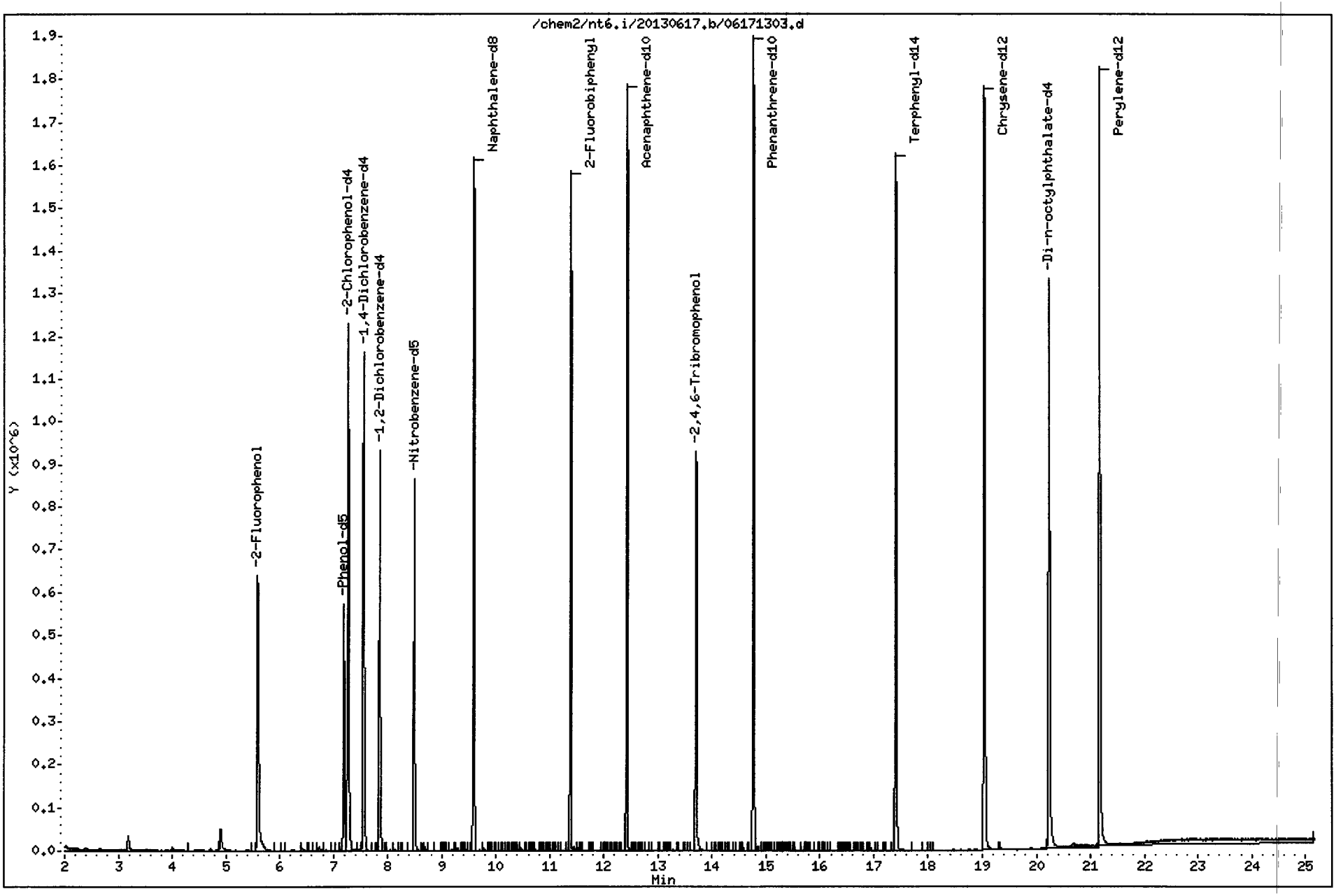
RECOVERY REPORT

Client Name: SAIC
Client SDG: WS90
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WS90MBW1
Client Smp ID: WS90MBW1
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/20130617.b/SW846030613.m
Misc Info: 13-12078

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	18.63	49.68	31-100
$ 2 Phenol-d5	37.50	14.35	38.26	19-100
$ 5 2-Chlorophenol-d4	37.50	28.52	76.05	49-101
$ 10 1,2-Dichlorobenzen	25.00	17.66	70.64	40-100
$ 18 Nitrobenzene-d5	25.00	18.18	72.73	46-101
$ 36 2-Fluorobiphenyl	25.00	19.21	76.85	49-103
$ 55 2,4,6-Tribromophen	37.50	36.26	96.68	51-122
$ 66 Terphenyl-d14	25.00	20.62	82.48	57-118

Data File: /chem2/nt6.i/20130617.b/06171303.d
Date : 17-JUN-2013 17:44
Client ID: WS90MBW1
Sample Info: WS90MBW1,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 06171303.d

Lab ID: WS90MBW1, Method: SW846030613.m, Instrument: nt6.i, Date: 17-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130617.b/06171302.d
Lab Smp Id: WS90LCSW1 Client Smp ID: WS90LCSW1
Inj Date : 17-JUN-2013 17:09
Operator : JZ Inst ID: nt6.i
Smp Info : WS90LCSW1,
Misc Info : 13-12078
Comment : 1ul Injection
Method : /chem2/nt6.i/20130617.b/SW846030613.m
Meth Date : 18-Jun-2013 12:25 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 2 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 JZ 06/18/13

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)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	5.601	5.593	(0.742)	386119	18.5972	18.60
$ 2	Phenol-d5	99	7.193	7.195	(0.953)	333665	13.7288	13.73
3	Phenol	94	7.209	7.212	(0.955)	246926	9.64897	9.649
$ 5	2-Chlorophenol-d4	132	7.268	7.265	(0.962)	560962	27.3048	27.30
4	Bis(2-Chloroethyl)ether	93	7.246	7.244	(0.960)	389973	17.5469	17.55
6	2-Chlorophenol	128	7.289	7.292	(0.965)	397065	19.3927	19.39
7	1,3-Dichlorobenzene	146	7.487	7.484	(0.992)	363719	15.2100	15.21
* 8	1,4-Dichlorobenzene-d4	152	7.551	7.548	(1.000)	320422	20.0000	
9	1,4-Dichlorobenzene	146	7.577	7.575	(1.004)	367796	15.8029	15.80
$ 10	1,2-Dichlorobenzene-d4	152	7.850	7.847	(1.040)	240970	16.6651	16.67
12	1,2-Dichlorobenzene	146	7.871	7.869	(1.042)	346800	15.5871	15.59
11	Benzyl alcohol	108	7.871	7.869	(1.042)	230965	16.5668	16.57
14	2,2'-oxybis(1-Chloropropane)	45	8.122	8.114	(1.076)	491966	13.9323	13.93
13	2-Methylphenol	108	8.128	8.130	(1.076)	320766	16.5302	16.53
17	Hexachloroethane	117	8.352	8.349	(1.106)	122332	12.9946	12.99
16	N-Nitroso-di-n-propylamine	70	8.336	8.344	(1.104)	253279	15.1860	15.19

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)	
15	4-Methylphenol	108	8.373	8.371	(1.109)	636579	33.1745	33.17	
$ 18	Nitrobenzene-d5	82	8.491	8.494	(0.885)	416276	18.0505	18.05	
19	Nitrobenzene	77	8.518	8.520	(0.888)	405248	18.3591	18.36	
20	Isophorone	82	8.913	8.910	(0.929)	704187	18.3031	18.30	
21	2-Nitrophenol	139	9.036	9.033	(0.942)	217920	21.3363	21.34	
22	2,4-Dimethylphenol	107	9.191	9.188	(0.958)	898652	46.5253	46.53	
23	Bis(2-Chloroethoxy)methane	93	9.319	9.316	(0.972)	449637	17.8120	17.81	
24	Benzoic acid	105	9.490	9.551	(0.989)	757948	45.3319	45.33	
25	2,4-Dichlorophenol	162	9.437	9.439	(0.984)	940285	63.2212	63.22	
26	1,2,4-Trichlorobenzene	180	9.543	9.541	(0.995)	310426	16.7672	16.77	
* 27	Naphthalene-d8	136	9.591	9.589	(1.000)	1149264	20.0000		
28	Naphthalene	128	9.624	9.621	(1.003)	1035745	19.7651	19.77	
29	4-Chloroaniline	127	9.794	9.792	(1.021)	1218067	129.320	129.3(R)	
30	Hexachlorobutadiene	225	9.949	9.947	(1.037)	169486	15.0435	15.04	
31	4-Chloro-3-methylphenol	107	10.633	10.636	(1.109)	949047	60.0733	60.07	
32	2-Methylnaphthalene	141	10.740	10.737	(1.120)	561591	20.0937	20.09	
33	Hexachlorocyclopentadiene	237	11.119	11.117	(0.894)	341784	34.0750	34.08	
34	2,4,6-Trichlorophenol	196	11.274	11.266	(0.907)	704851	67.1610	67.16	
35	2,4,5-Trichlorophenol	196	11.333	11.330	(0.911)	738974	71.3768	71.38	
$ 36	2-Fluorobiphenyl	172	11.392	11.389	(0.916)	805919	20.4509	20.45	
37	2-Chloronaphthalene	162	11.509	11.507	(0.926)	658409	24.6165	24.62	
38	2-Nitroaniline	65	11.771	11.763	(0.947)	620776	67.2602	67.26	
39	Dimethylphthalate	163	12.145	12.148	(0.977)	788260	20.9786	20.98	
40	Acenaphthylene	152	12.177	12.174	(0.979)	1096454	22.2657	22.27	
41	2,6-Dinitrotoluene	165	12.236	12.228	(0.984)	544994	67.8873	67.89	
* 42	Acenaphthene-d10	164	12.434	12.431	(1.000)	624306	20.0000		
43	3-Nitroaniline	138	12.450	12.447	(1.001)	563770	167.134	167.1(R)	Q
44	Acenaphthene	153	12.482	12.479	(1.004)	680636	21.3480	21.35	
45	2,4-Dinitrophenol	184	12.610	12.607	(1.014)	580984	101.325	101.3	
46	Dibenzofuran	168	12.743	12.741	(1.025)	1003201	24.0582	24.06	
47	4-Nitrophenol	109	12.802	12.805	(1.030)	129777	31.8209	31.82	
48	2,4-Dinitrotoluene	165	12.856	12.853	(1.034)	713253	65.6851	65.69	
50	Diethylphthalate	149	13.299	13.291	(1.070)	760239	21.8379	21.84	
49	Fluorene	166	13.288	13.291	(1.069)	745891	25.1806	25.18	
51	4-Chlorophenyl-phenylether	204	13.331	13.328	(1.072)	410427	22.4231	22.42	
52	4-Nitroaniline	138	13.443	13.435	(1.081)	566685	92.5467	92.55	Q
53	4,6-Dinitro-2-methylphenol	198	13.507	13.505	(0.914)	830988	106.271	106.3	
54	N-Nitrosodiphenylamine	169	13.545	13.542	(0.916)	570496	19.3238	19.32	
$ 55	2,4,6-Tribromophenol	330	13.716	13.713	(1.103)	194311	39.3616	39.36	
56	4-Bromophenyl-phenylether	248	14.100	14.098	(0.954)	245182	20.5724	20.57	
57	Hexachlorobenzene	284	14.303	14.306	(0.968)	240107	19.5415	19.54	
58	Pentachlorophenol	266	14.618	14.621	(0.989)	509075	70.2281	70.23	
* 59	Phenanthrene-d10	188	14.779	14.776	(1.000)	1085910	20.0000		
60	Phenanthrene	178	14.811	14.813	(1.002)	1121772	20.8797	20.88	
61	Anthracene	178	14.886	14.888	(1.007)	1097530	20.4025	20.40	
62	Carbazole	167	15.185	15.182	(1.027)	1040420	27.6856	27.69	
63	Di-n-butylphthalate	149	15.917	15.919	(1.077)	1284163	18.9353	18.94	

Q 06/18/13

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)	
64 Fluoranthene	202	16.729	16.726	(1.132)	1327871	23.4949	23.49	
65 Pyrene	202	17.070	17.073	(0.896)	1375463	21.7581	21.76	
$ 66 Terphenyl-d14	244	17.412	17.410	(0.914)	846746	20.8402	20.84	
67 Butylbenzylphthalate	149	18.305	18.307	(0.961)	575851	18.6287	18.63	
68 Benzo(a)anthracene	228	19.020	19.023	(0.999)	1292005	24.4822	24.48	
* 69 Chrysene-d12	240	19.047	19.050	(1.000)	1157515	20.0000		
70 3,3'-Dichlorobenzidine	252	19.058	19.055	(1.001)	923751	63.6217	63.62	
71 Chrysene	228	19.084	19.092	(1.002)	1253160	23.2612	23.26	
72 bis(2-Ethylhexyl)phthalate	149	19.309	19.311	(0.954)	793102	21.1579	21.16	
* 134 Di-n-octylphthalate-d4	153	20.238	20.241	(1.000)	1273869	20.0000		
73 Di-n-octylphthalate	149	20.249	20.252	(1.001)	1331534	22.1378	22.14	
74 Benzo(b)fluoranthene	252	20.660	20.668	(0.976)	1405935	23.1916	23.19	
75 Benzo(k)fluoranthene	252	20.692	20.700	(0.977)	1497827	22.4141	22.41	
76 Benzo(a)pyrene	252	21.098	21.106	(0.996)	1240533	21.6578	21.66	
* 77 Perylene-d12	264	21.179	21.187	(1.000)	1340097	20.0000		
78 Indeno(1,2,3-cd)pyrene	276	22.541	22.549	(1.064)	1239618	17.9830	17.98	
79 Dibenzo(a,h)anthracene	278	22.562	22.570	(1.065)	959747	17.6822	17.68	
80 Benzo(g,h,i)perylene	276	22.877	22.891	(1.080)	951917	16.1477	16.15	R
90 N-Nitrosodimethylamine	74	2.732	2.729	(0.362)	418550	27.7384	27.74	
91 Aniline	93	7.123	7.121	(0.943)	1413514	49.8511	49.85	R
93 Benzidine	184	Compound Not Detected.			NTC			
103 Pyridine	79	2.689	2.687	(0.356)	663806	27.7390	27.74	
105 1-methylnaphthalene	141	10.906	10.908	(1.137)	570026	20.0769	20.08	
111 Azobenzene (1,2-DP-Hydrazine)	77	13.582	13.579	(1.092)	781044	19.7453	19.75	
120 2,3,4,6-Tetrachlorophenol	232	13.037	13.040	(1.049)	227473	25.5268	25.53	
151 1,2,4,5-Tetrachlorobenzene	216	Compound Not Detected.			NTC			
187 Total Benzofluoranthenes	252	20.692	20.700	(0.977)	2741383	44.4329	44.43	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

06/18/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 06171302.d
Lab Smp Id: WS90LCSW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130617.b/SW846030613.m
Misc Info: 13-12078

Calibration Date: 17-JUN-2013
Calibration Time: 16:08
Client Smp ID: WS90LCSW1
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	458117	229058	916234	320422	-30.06
27 Naphthalene-d8	1718341	859170	3436682	1149264	-33.12
42 Acenaphthene-d10	1010041	505020	2020082	624306	-38.19
59 Phenanthrene-d10	1666734	833367	3333468	1085910	-34.85
69 Chrysene-d12	1675752	837876	3351504	1157515	-30.93
134 Di-n-octylphthala	2026355	1013178	4052710	1273869	-37.13
77 Perylene-d12	1637524	818762	3275048	1340097	-18.16

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.55	7.05	8.05	7.55	0.04
27 Naphthalene-d8	9.59	9.09	10.09	9.59	0.03
42 Acenaphthene-d10	12.43	11.93	12.93	12.43	0.02
59 Phenanthrene-d10	14.78	14.28	15.28	14.78	0.02
69 Chrysene-d12	19.05	18.55	19.55	19.05	-0.01
134 Di-n-octylphthala	20.24	19.74	20.74	20.24	-0.01
77 Perylene-d12	21.19	20.69	21.69	21.18	-0.04

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: WS90
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WS90LCSW1
Client Smp ID: WS90LCSW1
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/20130617.b/SW846030613.m
Misc Info: 13-12078

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
3	Phenol	25.00	9.649	38.60	16-100
4	Bis(2-Chloroethyl)	25.00	17.55	70.19	41-112
6	2-Chlorophenol	25.00	19.39	77.57	43-111
7	1,3-Dichlorobenzen	25.00	15.21	60.84	32-100
9	1,4-Dichlorobenzen	25.00	15.80	63.21	32-100
11	Benzyl alcohol	25.00	16.57	66.27	22-100
12	1,2-Dichlorobenzen	25.00	15.59	62.35	34-100
13	2-Methylphenol	25.00	16.53	66.12	36-110
14	2,2'-oxybis(1-Chlo	25.00	13.93	55.73	29-118
15	4-Methylphenol	50.00	33.17	66.35	38-104
16	N-Nitroso-di-n-pro	25.00	15.19	60.74	38-115
17	Hexachloroethane	25.00	12.99	51.98	24-100
19	Nitrobenzene	25.00	18.36	73.44	45-106
20	Isophorone	25.00	18.30	73.21	55-119
21	2-Nitrophenol	25.00	21.34	85.35	46-118
22	2,4-Dimethylphenol	75.00	46.53	62.03	28-105
23	Bis(2-Chloroethoxy	25.00	17.81	71.25	44-118
24	Benzoic acid	137.5	45.33	32.97	11-100
25	2,4-Dichlorophenol	75.00	63.22	84.29	43-121
26	1,2,4-Trichloroben	25.00	16.77	67.07	35-100
28	Naphthalene	25.00	19.77	79.06	36-111
29	4-Chloroaniline	75.00	129.3	172.43*	10-153
30	Hexachlorobutadien	25.00	15.04	60.17	24-100
31	4-Chloro-3-methylp	75.00	60.07	80.10	45-122
32	2-Methylnaphthalen	25.00	20.09	80.37	45-103
33	Hexachlorocyclopen	75.00	34.08	45.43	23-108
34	2,4,6-Trichlorophe	75.00	67.16	89.55	48-122
35	2,4,5-Trichlorophe	75.00	71.38	95.17	48-122
37	2-Chloronaphthalen	25.00	24.62	98.47	39-118
38	2-Nitroaniline	75.00	67.26	89.68	48-118
39	Dimethylphthalate	25.00	20.98	83.91	50-120
40	Acenaphthylene	25.00	22.27	89.06	50-119
41	2,6-Dinitrotoluene	75.00	67.89	90.52	48-133

USGS 08109

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
43 3-Nitroaniline	75.00	167.1	222.85*	10-208
44 Acenaphthene	25.00	21.35	85.39	41-120
45 2,4-Dinitrophenol	137.5	101.3	73.69	10-224
46 Dibenzofuran	25.00	24.06	96.23	51-114
47 4-Nitrophenol	75.00	31.82	42.43	10-103
48 2,4-Dinitrotoluene	75.00	65.69	87.58	51-134
49 Fluorene	25.00	25.18	100.72	50-120
50 Diethylphthalate	25.00	21.84	87.35	48-122
51 4-Chlorophenyl-phe	25.00	22.42	89.69	50-118
52 4-Nitroaniline	75.00	92.55	123.40	42-136
53 4,6-Dinitro-2-meth	125.0	106.3	85.02	10-190
54 N-Nitrosodiphenyla	25.00	19.32	77.30	58-141
56 4-Bromophenyl-phen	25.00	20.57	82.29	50-122
57 Hexachlorobenzene	25.00	19.54	78.17	47-125
58 Pentachlorophenol	75.00	70.23	93.64	35-130
60 Phenanthrene	25.00	20.88	83.52	49-120
61 Anthracene	25.00	20.40	81.61	53-116
62 Carbazole	25.00	27.69	110.74	57-122
63 Di-n-butylphthalat	25.00	18.94	75.74	57-121
64 Fluoranthene	25.00	23.49	93.98	56-119
65 Pyrene	25.00	21.76	87.03	37-143
67 Butylbenzylphthala	25.00	18.63	74.51	34-152
68 Benzo(a)anthracene	25.00	24.48	97.93	49-129
70 3,3'-Dichlorobenzi	75.00	63.62	84.83	50-128
71 Chrysene	25.00	23.26	93.04	45-128
72 bis(2-Ethylhexyl)p	25.00	21.16	84.63	57-133
73 Di-n-octylphthalat	25.00	22.14	88.55	52-120
74 Benzo(b)fluoranthe	25.00	23.19	92.77	50-126
75 Benzo(k)fluoranthe	25.00	22.41	89.66	49-126
76 Benzo(a)pyrene	25.00	21.66	86.63	46-109
78 Indeno(1,2,3-cd)py	25.00	17.98	71.93	34-136
79 Dibenzo(a,h)anthra	25.00	17.68	70.73	41-134
80 Benzo(g,h,i)peryle	25.00	16.15	64.59	41-133
91 Aniline	75.00	49.85	66.47	28-126
111 Azobenzene (1,2-DP	25.00	19.75	78.98	55-119
105 1-methylnaphthalen	25.00	20.08	80.31	43-115
90 N-Nitrosodimethyla	50.00	27.74	55.48	31-100
103 Pyridine	50.00	27.74	55.48	25-100
120 2,3,4,6-Tetrachlor	25.00	25.53	102.11	30-160
151 1,2,4,5-Tetrachlo	25.00	0.000	NC *	30-160
187 Total Benzofluoran	50.00	44.43	88.87	30-160

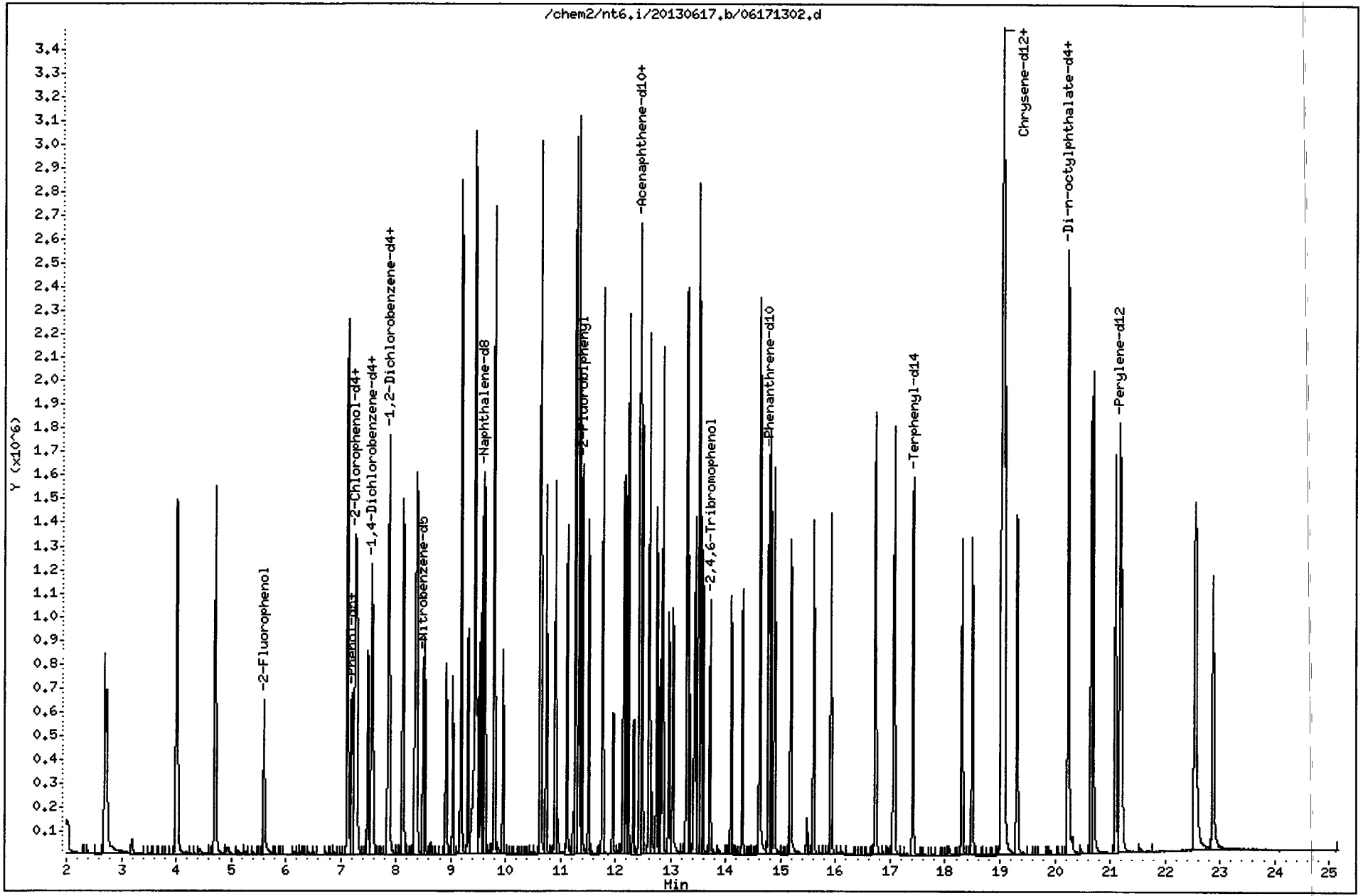
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	18.60	49.59	31-100

06/18/13

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 2 Phenol-d5	37.50	13.73	36.61	19-100
$ 5 2-Chlorophenol-d4	37.50	27.30	72.81	49-101
$ 10 1,2-Dichlorobenzen	25.00	16.67	66.66	40-100
$ 18 Nitrobenzene-d5	25.00	18.05	72.20	46-101
$ 36 2-Fluorobiphenyl	25.00	20.45	81.80	49-103
$ 55 2,4,6-Tribromophen	37.50	39.36	104.96	51-122
$ 66 Terphenyl-d14	25.00	20.84	83.36	57-118

Data File: /chem2/nt6.i/20130617.b/06171302.d
Date : 17-JUN-2013 17:09
Client ID: WS90LCSW1
Sample Info: WS90LCSW1,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 06171302.d

Lab ID: WS90LCSW1, Method: SW846030613.m, Instrument: nt6.i, Date: 17-JUN-201

RT	CO-ELUTION COMPOUNDS
7.871	1,2-Dichlorobenzene and Benzyl alcohol

checked ok

D 06/18/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130617.b/06171304.d
Lab Smp Id: WS90LCSDW1 Client Smp ID: WS90LCSDW1
Inj Date : 17-JUN-2013 18:18
Operator : JZ Inst ID: nt6.i
Smp Info : WS90LCSDW1,
Misc Info : 13-12078
Comment : 1ul Injection
Method : /chem2/nt6.i/20130617.b/SW846030613.m
Meth Date : 18-Jun-2013 12:25 jianqing Quant Type: ISTD
Cal Date : 06-MAR-2013 16:18 Cal File: 03061308.D
Als bottle: 4 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPAtclpMBLCS.sub
Target Version: 3.50

AZ 06/18/13

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	5.594	5.593	(0.741)	386970	18.3213	18.32
$	2 Phenol-d5	99	7.192	7.195	(0.953)	348504	14.0955	14.10
	3 Phenol	94	7.208	7.212	(0.955)	270853	10.4040	10.40
$	5 2-Chlorophenol-d4	132	7.261	7.265	(0.962)	569458	27.2470	27.25
	4 Bis(2-Chloroethyl)ether	93	7.245	7.244	(0.960)	410630	18.1622	18.16
	6 2-Chlorophenol	128	7.288	7.292	(0.965)	413307	19.8427	19.84
	7 1,3-Dichlorobenzene	146	7.486	7.484	(0.992)	377298	15.5096	15.51
*	8 1,4-Dichlorobenzene-d4	152	7.550	7.548	(1.000)	325965	20.0000	
	9 1,4-Dichlorobenzene	146	7.576	7.575	(1.004)	384507	16.2400	16.24
$	10 1,2-Dichlorobenzene-d4	152	7.849	7.847	(1.040)	247031	16.7938	16.79
	12 1,2-Dichlorobenzene	146	7.870	7.869	(1.042)	360971	15.9481	15.95
	11 Benzyl alcohol	108	7.865	7.869	(1.042)	246050	17.3487	17.35
	14 2,2'-oxybis(1-Chloropropane)	45	8.116	8.114	(1.075)	520253	14.4829	14.48
	13 2-Methylphenol	108	8.127	8.130	(1.076)	347056	17.5808	17.58
	17 Hexachloroethane	117	8.351	8.349	(1.106)	127393	13.3021	13.30
	16 N-Nitroso-di-n-propylamine	70	8.335	8.344	(1.104)	272002	16.0312	16.03

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
	15 4-Methylphenol	108	8.372	8.371	(1.109)	693705	35.5368	35.54
$	18 Nitrobenzene-d5	82	8.490	8.494	(0.885)	428877	18.1404	18.14
	19 Nitrobenzene	77	8.517	8.520	(0.888)	432478	19.1118	19.11
	20 Isophorone	82	8.912	8.910	(0.929)	776465	19.6863	19.69
	21 2-Nitrophenol	139	9.035	9.033	(0.942)	234089	22.3568	22.36
	22 2,4-Dimethylphenol	107	9.190	9.188	(0.958)	989942	49.9934	49.99
	23 Bis(2-Chloroethoxy)methane	93	9.313	9.316	(0.971)	483445	18.6812	18.68
	24 Benzoic acid	105	9.494	9.551	(0.990)	800000	46.6724	46.67
	25 2,4-Dichlorophenol	162	9.435	9.439	(0.984)	989431	64.8926	64.89
	26 1,2,4-Trichlorobenzene	180	9.537	9.541	(0.994)	330396	17.4078	17.41
*	27 Naphthalene-d8	136	9.590	9.589	(1.000)	1178186	20.0000	
	28 Naphthalene	128	9.622	9.621	(1.003)	1093008	20.5120	20.51
	29 4-Chloroaniline	127	9.788	9.792	(1.021)	1256812	130.650	130.6(R)
	30 Hexachlorobutadiene	225	9.948	9.947	(1.037)	179094	15.5061	15.51
	31 4-Chloro-3-methylphenol	107	10.632	10.636	(1.109)	1017218	62.8078	62.81
	32 2-Methylnaphthalene	141	10.734	10.737	(1.119)	611075	21.3275	21.33
	33 Hexachlorocyclopentadiene	237	11.118	11.117	(0.895)	359072	33.8101	33.81
	34 2,4,6-Trichlorophenol	196	11.268	11.266	(0.907)	760916	68.4757	68.48
	35 2,4,5-Trichlorophenol	196	11.332	11.330	(0.912)	797769	72.7755	72.78
$	36 2-Fluorobiphenyl	172	11.385	11.389	(0.916)	854157	20.4710	20.47
	37 2-Chloronaphthalene	162	11.508	11.507	(0.926)	724232	25.6447	25.64
	38 2-Nitroaniline	65	11.770	11.763	(0.947)	679276	69.5104	69.51
	39 Dimethylphthalate	163	12.144	12.148	(0.977)	866912	21.7902	21.79
	40 Acenaphthylene	152	12.176	12.174	(0.980)	1207864	23.1656	23.17
	41 2,6-Dinitrotoluene	165	12.229	12.228	(0.984)	591988	69.6450	69.64
*	42 Acenaphthene-d10	164	12.427	12.431	(1.000)	661024	20.0000	
	43 3-Nitroaniline	138	12.448	12.447	(1.002)	618077	176.516	176.5(R)
	44 Acenaphthene	153	12.475	12.479	(1.004)	756811	22.4187	22.42
	45 2,4-Dinitrophenol	184	12.609	12.607	(1.015)	648565	106.828	106.8
	46 Dibenzofuran	168	12.737	12.741	(1.025)	1119331	25.3521	25.35
	47 4-Nitrophenol	109	12.796	12.805	(1.030)	141567	32.7836	32.78
	48 2,4-Dinitrotoluene	165	12.854	12.853	(1.034)	792449	68.9247	68.92
	50 Diethylphthalate	149	13.292	13.291	(1.070)	845154	22.9286	22.93
	49 Fluorene	166	13.287	13.291	(1.069)	825751	26.4504	26.45
	51 4-Chlorophenyl-phenylether	204	13.325	13.328	(1.072)	458548	23.6605	23.66
	52 4-Nitroaniline	138	13.447	13.435	(1.082)	637477	98.3250	98.33
	53 4,6-Dinitro-2-methylphenol	198	13.506	13.505	(0.914)	933647	111.956	112.0
	54 N-Nitrosodiphenylamine	169	13.538	13.542	(0.916)	629623	19.9970	20.00
$	55 2,4,6-Tribromophenol	330	13.715	13.713	(1.104)	215162	41.1643	41.16
	56 4-Bromophenyl-phenylether	248	14.094	14.098	(0.954)	276662	21.7666	21.77
	57 Hexachlorobenzene	284	14.297	14.306	(0.968)	274712	20.9640	20.96
	58 Pentachlorophenol	266	14.612	14.621	(0.989)	568761	73.5703	73.57
*	59 Phenanthrene-d10	188	14.772	14.776	(1.000)	1158110	20.0000	
	60 Phenanthrene	178	14.810	14.813	(1.003)	1266224	22.0991	22.10
	61 Anthracene	178	14.879	14.888	(1.007)	1235830	21.5412	21.54
	62 Carbazole	167	15.178	15.182	(1.027)	1170882	29.1908	29.19
	63 Di-n-butylphthalate	149	15.915	15.919	(1.077)	1452447	20.0815	20.08

6/18/13

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)	
64 Fluoranthene	202	16.722	16.726	(1.132)	1458444	24.1965	24.20	
65 Pyrene	202	17.069	17.073	(0.896)	1523940	23.8016	23.80	
$ 66 Terphenyl-d14	244	17.406	17.410	(0.914)	922117	22.4079	22.41	
67 Butylbenzylphthalate	149	18.303	18.307	(0.961)	646385	20.6457	20.65	
68 Benzo(a)anthracene	228	19.019	19.023	(0.999)	1401478	26.2204	26.22	
* 69 Chrysene-d12	240	19.041	19.050	(1.000)	1172359	20.0000		
70 3,3'-Dichlorobenzidine	252	19.051	19.055	(1.001)	979343	66.5964	66.60	
71 Chrysene	228	19.083	19.092	(1.002)	1342868	24.6107	24.61	
72 bis(2-Ethylhexyl)phthalate	149	19.308	19.311	(0.954)	878888	22.0731	22.07	
* 134 Di-n-octylphthalate-d4	153	20.237	20.241	(1.000)	1353129	20.0000		
73 Di-n-octylphthalate	149	20.248	20.252	(1.001)	1489388	23.3118	23.31	
74 Benzo(b)fluoranthene	252	20.659	20.668	(0.976)	1559783	25.7668	25.77	
75 Benzo(k)fluoranthene	252	20.691	20.700	(0.977)	1574596	23.5714	23.57	
76 Benzo(a)pyrene	252	21.097	21.106	(0.996)	1346640	23.3754	23.38	
* 77 Perylene-d12	264	21.177	21.187	(1.000)	1347828	20.0000		
78 Indeno(1,2,3-cd)pyrene	276	22.540	22.549	(1.064)	1312500	18.9311	18.93	
79 Dibenzo(a,h)anthracene	278	22.561	22.570	(1.065)	999773	18.3140	18.31	
80 Benzo(g,h,i)perylene	276	22.876	22.891	(1.080)	1011463	17.0594	17.06	Q
90 N-Nitrosodimethylamine	74	2.726	2.729	(0.361)	435974	28.4018	28.40	
91 Aniline	93	7.117	7.121	(0.943)	1433822	49.7074	49.71	Q
93 Benzidine	184	Compound Not Detected.			NTC			
103 Pyridine	79	2.688	2.687	(0.356)	558351	22.9355	22.94	
105 1-methylnaphthalene	141	10.905	10.908	(1.137)	617897	21.2287	21.23	
111 Azobenzene (1,2-DP-Hydrazine)	77	13.576	13.579	(1.092)	885904	21.1522	21.15	
120 2,3,4,6-Tetrachlorophenol	232	13.036	13.040	(1.049)	257170	27.2563	27.26	
151 1,2,4,5-Tetrachlorobenzene	216	Compound Not Detected.			NTC			
187 Total Benzofluoranthenes	252	20.691	20.700	(0.977)	2939298	47.3675	47.37	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

06/18/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 06171304.d
Lab Smp Id: WS90LCSDW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130617.b/SW846030613.m
Misc Info: 13-12078

Calibration Date: 17-JUN-2013
Calibration Time: 16:08
Client Smp ID: WS90LCSDW1
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	458117	229058	916234	325965	-28.85
27 Naphthalene-d8	1718341	859170	3436682	1178186	-31.43
42 Acenaphthene-d10	1010041	505020	2020082	661024	-34.55
59 Phenanthrene-d10	1666734	833367	3333468	1158110	-30.52
69 Chrysene-d12	1675752	837876	3351504	1172359	-30.04
134 Di-n-octylphthala	2026355	1013178	4052710	1353129	-33.22
77 Perylene-d12	1637524	818762	3275048	1347828	-17.69

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.55	7.05	8.05	7.55	0.02
27 Naphthalene-d8	9.59	9.09	10.09	9.59	0.02
42 Acenaphthene-d10	12.43	11.93	12.93	12.43	-0.03
59 Phenanthrene-d10	14.78	14.28	15.28	14.77	-0.03
69 Chrysene-d12	19.05	18.55	19.55	19.04	-0.05
134 Di-n-octylphthala	20.24	19.74	20.74	20.24	-0.02
77 Perylene-d12	21.19	20.69	21.69	21.18	-0.04

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: WS90
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WS90LCSDW1
Client Smp ID: WS90LCSDW1
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: LCSD
SpikeList File: SEPAtclpLCS.spk
Quant Type: ISTD
Sublist File: SEPAtclpMBLCS.sub
Method File: /chem2/nt6.i/20130617.b/SW846030613.m
Misc Info: 13-12078

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
3 Phenol	25.00	10.40	41.62	16-100
4 Bis(2-Chloroethyl)	25.00	18.16	72.65	41-112
6 2-Chlorophenol	25.00	19.84	79.37	43-111
7 1,3-Dichlorobenzen	25.00	15.51	62.04	32-100
9 1,4-Dichlorobenzen	25.00	16.24	64.96	32-100
11 Benzyl alcohol	25.00	17.35	69.39	22-100
12 1,2-Dichlorobenzen	25.00	15.95	63.79	34-100
13 2-Methylphenol	25.00	17.58	70.32	36-110
14 2,2'-oxybis(1-Chlo	25.00	14.48	57.93	29-118
15 4-Methylphenol	50.00	35.54	71.07	38-104
16 N-Nitroso-di-n-pro	25.00	16.03	64.12	38-115
17 Hexachloroethane	25.00	13.30	53.21	24-100
19 Nitrobenzene	25.00	19.11	76.45	45-106
20 Isophorone	25.00	19.69	78.75	55-119
21 2-Nitrophenol	25.00	22.36	89.43	46-118
22 2,4-Dimethylphenol	75.00	49.99	66.66	28-105
23 Bis(2-Chloroethoxy	25.00	18.68	74.72	44-118
24 Benzoic acid	137.5	46.67	33.94	11-100
25 2,4-Dichlorophenol	75.00	64.89	86.52	43-121
26 1,2,4-Trichloroben	25.00	17.41	69.63	35-100
28 Naphthalene	25.00	20.51	82.05	36-111
29 4-Chloroaniline	75.00	130.6	174.20*	10-153
30 Hexachlorobutadien	25.00	15.51	62.02	24-100
31 4-Chloro-3-methylp	75.00	62.81	83.74	45-122
32 2-Methylnaphthalen	25.00	21.33	85.31	45-103
33 Hexachlorocyclopen	75.00	33.81	45.08	23-108
34 2,4,6-Trichlorophe	75.00	68.48	91.30	48-122
35 2,4,5-Trichlorophe	75.00	72.78	97.03	48-122
37 2-Chloronaphthalen	25.00	25.64	102.58	39-118
38 2-Nitroaniline	75.00	69.51	92.68	48-118
39 Dimethylphthalate	25.00	21.79	87.16	50-120
40 Acenaphthylene	25.00	23.17	92.66	50-119
41 2,6-Dinitrotoluene	75.00	69.64	92.86	48-133

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
43 3-Nitroaniline	75.00	176.5	235.36*	10-208
44 Acenaphthene	25.00	22.42	89.67	41-120
45 2,4-Dinitrophenol	137.5	106.8	77.69	10-224
46 Dibenzofuran	25.00	25.35	101.41	51-114
47 4-Nitrophenol	75.00	32.78	43.71	10-103
48 2,4-Dinitrotoluene	75.00	68.92	91.90	51-134
49 Fluorene	25.00	26.45	105.80	50-120
50 Diethylphthalate	25.00	22.93	91.71	48-122
51 4-Chlorophenyl-phe	25.00	23.66	94.64	50-118
52 4-Nitroaniline	75.00	98.33	131.10	42-136
53 4,6-Dinitro-2-meth	125.0	112.0	89.56	10-190
54 N-Nitrosodiphenyla	25.00	20.00	79.99	58-141
56 4-Bromophenyl-phen	25.00	21.77	87.07	50-122
57 Hexachlorobenzene	25.00	20.96	83.86	47-125
58 Pentachlorophenol	75.00	73.57	98.09	35-130
60 Phenanthrene	25.00	22.10	88.40	49-120
61 Anthracene	25.00	21.54	86.16	53-116
62 Carbazole	25.00	29.19	116.76	57-122
63 Di-n-butylphthalat	25.00	20.08	80.33	57-121
64 Fluoranthene	25.00	24.20	96.79	56-119
65 Pyrene	25.00	23.80	95.21	37-143
67 Butylbenzylphthala	25.00	20.65	82.58	34-152
68 Benzo(a)anthracene	25.00	26.22	104.88	49-129
70 3,3'-Dichlorobenzi	75.00	66.60	88.80	50-128
71 Chrysene	25.00	24.61	98.44	45-128
72 bis(2-Ethylhexyl)p	25.00	22.07	88.29	57-133
73 Di-n-octylphthalat	25.00	23.31	93.25	52-120
74 Benzo(b)fluoranthe	25.00	25.77	103.07	50-126
75 Benzo(k)fluoranthe	25.00	23.57	94.29	49-126
76 Benzo(a)pyrene	25.00	23.38	93.50	46-109
78 Indeno(1,2,3-cd)py	25.00	18.93	75.72	34-136
79 Dibenzo(a,h)anthra	25.00	18.31	73.26	41-134
80 Benzo(g,h,i)peryle	25.00	17.06	68.24	41-133
91 Aniline	75.00	49.71	66.28	28-126
111 Azobenzene (1,2-DP	25.00	21.15	84.61	55-119
105 1-methylnaphthalen	25.00	21.23	84.91	43-115
90 N-Nitrosodimethyla	50.00	28.40	56.80	31-100
103 Pyridine	50.00	22.94	45.87	25-100
120 2,3,4,6-Tetrachlor	25.00	27.26	109.03	30-160
151 1,2,4,5-Tetrachlo	25.00	0.000	*	30-160
187 Total Benzofluoran	50.00	47.37	94.73	30-160

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	18.32	48.86	31-100

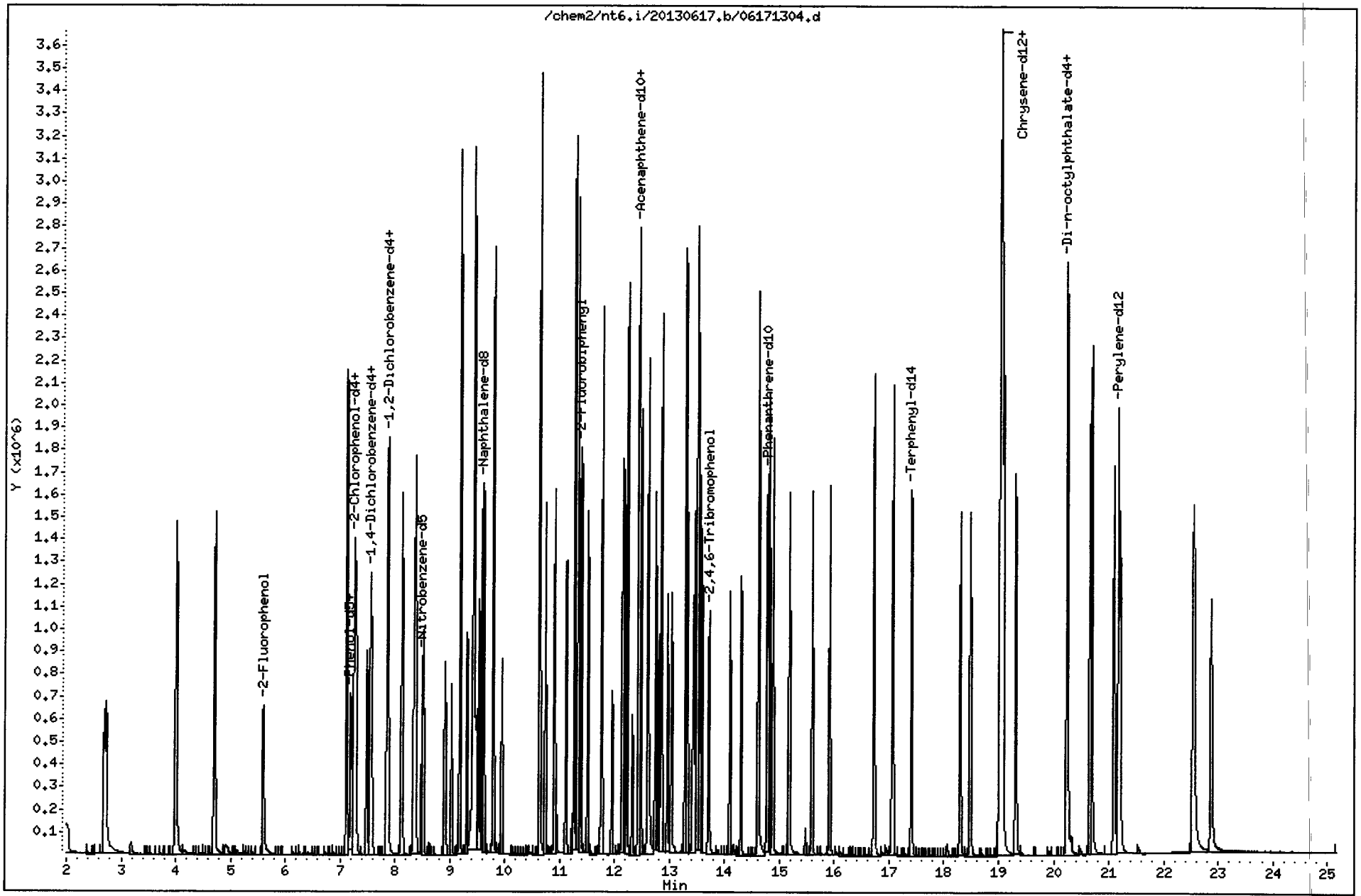
06/18/13

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 2 Phenol-d5	37.50	14.10	37.59	19-100
$ 5 2-Chlorophenol-d4	37.50	27.25	72.66	49-101
$ 10 1,2-Dichlorobenzen	25.00	16.79	67.18	40-100
$ 18 Nitrobenzene-d5	25.00	18.14	72.56	46-101
$ 36 2-Fluorobiphenyl	25.00	20.47	81.88	49-103
$ 55 2,4,6-Tribromophen	37.50	41.16	109.77	51-122
$ 66 Terphenyl-d14	25.00	22.41	89.63	57-118

Data File: /chem2/nt6.i/20130617.b/06171304.d
Date : 17-JUN-2013 18:18
Client ID: WS90LCSDW1
Sample Info: WS90LCSDW1,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 06171304.d

Lab ID: WS90LCSDW1, Method: SW846030613.m, Instrument: nt6.i, Date: 17-JUN-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

SIM PAH Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WS90, WS92

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) W597, WT15, W59ϕ Page 1 of 1 Batch set up by: JH

Bottle #	Extraction Requirements	Volume Extracted	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	W597 MBW	500mL	0.5mL	0.5mL		M 6/18/13 AR
	SBW	500mL	0.5mL	0.5mL		Analyst/Date
	SBW Dup.	500mL	0.5mL	0.5mL		KD 80°C 1 2 3 4 5 6
	QLS	500mL	0.5mL	0.5mL		Analyst/Date 6/12/13
1	A	500mL	0.5mL	0.5mL		TurboVap (1) 2 3 Pre-Silica Gel Shakeout
3	WT15 A	500mL	0.5mL	0.5mL		SR 6/11/13
4	W59ϕ A	500mL	0.5mL	0.5mL		Analyst/Date
4	B	500mL	0.5mL	0.5mL		(REQ) Silica Gel Clean Shakeout (1:1)
3	C	500mL	0.5mL	0.5mL		SP 6/11/13
5	D	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		SR 6/11/13
		500mL	0.5mL	0.5mL		Analyst/Date
		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		
		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		M/AR 6/18/13	SR 6/11/13	SP 6/11/13	Reviewed by SR 6/11/13	

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	1 (BϕH346)	1.5/7.5µg/mL	100µL	2/21/14	AR	WW
Spike	18 (2ϕ77-2)	1.5/7.5µg/mL	100µL	1ϕ/13/13	AR	WW
QLS Spike	2 (2ϕ77-3)	0.1µg/mL	50µL	1ϕ/13/13	AR	WW
Extraction Time:	3:30					

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.

12104
12179
12078

A. Archive Y/(N)

USGS : 08:24

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WS90 Client ID: SAIC

Parameter: SIM PNA low level 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 C - D	M 6/8/13
☒ Turbid/Color= A - B = Light tan; Turbid	M 6/8/13
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☒ Other (Details)= WS90 - A - D received as is 1L Amber bottles. There will be no bottle Rinsed	M 6/8/13
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

SIM PAH Raw Data
Initial Calibration

ARI Job ID: WS90, WS92

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS,SVOA Initial Calibration Notes

ARI SOR: **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
ANJ.DATE:	12-JUN-2013	12-JUN-2013	12-JUN-2013	12-JUN-2013	12-JUN-2013	12-JUN-2013
ANJ.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 VD Date: 6.13.13

Reviewer 2 _____ Date: _____

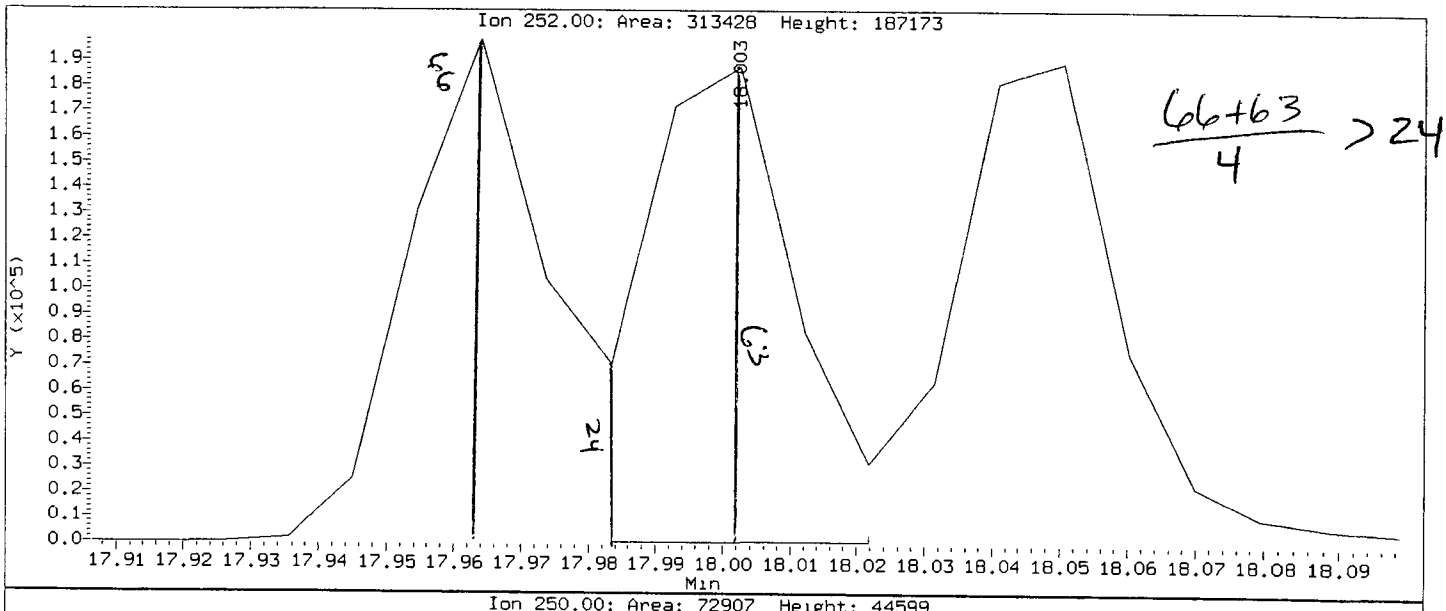
Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt11.i/20130612.b/lowsim.m
Batch File: /chem3/nt11.i/20130612.b
Inst ID: nt11.i

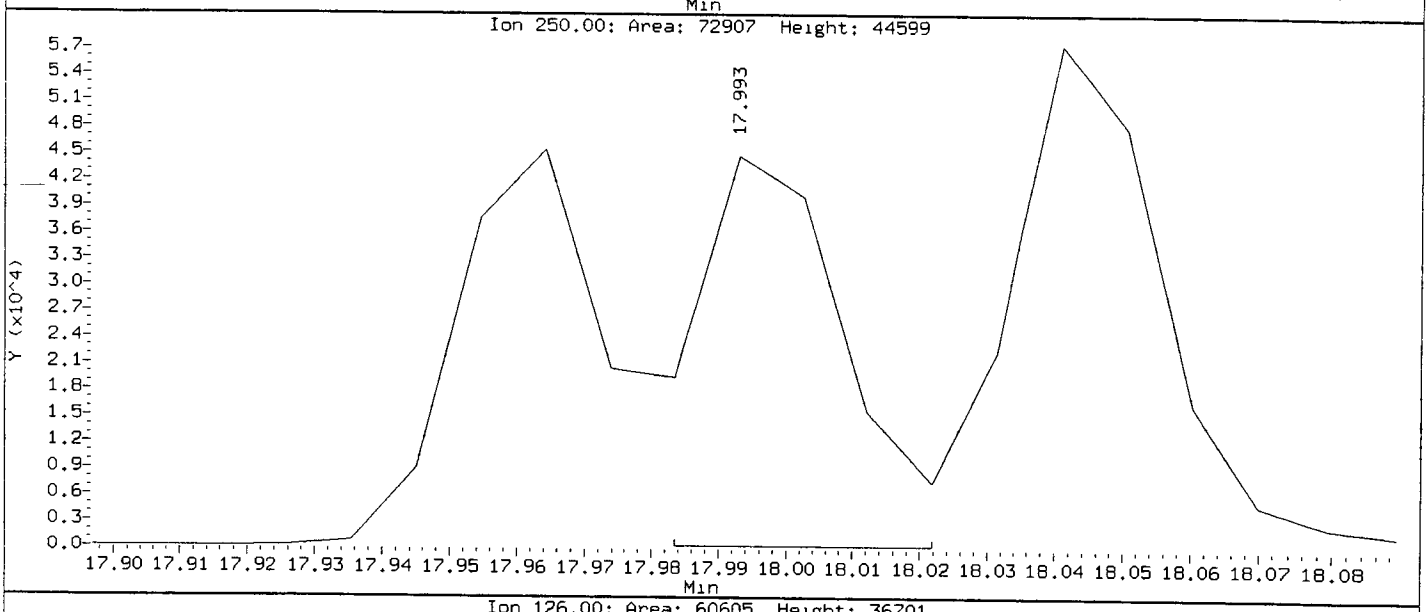
	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	24 Fluoranthene	13.686	13.686	13.686	13.686	13.686	13.686	13.686	13.436-13.936	13.686	0.000
	25 Pyrene	14.166	14.166	14.166	14.166	14.166	14.166	14.166	13.916-14.416	14.166	0.000
*	29 Chrysene-d12	16.275	16.275	16.275	16.275	16.275	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

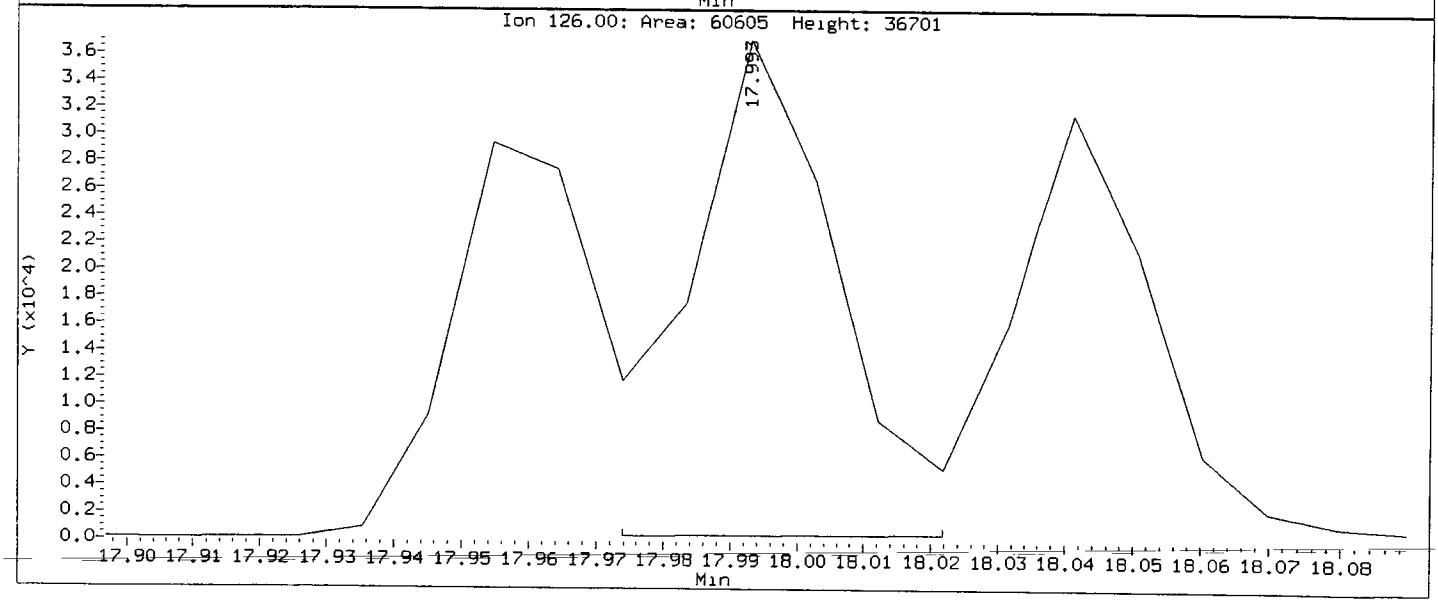
Data File: /chem3/nt11.i/20130612.b/ic0612a.d
Injection Date: 12-JUN-2013 15:46
Instrument: nt11.i
Client Sample ID:

Compound: Benzo(k)fluoranthene
CAS Number:



$\frac{66+63}{4} > 24$





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
530	df0612.d	DFTPP 10		1	NO MANUAL INTEGRATION
546	ic0612a.d	SIM 250		1	NO MANUAL INTEGRATION
615	ic0612b.d	SIM 1000		1	NO MANUAL INTEGRATION
644	ic0612c.d	SIM 10		1	NO MANUAL INTEGRATION
713	ic0612d.d	SIM 500		1	NO MANUAL INTEGRATION
742	ic0612e.d	SIM 50		1	NO MANUAL INTEGRATION
811	ic0612f.d	SIM 100		1	NO MANUAL INTEGRATION
840	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	172368
15	2202	ws90a.d	WS90A	CL-MH-SPS-20	1	5.98	285000	8.94	167156	11.57	275580	16.28	207520	18.81	179029
16	2231	ws90b.d	WS90B	CL-VT-EFF-20	1	5.98	284887	8.94	168729	11.57	276129	16.28	208482	18.81	178699
17	2300	ws90c.d	WS90C	QC-EB-02-201	1	5.98	294815	8.94	178304	11.57	280260	16.28	211800	18.81	177409
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

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:

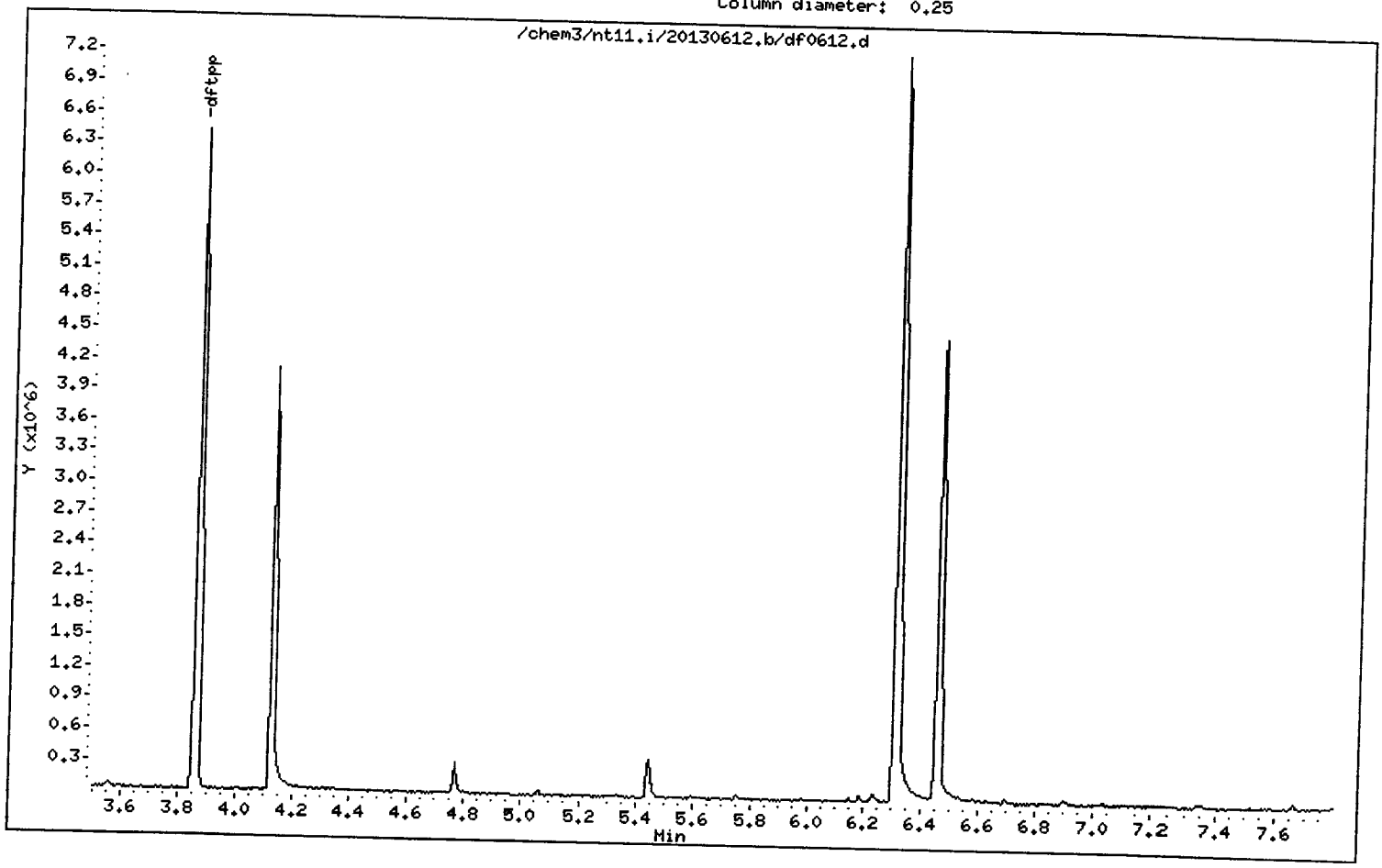
Sample Info: DFTPP 10

Instrument: nt11.i

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

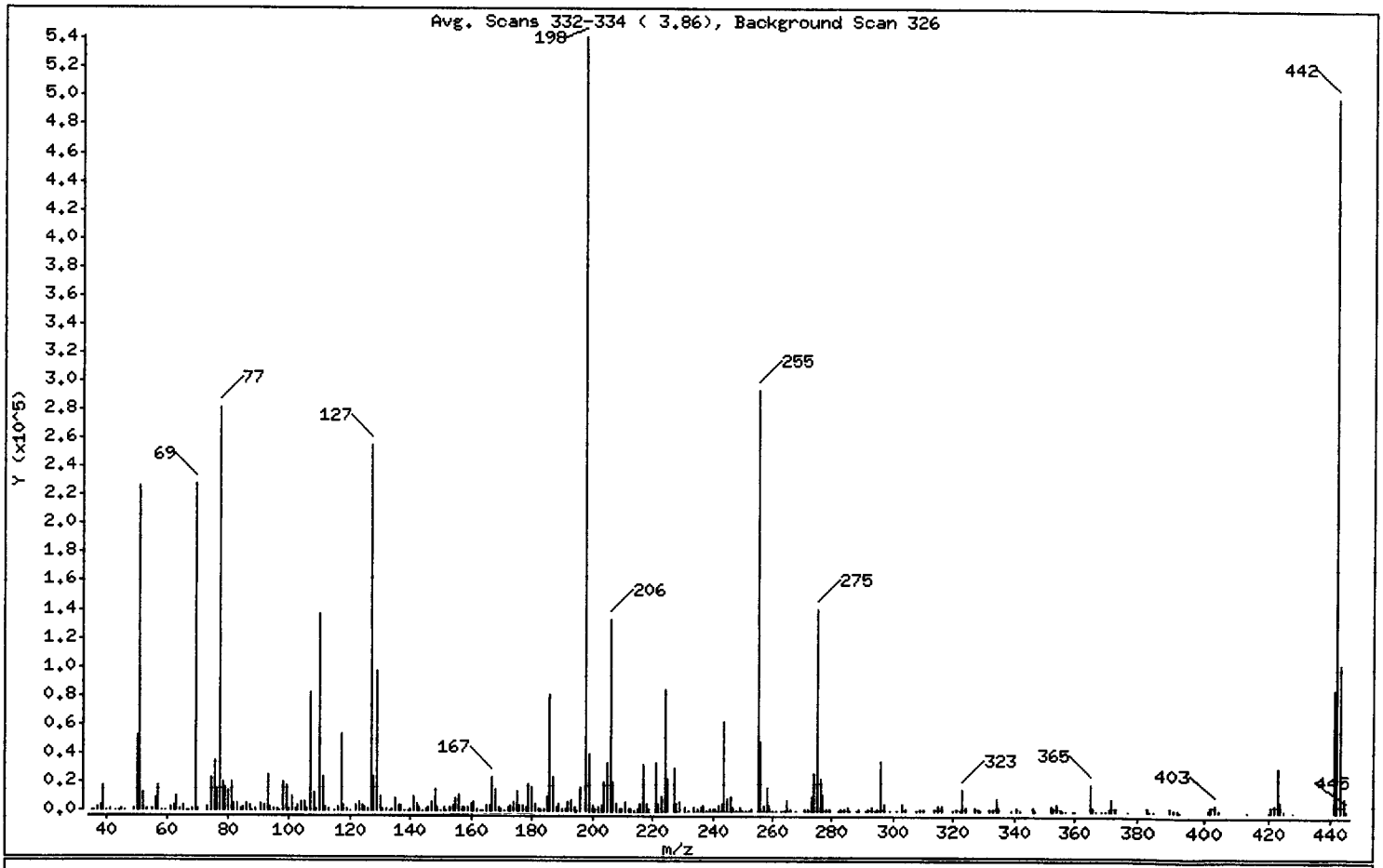
Sample Info: DFTPP 10

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	25.96
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/nt11.1/20130612.b/df0612.d

Date : 12-JUN-2013 15:30

Client ID:

Instrument: nt11.1

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	2503	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	925	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	754
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	3281	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	4387
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

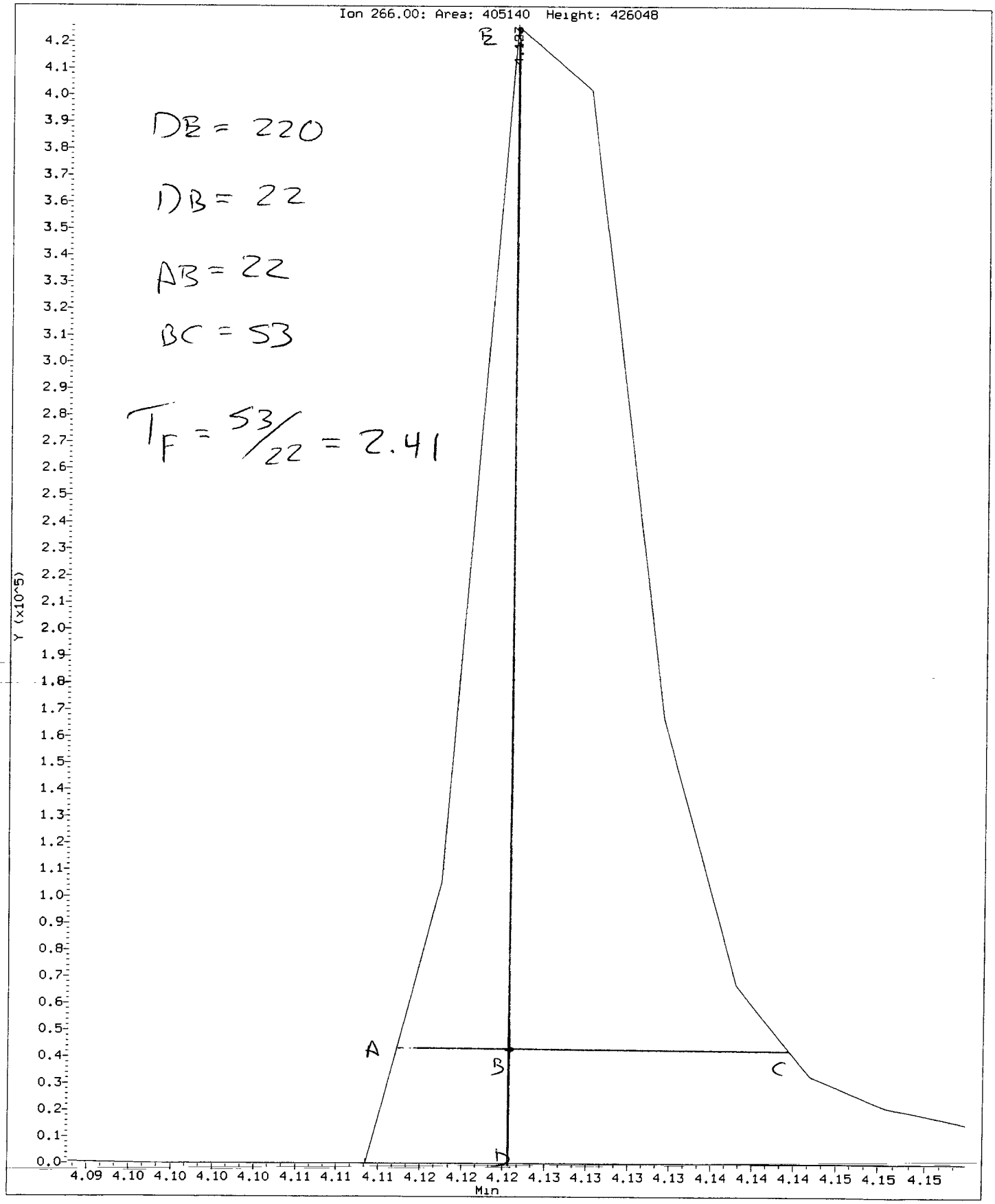
Location of Maximum: 198.00

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		

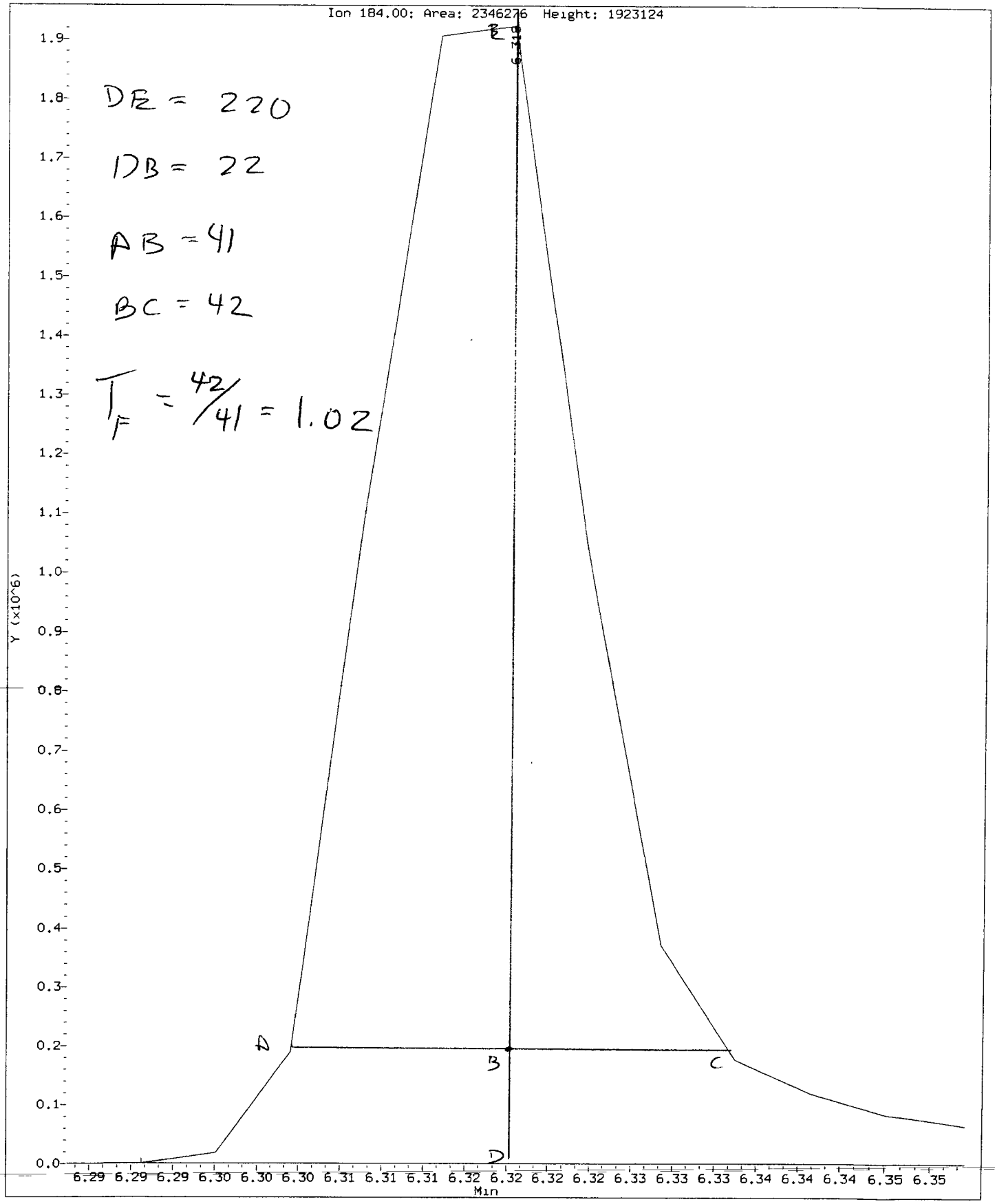
Data File: /chem3/nt11.1/20130612.b/DDT.b/df0612.d
Injection Date: 12-JUN-2013 15:30
Instrument: nt11.1
Client Sample ID:

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)	AMOUNTS 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

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

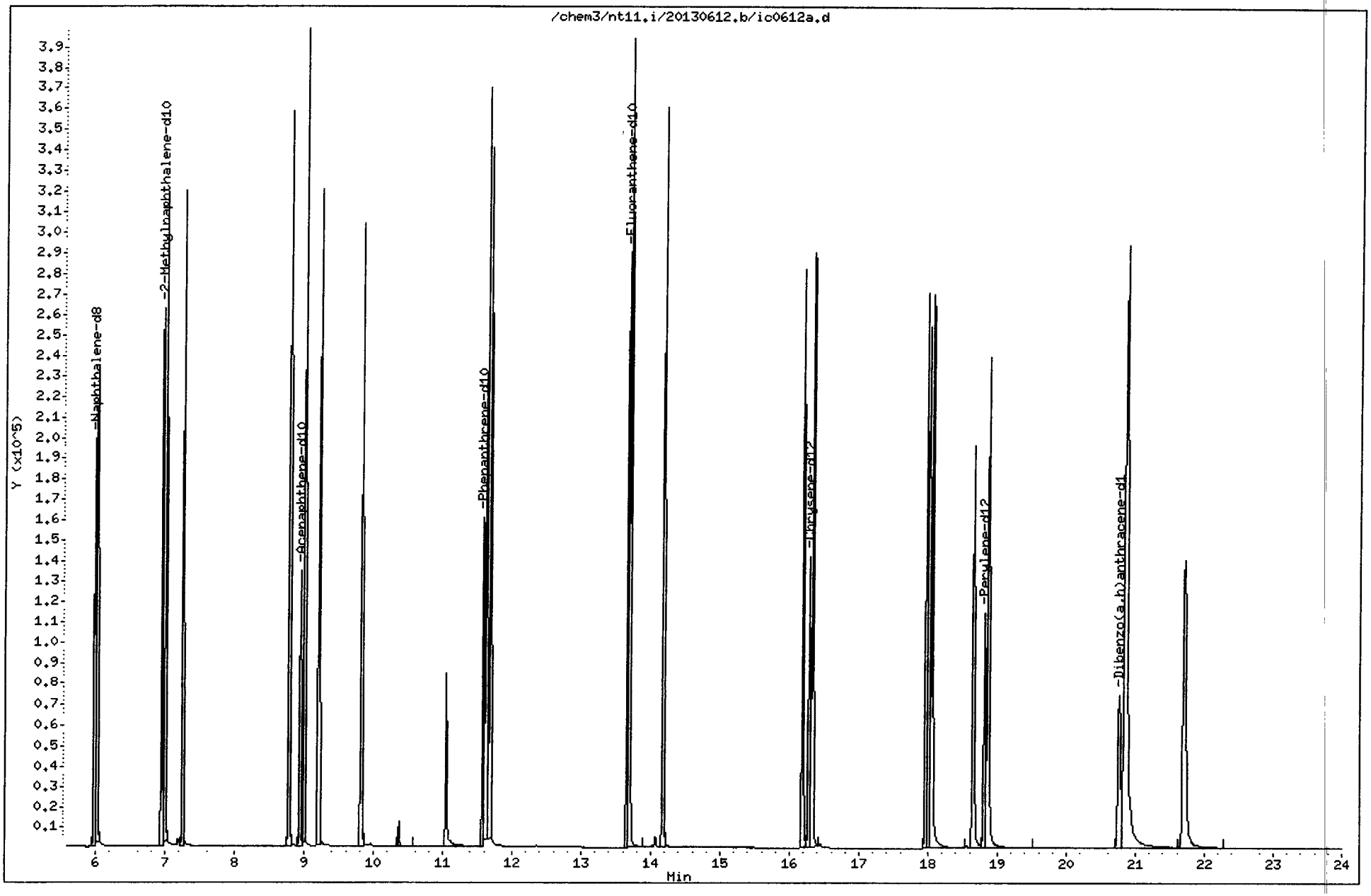
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

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)	AMOUNTS 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

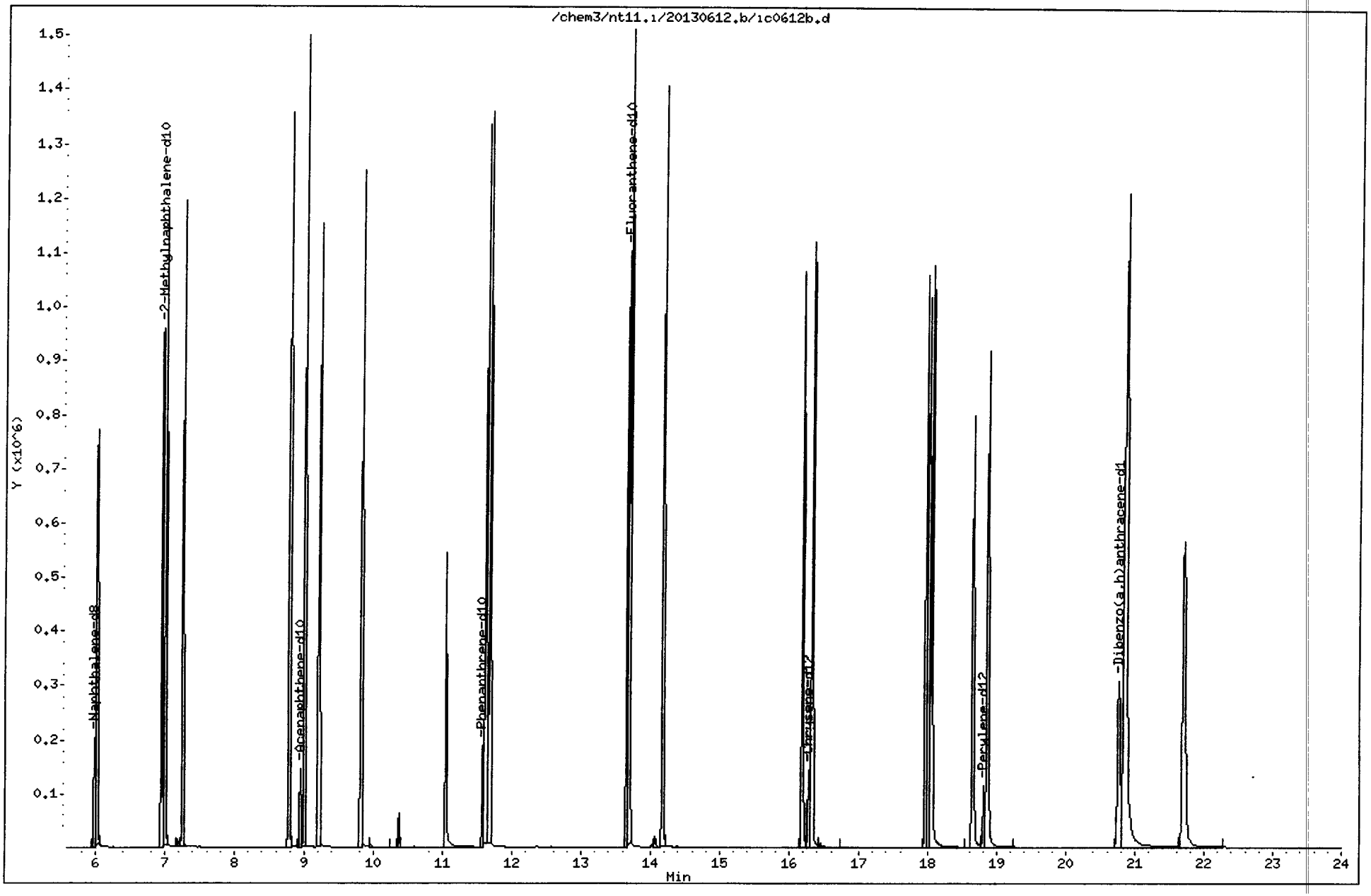
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

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 Dibenzofuran	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

47
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

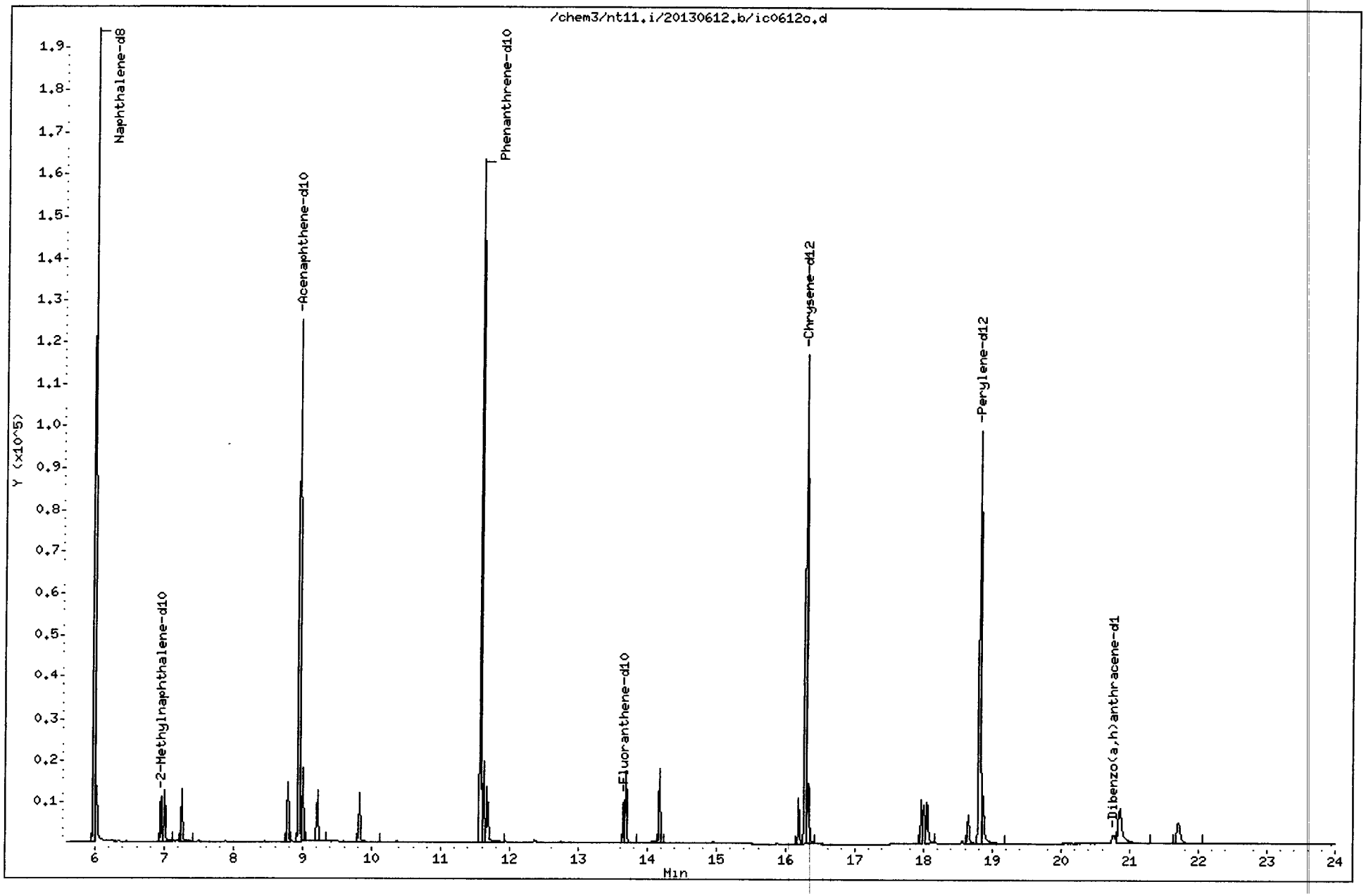
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

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

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

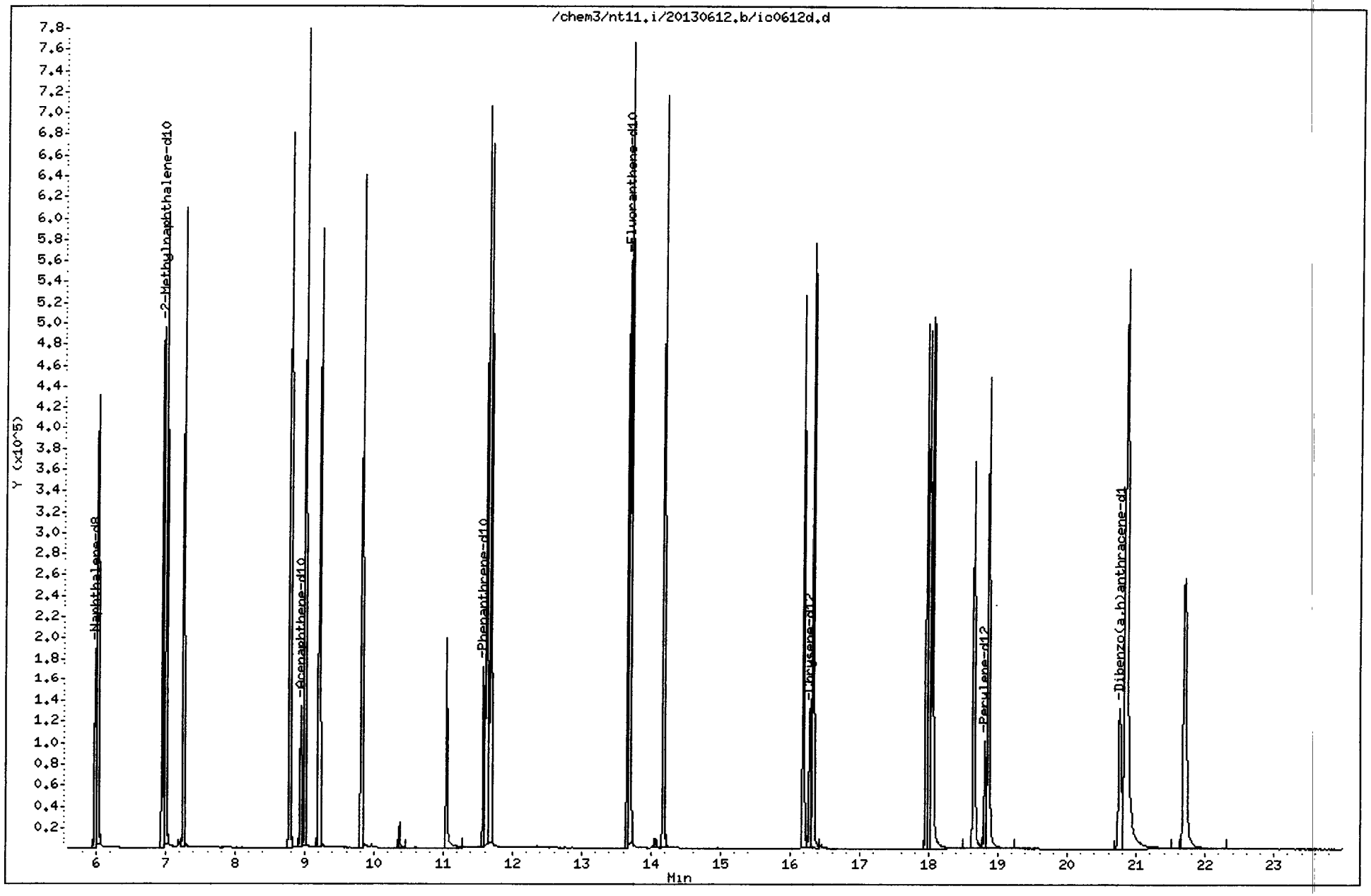
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

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

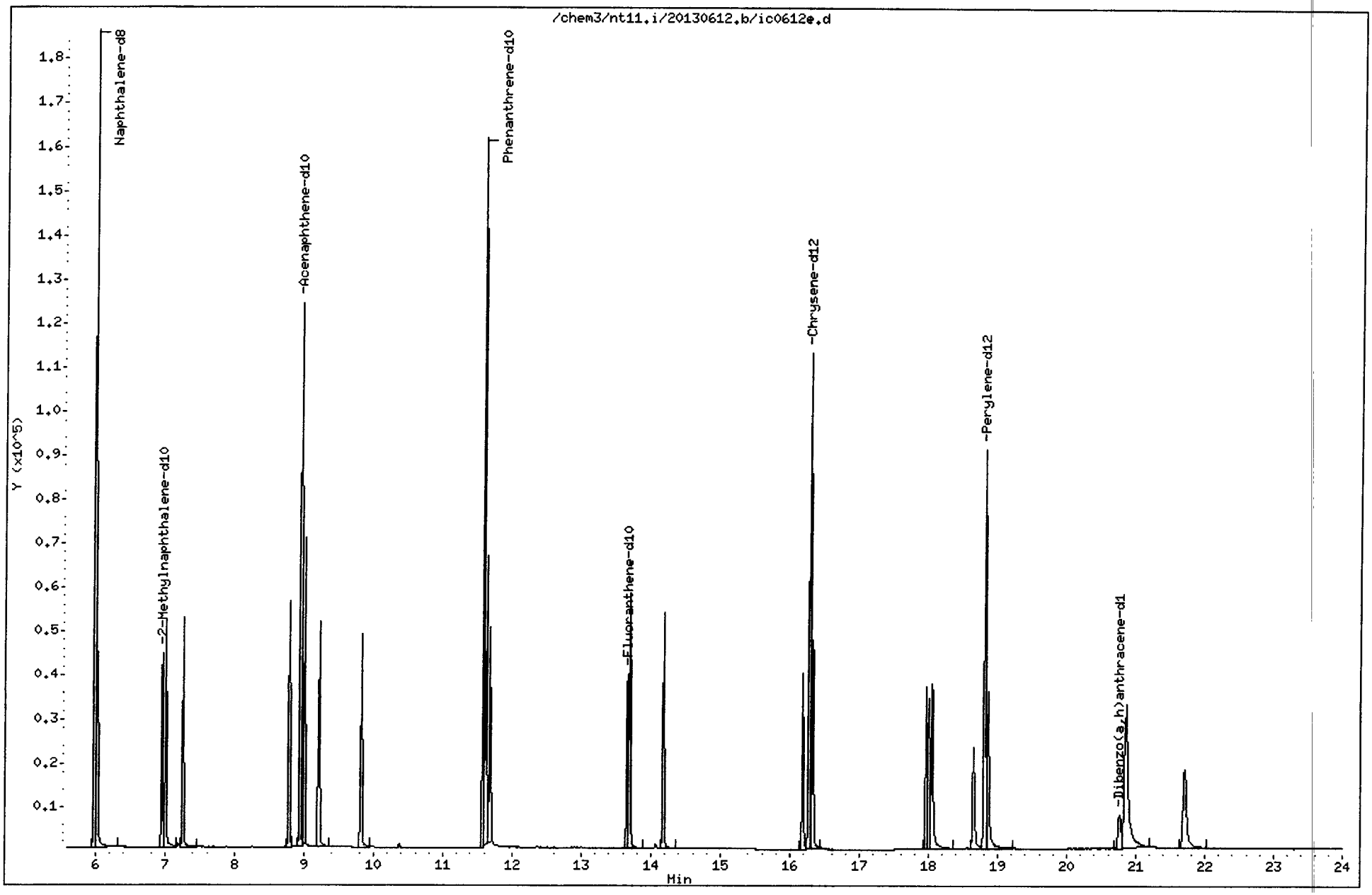
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

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)	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

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

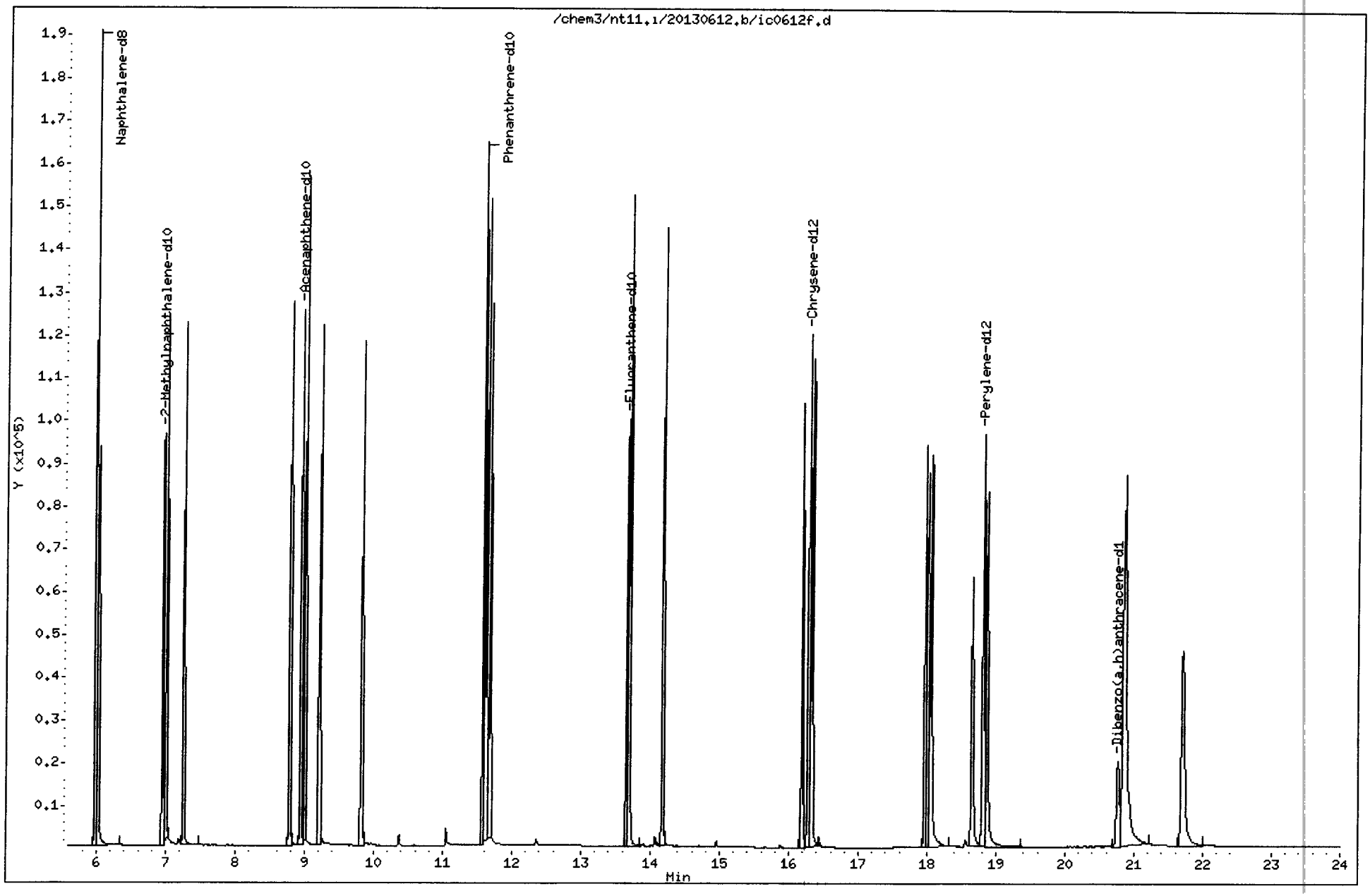
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20130612.b/ic0612f.d
Date : 12-JUN-2013 18:11
Client ID:
Sample Info: SIM 100

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: Rxi-17Sil MS



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)	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.

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

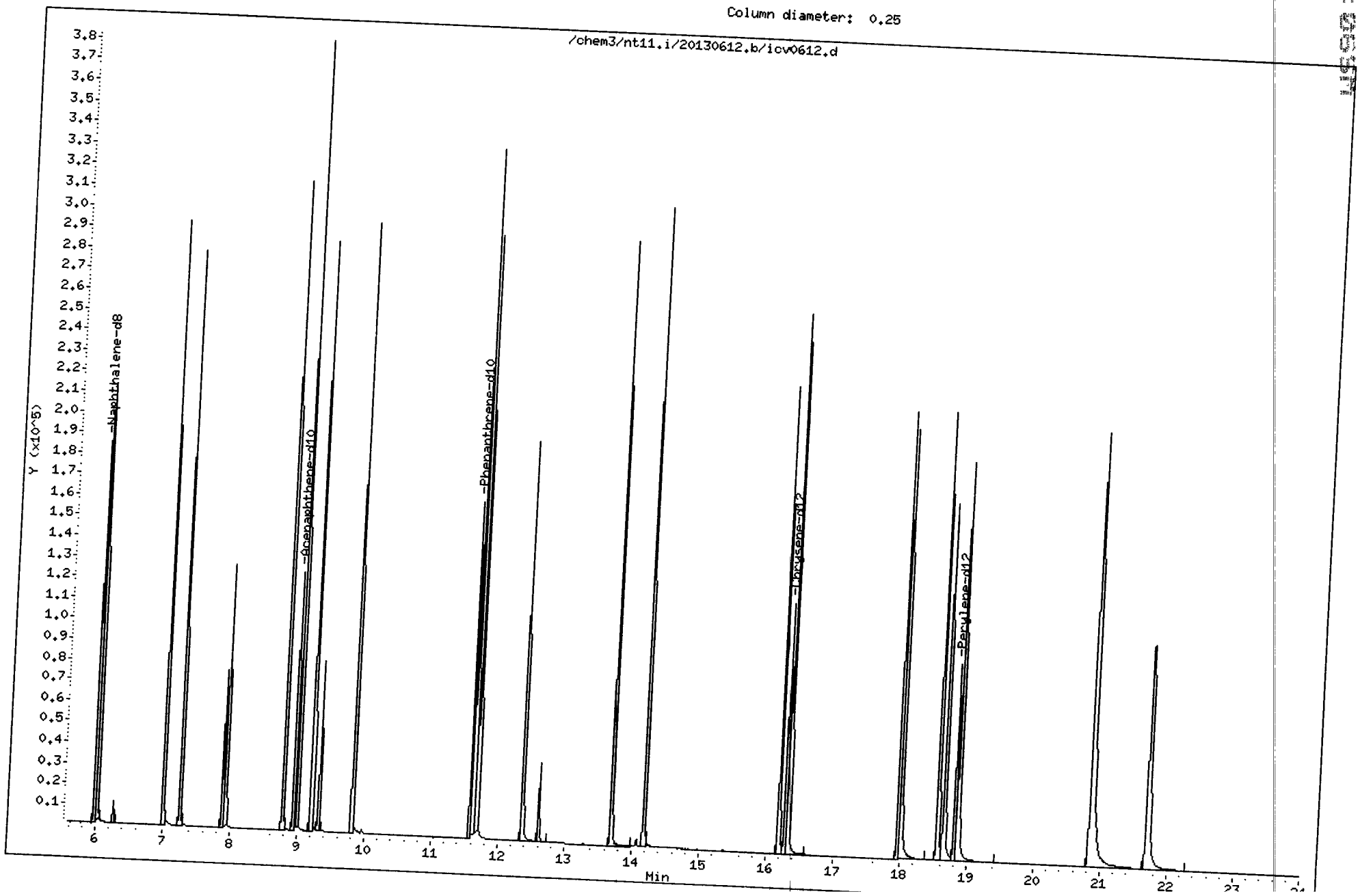
SPIKE COMPOUND	AMOUNT ADDED ng/mL	AMOUNT RECOVERED ng/mL	% RECOVERED	LIMITS
5 Naphthalene	249	244	98.07*	80-120
7 2-Methylnaphthalen	249	256	102.65*	
8 1-methylnaphthalen	249	240	96.46*	
10 Acenaphthylene	249	246	98.65*	
12 Acenaphthene	249	248	99.74*	
14 Dibenzofuran	249	245	98.44*	
15 Fluorene	249	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: WS90, WS92

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WS90 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: 6·12·13 Analysis Start Date: 6·12·13

	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.

(1) PCP @ 2.41, does not affect data quality, benzidine <2 - level IV package, samples A-D.

(Review 1) Analyst: VD **Date:** 6·13·13

(Review 2) Reviewer: _____ **Date:** _____

Analytical Resources Inc.: Organics Instrument Log

NT-11 Serial No.:GC=US10140004, MS=US10481502

Date: 6·12·13 Analysis: low sim PNA Analyst: VD

GC Program: 104sim 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	172368
15	2202	ws90a.d	WS90A	CL-MH-SPS-20	1	5.98	285000	8.94	167156	11.57	275580	16.28	207520	18.81	177029
16	2231	ws90b.d	WS90B	CL-VT-EFF-20	1	5.98	284887	8.94	168729	11.57	276129	16.28	208482	18.81	178699
17	2300	ws90c.d	WS90C	QC-EB-02-201	1	5.98	294815	8.94	178304	11.57	280260	16.28	211800	18.81	177409
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

VD 6.13.13

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
2202	ws90a.d	WS90A	CL-MH-SPS-	1	NO MANUAL INTEGRATION
2231	ws90b.d	WS90B	CL-VT-EFF-	1	NO MANUAL INTEGRATION
2300	ws90c.d	WS90C	QC-EB-02-2	1	NO MANUAL INTEGRATION
2329	ws90d.d	WS90D	QC-EB-03-2	1	NO MANUAL INTEGRATION
2104	ws97a.d	WS97A	LS431-W-06	1	NO MANUAL INTEGRATION
1908	ws97mb.d	WS97MBW1	WS97MBW1	1	NO MANUAL INTEGRATION
1937	ws97sb.d	WS97LCSW1	WS97LCSW1	1	NO MANUAL INTEGRATION
2006	ws97sbd.d	WS97LCSDW1	WS97LCSDW1	1	NO MANUAL INTEGRATION
2133	wt15a.d	WT15A	LTST-W-LSI	1	NO MANUAL INTEGRATION

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:

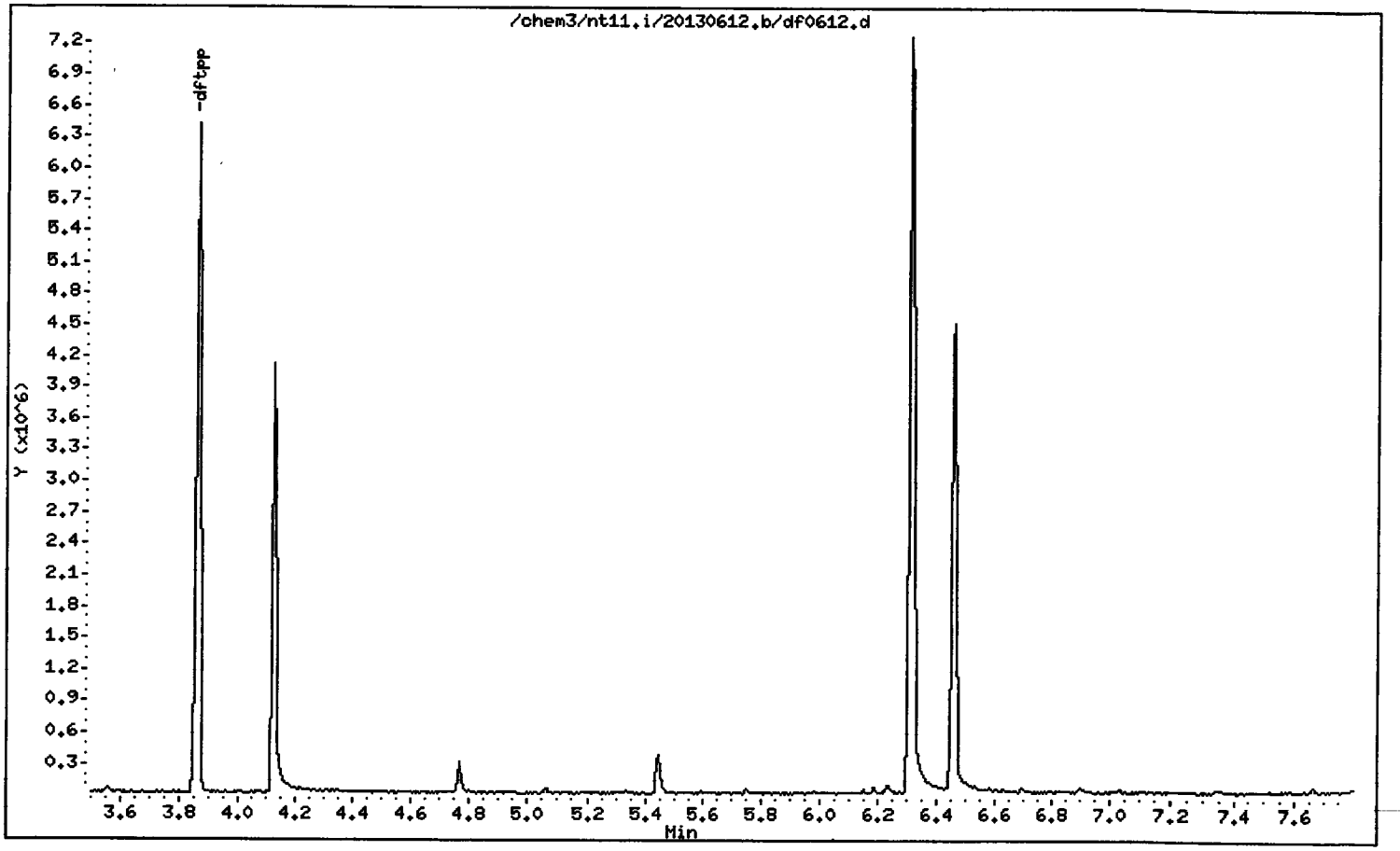
Instrument: nt11.i

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

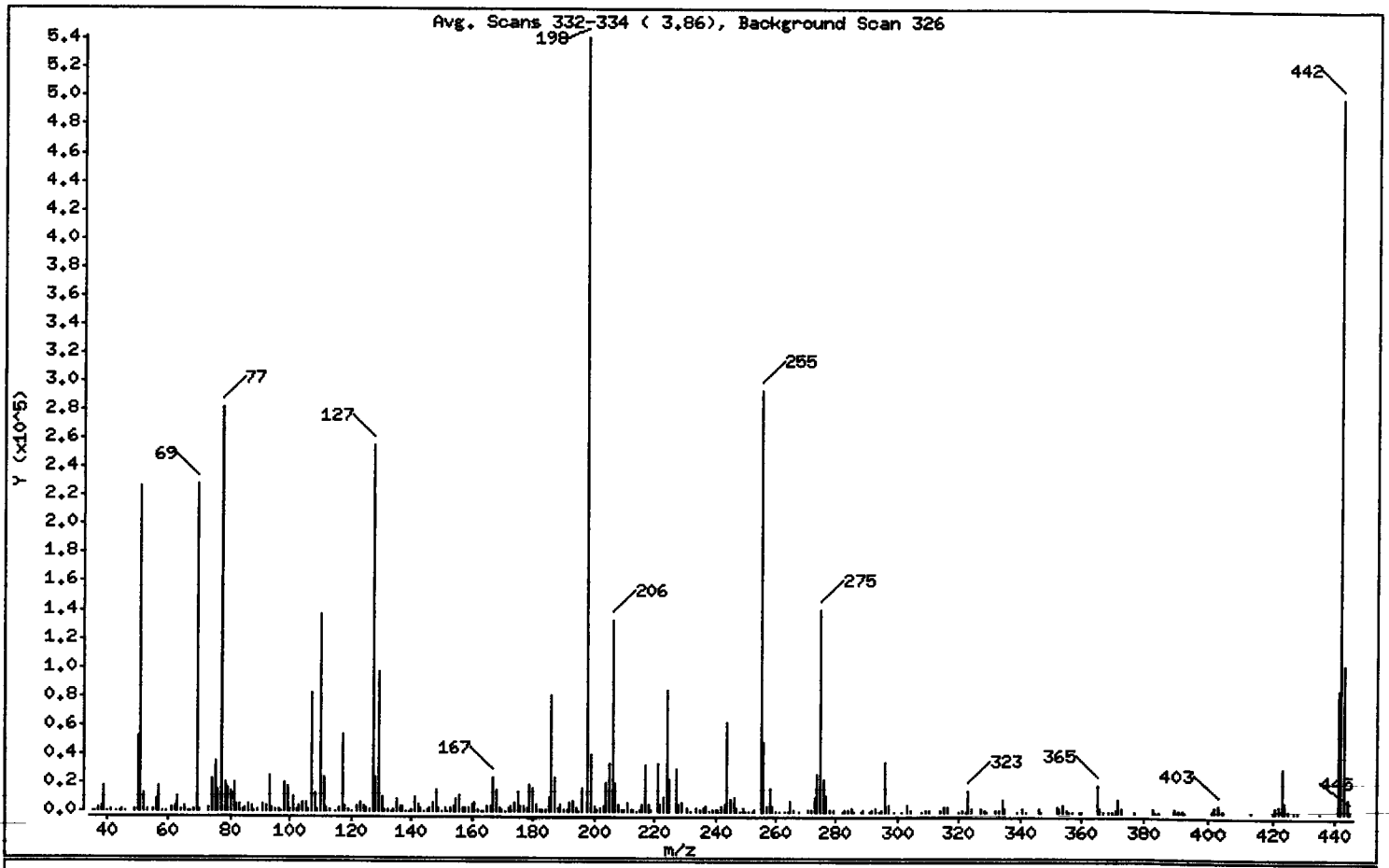
Sample Info: DFTPP 10

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	25.96
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	2503	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	925	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	754
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	3281	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	4387
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

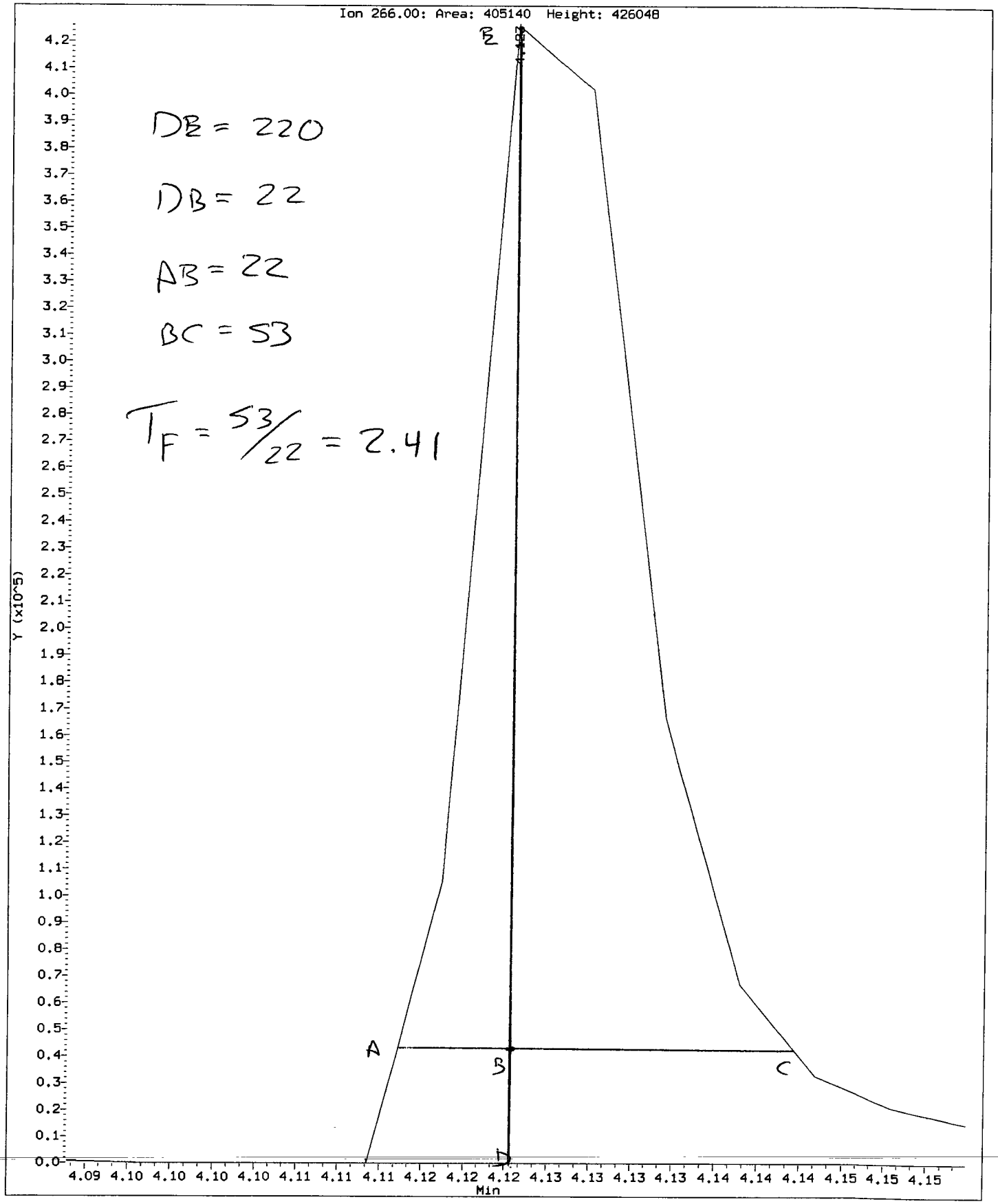
Location of Maximum: 198.00

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		

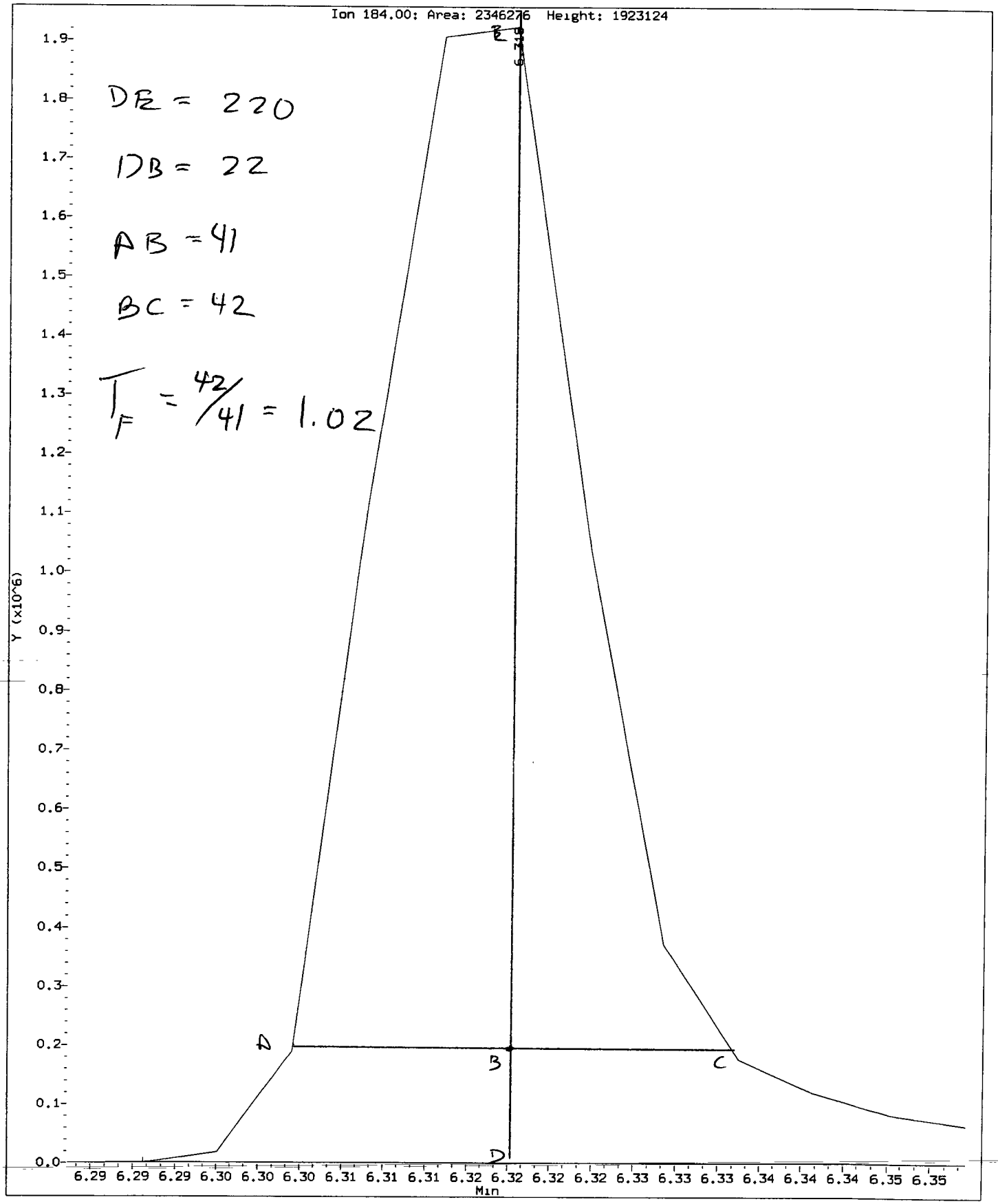
Data File: /chem3/nt11.i/20130612.b/DDT.b/df0612.d
Injection Date: 12-JUN-2013 15:30
Instrument: nt11.i
Client Sample ID:

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:



USGS : 08191

Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem3/nt11.i/20130612.b/DDT.b/df0612.d
Method: /chem3/nt11.i/20130612.b/DDT.b/sw846ddt.m
Analysis Date: 12-JUN-2013 15:30

ARI ID: DFTPP 10
Misc:
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 08:31 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

	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	246
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	208519	250.000	254
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	211130	250.000	258
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	213175	250.000	254
	10 Acenaphthylene	152	8.784	8.784	(0.983)	309540	250.000	256
*	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	248
	14 Dibenzofuran	168	9.205	9.205	(1.030)	305380	250.000	252
	15 Fluorene	166	9.825	9.825	(1.099)	219540	250.000	254
*	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	244
	20 Anthracene	178	11.674	11.674	(1.009)	306873	250.000	261
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	323728	250.000	257
	24 Fluoranthene	202	13.686	13.686	(1.182)	361936	250.000	246
	25 Pyrene	202	14.166	14.166	(0.870)	352034	250.000	234
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	308816	250.000	249
*	29 Chrysene-d12	240	16.275	16.275	(1.000)	194330	200.000	
	30 Chrysene	228	16.325	16.325	(1.003)	340659	250.000	243
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	305774	250.000	251
	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	244
	34 Benzo(a)pyrene	252	18.637	18.637	(0.991)	256547	250.000	253
*	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	258
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	235708	250.000	263
	38 Dibenzo(a,h)anthracene	278	20.853	20.853	(1.109)	271342	250.000	263

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)	297833	250.000	247
47 Perylene	252	18.858	18.858	(1.003)	294106	250.000	247

VD
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
Report Date: 13-Jun-2013 08:31

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt11.i
Lab File ID: ic0612a.d
Analysis Type:
Lab Sample ID: SIM 250
Method: /chem3/nt11.i/20130612.b/lowsim.m

Injection Date: 12-JUN-2013 15:46
Init. Cal. Date(s): 12-JUN-2013 12-JUN-2013
Init. Cal. Times: 15:46 18:11
Quant Type: ISTD

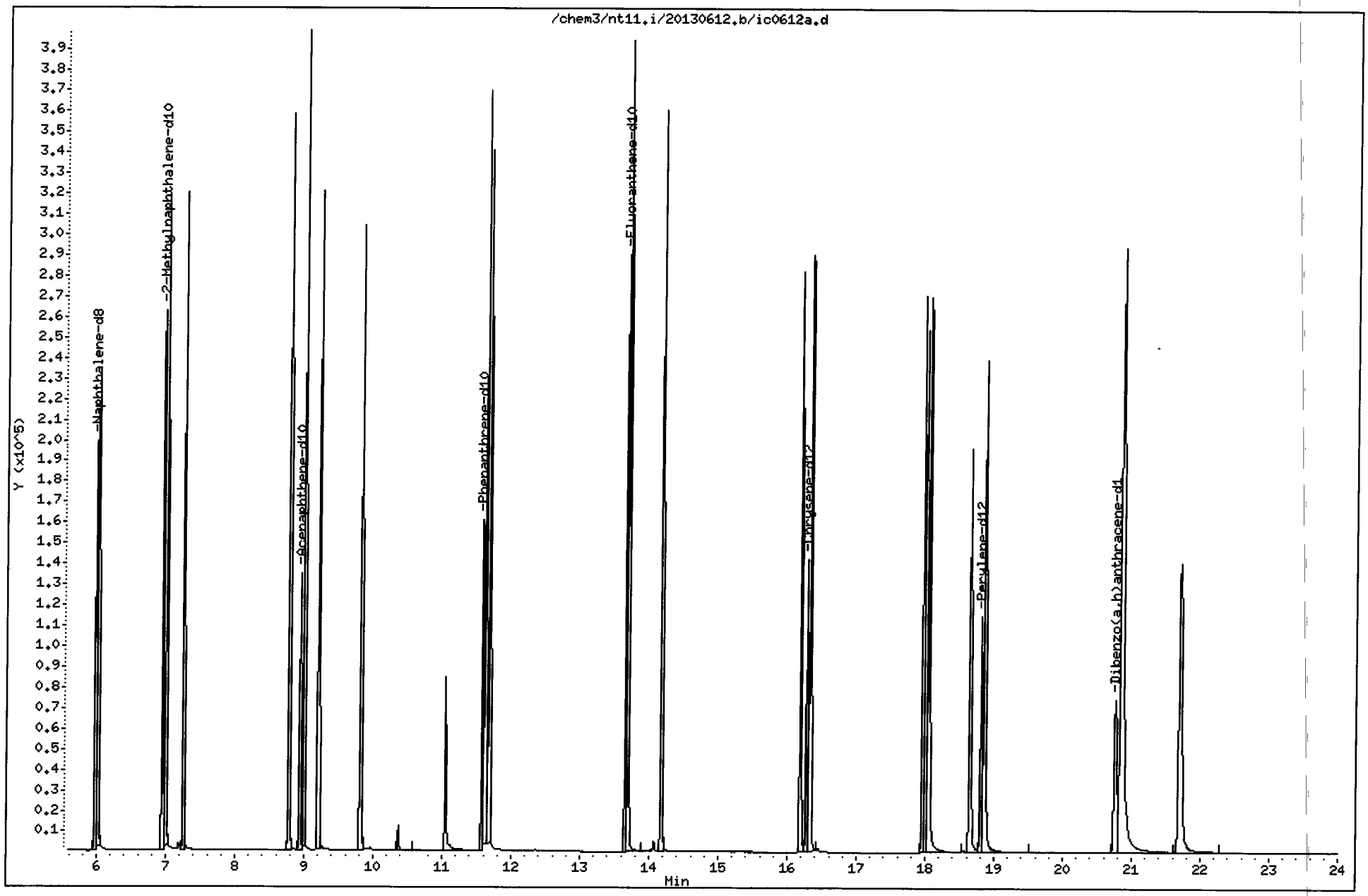
COMPOUND	RRF / AMOUNT	RF250	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
5 Naphthalene	0.98949	0.97447	0.010	-1.51755	20.00000	Averaged
$ 6 2-Methylnaphthalene-d10	0.60637	0.61674	0.010	1.71078	20.00000	Averaged
7 2-Methylnaphthalene	0.60486	0.62446	0.010	3.24077	20.00000	Averaged
8 1-Methylnaphthalene	0.62053	0.63051	0.010	1.60884	20.00000	Averaged
10 Acenaphthylene	1.54294	1.58061	0.010	2.44107	20.00000	Averaged
12 Acenaphthene	1.04479	1.03825	0.010	-0.62566	20.00000	Averaged
14 Dibenzofuran	1.54937	1.55936	0.010	0.64509	20.00000	Averaged
15 Fluorene	1.10513	1.12104	0.010	1.43948	20.00000	Averaged
19 Phenanthrene	1.13398	1.10458	0.010	-2.59325	20.00000	Averaged
20 Anthracene	0.96105	1.00522	0.010	4.59574	20.00000	Averaged
$ 23 Fluoranthene-d10	1.03288	1.06043	0.200	2.66729	20.00000	Averaged
24 Fluoranthene	1.20436	1.18559	0.010	-1.55837	20.00000	Averaged
25 Pyrene	1.54694	1.44922	0.010	-6.31683	20.00000	Averaged
28 Benzo(a)anthracene	1.27534	1.27131	0.010	-0.31604	20.00000	Averaged
30 Chrysene	1.44303	1.40239	0.010	-2.81585	20.00000	Averaged
44 Benzo(b)fluoranthene	1.49916	1.50222	0.200	0.20354	20.00000	Averaged
45 Benzo(k)fluoranthene	1.54113	1.53982	0.200	-0.08512	20.00000	Averaged
46 Benzo(j)fluoranthene	1.73363	1.68910	0.200	-2.56878	20.00000	Averaged
34 Benzo(a)pyrene	1.24608	1.26037	0.010	1.14719	20.00000	Averaged
37 Indeno(1,2,3-cd)pyrene	1.65700	1.70815	0.010	3.08689	20.00000	Averaged
$ 36 Dibenzo(a,h)anthracene-d14	1.10102	1.15799	0.010	5.17492	20.00000	Averaged
38 Dibenzo(a,h)anthracene	1.26870	1.33306	0.010	5.07242	20.00000	Averaged
39 Benzo(g,h,i)perylene	1.48200	1.46320	0.010	-1.26823	20.00000	Averaged
47 Perylene	1.46476	1.44489	0.200	-1.35634	20.00000	Averaged

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/ws97mb.d
Lab Smp Id: WS97MBW1 Client Smp ID: WS97MBW1
Inj Date : 12-JUN-2013 19:08
Operator : VTS Inst ID: nt11.i
Smp Info : WS97MBW1
Misc Info : 13-12104
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: 9 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)	FINAL (ug/L)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	270075	200.000	
	5 Naphthalene	128	Compound Not Detected.					
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	182061	222.345	222
	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)	147902	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	250461	200.000	
	19 Phenanthrene	178	Compound Not Detected.					
	20 Anthracene	178	Compound Not Detected.					
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	315279	243.744	244
	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	16.275	16.275	(1.000)	176331	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)	141530	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)	194224	249.282	249
	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.					

VA
6-13-13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ws97mb.d
Lab Smp Id: WS97MBW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info: 13-12104

Calibration Date: 12-JUN-2013
Calibration Time: 15:46
Client Smp ID: WS97MBW1
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	270075	-0.15
11 Acenaphthene-d10	156669	78334	313338	147902	-5.60
18 Phenanthrene-d10	244223	122112	488446	250461	2.55
29 Chrysene-d12	194330	97165	388660	176331	-9.26
35 Perylene-d12	162839	81420	325678	141530	-13.09

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: The Boeing Company
Sample Matrix: LIQUID
Lab Smp Id: WS97MBW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info: 13-12104

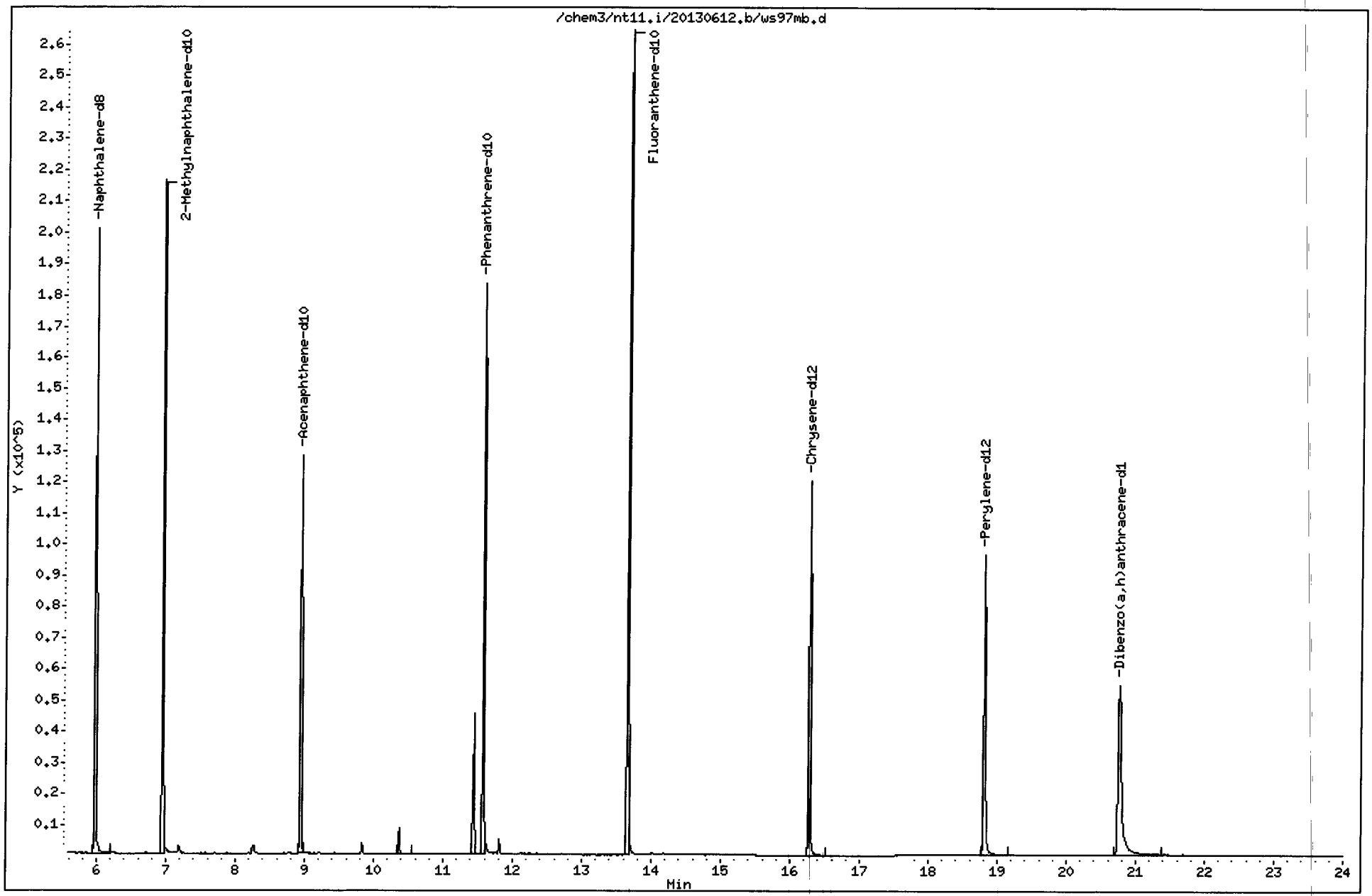
Client SDG: WS97
Fraction: SV
Client Smp ID: WS97MBW1
Operator: VTS
SampleType: BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	222	74.12	35-94
$ 23 Fluoranthene-d10	300	244	81.25	30-160
$ 36 Dibenzo(a,h)anthra	300	249	83.09	26-115

Data File: /chem3/nt11.i/20130612.b/ws97mb.d
Date : 12-JUN-2013 19:08
Client ID: WS97MBW1
Sample Info: WS97MBW1
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ws97mb.d

Lab ID: WS97MBW1, Method: lowsim.m, Instrument: nt11.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130612.b/ws97sb.d
Lab Smp Id: WS97LCSW1
Client Smp ID: WS97LCSW1
Inj Date : 12-JUN-2013 19:37
Operator : VTS
Inst ID: nt11.i
Smp Info : WS97LCSW1
Misc Info : 13-12104
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: 10
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)	269794	200.000	
5 Naphthalene	128	6.018	6.018	(1.007)	308575	231.179	231
$ 6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	201048	245.789	246
7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	197025	241.470	241
8 1-methylnaphthalene	142	7.247	7.247	(1.213)	199565	238.408	238
10 Acenaphthylene	152	8.784	8.784	(0.983)	294910	244.323	244
* 11 Acenaphthene-d10	164	8.939	8.939	(1.000)	156461	200.000	
12 Acenaphthene	153	8.995	8.995	(1.006)	190906	233.569	234
14 Dibenzofuran	168	9.205	9.205	(1.030)	289529	238.870	239
15 Fluorene	166	9.814	9.814	(1.098)	218115	252.288	252
* 18 Phenanthrene-d10	188	11.574	11.574	(1.000)	251349	200.000	
19 Phenanthrene	178	11.618	11.619	(1.004)	336426	236.067	236
20 Anthracene	178	11.674	11.674	(1.009)	290033	240.133	240
$ 23 Fluoranthene-d10	212	13.657	13.657	(1.180)	333347	256.802	257
24 Fluoranthene	202	13.686	13.686	(1.182)	357558	236.234	236

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
25 Pyrene	202	14.166	14.166	(0.870)	350024	241.130	241
28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	304817	254.707	255
* 29 Chrysene-d12	240	16.275	16.275	(1.000)	187674	200.000	
30 Chrysene	228	16.317	16.317	(1.003)	338307	249.840	250
44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	290901	261.581	262
45 Benzo(k)fluoranthene	252	18.003	18.003	(0.957)	301215	263.480	263
46 Benzo(j)fluoranthene	252	18.041	18.051	(0.959)	340459	264.739	265
34 Benzo(a)pyrene	252	18.637	18.637	(0.991)	216414	234.127	234
* 35 Perylene-d12	264	18.810	18.810	(1.000)	148361	200.000	
37 Indeno(1,2,3-cd)pyrene	276	20.852	20.853	(1.109)	317886	258.618	259
$ 36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	216825	265.476	265
38 Dibenzo(a,h)anthracene	278	20.852	20.853	(1.109)	251515	267.248	267
39 Benzo(g,h,i)perylene	276	21.694	21.705	(1.153)	274966	250.116	250
47 Perylene	252	18.858	18.858	(1.003)	263265	242.291	242

KD
6.13.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ws97sb.d
Lab Smp Id: WS97LCSW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info: 13-12104

Calibration Date: 12-JUN-2013
Calibration Time: 15:46
Client Smp ID: WS97LCSW1
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	269794	-0.25
11 Acenaphthene-d10	156669	78334	313338	156461	-0.13
18 Phenanthrene-d10	244223	122112	488446	251349	2.92
29 Chrysene-d12	194330	97165	388660	187674	-3.43
35 Perylene-d12	162839	81420	325678	148361	-8.89

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: The Boeing Company
Sample Matrix: LIQUID
Lab Smp Id: WS97LCSW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info: 13-12104

Client SDG: WS97
Fraction: SV
Client Smp ID: WS97LCSW1
Operator: VTS
SampleType: LCS
Quant Type: ISTD

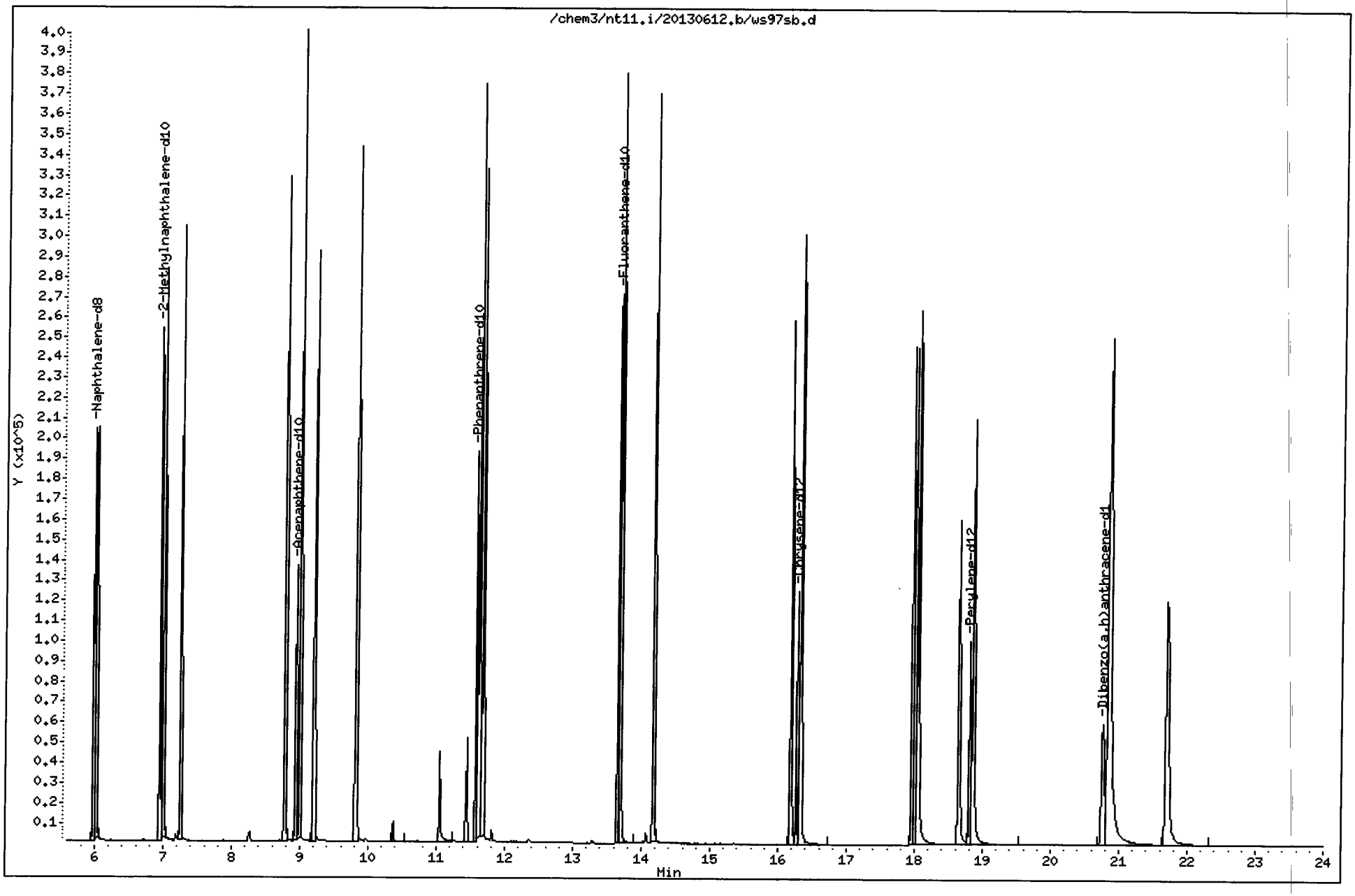
SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	231	77.06	37-90
7 2-Methylnaphthalen	300	241	80.49	39-90
8 1-methylnaphthalen	300	238	79.47	38-95
10 Acenaphthylene	300	244	81.44	35-95
12 Acenaphthene	300	234	77.86	38-94
14 Dibenzofuran	300	239	79.62	36-94
15 Fluorene	300	252	84.10	41-102
19 Phenanthrene	300	236	78.69	41-101
20 Anthracene	300	240	80.04	28-101
24 Fluoranthene	300	236	78.74	49-114
25 Pyrene	300	241	80.38	42-114
28 Benzo(a)anthracene	300	255	84.90	42-111
30 Chrysene	300	250	83.28	46-106
44 Benzo(b)fluoranthe	300	262	87.19	30-160
45 Benzo(k)fluoranthe	300	263	87.83	30-160
46 Benzo(j)fluoranthe	300	265	88.25	30-160
34 Benzo(a)pyrene	300	234	78.04	20-99
37 Indeno(1,2,3-cd)py	300	259	86.21	32-113
38 Dibenzo(a,h)anthra	300	267	89.08	30-113
39 Benzo(g,h,i)peryle	300	250	83.37	27-113
47 Perylene	300	242	80.76	30-160

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	246	81.93	35-94
$ 23 Fluoranthene-d10	300	257	85.60	30-160
$ 36 Dibenzo(a,h)anthra	300	265	88.49	26-115

Data File: /chem3/nt11.i/20130612.b/ws97sb.d
Date : 12-JUN-2013 19:37
Client ID: WS97LCSW1
Sample Info: WS97LCSW1
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25



WS97 : 00509

CO-ELUTION SUMMARY FOR FILE - ws97sb.d

Lab ID: WS97LCSW1, 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/ws97sbd.d
Lab Smp Id: WS97LCSDW1 Client Smp ID: WS97LCSDW1
Inj Date : 12-JUN-2013 20:06
Operator : VTS Inst ID: nt11.i
Smp Info : WS97LCSDW1
Misc Info : 13-12104
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: 11 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)	283697	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	328416	233.986	234
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	212801	247.408	247
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	211286	246.258	246
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	210658	239.327	239
	10 Acenaphthylene	152	8.784	8.784	(0.983)	312132	249.416	249
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	162216	200.000	
	12 Acenaphthene	153	8.994	8.995	(1.006)	203637	240.306	240
	14 Dibenzofuran	168	9.205	9.205	(1.030)	309764	246.497	246
	15 Fluorene	166	9.814	9.814	(1.098)	230627	257.296	257
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	264618	200.000	
	19 Phenanthrene	178	11.618	11.619	(1.004)	356630	237.696	238
	20 Anthracene	178	11.674	11.674	(1.009)	313728	246.726	247
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	362623	265.347	265
	24 Fluoranthene	202	13.686	13.686	(1.182)	394674	247.681	248

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	25 Pyrene	202	14.166	14.166	(0.870)	385053	245.876	246
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	341937	264.844	265
*	29 Chrysene-d12	240	16.275	16.275	(1.000)	202470	200.000	
	30 Chrysene	228	16.317	16.317	(1.003)	373030	255.352	255
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	326164	266.130	266
	45 Benzo(k)fluoranthene	252	18.002	18.003	(0.957)	335040	265.928	266
	46 Benzo(j)fluoranthene	252	18.041	18.051	(0.959)	370663	261.535	262
	34 Benzo(a)pyrene	252	18.637	18.637	(0.991)	245171	240.675	241
*	35 Perylene-d12	264	18.810	18.810	(1.000)	163502	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.852	20.853	(1.109)	352585	260.284	260
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	236621	262.885	263
	38 Dibenzo(a,h)anthracene	278	20.852	20.853	(1.109)	279753	269.725	270
	39 Benzo(g,h,i)perylene	276	21.694	21.705	(1.153)	302885	249.998	250
	47 Perylene	252	18.858	18.858	(1.003)	291711	243.609	244

VD
6.13.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ws97sbd.d
Lab Smp Id: WS97LCSDW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info: 13-12104

Calibration Date: 12-JUN-2013
Calibration Time: 15:46
Client Smp ID: WS97LCSDW1
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	283697	4.89
11 Acenaphthene-d10	156669	78334	313338	162216	3.54
18 Phenanthrene-d10	244223	122112	488446	264618	8.35
29 Chrysene-d12	194330	97165	388660	202470	4.19
35 Perylene-d12	162839	81420	325678	163502	0.41

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: The Boeing Company
Sample Matrix: LIQUID
Lab Smp Id: WS97LCSDW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info: 13-12104

Client SDG: WS97
Fraction: SV
Client Smp ID: WS97LCSDW1
Operator: VTS
SampleType: LCSD
Quant Type: ISTD

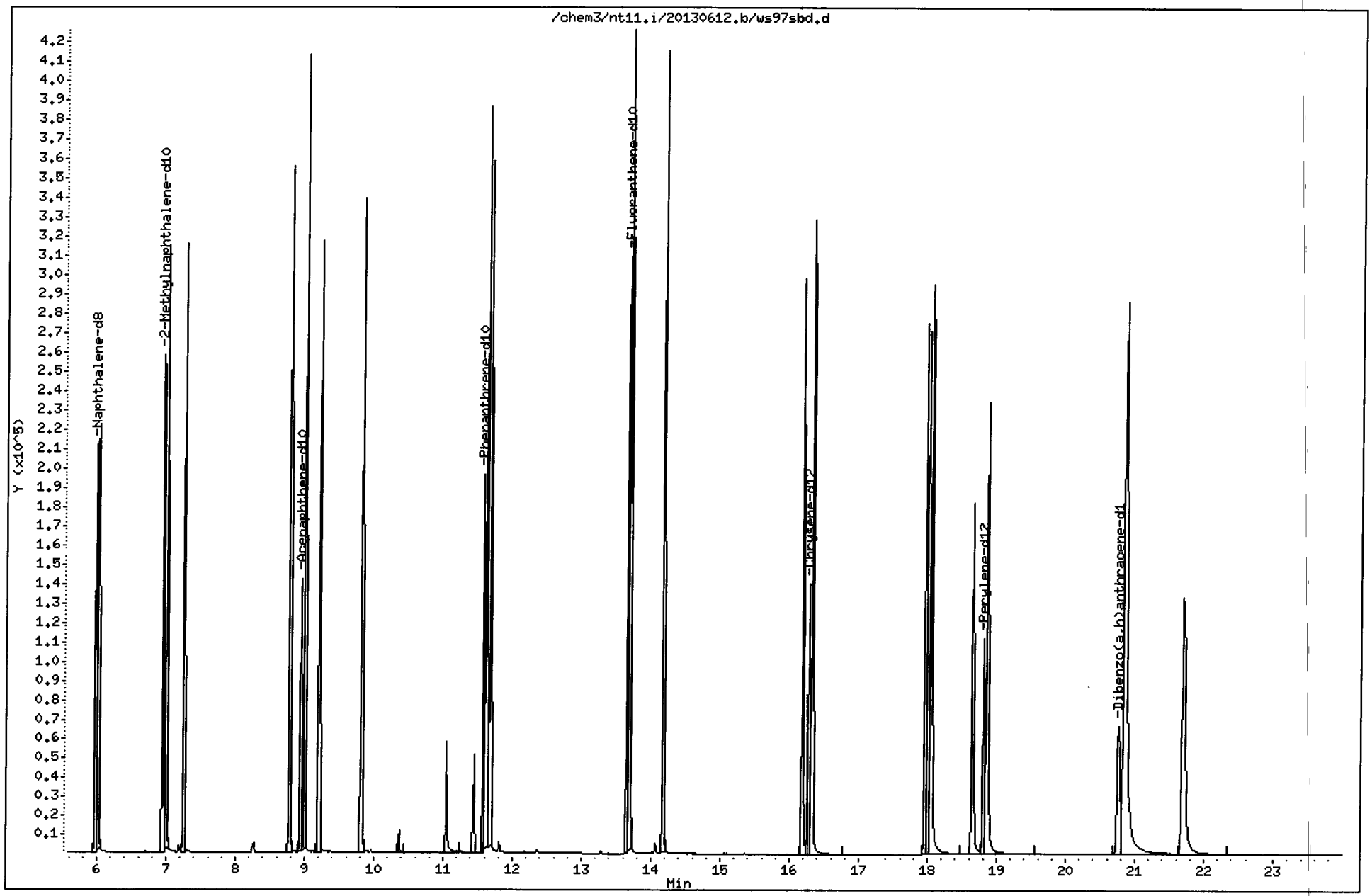
SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	234	78.00	37-90
7 2-Methylnaphthalen	300	246	82.09	39-90
8 1-methylnaphthalen	300	239	79.78	38-95
10 Acenaphthylene	300	249	83.14	35-95
12 Acenaphthene	300	240	80.10	38-94
14 Dibenzofuran	300	246	82.17	36-94
15 Fluorene	300	257	85.77	41-102
19 Phenanthrene	300	238	79.23	41-101
20 Anthracene	300	247	82.24	28-101
24 Fluoranthene	300	248	82.56	49-114
25 Pyrene	300	246	81.96	42-114
28 Benzo(a)anthracene	300	265	88.28	42-111
30 Chrysene	300	255	85.12	46-106
44 Benzo(b)fluoranthe	300	266	88.71	30-160
45 Benzo(k)fluoranthe	300	266	88.64	30-160
46 Benzo(j)fluoranthe	300	262	87.18	30-160
34 Benzo(a)pyrene	300	241	80.23	20-99
37 Indeno(1,2,3-cd)py	300	260	86.76	32-113
38 Dibenzo(a,h)anthra	300	270	89.91	30-113
39 Benzo(g,h,i)peryle	300	250	83.33	27-113
47 Perylene	300	244	81.20	30-160

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	247	82.47	35-94
$ 23 Fluoranthene-d10	300	265	88.45	30-160
$ 36 Dibenzo(a,h)anthra	300	263	87.63	26-115

Data File: /chem3/nt11.i/20130612.b/ws97sbd.d
Date : 12-JUN-2013 20:06
Client ID: WS97LCSDW1
Sample Info: WS97LCSDW1
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25



WS90:00515

CO-ELUTION SUMMARY FOR FILE - ws97sbd.d

Lab ID: WS97LCSDW1, 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/ws90a.d
Lab Smp Id: WS90A Client Smp ID: CL-MH-SPS-20130605-
Inj Date : 12-JUN-2013 22:02
Operator : VTS Inst ID: nt11.i
Smp Info : WS90A
Misc Info : 13-12078
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: 15
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)	285000	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	28367	20.1182	20.1
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	195326	226.053	226
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	13852	16.0710	16.1
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	9028	10.2098	10.2
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	167156	200.000	
	12 Acenaphthene	153	8.995	8.995	(1.006)	10531	12.0601	12.1
	14 Dibenzofuran	168	9.205	9.205	(1.030)	14208	10.9720	11.0
	15 Fluorene	166	9.814	9.814	(1.098)	22396	24.2474	24.2
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	275580	200.000	
	19 Phenanthrene	178	11.619	11.619	(1.004)	91958	58.8525	58.9
	20 Anthracene	178	11.674	11.674	(1.009)	6982	5.27247	5.27
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	371586	261.090	261
	24 Fluoranthene	202	13.686	13.686	(1.182)	34998	21.0896	21.1

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	25 Pyrene	202	14.166	14.166	(0.870)	42830	26.6836	26.7
	28 Benzo(a)anthracene	228	Compound Not Detected.					
*	29 Chrysene-d12	240	16.275	16.275	(1.000)	207520	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)	177029	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	20.753	20.764	(1.103)	228596	234.564	235
	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.					

WD
6.13.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ws90a.d
Lab Smp Id: WS90A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info: 13-12078

Calibration Date: 12-JUN-2013
Calibration Time: 15:46
Client Smp ID: CL-MH-SPS-20130605-
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	285000	5.37
11 Acenaphthene-d10	156669	78334	313338	167156	6.69
18 Phenanthrene-d10	244223	122112	488446	275580	12.84
29 Chrysene-d12	194330	97165	388660	207520	6.79
35 Perylene-d12	162839	81420	325678	177029	8.71

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

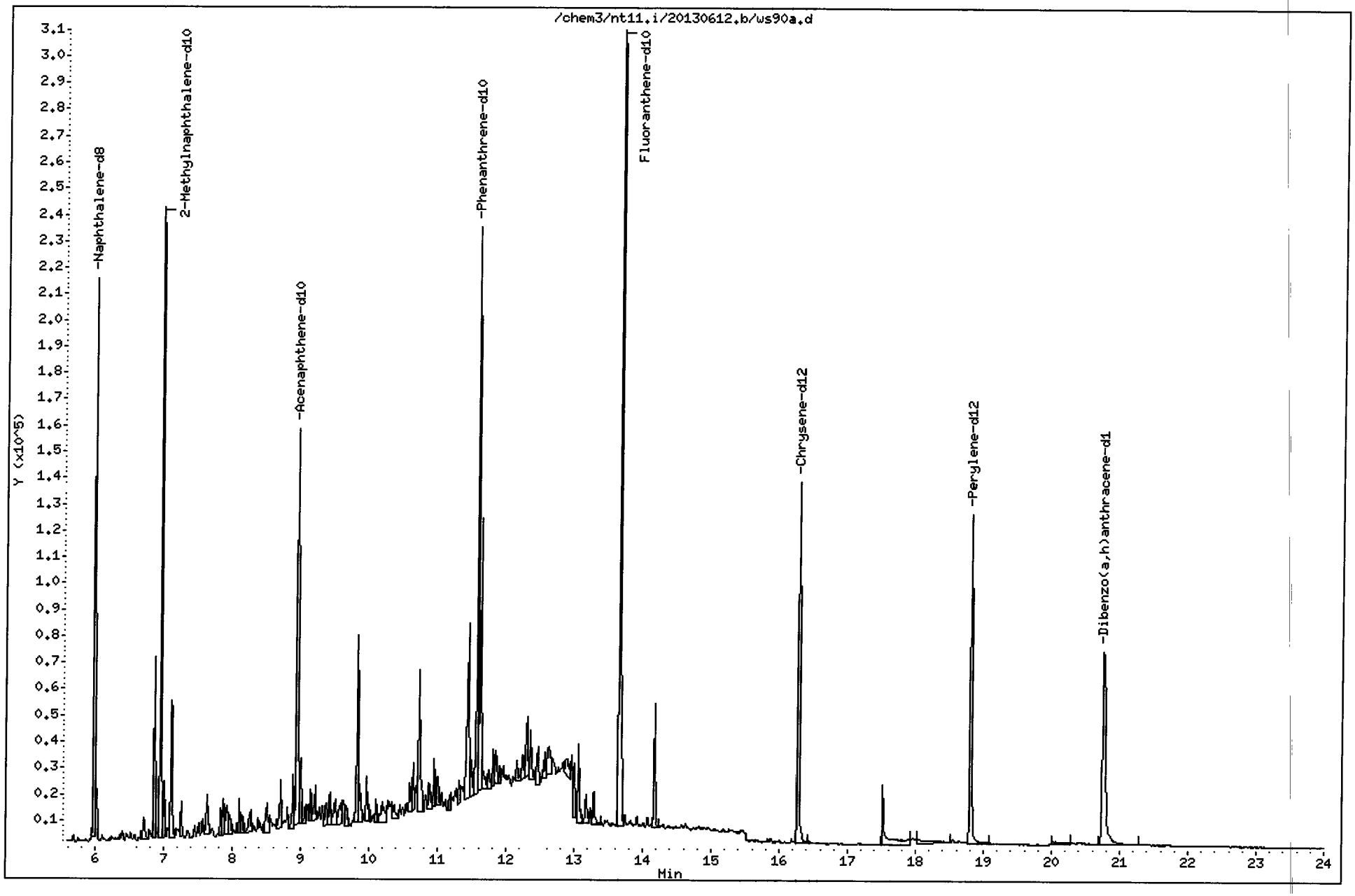
Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WS90A
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info: 13-12078

Client SDG: WS90
Fraction: SV
Client Smp ID: CL-MH-SPS-20130605-
Operator: VTS
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	226	75.35	35-94
$ 23 Fluoranthene-d10	300	261	87.03	30-160
$ 36 Dibenzo(a,h)anthra	300	235	78.19	26-115

Data File: /chem3/nt11.i/20130612.b/ws90a.d
Date : 12-JUN-2013 22:02
Client ID: CL-MH-SPS-20130605-
Sample Info: WS90A
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: VTS
Column diameter: 0.25



WS90 : 060524

Data File: /chem3/nt11.i/20130612.b/ws90a.d

Date : 12-JUN-2013 22:02

Client ID: CL-MH-SPS-20130605-

Instrument: nt11.i

Sample Info: WS90A

Volume Injected (uL): 2.0

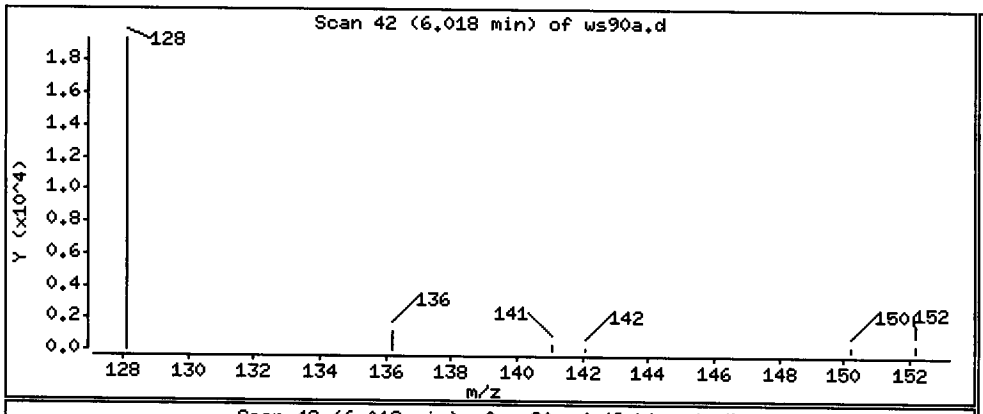
Operator: VTS

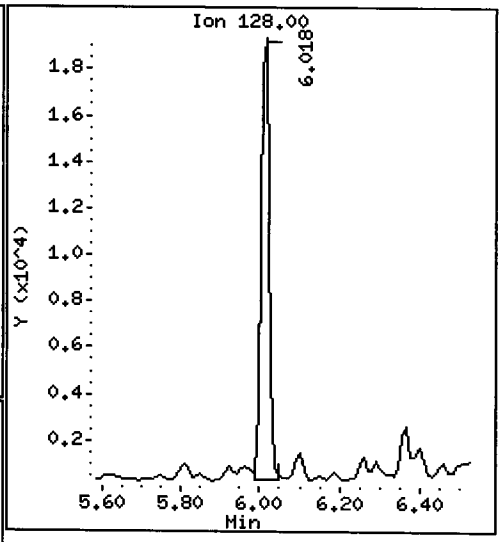
Column phase: Rxi-17Sil MS

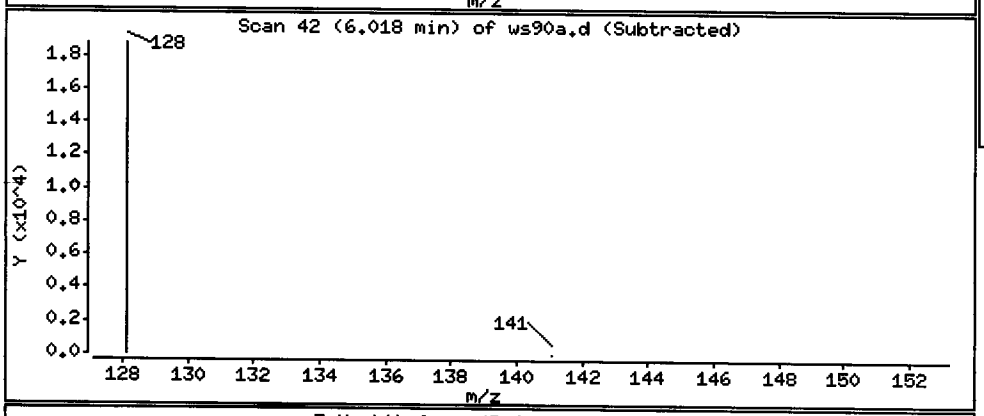
Column diameter: 0.25

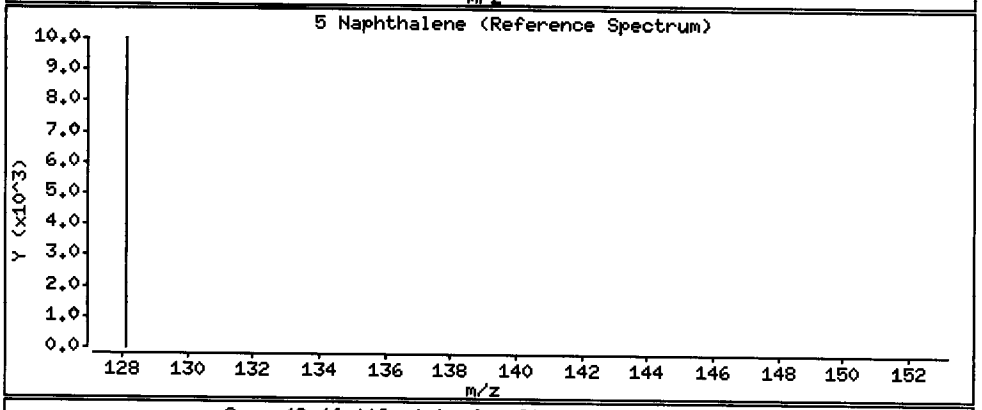
5 Naphthalene

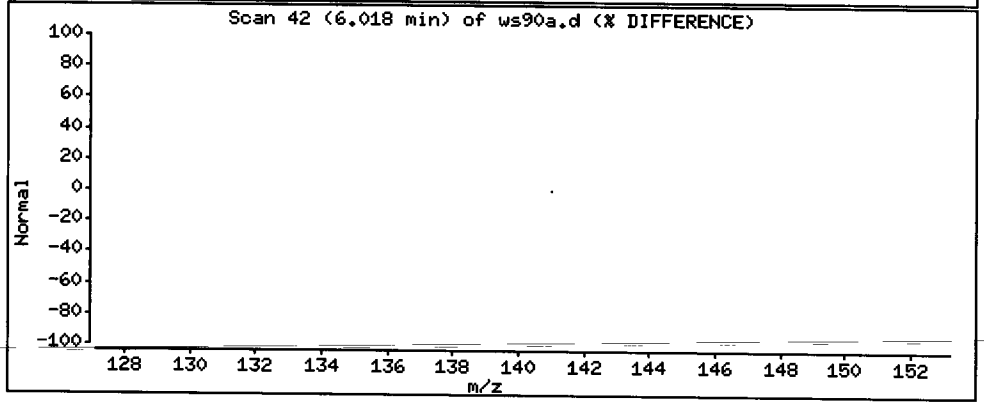
Concentration: 20.1 ug/L











Data File: /chem3/nt11.i/20130612.b/ws90a.d

Date : 12-JUN-2013 22:02

Client ID: CL-MH-SPS-20130605-

Instrument: nt11.i

Sample Info: WS90A

Volume Injected (uL): 2.0

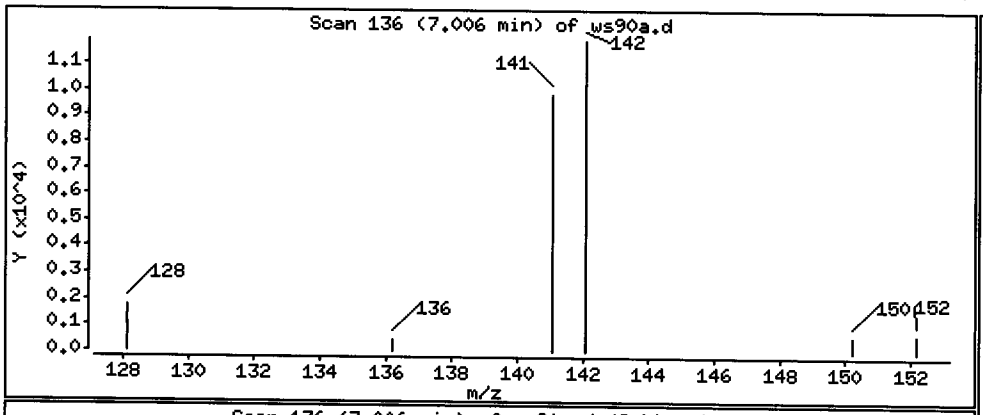
Operator: VTS

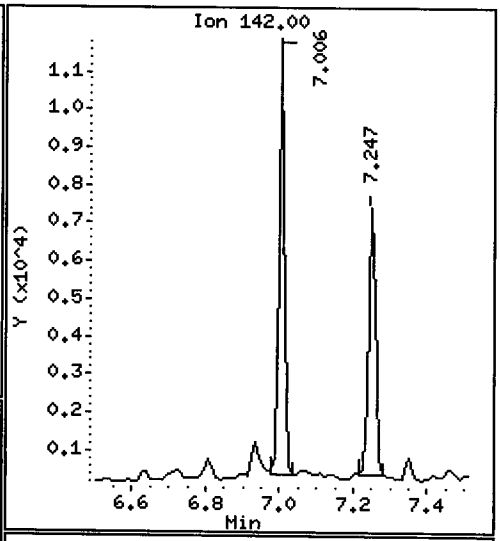
Column phase: Rxi-17Sil MS

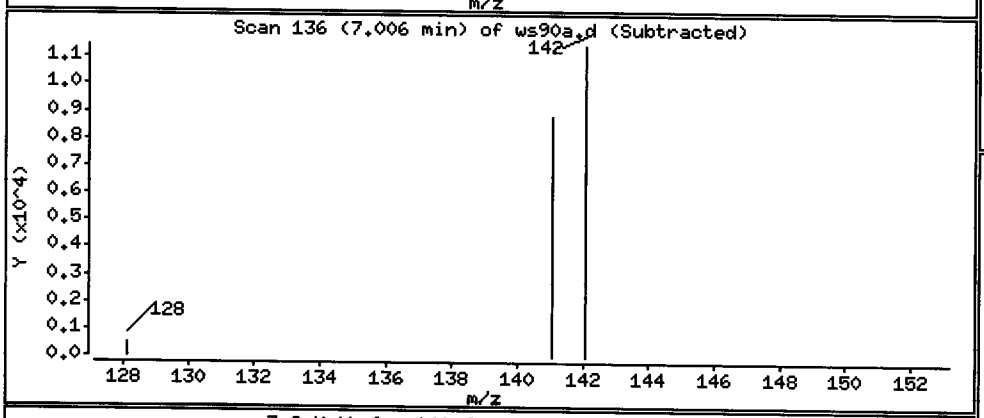
Column diameter: 0.25

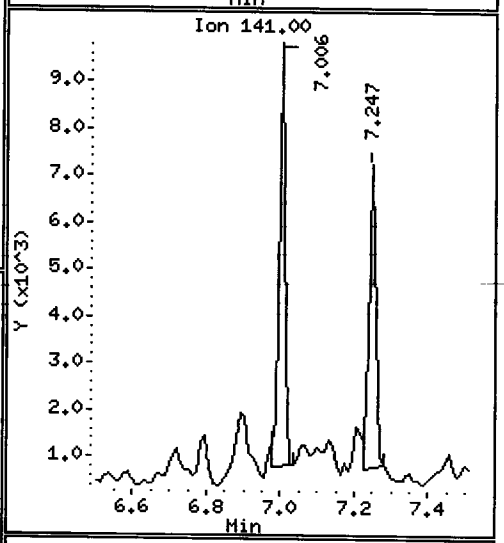
7 2-Methylnaphthalene

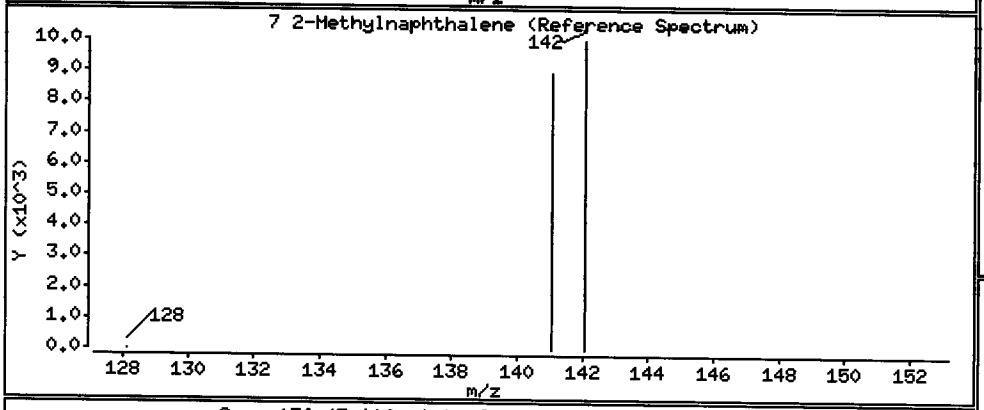
Concentration: 16.1 ug/L

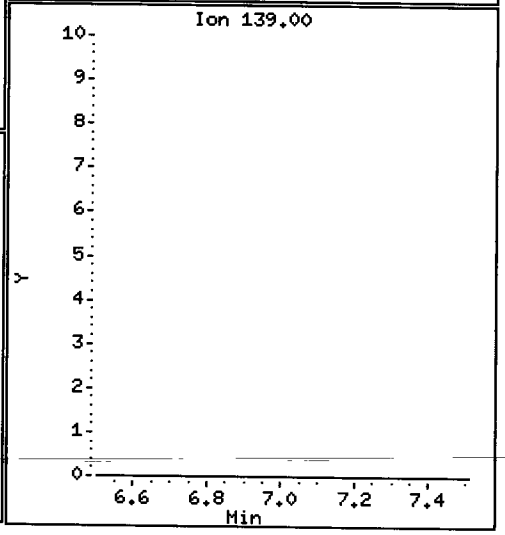


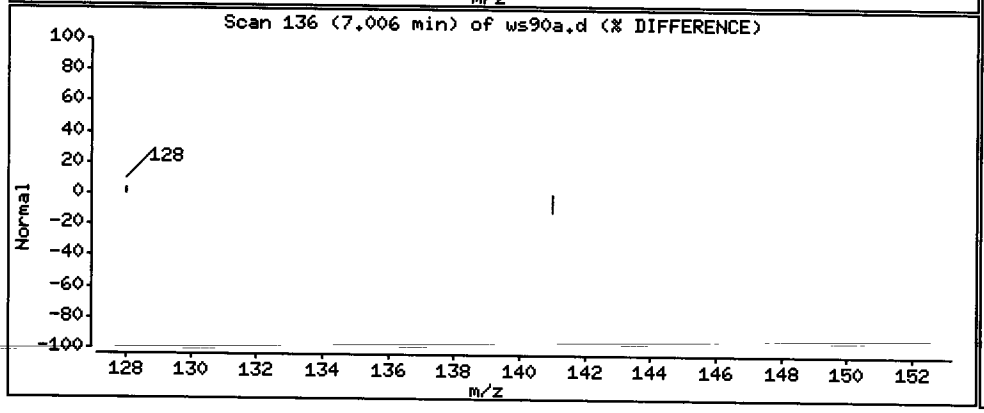












Data File: /chem3/nt11.i/20130612.b/ws90a.d

Date : 12-JUN-2013 22:02

Client ID: CL-MH-SPS-20130605-

Instrument: nt11.i

Sample Info: WS90A

Volume Injected (uL): 2.0

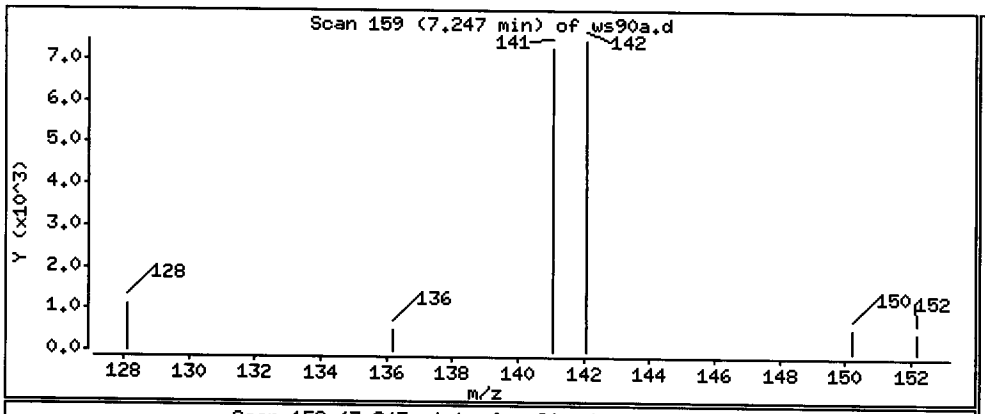
Operator: VTS

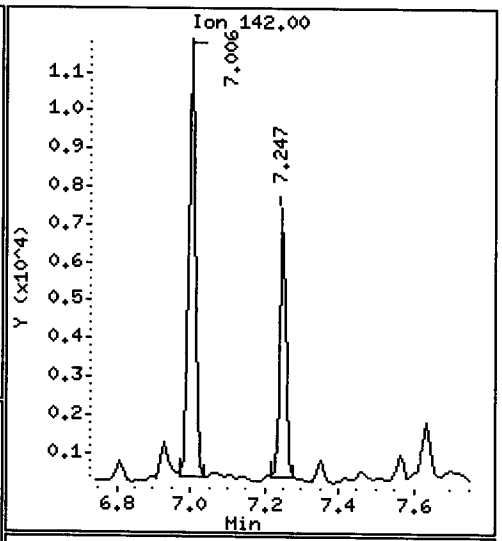
Column phase: Rxi-17Sil MS

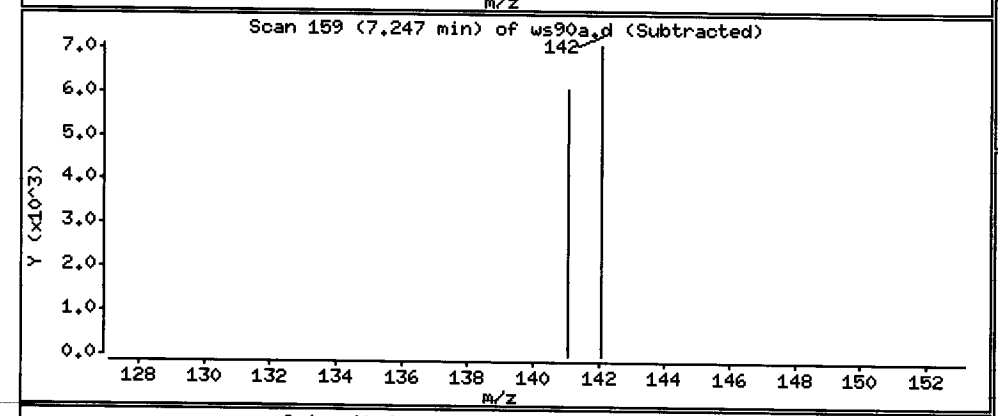
Column diameter: 0.25

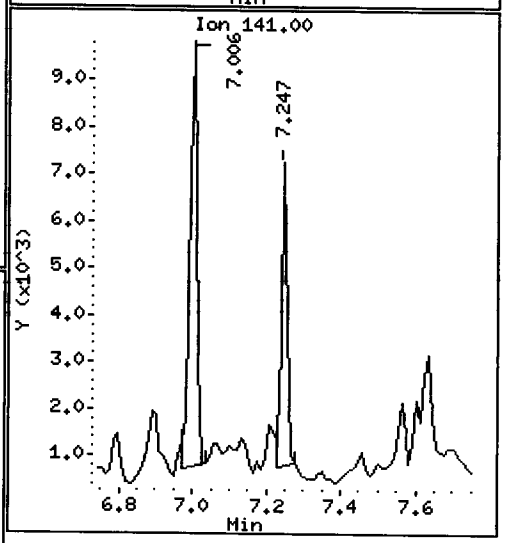
8 1-methylnaphthalene

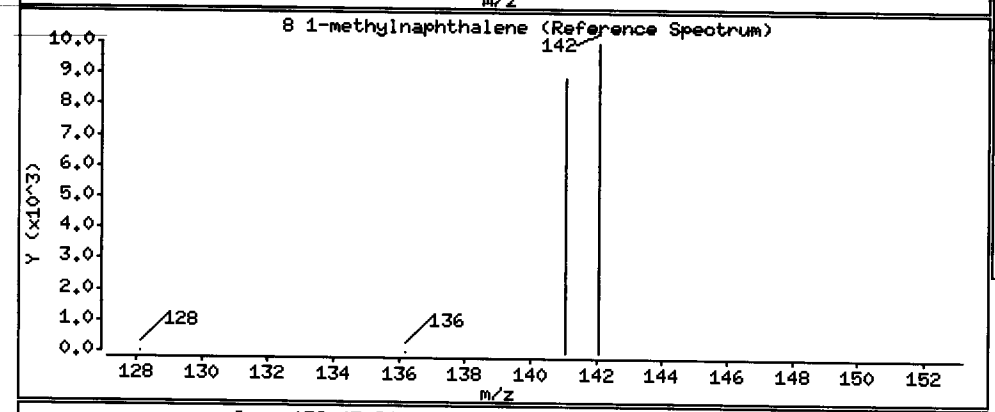
Concentration: 10.2 ug/L

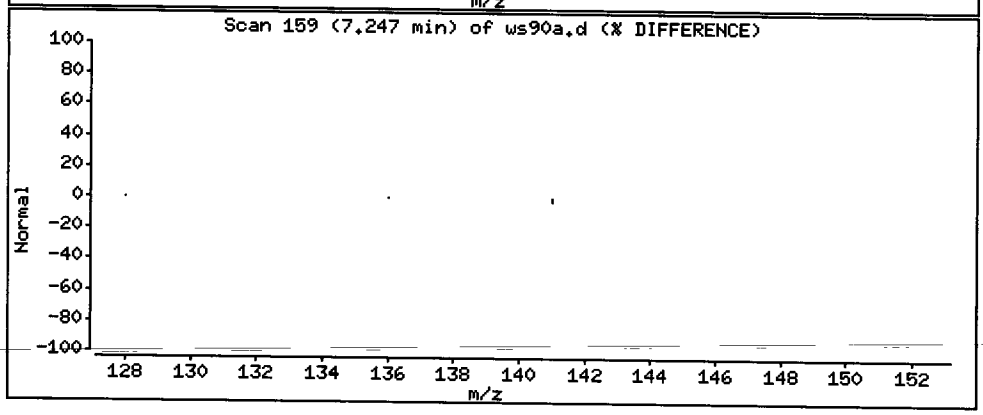












Data File: /chem3/nt11.i/20130612.b/ws90a.d

Date : 12-JUN-2013 22:02

Client ID: CL-MH-SPS-20130605-

Instrument: nt11.i

Sample Info: WS90A

Volume Injected (uL): 2.0

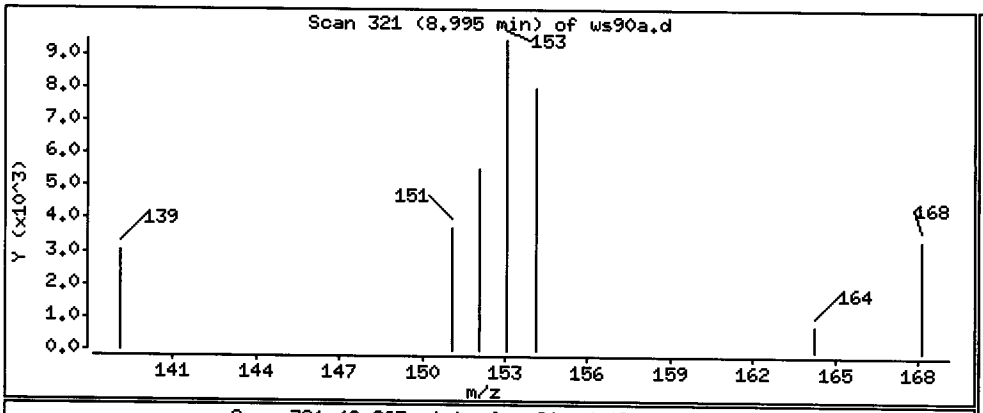
Operator: VTS

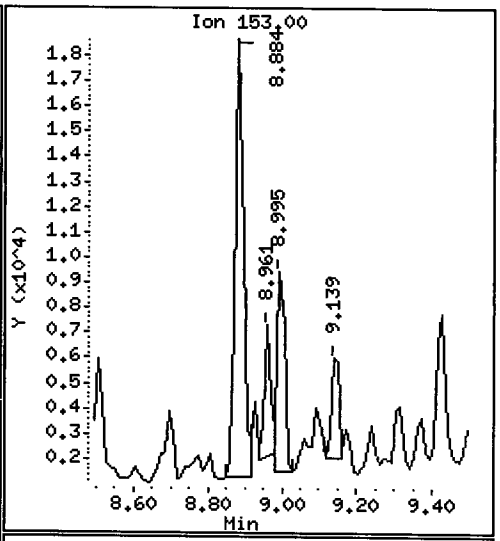
Column phase: Rxi-17Sil MS

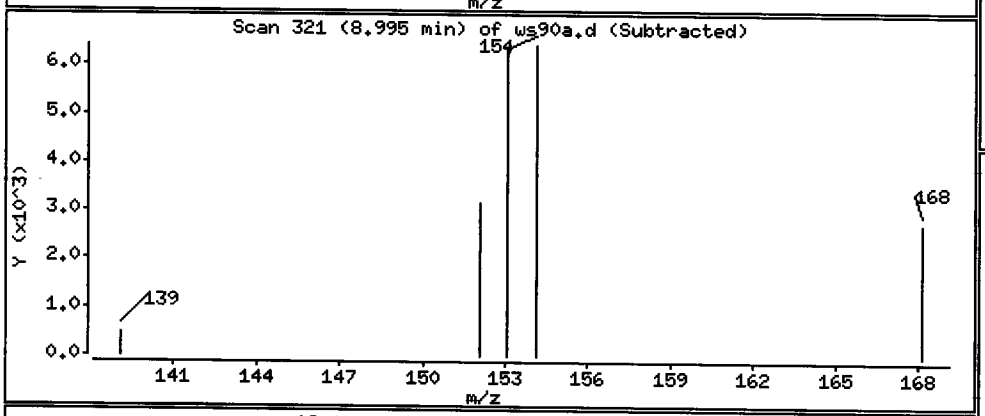
Column diameter: 0.25

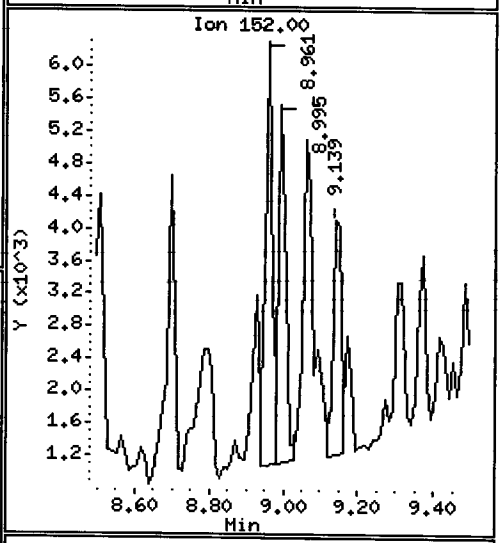
12 Acenaphthene

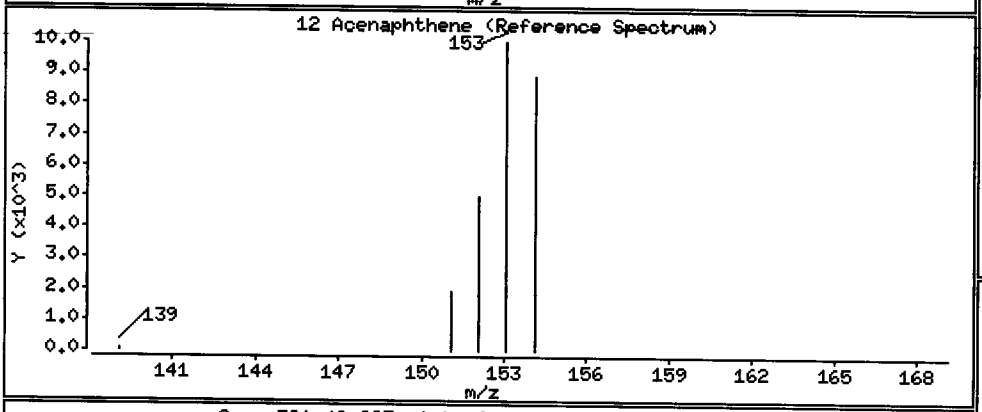
Concentration: 12.1 ug/L

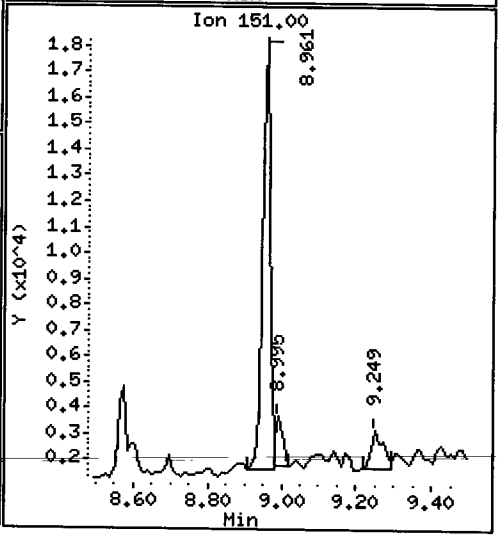


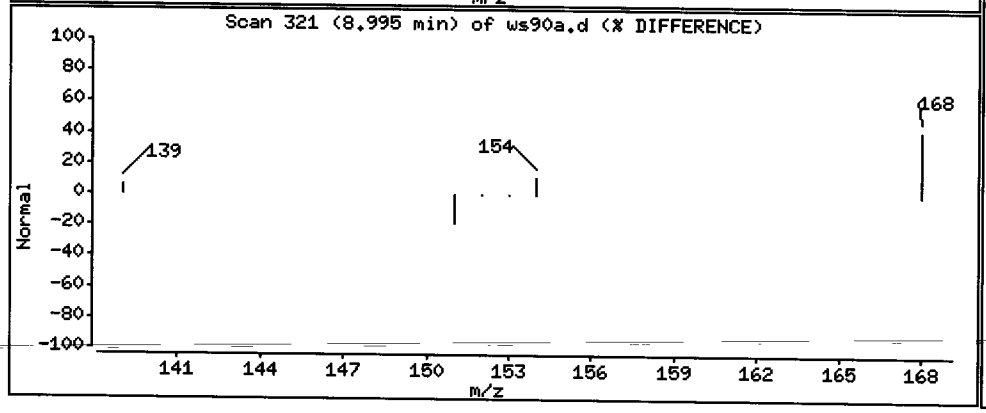












Data File: /chem3/nt11.i/20130612.b/ws90a.d

Date : 12-JUN-2013 22:02

Client ID: CL-MH-SPS-20130605-

Instrument: nt11.i

Sample Info: WS90A

Volume Injected (uL): 2.0

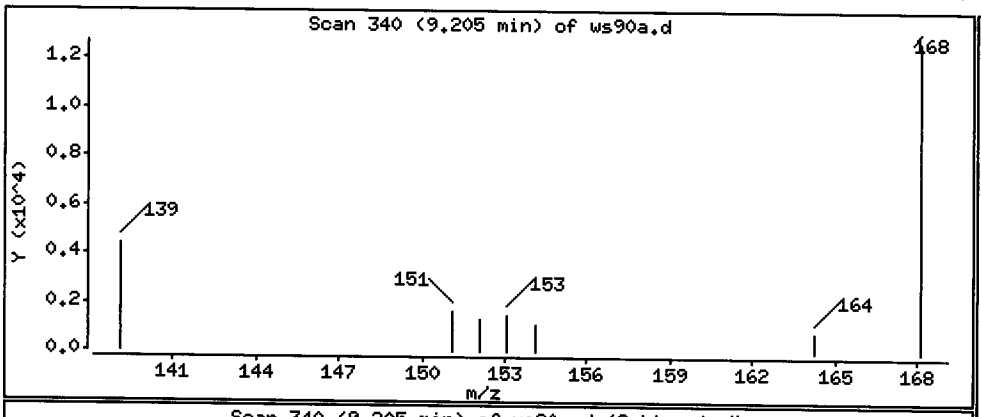
Operator: VTS

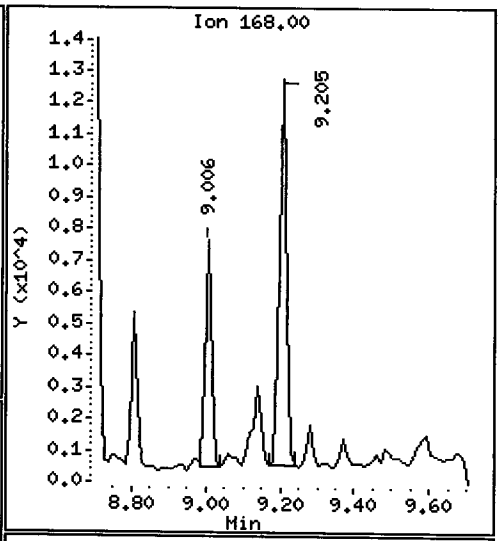
Column phase: Rxi-17Sil MS

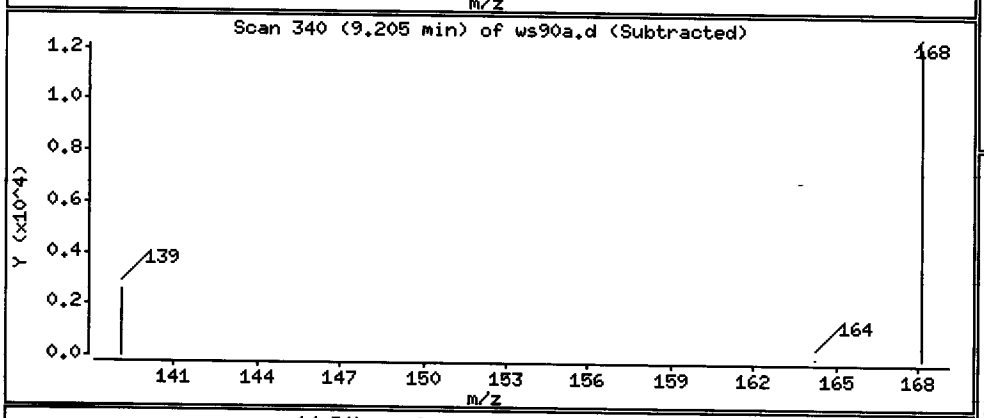
Column diameter: 0.25

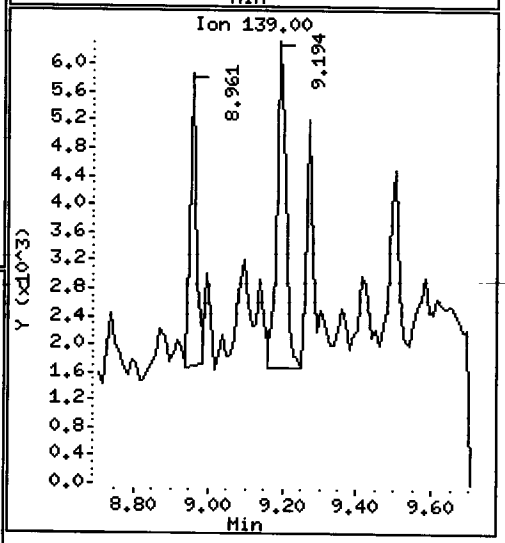
14 Dibenzofuran

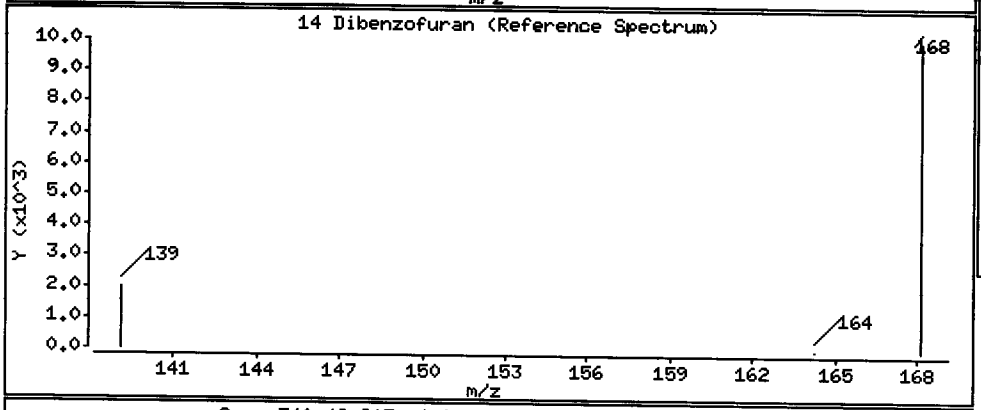
Concentration: 11.0 ug/L

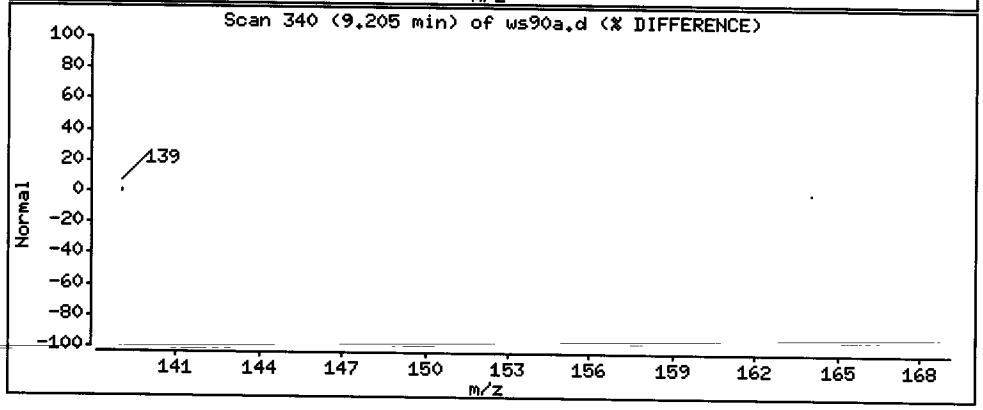












Data File: /chem3/nt11.i/20130612.b/ws90a.d

Date : 12-JUN-2013 22:02

Client ID: CL-MH-SPS-20130605-

Instrument: nt11.i

Sample Info: WS90A

Volume Injected (uL): 2.0

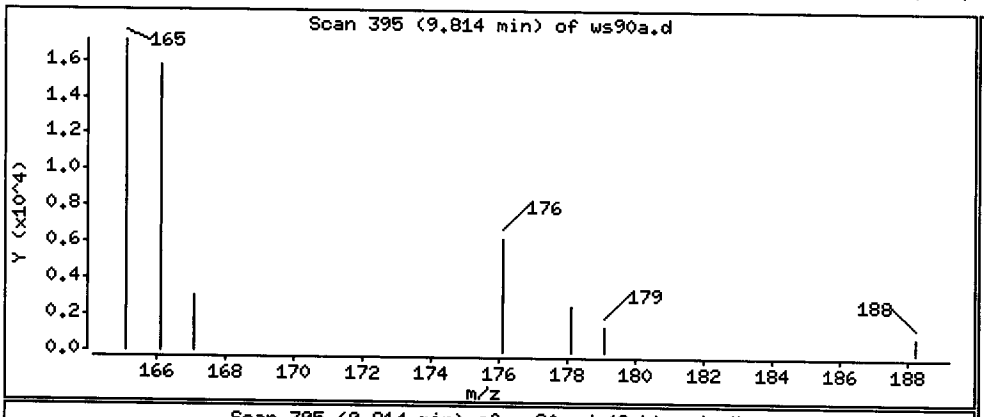
Operator: VTS

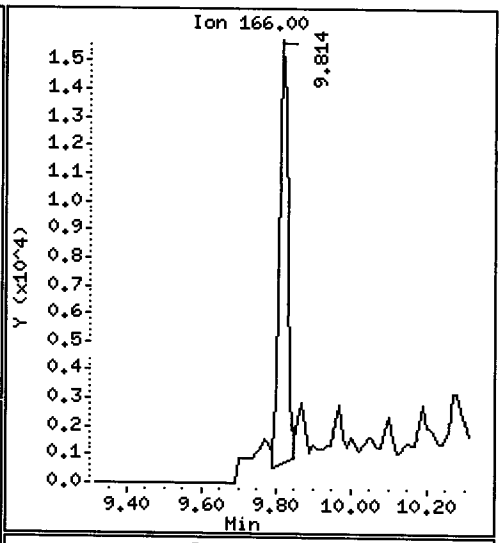
Column phase: Rxi-17Sil MS

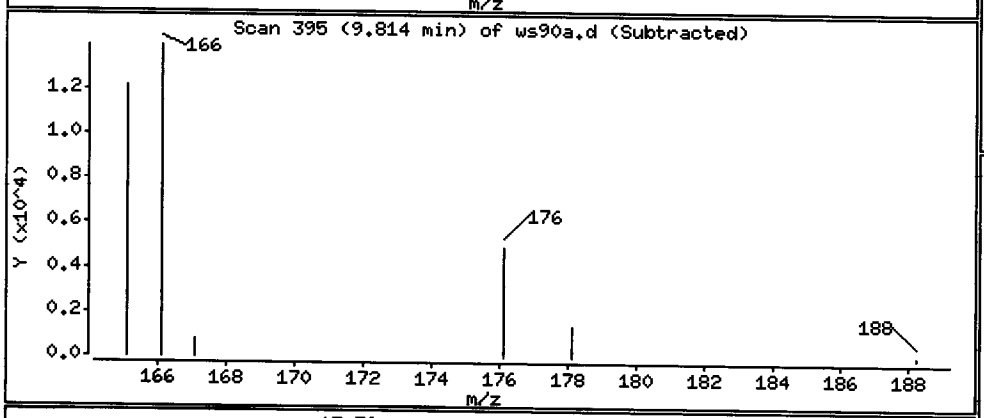
Column diameter: 0.25

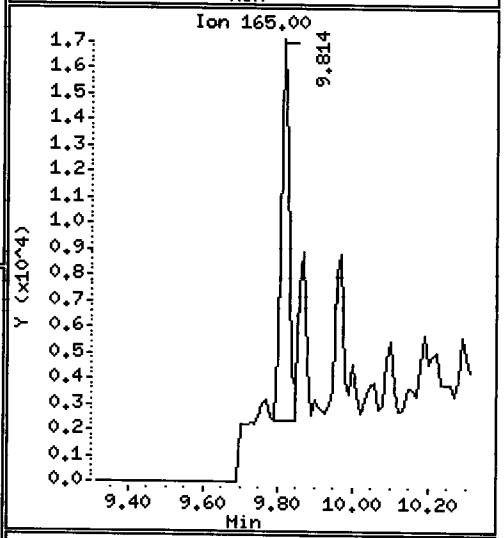
15 Fluorene

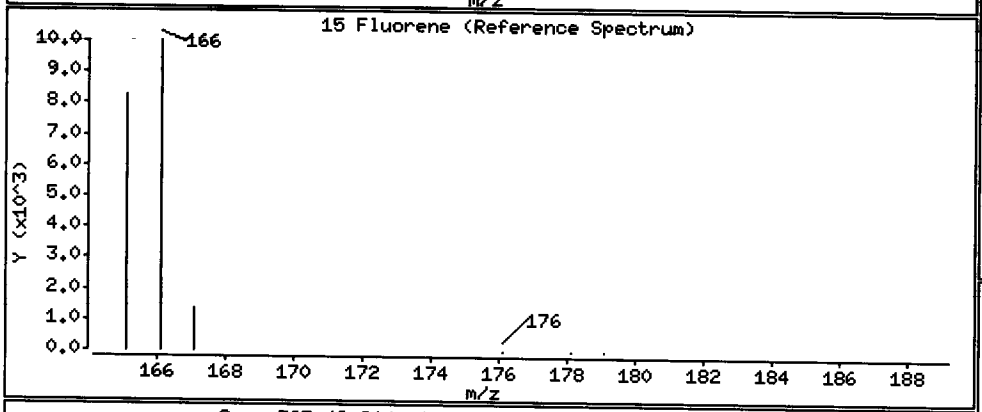
Concentration: 24.2 ug/L

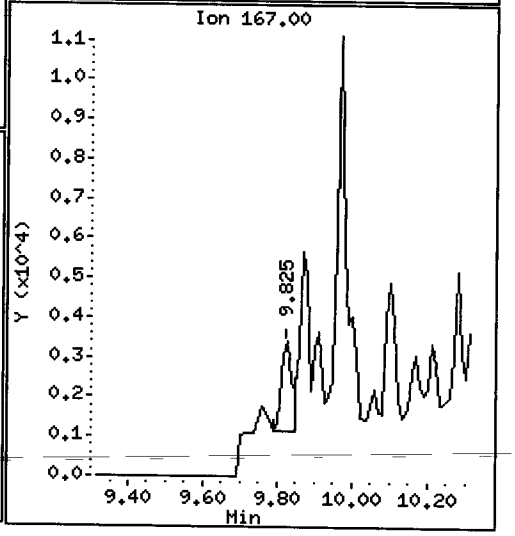


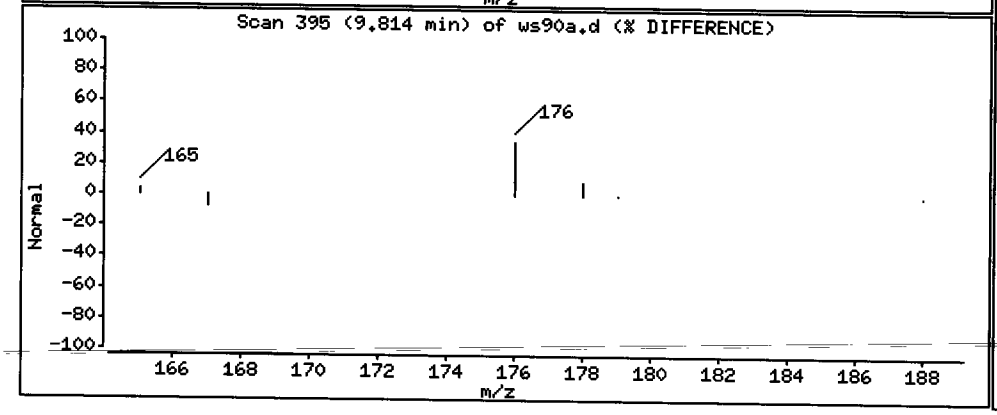












Data File: /chem3/nt11.i/20130612.b/ws90a.d

Date : 12-JUN-2013 22:02

Client ID: CL-MH-SPS-20130605-

Instrument: nt11.i

Sample Info: WS90A

Volume Injected (uL): 2.0

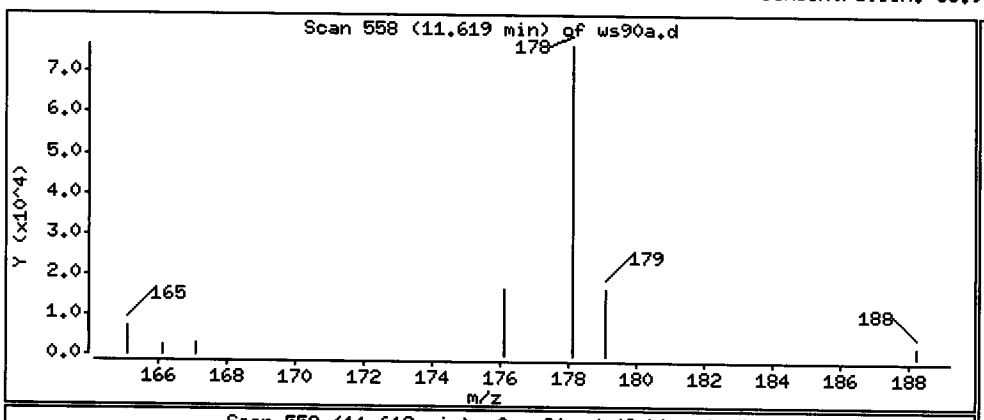
Operator: VTS

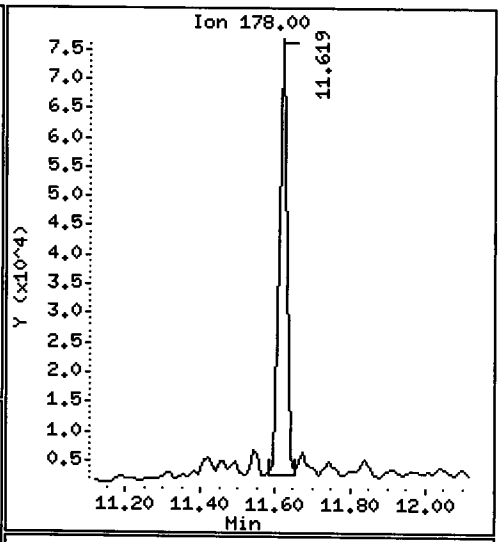
Column phase: Rxi-17Sil MS

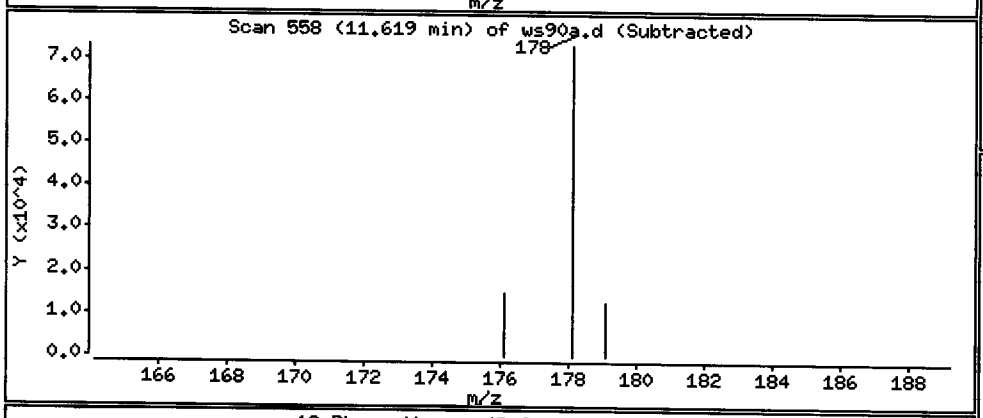
Column diameter: 0.25

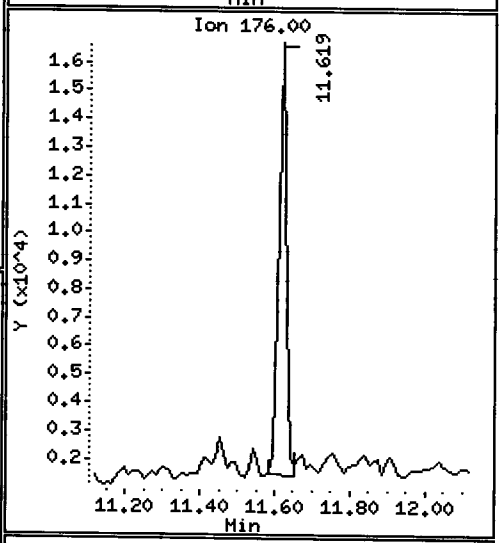
19 Phenanthrene

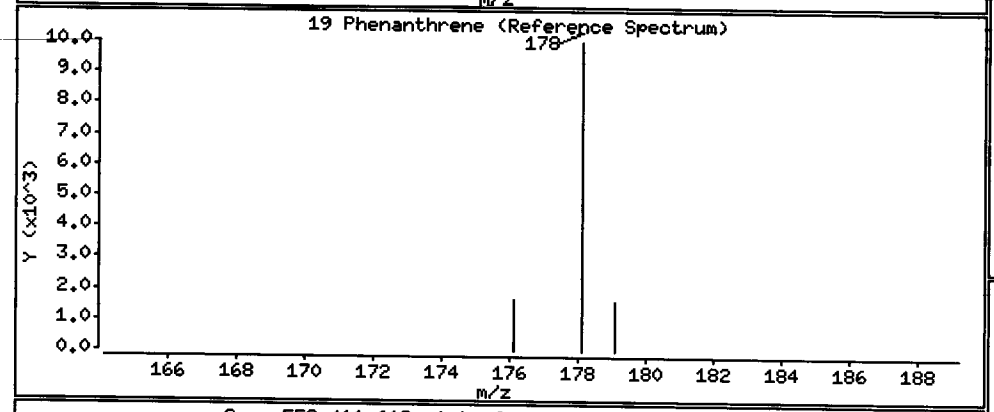
Concentration: 58.9 ug/L

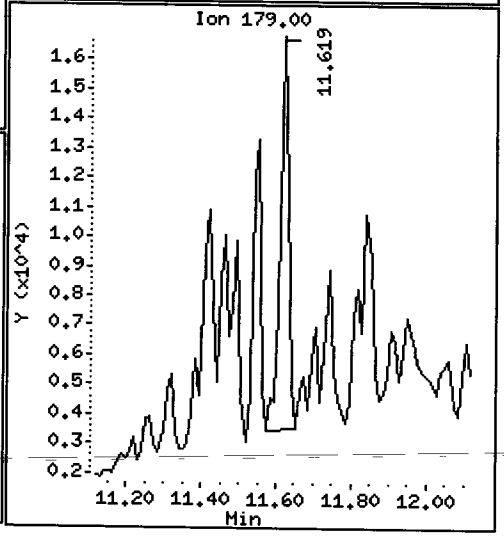


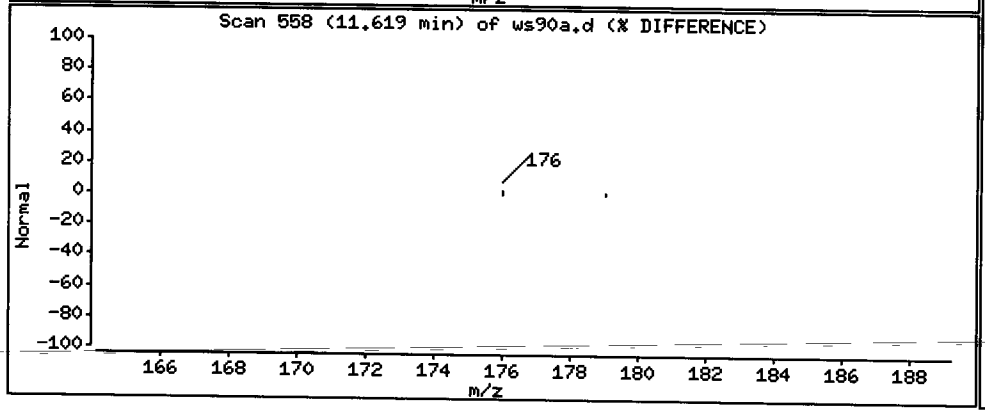












Data File: /chem3/nt11.i/20130612.b/ws90a.d

Date : 12-JUN-2013 22:02

Client ID: CL-MH-SPS-20130605-

Instrument: nt11.i

Sample Info: WS90A

Volume Injected (uL): 2.0

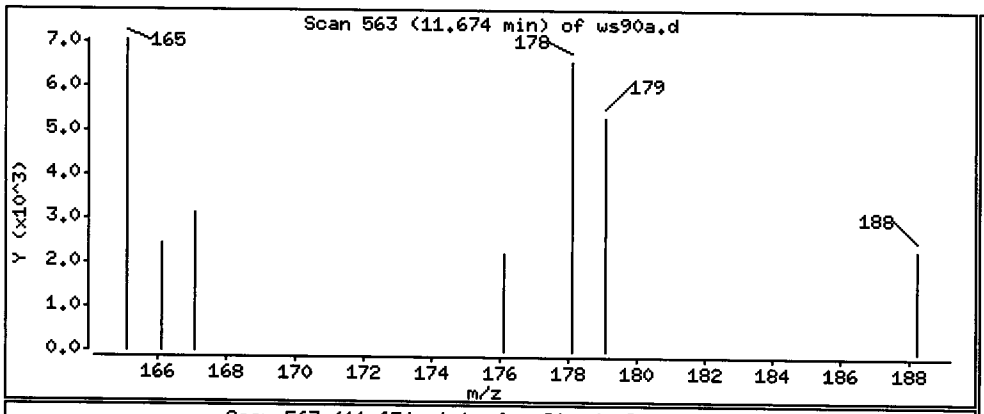
Operator: VTS

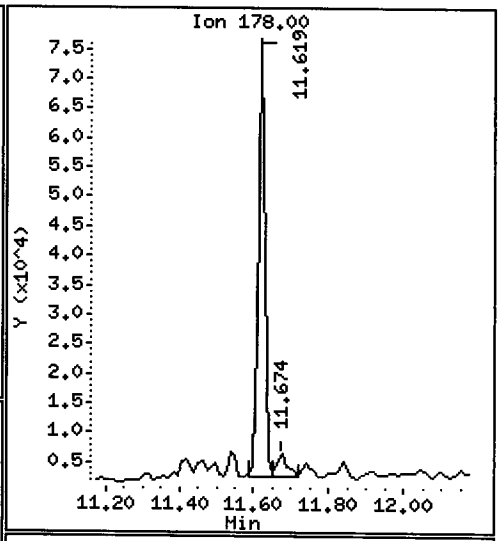
Column phase: Rxi-17Sil MS

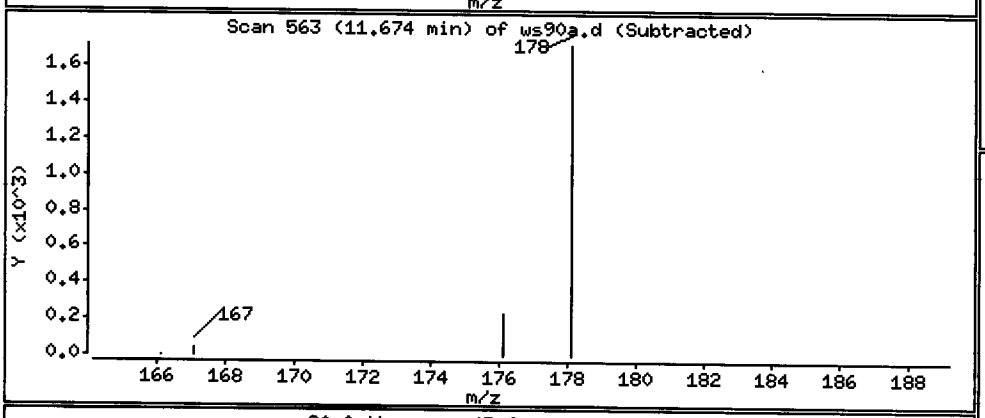
Column diameter: 0.25

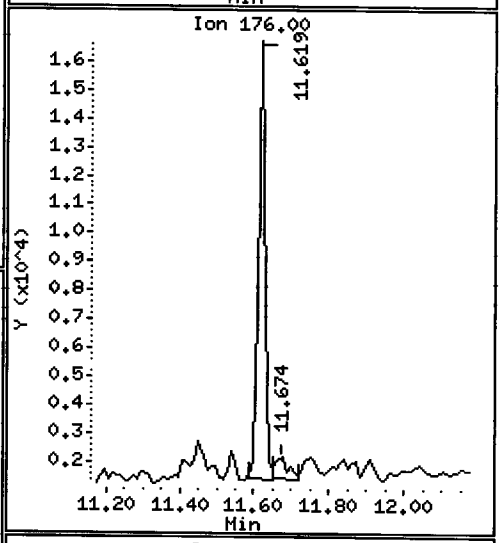
20 Anthracene

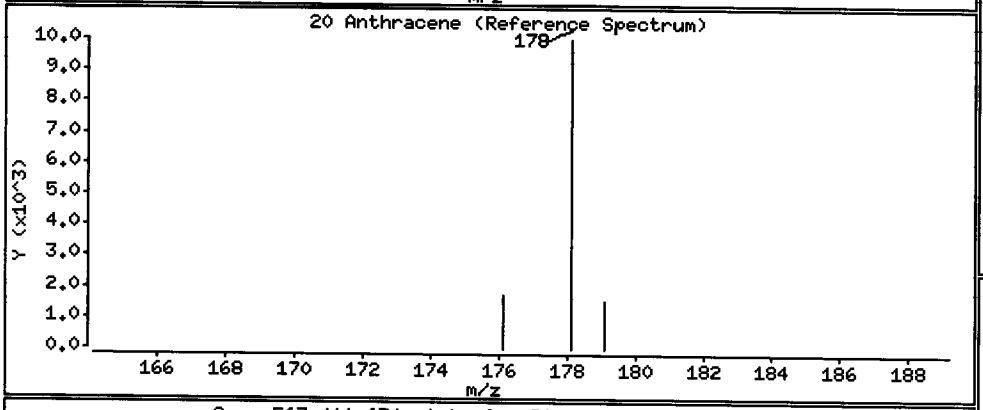
Concentration: 5.27 ug/L

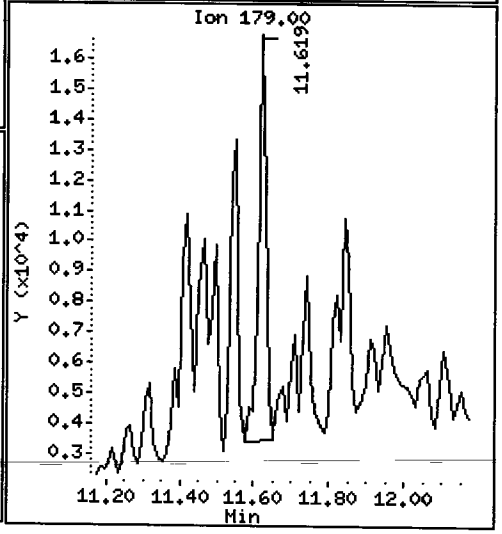


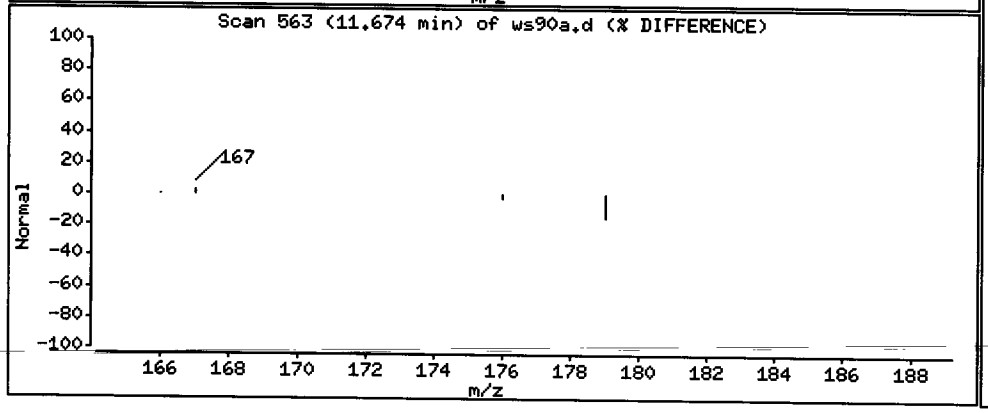












Data File: /chem3/nt11.i/20130612.b/ws90a.d

Date : 12-JUN-2013 22:02

Client ID: CL-MH-SPS-20130605-

Instrument: nt11.i

Sample Info: WS90A

Volume Injected (uL): 2.0

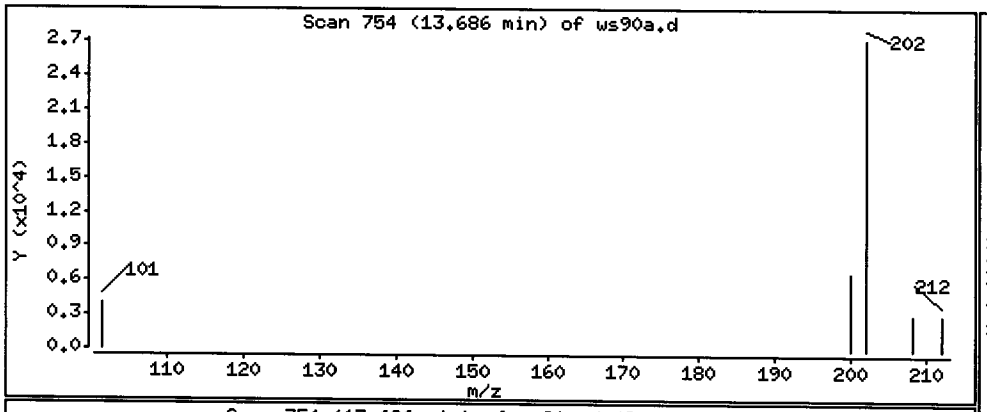
Operator: VTS

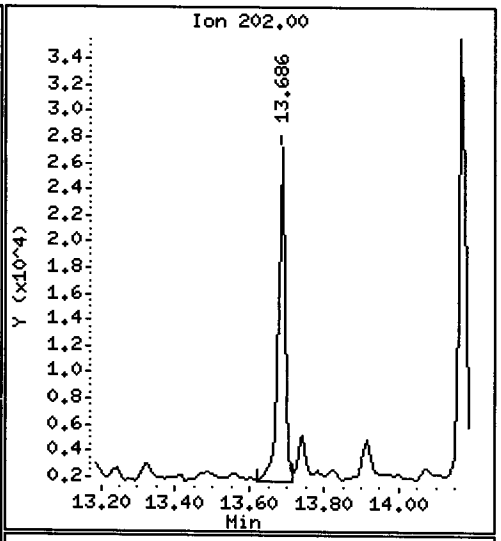
Column phase: Rxi-17Sil MS

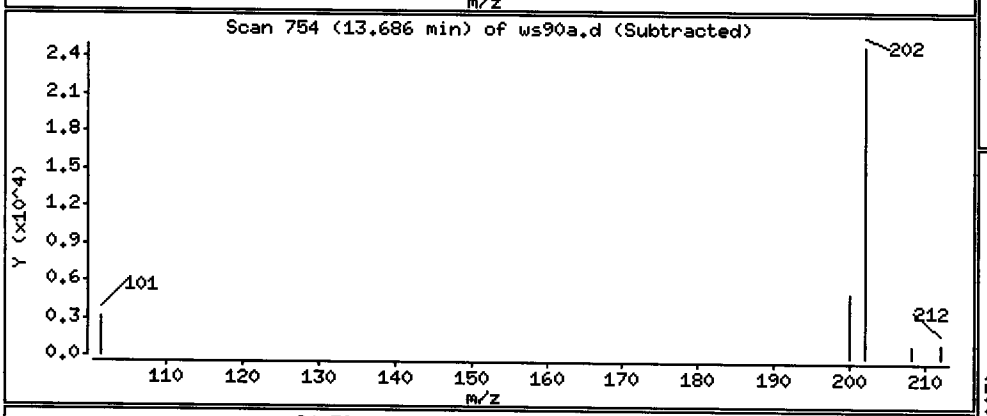
Column diameter: 0.25

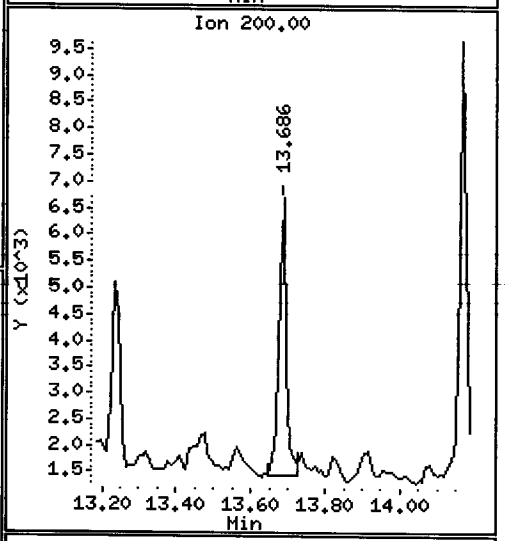
24 Fluoranthene

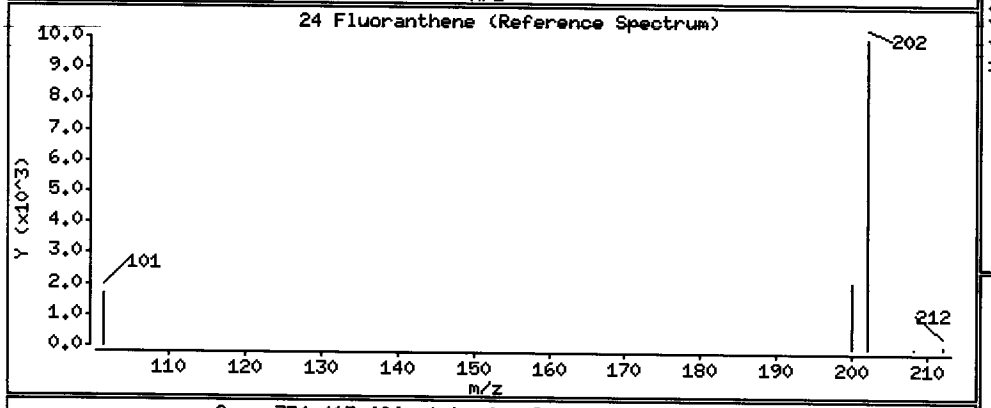
Concentration: 21.1 ug/L

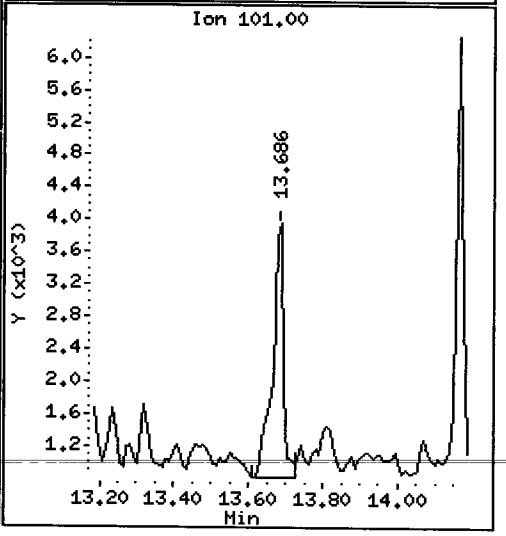


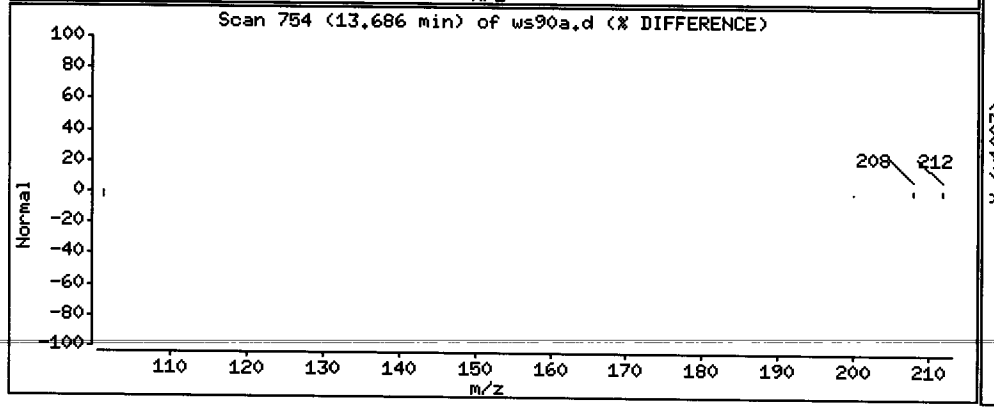












Data File: /chem3/nt11.i/20130612.b/ws90a.d

Date : 12-JUN-2013 22:02

Client ID: CL-MH-SPS-20130605-

Instrument: nt11.i

Sample Info: WS90A

Volume Injected (uL): 2.0

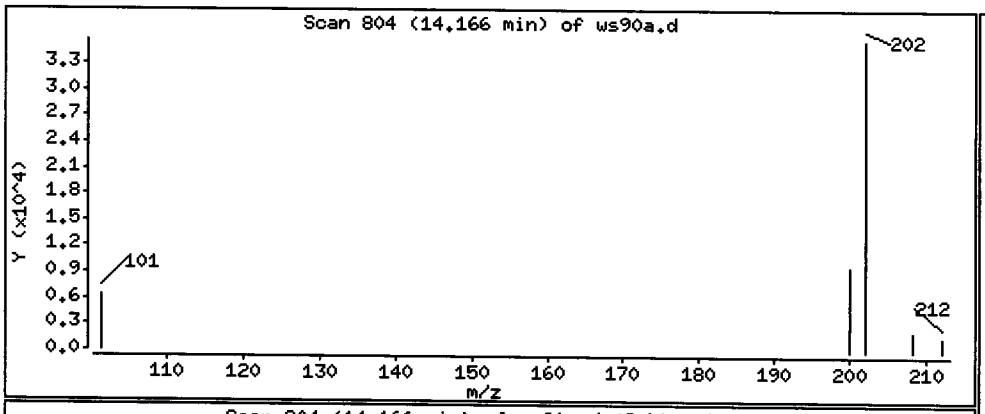
Operator: VTS

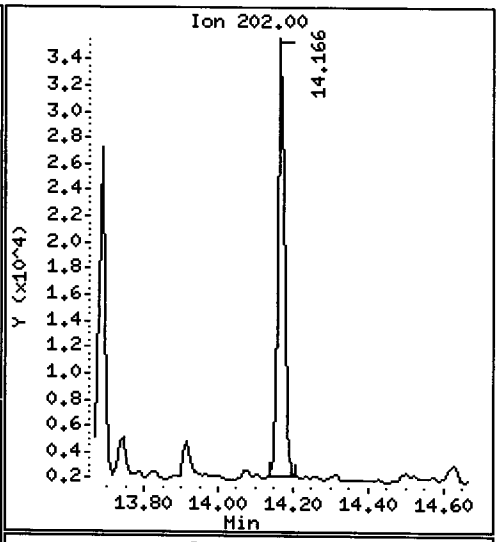
Column phase: Rxi-17Sil MS

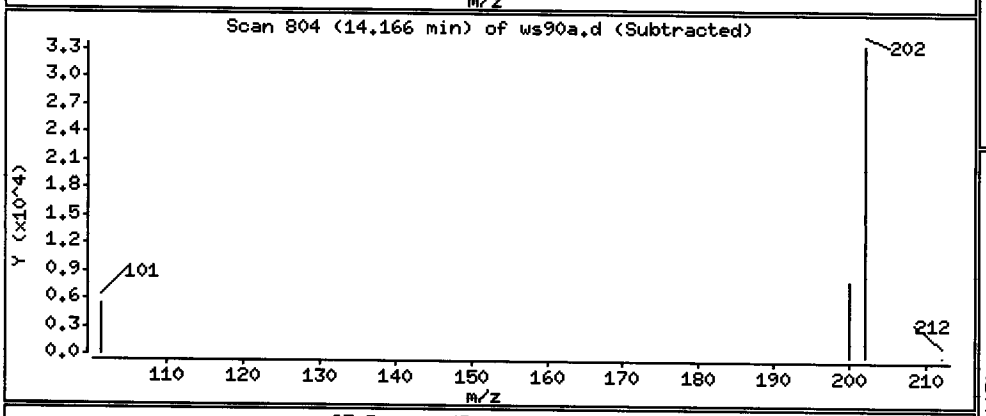
Column diameter: 0.25

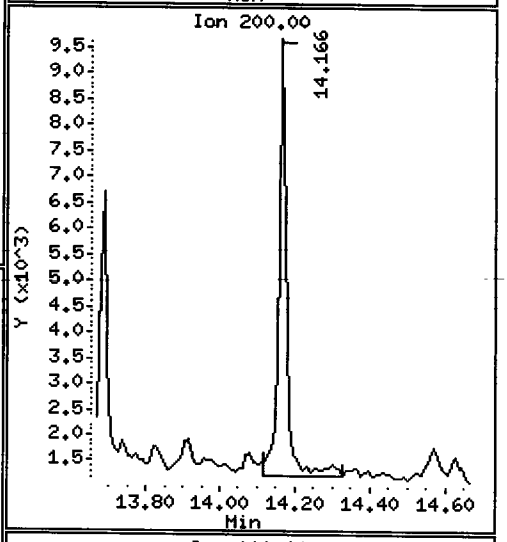
25 Pyrene

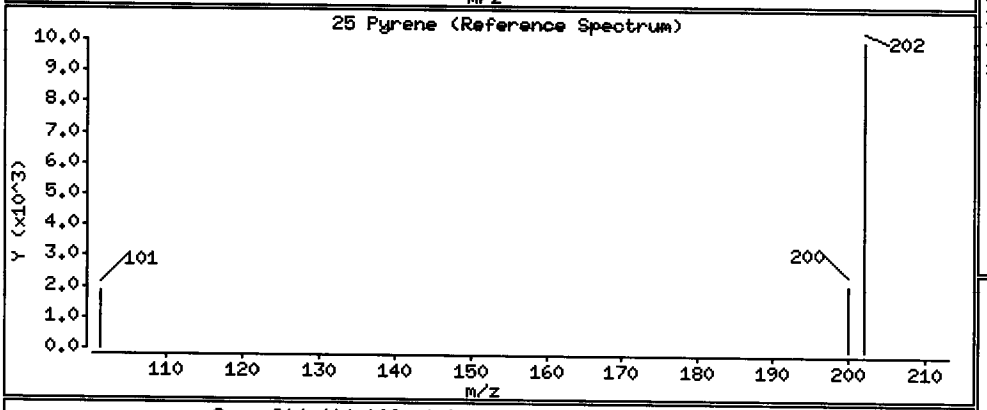
Concentration: 26.7 ug/L

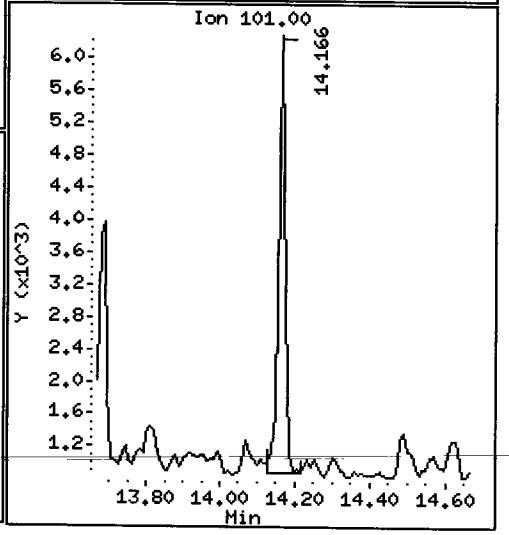


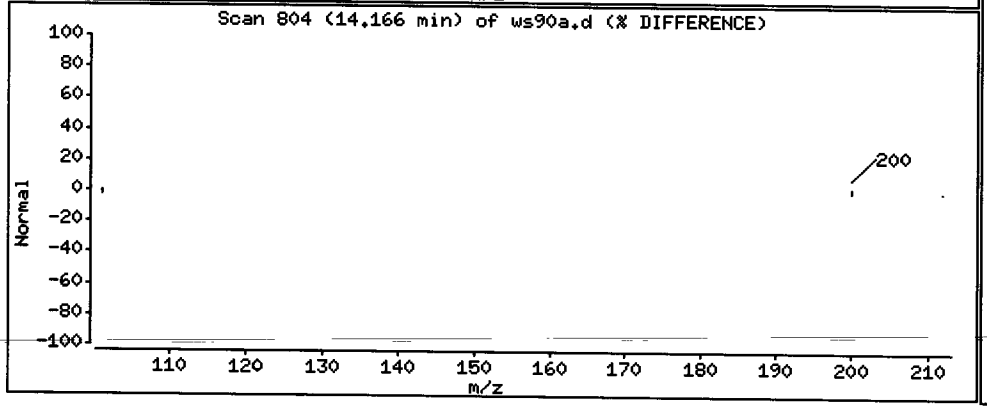












CO-ELUTION SUMMARY FOR FILE - ws90a.d

Lab ID: WS90A, Method: lowsim.m, Instrument: nt11.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130612.b/ws90b.d
Lab Smp Id: WS90B Client Smp ID: CL-VT-EFF-20130605-
Inj Date : 12-JUN-2013 22:31
Operator : VTS Inst ID: nt11.i
Smp Info : WS90B
Misc Info : 13-12079
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: 16
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)	284887	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	19968	14.1671	14.2
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	197989	229.226	229
	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)	168729	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	9.814	9.814	(1.098)	6480	6.95027	6.95
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	276129	200.000	
	19 Phenanthrene	178	11.618	11.619	(1.004)	19701	12.5834	12.6
	20 Anthracene	178	Compound Not Detected.					
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	381828	267.753	268
	24 Fluoranthene	202	13.686	13.686	(1.182)	22093	13.2867	13.3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
25	Pyrene	202	14.166	14.166	(0.870)	23930	14.8399	14.8
28	Benzo(a)anthracene	228	Compound Not Detected.					
* 29	Chrysene-d12	240	16.275	16.275	(1.000)	208482	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)	178699	200.000	
37	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$ 36	Dibenzo(a,h)anthracene-d14	292	20.753	20.764	(1.103)	250877	255.020	255
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.					

MD
6.13.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ws90b.d
Lab Smp Id: WS90B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info: 13-12079

Calibration Date: 12-JUN-2013
Calibration Time: 15:46
Client Smp ID: CL-VT-EFF-20130605-
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	284887	5.33
11 Acenaphthene-d10	156669	78334	313338	168729	7.70
18 Phenanthrene-d10	244223	122112	488446	276129	13.06
29 Chrysene-d12	194330	97165	388660	208482	7.28
35 Perylene-d12	162839	81420	325678	178699	9.74

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

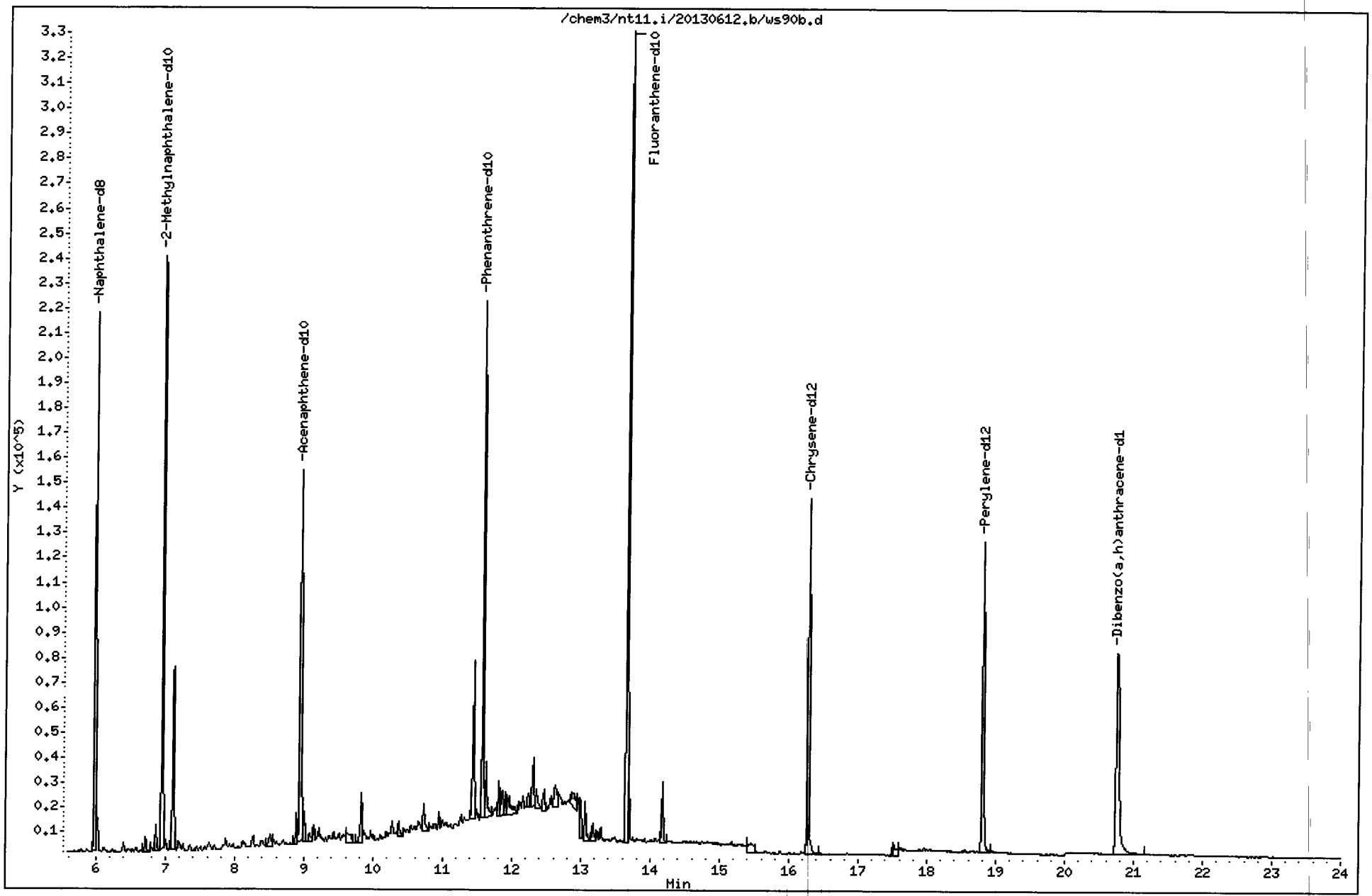
Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WS90B
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info: 13-12079

Client SDG: WS90
Fraction: SV
Client Smp ID: CL-VT-EFF-20130605-
Operator: VTS
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	229	76.41	35-94
$ 23 Fluoranthene-d10	300	268	89.25	30-160
$ 36 Dibenzo(a,h)anthra	300	255	85.01	26-115

Data File: /chem3/nt11.i/20130612.b/ws90b.d
Date : 12-JUN-2013 22:31
Client ID: CL-VT-EFF-20130605-
Sample Info: WS90B
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: VTS
Column diameter: 0.25



Data File: /chem3/nt11.i/20130612.b/ws90b.d

Date : 12-JUN-2013 22:31

Client ID: CL-VT-EFF-20130605-

Instrument: nt11.i

Sample Info: WS90B

Volume Injected (uL): 2.0

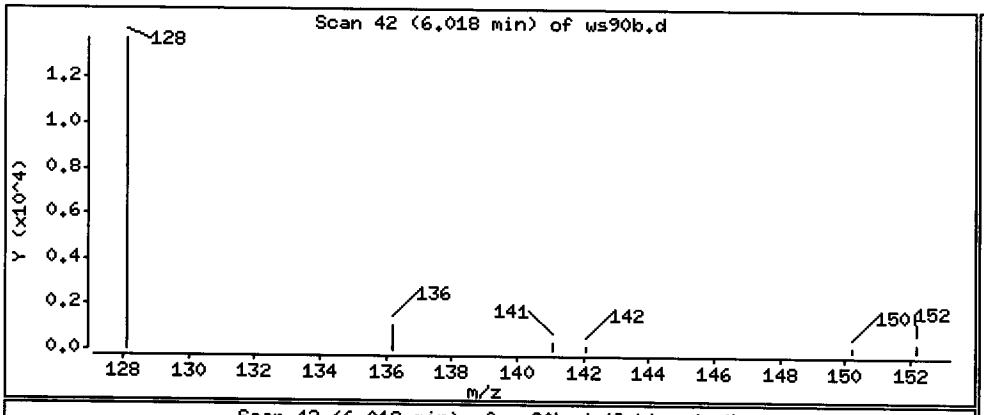
Operator: VTS

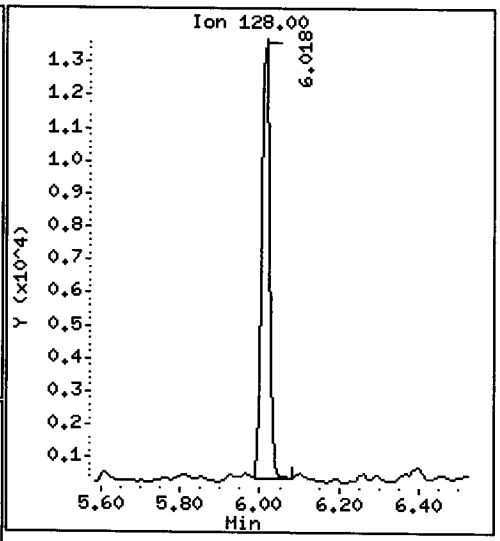
Column phase: Rxi-17Sil MS

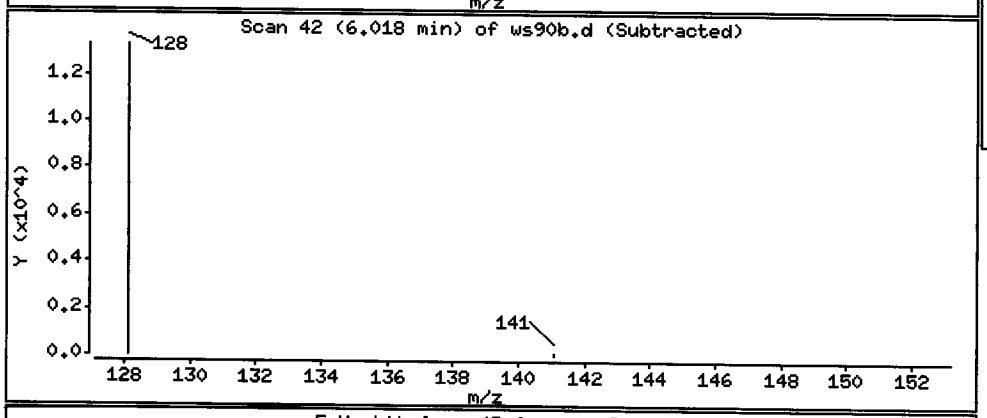
Column diameter: 0.25

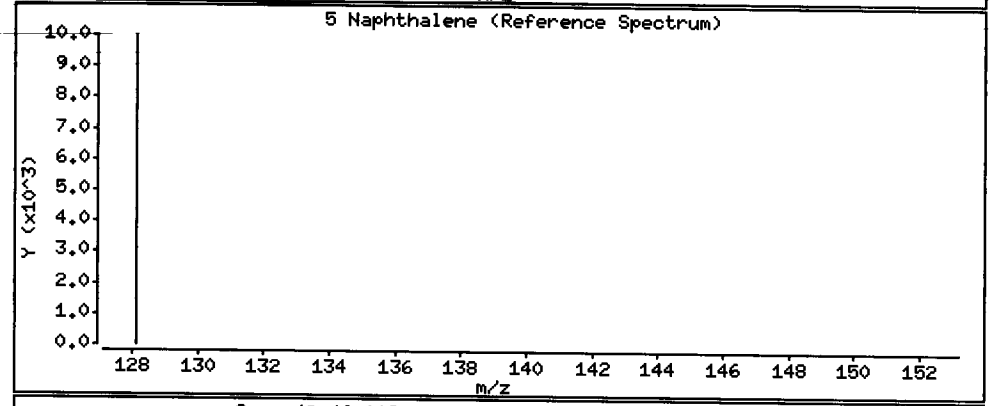
5 Naphthalene

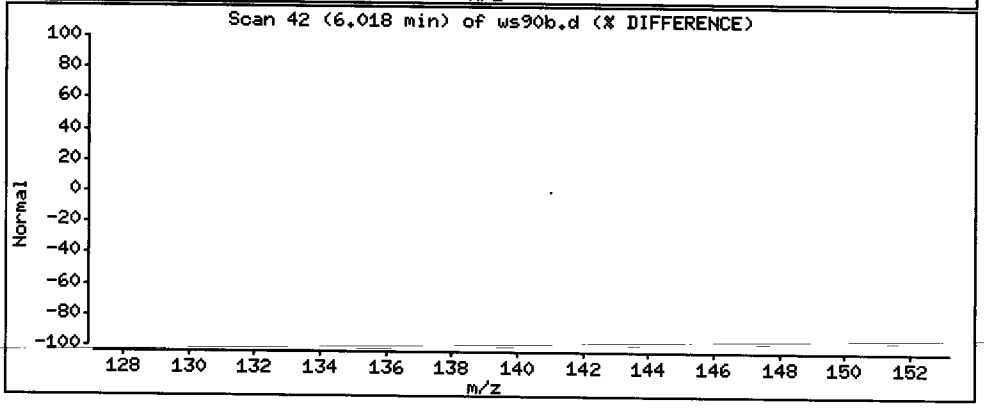
Concentration: 14.2 ug/L











Data File: /chem3/nt11.i/20130612.b/ws90b.d

Date : 12-JUN-2013 22:31

Client ID: CL-VT-EFF-20130605-

Instrument: nt11.i

Sample Info: WS90B

Volume Injected (uL): 2.0

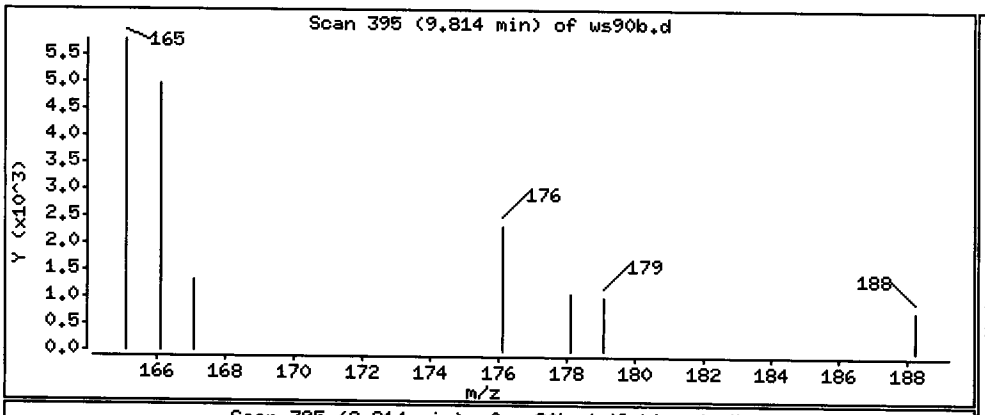
Operator: VTS

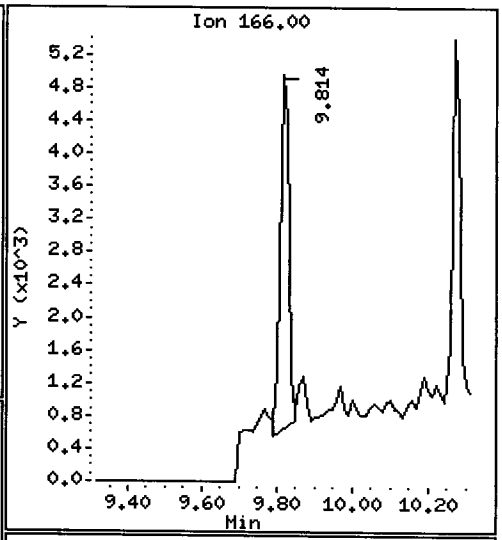
Column phase: Rxi-17Sil MS

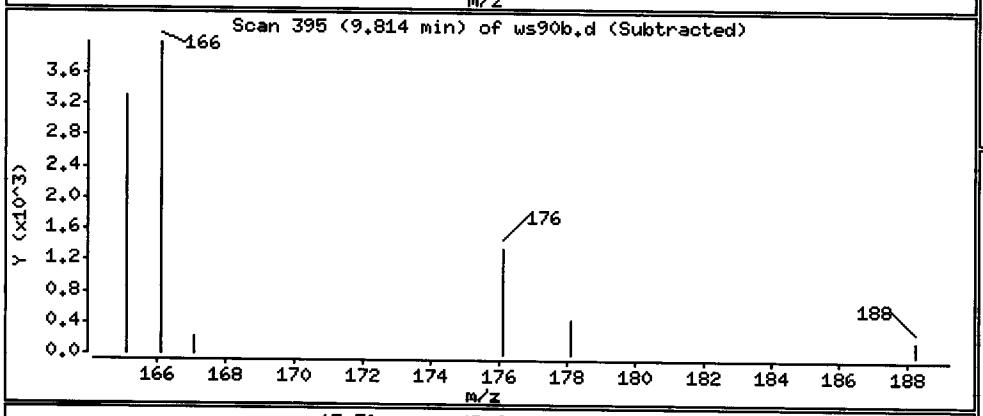
Column diameter: 0.25

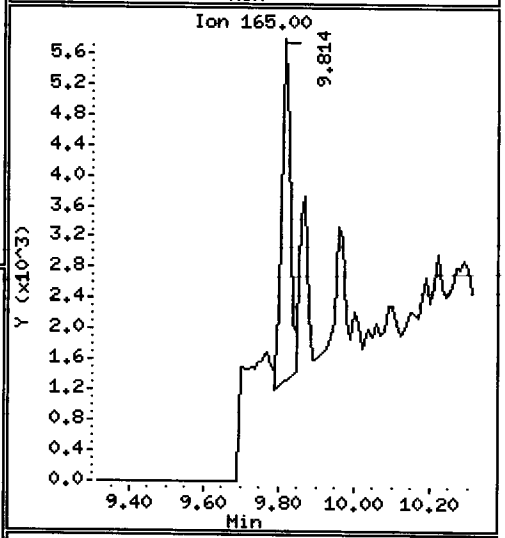
15 Fluorene

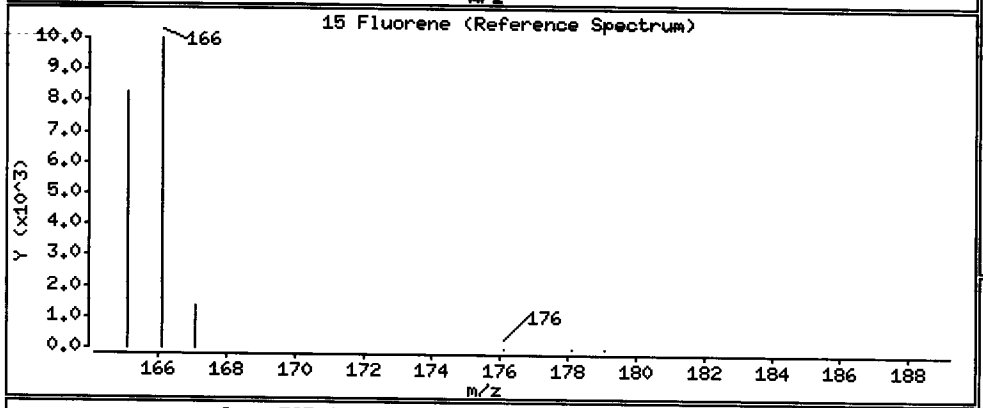
Concentration: 6.95 ug/L

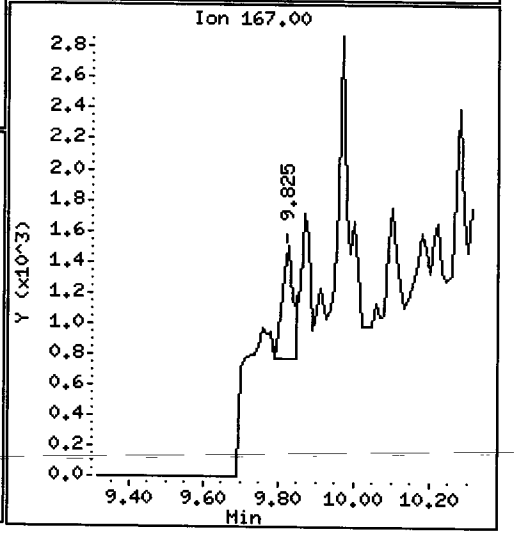


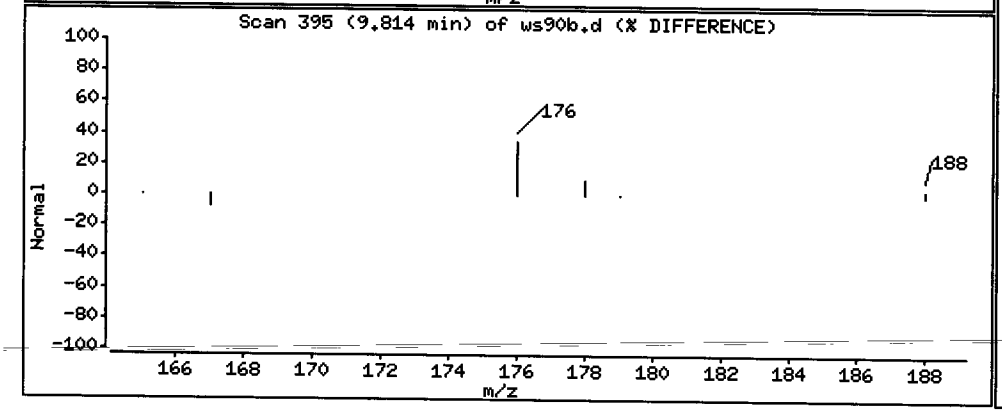












Data File: /chem3/nt11.i/20130612.b/ws90b.d

Date : 12-JUN-2013 22:31

Client ID: CL-VT-EFF-20130605-

Instrument: nt11.i

Sample Info: WS90B

Volume Injected (uL): 2.0

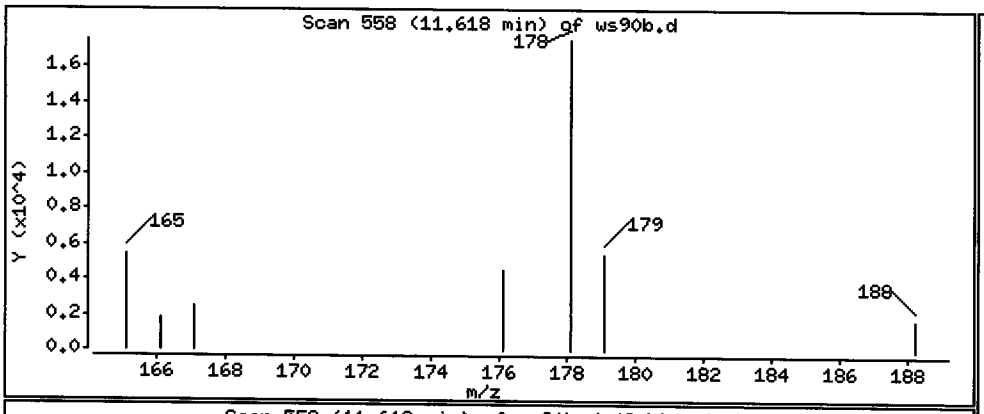
Operator: VTS

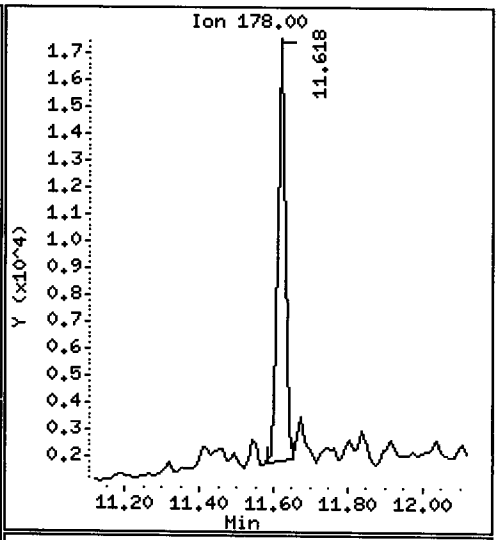
Column phase: Rxi-17Sil MS

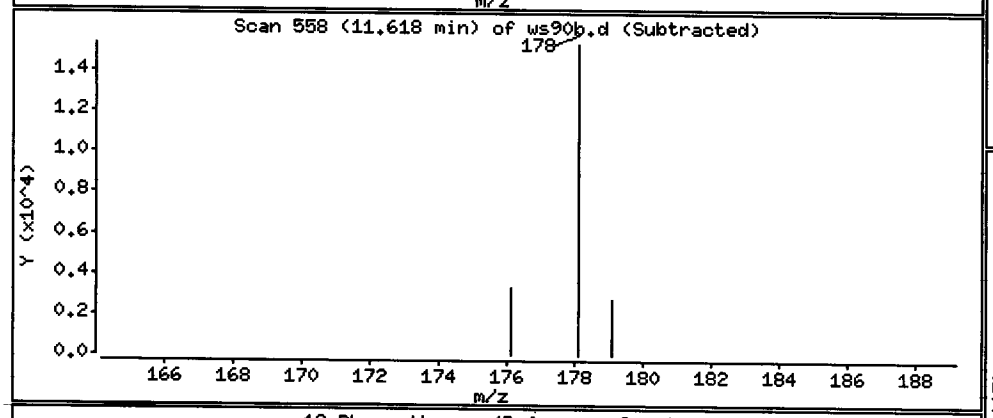
Column diameter: 0.25

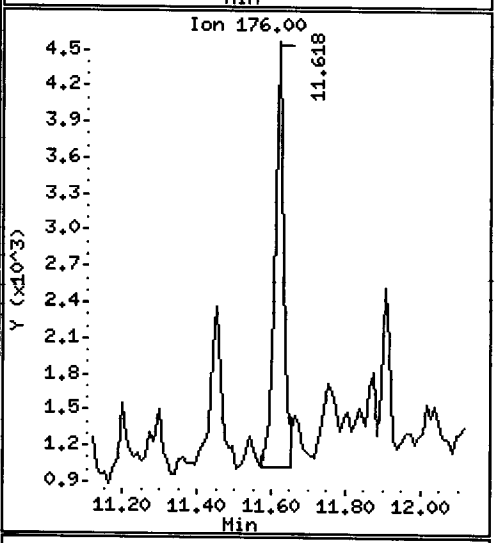
19 Phenanthrene

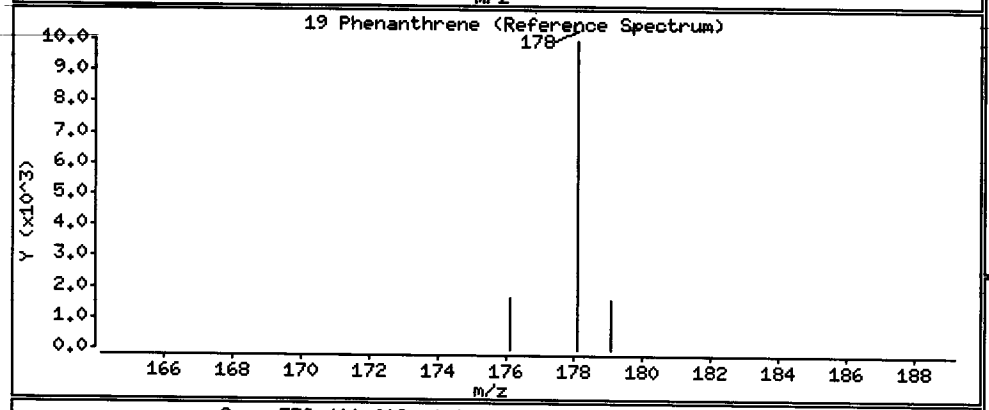
Concentration: 12.6 ug/L

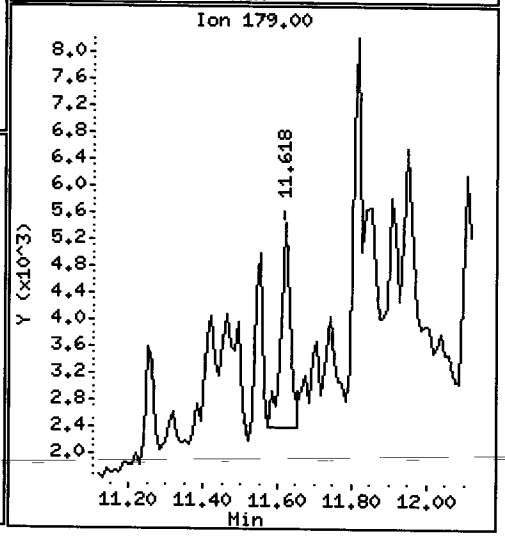


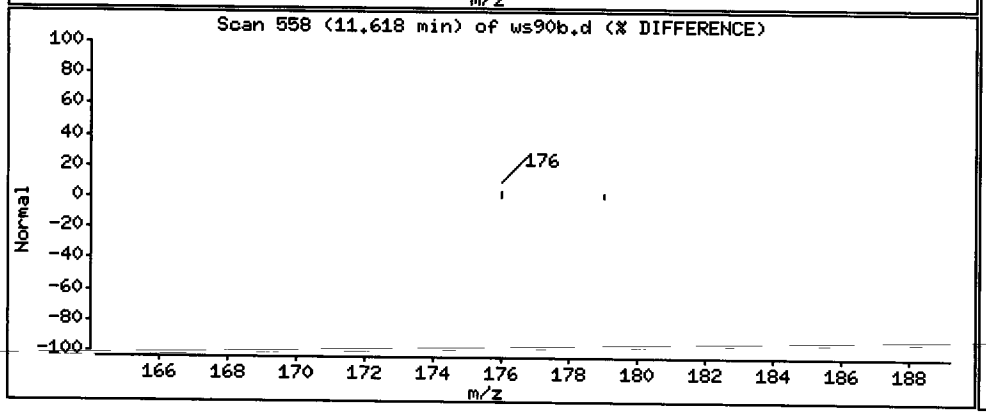












Data File: /chem3/nt11.i/20130612.b/ws90b.d

Date : 12-JUN-2013 22:31

Client ID: CL-VT-EFF-20130605-

Instrument: nt11.i

Sample Info: WS90B

Volume Injected (uL): 2.0

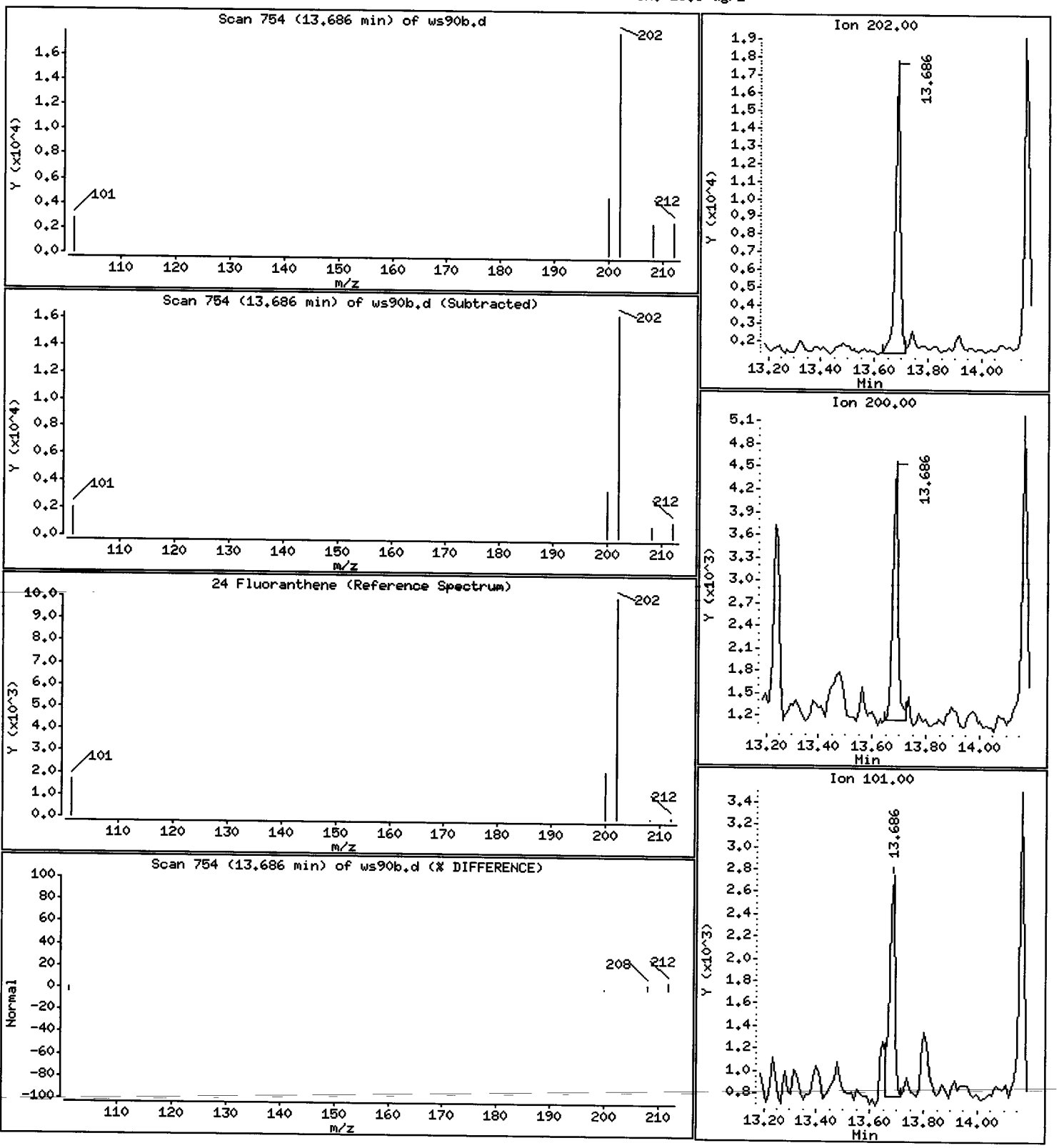
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

24 Fluoranthene

Concentration: 13.3 ug/L



Data File: /chem3/nt11.i/20130612.b/ws90b.d

Date : 12-JUN-2013 22:31

Client ID: CL-VT-EFF-20130605-

Instrument: nt11.i

Sample Info: WS90B

Volume Injected (uL): 2.0

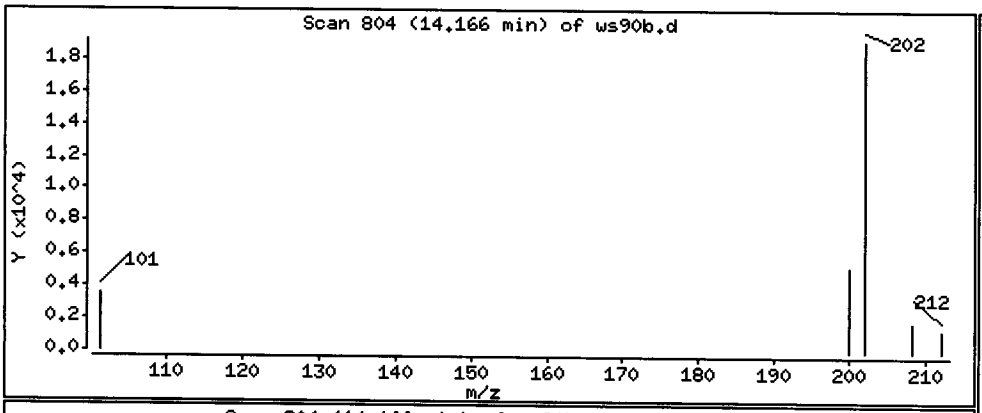
Operator: VTS

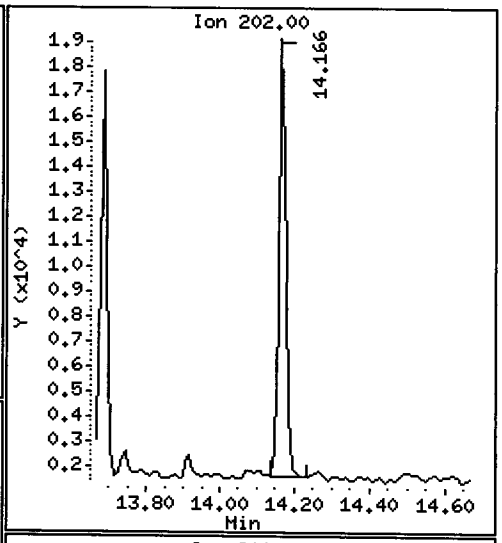
Column phase: Rxi-17Sil MS

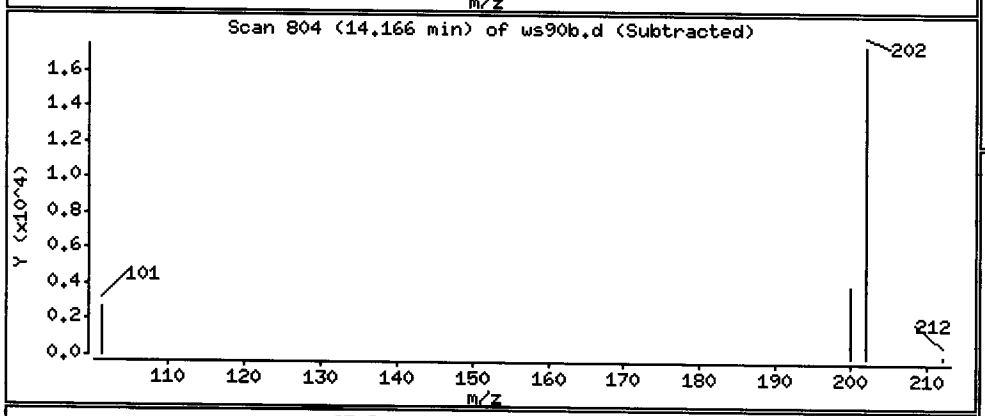
Column diameter: 0.25

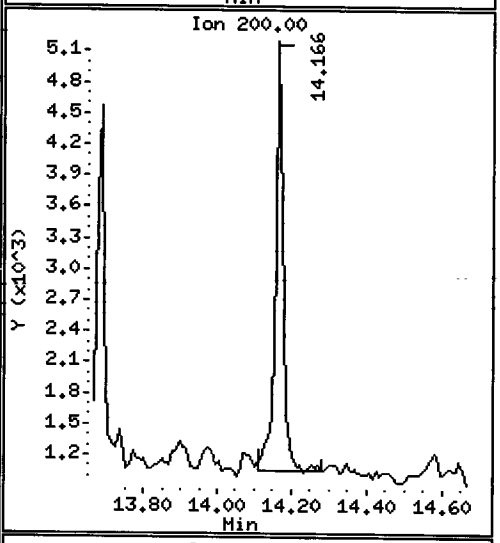
25 Pyrene

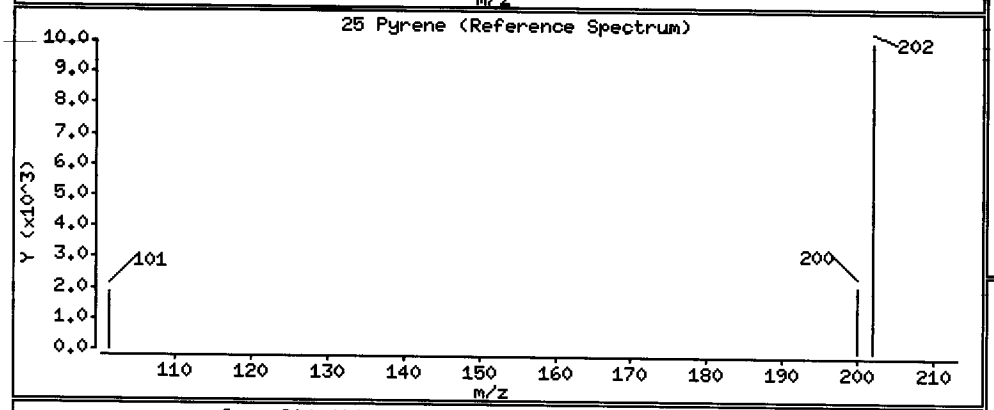
Concentration: 14.8 ug/L

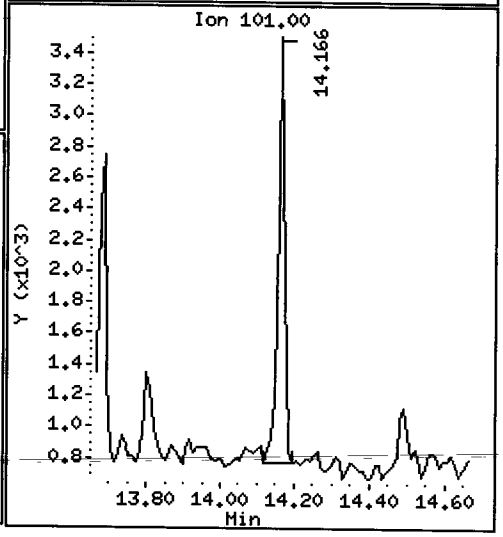


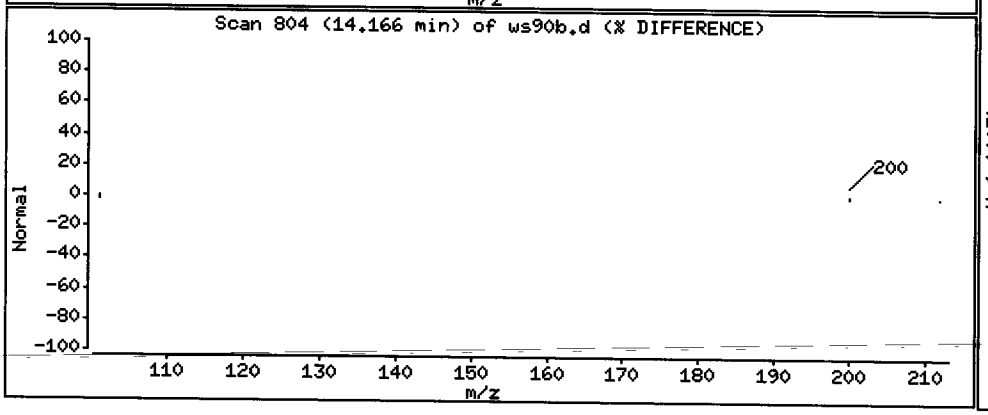












CO-ELUTION SUMMARY FOR FILE - ws90b.d

Lab ID: WS90B, Method: lowsim.m, Instrument: nt11.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130612.b/ws90c.d
Lab Smp Id: WS90C Client Smp ID: QC-EB-02-20130605-W
Inj Date : 12-JUN-2013 23:00
Operator : VTS Inst ID: nt11.i
Smp Info : WS90C
Misc Info : 13-12080
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: 17
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)	294815	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	165494	113.463	113
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	209113	233.952	234
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	35713	40.0545	40.1
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	20035	21.9033	21.9
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	178304	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	9.825	9.814	(1.099)	9407	9.54787	9.55
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	280260	200.000	
	19 Phenanthrene	178	11.618	11.619	(1.004)	12096	7.61208	7.61
	20 Anthracene	178	Compound Not Detected.					
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	377520	260.830	261
	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	16.275	16.275	(1.000)	211800	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)	177409	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)	206662	211.603	212
	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.					

6.13.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ws90c.d
Lab Smp Id: WS90C
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info: 13-12080

Calibration Date: 12-JUN-2013
Calibration Time: 15:46
Client Smp ID: QC-EB-02-20130605-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	294815	9.00
11 Acenaphthene-d10	156669	78334	313338	178304	13.81
18 Phenanthrene-d10	244223	122112	488446	280260	14.76
29 Chrysene-d12	194330	97165	388660	211800	8.99
35 Perylene-d12	162839	81420	325678	177409	8.95

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: WS90C
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info: 13-12080

Client SDG: WS90
Fraction: SV
Client Smp ID: QC-EB-02-20130605-W
Operator: VTS
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	234	77.98	35-94
$ 23 Fluoranthene-d10	300	261	86.94	30-160
$ 36 Dibenzo(a,h)anthra	300	212	70.53	26-115

Data File: /chem3/nt11.i/20130612.b/ws90c.d

Date : 12-JUN-2013 23:00

Client ID: QC-EB-02-20130605-W

Sample Info: WS90C

Volume Injected (uL): 2.0

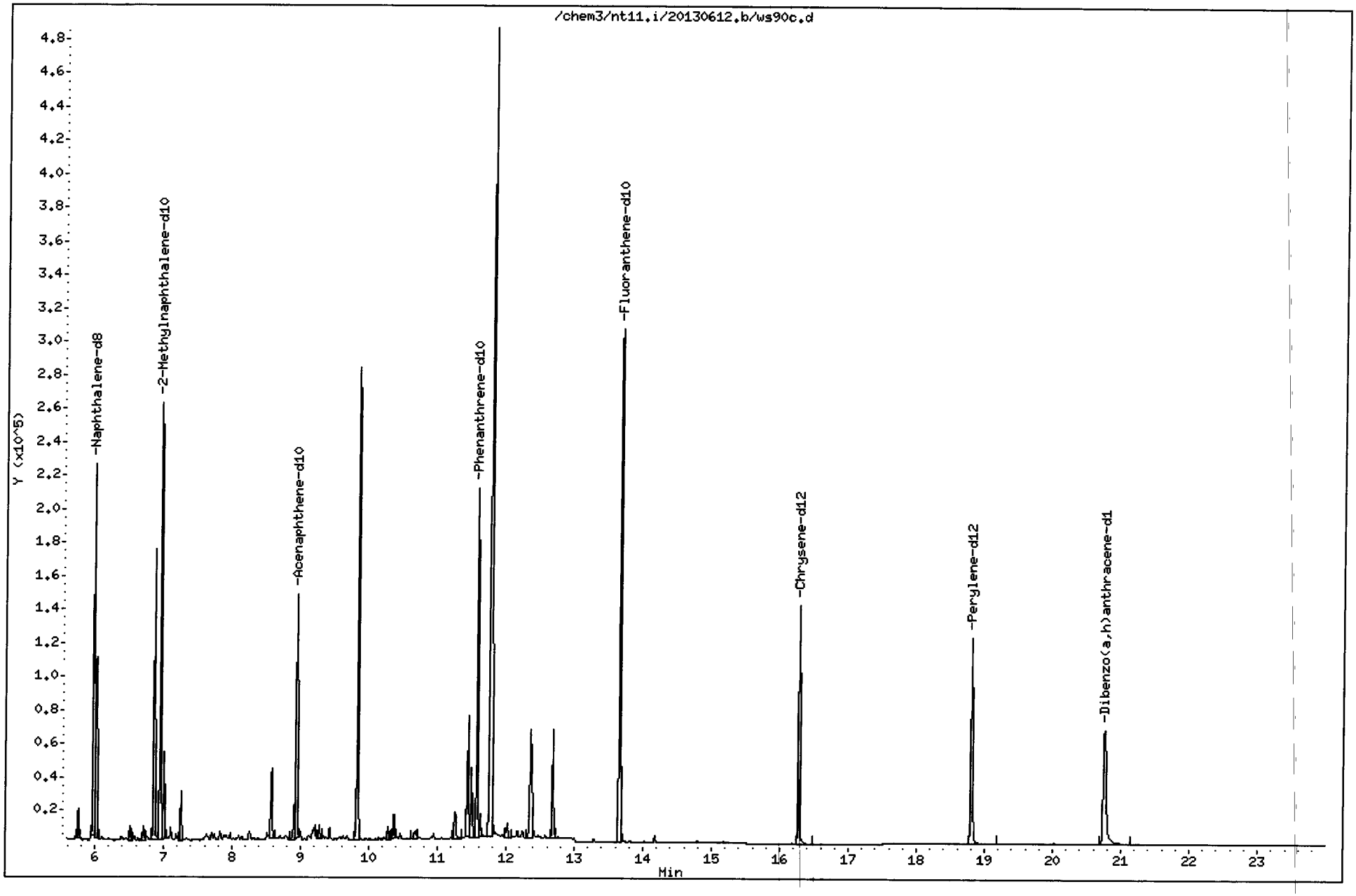
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: VTS

Column diameter: 0.25

WS90 : 06SEP13



Data File: /chem3/nt11.i/20130612.b/ws90c.d

Date : 12-JUN-2013 23:00

Client ID: QC-EB-02-20130605-W

Instrument: nt11.i

Sample Info: WS90C

Volume Injected (uL): 2.0

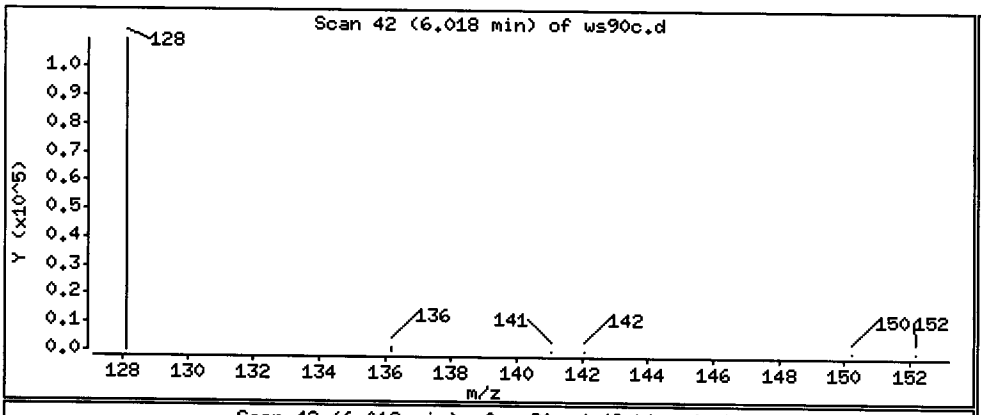
Operator: VTS

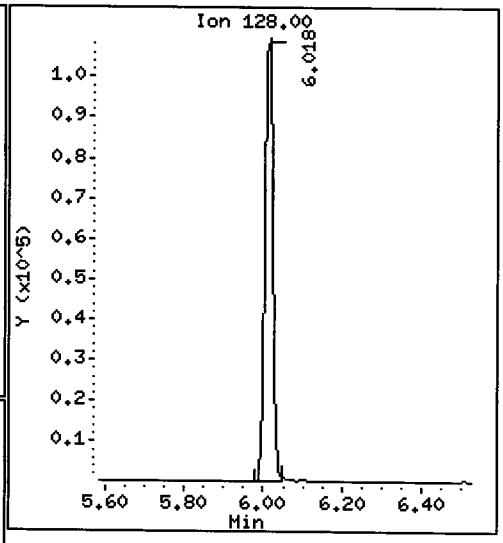
Column phase: Rxi-17Sil MS

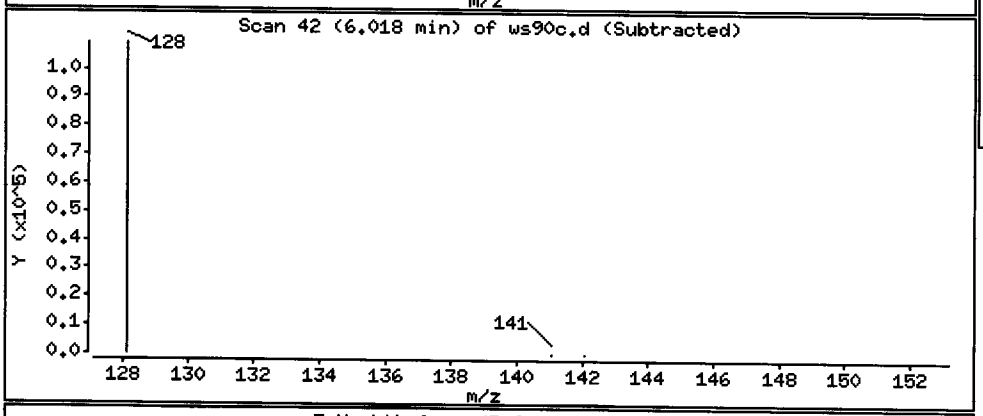
Column diameter: 0.25

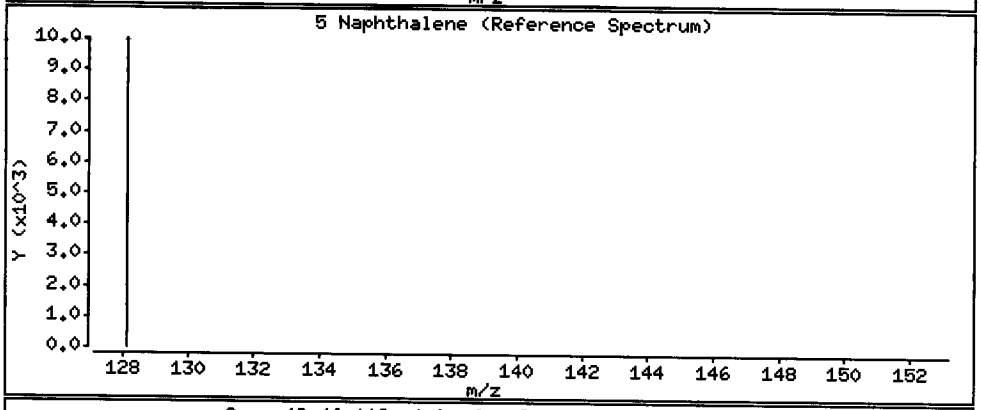
5 Naphthalene

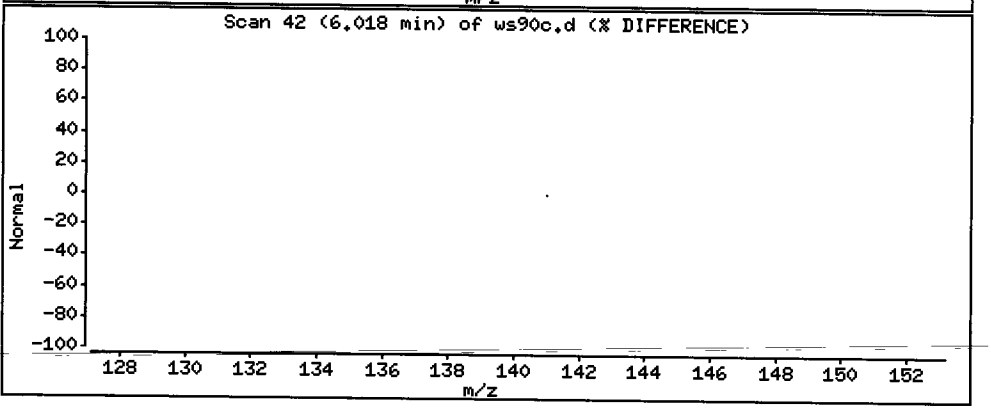
Concentration: 113 ug/L











Data File: /chem3/nt11.i/20130612.b/ws90c.d

Date : 12-JUN-2013 23:00

Client ID: QC-EB-02-20130605-W

Instrument: nt11.i

Sample Info: WS90C

Volume Injected (uL): 2.0

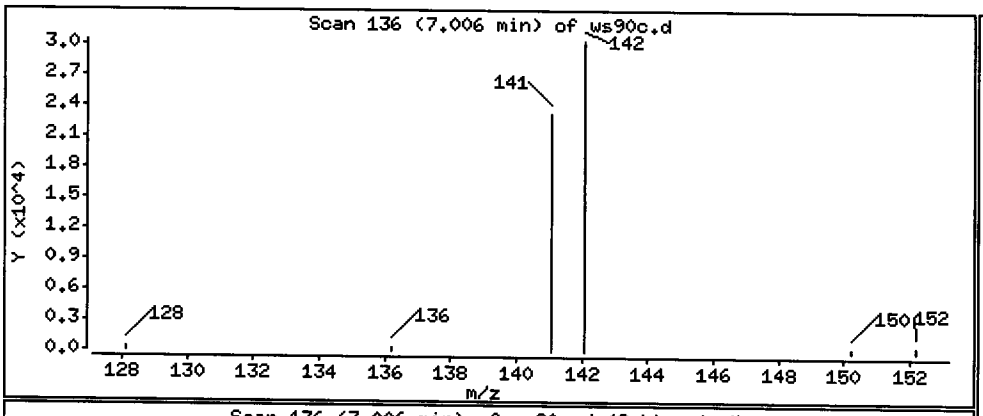
Operator: VTS

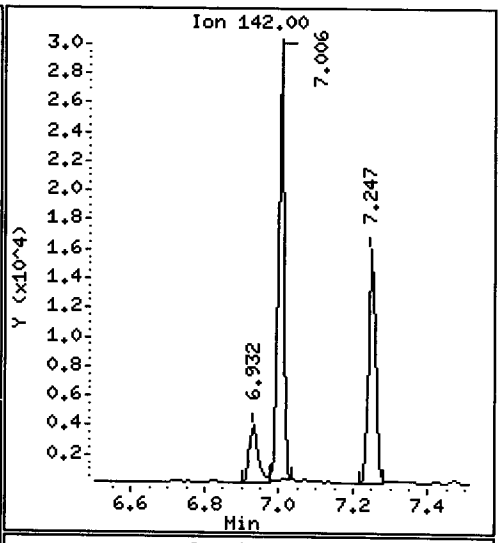
Column phase: Rxi-17Sil MS

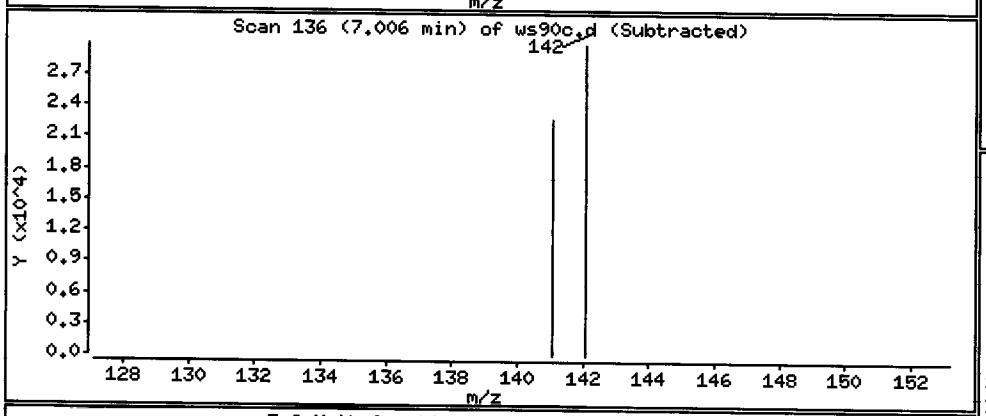
Column diameter: 0.25

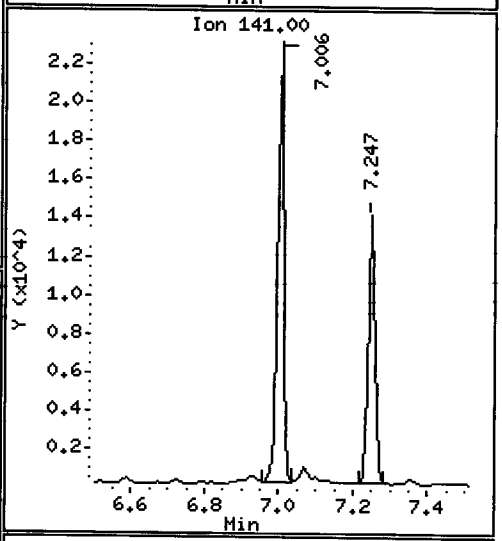
7 2-Methylnaphthalene

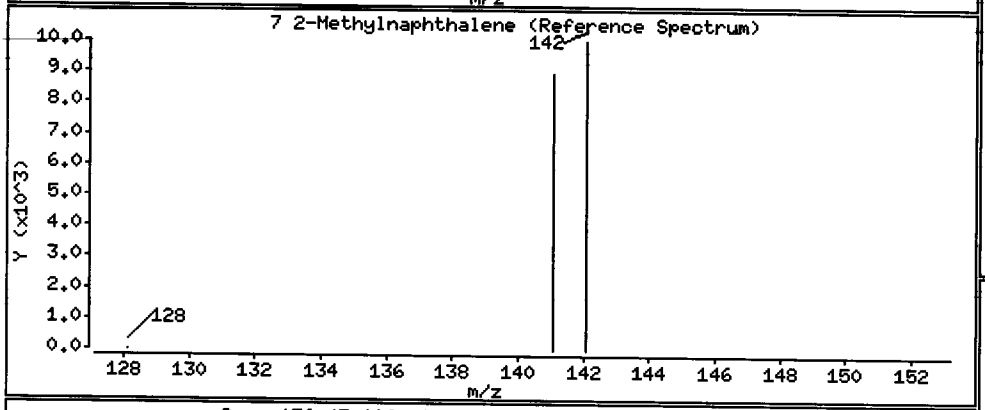
Concentration: 40.1 ug/L

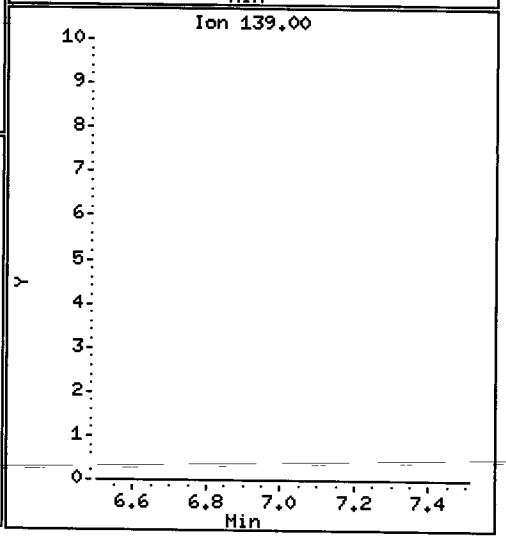


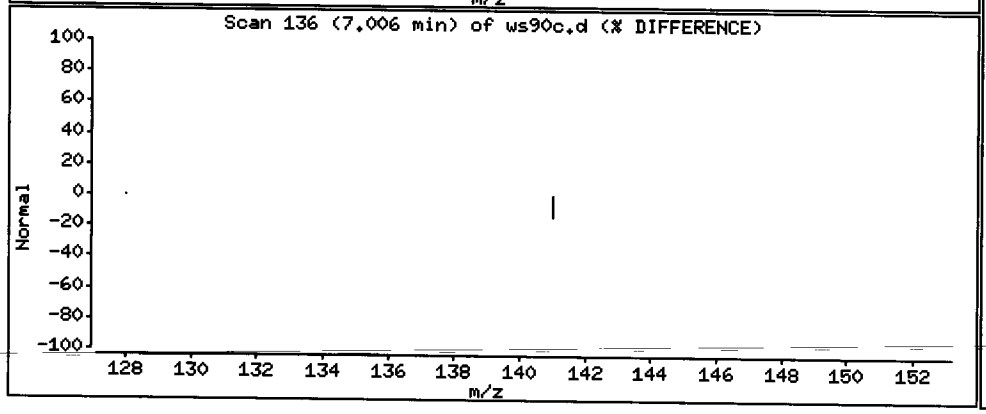












Data File: /chem3/nt11.i/20130612.b/ws90c.d

Date : 12-JUN-2013 23:00

Client ID: QC-EB-02-20130605-W

Instrument: nt11.i

Sample Info: WS90C

Volume Injected (uL): 2.0

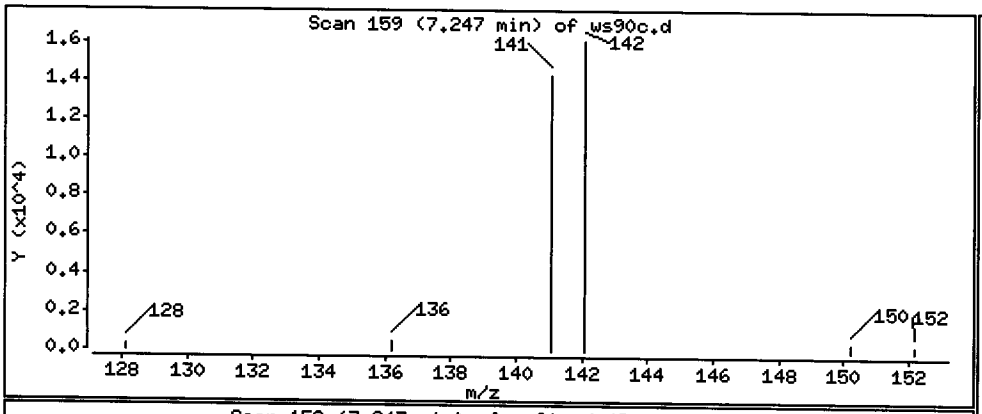
Operator: VTS

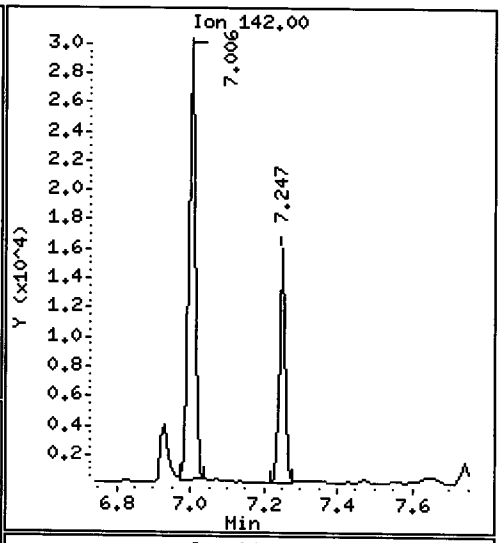
Column phase: Rxi-17Sil MS

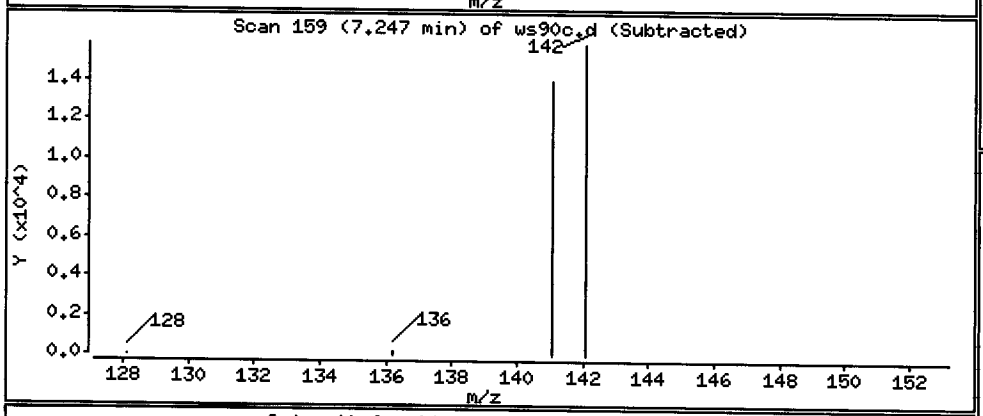
Column diameter: 0.25

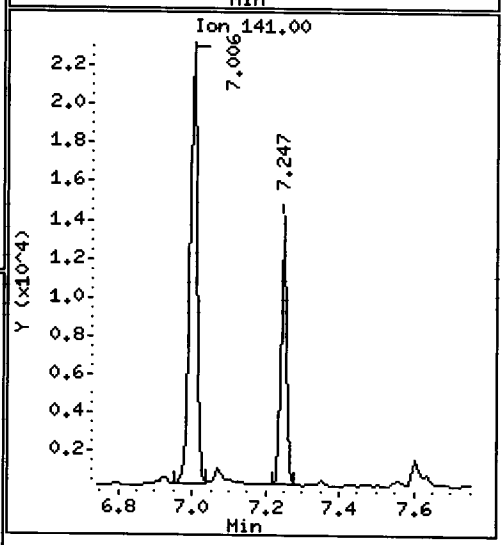
8 1-methylnaphthalene

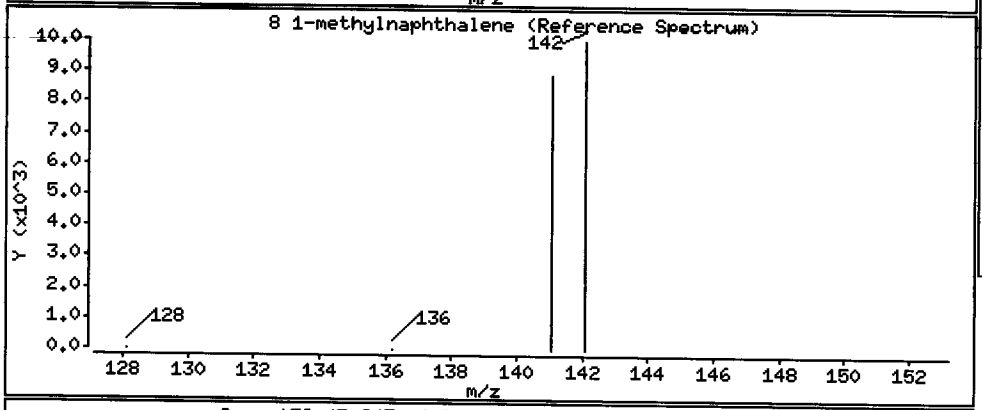
Concentration: 21.9 ug/L

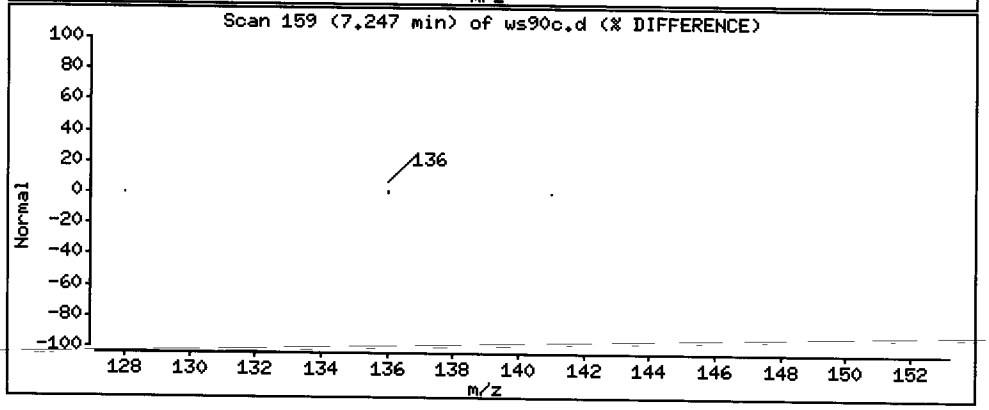












Data File: /chem3/nt11.i/20130612.b/ws90c.d

Date : 12-JUN-2013 23:00

Client ID: QC-EB-02-20130605-W

Instrument: nt11.i

Sample Info: WS90C

Volume Injected (uL): 2.0

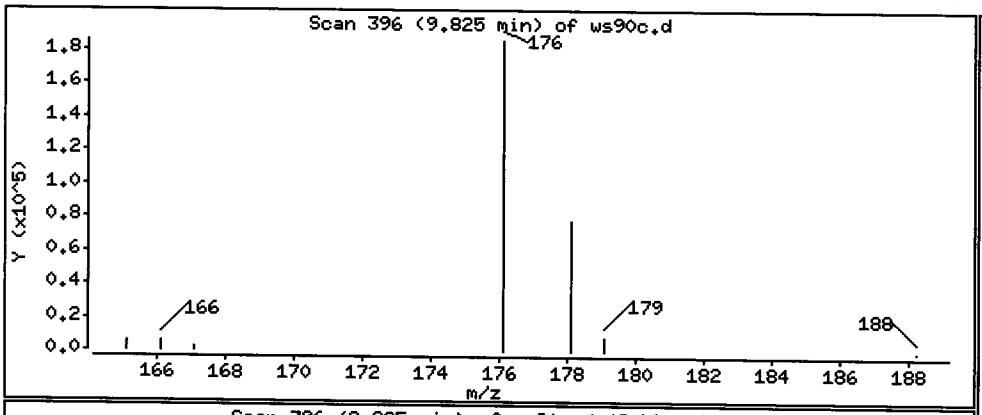
Operator: VTS

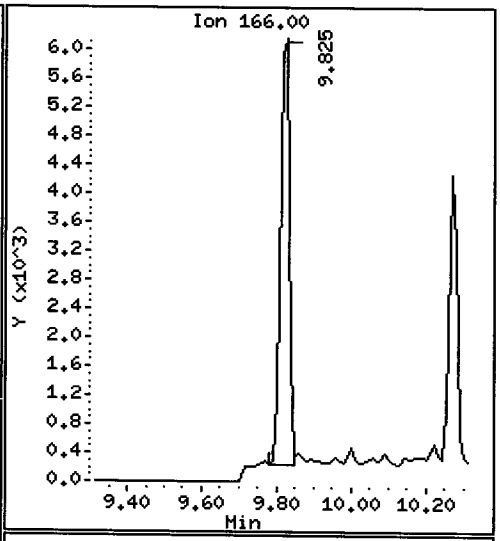
Column phase: Rxi-17Sil MS

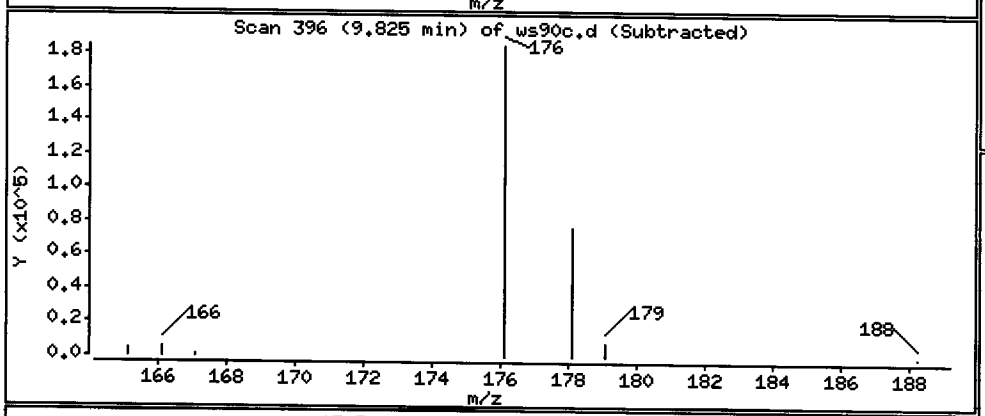
Column diameter: 0.25

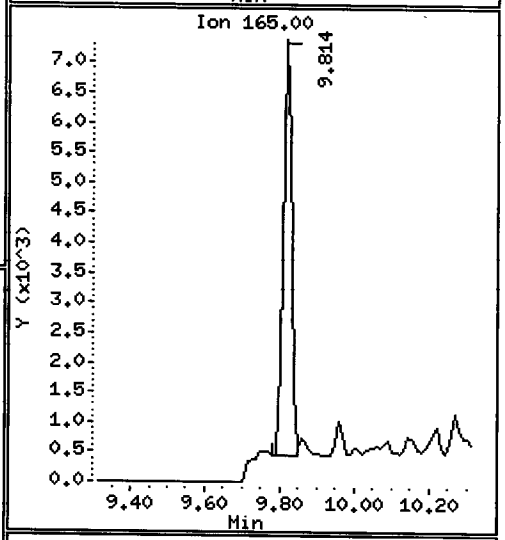
15 Fluorene

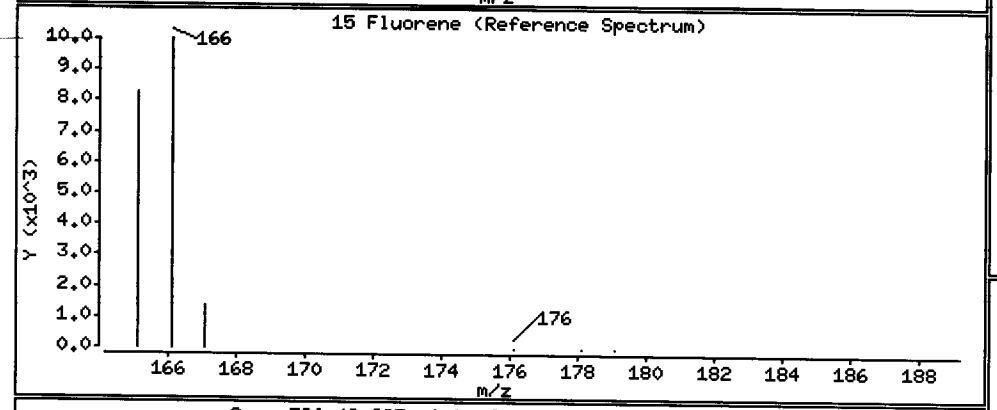
Concentration: 9.55 ug/L

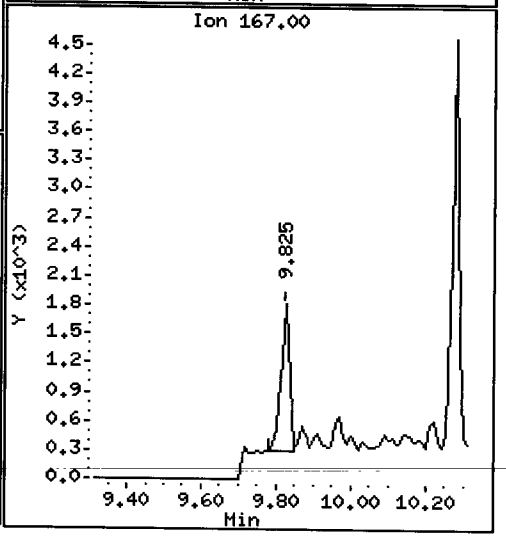


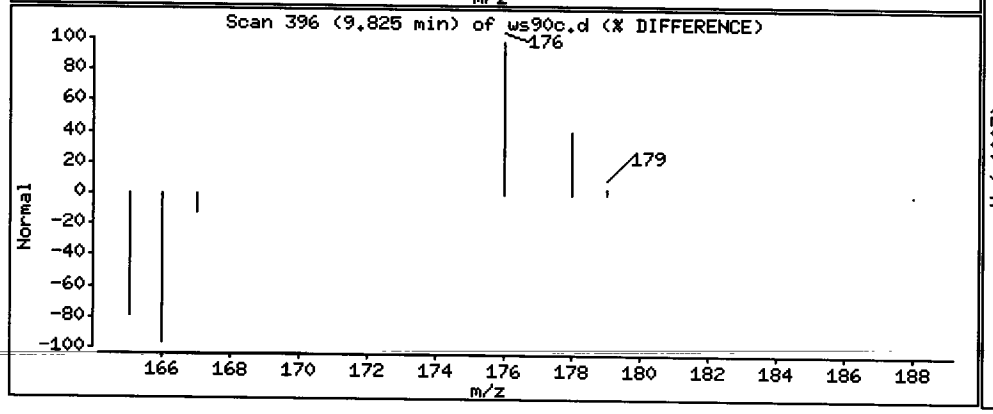












Data File: /chem3/nt11.i/20130612.b/ws90c.d

Date : 12-JUN-2013 23:00

Client ID: QC-EB-02-20130605-W

Instrument: nt11.i

Sample Info: WS90C

Volume Injected (uL): 2.0

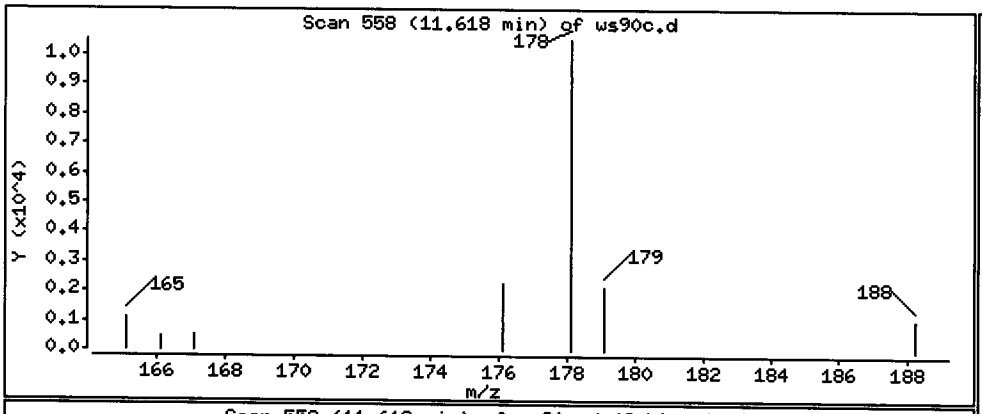
Operator: VTS

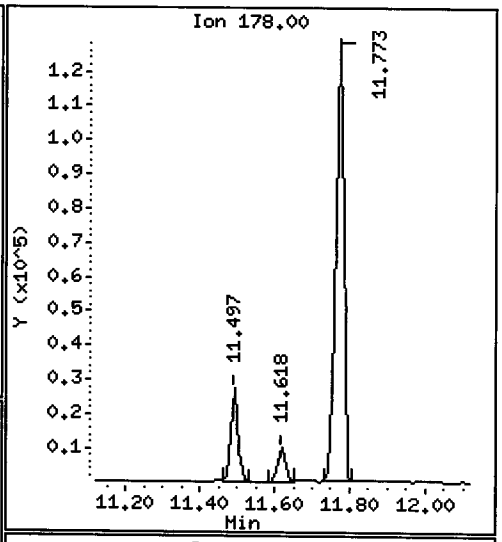
Column phase: Rxi-17Sil MS

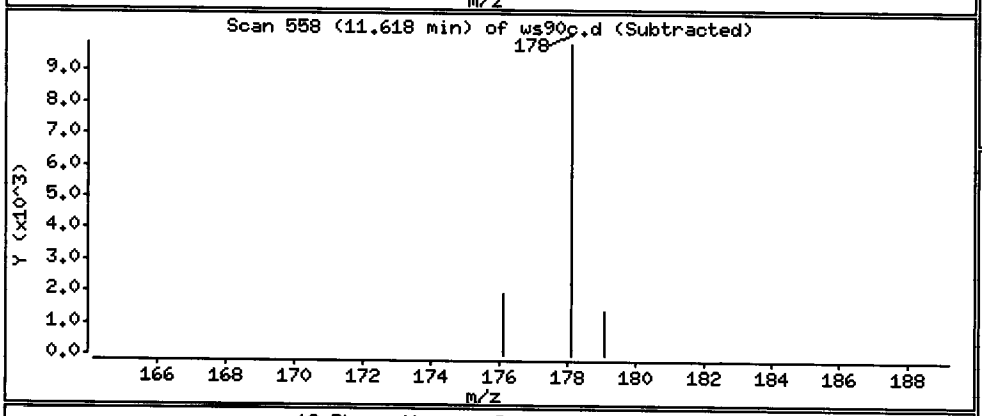
Column diameter: 0.25

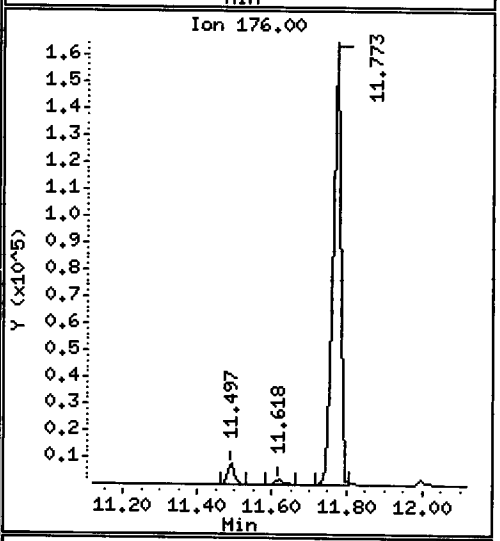
19 Phenanthrene

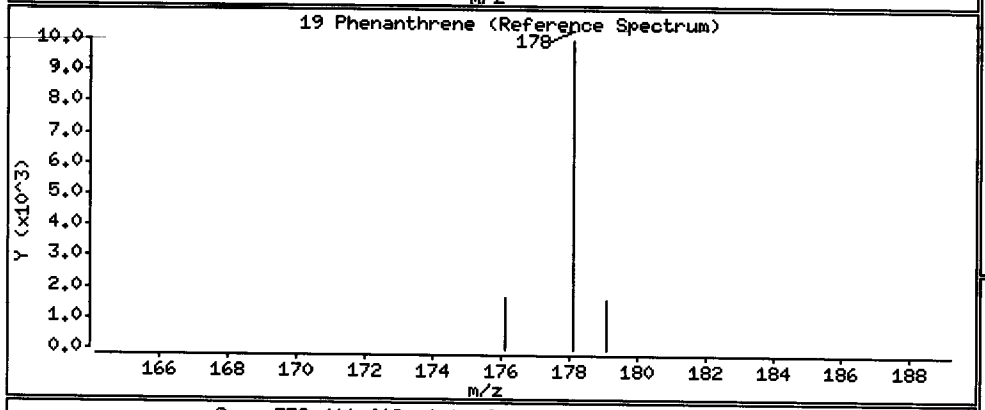
Concentration: 7.61 ug/L

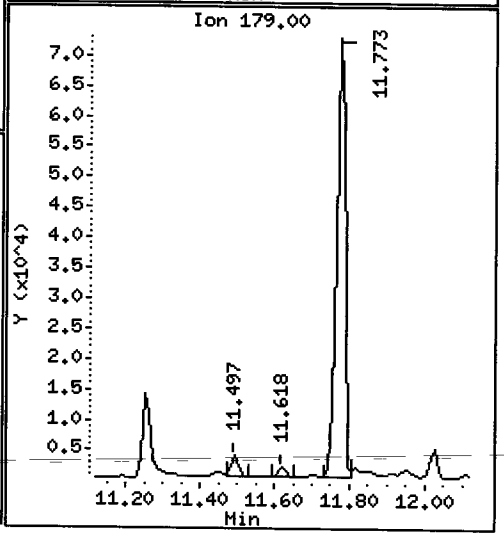


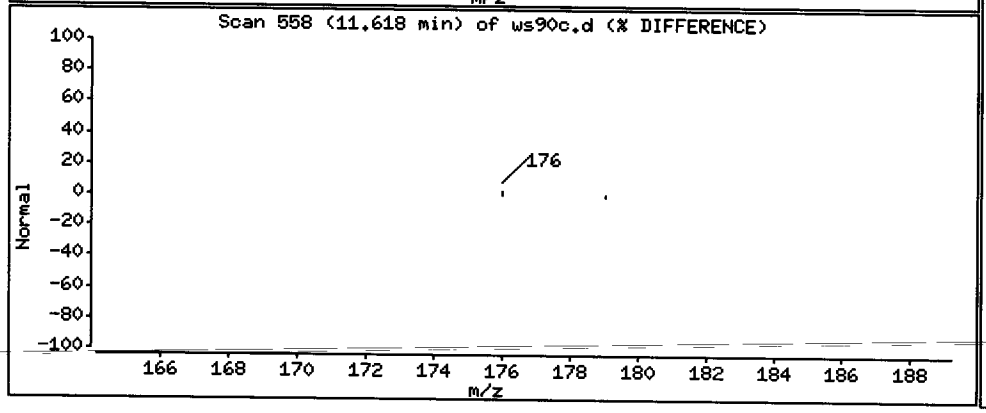












CO-ELUTION SUMMARY FOR FILE - ws90c.d

Lab ID: WS90C, Method: lowsim.m, Instrument: nt11.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130612.b/ws90d.d
Lab Smp Id: WS90D Client Smp ID: QC-EB-03-20130605-W
Inj Date : 12-JUN-2013 23:29
Operator : VTS Inst ID: nt11.i
Smp Info : WS90D
Misc Info : 13-12081
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: 18
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)	288239	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	153833	107.874	108
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	200627	229.579	230
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	33870	38.8541	38.9
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	19308	21.5900	21.6
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	173065	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	9.825	9.814	(1.099)	8890	9.29627	9.30
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	272368	200.000	
	19 Phenanthrene	178	11.619	11.619	(1.004)	11950	7.73811	7.74
	20 Anthracene	178	Compound Not Detected.					
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	365221	259.644	260
	24 Fluoranthene	202	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
25 Pyrene	202	Compound Not Detected.					
28 Benzo(a)anthracene	228	Compound Not Detected.					
* 29 Chrysene-d12	240	16.267	16.275	(1.000)	203221	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)	170713	200.000	
37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$ 36 Dibenzo(a,h)anthracene-d14	292	20.753	20.764	(1.103)	202227	215.183	215
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.					

6.13.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ws90d.d
Lab Smp Id: WS90D
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info: 13-12081

Calibration Date: 12-JUN-2013
Calibration Time: 15:46
Client Smp ID: QC-EB-03-20130605-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	288239	6.57
11 Acenaphthene-d10	156669	78334	313338	173065	10.47
18 Phenanthrene-d10	244223	122112	488446	272368	11.52
29 Chrysene-d12	194330	97165	388660	203221	4.58
35 Perylene-d12	162839	81420	325678	170713	4.84

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	16.27	-0.05
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: WS90D
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info: 13-12081

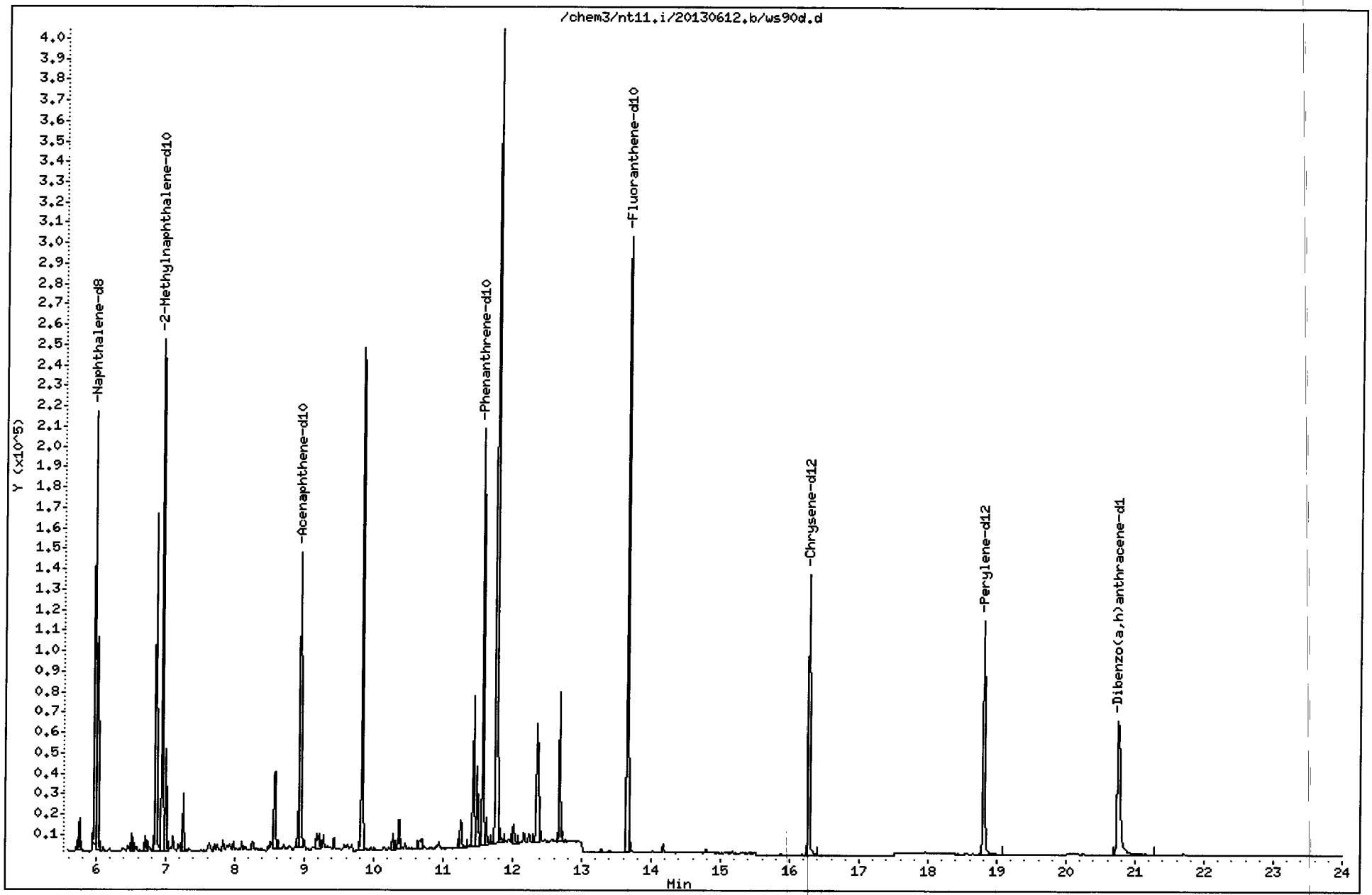
Client SDG: WS90
Fraction: SV
Client Smp ID: QC-EB-03-20130605-W
Operator: VTS
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	230	76.53	35-94
$ 23 Fluoranthene-d10	300	260	86.55	30-160
$ 36 Dibenzo(a,h)anthra	300	215	71.73	26-115

Data File: /chem3/nt11.i/20130612.b/ws90d.d
Date : 12-JUN-2013 23:29
Client ID: QC-EB-03-20130605-W
Sample Info: WS90D
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25



Data File: /chem3/nt11.i/20130612.b/ws90d.d

Date : 12-JUN-2013 23:29

Client ID: QC-EB-03-20130605-W

Instrument: nt11.i

Sample Info: WS90D

Volume Injected (uL): 2.0

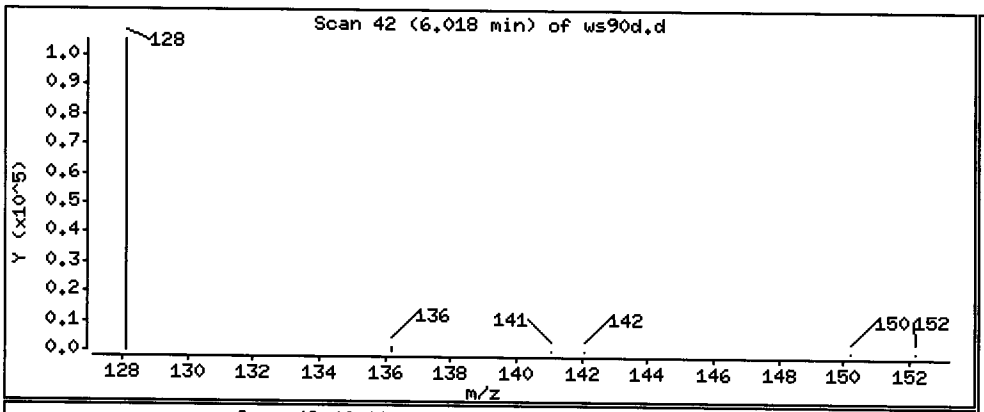
Operator: VTS

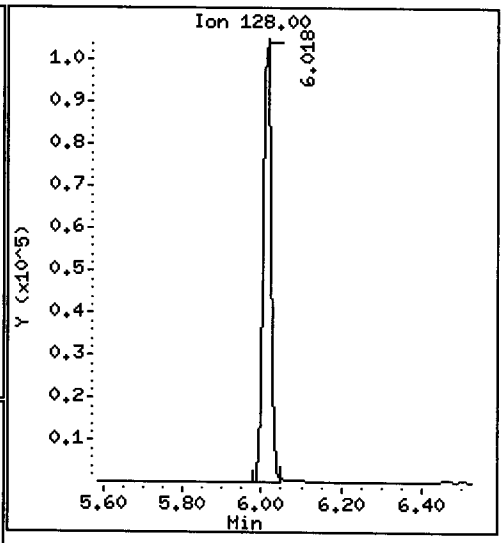
Column phase: Rxi-17Sil MS

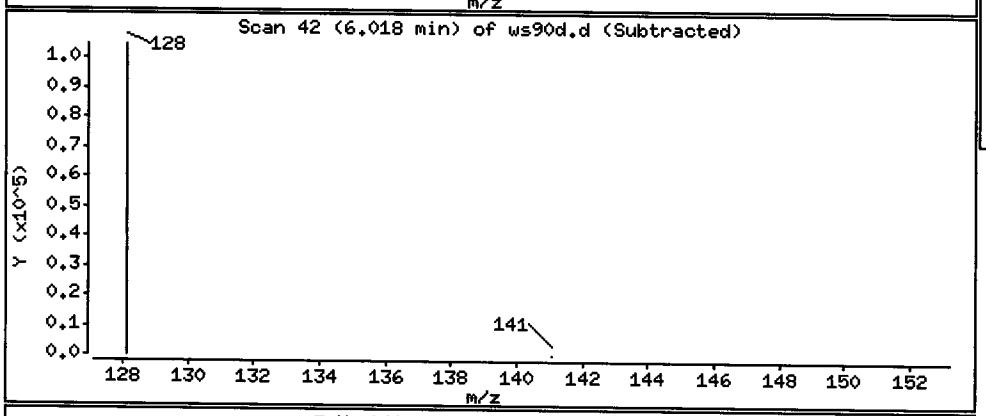
Column diameter: 0.25

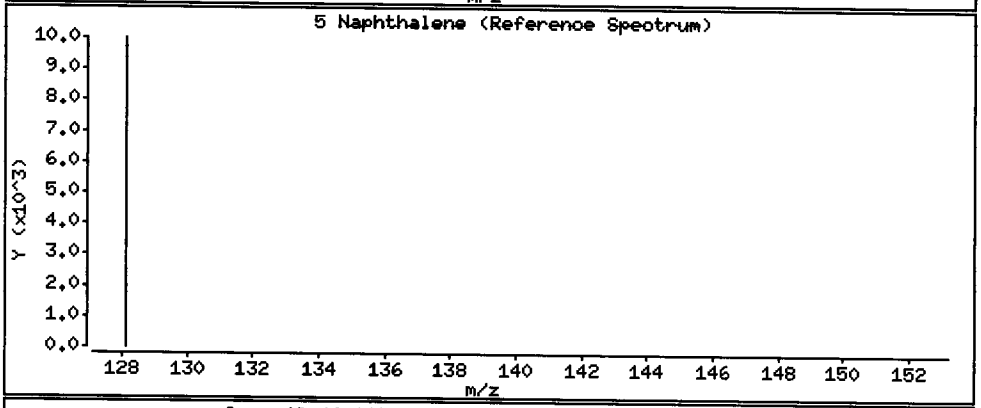
5 Naphthalene

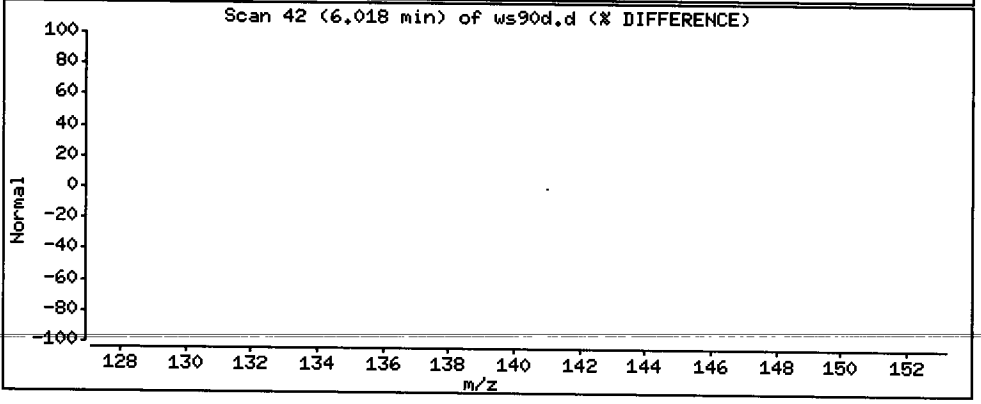
Concentration: 108 ug/L











Data File: /chem3/nt11.i/20130612.b/ws90d.d

Date : 12-JUN-2013 23:29

Client ID: QC-EB-03-20130605-W

Instrument: nt11.i

Sample Info: WS90D

Volume Injected (uL): 2.0

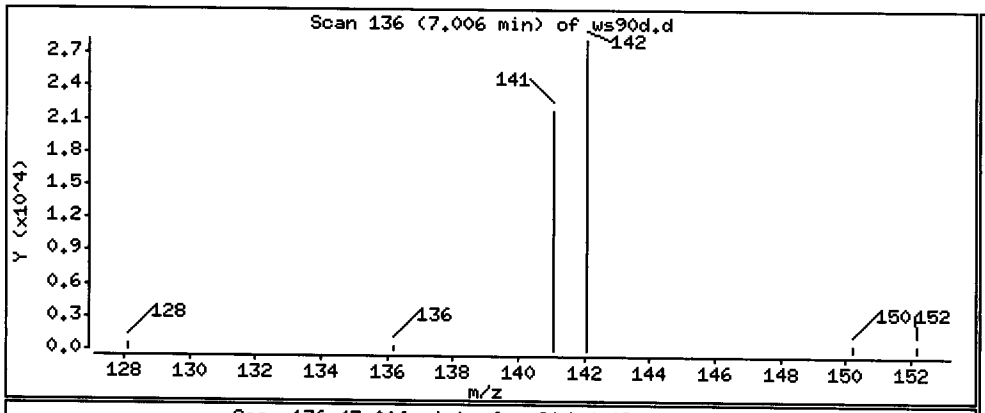
Operator: VTS

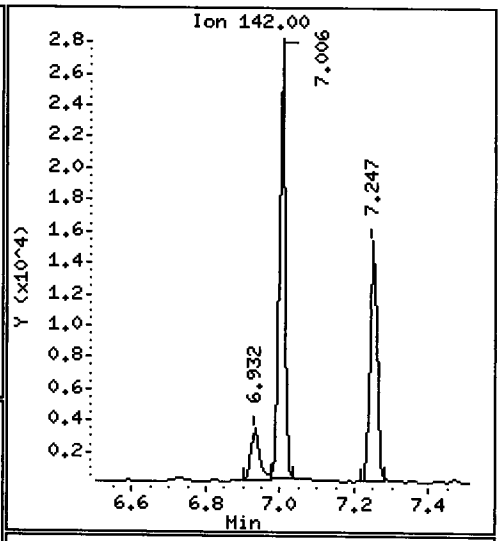
Column phase: Rxi-17Sil MS

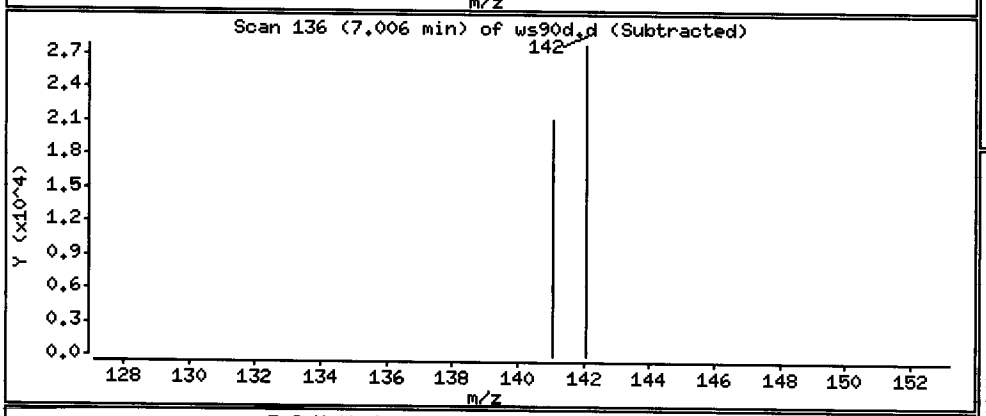
Column diameter: 0.25

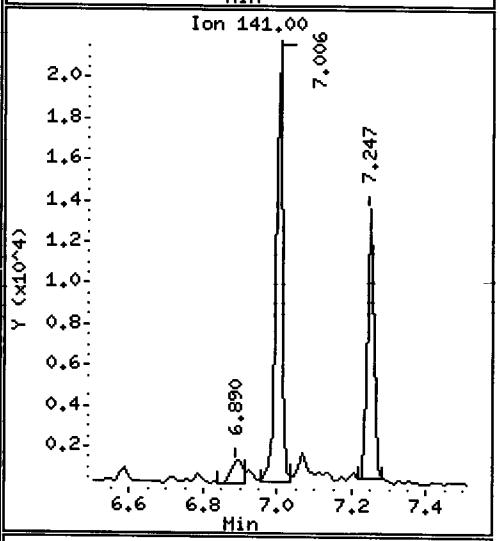
7 2-Methylnaphthalene

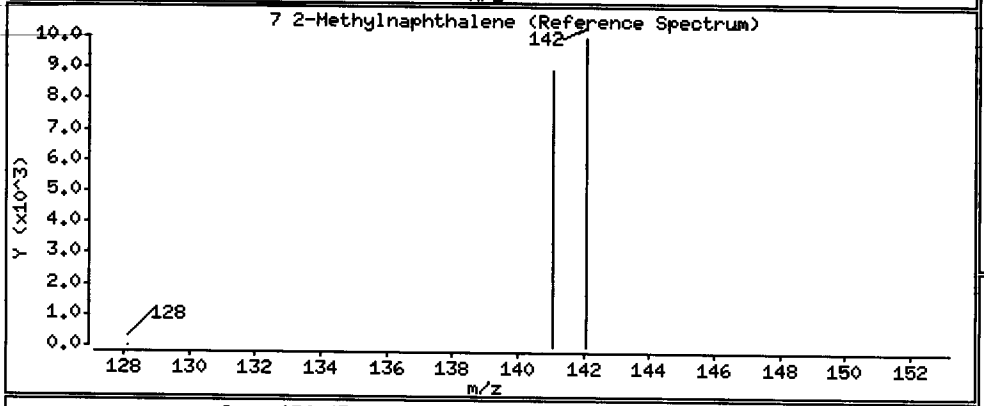
Concentration: 38.9 ug/L

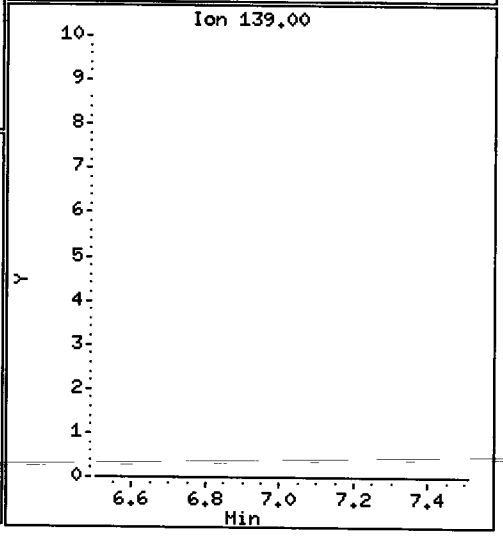


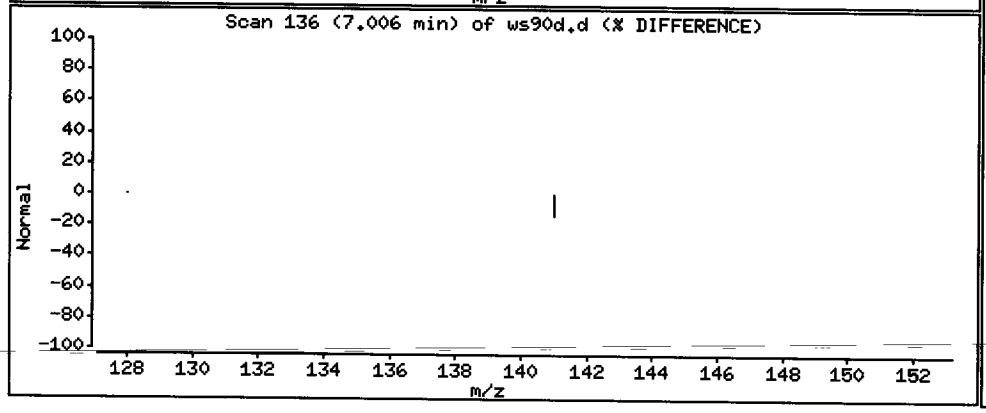












Data File: /chem3/nt11.i/20130612.b/ws90d.d

Date : 12-JUN-2013 23:29

Client ID: QC-EB-03-20130605-W

Instrument: nt11.i

Sample Info: WS90D

Volume Injected (uL): 2.0

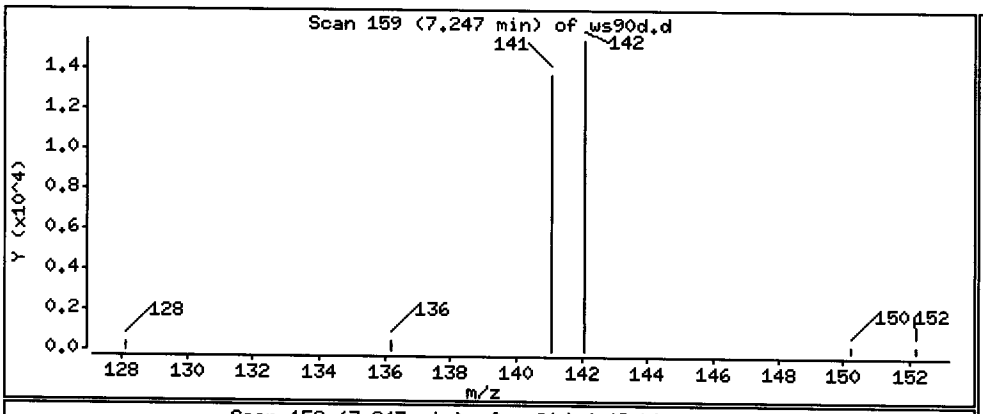
Operator: VTS

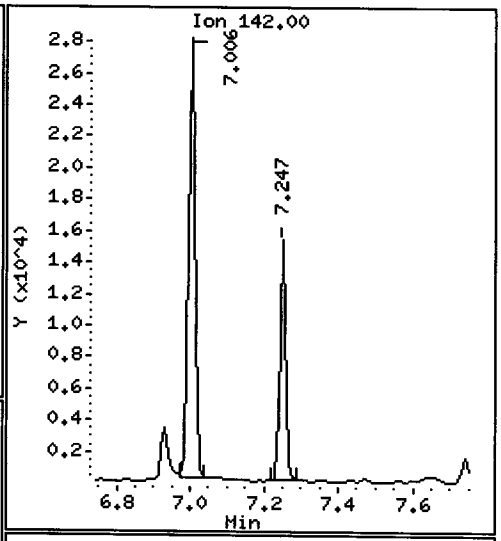
Column phase: Rxi-17Sil MS

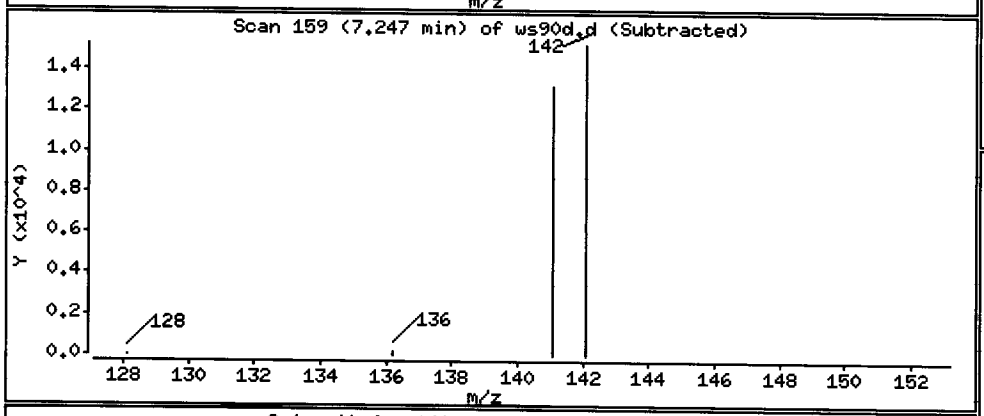
Column diameter: 0.25

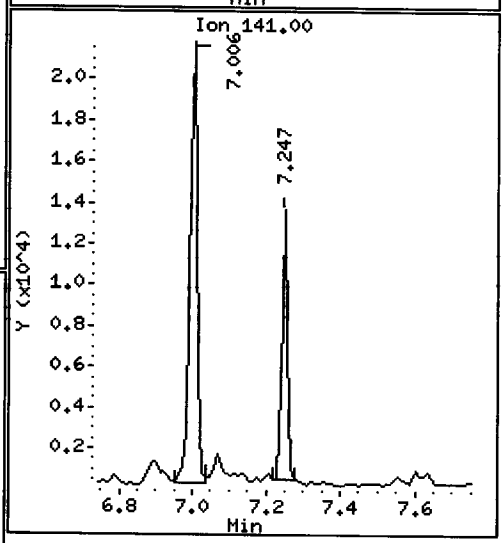
8 1-methylnaphthalene

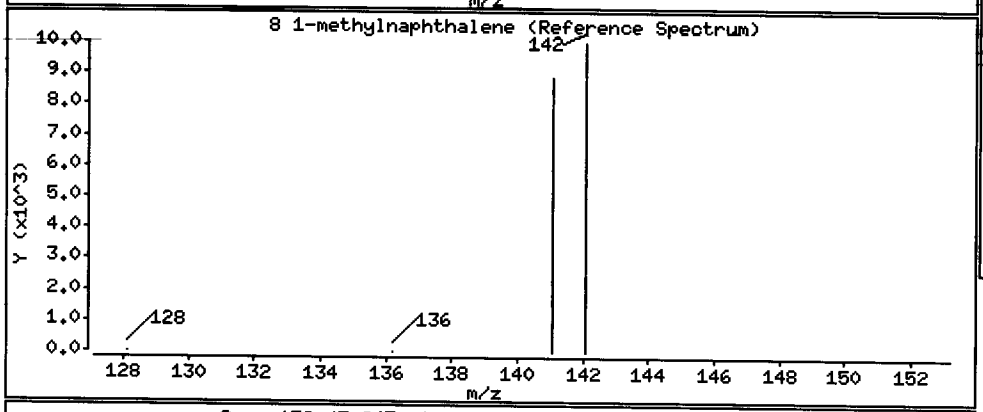
Concentration: 21.6 ug/L

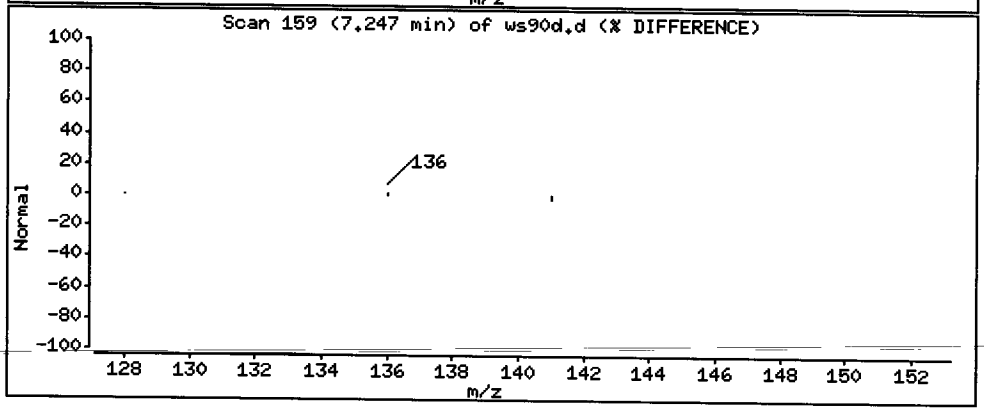












Data File: /chem3/nt11.i/20130612.b/ws90d.d

Date : 12-JUN-2013 23:29

Client ID: QC-EB-03-20130605-W

Instrument: nt11.i

Sample Info: WS90D

Volume Injected (uL): 2.0

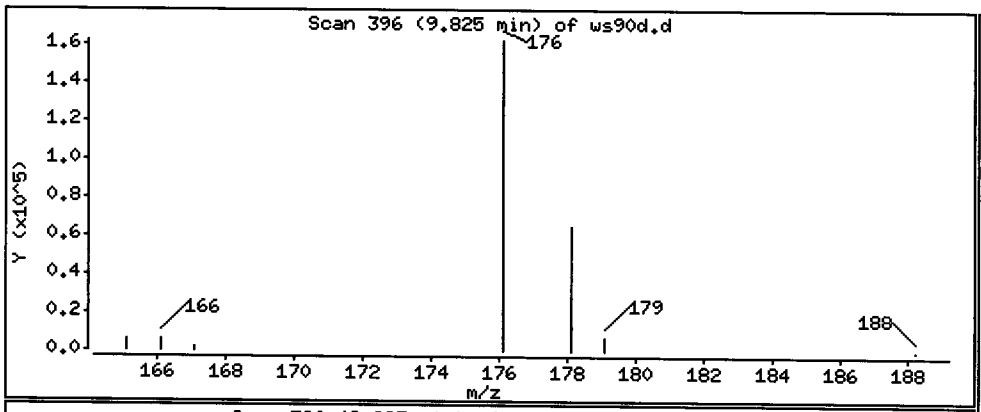
Operator: VTS

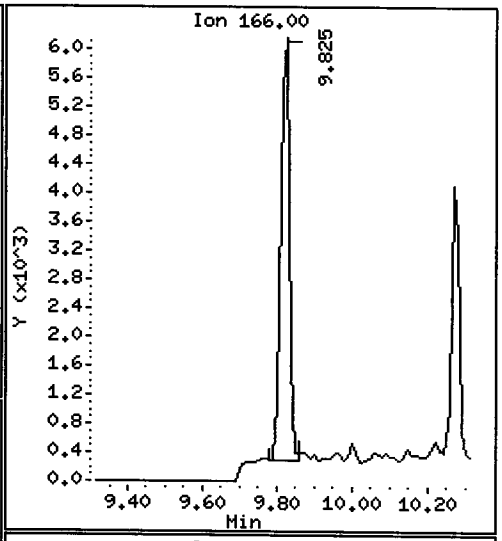
Column phase: Rxi-17Sil MS

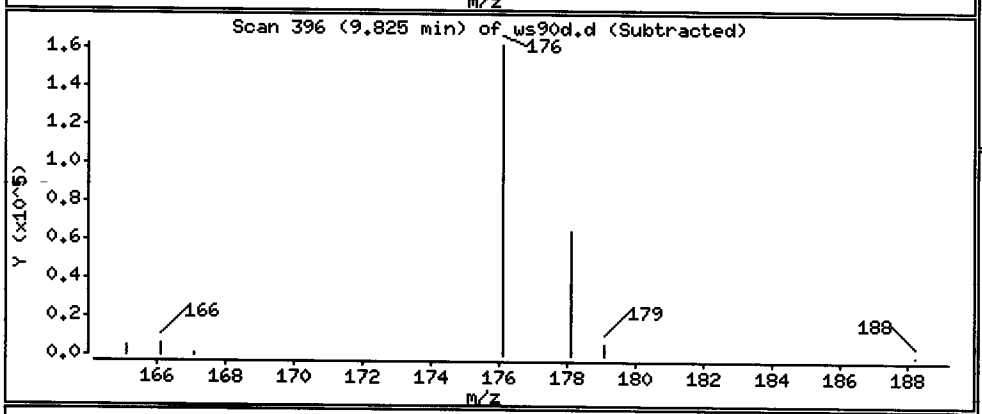
Column diameter: 0.25

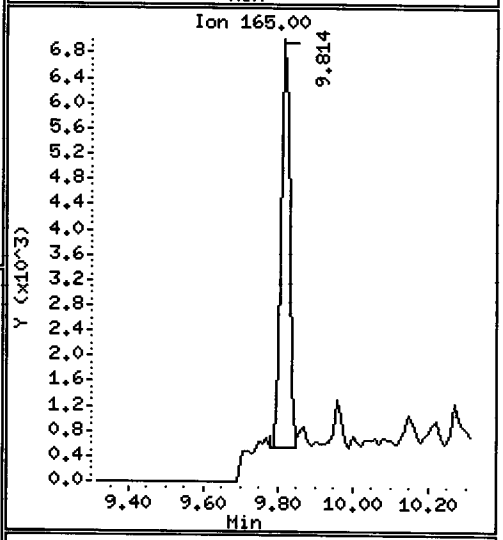
15 Fluorene

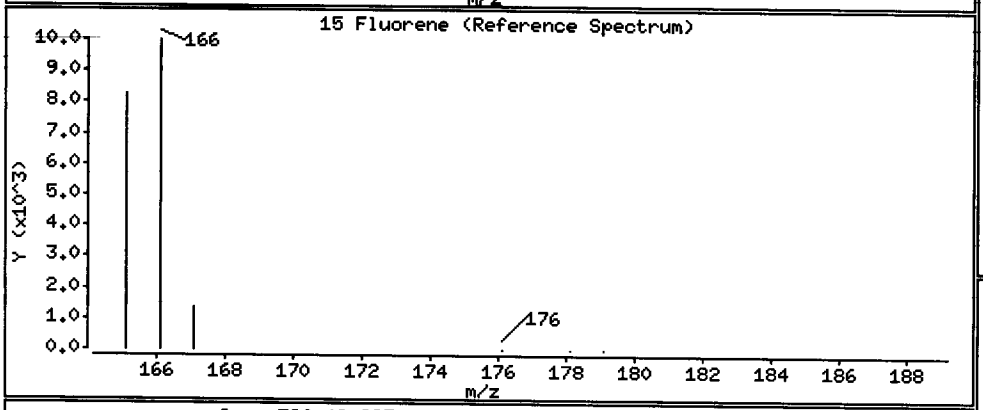
Concentration: 9.30 ug/L

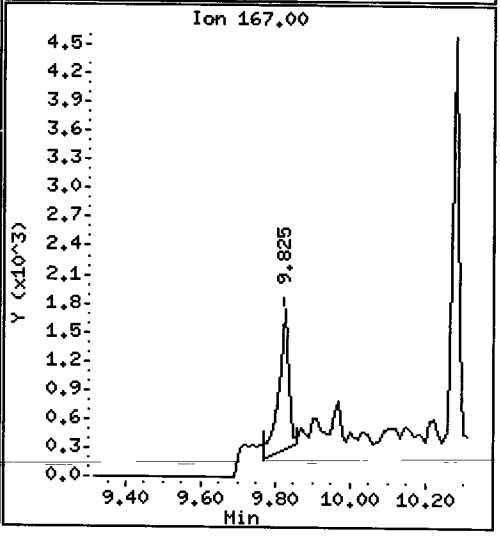


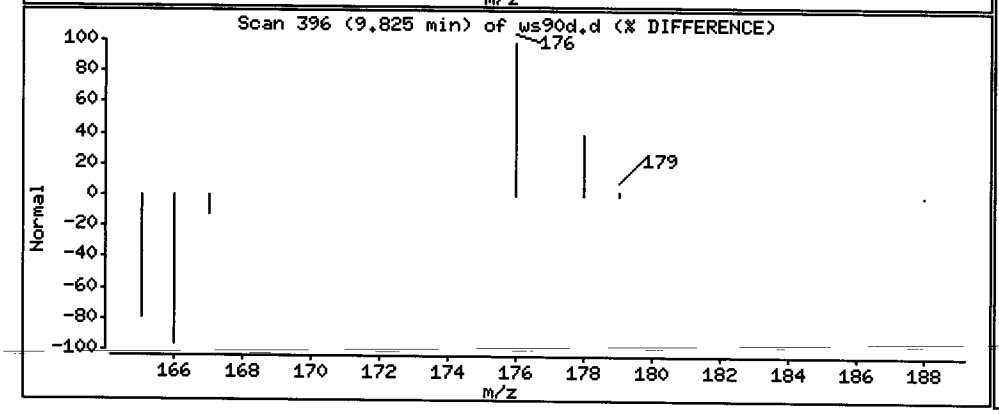












Data File: /chem3/nt11.i/20130612.b/ws90d.d

Date : 12-JUN-2013 23:29

Client ID: QC-EB-03-20130605-W

Instrument: nt11.i

Sample Info: WS90D

Volume Injected (uL): 2.0

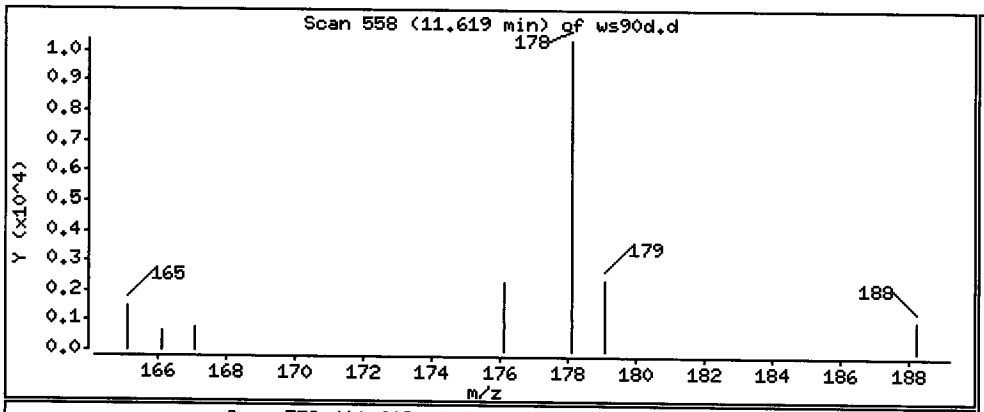
Operator: VTS

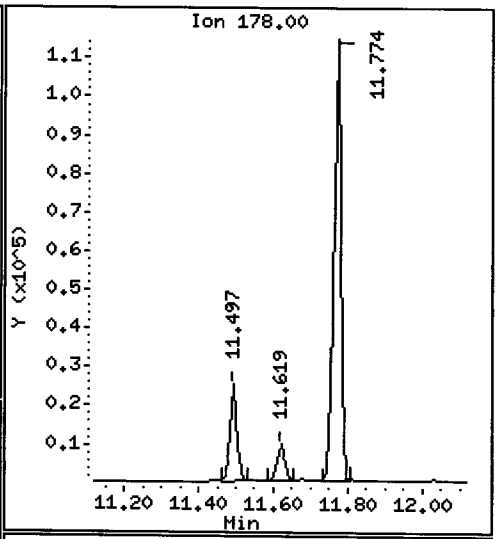
Column phase: Rxi-17Sil MS

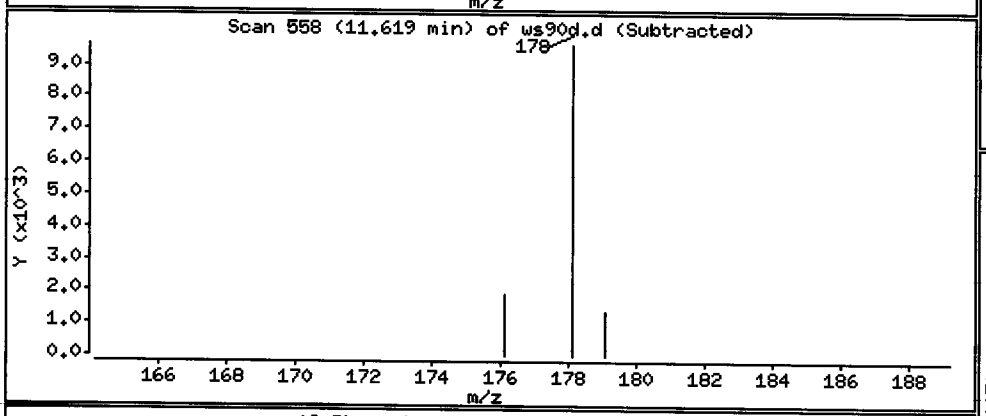
Column diameter: 0.25

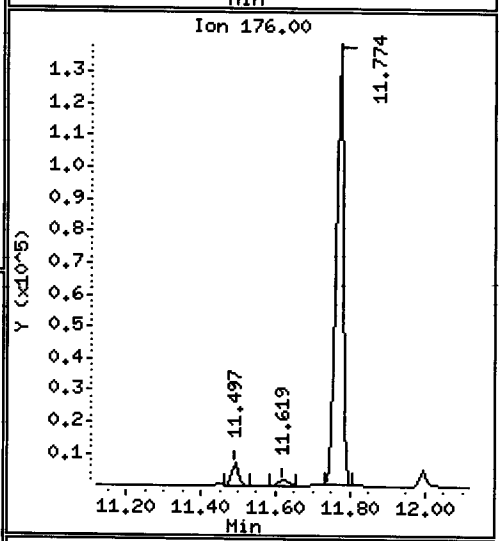
19 Phenanthrene

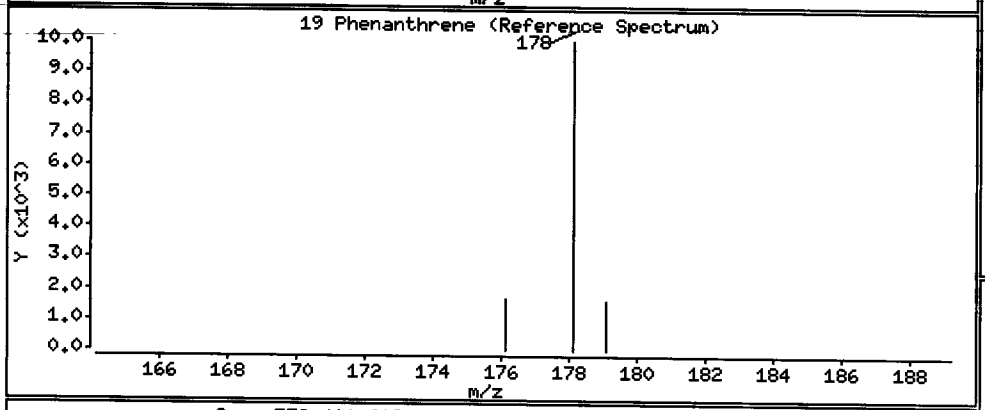
Concentration: 7.74 ug/L

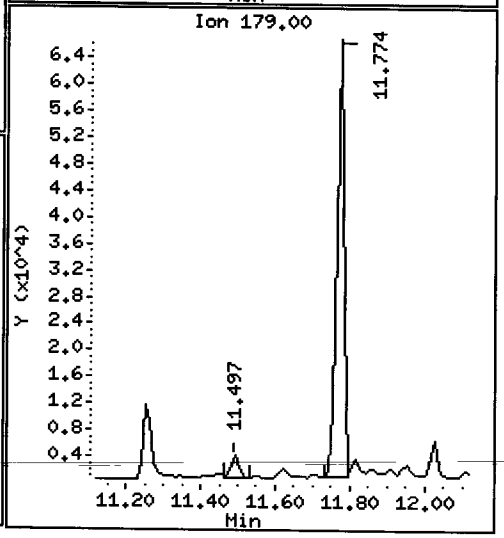


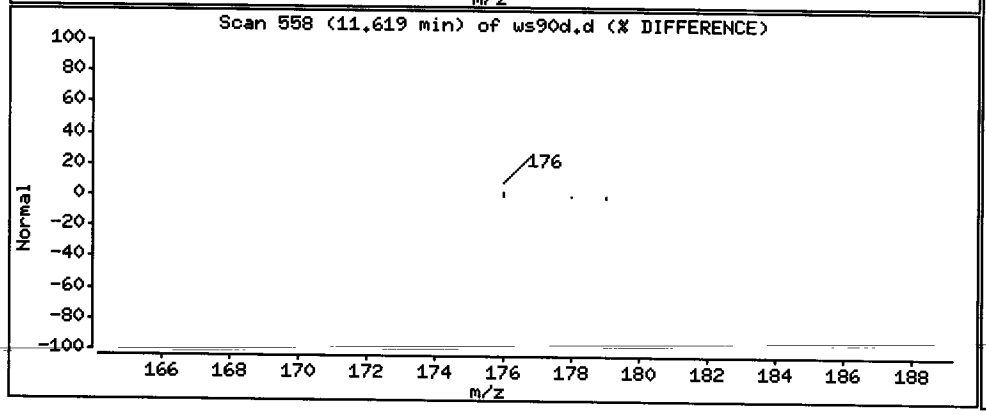












CO-ELUTION SUMMARY FOR FILE - ws90d.d

Lab ID: WS90D, Method: lowsim.m, Instrument: nt11.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Pesticide Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WS90, WS92

Incorporated
Analytical Chemists and Consultants

(8081B) Pest – Water
Separatory Funnel (3510C) (SOP # 3311S)
In-House (0.05-0.1ppb)

Preparation Test Pest # 1(PESWSI)
ARI Job No(s) WS96 Page 1 of 1 Batch set up by: SP

Bottle #	ARI Sample I.D.	Volume Extracted	(Opt) Sulfur Clean 4.5mL+0.5mL (5mL) Ethyl Acetate ① 2 3	(Opt) ~~Silica Gel Clean~~ (1:5) Acid clean	Final Effective Volume	Volume to Lab	Comment	Verify Client ID
	WS96 MBW	500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		AR 06/11/13 Analyst/Date
	SBW	500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		Verify pH is 5-9
	SBW Dup.	500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		AR 06/11/13
	QLS	500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		Analyst/Date
9	A	500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		KD 80-85°C
8	B	500mL	(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	(1:5) Y / N	5mL	1mL		YL/RF
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		06/14/13 Analyst/Date
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		TurboVap ① 2 3 Pre-Cleanups (4mL=10mL Hexane Exchange)
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		6/17/13
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		Analyst/Date
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		TurboVap 1 2 ③ Post Cleanups
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		6/17/13
		500mL	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		~~500mL~~	(5mL) Y / N	(1:5) Y / N	~~5mL~~	~~1mL~~		
Analyst/Date	AR 06/11/13 →		6/17/13	6/17/13	6/17/13	6/17/13	Reviewed By 6/17/13	Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	**N** (B040151)	2µg/mL	**100µL**	4/30/14	AR	
Spike	**3** (2079-2)	0.5/1/5µg/mL	**200µL**	12/10/13	AR	
QLS Spike	**10** (B040567)	0.25-2.5µg/mL	**50µL**	12/10/13	AR	
Extraction Time: 13:00						

Freezer

SPECIAL INSTRUCTIONS: 1. Verify pH is 5-9 2. Adjust pH (if necessary=Analyst Notes). 3. Add Surr/Spike. 4. Extract 3X with 30mL DCM. 5. KD (NO Drying Column) at 80°. 6. Exchange (2 X with 20mL) Hexane at 100°. 7. TurboVap to 4mL=10mL Hexane Exchange. 8. TurboVap. 9. Clean-ups? 10. TurboVap (if Silica Clean). 11. Vial with Hexane.

A. Archive Y / N

WS96 : 040567

Reagent and Solutions Identification

(8081B) Pest – Water
Separatory Funnel (3510C) (SOP # 3311S)

ARI Job No(s) WS 90

(8081B) Pest Aqueous:	Analyst/Date
Separatory Funnel Station: Methylene Chloride: (I# 8270) Anhydrous Sodium Sulfate: (I#8130 + jar date 5/20/13)	Sep. Funnel AR 06/11/13
KD Station: Methylene Chloride: (I#8279) Hexane: (I#8269)	KD RR/YC 06/14/13
Vialing Station: Hexane: (I# 8269) Ethyl Acetate: (I# 8079) Tetrabutylammonium hydrogensulfate (TBAS): (H# 190) Sodium Sulfite: (I# 7709) Silica Gel (SPE) Darts: (I# 5127)	Vialing MW 6/17/13

USSA : 00558

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WS90 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= WS90 samples A, tan, turbid B, light tan, turbid	AR 06/11/13
☑ Particulates(%)=(Note: >5%=Notify Supervisor/Lead) WS90 sample A. 2% particulate	AR 06/11/13
☐ 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: WS90, WS92

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): 05/14/13 Internal Standard ID 2006-1 Expiration 7/26/13

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
Restek	B00037O	8/29/13	UCT-19	2023-1	10/4/13
	B000337	12/10/13			
	2048-2	05/16/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: YZ **Date:** 5/16/13

Reviewer: VD **Date:** 5.16.13

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 5/14/13 (5/13) Analysis: Pest Analyst: YZ

Column 1 Serial No.: 1085681 Column Type: 5% cap

Column 2 Serial No.: 1094709 Column Type: 5% cap

GC Method: Pest ICal Date: 05/14/13

IS	Ical/Ccal	ICV
2000-1	B000370 (5/13)	2023-1
	B000337 (5/10)	
	2048-2.	

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130514PEST.b/ical-1.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	14-MAY-2013 14:17	0514a004.d	1	DS	
2	14-MAY-2013 14:37	0514a005.d	1	INDAE	
3	14-MAY-2013 14:57	0514a006.d	1	INDAA	
4	14-MAY-2013 15:17	0514a007.d	1	INDAB	
5	14-MAY-2013 15:37	0514a008.d	1	INDAC	
6	14-MAY-2013 15:56	0514a009.d	1	INDAD	
7	14-MAY-2013 16:16	0514a010.d	1	INDAF	
8	14-MAY-2013 16:34	0514a011.d	1	INDAG	
9	14-MAY-2013 16:54	0514a012.d	1	INDAICV	
10	14-MAY-2013 17:12	0514a013.d	1	TOXAPH	
11	14-MAY-2013 17:31	0514a014.d	1	DS	
12	14-MAY-2013 17:48	0514a015.d	1	INDAE	
13	14-MAY-2013 18:06	0514a016.d	1	WO26MBS1	
14	14-MAY-2013 18:24	0514a017.d	1	WO26LCSS1	
15	14-MAY-2013 18:42	0514a018.d	1	WO26LCSDS1	
16	14-MAY-2013 19:00	0514a019.d	1	WO26QLS	
17	14-MAY-2013 19:17	0514a020.d	5	WO26A	5
18	14-MAY-2013 19:35	0514a021.d	5	WO26B	5
19	14-MAY-2013 19:53	0514a022.d	5	WO26C	5
20	14-MAY-2013 20:11	0514a023.d	5	WO26D	5
21	14-MAY-2013 20:29	0514a024.d	5	WO26E	5
22	14-MAY-2013 20:46	0514a025.d	5	WO26F	5
23	14-MAY-2013 21:04	0514a026.d	5	WO26G	5
24	14-MAY-2013 21:22	0514a027.d	5	WO26H	5
25	14-MAY-2013 21:40	0514a028.d	1	WO26MBS1	
26	14-MAY-2013 21:58	0514a029.d	1	WO26LCSS1	
27	14-MAY-2013 22:15	0514a030.d	1	WO26LCSDS1	
28	14-MAY-2013 22:33	0514a031.d	1	DS	
29	14-MAY-2013 22:51	0514a032.d	1	INDAE	
30	14-MAY-2013 23:09	0514a033.d	5	WO26I	5
31	14-MAY-2013 23:27	0514a034.d	1	WO26J	
32	14-MAY-2013 23:44	0514a035.d	1	WO26K	
33	15-MAY-2013 00:02	0514a036.d	5	WO26KMS	
34	15-MAY-2013 00:20	0514a037.d	1	WO26KMSD	
35	15-MAY-2013 00:38	0514a038.d	1	WO27MBS1	
36	15-MAY-2013 00:56	0514a039.d	1	WO27LCSS1	
37	15-MAY-2013 01:13	0514a040.d	1	WO27LCSDS1	
38	15-MAY-2013 01:31	0514a041.d	1	DS	
39	15-MAY-2013 01:49	0514a042.d	1	INDAE	
40	15-MAY-2013 02:07	0514a043.d	5	WO27A	5
41	15-MAY-2013 02:25	0514a044.d	5	WO27B	5
42	15-MAY-2013 02:42	0514a045.d	5	WO27C	5
43	15-MAY-2013 03:00	0514a046.d	5	WO27CMS	5
44	15-MAY-2013 03:18	0514a047.d	5	WO27CMSD	5
45	15-MAY-2013 03:36	0514a048.d	5	WO27D	5
46	15-MAY-2013 03:54	0514a049.d	5	WO27E	5
47	15-MAY-2013 04:11	0514a050.d	5	WO27F	5
48	15-MAY-2013 04:29	0514a051.d	5	WO27G	5
49	15-MAY-2013 04:47	0514a052.d	1	WO27MBS1	
50	15-MAY-2013 05:05	0514a053.d	1	WO27LCSS1	
51	15-MAY-2013 05:23	0514a054.d	1	WO27LCSDS1	
52	15-MAY-2013 05:40	0514a055.d	1	DS	
53	15-MAY-2013 05:58	0514a056.d	1	INDAE	
54	15-MAY-2013 06:16	0514a057.d	5	WO27H	5
55	15-MAY-2013 06:34	0514a058.d	5	WO27I	5
56	15-MAY-2013 06:52	0514a059.d	5	WO27J	5
57	15-MAY-2013 07:09	0514a060.d	5	WO27K	5
58	15-MAY-2013 07:27	0514a061.d	1	WO27MBS1	
59	15-MAY-2013 07:45	0514a062.d	1	WO27LCSS1	
60	15-MAY-2013 08:03	0514a063.d	1	WO27LCSDS1	
61	15-MAY-2013 08:21	0514a064.d	1	DS	
62	15-MAY-2013 08:38	0514a065.d	1	INDAE	

Every line mus
Start a new pa

S

YZ 5/14/13

Report Date : 15-May-2013 15:10

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Batch File: /chem2/ecd6.i/20130514PEST.b/ical-1.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0514a005	0514a006	0514a007	0514a008	0514a009	0514a010	0514a011
INJ.DATE:	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013
INJ.TIME:	14:37	14:57	15:17	15:37	15:56	16:16	16:34

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	2.336	2.336	2.336	2.336	2.336	2.336	2.336	2.336	2.286-2.386	2.336	0.000
* 54 1Bromo-2nitrobenzene	3.162	3.162	3.162	3.161	3.160	3.161	3.160	3.162	3.112-3.212	3.161	0.001
* 58 Hexabromobiphenyl	8.997	8.998	8.998	8.999	8.998	8.999	8.999	8.997	8.947-9.047	8.998	0.001
$ 2 Tetrachloro-m-xylene	3.840	3.842	3.842	3.840	3.837	3.837	3.835	3.840	3.790-3.890	3.839	0.003
3 Hexachlorobenzene	4.186	4.197	4.195	4.190	4.186	4.183	4.179	4.186	4.136-4.236	4.188	0.006
4 alpha-BHC	4.332	4.331	4.332	4.331	4.328	4.329	4.326	4.332	4.282-4.382	4.330	0.002
5 gamma-BHC (Lindane)	4.617	4.618	4.619	4.618	4.614	4.614	4.611	4.617	4.567-4.667	4.616	0.003
6 beta-BHC	4.697	4.724	4.720	4.712	4.702	4.692	4.687	4.697	4.647-4.747	4.705	0.014
7 delta-BHC	4.868	4.894	4.890	4.882	4.872	4.863	4.858	4.868	4.818-4.918	4.875	0.014
8 Heptachlor	5.065	5.065	5.066	5.065	5.062	5.063	5.059	5.065	5.015-5.115	5.063	0.002
9 Aldrin	5.359	5.359	5.360	5.359	5.356	5.357	5.353	5.359	5.309-5.409	5.358	0.002
38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.577-13.677	+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.819-10.919	+++++	+++++
11 Heptachlor epoxide b	5.933	5.935	5.936	5.934	5.931	5.931	5.928	5.933	5.883-5.983	5.933	0.003
12 gamma-Chlordane	6.054	6.060	6.059	6.057	6.052	6.051	6.048	6.054	6.004-6.104	6.054	0.005
13 alpha-Chlordane	6.177	6.183	6.182	6.180	6.176	6.175	6.172	6.177	6.127-6.227	6.178	0.004
14 Endosulfan I	6.310	6.315	6.314	6.313	6.309	6.309	6.306	6.310	6.260-6.360	6.311	0.003

Reviewer 1 YZ Date: 5/15/13
Reviewer 2 [illegible] Date: 5-16-13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Batch File: /chem2/ecd6.i/20130514PEST.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	6.235	6.247	6.245	6.241	6.235	6.232	6.229	6.235	6.185-6.285	6.238	0.007
16	Dieldrin	6.532	6.536	6.536	6.534	6.531	6.531	6.528	6.532	6.482-6.582	6.533	0.003
17	Endrin	6.751	6.755	6.755	6.753	6.750	6.749	6.747	6.751	6.701-6.801	6.751	0.003
18	4,4'-DDD	6.800	6.812	6.812	6.809	6.806	6.795	6.787	6.800	6.750-6.850	6.803	0.009
19	Endosulfan II	6.959	6.966	6.964	6.962	6.958	6.956	6.953	6.959	6.909-7.009	6.960	0.004
20	4,4'-DDT	7.053	7.063	7.062	7.059	7.056	7.049	7.043	7.053	7.003-7.103	7.055	0.007
21	Endrin aldehyde	7.336	7.341	7.341	7.339	7.336	7.334	7.330	7.336	7.286-7.386	7.337	0.004
22	Methoxychlor	7.479	7.487	7.486	7.484	7.482	7.478	7.474	7.479	7.429-7.529	7.482	0.005
23	Endosulfan sulfate	7.727	7.731	7.730	7.729	7.726	7.725	7.721	7.727	7.677-7.777	7.727	0.003
24	Endrin ketone	7.983	7.987	7.986	7.985	7.982	7.981	7.977	7.983	7.933-8.033	7.983	0.003
$ 25	Decachlorobiphenyl	8.832	8.834	8.834	8.833	8.832	8.832	8.830	8.832	8.782-8.882	8.833	0.002
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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.006	6.956-7.056	+++++	+++++
39	2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.911	5.861-5.961	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Batch File: /chem2/ecd6.i/20130514PEST.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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.397	6.347-6.447	+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.636	6.586-6.686	+++++	+++++
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.754	1.704-1.804	+++++	+++++
43 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.840	5.790-5.890	+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.162	6.112-6.212	+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.778	6.728-6.828	+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.653	7.603-7.703	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.106-20.206	+++++	+++++
59 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.837	4.787-4.887	+++++	+++++
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/20130514PEST.b/PEST0514B.m
Batch File: /chem2/ecd6.i/20130514PEST.b/ical-2.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0514a005	0514a006	0514a007	0514a008	0514a009	0514a010	0514a011
INJ.DATE:	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013
INJ.TIME:	14:37	14:57	15:17	15:37	15:56	16:16	16:34

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	2.493	2.492	2.493	2.492	2.492	2.493	2.493	2.493	2.443-2.543	2.493	0.000
*	52 1Bromo-2nitrobenzene	3.331	3.331	3.331	3.330	3.329	3.330	3.329	3.331	3.281-3.381	3.330	0.001
*	55 Hexabromobiphenyl	10.370	10.370	10.371	10.372	10.370	10.372	10.371	10.370	10.320-10.421	10.371	0.001
$	2 Tetrachloro-m-xylene	4.168	4.169	4.170	4.168	4.165	4.166	4.166	4.168	4.118-4.218	4.168	0.002
	3 Hexachlorobenzene	4.633	4.638	4.638	4.635	4.631	4.630	4.627	4.633	4.583-4.683	4.633	0.004
	4 alpha-BHC	4.756	4.755	4.756	4.756	4.752	4.754	4.752	4.756	4.706-4.806	4.754	0.002
	5 gamma-BHC (Lindane)	5.115	5.115	5.116	5.115	5.112	5.113	5.111	5.115	5.065-5.165	5.114	0.002
	6 beta-BHC	5.189	5.204	5.203	5.198	5.190	5.186	5.183	5.189	5.139-5.239	5.193	0.008
	7 delta-BHC	5.501	5.513	5.512	5.508	5.502	5.498	5.495	5.501	5.451-5.551	5.504	0.007
	8 Heptachlor	5.579	5.579	5.580	5.579	5.577	5.577	5.575	5.579	5.529-5.629	5.578	0.002
	37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.538-14.638	+++++	+++++
	9 Aldrin	5.917	5.917	5.917	5.917	5.915	5.916	5.913	5.917	5.867-5.967	5.916	0.001
	10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.630-12.730	+++++	+++++
	11 Heptachlor epoxide b	6.470	6.472	6.472	6.471	6.469	6.470	6.467	6.470	6.420-6.520	6.470	0.002
	12 gamma-Chlordane	6.653	6.657	6.657	6.656	6.653	6.652	6.650	6.653	6.603-6.703	6.654	0.003
	13 alpha-Chlordane	6.791	6.793	6.794	6.793	6.790	6.790	6.788	6.791	6.741-6.841	6.791	0.002
	14 Endosulfan I	6.858	6.861	6.861	6.860	6.857	6.857	6.855	6.858	6.808-6.908	6.859	0.002

Reviewer 1 YZ Date: 5/15/13

Reviewer 2 Date: 5/16/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Batch File: /chem2/ecd6.i/20130514PEST.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	6.918	6.925	6.923	6.921	6.918	6.916	6.915	6.918	6.868-6.968	6.919	0.004
	16 Dieldrin	7.116	7.117	7.118	7.116	7.114	7.115	7.113	7.116	7.066-7.166	7.116	0.002
	17 Endrin	7.405	7.407	7.407	7.406	7.404	7.404	7.403	7.405	7.355-7.455	7.405	0.002
	18 4,4'-DDD	7.460	7.466	7.465	7.464	7.462	7.457	7.454	7.460	7.410-7.510	7.461	0.004
	19 Endosulfan II	7.594	7.598	7.598	7.596	7.594	7.593	7.592	7.594	7.544-7.644	7.595	0.002
	20 4,4'-DDT	7.745	7.749	7.749	7.748	7.746	7.743	7.740	7.745	7.695-7.795	7.746	0.003
	21 Endrin aldehyde	7.892	7.895	7.896	7.893	7.892	7.891	7.889	7.892	7.842-7.942	7.892	0.002
	22 Endosulfan sulfate	8.138	8.139	8.140	8.138	8.137	8.136	8.134	8.138	8.088-8.188	8.138	0.002
	23 Methoxychlor	8.327	8.329	8.330	8.329	8.327	8.326	8.325	8.327	8.277-8.377	8.328	0.002
	24 Endrin ketone	8.629	8.631	8.631	8.630	8.629	8.628	8.627	8.629	8.579-8.679	8.629	0.002
$	25 Decachlorobiphenyl	9.791	9.791	9.792	9.792	9.790	9.791	9.791	9.791	9.741-9.841	9.791	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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.338	7.288-7.388	+++++	+++++
	38 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.631	6.581-6.681	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Batch File: /chem2/ecd6.i/20130514PEST.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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.115	7.065-7.165	+++++	+++++
40 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.404	7.354-7.454	+++++	+++++
41 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.732	1.682-1.782	+++++	+++++
42 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.385	6.335-6.435	+++++	+++++
43 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.741	6.691-6.791	+++++	+++++
44 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.465	7.415-7.515	+++++	+++++
45 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.619	8.569-8.669	+++++	+++++
46 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.449-21.549	+++++	+++++
56 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.369	5.319-5.419	+++++	+++++
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 : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a006.d
Level 2: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a007.d
Level 3: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a008.d
Level 4: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a009.d
Level 5: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a013.d
Level 6: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a010.d
Level 7: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a011.d
Level 8: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a013.d/0514a013.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	1.79325	1.69392	1.74961	1.78148	1.75119	1.71302		
	1.98781	+++++					1.78147	5.471
3 Hexachlorobenzene	1.49749	1.39055	1.33447	1.32478	1.26906	1.22701		
	1.39069	+++++					1.34772	6.607
4 alpha-BHC	1.59686	1.53923	1.58723	1.69009	1.72967	1.74432		
	2.04256	+++++					1.70428	9.858
5 gamma-BHC (Lindane)	1.37757	1.32209	1.37386	1.47369	1.50450	1.51729		
	1.76991	+++++					1.47699	10.069
6 beta-BHC	0.73008	0.68228	0.67383	0.64825	0.64133	0.63188		
	0.72204	+++++					0.67567	5.734
7 delta-BHC	1.27862	1.26192	1.31879	1.44766	1.43894	1.47751		
	1.73280	+++++					1.42232	11.390

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 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	1.44016	1.35450	1.36987	1.44472	1.43635	1.40950		
	1.59374	+++++					1.43555	5.447
9 Aldrin	1.33913	1.32192	1.35890	1.43056	1.44425	1.42846		
	1.62361	+++++					1.42098	7.160
38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Heptachlor epoxide b	1.31883	1.22935	1.23549	1.29042	1.26295	1.24015		
	1.39299	+++++					1.28146	4.594
12 gamma-Chlordane	1.34328	1.29043	1.30193	1.38657	1.37855	1.37018		
	1.54904	+++++					1.37428	6.228
13 alpha-Chlordane	1.26506	1.18635	1.20487	1.27829	1.28473	1.27759		
	1.45008	+++++					1.27814	6.667
14 Endosulfan I	1.33723	1.22412	1.19481	1.20636	1.16700	1.12310		
	1.25888	+++++					1.21593	5.636
15 4,4'-DDE	1.07900	0.99206	0.98337	1.00262	1.00227	1.00380		
	1.18006	+++++					1.03474	6.900

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 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	1.28138	1.23307	1.26288	1.31804	1.29159	1.25290		
	1.40559	+++++					1.29221	4.417
17 Endrin	1.00045	0.95140	0.98797	1.05878	1.05845	1.07061		
	1.20035	+++++					1.04686	7.715
18 4,4'-DDD	1.22524	1.14701	1.15954	1.20318	1.16084	1.17739		
	1.32680	+++++					1.20000	5.184
19 Endosulfan II	1.12524	1.08894	1.05454	1.15097	1.11621	1.13029		
	1.27640	+++++					1.13466	6.160
20 4,4'-DDT	1.00324	0.95977	0.99273	1.06721	1.05511	1.10036		
	1.26486	+++++					1.06332	9.513
21 Endrin aldehyde	1.01452	0.92945	0.92202	0.94895	0.90871	0.92167		
	1.03644	+++++					0.95454	5.274
22 Methoxychlor	0.54273	0.50238	0.49266	0.49601	0.47525	0.48309		
	0.56389	+++++					0.50800	6.446
23 Endosulfan sulfate	1.04430	0.96556	0.97447	1.00876	0.98463	1.00608		
	1.14237	+++++					1.01803	5.968
24 Endrin ketone	1.44182	1.27425	1.25105	1.26006	1.20536	1.22442		
	1.39160	+++++					1.29265	6.880

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 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)	+++++	+++++	+++++	+++++	0.04979	+++++		
	+++++	0.04979					0.04979	0.000
(2)	+++++	+++++	+++++	+++++	0.03856	+++++		
	+++++	+++++					0.03856	0.000
(3)	+++++	+++++	+++++	+++++	0.05763	+++++		
	+++++	+++++					0.05763	0.000
(4)	+++++	+++++	+++++	+++++	0.05405	+++++		
	+++++	+++++					0.05405	0.000
(5)	+++++	+++++	+++++	+++++	0.03832	+++++		
	+++++	+++++					0.03832	0.000
(6)	+++++	+++++	+++++	+++++	0.03390	+++++		
	+++++	+++++					0.03390	0.000
39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 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	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
47 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
59 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 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	1.05731	1.02496	1.04909	1.09575	1.10430	1.07844		
	1.22555	+++++					1.09077	6.002
$ 25 Decachlorobiphenyl	1.36908	1.17032	1.18645	1.09539	1.01496	0.99573		
	1.12973	+++++					1.13738	11.007

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a006.d
Level 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a007.d
Level 3: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a008.d
Level 4: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a009.d
Level 5: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a013.d
Level 6: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a010.d
Level 7: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a011.d
Level 8: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a013.d/0514a013.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	1.60053	1.49408	1.47331	1.53778	1.43422	1.40997		
	1.56693	+++++					1.50240	4.639
3 Hexachlorobenzene	1.91130	1.81415	1.84722	1.93843	1.89171	1.80326		
	1.99642	+++++					1.88607	3.694
4 alpha-BHC	1.59644	1.60778	1.71794	1.85564	1.87161	1.84057		
	2.08612	+++++					1.79658	9.554
5 gamma-BHC (Lindane)	1.41279	1.39821	1.47572	1.59627	1.61089	1.59098		
	1.82714	+++++					1.55886	9.485
6 beta-BHC	0.67540	0.64906	0.66168	0.69664	0.70034	0.68947		
	0.76488	+++++					0.69107	5.428
7 delta-BHC	1.25042	1.25618	1.36398	1.51769	1.57828	1.57346		
	1.78854	+++++					1.47551	13.302

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 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	1.52144	1.46615	1.50731	1.56510	1.51707	1.41707		
	1.49206	+++++					1.49803	3.120
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
9 Aldrin	1.36731	1.34038	1.38390	1.47646	1.46628	1.38183		
	1.48140	+++++					1.41394	4.156
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Heptachlor epoxide b	1.31110	1.18086	1.22473	1.27311	1.25167	1.18019		
	1.24678	+++++					1.23835	3.848
12 gamma-Chlordane	1.27948	1.21377	1.25856	1.33964	1.33160	1.27964		
	1.38294	+++++					1.29795	4.382
13 alpha-Chlordane	1.14954	1.11506	1.16114	1.24321	1.22852	1.18631		
	1.28714	+++++					1.19585	5.019
14 Endosulfan I	1.12895	1.09165	1.12764	1.19879	1.17527	1.11474		
	1.17124	+++++					1.14404	3.350
15 4,4'-DDE	1.24203	1.21383	1.24821	1.28890	1.20552	1.12039		
	1.15989	+++++					1.21125	4.679

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 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	1.21939	1.20049	1.19568	1.22906	1.15598	1.05909		
	1.10103	+++++					1.16582	5.498
17 Endrin	1.54901	1.48644	1.53945	1.58915	1.52214	1.42686		
	1.49666	+++++					1.51567	3.431
18 4,4'-DDD	1.88151	1.77566	1.81334	1.83674	1.73699	1.64836		
	1.79856	+++++					1.78445	4.221
19 Endosulfan II	1.82350	1.73853	1.79597	1.88652	1.77228	1.65784		
	1.77324	+++++					1.77827	3.991
20 4,4'-DDT	1.40789	1.35837	1.42769	1.51306	1.44947	1.46591		
	1.66557	+++++					1.46971	6.727
21 Endrin aldehyde	1.51334	1.40321	1.41383	1.43030	1.36548	1.30518		
	1.40698	+++++					1.40547	4.499
22 Endosulfan sulfate	1.47464	1.39724	1.44210	1.49521	1.44784	1.40238		
	1.52333	+++++					1.45468	3.199
23 Methoxychlor	0.67502	0.62296	0.60582	0.57954	0.51795	0.47598		
	0.48760	+++++					0.56641	13.184
24 Endrin ketone	1.70322	1.58267	1.59409	1.60970	1.52594	1.46607		
	1.60759	+++++					1.58418	4.668

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 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)	+++++	+++++	+++++	+++++	0.08641	+++++		
	+++++	+++++					0.08641	0.000
(3)	+++++	+++++	+++++	+++++	0.09252	+++++		
	+++++	+++++					0.09252	0.000
(4)	+++++	+++++	+++++	+++++	0.06545	+++++		
	+++++	+++++					0.06545	0.000
(5)	+++++	+++++	+++++	+++++	0.08604	+++++		
	+++++	+++++					0.08604	0.000
38 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
39 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
40 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
41 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
42 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 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	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
44 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
45 Mirex	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
46 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
56 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 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	1.36753	1.31204	1.33239	1.36072	1.28841	1.21312		
	1.22974	+++++					1.30057	4.662
$ 25 Decachlorobiphenyl	1.80274	1.62026	1.59384	1.59909	1.52505	1.48844		
	1.68340	+++++					1.61612	6.428

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a005.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a005.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-MAY-2013 14:37
Compound Sublist: INDA Report Date: 05/15/2013 14:42
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

YE 5/15/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.162	0.000	5500669	3.331	0.002	29060499	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.332	0.000	2378587	4.756	0.004	13597458	20.2980	20.8352	2.6	alpha-BHC
4.697	0.000	881930	5.189	0.006	5088022	18.9835	20.2683	6.5	beta-BHC
4.868	0.000	1978785	5.501	0.006	11466386	20.2337	21.3930	5.6	delta-BHC
4.617	0.000	2068937	5.115	0.004	11703292	20.3725	20.6675	1.4	gamma-BHC (Lindane)
5.065	0.000	1975223	5.579	0.004	11021714	20.0112	20.2542	1.2	Heptachlor
5.359	0.000	1986091	5.917	0.004	10652708	20.3276	20.7404	2.0	Aldrin
5.933	0.000	1736770	6.470	0.003	9093575	19.7112	20.2152	2.5	Heptachlor epoxide b
6.310	0.000	1604825	6.858	0.003	8538511	19.1953	20.5460	6.8	Endosulfan I
6.532	0.000	3552297	7.116	0.003	16796653	39.9808	39.6624	0.8	Dieldrin
6.235	0.000	2756569	6.918	0.003	17516467	38.7447	39.8107	2.7	4,4'-DDE
6.751	0.000	2814950	7.405	0.002	12569567	40.4428	40.1706	0.7	Endrin
6.959	0.000	2968558	7.594	0.003	14635204	39.3496	39.8653	1.3	Endosulfan II
6.800	0.000	3087253	7.460	0.006	14343775	38.6946	38.9360	0.6	4,4'-DDD
7.727	0.000	2618632	8.138	0.003	11956025	38.6879	39.8119	2.9	Endosulfan sulfate
7.053	0.000	2806075	7.745	0.004	11969550	39.6911	39.4493	0.6	4,4'-DDT
7.479	0.000	6319705	8.327	0.002	21385691	187.1070	182.8875	2.3	Methoxychlor
7.983	0.000	3205646	8.629	0.002	12600957	37.2987	38.5293	3.2	Endrin ketone
7.336	0.000	2416722	7.892	0.003	11275916	38.0797	38.8617	2.0	Endrin aldehyde
6.054	0.000	1895741	6.653	0.003	9674267	20.0621	20.5186	2.2	gamma-Chlordane
6.177	0.000	1766712	6.791	0.003	8925381	20.1031	20.5465	2.2	alpha-Chlordane
2.336	0.000	2408182	2.493	0.000	10419791	19.6601	19.0923	2.9	Hexachlorobutadiene
4.186	0.000	1745176	4.633	0.006	13743481	18.8327	20.0598	6.3	Hexachlorobenzene
8.997	0.000	5319006	10.370	-0.001	16515704	80.0000	80.0000	0.0	Hexabromobiphenyl
3.840	0.000	3037199	4.168	0.002	18720888	40.4962	39.6261	2.2	Tetrachloro-m-xylen
8.832	0.000	2699302	9.791	0.001	12593626	35.6948	37.7460	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	101.2	99.1	99.1~	115- 0
Decachlorobiphenyl	89.2	94.4	89.2~	115- 0

~ Indicates recovery outside QC Limits

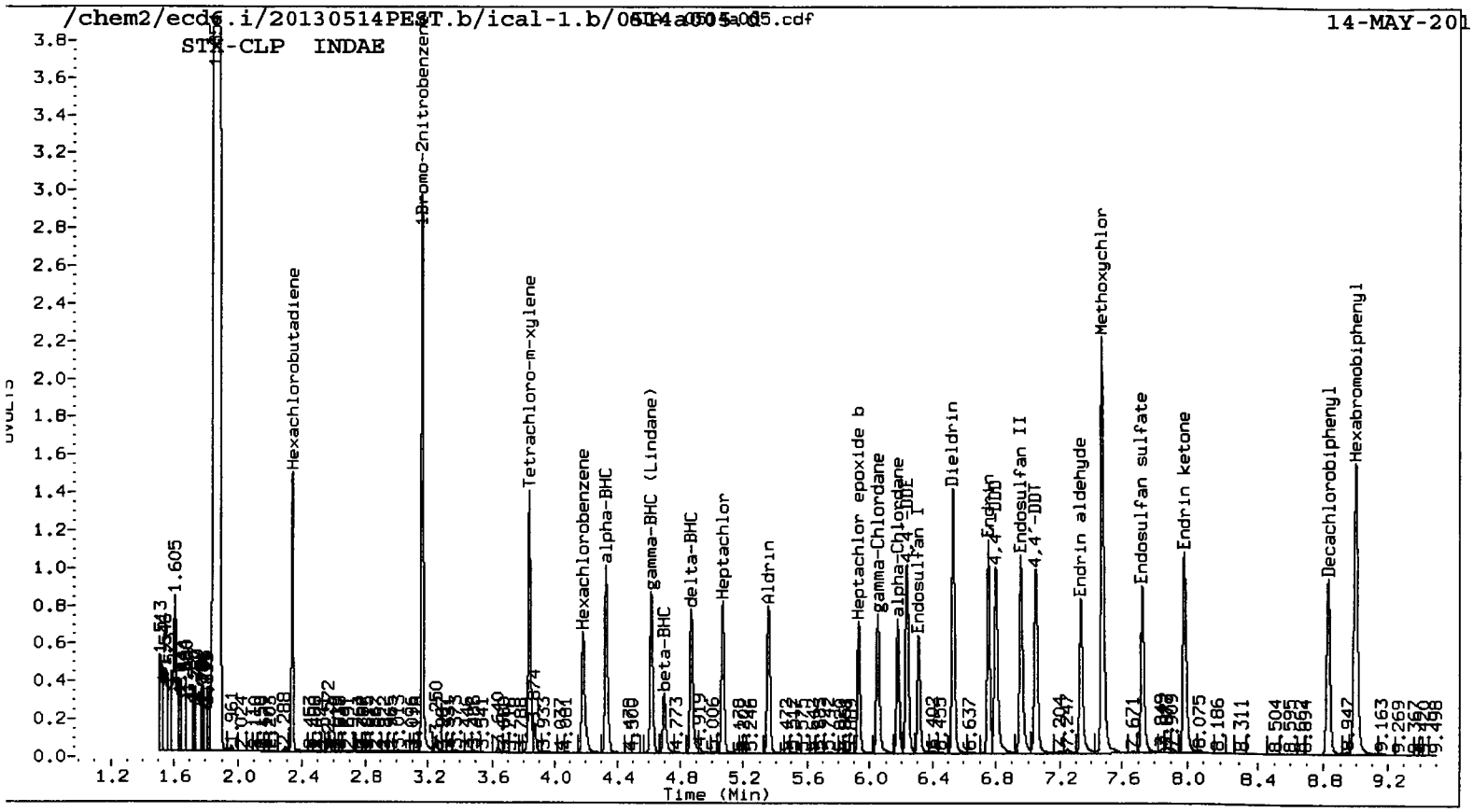
INTERNAL STANDARD SUMMARY

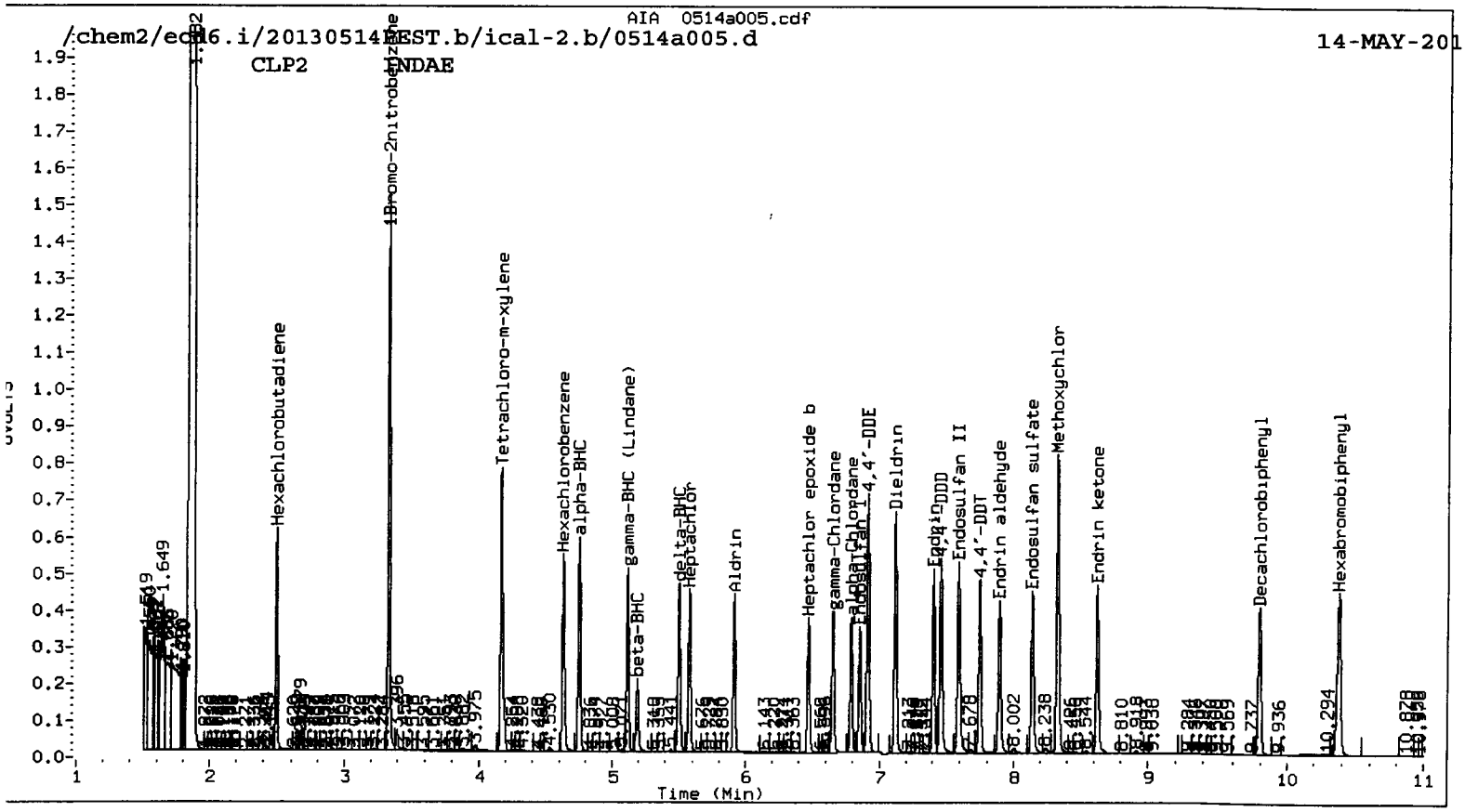
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5500669	0.0
Hexabromobiphenyl	5319006	5319006	0.0

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29060499	0.0
Hexabromobiphenyl	16515704	16515704	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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


/chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a005.d
14-MAY-201
STX-CLP INDAE
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
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)


AIA 0514a005.cdf
/chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a005.d
14-MAY-201
CLP2 INDAE
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
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a006.d ARI ID: INDAA YZ 5/15/13
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a006.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-MAY-2013 14:57
Compound Sublist: INDA Report Date: 05/15/2013 14:42
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
3.162	0.000	5276720	3.331	0.001	28661245	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.331	0.000	131659	4.755	0.004	714937	1.1712	1.1107	5.3	alpha-BHC
4.724	0.000	60194	5.204	0.021	302466	1.3507	1.2217	10.0	beta-BHC
4.894	0.000	105421	5.513	0.018	559976	1.1237	1.0593	5.9	delta-BHC
4.618	0.000	113579	5.115	0.004	632692	1.1659	1.1329	2.9	gamma-BHC (Lindane)
5.065	0.000	118739	5.579	0.004	681351	1.2540	1.2695	1.2	Heptachlor
5.359	0.000	110410	5.917	0.003	612325	1.1780	1.2088	2.6	Aldrin
5.935	0.000	108736	6.472	0.004	587152	1.2865	1.3234	2.8	Heptachlor epoxide b
6.315	0.000	110253	6.861	0.006	505578	1.3747	1.2335	10.8	Endosulfan I
6.536	0.000	211297	7.117	0.004	1092166	2.4791	2.6149	5.3	Dieldrin
6.247	0.000	177925	6.925	0.010	1112439	2.6069	2.5635	1.7	4,4'-DDE
6.755	0.000	157918	7.407	0.004	778157	2.3892	2.5550	6.7	Endrin
6.966	0.000	177617	7.598	0.006	916046	2.4793	2.5636	3.3	Endosulfan II
6.812	0.000	193401	7.466	0.012	945192	2.5526	2.6360	3.2	4,4'-DDD
7.731	0.000	164840	8.139	0.005	740798	2.5645	2.5343	1.2	Endosulfan sulfate
7.063	0.000	158359	7.749	0.009	707264	2.3587	2.3948	1.5	4,4'-DDT
7.487	0.000	428340	8.329	0.004	1695513	13.3544	14.8969	10.9	Methoxychlor
7.987	0.000	227587	8.631	0.004	855623	2.7885	2.6878	3.7	Endrin ketone
7.341	0.000	160140	7.895	0.007	760235	2.6571	2.6919	1.3	Endrin aldehyde
6.060	0.000	110752	6.657	0.007	572990	1.2218	1.2322	0.8	gamma-Chlordane
6.183	0.000	104303	6.793	0.006	514801	1.2372	1.2016	2.9	alpha-Chlordane
2.336	0.000	147851	2.492	-0.001	716768	1.2583	1.3316	5.7	Hexachlorobutadiene
4.197	0.000	123466	4.638	0.010	855939	1.3889	1.2667	9.2	Hexachlorobenzene
8.998	0.000	5051117	10.370	-0.001	16075431	80.0000	80.0000	0.0	Hexabromobiphenyl
3.842	0.000	174347	4.169	0.003	1224847	2.4233	2.6287	8.1	Tetrachloro-m-xylene
8.834	0.000	216105	9.791	0.001	905617	3.0093	2.7887	7.6	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	6.1	6.6	6.1~	115- 0
Decachlorobiphenyl	7.5	7.0	7.0~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

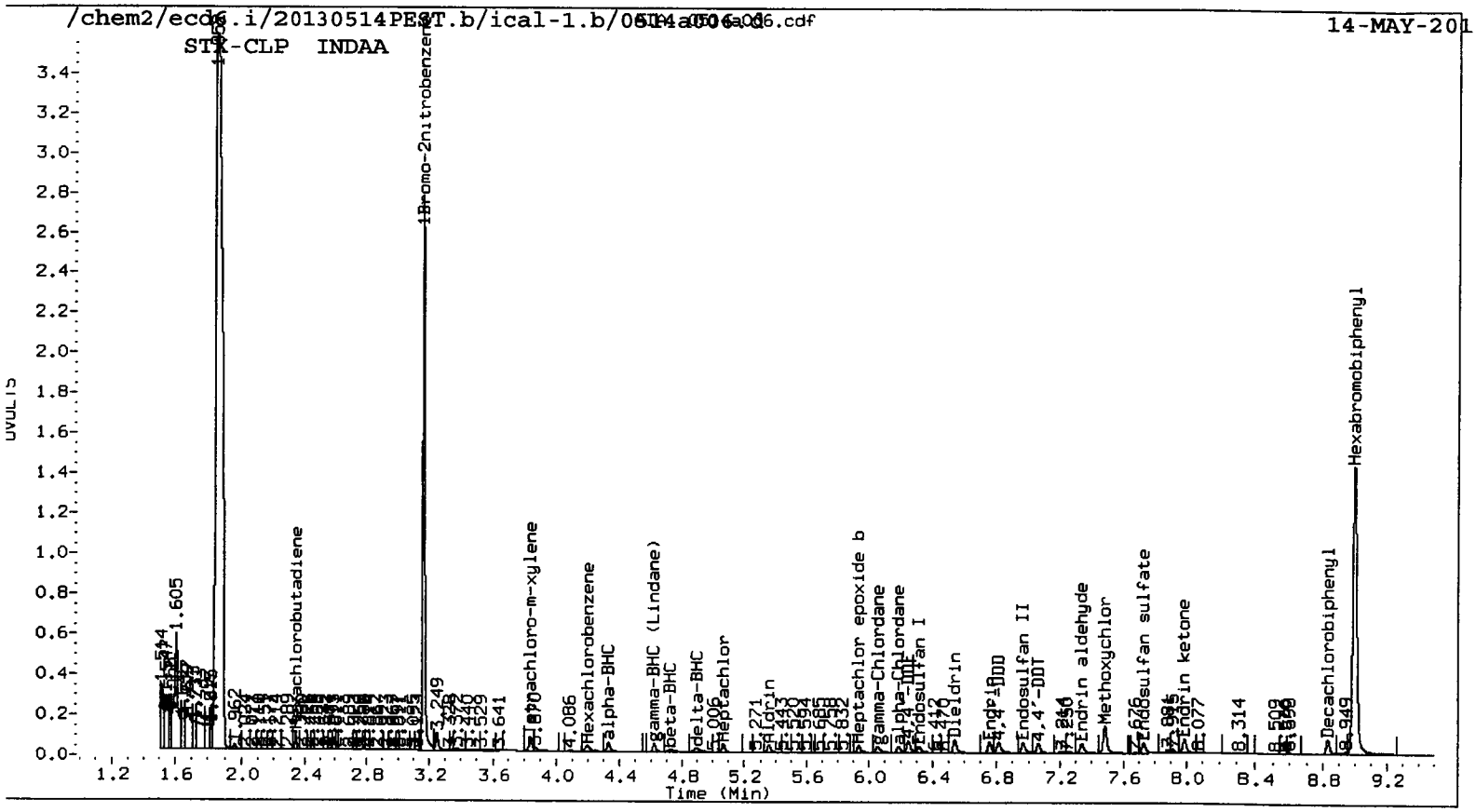
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5276720	-4.1
Hexabromobiphenyl	5319006	5051117	-5.0

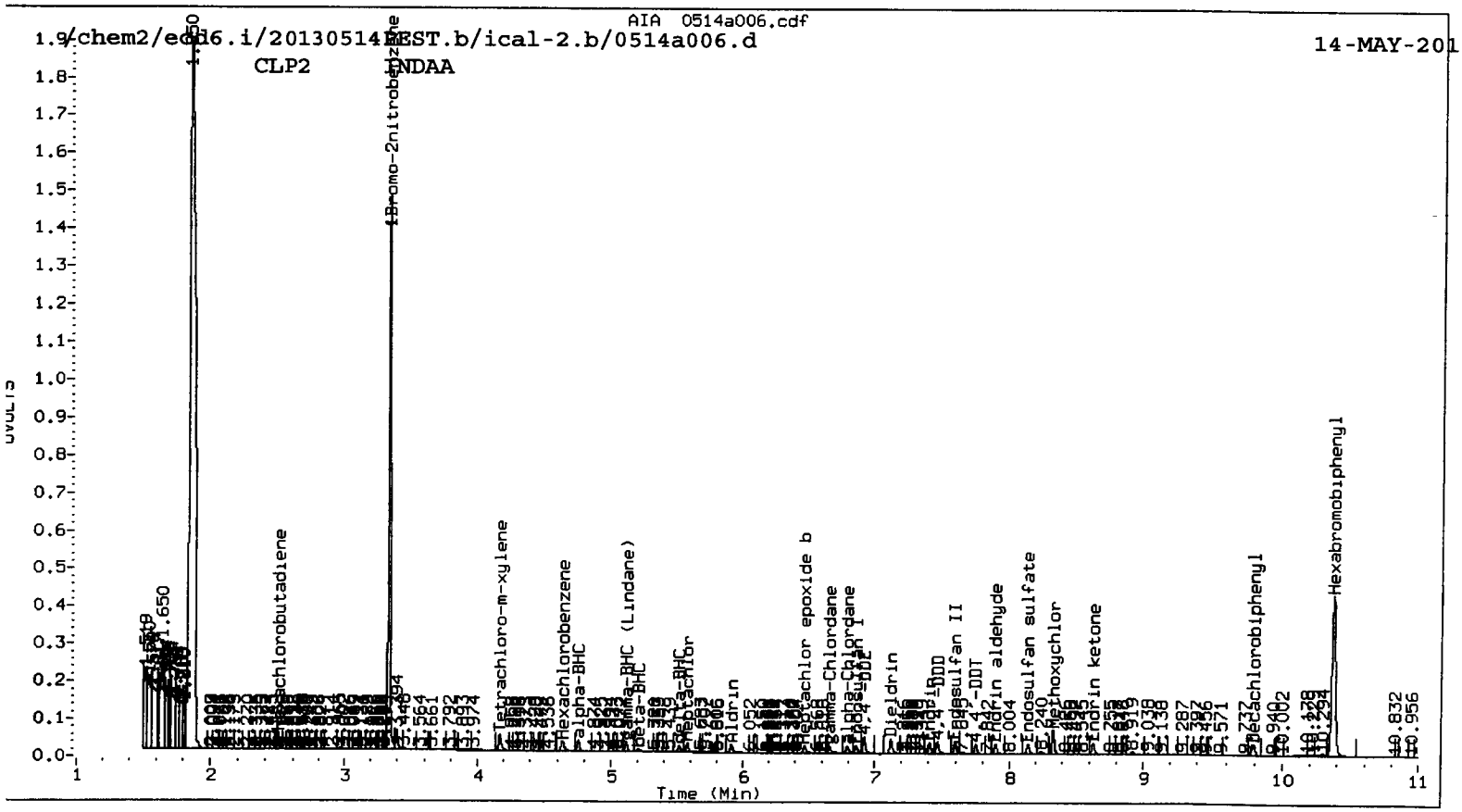
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	28661245	-1.4
Hexabromobiphenyl	16515704	16075431	-2.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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/20130514PEST.b/ical-1.b/0514a006.d
STX-CLP INDAA
14-MAY-201
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
Dieldrin
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)


AIA 0514a006.cdf
/chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a006.d
CLP2 INDAA
14-MAY-201
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
Dieldrin
Endrin
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

YZ 5/15/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a007.d ARI ID: INDAB
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a007.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 14-MAY-2013 15:17
Report Date: 05/15/2013 14:42
Matrix: NONE
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
3.162	0.000	5534770	3.331	0.002	30201103	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.332	0.000	266227	4.756	0.005	1517399	2.2579	2.2373	0.9	alpha-BHC
4.720	0.000	118008	5.203	0.020	612573	2.5245	2.3480	7.2	beta-BHC
4.890	0.000	218264	5.512	0.017	1185561	2.2181	2.1284	4.1	delta-BHC
4.619	0.000	228671	5.116	0.006	1319610	2.2378	2.2424	0.2	gamma-BHC (Lindane)
5.066	0.000	234277	5.580	0.005	1383730	2.3589	2.4468	3.7	Heptachlor
5.360	0.000	228641	5.917	0.004	1265030	2.3257	2.3699	1.9	Aldrin
5.936	0.000	212631	6.472	0.005	1114482	2.3984	2.3839	0.6	Heptachlor epoxide b
6.314	0.000	211726	6.861	0.006	1030282	2.5168	2.3855	5.4	Endosulfan I
6.536	0.000	426547	7.118	0.005	2266016	4.7712	5.1487	7.6	Dieldrin
6.245	0.000	343175	6.923	0.008	2291185	4.7937	5.0106	4.4	4,4'-DDE
6.755	0.000	319855	7.407	0.004	1592938	4.5441	4.9036	7.6	Endrin
6.964	0.000	366093	7.598	0.006	1863085	4.7985	4.8883	1.9	Endosulfan II
6.812	0.000	385618	7.465	0.011	1902877	4.7792	4.9754	4.0	4,4'-DDD
7.730	0.000	324616	8.140	0.005	1497340	4.7423	4.8026	1.3	Endosulfan sulfate
7.062	0.000	322667	7.749	0.009	1455693	4.5130	4.6212	2.4	4,4'-DDT
7.486	0.000	844492	8.330	0.005	3337982	24.7235	27.4961	10.6	Methoxychlor
7.986	0.000	428395	8.631	0.005	1696063	4.9288	4.9952	1.3	Endrin ketone
7.341	0.000	312474	7.896	0.007	1503742	4.8686	4.9919	2.5	Endrin aldehyde
6.059	0.000	223194	6.657	0.007	1145536	2.3475	2.3379	0.4	gamma-Chlordane
6.182	0.000	205193	6.794	0.006	1052375	2.3205	2.3311	0.5	alpha-Chlordane
2.336	0.000	292983	2.493	0.000	1410088	2.3771	2.4861	4.5	Hexachlorobutadiene
4.195	0.000	240511	4.638	0.010	1712164	2.5794	2.4047	7.0	Hexachlorobenzene
8.998	0.000	5379091	10.371	0.000	17146317	80.0000	80.0000	0.0	Hexabromobiphenyl
3.842	0.000	354557	4.170	0.003	2476566	4.6983	5.0441	7.1	Tetrachloro-m-xylene
8.834	0.000	393452	9.792	0.002	1736343	5.1448	5.0128	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	11.7	12.6	11.7~	115- 0
Decachlorobiphenyl	12.9	12.5	12.5~	115- 0

~ Indicates recovery outside QC Limits

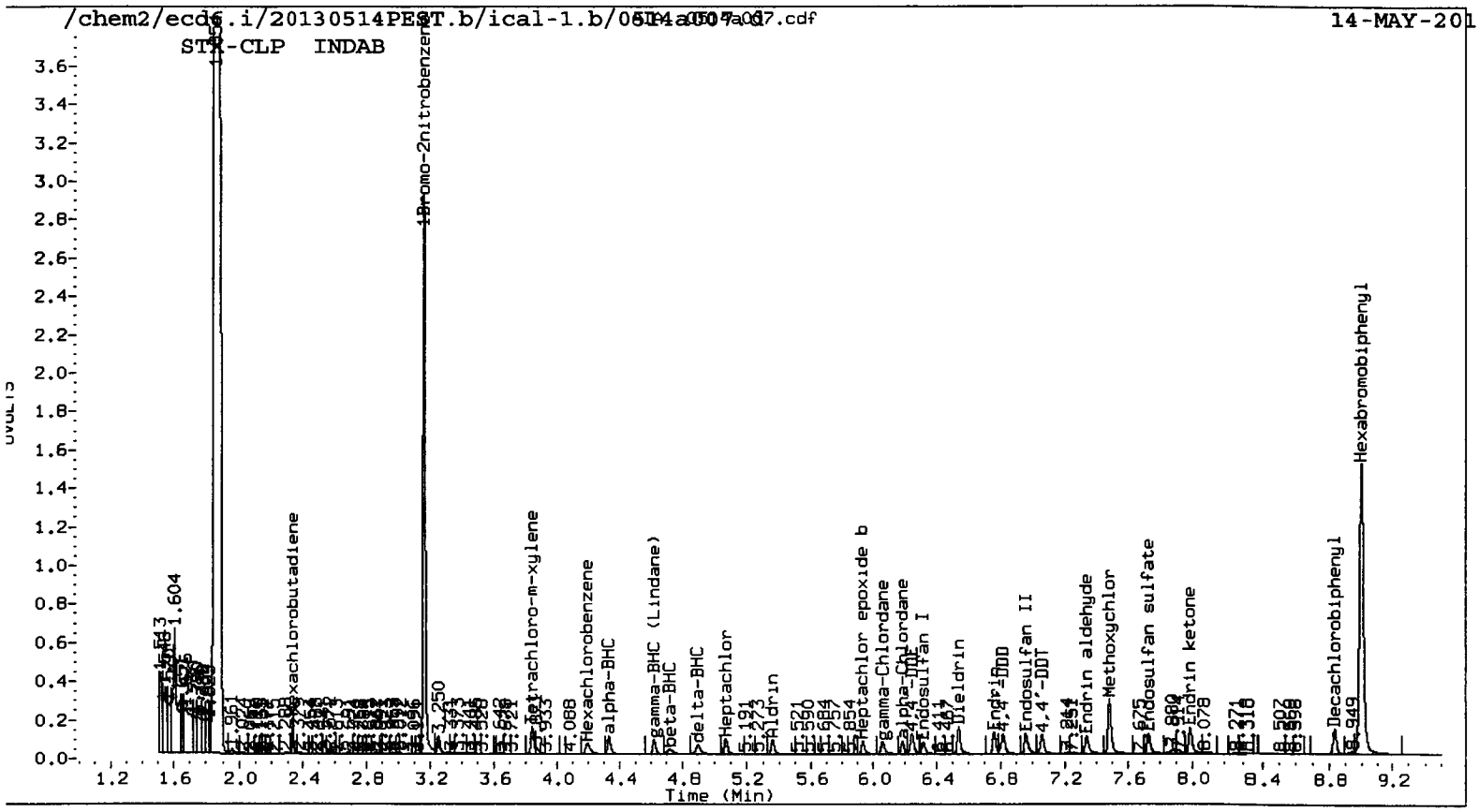
INTERNAL STANDARD SUMMARY

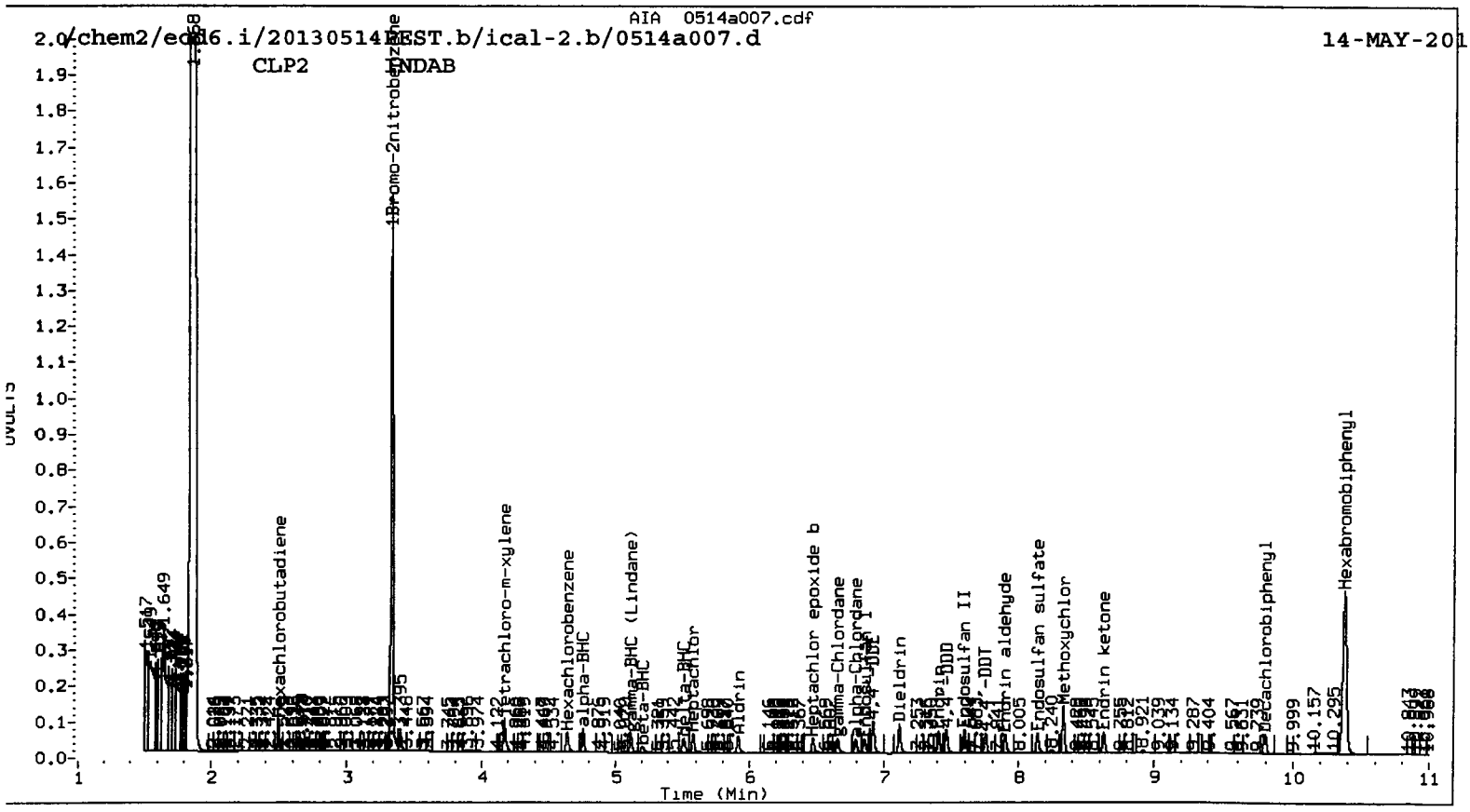
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5534770	0.6
Hexabromobiphenyl	5319006	5379091	1.1

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	30201103	3.9
Hexabromobiphenyl	16515704	17146317	3.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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


/chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a007.d
0514a007.cdf
14-MAY-201
STX-CLP INDAB
1Bromo-2nitrobenzene
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
Dieldrin
4,4'-DDE
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)


AIA 0514a007.cdf
/chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a007.d
14-MAY-201
CLP2 INDAB
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobutadiene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a008.d ARI ID: INDAC
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a008.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 14-MAY-2013 15:37
Report Date: 05/15/2013 14:42
Matrix: NONE
Dilution Factor: 1.000

yz 5/15/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.161	0.000	5478422	3.330	0.001	29972511	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.331	0.000	543471	4.756	0.004	3218177	4.6566	4.7811	2.6	alpha-BHC
4.712	0.000	230721	5.198	0.015	1239504	4.9864	4.7874	4.1	beta-BHC
4.882	0.000	451555	5.508	0.012	2555115	4.6360	4.6221	0.3	delta-BHC
4.618	0.000	470412	5.115	0.004	2764445	4.6509	4.7334	1.8	gamma-BHC (Lindane)
5.065	0.000	469047	5.579	0.004	2823616	4.7713	5.0310	5.3	Heptachlor
5.359	0.000	465290	5.917	0.004	2592438	4.7816	4.8938	2.3	Aldrin
5.934	0.000	423034	6.471	0.004	2294257	4.8207	4.9450	2.5	Heptachlor epoxide b
6.313	0.000	409103	6.860	0.004	2112396	4.9131	4.9283	0.3	Endosulfan I
6.534	0.000	864822	7.116	0.003	4479682	9.7730	10.2561	4.8	Dieldrin
6.241	0.000	673413	6.921	0.006	4676501	9.5035	10.3051	8.1	4,4'-DDE
6.753	0.000	657274	7.406	0.003	3232003	9.4374	10.1569	7.3	Endrin
6.962	0.000	701565	7.596	0.004	3770541	9.2939	10.0995	8.3	Endosulfan II
6.809	0.000	771416	7.464	0.010	3807006	9.6628	10.1619	5.0	4,4'-DDD
7.729	0.000	648297	8.138	0.004	3027616	9.5722	9.9135	3.5	Endosulfan sulfate
7.059	0.000	660441	7.748	0.007	2997363	9.3361	9.7141	4.0	4,4'-DDT
7.484	0.000	1638780	8.329	0.004	6359453	48.4899	53.4789	9.8	Methoxychlor
7.985	0.000	832294	8.630	0.003	3346715	9.6782	10.0626	3.9	Endrin ketone
7.339	0.000	613397	7.893	0.005	2968269	9.6593	10.0595	4.1	Endrin aldehyde
6.057	0.000	445784	6.656	0.006	2357637	4.7368	4.8483	2.3	gamma-Chlordane
6.180	0.000	412550	6.793	0.005	2175134	4.7134	4.8549	3.0	alpha-Chlordane
2.336	0.000	599069	2.492	-0.001	2759930	4.9106	4.9032	0.2	Hexachlorobutadiene
4.190	0.000	456923	4.635	0.008	3460369	4.9508	4.8970	1.1	Hexachlorobenzene
8.999	0.000	5322227	10.372	0.001	16795593	80.0000	80.0000	0.0	Hexabromobiphenyl
3.840	0.000	718422	4.168	0.002	4991895	9.6179	10.2447	6.3	Tetrachloro-m-xylene
8.833	0.000	789319	9.792	0.001	3346191	10.4314	9.8622	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	24.0	25.6	24.0~	115- 0
Decachlorobiphenyl	26.1	24.7	24.7~	115- 0

USGS : 00000

~ Indicates recovery outside QC Limits

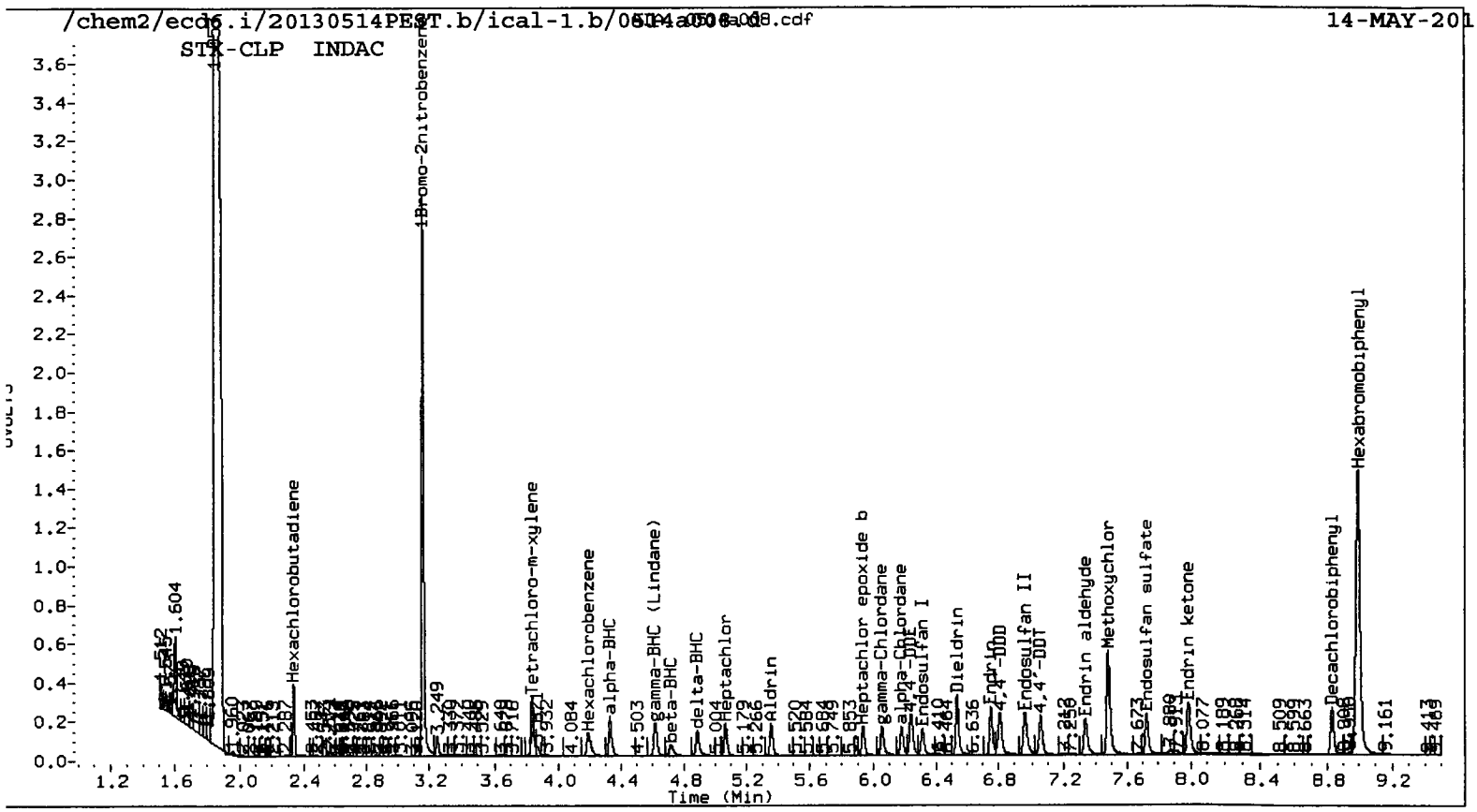
INTERNAL STANDARD SUMMARY

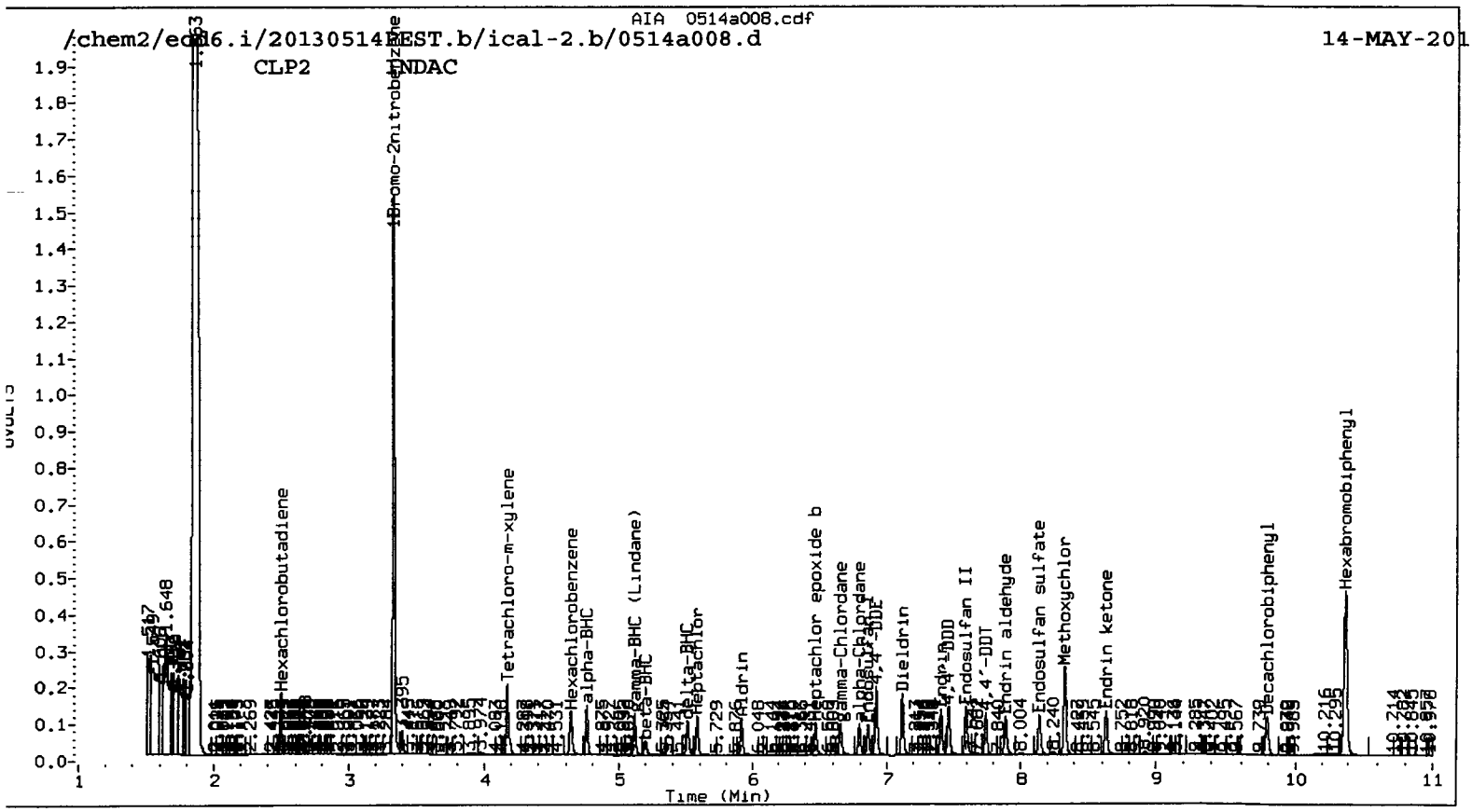
Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	%D
Bromo-Nitrobenzene	5500669	5478422	-0.4
Hexabromobiphenyl	5319006	5322227	0.1

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	%D
Bromo-Nitrobenzene	29060499	29972511	3.1
Hexabromobiphenyl	16515704	16795593	1.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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


/chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a008.d
0514a008.cdf
14-MAY-201
STX-CLP INDAC
1.604
Hexachlorobutadiene
1Bromo-2nitrobenzene
3.249
Tetrachloro-m-xylene
4.084
Hexachlorobenzene
alpha-BHC
4.503
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
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
9.161
Hexabromobiphenyl
Time (Min)


AIA 0514a008.cdf
/chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a008.d
14-MAY-201
CLP2 INDAC
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
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a009.d ARI ID: INDAD
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a009.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-MAY-2013 15:56
Compound Sublist: INDA Report Date: 05/15/2013 14:42
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

YZ 5/16/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.160	0.000	5395940	3.329	0.000	29160968	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.328	0.000	1139950	4.752	0.001	6764016	9.9167	10.3287	4.1	alpha-BHC
4.702	0.000	437239	5.190	0.008	2539348	9.5942	10.0807	4.9	beta-BHC
4.872	0.000	976436	5.502	0.006	5532164	10.1781	10.2859	1.1	delta-BHC
4.614	0.000	993991	5.112	0.002	5818591	9.9777	10.2400	2.6	gamma-BHC (Lindane)
5.062	0.000	974450	5.577	0.002	5704997	10.0639	10.4478	3.7	Heptachlor
5.356	0.000	964900	5.915	0.002	5381877	10.0674	10.4422	3.7	Aldrin
5.931	0.000	870381	6.469	0.001	4640629	10.0700	10.2807	2.1	Heptachlor epoxide b
6.309	0.000	813681	6.857	0.002	4369749	9.9213	10.4786	5.5	Endosulfan I
6.531	0.000	1778022	7.114	0.001	8960153	20.3999	21.0850	3.3	Dieldrin
6.235	0.000	1352520	6.918	0.003	9396365	19.3792	21.2821	9.4	4,4'-DDE
6.750	0.000	1372588	7.404	0.001	6565999	20.2278	20.9695	3.6	Endrin
6.958	0.000	1492098	7.594	0.002	7794686	20.2876	21.2175	4.5	Endosulfan II
6.806	0.000	1559782	7.462	0.008	7589012	20.0530	20.5861	2.6	4,4'-DDD
7.726	0.000	1307738	8.137	0.003	6177871	19.8180	20.5573	3.7	Endosulfan sulfate
7.056	0.000	1383512	7.746	0.006	6251609	20.0731	20.5899	2.5	4,4'-DDT
7.482	0.000	3215078	8.327	0.002	11972694	97.6388	102.3181	4.7	Methoxychlor
7.982	0.000	1633514	8.629	0.002	6650933	19.4957	20.3222	4.2	Endrin ketone
7.336	0.000	1230206	7.892	0.003	5909701	19.8830	20.3533	2.3	Endrin aldehyde
6.052	0.000	935231	6.653	0.003	4883146	10.0894	10.3212	2.3	gamma-Chlordane
6.176	0.000	862198	6.790	0.002	4531641	10.0012	10.3961	3.9	alpha-Chlordane
2.336	0.000	1201598	2.492	-0.001	5605387	10.0001	10.2355	2.3	Hexachlorobutadiene
4.186	0.000	893552	4.631	0.004	7065810	9.8298	10.2776	4.5	Hexachlorobenzene
8.998	0.000	5185525	10.370	-0.001	16527116	80.0000	80.0000	0.0	Hexabromobiphenyl
3.837	0.000	1478146	4.165	-0.001	9919999	20.0912	20.9251	4.1	Tetrachloro-m-xylene
8.832	0.000	1420049	9.790	0.000	6607102	19.2617	19.7893	2.7	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	50.2	52.3	50.2~	115- 0
Decachlorobiphenyl	48.2	49.5	48.2~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

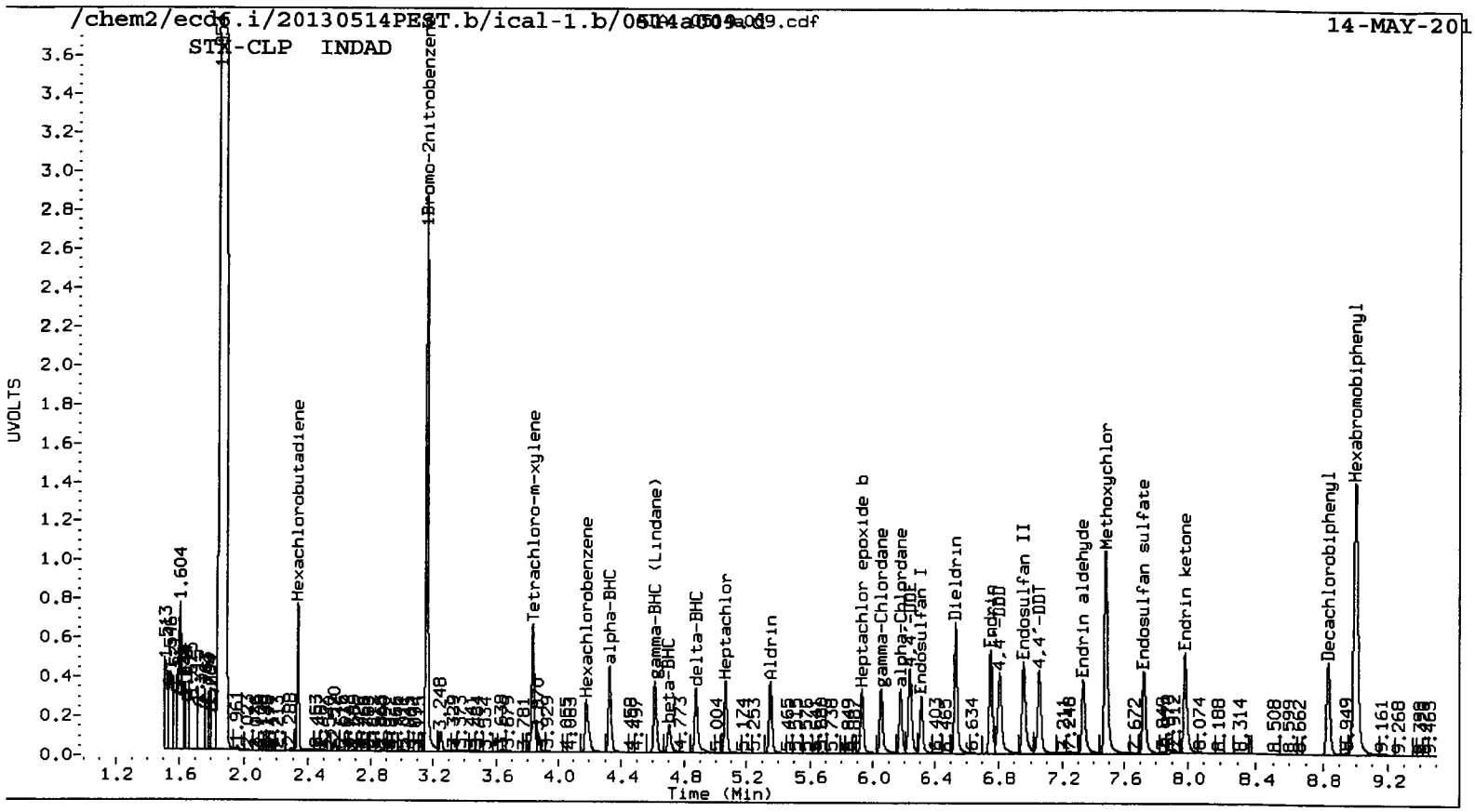
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5395940	-1.9
Hexabromobiphenyl	5319006	5185525	-2.5

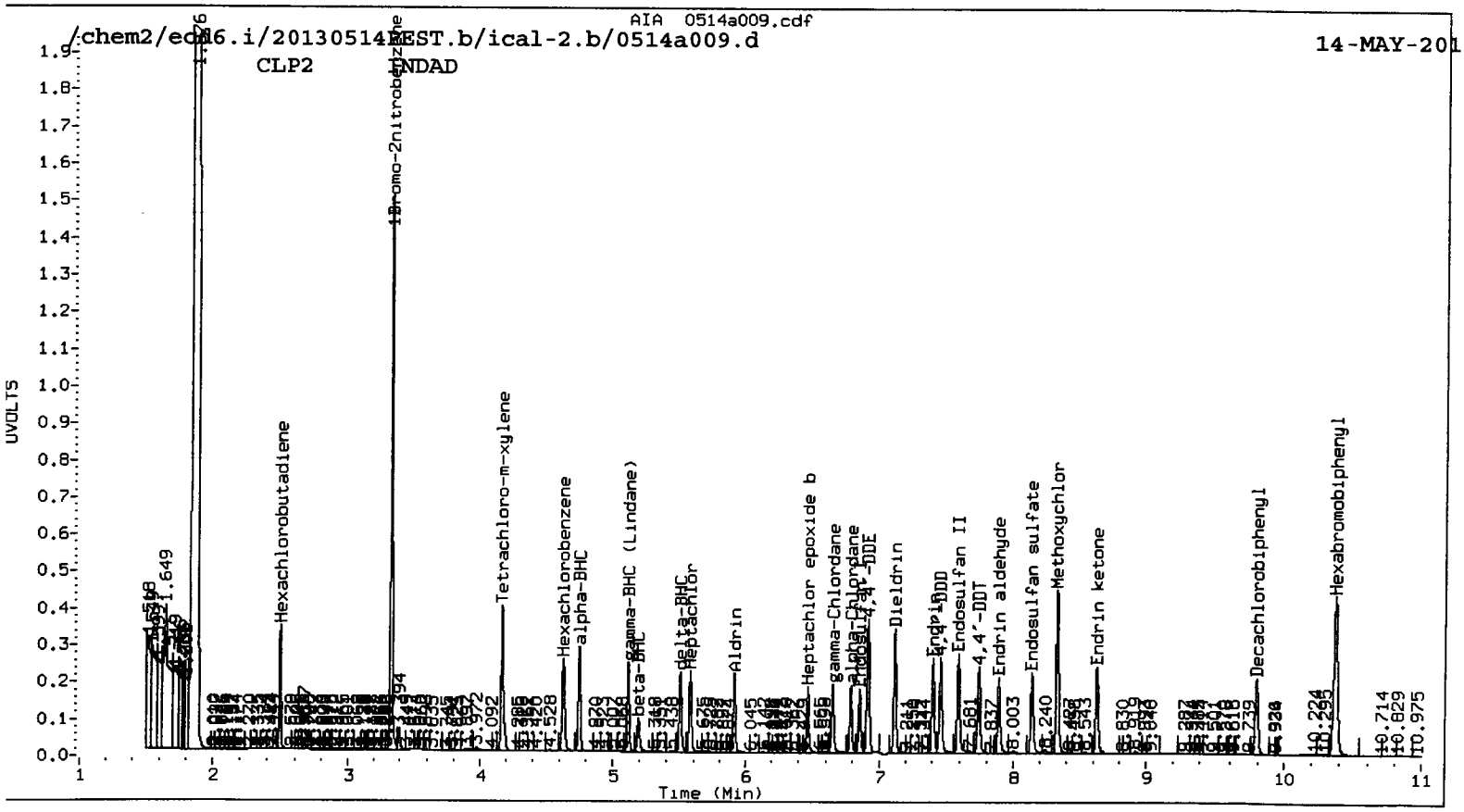
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29160968	0.3
Hexabromobiphenyl	16515704	16527116	0.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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/20130514PEST.b/ical-1.b/0514a009.d
14-MAY-201
STX-CLP INDAD
UVOLTS
Time (Min)
1.604
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
Endosulfan I
Dieldrin
4,4'-DDT
Endosulfan II
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0514a009.cdf
/chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a009.d
14-MAY-201
CLP2 INDAD
UVOLTS
Time (Min)
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
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/20130514PEST.b/ical-1.b/0514a010.d ARI ID: INDAF YZ 5/15/13
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a010.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-MAY-2013 16:16
Compound Sublist: INDA Report Date: 05/15/2013 14:42
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
3.161	0.000	5385380	3.330	0.001	29405183	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.329	0.000	4696911	4.754	0.002	27061082	40.9398	40.9793	0.1	alpha-BHC
4.692	0.000	1701444	5.186	0.003	10136932	37.4075	39.9074	6.5	beta-BHC
4.863	0.000	3978478	5.498	0.003	23133964	41.5521	42.6555	2.6	delta-BHC
4.614	0.000	4085589	5.113	0.002	23391530	41.0915	40.8243	0.7	gamma-BHC (Lindane)
5.063	0.000	3795342	5.577	0.002	20834563	39.2741	37.8382	3.7	Heptachlor
5.357	0.000	3846389	5.916	0.002	20316416	40.2106	39.0916	2.8	Aldrin
5.931	0.000	3339340	6.470	0.002	17351838	38.7107	38.1214	1.5	Heptachlor epoxide
6.309	0.000	3024165	6.857	0.002	16389635	36.9463	38.9756	5.3	Endosulfan I
6.531	0.000	6747354	7.115	0.002	31142629	77.5666	72.6760	6.5	Dieldrin
6.232	0.000	5405842	6.916	0.002	32945159	77.6079	73.9986	4.8	4,4'-DDE
6.749	0.000	5376621	7.404	0.001	23448845	81.8151	75.3121	8.3	Endrin
6.956	0.000	5676334	7.593	0.001	27244763	79.6922	74.5822	6.6	Endosulfan II
6.795	0.000	5912865	7.457	0.003	27089075	78.4926	73.8989	6.0	4,4'-DDD
7.725	0.000	5052560	8.136	0.002	23046636	79.0614	77.1240	2.5	Endosulfan sulfate
7.049	0.000	5526006	7.743	0.003	24090708	82.7862	79.7934	3.7	4,4'-DDT
7.478	0.000	12130490	8.326	0.001	39111410	380.3859	336.1400	12.4	Methoxychlor
7.981	0.000	6149035	8.628	0.002	24093264	75.7772	74.0354	2.3	Endrin ketone
7.334	0.000	4628640	7.891	0.002	21449280	77.2455	74.2914	3.9	Endrin aldehyde
6.051	0.000	3689472	6.652	0.002	18814044	39.8806	39.4359	1.1	gamma-Chlordane
6.175	0.000	3440149	6.790	0.002	17441880	39.9828	39.6812	0.8	alpha-Chlordane
2.336	0.000	4612620	2.493	-0.001	20730266	38.4630	37.5391	2.4	Hexachlorobutadiene
4.183	0.000	3303966	4.630	0.003	26512574	36.4174	38.2438	4.9	Hexachlorobenzene
8.999	0.000	5022010	10.372	0.001	16433920	80.0000	80.0000	0.0	Hexabromobiphenyl
3.837	0.000	5807812	4.166	0.000	35671955	79.0956	74.6210	5.8	Tetrachloro-m-xylen
8.832	0.000	5000587	9.791	0.001	24460912	70.0370	73.6798	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	197.7	186.6	186.6~	115- 0
Decachlorobiphenyl	175.1	184.2	175.1~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

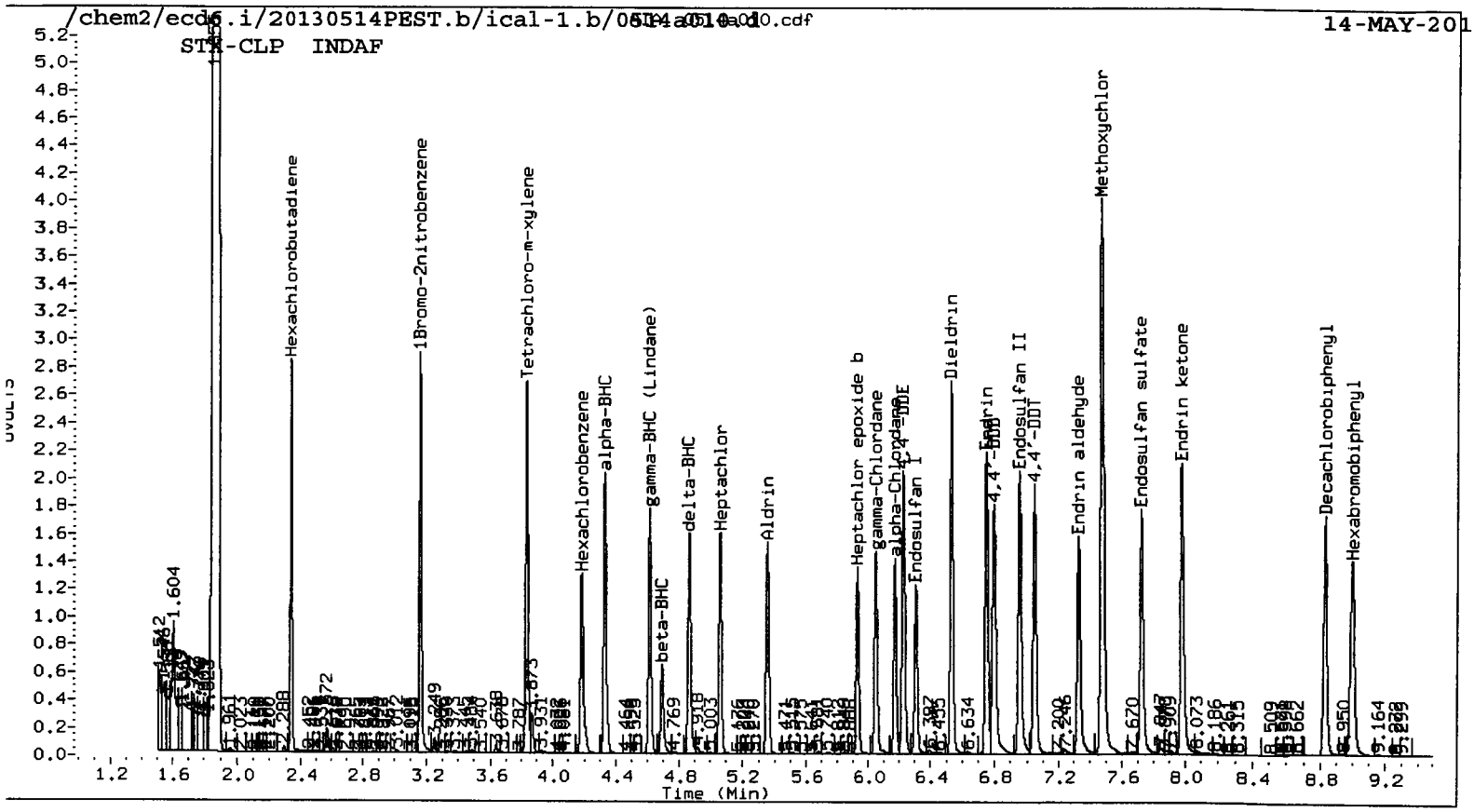
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5385380	-2.1
Hexabromobiphenyl	5319006	5022010	-5.6

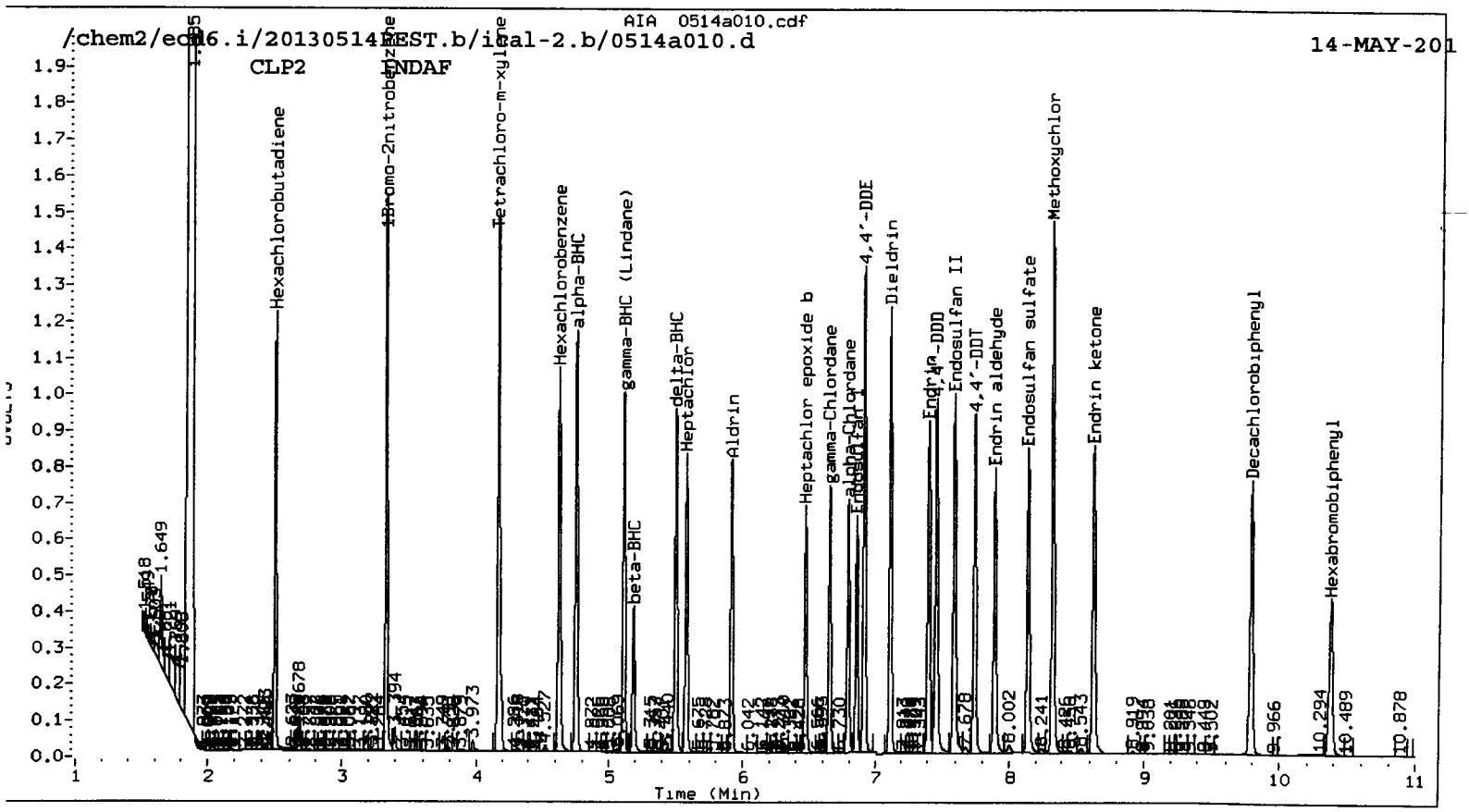
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29405183	1.2
Hexabromobiphenyl	16515704	16433920	-0.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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/20130514PEST.b/ical-1.b/0514a010.d
STX-CLP INDAF
14-MAY-201
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
Time (Min)


AIA 0514a010.cdf
/chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a010.d
CLP2 INDAF
14-MAY-201
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
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/20130514PEST.b/ical-1.b/0514a011.d ARI ID: INDAG YZ 5/15/13
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a011.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-MAY-2013 16:34
Compound Sublist: INDA Report Date: 05/15/2013 14:42
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
3.160	0.000	4447256	3.329	0.000	24971444	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.326	0.000	9083784	4.752	0.000	52093305	95.8791	92.8926	3.2	alpha-BHC
4.687	0.000	3211079	5.183	0.000	19100075	85.4901	88.5447	3.5	beta-BHC
4.858	0.000	7706224	5.495	0.000	44662411	97.4634	96.9723	0.5	delta-BHC
4.611	0.000	7871237	5.111	0.000	45626240	95.8659	93.7681	2.2	gamma-BHC (Lindane)
5.059	0.000	7087765	5.575	0.000	37258776	88.8156	79.6810	10.8	Heptachlor
5.353	0.000	7220609	5.913	0.000	36992672	91.4082	83.8170	8.7	Aldrin
5.928	0.000	6194985	6.467	0.000	31134002	86.9630	80.5449	7.7	Heptachlor epoxide
6.306	0.000	5598549	6.855	0.000	29247673	82.8257	81.9022	1.1	Endosulfan I
6.528	0.000	12502052	7.113	0.000	54988789	174.0391	151.1088	14.1	Dieldrin
6.229	0.000	10496099	6.915	0.000	57928305	182.4713	153.2156	17.4	4,4'-DDE
6.747	0.000	10042433	7.403	0.000	41365984	183.4598	157.9933	14.9	Endrin
6.953	0.000	10678636	7.592	0.000	49010258	179.9873	159.5478	12.0	Endosulfan II
6.787	0.000	11100345	7.454	0.000	49710150	176.9071	161.2653	9.3	4,4'-DDD
7.721	0.000	9557351	8.134	0.000	42103099	179.5431	167.5514	6.9	Endosulfan sulfate
7.043	0.000	10582072	7.740	0.000	46034366	190.3247	181.3223	4.8	4,4'-DDT
7.474	0.000	23588324	8.325	0.000	67383324	888.0169	688.6854	25.3	Methoxychlor
7.977	0.000	11642474	8.627	0.000	44431774	172.2483	162.3638	5.9	Endrin ketone
7.330	0.000	8671066	7.889	0.000	38887201	173.7281	160.1712	8.1	Endrin aldehyde
6.048	0.000	6888968	6.650	0.000	34534060	90.1728	85.2387	5.6	gamma-Chlordane
6.172	0.000	6448867	6.788	0.000	32141725	90.7618	86.1074	5.3	alpha-Chlordane
2.336	0.000	8840303	2.493	0.000	39128589	89.2662	83.4361	6.8	Hexachlorobutadiene
4.179	0.000	6184773	4.627	0.000	49853539	82.5509	84.6808	2.5	Hexachlorobenzene
8.999	0.000	4183112	10.371	0.000	13819406	80.0000	80.0000	0.0	Hexabromobiphenyl
3.835	0.000	10900686	4.166	0.000	61416989	179.7703	151.2874	17.2	Tetrachloro-m-xyl
8.830	0.000	9451613	9.791	0.000	46527110	158.9243	166.6610	4.8	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	449.4	378.2	378.2~	115- 0
Decachlorobiphenyl	397.3	416.7	397.3~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

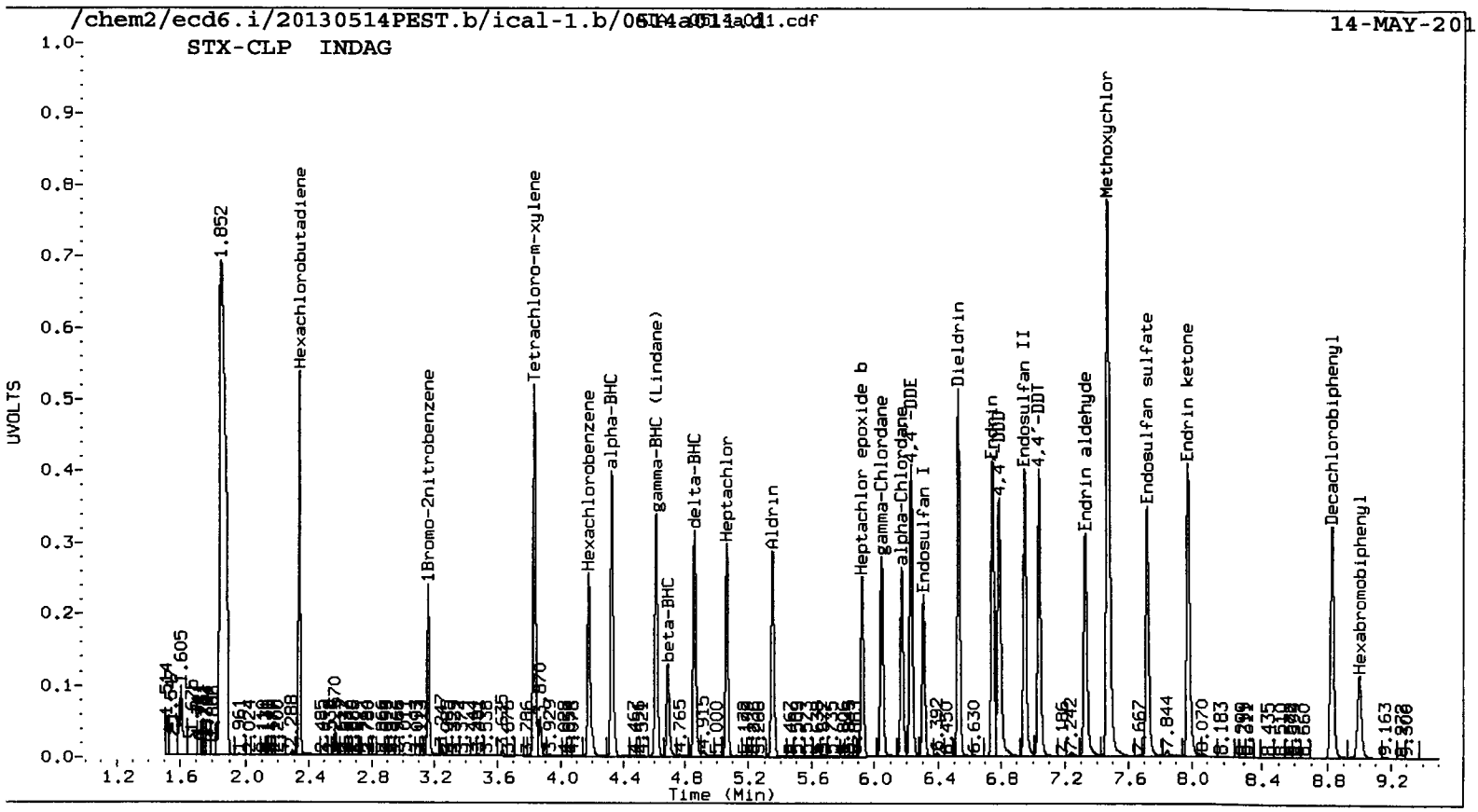
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	4447256	-19.2
Hexabromobiphenyl	5319006	4183112	-21.4

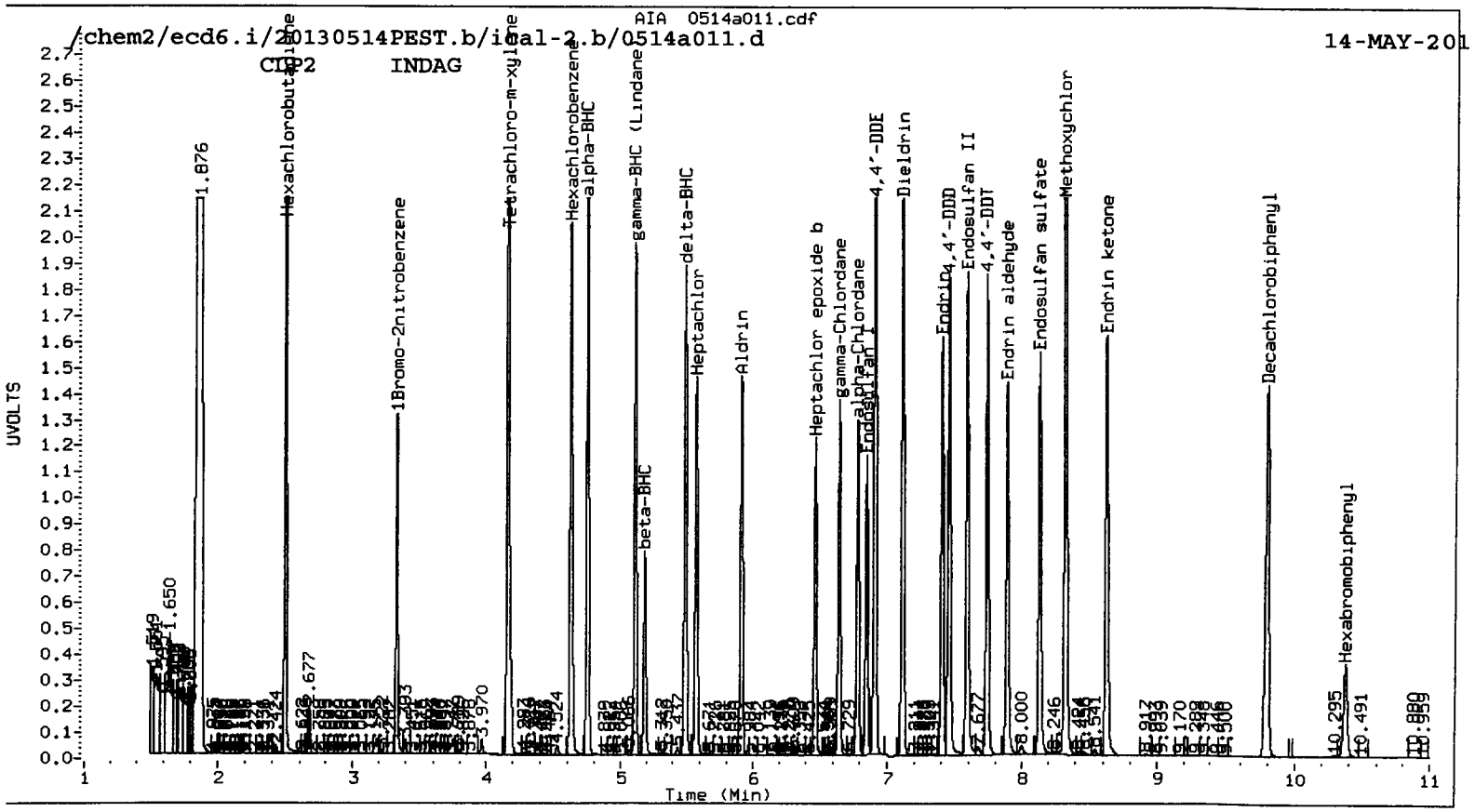
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	24971444	-14.1
Hexabromobiphenyl	16515704	13819406	-16.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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/20130514PEST.b/ical-1.b/0514a011.cdf
14-MAY-201
STX-CLP INDAG
UVOLTS
Time (Min)
1.852
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/20130514PEST.b/ical-2.b/0514a011.d
AIA 0514a011.cdf
14-MAY-201
CLP2 INDAG
UVOLTS
Time (Min)
1.876
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

YZ 5/15/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a013.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a013.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-MAY-2013 17:12
Compound Sublist: TOXAPH Report Date: 05/15/2013 14:43
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
3.160	0.000	5170972	3.329	0.000	29085221	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.999	0.000	5171544	10.371	0.000	16639283	80.0000	80.0000	0.0	Hexabromobiphenyl
3.837	0.003	2463544	4.165	-0.001	18029402	34.9417	38.1300	8.7	Tetrachloro-m-xylen
8.832	0.002	2745039	9.792	0.001	12769214	37.3347	37.9880	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	87.4	95.3	87.4~	150- 0
Decachlorobiphenyl	93.3	95.0	93.3~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

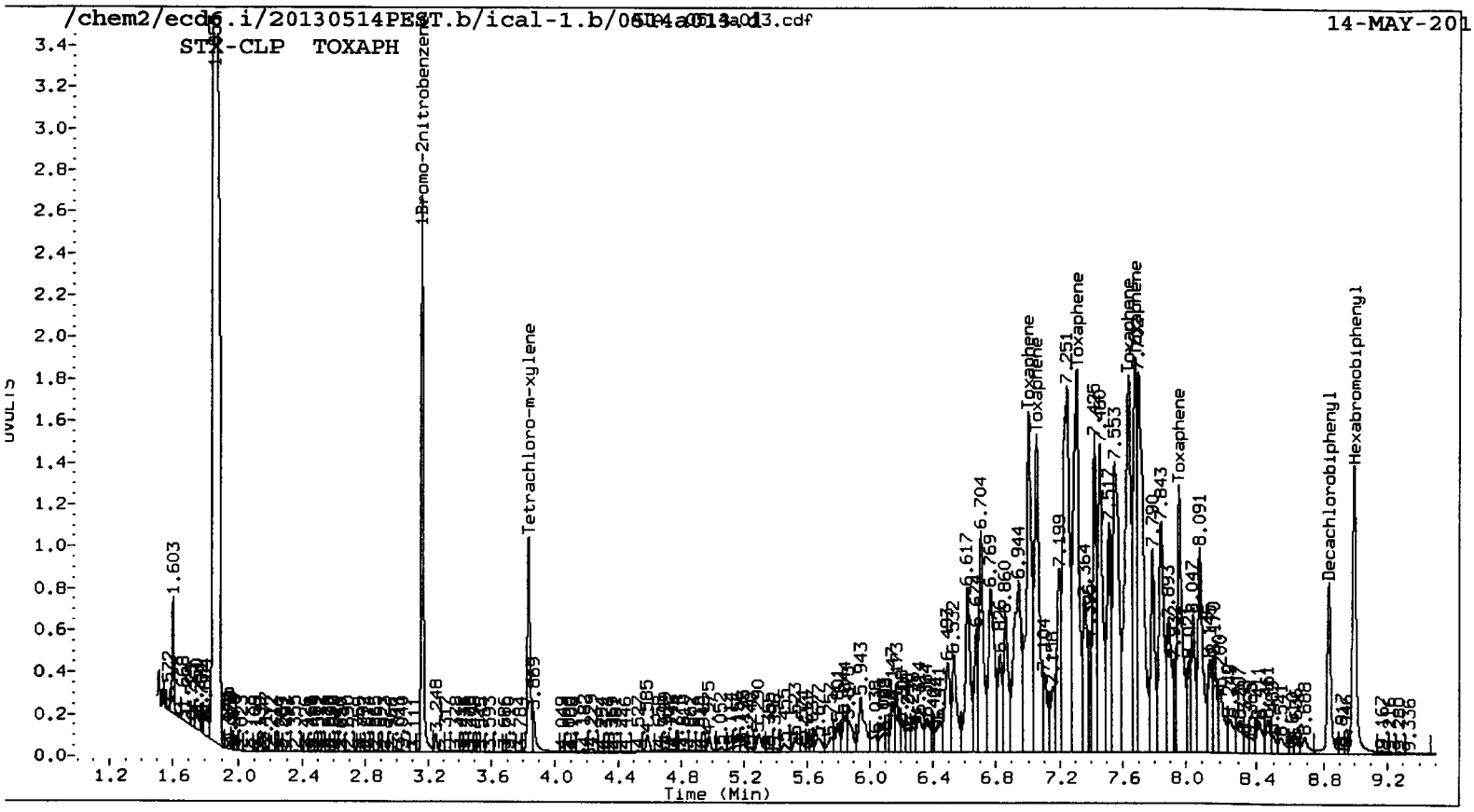
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5170972	-6.0
Hexabromobiphenyl	5319006	5171544	-2.8

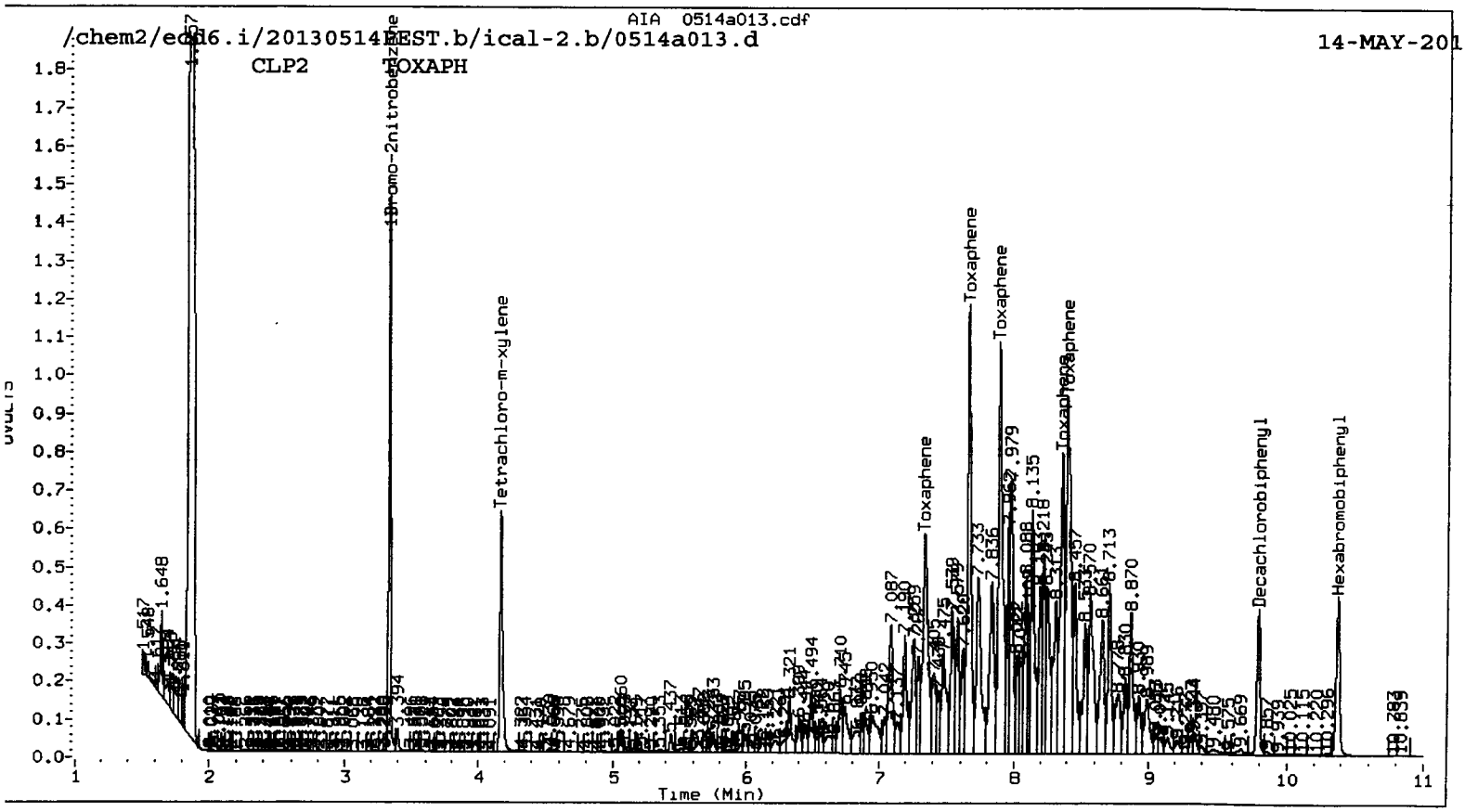
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29085221	0.1
Hexabromobiphenyl	16515704	16639283	0.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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	7.006	0.000	8045822	2500.0	1	7.338	0.000	30225007	2500.0
Toxaphene	2	7.057	0.000	6231410	2500.0	2	7.664	0.000	44930131	2500.0
Toxaphene	3	7.314	0.000	9313581	2500.0	3	7.894	0.000	48107139	2500.0
Toxaphene	4	7.640	0.000	8735760	2500.0	4	8.363	0.000	34031049	2500.0
Toxaphene	5	7.681	0.000	6192990	2500.0	5	8.401	0.000	44737734	2500.0
Toxaphene	6	7.961	0.000	5478732	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


/chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a013.d
14-MAY-201
ST2-CLP TOXAPH
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)


AIA 0514a013.cdf
/chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a013.d
14-MAY-201
CLP2 TOXAPH
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YE 5/16/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a012.d ARI ID: INDAICV
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a012.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Injection Date: 14-MAY-2013 16:54
Compound Sublist: INDA
Report Date: 05/16/2013 12:55
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
3.162	0.000	5229139	3.331	0.001	29203550	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.331	0.000	4591630	4.755	0.003	26999593	41.2179	41.1684	0.1	alpha-BHC
4.708	-0.015	1792584	5.197	0.014	10448458	40.5888	41.4178	2.0	beta-BHC
4.882	0.022	3879613	5.509	0.014	21726867	41.7302	40.3376	3.4	delta-BHC
4.617	-0.001	3908034	5.114	0.004	23234633	40.4801	40.8304	0.9	gamma-BHC (Lindane)
5.064	0.000	3722436	5.579	0.004	21669499	39.6706	39.6263	0.1	Heptachlor
5.359	0.000	3844529	5.916	0.003	20810347	41.3920	40.3184	2.6	Aldrin
5.933	-0.002	3258516	6.471	0.004	17450909	38.9024	38.6037	0.8	Heptachlor epoxide
6.313	-0.002	3463827	6.859	0.004	16375535	43.5821	39.2110	10.6	Endosulfan I
6.534	-0.002	3468526	7.116	0.003	17381588	41.0650	40.8426	0.5	Dieldrin
6.252	0.004	3415443	6.926	0.011	17667309	50.4982	39.9568	23.3	4,4'-DDE
6.753	-0.002	2584296	7.406	0.003	12436481	38.9320	39.8967	2.4	Endrin
6.963	-0.002	2790296	7.597	0.005	14886672	38.7828	40.7048	4.8	Endosulfan II
6.812	0.000	3064870	7.465	0.011	14854516	40.2794	40.4761	0.5	4,4'-DDD
7.729	-0.001	2508266	8.139	0.005	11996679	38.8568	40.0995	3.1	Endosulfan sulfate
7.062	0.000	2701822	7.749	0.009	12175344	40.0722	40.2805	0.5	4,4'-DDT
7.490	0.003	1272077	8.331	0.006	5107174	39.4912	43.8423	10.4	Methoxychlor
7.985	-0.002	2977417	8.631	0.004	12316529	36.3255	37.8032	4.0	Endrin ketone
7.340	-0.002	2247383	7.894	0.006	11004894	37.1310	38.0722	2.5	Endrin aldehyde
6.057	-0.003	3572622	6.656	0.006	18499116	39.7714	39.0435	1.8	gamma-Chlordane
6.179	-0.003	3331051	6.792	0.004	17217290	39.8715	39.4406	1.1	alpha-Chlordane
2.356	0.020	10785	2.481	-0.012	5157	0.0926	0.0094	163.1*	Hexachlorobutadiene
4.186	-0.011	36977	4.635	0.007	5355	0.4198	0.0078	192.7*	Hexachlorobenzene
9.001	0.003	5072678	10.372	0.001	16453002	80.0000	80.0000	0.0	Hexabromobiphenyl
3.840	-0.002	2680346	4.168	0.001	18925047	37.5939	39.8620	5.9	Tetrachloro-m-xylen
8.835	0.001	2583146	9.794	0.003	12580025	35.8175	37.8489	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	94.0	99.7	94.0~	115- 0
Decachlorobiphenyl	89.5	94.6	89.5~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

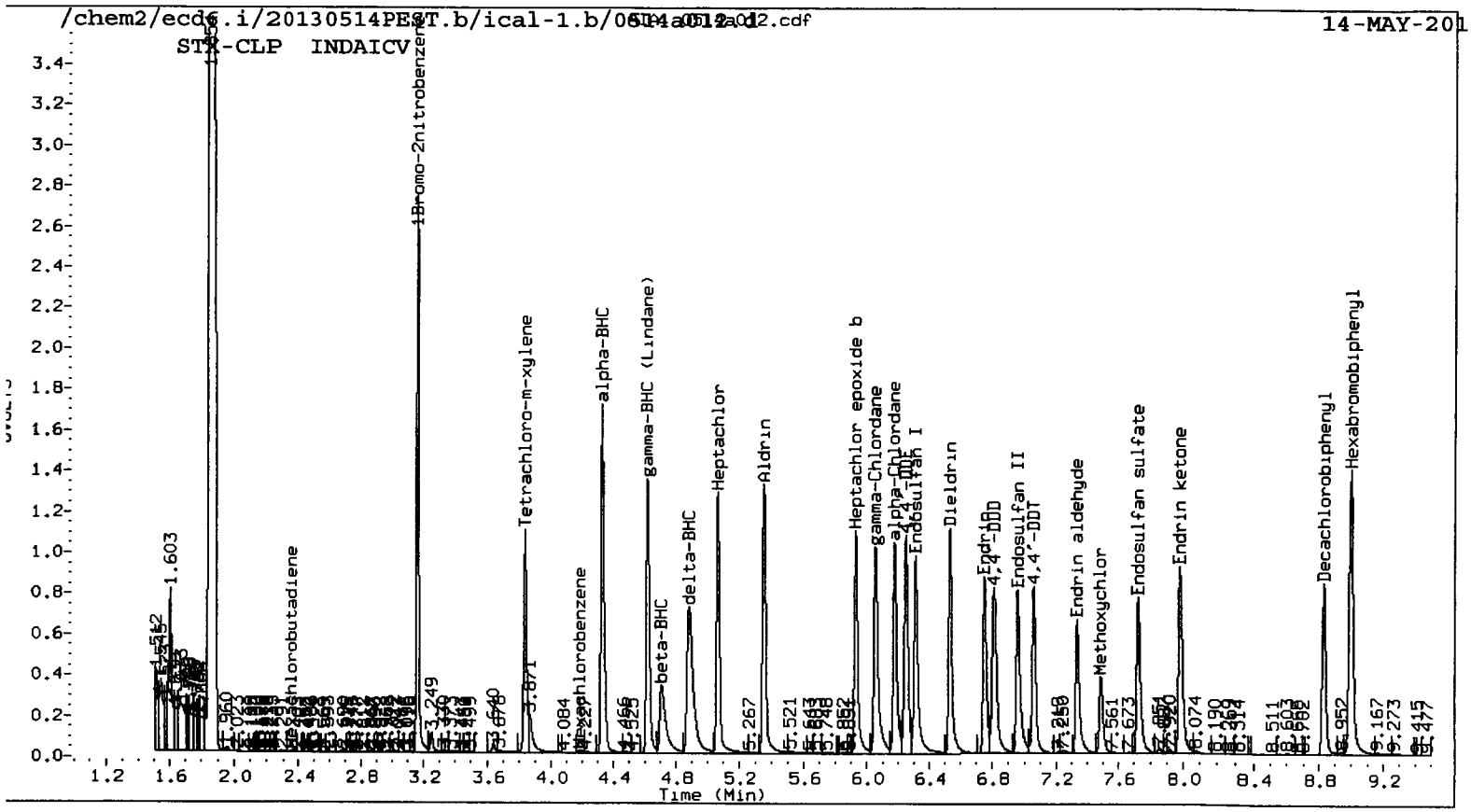
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5229139	-4.9
Hexabromobiphenyl	5319006	5072678	-4.6

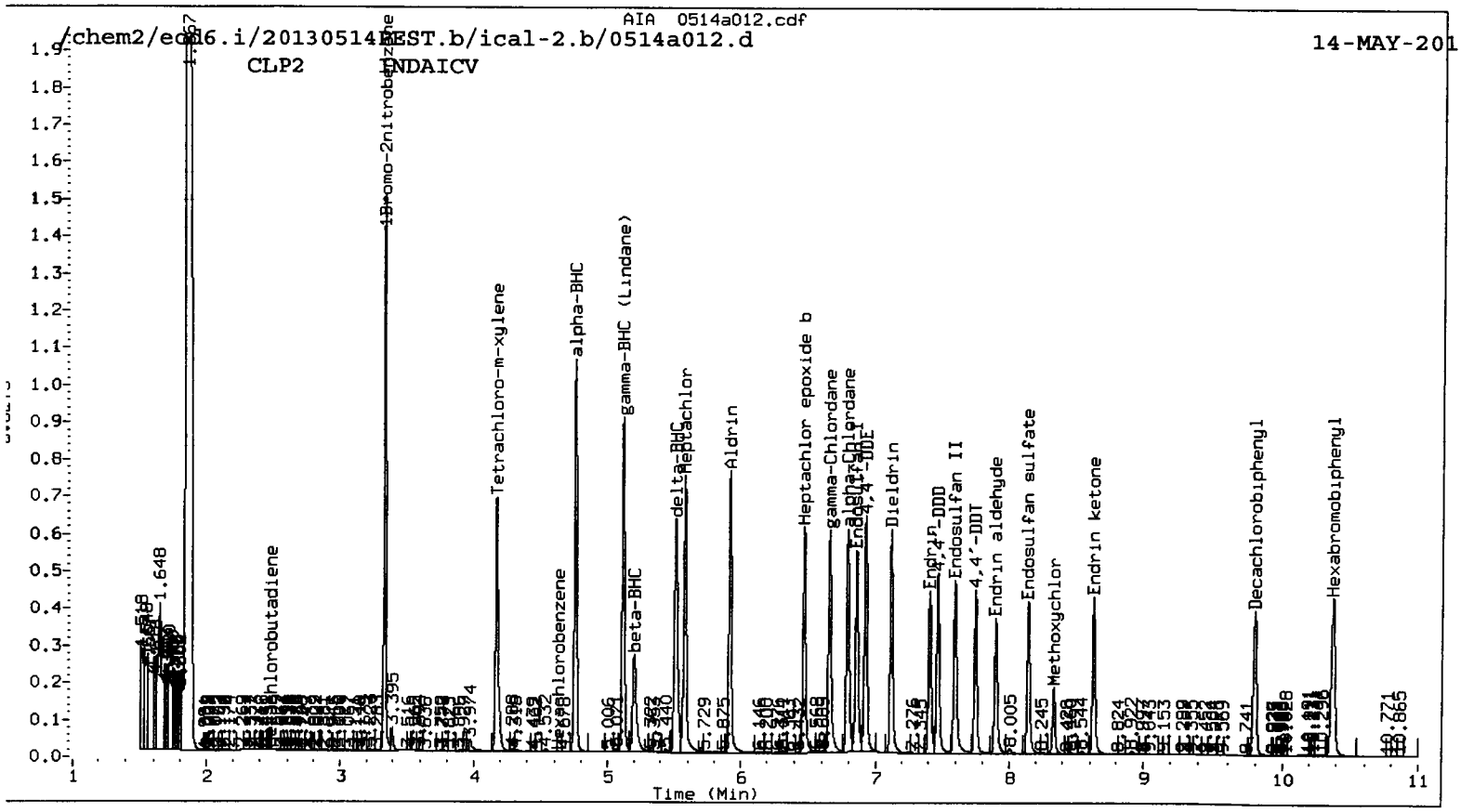
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29203550	0.5
Hexabromobiphenyl	16515704	16453002	-0.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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/20130514PEST.b/ical-1.b/0514a012.d
STX-CLP INDAICV
14-MAY-201
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
alpha-BHC
gamma-BHC (Lindane)
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
beta-BHC
delta-BHC
Time (Min)


AIA 0514a012.cdf
/chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a012.d
CLP2 INDAICV
14-MAY-201
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
alpha-BHC
gamma-BHC (Lindane)
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
beta-BHC
delta-BHC
Time (Min)

Pesticide Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WS90, WS92

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WS90 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: 05/14/13 Analysis Start Date: 06/18/13

	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 / <10%
Surrogate Recovery in Control?	Y / N / ✓	MS / MSD Recovery in Control?	NA 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

Rt shift is due to instrument maintenance, open/close ccals fail high (~4%) for first run, 2nd run DS fails due to oily matrix from a differnt job, reporting first run as samples are non-detects. Dieldrin incorrectly assigned, manually assigned peak correctly.

(Review 1) Analyst: [signature] **Date:** 06/21/13

(Review 2) Reviewer: [signature] **Date:** 6/21/13

WS90 : 00619

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 06/19/13 Analysis: Pest Analyst: JL

Column 1 Serial No.: 108624 Column Type: CLP1

Column 2 Serial No.: 109709 Column Type: CLP2

GC Method: Pest ICal Date: 2 µL Vol. Inj.

IS	Ical/Ccal	ICV
	B370	
	B374	
2006-1	2048-2	

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID
1	18-JUN-2013 11:14	0618a004.d	1	DS
2	18-JUN-2013 11:32	0618a005.d	1	INDAE
3	18-JUN-2013 11:52	0618a006.d	1	TOXAPH
4	18-JUN-2013 12:10	0618a007.d	1	WS90MBW1
5	18-JUN-2013 12:28	0618a008.d	1	WS90LCSW1
6	18-JUN-2013 12:46	0618a009.d	1	WS90LCSDW1
7	18-JUN-2013 13:03	0618a010.d	1	WS90QLS
8	18-JUN-2013 13:21	0618a011.d	1	WS90A
9	18-JUN-2013 13:39	0618a012.d	1	WS90B
10	18-JUN-2013 13:57	0618a013.d	1	WT07MBW1
11	18-JUN-2013 14:15	0618a014.d	1	WT07LCSS1
12	18-JUN-2013 14:32	0618a015.d	1	WT07LCSDS1
13	18-JUN-2013 14:53	0618a016.d	1	WT07QLS
14	18-JUN-2013 15:13	0618a017.d	1	WT07A
15	18-JUN-2013 15:30	0618a018.d	1	WT07B
16	18-JUN-2013 15:48	0618a019.d	1	DS
17	18-JUN-2013 16:06	0618a020.d	1	INDAE
18	18-JUN-2013 16:24	0618a021.d	1	TOXAPH
19	18-JUN-2013 16:42	0618a022.d	1	WS91MBS1
20	18-JUN-2013 17:00	0618a023.d	1	WS91LCSS1
21	18-JUN-2013 17:17	0618a024.d	1	WS91LCSDS1
22	18-JUN-2013 17:35	0618a025.d	5	WT36A
23	18-JUN-2013 17:53	0618a026.d	5	WS91A
24	18-JUN-2013 18:11	0618a027.d	5	WS91AMS
25	18-JUN-2013 18:28	0618a028.d	5	WS91AMSD
26	18-JUN-2013 18:46	0618a029.d	1	DS
27	18-JUN-2013 19:04	0618a030.d	1	INDAE
28	18-JUN-2013 19:22	0618a031.d	1	TOXAPH

6/19/13

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

US00 : 00628

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130514PEST.b/0618-2.b

ARI Job No.: DS Method: PEST0514B.m Instrument: ecd6.i Date: 18-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1114	0618a004.d	DS		1	NO MANUAL INTEGRATION
1132	0618a005.d	INDAE		1	NO MANUAL INTEGRATION
1152	0618a006.d	TOXAPH		1	NO MANUAL INTEGRATION
1210	0618a007.d	WS90MBW1	WS90MBW1	1	NO MANUAL INTEGRATION
1228	0618a008.d	WS90LCSW1	WS90LCSW1	1	Dieldrin,
1246	0618a009.d	WS90LCSDW1	WS90LCSDW1	1	Dieldrin,
1303	0618a010.d	WS90QLS		1	NO MANUAL INTEGRATION
1321	0618a011.d	WS90A	CL-MH-SPS-	1	NO MANUAL INTEGRATION
1339	0618a012.d	WS90B	CL-VT-EFF-	1	NO MANUAL INTEGRATION
1357	0618a013.d	WT07MBW1		1	NO MANUAL INTEGRATION
1415	0618a014.d	WT07LCSS1		1	Dieldrin,
1432	0618a015.d	WT07LCSDS1		1	Dieldrin,
1453	0618a016.d	WT07QLS		1	NO MANUAL INTEGRATION
1513	0618a017.d	WT07A		1	NO MANUAL INTEGRATION
1530	0618a018.d	WT07B		1	NO MANUAL INTEGRATION
1548	0618a019.d	DS		1	NO MANUAL INTEGRATION
1606	0618a020.d	INDAE		1	NO MANUAL INTEGRATION
1624	0618a021.d	TOXAPH		1	NO MANUAL INTEGRATION
1642	0618a022.d	WS91MBS1	WS91MBS1	1	NO MANUAL INTEGRATION
1700	0618a023.d	WS91LCSS1	WS91LCSS1	1	Dieldrin,

1717 0618a024.d WS91LCSDS1 WS91LCSDS1 1 Dieldrin,

WS90:00622

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130514PEST.b/0618-2.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1735	0618a025.d WT36A	CL-MH-SPS-	5		NO MANUAL INTEGRATION
1753	0618a026.d WS91A	CL-MH-SPS-	5		Heptachlor epoxide b, Endosulfan I, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, 4,4'-DDD, Endosulfan sulfate, 4,4'-DDT, Methoxychlor, Endrin ketone, Endrin aldehyde, gamma-Chlordane, alpha-Chlordane, Toxaphene, Aroclor-1221, Aroclor-1232, Aroclor-1248, Aroclor-1254, Aroclor-1260, Oxychlordane, 2
1811	0618a027.d WS91AMS	CL-MH-SPS-	5		delta-BHC, Heptachlor, Aldrin, Heptachlor epoxide b, Endosulfan I, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, 4,4'-DDD, Endosulfan sulfate, 4,4'-DDT, Methoxychlor, Endrin ketone, Endrin aldehyde, gamma-Chlordane, alpha-Chlordane, Toxaphene, Aroclor-1221, Aroclor-1232, Aroclor-124
1828	0618a028.d WS91AMSD	CL MH SPS-	5		1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, Heptachlor, Aldrin, Heptachlor epoxide b, Endosulfan I, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, 4,4'-DDD, Endosulfan sulfate, 4,4'-DDT, Methoxychlor, Endrin ketone, Endrin aldehyde, gamma-Chlordane, alpha-Chlordane, Toxaphene, Aroclor-1
1846	0618a029.d DS		1		NO MANUAL INTEGRATION
1904	0618a030.d INDAE		1		NO MANUAL INTEGRATION
1922	0618a031.d TOXAPH		1		NO MANUAL INTEGRATION

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a005.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a005.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 18-JUN-2013 11:32
Compound Sublist: INDA Report Date: 06/21/2013 14:39
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
3.128	-0.001	4928229	3.298	-0.001	25203156	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.284	0.000	2475689	4.708	0.000	13609288	23.5806	24.0449	1.9	alpha-BHC
4.642	0.001	912757	5.138	0.001	5420949	21.9291	24.8995	12.7	beta-BHC
4.812	0.001	2075486	5.449	0.001	11506547	23.6876	24.7536	4.4	delta-BHC
4.567	0.000	2219583	5.065	0.000	11790750	24.3946	24.0088	1.6	gamma-BHC (Lindane)
5.012	0.000	2055104	5.528	0.000	11209229	23.2389	23.7515	2.2	Heptachlor
5.305	0.000	2117131	5.866	0.000	11155656	24.1858	25.0438	3.5	Aldrin
5.880	0.000	1908887	6.420	-0.001	10022936	24.1811	25.6913	6.1	Heptachlor epoxide
6.257	0.000	1757017	6.807	-0.001	8944299	23.4567	24.8164	5.6	Endosulfan I
6.479	0.000	3792074	7.065	-0.001	17509179	47.6369	47.6727	0.1	Dieldrin
6.180	0.000	2753403	6.868	0.000	17656119	43.1954	46.2696	6.9	4,4'-DDE
6.697	0.000	3112842	7.355	-0.001	13194319	45.9659	43.8739	4.7	Endrin
6.903	0.000	3066229	7.544	-0.001	14325863	41.7741	40.6021	2.8	Endosulfan II
6.737	0.001	3107944	7.406	-0.001	14350034	40.0367	40.5296	1.2	4,4'-DDD
7.670	-0.001	2725168	8.086	-0.001	11571137	41.3810	40.0898	3.2	Endosulfan sulfate
6.994	0.000	2894444	7.693	-0.001	12239245	42.0790	41.9708	0.3	4,4'-DDT
7.419	0.000	6448548	8.276	-0.001	21322089	196.2286	189.7238	3.4	Methoxychlor
7.925	0.000	3414864	8.577	-0.001	12152523	40.8375	38.6621	5.5	Endrin ketone
7.279	0.000	2375599	7.841	-0.001	10533500	38.4722	37.7723	1.8	Endrin aldehyde
6.000	0.000	1990334	6.603	0.000	10136856	23.5098	24.7903	5.3	gamma-Chlordane
6.123	0.000	1906598	6.741	0.000	9373312	24.2148	24.8802	2.7	alpha-Chlordane
2.308	-0.001	2467457	2.466	0.000	8010671	22.4838	16.9246	28.2	Hexachlorobutadiene
4.138	0.001	1814485	4.585	0.001	14066627	21.8551	23.6738	8.0	Hexachlorobenzene
8.920	0.000	5175154	10.287	-0.003	15873251	80.0000	80.0000	0.0	Hexabromobiphenyl
3.797	0.001	3144177	4.125	0.000	18759826	46.7921	45.7859	2.2	Tetrachloro-m-xylen
8.771	0.000	2765874	9.724	-0.001	13053624	37.5918	40.7083	8.0	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	117.0	114.5	114.5~	115- 0
Decachlorobiphenyl	94.0	101.8	94.0~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

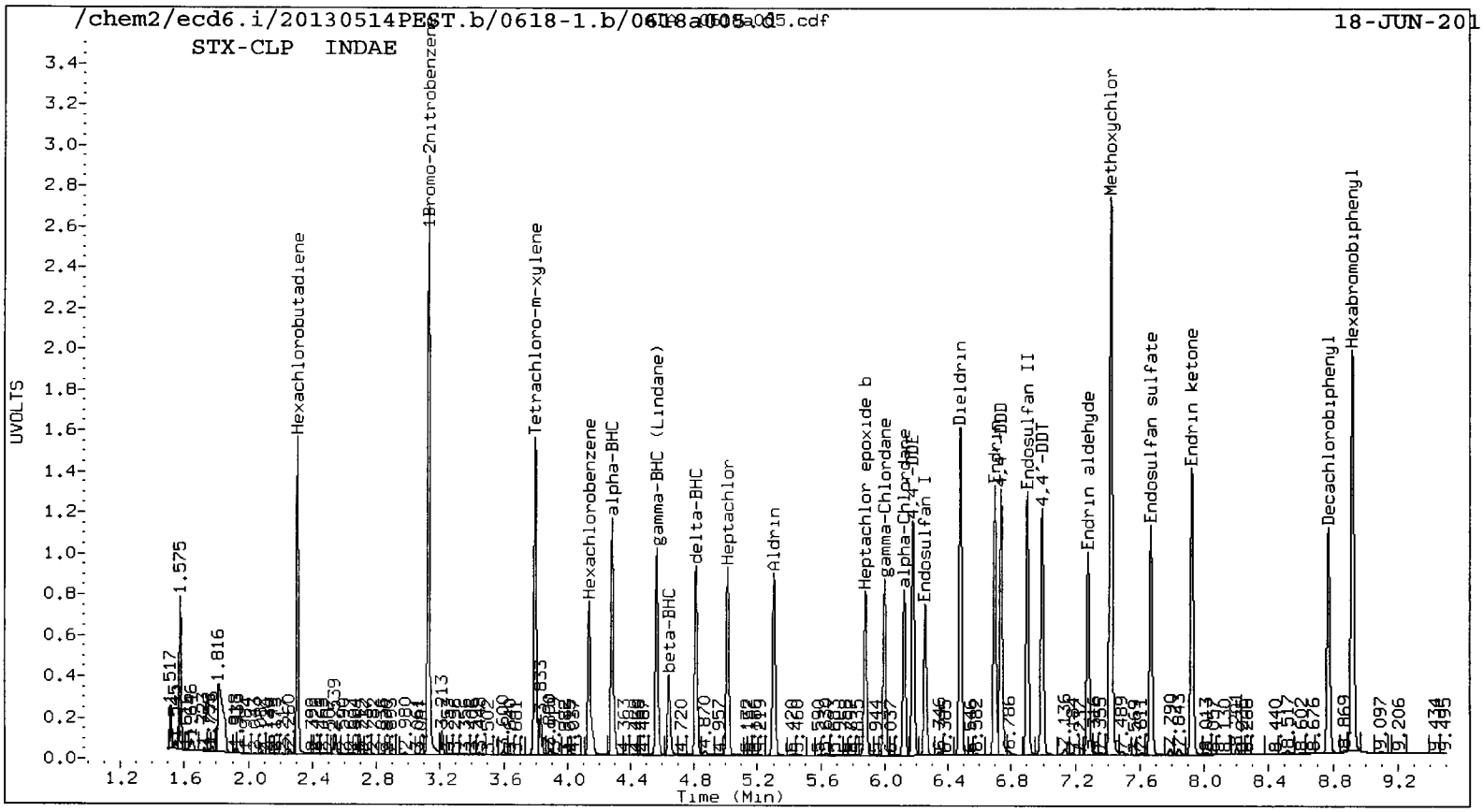
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	4928229	-10.4
Hexabromobiphenyl	5319006	5175154	-2.7

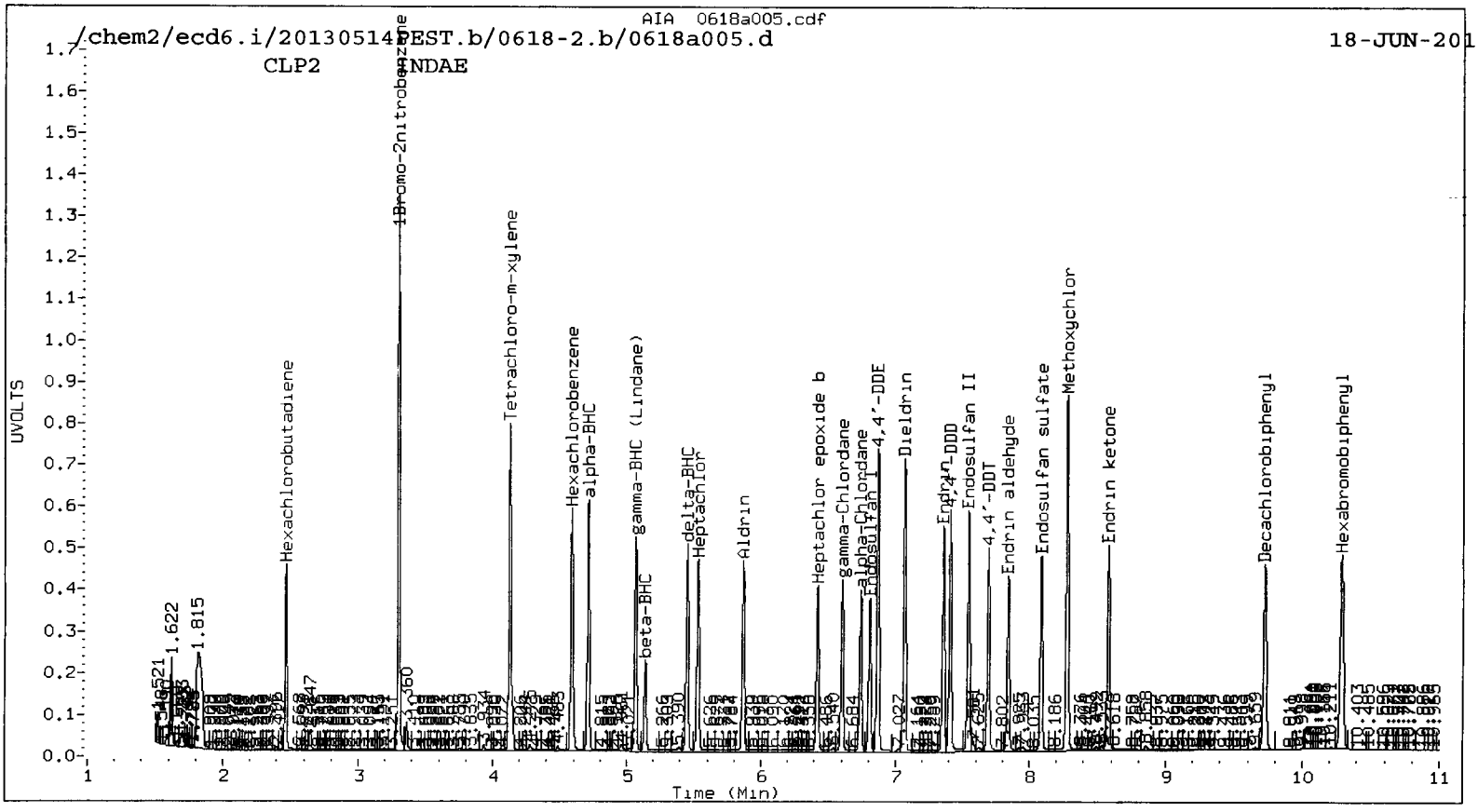
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	25203156	-13.3
Hexabromobiphenyl	16515704	15873251	-3.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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/20130514PEST.b/0618-1.b/0618a005.d
STX-CLP INDAE
18-JUN-201
UVOLTS
Time (Min)
Hexachlorobutadiene
1.575
1.816
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 0618a005.cdf
/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a005.d
CLP2 INDAE
18-JUN-201
UVOLTS
Time (Min)
Hexachlorobutadiene
1.622
1.815
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/20130514PEST.b/0618-1.b/0618a006.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a006.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 18-JUN-2013 11:52
Compound Sublist: TOXAPH Report Date: 06/21/2013 14:39
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
3.128	-0.001	5774499	3.297	-0.002	27844917	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.922	0.001	6439257	10.288	-0.002	18278161	80.0000	80.0000	0.0	Hexabromobiphenyl
3.798	0.001	3028538	4.125	0.000	17557317	38.4658	38.7856	0.8	Tetrachloro-m-xylen
8.772	0.002	2911099	9.725	0.000	13007810	31.7984	35.2281	10.2	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	96.2	97.0	96.2~	150- 0
Decachlorobiphenyl	79.5	83.1	79.5~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

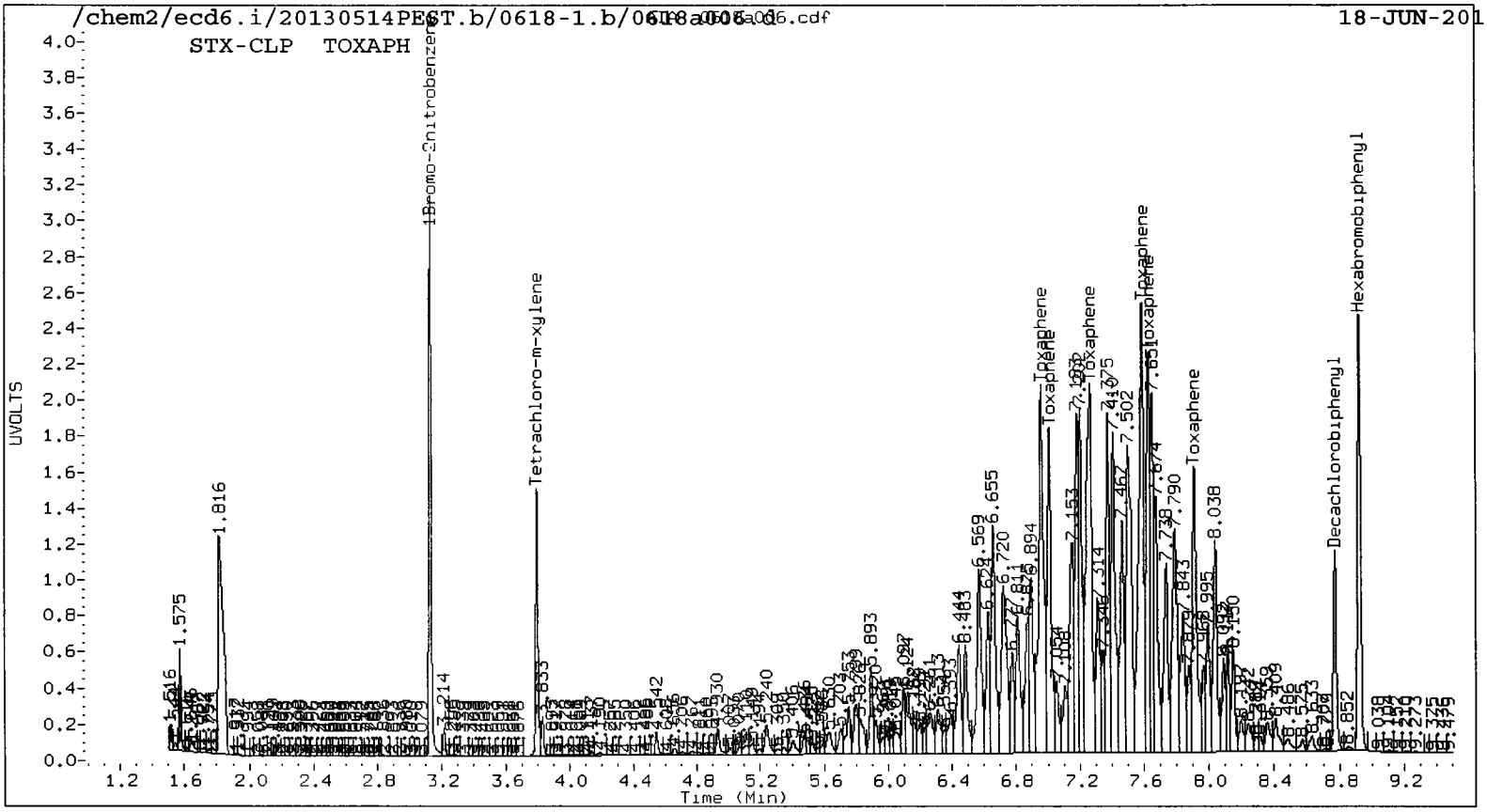
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5774499	5.0
Hexabromobiphenyl	5319006	6439257	21.1

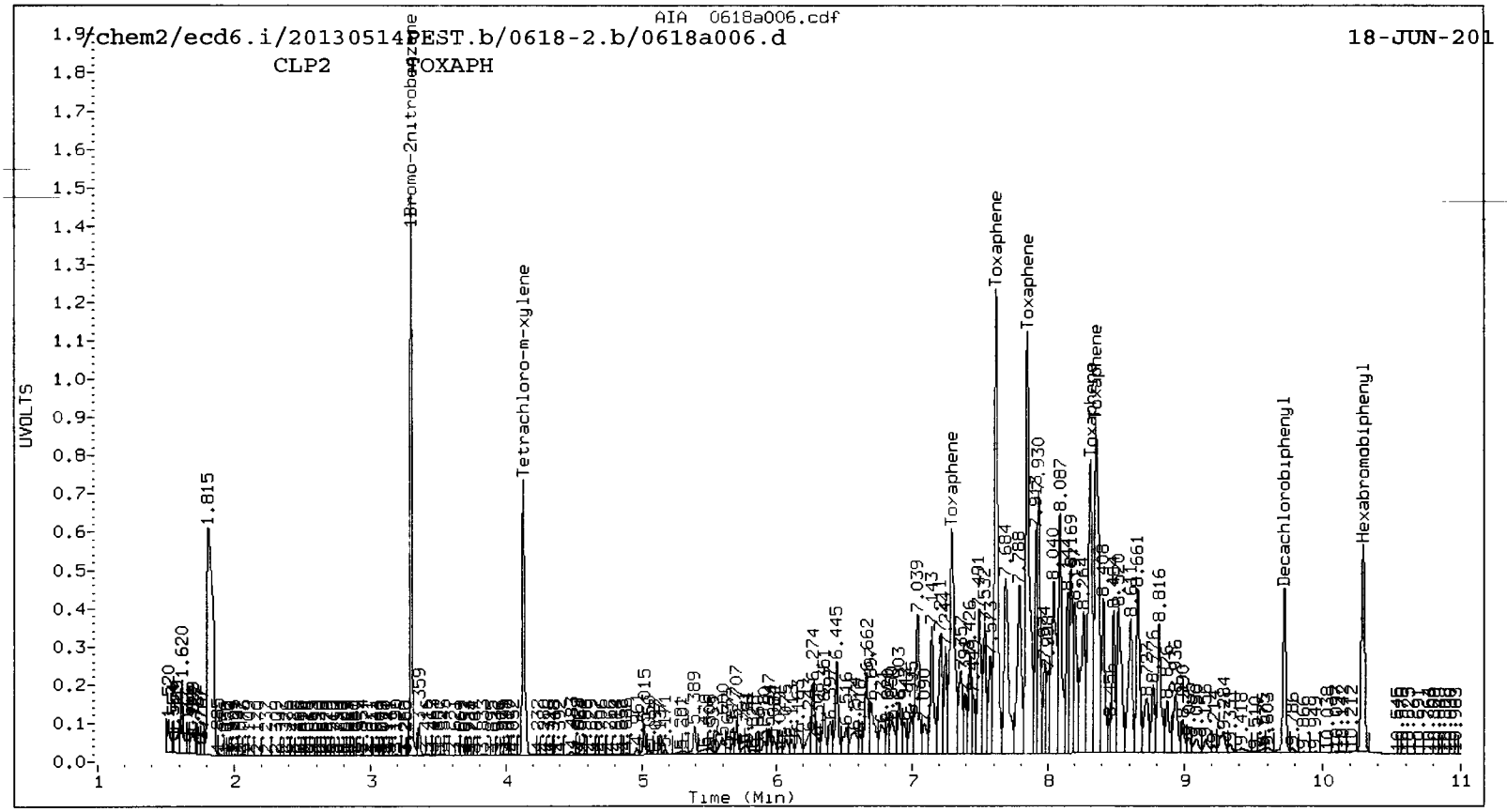
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	27844917	-4.2
Hexabromobiphenyl	16515704	18278161	10.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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	6.956	0.001	9019485	2250.8	1	7.291	0.000	28798589	2168.4
Toxaphene	2	7.008	0.001	6236464	2009.4	2	7.615	-0.001	41810122	2117.8
Toxaphene	3	7.265	0.001	9941940	2143.3	3	7.846	0.000	44394231	2100.2
Toxaphene	4	7.590	0.001	10154708	2333.9	4	8.313	-0.001	31145321	2082.9
Toxaphene	5	7.628	0.001	6527523	2116.3	5	8.353	0.000	38159678	1941.2
Toxaphene	6	7.910	0.001	5582823	2046.0	NS	---			----
Total STX-CLPAve (6 peaks): 2149.952						Total CLP2Ave (5 peaks): 2082.101				RPD = 3
Corrected Ave (6 peaks): 2149.952						Corrected Ave (5 peaks): 2082.101				RPD = 3


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a006.d
18-JUN-201
STX-CLP TOXAPH
UVOLTS
Time (Min)
1.816
1.575
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0618a006.cdf
/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a006.d
18-JUN-201
CLP2 TOXAPH
UVOLTS
Time (Min)
1.815
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a007.d ARI ID: WS90MBW1
Data file 2: /chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a007.d Client ID: WS90MBW1
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 18-JUN-2013 12:10
Compound Sublist: wpest Report Date: 06/21/2013 14:39
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

1st 06/21/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.126	-0.003	6837396	3.296	-0.003	29285630	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.279	-0.005	2966	4.706	-0.002	96980	0.0204	0.1475	151.5*	alpha-BHC
4.662	0.020	4791	5.149	0.013	186733	0.0830	0.7381	159.6*	beta-BHC
4.797	-0.014	14737	5.454	0.007	134177	0.1212	0.2484	68.8*	delta-BHC
4.563	-0.003	3064	5.046	-0.019	127777	0.0243	0.2239	160.9*	gamma-BHC (Lindane)
5.010	-0.002	3810	5.530	0.001	89091	0.0311	0.1625	135.8*	Heptachlor
5.323	0.018	33824	5.849	-0.017	299618	0.2785	0.5789	70.1*	Aldrin
5.884	0.004	7244	6.444	0.023	239494	0.0661	0.5283	155.5*	Heptachlor epoxide b
6.252	-0.004	1025	6.808	0.000	128054	0.0099	0.3058	187.5*	Endosulfan I
6.479	0.000	2115	7.059	-0.007	225880	0.0192	0.5293	186.0*	Dieldrin
6.179	-0.001	1585	6.862	-0.006	195317	0.0179	0.4405	184.4*	4,4'-DDE
6.654	-0.043	5176	7.367	0.011	222426	0.0553	0.5873	165.6*	Endrin
6.893	-0.009	1191	7.512	-0.032	329436	0.0117	0.7415	193.8*	Endosulfan II
6.750	0.014	7230	7.399	-0.007	107990	0.0674	0.2422	112.9*	4,4'-DDD
7.669	-0.001	7313	8.085	-0.001	230806	0.0804	0.6350	155.0*	Endosulfan sulfate
7.005	0.010	6655	7.700	0.006	255640	0.0701	0.6962	163.4*	4,4'-DDT
7.407	-0.012	8675	8.263	-0.014	359059	0.1911	2.5372	172.0*	Methoxychlor
7.916	-0.009	25730	8.569	-0.009	240771	0.2228	0.6083	92.8*	Endrin ketone
7.268	-0.012	9179	7.842	0.000	319172	0.1076	0.9089	157.6*	Endrin aldehyde
5.969	-0.030	13854	6.607	0.003	259041	0.1180	0.5452	128.9*	gamma-Chlordane
6.122	-0.001	1941	6.754	0.013	112426	0.0178	0.2568	174.1*	alpha-Chlordane
2.306	-0.003	7160	2.468	0.002	135546	0.0470	0.2465	135.9*	Hexachlorobutadiene
4.135	-0.003	62027	4.580	-0.004	159312	0.5385	0.2307	80.0*	Hexachlorobenzene
5.779	-0.005	6452	6.288	-0.044	185368	0.0675	0.4643	149.2*	Oxychlordane
----			6.570	-0.010	159803	0.0000	0.5359	---	2,4-DDE
6.092	-0.015	1547	6.681	-0.011	205270	0.0132	0.4577	188.8*	trans-Nonachlor
----			7.043	-0.022	184591	0.0000	0.7402	---	2,4-DDD
6.622	0.040	2757	----			0.0386	0.0000	---	2,4-DDT
----			7.444	0.027	165142	0.0000	0.3521	---	cis-Nonachlor
7.588	-0.007	15707	8.532	-0.033	419236	0.2003	1.6796	157.4*	Mirex
8.918	-0.002	7147800	10.285	-0.005	19988398	80.0000	80.0000	0.0	Hexabromobiphenyl
1.750	-0.006	9437	1.733	0.009	6590669	0.0000	0.0000	---	Hexachloroethane
6.563	-0.018	5732	7.288	-0.048	289074	0.0000	0.0000	---	Kepone
3.795	-0.002	2376514	4.123	-0.003	11579173	25.4921	24.3210	4.7	Tetrachloro-m-xylen
8.770	-0.001	1768512	9.722	-0.003	7779911	17.4028	19.2670	10.2	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	63.7	60.8	60.8	52-100
Decachlorobiphenyl	43.5	48.2	43.5~	54-100

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

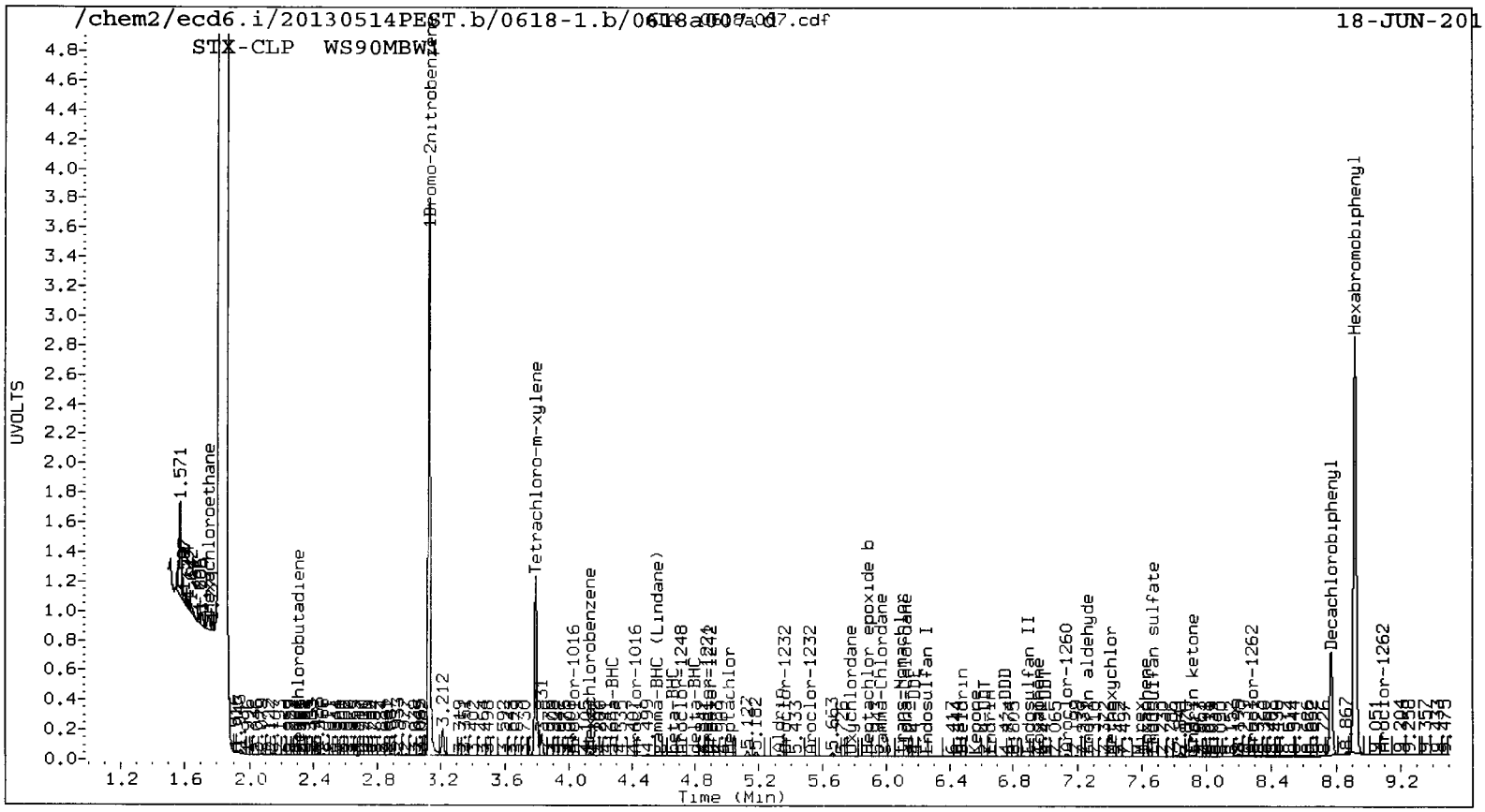
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	6837396	24.3
Hexabromobiphenyl	5319006	7147800	34.4

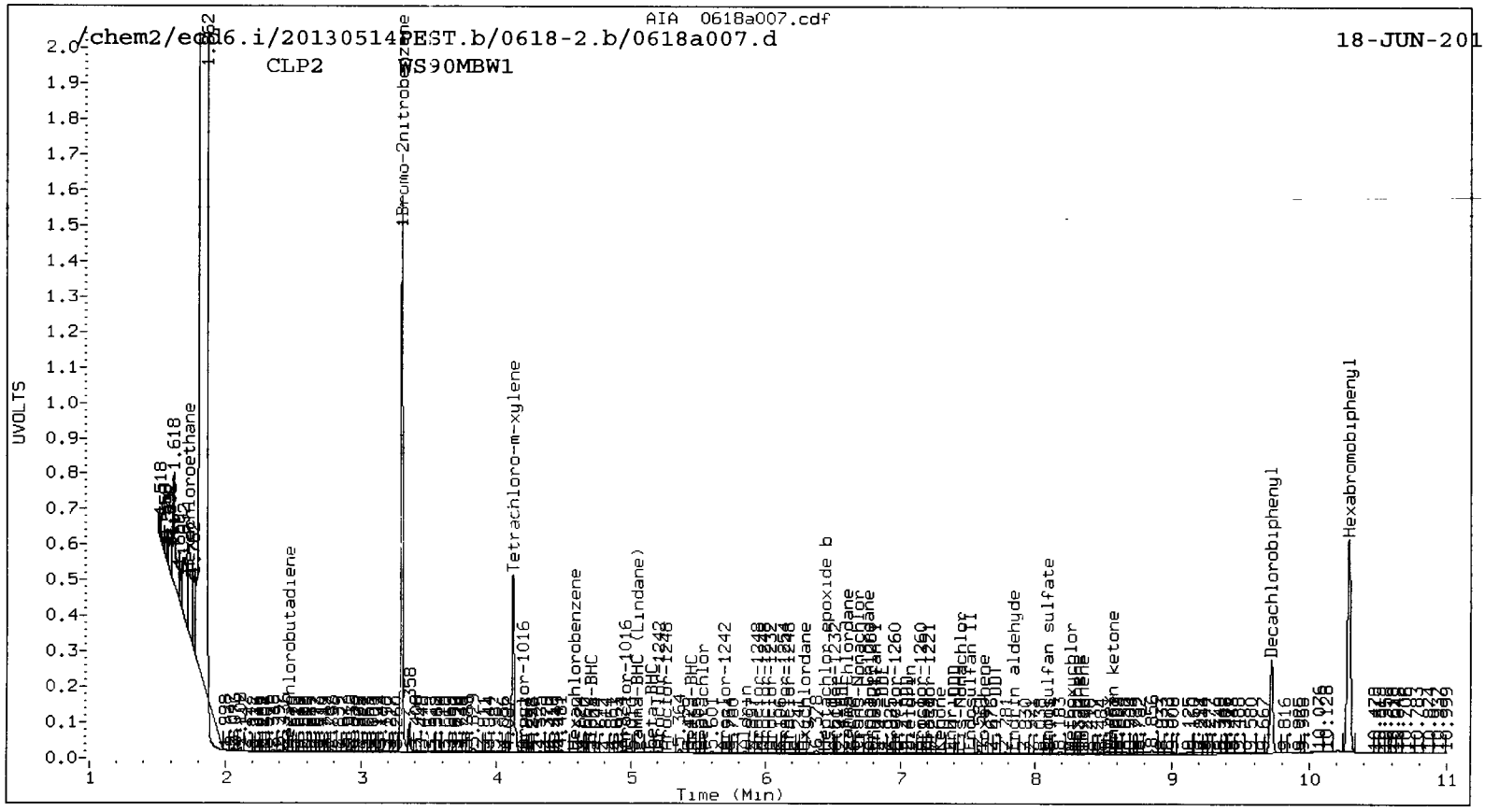
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29285630	0.8
Hexabromobiphenyl	16515704	19988398	21.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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	6.954	-0.001	4424	1.0	1	7.288	-0.003	289074	19.9
Toxaphene	2	7.005	-0.002	6655	1.9	2	7.615	-0.001	229386	10.6
Toxaphene	3	7.268	0.004	9179	1.8	3	7.842	-0.004	319172	13.8
Toxaphene	4	7.588	0.000	15707	3.3	4	8.309	-0.005	195539	12.0
Toxaphene	5	7.626	-0.001	8436	2.5	5	8.352	-0.001	346792	16.1
Toxaphene	6	7.916	0.007	25730	8.5	NS	---			----
Total STX-CLPAve (6 peaks): 3.153						Total CLP2Ave (5 peaks): 14.485				RPD = 128*
Corrected Ave (5 peaks): 2.085						Corrected Ave (5 peaks): 14.485				RPD = 150*


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a007.d
18-JUN-201
STX-CLP WS90MBW1
UVOLTS
Time (Min)
1.571
Hexachloroethane
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0618a007.cdf
/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a007.d
18-JUN-201
CLP2 WS90MBW1
UVOLTS
Time (Min)
1.618
Hexachloroethane
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl

WS90 : 00632

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a008.d ARI ID: WS90LCSW1
Data file 2: /chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a008.d Client ID: WS90LCSW1
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 18-JUN-2013 12:28
Compound Sublist: wpest Report Date: 06/21/2013 14:48
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

6/21/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.127	-0.002	7142940	3.297	-0.002	29590651	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.282	-0.003	2544304	4.706	-0.002	11359841	16.7202	17.0947	2.2	alpha-BHC
4.639	-0.002	999371	5.135	-0.002	4509402	16.5656	17.6415	6.3	beta-BHC
4.809	-0.002	2352126	5.446	-0.002	10686623	18.5215	19.5810	5.6	delta-BHC
4.564	-0.002	2377629	5.062	-0.002	9975930	18.0294	17.3015	4.1	gamma-BHC (Lindane)
5.010	-0.002	2091208	5.526	-0.002	9295887	16.3152	16.7767	2.8	Heptachlor
5.303	-0.002	1996749	5.864	-0.002	8568996	15.7380	16.3846	4.0	Aldrin
5.877	-0.002	2160640	6.419	-0.002	9192826	18.8839	20.0697	6.1	Heptachlor epoxide b
6.254	-0.002	2023759	6.806	-0.002	8179806	18.6408	19.3302	3.6	Endosulfan I
6.477	-0.003	4290200	7.063	-0.003	17118441	37.1842	39.6980	6.5	Dieldrin N
6.178	-0.001	4009285	6.866	-0.002	16698525	43.3959	37.2717	15.2	4,4'-DDE
6.695	-0.002	3541183	7.353	-0.002	12820259	37.0120	34.6901	6.5	Endrin
6.900	-0.002	3705426	7.541	-0.004	13451152	35.7319	31.0225	14.1	Endosulfan II
6.735	-0.002	3607836	7.403	-0.003	13943353	32.8963	32.0462	2.6	4,4'-DDD
7.668	-0.002	3275393	8.084	-0.003	12218481	35.2036	34.4481	2.2	Endosulfan sulfate
6.992	-0.002	3317495	7.692	-0.002	10721133	34.1371	29.9174	13.2	4,4'-DDT
7.417	-0.002	7473235	8.274	-0.003	21737634	160.9625	157.3963	2.2	Methoxychlor
7.923	-0.003	4037950	8.575	-0.002	12554121	34.1792	32.5009	5.0	Endrin ketone
7.277	-0.003	2383621	7.839	-0.002	9231528	27.3229	26.9380	1.4	Endrin aldehyde
5.997	-0.002	2231310	6.601	-0.002	9443143	18.1843	19.6696	7.8	gamma-Chlordane
6.121	-0.002	2124109	6.739	-0.002	8588131	18.6128	19.4160	4.2	alpha-Chlordane
2.307	-0.002	1507801	2.465	-0.001	5365893	9.4794	9.6559	1.8	Hexachlorobutadiene
4.135	-0.002	1691254	4.582	-0.002	10674742	14.0547	15.3015	8.5	Hexachlorobenzene
5.795	0.011	22480	6.311	-0.021	130848	0.2300	0.3243	34.1	Oxychlordane
5.831	-0.026	1572	6.539	-0.041	365732	0.0213	1.2139	193.1*	2,4-DDE
----			6.683	-0.009	189022	0.0000	0.4319	---	trans-Nonachlor
6.342	-0.002	41307	7.063	-0.001	17118441	0.6324	70.3420	196.4*	2,4-DDD
6.542	-0.040	4645	----			0.0636	0.0000	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.609	0.014	40199	8.536	-0.028	191808	0.5012	0.7874	44.4*	Mirex
8.918	-0.002	7311519	10.286	-0.004	19506327	80.0000	80.0000	0.0	Hexabromobiphenyl
1.753	-0.003	23055	1.724	0.000	2858372	0.0000	0.0000	---	Hexachloroethane
6.579	-0.002	24476	7.287	-0.049	270251	0.0000	0.0000	---	Kepone
3.795	-0.002	2315060	4.123	-0.002	10884900	23.7707	22.6270	4.9	Tetrachloro-m-xylen
8.769	-0.002	1937951	9.722	-0.003	8228919	18.6431	20.8826	11.3	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	59.4	56.6	56.6	52-100
Decachlorobiphenyl	46.6	52.2	46.6~	54-100
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	92529.9	86725.3	86725.3~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	85342.8	74793.5	74793.5~	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	5500669	7142940	29.9
Hexabromobiphenyl	5319006	7311519	37.5

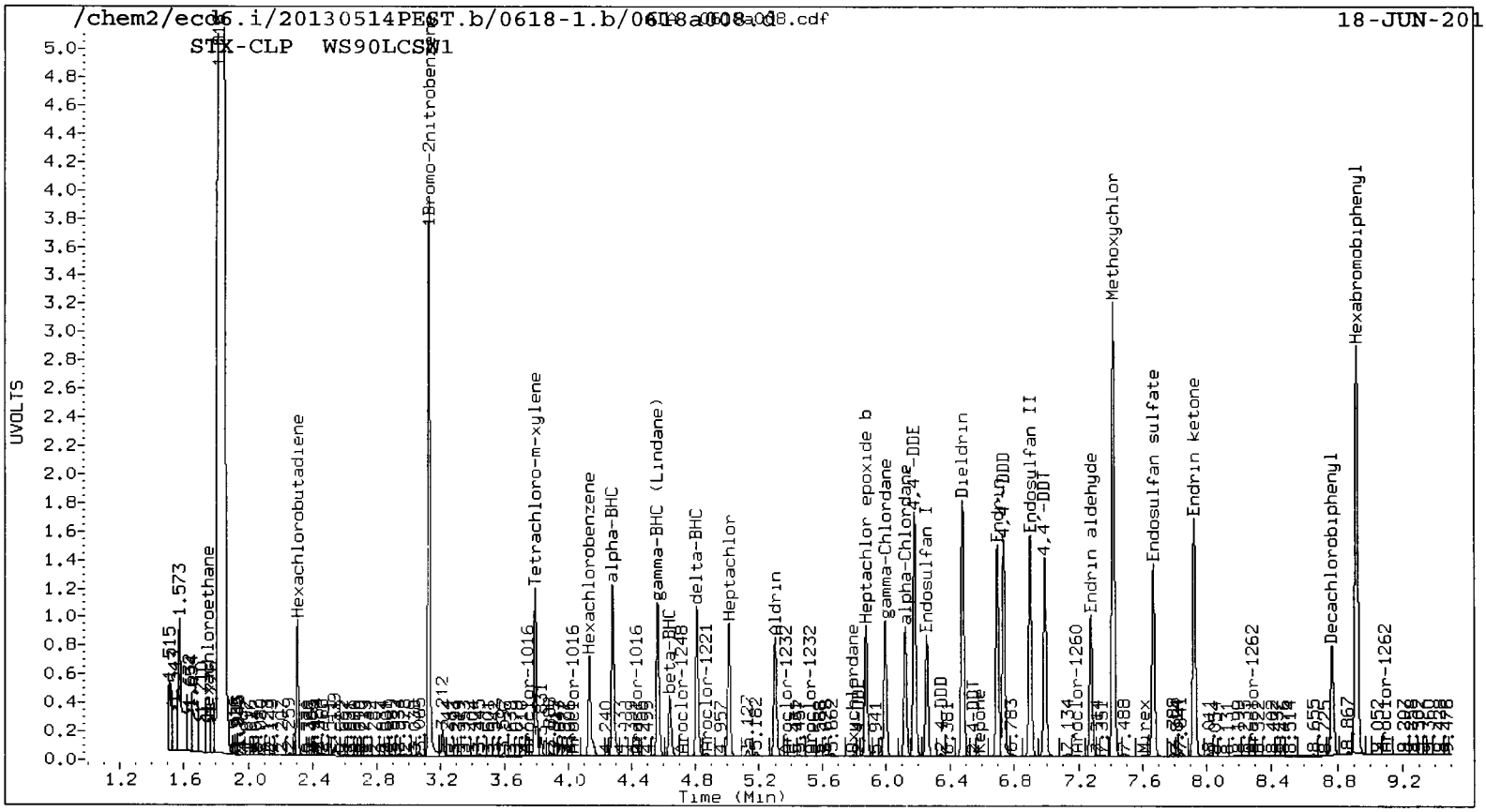
Column 2

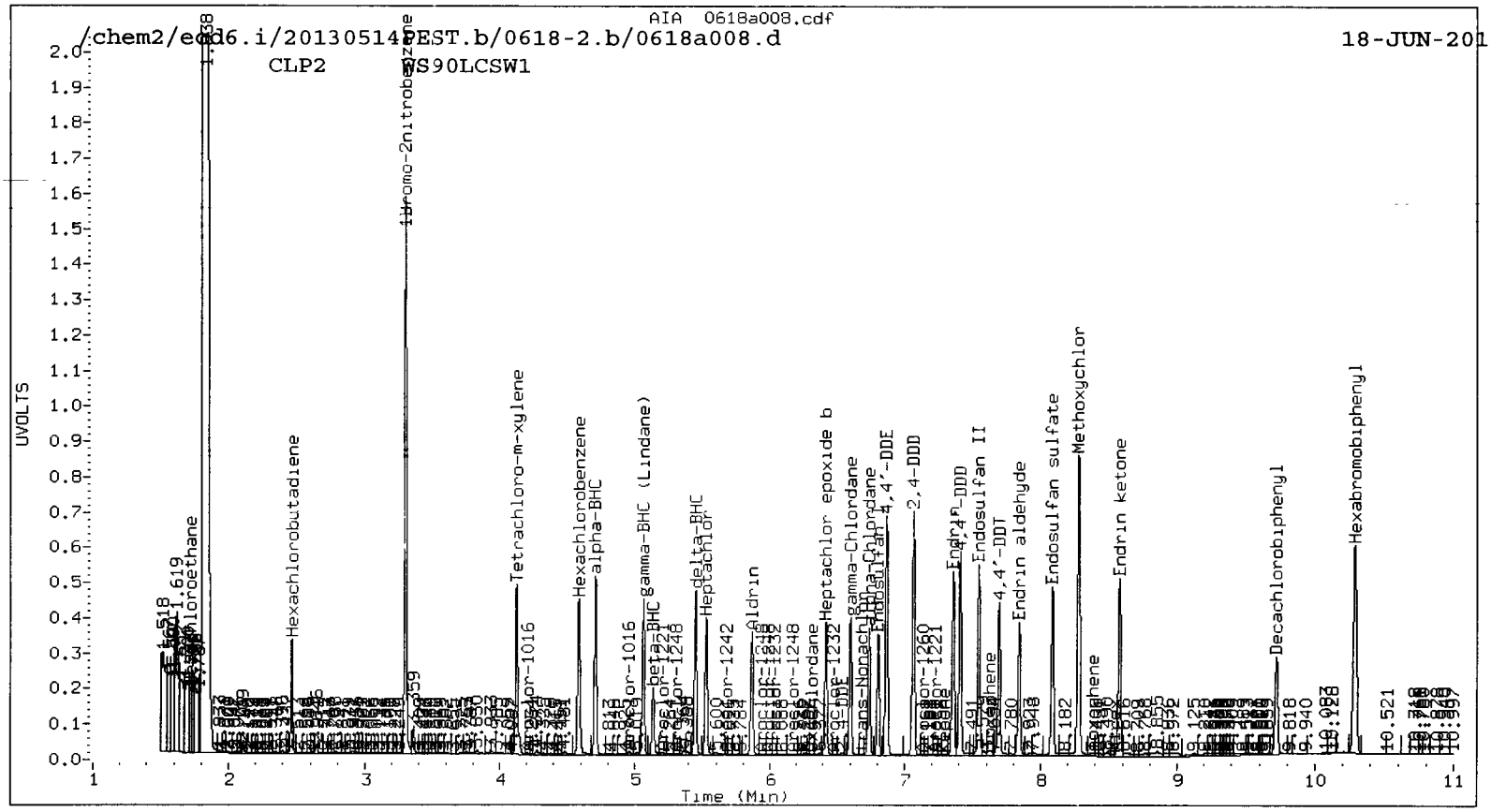
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29590651	1.8
Hexabromobiphenyl	16515704	19506327	18.1

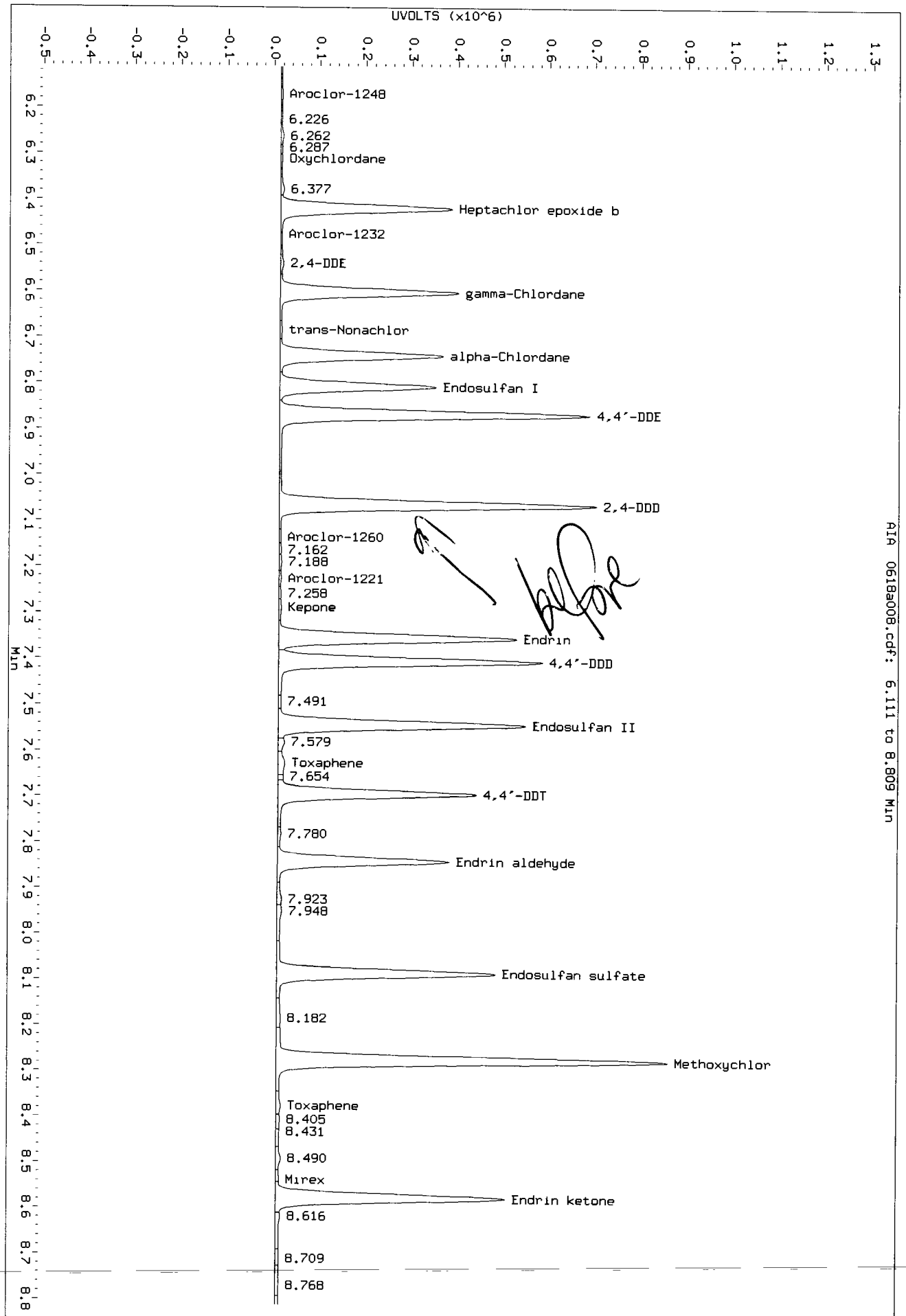
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.992	0.037	3317495	729.1	1	7.287	-0.004	270251	19.1	
Toxaphene	2	---			0.000	2	7.626	0.010	750359	35.6	
Toxaphene	3	7.277	0.014	2383621	452.6	3	7.839	-0.007	9231528	409.2	
Toxaphene	4	7.609	0.021	40199	8.1	4	8.274	-0.040	21737634	1362.2	
Toxaphene	5	---			0.000	5	8.375	0.022	460387	21.9	
Toxaphene	6	7.923	0.014	4037950	1303.3	NS	---			----	
Total STX-CLPAve (4 peaks): 623.268						Total CLP2Ave (5 peaks): 369.608				RPD = 51*	
Corrected Ave (3 peaks): 396.601						Corrected Ave (4 peaks): 121.464				RPD = 106*	

USGS : 88634


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a008.d
18-JUN-201
STX-CLP WS90LCSW1
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
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 0618a008.cdf
/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a008.d
18-JUN-201
CLP2 WS90LCSW1
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
4,4'-DDE
2,4-DDD
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


Data File: /chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a008.d/0618a008.cdf
Injection Date: 18-JUN-2013 12:28
Instrument: ecd6.i
Client Sample ID: WS90LCSW1
UVOLTS (x10^6)
Min
AIA 0618a008.cdf: 6.111 to 8.809 Min
Aroclor-1248
6.226
6.262
6.287
Oxychlordane
6.377
Heptachlor epoxide b
Aroclor-1232
2,4-DDE
gamma-Chlordane
trans-Nonachlor
alpha-Chlordane
Endosulfan I
4,4'-DDE
2,4-DDD
Aroclor-1260
7.162
7.188
Aroclor-1221
7.258
Kepone
Endrin
4,4'-DDD
7.491
Endosulfan II
7.579
Toxaphene
7.654
4,4'-DDT
7.780
Endrin aldehyde
7.923
7.948
Endosulfan sulfate
8.182
Methoxychlor
Toxaphene
8.405
8.431
8.490
Mirex
Endrin ketone
8.616
8.709
8.768

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a009.d ARI ID: WS90LCSDW1
Data file 2: /chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a009.d Client ID: WS90LCSDW1
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 18-JUN-2013 12:46
Compound Sublist: wpest Report Date: 06/21/2013 14:48
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

06/21/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.126	-0.002	7623637	3.297	-0.003	31146105	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.282	-0.003	2712317	4.706	-0.002	11865740	16.7004	16.9642	1.6	alpha-BHC
4.639	-0.002	1054940	5.135	-0.002	4731982	16.3841	17.5878	7.1	beta-BHC
4.809	-0.002	2461958	5.446	-0.002	11054603	18.1640	19.2437	5.8	delta-BHC
4.564	-0.002	2531221	5.062	-0.002	10506496	17.9838	17.3116	3.8	gamma-BHC (Lindane)
5.010	-0.002	2182234	5.526	-0.002	9625178	15.9519	16.5035	3.4	Heptachlor
5.302	-0.002	2097697	5.864	-0.002	8937737	15.4912	16.2362	4.7	Aldrin
5.877	-0.002	2316081	6.419	-0.003	9920735	18.9661	20.5772	8.1	Heptachlor epoxide b
6.254	-0.002	2153865	6.806	-0.002	8745040	18.5882	19.6339	5.5	Endosulfan I
6.477	-0.002	4561940	7.064	-0.003	18381593	37.0463	40.4985	8.9	Dieldrin N
6.178	-0.001	4199647	6.866	-0.002	17511978	42.5902	37.1353	13.7	4,4'-DDE
6.695	-0.002	3758466	7.353	-0.002	13728568	36.9581	34.6177	6.5	Endrin
6.900	-0.002	3888219	7.541	-0.003	14006316	35.2756	30.1027	15.8	Endosulfan II
6.735	-0.002	3818034	7.404	-0.002	14888161	32.7526	31.8871	2.7	4,4'-DDD
7.668	-0.003	3288660	8.085	-0.002	12751098	33.2543	33.5012	0.7	Endosulfan sulfate
6.992	-0.002	3399744	7.692	-0.002	11126669	32.9130	28.9343	12.9	4,4'-DDT
7.417	-0.002	7726377	8.274	-0.002	22823718	156.5659	154.0044	1.6	Methoxychlor
7.923	-0.002	4165327	8.575	-0.002	12989656	33.1708	31.3380	5.7	Endrin ketone
7.278	-0.002	2485750	7.839	-0.002	9863730	26.8072	26.8224	0.1	Endrin aldehyde
5.997	-0.002	2371429	6.602	-0.002	10015853	18.1076	19.8206	9.0	gamma-Chlordane
6.121	-0.002	2257633	6.739	-0.002	9124736	13.5355	19.5989	5.6	alpha-Chlordane
2.307	-0.002	1621202	2.464	-0.002	5507435	9.5496	9.4156	1.4	Hexachlorobutadiene
4.135	-0.002	1589594	4.582	-0.002	11233039	12.3770	15.4339	22.0	Hexachlorobenzene
5.795	0.011	20437	6.309	-0.022	171345	0.1967	0.4035	68.9*	Oxychlordane
5.831	-0.026	1208	6.539	-0.041	445074	0.0154	1.4035	195.7*	2,4-DDE
----			6.682	-0.010	257875	0.0000	0.5491	---	trans-Nonachlor
6.342	-0.002	40724	7.064	-0.001	18381593	0.5865	70.3879	196.7*	2,4-DDD
6.580	-0.003	26672	----			0.3435	0.0000	---	2,4-DDT
----			---			0.0000	0.0000	---	cis-Nonachlor
7.609	0.013	23313	8.531	-0.033	326484	0.2735	1.2490	128.2*	Mirex
8.917	-0.003	7771454	10.285	-0.005	20932018	80.0000	80.0000	0.0	Hexabromobiphenyl
1.751	-0.004	3948	1.725	0.000	3367650	0.0000	0.0000	---	Hexachloroethane
6.541	-0.040	7553	7.287	-0.050	313212	0.0000	0.0000	---	Kepone
3.795	-0.002	2394842	4.123	-0.002	11135076	23.0394	21.9917	4.7	Tetrachloro-m-xylen
8.769	-0.002	2575196	9.722	-0.003	11175061	23.3073	26.4275	12.5	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	57.6	55.0	55.0	52-100
Decachlorobiphenyl	58.3	66.1	58.3	54-100
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	92395.3	86544.4	86544.4~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	82282.6	72335.7	72335.7~	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	5500669	7623637	38.6
Hexabromobiphenyl	5319006	7771454	46.1

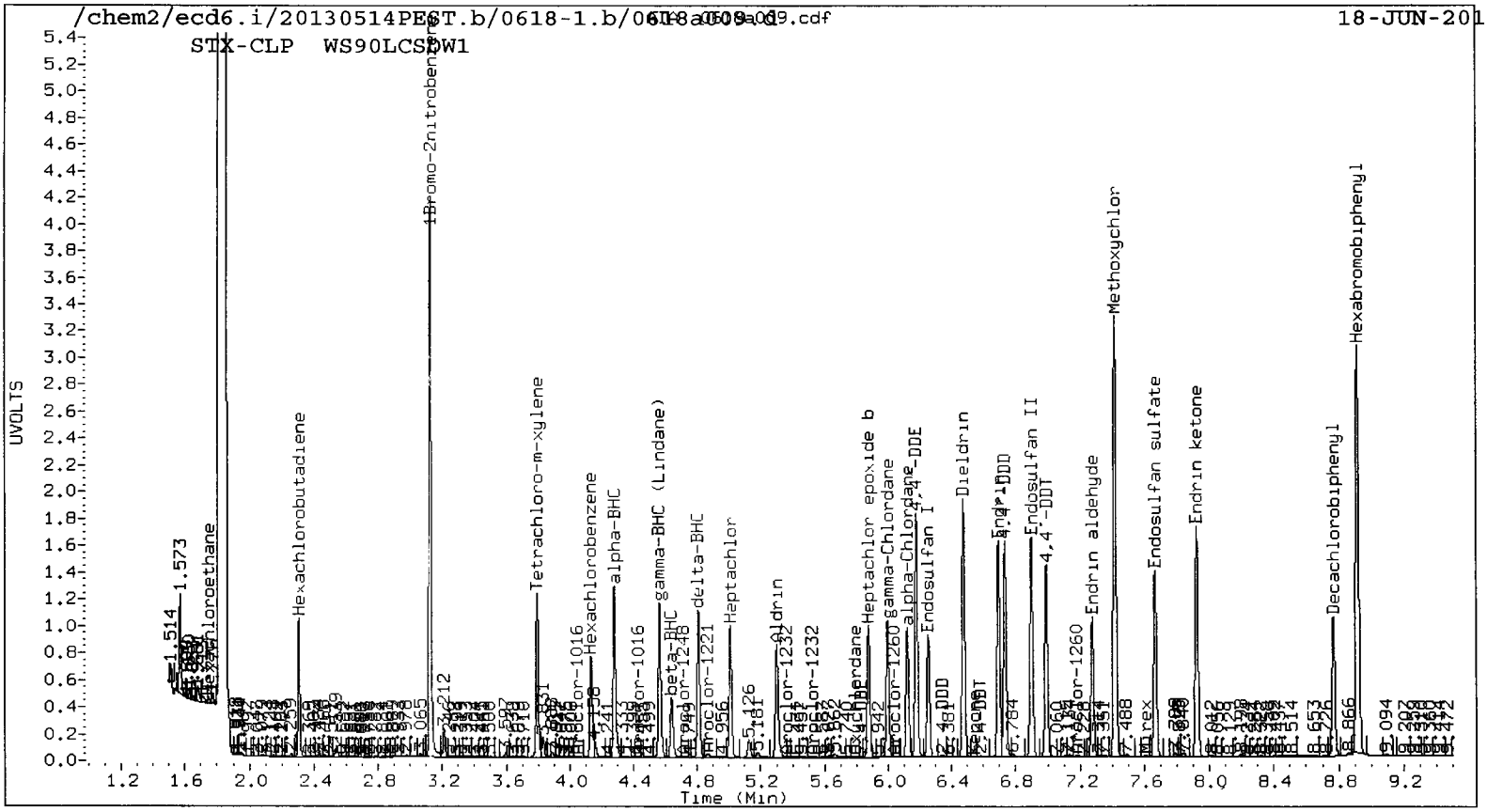
Column 2

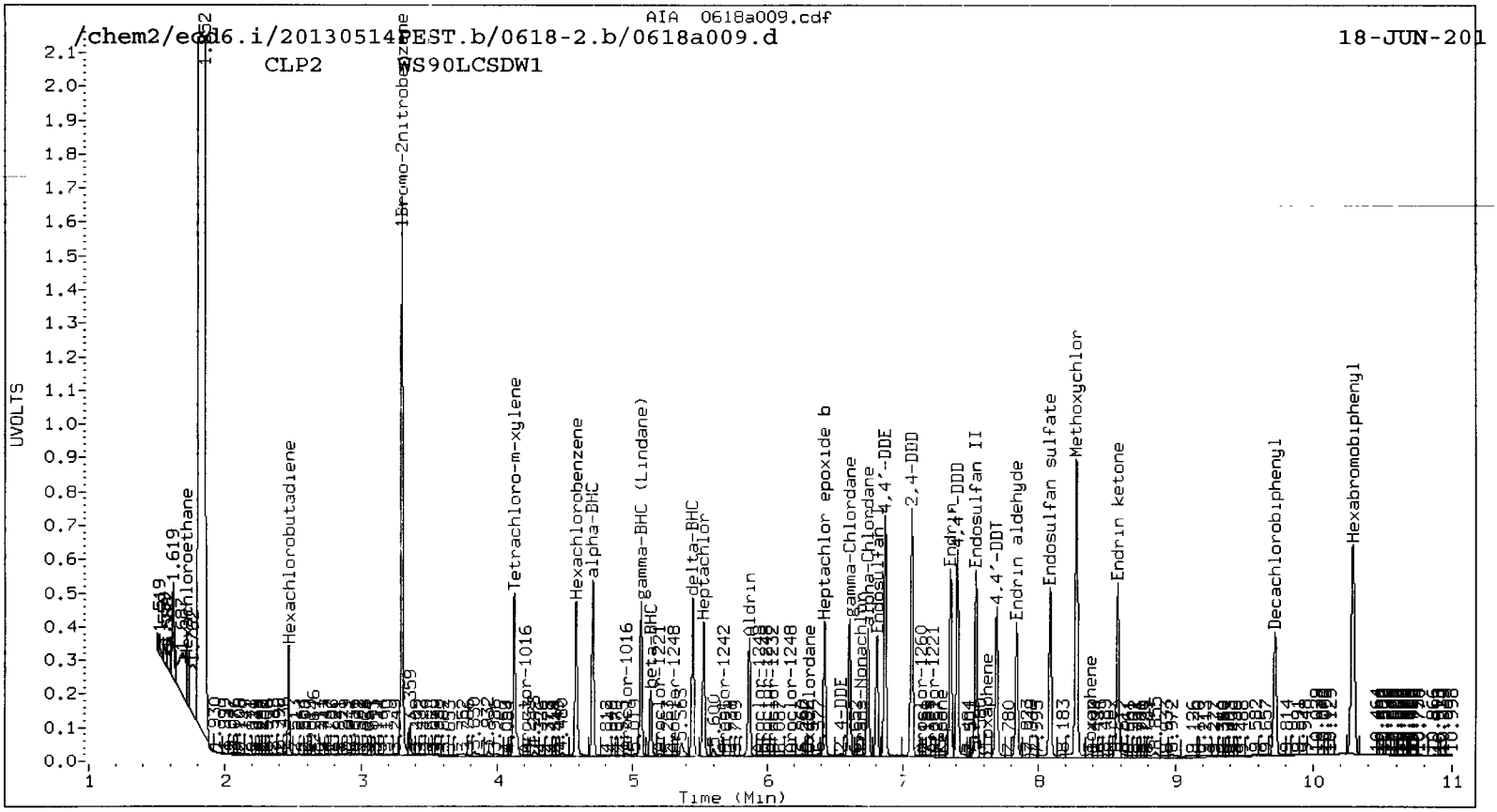
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	31146105	7.2
Hexabromobiphenyl	16515704	20932018	26.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

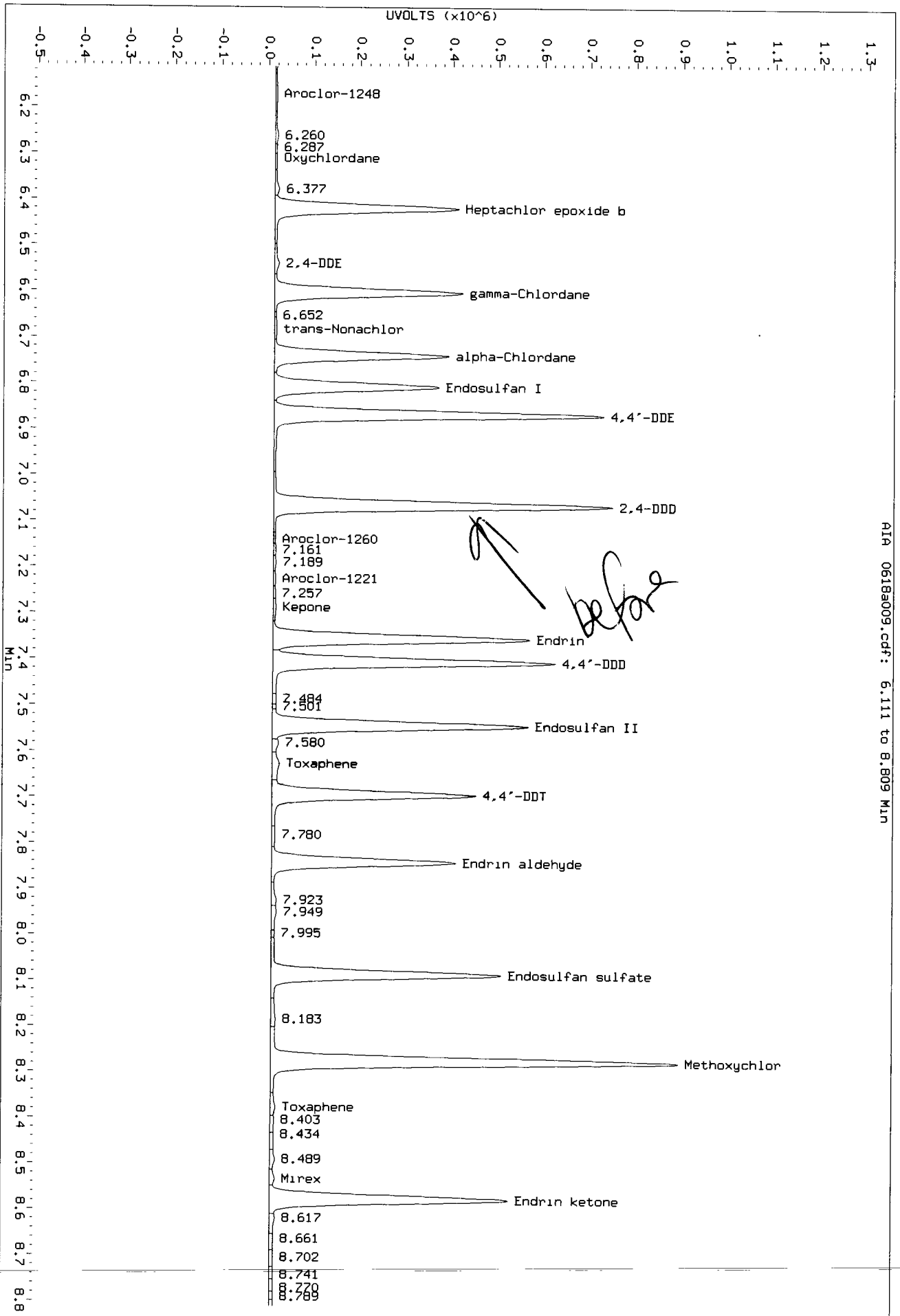
	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.992	0.037	3399744	703.0	1	7.287	-0.004	313212	20.6
Toxaphene	2	---			0.000	2	7.625	0.009	856569	37.9
Toxaphene	3	7.273	0.014	2485750	444.0	3	7.839	-0.007	9863730	407.5
Toxaphene	4	7.609	0.020	23313	4.4	4	8.274	-0.040	22823718	1332.8
Toxaphene	5	---			0.000	5	8.375	0.022	486204	21.6
Toxaphene	6	7.923	0.014	4165327	1264.8	NS	---			----

Total STX-CLPAve (4 peaks): 604.059 Total CLP2Ave (5 peaks): 364.075 RPD = 50*
Corrected Ave (3 peaks): 383.807 Corrected Ave (4 peaks): 121.887 RPD = 104*


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a009.d
18-JUN-201
STX-CLP WS90LCSDW1
UVOLTS
Time (Min)
1.514
1.573
Hexachloroethane
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0618a009.cdf
/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a009.d
18-JUN-201
CLP2 WS90LCSDW1
UVOLTS
Time (Min)
1.619
Hexachloroethane
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
2,4-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

WS90 00639


Data File: /chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a009.d/0618a009.cdf
Injection Date: 18-JUN-2013 12:46
Instrument: ecd6.i
Client Sample ID: WS90LCSDW1
UVOLTS (x10^6)
Min
AIA 0618a009.cdf: 6.111 to 8.809 Min
Aroclor-1248
6.260
6.287
Oxychlordane
6.377
Heptachlor epoxide b
2,4-DDE
gamma-Chlordane
6.652
trans-Nonachlor
alpha-Chlordane
Endosulfan I
4,4'-DDE
2,4-DDD
Aroclor-1260
7.161
7.189
Aroclor-1221
7.257
Kepone
Endrin
4,4'-DDD
7.484
7.501
Endosulfan II
7.580
Toxaphene
4,4'-DDT
7.780
Endrin aldehyde
7.923
7.949
7.995
Endosulfan sulfate
8.183
Methoxychlor
Toxaphene
8.403
8.434
8.489
Mirex
Endrin ketone
8.617
8.661
8.702
8.741
8.770
8.789

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a011.d ARI ID: WS90A
Data file 2: /chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a011.d Client ID: CL-MH-SPS-20130605-
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 18-JUN-2013 13:21
Compound Sublist: wpest Report Date: 06/21/2013 14:40
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

6/21/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.126	-0.003	6636100	3.296	-0.003	27855581	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.266	-0.018	12793	4.702	-0.006	74592	0.0905	0.1192	27.4	alpha-BHC
4.662	0.021	87899	5.147	0.010	111218	1.5683	0.4622	108.9*	beta-BHC
4.794	-0.017	12802	5.447	-0.001	94459	0.1085	0.1839	51.5*	delta-BHC
4.598	0.032	30636	5.042	-0.023	218299	0.2501	0.4022	46.6*	gamma-BHC (Lindane)
5.015	0.003	10657	5.529	0.000	43999	0.0895	0.0844	5.9	Heptachlor
5.321	0.017	39321	5.848	-0.019	381046	0.3336	0.7740	79.5*	Aldrin
5.868	-0.012	39189	6.402	-0.019	153273	0.3687	0.3555	3.6	Heptachlor epoxide b
6.245	-0.011	7954	6.776	-0.032	221507	0.0789	0.5561	150.3*	Endosulfan I
6.455	-0.024	9524	7.052	-0.014	234087	0.0889	0.5767	146.6*	Dieldrin
6.175	-0.004	9559	6.857	-0.011	187285	0.1114	0.4441	119.8*	4,4'-DDE
6.704	0.007	16540	7.365	0.010	161488	0.1877	0.4579	83.7*	Endrin
6.921	0.018	9756	7.527	-0.018	319740	0.0917	0.7728	157.6*	Endosulfan II
6.727	-0.010	7945	7.397	-0.010	129592	0.0786	0.3121	119.5*	4,4'-DDD
7.670	0.000	19381	8.082	-0.004	228760	0.2261	0.6759	99.7*	Endosulfan sulfate
7.004	0.010	21790	7.666	-0.028	1934304	0.2434	5.6567	183.5*	4,4'-DDT
7.440	0.021	6947	8.282	0.005	355822	0.1624	2.7000	177.3*	Methoxychlor
7.918	-0.007	50958	8.579	0.002	585559	0.4682	1.5887	108.9*	Endrin ketone
7.276	-0.004	5876	7.839	-0.003	200650	0.0731	0.6136	157.4*	Endrin aldehyde
5.997	-0.002	5932	6.604	0.000	227399	0.0520	0.5032	162.5*	gamma-Chlordane
6.128	0.005	4195	6.747	0.006	108585	0.0396	0.2608	147.3*	alpha-Chlordane
2.291	-0.018	6128	2.451	-0.015	148903	0.0415	0.2846	149.1*	Hexachlorobutadiene
4.134	-0.004	65382	4.564	-0.020	376449	0.5848	0.5732	2.0	Hexachlorobenzene
5.774	-0.010	2455	6.313	-0.019	233923	0.0273	0.6159	183.0*	Oxychlordane
5.816	-0.042	3074	6.565	-0.015	66412	0.0452	0.2342	135.2*	2,4-DDE
6.067	-0.019	22378	6.678	-0.014	274142	0.2026	0.6564	105.7*	trans-Nonachlor
6.338	-0.005	8980	7.085	0.021	214279	0.1492	0.9228	144.3*	2,4-DDD
6.604	0.021	5589	7.349	-0.003	131010	0.0831	0.5383	146.5*	2,4-DDT
6.758	0.036	20164	7.439	0.022	302486	0.1690	0.6925	121.5*	cis-Nonachlor
7.616	0.020	28718	8.531	-0.033	449756	0.3887	1.9350	133.1*	Mirex
8.917	-0.004	6735705	10.284	-0.006	18613286	80.0000	80.0000	0.0	Hexabromobiphenyl
1.750	-0.006	4515	1.722	-0.002	5651058	0.0000	0.0000	---	Hexachloroethane
6.535	-0.046	9790	7.316	-0.020	225278	0.0000	0.0000	---	Kepone
3.793	-0.003	2137899	4.123	-0.003	9470607	23.6282	20.9133	12.2	Tetrachloro-m-xylene
8.768	-0.002	2027653	9.721	-0.003	8813955	21.1726	23.4537	10.2	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	59.1	52.3	52.3	52-100
Decachlorobiphenyl	52.9	58.6	52.9~	54-100

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	6636100	20.6
Hexabromobipheryl	5319006	6735705	26.6

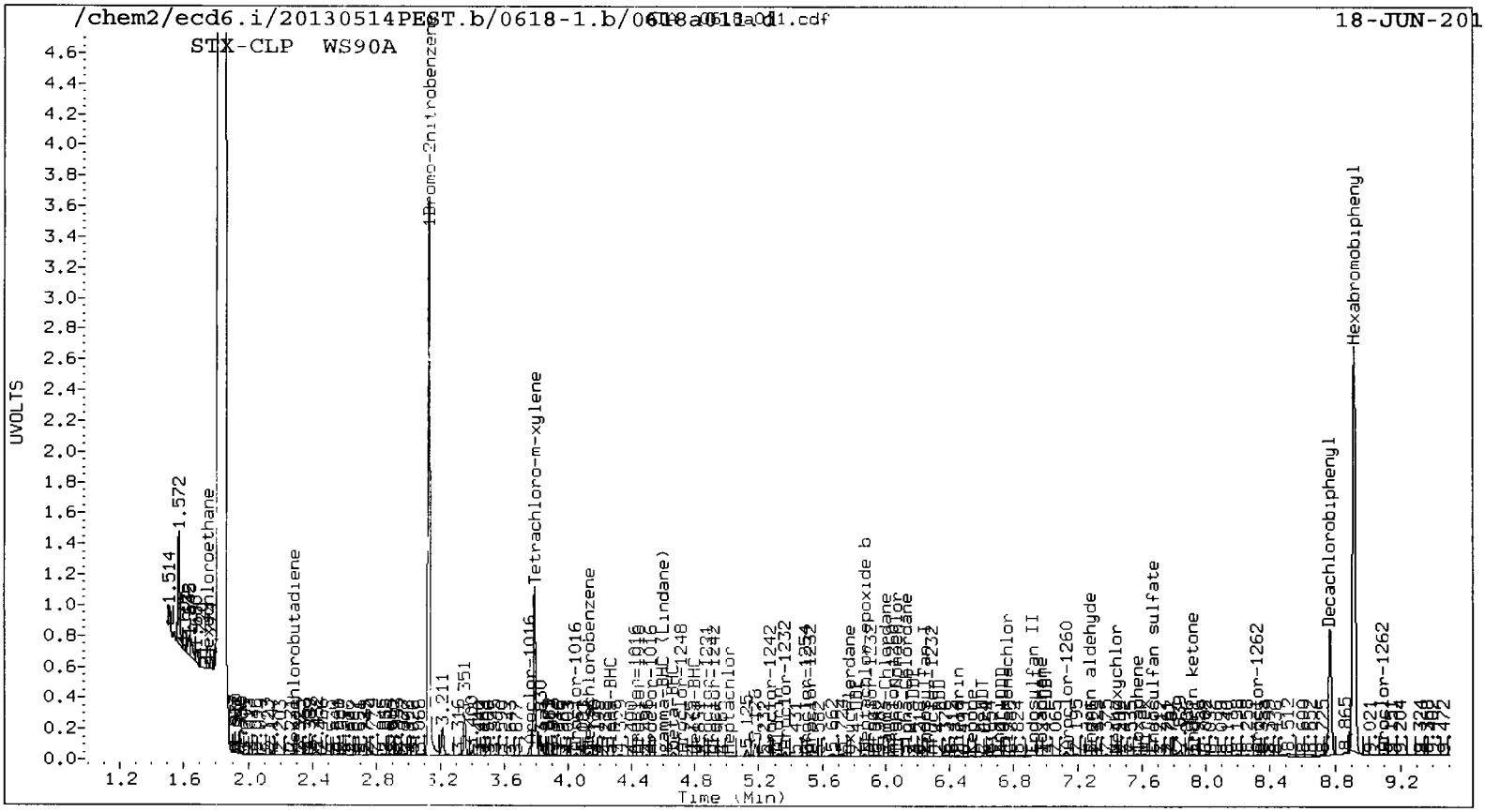
Column 2

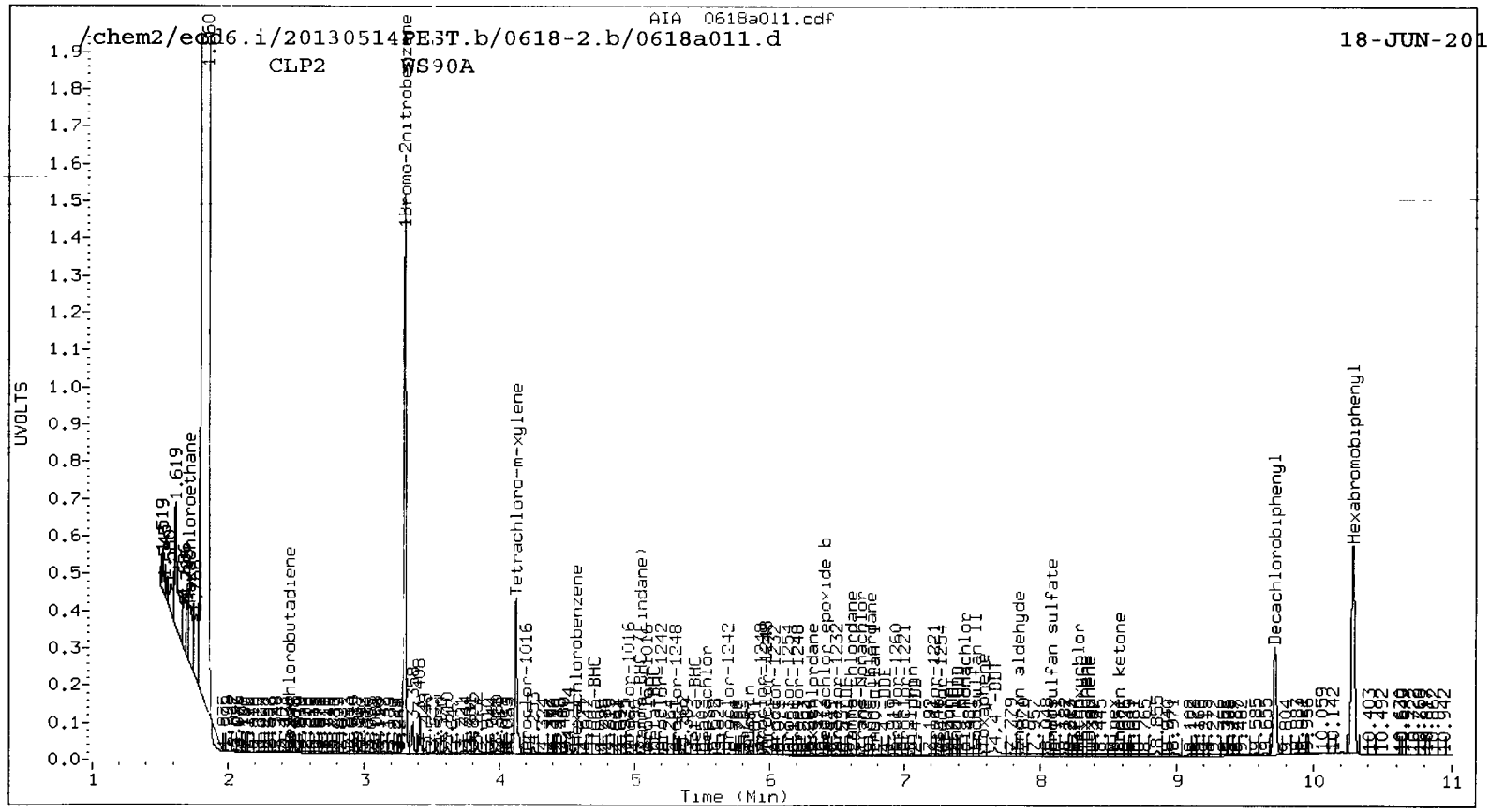
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	27855581	-4.1
Hexabromobiphenyl	16515704	18613286	12.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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	6.970	0.015	10243	2.4	1	7.272	-0.019	102473	7.6
Toxaphene	2	7.004	-0.003	21790	6.7	2	7.580	-0.036	529651	26.3
Toxaphene	3	7.276	0.012	5876	1.2	3	7.839	-0.007	200650	9.3
Toxaphene	4	7.567	-0.021	29843	6.6	4	8.328	0.014	209454	13.8
Toxaphene	5	7.616	-0.012	28718	8.9	5	8.359	0.006	345461	17.3
Toxaphene	6	7.918	0.009	50958	17.9	NS	---			----

Total STX-CLPAve (6 peaks): 7.280 Total CLP2Ave (5 peaks): 14.851 RPD = 68*
Corrected Ave (5 peaks): 5.165 Corrected Ave (4 peaks): 11.978 RPD = 79*


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a011.d
18-JUN-201
STX-CLP WS90A
UVOLTS
Time (Min)
1.514
1.572
Hexachloroethane
Hexachlorobutadiene
3.211
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0618a011.cdf
/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a011.d
18-JUN-201
CLP2 WS90A
UVOLTS
Time (Min)
1.619
Hexachloroethane
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a012.d ARI ID: WS90B
Data file 2: /chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a012.d Client ID: CL-VT-EFF-20130605-
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 18-JUN-2013 13:39
Compound Sublist: wpest Report Date: 06/21/2013 14:40
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

JR 06/21/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.126	-0.003	6749563	3.297	-0.003	29955195	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.266	-0.018	11747	4.703	-0.005	174101	0.0817	0.2588	104.0*	alpha-BHC
4.667	0.025	35668	5.149	0.013	200911	0.6257	0.7764	21.5	beta-BHC
4.775	-0.036	30884	5.454	0.006	203498	0.2574	0.3683	35.5	delta-BHC
4.567	0.001	1664	5.043	-0.022	335851	0.0134	0.5754	190.9*	gamma-BHC (Lindane)
5.017	0.004	7538	5.504	-0.024	250319	0.0622	0.4463	151.0*	Heptachlor
5.323	0.018	29576	5.848	-0.019	382094	0.2467	0.7217	98.1*	Aldrin
5.869	-0.011	13452	6.447	0.026	68824	0.1244	0.1484	17.6	Heptachlor epoxide b
6.244	-0.012	6136	6.791	-0.017	270340	0.0598	0.6311	165.4*	Endosulfan I
6.457	-0.022	7788	7.053	-0.013	317483	0.0714	0.7273	164.2*	Dieldrin
6.176	-0.003	6881	6.851	-0.018	330133	0.0788	0.7279	160.9*	4,4'-DDE
6.656	-0.041	7583	7.367	0.012	361155	0.0839	0.9326	167.0*	Endrin
6.894	-0.009	5475	7.520	-0.025	208871	0.0559	0.4597	156.6*	Endosulfan II
6.759	0.022	62614	7.406	0.000	150276	0.6045	0.3296	58.9*	4,4'-DDD
7.663	-0.007	26092	8.081	-0.006	230675	0.2969	0.6207	70.6*	Endosulfan sulfate
7.005	0.011	20777	7.666	-0.023	952775	0.2264	2.5374	167.2*	4,4'-DDT
7.444	0.024	21834	8.280	0.003	357354	0.4979	2.4694	132.9*	Methoxychlor
7.917	-0.009	50135	8.579	0.001	826650	0.4493	2.0424	127.9*	Endrin ketone
7.275	-0.005	8559	7.838	-0.003	205094	0.1039	0.5712	138.4*	Endrin aldehyde
6.019	0.020	8783	6.606	0.002	278543	0.0758	0.5731	153.3*	gamma-Chlordane
----			6.773	0.032	266396	0.0000	0.5949	---	alpha-Chlordane
2.291	-0.018	11020	2.488	0.022	46895	0.0733	0.0834	12.8	Hexachlorobutadiene
4.134	-0.003	60757	4.565	-0.019	240324	0.5343	0.3403	44.4*	Hexachlorobenzene
5.815	0.030	3332	6.314	-0.018	251300	0.0261	0.6153	177.8*	Oxychlordane
----			6.568	-0.012	122483	0.0000	0.4016	---	2,4-DDE
6.110	0.004	8441	6.680	-0.012	443760	0.0745	0.9677	171.4*	trans-Nonachlor
6.342	-0.002	4143	7.087	0.022	166712	0.0672	0.6530	162.7*	2,4-DDD
6.606	0.024	4589	----			0.0665	0.0000	---	2,4-DDT
6.707	-0.015	10073	7.448	0.031	264806	0.0823	0.5521	148.1*	cis-Nonachlor
7.611	0.015	12393	8.531	-0.034	463463	0.1626	1.8354	167.3*	Mirex
8.917	-0.003	6905449	10.284	-0.006	20439039	80.0000	80.0000	0.0	Hexabromobiphenyl
1.752	-0.004	20212	1.704	-0.020	10813874	0.0000	0.0000	---	Hexachloroethane
6.535	-0.046	8188	7.316	-0.020	320346	0.0000	0.0000	---	Kepone
3.794	-0.003	2295858	4.123	-0.002	11060718	24.9474	22.7212	9.3	Tetrachloro-m-xylen
8.768	-0.002	2360385	9.721	-0.004	11250807	24.0422	27.2484	12.5	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

WS90 : 0061U

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	62.4	56.8	56.8	52-100
Decachlorobiphenyl	60.1	68.1	60.1	54-100

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

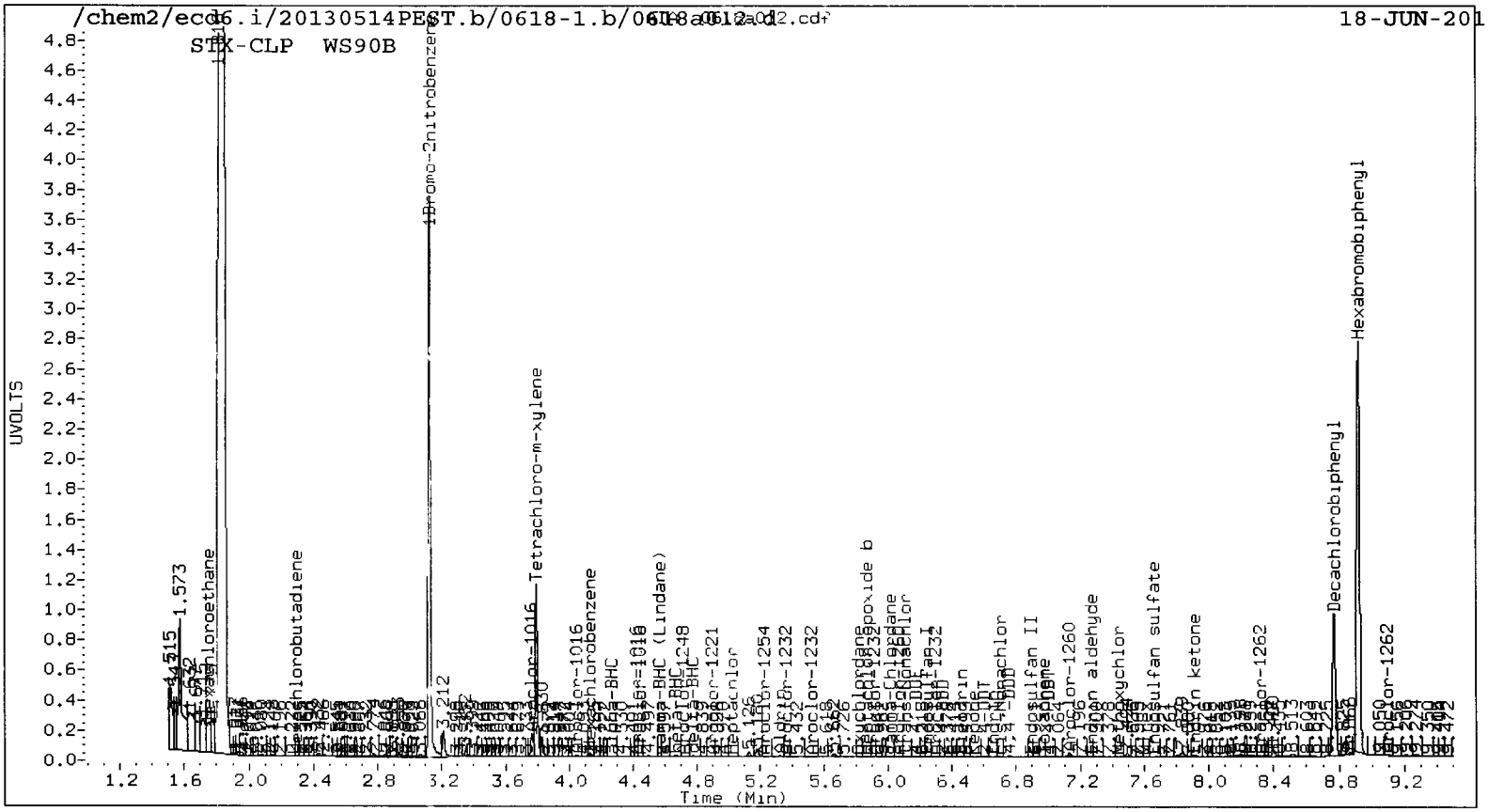
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	6749563	22.7
Hexabromobiphenyl	5319006	6905449	29.8

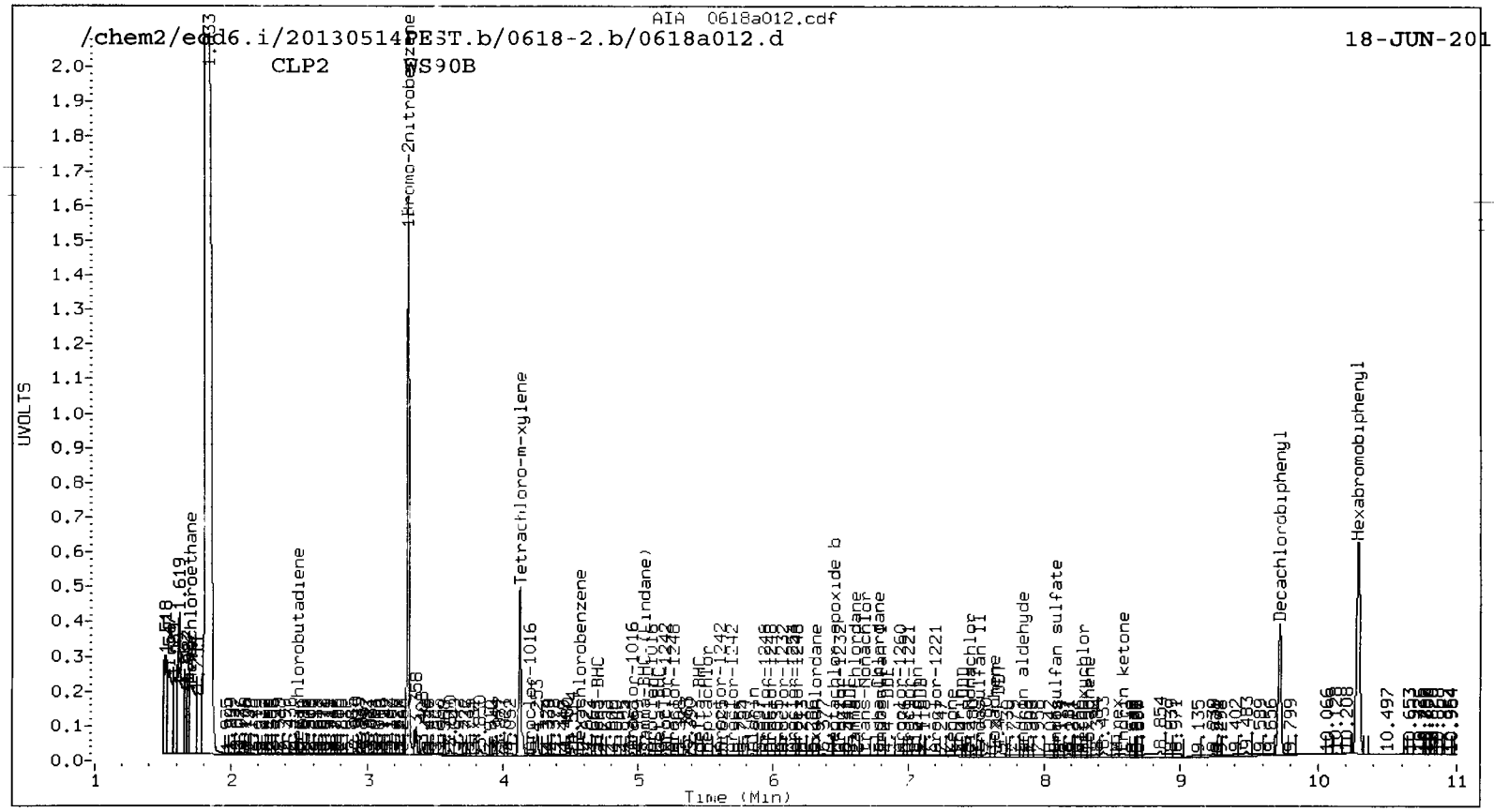
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29955195	3.1
Hexabromobiphenyl	16515704	20439039	23.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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	6.971	0.015	8560	2.0	1	7.316	0.025	330346	22.2
Toxaphene	2	7.005	-0.002	20777	6.2	2	7.628	0.012	454952	20.6
Toxaphene	3	7.075	0.012	8559	1.7	3	7.838	-0.008	205094	8.7
Toxaphene	4	7.611	0.022	12393	2.7	4	8.327	0.014	183296	11.0
Toxaphene	5	---			0.000	5	---			0.000
Toxaphene	6	7.917	0.008	50135	17.1	NS	---			----
Total STX-CLPAve (5 peaks): 5.949						Total CLP2Ave (4 peaks): 15.623				RPD = 90*
Corrected Ave (4 peaks): 3.153						Corrected Ave (4 peaks): 15.623				RPD = 133*


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a012.d
STX-CLP WS90B
18-JUN-201
UVOLTS
Time (Min)
1.573
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexabromobiphenyl
Decachlorobiphenyl


AIA 0618a012.cdf
/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a012.d
CLP2 WS90B
18-JUN-201
UVOLTS
Time (Min)
1.573
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexabromobiphenyl
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a020.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a020.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 18-JUN-2013 16:06
Compound Sublist: INDA Report Date: 06/21/2013 14:40
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
3.127	-0.002	5270968	3.297	-0.003	26872349	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.282	-0.002	2630075	4.706	-0.003	14671330	23.4222	24.3112	3.7	alpha-BHC
4.640	-0.002	965038	5.135	-0.002	5803680	21.6776	25.0017	14.2	beta-BHC
4.809	-0.002	2185617	5.446	-0.002	12383743	23.3225	24.9859	6.9	delta-BHC
4.564	-0.002	2352037	5.062	-0.002	12676827	24.1695	24.2097	0.2	gamma-BHC (Lindane)
5.010	-0.002	2193622	5.526	-0.002	12060666	23.1923	23.9682	3.3	Heptachlor
5.303	-0.002	2227968	5.864	-0.002	11948759	23.7970	25.1581	5.6	Aldrin
5.877	-0.003	2025530	6.418	-0.003	10971138	23.9902	26.3750	9.5	Heptachlor epoxide
6.254	-0.003	1855368	6.806	-0.003	9789914	23.1591	25.4754	9.5	Endosulfan I
6.477	-0.002	3992739	7.063	-0.003	19417677	46.8963	49.5851	5.6	Dieldrin
6.178	-0.002	2865607	6.866	-0.002	19268783	42.0325	47.3592	11.9	4,4'-DDE
6.695	-0.002	3324047	7.353	-0.002	14971569	45.8862	43.2254	6.0	Endrin
6.901	-0.002	3219569	7.542	-0.002	16466595	41.0050	40.5214	1.2	Endosulfan II
6.735	-0.002	3285828	7.404	-0.002	16208220	39.5701	39.7473	0.4	4,4'-DDD
7.668	-0.002	2922203	8.085	-0.002	13630784	41.4816	41.0045	1.2	Endosulfan sulfate
6.993	-0.002	3153578	7.692	-0.002	14365993	42.8589	42.7741	0.2	4,4'-DDT
7.418	-0.002	6973603	8.275	-0.002	24097362	198.3785	186.1720	6.3	Methoxychlor
7.923	-0.002	3669118	8.576	-0.002	14355096	41.0189	39.6532	3.4	Endrin ketone
7.277	-0.003	2518991	7.840	-0.002	12291301	38.1362	38.2694	0.3	Endrin aldehyde
5.997	-0.002	2110396	6.602	-0.002	11083276	23.3070	25.4212	8.7	gamma-Chlordane
6.121	-0.003	2013593	6.738	-0.003	10294082	23.9108	25.6269	6.9	alpha-Chlordane
2.307	-0.001	2644856	2.465	-0.001	8333548	22.5332	16.5131	30.8	Hexachlorobutadiene
4.136	-0.002	1902291	4.582	-0.002	15053839	21.4904	23.7515	10.0	Hexachlorobenzene
8.918	-0.002	5535875	10.286	-0.004	18281546	80.0000	80.0000	0.0	Hexabromobiphenyl
3.795	-0.002	3326218	4.123	-0.002	20015201	46.2825	45.8155	1.0	Tetrachloro-m-xylen
8.769	-0.001	2974083	9.723	-0.002	15295221	37.7992	41.4152	9.1	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	115.7	114.5	111.5*	115- 0
Decachlorobiphenyl	94.5	103.5	91.5*	115- 0

US96:00617

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

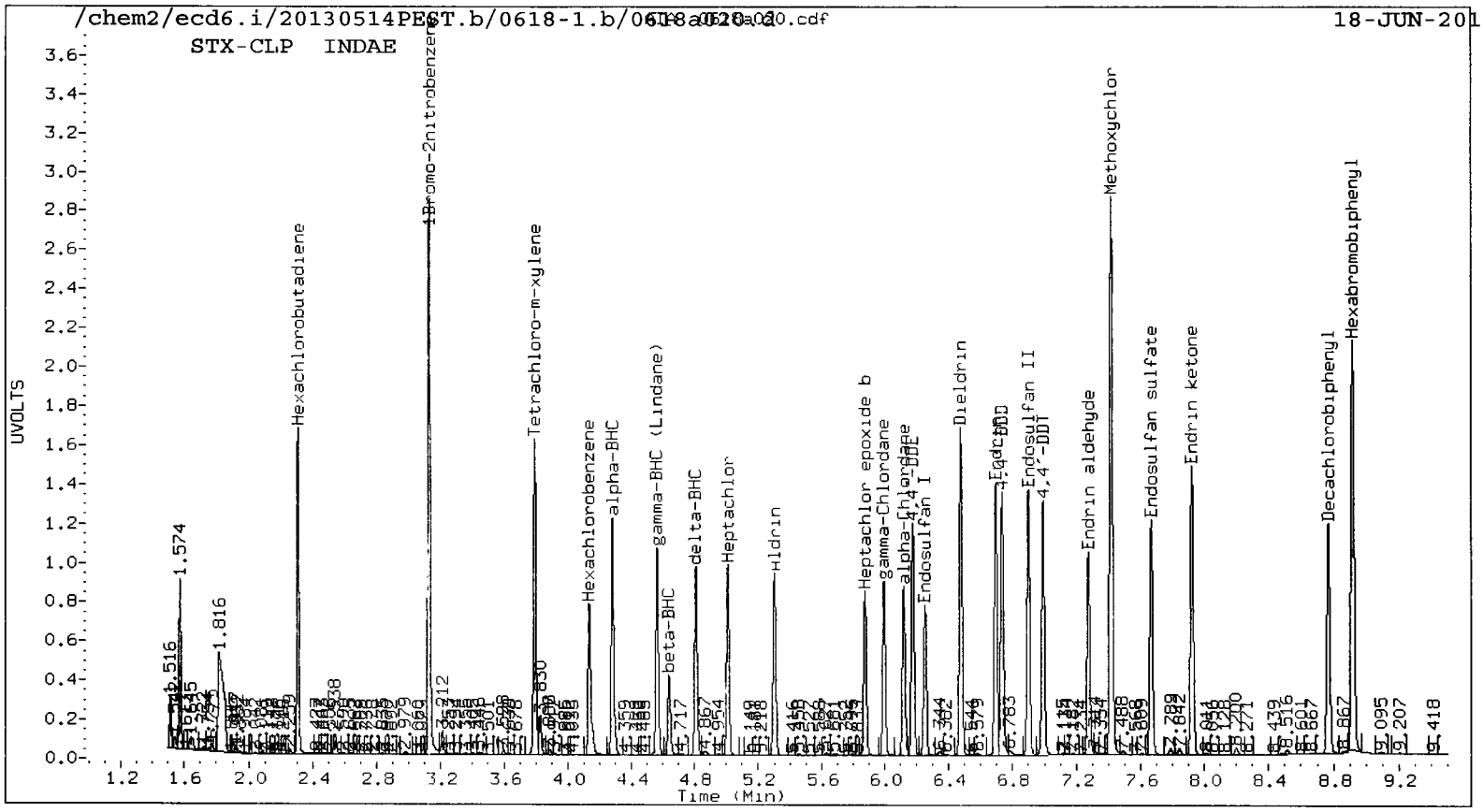
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5270968	-4.2
Hexabromobiphenyl	5319006	5535875	4.1

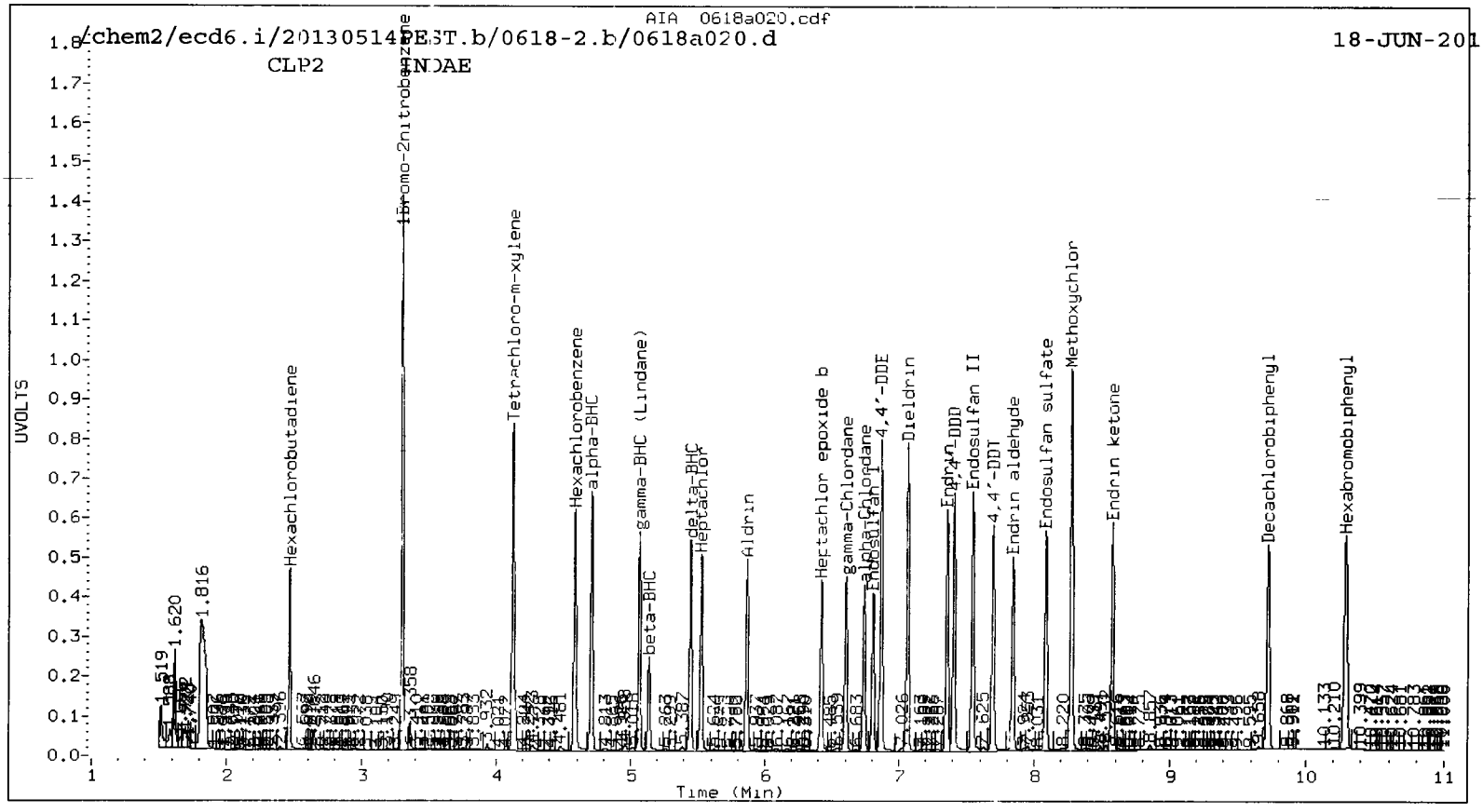
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	26872349	-7.5
Hexabromobiphenyl	16515704	18281546	10.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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/20130514PEST.b/0618-1.b/0618a020.d
AIA 0618a020.cdf
18-JUN-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.574
1.816
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


/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a020.d
AIA 0618a020.cdf
18-JUN-201
CLP2 INDAE
UVOLTS
Time (Min)
1.620
1.816
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/20130514PEST.b/0618-1.b/0618a021.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a021.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 18-JUN-2013 16:24
Compound Sublist: TOXAPH Report Date: 06/21/2013 14:40
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
3.126	-0.002	5808987	3.297	-0.003	29086569	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.918	-0.002	6374042	10.285	-0.005	20610335	80.0000	80.0000	0.0	Hexabromobiphenyl
3.795	-0.002	3040096	4.124	-0.002	18541559	38.3834	39.2113	2.1	Tetrachloro-m-xylen
8.769	-0.001	2924543	9.722	-0.003	14772347	32.2721	35.4798	9.5	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	96.0	98.0	96.0~	150- 0
Decachlorobiphenyl	80.7	88.7	80.7~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5808987	5.6
Hexabromobiphenyl	5319006	6374042	19.8

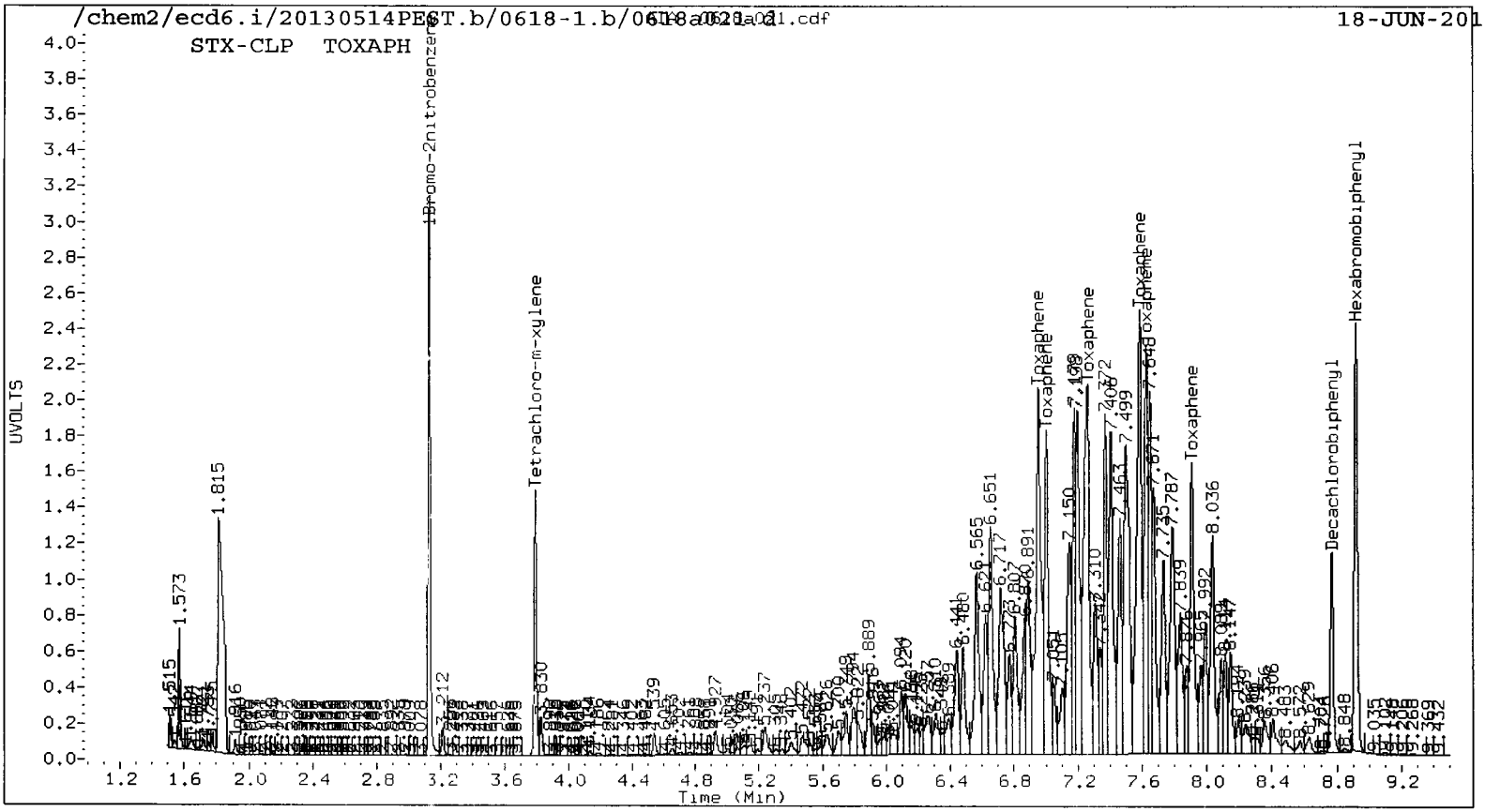
Column 2

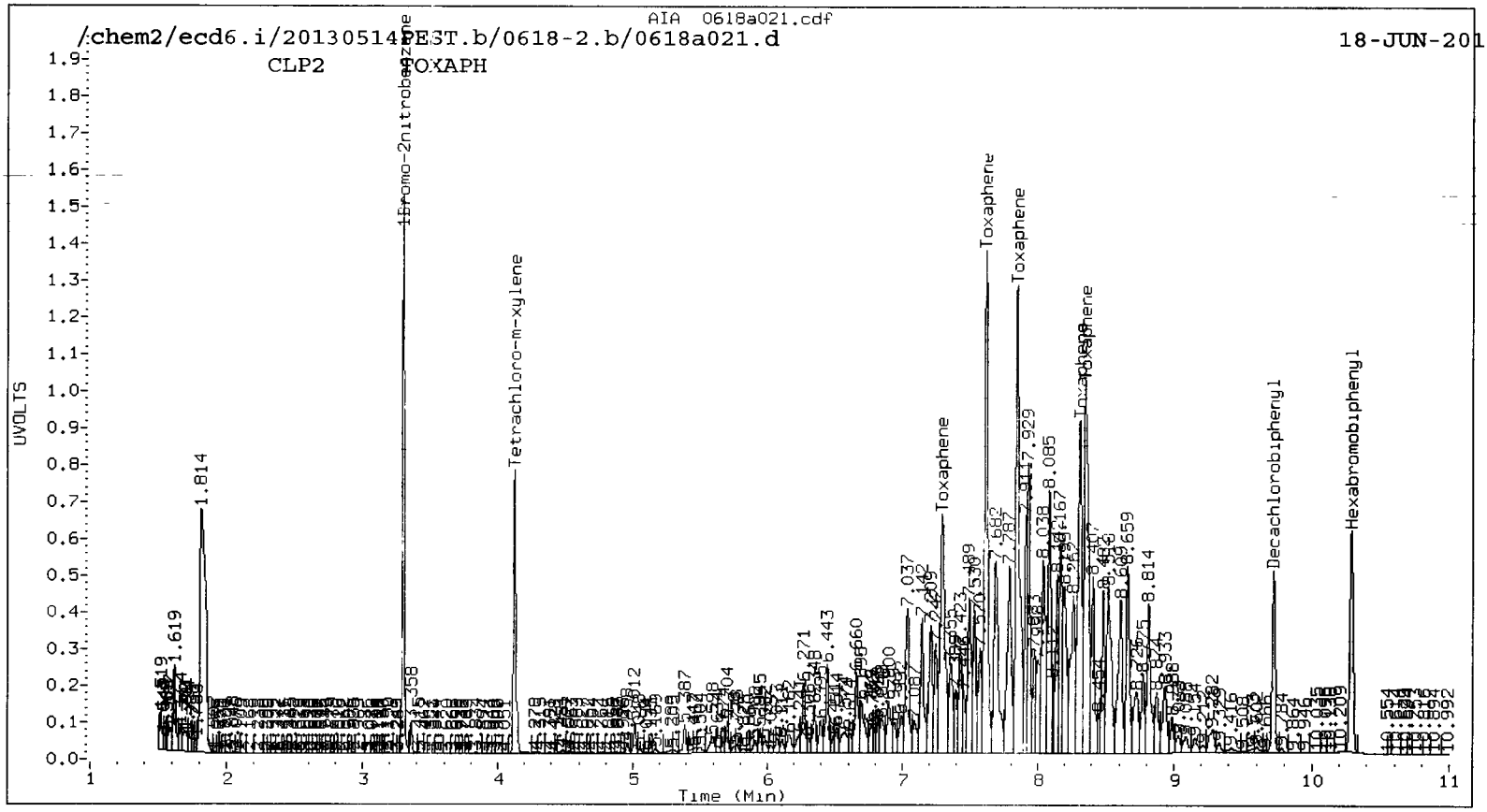
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29086569	0.1
Hexabromobiphenyl	16515704	20610335	24.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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	6.953	-0.002	9037896	2278.5	1	7.289	-0.002	32050487	2140.2
Toxaphene	2	7.004	-0.002	6294822	2049.0	2	7.613	-0.003	47001054	2111.3
Toxaphene	3	7.261	-0.002	10135792	2207.4	3	7.844	-0.002	50863133	2133.9
Toxaphene	4	7.586	-0.002	10295138	2390.4	4	8.312	-0.002	36314796	2153.8
Toxaphene	5	7.626	-0.002	6671922	2185.2	5	8.351	-0.002	44927757	2026.9
Toxaphene	6	7.907	-0.002	5707191	2112.9	NS	---			----

Total STX-CLPAve (6 peaks): 2203.916 Total CLP2Ave (5 peaks): 2113.232 RPD = 4
Corrected Ave (6 peaks): 2203.916 Corrected Ave (5 peaks): 2113.232 RPD = 4


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a021.d
AIA 0618a021.cdf
18-JUN-201
STX-CLP TOXAPH
UVOLTS
Time (Min)
1.815
1.573
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0618a021.cdf
/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a021.d
18-JUN-201
CLP2 TOXAPH
UVOLTS
Time (Min)
1.814
1.619
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

PCB Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WS90, WS92

Incorporated
Analytical Chemists and Consultants

(8082A) PCB – Water
Separatory Funnel (3510C) (SOP # 3311S)

Preparation Test PCB Low Level # 3 (PCBWSL)
ARI Job No(s) WS 96, WS97, WT15 Page 1 of 1

Low Level (0.01ppb)
Batch set up by: SP

Bottle #	ARI Sample I.D.	Volume Extracted	(REQ) Acid Clean (1:1)	(REQ) Sulfur Clean (1:1) Transfer Rinse (1) 2 3	(REQ) Silica Gel Clean (1:1) Transfer Rinse	Final Effective Volume	Volume to Lab	Comments	Verify Client ID AR 06/11/13 Analyst/Date
	WS96 MBW	1000mL	4mL	4mL	1mL	0.5mL	0.5mL		Verifty pH is 5-9
	SBW	1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
	SBW Dup.	1000mL	4mL	4mL	1mL	0.5mL	0.5mL		AR 06/11/13
	QLS	1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
2	↓ D	1000mL	4mL	4mL	1mL	0.5mL	0.5mL		Analyst/Date
5	WS97A	1000mL	4mL	4mL	1mL	0.5mL	0.5mL		KD 100ºC 1 2 3 4 5 6
5	WT15 A	1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
1	B	1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
1	↓ C	1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		06/12/13
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		Analyst/Date
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		TurboVap 1 2 3 Pre-Cleanups
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		6/14/13
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		Analyst/Date
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		TurboVap 1 2 3 Post Cleanups
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		AC 6-14-13
		1000mL	4mL	4mL	1mL	0.5mL	0.5mL		
Analyst/Date		AR 06/11/13 →	6/14/13	6/14/13	6/14/13	AC 6-14-13	AC 6-14-13	Reviewed AC 6-17-13	Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	D (B444152)	0.2µg/mL	100µL	4/30/14	AR	SP
Spike	13 (B444619)	2µg/mL	25µL	10/31/13	AR	SP
QLS Spike	23 (2074-3)	0.2µg/mL	50µL	8/28/13	AR	SP

Extraction Time: 0840

SPECIAL INSTRUCTIONS: 1. Rinse all Non-scratched glassware with Hexane. 2. Verify pH is 5-9.

3. Adjust pH (if necessary=Analyst Notes). 4. Add Surr/Spike. 5. Extract 3X with 60mL Hexane.

6. Non-scratched KD (NO Drying Column) at 100°. RINSE SNYDER COLUMNS WITH HEXANE 7. TurboVap.

8. Clean-ups=Transfer Rinse. 9. TurboVap. 10. Vial with Hexane.

A. Archive (Y) N

WS97 only

WS96 : 00654

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WS90 Client ID: SAIC

Parameter: Low level PCB 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 WS90 Sample D	AR 06/11/13
☐ 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)	

WS90 : 00055

PCB Raw Data
Initial Calibration

ARI Job ID: WS90, WS92

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): 05/07/13 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
IB	1992-2	05/16/13	AR1660	~~B207~~ B182	04/30/14
AR1660	B161	04/30/14	AR1242	B190	
AR1242	B163		AR1248	B191	
AR1248	B172		AR1254	B192	
AR1254	B173		AR2162	B193	
AR2162	B174		AR5768	B194	
AR5768	B175				
BD	2067-1	05/16/13			
DDT-	1991-2	01/21/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: JR Date: 05/07/13

Reviewer: VD Date: 5-8-13

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130507.b/ical-1.b

ARI Job No.: IB Method: PCB1.m Instrument: ecd5.i Date: 07-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1619	0507a003.d	IB		1	NO MANUAL INTEGRATION
1639	0507a004.d	0.25PPMAR1660		1	NO MANUAL INTEGRATION
1659	0507a005.d	0.02PPMAR1660		1	NO MANUAL INTEGRATION
1719	0507a006.d	0.05PPMAR1660		1	NO MANUAL INTEGRATION
1739	0507a007.d	1PPMAR1660		1	NO MANUAL INTEGRATION
1759	0507a008.d	0.1PPMAR1660		1	NO MANUAL INTEGRATION
1819	0507a009.d	0.5PPMAR1660		1	NO MANUAL INTEGRATION
1839	0507a010.d	AR1242		1	NO MANUAL INTEGRATION
1859	0507a011.d	AR1248		1	NO MANUAL INTEGRATION
1920	0507a012.d	AR1254		1	NO MANUAL INTEGRATION
1940	0507a013.d	AR2162		1	NO MANUAL INTEGRATION
2000	0507a014.d	AR3268		1	NO MANUAL INTEGRATION
2021	0507a015.d	AR1242 ICV		1	NO MANUAL INTEGRATION
2041	0507a016.d	AR1248 ICV		1	NO MANUAL INTEGRATION
2101	0507a017.d	AR1254 ICV		1	NO MANUAL INTEGRATION
2121	0507a018.d	AR1660 ICV		1	NO MANUAL INTEGRATION
2142	0507a019.d	AR2162 ICV		1	NO MANUAL INTEGRATION
2202	0507a020.d	AR3268 ICV		1	NO MANUAL INTEGRATION

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB2.m
Batch File: /chem2/ecd5.i/20130507.b/ical-2.b
Inst ID: ecd5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0507a004	0507a005	0507a006	0507a007	0507a008	0507a009
INJ.DATE:	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013
INJ.TIME:	16:39	16:59	17:19	17:39	17:59	18:19

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BNB	2.727	2.727	2.726	2.727	2.725	2.725	2.724	2.624-2.824	2.726	0.001
$ 2 Tetrachloro-m-xylene	4.414	4.413	4.413	4.414	4.413	4.412	4.412	4.312-4.512	4.413	0.001
1 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	3.694	3.594-3.794	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	6.165	6.066-6.266	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	6.167	6.067-6.267	+++++	+++++
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	6.800	6.700-6.900	+++++	+++++
7 Aroclor-1016	6.167	6.167	6.167	6.167	6.167	6.166	6.166	6.066-6.266	6.167	0.000
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	8.298	8.198-8.398	+++++	+++++
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.260	10.160-10.360	+++++	+++++
9 Aroclor-1260	10.261	10.262	10.262	10.260	10.262	10.260	10.260	10.160-10.360	10.261	0.001
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	11.507	11.407-11.607	+++++	+++++
$ 13 Decachlorobiphenyl	13.206	13.206	13.205	13.203	13.204	13.204	13.205	13.105-13.305	13.205	0.001
* 12 IS-HBBP	14.074	14.073	14.073	14.072	14.073	14.073	14.072	13.972-14.172	14.073	0.001
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.560	8.510-8.610	+++++	+++++
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.246	9.196-9.296	+++++	+++++
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.949	8.849-9.049	+++++	+++++
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.713	9.613-9.813	+++++	+++++

Reviewer 1 _____ Date: 05/08/13
Reviewer 2 _____ Date: 5-8-13

65378 : 65514

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB2.m
Batch File: /chem2/ecd5.i/20130507.b/ical-2.b
Inst ID: ecd5.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.148	10.048-10.248	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB1.m
Batch File: /chem2/ecd5.i/20130507.b/ical-1.b
Inst ID: ecd5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0507a004	0507a005	0507a006	0507a007	0507a008	0507a009
INJ.DATE:	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013
INJ.TIME:	16:39	16:59	17:19	17:39	17:59	18:19

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	2.250	2.250	2.250	2.249	2.249	2.249	2.249	2.149-2.349	2.249	0.001
$ 1 Tetrachloro-m-xylene	4.412	4.411	4.411	4.410	4.411	4.411	4.411	4.311-4.511	4.411	0.001
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	5.064	4.964-5.164	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	6.059	5.959-6.159	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	6.060	5.960-6.160	+++++	+++++
7 Aroclor-1016	6.062	6.062	6.062	6.059	6.061	6.060	6.060	5.960-6.160	6.061	0.001
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	6.467	6.367-6.567	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	8.192	8.092-8.292	+++++	+++++
9 Aroclor-1260	9.968	9.968	9.968	9.967	9.967	9.967	9.967	9.867-10.067	9.967	0.001
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.283	10.183-10.383	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	11.175	11.075-11.275	+++++	+++++
$ 13 Decachlorobiphenyl	12.829	12.828	12.828	12.827	12.828	12.827	12.828	12.728-12.928	12.828	0.001
* 12 IS-HBBP	13.191	13.191	13.191	13.189	13.191	13.190	13.191	13.091-13.291	13.190	0.001
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.156	8.106-8.206	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	8.707	8.657-8.757	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.210	9.160-9.260	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.589	8.489-8.689	+++++	+++++

Reviewer 1 _____ Date: 05/08/13
Reviewer 2 _____ Date: 5-8-13

USGS : 00551

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB1.m
Batch File: /chem2/ecd5.i/20130507.b/ical-1.b
Inst ID: ecd5.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.163	9.063-9.263	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.675	9.575-9.775	+++++	+++++

4590:00662

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd5.i/20130507.b/ical-1.b/0507a005.d
Level 2: /chem2/ecd5.i/20130507.b/ical-1.b/0507a006.d
Level 3: /chem2/ecd5.i/20130507.b/ical-1.b/0507a008.d
Level 4: /chem2/ecd5.i/20130507.b/ical-1.b/0507a004.d
Level 5: /chem2/ecd5.i/20130507.b/ical-1.b/0507a009.d
Level 6: /chem2/ecd5.i/20130507.b/ical-1.b/0507a007.d
Level 7: /chem2/ecd5.i/20130507.b/ical-1.b/0507a014.d
Level 8: /chem2/ecd5.i/20130507.b/ddt-1.b/0507a021.d/0507a021.cdf

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
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03259	+++++	0.03259	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.00997	+++++	0.00997	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.01408	+++++	0.01408	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02881	+++++	0.02881	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.08837	+++++	0.08837	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03943	+++++	0.03943	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 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)	+++++	+++++	+++++	+++++	+++++	+++++	0.04869	+++++	0.04869	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.01482	+++++	0.01482	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04536	+++++	0.04536	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02357	+++++	0.02357	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.02708	+++++	0.02708	0.000
7 Aroclor-1016(1)	0.04186	0.03922	0.03800	0.03458	0.03232	0.03038	+++++	+++++	0.03606	12.136
(2)	0.12934	0.12017	0.11740	0.10631	0.09981	0.09343	+++++	+++++	0.11108	12.195
(3)	0.05884	0.05458	0.05260	0.04727	0.04418	0.04111	+++++	+++++	0.04976	13.510
(4)	0.04321	0.04072	0.03932	0.03524	0.03340	0.03123	+++++	+++++	0.03718	12.437

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 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
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.05630	+++++	0.05630	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.06332	+++++	0.06332	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.08051	+++++	0.08051	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.05614	+++++	0.05614	0.000
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.07461	+++++	0.07461	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04925	+++++	0.04925	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.10267	+++++	0.10267	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.10574	+++++	0.10574	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.03999	+++++	0.03999	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 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
9 Aroclor-1260(1)	0.08092	0.07140	0.06872	0.06239	0.05721	0.05245	+++++	+++++	0.06551	15.742
(2)	0.07490	0.06756	0.06590	0.06047	0.05602	+++++	+++++	+++++	0.06497	11.060
(3)	0.17376	0.16180	0.15830	0.14675	0.13829	+++++	+++++	+++++	0.15578	8.810
(4)	0.08420	0.07867	0.07662	0.07158	0.06832	+++++	+++++	+++++	0.07588	8.154
(5)	0.04297	0.04212	0.04155	0.03881	0.03753	+++++	+++++	+++++	0.04060	5.708
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.07490	+++++	0.07490	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.17600	+++++	0.17600	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.05574	+++++	0.05574	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.07824	+++++	0.07824	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 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)	+++++	+++++	+++++	+++++	+++++	+++++	0.06005	+++++	0.06005	0.000
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.16835	+++++	0.16835	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.18617	+++++	0.18617	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.13825	+++++	0.13825	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.38949	+++++	0.38949	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1037	1037	0.000
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1111	1111	0.000
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1189	1189	0.000
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1453	1453	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 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						
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1128					1128	0.000
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1294					1294	0.000
$ 1 Tetrachloro-m-xylene	1.27779	1.27691	1.30214	1.24444	1.19768	1.14335		
	+++++	+++++					1.24039	4.811
$ 13 Decachlorobiphenyl	1.45250	1.28741	1.22687	1.12094	1.06410	1.01848		
	+++++	+++++					1.19505	13.474

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd5.i/20130507.b/ical-2.b/0507a005.d
Level 2: /chem2/ecd5.i/20130507.b/ical-2.b/0507a006.d
Level 3: /chem2/ecd5.i/20130507.b/ical-2.b/0507a008.d
Level 4: /chem2/ecd5.i/20130507.b/ical-2.b/0507a004.d
Level 5: /chem2/ecd5.i/20130507.b/ical-2.b/0507a009.d
Level 6: /chem2/ecd5.i/20130507.b/ical-2.b/0507a007.d
Level 7: /chem2/ecd5.i/20130507.b/ical-2.b/0507a014.d
Level 8: /chem2/ecd5.i/20130507.b/ddt-2.b/0507a021.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						
1 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00820	+++++					0.00820	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01373	+++++					0.01373	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00748	+++++					0.00748	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02352	+++++					0.02352	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02053	+++++					0.02053	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04099	+++++					0.04099	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 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)	+++++	+++++	+++++	+++++	+++++	+++++	0.01709	+++++	0.01709	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.01434	+++++	0.01434	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03645	+++++	0.03645	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.08006	+++++	0.08006	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03345	+++++	0.03345	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.02802	+++++	0.02802	0.000
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.05013	+++++	0.05013	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04157	+++++	0.04157	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.04304	+++++	0.04304	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 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)	+++++	+++++	+++++	+++++	+++++	+++++	0.05593	+++++	0.05593	0.000
7 Aroclor-1016(1)	0.05136	0.05104	0.04862	0.04453	0.04104	0.03730	+++++	+++++	0.04565	12.493
(2)	0.11167	0.10627	0.10431	0.09724	0.09163	0.08432	+++++	+++++	0.09924	10.221
(3)	0.02778	0.02695	0.02737	0.02574	0.02469	0.02316	+++++	+++++	0.02595	6.857
(4)	0.02758	0.02578	0.02560	0.02332	0.02231	0.02042	+++++	+++++	0.02417	10.869
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03879	+++++	0.03879	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04792	+++++	0.04792	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03671	+++++	0.03671	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.07862	+++++	0.07862	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 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						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04427	+++++					0.04427	0.000
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.11065	+++++					0.11065	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10118	+++++					0.10118	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.18978	+++++					0.18978	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.12335	+++++					0.12335	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05956	+++++					0.05956	0.000
9 Aroclor-1260(1)	0.08456	0.07842	0.07600	0.07099	0.06556	0.05983		
	+++++	+++++					0.07256	12.383
(2)	0.09657	0.09048	0.08853	0.08437	0.07825	0.07177		
	+++++	+++++					0.08500	10.489
(3)	0.16866	0.16707	0.16406	0.15713	0.14786	0.13685		
	+++++	+++++					0.15694	7.943

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 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)	0.04850	0.04574	0.04367	0.04155	0.03920	0.03660		
	+++++	+++++					0.04254	10.221
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.19311	+++++					0.19311	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.18203	+++++					0.18203	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.14408	+++++					0.14408	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.37318	+++++					0.37318	0.000
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	757					757	0.000
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	727					727	0.000
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1214					1214	0.000
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	916					916	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 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	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1037					1037	0.000
$ 2 Tetrachloro-m-xylene	1.13790	1.10316	1.09698	1.08696	1.05825	1.00770		
	+++++	+++++					1.08183	4.115
$ 13 Decachlorobiphenyl	1.43878	1.24550	1.16217	1.06757	1.02392	0.96937		
	+++++	+++++					1.15122	14.943

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a003.d
Data file 2: 20130507.b/ical-2.b/0507a003.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 07-MAY-2013 16:19
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.411	0.000	32061788	4.413	0.002	8759043	42.4	42.7	0.7	Tetrachloro-m-xylen
12.829	0.000	27295255	13.206	0.001	4923666	35.8	35.7	0.4	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	105.9	106.6
Decachlorobiphenyl	89.6	89.2

JK 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	48807947	-0.3
Hexabromobiphenyl	50004151	51001521	2.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15184482	2.3
Hexabromobiphenyl	9345340	9588268	2.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

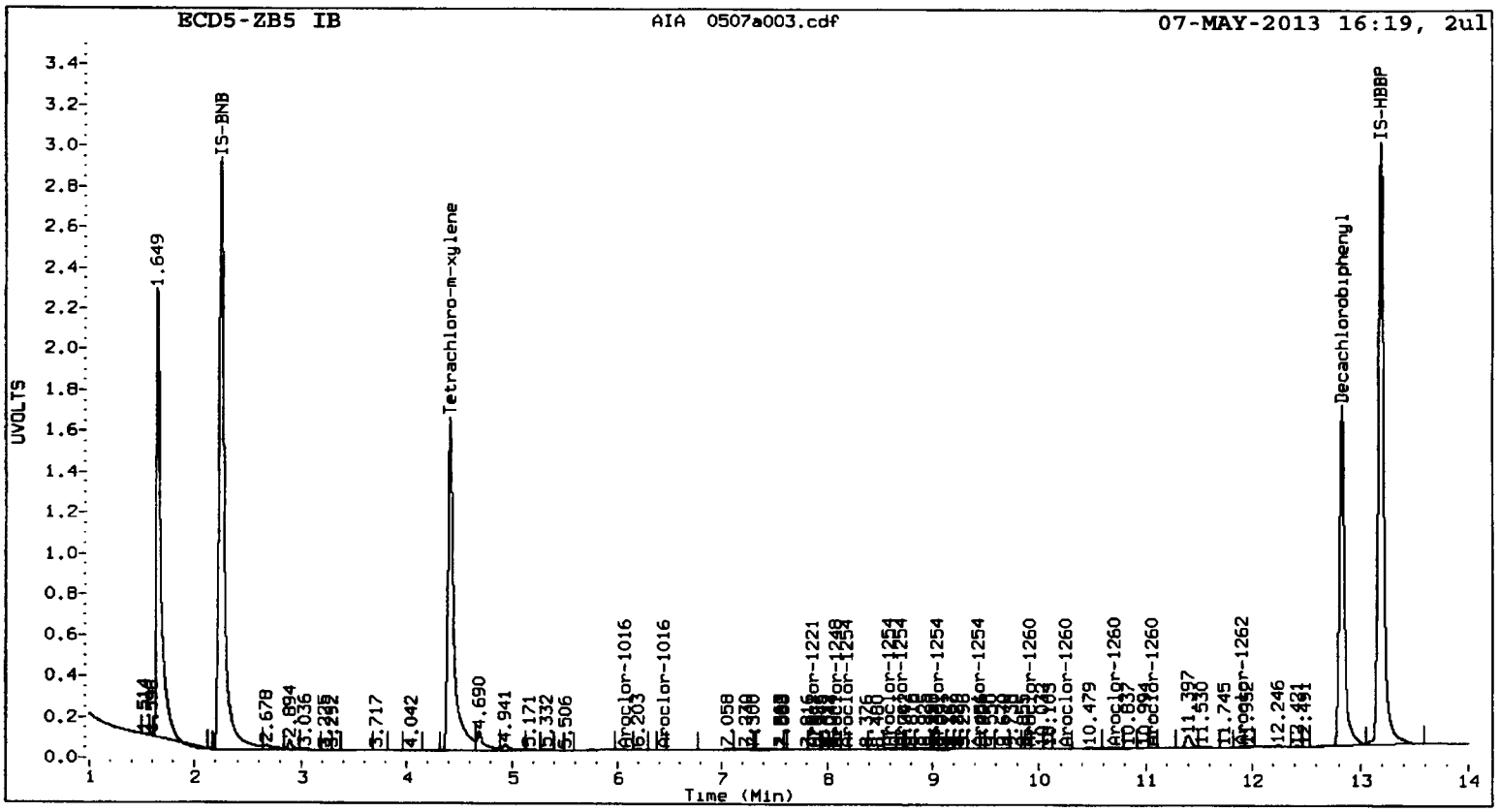
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.073	0.012	22097	1.0	1	---			0.0
Aroclor-1016	2	6.444	-0.024	12954	0.2	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.444	-0.024	12954	2.1	2	5.113	0.019	112267	43.1
Aroclor-1221	3	7.865	-0.013	88509	10.3	3	---			0.0
Aroclor-1221	NS	---			----	4	5.468	0.008	21627	4.8
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	6.073	0.012	22097	2.4	1	---			0.0
Aroclor-1232	2	6.444	-0.025	12954	0.5	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	7.865	-0.009	88509	5.4	4	---			0.0
	Total Col1Ave (3 peaks):			2.8		Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	6.073	0.013	22097	1.3	1	---			0.0
Aroclor-1242	2	6.444	-0.024	12954	0.2	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	7.865	-0.007	88509	3.0	4	---			0.0
	Total Col1Ave (3 peaks):			1.5		Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	6.444	-0.022	12954	0.4	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	7.865	-0.009	88509	1.8	3	---			0.0
Aroclor-1248	4	8.084	-0.027	42411	1.2	4	---			0.0
	Total Col1Ave (3 peaks):			1.1		Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	8.193	0.001	54179	1.2	1	---			0.0
Aroclor-1254	2	8.591	0.027	84538	2.8	2	---			0.0
Aroclor-1254	3	8.702	0.002	41716	0.7	3	---			0.0
Aroclor-1254	4	9.044	-0.009	43297	0.7	4	---			0.0
Aroclor-1254	5	9.430	0.068	73478	3.0	5	---			0.0
	Total Col1Ave (5 peaks):			1.7		Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	9.912	-0.055	26920	0.6	1	---			0.0
Aroclor-1260	2	10.257	-0.027	72723	1.8	2	---			0.0
Aroclor-1260	3	10.709	0.050	104804	1.1	3	---			0.0
Aroclor-1260	4	11.055	-0.003	13255	0.3	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
	Total Col1Ave (4 peaks):			0.9		Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	10.257	-0.026	72723	1.5	1	---			0.0
Aroclor-1262	2	10.709	0.051	104804	0.9	2	---			0.0
Aroclor-1262	3	11.055	-0.005	13255	0.4	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
Aroclor-1262	5	11.906	-0.012	20784	0.5	5	---			0.0
	Total Col1Ave (4 peaks):			0.8		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				

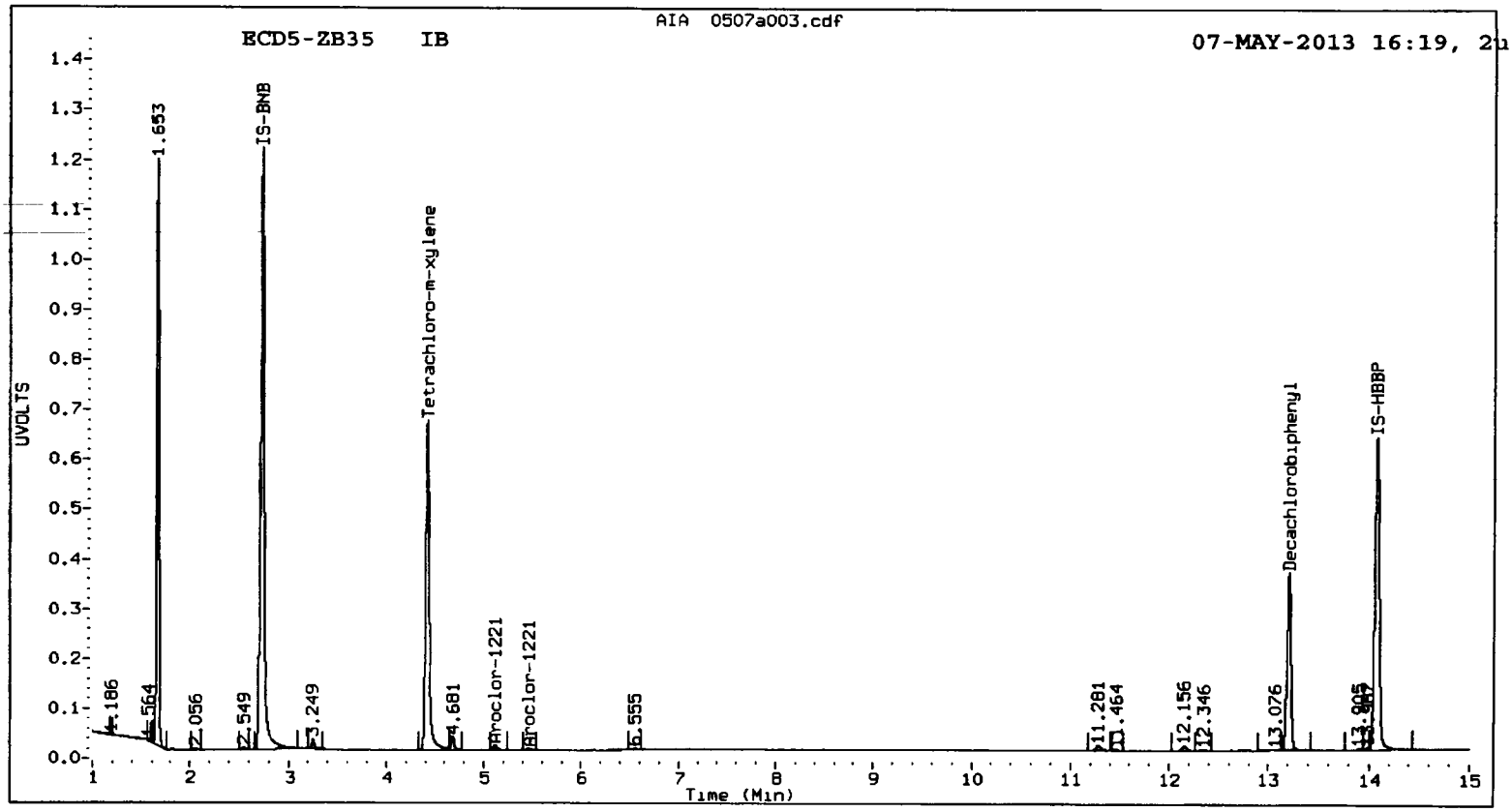
Total PCB Area Col1 (4.511 - 12.728) = 7126262 Col1 Total PCB = 0.0 ppm*

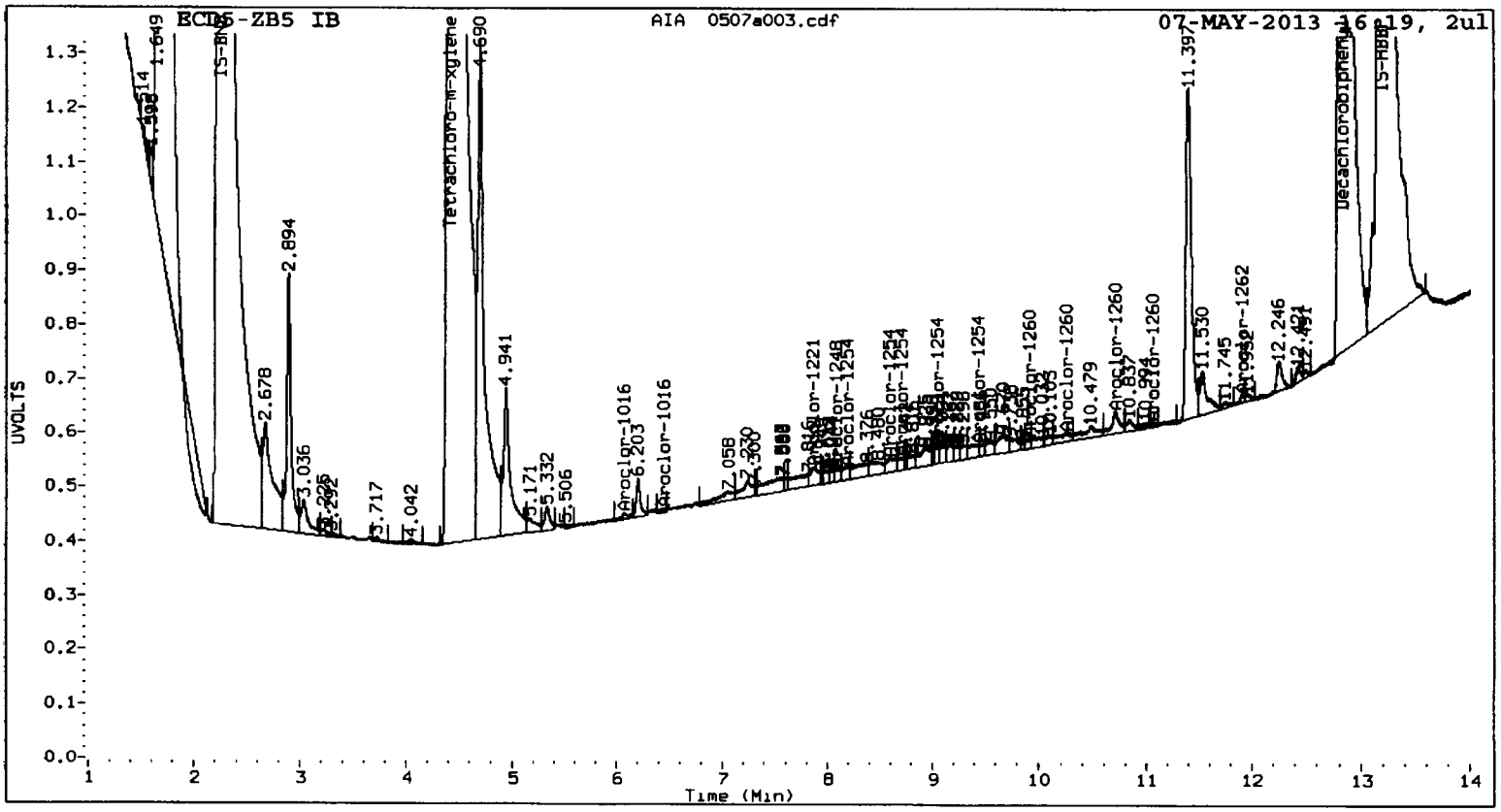
Total PCB Area Col2 (4.512 - 13.105) = 766675 Col2 Total PCB = 0.0 ppm*

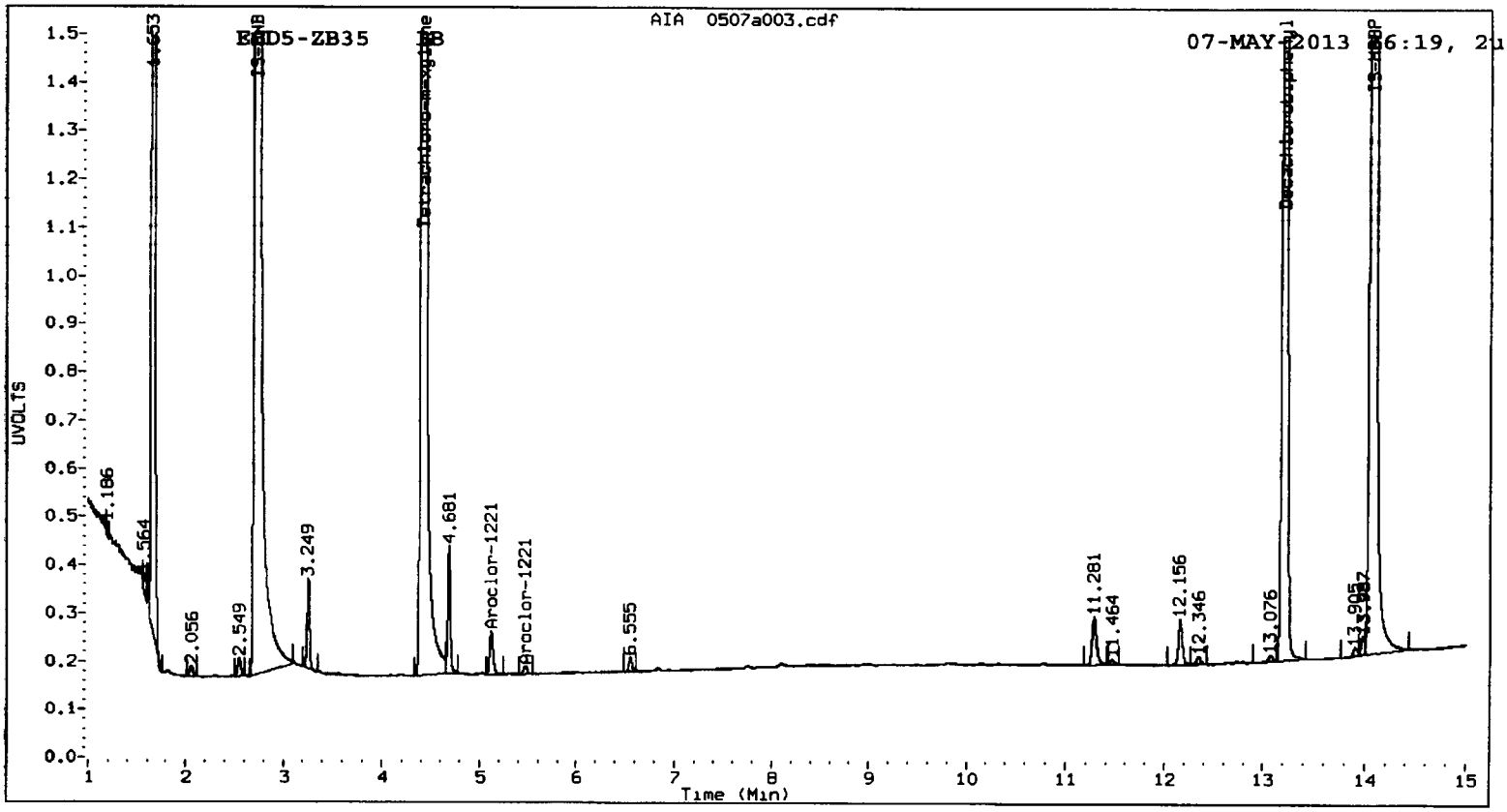
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 IB
AIA 0507a003.cdf
07-MAY-2013 16:19, 2ul
UVOLTS
Time (Min)
1.649
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP


AIA 0507a003.cdf
ECD5-ZB35 IB
07-MAY-2013 16:19, 2u
UVOLTS
Time (Min)
1.653
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 IB
AIA 0507a003.cdf
07-MAY-2013 16:19, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1221
Aroclor-1248


ECD5-ZB35 IB
AIA 0507a003.cdf
07-MAY-2013 16:19, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1221

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a004.d
Data file 2: 20130507.b/ical-2.b/0507a004.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 16:39
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.412	0.002	15237305	4.414	0.002	4032555	20.1	20.1	0.1	Tetrachloro-m-xylen
12.829	0.000	14012855	13.206	0.000	2494212	18.8	18.5	1.1	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	50.2	50.2
Decachlorobiphenyl	46.9	46.4

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	48977254	0.0
Hexabromobiphenyl	50004151	50004151	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14839715	0.0
Hexabromobiphenyl	9345340	9345340	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

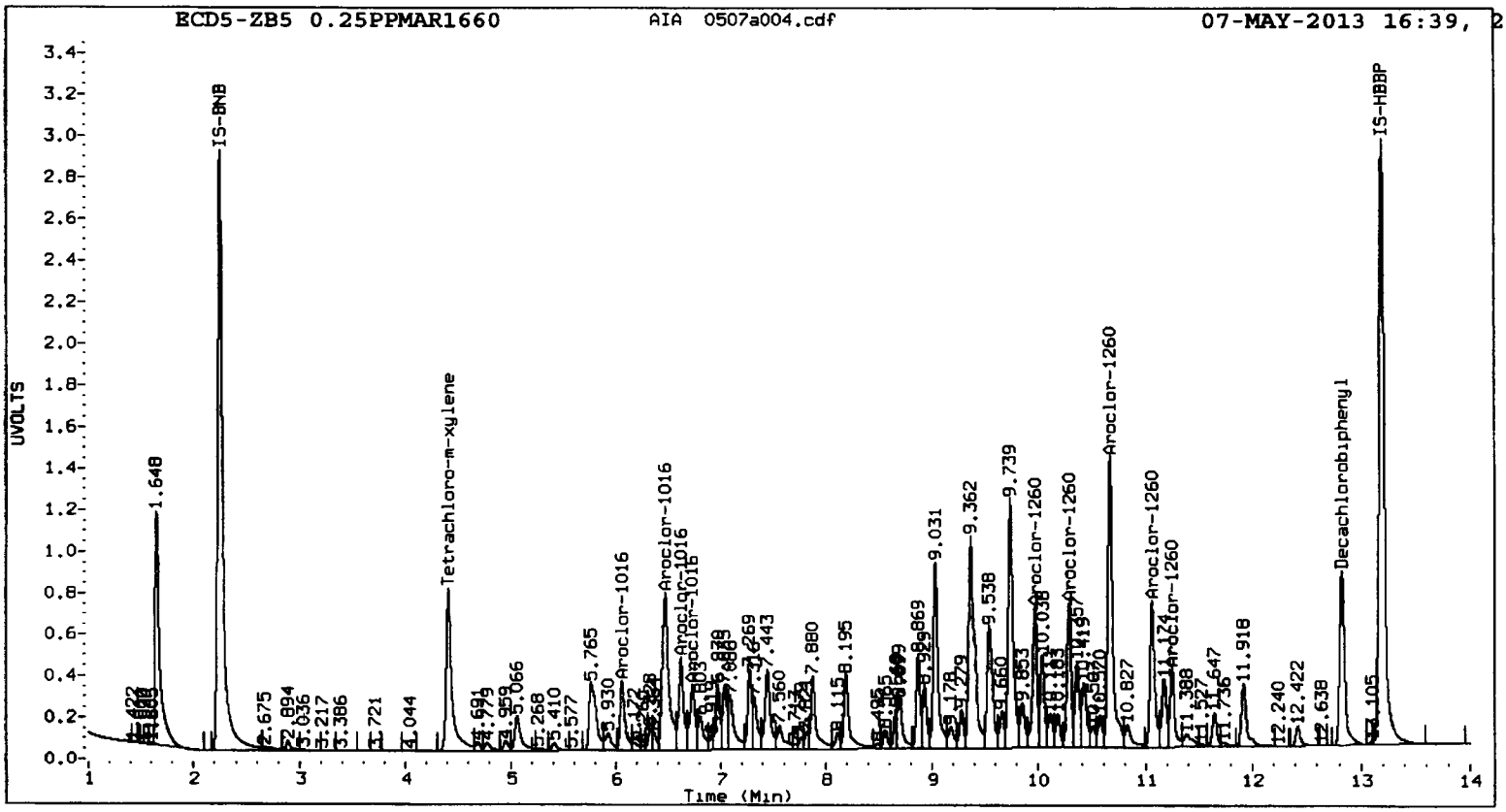
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.062	0.001	5292322	239.7	1	6.167	0.001	2064971	243.9
Aroclor-1016	2	6.470	0.002	16270732	239.3	2	6.803	0.002	4509319	245.0
Aroclor-1016	3	6.619	0.002	7234719	237.5	3	7.187	0.002	1193712	248.0
Aroclor-1016	4	6.731	0.003	5392918	236.9	4	7.360	0.002	1081244	241.2
	Total Col1Ave (4 peaks):			238.3		Total Col2Ave (4 peaks):			244.5	RPD = 3
	Corrected Ave (3 peaks):			237.9		Corrected Ave (3 peaks):			243.3	RPD = 2
Aroclor-1260	1	9.968	0.001	9749945	238.1	1	10.261	0.001	2073273	244.6
Aroclor-1260	2	10.284	0.001	9449895	232.7	2	10.711	0.001	2464050	248.2
Aroclor-1260	3	10.660	0.000	22932169	235.5	3	10.986	0.001	4588966	250.3
Aroclor-1260	4	11.059	0.001	11185744	235.8	4	11.507	0.002	1213324	244.1
Aroclor-1260	5	11.247	0.000	6064816	239.0	NS	---			----
	Total Col1Ave (5 peaks):			236.2		Total Col2Ave (4 peaks):			246.8	RPD = 4
	Corrected Ave (4 peaks):			235.5		Corrected Ave (3 peaks):			245.6	RPD = 4

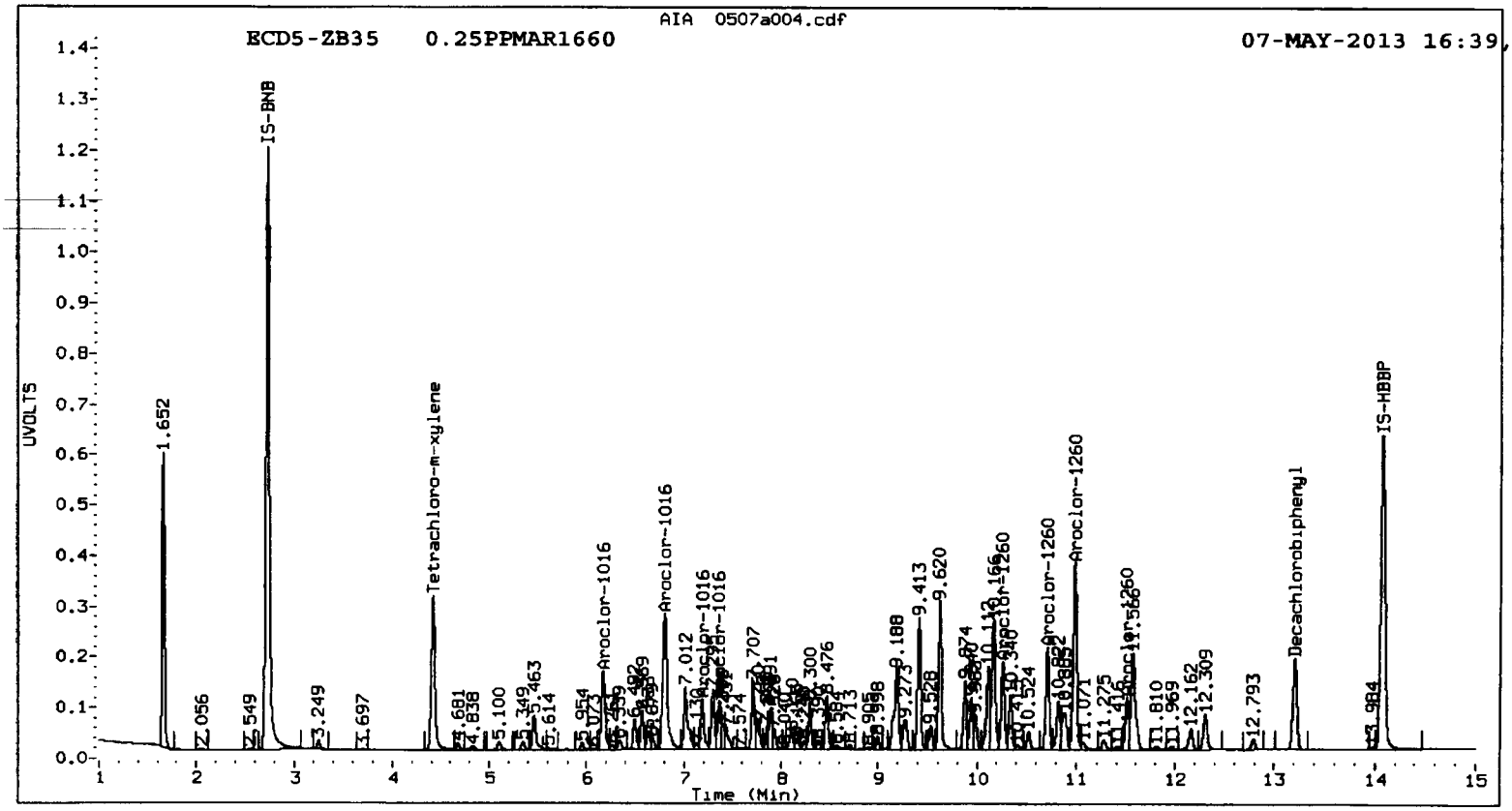
Total PCB Area Col1 (4.511 - 12.728) = 301049488 Col1 Total PCB = 0.5 ppm*

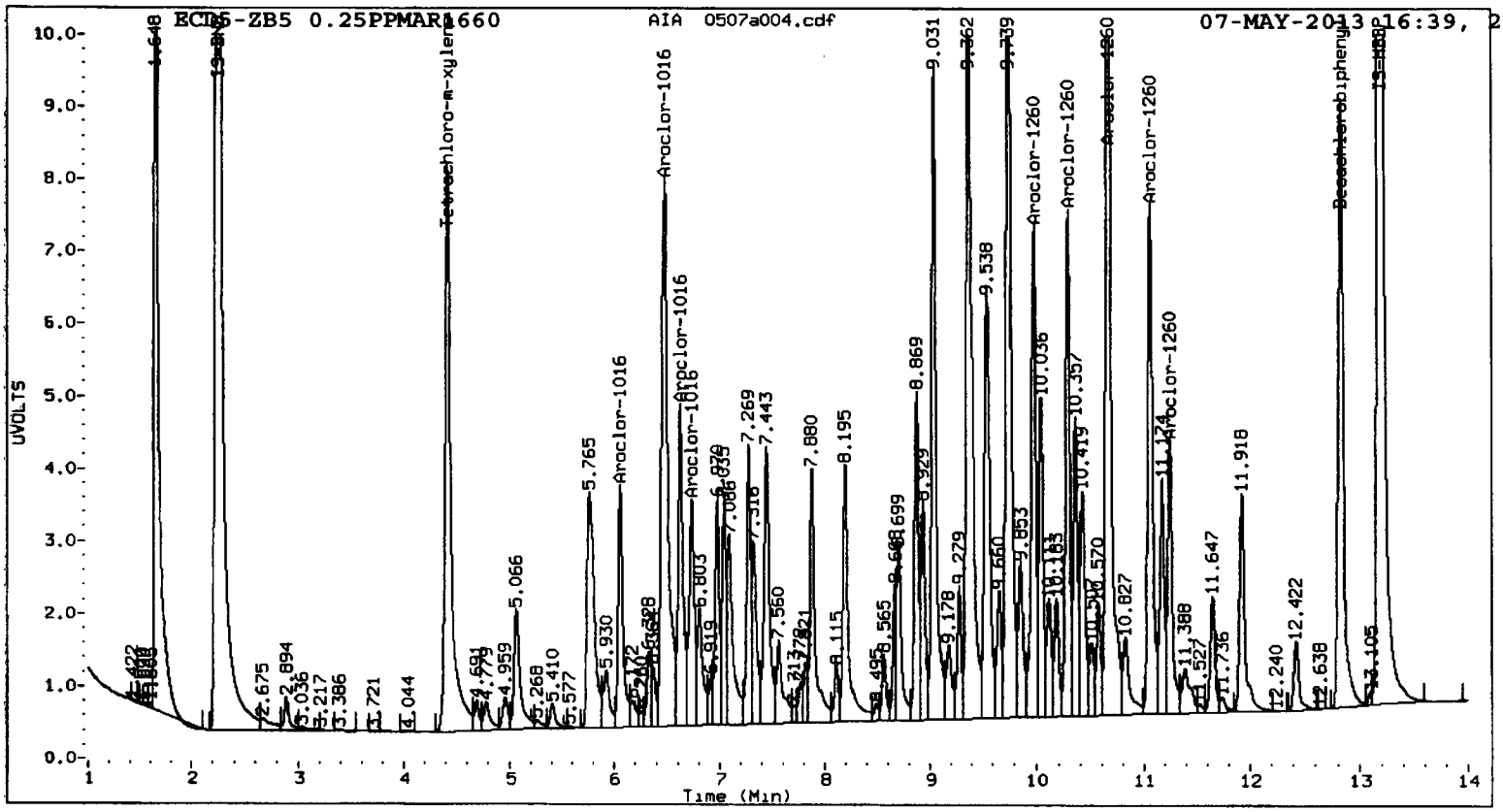
Total PCB Area Col2 (4.512 - 13.105) = 65038970 Col2 Total PCB = 0.5 ppm*

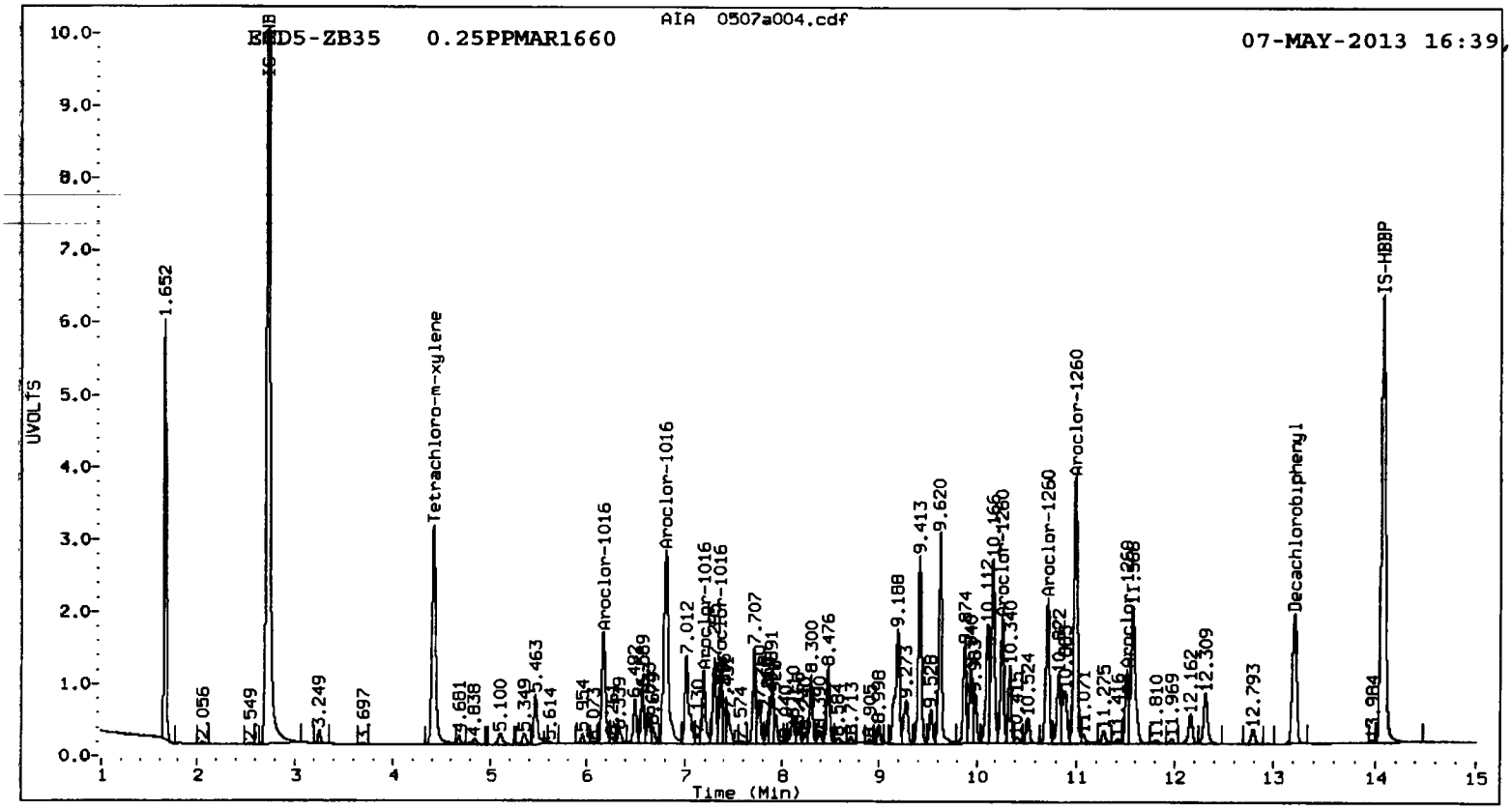
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 0.25PPMAR1660
AIA 0507a004.cdf
07-MAY-2013 16:39,
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


AIA 0507a004.cdf
ECD5-ZB35 0.25PPMAR1660
07-MAY-2013 16:39,
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 0.25PPMAR1660
AIA 0507a004.cdf
07-MAY-2013 16:39,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl


ECD5-ZB35 0.25PPMAR1660
AIA 0507a004.cdf
07-MAY-2013 16:39,
UVOLTS
Time (Min)
1.652
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBBP
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a005.d
Data file 2: 20130507.b/ical-2.b/0507a005.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 16:59
Ical Date: 07-MAY-2013
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
4.411	0.001	1277251	4.413	0.002	336292	1.6	1.7	2.1	Tetrachloro-m-xylen
12.828	0.000	1463829	13.206	0.001	269190	1.9	2.0	2.8	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	4.1	4.2
Decachlorobiphenyl	4.9	5.0

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	49978735	2.0
Hexabromobiphenyl	50004151	50389911	0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14776833	-0.4
Hexabromobiphenyl	9345340	9354827	0.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

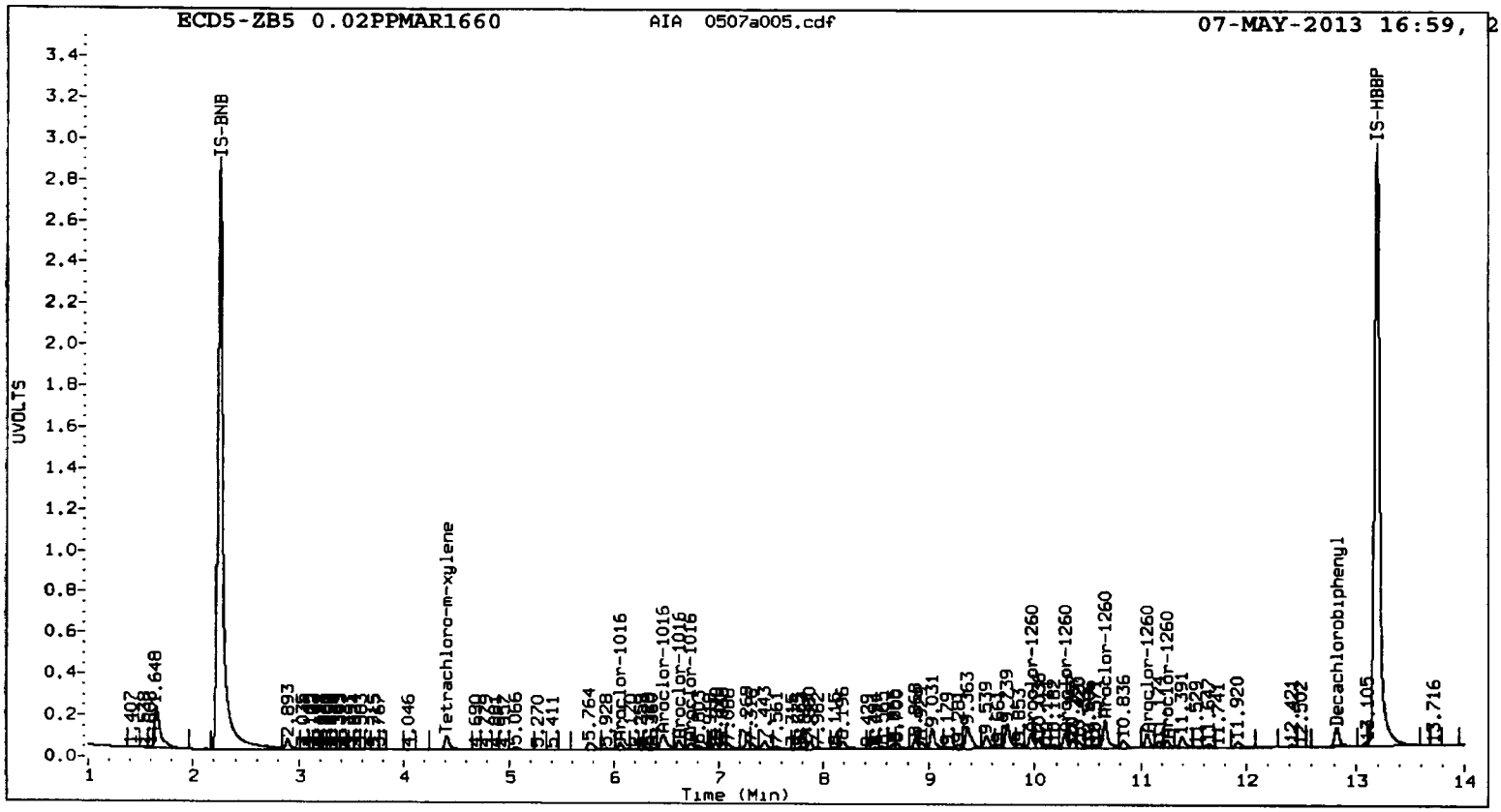
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.062	0.001	522973	23.2	1	6.167	0.001	189742	22.5
Aroclor-1016	2	6.471	0.003	1616098	23.3	2	6.805	0.004	412537	22.5
Aroclor-1016	3	6.620	0.004	735232	23.6	3	7.188	0.003	102632	21.4
Aroclor-1016	4	6.731	0.003	539914	23.2	4	7.360	0.002	101879	22.8
	Total Col1Ave (4 peaks):				23.3	Total Col2Ave (4 peaks):			22.3	RPD = 5
	Corrected Ave (3 peaks):				23.2	Corrected Ave (3 peaks):			22.1	RPD = 5
Aroclor-1260	1	9.968	0.001	1019399	24.7	1	10.262	0.002	197758	23.3
Aroclor-1260	2	10.284	0.001	943544	23.1	2	10.711	0.002	225842	22.7
Aroclor-1260	3	10.661	0.001	2188991	22.3	3	10.987	0.002	394454	21.5
Aroclor-1260	4	11.060	0.003	1060689	22.2	4	11.507	0.002	113428	22.8
Aroclor-1260	5	11.249	0.002	541330	21.2	NS	---			----
	Total Col1Ave (5 peaks):				22.7	Total Col2Ave (4 peaks):			22.6	RPD = 0
	Corrected Ave (4 peaks):				22.2	Corrected Ave (3 peaks):			22.3	RPD = 1

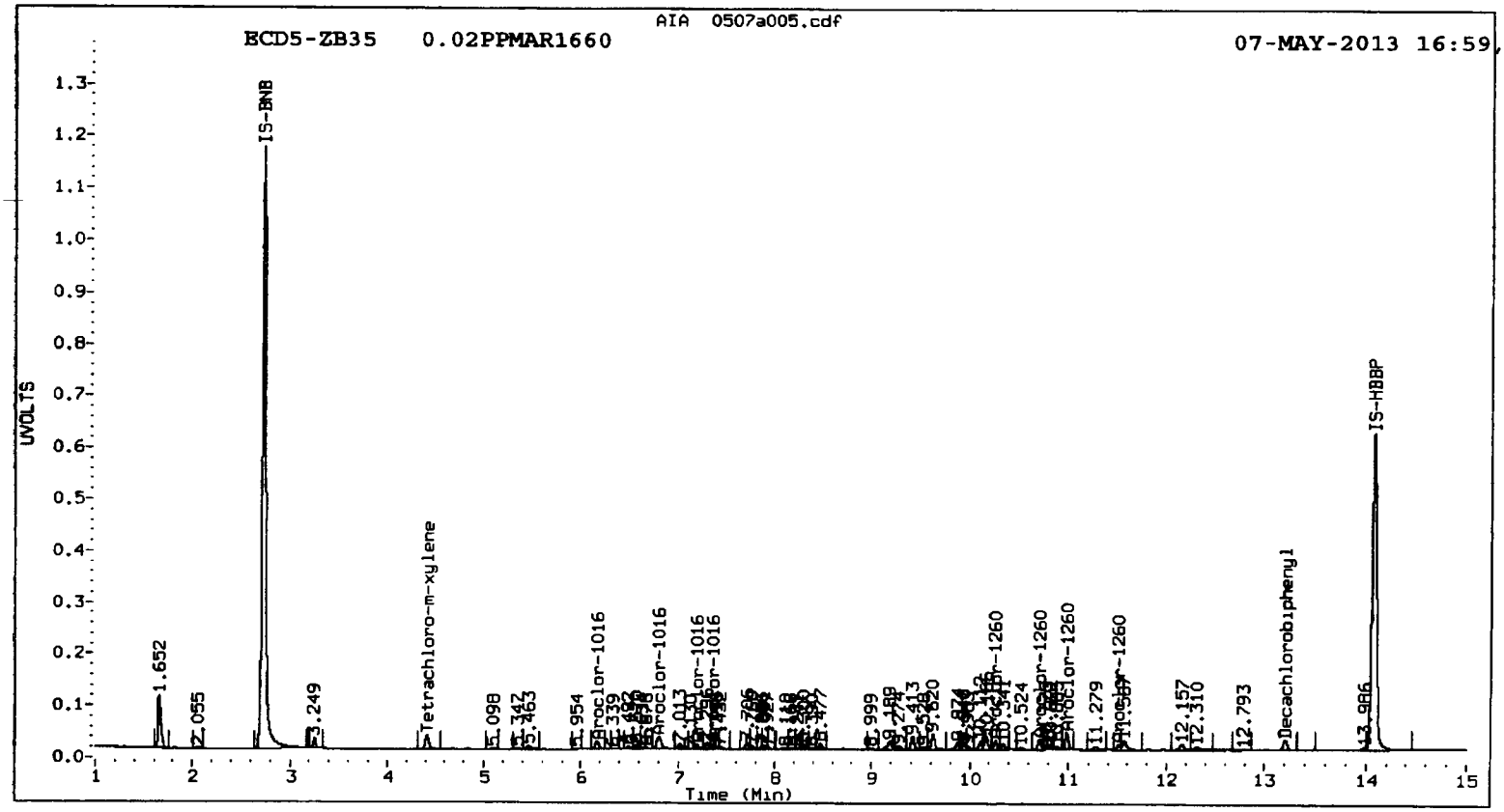
Total PCB Area Col1 (4.511 - 12.728) = 32498603 Col1 Total PCB = 0.1 ppm*

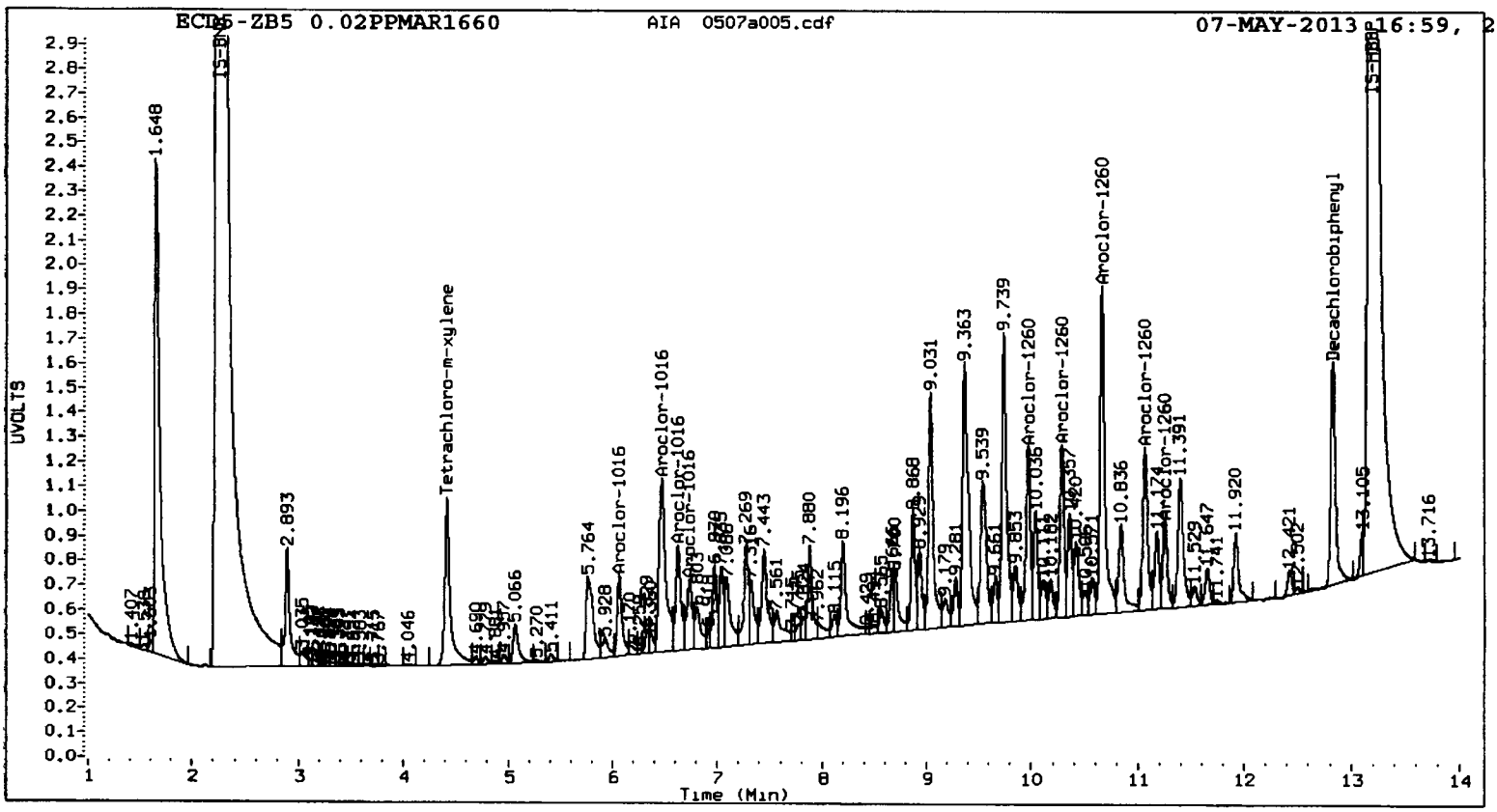
Total PCB Area Col2 (4.512 - 13.105) = 6010068 Col2 Total PCB = 0.0 ppm*

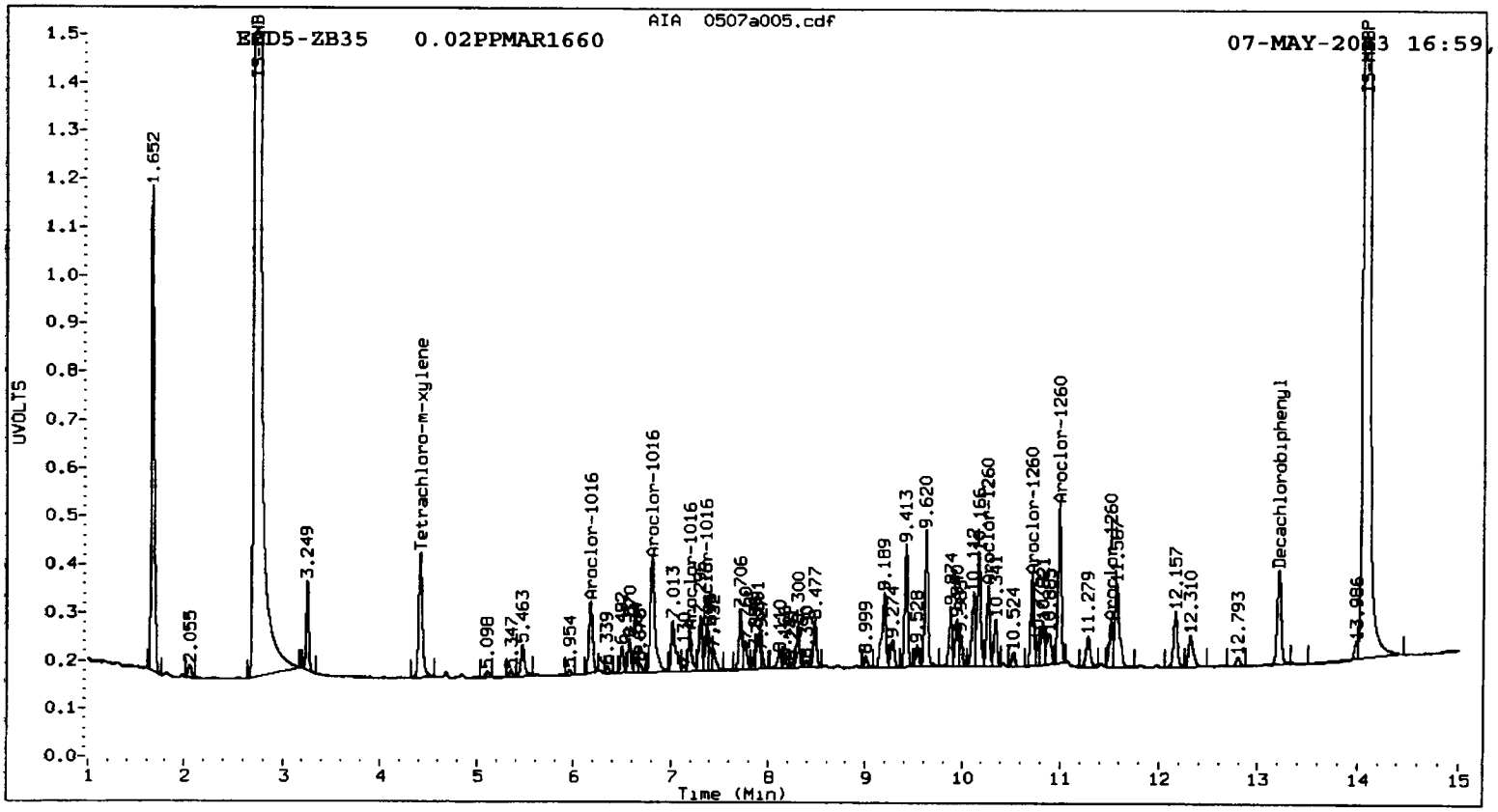
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 0.02PPMAR1660
AIA 0507a005.cdf
07-MAY-2013 16:59,
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
UVOLTS
Time (Min)


AIA 0507a005.cdf
ECD5-ZB35 0.02PPMAR1660
07-MAY-2013 16:59,
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
UVOLTS
Time (Min)


ECD5-ZB5 0.02PPMAR1660
AIA 0507a005.cdf
07-MAY-2013 16:59,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl


ECD5-ZB35 0.02PPMAR1660
AIA 0507a005.cdf
07-MAY-2013 16:59,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

USGS : 00689

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a006.d
Data file 2: 20130507.b/ical-2.b/0507a006.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 17:19
Ical Date: 07-MAY-2013
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
4.411	0.001	3240306	4.413	0.001	828310	4.1	4.1	0.9	Tetrachloro-m-xylen
12.828	0.000	3422581	13.205	0.000	610804	4.3	4.3	0.4	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	10.3	10.2
Decachlorobiphenyl	10.8	10.8

JR 05/07/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	50752482	3.6
Hexabromobiphenyl	50004151	53170067	6.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15017003	1.2
Hexabromobiphenyl	9345340	9808139	5.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.062	0.001	1244105	54.4	1	6.167	0.001	479006	55.9
Aroclor-1016	2	6.471	0.002	3811814	54.1	2	6.804	0.003	997455	53.5
Aroclor-1016	3	6.620	0.003	1731330	54.8	3	7.187	0.002	252974	51.9
Aroclor-1016	4	6.731	0.003	1291534	54.7	4	7.359	0.001	242005	53.3
Total Col1Ave (4 peaks):					54.5	Total Col2Ave (4 peaks):			53.7	RPD = 2
Corrected Ave (3 peaks):					54.4	Corrected Ave (3 peaks):			52.9	RPD = 3
Aroclor-1260	1	9.968	0.001	2372653	54.5	1	10.262	0.002	480726	54.0
Aroclor-1260	2	10.284	0.001	2245127	52.0	2	10.711	0.002	554671	53.2
Aroclor-1260	3	10.661	0.001	5376976	51.9	3	10.987	0.003	1024158	53.2
Aroclor-1260	4	11.059	0.002	2614350	51.8	4	11.507	0.002	280398	53.8
Aroclor-1260	5	11.248	0.001	1399830	51.9	NS	---			----
Total Col1Ave (5 peaks):					52.4	Total Col2Ave (4 peaks):			53.6	RPD = 2
Corrected Ave (4 peaks):					51.9	Corrected Ave (3 peaks):			53.4	RPD = 3

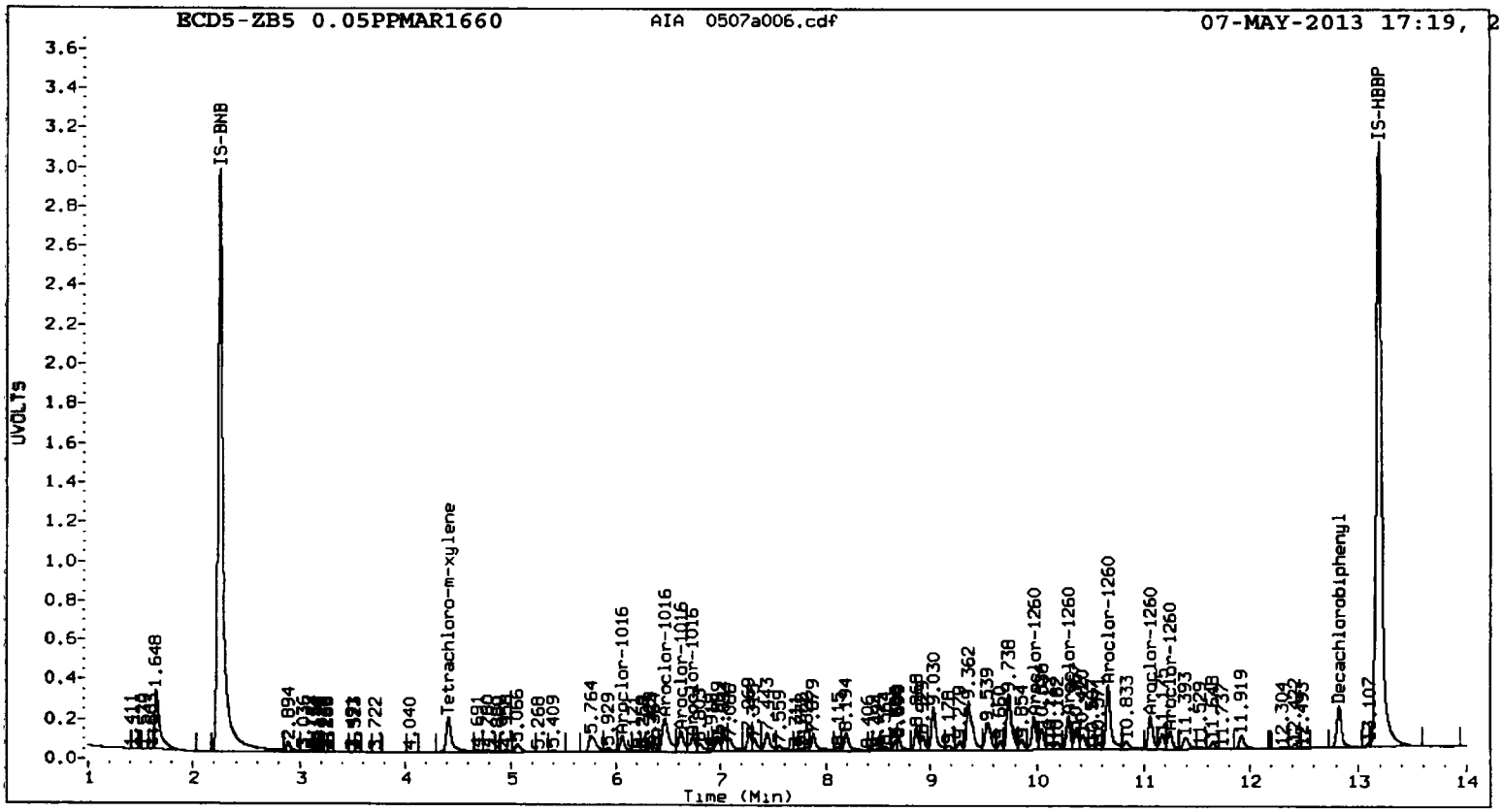
Total PCB Area Col1 (4.511 - 12.728) = 73710860 Col1 Total PCB = 0.1 ppm*

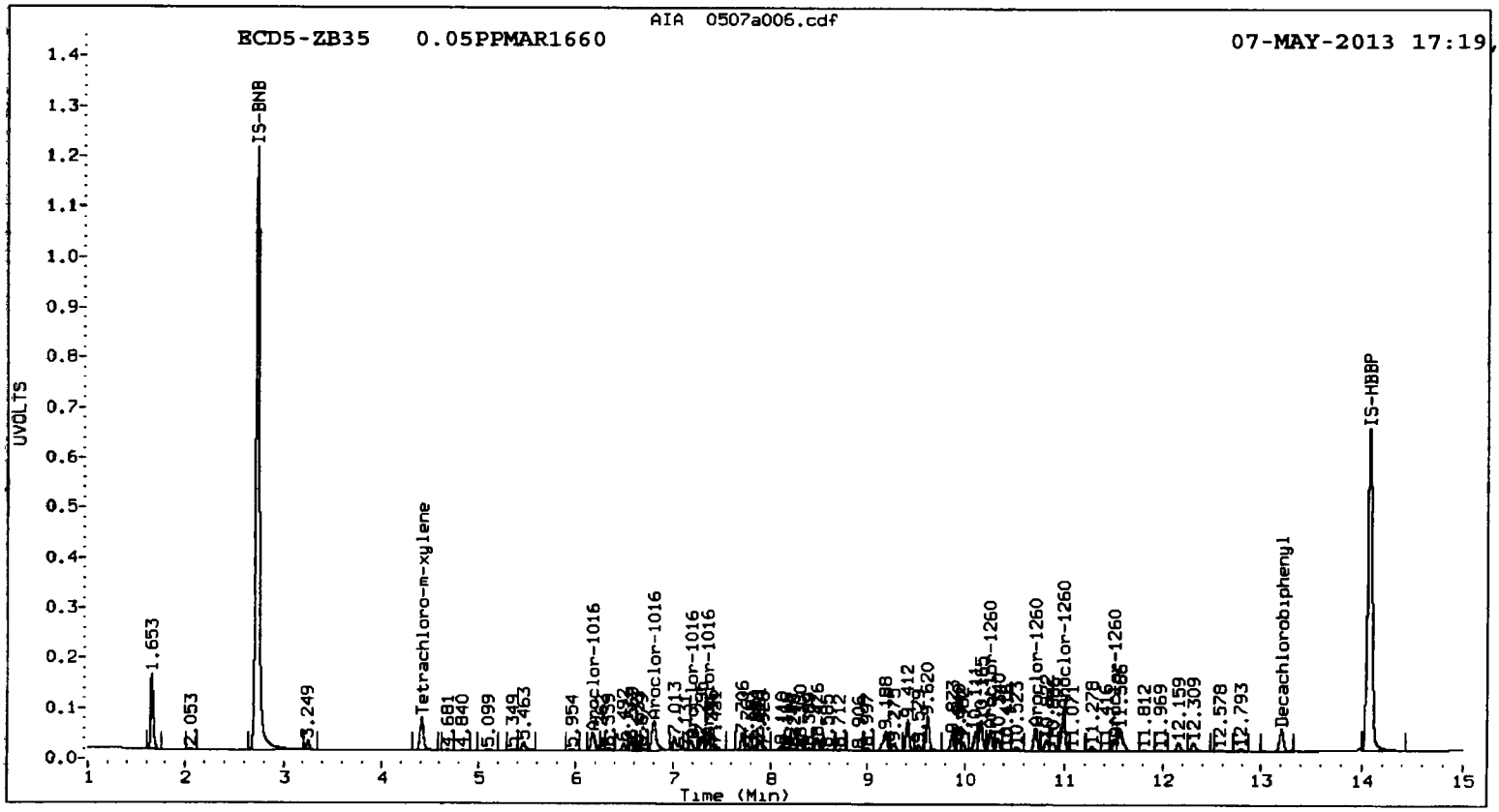
Total PCB Area Col2 (4.512 - 13.105) = 14729318 Col2 Total PCB = 0.1 ppm*

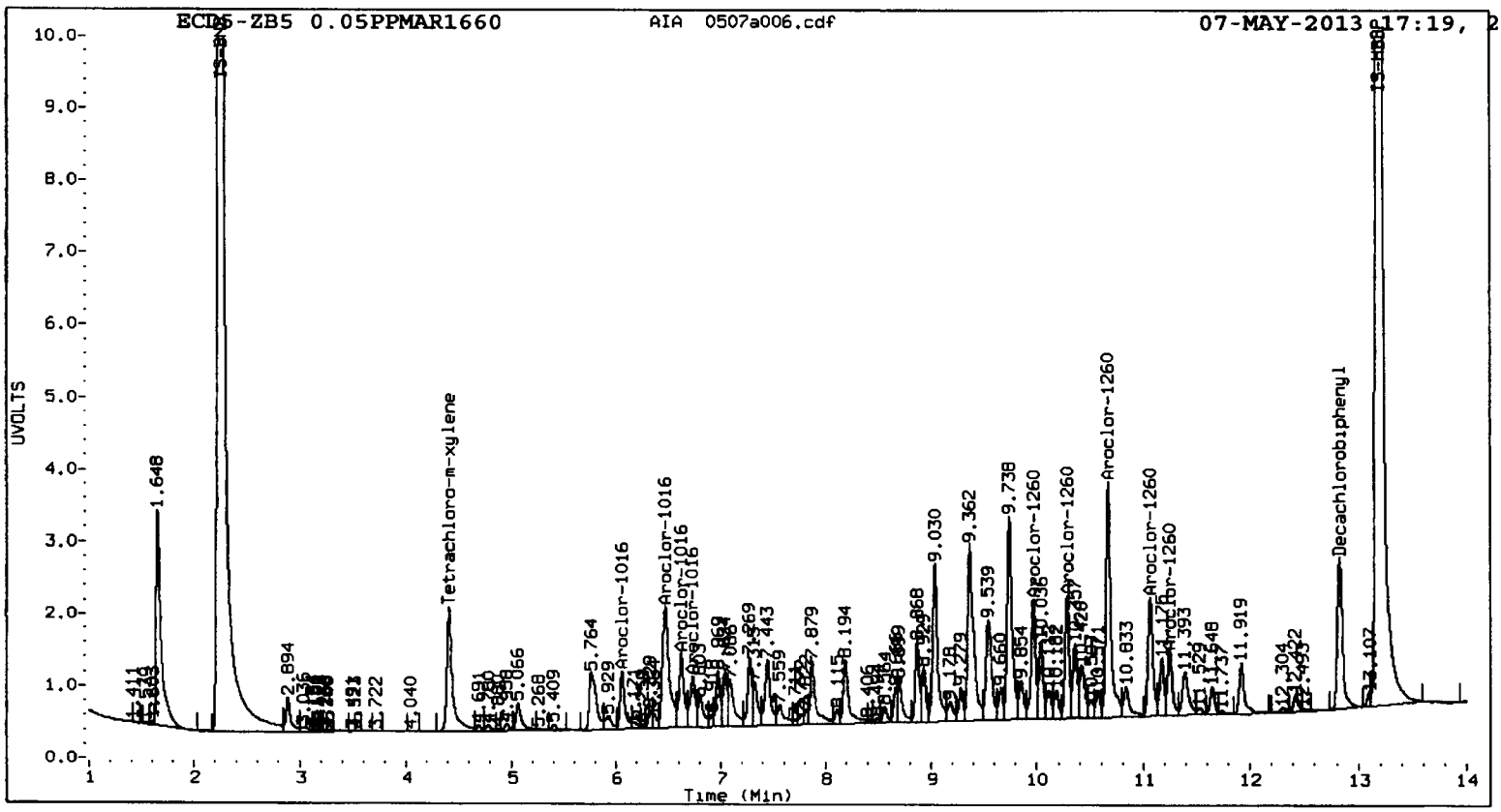
* Quantitated against AR1660 0.25ppm in Ical

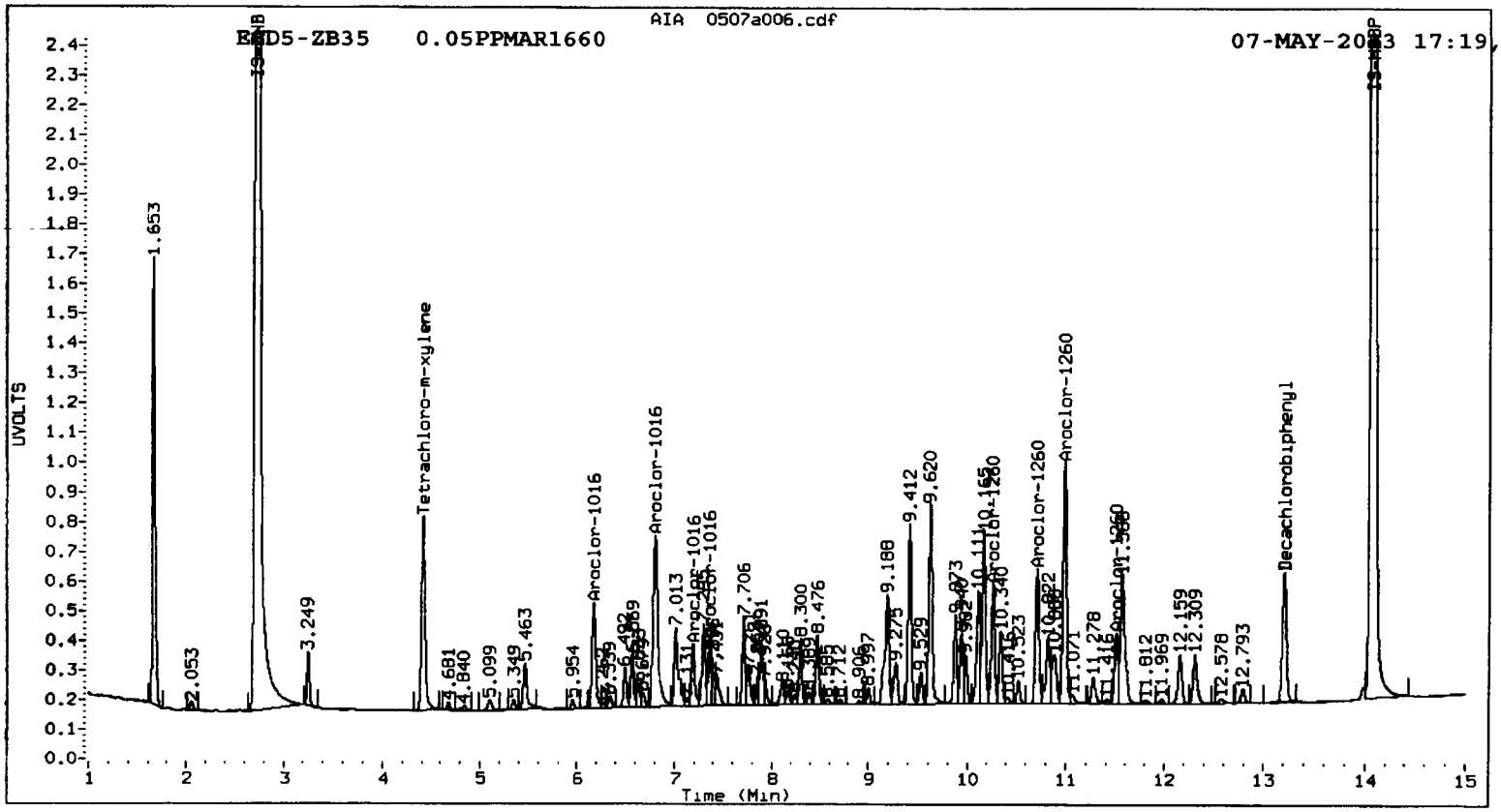
PCB-Form 10 Mod.

US90 : 00692


ECD5-ZB5 0.05PPMAR1660
AIA 0507a006.cdf
07-MAY-2013 17:19,
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
UVOLTS
Time (Min)


AIA 0507a006.cdf
ECD5-ZB35 0.05PPMAR1660
07-MAY-2013 17:19,
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
UVOLTS
Time (Min)


ECD5-ZB5 0.05PPMAR1660
AIA 0507a006.cdf
07-MAY-2013 17:19,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl


ECD5-ZB35 0.05PPMAR1660
AIA 0507a006.cdf
07-MAY-2013 17:19,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a007.d
Data file 2: 20130507.b/ical-2.b/0507a007.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 1PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 17:39
Ical Date: 07-MAY-2013
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
4.410	0.000	56438104	4.414	0.003	14978631	73.7	74.5	1.0	Tetrachloro-m-xylen
12.827	-0.001	54253911	13.203	-0.002	9605990	68.2	67.4	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

05/08/13

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	184.4	186.3
Decachlorobiphenyl	170.5	168.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	49361946	0.8
Hexabromobiphenyl	50004151	53269354	6.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14864205	0.2
Hexabromobiphenyl	9345340	9909484	6.0

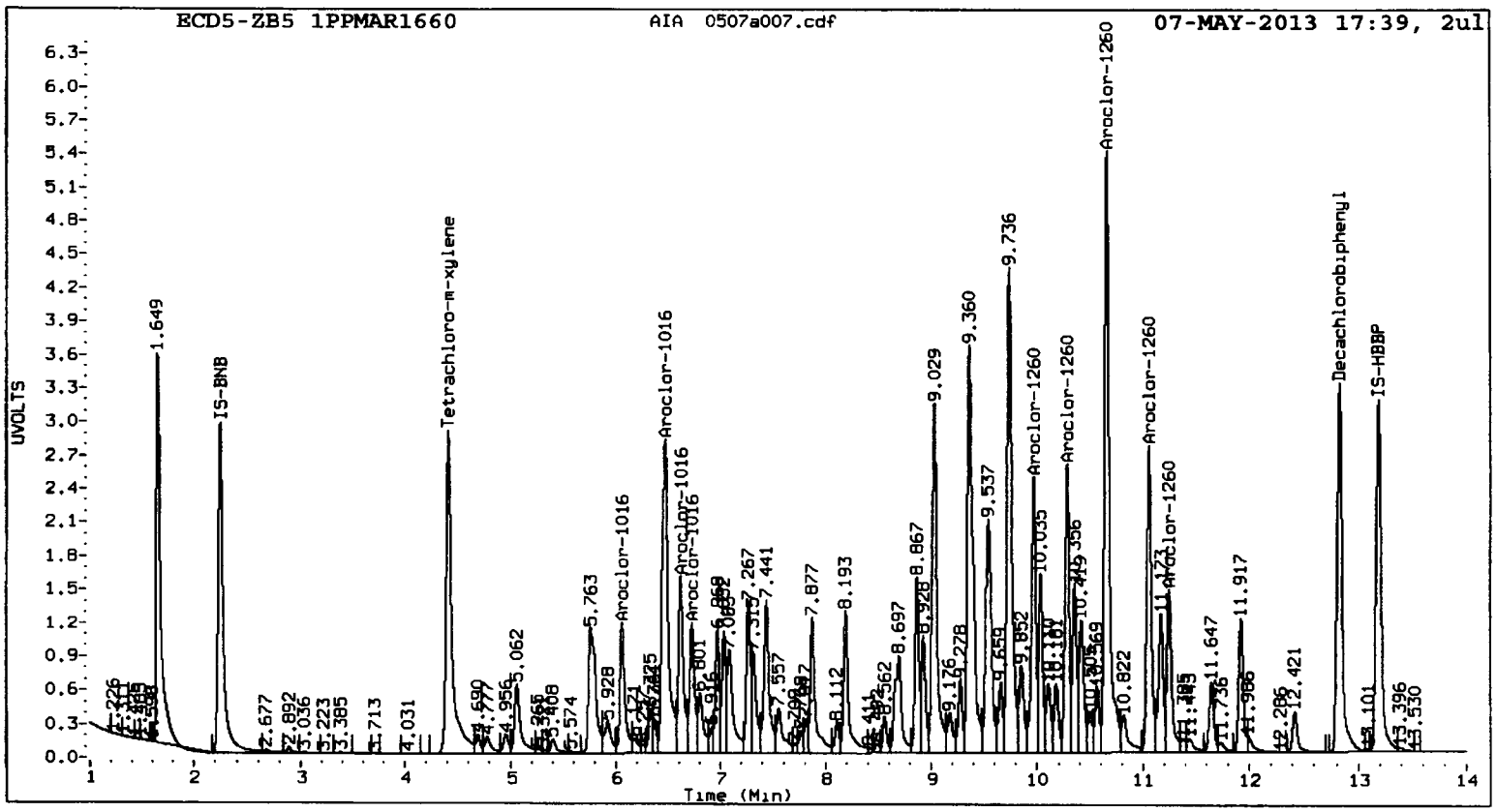
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

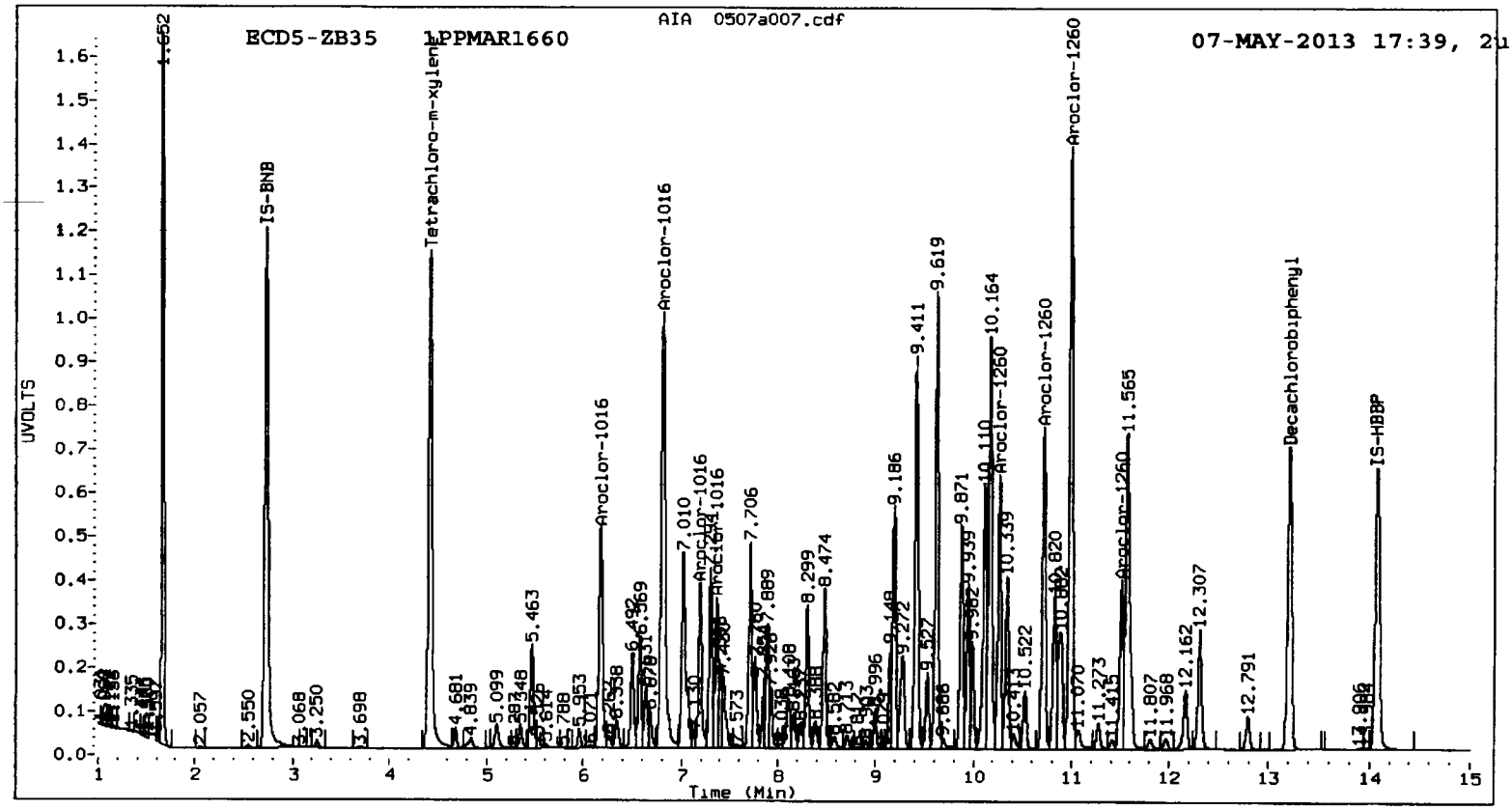
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.059	-0.001	18746470	842.5	1	6.167	0.001	6930745	817.2
Aroclor-1016	2	6.467	-0.002	57649136	841.1	2	6.801	0.000	15666487	849.6
Aroclor-1016	3	6.616	-0.001	25366020	826.1	3	7.186	0.000	4302384	892.4
Aroclor-1016	4	6.727	-0.001	19267159	839.8	4	7.359	0.001	3794728	845.1
Total Col1Ave (4 peaks):					837.4	Total Col2Ave (4 peaks):				851.1 RPD = 2
Corrected Ave (3 peaks):					835.7	Corrected Ave (3 peaks):				837.3 RPD = 0
Aroclor-1260	1	9.967	0.000	34921569	800.5	1	10.260	0.000	7411124	824.6
Aroclor-1260	2	10.283	-0.001	34401497	795.2	2	10.709	0.000	8889960	844.4
Aroclor-1260	3	10.659	0.000	86265488	831.6	3	10.986	0.001	16951381	872.0
Aroclor-1260	4	11.057	0.000	42604682	843.2	4	11.506	0.000	4533121	860.2
Aroclor-1260	5	11.247	0.000	23577619	872.2	NS	---			----
Total Col1Ave (5 peaks):					828.6	Total Col2Ave (4 peaks):				850.3 RPD = 3
Corrected Ave (4 peaks):					817.6	Corrected Ave (3 peaks):				843.1 RPD = 3

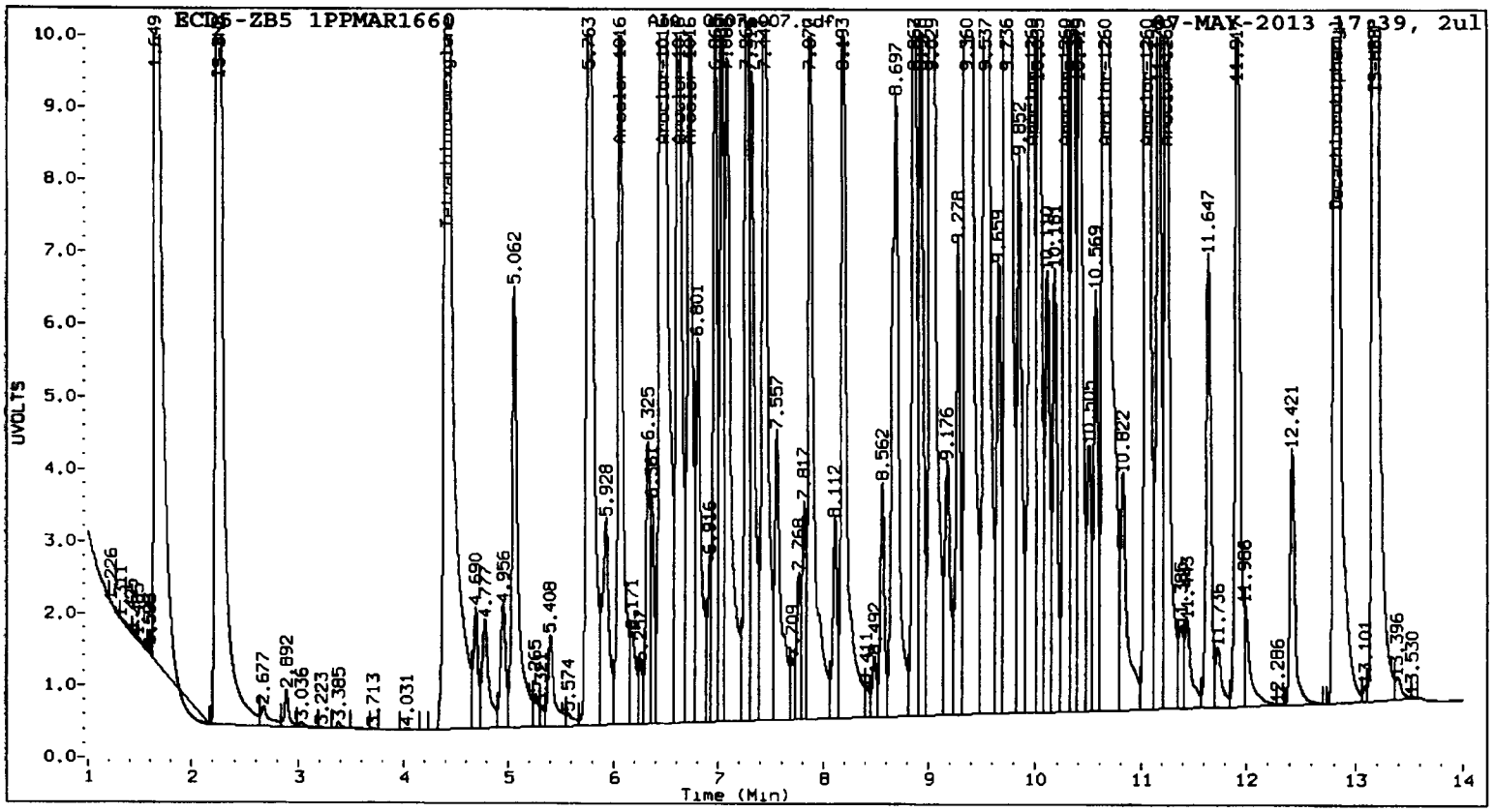
Total PCB Area Col1 (4.511 - 12.728) = 1078983721 Col1 Total PCB = 1.8 ppm*

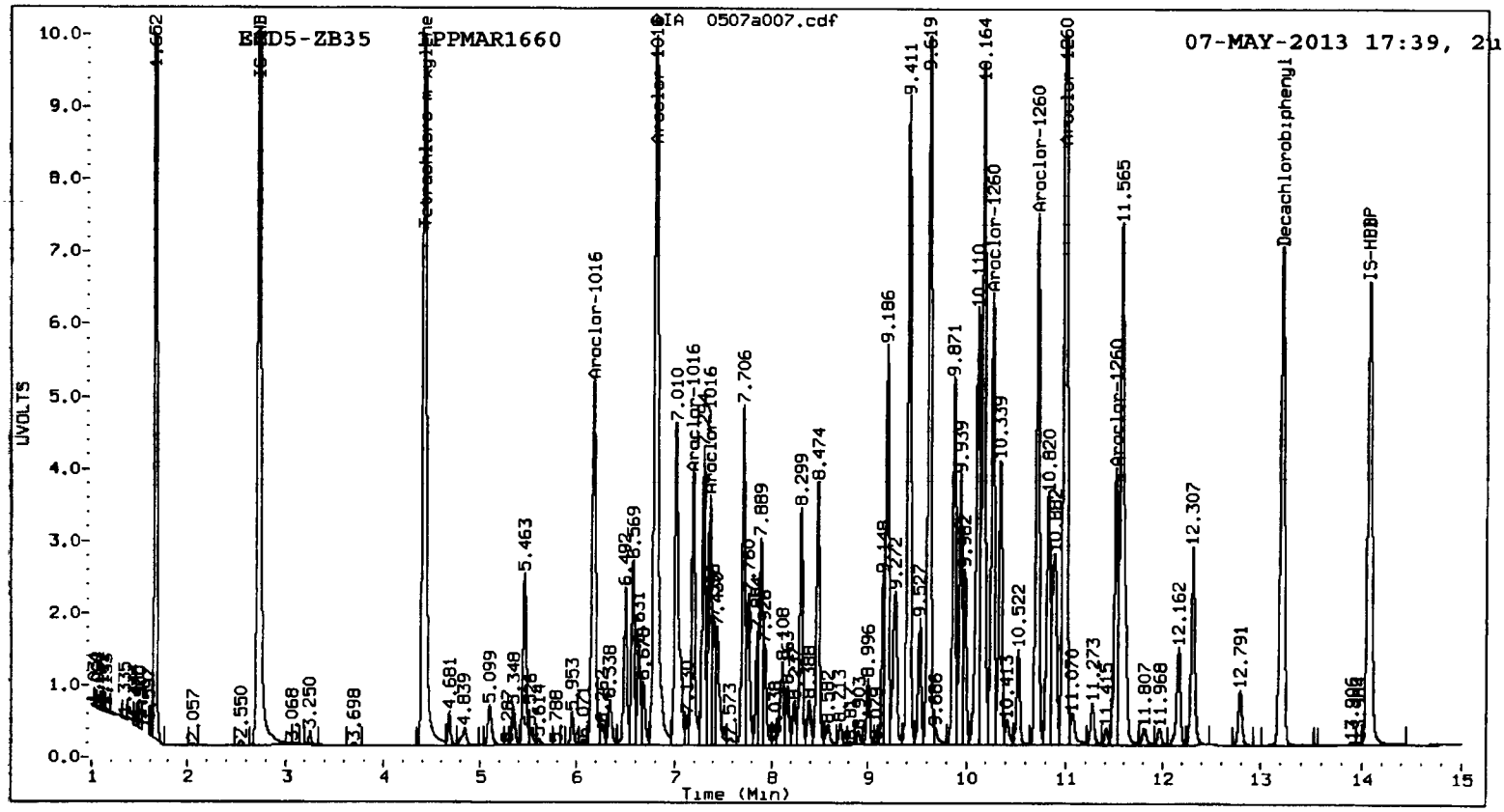
Total PCB Area Col2 (4.512 - 13.105) = 230522338 Col2 Total PCB = 1.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 1PPMAR1660
AIA 0507a007.cdf
07-MAY-2013 17:39, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 1PPMAR1660
AIA 0507a007.cdf
07-MAY-2013 17:39, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 1PPMAR1660
07-MAY-2013 17:39, 2ul
UVOLTS
Time (Min)


ECD5-ZB35 1PPMAR1660
0507a007.cdf
07-MAY-2013 17:39, 2u
UVOLTS
Time (Min)
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

USGS : 00698

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a008.d
Data file 2: 20130507.b/ical-2.b/0507a008.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 17:59
Ical Date: 07-MAY-2013
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
4.411	0.000	6731015	4.413	0.001	1684319	8.4	8.1	3.5	Tetrachloro-m-xylen
12.828	0.000	6587362	13.204	-0.001	1145480	8.2	8.1	1.7	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	21.0	20.3
Decachlorobiphenyl	20.5	20.2

JM 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	51692067	5.5
Hexabromobiphenyl	50004151	53692342	7.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15354151	3.5
Hexabromobiphenyl	9345340	9856374	5.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.061	0.000	2455484	105.4	1	6.167	0.001	933103	106.5
Aroclor-1016	2	6.469	0.001	7585703	105.7	2	6.803	0.003	2002074	105.1
Aroclor-1016	3	6.619	0.002	3398868	105.7	3	7.187	0.002	525355	105.5
Aroclor-1016	4	6.730	0.002	2540359	105.7	4	7.359	0.001	491272	105.9

Total Col1Ave (4 peaks): 105.6 Total Col2Ave (4 peaks): 105.8 RPD = 0
Corrected Ave (3 peaks): 105.6 Corrected Ave (3 peaks): 105.5 RPD = 0

Aroclor-1260	1	9.967	0.001	4612344	104.9	1	10.262	0.002	936375	104.7
Aroclor-1260	2	10.284	0.001	4422973	101.4	2	10.710	0.001	1090787	104.2
Aroclor-1260	3	10.660	0.000	10624516	101.6	3	10.986	0.001	2021333	104.5
Aroclor-1260	4	11.059	0.001	5142675	101.0	4	11.507	0.002	538050	102.7
Aroclor-1260	5	11.248	0.001	2788613	102.3	NS	---			----

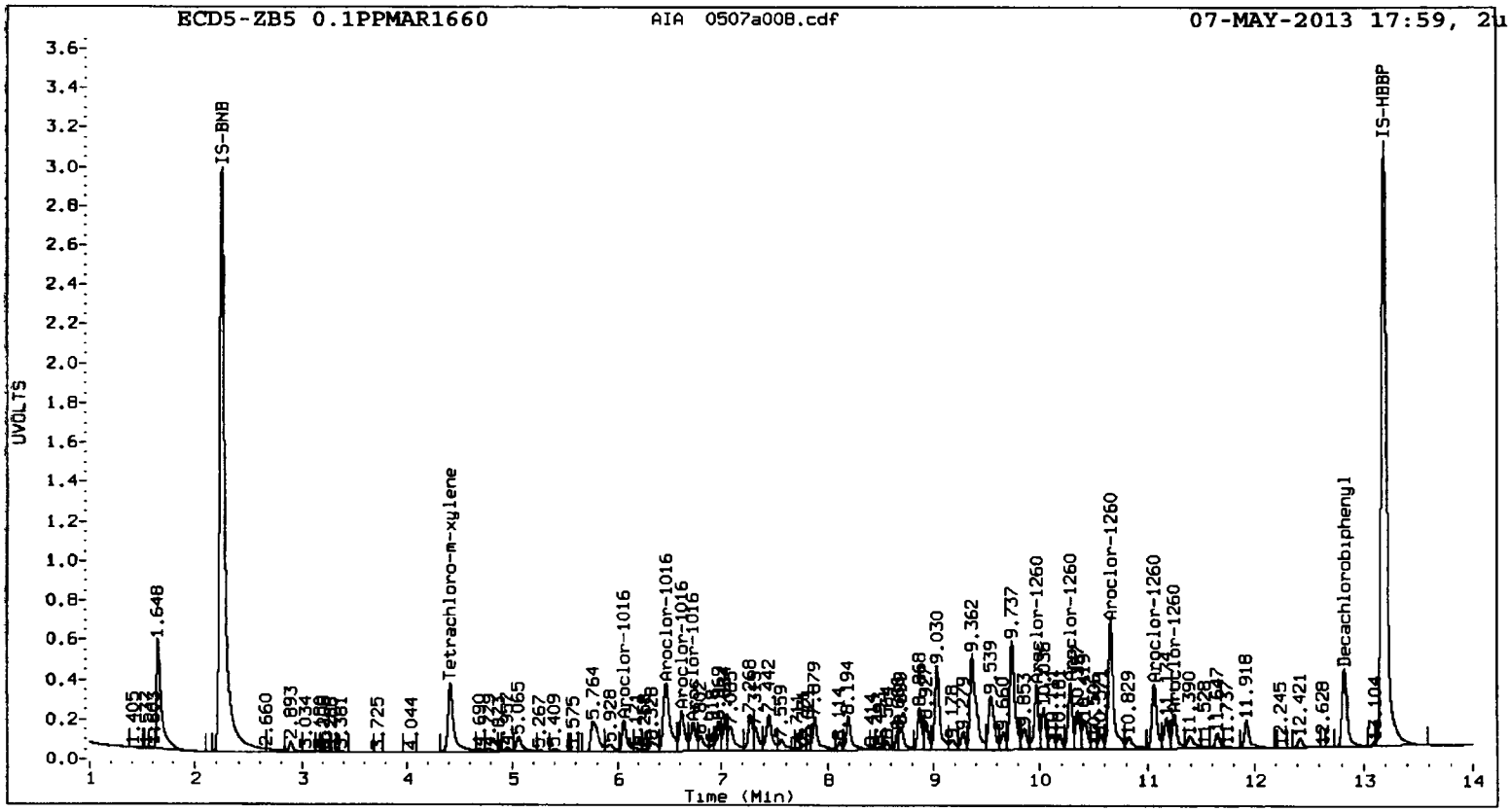
Total Col1Ave (5 peaks): 102.3 Total Col2Ave (4 peaks): 104.0 RPD = 2
Corrected Ave (4 peaks): 101.6 Corrected Ave (3 peaks): 103.8 RPD = 2

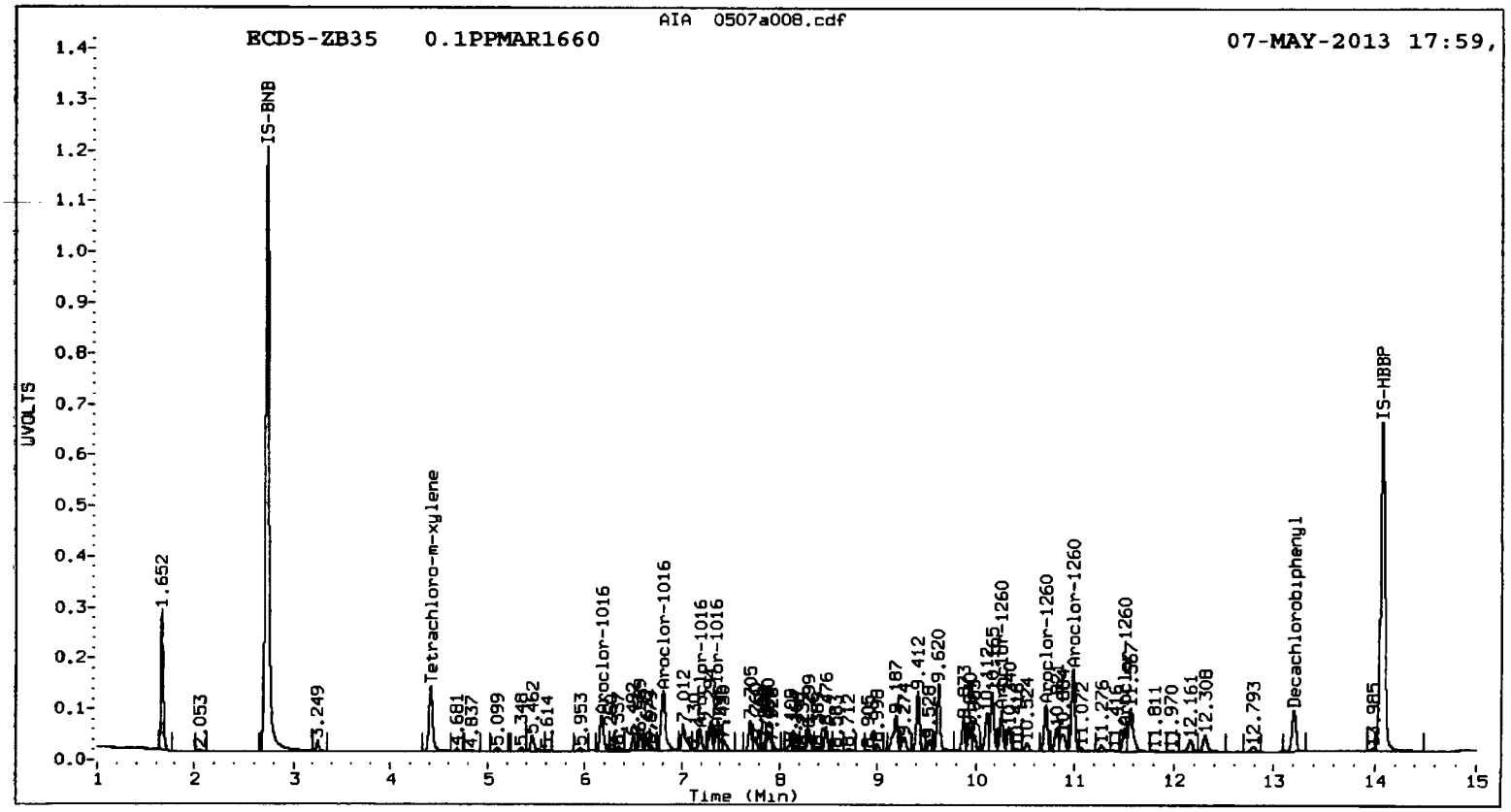
Total PCB Area Col1 (4.511 - 12.728) = 143086545 Col1 Total PCB = 0.2 ppm*

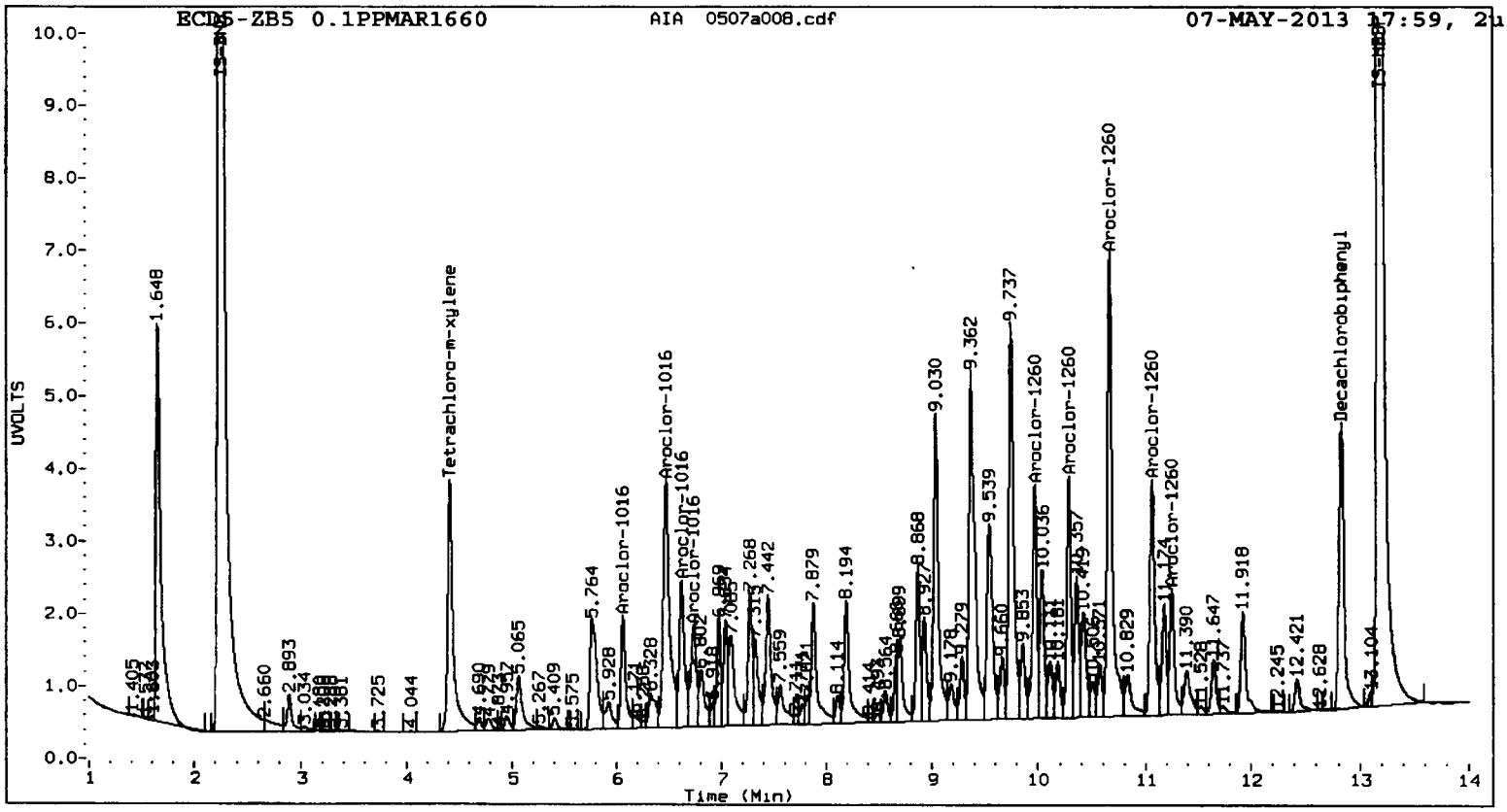
Total PCB Area Col2 (4.512 - 13.105) = 29038947 Col2 Total PCB = 0.2 ppm*

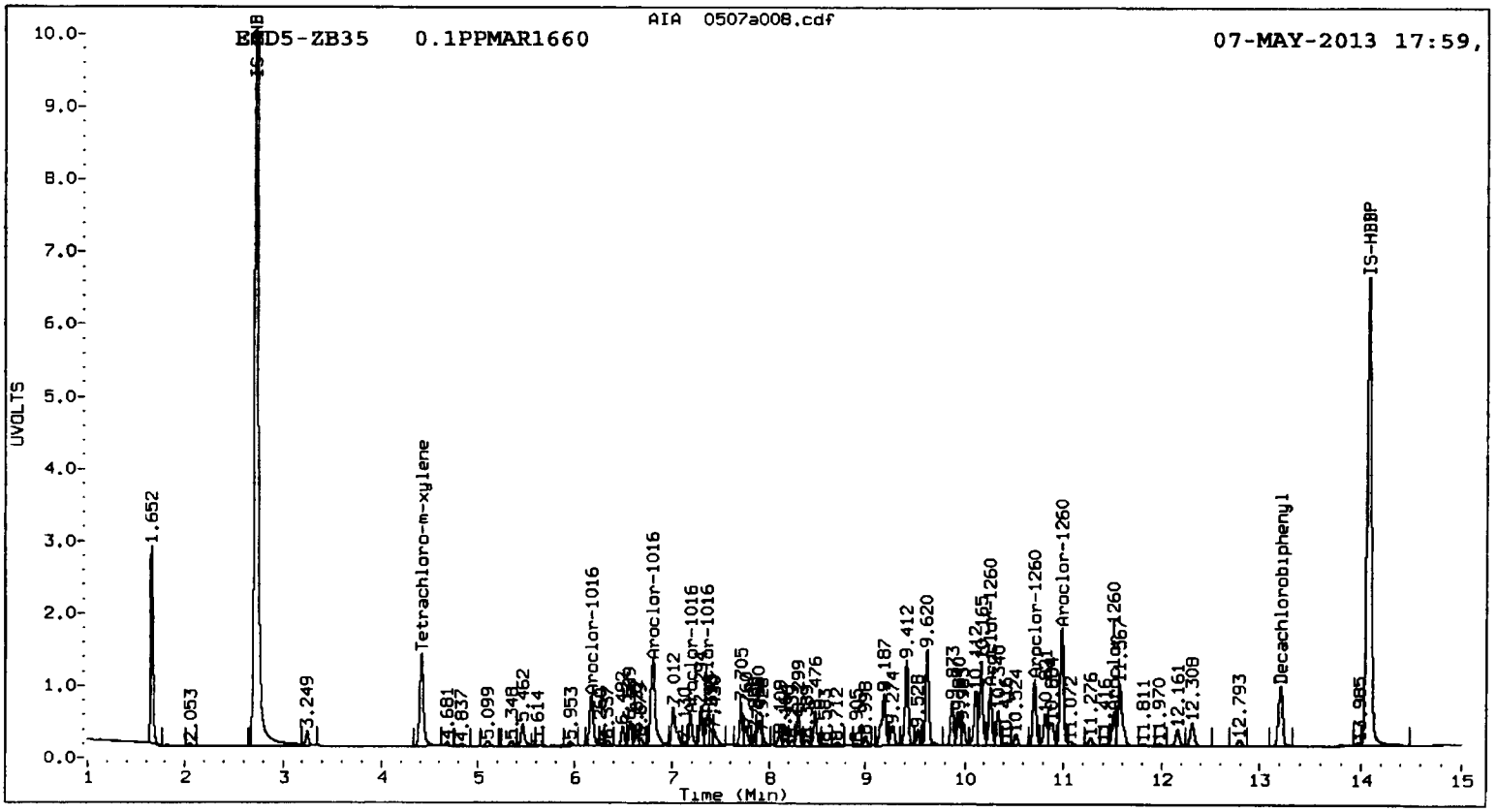
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 0.1PPMAR1660
AIA 0507a008.cdf
07-MAY-2013 17:59, 2u
UVOLTS
Time (Min)
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
1.648
9.030
9.362
9.737
11.918
12.421
12.628


AIA 0507a008.cdf
ECD5-ZB35 0.1PPMAR1660
07-MAY-2013 17:59,
UVOLTS
Time (Min)
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
1.652
3.249
9.620
12.793
12.308


ECD5-ZB5 0.1PPMAR1660
AIA 0507a008.cdf
07-MAY-2013 17:59, 21
UVOLTS
Time (Min)
1.648
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl


AIA 0507a008.cdf
ECD5-ZB35 0.1PPMAR1660
07-MAY-2013 17:59,
UVOLTS
Time (Min)
1.652
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

USGS : 88783

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a009.d
Data file 2: 20130507.b/ical-2.b/0507a009.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 18:19
Ical Date: 07-MAY-2013
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
4.411	0.000	30263952	4.412	0.001	7879158	38.6	39.1	1.3	Tetrachloro-m-xylen
12.827	-0.001	28353890	13.204	-0.001	4992554	35.6	35.6	0.1	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	96.6	97.8
Decachlorobiphenyl	89.0	88.9

5/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	50537542	3.2
Hexabromobiphenyl	50004151	53291913	6.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14890872	0.3
Hexabromobiphenyl	9345340	9751846	4.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

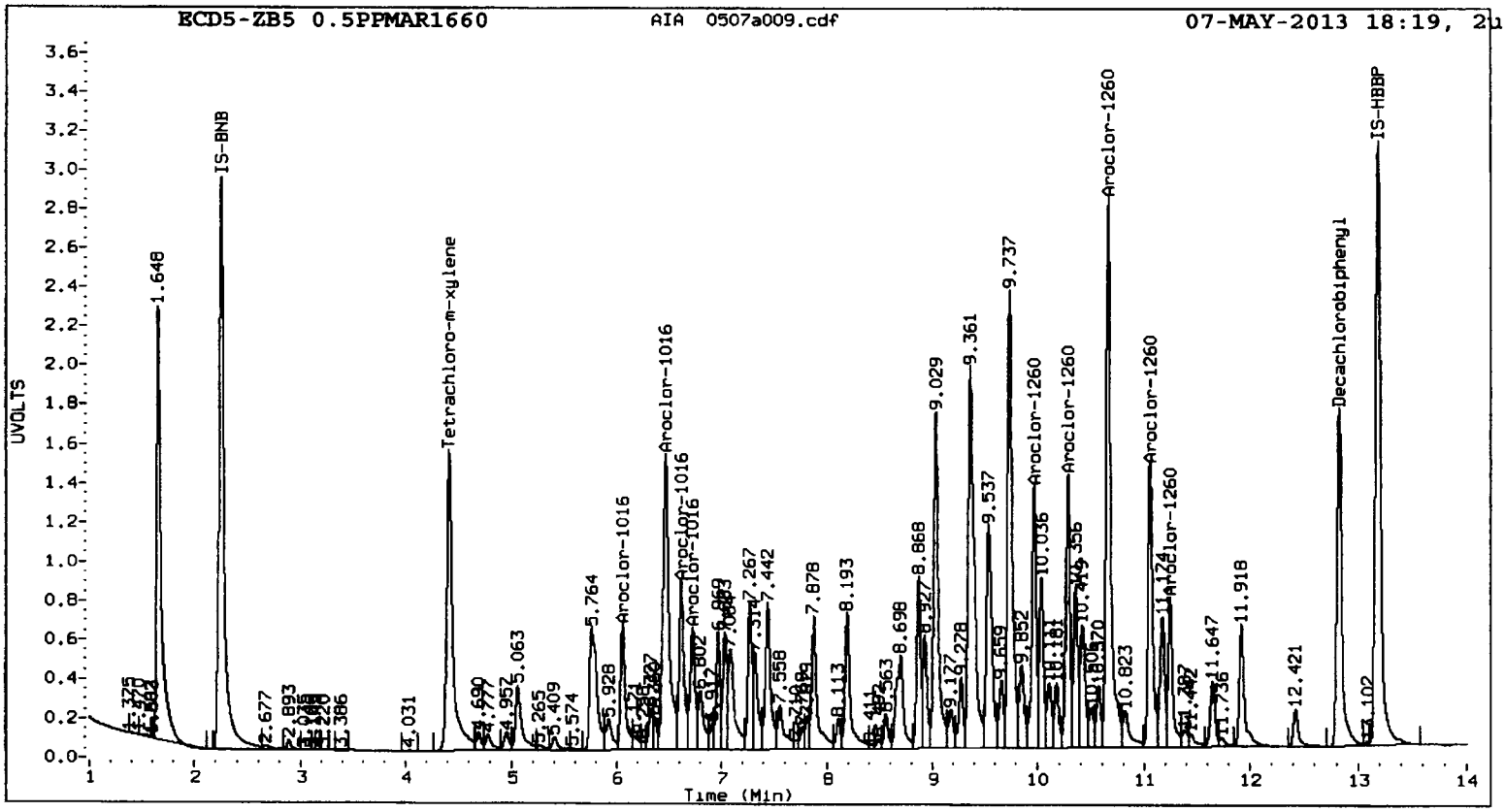
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.060	0.000	10209142	448.2	1	6.166	0.000	3819812	449.6
Aroclor-1016	2	6.469	0.000	31525506	449.3	2	6.801	0.000	8527560	461.6
Aroclor-1016	3	6.617	0.000	13954591	443.9	3	7.185	0.000	2297705	475.7
Aroclor-1016	4	6.728	0.000	10550969	449.2	4	7.358	0.000	2075939	461.5
	Total Col1Ave (4 peaks):				447.6		Total Col2Ave (4 peaks):			462.1 RPD = 3
	Corrected Ave (3 peaks):				447.1		Corrected Ave (3 peaks):			457.6 RPD = 2
Aroclor-1260	1	9.967	0.000	19054399	436.6	1	10.260	0.000	3995682	451.7
Aroclor-1260	2	10.284	0.000	18658025	431.1	2	10.709	0.000	4769094	460.3
Aroclor-1260	3	10.659	0.000	46060556	443.9	3	10.985	0.000	9011917	471.1
Aroclor-1260	4	11.058	0.000	22756673	450.2	4	11.505	0.000	2389092	460.7
Aroclor-1260	5	11.247	0.000	12499862	462.2	NS	---			----
	Total Col1Ave (5 peaks):				444.8		Total Col2Ave (4 peaks):			461.0 RPD = 4
	Corrected Ave (4 peaks):				440.4		Corrected Ave (3 peaks):			457.6 RPD = 4

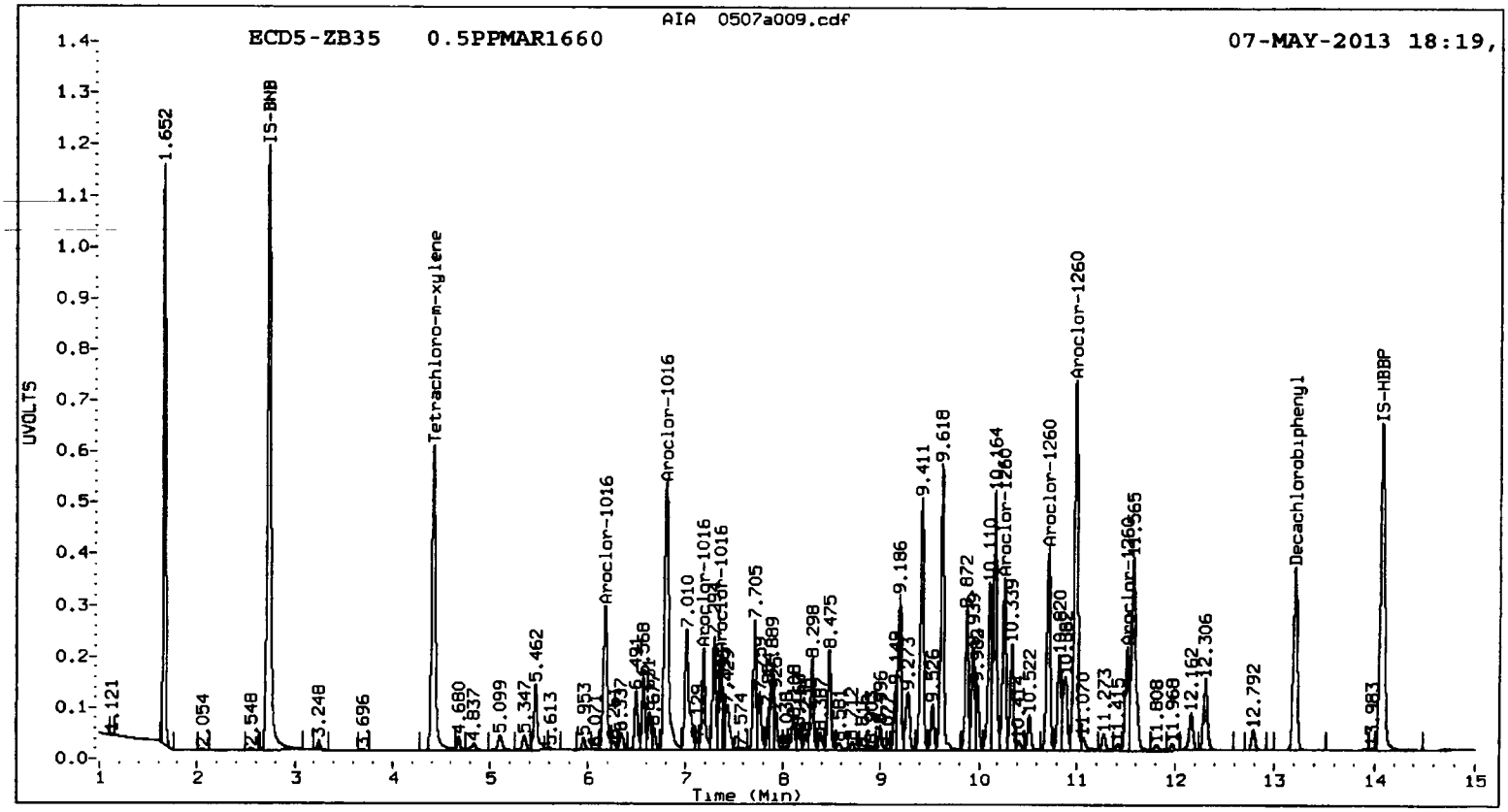
Total PCB Area Col1 (4.511 - 12.728) = 589049282 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (4.512 - 13.105) = 124374053 Col2 Total PCB = 1.0 ppm*

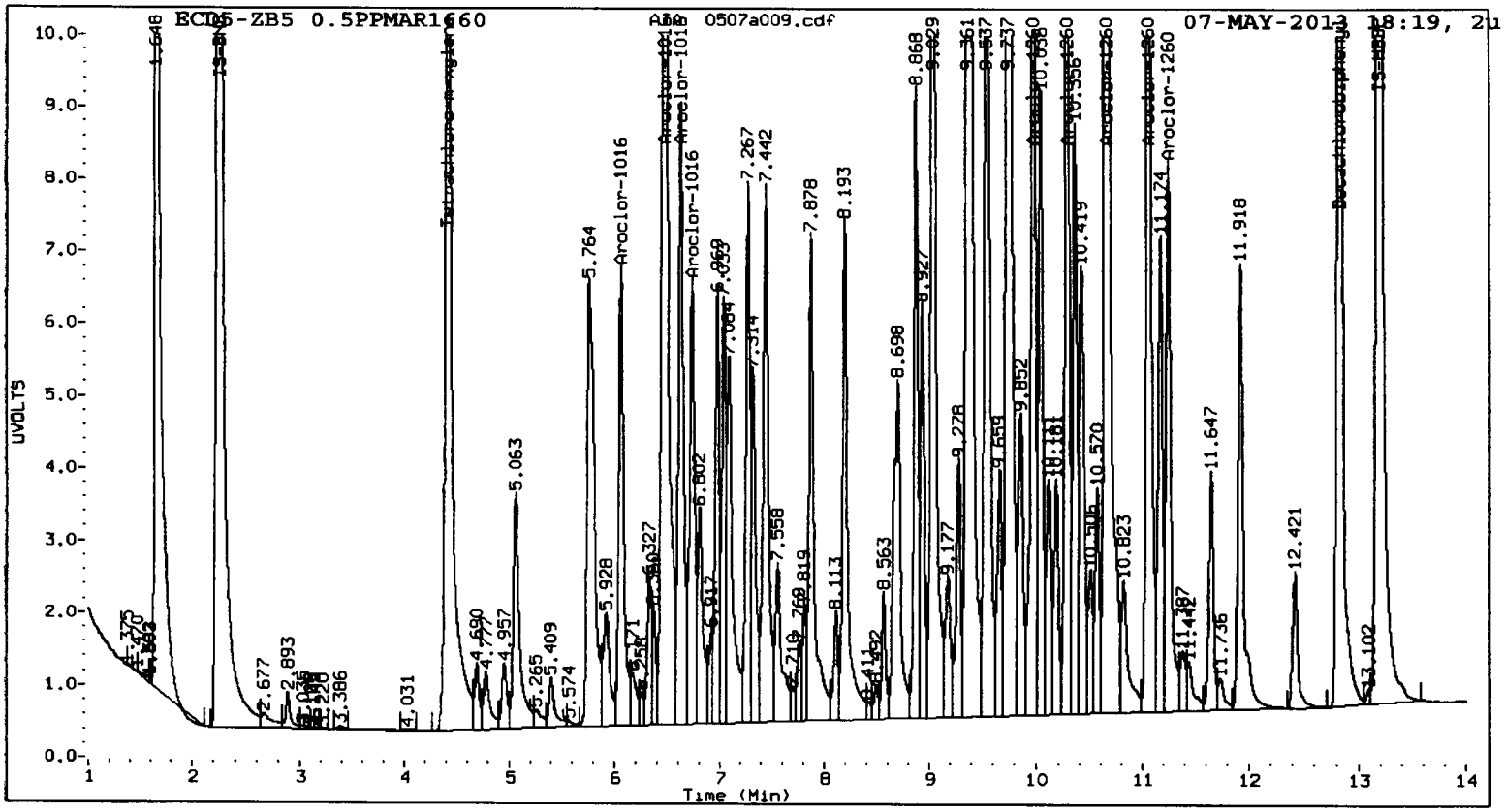
* Quantitated against AR1660 0.25ppm in Ical

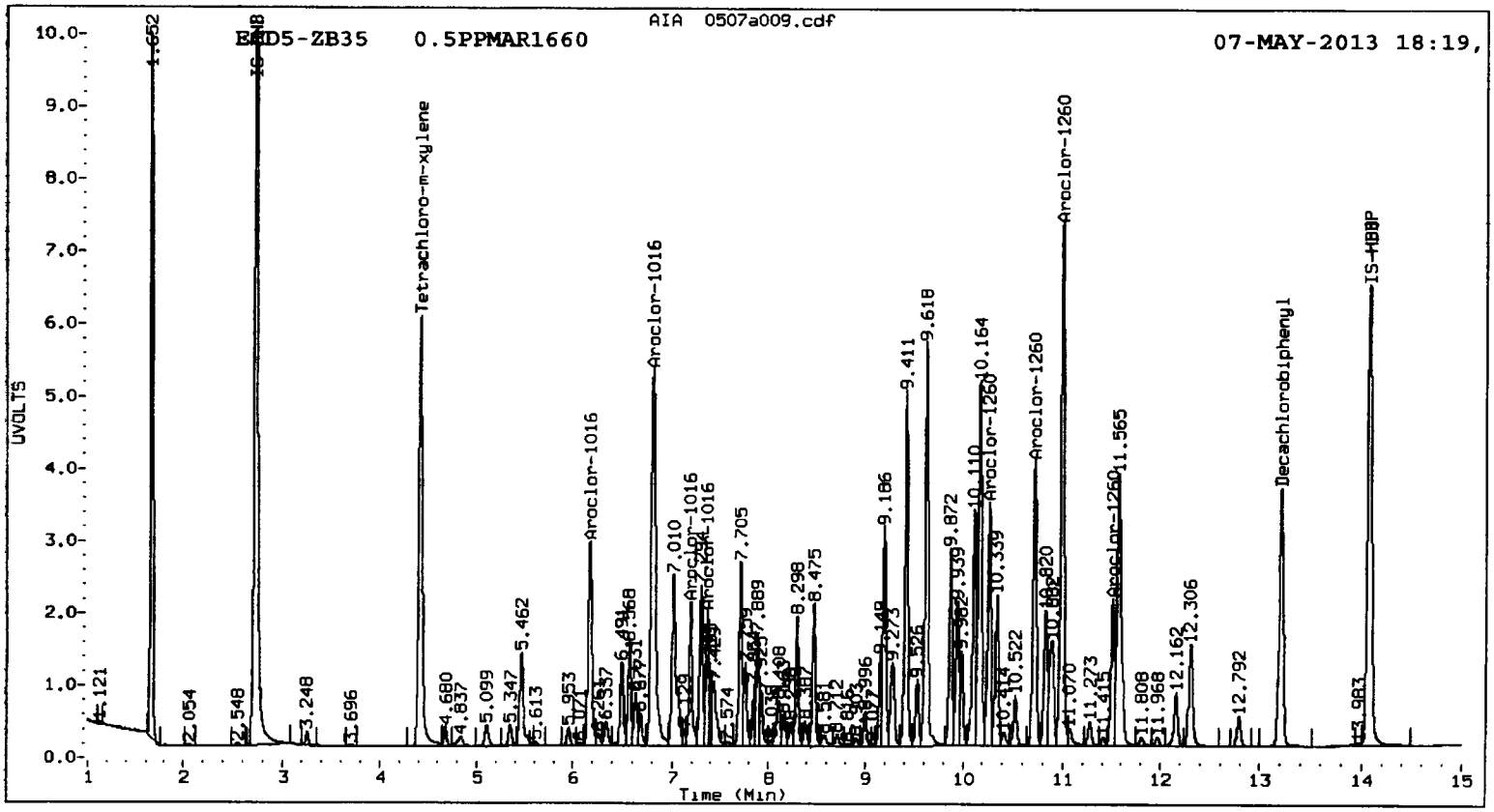
PCB-Form 10 Mod.


ECD5-ZB5 0.5PPMAR1660
AIA 0507a009.cdf
07-MAY-2013 18:19, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


AIA 0507a009.cdf
ECD5-ZB35 0.5PPMAR1660
07-MAY-2013 18:19,
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

WS90 : 00707


ECD5-ZB5 0.5PPMAR1660
AIA 0507a009.cdf
07-MAY-2013 18:19, 21
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


AIA 0507a009.cdf
ECD5-ZB35 0.5PPMAR1660
07-MAY-2013 18:19,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a010.d
Data file 2: 20130507.b/ical-2.b/0507a010.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 07-MAY-2013 18:39
Ical Date: 07-MAY-2013
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
4.410	-0.001	31274266	4.414	0.003	8134040	39.1	39.8	1.9	Tetrachloro-m-xylen
12.828	-0.001	31253738	13.204	-0.001	5452308	37.9	37.4	1.3	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	97.7	99.6
Decachlorobiphenyl	94.8	93.6

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	51594521	5.3
Hexabromobiphenyl	50004151	55145987	10.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15094795	1.7
Hexabromobiphenyl	9345340	10120992	8.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

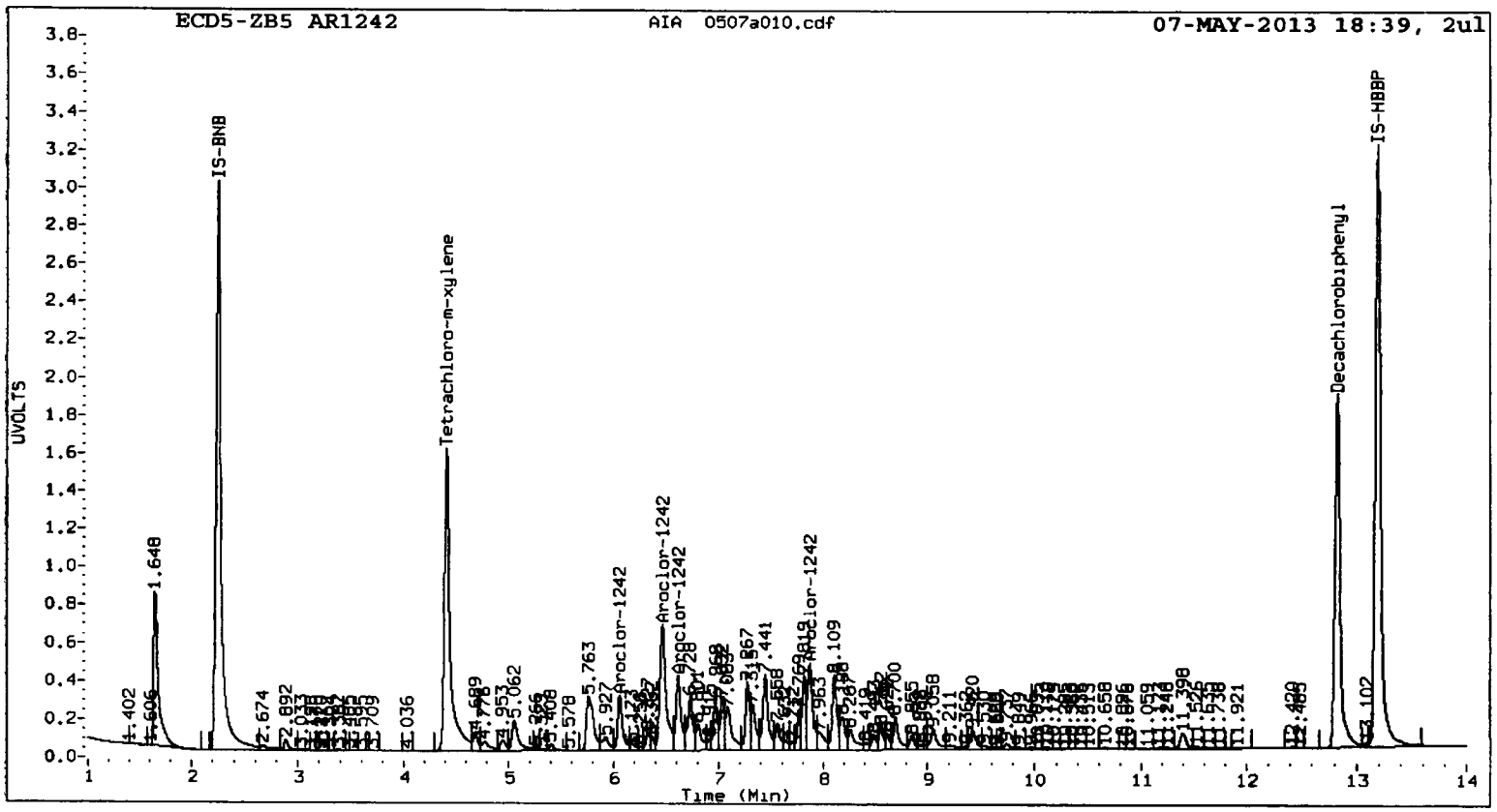
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	6.059	0.000	4645645	250.0	1	6.167	0.000	1719309	250.0
Aroclor-1242	2	6.468	0.000	14248309	250.0	2	6.803	0.000	3776677	250.0
Aroclor-1242	3	6.617	0.000	6357384	250.0	3	7.011	0.000	1577853	250.0
Aroclor-1242	4	7.873	0.000	7850170	250.0	4	8.239	0.000	1321956	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

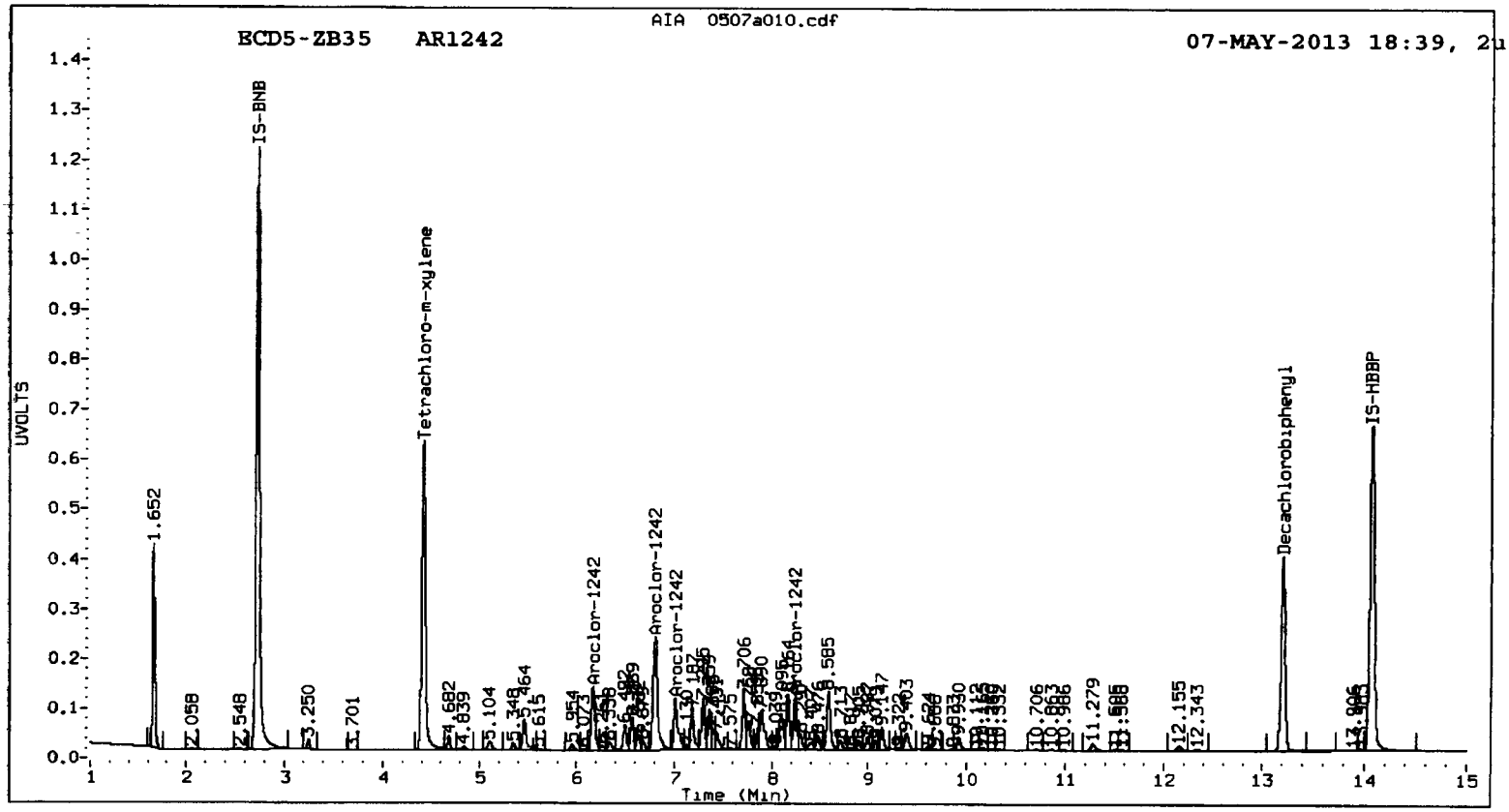
Total PCB Area Col1 (4.511 - 12.728) = 132730122 Col1 Total PCB = 0.2 ppm*

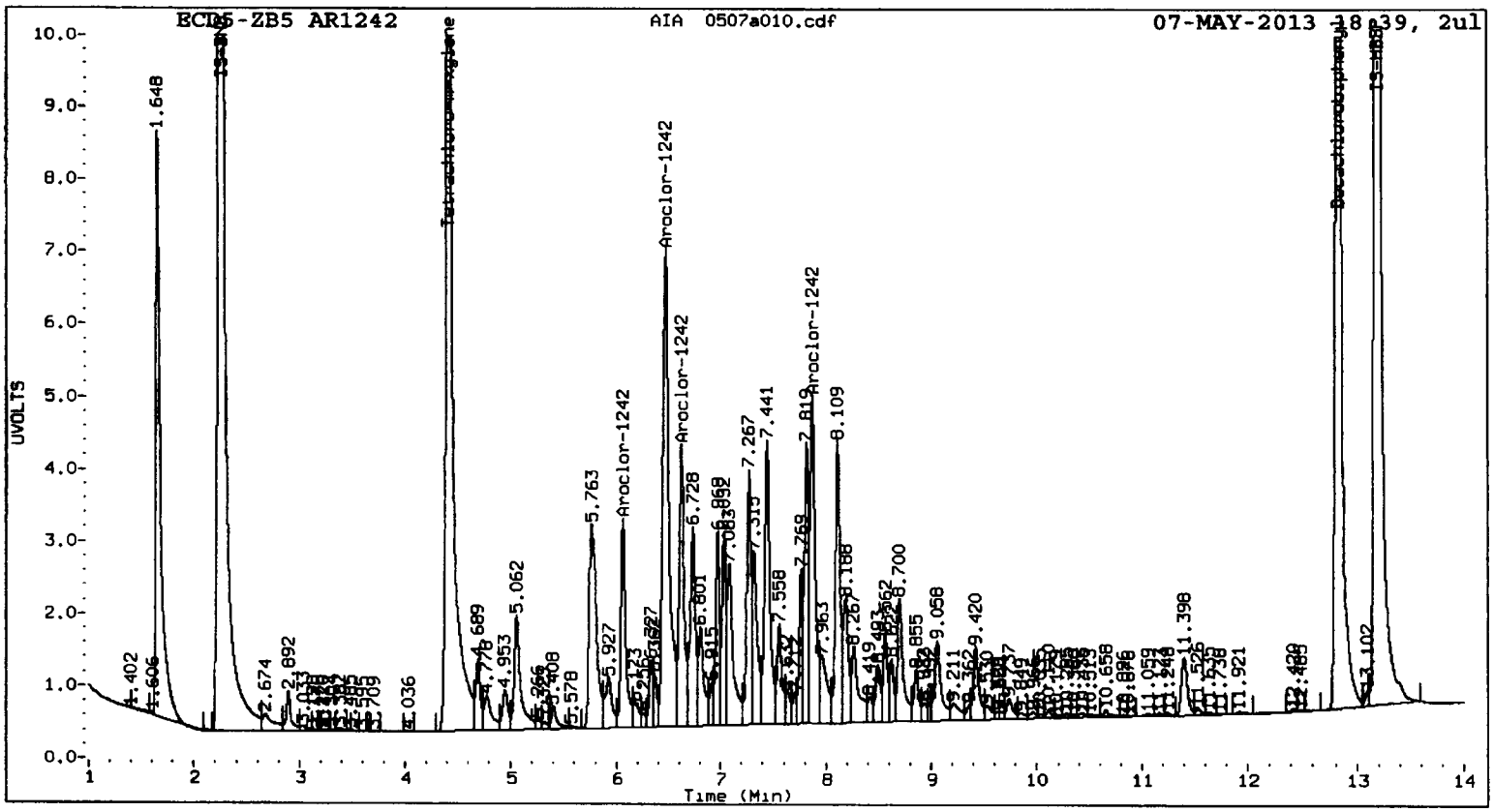
Total PCB Area Col2 (4.512 - 13.105) = 28500992 Col2 Total PCB = 0.2 ppm*

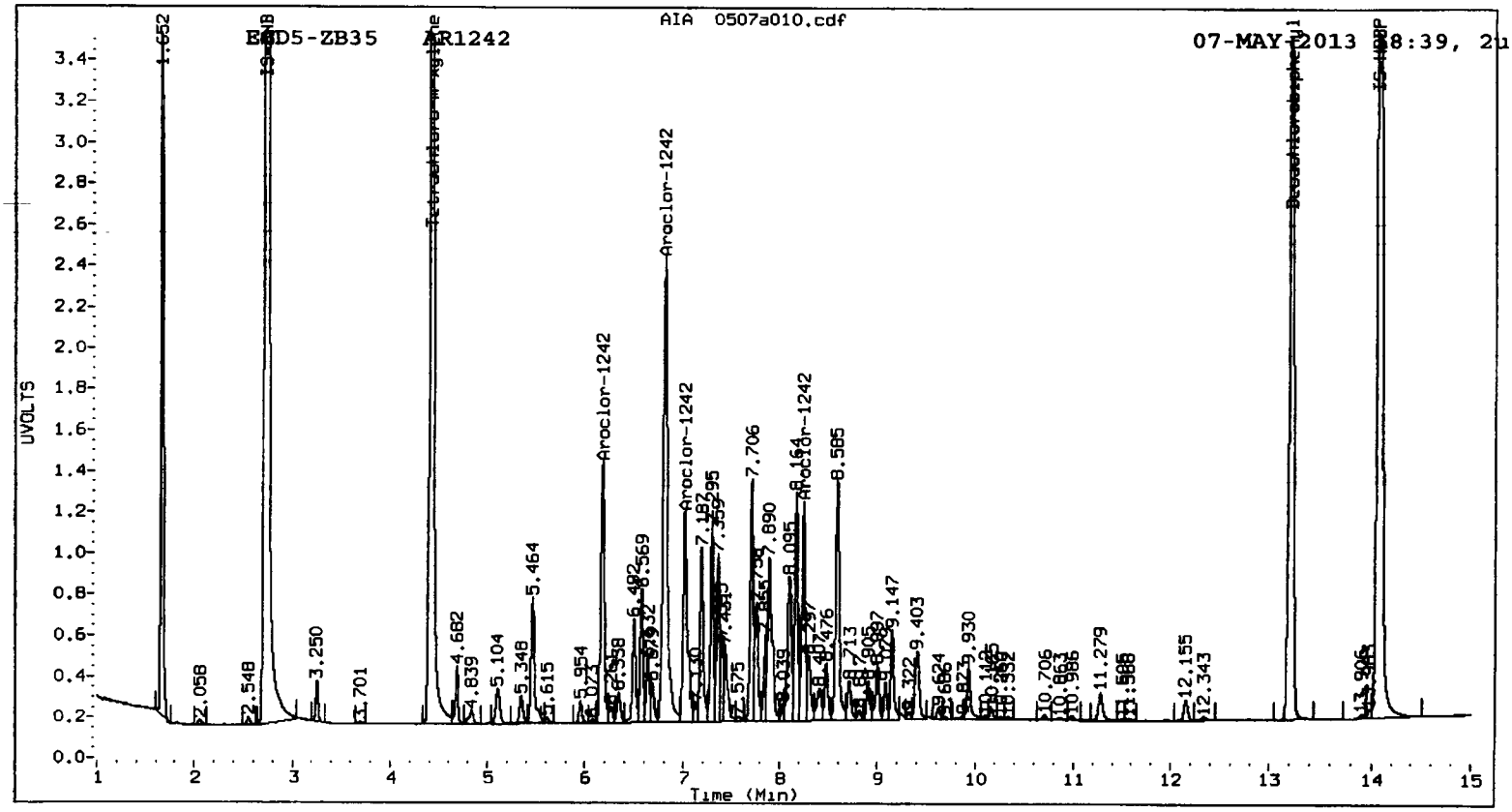
* Quantitated against AR1660 0.25ppm in Ical

WS90:00710


ECD5-ZB5 AR1242
AIA 0507a010.cdf
07-MAY-2013 18:39, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR1242
AIA 0507a010.cdf
07-MAY-2013 18:39, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 AR1242
AIA 0507a010.cdf
07-MAY-2013 18:39, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl


ECD5-ZB35 AR1242
AIA 0507a010.cdf
07-MAY-2013 18:39, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a011.d
Data file 2: 20130507.b/ical-2.b/0507a011.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 07-MAY-2013 18:59
Ical Date: 07-MAY-2013
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
4.411	0.000	31267686	4.412	0.000	8079724	38.2	39.1	2.2	Tetrachloro-m-xylen
12.828	0.000	29535239	13.204	-0.001	5138640	34.6	34.4	0.7	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	95.5	97.6
Decachlorobiphenyl	86.5	85.9

1 05/07/13
05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	52790343	7.8
Hexabromobiphenyl	50004151	57162764	14.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15297537	3.1
Hexabromobiphenyl	9345340	10392760	11.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

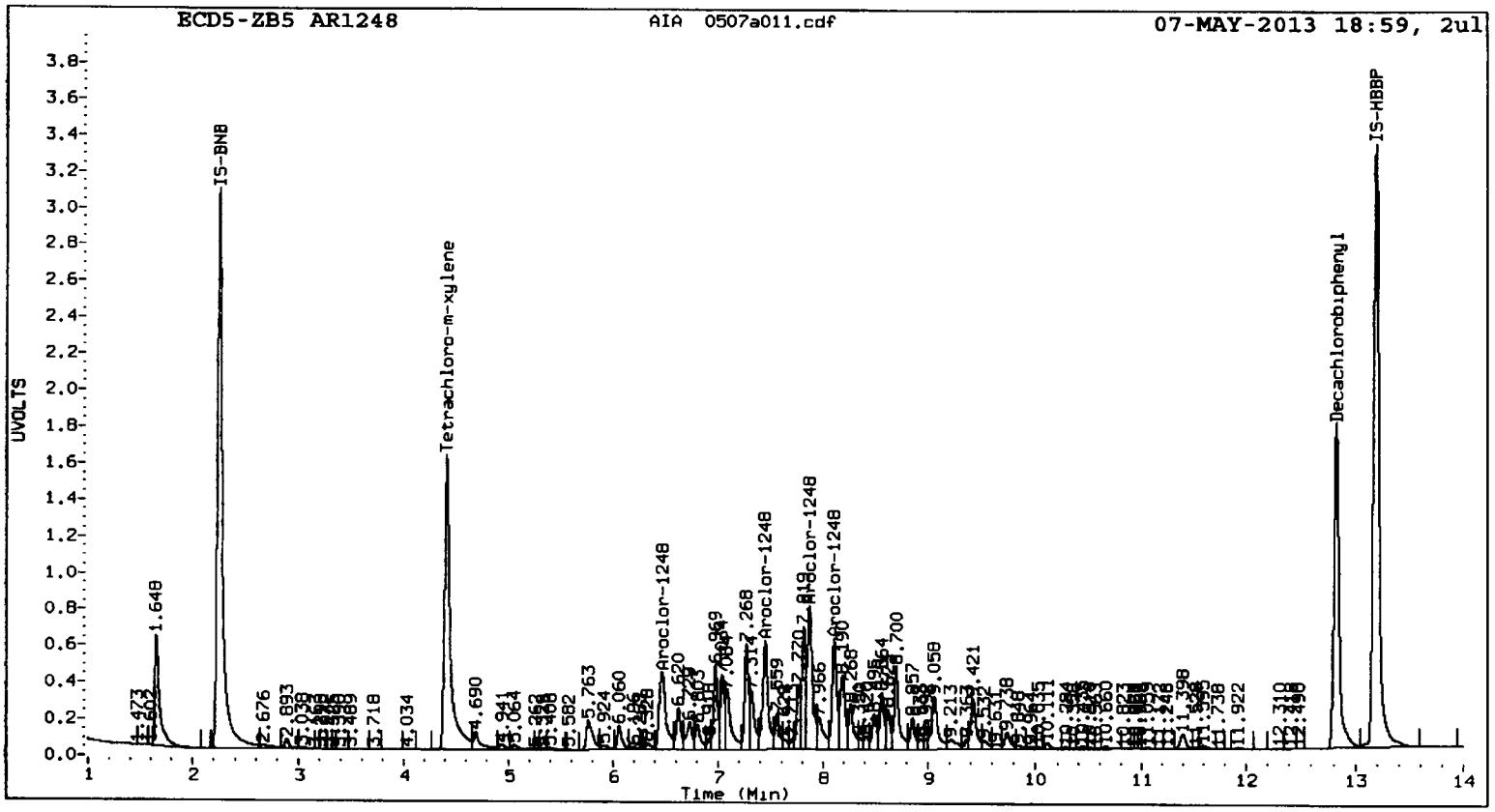
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	6.467	0.000	9288203	250.0	1	6.800	0.000	2396407	250.0
Aroclor-1248	2	7.442	0.000	10446110	250.0	2	7.706	0.000	1987417	250.0
Aroclor-1248	3	7.874	0.000	13282472	250.0	3	8.239	0.000	2057504	250.0
Aroclor-1248	4	8.110	0.000	9261094	250.0	4	8.584	0.000	2673699	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

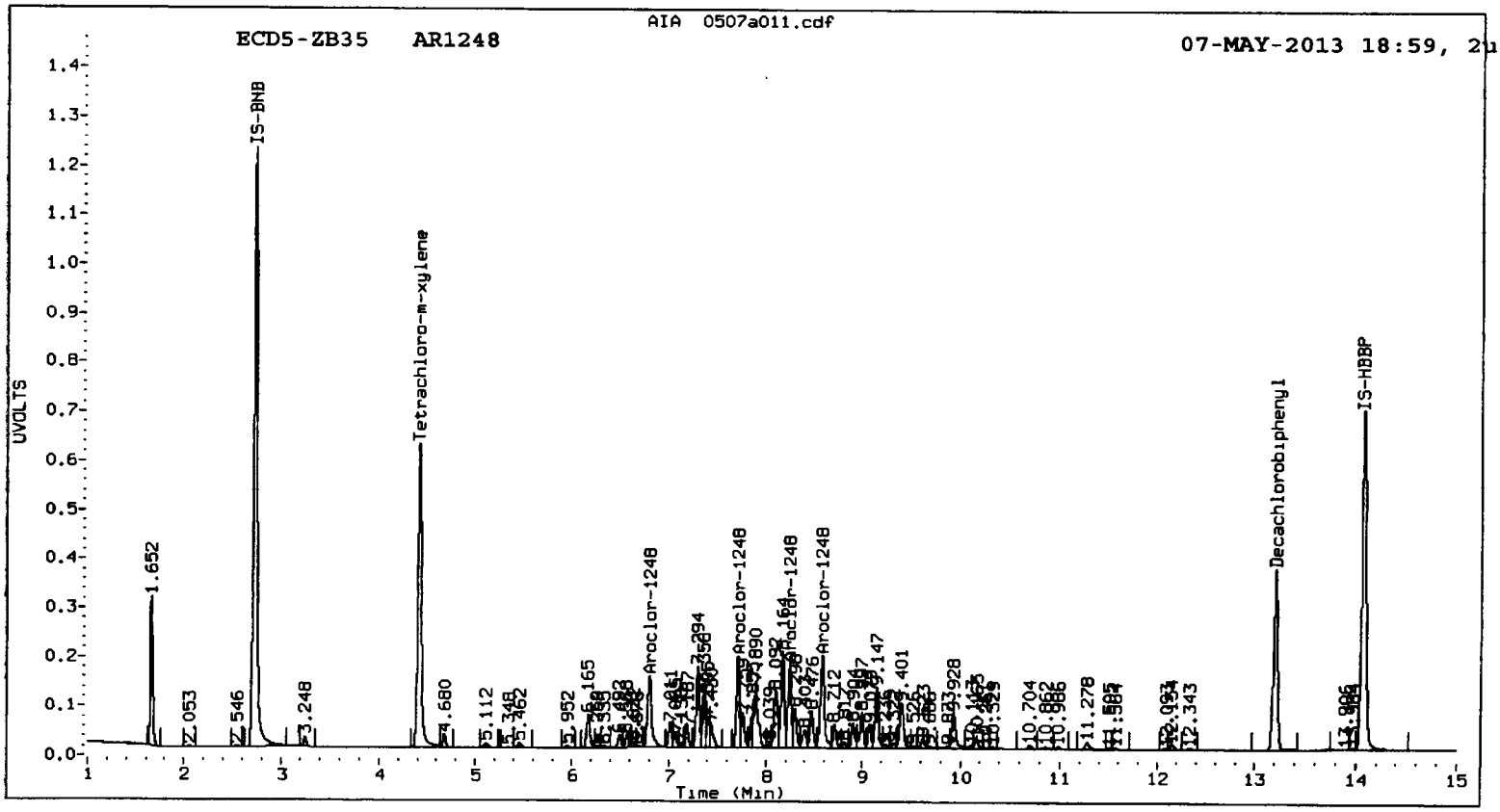
Total PCB Area Col1 (4.511 - 12.728) = 170915176 Col1 Total PCB = 0.3 ppm*

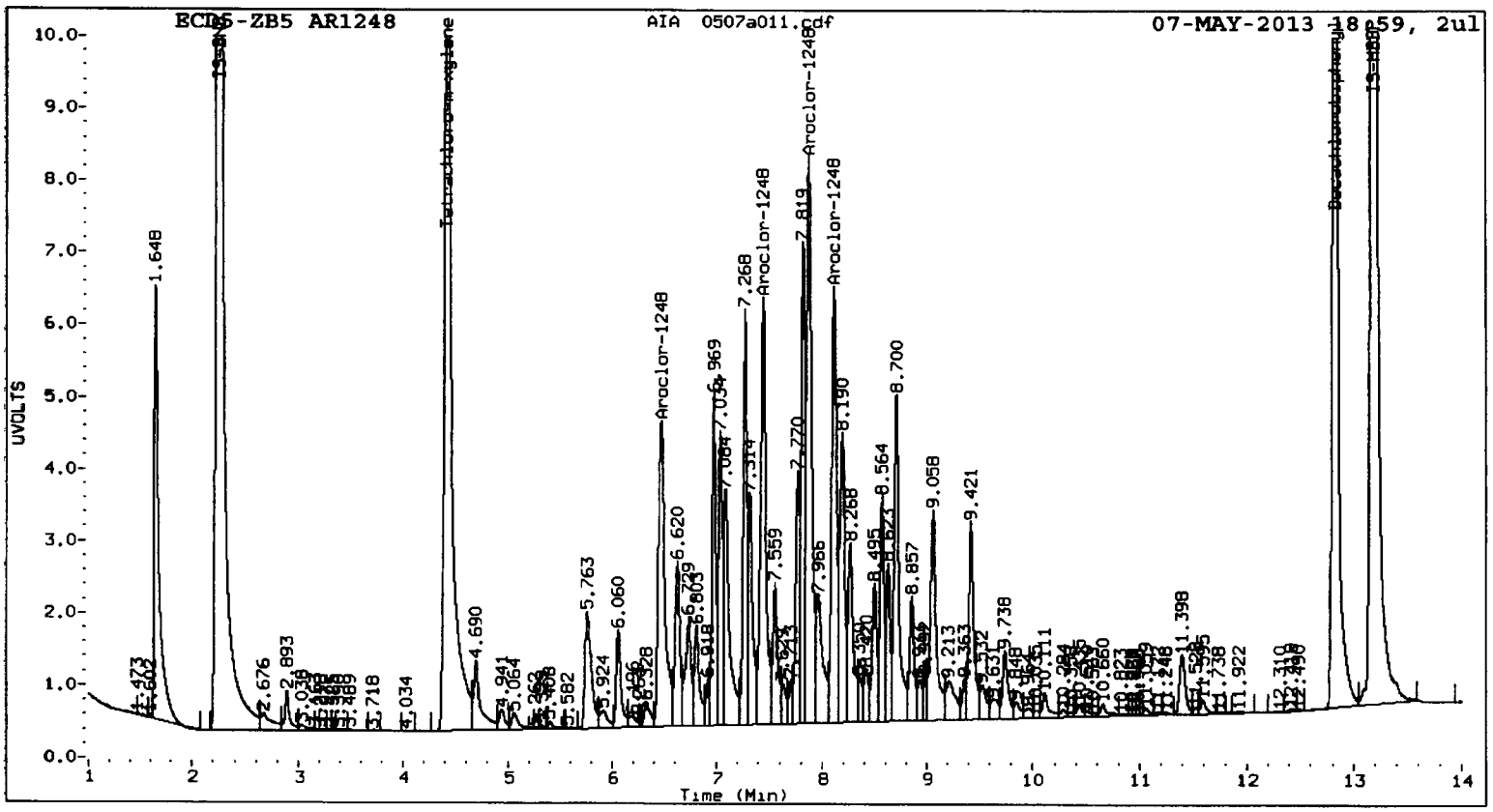
Total PCB Area Col2 (4.512 - 13.105) = 35045707 Col2 Total PCB = 0.3 ppm*

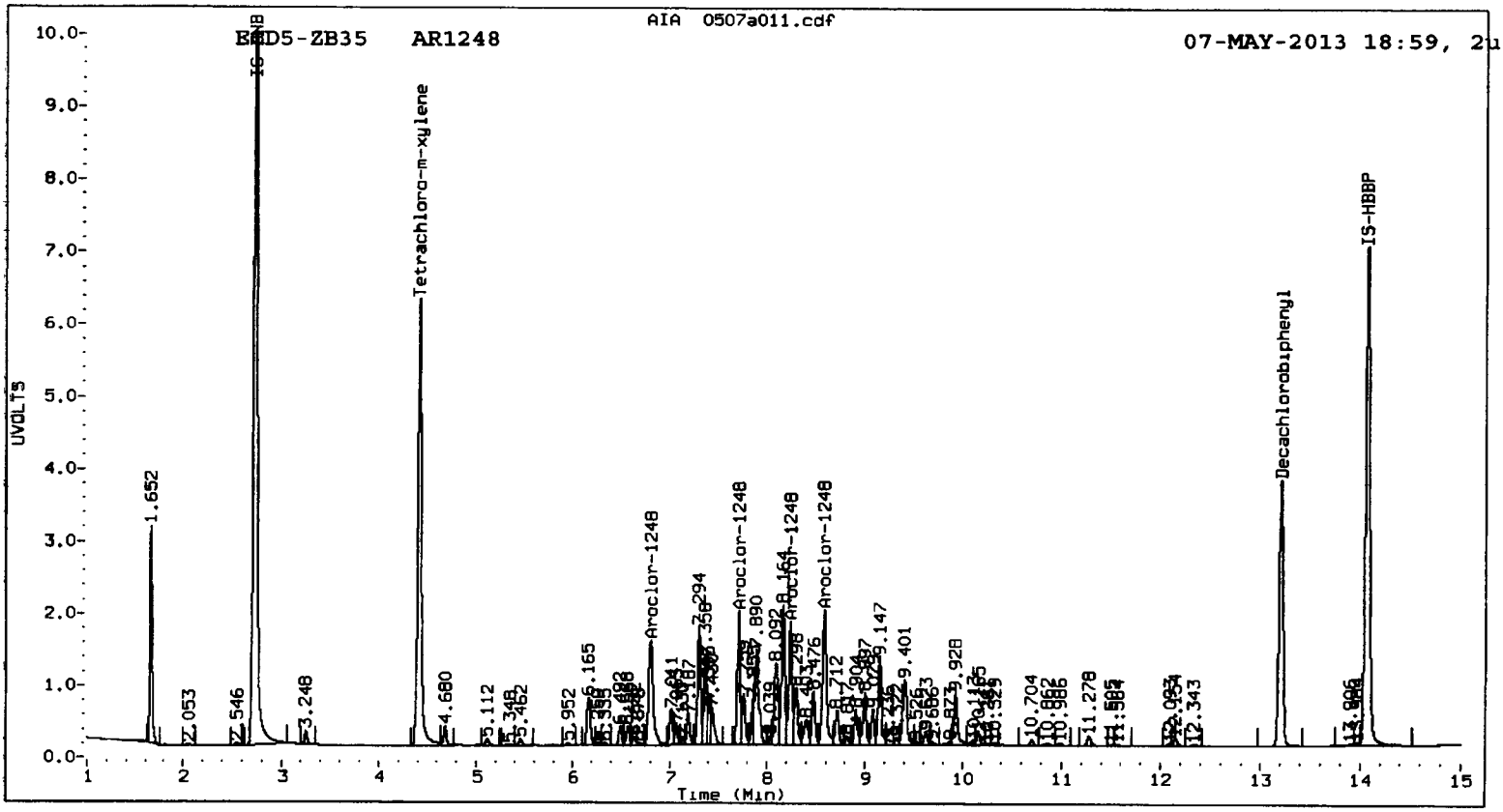
* Quantitated against AR1660 0.25ppm in Ical

WS90 00714


ECD5-ZB5 AR1248
AIA 0507a011.cdf
07-MAY-2013 18:59, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP


AIA 0507a011.cdf
ECD5-ZB35 AR1248
07-MAY-2013 18:59, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 AR1248
AIA 0507a011.cdf
07-MAY-2013 18:59, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR1248
AIA 0507a011.cdf
07-MAY-2013 18:59, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP

USGS : 00715

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a012.d
Data file 2: 20130507.b/ical-2.b/0507a012.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 07-MAY-2013 19:20
Ical Date: 07-MAY-2013
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
4.411	0.000	31597187	4.412	0.000	8169778	38.5	39.8	3.2	Tetrachloro-m-xylen
12.828	0.000	30575045	13.204	-0.001	5300158	35.4	35.2	0.6	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	96.3	99.4
Decachlorobiphenyl	88.4	87.9

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	52930034	8.1
Hexabromobiphenyl	50004151	57859101	15.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15196733	2.4
Hexabromobiphenyl	9345340	10477901	12.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

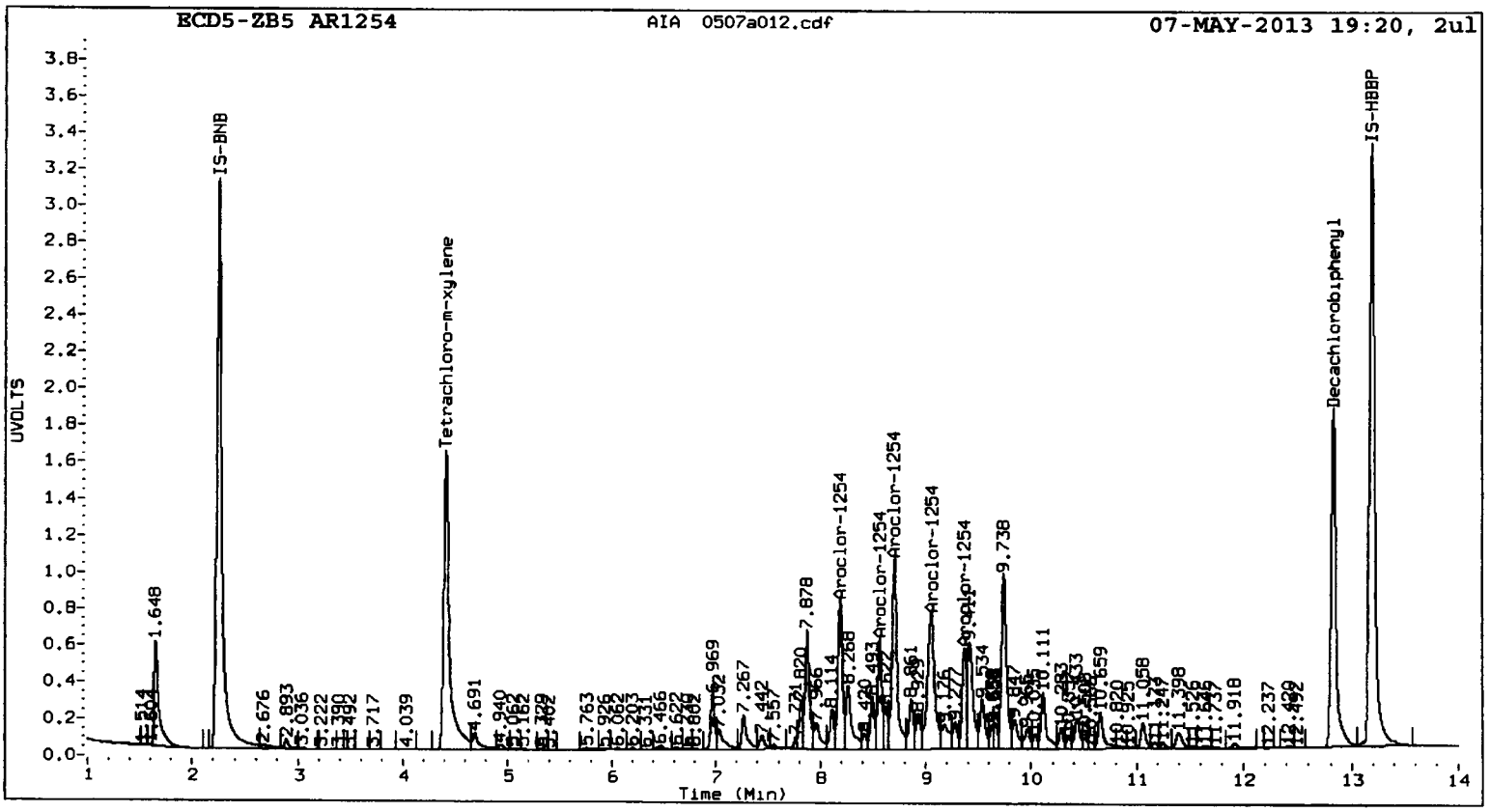
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.192	0.000	12340679	250.0	1	8.298	0.000	1842172	250.0
Aroclor-1254	2	8.564	0.000	8145566	250.0	2	8.475	0.000	2275796	250.0
Aroclor-1254	3	8.700	0.000	16981832	250.0	3	8.996	0.000	1743263	250.0
Aroclor-1254	4	9.053	0.000	17490326	250.0	4	9.147	0.000	3733641	250.0
Aroclor-1254	5	9.362	0.000	6614633	250.0	5	9.935	0.000	2102395	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

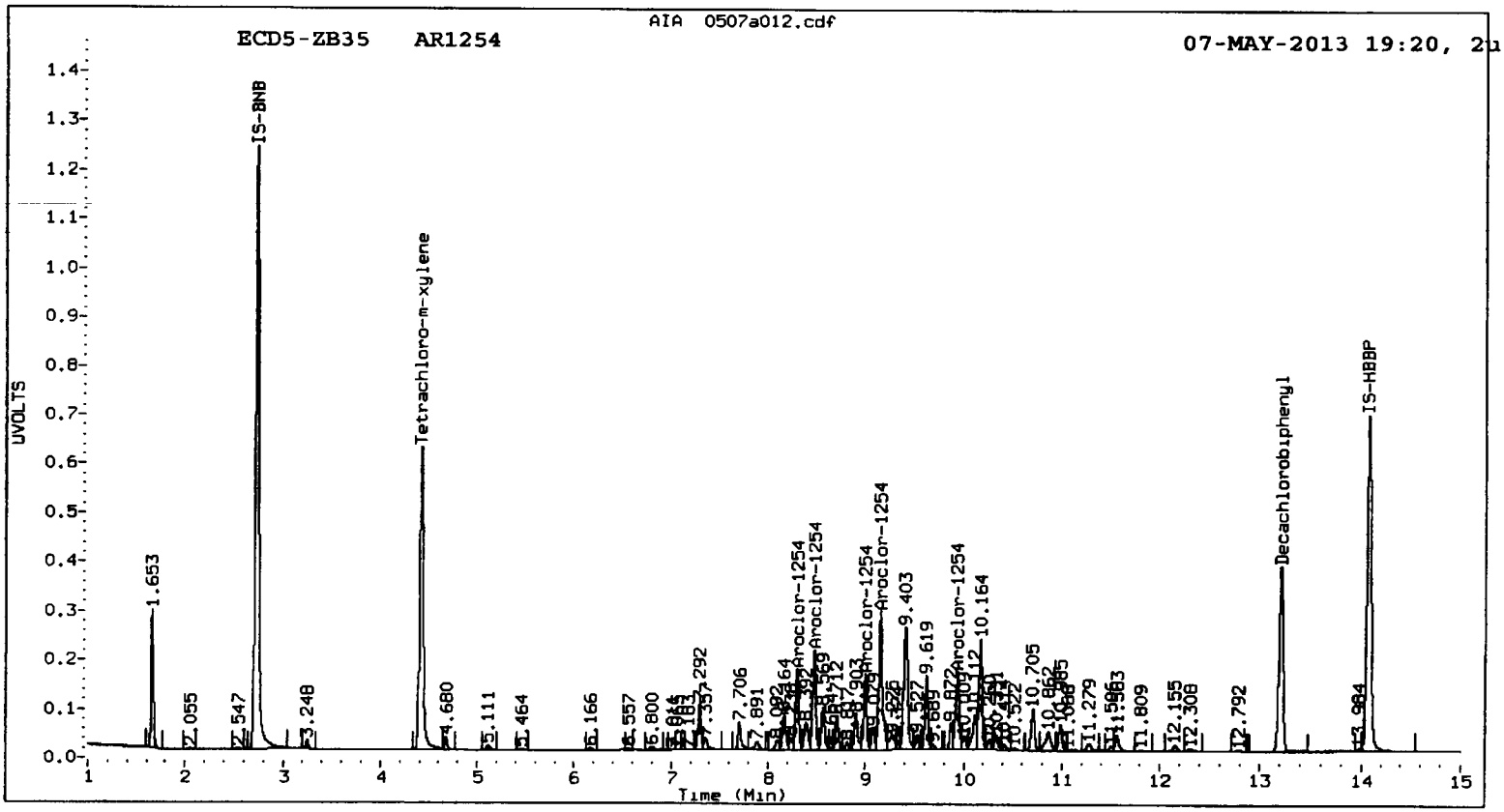
Total PCB Area Col1 (4.511 - 12.728) = 185172722 Col1 Total PCB = 0.3 ppm*

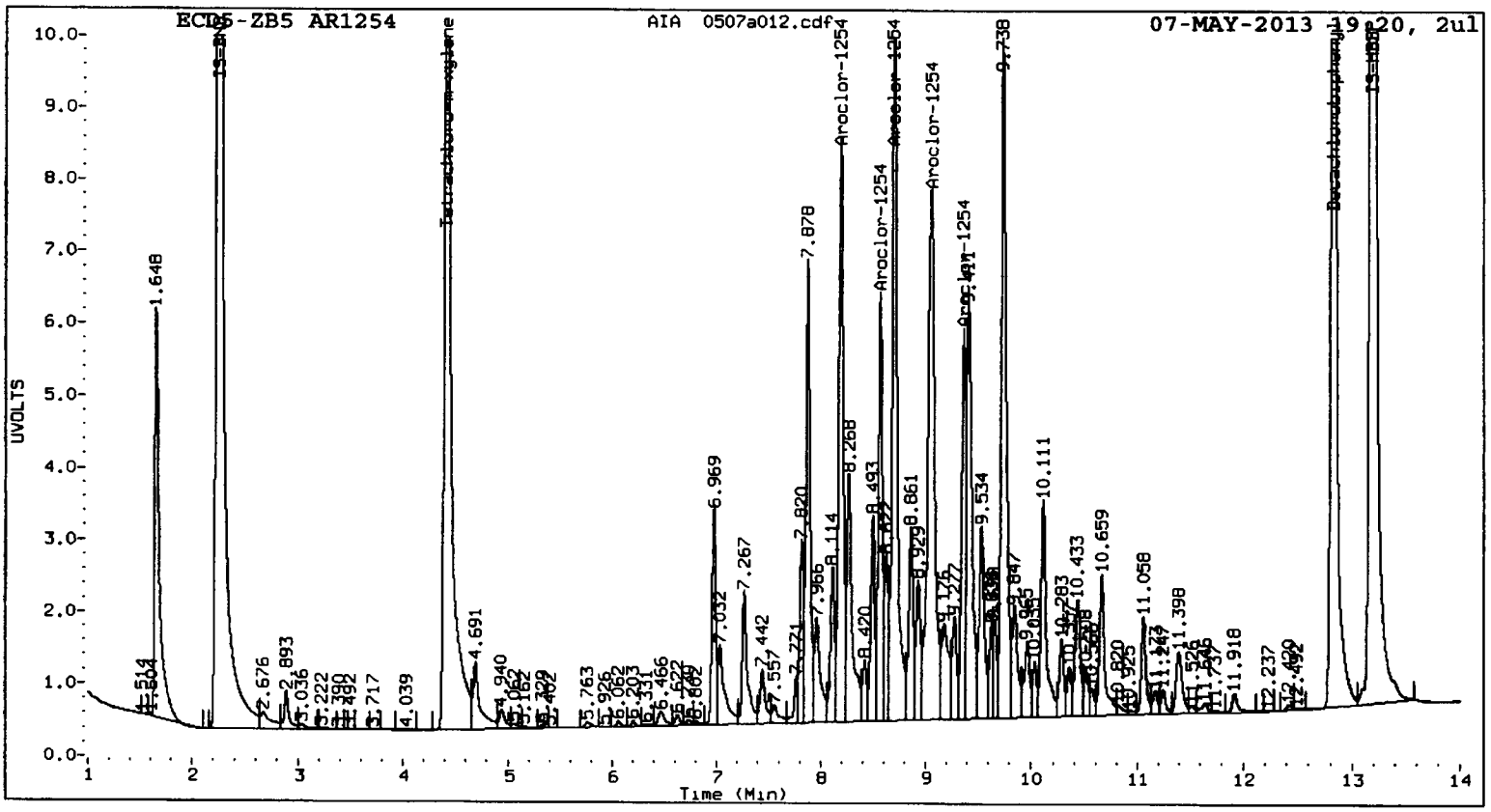
Total PCB Area Col2 (4.512 - 13.105) = 35929102 Col2 Total PCB = 0.3 ppm*

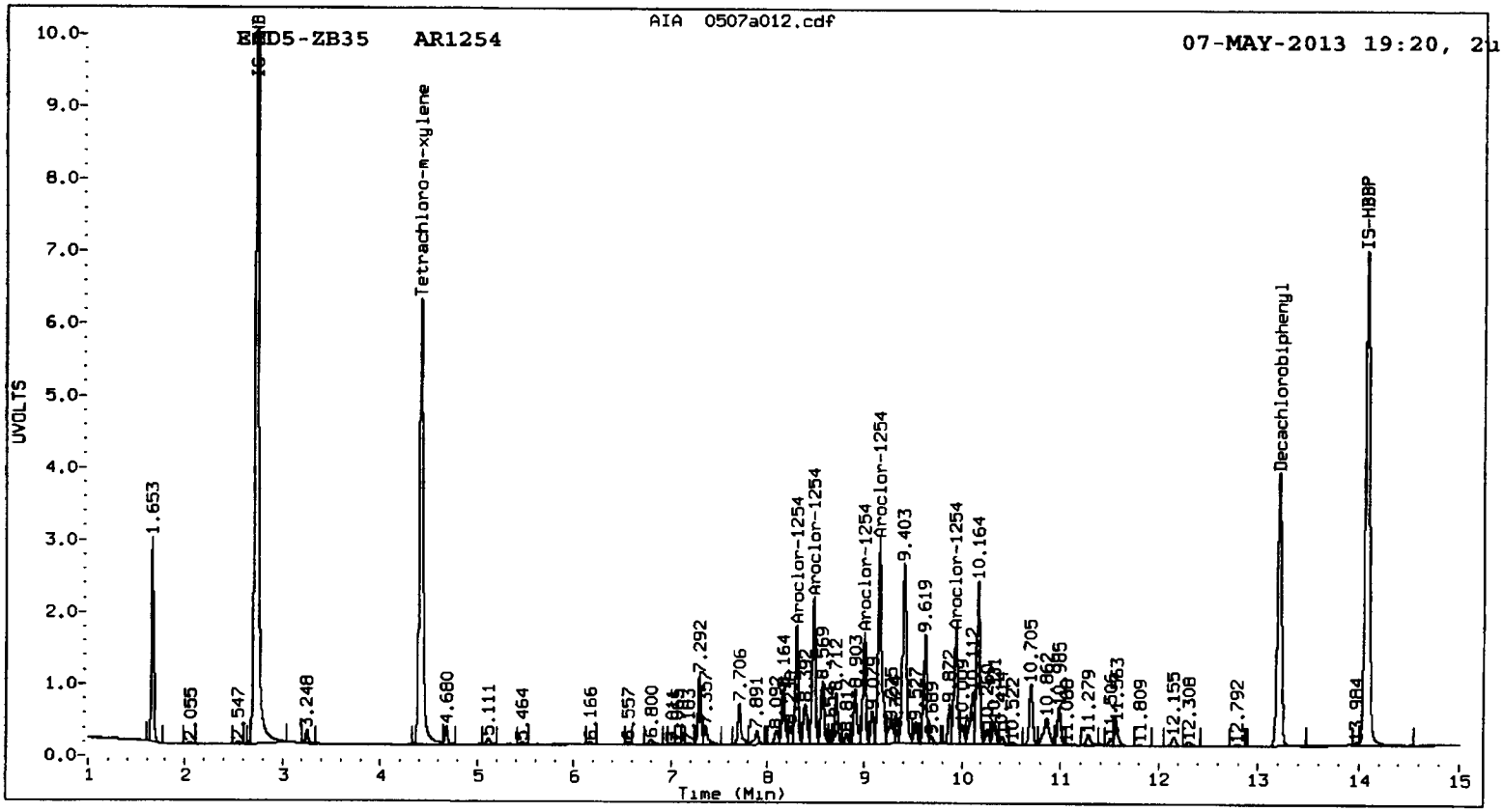
* Quantitated against AR1660 0.25ppm in Ical

US90:00718


ECD5-ZB5 AR1254
AIA 0507a012.cdf
07-MAY-2013 19:20, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR1254
AIA 0507a012.cdf
07-MAY-2013 19:20, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 AR1254
AIA 0507a012.cdf
07-MAY-2013 19:20, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP


AIA 0507a012.cdf
ECD5-ZB35 AR1254
07-MAY-2013 19:20, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a013.d
Data file 2: 20130507.b/ical-2.b/0507a013.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR2162
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162
Client ID:
Injection Date: 07-MAY-2013 19:40
Ical Date: 07-MAY-2013
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
4.410	-0.001	32354650	4.411	-0.001	8289820	38.8	40.0	2.9	Tetrachloro-m-xylen
12.828	-0.001	30623420	13.203	-0.002	5314887	35.1	34.9	0.7	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	97.1	99.9
Decachlorobiphenyl	87.9	87.2

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53739671	9.7
Hexabromobiphenyl	50004151	58323154	16.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15340978	3.4
Hexabromobiphenyl	9345340	10583916	13.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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-1221	1	5.064	0.000	5473596	250.0	1	3.694	0.000	393179	250.0
Aroclor-1221	2	6.468	0.000	1674697	250.0	2	5.095	0.000	658077	250.0
Aroclor-1221	3	7.878	0.000	2364906	250.0	3	5.345	0.000	358396	250.0
Aroclor-1221	NS	---			----	4	5.460	0.000	1127517	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	10.283	0.000	13652093	250.0	1	10.260	0.000	3659800	250.0
Aroclor-1262	2	10.659	0.000	32077138	250.0	2	10.710	0.000	3346602	250.0
Aroclor-1262	3	11.059	0.000	10159557	250.0	3	10.985	0.000	6277067	250.0
Aroclor-1262	4	11.247	0.000	14260811	250.0	4	11.567	0.000	4079795	250.0
Aroclor-1262	5	11.918	0.000	10944344	250.0	5	12.306	0.000	1969832	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

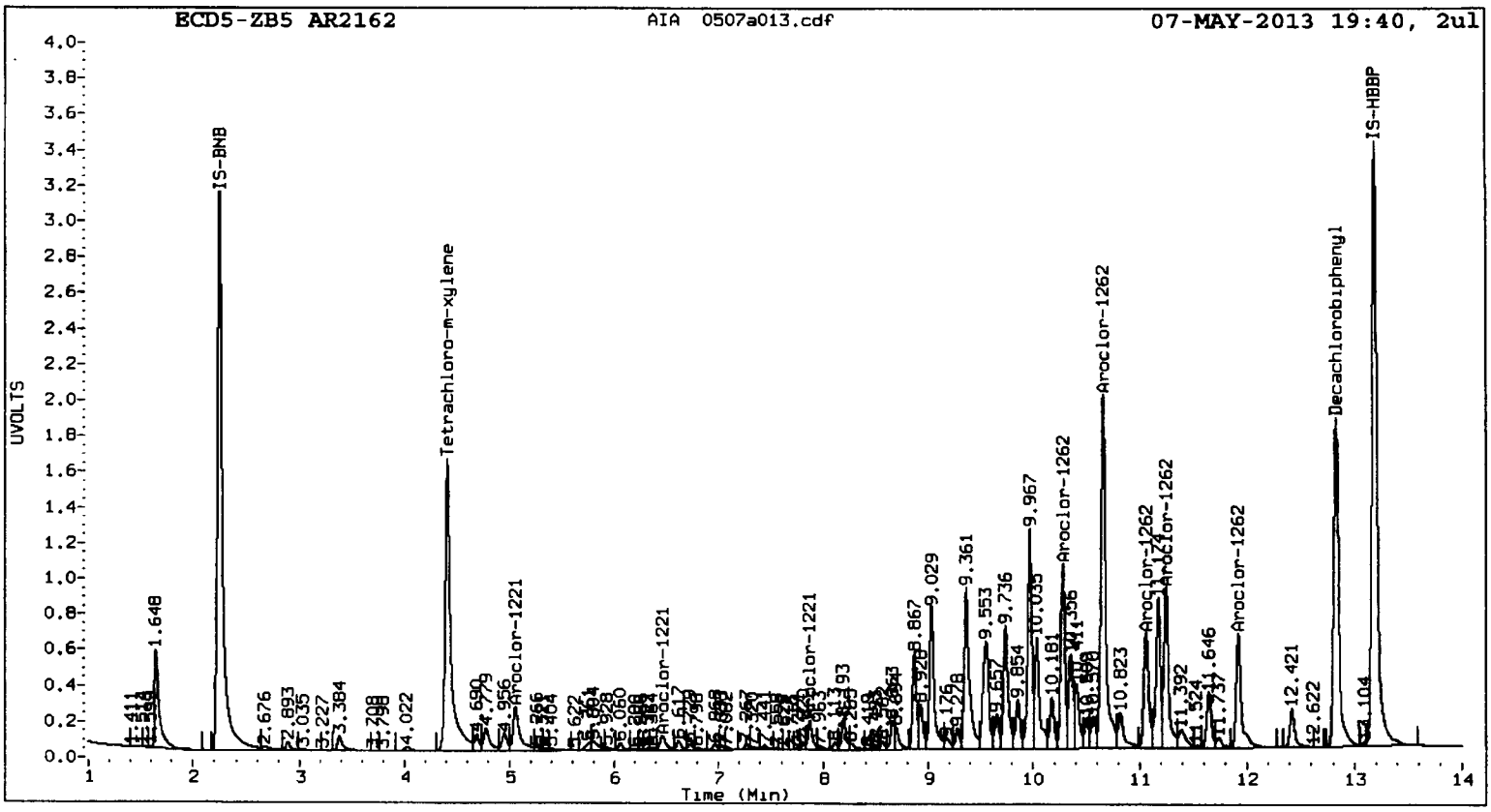
Total PCB Area Col1 (4.511 - 12.728) = 262283464 Col1 Total PCB = 0.4 ppm*

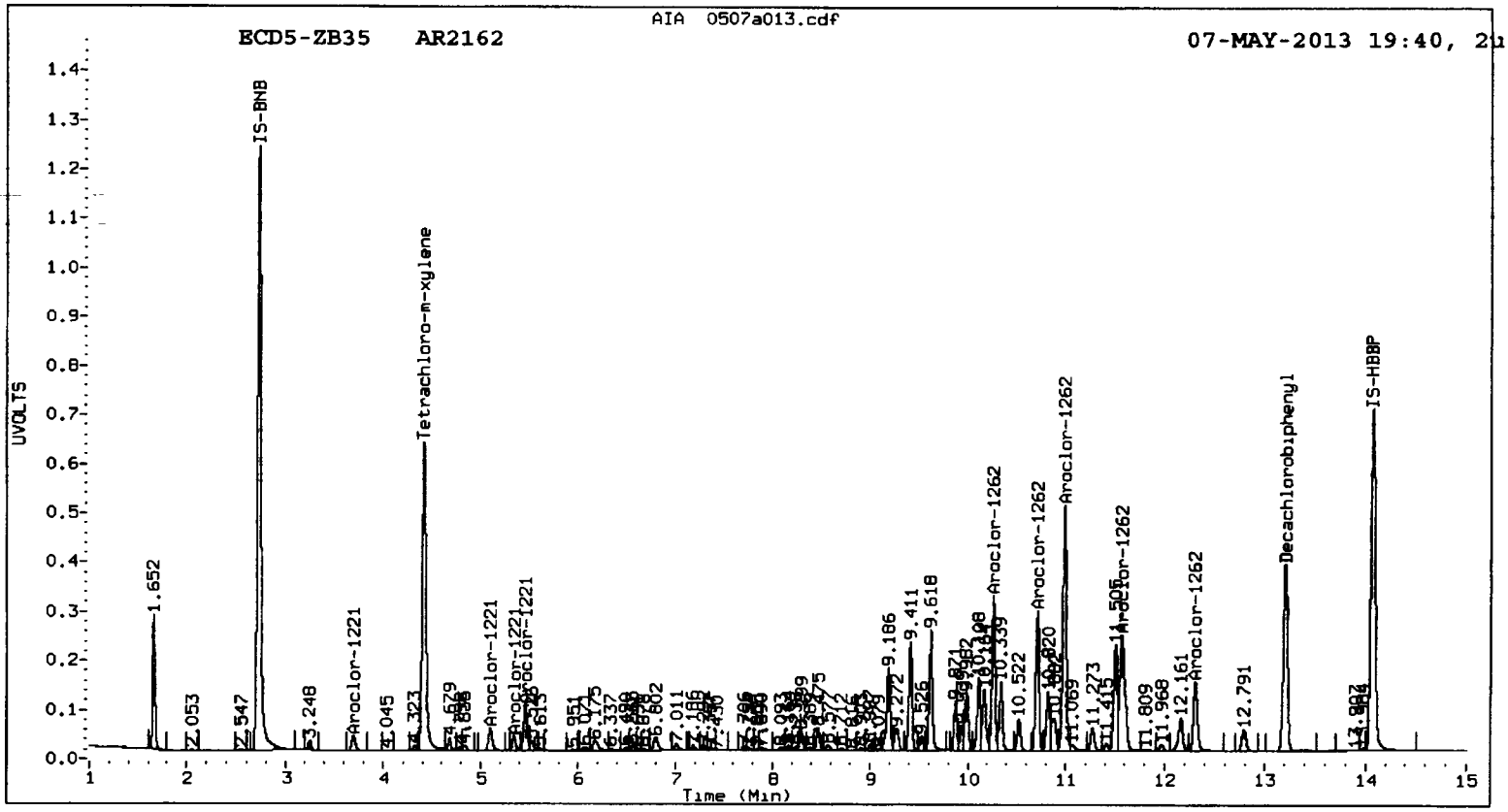
Total PCB Area Col2 (4.512 - 13.105) = 51791020 Col2 Total PCB = 0.4 ppm*

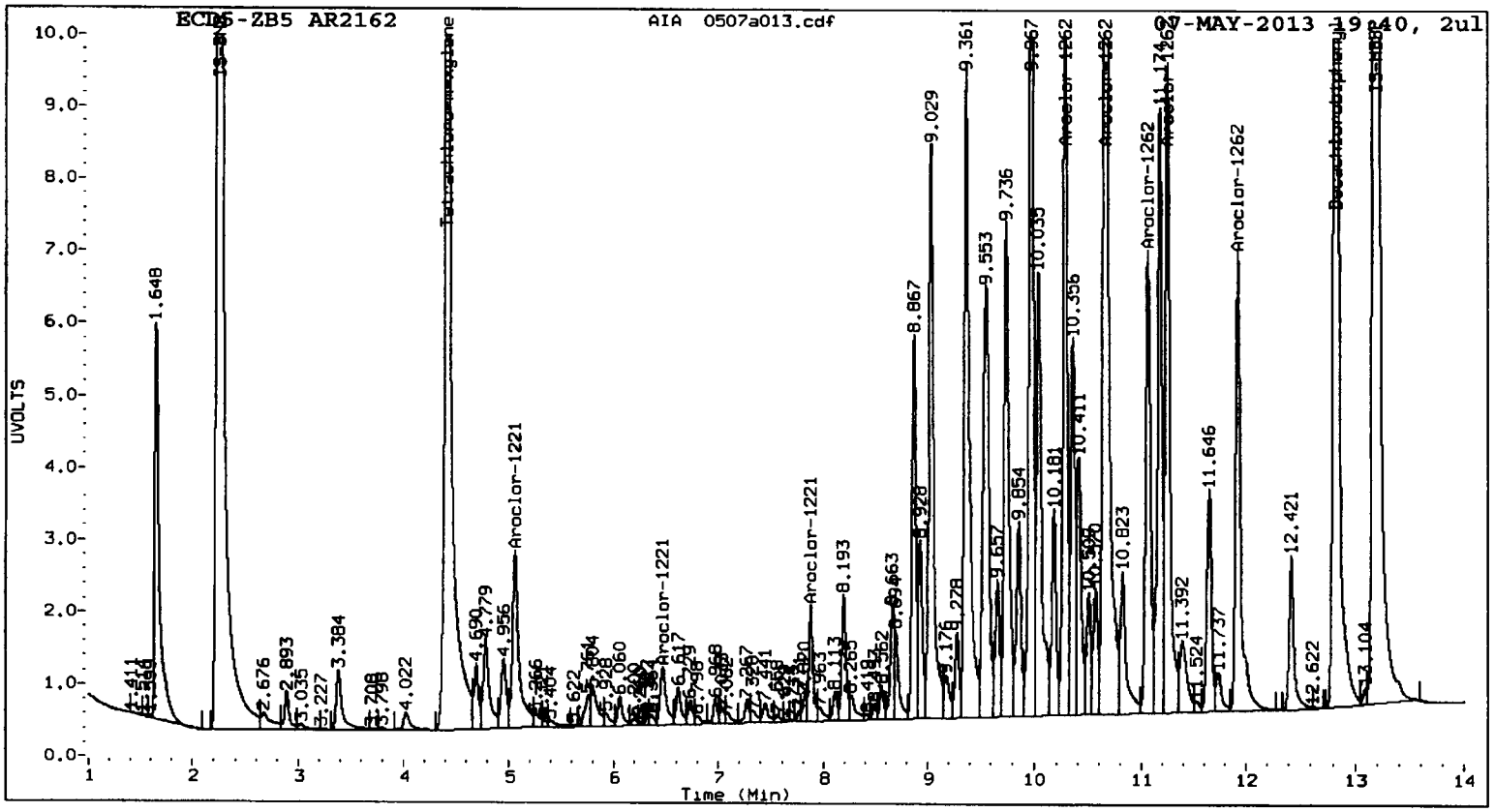
* Quantitated against AR1660 0.25ppm in Ical

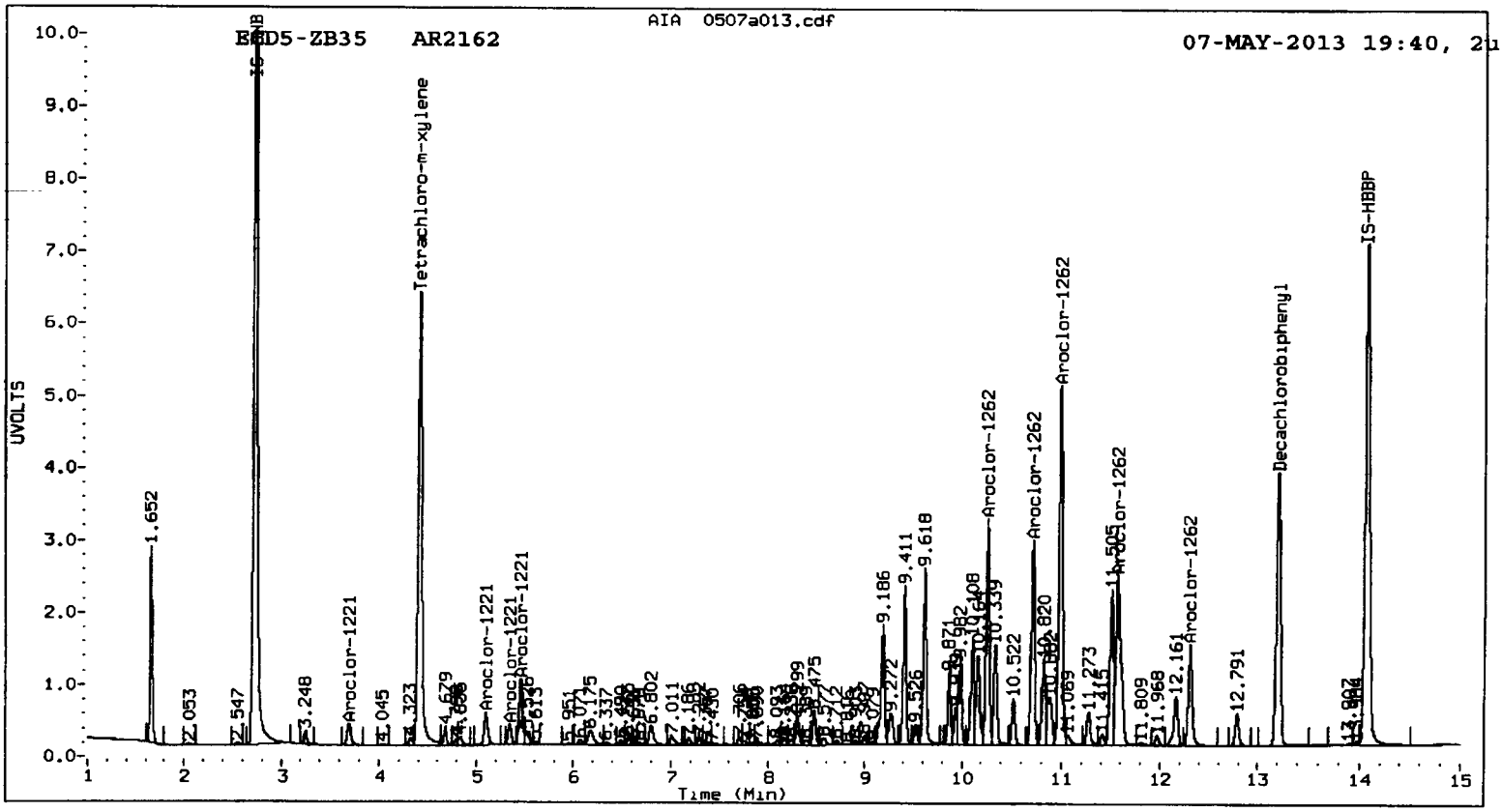
PCB-Form 10 Mod.

US98:00723


ECD5-ZB5 AR2162
AIA 0507a013.cdf
07-MAY-2013 19:40, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR2162
AIA 0507a013.cdf
07-MAY-2013 19:40, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 AR2162
AIA 0507a013.cdf
07-MAY-2013 19:40, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR2162
AIA 0507a013.cdf
07-MAY-2013 19:40, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a014.d
Data file 2: 20130507.b/ical-2.b/0507a014.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR3268
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268
Client ID:
Injection Date: 07-MAY-2013 20:00
Ical Date: 07-MAY-2013
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
4.411	0.000	31984640	4.412	0.000	8241550	38.7	40.0	3.2	Tetrachloro-m-xylen
12.828	0.000	43449498	13.205	0.000	7536002	50.6	49.8	1.7	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	96.8	100.0
Decachlorobiphenyl	126.5	124.5

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53262724	8.7
Hexabromobiphenyl	50004151	57460185	14.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15239954	2.7
Hexabromobiphenyl	9345340	10518547	12.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

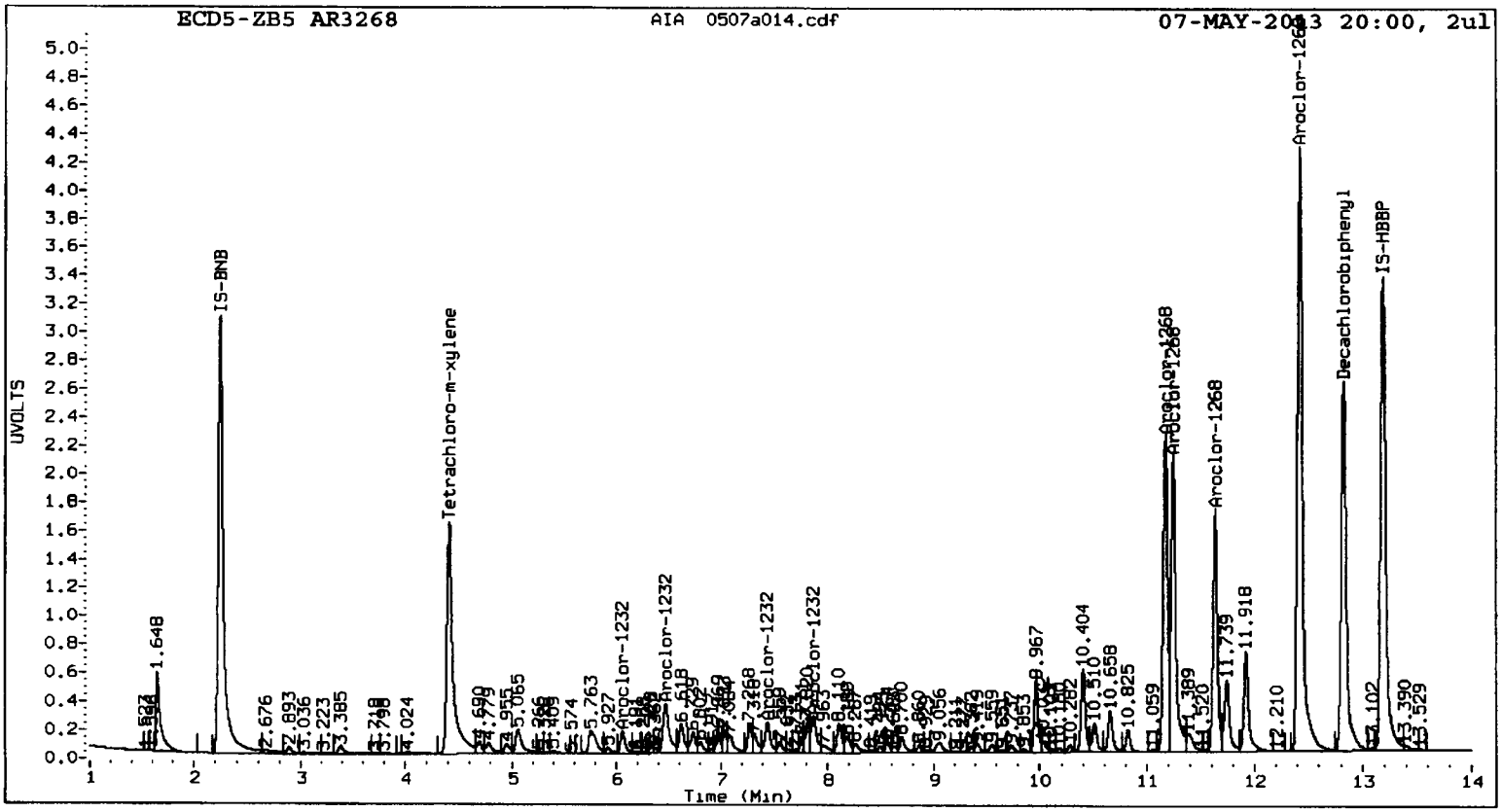
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	6.060	0.000	2466405	250.0	1	6.165	0.000	977839	250.0
Aroclor-1232	2	6.469	0.000	7549613	250.0	2	6.801	0.000	1952023	250.0
Aroclor-1232	3	7.442	0.000	3923778	250.0	3	7.011	0.000	813950	250.0
Aroclor-1232	4	7.874	0.000	4507818	250.0	4	8.239	0.000	683109	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	11.175	0.000	30229266	250.0	1	11.507	0.000	6347619	250.0
Aroclor-1268	2	11.246	0.000	33428922	250.0	2	11.573	0.000	5983248	250.0
Aroclor-1268	3	11.632	0.000	24825470	250.0	3	11.969	0.000	4735989	250.0
Aroclor-1268	4	12.422	0.000	69938717	250.0	4	12.792	0.000	12266670	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

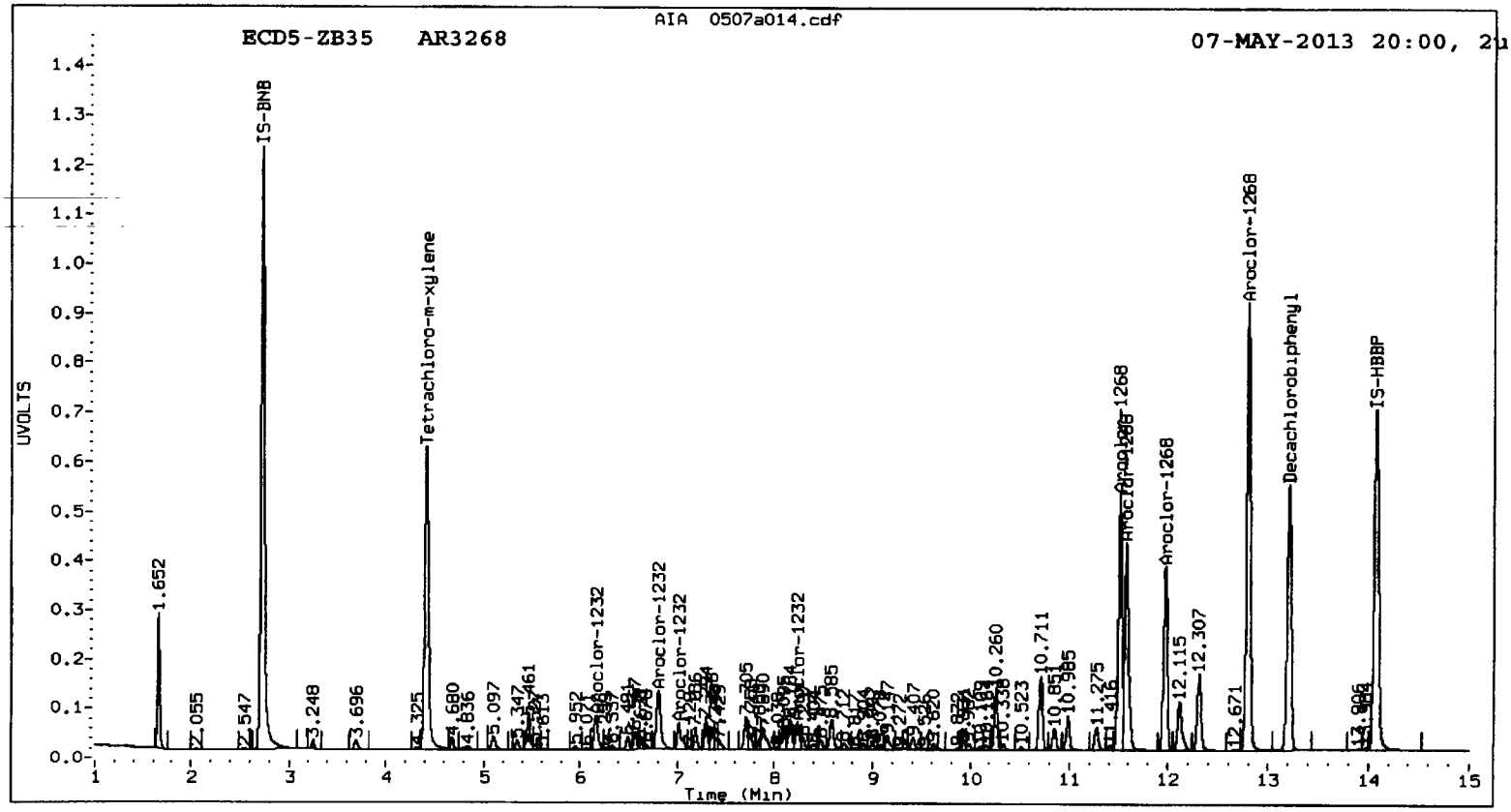
Total PCB Area Col1 (4.511 - 12.728) = 288711386 Col1 Total PCB = 0.4 ppm*

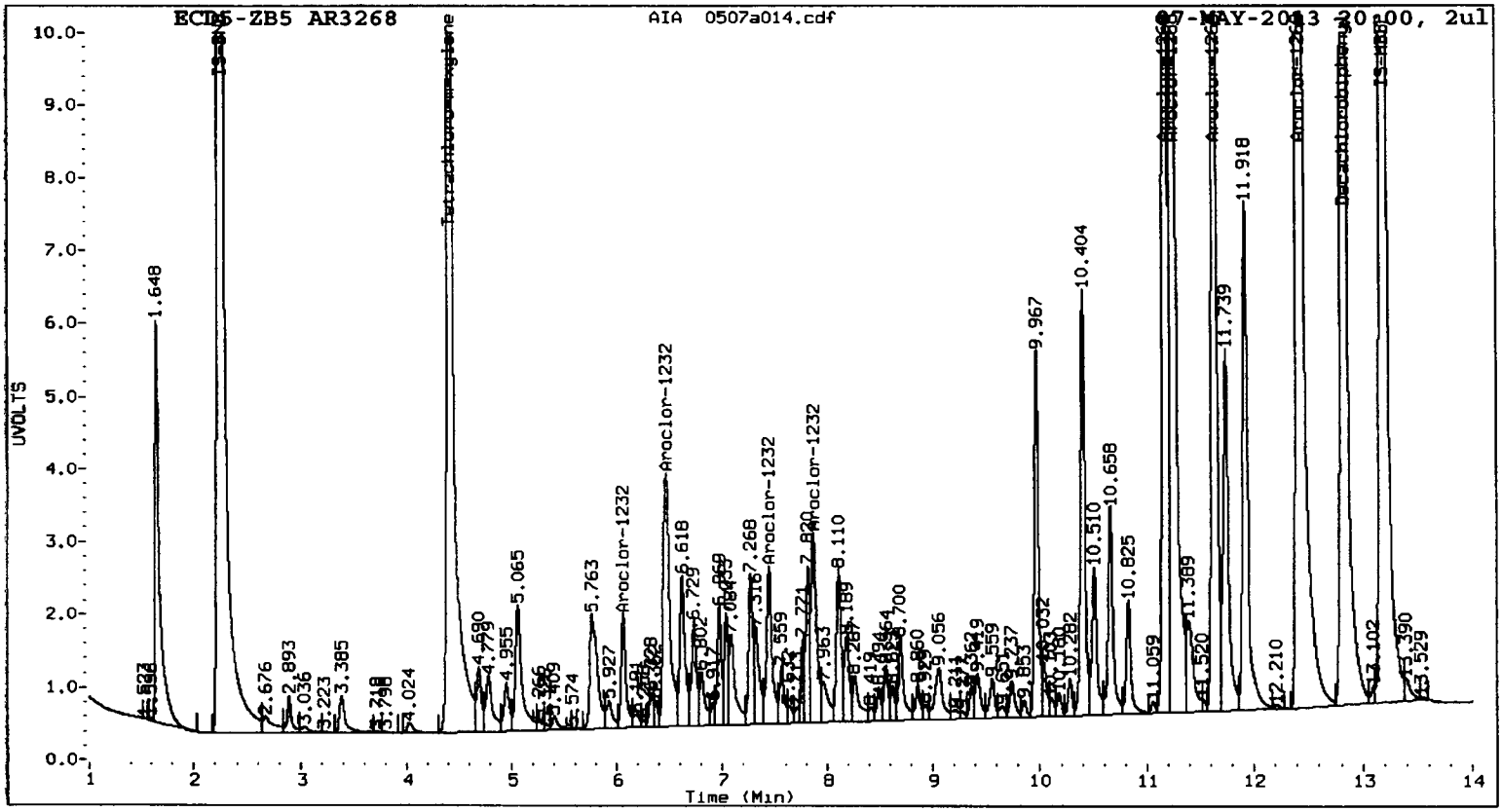
Total PCB Area Col2 (4.512 - 13.105) = 55525050 Col2 Total PCB = 0.4 ppm*

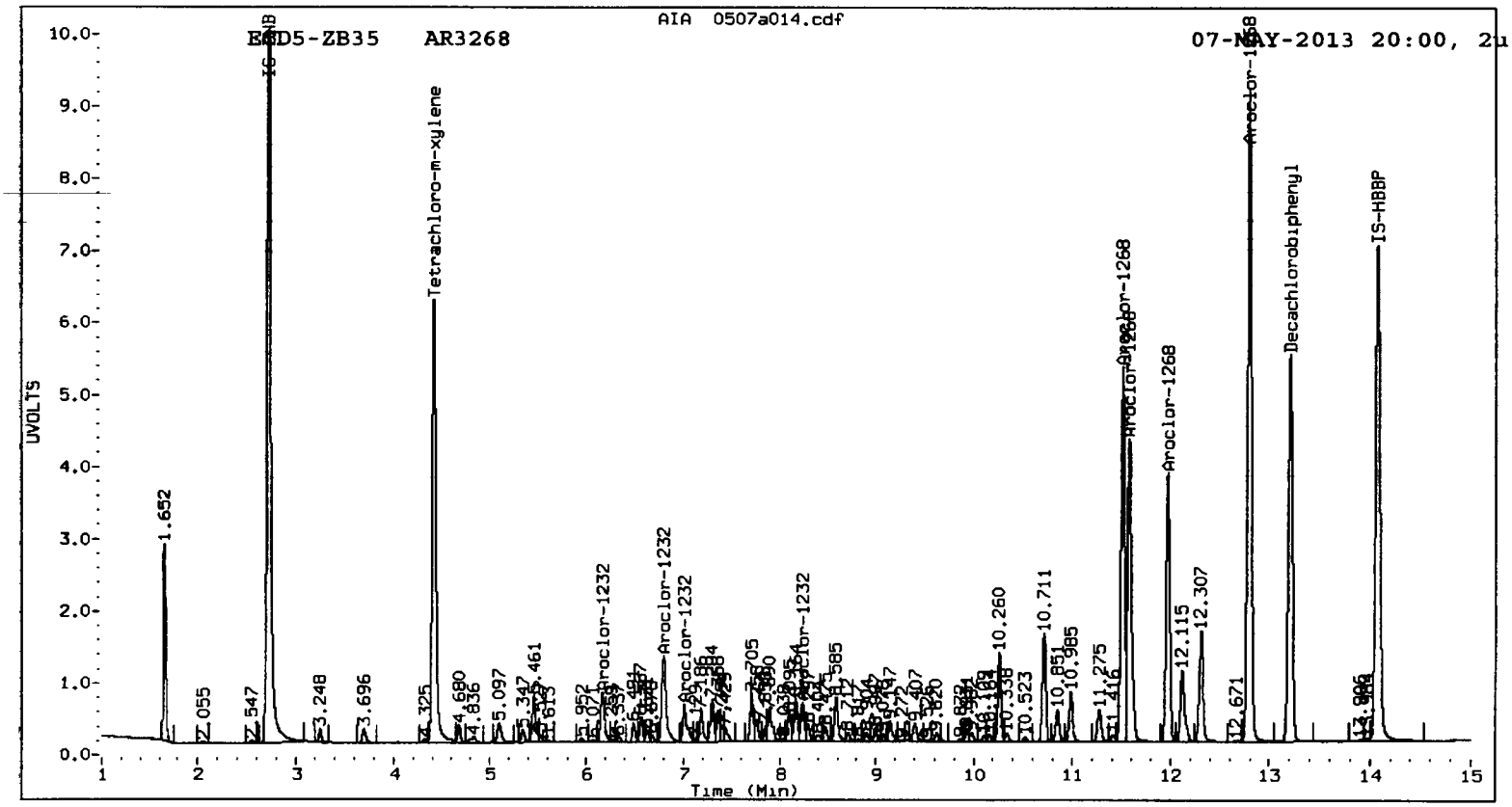
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 AR3268
AIA 0507a014.cdf
07-MAY-2013 20:00, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR3268
AIA 0507a014.cdf
07-MAY-2013 20:00, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 AR3268
AIA 0507a014.cdf
07-MAY-2013 20:00, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR3268
AIA 0507a014.cdf
07-MAY-2013 20:00, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a015.d
Data file 2: 20130507.b/ical-2.b/0507a015.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242 ICV
Client ID:
Injection Date: 07-MAY-2013 20:21
Ical Date: 07-MAY-2013
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
4.410	0.000	31924156	4.411	0.000	8216234	38.0	38.8	2.2	Tetrachloro-m-xylen
12.828	0.000	30828729	13.205	0.000	5320370	34.3	34.0	1.1	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	94.9	97.0
Decachlorobiphenyl	85.8	84.9

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54248541	10.8
Hexabromobiphenyl	50004151	60099807	20.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15658755	5.5
Hexabromobiphenyl	9345340	10888882	16.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.060	-0.001	4470855	182.8	1	6.166	0.000	1663757	186.2
Aroclor-1016	2	6.468	0.000	13617695	180.8	2	6.802	0.001	3565246	183.5
Aroclor-1016	3	6.617	0.001	6113829	181.2	3	7.185	0.000	947812	186.6
Aroclor-1016	4	6.729	0.001	4549783	180.4	4	7.358	0.000	881454	186.3
	Total Col1Ave (4 peaks):				181.3	Total Col2Ave (4 peaks):				185.7 RPD = 2
	Corrected Ave (3 peaks):				180.8	Corrected Ave (3 peaks):				185.4 RPD = 2
Aroclor-1221	1	5.063	-0.001	3230223	146.2	1	---			0.0
Aroclor-1221	2	6.468	0.000	13617695	2013.8	2	5.101	0.006	254025	94.5
Aroclor-1221	3	7.874	-0.004	7607955	796.7	3	5.346	0.001	163596	111.8
Aroclor-1221	NS	---			---	4	5.461	0.001	799065	173.6
	Total Col1Ave (3 peaks):				985.6	Total Col2Ave (3 peaks):				126.6 RPD = 154*
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1232	1	6.060	-0.001	4470855	444.9	1	6.166	0.000	1663757	414.0
Aroclor-1232	2	6.468	-0.001	13617695	442.7	2	6.802	0.000	3565246	444.4
Aroclor-1232	3	7.442	0.000	6893473	431.2	3	7.009	-0.002	1501264	448.8
Aroclor-1232	4	7.874	0.000	7607955	414.3	4	8.238	-0.001	1167882	416.0
	Total Col1Ave (4 peaks):				433.3	Total Col2Ave (4 peaks):				430.8 RPD = 1
	Corrected Ave (3 peaks):				429.4	Corrected Ave (3 peaks):				424.8 RPD = 1
Aroclor-1242	1	6.060	0.000	4470855	228.8	1	6.166	-0.002	1663757	233.2
Aroclor-1242	2	6.468	0.000	13617695	227.2	2	6.802	-0.001	3565246	227.5
Aroclor-1242	3	6.617	0.001	6113829	228.7	3	7.009	-0.002	1501264	229.3
Aroclor-1242	4	7.874	0.001	7607955	230.4	4	8.238	-0.001	1167882	212.9
	Total Col1Ave (4 peaks):				228.8	Total Col2Ave (4 peaks):				225.7 RPD = 1
	Corrected Ave (3 peaks):				228.2	Corrected Ave (3 peaks):				223.2 RPD = 2
Aroclor-1248	1	6.468	0.002	13617695	356.7	1	6.802	0.002	3565246	363.4
Aroclor-1248	2	7.442	-0.001	6893473	160.5	2	7.705	-0.001	1266936	155.7
Aroclor-1248	3	7.874	-0.001	7607955	139.3	3	8.238	-0.001	1167882	138.6
Aroclor-1248	4	8.110	0.000	5502492	144.5	4	8.584	0.001	1486653	135.8
	Total Col1Ave (4 peaks):				200.3	Total Col2Ave (4 peaks):				198.4 RPD = 1
	Corrected Ave (3 peaks):				148.1	Corrected Ave (3 peaks):				143.4 RPD = 3
Aroclor-1254	1	8.190	-0.002	3647666	72.1	1	8.298	0.000	493209	65.0
Aroclor-1254	2	8.564	0.000	3121258	63.5	2	8.475	0.000	469897	50.1
Aroclor-1254	3	8.700	0.000	3853127	55.3	3	8.996	0.000	426802	59.4
Aroclor-1254	4	9.057	0.005	3495648	48.8	4	9.147	0.000	714252	46.4
Aroclor-1254	5	9.362	0.000	680923	25.1	5	9.930	-0.004	413402	47.7
	Total Col1Ave (5 peaks):				53.0	Total Col2Ave (5 peaks):				53.7 RPD = 1
	Corrected Ave (4 peaks):				48.2	Corrected Ave (4 peaks):				50.9 RPD = 5
Aroclor-1260	1	9.966	-0.001	248097	5.0	1	10.260	0.001	14609	1.5
Aroclor-1260	2	10.282	-0.001	177183	3.6	2	10.704	-0.005	88810	7.7
Aroclor-1260	3	10.658	-0.001	314580	2.7	3	10.985	0.001	50951	2.4
Aroclor-1260	4	11.058	0.000	188167	3.3	4	11.506	0.001	16977	2.9
Aroclor-1260	5	11.248	0.001	45330	1.5	NS	---			----
	Total Col1Ave (5 peaks):				3.2	Total Col2Ave (4 peaks):				3.6 RPD = 11
	Corrected Ave (4 peaks):				2.8	Corrected Ave (3 peaks):				2.3 RPD = 20
Aroclor-1262	1	10.282	0.000	177183	3.1	1	10.260	0.001	14609	1.0
Aroclor-1262	2	10.658	-0.001	314580	2.4	2	10.704	-0.006	88810	6.4
Aroclor-1262	3	11.058	-0.001	188167	4.5	3	10.985	0.000	50951	2.0
Aroclor-1262	4	11.248	0.001	45330	0.8	4	11.564	-0.003	37242	2.2
Aroclor-1262	5	11.923	0.005	55055	1.2	5	12.344	0.038	32722	4.0
	Total Col1Ave (5 peaks):				2.4	Total Col2Ave (5 peaks):				3.1 RPD = 26
	Corrected Ave (4 peaks):				1.9	Corrected Ave (4 peaks):				2.3 RPD = 20
Aroclor-1268	1	11.173	-0.002	51213	0.4	1	11.506	0.000	16977	0.6

Aroclor-1268 2	11.248	0.002	45330	0.3	2	11.564	-0.009	37242	1.5
Aroclor-1268 3	11.629	-0.004	63465	0.6	3	---			0.0
Aroclor-1268 4	12.419	-0.003	91475	0.3	4	12.791	-0.001	10921	0.2

Total Col1Ave (4 peaks): 0.4 Total Col2Ave (3 peaks): 0.8 RPD = 62*

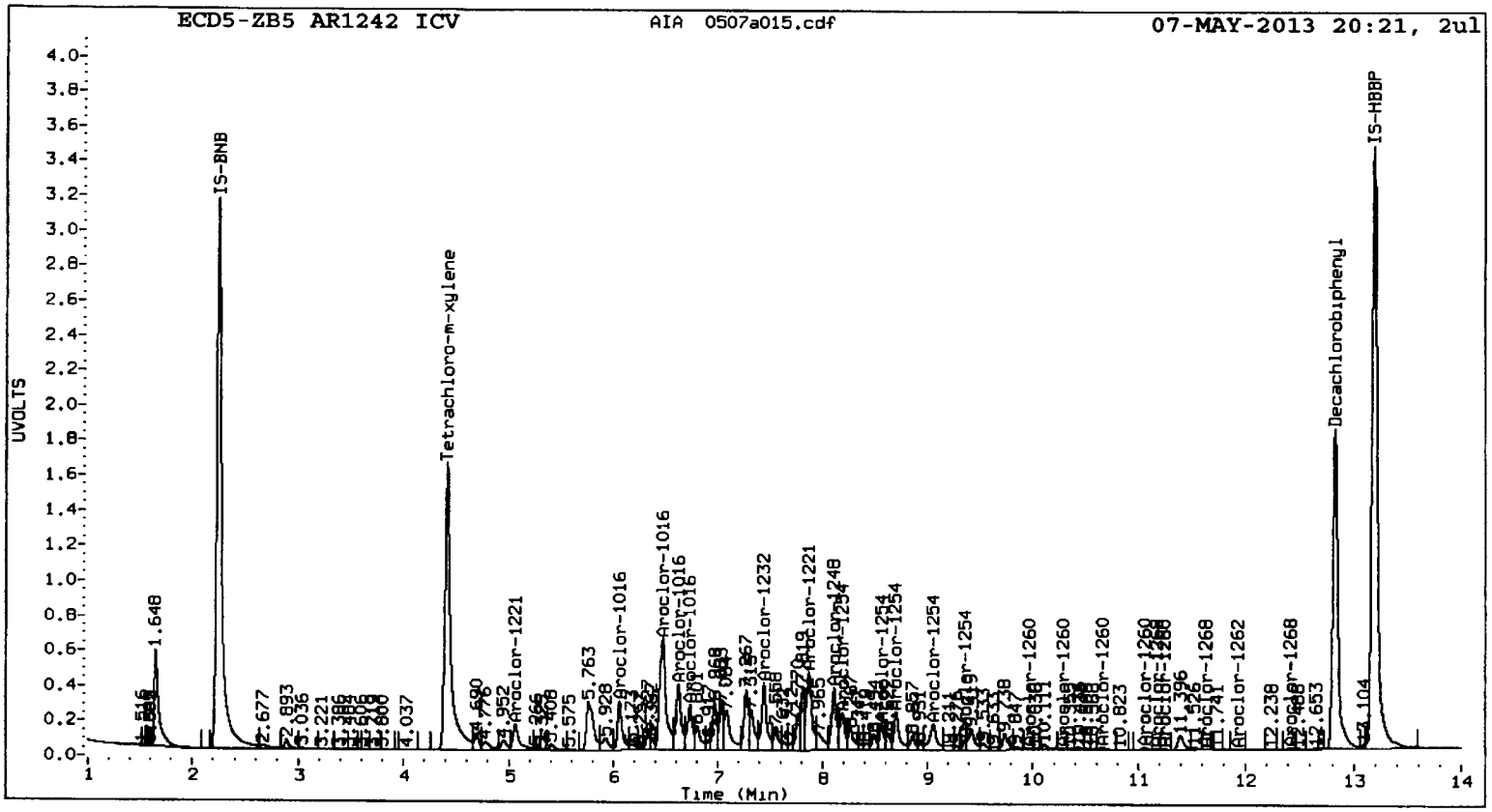
Corrected Ave (3 peaks): 0.3 Corrected Ave: < 3 Peaks

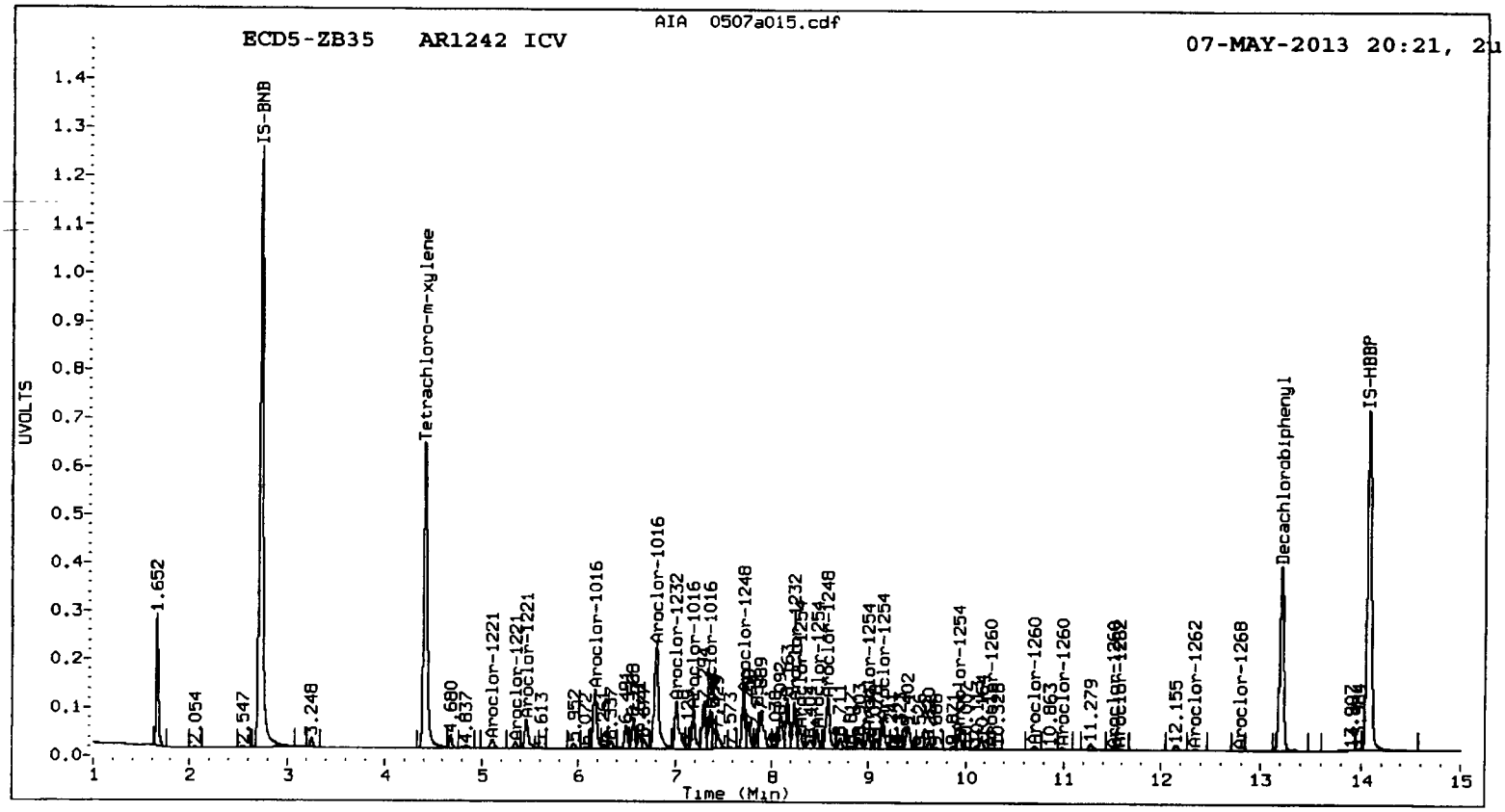
Total PCB Area Col1 (4.511 - 12.728) = 136701149 Col1 Total PCB = 0.2 ppm*

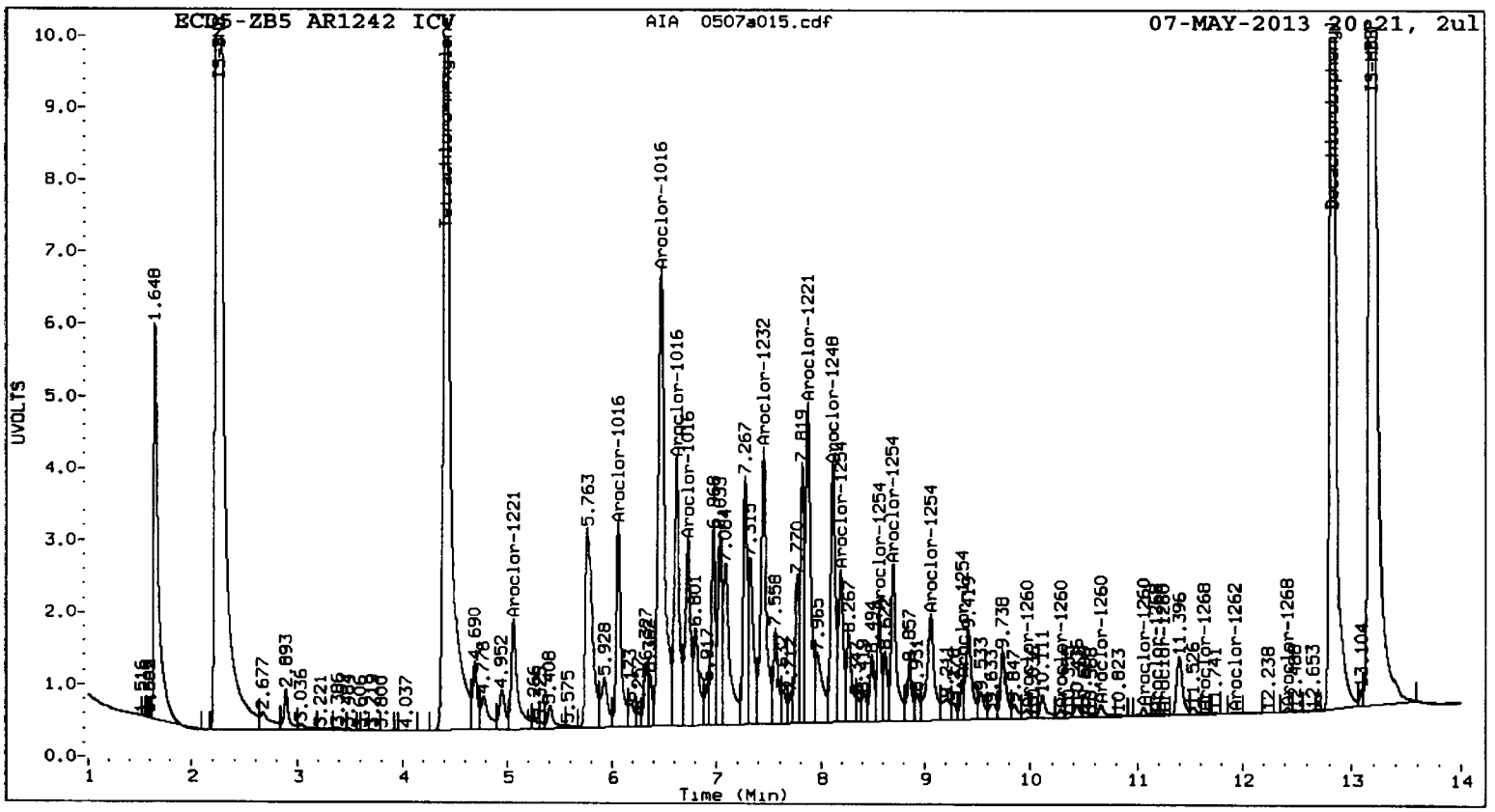
Total PCB Area Col2 (4.512 - 13.105) = 28787302 Col2 Total PCB = 0.2 ppm*

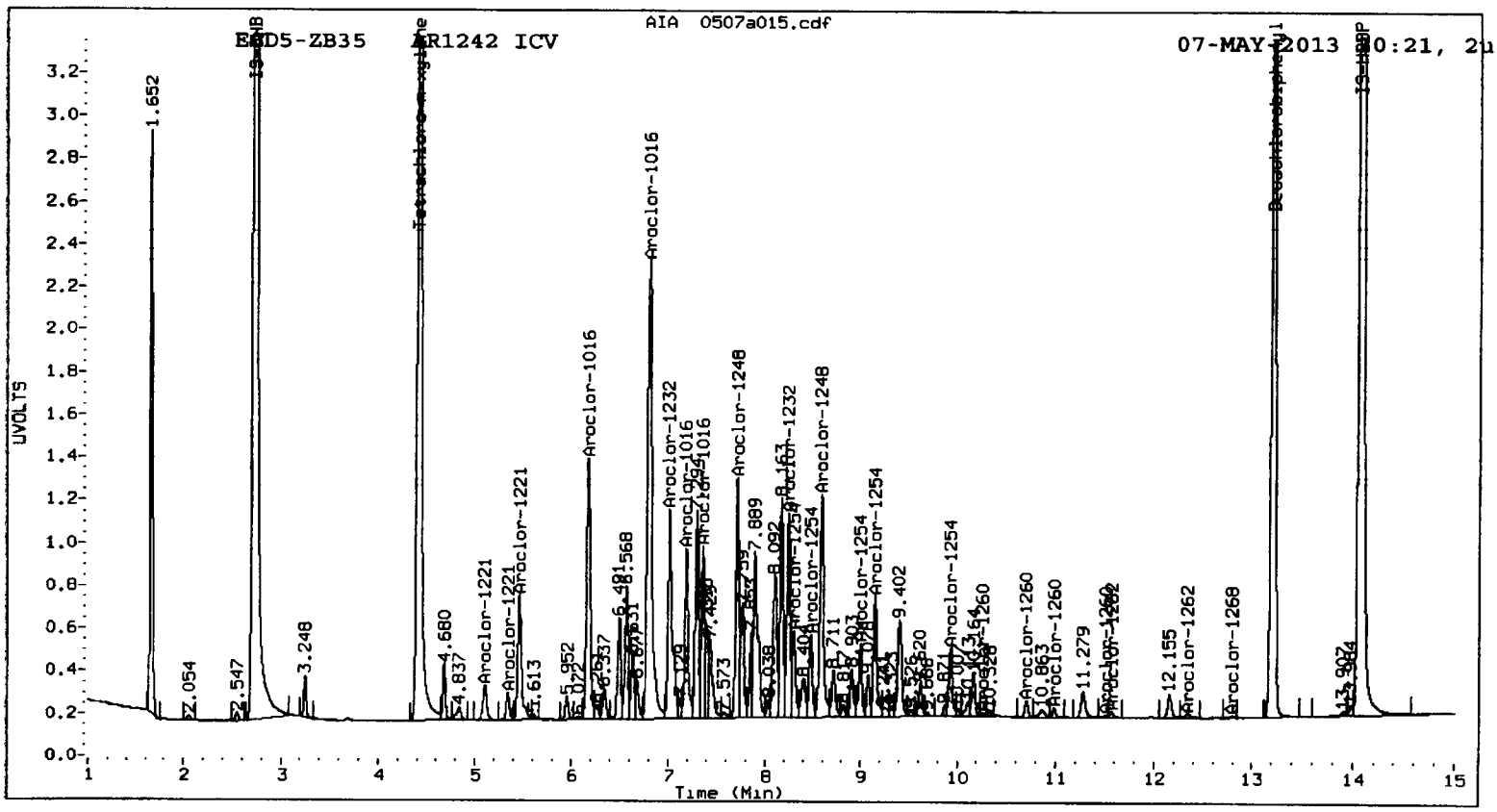
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 AR1242 ICV
AIA 0507a015.cdf
07-MAY-2013 20:21, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB35 AR1242 ICV
AIA 0507a015.cdf
07-MAY-2013 20:21, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB5 AR1242 ICV
AIA 0507a015.cdf
07-MAY-2013 20:21, 2ul
UVOLTS
Time (Min)
1.648
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl


ECD5-ZB35 AR1242 ICV
AIA 0507a015.cdf
07-MAY-2013 20:21, 2u
UVOLTS
Time (Min)
1.652
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a016.d
Data file 2: 20130507.b/ical-2.b/0507a016.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248 ICV
Client ID:
Injection Date: 07-MAY-2013 20:41
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	30900777	4.412	0.000	7953899	37.1	38.1	2.5	Tetrachloro-m-xylen
12.828	0.000	31048472	13.203	-0.002	5334093	34.3	33.8	1.2	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	92.9	95.2
Decachlorobiphenyl	85.7	84.6

05/03/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53651835	9.5
Hexabromobiphenyl	50004151	60660565	21.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15441440	4.1
Hexabromobiphenyl	9345340	10952020	17.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.060	-0.001	2318537	95.9	1	6.163	-0.002	909531	103.2
Aroclor-1016	2	6.467	-0.002	9438131	126.7	2	6.800	-0.001	2390530	124.8
Aroclor-1016	3	6.619	0.002	3851669	115.4	3	7.186	0.000	515984	103.0
Aroclor-1016	4	6.729	0.001	2894284	116.1	4	7.358	0.000	1263898	270.9
	Total Col1Ave (4 peaks):				113.5	Total Col2Ave (4 peaks):				150.5 RPD = 28
	Corrected Ave (3 peaks):				109.1	Corrected Ave (3 peaks):				110.3 RPD = 1
Aroclor-1221	1	5.063	0.000	864224	39.5	1	---			0.0
Aroclor-1221	2	6.467	-0.001	9438131	1411.2	2	5.110	0.015	123396	46.6
Aroclor-1221	3	7.874	-0.004	12549915	1328.9	3	5.348	0.003	31614	21.9
Aroclor-1221	NS	---			----	4	5.462	0.001	185951	41.0
	Total Col1Ave (3 peaks):				926.5	Total Col2Ave (3 peaks):				36.5 RPD = 185*
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1232	1	6.060	-0.001	2318537	233.3	1	6.163	-0.002	909531	229.5
Aroclor-1232	2	6.467	-0.002	9438131	310.3	2	6.800	-0.001	2390530	302.2
Aroclor-1232	3	7.441	0.000	9852880	623.2	3	7.010	-0.001	586053	177.7
Aroclor-1232	4	7.874	0.000	12549915	691.0	4	8.238	-0.001	1898417	685.7
	Total Col1Ave (4 peaks):				464.4	Total Col2Ave (4 peaks):				348.8 RPD = 28
	Corrected Ave (3 peaks):				388.9	Corrected Ave (3 peaks):				236.4 RPD = 49*
Aroclor-1242	1	6.060	0.000	2318537	120.0	1	6.163	-0.004	909531	129.3
Aroclor-1242	2	6.467	-0.001	9438131	159.3	2	6.800	-0.003	2390530	154.7
Aroclor-1242	3	6.619	0.003	3851669	145.7	3	7.010	-0.001	586053	90.8
Aroclor-1242	4	7.874	0.001	12549915	384.3	4	8.238	-0.001	1898417	351.0
	Total Col1Ave (4 peaks):				202.3	Total Col2Ave (4 peaks):				181.4 RPD = 11
	Corrected Ave (3 peaks):				141.6	Corrected Ave (3 peaks):				124.9 RPD = 13
Aroclor-1248	1	6.467	0.000	9438131	250.0	1	6.800	0.000	2390530	247.1
Aroclor-1248	2	7.441	-0.001	9852880	232.0	2	7.705	-0.001	1901637	237.0
Aroclor-1248	3	7.874	-0.001	12549915	232.4	3	8.238	-0.001	1898417	228.5
Aroclor-1248	4	8.110	0.000	8659425	230.0	4	8.584	0.000	2478354	229.6
	Total Col1Ave (4 peaks):				236.1	Total Col2Ave (4 peaks):				235.5 RPD = 0
	Corrected Ave (3 peaks):				231.5	Corrected Ave (3 peaks):				231.7 RPD = 0
Aroclor-1254	1	8.190	-0.003	6700207	133.9	1	8.298	0.000	911407	121.7
Aroclor-1254	2	8.563	0.000	4108008	124.4	2	8.476	0.001	848875	91.8
Aroclor-1254	3	8.700	0.000	7416000	107.7	3	8.996	0.000	845277	119.3
Aroclor-1254	4	9.057	0.005	6343972	89.5	4	9.147	0.000	1366372	90.0
Aroclor-1254	5	9.362	0.000	724814	27.0	5	9.929	-0.006	923605	108.1
	Total Col1Ave (5 peaks):				96.5	Total Col2Ave (5 peaks):				106.2 RPD = 10
	Corrected Ave (4 peaks):				87.1	Corrected Ave (4 peaks):				102.3 RPD = 16
Aroclor-1260	1	9.965	-0.002	449508	9.0	1	10.261	0.001	42393	4.3
Aroclor-1260	2	10.283	0.000	290261	5.9	2	10.705	-0.004	108079	9.3
Aroclor-1260	3	10.658	-0.001	538597	4.6	3	10.986	0.001	81136	3.8
Aroclor-1260	4	11.058	0.000	190563	3.3	4	11.505	0.000	34540	5.9
Aroclor-1260	5	11.248	0.001	168155	5.5	NS	---			----
	Total Col1Ave (5 peaks):				5.7	Total Col2Ave (4 peaks):				5.8 RPD = 3
	Corrected Ave (4 peaks):				4.8	Corrected Ave (3 peaks):				4.7 RPD = 3
Aroclor-1262	1	10.283	0.000	290261	5.1	1	10.261	0.001	42393	2.8
Aroclor-1262	2	10.658	0.000	538597	4.0	2	10.705	-0.005	108079	7.8
Aroclor-1262	3	11.058	-0.002	190563	4.5	3	10.986	0.000	81136	3.1
Aroclor-1262	4	11.248	0.000	168155	2.8	4	11.567	0.000	56086	3.3
Aroclor-1262	5	11.919	0.001	152715	3.4	5	12.341	0.035	50555	6.2
	Total Col1Ave (5 peaks):				4.0	Total Col2Ave (5 peaks):				4.6 RPD = 16
	Corrected Ave (4 peaks):				3.7	Corrected Ave (4 peaks):				3.9 RPD = 5
Aroclor-1268	1	11.173	-0.002	164171	1.3	1	11.505	-0.001	34540	1.3

Aroclor-1268	2	11.248	0.002	168155	1.2	2	11.567	-0.006	56086	2.3
Aroclor-1268	3	11.641	0.008	89736	0.9	3	---			0.0
Aroclor-1268	4	12.419	-0.002	102180	0.3	4	12.793	0.001	11794	0.2

Total Col1Ave (4 peaks): 0.9 Total Col2Ave (3 peaks): 1.3 RPD = 31

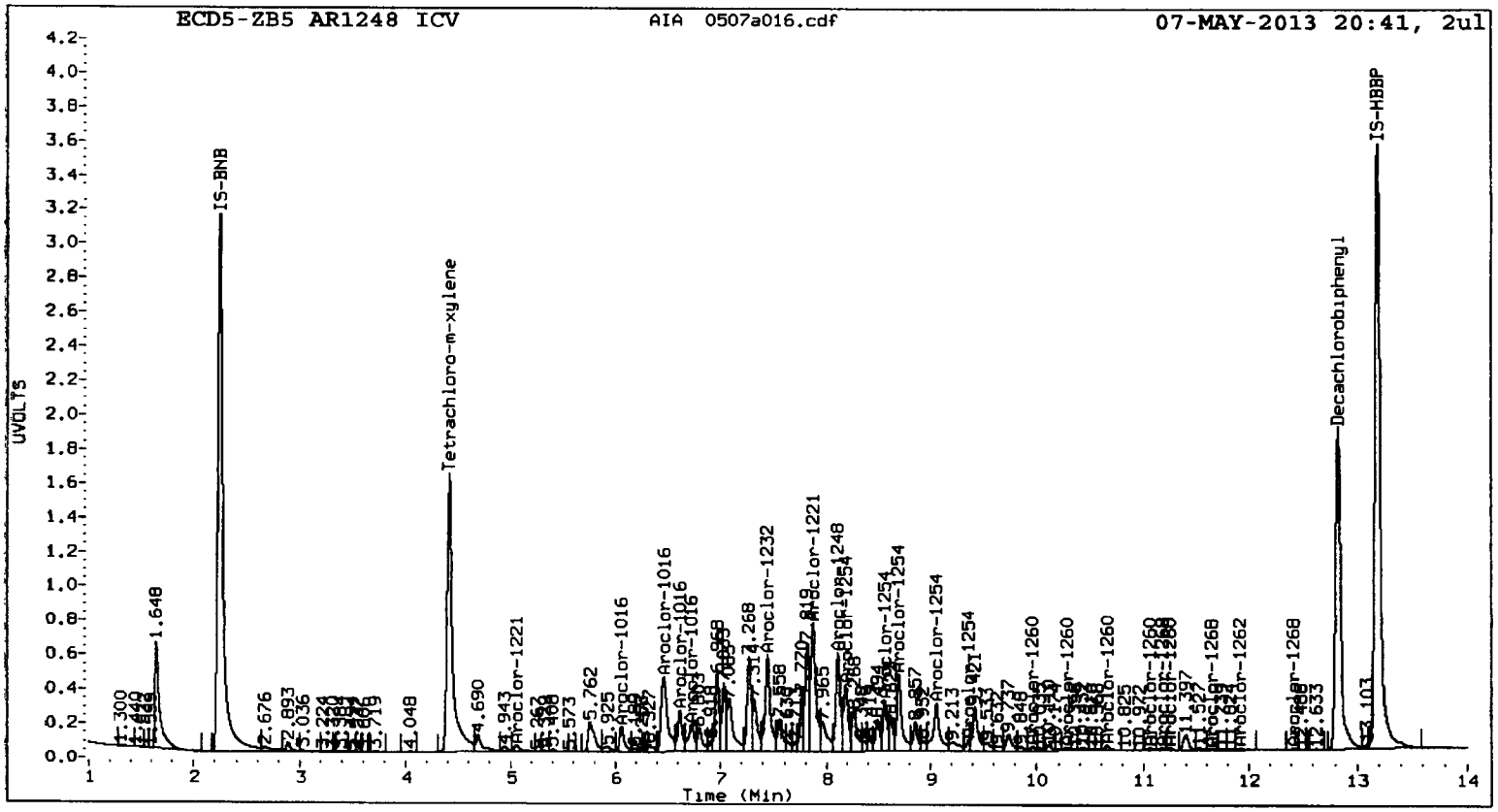
Corrected Ave (3 peaks): 0.8 Corrected Ave: < 3 Peaks

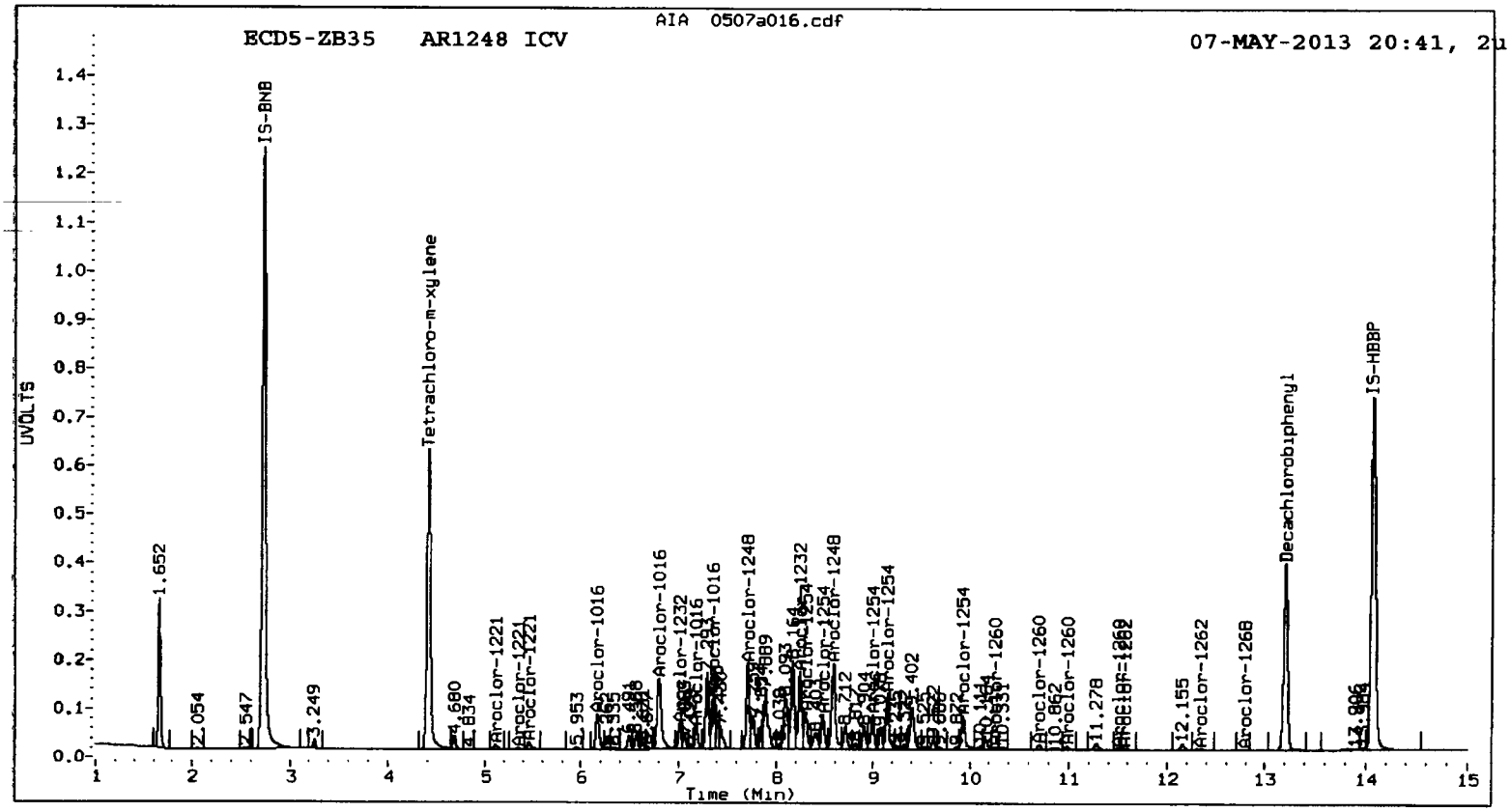
Total PCB Area Col1 (4.511 - 12.728) = 167287666 Col1 Total PCB = 0.3 ppm*

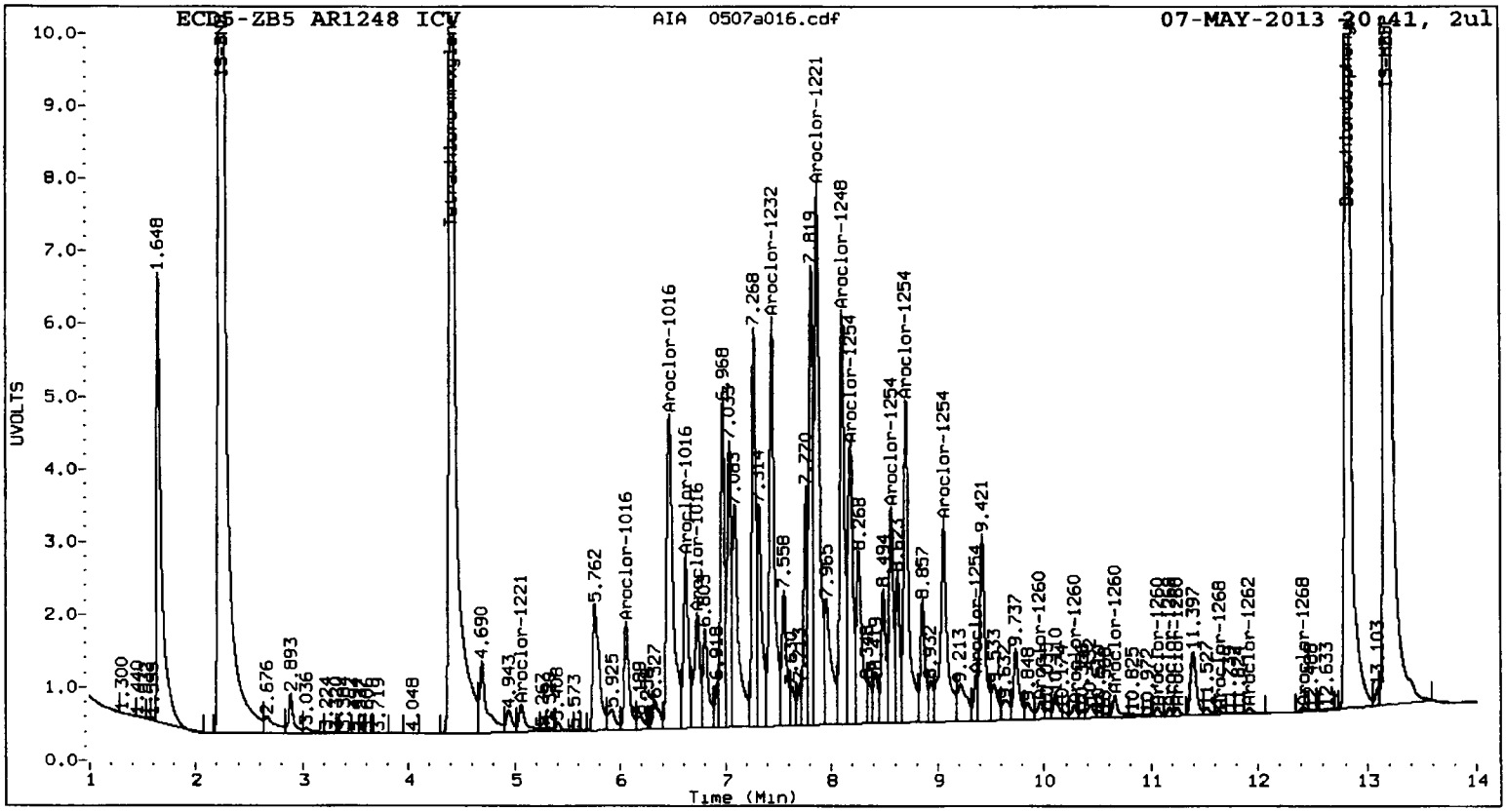
Total PCB Area Col2 (4.512 - 13.105) = 33824743 Col2 Total PCB = 0.2 ppm*

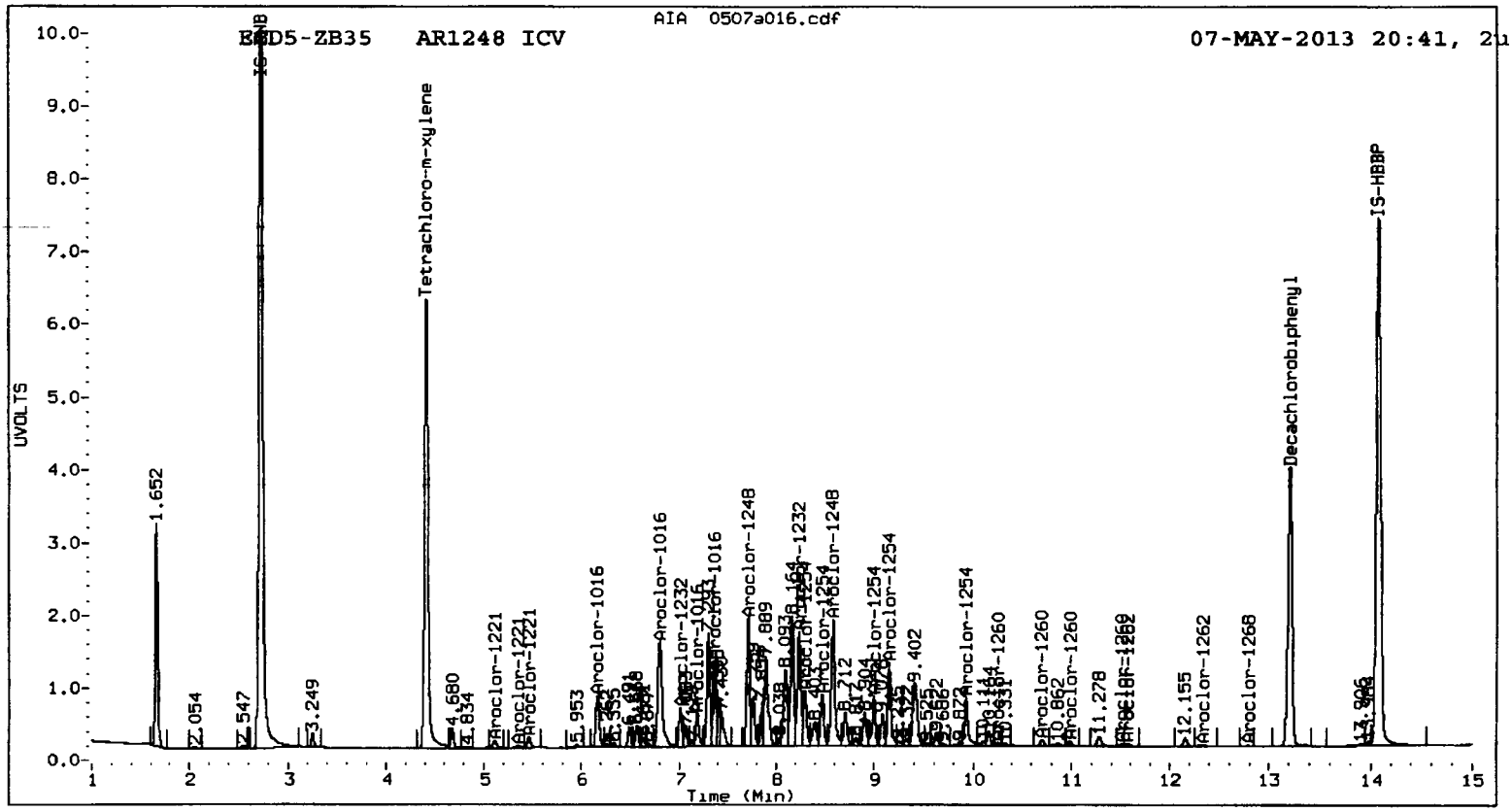
* Quantitated against AR1660 0.25ppm in Ical

US08 : 08738


ECD5-ZB5 AR1248 ICV
AIA 0507a016.cdf
07-MAY-2013 20:41, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.648
4.048
4.690
5.762
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB35 AR1248 ICV
AIA 0507a016.cdf
07-MAY-2013 20:41, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.652
2.054
2.547
3.249
4.680
5.953
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB5 AR1248 ICV
AIA 0507a016.cdf
07-MAY-2013 20:41, 2ul
UVOLTS
Time (Min)
1.648
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB35 AR1248 ICV
AIA 0507a016.cdf
07-MAY-2013 20:41, 2u
UVOLTS
Time (Min)
1.652
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a017.d
Data file 2: 20130507.b/ical-2.b/0507a017.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254 ICV
Client ID:
Injection Date: 07-MAY-2013 21:01
Ical Date: 07-MAY-2013
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
4.410	-0.001	31249884	4.411	0.000	8016298	37.6	38.6	2.7	Tetrachloro-m-xylen
12.828	0.000	30201361	13.205	-0.001	5162177	34.7	34.1	1.8	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	93.9	96.5
Decachlorobiphenyl	86.9	85.3

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53642771	9.5
Hexabromobiphenyl	50004151	58188446	16.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15360402	3.5
Hexabromobiphenyl	9345340	10510294	12.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.061	0.001	74537	3.1	1	6.163	-0.003	28483	3.2
Aroclor-1016	2	6.462	-0.007	337320	4.5	2	6.793	-0.007	84978	4.5
Aroclor-1016	3	6.623	0.006	206176	6.2	3	7.187	0.001	11814	2.4
Aroclor-1016	4	6.730	0.002	85227	3.4	4	7.357	-0.001	459146	98.9
Total Col1Ave (4 peaks):					4.3	Total Col2Ave (4 peaks):				27.3 RPD = 145*
Corrected Ave (3 peaks):					3.7	Corrected Ave (3 peaks):				3.4 RPD = 9
Aroclor-1221	1	5.059	-0.005	147002	6.7	1	---			0.0
Aroclor-1221	2	6.462	-0.007	337320	50.4	2	5.111	0.016	103036	39.1
Aroclor-1221	3	7.878	0.000	10714695	1134.7	3	---			0.0
Aroclor-1221	NS	---			----	4	5.465	0.004	27897	6.2
Total Col1Ave (3 peaks):					397.3	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	6.061	0.001	74537	7.5	1	6.163	-0.002	28483	7.2
Aroclor-1232	2	6.462	-0.008	337320	11.1	2	6.793	-0.008	84978	10.8
Aroclor-1232	3	7.442	0.001	1732024	109.6	3	7.010	-0.001	15916	4.9
Aroclor-1232	4	7.878	0.004	10714695	590.0	4	8.237	-0.001	361750	131.4
Total Col1Ave (4 peaks):					179.5	Total Col2Ave (4 peaks):				38.6 RPD = 129*
Corrected Ave (3 peaks):					42.7	Corrected Ave (3 peaks):				7.6 RPD = 139*
Aroclor-1242	1	6.061	0.002	74537	3.9	1	6.163	-0.004	28483	4.1
Aroclor-1242	2	6.462	-0.006	337320	5.7	2	6.793	-0.010	84978	5.5
Aroclor-1242	3	6.623	0.006	206176	7.8	3	7.010	-0.001	15916	2.5
Aroclor-1242	4	7.878	0.006	10714695	328.2	4	8.237	-0.002	361750	67.2
Total Col1Ave (4 peaks):					86.4	Total Col2Ave (4 peaks):				19.8 RPD = 125*
Corrected Ave (3 peaks):					5.8	Corrected Ave (3 peaks):				4.0 RPD = 36
Aroclor-1248	1	6.462	-0.005	337320	8.9	1	6.793	-0.007	84978	8.8
Aroclor-1248	2	7.442	0.000	1732024	40.8	2	7.705	-0.001	756815	94.8
Aroclor-1248	3	7.878	0.004	10714695	198.5	3	8.237	-0.001	361750	43.8
Aroclor-1248	4	8.113	0.003	3375422	89.7	4	8.569	-0.015	1382582	128.7
Total Col1Ave (4 peaks):					84.5	Total Col2Ave (4 peaks):				69.0 RPD = 20
Corrected Ave (3 peaks):					46.5	Corrected Ave (3 peaks):				49.1 RPD = 6
Aroclor-1254	1	8.192	0.000	14171059	283.3	1	8.299	0.001	2103454	282.4
Aroclor-1254	2	8.563	0.000	9711755	294.1	2	8.475	0.000	2629736	285.8
Aroclor-1254	3	8.700	0.000	19370984	281.4	3	8.996	0.000	2093024	297.0
Aroclor-1254	4	9.054	0.002	20541352	289.7	4	9.148	0.001	4267118	282.7
Aroclor-1254	5	9.362	0.000	7016935	261.7	5	9.933	-0.001	2526495	297.2
Total Col1Ave (5 peaks):					282.0	Total Col2Ave (5 peaks):				289.0 RPD = 2
Corrected Ave (4 peaks):					279.0	Corrected Ave (4 peaks):				287.0 RPD = 3
Aroclor-1260	1	9.964	-0.003	1762734	37.0	1	10.260	0.000	214372	22.5
Aroclor-1260	2	10.284	0.000	1461583	30.9	2	10.704	-0.005	1157323	103.6
Aroclor-1260	3	10.658	-0.001	2962044	26.1	3	10.985	0.000	606704	29.4
Aroclor-1260	4	11.057	0.000	2253674	40.8	4	11.506	0.001	77148	13.8
Aroclor-1260	5	11.247	0.000	227786	7.7	NS	---			----
Total Col1Ave (5 peaks):					28.5	Total Col2Ave (4 peaks):				42.3 RPD = 39
Corrected Ave (4 peaks):					25.4	Corrected Ave (3 peaks):				21.9 RPD = 15
Aroclor-1262	1	10.284	0.001	1461583	26.8	1	10.260	0.000	214372	14.7
Aroclor-1262	2	10.658	0.000	2962044	23.1	2	10.704	-0.006	1157323	87.1
Aroclor-1262	3	11.057	-0.002	2253674	55.6	3	10.985	0.000	606704	24.3
Aroclor-1262	4	11.247	0.000	227786	4.0	4	11.563	-0.004	395081	24.4
Aroclor-1262	5	11.918	0.000	149251	3.4	5	12.340	0.034	39786	5.1
Total Col1Ave (5 peaks):					22.6	Total Col2Ave (5 peaks):				31.1 RPD = 32
Corrected Ave (4 peaks):					14.3	Corrected Ave (4 peaks):				17.1 RPD = 18
Aroclor-1268	1	11.171	-0.004	198308	1.6	1	11.506	0.000	77148	3.0
Aroclor-1268	2	11.247	0.001	227786	1.7	2	11.563	-0.010	395081	16.5

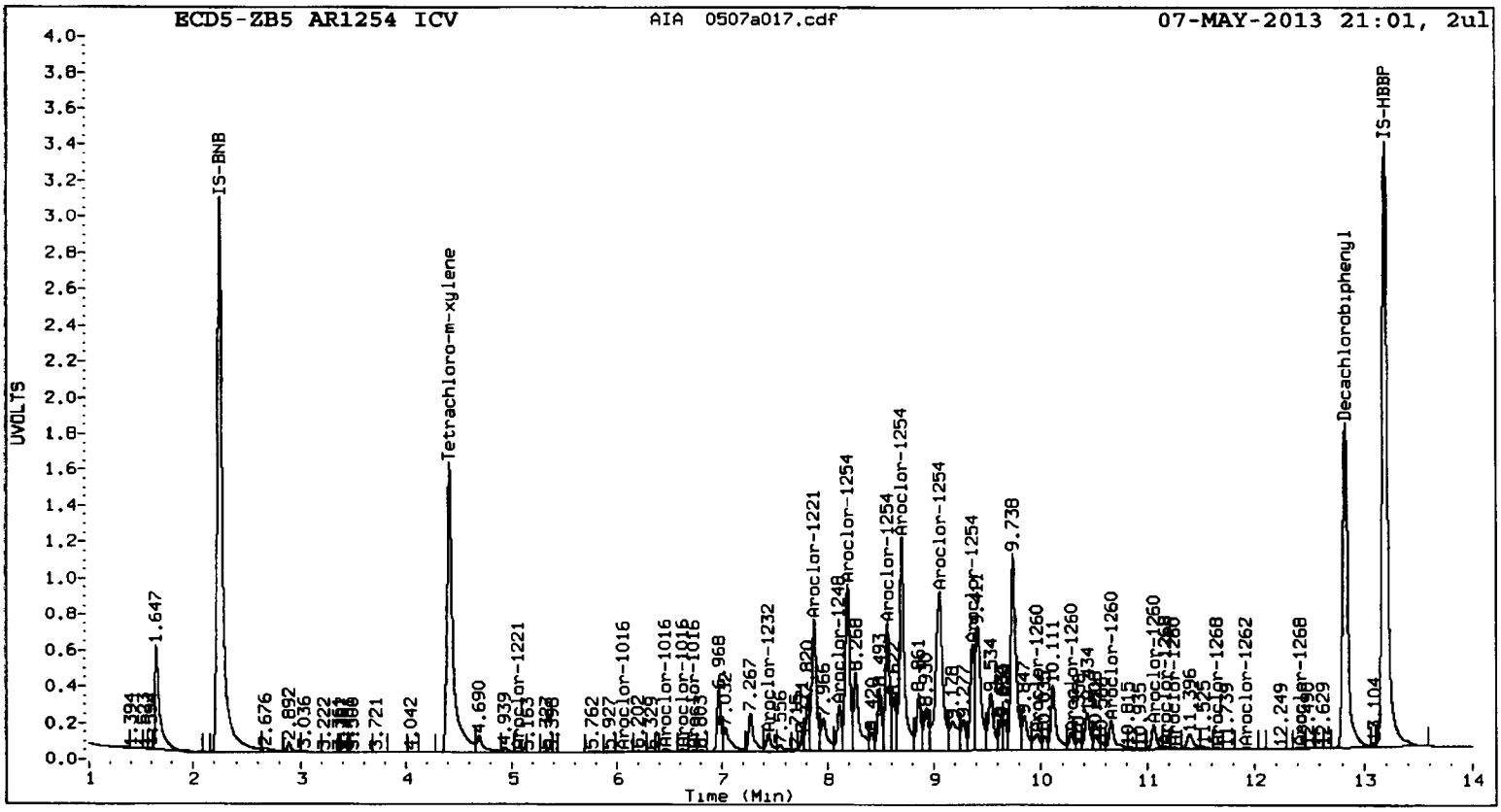
Aroclor-1268 3	11.643	0.011	109759	1.1	3	---	0.0
Aroclor-1268 4	12.420	-0.002	62105	0.2	4	---	0.0
Total Col1Ave (4 peaks):				1.2	Col2Ave: <3 Quant Peaks		

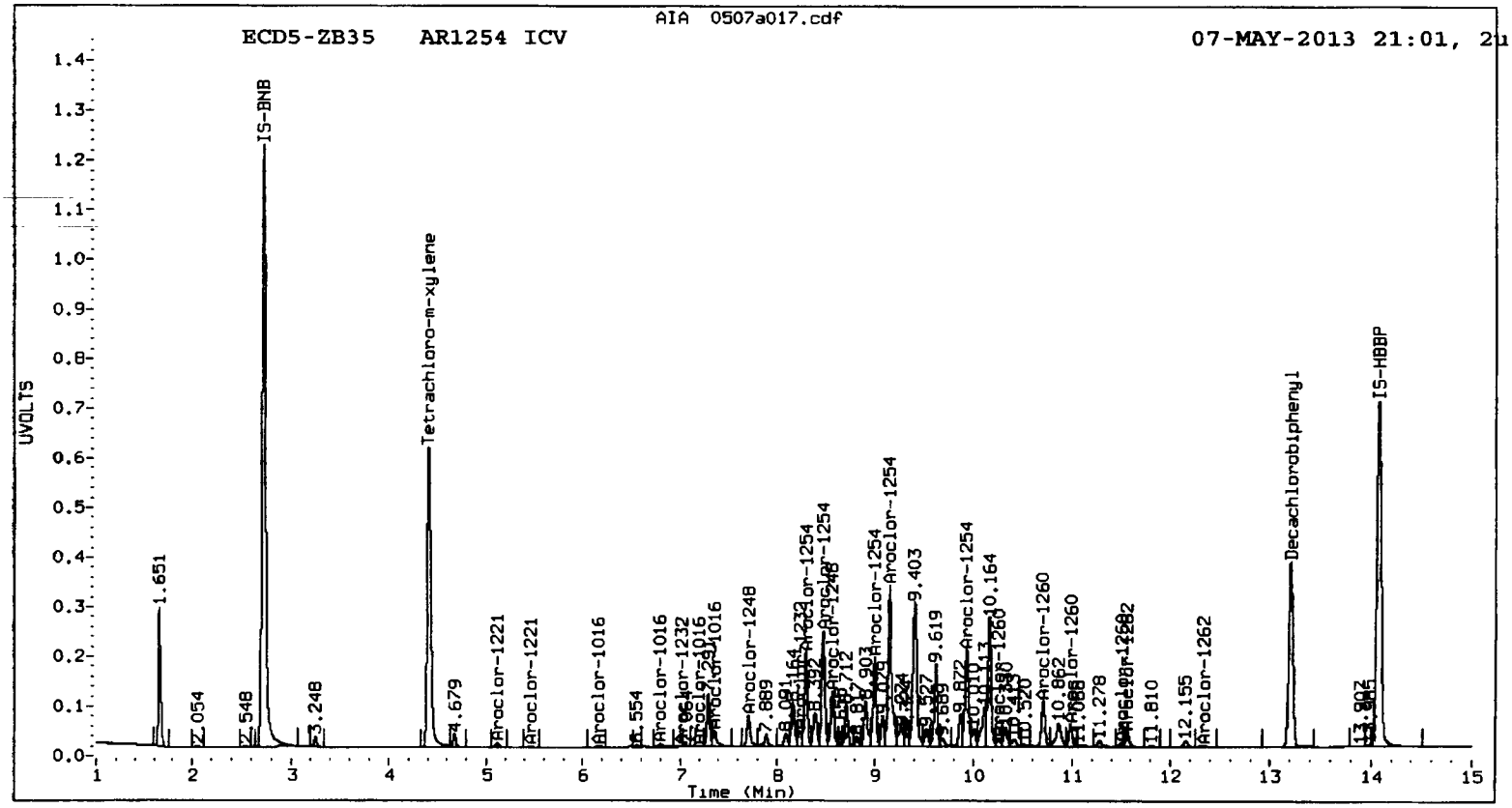
Total PCB Area Col1 (4.511 - 12.728) = 211898856 Col1 Total PCB = 0.3 ppm*

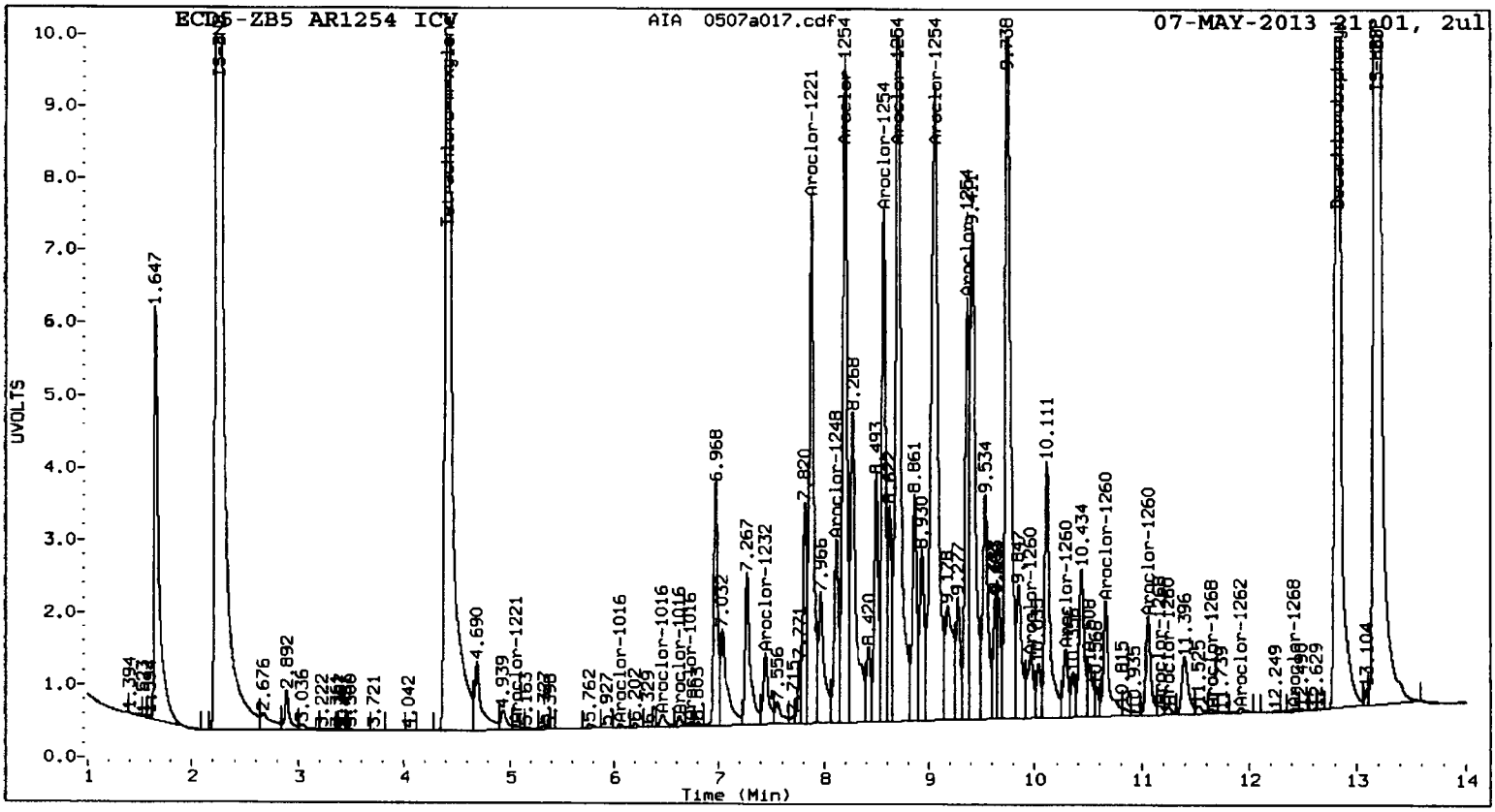
Total PCB Area Col2 (4.512 - 13.105) = 42309153 Col2 Total PCB = 0.3 ppm*

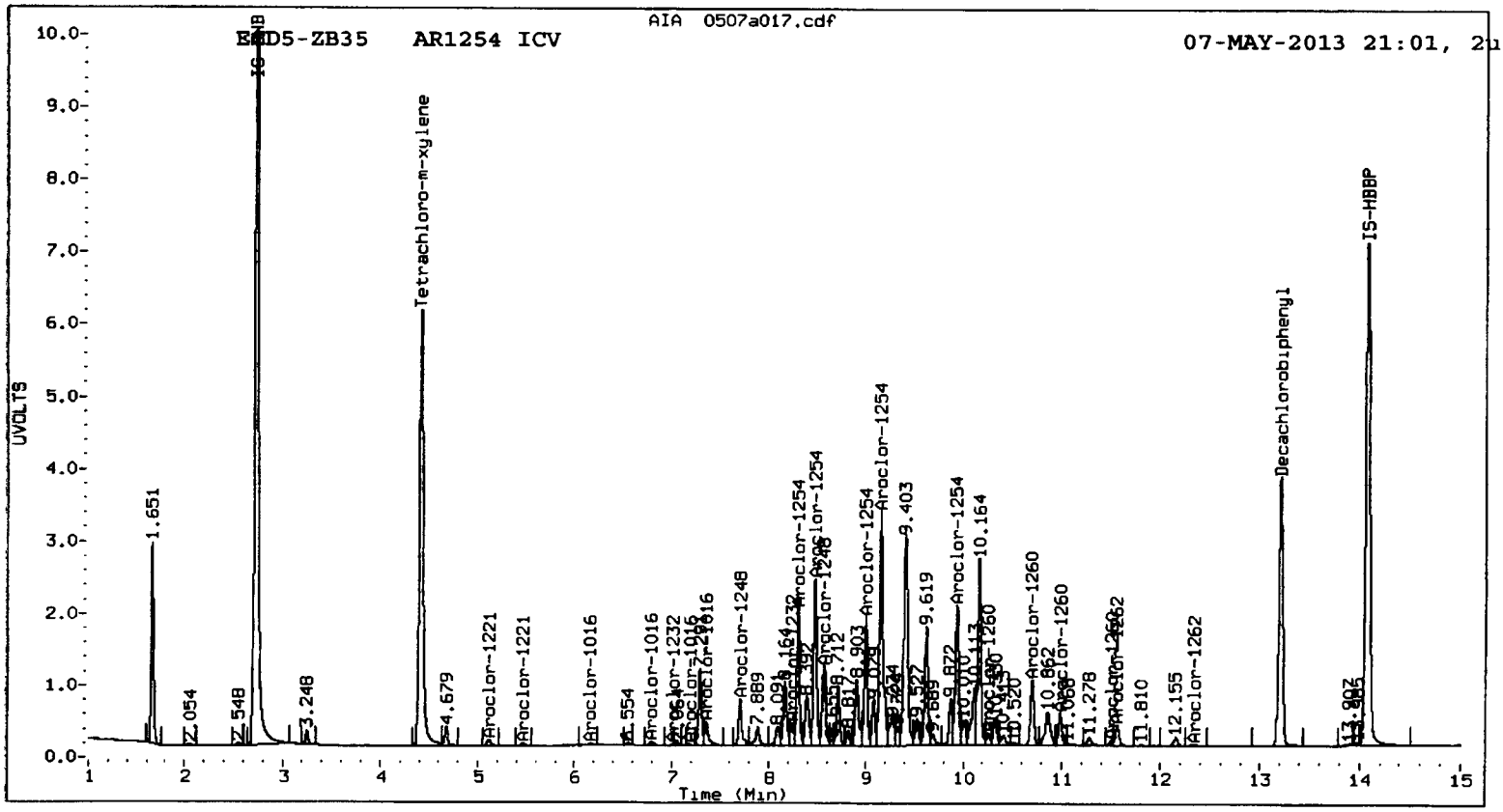
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 AR1254 ICV
AIA 0507a017.cdf
07-MAY-2013 21:01, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.647
4.690
9.738
Aroclor-1221
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


AIA 0507a017.cdf
ECD5-ZB35 AR1254 ICV
07-MAY-2013 21:01, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.651
4.679
9.403
Aroclor-1221
Aroclor-1254
Aroclor-1260
Aroclor-1262


ECD5-ZB5 AR1254 ICV
AIA 0507a017.cdf
07-MAY-2013 21:01, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB35 AR1254 ICV
AIA 0507a017.cdf
07-MAY-2013 21:01, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a018.d
Data file 2: 20130507.b/ical-2.b/0507a018.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 ICV
Client ID:
Injection Date: 07-MAY-2013 21:21
Ical Date: 07-MAY-2013
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
4.410	0.000	31767638	4.411	0.000	8077710	37.7	38.5	2.1	Tetrachloro-m-xylen
12.827	-0.001	30552007	13.205	0.000	5210574	34.7	34.1	1.7	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	94.2	96.2
Decachlorobiphenyl	86.8	85.3

M 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54355833	11.0
Hexabromobiphenyl	50004151	58930522	17.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15522820	4.6
Hexabromobiphenyl	9345340	10608758	13.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.060	0.000	5710646	233.1	1	6.166	0.000	2083969	235.3
Aroclor-1016	2	6.468	0.000	17399600	230.5	2	6.800	0.000	4481969	232.8
Aroclor-1016	3	6.618	0.001	7785800	230.3	3	7.185	0.000	1171797	232.7
Aroclor-1016	4	6.729	0.001	5827980	230.7	4	7.357	-0.001	1070181	228.2
	Total Col1Ave (4 peaks):				231.1		Total Col2Ave (4 peaks):			232.2 RPD = 0
	Corrected Ave (3 peaks):				230.5		Corrected Ave (3 peaks):			231.2 RPD = 0
Aroclor-1221	1	5.063	0.000	4136002	186.8	1	3.696	0.001	11910	7.5
Aroclor-1221	2	6.468	0.000	17399600	2568.0	2	5.100	0.006	292561	109.8
Aroclor-1221	3	7.878	0.000	5153861	538.7	3	5.347	0.002	209236	144.2
Aroclor-1221	NS	---			----	4	5.461	0.001	1022087	224.0
	Total Col1Ave (3 peaks):				1097.8		Total Col2Ave (4 peaks):			121.4 RPD = 160*
	Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			87.2
Aroclor-1232	1	6.060	0.000	5710646	567.2	1	6.166	0.000	2083969	523.1
Aroclor-1232	2	6.468	-0.001	17399600	564.6	2	6.800	-0.001	4481969	563.6
Aroclor-1232	3	7.442	0.000	8239430	514.4	3	7.010	-0.001	1862855	561.7
Aroclor-1232	4	7.878	0.004	5153861	280.1	4	8.237	-0.002	198387	71.3
	Total Col1Ave (4 peaks):				481.6		Total Col2Ave (4 peaks):			429.9 RPD = 11
	Corrected Ave (3 peaks):				453.0		Corrected Ave (3 peaks):			385.4 RPD = 16
Aroclor-1242	1	6.060	0.001	5710646	291.7	1	6.166	-0.002	2083969	294.7
Aroclor-1242	2	6.468	0.000	17399600	289.8	2	6.800	-0.002	4481969	288.5
Aroclor-1242	3	6.618	0.001	7785800	290.6	3	7.010	-0.001	1862855	287.0
Aroclor-1242	4	7.878	0.006	5153861	155.8	4	8.237	-0.002	198387	36.5
	Total Col1Ave (4 peaks):				257.0		Total Col2Ave (4 peaks):			226.7 RPD = 13
	Corrected Ave (3 peaks):				245.4		Corrected Ave (3 peaks):			204.0 RPD = 18
Aroclor-1248	1	6.468	0.001	17399600	454.8	1	6.800	0.001	4481969	460.8
Aroclor-1248	2	7.442	0.000	8239430	191.5	2	7.705	-0.001	1494414	185.3
Aroclor-1248	3	7.878	0.004	5153861	94.2	3	8.237	-0.002	198387	23.8
Aroclor-1248	4	8.113	0.003	956546	25.1	4	8.584	0.000	77790	7.2
	Total Col1Ave (4 peaks):				191.4		Total Col2Ave (4 peaks):			169.2 RPD = 12
	Corrected Ave (3 peaks):				103.6		Corrected Ave (3 peaks):			72.1 RPD = 36
Aroclor-1254	1	8.194	0.002	5604593	110.6	1	8.299	0.000	888811	118.1
Aroclor-1254	2	8.563	0.000	760107	22.7	2	8.475	0.000	906791	97.5
Aroclor-1254	3	8.696	-0.004	2725232	39.1	3	8.997	0.001	149462	21.0
Aroclor-1254	4	9.029	-0.024	14910986	207.5	4	9.187	0.040	2306321	151.2
Aroclor-1254	5	9.361	-0.001	20865390	767.9	5	9.939	0.004	1000144	116.4
	Total Col1Ave (5 peaks):				229.6		Total Col2Ave (5 peaks):			100.8 RPD = 78*
	Corrected Ave (4 peaks):				95.0		Corrected Ave (4 peaks):			88.3 RPD = 7
Aroclor-1260	1	9.967	0.000	12336540	255.6	1	10.261	0.001	2515434	261.4
Aroclor-1260	2	10.283	-0.001	11792031	246.4	2	10.710	0.001	2780218	246.7
Aroclor-1260	3	10.659	-0.001	28793615	250.9	3	10.986	0.001	5491310	263.9
Aroclor-1260	4	11.059	0.001	13292663	237.8	4	11.506	0.001	1529990	271.2
Aroclor-1260	5	11.247	0.000	8346657	279.1	NS	---			----
	Total Col1Ave (5 peaks):				254.0		Total Col2Ave (4 peaks):			260.8 RPD = 3
	Corrected Ave (4 peaks):				247.7		Corrected Ave (3 peaks):			257.3 RPD = 4
Aroclor-1262	1	10.283	0.000	11792031	213.7	1	10.261	0.001	2515434	171.4
Aroclor-1262	2	10.659	0.000	28793615	222.1	2	10.710	0.000	2780218	207.2
Aroclor-1262	3	11.059	-0.001	13292663	323.7	3	10.986	0.001	5491310	218.2
Aroclor-1262	4	11.247	0.000	8346657	144.8	4	11.565	-0.002	3586824	219.3
Aroclor-1262	5	11.918	0.000	7146896	161.6	5	12.307	0.001	1281460	162.3
	Total Col1Ave (5 peaks):				213.2		Total Col2Ave (5 peaks):			195.7 RPD = 9
	Corrected Ave (4 peaks):				185.5		Corrected Ave (4 peaks):			189.8 RPD = 2
Aroclor-1268	1	11.174	-0.001	6512368	52.5	1	11.506	-0.001	1529990	59.7

Aroclor-1268 2	11.247	0.001	8346657	60.9	2	11.565	-0.008	3586824	148.6
Aroclor-1268 3	11.648	0.015	3204605	31.5	3	11.967	-0.002	50714	2.7
Aroclor-1268 4	12.420	-0.001	1403153	4.9	4	12.792	0.000	228513	4.6

Total Col1Ave (4 peaks): 37.4 Total Col2Ave (4 peaks): 53.9 RPD = 36

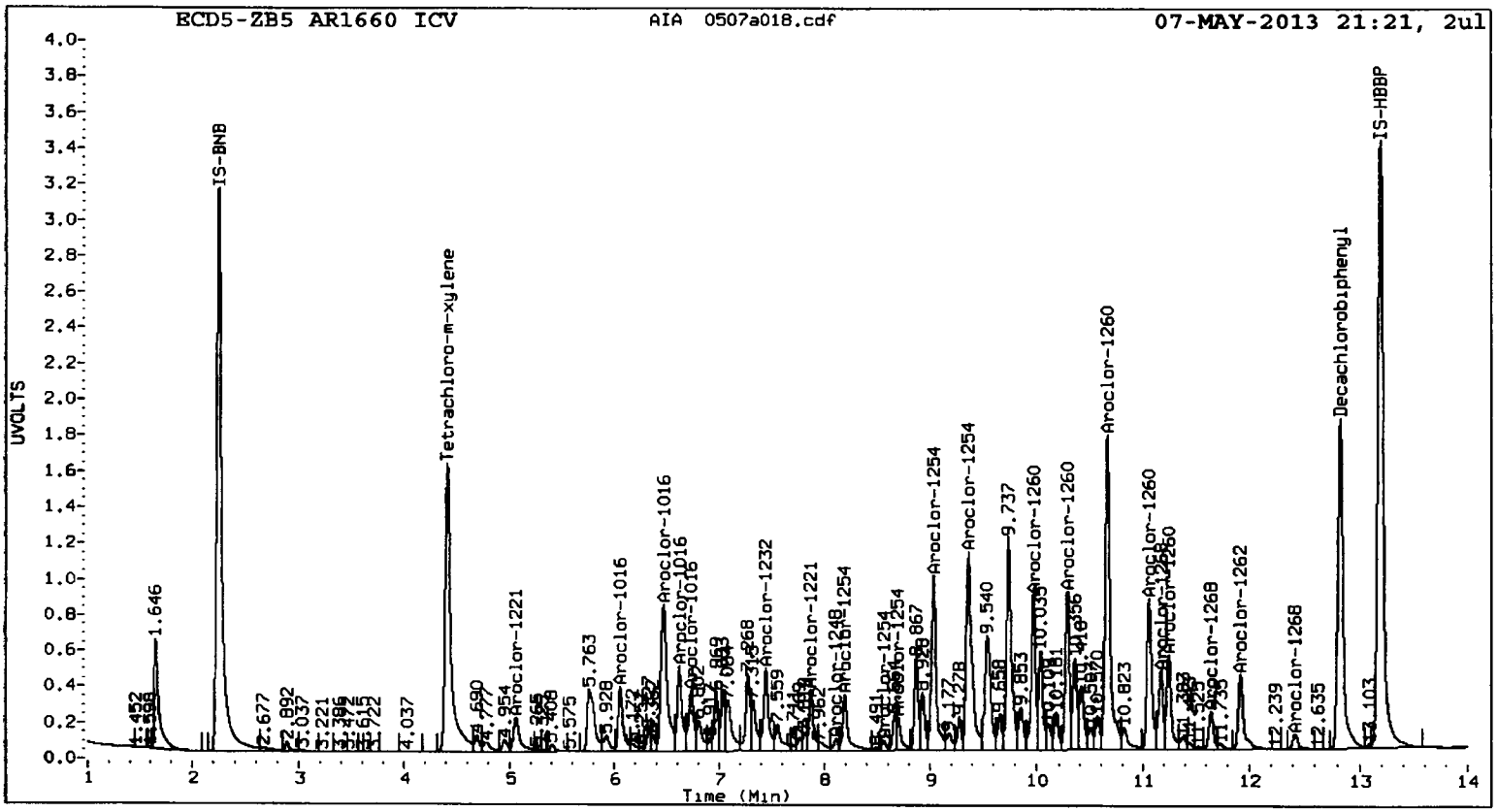
Corrected Ave (3 peaks): 29.6 Corrected Ave (3 peaks): 22.3 RPD = 28

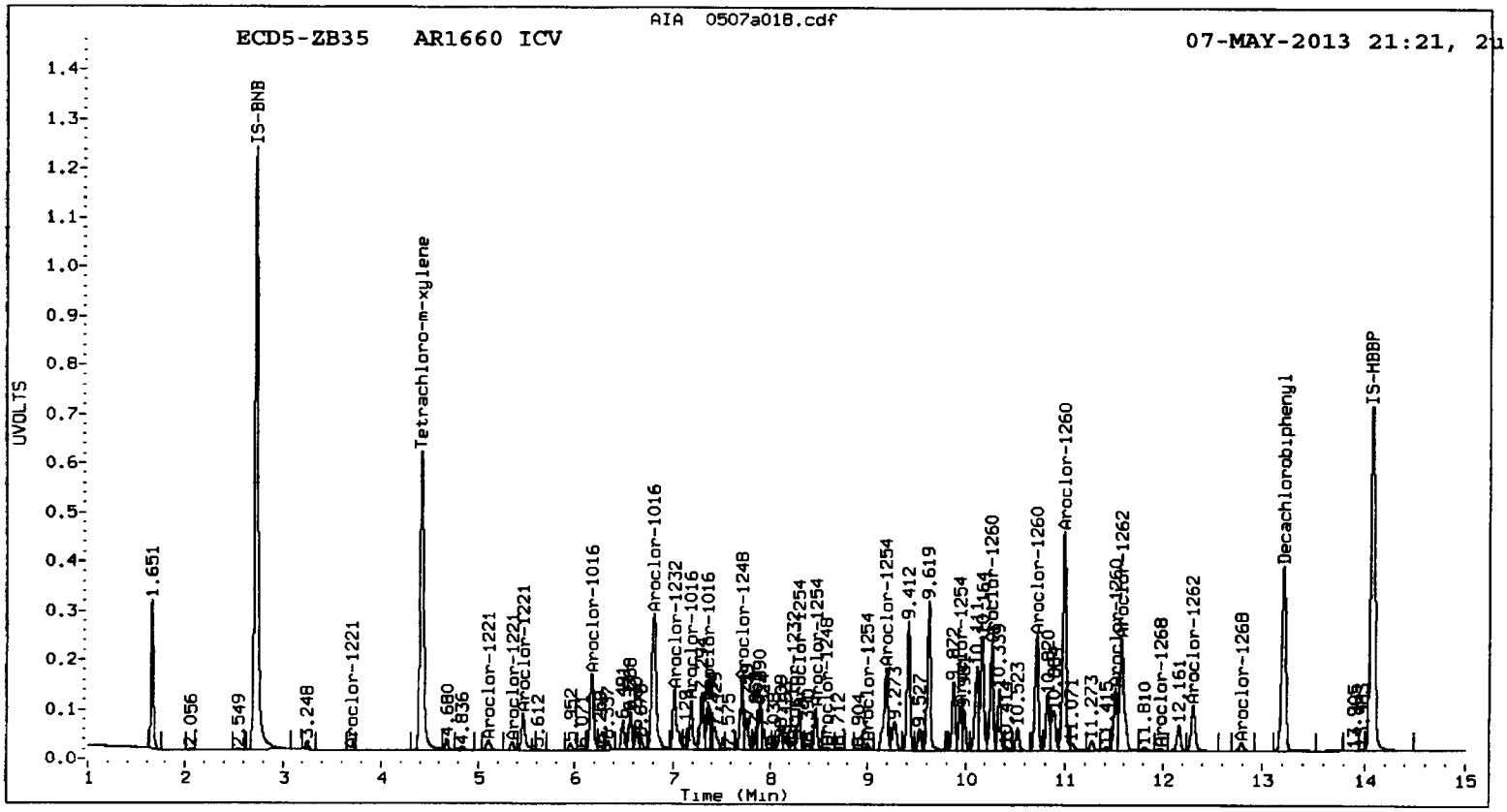
Total PCB Area Col1 (4.511 - 12.728) = 339033302 Col1 Total PCB = 0.5 ppm*

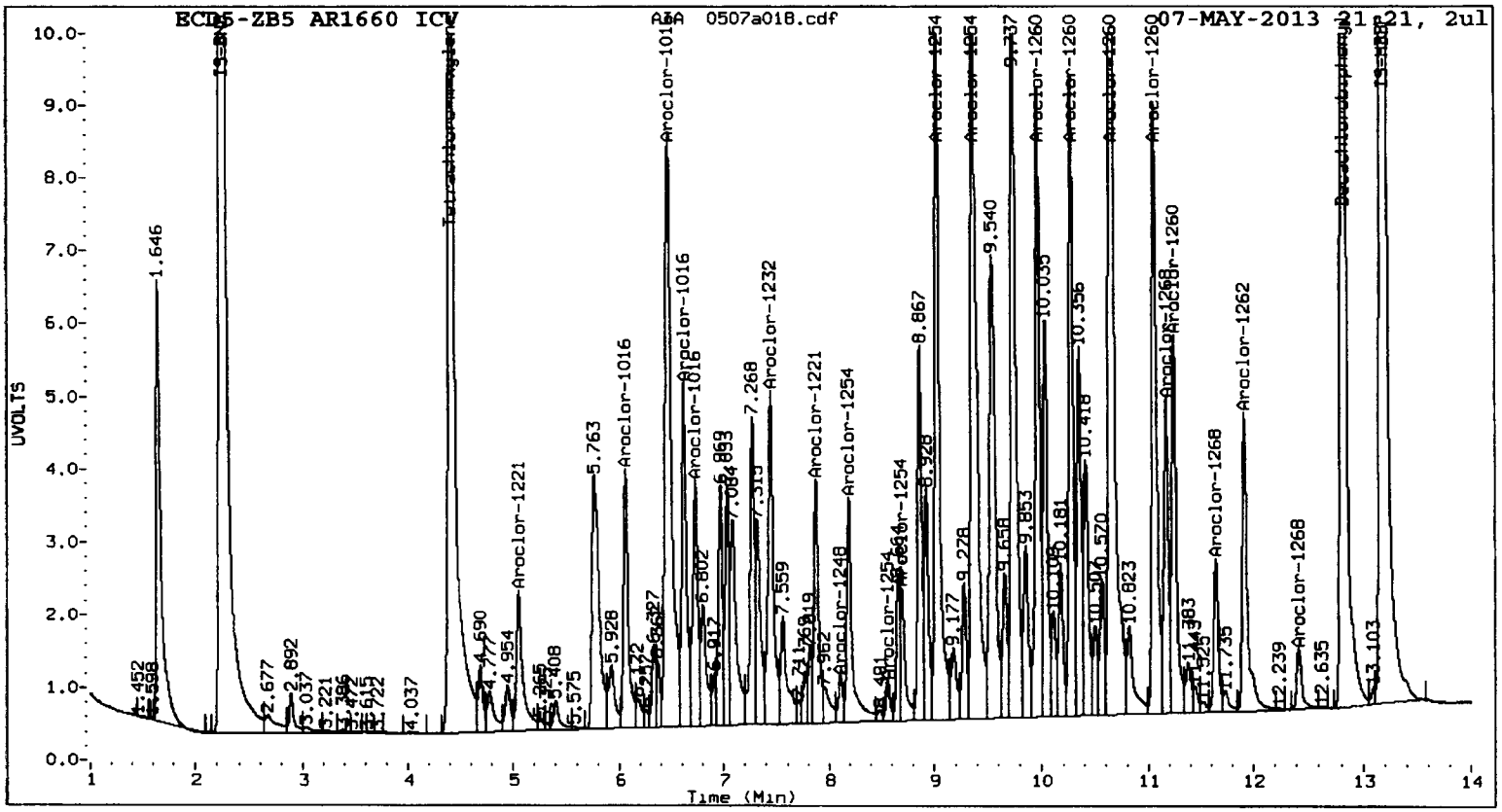
Total PCB Area Col2 (4.512 - 13.105) = 67437339 Col2 Total PCB = 0.5 ppm*

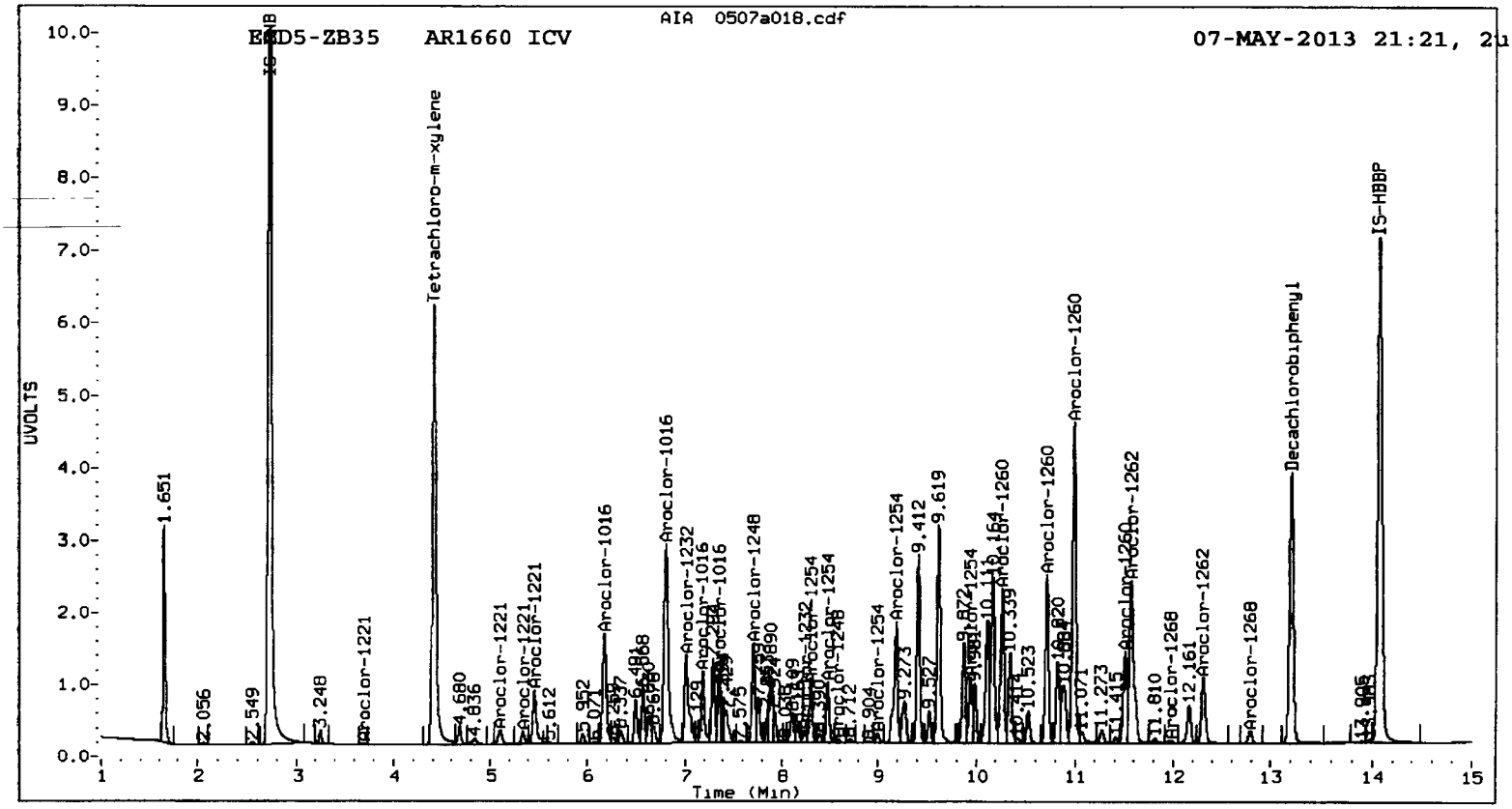
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 AR1660 ICV
AIA 0507a018.cdf
07-MAY-2013 21:21, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR1660 ICV
AIA 0507a018.cdf
07-MAY-2013 21:21, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 AR1660 ICV
AIA 0507a018.cdf
07-MAY-2013 21:21, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


AIA 0507a018.cdf
ECD5-ZB35 AR1660 ICV
07-MAY-2013 21:21, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a019.d
Data file 2: 20130507.b/ical-2.b/0507a019.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162 ICV
Client ID:
Injection Date: 07-MAY-2013 21:42
Ical Date: 07-MAY-2013
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
4.410	0.000	32723514	4.412	0.000	8175501	38.5	39.3	2.2	Tetrachloro-m-xylen
12.828	0.000	30887403	13.205	0.000	5217278	35.3	34.6	1.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

05/08/13

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.1	98.3
Decachlorobiphenyl	88.3	86.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54884040	12.1
Hexabromobiphenyl	50004151	58566252	17.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15378234	3.6
Hexabromobiphenyl	9345340	10470042	12.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.060	-0.001	613149	24.8	1	6.177	0.011	386723	44.1	
Aroclor-1016	2	6.470	0.001	1448260	19.0	2	6.803	0.002	348544	18.3	
Aroclor-1016	3	6.617	0.000	702982	20.6	3	7.186	0.001	92186	18.5	
Aroclor-1016	4	6.729	0.001	468102	18.3	4	7.357	-0.001	67755	14.6	
	Total Col1Ave (4 peaks):				20.7	Total Col2Ave (4 peaks):				23.9	RPD = 14
	Corrected Ave (3 peaks):				19.3	Corrected Ave (3 peaks):				17.1	RPD = 12
Aroclor-1221	1	5.064	0.000	5852175	261.7	1	3.696	0.002	409204	259.6	
Aroclor-1221	2	6.470	0.002	1448260	211.7	2	5.095	0.001	683679	259.1	
Aroclor-1221	3	7.878	0.000	2211598	228.9	3	5.346	0.001	375497	261.3	
Aroclor-1221	NS	---			----	4	5.461	0.001	1172244	259.3	
	Total Col1Ave (3 peaks):				234.1	Total Col2Ave (4 peaks):				259.8	RPD = 10
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				259.3	
Aroclor-1232	1	6.060	-0.001	613149	60.3	1	6.177	0.011	386723	98.0	
Aroclor-1232	2	6.470	0.001	1448260	46.5	2	6.803	0.002	348544	44.2	
Aroclor-1232	3	7.441	0.000	391114	24.2	3	7.011	0.000	157577	48.0	
Aroclor-1232	4	7.878	0.004	2211598	119.0	4	8.239	0.001	57476	20.8	
	Total Col1Ave (4 peaks):				62.5	Total Col2Ave (4 peaks):				52.8	RPD = 17
	Corrected Ave (3 peaks):				43.7	Corrected Ave (3 peaks):				37.7	RPD = 15
Aroclor-1242	1	6.060	0.000	613149	31.0	1	6.177	0.009	386723	55.2	
Aroclor-1242	2	6.470	0.002	1448260	23.9	2	6.803	0.000	348544	22.6	
Aroclor-1242	3	6.617	0.000	702982	26.0	3	7.011	0.000	157577	24.5	
Aroclor-1242	4	7.878	0.005	2211598	66.2	4	8.239	0.000	57476	10.7	
	Total Col1Ave (4 peaks):				36.8	Total Col2Ave (4 peaks):				28.3	RPD = 26
	Corrected Ave (3 peaks):				27.0	Corrected Ave (3 peaks):				19.3	RPD = 33
Aroclor-1248	1	6.470	0.003	1448260	37.5	1	6.803	0.003	348544	36.2	
Aroclor-1248	2	7.441	-0.001	391114	9.0	2	7.705	-0.001	87992	11.0	
Aroclor-1248	3	7.878	0.004	2211598	40.0	3	8.239	0.000	57476	6.9	
Aroclor-1248	4	8.113	0.003	478072	12.4	4	8.578	-0.005	115261	10.7	
	Total Col1Ave (4 peaks):				24.7	Total Col2Ave (4 peaks):				16.2	RPD = 42*
	Corrected Ave (3 peaks):				19.6	Corrected Ave (3 peaks):				9.6	RPD = 69*
Aroclor-1254	1	8.194	0.002	2387711	46.6	1	8.299	0.000	421166	56.5	
Aroclor-1254	2	8.563	0.000	484981	14.4	2	8.475	0.000	484426	52.6	
Aroclor-1254	3	8.663	-0.037	3505604	49.8	3	8.997	0.000	101058	14.3	
Aroclor-1254	4	9.029	-0.024	12603810	173.7	4	9.186	0.040	2047860	135.5	
Aroclor-1254	5	9.361	-0.001	15873155	578.6	5	9.939	0.004	484038	56.9	
	Total Col1Ave (5 peaks):				172.6	Total Col2Ave (5 peaks):				63.2	RPD = 93*
	Corrected Ave (4 peaks):				71.1	Corrected Ave (4 peaks):				45.1	RPD = 45*
Aroclor-1260	1	9.967	0.000	17243313	359.5	1	10.261	0.001	3588073	377.8	
Aroclor-1260	2	10.282	-0.001	14266396	299.9	2	10.711	0.002	3379274	303.8	
Aroclor-1260	3	10.659	0.000	31833903	279.1	3	10.986	0.001	6071825	295.6	
Aroclor-1260	4	11.059	0.002	10098810	181.8	4	11.507	0.002	2715788	487.8	
Aroclor-1260	5	11.248	0.001	14639139	492.6	NS	---			----	
	Total Col1Ave (5 peaks):				322.6	Total Col2Ave (4 peaks):				366.3	RPD = 13
	Corrected Ave (4 peaks):				280.1	Corrected Ave (3 peaks):				325.7	RPD = 15
Aroclor-1262	1	10.282	0.000	14266396	260.2	1	10.261	0.001	3588073	247.8	
Aroclor-1262	2	10.659	0.000	31833903	247.1	2	10.711	0.001	3379274	255.2	
Aroclor-1262	3	11.059	0.000	10098810	247.5	3	10.986	0.001	6071825	244.5	
Aroclor-1262	4	11.248	0.000	14639139	255.6	4	11.569	0.002	4096791	253.8	
Aroclor-1262	5	11.917	-0.001	11001330	250.3	5	12.308	0.002	1957515	251.1	
	Total Col1Ave (5 peaks):				252.1	Total Col2Ave (5 peaks):				250.5	RPD = 1
	Corrected Ave (4 peaks):				250.1	Corrected Ave (4 peaks):				249.3	RPD = 0
Aroclor-1268	1	11.173	-0.002	12852069	104.3	1	11.507	0.000	2715788	107.5	

Aroclor-1268	2	11.248	0.002	14639139	107.4	2	11.569	-0.004	4096791	172.0
Aroclor-1268	3	11.648	0.016	5026777	49.7	3	11.970	0.001	170870	9.1
Aroclor-1268	4	12.421	0.000	3714076	13.0	4	12.792	0.000	626393	12.8

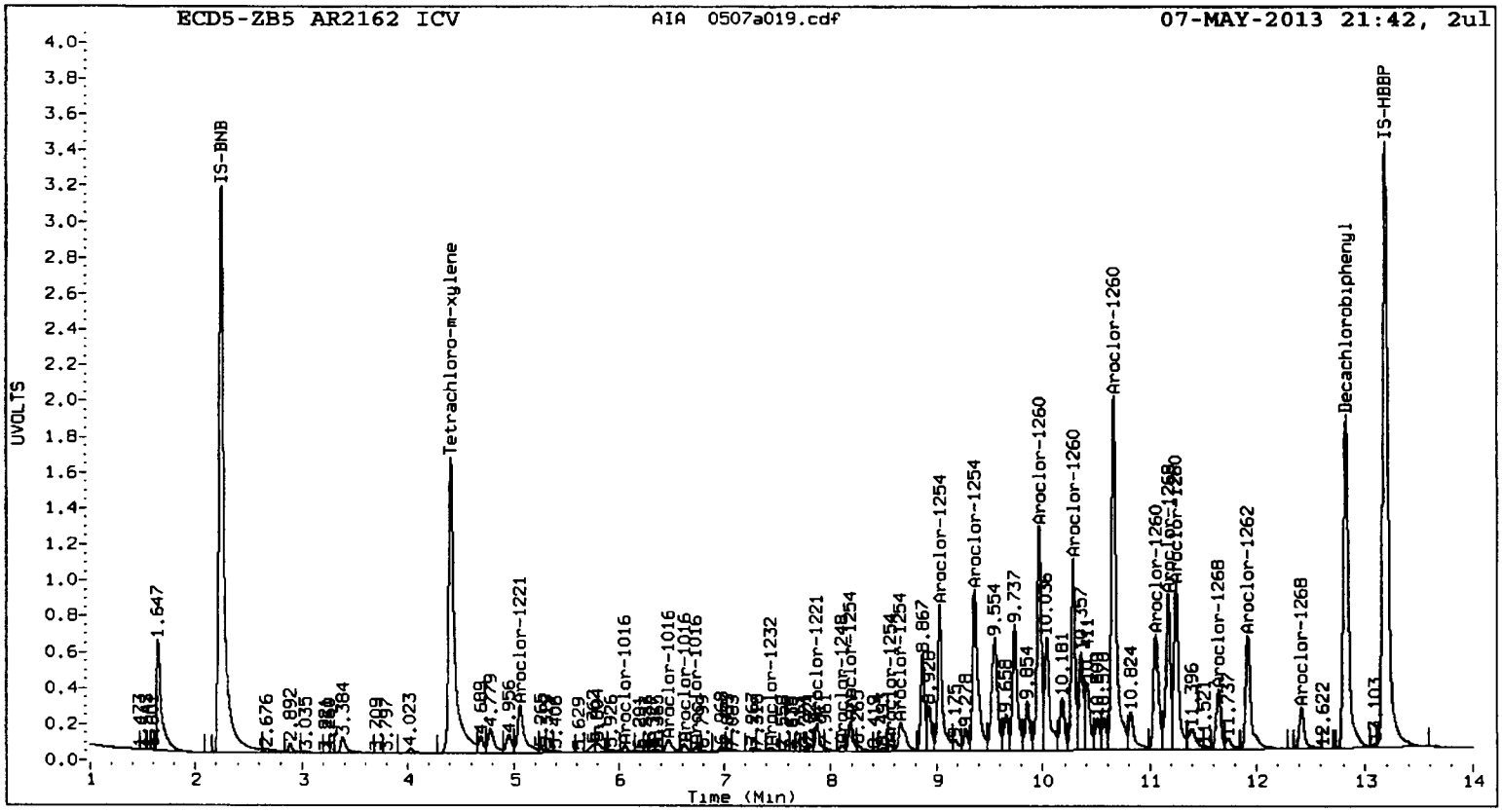
Total Col1Ave (4 peaks): 68.6 Total Col2Ave (4 peaks): 75.3 RPD = 9

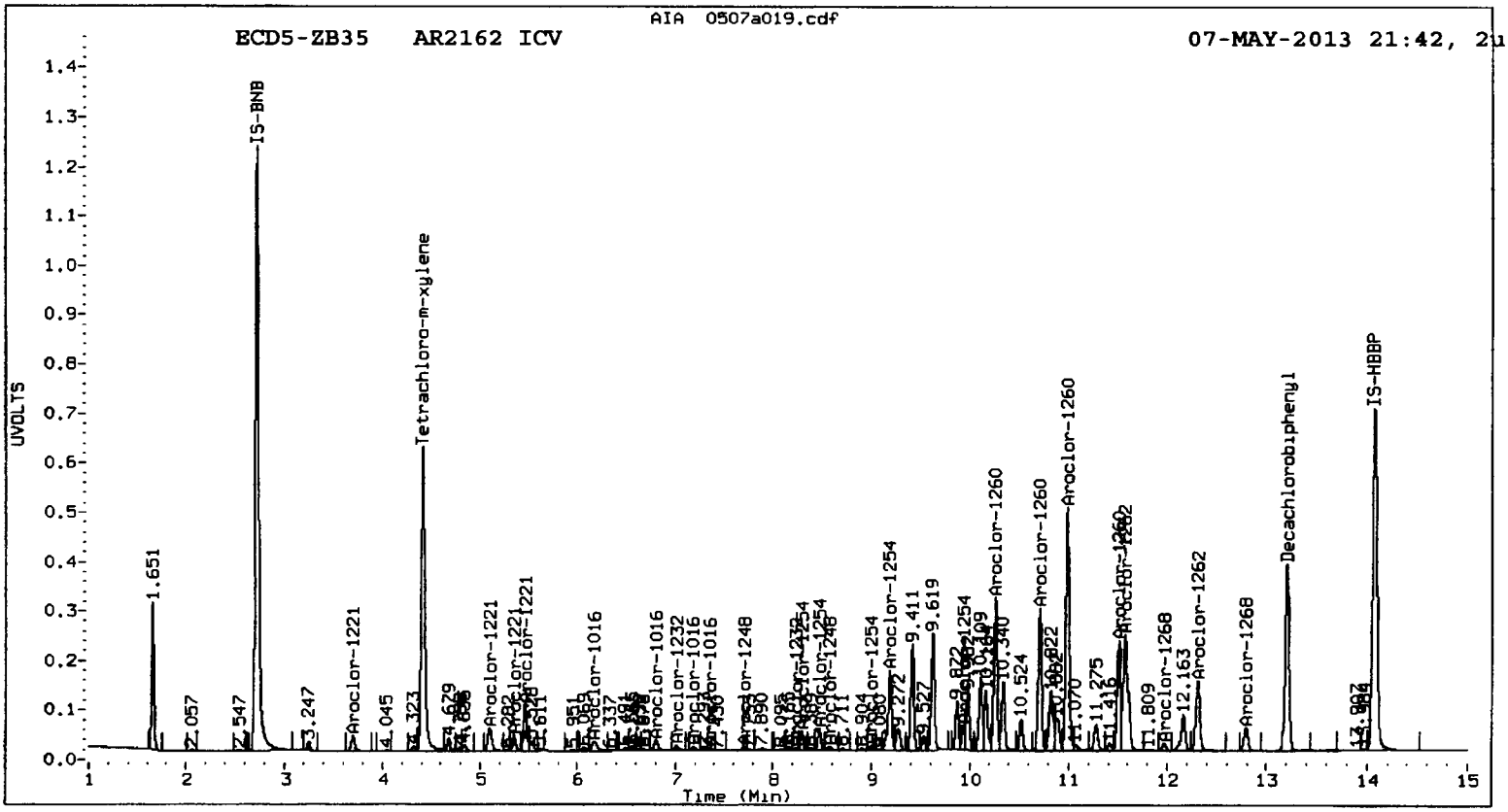
Corrected Ave (3 peaks): 55.7 Corrected Ave (3 peaks): 43.1 RPD = 25

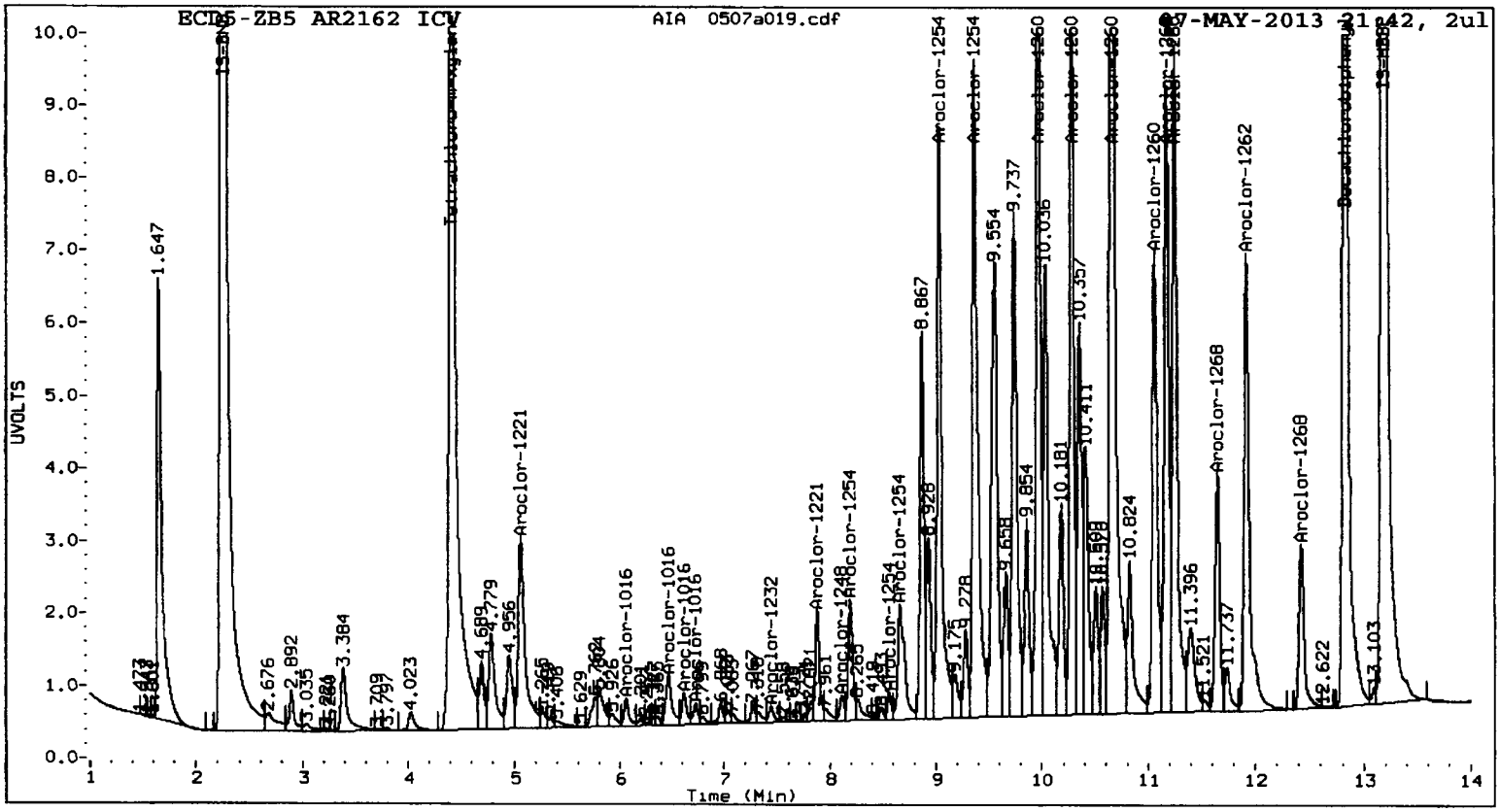
Total PCB Area Col1 (4.511 - 12.728) = 265426514 Col1 Total PCB = 0.4 ppm*

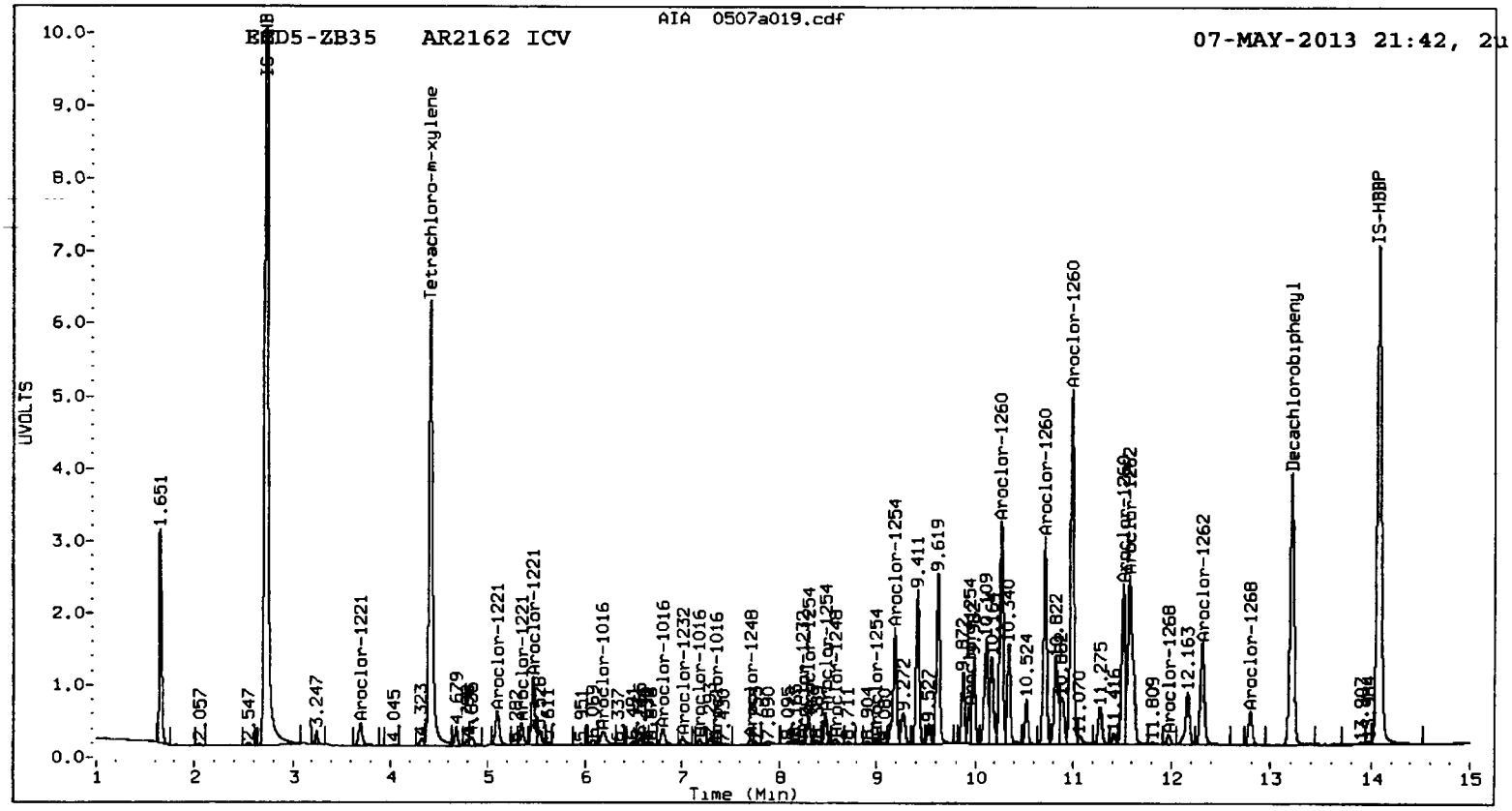
Total PCB Area Col2 (4.512 - 13.105) = 50390342 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR2162 ICV
AIA 0507a019.cdf
07-MAY-2013 21:42, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


AIA 0507a019.cdf
ECD5-ZB35 AR2162 ICV
07-MAY-2013 21:42, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB5 AR2162 ICV
AIA 0507a019.cdf
07-MAY-2013 21:42, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl


ECD5-ZB35 AR2162 ICV
AIA 0507a019.cdf
07-MAY-2013 21:42, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a020.d
Data file 2: 20130507.b/ical-2.b/0507a020.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268 ICV
Client ID:
Injection Date: 07-MAY-2013 22:02
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	32178954	4.411	-0.001	8089911	37.9	39.1	3.0	Tetrachloro-m-xylen
12.827	-0.001	41292857	13.204	-0.001	6993423	45.8	45.1	1.6	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	94.8	97.7
Decachlorobiphenyl	114.6	112.8

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54747539	11.8
Hexabromobiphenyl	50004151	60316622	20.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15307215	3.2
Hexabromobiphenyl	9345340	10773388	15.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.060	-0.001	2754975	111.6	1	6.165	-0.001	1064635	121.9
Aroclor-1016	2	6.468	0.000	8293080	109.1	2	6.801	0.001	2096355	110.4
Aroclor-1016	3	6.617	0.000	3727765	109.5	3	7.186	0.000	553151	111.4
Aroclor-1016	4	6.729	0.001	2773984	109.0	4	7.357	-0.001	453332	98.0
Total Col1Ave (4 peaks):		109.8				Total Col2Ave (4 peaks):		110.4	RPD = 1	
Corrected Ave (3 peaks):		109.2				Corrected Ave (3 peaks):		106.6	RPD = 2	
Aroclor-1221	1	5.063	0.000	4449445	199.5	1	3.695	0.001	235147	149.8
Aroclor-1221	2	6.468	0.000	8293080	1215.2	2	5.097	0.002	434232	165.3
Aroclor-1221	3	7.874	-0.004	4148169	430.4	3	5.346	0.001	253609	177.3
Aroclor-1221	NS	---			----	4	5.461	0.000	945969	210.2
Total Col1Ave (3 peaks):		615.0				Total Col2Ave (4 peaks):		175.7	RPD = 111*	
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):		164.2		
Aroclor-1232	1	6.060	-0.001	2754975	271.7	1	6.165	0.000	1064635	271.0
Aroclor-1232	2	6.468	-0.001	8293080	267.2	2	6.801	0.000	2096355	267.3
Aroclor-1232	3	7.441	0.000	3759089	233.0	3	7.010	-0.001	874326	267.4
Aroclor-1232	4	7.874	0.000	4148169	223.8	4	8.239	0.000	645903	235.3
Total Col1Ave (4 peaks):		248.9				Total Col2Ave (4 peaks):		260.3	RPD = 4	
Corrected Ave (3 peaks):		241.3				Corrected Ave (3 peaks):		256.7	RPD = 6	
Aroclor-1242	1	6.060	0.000	2754975	139.7	1	6.165	-0.002	1064635	152.7
Aroclor-1242	2	6.468	0.000	8293080	137.1	2	6.801	-0.001	2096355	136.8
Aroclor-1242	3	6.617	0.001	3727765	138.1	3	7.010	-0.001	874326	136.6
Aroclor-1242	4	7.874	0.001	4148169	124.5	4	8.239	0.000	645903	120.5
Total Col1Ave (4 peaks):		134.9				Total Col2Ave (4 peaks):		136.6	RPD = 1	
Corrected Ave (3 peaks):		133.3				Corrected Ave (3 peaks):		131.3	RPD = 1	
Aroclor-1248	1	6.468	0.002	8293080	215.2	1	6.801	0.002	2096355	218.6
Aroclor-1248	2	7.441	-0.001	3759089	86.7	2	7.705	-0.002	686789	86.3
Aroclor-1248	3	7.874	0.000	4148169	75.3	3	8.239	0.000	645903	78.4
Aroclor-1248	4	8.111	0.001	3087951	80.4	4	8.585	0.002	769968	71.9
Total Col1Ave (4 peaks):		114.4				Total Col2Ave (4 peaks):		113.8	RPD = 1	
Corrected Ave (3 peaks):		80.8				Corrected Ave (3 peaks):		78.9	RPD = 2	
Aroclor-1254	1	8.189	-0.003	1593730	31.2	1	8.297	-0.002	213975	28.8
Aroclor-1254	2	8.564	0.000	750392	22.3	2	8.476	0.001	185955	20.3
Aroclor-1254	3	8.700	0.001	1491908	21.2	3	8.996	0.000	159149	22.7
Aroclor-1254	4	9.035	-0.018	1725047	23.8	4	9.148	0.001	236498	15.7
Aroclor-1254	5	9.362	0.000	1079040	39.4	5	9.932	-0.003	135485	16.0
Total Col1Ave (5 peaks):		27.6				Total Col2Ave (5 peaks):		20.7	RPD = 29	
Corrected Ave (4 peaks):		24.6				Corrected Ave (4 peaks):		18.7	RPD = 28	
Aroclor-1260	1	9.967	0.000	9566796	193.7	1	10.260	0.000	2036369	208.4
Aroclor-1260	2	10.283	-0.001	1540353	31.4	2	10.711	0.002	2209727	193.1
Aroclor-1260	3	10.658	-0.001	7448068	63.4	3	10.985	0.000	1398883	66.2
Aroclor-1260	4	11.059	0.002	580097	10.1	4	11.505	0.000	6860604	1197.5
Aroclor-1260	5	11.246	-0.001	39714854	1297.5	NS	---			----
Total Col1Ave (5 peaks):		319.2				Total Col2Ave (4 peaks):		416.3	RPD = 26	
Corrected Ave (4 peaks):		74.7				Corrected Ave (3 peaks):		155.9	RPD = 70*	
Aroclor-1262	1	10.283	0.000	1540353	27.3	1	10.260	0.000	2036369	136.7
Aroclor-1262	2	10.658	0.000	7448068	56.1	2	10.711	0.001	2209727	162.2
Aroclor-1262	3	11.059	0.000	580097	13.8	3	10.985	-0.001	1398883	54.7
Aroclor-1262	4	11.246	-0.001	39714854	673.2	4	11.572	0.005	7134271	429.5
Aroclor-1262	5	11.918	0.000	12822548	283.2	5	12.307	0.001	2273742	283.5
Total Col1Ave (5 peaks):		210.7				Total Col2Ave (5 peaks):		213.3	RPD = 1	
Corrected Ave (4 peaks):		95.1				Corrected Ave (4 peaks):		159.3	RPD = 50*	
Aroclor-1268	1	11.174	-0.001	33104578	260.8	1	11.505	-0.001	6860604	263.8

Aroclor-1268	2	11.246	0.000	39714854	282.9	2	11.572	-0.001	7134271	291.0
Aroclor-1268	3	11.632	-0.001	24428545	234.4	3	11.969	0.000	4550691	234.5
Aroclor-1268	4	12.422	0.000	64120345	218.3	4	12.791	-0.002	11103711	220.9

Total Col1Ave (4 peaks): 249.1 Total Col2Ave (4 peaks): 252.6 RPD = 1

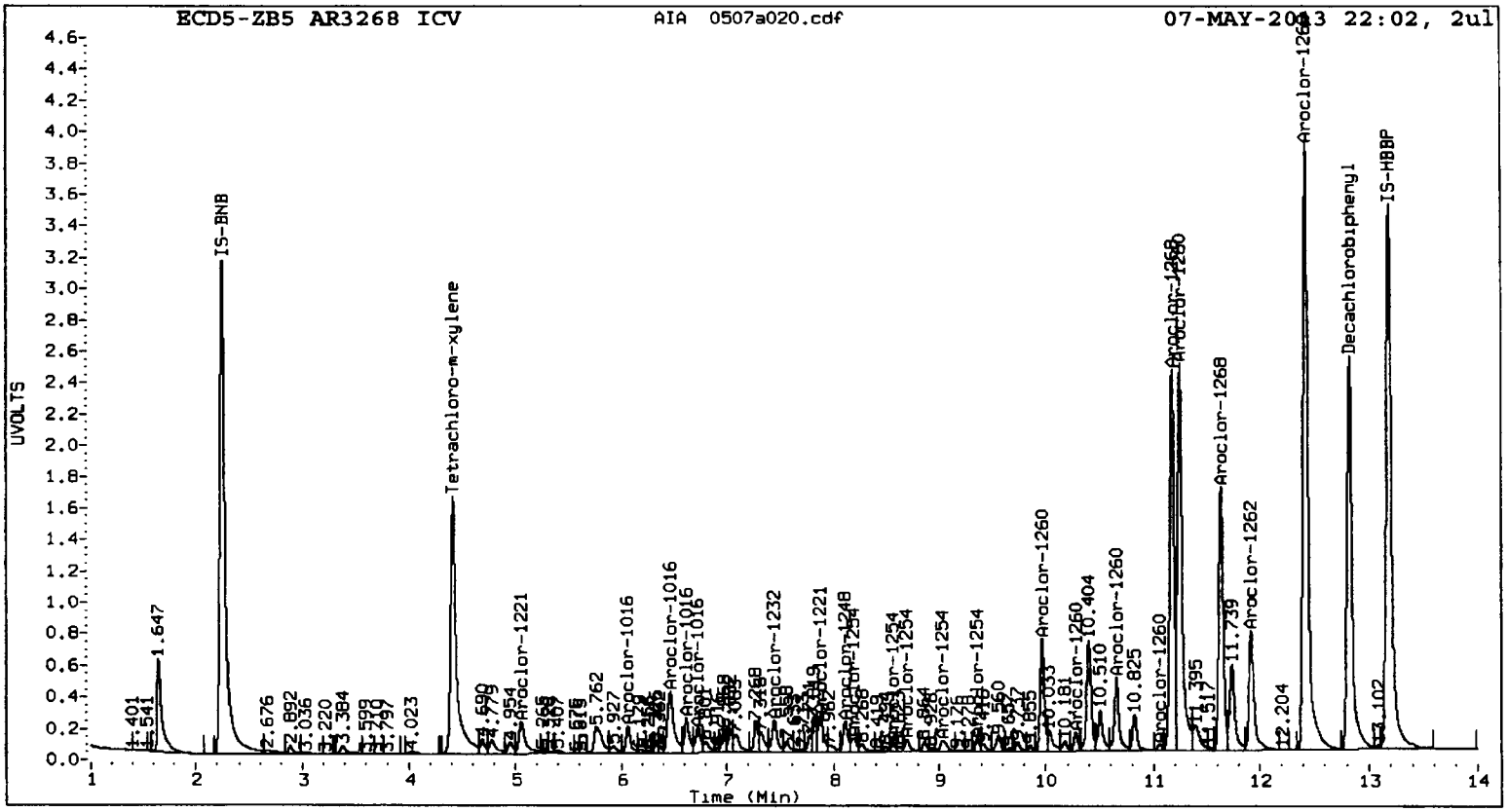
Corrected Ave (3 peaks): 237.8 Corrected Ave (3 peaks): 239.8 RPD = 1

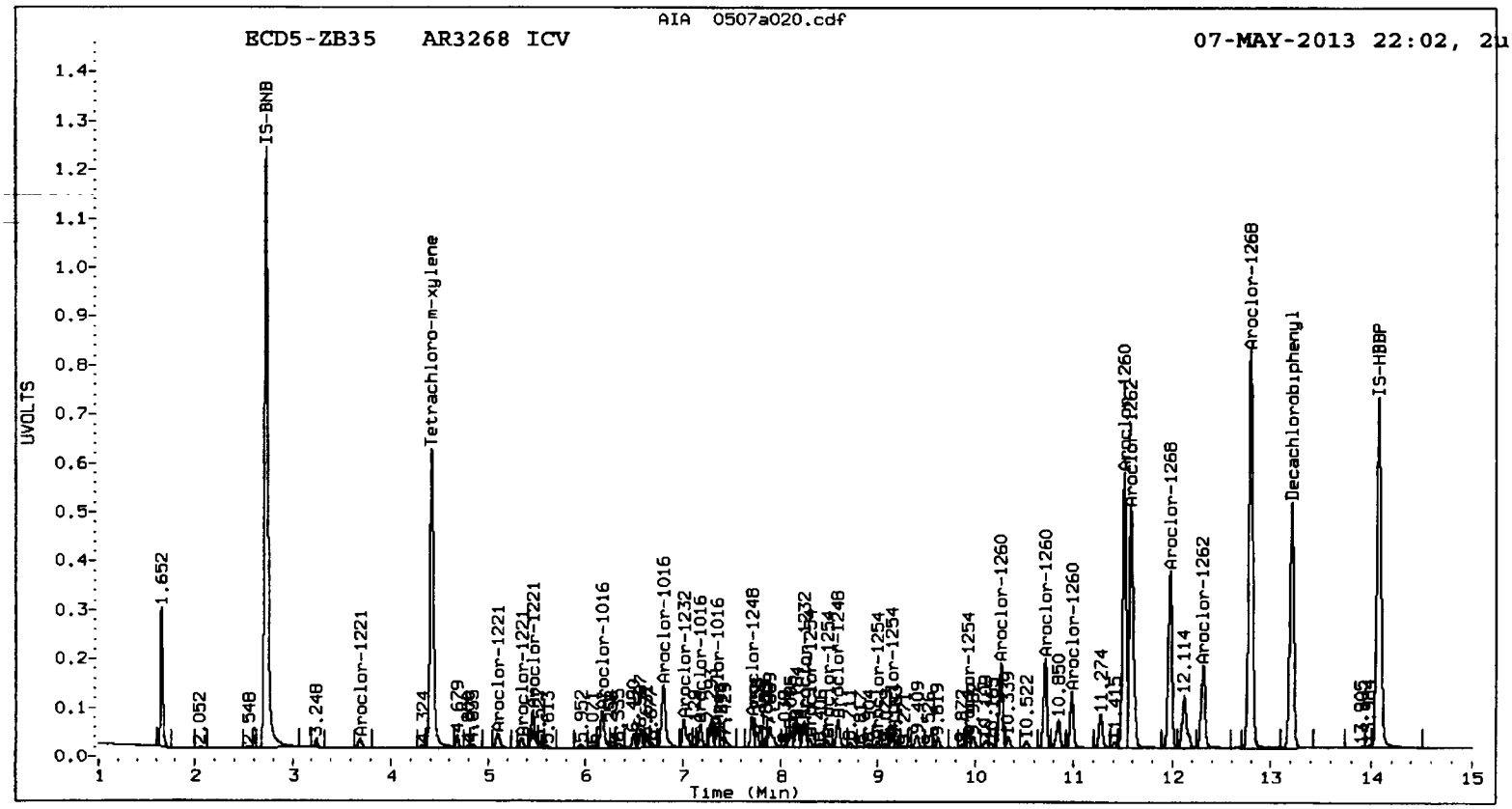
Total PCB Area Col1 (4.511 - 12.728) = 308240732 Col1 Total PCB = 0.5 ppm*

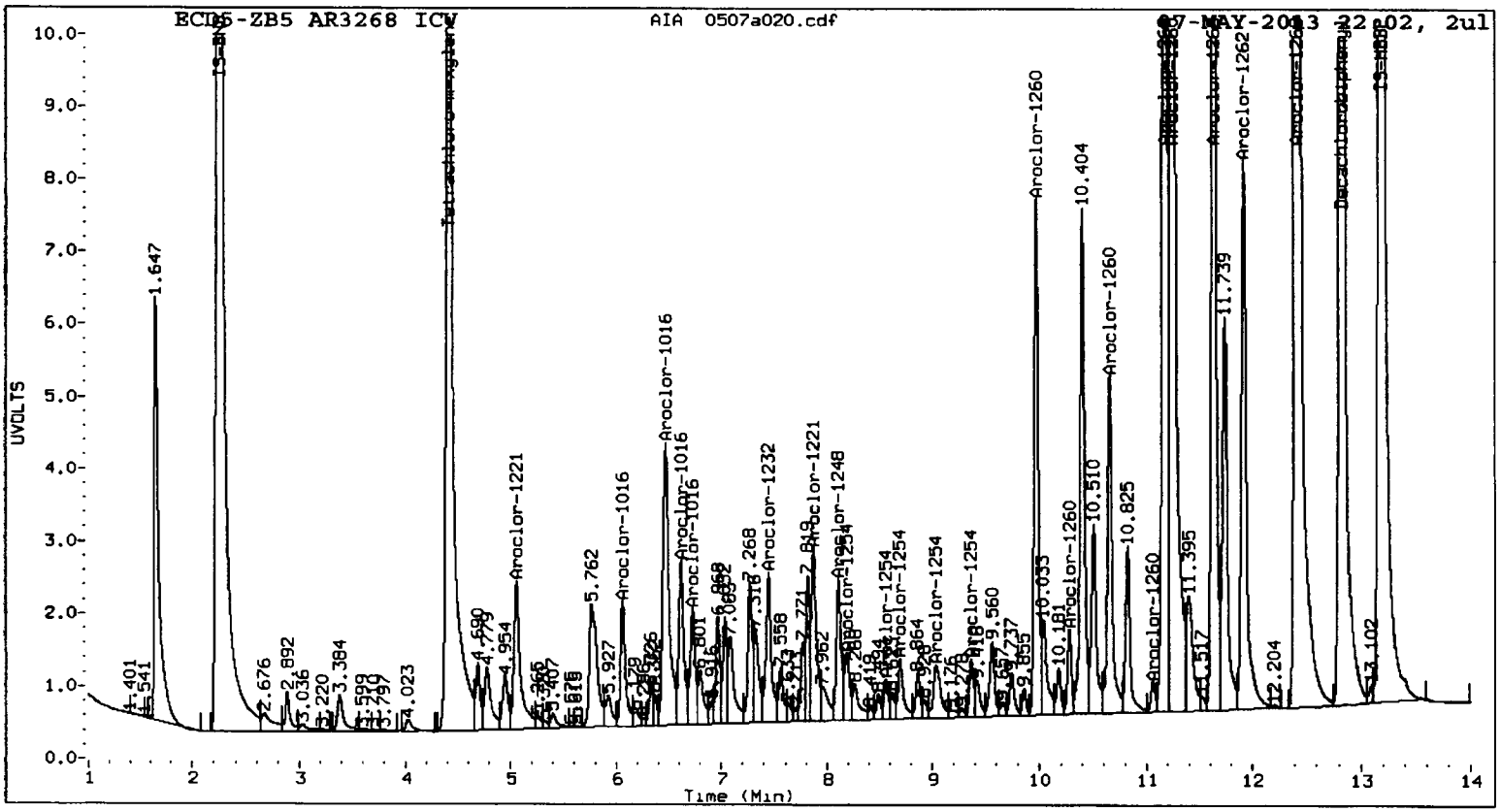
Total PCB Area Col2 (4.512 - 13.105) = 58535775 Col2 Total PCB = 0.4 ppm*

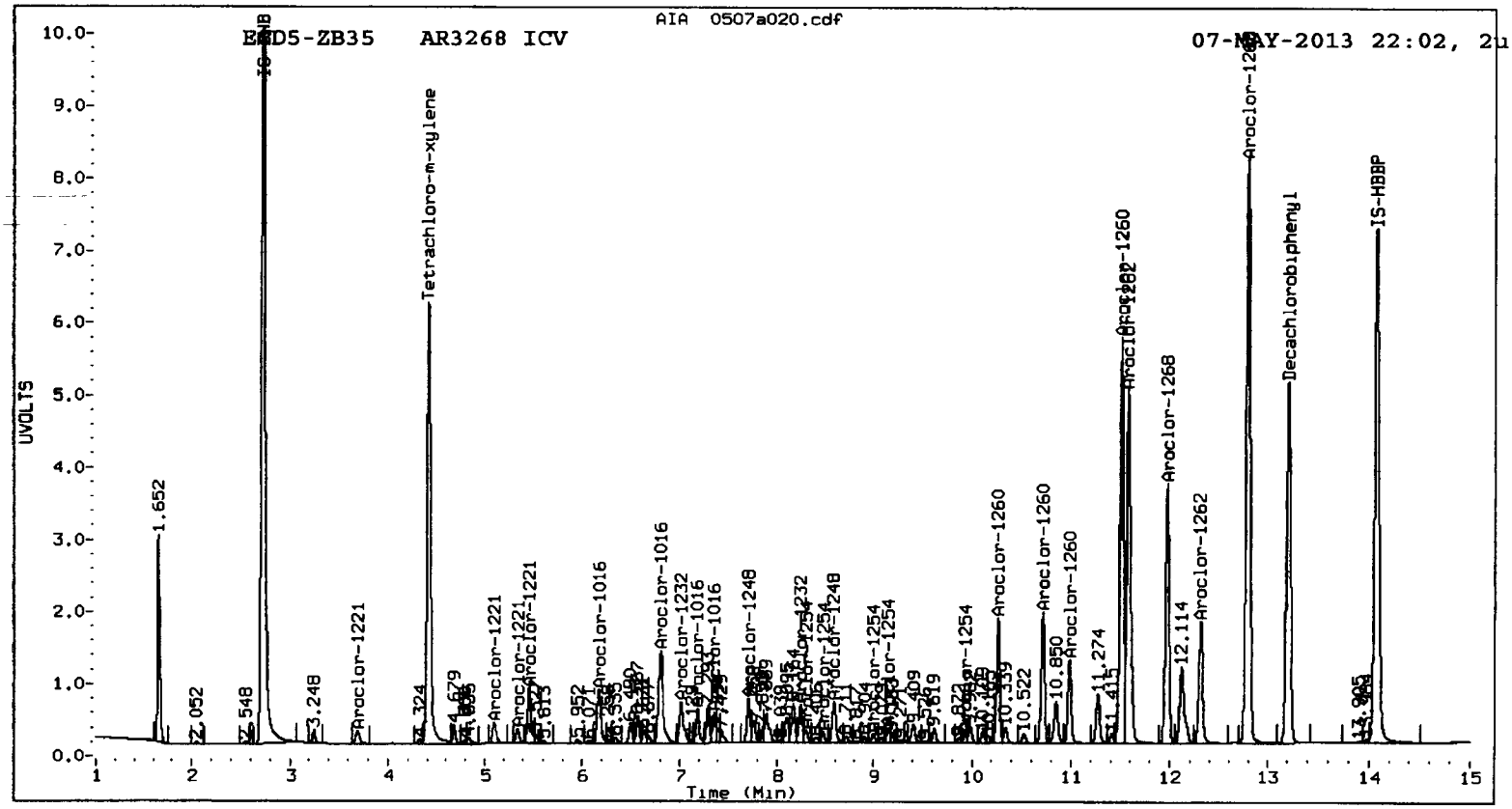
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 AR3268 ICV
AIA 0507a020.cdf
07-MAY-2013 22:02, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


AIA 0507a020.cdf
ECD5-ZB35 AR3268 ICV
07-MAY-2013 22:02, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 AR3268 ICV
AIA 0507a020.cdf
07-MAY-2013 22:02, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR3268 ICV
AIA 0507a020.cdf
07-MAY-2013 22:02, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: 20130507.b/ddt-1.b/0507a021.d ARI ID: 0.1 PPM DDTS

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
8.156	0.000	70648560	8.560	0.000	14556975	0.100	0.100	0.0	2,4-DDE
8.707	0.000	75652806	9.246	0.000	13980580	0.100	0.100	0.0	2,4-DDD
9.210	0.000	80992371	9.713	0.000	35257917	0.100	0.200#	66.7*	2,4-DDT
8.589	0.000	98960725	8.949	0.000	23356763	0.100	0.100	0.0	4,4-DDE
9.163	0.000	76831347	9.713	0.000	35257917	0.100	0.200#	66.7*	4,4-DDD
9.675	0.000	88164078	10.148	0.000	19956133	0.100	0.100	0.0	4,4-DDT

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

05/08/13

7E

8082 DDT BREAKDOWN VERIFICATION SUMMARY

Lab ID: DDT BD

Analysis Date: 07-MAY-2013 22:43 Init. Calib. Date: 07-MAY-2013

GC Column: ZB5 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	8.590	867273
4,4-DDD	9.168	6982253
4,4-DDT	9.676	87775915

Col 1: 4,4-DDT Percent Breakdown = 8.2 %

GC Column: ZB35 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	8.950	168832
4,4-DDD/2,4-DDT	9.719	1384968
4,4-DDT	10.149	20474911

Col 2: 4,4-DDT Percent Breakdown = 7.1 %

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

JA 05/08/13

PCB Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WS90, WS92

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WS90 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: 05/07/13 Analysis Start Date: ~~05~~ 06/15/13 ~~06/17/13~~

	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 / ~~✓~~	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: _____ **Date:** 06/17/13

(Review 2) Reviewer: _____ **Date:** 6/17

Analytical Resources Inc.: Organics Instrument Log

ECD-5 Serial No.: US00034118

Date: 06/15/13 Analysis: PCB Analyst: [illegible]

Column 1 Serial No.: 196398 Column Type: 2B5

Column 2 Serial No.: 182259 Column Type: 2B35

GC Method: PCB2 ICal Date: 05/07/13 Injection Volume: 2µl

IS	Ical/Ccal	ICV
	B161	B182
2006-1	163	B191
	172	192
	173	193
	174	194
	175	
	207	

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID
1	15-JUN-2013 13:16	0615b001.d	1	RINSE
2	15-JUN-2013 13:36	0615b002.d	1	DDT
3	15-JUN-2013 13:56	0615b003.d	1	BD
4	15-JUN-2013 14:16	0615b004.d	1	AR1254
5	15-JUN-2013 14:37	0615b005.d	1	AR1660
6	15-JUN-2013 14:57	0615b006.d	1	WS90MBW1
7	15-JUN-2013 15:17	0615b007.d	1	WS90LCSW1
8	15-JUN-2013 15:37	0615b008.d	1	WS90LCSDW
9	15-JUN-2013 15:57	0615b009.d	1	WS90QLS1
10	15-JUN-2013 16:17	0615b010.d	1	WS90D
11	15-JUN-2013 16:37	0615b011.d	1	WS97A
12	15-JUN-2013 16:57	0615b012.d	1	WT15A
13	15-JUN-2013 17:17	0615b013.d	1	WT15B
14	15-JUN-2013 17:37	0615b014.d	1	WT15C
15	15-JUN-2013 17:58	0615b015.d	1	WT05MBS1
16	15-JUN-2013 18:18	0615b016.d	1	WT05LCSS1
17	15-JUN-2013 18:38	0615b017.d	1	WT05LCSDS
18	15-JUN-2013 18:58	0615b018.d	1	WT05A
19	15-JUN-2013 19:19	0615b019.d	1	AR1248
20	15-JUN-2013 19:39	0615b020.d	1	AR1660
21	15-JUN-2013 19:59	0615b021.d	1	WS93MBW1
22	15-JUN-2013 20:19	0615b022.d	1	WS93LCSW1
23	15-JUN-2013 20:39	0615b023.d	1	WS93QLS1
24	15-JUN-2013 20:59	0615b024.d	1	WS93A
25	15-JUN-2013 21:20	0615b025.d	1	WS93B
26	15-JUN-2013 21:40	0615b026.d	1	WS93C
27	15-JUN-2013 22:00	0615b027.d	1	WS93D
28	15-JUN-2013 22:20	0615b028.d	1	WS93E
29	15-JUN-2013 22:41	0615b029.d	1	WS95A
30	15-JUN-2013 23:01	0615b030.d	1	WS95AMS
31	15-JUN-2013 23:21	0615b031.d	1	WS95AMSD
32	15-JUN-2013 23:42	0615b032.d	1	WS95B
33	16-JUN-2013 00:02	0615b033.d	1	WS95C
34	16-JUN-2013 00:22	0615b034.d	1	WS95D
35	16-JUN-2013 00:43	0615b035.d	1	WS95E
36	16-JUN-2013 01:03	0615b036.d	1	AR1242
37	16-JUN-2013 01:23	0615b037.d	1	AR1660

[illegible] 6/17/13

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

Form 4127F
ECD-5 Daily Run Log

Revision 002
2/2/2011

US90 : 00765

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130507.b/0615-1.b

ARI Job No.: RINS Method: PCB1.m Instrument: ecd5.i Date: 15-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1316	0615b001.d	RINSE		1	NO MANUAL INTEGRATION
1336	0615b002.d	DDT		1	NO MANUAL INTEGRATION
1356	0615b003.d	BD		1	NO MANUAL INTEGRATION
1416	0615b004.d	AR1254		1	NO MANUAL INTEGRATION
1437	0615b005.d	AR1660		1	NO MANUAL INTEGRATION
1457	0615b006.d	WS90MBW1	WS90MBW1	1	NO MANUAL INTEGRATION
1517	0615b007.d	WS90LCSW1	WS90LCSW1	1	NO MANUAL INTEGRATION
1537	0615b008.d	WS90LCSDW1	WS90LCSDW1	1	NO MANUAL INTEGRATION
1557	0615b009.d	WS90QLS1		1	NO MANUAL INTEGRATION
1617	0615b010.d	WS90D	QC-EB-03-2	1	NO MANUAL INTEGRATION
1637	0615b011.d	WS97A	LS431-W-06	1	NO MANUAL INTEGRATION
1657	0615b012.d	WT15A	LTST-W-LSI	1	NO MANUAL INTEGRATION
1717	0615b013.d	WT15B	LTST-W-MH1	1	NO MANUAL INTEGRATION
1737	0615b014.d	WT15C	LTST-W-EFF	1	NO MANUAL INTEGRATION
1758	0615b015.d	WT05MBS1	WT05MBS1	1	NO MANUAL INTEGRATION
1818	0615b016.d	WT05LCSS1	WT05LCSS1	1	NO MANUAL INTEGRATION
1838	0615b017.d	WT05LCSDS1	WT05LCSDS1	1	NO MANUAL INTEGRATION
1858	0615b018.d	WT05A	PF-PA-16-0	1	NO MANUAL INTEGRATION
1919	0615b019.d	AR1248		1	NO MANUAL INTEGRATION
1939	0615b020.d	AR1660		1	NO MANUAL INTEGRATION

1959 0615b021.d WS93MBW1 WS93MBW1 1 NO MANUAL INTEGRATION

Agilent Technologies

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130507.b/0615-1.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2019	0615b022.d	WS93LCSW1	WS93LCSW1	1	NO MANUAL INTEGRATION
2039	0615b023.d	WS93QLS1		1	NO MANUAL INTEGRATION
2059	0615b024.d	WS93A	MW-S30-061	1	NO MANUAL INTEGRATION
2120	0615b025.d	WS93B	MW-S3-0613	1	NO MANUAL INTEGRATION
2140	0615b026.d	WS93C	MW-S4-0613	1	NO MANUAL INTEGRATION
2200	0615b027.d	WS93D	MW-S2-0613	1	NO MANUAL INTEGRATION
2220	0615b028.d	WS93E	MW-S1-0613	1	NO MANUAL INTEGRATION
2241	0615b029.d	WS95A	MW-15-0613	1	NO MANUAL INTEGRATION
2301	0615b030.d	WS95AMS	MW-15-0613	1	NO MANUAL INTEGRATION
2321	0615b031.d	WS95AMSD	MW-15-0613	1	NO MANUAL INTEGRATION
2342	0615b032.d	WS95B	PGG-3-0613	1	NO MANUAL INTEGRATION
0002	0615b033.d	WS95C	PGG-2-0613	1	NO MANUAL INTEGRATION
0022	0615b034.d	WS95D	PGG-6-0613	1	NO MANUAL INTEGRATION
0043	0615b035.d	WS95E	PGG-5-0613	1	NO MANUAL INTEGRATION
0103	0615b036.d	AR1242		1	NO MANUAL INTEGRATION
0123	0615b037.d	AR1660		1	NO MANUAL INTEGRATION

05/29/2013

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0615-1.b/0615b004.d
Data file 2: 20130507.b/0615-2.b/0615b004.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 15-JUN-2013 14:16
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

06/17/13

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
4.407	-0.002	37882760	4.406	-0.002	9096418	39.7	38.6	2.6	Tetrachloro-m-xylen
12.825	0.001	42532113	13.199	-0.001	7516988	37.5	37.1	1.1	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	99.1	96.6
Decachlorobiphenyl	93.7	92.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	61610068	25.8
Hexabromobiphenyl	50004151	75941822	51.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	17406396	17.3
Hexabromobiphenyl	9345340	14092422	50.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	8.189	-0.001	15285503	266.0	1	8.294	-0.001	2112169	250.3
Aroclor-1254	2	8.562	0.000	8925587	235.3	2	8.471	0.000	2622526	251.5
Aroclor-1254	3	8.697	0.000	20645681	261.1	3	8.992	-0.001	2068941	259.0
Aroclor-1254	4	9.050	-0.001	22460464	275.8	4	9.142	-0.001	4291272	250.9
Aroclor-1254	5	9.359	-0.001	8853381	287.5	5	9.928	-0.001	2613449	271.3

Total Col1Ave (5 peaks): 265.2 Total Col2Ave (5 peaks): 256.6 RPD = 3

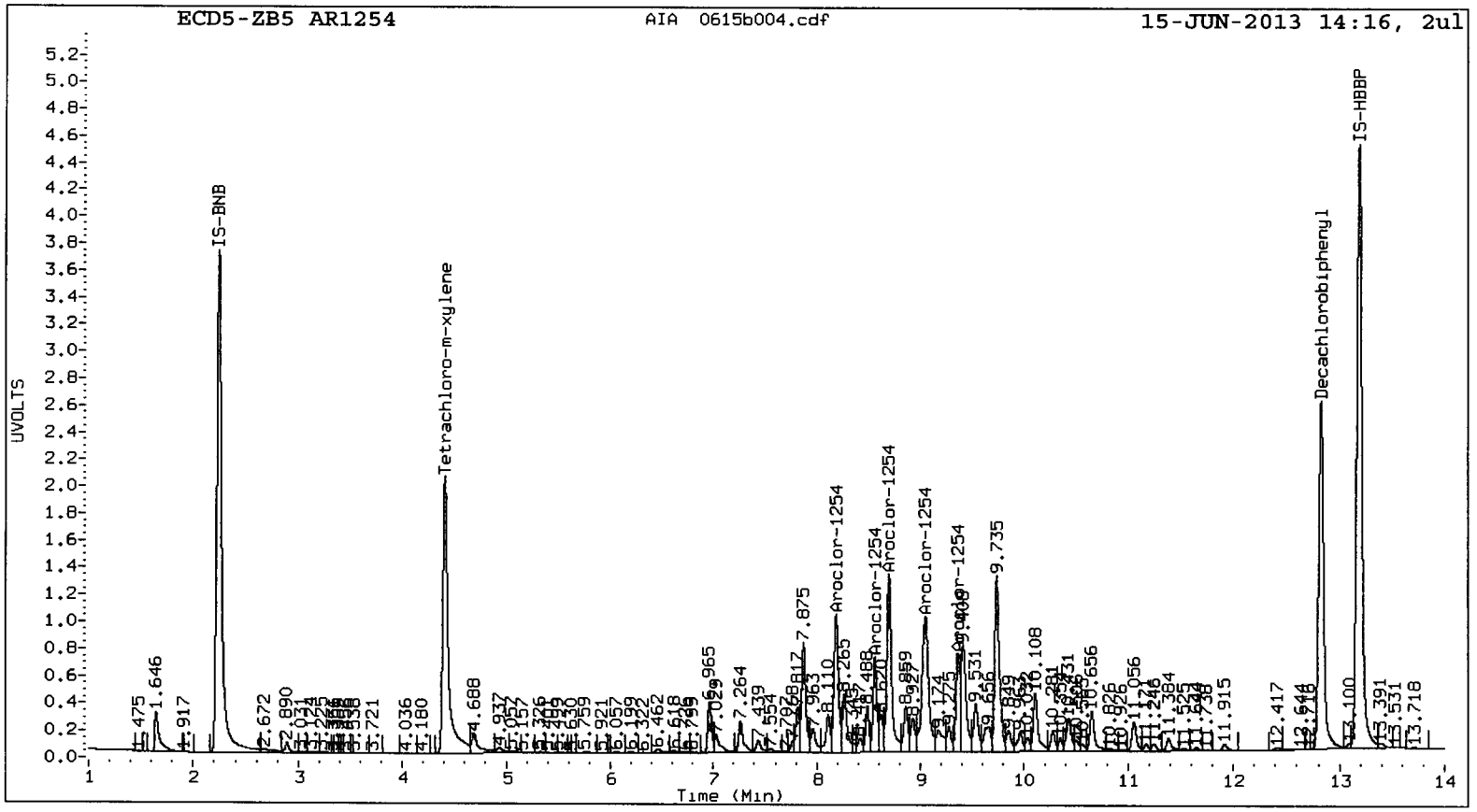
Corrected Ave (4 peaks): 259.6 Corrected Ave (4 peaks): 252.9 RPD = 3

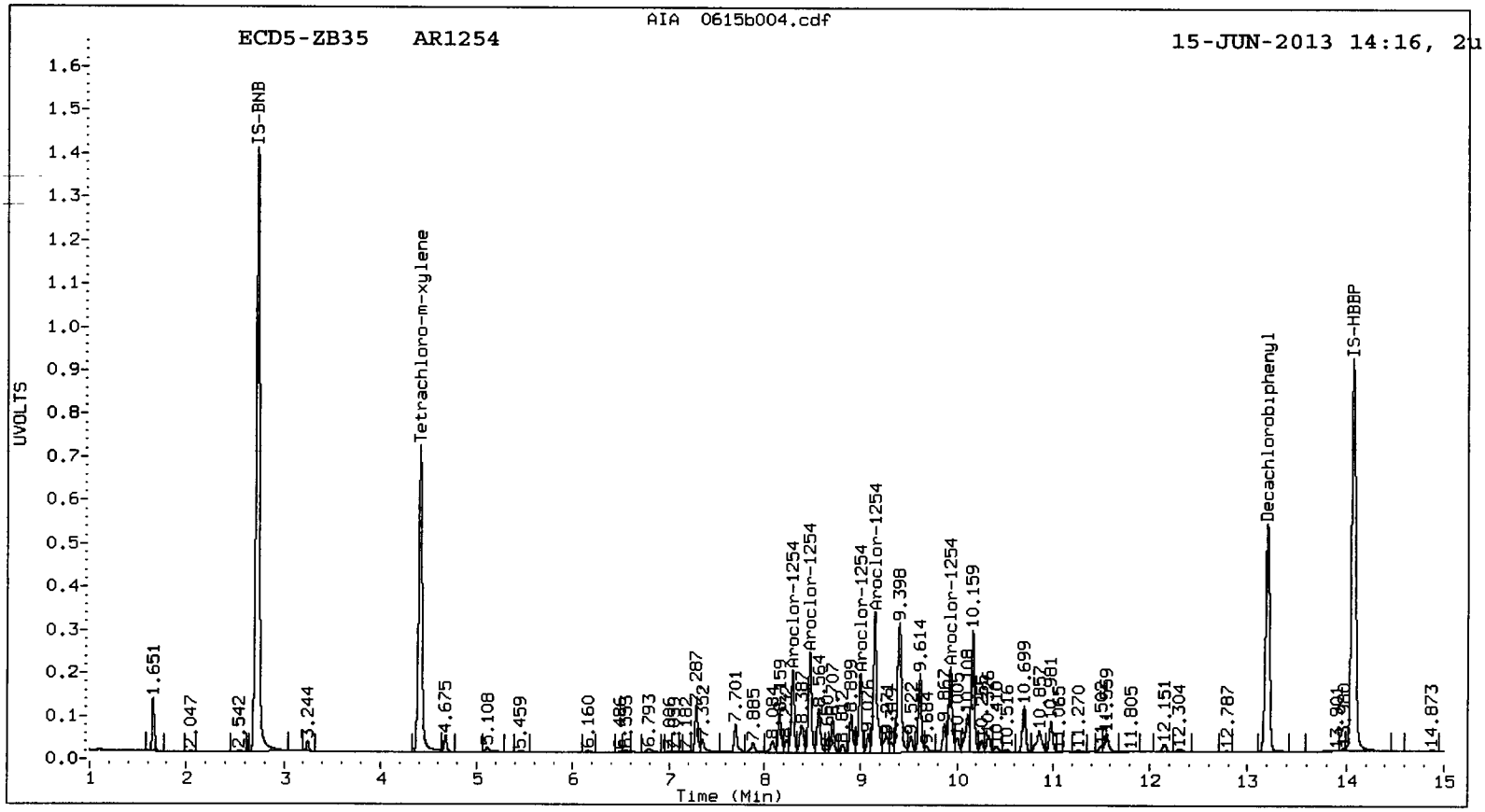
Total PCB Area Col1 (4.509 - 12.725) = 232885934 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.508 - 13.100) = 44046628 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

US90 : 00770


ECD5-ZB5 AR1254
AIA 0615b004.cdf
15-JUN-2013 14:16, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP


AIA 0615b004.cdf
ECD5-ZB35 AR1254
15-JUN-2013 14:16, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0615-1.b/0615b005.d
Data file 2: 20130507.b/0615-2.b/0615b005.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 15-JUN-2013 14:37
Ical Date: 07-MAY-2013
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
4.407	-0.002	34956337	4.408	0.000	8403121	39.5	38.4	2.8	Tetrachloro-m-xylen
12.825	0.000	40327958	13.200	0.000	6961367	38.2	37.1	2.9	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	98.8	96.0
Decachlorobiphenyl	95.6	92.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	57050796	16.5
Hexabromobiphenyl	50004151	70630033	41.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	16175505	9.0
Hexabromobiphenyl	9345340	13031972	39.4

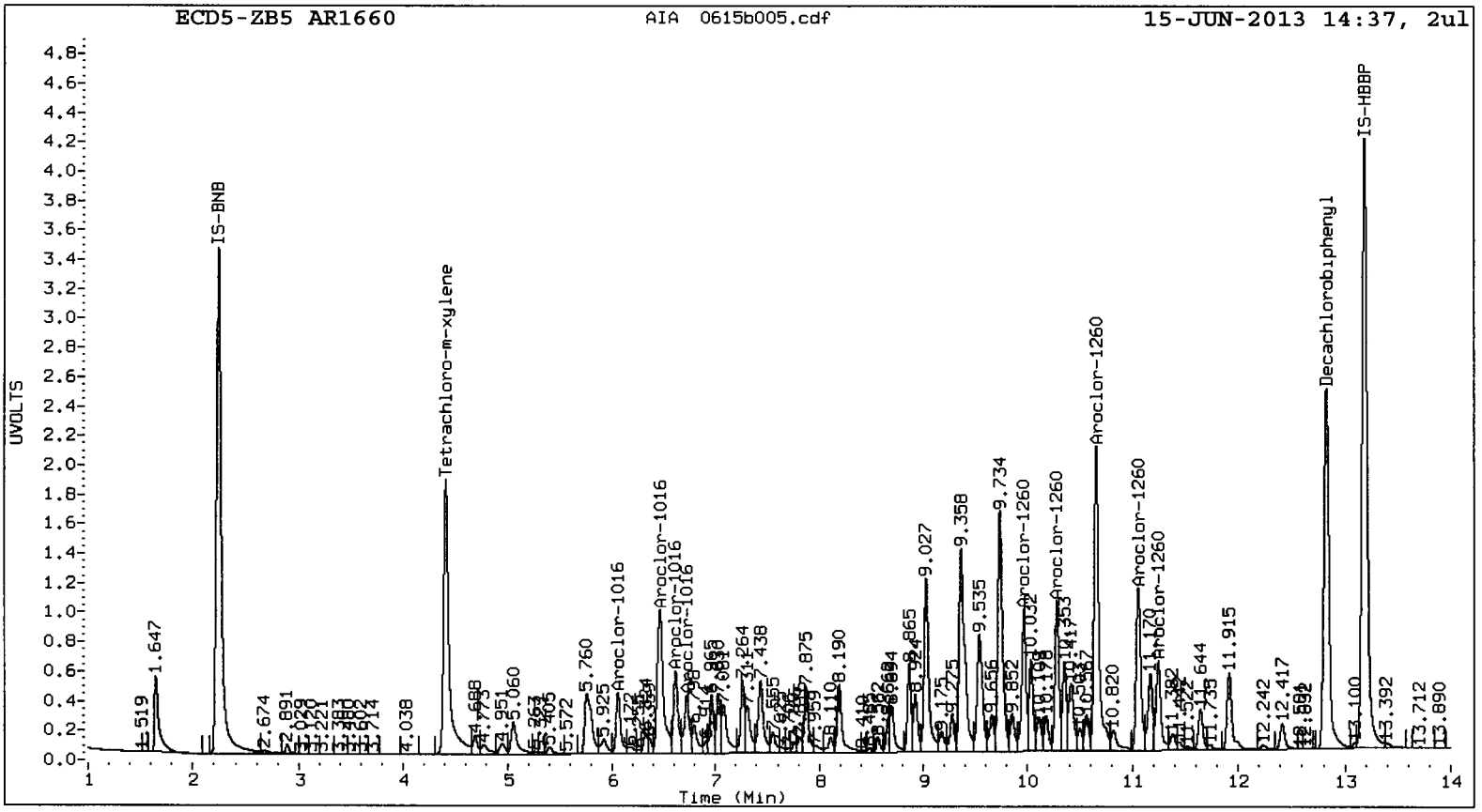
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

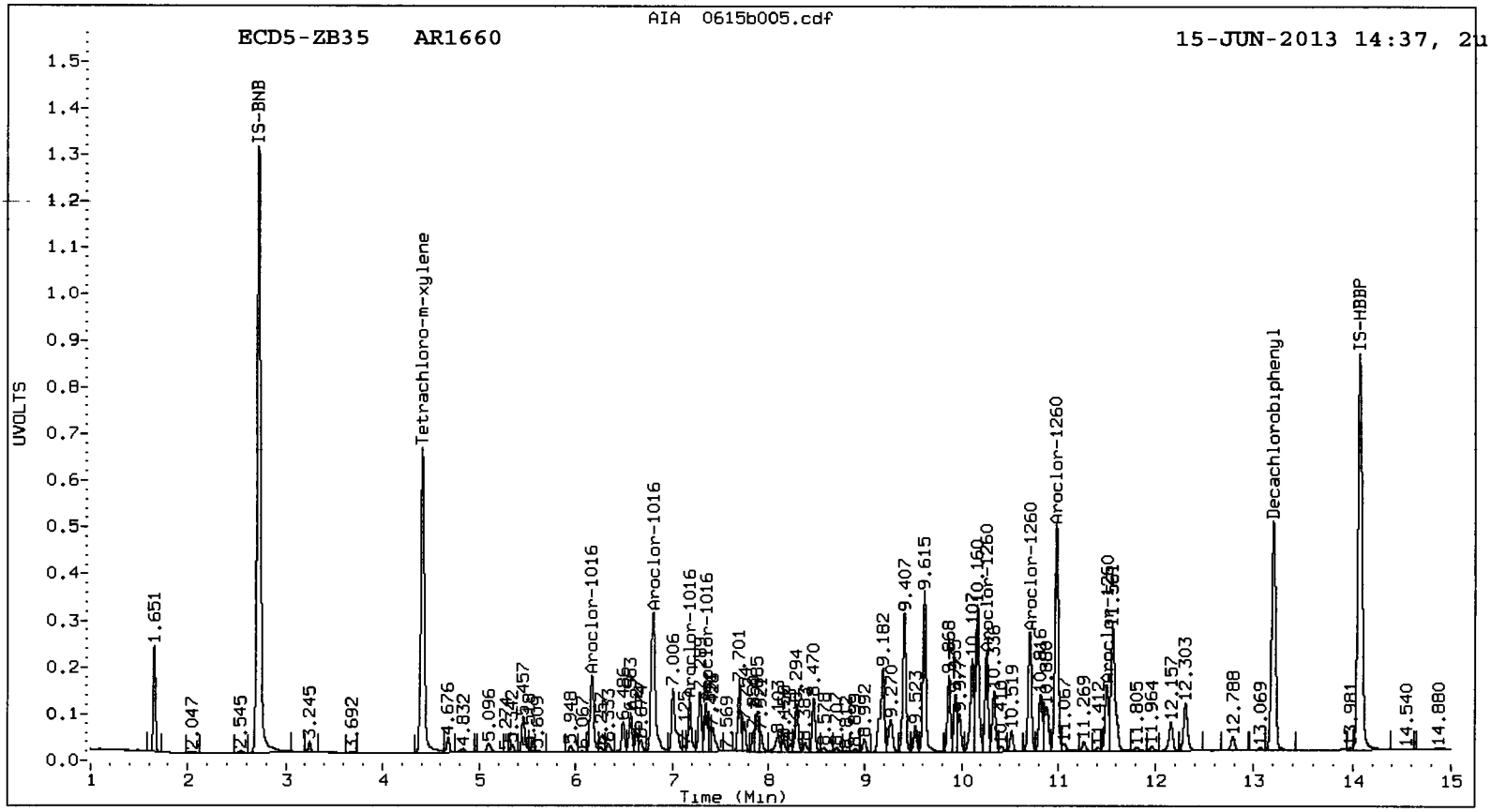
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.057	-0.001	6430843	250.1	1	6.161	0.000	2186374	236.9
Aroclor-1016	2	6.465	-0.002	20130473	254.1	2	6.797	-0.001	4789141	238.7
Aroclor-1016	3	6.614	-0.001	8746238	246.5	3	7.181	-0.002	1260633	240.3
Aroclor-1016	4	6.725	-0.002	6657121	251.0	4	7.353	-0.001	1140845	233.5
Total Col1Ave (4 peaks):					250.4	Total Col2Ave (4 peaks):				237.3 RPD = 5
Corrected Ave (3 peaks):					249.2	Corrected Ave (3 peaks):				236.3 RPD = 5
Aroclor-1260	1	9.964	0.000	13708946	237.0	1	10.256	0.000	2515634	212.8
Aroclor-1260	2	10.280	0.000	13745114	239.6	2	10.706	-0.001	3077131	222.2
Aroclor-1260	3	10.657	0.000	33676804	244.9	3	10.981	-0.001	5955482	233.0
Aroclor-1260	4	11.055	-0.001	17373981	259.3	4	11.502	0.000	1722546	248.6
Aroclor-1260	5	11.245	0.000	9561441	266.8	NS	---			----
Total Col1Ave (5 peaks):					249.5	Total Col2Ave (4 peaks):				229.1 RPD = 9
Corrected Ave (4 peaks):					245.2	Corrected Ave (3 peaks):				222.7 RPD = 10

Total PCB Area Col1 (4.509 - 12.725) = 409619493 Col1 Total PCB = 0.6 ppm*

Total PCB Area Col2 (4.508 - 13.100) = 76451593 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1660
AIA 0615b005.cdf
15-JUN-2013 14:37, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


AIA 0615b005.cdf
ECD5-ZB35 AR1660
15-JUN-2013 14:37, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0615-1.b/0615b006.d
Data file 2: 20130507.b/0615-2.b/0615b006.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WS90MBW1
Client ID: WS90MBW1
Injection Date: 15-JUN-2013 14:57
Ical Date: 07-MAY-2013
Matrix: WATER
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
4.405	-0.004	24323981	4.407	-0.001	5623874	24.1	26.7	10.4	Tetrachloro-m-xylen
12.825	0.000	33225231	13.199	0.000	5593619	32.8	30.9	6.1	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	60.3	66.9
Decachlorobiphenyl	82.0	77.2

6/17/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	65065602	32.8
Hexabromobiphenyl	50004151	67773403	35.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15549398	4.8
Hexabromobiphenyl	9345340	12589759	34.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.063	0.004	57304	2.0	1	6.214	0.053	70632	8.0
Aroclor-1016	2	6.439	-0.028	38993	0.4	2	6.785	-0.013	23339	1.2
Aroclor-1016	3	6.630	0.015	97139	2.4	3	---			0.0
Aroclor-1016	4	6.721	-0.006	308383	10.2	4	7.427	0.072	13967	3.0
	Total Col1Ave (4 peaks):			3.7		Total Col2Ave (3 peaks):			4.0	RPD = 8
	Corrected Ave (3 peaks):			1.6			Corrected Ave: < 3 Peaks			
Aroclor-1221	1	---			0.0	1	3.677	-0.017	5284282	3314.9
Aroclor-1221	2	6.439	-0.030	38993	4.8	2	5.106	0.011	75610	28.3
Aroclor-1221	3	7.875	-0.003	223867	19.5	3	5.366	0.021	1330689	915.8
Aroclor-1221	NS	---			----	4	5.454	-0.006	153267	33.5
	Col1Ave: <3 Quant Peaks						Col2Ave: 1073.1			
Aroclor-1232	1	6.063	0.002	57304	4.8	1	6.214	0.049	70632	17.7
Aroclor-1232	2	6.439	-0.031	38993	1.1	2	6.785	-0.017	23339	2.9
Aroclor-1232	3	7.436	-0.006	51099	2.7	3	6.947	-0.064	41466	12.5
Aroclor-1232	4	7.875	0.001	223867	10.2	4	8.221	-0.018	19081	6.8
	Total Col1Ave (4 peaks):			4.7		Total Col2Ave (4 peaks):			10.0	RPD = 73*
	Corrected Ave (3 peaks):			2.8		Corrected Ave (3 peaks):			7.4	RPD = 90*
Aroclor-1242	1	6.063	0.004	57304	2.4	1	6.214	0.052	70632	10.0
Aroclor-1242	2	6.439	-0.028	38993	0.5	2	6.785	-0.016	23339	1.5
Aroclor-1242	3	6.630	0.014	97139	3.0	3	6.947	-0.060	41466	6.4
Aroclor-1242	4	7.875	0.004	223867	5.7	4	8.221	-0.014	19081	3.5
	Total Col1Ave (4 peaks):			2.9		Total Col2Ave (4 peaks):			5.3	RPD = 59*
	Corrected Ave (3 peaks):			2.0		Corrected Ave (3 peaks):			3.8	RPD = 62*
Aroclor-1248	1	6.439	-0.023	38993	0.9	1	6.785	-0.009	23339	2.4
Aroclor-1248	2	7.436	-0.002	51099	1.0	2	7.685	-0.016	32838	4.1
Aroclor-1248	3	7.875	0.006	223867	3.4	3	8.221	-0.013	19081	2.3
Aroclor-1248	4	8.100	-0.006	124160	2.7	4	8.573	-0.006	12239	1.1
	Total Col1Ave (4 peaks):			2.0		Total Col2Ave (4 peaks):			2.5	RPD = 21
	Corrected Ave (3 peaks):			1.5		Corrected Ave (3 peaks):			1.9	RPD = 24
Aroclor-1254	1	8.189	-0.001	165276	2.7	1	8.221	-0.074	19081	2.5
Aroclor-1254	2	8.562	0.000	90946	2.3	2	---			0.0
Aroclor-1254	3	8.696	-0.001	191472	2.3	3	8.993	0.000	541285	75.9
Aroclor-1254	4	9.044	-0.006	309815	3.6	4	9.142	-0.002	58888	3.9
Aroclor-1254	5	9.407	0.048	564342	17.4	5	9.928	-0.002	11454	1.3
	Total Col1Ave (5 peaks):			5.6		Total Col2Ave (4 peaks):			20.9	RPD = 115*
	Corrected Ave (4 peaks):			2.7		Corrected Ave (3 peaks):			2.6	RPD = 6
Aroclor-1260	1	9.959	-0.005	259734	4.7	1	10.304	0.047	26153	2.3
Aroclor-1260	2	10.283	0.003	173604	3.2	2	10.701	-0.006	13236	1.0
Aroclor-1260	3	10.697	0.040	789219	6.0	3	10.980	-0.002	14322	0.6
Aroclor-1260	4	11.054	-0.003	196860	3.1	4	11.453	-0.049	84623	12.6
Aroclor-1260	5	11.247	0.002	155724	4.5	NS	---			----
	Total Col1Ave (5 peaks):			4.3		Total Col2Ave (4 peaks):			4.1	RPD = 4
	Corrected Ave (4 peaks):			3.9		Corrected Ave (3 peaks):			1.3	RPD = 100*
Aroclor-1262	1	10.283	0.000	173604	2.7	1	10.304	0.044	26153	1.5
Aroclor-1262	2	10.697	0.038	789219	5.3	2	10.701	-0.009	13236	0.8
Aroclor-1262	3	11.054	-0.006	196860	4.2	3	10.980	-0.005	14322	0.5
Aroclor-1262	4	11.247	-0.001	155724	2.3	4	11.559	-0.008	14545	0.7
Aroclor-1262	5	11.897	-0.021	968183	19.0	5	12.337	0.031	37885	4.0
	Total Col1Ave (5 peaks):			6.7		Total Col2Ave (5 peaks):			1.5	RPD = 126*
	Corrected Ave (4 peaks):			3.6		Corrected Ave (4 peaks):			0.9	RPD = 121*
Aroclor-1268	1	11.165	-0.010	150501	1.1	1	11.559	0.053	14545	0.5
Aroclor-1268	2	11.247	0.001	155724	1.0	2	---			0.0

Aroclor-1268 3	11.639	0.006	301152	2.6	3	11.966	-0.003	16096	0.7
Aroclor-1268 4	12.418	-0.004	306028	0.9	4	12.722	-0.070	14456	0.2

Total Col1Ave (4 peaks): 1.4 Total Col2Ave (3 peaks): 0.5 RPD = 97*

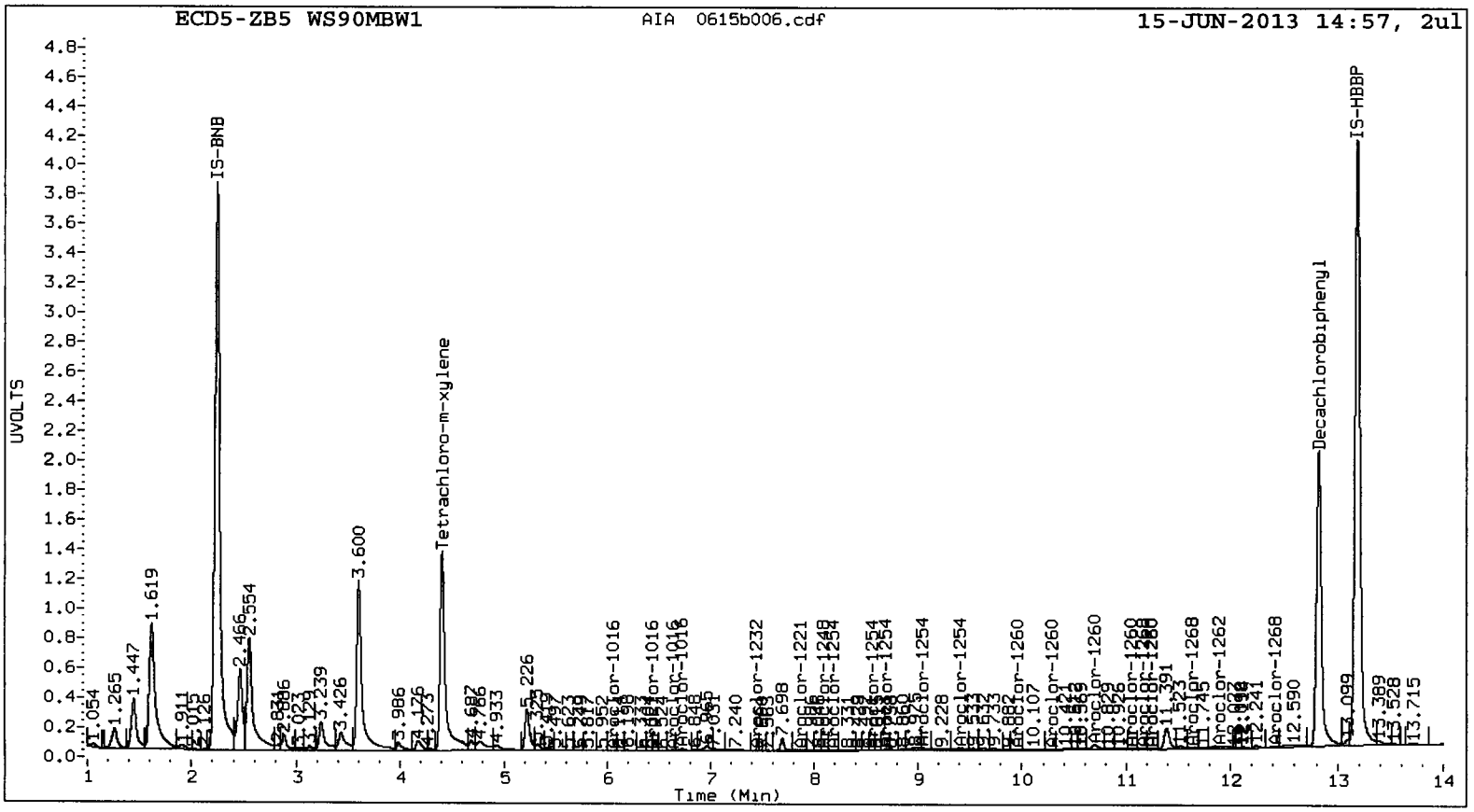
Corrected Ave (3 peaks): 1.0 Corrected Ave: < 3 Peaks

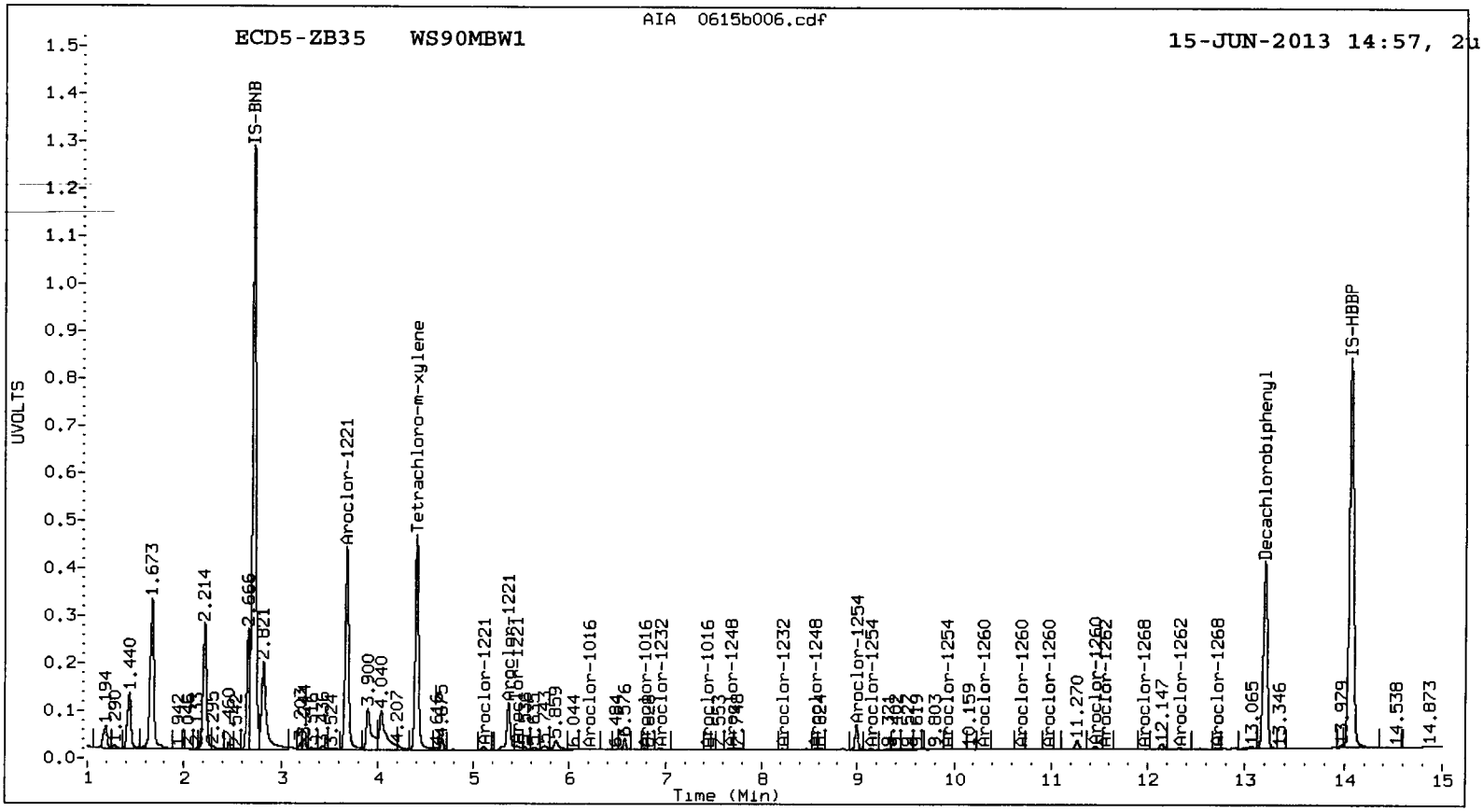
Total PCB Area Col1 (4.509 - 12.725) = 28472476 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (4.508 - 13.100) = 4516484 Col2 Total PCB = 0.0 ppm*

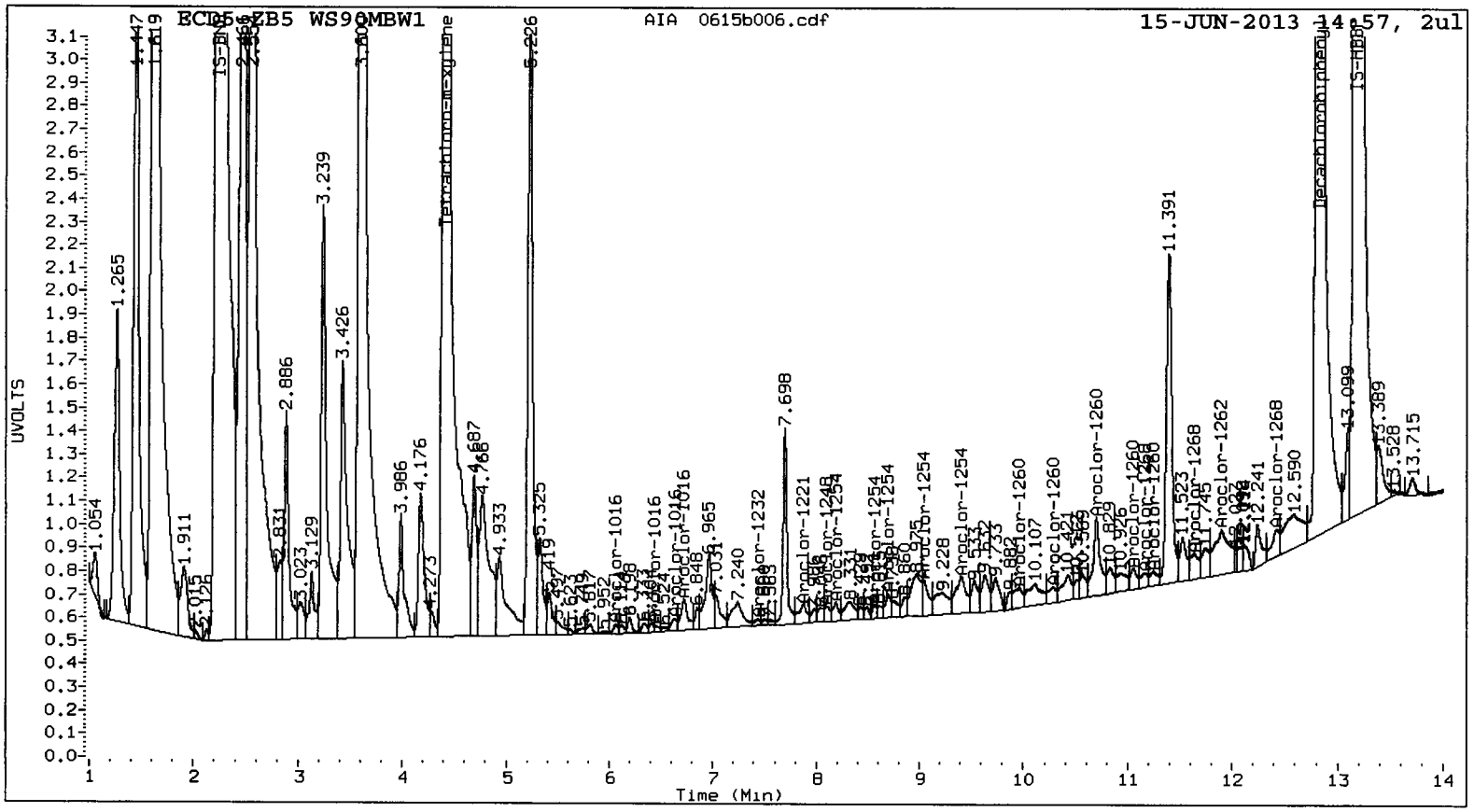
* Quantitated against AR1660 0.25ppm in Ical

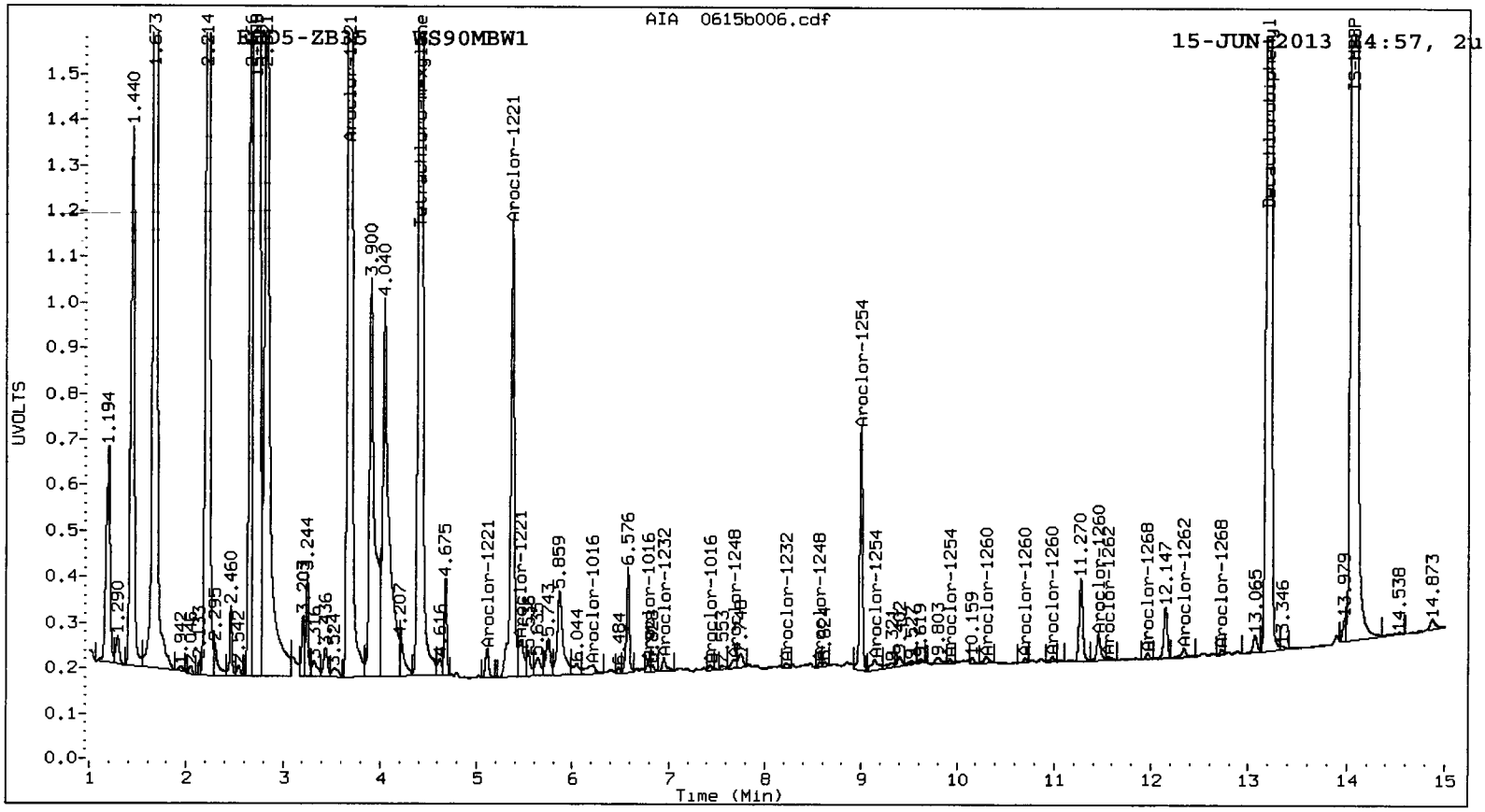
PCB-Form 10 Mod.


ECD5-ZB5 WS90MBW1
AIA 0615b006.cdf
15-JUN-2013 14:57, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP


AIA 0615b006.cdf
ECD5-ZB35 WS90MBW1
15-JUN-2013 14:57, 2u
UVOLTS
Time (Min)
IS-BNB
Aroclor-1221
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP

USGS : 69778


ECD5-ZB5 WS90MBW1
AIA 0615b006.cdf
15-JUN-2013 14:57, 2ul
UVOLTS
Time (Min)
1.054
1.265
1.447
1.619
1.911
2.886
3.239
3.426
3.986
4.176
4.687
4.933
5.226
7.698
11.391
13.099
13.389
13.528
13.715


AIA 0615b006.cdf
15-JUN-2013 14:57, 2u
UVOLTS
Time (Min)
1.194
1.290
1.440
1.673
2.214
2.295
2.460
3.203
3.244
3.900
4.040
4.207
4.675
5.743
5.859
6.044
6.576
Aroclor-1221
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
11.270
12.147
13.065
13.346
13.979
14.538
14.873

4699:69770

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0615-1.b/0615b007.d
Data file 2: 20130507.b/0615-2.b/0615b007.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WS90LCSW1
Client ID: WS90LCSW1
Injection Date: 15-JUN-2013 15:17
Ical Date: 07-MAY-2013
Matrix: WATER
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
4.407	-0.002	21789261	4.408	0.000	5268924	24.0	23.8	0.7	Tetrachloro-m-xylen
12.824	0.000	31152216	13.199	-0.001	5235307	29.7	28.1	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	60.0	59.6
Decachlorobiphenyl	74.3	70.3

6/17/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	58566639	19.6
Hexabromobiphenyl	50004151	70212962	40.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	16356459	10.2
Hexabromobiphenyl	9345340	12941410	38.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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-1016	1	6.056	-0.002	2277552	86.3	1	6.161	-0.001	739344	79.2
Aroclor-1016	2	6.464	-0.002	6791245	83.5	2	6.796	-0.002	1620565	79.9
Aroclor-1016	3	6.613	-0.002	3006569	82.5	3	7.180	-0.002	430204	81.1
Aroclor-1016	4	6.724	-0.003	2373913	87.2	4	7.353	-0.002	398069	80.6
Total Col1Ave (4 peaks):					84.9	Total Col2Ave (4 peaks):				80.2 RPD = 6
Corrected Ave (3 peaks):					84.1	Corrected Ave (3 peaks):				79.9 RPD = 5
Aroclor-1221	1	5.059	-0.005	1380269	57.8	1	3.678	-0.016	948403	565.6
Aroclor-1221	2	6.464	-0.004	6791245	930.2	2	5.102	0.007	122709	43.7
Aroclor-1221	3	7.874	-0.005	2352891	228.2	3	5.365	0.020	356283	233.1
Aroclor-1221	NS	---			----	4	5.457	-0.004	319612	66.5
Total Col1Ave (3 peaks):					405.4	Total Col2Ave (4 peaks):				227.2 RPD = 56*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				114.4
Aroclor-1232	1	6.056	-0.004	2277552	210.0	1	6.161	-0.005	739344	176.1
Aroclor-1232	2	6.464	-0.005	6791245	204.5	2	6.796	-0.005	1620565	193.4
Aroclor-1232	3	7.437	-0.004	2909198	168.6	3	7.005	-0.006	679672	194.5
Aroclor-1232	4	7.874	0.000	2352891	118.7	4	8.233	-0.006	71938	24.5
Total Col1Ave (4 peaks):					175.4	Total Col2Ave (4 peaks):				147.1 RPD = 18
Corrected Ave (3 peaks):					163.9	Corrected Ave (3 peaks):				131.3 RPD = 22
Aroclor-1242	1	6.056	-0.002	2277552	108.0	1	6.161	-0.001	739344	99.2
Aroclor-1242	2	6.464	-0.002	6791245	105.0	2	6.796	-0.005	1620565	99.0
Aroclor-1242	3	6.613	-0.002	3006569	104.2	3	7.005	-0.003	679672	99.4
Aroclor-1242	4	7.874	0.003	2352891	66.0	4	8.233	-0.002	71938	12.6
Total Col1Ave (4 peaks):					95.8	Total Col2Ave (4 peaks):				77.5 RPD = 21
Corrected Ave (3 peaks):					91.7	Corrected Ave (3 peaks):				70.3 RPD = 26
Aroclor-1248	1	6.464	0.002	6791245	164.8	1	6.796	0.003	1620565	158.1
Aroclor-1248	2	7.437	-0.001	2909198	62.8	2	7.700	0.000	607246	71.4
Aroclor-1248	3	7.874	0.004	2352891	39.9	3	8.233	-0.001	71938	8.2
Aroclor-1248	4	8.108	0.003	497531	12.1	4	8.577	-0.002	46519	4.1
Total Col1Ave (4 peaks):					69.9	Total Col2Ave (4 peaks):				60.5 RPD = 14
Corrected Ave (3 peaks):					38.3	Corrected Ave (3 peaks):				27.9 RPD = 31
Aroclor-1254	1	8.189	0.000	2725353	49.9	1	8.294	-0.001	391575	49.4
Aroclor-1254	2	8.559	-0.003	539402	15.0	2	8.470	-0.001	441611	45.1
Aroclor-1254	3	8.694	-0.004	1828417	24.3	3	8.993	0.000	448000	59.7
Aroclor-1254	4	9.026	-0.024	6887983	89.0	4	9.182	0.038	969599	60.3
Aroclor-1254	5	9.357	-0.002	9630820	329.0	5	9.934	0.004	495054	54.7
Total Col1Ave (5 peaks):					101.4	Total Col2Ave (5 peaks):				53.8 RPD = 61*
Corrected Ave (4 peaks):					44.5	Corrected Ave (4 peaks):				52.2 RPD = 16
Aroclor-1260	1	9.963	-0.001	4965878	86.4	1	10.256	-0.001	884122	75.3
Aroclor-1260	2	10.280	-0.001	4946807	86.8	2	10.705	-0.001	1086300	79.0
Aroclor-1260	3	10.655	-0.001	12309049	90.0	3	10.981	-0.001	2082305	82.0
Aroclor-1260	4	11.055	-0.002	6357233	95.5	4	11.501	-0.001	617740	89.8
Aroclor-1260	5	11.244	-0.001	3296754	92.5	NS	---			----
Total Col1Ave (5 peaks):					90.2	Total Col2Ave (4 peaks):				81.5 RPD = 10
Corrected Ave (4 peaks):					88.9	Corrected Ave (3 peaks):				78.8 RPD = 12
Aroclor-1262	1	10.280	-0.003	4946807	75.2	1	10.256	-0.004	884122	49.4
Aroclor-1262	2	10.655	-0.003	12309049	79.7	2	10.705	-0.005	1086300	66.4
Aroclor-1262	3	11.055	-0.005	6357233	129.9	3	10.981	-0.004	2082305	67.8
Aroclor-1262	4	11.244	-0.003	3296754	48.0	4	11.560	-0.007	1429413	71.6
Aroclor-1262	5	11.914	-0.004	2887698	54.8	5	12.303	-0.003	498561	51.7
Total Col1Ave (5 peaks):					77.5	Total Col2Ave (5 peaks):				61.4 RPD = 23
Corrected Ave (4 peaks):					64.4	Corrected Ave (4 peaks):				58.8 RPD = 9
Aroclor-1268	1	11.170	-0.005	2744570	18.6	1	11.501	-0.006	617740	19.8

Aroclor-1268	2	11.244	-0.002	3296754	20.2	2	11.560	-0.012	1429413	48.5
Aroclor-1268	3	11.644	0.011	1513177	12.5	3	11.965	-0.004	48830	2.1
Aroclor-1268	4	12.416	-0.005	978442	2.9	4	12.787	-0.005	128600	2.1

Total Col1Ave (4 peaks): 13.5 Total Col2Ave (4 peaks): 18.1 RPD = 29

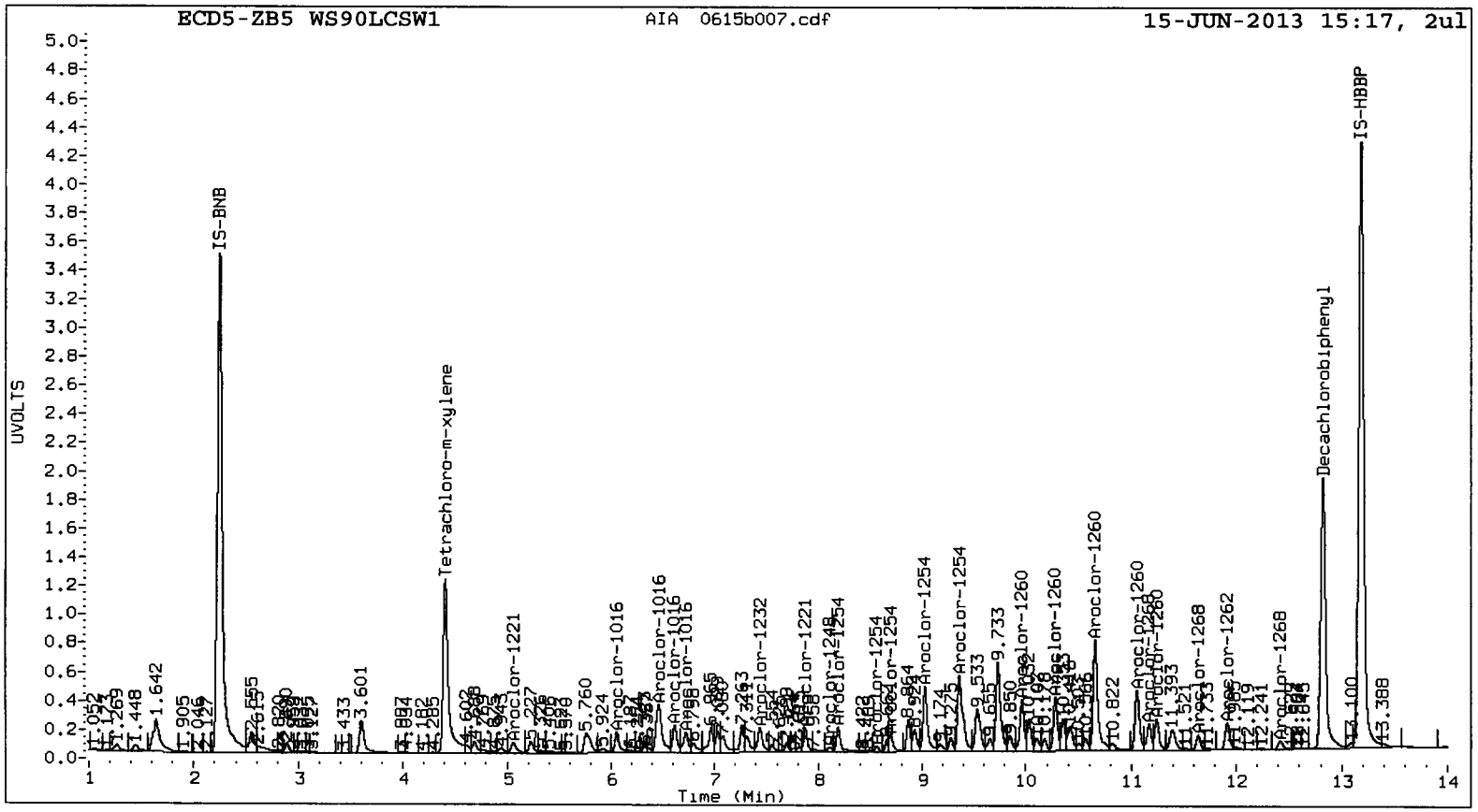
Corrected Ave (3 peaks): 11.3 Corrected Ave (3 peaks): 8.0 RPD = 34

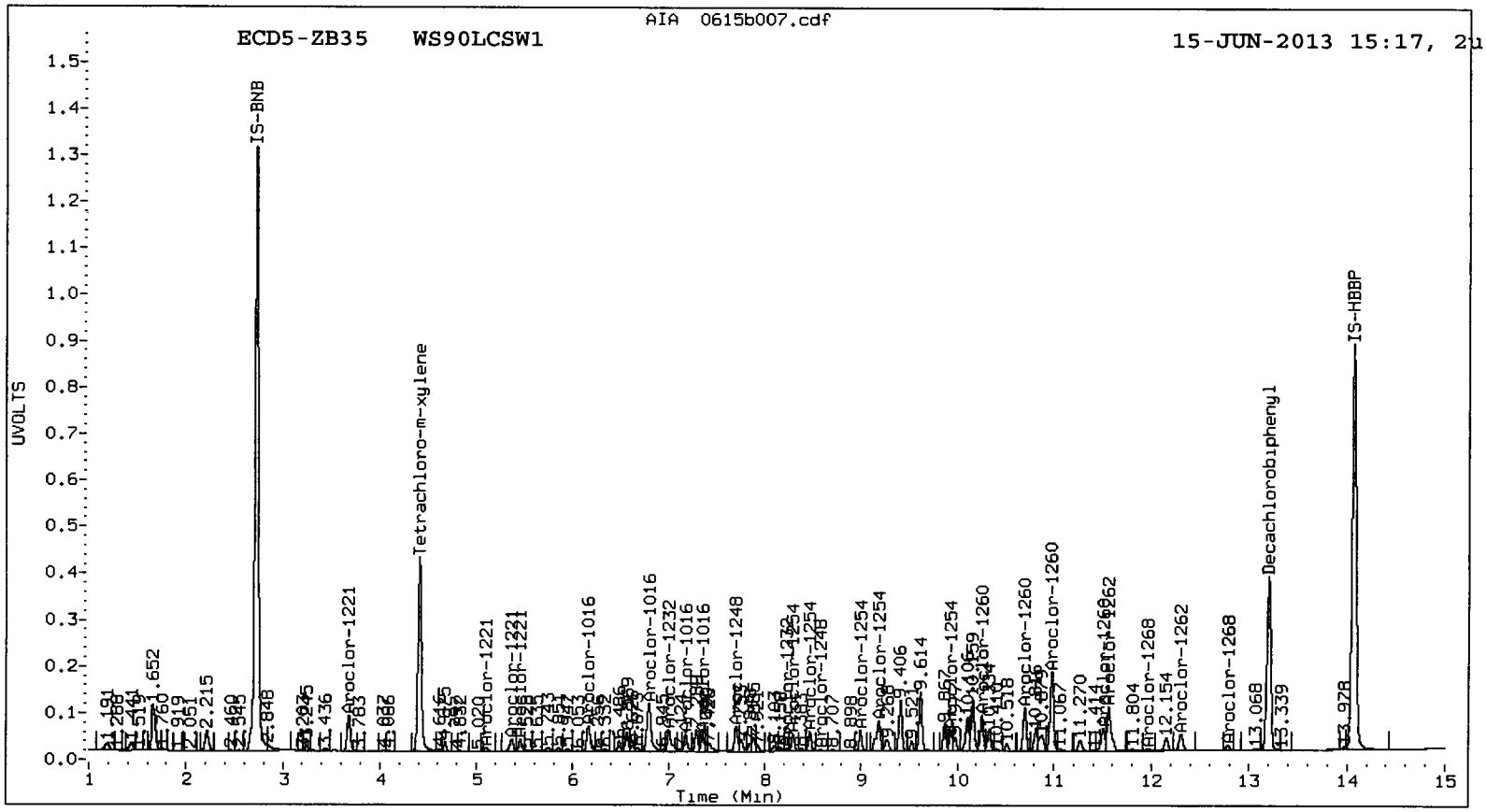
Total PCB Area Col1 (4.509 - 12.725) = 153950791 Col1 Total PCB = 0.2 ppm*

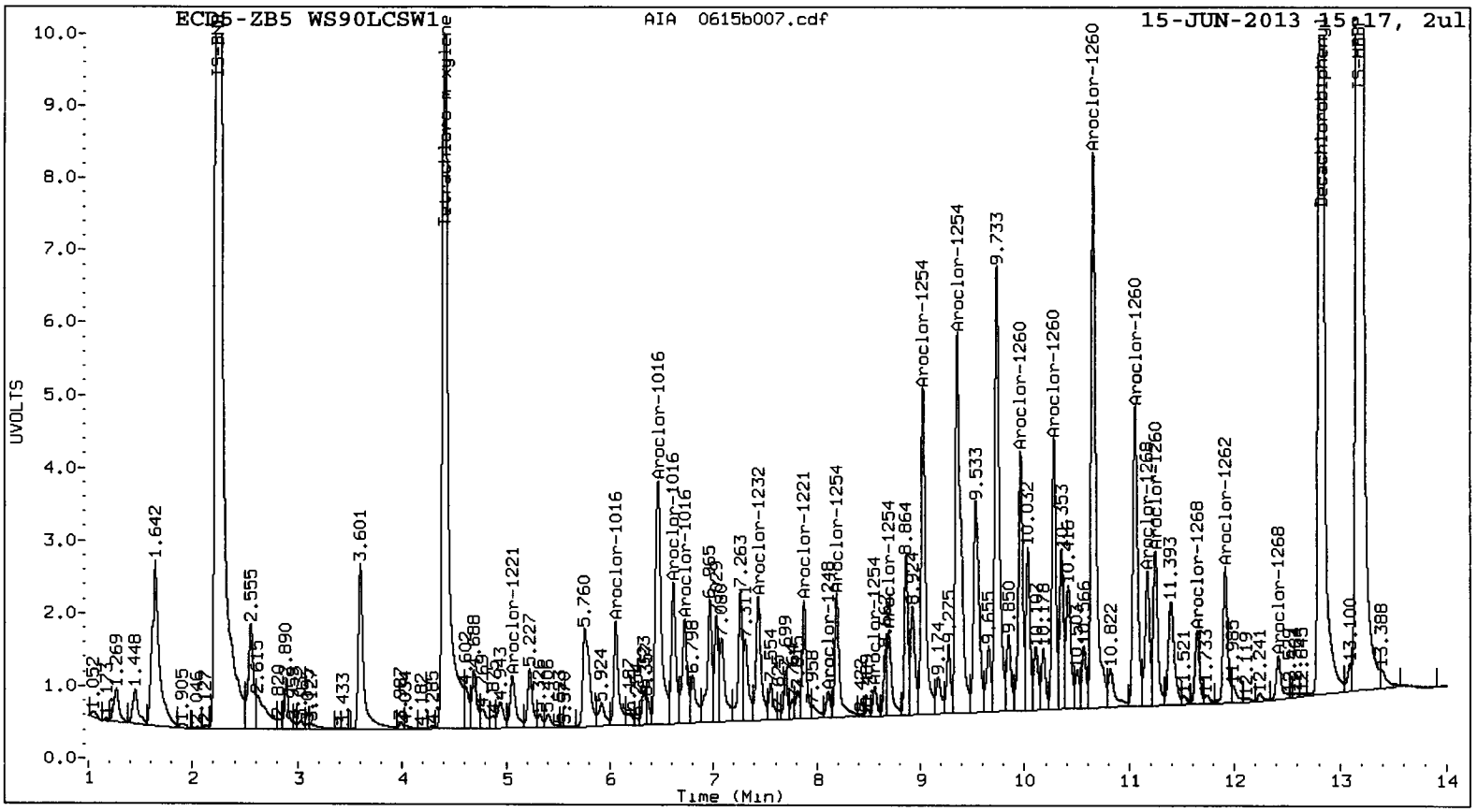
Total PCB Area Col2 (4.508 - 13.100) = 28192842 Col2 Total PCB = 0.2 ppm*

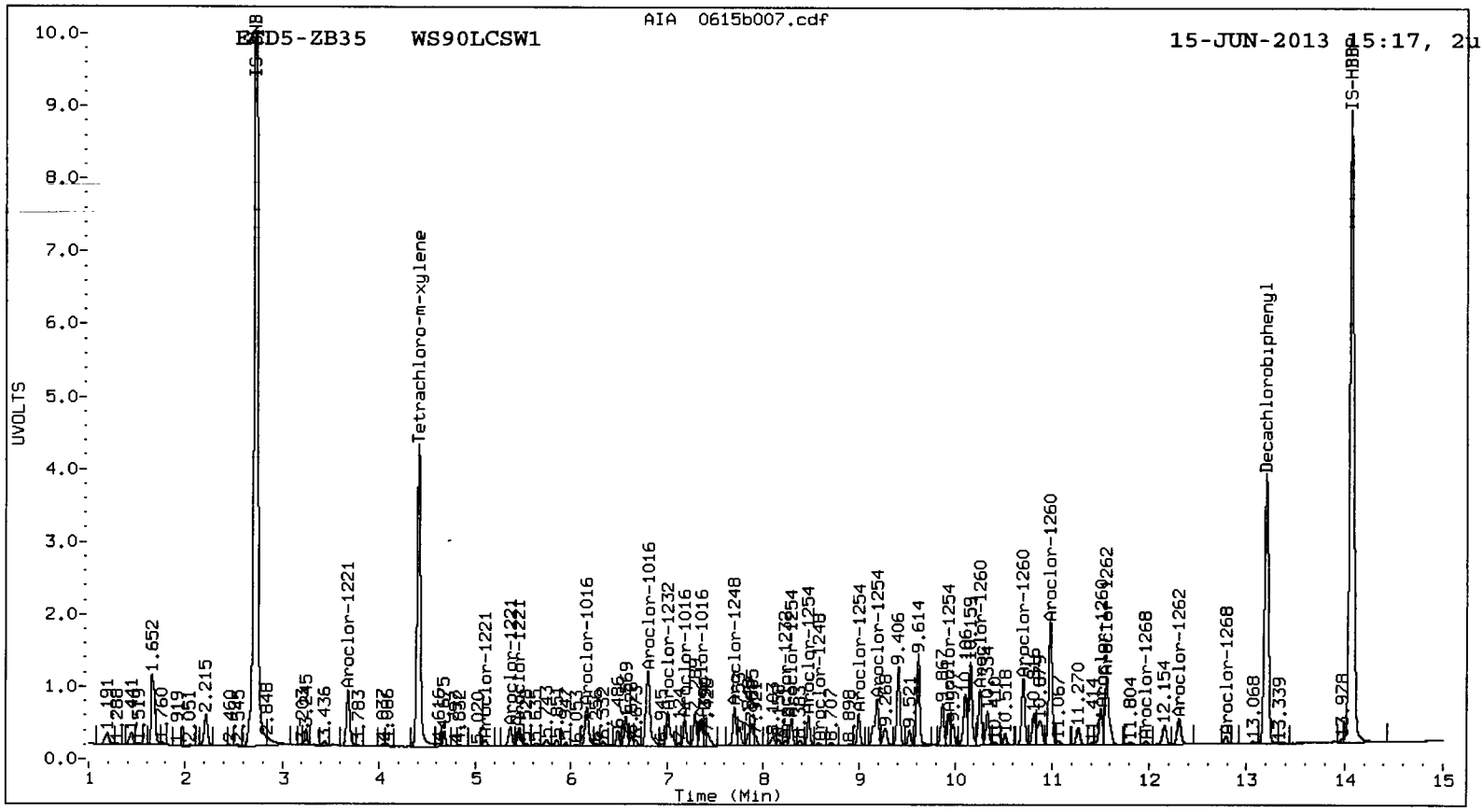
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 WS90LCSW1
AIA 0615b007.cdf
15-JUN-2013 15:17, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


AIA 0615b007.cdf
ECD5-ZB35 WS90LCSW1
15-JUN-2013 15:17, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB5 WS90LCSW1
AIA 0615b007.cdf
15-JUN-2013 15:17, 2ul
UVOLTS
Time (Min)
IS-HBB
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB35 WS90LCSW1
AIA 0615b007.cdf
15-JUN-2013 15:17, 2u
UVOLTS
Time (Min)
IS-HBB
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0615-1.b/0615b008.d
Data file 2: 20130507.b/0615-2.b/0615b008.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WS90LCSDW1
Client ID: WS90LCSDW1
Injection Date: 15-JUN-2013 15:37
Ical Date: 07-MAY-2013
Matrix: WATER
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
4.404	-0.005	24394411	4.408	0.000	5685930	27.1	25.4	6.7	Tetrachloro-m-xylen
12.822	-0.003	33467217	13.199	0.000	5467778	31.2	29.0	7.5	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	67.8	63.5
Decachlorobiphenyl	78.0	72.4

6/17/13
6/17/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	57995276	18.4
Hexabromobiphenyl	50004151	71805204	43.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	16565970	11.6
Hexabromobiphenyl	9345340	13121829	40.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.054	-0.004	2411260	92.2	1	6.160	-0.001	789360	83.5
Aroclor-1016	2	6.462	-0.004	7460961	92.7	2	6.797	-0.001	1763742	85.8
Aroclor-1016	3	6.612	-0.003	3330077	92.3	3	7.180	-0.002	463677	86.3
Aroclor-1016	4	6.722	-0.004	2591925	96.2	4	7.353	-0.002	427826	85.5
Total Col1Ave (4 peaks):					93.3	Total Col2Ave (4 peaks):				85.3 RPD = 9
Corrected Ave (3 peaks):					92.4	Corrected Ave (3 peaks):				84.9 RPD = 8
Aroclor-1221	1	5.056	-0.007	1509637	63.9	1	3.678	-0.017	765217	450.6
Aroclor-1221	2	6.462	-0.006	7460961	1032.1	2	5.101	0.006	132656	46.7
Aroclor-1221	3	7.872	-0.006	2695550	264.0	3	5.366	0.021	382796	247.3
Aroclor-1221	NS	---			----	4	5.456	-0.004	343786	70.6
Total Col1Ave (3 peaks):					453.3	Total Col2Ave (4 peaks):				203.8 RPD = 76*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				121.5
Aroclor-1232	1	6.054	-0.006	2411260	224.5	1	6.160	-0.005	789360	185.7
Aroclor-1232	2	6.462	-0.007	7460961	226.9	2	6.797	-0.005	1763742	207.8
Aroclor-1232	3	7.436	-0.005	3345034	195.7	3	7.005	-0.006	734704	207.6
Aroclor-1232	4	7.872	-0.002	2695550	137.3	4	8.232	-0.007	79222	26.7
Total Col1Ave (4 peaks):					196.1	Total Col2Ave (4 peaks):				156.9 RPD = 22
Corrected Ave (3 peaks):					185.8	Corrected Ave (3 peaks):				140.0 RPD = 28
Aroclor-1242	1	6.054	-0.004	2411260	115.4	1	6.160	-0.002	789360	104.6
Aroclor-1242	2	6.462	-0.005	7460961	116.5	2	6.797	-0.004	1763742	106.4
Aroclor-1242	3	6.612	-0.004	3330077	116.5	3	7.005	-0.002	734704	106.1
Aroclor-1242	4	7.872	0.001	2695550	76.4	4	8.232	-0.003	79222	13.7
Total Col1Ave (4 peaks):					106.2	Total Col2Ave (4 peaks):				82.7 RPD = 25
Corrected Ave (3 peaks):					102.8	Corrected Ave (3 peaks):				74.8 RPD = 32
Aroclor-1248	1	6.462	0.000	7460961	182.8	1	6.797	0.003	1763742	169.9
Aroclor-1248	2	7.436	-0.002	3345034	72.9	2	7.700	-0.001	643168	74.7
Aroclor-1248	3	7.872	0.003	2695550	46.2	3	8.232	-0.001	79222	8.9
Aroclor-1248	4	8.108	0.002	702103	17.3	4	8.577	-0.002	51085	4.4
Total Col1Ave (4 peaks):					79.8	Total Col2Ave (4 peaks):				64.5 RPD = 21
Corrected Ave (3 peaks):					45.4	Corrected Ave (3 peaks):				29.3 RPD = 43*
Aroclor-1254	1	8.188	-0.002	3513825	65.0	1	8.294	-0.001	422859	52.6
Aroclor-1254	2	8.557	-0.005	784942	22.0	2	8.470	-0.001	477015	48.1
Aroclor-1254	3	8.692	-0.005	2294511	30.8	3	8.992	0.000	647218	85.1
Aroclor-1254	4	9.024	-0.026	7773775	101.4	4	9.143	0.000	222306	13.7
Aroclor-1254	5	9.355	-0.004	10809152	372.9	5	9.933	0.003	523359	57.1
Total Col1Ave (5 peaks):					118.4	Total Col2Ave (5 peaks):				51.3 RPD = 79*
Corrected Ave (4 peaks):					54.8	Corrected Ave (4 peaks):				42.9 RPD = 24
Aroclor-1260	1	9.962	-0.002	5682441	96.6	1	10.255	-0.002	943305	79.3
Aroclor-1260	2	10.278	-0.002	5650229	96.9	2	10.704	-0.002	1164443	83.5
Aroclor-1260	3	10.654	-0.002	13958182	99.8	3	10.980	-0.002	2256169	87.6
Aroclor-1260	4	11.053	-0.003	7401238	108.7	4	11.500	-0.002	682490	97.8
Aroclor-1260	5	11.243	-0.002	4130212	113.3	NS	---			----
Total Col1Ave (5 peaks):					103.1	Total Col2Ave (4 peaks):				87.1 RPD = 17
Corrected Ave (4 peaks):					100.5	Corrected Ave (3 peaks):				83.5 RPD = 19
Aroclor-1262	1	10.278	-0.004	5650229	84.0	1	10.255	-0.005	943305	52.0
Aroclor-1262	2	10.654	-0.004	13958182	88.4	2	10.704	-0.006	1164443	70.2
Aroclor-1262	3	11.053	-0.006	7401238	147.9	3	10.980	-0.005	2256169	72.5
Aroclor-1262	4	11.243	-0.004	4130212	58.8	4	11.559	-0.008	1576342	77.9
Aroclor-1262	5	11.912	-0.006	3954641	73.4	5	12.303	-0.003	545623	55.9
Total Col1Ave (5 peaks):					90.5	Total Col2Ave (5 peaks):				65.7 RPD = 32
Corrected Ave (4 peaks):					76.1	Corrected Ave (4 peaks):				62.6 RPD = 19
Aroclor-1268	1	11.169	-0.006	3328421	22.0	1	11.500	-0.006	682490	21.5

Aroclor-1268	2	11.243	-0.003	4130212	24.7	2	11.559	-0.014	1576342	52.8
Aroclor-1268	3	11.642	0.010	2251048	18.1	3	11.964	-0.005	69844	3.0
Aroclor-1268	4	12.416	-0.006	1878980	5.4	4	12.785	-0.007	141101	2.3

Total Col1Ave (4 peaks): 17.6 Total Col2Ave (4 peaks): 19.9 RPD = 12

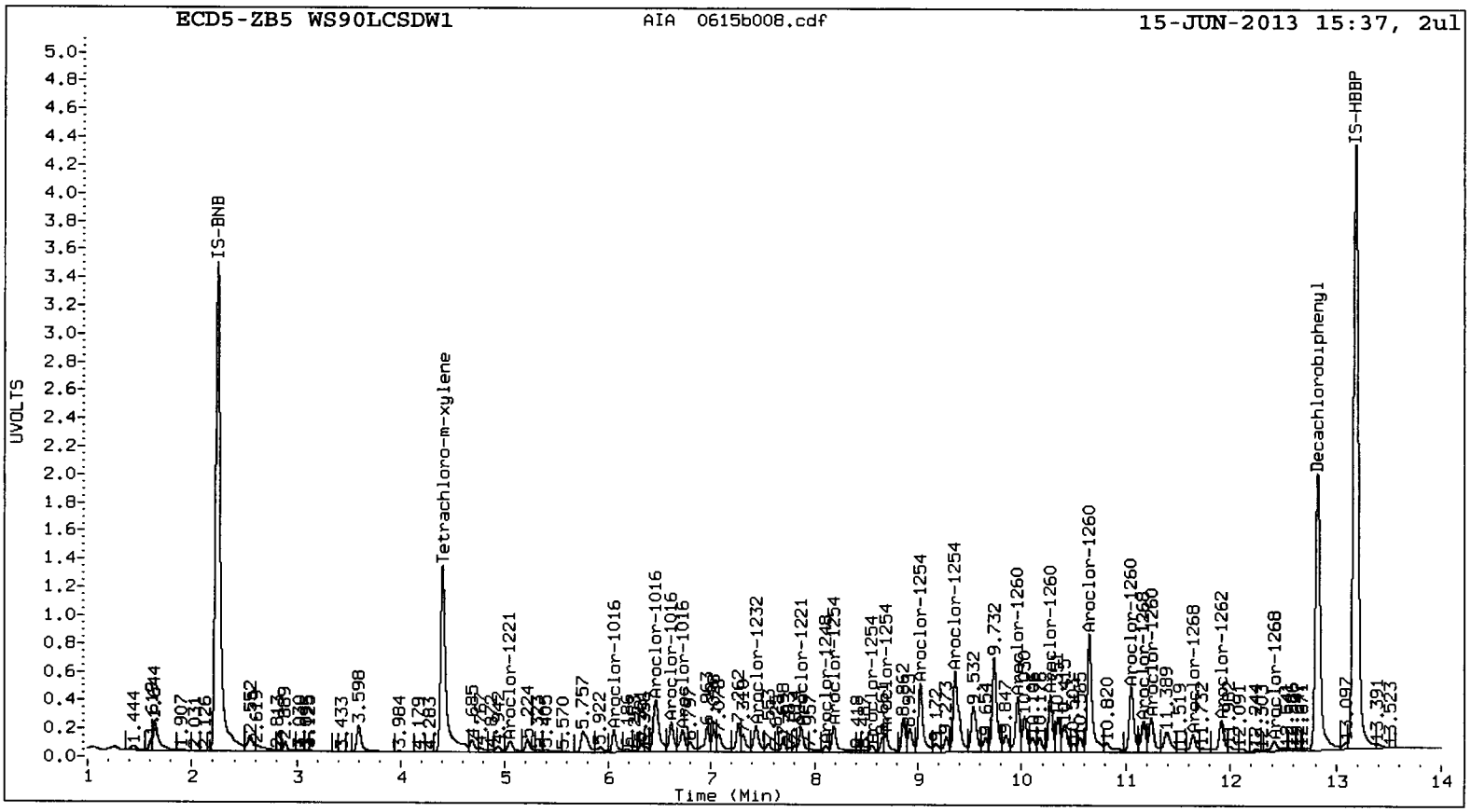
Corrected Ave (3 peaks): 15.2 Corrected Ave (3 peaks): 8.9 RPD = 52*

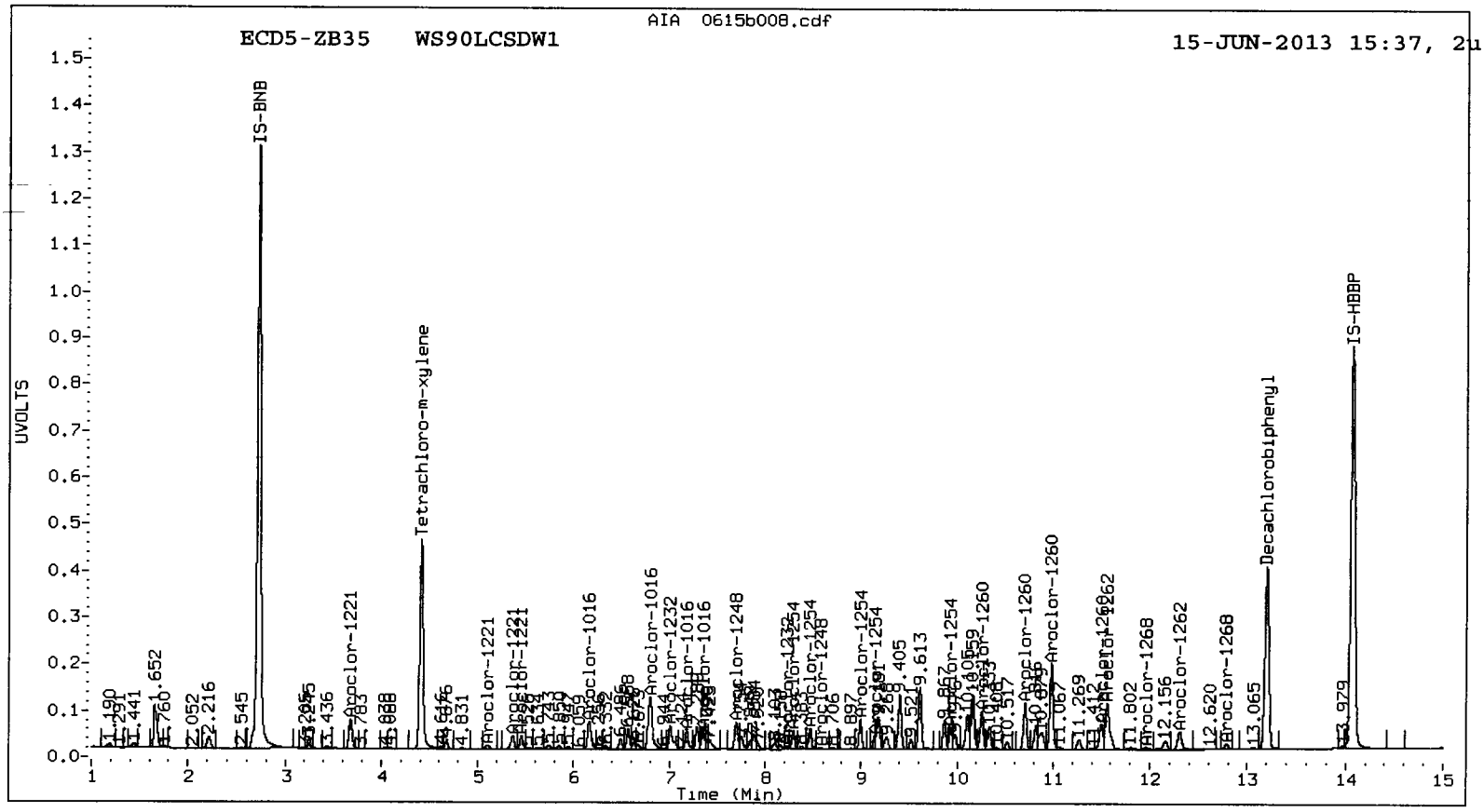
Total PCB Area Col1 (4.509 - 12.725) = 181760351 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.508 - 13.100) = 30225151 Col2 Total PCB = 0.2 ppm*

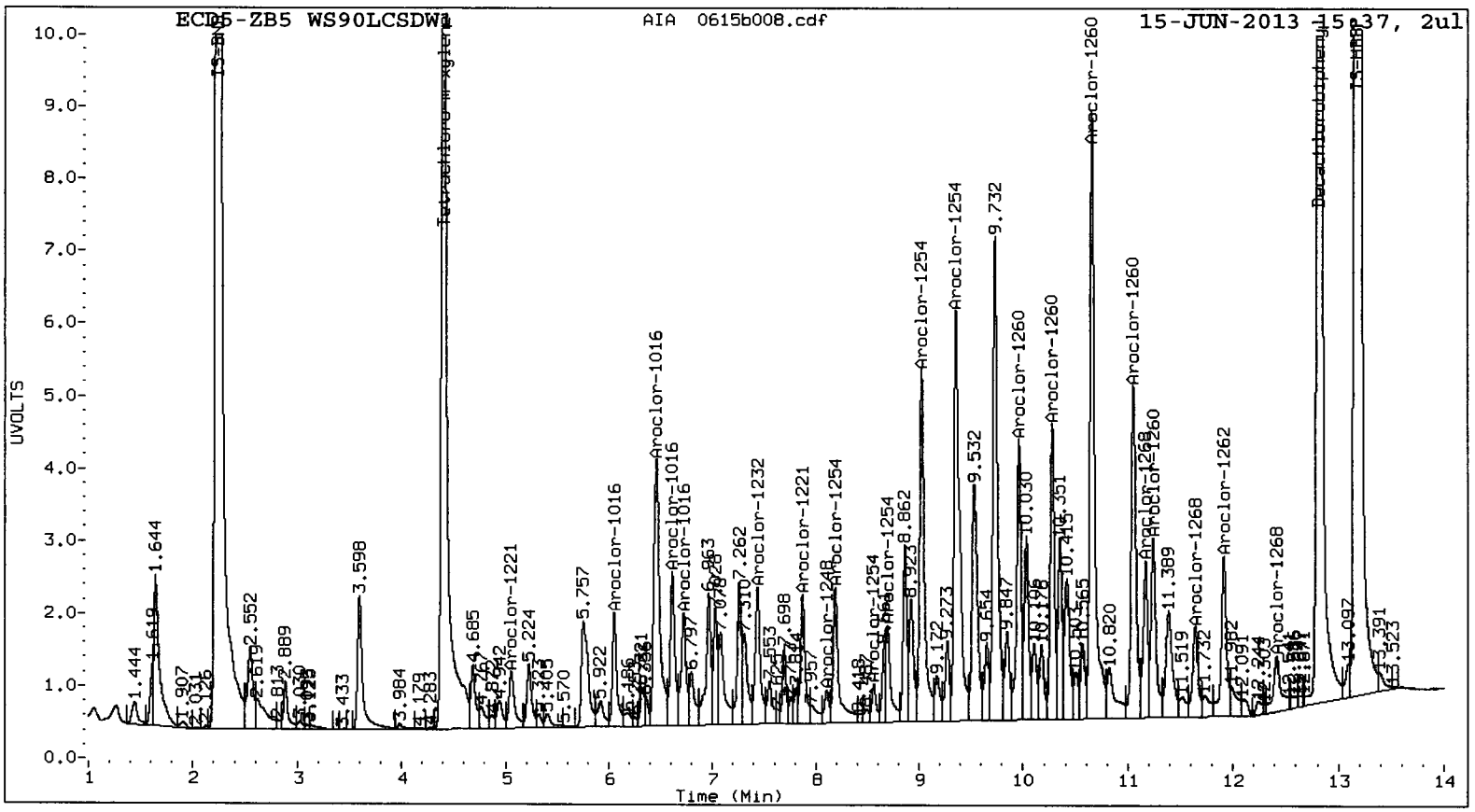
* Quantitated against AR1660 0.25ppm in Ical

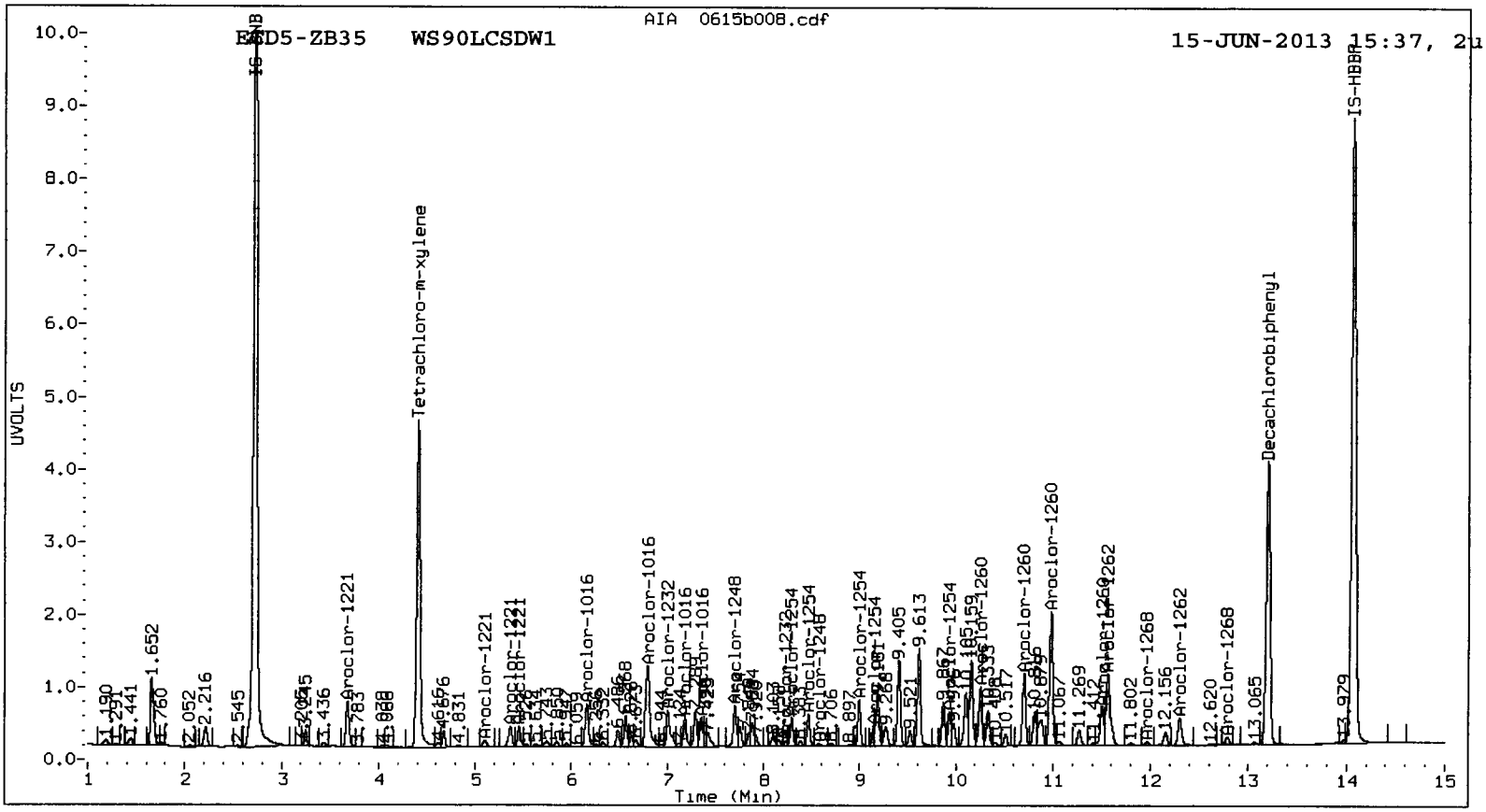
PCB-Form 10 Mod.


ECD5-ZB5 WS90LCSDW1
AIA 0615b008.cdf
15-JUN-2013 15:37, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


AIA 0615b008.cdf
ECD5-ZB35 WS90LCSDW1
15-JUN-2013 15:37, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

WS90 00788


ECD5-ZB5 WS90LCSDW1
AIA 0615b008.cdf
15-JUN-2013 15:37, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB35 WS90LCSDW1
AIA 0615b008.cdf
15-JUN-2013 15:37, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

USOO 08789

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0615-1.b/0615b010.d
Data file 2: 20130507.b/0615-2.b/0615b010.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WS90D
Client ID: QC-EB-03-20130605-W
Injection Date: 15-JUN-2013 16:17
Ical Date: 07-MAY-2013
Matrix: WATER
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
4.406	-0.003	22349468	4.407	-0.002	5039967	25.1	22.8	9.5	Tetrachloro-m-xylen
12.824	-0.001	25499815	13.198	-0.002	4104675	24.0	21.8	9.3	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	62.7	57.1
Decachlorobiphenyl	59.9	54.6

06/17/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	57455169	17.3
Hexabromobiphenyl	50004151	71259831	42.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	16330506	10.0
Hexabromobiphenyl	9345340	13070076	39.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.058	0.000	127194	4.9	1	6.160	-0.002	16200	1.7
Aroclor-1016	2	6.462	-0.005	228844	2.9	2	6.784	-0.014	141566	7.0
Aroclor-1016	3	6.618	0.003	146219	4.1	3	---			0.0
Aroclor-1016	4	6.717	-0.010	260044	9.7	4	7.354	-0.001	13760	2.8
	Total Col1Ave (4 peaks):				5.4	Total Col2Ave (3 peaks):				3.8 RPD = 34
	Corrected Ave (3 peaks):				4.0	Corrected Ave: < 3 Peaks				
Aroclor-1221	1	5.056	-0.008	108087	4.6	1	3.678	-0.016	319760	191.0
Aroclor-1221	2	6.462	-0.007	228844	32.0	2	5.105	0.011	77271	27.6
Aroclor-1221	3	7.872	-0.006	481700	47.6	3	5.366	0.021	93869	61.5
Aroclor-1221	NS	---			----	4	5.476	0.016	68135	14.2
	Total Col1Ave (3 peaks):				28.1	Total Col2Ave (4 peaks):				73.6 RPD = 90*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				34.4
Aroclor-1232	1	6.058	-0.002	127194	12.0	1	6.160	-0.006	16200	3.9
Aroclor-1232	2	6.462	-0.008	228844	7.0	2	6.784	-0.017	141566	16.9
Aroclor-1232	3	7.434	-0.008	202516	12.0	3	6.926	-0.085	22399	6.4
Aroclor-1232	4	7.872	-0.002	481700	24.8	4	8.231	-0.008	26631	9.1
	Total Col1Ave (4 peaks):				13.9	Total Col2Ave (4 peaks):				9.1 RPD = 42*
	Corrected Ave (3 peaks):				10.3	Corrected Ave (3 peaks):				6.5 RPD = 46*
Aroclor-1242	1	6.058	0.000	127194	6.1	1	6.160	-0.003	16200	2.2
Aroclor-1242	2	6.462	-0.005	228844	3.6	2	6.784	-0.017	141566	8.7
Aroclor-1242	3	6.618	0.002	146219	5.2	3	6.926	-0.081	22399	3.3
Aroclor-1242	4	7.872	0.001	481700	13.8	4	8.231	-0.004	26631	4.7
	Total Col1Ave (4 peaks):				7.2	Total Col2Ave (4 peaks):				4.7 RPD = 42*
	Corrected Ave (3 peaks):				5.0	Corrected Ave (3 peaks):				3.4 RPD = 38
Aroclor-1248	1	6.462	0.000	228844	5.7	1	6.784	-0.009	141566	13.8
Aroclor-1248	2	7.434	-0.004	202516	4.5	2	7.700	0.000	56043	6.6
Aroclor-1248	3	7.872	0.003	481700	8.3	3	8.231	-0.002	26631	3.0
Aroclor-1248	4	8.105	0.000	248030	6.2	4	8.566	-0.013	51942	4.5
	Total Col1Ave (4 peaks):				6.1	Total Col2Ave (4 peaks):				7.0 RPD = 13
	Corrected Ave (3 peaks):				5.4	Corrected Ave (3 peaks):				4.7 RPD = 14
Aroclor-1254	1	8.186	-0.004	628710	11.7	1	8.293	-0.002	57612	7.3
Aroclor-1254	2	8.559	-0.003	510808	14.4	2	8.470	-0.001	76669	7.8
Aroclor-1254	3	8.694	-0.004	1247357	16.9	3	8.991	-0.001	880956	117.6
Aroclor-1254	4	9.044	-0.006	1162779	15.3	4	9.141	-0.002	142350	8.9
Aroclor-1254	5	9.356	-0.003	467052	16.3	5	9.927	-0.003	84092	9.3
	Total Col1Ave (5 peaks):				14.9	Total Col2Ave (5 peaks):				30.2 RPD = 68*
	Corrected Ave (4 peaks):				14.4	Corrected Ave (4 peaks):				8.3 RPD = 54*
Aroclor-1260	1	9.961	-0.003	310853	5.3	1	10.253	-0.004	26756	2.3
Aroclor-1260	2	10.279	-0.002	306883	5.3	2	10.700	-0.007	59507	4.3
Aroclor-1260	3	10.692	0.036	1623731	11.7	3	10.980	-0.002	66333	2.6
Aroclor-1260	4	11.053	-0.004	475374	7.0	4	11.451	-0.051	176195	25.4
Aroclor-1260	5	11.243	-0.002	384739	10.6	NS	---			----
	Total Col1Ave (5 peaks):				8.0	Total Col2Ave (4 peaks):				8.6 RPD = 7
	Corrected Ave (4 peaks):				7.1	Corrected Ave (3 peaks):				3.0 RPD = 80*
Aroclor-1262	1	10.279	-0.004	306883	4.6	1	10.253	-0.007	26756	1.5
Aroclor-1262	2	10.692	0.034	1623731	10.4	2	10.700	-0.010	59507	3.6
Aroclor-1262	3	11.053	-0.007	475374	9.6	3	10.980	-0.005	66333	2.1
Aroclor-1262	4	11.243	-0.005	384739	5.5	4	11.559	-0.008	51082	2.5
Aroclor-1262	5	11.903	-0.015	1465983	27.4	5	12.309	0.003	19168	2.0
	Total Col1Ave (5 peaks):				11.5	Total Col2Ave (5 peaks):				2.3 RPD = 132*
	Corrected Ave (4 peaks):				7.5	Corrected Ave (4 peaks):				2.0 RPD = 115*
Aroclor-1268	1	11.169	-0.006	357547	2.4	1	11.559	0.052	51082	1.6

Aroclor-1268	2	11.243	-0.003	384739	2.3	2	---		0.0
Aroclor-1268	3	11.636	0.003	322343	2.6	3	11.963	-0.006	16033	0.7
Aroclor-1268	4	12.417	-0.005	460452	1.3	4	12.719	-0.073	23830	0.4

Total Col1Ave (4 peaks): 2.2 Total Col2Ave (3 peaks): 0.9 RPD = 83*

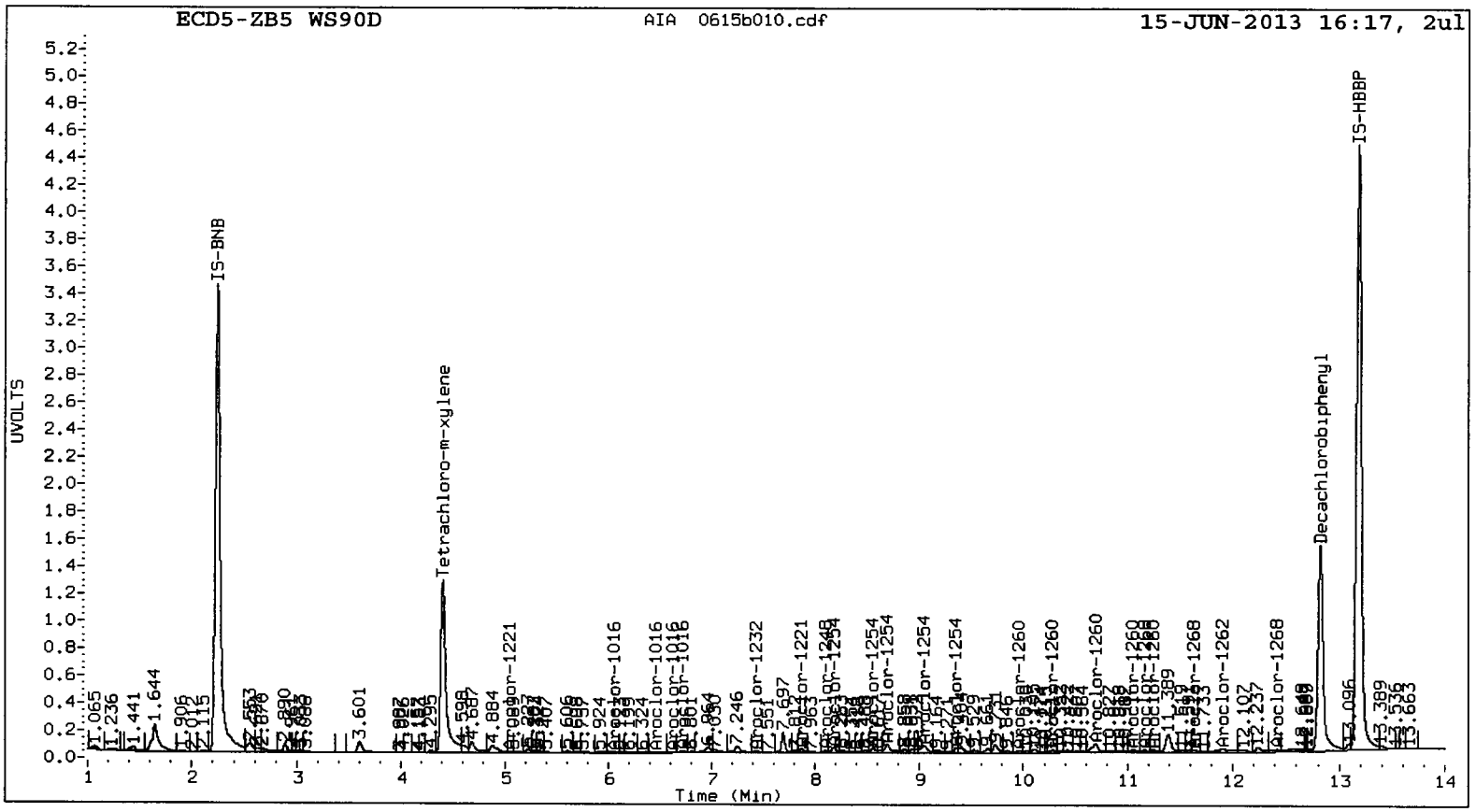
Corrected Ave (3 peaks): 2.0 Corrected Ave: < 3 Peaks

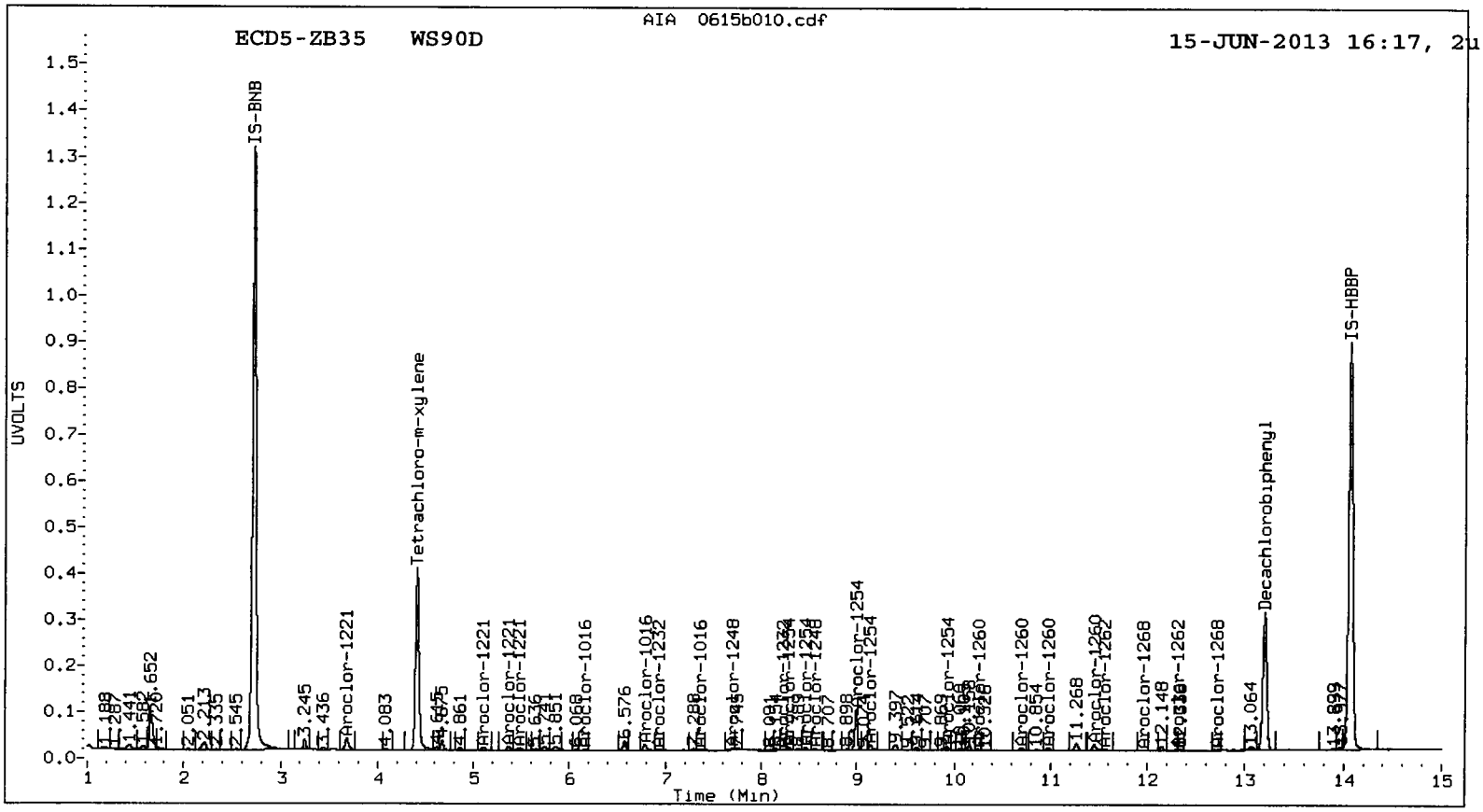
Total PCB Area Col1 (4.509 - 12.725) = 35817023 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (4.508 - 13.100) = 4291073 Col2 Total PCB = 0.0 ppm*

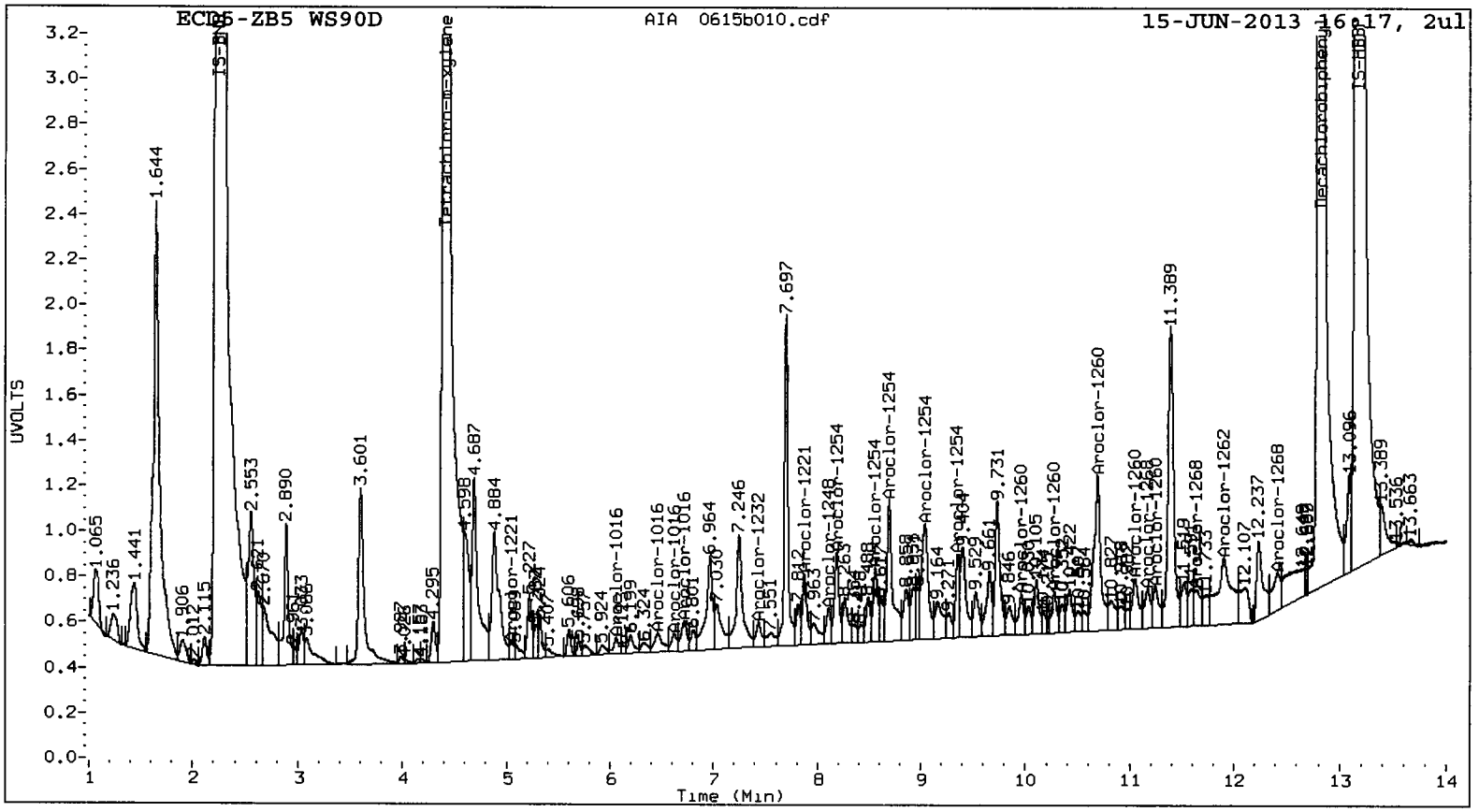
* Quantitated against AR1660 0.25ppm in Ical

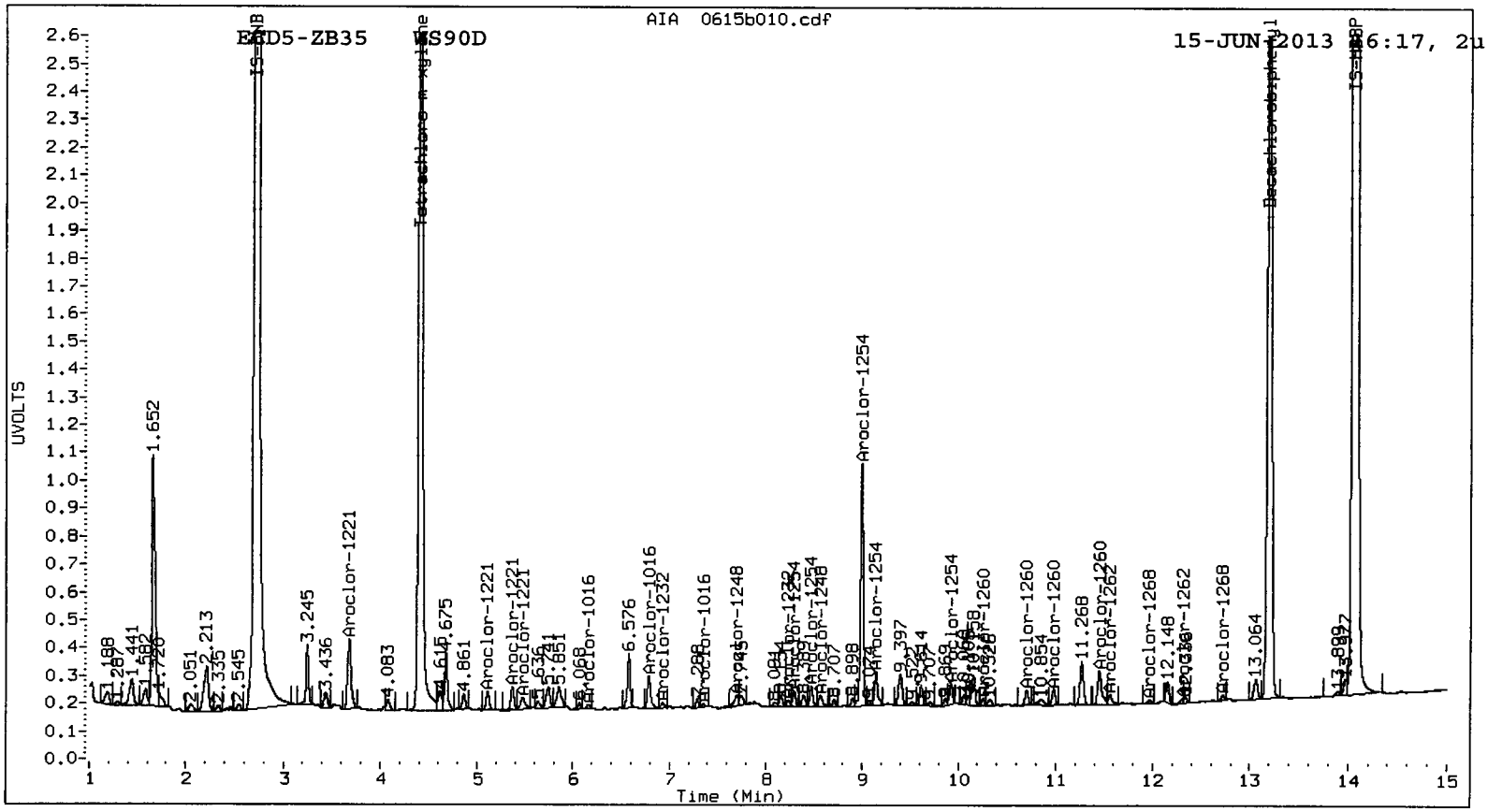
PCB-Form 10 Mod.


ECD5-ZB5 WS90D
AIA 0615b010.cdf
15-JUN-2013 16:17, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 WS90D
AIA 0615b010.cdf
15-JUN-2013 16:17, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP

4598:00799


ECD5-ZB5 WS90D
AIA 0615b010.cdf
15-JUN-2013 16:17, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB35 WS90D
AIA 0615b010.cdf
15-JUN-2013 16:17, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0615-1.b/0615b019.d
Data file 2: 20130507.b/0615-2.b/0615b019.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 15-JUN-2013 19:19
Ical Date: 07-MAY-2013
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
4.406	-0.003	36685243	4.407	-0.001	8750371	39.0	38.9	0.5	Tetrachloro-m-xylen
12.823	-0.001	41345304	13.201	0.001	6847038	38.3	36.7	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	97.6	97.2
Decachlorobiphenyl	95.6	91.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	60601122	23.7
Hexabromobiphenyl	50004151	72359630	44.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	16649224	12.2
Hexabromobiphenyl	9345340	12958538	38.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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-1248	1	6.462	0.000	11211245	262.9	1	6.793	0.000	2643060	253.3
Aroclor-1248	2	7.438	0.000	12347359	257.4	2	7.700	0.000	2182919	252.3
Aroclor-1248	3	7.869	0.000	15701091	257.4	3	8.233	0.000	2283171	254.9
Aroclor-1248	4	8.105	0.000	11856918	278.8	4	8.579	0.000	2962700	254.5

Total Col1Ave (4 peaks): 264.1 Total Col2Ave (4 peaks): 253.8 RPD = 4

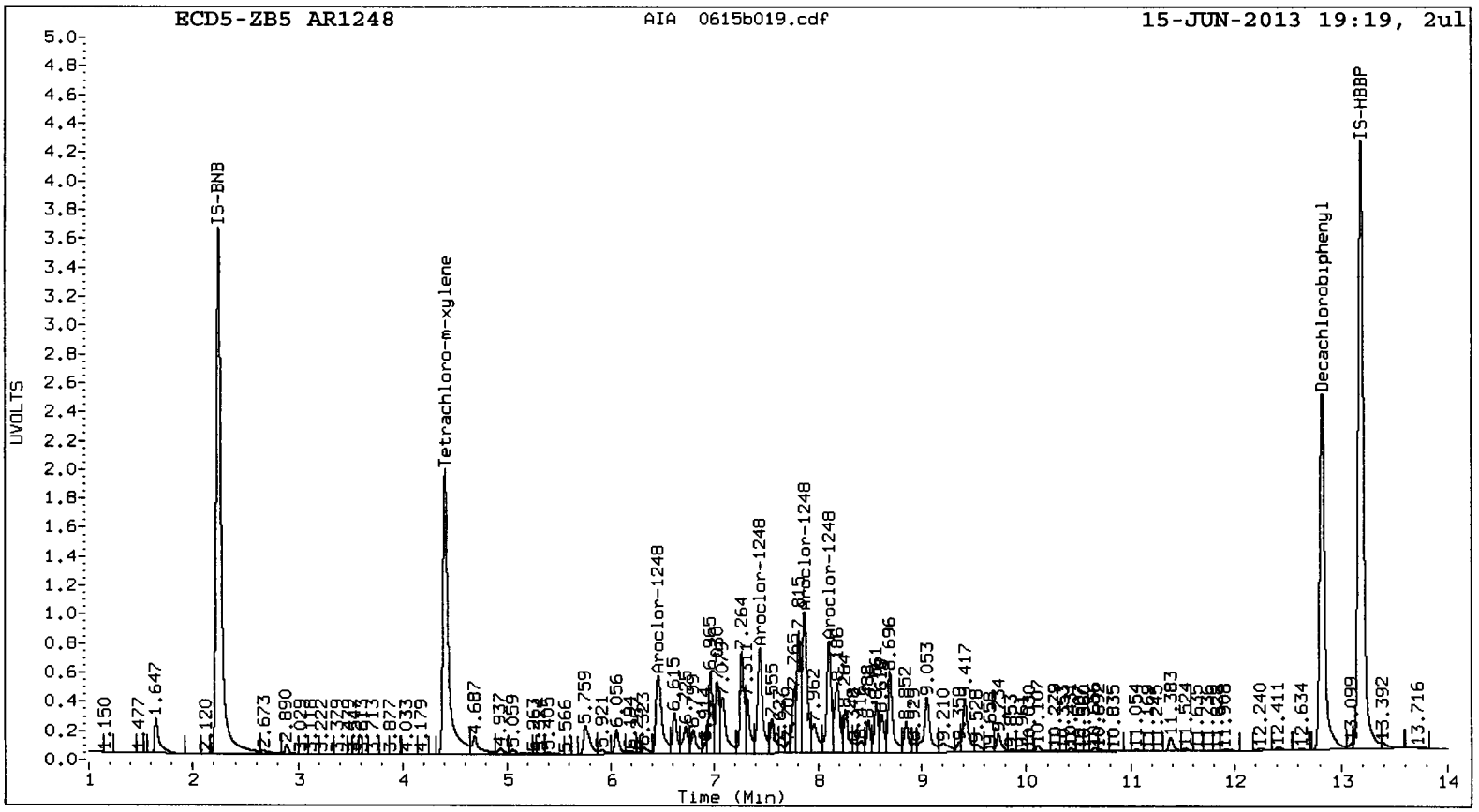
Corrected Ave (3 peaks): 259.2 Corrected Ave (3 peaks): 253.4 RPD = 2

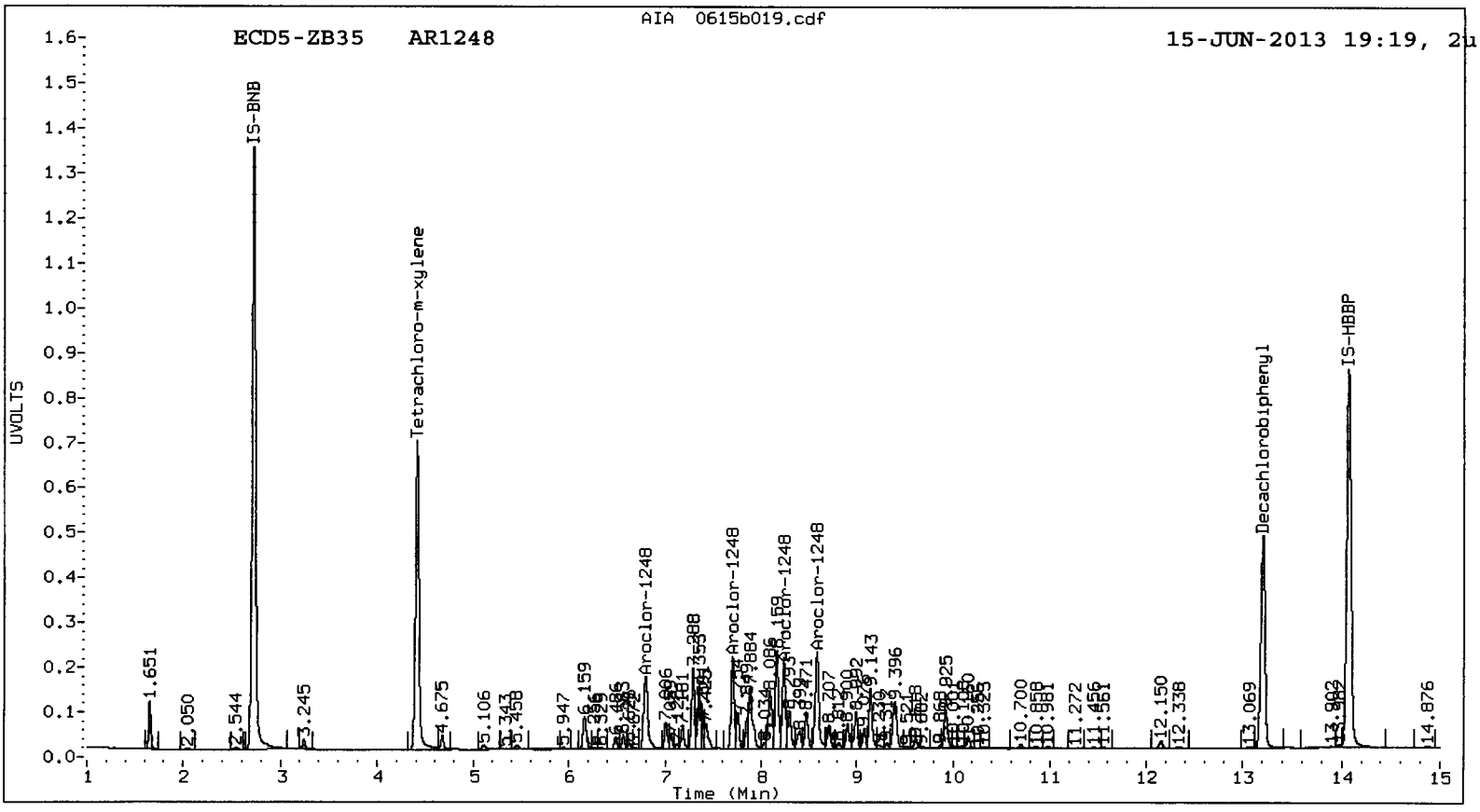
Total PCB Area Col1 (4.509 - 12.725) = 203665529 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.508 - 13.100) = 38453414 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

US90 : 00796


ECD5-ZB5 AR1248
AIA 0615b019.cdf
15-JUN-2013 19:19, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP


AIA 0615b019.cdf
ECD5-ZB35 AR1248
15-JUN-2013 19:19, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP

4599:69797

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0615-1.b/0615b020.d
Data file 2: 20130507.b/0615-2.b/0615b020.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 15-JUN-2013 19:39
Ical Date: 07-MAY-2013
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
4.406	-0.003	36588053	4.407	-0.001	8628885	39.2	38.4	2.0	Tetrachloro-m-xylen
12.824	-0.001	41885256	13.200	0.000	6968506	38.1	36.6	3.9	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	98.0	96.1
Decachlorobiphenyl	95.1	91.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	60200493	22.9
Hexabromobiphenyl	50004151	73683845	47.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	16599434	11.9
Hexabromobiphenyl	9345340	13226344	41.5

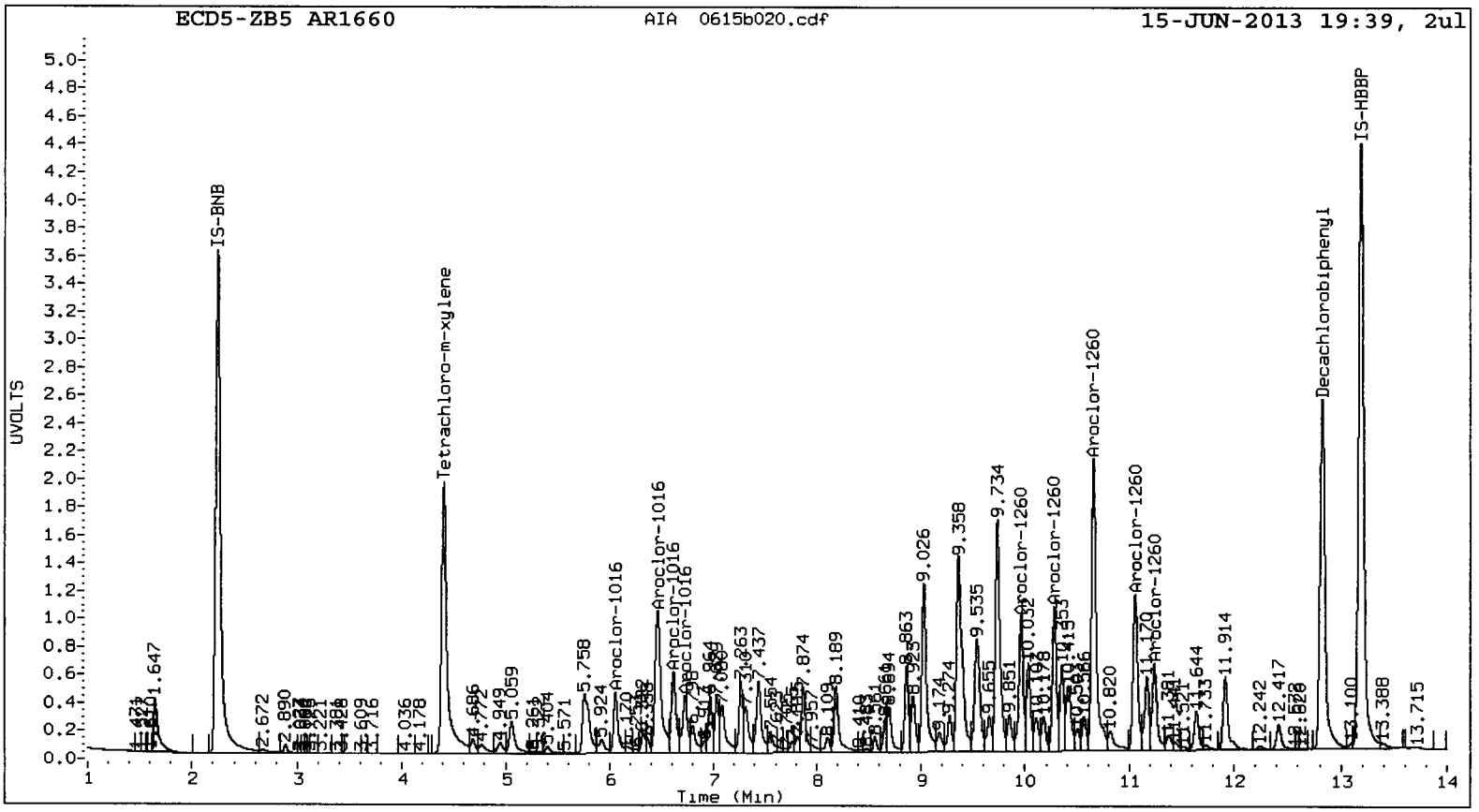
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

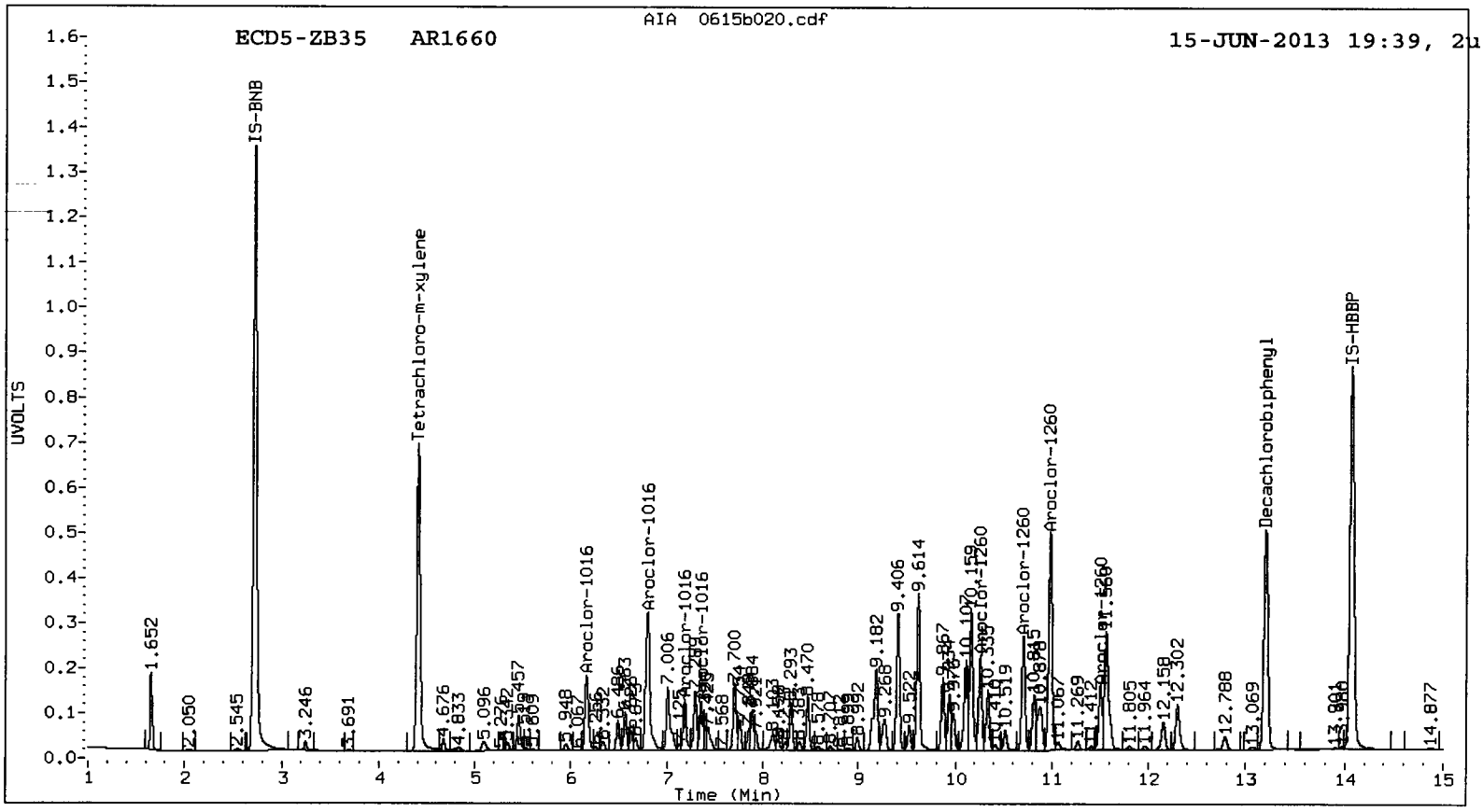
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.056	-0.003	6713306	247.4	1	6.161	0.000	2255449	238.1
Aroclor-1016	2	6.464	-0.003	20805601	248.9	2	6.797	-0.001	4965152	241.1
Aroclor-1016	3	6.613	-0.002	9117482	243.5	3	7.181	-0.002	1334885	247.9
Aroclor-1016	4	6.724	-0.002	6841672	244.5	4	7.353	-0.001	1203092	239.9
Total Col1Ave (4 peaks):				246.1		Total Col2Ave (4 peaks):			241.8	RPD = 2
Corrected Ave (3 peaks):				245.1		Corrected Ave (3 peaks):			239.7	RPD = 2
Aroclor-1260	1	9.963	-0.001	13915074	230.6	1	10.256	-0.001	2522036	210.2
Aroclor-1260	2	10.280	-0.001	13981896	233.7	2	10.705	-0.002	3090023	219.9
Aroclor-1260	3	10.656	-0.001	34444552	240.1	3	10.982	-0.001	5974226	230.2
Aroclor-1260	4	11.055	-0.001	17813158	254.9	4	11.502	0.000	1718829	244.4
Aroclor-1260	5	11.244	-0.001	9887871	264.4	NS	---			----
Total Col1Ave (5 peaks):				244.7		Total Col2Ave (4 peaks):			226.2	RPD = 8
Corrected Ave (4 peaks):				239.8		Corrected Ave (3 peaks):			220.1	RPD = 9

Total PCB Area Col1 (4.509 - 12.725) = 420517577 Col1 Total PCB = 0.6 ppm*

Total PCB Area Col2 (4.508 - 13.100) = 78077061 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1660
AIA 0615b020.cdf
15-JUN-2013 19:39, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR1660
AIA 0615b020.cdf
15-JUN-2013 19:39, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: WS90, WS92

Analytical Resources,Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: DM

Date: 6-11-13

Final Volume 25

Final Volume (Hg):

Sample ID W500 ASPK, MB1SPK ESPK, MB2SPK

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
	BS10	BS11	
	0.05	0.05	
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		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: DM Date: 6-11-13 Time: 0740

Matrix: Water Block ID: #12 Block Temp: 94°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
WSQ0 A	5	√	50.0	25.0			
" ADUP	5	√					
" ASPK	5	√					
" B	5	√					
" C	1	√					
" D	1	√					
" MB1	—	√					
" MB1SPK	—	√					
" E	1	—					
" EDUP	1	—					
" ESPK	1	—					
" F	1	—					- Filtered
" G	1	—					in Lab
" H	1	—					
" MB2	—	—					
" MB2SPK	—	—					
WSQ5 A	7	√					
" ADUP	7	√					
" ASPK	7	√					
" B	3	√					
" C	3	√					
" D	3	√					
" E	3	√					
" MB	—	√					
" MBSPK	—	√	50.0	25.0			

Chemical/Reagent ID: HNO3 MP2495 H2O2: I8135 Tube Lot # MH21KK06

USGS : 00593

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: DM

Date: 6-17-13

Final Volume 25

Final Volume (Hg):

Sample ID W3J0R ASPK, MB1SPK, ESPK, MB2SPK

	Prepcode:			
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:			
	Vol Added (mL):			
	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	

	REN	REN	
	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
	B510	B511	
	0.05	0.05	
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		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: DM Date: 6-17-13 Time: 0750

Matrix: Water Block ID: # 12 Block Temp: 90°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
WE90R A	5	✓	50.0	25.0			
" ADUP	5	✓					
" ASPK	5	✓					
" MB1	—	✓					
" MBSPK	—	✓					
" E	1	—					
" EDUP	1	—					
" ESPK	1	—					— Filtered
" MBR	—	—					in Lab
" MBSPK	—	—					
WU21 A	1	✓					
" B	1	✓					
" MB	—	✓					
" MBSPK	—	✓					
WU15 A	1	✓					
" MB	—	✓					
" MBSPK	—	✓					
WT7L A	10	✓					
" ADUP	10	✓					
" ASPK	10	✓					
" E	5	✓					
" F	5	✓					
" G	5	✓					
" MB1	—	✓					
" MB1SPK	—	✓	50.0	25.0			

Chemical/Reagent ID: HNO_3: MP250 MP2452 H_2O_2: IB135 Tube LOT # MH21KK06

USGS-00005

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	WS910
Unacceptable Blank:	☐	Date of Event:	6-12-13
Unacceptable Duplicate:	☐	Client ID:	
Unacceptable Spike:	☑	Method/Element:	ICPMS
Unacceptable Reference:	☐	Prep Code:	KEN

Details of Problem/Recommended Corrective Action:

Low %R for Sb in Aqdc (30%R)
post spike ok

Samples Affected:

Corrective Action Taken:

Analyst Initials: AT **Supervisor:** [signature]

Date: 6-12-13 **Date:** 6-13-13

5049F

Revision 007
6/11/10

WS90 : 08805

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	CK590
Unacceptable Blank:	☐	Date of Event:	6-13-13
Unacceptable Duplicate:	☐	Client ID:	SAIC
Unacceptable Spike:	☐	Method/Element:	ICP/MS
Unacceptable Reference:	☐	Prep Code:	

Details of Problem/Recommended Corrective Action:

Total Sb < Dissolved

Redo A, E

Samples Affected:

Corrective Action Taken:

Analyst Initials: _____ **Supervisor:** _____

Date: _____ **Date:** 6-14-13

5049F

Revision 007
6/11/10

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Metals Laboratory Analyst Notes

ARI Job No.: WS90R

Client ID: SAIC

Parameter: ICPMS

Client Project:

List problems, concerns, corrective actions and any other pertinent information
*Sb in Totals still lower ~~higher~~ than in dissolved probably a matrix effect as Sb in Aspk was also low. There was sediment in A
Analyst Initials: AA **Date:** 6-18-13

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: WS90, WS92

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP (ICP-MS) GFA CVA **Analysis Date:** 6-12-13

M2 Nexion SM	Analyst AM 6-13	Peer CA 6-13-13	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	✓	✓	See Log
ICB/CCB	✓	✓	↳
Samples:			
RSD's & SD's	✓	✓	See Log
Internal Standards	✓	✓	↳
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	See Log
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	WS90
Matrix Duplicates	✓	✓	See Log
Method Blanks	✓	✓	WS61 WS97
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analytes Noted and QA'd	✓	✓	CAF WS61 WS97 WS90

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 10-12-13 **Analyst:** AA **Page:** 1 **of** 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			B524
		1			B542
		2			B631
		3			B632
		4			B633
		5			B634
		Rinse Sample			
		ICV			B523
		ICB			
		CCV1			
		CCB1			
		Low check			
		ICSA			
		ICSAB			^{62}Ni ↑
		LR200			Ag ↑
		LR300			
		B1			
ZZZ		~~CCV2~~ ZZZZZZ			
ZZZ		~~CCB2~~ ZZZZZZ			^{62}Ni ↑
		CCV2			
		CCB2			^{62}Ni 0.60
		WS90 MB1	REN	2	
		ADup A		✓	RREr (sc)
		↓	↓	↓	↓ ↓ CAF

USGS : 00911

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 6-12-13 **Analyst:** ** **Page:** 2 **of** 4

All corrections made by analyst unless otherwise noted. ** 6-12-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		WS90 ASpk	REN	2	Sb low%R
ZZZ		ZZZZZZ			spiked at wrong level
		WS90 EDup	REN	2	✓
	✓	E			missed tube
		Espk			✓
ZZZ		ZZZZZZ			spiked at wrong level
		WS90 MB1spk	REN	2	✓
		CCV3			
		CCB3			
		WS90 MB2	REN	2	
		E			
		B			
	✓	C			Noisy (sample probe hung up)
	✓	D			
		~~G~~ F			RR Ni
		G			
		H			
	✓	MB2spk			RR ~~Be~~ all (~~Li~~) (Li4)
		CCV4			V
		CCB4			
		WS90 C	REN	2	
		D			
		ADup		5	✓ Cr
		A			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 6-12-13 **Analyst:** M **Page:** 3 of 4

All corrections made by analyst unless otherwise noted. MA 6-12-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		WS90 Ask	REN	5 ✓	Cr
		APost		↓	0.06mL spk #1 NOT RUN
		APost		2	0.06 mL spk #2 0.06mL spk #1 SD
		MB2spk		↓ ✓	
		CCV5			V ↓
		CCB5			end pkgs
		WS97 MB1	REN	2	
		MB2			Pb 0.75 RR CAF
✓		ADup			X Pb 71% Diff RR
✓		A			↓
		ASpk			✓
		BDup			✓
		B			
		BSpk			✓
		MB1Spk			✓
		MB2spk	6-14-13		✓
		CCV6			
		CCB6			
		WS61 MB2	SPN		Cr 0.76 Ni 0.52
✓	✓	WS97 MB2	REN	2	Confirms Pb ✓ WS61 MB2 SPN confirms
		A			~~RR Cr, Ni~~
		ADup	↓	↓	✓ ↓
		WS61 Ba	SPN		
		AaDup	↓		RR Cr, Ni (Cr 71% Diff)

USGS : 006613

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Wednesday, June 12, 2013 08:32:12
Sample Description:
Method File: C:\NexIONData\Method\Daily Performancenew.mth
Dataset File: C:\NexIONData\Dataset\Default\Daily Performance Check.2110
MassCal File: C.\NexIONData\MassCal\Default.tun
Conditions File: C:\NexIONData\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	5673.0	5672.997	91.627	1.6	Standard
	Mg	24.0	44117.0	44117.017	521.962	1.2	Standard
	In	114.9	84393.9	84393.869	571.160	0.7	Standard
	Pb	208.0	37125.4	37125.383	231.958	0.6	Standard
	U	238.1	64336.7	64336.671	388.772	0.6	Standard
⌈	CeO	155.9	1314.7	0.016	0.001	4.0	Standard
| >	Ce	139.9	84661.7	84661.689	356.852	0.4	Standard
⌊	Ce++	70.0	1708.9	0.020	0.001	2.5	Standard
	Bkgd	220.0	0.1	0.067	0.091	136.9	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
-1700.00	Analog Stage Voltage
900.00	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

USGS : 0081 14

SmartTune Wizard - Summary

timization Summary

artTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

art Time: 6/12/2013 8:32:12 AM
d Time: 6/12/2013 8:34:46 AM

ily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 5673.00
Obtained Intensity (Mg 23.985): 44117.02
Obtained Intensity (In 114.904): 84393.87
Obtained Intensity (Pb 207.977): 37125.38
Obtained Intensity (U 238.05): 64336.67
Obtained Intensity (Bkgd 220): 0.07
Obtained Formula (CeO 155.9 / Ce 139.905): 0.016 (=1314.70 / 84661.69)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.020 (=1708.91 / 84661.69)

US90:00815

SmartTune Wizard - Summary

timization Summary

artTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

art Time: 6/12/2013 8:21:16 AM
d Time: 6/12/2013 8:24:06 AM

bulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 1.06
Obtained Intensity (In 114.904): 79067.33
Obtained Formula (CeO 155.9 / Ce 139.905): 0.017 (=1332.11 / 78593.88)

USQA : 00810

SmartTune Wizard - Summary

timization Summary

artTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

art Time: 6/12/2013 8:24:18 AM
d Time: 6/12/2013 8:24:52 AM

rch Alignment - [Passed]

Vertical	Horizontal	Intensity
0.47 mm	-0.48 mm	86784.55

WS90 00817

SmartTune Wizard - Summary

ɪtimization Summary

ıartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

.art Time: 6/12/2013 8:25:14 AM
ıd Time: 6/12/2013 8:27:26 AM

ıss Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.689)
Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.7/0.700)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.696)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.699)

US9A : 00818

SmartTune Wizard - Summary

)timization Summary

iartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

:art Time: 6/12/2013 8:27:45 AM
id Time: 6/12/2013 8:31:55 AM

itoLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.995; Intercept = -11.64

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 09:07:10
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\061113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L				1497608	1
	Be	9		ug/L				24	30
	C	13		ug/L				93073	0
	Cl	37		ug/L				4500094	3
>	Sc	45		ug/L				1309883	1
	V	51		ug/L				8014	2
	V-1	51		ug/L				51	14
	Cr	52		ug/L				23924	2
	Cr	53		ug/L				157	9
	Mn	55		ug/L				818	3
	Co	59		ug/L				151	8
>	Ge	72		ug/L				720962	0
	Ni	60		ug/L				73	10
	Ni	62		ug/L				223	9
	Cu	63		ug/L				644	6
	Cu	65		ug/L				188	15
	Zn	66		ug/L				1943	0
	Zn	67		ug/L				310	5
	Zn	68		ug/L				1420	5
	As	75		ug/L				262	13
	As-1	75		ug/L				10391	0
	Se	82		ug/L				8	63
	Se	78		ug/L				10548	0
	Mo	98		ug/L				9	23
	Y	89		ug/L				474888	1
	Kr	83		ug/L				547	3
>	In	115		ug/L				1082254	0
	Ag	107		ug/L				21	14
	Cd	111		ug/L				82	13
	Cd	114		ug/L				34	26
	Sb	121		ug/L				73	37
	Sb	123		ug/L				55	22
	Ba	135		ug/L				83	15
	Ba	137		ug/L				166	8
>	Tb	159		ug/L				1254824	0
	Tl	205		ug/L				48	9
	Pb	208		ug/L				368	3
	Bi	209		ug/L				3019464	0
	Th	232		ug/L				73	21
	U	238		ug/L				4	32

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 09:11:18
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\061113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1497608	1495282	1
[	Be	9	0.200	ug/L	0.005	2	24	916	1
	C	13		ug/L			93073	93115	2
	Cl	37		ug/L			4500094	4432541	0
[>	Sc	45		ug/L			1309883	1320714	0
[	V	51	0.200	ug/L	0.008	3	8014	13295	1
[	V-1	51	0.500	ug/L	0.009	1	51	5099	1
[	Cr	52	0.500	ug/L	0.026	5	23924	35253	1
[	Cr	53	0.500	ug/L	0.012	2	157	1362	1
[	Mn	55	0.500	ug/L	0.008	1	818	15656	0
[	Co	59	0.200	ug/L	0.003	1	151	4532	0
[>	Ge	72		ug/L			720962	733578	1
[	Ni	60	0.500	ug/L	0.021	4	73	2312	2
[	Ni	62	0.500	ug/L	0.061	12	223	537	6
[	Cu	63	0.500	ug/L	0.024	4	644	5511	2
[	Cu	65	0.500	ug/L	0.017	3	188	2311	1
[	Zn	66	4.000	ug/L	0.152	3	1943	11316	1
[	Zn	67	4.000	ug/L	0.115	2	310	1671	0
[	Zn	68	4.000	ug/L	0 146	3	1420	8035	1
[	As	75	0.200	ug/L	0 004	2	262	779	0
[	As-1	75	0.200	ug/L	0.069	34	10391	10935	0
[	Se	82	0.500	ug/L	0.043	8	8	136	6
[	Se	78	0.500	ug/L	0.390	78	10548	10897	0
[	Mo	98	0.200	ug/L	0.001	0	9	1090	1
	Y	89		ug/L			474888	467947	0
	Kr	83		ug/L			547	543	5
[>	In	115		ug/L			1082254	1071863	0
[	Ag	107	0.200	ug/L	0.005	2	21	2296	2
[	Cd	111	0.100	ug/L	0.005	5	82	591	4
[	Cd	114	0.100	ug/L	0.003	3	34	1251	2
[	Sb	121	0.200	ug/L	0.002	1	73	3002	0
[	Sb	123	0.200	ug/L	0.005	2	55	2204	2
[	Ba	135	0.500	ug/L	0.016	3	83	2291	2
[	Ba	137	0.500	ug/L	0.009	1	166	3950	1
[>	Tb	159		ug/L			1254824	1247803	0
[	Tl	205	0.200	ug/L	0.005	2	48	7966	2
[	Pb	208	0.100	ug/L	0.001	1	368	5531	1
[	Bi	209		ug/L			3019464	3035523	0
[	Th	232	0.200	ug/L	0.010	4	73	8023	5
[	U	238	0.200	ug/L	0.002	1	4	9865	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 09:15:27
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\061113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1497608	1502003	0
	Be	9	10.000	ug/L	0.115	1	24	45201	1
	C	13		ug/L			93073	93093	1
	Cl	37		ug/L			4500094	4642597	2
>	Sc	45		ug/L			1309883	1303326	1
	V	51	10.000	ug/L	0.053	0	8014	256880	0
	V-1	51	10.015	ug/L	0.044	0	51	249559	1
	Cr	52	10.000	ug/L	0.152	1	23924	240745	1
	Cr	53	10.001	ug/L	0.089	0	157	24863	1
	Mn	55	10.001	ug/L	0.221	2	818	299679	1
	Co	59	10.000	ug/L	0.046	0	151	218861	0
>	Ge	72		ug/L			720962	734955	0
	Ni	60	10.001	ug/L	0.082	0	73	47042	0
	Ni	62	10.001	ug/L	0.109	1	223	6634	0
	Cu	63	10.001	ug/L	0.269	2	644	103453	2
	Cu	65	10.002	ug/L	0.241	2	188	45442	2
	Zn	66	10.219	ug/L	0.087	0	1943	29673	0
	Zn	67	10.344	ug/L	0 195	1	310	4792	2
	Zn	68	10.214	ug/L	0.098	0	1420	20913	1
	As	75	10.000	ug/L	0.098	0	262	23534	1
	As-1	75	10.001	ug/L	0.122	1	10391	34033	0
	Se	82	9.999	ug/L	0.169	1	8	2471	1
	Se	78	10.012	ug/L	0.308	3	10548	17182	0
	Mo	98	10.000	ug/L	0.185	1	9	54789	1
	Y	89		ug/L			474888	470460	0
	Kr	83		ug/L			547	560	2
>	In	115		ug/L			1082254	1087147	0
	Ag	107	10.000	ug/L	0.048	0	21	109420	0
	Cd	111	10.000	ug/L	0.055	0	82	50395	1
	Cd	114	10.000	ug/L	0.113	1	34	127704	0
	Sb	121	10.000	ug/L	0.071	0	73	145967	0
	Sb	123	10.000	ug/L	0.149	1	55	110545	0
	Ba	135	10.000	ug/L	0.120	1	83	45688	0
	Ba	137	10.001	ug/L	0.043	0	166	78841	0
>	Tb	159		ug/L			1254824	1260462	1
	Tl	205	10.000	ug/L	0.108	1	48	396929	0
	Pb	208	10.000	ug/L	0.108	1	368	529747	0
	Bi	209		ug/L			3019464	2996585	1
	Th	232	10.001	ug/L	0.190	1	73	474644	1
	U	238	10.000	ug/L	0.106	1	4	500603	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 09:19:49
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\061113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1494814	0
	Be	9	19.985	ug/L	0.079	0	24	89602	0
	C	13		ug/L			93073	93636	3
	Cl	37		ug/L			4500094	4756423	1
>	Sc	45		ug/L			1309883	1307762	2
	V	51	19.980	ug/L	0.278	1	8014	504933	1
	V-1	51	19.980	ug/L	0.437	2	51	497340	0
	Cr	52	19.973	ug/L	0.244	1	23924	456323	2
	Cr	53	19.953	ug/L	0.653	3	157	49136	1
	Mn	55	19.970	ug/L	0.499	2	818	595902	0
	Co	59	19.975	ug/L	0.360	1	151	436316	1
>	Ge	72		ug/L			720962	725636	1
	Ni	60	20.039	ug/L	0.523	2	73	93702	1
	Ni	62	20.097	ug/L	0.622	3	223	13183	1
	Cu	63	19.930	ug/L	0.432	2	644	200056	0
	Cu	65	20.107	ug/L	0.581	2	188	91934	1
	Zn	66	19.927	ug/L	0.313	1	1943	54623	2
	Zn	67	20.186	ug/L	0 644	3	310	9219	2
	Zn	68	20.035	ug/L	0.407	2	1420	39352	2
	As	75	20.071	ug/L	0.331	1	262	47030	0
	As-1	75	20.076	ug/L	0.473	2	10391	57619	0
	Se	82	20.080	ug/L	0.454	2	8	4968	0
	Se	78	20.095	ug/L	0.979	4	10548	23596	0
	Mo	98	20.068	ug/L	0.370	1	9	110030	0
	Y	89		ug/L			474888	467851	1
	Kr	83		ug/L			547	537	1
>	In	115		ug/L			1082254	1065571	1
	Ag	107	20.068	ug/L	0.445	2	21	218137	2
	Cd	111	20.051	ug/L	0.444	2	82	99955	0
	Cd	114	19.980	ug/L	0.685	3	34	248990	1
	Sb	121	20.028	ug/L	0.209	1	73	288047	0
	Sb	123	20.064	ug/L	0.390	1	55	220122	0
	Ba	135	20.078	ug/L	0.350	1	83	91227	0
	Ba	137	20.112	ug/L	0.317	1	166	158764	0
>	Tb	159		ug/L			1254824	1260416	1
	Tl	205	20.026	ug/L	0.437	2	48	798868	1
	Pb	208	19.993	ug/L	0.311	1	368	1057189	0
	Bi	209		ug/L			3019464	2969691	1
	Th	232	20.086	ug/L	0.346	1	73	969728	0
	U	238	20.023	ug/L	0.278	1	4	1006908	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 09:24:20
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\061113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1522619	1
	Be	9	49.848	ug/L	0.160	0	24	224205	0
	C	13		ug/L			93073	92590	2
	Cl	37		ug/L			4500094	4999210	0
>	Sc	45		ug/L			1309883	1295082	0
	V	51	49.978	ug/L	0.844	1	8014	1236379	1
	V-1	51	49.996	ug/L	0.881	1	51	1232275	1
	Cr	52	49.678	ug/L	0.685	1	23924	1055580	0
	Cr	53	49.734	ug/L	0.360	0	157	117968	0
	Mn	55	49.851	ug/L	0.931	1	818	1450792	1
	Co	59	49.681	ug/L	0.358	0	151	1041356	0
>	Ge	72		ug/L			720962	712904	1
	Ni	60	49.776	ug/L	0.617	1	73	223597	0
	Ni	62	49.866	ug/L	0.636	1	223	31400	0
	Cu	63	49.759	ug/L	0.766	1	644	478311	0
	Cu	65	49.978	ug/L	0.662	1	188	223782	0
	Zn	66	50.054	ug/L	0.883	1	1943	132548	1
	Zn	67	49.964	ug/L	1.130	2	310	21892	1
	Zn	68	49.784	ug/L	0.143	0	1420	92090	1
	As	75	49.982	ug/L	0.771	1	262	114470	0
	As-1	75	49.987	ug/L	0.753	1	10391	125515	0
	Se	82	49.962	ug/L	0.930	1	8	12088	1
	Se	78	49.994	ug/L	0.619	1	10548	42152	0
	Mo	98	49.924	ug/L	1.064	2	9	266905	1
	Y	89		ug/L			474888	458964	0
	Kr	83		ug/L			547	560	4
>	In	115		ug/L			1082254	1043081	1
	Ag	107	50.041	ug/L	1.263	2	21	534553	1
	Cd	111	49.914	ug/L	0.319	0	82	241431	1
	Cd	114	49.931	ug/L	0.558	1	34	605065	0
	Sb	121	50.143	ug/L	0.543	1	73	716095	1
	Sb	123	49.972	ug/L	0.895	1	55	535124	0
	Ba	135	49.962	ug/L	1.002	2	83	221259	0
	Ba	137	50.063	ug/L	0.415	0	166	389093	1
>	Tb	159		ug/L			1254824	1240507	1
	Tl	205	49.890	ug/L	0.671	1	48	1937540	0
	Pb	208	49.803	ug/L	0.418	0	368	2541469	0
	Bi	209		ug/L			3019464	2851215	0
	Th	232	50.806	ug/L	0.929	1	73	2625604	0
	U	238	50.702	ug/L	0.704	1	4	2698746	0

USGS : 0000211

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 09:29:32
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: C:\NexION Data\System\061113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1491340	1
	Be	9	99.939	ug/L	1.468	1	24	439330	1
	C	13		ug/L			93073	94489	2
	Cl	37		ug/L			4500094	4911206	1
>	Sc	45		ug/L			1309883	1271396	1
	V	51	101.777	ug/L	1.278	1	8014	2618213	0
	V-1	51	101.423	ug/L	1.035	1	51	2576007	0
	Cr	52	101.471	ug/L	0.646	0	23924	2199244	1
	Cr	53	100.226	ug/L	0.644	0	157	235017	1
	Mn	55	101.074	ug/L	2.212	2	818	2993815	1
	Co	59	101.387	ug/L	2.062	2	151	2187017	1
>	Ge	72		ug/L			720962	689964	0
	Ni	60	99.999	ug/L	2.215	2	73	434700	2
	Ni	62	100.583	ug/L	2.066	2	223	62292	2
	Cu	63	100.095	ug/L	0.349	0	644	933667	0
	Cu	65	99.429	ug/L	3.036	3	188	422691	2
	Zn	66	99.909	ug/L	2.376	2	1943	253477	2
	Zn	67	100.133	ug/L	0.353	0	310	42355	0
	Zn	68	100.184	ug/L	2 196	2	1420	179065	2
	As	75	100.118	ug/L	0.982	0	262	222568	1
	As-1	75	100.157	ug/L	1.259	1	10391	234619	1
	Se	82	99.809	ug/L	0.865	0	8	23218	0
	Se	78	99.992	ug/L	0.699	0	10548	71488	0
	Mo	98	100.101	ug/L	0.679	0	9	519733	0
	Y	89		ug/L			474888	454511	0
	Kr	83		ug/L			547	643	1
>	In	115		ug/L			1082254	1033342	1
	Ag	107	99.239	ug/L	3.364	3	21	1024200	2
	Cd	111	99.208	ug/L	1.922	1	82	463043	0
	Cd	114	99.610	ug/L	1.442	1	34	1180431	0
	Sb	121	99.642	ug/L	0.628	0	73	1393056	0
	Sb	123	99.702	ug/L	0.783	0	55	1047359	0
	Ba	135	100.188	ug/L	0.918	0	83	442285	0
	Ba	137	100.124	ug/L	1.312	1	166	773908	0
>	Tb	159		ug/L			1254824	1232801	0
	Tl	205	101.216	ug/L	0.313	0	48	4071890	0
	Pb	208	100.710	ug/L	0.806	0	368	5231085	0
	Bi	209		ug/L			3019464	2734348	1
	Th	232	99.989	ug/L	0.175	0	73	5134200	0
	U	238	99.891	ug/L	0.265	0	4	5265400	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 09:35:04
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: C:\NexION Data\System\061113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1571398	1
	Be	9	0.001	ug/L	0.001	89	24	31	16
	C	13		ug/L			93073	91609	0
	Cl	37		ug/L			4500094	4801772	2
>	Sc	45		ug/L			1309883	1317801	1
	V	51	-0.004	ug/L	0.007	166	8014	7956	2
	V-1	51	0.001	ug/L	0.001	110	51	85	44
	Cr	52	-0.018	ug/L	0.018	100	23924	23670	2
	Cr	53	-0.000	ug/L	0.001	923	157	157	2
	Mn	55	0.001	ug/L	0.003	280	818	857	11
	Co	59	0.002	ug/L	0.002	110	151	187	20
>	Ge	72		ug/L			720962	721257	1
	Ni	60	-0.002	ug/L	0.002	98	73	66	12
	Ni	62	0.653	ug/L	0.235	36	223	643	22
	Cu	63	0.036	ug/L	0.019	53	644	991	17
	Cu	65	-0.005	ug/L	0.002	30	188	164	5
	Zn	66	-0.175	ug/L	0.013	7	1943	1484	1
	Zn	67	-0.176	ug/L	0.040	22	310	233	7
	Zn	68	-0.139	ug/L	0.019	13	1420	1163	1
	As	75	0.007	ug/L	0.013	175	262	280	11
	As-1	75	-0.046	ug/L	0.075	163	10391	10286	0
	Se	82	-0.048	ug/L	0.039	81	8	-3	308
	Se	78	-0.188	ug/L	0.291	154	10548	10430	0
	Mo	98	0.034	ug/L	0.020	59	9	195	56
	Y	89		ug/L			474888	470259	0
	Kr	83		ug/L			547	589	2
>	In	115		ug/L			1082254	1060040	0
	Ag	107	0.014	ug/L	0.019	136	21	170	119
	Cd	111	0.011	ug/L	0.012	115	82	132	44
	Cd	114	0.006	ug/L	0.009	140	34	112	98
	Sb	121	0.186	ug/L	0.025	13	73	2745	13
	Sb	123	0.186	ug/L	0.027	14	55	2064	14
	Ba	135	0.006	ug/L	0.009	145	83	109	37
	Ba	137	0.002	ug/L	0.009	535	166	175	38
>	Tb	159		ug/L			1254824	1247622	1
	Tl	205	0.009	ug/L	0.005	51	48	427	43
	Pb	208	0.003	ug/L	0.005	168	368	508	45
	Bi	209		ug/L			3019464	2982250	1
	Th	232	0.152	ug/L	0.008	5	73	7948	4
	U	238	0.005	ug/L	0.003	47	4	288	45

Sample Information

Sample Date/Time: Wednesday, June 12, 2013 09:29:32
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\061213.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	**0.9995**	0.020	0.20	10	20	50	100
V-1	51	**0.9997**	0.020	0.50	10	20	50	100
Cr	52	**0.9996**	0.017	0.50	10	20	50	100
Cr	53	**1.0000**	0.002	0.50	10	20	50	100
Mn	55	**0.9998**	0.023	0.50	10	20	50	100
Co	59	**0.9997**	0.017	0.20	10	20	50	100
Ge	72							
Ni	60	**1.0000**	0.006	0.50	10	20	50	100
Ni	62	**0.9999**	0.001	0.50	10	20	50	100
Cu	63	**1.0000**	0.014	0.50	10	20	50	100
Cu	65	**0.9999**	0.006	0.50	10	20	50	100
Zn	66	**1.0000**	0.004	4.00	10	20	50	100
Zn	67	**1.0000**	0.001	4.00	10	20	50	100
Zn	68	**1.0000**	0.003	4.00	10	20	50	100
As	75	**1.0000**	0.003	0.20	10	20	50	100
As-1	75	**1.0000**	0.003	0.20	10	20	50	100
Se	82	**0.9999**	0.000	0.50	10	20	50	100
Se	78	**1.0000**	0.001	0.50	10	20	50	100
Mo	98	**1.0000**	0.008	0.20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**0.9999**	0.010	0.20	10	20	50	100
Cd	111	**0.9999**	0.005	0.10	10	20	50	100
Cd	114	**1.0000**	0.011	0.10	10	20	50	100
Sb	121	**1.0000**	0.014	0.20	10	20	50	100
Sb	123	**1.0000**	0.010	0.20	10	20	50	100
Ba	135	**1.0000**	0.004	0.50	10	20	50	100
Ba	137	**1.0000**	0.007	0.50	10	20	50	100
Tb	159							
Tl	205	**0.9998**	0.033	0.20	10	20	50	100
Pb	208	**0.9999**	0.042	0.10	10	20	50	100
Bi	209							
Th	232	**0.9998**	0.042	0.20	10	20	50	100
U	238	**0.9999**	0.043	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 09:41:58
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1543489	1
	Be	9	49.513	ug/L	0.699	1	24	225311	2
	C	13		ug/L			93073	96699	1
	Cl	37		ug/L			4500094	4980364	0
>	Sc	45		ug/L			1309883	1303678	1
	V	51	47.208	ug/L	0.668	1	8014	1249485	0
	V-1	51	47.772	ug/L	0.668	1	51	1244129	0
	Cr	52	48.666	ug/L	0.616	1	23924	1093862	0
	Cr	53	50.669	ug/L	0.699	1	157	121893	0
	Mn	55	49.159	ug/L	0.414	0	818	1493612	0
	Co	59	48.831	ug/L	0.371	0	151	1080282	1
>	Ge	72		ug/L			720962	717636	1
	Ni	60	50.200	ug/L	1.146	2	73	226956	0
	Ni	62	50.689	ug/L	1.454	2	223	32756	2
	Cu	63	51.101	ug/L	1.481	2	644	495973	1
	Cu	65	50.997	ug/L	1.196	2	188	225554	1
	Zn	66	49.277	ug/L	1.618	3	1943	130988	2
	Zn	67	48.852	ug/L	0.712	1	310	21653	2
	Zn	68	49.088	ug/L	1 502	3	1420	91969	2
	As	75	49.232	ug/L	0.504	1	262	113955	0
	As-1	75	49.448	ug/L	0.873	1	10391	125693	0
	Se	82	77.155	ug/L	0.728	0	8	18393	0
	Se	78	75.791	ug/L	1.976	2	10548	58880	0
	Mo	98	49.107	ug/L	1.091	2	9	265142	0
	Y	89		ug/L			474888	464738	2
	Kr	83		ug/L			547	589	2
>	In	115		ug/L			1082254	1058710	0
	Ag	107	51.040	ug/L	0.547	1	21	539819	0
	Cd	111	49.478	ug/L	0.702	1	82	236666	0
	Cd	114	48.337	ug/L	0.284	0	34	586951	0
	Sb	121	50.804	ug/L	0.267	0	73	727751	0
	Sb	123	50.856	ug/L	0.309	0	55	547397	0
	Ba	135	49.647	ug/L	0.740	1	83	224599	1
	Ba	137	49.854	ug/L	0.550	1	166	394925	1
>	Tb	159		ug/L			1254824	1245586	0
	Tl	205	47.607	ug/L	0.115	0	48	1935091	0
	Pb	208	49.435	ug/L	0.137	0	368	2594621	0
	Bi	209		ug/L			3019464	2847262	0
	Th	232	50.894	ug/L	0.304	0	73	2640437	0
	U	238	50.338	ug/L	0.420	0	4	2680922	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 09:48:50
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			1497608	1548425	1
	Be	9	0.001	ug/L	0.001	81	24	30	13
	C	13		ug/L			93073	94644	2
	Cl	37		ug/L			4500094	4730221	0
>	Sc	45		ug/L			1309883	1320422	2
	V	51	-0.001	ug/L	0.011	1296	8014	8051	1
	V-1	51	0.000	ug/L	0.000	46	51	62	6
	Cr	52	-0.012	ug/L	0.043	349	23924	23831	1
	Cr	53	-0.008	ug/L	0.010	119	157	138	16
	Mn	55	0.001	ug/L	0.002	332	818	844	5
	Co	59	0.000	ug/L	0.000	112	151	160	5
>	Ge	72		ug/L			720962	726177	2
	Ni	60	-0.004	ug/L	0.001	18	73	56	7
	Ni	62	0.172	ug/L	0.074	42	223	336	12
	Cu	63	-0.002	ug/L	0.005	289	644	630	7
	Cu	65	-0.008	ug/L	0.002	20	188	153	6
	Zn	66	-0.165	ug/L	0.011	6	1943	1519	3
	Zn	67	-0.209	ug/L	0.033	16	310	220	6
	Zn	68	-0.138	ug/L	0.037	26	1420	1173	5
	As	75	-0.011	ug/L	0.007	58	262	238	8
	As-1	75	-0.070	ug/L	0.104	147	10391	10297	0
	Se	82	-0.085	ug/L	0.018	20	8	-11	36
	Se	78	-0.251	ug/L	0.420	167	10548	10458	0
	Mo	98	0.009	ug/L	0.003	28	9	59	24
	Y	89		ug/L			474888	464695	0
	Kr	83		ug/L			547	587	0
>	In	115		ug/L			1082254	1062734	1
	Ag	107	0.002	ug/L	0.001	44	21	40	21
	Cd	111	0.004	ug/L	0.003	80	82	101	15
	Cd	114	0.001	ug/L	0.001	99	34	48	29
	Sb	121	0.036	ug/L	0.008	23	73	590	21
	Sb	123	0.039	ug/L	0.011	28	55	473	26
	Ba	135	0.001	ug/L	0.002	160	83	88	11
	Ba	137	-0.004	ug/L	0.000	7	166	132	2
>	Tb	159		ug/L			1254824	1242550	0
	Tl	205	0.004	ug/L	0.001	16	48	200	12
	Pb	208	-0.000	ug/L	0.000	63	368	341	4
	Bi	209		ug/L			3019464	2971419	0
	Th	232	0.066	ug/L	0.003	4	73	3470	4
	U	238	0.002	ug/L	0.000	19	4	94	18

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 09:52:58
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1559977	1
	Be	9	48.952	ug/L	1.738	3	24	225041	2
	C	13		ug/L			93073	92008	2
	Cl	37		ug/L			4500094	4881930	1
>	Sc	45		ug/L			1309883	1296429	1
	V	51	46.703	ug/L	1.128	2	8014	1229185	1
	V-1	51	47.228	ug/L	1.044	2	51	1223015	0
	Cr	52	47.566	ug/L	1.469	3	23924	1063544	1
	Cr	53	49.415	ug/L	1.027	2	157	118207	0
	Mn	55	47.220	ug/L	0.756	1	818	1426829	2
	Co	59	47.698	ug/L	1.141	2	151	1049143	0
>	Ge	72		ug/L			720962	720713	2
	Ni	60	49.124	ug/L	1.049	2	73	223015	0
	Ni	62	49.162	ug/L	1.600	3	223	31903	1
	Cu	63	49.906	ug/L	1.342	2	644	486369	0
	Cu	65	49.515	ug/L	0.842	1	188	219918	1
	Zn	66	49.264	ug/L	1.317	2	1943	131489	1
	Zn	67	49.418	ug/L	0.226	0	310	21993	2
	Zn	68	50.384	ug/L	1.955	3	1420	94713	1
	As	75	49.150	ug/L	1.362	2	262	114212	0
	As-1	75	48.930	ug/L	1.541	3	10391	124979	0
	Se	82	50.273	ug/L	1.115	2	8	12036	0
	Se	78	48.726	ug/L	1.750	3	10548	41771	0
	Mo	98	49.132	ug/L	0.938	1	9	266407	1
	Y	89		ug/L			474888	459350	0
	Kr	83		ug/L			547	597	6
>	In	115		ug/L			1082254	1058853	0
	Ag	107	49.799	ug/L	0.779	1	21	526761	1
	Cd	111	49.752	ug/L	0.170	0	82	238017	0
	Cd	114	50.048	ug/L	0.150	0	34	607823	0
	Sb	121	48.829	ug/L	0.259	0	73	699580	0
	Sb	123	49.131	ug/L	0.687	1	55	528886	1
	Ba	135	48.741	ug/L	0.885	1	83	220527	1
	Ba	137	48.849	ug/L	0.180	0	166	387024	0
>	Tb	159		ug/L			1254824	1248956	0
	Tl	205	47.342	ug/L	0.327	0	48	1929439	0
	Pb	208	48.416	ug/L	0.648	1	368	2547846	0
	Bi	209		ug/L			3019464	2852874	0
	Th	232	50.267	ug/L	0.581	1	73	2614801	0
	U	238	50.479	ug/L	0.348	0	4	2695607	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 09:59:30
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061213.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1497608	1596479	0
Be	9	-0.000	ug/L	0.000	91	24	24	7
C	13		ug/L			93073	93097	2
Cl	37		ug/L			4500094	4811059	1
> Sc	45		ug/L			1309883	1319931	0
V	51	-0.004	ug/L	0.004	87	8014	7958	1
V-1	51	0.001	ug/L	0.001	57	51	75	17
Cr	52	-0.026	ug/L	0.020	76	23924	23534	1
Cr	53	-0.008	ug/L	0.010	126	157	138	17
Mn	55	0.002	ug/L	0.006	304	818	888	21
Co	59	0.003	ug/L	0.006	172	151	225	55
> Ge	72		ug/L			720962	736322	0
Ni	60	0.002	ug/L	0.005	280	73	83	28
Ni	62	0.092	ug/L	0.056	61	223	288	12
Cu	63	-0.002	ug/L	0.007	311	644	634	11
Cu	65	-0.011	ug/L	0.008	76	188	143	25
Zn	66	-0.183	ug/L	0.004	2	1943	1492	1
Zn	67	-0.212	ug/L	0.010	4	310	222	1
Zn	68	-0.147	ug/L	0.005	3	1420	1173	0
As	75	-0.004	ug/L	0.012	291	262	258	10
As-1	75	-0.152	ug/L	0.045	29	10391	10248	0
Se	82	-0.054	ug/L	0.030	55	8	-4	164
Se	78	-0.556	ug/L	0.132	23	10548	10408	0
Mo	98	0.013	ug/L	0.002	11	9	83	10
Y	89		ug/L			474888	472347	2
Kr	83		ug/L			547	587	4
> In	115		ug/L			1082254	1075543	0
Ag	107	0.003	ug/L	0.000	5	21	55	3
Cd	111	0.005	ug/L	0.001	24	82	106	5
Cd	114	0.001	ug/L	0.001	45	34	50	15
Sb	121	0.091	ug/L	0.019	21	73	1394	19
Sb	123	0.086	ug/L	0.020	23	55	990	22
Ba	135	-0.001	ug/L	0.001	144	83	79	5
Ba	137	-0.003	ug/L	0.001	25	166	142	3
> Tb	159		ug/L			1254824	1243573	0
Tl	205	0.004	ug/L	0.001	16	48	206	12
Pb	208	-0.000	ug/L	0.000	234	368	357	5
Bi	209		ug/L			3019464	3030575	0
Th	232	0.099	ug/L	0.005	4	73	5215	4
U	238	0.002	ug/L	0.000	13	4	115	12

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 10:03:38
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1586250	0
	Be	9	0.199	ug/L	0.009	4	24	956	5
	C	13		ug/L			93073	97283	3
	Cl	37		ug/L			4500094	4795666	1
>	Sc	45		ug/L			1309883	1328468	0
	V	51	0.186	ug/L	0.008	4	8014	13115	1
	V-1	51	0.191	ug/L	0.003	1	51	5115	2
	Cr	52	0.472	ug/L	0.021	4	23924	34831	1
	Cr	53	0.498	ug/L	0.014	2	157	1377	3
	Mn	55	0.484	ug/L	0.008	1	818	15823	1
	Co	59	0.199	ug/L	0.004	2	151	4631	1
>	Ge	72		ug/L			720962	730197	0
	Ni	60	0.516	ug/L	0.013	2	73	2449	1
	Ni	62	0.553	ug/L	0.012	2	223	587	1
	Cu	63	0.488	ug/L	0.020	4	644	5461	3
	Cu	65	0.483	ug/L	0.009	1	188	2363	1
	Zn	66	3.905	ug/L	0.033	0	1943	12375	0
	Zn	67	3.336	ug/L	0.186	5	310	1796	3
	Zn	68	3.755	ug/L	0.070	1	1420	8488	1
	As	75	0.201	ug/L	0.008	4	262	738	2
	As-1	75	0.124	ug/L	0.033	26	10391	10818	0
	Se	82	0.491	ug/L	0.031	6	8	127	5
	Se	78	0.187	ug/L	0.125	67	10548	10804	0
	Mo	98	0.203	ug/L	0.009	4	9	1123	3
	Y	89		ug/L			474888	472180	0
	Kr	83		ug/L			547	549	5
>	In	115		ug/L			1082254	1075376	1
	Ag	107	0.207	ug/L	0.005	2	21	2249	2
	Cd	111	0.105	ug/L	0.008	7	82	591	4
	Cd	114	0.102	ug/L	0.007	6	34	1294	4
	Sb	121	0.226	ug/L	0.008	3	73	3366	2
	Sb	123	0.219	ug/L	0.008	3	55	2447	2
	Ba	135	0.474	ug/L	0.008	1	83	2257	0
	Ba	137	0.466	ug/L	0.014	2	166	3909	1
>	Tb	159		ug/L			1254824	1255236	0
	Tl	205	0.196	ug/L	0.003	1	48	8090	1
	Pb	208	0.098	ug/L	0.001	1	368	5555	1
	Bi	209		ug/L			3019464	3019654	0
	Th	232	0.189	ug/L	0.001	0	73	9976	0
	U	238	0.185	ug/L	0.001	0	4	9929	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 10:07:46
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1619585	2
	Be	9	-0.002	ug/L	0.001	63	24	19	22
	C	13		ug/L			93073	198413	2
	Cl	37		ug/L			4500094	13827769	2
>	Sc	45		ug/L			1309883	1331379	2
	V	51	0.116	ug/L	0.024	20	8014	11246	3
	V-1	51	0.683	ug/L	0.007	1	51	18209	3
	Cr	52	0.543	ug/L	0 030	5	23924	36514	1
	Cr	53	2.523	ug/L	0.081	3	157	6352	5
	Mn	55	0.062	ug/L	0.002	2	818	2752	2
	Co	59	0.019	ug/L	0.001	2	151	593	2
>	Ge	72		ug/L			720962	705613	1
	Ni	60	0.316	ug/L	0.010	3	73	1475	3
	Ni	62	5.475	ug/L	1.008	18	223	3670	16
	Cu	63	1.081	ug/L	0.104	9	644	10931	8
	Cu	65	0.329	ug/L	0.008	2	188	1613	2
	Zn	66	0.370	ug/L	0.045	12	1943	2855	4
	Zn	67	4.902	ug/L	0.154	3	310	2409	2
	Zn	68	-0.149	ug/L	0.035	23	1420	1120	5
	As	75	0.086	ug/L	0.012	13	262	452	6
	As-1	75	0.330	ug/L	0.084	25	10391	10927	0
	Se	82	-0.239	ug/L	0.019	8	8	-47	10
	Se	78	1.000	ug/L	0.368	36	10548	10950	1
	Mo	98	444.009	ug/L	13.770	3	9	2357113	2
	Y	89		ug/L			474888	457572	0
	Kr	83		ug/L			547	799	0
>	In	115		ug/L			1082254	1058563	1
	Ag	107	0.017	ug/L	0.001	7	21	205	5
	Cd	111	0.143	ug/L	0.009	6	82	767	6
	Cd	114	0.256	ug/L	0.012	4	34	3135	3
	Sb	121	0.075	ug/L	0.005	7	73	1143	7
	Sb	123	0.072	ug/L	0.005	6	55	828	7
	Ba	135	0.034	ug/L	0.006	18	83	236	11
	Ba	137	0.025	ug/L	0.004	15	166	359	7
>	Tb	159		ug/L			1254824	1269373	1
	Tl	205	0.027	ug/L	0.002	5	48	1185	6
	Pb	208	0.030	ug/L	0.002	6	368	1995	5
	Bi	209		ug/L			3019464	2682803	0
	Th	232	0.068	ug/L	0.016	23	73	3660	21
	U	238	0.001	ug/L	0.001	72	4	73	69

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 10:14:17
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1635710	2
	Be	9	-0.002	ug/L	0.001	56	24	16	38
	C	13		ug/L			93073	207300	2
	Cl	37		ug/L			4500094	13785018	4
>	Sc	45		ug/L			1309883	1327813	1
	V	51	0.063	ug/L	0.098	155	8014	9844	28
	V-1	51	0.745	ug/L	0.023	3	51	19820	1
	Cr	52	19.170	ug/L	0.157	0	23924	453570	1
	Cr	53	22.187	ug/L	0.527	2	157	54443	0
	Mn	55	18.916	ug/L	0.505	2	818	585755	1
	Co	59	18.717	ug/L	0.232	1	151	421785	0
>	Ge	72		ug/L			720962	691318	1
	Ni	60	20.143	ug/L	0.756	3	73	87753	2
	Ni	62	26.098	ug/L	1.416	5	223	16344	3
	Cu	63	20.763	ug/L	0.585	2	644	194491	1
	Cu	65	20.019	ug/L	0.102	0	188	85414	1
	Zn	66	19.535	ug/L	0.572	2	1943	51143	1
	Zn	67	21.734	ug/L	0.635	2	310	9441	1
	Zn	68	18.459	ug/L	0.635	3	1420	34158	1
	As	75	19.682	ug/L	0.458	2	262	44032	1
	As-1	75	19.782	ug/L	0.508	2	10391	54414	0
	Se	82	-0.306	ug/L	0.035	11	8	-61	11
	Se	78	1.228	ug/L	0.244	19	10548	10868	0
	Mo	98	451.009	ug/L	11.514	2	9	2345686	1
	Y	89		ug/L			474888	458519	3
	Kr	83		ug/L			547	859	4
>	In	115		ug/L			1082254	1082710	2
	Ag	107	19.911	ug/L	1.039	5	21	215205	2
	Cd	111	19.699	ug/L	0.456	2	82	96380	0
	Cd	114	19.660	ug/L	0.456	2	34	244071	0
	Sb	121	0.072	ug/L	0.007	9	73	1123	6
	Sb	123	0.070	ug/L	0.002	3	55	827	0
	Ba	135	0.036	ug/L	0.005	13	83	248	6
	Ba	137	0.024	ug/L	0.002	8	166	360	4
>	Tb	159		ug/L			1254824	1292352	1
	Tl	205	0.028	ug/L	0.000	0	48	1217	1
	Pb	208	0.027	ug/L	0 001	4	368	1848	3
	Bi	209		ug/L			3019464	2660263	2
	Th	232	0.026	ug/L	0.001	4	73	1474	3
	U	238	0.000	ug/L	0.000	8	4	29	5

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 10:21:09
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens RSD
>	Li	6		ug/L			1497608	1548130	2
	Be	9	194.451	ug/L	4.344	2	24	887012	0
	C	13		ug/L			93073	98431	1
	Cl	37		ug/L			4500094	5089825	1
>	Sc	45		ug/L			1309883	1296121	1
	V	51	196.757	ug/L	5.090	2	8014	5151452	0
	V-1	51	195.733	ug/L	3.308	1	51	5067388	0
	Cr	52	195.181	ug/L	7.524	3	23924	4289113	2
	Cr	53	191.566	ug/L	0.038	0	157	457786	1
	Mn	55	193.358	ug/L	4.809	2	818	5837203	0
	Co	59	194.883	ug/L	3.592	1	151	4286761	3
>	Ge	72		ug/L			720962	675303	0
	Ni	60	192.350	ug/L	1.713	0	73	818277	0
	Ni	62	200.520	ug/L	5.363	2	223	121321	1
	Cu	63	192.854	ug/L	1.779	0	644	1760049	0
	Cu	65	191.180	ug/L	1.150	0	188	795306	0
	Zn	66	189.029	ug/L	3.209	1	1943	467782	2
	Zn	67	189.556	ug/L	3.368	1	310	78213	1
	Zn	68	188.661	ug/L	2 432	1	1420	328848	0
	As	75	196.211	ug/L	3.209	1	262	426648	0
	As-1	75	195.076	ug/L	3.501	1	10391	437994	1
	Se	82	198.756	ug/L	1.663	0	8	44578	0
	Se	78	191.886	ug/L	2.722	1	10548	125164	0
	Mo	98	205.613	ug/L	0.900	0	9	1044863	0
	Y	89		ug/L			474888	445485	0
	Kr	83		ug/L			547	808	5
>	In	115		ug/L			1082254	1050787	1
	Ag	107	223.001	ug/L	1.352	0	21	2340796	0
	Cd	111	197.314	ug/L	1.864	0	82	936506	0
	Cd	114	214.579	ug/L	1.000	0	34	2585964	0
	Sb	121	216.963	ug/L	0.475	0	73	3084554	1
	Sb	123	219.520	ug/L	4.091	1	55	2344695	0
	Ba	135	198.203	ug/L	2.788	1	83	889667	0
	Ba	137	200.791	ug/L	1.406	0	166	1578126	0
>	Tb	159		ug/L			1254824	1275539	1
	Tl	205	192.564	ug/L	4.577	2	48	8013819	1
	Pb	208	197.917	ug/L	4.013	2	368	10634819	0
	Bi	209		ug/L			3019464	2669154	1
	Th	232	190.324	ug/L	3.959	2	73	10109852	0
	U	238	190.272	ug/L	3.613	1	4	10375702	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 10:28:00
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			1497608	1528151	2
	Be	9	279.840	ug/L	10.113	3	24	1259953	1
	C	13		ug/L			93073	96669	3
	Cl	37		ug/L			4500094	5141795	2
>	Sc	45		ug/L			1309883	1242820	1
	V	51	302.128	ug/L	8.119	2	8014	7581745	1
	V-1	51	299.855	ug/L	6.862	2	51	7443869	1
	Cr	52	299.066	ug/L	3.781	1	23924	6291393	0
	Cr	53	291.071	ug/L	4.607	1	157	666835	1
	Mn	55	294.454	ug/L	6.090	2	818	8525177	2
	Co	59	293.371	ug/L	3.036	1	151	6186012	0
>	Ge	72		ug/L			720962	650078	1
	Ni	60	288.176	ug/L	12.464	4	73	1179500	2
	Ni	62	298.461	ug/L	2.240	0	223	173743	1
	Cu	63	311.288	ug/L	5.608	1	644	2733908	0
	Cu	65	283.899	ug/L	5.943	2	188	1136576	0
	Zn	66	279.754	ug/L	8.089	2	1943	665321	0
	Zn	67	280.976	ug/L	6.472	2	310	111443	0
	Zn	68	285.709	ug/L	5.946	2	1420	478647	0
	As	75	294.681	ug/L	5.856	1	262	616602	0
	As-1	75	293.488	ug/L	5.893	2	10391	629506	0
	Se	82	293.337	ug/L	5.835	1	8	63316	0
	Se	78	285.141	ug/L	5.902	2	10548	174391	0
	Mo	98	313.913	ug/L	8.697	2	9	1535088	0
	Y	89		ug/L			474888	429751	0
	Kr	83		ug/L			547	916	3
>	In	115		ug/L			1082254	1030080	1
	Ag	107	316.659	ug/L	8.202	2	21	3257788	1
	Cd	111	288.401	ug/L	5.178	1	82	1341648	0
	Cd	114	311.829	ug/L	5.980	1	34	3683343	0
	Sb	121	317.572	ug/L	6.747	2	73	4424997	0
	Sb	123	324.066	ug/L	9 251	2	55	3392725	1
	Ba	135	303.145	ug/L	2.599	0	83	1333863	0
	Ba	137	328.121	ug/L	2.635	0	166	2527906	0
>	Tb	159		ug/L			1254824	1264845	1
	Tl	205	284.149	ug/L	4.208	1	48	11726690	0
	Pb	208	288.801	ug/L	3.872	1	368	15388607	0
	Bi	209		ug/L			3019464	2525086	0
	Th	232	281.793	ug/L	5.569	1	73	14843062	0
	U	238	283.117	ug/L	5.039	1	4	15309040	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 10:34:52
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061213.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1497608	1672184	2
Be	9	0.003	ug/L	0.001	45	24	41	14
C	13		ug/L			93073	99156	1
Cl	37		ug/L			4500094	5101029	2
> Sc	45		ug/L			1309883	1348535	0
V	51	-0.002	ug/L	0.010	592	8014	8203	3
V-1	51	0.004	ug/L	0.001	14	51	160	9
Cr	52	-0.024	ug/L	0.032	136	23924	24090	2
Cr	53	-0.005	ug/L	0.001	26	157	150	2
Mn	55	0.019	ug/L	0.001	7	818	1449	2
Co	59	0.003	ug/L	0.001	29	151	228	8
> Ge	72		ug/L			720962	729033	1
Ni	60	-0.001	ug/L	0.003	425	73	70	20
Ni	62	2.759	ug/L	0.047	1	223	2025	2
Cu	63	0.172	ug/L	0.001	0	644	2342	1
Cu	65	-0.012	ug/L	0.002	13	188	136	5
Zn	66	-0.453	ug/L	0.010	2	1943	760	1
Zn	67	-0.446	ug/L	0.010	2	310	116	3
Zn	68	-0.417	ug/L	0.005	1	1420	656	1
As	75	0.014	ug/L	0.017	126	262	297	13
As-1	75	-0.055	ug/L	0.085	155	10391	10376	1
Se	82	-0.030	ug/L	0.041	134	8	1	828
Se	78	-0.225	ug/L	0.313	139	10548	10518	0
Mo	98	0.037	ug/L	0.002	6	9	214	4
Y	89		ug/L			474888	473682	3
Kr	83		ug/L			547	596	3
> In	115		ug/L			1082254	1131134	0
Ag	107	0.008	ug/L	0.001	14	21	116	11
Cd	111	0.007	ug/L	0.002	31	82	124	9
Cd	114	0.005	ug/L	0.001	22	34	96	14
Sb	121	0.342	ug/L	0.075	21	73	5320	21
Sb	123	0.349	ug/L	0.079	22	55	4075	22
Ba	135	-0.009	ug/L	0.001	14	83	45	13
Ba	137	-0.011	ug/L	0.001	9	166	83	10
> Tb	159		ug/L			1254824	1301020	0
Tl	205	0.026	ug/L	0.003	12	48	1142	11
Pb	208	0.002	ug/L	0.001	37	368	497	8
Bi	209		ug/L			3019464	3099383	0
Th	232	0.138	ug/L	0.004	3	73	7562	3
U	238	0.007	ug/L	0.001	8	4	401	8

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~CCV2~~ 222222
Sample Dil Factor: AA 6-12-13
Comments:
Sample Date/Time: Wednesday, June 12, 2013 10:40:55
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens	Intens. RSD
>	Li	6		ug/L			1497608	1661777	1
	Be	9	49.100	ug/L	0.660	1	24	240506	1
	C	13		ug/L			93073	96679	2
	Cl	37		ug/L			4500094	5195506	1
>	Sc	45		ug/L			1309883	1329990	2
	V	51	46.447	ug/L	0.775	1	8014	1254119	0
	V-1	51	47.256	ug/L	0.749	1	51	1255381	0
	Cr	52	47.012	ug/L	0.894	1	23924	1078687	1
	Cr	53	49.834	ug/L	0.835	1	157	122295	1
	Mn	55	47.922	ug/L	1.866	3	818	1484638	1
	Co	59	46.411	ug/L	1.590	3	151	1046953	1
>	Ge	72		ug/L			720962	714962	0
	Ni	60	49.306	ug/L	1.375	2	73	222099	1
	Ni	62	50.973	ug/L	1.501	2	223	32816	2
	Cu	63	50.385	ug/L	0.227	0	644	487316	0
	Cu	65	49.671	ug/L	0.835	1	188	218892	1
	Zn	66	49.291	ug/L	0.263	0	1943	130561	0
	Zn	67	49.999	ug/L	0 754	1	310	22071	2
	Zn	68	50.212	ug/L	1.236	2	1420	93690	1
	As	75	49.588	ug/L	0.413	0	262	114358	0
	As-1	75	49.512	ug/L	0.440	0	10391	125389	0
	Se	82	51.085	ug/L	1.393	2	8	12136	2
	Se	78	50.096	ug/L	0.991	1	10548	42323	0
	Mo	98	49.595	ug/L	0.348	0	9	266831	0
	Y	89		ug/L			474888	471134	1
	Kr	83		ug/L			547	641	6
>	In	115		ug/L			1082254	1119304	0
	Ag	107	50.068	ug/L	0.648	1	21	559853	1
	Cd	111	49.406	ug/L	0.189	0	82	249857	0
	Cd	114	49.601	ug/L	0.320	0	34	636782	0
	Sb	121	48.682	ug/L	0.547	1	73	737272	0
	Sb	123	49.696	ug/L	0.360	0	55	565519	0
	Ba	135	48.710	ug/L	0.424	0	83	232975	0
	Ba	137	47.833	ug/L	0.884	1	166	400615	2
>	Tb	159		ug/L			1254824	1309591	0
	Tl	205	46.379	ug/L	0.266	0	48	1982042	0
	Pb	208	47.451	ug/L	0.154	0	368	2618471	0
	Bi	209		ug/L			3019464	2949879	0
	Th	232	49.363	ug/L	0.586	1	73	2692584	0
	U	238	49.517	ug/L	0.329	0	4	2772702	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~CCB2~~ 222222
Sample Dil Factor: 061213
Comments:
Sample Date/Time: Wednesday, June 12, 2013 10:47:48
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
[>	Li	6		ug/L			1497608	1697617	0
[	Be	9	0.000	ug/L	0.001	223	24	29	15
	C	13		ug/L			93073	99286	0
	Cl	37		ug/L			4500094	5048773	0
[>	Sc	45		ug/L			1309883	1343222	0
[	V	51	0.003	ug/L	0.004	145	8014	8296	1
[	V-1	51	0.002	ug/L	0.001	35	51	99	17
[	Cr	52	-0.000	ug/L	0.017	4189	23924	24523	1
[	Cr	53	-0.004	ug/L	0.007	153	157	150	11
[	Mn	55	0.005	ug/L	0.001	14	818	989	2
[	Co	59	0.001	ug/L	0.001	105	151	186	17
[>	Ge	72		ug/L			720962	721119	0
[	Ni	60	-0.005	ug/L	0.002	36	73	51	15
[	Ni	62	1.127	ug/L	0.181	16	223	950	12
[	Cu	63	0.067	ug/L	0.006	8	644	1299	4
[	Cu	65	-0.010	ug/L	0.003	30	188	144	9
[	Zn	66	-0.370	ug/L	0.012	3	1943	969	2
[	Zn	67	-0.363	ug/L	0.011	3	310	151	4
[	Zn	68	-0.335	ug/L	0.005	1	1420	800	0
[	As	75	0.007	ug/L	0.003	45	262	279	3
[	As-1	75	-0.048	ug/L	0.033	68	10391	10281	0
[	Se	82	-0.049	ug/L	0.048	99	8	-3	368
[	Se	78	-0.155	ug/L	0.137	88	10548	10450	0
[	Mo	98	0.014	ug/L	0.002	11	9	84	11
	Y	89		ug/L			474888	467929	0
	Kr	83		ug/L			547	621	4
[>	In	115		ug/L			1082254	1121254	0
[	Ag	107	0.003	ug/L	0.001	19	21	59	11
[	Cd	111	0.006	ug/L	0.001	13	82	115	3
[	Cd	114	0.001	ug/L	0.000	29	34	54	10
[	Sb	121	0.120	ug/L	0.029	23	73	1899	23
[	Sb	123	0.121	ug/L	0.028	22	55	1441	21
[	Ba	135	-0.006	ug/L	0.002	25	83	56	13
[	Ba	137	-0.008	ug/L	0.000	5	166	109	3
[>	Tb	159		ug/L			1254824	1302317	1
[	Tl	205	0.007	ug/L	0.001	16	48	359	13
[	Pb	208	-0.000	ug/L	0.000	85	368	364	5
[	Bi	209		ug/L			3019464	3078698	1
[	Th	232	0.098	ug/L	0.003	3	73	5382	2
[	U	238	0.003	ug/L	0.001	20	4	148	19

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 10:52:09
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1621311	0
	Be	9	49.527	ug/L	1.009	2	24	236698	1
	C	13		ug/L			93073	98089	3
	Cl	37		ug/L			4500094	5158602	1
>	Sc	45		ug/L			1309883	1297453	0
	V	51	46.997	ug/L	0.623	1	8014	1238146	1
	V-1	51	47.491	ug/L	0.367	0	51	1231048	1
	Cr	52	48.209	ug/L	1.063	2	23924	1078711	1
	Cr	53	49.961	ug/L	1.271	2	157	119624	2
	Mn	55	48.273	ug/L	0.483	1	818	1459765	0
	Co	59	48.490	ug/L	0.786	1	151	1067622	1
>	Ge	72		ug/L			720962	702844	2
	Ni	60	49.706	ug/L	1.138	2	73	220079	0
	Ni	62	50.465	ug/L	1.505	2	223	31933	1
	Cu	63	50.372	ug/L	1.254	2	644	478831	1
	Cu	65	50.894	ug/L	1.324	2	188	220482	3
	Zn	66	50.186	ug/L	1.343	2	1943	130649	3
	Zn	67	50.585	ug/L	2.062	4	310	21938	3
	Zn	68	51.369	ug/L	0.626	1	1420	94196	1
	As	75	50.062	ug/L	0.688	1	262	113476	0
	As-1	75	49.936	ug/L	0.694	1	10391	124218	0
	Se	82	51.559	ug/L	0.995	1	8	12040	1
	Se	78	50.397	ug/L	0.783	1	10548	41791	0
	Mo	98	50.689	ug/L	0.669	1	9	268114	2
	Y	89		ug/L			474888	457512	1
	Kr	83		ug/L			547	641	2
>	In	115		ug/L			1082254	1094344	0
	Ag	107	50.061	ug/L	0.109	0	21	547305	0
	Cd	111	51.333	ug/L	0.195	0	82	253809	0
	Cd	114	50.531	ug/L	0.192	0	34	634255	0
	Sb	121	49.791	ug/L	0.215	0	73	737278	0
	Sb	123	49.506	ug/L	0.321	0	55	550808	0
	Ba	135	49.397	ug/L	0.283	0	83	231002	0
	Ba	137	49.488	ug/L	0.290	0	166	405227	1
>	Tb	159		ug/L			1254824	1290626	1
	Tl	205	47.233	ug/L	0 764	1	48	1989047	0
	Pb	208	48.113	ug/L	0.716	1	368	2616285	0
	Bi	209		ug/L			3019464	2929361	0
	Th	232	49.972	ug/L	0.597	1	73	2686077	0
	U	238	50.820	ug/L	0.831	1	4	2804093	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 10:59:02
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1650821	0
	Be	9	0.001	ug/L	0.004	301	24	33	58
	C	13		ug/L			93073	98441	2
	Cl	37		ug/L			4500094	4916346	2
>	Sc	45		ug/L			1309883	1350090	1
	V	51	-0.006	ug/L	0.008	143	8014	8105	2
	V-1	51	0.003	ug/L	0.003	103	51	125	61
	Cr	52	-0.039	ug/L	0.025	64	23924	23776	1
	Cr	53	-0.011	ug/L	0.004	38	157	134	8
	Mn	55	0.002	ug/L	0.003	119	818	917	10
	Co	59	0.001	ug/L	0.001	70	151	186	12
>	Ge	72		ug/L			720962	712009	1
	Ni	60	-0.006	ug/L	0.003	49	73	47	28
	Ni	62	0.609	ug/L	0.068	11	223	609	8
	Cu	63	0.024	ug/L	0.005	20	644	871	6
	Cu	65	-0.016	ug/L	0.002	11	188	114	8
	Zn	66	-0.377	ug/L	0 013	3	1943	939	4
	Zn	67	-0.380	ug/L	0.037	9	310	142	12
	Zn	68	-0.321	ug/L	0.019	5	1420	815	4
	As	75	0.020	ug/L	0.009	43	262	306	7
	As-1	75	-0.035	ug/L	0.059	169	10391	10180	0
	Se	82	-0.017	ug/L	0.044	263	8	4	237
	Se	78	-0.147	ug/L	0.244	165	10548	10322	0
	Mo	98	0.012	ug/L	0.001	12	9	73	9
	Y	89		ug/L			474888	465395	0
	Kr	83		ug/L			547	595	4
>	In	115		ug/L			1082254	1123551	1
	Ag	107	0.003	ug/L	0.002	54	21	60	34
	Cd	111	0.003	ug/L	0.003	78	82	103	12
	Cd	114	0.001	ug/L	0.001	70	34	49	20
	Sb	121	0.109	ug/L	0.021	19	73	1724	17
	Sb	123	0.105	ug/L	0.017	15	55	1253	14
	Ba	135	0.000	ug/L	0.009	4255	83	87	51
	Ba	137	-0.003	ug/L	0.006	179	166	144	36
>	Tb	159		ug/L			1254824	1291468	1
	Tl	205	0.009	ug/L	0.005	51	48	438	47
	Pb	208	0.001	ug/L	0.005	329	368	456	56
	Bi	209		ug/L			3019464	3074944	1
	Th	232	0.097	ug/L	0.005	5	73	5275	5
	U	238	0.004	ug/L	0.003	72	4	227	73

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 MB1 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, June 12, 2013 11:05:09
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1670744	1
	Be	9	0.000	ug/L	0.001	2577	24	27	22
	C	13		ug/L			93073	106013	2
	Cl	37		ug/L			4500094	4945757	1
>	Sc	45		ug/L			1309883	1387125	2
	V	51	0.003	ug/L	0.006	198	8014	8566	1
	V-1	51	0.004	ug/L	0.000	5	51	165	5
	Cr	52	0.002	ug/L	0.023	1122	23924	25378	1
	Cr	53	0.006	ug/L	0.005	81	157	181	6
	Mn	55	0.013	ug/L	0.001	10	818	1282	3
	Co	59	-0.001	ug/L	0.001	42	151	126	10
>	Ge	72		ug/L			720962	732117	0
	Ni	60	0.074	ug/L	0.006	8	73	417	7
	Ni	62	0.425	ug/L	0.007	1	223	505	1
	Cu	63	0.068	ug/L	0.005	7	644	1321	3
	Cu	65	0.047	ug/L	0.002	3	188	401	2
	Zn	66	3.052	ug/L	0.330	10	1943	10124	8
	Zn	67	2.678	ug/L	0.334	12	310	1508	9
	Zn	68	2.970	ug/L	0.357	12	1420	7029	8
	As	75	0.003	ug/L	0.012	398	262	274	9
	As-1	75	-0.121	ug/L	0.025	20	10391	10265	1
	Se	82	-0.067	ug/L	0.020	29	8	-7	62
	Se	78	-0.440	ug/L	0.094	21	10548	10425	1
	Mo	98	0.018	ug/L	0.003	16	9	110	14
	Y	89		ug/L			474888	483707	0
	Kr	83		ug/L			547	616	2
>	In	115		ug/L			1082254	1149724	1
	Ag	107	0.001	ug/L	0.001	54	21	39	23
	Cd	111	0.008	ug/L	0.004	47	82	129	15
	Cd	114	0.005	ug/L	0.001	11	34	104	7
	Sb	121	0.049	ug/L	0.009	17	73	833	15
	Sb	123	0.048	ug/L	0.008	17	55	622	15
	Ba	135	0.008	ug/L	0.002	30	83	125	9
	Ba	137	0.002	ug/L	0.005	258	166	192	22
>	Tb	159		ug/L			1254824	1316130	0
	Tl	205	0.008	ug/L	0.002	18	48	408	15
	Pb	208	0.070	ug/L	0.005	6	368	4268	6
	Bi	209		ug/L			3019464	3142947	1
	Th	232	0.046	ug/L	0.002	4	73	2593	4
	U	238	0.001	ug/L	0.000	4	4	62	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 ADUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, June 12, 2013 11:09:16
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1730273	1
	Be	9	0.258	ug/L	0.003	1	24	1341	2
	C	13		ug/L			93073	107885	1
	Cl	37		ug/L			4500094	5302220	1
>	Sc	45		ug/L			1309883	1698496	1
	V	51	67.748	ug/L	0.395	0	8014	2331805	0
	V-1	51	68.608	ug/L	0.065	0	51	2328098	1
	Cr	52	31.758	ug/L	0 966	3	23924	940585	1
	Cr	53	33.506	ug/L	0.264	0	157	105100	2
	Mn	55	375.620	ug/L	3.907	1	818	14861440	0
	Co	59	9.647	ug/L	0.192	1	151	278185	1
>	Ge	72		ug/L			720962	726415	0
	Ni	60	31.272	ug/L	0.660	2	73	143175	2
	Ni	62	34.129	ug/L	0.330	0	223	22402	1
	Cu	63	48.834	ug/L	0.962	1	644	479864	1
	Cu	65	48.897	ug/L	0.669	1	188	218947	1
	Zn	66	73.917	ug/L	0.053	0	1943	197947	0
	Zn	67	78.595	ug/L	1.186	1	310	35066	1
	Zn	68	78.898	ug/L	1.146	1	1420	148776	1
	As	75	4.616	ug/L	0.066	1	262	11056	1
	As-1	75	4.331	ug/L	0.030	0	10391	20699	0
	Se	82	0.292	ug/L	0.131	44	8	78	39
	Se	78	0.007	ug/L	0.063	936	10548	10632	0
	Mo	98	4.996	ug/L	0.130	2	9	27314	2
	Y	89		ug/L			474888	666934	0
	Kr	83		ug/L			547	1039	3
>	In	115		ug/L			1082254	1135932	1
	Ag	107	0.103	ug/L	0 001	1	21	1195	0
	Cd	111	0.162	ug/L	0.004	2	82	920	3
	Cd	114	0.109	ug/L	0.003	3	34	1453	4
	Sb	121	1.686	ug/L	0.019	1	73	25983	1
	Sb	123	1.697	ug/L	0.035	2	55	19650	1
	Ba	135	120.284	ug/L	1.276	1	83	583675	0
	Ba	137	120.696	ug/L	1.666	1	166	1025444	0
>	Tb	159		ug/L			1254824	1345526	0
	Tl	205	0.081	ug/L	0.007	8	48	3617	8
	Pb	208	3.494	ug/L	0.050	1	368	198482	0
	Bi	209		ug/L			3019464	2798792	0
	Th	232	0.778	ug/L	0.014	1	73	43696	1
	U	238	0.311	ug/L	0.001	0	4	17902	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, June 12, 2013 11:13:24
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\061213.cal

RLCV

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1763383	1
	Be	9	0.258	ug/L	0.005	1	24	1368	0
	C	13		ug/L			93073	113807	2
	Cl	37		ug/L			4500094	5403618	3
>	Sc	45		ug/L			1309883	1695775	2
	V	51	69.045	ug/L	2.450	3	8014	2371392	1
	V-1	51	69.830	ug/L	2.506	3	51	2364648	1
	Cr	52	31.844	ug/L	0.672	2	23924	941560	0
	Cr	53	33.295	ug/L	0.798	2	157	104239	1
	Mn	55	376.291	ug/L	3.002	0	818	14864447	1
	Co	59	9.678	ug/L	0.143	1	151	278623	1
>	Ge	72		ug/L			720962	714880	1
	Ni	60	31.934	ug/L	0.355	1	73	143864	0
	Ni	62	35.172	ug/L	0 691	1	223	22709	1
	Cu	63	50.253	ug/L	1.138	2	644	485874	0
	Cu	65	49.836	ug/L	1.444	2	188	219543	1
	Zn	66	75.349	ug/L	1.624	2	1943	198498	0
	Zn	67	79.621	ug/L	0.925	1	310	34958	2
	Zn	68	79.345	ug/L	1.100	1	1420	147211	0
	As	75	4.746	ug/L	0.097	2	262	11177	0
	As-1	75	4.511	ug/L	0.148	3	10391	20785	0
	Se	82	0.330	ug/L	0.053	16	8	86	13
	Se	78	0.292	ug/L	0.250	85	10548	10643	0
	Mo	98	5.258	ug/L	0.072	1	9	28288	0
	Y	89		ug/L			474888	673881	0
	Kr	83		ug/L			547	1072	0
>	In	115		ug/L			1082254	1150373	0
	Ag	107	0.110	ug/L	0.004	3	21	1282	3
	Cd	111	0.180	ug/L	0 012	6	82	1021	6
	Cd	114	0.106	ug/L	0.004	4	34	1431	3
	Sb	121	1.648	ug/L	0.011	0	73	25722	0
	Sb	123	1.675	ug/L	0 017	1	55	19643	0
	Ba	135	120.127	ug/L	0.679	0	83	590382	0
	Ba	137	119.449	ug/L	0.532	0	166	1027884	0
>	Tb	159		ug/L			1254824	1372769	1
	Tl	205	0.085	ug/L	0.002	1	48	3840	2
	Pb	208	3.469	ug/L	0.051	1	368	200994	0
	Bi	209		ug/L			3019464	2825433	1
	Th	232	0.765	ug/L	0.010	1	73	43791	0
	U	238	0.303	ug/L	0.001	0	4	17798	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 ASPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, June 12, 2013 11:17:31
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1497608	1769701	1
	Be	9	22.139	ug/L	0.417	1	24	115497	0
	C	13		ug/L			93073	114582	1
	Cl	37		ug/L			4500094	5565906	0
>	Sc	45		ug/L			1309883	1692627	1
	V	51	87.626	ug/L	1.279	1	8014	3002335	0
	V-1	51	88.802	ug/L	1.372	1	51	3002588	0
	Cr	52	49.696	ug/L	0.402	0	23924	1449693	0
	Cr	53	52.475	ug/L	0.558	1	157	163896	0
	Mn	55	390.882	ug/L	5.511	1	818	15411667	0
	Co	59	27.699	ug/L	0.477	1	151	795615	0
>	Ge	72		ug/L			720962	705534	1
	Ni	60	55.678	ug/L	0.750	1	73	247490	0
	Ni	62	57.667	ug/L	0.435	0	223	36611	1
	Cu	63	73.851	ug/L	1.591	2	644	704497	2
	Cu	65	72.289	ug/L	2.089	2	188	314210	1
	Zn	66	147.714	ug/L	5.605	3	1943	382144	2
	Zn	67	144.194	ug/L	4.149	2	310	62222	2
	Zn	68	149.807	ug/L	6.533	4	1420	272980	2
	As	75	27.875	ug/L	0.826	2	262	63530	1
	As-1	75	27.604	ug/L	0.760	2	10391	73469	1
	Se	82	73.664	ug/L	1.969	2	8	17262	0
	Se	78	70.564	ug/L	1.567	2	10548	54606	0
	Mo	98	28.758	ug/L	0.473	1	9	152666	0
	Y	89		ug/L			474888	678334	1
	Kr	83		ug/L			547	1087	1
>	In	115		ug/L			1082254	1160768	0
	Ag	107	23.650	ug/L	0.255	1	21	274258	0
	Cd	111	23.037	ug/L	0.282	1	82	120871	1
	Cd	114	22.803	ug/L	0.392	1	34	303598	1
	Sb	121	9.159	ug/L	0.062	0	73	143907	0
	Sb	123	9.057	ug/L	0.097	1	55	106934	0
	Ba	135	141.171	ug/L	1.056	0	83	700058	0
	Ba	137	142.103	ug/L	0.231	0	166	1233876	0
>	Tb	159		ug/L			1254824	1363965	0
	Tl	205	21.236	ug/L	0.227	1	48	945189	0
	Pb	208	25.294	ug/L	0.134	0	368	1453919	0
	Bi	209		ug/L			3019464	2794848	0
	Th	232	21.430	ug/L	0.100	0	73	1217501	0
	U	238	21.736	ug/L	0.294	1	4	1267571	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~WS90 APOST REN~~ 222222
Sample Dil Factor: 2
Comments: #061213
Sample Date/Time: Wednesday, June 12, 2013 11:21:39
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1762362	0
	Be	9	38.033	ug/L	0.298	0	24	197606	0
	C	13		ug/L			93073	114221	2
	Cl	37		ug/L			4500094	5502500	0
>	Sc	45		ug/L			1309883	1707648	1
	V	51	97.136	ug/L	0.907	0	8014	3356710	0
	V-1	51	98.334	ug/L	1.227	1	51	3354468	0
	Cr	52	61.301	ug/L	0.760	1	23924	1796879	1
	Cr	53	64.227	ug/L	1.387	2	157	202330	1
	Mn	55	394.150	ug/L	5.782	1	818	15678992	1
	Co	59	39.739	ug/L	0.335	0	151	1151545	0
>	Ge	72		ug/L			720962	712716	2
	Ni	60	69.870	ug/L	1.512	2	73	313635	1
	Ni	62	73.894	ug/L	2.345	3	223	47303	0
	Cu	63	87.233	ug/L	2.214	2	644	840353	2
	Cu	65	87.782	ug/L	3.408	3	188	385237	1
	Zn	66	193.811	ug/L	5.714	2	1943	505909	2
	Zn	67	184.573	ug/L	4.638	2	310	80350	0
	Zn	68	194.180	ug/L	3.052	1	1420	357114	1
	As	75	44.828	ug/L	1.003	2	262	103039	0
	As-1	75	43.832	ug/L	1.410	3	10391	111776	0
	Se	82	125.962	ug/L	2.871	2	8	29807	0
	Se	78	118.071	ug/L	4.278	3	10548	85247	0
	Mo	98	47.236	ug/L	1.923	4	9	253150	1
	Y	89		ug/L			474888	670723	0
	Kr	83		ug/L			547	1056	2
>	In	115		ug/L			1082254	1158901	0
	Ag	107	40.983	ug/L	1.087	2	21	474466	2
	Cd	111	38.785	ug/L	0.156	0	82	203104	1
	Cd	114	38.607	ug/L	0.486	1	34	513140	0
	Sb	121	40.708	ug/L	0.801	1	73	638277	1
	Sb	123	40.717	ug/L	0.361	0	55	479742	1
	Ba	135	157.004	ug/L	1.469	0	83	777324	1
	Ba	137	156.814	ug/L	2.935	1	166	1359301	1
>	Tb	159		ug/L			1254824	1369681	0
	Tl	205	36.306	ug/L	0.208	0	48	1622786	1
	Pb	208	39.914	ug/L	0 199	0	368	2303678	0
	Bi	209		ug/L			3019464	2786328	0
	Th	232	39.260	ug/L	0.474	1	73	2239866	1
	U	238	40.315	ug/L	0.141	0	4	2360999	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 EDUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, June 12, 2013 11:25:46
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1758651	0
	Be	9	0.000	ug/L	0.004	1206	24	30	70
	C	13		ug/L			93073	119903	1
	Cl	37		ug/L			4500094	5581462	4
>	Sc	45		ug/L			1309883	1431635	3
	V	51	23.834	ug/L	0.871	3	8014	696640	0
	V-1	51	24.235	ug/L	0.958	3	51	692613	0
	Cr	52	11.068	ug/L	0.182	1	23924	293332	1
	Cr	53	12.018	ug/L	0.452	3	157	31858	0
	Mn	55	0.348	ug/L	0.031	9	818	12479	8
	Co	59	0.121	ug/L	0.002	1	151	3113	1
>	Ge	72		ug/L			720962	713665	0
	Ni	60	0.598	ug/L	0.015	2	73	2758	1
	Ni	62	0.390	ug/L	0.042	10	223	470	6
	Cu	63	2.645	ug/L	0.018	0	644	26134	0
	Cu	65	2.326	ug/L	0.018	0	188	10412	1
	Zn	66	0.419	ug/L	0.003	0	1943	3016	0
	Zn	67	1.284	ug/L	0.068	5	310	865	2
	Zn	68	1.402	ug/L	0.037	2	1420	3978	2
	As	75	2.565	ug/L	0.018	0	262	6152	1
	As-1	75	2.461	ug/L	0.037	1	10391	15997	0
	Se	82	0.566	ug/L	0.003	0	8	142	0
	Se	78	0.410	ug/L	0.105	25	10548	10702	0
	Mo	98	5.828	ug/L	0.049	0	9	31303	0
	Y	89		ug/L			474888	477055	2
	Kr	83		ug/L			547	668	1
>	In	115		ug/L			1082254	1188983	1
	Ag	107	0.004	ug/L	0.001	19	21	75	12
	Cd	111	0.024	ug/L	0.001	2	82	221	1
	Cd	114	0.023	ug/L	0.001	6	34	356	4
	Sb	121	4.609	ug/L	0.044	0	73	74213	0
	Sb	123	4.714	ug/L	0.015	0	55	57044	1
	Ba	135	4.030	ug/L	0.061	1	83	20558	0
	Ba	137	3.973	ug/L	0.084	2	166	35507	1
>	Tb	159		ug/L			1254824	1374550	0
	Tl	205	0.024	ug/L	0.006	26	48	1136	25
	Pb	208	0.015	ug/L	0.007	46	368	1296	32
	Bi	209		ug/L			3019464	2975611	0
	Th	232	0.067	ug/L	0.010	14	73	3935	14
	U	238	0.081	ug/L	0.002	2	4	4750	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 E REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, June 12, 2013 11:30:01
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1497608	3186962	11
	Be	9	-0.004	ug/L	0.001	18	24	13	62
	C	13		ug/L			93073	77676	9
	Cl	37		ug/L			4500094	2665659	4
>	Sc	45		ug/L			1309883	2550634	9
	V	51	-0.211	ug/L	0.023	10	8014	4745	24
	V-1	51	0.022	ug/L	0.018	80	51	1190	73
	Cr	52	-0.812	ug/L	0.025	3	23924	11622	11
	Cr	53	-0.027	ug/L	0.008	30	157	176	19
	Mn	55	0.003	ug/L	0.005	153	818	1794	23
	Co	59	-0.002	ug/L	0.001	31	151	215	13
>	Ge	72		ug/L			720962	1224494	7
	Ni	60	-0.009	ug/L	0.001	16	73	58	14
	Ni	62	-0.198	ug/L	0.028	14	223	162	15
	Cu	63	-0.049	ug/L	0.005	9	644	282	21
	Cu	65	-0.030	ug/L	0.002	6	188	89	11
	Zn	66	-0.626	ug/L	0.029	4	1943	495	18
	Zn	67	-0.594	ug/L	0.011	1	310	84	10
	Zn	68	-0.601	ug/L	0.018	3	1420	522	15
	As	75	0.093	ug/L	0.103	111	262	832	54
	As-1	75	-2.232	ug/L	0 058	2	10391	8772	9
	Se	82	-0.057	ug/L	0.011	18	8	-8	51
	Se	78	-8.383	ug/L	0.217	2	10548	8792	9
	Mo	98	0.006	ug/L	0.005	87	9	71	63
	Y	89		ug/L			474888	837322	6
	Kr	83		ug/L			547	1139	51
>	In	115		ug/L			1082254	2317603	13
	Ag	107	0.000	ug/L	0.001	525	21	48	30
	Cd	111	-0.007	ug/L	0.004	61	82	102	24
	Cd	114	-0.000	ug/L	0.001	574	34	66	31
	Sb	121	0.012	ug/L	0.013	107	73	506	63
	Sb	123	0.013	ug/L	0 013	104	55	393	61
	Ba	135	-0.006	ug/L	0.009	166	83	114	66
	Ba	137	-0.010	ug/L	0.007	68	166	170	61
>	Tb	159		ug/L			1254824	2975307	7
	Tl	205	0.002	ug/L	0.001	44	48	340	21
	Pb	208	-0.004	ug/L	0 001	13	368	327	14
	Bi	209		ug/L			3019464	6372985	5
	Th	232	0.009	ug/L	0.009	102	73	1229	81
	U	238	0.001	ug/L	0 001	89	4	105	73

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 ESPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, June 12, 2013 11:34:08
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\061213.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1497608	1784411	0
Be	9	24.836	ug/L	0.431	1	24	130669	2
C	13		ug/L			93073	120242	0
Cl	37		ug/L			4500094	5590817	0
> Sc	45		ug/L			1309883	1458731	2
V	51	47.022	ug/L	0.562	1	8014	1392631	1
V-1	51	47.794	ug/L	0.668	1	51	1392728	1
Cr	52	34.134	ug/L	0.420	1	23924	866354	1
Cr	53	36.367	ug/L	0.733	2	157	97929	1
Mn	55	23.708	ug/L	0.579	2	818	806295	1
Co	59	22.970	ug/L	0.243	1	151	568682	2
> Ge	72		ug/L			720962	710470	0
Ni	60	26.647	ug/L	0.009	0	73	119329	0
Ni	62	26.125	ug/L	0.260	0	223	16823	1
Cu	63	29.175	ug/L	0.357	1	644	280682	1
Cu	65	28.481	ug/L	0.218	0	188	124814	1
Zn	66	78.578	ug/L	0.570	0	1943	205695	1
Zn	67	71.681	ug/L	0.223	0	310	31308	0
Zn	68	78.455	ug/L	1.358	1	1420	144702	1
As	75	28.616	ug/L	0.329	1	262	65690	0
As-1	75	27.993	ug/L	0.392	1	10391	74900	1
Se	82	80.387	ug/L	0.306	0	8	18974	0
Se	78	75.180	ug/L	0.787	1	10548	57918	1
Mo	98	33.132	ug/L	0.557	1	9	177151	1
Y	89		ug/L			474888	474852	1
Kr	83		ug/L			547	696	5
> In	115		ug/L			1082254	1178107	0
Ag	107	27.118	ug/L	0.213	0	21	319180	1
Cd	111	25.193	ug/L	0.100	0	82	134147	0
Cd	114	25.329	ug/L	0.329	1	34	342270	1
Sb	121	29.550	ug/L	0.140	0	73	471064	0
Sb	123	29.743	ug/L	0.434	1	55	356263	1
Ba	135	30.318	ug/L	0.551	1	83	152656	1
Ba	137	29.453	ug/L	0.251	0	166	259700	0
> Tb	159		ug/L			1254824	1369904	2
Tl	205	23.867	ug/L	0.483	2	48	1066637	0
Pb	208	24.403	ug/L	0.441	1	368	1408446	0
Bi	209		ug/L			3019464	2957675	0
Th	232	22.543	ug/L	0.467	2	73	1285888	0
U	238	23.598	ug/L	0.627	2	4	1381657	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~WS90 EPOST~~ REN ZZ ZZZZ
Sample Dil Factor: 2 # 6-13-13
Comments:
Sample Date/Time: Wednesday, June 12, 2013 11:38:16
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061213.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1497608	1778591	1
Be	9	38.806	ug/L	0.493	1	24	203461	1
C	13		ug/L			93073	119052	1
Cl	37		ug/L			4500094	5612057	0
> Sc	45		ug/L			1309883	1401489	1
V	51	59.583	ug/L	0.972	1	8014	1693078	0
V-1	51	60.244	ug/L	1.131	1	51	1686558	0
Cr	52	48.159	ug/L	0.532	1	23924	1163985	1
Cr	53	50.057	ug/L	1.266	2	157	129445	1
Mn	55	37.808	ug/L	1.018	2	818	1235027	2
Co	59	37.418	ug/L	0.245	0	151	889901	0
> Ge	72		ug/L			720962	705329	0
Ni	60	40.939	ug/L	1.184	2	73	181944	2
Ni	62	40.221	ug/L	0.526	1	223	25593	0
Cu	63	43.445	ug/L	0.439	1	644	414609	0
Cu	65	43.382	ug/L	0.844	1	188	188619	1
Zn	66	123.838	ug/L	4.003	3	1943	320665	2
Zn	67	116.894	ug/L	2.988	2	310	50489	1
Zn	68	123.260	ug/L	1.535	1	1420	224890	1
As	75	43.494	ug/L	0.832	1	262	98979	1
As-1	75	42.402	ug/L	0.893	2	10391	107390	1
Se	82	128.000	ug/L	1.885	1	8	29986	0
Se	78	119.114	ug/L	2.144	1	10548	85061	0
Mo	98	48.588	ug/L	0.653	1	9	257879	0
Y	89		ug/L			474888	474334	2
Kr	83		ug/L			547	658	3
> In	115		ug/L			1082254	1176570	1
Ag	107	43.576	ug/L	0.138	0	21	512216	1
Cd	111	40.558	ug/L	0.415	1	82	215605	0
Cd	114	39.760	ug/L	0.298	0	34	536538	0
Sb	121	44.260	ug/L	0.910	2	73	704494	0
Sb	123	44.260	ug/L	0.360	0	55	529431	1
Ba	135	44.547	ug/L	0.701	1	83	223975	1
Ba	137	44.345	ug/L	0.509	1	166	390378	0
> Tb	159		ug/L			1254824	1359632	1
Tl	205	37.722	ug/L	0.543	1	48	1673506	0
Pb	208	38.658	ug/L	0.579	1	368	2214647	0
Bi	209		ug/L			3019464	2945478	0
Th	232	40.161	ug/L	0.570	1	73	2274158	0
U	238	41.799	ug/L	0.831	1	4	2429585	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 MB1SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, June 12, 2013 11:42:23
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1707604	1
	Be	9	24.939	ug/L	0.346	1	24	125552	1
	C	13		ug/L			93073	109194	1
	Cl	37		ug/L			4500094	5333536	2
>	Sc	45		ug/L			1309883	1336703	0
	V	51	23.534	ug/L	0.136	0	8014	642810	0
	V-1	51	23.826	ug/L	0.122	0	51	636327	1
	Cr	52	23.852	ug/L	0.195	0	23924	562172	0
	Cr	53	24.877	ug/L	0.318	1	157	61452	2
	Mn	55	24.242	ug/L	0.315	1	818	755695	1
	Co	59	24.056	ug/L	0.292	1	151	545723	0
>	Ge	72		ug/L			720962	707381	0
	Ni	60	25.915	ug/L	0.366	1	73	115545	1
	Ni	62	25.069	ug/L	0.406	1	223	16081	1
	Cu	63	26.522	ug/L	0.828	3	644	254122	3
	Cu	65	26.207	ug/L	0.264	1	188	114365	1
	Zn	66	81.732	ug/L	1.908	2	1943	212952	2
	Zn	67	73.895	ug/L	0.288	0	310	32125	0
	Zn	68	79.919	ug/L	1.798	2	1420	146740	2
	As	75	25.488	ug/L	0.501	1	262	58282	1
	As-1	75	24.596	ug/L	0.310	1	10391	66760	0
	Se	82	82.608	ug/L	1.445	1	8	19413	1
	Se	78	76.174	ug/L	0.611	0	10548	58290	0
	Mo	98	25.587	ug/L	0.491	1	9	136204	1
	Y	89		ug/L			474888	455148	1
	Kr	83		ug/L			547	679	7
>	In	115		ug/L			1082254	1163572	1
	Ag	107	26.781	ug/L	0.391	1	21	311314	1
	Cd	111	25.902	ug/L	0.147	0	82	136222	1
	Cd	114	25.844	ug/L	0.304	1	34	344956	2
	Sb	121	24.947	ug/L	0.131	0	73	392788	0
	Sb	123	24.959	ug/L	0.053	0	55	295299	1
	Ba	135	25.027	ug/L	0.383	1	83	124471	0
	Ba	137	24.742	ug/L	0.249	1	166	215490	0
>	Tb	159		ug/L			1254824	1328594	1
	Tl	205	24.433	ug/L	0.187	0	48	1059284	0
	Pb	208	25.284	ug/L	0.376	1	368	1415457	0
	Bi	209		ug/L			3019464	3110151	0
	Th	232	21.877	ug/L	0.526	2	73	1210454	1
	U	238	23.514	ug/L	0 244	1	4	1335710	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 11:47:37
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\061213.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1497608	1693594	3
Be	9	49.942	ug/L	2.601	5	24	249003	1
C	13		ug/L			93073	105287	1
Cl	37		ug/L			4500094	5517730	0
> Sc	45		ug/L			1309883	1302480	3
V	51	46.855	ug/L	1.859	3	8014	1238025	0
V-1	51	47.351	ug/L	2.128	4	51	1230825	0
Cr	52	47.248	ug/L	1.762	3	23924	1060923	1
Cr	53	48.979	ug/L	2.634	5	157	117581	1
Mn	55	46.612	ug/L	1.461	3	818	1414047	1
Co	59	47.044	ug/L	1.313	2	151	1039309	2
> Ge	72		ug/L			720962	679595	0
Ni	60	50.164	ug/L	0.240	0	73	214816	0
Ni	62	49.733	ug/L	0.777	1	223	30442	1
Cu	63	50.576	ug/L	0.928	1	644	464955	1
Cu	65	50.356	ug/L	0.505	1	188	210943	0
Zn	66	51.526	ug/L	0.918	1	1943	129642	1
Zn	67	49.833	ug/L	0.630	1	310	20908	0
Zn	68	51.779	ug/L	1.151	2	1420	91801	2
As	75	51.004	ug/L	0.162	0	262	111802	0
As-1	75	50.594	ug/L	0.355	0	10391	121581	0
Se	82	53.347	ug/L	0.301	0	8	12047	0
Se	78	51.172	ug/L	0.631	1	10548	40883	0
Mo	98	51.874	ug/L	0.169	0	9	265292	0
Y	89		ug/L			474888	450999	0
Kr	83		ug/L			547	683	2
> In	115		ug/L			1082254	1109425	2
Ag	107	52.187	ug/L	1.450	2	21	578099	0
Cd	111	52.252	ug/L	1.651	3	82	261751	0
Cd	114	51.510	ug/L	2.091	4	34	654945	1
Sb	121	50.654	ug/L	1.598	3	73	759926	0
Sb	123	51.396	ug/L	1.644	3	55	579359	0
Ba	135	49.903	ug/L	1.767	3	83	236416	0
Ba	137	49.510	ug/L	1.919	3	166	410680	1
> Tb	159		ug/L			1254824	1296341	1
Tl	205	51.084	ug/L	3.744	7	48	2160050	6
Pb	208	48.532	ug/L	1.113	2	368	2650409	0
Bi	209		ug/L			3019464	2916662	2
Th	232	51.004	ug/L	1.066	2	73	2753368	0
U	238	51.300	ug/L	0.940	1	4	2842925	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 11:54:29
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1722838	1
	Be	9	0.000	ug/L	0.001	448	24	29	15
	C	13		ug/L			93073	107220	3
	Cl	37		ug/L			4500094	5383997	1
>	Sc	45		ug/L			1309883	1323737	1
	V	51	-0.006	ug/L	0.001	15	8014	7937	1
	V-1	51	0.003	ug/L	0.000	17	51	127	11
	Cr	52	-0.035	ug/L	0 002	5	23924	23384	1
	Cr	53	-0.006	ug/L	0.001	14	157	144	2
	Mn	55	0.013	ug/L	0.000	3	818	1214	1
	Co	59	0.003	ug/L	0.001	24	151	230	6
>	Ge	72		ug/L			720962	703152	0
	Ni	60	-0.004	ug/L	0.003	80	73	53	28
	Ni	62	-0.187	ug/L	0.019	10	223	100	11
	Cu	63	-0.042	ug/L	0.001	3	644	231	5
	Cu	65	-0.021	ug/L	0.002	11	188	91	11
	Zn	66	-0.370	ug/L	0.020	5	1943	946	5
	Zn	67	-0.376	ug/L	0.042	11	310	141	13
	Zn	68	-0.344	ug/L	0.010	2	1420	764	2
	As	75	0.037	ug/L	0.004	12	262	340	2
	As-1	75	-0.124	ug/L	0.095	76	10391	9850	1
	Se	82	-0.046	ug/L	0.024	51	8	-2	234
	Se	78	-0.457	ug/L	0.333	72	10548	10000	1
	Mo	98	0.010	ug/L	0.002	21	9	62	19
	Y	89		ug/L			474888	462624	1
	Kr	83		ug/L			547	668	1
>	In	115		ug/L			1082254	1162936	1
	Ag	107	0.003	ug/L	0.000	13	21	56	7
	Cd	111	0.004	ug/L	0.001	17	82	110	2
	Cd	114	0.001	ug/L	0.000	42	34	49	9
	Sb	121	0.087	ug/L	0.015	17	73	1451	17
	Sb	123	0.090	ug/L	0.022	24	55	1126	24
	Ba	135	-0.006	ug/L	0.001	18	83	60	7
	Ba	137	-0.009	ug/L	0.002	16	166	101	11
>	Tb	159		ug/L			1254824	1320048	0
	Tl	205	0.005	ug/L	0.001	23	48	276	18
	Pb	208	-0.001	ug/L	0.000	4	368	327	0
	Bi	209		ug/L			3019464	3138533	0
	Th	232	0.109	ug/L	0.002	2	73	6066	1
	U	238	0.002	ug/L	0.000	14	4	131	13

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 MB2 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, June 12, 2013 12:00:47
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\061213.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1497608	1706332	0
Be	9	0.001	ug/L	0.001	158	24	30	13
C	13		ug/L			93073	111894	1
Cl	37		ug/L			4500094	5322794	2
Sc	45		ug/L			1309883	1365607	1
V	51	0.028	ug/L	0.005	18	8014	9120	0
V-1	51	0.031	ug/L	0.001	3	51	902	1
Cr	52	0.036	ug/L	0.016	45	23924	25767	0
Cr	53	0.048	ug/L	0.002	4	157	283	0
Mn	55	0.050	ug/L	0.002	4	818	2436	3
Co	59	-0.000	ug/L	0.000	1468	151	157	4
Ge	72		ug/L			720962	704257	1
Ni	60	0.101	ug/L	0.005	5	73	522	4
Ni	62	-0.101	ug/L	0.006	5	223	154	1
Cu	63	0.021	ug/L	0.005	22	644	827	4
Cu	65	0.037	ug/L	0.001	2	188	342	2
Zn	66	0.045	ug/L	0.009	20	1943	2013	0
Zn	67	0.012	ug/L	0.065	529	310	308	8
Zn	68	0.062	ug/L	0 046	74	1420	1499	4
As	75	0.027	ug/L	0.010	35	262	319	5
As-1	75	-0.067	ug/L	0.054	80	10391	9996	1
Se	82	-0.020	ug/L	0.065	331	8	3	413
Se	78	-0.215	ug/L	0.210	97	10548	10169	1
Mo	98	0.008	ug/L	0.002	21	9	49	16
Y	89		ug/L			474888	473909	0
Kr	83		ug/L			547	651	5
In	115		ug/L			1082254	1172630	0
Ag	107	0.002	ug/L	0.000	17	21	43	8
Cd	111	0.009	ug/L	0.002	26	82	137	9
Cd	114	0.004	ug/L	0 001	36	34	88	21
Sb	121	0.035	ug/L	0.008	22	73	626	19
Sb	123	0.035	ug/L	0.008	23	55	477	19
Ba	135	0.148	ug/L	0.009	6	83	829	4
Ba	137	0.138	ug/L	0.003	2	166	1387	2
Tb	159		ug/L			1254824	1347932	0
Tl	205	0.005	ug/L	0.000	2	48	254	2
Pb	208	0.028	ug/L	0.001	2	368	1993	2
Bi	209		ug/L			3019464	3132798	0
Th	232	0.059	ug/L	0.006	10	73	3399	10
U	238	0.002	ug/L	0.000	12	4	108	12

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 E REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, June 12, 2013 12:04:54
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\061213.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1497608	1707542	1
Be	9	-0.002	ug/L	0.001	44	24	19	17
C	13		ug/L			93073	116872	2
Cl	37		ug/L			4500094	5505179	2
Sc	45		ug/L			1309883	1410501	0
V	51	22.826	ug/L	0.048	0	8014	658172	0
V-1	51	23.243	ug/L	0 045	0	51	655020	0
Cr	52	10.862	ug/L	0.079	0	23924	284169	0
Cr	53	11.900	ug/L	0.084	0	157	31103	0
Mn	55	0.297	ug/L	0.005	1	818	10649	0
Co	59	0.116	ug/L	0.002	2	151	2943	1
Ge	72		ug/L			720962	698830	2
Ni	60	0.555	ug/L	0.018	3	73	2515	2
Ni	62	0.080	ug/L	0.025	31	223	267	6
Cu	63	2.554	ug/L	0.070	2	644	24731	0
Cu	65	2.320	ug/L	0.064	2	188	10168	4
Zn	66	0.434	ug/L	0.043	9	1943	2989	1
Zn	67	1.423	ug/L	0.066	4	310	905	1
Zn	68	1.301	ug/L	0.119	9	1420	3712	4
As	75	2.488	ug/L	0.047	1	262	5848	0
As-1	75	2.361	ug/L	0.132	5	10391	15433	0
Se	82	0.544	ug/L	0.022	3	8	134	5
Se	78	0.354	ug/L	0.357	100	10548	10441	0
Mo	98	5.569	ug/L	0.083	1	9	29291	1
Y	89		ug/L			474888	472197	2
Kr	83		ug/L			547	692	4
In	115		ug/L			1082254	1142346	1
Ag	107	0.001	ug/L	0.000	30	21	36	12
Cd	111	0.020	ug/L	0.003	16	82	192	9
Cd	114	0.023	ug/L	0.001	4	34	332	3
Sb	121	4.515	ug/L	0.029	0	73	69851	0
Sb	123	4.559	ug/L	0.032	0	55	52999	1
Ba	135	3.976	ug/L	0.073	1	83	19489	1
Ba	137	3.907	ug/L	0.100	2	166	33555	1
Tb	159		ug/L			1254824	1347157	0
Tl	205	0.016	ug/L	0.001	6	48	747	6
Pb	208	0.011	ug/L	0.001	7	368	1030	5
Bi	209		ug/L			3019464	2932074	1
Th	232	0.034	ug/L	0.002	5	73	1964	4
U	238	0.075	ug/L	0.002	2	4	4320	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 B REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, June 12, 2013 12:09:02
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens RSD
>	Li	6		ug/L			1497608	1724732	1
	Be	9	0.031	ug/L	0.001	2	24	187	1
	C	13		ug/L			93073	113405	2
	Cl	37		ug/L			4500094	5476039	1
>	Sc	45		ug/L			1309883	1405874	2
	V	51	15.433	ug/L	0.398	2	8014	446187	0
	V-1	51	15.766	ug/L	0.358	2	51	442732	0
	Cr	52	8.281	ug/L	0.278	3	23924	221967	0
	Cr	53	9.190	ug/L	0.150	1	157	23977	0
	Mn	55	48.799	ug/L	1.394	2	818	1598392	0
	Co	59	1.481	ug/L	0.012	0	151	35481	1
>	Ge	72		ug/L			720962	697707	1
	Ni	60	3.916	ug/L	0.109	2	73	17279	2
	Ni	62	3.913	ug/L	0.091	2	223	2658	1
	Cu	63	10.929	ug/L	0.125	1	644	103633	0
	Cu	65	10.898	ug/L	0.112	1	188	47011	0
	Zn	66	13.711	ug/L	0.216	1	1943	36796	1
	Zn	67	15.269	ug/L	0.430	2	310	6784	1
	Zn	68	16.102	ug/L	0.427	2	1420	30252	1
	As	75	1.997	ug/L	0.022	1	262	4739	0
	As-1	75	1.865	ug/L	0.064	3	10391	14286	0
	Se	82	0.367	ug/L	0.057	15	8	93	14
	Se	78	0.178	ug/L	0.172	96	10548	10318	0
	Mo	98	4.214	ug/L	0.079	1	9	22130	0
	Y	89		ug/L			474888	487651	1
	Kr	83		ug/L			547	715	1
>	In	115		ug/L			1082254	1156893	1
	Ag	107	0.022	ug/L	0.001	6	21	282	4
	Cd	111	0.114	ug/L	0.007	6	82	683	5
	Cd	114	0.092	ug/L	0.001	1	34	1258	1
	Sb	121	2.354	ug/L	0.027	1	73	36923	1
	Sb	123	2.364	ug/L	0.036	1	55	27855	1
	Ba	135	28.567	ug/L	0.160	0	83	141262	1
	Ba	137	28.359	ug/L	0.281	0	166	245546	0
>	Tb	159		ug/L			1254824	1351502	0
	Tl	205	0.027	ug/L	0.003	11	48	1242	10
	Pb	208	0.739	ug/L	0.003	0	368	42452	0
	Bi	209		ug/L			3019464	2953560	0
	Th	232	0.076	ug/L	0.004	4	73	4362	4
	U	238	0.154	ug/L	0.001	0	4	8878	0

US90 : 20955

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 C REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, June 12, 2013 12:13:09
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			1497608	2425032	27
	Be	**9**	**-0.002**	ug/L	0.002	81	24	21	29
	C	**13**		ug/L			93073	96752	22
	Cl	**37**		ug/L			4500094	4098935	33
>	**Sc**	**45**		ug/L			1309883	1908892	27
	V	**51**	**-0.119**	ug/L	0.114	96	8014	6310	41
	V-1	**51**	**0.007**	ug/L	0.005	72	51	310	36
	Cr	**52**	**-0.430**	ug/L	0.398	92	23924	18704	40
	Cr	**53**	**-0.004**	ug/L	0.030	684	157	194	25
	Mn	**55**	**0.179**	ug/L	0.183	102	818	7700	76
	Co	**59**	**-0.001**	ug/L	0.002	271	151	184	7
>	**Ge**	**72**		ug/L			720962	953266	24
	Ni	**60**	**0.045**	ug/L	0.054	121	73	313	79
	Ni	**62**	**-0.196**	ug/L	0.101	51	223	115	46
	Cu	**63**	**-0.016**	ug/L	0.042	271	644	562	70
	Cu	**65**	**0.004**	ug/L	0.038	895	188	237	69
	Zn	**66**	**-0.167**	ug/L	0.484	290	1943	1718	71
	Zn	**67**	**-0.216**	ug/L	0.398	184	310	247	68
	Zn	**68**	**-0.140**	ug/L	0.482	343	1420	1344	62
	As	**75**	**0.096**	ug/L	0 057	59	262	670	50
	As-1	**75**	**-1.129**	ug/L	1.041	92	10391	9719	8
	Se	**82**	**-0.049**	ug/L	0.035	72	8	-3	291
	Se	**78**	**-4.243**	ug/L	3.917	92	10548	9810	9
	Mo	**98**	**0.005**	ug/L	0 005	90	9	43	55
	Y	**89**		ug/L			474888	637402	25
	Kr	**83**		ug/L			547	1014	31
>	**In**	**115**		ug/L			1082254	1769576	35
	Ag	**107**	**0.000**	ug/L	0.001	625	21	33	32
	Cd	**111**	**-0.001**	ug/L	0.007	606	82	112	13
	Cd	**114**	**0.002**	ug/L	0.003	151	34	84	43
	Sb	**121**	**0.011**	ug/L	0 013	118	73	311	64
	Sb	**123**	**0.010**	ug/L	0.011	104	55	230	54
	Ba	**135**	**0.004**	ug/L	0.021	509	83	130	79
	Ba	**137**	**0.004**	ug/L	0.023	572	166	253	82
>	**Tb**	**159**		ug/L			1254824	2084062	41
	Tl	**205**	**0.002**	ug/L	0.001	37	48	218	17
	Pb	**208**	**0.004**	ug/L	0.009	225	368	750	60
	Bi	**209**		ug/L			3019464	4684564	33
	Th	**232**	**0.004**	ug/L	0.004	85	73	403	37
	U	**238**	**0.001**	ug/L	0.001	108	4	40	77

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 D REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, June 12, 2013 12:17:17
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	2293974	30
	Be	9	-0.001	ug/L	0.003	256	24	25	55
	C	13		ug/L			93073	100788	21
	Cl	37		ug/L			4500094	4241888	35
>	Sc	45		ug/L			1309883	1856249	30
	V	51	-0.072	ug/L	0.145	200	8014	7565	47
	V-1	51	0.025	ug/L	0.021	86	51	824	74
	Cr	52	-0.285	ug/L	0.495	173	23924	21862	46
	Cr	53	0.043	ug/L	0.079	184	157	314	61
	Mn	55	1.066	ug/L	0.942	88	818	38998	83
	Co	59	0.004	ug/L	0 007	156	151	307	44
>	Ge	72		ug/L			720962	924322	28
	Ni	60	0.129	ug/L	0.118	91	73	714	76
	Ni	62	-0.122	ug/L	0.154	126	223	162	57
	Cu	63	0.111	ug/L	0.151	136	644	1855	81
	Cu	65	0.130	ug/L	0.146	112	188	822	81
	Zn	66	0.558	ug/L	1.076	192	1943	3687	78
	Zn	67	0.408	ug/L	0.918	225	310	529	77
	Zn	68	0.605	ug/L	1.091	180	1420	2766	73
	As	75	0.084	ug/L	0.066	78	262	624	61
	As-1	75	-0.916	ug/L	1.106	120	10391	9938	8
	Se	82	-0.007	ug/L	0.045	653	8	10	146
	Se	78	-3.424	ug/L	4.166	121	10548	10056	8
	Mo	98	0.012	ug/L	0.011	97	9	78	81
	Y	89		ug/L			474888	613172	24
	Kr	83		ug/L			547	945	35
>	In	115		ug/L			1082254	1659346	40
	Ag	107	0.001	ug/L	0.002	256	21	37	47
	Cd	111	0.004	ug/L	0.012	302	82	133	35
	Cd	114	0.006	ug/L	0.006	106	34	128	56
	Sb	121	0.011	ug/L	0.012	108	73	290	62
	Sb	123	0.012	ug/L	0.012	104	55	226	59
	Ba	135	0.108	ug/L	0.110	102	83	686	85
	Ba	137	0.101	ug/L	0.106	104	166	1157	85
>	Tb	159		ug/L			1254824	1961659	44
	Tl	205	0.002	ug/L	0.001	68	48	168	11
	Pb	208	0.050	ug/L	0.049	97	368	3496	81
	Bi	209		ug/L			3019464	4398448	37
	Th	232	0.004	ug/L	0.004	87	73	377	46
	U	238	0.001	ug/L	0.001	91	4	64	79

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 F REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, June 12, 2013 12:21:24
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens	Intens. RSD
>	Li	6		ug/L			1497608	1760944	1
	Be	9	-0.001	ug/L	0.001	80	24	24	15
	C	13		ug/L			93073	119722	2
	Cl	37		ug/L			4500094	5578090	0
>	Sc	45		ug/L			1309883	1418020	1
	V	51	11.210	ug/L	0.220	1	8014	329376	2
	V-1	51	11.413	ug/L	0.196	1	51	323378	2
	Cr	52	6.072	ug/L	0.052	0	23924	171138	1
	Cr	53	6.601	ug/L	0.047	0	157	17420	1
	Mn	55	1.025	ug/L	0.011	1	818	34749	1
	Co	59	0.260	ug/L	0.008	2	151	6415	1
>	Ge	72		ug/L			720962	700785	0
	Ni	60	0.881	ug/L	0.010	1	73	3960	1
	Ni	62	0.375	ug/L	0.056	14	223	452	7
	Cu	63	4.773	ug/L	0.106	2	644	45806	1
	Cu	65	4.576	ug/L	0.078	1	188	19931	0
	Zn	66	2.064	ug/L	0.052	2	1943	7167	1
	Zn	67	2.751	ug/L	0.097	3	310	1475	2
	Zn	68	2.976	ug/L	0.071	2	1420	6743	2
	As	75	1.939	ug/L	0.020	1	262	4628	1
	As-1	75	1.859	ug/L	0.059	3	10391	14336	0
	Se	82	0.361	ug/L	0.090	24	8	92	23
	Se	78	0.341	ug/L	0.188	55	10548	10465	0
	Mo	98	5.408	ug/L	0.042	0	9	28524	0
	Y	89		ug/L			474888	472864	1
	Kr	83		ug/L			547	703	4
>	In	115		ug/L			1082254	1163301	1
	Ag	107	0.003	ug/L	0.001	23	21	54	12
	Cd	111	0.079	ug/L	0.004	5	82	506	2
	Cd	114	0.075	ug/L	0.002	2	34	1042	1
	Sb	121	2.721	ug/L	0.038	1	73	42895	1
	Sb	123	2.781	ug/L	0 065	2	55	32940	0
	Ba	135	9.017	ug/L	0.092	1	83	44893	0
	Ba	137	8.758	ug/L	0.132	1	166	76372	1
>	Tb	159		ug/L			1254824	1360561	0
	Tl	205	0.011	ug/L	0.001	8	48	556	7
	Pb	208	0.034	ug/L	0 001	2	368	2328	2
	Bi	209		ug/L			3019464	2966222	1
	Th	232	0.011	ug/L	0.002	19	73	678	17
	U	238	0.131	ug/L	0.000	0	4	7628	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 G REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, June 12, 2013 12:25:32
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: C:\NexION Data\System\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1793710	1
	Be	9	0.001	ug/L	0.001	91	24	36	18
	C	13		ug/L			93073	113744	2
	Cl	37		ug/L			4500094	5478161	1
>	Sc	45		ug/L			1309883	1383047	0
	V	51	0.012	ug/L	0.006	47	8014	8804	2
	V-1	51	0.018	ug/L	0 002	9	51	560	8
	Cr	52	0.009	ug/L	0.016	175	23924	25479	1
	Cr	53	0.030	ug/L	0.002	5	157	242	1
	Mn	55	0.736	ug/L	0.008	1	818	24560	1
	Co	59	0.004	ug/L	0.001	21	151	260	8
>	Ge	72		ug/L			720962	719245	0
	Ni	60	0.118	ug/L	0.005	4	73	606	3
	Ni	62	-0.085	ug/L	0.020	23	223	168	7
	Cu	63	0.093	ug/L	0.002	2	644	1543	1
	Cu	65	0.113	ug/L	0.004	3	188	686	2
	Zn	66	0.245	ug/L	0.002	0	1943	2583	0
	Zn	67	0.159	ug/L	0.063	39	310	379	6
	Zn	68	0.233	ug/L	0.009	3	1420	1847	0
	As	75	0.035	ug/L	0 019	53	262	342	12
	As-1	75	-0.130	ug/L	0.054	41	10391	10062	0
	Se	82	-0.017	ug/L	0.104	594	8	4	579
	Se	78	-0.442	ug/L	0.216	48	10548	10239	0
	Mo	98	0.004	ug/L	0.000	6	9	33	4
	Y	89		ug/L			474888	483197	1
	Kr	83		ug/L			547	686	5
>	In	115		ug/L			1082254	1185629	1
	Ag	107	0.003	ug/L	0.001	22	21	57	14
	Cd	111	0.012	ug/L	0 003	26	82	152	8
	Cd	114	0.009	ug/L	0.002	18	34	153	12
	Sb	121	0.008	ug/L	0.001	10	73	213	5
	Sb	123	0.008	ug/L	0.003	31	55	162	17
	Ba	135	0.028	ug/L	0.001	5	83	231	4
	Ba	137	0.026	ug/L	0.001	4	166	412	4
>	Tb	159		ug/L			1254824	1349787	1
	Tl	205	0.005	ug/L	0 000	9	48	269	6
	Pb	208	0.013	ug/L	0.001	6	368	1140	4
	Bi	209		ug/L			3019464	3161687	0
	Th	232	0.005	ug/L	0.001	16	73	345	11
	U	238	0.003	ug/L	0.000	5	4	176	4

ICP-MS Quantitative Analysis - Summary Report

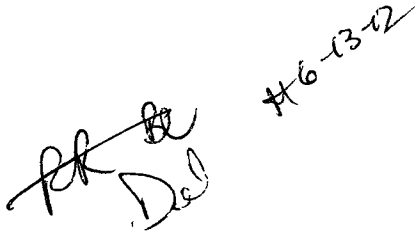
Sample ID: WS90 H REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, June 12, 2013 12:29:40
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\061213.cal

P + 6-13-12

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1497608	1762547	1
[	Be	9	-0.001	ug/L	0.001	92	24	25	14
	C	13		ug/L			93073	113683	0
	Cl	37		ug/L			4500094	5353878	0
[>	Sc	45		ug/L			1309883	1369628	0
[	V	51	0.024	ug/L	0.003	11	8014	9055	1
[	V-1	51	0.028	ug/L	0.002	5	51	829	5
[	Cr	52	0.024	ug/L	0.007	30	23924	25570	1
[	Cr	53	0.038	ug/L	0.002	5	157	259	2
[	Mn	55	0.741	ug/L	0.025	3	818	24491	2
[	Co	59	0.003	ug/L	0 001	35	151	232	11
[>	Ge	72		ug/L			720962	700896	0
[	Ni	60	0.141	ug/L	0.005	3	73	692	2
[	Ni	62	-0.079	ug/L	0.022	27	223	167	7
[	Cu	63	0.148	ug/L	0.004	2	644	2022	1
[	Cu	65	0.170	ug/L	0.003	1	188	916	0
[	Zn	66	0.535	ug/L	0.014	2	1943	3258	1
[	Zn	67	0.417	ug/L	0.041	9	310	479	2
[	Zn	68	0.554	ug/L	0.010	1	1420	2380	1
[	As	75	0.034	ug/L	0.018	51	262	331	11
[	As-1	75	-0.027	ug/L	0.023	86	10391	10042	0
[	Se	82	-0.017	ug/L	0.024	143	8	4	128
[	Se	78	-0.072	ug/L	0.054	73	10548	10209	0
[	Mo	98	0.014	ug/L	0.003	20	9	83	17
	Y	89		ug/L			474888	481265	1
	Kr	83		ug/L			547	659	3
[>	In	115		ug/L			1082254	1193326	1
[	Ag	107	0.002	ug/L	0.001	38	21	46	17
[	Cd	111	0.013	ug/L	0.001	11	82	160	6
[	Cd	114	0.007	ug/L	0.000	5	34	131	2
[	Sb	121	0.010	ug/L	0.003	25	73	245	15
[	Sb	123	0.010	ug/L	0.002	18	55	177	10
[	Ba	135	0.112	ug/L	0.006	5	83	664	6
[	Ba	137	0.103	ug/L	0.006	5	166	1106	3
[>	Tb	159		ug/L			1254824	1346881	0
[	Tl	205	0.003	ug/L	0.000	6	48	190	4
[	Pb	208	0.023	ug/L	0.001	3	368	1709	2
[	Bi	209		ug/L			3019464	3128104	2
[	Th	232	0.004	ug/L	0.001	15	73	314	10
[	U	238	0.002	ug/L	0.000	16	4	108	16

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 MB2SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, June 12, 2013 12:33:47
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\061213.cal



	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1497608	1807264	0
[	Be	9	23.030	ug/L	0.178	0	24	122709	0
	C	13		ug/L			93073	112283	2
	Cl	37		ug/L			4500094	5397690	1
[>	Sc	45		ug/L			1309883	1381316	1
[	V	51	22.430	ug/L	0.585	2	8014	633408	1
[	V-1	51	22.677	ug/L	0.651	2	51	625696	1
[	Cr	52	23.374	ug/L	0.086	0	23924	569831	1
[	Cr	53	24.260	ug/L	0.257	1	157	61924	0
[	Mn	55	23.458	ug/L	0.397	1	818	755660	1
[	Co	59	23.575	ug/L	0.357	1	151	552762	2
[>	Ge	72		ug/L			720962	712106	0
[	Ni	60	25.742	ug/L	0.351	1	73	115540	0
[	Ni	62	24.983	ug/L	0.313	1	223	16133	0
[	Cu	63	25.866	ug/L	0.249	0	644	249475	0
[	Cu	65	25.712	ug/L	0.474	1	188	112947	1
[	Zn	66	77.288	ug/L	0.428	0	1943	202809	0
[	Zn	67	69.955	ug/L	1.938	2	310	30628	2
[	Zn	68	75.607	ug/L	0.397	0	1420	139816	0
[	As	75	24.466	ug/L	0.204	0	262	56331	1
[	As-1	75	23.883	ug/L	0.086	0	10391	65558	0
[	Se	82	76.562	ug/L	1.297	1	8	18113	1
[	Se	78	71.514	ug/L	0.475	0	10548	55727	0
[	Mo	98	25.612	ug/L	0 323	1	9	137250	0
	Y	89		ug/L			474888	474176	0
	Kr	83		ug/L			547	669	2
[>	In	115		ug/L			1082254	1180792	1
[	Ag	107	25.605	ug/L	0.975	3	21	301964	2
[	Cd	111	24.371	ug/L	0.497	2	82	130055	1
[	Cd	114	24.325	ug/L	0 397	1	34	329421	0
[	Sb	121	23.867	ug/L	0.272	1	73	381341	1
[	Sb	123	23.977	ug/L	0.404	1	55	287832	0
[	Ba	135	24.286	ug/L	0.246	1	83	122577	0
[	Ba	137	24.306	ug/L	0.337	1	166	214814	0
[>	Tb	159		ug/L			1254824	1364715	0
[	Tl	205	23.180	ug/L	0.165	0	48	1032340	0
[	Pb	208	24.022	ug/L	0.370	1	368	1381505	0
[	Bi	209		ug/L			3019464	3138659	0
[	Th	232	21.512	ug/L	0.233	1	73	1222841	0
[	U	238	22.774	ug/L	0.277	1	4	1328848	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 12:37:56
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1713037	1
	Be	9	48.853	ug/L	0.600	1	24	246687	1
	C	13		ug/L			93073	103441	2
	Cl	37		ug/L			4500094	5693289	1
>	Sc	45		ug/L			1309883	1335035	1
	V	51	44.660	ug/L	1.913	4	8014	1210491	2
	V-1	51	44.991	ug/L	1.638	3	51	1199538	2
	Cr	52	46.493	ug/L	1.491	3	23924	1071009	1
	Cr	53	47.700	ug/L	0.401	0	157	117521	0
	Mn	55	46.695	ug/L	1.038	2	818	1452664	0
	Co	59	45.017	ug/L	1.615	3	151	1019611	2
>	Ge	72		ug/L			720962	689519	0
	Ni	60	49.673	ug/L	1.396	2	73	215794	2
	Ni	62	49.033	ug/L	0.815	1	223	30455	1
	Cu	63	50.745	ug/L	0.464	0	644	473353	1
	Cu	65	49.322	ug/L	0.562	1	188	209643	1
	Zn	66	49.989	ug/L	0.693	1	1943	127664	0
	Zn	67	50.853	ug/L	0 619	1	310	21641	0
	Zn	68	51.541	ug/L	0.549	1	1420	92722	1
	As	75	50.342	ug/L	0.276	0	262	111962	0
	As-1	75	49.615	ug/L	0.478	0	10391	121158	0
	Se	82	53.731	ug/L	0.309	0	8	12310	0
	Se	78	50.376	ug/L	1.140	2	10548	40989	0
	Mo	98	51.864	ug/L	0.513	0	9	269113	1
	Y	89		ug/L			474888	459178	0
	Kr	83		ug/L			547	706	5
>	In	115		ug/L			1082254	1138484	1
	Ag	107	51.709	ug/L	0.774	1	21	588121	1
	Cd	111	50.606	ug/L	0.437	0	82	260294	0
	Cd	114	49.967	ug/L	0.661	1	34	652412	0
	Sb	121	49.413	ug/L	0.480	0	73	761118	0
	Sb	123	49.666	ug/L	0.433	0	55	574836	0
	Ba	135	49.216	ug/L	1.299	2	83	239385	1
	Ba	137	48.789	ug/L	0.786	1	166	415573	1
>	Tb	159		ug/L			1254824	1320959	0
	Tl	205	48.081	ug/L	3 326	6	48	2072859	7
	Pb	208	47.472	ug/L	0.248	0	368	2642365	0
	Bi	209		ug/L			3019464	2987437	1
	Th	232	50.616	ug/L	0.607	1	73	2784884	0
	U	238	50.414	ug/L	0.148	0	4	2847419	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 12:44:49
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061213.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1497608	1686975	1
Be	9	-0.001	ug/L	0.001	92	24	20	32
C	13		ug/L			93073	101948	2
Cl	37		ug/L			4500094	5339342	1
> Sc	45		ug/L			1309883	1325310	1
V	51	-0.010	ug/L	0.006	61	8014	7832	0
V-1	51	0.001	ug/L	0.000	27	51	89	12
Cr	52	-0.049	ug/L	0.025	50	23924	23107	0
Cr	53	-0.010	ug/L	0.004	36	157	135	5
Mn	55	0.010	ug/L	0.001	11	818	1143	2
Co	59	0.003	ug/L	0.001	32	151	227	9
> Ge	72		ug/L			720962	690450	1
Ni	60	-0.008	ug/L	0.002	21	73	37	18
Ni	62	-0.217	ug/L	0 017	7	223	80	12
Cu	63	-0.045	ug/L	0.001	2	644	199	5
Cu	65	-0.019	ug/L	0.000	1	188	97	1
Zn	66	-0.367	ug/L	0.014	3	1943	937	3
Zn	67	-0.363	ug/L	0.010	2	310	144	3
Zn	68	-0.328	ug/L	0.020	6	1420	778	5
As	75	0.033	ug/L	0.013	38	262	324	8
As-1	75	-0.023	ug/L	0.031	135	10391	9900	0
Se	82	-0.071	ug/L	0.034	48	8	-8	96
Se	78	-0.076	ug/L	0.129	170	10548	10054	0
Mo	98	0.007	ug/L	0 001	11	9	47	9
Y	89		ug/L			474888	456538	0
Kr	83		ug/L			547	672	3
> In	115		ug/L			1082254	1136287	0
Ag	107	0.002	ug/L	0.001	32	21	44	16
Cd	111	0.005	ug/L	0.001	25	82	113	5
Cd	114	0.000	ug/L	0.000	55	34	41	7
Sb	121	0.076	ug/L	0.018	23	73	1245	21
Sb	123	0.079	ug/L	0.020	25	55	971	23
Ba	135	-0.005	ug/L	0.002	34	83	63	11
Ba	137	-0.009	ug/L	0.001	14	166	101	11
> Tb	159		ug/L			1254824	1295502	0
Tl	205	0.003	ug/L	0.000	14	48	189	10
Pb	208	-0.001	ug/L	0.000	24	368	310	4
Bi	209		ug/L			3019464	3116563	0
Th	232	0.094	ug/L	0.003	3	73	5172	4
U	238	0.002	ug/L	0.000	13	4	99	13

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 C REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, June 12, 2013 12:50:13
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061213.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1497608	1724025	1
Be	9	-0.000	ug/L	0.000	100	24	26	6
C	13		ug/L			93073	109366	1
Cl	37		ug/L			4500094	5383507	1
Sc	45		ug/L			1309883	1367031	0
V	51	0.009	ug/L	0.009	102	8014	8612	2
V-1	51	0.010	ug/L	0.001	5	51	321	4
Cr	52	0.016	ug/L	0.030	188	23924	25334	2
Cr	53	0.019	ug/L	0.001	5	157	211	0
Mn	55	0.364	ug/L	0.003	0	818	12444	1
Co	59	0.002	ug/L	0.000	15	151	214	4
Ge	72		ug/L			720962	706702	2
Ni	60	0.107	ug/L	0.005	4	73	550	1
Ni	62	-0.111	ug/L	0.007	6	223	149	3
Cu	63	0.033	ug/L	0.002	5	644	945	1
Cu	65	0.054	ug/L	0.005	8	188	420	5
Zn	66	0.408	ug/L	0.044	10	1943	2956	3
Zn	67	0.290	ug/L	0.056	19	310	428	3
Zn	68	0.397	ug/L	0.066	16	1420	2111	3
As	75	0.033	ug/L	0.032	96	262	333	23
As-1	75	-0.059	ug/L	0.106	179	10391	10047	0
Se	82	-0.060	ug/L	0.087	145	8	-5	380
Se	78	-0.188	ug/L	0.447	238	10548	10217	0
Mo	98	0.010	ug/L	0 004	38	9	64	32
Y	89		ug/L			474888	473188	1
Kr	83		ug/L			547	695	4
In	115		ug/L			1082254	1168562	2
Ag	107	0.003	ug/L	0.001	48	21	53	29
Cd	111	0.011	ug/L	0.000	3	82	145	3
Cd	114	0.006	ug/L	0.001	24	34	111	18
Sb	121	0.033	ug/L	0.007	22	73	599	17
Sb	123	0.032	ug/L	0.005	16	55	438	12
Ba	135	0.033	ug/L	0.005	16	83	252	9
Ba	137	0.030	ug/L	0.002	7	166	437	5
Tb	159		ug/L			1254824	1324482	0
Tl	205	0.004	ug/L	0.000	4	48	228	3
Pb	208	0.016	ug/L	0.000	3	368	1282	1
Bi	209		ug/L			3019464	3111946	0
Th	232	0.052	ug/L	0.010	18	73	2942	18
U	238	0.002	ug/L	0.000	16	4	107	15

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 D REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, June 12, 2013 12:55:25
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: C:\NexION Data\System\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1699642	1
	Be	9	0.002	ug/L	0.002	101	24	37	27
	C	13		ug/L			93073	111349	4
	Cl	37		ug/L			4500094	5193548	1
>	Sc	45		ug/L			1309883	1350039	1
	V	51	0.046	ug/L	0.006	14	8014	9515	1
	V-1	51	0.041	ug/L	0.001	1	51	1147	2
	Cr	52	0.126	ug/L	0.019	15	23924	27514	1
	Cr	53	0.109	ug/L	0.002	2	157	433	2
	Mn	55	1.837	ug/L	0.039	2	818	58599	0
	Co	59	0.011	ug/L	0.001	11	151	398	8
>	Ge	72		ug/L			720962	698396	1
	Ni	60	0.214	ug/L	0.012	5	73	1013	3
	Ni	62	0.004	ug/L	0.023	641	223	219	7
	Cu	63	0.237	ug/L	0.010	4	644	2859	2
	Cu	65	0.250	ug/L	0.009	3	188	1257	2
	Zn	66	1.502	ug/L	0.089	5	1943	5709	2
	Zn	67	1.289	ug/L	0.036	2	310	848	3
	Zn	68	1.514	ug/L	0.041	2	1420	4094	1
	As	75	0.056	ug/L	0.006	10	262	379	5
	As-1	75	-0.013	ug/L	0.092	691	10391	10034	0
	Se	82	-0.065	ug/L	0.038	57	8	-6	126
	Se	78	-0.084	ug/L	0.364	430	10548	10163	0
	Mo	98	0.025	ug/L	0.005	21	9	138	19
	Y	89		ug/L			474888	461743	2
	Kr	83		ug/L			547	707	3
>	In	115		ug/L			1082254	1171063	1
	Ag	107	0.009	ug/L	0.010	110	21	132	91
	Cd	111	0.019	ug/L	0.006	32	82	189	17
	Cd	114	0.016	ug/L	0.008	52	34	255	45
	Sb	121	0.025	ug/L	0.008	32	73	474	27
	Sb	123	0.025	ug/L	0.010	39	55	358	33
	Ba	135	0.191	ug/L	0.011	5	83	1045	4
	Ba	137	0.184	ug/L	0.008	4	166	1794	2
>	Tb	159		ug/L			1254824	1317440	0
	Tl	205	0.006	ug/L	0.004	71	48	289	58
	Pb	208	0.088	ug/L	0.003	3	368	5268	3
	Bi	209		ug/L			3019464	3101151	0
	Th	232	0.021	ug/L	0.004	16	73	1222	15
	U	238	0.003	ug/L	0.002	79	4	181	77

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 ADUP REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Wednesday, June 12, 2013 12:59:32
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: C:\NexION Data\System\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1666647	2
	Be	9	0.116	ug/L	0.002	1	24	595	1
	C	13		ug/L			93073	106288	0
	Cl	37		ug/L			4500094	5290037	0
>	Sc	45		ug/L			1309883	1470643	1
	V	51	28.644	ug/L	0.279	0	8014	858767	0
	V-1	51	29.028	ug/L	0.324	1	51	852827	0
	Cr	52	14.207	ug/L	0.252	1	23924	379256	1
	Cr	53	15.047	ug/L	0.230	1	157	40956	0
	Mn	55	168.263	ug/L	3.407	2	818	5764167	0
	Co	59	4.347	ug/L	0 146	3	151	108597	1
>	Ge	72		ug/L			720962	688840	1
	Ni	60	12.973	ug/L	0.036	0	73	56360	1
	Ni	62	14.026	ug/L	0 218	1	223	8855	0
	Cu	63	20.816	ug/L	0.196	0	644	194319	0
	Cu	65	20.934	ug/L	0.423	2	188	88980	1
	Zn	66	33.043	ug/L	0.369	1	1943	84930	0
	Zn	67	34.251	ug/L	0.158	0	310	14658	0
	Zn	68	34.643	ug/L	0.917	2	1420	62696	1
	As	75	2.022	ug/L	0.025	1	262	4734	1
	As-1	75	1.898	ug/L	0.108	5	10391	14177	0
	Se	82	0.197	ug/L	0.040	20	8	53	18
	Se	78	0.205	ug/L	0.350	170	10548	10202	1
	Mo	98	2.060	ug/L	0.025	1	9	10688	1
	Y	89		ug/L			474888	542485	0
	Kr	83		ug/L			547	830	2
>	In	115		ug/L			1082254	1139765	1
	Ag	107	0.043	ug/L	0.002	5	21	510	3
	Cd	111	0.073	ug/L	0.013	18	82	463	13
	Cd	114	0.050	ug/L	0.001	2	34	685	1
	Sb	121	0.699	ug/L	0.019	2	73	10847	1
	Sb	123	0.697	ug/L	0.012	1	55	8136	0
	Ba	135	47.819	ug/L	1.672	3	83	232814	1
	Ba	137	47.586	ug/L	1.082	2	166	405721	0
>	Tb	159		ug/L			1254824	1314111	0
	Tl	205	0.030	ug/L	0.003	10	48	1358	10
	Pb	208	1.478	ug/L	0.001	0	368	82231	0
	Bi	209		ug/L			3019464	2959923	0
	Th	232	0.340	ug/L	0.004	1	73	18694	1
	U	238	0.128	ug/L	0.002	1	4	7196	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 A REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Wednesday, June 12, 2013 13:03:39
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\061213.cal

CI

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1497608	1713989	0
	Be	9	0.114	ug/L	0.005	4	24	603	3
	C	13		ug/L			93073	108346	3
	Cl	37		ug/L			4500094	5333332	0
>	Sc	45		ug/L			1309883	1496553	0
	V	51	28.221	ug/L	0.413	1	8014	861194	0
	V-1	51	28.576	ug/L	0.459	1	51	854372	1
	Cr	52	14.253	ug/L	0.125	0	23924	387128	1
	Cr	53	15.004	ug/L	0.085	0	157	41563	0
	Mn	55	171.732	ug/L	2.240	1	818	5987706	1
	Co	59	4.291	ug/L	0.101	2	151	109111	1
>	Ge	72		ug/L			720962	687813	0
	Ni	60	13.094	ug/L	0.132	1	73	56805	1
	Ni	62	14.008	ug/L	0.299	2	223	8832	2
	Cu	63	21.085	ug/L	0.208	0	644	196540	0
	Cu	65	20.536	ug/L	0.062	0	188	87177	0
	Zn	66	33.312	ug/L	0.901	2	1943	85487	2
	Zn	67	35.171	ug/L	0.754	2	310	15023	2
	Zn	68	34.999	ug/L	0.409	1	1420	63240	0
	As	75	2.025	ug/L	0.036	1	262	4733	0
	As-1	75	1.885	ug/L	0.032	1	10391	14128	0
	Se	82	0.149	ug/L	0.066	44	8	42	34
	Se	78	0.115	ug/L	0.078	67	10548	10133	0
	Mo	98	2.116	ug/L	0.015	0	9	10962	1
	Y	89		ug/L			474888	544692	1
	Kr	83		ug/L			547	839	1
>	In	115		ug/L			1082254	1144485	1
	Ag	107	0.043	ug/L	0.002	4	21	515	4
	Cd	111	0.074	ug/L	0.005	6	82	469	6
	Cd	114	0.050	ug/L	0.000	0	34	693	2
	Sb	121	0.682	ug/L	0.005	0	73	10644	2
	Sb	123	0.690	ug/L	0.010	1	55	8082	0
	Ba	135	48.759	ug/L	1.267	2	83	238414	1
	Ba	137	47.736	ug/L	0.680	1	166	408736	0
>	Tb	159		ug/L			1254824	1337125	0
	Tl	205	0.037	ug/L	0.002	6	48	1661	5
	Pb	208	1.469	ug/L	0.010	0	368	83171	0
	Bi	209		ug/L			3019464	2956576	0
	Th	232	0.332	ug/L	0.005	1	73	18556	1
	U	238	0.126	ug/L	0.003	2	4	7211	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 ASPK REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Wednesday, June 12, 2013 13:07:47
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas Intens.	Intens. RSD
>	Li	6		ug/L			1497608	1743110	0
	Be	9	9.545	ug/L	0.099	1	24	49072	1
	C	13		ug/L			93073	107120	1
	Cl	37		ug/L			4500094	5345203	1
>	Sc	45		ug/L			1309883	1478380	1
	V	51	35.785	ug/L	1.223	3	8014	1076018	2
	V-1	51	36.164	ug/L	1.330	3	51	1067808	2
	Cr	52	22.349	ug/L	0.353	1	23924	584219	0
	Cr	53	23.205	ug/L	0.705	3	157	63391	2
	Mn	55	176.340	ug/L	4.258	2	818	6072220	1
	Co	59	12.427	ug/L	0.488	3	151	311763	2
>	Ge	72		ug/L			720962	703390	0
	Ni	60	21.425	ug/L	0.421	1	73	94997	1
	Ni	62	22.778	ug/L	0.600	2	223	14548	1
	Cu	63	29.505	ug/L	0.299	1	644	280998	0
	Cu	65	29.297	ug/L	0.280	0	188	127096	0
	Zn	66	63.618	ug/L	0.779	1	1943	165221	0
	Zn	67	61.277	ug/L	0.645	1	310	26540	0
	Zn	68	63.015	ug/L	0.610	0	1420	115331	0
	As	75	11.701	ug/L	0.284	2	262	26740	1
	As-1	75	11.264	ug/L	0.337	2	10391	35893	1
	Se	82	32.049	ug/L	0.422	1	8	7494	1
	Se	78	29.607	ug/L	0.515	1	10548	28818	0
	Mo	98	11.320	ug/L	0.092	0	9	59928	1
	Y	89		ug/L			474888	550357	0
	Kr	83		ug/L			547	839	1
>	In	115		ug/L			1082254	1149332	0
	Ag	107	9.773	ug/L	0.123	1	21	112231	1
	Cd	111	9.783	ug/L	0.146	1	82	50872	1
	Cd	114	9.724	ug/L	0.074	0	34	128208	0
	Sb	121	3.780	ug/L	0.023	0	73	58855	0
	Sb	123	3.770	ug/L	0.029	0	55	44107	0
	Ba	135	57.013	ug/L	0.768	1	83	279981	0
	Ba	137	57.112	ug/L	0.645	1	166	491102	0
>	Tb	159		ug/L			1254824	1349201	0
	Tl	205	8.768	ug/L	0.081	0	48	386074	0
	Pb	208	10.500	ug/L	0.127	1	368	597194	0
	Bi	209		ug/L			3019464	2962903	0
	Th	232	8.912	ug/L	0.155	1	73	500861	0
	U	238	8.820	ug/L	0.068	0	4	508778	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 APOST REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, June 12, 2013 13:12:29
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1497608	1694996	1
	Be	9	24.207	ug/L	0.392	1	24	120953	0
	C	13		ug/L			93073	116635	1
	Cl	37		ug/L			4500094	5408282	0
>	Sc	45		ug/L			1309883	1646886	0
	V	51	87.648	ug/L	0.643	0	8014	2922242	0
	V-1	51	88.688	ug/L	0.751	0	51	2918022	0
	Cr	52	49.705	ug/L	0.557	1	23924	1410809	1
	Cr	53	52.011	ug/L	0.378	0	157	158071	0
	Mn	55	391.863	ug/L	3.040	0	818	15034311	0
	Co	59	27.967	ug/L	0.448	1	151	781700	1
>	Ge	72		ug/L			720962	669853	2
	Ni	60	56.490	ug/L	1.317	2	73	238360	1
	Ni	62	58.405	ug/L	1.466	2	223	35191	1
	Cu	63	73.703	ug/L	0.741	1	644	667505	1
	Cu	65	72.650	ug/L	0.764	1	188	299855	1
	Zn	66	156.077	ug/L	2.160	1	1943	383334	1
	Zn	67	156.959	ug/L	3.057	1	310	64273	0
	Zn	68	160.389	ug/L	3.050	1	1420	277443	0
	As	75	29.905	ug/L	0.922	3	262	64687	1
	As-1	75	29.512	ug/L	0.791	2	10391	73900	0
	Se	82	78.064	ug/L	2.223	2	8	17366	1
	Se	78	74.470	ug/L	1.710	2	10548	54167	0
	Mo	98	32.183	ug/L	1.076	3	9	162155	1
	Y	89		ug/L			474888	636239	2
	Kr	83		ug/L			547	1114	3
>	In	115		ug/L			1082254	1110351	3
	Ag	107	25.553	ug/L	1.271	4	21	283136	1
	Cd	111	24.475	ug/L	0.941	3	82	122717	0
	Cd	114	24.492	ug/L	0.857	3	34	311676	0
	Sb	121	25.663	ug/L	0.852	3	73	385295	0
	Sb	123	25.784	ug/L	0.967	3	55	290834	0
	Ba	135	144.510	ug/L	6.334	4	83	684785	0
	Ba	137	145.573	ug/L	6.430	4	166	1207842	0
>	Tb	159		ug/L			1254824	1328203	2
	Tl	205	22.358	ug/L	0.646	2	48	968715	0
	Pb	208	26.283	ug/L	0.782	2	368	1470545	0
	Bi	209		ug/L			3019464	2753333	1
	Th	232	22.922	ug/L	0.792	3	73	1267538	1
	U	238	22.895	ug/L	0.645	2	4	1299744	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 MB2SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, June 12, 2013 13:16:36
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\061213.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
> Li	6		ug/L			1497608	1759237	2
Be	9	24.109	ug/L	0.350	1	24	125028	1
C	13		ug/L			93073	115468	2
Cl	37		ug/L			4500094	5129272	1
> Sc	45		ug/L			1309883	1372546	1
V	51	22.629	ug/L	0.463	2	8014	634909	1
V-1	51	22.827	ug/L	0.411	1	51	625883	1
Cr	52	23.123	ug/L	0.347	1	23924	560332	1
Cr	53	23.826	ug/L	0.233	0	157	60431	0
Mn	55	23.571	ug/L	0.638	2	818	754358	2
Co	59	22.897	ug/L	0.119	0	151	533372	1
> Ge	72		ug/L			720962	703409	1
Ni	60	25.403	ug/L	0.620	2	73	112599	0
Ni	62	25.064	ug/L	0.385	1	223	15986	1
Cu	63	25.912	ug/L	0.279	1	644	246850	1
Cu	65	25.573	ug/L	0.296	1	188	110961	1
Zn	66	75.913	ug/L	0.456	0	1943	196798	1
Zn	67	70.603	ug/L	0.767	1	310	30534	1
Zn	68	75.603	ug/L	0 925	1	1420	138082	0
As	75	24.617	ug/L	0.867	3	262	55967	2
As-1	75	23.857	ug/L	1.039	4	10391	64669	1
Se	82	76.896	ug/L	2.366	3	8	17968	3
Se	78	71.244	ug/L	2.180	3	10548	54862	0
Mo	98	25.592	ug/L	0.575	2	9	135435	0
Y	89		ug/L			474888	472565	1
Kr	83		ug/L			547	700	5
> In	115		ug/L			1082254	1193754	0
Ag	107	26.479	ug/L	0.423	1	21	315797	1
Cd	111	24.057	ug/L	0.515	2	82	129802	2
Cd	114	23.721	ug/L	0.369	1	34	324826	2
Sb	121	23.551	ug/L	0.224	0	73	380446	1
Sb	123	23.844	ug/L	0 096	0	55	289420	0
Ba	135	24.201	ug/L	0.261	1	83	123496	0
Ba	137	23.688	ug/L	0.182	0	166	211683	1
> Tb	159		ug/L			1254824	1361298	2
Tl	205	23.102	ug/L	0.102	0	48	1026251	1
Pb	208	23.696	ug/L	0.358	1	368	1359185	0
Bi	209		ug/L			3019464	3125192	0
Th	232	20.930	ug/L	0.293	1	73	1186629	1
U	238	22.624	ug/L	0 443	1	4	1316476	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 13:20:45
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			1497608	1708614	1
	Be	9	49.495	ug/L	0.196	0	24	249301	0
	C	13		ug/L			93073	102371	2
	Cl	37		ug/L			4500094	5376436	3
>	Sc	45		ug/L			1309883	1336037	2
	V	51	44.856	ug/L	1.525	3	8014	1216534	0
	V-1	51	45.438	ug/L	1.392	3	51	1212204	0
	Cr	52	46.017	ug/L	1.127	2	23924	1060987	0
	Cr	53	48.072	ug/L	0.870	1	157	118506	1
	Mn	55	46.290	ug/L	1.137	2	818	1441019	1
	Co	59	45.366	ug/L	1.120	2	151	1028164	1
>	Ge	72		ug/L			720962	699912	1
	Ni	60	49.203	ug/L	0.070	0	73	217010	1
	Ni	62	48.098	ug/L	0.161	0	223	30330	1
	Cu	63	49.697	ug/L	0.672	1	644	470534	1
	Cu	65	49.210	ug/L	0.313	0	188	212299	1
	Zn	66	49.454	ug/L	0.834	1	1943	128207	0
	Zn	67	49.073	ug/L	0 969	1	310	21206	0
	Zn	68	49.450	ug/L	0 466	0	1420	90364	2
	As	75	49.578	ug/L	0.763	1	262	111913	0
	As-1	75	48.878	ug/L	0.908	1	10391	121289	0
	Se	82	52.373	ug/L	0.574	1	8	12180	0
	Se	78	49.197	ug/L	1.146	2	10548	40869	0
	Mo	98	51.090	ug/L	0.648	1	9	269059	0
	Y	89		ug/L			474888	457552	4
	Kr	83		ug/L			547	748	2
>	In	115		ug/L			1082254	1133295	2
	Ag	107	50.532	ug/L	1.155	2	21	571916	0
	Cd	111	50.981	ug/L	0.796	1	82	260993	1
	Cd	114	50.481	ug/L	1 267	2	34	655929	0
	Sb	121	49.664	ug/L	1.041	2	73	761347	1
	Sb	123	49.662	ug/L	1.267	2	55	571994	0
	Ba	135	48.936	ug/L	1.170	2	83	236909	0
	Ba	137	48.703	ug/L	1.867	3	166	412783	2
>	Tb	159		ug/L			1254824	1312621	1
	Tl	205	48.301	ug/L	3.876	8	48	2068290	7
	Pb	208	47.554	ug/L	0.888	1	368	2629862	0
	Bi	209		ug/L			3019464	2975285	0
	Th	232	52.088	ug/L	1.041	1	73	2847366	0
	U	238	50.813	ug/L	1.084	2	4	2851314	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, June 12, 2013 13:27:38
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1497608	1697659	1
[	Be	9	-0.001	ug/L	0.001	54	24	21	16
	C	13		ug/L			93073	104177	1
	Cl	37		ug/L			4500094	5189509	1
[>	Sc	45		ug/L			1309883	1340535	1
[	V	51	-0.012	ug/L	0.008	62	8014	7869	2
[	V-1	51	0.003	ug/L	0.000	4	51	129	2
[	Cr	52	-0.054	ug/L	0.025	46	23924	23251	1
[	Cr	53	-0.003	ug/L	0.002	60	157	152	2
[	Mn	55	0.018	ug/L	0.002	8	818	1410	3
[	Co	59	0.002	ug/L	0.001	63	151	194	11
[>	Ge	72		ug/L			720962	684266	1
[	Ni	60	-0.007	ug/L	0.000	4	73	38	3
[	Ni	62	-0.226	ug/L	0.029	12	223	74	24
[	Cu	63	-0.042	ug/L	0.001	1	644	218	2
[	Cu	65	-0.022	ug/L	0.003	14	188	85	16
[	Zn	66	-0.371	ug/L	0.019	5	1943	917	5
[	Zn	67	-0.343	ug/L	0.022	6	310	151	5
[	Zn	68	-0.325	ug/L	0.020	6	1420	776	4
[	As	75	0.052	ug/L	0.009	17	262	365	7
[	As-1	75	-0.027	ug/L	0.059	220	10391	9802	0
[	Se	82	-0.068	ug/L	0.057	84	8	-7	180
[	Se	78	-0.100	ug/L	0.247	246	10548	9948	0
[	Mo	98	0.010	ug/L	0.001	13	9	62	11
	Y	89		ug/L			474888	456726	1
	Kr	83		ug/L			547	711	4
[>	In	115		ug/L			1082254	1150878	2
[	Ag	107	0.002	ug/L	0.000	18	21	51	11
[	Cd	111	0.004	ug/L	0.003	59	82	111	12
[	Cd	114	0.000	ug/L	0.000	157	34	38	9
[	Sb	121	0.082	ug/L	0.021	25	73	1350	22
[	Sb	123	0.083	ug/L	0.021	25	55	1023	21
[	Ba	135	-0.005	ug/L	0.001	15	83	61	7
[	Ba	137	-0.008	ug/L	0.001	16	166	112	11
[>	Tb	159		ug/L			1254824	1314081	2
[	Tl	205	0.004	ug/L	0.001	17	48	228	11
[	Pb	208	-0.002	ug/L	0.000	29	368	296	8
[	Bi	209		ug/L			3019464	3086476	1
[	Th	232	0.097	ug/L	0.006	6	73	5363	4
[	U	238	0.002	ug/L	0.000	16	4	103	14

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA **Analysis Date:** 6-13-13

M2 Nexion STD	Analyst #6-14	Peer 6-14-13	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	✓	✓	See log
Calibration Verification:			
ICV/CCV	✓	✓	
ICB/CCB	✓	✓ s	See log
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	See log
Post Spikes/Serial Dilutions	✓	✓	WS91
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	WS91
Matrix Duplicates	✓	✓	WS91
Method Blanks	✓	✓	WS61
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysis Notes and CAF's	✓	✓	CAF WS91 WS61

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 6-13-13 **Analyst:** M **Page:** 1 of 6

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			B654
		1			B542
		2			B631
		3			B632
		4			B633
		5			B634
		Rinse Samde			V, Tl poor Curve
		Dual Det	Cal		
		STD 0			B654
		1			B542
		2			B631
		3			B632
		4			B633
		5			B634
		Rinse Samde			
		ICV			B523
		ICB			
		CCV1			
		CCV2			
		Lowcheck			
		ICSA			CaA (MO interference)
		ICSAB			^{62}Ni 121 Sb
		LR200			
		LR300			

USGS : 00875

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 6-13-13 **Analyst:** AA **Page:** 2 of 6

All corrections made by analyst unless otherwise noted. AA 6-13-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		B1			
		~~B2~~			not Run
		CCV2			B655
		CCB2			
		WS30 MB1	SWN	20	
		WS90 F	REN	2	Ni
		WS61 AaDup	SPN		~~Cr~~ Ni RRCV (SC4)
		Aa			
		Aaspk		20 ✓	
		WS30 IDup	SWN	✓	
		I			
		Ispk		✓	
		Ref1		50 ✓	
		MB1spk		20 ✓	
		CCV3			
		CCB3			
		WS30 A	SWN	20	
		B			
		C			
		D			
		E			
		F			
		G			
		H			

AA 6-14-13

US90 : 00876

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Thursday, June 13, 2013 08:24:50
Sample Description:
Method File: C:\NexIONData\Method\Daily Performancenew.mth
Dataset File: C:\NexIONData\Dataset\Default\Daily Performance Check.2111
MassCal File: C \NexIONData\MassCal\Default.tun
Conditions File: C:\NexIONData\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 60
Current Dead Time (ns): 60
Torch Z position (mm): 0.00

initial

Summary

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
Be	9.0	5108.2	5108.232	28.611	0.6	Standard
Mg	24.0	41293.1	41293.125	287.565	0.7	Standard
In	114.9	70371.3	70371.285	380.229	0.5	Standard
Pb	208.0	33672.6	33672.562	212.177	0.6	Standard
U	238.1	58434.6	58434.630	257.771	0.4	Standard
CeO	155.9	1025.1	0.014	0.001	3.8	Standard
Ce	139.9	74346.8	74346.789	566.442	0.8	Standard
Ce++	70.0	1270.9	0.017	0.000	1.5	Standard
Bkgd	220.0	0.1	0.100	0.091	91.3	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
-1700.00	Analog Stage Voltage
900.00	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

USGS : 00877

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 6/13/2013 8:24:45 AM
nd Time: 6/13/2013 8:30:07 AM

aily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 5108.23
Obtained Intensity (Mg 23.985): 41293.13
Obtained Intensity (In 114.904): 70371.28
Obtained Intensity (Pb 207.977): 33672.56
Obtained Intensity (U 238.05): 58434.63
Obtained Intensity (Bkgd 220): 0.10
Obtained Formula (CeO 155.9 / Ce 139.905): 0.014 (=1025.13 / 74346.79)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.017 (=1270.90 / 74346.79)

orch Alignment - [Failed]
Error: optimum could not be found.

US90 : 08978

SmartTune Wizard - Summary

timization Summary

artTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

art Time: 6/13/2013 8:30:17 AM
d Time: 6/13/2013 8:33:08 AM

bulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 1.06
Obtained Intensity (In 114.904): 79478.21
Obtained Formula (CeO 155.9 / Ce 139.905): 0.017 (=1404.12 / 80388.88)

SmartTune Wizard - Summary

ɪtimization Summary

ıartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

.art Time: 6/13/2013 8:33:16 AM
ıd Time: 6/13/2013 8:34:01 AM

ɔrch Alignment - [Passed]

Vertical	Horizontal	Intensity
0.87 mm	-0.48 mm	89310.03

US90 : 08880

SmartTune Wizard - Summary

ɔtimization Summary

ıartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

:art Time: 6/13/2013 8:34:25 AM
ıd Time: 6/13/2013 8:36:36 AM

ıss Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.700)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.717)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.690)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.708)

SmartTune Wizard - Summary

ıtimization Summary

ıartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

.art Time: 6/13/2013 8:37:01 AM
ıd Time: 6/13/2013 8:41:11 AM

ıtoLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.993; Intercept = -10.87

US90 : 00882

SmartTune Wizard - Summary

ɔtimization Summary

ıartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

:art Time: 6/13/2013 8:41:26 AM
ıd Time: 6/13/2013 8:44:00 AM

ıily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 6578.13
Obtained Intensity (Mg 23.985): 50388.85
Obtained Intensity (In 114.904): 82518.49
Obtained Intensity (Pb 207.977): 37397.13
Obtained Intensity (U 238.05): 67536.64
Obtained Intensity (Bkgd 220): 0.13
Obtained Formula (CeO 155.9 / Ce 139.905): 0.023 (=1928.49 / 82934.38)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.023 (=1880.95 / 82934.38)

US90 : 00883

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Thursday, June 13, 2013 10:16:28
Sample Description:
Method File: C:\NexION Data\Method\Daily Performance.mth
Dataset File: C:\NexION Data\Dataset\Default\Daily Performance Check.2125
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	6269.9	6269.892	97.436	1.6	Standard
	Mg	24.0	48209.2	48209.189	469.030	1.0	Standard
	In	114.9	77293.4	77293.366	818.775	1.1	Standard
	U	238.1	62087.7	62087.724	683.119	1.1	Standard
⌈	CeO	155.9	1803.5	0.023	0.001	3.4	Standard
| >	Ce	139.9	78424.3	78424.300	348.131	0.4	Standard
⌊	Ce++	70.0	1777.8	0.023	0.001	2.3	Standard
	Bkgd	220.0	0.1	0.067	0.091	136.9	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
900.00	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
0.25	KED RPq

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\DUALDET.swz

tart Time: 6/13/2013 10:16:27 AM
nd Time: 6/13/2013 10:18:47 AM

aily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 6269.89
Obtained Intensity (Mg 23.985): 48209.19
Obtained Intensity (In 114.904): 77293.37
Obtained Intensity (U 238.05): 62087.72
Obtained Intensity (Bkgd 220): 0.07
Obtained Formula (CeO 155.9 / Ce 139.905): 0.023 (=1803.53 / 78424.30)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.023 (=1777.79 / 78424.30)

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 10:25:24
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061213.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L				1477068	1
Be	9		ug/L				52	21
C	13		ug/L				91865	1
Cl	37		ug/L				4664629	0
> Sc	45		ug/L				1199367	1
V	51		ug/L				7921	2
V-1	51		ug/L				182	6
Cr	52		ug/L				23276	2
Cr	53		ug/L				155	3
Mn	55		ug/L				856	7
Co	59		ug/L				217	8
> Ge	72		ug/L				666955	1
Ni	60		ug/L				57	11
Ni	62		ug/L				234	9
Cu	63		ug/L				374	3
Cu	65		ug/L				101	14
Zn	66		ug/L				850	5
Zn	67		ug/L				128	1
Zn	68		ug/L				745	4
As	75		ug/L				118	42
As-1	75		ug/L				9854	0
Se	82		ug/L				0	1368
Se	78		ug/L				10009	0
Mo	98		ug/L				75	6
Y	89		ug/L				438666	0
Kr	83		ug/L				391	5
> In	115		ug/L				956745	0
Ag	107		ug/L				77	14
Cd	111		ug/L				131	7
Cd	114		ug/L				64	10
Sb	121		ug/L				875	21
Sb	123		ug/L				675	17
Ba	135		ug/L				41	14
Ba	137		ug/L				73	6
> Tb	159		ug/L				1186124	0
Tl	205		ug/L				270	15
Pb	208		ug/L				477	2
Bi	209		ug/L				2621879	1
Th	232		ug/L				1082	22
U	238		ug/L				146	16

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 10:29:32
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: C:\NexION Data\System\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1510538	0
	Be	9	0.200	ug/L	0.006	2	52	1023	1
	C	13		ug/L			91865	95590	2
	Cl	37		ug/L			4664629	4713906	0
>	Sc	45		ug/L			1199367	1240869	0
	V	51	0.200	ug/L	0.009	4	7921	13502	2
	V-1	51	0.500	ug/L	0.011	2	182	5171	2
	Cr	52	0.500	ug/L	0.023	4	23276	35236	2
	Cr	53	0.500	ug/L	0.019	3	155	1317	3
	Mn	55	0.500	ug/L	0.003	0	856	15047	1
	Co	59	0.200	ug/L	0.006	2	217	4520	3
>	Ge	72		ug/L			666955	678983	0
	Ni	60	0.500	ug/L	0.014	2	57	2226	2
	Ni	62	0.500	ug/L	0.031	6	234	532	3
	Cu	63	0.500	ug/L	0.004	0	374	5123	0
	Cu	65	0.500	ug/L	0.015	3	101	2269	3
	Zn	66	4.000	ug/L	0.091	2	850	10625	2
	Zn	67	4.000	ug/L	0.099	2	128	1612	2
	Zn	68	4.000	ug/L	0.064	1	745	7204	1
	As	75	0.200	ug/L	0.011	5	118	559	4
	As-1	75	0.200	ug/L	0.027	13	9854	10354	0
	Se	82	0.500	ug/L	0.053	10	0	109	10
	Se	78	0.500	ug/L	0.098	19	10009	10361	0
	Mo	98	0.200	ug/L	0.013	6	75	1167	6
	Y	89		ug/L			438666	453184	0
	Kr	83		ug/L			391	407	5
>	In	115		ug/L			956745	982188	0
	Ag	107	0.200	ug/L	0.014	7	77	2207	6
	Cd	111	0.100	ug/L	0.015	14	131	602	10
	Cd	114	0.100	ug/L	0.011	11	64	1252	10
	Sb	121	0.200	ug/L	0.009	4	875	3127	2
	Sb	123	0.200	ug/L	0.015	7	675	2375	4
	Ba	135	0.500	ug/L	0.008	1	41	2155	2
	Ba	137	0.500	ug/L	0.004	0	73	3785	1
>	Tb	159		ug/L			1186124	1190436	0
	Tl	205	0.200	ug/L	0.002	0	270	7885	1
	Pb	208	0.100	ug/L	0.003	2	477	5497	3
	Bi	209		ug/L			2621879	2690744	0
	Th	232	0.200	ug/L	0.001	0	1082	8361	0
	U	238	0.200	ug/L	0.004	2	146	9936	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 10:33:40
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1477068	1566166	4
[	Be	9	10.000	ug/L	0.507	5	52	48391	1
	C	13		ug/L			91865	94233	1
	Cl	37		ug/L			4664629	4770269	4
[>	Sc	45		ug/L			1199367	1250582	1
[	V	51	10.000	ug/L	0.078	0	7921	250636	2
[	V-1	51	10.015	ug/L	0.080	0	182	243854	2
[	Cr	52	9.998	ug/L	0.017	0	23276	233411	1
[	Cr	53	10.001	ug/L	0.070	0	155	24206	1
[	Mn	55	10.000	ug/L	0.152	1	856	292168	3
[	Co	59	10.000	ug/L	0.171	1	217	212764	0
[>	Ge	72		ug/L			666955	685853	1
[	Ni	60	10.000	ug/L	0.086	0	57	44536	1
[	Ni	62	10.001	ug/L	0.227	2	234	6396	0
[	Cu	63	10.001	ug/L	0.075	0	374	99771	0
[	Cu	65	10.000	ug/L	0.231	2	101	44748	3
[	Zn	66	10.083	ug/L	0.205	2	850	27071	0
[	Zn	67	10.207	ug/L	0.021	0	128	4518	1
[	Zn	68	10.204	ug/L	0.144	1	745	19804	1
[	As	75	10.000	ug/L	0.133	1	118	22632	1
[	As-1	75	10.001	ug/L	0.105	1	9854	32798	1
[	Se	82	10.002	ug/L	0.252	2	0	2404	2
[	Se	78	10.011	ug/L	0.259	2	10009	16569	0
[	Mo	98	10.000	ug/L	0.116	1	75	53104	1
	Y	89		ug/L			438666	460207	1
	Kr	83		ug/L			391	419	4
[>	In	115		ug/L			956745	988515	1
[	Ag	107	10.000	ug/L	0.079	0	77	103792	1
[	Cd	111	10.000	ug/L	0.249	2	131	45721	1
[	Cd	114	10.000	ug/L	0.163	1	64	116115	0
[	Sb	121	10.001	ug/L	0.113	1	875	132541	2
[	Sb	123	10.001	ug/L	0.114	1	675	99198	0
[	Ba	135	10.001	ug/L	0.072	0	41	43707	0
[	Ba	137	10.000	ug/L	0.317	3	73	75487	2
[>	Tb	159		ug/L			1186124	1213356	1
[	Tl	205	10.000	ug/L	0.110	1	270	381024	1
[	Pb	208	10.000	ug/L	0.035	0	477	500700	0
[	Bi	209		ug/L			2621879	2703278	0
[	Th	232	10.001	ug/L	0.144	1	1082	454994	2
[	U	238	10.000	ug/L	0.056	0	146	485012	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 10:38:03
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			1477068	1563691	0
	Be	**9**	**20.107**	ug/L	0.467	2	52	99340	1
	C	**13**		ug/L			91865	92802	1
	Cl	**37**		ug/L			4664629	4844867	2
>	**Sc**	**45**		ug/L			1199367	1248857	1
	V	**51**	**20.085**	ug/L	0.381	1	7921	502677	0
	V-1	**51**	**20.084**	ug/L	0.492	2	182	496343	1
	Cr	**52**	**19.968**	ug/L	0.616	3	23276	438590	2
	Cr	**53**	**19.947**	ug/L	0.570	2	155	47535	1
	Mn	**55**	**20.008**	ug/L	0.324	1	856	583496	0
	Co	**59**	**19.985**	ug/L	0.426	2	217	423081	0
>	**Ge**	**72**		ug/L			666955	687586	0
	Ni	**60**	**20.004**	ug/L	0.473	2	57	89331	1
	Ni	**62**	**20.114**	ug/L	0 305	1	234	12944	1
	Cu	**63**	**19.939**	ug/L	0 360	1	374	196639	1
	Cu	**65**	**19.913**	ug/L	0.785	3	101	87688	3
	Zn	**66**	**19.976**	ug/L	0.107	0	850	52702	0
	Zn	**67**	**20.066**	ug/L	0.376	1	128	8876	1
	Zn	**68**	**19.936**	ug/L	0.595	2	745	37653	2
	As	**75**	**19.981**	ug/L	0.430	2	118	45048	1
	As-1	**75**	**19.979**	ug/L	0.458	2	9854	55361	1
	Se	**82**	**20.017**	ug/L	0.517	2	0	4841	2
	Se	**78**	**20.000**	ug/L	0.672	3	10009	22889	1
	Mo	**98**	**20.068**	ug/L	0.452	2	75	108234	1
	Y	**89**		ug/L			438666	460825	2
	Kr	**83**		ug/L			391	398	4
>	**In**	**115**		ug/L			956745	967650	0
	Ag	**107**	**19.993**	ug/L	0.235	1	77	202755	1
	Cd	**111**	**20.036**	ug/L	0.262	1	131	90214	0
	Cd	**114**	**20.053**	ug/L	0.364	1	64	230325	1
	Sb	**121**	**20.041**	ug/L	0.072	0	875	261225	0
	Sb	**123**	**20.120**	ug/L	0.100	0	675	199453	0
	Ba	**135**	**20.077**	ug/L	0.193	0	41	87199	0
	Ba	**137**	**20.079**	ug/L	0.019	0	73	150690	0
>	**Tb**	**159**		ug/L			1186124	1217879	0
	Tl	**205**	**19.980**	ug/L	0.193	0	270	760713	0
	Pb	**208**	**19.983**	ug/L	0.143	0	477	1000340	0
	Bi	**209**		ug/L			2621879	2637275	1
	Th	**232**	**20.069**	ug/L	0.358	1	1082	928095	0
	U	**238**	**19.969**	ug/L	0.365	1	146	965909	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 10:42:34
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1556746	0
	Be	9	49.726	ug/L	0.792	1	52	238021	1
	C	13		ug/L			91865	93757	0
	Cl	37		ug/L			4664629	4935171	2
>	Sc	45		ug/L			1199367	1230639	1
	V	51	49.972	ug/L	1.062	2	7921	1217127	1
	V-1	51	50.016	ug/L	0.894	1	182	1219889	1
	Cr	52	49.996	ug/L	0.526	1	23276	1045925	0
	Cr	53	50.130	ug/L	0.741	1	155	119072	1
	Mn	55	49.830	ug/L	1.398	2	856	1406875	1
	Co	59	49.902	ug/L	0.127	0	217	1030838	1
>	Ge	72		ug/L			666955	672682	1
	Ni	60	49.822	ug/L	0.631	1	57	213774	0
	Ni	62	49.886	ug/L	0.865	1	234	30716	2
	Cu	63	49.800	ug/L	0.456	0	374	470490	0
	Cu	65	49.844	ug/L	0.020	0	101	211313	1
	Zn	66	50.021	ug/L	0.429	0	850	128083	1
	Zn	67	50.006	ug/L	0.502	1	128	21457	0
	Zn	68	49.921	ug/L	1.287	2	745	90411	1
	As	75	50.035	ug/L	0.550	1	118	110567	0
	As-1	75	50.048	ug/L	0.673	1	9854	121247	0
	Se	82	50.032	ug/L	0.222	0	0	11880	1
	Se	78	50.085	ug/L	0.710	1	10009	41157	0
	Mo	98	50.091	ug/L	0.871	1	75	266592	0
	Y	89		ug/L			438666	454748	0
	Kr	83		ug/L			391	430	3
>	In	115		ug/L			956745	958793	0
	Ag	107	49.754	ug/L	0.748	1	77	487816	1
	Cd	111	49.831	ug/L	0.045	0	131	218443	0
	Cd	114	49.837	ug/L	0.627	1	64	558013	1
	Sb	121	50.056	ug/L	0.611	1	875	648768	1
	Sb	123	49.927	ug/L	0.799	1	675	485855	1
	Ba	135	49.930	ug/L	0.574	1	41	213317	1
	Ba	137	49.970	ug/L	0.684	1	73	370377	1
>	Tb	159		ug/L			1186124	1209195	1
	Tl	205	49.851	ug/L	1.000	2	270	1856221	0
	Pb	208	49.834	ug/L	0.708	1	477	2435432	0
	Bi	209		ug/L			2621879	2567244	0
	Th	232	50.302	ug/L	0.766	1	1082	2379675	0
	U	238	50.219	ug/L	0.856	1	146	2465326	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 10:47:46
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\061213.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1477068	1507522	2
Be	9	100.851	ug/L	2.601	2	52	480899	1
C	13		ug/L			91865	95782	1
Cl	37		ug/L			4664629	4856154	3
> Sc	45		ug/L			1199367	1237147	1
V	51	100.737	ug/L	2.047	2	7921	2519519	0
V-1	51	100.447	ug/L	2.089	2	182	2499477	0
Cr	52	100.228	ug/L	2.453	2	23276	2099140	1
Cr	53	99.229	ug/L	2.248	2	155	230793	0
Mn	55	100.079	ug/L	1.883	1	856	2847243	1
Co	59	100.318	ug/L	2.740	2	217	2104626	0
> Ge	72		ug/L			666955	668649	0
Ni	60	100.130	ug/L	1.020	1	57	428904	1
Ni	62	100.219	ug/L	1.051	1	234	61544	0
Cu	63	99.636	ug/L	0.555	0	374	924199	0
Cu	65	99.448	ug/L	1.905	1	101	411434	2
Zn	66	99.380	ug/L	0.573	0	850	247036	0
Zn	67	99.678	ug/L	1.171	1	128	41944	1
Zn	68	99.663	ug/L	2.141	2	745	176740	2
As	75	100.088	ug/L	0.413	0	118	220393	0
As-1	75	100.220	ug/L	0.633	0	9854	233103	0
Se	82	99.511	ug/L	0.147	0	0	23113	0
Se	78	100.023	ug/L	0.695	0	10009	71752	0
Mo	98	100.021	ug/L	0.645	0	75	529502	0
Y	89		ug/L			438666	450109	0
Kr	83		ug/L			391	486	3
> In	115		ug/L			956745	950655	0
Ag	107	99.792	ug/L	1.312	1	77	963353	1
Cd	111	99.817	ug/L	1.359	1	131	431082	1
Cd	114	99.785	ug/L	0.541	0	64	1099849	0
Sb	121	99.917	ug/L	1.385	1	875	1279572	0
Sb	123	99.851	ug/L	0.615	0	675	958015	0
Ba	135	100.312	ug/L	1.211	1	41	429353	1
Ba	137	100.255	ug/L	0.937	0	73	742988	0
> Tb	159		ug/L			1186124	1210007	0
Tl	205	100.069	ug/L	2.212	2	270	3737142	1
Pb	208	99.899	ug/L	1.087	1	477	4869045	0
Bi	209		ug/L			2621879	2502515	0
Th	232	99.961	ug/L	2.034	2	1082	4725154	1
U	238	99.908	ug/L	1.568	1	146	4893251	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 10:53:19
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: C:\NexION Data\System\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			1477068	1526232	1
	Be	**9**	**0.004**	ug/L	0.008	220	52	71	52
	C	**13**		ug/L			91865	93963	0
	Cl	**37**		ug/L			4664629	4772499	0
>	**Sc**	**45**		ug/L			1199367	1220809	0
	V	**51**	**0.005**	ug/L	0.007	139	7921	8184	2
	V-1	**51**	**0.004**	ug/L	0.009	211	182	289	75
	Cr	**52**	**0.003**	ug/L	0.011	399	23276	23745	0
	Cr	**53**	**0.000**	ug/L	0.009	12195	155	158	13
	Mn	**55**	**0.000**	ug/L	0.005	1137	856	884	16
	Co	**59**	**0.003**	ug/L	0.006	184	217	286	41
>	**Ge**	**72**		ug/L			666955	666775	0
	Ni	**60**	**0.002**	ug/L	0.005	254	57	65	30
	Ni	**62**	**0.182**	ug/L	0.073	40	234	345	12
	Cu	**63**	**0.012**	ug/L	0.007	57	374	481	13
	Cu	**65**	**0.003**	ug/L	0.004	121	101	115	15
	Zn	**66**	**0.003**	ug/L	0.011	427	850	856	2
	Zn	**67**	**0.000**	ug/L	0.011	7721	128	128	2
	Zn	**68**	**-0.021**	ug/L	0.016	76	745	709	4
	As	**75**	**0.014**	ug/L	0.008	54	118	150	11
	As-1	**75**	**0.028**	ug/L	0.065	229	9854	9913	1
	Se	**82**	**0.003**	ug/L	0.037	1217	0	0	2926
	Se	**78**	**0.083**	ug/L	0.227	271	10009	10057	0
	Mo	**98**	**0.012**	ug/L	0.003	25	75	135	11
	Y	**89**		ug/L			438666	452952	1
	Kr	**83**		ug/L			391	415	4
>	**In**	**115**		ug/L			956745	959121	0
	Ag	**107**	**0.001**	ug/L	0.002	175	77	89	23
	Cd	**111**	**0.002**	ug/L	0.003	202	131	138	9
	Cd	**114**	**0.000**	ug/L	0.002	400	64	68	24
	Sb	**121**	**0.146**	ug/L	0.031	21	875	2765	14
	Sb	**123**	**0.144**	ug/L	0.030	20	675	2068	13
	Ba	**135**	**0.002**	ug/L	0.003	127	41	50	21
	Ba	**137**	**0.005**	ug/L	0.008	151	73	110	51
>	**Tb**	**159**		ug/L			1186124	1170649	1
	Tl	**205**	**0.016**	ug/L	0.016	98	270	862	68
	Pb	**208**	**0.008**	ug/L	0.017	210	477	847	93
	Bi	**209**		ug/L			2621879	2640947	0
	Th	**232**	**0.143**	ug/L	0.015	10	1082	7610	8
	U	**238**	**0.009**	ug/L	0.012	131	146	592	99

Sample Information

Sample Date/Time: Thursday, June 13, 2013 10:47:46
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\061213a.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	**0.9999**	0.003	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
V	51	**0.9999**	0.020	0.20	10	20	50	100
V-1	51	**1.0000**	0.020	0.50	10	20	50	100
Cr	52	**1.0000**	0.017	0.50	10	20	50	100
Cr	53	**0.9999**	0.002	0.50	10	20	50	100
Mn	55	**1.0000**	0.023	0.50	10	20	50	100
Co	59	**1.0000**	0.017	0.20	10	20	50	100
Ge	72							
Ni	60	**1.0000**	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	**0.9999**	0.006	0.50	10	20	50	100
Zn	66	**0.9999**	0.004	4.00	10	20	50	100
Zn	67	**1.0000**	0.001	4.00	10	20	50	100
Zn	68	**1.0000**	0.003	4.00	10	20	50	100
As	75	**1.0000**	0.003	0.20	10	20	50	100
As-1	75	**1.0000**	0.003	0.20	10	20	50	100
Se	82	**0.9999**	0.000	0.50	10	20	50	100
Se	78	**1.0000**	0.001	0.50	10	20	50	100
Mo	98	**1.0000**	0.008	0.20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**1.0000**	0.010	0.20	10	20	50	100
Cd	111	**1.0000**	0.005	0.10	10	20	50	100
Cd	114	**1.0000**	0.012	0.10	10	20	50	100
Sb	121	**1.0000**	0.013	0.20	10	20	50	100
Sb	123	**1.0000**	0.010	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	**1.0000**	0.031	0.20	10	20	50	100
Pb	208	**1.0000**	0.040	0.10	10	20	50	100
Bi	209							
Th	232	**1.0000**	0.039	0.20	10	20	50	100
U	238	**1.0000**	0.040	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 11:00:11
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1589291	1
	Be	9	47.912	ug/L	1.610	3	52	240879	1
	C	13		ug/L			91865	99664	0
	Cl	37		ug/L			4664629	4895348	2
>	Sc	45		ug/L			1199367	1289171	1
	V	51	48.570	ug/L	0.271	0	7921	1270519	1
	V-1	51	48.862	ug/L	0.224	0	182	1267379	1
	Cr	52	48.831	ug/L	0.867	1	23276	1078741	1
	Cr	53	49.832	ug/L	0.165	0	155	120893	1
	Mn	55	50.417	ug/L	0.605	1	856	1495209	0
	Co	59	48.371	ug/L	0.582	1	217	1057879	1
>	Ge	72		ug/L			666955	691004	2
	Ni	60	49.806	ug/L	1.490	2	57	220404	0
	Ni	62	48.875	ug/L	2.151	4	234	31132	3
	Cu	63	50.648	ug/L	0.915	1	374	485570	1
	Cu	65	51.281	ug/L	1.759	3	101	219218	2
	Zn	66	48.929	ug/L	1.591	3	850	126095	2
	Zn	67	49.484	ug/L	0.860	1	128	21584	2
	Zn	68	48.563	ug/L	1.764	3	745	89357	2
	As	75	49.184	ug/L	1.373	2	118	111940	0
	As-1	75	49.406	ug/L	1.617	3	9854	123878	0
	Se	82	76.789	ug/L	1.332	1	0	18221	0
	Se	78	75.577	ug/L	2.202	2	10009	58536	0
	Mo	98	49.278	ug/L	1.564	3	75	269514	1
	Y	89		ug/L			438666	470255	1
	Kr	83		ug/L			391	457	4
>	In	115		ug/L			956745	999634	1
	Ag	107	49.220	ug/L	0.473	0	77	499646	0
	Cd	111	47.660	ug/L	1.228	2	131	216479	2
	Cd	114	47.224	ug/L	0.152	0	64	547364	1
	Sb	121	49.255	ug/L	0.468	0	875	663711	0
	Sb	123	49.216	ug/L	0.219	0	675	496876	1
	Ba	135	49.128	ug/L	0.765	1	41	221112	1
	Ba	137	48.676	ug/L	0.253	0	73	379376	1
>	Tb	159		ug/L			1186124	1238697	1
	Tl	205	49.061	ug/L	1.141	2	270	1875837	1
	Pb	208	49.971	ug/L	0.422	0	477	2493648	0
	Bi	209		ug/L			2621879	2633336	1
	Th	232	49.814	ug/L	0.189	0	1082	2411315	0
	U	238	49.325	ug/L	0.305	0	146	2473419	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 11:07:03
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1477068	1537330	0
Be	9	-0.003	ug/L	0.001	42	52	38	16
C	13		ug/L			91865	91644	0
Cl	37		ug/L			4664629	4718297	1
> Sc	45		ug/L			1199367	1228339	0
V	51	0.003	ug/L	0.005	188	7921	8185	2
V-1	51	-0.003	ug/L	0.000	11	182	116	7
Cr	52	0.013	ug/L	0.020	156	23276	24108	2
Cr	53	-0.007	ug/L	0.005	70	155	144	8
Mn	55	-0.003	ug/L	0.000	11	856	780	2
Co	59	-0.003	ug/L	0.000	11	217	150	5
> Ge	72		ug/L			666955	665640	0
Ni	60	0.007	ug/L	0.003	37	57	86	12
Ni	62	0.077	ug/L	0.022	28	234	281	5
Cu	63	0.001	ug/L	0.001	87	374	385	1
Cu	65	0.001	ug/L	0.004	574	101	104	15
Zn	66	0.609	ug/L	0.027	4	850	2349	3
Zn	67	0.569	ug/L	0.054	9	128	366	6
Zn	68	0.559	ug/L	0.012	2	745	1726	0
As	75	0.010	ug/L	0.015	143	118	140	22
As-1	75	-0.030	ug/L	0.041	138	9854	9767	0
Se	82	0.059	ug/L	0.018	30	0	12	32
Se	78	-0.087	ug/L	0.124	141	10009	9935	0
Mo	98	-0.002	ug/L	0.002	72	75	63	13
Y	89		ug/L			438666	446515	1
Kr	83		ug/L			391	391	3
> In	115		ug/L			956745	949594	1
Ag	107	-0.002	ug/L	0.001	26	77	54	12
Cd	111	-0.002	ug/L	0.003	163	131	121	12
Cd	114	-0.002	ug/L	0.001	35	64	39	19
Sb	121	-0.011	ug/L	0.010	93	875	730	18
Sb	123	-0.009	ug/L	0.011	128	675	586	19
Ba	135	-0.001	ug/L	0.001	100	41	37	9
Ba	137	-0.002	ug/L	0.001	66	73	60	14
> Tb	159		ug/L			1186124	1182540	0
Tl	205	-0.000	ug/L	0.001	259	270	258	11
Pb	208	-0.003	ug/L	0.000	13	477	312	6
Bi	209		ug/L			2621879	2664742	1
Th	232	0.045	ug/L	0.004	8	1082	3148	6
U	238	-0.001	ug/L	0.000	6	146	108	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 11:11:12
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1581144	1
	Be	9	48.230	ug/L	0.901	1	52	241285	1
	C	13		ug/L			91865	95352	2
	Cl	37		ug/L			4664629	4751814	2
>	Sc	45		ug/L			1199367	1239687	1
	V	51	48.683	ug/L	1.125	2	7921	1224495	1
	V-1	51	48.904	ug/L	1.060	2	182	1219676	1
	Cr	52	49.161	ug/L	0.794	1	23276	1044145	0
	Cr	53	49.920	ug/L	0.669	1	155	116447	0
	Mn	55	49.445	ug/L	1.137	2	856	1410059	1
	Co	59	48.999	ug/L	0 925	1	217	1030421	0
>	Ge	72		ug/L			666955	688262	1
	Ni	60	48.277	ug/L	0.867	1	57	212911	2
	Ni	62	48.855	ug/L	0.168	0	234	31005	1
	Cu	63	49.111	ug/L	0.390	0	374	469063	0
	Cu	65	49.770	ug/L	0.331	0	101	211985	1
	Zn	66	48.183	ug/L	0.628	1	850	123723	0
	Zn	67	48.750	ug/L	0.309	0	128	21184	1
	Zn	68	48.472	ug/L	0.397	0	745	88877	1
	As	75	48.464	ug/L	0.246	0	118	109905	0
	As-1	75	48.104	ug/L	0.251	0	9854	120450	0
	Se	82	49.832	ug/L	0.207	0	0	11780	1
	Se	78	47.934	ug/L	0.251	0	10009	40768	1
	Mo	98	48.411	ug/L	0.486	1	75	263820	0
	Y	89		ug/L			438666	454770	0
	Kr	83		ug/L			391	432	2
>	In	115		ug/L			956745	970833	0
	Ag	107	49.116	ug/L	0.812	1	77	484308	2
	Cd	111	49.284	ug/L	0.780	1	131	217444	2
	Cd	114	49.334	ug/L	0.409	0	64	555326	0
	Sb	121	48.507	ug/L	1.040	2	875	634791	1
	Sb	123	49.134	ug/L	0.672	1	675	481755	1
	Ba	135	48.932	ug/L	0.623	1	41	213894	1
	Ba	137	49.073	ug/L	0.655	1	73	371425	0
>	Tb	159		ug/L			1186124	1204439	0
	Tl	205	49.949	ug/L	0.404	0	270	1857126	0
	Pb	208	50.031	ug/L	0.677	1	477	2427547	0
	Bi	209		ug/L			2621879	2614406	0
	Th	232	50.705	ug/L	0.827	1	1082	2386587	1
	U	238	50.384	ug/L	0.359	0	146	2456558	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 11:17:44
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1497855	2
	Be	9	-0.002	ug/L	0.002	131	52	45	23
	C	13		ug/L			91865	90872	1
	Cl	37		ug/L			4664629	4681949	1
>	Sc	45		ug/L			1199367	1201905	0
	V	51	0.005	ug/L	0.005	106	7921	8059	1
	V-1	51	-0.003	ug/L	0.000	16	182	117	8
	Cr	52	0.030	ug/L	0.017	56	23276	23934	1
	Cr	53	0.004	ug/L	0.004	91	155	164	4
	Mn	55	-0.003	ug/L	0.002	61	856	773	7
	Co	59	-0.003	ug/L	0.000	15	217	158	5
>	Ge	72		ug/L			666955	665363	0
	Ni	60	-0.000	ug/L	0.002	1041	57	56	14
	Ni	62	0.058	ug/L	0.021	35	234	269	5
	Cu	63	0.001	ug/L	0.003	183	374	387	5
	Cu	65	0.000	ug/L	0.002	1122	101	102	6
	Zn	66	0.404	ug/L	0.016	3	850	1845	2
	Zn	67	0.353	ug/L	0.023	6	128	275	4
	Zn	68	0.375	ug/L	0.034	8	745	1403	5
	As	75	0.008	ug/L	0.011	138	118	135	18
	As-1	75	0.020	ug/L	0.034	166	9854	9875	0
	Se	82	0.006	ug/L	0.013	205	0	0	622
	Se	78	0.069	ug/L	0.161	231	10009	10027	0
	Mo	98	0.000	ug/L	0.002	517	75	76	11
	Y	89		ug/L			438666	448863	0
	Kr	83		ug/L			391	404	1
>	In	115		ug/L			956745	950603	0
	Ag	107	-0.002	ug/L	0.001	24	77	56	9
	Cd	111	-0.004	ug/L	0.002	38	131	111	7
	Cd	114	-0.002	ug/L	0.001	46	64	37	31
	Sb	121	0.029	ug/L	0.019	64	875	1241	19
	Sb	123	0.027	ug/L	0.017	64	675	931	17
	Ba	135	-0.000	ug/L	0.004	4008	41	41	36
	Ba	137	-0.000	ug/L	0.000	160	73	70	4
>	Tb	159		ug/L			1186124	1168315	1
	Tl	205	-0.001	ug/L	0.001	91	270	237	9
	Pb	208	-0.001	ug/L	0.000	9	477	402	1
	Bi	209		ug/L			2621879	2649212	1
	Th	232	0.071	ug/L	0.004	5	1082	4289	4
	U	238	-0.001	ug/L	0.000	22	146	102	8

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 11:21:52
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1541860	1
	Be	9	0.187	ug/L	0.005	2	52	967	1
	C	13		ug/L			91865	94314	1
	Cl	37		ug/L			4664629	4616270	2
>	Sc	45		ug/L			1199367	1203965	0
	V	51	0.209	ug/L	0.007	3	7921	13034	1
	V-1	51	0.189	ug/L	0.002	1	182	4766	1
	Cr	52	0.542	ug/L	0.024	4	23276	34289	1
	Cr	53	0.475	ug/L	0.015	3	155	1230	2
	Mn	55	0.484	ug/L	0.011	2	856	14251	2
	Co	59	0.195	ug/L	0.004	2	217	4191	1
>	Ge	72		ug/L			666955	657454	1
	Ni	60	0.505	ug/L	0.010	1	57	2182	3
	Ni	62	0.481	ug/L	0.051	10	234	520	4
	Cu	63	0.498	ug/L	0.015	2	374	4905	1
	Cu	65	0.512	ug/L	0.014	2	101	2183	2
	Zn	66	3.916	ug/L	0.026	0	850	10377	2
	Zn	67	3.432	ug/L	0.116	3	128	1541	1
	Zn	68	3.728	ug/L	0.160	4	745	7204	2
	As	75	0.201	ug/L	0.020	10	118	550	8
	As-1	75	0.259	ug/L	0.088	34	9854	10278	0
	Se	82	0.560	ug/L	0.051	9	0	125	10
	Se	78	0.740	ug/L	0.320	43	10009	10313	0
	Mo	98	0.196	ug/L	0.007	3	75	1091	1
	Y	89		ug/L			438666	445157	1
	Kr	83		ug/L			391	379	3
>	In	115		ug/L			956745	938780	2
	Ag	107	0.198	ug/L	0.005	2	77	1967	3
	Cd	111	0.093	ug/L	0.002	2	131	523	1
	Cd	114	0.099	ug/L	0.003	3	64	1142	0
	Sb	121	0.158	ug/L	0.010	6	875	2855	4
	Sb	123	0.167	ug/L	0.007	4	675	2238	2
	Ba	135	0.483	ug/L	0.022	4	41	2079	3
	Ba	137	0.490	ug/L	0.028	5	73	3653	2
>	Tb	159		ug/L			1186124	1162157	1
	Tl	205	0.199	ug/L	0.000	0	270	7391	1
	Pb	208	0.096	ug/L	0.001	1	477	4975	1
	Bi	209		ug/L			2621879	2635085	0
	Th	232	0.178	ug/L	0.005	2	1082	9145	1
	U	238	0.195	ug/L	0.003	1	146	9330	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 11:26:00
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\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1477068	1617103	1
Be	9	-0.006	ug/L	0.001	16	52	26	21
C	13		ug/L			91865	199000	1
Cl	37		ug/L			4664629	13168570	2
> Sc	45		ug/L			1199367	1300953	3
V	51	0.126	ug/L	0.045	35	7921	11862	6
V-1	51	1.266	ug/L	0.026	2	182	33307	1
Cr	52	0.630	ug/L	0.054	8	23276	38931	0
Cr	53	4.535	ug/L	0.032	0	155	11257	3
Mn	55	0.045	ug/L	0.002	4	856	2278	4
Co	59	0.019	ug/L	0.002	8	217	665	2
> Ge	72		ug/L			666955	686334	2
Ni	60	0.331	ug/L	0.005	1	57	1515	2
Ni	62	5.087	ug/L	0.726	14	234	3441	14
Cu	63	1.002	ug/L	0.061	6	374	9931	7
Cu	65	0.369	ug/L	0.020	5	101	1670	4
Zn	66	0.723	ug/L	0.015	2	850	2712	2
Zn	67	4.710	ug/L	0.068	1	128	2160	1
Zn	68	0.151	ug/L	0.028	18	745	1042	6
As	75	0.101	ug/L	0.024	23	118	348	13
As-1	75	0.174	ug/L	0.080	45	9854	10536	0
Se	82	-0.185	ug/L	0.055	29	0	-44	29
Se	78	0.395	ug/L	0.199	50	10009	10548	0
Mo	98	414.911	ug/L	8.604	2	75	2253766	0
Y	89		ug/L			438666	467624	2
Kr	83		ug/L			391	645	6
> In	115		ug/L			956745	959455	2
Ag	107	0.014	ug/L	0.001	7	77	212	5
Cd	111	0.244	ug/L	0.031	12	131	1194	9
Cd	114	0.350	ug/L	0.005	1	64	3958	0
Sb	121	0.020	ug/L	0.004	21	875	1134	6
Sb	123	0.015	ug/L	0.002	13	675	823	4
Ba	135	0.039	ug/L	0.003	8	41	211	8
Ba	137	0.033	ug/L	0.003	8	73	319	4
> Tb	159		ug/L			1186124	1223181	1
Tl	205	0.022	ug/L	0.002	7	270	1122	4
Pb	208	0.026	ug/L	0.000	1	477	1789	1
Bi	209		ug/L			2621879	2464744	1
Th	232	0.056	ug/L	0.022	38	1082	3757	25
U	238	-0.002	ug/L	0.000	18	146	56	28

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 11:32:31
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\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1477068	1614269	1
Be	9	-0.007	ug/L	0.001	12	52	20	22
C	13		ug/L			91865	202836	1
Cl	37		ug/L			4664629	13569977	3
Sc	45		ug/L			1199367	1335175	0
V	51	0.207	ug/L	0.032	15	7921	14385	6
V-1	51	1.228	ug/L	0.015	1	182	33185	1
Cr	52	19.796	ug/L	0.409	2	23276	468368	1
Cr	53	23.421	ug/L	0.497	2	155	58937	2
Mn	55	19.386	ug/L	0.123	0	856	596092	0
Co	59	18.827	ug/L	0.379	2	217	426613	1
Ge	72		ug/L			666955	686887	0
Ni	60	20.017	ug/L	0.328	1	57	88128	1
Ni	62	24.245	ug/L	0.950	3	234	15478	3
Cu	63	20.483	ug/L	0.349	1	374	195484	1
Cu	65	19.725	ug/L	0.344	1	101	83910	1
Zn	66	19.402	ug/L	0.222	1	850	50249	1
Zn	67	21.197	ug/L	0.088	0	128	9267	1
Zn	68	18.024	ug/L	0.240	1	745	33464	1
As	75	19.270	ug/L	0.096	0	118	43687	0
As-1	75	19.165	ug/L	0.147	0	9854	53999	0
Se	82	-0.194	ug/L	0.050	25	0	-46	26
Se	78	0.570	ug/L	0.181	31	10009	10669	0
Mo	98	417.794	ug/L	5.976	1	75	2271926	1
Y	89		ug/L			438666	472786	0
Kr	83		ug/L			391	648	6
In	115		ug/L			956745	1005556	0
Ag	107	18.775	ug/L	0.166	0	77	191790	1
Cd	111	19.353	ug/L	0.372	1	131	88528	2
Cd	114	19.434	ug/L	0.330	1	64	226629	1
Sb	121	0.011	ug/L	0.004	33	875	1068	5
Sb	123	0.010	ug/L	0.004	45	675	808	6
Ba	135	0.039	ug/L	0.005	13	41	221	11
Ba	137	0.033	ug/L	0.004	11	73	338	9
Tb	159		ug/L			1186124	1267565	0
Tl	205	0.020	ug/L	0.000	0	270	1082	0
Pb	208	0.025	ug/L	0.002	7	477	1791	4
Bi	209		ug/L			2621879	2494307	0
Th	232	0.006	ug/L	0.001	15	1082	1464	2
U	238	-0.002	ug/L	0.000	4	146	32	18

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 11:39:23
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1477068	1541502	1
Be	9	191.123	ug/L	1.611	0	52	932084	0
C	13		ug/L			91865	99601	1
Cl	37		ug/L			4664629	4927811	1
Sc	45		ug/L			1199367	1279414	1
V	51	195.964	ug/L	2.801	1	7921	5061168	0
V-1	51	196.053	ug/L	2.006	1	182	5045714	0
Cr	52	192.934	ug/L	4.836	2	23276	4155764	0
Cr	53	193.213	ug/L	2.202	1	155	464659	0
Mn	55	193.593	ug/L	0.096	0	856	5695946	1
Co	59	189.308	ug/L	1.583	0	217	4108590	2
Ge	72		ug/L			666955	656874	0
Ni	60	192.889	ug/L	3.172	1	57	811591	1
Ni	62	197.156	ug/L	3.198	1	234	118730	2
Cu	63	192.829	ug/L	2.624	1	374	1756792	1
Cu	65	194.456	ug/L	2.727	1	101	790248	2
Zn	66	188.666	ug/L	3.128	1	850	459978	1
Zn	67	191.456	ug/L	0.670	0	128	79031	1
Zn	68	190.426	ug/L	1.135	0	745	331077	0
As	75	196.237	ug/L	0.975	0	118	424386	0
As-1	75	196.184	ug/L	0.962	0	9854	438974	0
Se	82	194.942	ug/L	0.676	0	0	43984	0
Se	78	192.860	ug/L	1.338	0	10009	126750	1
Mo	98	204.445	ug/L	1.311	0	75	1063175	0
Y	89		ug/L			438666	448799	0
Kr	83		ug/L			391	636	1
In	115		ug/L			956745	972903	0
Ag	107	188.530	ug/L	1.921	1	77	1862669	1
Cd	111	193.633	ug/L	1.913	0	131	855681	0
Cd	114	201.588	ug/L	2.310	1	64	2273912	1
Sb	121	200.891	ug/L	1.456	0	875	2631995	0
Sb	123	196.573	ug/L	1.064	0	675	1929470	0
Ba	135	196.680	ug/L	3.168	1	41	861403	0
Ba	137	199.632	ug/L	1.987	0	73	1514041	1
Tb	159		ug/L			1186124	1218348	0
Tl	205	195.047	ug/L	0.437	0	270	7335177	0
Pb	208	194.684	ug/L	0.677	0	477	9554372	0
Bi	209		ug/L			2621879	2421633	0
Th	232	195.729	ug/L	1.622	0	1082	9315883	0
U	238	193.634	ug/L	1.628	0	146	9549701	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 11:46:15
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: C:\NexION Data\System\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1508247	2
	Be	9	283.705	ug/L	4.487	1	52	1353399	1
	C	13		ug/L			91865	98935	1
	Cl	37		ug/L			4664629	5076037	1
>	Sc	45		ug/L			1199367	1244928	2
	V	51	298.399	ug/L	4.646	1	7921	7494575	1
	V-1	51	299.780	ug/L	4.678	1	182	7506540	1
	Cr	52	288.456	ug/L	4.088	1	23276	6034185	1
	Cr	53	293.109	ug/L	6.135	2	155	685689	1
	Mn	55	292.599	ug/L	4.685	1	856	8374438	1
	Co	59	284.869	ug/L	0.863	0	217	6015738	2
>	Ge	72		ug/L			666955	641518	1
	Ni	60	294.468	ug/L	3.635	1	57	1209947	1
	Ni	62	293.007	ug/L	5.576	1	234	172235	3
	Cu	63	297.706	ug/L	1.411	0	374	2648542	1
	Cu	65	286.728	ug/L	4.326	1	101	1138049	2
	Zn	66	277.994	ug/L	5.411	1	850	661399	0
	Zn	67	278.454	ug/L	3.000	1	128	112196	1
	Zn	68	280.526	ug/L	2.778	0	745	475977	1
	As	75	291.377	ug/L	1.955	0	118	615346	1
	As-1	75	291.843	ug/L	1.937	0	9854	633120	1
	Se	82	284.685	ug/L	1.682	0	0	62730	1
	Se	78	283.921	ug/L	1.558	0	10009	177677	1
	Mo	98	307.927	ug/L	2.833	0	75	1563798	1
	Y	89		ug/L			438666	438139	0
	Kr	83		ug/L			391	817	4
>	In	115		ug/L			956745	939191	0
	Ag	107	286.724	ug/L	2.720	0	77	2734395	0
	Cd	111	287.074	ug/L	1.150	0	131	1224615	0
	Cd	114	294.743	ug/L	1.618	0	64	3209409	0
	Sb	121	299.886	ug/L	2.165	0	875	3792481	0
	Sb	123	301.482	ug/L	3.516	1	675	2856297	0
	Ba	135	298.909	ug/L	4.292	1	41	1263818	1
	Ba	137	306.706	ug/L	3.339	1	73	2245411	0
>	Tb	159		ug/L			1186124	1196240	0
	Tl	205	288.881	ug/L	1.446	0	270	10666800	1
	Pb	208	288.820	ug/L	1.628	0	477	13916514	0
	Bi	209		ug/L			2621879	2307382	0
	Th	232	291.891	ug/L	2.569	0	1082	13639655	0
	U	238	291.436	ug/L	0.776	0	146	14112502	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 11:53:07
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\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1477068	1536377	1
Be	9	0.004	ug/L	0.004	96	52	73	24
C	13		ug/L			91865	96755	0
Cl	37		ug/L			4664629	4825305	1
> Sc	45		ug/L			1199367	1247392	2
V	51	0.011	ug/L	0.011	94	7921	8521	4
V-1	51	0.015	ug/L	0.001	8	182	578	6
Cr	52	0.017	ug/L	0.030	174	23276	24571	3
Cr	53	0.032	ug/L	0.010	31	155	236	9
Mn	55	0.010	ug/L	0.002	17	856	1186	3
Co	59	0.004	ug/L	0.002	45	217	310	13
> Ge	72		ug/L			666955	667836	0
Ni	60	0.006	ug/L	0.002	28	57	82	8
Ni	62	0.402	ug/L	0.150	37	234	479	18
Cu	63	0.028	ug/L	0.012	43	374	631	16
Cu	65	0.007	ug/L	0.006	89	101	129	18
Zn	66	-0.133	ug/L	0.010	7	850	522	3
Zn	67	-0.087	ug/L	0.042	48	128	92	18
Zn	68	-0.147	ug/L	0.030	20	745	486	10
As	75	0.038	ug/L	0.048	124	118	202	50
As-1	75	0.079	ug/L	0.107	134	9854	10041	1
Se	82	-0.013	ug/L	0.052	403	0	-3	300
Se	78	0.173	ug/L	0.277	160	10009	10128	1
Mo	98	0.043	ug/L	0.011	25	75	300	18
Y	89		ug/L			438666	443982	1
Kr	83		ug/L			391	420	2
> In	115		ug/L			956745	986460	1
Ag	107	0.008	ug/L	0.004	51	77	154	23
Cd	111	0.007	ug/L	0.005	75	131	164	12
Cd	114	0.008	ug/L	0.002	27	64	159	15
Sb	121	0.336	ug/L	0.066	19	875	5366	16
Sb	123	0.336	ug/L	0.074	21	675	4046	18
Ba	135	0.000	ug/L	0.003	1129	41	44	27
Ba	137	0.001	ug/L	0.001	102	73	81	6
> Tb	159		ug/L			1186124	1204929	1
Tl	205	0.027	ug/L	0.004	13	270	1263	9
Pb	208	0.004	ug/L	0.001	25	477	668	6
Bi	209		ug/L			2621879	2705948	0
Th	232	0.122	ug/L	0.005	4	1082	6836	2
U	238	0.009	ug/L	0.002	25	146	575	17

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:01:38
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1550612	1
	Be	9	50.696	ug/L	1.529	3	52	248687	1
	C	13		ug/L			91865	96070	0
	Cl	37		ug/L			4664629	4929986	2
>	Sc	45		ug/L			1199367	1257493	0
	V	51	48.772	ug/L	0.952	1	7921	1244614	2
	V-1	51	48.866	ug/L	0.692	1	182	1236456	2
	Cr	52	48.847	ug/L	0.939	1	23276	1052702	2
	Cr	53	49.166	ug/L	0.813	1	155	116346	1
	Mn	55	48.771	ug/L	0.827	1	856	1410933	1
	Co	59	47.349	ug/L	0.330	0	217	1010190	1
>	Ge	72		ug/L			666955	664679	1
	Ni	60	50.529	ug/L	0.969	1	57	215142	0
	Ni	62	50.159	ug/L	0.882	1	234	30731	0
	Cu	63	50.369	ug/L	0.390	0	374	464588	0
	Cu	65	50.078	ug/L	0.341	0	101	205991	1
	Zn	66	50.607	ug/L	1.198	2	850	125446	1
	Zn	67	50.628	ug/L	1.481	2	128	21238	2
	Zn	68	49.836	ug/L	0.162	0	745	88224	1
	As	75	49.779	ug/L	0.683	1	118	109014	1
	As-1	75	49.513	ug/L	0.826	1	9854	119438	1
	Se	82	51.413	ug/L	0.381	0	0	11736	0
	Se	78	49.850	ug/L	0.700	1	10009	40544	0
	Mo	98	50.104	ug/L	0.434	0	75	263703	1
	Y	89		ug/L			438666	450435	1
	Kr	83		ug/L			391	440	0
>	In	115		ug/L			956745	981416	1
	Ag	107	48.148	ug/L	1.166	2	77	479802	1
	Cd	111	50.189	ug/L	1.210	2	131	223802	2
	Cd	114	50.448	ug/L	0.698	1	64	573971	0
	Sb	121	49.620	ug/L	0.665	1	875	656402	0
	Sb	123	49.831	ug/L	0.958	1	675	493831	1
	Ba	135	49.350	ug/L	0.646	1	41	218048	0
	Ba	137	49.721	ug/L	0.128	0	73	380457	2
>	Tb	159		ug/L			1186124	1231398	0
	Tl	205	49.911	ug/L	0.192	0	270	1897331	0
	Pb	208	49.717	ug/L	0.241	0	477	2466381	0
	Bi	209		ug/L			2621879	2624808	0
	Th	232	50.551	ug/L	0.605	1	1082	2432512	0
	U	238	50.576	ug/L	0.403	0	146	2521116	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:08:30
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			1477068	1559529	1
	Be	**9**	**-0.002**	ug/L	0.002	113	52	46	22
	C	**13**		ug/L			91865	96387	1
	Cl	**37**		ug/L			4664629	4691333	2
>	**Sc**	**45**		ug/L			1199367	1228129	0
	V	**51**	**-0.009**	ug/L	0.002	27	7921	7888	1
	V-1	**51**	**0.004**	ug/L	0.001	23	182	285	8
	Cr	**52**	**-0.026**	ug/L	0.007	26	23276	23293	1
	Cr	**53**	**0.018**	ug/L	0.007	37	155	200	7
	Mn	**55**	**0.004**	ug/L	0.001	31	856	999	4
	Co	**59**	**-0.001**	ug/L	0.001	219	217	211	12
>	**Ge**	**72**		ug/L			666955	653059	1
	Ni	**60**	**-0.001**	ug/L	0.001	113	57	52	9
	Ni	**62**	**0.126**	ug/L	0.025	19	234	304	3
	Cu	**63**	**0.009**	ug/L	0.003	30	374	446	5
	Cu	**65**	**0.002**	ug/L	0.003	144	101	107	10
	Zn	**66**	**0.448**	ug/L	0.029	6	850	1917	4
	Zn	**67**	**0.389**	ug/L	0.067	17	128	285	10
	Zn	**68**	**0.437**	ug/L	0.050	11	745	1484	6
	As	**75**	**0.060**	ug/L	0.043	72	118	244	39
	As-1	**75**	**0.120**	ug/L	0.041	34	9854	9909	0
	Se	**82**	**0.055**	ug/L	0.037	66	0	11	72
	Se	**78**	**0.291**	ug/L	0.245	84	10009	9974	0
	Mo	**98**	**0.013**	ug/L	0.016	127	75	138	60
	Y	**89**		ug/L			438666	435050	1
	Kr	**83**		ug/L			391	397	1
>	**In**	**115**		ug/L			956745	965227	1
	Ag	**107**	**0.002**	ug/L	0.008	407	77	96	77
	Cd	**111**	**-0.000**	ug/L	0.008	1643	131	130	26
	Cd	**114**	**0.002**	ug/L	0.006	369	64	83	84
	Sb	**121**	**0.067**	ug/L	0.034	49	875	1756	24
	Sb	**123**	**0.073**	ug/L	0.033	45	675	1393	22
	Ba	**135**	**0.003**	ug/L	0.003	92	41	56	22
	Ba	**137**	**0.002**	ug/L	0.004	175	73	88	29
>	**Tb**	**159**		ug/L			1186124	1168556	0
	Tl	**205**	**0.004**	ug/L	0.004	105	270	419	38
	Pb	**208**	**0.001**	ug/L	0.003	228	477	540	29
	Bi	**209**		ug/L			2621879	2657865	0
	Th	**232**	**0.077**	ug/L	0.005	6	1082	4597	5
	U	**238**	**0.001**	ug/L	0.002	284	146	184	62

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS30 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:15:13
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1687018	3
	Be	9	-0.003	ug/L	0.003	90	52	44	30
	C	13		ug/L			91865	148752	3
	Cl	37		ug/L			4664629	4858644	2
>	Sc	45		ug/L			1199367	1332299	0
	V	51	0.022	ug/L	0.008	38	7921	9389	1
	V-1	51	0.004	ug/L	0.002	59	182	302	18
	Cr	52	0.088	ug/L	0.023	26	23276	27806	1
	Cr	53	0.025	ug/L	0 002	9	155	236	1
	Mn	55	0.007	ug/L	0.001	19	856	1167	2
	Co	59	-0.002	ug/L	0.002	85	217	186	24
>	Ge	72		ug/L			666955	700365	0
	Ni	60	0.030	ug/L	0.001	4	57	195	3
	Ni	62	0.063	ug/L	0.019	30	234	286	3
	Cu	63	0.019	ug/L	0.001	6	374	574	1
	Cu	65	0.022	ug/L	0.004	18	101	201	8
	Zn	66	0.109	ug/L	0.011	10	850	1176	2
	Zn	67	0.102	ug/L	0.030	29	128	180	7
	Zn	68	0.085	ug/L	0.001	0	745	940	0
	As	75	0.006	ug/L	0.012	194	118	138	18
	As-1	75	-0.191	ug/L	0.041	21	9854	9901	0
	Se	82	0.040	ug/L	0.038	95	0	8	106
	Se	78	-0.679	ug/L	0.128	18	10009	10071	0
	Mo	98	0.006	ug/L	0.014	221	75	114	68
	Y	89		ug/L			438666	476639	0
	Kr	83		ug/L			391	405	2
>	In	115		ug/L			956745	1028290	1
	Ag	107	0.003	ug/L	0.010	320	77	116	91
	Cd	111	0.002	ug/L	0.008	458	131	149	25
	Cd	114	0.006	ug/L	0.010	169	64	136	83
	Sb	121	-0.002	ug/L	0.006	313	875	915	7
	Sb	123	-0.006	ug/L	0.005	93	675	665	7
	Ba	135	0.005	ug/L	0.005	102	41	66	33
	Ba	137	0.006	ug/L	0.008	141	73	122	51
>	Tb	159		ug/L			1186124	1271793	0
	Tl	205	0.004	ug/L	0.004	97	270	444	33
	Pb	208	0.001	ug/L	0.004	291	477	579	33
	Bi	209		ug/L			2621879	2826435	0
	Th	232	0.043	ug/L	0.013	30	1082	3278	18
	U	238	-0.000	ug/L	0.002	514	146	133	85

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 F REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:19:21
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1607510	1
	Be	9	-0.005	ug/L	0.001	15	52	30	14
	C	13		ug/L			91865	112790	1
	Cl	37		ug/L			4664629	4844703	2
>	Sc	45		ug/L			1199367	1316432	0
	V	51	11.834	ug/L	0.135	1	7921	322707	1
	V-1	51	11.912	ug/L	0.188	1	182	315649	1
	Cr	52	6.481	ug/L	0.064	0	23276	168384	1
	Cr	53	6.711	ug/L	0.188	2	155	16770	2
	Mn	55	1.167	ug/L	0.009	0	856	36275	0
	Co	59	0.273	ug/L	0.003	0	217	6340	0
>	Ge	72		ug/L			666955	666418	1
	Ni	60	0.855	ug/L	0.029	3	57	3705	3
	Ni	62	0.647	ug/L	0.067	10	234	628	4
	Cu	63	4.878	ug/L	0.134	2	374	45439	1
	Cu	65	4.778	ug/L	0.076	1	101	19795	0
	Zn	66	2.341	ug/L	0.031	1	850	6627	0
	Zn	67	3.124	ug/L	0.093	2	128	1434	2
	Zn	68	3.152	ug/L	0.067	2	745	6291	1
	As	75	1.891	ug/L	0.036	1	118	4264	1
	As-1	75	1.834	ug/L	0.119	6	9854	13914	0
	Se	82	0.398	ug/L	0.041	10	0	90	9
	Se	78	0.290	ug/L	0.370	127	10009	10177	0
	Mo	98	5.238	ug/L	0.089	1	75	27701	0
	Y	89		ug/L			438666	460981	0
	Kr	83		ug/L			391	419	2
>	In	115		ug/L			956745	999396	0
	Ag	107	-0.002	ug/L	0.001	62	77	61	20
	Cd	111	0.062	ug/L	0.003	5	131	420	3
	Cd	114	0.069	ug/L	0.004	5	64	867	5
	Sb	121	2.695	ug/L	0.038	1	875	37177	1
	Sb	123	2.729	ug/L	0.065	2	675	28213	2
	Ba	135	9.017	ug/L	0.126	1	41	40614	1
	Ba	137	8.915	ug/L	0.005	0	73	69524	0
>	Tb	159		ug/L			1186124	1250055	0
	Tl	205	0.015	ug/L	0.001	3	270	881	3
	Pb	208	0.047	ug/L	0.000	0	477	2870	0
	Bi	209		ug/L			2621879	2596963	0
	Th	232	0.025	ug/L	0.007	26	1082	2362	14
	U	238	0.140	ug/L	0.004	2	146	7218	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS61 AaDUP SPN
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:23:28
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\061213a.cal

RL CV

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1764386	1
	Be	9	-0.002	ug/L	0.001	24	52	50	4
	C	13		ug/L			91865	209810	1
	Cl	37		ug/L			4664629	5213812	2
>	Sc	45		ug/L			1199367	1465801	1
	V	51	0.851	ug/L	0.023	2	7921	34810	0
	V-1	51	0.802	ug/L	0.030	3	182	23861	2
	Cr	52	1.418	ug/L	0.045	3	23276	63238	0
	Cr	53	1.255	ug/L	0.074	5	155	3644	4
	Mn	55	373.164	ug/L	7.206	1	856	12575830	0
	Co	59	1.795	ug/L	0.041	2	217	44885	1
>	Ge	72		ug/L			666955	701775	1
	Ni	60	6.801	ug/L	0.079	1	57	30628	0
	Ni	62	6.486	ug/L	0.243	3	234	4410	3
	Cu	63	11.792	ug/L	0.076	0	374	115142	0
	Cu	65	11.770	ug/L	0.061	0	101	51199	0
	Zn	66	11.186	ug/L	0.066	0	850	29977	1
	Zn	67	14.867	ug/L	0.220	1	128	6680	1
	Zn	68	15.065	ug/L	0.276	1	745	28703	0
	As	75	1.621	ug/L	0.020	1	118	3869	0
	As-1	75	1.675	ug/L	0.060	3	9854	14284	1
	Se	82	0.089	ug/L	0.069	77	0	20	81
	Se	78	0.368	ug/L	0.157	42	10009	10770	1
	Mo	98	5.657	ug/L	0.164	2	75	31501	1
	Y	89		ug/L			438666	513652	0
	Kr	83		ug/L			391	428	11
>	In	115		ug/L			956745	1088138	0
	Ag	107	0.007	ug/L	0.002	28	77	161	12
	Cd	111	0.029	ug/L	0.006	21	131	293	10
	Cd	114	0.029	ug/L	0.002	8	64	432	6
	Sb	121	0.403	ug/L	0.009	2	875	6905	1
	Sb	123	0.401	ug/L	0.006	1	675	5167	1
	Ba	135	80.432	ug/L	0.624	0	41	394059	0
	Ba	137	80.512	ug/L	1.122	1	73	683011	1
>	Tb	159		ug/L			1186124	1362939	0
	Tl	205	0.002	ug/L	0.000	20	270	389	3
	Pb	208	1.803	ug/L	0.020	1	477	99551	0
	Bi	209		ug/L			2621879	2658096	0
	Th	232	0.041	ug/L	0.009	21	1082	3437	14
	U	238	0.006	ug/L	0.001	9	146	493	6

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS61 Aa SPN
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:27:36
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\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1477068	1792709	0
Be	9	0.016	ug/L	0.002	14	52	155	8
C	13		ug/L			91865	213321	1
Cl	37		ug/L			4664629	5282843	3
Sc	45		ug/L			1199367	1475476	2
V	51	0.950	ug/L	0.010	1	7921	38004	2
V-1	51	0.880	ug/L	0.014	1	182	26345	0
Cr	52	2.022	ug/L	0.040	1	23276	78555	1
Cr	53	1.789	ug/L	0.074	4	155	5148	1
Mn	55	372.457	ug/L	8.430	2	856	12632726	0
Co	59	1.780	ug/L	0.069	3	217	44799	1
Ge	72		ug/L			666955	715948	2
Ni	60	6.761	ug/L	0.049	0	57	31064	1
Ni	62	6.329	ug/L	0.110	1	234	4396	1
Cu	63	12.378	ug/L	0.120	0	374	123272	1
Cu	65	12.725	ug/L	0.171	1	101	56453	0
Zn	66	10.662	ug/L	0.440	4	850	29177	2
Zn	67	14.440	ug/L	0.327	2	128	6622	0
Zn	68	14.091	ug/L	0.468	3	745	27432	1
As	75	1.585	ug/L	0.027	1	118	3861	0
As-1	75	1.658	ug/L	0.084	5	9854	14529	0
Se	82	0.070	ug/L	0.032	45	0	16	49
Se	78	0.415	ug/L	0.181	43	10009	11017	0
Mo	98	5.840	ug/L	0.179	3	75	33170	1
Y	89		ug/L			438666	513793	1
Kr	83		ug/L			391	436	5
In	115		ug/L			956745	1104104	1
Ag	107	0.007	ug/L	0.003	39	77	163	18
Cd	111	0.033	ug/L	0 004	12	131	315	7
Cd	114	0.026	ug/L	0.002	7	64	409	5
Sb	121	0.368	ug/L	0.005	1	875	6479	1
Sb	123	0.365	ug/L	0.014	3	675	4841	2
Ba	135	79.276	ug/L	1.342	1	41	394039	0
Ba	137	79.555	ug/L	1.197	1	73	684704	0
Tb	159		ug/L			1186124	1379515	0
Tl	205	0.006	ug/L	0.000	2	270	590	1
Pb	208	1.726	ug/L	0.015	0	477	96458	0
Bi	209		ug/L			2621879	2664715	0
Th	232	0.005	ug/L	0.002	40	1082	1504	6
U	238	0.005	ug/L	0.000	3	146	471	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS61 AaSPK SPN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:31:43
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1581003	1
	Be	9	24.797	ug/L	0.288	1	52	124079	0
	C	13		ug/L			91865	105343	0
	Cl	37		ug/L			4664629	4824388	0
>	Sc	45		ug/L			1199367	1273981	1
	V	51	23.913	ug/L	0.600	2	7921	622352	1
	V-1	51	24.099	ug/L	0.752	3	182	617684	2
	Cr	52	24.474	ug/L	0.454	1	23276	546693	2
	Cr	53	25.113	ug/L	0.194	0	155	60283	1
	Mn	55	45.257	ug/L	0.854	1	856	1326353	1
	Co	59	24.481	ug/L	0.502	2	217	529109	0
>	Ge	72		ug/L			666955	684178	0
	Ni	60	25.444	ug/L	0.510	2	57	111564	2
	Ni	62	24.904	ug/L	0.555	2	234	15829	2
	Cu	63	26.407	ug/L	0.645	2	374	250923	2
	Cu	65	26.270	ug/L	0.229	0	101	111282	1
	Zn	66	80.866	ug/L	0.125	0	850	205845	0
	Zn	67	74.042	ug/L	0.989	1	128	31916	1
	Zn	68	78.906	ug/L	0.570	0	745	143342	0
	As	75	24.857	ug/L	0.323	1	118	56097	1
	As-1	75	25.053	ug/L	0.224	0	9854	67205	0
	Se	82	80.257	ug/L	0.449	0	0	18860	0
	Se	78	77.667	ug/L	0.540	0	10009	59298	1
	Mo	98	0.279	ug/L	0.007	2	75	1587	2
	Y	89		ug/L			438666	463690	2
	Kr	83		ug/L			391	414	2
>	In	115		ug/L			956745	1013557	0
	Ag	107	24.342	ug/L	0.461	1	77	250603	1
	Cd	111	24.932	ug/L	0.066	0	131	114905	0
	Cd	114	24.815	ug/L	0.462	1	64	291679	2
	Sb	121	-0.029	ug/L	0.004	13	875	526	9
	Sb	123	-0.030	ug/L	0.003	10	675	411	6
	Ba	135	29.027	ug/L	0.517	1	41	132496	2
	Ba	137	28.671	ug/L	0.170	0	73	226604	1
>	Tb	159		ug/L			1186124	1249058	0
	Tl	205	25.193	ug/L	0.201	0	270	971529	0
	Pb	208	25.792	ug/L	0.099	0	477	1298083	0
	Bi	209		ug/L			2621879	2783786	0
	Th	232	23.781	ug/L	0.133	0	1082	1161377	0
	U	238	24.631	ug/L	0.293	1	146	1245437	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS30 IDUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:35:51
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1609081	2
	Be	9	0.136	ug/L	0.008	5	52	750	5
	C	13		ug/L			91865	149640	1
	Cl	37		ug/L			4664629	5129609	5
>	Sc	45		ug/L			1199367	1402551	0
	V	51	26.868	ug/L	0.494	1	7921	768757	1
	V-1	51	26.911	ug/L	0.562	2	182	759461	1
	Cr	52	12.977	ug/L	0.085	0	23276	331906	1
	Cr	53	13.033	ug/L	0.238	1	155	34532	1
	Mn	55	89.969	ug/L	1.753	1	856	2902577	2
	Co	59	3.528	ug/L	0.055	1	217	84174	1
>	Ge	72		ug/L			666955	693345	1
	Ni	60	9.311	ug/L	0.166	1	57	41411	2
	Ni	62	10.627	ug/L	0.298	2	234	6984	2
	Cu	63	37.492	ug/L	0.203	0	374	360861	1
	Cu	65	36.812	ug/L	0.599	1	101	157961	0
	Zn	66	53.163	ug/L	1.098	2	850	137436	2
	Zn	67	51.259	ug/L	0.614	1	128	22431	1
	Zn	68	52.364	ug/L	0 561	1	745	96656	0
	As	75	5.007	ug/L	0.035	0	118	11548	1
	As-1	75	4.815	ug/L	0.104	2	9854	21363	0
	Se	82	0.131	ug/L	0.038	28	0	30	29
	Se	78	-0.195	ug/L	0.310	158	10009	10279	0
	Mo	98	0.654	ug/L	0.017	2	75	3666	2
	Y	89		ug/L			438666	591658	0
	Kr	83		ug/L			391	532	3
>	In	115		ug/L			956745	1026080	2
	Ag	107	0.112	ug/L	0.006	5	77	1248	7
	Cd	111	0.192	ug/L	0.013	6	131	1038	7
	Cd	114	0.110	ug/L	0.006	5	64	1373	3
	Sb	121	-0.007	ug/L	0.003	42	875	837	4
	Sb	123	-0.007	ug/L	0.006	83	675	647	8
	Ba	135	32.208	ug/L	0.672	2	41	148779	0
	Ba	137	32.317	ug/L	0.604	1	73	258500	0
>	Tb	159		ug/L			1186124	1298007	1
	Tl	205	0.075	ug/L	0.001	1	270	3311	2
	Pb	208	20.846	ug/L	0.096	0	477	1090370	0
	Bi	209		ug/L			2621879	2719083	1
	Th	232	0.906	ug/L	0.053	5	1082	47107	5
	U	238	0.500	ug/L	0.011	2	146	26413	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS30 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:39:59
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1477068	1671594	2
	Be	9	0.148	ug/L	0.010	6	52	840	4
	C	13		ug/L			91865	140875	1
	Cl	37		ug/L			4664629	4977074	3
>	Sc	45		ug/L			1199367	1406012	0
	V	51	29.684	ug/L	0.071	0	7921	850531	0
	V-1	51	29.730	ug/L	0.049	0	182	841146	0
	Cr	52	13.596	ug/L	0.414	3	23276	347238	2
	Cr	53	13.646	ug/L	0.298	2	155	36236	1
	Mn	55	95.641	ug/L	0.573	0	856	3092857	0
	Co	59	3.494	ug/L	0.057	1	217	83572	1
>	Ge	72		ug/L			666955	694885	0
	Ni	60	8.562	ug/L	0.035	0	57	38167	0
	Ni	62	10.525	ug/L	0.209	1	234	6935	1
	Cu	63	36.733	ug/L	0.295	0	374	354338	0
	Cu	65	36.763	ug/L	0.296	0	101	158124	0
	Zn	66	55.988	ug/L	0.236	0	850	145022	0
	Zn	67	55.388	ug/L	0.229	0	128	24281	0
	Zn	68	55.362	ug/L	0.901	1	745	102377	1
	As	75	4.980	ug/L	0.035	0	118	11513	0
	As-1	75	4.757	ug/L	0.003	0	9854	21278	0
	Se	82	0.117	ug/L	0.087	74	0	26	76
	Se	78	-0.276	ug/L	0.127	46	10009	10251	0
	Mo	98	0.659	ug/L	0.017	2	75	3705	2
	Y	89		ug/L			438666	597699	0
	Kr	83		ug/L			391	571	7
>	In	115		ug/L			956745	1029796	1
	Ag	107	0.139	ug/L	0.001	0	77	1540	0
	Cd	111	0.223	ug/L	0.027	12	131	1185	10
	Cd	114	0.128	ug/L	0.004	3	64	1601	2
	Sb	121	-0.009	ug/L	0.002	18	875	813	3
	Sb	123	-0.011	ug/L	0.002	17	675	607	3
	Ba	135	52.816	ug/L	0 322	0	41	244891	0
	Ba	137	52.938	ug/L	0.620	1	73	425018	1
>	Tb	159		ug/L			1186124	1296878	1
	Tl	205	0.058	ug/L	0.001	1	270	2620	0
	Pb	208	18.696	ug/L	0.295	1	477	976993	0
	Bi	209		ug/L			2621879	2714276	0
	Th	232	0.761	ug/L	0.017	2	1082	39728	1
	U	238	0.505	ug/L	0.005	1	146	26672	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS30 ISPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:44:07
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1477068	1609709	0
	Be	9	24.688	ug/L	0.054	0	52	125787	0
	C	13		ug/L			91865	138655	2
	Cl	37		ug/L			4664629	5026487	0
>	Sc	45		ug/L			1199367	1411417	0
	V	51	51.597	ug/L	0.471	0	7921	1477207	1
	V-1	51	51.699	ug/L	0.441	0	182	1468180	1
	Cr	52	36.951	ug/L	0.295	0	23276	900420	0
	Cr	53	37.203	ug/L	0.346	0	155	98860	1
	Mn	55	117.944	ug/L	0.356	0	856	3828584	0
	Co	59	25.720	ug/L	0.512	1	217	615999	1
>	Ge	72		ug/L			666955	687378	0
	Ni	60	34.732	ug/L	0.251	0	57	152976	0
	Ni	62	35.579	ug/L	0.374	1	234	22616	1
	Cu	63	69.648	ug/L	1.729	2	374	664245	2
	Cu	65	70.312	ug/L	0.662	0	101	299063	1
	Zn	66	152.870	ug/L	3.103	2	850	390166	1
	Zn	67	140.991	ug/L	0.311	0	128	60936	0
	Zn	68	148.405	ug/L	0.331	0	745	270181	0
	As	75	29.796	ug/L	0.286	0	118	67534	0
	As-1	75	30.183	ug/L	0.078	0	9854	79265	0
	Se	82	79.634	ug/L	0.257	0	0	18801	0
	Se	78	78.164	ug/L	1.184	1	10009	59890	1
	Mo	98	0.760	ug/L	0.003	0	75	4210	0
	Y	89		ug/L			438666	587341	0
	Kr	83		ug/L			391	566	9
>	In	115		ug/L			956745	1026952	0
	Ag	107	22.998	ug/L	0.308	1	77	239901	1
	Cd	111	25.368	ug/L	0.278	1	131	118458	1
	Cd	114	25.265	ug/L	0.365	1	64	300869	1
	Sb	121	-0.006	ug/L	0.001	21	875	849	2
	Sb	123	-0.009	ug/L	0.001	13	675	629	1
	Ba	135	61.647	ug/L	0.375	0	41	285046	0
	Ba	137	62.230	ug/L	0.509	0	73	498233	0
>	Tb	159		ug/L			1186124	1293802	0
	Tl	205	24.640	ug/L	0.193	0	270	984253	0
	Pb	208	46.285	ug/L	0.254	0	477	2412582	0
	Bi	209		ug/L			2621879	2697189	0
	Th	232	24.808	ug/L	0.193	0	1082	1254930	0
	U	238	24.818	ug/L	0.277	1	146	1299922	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS30 REF1 SWN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:48:14
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1477068	1617144	3
Be	9	33.214	ug/L	0.383	1	52	169951	1
C	13		ug/L			91865	121775	1
Cl	37		ug/L			4664629	4926963	2
> Sc	45		ug/L			1199367	1328932	2
V	51	28.217	ug/L	0.579	2	7921	764418	0
V-1	51	28.302	ug/L	0.657	2	182	756628	0
Cr	52	25.494	ug/L	0.467	1	23276	592794	0
Cr	53	25.766	ug/L	0.756	2	155	64494	0
Mn	55	168.951	ug/L	2.746	1	856	5162301	0
Co	59	26.365	ug/L	0.441	1	217	594440	1
> Ge	72		ug/L			666955	687825	1
Ni	60	21.535	ug/L	0.440	2	57	94944	2
Ni	62	21.296	ug/L	0.136	0	234	13643	0
Cu	63	26.365	ug/L	0.336	1	374	251854	1
Cu	65	26.954	ug/L	0.404	1	101	114775	1
Zn	66	69.528	ug/L	0.405	0	850	178055	1
Zn	67	70.587	ug/L	1.322	1	128	30590	1
Zn	68	73.341	ug/L	0.299	0	745	133994	0
As	75	47.055	ug/L	0.313	0	118	106647	0
As-1	75	46.799	ug/L	0.123	0	9854	117387	1
Se	82	62.457	ug/L	1.512	2	0	14753	1
Se	78	60.279	ug/L	0.789	1	10009	48575	0
Mo	98	14.383	ug/L	0.375	2	75	78377	1
Y	89		ug/L			438666	599765	2
Kr	83		ug/L			391	509	4
> In	115		ug/L			956745	1032950	1
Ag	107	37.450	ug/L	0.574	1	77	392903	2
Cd	111	25.612	ug/L	0.371	1	131	120284	1
Cd	114	25.840	ug/L	0.667	2	64	309444	1
Sb	121	1.456	ug/L	0.023	1	875	21192	0
Sb	123	1.477	ug/L	0.007	0	675	16118	1
Ba	135	120.502	ug/L	1.652	1	41	560339	0
Ba	137	120.909	ug/L	0.452	0	73	973591	1
> Tb	159		ug/L			1186124	1296159	0
Tl	205	51.725	ug/L	1.611	3	270	2069615	2
Pb	208	49.178	ug/L	0.324	0	477	2568003	0
Bi	209		ug/L			2621879	2798283	0
Th	232	4.162	ug/L	0.059	1	1082	211905	1
U	238	0.558	ug/L	0.006	1	146	29423	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS30 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:52:22
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\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1477068	1587464	0
Be	9	24.418	ug/L	0.112	0	52	122692	0
C	13		ug/L			91865	110742	1
Cl	37		ug/L			4664629	4771719	0
> Sc	45		ug/L			1199367	1271981	1
V	51	23.759	ug/L	0.072	0	7921	617512	1
V-1	51	23.923	ug/L	0.199	0	182	612307	0
Cr	52	24.509	ug/L	0.290	1	23276	546573	2
Cr	53	25.075	ug/L	0.270	1	155	60098	0
Mn	55	24.734	ug/L	0.368	1	856	724181	0
Co	59	24.424	ug/L	0.601	2	217	527083	1
> Ge	72		ug/L			666955	673367	2
Ni	60	26.013	ug/L	0.606	2	57	112228	1
Ni	62	24.942	ug/L	1 086	4	234	15593	2
Cu	63	25.859	ug/L	0.825	3	374	241713	1
Cu	65	26.038	ug/L	0.814	3	101	108503	0
Zn	66	80.986	ug/L	2.964	3	850	202783	1
Zn	67	73.566	ug/L	1.518	2	128	31199	0
Zn	68	78.906	ug/L	1.552	1	745	141046	1
As	75	24.657	ug/L	0.814	3	118	54741	1
As-1	75	25.291	ug/L	0.891	3	9854	66646	0
Se	82	79.774	ug/L	2.388	2	0	18442	0
Se	78	78.759	ug/L	2.601	3	10009	59013	0
Mo	98	0.002	ug/L	0.002	61	75	88	7
Y	89		ug/L			438666	454960	0
Kr	83		ug/L			391	393	7
> In	115		ug/L			956745	1027359	1
Ag	107	24.639	ug/L	0.466	1	77	257145	3
Cd	111	24.793	ug/L	0.298	1	131	115809	0
Cd	114	24.655	ug/L	0.426	1	64	293680	0
Sb	121	-0.056	ug/L	0.001	1	875	167	8
Sb	123	-0.058	ug/L	0.001	1	675	123	10
Ba	135	24.407	ug/L	0.307	1	41	112916	0
Ba	137	24.594	ug/L	0.655	2	73	196986	1
> Tb	159		ug/L			1186124	1250243	0
Tl	205	25.224	ug/L	0.169	0	270	973659	0
Pb	208	25.490	ug/L	0.320	1	477	1284092	0
Bi	209		ug/L			2621879	2803272	0
Th	232	24.000	ug/L	0.449	1	1082	1173073	0
U	238	24.519	ug/L	0.317	1	146	1240969	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:57:35
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\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
> Li	6		ug/L			1477068	1549492	2
Be	9	49.423	ug/L	1.668	3	52	242213	1
C	13		ug/L			91865	98697	1
Cl	37		ug/L			4664629	5050113	3
> Sc	45		ug/L			1199367	1256650	0
V	51	47.381	ug/L	1.052	2	7921	1208329	1
V-1	51	47.749	ug/L	0.724	1	182	1207215	0
Cr	52	48.125	ug/L	1.043	2	23276	1036646	1
Cr	53	49.386	ug/L	1.019	2	155	116784	1
Mn	55	48.520	ug/L	0.172	0	856	1402817	0
Co	59	47.725	ug/L	0.334	0	217	1017478	0
> Ge	72		ug/L			666955	661870	0
Ni	60	49.348	ug/L	0.242	0	57	209266	0
Ni	62	48.860	ug/L	0.889	1	234	29818	1
Cu	63	50.431	ug/L	0.554	1	374	463200	0
Cu	65	49.370	ug/L	0.447	0	101	202216	0
Zn	66	49.607	ug/L	0.483	0	850	122482	0
Zn	67	49.832	ug/L	0.104	0	128	20820	0
Zn	68	49.708	ug/L	0.302	0	745	87630	0
As	75	49.471	ug/L	0.438	0	118	107890	0
As-1	75	49.349	ug/L	0.393	0	9854	118580	0
Se	82	50.792	ug/L	0.325	0	0	11546	0
Se	78	49.769	ug/L	0.293	0	10009	40326	0
Mo	98	49.794	ug/L	0.137	0	75	260976	0
Y	89		ug/L			438666	449235	1
Kr	83		ug/L			391	439	4
> In	115		ug/L			956745	1000824	0
Ag	107	47.211	ug/L	0.462	0	77	479833	0
Cd	111	49.022	ug/L	0.545	1	131	222946	0
Cd	114	49.296	ug/L	1.006	2	64	571991	1
Sb	121	48.209	ug/L	0.810	1	875	650389	0
Sb	123	48.906	ug/L	1.068	2	675	494297	1
Ba	135	48.446	ug/L	0.463	0	41	218306	0
Ba	137	49.153	ug/L	0.497	1	73	383518	0
> Tb	159		ug/L			1186124	1224000	0
Tl	205	49.720	ug/L	0.386	0	270	1878662	0
Pb	208	50.084	ug/L	0.097	0	477	2469726	0
Bi	209		ug/L			2621879	2652502	0
Th	232	50.858	ug/L	0.397	0	1082	2432723	0
U	238	50.779	ug/L	0.314	0	146	2516067	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 13:04:28
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\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1477068	1521330	2
Be	9	-0.003	ug/L	0.000	13	52	37	3
C	13		ug/L			91865	96070	1
Cl	37		ug/L			4664629	4741171	1
> Sc	45		ug/L			1199367	1225794	1
V	51	-0.010	ug/L	0.002	21	7921	7836	2
V-1	51	-0.001	ug/L	0.001	121	182	161	20
Cr	52	-0.038	ug/L	0.007	18	23276	23008	2
Cr	53	-0.006	ug/L	0.002	38	155	145	4
Mn	55	0.007	ug/L	0.002	29	856	1059	6
Co	59	-0.001	ug/L	0.001	110	217	211	7
> Ge	72		ug/L			666955	641584	1
Ni	60	0.000	ug/L	0.001	323	57	57	11
Ni	62	-0.028	ug/L	0.024	85	234	208	5
Cu	63	-0.001	ug/L	0.002	326	374	354	6
Cu	65	0.001	ug/L	0.006	490	101	103	24
Zn	66	0.467	ug/L	0.017	3	850	1928	2
Zn	67	0.362	ug/L	0.017	4	128	269	1
Zn	68	0.407	ug/L	0.010	2	745	1406	2
As	75	0.010	ug/L	0.006	62	118	134	8
As-1	75	0.151	ug/L	0.074	49	9854	9799	0
Se	82	0.040	ug/L	0.018	45	0	7	51
Se	78	0.563	ug/L	0.276	49	10009	9960	0
Mo	98	0.002	ug/L	0.001	74	75	80	7
Y	89		ug/L			438666	434129	0
Kr	83		ug/L			391	390	2
> In	115		ug/L			956745	966702	0
Ag	107	-0.001	ug/L	0.005	803	77	71	75
Cd	111	-0.004	ug/L	0.001	25	131	116	3
Cd	114	-0.001	ug/L	0.003	373	64	55	67
Sb	121	0.021	ug/L	0.015	71	875	1161	17
Sb	123	0.019	ug/L	0.017	85	675	870	18
Ba	135	0.002	ug/L	0.005	350	41	49	49
Ba	137	0.002	ug/L	0.004	242	73	87	38
> Tb	159		ug/L			1186124	1198848	2
Tl	205	-0.000	ug/L	0.002	6702	270	272	32
Pb	208	-0.000	ug/L	0.001	267	477	461	14
Bi	209		ug/L			2621879	2673265	1
Th	232	0.077	ug/L	0.006	7	1082	4709	5
U	238	-0.001	ug/L	0.001	125	146	106	52

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA **Analysis Date:** 6-18-13

MZ Vertex STD	Analyst 6-19	Peer 6/19/13	Comment
Logbook(s)			
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	✓	✓	See log
ICB/CCB	✓	✓	
Samples			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	See log
Carry-over	✓	✓	
Method QC			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	See log
Post Spikes/Serial Dilutions N/A	—	—	
Analytic Spikes	—	—	
Matrix QC			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	WT66 WS90R
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	See log
Data Distribution			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analyst Notified and CAF	✓	✓	CAF WT66 A.N. WS90R

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 6-18-13 **Analyst:** AA **Page:** 1 of 7

All corrections made by analyst unless otherwise noted. AA 6-18-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			B684
		1			B642
		2			B631
		3			B632
		4			B675
		5			B 634
		Rinse Sample			
		ICV			B523
		ICB			
		CCV1			
		CCB1			
		Low check			
		ICSA			
		ICSAB			^{62}Ni ↑
		LR200			
		LR300			
		B 1			
		CCV2			
		CCB2			
	✓	WS90R MB1	RDN	2	Zn 5.2 RR Rbdl
		MB2			
		ADup			RR Cr (sc)
		A			(A.N.) CAE
		ASpk			Sb low %R

WS90 : 00919

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 6-18-13 **Analyst:** MT **Page:** 2 of 7

All corrections made by analyst unless otherwise noted. 6-18-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
	✓	WS90R EDup	REN	2	✓ ~~RRPb~~ RR all
		E			
		Espk			✓
		MB1spk			✓
		MB2spk			✓
		CCV3			
		CCB3			Pb ↑
90R	✓	WS90R MB1	REN	2	Zn
		ADup		10	✓ Cr
		A			
		Aspk			✓
		ABst		2	✓ Sb 0.06 mL spk #2 1/10 0.06 mL spk #1 1/10
		WT51 ADup		20	✓ CuZn, Mn
		A			
		Aspk			✓ CuZn SiZ
		B			CuZn
		WT30 J		10000	Zn
		CCV4			
		CCB4			
		WS90R MB1	REN	2	
		MB2			
		ADup			✓ NO Cr
		A			
		Aspk			Sb low %R

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 6-18-13 **Analyst:** MT **Page:** 3 of 7

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		WS90 EDup	REN	2	
		E			
		ESpk			
		MB1spk			
		MB2spk			
5		CCV 5			
5		CCB 5			As2 4
		WT30 MDup	REN	5	Mn
		M			
		Mspk			STL
		AADup			
		AA			
REN		AAspk			STL
		WT51 UDup		20	Cu Zn
		U			
		Uspk			STL
		CCV6			
		CCB6			As2 78 Se high
		STD0			
		CCV7			
		CCB7			
		WT56 MB1	SWN	20	
		WT 30 J	REN	100	Mn Cu Cd

6-19-13

WS90 : 00921

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Tuesday, June 18, 2013 08:18:11
Sample Description:
Method File: C:\NexION Data\Method\Daily Performancenew.mth
Dataset File: C:\NexION Data\Dataset\Default\Daily Performance Check.2138
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	3781.5	3781.525	32.399	0.9	Standard
	Mg	24.0	22536.6	22536.634	144.073	0.6	Standard
	In	114.9	43469.4	43469.350	272.873	0.6	Standard
	Pb	208.0	20250.5	20250.509	137.362	0.7	Standard
	U	238.1	36296.8	36296.810	117.729	0.3	Standard
⌈	CeO	155.9	505.1	0.011	0.000	3.7	Standard
| >	Ce	139.9	46505.1	46505.143	372.278	0.8	Standard
⌊	Ce++	70.0	672.2	0.014	0.000	3.1	Standard
	Bkgd	220.0	0.0	0.033	0.075	223.6	Standard

Current Conditions File Data

Current Value	Description
1.07	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
900.00	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
1.07	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

Optimization Summary

SmartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

Start Time: 6/18/2013 8:14:20 AM
End Time: 6/18/2013 8:23:33 AM

Daily Performance Check - [Failed]
Obtained Intensity (Be 9.0122): 3781.52
Obtained Intensity (Mg 23.985): 22536.63
Obtained Intensity (In 114.904): 43469.35 - <Target not achieved>
Obtained Intensity (Pb 207.977): 20250.51
Obtained Intensity (U 238.05): 36296.81 - <Target not achieved>
Obtained Intensity (Bkgd 220): 0.03
Obtained Formula (CeO 155.9 / Ce 139.905): 0.011 (=505.08 / 46505.14)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.014 (=672.16 / 46505.14)

Torch Alignment - [Failed]
Error: optimum could not be found.

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 6/18/2013 8:24:04 AM
nd Time: 6/18/2013 8:26:54 AM

ebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 1.08
Obtained Intensity (In 114.904): 53942.02
Obtained Formula (CeO 155.9 / Ce 139.905): 0.017 (=935.05 / 54560.02)

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 6/18/2013 8:28:10 AM
nd Time: 6/18/2013 8:29:26 AM

orch Alignment - [Passed]

Vertical	Horizontal	Intensity
0.79 mm	-0.74 mm	60037.49

US90 : 00925

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

Start Time: 6/18/2013 8:29:48 AM
End Time: 6/18/2013 8:31:59 AM

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.693)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.701)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.690)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.700)

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 6/18/2013 8:34:12 AM
nd Time: 6/18/2013 8:38:22 AM

utoLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.997; Intercept = -11.11

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Tuesday, June 18, 2013 08:38:33
Sample Description:
Method File: C:\NexION Data\Method\Daily Performancenew.mth
Dataset File: C:\NexION Data\Dataset\Default\Daily Performance Check.2144
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	5289.9	5289.945	22.466	0.4	Standard
	Mg	24.0	31051.4	31051.412	188.352	0.6	Standard
	In	114.9	55711.3	55711.293	685.030	1.2	Standard
	Pb	208.0	24098.9	24098.930	176.961	0.7	Standard
	U	238.1	44929.3	44929.338	489.346	1.1	Standard
[	CeO	155.9	1428.0	0.026	0.001	4.3	Standard
| >	Ce	139.9	55563.8	55563.826	155.370	0.3	Standard
[	Ce++	70.0	1274.2	0.023	0.001	2.7	Standard
	Bkgd	220.0	0.0	0.033	0.075	223.6	Standard

Current Conditions File Data

Current Value	Description
1.08	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
900.00	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
1.08	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

Reduce neb to 1.07

4598 : 66928

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 6/18/2013 8:38:33 AM
nd Time: 6/18/2013 8:41:07 AM

aily Performance Check - [Failed]
Obtained Intensity (Be 9.0122): 5289.95
Obtained Intensity (Mg 23.985): 31051.41
Obtained Intensity (In 114.904): 55711.29
Obtained Intensity (Pb 207.977): 24098.93
Obtained Intensity (U 238.05): 44929.34
Obtained Intensity (Bkgd 220): 0.03
Obtained Formula (CeO 155.9 / Ce 139.905): 0.026 (=1427.99 / 55563.83) - <Target not achieved>
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.023 (=1274.16 / 55563.83)

SmartTune Wizard - Details

ptimization Details

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

ptimization Status

tart Time: 6/18/2013 8:42:13 AM

aily Performance Check
Optimization Settings:
Method: C:\NexIONData\Method\Daily Performancenew.mth.
Intensity Criterion: Be 9.0122 > 3000
Intensity Criterion: Mg 23.985 > 20000
Intensity Criterion: In 114.904 > 50000
Intensity Criterion: Pb 207.977 > 20000
Intensity Criterion: U 238.05 > 40000
Intensity Criterion: Bkgd 220 <= 5
Formula Criterion: CeO 155.9 / Ce 139.905 <= 0.025
Formula Criterion: Ce++ 69.9527 / Ce 139.905 <= 0.03

Optimization Results:
Initial Try
Obtained Intensity (Be 9.0122): 4699.93
Obtained Intensity (Mg 23.985): 28604.55
Obtained Intensity (In 114.904): 51501.73
Obtained Intensity (Pb 207.977): 23108.80
Obtained Intensity (U 238.05): 43265.16
Obtained Intensity (Bkgd 220): 0.07
Obtained Formula (CeO 155.9 / Ce 139.905): 0.017 (=911.78 / 53041.68)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.020 (=1055.80 / 53041.68)
Passed] Optimum value(s): N/A

nd Time: 6/18/2013 8:44:47 AM

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 09:10:01
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:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L				1192070	0
	Be	9		ug/L				8	18
	C	13		ug/L				82220	0
	Cl	37		ug/L				3880679	1
>	Sc	45		ug/L				911484	0
	V	51		ug/L				6527	2
	V-1	51		ug/L				44	9
	Cr	52		ug/L				19340	1
	Cr	53		ug/L				112	6
	Mn	55		ug/L				611	1
	Co	59		ug/L				132	14
>	Ge	72		ug/L				493057	0
	Ni	60		ug/L				43	13
	Ni	62		ug/L				50	8
	Cu	63		ug/L				82	7
	Cu	65		ug/L				48	2
	Zn	66		ug/L				317	1
	Zn	67		ug/L				50	26
	Zn	68		ug/L				347	3
	As	75		ug/L				63	23
	As-1	75		ug/L				9253	1
	Se	82		ug/L				0	4271
	Se	78		ug/L				9393	1
	Mo	98		ug/L				6	47
	Y	89		ug/L				311395	0
	Kr	83		ug/L				297	5
>	In	115		ug/L				657061	1
	Ag	107		ug/L				12	14
	Cd	111		ug/L				59	15
	Cd	114		ug/L				11	5
	Sb	121		ug/L				23	19
	Sb	123		ug/L				14	45
	Ba	135		ug/L				11	15
	Ba	137		ug/L				16	10
>	Tb	159		ug/L				775527	0
	Tl	205		ug/L				29	19
	Pb	208		ug/L				91	10
	Bi	209		ug/L				1757049	0
	Th	232		ug/L				25	32
	U	238		ug/L				2	132

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 09:14:09
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			1192070	1182181	1
[	Be	9	0.200	ug/L	0.001	0	8	748	0
	C	13		ug/L			82220	87241	2
	Cl	37		ug/L			3880679	3902923	0
[>	Sc	45		ug/L			911484	920944	1
[	V	51	0.200	ug/L	0.012	5	6527	10153	2
[	V-1	51	0.500	ug/L	0.007	1	44	3759	2
[	Cr	52	0.500	ug/L	0.027	5	19340	26712	0
[	Cr	53	0.500	ug/L	0.037	7	112	973	5
[	Mn	55	0.500	ug/L	0.012	2	611	11588	0
[	Co	59	0.200	ug/L	0.004	1	132	3309	2
[>	Ge	72		ug/L			493057	494060	0
[	Ni	60	0.500	ug/L	0.007	1	43	1699	1
[	Ni	62	0.500	ug/L	0.069	13	50	294	11
[	Cu	63	0.500	ug/L	0.007	1	82	4137	1
[	Cu	65	0.500	ug/L	0.010	2	48	1834	1
[	Zn	66	4.000	ug/L	0.046	1	317	8826	1
[	Zn	67	4.000	ug/L	0.089	2	50	1296	2
[	Zn	68	4.000	ug/L	0.083	2	347	5992	2
[	As	75	0.200	ug/L	0.018	8	63	412	7
[	As-1	75	0.200	ug/L	0.011	5	9253	9668	0
[	Se	82	0.500	ug/L	0.035	6	0	91	6
[	Se	78	0.500	ug/L	0.048	9	9393	9683	0
[	Mo	98	0.200	ug/L	0.005	2	6	766	2
	Y	89		ug/L			311395	312542	1
	Kr	83		ug/L			297	287	3
[>	In	115		ug/L			657061	660375	0
[	Ag	107	0.200	ug/L	0.006	3	12	1405	3
[	Cd	111	0.100	ug/L	0.005	5	59	379	5
[	Cd	114	0.100	ug/L	0.001	0	11	791	1
[	Sb	121	0.200	ug/L	0.009	4	23	1783	4
[	Sb	123	0.200	ug/L	0.004	1	14	1358	2
[	Ba	135	0.500	ug/L	0.003	0	11	1492	0
[	Ba	137	0.500	ug/L	0.007	1	16	2568	2
[>	Tb	159		ug/L			775527	782995	0
[	Tl	205	0.200	ug/L	0.007	3	29	5261	3
[	Pb	208	0.100	ug/L	0.001	1	91	3801	1
[	Bi	209		ug/L			1757049	1767713	1
[	Th	232	0.200	ug/L	0.008	4	25	5133	3
[	U	238	0.200	ug/L	0.004	2	2	6819	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 09:18:18
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			1192070	1218702	1
[	Be	9	10.000	ug/L	0.317	3	8	37866	2
	C	13		ug/L			82220	89068	1
	Cl	37		ug/L			3880679	3998056	1
[>	Sc	45		ug/L			911484	943496	1
[	V	51	10.000	ug/L	0.168	1	6527	191795	0
[	V-1	51	10.015	ug/L	0.155	1	44	186051	0
[	Cr	52	10.001	ug/L	0.101	1	19340	176222	0
[	Cr	53	10.000	ug/L	0.051	0	112	18076	0
[	Mn	55	10.000	ug/L	0.191	1	611	221546	1
[	Co	59	10.000	ug/L	0.259	2	132	161351	1
[>	Ge	72		ug/L			493057	508383	1
[	Ni	60	10.000	ug/L	0.152	1	43	33469	0
[	Ni	62	9.998	ug/L	0.234	2	50	4725	1
[	Cu	63	9.997	ug/L	0.036	0	82	74990	0
[	Cu	65	9.998	ug/L	0.135	1	48	33827	0
[	Zn	66	10.048	ug/L	0.191	1	317	22998	1
[	Zn	67	10.215	ug/L	0.038	0	50	3835	1
[	Zn	68	10.122	ug/L	0.047	0	347	16268	1
[	As	75	10.000	ug/L	0.147	1	63	16949	0
[	As-1	75	9.999	ug/L	0.180	1	9253	26505	0
[	Se	82	10.000	ug/L	0.242	2	0	1857	1
[	Se	78	9.996	ug/L	0.364	3	9393	14491	0
[	Mo	98	10.000	ug/L	0.260	2	6	37734	1
	Y	89		ug/L			311395	321328	0
	Kr	83		ug/L			297	317	0
[>	In	115		ug/L			657061	676285	0
[	Ag	107	10.000	ug/L	0.118	1	12	70684	1
[	Cd	111	10.000	ug/L	0.101	1	59	32490	1
[	Cd	114	10.000	ug/L	0.128	1	11	81659	0
[	Sb	121	10.000	ug/L	0.089	0	23	91289	0
[	Sb	123	10.000	ug/L	0.105	1	14	68676	0
[	Ba	135	10.000	ug/L	0.227	2	11	30176	1
[	Ba	137	10.000	ug/L	0.183	1	16	51761	1
[>	Tb	159		ug/L			775527	801700	2
[	Tl	205	10.000	ug/L	0.241	2	29	267907	0
[	Pb	208	10.000	ug/L	0.308	3	91	353229	1
[	Bi	209		ug/L			1757049	1803900	1
[	Th	232	10.001	ug/L	0.219	2	25	323920	0
[	U	238	10.000	ug/L	0.216	2	2	351512	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 09:22:39
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			1192070	1173123	1
	Be	**9**	**20.165**	ug/L	0.248	1	8	76011	1
	C	**13**		ug/L			82220	88302	0
	Cl	**37**		ug/L			3880679	3971886	0
>	**Sc**	**45**		ug/L			911484	919716	1
	V	**51**	**20.105**	ug/L	0.300	1	6527	377090	2
	V-1	**51**	**20.110**	ug/L	0.261	1	44	372367	1
	Cr	**52**	**20.110**	ug/L	0 072	0	19340	332605	0
	Cr	**53**	**20.107**	ug/L	0.687	3	112	36073	2
	Mn	**55**	**20.147**	ug/L	0.317	1	611	447654	1
	Co	**59**	**20.077**	ug/L	0.254	1	132	320628	1
>	**Ge**	**72**		ug/L			493057	504309	1
	Ni	**60**	**20.052**	ug/L	0.245	1	43	67231	1
	Ni	**62**	**20.054**	ug/L	0.509	2	50	9452	2
	Cu	**63**	**20.044**	ug/L	0.329	1	82	150370	2
	Cu	**65**	**19.961**	ug/L	0.210	1	48	66430	1
	Zn	**66**	**19.665**	ug/L	0.286	1	317	41941	0
	Zn	**67**	**19.757**	ug/L	0.521	2	50	7017	2
	Zn	**68**	**19.770**	ug/L	0.337	1	347	30004	1
	As	**75**	**20.022**	ug/L	0.100	0	63	33747	0
	As-1	**75**	**20.068**	ug/L	0.240	1	9253	43709	0
	Se	**82**	**19.964**	ug/L	0.099	0	0	3652	1
	Se	**78**	**20.126**	ug/L	0.399	1	9393	19455	0
	Mo	**98**	**20.033**	ug/L	0.285	1	6	75486	1
	Y	**89**		ug/L			311395	315813	1
	Kr	**83**		ug/L			297	316	1
>	**In**	**115**		ug/L			657061	661254	0
	Ag	**107**	**20.002**	ug/L	0.408	2	12	138267	1
	Cd	**111**	**20.055**	ug/L	0.277	1	59	64357	1
	Cd	**114**	**20.099**	ug/L	0.089	0	11	163722	0
	Sb	**121**	**20.061**	ug/L	0.355	1	23	181248	1
	Sb	**123**	**20.043**	ug/L	0.216	1	14	135759	0
	Ba	**135**	**20.070**	ug/L	0.045	0	11	60049	0
	Ba	**137**	**20.107**	ug/L	0.188	0	16	103974	0
>	**Tb**	**159**		ug/L			775527	792253	0
	Tl	**205**	**20.055**	ug/L	0.266	1	29	537037	0
	Pb	**208**	**20.039**	ug/L	0.176	0	91	705227	0
	Bi	**209**		ug/L			1757049	1759180	0
	Th	**232**	**20.161**	ug/L	0.410	2	25	666969	1
	U	**238**	**20.085**	ug/L	0.198	0	2	709871	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 09:27:11
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1206827	1
	Be	9	49.662	ug/L	1.545	3	8	186242	1
	C	13		ug/L			82220	79992	0
	Cl	37		ug/L			3880679	4069892	2
>	Sc	45		ug/L			911484	945800	1
	V	51	49.827	ug/L	1.409	2	6527	934622	1
	V-1	51	49.799	ug/L	1.083	2	44	929241	0
	Cr	52	49.759	ug/L	1.152	2	19340	797803	0
	Cr	53	49.656	ug/L	0.221	0	112	88431	1
	Mn	55	49.627	ug/L	1.164	2	611	1092118	1
	Co	59	49.703	ug/L	0.667	1	132	792472	1
>	Ge	72		ug/L			493057	504471	0
	Ni	60	49.825	ug/L	1.017	2	43	164169	1
	Ni	62	49.900	ug/L	0.698	1	50	23217	0
	Cu	63	49.815	ug/L	1.190	2	82	366903	1
	Cu	65	49.749	ug/L	0 545	1	48	161491	0
	Zn	66	49.565	ug/L	0.797	1	317	101004	0
	Zn	67	49.426	ug/L	0.736	1	50	16566	1
	Zn	68	49.701	ug/L	0.664	1	347	72812	0
	As	75	49.896	ug/L	0.673	1	63	83166	0
	As-1	75	49.907	ug/L	0.835	1	9253	93872	0
	Se	82	49.827	ug/L	0.515	1	0	8963	0
	Se	78	49.865	ug/L	1.013	2	9393	33694	0
	Mo	98	49.867	ug/L	0.585	1	6	185499	0
	Y	89		ug/L			311395	319171	0
	Kr	83		ug/L			297	329	2
>	In	115		ug/L			657061	667266	2
	Ag	107	49.859	ug/L	2.170	4	12	342747	2
	Cd	111	49.637	ug/L	0.895	1	59	154978	0
	Cd	114	49.702	ug/L	0.885	1	11	396639	1
	Sb	121	49.747	ug/L	0.974	1	23	442217	0
	Sb	123	49.739	ug/L	1.612	3	14	331141	1
	Ba	135	49.827	ug/L	1.083	2	11	147824	1
	Ba	137	49.862	ug/L	1.010	2	16	256541	0
>	Tb	159		ug/L			775527	809523	0
	Tl	205	49.649	ug/L	0.458	0	29	1312344	0
	Pb	208	49.657	ug/L	0.484	0	91	1726297	0
	Bi	209		ug/L			1757049	1736377	1
	Th	232	49.871	ug/L	0.563	1	25	1664417	0
	U	238	49.792	ug/L	0.181	0	2	1761704	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 09:32:23
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:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1175666	0
	Be	9	100.199	ug/L	2.560	2	8	368588	2
	C	13		ug/L			82220	86329	1
	Cl	37		ug/L			3880679	4022093	1
>	Sc	45		ug/L			911484	938803	1
	V	51	100.250	ug/L	1.722	1	6527	1875540	0
	V-1	51	100.145	ug/L	1.793	1	44	1863915	0
	Cr	52	100.097	ug/L	1.653	1	19340	1578035	0
	Cr	53	99.733	ug/L	2.085	2	112	174600	0
	Mn	55	102.005	ug/L	1.904	1	611	2387114	0
	Co	59	99.573	ug/L	1.751	1	132	1553494	0
>	Ge	72		ug/L			493057	504041	0
	Ni	60	99.378	ug/L	0.886	0	43	320488	0
	Ni	62	99.837	ug/L	0.439	0	50	46113	1
	Cu	63	99.228	ug/L	0.963	0	82	711867	0
	Cu	65	99.665	ug/L	1.450	1	48	319620	0
	Zn	66	98.975	ug/L	1.391	1	317	194598	0
	Zn	67	99.862	ug/L	1.528	1	50	33236	0
	Zn	68	98.903	ug/L	1.316	1	347	139375	1
	As	75	99.689	ug/L	0.328	0	63	164264	1
	As-1	75	99.675	ug/L	0.482	0	9253	176103	1
	Se	82	99.586	ug/L	0.853	0	0	17656	1
	Se	78	99.557	ug/L	1.179	1	9393	56947	0
	Mo	98	100.002	ug/L	0.208	0	6	371730	1
	Y	89		ug/L			311395	318611	1
	Kr	83		ug/L			297	388	4
>	In	115		ug/L			657061	655713	0
	Ag	107	100.083	ug/L	1.842	1	12	678359	1
	Cd	111	99.888	ug/L	0.736	0	59	305349	0
	Cd	114	99.592	ug/L	0.905	0	11	770651	0
	Sb	121	100.282	ug/L	1.818	1	23	884457	0
	Sb	123	100.302	ug/L	2.097	2	14	663101	1
	Ba	135	100.356	ug/L	1.192	1	11	296131	0
	Ba	137	100.295	ug/L	1.280	1	16	512225	0
>	Tb	159		ug/L			775527	807551	0
	Tl	205	102.063	ug/L	0.052	0	29	2890010	0
	Pb	208	99.670	ug/L	0.396	0	91	3418968	0
	Bi	209		ug/L			1757049	1702241	1
	Th	232	102.492	ug/L	0.334	0	25	3721487	0
	U	238	102.195	ug/L	1.006	0	2	3891760	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 09:37:56
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:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1202265	1
	Be	9	0.005	ug/L	0.001	28	8	27	18
	C	13		ug/L			82220	81994	2
	Cl	37		ug/L			3880679	3981749	1
>	Sc	45		ug/L			911484	931411	0
	V	51	0.000	ug/L	0.010	4233	6527	6673	2
	V-1	51	0.005	ug/L	0.000	5	44	142	4
	Cr	52	-0.015	ug/L	0.033	225	19340	19533	2
	Cr	53	0.002	ug/L	0.002	100	112	118	3
	Mn	55	0.002	ug/L	0.002	79	611	676	6
	Co	59	0.005	ug/L	0.000	4	132	220	1
>	Ge	72		ug/L			493057	502491	0
	Ni	60	0.003	ug/L	0.002	66	43	54	11
	Ni	62	0.024	ug/L	0.023	95	50	62	16
	Cu	63	0.009	ug/L	0.003	31	82	149	14
	Cu	65	0.006	ug/L	0.002	38	48	68	10
	Zn	66	0.001	ug/L	0.015	1147	317	325	9
	Zn	67	-0.005	ug/L	0.017	346	50	50	10
	Zn	68	0.008	ug/L	0.018	220	347	365	6
	As	75	0.018	ug/L	0.017	94	63	94	30
	As-1	75	0.036	ug/L	0.063	175	9253	9489	0
	Se	82	-0.012	ug/L	0.081	685	0	-1	743
	Se	78	0.090	ug/L	0.244	269	9393	9615	0
	Mo	98	0.030	ug/L	0.007	24	6	118	23
	Y	89		ug/L			311395	318518	0
	Kr	83		ug/L			297	325	8
>	In	115		ug/L			657061	666979	1
	Ag	107	0.010	ug/L	0.003	30	12	82	24
	Cd	111	0.010	ug/L	0.006	58	59	91	18
	Cd	114	0.009	ug/L	0.003	31	11	83	25
	Sb	121	0.205	ug/L	0.033	16	23	1863	14
	Sb	123	0.211	ug/L	0.034	16	14	1432	14
	Ba	135	0.004	ug/L	0.003	72	11	24	37
	Ba	137	0.006	ug/L	0.002	35	16	47	22
>	Tb	159		ug/L			775527	790997	1
	Tl	205	0.012	ug/L	0.002	16	29	352	14
	Pb	208	0.007	ug/L	0.001	8	91	325	5
	Bi	209		ug/L			1757049	1784329	0
	Th	232	0.135	ug/L	0.006	4	25	4809	4
	U	238	0.008	ug/L	0.001	9	2	298	8

Sample Information

Sample Date/Time: Tuesday, June 18, 2013 09:32:23
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\061813.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**	0.020	0.20	10	20	50	100
V-1	51	**1.0000**	0.020	0.50	10	20	50	100
Cr	52	**1.0000**	0.017	0.50	10	20	50	100
Cr	53	**1.0000**	0.002	0.50	10	20	50	100
Mn	55	**0.9993**	0.025	0.50	10	20	50	100
Co	59	**0.9999**	0.017	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	**0.9999**	0.014	0.50	10	20	50	100
Cu	65	**1.0000**	0.006	0.50	10	20	50	100
Zn	66	**0.9998**	0.004	4.00	10	20	50	100
Zn	67	**0.9999**	0.001	4.00	10	20	50	100
Zn	68	**0.9998**	0.003	4.00	10	20	50	100
As	75	**1.0000**	0.003	0.20	10	20	50	100
As-1	75	**1.0000**	0.003	0.20	10	20	50	100
Se	82	**0.9999**	0.000	0.50	10	20	50	100
Se	78	**1.0000**	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	**1.0000**	0.010	0.20	10	20	50	100
Cd	111	**1.0000**	0.005	0.10	10	20	50	100
Cd	114	**0.9999**	0.012	0.10	10	20	50	100
Sb	121	**1.0000**	0.013	0.20	10	20	50	100
Sb	123	**1.0000**	0.010	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	**0.9993**	0.035	0.20	10	20	50	100
Pb	208	**1.0000**	0.042	0.10	10	20	50	100
Bi	209							
Th	232	**0.9990**	0.045	0.20	10	20	50	100
U	238	**0.9992**	0.047	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 09:44:48
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1187879	0
	Be	9	50.903	ug/L	0.143	0	8	189208	1
	C	13		ug/L			82220	87267	1
	Cl	37		ug/L			3880679	4016046	0
>	Sc	45		ug/L			911484	930111	0
	V	51	51.448	ug/L	0.646	1	6527	956963	0
	V-1	51	51.687	ug/L	0.467	0	44	953257	0
	Cr	52	51.302	ug/L	1.073	2	19340	810973	1
	Cr	53	52.111	ug/L	0.274	0	112	90454	0
	Mn	55	48.330	ug/L	0.529	1	611	1121091	1
	Co	59	52.407	ug/L	0.507	0	132	810266	1
>	Ge	72		ug/L			493057	501982	0
	Ni	60	52.169	ug/L	0.359	0	43	167580	0
	Ni	62	51.559	ug/L	0.929	1	50	23741	1
	Cu	63	51.663	ug/L	1.135	2	82	369193	2
	Cu	65	52.283	ug/L	0.145	0	48	167022	0
	Zn	66	51.407	ug/L	0.784	1	317	100822	1
	Zn	67	51.617	ug/L	0.159	0	50	17135	0
	Zn	68	51.559	ug/L	0.403	0	347	72530	0
	As	75	50.990	ug/L	0.149	0	63	83706	0
	As-1	75	51.167	ug/L	0.125	0	9253	94615	0
	Se	82	79.847	ug/L	0.859	1	0	13933	0
	Se	78	78.076	ug/L	0.937	1	9393	46538	0
	Mo	98	50.561	ug/L	0.511	1	6	187176	0
	Y	89		ug/L			311395	320954	0
	Kr	83		ug/L			297	351	1
>	In	115		ug/L			657061	671419	1
	Ag	107	49.498	ug/L	1.085	2	12	343469	0
	Cd	111	48.889	ug/L	0.920	1	59	153032	0
	Cd	114	49.012	ug/L	0.682	1	11	388307	0
	Sb	121	50.732	ug/L	1.125	2	23	458108	0
	Sb	123	50.656	ug/L	0.770	1	14	342902	0
	Ba	135	49.987	ug/L	0.745	1	11	151028	0
	Ba	137	50.158	ug/L	1.318	2	16	262255	1
>	Tb	159		ug/L			775527	810820	0
	Tl	205	46.583	ug/L	0.596	1	29	1324297	0
	Pb	208	51.131	ug/L	0.544	1	91	1760969	0
	Bi	209		ug/L			1757049	1754934	0
	Th	232	46.127	ug/L	0.314	0	25	1681615	0
	U	238	46.338	ug/L	0.493	1	2	1771700	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 09:51:40
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1192070	1183009	3
[	Be	9	0.004	ug/L	0.001	21	8	23	15
	C	13		ug/L			82220	80175	0
	Cl	37		ug/L			3880679	3887670	1
[>	Sc	45		ug/L			911484	920724	1
|	V	51	-0.002	ug/L	0.006	365	6527	6564	0
|	V-1	51	0.002	ug/L	0.001	23	44	89	11
|	Cr	52	-0.015	ug/L	0.020	127	19340	19297	1
|	Cr	53	-0.002	ug/L	0.004	211	112	109	6
|	Mn	55	0.000	ug/L	0.002	1018	611	621	5
[	Co	59	0.002	ug/L	0.001	45	132	164	6
[>	Ge	72		ug/L			493057	502492	1
|	Ni	60	-0.002	ug/L	0.003	191	43	39	27
|	Ni	62	0.021	ug/L	0.005	24	50	61	4
|	Cu	63	0.002	ug/L	0.001	46	82	97	6
|	Cu	65	-0.002	ug/L	0.002	87	48	43	10
|	Zn	66	0.005	ug/L	0.004	80	317	333	2
|	Zn	67	-0.023	ug/L	0.025	107	50	44	17
|	Zn	68	0.006	ug/L	0.031	554	347	362	12
|	As	75	0.014	ug/L	0.021	157	63	87	41
|	As-1	75	-0.037	ug/L	0.083	224	9253	9367	0
|	Se	82	-0.010	ug/L	0.011	110	0	-1	119
|	Se	78	-0.171	ug/L	0.288	168	9393	9490	0
[	Mo	98	0.012	ug/L	0.002	17	6	50	15
	Y	89		ug/L			311395	311797	1
	Kr	83		ug/L			297	311	4
[>	In	115		ug/L			657061	660314	0
|	Ag	107	0.004	ug/L	0.001	33	12	36	22
|	Cd	111	0.002	ug/L	0.001	57	59	64	4
|	Cd	114	0.003	ug/L	0.001	34	11	34	22
|	Sb	121	0.046	ug/L	0.011	23	23	431	22
|	Sb	123	0.048	ug/L	0.012	25	14	333	25
|	Ba	135	0.001	ug/L	0.001	178	11	13	26
[	Ba	137	0.003	ug/L	0.000	4	16	34	2
[>	Tb	159		ug/L			775527	781055	0
|	Tl	205	0.005	ug/L	0.000	0	29	164	1
|	Pb	208	0.003	ug/L	0.000	3	91	191	2
|	Bi	209		ug/L			1757049	1784663	0
|	Th	232	0.063	ug/L	0.003	5	25	2238	5
[	U	238	0.003	ug/L	0.001	20	2	125	19

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 09:55:48
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1196080	1
	Be	9	49.689	ug/L	0.162	0	8	185967	0
	C	13		ug/L			82220	78023	1
	Cl	37		ug/L			3880679	4069358	0
>	Sc	45		ug/L			911484	931803	0
	V	51	49.950	ug/L	0.226	0	6527	931009	0
	V-1	51	50.114	ug/L	0.304	0	44	925946	1
	Cr	52	49.768	ug/L	0.437	0	19340	788753	0
	Cr	53	50.322	ug/L	0.468	0	112	87510	0
	Mn	55	46.856	ug/L	0.257	0	611	1088837	0
	Co	59	50.371	ug/L	0.422	0	132	780210	1
>	Ge	72		ug/L			493057	498081	0
	Ni	60	51.358	ug/L	0.469	0	43	163697	1
	Ni	62	49.866	ug/L	1.305	2	50	22783	2
	Cu	63	51.707	ug/L	0.766	1	82	366596	0
	Cu	65	50.525	ug/L	0.679	1	48	160150	1
	Zn	66	52.183	ug/L	0.467	0	317	101540	0
	Zn	67	50.523	ug/L	0.435	0	50	16642	0
	Zn	68	51.735	ug/L	0.756	1	347	72205	0
	As	75	50.957	ug/L	0.567	1	63	82998	0
	As-1	75	50.986	ug/L	0.816	1	9253	93574	0
	Se	82	51.607	ug/L	0.441	0	0	8935	0
	Se	78	51.114	ug/L	1.241	2	9393	33504	0
	Mo	98	50.908	ug/L	0.506	0	6	186988	0
	Y	89		ug/L			311395	318168	0
	Kr	83		ug/L			297	341	2
>	In	115		ug/L			657061	658930	1
	Ag	107	49.664	ug/L	0.722	1	12	338248	0
	Cd	111	51.010	ug/L	0.500	0	59	156738	2
	Cd	114	50.664	ug/L	0.969	1	11	393918	0
	Sb	121	50.153	ug/L	0.346	0	23	444539	0
	Sb	123	49.976	ug/L	0.989	1	14	332004	0
	Ba	135	49.250	ug/L	1.084	2	11	146027	0
	Ba	137	50.457	ug/L	0.791	1	16	258949	0
>	Tb	159		ug/L			775527	796241	0
	Tl	205	47.322	ug/L	0.345	0	29	1321189	0
	Pb	208	50.783	ug/L	0.279	0	91	1717605	0
	Bi	209		ug/L			1757049	1738979	1
	Th	232	46.717	ug/L	0.371	0	25	1672510	0
	U	238	47.307	ug/L	0.092	0	2	1776286	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 10:02:20
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			1192070	1196469	2
	Be	**9**	**0.004**	ug/L	0.001	19	8	22	14
	C	**13**		ug/L			82220	80488	2
	Cl	**37**		ug/L			3880679	3918150	2
>	**Sc**	**45**		ug/L			911484	924737	1
	V	**51**	**-0.006**	ug/L	0.006	106	6527	6514	1
	V-1	**51**	**0.003**	ug/L	0.000	15	44	98	9
	Cr	**52**	**-0.032**	ug/L	0.024	74	19340	19134	1
	Cr	**53**	**-0.002**	ug/L	0.007	348	112	110	11
	Mn	**55**	**-0.000**	ug/L	0.002	4608	611	618	6
	Co	**59**	**0.003**	ug/L	0.001	16	132	184	4
>	**Ge**	**72**		ug/L			493057	505353	0
	Ni	**60**	**-0.000**	ug/L	0.003	6906	43	44	18
	Ni	**62**	**0.023**	ug/L	0.015	65	50	62	11
	Cu	**63**	**0.003**	ug/L	0.002	55	82	108	11
	Cu	**65**	**0.001**	ug/L	0.000	17	48	53	1
	Zn	**66**	**0.150**	ug/L	0.012	7	317	620	4
	Zn	**67**	**0.114**	ug/L	0.022	19	50	90	8
	Zn	**68**	**0.154**	ug/L	0.018	11	347	573	4
	As	**75**	**0.024**	ug/L	0.024	100	63	104	38
	As-1	**75**	**-0.048**	ug/L	0.050	103	9253	9404	0
	Se	**82**	**-0.001**	ug/L	0.043	3973	0	0	10361
	Se	**78**	**-0.203**	ug/L	0.166	82	9393	9530	0
	Mo	**98**	**0.015**	ug/L	0.005	31	6	63	28
	Y	**89**		ug/L			311395	313626	0
	Kr	**83**		ug/L			297	333	3
>	**In**	**115**		ug/L			657061	661205	0
	Ag	**107**	**0.008**	ug/L	0.005	56	12	67	46
	Cd	**111**	**0.007**	ug/L	0.010	134	59	82	37
	Cd	**114**	**0.006**	ug/L	0.004	64	11	57	52
	Sb	**121**	**0.106**	ug/L	0.023	22	23	969	21
	Sb	**123**	**0.102**	ug/L	0.022	21	14	696	21
	Ba	**135**	**0.004**	ug/L	0.003	79	11	23	42
	Ba	**137**	**0.004**	ug/L	0.001	30	16	36	16
>	**Tb**	**159**		ug/L			775527	792755	0
	Tl	**205**	**0.007**	ug/L	0.002	28	29	218	24
	Pb	**208**	**0.005**	ug/L	0.001	22	91	245	13
	Bi	**209**		ug/L			1757049	1799965	0
	Th	**232**	**0.088**	ug/L	0.003	3	25	3156	3
	U	**238**	**0.005**	ug/L	0.001	22	2	171	21

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 10:06:28
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens RSD
[>	Li	6		ug/L			1192070	1189326	1
[	Be	9	0.206	ug/L	0.016	7	8	772	6
	C	13		ug/L			82220	82597	1
	Cl	37		ug/L			3880679	3834932	2
[>	Sc	45		ug/L			911484	939319	1
[	V	51	0.183	ug/L	0.010	5	6527	10147	0
[	V-1	51	0.200	ug/L	0.005	2	44	3769	1
[	Cr	52	0.462	ug/L	0.033	7	19340	27119	1
[	Cr	53	0.520	ug/L	0.022	4	112	1025	3
[	Mn	55	0.455	ug/L	0.013	2	611	11276	2
[	Co	59	0.208	ug/L	0.003	1	132	3379	2
[>	Ge	72		ug/L			493057	499181	2
[	Ni	60	0.513	ug/L	0.018	3	43	1683	3
[	Ni	62	0.547	ug/L	0.046	8	50	301	6
[	Cu	63	0.515	ug/L	0.009	1	82	3743	2
[	Cu	65	0.510	ug/L	0.012	2	48	1667	0
[	Zn	66	4.215	ug/L	0.153	3	317	8510	1
[	Zn	67	3.722	ug/L	0.116	3	50	1276	2
[	Zn	68	4.017	ug/L	0.072	1	347	5942	1
[	As	75	0.207	ug/L	0.018	8	63	402	9
[	As-1	75	0.236	ug/L	0.094	39	9253	9757	0
[	Se	82	0.467	ug/L	0.043	9	0	81	7
[	Se	78	0.619	ug/L	0 421	67	9393	9798	0
[	Mo	98	0.211	ug/L	0.011	5	6	785	6
	Y	89		ug/L			311395	314259	2
	Kr	83		ug/L			297	340	6
[>	In	115		ug/L			657061	662175	1
[	Ag	107	0.209	ug/L	0.006	2	12	1442	1
[	Cd	111	0.109	ug/L	0.001	0	59	396	2
[	Cd	114	0.102	ug/L	0.004	4	11	811	2
[	Sb	121	0.239	ug/L	0.005	1	23	2155	2
[	Sb	123	0.230	ug/L	0.009	3	14	1549	5
[	Ba	135	0.491	ug/L	0.012	2	11	1473	3
[	Ba	137	0.501	ug/L	0.005	1	16	2599	1
[>	Tb	159		ug/L			775527	787327	2
[	Tl	205	0.198	ug/L	0.004	1	29	5495	0
[	Pb	208	0.107	ug/L	0.001	1	91	3672	2
[	Bi	209		ug/L			1757049	1800097	0
[	Th	232	0.188	ug/L	0.006	2	25	6685	1
[	U	238	0.191	ug/L	0.005	2	2	7072	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 10:10:35
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			1192070	1189728	3
	Be	9	0.001	ug/L	0.001	76	8	12	28
	C	13		ug/L			82220	154730	1
	Cl	37		ug/L			3880679	10602623	4
>	Sc	45		ug/L			911484	940693	1
	V	51	0.150	ug/L	0.012	7	6527	9533	3
	V-1	51	0.720	ug/L	0.033	4	44	13480	5
	Cr	52	0.592	ug/L	0.012	1	19340	29192	1
	Cr	53	2.534	ug/L	0.094	3	112	4560	4
	Mn	55	0.082	ug/L	0.003	4	611	2559	1
	Co	59	0.020	ug/L	0.002	11	132	445	8
>	Ge	72		ug/L			493057	492585	2
	Ni	60	0.324	ug/L	0.005	1	43	1063	1
	Ni	62	4.901	ug/L	0.476	9	50	2260	10
	Cu	63	1.044	ug/L	0.052	5	82	7402	7
	Cu	65	0.384	ug/L	0.006	1	48	1250	3
	Zn	66	1.161	ug/L	0.036	3	317	2543	3
	Zn	67	4.974	ug/L	0.116	2	50	1665	2
	Zn	68	0.613	ug/L	0.002	0	347	1189	2
	As	75	0.056	ug/L	0.008	13	63	153	6
	As-1	75	0.385	ug/L	0.083	21	9253	9871	0
	Se	82	-0.333	ug/L	0.065	19	0	-56	19
	Se	78	1.258	ug/L	0.288	22	9393	9966	0
	Mo	98	421.112	ug/L	3.284	0	6	1529699	2
	Y	89		ug/L			311395	315512	2
	Kr	83		ug/L			297	540	7
>	In	115		ug/L			657061	652597	2
	Ag	107	0.016	ug/L	0.001	3	12	119	5
	Cd	111	0.199	ug/L	0.024	11	59	662	8
	Cd	114	0.308	ug/L	0.006	2	11	2381	0
	Sb	121	0.082	ug/L	0.005	6	23	741	8
	Sb	123	0.082	ug/L	0.006	7	14	557	9
	Ba	135	0.048	ug/L	0.003	6	11	151	3
	Ba	137	0.045	ug/L	0.002	4	16	246	6
>	Tb	159		ug/L			775527	805316	0
	Tl	205	0.027	ug/L	0.001	3	29	787	4
	Pb	208	0.038	ug/L	0.001	3	91	1402	4
	Bi	209		ug/L			1757049	1641092	1
	Th	232	0.069	ug/L	0.015	20	25	2539	19
	U	238	0.001	ug/L	0.000	8	2	45	8

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 10:17:07
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1192070	1216381	1
	Be	9	0.001	ug/L	0.000	31	8	12	9
	C	13		ug/L			82220	163704	2
	Cl	37		ug/L			3880679	10995165	1
>	Sc	45		ug/L			911484	971478	1
	V	51	0.043	ug/L	0.148	342	6527	7764	35
	V-1	51	0.739	ug/L	0.035	4	44	14280	5
	Cr	52	20.454	ug/L	0.282	1	19340	350089	0
	Cr	53	22.930	ug/L	0.337	1	112	41643	2
	Mn	55	18.682	ug/L	0.239	1	611	453051	2
	Co	59	19.736	ug/L	0.261	1	132	318799	2
>	Ge	72		ug/L			493057	507447	2
	Ni	60	20.523	ug/L	0.274	1	43	66682	3
	Ni	62	24.519	ug/L	0.290	1	50	11441	2
	Cu	63	20.662	ug/L	0.170	0	82	149298	1
	Cu	65	20.272	ug/L	0.188	0	48	65486	1
	Zn	66	20.095	ug/L	0.281	1	317	40032	0
	Zn	67	21.734	ug/L	0.082	0	50	7323	1
	Zn	68	18.750	ug/L	0.202	1	347	26887	1
	As	75	20.016	ug/L	0.325	1	63	33249	0
	As-1	75	20.057	ug/L	0.325	1	9253	43275	1
	Se	82	-0.235	ug/L	0.056	23	0	-41	24
	Se	78	1.323	ug/L	0.072	5	9393	10300	1
	Mo	98	420.087	ug/L	1.309	0	6	1572110	2
	Y	89		ug/L			311395	324969	2
	Kr	83		ug/L			297	523	2
>	In	115		ug/L			657061	670430	1
	Ag	107	19.193	ug/L	0.251	1	12	133035	2
	Cd	111	19.862	ug/L	0.279	1	59	62128	1
	Cd	114	20.102	ug/L	0.220	1	11	159060	2
	Sb	121	0.075	ug/L	0.005	6	23	697	7
	Sb	123	0.077	ug/L	0.001	1	14	532	2
	Ba	135	0.049	ug/L	0.005	9	11	160	9
	Ba	137	0.045	ug/L	0.003	6	16	249	7
>	Tb	159		ug/L			775527	825626	2
	Tl	205	0.027	ug/L	0.000	1	29	808	2
	Pb	208	0.037	ug/L	0.003	9	91	1394	6
	Bi	209		ug/L			1757049	1674120	1
	Th	232	0.026	ug/L	0.001	5	25	982	4
	U	238	0.000	ug/L	0.000	12	2	21	9

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 10:23:58
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			1192070	1187256	0
	Be	**9**	**192.864**	ug/L	0.712	0	8	716467	0
	C	**13**		ug/L			82220	86666	1
	Cl	**37**		ug/L			3880679	4239103	2
>	**Sc**	**45**		ug/L			911484	946615	0
	V	**51**	**219.568**	ug/L	3.714	1	6527	4134324	1
	V-1	**51**	**215.819**	ug/L	2.906	1	44	4050767	1
	Cr	**52**	**212.679**	ug/L	4.801	2	19340	3358417	1
	Cr	**53**	**199.879**	ug/L	0.831	0	112	352779	0
	Mn	**55**	**201.642**	ug/L	1.562	0	611	4758317	1
	Co	**59**	**213.736**	ug/L	1.249	0	132	3362777	1
>	**Ge**	**72**		ug/L			493057	496769	1
	Ni	**60**	**200.003**	ug/L	2.602	1	43	635655	1
	Ni	**62**	**200.370**	ug/L	2.177	1	50	91155	0
	Cu	**63**	**197.959**	ug/L	2.784	1	82	1399546	1
	Cu	**65**	**198.775**	ug/L	4.244	2	48	628148	0
	Zn	**66**	**196.231**	ug/L	3.800	1	317	379921	1
	Zn	**67**	**191.438**	ug/L	1.468	0	50	62758	2
	Zn	**68**	**191.906**	ug/L	4.675	2	347	266144	1
	As	**75**	**200.604**	ug/L	2.602	1	63	325676	0
	As-1	**75**	**200.171**	ug/L	2.315	1	9253	339121	0
	Se	**82**	**198.201**	ug/L	2.564	1	0	34224	0
	Se	**78**	**194.740**	ug/L	1.928	0	9393	100724	0
	Mo	**98**	**207.479**	ug/L	2.761	1	6	760007	0
	Y	**89**		ug/L			311395	320506	1
	Kr	**83**		ug/L			297	510	6
>	**In**	**115**		ug/L			657061	660143	1
	Ag	**107**	**192.842**	ug/L	2.090	1	12	1315783	0
	Cd	**111**	**196.573**	ug/L	3.027	1	59	604858	1
	Cd	**114**	**196.579**	ug/L	1.135	0	11	1531471	1
	Sb	**121**	**200.678**	ug/L	3.021	1	23	1781737	0
	Sb	**123**	**199.648**	ug/L	3.372	1	14	1328681	0
	Ba	**135**	**201.045**	ug/L	4.216	2	11	597138	0
	Ba	**137**	**202.814**	ug/L	2.701	1	16	1042699	0
>	**Tb**	**159**		ug/L			775527	811763	0
	Tl	**205**	**201.109**	ug/L	1.820	0	29	5723977	0
	Pb	**208**	**207.498**	ug/L	2.018	0	91	7154403	0
	Bi	**209**		ug/L			1757049	1645483	1
	Th	**232**	**202.634**	ug/L	1.708	0	25	7395726	0
	U	**238**	**203.120**	ug/L	2.144	1	2	7775026	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 10:30:49
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1196716	1
	Be	9	282.389	ug/L	7.783	2	8	1057180	1
	C	13		ug/L			82220	90001	2
	Cl	37		ug/L			3880679	4249364	1
>	Sc	45		ug/L			911484	962699	0
	V	51	321.101	ug/L	2.519	0	6527	6145972	0
	V-1	51	316.139	ug/L	2.975	0	44	6034672	0
	Cr	52	309.074	ug/L	2.598	0	19340	4954648	0
	Cr	53	292.116	ug/L	0.814	0	112	524282	0
	Mn	55	291.692	ug/L	5.245	1	611	6999776	1
	Co	59	311.105	ug/L	4.922	1	132	4977793	1
>	Ge	72		ug/L			493057	490255	0
	Ni	60	294.132	ug/L	2.344	0	43	922592	1
	Ni	62	298.176	ug/L	3.588	1	50	133860	1
	Cu	63	324.117	ug/L	3.969	1	82	2261603	1
	Cu	65	288.693	ug/L	4.060	1	48	900533	1
	Zn	66	280.604	ug/L	2.749	0	317	536075	0
	Zn	67	278.833	ug/L	2.067	0	50	90183	1
	Zn	68	275.204	ug/L	1.624	0	347	376604	1
	As	75	293.717	ug/L	0.718	0	63	470612	0
	As-1	75	294.336	ug/L	0.621	0	9253	487834	0
	Se	82	287.024	ug/L	2.456	0	0	48918	0
	Se	78	286.608	ug/L	2.077	0	9393	141900	0
	Mo	98	314.960	ug/L	2.536	0	6	1138737	1
	Y	89		ug/L			311395	324221	1
	Kr	83		ug/L			297	631	8
>	In	115		ug/L			657061	666056	1
	Ag	107	277.558	ug/L	4.047	1	12	1911191	2
	Cd	111	279.211	ug/L	3.877	1	59	866822	0
	Cd	114	311.908	ug/L	5.040	1	11	2451458	0
	Sb	121	318.206	ug/L	4.199	1	23	2850715	0
	Sb	123	289.411	ug/L	1.217	0	14	1943629	0
	Ba	135	294.731	ug/L	2.696	0	11	883441	1
	Ba	137	296.985	ug/L	5.808	1	16	1540610	1
>	Tb	159		ug/L			775527	825025	0
	Tl	205	291.550	ug/L	3.818	1	29	8433869	1
	Pb	208	314.250	ug/L	2.671	0	91	11012525	0
	Bi	209		ug/L			1757049	1637554	0
	Th	232	295.875	ug/L	4.307	1	25	10975426	1
	U	238	295.004	ug/L	3.292	1	2	11477033	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 10:37:41
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1230089	2
	Be	9	0.007	ug/L	0.001	20	8	37	16
	C	13		ug/L			82220	81797	2
	Cl	37		ug/L			3880679	4105953	1
>	Sc	45		ug/L			911484	968304	1
	V	51	-0.027	ug/L	0.008	28	6527	6413	1
	V-1	51	0.014	ug/L	0.001	5	44	324	5
	Cr	52	-0.102	ug/L	0.032	30	19340	18905	2
	Cr	53	0.039	ug/L	0.004	9	112	189	1
	Mn	55	0.013	ug/L	0.004	30	611	962	8
	Co	59	0.007	ug/L	0.003	42	132	254	17
>	Ge	72		ug/L			493057	516366	1
	Ni	60	0.008	ug/L	0.001	9	43	73	2
	Ni	62	0.689	ug/L	0.361	52	50	380	46
	Cu	63	0.080	ug/L	0.020	24	82	676	23
	Cu	65	0.048	ug/L	0.007	15	48	206	11
	Zn	66	0.849	ug/L	0.028	3	317	2039	1
	Zn	67	0.737	ug/L	0.071	9	50	304	8
	Zn	68	0.822	ug/L	0.013	1	347	1547	1
	As	75	0.022	ug/L	0.015	67	63	104	23
	As-1	75	-0.054	ug/L	0.070	129	9253	9597	0
	Se	82	0.024	ug/L	0.008	35	0	4	33
	Se	78	-0.220	ug/L	0.218	99	9393	9729	0
	Mo	98	0.039	ug/L	0.001	1	6	153	2
	Y	89		ug/L			311395	327446	1
	Kr	83		ug/L			297	325	6
>	In	115		ug/L			657061	698015	2
	Ag	107	0.013	ug/L	0.005	39	12	104	37
	Cd	111	0.012	ug/L	0.003	22	59	101	10
	Cd	114	0.011	ug/L	0.003	27	11	103	27
	Sb	121	0.387	ug/L	0.090	23	23	3645	20
	Sb	123	0.386	ug/L	0.093	24	14	2720	21
	Ba	135	0.008	ug/L	0.003	32	11	38	23
	Ba	137	0.009	ug/L	0.000	4	16	67	3
>	Tb	159		ug/L			775527	825059	0
	Tl	205	0.024	ug/L	0.001	5	29	733	5
	Pb	208	0.010	ug/L	0.002	19	91	446	15
	Bi	209		ug/L			1757049	1863244	0
	Th	232	0.111	ug/L	0.002	1	25	4132	1
	U	238	0.008	ug/L	0.001	9	2	310	9

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 10:43:44
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1192070	1246662	0
[	Be	9	48.504	ug/L	0.693	1	8	189216	1
	C	13		ug/L			82220	80737	1
	Cl	37		ug/L			3880679	4171044	0
[>	Sc	45		ug/L			911484	971717	0
[	V	51	48.084	ug/L	0.605	1	6527	934833	0
[	V-1	51	48.287	ug/L	0.975	2	44	930320	1
[	Cr	52	47.954	ug/L	0.506	1	19340	793386	1
[	Cr	53	48.640	ug/L	1.181	2	112	88209	2
[	Mn	55	45.140	ug/L	0.541	1	611	1093992	1
[	Co	59	48.683	ug/L	0.713	1	132	786365	1
[>	Ge	72		ug/L			493057	513769	1
[	Ni	60	49.308	ug/L	0.941	1	43	162081	0
[	Ni	62	48.104	ug/L	1.169	2	50	22669	0
[	Cu	63	49.231	ug/L	0.010	0	82	360067	1
[	Cu	65	48.813	ug/L	1.093	2	48	159562	0
[	Zn	66	50.605	ug/L	0.642	1	317	101573	0
[	Zn	67	50.126	ug/L	1.519	3	50	17028	1
[	Zn	68	50.521	ug/L	0.962	1	347	72734	1
[	As	75	49.601	ug/L	1.085	2	63	83320	0
[	As-1	75	49.388	ug/L	1.250	2	9253	93783	0
[	Se	82	50.638	ug/L	1.285	2	0	9041	0
[	Se	78	49.279	ug/L	1.816	3	9393	33663	0
[	Mo	98	48.930	ug/L	1.109	2	6	185349	0
	Y	89		ug/L			311395	324599	0
	Kr	83		ug/L			297	345	3
[>	In	115		ug/L			657061	687329	1
[	Ag	107	48.139	ug/L	0.713	1	12	341974	0
[	Cd	111	49.019	ug/L	1.476	3	59	157052	1
[	Cd	114	49.374	ug/L	0.785	1	11	400433	0
[	Sb	121	49.228	ug/L	1.432	2	23	455004	1
[	Sb	123	48.634	ug/L	0.668	1	14	337013	0
[	Ba	135	48.400	ug/L	1.518	3	11	149663	1
[	Ba	137	48.154	ug/L	1.311	2	16	257737	1
[>	Tb	159		ug/L			775527	835694	0
[	Tl	205	45.275	ug/L	0.607	1	29	1326628	0
[	Pb	208	49.020	ug/L	0.219	0	91	1740163	0
[	Bi	209		ug/L			1757049	1802730	0
[	Th	232	45.127	ug/L	0.256	0	25	1695703	0
[	U	238	45.350	ug/L	0.531	1	2	1787134	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 10:50:36
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1192070	1205892	1
	Be	9	0.004	ug/L	0.002	48	8	24	32
	C	13		ug/L			82220	84204	0
	Cl	37		ug/L			3880679	3970477	1
>	Sc	45		ug/L			911484	935905	0
	V	51	-0.015	ug/L	0.003	17	6527	6425	0
	V-1	51	0.009	ug/L	0.001	9	44	208	8
	Cr	52	-0.064	ug/L	0.016	24	19340	18867	0
	Cr	53	0.016	ug/L	0.007	44	112	143	8
	Mn	55	0.005	ug/L	0.001	18	611	748	3
	Co	59	0.001	ug/L	0.002	115	132	157	16
>	Ge	72		ug/L			493057	503013	2
	Ni	60	0.001	ug/L	0.001	229	43	46	10
	Ni	62	0.049	ug/L	0.013	27	50	74	7
	Cu	63	0.019	ug/L	0.003	15	82	219	9
	Cu	65	0.012	ug/L	0.004	29	48	87	14
	Zn	66	0.220	ug/L	0.007	3	317	754	3
	Zn	67	0.170	ug/L	0.031	18	50	108	11
	Zn	68	0.202	ug/L	0.023	11	347	637	2
	As	75	0.017	ug/L	0.013	75	63	93	24
	As-1	75	-0.033	ug/L	0.142	432	9253	9381	0
	Se	82	-0.026	ug/L	0.032	122	0	-4	125
	Se	78	-0.150	ug/L	0.532	355	9393	9507	0
	Mo	98	0.017	ug/L	0.003	19	6	70	20
	Y	89		ug/L			311395	318396	1
	Kr	83		ug/L			297	331	3
>	In	115		ug/L			657061	677940	0
	Ag	107	0.005	ug/L	0.002	28	12	49	20
	Cd	111	0.005	ug/L	0.004	91	59	75	18
	Cd	114	0.005	ug/L	0.002	48	11	49	36
	Sb	121	0.139	ug/L	0.034	24	23	1288	24
	Sb	123	0.138	ug/L	0.034	24	14	956	24
	Ba	135	0.011	ug/L	0.003	22	11	45	16
	Ba	137	0.013	ug/L	0.002	14	16	87	11
>	Tb	159		ug/L			775527	802989	0
	Tl	205	0.009	ug/L	0.002	23	29	284	21
	Pb	208	0.007	ug/L	0.000	3	91	331	2
	Bi	209		ug/L			1757049	1823712	1
	Th	232	0.078	ug/L	0.006	8	25	2853	8
	U	238	0.003	ug/L	0.001	21	2	123	20

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R MB1 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 10:58:02
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			1192070	1223915	0
	Be	9	0.003	ug/L	0.002	54	8	20	31
	C	13		ug/L			82220	88414	1
	Cl	37		ug/L			3880679	3958397	2
>	Sc	45		ug/L			911484	944847	1
	V	51	-0.001	ug/L	0.005	593	6527	6752	2
	V-1	51	0.008	ug/L	0.001	11	44	204	9
	Cr	52	0.003	ug/L	0 017	645	19340	20089	2
	Cr	53	0.034	ug/L	0.004	11	112	176	5
	Mn	55	0.014	ug/L	0.001	6	611	962	1
	Co	59	-0.002	ug/L	0.000	3	132	100	2
>	Ge	72		ug/L			493057	504775	1
	Ni	60	0.008	ug/L	0.004	48	43	70	17
	Ni	62	0.040	ug/L	0.018	44	50	70	12
	Cu	63	0.024	ug/L	0.001	4	82	257	2
	Cu	65	0.024	ug/L	0.006	26	48	127	16
	Zn	66	5.190	ug/L	0.501	9	317	10525	9
	Zn	67	4.490	ug/L	0.404	9	50	1545	8
	Zn	68	4.915	ug/L	0.422	8	347	7273	8
	As	75	0.024	ug/L	0.021	84	63	105	31
	As-1	75	0.009	ug/L	0.050	560	9253	9487	0
	Se	82	-0.034	ug/L	0.056	164	0	-5	167
	Se	78	-0.030	ug/L	0.146	488	9393	9601	0
	Mo	98	0.020	ug/L	0.003	15	6	81	15
	Y	89		ug/L			311395	321603	0
	Kr	83		ug/L			297	337	8
>	In	115		ug/L			657061	675584	0
	Ag	107	0.002	ug/L	0.001	31	12	25	15
	Cd	111	-0.000	ug/L	0.003	5808	59	60	12
	Cd	114	0.004	ug/L	0.000	11	11	41	7
	Sb	121	0.053	ug/L	0.012	23	23	503	21
	Sb	123	0.053	ug/L	0.007	13	14	377	12
	Ba	135	0.008	ug/L	0.000	6	11	34	4
	Ba	137	0.007	ug/L	0.002	28	16	50	18
>	Tb	159		ug/L			775527	809361	0
	Tl	205	0.011	ug/L	0.001	10	29	335	9
	Pb	208	0.014	ug/L	0.001	4	91	563	3
	Bi	209		ug/L			1757049	1810322	0
	Th	232	0.032	ug/L	0.002	7	25	1202	7
	U	238	0.001	ug/L	0.000	10	2	46	9

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R MB2 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 11:02:09
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1192070	1263088	0
[	Be	9	0.005	ug/L	0.000	2	8	30	1
	C	13		ug/L			82220	92021	0
	Cl	37		ug/L			3880679	3952132	2
[>	Sc	45		ug/L			911484	975078	1
[	V	51	0.026	ug/L	0.008	29	6527	7485	0
[	V-1	51	0.036	ug/L	0.001	1	44	735	2
[	Cr	52	0.035	ug/L	0.024	69	19340	21251	1
[	Cr	53	0.068	ug/L	0.020	29	112	243	16
[	Mn	55	0.056	ug/L	0.010	18	611	2016	13
[	Co	59	0.008	ug/L	0.014	176	132	272	84
[>	Ge	72		ug/L			493057	510800	0
[	Ni	60	0.013	ug/L	0.011	80	43	88	39
[	Ni	62	0.059	ug/L	0.043	72	50	80	24
[	Cu	63	0.036	ug/L	0.019	53	82	343	39
[	Cu	65	0.034	ug/L	0.017	51	48	158	34
[	Zn	66	0.556	ug/L	0.023	4	317	1434	2
[	Zn	67	0.499	ug/L	0.051	10	50	220	7
[	Zn	68	0.534	ug/L	0.048	8	347	1120	5
[	As	75	0.033	ug/L	0.014	43	63	120	18
[	As-1	75	-0.006	ug/L	0.020	336	9253	9576	0
[	Se	82	-0.002	ug/L	0.050	2660	0	0	4460
[	Se	78	-0.079	ug/L	0.074	92	9393	9693	0
[	Mo	98	0.016	ug/L	0.004	25	6	65	22
	Y	89		ug/L			311395	326443	1
	Kr	83		ug/L			297	341	6
[>	In	115		ug/L			657061	693569	0
[	Ag	107	0.003	ug/L	0.002	76	12	33	47
[	Cd	111	0.006	ug/L	0.002	30	59	82	6
[	Cd	114	0.004	ug/L	0.002	53	11	46	39
[	Sb	121	0.040	ug/L	0.006	15	23	398	14
[	Sb	123	0.041	ug/L	0.006	15	14	299	13
[	Ba	135	0.162	ug/L	0.004	2	11	516	2
[	Ba	137	0.163	ug/L	0.006	3	16	894	3
[>	Tb	159		ug/L			775527	821955	1
[	Tl	205	0.007	ug/L	0.001	17	29	228	14
[	Pb	208	0.035	ug/L	0.001	2	91	1311	3
[	Bi	209		ug/L			1757049	1832738	1
[	Th	232	0.029	ug/L	0.004	14	25	1113	14
[	U	238	0.003	ug/L	0.001	27	2	124	26

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R ADUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 11:06:16
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\061813.cal

Del rec 1/10

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1261517	3
	Be	9	0.276	ug/L	0.010	3	8	1099	3
	C	13		ug/L			82220	94105	2
	Cl	37		ug/L			3880679	4153232	1
>	Sc	45		ug/L			911484	1248974	1
	V	51	69.503	ug/L	0.896	1	6527	1732981	2
	V-1	51	69.657	ug/L	0.742	1	44	1725206	2
	Cr	52	34.500	ug/L	0 168	0	19340	741057	1
	Cr	53	34.833	ug/L	0.761	2	112	81253	3
	Mn	55	385.197	ug/L	0.911	0	611	11992453	1
	Co	59	10.461	ug/L	0.179	1	132	217363	3
>	Ge	72		ug/L			493057	508083	1
	Ni	60	33.663	ug/L	0.165	0	43	109459	1
	Ni	62	37.233	ug/L	0.911	2	50	17365	1
	Cu	63	52.825	ug/L	0.505	0	82	382110	2
	Cu	65	52.446	ug/L	0.854	1	48	169610	3
	Zn	66	79.935	ug/L	0.762	0	317	158481	0
	Zn	67	84.156	ug/L	0.889	1	50	28242	1
	Zn	68	84.112	ug/L	0.686	0	347	119545	2
	As	75	5.103	ug/L	0.081	1	63	8537	1
	As-1	75	5.006	ug/L	0.104	2	9253	17972	1
	Se	82	0.269	ug/L	0.110	40	0	47	39
	Se	78	0.887	ug/L	0.168	18	9393	10104	1
	Mo	98	5.487	ug/L	0.104	1	6	20568	3
	Y	89		ug/L			311395	486849	2
	Kr	83		ug/L			297	735	1
>	In	115		ug/L			657061	686438	1
	Ag	107	0.104	ug/L	0.005	5	12	747	4
	Cd	111	0.171	ug/L	0.007	4	59	609	4
	Cd	114	0.111	ug/L	0.008	7	11	910	7
	Sb	121	1.798	ug/L	0.032	1	23	16628	1
	Sb	123	1.777	ug/L	0.024	1	14	12314	1
	Ba	135	130.679	ug/L	2.035	1	11	403675	1
	Ba	137	130.343	ug/L	3.833	2	16	696902	2
>	Tb	159		ug/L			775527	843133	0
	Tl	205	0.071	ug/L	0.003	3	29	2132	3
	Pb	208	3.985	ug/L	0.061	1	91	142806	1
	Bi	209		ug/L			1757049	1688364	0
	Th	232	0.854	ug/L	0.002	0	25	32414	0
	U	238	0.333	ug/L	0.003	0	2	13231	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 11:10:24
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\061813.cal

Dil rec 1/10

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	**Li**	**6**		ug/L			1192070	1288400	2
[	**Be**	**9**	**0.273**	ug/L	0.008	2	8	1111	4
	C	**13**		ug/L			82220	95859	1
	Cl	**37**		ug/L			3880679	4129989	1
[>	**Sc**	**45**		ug/L			911484	1261937	1
[	**V**	**51**	**67.897**	ug/L	0.380	0	6527	1710675	1
[	**V-1**	**51**	**68.270**	ug/L	0.596	0	44	1708326	1
[	**Cr**	**52**	**33.254**	ug/L	0.219	0	19340	722704	1
[	**Cr**	**53**	**34.336**	ug/L	0.727	2	112	80914	2
[	**Mn**	**55**	**373.828**	ug/L	2.298	0	611	11758664	0
[	**Co**	**59**	**10.348**	ug/L	0.171	1	132	217189	0
[>	**Ge**	**72**		ug/L			493057	517709	1
[	**Ni**	**60**	**32.673**	ug/L	0.451	1	43	108250	0
[	**Ni**	**62**	**35.764**	ug/L	0.584	1	50	16998	0
[	**Cu**	**63**	**50.308**	ug/L	0.821	1	82	370728	1
[	**Cu**	**65**	**49.813**	ug/L	1.233	2	48	164081	1
[	**Zn**	**66**	**76.343**	ug/L	0.328	0	317	154253	1
[	**Zn**	**67**	**81.006**	ug/L	2.270	2	50	27704	3
[	**Zn**	**68**	**78.746**	ug/L	0.859	1	347	114049	1
[	**As**	**75**	**4.789**	ug/L	0.044	0	63	8168	1
[	**As-1**	**75**	**4.695**	ug/L	0.076	1	9253	17778	1
[	**Se**	**82**	**0.208**	ug/L	0.026	12	0	37	13
[	**Se**	**78**	**0.801**	ug/L	0.198	24	9393	10253	0
[	**Mo**	**98**	**5.345**	ug/L	0.046	0	6	20413	1
	Y	**89**		ug/L			311395	494582	1
	Kr	**83**		ug/L			297	734	2
[>	**In**	**115**		ug/L			657061	696642	1
[	**Ag**	**107**	**0.100**	ug/L	0.002	1	12	732	2
[	**Cd**	**111**	**0.166**	ug/L	0.011	6	59	602	6
[	**Cd**	**114**	**0.107**	ug/L	0.002	1	11	888	0
[	**Sb**	**121**	**1.891**	ug/L	0.035	1	23	17747	1
[	**Sb**	**123**	**1.912**	ug/L	0.025	1	14	13444	2
[	**Ba**	**135**	**126.921**	ug/L	0.461	0	11	397929	1
[	**Ba**	**137**	**127.579**	ug/L	2.662	2	16	692186	1
[>	**Tb**	**159**		ug/L			775527	857534	0
[	**Tl**	**205**	**0.075**	ug/L	0 001	0	29	2283	0
[	**Pb**	**208**	**3.818**	ug/L	0.036	0	91	139182	0
[	**Bi**	**209**		ug/L			1757049	1700831	0
[	**Th**	**232**	**0.805**	ug/L	0.010	1	25	31072	1
[	**U**	**238**	**0.320**	ug/L	0.003	0	2	12943	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R ASPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 11:14:31
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\061813.cal

DW rerun 1/10

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1320817	1
	Be	9	23.022	ug/L	0.496	2	8	95141	1
	C	13		ug/L			82220	95645	1
	Cl	37		ug/L			3880679	4285056	1
>	Sc	45		ug/L			911484	1306693	1
	V	51	93.626	ug/L	1.663	1	6527	2438721	1
	V-1	51	94.105	ug/L	1.834	1	44	2437985	1
	Cr	52	51.652	ug/L	0.737	1	19340	1146887	0
	Cr	53	53.056	ug/L	1.328	2	112	129362	1
	Mn	55	388.315	ug/L	7.684	1	611	12648064	2
	Co	59	28.785	ug/L	0.934	3	132	625157	2
>	Ge	72		ug/L			493057	522110	1
	Ni	60	57.661	ug/L	0.504	0	43	192642	1
	Ni	62	58.884	ug/L	1.192	2	50	28194	2
	Cu	63	74.852	ug/L	1.019	1	82	556288	1
	Cu	65	75.355	ug/L	1.162	1	48	250351	1
	Zn	66	149.891	ug/L	2.581	1	317	305096	1
	Zn	67	148.305	ug/L	0.991	0	50	51106	1
	Zn	68	152.427	ug/L	1.270	0	347	222288	0
	As	75	28.528	ug/L	0.584	2	63	48732	0
	As-1	75	29.154	ug/L	0.538	1	9253	60281	1
	Se	82	73.979	ug/L	1.518	2	0	13425	0
	Se	78	73.540	ug/L	1.357	1	9393	46167	1
	Mo	98	29.946	ug/L	0.419	1	6	115299	1
	Y	89		ug/L			311395	507467	1
	Kr	83		ug/L			297	708	1
>	In	115		ug/L			657061	712184	1
	Ag	107	22.755	ug/L	0.150	0	12	167530	1
	Cd	111	23.621	ug/L	0.207	0	59	78475	1
	Cd	114	23.606	ug/L	0.539	2	11	198373	0
	Sb	121	9.657	ug/L	0.109	1	23	92538	1
	Sb	123	9.697	ug/L	0.044	0	14	69647	1
	Ba	135	150.173	ug/L	2.414	1	11	481317	2
	Ba	137	149.322	ug/L	0.147	0	16	828349	1
>	Tb	159		ug/L			775527	873258	1
	Tl	205	22.031	ug/L	0.246	1	29	674552	0
	Pb	208	27.739	ug/L	0.360	1	91	1028920	0
	Bi	209		ug/L			1757049	1744280	0
	Th	232	22.522	ug/L	0.402	1	25	884178	0
	U	238	22.755	ug/L	0.256	1	2	936955	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R EDUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 11:18:38
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens	Intens. RSD
>	Li	6		ug/L			1192070	1269029	0
	Be	9	0.002	ug/L	0.001	46	8	18	24
	C	13		ug/L			82220	100067	3
	Cl	37		ug/L			3880679	4461135	0
>	Sc	45		ug/L			911484	1037797	1
	V	51	25.187	ug/L	0.176	0	6527	526515	1
	V-1	51	25.420	ug/L	0.222	0	44	523082	1
	Cr	52	11.814	ug/L	0.090	0	19340	225325	1
	Cr	53	12.532	ug/L	0.246	1	112	24363	0
	Mn	55	0.418	ug/L	0.032	7	611	11496	6
	Co	59	0.129	ug/L	0.001	0	132	2375	2
>	Ge	72		ug/L			493057	526434	0
	Ni	60	0.473	ug/L	0.024	5	43	1639	4
	Ni	62	0.288	ug/L	0.029	9	50	193	7
	Cu	63	2.653	ug/L	0.095	3	82	19966	3
	Cu	65	2.442	ug/L	0.041	1	48	8228	1
	Zn	66	1.176	ug/L	0.023	1	317	2749	1
	Zn	67	1.978	ug/L	0.064	3	50	740	3
	Zn	68	1.974	ug/L	0.056	2	347	3268	1
	As	75	2.540	ug/L	0.012	0	63	4437	0
	As-1	75	2.552	ug/L	0.089	3	9253	14335	0
	Se	82	0.620	ug/L	0.021	3	0	113	3
	Se	78	0.810	ug/L	0.277	34	9393	10430	0
	Mo	98	5.665	ug/L	0.031	0	6	21999	1
	Y	89		ug/L			311395	342285	1
	Kr	83		ug/L			297	352	1
>	In	115		ug/L			657061	705950	0
	Ag	107	0.005	ug/L	0.001	29	12	47	21
	Cd	111	0.020	ug/L	0.003	17	59	127	7
	Cd	114	0.021	ug/L	0.001	5	11	183	4
	Sb	121	4.597	ug/L	0.038	0	23	43673	0
	Sb	123	4.617	ug/L	0.043	0	14	32880	0
	Ba	135	4.142	ug/L	0.060	1	11	13169	1
	Ba	137	4.096	ug/L	0.038	0	16	22542	1
>	Tb	159		ug/L			775527	851731	0
	Tl	205	0.019	ug/L	0.001	6	29	613	6
	Pb	208	0.040	ug/L	0.002	4	91	1550	4
	Bi	209		ug/L			1757049	1777305	0
	Th	232	0.046	ug/L	0.006	12	25	1797	12
	U	238	0.081	ug/L	0.001	0	2	3254	1

WS90 : 89956

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R E REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 11:22:46
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061813.cal

Del

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1260366	1
	Be	9	0.003	ug/L	0.001	35	8	22	20
	C	13		ug/L			82220	97768	2
	Cl	37		ug/L			3880679	4559838	2
>	Sc	45		ug/L			911484	1029475	0
	V	51	25.258	ug/L	0.232	0	6527	523763	0
	V-1	51	25.528	ug/L	0.236	0	44	521127	0
	Cr	52	11.780	ug/L	0.196	1	19340	222960	1
	Cr	53	12.625	ug/L	0.361	2	112	24351	2
	Mn	55	0.331	ug/L	0.003	0	611	9188	0
	Co	59	0.124	ug/L	0.001	1	132	2275	0
>	Ge	72		ug/L			493057	513020	2
	Ni	60	0.479	ug/L	0.012	2	43	1616	4
	Ni	62	0.314	ug/L	0.016	4	50	200	4
	Cu	63	2.676	ug/L	0.109	4	82	19613	2
	Cu	65	2.409	ug/L	0.055	2	48	7910	1
	Zn	66	1.332	ug/L	0.052	3	317	2990	1
	Zn	67	2.087	ug/L	0.050	2	50	758	0
	Zn	68	2.034	ug/L	0.055	2	347	3270	1
	As	75	2.573	ug/L	0.042	1	63	4379	1
	As-1	75	2.614	ug/L	0.229	8	9253	14071	0
	Se	82	0.758	ug/L	0.028	3	0	135	4
	Se	78	1.048	ug/L	0.655	62	9393	10276	1
	Mo	98	5.578	ug/L	0.115	2	6	21102	0
	Y	89		ug/L			311395	338051	0
	Kr	83		ug/L			297	346	1
>	In	115		ug/L			657061	701993	1
	Ag	107	0.003	ug/L	0.000	15	12	32	9
	Cd	111	0.023	ug/L	0.003	14	59	138	6
	Cd	114	0.020	ug/L	0.001	5	11	180	4
	Sb	121	4.517	ug/L	0.023	0	23	42682	0
	Sb	123	4.572	ug/L	0.080	1	14	32375	0
	Ba	135	4.030	ug/L	0.049	1	11	12742	0
	Ba	137	3.973	ug/L	0.039	0	16	21741	0
>	Tb	159		ug/L			775527	849510	1
	Tl	205	0.021	ug/L	0.000	1	29	643	0
	Pb	208	0.031	ug/L	0.001	4	91	1213	2
	Bi	209		ug/L			1757049	1779254	1
	Th	232	0.012	ug/L	0.002	12	25	493	10
	U	238	0.077	ug/L	0.002	2	2	3105	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R ESPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 11:26:53
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1199897	7
	Be	9	23.867	ug/L	1.016	4	8	89442	4
	C	13		ug/L			82220	94464	2
	Cl	37		ug/L			3880679	4211715	3
>	Sc	45		ug/L			911484	991460	4
	V	51	47.822	ug/L	0.982	2	6527	948314	3
	V-1	51	47.924	ug/L	0.929	1	44	941924	4
	Cr	52	34.532	ug/L	0.637	1	19340	588490	2
	Cr	53	34.804	ug/L	0.372	1	112	64455	5
	Mn	55	22.384	ug/L	0.378	1	611	553535	2
	Co	59	23.749	ug/L	0.029	0	132	391480	4
>	Ge	72		ug/L			493057	498527	4
	Ni	60	25.352	ug/L	0.437	1	43	80862	2
	Ni	62	24.986	ug/L	0.213	0	50	11450	3
	Cu	63	27.242	ug/L	0.407	1	82	193335	4
	Cu	65	26.971	ug/L	0.061	0	48	85586	4
	Zn	66	75.445	ug/L	0.293	0	317	146815	4
	Zn	67	70.357	ug/L	1.107	1	50	23185	5
	Zn	68	73.380	ug/L	2.926	3	347	102250	0
	As	75	26.280	ug/L	0.486	1	63	42854	2
	As-1	75	26.895	ug/L	0.391	1	9253	53811	3
	Se	82	73.226	ug/L	1.510	2	0	12683	2
	Se	78	72.120	ug/L	1.087	1	9393	43403	3
	Mo	98	30.469	ug/L	1.068	3	6	111910	0
	Y	89		ug/L			311395	328686	3
	Kr	83		ug/L			297	344	7
>	In	115		ug/L			657061	683002	4
	Ag	107	24.116	ug/L	0.499	2	12	170185	2
	Cd	111	23.694	ug/L	0.332	1	59	75464	2
	Cd	114	23.920	ug/L	0.534	2	11	192704	2
	Sb	121	27.961	ug/L	0.576	2	23	256791	2
	Sb	123	27.659	ug/L	0.704	2	14	190364	1
	Ba	135	28.804	ug/L	0.633	2	11	88513	3
	Ba	137	28.975	ug/L	0.837	2	16	154070	2
>	Tb	159		ug/L			775527	822728	4
	Tl	205	22.925	ug/L	0.594	2	29	660960	2
	Pb	208	24.711	ug/L	0.733	2	91	862958	1
	Bi	209		ug/L			1757049	1755676	1
	Th	232	21.945	ug/L	0.704	3	25	811119	0
	U	238	22.882	ug/L	0.745	3	2	886986	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R MB1SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 11:31:00
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1192070	1163730	1
[	Be	9	25.639	ug/L	0.472	1	8	93364	2
	C	13		ug/L			82220	87867	1
	Cl	37		ug/L			3880679	4058222	1
[>	Sc	45		ug/L			911484	913252	1
[	V	51	26.072	ug/L	0.472	1	6527	479331	1
[	V-1	51	26.193	ug/L	0.463	1	44	474286	1
[	Cr	52	26.126	ug/L	0.345	1	19340	415003	0
[	Cr	53	26.539	ug/L	0.338	1	112	45282	0
[	Mn	55	24.845	ug/L	0.338	1	611	566097	0
[	Co	59	26.442	ug/L	0.309	1	132	401507	2
[>	Ge	72		ug/L			493057	486495	1
[	Ni	60	27.421	ug/L	0.277	1	43	85379	1
[	Ni	62	26.516	ug/L	0.595	2	50	11854	0
[	Cu	63	27.291	ug/L	0.768	2	82	188984	1
[	Cu	65	27.460	ug/L	0.555	2	48	85018	0
[	Zn	66	85.865	ug/L	0.877	1	317	162982	0
[	Zn	67	77.512	ug/L	2.107	2	50	24906	1
[	Zn	68	82.287	ug/L	2.308	2	347	111952	1
[	As	75	25.229	ug/L	0.153	0	63	40168	1
[	As-1	75	26.453	ug/L	0.396	1	9253	51809	0
[	Se	82	81.978	ug/L	0.878	1	0	13863	0
[	Se	78	82.425	ug/L	1.658	2	9393	47090	0
[	Mo	98	26.243	ug/L	0.410	1	6	94144	1
	Y	89		ug/L			311395	312761	0
	Kr	83		ug/L			297	355	2
[>	In	115		ug/L			657061	678092	0
[	Ag	107	25.825	ug/L	0.667	2	12	181039	2
[	Cd	111	25.908	ug/L	0.618	2	59	81941	1
[	Cd	114	25.853	ug/L	0.201	0	11	206902	1
[	Sb	121	25.114	ug/L	0.230	0	23	229086	0
[	Sb	123	25.707	ug/L	0.207	0	14	175780	0
[	Ba	135	26.131	ug/L	0.191	0	11	79755	1
[	Ba	137	25.810	ug/L	0.263	1	16	136330	0
[>	Tb	159		ug/L			775527	800367	0
[	Tl	205	25.059	ug/L	0.415	1	29	703210	0
[	Pb	208	27.368	ug/L	0.505	1	91	930413	0
[	Bi	209		ug/L			1757049	1801704	0
[	Th	232	22.703	ug/L	0.383	1	25	816951	0
[	U	238	24.342	ug/L	0.175	0	2	918702	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R MB2SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 11:35:07
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1192070	1179730	2
[	Be	9	24.828	ug/L	0.430	1	8	91632	1
	C	13		ug/L			82220	87761	1
	Cl	37		ug/L			3880679	4055090	1
[>	Sc	45		ug/L			911484	914548	1
[	V	51	25.752	ug/L	0.470	1	6527	474164	0
[	V-1	51	25.841	ug/L	0.475	1	44	468536	0
[	Cr	52	26.182	ug/L	0.289	1	19340	416469	1
[	Cr	53	26.488	ug/L	0.218	0	112	45261	1
[	Mn	55	25.054	ug/L	0.230	0	611	571711	2
[	Co	59	26.598	ug/L	0.523	1	132	404366	2
[>	Ge	72		ug/L			493057	483613	1
[	Ni	60	27.269	ug/L	0.367	1	43	84418	2
[	Ni	62	26.209	ug/L	0.318	1	50	11652	2
[	Cu	63	27.290	ug/L	0.661	2	82	187941	3
[	Cu	65	27.274	ug/L	0.209	0	48	83966	1
[	Zn	66	82.866	ug/L	2.057	2	317	156411	3
[	Zn	67	74.451	ug/L	1.184	1	50	23787	0
[	Zn	68	79.243	ug/L	0.920	1	347	107219	2
[	As	75	24.974	ug/L	0.338	1	63	39532	2
[	As-1	75	25.703	ug/L	0.201	0	9253	50308	1
[	Se	82	77.838	ug/L	0.754	0	0	13087	2
[	Se	78	76.774	ug/L	0.542	0	9393	44243	1
[	Mo	98	26.178	ug/L	0.406	1	6	93376	2
	Y	89		ug/L			311395	310703	1
	Kr	83		ug/L			297	335	3
[>	In	115		ug/L			657061	668109	2
[	Ag	107	26.211	ug/L	0.411	1	12	181020	2
[	Cd	111	25.652	ug/L	0.154	0	59	79945	2
[	Cd	114	25.482	ug/L	0.339	1	11	200907	2
[	Sb	121	25.361	ug/L	0.289	1	23	227914	1
[	Sb	123	25.403	ug/L	0.091	0	14	171138	1
[	Ba	135	26.595	ug/L	0.559	2	11	79949	0
[	Ba	137	26.287	ug/L	0.051	0	16	136807	2
[>	Tb	159		ug/L			775527	801586	0
[	Tl	205	24.765	ug/L	0.218	0	29	696089	0
[	Pb	208	27.019	ug/L	0.329	1	91	920041	1
[	Bi	209		ug/L			1757049	1769266	1
[	Th	232	22.961	ug/L	0.197	0	25	827582	0
[	U	238	24.463	ug/L	0.021	0	2	924689	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 11:40:21
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1155342	2
	Be	9	49.703	ug/L	1.214	2	8	179605	0
	C	13		ug/L			82220	81348	2
	Cl	37		ug/L			3880679	4173178	1
>	Sc	45		ug/L			911484	911164	0
	V	51	49.233	ug/L	0.360	0	6527	897415	0
	V-1	51	49.402	ug/L	0.411	0	44	892559	0
	Cr	52	49.631	ug/L	0.577	1	19340	769248	1
	Cr	53	50.203	ug/L	0.697	1	112	85372	1
	Mn	55	46.562	ug/L	0.368	0	611	1058050	0
	Co	59	49.476	ug/L	0.550	1	132	749361	1
>	Ge	72		ug/L			493057	486154	0
	Ni	60	50.117	ug/L	1.048	2	43	155910	1
	Ni	62	48.306	ug/L	1.008	2	50	21545	1
	Cu	63	49.883	ug/L	0.529	1	82	345218	0
	Cu	65	49.787	ug/L	0.529	1	48	154035	0
	Zn	66	50.447	ug/L	0.437	0	317	95828	1
	Zn	67	50.517	ug/L	0.790	1	50	16242	1
	Zn	68	50.863	ug/L	1.331	2	347	69297	2
	As	75	50.506	ug/L	0.791	1	63	80295	1
	As-1	75	50.547	ug/L	0.796	1	9253	90630	1
	Se	82	51.888	ug/L	1.135	2	0	8769	1
	Se	78	51.448	ug/L	1.119	2	9393	32857	1
	Mo	98	50.393	ug/L	0 716	1	6	180670	1
	Y	89		ug/L			311395	307844	0
	Kr	83		ug/L			297	363	2
>	In	115		ug/L			657061	653825	0
	Ag	107	49.410	ug/L	0.636	1	12	333934	0
	Cd	111	50.398	ug/L	0.486	0	59	153653	1
	Cd	114	51.244	ug/L	0.614	1	11	395427	1
	Sb	121	50.112	ug/L	0.207	0	23	440754	0
	Sb	123	50.790	ug/L	0.645	1	14	334845	0
	Ba	135	50.486	ug/L	0.369	0	11	148556	0
	Ba	137	49.850	ug/L	0.260	0	16	253882	0
>	Tb	159		ug/L			775527	796740	0
	Tl	205	46.330	ug/L	0.384	0	29	1294269	0
	Pb	208	50.372	ug/L	0.509	1	91	1704721	0
	Bi	209		ug/L			1757049	1721902	0
	Th	232	47.135	ug/L	1.081	2	25	1688330	1
	U	238	46.321	ug/L	0.665	1	2	1740210	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 11:47:13
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1192070	1136672	0
[	Be	9	0.003	ug/L	0.001	29	8	19	18
	C	13		ug/L			82220	81838	2
	Cl	37		ug/L			3880679	4093025	0
[>	Sc	45		ug/L			911484	888856	1
[	V	51	-0.013	ug/L	0.002	16	6527	6140	0
[	V-1	51	0.006	ug/L	0.000	5	44	150	4
[	Cr	52	-0.055	ug/L	0.014	25	19340	18047	0
[	Cr	53	0.009	ug/L	0.008	93	112	123	10
[	Mn	55	0.010	ug/L	0.003	24	611	825	7
[	Co	59	-0.001	ug/L	0.001	59	132	114	7
[>	Ge	72		ug/L			493057	479956	1
[	Ni	60	-0.001	ug/L	0.003	353	43	40	23
[	Ni	62	0.038	ug/L	0.013	34	50	66	8
[	Cu	63	0.017	ug/L	0.000	0	82	192	1
[	Cu	65	0.013	ug/L	0.002	17	48	87	7
[	Zn	66	0.217	ug/L	0.013	5	317	713	2
[	Zn	67	0.158	ug/L	0.043	27	50	99	14
[	Zn	68	0.206	ug/L	0.016	7	347	613	3
[	As	75	0.031	ug/L	0.010	33	63	110	15
[	As-1	75	0.312	ug/L	0.034	10	9253	9503	0
[	Se	82	-0.030	ug/L	0.047	153	0	-4	159
[	Se	78	1.058	ug/L	0.119	11	9393	9622	0
[	Mo	98	0.012	ug/L	0.003	24	6	47	22
	Y	89		ug/L			311395	301866	0
	Kr	83		ug/L			297	346	2
[>	In	115		ug/L			657061	653964	0
[	Ag	107	0.005	ug/L	0.003	65	12	46	48
[	Cd	111	0.008	ug/L	0.000	4	59	84	1
[	Cd	114	0.003	ug/L	0.001	30	11	32	19
[	Sb	121	0.101	ug/L	0.023	23	23	915	22
[	Sb	123	0.103	ug/L	0.018	17	14	690	17
[	Ba	135	0.012	ug/L	0.002	18	11	47	13
[	Ba	137	0.013	ug/L	0.001	8	16	83	7
[>	Tb	159		ug/L			775527	771102	1
[	Tl	205	0.005	ug/L	0.000	4	29	174	2
[	Pb	208	0.279	ug/L	0.471	169	91	9161	167
[	Bi	209		ug/L			1757049	1765578	0
[	Th	232	0.090	ug/L	0.006	6	25	3130	6
[	U	238	0.002	ug/L	0.001	21	2	87	20

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 MB1 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 11:57:08
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1147963	0
	Be	9	0.001	ug/L	0.001	102	8	11	27
	C	13		ug/L			82220	87252	0
	Cl	37		ug/L			3880679	4081205	1
>	Sc	45		ug/L			911484	890409	0
	V	51	0.013	ug/L	0.004	33	6527	6606	0
	V-1	51	0.009	ug/L	0.000	4	44	195	3
	Cr	52	0.043	ug/L	0.011	25	19340	19520	0
	Cr	53	0.028	ug/L	0.012	43	112	155	13
	Mn	55	0.031	ug/L	0.001	1	611	1277	1
	Co	59	-0.002	ug/L	0.001	24	132	95	8
>	Ge	72		ug/L			493057	476150	0
	Ni	60	0.024	ug/L	0.008	35	43	115	22
	Ni	62	0.063	ug/L	0.005	7	50	76	2
	Cu	63	0.033	ug/L	0.004	12	82	305	9
	Cu	65	0.029	ug/L	0.002	5	48	135	4
	Zn	66	0.817	ug/L	0.029	3	317	1821	2
	Zn	67	0.755	ug/L	0.019	2	50	286	1
	Zn	68	0.812	ug/L	0.029	3	347	1413	2
	As	75	0.037	ug/L	0.007	18	63	118	9
	As-1	75	0.348	ug/L	0.042	11	9253	9486	0
	Se	82	-0.011	ug/L	0.011	102	0	-1	109
	Se	78	1.193	ug/L	0.154	12	9393	9607	0
	Mo	98	0.017	ug/L	0.003	17	6	65	15
	Y	89		ug/L			311395	304343	1
	Kr	83		ug/L			297	349	1
>	In	115		ug/L			657061	665544	0
	Ag	107	0.002	ug/L	0.001	43	12	26	24
	Cd	111	0.003	ug/L	0.002	66	59	68	8
	Cd	114	0.003	ug/L	0.001	42	11	31	26
	Sb	121	0.035	ug/L	0.010	27	23	341	25
	Sb	123	0.033	ug/L	0.004	12	14	238	12
	Ba	135	0.013	ug/L	0.003	24	11	49	18
	Ba	137	0.014	ug/L	0.001	10	16	88	9
>	Tb	159		ug/L			775527	784541	0
	Tl	205	0.004	ug/L	0.001	15	29	151	12
	Pb	208	0.053	ug/L	0.001	2	91	1850	1
	Bi	209		ug/L			1757049	1755712	0
	Th	232	0.034	ug/L	0.001	2	25	1222	2
	U	238	0.001	ug/L	0.000	26	2	30	24

WS90 : 66553

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R ADUP REN
Sample Dil Factor: 10
Comments:
Sample Date/Time: Tuesday, June 18, 2013 12:18:51
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1192070	1127882	1
[	Be	9	0.067	ug/L	0.005	7	8	245	5
	C	13		ug/L			82220	83319	0
	Cl	37		ug/L			3880679	3892691	1
[>	Sc	45		ug/L			911484	952949	2
[	V	51	16.817	ug/L	0.675	4	6527	324846	1
[	V-1	51	16.913	ug/L	0.659	3	44	319382	1
[	Cr	52	8.424	ug/L	0.169	2	19340	153296	1
[	Cr	53	8.705	ug/L	0.111	1	112	15574	1
[	Mn	55	97.189	ug/L	3.430	3	611	2307588	0
[	Co	59	2.609	ug/L	0.074	2	132	41444	0
[>	Ge	72		ug/L			493057	479540	1
[	Ni	60	7.013	ug/L	0.118	1	43	21555	0
[	Ni	62	7.761	ug/L	0.238	3	50	3455	1
[	Cu	63	11.161	ug/L	0.100	0	82	76246	0
[	Cu	65	11.185	ug/L	0.112	1	48	34169	0
[	Zn	66	19.575	ug/L	0.351	1	317	36861	0
[	Zn	67	20.514	ug/L	0.375	1	50	6534	0
[	Zn	68	20.243	ug/L	0.383	1	347	27405	0
[	As	75	1.108	ug/L	0.010	0	63	1798	0
[	As-1	75	1.351	ug/L	0.149	10	9253	11147	1
[	Se	82	0.198	ug/L	0.029	14	0	33	15
[	Se	78	1.226	ug/L	0.486	39	9393	9688	1
[	Mo	98	1.081	ug/L	0.045	4	6	3828	3
	Y	89		ug/L			311395	339669	1
	Kr	83		ug/L			297	364	1
[>	In	115		ug/L			657061	660651	1
[	Ag	107	0.020	ug/L	0.003	15	12	147	13
[	Cd	111	0.036	ug/L	0.005	15	59	169	9
[	Cd	114	0.029	ug/L	0.002	6	11	237	8
[	Sb	121	0.386	ug/L	0.008	1	23	3455	1
[	Sb	123	0.384	ug/L	0.009	2	14	2569	1
[	Ba	135	26.315	ug/L	0.524	1	11	78234	0
[	Ba	137	25.720	ug/L	0.551	2	16	132336	0
[>	Tb	159		ug/L			775527	800507	0
[	Tl	205	0.030	ug/L	0.004	13	29	876	11
[	Pb	208	0.871	ug/L	0.010	1	91	29694	0
[	Bi	209		ug/L			1757049	1737384	0
[	Th	232	0.187	ug/L	0.011	5	25	6759	4
[	U	238	0.068	ug/L	0.002	2	2	2557	3

WS90R : 06/18/13

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R A REN
Sample Dil Factor: 10
Comments:
Sample Date/Time: Tuesday, June 18, 2013 12:22:58
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1118570	0
	Be	9	0.061	ug/L	0.005	7	8	221	6
	C	13		ug/L			82220	83162	1
	Cl	37		ug/L			3880679	3917233	1
>	Sc	45		ug/L			911484	939467	1
	V	51	16.454	ug/L	0.588	3	6527	313566	1
	V-1	51	16.531	ug/L	0.554	3	44	307857	1
	Cr	52	8.190	ug/L	0.328	3	19340	147467	1
	Cr	53	8.410	ug/L	0.213	2	112	14837	0
	Mn	55	94.320	ug/L	1.703	1	611	2208729	0
	Co	59	2.581	ug/L	0.080	3	132	40417	1
>	Ge	72		ug/L			493057	472178	0
	Ni	60	6.806	ug/L	0.077	1	43	20600	0
	Ni	62	7.460	ug/L	0.027	0	50	3272	0
	Cu	63	10.524	ug/L	0.120	1	82	70798	1
	Cu	65	10.716	ug/L	0 048	0	48	32235	0
	Zn	66	18.340	ug/L	0.397	2	317	34027	1
	Zn	67	18.835	ug/L	0.458	2	50	5911	1
	Zn	68	18.952	ug/L	0.048	0	347	25287	0
	As	75	1.058	ug/L	0.045	4	63	1693	3
	As-1	75	1.379	ug/L	0.051	3	9253	11020	0
	Se	82	0.099	ug/L	0.016	15	0	16	15
	Se	78	1.446	ug/L	0.101	6	9393	9639	0
	Mo	98	1.075	ug/L	0.034	3	6	3749	2
	Y	89		ug/L			311395	332137	0
	Kr	83		ug/L			297	383	2
>	In	115		ug/L			657061	645587	1
	Ag	107	0.020	ug/L	0 001	6	12	148	4
	Cd	111	0.036	ug/L	0.003	8	59	166	4
	Cd	114	0.024	ug/L	0.002	9	11	191	10
	Sb	121	0.419	ug/L	0.006	1	23	3659	1
	Sb	123	0.418	ug/L	0.011	2	14	2731	2
	Ba	135	26.163	ug/L	0.214	0	11	76019	0
	Ba	137	26.416	ug/L	0.503	1	16	132829	1
>	Tb	159		ug/L			775527	782723	0
	Tl	205	0.033	ug/L	0.002	6	29	940	6
	Pb	208	0.836	ug/L	0.009	1	91	27891	0
	Bi	209		ug/L			1757049	1711503	0
	Th	232	0.177	ug/L	0.003	1	25	6253	1
	U	238	0.069	ug/L	0.001	1	2	2535	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R ASPK REN
Sample Dil Factor: 10
Comments:
Sample Date/Time: Tuesday, June 18, 2013 12:27:05
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			1192070	1110453	1
	Be	9	5.200	ug/L	0.111	2	8	18070	0
	C	13		ug/L			82220	83264	3
	Cl	37		ug/L			3880679	3852594	2
>	Sc	45		ug/L			911484	949151	1
	V	51	20.896	ug/L	0.373	1	6527	400638	0
	V-1	51	20.978	ug/L	0.315	1	44	394815	0
	Cr	52	12.701	ug/L	0.456	3	19340	220007	2
	Cr	53	12.936	ug/L	0.261	2	112	22998	0
	Mn	55	98.157	ug/L	2.290	2	611	2322405	1
	Co	59	7.164	ug/L	0.064	0	132	113145	1
>	Ge	72		ug/L			493057	476083	1
	Ni	60	11.834	ug/L	0.327	2	43	36072	1
	Ni	62	12.294	ug/L	0.214	1	50	5405	0
	Cu	63	15.506	ug/L	0.300	1	82	105119	0
	Cu	65	15.558	ug/L	0.366	2	48	47157	0
	Zn	66	34.595	ug/L	0.727	2	317	64433	0
	Zn	67	33.428	ug/L	0.687	2	50	10539	0
	Zn	68	34.831	ug/L	1.030	2	347	46561	1
	As	75	5.968	ug/L	0.155	2	63	9342	0
	As-1	75	6.425	ug/L	0.171	2	9253	19077	0
	Se	82	16.865	ug/L	0.524	3	0	2790	1
	Se	78	17.874	ug/L	0.623	3	9393	17094	1
	Mo	98	5.861	ug/L	0.100	1	6	20581	1
	Y	89		ug/L			311395	337911	1
	Kr	83		ug/L			297	388	9
>	In	115		ug/L			657061	655322	0
	Ag	107	4.805	ug/L	0.087	1	12	32562	2
	Cd	111	5.076	ug/L	0.004	0	59	15564	0
	Cd	114	5.055	ug/L	0.044	0	11	39106	1
	Sb	121	2.008	ug/L	0.018	0	23	17722	0
	Sb	123	2.021	ug/L	0.028	1	14	13365	1
	Ba	135	30.012	ug/L	0.324	1	11	88522	1
	Ba	137	29.838	ug/L	0.284	0	16	152316	0
>	Tb	159		ug/L			775527	793680	1
	Tl	205	4.647	ug/L	0.047	1	29	129327	0
	Pb	208	5.933	ug/L	0.102	1	91	200096	0
	Bi	209		ug/L			1757049	1723893	0
	Th	232	4.768	ug/L	0.165	3	25	170115	2
	U	238	4.708	ug/L	0.080	1	2	176169	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R APOST REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 12:31:12
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1201238	0
	Be	9	23.190	ug/L	0.104	0	8	87171	0
	C	13		ug/L			82220	93587	1
	Cl	37		ug/L			3880679	4234014	2
>	Sc	45		ug/L			911484	1202815	0
	V	51	93.951	ug/L	1.866	1	6527	2252730	1
	V-1	51	94.335	ug/L	1.915	2	44	2249802	1
	Cr	52	51.552	ug/L	0.981	1	19340	1053744	1
	Cr	53	52.629	ug/L	1.321	2	112	118136	2
	Mn	55	390.002	ug/L	6.144	1	611	11692633	1
	Co	59	28.812	ug/L	0.634	2	132	576130	2
>	Ge	72		ug/L			493057	486508	2
	Ni	60	57.222	ug/L	0.637	1	43	178148	2
	Ni	62	60.109	ug/L	0.724	1	50	26821	3
	Cu	63	74.299	ug/L	0.485	0	82	514495	1
	Cu	65	73.748	ug/L	0.694	0	48	228320	2
	Zn	66	149.341	ug/L	2.623	1	317	283205	0
	Zn	67	146.373	ug/L	0.882	0	50	46998	1
	Zn	68	149.899	ug/L	1.981	1	347	203689	1
	As	75	28.752	ug/L	0.381	1	63	45764	0
	As-1	75	29.406	ug/L	0.478	1	9253	56573	1
	Se	82	74.166	ug/L	0.496	0	0	12543	1
	Se	78	73.882	ug/L	0.925	1	9393	43175	1
	Mo	98	31.421	ug/L	0.393	1	6	112735	2
	Y	89		ug/L			311395	461061	2
	Kr	83		ug/L			297	692	4
>	In	115		ug/L			657061	664600	1
	Ag	107	24.144	ug/L	0.593	2	12	165831	0
	Cd	111	23.829	ug/L	0.739	3	59	73854	1
	Cd	114	23.771	ug/L	0.343	1	11	186431	1
	Sb	121	25.912	ug/L	0.594	2	23	231613	1
	Sb	123	25.562	ug/L	0.569	2	14	171273	0
	Ba	135	153.506	ug/L	4.291	2	11	459004	1
	Ba	137	153.963	ug/L	3.639	2	16	796857	1
>	Tb	159		ug/L			775527	811543	1
	Tl	205	23.130	ug/L	0.144	0	29	658198	1
	Pb	208	28.404	ug/L	0.236	0	91	979292	1
	Bi	209		ug/L			1757049	1640946	1
	Th	232	23.731	ug/L	0.236	0	25	866025	2
	U	238	23.553	ug/L	0.182	0	2	901355	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WT51 ADUP REN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, June 18, 2013 12:35:19
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: C:\NexION Data\System\061813.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1192070	1182358	0
Be	9	0.006	ug/L	0.002	28	8	29	20
C	13		ug/L			82220	85498	1
Cl	37		ug/L			3880679	3843879	4
> Sc	45		ug/L			911484	937531	0
V	51	0.011	ug/L	0.007	65	6527	6921	1
V-1	51	0.021	ug/L	0.002	10	44	440	8
Cr	52	0.004	ug/L	0.020	451	19340	19959	1
Cr	53	0.039	ug/L	0.007	18	112	183	6
Mn	55	6.172	ug/L	0.020	0	611	144863	0
Co	59	0.216	ug/L	0.004	1	132	3500	1
> Ge	72		ug/L			493057	498575	1
Ni	60	0.534	ug/L	0.019	3	43	1746	2
Ni	62	0.523	ug/L	0.008	1	50	290	2
Cu	63	60.013	ug/L	0.282	0	82	425938	1
Cu	65	58.958	ug/L	0.976	1	48	187034	0
Zn	66	158.655	ug/L	1.689	1	317	308378	1
Zn	67	138.828	ug/L	1.957	1	50	45682	0
Zn	68	150.047	ug/L	2.288	1	347	208955	1
As	75	0.059	ug/L	0.012	20	63	161	10
As-1	75	0.319	ug/L	0.102	32	9253	9883	0
Se	82	0.023	ug/L	0 023	101	0	4	98
Se	78	1.032	ug/L	0.334	32	9393	9982	0
Mo	98	0.028	ug/L	0.004	15	6	107	14
Y	89		ug/L			311395	320366	0
Kr	83		ug/L			297	358	2
> In	115		ug/L			657061	680591	1
Ag	107	0.004	ug/L	0.001	26	12	40	17
Cd	111	0.895	ug/L	0.016	1	59	2899	2
Cd	114	0.919	ug/L	0.021	2	11	7393	2
Sb	121	0.099	ug/L	0.008	7	23	927	6
Sb	123	0.096	ug/L	0.007	7	14	670	6
Ba	135	2.672	ug/L	0.106	3	11	8193	2
Ba	137	2.654	ug/L	0.019	0	16	14085	1
> Tb	159		ug/L			775527	810725	0
Tl	205	0.015	ug/L	0.003	19	29	449	17
Pb	208	0.051	ug/L	0.002	3	91	1856	3
Bi	209		ug/L			1757049	1816443	0
Th	232	0.030	ug/L	0.005	15	25	1122	14
U	238	0.009	ug/L	0.000	4	2	359	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WT51 A REN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, June 18, 2013 12:39:27
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			1192070	1151733	1
	Be	9	0.003	ug/L	0.001	19	8	19	10
	C	13		ug/L			82220	85297	2
	Cl	37		ug/L			3880679	3834864	1
>	Sc	45		ug/L			911484	927270	2
	V	51	0.002	ug/L	0.003	129	6527	6682	1
	V-1	51	0.012	ug/L	0.000	0	44	261	2
	Cr	52	-0.014	ug/L	0.025	179	19340	19460	0
	Cr	53	0.019	ug/L	0.015	78	112	145	15
	Mn	55	5.951	ug/L	0.168	2	611	138105	0
	Co	59	0.203	ug/L	0.003	1	132	3256	1
>	Ge	72		ug/L			493057	494110	0
	Ni	60	0.488	ug/L	0.012	2	43	1584	1
	Ni	62	0.460	ug/L	0.042	9	50	259	7
	Cu	63	57.528	ug/L	0.418	0	82	404639	0
	Cu	65	57.590	ug/L	1.119	1	48	181074	1
	Zn	66	153.386	ug/L	3.927	2	317	295467	2
	Zn	67	135.492	ug/L	0.324	0	50	44192	0
	Zn	68	146.947	ug/L	2.891	1	347	202816	1
	As	75	0.059	ug/L	0.027	45	63	159	27
	As-1	75	0.380	ug/L	0.060	15	9253	9895	0
	Se	82	0.016	ug/L	0.050	306	0	2	289
	Se	78	1.257	ug/L	0.220	17	9393	9998	0
	Mo	98	0.015	ug/L	0.002	9	6	62	9
	Y	89		ug/L			311395	318706	1
	Kr	83		ug/L			297	365	5
>	In	115		ug/L			657061	678343	0
	Ag	107	0.001	ug/L	0.001	72	12	22	31
	Cd	111	0.875	ug/L	0.024	2	59	2829	2
	Cd	114	0.887	ug/L	0.009	1	11	7115	0
	Sb	121	0.033	ug/L	0.005	14	23	324	13
	Sb	123	0.034	ug/L	0.005	13	14	243	12
	Ba	135	2.544	ug/L	0.027	1	11	7777	1
	Ba	137	2.569	ug/L	0.020	0	16	13591	0
>	Tb	159		ug/L			775527	799812	0
	Tl	205	0.009	ug/L	0.001	10	29	273	9
	Pb	208	0.049	ug/L	0.000	0	91	1767	0
	Bi	209		ug/L			1757049	1797717	1
	Th	232	0.008	ug/L	0.001	11	25	326	9
	U	238	0.007	ug/L	0.000	2	2	247	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WT51 ASPK REN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, June 18, 2013 12:43:34
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1124363	1
	Be	9	2.635	ug/L	0.003	0	8	9277	1
	C	13		ug/L			82220	83188	3
	Cl	37		ug/L			3880679	3828721	0
>	Sc	45		ug/L			911484	914219	0
	V	51	2.544	ug/L	0.045	1	6527	52736	1
	V-1	51	2.569	ug/L	0.026	1	44	46611	0
	Cr	52	2.552	ug/L	0.043	1	19340	58094	0
	Cr	53	2.637	ug/L	0.102	3	112	4605	3
	Mn	55	8.769	ug/L	0.126	1	611	200436	1
	Co	59	2.788	ug/L	0.034	1	132	42496	0
>	Ge	72		ug/L			493057	490174	1
	Ni	60	3.193	ug/L	0.056	1	43	10054	0
	Ni	62	2.972	ug/L	0.089	2	50	1383	1
	Cu	63	62.524	ug/L	1.015	1	82	436193	0
	Cu	65	62.382	ug/L	1.650	2	48	194563	2
	Zn	66	170.461	ug/L	1.539	0	317	325702	1
	Zn	67	149.132	ug/L	2.814	1	50	48240	1
	Zn	68	160.193	ug/L	1.982	1	347	219302	1
	As	75	2.666	ug/L	0.066	2	63	4332	2
	As-1	75	3.026	ug/L	0.134	4	9253	14116	0
	Se	82	8.711	ug/L	0 190	2	0	1484	2
	Se	78	9.627	ug/L	0.512	5	9393	13787	0
	Mo	98	0.014	ug/L	0.001	9	6	58	8
	Y	89		ug/L			311395	311156	1
	Kr	83		ug/L			297	338	4
>	In	115		ug/L			657061	668059	0
	Ag	107	2.486	ug/L	0.034	1	12	17176	1
	Cd	111	3.494	ug/L	0.044	1	59	10940	1
	Cd	114	3.562	ug/L	0.069	1	11	28089	1
	Sb	121	0.023	ug/L	0.004	18	23	227	16
	Sb	123	0.024	ug/L	0.002	6	14	175	6
	Ba	135	5.223	ug/L	0.133	2	11	15715	2
	Ba	137	5.152	ug/L	0.059	1	16	26824	0
>	Tb	159		ug/L			775527	793517	0
	Tl	205	2.442	ug/L	0.027	1	29	67983	0
	Pb	208	2.694	ug/L	0.037	1	91	90885	0
	Bi	209		ug/L			1757049	1797198	0
	Th	232	2.254	ug/L	0.039	1	25	80432	0
	U	238	2.396	ug/L	0.033	1	2	89669	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WT51 B REN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, June 18, 2013 12:47:41
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1132785	2
	Be	9	0.008	ug/L	0.007	94	8	36	76
	C	13		ug/L			82220	82932	0
	Cl	37		ug/L			3880679	3712370	0
>	Sc	45		ug/L			911484	914110	1
	V	51	0.010	ug/L	0.020	197	6527	6731	6
	V-1	51	0.020	ug/L	0.016	80	44	402	72
	Cr	52	-0.011	ug/L	0.023	210	19340	19230	2
	Cr	53	0.021	ug/L	0.006	26	112	149	8
	Mn	55	6.051	ug/L	0.165	2	611	138433	1
	Co	59	0.211	ug/L	0.009	4	132	3344	5
>	Ge	72		ug/L			493057	487512	1
	Ni	60	0.515	ug/L	0.008	1	43	1648	0
	Ni	62	0.464	ug/L	0.006	1	50	257	1
	Cu	63	59.017	ug/L	0.030	0	82	409565	1
	Cu	65	58.766	ug/L	0.617	1	48	182301	0
	Zn	66	157.310	ug/L	3.853	2	317	298923	1
	Zn	67	136.301	ug/L	1.898	1	50	43857	0
	Zn	68	149.992	ug/L	1.983	1	347	204241	0
	As	75	0.057	ug/L	0.016	27	63	153	17
	As-1	75	0.461	ug/L	0.049	10	9253	9893	0
	Se	82	0.033	ug/L	0.020	60	0	5	60
	Se	78	1.545	ug/L	0.205	13	9393	9997	0
	Mo	98	0.042	ug/L	0.048	115	6	157	111
	Y	89		ug/L			311395	313452	1
	Kr	83		ug/L			297	349	1
>	In	115		ug/L			657061	658112	0
	Ag	107	0.027	ug/L	0.043	157	12	197	148
	Cd	111	0.925	ug/L	0.032	3	59	2896	4
	Cd	114	0.937	ug/L	0.036	3	11	7290	3
	Sb	121	0.032	ug/L	0.020	61	23	311	57
	Sb	123	0.030	ug/L	0.019	63	14	211	59
	Ba	135	2.762	ug/L	0.079	2	11	8191	3
	Ba	137	2.758	ug/L	0.013	0	16	14152	1
>	Tb	159		ug/L			775527	785827	0
	Tl	205	0.016	ug/L	0.014	87	29	479	81
	Pb	208	0.053	ug/L	0.014	26	91	1869	25
	Bi	209		ug/L			1757049	1807147	0
	Th	232	0.036	ug/L	0.011	31	25	1312	31
	U	238	0.011	ug/L	0.008	72	2	419	72

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WT30 J REN
Sample Dil Factor: 10000
Comments:
Sample Date/Time: Tuesday, June 18, 2013 12:51:48
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1134895	1
	Be	9	0.002	ug/L	0.001	42	8	16	22
	C	13		ug/L			82220	84055	2
	Cl	37		ug/L			3880679	3804726	1
>	Sc	45		ug/L			911484	912406	1
	V	51	0.029	ug/L	0.012	41	6527	7055	2
	V-1	51	0.038	ug/L	0.004	9	44	729	8
	Cr	52	-0.006	ug/L	0.029	479	19340	19265	1
	Cr	53	0.024	ug/L	0.011	45	112	153	12
	Mn	55	2.300	ug/L	0.048	2	611	52921	1
	Co	59	0.115	ug/L	0.003	2	132	1869	1
>	Ge	72		ug/L			493057	490042	1
	Ni	60	0.035	ug/L	0.002	5	43	153	3
	Ni	62	0.041	ug/L	0.018	42	50	69	12
	Cu	63	1.477	ug/L	0.014	0	82	10384	0
	Cu	65	1.495	ug/L	0.031	2	48	4709	3
	Zn	66	95.300	ug/L	1.742	1	317	182171	0
	Zn	67	85.552	ug/L	2.256	2	50	27686	1
	Zn	68	90.480	ug/L	1.844	2	347	123974	0
	As	75	0.032	ug/L	0.034	107	63	114	47
	As-1	75	0.426	ug/L	0.091	21	9253	9888	0
	Se	82	0.002	ug/L	0.021	1054	0	0	733
	Se	78	1.486	ug/L	0.289	19	9393	10021	0
	Mo	98	0.001	ug/L	0.000	26	6	11	12
	Y	89		ug/L			311395	307993	1
	Kr	83		ug/L			297	354	2
>	In	115		ug/L			657061	662328	0
	Ag	107	0.003	ug/L	0.001	31	12	31	20
	Cd	111	0.364	ug/L	0.014	3	59	1183	3
	Cd	114	0.377	ug/L	0.005	1	11	2960	1
	Sb	121	0.005	ug/L	0.001	19	23	72	12
	Sb	123	0.006	ug/L	0.001	22	14	53	15
	Ba	135	0.007	ug/L	0.001	13	11	32	9
	Ba	137	0.009	ug/L	0.002	25	16	61	18
>	Tb	159		ug/L			775527	789516	0
	Tl	205	0.001	ug/L	0.000	35	29	63	19
	Pb	208	0.014	ug/L	0.001	6	91	564	5
	Bi	209		ug/L			1757049	1789141	0
	Th	232	0.007	ug/L	0.001	17	25	277	15
	U	238	0.016	ug/L	0.000	1	2	612	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 12:57:01
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1143331	2
	Be	9	49.961	ug/L	1.088	2	8	178682	0
	C	13		ug/L			82220	80867	1
	Cl	37		ug/L			3880679	4094037	1
>	Sc	45		ug/L			911484	910836	0
	V	51	49.418	ug/L	0.486	0	6527	900409	0
	V-1	51	49.617	ug/L	0.604	1	44	896081	0
	Cr	52	49.491	ug/L	0.455	0	19340	766869	1
	Cr	53	50.165	ug/L	0.549	1	112	85272	0
	Mn	55	46.357	ug/L	0.867	1	611	1052902	0
	Co	59	49.053	ug/L	1.198	2	132	742574	1
>	Ge	72		ug/L			493057	487690	1
	Ni	60	50.475	ug/L	0.603	1	43	157510	0
	Ni	62	49.054	ug/L	0.880	1	50	21944	0
	Cu	63	49.705	ug/L	1.144	2	82	345023	1
	Cu	65	50.021	ug/L	0.951	1	48	155224	0
	Zn	66	50.931	ug/L	0.602	1	317	97042	0
	Zn	67	50.703	ug/L	0.525	1	50	16352	0
	Zn	68	50.806	ug/L	2.117	4	347	69425	3
	As	75	50.456	ug/L	0.684	1	63	80463	0
	As-1	75	50.750	ug/L	0.826	1	9253	91237	0
	Se	82	51.761	ug/L	0.193	0	0	8775	0
	Se	78	52.215	ug/L	0.791	1	9393	33312	0
	Mo	98	50.695	ug/L	0.681	1	6	182312	0
	Y	89		ug/L			311395	310688	0
	Kr	83		ug/L			297	365	3
>	In	115		ug/L			657061	645732	0
	Ag	107	48.793	ug/L	0.933	1	12	325673	1
	Cd	111	50.819	ug/L	0.160	0	59	153018	1
	Cd	114	51.884	ug/L	0.611	1	11	395386	1
	Sb	121	50.976	ug/L	0.477	0	23	442804	1
	Sb	123	50.774	ug/L	0.563	1	14	330583	0
	Ba	135	50.626	ug/L	0.557	1	11	147118	0
	Ba	137	50.903	ug/L	0.816	1	16	256018	0
>	Tb	159		ug/L			775527	788970	1
	Tl	205	47.014	ug/L	0.936	1	29	1300366	0
	Pb	208	51.108	ug/L	1.136	2	91	1712465	0
	Bi	209		ug/L			1757049	1737590	0
	Th	232	47.637	ug/L	1.901	3	25	1689228	2
	U	238	47.004	ug/L	0.805	1	2	1748525	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, June 18, 2013 13:03:54
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1130264	1
	Be	9	0.002	ug/L	0.002	71	8	16	37
	C	13		ug/L			82220	82198	0
	Cl	37		ug/L			3880679	4001873	1
>	Sc	45		ug/L			911484	893701	1
	V	51	-0.007	ug/L	0.010	135	6527	6271	3
	V-1	51	0.003	ug/L	0.000	9	44	103	4
	Cr	52	-0.032	ug/L	0.031	96	19340	18482	2
	Cr	53	0.004	ug/L	0.009	234	112	116	11
	Mn	55	0.008	ug/L	0.002	32	611	766	5
	Co	59	0.002	ug/L	0.001	29	132	157	4
>	Ge	72		ug/L			493057	476435	3
	Ni	60	-0.003	ug/L	0.002	59	43	31	17
	Ni	62	0.013	ug/L	0.011	84	50	54	5
	Cu	63	0.004	ug/L	0.003	62	82	108	14
	Cu	65	0.001	ug/L	0.002	108	48	50	7
	Zn	66	-0.013	ug/L	0.011	85	317	283	8
	Zn	67	0.021	ug/L	0.037	176	50	55	21
	Zn	68	-0.023	ug/L	0.018	76	347	304	7
	As	75	0.034	ug/L	0.009	27	63	114	11
	As-1	75	0.444	ug/L	0.179	40	9253	9636	0
	Se	82	-0.018	ug/L	0.003	18	0	-2	22
	Se	78	1.525	ug/L	0.631	41	9393	9756	0
	Mo	98	0.010	ug/L	0.002	23	6	40	18
	Y	89		ug/L			311395	305694	0
	Kr	83		ug/L			297	346	0
>	In	115		ug/L			657061	647527	0
	Ag	107	0.002	ug/L	0.001	30	12	26	17
	Cd	111	0.000	ug/L	0.003	31310	59	58	16
	Cd	114	0.003	ug/L	0.001	33	11	33	22
	Sb	121	0.091	ug/L	0.019	20	23	817	19
	Sb	123	0.095	ug/L	0.020	20	14	635	19
	Ba	135	0.002	ug/L	0.000	20	11	16	7
	Ba	137	0.001	ug/L	0.001	35	16	23	11
>	Tb	159		ug/L			775527	777004	1
	Tl	205	0.006	ug/L	0.000	7	29	198	7
	Pb	208	0.003	ug/L	0.000	11	91	177	6
	Bi	209		ug/L			1757049	1753888	0
	Th	232	0.068	ug/L	0.002	2	25	2400	2
	U	238	0.003	ug/L	0.001	20	2	96	19

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R MB1 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 13:08:20
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1192070	1160528	2
[	Be	9	0.002	ug/L	0.001	62	8	15	30
	C	13		ug/L			82220	89954	1
	Cl	37		ug/L			3880679	3999301	4
[>	Sc	45		ug/L			911484	907230	2
[	V	51	0.002	ug/L	0.012	535	6527	6534	2
[	V-1	51	0.005	ug/L	0.000	6	44	133	3
[	Cr	52	0.014	ug/L	0.044	301	19340	19458	1
[	Cr	53	0.024	ug/L	0.006	26	112	152	4
[	Mn	55	0.011	ug/L	0.001	8	611	860	0
[	Co	59	-0.002	ug/L	0.001	51	132	106	9
[>	Ge	72		ug/L			493057	480166	1
[	Ni	60	0.008	ug/L	0.006	73	43	65	24
[	Ni	62	0.018	ug/L	0.008	47	50	57	4
[	Cu	63	0.020	ug/L	0.003	13	82	219	7
[	Cu	65	0.016	ug/L	0.009	55	48	94	27
[	Zn	66	0.537	ug/L	0.010	1	317	1312	2
[	Zn	67	0.437	ug/L	0.049	11	50	188	9
[	Zn	68	0.542	ug/L	0.045	8	347	1063	5
[	As	75	0.031	ug/L	0.006	20	63	110	7
[	As-1	75	0.466	ug/L	0.124	26	9253	9751	0
[	Se	82	-0.014	ug/L	0.046	323	0	-2	330
[	Se	78	1.611	ug/L	0.423	26	9393	9875	0
[	Mo	98	0.007	ug/L	0.002	24	6	32	19
	Y	89		ug/L			311395	308258	1
	Kr	83		ug/L			297	345	8
[>	In	115		ug/L			657061	666549	1
[	Ag	107	0.002	ug/L	0.001	49	12	26	25
[	Cd	111	-0.002	ug/L	0.002	83	59	52	9
[	Cd	114	0.002	ug/L	0.001	26	11	29	15
[	Sb	121	0.031	ug/L	0.002	7	23	300	7
[	Sb	123	0.031	ug/L	0.007	21	14	225	21
[	Ba	135	0.005	ug/L	0.001	23	11	25	13
[	Ba	137	0.007	ug/L	0.001	9	16	52	7
[>	Tb	159		ug/L			775527	794303	1
[	Tl	205	0.006	ug/L	0.000	3	29	195	3
[	Pb	208	0.010	ug/L	0.000	5	91	421	2
[	Bi	209		ug/L			1757049	1763856	1
[	Th	232	0.029	ug/L	0.004	13	25	1060	13
[	U	238	0.001	ug/L	0.000	16	2	42	14

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R MB2 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 13:12:28
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1182224	1
	Be	9	0.001	ug/L	0.001	82	8	13	33
	C	13		ug/L			82220	93709	2
	Cl	37		ug/L			3880679	3794247	1
>	Sc	45		ug/L			911484	922267	1
	V	51	0.033	ug/L	0.018	54	6527	7203	2
	V-1	51	0.030	ug/L	0.001	4	44	591	1
	Cr	52	0.076	ug/L	0.061	81	19340	20714	2
	Cr	53	0.066	ug/L	0.005	7	112	226	1
	Mn	55	0.050	ug/L	0.004	7	611	1761	3
	Co	59	0.000	ug/L	0.000	148	132	138	5
>	Ge	72		ug/L			493057	490156	0
	Ni	60	0.011	ug/L	0.001	10	43	77	5
	Ni	62	0.015	ug/L	0.011	77	50	57	9
	Cu	63	0.025	ug/L	0.003	11	82	254	8
	Cu	65	0.018	ug/L	0.006	30	48	105	16
	Zn	66	0.584	ug/L	0.039	6	317	1430	5
	Zn	67	0.526	ug/L	0.034	6	50	220	5
	Zn	68	0.621	ug/L	0.015	2	347	1194	2
	As	75	0.052	ug/L	0.029	56	63	145	31
	As-1	75	0.372	ug/L	0.051	13	9253	9803	0
	Se	82	0.060	ug/L	0.079	130	0	10	128
	Se	78	1.248	ug/L	0.171	13	9393	9914	0
	Mo	98	0.005	ug/L	0.002	42	6	22	30
	Y	89		ug/L			311395	317372	0
	Kr	83		ug/L			297	334	6
>	In	115		ug/L			657061	676023	2
	Ag	107	0.001	ug/L	0.000	13	12	20	5
	Cd	111	-0.002	ug/L	0.002	84	59	52	10
	Cd	114	0.002	ug/L	0.001	31	11	25	19
	Sb	121	0.024	ug/L	0.006	25	23	239	20
	Sb	123	0.023	ug/L	0.003	14	14	174	10
	Ba	135	0.153	ug/L	0.009	6	11	478	6
	Ba	137	0.149	ug/L	0.006	4	16	801	3
>	Tb	159		ug/L			775527	791502	2
	Tl	205	0.002	ug/L	0.000	16	29	97	9
	Pb	208	0.034	ug/L	0.001	4	91	1242	2
	Bi	209		ug/L			1757049	1780926	0
	Th	232	0.020	ug/L	0.001	4	25	738	6
	U	238	0.001	ug/L	0 000	7	2	52	5

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R ADUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 13:16:35
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1215907	2
	Be	9	0.278	ug/L	0.006	2	8	1067	3
	C	13		ug/L			82220	96391	1
	Cl	37		ug/L			3880679	4232318	2
>	Sc	45		ug/L			911484	1211964	1
	V	51	69.762	ug/L	0.941	1	6527	1687745	1
	V-1	51	70.142	ug/L	0.982	1	44	1685544	1
	Cr	52	33.855	ug/L	0.515	1	19340	706126	1
	Cr	53	34.952	ug/L	0.934	2	112	79088	1
	Mn	55	381.819	ug/L	6.442	1	611	11534106	1
	Co	59	10.315	ug/L	0.203	1	132	207918	0
>	Ge	72		ug/L			493057	484299	1
	Ni	60	33.459	ug/L	0.114	0	43	103713	1
	Ni	62	37.292	ug/L	1.017	2	50	16577	1
	Cu	63	52.318	ug/L	0.260	0	82	360674	0
	Cu	65	52.723	ug/L	0.936	1	48	162510	2
	Zn	66	80.119	ug/L	0.807	1	317	151421	1
	Zn	67	84.590	ug/L	1.970	2	50	27066	3
	Zn	68	83.362	ug/L	0.705	0	347	112918	0
	As	75	5.059	ug/L	0.035	0	63	8068	1
	As-1	75	5.357	ug/L	0.073	1	9253	17692	0
	Se	82	0.414	ug/L	0.040	9	0	69	11
	Se	78	2.316	ug/L	0.138	5	9393	10283	0
	Mo	98	5.521	ug/L	0.050	0	6	19727	2
	Y	89		ug/L			311395	474810	0
	Kr	83		ug/L			297	651	1
>	In	115		ug/L			657061	657173	1
	Ag	107	0.099	ug/L	0.006	6	12	685	5
	Cd	111	0.154	ug/L	0.009	6	59	531	4
	Cd	114	0.115	ug/L	0.006	5	11	901	5
	Sb	121	1.830	ug/L	0.021	1	23	16202	2
	Sb	123	1.843	ug/L	0.017	0	14	12227	1
	Ba	135	133.952	ug/L	0.711	0	11	396146	1
	Ba	137	132.432	ug/L	1.482	1	16	677829	0
>	Tb	159		ug/L			775527	815952	1
	Tl	205	0.066	ug/L	0.005	7	29	1913	5
	Pb	208	4.012	ug/L	0.040	0	91	139127	0
	Bi	209		ug/L			1757049	1649917	0
	Th	232	0.868	ug/L	0.001	0	25	31857	1
	U	238	0.333	ug/L	0.009	2	2	12807	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 13:20:42
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1231812	1
	Be	9	0.287	ug/L	0.006	2	8	1114	1
	C	13		ug/L			82220	101457	1
	Cl	37		ug/L			3880679	4171181	3
>	Sc	45		ug/L			911484	1242339	1
	V	51	68.861	ug/L	1.953	2	6527	1707316	1
	V-1	51	69.234	ug/L	1.893	2	44	1705022	1
	Cr	52	33.413	ug/L	0.295	0	19340	714671	1
	Cr	53	34.491	ug/L	0.380	1	112	80024	2
	Mn	55	369.783	ug/L	4.708	1	611	11449890	1
	Co	59	9.899	ug/L	0.118	1	132	204548	0
>	Ge	72		ug/L			493057	499929	1
	Ni	60	32.414	ug/L	0.886	2	43	103700	2
	Ni	62	34.778	ug/L	0.687	1	50	15963	1
	Cu	63	50.644	ug/L	0.320	0	82	360395	1
	Cu	65	50.104	ug/L	0.291	0	48	159398	1
	Zn	66	76.565	ug/L	1.321	1	317	149369	0
	Zn	67	81.111	ug/L	1.835	2	50	26781	1
	Zn	68	80.158	ug/L	2.446	3	347	112069	1
	As	75	4.850	ug/L	0.020	0	63	7987	1
	As-1	75	5.104	ug/L	0.089	1	9253	17845	1
	Se	82	0.248	ug/L	0.019	7	0	43	7
	Se	78	2.135	ug/L	0.292	13	9393	10529	0
	Mo	98	5.426	ug/L	0.107	1	6	20006	1
	Y	89		ug/L			311395	482900	1
	Kr	83		ug/L			297	754	6
>	In	115		ug/L			657061	682863	0
	Ag	107	0.101	ug/L	0.003	2	12	723	1
	Cd	111	0.158	ug/L	0.015	9	59	564	9
	Cd	114	0.101	ug/L	0.002	2	11	823	2
	Sb	121	1.973	ug/L	0.046	2	23	18150	2
	Sb	123	1.999	ug/L	0.034	1	14	13778	0
	Ba	135	129.821	ug/L	0.781	0	11	398960	1
	Ba	137	129.299	ug/L	0.624	0	16	687724	0
>	Tb	159		ug/L			775527	842763	1
	Tl	205	0.068	ug/L	0.002	2	29	2026	1
	Pb	208	3.826	ug/L	0.071	1	91	137048	0
	Bi	209		ug/L			1757049	1675155	0
	Th	232	0.812	ug/L	0.021	2	25	30800	1
	U	238	0.321	ug/L	0.010	3	2	12759	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R ASPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 13:24:50
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1192070	1322743	0
	Be	9	22.294	ug/L	0.555	2	8	92275	2
	C	13		ug/L			82220	99839	1
	Cl	37		ug/L			3880679	4389718	2
>	Sc	45		ug/L			911484	1305071	0
	V	51	92.979	ug/L	1.841	1	6527	2419022	1
	V-1	51	93.060	ug/L	2.083	2	44	2408013	1
	Cr	52	51.400	ug/L	0.236	0	19340	1140117	0
	Cr	53	51.452	ug/L	0.585	1	112	125312	0
	Mn	55	384.232	ug/L	6.563	1	611	12498739	1
	Co	59	27.969	ug/L	0.424	1	132	606817	1
>	Ge	72		ug/L			493057	515253	1
	Ni	60	56.589	ug/L	0.659	1	43	186572	0
	Ni	62	58.260	ug/L	0.887	1	50	27527	0
	Cu	63	74.140	ug/L	0.498	0	82	543750	0
	Cu	65	73.435	ug/L	0.766	1	48	240761	0
	Zn	66	148.416	ug/L	3.625	2	317	298138	2
	Zn	67	144.220	ug/L	2.432	1	50	49044	1
	Zn	68	148.392	ug/L	0.740	0	347	213578	0
	As	75	27.974	ug/L	0.351	1	63	47163	0
	As-1	75	28.657	ug/L	0.632	2	9253	58639	1
	Se	82	73.518	ug/L	0.666	0	0	13168	1
	Se	78	73.349	ug/L	0.922	1	9393	45468	0
	Mo	98	29.478	ug/L	0.489	1	6	112005	0
	Y	89		ug/L			311395	503258	1
	Kr	83		ug/L			297	743	3
>	In	115		ug/L			657061	711446	1
	Ag	107	22.194	ug/L	0.803	3	12	163198	2
	Cd	111	22.958	ug/L	0.800	3	59	76176	2
	Cd	114	23.416	ug/L	0.196	0	11	196603	0
	Sb	121	9.811	ug/L	0.291	2	23	93895	1
	Sb	123	9.674	ug/L	0.153	1	14	69407	0
	Ba	135	147.982	ug/L	1.905	1	11	473770	0
	Ba	137	148.451	ug/L	2.106	1	16	822594	0
>	Tb	159		ug/L			775527	875746	1
	Tl	205	21.674	ug/L	0.468	2	29	665398	0
	Pb	208	27.256	ug/L	0.566	2	91	1013746	0
	Bi	209		ug/L			1757049	1753193	0
	Th	232	22.199	ug/L	0.290	1	25	873998	0
	U	238	22.178	ug/L	0.489	2	2	915681	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R EDUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 13:28:57
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1292890	2
	Be	9	0.001	ug/L	0.000	32	8	15	11
	C	13		ug/L			82220	103925	2
	Cl	37		ug/L			3880679	4419533	3
>	Sc	45		ug/L			911484	1059487	1
	V	51	24.817	ug/L	0.474	1	6527	529647	0
	V-1	51	24.995	ug/L	0.423	1	44	525032	0
	Cr	52	11.471	ug/L	0.311	2	19340	223952	1
	Cr	53	12.004	ug/L	0.236	1	112	23830	0
	Mn	55	0.427	ug/L	0.012	2	611	11982	3
	Co	59	0.126	ug/L	0.002	1	132	2378	1
>	Ge	72		ug/L			493057	515249	1
	Ni	60	0.498	ug/L	0.004	0	43	1686	0
	Ni	62	0.277	ug/L	0.039	14	50	183	9
	Cu	63	2.663	ug/L	0.040	1	82	19614	0
	Cu	65	2.368	ug/L	0.105	4	48	7811	3
	Zn	66	1.100	ug/L	0.058	5	317	2537	3
	Zn	67	1.894	ug/L	0.127	6	50	696	5
	Zn	68	1.910	ug/L	0.058	3	347	3108	3
	As	75	2.546	ug/L	0.039	1	63	4353	1
	As-1	75	2.828	ug/L	0.117	4	9253	14501	0
	Se	82	0.547	ug/L	0.061	11	0	98	10
	Se	78	1.733	ug/L	0.327	18	9393	10657	0
	Mo	98	5.641	ug/L	0.141	2	6	21435	1
	Y	89		ug/L			311395	341780	1
	Kr	83		ug/L			297	373	6
>	In	115		ug/L			657061	722302	2
	Ag	107	0.005	ug/L	0.001	13	12	51	12
	Cd	111	0.018	ug/L	0.003	14	59	127	8
	Cd	114	0.021	ug/L	0.001	5	11	194	2
	Sb	121	4.447	ug/L	0.109	2	23	43220	0
	Sb	123	4.395	ug/L	0.149	3	14	32007	1
	Ba	135	4.025	ug/L	0.063	1	11	13092	0
	Ba	137	4.000	ug/L	0.104	2	16	22513	0
>	Tb	159		ug/L			775527	863653	1
	Tl	205	0.017	ug/L	0.001	3	29	538	2
	Pb	208	0.024	ug/L	0.001	4	91	982	4
	Bi	209		ug/L			1757049	1796464	0
	Th	232	0.044	ug/L	0.005	11	25	1751	12
	U	238	0.078	ug/L	0.000	0	2	3174	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R E REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 13:33:04
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: C:\NexION Data\System\061813.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1192070	1273987	2
Be	9	0.002	ug/L	0.001	67	8	16	28
C	13		ug/L			82220	101116	0
Cl	37		ug/L			3880679	4602890	1
> Sc	45		ug/L			911484	1043580	2
V	51	24.548	ug/L	0.593	2	6527	516044	0
V-1	51	24.835	ug/L	0.637	2	44	513730	0
Cr	52	11.318	ug/L	0.322	2	19340	217922	0
Cr	53	12.222	ug/L	0.514	4	112	23885	1
Mn	55	0.325	ug/L	0.014	4	611	9143	1
Co	59	0.124	ug/L	0.003	2	132	2305	0
> Ge	72		ug/L			493057	510224	2
Ni	60	0.470	ug/L	0.024	5	43	1577	3
Ni	62	0.287	ug/L	0.015	5	50	186	5
Cu	63	2.633	ug/L	0.062	2	82	19201	1
Cu	65	2.360	ug/L	0.113	4	48	7706	2
Zn	66	1.194	ug/L	0.047	3	317	2700	1
Zn	67	1.947	ug/L	0.077	3	50	707	4
Zn	68	1.995	ug/L	0.112	5	347	3195	3
As	75	2.568	ug/L	0.019	0	63	4347	2
As-1	75	2.758	ug/L	0.081	2	9253	14240	1
Se	82	0.762	ug/L	0.024	3	0	135	1
Se	78	1.603	ug/L	0.343	21	9393	10489	0
Mo	98	5.567	ug/L	0.145	2	6	20946	0
Y	89		ug/L			311395	339275	2
Kr	83		ug/L			297	363	4
> In	115		ug/L			657061	716395	1
Ag	107	0.003	ug/L	0.001	55	12	32	31
Cd	111	0.023	ug/L	0.005	19	59	142	11
Cd	114	0.022	ug/L	0.002	9	11	194	8
Sb	121	4.453	ug/L	0.054	1	23	42929	0
Sb	123	4.448	ug/L	0.125	2	14	32142	1
Ba	135	3.977	ug/L	0.080	2	11	12832	1
Ba	137	3.973	ug/L	0.039	0	16	22188	0
> Tb	159		ug/L			775527	868369	0
Tl	205	0.018	ug/L	0.000	0	29	572	0
Pb	208	0.025	ug/L	0.001	3	91	1008	2
Bi	209		ug/L			1757049	1803268	0
Th	232	0.011	ug/L	0.002	14	25	449	12
U	238	0.074	ug/L	0.002	2	2	3032	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R ESPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 13:37:12
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\061813.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1192070	1260389	2
Be	9	23.290	ug/L	0.557	2	8	91830	1
C	13		ug/L			82220	100925	1
Cl	37		ug/L			3880679	4413719	1
> Sc	45		ug/L			911484	1027843	0
V	51	47.008	ug/L	0.630	1	6527	966857	0
V-1	51	47.236	ug/L	0.623	1	44	962681	0
Cr	52	34.233	ug/L	0.545	1	19340	605253	0
Cr	53	34.939	ug/L	0.466	1	112	67058	0
Mn	55	21.851	ug/L	0.109	0	611	560472	0
Co	59	22.914	ug/L	0.439	1	132	391538	1
> Ge	72		ug/L			493057	506441	1
Ni	60	25.387	ug/L	0.262	1	43	82290	0
Ni	62	24.430	ug/L	0.576	2	50	11374	1
Cu	63	27.231	ug/L	0.300	1	82	196361	1
Cu	65	26.495	ug/L	0.692	2	48	85400	1
Zn	66	75.699	ug/L	1.098	1	317	149621	1
Zn	67	68.844	ug/L	1.172	1	50	23036	0
Zn	68	73.652	ug/L	0.784	1	347	104366	0
As	75	26.183	ug/L	0.530	2	63	43390	1
As-1	75	27.036	ug/L	0.698	2	9253	54910	0
Se	82	73.163	ug/L	0.920	1	0	12880	0
Se	78	72.994	ug/L	1.502	2	9393	44518	0
Mo	98	30.753	ug/L	0.869	2	6	114838	1
Y	89		ug/L			311395	330787	1
Kr	83		ug/L			297	412	6
> In	115		ug/L			657061	703267	1
Ag	107	23.253	ug/L	0.336	1	12	169039	1
Cd	111	23.288	ug/L	0.240	1	59	76399	1
Cd	114	23.766	ug/L	0.428	1	11	197233	0
Sb	121	27.287	ug/L	0.185	0	23	258150	0
Sb	123	27.775	ug/L	0.518	1	14	196949	0
Ba	135	28.830	ug/L	0.462	1	11	91243	0
Ba	137	28.477	ug/L	0.385	1	16	155998	1
> Tb	159		ug/L			775527	853203	0
Tl	205	22.283	ug/L	0 225	1	29	666629	0
Pb	208	24.182	ug/L	0.172	0	91	876455	0
Bi	209		ug/L			1757049	1790751	0
Th	232	21.542	ug/L	0.230	1	25	826390	0
U	238	22.353	ug/L	0.217	0	2	899337	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R MB1SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 13:41:19
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	**Li**	**6**		ug/L			1192070	1224240	1
	Be	**9**	**24.968**	ug/L	0.071	0	8	95651	1
	C	**13**		ug/L			82220	94671	3
	Cl	**37**		ug/L			3880679	4305699	2
>	**Sc**	**45**		ug/L			911484	955760	1
	V	**51**	**25.439**	ug/L	0.648	2	6527	489596	1
	V-1	**51**	**25.494**	ug/L	0.678	2	44	483065	1
	Cr	**52**	**25.799**	ug/L	0.287	1	19340	429147	0
	Cr	**53**	**25.987**	ug/L	0.370	1	112	46404	0
	Mn	**55**	**24.076**	ug/L	0.614	2	611	574091	1
	Co	**59**	**25.615**	ug/L	0.669	2	132	406912	1
>	**Ge**	**72**		ug/L			493057	496735	0
	Ni	**60**	**27.297**	ug/L	0.190	0	43	86790	0
	Ni	**62**	**26.144**	ug/L	0.638	2	50	11937	2
	Cu	**63**	**27.327**	ug/L	0.330	1	82	193275	1
	Cu	**65**	**27.046**	ug/L	0.334	1	48	85521	1
	Zn	**66**	**84.780**	ug/L	1.321	1	317	164332	1
	Zn	**67**	**76.319**	ug/L	1.093	1	50	25046	1
	Zn	**68**	**82.165**	ug/L	0.574	0	347	114168	0
	As	**75**	**25.594**	ug/L	0.443	1	63	41608	1
	As-1	**75**	**26.372**	ug/L	0.225	0	9253	52774	0
	Se	**82**	**83.103**	ug/L	1.197	1	0	14350	1
	Se	**78**	**81.900**	ug/L	0.349	0	9393	47844	0
	Mo	**98**	**26.115**	ug/L	0.429	1	6	95670	1
	Y	**89**		ug/L			311395	325626	1
	Kr	**83**		ug/L			297	342	1
>	**In**	**115**		ug/L			657061	702346	0
	Ag	**107**	**25.186**	ug/L	0.553	2	12	182852	1
	Cd	**111**	**25.690**	ug/L	0.126	0	59	84167	1
	Cd	**114**	**25.538**	ug/L	0.446	1	11	211689	2
	Sb	**121**	**25.032**	ug/L	0.098	0	23	236516	0
	Sb	**123**	**24.905**	ug/L	0.079	0	14	176388	0
	Ba	**135**	**25.283**	ug/L	0.193	0	11	79923	0
	Ba	**137**	**25.520**	ug/L	0.138	0	16	139626	0
>	**Tb**	**159**		ug/L			775527	819310	1
	Tl	**205**	**24.763**	ug/L	0.182	0	29	711387	0
	Pb	**208**	**26.937**	ug/L	0.185	0	91	937501	0
	Bi	**209**		ug/L			1757049	1831732	0
	Th	**232**	**22.255**	ug/L	0.223	1	25	819824	0
	U	**238**	**24.133**	ug/L	0.132	0	2	932362	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90R MB2SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Tuesday, June 18, 2013 13:45:26
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\061813.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1192070	1205126	0
	Be	9	24.775	ug/L	0.587	2	8	93428	2
	C	13		ug/L			82220	94646	2
	Cl	37		ug/L			3880679	4241839	2
>	Sc	45		ug/L			911484	958717	0
	V	51	24.928	ug/L	0.431	1	6527	481446	1
	V-1	51	25.094	ug/L	0.346	1	44	477037	0
	Cr	52	25.349	ug/L	0.553	2	19340	423326	1
	Cr	53	25.916	ug/L	0.330	1	112	46425	0
	Mn	55	23.842	ug/L	0.200	0	611	570381	1
	Co	59	25.113	ug/L	0.383	1	132	400255	1
>	Ge	72		ug/L			493057	494039	0
	Ni	60	26.807	ug/L	0.234	0	43	84765	0
	Ni	62	26.228	ug/L	0.726	2	50	11910	2
	Cu	63	26.918	ug/L	0.385	1	82	189336	0
	Cu	65	26.548	ug/L	0.276	1	48	83489	0
	Zn	66	80.650	ug/L	0.510	0	317	155493	1
	Zn	67	72.793	ug/L	1.572	2	50	23761	2
	Zn	68	78.246	ug/L	1.848	2	347	108158	2
	As	75	24.436	ug/L	0.452	1	63	39508	0
	As-1	75	25.165	ug/L	0 512	2	9253	50504	0
	Se	82	76.758	ug/L	1.131	1	0	13181	0
	Se	78	75.752	ug/L	1.536	2	9393	44715	0
	Mo	98	26.056	ug/L	0.199	0	6	94941	1
	Y	89		ug/L			311395	317759	1
	Kr	83		ug/L			297	353	2
>	In	115		ug/L			657061	699711	0
	Ag	107	24.932	ug/L	0.168	0	12	180341	0
	Cd	111	24.850	ug/L	0.588	2	59	81113	2
	Cd	114	24.933	ug/L	0.164	0	11	205897	0
	Sb	121	24.498	ug/L	0.189	0	23	230603	0
	Sb	123	24.559	ug/L	0.340	1	14	173289	1
	Ba	135	25.499	ug/L	0.151	0	11	80304	0
	Ba	137	25.216	ug/L	0.203	0	16	137446	0
>	Tb	159		ug/L			775527	829424	1
	Tl	205	23.877	ug/L	0.266	1	29	694388	0
	Pb	208	26.273	ug/L	0.215	0	91	925649	0
	Bi	209		ug/L			1757049	1807086	0
	Th	232	22.241	ug/L	0.272	1	25	829397	0
	U	238	23.361	ug/L	0.258	1	2	913663	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3 5
Sample Dil Factor: 6-18-13
Comments:
Sample Date/Time: Tuesday, June 18, 2013 13:50:39
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061813.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1192070	1161554	2
Be	9	50.161	ug/L	0.923	1	8	182273	1
C	13		ug/L			82220	86547	1
Cl	37		ug/L			3880679	4295179	1
> Sc	45		ug/L			911484	941816	1
V	51	47.887	ug/L	0.578	1	6527	902414	1
V-1	51	48.015	ug/L	0.381	0	44	896682	1
Cr	52	48.183	ug/L	0.528	1	19340	772458	0
Cr	53	48.618	ug/L	0.546	1	112	85454	0
Mn	55	45.328	ug/L	0.707	1	611	1064567	0
Co	59	48.094	ug/L	1.312	2	132	752746	1
> Ge	72		ug/L			493057	488642	1
Ni	60	50.543	ug/L	0.877	1	43	158017	0
Ni	62	48.688	ug/L	0.931	1	50	21823	1
Cu	63	49.383	ug/L	1.024	2	82	343437	0
Cu	65	49.091	ug/L	0.516	1	48	152646	1
Zn	66	49.965	ug/L	1.029	2	317	95378	0
Zn	67	49.791	ug/L	0.698	1	50	16090	1
Zn	68	50.313	ug/L	0.422	0	347	68897	0
As	75	50.534	ug/L	0.255	0	63	80749	1
As-1	75	50.662	ug/L	0.435	0	9253	91275	1
Se	82	51.766	ug/L	0.384	0	0	8792	0
Se	78	51.664	ug/L	1.061	2	9393	33120	0
Mo	98	50.240	ug/L	0.304	0	6	181037	1
Y	89		ug/L			311395	318585	1
Kr	83		ug/L			297	379	5
> In	115		ug/L			657061	675909	0
Ag	107	46.653	ug/L	1.111	2	12	325937	1
Cd	111	49.534	ug/L	0.651	1	59	156111	0
Cd	114	50.515	ug/L	0.992	1	11	402922	1
Sb	121	49.223	ug/L	0.378	0	23	447546	0
Sb	123	49.007	ug/L	0.340	0	14	334021	1
Ba	135	49.334	ug/L	0.994	2	11	150061	1
Ba	137	48.720	ug/L	1.220	2	16	256481	1
> Tb	159		ug/L			775527	818931	0
Tl	205	45.415	ug/L	0.099	0	29	1304090	0
Pb	208	49.398	ug/L	0.174	0	91	1718408	0
Bi	209		ug/L			1757049	1765642	1
Th	232	47.833	ug/L	1.523	3	25	1761142	2
U	238	45.148	ug/L	0.357	0	2	1743479	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB~~3~~ 5
Sample Dil Factor: 061813
Comments:
Sample Date/Time: Tuesday, June 18, 2013 13:57:32
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061813.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1192070	1144130	2
Be	9	0.004	ug/L	0.002	68	8	20	43
C	13		ug/L			82220	84996	2
Cl	37		ug/L			3880679	4162206	1
Sc	45		ug/L			911484	904861	0
V	51	-0.010	ug/L	0.010	92	6527	6295	2
V-1	51	0.006	ug/L	0.002	36	44	149	25
Cr	52	-0.049	ug/L	0.030	61	19340	18456	2
Cr	53	0.005	ug/L	0.005	86	112	120	6
Mn	55	0.009	ug/L	0.002	19	611	820	5
Co	59	0.001	ug/L	0.003	202	132	154	29
Ge	72		ug/L			493057	472365	0
Ni	60	-0.003	ug/L	0.002	73	43	34	17
Ni	62	0.027	ug/L	0.011	41	50	60	7
Cu	63	0.004	ug/L	0.001	24	82	103	6
Cu	65	0.002	ug/L	0.003	209	48	51	20
Zn	66	-0.022	ug/L	0.004	20	317	263	2
Zn	67	-0.021	ug/L	0.017	82	50	42	12
Zn	68	0.002	ug/L	0.013	788	347	335	5
As	75	0.044	ug/L	0.014	30	63	129	16
As-1	75	0.513	ug/L	0.066	12	9253	9667	0
Se	82	0.007	ug/L	0.033	491	0	1	435
Se	78	1.759	ug/L	0.247	14	9393	9782	0
Mo	98	0.011	ug/L	0.004	38	6	43	32
Y	89		ug/L			311395	302721	1
Kr	83		ug/L			297	346	3
In	115		ug/L			657061	663417	0
Ag	107	0.004	ug/L	0.001	16	12	39	11
Cd	111	0.003	ug/L	0.002	49	59	70	7
Cd	114	0.003	ug/L	0.001	39	11	35	27
Sb	121	0.097	ug/L	0.020	21	23	890	19
Sb	123	0.095	ug/L	0.014	15	14	647	14
Ba	135	0.001	ug/L	0.002	179	11	14	43
Ba	137	0.002	ug/L	0.001	43	16	25	15
Tb	159		ug/L			775527	785315	1
Tl	205	0.006	ug/L	0.000	6	29	205	6
Pb	208	0.003	ug/L	0.001	53	91	180	24
Bi	209		ug/L			1757049	1781172	1
Th	232	0.102	ug/L	0.004	4	25	3616	5
U	238	0.003	ug/L	0.000	16	2	111	15

Mercury Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: WS90, WS92

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: DM

Date: 6-11-13

Final Volume _____

Final Volume (Hg): 20

Sample ID W592 BSPK, MBISPK

	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	TLM	CVA	1.0	0.02	3007-14
Hg MBSPK	↓	CVA	1.0	0.04	↓
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.

Resources, Incorporated
Chemists and Consultants

SPIKING LOG

Analyst: DM

Date: 6-11-13

Final Volume _____

Final Volume (Hg): 20

Sample ID W592 FBPK, MBSPK
W598 MBSPK

	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	DLM	CVA	1.0	0.02	3007-14
Hg MBSPK	↓	CVA	1.0	0.04	↓
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: TLM | DLM
Analyst: DM
Bath Temp: 95°C
Start Time: 1040
Matrix: Water
Date: 6-11-13
End Time: 1240

ARI Sample ID	Sample Bottle #	pH<2	Initial ~~Weight (g)~~ Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WG92 A	1	√	20.0	20.0	4/20 1	(4)	
" B	1	√			1		
" BDUP	1	√			1		
" BSPK	1	√			1		
" C	1	√			1		
" D	1	√			1		
" MB1	—	√			1		
" MB1SPK	—	√			1		
" E	1	—			1		
" F	1	—			1		
" FDUP	1	—			1		
" FSPK	1	—			1		
" G	1	—			1		
" H	1	—			1		DLM
" MB2	—	—			1		
" MB2SPK	—	—			1	(4)	
WG98 A	1	—			4/7 1	N	
" MB	—	—			1	N	
" MBSPK	—	—	20.0	20.0	1	N	
				6-11-13 DM			

Chemical/Reagent ID:

HNO_3: IB1C9
H_2SO_4: IB044
HCl: —
5% $K_2S_2O_8$: MP24911
5% $KMnO_4$: MP2475
Digest Tube Lot: MM01LKK0

Mercury Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: WS90, WS92

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA (CVA)

Analysis Date: 6-11-13

Low Level	Analyst CB 6-11-13	Peer 6-11-13	Comment
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
ICV/CCV	✓	✓	
ICB/CCB	✓	✓	
RSD's & SD's	✓	✓	
Internal Standards	—	—	
Carry-over	—	—	
CRI/CRA	✓	✓	
ICSA/ICSAB	—	—	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
	—	—	

Mercury Analysis Log

Analyst: CB **Date:** 6-11-13

Instrument: CETAC **Page:** 1 of 3

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments
STD	0.0	TLM	1x		
"	20.0				
"	50.0				
"	100.0				
"	200.0				
"	400.0				
"	1000.0				
ICV				469.38	Begin CLP %R= 94 ✓
ICB				-1.23	✓
CCV1				490.02	%R= 98 ✓
CCB1				-1.61	✓
CRA				16.55	✓
WSO1	MB1			0.33	✓
"	MB1spk			181.45	%R=91 ✓
"	A			0.79	
"	Adup	↓		-0.15	No RPD: undetected ✓
"	Aspk	TLM		89.58	%R= 90 ✓
"	MB2	DLM		-1.23	✓
"	MB2spk			184.22	%R=92 ✓
"	B	↓		0.15	
"	Bdup	DLM		0.47	No RPD: undetected ✓
CCV2		TLM		496.20	%R= 99 ✓
CCB2		TLM		-0.83	✓
WSO1	Bspk	DLM		90.88	%R=91 ✓
CCV3		TLM		513.27 ~~496.2~~	CB 6/11/13 %R= 103 ✓
CCB3				-1.07	✓
WSO3	MB			-1.48	✓
"	MBSpk			183.05	%R=92 ✓
"	A				
"	B	↓	↓	-0.19	

Chemical/Reagent ID:

10% $SnCl_2$: MP2505 **14% NH_2OH/NaCl:** MP2477

Standard ID:

Standard: 3036-16 **ICV/CCV:** 3037-1

USGS : 09093

Mercury Analysis Log

Analyst: CB **Date:** 6-11-13

Instrument: CETAC **Page:** 2 of 3

ARI Sample ID		Prep Code	Dilution	QC Data (ppb) Abs	Comments
WS03	BBlp	TLM	1x	-0.41	No RPD: undetected ✓
"	BSpk			92.67	%R=83 ✓
"	C				
WS23	mB			-0.54	✓
"	mBSpk			190.18	%R=95 ✓
"	A				
CCV4				509.53	%R=102 ✓
CCB4				-1.55	✓
WS23	D			-0.22	
"	BDup			-1.19	No RPD: undetected ✓
"	BSpk			89.38	%R=89 ✓
"	E				
"	D				
"	F				
CCV5				510.99	%R=102 ✓
CCB5				-0.53	✓
WS92	mB1			-0.34	✓
"	mB1Spk			196.46	%R=98 ✓
"	A				
"	B			4.47	
"	BDup			3.15	No RPD: undetected ✓
"	BSpk			110.84	%R=111 ✓
"	C	↓			
"	D	TLM			
"	mB2	DLM		0.96	✓
"	mB2Spk	DLM		203.65	%R=101 ✓
CCV6		TLM		514.42	%R=103 ✓
CCB6		TLM		-0.92	✓
WS92	E	DLM			
"	F	DLM	↓	1.85	

Chemical/Reagent ID:

10% $SnCl_2$: mp2565 **14% NH_2OH/NaCl:** MP2477

Standard ID:

Standard: 3036-16 **ICV/CCV:** 3037-1

Mercury Analysis Log

Analyst: CB **Date:** 6-11-13

Instrument: CETAC **Page:** 3 of 3

ARI Sample ID	Prep Code	Dilution	QC Data (ppb) ppt	Comments
WS99 FDup	DLM	1x	1.78	ND: RPD undetected ✓
" FSpk	↓		106.69	%R = 107 ✓
" G	↓			
" H	DLM			
CCV	TLM		522.71	%R = 105 ✓
CCB7	TLM		-0.28	End CLP ✓
WS98 MB	DLM		-0.88	✓
" MBSpk	↓		216.08	%R = 108 ✓
" A	DLM			
CCV	TLM		525.7	%R = 105 ✓
CCB	TLM	↓	-1.00	✓
		CB. 6-11-13		

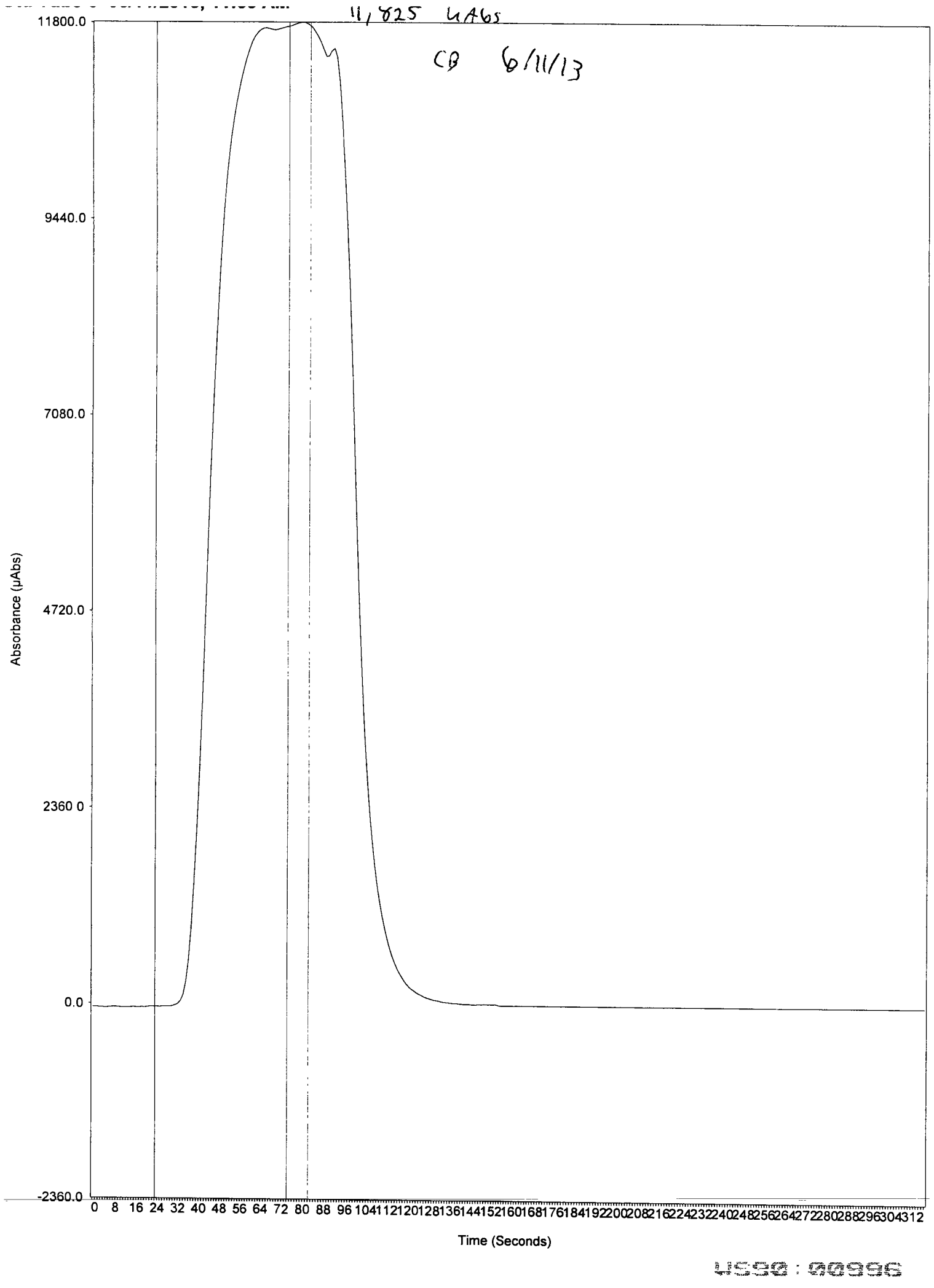
Chemical/Reagent ID:

10% $SnCl_2$: MP2505 **14% NH_2OH/NaCl:** MP2477

Standard ID:

Standard: 3036-1P **ICV/CCV:** 3037-1

WS98 : 88395


11,825 uAbs
CB 6/11/13
11800.0
9440.0
7080.0
4720.0
2360 0
0.0
-2360.0
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 - 13061100.DB - Tuesday, June 11, 2013, 3:08:19 PM

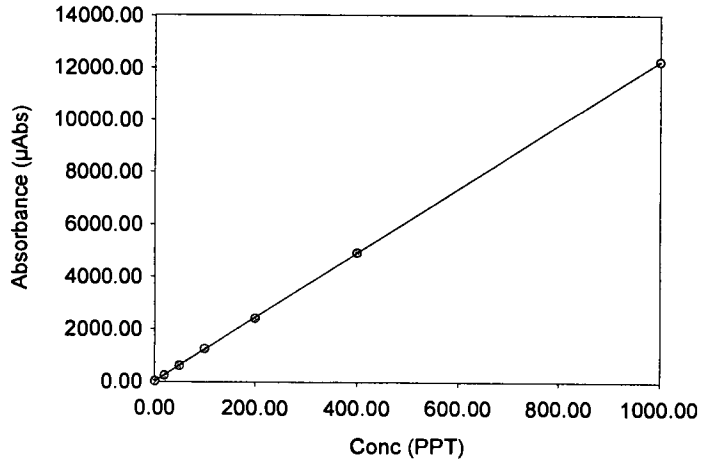
Analyst
Date Started Tuesday, June 11, 2013, 11:52:37
Worksheet LOW LEVEL CALIB 20 TO 1000 PPT
Comment

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
Std Tube 6	11-Jun-2013, 11:52	1000.00	0.13	11800.00	11805	11829	11842	11826	

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	11-Jun-2013, 11:55	0.00	32.10	12.50	8	10	15	16	
Standard #1	11-Jun-2013, 11:58	20.00	1.41	235.00	240	235	233	233	
Standard #2	11-Jun-2013, 12:00	50.00	0.43	612.00	610	609	613	614	
Standard #3	11-Jun-2013, 12:03	100.00	0.04	1260.00	1256	1255	1256	1255	
Standard #4	11-Jun-2013, 12:06	200.00	0.14	2420.00	2416	2417	2417	2410	
Standard #5	11-Jun-2013, 12:08	400.00	0.11	4920.00	4910	4921	4921	4919	
Standard #6	11-Jun-2013, 12:11	1000.00	0.10	12300.00	12244	12260	12269	12244	

Calibration Data



Int.	0.000
Slope	12.256
Correlation	0.99999

TLM

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
ICV	11-Jun-2013, 12:15	469.00	0.10	5750.00	5757	5756	5753	5744	
ICB	11-Jun-2013, 12:18	-1.23	15.50	-15.10	-13	-13	-18	-17	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	11-Jun-2013, 12:21	490.00	0.07	6010.00	6001	6003	6010	6008	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	11-Jun-2013, 12:23	-1.61	7.66	-19.70	-19	-22	-18	-20	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
CRA	11-Jun-2013, 12:26	16.60	0.66	203.00	203	203	201	204	
WS01 MB1 TLM	11-Jun-2013, 12:29	0.33	24.10	4.03	4	3	5	4	
WS01 MB1SPK TLM	11-Jun-2013, 12:31	181.00	0.11	2220.00	2221	2225	2227	2223	
WS01 A TLM	11-Jun-2013, 12:34	0.79	19.00	9.68	11	8	8	11	
WS01 ADUP TLM	11-Jun-2013, 12:37	-0.15	198.00	-1.85	-4	-5	-2	3	
WS01 ASPK TLM	11-Jun-2013, 12:39	89.60	0.11	1100.00	1096	1098	1099	1097	
WS01 MB2 DLM	11-Jun-2013, 12:42	-1.23	13.90	-15.10	-18	-16	-13	-14	
WS01 MB2SPK DLM	11-Jun-2013, 12:45	184.00	0.12	2260.00	2257	2261	2257	2255	
WS01 B DLM	11-Jun-2013, 12:48	0.15	154.00	1.84	0	3	5	-1	
WS01 BDUP DLM	11-Jun-2013, 12:50	0.47	62.30	5.78	7	0	8	8	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	11-Jun-2013, 12:53	496.00	0.18	6080.00	6066	6080	6090	6089	

Analyst
Date Started Tuesday, June 11, 2013, 12:56:13
Worksheet LOW LEVEL CALIB 20 TO 1000 PPT
Comment

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	11-Jun-2013, 12:56	-0.83	30.70	-10.20	-8	-7	-14	-12	
WS01 BSPK DLM	11-Jun-2013, 12:58	90.90	0.19	1110.00	1115	1112	1112	1116	
QC Standard	11-Jun-2013, 13:01	513.00	0.75	6290.00	6330	6322	6283	6227	
QC Blank	11-Jun-2013, 13:04	-1.07	32.40	-13.10	-7	-14	-14	-18	
WS03 MB TLM	11-Jun-2013, 13:07	-1.48	4.58	-18.10	-17	-19	-17	-19	
WS03 MBSPK TLM	11-Jun-2013, 13:09	183.00	0.26	2240.00	2249	2247	2243	2236	
WS03 A TLM	11-Jun-2013, 13:12	0.12	256.00	1.42	3	-4	4	3	
WS03 B TLM	11-Jun-2013, 13:15	-0.19	106.00	-2.27	-4	-4	-2	1	
WS03 BDUP TLM	11-Jun-2013, 13:17	-0.41	27.50	-5.04	-5	-7	-5	-3	
WS03 BSPK TLM	11-Jun-2013, 13:20	82.70	0.21	1010.00	1016	1011	1012	1014	
WS03 C TLM	11-Jun-2013, 13:23	-0.20	143.00	-2.41	3	-4	-5	-4	
WS23 MB TLM	11-Jun-2013, 13:25	-0.54	29.00	-6.67	-8	-7	-8	-4	
WS23 MBSPK TLM	11-Jun-2013, 13:28	190.00	0.17	2330.00	2332	2334	2332	2325	
WS23 A TLM	11-Jun-2013, 13:31	57.70	0.65	707.00	713	709	703	704	
QC Standard	11-Jun-2013, 13:34	510.00	0.18	6240.00	6229	6247	6256	6247	
QC Blank	11-Jun-2013, 13:36	-1.55	5.91	-19.00	-18	-18	-20	-20	
WS23 B TLM	11-Jun-2013, 13:39	-0.22	75.90	-2.67	-3	-3	-4	0	
WS23 BDUP TLM	11-Jun-2013, 13:42	-1.19	24.40	-14.60	-12	-11	-17	-18	
WS23 BSPK TLM	11-Jun-2013, 13:44	89.40	0.23	1100.00	1099	1096	1094	1093	
WS23 C TLM	11-Jun-2013, 13:47	-0.71	52.70	-8.65	-12	-13	-6	-4	
WS23 D TLM	11-Jun-2013, 13:50	-0.50	20.70	-6.09	-5	-7	-7	-5	
WS23 E TLM	11-Jun-2013, 13:53	-0.40	41.50	-4.94	-6	-7	-4	-2	
QC Standard	11-Jun-2013, 13:55	511.00	0.11	6260.00	6253	6263	6269	6265	
QC Blank	11-Jun-2013, 13:58	-0.53	60.00	-6.50	-11	-5	-2	-8	
WS92 MB1 TLM	11-Jun-2013, 14:01	-0.34	55.40	-4.21	-2	-4	-3	-7	
WS92 MB1SPK TLM	11-Jun-2013, 14:04	196.00	0.01	2410.00	2408	2408	2408	2408	
WS92 A TLM	11-Jun-2013, 14:07	18.30	1.86	224.00	228	226	223	219	
WS92 B TLM	11-Jun-2013, 14:09	4.47	6.29	54.80	53	58	58	51	
WS92 BDUP TLM	11-Jun-2013, 14:12	3.15	1.43	38.60	39	39	38	38	
WS92 BSPK TLM	11-Jun-2013, 14:15	111.00	0.45	1360.00	1362	1363	1358	1350	
WS92 C TLM	11-Jun-2013, 14:17	0.87	47.30	10.60	3	11	15	13	
WS92 D TLM	11-Jun-2013, 14:20	1.03	19.80	12.60	10	12	12	16	
WS92 MB2 DLM	11-Jun-2013, 14:23	0.96	13.60	11.70	10	13	13	11	
WS92 MB2SPK DLM	11-Jun-2013, 14:25	204.00	0.07	2500.00	2498	2497	2494	2495	

CETAC Hg Analysis Report - 13061100.DB - Tuesday, June 11, 2013, 3:08:20 PM

Analyst
Date Started Tuesday, June 11, 2013, 14:28:37
Worksheet LOW LEVEL CALIB 20 TO 1000 PPT
Comment

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	11-Jun-2013, 14:28	514.00	0.12	6300.00	6294	6305	6312	6307	
Sample ID	**Analysis Time**	**Conc (PPT)**	**%RSD**	**Avg. µAbs**	**Readings**				**Flags**
QC Blank	11-Jun-2013, 14:31	-0.92	21.60	-11.30	-14	-9	-10	-13	
Sample ID	**Analysis Time**	**Conc (PPT)**	**%RSD**	**Avg. µAbs**	**Readings**				**Flags**
WS92 E DLM	11-Jun-2013, 14:34	3.94	5.71	48.30	46	52	49	46	
WS92 F DLM	11-Jun-2013, 14:36	1.85	15.50	22.70	20	24	19	27	
WS92 FDUP DLM	11-Jun-2013, 14:39	1.78	15.30	21.80	26	20	18	23	
WS92 FSPK DLM	11-Jun-2013, 14:42	107.00	0.09	1310.00	1308	1306	1309	1307	
WS92 G DLM	11-Jun-2013, 14:44	1.04	29.20	12.70	11	9	14	17	
WS92 H DLM	11-Jun-2013, 14:47	1.24	14.90	15.20	12	16	16	17	
Sample ID	**Analysis Time**	**Conc (PPT)**	**%RSD**	**Avg. µAbs**	**Readings**				**Flags**
QC Standard	11-Jun-2013, 14:50	523.00	0.06	6410.00	6405	6409	6410	6402	
Sample ID	**Analysis Time**	**Conc (PPT)**	**%RSD**	**Avg. µAbs**	**Readings**				**Flags**
QC Blank	11-Jun-2013, 14:53	-0.28	52.40	-3.42	-1	-3	-4	-5	
Sample ID	**Analysis Time**	**Conc (PPT)**	**%RSD**	**Avg. µAbs**	**Readings**				**Flags**
WS98 MB DLM	11-Jun-2013, 14:55	-0.88	67.30	-10.70	-1	-11	-15	-17	
WS98 MBSPK DLM	11-Jun-2013, 14:58	216.00	0.20	2650.00	2652	2653	2646	2642	
WS98 A DLM	11-Jun-2013, 15:01	-0.29	58.70	-3.59	-5	-6	-3	-1	
Sample ID	**Analysis Time**	**Conc (PPT)**	**%RSD**	**Avg. µAbs**	**Readings**				**Flags**
QC Standard	11-Jun-2013, 15:03	526.00	0.14	6440.00	6430	6442	6452	6441	
Sample ID	**Analysis Time**	**Conc (PPT)**	**%RSD**	**Avg. µAbs**	**Readings**				**Flags**
QC Blank	11-Jun-2013, 15:06	-1.00	19.30	-12.20	-10	-15	-13	-10	

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: Smm
Analyst: DM
Bath Temp: 95°C
Start Time: 1425
Instrument: CETAC
Date: 6-06-13
End Time: 1455

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	3036-15	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	[illegible]
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% $KMnO_4$: MP2475

Prep Code: TLM
Digested 20.0mL
Analyst: DM
Bath Temp: 95°C
Start Time: 0815
Instrument: CETAC
Date: 6-11-13
End Time: 1015

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	3036-16	0.02		0.02	1
STD2		0.05		0.05	1
STD3		0.10		0.1	1
STD4		0.20		0.2	1
STD5		~~0.50~~ 0.4		0.4	1
STD6		1.00		1.0	1
CRA		0.02		0.02	1
ICB/CCB	—	0.00		0.0	1
ICV/LCS	3037-1	1.0		0.5	1
CCV		1.0	100.0	0.5	1

Chemical/Reagent ID:

HNO_3: I8169
H_2SO_4: I8044
HCl: —
5% $K_2S_2O_8$: MP2491
5% $KMnO_4$: MP2475

USSS : 01001

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: TLM | DLM
Analyst: DM
Bath Temp: 95°C
Start Time: 1040
Matrix: Water
Date: 6-11-13
End Time: 1240

ARI Sample ID	Sample Bottle #	pH<2	Initial ~~Weight (g)~~ Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WS92 A	1	√	20.0	20.0	4/20 1	Y	
" B	1	√			1		
" BDUP	1	√			1		
" BSPK	1	√			1		
" C	1	√			1		
" D	1	√			1		
" MB1	—	√			1		
" MB1SPK	—	√			1		
" E	1	—			1		
" F	1	—			1		
" FDUP	1	—			1		
" FSPK	1	—			1		
" G	1	—			1		
" H	1	—			1		DLM
" MB2	—	—			1		
" MB2SPK	—	—			1	Y	
WS93 A	1	—			4/17 1	N	
" MB	—	—			1	N	
" MB5PK	—	—	20.0	20.0	1	N	

6-11-13 DM

Chemical/Reagent ID:

HNO_3: IB1C9
H_2SO_4: I80414
HCl: —
5% $K_2S_2O_8$: MP2491
5% $KMnO_4$: MP2475
Digest Tube Lot: MM01LKK0

WS92:012802

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: WS90, WS92

Analytical Resources, Incorporated
Analytical Chemists and Consultants

pH Logbook

Meter ID: Accumet AR60

Calibration

① 121208H ② 7.00

Date:	6-5-13		Buffer	Source	Lot #	pH	Temp.
Time:	17:20		2.00	Ricca	1211549	2.00	21.3
Analyst:	CMC/APD		4.00	Fisher	153547	4.01	21.9
			7.00	Ricca	121266	~~7.05~~	21.5
			10.00	Fisher	126248	10.03	22.0
			12.00	Ricca	~~1248649~~	11.95	21.7
			Verification	Fisher	124864	7.00	22.0

Sample pH

Analyst Initials	Time	Sample ID	1	2	3	4	Temp-erature
		ICV	6.99	6.99			22.0
		WS90A'	9.46	9.46			21.4
		↓ Δp	9.47	9.48			21.6
		↓ B'	9.15	9.15			21.6
		CCV	7.00	7.00			22.1
		CCV					
		CCV					

Conductivity - Salinity BENCHSHEET

Salinity temperature compensated to 15°C
INSTRUMENT: Orion Model 115 (SN:002482)
Probe: Orion Model 011510 (SN:KU9020)

DATE:	6/11/13 12:43
ANALYST:	CDE / CC
Method:	***Standard Methods 2520 B-00***

Direct Calibration

0.01 N KCl	µS/cm
Cal Std	1,413
Cal Temp	20.0
input value	1277
Cell constant	0.9807

Cell Constant Adjustment (as necessary)

1413 Calibration Standard

Temp	20.4
Expected	1277
Displayed	1200
% Error	-6.03%
Adjust constant to	0.000

Calibration Verification Standard

RICCA # 1302913 *Conductivity of* **1000** *µS / cm*

Salinity Standard

Source **Ricca** Lot # **1203368** **47,600** *µS / cm*

Sample Data

(NOTE: Record both conductivity and Salinity values from probe)

ARI Number	Sample Dilution	Temp (C)	CONDUCTIVITY @ 25C (mS/cm)	CONDUCTIVITY @ 25C (µS/cm)	Salinity (ppt @15°C)	Notes & Flags
ICB		21.7		0.5	0.0	*OK!*
ICV		20.2		985	0.5	*98.50%*
Salinity Std		20.4	45.6	45600	29.3	*95.80%*
WT08 A7		19.6		675	0.3	
WT08 A7 dup		19.8		675	0.3	*RPD =0 %*
WT08 B7		20.8		138	0.1	
WT08 C7		20.5		372	0.2	
WT08 D7		20.2		145.2	0.1	
WT08 E7		19.8		119.2	0.1	
WT08 F7		19.9		113.1	0.1	
WT08 G7		20.3		116.8	0.1	
WT08 H7		20.6		109.9	0.1	
WT08 I7		21.0		116.0	0.1	
CCB		20.3		0.6	0.0	*OK!*
ICV		20.6		985	0.5	*98.50%*
Salinity Std		20.6	45.6	46600	29.3	*95.80%*
WS90 A1		21.9		197		
WS90 A1 dup		22.1		199		*RPD =1.01 %*
WS90 B1		21.7		186.6		
WT02 A1		18.9		14.8		
WT02 B1		18.9		124.9		
WT02 C1		18.9		147.1		
WT02 D1		18.8		67.8		
WT02 E1		18.6		41.2		
WT02 F1		18.9		43.0		
WT02 G1		19.5		43.6		
CCB		20.0		0.7		*OK!*
ICV		20.8		984		*98.40%*
WT02 H1		19.8		45.8		
WT02 I1		19.3		59.5		
WT02 J1		18.9		533		
WT02 K1		19.7		153.3		
WT02 L1		19		175.7		
WT07 A1		19.4		195.2		
WT07 B1		19.7		185.2		
CCB		22.4		0.6		*OK!*
ICV		21.3		982		*98.20%*

(NOTE: Record both conductivity and Salinity values from probe)

ARI	Sample	Temp	CONDUCTIVITY @ 25C	Salinity	*Notes & Flags*
WO36 O		21.6	11.9		
WO36 P		21.7	11.4		
WO36 Q		21.6	11.5		
WO36 R		21.7	11.5		
WO36 S		21.7	11.5		
WO36 T		21.7	11.5		
WO36 U		21.7	11.6		
CCB		21.5	0.7		*OK!*
ICV		21.4	982		*98.20%*

Conductivity - Salinity BENCHSHEET

Salinity temperature compensated to 15°C

INSTRUMENT: Orion Model 115 *Method: Standard Methods 2520*

DATE: 6-11-13 12:43

ANALYST: CAS / el

Direct Calibration

0.01 N KCl	µS/cm
Cal Std	1,413
Cal Temp	20.0
input value	1277
Cell constant	0.9807

Cell Constant Adjustment (as necessary)

1413 Calibration Standard

Temp	
Expected	
Displayed	
% Error	
Adjust constant to	

Temp Table 1413 Std

Temp	Cond
13	1094
14	1119
15	1145
16	1171
17	1198
18	1224
19	1251
20	1277
21	1304
22	1331
23	1358
24	1386
25	1413
26	1441
27	1468

Calibration Verification Standard

RICCA # 1302913 *Conductivity of* **1000** *µS / cm*

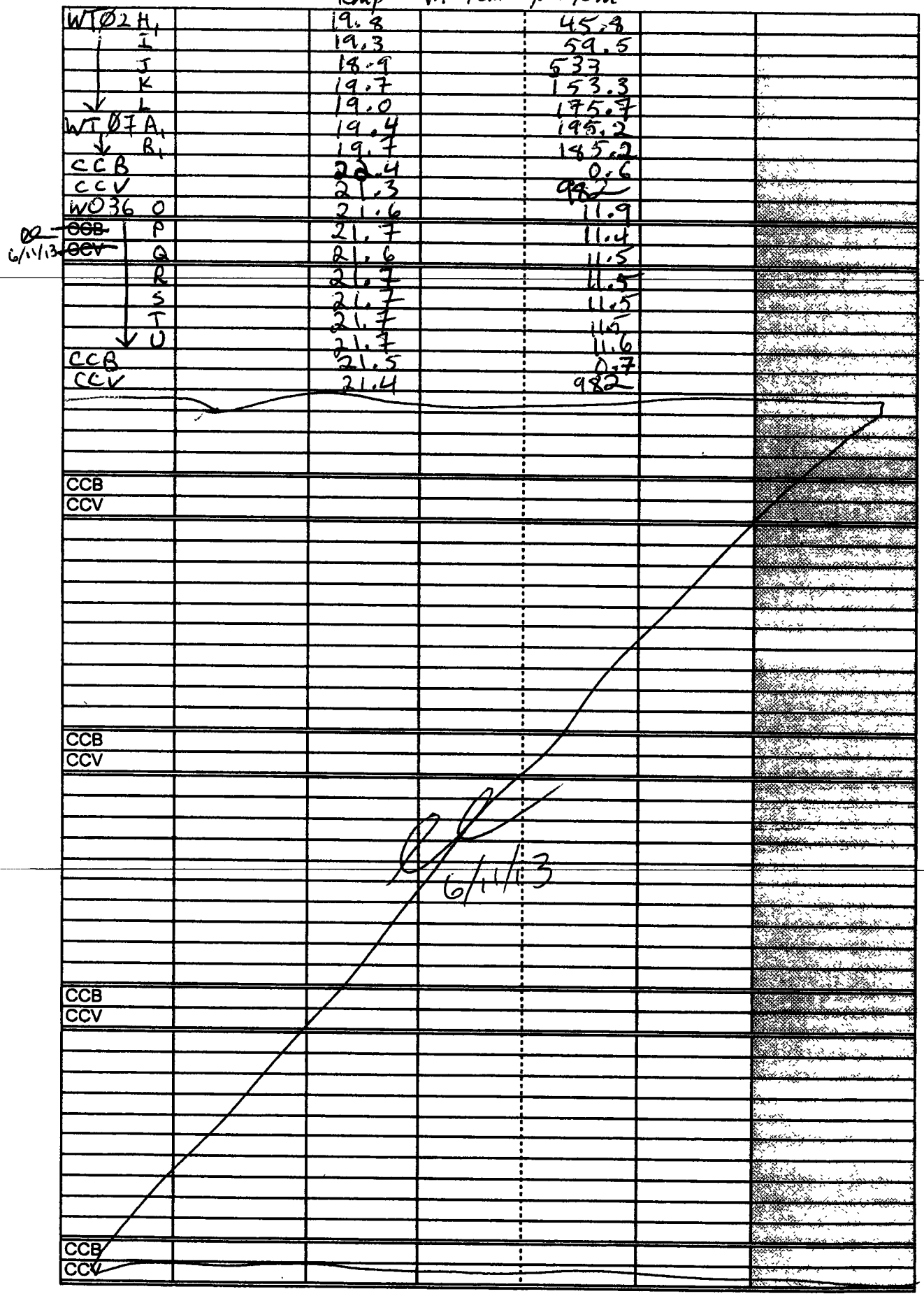
Salinity Standard

Source **Ricca** Lot # 1203368 **47,600** *µS / cm*

Sample Data

(NOTE: Record both conductivity and Salinity values from probe)

ARI Number	Sample Dilution	Temp (C)	CONDUCTIVITY @ 25C (mS/cm)	CONDUCTIVITY @ 25C (µS/cm)	Salinity (ppt @15°C)	Notes & Flags
ICB		21.7		0.5	0.0	
ICV		20.2		985	0.5	
Salinity Std		20.4	45.6		29.3	
WT08A7		19.6		675	0.3	
A7dp		19.8		675	0.3	
B7		20.8		137.5	0.1	
C7		20.5		372	0.2	
D7		20.2		145.2	0.1	
E7		19.8		119.2	0.1	
F7		19.9		113.1	0.1	
G7		20.3		116.8	0.1	
H7		20.6		109.9	0.1	
~~CCB~~ I7		21.0		116.0	0.1	
~~ICV~~ CCB		20.3		0.6	0.0	
CCV ~~Salinity Std~~		20.4		985	0.5	
Salinity Std		20.6	45.6		29.3	
WS90A1		21.9		197		
A1dp		22.1		199		
B1		21.7		186.6		
WT02A1		18.9		14.8		
B1		18.9		124.9		
C1		18.9		147.1		
D1		18.8		67.8		
E1		18.6		41.2		
F1		18.9		43.0		
~~CCB~~ G1		19.5		43.6		
~~ICV~~ CCB		20.0		0.7		
CCV ~~Salinity Std~~		20.8		984		


Temp
m S/cm
µS/cm
WT Ø2 H1 19.8 45.8
I 19.3 59.5
J 18.9 537
K 19.7 153.3
L 19.0 175.7
WT Ø7 A1 19.4 195.2
R1 19.7 185.2
CCB 20.4 0.6
CCV 21.3 982
WO36 O 21.6 11.9
CCB P 21.7 11.4
CCV Q 21.6 11.5
R 21.7 11.5
S 21.7 11.5
T 21.7 11.5
U 21.7 11.6
CCB 21.5 0.7
CCV 21.4 982
CCB
CCV
CCB
CCV
CCB
CCV
CCB
CCV
6/11/13

TOTAL SUSPENDED SOLIDS / VOLATILE SUSPENDED SOLIDS (TSS / TVSS) DATE: 6/10/2013

Methods : SM 2540 D-97, 2540 E-97 ANALYST: CDE 10:34

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: NA

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				6/10/13 15:12	6/10/13 16:54										
Cal Wt (g) 10.0000				10.0000	10.0000										
record weights to 4 places				Cal Ok!	Cal Ok!										
BLANK		1000	0.1230	0.1231	0.1230	STOP		0.0	< 1						
LCS # 00616-07		1000	0.1254	0.1752	0.1752	STOP		49.8	49.8	99.6%	% Recovery				
WT27 A2		940	0.1238	0.1251	0.1250	STOP		1.2	1.3						
WT27 B2		945	0.1246	0.1289	0.1289	STOP		4.3	4.6						
WT27 C2		930	0.1261	0.1275	0.1276	STOP		1.4	1.5						
WT27 D2		930	0.1240	0.1258	0.1258	STOP		1.8	1.9						
WT27 E2		920	0.1229	0.1274	0.1274	STOP		4.5	4.9						
WT27 F2		930	0.1250	0.1261	0.1261	STOP		1.1	1.2						
WT27 G2		940	0.1234	0.1239	0.1239	STOP		0.5	< 1.1						
WT27 I 2		910	0.1241	0.1272	0.1272	STOP		3.1	3.4						
WS90 A3		120	0.1246	0.1743	0.1744	STOP		49.7	414.2						
WS90 A3 dup		120	0.1241	0.1736	0.1734	STOP		49.3	410.8						
								RPD =	0.8%					*RPD =*	*NA*
WS90 B3		470	0.1224	0.1451	0.1451	STOP		22.7	48.3						
WS97 A8		1000	0.1243	0.1282	0.1282	STOP		3.9	3.9						
WT08 A8		150	0.1256	0.1406	0.1407	STOP		15.0	100.0						
WT08 A8 dup		150	0.1242	0.1397	0.1397	STOP		15.5	103.3						
								RPD =	3.2%					*RPD =*	*NA*
WT08 B8		930	0.1232	0.1231	0.1231	STOP		-0.1	< 1.1						
WT08 C8		940	0.1250	0.1276	0.1277	STOP		2.6	2.8						
WT08 D8		955	0.1230	0.1249	0.1249	STOP		1.9	2.0						

TOTAL SUSPENDED SOLIDS / VOLATILE SUSPENDED SOLIDS (TSS / TVSS) DATE: 6/10/2013

Methods : SM 2540 D-97, 2540 E-97 ANALYST: CDE 10:34

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: NA

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)				DryWT (mg)	TSS (mg/L)	ASH WT 550C (grams)				LOI (mg)	TVSS (mg/l)
				1	2	3	4			1	2	3	4		
WT08 E8		940	0.1236	0.1235	0.1235	STOP		0.1	<1.1						
WT08 F8		920	0.1282	0.1361	0.1360	STOP		7.8	8.5						
WT08 G8		915	0.1292	0.1465	0.1465	STOP		17.3	18.9						
WT08 H8		920	0.1271	0.1282	0.1281	STOP		1.0	1.1						
WT08 I 8		920	0.1260	0.1748	0.1748	STOP		48.8	53.0						

① P1638 ② 0.1242 6-10-13 [illegible]

(A)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOTAL SUSPENDED (TSS) / TOTAL VOLATILE SUSPENDED SOLID(TVSS) BENCHSHEET

Analyst:	[illegible]	Date/Time:	6-10-13 10:34	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:			6-10-13 15:12	6-10-13 16:54					
Cal Weight (10.0000g):			10.0000 [illegible]	10.0000 [illegible]					

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	P0938	1000	0.1230	0.1231	0.1230							
LCS # 00616-07	39	↓	0.1254	0.1752	0.1752							
WT27 A2	40	940	0.1238	0.1251	0.1250							
B2	47	945	0.1246	0.1289	0.1289							
C2	48	930	0.1261	0.1275	0.1276							
D2	49	930	0.1240	0.1258	0.1258	[illegible]						
E2	50	920	0.1229	0.1274	~~0.1273~~	0.1274						
F2	51	930	0.1250	0.1261	0.1261							
G2	52	940	0.1234	0.1239	0.1239							
I2	53	910	0.1241	0.1272	0.1272							
WS90 A3	54	120	0.1246	0.1743	0.1744							
A3 dp	55	↓	0.1241	0.1736	0.1734							
B3	56	470	0.1224	0.1451	0.1451							
WS97 A8	57	1000 [illegible]	0.1243	0.1282	0.1282							
WT08 A8	58	150	0.1256	0.1406	0.1407							
A8 dp	~~59~~	↓	~~0.1252~~	0.1397	0.1397							
B8	60	930	0.1232	0.1231	0.1231							
C8	61	940	0.1250	0.1276	0.1277							
D8	62	955	0.1230	0.1249	0.1249							
E8	P2551	940	0.1236	0.1235	0.1235							
F8	52	920	0.1282	0.1361	0.1360							

Continued from Page 00760 CVR

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOTAL SUSPENDED (TSS) / TOTAL VOLATILE SUSPENDED SOLID(TVSS) BENCHSHEET

Analyst: CVR	Date/Time: Cont	Oven #:		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:										
Cal Weight (10.0000g):										

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												
LCS#												
WT08 G8	P2553	915	0.1292	0.1465	0.1465							
H8	4	920	0.1271	0.1282	0.1281							
I8	5	920	0.1260	0.1748	0.1748							

6-10-13 CVR

6-10-13 CVR

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

No.	Injection Name	Calibration Level	X Value Fluoride	Y Value Fluoride	Amount mg/l Fluoride	Area µS*min Fluoride	Height µS Fluoride
1	STD1						0.345
2	STD2						2.058
3	STD3						4.296
4	STD4						10.668
5	STD5						20.470

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

No.	Injection Name	Calibration Level	X Value Chloride	Y Value Chloride	Amount mg/l Chloride	Area µS*min Chloride	Height µS Chloride
1	STD1						0.227
2	STD2						1.120
3	STD3						2.330
4	STD4						6.013
5	STD5						12.265

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

No.	Injection Name	Calibration Level	X Value Nitrite	Y Value Nitrite	Amount mg/l Nitrite	Area µS*min Nitrite	Height µS Nitrite
1	STD1						0.405
2	STD2						2.212
3	STD3						4.433
4	STD4						10.468
5	STD5						19.511

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

No.	Injection Name	Calibration Level	X Value Bromide	Y Value Bromide	Amount mg/l Bromide	Area µS*min Bromide	Height µS Bromide
1	STD1						0.053
2	STD2						0.295
3	STD3						0.634
4	STD4						1.709
5	STD5						3.562

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

No.	Injection Name	Calibration Level	X Value Sulfate	Y Value Sulfate	Amount mg/l Sulfate	Area µS*min Sulfate	Height µS Sulfate
1	STD1						
2	STD2						
3	STD3						
4	STD4						
5	STD5						

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

No.	Injection Name	Calibration Level	X Value Nitrate	Y Value Nitrate	Amount mg/l Nitrate	Area µS*min Nitrate	Height µS Nitrate
1	STD1						
2	STD2						
3	STD3						
4	STD4						
5	STD5						

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

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	0.0023	0.1000	0.0313	0.022	0.094
2	STD2	02	0.0223	0.6000	0.2000	0.124	0.609
3	STD3	03	0.0763	1.2000	0.3906	0.275	1.415
4	STD4	04	0.1508	2.4000	0.7500	0.751	3.811
5	STD5	05	1.6464	5.0000	1.5625	1.586	7.410

Sequence Details

Name:	**JUN0613RR**	*Calibration:*	**MAY2313RR** **ARI # 616-02**
Directory:	**Instrument Data\2013 DATA\JUNE 2013**	*Calibration exp:*	**7/23/2013**
Data Vault:	**ChromeleonLocal**	*Queue Start:*	6/6/2013 16:08
No. of Injections:	**17.000**	*User:*	**RR**

		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	3.046	2.982	3.003	3.001	3.011	2.977	2.962
%R=		**101.5%**	**99.4%**	**100.1%**	**100.0%**	**100.4%**	**99.2%**	**98.7%**
ICB	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
LOW	1.0	0.086	0.098	0.084	0.080	0.084	0.083	0.077
		0.136	7.532	0.062	n.a.	n.a.		0.016
		0.134	7.524	0.062	n.a.	n.a.		n.a.
%RPD=		**1.07%**	**0.11%**	**0.08%**			**0.22%**	
		2.530	9.535	2.124	1.885	n.a.		1.962
%R=		**119.7%**	**100.1%**	**103.1%**	**94.3%**		**102.1%**	**97.3%**
SPK=	**0.055**	***mL 200ppm INT to***		***5.5***	***mLsample=***		***2.00 ppm***	
		0.345	5.513	0.050	n.a.	18.584		n.a.
CCV	1.0	3.043	2.989	2.992	2.996	3.009	2.976	2.965
%R=		**101.4%**	**99.6%**	**99.7%**	**99.9%**	**100.3%**	**99.2%**	**98.8%**
CCB	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		0.128	7.448	0.062	n.a.	n.a.		n.a.
		0.127	7.450	0.062	n.a.	n.a.		n.a.
%RPD=		**0.65%**	**0.03%**	**0.20%**			**0.15%**	
		1.464	9.399	2.050	1.802	n.a.		1.627
%R=		**66.8%**	**97.6%**	**99.4%**	**90.1%**		**98.8%**	**81.3%**
SPK=	**0.055**	***mL 200ppm INT to***		***5.5***	***mLsample=***		***2.00 ppm***	
		0.349	5.470	0.049	n.a.	18.275		n.a.
CCV	1.0	3.043	2.989	2.997	2.994	3.006	2.968	2.912
%R=		**101.4%**	**99.6%**	**99.9%**	**99.8%**	**100.2%**	**98.9%**	**97.1%**
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.

Sequence Overview

Sequence Details

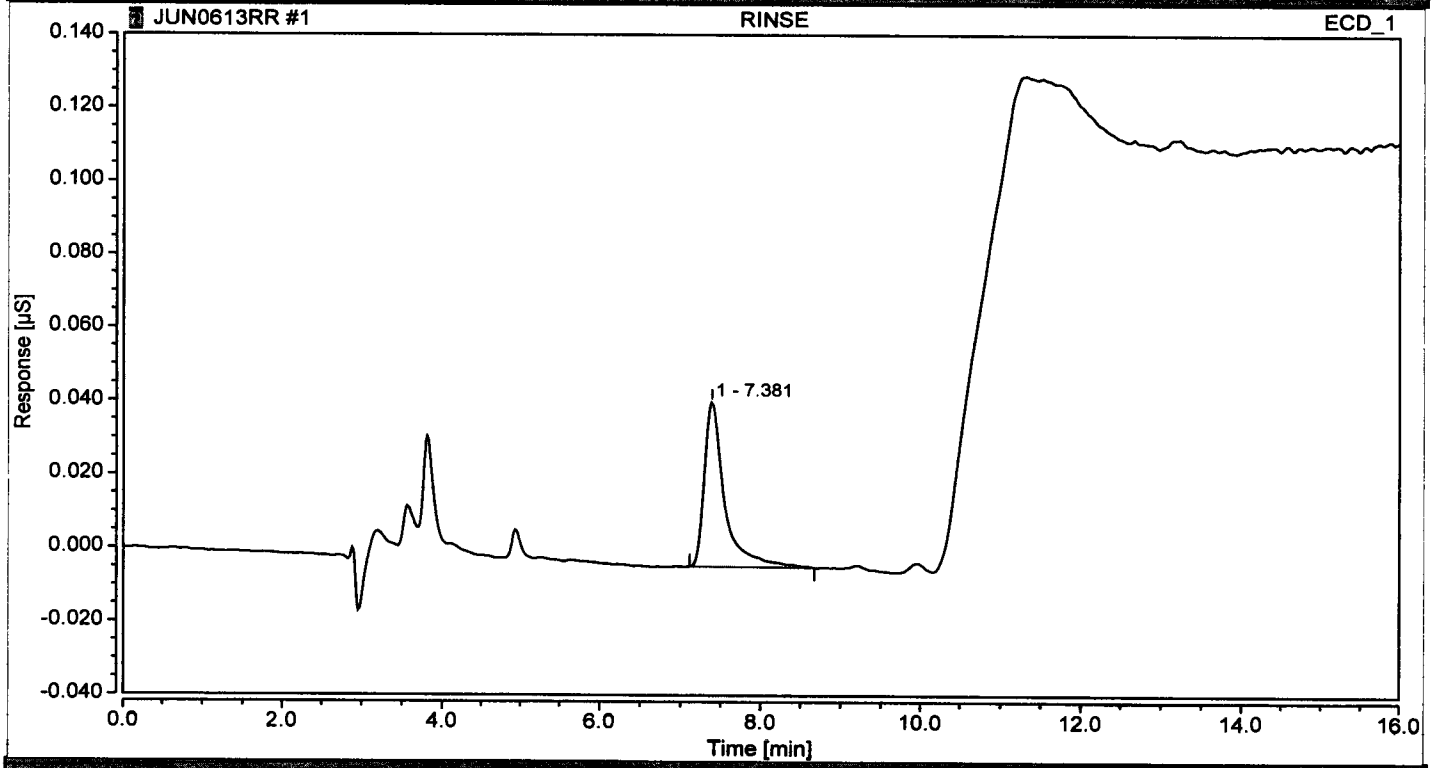
Name:	**JUN0613RR**	*Queue Start:*	**2013-06-06T16:08:47-**
Directory:	**Instrument Data\2013 DATA\JUNE 2013**	*Created By:*	**pat**
Data Vault:	**ChromeleonLocal**		
No. of Injections:	**17**		

Injection Details

No.	Injection Name	Position	Type	Level	Dilution	Inject Time
1	RINSE	[illegible]	Unknown	[illegible]	[illegible]	[illegible]/Jun/13 16:08:47
2	ICV	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	ICB	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	LOW	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9	CCV	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	CCB	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	CCV	[illegible]	Check Standard	[illegible]	[illegible]	[illegible]
16	CCB	[illegible]	Blank	[illegible]	[illegible]	[illegible]
17	STOP	[illegible]	Unknown	[illegible]	[illegible]	[illegible]

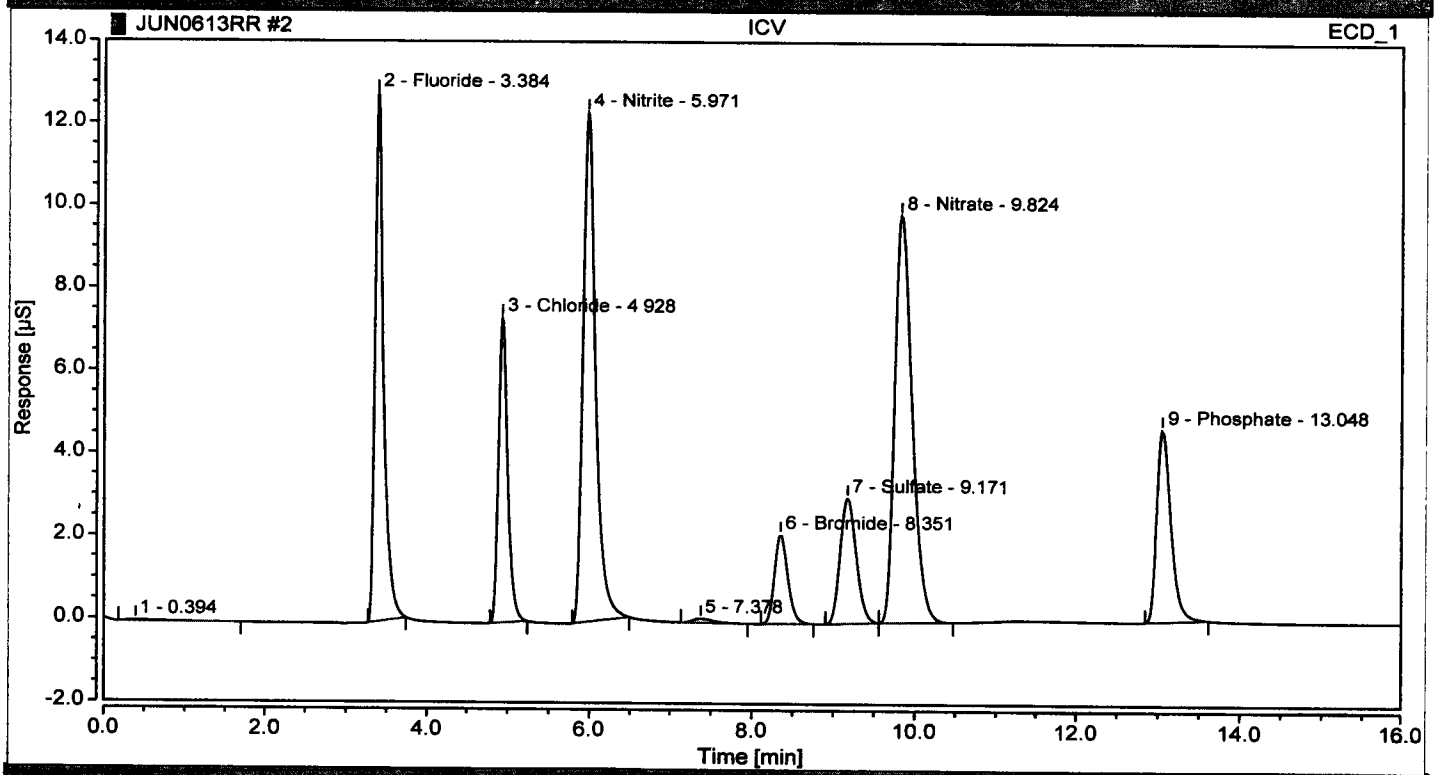
Injection Details

Injection Name:	*RINSE*	Inject Number:	1
Vial Number:	*1*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN0613RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time:	*06/06/13 16:08*		



No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride							
n.a.	Chloride							
n.a.	Nitrite							
1								
n.a.	Bromide							
n.a.	Sulfate							
n.a.	Nitrate							
n.a.	Phosphate							

Injection Name:	*ICV*	Inject Number:	2
Vial Number:	*2*	User:	pat
Injection Type:	*Check Standard*	Sequence:	JUN0613RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*06/06/13 16:27*		



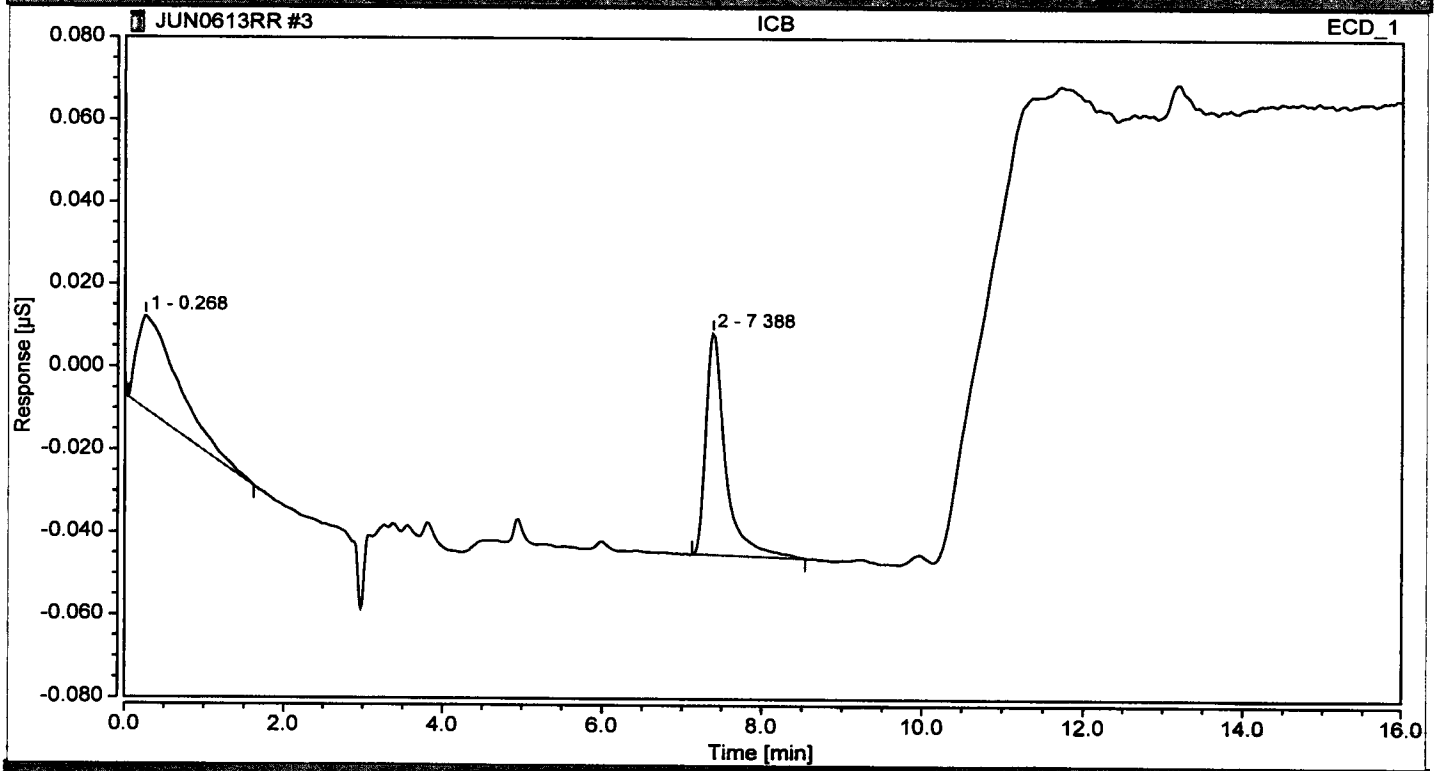
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1		1.0						
2	Fluoride	1.0					FALSE	N/A
3	Chloride	1.0					FALSE	
4	Nitrite	1.0					FALSE	0.11
5		1.0						
6	Bromide	1.0					FALSE	0.04
7	Sulfate	1.0					FALSE	0.05
8	Nitrate	1.0					FALSE	0.07
9	Phosphate	1.0					FALSE	-1.26

Chromatograms and Results

Injection Details

Injection Name:	*ICB*	Inject Number:	3
Vial Number:	*3*	User:	pat
Injection Type:	*Blank*	Sequence:	JUN0613RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*06/06/13 16:46*		

Chromatogram

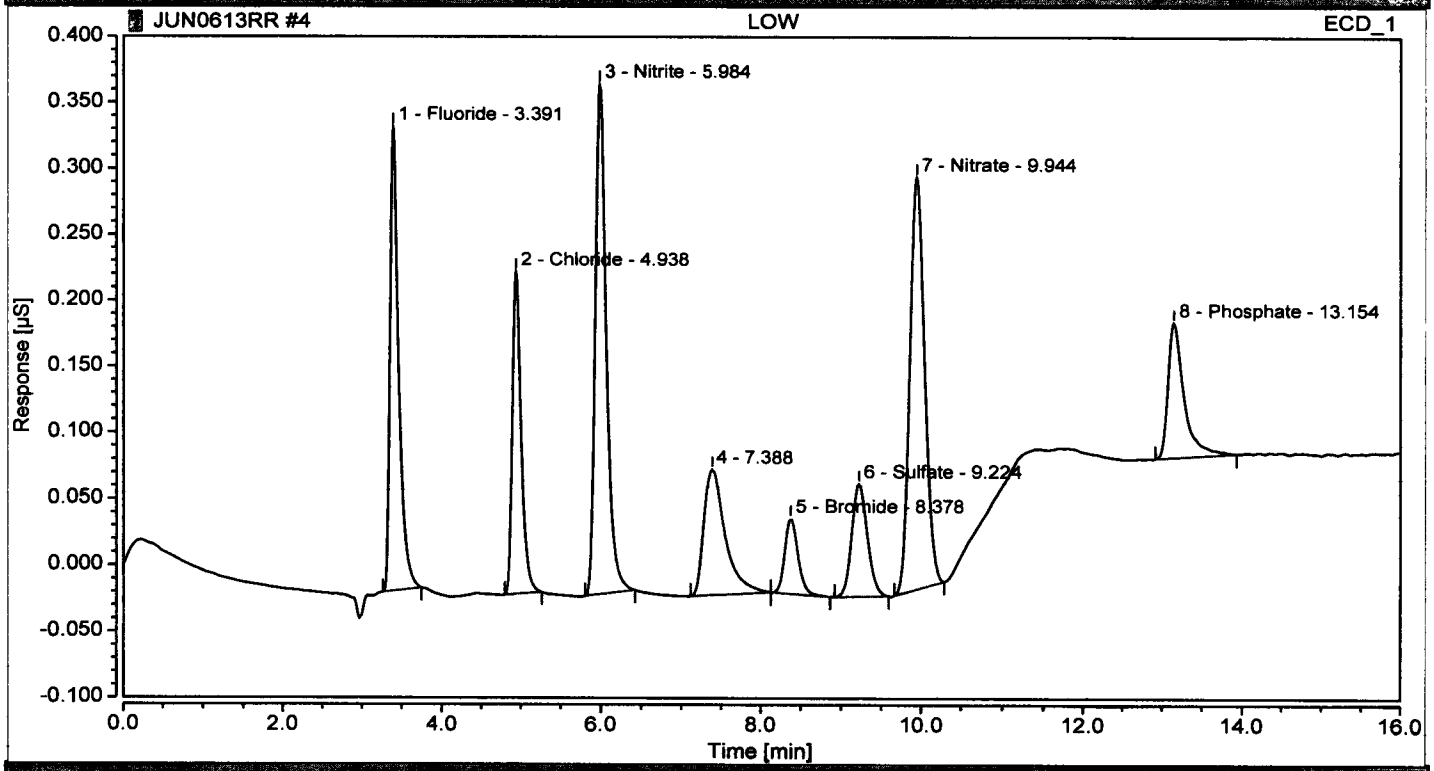


No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1								
n.a.	Fluoride						FAIL	n.a.
n.a.	Chloride							n.a.
n.a.	Nitrite							n.a.
2								
n.a.	Bromide							n.a.
n.a.	Sulfate							n.a.
n.a.	Nitrate							n.a.
n.a.	Phosphate							n.a.

Injection Information

Injection Name:	*LOW*	Inject Number:	4
Vial Number:	*4*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN0613RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*06/06/13 17:06*		

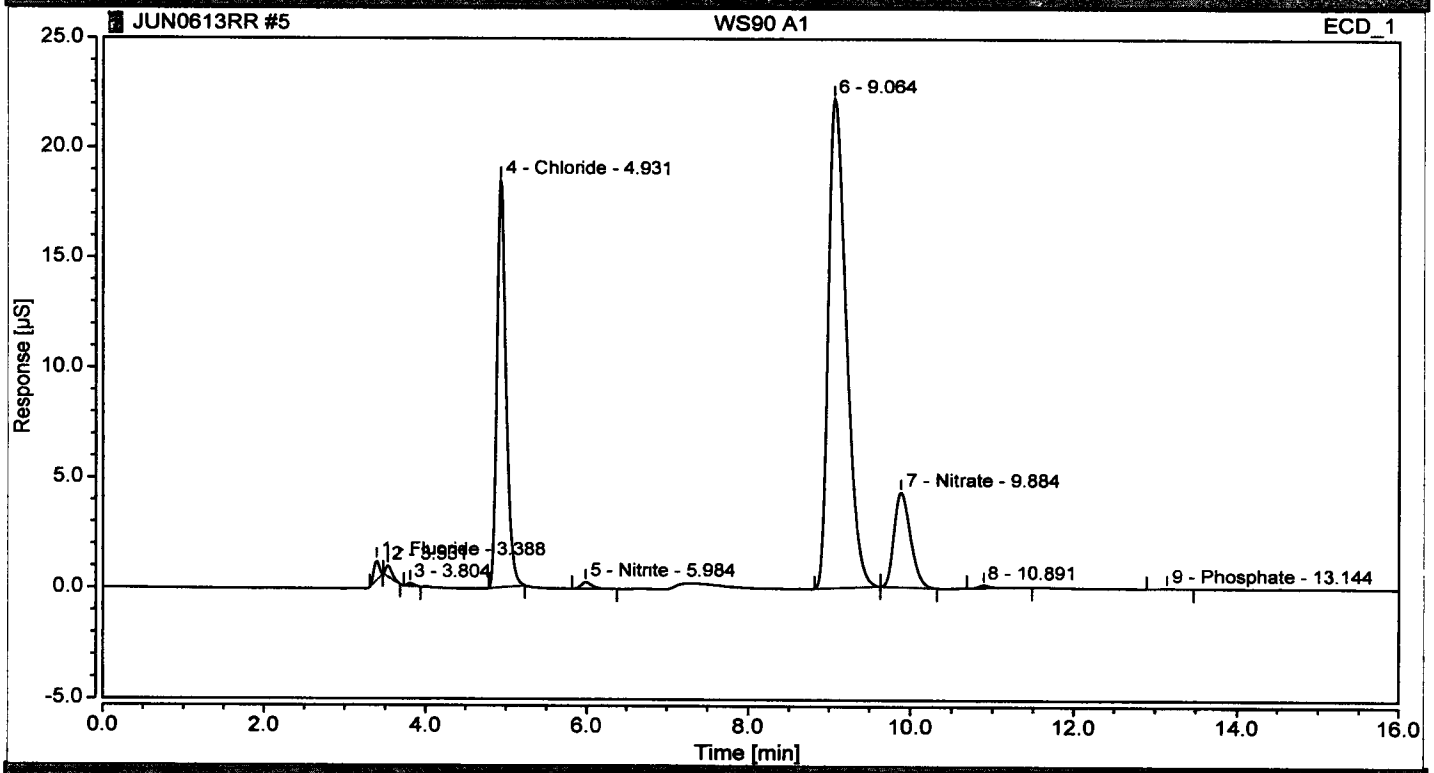
Chromatogram



Peak Table

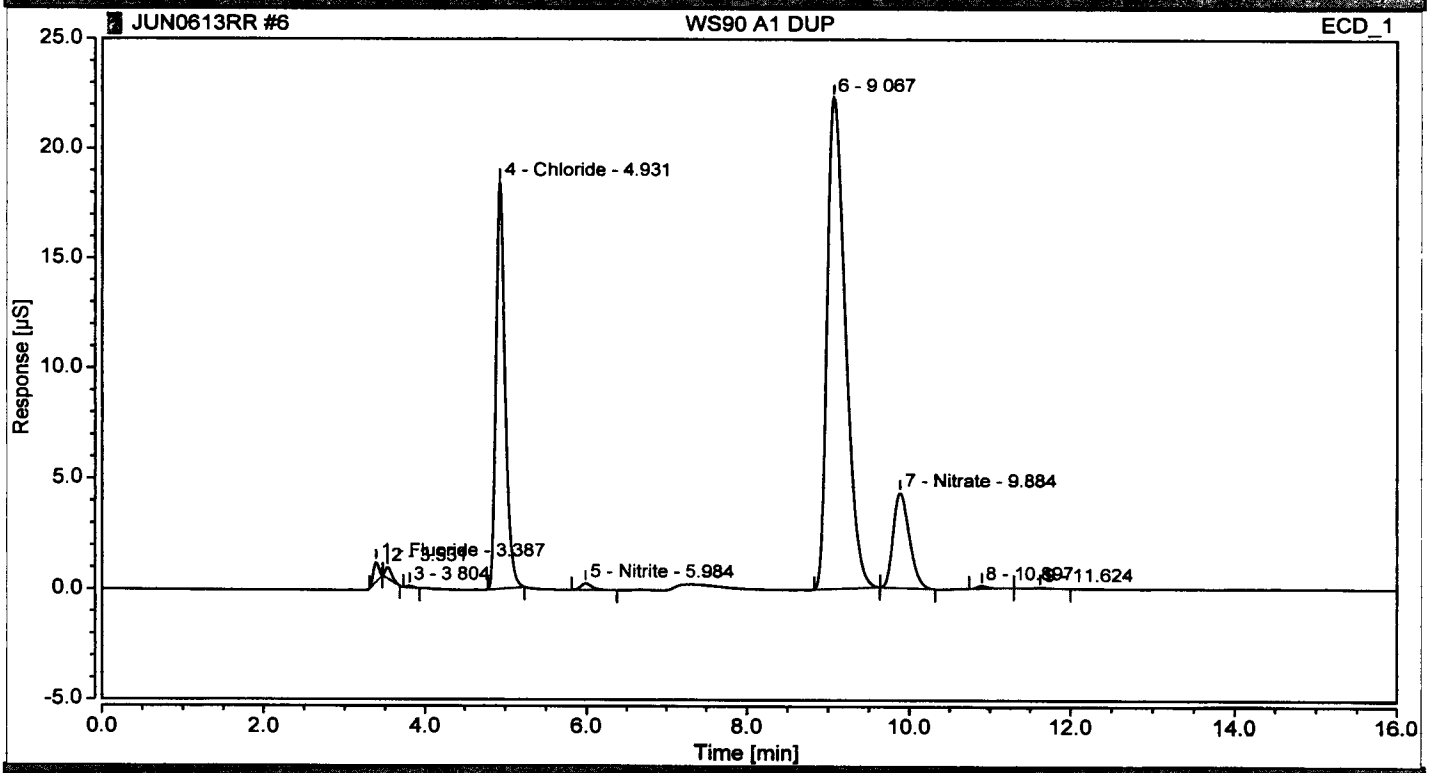
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride							n.a.
2	Chloride							n.a.
3	Nitrite							n.a.
4								n.a.
5	Bromide							n.a.
6	Sulfate							n.a.
7	Nitrate							n.a.
8	Phosphate							n.a.

Injection Name:	*WS90 A1*	Inject Number:	5
Vial Number:	*5*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN0613RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*06/06/13 17:25*		



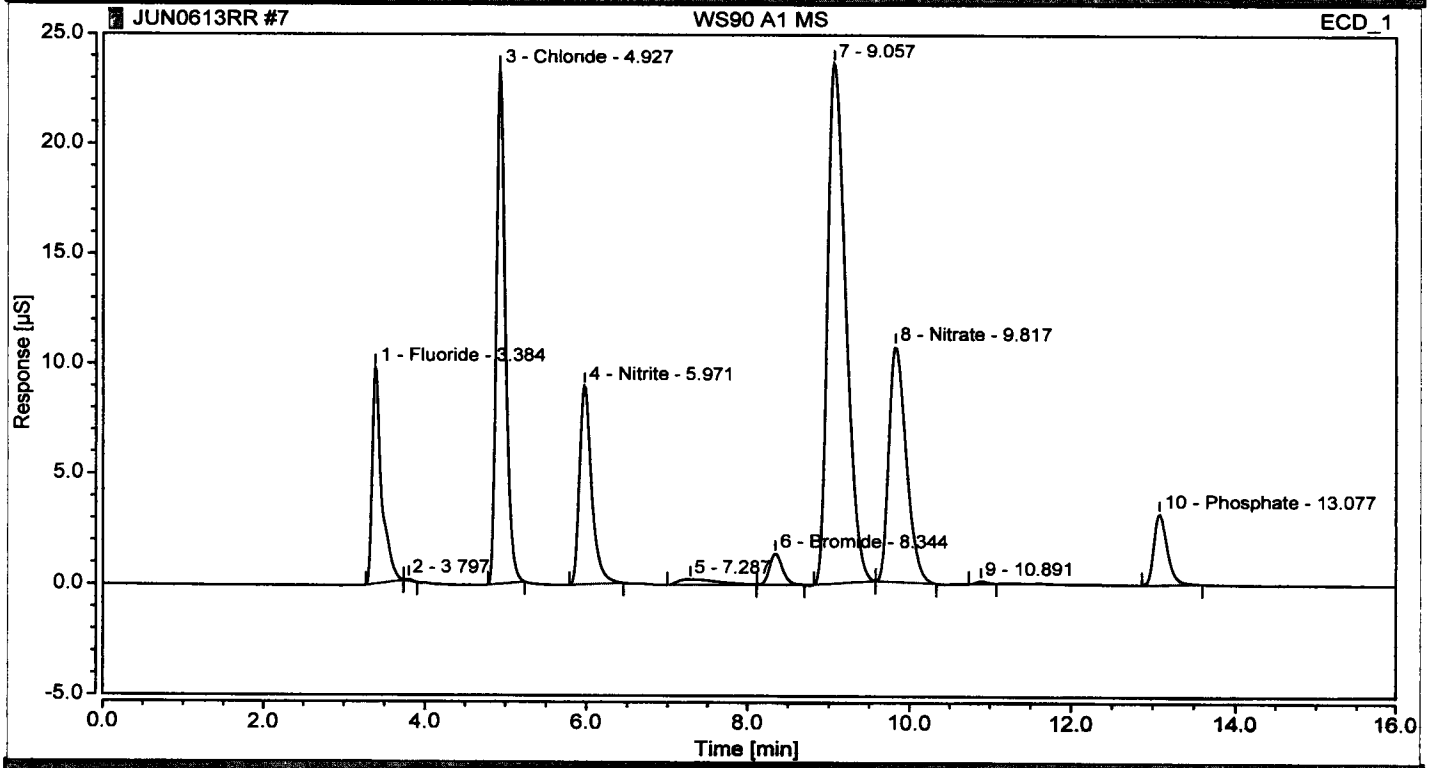
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride							
2								
3								
4	Chloride							
5	Nitrite							
n.a.	Bromide							
6								
n.a.	Sulfate							
7	Nitrate							
8								
9	Phosphate							

Injection Name:	*WS90 A1 DUP*	Inject Number:	6
Vial Number:	*6*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN0613RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*06/06/13 17:44*		



No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride							
2								
3								
4	Chloride							
5	Nitrite							
n.a.	Bromide							
6								
n.a.	Sulfate							
7	Nitrate							
8								
9								
n.a.	Phosphate							

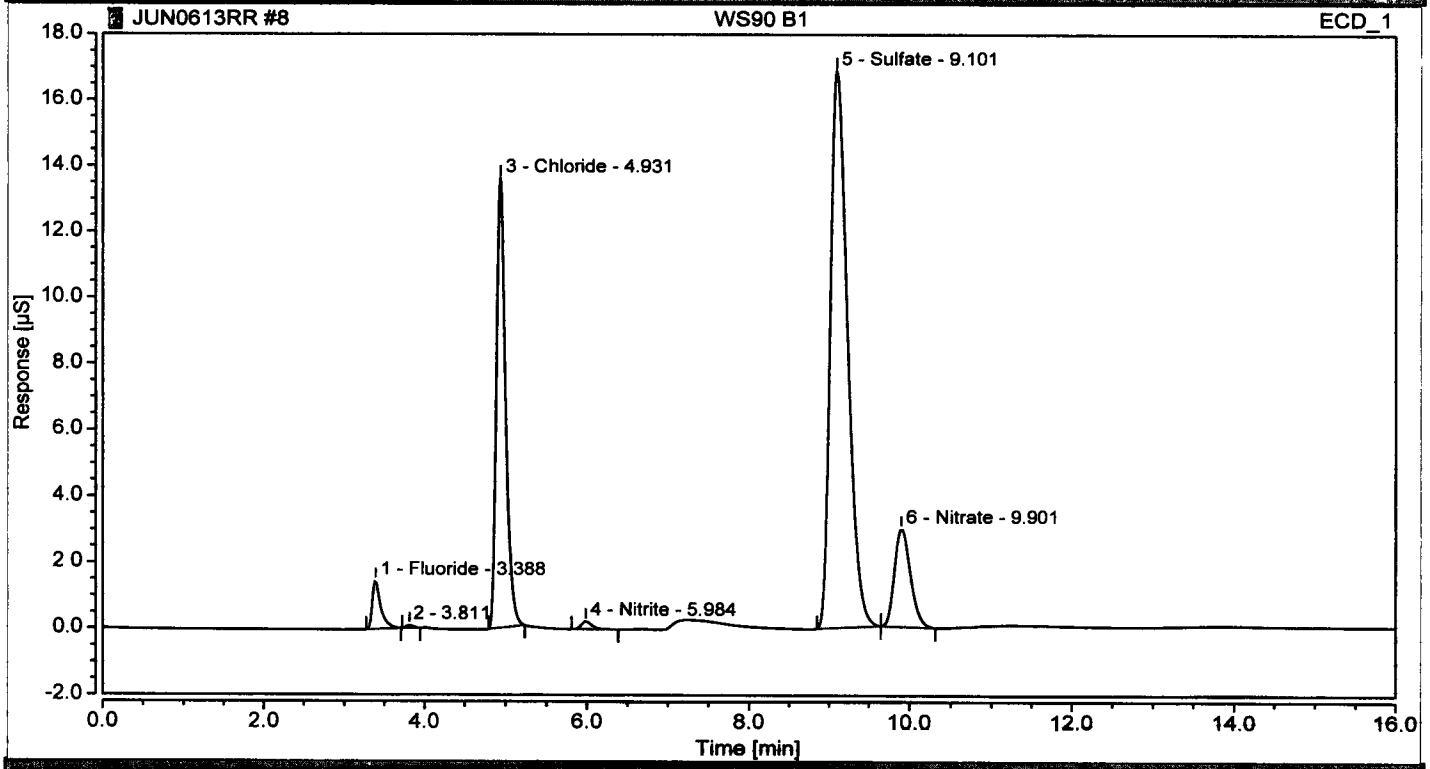
Injection Name:	*WS90 A1 MS*	Inject Number:	7
Vial Number:	*7*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN0613RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*06/06/13 18:04*		



No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.0	3.38	0.0	0.0	FALSE	n.a.
2		1.0	0.0	3.80	0.0	0.0	FALSE	n.a.
3	Chloride	1.0	0.0	4.93	0.0	0.0	FALSE	n.a.
4	Nitrite	1.0	0.0	5.97	0.0	0.0	FALSE	n.a.
5		1.0	0.0	7.29	0.0	0.0		n.a.
6	Bromide	1.0	0.0	8.34	0.0	0.0	FALSE	n.a.
7		1.0	0.0	9.06	0.0	0.0	FALSE	n.a.
n.a.	Sulfate	1.0	0.0	9.82	0.0	0.0	FALSE	n.a.
8	Nitrate	1.0	0.0	9.82	0.0	0.0	FALSE	n.a.
9		1.0	0.0	10.89	0.0	0.0	FALSE	n.a.
10	Phosphate	1.0	0.0	13.08	0.0	0.0	FALSE	n.a.

USGS-01823

Injection Name:	*WS90 B1*	Inject Number:	8
Vial Number:	*8*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN0613RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*06/06/13 18:24*		

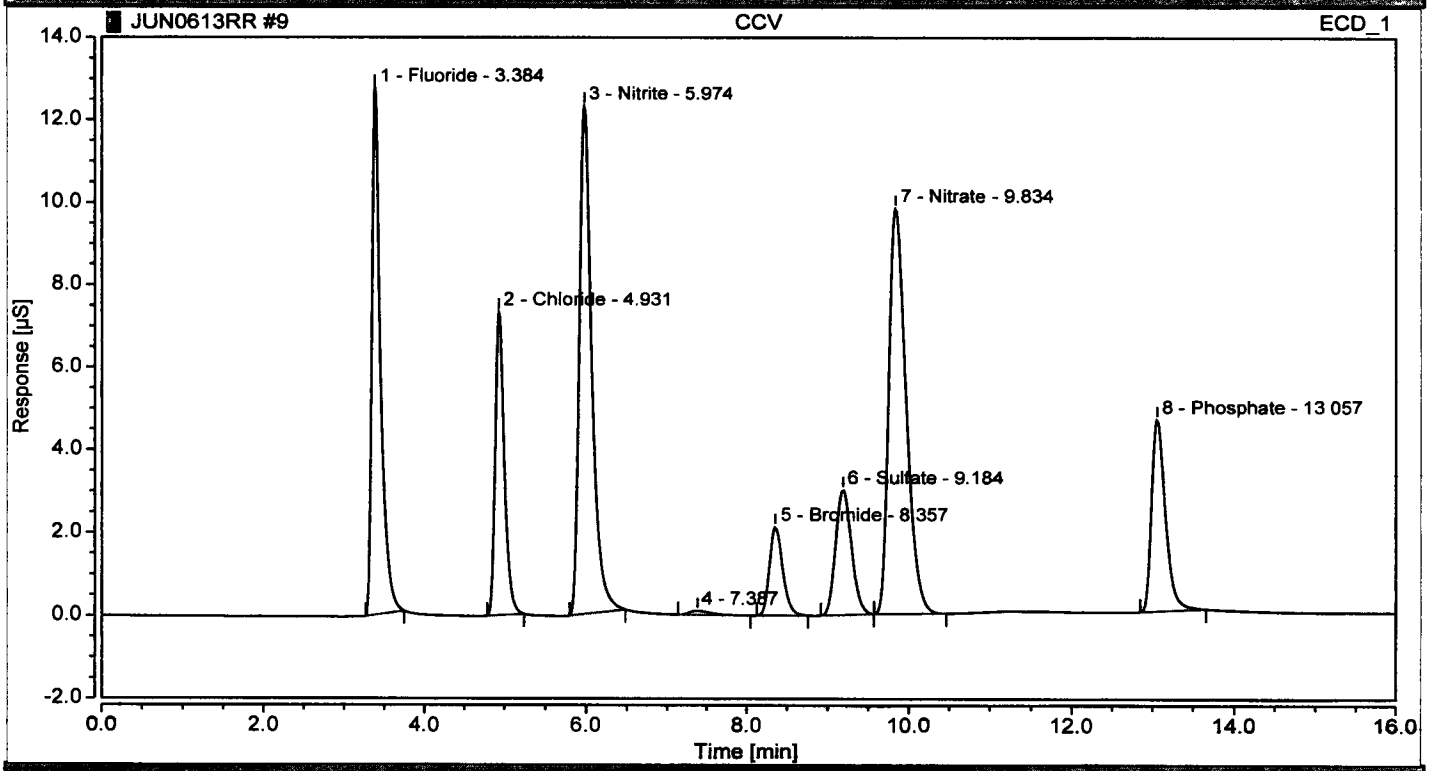


No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride							
2								
3	Chloride							
4	Nitrite							
n.a.								
5	Sulfate							
6	Nitrate							
n.a.	Phosphate		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Injection Details

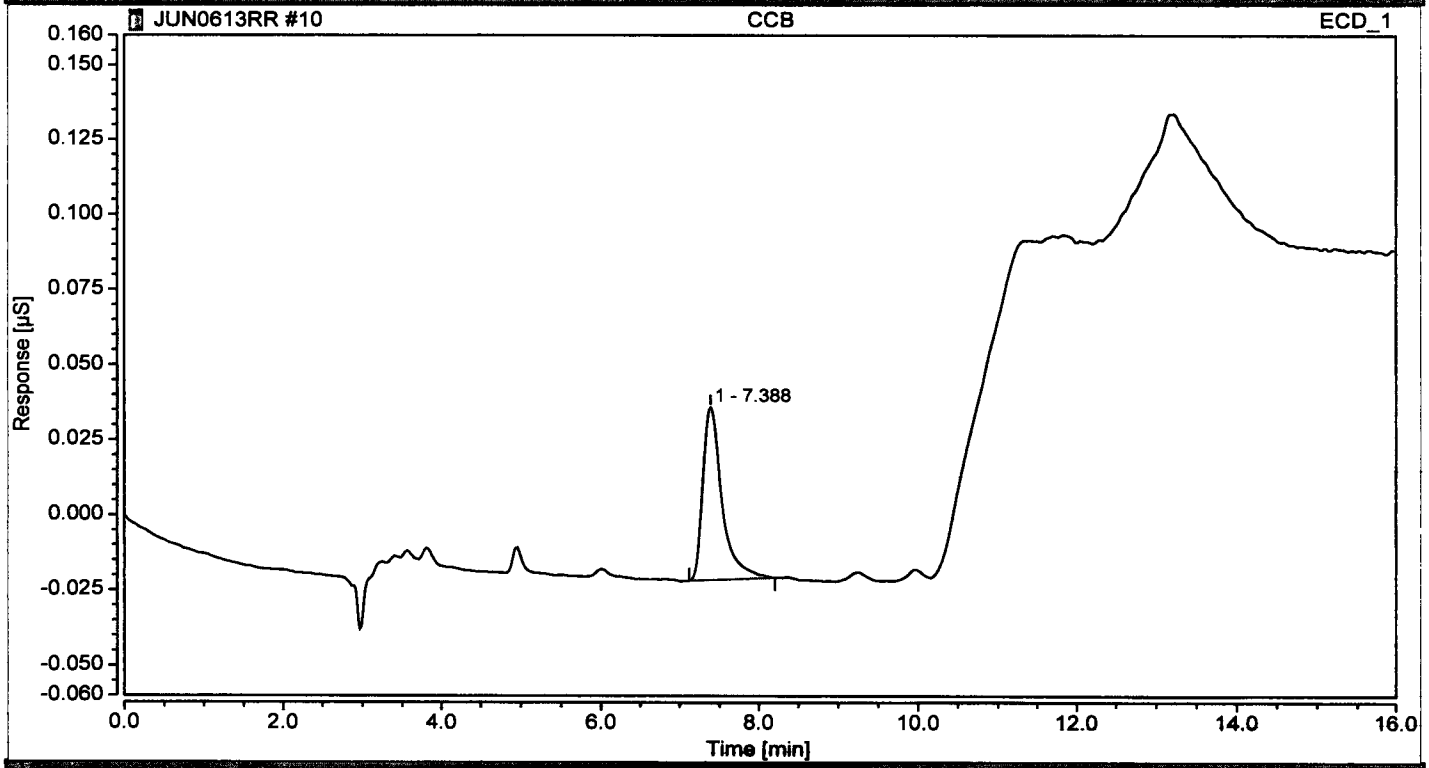
Injection Name:	*CCV*	Inject Number:	9
Vial Number:	*2*	User:	pat
Injection Type:	*Check Standard*	Sequence:	JUN0613RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*06/06/13 18:43*		

Chromatogram



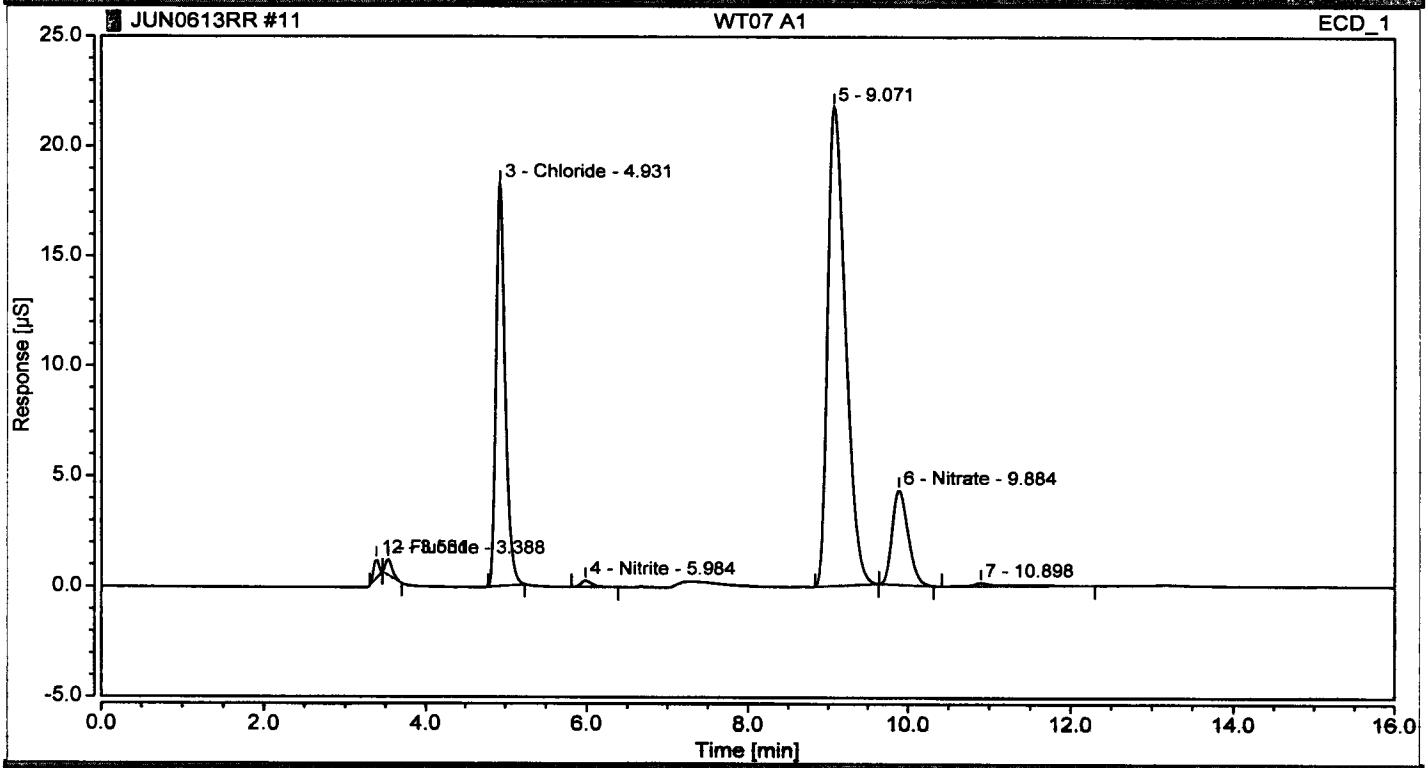
No.	Peak Name	Dilution	Amount mg/l	Retention min	Area µS*min	Height µS	anipulated	Amnt.Dev. mg/l
1	Fluoride						FALSE	1.44
2	Chloride						FALSE	0.37
3	Nitrite						FALSE	1.27
4							FALSE	
5							FALSE	
6	Sulfate						FALSE	0.28
7	Nitrate						FALSE	0.80
8	Phosphate						FALSE	1.18

Injection Name:	*CCB*	Inject Number:	10
Vial Number:	*3*	User:	pat
Injection Type:	*Blank*	Sequence:	JUN0613RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*06/06/13 19:04*		



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	[illegible]	1.0	n.a.	[illegible]	[illegible]	[illegible]	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.

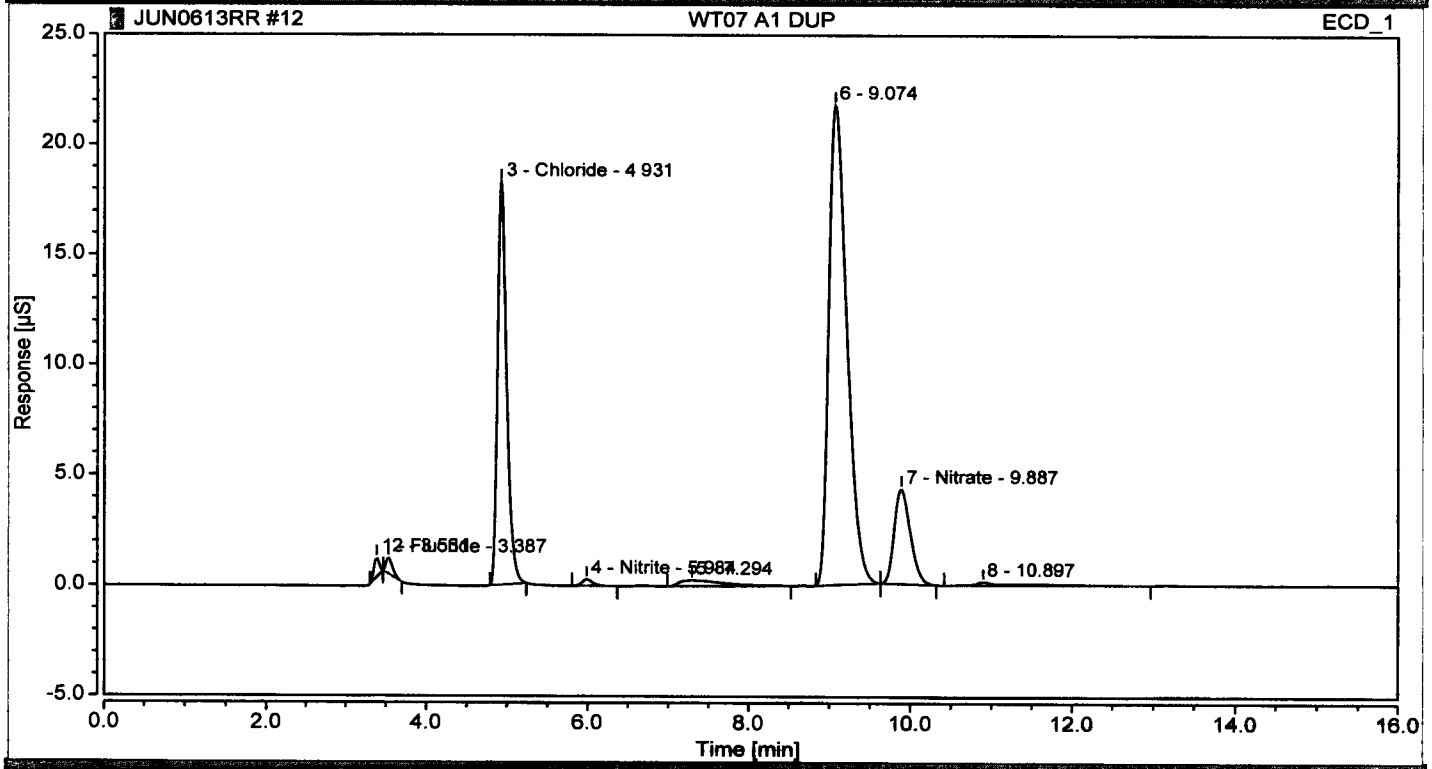
Injection Name:	*WT07 A1*	Inject Number:	11
Vial Number:	*9*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN0613RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processsmethodat*		
Injection Date/Time:	*06/06/13 19:24*		



No.	Peak Name	Dilution	Amount mg/l	Retention min	Area µS*min	Height µS	anipulated	Amnt.Dev. mg/l
1	Fluoride							n.a.
2								n.a.
3	Chloride							n.a.
4	Nitrite							n.a.
n.a.								n.a.
5								n.a.
n.a.	Sulfate							n.a.
6	Nitrate							n.a.
7								n.a.
n.a.	Phosphate							n.a.

US99:01027

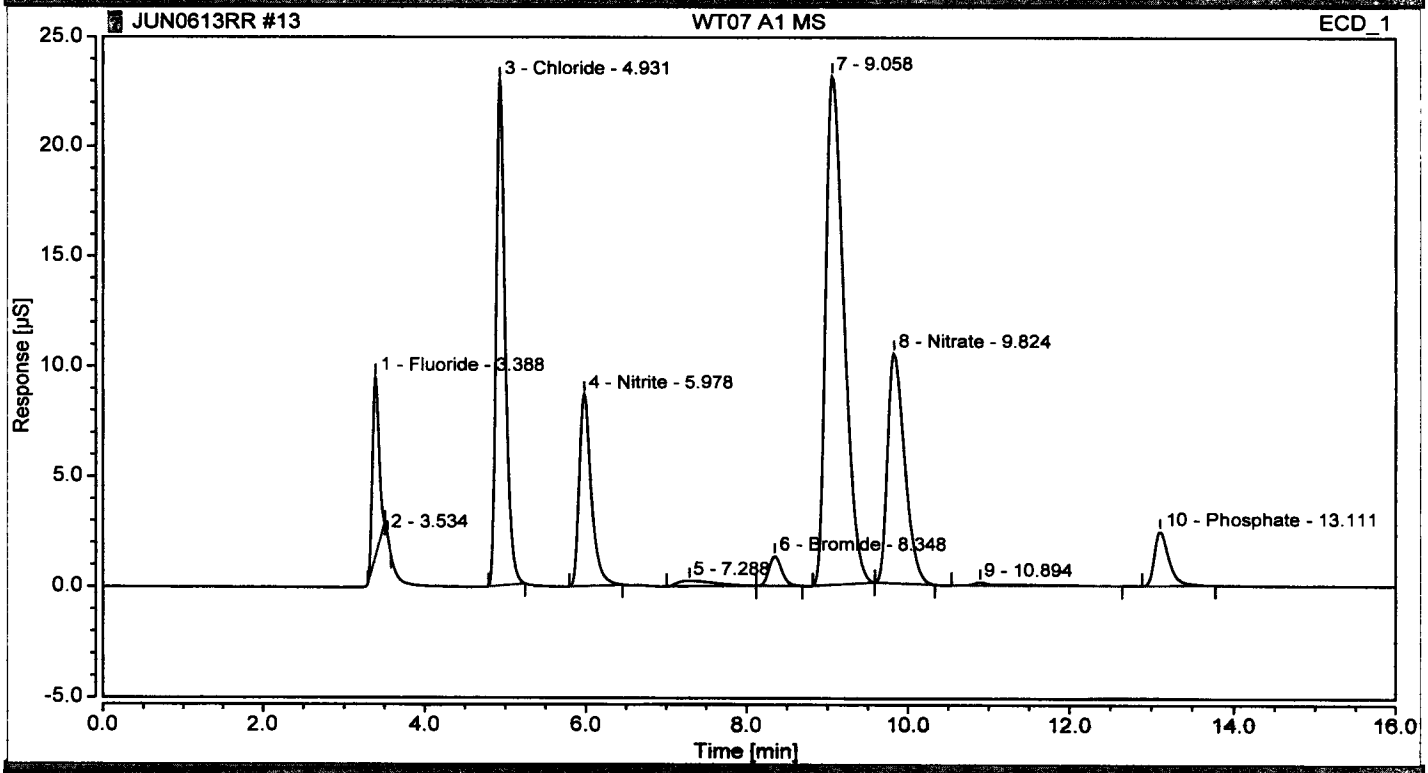
Injection Name:	*WT07 A1 DUP*	Inject Number:	12
Vial Number:	*10*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN0613RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*06/06/13 19:44*		



No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0					FALSE	n.a.
2		1.0					FALSE	n.a.
3	Chloride	1.0						n.a.
4	Nitrite	1.0						n.a.
6		1.0						n.a.
n.a.	Bromide	1.0					n.a.	n.a.
6		1.0						n.a.
n.a.	Sulfate	1.0					n.a.	n.a.
7	Nitrate	1.0						n.a.
8		1.0					FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

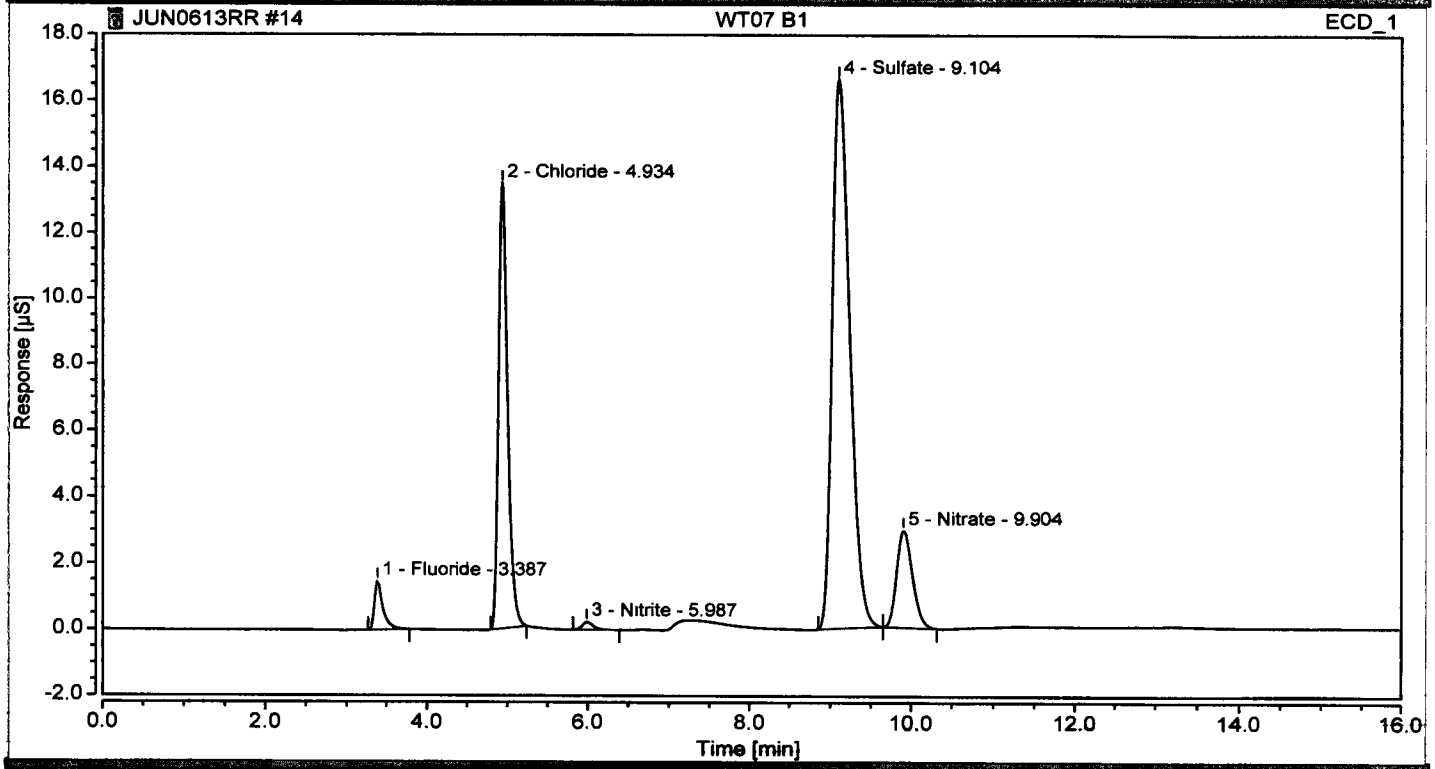
USGS : GI628

Injection Name:	*WT07 A1 MS*	Inject Number:	13
Vial Number:	*11*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN0613RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*06/06/13 20:04*		



No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride						FALSE	n.a.
2							FALSE	n.a.
3	Chloride						FALSE	n.a.
4	Nitrite						FALSE	n.a.
5								n.a.
6	Bromide						FALSE	n.a.
7							FALSE	n.a.
n.a.	Sulfate							n.a.
8	Nitrate						FALSE	n.a.
9							FALSE	n.a.
10	Phosphate			13.11			FALSE	n.a.

Injection Name:	*WT07 B1*	Inject Number:	14
Vial Number:	*12*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN0613RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*06/06/13 20:24*		



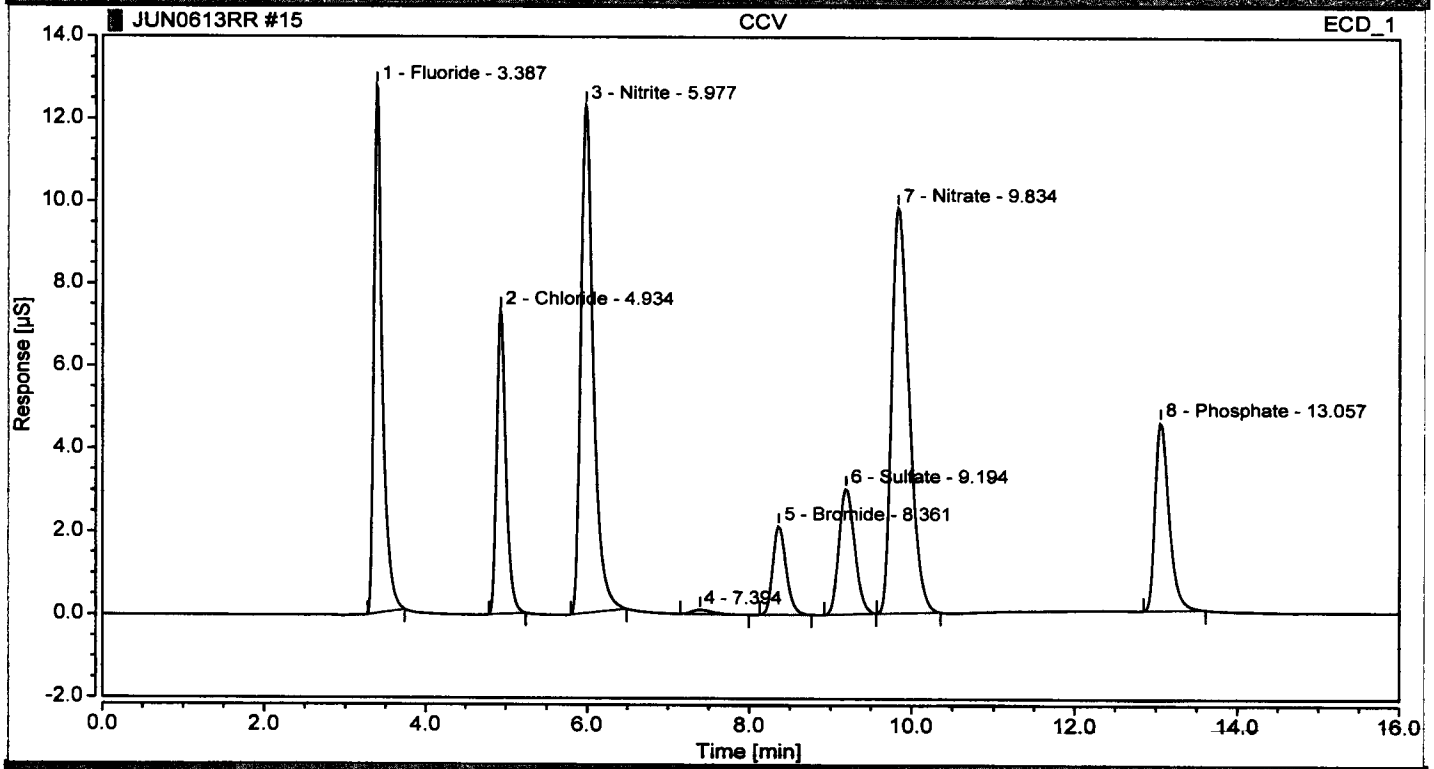
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
2	Chloride	1.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
3	Nitrite	1.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	1.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
5	Nitrate	1.0	0.807	9.90	0.602	2.926	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:	15
Vial Number:	*2*	User:	pat
Injection Type:	*Check Standard*	Sequence:	JUN0613RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*06/06/13 20:44*		

Chromatogram



Peak Results

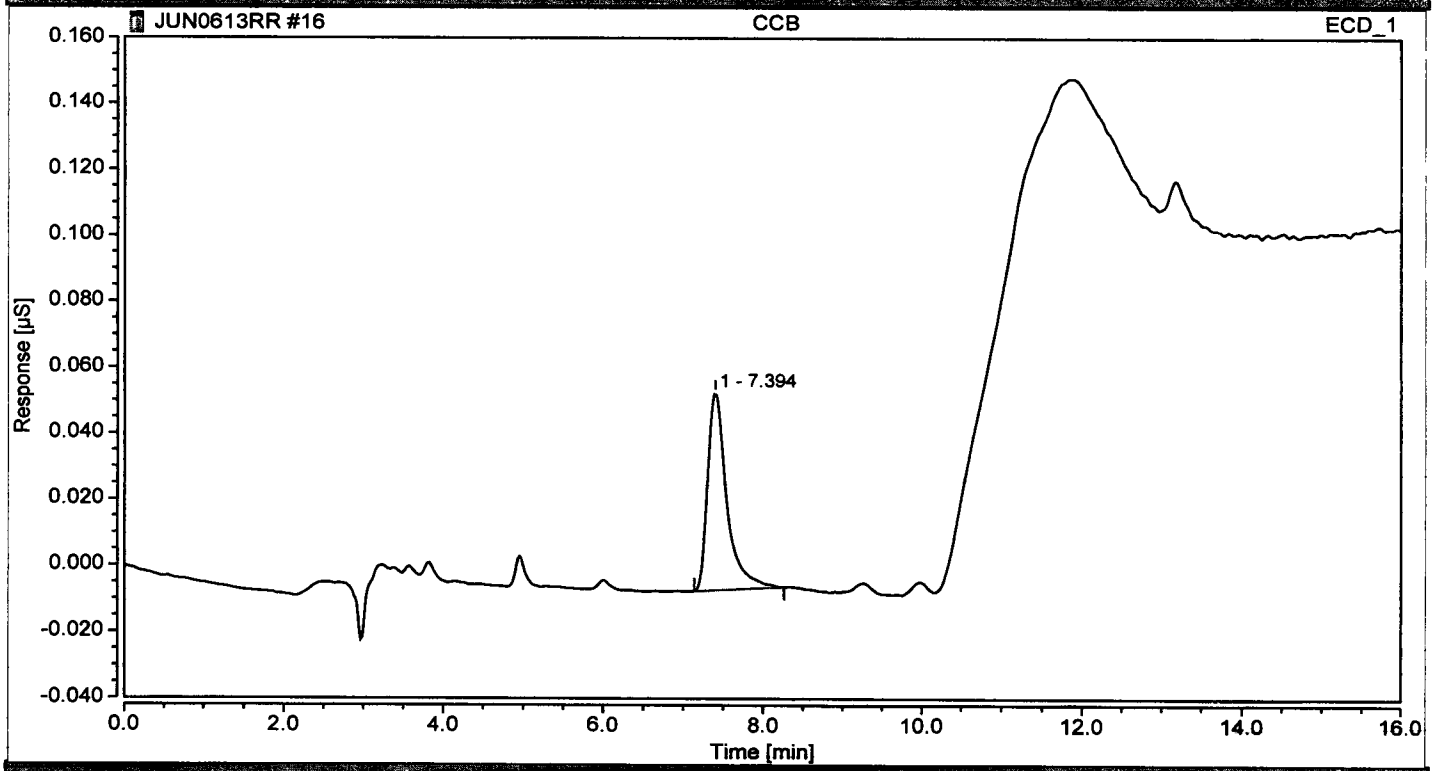
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	3.043	3.69	1.571	12.781	FALSE	1.44
2	Chloride	1.0	2.989	4.93	0.958	7.337	FALSE	-0.35
3	Nitrite	1.0	2.997	5.98	2.185	12.296	FALSE	-0.09
4		1.0	[illegible]	7.39	0.010	0.093	FALSE	0.8
5	Bromide	1.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	Sulfate	1.0	3.006	9.19	0.882	0.025	FALSE	0.21
7	Nitrate	1.0	2.948	9.83	2.434	0.816	FALSE	-1.08
8	Phosphate	1.0	2.912	13.06	0.909	4.542	FALSE	-2.92

Chromatogram and Results

Injection Details

Injection Name:	*CCB*	Inject Number:	16
Vial Number:	*3*	User:	pat
Injection Type:	*Blank*	Sequence:	JUN0613RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*06/06/13 21:05*		

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.	7.39	0.017	0.080	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	10.4	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.

Injection Report

Injection Name:	*STOP*	Inject Number:	17
Vial Number:	*1*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN0613RR
Dilution Factor:	*1.0*		
Instrument Method:	*SHUTDOWN*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*06/06/13 21:27*		

Chromatogram

Can't read channel ECD_1 from injection #17 - STOP
Channel is not available

Peak Information

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			n.a.	min	matogram in con	matogram in		n.a.

Amount Summary

Sequence Details

Name:	**JUN1013RR**	*Calibration:*	**MAY2313RR** **ARI # 616-02**
Directory:	**Instrument Data\2013 DATA\JUNE 2013**	*Calibration exp:*	**7/23/2013**
Data Vault:	**ChromeleonLocal**	*Queue Start:*	6/10/2013 18:12
No. of Injections:	**44.000**	*User:*	**RR**

		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	3.075	3.036	3.037	3.028	3.030	2.921	2.980
%R=		**102.5%**	**101.2%**	**101.2%**	**100.9%**	**101.0%**	**97.4%**	**99.3%**
ICB	1.0	n.a.	0.026	n.a.	n.a.	n.a.	n.a.	n.a.
LOW	1.0	0.088	0.098	0.080	0.079	0.084	0.082	0.076
		0.553	30.555	n.a.	n.a.		n.a.	0.421
		0.552	30.560	n.a.	n.a.		n.a.	0.357
%RPD=		**0.20%**	**0.02%**			**0.23%**		**16.40%**
		10.526	39.111	9.952	9.168		9.873	9.986
%R=		**99.7%**	**85.6%**	**99.5%**	**91.7%**	**96.0%**	**98.7%**	**95.6%**
SPK=	**0.25mL*200ppm/5mL**		**=10ppm**					
		0.485		n.a.	n.a.	13.121	n.a.	0.455
		0.475		n.a.	n.a.	13.097	n.a.	0.410
%RPD=		**2.10%**	**0.16%**			**0.18%**		**10.39%**
		20.466		19.916	18.613	32.235	19.780	19.399
%R=		**99.9%**	**85.9%**	**99.6%**	**93.1%**	**95.6%**	**98.9%**	**94.7%**
SPK=	**0.5mL*200ppm/5mL**		**=20ppm**					
		n.a.	2.220	n.a.	n.a.		n.a.	n.a.
		0.224		n.a.	n.a.	36.709	0.207	0.112
		0.289	21.797	n.a.	n.a.		0.193	n.a.
CCV	1.0	3.062	3.031	3.011	3.004	3.010	2.921	2.928
%R=		**102.1%**	**101.0%**	**100.4%**	**100.1%**	**100.3%**	**97.4%**	**97.6%**
CCB	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		n.a.	3.170	n.a.	n.a.		0.031	n.a.
		n.a.	2.320	n.a.	n.a.		n.a.	n.a.
		0.193	4.103	n.a.	n.a.		0.388	n.a.
		0.082	3.569	n.a.	n.a.		0.965	n.a.
		n.a.	2.511	n.a.	n.a.		0.169	n.a.
		0.083	3.577	n.a.	n.a.		0.970	n.a.
		0.118		0.058	n.a.	24.893	1.143	n.a.
		0.119		0.058	n.a.	24.887	1.141	n.a.
%RPD=		**0.32%**	**0.05%**	**0.31%**		**0.02%**	**0.17%**	
		10.571		10.112	9.493	33.674	11.208	9.511
%R=		**104.5%**	**96.7%**	**101.1%**	**94.9%**	**87.8%**	**112.1%**	**95.1%**
SPK=	**0.25mL*200ppm/5mL**		**=10ppm**					
		0.099	7.147	0.056	n.a.		1.051	n.a.
CCV	1.0	3.057	3.025	3.004	2.985	2.997	2.917	2.922
%R=		**101.9%**	**100.8%**	**100.1%**	**99.5%**	**99.9%**	**97.2%**	**97.4%**
CCB	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		0.100	7.139	0.056	n.a.		1.051	0.113
%RPD=		**0.32%**	**0.12%**	**1.18%**		**0.07%**	**0.06%**	
		20.586	26.379	20.074	19.011		21.066	19.018
%R=		**102.4%**	**96.2%**	**100.1%**	**95.1%**	**88.0%**	**100.1%**	**95.1%**
SPK=	**0.5mL*200ppm/5mL**		**=20ppm**					
		0.324		0.047	n.a.	18.687	0.779	n.a.
		0.302	5.281	0.045	n.a.		0.709	n.a.
		0.136		0.057	n.a.	24.609	1.122	n.a.
		0.412		0.057	n.a.	24.587	1.121	n.a.
%RPD=		**100.53%**	**0.06%**	**0.27%**		**0.09%**	**0.08%**	
		10.221		9.924	9.304	32.783	10.975	9.253

%R=		**100.8%**	**93.6%**	**99.2%**	**93.0%**	**81.7%**	**109.7%**	**92.5%**
SPK=	**0.25mL*200ppm/5mL**		**=10ppm**					
[redacted]		0.338	7.144	0.058	n.a.	[redacted]	1.037	n.a.
[redacted]		0.320	7.147	0.057	n.a.	[redacted]	1.033	n.a.
%RPD=		**5.31%**	**0.04%**	**1.64%**		**0.01%**	**0.41%**	
[redacted]		20.488	26.462	20.165	19.104	[redacted]	21.143	19.012
%R=		**100.8%**	**96.6%**	**100.8%**	**95.5%**	**88.6%**	**105.7%**	**95.1%**
SPK=	**0.5mL*200ppm/5mL**		**=20ppm**					
CCV	1.0	3.065	3.028	3.005	2.986	2.996	2.917	2.968
%R=		**102.2%**	**100.9%**	**100.2%**	**99.5%**	**99.9%**	**97.2%**	**98.9%**
CCB	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
[redacted]		0.329	[redacted]	0.047	n.a.	18.132	0.760	n.a.
[redacted]		0.335	5.207	0.047	n.a.	[redacted]	0.693	n.a.
CCV	1.0	3.064	3.024	3.001	2.986	2.995	2.916	2.919
%R=		**102.1%**	**100.8%**	**100.0%**	**99.5%**	**99.8%**	**97.2%**	**97.3%**
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.

[redacted]

Sequence Overview

Name:	**JUN1013RR**	*Queue Start:*	**2013-06-10T18:12:41-**
Directory:	**Instrument Data\2013 DATA\JUNE 2013**	*Created By:*	**pat**
Data Vault:	**ChromeleonLocal**		
No. of Injections:	**44**		

No.	Injection Name	Position	Type	Level	Dilution	Inject Time
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						
43						

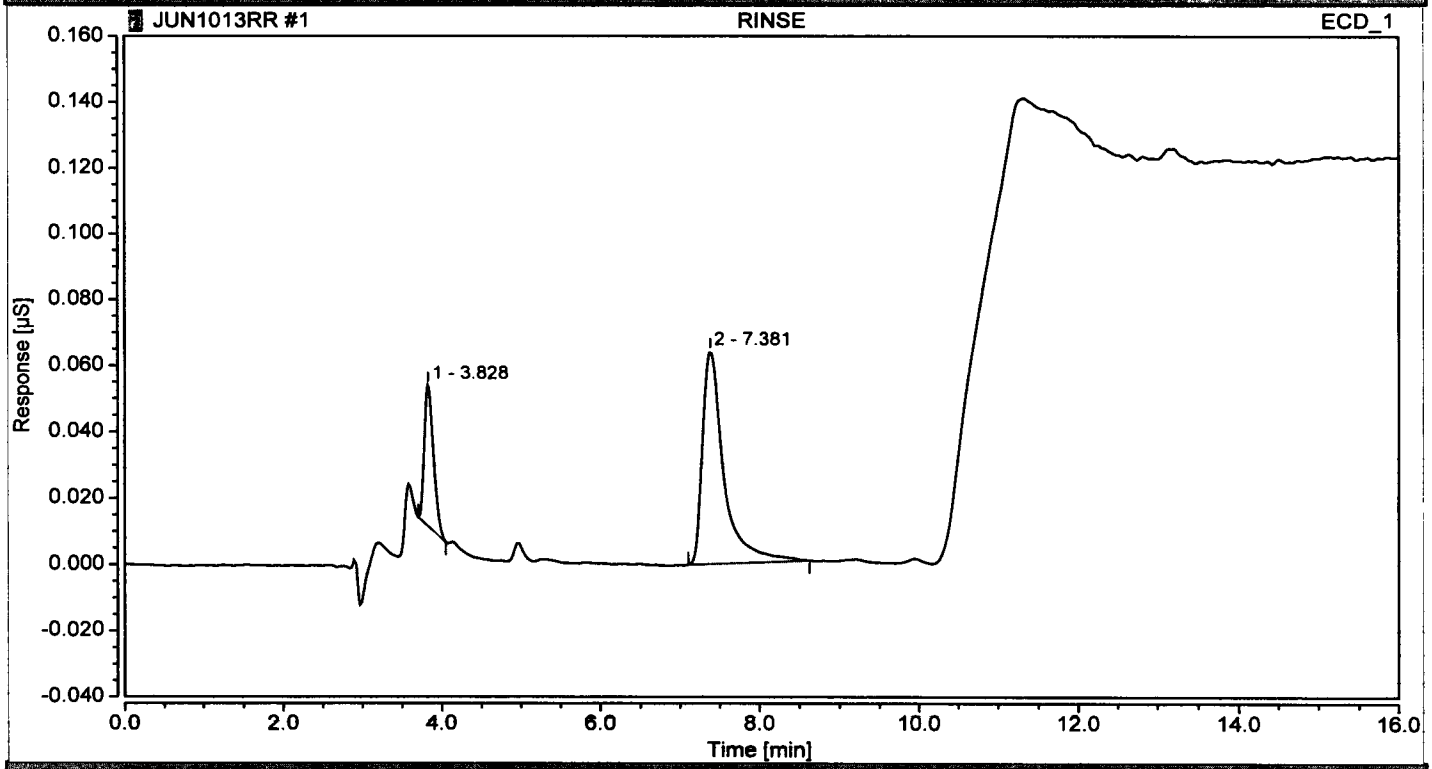
44	STOP	1	Unknown		1.0	11/Jun/13 08:34:19

Chromatograms and Results

Injection Details

Injection Name:	*RINSE*	Inject Number:	1
Vial Number:	*1*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*10/06/13 18:12*		

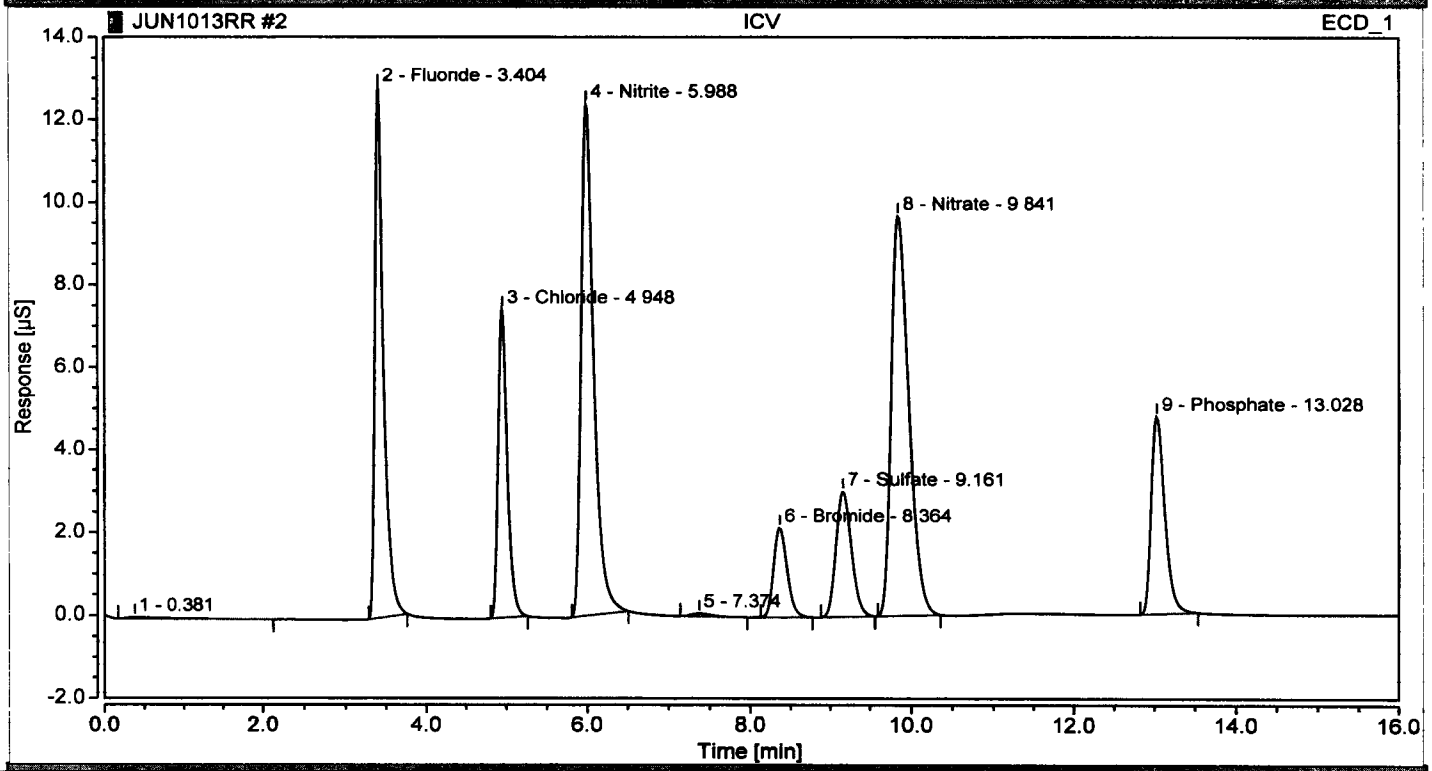
Chromatograms



Integrations

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		1.0	[illegible]	[illegible]	0.006	0.043	FALSE	n.a.
n.a.	Chloride	[illegible]	[illegible]	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	n.a.	n.a.
2		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
n.a.	Bromide	[illegible]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	[illegible]	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.

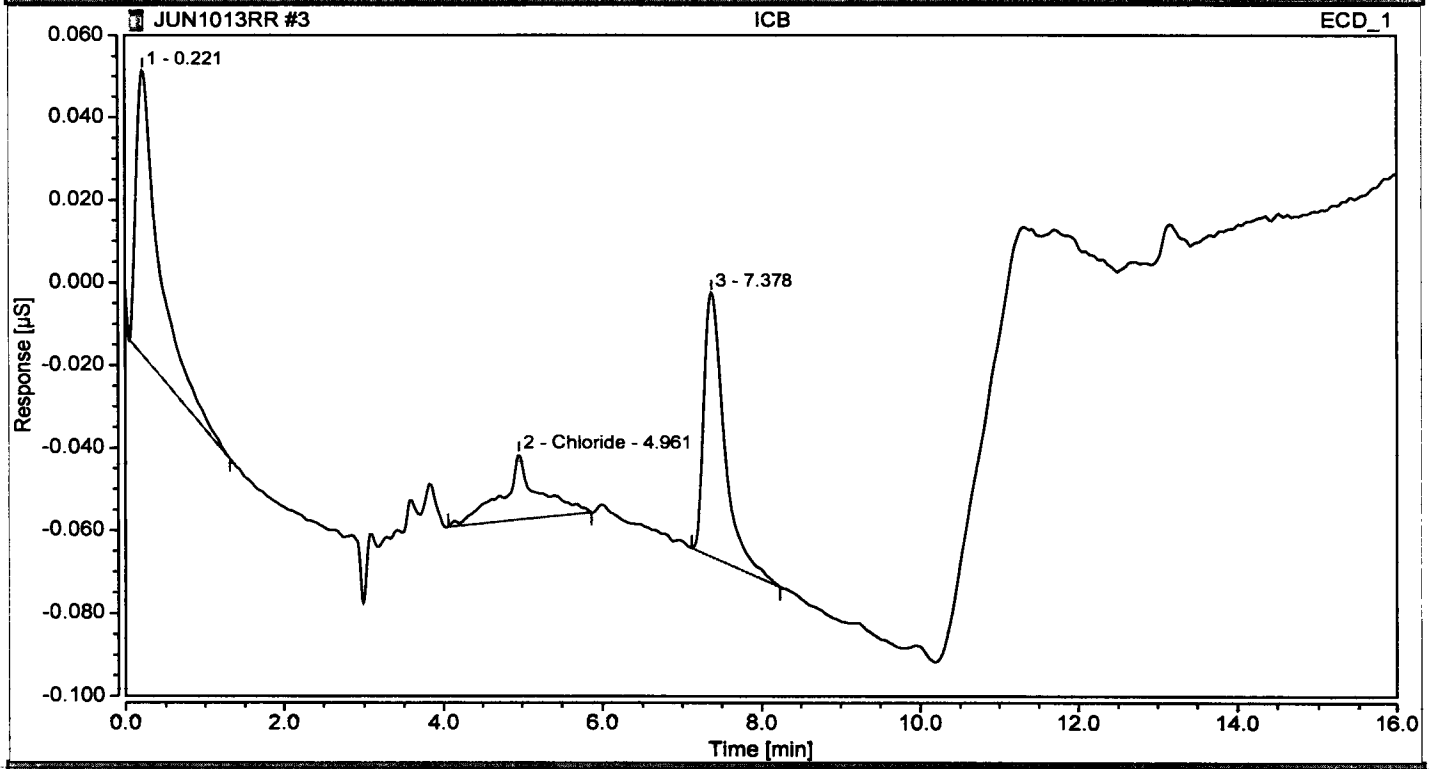
Injection Name:	*ICV*	Inject Number:	2
Vial Number:	*2*	User:	pat
Injection Type:	*Check Standard*	Sequence:	JUN1013RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*10/06/13 18:31*		



No.	Peak Name	Dilution	Amount mg/l	Retention min	Area µS*min	Height µS	anipulated	Amnt.Dev. mg/l
1		1.0					FALSE	n.a.
2	Fluonde	1.0					FALSE	2.49
3	Chloride	1.0					FALSE	1.22
4	Nitrite	1.0					FALSE	1.22
5		1.0					FALSE	n.a.
6	Bromide	1.0					FALSE	0.93
7	Sulfate	1.0					FALSE	0.99
8	Nitrate	1.0					FALSE	-2.63
9	Phosphate	1.0					FALSE	-0.66

Injection Details

Injection Name:	*ICB*	Inject Number:	3
Vial Number:	*3*	User:	pat
Injection Type:	*Blank*	Sequence:	JUN1013RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*10/06/13 18:50*		



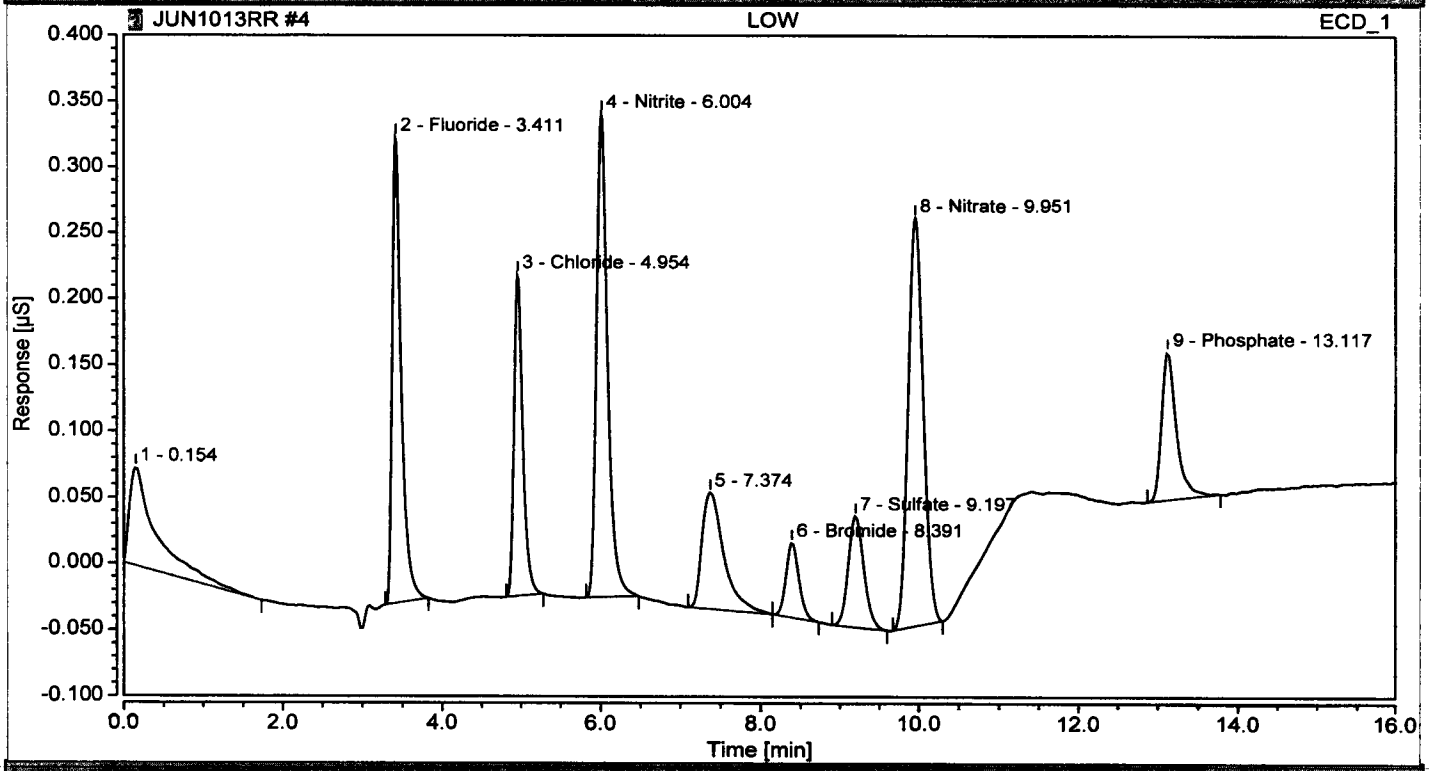
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1		1.0	n.a.	0.221	0.0000	0.000	FALSE	n.a.
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	Chloride	1.0	n.a.	4.961	0.0000	0.000	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		1.0	n.a.	7.378	0.0000	0.000	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:	JUN1013RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*10/06/13 19:10*		

Chromatogram



Integration Results

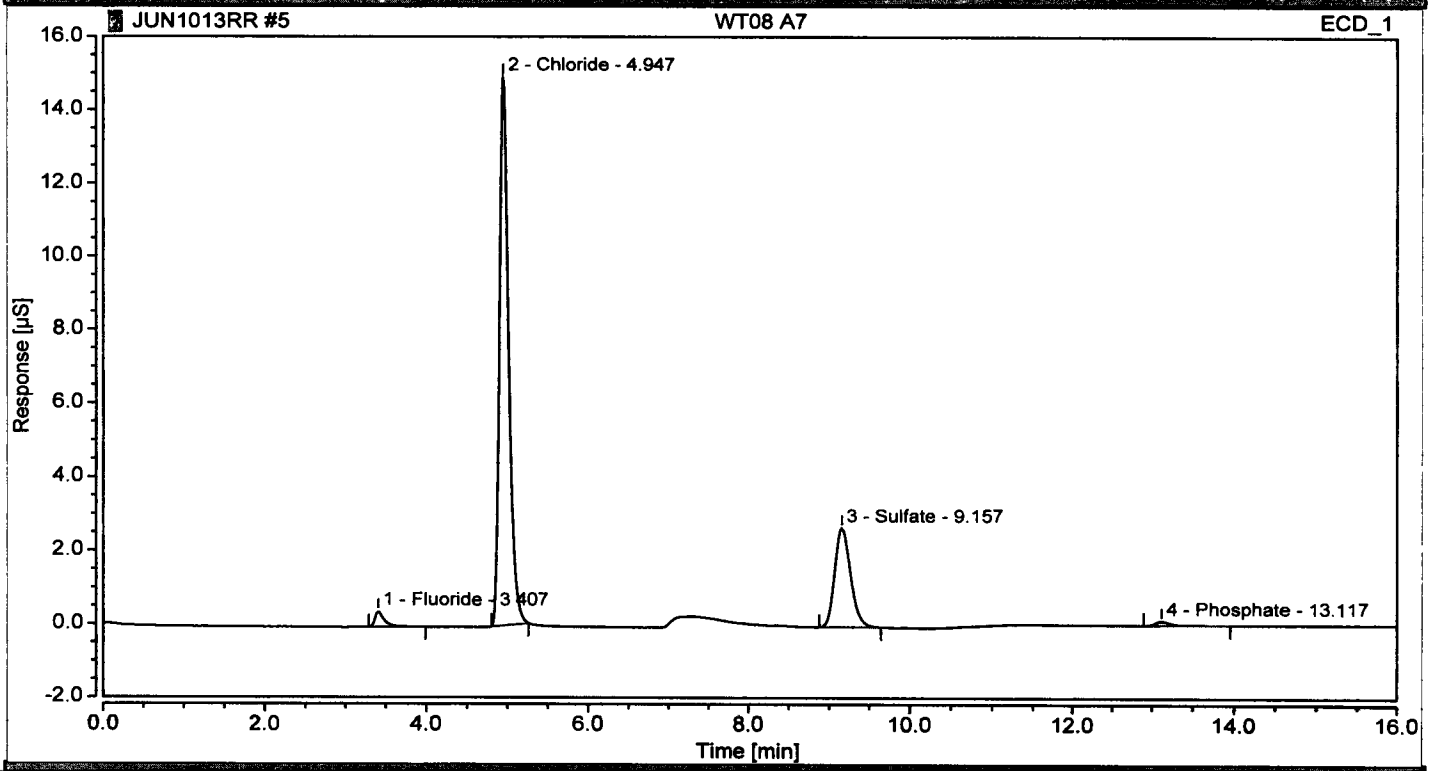
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1		1.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
2	Fluoride	1.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
3	Chloride	1.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
4	Nitrite	1.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
5		1.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
6	Bromide	1.0	0.079	[illegible]	[illegible]	[illegible]	FALSE	n.a.
7	Sulfate	1.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
8	Nitrate	1.0	[illegible]	9.95	[illegible]	[illegible]	FALSE	n.a.
9	Phosphate	1.0	0.078	13.12	[illegible]	0.112	FALSE	n.a.

Chromeleon Results

Injection Details

Injection Name:	*WT08 A7*	Inject Number:	5
Vial Number:	*5*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*5.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*10/06/13 19:29*		

Chromeleon



Integration Results

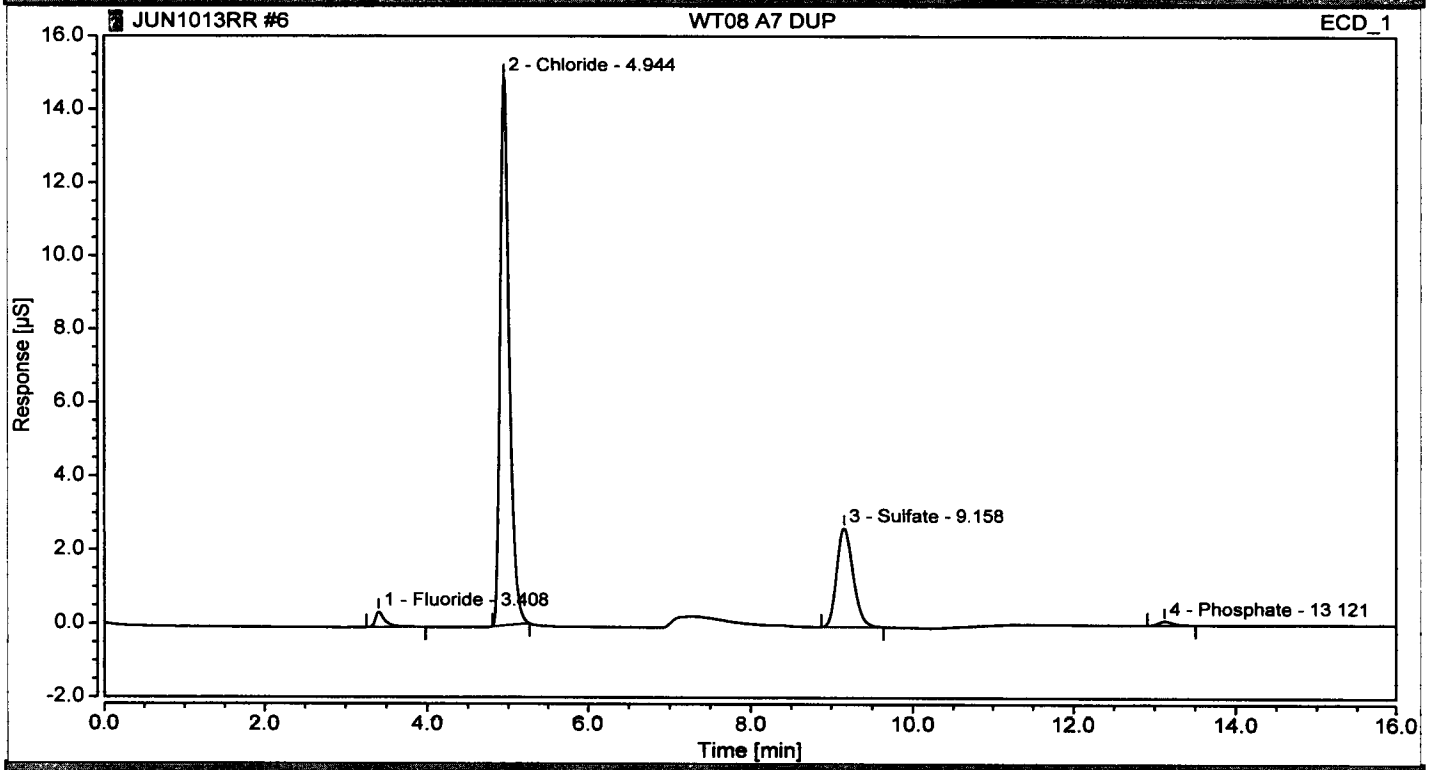
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	5.0	[illegible]	[illegible]	[illegible]	0.420	FALSE	n.a.
2	Chloride	5.0	[illegible]	4.95	1.958	[illegible]	FALSE	n.a.
n.a.	Nitrite	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Bromide	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	5.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
n.a.	Nitrate	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Phosphate	5.0	0.421	13.12	0.026	0.117	FALSE	n.a.

Injection Results

Injection Details

Injection Name:	*WT08 A7 DUP*	Inject Number:	6
Vial Number:	*6*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*5.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*10/06/13 19:48*		

Chromatogram



Integration

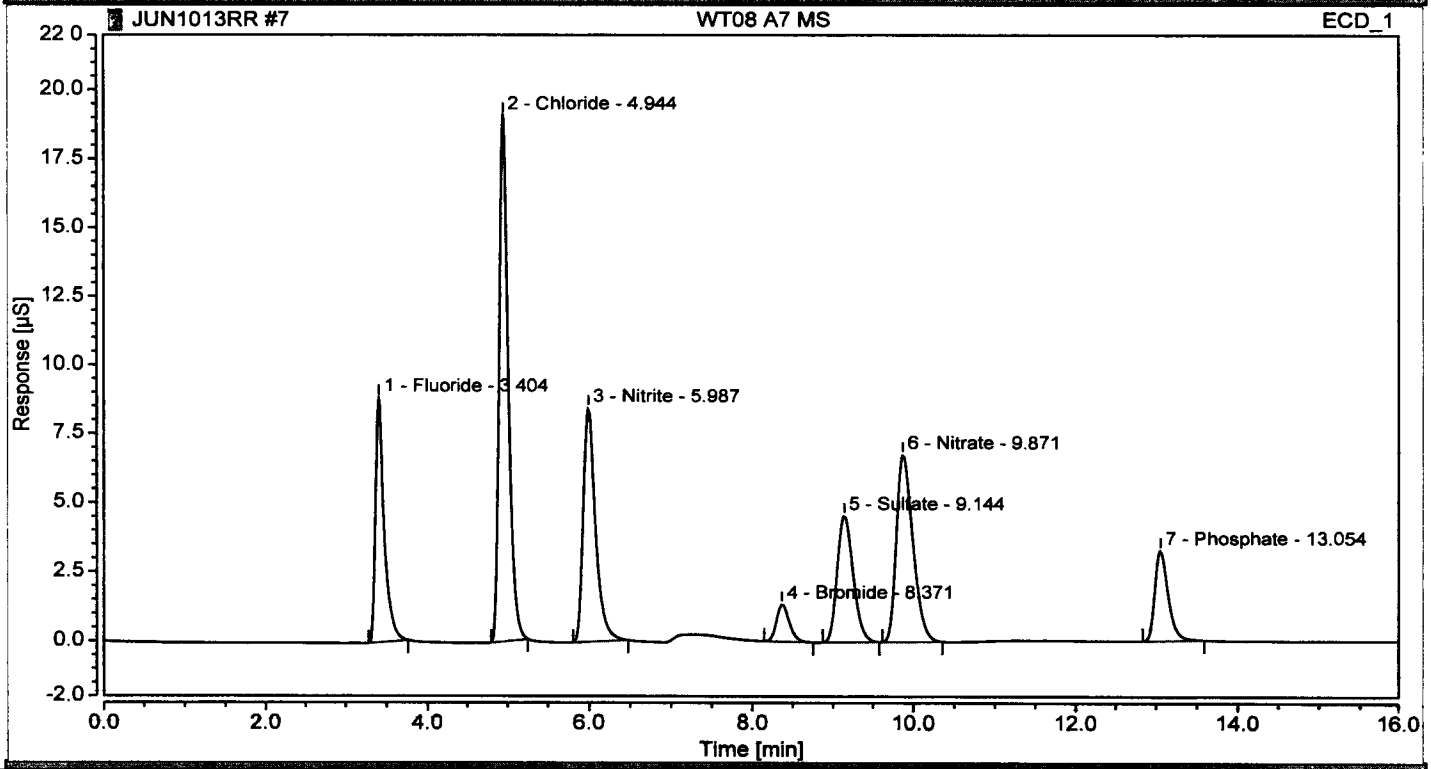
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	5.0	0.357	3.41	0.0167	0.410	FALSE	n.a.
2	Chloride	5.0	30.560	4.94	0.9008	13.341	FALSE	n.a.
n.a.	Nitrite	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Bromide	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	5.0	30.560	9.16	0.9008	13.341	FALSE	n.a.
n.a.	Nitrate	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Phosphate	5.0	0.357	13.12	0.0122	0.112	FALSE	n.a.

Chromatogram Report

Injection Details

Injection Name:	*WT08 A7 MS*	Inject Number:	7
Vial Number:	*7*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*5.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*10/06/13 20:08*		

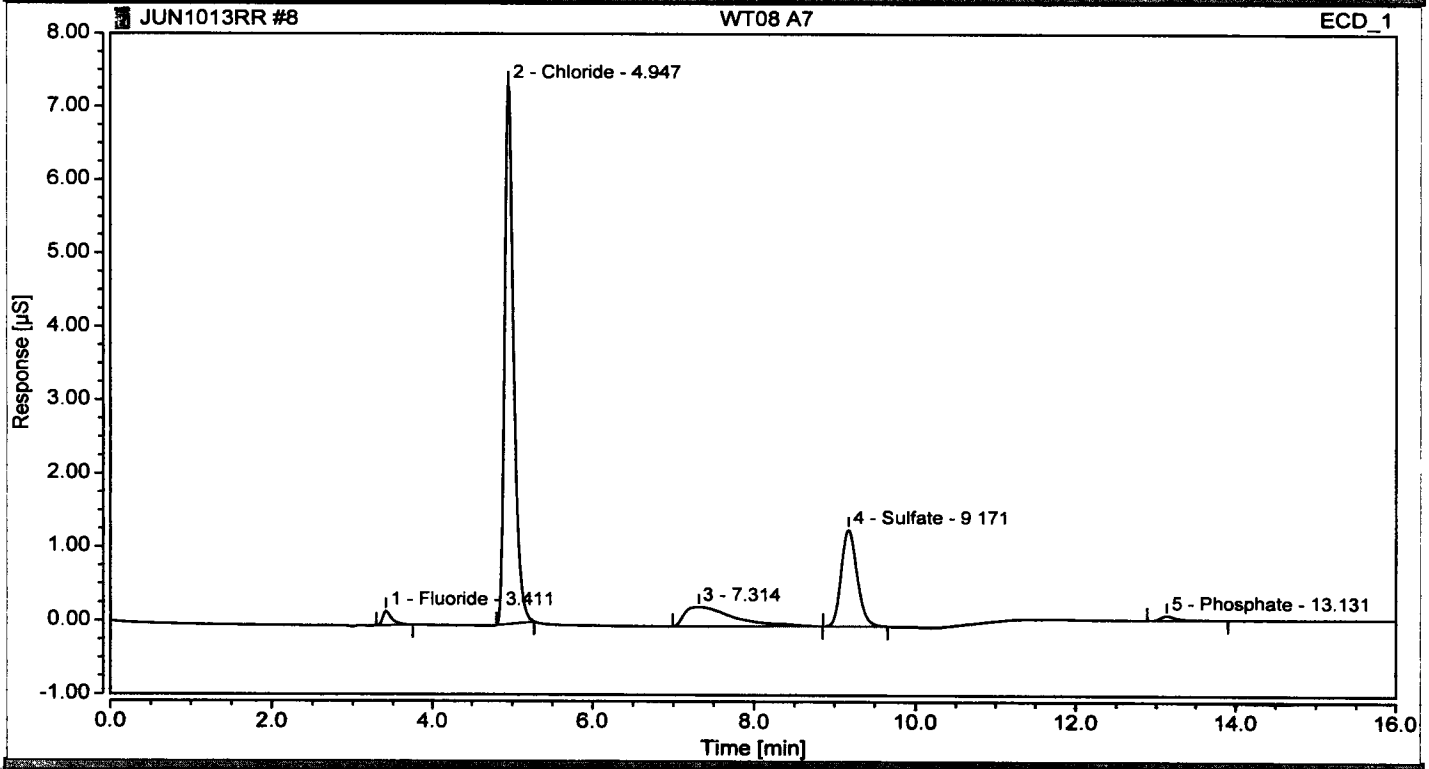
Chromatogram



Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	5.0	[illegible]	[illegible]	1.087	[illegible]	FALSE	n.a.
2	Chloride	5.0	39.111	[illegible]	[illegible]	[illegible]	FALSE	n.a.
3	Nitrite	5.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
4	Bromide	5.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
5	Sulfate	5.0	[illegible]	[illegible]	1.057	[illegible]	FALSE	n.a.
6	Nitrate	5.0	9.673	9.87	1.619	5.754	FALSE	n.a.
7	Phosphate	5.0	9.986	13.05	0.623	3.257	FALSE	n.a.

Injection Name:	*WT08 A7*	Inject Number:	8
Vial Number:	*8*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*10.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*10/06/13 20:28*		



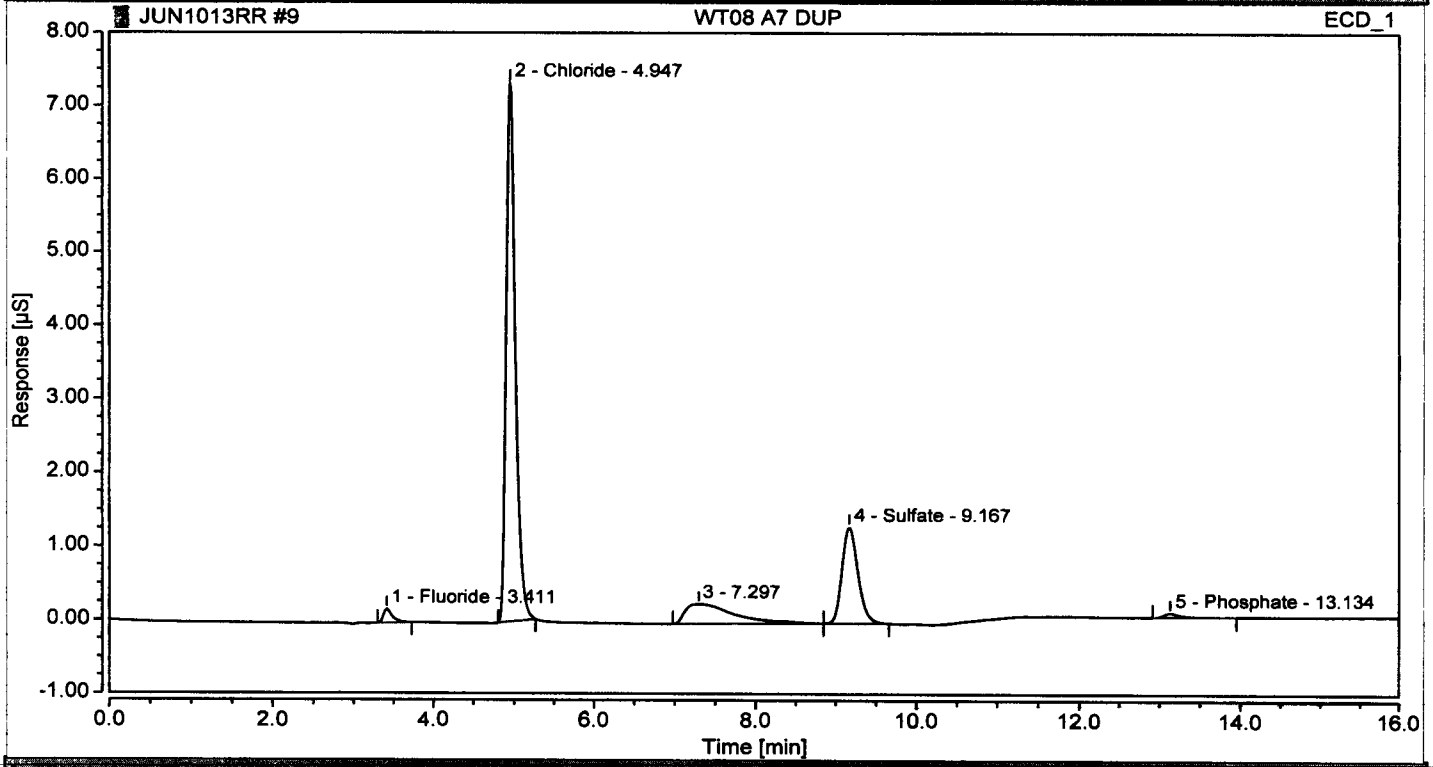
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	10.0	[illegible]	[illegible]	0.026	[illegible]	FALSE	n.a.
2	Chloride	[illegible]	[illegible]	4.95	[illegible]	7.35	FALSE	n.a.
n.a.	Nitrite	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	n.a.
3	[illegible]	[illegible]	[illegible]	7.31	[illegible]	[illegible]	[illegible]	n.a.
n.a.	Bromide	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	n.a.
4	Sulfate	[illegible]	[illegible]	9.17	[illegible]	[illegible]	FALSE	n.a.
n.a.	Nitrate	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	Phosphate	10.0	[illegible]	13.13	0.014	0.001	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WT08 A7 DUP*	Inject Number:	9
Vial Number:	*9*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*10.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time:	*10/06/13 20:47*		

Chromatogram



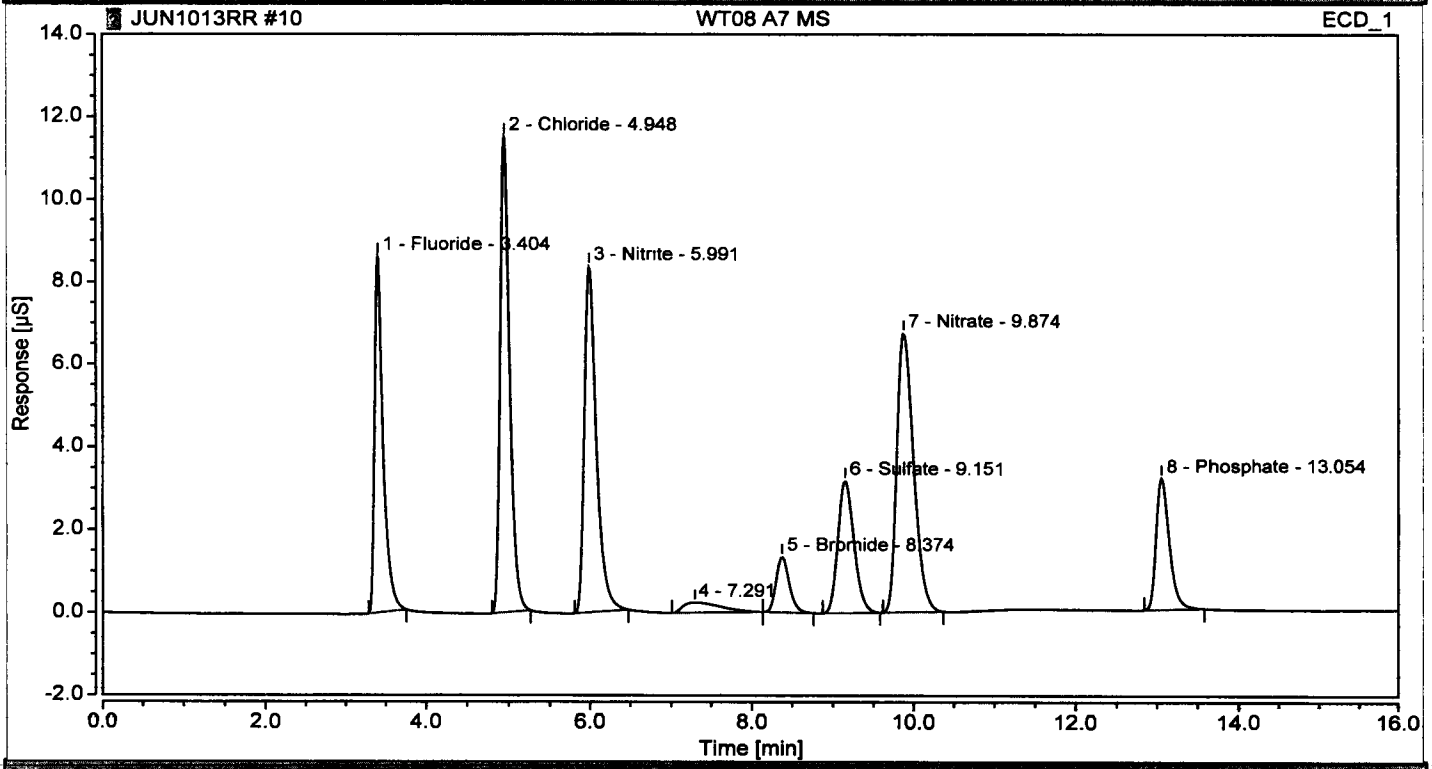
Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	10.0	0.475	3.41	[illegible]	0.197	FALSE	n.a.
2	Chloride	10.0	[illegible]	4.95	0.961	[illegible]	FALSE	n.a.
n.a.	Nitrite	[illegible]	n.a.	n.a.	n.a.	[illegible]	n.a.	n.a.
3		[illegible]	n.a.	[illegible]	[illegible]	[illegible]	FALSE	n.a.
n.a.	Bromide	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	10.0	[illegible]	9.17	0.297	[illegible]	FALSE	n.a.
n.a.	Nitrate	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	Phosphate	10.0	0.410	13.13	0.013	0.056	FALSE	n.a.

Injection Details

Injection Name:	*WT08 A7 MS*	Inject Number:	10
Vial Number:	*10*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*10.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*10/06/13 21:07*		

Chromatogram



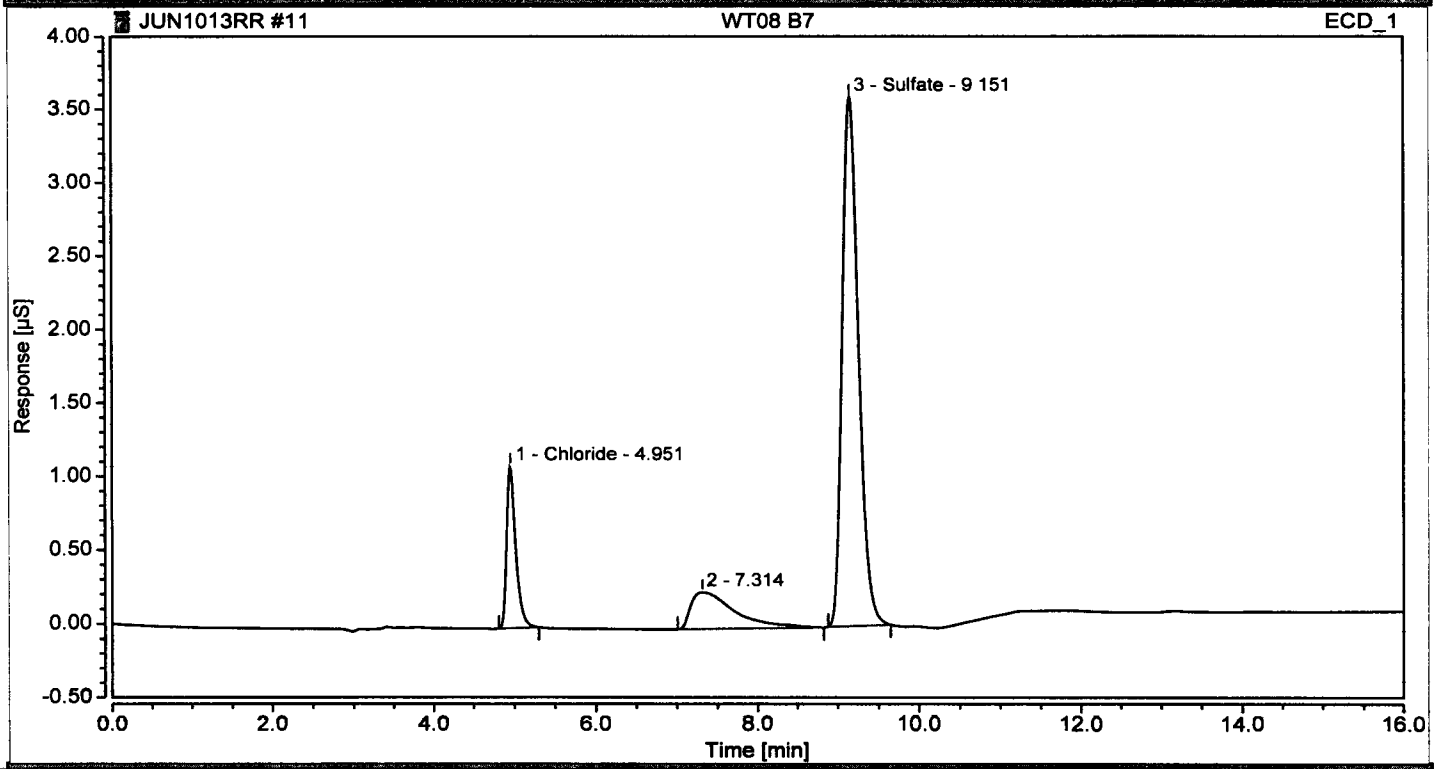
Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	10.0	20.456	3.404	1.5832	0.625	FALSE	n.a.
2	Chloride	10.0	47.928	4.948	3.5113	1.518	FALSE	n.a.
3	Nitrite	10.0	31.190	5.991	2.4332	1.021	FALSE	n.a.
4		10.0	0.41	7.291	0.0322	0.013	FALSE	n.a.
5	Bromide	10.0	18.0[illegible]	8.374	1.4051	0.590	FALSE	n.a.
6	Sulfate	10.0	22.[illegible]	9.15	1.7[illegible]	0.[illegible]	FALSE	n.a.
7	Nitrate	10.0	19.[illegible]	9.87	1.[illegible]	0.[illegible]	FALSE	n.a.
8	Phosphate	10.0	19.39[illegible]	13.05	1.5[illegible]	0.[illegible]	FALSE	n.a.

Injection Details

Injection Name:	*WT08 B7*	Inject Number:	11
Vial Number:	*11*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*5.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*10/06/13 21:27*		

Chromatogram



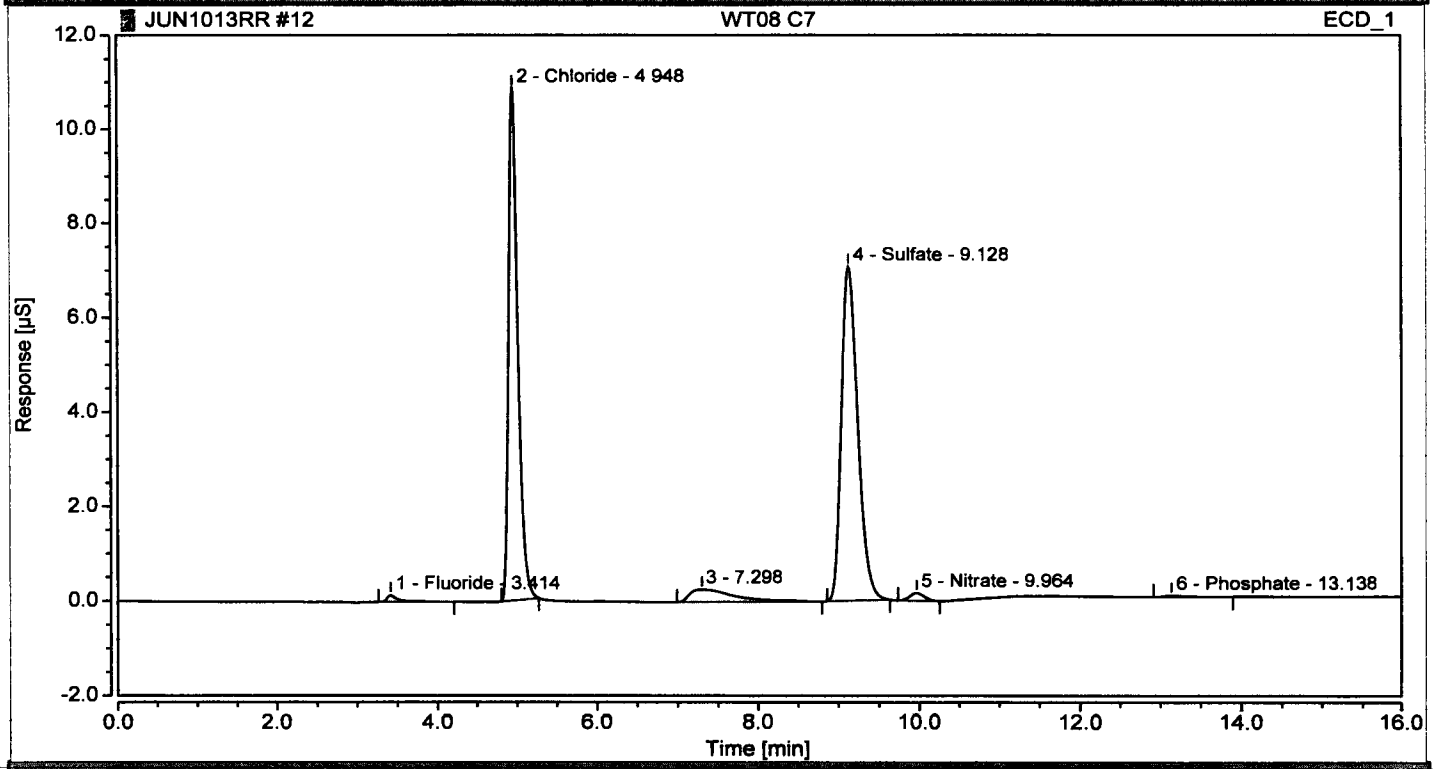
Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	5.0	2.820	4.951	0.142	1.088	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.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Bromide	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	5.0	3.249	9.151	0.232	3.000	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:	*WT08 C7*	Inject Number:	12
Vial Number:	*12*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*5.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*10/06/13 21:47*		



Integration

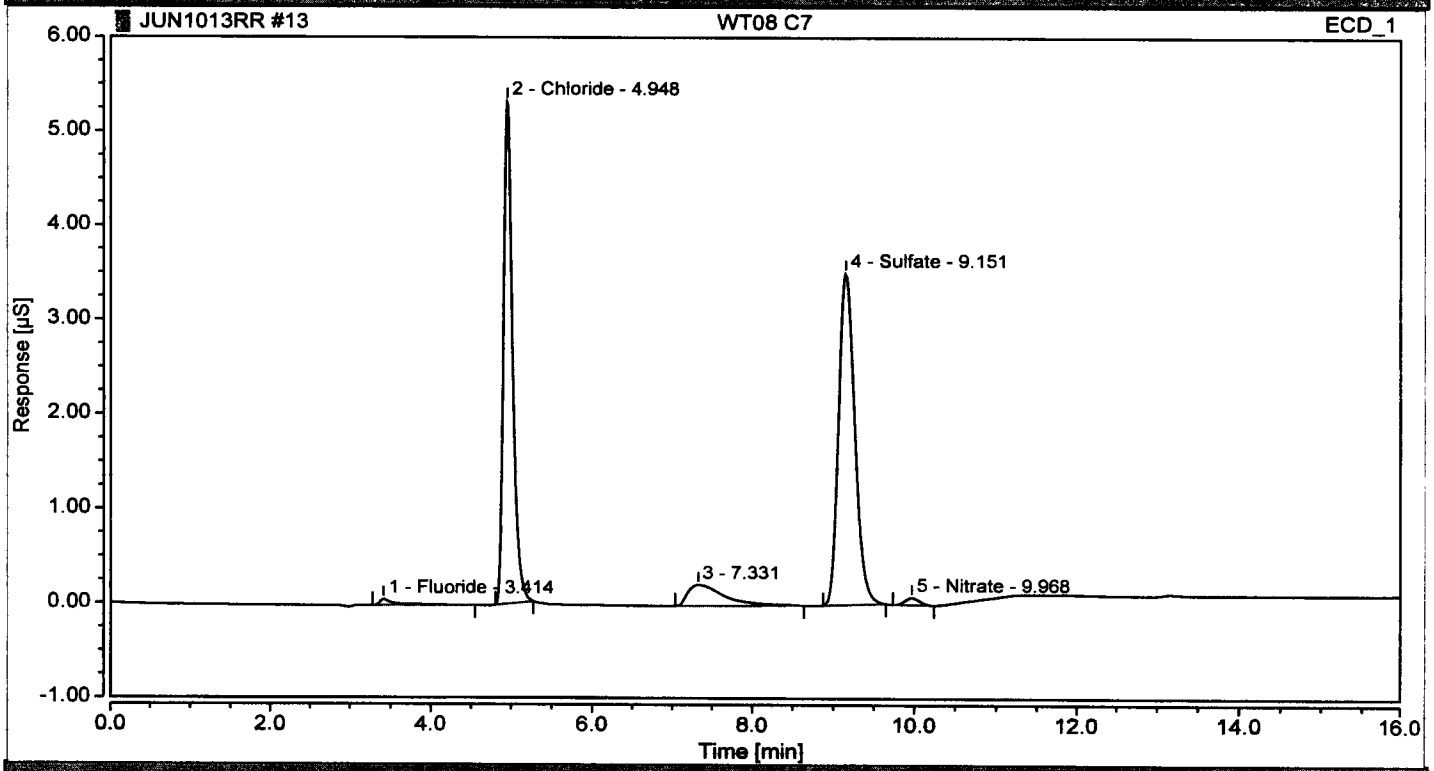
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	5.0	0.224	3.41	0.023	0.138	FALSE	n.a.
2	Chloride	5.0	[illegible]	4.95	1.430	[illegible]	FALSE	n.a.
n.a.	Nitrite	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	[illegible]	5.0	n.a.	[illegible]	[illegible]	[illegible]	FALSE	n.a.
n.a.	Bromide	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	5.0	35.709	9.13	[illegible]	7.079	FALSE	n.a.
5	Nitrate	5.0	0.207	9.96	0.034	0.163	FALSE	n.a.
6	Phosphate	5.0	0.112	13.14	0.007	0.026	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WT08 C7*	Inject Number:	13
Vial Number:	*13*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*10.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*10/06/13 22:07*		

Chromatogram



Integration Results

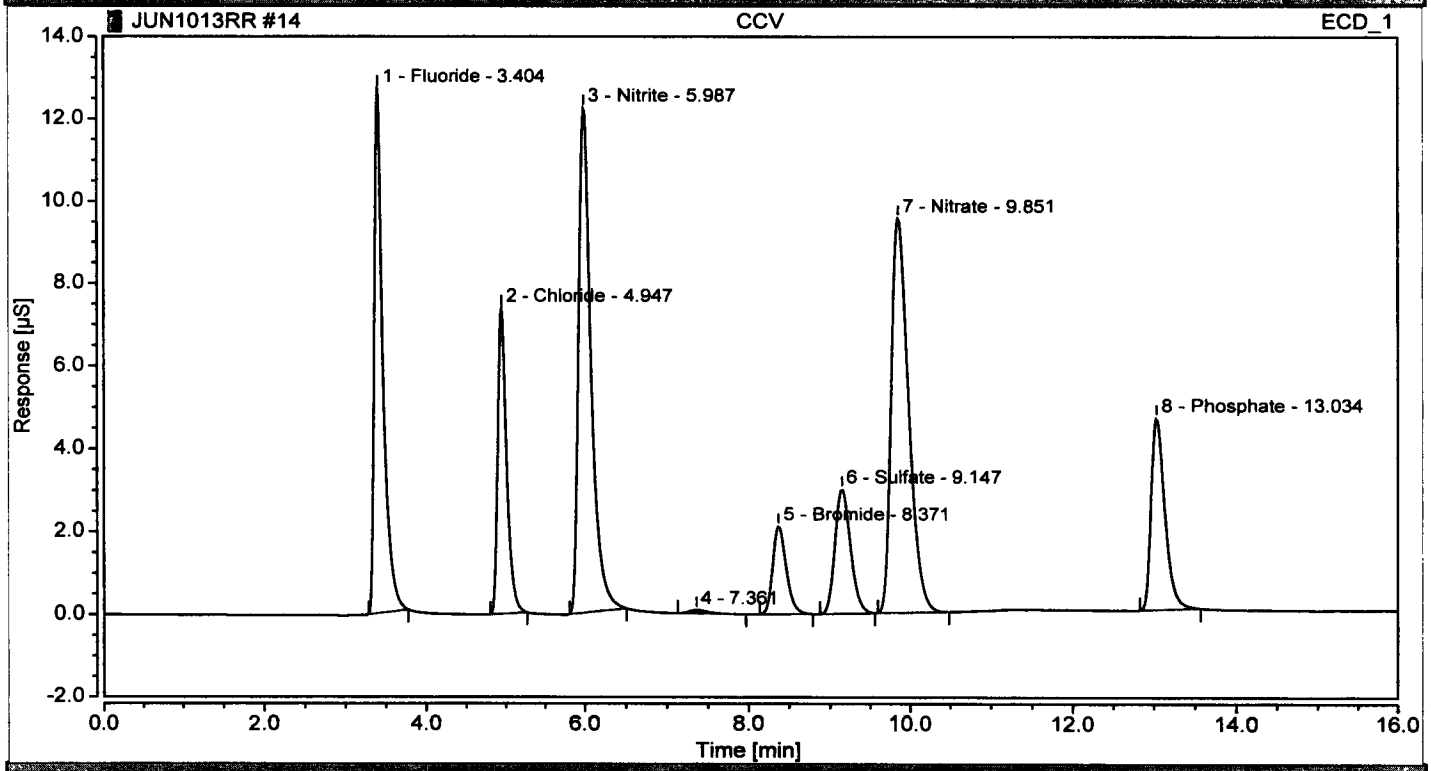
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	10.0	0.289	3.41	0.015	0.064	FALSE	n.a.
2	Chloride	10.0	21.797	4.95	0.698	5.330	FALSE	n.a.
n.a.	Nitrite	10.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		10.0	n.a.	[illegible]	[illegible]	[illegible]	FALSE	n.a.
n.a.	Bromide	10.0	[illegible]	[illegible]	n.a.	[illegible]	n.a.	n.a.
4	Sulfate	10.0	35.746	9.15	0.811	0.508	FALSE	n.a.
5	Nitrate	10.0	0.193	9.97	0.018	0.076	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:	*CCV*	Inject Number:	14
Vial Number:	*2*	User:	pat
Injection Type:	*Check Standard*	Sequence:	JUN1013RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*10/06/13 22:27*		

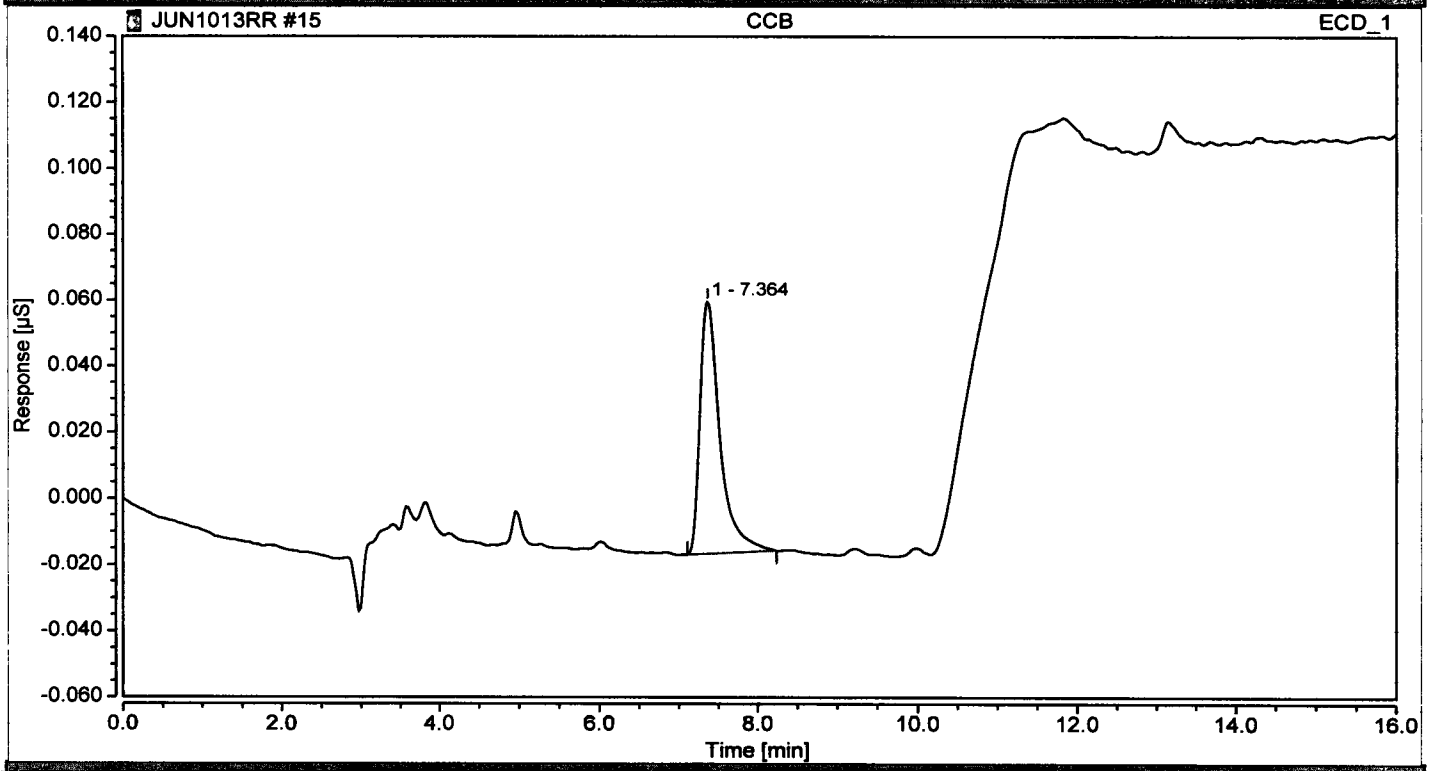
Chromatogram



Integration Results

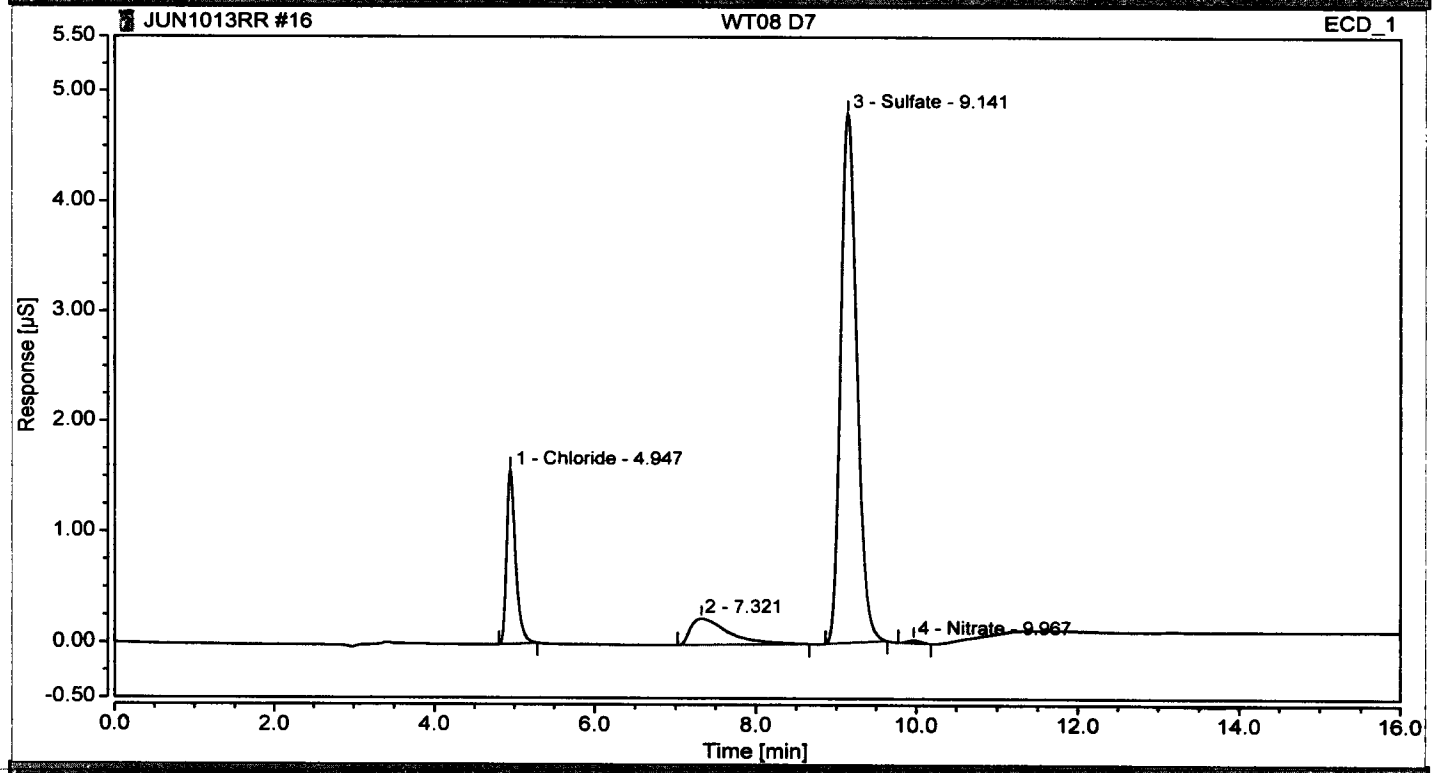
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	3.062	3.40	1.581	12.713	FALSE	2.08
2	Chloride	1.0	3.041	4.95	0.971	7.388	FALSE	1.05
3	Nitrite	1.0	3.014	5.99	[illegible]	12.731	FALSE	0.37
4		1.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	[illegible]
5	Bromide	1.0	[illegible]	8.37	[illegible]	[illegible]	FALSE	0.12
6	Sulfate	1.0	3.010	9.15	[illegible]	3.008	FALSE	0.35
7	Nitrate	1.0	2.921	9.85	2.395	9.543	FALSE	-2.64
8	Phosphate	1.0	2.928	13.03	0.914	4.634	FALSE	-2.39

Injection Name:	*CCB*	Inject Number:	15
Vial Number:	*3*	User:	pat
Injection Type:	*Blank*	Sequence:	JUN1013RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*10/06/13 22:48*		



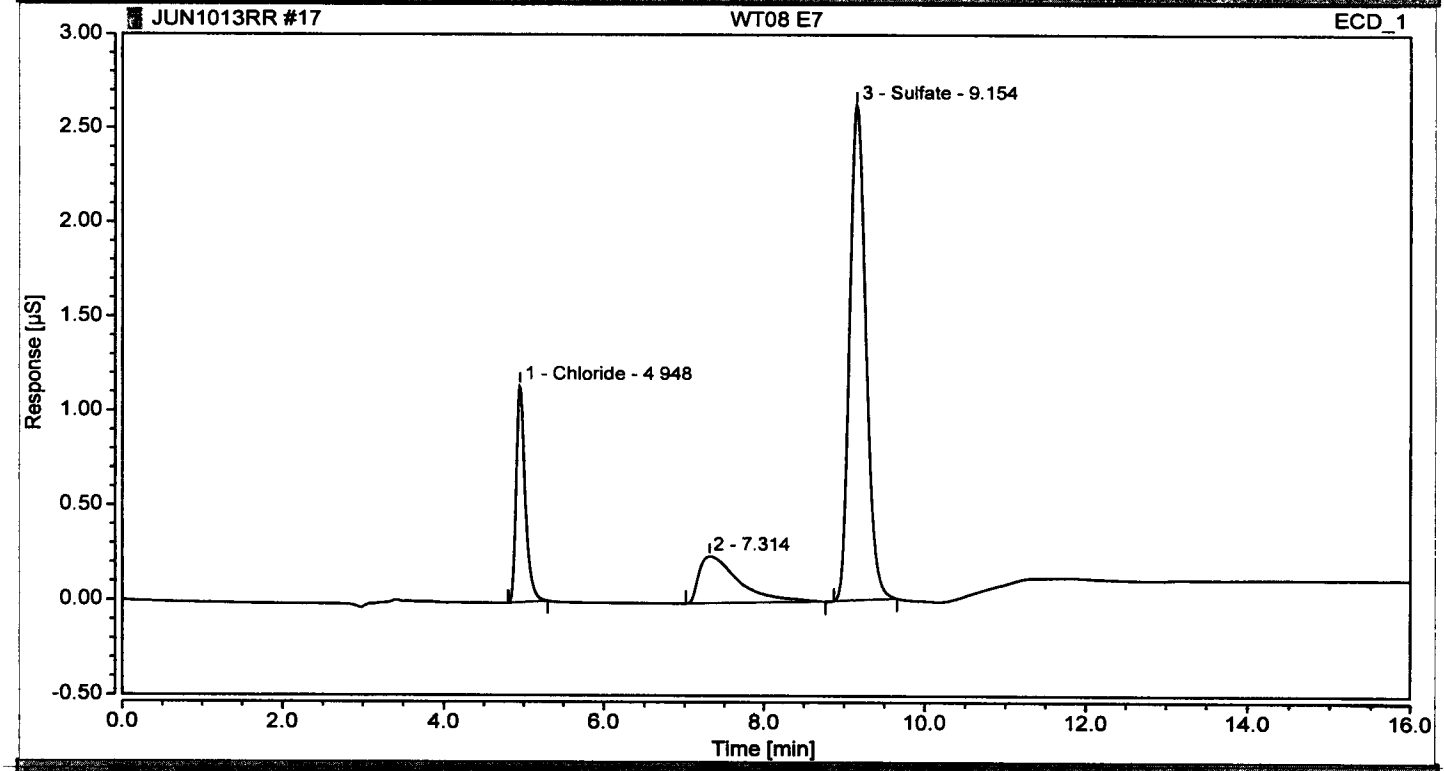
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		1.0						n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	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.

Injection Name:	*WT08 D7*	Inject Number:	16
Vial Number:	*14*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*5.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time:	*10/06/13 23:09*		



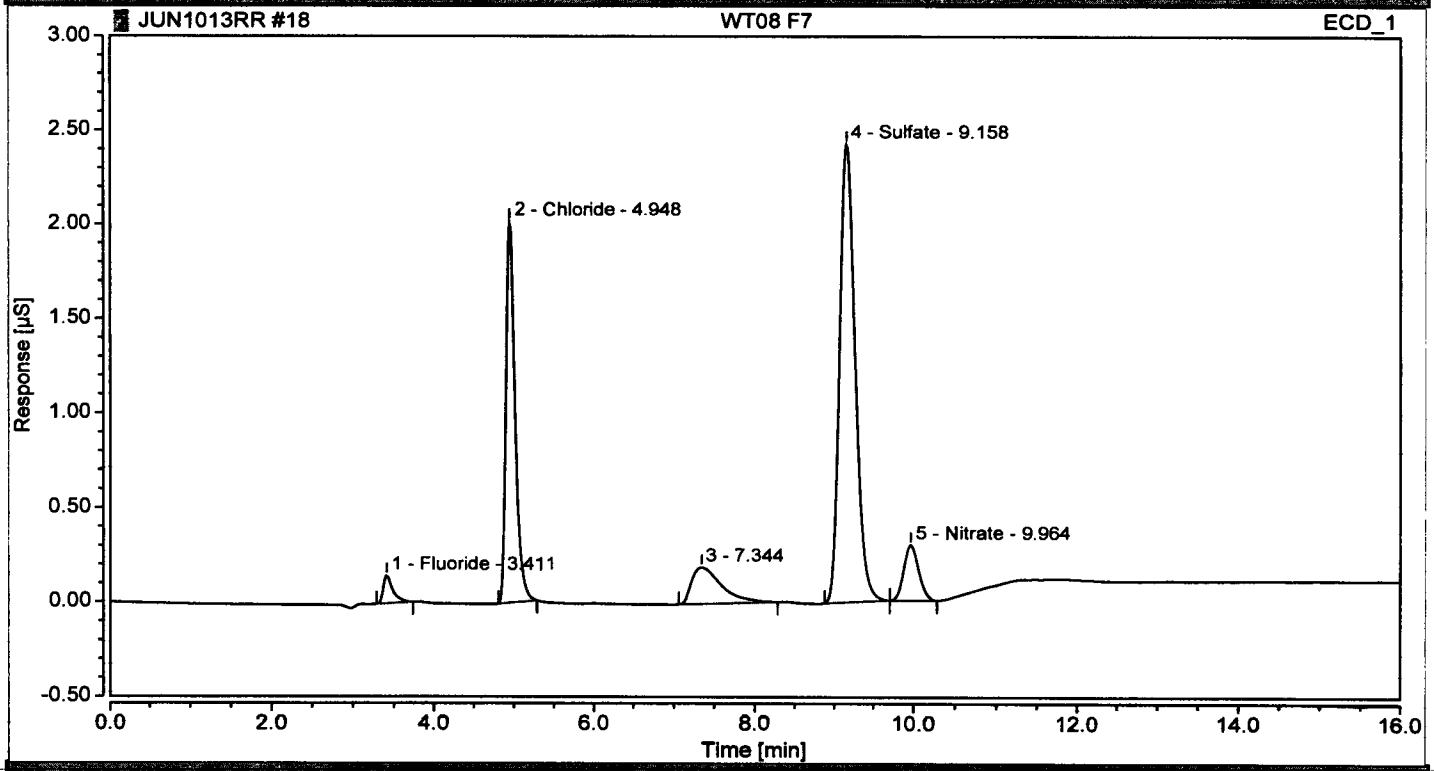
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	5.0	[illegible]	[illegible]	0.203	[illegible]	FALSE	n.a.
n.a.	Nitrite	5.0	[illegible]	n.a.	n.a.	n.a.	n.a.	n.a.
2	[illegible]	5.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	n.a.
n.a.	Bromide	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	5.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
4	Nitrate	5.0	[illegible]	[illegible]	0.008	0.025	FALSE	n.a.
n.a.	Phosphate	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Injection Name:	*WT08 E7*	Inject Number:	17
Vial Number:	*15*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*5.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*10/06/13 23:29*		



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	2.000	4.948	0.1436	1.1435	FALSE	n.a.
n.a.	Nitrite	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	[illegible]	5.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
n.a.	Bromide	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	5.0	13.221	9.154	0.9618	2.7622	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.

Injection Name:	*WT08 F7*	Inject Number:	18
Vial Number:	*16*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*5.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*10/06/13 23:50*		



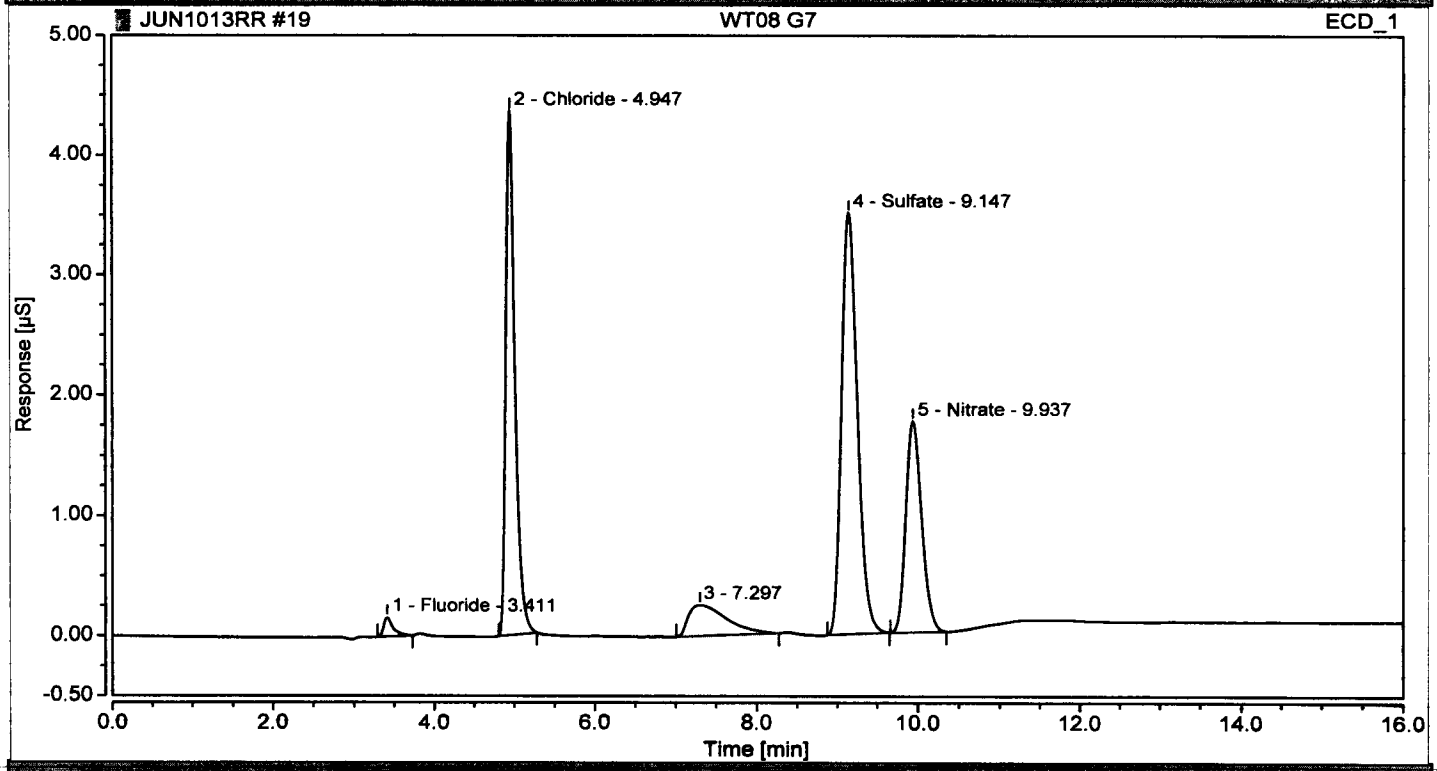
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	5.0	[illegible]	3.41	0.020	0.147	FALSE	n.a.
2	Chloride	5.0	[illegible]	4.95	0.263	0.020	FALSE	n.a.
n.a.	Nitrite	5.0	[illegible]	n.a.	n.a.	n.a.	n.a.	n.a.
3		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
n.a.	Bromide	[illegible]	[illegible]	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	[illegible]	[illegible]	9.15	0.558	[illegible]	FALSE	n.a.
5	Nitrate	5.0	[illegible]	[illegible]	0.064	0.295	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:	*WT08 G7*	Inject Number:	19
Vial Number:	*17*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*2.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 00:10*		

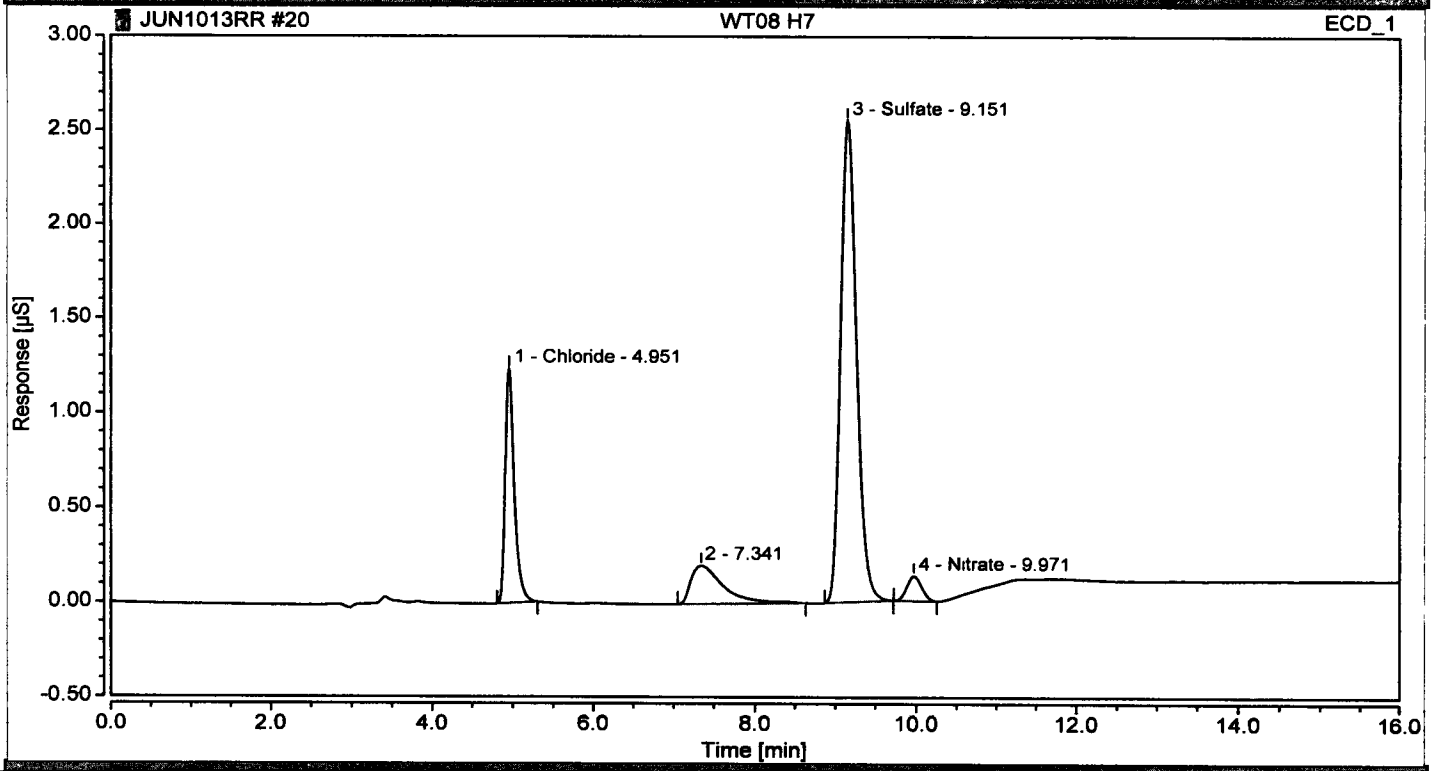
Chromatogram



Integration

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	2.0	[illegible]	3.41	0.021	[illegible]	FALSE	n.a.
2	Chloride	2.0	[illegible]	4.95	[illegible]	[illegible]	FALSE	n.a.
n.a.	Nitrite	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		[illegible]	[illegible]	7.30	[illegible]	[illegible]	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Sulfate	2.0	[illegible]	9.15	0.809	[illegible]	FALSE	n.a.
5	Nitrate	2.0	0.965	9.94	[illegible]	1.752	FALSE	n.a.
n.a.	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Injection Name:	*WT08 H7*	Inject Number:	20
Vial Number:	*18*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*5.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 00:31*		

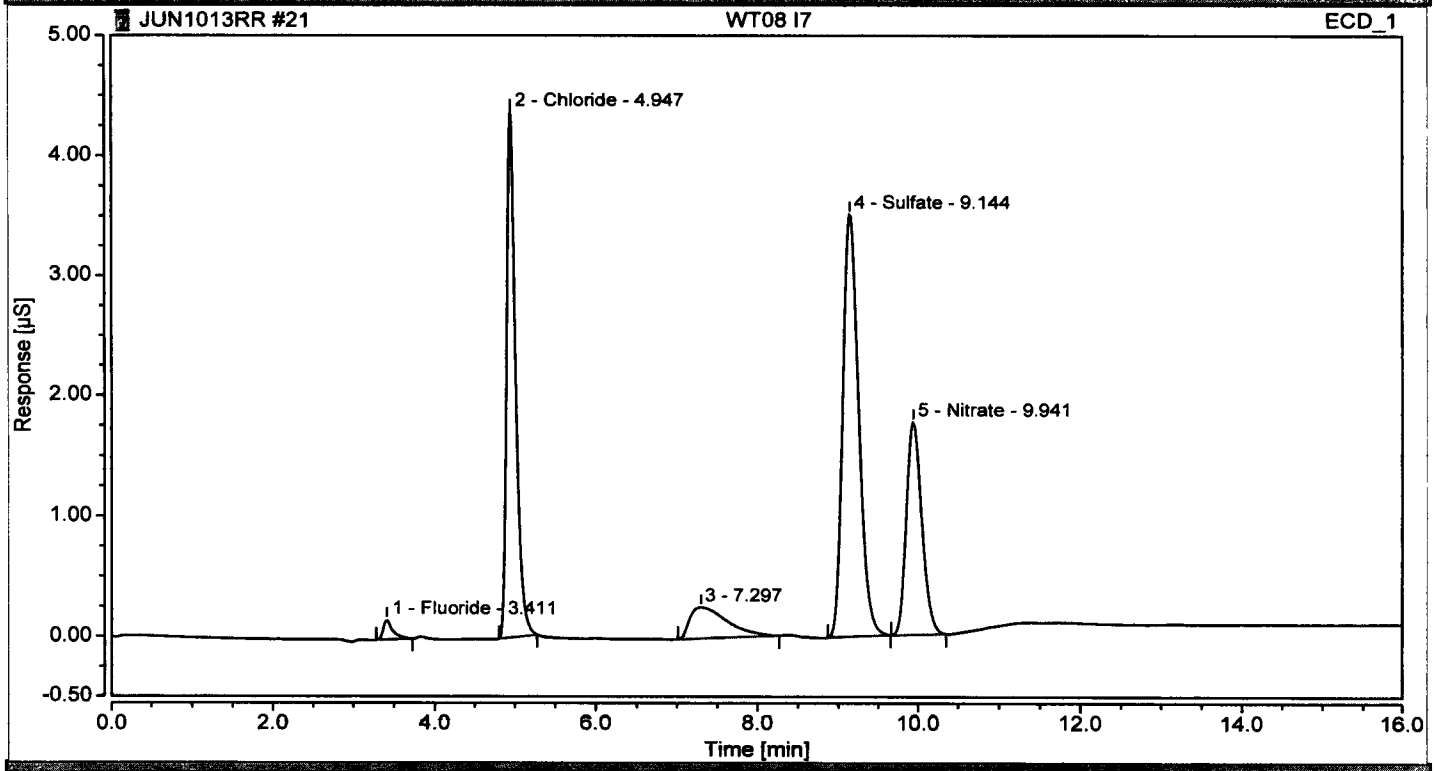


No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	5.0	2.570	4.95	0.161	1.438	FALSE	n.a.
n.a.	Nitrite	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	[illegible]	5.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
n.a.	Bromide	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	5.0	2.930	[illegible]	[illegible]	[illegible]	FALSE	n.a.
4	Nitrate	5.0	0.164	9.97	0.026	0.131	FALSE	n.a.
n.a.	Phosphate	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Injection Details

Injection Name:	*WT08 I7*	Inject Number:	21
Vial Number:	*19*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*2.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 00:52*		

Chromatogram



Integration

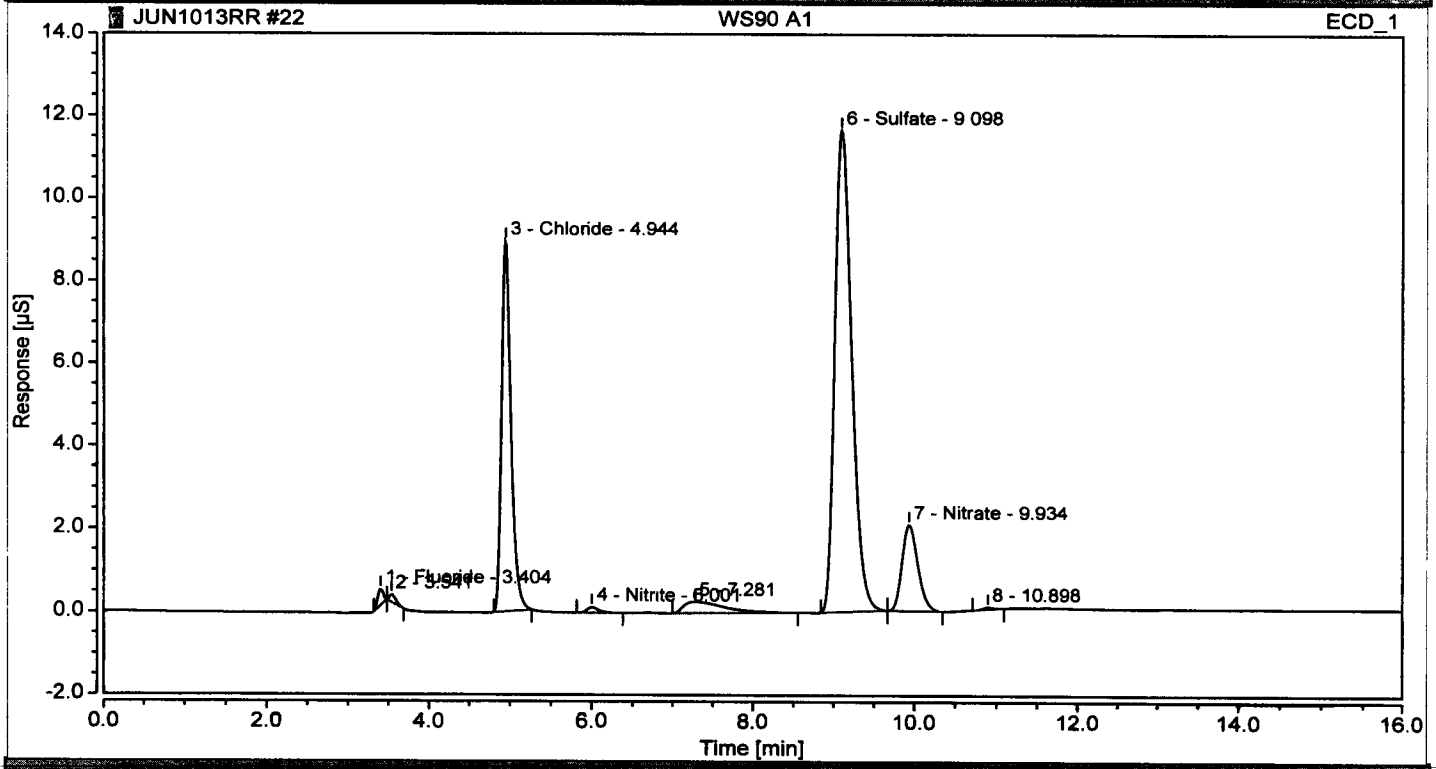
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	2.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
2	Chloride	2.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
n.a.	Nitrite	2.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	n.a.
3	[illegible]	2.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	n.a.
n.a.	Bromide	2.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	n.a.
4	Sulfate	2.0	[illegible]	9.144	[illegible]	[illegible]	FALSE	n.a.
5	Nitrate	2.0	0.870	[illegible]	[illegible]	[illegible]	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:	*WS90 A1*	Inject Number:	22
Vial Number:	*20*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*2.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 01:11*		

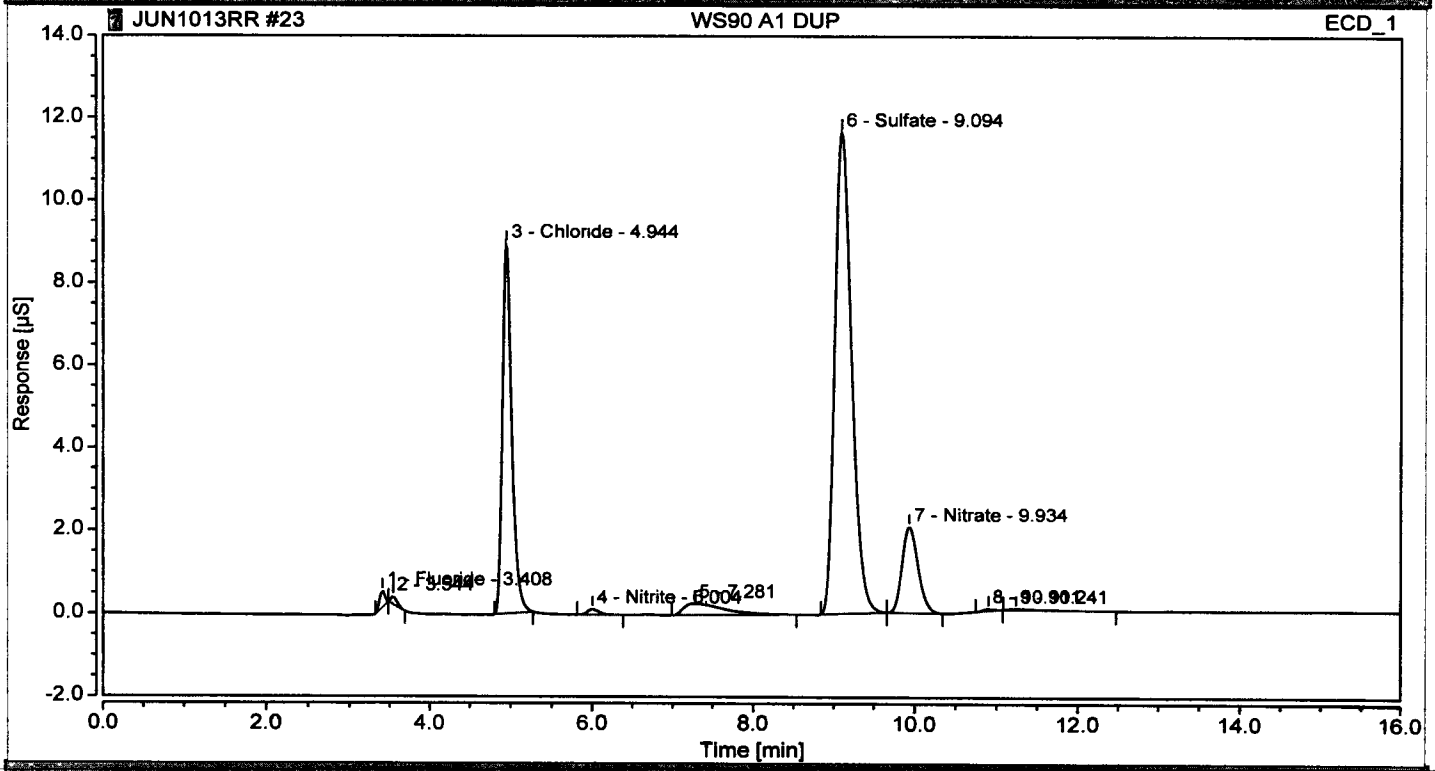
Chromatogram



Integration

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	2.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
2		2.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
3	Chloride	2.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
4	Nitrite	2.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
5		2.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
6	Sulfate	2.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
7	Nitrate	2.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
8		2.0	n.a.	[illegible]	[illegible]	[illegible]	FALSE	n.a.
n.a.	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Injection Name:	*WS90 A1 DUP*	Inject Number:	23
Vial Number:	*21*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*2.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 01:31*		

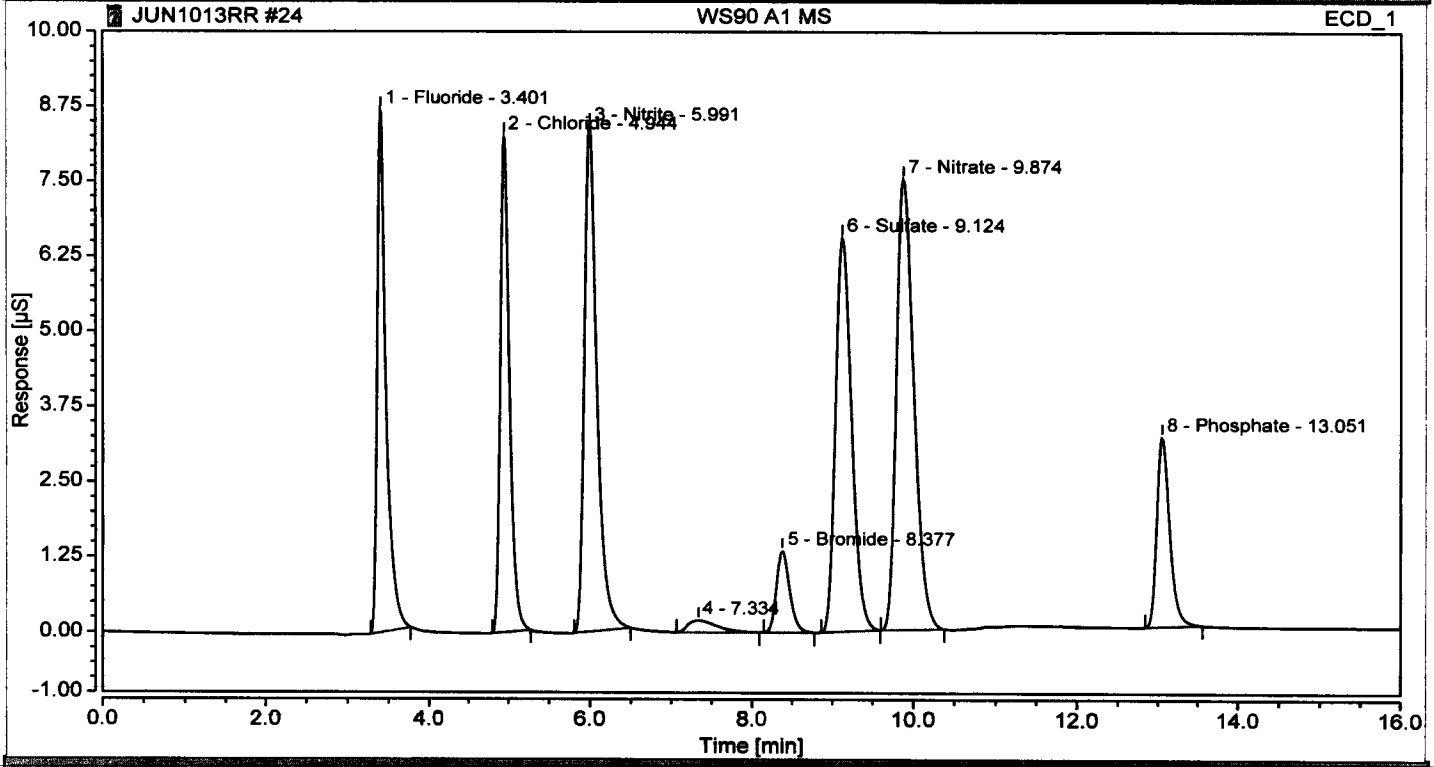


No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	2.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
2	[illegible]	2.0	[illegible]	[illegible]	0.016	[illegible]	FALSE	n.a.
3	Chloride	2.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
4	Nitrite	2.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
5	[illegible]	2.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	[illegible]	[illegible]	[illegible]	n.a.	n.a.
6	Sulfate	2.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
7	Nitrate	2.0	[illegible]	[illegible]	0.008	[illegible]	FALSE	n.a.
8	[illegible]	2.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
9	[illegible]	2.0	[illegible]	[illegible]	0.010	[illegible]	FALSE	n.a.
n.a.	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Injection Details

Injection Name:	*WS90 A1 MS*	Inject Number:	24
Vial Number:	*22*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*5.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 01:50*		

Chromatogram



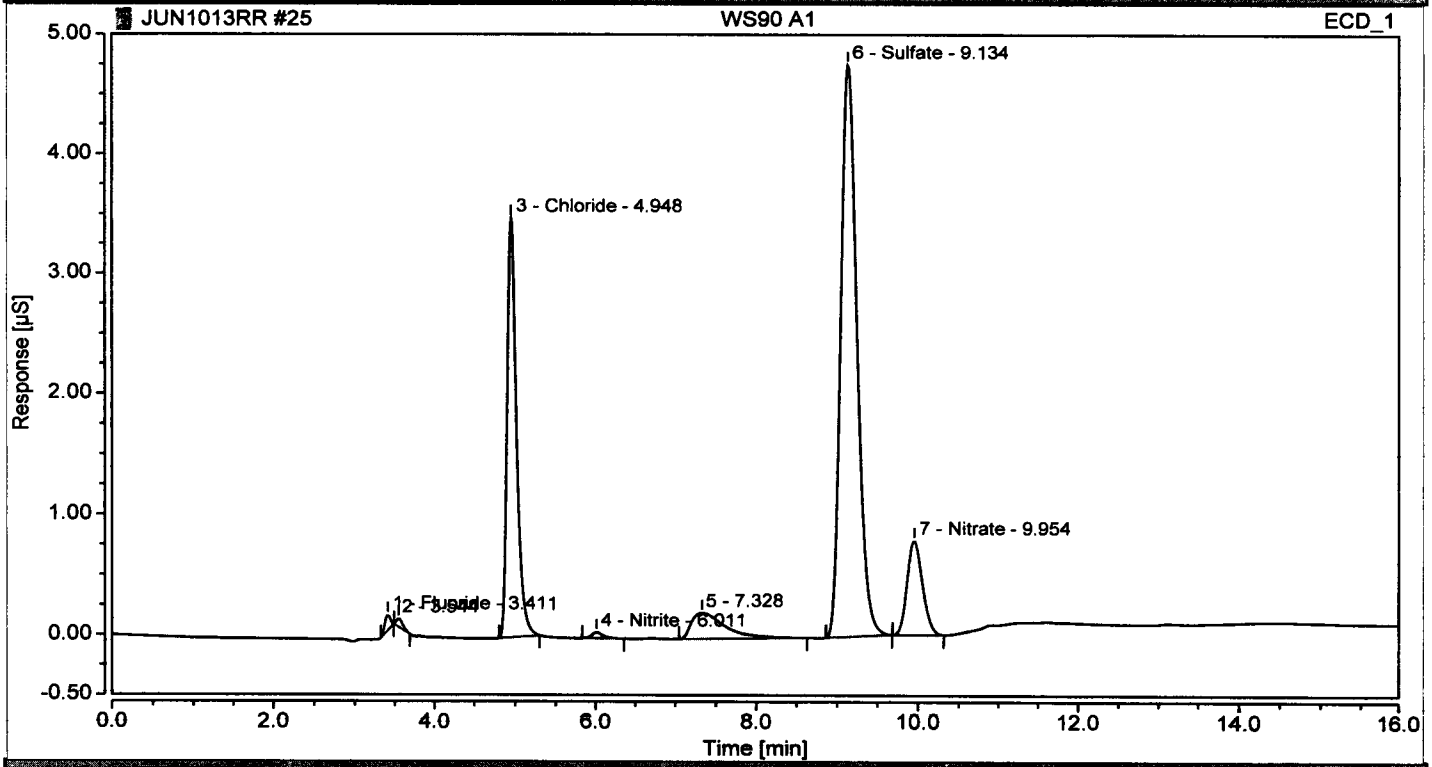
Integration

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	5.0	1.021	3.401	0.1058	0.0995	FALSE	n.a.
2	Chloride	5.0	1.000	4.944	0.1012	0.0760	FALSE	n.a.
3	Nitrite	5.0	1.000	5.991	0.1078	0.0661	FALSE	n.a.
4		5.0		7.334			FALSE	n.a.
5	Bromide	5.0	0.9999	8.377	0.1068	0.0622	FALSE	n.a.
6	Sulfate	5.0	3.013	9.124	0.3629	0.2236	FALSE	n.a.
7	Nitrate	5.0	11.208	9.874	0.4038	0.2306	FALSE	n.a.
8	Phosphate	5.0	8.511	13.051	0.6304	0.1564	FALSE	n.a.

Injection Details

Injection Name:	*WS90 A1*	Inject Number:	25
Vial Number:	*23*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*5.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 02:10*		

Chromatogram



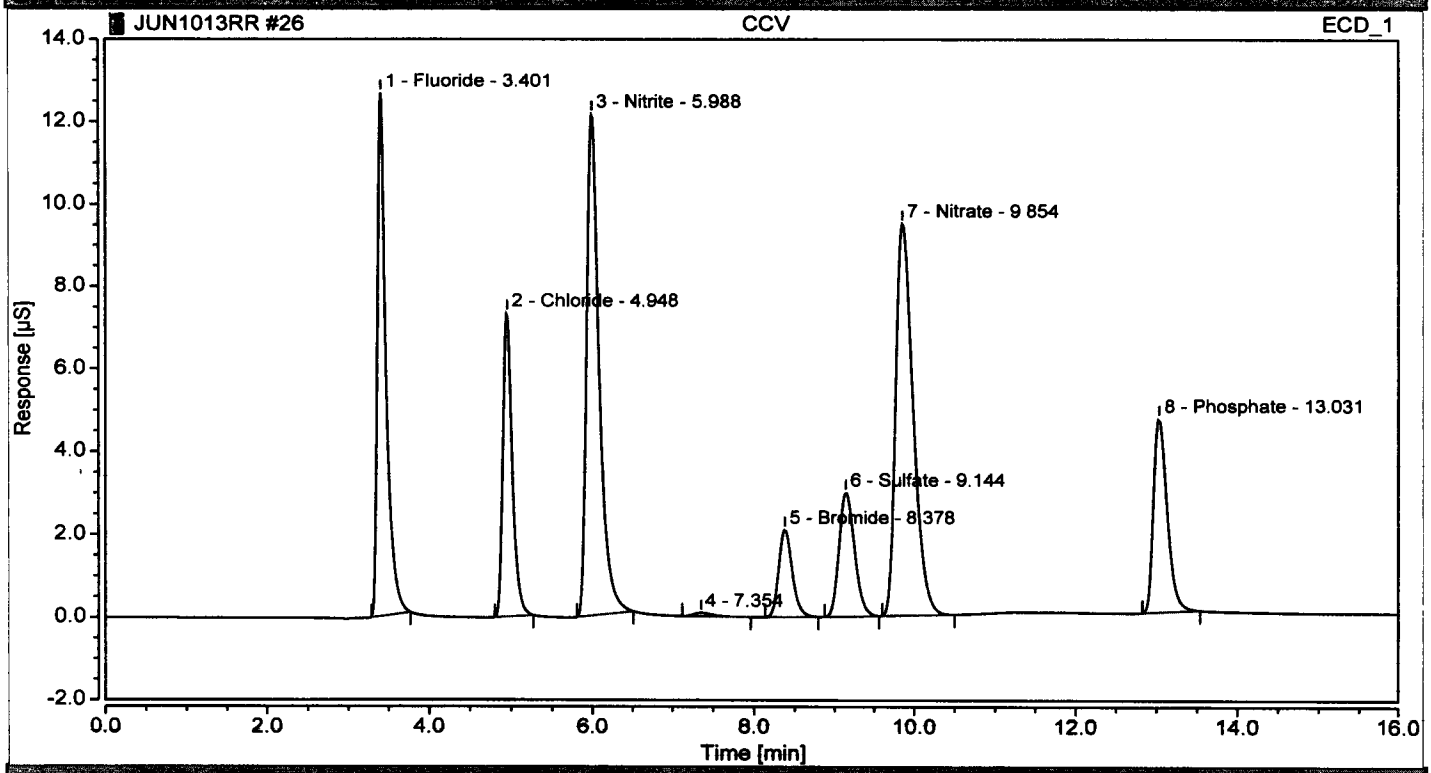
Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	5.0	0.099	3.411	0.0170	0.125	FALSE	n.a.
2		5.0		3.948	0.007	0.068	FALSE	n.a.
3	Chloride	5.0	2.[illegible]	4.948	[illegible]	[illegible]	FALSE	n.a.
4	Nitrite	5.0	0.[illegible]	6.911	[illegible]	[illegible]	FALSE	n.a.
5		5.0		7.328	0.0[illegible]	0.[illegible]	FALSE	n.a.
n.a.	Bromide	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
6	Sulfate	5.0	2.[illegible]	9.134	[illegible]	[illegible]	FALSE	n.a.
7	Nitrate	5.0	1.05[illegible]	9.954	0.[illegible]72	0.[illegible]78	FALSE	n.a.
n.a.	Phosphate	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Injection Details

Injection Name:	*CCV*	Inject Number:	26
Vial Number:	*2*	User:	pat
Injection Type:	*Check Standard*	Sequence:	JUN1013RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 02:29*		

Chromatogram



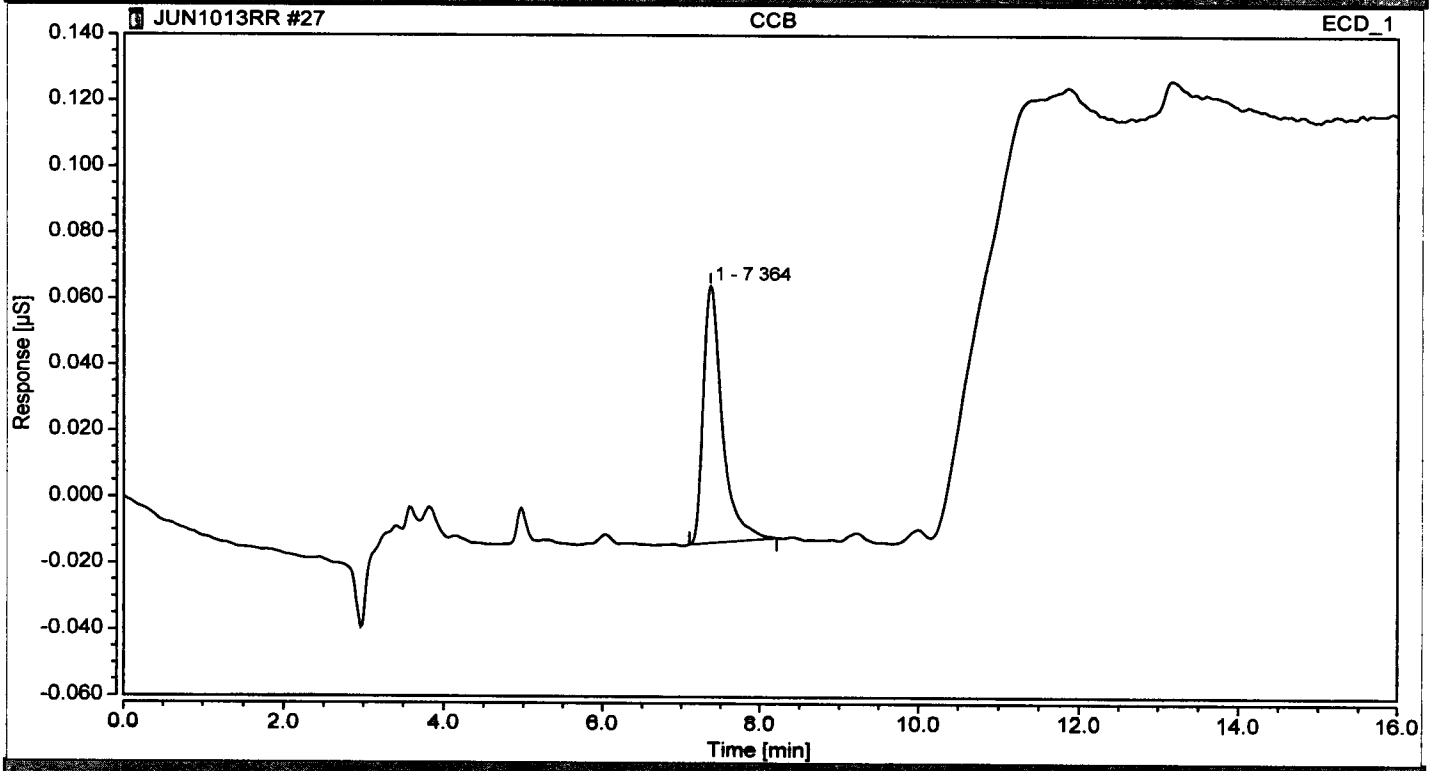
Integration

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	3.0	3.4	5.4	0.7	FALSE	1.91
2	Chloride	1.0	3.0	4.9	7.6	0.8	FALSE	0.84
3	Nitrite	1.0	3.0	5.9	9.4	0.9	FALSE	0.13
4		1.0	n.a.	7.4	0.3	0.0	FALSE	n.a.
5	Bromide	1.0	3.0	8.4	10.6	1.1	FALSE	-0.28
6	Sulfate	1.0	3.0	9.1	10.8	1.2	FALSE	-0.10
7	Nitrate	1.0	3.0	9.9	12.2	1.4	FALSE	-2.78
8	Phosphate	1.0	2.9	13.0	9.2	0.7	FALSE	-2.59

Injection Details

Injection Name:	*CCB*	Inject Number:	27
Vial Number:	*3*	User:	pat
Injection Type:	*Blank*	Sequence:	JUN1013RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 02:50*		

Chromatogram



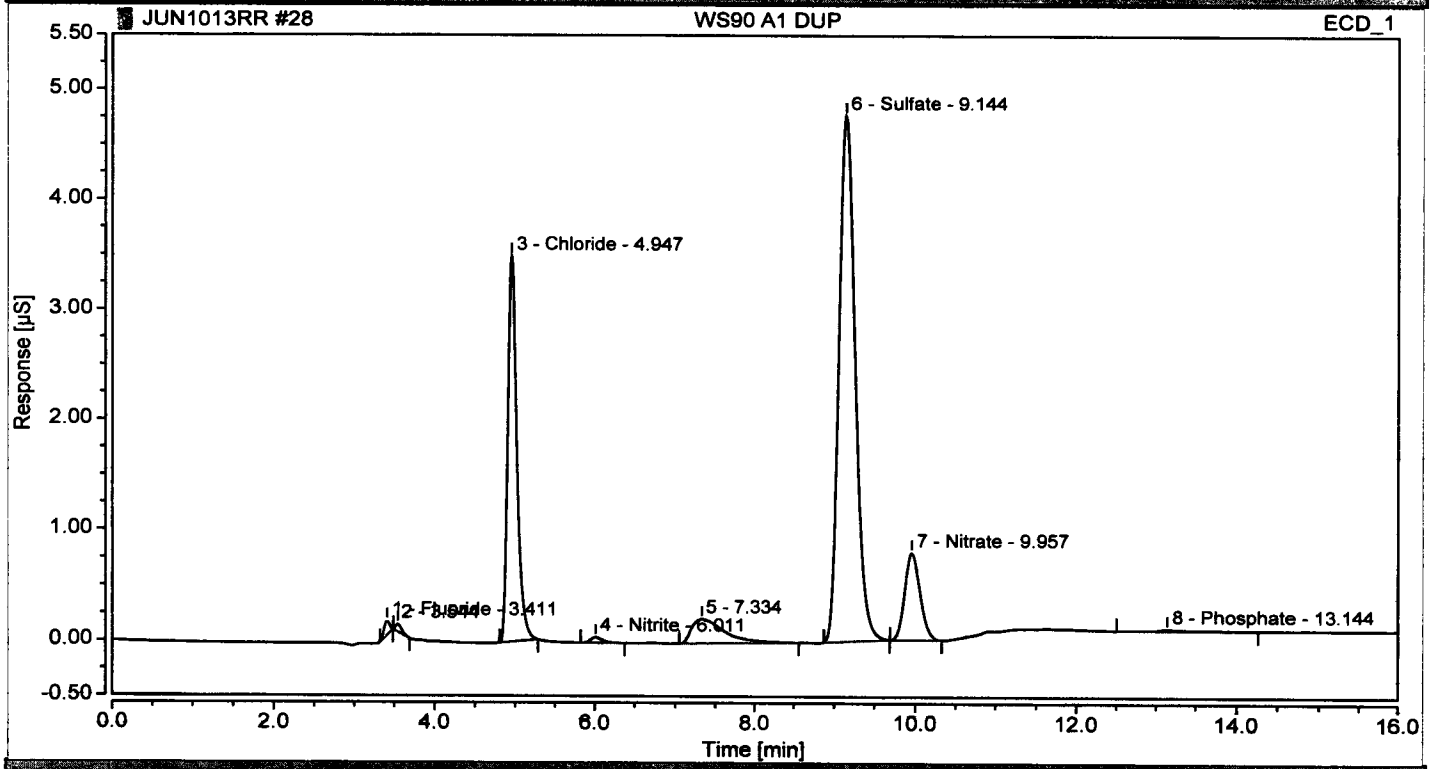
Peak Table

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.	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.

Injection Details

Injection Name:	*WS90 A1 DUP*	Inject Number:	28
Vial Number:	*24*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*5.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 03:10*		

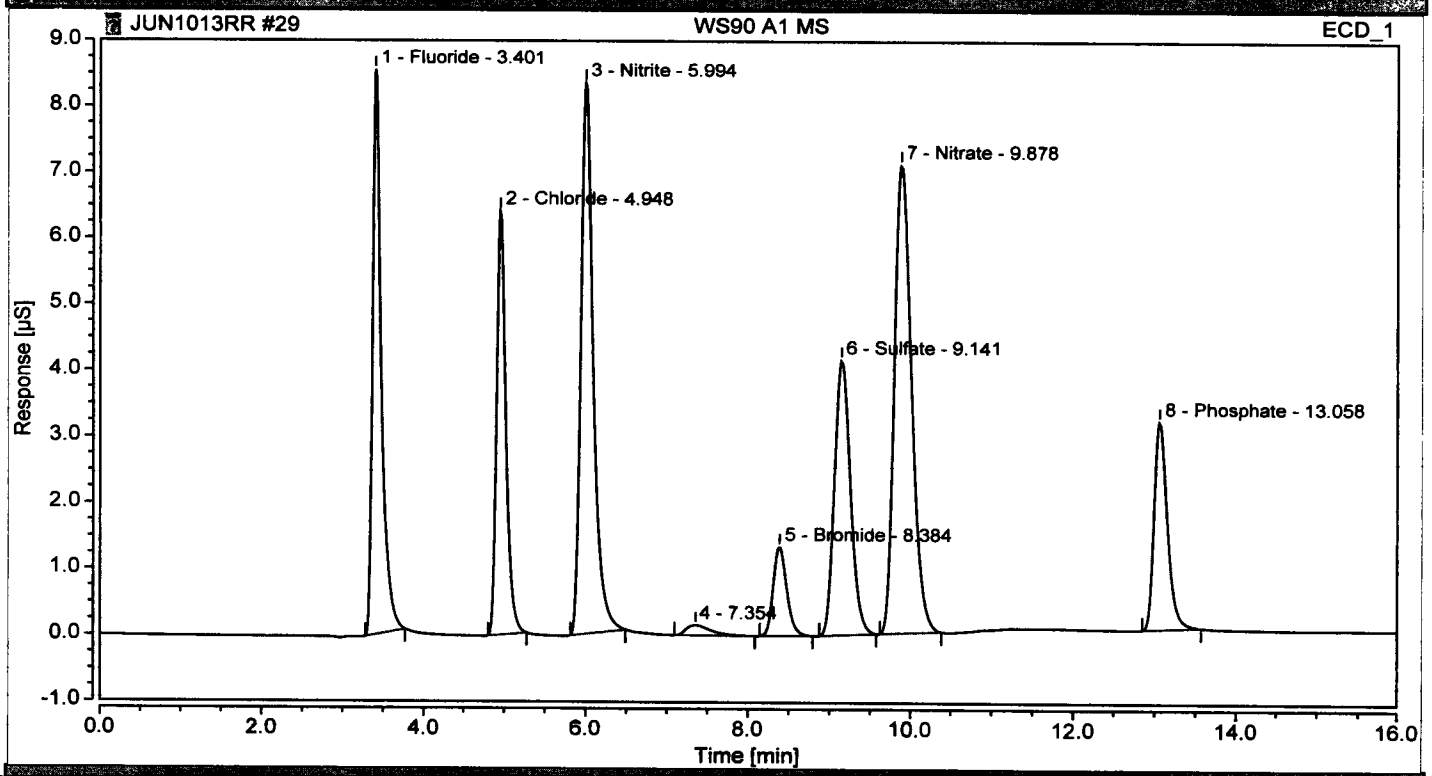
Chromatogram



Integration

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	5.0	0.000	3.411	0.010	0.027	FALSE	n.a.
2		5.0	0.000	3.944	0.000	0.002	FALSE	n.a.
3	Chloride	5.0	2.400	4.947	1.555	3.557	FALSE	n.a.
4	Nitrite	5.0	0.000	6.011	0.000	0.000	FALSE	n.a.
5		5.0	0.000	7.334	0.000	0.000	FALSE	n.a.
n.a.	Bromide	5.0	0.000	8.144	0.000	0.000	FALSE	n.a.
6	Sulfate	5.0	7.520	9.144	4.910	7.468	FALSE	n.a.
7	Nitrate	5.0	2.051	9.957	1.272	0.784	FALSE	n.a.
8	Phosphate	5.0	0.000	13.144	0.007	0.013	FALSE	n.a.

Injection Name:	*WS90 A1 MS*	Inject Number:	29
Vial Number:	*25*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*10.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 03:30*		

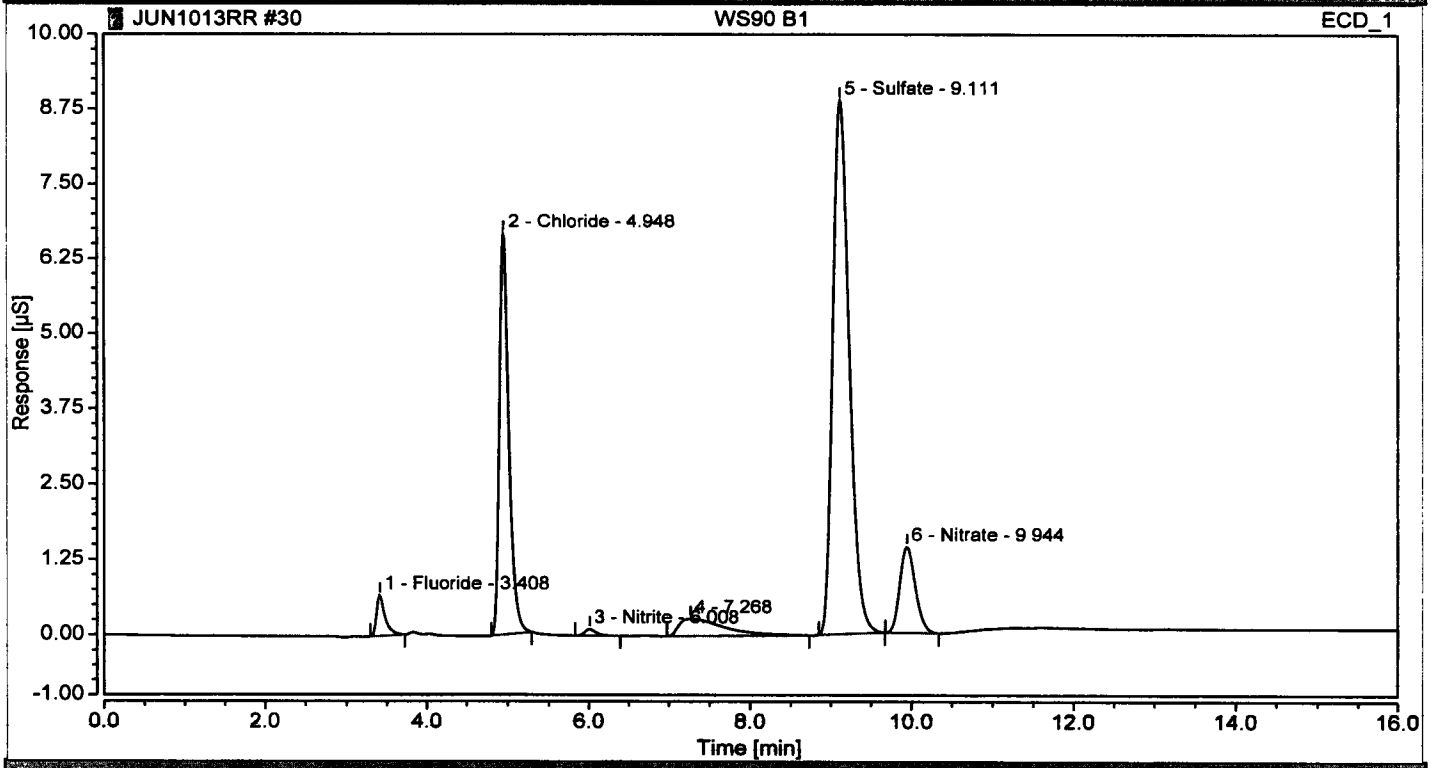


No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	10.0					FALSE	n.a.
2	Chloride	10.0					FALSE	n.a.
3	Nitrite	10.0					FALSE	n.a.
4							FALSE	n.a.
5	Bromide	10.0					FALSE	n.a.
6	Sulfate	10.0					FALSE	n.a.
7	Nitrate	10.0					FALSE	n.a.
8	Phosphate	10.0					FALSE	n.a.

WS90 : 91655

Injection Details

Injection Name:	*WS90 B1*	Inject Number:	30
Vial Number:	*26*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*2.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 03:50*		



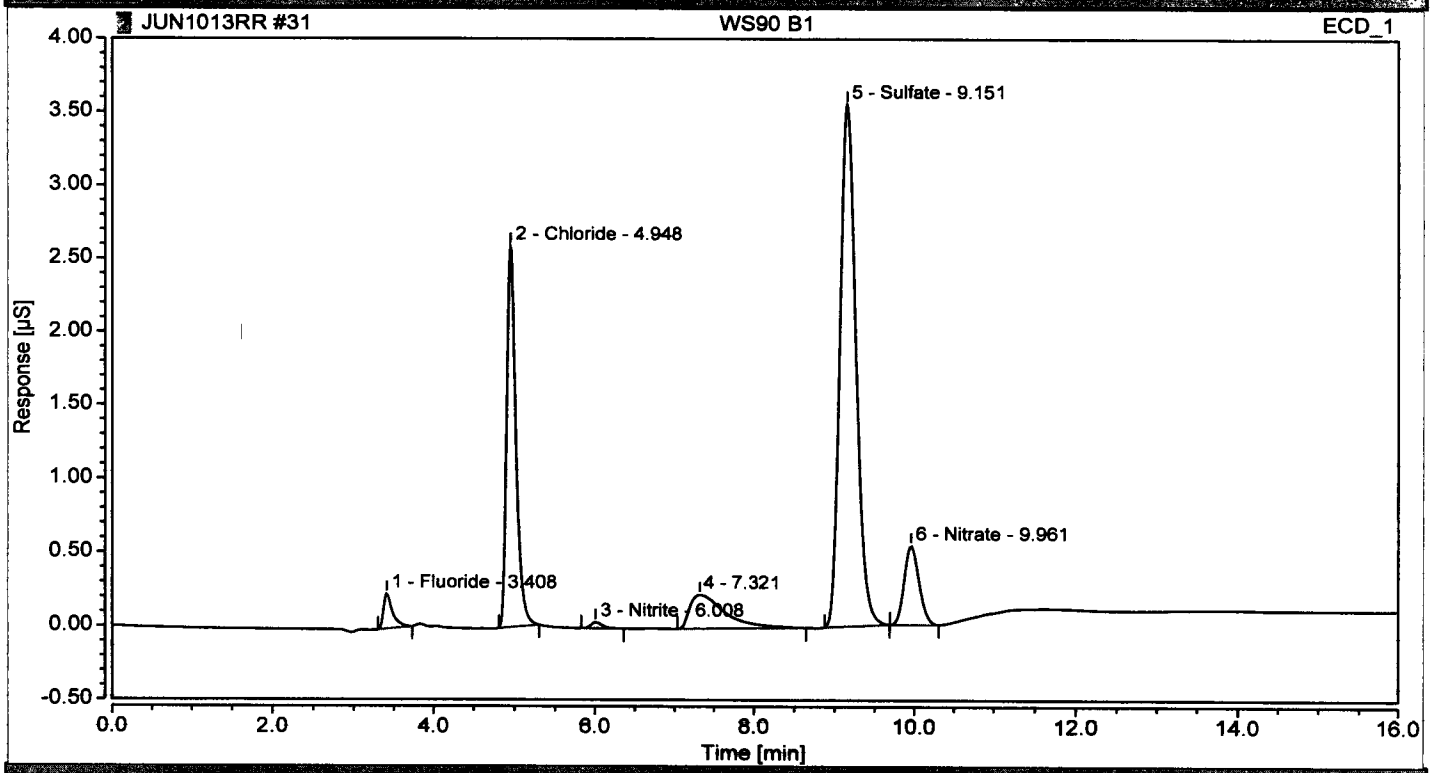
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	2.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
2	Chloride	2.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
3	Nitrite	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
4		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
n.a.	Bromide	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	n.a.	n.a.
5	Sulfate	2.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
6	Nitrate	2.0	[illegible]	[illegible]	[illegible]	[illegible]	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:	*WS90 B1*	Inject Number:	31
Vial Number:	*27*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*5.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 04:11*		

Chromatogram



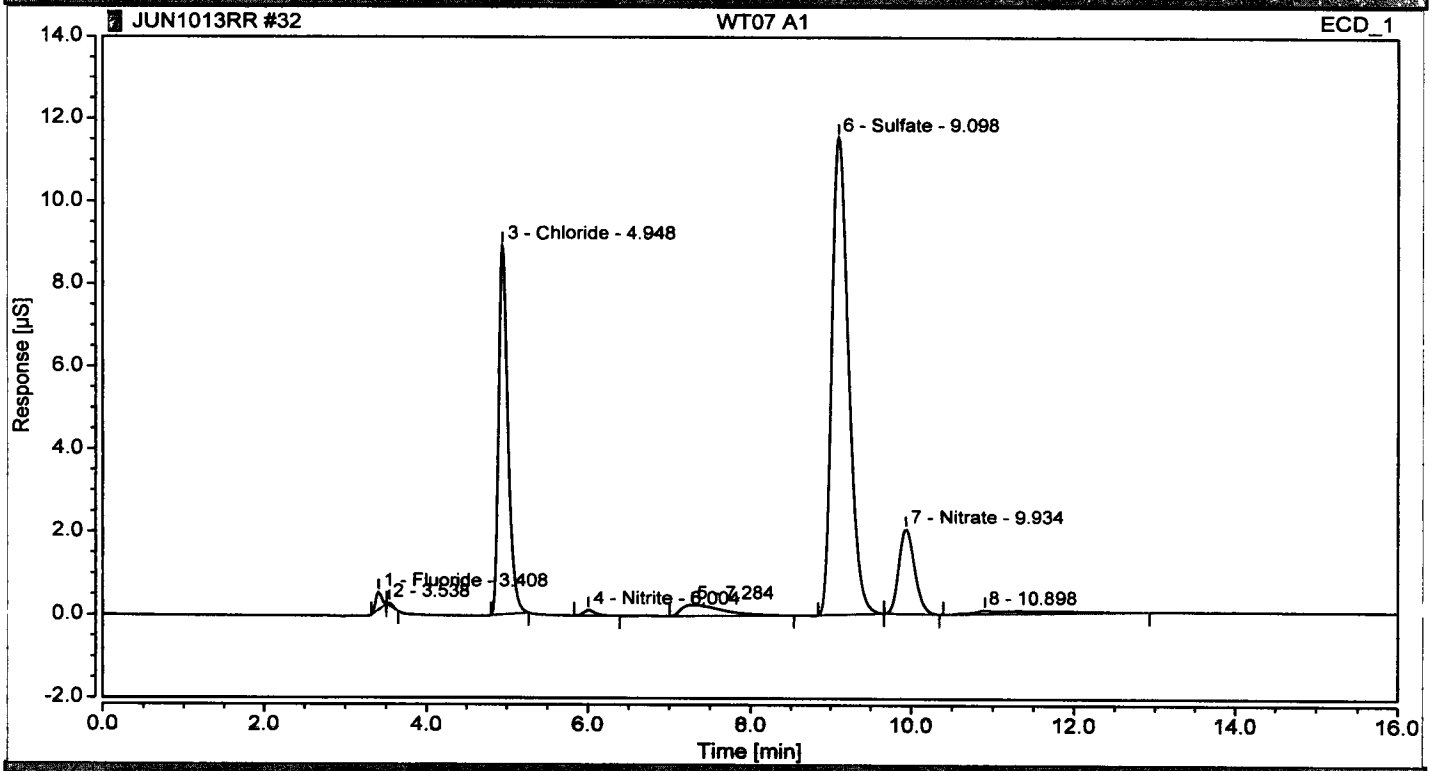
Integration

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	5.0	[illegible]	[illegible]	0.031	[illegible]	FALSE	n.a.
2	Chloride	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
3	Nitrite	5.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
4		5.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
n.a.	Bromide	5.0	n.a.	n.a.	[illegible]	n.a.	n.a.	n.a.
5	Sulfate	5.0	18.112	[illegible]	[illegible]	3.553	FALSE	n.a.
6	Nitrate	5.0	[illegible]	[illegible]	[illegible]	0.534	FALSE	n.a.
n.a.	Phosphate	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Injection Details

Injection Name:	*WT07 A1*	Inject Number:	32
Vial Number:	*28*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*2.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 04:31*		

Chromatogram

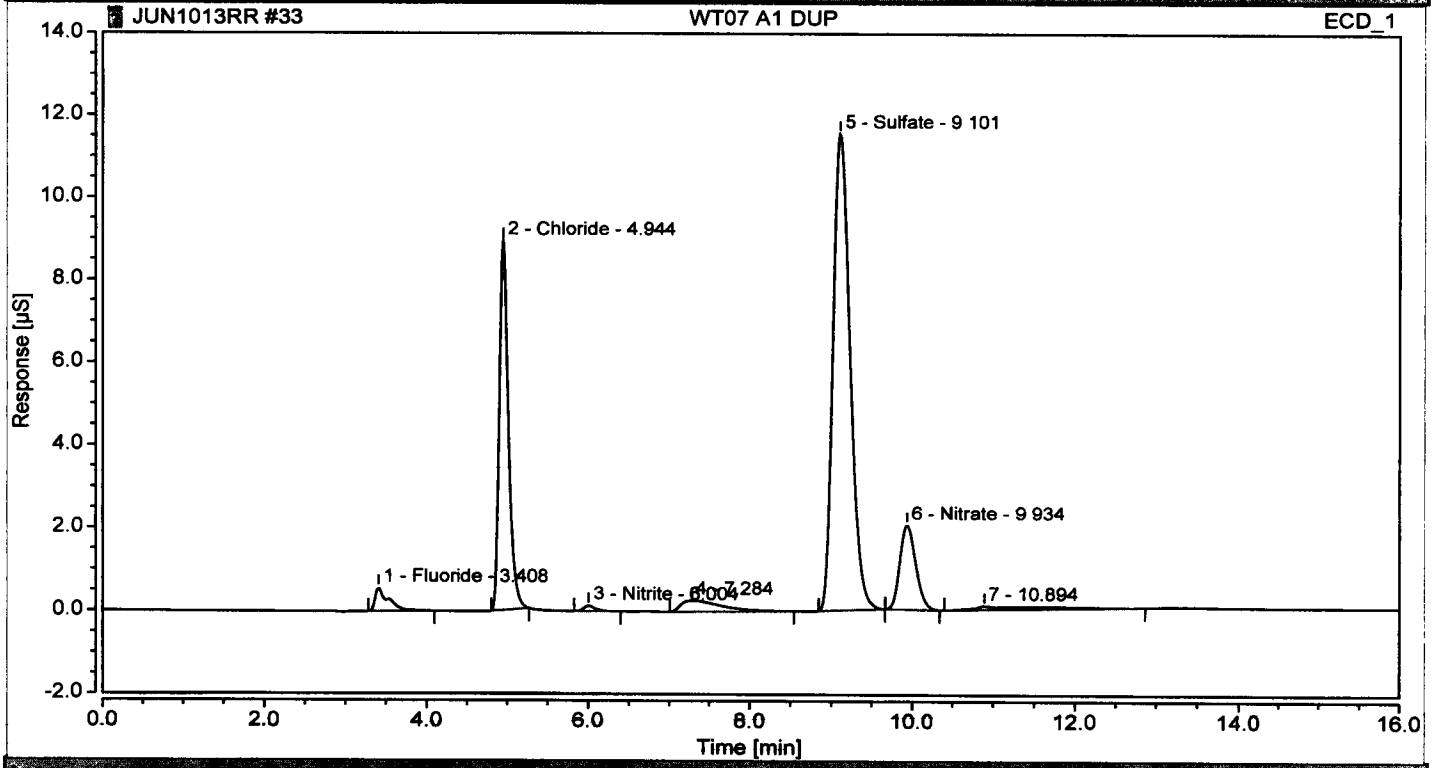


Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	2.0	0.138	3.408	0.035	0.215	FALSE	n.a.
2		2.0		3.538	0.000	0.005	FALSE	n.a.
3	Chloride	2.0	2.281	4.948	1.172	0.858	FALSE	n.a.
4	Nitrite	2.0	0.000	6.004	0.000	0.000	FALSE	n.a.
5		2.0		7.284	0.000	0.000	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
6	Sulfate	2.0	24.000	9.098	12.402	11.022	FALSE	n.a.
7	Nitrate	2.0	2.000	9.934	1.080	0.766	FALSE	n.a.
8		2.0	0.000	10.898	0.000	0.000	FALSE	n.a.
n.a.	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Injection Details

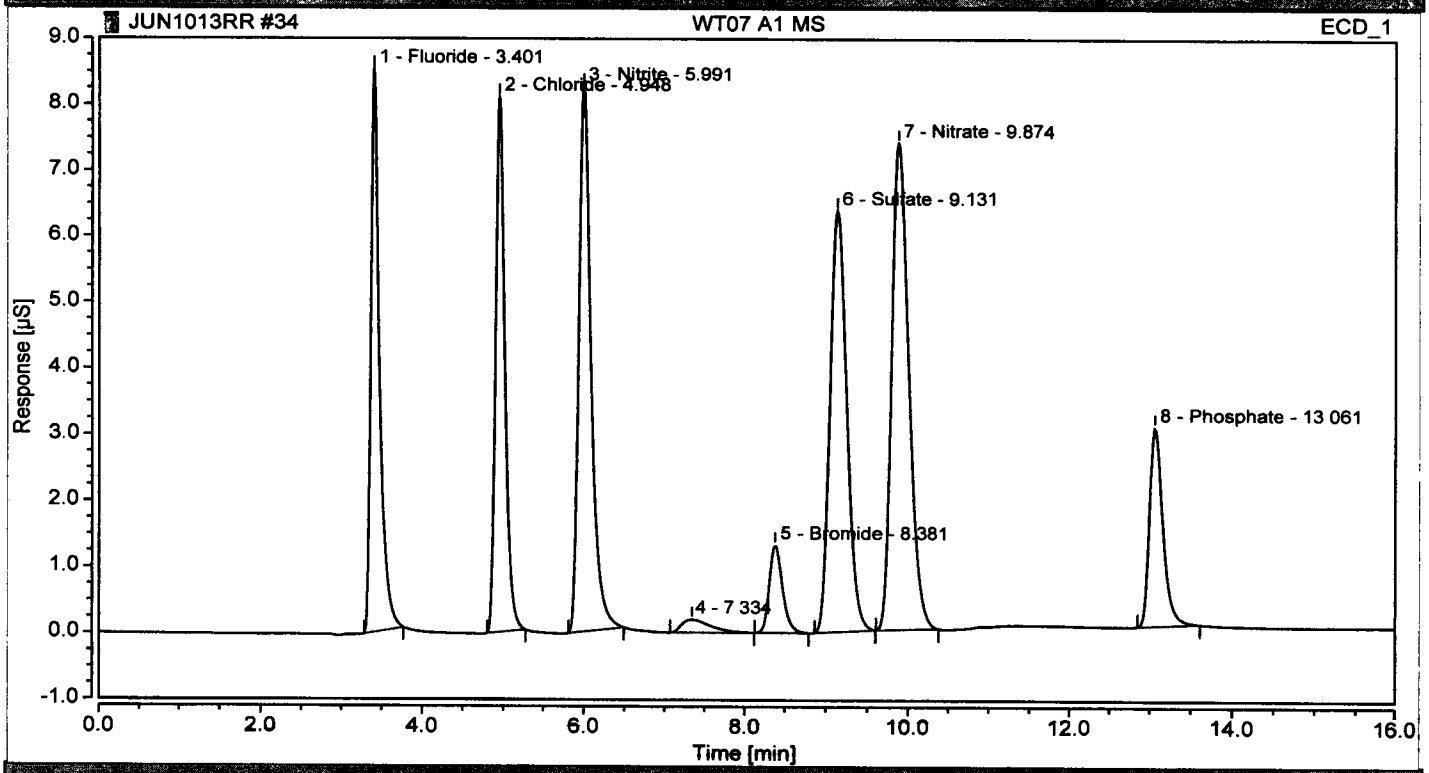
Injection Name:	*WT07 A1 DUP*	Inject Number:	33
Vial Number:	*29*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*2.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 04:51*		



Integration

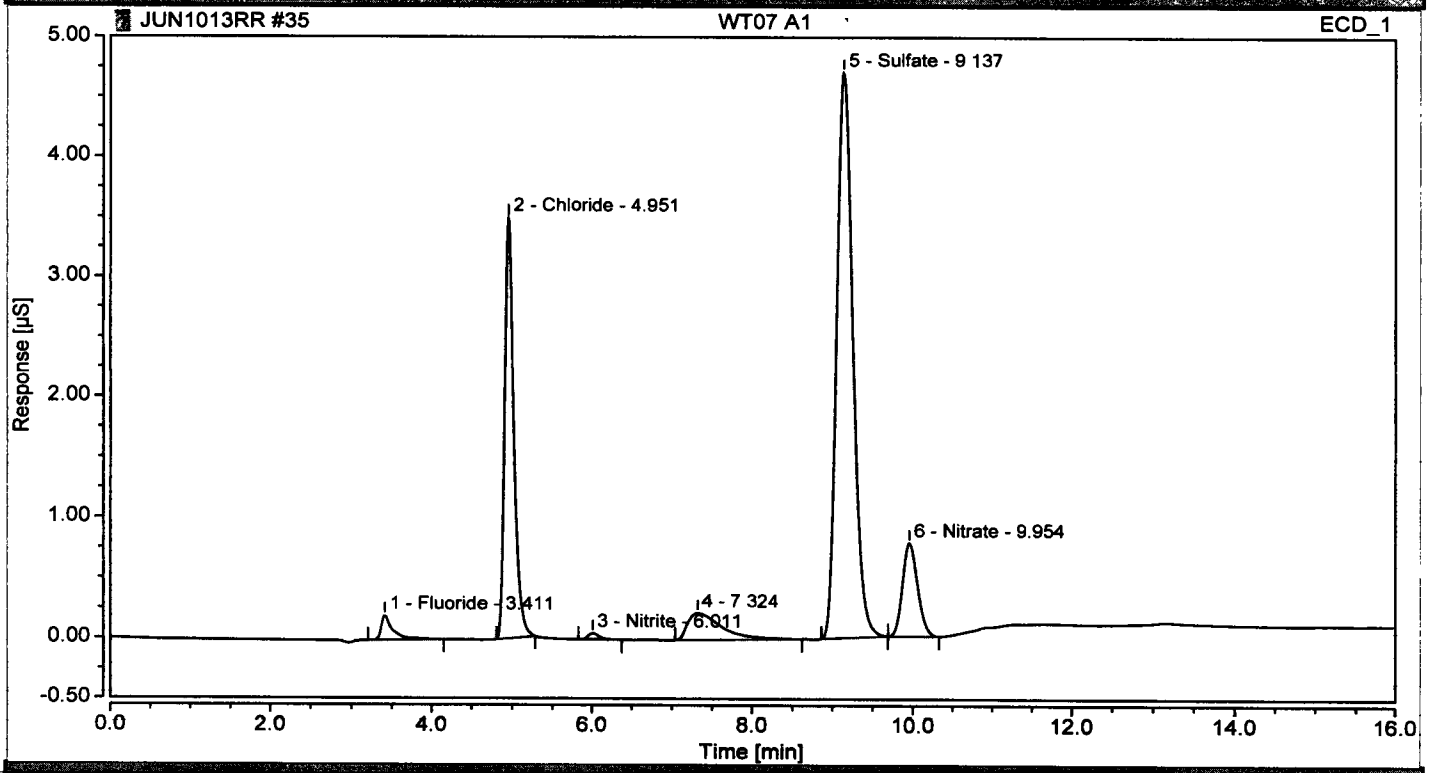
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	2.0	0.12	3.41	0.1884	0.559	FALSE	n.a.
2	Chloride	2.0	2.08	4.94	1.170	5.931	FALSE	n.a.
3	Nitrite	2.0	n.a.	6.00	0.0218	0.0676	FALSE	n.a.
4		2.0	n.a.	7.28	0.0218	0.0676	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	Sulfate	2.0	2.20	9.10	1.731	2.992	FALSE	n.a.
6	Nitrate	2.0	0.85	9.93	0.6659	2.008	FALSE	n.a.
7		2.0	n.a.	10.89	0.0083	0.0295	FALSE	n.a.
n.a.	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Injection Name:	*WT07 A1 MS*	Inject Number:	34
Vial Number:	*30*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*5.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 05:11*		



No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	5.0					FALSE	n.a.
2	Chloride	5.0					FALSE	n.a.
3	Nitrite	5.0					FALSE	n.a.
4		5.0					FALSE	n.a.
5	Bromide	5.0					FALSE	n.a.
6	Sulfate	5.0					FALSE	n.a.
7	Nitrate	5.0					FALSE	n.a.
8	Phosphate	5.0		13.06	0.578		FALSE	n.a.

Injection Name:	*WT07 A1*	Inject Number:	35
Vial Number:	*31*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*5.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 05:32*		



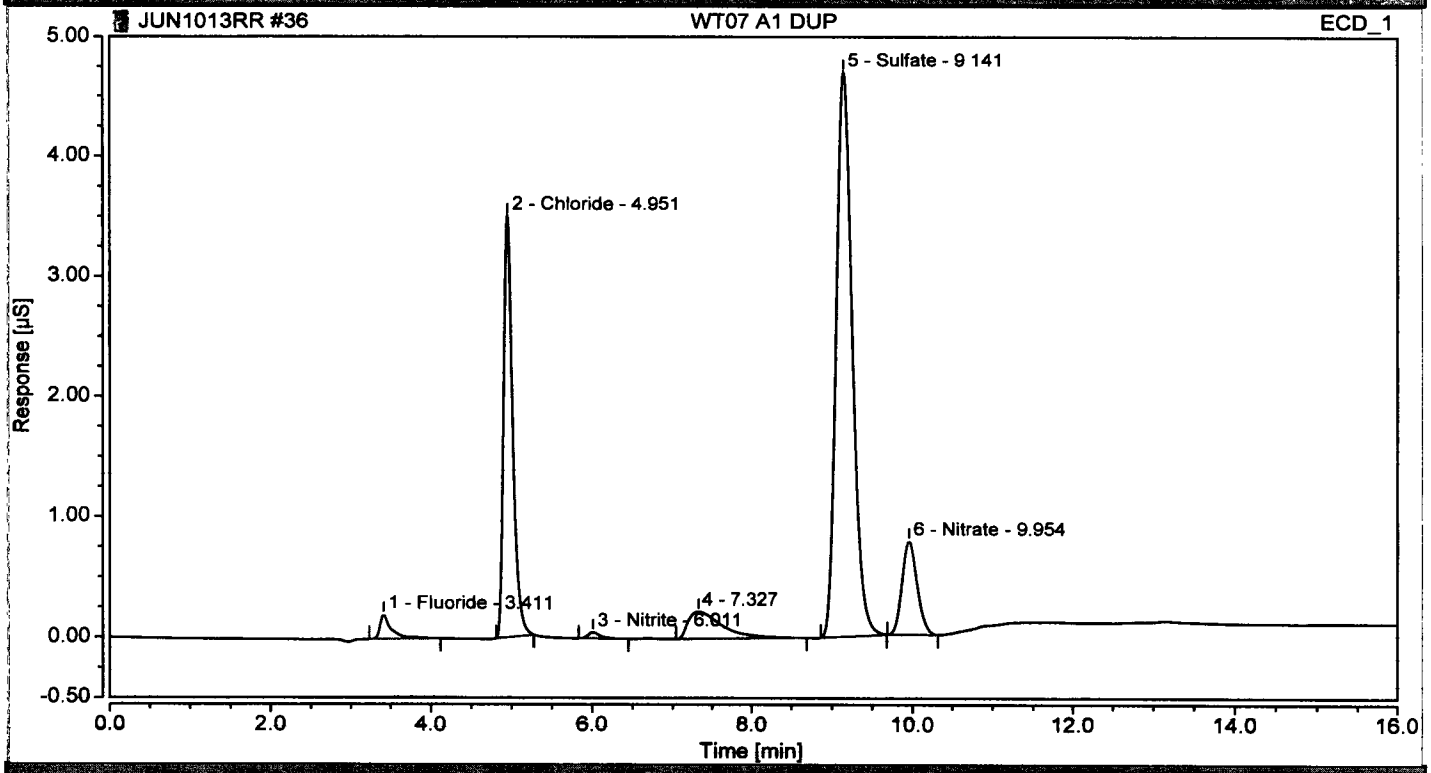
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	5.0	[illegible]	3.41	[illegible]	[illegible]	FALSE	n.a.
2	Chloride	5.0	[illegible]	4.95	[illegible]	[illegible]	FALSE	n.a.
3	Nitrite	5.0	0.058	6.01	[illegible]	[illegible]	FALSE	n.a.
4		5.0	n.a.	[illegible]	[illegible]	[illegible]	FALSE	n.a.
n.a.	Bromide	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	Sulfate	5.0	24.103	[illegible]	[illegible]	4.701	FALSE	n.a.
6	Nitrate	5.0	[illegible]	[illegible]	[illegible]	0.772	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:	*WT07 A1 DUP*	Inject Number:	36
Vial Number:	*32*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*5.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 05:52*		

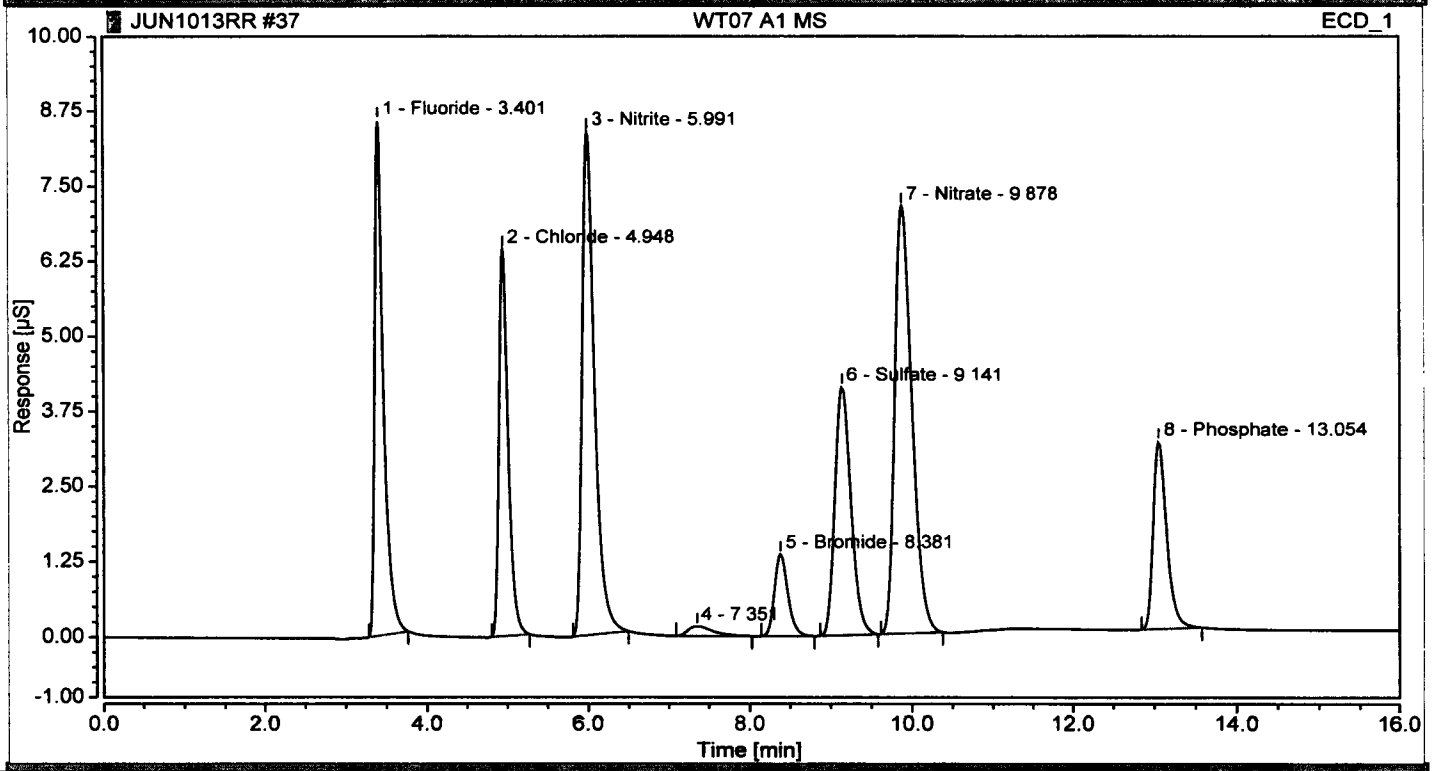
Chromatogram



Integration Results

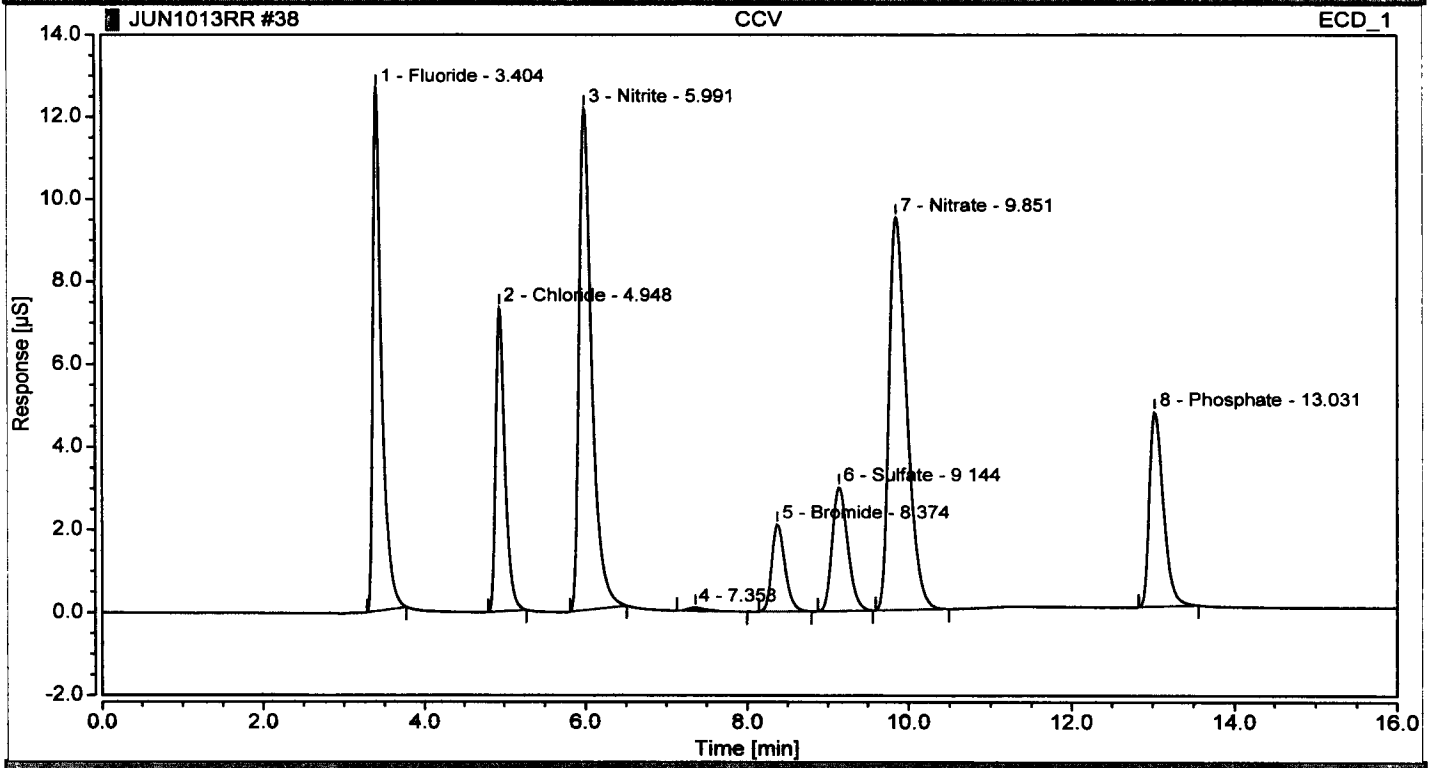
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	5.0	0.320	3.41	0.033	0.198	FALSE	n.a.
2	Chloride	5.0	[illegible]	[illegible]	0.456	3.505	FALSE	n.a.
3	Nitrite	5.0	[illegible]	6.01	0.008	0.051	FALSE	n.a.
4		5.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
n.a.	Bromide	[illegible]	[illegible]	[illegible]	[illegible]	n.a.	n.a.	n.a.
5	Sulfate	5.0	[illegible]	9.14	1.094	4.694	FALSE	n.a.
6	Nitrate	5.0	1.033	9.95	0.189	0.771	FALSE	n.a.
n.a.	Phosphate	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Injection Name:	*WT07 A1 MS*	Inject Number:	37
Vial Number:	*33*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*10.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 06:12*		



No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	10.0	20.468	[illegible]	1.058	8.572	FALSE	n.a.
2	Chloride	10.0	[illegible]	[illegible]	0.848	6.424	FALSE	n.a.
3	Nitrite	10.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
4		10.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
5	Bromide	10.0	[illegible]	[illegible]	0.250	[illegible]	FALSE	n.a.
6	Sulfate	10.0	41.614	9.14	[illegible]	4.128	FALSE	n.a.
7	Nitrate	10.0	21.133	9.88	1.734	7.111	FALSE	n.a.
8	Phosphate	10.0	12.012	13.05	0.593	3.110	FALSE	n.a.

Injection Name:	*CCV*	Inject Number:	38
Vial Number:	*34*	User:	pat
Injection Type:	*Check Standard*	Sequence:	JUN1013RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodai*		
Injection Date/Time:	*11/06/13 06:33*		



No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	3.985	3.400	1.580	12.671	FALSE	2.15
2	Chloride	1.0	4.970	4.948	0.970	7.436	FALSE	0.04
3	Nitrite	1.0	3.983	5.991	2.000	12.057	FALSE	0.17
4		1.0					FALSE	
5	Bromide	1.0		8.374	0.978	3.245	FALSE	0.37
6	Sulfate	1.0	2.987	9.144	0.931	2.969	FALSE	0.13
7	Nitrate	1.0	2.987	9.851	2.382	9.498	FALSE	-2.76
8	Phosphate	1.0	2.963	13.03	0.926	4.719	FALSE	-1.07

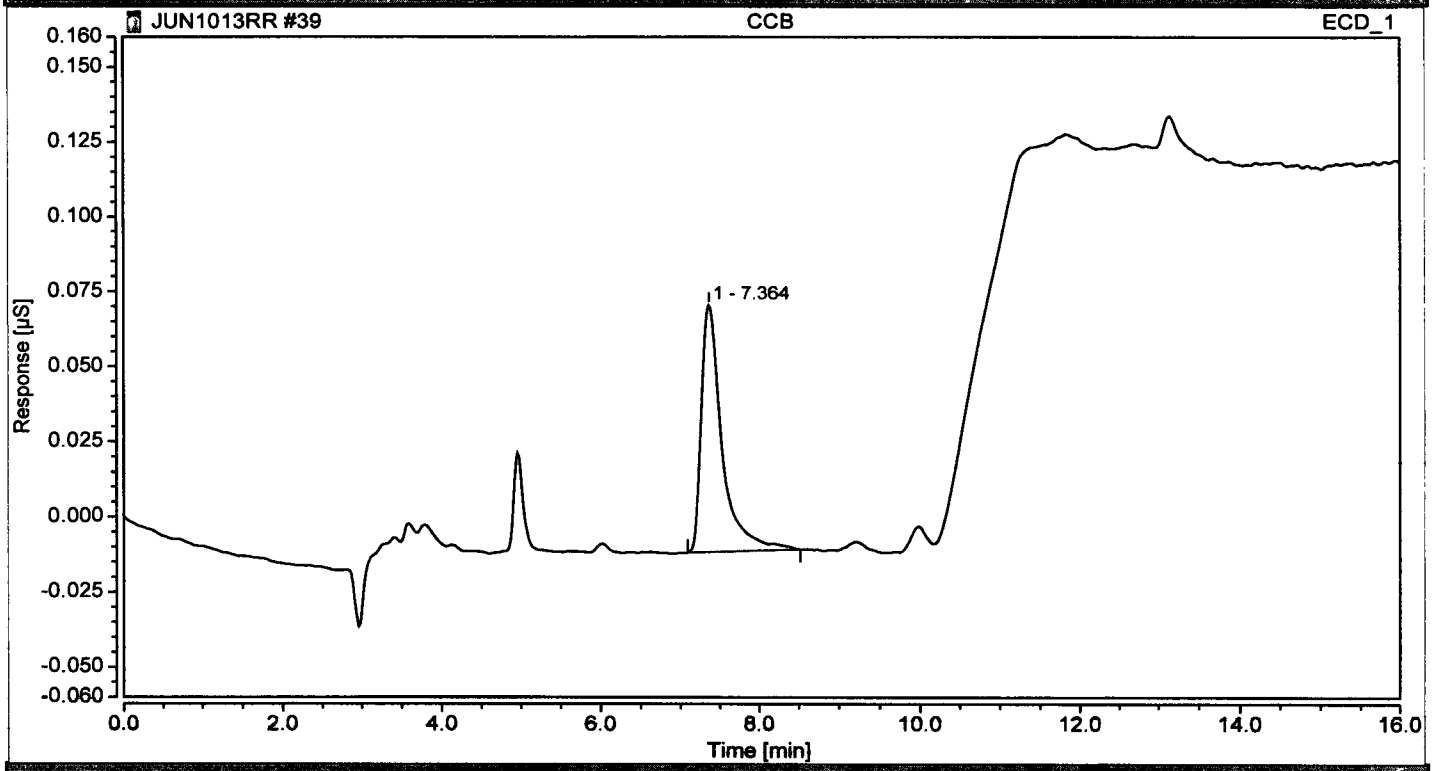
USGS : 01475

Chromatograph and Results

Injection Details

Injection Name:	*CCB*	Inject Number:	39
Vial Number:	*35*	User:	pat
Injection Type:	*Blank*	Sequence:	JUN1013RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 06:54*		

Chromatograph



Integration

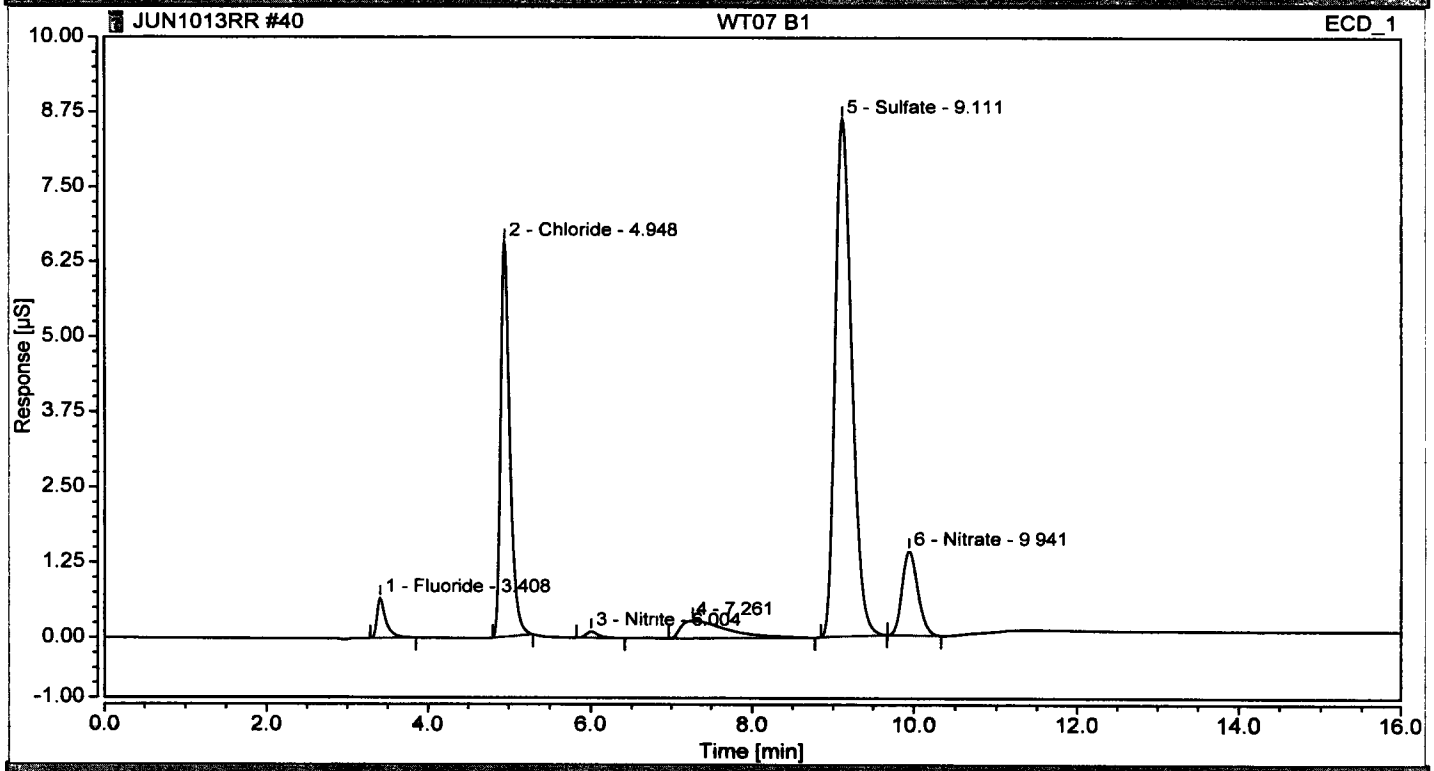
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		1.0	n.a.	7.[illegible]	0.025	0.082	FALSE	n.a.
n.a.	Bromide	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:	*WT07 B1*	Inject Number:	40
Vial Number:	*36*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*2.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 07:14*		

Chromatogram



Integration Results

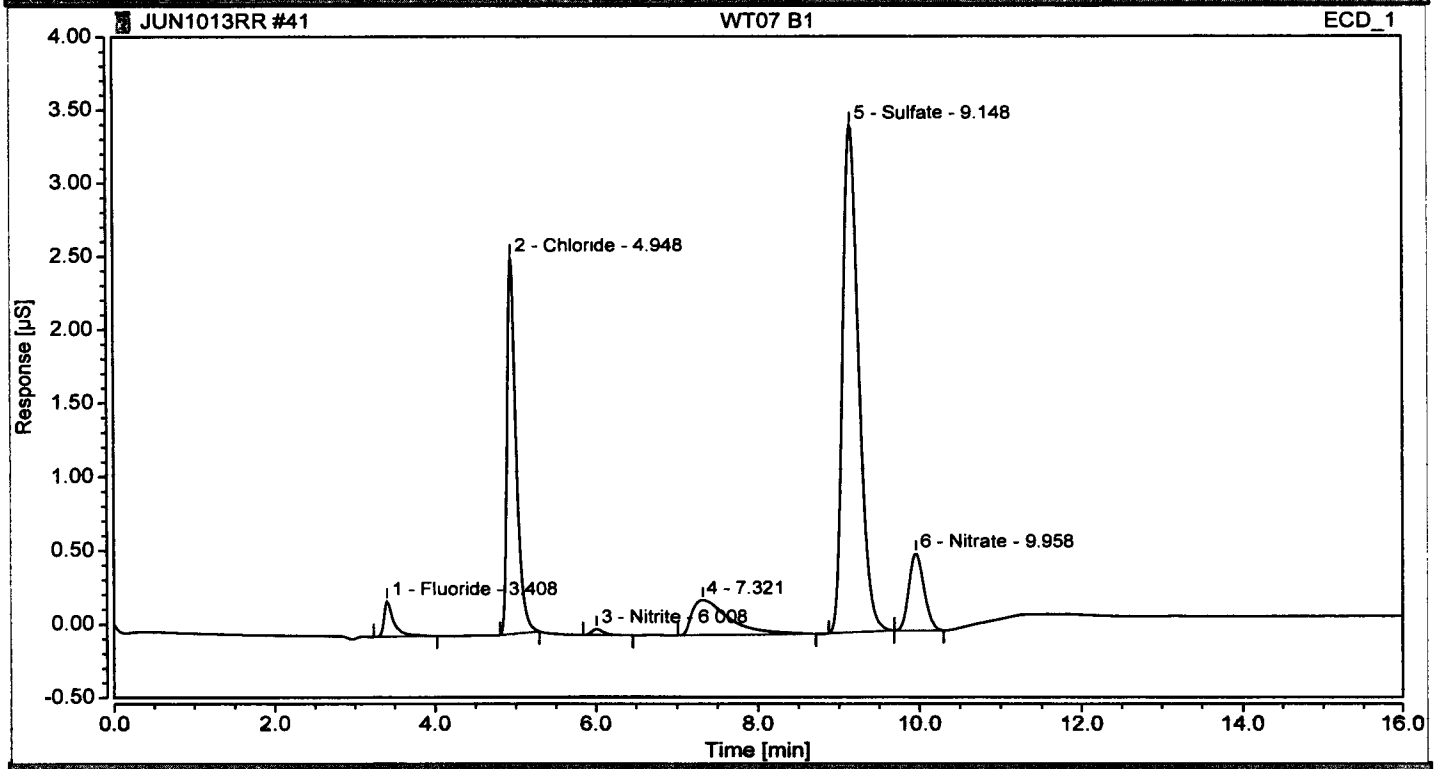
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	2.0	0.329	3.41	0.085	[illegible]	FALSE	n.a.
2	Chloride	2.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	n.a.
3	Nitrite	2.0	[illegible]	6.00	0.017	[illegible]	FALSE	n.a.
4		2.0	n.a.	7.26	[illegible]	[illegible]	FALSE	n.a.
n.a.	Bromide	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	Sulfate	2.0	[illegible]	9.11	2.058	[illegible]	FALSE	n.a.
6	Nitrate	2.0	0.760	9.94	0.312	[illegible]	FALSE	n.a.
n.a.	Phosphate	2.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatographic Results

Injection Details

Injection Name:	*WT07 B1*	Inject Number:	41
Vial Number:	*37*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*5.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 07:35*		

Chromatograph



Integration Results

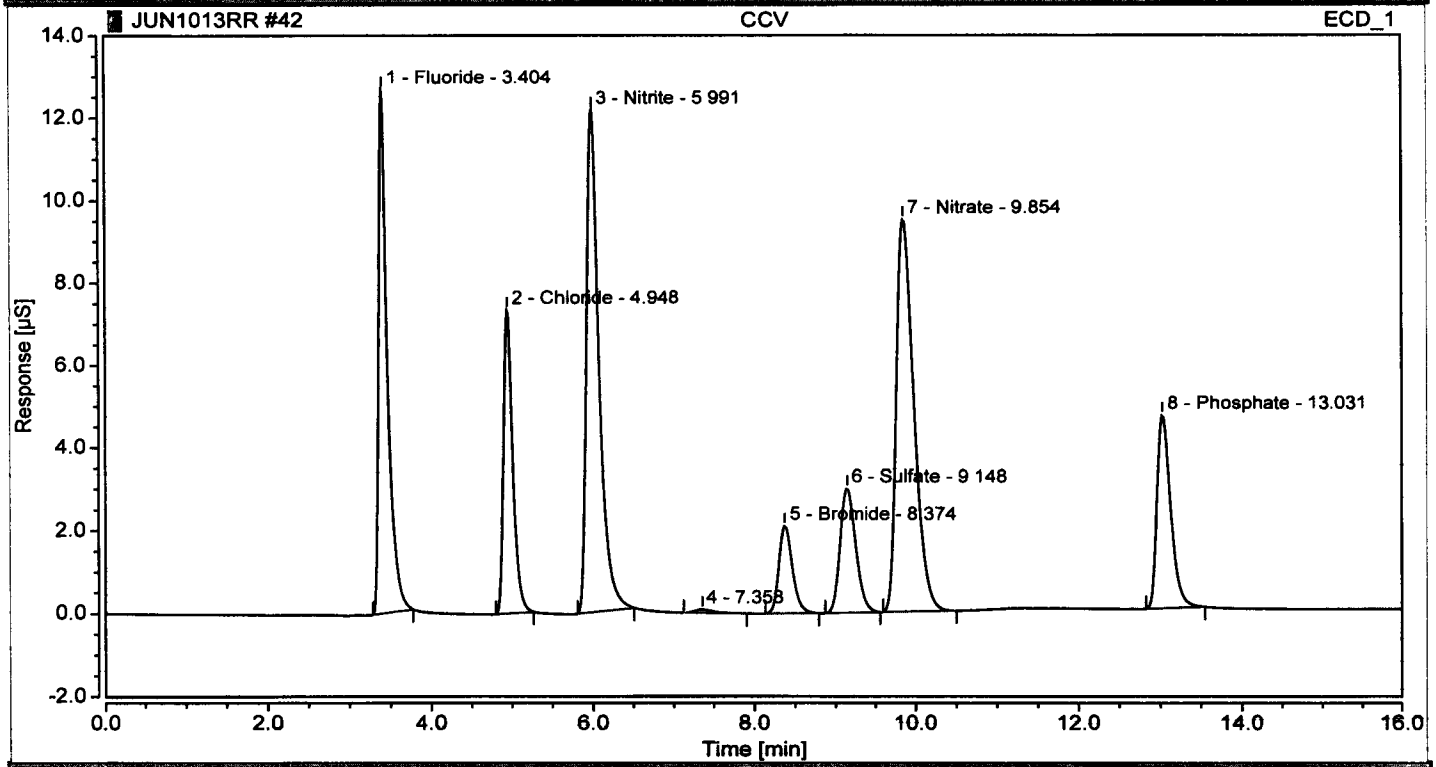
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	5.0	0.335	3.41	0.036	0.239	FALSE	n.a.
2	Chloride	5.0	5.207	4.95	0.334	2.558	FALSE	n.a.
3	Nitrite	5.0	0.047	6.01	0.007	0.041	FALSE	n.a.
4		5.0	n.a.	7.32	0.126	0.336	FALSE	n.a.
n.a.	Bromide	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	Sulfate	5.0	17.587	9.15	0.798	3.453	FALSE	n.a.
6	Nitrate	5.0	0.693	9.95	0.114	0.522	FALSE	n.a.
n.a.	Phosphate	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatograms and Results

Injection Details

Injection Name:	*CCV*	Inject Number:	42
Vial Number:	*34*	User:	pat
Injection Type:	*Check Standard*	Sequence:	JUN1013RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 07:54*		

Chromatogram



Integration Results

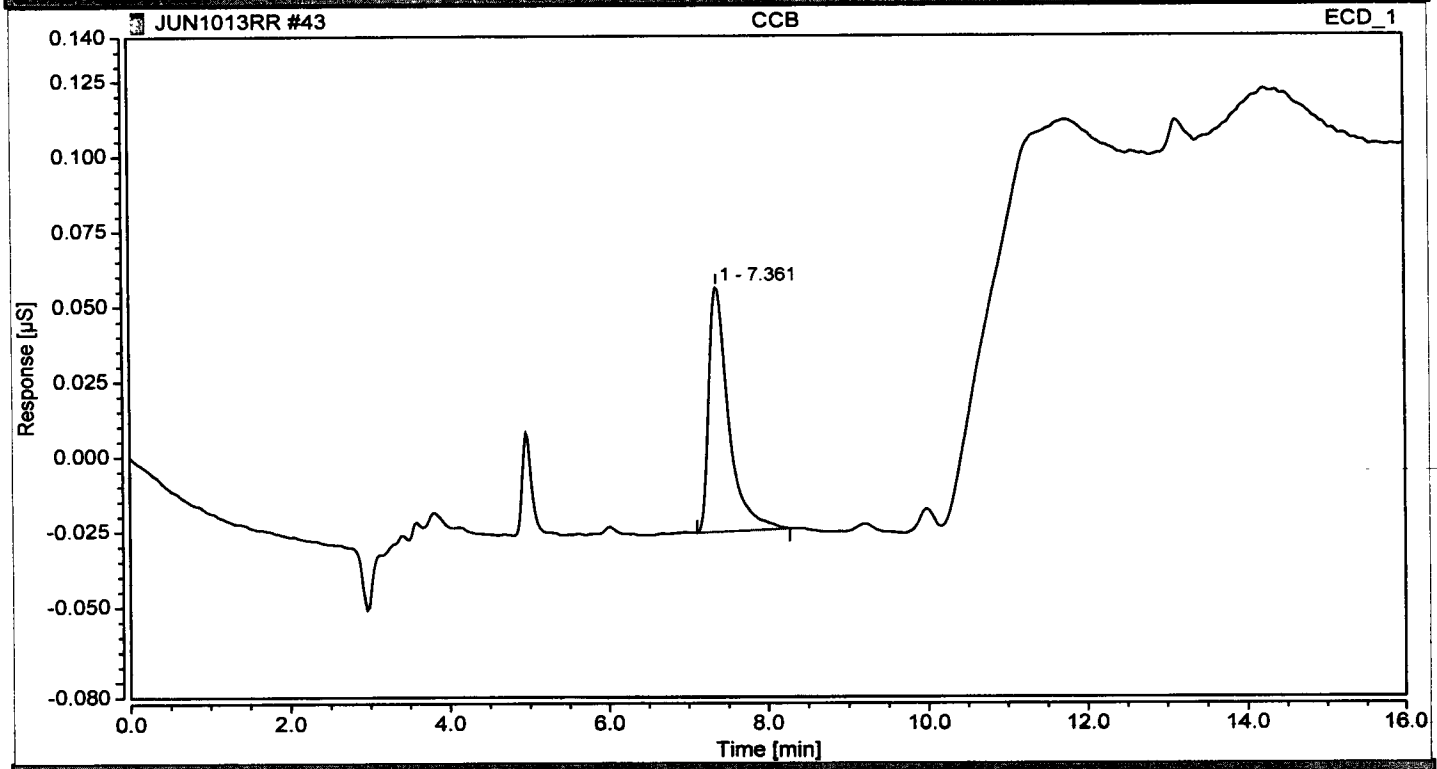
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	3.004	3.40	[illegible]	12.675	FALSE	2.14
2	Chloride	1.0	[illegible]	[illegible]	[illegible]	7.348	FALSE	0.81
3	Nitrite	1.0	[illegible]	5.99	[illegible]	[illegible]	FALSE	0.02
4		1.0	n.a.	[illegible]	[illegible]	[illegible]	FALSE	n.a.
5	Bromide	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	-0.47
6	Sulfate	1.0	[illegible]	9.15	[illegible]	[illegible]	FALSE	-0.17
7	Nitrate	1.0	[illegible]	[illegible]	[illegible]	[illegible]	FALSE	-2.79
8	Phosphate	1.0	[illegible]	13.03	0.911	[illegible]	FALSE	-2.71

Chromatogram and Results

Injection Details

Injection Name:	*CCB*	Inject Number:	43
Vial Number:	*35*	User:	pat
Injection Type:	*Blank*	Sequence:	JUN1013RR
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 08:14*		

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.	7.28	0.024	0.042	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.

Injection Details

Injection Name:	*STOP*	Inject Number:	44
Vial Number:	*1*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUN1013RR
Dilution Factor:	*1.0*		
Instrument Method:	*SHUTDOWN*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*11/06/13 08:34*		

Chromatogram

Can't read channel ECD_1 from injection #44 - STOP
Channel is not available

Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			n.a.	min	matogram in con	matogram in		n.a.

WC3362

TOC, Aqueous Data Summary (Shimadzu) DATE: 6/13/13 16:18
EPA 9060 A, SM 5310 B-00 ANALYST: MAP
Analysis Mode: **NPOC** *Instrument:* ***Shimadzu***

Detection Limits (mgC/L)
MRL = 1.5 **upper blank =** 1.5 **lower blank =** -1.5

Calibration Data
Stock ID: ARI 00139-03 | factor (m): 1.877E+05 | r²: 0.99949
Curve Date: 5/15/2013 | intercept (b_{cal}): 32575 | sys blk (b_{sys}) 21111
Curve ID: CAL051513

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* Form	# reps	mean	stdev	Measured	Report as	Notes: *will flag if RSD >5%*
ICV	1	NPOC	3	18.7900				
ICB	1	NPOC	3	0.0247				
0.5 ppm	1	NPOC	3	0.5174				
IC Sparge Check	1	NPOC	3	19.7600				
WT29 A1	1	DOC	3	1.6860				
WT29 B1	1	DOC	3	1.3280				
WT29 C1	1	DOC	3	0.7712				
WT29 C1ms	1	DOC	3	20.0800				
Spike at	0.100	*mL of*	5,000	*ppm Std to*	25.00	*mL =*	20.0	*mg/L*
WT29 C1msd	1	DOC	3	20.4100				
Spike at	0.100	*mL of*	5,000	*ppm Std to*	25.00	*mL =*	20.0	*mg/L*
WT29 D1	1	DOC	3	1.1110				
WT29 E1	1	DOC	3	1.9250				
WT29 F1	1	DOC	3	0.8749				
WT29 H1	1	DOC	3	1.2440				
WT29 I1	1	DOC	3	0.7220				
WT29 J1	1	DOC	5	0.6029				
WT29 K1	1	DOC	3	1.0300				
~~CCV~~	~~1~~	~~NPOC~~	~~3~~	~~19.8000~~				
CCB	1	NPOC	3	0.0000				
WT29 L1	1	DOC	3	0.5561				
WT29 M1	1	DOC	3	1.7050				
WT29 N1	1	DOC	3	1.6310				
WT29 O1	1	DOC	3	0.8531				
WT29 P1	1	DOC	4	0.4727				
WT30 A1	1	DOC	3	0.7774				
WT30 B1	1	DOC	3	0.8274				
WT30 C1	1	DOC	3	1.7050				
WT30 D1	1	DOC	3	0.9768				
WT30 E1	1	DOC	3	1.1870				
CCV	1	NPOC	3	19.7900				
CCB	1	NPOC	3	0.0000				
WT30 F2	1	DOC	3	0.2732				
WT30 G1	1	DOC	3	0.7154				
WT30 H1	1	DOC	3	0.7914				
WT30 I1	1	DOC	3	0.6155				
WT30 J1	1	DOC	3	2.6160		2.62	2.62	
WT30 K1	1	DOC	3	0.8500		0.85	<1.5	

USGS : 01882

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	
WT30 L1	1	DOC	5	0.7565		0.76	2.15	
WT30 M5	1	DOC	3	1.5960		1.60	3.5	
WT30 M5ms	1	DOC	3	21.2200		21.22	21.2	98.13%
Spike at	0.100	*mL of*	5,000	*ppm Std to*	25.00	*mL =*	20.0	*mg/L*
WT30 M5msd	1	DOC	3	21.3800		21.38	21.4	98.9%
Spike at	0.100	*mL of*	5,000	*ppm Std to*	25.00	*mL =*	20.0	*mg/L*
WT30 N1	1	DOC	3	1.1570		1.16	2.6	
CCV	1	NPOC	3	19.6700		19.67	19.7	98.35%
CCB	1	NPOC	3	0.0000		0.00	0.5	OK
WT07 FB	1	DOC	5	0.0700		0.07	1.5	
WT07 A4	1	DOC	3	3.0710		3.07	6.1	12203 12204
WT07 B	1	DOC	3	3.5790		3.58	7.2	
WS90 FB	1	DOC	3	0.1956		0.20	1.4	
WS90 A	1	DOC	3	3.5800		3.58	7.2	12078
WS90 B	1	DOC	3	3.5920		3.59	7.2	12079
WT 79 A1	1	NPOC	3	1.0570		1.06	2.1	NPOC
WT 79 A1dup	1	NPOC	3	1.3620		1.36	2.7	Re run
WT 79 A1ms	1	NPOC	3	21.0100		21.01	21.0	6-18
Spike at	0.100	*mL of*	5,000	*ppm Std to*	25.00	*mL =*	20.0	*mg/L*
WT 79 B1	1	NPOC	3	0.0000		0.00	0.5	OK
WT07 A4	5	NPOC	3	0.0000		0.00	2.5	OK 10.00%
WT07 B4	2.5	NPOC	3	0.0000		0.00	1.3	OK 10.00%
WS90 A10	5	NPOC	3	0.0000		0.00	2.5	OK 10.00%
WS90 B9	1	NPOC	3	4.4360		4.44	8.9	
CCV	1	NPOC	3	19.4200		97.10%	19.4	97.10%
CCB	1	NPOC	3	0.0458		0.05	0.5	OK
	1	NPOC	3					

6-20

WS90 : 01083

TOC-Control L Report

Mike
2013_06_13_001.tlx

Instr.Information

Instrument Options: TOC/ASI/IC Unit/
Catalyst: Regular Sensitivity

Sample

Sample Name: Rinse
Sample ID: Rinse
Origin: NPOC CAL 051513.cal
Status: Completed
Chk. Result

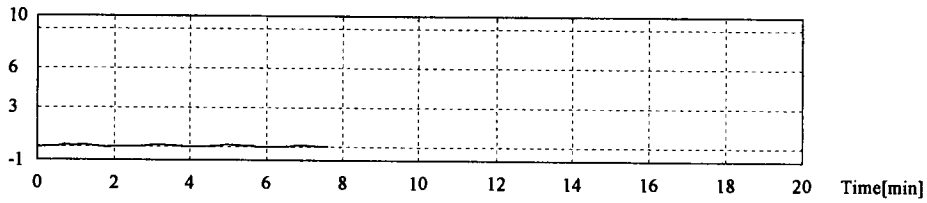
Unknown	NPOC	1 000	NPOC 0 00989mg/L

1. Det

Anal.: NPOC

1	0 5807	0.04948mg/L	150uL	1 000	E	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 3.35·34 PM
2	0 2931	0.02498mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 3 39·03 PM
3	0 2133	0 01818mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/13/2013 3 42:32 PM
4	0 1901	0 01620mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/13/2013 3 46 01 PM

Mean Area 0.2322
Mean Conc. 0.01978mg/L

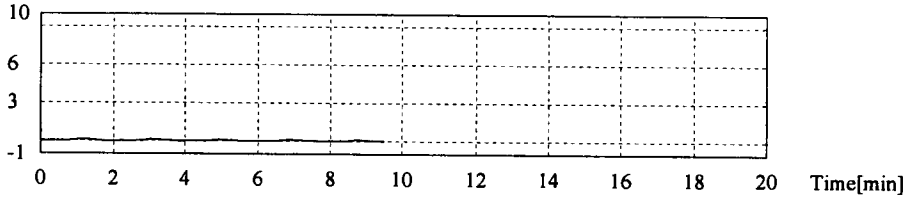


2 Det

Anal.: NPOC

1	0.2751	0.02344mg/L	150uL	1.000	E	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 3:53:30 PM
2	0.2304	0 01963mg/L	150uL	1 000	E	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 3·56 59 PM
3	0 000	0 000mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 4.00 28 PM
4	0 000	0 000mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 4.03 57 PM
5	0 000	0 000mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 4 07.26 PM

Mean Area 0.000
Mean Conc. 0.000mg/L



Control Sample

TOC-Control L Report

Mike
2013_06_13_001.tlx

Sample Name: CVS
Sample ID: CVS 20
Method: CVS 20 ppm.tpl
Status Completed
Chk. Result Control value: 93.95 / Control exceeds range!

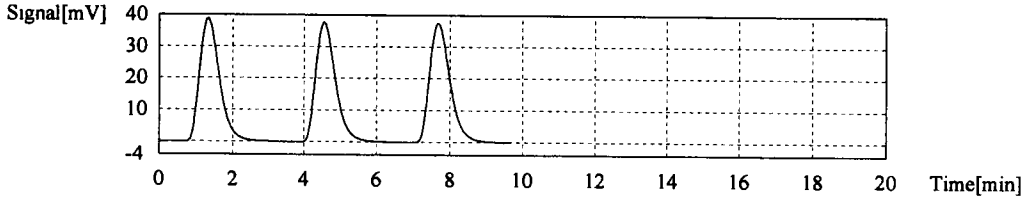
Control	NPOC	1 000	NPOC 18 79ppm

1. Det.

Anal.: NPOC

1	147 5	18 85ppm	100uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 4:18 22 PM
2	145 8	18 64ppm	100uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 4:22 28 PM
3	147 7	18 88ppm	100uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/13/2013 4 26 42 PM

Mean Area 147.0
Mean Conc. 18.79ppm



Control Sample

Sample Name: ICB/CCB
Sample ID:
Method: ICB CCB.tpl
Status Completed
Chk. Result Control value: 0.02476 / Control within range!

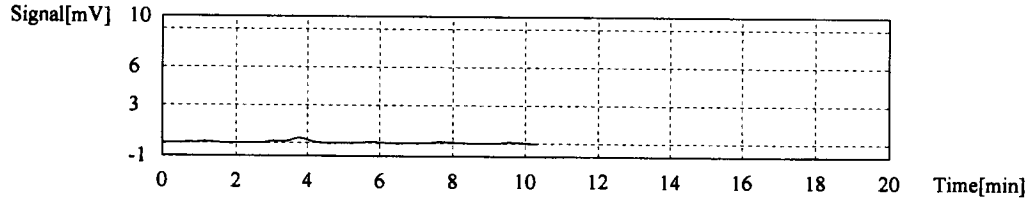
Control	NPOC	1 000	NPOC:0 02476mg/L

1. Det.

Anal.: NPOC

1	0 000	0.000mg/L	100uL	1 000	E	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/13/2013 4:36.28 PM
2	1 569	0 2006mg/L	100uL	1 000	E	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 4 40:46 PM
3	0 2267	0.02898mg/L	100uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 4 43:39 PM
4	0 1895	0 02422mg/L	100uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 4 47 08 PM
5	0 1649	0 02108mg/L	100uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 4 50 38 PM

Mean Area 0.1937
Mean Conc 0.02476mg/L



USGS : 01905

TOC-Control L Report

Mike
2013_06_13_001 tlx

Control Sample

Sample Name	DQL
Sample ID:	0 5 mg/L
Method·	DQL.tpl
Status	Completed
Chk. Result	Control value: 0.5174 / Control within range!

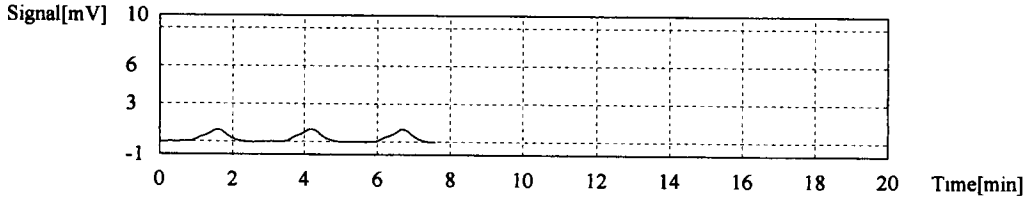
Control	NPOC	1 000	NPOC·0 5174mg/L

1. Det.

Anal.: NPOC

1	4 002	0 5115mg/L	100uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 5:00:41 PM
2	4 082	0 5218mg/L	100uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 5·04 01 PM
3	4 060	0 5190mg/L	100uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 5 07.23 PM

Mean Area 4.048
Mean Conc. 0 5174mg/L



Control Sample

Sample Name:	Sparge Check
Sample ID:	Untitled
Method:	Sparge Check.tpl
Status	Completed
Chk. Result	Control value: 98.78 / Control exceeds range!

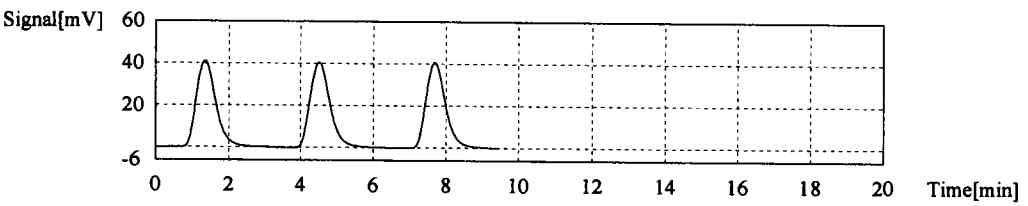
Control	NPOC	1 000	NPOC 19 76mg/L

1. Det.

Anal.: NPOC

1	154.3	19 72mg/L	100uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/13/2013 5:17:58 PM
2	154 9	19.80mg/L	100uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/13/2013 5.22:08 PM
3	154 5	19.75mg/L	100uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 5 26·13 PM

Mean Area 154.6
Mean Conc. 19 76mg/L



Sample

Sample Name: DOC
Sample ID: WT29 A1
Origin: NPOC Method.met
Status Completed
Chk. Result

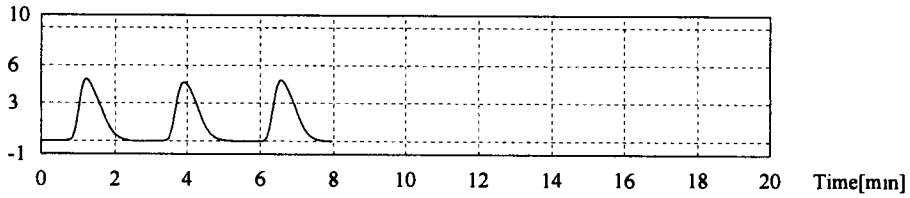
Unknown	NPOC	1 000	NPOC.1 686mg/L

1 Det

Anal.: NPOC

1	19.73	1 681mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/13/2013 5.36:45 PM
2	19 83	1.690mg/L	150uL	1.000	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 5·40.24 PM
3	19 78	1 686mg/L	150uL	1.000	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 5:44·01 PM

Mean Area 19.78
Mean Conc. 1.686mg/L



Sample

Sample Name: DOC
Sample ID: WT29 B1
Origin: NPOC Method.met
Status Completed
Chk Result

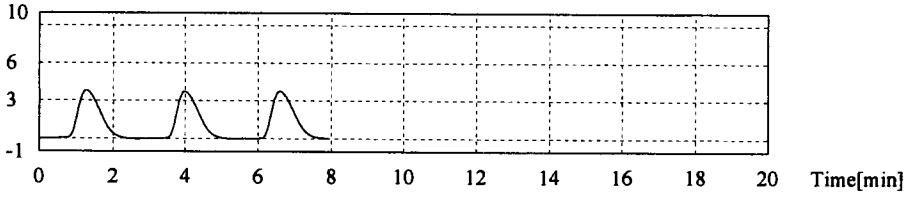
Unknown	NPOC	1 000	NPOC 1 328mg/L

1. Det

Anal.· NPOC

1	15 67	1 335mg/L	150uL	1 000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/13/2013 5:54:37 PM
2	15 51	1.322mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/13/2013 5.58.12 PM
3	15 58	1 328mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37.cal	6/13/2013 6 01 46 PM

Mean Area 15.59
Mean Conc. 1.328mg/L



Sample

Sample Name: DOC
Sample ID: WT29 C1
Origin: NPOC Method met
Status Completed
Chk. Result

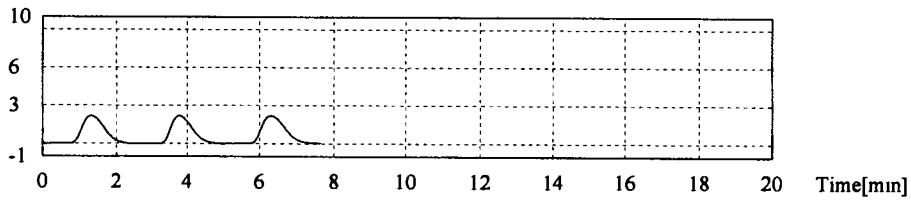
Unknown	NPOC	1 000	NPOC 0 7712mg/L

1. Det

Anal.: NPOC

1	8 957	0 7633mg/L	150uL	1 000	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 6 12 08 PM
2	9 067	0 7726mg/L	150uL	1.000	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 6 15 37 PM
3	9 126	0 7777mg/L	150uL	1 000	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 6 19.13 PM

Mean Area 9.050
Mean Conc. 0.7712mg/L



Sample

Sample Name: DOC
Sample ID: WT29 C1 ms 20
Origin: NPOC Method.met
Status Completed
Chk. Result

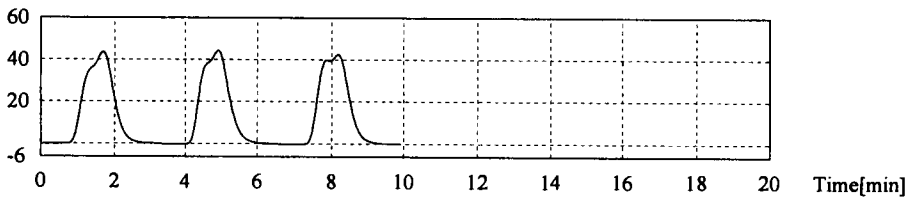
Unknown	NPOC	1.000	NPOC.20 08mg/L

1. Det

Anal.: NPOC

1	234 4	19.97mg/L	150uL	1.000	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 6 30:24 PM
2	235 3	20.05mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/13/2013 6.34:36 PM
3	237 3	20 22mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 6 38:57 PM

Mean Area 235.7
Mean Conc. 20.08mg/L



TOC-Control L Report

Mike
2013_06_13_001 tlx

Sample

Sample Name: DOC
Sample ID: WT29 C1 msd 20
Origin: NPOC Method.met
Status Completed
Chk. Result

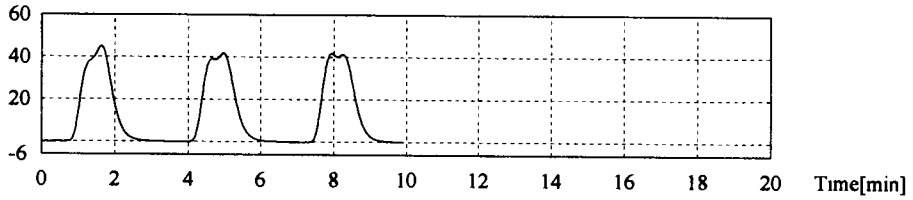
Unknown	NPOC	1 000	NPOC 20.41mg/L

1. Det

Anal.: NPOC

1	238 9	20 36mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/13/2013 6:50 08 PM
2	239 9	20 44mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 6 54.25 PM
3	239 8	20 43mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 6 58 39 PM

Mean Area 239.5
Mean Conc 20.41mg/L



Sample

Sample Name: DOC
Sample ID. WT29 D1
Origin: NPOC Method.met
Status Completed
Chk. Result

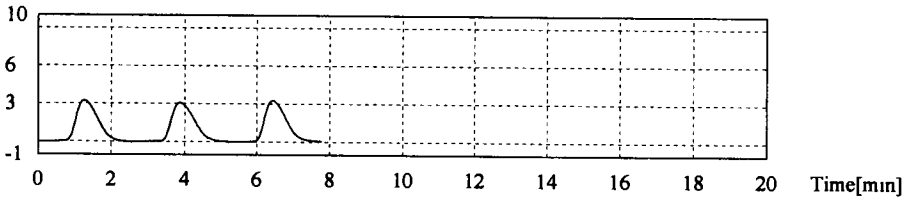
Unknown	NPOC	1 000	NPOC 1 111mg/L

1. Det

Anal.: NPOC

1	12.99	1 107mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/13/2013 7:09:07 PM
2	13 04	1 111mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/13/2013 7.12:41 PM
3	13.07	1 114mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 7 16 15 PM

Mean Area 13.03
Mean Conc. 1.111mg/L



Sample

Sample Name: DOC
Sample ID: WT29 E1
Origin: NPOC Method.met
Status Completed
Chk. Result

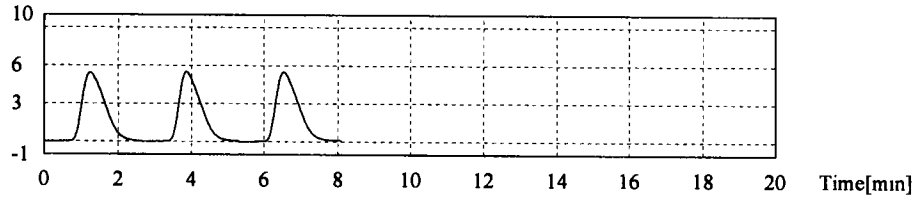
Unknown	NPOC	1 000	NPOC 1.925mg/L

1. Det

Anal.: NPOC

1	22 60	1 926mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 7:26:45 PM
2	22 41	1.910mg/L	150uL	1 000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/13/2013 7:30 24 PM
3	22 75	1 939mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/13/2013 7:34 10 PM

Mean Area 22.59
Mean Conc. 1.925mg/L



Sample

Sample Name: DOC
Sample ID: WT29 F1
Origin: NPOC Method.met
Status Completed
Chk. Result

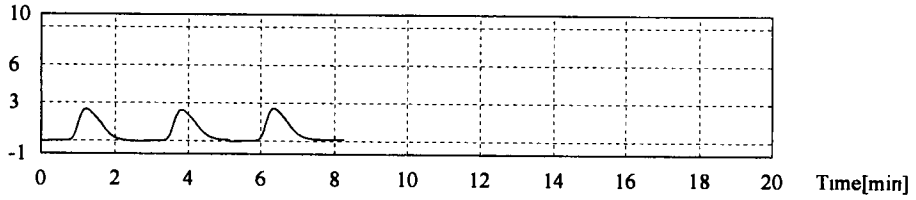
Unknown	NPOC	1 000	NPOC 0.8749mg/L

1. Det

Anal.: NPOC

1	10 24	0 8726mg/L	150uL	1 000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/13/2013 7:44:37 PM
2	10 15	0 8649mg/L	150uL	1 000	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 7 48:09 PM
3	10.41	0 8871mg/L	150uL	1.000	NPOC CAL 051513 2013_05_15_10_31_37.cal	6/13/2013 7.52:15 PM

Mean Area 10.27
Mean Conc. 0.8749mg/L



Sample

Sample Name: DOC
Sample ID: WT29 H1
Origin: NPOC Method.met
Status Completed
Chk. Result

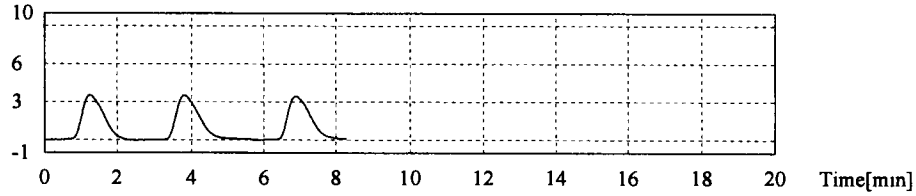
Unknown	NPOC	1 000	NPOC 1 244mg/L

1. Det

Anal.: NPOC

1	14.44	1 230mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37.cal	6/13/2013 8 02 40 PM
2	14.83	1 264mg/L	150uL	1 000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/13/2013 8 06 44 PM
3	14 53	1 238mg/L	150uL	1.000	NPOC CAL 051513 2013_05_15_10_31_37.cal	6/13/2013 8 10.21 PM

Mean Area 14.60
Mean Conc. 1.244mg/L



Sample

Sample Name: DOC
Sample ID: WT29 I1
Origin: NPOC Method.met
Status Completed
Chk. Result

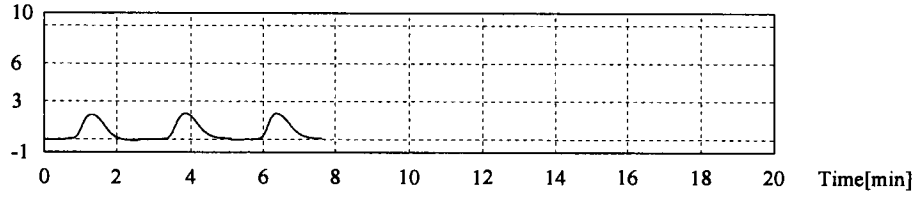
Unknown	NPOC	1 000	NPOC 0 7220mg/L

1. Det

Anal.: NPOC

1	8 483	0.7229mg/L	150uL	1 000	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 8.20:46 PM
2	8 461	0.7210mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 8:24:18 PM
3	8.473	0 7220mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 8:27·48 PM

Mean Area 8.472
Mean Conc. 0.7220mg/L



Sample

Sample Name: DOC
Sample ID: WT29 J1
Origin: NPOC Method.met
Status Completed
Chk. Result

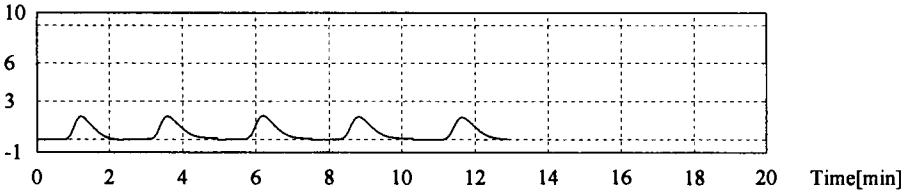
Unknown	NPOC	1 000	NPOC 0 6029mg/L

1. Det

Anal.: NPOC

1	6 771	0 5770mg/L	150uL	1.000	E	NPOC CAL 051513 2013_05_15_10_31_37.cal	6/13/2013 8:38:02 PM
2	6.907	0 5886mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 8:41 44 PM
3	7.129	0 6075mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 8 45 17 PM
4	7 416	0 6320mg/L	150uL	1 000	E	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 8:49 04 PM
5	7 191	0 6128mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 8 52 36 PM

Mean Area 7.076
Mean Conc. 0.6029mg/L



Sample

Sample Name: DOC
Sample ID: WT29 K1
Origin: NPOC Method.met
Status Completed
Chk. Result

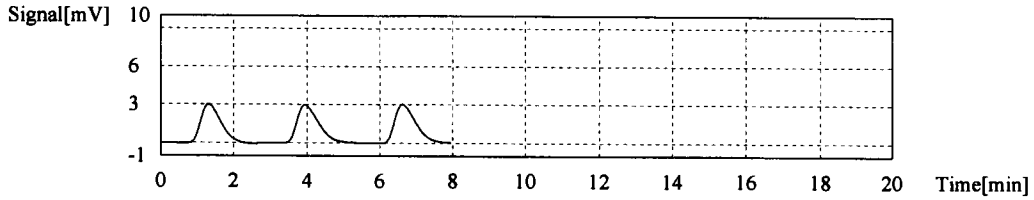
Unknown	NPOC	1 000	NPOC.1.030mg/L

1. Det

Anal.: NPOC

1	12 02	1.024mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 9 03 06 PM
2	12 07	1 029mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/13/2013 9 06 45 PM
3	12.17	1 037mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 9:10 22 PM

Mean Area 12.09
Mean Conc. 1.030mg/L



Control Sample

Sample Name: CVS
Sample ID: CVS 20
Method: CVS 20 ppm.tpl
Status Completed
Chk. Result Control value: 99.02 / Control exceeds range!

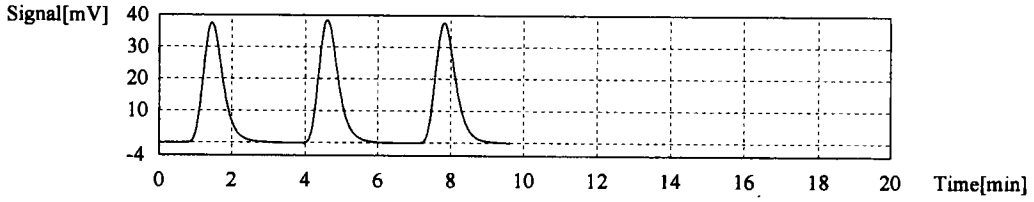
Control	NPOC	1.000	NPOC.19.80ppm

1. Det.

Anal.: NPOC

1	143 8	19 47ppm	100uL	1 000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27.cal	6/13/2013 9 21 24 PM
2	147.1	19 92ppm	100uL	1.000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/13/2013 9.25 35 PM
3	147 9	20 03ppm	100uL	1 000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27.cal	6/13/2013 9 29 49 PM

Mean Area 146.3
Mean Conc. 19.80ppm



Control Sample

Sample Name. ICB/CCB
Sample ID:
Method. ICB CCB.tpl
Status Completed
Chk. Result Control value: 0.000 / Control within range!

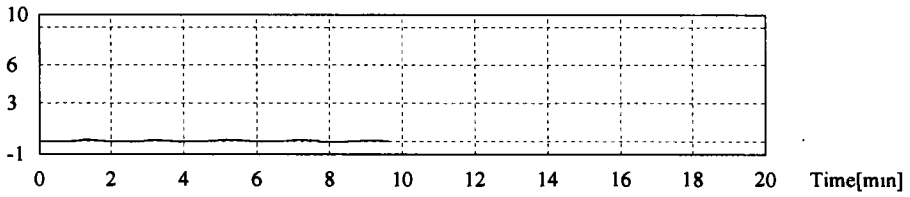
Control	NPOC	1.000	NPOC:0 000mg/L

1. Det.

Anal.: NPOC

1	0 3554	0.04812mg/L	100uL	1 000	E	NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	6/13/2013 9 39 35 PM
2	0 000	0 000mg/L	100uL	1 000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27.cal	6/13/2013 9 43.05 PM
3	0 2623	0 03552mg/L	100uL	1 000	E	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27.cal	6/13/2013 9.46.42 PM
4	0 000	0.000mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/13/2013 9.50.06 PM
5	0 000	0 000mg/L	100uL	1 000		NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	6/13/2013 9 53 36 PM

Mean Area 0.000
Mean Conc. 0.000mg/L



Sample

Sample Name: DOC
Sample ID: WT29 L1
Origin: NPOC Method met
Status Completed
Chk. Result

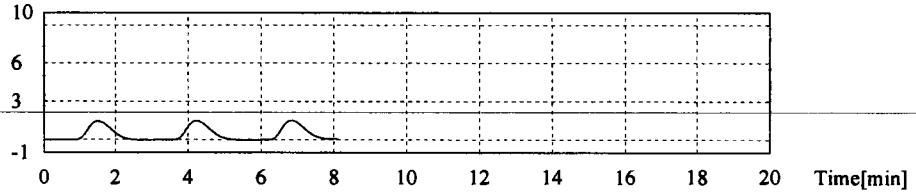
Unknown	NPOC	1.000	NPOC.0 5561mg/L

1. Det

Anal.: NPOC

1	6 498	0.5537mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 10:04:03 PM
2	6 460	0 5505mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 10:07 38 PM
3	6.620	0 5641mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 10 11 23 PM

Mean Area 6.526
Mean Conc. 0.5561mg/L



Sample

Sample Name: DOC
Sample ID: WT29 M1
Origin: NPOC Method.met
Status Completed
Chk. Result

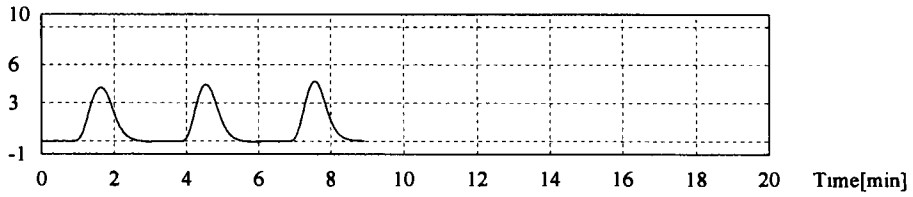
Unknown	NPOC	1 000	NPOC:1.705mg/L

1. Det

Anal.: NPOC

1	19 93	1.698mg/L	150uL	1 000	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 10:22.15 PM
2	19 88	1 694mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 10 26.14 PM
3	20 22	1.723mg/L	150uL	1 000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/13/2013 10:30.08 PM

Mean Area 20.01
Mean Conc. 1.705mg/L



Sample

Sample Name: DOC
Sample ID: WT29 N1
Origin: NPOC Method.met
Status Completed
Chk. Result

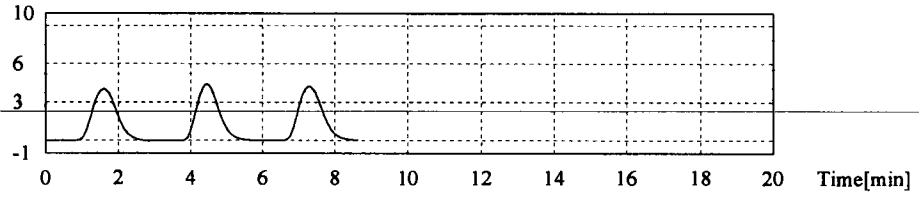
Unknown	NPOC	1 000	NPOC 1.631mg/L

1. Det

Anal.: NPOC

1	18.96	1 616mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/13/2013 10:40:55 PM
2	18 98	1 617mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37.cal	6/13/2013 10:44:44 PM
3	19.47	1 659mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 10 48 36 PM

Mean Area 19.14
Mean Conc. 1.631mg/L



Sample

Sample Name: DOC
Sample ID: WT29 O1
Origin: NPOC Method.met
Status Completed
Chk. Result

Unknown	NPOC	1 000	NPOC.0 8531mg/L

1. Det

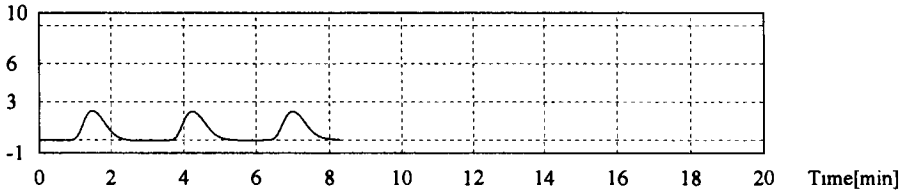
TOC-Control L Report

Mike
2013_06_13_001.tlx

Anal.: NPOC

1	10 04	0.8556mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 10:59 14 PM
2	10 03	0 8547mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 11 02.57 PM
3	9 964	0 8491mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 11 06 42 PM

Mean Area 10.01
Mean Conc. 0.8531mg/L



Sample

Sample Name: DOC
Sample ID: WT29 P1
Origin: NPOC Method.met
Status Completed
Chk. Result

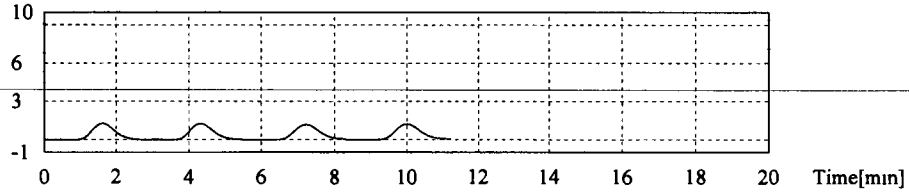
Unknown	NPOC	1 000	NPOC 0 4727mg/L

1. Det

Anal.: NPOC

1	5 542	0.4723mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/13/2013 11:17:18 PM
2	5 529	0 4712mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/13/2013 11:21:06 PM
3	5.292	0 4510mg/L	150uL	1 000	E	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/13/2013 11 24:51 PM
4	5 572	0.4748mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/13/2013 11 28:44 PM

Mean Area 5.548
Mean Conc. 0.4727mg/L



Sample

Sample Name: DOC
Sample ID: WT30 A1
Origin: NPOC Method.met
Status Completed
Chk. Result

Unknown	NPOC	1.000	NPOC 0 7774mg/L

TOC-Control L Report

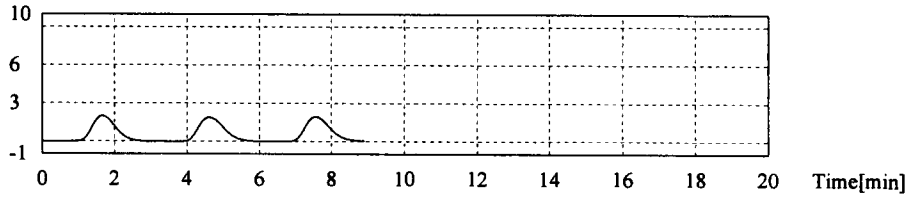
Mike
2013_06_13_001 tlx

1. Det

Anal.. NPOC

1	9.162	0.7807mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/13/2013 11:39:33 PM
2	9.120	0.7772mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/13/2013 11:43:28 PM
3	9.086	0.7743mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/13/2013 11:47:28 PM

Mean Area 9.123
Mean Conc. 0.7774mg/L



Sample

Sample Name: DOC
Sample ID: WT30 B1
Origin: NPOC Method.met
Status Completed
Chk. Result

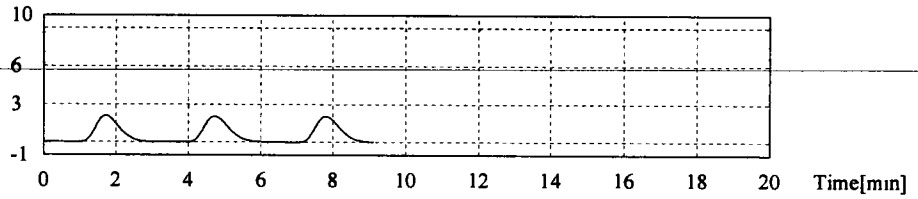
Unknown	NPOC	1.000	NPOC 0.8274mg/L

1. Det

Anal.: NPOC

1	9.683	0.8251mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/13/2013 11:58:19 PM
2	9.705	0.8270mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 12:02:22 AM
3	9.741	0.8301mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 12:06:25 AM

Mean Area 9.710
Mean Conc. 0.8274mg/L



Sample

Sample Name: DOC
Sample ID: WT30 C1
Origin: NPOC Method.met
Status Completed
Chk. Result

Unknown	NPOC	1.000	NPOC 1.705mg/L

TOC-Control L Report

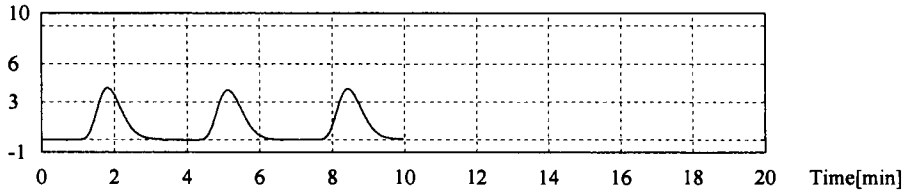
Mike
2013_06_13_001.tlx

1. Det

Anal.: NPOC

1	20 01	1.705mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 12 17 35 AM
2	20 00	1 704mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 12 21 51 AM
3	20 00	1.704mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 12 26 12 AM

Mean Area 20.00
Mean Conc. 1.705mg/L



Sample

Sample Name: DOC
Sample ID: WT30 D1
Origin: NPOC Method.met
Status Completed
Chk. Result

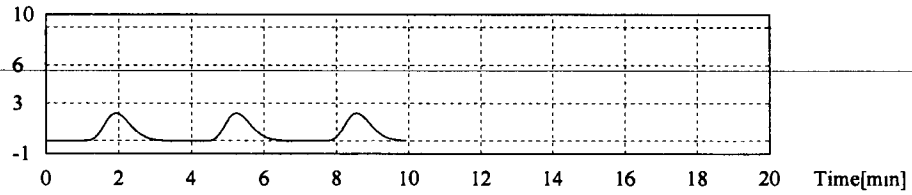
Unknown	NPOC	1.000	NPOC 0 9768mg/L

1. Det

Anal.: NPOC

1	11 58	0 9868mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 12:37 24 AM
2	11.40	0.9714mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 12:41:40 AM
3	11 41	0 9723mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 12.45.58 AM

Mean Area 11.46
Mean Conc. 0.9768mg/L



Sample

Sample Name: DOC
Sample ID: WT30 E1
Origin: NPOC Method.met
Status Completed
Chk. Result

Unknown	NPOC	1 000	NPOC.1 187mg/L

TOC-Control L Report

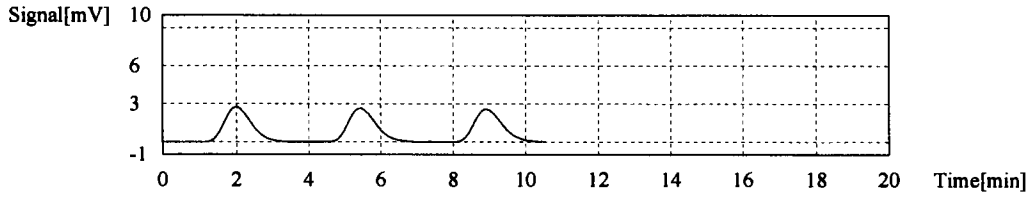
Mike
2013_06_13_001.tlx

1. Det

Anal.: NPOC

1	13 97	1 190mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 12 57.16 AM
2	13 86	1 181mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 1·01 42 AM
3	13 97	1 190mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 1.06 17 AM

Mean Area 13 93
Mean Conc. 1 187mg/L



Control Sample

Sample Name: CVS
Sample ID. CVS 20
Method: CVS 20 ppm.tpl
Status Completed
Chk. Result Control value: 98.95 / Control exceeds range!

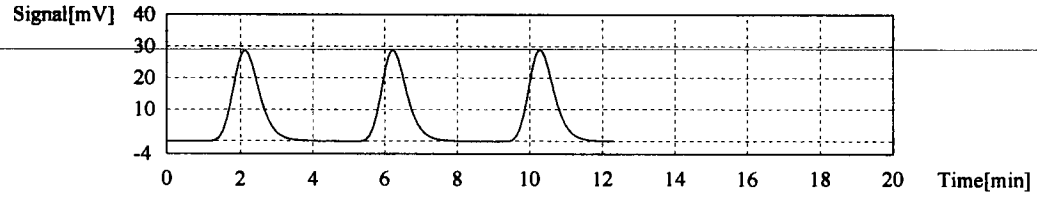
Control	NPOC	1.000	NPOC:19.79ppm

1. Det.

Anal.: NPOC

1	146 8	19 88ppm	100uL	1 000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27.cal	6/14/2013 1.18 32 AM
2	145 3	19.67ppm	100uL	1.000		NPOC Suspended 0.5 to 50 2013_05_07_12_18_27.cal	6/14/2013 1.23:37 AM
3	146 4	19 82ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/14/2013 1 28 43 AM

Mean Area 146.2
Mean Conc. 19.79ppm



Control Sample

Sample Name: ICB/CCB
Sample ID:
Method: ICB CCB.tpl
Status Completed
Chk. Result Control value: 0.000 / Control within range!

TOC-Control L Report

Mike
2013_06_13_001.tlx

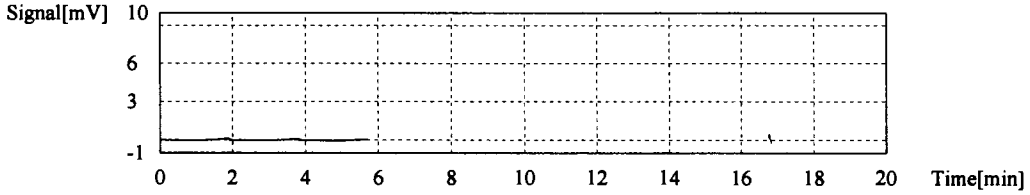
Control	NPOC	1 000	NPOC.0 000mg/L

1. Det.

Anal.: NPOC

1	0 000	0 000mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27.cal	6/14/2013 1 38:30 AM
2	0 000	0.000mg/L	100uL	1.000		NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	6/14/2013 1 42 00 AM
3	0 000	0 000mg/L	100uL	1 000		NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	6/14/2013 1.45.30 AM

Mean Area 0.000
Mean Conc. 0.000mg/L



Sample

Sample Name: DOC
Sample ID: WT30 F2
Origin: NPOC Method.met
Status Completed
Chk. Result

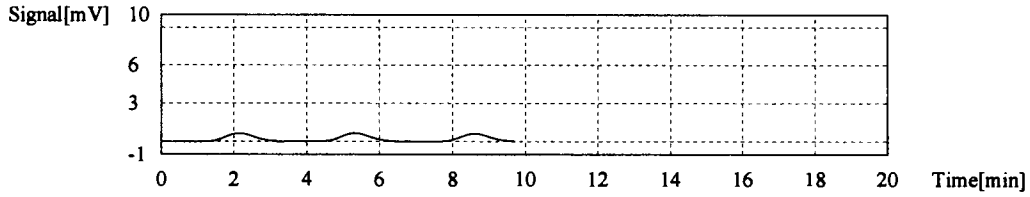
Unknown	NPOC	1 000	NPOC 0.2732mg/L

1. Det

Anal.: NPOC

1	3 203	0 2729mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 1 56 22 AM
2	3.292	0.2805mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 2:00:37 AM
3	3.123	0.2661mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 2:04:52 AM

Mean Area 3.206
Mean Conc. 0 2732mg/L



Sample

Sample Name: DOC
Sample ID: WT30 G1
Origin: NPOC Method.met
Status Completed
Chk. Result

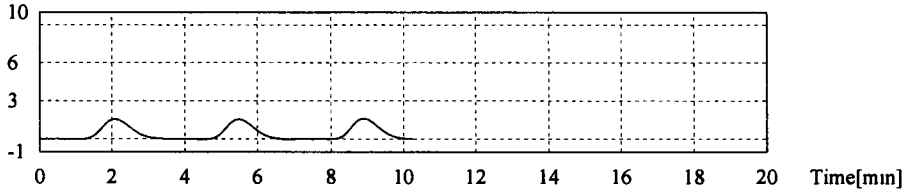
Unknown	NPOC	1 000	NPOC.0.7154mg/L

1. Det

Anal.: NPOC

1	8 471	0.7219mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 2 16.11 AM
2	8 358	0 7122mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 2 20 36 AM
3	8 357	0 7121mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 2.24 57 AM

Mean Area 8.395
Mean Conc 0.7154mg/L



Sample

Sample Name: DOC
Sample ID: WT30 H1
Origin: NPOC Method.met
Status Completed
Chk. Result

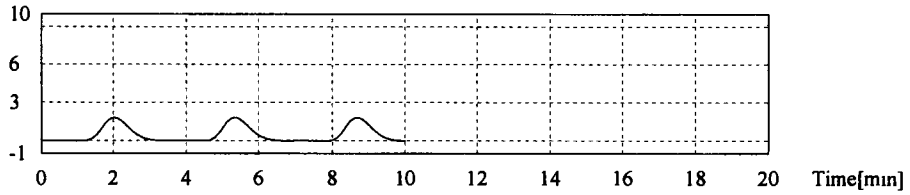
Unknown	NPOC	1.000	NPOC:0.7914mg/L

1. Det

Anal.: NPOC

1	9 355	0 7972mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 2:36:13 AM
2	9.273	0.7902mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 2:40:34 AM
3	9 233	0 7868mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 2 44 48 AM

Mean Area 9.287
Mean Conc. 0 7914mg/L



Sample

Sample Name DOC
Sample ID: WT30 I1
Origin: NPOC Method.met
Status Completed
Chk. Result

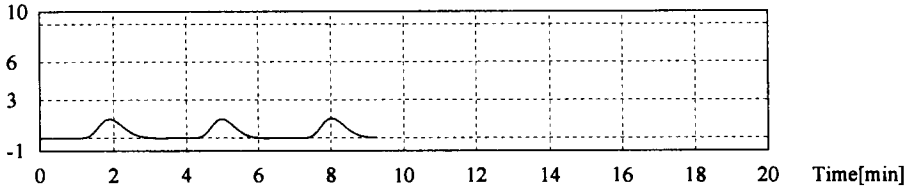
Unknown	NPOC	1.000	NPOC 0 6155mg/L

1. Det

Anal.: NPOC

1	7 268	0 6193mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 2 55.50 AM
2	7 230	0 6161mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 2 59.54 AM
3	7 171	0 6111mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 3:03 55 AM

Mean Area 7.223
Mean Conc. 0.6155mg/L



Sample

Sample Name: DOC
Sample ID: WT30 J1
Origin. NPOC Method.met
Status Completed
Chk. Result

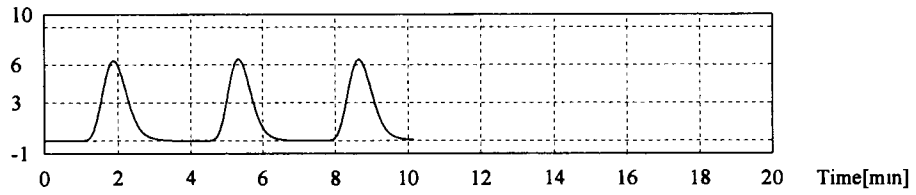
Unknown	NPOC	1 000	NPOC 2 616mg/L

1. Det

Anal.: NPOC

1	30 71	2 617mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 3 15:18 AM
2	30.47	2.596mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 3 19:37 AM
3	30.92	2 635mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 3:23:55 AM

Mean Area 30.70
Mean Conc. 2.616mg/L



Sample

Sample Name: DOC
Sample ID: WT30 K1
Origin: NPOC Method met
Status Completed
Chk. Result

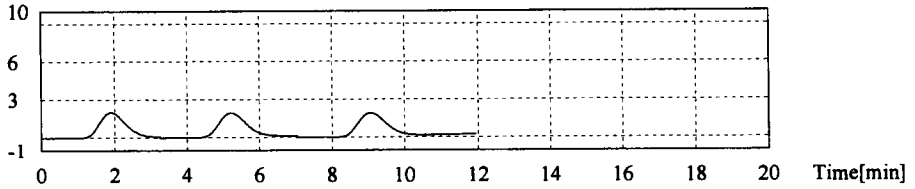
Unknown	NPOC	1 000	NPOC 0 8500mg/L

1. Det

Anal.: NPOC

1	9 879	0 8418mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 3 35 03 AM
2	10 09	0 8598mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 3 39 49 AM
3	9 957	0 8485mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 3 45 42 AM

Mean Area 9.975
Mean Conc. 0.8500mg/L



Sample

Sample Name: DOC
Sample ID: WT30 L1
Origin: NPOC Method.met
Status Completed
Chk. Result

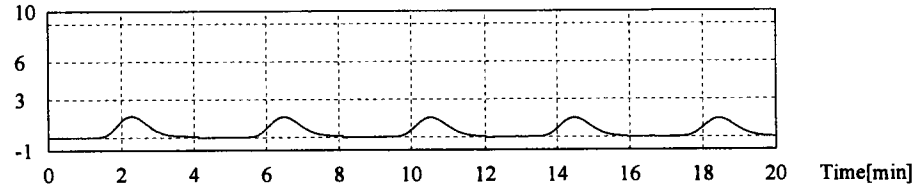
Unknown	NPOC	1 000	NPOC:0 7565mg/L

1. Det

Anal.: NPOC

1	9.676	0 8245mg/L	150uL	1 000	E	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 3 57:42 AM
2	9.328	0.7949mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 4.02:41 AM
3	9 010	0.7678mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 4:07:33 AM
4	8.818	0 7514mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 4:12:28 AM
5	8 806	0 7504mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 4 17 25 AM

Mean Area 8.878
Mean Conc. 0.7565mg/L



Sample

Sample Name: DOC
Sample ID: WT30 M5
Origin: NPOC Method.met
Status Completed
Chk. Result

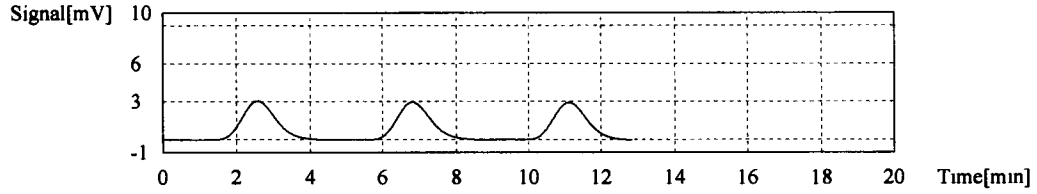
Unknown	NPOC	1.000	NPOC 1 596mg/L

1. Det

Anal.: NPOC

1	18 86	1 607mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 4:29.29 AM
2	18 62	1 587mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 4 34 46 AM
3	18 72	1 595mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 4·40 06 AM

Mean Area 18.73
Mean Conc. 1.596mg/L



Sample

Sample Name: DOC
Sample ID: WT30 M5 ms 20
Origin: NPOC Method.met
Status Completed
Chk. Result

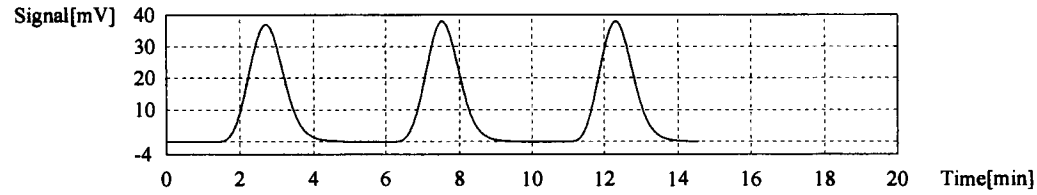
Unknown	NPOC	1 000	NPOC 21 22mg/L

1. Det

Anal.: NPOC

1	249 3	21 24mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 4.52.49 AM
2	247.8	21 12mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 4.58.40 AM
3	249 8	21.29mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 5:04 30 AM

Mean Area 249.0
Mean Conc. 21.22mg/L



Sample

TOC-Control L Report

Mike
2013_06_13_001.tlx

Sample Name: DOC
Sample ID: WT30 M5 msd 20
Origin: NPOC Method met
Status Completed
Chk. Result

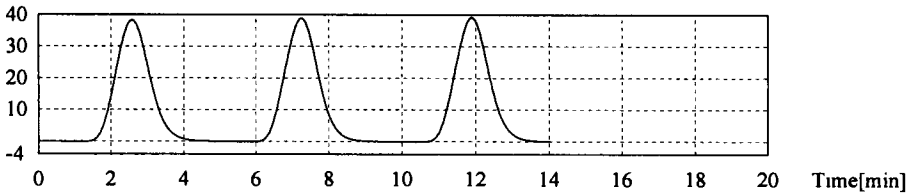
Unknown	NPOC	1 000	NPOC 21 38mg/L

1. Det

Anal.: NPOC

1	250.4	21 34mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 5:17:04 AM
2	250.7	21 36mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 5:22:43 AM
3	251 6	21 44mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 5:28.22 AM

Mean Area 250.9
Mean Conc 21.38mg/L



Sample

Sample Name: DOC
Sample ID: WT30 N1
Origin: NPOC Method.met
Status Completed
Chk. Result

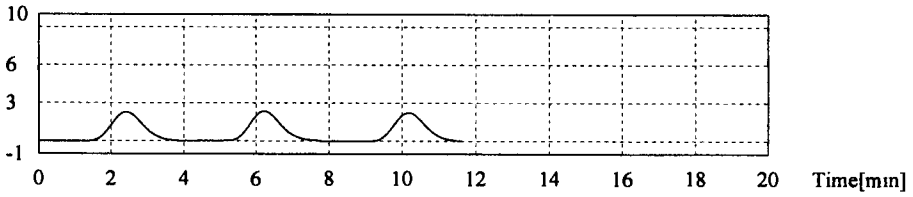
Unknown	NPOC	1 000	NPOC 1 157mg/L

1. Det

Anal.: NPOC

1	13.64	1.162mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 5.40:04 AM
2	13 77	1 173mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 5.44:59 AM
3	13 34	1 137mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 5 49:50 AM

Mean Area 13.58
Mean Conc. 1.157mg/L



Control Sample

TOC-Control L Report

Mike
2013_06_13_001.tlx

Sample Name: CVS
Sample ID: CVS 20
Method: CVS 20 ppm.tpl
Status Completed
Chk. Result Control value: 98.34 / Control exceeds range!

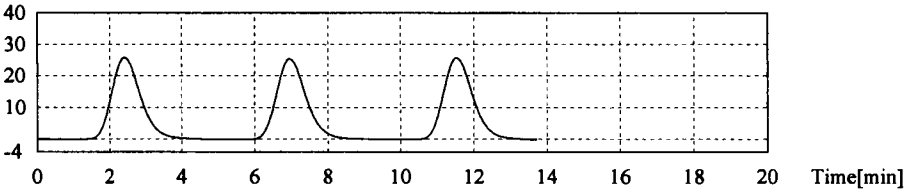
Control	NPOC	1 000	NPOC 19 67ppm

1. Det.

Anal.: NPOC

1	146 5	19 84ppm	100uL	1.000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/14/2013 6:02 15 AM
2	144.8	19.61ppm	100uL	1 000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	6/14/2013 6.07 50 AM
3	144 5	19 57ppm	100uL	1.000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	6/14/2013 6 13:24 AM

Mean Area 145.3
Mean Conc. 19.67ppm



Control Sample

Sample Name: ICB/CCB
Sample ID:
Method: ICB CCB.tpl
Status Completed
Chk. Result Control value: 0.000 / Control within range!

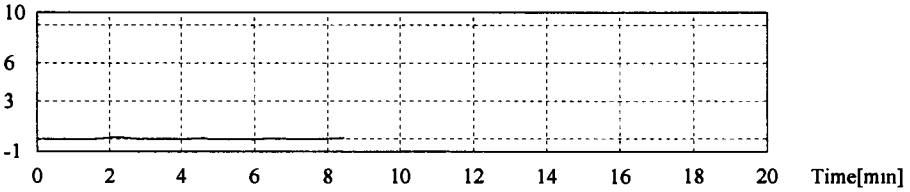
Control	NPOC	1 000	NPOC 0.000mg/L

1. Det.

Anal.: NPOC

1	0 3469	0 04697mg/L	100uL	1 000	E	NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	6/14/2013 6:24 01 AM
2	0 000	0 000mg/L	100uL	1 000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	6/14/2013 6 26 55 AM
3	0 000	0.000mg/L	100uL	1 000		NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	6/14/2013 6:30:24 AM
4	0 000	0.000mg/L	100uL	1 000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	6/14/2013 6 33.54 AM

Mean Area 0.000
Mean Conc. 0.000mg/L



USGS : 01105

Sample

Sample Name: DOC
Sample ID: WT07 FB
Origin: NPOC Method.met
Status Completed
Chk. Result

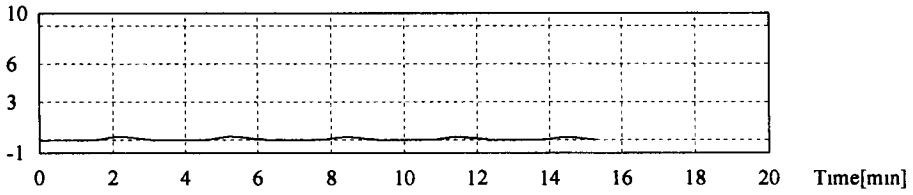
Unknown	NPOC	1 000	NPOC 0 06995mg/L

1. Det

Anal.. NPOC

1	1.118	0 09527mg/L	150uL	1 000	E	NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 6:44.56 AM
2	1 152	0.09817mg/L	150uL	1 000	E	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 6:49:05 AM
3	0 9047	0 07709mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 6:53.07 AM
4	0 7856	0 06694mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 6 57:06 AM
5	0 7722	0.06580mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 7 01:05 AM

Mean Area 0.8208
Mean Conc. 0.06995mg/L



Sample

Sample Name: DOC
Sample ID: WT07 A4
Origin: NPOC Method.met
Status Completed
Chk. Result

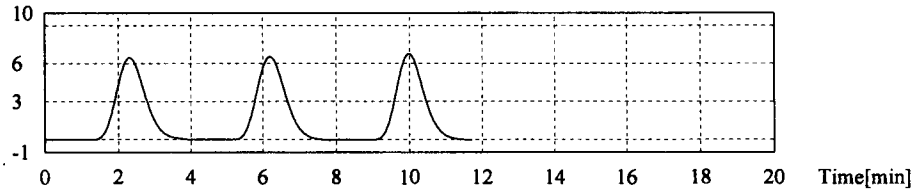
Unknown	NPOC	1 000	NPOC 3 071mg/L

1. Det

Anal.: NPOC

1	35 75	3 046mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 7:12:56 AM
2	36 09	3.075mg/L	150uL	1.000	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 7:17:48 AM
3	36 27	3 091mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 7 22:39 AM

Mean Area 36.04
Mean Conc. 3.071mg/L



US92 : 81107

Sample

Sample Name: DOC
Sample ID: WT07 B
Origin: NPOC Method.met
Status Completed
Chk. Result

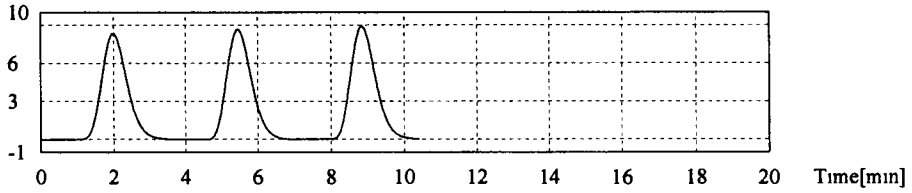
Unknown	NPOC	1.000	NPOC 3.579mg/L

1. Det

Anal.: NPOC

1	41.24	3.514mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 7:34:05 AM
2	42.02	3.581mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 7:38:30 AM
3	42.75	3.643mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 7:42:54 AM

Mean Area 42.00
Mean Conc. 3.579mg/L



Sample

Sample Name: DOC
Sample ID: WS90 FB
Origin: NPOC Method.met
Status Completed
Chk. Result

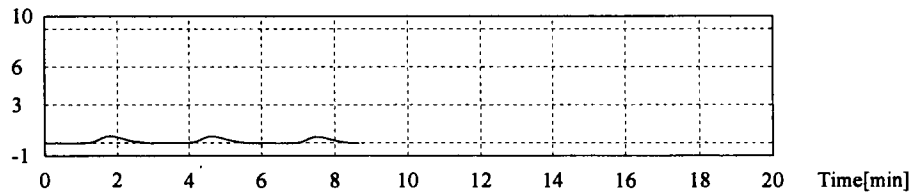
Unknown	NPOC	1.000	NPOC 0.1956mg/L

1. Det

Anal.: NPOC

1	2.323	0.1980mg/L	150uL	1.000	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 7:53:38 AM
2	2.344	0.1997mg/L	150uL	1.000	NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 7:57:32 AM
3	2.220	0.1892mg/L	150uL	1.000	NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 8:01:24 AM

Mean Area 2.296
Mean Conc. 0.1956mg/L



Sample

Sample Name: DOC
Sample ID: WS90 A
Origin: NPOC Method.met
Status Completed
Chk. Result

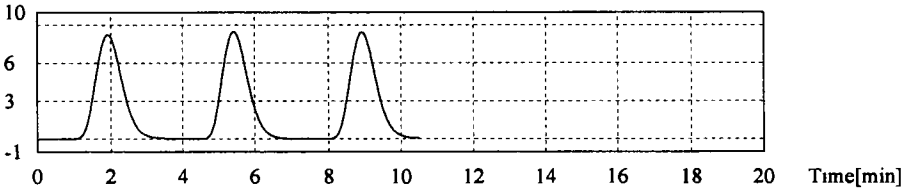
Unknown	NPOC	1 000	NPOC 3 580mg/L

1. Det

Anal.: NPOC

1	41 80	3.562mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 8 12 49 AM
2	41 99	3.578mg/L	150uL	1.000	NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 8 17 15 AM
3	42 24	3.599mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 8 21 45 AM

Mean Area 42.01
Mean Conc. 3.580mg/L



Sample

Sample Name: DOC
Sample ID: WS90 B
Origin: NPOC Method.met
Status Completed
Chk. Result

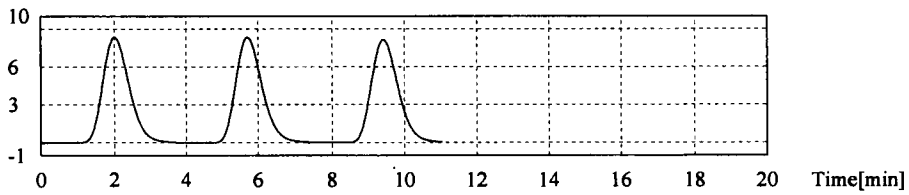
Unknown	NPOC	1.000	NPOC 3 592mg/L

1. Det

Anal.: NPOC

1	42.34	3 608mg/L	150uL	1 000	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 8:33 20 AM
2	41 88	3.569mg/L	150uL	1.000	NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 8.37:58 AM
3	42 23	3 599mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 8:42:38 AM

Mean Area 42.15
Mean Conc. 3.592mg/L



Sample

Sample Name: TOC
Sample ID. WT79 A1
Origin: NPOC Method.met
Status Completed
Chk. Result

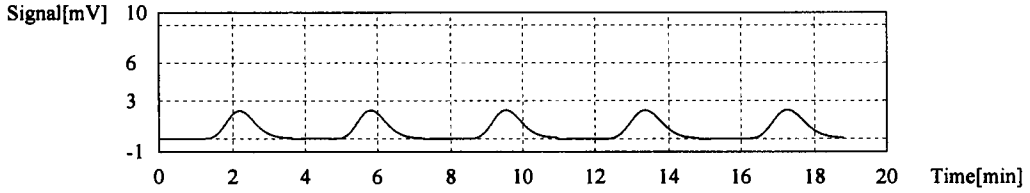
Unknown	NPOC	1 000	NPOC.1 057mg/L

1. Det

Anal.: NPOC

1	11 99	1 022mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 8.54:07 AM
2	12.45	1 061mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 8 58:46 AM
3	12 78	1 089mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 9.03 28 AM
4	13 33	1 136mg/L	150uL	1 000	E	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 9 08 18 AM
5	13 66	1 164mg/L	150uL	1 000	E	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 9.13 15 AM

Mean Area 12.41
Mean Conc. 1.057mg/L



Sample

Sample Name: TOC
Sample ID: WT79 A1 dup
Origin: NPOC Method.met
Status Completed
Chk. Result

Unknown	NPOC	1 000	NPOC·1 362mg/L

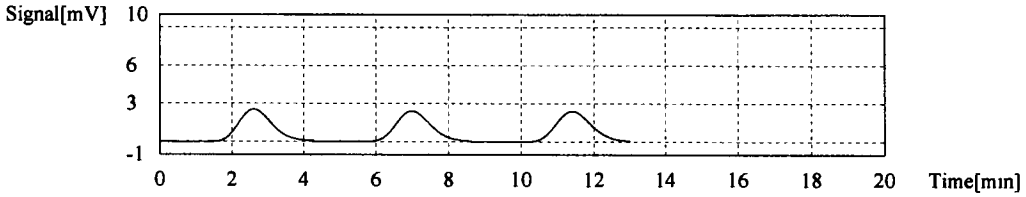
1. Det

Anal.: NPOC

1	16 19	1.380mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 9·25:25 AM
2	15.71	1 339mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 9 30 45 AM
3	16 05	1 368mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 9.36 07 AM

USGS : 01119

Mean Area 15.98
Mean Conc. 1.362mg/L



Sample

Sample Name: TOC
Sample ID: WT79 A1 ms 20
Origin: NPOC Method.met
Status Completed
Chk. Result

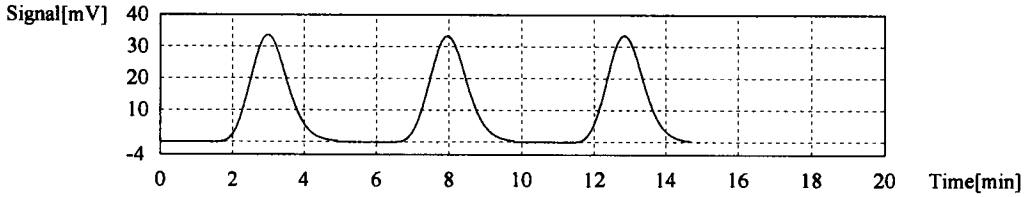
Unknown	NPOC	1 000	NPOC 21 01mg/L

1. Det

Anal.: NPOC

1	247 4	21 08mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 9:48 55 AM
2	246 1	20.97mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 9:54 48 AM
3	246 1	20 97mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 10.00:41 AM

Mean Area 246.5
Mean Conc. 21.01mg/L



Sample

Sample Name: TOC
Sample ID: WT79 B1
Origin: NPOC Method.met
Status Completed
Chk. Result

Unknown	NPOC	1 000	NPOC 0.000mg/L

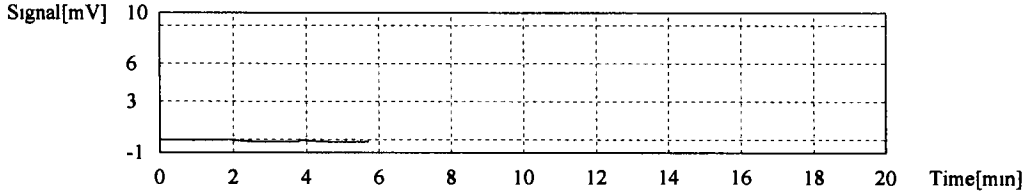
1. Det

Anal.: NPOC

1	0.000	0 000mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 10:10 29 AM
2	0.000	0.000mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 10:14.43 AM
3	0 000	0 000mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 10:18 52 AM

USGS : GL111

Mean Area 0.000
Mean Conc. 0.000mg/L



Sample

Sample Name: TOC
Sample ID: WT07 A4 5X
Origin: NPOC Method.met
Status Completed
Chk. Result

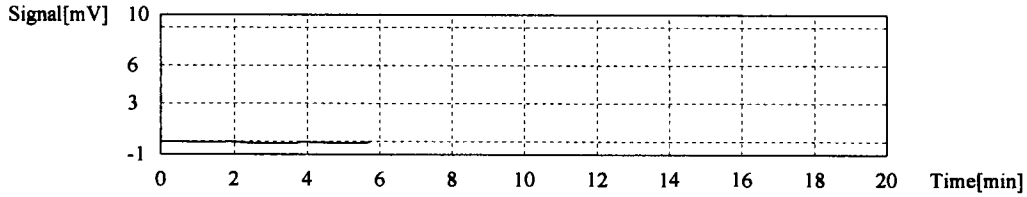
Unknown	NPOC	1 000	NPOC 0 000mg/L

1. Det

Anal.: NPOC

1	0 000	0 000mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 10.28 30 AM
2	0 000	0 000mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 10 32 58 AM
3	0 000	0 000mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 10 37 27 AM

Mean Area 0.000
Mean Conc. 0.000mg/L



Sample

Sample Name: TOC
Sample ID: WT07 B4 2.5X
Origin: NPOC Method.met
Status Completed
Chk. Result

Unknown	NPOC	1.000	NPOC 0.000mg/L

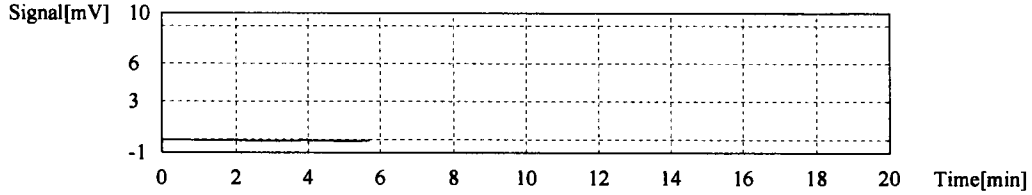
1. Det

Anal.. NPOC

1	0 000	0.000mg/L	150uL	1 000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 10.47.05 AM
2	0 000	0.000mg/L	150uL	1 000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 10.51 44 AM
3	0.000	0.000mg/L	150uL	1 000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 10 56.24 AM

USGS : 01112

Mean Area 0.000
Mean Conc. 0.000mg/L



Sample

Sample Name: TOC
Sample ID: WS90 A10 5X
Origin: NPOC Method.met
Status Completed
Chk. Result

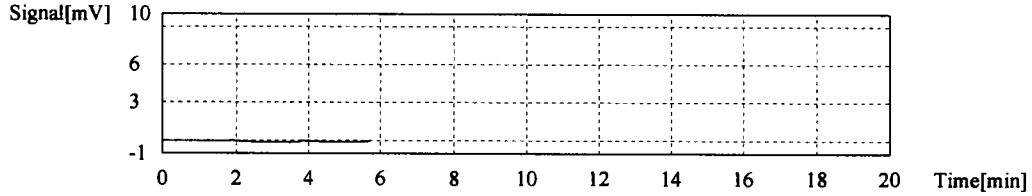
Unknown	NPOC	1 000	NPOC:0.000mg/L

1. Det

Anal.: NPOC

1	0 000	0.000mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 11:06:02 AM
2	0 000	0 000mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 11:10:34 AM
3	0 000	0 000mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 11:15 06 AM

Mean Area 0.000
Mean Conc. 0.000mg/L



Sample

Sample Name: TOC
Sample ID: WS90 B9 1X
Origin: NPOC Method.met
Status Completed
Chk. Result

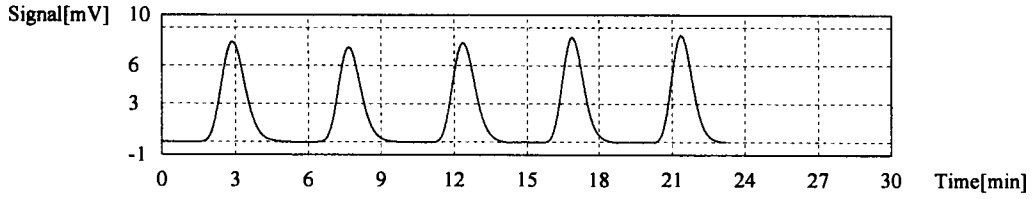
Unknown	NPOC	1 000	NPOC 4 436mg/L

1. Det

Anal.: NPOC

1	55 07	4 693mg/L	150uL	1.000	E	NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 11.27.44 AM
2	49 57	4.224mg/L	150uL	1 000	E	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 11:33:28 AM
3	51 72	4 407mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 11 39 05 AM
4	52 14	4 443mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 11 44 37 AM
5	52 30	4 457mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 11 49 58 AM

Mean Area 52.05
Mean Conc. 4.436mg/L



Control Sample

Sample Name: CVS
Sample ID: CVS 20
Method: CVS 20 ppm.tpl
Status Completed
Chk. Result Control value: 97.10 / Control exceeds range!

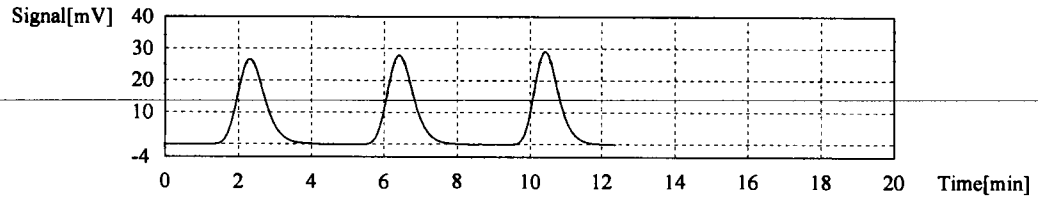
Control	NPOC	1 000	NPOC.19 42ppm

1. Det.

Anal.· NPOC

1	142 9	19 35ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/14/2013 12:02 04 PM
2	143 1	19.38ppm	100uL	1.000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	6/14/2013 12·07·10 PM
3	144 3	19 54ppm	100uL	1.000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27.cal	6/14/2013 12.12·12 PM

Mean Area 143.4
Mean Conc. 19.42ppm



Control Sample

Sample Name: ICB/CCB
Sample ID:
Method: ICB CCB.tpl
Status Completed
Chk. Result Control value: 0.04584 / Control within range!

Control	NPOC	1 000	NPOC 0 04584mg/L

TOC-Control L Report

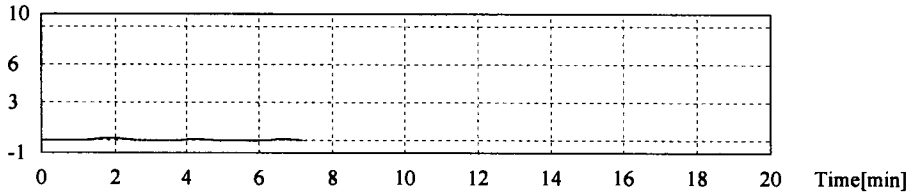
Mike
2013_06_13_001.tlx

1. Det.

Anal.: NPOC

1	0 4282	0 05798mg/L	100uL	1.000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/14/2013 12 22 38 PM
2	0.3260	0 04414mg/L	100uL	1.000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27.cal	6/14/2013 12.26.05 PM
3	0 2615	0 03541mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/14/2013 12:29 18 PM

Mean Area 0.3386
Mean Conc. 0.04584mg/L



Sample

Sample Name: Rinse
Sample ID: Rinse
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

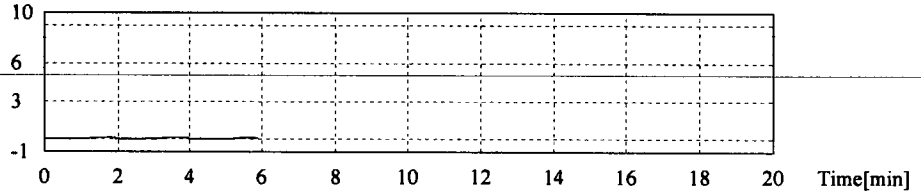
Unknown	NPOC	1 000	NPOC 0.00227mg/L

1. Det

Anal.: NPOC

1	0 000	0 000mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 12:36.47 PM
2	0.1596	0 01360mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 12:40:26 PM
3	0 000	0 000mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/14/2013 12 43:45 PM

Mean Area 0.05320
Mean Conc. 0.00453mg/L



2. Det

Anal.: NPOC

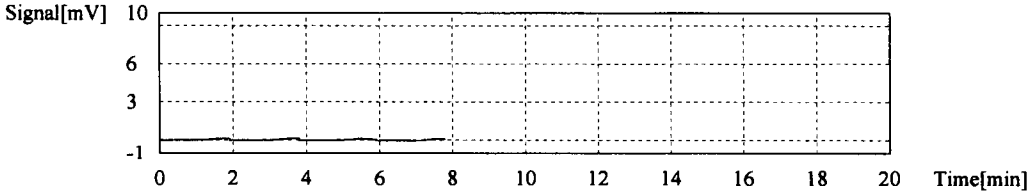
1	0 000	0 000mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/14/2013 12 51.14 PM
2	0 000	0.000mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 12.54:43 PM
3	0 1809	0 01542mg/L	150uL	1 000	E	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/14/2013 12.58:24 PM
4	0 000	0.000mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/14/2013 1:01:41 PM

UCSB : 01115

TOC-Control L Report

Mike
2013_06_13_001.tlx

Mean Area	0.000
Mean Conc.	0.000mg/L



USGS : 01115

TOC, Aqueous Data Summary (Apollo 9000) DATE: 6/18/13 13:50

EPA 9060 A, SM 5310 B-00 ANALYST: UW

Analysis Mode: **NPOC** *Instrument:* ***Apollo 9000***

Detection Limits (mgC/L)

MRL = 1.5 **upper blank =** 1.5 **lower blank =** -1.5

Calibration Data

Stock ID:	ARI 00136-10	factor (m):	1.174E+01	r^2:	1.00000
Curve Date:	5/15/2013	intercept (b_{cal}):	0	sys blk (b_{sys})	21111
Curve ID:	051513X 0-50ppm				

LCS, Verification Standard and Inorganic Sparge Check

	Organic Carbon			Inorganic carbon		
Source:	**ERA 0408-13-02**					
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* Form	# reps	mean	stdev	Measured	Report as	Notes: *will flag if RSD >5%*
ICB	1	NPOC	3	0.0247		0.02	<1.5	*OK !*
CCV	1	NPOC	3	21.4000		21.40	21.4	*107.00%*
0..5 ppm	1	NPOC	3	0.6368		0.64	<1.5	
IC Sparge Check	1	NPOC	3	21.6000		21.60	21.6	*108.00%*
WT07 A4	2.5	NPOC	3	2.2280		5.57	5.57	
WT07 B4	1	NPOC	3	3.9730		3.97	3.97	
WS90 A10	2.5	NPOC	3	2.4640		6.16	6.16	
WS90B9	1	NPOC	3	4.3550		4.36	4.36	
WT79 A1	1	NPOC	3	1.1860		1.19	<1.5	
WT79 A1dup	1	NPOC	3	1.2750		1.28	<1.5	*RPD NA*
WT79 A1ms	1	NPOC	3	22.0900		22.09	22.1	*110.45%*
Spike at	0.200	*mL of*	2,000	*ppm Std to*	20.00	*mL =*	20.0	*mg/L*
WT79 B1	1	NPOC	3	0.6730		0.67	<1.5	
CCB	1	NPOC	3	0.0778		0.08	<1.5	*OK !*
CCV	1	NPOC	3	21.3400		21.34	21.3	*106.50%*
WU02 A5	1	NPOC	3	0.6403		0.64	<1.5	
WU02 A5dup	1	NPOC	3	0.6564		0.66	<1.5	*RPD NA*
WU02 A5ms	1	NPOC	3	21.9500		21.95	22	*109.75%*
Spike at	0.200	*mL of*	2,000	*ppm Std to*	20.00	*mL =*	20.0	*mg/L*
WU02 B5	1	NPOC	3	0.1631		0.16	<1.5	
WU02 C5	1	NPOC	3	0.1949		0.19	<1.5	
WU02 D5	1	NPOC	3	0.1288		0.13	<1.5	
WU02 E5	1	NPOC	3	0.1278		0.13	<1.5	
WU03 A7	1	NPOC	3	0.3033		0.30	<1.5	
WU03 B7	1	NPOC	3	0.1618		0.16	<1.5	
WU03 C7	1	NPOC	3	0.2721		0.27	<1.5	
CCB	1	NPOC	3	0.0000		0.00	<1.5	*OK !*
CCV	1	NPOC	3	21.4900		21.49	21.5	*107.50%*
WU03 D7	1	NPOC	3	16.6700		16.67	16.7	
WU04 A7	1	NPOC	3	0.1476		0.15	<1.5	
WU04 B7	1	NPOC	3	0.1954		0.20	<1.5	
WU04 C7	1	NPOC	3	0.1937		0.19	<1.5	
CCB	1	NPOC	3	0.0000		0.00	<1.5	*OK !*
CCV	1	NPOC	3	21.3300		21.33	21.3	*106.50%*

* = Sample is < 5x the MRL (7.5) and RSD >5% is expected due to low concentration in sample.

12203

	Type	Analysis	Sample Nam	Sample ID	Origin	Manual Diluti	Result	Notes	Status	Date / Time	Vial
1*	Unknown	NPOC	RINSE	RINSE	NPOC CAL	1.000			Defined		0, 0
2*	Control	NPOC	ICB/CCB		ICB CCB.tpl	1.000			Defined		1
3*	Control	NPOC	CVS	CVS 20	CVS 20 pp	1.000			Defined		2
4*	Control	NPOC	DQL	0.5 mg/L	DQL.tpl	1.000			Defined		3
5*	Control	NPOC	Sparge Chec	Untitled	Sparge Che	1.000			Defined		4
6*	Unknown	NPOC	WT07 A4 2.5	NPOC CAL 05151	NPOC CAL	1.000			Defined		5
7*	Unknown	NPOC	WT07 B4	NPOC CAL 05151	NPOC CAL	1.000			Defined		6
8*	Unknown	NPOC	WS90 A10 2.	NPOC CAL 05151	NPOC CAL	1.000			Defined		7
9*	Unknown	NPOC	WS90 B9	NPOC CAL 05151	NPOC CAL	1.000			Defined		8
10*	Unknown	NPOC	WT79 A1	NPOC CAL 05151	NPOC CAL	1.000			Defined		9
11*	Unknown	NPOC	WT79 A1 DU	NPOC CAL 05151	NPOC CAL	1.000			Defined		10
12*	Unknown	NPOC	WT79 A1 M	NPOC CAL 05151	NPOC CAL	1.000			Defined		11
13*	Unknown	NPOC	WT79 B1	NPOC CAL 05151	NPOC CAL	1.000			Defined		12
14*	Control	NPOC	ICB/CCB		ICB CCB.tpl	1.000			Defined		1
15*	Control	NPOC	CVS	CVS 20	CVS 20 pp	1.000			Defined		2
16*	Unknown	NPOC	WU02 A5	NPOC CAL 05151	NPOC CAL	1.000			Defined		13
17*	Unknown	NPOC	WU02 A5 D	NPOC CAL 05151	NPOC CAL	1.000			Defined		14
18*	Unknown	NPOC	WU02 A5 M	NPOC CAL 05151	NPOC CAL	1.000			Defined		15
19*	Unknown	NPOC	WU02 B5	NPOC CAL 05151	NPOC CAL	1.000			Defined		16
20*	Unknown	NPOC	WU02 C5	NPOC CAL 05151	NPOC CAL	1.000			Defined		17
21*	Unknown	NPOC	WU02 D5	NPOC CAL 05151	NPOC CAL	1.000			Defined		18
22*	Unknown	NPOC	WU02 E5	NPOC CAL 05151	NPOC CAL	1.000			Defined		19
23*	Unknown	NPOC	WU03 A7	NPOC CAL 05151	NPOC CAL	1.000			Defined		20
24*	Unknown	NPOC	WU03 B7	NPOC CAL 05151	NPOC CAL	1.000			Defined		21
25*	Unknown	NPOC	WU03 C7	NPOC CAL 05151	NPOC CAL	1.000			Defined		22
26*	Control	NPOC	ICB/CCB		ICB CCB.tpl	1.000			Defined		1
27*	Control	NPOC	CVS	CVS 20	CVS 20 pp	1.000			Defined		2
28*	Unknown	NPOC	WU03 D7	NPOC CAL 05151	NPOC CAL	1.000			Defined		23
29*	Unknown	NPOC	WU04 A7	NPOC CAL 05151	NPOC CAL	1.000			Defined		24
30*	Unknown	NPOC	WU04 B7	NPOC CAL 05151	NPOC CAL	1.000			Defined		25
31*	Unknown	NPOC	WU04 C7	NPOC CAL 05151	NPOC CAL	1.000			Defined		26
32*	Control	NPOC	ICB/CCB		ICB CCB.tpl	1.000			Defined		27
33*	Control	NPOC	CVS	CVS 20	CVS 20 pp	1.000			Defined		28

TOC-Control L Report

Ursula
2013_06_18_001.tlx

Instr.Information

Instrument Options: TOC/ASI/IC Unit/
Catalyst: Regular Sensitivity

Sample

Sample Name: RINSE
Sample ID: RINSE
Origin: NPOC CAL 051513 cal
Status: Completed
Chk. Result:

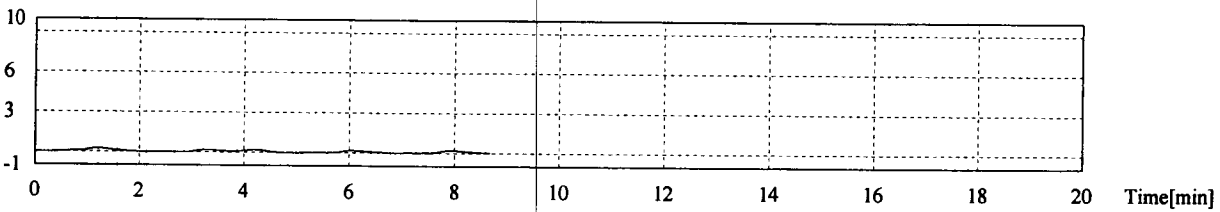
Unknown	NPOC	1 000		NPOC 0.04300mg/L

1. Det

Anal.: NPOC

1	0.5771	0 04918mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013	1:50 55 PM
2	1 302	0.1109mg/L	150uL	1 000	E	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013	1·55.03 PM
3	0.4371	0 03725mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013	1 57·56 PM
4	0.6177	0 05264mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/18/2013	2:01 29 PM

Mean Area: 0.5440
Mean Conc.: 0.04635mg/L



2. Det

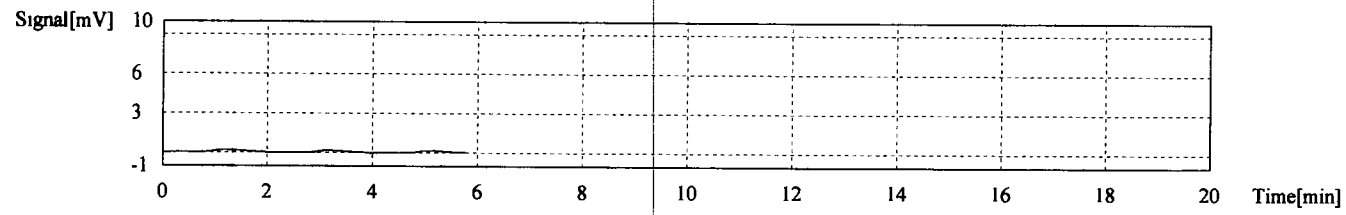
Anal.: NPOC

TOC-Control L Report

Ursula
2013_06_18_001.tlx

1	0 5368	0.04574mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 2 09:03 PM
2	0 4373	0.03726mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 2 12:28 PM
3	0 4215	0 03592mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 2 15:57 PM

Mean Area 0.4652
Mean Conc. 0.03964mg/L



Control Sample

Sample Name: ICB/CCB
Sample ID:
Method: ICB CCB.tpl
Status Completed
Chk. Result Control value 0.02473 / Control within range!

7.386

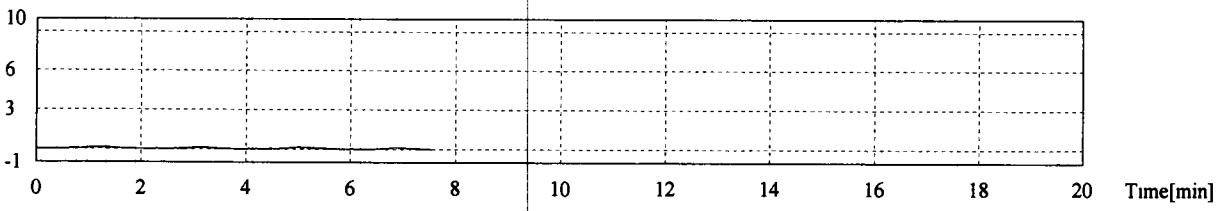
Control	NPOC	1.000	NPOC.0 02473mg/L

1. Det.

Anal.: NPOC

1	0.1435	0 01943mg/L	100uL	1.000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	6/18/2013 2:25:34 PM
2	0 000	0 000mg/L	100uL	1 000	E	NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	6/18/2013 2 29:04 PM
3	0.1977	0 02677mg/L	100uL	1.000		NPOC Suspended 0.5 to 50 2013_05_07_12_18_27.cal	6/18/2013 2 32 34 PM
4	0.2068	0 02800mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/18/2013 2 36 04 PM

Mean Area 0.1827
Mean Conc. 0.02473mg/L



Control Sample

Sample Name: CVS
Sample ID: CVS 20
Method: CVS 20 ppm.tpl
Status Completed
Chk. Result Control value: 107.0 / Control exceeds range!

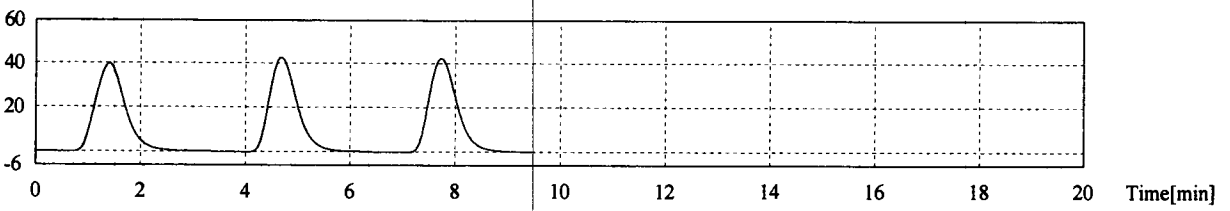
Control	NPOC	1 000	NPOC 21 41ppm

1. Det.

Anal.: NPOC

1	157.5	21.33ppm	100uL	1 000	NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	6/18/2013 2:47:08 PM
2	158 5	21 46ppm	100uL	1 000	NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	6/18/2013 2:51 11 PM
3	158 3	21.43ppm	100uL	1 000	NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	6/18/2013 2:55.14 PM

Mean Area 158.1
Mean Conc. 21 41ppm



TOC-Control L Report

Ursula
2013_06_18_001.tlx

Control Sample

Sample Name:	DQL
Sample ID:	0.5 mg/L
Method:	DQL.tpl
Status	Completed
Chk. Result	Control value: 0.6368 / Control within range!

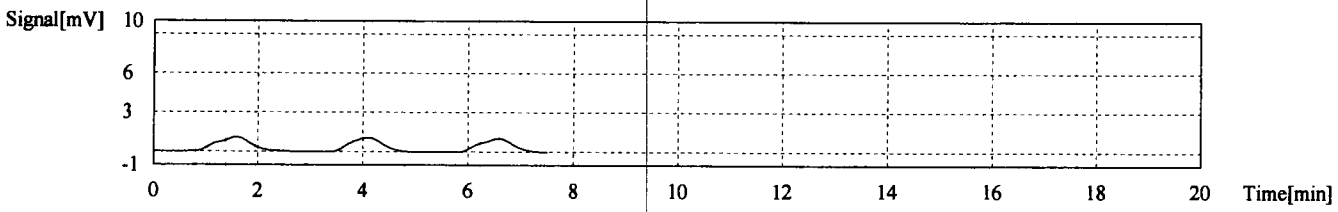
Control	NPOC	1.000	NPOC.0 6368mg/L

1. Det.

Anal.: NPOC

1	4 774	0.6464mg/L	100uL	1 000	NPOC Suspended 0 5 to 50.2013_05_07_12_18_27.cal	6/18/2013 3:05.26 PM
2	4 713	0.6381mg/L	100uL	1 000	NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	6/18/2013 3:08:44 PM
3	4 622	0 6258mg/L	100uL	1 000	NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	6/18/2013 3:12 07 PM

Mean Area	4.703
Mean Conc.	0.6368mg/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!

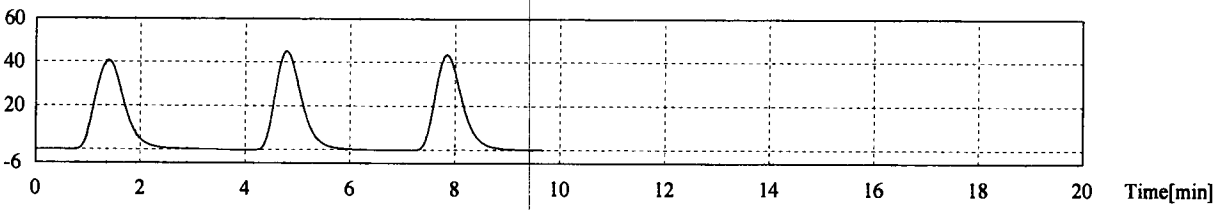
Control	NPOC	1 000	NPOC:21 60mg/L

1. Det.

Anal.: NPOC

1	159 1	21 54mg/L	100uL	1.000	NPOC Suspended 0.5 to 50 2013_05_07_12_18_27.cal	6/18/2013 3 23 02 PM
2	159 9	21 65mg/L	100uL	1 000	NPOC Suspended 0.5 to 50 2013_05_07_12_18_27.cal	6/18/2013 3:27 05 PM
3	159 5	21 60mg/L	100uL	1 000	NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	6/18/2013 3 31 15 PM

Mean Area 159.5
Mean Conc. 21.60mg/L



Sample

Sample Name: WT07 A4 2.5X
Sample ID: NPOC CAL 051513
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

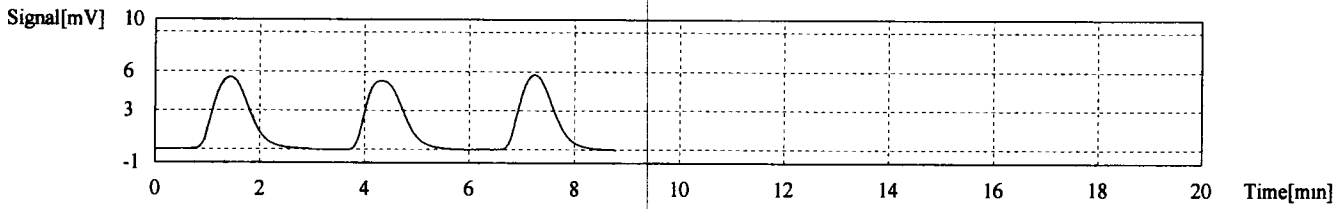
Unknown	NPOC	1.000	NPOC 2.228mg/L

1. Det

Anal.: NPOC

1	26.05	2 220mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 3:42 04 PM
2	26 32	2.243mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 3 45 58 PM
3	26.08	2 222mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 3 49 55 PM

Mean Area 26.15
Mean Conc. 2.228mg/L



Sample

Sample Name: WT07 B4
Sample ID: NPOC CAL 051513
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

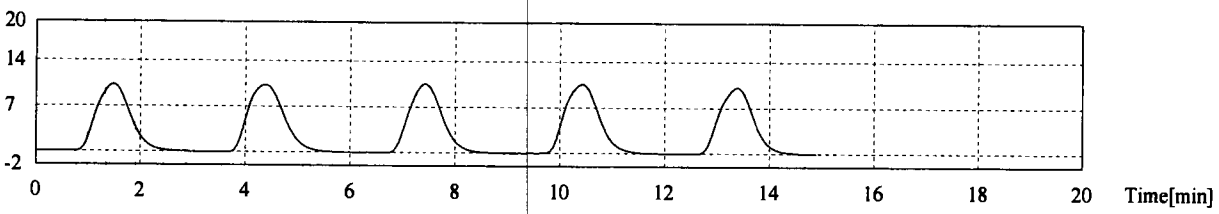
Unknown	NPOC	1 000		NPOC:3 973mg/L

1. Det

Anal.. NPOC

1	46.59	3 970mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 4.00 43 PM
2	49.49	4 217mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 4:04 44 PM
3	46 91	3.997mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 4:08 43 PM
4	48.40	4 124mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 4 12.38 PM
5	46 36	3 951mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 4 16.39 PM

Mean Area	46.62
Mean Conc.	3.973mg/L



Sample

Sample Name:	WS90 A10 2.5X
Sample ID:	NPOC CAL 051513
Origin:	NPOC CAL 051513.cal
Status	Completed
Chk. Result	

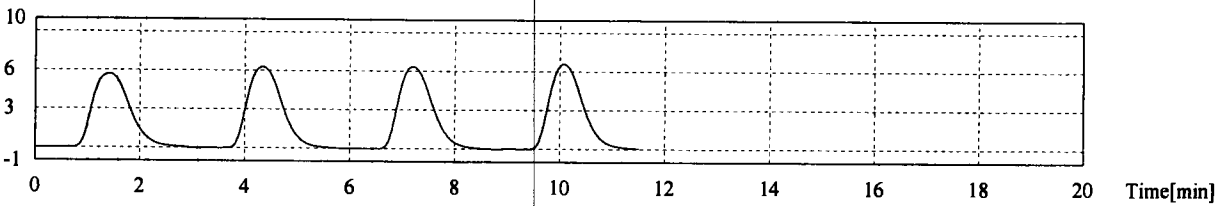
Unknown	NPOC	1.000	NPOC:2 464mg/L

1. Det

Anal.: NPOC

1	27.70	2 360mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 4:27:27 PM
2	28 97	2 469mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 4.31:20 PM
3	28.69	2 445mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 4.35.12 PM
4	29 07	2 477mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/18/2013 4.39 01 PM

Mean Area	28.91
Mean Conc.	2 464mg/L



TOC-Control L Report

Ursula
2013_06_18_001.tlx

Sample

Sample Name:	WS90 B9
Sample ID:	NPOC CAL 051513
Origin:	NPOC CAL 051513.cal
Status	Completed
Chk. Result	

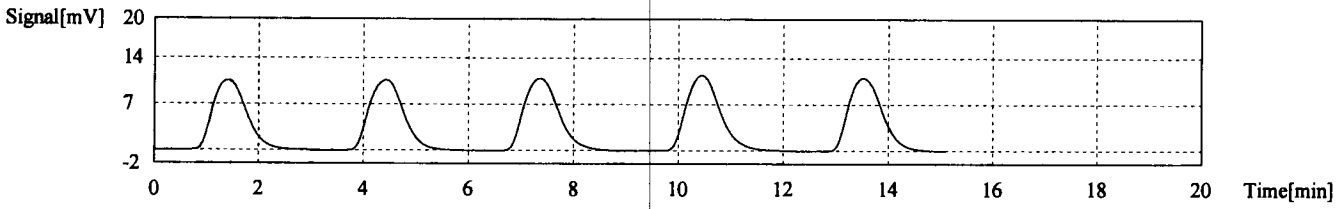
Unknown	NPOC	1 000	NPOC:4 355mg/L

1. Det

Anal.: NPOC

1	47 63	4 059mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 4:49:51 PM
2	48 81	4.159mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 4:53 47 PM
3	51 40	4 380mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 4.57:52 PM
4	51 92	4 424mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 5:01 58 PM
5	50.00	4 261mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 5:05 55 PM

Mean Area 51.11
Mean Conc. 4.355mg/L



Sample

Sample Name:	WT79 A1
Sample ID:	NPOC CAL 051513
Origin:	NPOC CAL 051513.cal
Status	Completed
Chk. Result	

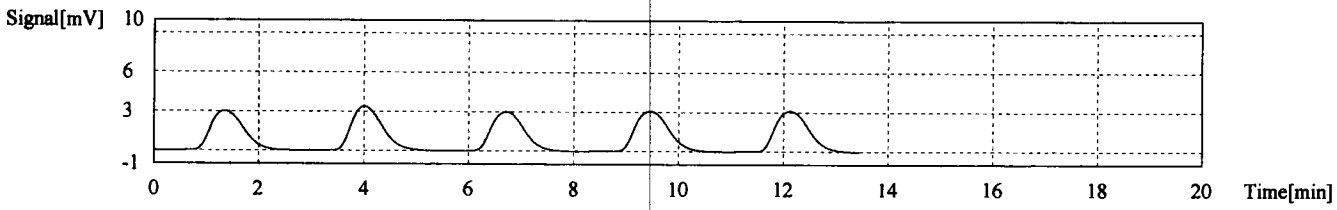
Unknown	NPOC	1 000	NPOC:1.186mg/L

1. Det

Anal.: NPOC

1	13.11	1.117mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 5:16:26 PM
2	13.91	1.185mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 5:20:06 PM
3	13.06	1.113mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 5:23:49 PM
4	13.74	1.171mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 5:27:28 PM
5	14.10	1.202mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 5:31:10 PM

Mean Area 13.92
Mean Conc. 1.186mg/L



Sample

Sample Name: WT79 A1 DUP
Sample ID: NPOC CAL 051513
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

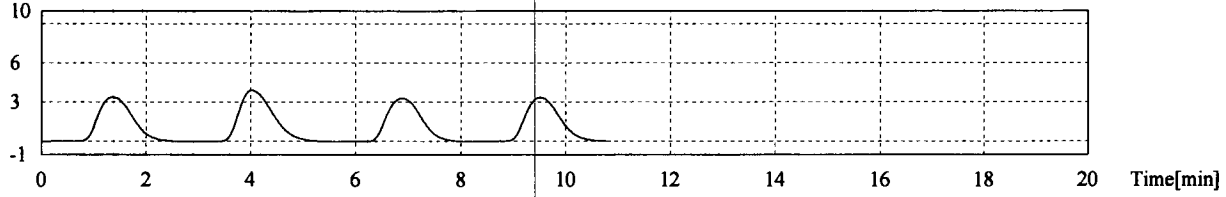
Unknown	NPOC	1 000	NPOC:1.275mg/L

1. Det

Anal.: NPOC

1	15 05	1.282mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/18/2013 5:41:43 PM
2	17.50	1.491mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 5:45:30 PM
3	14 86	1 266mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 5:49 08 PM
4	14 98	1.277mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 5:52:48 PM

Mean Area 14.96
Mean Conc. 1.275mg/L



Sample

Sample Name: WT79 A1 MS
Sample ID: NPOC CAL 051513
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

Unknown	NPOC	1 000		NPOC 22 09mg/L

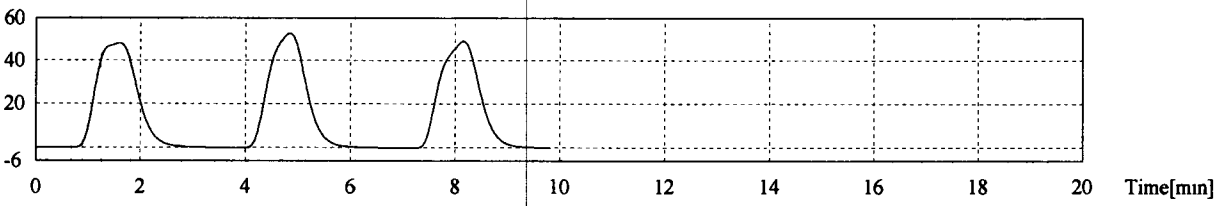
1. Det

Anal.: NPOC

1	258.7	22.05mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 6 03.55 PM
2	259 8	22 14mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 6:08 12 PM
3	259 2	22 09mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 6:12 29 PM

152 15 3054

Mean Area 259.2
Mean Conc. 22.09mg/L



Sample

Sample Name: WT79 B1
Sample ID: NPOC CAL 051513
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

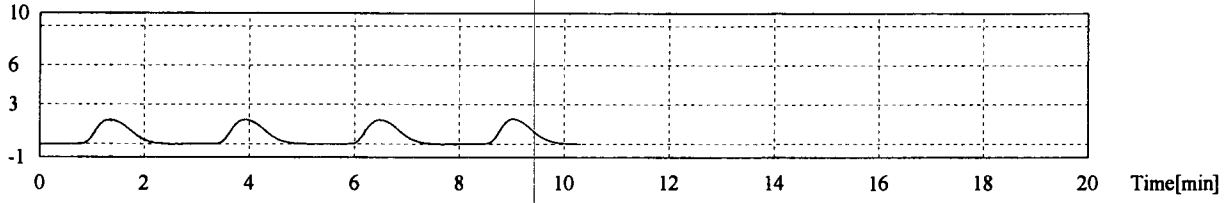
Unknown	NPOC	1 000	NPOC:0.6730mg/L

1. Det

Anal.: NPOC

1	8 196	0.6984mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 6:22 56 PM
2	7 988	0 6807mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/18/2013 6:26 28 PM
3	7 845	0.6685mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/18/2013 6:30 02 PM
4	7 860	0.6698mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/18/2013 6:33 36 PM

Mean Area 7.898
Mean Conc. 0.6730mg/L



TOC-Control L Report

Ursula
2013_06_18_001.tlx

Control Sample

Sample Name:	ICB/CCB
Sample ID:	
Method:	ICB CCB.tpl
Status	Completed
Chk. Result	Control value: 0.07777 / Control within range!

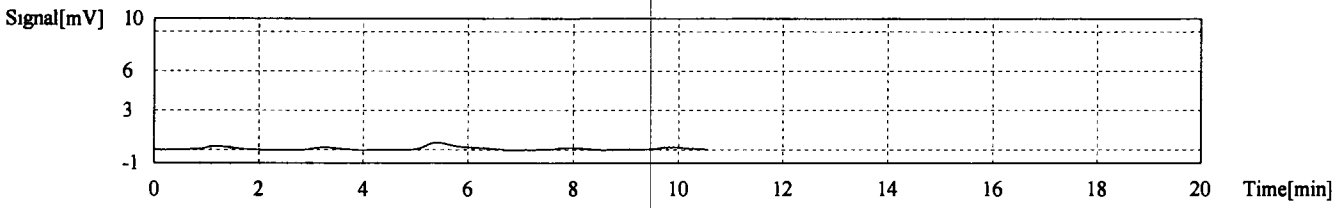
Control	NPOC	1 000	NPOC 0 07777mg/L

1. Det.

Anal.: NPOC

1	0 7888	0.1068mg/L	100uL	1.000	E	NPOC Suspended 0.5 to 50.2013_05_07_12_18_27.cal	6/18/2013 6 43.40 PM
2	0 6505	0.08808mg/L	100uL	1 000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	6/18/2013 6:47:13 PM
3	2 190	0 2965mg/L	100uL	1 000	E	NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	6/18/2013 6:51 14 PM
4	0.5278	0 07146mg/L	100uL	1.000		NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	6/18/2013 6:54 11 PM
5	0 5449	0 07378mg/L	100uL	1.000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	6/18/2013 6 57 37 PM

Mean Area	0.5744
Mean Conc.	0.07777mg/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!

TOC-Control L Report

Ursula
2013_06_18_001.tlx

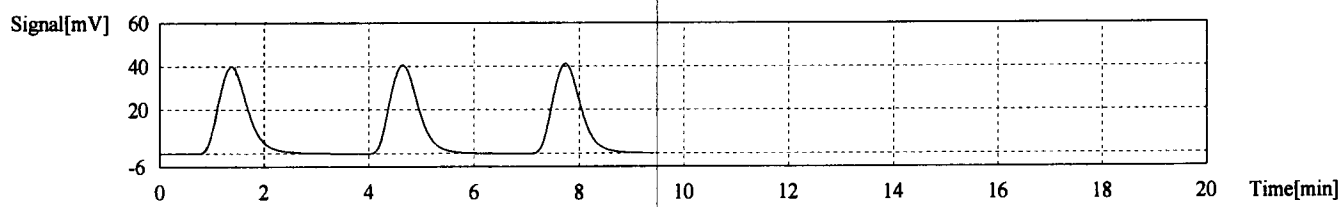
Control	NPOC	1 000	NPOC:21.34ppm

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	6/18/2013 7:08:35 PM
2	157 7	21.35ppm	100uL	1 000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	6/18/2013 7 12:40 PM
3	158 0	21 39ppm	100uL	1.000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27.cal	6/18/2013 7 16:44 PM

Mean Area 157.6
Mean Conc. 21.34ppm



Sample

Sample Name: WU02 A5
Sample ID: NPOC CAL 051513
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

Unknown	NPOC	1 000	NPOC:0.6403mg/L

1. Det

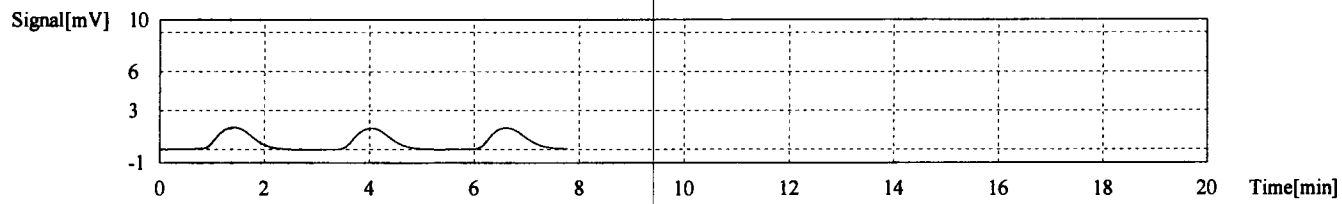
Anal.: NPOC

TOC-Control L Report

Ursula
2013_06_18_001.tlx

1	7 623	0 6496mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 7:27:21 PM
2	7 448	0 6347mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/18/2013 7:30:55 PM
3	7 472	0 6367mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 7.34 28 PM

Mean Area 7 514
Mean Conc. 0 6403mg/L



Sample

Sample Name: WU02 A5 DUP
Sample ID: NPOC CAL 051513
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

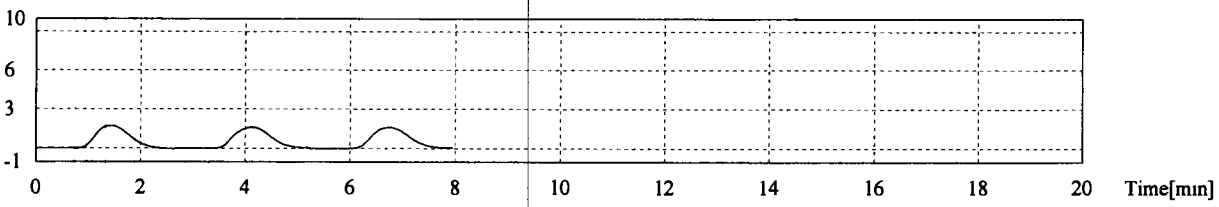
Unknown	NPOC	1 000		NPOC·0 6564mg/L

1. Det

Anal.. NPOC

1	7 785	0 6634mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 7:44:58 PM
2	7 625	0.6498mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/18/2013 7·48·33 PM
3	7 698	0 6560mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/18/2013 7·52 14 PM

Mean Area 7.703
Mean Conc. 0.6564mg/L



Sample

Sample Name: WU02 A5 MS
Sample ID: NPOC CAL 051513
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

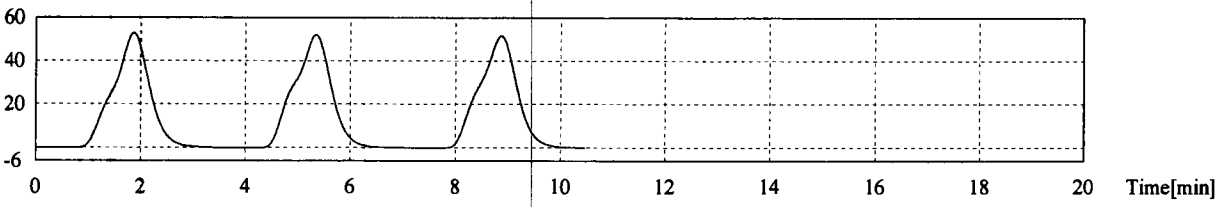
Unknown	NPOC	1.000	NPOC:21 95mg/L

1. Det

Anal.: NPOC

1	255.2	21.75mg/L	150uL	1.000	NPOC CAL 051513 2013_05_15_10_31_37.cal	6/18/2013 8.03 36 PM
2	259 3	22 10mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 8·08 05 PM
3	258 3	22 01mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37.cal	6/18/2013 8 12 31 PM

Mean Area 257.6
Mean Conc. 21.95mg/L



Technical Report

Sample

Sample Name: WU02 B5
Sample ID: NPOC CAL 051513
Origin: NPOC CAL 051513 cal
Status Completed
Chk. Result

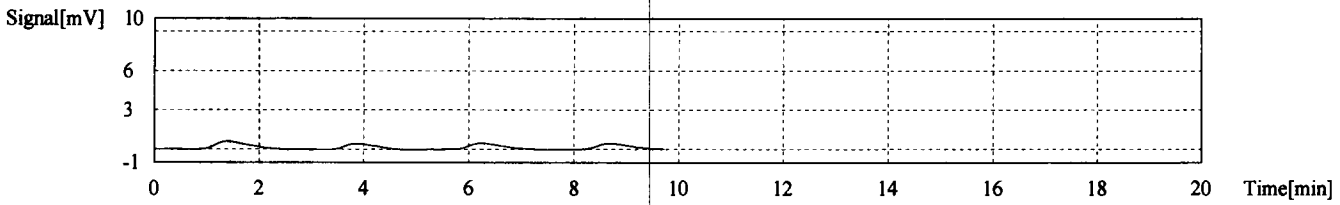
Unknown	NPOC	1.000	NPOC 0.1631mg/L

1. Det

Anal.: NPOC

1	2.545	0.2169mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 8:22:52 PM
2	1 925	0 1640mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 8:26 13 PM
3	1 910	0 1628mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 8 29 46 PM
4	1 907	0.1625mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/18/2013 8:33.18 PM

Mean Area 1.914
Mean Conc. 0 1631mg/L



Sample

Sample Name: WU02 C5
Sample ID: NPOC CAL 051513
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

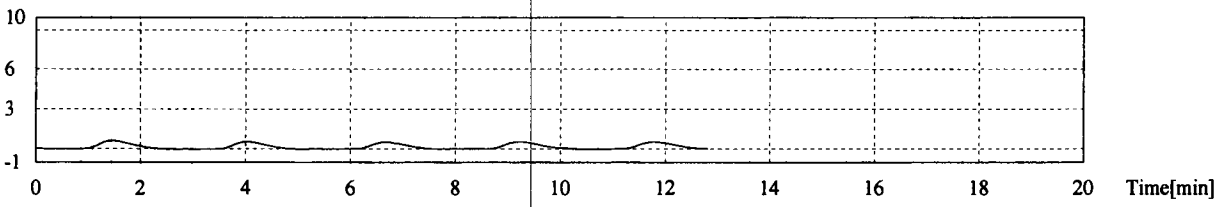
Unknown	NPOC	1 000	NPOC:0 1949mg/L

1 Det

Anal.. NPOC

1	2 656	0.2263mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 8 43:37 PM
2	2 451	0 2089mg/L	150uL	1 000	E	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/18/2013 8·47·14 PM
3	2 258	0 1924mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/18/2013 8·50.44 PM
4	2 309	0 1968mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/18/2013 8 54 15 PM
5	2 295	0 1956mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/18/2013 8 57 48 PM

Mean Area 2.287
Mean Conc. 0.1949mg/L



Sample

Sample Name: WU02 D5
Sample ID: NPOC CAL 051513
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

Unknown	NPOC	1 000	NPOC.1 288mg/L

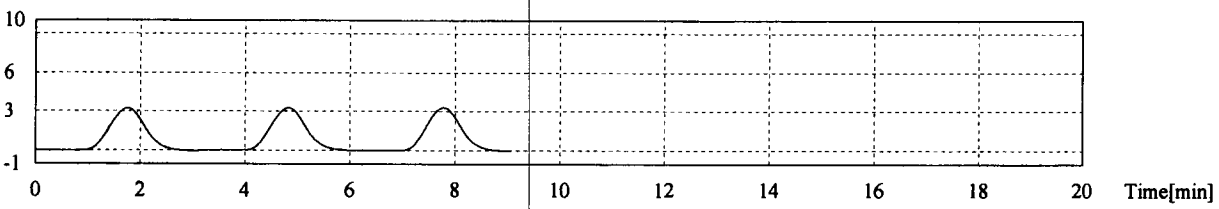
1. Det

Anal.: NPOC

Scanned with CamScanner

1	15 18	1 294mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37.cal	6/18/2013 9:08:46 PM
2	15 02	1 280mg/L	150uL	1 000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 9:12 43 PM
3	15 16	1 292mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/18/2013 9:16 41 PM

Mean Area 15.12
Mean Conc. 1.288mg/L



Sample

Sample Name: WU02 E5
Sample ID: NPOC CAL 051513
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

Unknown		NPOC	1.000				NPOC.0.1278mg/L

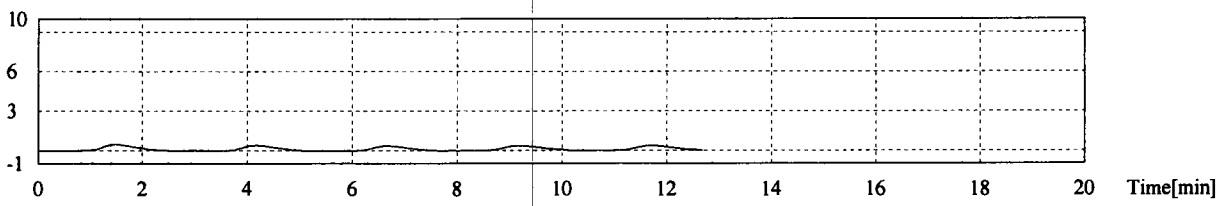
1. Det

Anal.: NPOC

1	2.067	0.1761mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 9:27:12 PM
2	1 711	0.1458mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 9.30 40 PM
3	1 527	0 1301mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 9:34 09 PM
4	1.470	0 1253mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 9:37:39 PM
5	1.501	0 1279mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 9:41 11 PM

Exhibit #5 - 2013-06-19 Sampling Event

Mean Area 1.499
Mean Conc. 0.1278mg/L



Sample

Sample Name: WU03 A7
Sample ID: NPOC CAL 051513
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

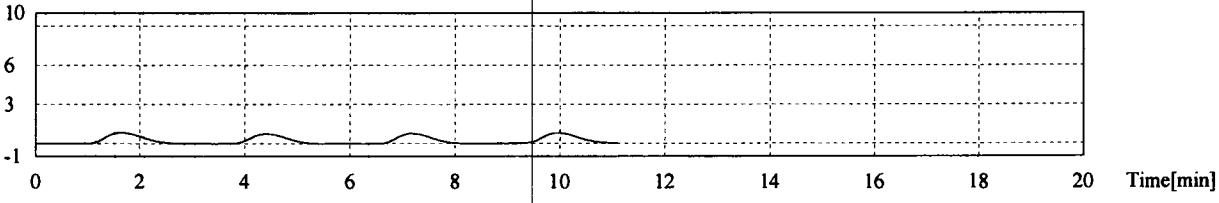
Unknown	NPOC	1.000	NPOC 0.3033mg/L

1. Det

Anal.: NPOC

1	3.894	0.3318mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 9:51:49 PM
2	3.517	0.2997mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 9:55:34 PM
3	3.547	0.3023mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 9:59:19 PM
4	3.613	0.3079mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 10:03:05 PM

Mean Area 3.559
Mean Conc. 0.3033mg/L



TOC-Control L Report

Ursula
2013_06_18_001.tlx

Sample

Sample Name: WU03 B7
Sample ID: NPOC CAL 051513
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

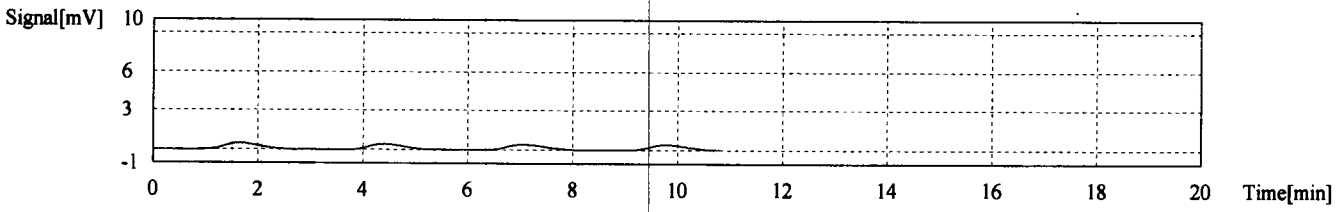
Unknown	NPOC	1 000	NPOC:0.1618mg/L

1. Det

Anal.: NPOC

1	2 211	0.1884mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 10:13:42 PM
2	1 955	0.1666mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 10:17 21 PM
3	1 875	0 1598mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 10·21.03 PM
4	1.865	0.1589mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 10 24:45 PM

Mean Area 1.898
Mean Conc. 0.1618mg/L



Sample

Sample Name: WU03 C7
Sample ID: NPOC CAL 051513
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

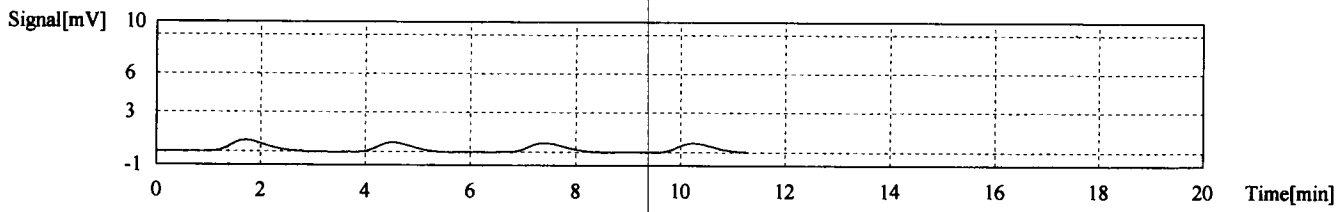
Unknown	NPOC	1.000	NPOC 0.2721mg/L

1. Det

Anal.: NPOC

1	3 692	0 3146mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 10:35.26 PM
2	3 233	0.2755mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 10.39:18 PM
3	3.216	0 2741mg/L	150uL	1 000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/18/2013 10 43 07 PM
4	3 132	0 2669mg/L	150uL	1.000		NPOC CAL 051513 2013_05_15_10_31_37 cal	6/18/2013 10.46 54 PM

Mean Area 3 194
Mean Conc. 0.2721mg/L



Control Sample

Sample Name: ICB/CCB
Sample ID:
Method: ICB CCB.tpl
Status Completed
Chk. Result Control value: 0.000 / Control within range!

Control	NPOC	1.000	NPOC 0.000mg/L

1. Det.

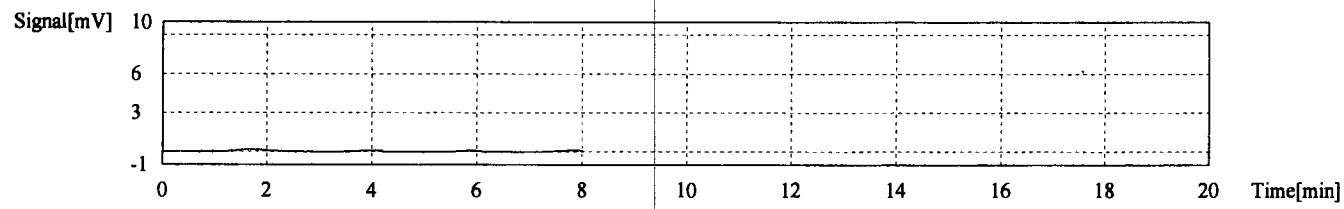
Anal.: NPOC

TOC-Control L Report

Ursula
2013_06_18_001.tlx

1	0 4606	0 06236mg/L	100uL	1 000	E	NPOC Suspended 0.5 to 50.2013_05_07_12_18_27.cal	6/18/2013 10:57:08 PM
2	0 000	0.000mg/L	100uL	1 000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27.cal	6/18/2013 11:00:14 PM
3	0 000	0.000mg/L	100uL	1 000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	6/18/2013 11.03.44 PM
4	0 000	0 000mg/L	100uL	1 000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27.cal	6/18/2013 11 07:14 PM

Mean Area 0.000
Mean Conc 0.000mg/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!

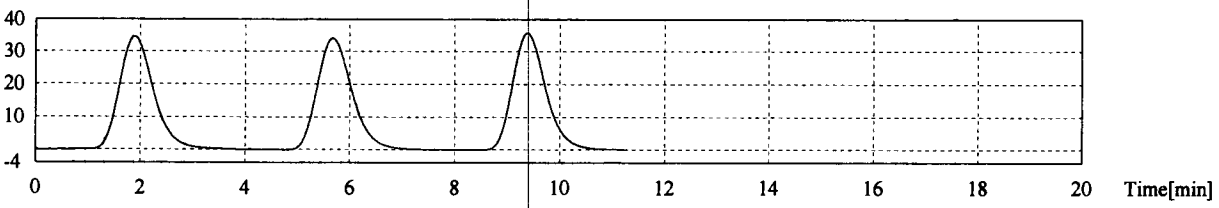
Control	NPOC	1 000	NPOC 21.49ppm	

1. Det.

Anal.: NPOC

1	158.3	21.43ppm	100uL	1.000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27.cal	6/18/2013 11:18:45 PM
2	159 5	21 60ppm	100uL	1 000		NPOC Suspended 0.5 to 50 2013_05_07_12_18_27.cal	6/18/2013 11 23.30 PM
3	158 3	21 43ppm	100uL	1.000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	6/18/2013 11 28:09 PM

Mean Area 158.7
Mean Conc. 21.49ppm



Sample

Sample Name: WU03 D7
Sample ID: NPOC CAL 051513
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

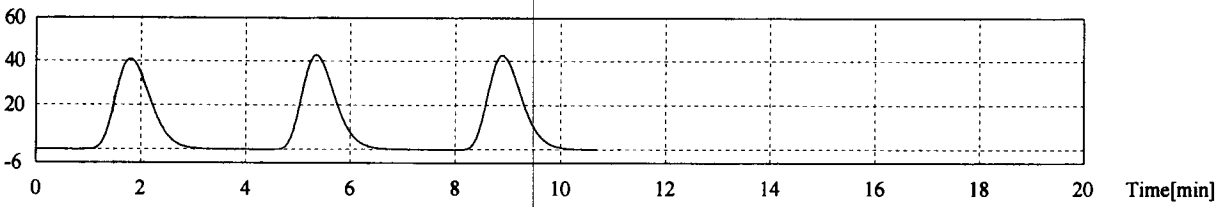
Unknown	NPOC	1.000	NPOC:16.67mg/L

1. Det

Anal.: NPOC

1	194 7	16.59mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 11 39:49 PM
2	195.5	16 66mg/L	150uL	1 000	NPOC CAL 051513 2013_05_15_10_31_37 cal	6/18/2013 11 44:20 PM
3	196 8	16 77mg/L	150uL	1.000	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/18/2013 11 48 53 PM

Mean Area 195.7
Mean Conc. 16.67mg/L



TOC-Control L Report

Ursula
2013_06_18_001.tlx

Sample

Sample Name:	WU04 A7
Sample ID:	NPOC CAL 051513
Origin:	NPOC CAL 051513.cal
Status	Completed
Chk. Result	

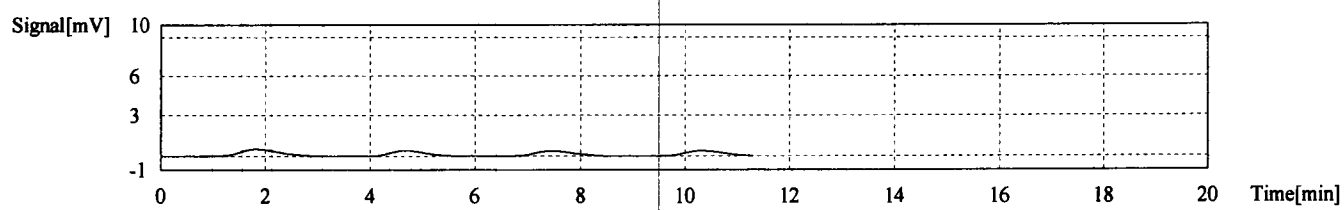
Unknown	NPOC	1.000	NPOC 0 1476mg/L

1. Det

Anal.: NPOC

1	2.332	0.1987mg/L	150uL	1 000	E	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/18/2013 11.59.37 PM
2	1.789	0.1524mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/19/2013 12·03:23 AM
3	1.619	0 1380mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/19/2013 12 07.12 AM
4	1.788	0 1524mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/19/2013 12·11:03 AM

Mean Area	1.732
Mean Conc.	0.1476mg/L



Sample

Sample Name:	WU04 B7
Sample ID:	NPOC CAL 051513
Origin:	NPOC CAL 051513.cal
Status	Completed
Chk. Result	

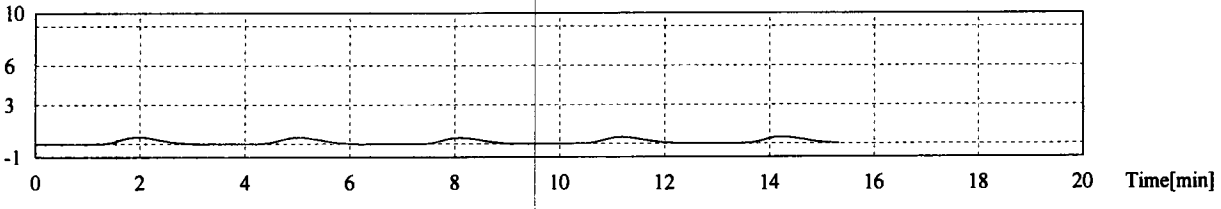
Unknown	NPOC	1.000	NPOC 0.1954mg/L

1. Det

Anal.: NPOC

1	2.622	0.2234mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/19/2013 12:22:00 AM
2	2.549	0.2172mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37.cal	6/19/2013 12:26:05 AM
3	2.294	0.1955mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/19/2013 12:30:09 AM
4	2.316	0.1974mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/19/2013 12:34:11 AM
5	2.268	0.1933mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37.cal	6/19/2013 12:38:15 AM

Mean Area 2.293
Mean Conc. 0.1954mg/L



Sample

Sample Name: WU04 C7
Sample ID: NPOC CAL 051513
Origin: NPOC CAL 051513.cal
Status Completed
Chk. Result

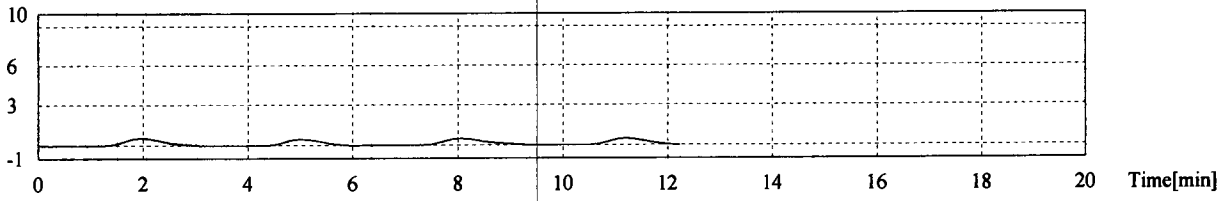
Unknown	NPOC	1.000	NPOC 0.1937mg/L

1. Det

Anal.: NPOC

1	2.570	0.2190mg/L	150uL	1.000	E	NPOC CAL 051513.2013_05_15_10_31_37 cal	6/19/2013 12:49:11 AM
2	2.261	0.1927mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/19/2013 12:53:14 AM
3	2.330	0.1985mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/19/2013 12:57:23 AM
4	2.229	0.1899mg/L	150uL	1.000		NPOC CAL 051513.2013_05_15_10_31_37 cal	6/19/2013 1:01:21 AM

Mean Area 2.273
Mean Conc. 0.1937mg/L



Control Sample

Sample Name: ICB/CCB
Sample ID:
Method: ICB CCB.tpl
Status Completed
Chk. Result Control value: 0.000 / Control within range!

Control	NPOC	1.000	NPOC:0.000mg/L

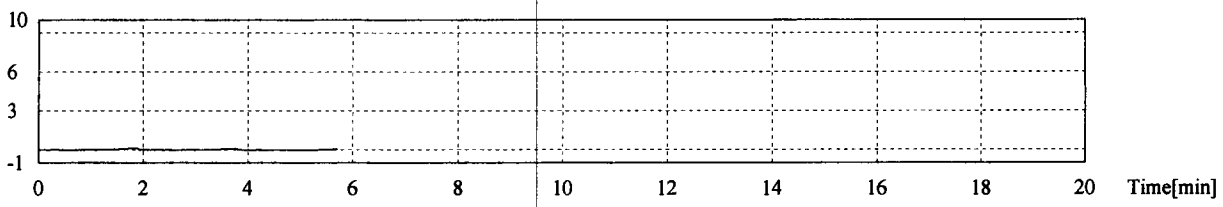
1. Det.

Anal.: NPOC

1	0.000	0.000mg/L	100uL	1.000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	6/19/2013 1:11:09 AM
2	0.000	0.000mg/L	100uL	1.000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	6/19/2013 1:14:39 AM
3	0.000	0.000mg/L	100uL	1.000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27 cal	6/19/2013 1:18:09 AM

Test Data

Mean Area 0.000
Mean Conc. 0.000mg/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!

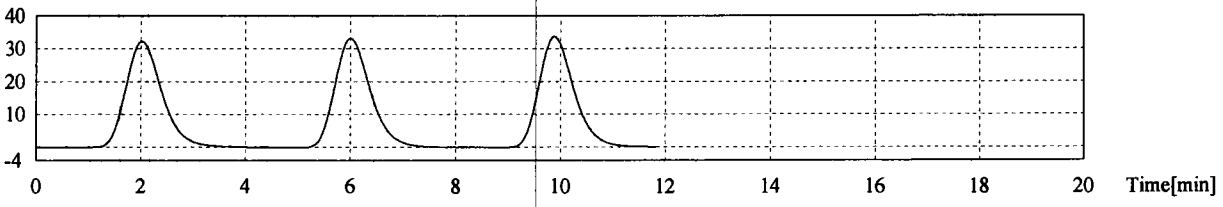
Control	NPOC	1.000		NPOC 21.33ppm

1. Det.

Anal.: NPOC

1	156 7	21.22ppm	100uL	1.000	NPOC Suspended 0.5 to $0.2013_05_07_12_18_27 cal	6/19/2013 1:29 53 AM
2	157 9	21.38ppm	100uL	1.000	NPOC Suspended 0.5 to $0.2013_05_07_12_18_27.cal	6/19/2013 1.34.48 AM
3	158 1	21.41ppm	100uL	1.000	NPOC Suspended 0 5 to $0 2013_05_07_12_18_27.cal	6/19/2013 1 39:42 AM

Mean Area 157.6
Mean Conc. 21.33ppm



6-17-13

ALKALINITY BENCHSHEET methods: **SM 2320 B-97** Date/Time: 6/14/13 11:45

pH meter verification **pH meter ID: ACCUMET AR60** **Buret ID: 01G30627** Analyst: APD

Buffer pH 7.00 **pH Probe ID : AR60**

Measured pH 7.01 *Calibration OK* **Acid ARI ID:** 10056C

Partitioning Calculations
T=Total, P=Phenolphthalein

Standardization of acid titrant ***(titration to pH 4.5)***

ARI ID: 00139-04

grams Na2CO3 = 0.6274 *to* 250 *ml DI*

Normality Na2CO3 = 0.0474

Assumed Acid Normality = 0.02

Standardized Acid Normality= 0.0203 ***OK!***

BLANK		STANDARD TITRATION			Partitioning Calculations			
BLANK	ml ACID	ml Na2CO3	ml ACID	N H2SO4	*Obs*	*HCO3*	*CO3*	*OH*
1	0.01	5	11.72	0.020	*P =0*	T	0	0
2	0.01	5	11.65	0.020	*P< 0.5T*	T - 2P	2P	0
3	0.00	5	11.65	0.020	*P= 0.5T*	0	2P	0
AVERAGE	0.01			0.020	*P> 0.5T*	0	2(T - P)	2P - T
					P =T	0	0	T

Calibration Verification Standard (second source sodium carbonate solution)

ARI ID: 00139-05 *mg/L CaCO3*

grams Na2CO3 = 0.6263 *grams in* 250 *mL =* 2364

dilution: 5.0 *mL to* 100 *CVS =* 118.2

DQL Std (2ppm) *dilute* 0.085 *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

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			ALK (mg CaCO3/l)			Partitioning (mg/l CaCO3)			(mg/l)
					pH=8.3	pH =4.5	pH=4.2	Phenolph	TOT HIGH	TOT LOW	HCO3	CO3	OH	FREE CO2
ICV		10.33	100	21.5	5.73	11.80	12.00	58.1	119.7		*101.3% OK!*			
ICB		4.50	50	21.3	0.00	0.00	0.00	0.0		0.0	0.0	0.0	0.0	0.0
DQL Std (2ppm)		7.85	100	21.5	0.00	0.23	0.29	0.0		1.7				
LCS		8.76	50	18.6	0.68	1.58	1.65	13.8	32.1		*99.9% OK!*			
WT28 L2		5.47	50	19.6	0.00	0.19	0.25	0.0		2.6	2.6	0.0	0.0	17.9
WT28 M2		5.76	50	19.2	0.00	1.09	1.20	0.0	22.1		22.1	0.0	0.0	76.9
WT28 N2		6.75	50	19.2	0.00	0.57	0.62	0.0		10.6	10.6	0.0	0.0	3.8
WT28 O2		6.56	50	19.1	0.00	0.54	0.61	0.0		9.5	9.5	0.0	0.0	5.3
WT28 P2		6.54	50	19.1	0.00	2.56	2.68	0.0	52.0		52.0	0.0	0.0	30.0
WT28 Q2		6.33	50	19.6	0.00	1.78	1.86	0.0	36.1		36.1	0.0	0.0	33.8
WT26 B1		6.68	50	19.6	0.00	0.57	0.62	0.0		10.6	10.6	0.0	0.0	4.4
CCV		10.37	100	21.0	5.74	11.82	12.01	58.2	119.9		*101.4% OK!*		0.0	0.0
WT26 A2		6.73	50	19.8	0.00	0.57	0.64	0.0		10.1	10.1	0.0	0.0	3.8
WT26 A2 dup		6.76	50	19.9	0.00	0.57	0.63	0.0		10.4	10.4	0.0	0.0	3.6
RPD =										*2.0%*	*2.0%*			*4.9%*
WT26 C1		6.74	50	19.8	0.00	0.54	0.60	0.0		9.7	9.7	0.0	0.0	3.5
WT26 D1		6.67	50	20.0	0.00	0.56	0.63	0.0		9.9	9.9	0.0	0.0	4.3
WT26 E1		6.81	50	19.6	0.00	0.55	0.60	0.0		10.1	10.1	0.0	0.0	3.1
WT26 F1		5.40	50	19.1	0.00	0.09	0.15	0.0		0.6	0.6	0.0	0.0	4.8
WT26 G1		6.71	50	19.5	0.00	0.47	0.53	0.0		8.3	8.3	0.0	0.0	3.2
WT26 H1		6.56	50	19.5	0.00	0.58	0.64	0.0		10.6	10.6	0.0	0.0	5.8
WT26 I1		6.69	50	20.2	0.00	0.46	0.52	0.0		8.1	8.1	0.0	0.0	3.3
WT26 J1		6.63	50	20.5	0.00	0.58	0.63	0.0		10.8	10.8	0.0	0.0	5.0
CCV		10.34	100	22.1	5.66	11.68	11.89	57.4	118.5		*100.2% OK!*		0.0	0.0

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			ALK (mg CaCO3/l)			Partitioning (mg/l CaCO3)			(mg/l)
					pH=8.3	pH =4.5	pH=4.2	Phenolph	TOT HIGH	TOT LOW	HCO3	CO3	OH	FREE CO2
WT26 K1		6.50	50	20.0	0.00	0.50	0.56	6.4		8.9	0.0	5.1	3.8	0.0
WT26 L1		6.36	50	19.5	0.00	0.42	0.48	0.0		7.3	7.3	0.0	0.0	6.4
WT26 M1		6.71	50	19.8	0.00	0.53	0.60	0.0		9.3	9.3	0.0	0.0	3.6
WT26 N1		6.55	50	19.6	0.00	0.46	0.52	0.0		8.1	8.1	0.0	0.0	4.6
CCB		4.72	50	22.2	0.00	0.03	0.07	0.0		-0.2	-0.2	0.0	0.0	-7.7
LCS-2		8.75	50	21.2	0.69	1.59	1.70	14.0	32.3		4.3	28.0	0.0	0.0
WT26 O1		6.60	50	19.3	0.00	0.55	0.61	0.0		9.9	9.9	0.0	0.0	5.0
WS90 A4		9.49	50	18.8	1.11	4.20	4.35	22.5	85.2		40.2	45.1	0.0	0.0
WS90 A4 dup		9.48	50	19.1	1.11	4.24	4.38	22.5	86.1		41.0	45.1	0.0	0.0
RPD =								*0.0%*	*0.9%*		*2.0%*	*0.0%*		*4.3%*
WS90 B3		9.15	50	19.3	0.57	3.41	3.53	11.6	69.2		46.1	23.1	0.0	0.1
CCV		10.33	100	21.7	5.66	11.79	11.99	57.4	119.6		*101.2% OK!*		0.0	0.0

ALKALINITY BENCHSHEET methods: **SM 2320 B-97** Date/Time: 6/14/13 11:45

pH meter verification **pH meter ID:** **ACCUMET AR60** **Buret ID:** 01G30627 Analyst: APD

Buffer pH 7.00 **pH Probe ID :** AR60

Measured pH 7.01 *must agree within 0.1 pH un* **Acid ARI ID:** 100566

Standardization of acid titrant ***(titration to pH 4.5)***

ARI ID: 00139-04

grams Na2CO3 = 0.6274 to 250 *ml DI*

Normality Na2CO3 =

Assumed Acid Normality = 0.01N

Standardized Acid Normality=

BLANK		STANDARD TITRATION		
BLANK	ml ACID	ml Na2CO3	ml ACID	N H2SO4
1	0.01	5	11.72	
2	0.01	5	11.65	
3	0.00	5	11.65	
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: 00139-05

grams Na2CO3 = 0.6263 *grams in* 250 *mL =* ###### *mg/L CaCO3*

dilution: 5.0 *mL to* 100 *CVS =* ######

DQL Std (2ppm) *dilute* 0.855 *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 *(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		10.33	100	21.5	5.73	11.80	12.00							
ICB		4.50	50	21.3	—	—	—							
DQL Std (2ppm)		7.85	100	21.5	—	0.23	0.29							
LCS		8.76	50	18.6	0.68	1.58	1.65							
WT28L2		5.38	50	19.6	—	0.19	0.25							
M2		6.76	50	19.2	—	1.09	1.20							
N2		6.49	50	19.2	—	0.57	0.62							
O2		6.56	50	19.1	—	0.54	0.61							
P2		6.54	50	19.1	—	2.56	2.68							
Q2		6.33	50	19.6	—	1.78	1.86							
WT26 B2		6.68	50	19.6	—	0.57	0.62							
CCV		10.32	100	21.0	5.74	11.82	12.01							
WT26 A2		6.73	50	19.8	—	0.57	0.64							
A2 DUP		6.76	50	19.9	—	0.57	0.63							
C1		6.74	50	19.8	—	0.54	0.60							
D1		6.67	50	20.0	—	0.56	0.63							
E1		6.81	19.50	19.6	—	0.55	0.60							
F1		5.40	50	19.1	—	0.09	0.15							
G1		6.71	19.50	19.5	—	0.47	0.53							
H1		6.56	50	19.5	—	0.58	0.64							
I1		6.69	50	20.2	—	0.46	0.52							
J1		6.63	50	20.5	—	0.58	0.63							
CCV		10.34	100	22.1	5.66	11.68	11.89							
WT26 K1		6.50	50	20.0	—	0.50	0.56							
~~CCV~~ L1		6.36	50	19.5		0.42	0.48							

① 5.47 ② 6.75

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	pH =4.5	pH=4.2	ALK (mg CaCO3/l) Phenolph	TOT HIGH	TOT LOW	Partitioning (mg/l CaCO3) HCO3	CO3	OH	(mg/l) FREE CO2
WT26M1		6.71	50	19.8	—	0.53	0.60							
N1		6.55		19.6	—	0.46	0.52							
CCB		4.77		22.2	—	0.03	0.07							
LCS-2		8.75		21.2	0.69	1.59	1.70							
WT2601		6.60		19.3	—	0.55	0.61							
WS90 A4		9.49		18.8	1.11	4.20	4.35							
A4dup		9.48		19.1	1.11	4.24	4.38							
B4		9.15		19.3	0.57	3.41	3.52							
CCV		10.33	100	21.7	5.66	11.79	11.99							
~~WT07 A2~~														
~~A2dup~~														
~~B3~~														
~~CCV~~ CCV			100											
CCV														
CCV														

① 3.53

USOG : 01149

Table of Contents: ARI Job WS91

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	32
Volatile Analysis		
Report and Summary QC Forms	33	66
Semivolatile Analysis		
Report and Summary QC Forms	67	99
SIM Semivolatile Analysis		
Report and Summary QC Forms	100	118
Dioxin Analysis		
Report and Summary QC Forms	119	136
Pesticide Analysis		
Report and Summary QC Forms	137	163
PCB Analysis		
Report and Summary QC Forms	164	188
TPHD Analysis		
Report and Summary QC Forms	189	208
TPHG Analysis		
Report and Summary QC Forms	209	223
Metals Analysis		
Report and Summary QC Forms	224	250
General Chemistry Analysis		
Report and Summary QC Forms	251	257
Geotechnical Analysis		
Report and Summary QC Forms	258	261

BC
Signature

June-24-2013
Date

Table of Contents: ARI Job WS91

Client: SAIC

Project: 209977 NPDES Sampling Support

	Page From:	Page To:
Total Solids		
Report and Summary QC Forms	262	269
Volatile Raw Data		
Preparation Log	270	271
Initial Calibration	272	405
Run Logs, Continuing Calibrations, and Raw Data	406	481
Semivolatile Raw Data		
Extractions Bench Sheets and Notes	482	485
Initial Calibration	486	606
Run Logs, Continuing Calibrations, and Raw Data	607	719
SIM Semivolatile Raw Data		
Extractions Bench Sheets and Notes	720	721
Initial Calibration	722	804
Run Logs, Continuing Calibrations, and Raw Data	805	885
Dioxin Raw Data		
Extractions Bench Sheets and Notes	886	888
Initial Calibration	889	1012
Run Logs, Continuing Calibrations, and Raw Data	1013	1130
Pesticide Raw Data		
Extractions Bench Sheets and Notes	1131	1134
Initial Calibration	1135	1182
Run Logs, Continuing Calibrations, and Raw Data	1183	1218
PCB Raw Data		
Extractions Bench Sheets and Notes	1219	1222
Initial Calibration	1223	1326
Run Logs, Continuing Calibrations, and Raw Data	1327	1377

BL

Signature

June-24-2013

Date

Table of Contents: ARI Job WS91

Client: SAIC

Project: 209977 NPDES Sampling Support

	Page From:	Page To:
TPHD Raw Data		
Extractions Bench Sheets and Notes	1378	1382
Initial Calibration	1383	1463
Run Logs, Continuing Calibrations, and Raw Data	1464	1498
TPHG Raw Data		
Preparation Log	1499	1500
Initial Calibration	1501	1669
Run Logs, Continuing Calibrations, and Raw Data	1670	1698
Metals Raw Data		
Preparation Bench Sheets and Notes	1699	1705
Run Logs, Calibrations, and Raw Data	1706	1848
General Chemistry Raw Data		
Analyst Notes and Raw Data	1849	1861
Geotechnical Raw Data		
Analyst Notes and Raw Data	1862	1888

BC
Signature

June-24-2013
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

June 26, 2013

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

RE: Project: NPDES Sampling Support, 209977
ARI Job No.: WS91

Dear Christine:

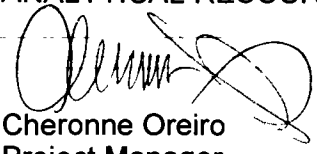
Please find enclosed the Chain-of-Custody records (COCs), sample receipt documentation, and the final data package for samples from the project referenced above.

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 WS91

Enclosures

Chain of Custody Documentation

ARI Job ID: WS91

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: W891	Turn-around Requested: Standard
ARI Client Company: SAIC	Phone: 206-300-2144 christine.nancarrow@saic.com
Client Contact: Christine Nancarrow	
Client Project Name: NPDES Sampling Support	
Client Project #: 209977.	Samplers: CW/CN

Page: 1	of 1
Date: 6/5/13	Ice Present? Yes
No. of Coolers: 2	Cooler Temps: 4.1, 6.0

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 8270)	SVOCs (PAHs (8270 SIM))	Pesticides (EPA 8081)	Dioxin/Furans (EPA 1613B)	TPH-Diesel (NWTPH-Dx)	VOCs (EPA 8260)	Metals (EPA 6010/200.8)	Mercury (EPA 7471)	TOC (Plumb 1981)	Total Solids (SM 2540B)	Particle Size Distribution (Sedigraph)	TPH-Gas (NWTPH-Gx)			Notes/Comments
CL-MH-SPS-20130605-5	6-5-13	1207	Sediment	11	X	X	X	X	X	X	X	X	X	X	X	X			

Analysis Requested

Comments/Special Instructions
Please do not dispose of any samples w/out prior written authorization from the SAIC PM. Thanks!

	Relinquished by	Received by	Relinquished by	Received by
(Signature)	CNancarrow			
Printed Name:	CNancarrow	Jennifer Millsap		
Company:	SAIC	AKI		
Date & Time	6/5/13 @ 1704	6/5/13 1704		

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: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: Standard 3 week	Date: 6-5-13
ARI Client Company: **SAIC**	Phone: **206.300.2144** nancarrowc@saic.com	Page: 1 of 1
Client Contact: **Christine Nancarrow**		No. of Coolers: Cooler Temps:
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 (EPA 8270)	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: VOCs (8260)	Notes/Comments: TPH-Dx (W/TPH-Dx)
CL-MH-SPS-20130605-W	6/5/13	1122	Water	10	X	X	X	X	X	X	X	X	X	X	X	X		
CL-VT-EFF-20130605-W	6/5/13	1349	Water	9	X	X	X	X	X	X	X	X	X	X	X	X		
~~CL-QC-TB-VT-20130605-W~~																		
CL-QC-TB-20130605-W	6/5/13	1200	Water	1													X	X

CW 6/5/13

Comments/Special Instructions	Relinquished by (Signature)	Received by (Signature)	Relinquished by (Signature)	Received by (Signature)
Please do not dispose of samples w/out prior written authorization from SAIC PM.	C Nancarrow			
	Printed Name: C Nancarrow	Printed Name: Jennifer Milkop	Printed Name	Printed Name
	Company: SAIC	Company: ARI	Company	Company
	Date & Time: 6/5/13 @1704	Date & Time: 6/5/13 1704	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 contrery 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 UCS91 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)	4.1 6.0	

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877952

Cooler Accepted by: JM (AV) Date: 6/5/13 Time: 1704

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?	JM	(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: _____

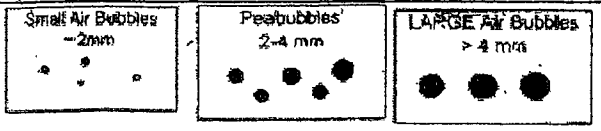
Samples Logged by: AV Date: 6/6/13 Time: 844

*** 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"

US91 : 00005

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: WS91

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative

Client: SAIC
Project: NPDES Sampling Support, 209977
ARI Job No.: WS91

Sample Receipt

One water sample and one sediment sample were received on June 5, 2013 under ARI job WS91. The cooler temperatures measured by IR thermometer following ARI SOP were 4.1 and 6.0°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.

Initial calibrations were within method requirements.

The continuing calibration was outside the 20% control limit high for Chloroethane, 1,1,2-Trichloro-1,2,2-trifluoroethane, Acrylonitrile, and 1,1-Dichloroethane. All detected results for these compounds 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.

Methylene Chloride and Naphthalene were present in **MB-061213A** in low levels. All detected results associated with this method blank have been flagged with a "B" qualifier. No further corrective action was taken.

The LCS/LCSD percent recoveries of Methyl tert-Butyl Ether, and the LCSD percent recoveries of trans-1,2-Dichloroethene and Acrylonitrile were outside the control limits high for **LCS-061213A**. All other percent recoveries were within control limits. No corrective action was taken.

Semivolatiles by SW8270D

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

Initial calibrations were within method requirements.

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

The CCAL on 6/24/13 fell outside the 20% control limit low for Phenol, bis(2-Chloroethyl)ether, 4-Methylphenol, Benzoic Acid, Hexachlorocyclopentadiene, 2,4-Dinitrophenol, 4-Nitrophenol, Pentachlorophenol, and N-Nitrosodimethylamine. The CCAL was outside the control limit high for 3,3'-Dichlorobenzidine. Associated results were undetected for these compounds. No further corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recoveries of 2,4,6-Tribromophenol fell outside the control limits low for sample **CL-MH-SPS-20130605** and the associated matrix spike and matrix spike duplicate. 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 4-Chloroaniline, 3-Nitroaniline, 3,3'-Dichlorobenzidine, and Aniline fell outside the control limits low for **LCS-061713**. 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 **CL-MH-SPS-20130605-S**. No corrective action is required for matrix QC.

SIM Semivolatiles by SW78270-SIM

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

Initial calibrations were within method requirements.

The continuing calibration (CCAL) on 6/20/13 was outside the 20% control limit high for Butylbenzylphthalate and fell out low for Pentachlorophenol. All detected results associated with this CCAL have been flagged with a "Q" qualifier. No further corrective action was taken.

The CCAL on 6/24/13 fell outside the 20% control limit low for Phenol, 2-Methylphenol, 4-Methylphenol, Pentachlorophenol, and N-Nitrosodimethylamine. Associated results were undetected for these compounds. No further corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

Diethylphthalate was present in **MB-061713** at a level that was greater than 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 were within control limits.

Several matrix spike and matrix spike duplicate percent recoveries were outside advisory control limits with wide RPDs for sample **CL-MH-SPS-20130605-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.

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.

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

Initial calibrations were within method requirements.

The continuing calibration (CCAL) on 6/18/13 at 16:06 was outside the 20% control limit high for gamma-BHC on the first column and was out both high and low for several compounds on the second column. The CCAL on 6/18/13 at 19:04 was outside the control limit high for Endrin on the first column and fell out low on the second column for several compounds. The Toxaphene CCAL on 6/18/13 at 19:22 fell outside the control limit low on both columns. 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 LCSD percent recoveries of delta-BHC and 4,4'-DDD fell outside the control limit low for **LCS-061313**. 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 **CL-MH-SPS-20130605-S**. No corrective action is required for matrix QC.

Aroclor PCBs by SW8082

The sample and associated laboratory QC were 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 limit. The LCS and LCSD percent recoveries were within control limits.

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

NWTPH-Dx

The sample and associated laboratory QC were extracted and 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 limits. The LCS percent recovery was within control limits.

There were no matrix spike and matrix spike duplicate percent recoveries of Diesel for sample **CL-MH-SPS-20130605-S**. No corrective action is required for matrix QC.

NWTPH-Gx

The sample was 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.

Metals and Mercury

The sample 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 zinc fell outside the control limits low for sample **CL-MH-SPS-20130605-S**. Post digestion spikes were performed and the recoveries were within control limits. All relevant data have been flagged with an "N" qualifier on the appropriate Form V. No further corrective action was taken.

The duplicate RPD of copper was outside the control limit for sample **CL-MH-SPS-20130605-S**. All relevant data have been flagged with a "*" qualifier on the appropriate Form VI. No further corrective action was taken.

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 recovery was within control limits.

The SRM percent recovery was within limits.

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

Geotechnical Parameters

A laboratory-specific case narrative follows this page.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: SAIC	**ARI Job No.:** WS91
Client Project: NPDES Sampling Support	**Client Project No.:** 209977

Case Narrative

1. One sample was submitted for analysis on June 6, 2013.
2. The sample was 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 sample was run in a single batch and the sample from this 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. Organic material does not absorb X-rays, and is not included in the fine portion of the analysis.
6. The sample appeared to be contaminated. The sample produced air bubbles after homogenization and while sitting in sample tare.
7. The data is provided in summary tables and plots.
8. There were no other noted anomalies in the sample or methods on this project.

Released by: Elizabeth Dobbe Date: June 18, 2013
Technician

Reviewed by: Guerna Curtis Date: 6/18/13
Geotechnical Laboratory Manager

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

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: WS91
Client: SAIC
Project Event: 209977
Project Name: NPDES Sampling Support

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	CL-MH-SPS-20130605-S	WS91A	13-12076	Sediment	06/05/13 12:07	06/05/13 17:04
2.	CL-QC-TB-20130605-W	WS91B	13-12077	Water	06/05/13	06/05/13 17:04

WS91 - 209914

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

USA1 · 29918

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

USS1 : 22213

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

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

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

WSS1 · 020822

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

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

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

(3) Spiked at 5 ppb
(4) Spiked at 100 ppb
(5) Spiked at 200 ppb
(6) 3-Methylphenol (not calibrated) co-elutes with 4-Methylphennol (calibrated)
(7) 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.
(8) Benzo(b)fluoranthene + Benzo(j)fluoranthene + Benzo(k)fluoranthene (only the b & k isomers are calibrated)
(9) LOD study WC15 (2/5/13)

WC91 · 00023

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

USA1 : 20826

Analytical Resources, Incorporated
Analytical Chemists and Consultants

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

WS91 : 00027

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

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

W331 00029

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	0.25	**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_O=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	0.0021	0.0125	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%

Volatile Analysis
Report and Summary QC Forms

ARI Job ID: WS91

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: CL-MH-SPS-20130605-S**
Page 1 of 2 **SAMPLE**

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/18/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/12/13 15:33

Sample Amount: 2.44 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 63.9%

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.54	2.1	< 2.1 U
74-83-9	Bromomethane	0.38	2.1	< 2.1 U
75-01-4	Vinyl Chloride	0.48	2.1	< 2.1 U
75-00-3	Chloroethane	0.95	2.1	< 2.1 U
75-09-2	**Methylene Chloride**	**1.3**	**4.1**	**9.0 B**
67-64-1	**Acetone**	**0.99**	**10**	**940**
75-15-0	**Carbon Disulfide**	**1.1**	**2.1**	**6.6**
75-35-4	1,1-Dichloroethene	0.69	2.1	< 2.1 U
75-34-3	1,1-Dichloroethane	0.42	2.1	< 2.1 U
156-60-5	trans-1,2-Dichloroethene	0.55	2.1	< 2.1 U
156-59-2	cis-1,2-Dichloroethene	0.49	2.1	< 2.1 U
67-66-3	**Chloroform**	**0.48**	**2.1**	**4.9**
107-06-2	1,2-Dichloroethane	0.39	2.1	< 2.1 U
78-93-3	**2-Butanone**	**1.1**	**10**	**85**
71-55-6	1,1,1-Trichloroethane	0.46	2.1	< 2.1 U
56-23-5	Carbon Tetrachloride	0.44	2.1	< 2.1 U
108-05-4	Vinyl Acetate	0.78	10	< 10 U
75-27-4	Bromodichloromethane	0.52	2.1	< 2.1 U
78-87-5	1,2-Dichloropropane	0.33	2.1	< 2.1 U
10061-01-5	cis-1,3-Dichloropropene	0.46	2.1	< 2.1 U
79-01-6	Trichloroethene	0.43	2.1	< 2.1 U
124-48-1	Dibromochloromethane	0.55	2.1	< 2.1 U
79-00-5	1,1,2-Trichloroethane	0.59	2.1	< 2.1 U
71-43-2	**Benzene**	**0.61**	**2.1**	**2.0 J**
10061-02-6	trans-1,3-Dichloropropene	0.44	2.1	< 2.1 U
110-75-8	2-Chloroethylvinylether	0.57	10	< 10 U
75-25-2	Bromoform	0.61	2.1	< 2.1 U
108-10-1	**4-Methyl-2-Pentanone (MIBK)**	**0.86**	**10**	**90**
591-78-6	2-Hexanone	0.90	10	< 10 U
127-18-4	Tetrachloroethene	0.53	2.1	< 2.1 U
79-34-5	1,1,2,2-Tetrachloroethane	0.52	2.1	< 2.1 U
108-88-3	**Toluene**	**0.31**	**2.1**	**2.5**
108-90-7	Chlorobenzene	0.45	2.1	< 2.1 U
100-41-4	**Ethylbenzene**	**0.41**	**2.1**	**2.4**
100-42-5	Styrene	0.28	2.1	< 2.1 U
75-69-4	Trichlorofluoromethane	0.55	2.1	< 2.1 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.59	4.1	< 4.1 U
179601-23-1	**m,p-Xylene**	**0.80**	**2.1**	**18**
95-47-6	**o-Xylene**	**0.46**	**2.1**	**7.5**
95-50-1	1,2-Dichlorobenzene	0.60	2.1	< 2.1 U
541-73-1	1,3-Dichlorobenzene	0.47	2.1	< 2.1 U
106-46-7	1,4-Dichlorobenzene	0.48	2.1	< 2.1 U
107-02-8	Acrolein	7.8	100	< 100 U

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Date Analyzed: 06/12/13 15:33

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
74-88-4	Iodomethane	0.44	2.1	< 2.1 U
74-96-4	Bromoethane	0.90	4.1	< 4.1 U
107-13-1	Acrylonitrile	2.1	10	< 10 U
563-58-6	1,1-Dichloropropene	0.64	2.1	< 2.1 U
74-95-3	Dibromomethane	0.30	2.1	< 2.1 U
630-20-6	1,1,1,2-Tetrachloroethane	0.48	2.1	< 2.1 U
96-12-8	1,2-Dibromo-3-chloropropane	1.2	10	< 10 U
96-18-4	1,2,3-Trichloropropane	1.1	4.1	< 4.1 U
110-57-6	trans-1,4-Dichloro-2-butene	0.90	10	< 10 U
108-67-8	**1,3,5-Trimethylbenzene**	**0.52**	**2.1**	**15**
95-63-6	**1,2,4-Trimethylbenzene**	**0.47**	**2.1**	**44**
87-68-3	Hexachlorobutadiene	0.84	10	< 10 U
106-93-4	1,2-Dibromoethane	0.36	2.1	< 2.1 U
74-97-5	Bromochloromethane	0.66	2.1	< 2.1 U
75-71-8	Dichlorodifluoromethane	0.42	2.1	< 2.1 U
594-20-7	2,2-Dichloropropane	0.60	2.1	< 2.1 U
142-28-9	1,3-Dichloropropane	0.43	2.1	< 2.1 U
98-82-8	Isopropylbenzene	0.48	2.1	< 2.1 U
103-65-1	**n-Propylbenzene**	**0.56**	**2.1**	**3.2**
108-86-1	Bromobenzene	0.31	2.1	< 2.1 U
95-49-8	2-Chlorotoluene	0.61	2.1	< 2.1 U
106-43-4	4-Chlorotoluene	0.57	2.1	< 2.1 U
98-06-6	tert-Butylbenzene	0.63	2.1	< 2.1 U
135-98-8	**sec-Butylbenzene**	**0.49**	**2.1**	**3.4**
99-87-6	4-Isopropyltoluene	0.48	2.1	< 2.1 U
104-51-8	n-Butylbenzene	0.54	2.1	< 2.1 U
120-82-1	1,2,4-Trichlorobenzene	0.68	10	< 10 U
91-20-3	**Naphthalene**	**0.88**	**10**	**14 B**
87-61-6	1,2,3-Trichlorobenzene	0.62	10	< 10 U
1634-04-4	Methyl tert-Butyl Ether	0.47	2.1	< 2.1 U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	116%
d8-Toluene	99.7%
Bromofluorobenzene	92.3%
d4-1,2-Dichlorobenzene	102%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: CL-QC-TB-20130605-W**
 SAMPLE

Lab Sample ID: WS91B
LIMS ID: 13-12077
Matrix: Water
Data Release Authorized:
Reported: 06/18/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/12/13 16:21

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**	**2.3 B**
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: WS91B
LIMS ID: 13-12077
Matrix: Water
Date Analyzed: 06/12/13 16:21

QC Report No: WS91-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	114%
d8-Toluene	104%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	101%

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: Sediment

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977

ARI ID	Client ID	Level	DCE	TOL	BFB	DCB	TOT OUT
MB-061213A	Method Blank	Low	115%	103%	100%	103%	0
LCS-061213A	Lab Control	Low	112%	102%	99.3%	102%	0
LCSD-061213A	Lab Control Dup	Low	114%	103%	100%	101%	0
WS91A	CL-MH-SPS-20130605-S	Low	116%	99.7%	92.3%	102%	0

	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: 13-12076 to 13-12076

WS91 : 209938

ANALYTICAL RESOURCES INCORPORATED

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-061213A	Method Blank	5	115%	103%	100%	103%	0
LCS-061213A	Lab Control	5	112%	102%	99.3%	102%	0
LCSD-061213A	Lab Control Dup	5	114%	103%	100%	101%	0
WS91B	CL-QC-TB-20130605-W	5	114%	104%	102%	101%	0

	LCS/MB LIMITS	QC LIMITS
SW8260C		
(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: 13-12077 to 13-12077

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-061213A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-061213A
LIMS ID: 13-12077
Matrix: Water
Data Release Authorized:
Reported: 06/18/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT5/PAB
LCSD: NT5/PAB
Date Analyzed LCS: 06/12/13 12:38
LCSD: 06/12/13 14:07

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	58.3		50.0	117%	58.3		50.0	117%	0.0%
Bromomethane	57.0		50.0	114%	57.1		50.0	114%	0.2%
Vinyl Chloride	59.3		50.0	119%	61.8		50.0	124%	4.1%
Chloroethane	61.3	Q	50.0	123%	62.0	Q	50.0	124%	1.1%
Methylene Chloride	58.5	B	50.0	117%	70.4	B	50.0	141%	18.5%
Acetone	183		250	73.2%	180		250	72.0%	1.7%
Carbon Disulfide	49.0		50.0	98.0%	45.4		50.0	90.8%	7.6%
1,1-Dichloroethene	48.7		50.0	97.4%	45.8		50.0	91.6%	6.1%
1,1-Dichloroethane	64.2	Q	50.0	128%	66.1	Q	50.0	132%	2.9%
trans-1,2-Dichloroethene	65.1		50.0	130%	71.1		50.0	142%	8.8%
cis-1,2-Dichloroethene	57.7		50.0	115%	59.4		50.0	119%	2.9%
Chloroform	57.8		50.0	116%	59.7		50.0	119%	3.2%
1,2-Dichloroethane	50.6		50.0	101%	51.4		50.0	103%	1.6%
2-Butanone	273		250	109%	289		250	116%	5.7%
1,1,1-Trichloroethane	58.5		50.0	117%	59.8		50.0	120%	2.2%
Carbon Tetrachloride	53.4		50.0	107%	54.3		50.0	109%	1.7%
Vinyl Acetate	56.6		50.0	113%	57.6		50.0	115%	1.8%
Bromodichloromethane	52.4		50.0	105%	53.2		50.0	106%	1.5%
1,2-Dichloropropane	52.7		50.0	105%	52.5		50.0	105%	0.4%
cis-1,3-Dichloropropene	53.6		50.0	107%	53.8		50.0	108%	0.4%
Trichloroethene	53.4		50.0	107%	53.9		50.0	108%	0.9%
Dibromochloromethane	51.3		50.0	103%	50.6		50.0	101%	1.4%
1,1,2-Trichloroethane	51.9		50.0	104%	52.3		50.0	105%	0.8%
Benzene	54.0		50.0	108%	54.9		50.0	110%	1.7%
trans-1,3-Dichloropropene	53.3		50.0	107%	54.0		50.0	108%	1.3%
2-Chloroethylvinylether	53.7		50.0	107%	54.2		50.0	108%	0.9%
Bromoform	51.7		50.0	103%	49.1		50.0	98.2%	5.2%
4-Methyl-2-Pentanone (MIBK)	259		250	104%	259		250	104%	0.0%
2-Hexanone	246		250	98.4%	247		250	98.8%	0.4%
Tetrachloroethene	52.9		50.0	106%	53.0		50.0	106%	0.2%
1,1,2,2-Tetrachloroethane	49.8		50.0	99.6%	47.9		50.0	95.8%	3.9%
Toluene	53.5		50.0	107%	54.4		50.0	109%	1.7%
Chlorobenzene	52.4		50.0	105%	52.3		50.0	105%	0.2%
Ethylbenzene	55.1		50.0	110%	55.4		50.0	111%	0.5%
Styrene	55.6		50.0	111%	55.7		50.0	111%	0.2%
Trichlorofluoromethane	59.2		50.0	118%	60.6		50.0	121%	2.3%
1,1,2-Trichloro-1,2,2-trifluoroetha	49.5	Q	50.0	99.0%	46.4	Q	50.0	92.8%	6.5%
m,p-Xylene	110		100	110%	110		100	110%	0.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-061213A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-061213A QC Report No: WS91-SAIC
LIMS ID: 13-12077 Project: NPDES Sampling Support
Matrix: Water 209977

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
o-Xylene	53.6	50.0	107%	53.7	50.0	107%	0.2%
1,2-Dichlorobenzene	51.8	50.0	104%	50.4	50.0	101%	2.7%
1,3-Dichlorobenzene	53.8	50.0	108%	52.5	50.0	105%	2.4%
1,4-Dichlorobenzene	53.1	50.0	106%	51.9	50.0	104%	2.3%
Acrolein	190	250	76.0%	205	250	82.0%	7.6%
Iodomethane	46.9	50.0	93.8%	43.5	50.0	87.0%	7.5%
Bromoethane	47.4	50.0	94.8%	46.0	50.0	92.0%	3.0%
Acrylonitrile	62.0 Q	50.0	124%	62.4 Q	50.0	125%	0.6%
1,1-Dichloropropene	52.9	50.0	106%	53.2	50.0	106%	0.6%
Dibromomethane	51.2	50.0	102%	51.4	50.0	103%	0.4%
1,1,1,2-Tetrachloroethane	51.1	50.0	102%	51.3	50.0	103%	0.4%
1,2-Dibromo-3-chloropropane	47.2	50.0	94.4%	46.1	50.0	92.2%	2.4%
1,2,3-Trichloropropane	49.6	50.0	99.2%	47.0	50.0	94.0%	5.4%
trans-1,4-Dichloro-2-butene	50.4	50.0	101%	48.7	50.0	97.4%	3.4%
1,3,5-Trimethylbenzene	56.8	50.0	114%	55.1	50.0	110%	3.0%
1,2,4-Trimethylbenzene	57.0	50.0	114%	55.3	50.0	111%	3.0%
Hexachlorobutadiene	53.6	50.0	107%	53.6	50.0	107%	0.0%
1,2-Dibromoethane	51.1	50.0	102%	51.2	50.0	102%	0.2%
Bromochloromethane	60.6	50.0	121%	61.9	50.0	124%	2.1%
Dichlorodifluoromethane	57.8	50.0	116%	60.0	50.0	120%	3.7%
2,2-Dichloropropane	58.3	50.0	117%	59.8	50.0	120%	2.5%
1,3-Dichloropropane	50.8	50.0	102%	50.6	50.0	101%	0.4%
Isopropylbenzene	57.4	50.0	115%	55.7	50.0	111%	3.0%
n-Propylbenzene	57.4	50.0	115%	55.9	50.0	112%	2.6%
Bromobenzene	52.3	50.0	105%	50.5	50.0	101%	3.5%
2-Chlorotoluene	54.7	50.0	109%	53.2	50.0	106%	2.8%
4-Chlorotoluene	55.3	50.0	111%	53.8	50.0	108%	2.7%
tert-Butylbenzene	56.5	50.0	113%	54.8	50.0	110%	3.1%
sec-Butylbenzene	57.4	50.0	115%	56.0	50.0	112%	2.5%
4-Isopropyltoluene	58.5	50.0	117%	57.2	50.0	114%	2.2%
n-Butylbenzene	59.0	50.0	118%	57.8	50.0	116%	2.1%
1,2,4-Trichlorobenzene	54.7	50.0	109%	54.4	50.0	109%	0.5%
Naphthalene	51.8 B	50.0	104%	50.7 B	50.0	101%	2.1%
1,2,3-Trichlorobenzene	51.4	50.0	103%	51.2	50.0	102%	0.4%
Methyl tert-Butyl Ether	67.8	50.0	136%	70.0	50.0	140%	3.2%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	112%	114%
d8-Toluene	102%	103%
Bromofluorobenzene	99.3%	100%
d4-1,2-Dichlorobenzene	102%	101%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-061213A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-061213A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/18/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT5/PAB
LCSD: NT5/PAB
Date Analyzed LCS: 06/12/13 12:38
LCSD: 06/12/13 14:07

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	58.3	50.0	117%	58.3	50.0	117%	0.0%
Bromomethane	57.0	50.0	114%	57.1	50.0	114%	0.2%
Vinyl Chloride	59.3	50.0	119%	61.8	50.0	124%	4.1%
Chloroethane	61.3 Q	50.0	123%	62.0 Q	50.0	124%	1.1%
Methylene Chloride	58.5 B	50.0	117%	70.4 B	50.0	141%	18.5%
Acetone	183	250	73.2%	180	250	72.0%	1.7%
Carbon Disulfide	49.0	50.0	98.0%	45.4	50.0	90.8%	7.6%
1,1-Dichloroethene	48.7	50.0	97.4%	45.8	50.0	91.6%	6.1%
1,1-Dichloroethane	64.2 Q	50.0	128%	66.1 Q	50.0	132%	2.9%
trans-1,2-Dichloroethene	65.1	50.0	130%	71.1	50.0	142%	8.8%
cis-1,2-Dichloroethene	57.7	50.0	115%	59.4	50.0	119%	2.9%
Chloroform	57.8	50.0	116%	59.7	50.0	119%	3.2%
1,2-Dichloroethane	50.6	50.0	101%	51.4	50.0	103%	1.6%
2-Butanone	273	250	109%	289	250	116%	5.7%
1,1,1-Trichloroethane	58.5	50.0	117%	59.8	50.0	120%	2.2%
Carbon Tetrachloride	53.4	50.0	107%	54.3	50.0	109%	1.7%
Vinyl Acetate	56.6	50.0	113%	57.6	50.0	115%	1.8%
Bromodichloromethane	52.4	50.0	105%	53.2	50.0	106%	1.5%
1,2-Dichloropropane	52.7	50.0	105%	52.5	50.0	105%	0.4%
cis-1,3-Dichloropropene	53.6	50.0	107%	53.8	50.0	108%	0.4%
Trichloroethene	53.4	50.0	107%	53.9	50.0	108%	0.9%
Dibromochloromethane	51.3	50.0	103%	50.6	50.0	101%	1.4%
1,1,2-Trichloroethane	51.9	50.0	104%	52.3	50.0	105%	0.8%
Benzene	54.0	50.0	108%	54.9	50.0	110%	1.7%
trans-1,3-Dichloropropene	53.3	50.0	107%	54.0	50.0	108%	1.3%
2-Chloroethylvinylether	53.7	50.0	107%	54.2	50.0	108%	0.9%
Bromoform	51.7	50.0	103%	49.1	50.0	98.2%	5.2%
4-Methyl-2-Pentanone (MIBK)	259	250	104%	259	250	104%	0.0%
2-Hexanone	246	250	98.4%	247	250	98.8%	0.4%
Tetrachloroethene	52.9	50.0	106%	53.0	50.0	106%	0.2%
1,1,2,2-Tetrachloroethane	49.8	50.0	99.6%	47.9	50.0	95.8%	3.9%
Toluene	53.5	50.0	107%	54.4	50.0	109%	1.7%
Chlorobenzene	52.4	50.0	105%	52.3	50.0	105%	0.2%
Ethylbenzene	55.1	50.0	110%	55.4	50.0	111%	0.5%
Styrene	55.6	50.0	111%	55.7	50.0	111%	0.2%
Trichlorofluoromethane	59.2	50.0	118%	60.6	50.0	121%	2.3%
1,1,2-Trichloro-1,2,2-trifluoroetha	49.5 Q	50.0	99.0%	46.4 Q	50.0	92.8%	6.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-061213A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-061213A QC Report No: WS91-SAIC
LIMS ID: 13-12076 Project: NPDES Sampling Support
Matrix: Sediment 209977

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
m,p-Xylene	110	100	110%	110	100	110%	0.0%
o-Xylene	53.6	50.0	107%	53.7	50.0	107%	0.2%
1,2-Dichlorobenzene	51.8	50.0	104%	50.4	50.0	101%	2.7%
1,3-Dichlorobenzene	53.8	50.0	108%	52.5	50.0	105%	2.4%
1,4-Dichlorobenzene	53.1	50.0	106%	51.9	50.0	104%	2.3%
Acrolein	190	250	76.0%	205	250	82.0%	7.6%
Iodomethane	46.9	50.0	93.8%	43.5	50.0	87.0%	7.5%
Bromoethane	47.4	50.0	94.8%	46.0	50.0	92.0%	3.0%
Acrylonitrile	62.0 Q	50.0	124%	62.4 Q	50.0	125%	0.6%
1,1-Dichloropropene	52.9	50.0	106%	53.2	50.0	106%	0.6%
Dibromomethane	51.2	50.0	102%	51.4	50.0	103%	0.4%
1,1,1,2-Tetrachloroethane	51.1	50.0	102%	51.3	50.0	103%	0.4%
1,2-Dibromo-3-chloropropane	47.2	50.0	94.4%	46.1	50.0	92.2%	2.4%
1,2,3-Trichloropropane	49.6	50.0	99.2%	47.0	50.0	94.0%	5.4%
trans-1,4-Dichloro-2-butene	50.4	50.0	101%	48.7	50.0	97.4%	3.4%
1,3,5-Trimethylbenzene	56.8	50.0	114%	55.1	50.0	110%	3.0%
1,2,4-Trimethylbenzene	57.0	50.0	114%	55.3	50.0	111%	3.0%
Hexachlorobutadiene	53.6	50.0	107%	53.6	50.0	107%	0.0%
1,2-Dibromoethane	51.1	50.0	102%	51.2	50.0	102%	0.2%
Bromochloromethane	60.6	50.0	121%	61.9	50.0	124%	2.1%
Dichlorodifluoromethane	57.8	50.0	116%	60.0	50.0	120%	3.7%
2,2-Dichloropropane	58.3	50.0	117%	59.8	50.0	120%	2.5%
1,3-Dichloropropane	50.8	50.0	102%	50.6	50.0	101%	0.4%
Isopropylbenzene	57.4	50.0	115%	55.7	50.0	111%	3.0%
n-Propylbenzene	57.4	50.0	115%	55.9	50.0	112%	2.6%
Bromobenzene	52.3	50.0	105%	50.5	50.0	101%	3.5%
2-Chlorotoluene	54.7	50.0	109%	53.2	50.0	106%	2.8%
4-Chlorotoluene	55.3	50.0	111%	53.8	50.0	108%	2.7%
tert-Butylbenzene	56.5	50.0	113%	54.8	50.0	110%	3.1%
sec-Butylbenzene	57.4	50.0	115%	56.0	50.0	112%	2.5%
4-Isopropyltoluene	58.5	50.0	117%	57.2	50.0	114%	2.2%
n-Butylbenzene	59.0	50.0	118%	57.8	50.0	116%	2.1%
1,2,4-Trichlorobenzene	54.7	50.0	109%	54.4	50.0	109%	0.5%
Naphthalene	51.8 B	50.0	104%	50.7 B	50.0	101%	2.1%
1,2,3-Trichlorobenzene	51.4	50.0	103%	51.2	50.0	102%	0.4%
Methyl tert-Butyl Ether	67.8	50.0	136%	70.0	50.0	140%	3.2%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	112%	114%
d8-Toluene	102%	103%
Bromofluorobenzene	99.3%	100%
d4-1,2-Dichlorobenzene	102%	101%

4A
VOLATILE METHOD BLANK SUMMARY

Method Blank ID.

MB0612

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WS91

Project: NPDES SAMPLING SUPPORT

Lab File ID: MB0612

Lab Sample ID: MB0612

Date Analyzed: 06/12/13

Time Analyzed: 1326

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	LCS0612	LCS0612	LCS0612	1238
02	LCS0612	LCS0612	LCS0612B	1407
03	CL-MH-SPS-20	WS91A	WS91A	1533
04	CL-QC-TB-201	WS91B	WS91B	1621
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-061213A**
 METHOD BLANK

Lab Sample ID: MB-061213A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/18/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/12/13 13:26

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**	**2.6**
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

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-061213A**
 METHOD BLANK

Lab Sample ID: MB-061213A
LIMS ID: 13-12076
Matrix: Sediment
Date Analyzed: 06/12/13 13:26

QC Report No: WS91-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	< 5.0 U
91-20-3	**Naphthalene**	**0.43**	**5.0**	**0.8 J**
87-61-6	1,2,3-Trichlorobenzene	0.30	5.0	< 5.0 U
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	115%
d8-Toluene	103%
Bromofluorobenzene	100%
d4-1,2-Dichlorobenzene	103%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-061213A**
 METHOD BLANK

Lab Sample ID: MB-061213A
LIMS ID: 13-12077
Matrix: Water
Data Release Authorized:
Reported: 06/18/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/12/13 13:26

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**	**2.6**
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

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-061213A**
 METHOD BLANK

Lab Sample ID: MB-061213A QC Report No: WS91-SAIC
LIMS ID: 13-12077 Project: NPDES Sampling Support
Matrix: Water 209977
Date Analyzed: 06/12/13 13:26

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**	**0.8 J**
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	115%
d8-Toluene	103%
Bromofluorobenzene	100%
d4-1,2-Dichlorobenzene	103%

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.: WS91

Lab File ID: BFB0611A BFB Injection Date: 06/11/13

Instrument ID: NT5 BFB Injection Time: 0810

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	19.4
75	30.0 - 66.0% of mass 95	45.5
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 101.0% of mass 95	83.2
175	4.0 - 9.0% of mass 174	5.9 (7.1)1
176	95.0 - 101.0% of mass 174	79.8 (95.9)1
177	5.0 - 9.0% of mass 176	5.3 (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	VSTD1	IC0611	0010611	06/11/13	0833
02	VSTD200	IC0611	2000611	06/11/13	0857
03	VSTD150	IC0611	1500611	06/11/13	0921
04	VSTD50	IC0611	0500611	06/11/13	1009
05	VSTD5	IC0611	0050611	06/11/13	1057
06	VSTD2	IC0611	0020611	06/11/13	1120
07	VSTD10	IC0611	0100611	06/11/13	1221
08	VSTD100	IC0611	1000611	06/11/13	1245
09	ICV0611	ICV0611	ICV0611	06/11/13	1404
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

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.: WS91

Lab File ID: BFB0612 BFB Injection Date: 06/12/13

Instrument ID: NT5 BFB Injection Time: 1109

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	20.0
75	30.0 - 66.0% of mass 95	46.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 101.0% of mass 95	78.0
175	4.0 - 9.0% of mass 174	5.7 (7.3)1
176	95.0 - 101.0% of mass 174	74.8 (95.9)1
177	5.0 - 9.0% of mass 176	5.0 (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	CC0612	CC0612	06/12/13	1143
02	LCS0612	LCS0612	LCS0612	06/12/13	1238
03	MB0612	MB0612	MB0612	06/12/13	1326
04	LCS0612	LCS0612	LCS0612B	06/12/13	1407
05	CL-MH-SPS-201306	WS91A	WS91A	06/12/13	1533
06	CL-QC-TB-2013060	WS91B	WS91B	06/12/13	1621
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

WS91 : 20050

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 06/11/13

LAB FILE ID: RF1: 0010611 RF2: 0020611 RF5: 0050611
RF10: 0100611 RF50: 0500611

COMPOUND	RF1	RF2	RF5	RF10	RF50
Chloromethane	2.153	1.611	1.834	1.644	1.664
Vinyl Chloride	1.999	1.531	1.631	1.738	1.655
Bromomethane	1.114	0.870	0.911	0.928	0.797
Chloroethane	1.256	1.020	1.010	1.073	0.971
Trichlorofluoromethane	2.072	1.607	1.768	1.763	1.586
Acrolein	0.299	0.258	0.229	0.268	0.277
112Trichloro122Trifluoroetha	1.173	0.975	1.013	1.000	0.978
Acetone	0.531	0.417	0.267	0.513	0.244
1,1-Dichloroethene	1.433	1.089	1.154	1.115	1.120
Bromoethane	0.880	0.677	0.689	0.739	0.740
Iodomethane	0.906	0.647	0.652	0.716	0.866
Methylene Chloride		1.966	1.258	1.395	1.115
Acrylonitrile	0.616	0.621	0.591	0.530	0.521
Carbon Disulfide	4.581	3.660	3.851	3.733	3.705
Trans-1,2-Dichloroethene	1.515	1.193	1.061	1.311	1.048
Vinyl Acetate	3.533	3.350	3.554	3.131	3.375
1,1-Dichloroethane	3.048	2.608	2.759	2.638	2.161
2-Butanone	0.169	0.163	0.171	0.142	0.177
2,2-Dichloropropane	2.465	1.871	2.036	1.989	1.868
Cis-1,2-Dichloroethene	1.598	1.421	1.447	1.361	1.349
Chloroform	2.680	2.251	2.357	2.182	2.195
Bromochloromethane	0.710	0.581	0.650	0.622	0.592
1,1,1-Trichloroethane	2.293	1.932	2.076	2.012	1.927
1,1-Dichloropropene	0.616	0.513	0.621	0.523	0.513
Carbon Tetrachloride	0.541	0.441	0.466	0.461	0.438
1,2-Dichloroethane	0.568	0.498	0.513	0.453	0.478
Benzene	1.848	1.573	1.690	1.553	1.523
Trichloroethene	0.416	0.358	0.397	0.364	0.354
1,2-Dichloropropane	0.493	0.434	0.450	0.401	0.431
Bromodichloromethane	0.536	0.462	0.479	0.445	0.468
Dibromomethane	0.220	0.201	0.210	0.186	0.204
2-Chloroethyl Vinyl Ether	0.198	0.203	0.236	0.210	0.251
4-Methyl-2-Pentanone	0.170	0.174	0.186	0.161	0.189
Cis 1,3-dichloropropene	0.683	0.582	0.643	0.591	0.618
Toluene	1.208	1.013	1.058	0.969	0.941
Trans 1,3-Dichloropropene	0.594	0.528	0.569	0.517	0.559
2-Hexanone	0.237	0.250	0.268	0.231	0.268

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 06/11/13

LAB FILE ID: RF1: 0010611 RF2: 0020611 RF5: 0050611
RF10: 0100611 RF50: 0500611

COMPOUND	RF1	RF2	RF5	RF10	RF50
1,1,2-Trichloroethane	0.322	0.301	0.323	0.288	0.313
1,3-Dichloropropane	0.519	0.481	0.494	0.443	0.492
Tetrachloroethene	0.385	0.307	0.345	0.339	0.312
Chlorodibromomethane	0.320	0.274	0.292	0.269	0.295
1,2-Dibromoethane	0.331	0.304	0.311	0.269	0.305
Chlorobenzene	0.984	0.847	0.897	0.831	0.809
Ethyl Benzene	1.753	1.453	1.603	1.526	1.436
1,1,1,2-Tetrachloroethane	0.341	0.287	0.305	0.278	0.287
m,p-xylene	0.650	0.542	0.601	0.569	0.540
o-Xylene	0.584	0.497	0.560	0.533	0.535
Styrene	0.924	0.840	0.965	0.891	0.909
Bromoform	0.416	0.362	0.385	0.349	0.392
1,1,2,2-Tetrachloroethane	0.676	0.605	0.633	0.584	0.658
1,2,3-Trichloropropane	0.201	0.192	0.197	0.178	0.198
Trans-1,4-Dichloro 2-Butene	0.248	0.219	0.228	0.219	0.250
N-Propyl Benzene	3.619	2.969	3.277	3.239	2.876
Bromobenzene	0.743	0.640	0.652	0.621	0.621
Isopropyl Benzene	2.849	2.445	2.710	2.669	2.470
2-Chloro Toluene	2.185	1.817	1.949	1.905	1.796
4-Chloro Toluene	2.174	1.906	2.031	1.988	1.852
T-Butyl Benzene	2.032	1.759	1.964	1.919	1.813
1,3,5-Trimethyl Benzene	2.403	2.042	2.252	2.216	2.067
1,2,4-Trimethylbenzene	2.370	1.999	2.235	2.175	2.048
S-Butyl Benzene	3.215	2.741	2.984	2.947	2.639
4-Isopropyl Toluene	2.525	2.170	2.410	2.402	2.172
1,3-Dichlorobenzene	1.497	1.217	1.239	1.213	1.135
1,4-Dichlorobenzene	1.526	1.255	1.297	1.233	1.153
N-Butyl Benzene	2.436	2.050	2.260	2.325	2.050
1,2-Dichlorobenzene	1.426	1.209	1.220	1.138	1.100
1,2-Dibromo 3-Chloropropane	0.128	0.129	0.119	0.113	0.126
1,2,4-Trichlorobenzene	0.954	0.797	0.827	0.831	0.791
Hexachloro 1,3-Butadiene	0.629	0.490	0.531	0.526	0.466
Naphthalene	1.917	1.975	1.994	1.706	1.946
1,2,3-Trichlorobenzene	0.908	0.838	0.838	0.772	0.767
Dichlorodifluoromethane	1.160	0.738	0.816	0.977	0.768
Methyl tert butyl ether	4.247	3.740	3.548	3.585	3.277

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 06/11/13

LAB FILE ID: RF1: 0010611 RF2: 0020611 RF5: 0050611
RF10: 0100611 RF50: 0500611

COMPOUND	RF1	RF2	RF5	RF10	RF50
d4-1,2-Dichloroethane	1.332	1.362	1.342	1.345	1.350
d8-Toluene	1.469	1.473	1.474	1.473	1.468
4-Bromofluorobenzene	0.543	0.544	0.548	0.544	0.545
d4-1,2-Dichlorobenzene	1.033	1.031	1.018	1.035	1.009
Dibromofluoromethane	1.421	1.434	1.430	1.440	1.441

WS91 - 00053

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 06/11/13

LAB FILE ID: RF100: 1000611 RF150: 1500611 RF200: 2000611

COMPOUND	RF100	RF150	RF200
Chloromethane	1.794	1.696	1.727
Vinyl Chloride	1.824	1.705	1.578
Bromomethane	0.797	0.734	0.693
Chloroethane	1.059	0.903	0.842
Trichlorofluoromethane	1.905	1.733	1.761
Acrolein	0.271	0.219	0.200
112Trichloro122Trifluoroetha	1.191	1.041	1.066
Acetone	0.209		
1,1-Dichloroethene	1.313	1.179	1.181
Bromoethane	0.807	0.683	0.674
Iodomethane	1.235	1.022	1.044
Methylene Chloride	1.075		
Acrylonitrile	0.344		
Carbon Disulfide	4.264	3.743	3.608
Trans-1,2-Dichloroethene	1.122	0.968	0.968
Vinyl Acetate	3.550	3.335	
1,1-Dichloroethane	1.733		
2-Butanone	0.184	0.178	0.166
2,2-Dichloropropane	2.213	2.056	2.079
Cis-1,2-Dichloroethene	1.538	1.453	1.462
Chloroform	2.324	2.332	2.337
Bromochloromethane	0.654	0.693	0.706
1,1,1-Trichloroethane	2.276	2.122	2.133
1,1-Dichloropropene	0.599	0.555	0.563
Carbon Tetrachloride	0.520	0.483	0.492
1,2-Dichloroethane	0.516	0.481	0.483
Benzene	1.652	1.449	1.361
Trichloroethene	0.415	0.387	0.398
1,2-Dichloropropane	0.476	0.448	0.453
Bromodichloromethane	0.513	0.484	0.489
Dibromomethane	0.220	0.209	0.213
2-Chloroethyl Vinyl Ether	0.269	0.258	0.258
4-Methyl-2-Pentanone	0.189	0.176	0.169
Cis 1,3-dichloropropene	0.675	0.626	0.623
Toluene	1.046	0.928	0.888
Trans 1,3-Dichloropropene	0.600	0.560	0.556
2-Hexanone	0.261	0.261	0.255

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 06/11/13

LAB FILE ID: RF100: 1000611 RF150: 1500611 RF200: 2000611

COMPOUND	RF100	RF150	RF200
1,1,2-Trichloroethane	0.335	0.317	0.320
1,3-Dichloropropane	0.523	0.496	0.494
Tetrachloroethene	0.375	0.346	0.359
Chlorodibromomethane	0.319	0.306	0.312
1,2-Dibromoethane	0.326	0.310	0.309
Chlorobenzene	0.883	0.791	0.767
Ethyl Benzene	1.497	1.252	1.156
1,1,1,2-Tetrachloroethane	0.321	0.301	0.305
m,p-xylene	0.580	0.498	0.467
o-Xylene	0.604	0.558	0.553
Styrene	0.973	0.857	0.805
Bromoform	0.420	0.400	0.407
1,1,2,2-Tetrachloroethane	0.699	0.681	0.699
1,2,3-Trichloropropane	0.210	0.202	0.207
Trans-1,4-Dichloro 2-Butene	0.259	0.252	0.268
N-Propyl Benzene	3.050	2.455	2.301
Bromobenzene	0.699	0.646	0.672
Isopropyl Benzene	2.662	2.204	2.059
2-Chloro Toluene	2.007	1.733	1.676
4-Chloro Toluene	2.074	1.809	1.776
T-Butyl Benzene	2.058	1.766	1.706
1,3,5-Trimethyl Benzene	2.299	1.938	1.853
1,2,4-Trimethylbenzene	2.251	1.898	1.810
S-Butyl Benzene	2.847	2.322	2.148
4-Isopropyl Toluene	2.398	1.982	1.863
1,3-Dichlorobenzene	1.279	1.122	1.114
1,4-Dichlorobenzene	1.305	1.166	1.183
N-Butyl Benzene	2.339	1.930	1.858
1,2-Dichlorobenzene	1.212	1.105	1.137
1,2-Dibromo 3-Chloropropane	0.131	0.132	0.135
1,2,4-Trichlorobenzene	0.921	0.856	0.908
Hexachloro 1,3-Butadiene	0.560	0.506	0.529
Naphthalene	1.985	1.833	1.756
1,2,3-Trichlorobenzene	0.849	0.820	0.862
Dichlorodifluoromethane	0.938	0.790	0.903
Methyl tert butyl ether	3.099	2.581	2.491

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 06/11/13

LAB FILE ID: RF100: 1000611 RF150: 1500611 RF200: 2000611

COMPOUND	RF100	RF150	RF200
d4-1,2-Dichloroethane	1.370	1.314	1.306
d8-Toluene	1.465	1.447	1.452
4-Bromofluorobenzene	0.547	0.550	0.543
d4-1,2-Dichlorobenzene	1.013	0.996	1.012
Dibromofluoromethane	1.457	1.427	1.423

WS91 · 00056

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 06/11/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
Chloromethane	AVRG	1.765	9.8
Vinyl Chloride	AVRG	1.708	8.7
Bromomethane	AVRG	0.856	15.5
Chloroethane	AVRG	1.017	12.2
Trichlorofluoromethane	AVRG	1.774	8.8
Acrolein	AVRG	0.253	13.2
112Trichloro122Trifluoroetha	AVRG	1.055	8.0
Acetone	2ORDR		0.9944
1,1-Dichloroethene	AVRG	1.198	9.8
Bromoethane	AVRG	0.736	10.0
Iodomethane	LINR		0.9902
Methylene Chloride	LINR		0.9980
Acrylonitrile	AVRG	0.537	19.3
Carbon Disulfide	AVRG	3.893	8.8
Trans-1,2-Dichloroethene	AVRG	1.148	16.3
Vinyl Acetate	AVRG	3.404	4.5
1,1-Dichloroethane	AVRG	2.491	18.8
2-Butanone	AVRG	0.169	7.6
2,2-Dichloropropane	AVRG	2.072	9.4
Cis-1,2-Dichloroethene	AVRG	1.454	5.7
Chloroform	AVRG	2.332	6.7
Bromochloromethane	AVRG	0.651	7.7
1,1,1-Trichloroethane	AVRG	2.096	6.6
1,1-Dichloropropene	AVRG	0.563	8.0
Carbon Tetrachloride	AVRG	0.480	7.6
1,2-Dichloroethane	AVRG	0.499	6.9
Benzene	AVRG	1.581	9.5
Trichloroethene	AVRG	0.386	6.4
1,2-Dichloropropane	AVRG	0.448	6.2
Bromodichloromethane	AVRG	0.485	5.9
Dibromomethane	AVRG	0.208	5.4
2-Chloroethyl Vinyl Ether	AVRG	0.236	11.9
4-Methyl-2-Pentanone	AVRG	0.177	5.8
Cis 1,3-dichloropropene	AVRG	0.630	5.7
Toluene	AVRG	1.006	10.0
Trans 1,3-Dichloropropene	AVRG	0.560	5.1
2-Hexanone	AVRG	0.254	5.4

<- 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: WS91 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 06/11/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
1,1,2-Trichloroethane	AVRG	0.315	4.6
1,3-Dichloropropane	AVRG	0.493	5.0
Tetrachloroethene	AVRG	0.346	7.9
Chlorodibromomethane	AVRG	0.299	6.5
1,2-Dibromoethane	AVRG	0.308	6.0
Chlorobenzene	AVRG	0.851	8.2
Ethyl Benzene	AVRG	1.460	12.9
1,1,1,2-Tetrachloroethane	AVRG	0.303	6.8
m,p-xylene	AVRG	0.556	10.4
o-Xylene	AVRG	0.553	5.9
Styrene	AVRG	0.895	6.6
Bromoform	AVRG	0.392	6.4
1,1,2,2-Tetrachloroethane	AVRG	0.654	6.6
1,2,3-Trichloropropane	AVRG	0.198	5.0
Trans-1,4-Dichloro 2-Butene	AVRG	0.243	7.7
N-Propyl Benzene	AVRG	2.973	14.6
Bromobenzene	AVRG	0.662	6.3
Isopropyl Benzene	AVRG	2.508	10.7
2-Chloro Toluene	AVRG	1.884	8.7
4-Chloro Toluene	AVRG	1.951	7.1
T-Butyl Benzene	AVRG	1.877	7.1
1,3,5-Trimethyl Benzene	AVRG	2.134	8.9
1,2,4-Trimethylbenzene	AVRG	2.098	9.1
S-Butyl Benzene	AVRG	2.730	12.9
4-Isopropyl Toluene	AVRG	2.240	10.4
1,3-Dichlorobenzene	AVRG	1.227	10.1
1,4-Dichlorobenzene	AVRG	1.265	9.5
N-Butyl Benzene	AVRG	2.156	9.8
1,2-Dichlorobenzene	AVRG	1.194	8.8
1,2-Dibromo 3-Chloropropane	AVRG	0.127	5.8
1,2,4-Trichlorobenzene	AVRG	0.861	7.0
Hexachloro 1,3-Butadiene	AVRG	0.530	9.3
Naphthalene	AVRG	1.889	5.9
1,2,3-Trichlorobenzene	AVRG	0.832	5.5
Dichlorodifluoromethane	AVRG	0.886	15.7
Methyl tert butyl ether	AVRG	3.321	17.8

<- 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: WS91 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Calibration Date: 06/11/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
d4-1,2-Dichloroethane	AVRG	1.340	1.6
d8-Toluene	AVRG	1.465	0.7
4-Bromofluorobenzene	AVRG	0.546	0.4
d4-1,2-Dichlorobenzene	AVRG	1.018	1.3
Dibromofluoromethane	AVRG	1.434	0.8

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

WS91 00059

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Cont. Calib. Date: 06/12/13

Init. Calib. Date: 06/11/13 Cont. Calib. Time: 1143

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Chloromethane	1.765	2.0526	0.100	AVRG	16.3	
Vinyl Chloride	1.708	1.8971	0.010	AVRG	11.1	
Bromomethane	0.856	0.9855	0.010	AVRG	15.1	
Chloroethane	1.017	1.2310	0.010	AVRG	21.0	<-
Trichlorofluoromethane	1.774	2.0891	0.010	AVRG	17.8	
Acrolein	0.253	0.2785	0.010	AVRG	10.1	
112Trichloro122Trifluoroetha	1.055	1.2685	0.010	AVRG	20.2	<-
Acetone	250.00	248.52	0.010	2ORDR	-0.6	
1,1-Dichloroethene	1.198	1.4137	0.010	AVRG	18.0	
Bromoethane	0.736	0.8529	0.010	AVRG	15.9	
Iodomethane	50.000	54.836	0.010	LINR	9.7	
Methylene Chloride	50.000	55.689	0.010	LINR	11.4	
Acrylonitrile	0.537	0.6719	0.010	AVRG	25.1	<-
Carbon Disulfide	3.893	4.6484	0.010	AVRG	19.4	
Trans-1,2-Dichloroethene	1.148	1.2253	0.010	AVRG	6.7	
Vinyl Acetate	3.404	3.9776	0.010	AVRG	16.8	
1,1-Dichloroethane	2.491	3.0325	0.100	AVRG	21.7	<-
2-Butanone	0.169	0.1954	0.010	AVRG	15.6	
2,2-Dichloropropane	2.072	2.4095	0.010	AVRG	16.3	
Cis-1,2-Dichloroethene	1.454	1.6838	0.010	AVRG	15.8	
Chloroform	2.332	2.7345	0.010	AVRG	17.2	
Bromochloromethane	0.651	0.7519	0.010	AVRG	15.5	
1,1,1-Trichloroethane	2.096	2.4777	0.010	AVRG	18.2	
1,1-Dichloropropene	0.563	0.5907	0.010	AVRG	4.9	
Carbon Tetrachloride	0.480	0.5143	0.010	AVRG	7.1	
1,2-Dichloroethane	0.499	0.5179	0.010	AVRG	3.8	
Benzene	1.581	1.7117	0.010	AVRG	8.3	
Trichloroethene	0.386	0.4077	0.010	AVRG	5.6	
1,2-Dichloropropane	0.448	0.4735	0.010	AVRG	5.7	
Bromodichloromethane	0.484	0.5166	0.010	AVRG	6.7	
Dibromomethane	0.208	0.2187	0.010	AVRG	5.1	
2-Chloroethyl Vinyl Ether	0.235	0.2628	0.010	AVRG	11.8	
4-Methyl-2-Pentanone	0.177	0.1933	0.010	AVRG	9.2	
Cis 1,3-dichloropropene	0.630	0.6848	0.010	AVRG	8.7	
Toluene	1.006	1.0775	0.010	AVRG	7.1	
Trans 1,3-Dichloropropene	0.560	0.6120	0.010	AVRG	9.3	
2-Hexanone	0.254	0.2599	0.010	AVRG	2.3	

<- 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: WS91 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Cont. Calib. Date: 06/12/13

Init. Calib. Date: 06/11/13 Cont. Calib. Time: 1143

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
1,1,2-Trichloroethane	0.315	0.3380	0.010	AVRG	7.3
1,3-Dichloropropane	0.493	0.5080	0.010	AVRG	3.0
Tetrachloroethene	0.346	0.3559	0.010	AVRG	2.9
Chlorodibromomethane	0.298	0.3098	0.010	AVRG	4.0
1,2-Dibromoethane	0.308	0.3267	0.010	AVRG	6.1
Chlorobenzene	0.851	0.8840	0.300	AVRG	3.9
Ethyl Benzene	1.460	1.5915	0.010	AVRG	9.0
1,1,1,2-Tetrachloroethane	0.303	0.3144	0.010	AVRG	3.8
m,p-xylene	0.556	0.5980	0.010	AVRG	7.6
o-Xylene	0.553	0.5901	0.010	AVRG	6.7
Styrene	0.896	0.9933	0.010	AVRG	10.8
Bromoform	0.391	0.4104	0.100	AVRG	5.0
1,1,2,2-Tetrachloroethane	0.654	0.6621	0.300	AVRG	1.2
1,2,3-Trichloropropane	0.198	0.2013	0.010	AVRG	1.7
Trans-1,4-Dichloro 2-Butene	0.243	0.2480	0.010	AVRG	2.0
N-Propyl Benzene	2.973	3.2732	0.010	AVRG	10.1
Bromobenzene	0.662	0.6709	0.010	AVRG	1.3
Isopropyl Benzene	2.508	2.7897	0.010	AVRG	11.2
2-Chloro Toluene	1.884	1.9983	0.010	AVRG	6.1
4-Chloro Toluene	1.951	2.0678	0.010	AVRG	6.0
T-Butyl Benzene	1.877	2.0604	0.010	AVRG	9.8
1,3,5-Trimethyl Benzene	2.134	2.3386	0.010	AVRG	9.6
1,2,4-Trimethylbenzene	2.098	2.2995	0.010	AVRG	9.6
S-Butyl Benzene	2.730	3.0204	0.010	AVRG	10.6
4-Isopropyl Toluene	2.240	2.5150	0.010	AVRG	12.3
1,3-Dichlorobenzene	1.227	1.2691	0.010	AVRG	3.4
1,4-Dichlorobenzene	1.265	1.2919	0.010	AVRG	2.1
N-Butyl Benzene	2.156	2.3898	0.010	AVRG	10.8
1,2-Dichlorobenzene	1.193	1.2123	0.010	AVRG	1.6
1,2-Dibromo 3-Chloropropane	0.127	0.1235	0.010	AVRG	-2.8
1,2,4-Trichlorobenzene	0.861	0.9027	0.010	AVRG	4.8
Hexachloro 1,3-Butadiene	0.530	0.5511	0.010	AVRG	4.0
Naphthalene	1.889	1.9783	0.010	AVRG	4.7
1,2,3-Trichlorobenzene	0.832	0.8420	0.010	AVRG	1.2
Dichlorodifluoromethane	0.886	1.0039	0.010	AVRG	13.3
Methyl tert butyl ether	3.321	3.7723	0.010	AVRG	13.6

<- 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: WS91 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT5 Cont. Calib. Date: 06/12/13

Init. Calib. Date: 06/11/13 Cont. Calib. Time: 1143

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
d4-1,2-Dichloroethane	1.340	1.5227	0.010	AVRG	13.6
d8-Toluene	1.465	1.4951	0.010	AVRG	2.0
4-Bromofluorobenzene	0.546	0.5473	0.010	AVRG	0.2
d4-1,2-Dichlorobenzene	1.018	1.0352	0.010	AVRG	1.7
Dibromofluoromethane	1.434	1.6636	0.010	AVRG	16.0

<- 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: WS91 | Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: 0100611 | Ical Date: 06/11/13

Instrument ID: NT5 | Project Run Date: 06/11/13

		IS1(PFB) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CLB) AREA #	RT #
	ICAL MIDPT	441694	4.66	1634225	5.11	1921755	7.59
	UPPER LIMIT	883388	5.16	3268450	5.61	3843510	8.09
	LOWER LIMIT	220847	4.16	817112	4.61	960878	7.09
	Sample ID						
01	ICV0611	434681	4.66	1638920	5.11	1920237	7.59
02							
03							
04							
05							
06							
07							
08							
09							
10							
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: WS91 | Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: 0100611 | Ical Date: 06/11/13

Instrument ID: NT5 | Project Run Date: 06/11/13

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	1018367	9.67				
	UPPER LIMIT	2036734	10.17				
	LOWER LIMIT	509184	9.17				
	Sample ID						
01	ICV0611	1043748	9.67				
02							
03							
04							
05							
06							
07							
08							
09							
10							
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.

WS91:00064

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WS91 | Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: 0100611 | Ical Date: 06/11/13

Instrument ID: NT5 | Project Run Date: 06/12/13

		IS1(PFB) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CLB) AREA #	RT #
	ICAL MIDPT	441694	4.66	1634225	5.11	1921755	7.59
	UPPER LIMIT	883388	5.16	3268450	5.61	3843510	8.09
	LOWER LIMIT	220847	4.16	817112	4.61	960878	7.09
	Sample ID						
01	LCS0612	362501	4.65	1476772	5.11	1777023	7.59
02	MB0612	355746	4.67	1457930	5.12	1809126	7.59
03	LCS0612	355434	4.67	1466677	5.12	1789446	7.60
04	CL-MH-SPS-20	338480	4.67	1391105	5.12	1577330	7.60
05	CL-QC-TB-201	361246	4.67	1486898	5.11	1868335	7.59
06							
07							
08							
09							
10							
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: WS91 | Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: 0100611 | Ical Date: 06/11/13

Instrument ID: NT5 | Project Run Date: 06/12/13

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	1018367	9.67				
	UPPER LIMIT	2036734	10.17				
	LOWER LIMIT	509184	9.17				
	Sample ID						
01	LCS0612	935154	9.67				
02	MB0612	982002	9.67				
03	LCS0612	974054	9.67				
04	CL-MH-SPS-20	661588	9.67				
05	CL-QC-TB-201	1050841	9.67				
06							
07							
08							
09							
10							
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.

WS91 : 00006

Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: WS91

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: CL-MH-SPS-20130605-S
SAMPLE

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/25/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/17/13
Date Analyzed: 06/20/13 16:38
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 5.40 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 59.3%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	**Phenol**	**16**	**37**	**880**
111-44-4	Bis-(2-Chloroethyl) Ether	6.2	37	< 37 U
95-57-8	2-Chlorophenol	4.4	37	< 37 U
541-73-1	1,3-Dichlorobenzene	4.9	37	< 37 U
106-46-7	1,4-Dichlorobenzene	5.3	37	< 37 U
100-51-6	Benzyl Alcohol	11	37	< 37 U
95-50-1	1,2-Dichlorobenzene	4.6	37	< 37 U
95-48-7	2-Methylphenol	9.7	37	< 37 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	7.0	37	< 37 U
106-44-5	**4-Methylphenol**	**12**	**37**	**270**
621-64-7	N-Nitroso-Di-N-Propylamine	6.2	37	< 37 U
67-72-1	Hexachloroethane	5.4	37	< 37 U
98-95-3	Nitrobenzene	7.5	37	< 37 U
78-59-1	Isophorone	5.3	37	< 37 U
88-75-5	2-Nitrophenol	72	180	< 180 U
105-67-9	**2,4-Dimethylphenol**	**6.4**	**74**	**110**
65-85-0	Benzoic Acid	190	740	< 740 U
111-91-1	bis(2-Chloroethoxy) Methane	3.7	37	< 37 U
120-83-2	2,4-Dichlorophenol	40	370	< 370 U
120-82-1	1,2,4-Trichlorobenzene	6.4	37	< 37 U
91-20-3	**Naphthalene**	**5.1**	**37**	**46**
106-47-8	4-Chloroaniline	41	500	< 500 U
87-68-3	Hexachlorobutadiene	8.5	37	< 37 U
59-50-7	4-Chloro-3-methylphenol	28	180	< 180 U
91-57-6	**2-Methylnaphthalene**	**5.7**	**37**	**96**
77-47-4	Hexachlorocyclopentadiene	120	740	< 740 U
88-06-2	2,4,6-Trichlorophenol	41	180	< 180 U
95-95-4	2,4,5-Trichlorophenol	40	180	< 180 U
91-58-7	2-Chloronaphthalene	4.9	37	< 37 U
88-74-4	2-Nitroaniline	34	180	< 180 U
131-11-3	Dimethylphthalate	5.4	37	< 37 U
208-96-8	Acenaphthylene	11	37	< 37 U
99-09-2	3-Nitroaniline	42	180	< 180 U
83-32-9	Acenaphthene	6.1	37	< 37 U
51-28-5	2,4-Dinitrophenol	210	1,600	< 1,600 U
100-02-7	4-Nitrophenol	64	180	< 180 U
132-64-9	**Dibenzofuran**	**7.6**	**37**	**74**
606-20-2	2,6-Dinitrotoluene	57	180	< 180 U
121-14-2	2,4-Dinitrotoluene	36	180	< 180 U
84-66-2	Diethylphthalate	68	93	< 93 U
7005-72-3	4-Chlorophenyl-phenylether	9.8	37	< 37 U
86-73-7	**Fluorene**	**8.1**	**37**	**87**
100-01-6	4-Nitroaniline	70	180	< 180 U

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: CL-MH-SPS-20130605-S
SAMPLE

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Date Analyzed: 06/20/13 16:38

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	39	370	< 370 U
86-30-6	**N-Nitrosodiphenylamine**	**10**	**37**	**78 M**
101-55-3	4-Bromophenyl-phenylether	9.3	37	< 37 U
118-74-1	Hexachlorobenzene	7.9	37	< 37 U
87-86-5	Pentachlorophenol	90	370	< 370 U
85-01-8	**Phenanthrene**	**6.7**	**37**	**690**
86-74-8	Carbazole	5.0	37	< 37 U
120-12-7	Anthracene	8.3	37	< 37 U
84-74-2	Di-n-Butylphthalate	15	37	< 37 U
206-44-0	**Fluoranthene**	**5.4**	**37**	**430**
129-00-0	**Pyrene**	**3.6**	**37**	**320**
85-68-7	Butylbenzylphthalate	11	37	< 37 U
91-94-1	3,3'-Dichlorobenzidine	33	280	< 280 U
56-55-3	**Benzo(a)anthracene**	**6.1**	**37**	**52**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**27**	**46**	**2,100**
218-01-9	**Chrysene**	**6.9**	**37**	**190**
117-84-0	**Di-n-Octyl phthalate**	**11**	**37**	**100**
50-32-8	**Benzo(a)pyrene**	**10**	**37**	**37**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**8.7**	**37**	**30 J**
53-70-3	Dibenz(a,h)anthracene	8.0	37	< 37 U
191-24-2	**Benzo(g,h,i)perylene**	**8.1**	**37**	**63**
62-53-3	Aniline	74	1,000	< 1,000 U
62-75-9	N-Nitrosodimethylamine	26	180	< 180 U
90-12-0	**1-Methylnaphthalene**	**5.0**	**37**	**56**
TOTBFA	**Total Benzofluoranthenes**	**5.1**	**74**	**150**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	58.6%	2-Fluorobiphenyl	77.2%
d14-p-Terphenyl	80.0%	d4-1,2-Dichlorobenzene	64.8%
d5-Phenol	66.1%	2-Fluorophenol	43.2%
2,4,6-Tribromophenol	7.1%	d4-2-Chlorophenol	55.2%

WS91 : 209977

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-061713	65.6%	66.6%	85.8%	64.2%	56.1%	60.0%	84.7%	62.8%	0
LCS-061713	64.4%	68.8%	82.8%	64.2%	71.6%	64.5%	82.3%	66.5%	0
CL-MH-SPS-20130605	58.6%	77.2%	80.0%	64.8%	66.1%	43.2%	7.1%*	55.2%	1
CL-MH-SPS-20130605 MS	55.2%	77.0%	74.8%	62.8%	62.0%	35.1%	11.5%*	34.4%	1
CL-MH-SPS-20130605 MSD	65.0%	77.6%	77.6%	65.4%	60.5%	32.0%	23.6%*	50.9%	1

	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: 13-12076 to 13-12076

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: CL-MH-SPS-20130605-S
MS/MSD

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/25/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted MS/MSD: 06/17/13

Date Analyzed MS: 06/20/13 17:14
MSD: 06/20/13 17:51
Instrument/Analyst MS: NT10/YZ
MSD: NT10/YZ
GPC Cleanup: Yes

Sample Amount MS: 5.45 g-dry-wt
MSD: 5.42 g-dry-wt
Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL
Dilution Factor MS: 1.00
MSD: 1.00
Percent Moisture: 59.3 %

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Phenol	880	1310	917	46.9%	1230	923	37.9%	6.3%
Bis-(2-Chloroethyl) Ether	< 37 U	699	917	76.2%	694	923	75.2%	0.7%
2-Chlorophenol	< 37 U	413	917	45.0%	269	923	29.1%	42.2%
1,3-Dichlorobenzene	< 37 U	560	917	61.1%	600	923	65.0%	6.9%
1,4-Dichlorobenzene	< 37 U	561	917	61.2%	624	923	67.6%	10.6%
Benzyl Alcohol	< 37 U	760	917	82.9%	755	923	81.8%	0.7%
1,2-Dichlorobenzene	< 37 U	604	917	65.9%	642	923	69.6%	6.1%
2-Methylphenol	< 37 U	681	917	74.3%	607	923	65.8%	11.5%
2,2'-Oxybis(1-Chloropropane)	< 37 U	661	917	72.1%	725	923	78.5%	9.2%
4-Methylphenol	270	1370	1830	60.1%	1390	1850	60.5%	1.4%
N-Nitroso-Di-N-Propylamine	< 37 U	769	917	83.9%	782	923	84.7%	1.7%
Hexachloroethane	< 37 U	363	917	39.6%	485	923	52.5%	28.8%
Nitrobenzene	< 37 U	620	917	67.6%	661	923	71.6%	6.4%
Isophorone	< 37 U	609	917	66.4%	640	923	69.3%	5.0%
2-Nitrophenol	< 180 U	270	917	29.4%	303	923	32.8%	11.5%
2,4-Dimethylphenol	110	2140	2750	73.8%	2140	2770	73.3%	0.0%
Benzoic Acid	< 740 U	< 734 U	5050	NA	< 738 U	5070	NA	NA
bis(2-Chloroethoxy) Methane	< 37 U	688	917	75.0%	755	923	81.8%	9.3%
2,4-Dichlorophenol	< 370 U	971	2750	35.3%	970	2770	35.0%	0.1%
1,2,4-Trichlorobenzene	< 37 U	644	917	70.2%	697	923	75.5%	7.9%
Naphthalene	46	646	917	65.4%	675	923	68.1%	4.4%
4-Chloroaniline	< 500 U	404 J	2750	14.7%	686	2770	24.8%	51.7%
Hexachlorobutadiene	< 37 U	651	917	71.0%	697	923	75.5%	6.8%
4-Chloro-3-methylphenol	< 180 U	2180	2750	79.3%	2320	2770	83.8%	6.2%
2-Methylnaphthalene	96	846	917	81.8%	786	923	74.8%	7.4%
Hexachlorocyclopentadiene	< 740 U	< 734 U	2750	NA	< 738 U	2770	NA	NA
2,4,6-Trichlorophenol	< 180 U	367	2750	13.3%	662	2770	23.9%	57.3%
2,4,5-Trichlorophenol	< 180 U	806	2750	29.3%	950	2770	34.3%	16.4%
2-Chloronaphthalene	< 37 U	787	917	85.8%	819	923	88.7%	4.0%
2-Nitroaniline	< 180 U	2930	2750	107%	2890	2770	104%	1.4%
Dimethylphthalate	< 37 U	594	917	64.8%	668	923	72.4%	11.7%
Acenaphthylene	< 37 U	772	917	84.2%	714	923	77.4%	7.8%
3-Nitroaniline	< 180 U	1320	2750	48.0%	1660	2770	59.9%	22.8%
Acenaphthene	< 37 U	993	917	108%	779	923	84.4%	24.2%
2,4-Dinitrophenol	< 1600 U	1620 Q	5050	32.1%	1390 J	5070	27.4%	15.3%
4-Nitrophenol	< 180 U	< 183 U	2750	NA	< 185 U	2770	NA	NA
Dibenzofuran	74	1270	917	130%	810	923	79.7%	44.2%
2,6-Dinitrotoluene	< 180 U	2270	2750	82.5%	2400	2770	86.6%	5.6%
2,4-Dinitrotoluene	< 180 U	2050	2750	74.5%	2150	2770	77.6%	4.8%
Diethylphthalate	< 93 U	710	917	77.4%	747	923	80.9%	5.1%
4-Chlorophenyl-phenylether	< 37 U	831	917	90.6%	858	923	93.0%	3.2%
Fluorene	87	1390	917	142%	782	923	75.3%	56.0%
4-Nitroaniline	< 180 U	2100	2750	76.4%	1740	2770	62.8%	18.8%
4,6-Dinitro-2-Methylphenol	< 370 U	2420	5050	47.9%	2450	5070	48.3%	1.2%
N-Nitrosodiphenylamine	78 M	943	917	94.3%	980	923	97.7%	3.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: CL-MH-SPS-20130605-S
MS/MSD

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Date Analyzed MS: 06/20/13 17:14
MSD: 06/20/13 17:51

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
4-Bromophenyl-phenylether	< 37 U	833	917	90.8%	899	923	97.4%	7.6%
Hexachlorobenzene	< 37 U	785	917	85.6%	843	923	91.3%	7.1%
Pentachlorophenol	< 370 U	371	2750	13.5%	780	2770	28.2%	71.1%
Phenanthrene	690	7710 E	917	766%	1360	923	72.6%	140%
Carbazole	< 37 U	1530	917	167%	1250	923	135%	20.1%
Anthracene	< 37 U	908	917	99.0%	815	923	88.3%	10.8%
Di-n-Butylphthalate	< 37 U	939	917	102%	959	923	104%	2.1%
Fluoranthene	430	6400 E	917	651%	1300	923	94.3%	132%
Pyrene	320	3270	917	322%	1010	923	74.8%	106%
Butylbenzylphthalate	< 37 U	791	917	86.3%	858	923	93.0%	8.1%
3,3'-Dichlorobenzidine	< 280 U	< 275 U	2750	NA	262 J	2770	9.5%	NA
Benzo(a)anthracene	52	1140	917	119%	832	923	84.5%	31.2%
bis(2-Ethylhexyl)phthalate	2100	2610	917	55.6%	3020	923	99.7%	14.6%
Chrysene	190	2280	917	228%	980	923	85.6%	79.8%
Di-n-Octyl phthalate	100	831	917	79.7%	887	923	85.3%	6.5%
Benzo(a)pyrene	37	927	917	97.1%	810	923	83.7%	13.5%
Indeno(1,2,3-cd)pyrene	30 J	776	917	81.4%	756	923	78.7%	2.6%
Dibenz(a,h)anthracene	< 37 U	631	917	68.8%	729	923	79.0%	14.4%
Benzo(g,h,i)perylene	63	717	917	71.3%	696	923	68.6%	3.0%
Aniline	< 1000 U	264 J	2750	9.6%	338 J	2770	12.2%	24.6%
N-Nitrosodimethylamine	< 180 U	593	2750	21.6%	821	2770	29.6%	32.2%
1-Methylnaphthalene	56	815	917	82.8%	815	923	82.2%	0.0%
Total Benzofluoranthenes	150	2720	1830	140%	1650	1850	81.1%	49.0%

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.

WS91 : 00072

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: CL-MH-SPS-20130605-S
MATRIX SPIKE

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/25/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/17/13
Date Analyzed: 06/20/13 17:14
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 5.45 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 59.3%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	16	37	---
111-44-4	Bis-(2-Chloroethyl) Ether	6.1	37	---
95-57-8	2-Chlorophenol	4.4	37	---
541-73-1	1,3-Dichlorobenzene	4.8	37	---
106-46-7	1,4-Dichlorobenzene	5.2	37	---
100-51-6	Benzyl Alcohol	11	37	---
95-50-1	1,2-Dichlorobenzene	4.6	37	---
95-48-7	2-Methylphenol	9.6	37	---
108-60-1	2,2'-Oxybis(1-Chloropropane)	6.9	37	---
106-44-5	4-Methylphenol	12	37	---
621-64-7	N-Nitroso-Di-N-Propylamine	6.2	37	---
67-72-1	Hexachloroethane	5.4	37	---
98-95-3	Nitrobenzene	7.4	37	---
78-59-1	Isophorone	5.2	37	---
88-75-5	2-Nitrophenol	71	180	---
105-67-9	2,4-Dimethylphenol	6.3	73	---
65-85-0	Benzoic Acid	190	730	---
111-91-1	bis(2-Chloroethoxy) Methane	3.7	37	---
120-83-2	2,4-Dichlorophenol	39	370	---
120-82-1	1,2,4-Trichlorobenzene	6.4	37	---
91-20-3	Naphthalene	5.1	37	---
106-47-8	4-Chloroaniline	41	500	---
87-68-3	Hexachlorobutadiene	8.4	37	---
59-50-7	4-Chloro-3-methylphenol	28	180	---
91-57-6	2-Methylnaphthalene	5.6	37	---
77-47-4	Hexachlorocyclopentadiene	120	730	---
88-06-2	2,4,6-Trichlorophenol	41	180	---
95-95-4	2,4,5-Trichlorophenol	39	180	---
91-58-7	2-Chloronaphthalene	4.8	37	---
88-74-4	2-Nitroaniline	34	180	---
131-11-3	Dimethylphthalate	5.3	37	---
208-96-8	Acenaphthylene	10	37	---
99-09-2	3-Nitroaniline	41	180	---
83-32-9	Acenaphthene	6.0	37	---
51-28-5	2,4-Dinitrophenol	200	1,600	---
100-02-7	4-Nitrophenol	64	180	---
132-64-9	Dibenzofuran	7.5	37	---
606-20-2	2,6-Dinitrotoluene	56	180	---
121-14-2	2,4-Dinitrotoluene	36	180	---
84-66-2	Diethylphthalate	67	92	---
7005-72-3	4-Chlorophenyl-phenylether	9.7	37	---
86-73-7	Fluorene	8.0	37	---
100-01-6	4-Nitroaniline	70	180	---

WS91:00075

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: CL-MH-SPS-20130605-S
MATRIX SPIKE

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Date Analyzed: 06/20/13 17:14

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	39	370	---
86-30-6	N-Nitrosodiphenylamine	9.9	37	---
101-55-3	4-Bromophenyl-phenylether	9.2	37	---
118-74-1	Hexachlorobenzene	7.9	37	---
87-86-5	Pentachlorophenol	89	370	---
85-01-8	Phenanthrene	6.7	37	---
86-74-8	Carbazole	4.9	37	---
120-12-7	Anthracene	8.3	37	---
84-74-2	Di-n-Butylphthalate	15	37	---
206-44-0	Fluoranthene	5.3	37	---
129-00-0	Pyrene	3.6	37	---
85-68-7	Butylbenzylphthalate	11	37	---
91-94-1	3,3'-Dichlorobenzidine	33	280	---
56-55-3	Benzo(a)anthracene	6.0	37	---
117-81-7	bis(2-Ethylhexyl)phthalate	27	46	---
218-01-9	Chrysene	6.9	37	---
117-84-0	Di-n-Octyl phthalate	11	37	---
50-32-8	Benzo(a)pyrene	10	37	---
193-39-5	Indeno(1,2,3-cd)pyrene	8.6	37	---
53-70-3	Dibenz(a,h)anthracene	7.9	37	---
191-24-2	Benzo(g,h,i)perylene	8.1	37	---
62-53-3	Aniline	73	990	---
62-75-9	N-Nitrosodimethylamine	26	180	---
90-12-0	1-Methylnaphthalene	4.9	37	---
TOTBFA	Total Benzofluoranthenes	5.0	73	---

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	55.2%	2-Fluorobiphenyl	77.0%
d14-p-Terphenyl	74.8%	d4-1,2-Dichlorobenzene	62.8%
d5-Phenol	62.0%	2-Fluorophenol	35.1%
2,4,6-Tribromophenol	11.5%	d4-2-Chlorophenol	34.4%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: CL-MH-SPS-20130605-S
MATRIX SPIKE DUPLICATE

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/25/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/17/13
Date Analyzed: 06/20/13 17:51
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 5.42 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 59.3%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	16	37	---
111-44-4	Bis-(2-Chloroethyl) Ether	6.2	37	---
95-57-8	2-Chlorophenol	4.4	37	---
541-73-1	1,3-Dichlorobenzene	4.9	37	---
106-46-7	1,4-Dichlorobenzene	5.3	37	---
100-51-6	Benzyl Alcohol	11	37	---
95-50-1	1,2-Dichlorobenzene	4.6	37	---
95-48-7	2-Methylphenol	9.7	37	---
108-60-1	2,2'-Oxybis(1-Chloropropane)	6.9	37	---
106-44-5	4-Methylphenol	12	37	---
621-64-7	N-Nitroso-Di-N-Propylamine	6.2	37	---
67-72-1	Hexachloroethane	5.4	37	---
98-95-3	Nitrobenzene	7.5	37	---
78-59-1	Isophorone	5.3	37	---
88-75-5	2-Nitrophenol	71	180	---
105-67-9	2,4-Dimethylphenol	6.4	74	---
65-85-0	Benzoic Acid	190	740	---
111-91-1	bis(2-Chloroethoxy) Methane	3.7	37	---
120-83-2	2,4-Dichlorophenol	40	370	---
120-82-1	1,2,4-Trichlorobenzene	6.4	37	---
91-20-3	Naphthalene	5.1	37	---
106-47-8	4-Chloroaniline	41	500	---
87-68-3	Hexachlorobutadiene	8.4	37	---
59-50-7	4-Chloro-3-methylphenol	28	180	---
91-57-6	2-Methylnaphthalene	5.6	37	---
77-47-4	Hexachlorocyclopentadiene	120	740	---
88-06-2	2,4,6-Trichlorophenol	41	180	---
95-95-4	2,4,5-Trichlorophenol	39	180	---
91-58-7	2-Chloronaphthalene	4.9	37	---
88-74-4	2-Nitroaniline	34	180	---
131-11-3	Dimethylphthalate	5.4	37	---
208-96-8	Acenaphthylene	11	37	---
99-09-2	3-Nitroaniline	42	180	---
83-32-9	Acenaphthene	6.1	37	---
51-28-5	2,4-Dinitrophenol	200	1,600	---
100-02-7	4-Nitrophenol	64	180	---
132-64-9	Dibenzofuran	7.6	37	---
606-20-2	2,6-Dinitrotoluene	56	180	---
121-14-2	2,4-Dinitrotoluene	36	180	---
84-66-2	Diethylphthalate	68	92	---
7005-72-3	4-Chlorophenyl-phenylether	9.8	37	---
86-73-7	Fluorene	8.0	37	---
100-01-6	4-Nitroaniline	70	180	---

WS91 : 020975

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

Sample ID: CL-MH-SPS-20130605-S
MATRIX SPIKE DUPLICATE

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Date Analyzed: 06/20/13 17:51

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	39	370	---
86-30-6	N-Nitrosodiphenylamine	9.9	37	---
101-55-3	4-Bromophenyl-phenylether	9.3	37	---
118-74-1	Hexachlorobenzene	7.9	37	---
87-86-5	Pentachlorophenol	89	370	---
85-01-8	Phenanthrene	6.7	37	---
86-74-8	Carbazole	5.0	37	---
120-12-7	Anthracene	8.3	37	---
84-74-2	Di-n-Butylphthalate	15	37	---
206-44-0	Fluoranthene	5.4	37	---
129-00-0	Pyrene	3.6	37	---
85-68-7	Butylbenzylphthalate	11	37	---
91-94-1	3,3'-Dichlorobenzidine	33	280	---
56-55-3	Benzo(a)anthracene	6.1	37	---
117-81-7	bis(2-Ethylhexyl)phthalate	27	46	---
218-01-9	Chrysene	6.9	37	---
117-84-0	Di-n-Octyl phthalate	11	37	---
50-32-8	Benzo(a)pyrene	10	37	---
193-39-5	Indeno(1,2,3-cd)pyrene	8.6	37	---
53-70-3	Dibenz(a,h)anthracene	8.0	37	---
191-24-2	Benzo(g,h,i)perylene	8.1	37	---
62-53-3	Aniline	74	1,000	---
62-75-9	N-Nitrosodimethylamine	26	180	---
90-12-0	1-Methylnaphthalene	4.9	37	---
TOTBFA	Total Benzofluoranthenes	5.1	74	---

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.0%	2-Fluorobiphenyl	77.6%
d14-p-Terphenyl	77.6%	d4-1,2-Dichlorobenzene	65.4%
d5-Phenol	60.5%	2-Fluorophenol	32.0%
2,4,6-Tribromophenol	23.6%	d4-2-Chlorophenol	50.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LCS-061713
LAB CONTROL

Lab Sample ID: LCS-061713
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/25/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/17/13
Date Analyzed: 06/20/13 16:01
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	309		500	61.8%
Bis-(2-Chloroethyl) Ether	350		500	70.0%
2-Chlorophenol	302		500	60.4%
1,3-Dichlorobenzene	325		500	65.0%
1,4-Dichlorobenzene	330		500	66.0%
Benzyl Alcohol	279		500	55.8%
1,2-Dichlorobenzene	339		500	67.8%
2-Methylphenol	290		500	58.0%
2,2'-Oxybis(1-Chloropropane)	357		500	71.4%
4-Methylphenol	600		1000	60.0%
N-Nitroso-Di-N-Propylamine	364		500	72.8%
Hexachloroethane	336		500	67.2%
Nitrobenzene	347		500	69.4%
Isophorone	340		500	68.0%
2-Nitrophenol	334		500	66.8%
2,4-Dimethylphenol	861		1500	57.4%
Benzoic Acid	1090	Q	2750	39.6%
bis(2-Chloroethoxy) Methane	379		500	75.8%
2,4-Dichlorophenol	1020		1500	68.0%
1,2,4-Trichlorobenzene	344		500	68.8%
Naphthalene	321		500	64.2%
4-Chloroaniline	101	J	1500	6.7%
Hexachlorobutadiene	344		500	68.8%
4-Chloro-3-methylphenol	1170		1500	78.0%
2-Methylnaphthalene	348		500	69.6%
Hexachlorocyclopentadiene	486	Q	1500	32.4%
2,4,6-Trichlorophenol	1120		1500	74.7%
2,4,5-Trichlorophenol	1100		1500	73.3%
2-Chloronaphthalene	385		500	77.0%
2-Nitroaniline	1340		1500	89.3%
Dimethylphthalate	455		500	91.0%
Acenaphthylene	338		500	67.6%
3-Nitroaniline	219		1500	14.6%
Acenaphthene	367		500	73.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LCS-061713
LAB CONTROL

Lab Sample ID: LCS-061713
LIMS ID: 13-12076
Matrix: Sediment
Date Analyzed: 06/20/13 16:01

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977

Analyte	Lab Control	Spike Added	Recovery
2,4-Dinitrophenol	1400 Q	2750	50.9%
4-Nitrophenol	679 Q	1500	45.3%
Dibenzofuran	386	500	77.2%
2,6-Dinitrotoluene	1310	1500	87.3%
2,4-Dinitrotoluene	1400	1500	93.3%
Diethylphthalate	450	500	90.0%
4-Chlorophenyl-phenylether	447	500	89.4%
Fluorene	365	500	73.0%
4-Nitroaniline	695	1500	46.3%
4,6-Dinitro-2-Methylphenol	1880	2750	68.4%
N-Nitrosodiphenylamine	314	500	62.8%
4-Bromophenyl-phenylether	434	500	86.8%
Hexachlorobenzene	378	500	75.6%
Pentachlorophenol	944	1500	62.9%
Phenanthrene	409	500	81.8%
Carbazole	579	500	116%
Anthracene	372	500	74.4%
Di-ń-Butylphthalate	493	500	98.6%
Fluoranthene	425	500	85.0%
Pyrene	419	500	83.8%
Butylbenzylphthalate	545	500	109%
3,3'-Dichlorobenzidine	< 150 U	1500	NA
Benzo(a)anthracene	408	500	81.6%
bis(2-Ethylhexyl)phthalate	428	500	85.6%
Chrysene	389	500	77.8%
Di-n-Octyl phthalate	395	500	79.0%
Benzo(a)pyrene	385	500	77.0%
Indeno(1,2,3-cd)pyrene	380	500	76.0%
Dibenz(a,h)anthracene	380	500	76.0%
Benzo(g,h,i)perylene	337	500	67.4%
Aniline	50.0 J	1500	3.3%
N-Nitrosodimethylamine	897	1500	59.8%
1-Methylnaphthalene	371	500	74.2%
Total Benzofluoranthenes	800	1000	80.0%

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.4%
2-Fluorobiphenyl	68.8%
d14-p-Terphenyl	82.8%
d4-1,2-Dichlorobenzene	64.2%
d5-Phenol	71.6%
2-Fluorophenol	64.5%
2,4,6-Tribromophenol	82.3%
d4-2-Chlorophenol	66.5%

Reported in µg/kg (ppb)

WS91:00078

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WS91MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No: WS91
Project: NPDES SAMPLING SUPPO

Lab File ID: WS91MB
Date Extracted: 06/17/13

Instrument ID: NT10
Date Analyzed: 06/24/13

Matrix: SOLID
Time Analyzed: 1618

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WS91LCSS1	WS91LCSS1	WS91SB	06/20/13
02	CL-MH-SPS-201306	WS91A	WS91A	06/20/13
03	CL-MH-SPS-20130	WS91AMS	WS91AMS	06/20/13
04	CL-MH-SPS-20130	WS91AMSD	WS91AMSD	06/20/13
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

FORM IV SV

WS91 : 00079

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MB-061713
METHOD BLANK

Lab Sample ID: MB-061713
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/25/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/17/13
Date Analyzed: 06/24/13 16:18
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	8.6	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	3.4	20	< 20 U
95-57-8	2-Chlorophenol	2.4	20	< 20 U
541-73-1	1,3-Dichlorobenzene	2.6	20	< 20 U
106-46-7	1,4-Dichlorobenzene	2.9	20	< 20 U
100-51-6	Benzyl Alcohol	6.1	20	< 20 U
95-50-1	1,2-Dichlorobenzene	2.5	20	< 20 U
95-48-7	2-Methylphenol	5.2	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	3.8	20	< 20 U
106-44-5	4-Methylphenol	6.6	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	3.4	20	< 20 U
67-72-1	Hexachloroethane	2.9	20	< 20 U
98-95-3	Nitrobenzene	4.1	20	< 20 U
78-59-1	Isophorone	2.9	20	< 20 U
88-75-5	2-Nitrophenol	39	100	< 100 U
105-67-9	2,4-Dimethylphenol	3.5	40	< 40 U
65-85-0	Benzoic Acid	100	400	< 400 U
111-91-1	bis(2-Chloroethoxy) Methane	2.0	20	< 20 U
120-83-2	2,4-Dichlorophenol	22	200	< 200 U
120-82-1	1,2,4-Trichlorobenzene	3.5	20	< 20 U
91-20-3	Naphthalene	2.8	20	< 20 U
106-47-8	4-Chloroaniline	22	270	< 270 U
87-68-3	Hexachlorobutadiene	4.6	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	15	100	< 100 U
91-57-6	2-Methylnaphthalene	3.1	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	66	400	< 400 U
88-06-2	2,4,6-Trichlorophenol	22	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	21	100	< 100 U
91-58-7	2-Chloronaphthalene	2.6	20	< 20 U
88-74-4	2-Nitroaniline	18	100	< 100 U
131-11-3	Dimethylphthalate	2.9	20	< 20 U
208-96-8	Acenaphthylene	5.7	20	< 20 U
99-09-2	3-Nitroaniline	22	100	< 100 U
83-32-9	Acenaphthene	3.3	20	< 20 U
51-28-5	2,4-Dinitrophenol	110	850	< 850 U
100-02-7	4-Nitrophenol	35	100	< 100 U
132-64-9	Dibenzofuran	4.1	20	< 20 U
606-20-2	2,6-Dinitrotoluene	31	100	< 100 U
121-14-2	2,4-Dinitrotoluene	20	100	< 100 U
84-66-2	Diethylphthalate	37	50	< 50 U
7005-72-3	4-Chlorophenyl-phenylether	5.3	20	< 20 U
86-73-7	Fluorene	4.4	20	< 20 U
100-01-6	4-Nitroaniline	38	100	< 100 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MB-061713**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-061713 QC Report No: WS91-SAIC
LIMS ID: 13-12076 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 06/24/13 16:18

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

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.6%	2-Fluorobiphenyl	66.6%
d14-p-Terphenyl	85.8%	d4-1,2-Dichlorobenzene	64.2%
d5-Phenol	56.1%	2-Fluorophenol	60.0%
2,4,6-Tribromophenol	84.7%	d4-2-Chlorophenol	62.8%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	16.7
68	Less than 2.0% of mass 69	0.5 (1.6)1
69	Mass 69 relative abundance	32.0
70	Less than 2.0% of mass 69	0.1 (0.5)1
127	10.0 - 80.0% of mass 198	44.8
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	27.4
365	Greater than 1.0% of mass 198	4.00
441	0.0 - 24.0% of mass 442	16.8 (15.6)2
442	50.0 - 200.0% of mass 198	108.0
443	15.0 - 24.0% of mass 442	20.8 (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		IC0429A	IC0429A	04/29/13	1653
02		IC0429B	IC0429B	04/29/13	1730
03		IC0429C	IC0429C	04/29/13	1807
04		IC0429D	IC0429D	04/29/13	1844
05		IC0429E	IC0429E	04/29/13	1921
06		IC0429G	IC0429G	04/29/13	2034
07		IC0429I	IC0429I	04/29/13	2147
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

USEPA - 00262

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 06/20/13 DFTPP Injection Time: 1003

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	17.0
68	Less than 2.0% of mass 69	0.5 (1.4)1
69	Mass 69 relative abundance	34.0
70	Less than 2.0% of mass 69	0.1 (0.4)1
127	10.0 - 80.0% of mass 198	45.2
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	6.8
275	10.0 - 60.0% of mass 198	27.2
365	Greater than 1.0% of mass 198	3.90
441	0.0 - 24.0% of mass 442	16.9 (15.4)2
442	50.0 - 200.0% of mass 198	109.7
443	15.0 - 24.0% of mass 442	21.4 (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	WS91LCSS1	WS91LCSS1	WS91SB	06/20/13	1601
02	CL-MH-SPS-201306	WS91A	WS91A	06/20/13	1638
03	CL-MH-SPS-20130	WS91AMS	WS91AMS	06/20/13	1714
04	CL-MH-SPS-20130	WS91AMSD	WS91AMSD	06/20/13	1751
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

WS91:00000

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 06/24/13 DFTPP Injection Time: 1450

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	18.9
68	Less than 2.0% of mass 69	0.7 (2.0)1
69	Mass 69 relative abundance	36.3
70	Less than 2.0% of mass 69	0.1 (0.4)1
127	10.0 - 80.0% of mass 198	47.3
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	27.5
365	Greater than 1.0% of mass 198	3.91
441	0.0 - 24.0% of mass 442	16.2 (15.4)2
442	50.0 - 200.0% of mass 198	105.0
443	15.0 - 24.0% of mass 442	20.5 (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		ABN 5	CC0624	06/24/13	1505
02	WS91MBS1	WS91MBS1	WS91MB	06/24/13	1618
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

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

Method = ABN.m
Cal levels = 7

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

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

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

FORM VI SV-1

WS91 : 00065

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

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

Method = ABN.m
Cal levels = 7

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

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

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

FORM VI SV-2

WS91 : 00086

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

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

Method = ABN.m
Cal levels = 7

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

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

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

WS91:29987

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WS91 | Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 | Cont. Calib. Date: 06/20/13

Init. Calib. Date: 04/29/13 | Cont. Calib. Time: 1018

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	2.068	2.114	0.800	AVRG	2.2	
Bis(2-Chloroethyl)ether	1.487	1.438	0.700	AVRG	-3.3	
2-Chlorophenol	1.595	1.601	0.800	AVRG	0.4	
1,3-Dichlorobenzene	1.600	1.588	0.010	AVRG	-0.8	
1,4-Dichlorobenzene	1.577	1.567	0.010	AVRG	-0.6	
1,2-Dichlorobenzene	1.510	1.474	0.010	AVRG	-2.4	
Benzyl alcohol	0.870	0.925	0.010	AVRG	6.3	
2,2'-oxybis(1-Chloropropane)	0.459	0.468	0.010	AVRG	2.0	
2-Methylphenol	1.488	1.505	0.700	AVRG	1.1	
Hexachloroethane	0.660	0.651	0.300	AVRG	-1.4	
N-Nitroso-di-n-propylamine	0.929	0.969	0.500	AVRG	4.3	
4-Methylphenol	1.517	1.528	0.600	AVRG	0.7	
Nitrobenzene	0.390	0.370	0.200	AVRG	-5.1	
Isophorone	0.733	0.708	0.400	AVRG	-3.4	
2-Nitrophenol	0.218	0.239	0.100	AVRG	9.6	
2,4-Dimethylphenol	0.401	0.378	0.200	AVRG	-5.7	
Bis(2-Chloroethoxy)methane	0.432	0.424	0.300	AVRG	-1.8	
2,4-Dichlorophenol	0.370	0.374	0.200	AVRG	1.1	
1,2,4-Trichlorobenzene	0.361	0.345	0.010	AVRG	-4.4	
Naphthalene	1.065	1.007	0.700	AVRG	-5.4	
Benzoic acid	20.00	14.06	0.010	2ORDR	-29.7	<-
4-Chloroaniline	0.416	0.452	0.010	AVRG	8.6	
Hexachlorobutadiene	0.214	0.211	0.010	AVRG	-1.4	
4-Chloro-3-methylphenol	0.325	0.360	0.200	AVRG	10.8	
2-Methylnaphthalene	0.707	0.685	0.400	AVRG	-3.1	
Hexachlorocyclopentadiene	0.440	0.271	0.050	AVRG	-38.4	<-
2,4,6-Trichlorophenol	0.421	0.438	0.200	AVRG	4.0	
2,4,5-Trichlorophenol	0.434	0.470	0.200	AVRG	8.3	
2-Chloronaphthalene	1.112	1.067	0.800	AVRG	-4.0	
2-Nitroaniline	0.268	0.290	0.010	AVRG	8.2	
Acenaphthylene	1.885	1.736	0.900	AVRG	-7.9	
Dimethylphthalate	1.201	1.174	0.010	AVRG	-2.2	
2,6-Dinitrotoluene	0.281	0.285	0.200	AVRG	1.4	
Acenaphthene	1.136	1.054	0.900	AVRG	-7.2	
3-Nitroaniline	0.232	0.266	0.010	AVRG	14.6	
2,4-Dinitrophenol	20.00	12.03	0.010	2ORDR	-39.8	<-
Dibenzofuran	1.553	1.458	0.800	AVRG	-6.1	

<- Exceeds QC limit of 20% D

* RF less than minimum RF

WS91 : 20250

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 06/20/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1018

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
4-Nitrophenol	10.00	7.868	0.010	2ORDR	-21.3	<-
2,4-Dinitrotoluene	0.363	0.382	0.200	AVRG	5.2	
Fluorene	1.325	1.232	0.900	AVRG	-7.0	
4-Chlorophenyl-phenylether	0.652	0.680	0.400	AVRG	4.3	
Diethylphthalate	1.206	1.186	0.010	AVRG	-1.6	
4-Nitroaniline	0.241	0.233	0.010	AVRG	-3.3	
4,6-Dinitro-2-methylphenol	20.00	17.51	0.010	2ORDR	-12.4	
N-Nitrosodiphenylamine(1)	0.463	0.456	0.010	AVRG	-1.5	
4-Bromophenyl-phenylether	0.226	0.223	0.100	AVRG	-1.3	
Hexachlorobenzene	0.270	0.265	0.100	AVRG	-1.8	
Pentachlorophenol	0.189	0.168	0.050	AVRG	-11.1	
Phenanthrene	1.091	1.023	0.700	AVRG	-6.2	
Anthracene	1.118	1.062	0.700	AVRG	-5.0	
Carbazole	0.679	0.705	0.010	AVRG	3.8	
Di-n-butylphthalate	1.154	1.183	0.010	AVRG	2.5	
Fluoranthene	1.284	1.248	0.600	AVRG	-2.8	
Pyrene	1.238	1.386	0.600	AVRG	12.0	
Butylbenzylphthalate	0.422	0.489	0.010	AVRG	15.9	
Benzo(a)anthracene	1.120	1.111	0.800	AVRG	-0.8	
3,3'-Dichlorobenzidine	0.426	0.473	0.010	AVRG	11.0	
Chrysene	1.013	0.986	0.700	AVRG	-2.7	
bis(2-Ethylhexyl)phthalate	0.532	0.568	0.010	AVRG	6.8	
Di-n-octylphthalate	0.921	0.878	0.010	AVRG	-4.7	
Benzo(b)fluoranthene	1.188	1.207	0.700	AVRG	1.6	
Benzo(k)fluoranthene	1.251	1.096	0.700	AVRG	-12.4	
Benzo(a)pyrene	1.014	0.962	0.700	AVRG	-5.1	
Indeno(1,2,3-cd)pyrene	1.169	1.226	0.500	AVRG	4.9	
Dibenzo(a,h)anthracene	0.897	0.962	0.400	AVRG	7.2	
Benzo(g,h,i)perylene	1.012	1.030	0.500	AVRG	1.8	
N-Nitrosodimethylamine	0.911	0.855	0.010	AVRG	-6.1	
Aniline	4.012	4.174	0.010	AVRG	4.0	
Benzidine	10.00	6.290	0.010	2ORDR	-37.1	<-
Retene	0.468	0.501	0.010	AVRG	7.0	
Perylene	1.160	1.060	0.010	AVRG	-8.6	
Pyridine	0.801	0.720	0.010	AVRG	-10.1	
1-methylnaphthalene	0.648	0.622	0.010	AVRG	-4.0	

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

WS91 · 09069

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 06/20/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1018

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Azobenzene (1,2-DP-Hydrazine	1.237	1.121	0.010	AVRG	-9.4
2,3,4,6-Tetrachlorophenol	0.323	0.337	0.010	AVRG	4.3
Total Benzofluoranthenes	1.153	1.061	0.010	AVRG	-8.0
2-Fluorophenol	1.428	1.439	0.010	AVRG	0.8
Phenol-d5	1.847	1.849	0.010	AVRG	0.1
2-Chlorophenol-d4	1.402	1.446	0.010	AVRG	3.1
1,2-Dichlorobenzene-d4	1.009	1.023	0.010	AVRG	1.4
Nitrobenzene-d5	0.422	0.409	0.010	AVRG	-3.1
2-Fluorobiphenyl	1.396	1.314	0.010	AVRG	-5.9
2,4,6-Tribromophenol	0.212	0.227	0.010	AVRG	7.1
Terphenyl-d14	0.778	0.795	0.010	AVRG	2.2

<- 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: WS91 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 06/24/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1505

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	2.068	1.599	0.800	AVRG	-22.7	<-
Bis(2-Chloroethyl)ether	1.487	1.166	0.700	AVRG	-21.6	<-
2-Chlorophenol	1.595	1.296	0.800	AVRG	-18.7	
1,3-Dichlorobenzene	1.600	1.418	0.010	AVRG	-11.4	
1,4-Dichlorobenzene	1.577	1.398	0.010	AVRG	-11.4	
1,2-Dichlorobenzene	1.510	1.334	0.010	AVRG	-11.6	
Benzyl alcohol	0.870	0.727	0.010	AVRG	-16.4	
2,2'-oxybis(1-Chloropropane)	0.459	0.408	0.010	AVRG	-11.1	
2-Methylphenol	1.488	1.217	0.700	AVRG	-18.2	
Hexachloroethane	0.660	0.585	0.300	AVRG	-11.4	
N-Nitroso-di-n-propylamine	0.929	0.827	0.500	AVRG	-11.0	
4-Methylphenol	1.517	1.205	0.600	AVRG	-20.6	<-
Nitrobenzene	0.390	0.335	0.200	AVRG	-14.1	
Isophorone	0.733	0.647	0.400	AVRG	-11.7	
2-Nitrophenol	0.218	0.213	0.100	AVRG	-2.3	
2,4-Dimethylphenol	0.401	0.368	0.200	AVRG	-8.2	
Bis(2-Chloroethoxy)methane	0.432	0.386	0.300	AVRG	-10.6	
2,4-Dichlorophenol	0.370	0.324	0.200	AVRG	-12.4	
1,2,4-Trichlorobenzene	0.361	0.328	0.010	AVRG	-9.1	
Naphthalene	1.065	0.954	0.700	AVRG	-10.4	
Benzoic acid	20.00	15.37	0.010	2ORDR	-23.2	<-
4-Chloroaniline	0.416	0.416	0.010	AVRG	0.0	
Hexachlorobutadiene	0.214	0.212	0.010	AVRG	-0.9	
4-Chloro-3-methylphenol	0.325	0.323	0.200	AVRG	-0.6	
2-Methylnaphthalene	0.707	0.656	0.400	AVRG	-7.2	
Hexachlorocyclopentadiene	0.440	0.254	0.050	AVRG	-42.3	<-
2,4,6-Trichlorophenol	0.421	0.390	0.200	AVRG	-7.4	
2,4,5-Trichlorophenol	0.434	0.421	0.200	AVRG	-3.0	
2-Chloronaphthalene	1.112	1.026	0.800	AVRG	-7.7	
2-Nitroaniline	0.268	0.279	0.010	AVRG	4.1	
Acenaphthylene	1.885	1.671	0.900	AVRG	-11.4	
Dimethylphthalate	1.201	1.133	0.010	AVRG	-5.7	
2,6-Dinitrotoluene	0.281	0.275	0.200	AVRG	-2.1	
Acenaphthene	1.136	1.020	0.900	AVRG	-10.2	
3-Nitroaniline	0.232	0.234	0.010	AVRG	0.9	
2,4-Dinitrophenol	20.00	13.21	0.010	2ORDR	-34.0	<-
Dibenzofuran	1.553	1.399	0.800	AVRG	-9.9	

<- Exceeds QC limit of 20% D

* RF less than minimum RF

WS91:00091

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 06/24/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1505

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
4-Nitrophenol	10.00	7.238	0.010	2ORDR	-27.6	<-
2,4-Dinitrotoluene	0.363	0.363	0.200	AVRG	0.0	
Fluorene	1.325	1.233	0.900	AVRG	-6.9	
4-Chlorophenyl-phenylether	0.652	0.555	0.400	AVRG	-14.9	
Diethylphthalate	1.206	1.107	0.010	AVRG	-8.2	
4-Nitroaniline	0.241	0.247	0.010	AVRG	2.5	
4,6-Dinitro-2-methylphenol	20.00	17.13	0.010	2ORDR	-14.4	
N-Nitrosodiphenylamine(1)	0.463	0.448	0.010	AVRG	-3.2	
4-Bromophenyl-phenylether	0.226	0.221	0.100	AVRG	-2.2	
Hexachlorobenzene	0.270	0.269	0.100	AVRG	-0.4	
Pentachlorophenol	0.189	0.137	0.050	AVRG	-27.5	<-
Phenanthrene	1.091	1.016	0.700	AVRG	-6.9	
Anthracene	1.118	1.039	0.700	AVRG	-7.1	
Carbazole	0.679	0.788	0.010	AVRG	16.0	
Di-n-butylphthalate	1.154	1.160	0.010	AVRG	0.5	
Fluoranthene	1.284	1.225	0.600	AVRG	-4.6	
Pyrene	1.238	1.190	0.600	AVRG	-3.9	
Butylbenzylphthalate	0.422	0.462	0.010	AVRG	9.5	
Benzo(a)anthracene	1.120	0.997	0.800	AVRG	-11.0	
3,3'-Dichlorobenzidine	0.426	0.516	0.010	AVRG	21.1	<-
Chrysene	1.013	0.924	0.700	AVRG	-8.8	
bis(2-Ethylhexyl)phthalate	0.532	0.511	0.010	AVRG	-3.9	
Di-n-octylphthalate	0.921	0.831	0.010	AVRG	-9.8	
Benzo(b)fluoranthene	1.188	1.042	0.700	AVRG	-12.3	
Benzo(k)fluoranthene	1.251	1.210	0.700	AVRG	-3.3	
Benzo(a)pyrene	1.014	0.935	0.700	AVRG	-7.8	
Indeno(1,2,3-cd)pyrene	1.169	1.182	0.500	AVRG	1.1	
Dibenzo(a,h)anthracene	0.897	0.953	0.400	AVRG	6.2	
Benzo(g,h,i)perylene	1.012	0.968	0.500	AVRG	-4.3	
N-Nitrosodimethylamine	0.911	0.724	0.010	AVRG	-20.5	<-
Aniline	4.012	3.463	0.010	AVRG	-13.7	
Benzidine	10.00	17.49	0.010	2ORDR	74.9	<-
Retene	0.468	0.457	0.010	AVRG	-2.4	
Perylene	1.160	1.032	0.010	AVRG	-11.0	
Pyridine	0.801	0.634	0.010	AVRG	-20.8	<-
1-methylnaphthalene	0.648	0.590	0.010	AVRG	-9.0	

(1) Cannot be separated from Diphenylamine
<- Exceeds QC limit of 20% D
* RF less than minimum RF

WS91 · 02252

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 06/24/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1505

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Azobenzene (1,2-DP-Hydrazine	1.237	1.085	0.010	AVRG	-12.3
2,3,4,6-Tetrachlorophenol	0.323	0.321	0.010	AVRG	-0.6
Total Benzofluoranthenes	1.153	1.040	0.010	AVRG	-9.8
2-Fluorophenol	1.428	1.197	0.010	AVRG	-16.2
Phenol-d5	1.847	1.479	0.010	AVRG	-19.9
2-Chlorophenol-d4	1.402	1.223	0.010	AVRG	-12.8
1,2-Dichlorobenzene-d4	1.009	0.894	0.010	AVRG	-11.4
Nitrobenzene-d5	0.422	0.369	0.010	AVRG	-12.6
2-Fluorobiphenyl	1.396	1.268	0.010	AVRG	-9.2
2,4,6-Tribromophenol	0.212	0.230	0.010	AVRG	8.5
Terphenyl-d14	0.778	0.746	0.010	AVRG	-4.1

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

WS91 : 08898

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WS91 | Project: NPDES SAMPLING SUPPORT

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

Instrument ID: NT10 | Cont. Cal Date: 06/20/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	45250	8.99	166754	11.64	106910	15.54
	UPPER LIMIT	90500		333508		213820	
	LOWER LIMIT	22625		83377		53455	
	CCAL	41342	7.69	157631	10.26	100838	14.05
	UPPER LIMIT		8.19		10.76		14.55
	LOWER LIMIT		7.19		9.76		13.55
01	WS91LCSS1	43340	7.69	161474	10.26	96609	14.05
02	CL-MH-SPS-20	29777	7.75	117810	10.29	68387	14.05
03	CL-MH-SPS-20	29901	7.75	116132	10.28	66136	14.06
04	CL-MH-SPS-20	30049	7.75	114569	10.28	66019	14.06
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
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.

WS91 : 06/20/13

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

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

Instrument ID: NT10 Cont. Cal Date: 06/20/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	179783	18.82	192841	23.90	184310	26.35
	UPPER LIMIT	359566		385682		368620	
	LOWER LIMIT	89892		96420		92155	
	CCAL	167850	17.24	151335	22.45	144619	24.72
	UPPER LIMIT		17.74		22.95		25.22
	LOWER LIMIT		16.74		21.95		24.22
01	WS91LCSS1	160846	17.23	168731	22.45	147323	24.72
02	CL-MH-SPS-20	100921	17.25	129376	22.49	137291	24.78
03	CL-MH-SPS-20	100502	17.26	131936	22.50	146029	24.78
04	CL-MH-SPS-20	98471	17.25	129545	22.49	134358	24.78
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
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.

WS91 : 00095

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

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

Instrument ID: NT10 Cont. Cal Date: 06/20/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	229567	24.99				
	UPPER LIMIT	459134					
	LOWER LIMIT	114784					
	CCAL	189779	23.66				
	UPPER LIMIT		24.16				
	LOWER LIMIT		23.16				
01	WS91LCSS1	200706	23.66				
02	CL-MH-SPS-20	176922	23.70				
03	CL-MH-SPS-20	173359	23.70				
04	CL-MH-SPS-20	173331	23.70				
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
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.

WS91:02295

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

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

Instrument ID: NT10 Cont. Cal Date: 06/24/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	45250	8.99	166754	11.64	106910	15.54
	UPPER LIMIT	90500		333508		213820	
	LOWER LIMIT	22625		83377		53455	
	CCAL	45845	7.45	163568	10.03	106358	13.83
	UPPER LIMIT		7.95		10.53		14.33
	LOWER LIMIT		6.95		9.53		13.33
01	WS91MBS1	51969	7.45	191996	10.02	119058	13.83
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
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

WS91:00097

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

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

Instrument ID: NT10 Cont. Cal Date: 06/24/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	179783	18.82	192841	23.90	184310	26.35
	UPPER LIMIT	359566		385682		368620	
	LOWER LIMIT	89892		96420		92155	
	CCAL	177858	17.03	183565	22.33	158255	24.62
	UPPER LIMIT		17.53		22.83		25.12
	LOWER LIMIT		16.53		21.83		24.12
01	WS91MBS1	205984	17.03	219414	22.33	170417	24.62
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
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

WS91 : 20959

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WS91

Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429A

Ical Date: 04/29/13

Instrument ID: NT10

Cont. Cal Date: 06/24/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	229567	24.99				
	UPPER LIMIT	459134					
	LOWER LIMIT	114784					
	CCAL	212458	23.60				
	UPPER LIMIT		24.10				
	LOWER LIMIT		23.10				
01	WS91MBS1	253726	23.59				
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
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.

WS91:09099

SIM Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: WS91

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: CL-MH-SPS-20130605-S**
Extraction Method: SW3546 **SAMPLE**

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/25/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/17/13
Date Analyzed: 06/20/13 16:38
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 5.40 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 59.3 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	**Dibenz(a,h)anthracene**	**3.7**	**9.3**	**10**
106-46-7	1,4-Dichlorobenzene	2.2	9.3	< 9.3 U
120-82-1	1,2,4-Trichlorobenzene	3.4	9.3	< 9.3 U
118-74-1	Hexachlorobenzene	2.3	9.3	< 9.3 U
87-68-3	Hexachlorobutadiene	1.8	9.3	< 9.3 U
131-11-3	**Dimethylphthalate**	**2.5**	**9.3**	**13**
84-66-2	**Diethylphthalate**	**6.0**	**9.3**	**14 B**
85-68-7	**Butylbenzylphthalate**	**5.4**	**9.3**	**33 Q**
95-48-7	2-Methylphenol	3.4	9.3	< 9.3 U
105-67-9	**2,4-Dimethylphenol**	**5.4**	**37**	**110**
86-30-6	**N-Nitrosodiphenylamine**	**2.6**	**37**	**92**
100-51-6	Benzyl Alcohol	13	37	< 37 U
87-86-5	Pentachlorophenol	26	93	< 93 U
95-50-1	1,2-Dichlorobenzene	2.0	9.3	< 9.3 U
541-73-1	1,3-Dichlorobenzene	2.4	9.3	< 9.3 U
621-64-7	N-Nitroso-Di-N-Propylamine	18	22	< 22 U
62-75-9	N-Nitrosodimethylamine	5.8	46	< 46 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	42.8%
d14-p-Terphenyl	88.0%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977

Client ID	FPH	TER	TOT OUT
MB-061713	62.0%	89.6%	0
LCS-061713	63.6%	83.8%	0
CL-MH-SPS-20130605-S	42.8%	88.0%	0
CL-MH-SPS-20130605-S MS	35.9%	78.8%	0
CL-MH-SPS-20130605-S MSD	32.3%	80.2%	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: 13-12076 to 13-12076

08/16/13

WS91:00107_REV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: CL-MH-SPS-20130605-S**
Page 1 of 1 **MATRIX SPIKE**

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/25/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted MS/MSD: 06/17/13

Sample Amount MS: 5.45 g-dry-wt
MSD: 5.42 g-dry-wt
Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL
Dilution Factor MS: 1.00
MSD: 1.00

Date Analyzed MS: 06/20/13 17:14
MSD: 06/20/13 17:51
Instrument/Analyst MS: NT10/YZ
MSD: NT10/YZ

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Dibenz(a,h)anthracene	10	695	917	74.7%	765	923	81.8%	9.6%
1,4-Dichlorobenzene	< 9.3 U	551	917	60.1%	578	923	62.6%	4.8%
1,2,4-Trichlorobenzene	< 9.3 U	629	917	68.6%	662	923	71.7%	5.1%
Hexachlorobenzene	< 9.3 U	757	917	82.6%	794	923	86.0%	4.8%
Hexachlorobutadiene	< 9.3 U	600	917	65.4%	635	923	68.8%	5.7%
Dimethylphthalate	13	601	917	64.1%	750	923	79.8%	22.1%
Diethylphthalate	14 B	777 B	917	83.2%	1070 B	923	114%	31.7%
Butylbenzylphthalate	33 Q	896 Q	917	94.1%	1050 Q	923	110%	15.8%
2-Methylphenol	< 9.3 U	621	917	67.7%	625	923	67.7%	0.6%
2,4-Dimethylphenol	110	2180	2750	75.3%	2160	2770	74.0%	0.9%
N-Nitrosodiphenylamine	92	1030	917	102%	1090	923	108%	5.7%
Benzyl Alcohol	< 37 U	684	917	74.6%	842	923	91.2%	20.7%
Pentachlorophenol	< 93 U	476 Q	2750	17.3%	960 Q	2770	34.7%	67.4%
1,2-Dichlorobenzene	< 9.3 U	573	917	62.5%	602	923	65.2%	4.9%
1,3-Dichlorobenzene	< 9.3 U	539	917	58.8%	571	923	61.9%	5.8%
N-Nitroso-Di-N-Propylamine	< 22 U	820	917	89.4%	798	923	86.5%	2.7%
N-Nitrosodimethylamine	< 46 U	1860	2750	67.6%	1260	2770	45.5%	38.5%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

WS91:209193

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS
Extraction Method: SW3546
Page 1 of 1

Sample ID: CL-MH-SPS-20130605-S
MATRIX SPIKE

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/25/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/17/13
Date Analyzed: 06/20/13 17:14
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 5.45 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 59.3 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	Dibenz(a,h)anthracene	3.7	9.2	---
106-46-7	1,4-Dichlorobenzene	2.2	9.2	---
120-82-1	1,2,4-Trichlorobenzene	3.4	9.2	---
118-74-1	Hexachlorobenzene	2.3	9.2	---
87-68-3	Hexachlorobutadiene	1.8	9.2	---
131-11-3	Dimethylphthalate	2.5	9.2	---
84-66-2	Diethylphthalate	6.0	9.2	---
85-68-7	Butylbenzylphthalate	5.3	9.2	---
95-48-7	2-Methylphenol	3.3	9.2	---
105-67-9	2,4-Dimethylphenol	5.3	37	---
86-30-6	N-Nitrosodiphenylamine	2.5	37	---
100-51-6	Benzyl Alcohol	13	37	---
87-86-5	Pentachlorophenol	26	92	---
95-50-1	1,2-Dichlorobenzene	2.0	9.2	---
541-73-1	1,3-Dichlorobenzene	2.4	9.2	---
621-64-7	N-Nitroso-Di-N-Propylamine	17	22	---
62-75-9	N-Nitrosodimethylamine	5.8	46	---

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	35.9%
d14-p-Terphenyl	78.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: CL-MH-SPS-20130605-S**
Extraction Method: SW3546 **MATRIX SPIKE DUP**

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/25/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/17/13
Date Analyzed: 06/20/13 17:51
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 5.42 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 59.3 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	Dibenz(a,h)anthracene	3.7	9.2	---
106-46-7	1,4-Dichlorobenzene	2.2	9.2	---
120-82-1	1,2,4-Trichlorobenzene	3.4	9.2	---
118-74-1	Hexachlorobenzene	2.3	9.2	---
87-68-3	Hexachlorobutadiene	1.8	9.2	---
131-11-3	Dimethylphthalate	2.5	9.2	---
84-66-2	Diethylphthalate	6.0	9.2	---
85-68-7	Butylbenzylphthalate	5.3	9.2	---
95-48-7	2-Methylphenol	3.3	9.2	---
105-67-9	2,4-Dimethylphenol	5.3	37	---
86-30-6	N-Nitrosodiphenylamine	2.5	37	---
100-51-6	Benzyl Alcohol	13	37	---
87-86-5	Pentachlorophenol	26	92	---
95-50-1	1,2-Dichlorobenzene	2.0	9.2	---
541-73-1	1,3-Dichlorobenzene	2.4	9.2	---
621-64-7	N-Nitroso-Di-N-Propylamine	17	22	---
62-75-9	N-Nitrosodimethylamine	5.8	46	---

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	32.3%
d14-p-Terphenyl	80.2%

WS91 : 20125

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: LCS-061713**
Page 1 of 1 **LAB CONTROL SAMPLE**

Lab Sample ID: LCS-061713
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/25/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/17/13
Date Analyzed LCS: 06/20/13 16:01
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	391	500	78.2%
1,4-Dichlorobenzene	308	500	61.6%
1,2,4-Trichlorobenzene	330	500	66.0%
Hexachlorobenzene	359	500	71.8%
Hexachlorobutadiene	315	500	63.0%
Dimethylphthalate	447	500	89.4%
Diethylphthalate	453 B	500	90.6%
Butylbenzylphthalate	580 Q	500	116%
2-Methylphenol	304	500	60.8%
2,4-Dimethylphenol	873	1500	58.2%
N-Nitrosodiphenylamine	327	500	65.4%
Benzyl Alcohol	322	500	64.4%
Pentachlorophenol	1100 Q	1500	73.3%
1,2-Dichlorobenzene	318	500	63.6%
1,3-Dichlorobenzene	307	500	61.4%
N-Nitroso-Di-N-Propylamine	362	500	72.4%
N-Nitrosodimethylamine	894	1500	59.6%

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	63.6%
d14-p-Terphenyl	83.8%

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WS91MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No: WS91
Project: NPDES SAMPLING SUPPO

Lab File ID: WS91MB
Date Extracted: 06/17/13

Instrument ID: NT10
Date Analyzed: 06/24/13

Matrix: SOLID
Time Analyzed: 1618

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WS91LCSS1	WS91LCSS1	WS91SB	06/20/13
02	CL-MH-SPS-201306	WS91A	WS91A	06/20/13
03	CL-MH-SPS-20130	WS91AMS	WS91AMS	06/20/13
04	CL-MH-SPS-20130	WS91AMSD	WS91AMSD	06/20/13
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

WS91 : 92107

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: MB-061713**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-061713
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/25/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/17/13
Date Analyzed: 06/24/13 16:18
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	2.0	5.0	< 5.0 U
106-46-7	1,4-Dichlorobenzene	1.2	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.9	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	1.3	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.96	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.3	5.0	< 5.0 U
84-66-2	**Diethylphthalate**	**3.3**	**5.0**	**5.5**
85-68-7	Butylbenzylphthalate	2.9	5.0	< 5.0 U
95-48-7	2-Methylphenol	1.8	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	2.9	20	< 20 U
86-30-6	N-Nitrosodiphenylamine	1.4	20	< 20 U
100-51-6	Benzyl Alcohol	7.0	20	< 20 U
87-86-5	Pentachlorophenol	14	50	< 50 U
95-50-1	1,2-Dichlorobenzene	1.1	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	9.5	12	< 12 U
62-75-9	N-Nitrosodimethylamine	3.2	25	< 25 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	62.0%
d14-p-Terphenyl	89.6%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	16.7
68	Less than 2.0% of mass 69	0.5 (1.6)1
69	Mass 69 relative abundance	32.0
70	Less than 2.0% of mass 69	0.1 (0.5)1
127	10.0 - 80.0% of mass 198	44.8
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	27.4
365	Greater than 1.0% of mass 198	4.00
441	0.0 - 24.0% of mass 442	16.8 (15.6)2
442	50.0 - 200.0% of mass 198	108.0
443	15.0 - 24.0% of mass 442	20.8 (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		IC0429A	IC0429A	04/29/13	1653
02		IC0429C	IC0429C	04/29/13	1807
03		IC0429D	IC0429D	04/29/13	1844
04		IC0429F	IC0429F	04/29/13	1957
05		IC0429G	IC0429G	04/29/13	2034
06		IC0429H	IC0429H	04/29/13	2111
07		IC0429I	IC0429I	04/29/13	2147
08					
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 SAMPLING SUPPORT

DFTPP Injection Date: 06/20/13 DFTPP Injection Time: 1003

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	17.0
68	Less than 2.0% of mass 69	0.5 (1.4)1
69	Mass 69 relative abundance	34.0
70	Less than 2.0% of mass 69	0.1 (0.4)1
127	10.0 - 80.0% of mass 198	45.2
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	6.8
275	10.0 - 60.0% of mass 198	27.2
365	Greater than 1.0% of mass 198	3.90
441	0.0 - 24.0% of mass 442	16.9 (15.4)2
442	50.0 - 200.0% of mass 198	109.7
443	15.0 - 24.0% of mass 442	21.4 (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		CC0620A	CC0620A	06/20/13	1057
02	WS91LCSS1	WS91LCSS1	WS91SB	06/20/13	1601
03	CL-MH-SPS-201306	WS91A	WS91A	06/20/13	1638
04	CL-MH-SPS-20130	WS91AMS	WS91AMS	06/20/13	1714
05	CL-MH-SPS-20130	WS91AMSD	WS91AMSD	06/20/13	1751
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

WS91:02119

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 06/24/13 DFTPP Injection Time: 1450

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	18.9
68	Less than 2.0% of mass 69	0.7 (2.0)1
69	Mass 69 relative abundance	36.3
70	Less than 2.0% of mass 69	0.1 (0.4)1
127	10.0 - 80.0% of mass 198	47.3
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	27.5
365	Greater than 1.0% of mass 198	3.91
441	0.0 - 24.0% of mass 442	16.2 (15.4)2
442	50.0 - 200.0% of mass 198	105.0
443	15.0 - 24.0% of mass 442	20.5 (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		ABN 1	CC0624A	06/24/13	1542
02	WS91MBS1	WS91MBS1	WS91MB	06/24/13	1618
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

WS91 : 062411

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

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

Method = SIM.b/SIMABN2.m
Cal levels = 7

LAB FILE ID: RRF0.05=IC0429F RRF0.1=IC0429H RRF0.2=IC0429C
RRF0.5=IC0429I RRF1 =IC0429D RRF2.5=IC0429G
RRF5 =IC0429A

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	2.193	1.937	2.061	1.929	1.947	2.088	1.982	2.020	4.9
1,3-Dichlorobenzene	1.876	1.752	1.728	1.588	1.573	1.595	1.539	1.664	7.4
1,4-Dichlorobenzene	1.919	1.703	1.739	1.578	1.552	1.578	1.529	1.657	8.5
1,2-Dichlorobenzene	1.801	1.618	1.674	1.494	1.476	1.511	1.447	1.574	8.2
Benzyl alcohol	1.014	0.924	0.960	0.916	0.949	1.024	0.993	0.968	4.4
2-Methylphenol	1.595	1.392	1.487	1.364	1.397	1.471	1.401	1.444	5.6
N-Nitroso-di-n-propylamine	0.914	0.806	0.850	0.799	0.801	0.850	0.783	0.829	5.5
4-Methylphenol	1.588	1.377	1.517	1.385	1.444	1.521	1.461	1.470	5.2
2,4-Dimethylphenol	0.406	0.356	0.404	0.372	0.385	0.404	0.385	0.387	4.8
1,2,4-Trichlorobenzene	0.443	0.394	0.409	0.363	0.361	0.366	0.347	0.383	8.8
Hexachlorobutadiene	0.272	0.237	0.244	0.221	0.219	0.226	0.215	0.233	8.5
Dimethylphthalate	1.295	1.185	1.226	1.063	1.108	1.111	1.090	1.154	7.3
Diethylphthalate	1.489	1.226	1.394	1.181	1.282	1.302	1.275	1.307	8.0
N-Nitrosodiphenylamine (1)	0.394	0.383	0.485	0.433	0.463	0.459	0.453	0.438	8.5
Hexachlorobenzene	0.376	0.301	0.330	0.268	0.276	0.273	0.274	0.300	13.4
Pentachlorophenol	0.145	0.138	0.182	0.166	0.190	0.205	0.220	0.178	17.1
Butylbenzylphthalate	0.361	0.291	0.415	0.320	0.389	0.402	0.419	0.371	13.3
Dibenzo(a,h)anthracene	0.974	0.783	0.989	0.789	0.879	0.896	0.932	0.892	9.2
N-Nitrosodimethylamine	0.902	0.860	0.851	0.863	0.840	0.902	0.815	0.862	3.7
2-Fluorophenol	1.520	1.352	1.446	1.312	1.367	1.434	1.396	1.404	4.9
Terphenyl-d14	0.565	0.465	0.538	0.444	0.480	0.471	0.478	0.492	8.8

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

WS91 02112

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 06/20/13

Init. Calib. Date: 04/29/13 Cont. Calib. Time: 1057

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	2.020	1.889	0.800	AVRG	-6.5	
1,3-Dichlorobenzene	1.664	1.556	0.010	AVRG	-6.5	
1,4-Dichlorobenzene	1.657	1.555	0.010	AVRG	-6.2	
1,2-Dichlorobenzene	1.574	1.488	0.010	AVRG	-5.5	
Benzyl alcohol	0.968	0.976	0.010	AVRG	0.8	
2-Methylphenol	1.444	1.400	0.700	AVRG	-3.0	
N-Nitroso-di-n-propylamine	0.829	0.834	0.500	AVRG	0.6	
4-Methylphenol	1.470	1.408	0.600	AVRG	-4.2	
2,4-Dimethylphenol	0.387	0.372	0.200	AVRG	-3.9	
1,2,4-Trichlorobenzene	0.383	0.368	0.010	AVRG	-3.9	
Hexachlorobutadiene	0.233	0.218	0.010	AVRG	-6.4	
Dimethylphthalate	1.154	1.191	0.010	AVRG	3.2	
Diethylphthalate	1.307	1.384	0.010	AVRG	5.9	
N-Nitrosodiphenylamine(1)	0.438	0.463	0.010	AVRG	5.7	
Hexachlorobenzene	0.300	0.290	0.100	AVRG	-3.3	
Pentachlorophenol	0.178	0.131	0.050	AVRG	-26.4	<-
Butylbenzylphthalate	0.371	0.473	0.010	AVRG	27.5	<-
Dibenzo(a,h)anthracene	0.892	0.992	0.400	AVRG	11.2	
N-Nitrosodimethylamine	0.862	0.805	0.010	AVRG	-6.6	
2-Fluorophenol	1.405	1.400	0.010	AVRG	-0.4	
Terphenyl-d14	0.492	0.518	0.010	AVRG	5.3	

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

WS91 - 00119

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WS91

Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10

Cont. Calib. Date: 06/24/13

Init. Calib. Date: 04/29/13

Cont. Calib. Time: 1542

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	2.020	1.452	0.800	AVRG	-28.1	<-
1,3-Dichlorobenzene	1.664	1.374	0.010	AVRG	-17.4	
1,4-Dichlorobenzene	1.657	1.373	0.010	AVRG	-17.1	
1,2-Dichlorobenzene	1.574	1.304	0.010	AVRG	-17.2	
Benzyl alcohol	0.968	0.793	0.010	AVRG	-18.1	
2-Methylphenol	1.444	1.101	0.700	AVRG	-23.8	<-
N-Nitroso-di-n-propylamine	0.829	0.689	0.500	AVRG	-16.9	
4-Methylphenol	1.470	1.087	0.600	AVRG	-26.0	<-
2,4-Dimethylphenol	0.387	0.326	0.200	AVRG	-15.8	
1,2,4-Trichlorobenzene	0.383	0.338	0.010	AVRG	-11.7	
Hexachlorobutadiene	0.233	0.199	0.010	AVRG	-14.6	
Dimethylphthalate	1.154	1.094	0.010	AVRG	-5.2	
Diethylphthalate	1.307	1.277	0.010	AVRG	-2.3	
N-Nitrosodiphenylamine(1)	0.438	0.411	0.010	AVRG	-6.2	
Hexachlorobenzene	0.300	0.258	0.100	AVRG	-14.0	
Pentachlorophenol	0.178	0.070	0.050	AVRG	-60.7	<-
Butylbenzylphthalate	0.371	0.438	0.010	AVRG	18.0	
Dibenzo(a,h)anthracene	0.892	0.913	0.400	AVRG	2.4	
N-Nitrosodimethylamine	0.862	0.657	0.010	AVRG	-23.8	<-
2-Fluorophenol	1.405	1.140	0.010	AVRG	-18.9	
Terphenyl-d14	0.492	0.475	0.010	AVRG	-3.4	

(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: WS91 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429D Ical Date: 04/29/13

Instrument ID: NT10 Cont. Cal Date: 06/20/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	52658	8.98	192325	11.65	109274	15.54
	UPPER LIMIT	105316		384650		218548	
	LOWER LIMIT	26329		96162		54637	
	CCAL	56916	7.70	206638	10.26	115081	14.05
	UPPER LIMIT		8.20		10.76		14.55
	LOWER LIMIT		7.20		9.76		13.55
01	WS91LCSS1	50644	7.70	185383	10.26	101222	14.05
02	CL-MH-SPS-20	34311	7.75	135587	10.28	69084	14.05
03	CL-MH-SPS-20	33589	7.75	131953	10.28	68769	14.05
04	CL-MH-SPS-20	34255	7.75	132932	10.28	67921	14.06
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
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

WS91:0115

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WS91 | Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429D | Ical Date: 04/29/13

Instrument ID: NT10 | Cont. Cal Date: 06/20/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	203933	18.82	223647	23.90	211919	26.35
	UPPER LIMIT	407866		447294		423838	
	LOWER LIMIT	101966		111824		105960	
	CCAL	218821	17.24	227644	22.46	193988	24.73
	UPPER LIMIT		17.74		22.96		25.23
	LOWER LIMIT		16.74		21.96		24.23
01	WS91LCSS1	185833	17.24	202139	22.46	175694	24.73
02	CL-MH-SPS-20	117746	17.26	153651	22.50	158023	24.78
03	CL-MH-SPS-20	118381	17.26	153651	22.50	163622	24.78
04	CL-MH-SPS-20	116920	17.26	151860	22.50	157493	24.78
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
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

WS91 · 09116

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WS91 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429D Ical Date: 04/29/13

Instrument ID: NT10 Cont. Cal Date: 06/24/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	52658	8.98	192325	11.65	109274	15.54
	UPPER LIMIT	105316		384650		218548	
	LOWER LIMIT	26329		96162		54637	
	CCAL	57222	7.45	211281	10.02	120825	13.83
	UPPER LIMIT		7.95		10.52		14.33
	LOWER LIMIT		6.95		9.52		13.33
01	WS91MBS1	58748	7.44	227812	10.02	125123	13.82
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
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.

WS91-0617

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WS91 | Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0429D | Ical Date: 04/29/13

Instrument ID: NT10 | Cont. Cal Date: 06/24/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	203933	18.82	223647	23.90	211919	26.35
	UPPER LIMIT	407866		447294		423838	
	LOWER LIMIT	101966		111824		105960	
	CCAL	240475	17.03	250154	22.33	212884	24.62
	UPPER LIMIT		17.53		22.83		25.12
	LOWER LIMIT		16.53		21.83		24.12
01	WS91MBS1	247086	17.03	255820	22.33	207408	24.62
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
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

WS91 · 02118

Dioxin Analysis
Report and Summary QC Forms

ARI Job ID: WS91

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: CL-MH-SPS-20130605-S**

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/19/13
Date Analyzed: 06/24/13 14:33
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	0.59	0.65-0.89		1.00	0.526	JEMPC
2,3,7,8-TCDD	0.37	0.65-0.89		1.00	0.236	JEMPC
1,2,3,7,8-PeCDF	1.82	1.32-1.78		1.00	0.540	JEMPC
2,3,4,7,8-PeCDF	1.34	1.32-1.78		1.00	0.612	J
1,2,3,7,8-PeCDD	1.44	1.32-1.78		1.00	0.762	J
1,2,3,4,7,8-HxCDF	1.02	1.05-1.43		1.00	1.01	EMPC
1,2,3,6,7,8-HxCDF	1.25	1.05-1.43		1.00	0.974	J
2,3,4,6,7,8-HxCDF	1.16	1.05-1.43		1.00	1.19	
1,2,3,7,8,9-HxCDF	1.36	1.05-1.43		1.00	0.416	BJ
1,2,3,4,7,8-HxCDD	1.39	1.05-1.43		1.00	1.02	
1,2,3,6,7,8-HxCDD	1.27	1.05-1.43		1.00	2.20	
1,2,3,7,8,9-HxCDD	1.24	1.05-1.43		1.00	2.00	
1,2,3,4,6,7,8-HpCDF	1.02	0.88-1.20		1.00	13.6	
1,2,3,4,7,8,9-HpCDF	1.15	0.88-1.20		1.00	1.04	
1,2,3,4,6,7,8-HpCDD	1.03	0.88-1.20		1.00	50.9	
OCDF	0.86	0.76-1.02		2.00	28.1	
OCDD	0.88	0.76-1.02		2.00	374	

Homologue Group	EDL	RL	Result	
Total TCDF		1.00	6.61	EMPC
Total TCDD		1.00	1.82	EMPC
Total PeCDF		2.00	13.8	EMPC
Total PeCDD		1.00	3.69	EMPC
Total HxCDF		2.00	17.8	EMPC
Total HxCDD		2.00	20.0	EMPC
Total HpCDF		2.00	30.3	EMPC
Total HpCDD		2.00	129	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 2.91

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 2.91

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: CL-MH-SPS-20130605-S**
Page 1 of 1

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/26/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/19/13
Date Analyzed: 06/24/13 14:33
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	0.76	0.65-0.89	67.8	24-169	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	72.6	25-164	
13C-1,2,3,7,8-PeCDF	1.55	1.32-1.78	92.2	24-185	
13C-2,3,4,7,8-PeCDF	1.56	1.32-1.78	92.5	21-178	
13C-1,2,3,7,8-PeCDD	1.56	1.32-1.78	91.6	25-181	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	73.4	26-152	
13C-1,2,3,6,7,8-HxCDF	0.51	0.43-0.59	70.8	26-123	
13C-2,3,4,6,7,8-HxCDF	0.51	0.43-0.59	75.5	28-136	
13C-1,2,3,7,8,9-HxCDF	0.51	0.43-0.59	82.0	29-147	
13C-1,2,3,4,7,8-HxCDD	1.25	1.05-1.43	77.3	32-141	
13C-1,2,3,6,7,8-HxCDD	1.23	1.05-1.43	72.5	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	71.6	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	81.4	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	81.4	23-140	
13C-OCDD	0.88	0.76-1.02	61.4	17-157	
37Cl4-2,3,7,8-TCDD			74.2	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-061913**

Lab Sample ID: OPR-061913
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/26/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/19/13
Date Analyzed: 06/24/13 13:38
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	0.76	0.65-0.89	1.00	23.0
2,3,7,8-TCDD	0.73	0.65-0.89	1.00	21.7
1,2,3,7,8-PeCDF	1.54	1.32-1.78	1.00	107
2,3,4,7,8-PeCDF	1.48	1.32-1.78	1.00	105
1,2,3,7,8-PeCDD	1.53	1.32-1.78	1.00	104
1,2,3,4,7,8-HxCDF	1.24	1.05-1.43	1.00	106
1,2,3,6,7,8-HxCDF	1.25	1.05-1.43	1.00	106
2,3,4,6,7,8-HxCDF	1.19	1.05-1.43	1.00	108
1,2,3,7,8,9-HxCDF	1.19	1.05-1.43	1.00	108
1,2,3,4,7,8-HxCDD	1.25	1.05-1.43	1.00	104
1,2,3,6,7,8-HxCDD	1.28	1.05-1.43	1.00	106
1,2,3,7,8,9-HxCDD	1.22	1.05-1.43	1.00	106
1,2,3,4,6,7,8-HpCDF	1.03	0.88-1.20	1.00	143
1,2,3,4,7,8,9-HpCDF	1.00	0.88-1.20	1.00	109
1,2,3,4,6,7,8-HpCDD	1.00	0.88-1.20	1.00	109
OCDF	0.89	0.76-1.02	2.00	199
OCDD	0.87	0.76-1.02	2.00	219

Homologue Group	EDL	RL	Result	
Total TCDF		1.00	28.9	EMPC
Total TCDD		1.00	22.9	EMPC
Total PeCDF		2.00	227	EMPC
Total PeCDD		1.00	105	EMPC
Total HxCDF		2.00	433	EMPC
Total HxCDD		2.00	316	
Total HpCDF		2.00	254	EMPC
Total HpCDD		2.00	111	

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-061913**

Lab Sample ID: OPR-061913
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/19/13
Date Analyzed: 06/24/13 13:38
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	0.76	0.65-0.89	72.0	22-152	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	73.2	20-175	
13C-1,2,3,7,8-PeCDF	1.52	1.32-1.78	90.2	21-192	
13C-2,3,4,7,8-PeCDF	1.54	1.32-1.78	71.7	13-328	
13C-1,2,3,7,8-PeCDD	1.55	1.32-1.78	78.4	21-227	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	77.0	19-202	
13C-1,2,3,6,7,8-HxCDF	0.51	0.43-0.59	84.4	21-159	
13C-2,3,4,6,7,8-HxCDF	0.50	0.43-0.59	76.0	22-176	
13C-1,2,3,7,8,9-HxCDF	0.50	0.43-0.59	69.7	17-205	
13C-1,2,3,4,7,8-HxCDD	1.25	1.05-1.43	86.6	21-193	
13C-1,2,3,6,7,8-HxCDD	1.20	1.05-1.43	84.2	25-163	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	72.4	21-158	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	72.9	20-186	
13C-1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20	86.2	26-166	
13C-OCDD	0.86	0.76-1.02	71.3	13-198	
37Cl4-2,3,7,8-TCDD			75.6	31-191	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-061913**

Lab Sample ID: OPR-061913
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/26/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/19/13
Date Analyzed: 06/24/13 13:38
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	23.0	20.0	115	75-158
2,3,7,8-TCDD	21.7	20.0	108	67-158
1,2,3,7,8-PeCDF	107	100	107	80-134
2,3,4,7,8-PeCDF	105	100	105	68-160
1,2,3,7,8-PeCDD	104	100	104	70-142
1,2,3,4,7,8-HxCDF	106	100	106	72-134
1,2,3,6,7,8-HxCDF	106	100	106	84-130
2,3,4,6,7,8-HxCDF	108	100	108	70-156
1,2,3,7,8,9-HxCDF	108	100	108	78-130
1,2,3,4,7,8-HxCDD	104	100	104	70-164
1,2,3,6,7,8-HxCDD	106	100	106	76-134
1,2,3,7,8,9-HxCDD	106	100	106	64-162
1,2,3,4,6,7,8-HpCDF	143	100	143	82-132
1,2,3,4,7,8,9-HpCDF	109	100	109	78-138
1,2,3,4,6,7,8-HpCDD	109	100	109	70-140
OCDF	199	200	99.5	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.
WS91MB

Lab Name: ANALYTICAL RESOURCES, INC. Contract: SAIC

Lab Code: WS91 Project: NPDES

Matrix:(Soil/Water/Ash/Tissue/Oil) SOIL Lab Sample ID: WS91MBS

Sample wt/vol: 10 (g/ml) g Lab File ID: 13062405

Water Sample Prep: (sep/spe) Date Received: 05-JUN-13

GC Column: RTX-DIOXIN2 ID: 0.25 mm Date Extracted: 19-JUN-13

Instrument ID: AUTOSPEC1 Date Analyzed: 24-JUN-13

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed
WS91OPR	WS91OPR	13062406	06/24/13
CL-MH-20130605-2	WS91A	13062407	06/24/13
AM-VT-INF-20130612-S	WT81A	13062409	06/24/13
AM-SF4-EFF-20130612-S	WT81B	13062410	06/24/13
AM-DUP-01-20130612-S	WT81C	13062411	06/24/13

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: MB-061913**

Lab Sample ID: MB-061913
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/19/13
Date Analyzed: 06/24/13 12:48
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		0.65-0.89	0.0600	1.00	< 0.0600	U
2,3,7,8-TCDD		0.65-0.89	0.0740	1.00	< 0.0740	U
1,2,3,7,8-PeCDF		1.32-1.78	0.0660	1.00	< 0.0660	U
2,3,4,7,8-PeCDF		1.32-1.78	0.0780	1.00	< 0.0780	U
1,2,3,7,8-PeCDD		1.32-1.78	0.0620	1.00	< 0.0620	U
1,2,3,4,7,8-HxCDF		1.05-1.43	0.0460	1.00	< 0.0460	U
1,2,3,6,7,8-HxCDF		1.05-1.43	0.0420	1.00	< 0.0420	U
2,3,4,6,7,8-HxCDF	0.89	1.05-1.43		1.00	0.0440	JEMPC
1,2,3,7,8,9-HxCDF	3.04	1.05-1.43		1.00	0.0860	JEMPC
1,2,3,4,7,8-HxCDD		1.05-1.43	0.0760	1.00	< 0.0760	U
1,2,3,6,7,8-HxCDD		1.05-1.43	0.0820	1.00	< 0.0820	U
1,2,3,7,8,9-HxCDD		1.05-1.43	0.0860	1.00	< 0.0860	U
1,2,3,4,6,7,8-HpCDF		0.88-1.20	0.0500	1.00	< 0.0500	U
1,2,3,4,7,8,9-HpCDF		0.88-1.20	0.0760	1.00	< 0.0760	U
1,2,3,4,6,7,8-HpCDD	1.42	0.88-1.20		1.00	0.146	JEMPC
OCDF		0.76-1.02	0.182	2.00	< 0.182	U
OCDD	0.54	0.76-1.02		2.00	0.346	JEMPC

Homologue Group	EDL	RL	Result	
Total TCDF	0.0600	1.00	< 0.0600	U
Total TCDD	0.0740	1.00	0.233	EMPC
Total PeCDF	0.0780	2.00	< 0.0780	U
Total PeCDD	0.0620	1.00	0.218	EMPC
Total HxCDF		2.00	0.130	EMPC
Total HxCDD	0.0860	2.00	0.493	EMPC
Total HpCDF	0.0760	2.00	< 0.0760	U
Total HpCDD		2.00	0.278	EMPC

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.01

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.12

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: MB-061913**

Lab Sample ID: MB-061913 QC Report No: WS91-SAIC
LIMS ID: 13-12076 Project: NPDES Sampling Support
Matrix: Sediment 209977
Data Release Authorized: MW Date Sampled: NA
Reported: 06/26/13 Date Received: NA

Date Extracted: 06/19/13 Sample Amount: 10.0 g-dry-wt
Date Analyzed: 06/24/13 12:48 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	0.76	0.65-0.89	89.2	24-169	
13C-2,3,7,8-TCDD	0.77	0.65-0.89	89.0	25-164	
13C-1,2,3,7,8-PeCDF	1.57	1.32-1.78	100	24-185	
13C-2,3,4,7,8-PeCDF	1.56	1.32-1.78	84.6	21-178	
13C-1,2,3,7,8-PeCDD	1.54	1.32-1.78	91.8	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	83.0	26-152	
13C-1,2,3,6,7,8-HxCDF	0.51	0.43-0.59	88.3	26-123	
13C-2,3,4,6,7,8-HxCDF	0.51	0.43-0.59	83.0	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	78.4	29-147	
13C-1,2,3,4,7,8-HxCDD	1.24	1.05-1.43	93.0	32-141	
13C-1,2,3,6,7,8-HxCDD	1.23	1.05-1.43	89.3	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.42	0.37-0.51	78.9	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	82.6	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20	91.6	23-140	
13C-OCDD	0.89	0.76-1.02	75.0	17-157	
37Cl4-2,3,7,8-TCDD			91.3	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: WS91
Project: NPDES
GC Column: RTX-DIOXIN2 ID: 0.25 mm
Lab File ID: 13062402
Instrument ID: AUTOSPEC1
Date Analyzed: 24-JUN-13
Time Analyzed: 0956

CDD/CDF	RT First Eluting	RT Last Eluting
TCDD	24.36	27.83
TCDF	23.08	28.10
PeCDD	29.61	32.74
PeCDF	27.93	33.13
HxCDD	34.83	37.54
HxCDF	34.04	37.96
HpCDD	40.64	41.94
HpCDF	40.07	42.86

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:	WS91	Project:	NPDES
GC Column:	RTX-DIOXIN2 ID: .25 mm	Lab File ID:	13062403
Instrument:	AUTOSPEC1	Date Analyzed:	24-JUN-13
		Time Analyzed:	1047

Percent Valley determination for RTX-DIOXIN2 column -
For the column performance solution beginning 12-hour period:

1278-TCDD/2378-TCDD: 17.9

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: 12.0

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: WS91 Project: NPDES

GC Column: RTX-DIOXIN2 ID: 0.25 mm Instrument ID: AUTOSPEC1

Init. Calib. Date(s): 20-JUN-13

Init: Calib. Times: 12:34 to 17:10

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	13062402	06/24/13	0956
ISC01	ISC	13062403	06/24/13	1047
WS91MB	WS91MBS	13062405	06/24/13	1248
WS91OPR	WS91OPR	13062406	06/24/13	1338
CL-MH-20130605-2	WS91A	13062407	06/24/13	1433
AM-VT-INF-20130612-S	WT81A	13062409	06/24/13	1616
AM-SF4-EFF-20130612-S	WT81B	13062410	06/24/13	1709
AM-DUP-01-20130612-S	WT81C	13062411	06/24/13	1801
CS3	CS3	13062414	06/24/13	2038

6DFA - Form VI-HR CDD-1
CDD/CDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES, INC.	Contract:	SAIC
Lab Code:	WS91	Case No.:	NPDES
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1		
Init.Calib.Date CSL:	20-Jun-13	Init.Calib.Time CSL:	12:34:03
Init.Calib.Date CS1:	20-Jun-13	Init.Calib.Time CS1:	13:43:04
Init.Calib.Date CS2:	20-Jun-13	Init.Calib.Time CS2:	14:33:31
Init.Calib.Date CS3:	20-Jun-13	Init.Calib.Time CS3:	15:25:46
Init.Calib.Date CS4:	20-Jun-13	Init.Calib.Time CS4:	16:18:06
Init.Calib.Date CS5:	20-Jun-13	Init.Calib.Time CS5:	17:10:20

Target Analytes	RR/RRF						Mean RR/RRF	% RSD	Limits (% +/-)
	CSL	CS1	CS2	CS3	CS4	CS5			
2378-TCDD	0.00	1.01	0.89	0.91	0.93	0.94	0.94	4.8	20.0
2378-TCDF	0.00	0.78	0.75	0.79	0.76	0.77	0.77	2.0	20.0
12378-PeCDF	0.81	0.81	0.79	0.85	0.81	0.81	0.81	2.3	20.0
12378-PeCDD	0.95	0.92	0.86	0.87	0.88	0.89	0.89	3.6	20.0
23478-PeCDF	0.87	0.85	0.80	0.84	0.83	0.83	0.84	2.6	20.0
123478-HxCDF	1.02	0.96	0.95	0.95	0.96	0.96	0.97	2.6	20.0
123678-HxCDF	0.97	0.98	0.92	0.96	0.92	0.96	0.95	2.6	20.0
123478-HxCDD	0.94	0.96	0.87	0.87	0.87	0.88	0.90	4.7	20.0
123678-HxCDD	0.76	0.85	0.81	0.84	0.80	0.83	0.82	4.0	20.0
123789-HxCDD[2]	0.74	0.80	0.79	0.80	0.80	0.80	0.79	3.0	20.0
234678-HxCDF	0.90	1.03	0.99	1.06	1.00	1.02	1.00	5.4	20.0
123789-HxCDF	0.77	0.89	0.86	0.92	0.90	0.91	0.87	6.5	20.0
1234678-HpCDF	0.89	1.12	1.08	1.14	1.08	1.12	1.07	8.5	20.0
1234678-HpCDD	0.80	0.87	0.87	0.92	0.92	0.90	0.88	4.8	20.0
1234789-HpCDF	1.01	1.10	1.04	1.15	1.09	1.13	1.09	4.7	20.0
OCDD	0.85	0.84	0.87	0.88	0.90	0.91	0.88	3.0	20.0
OCDF[1]	0.82	0.83	0.85	0.93	0.91	0.93	0.88	5.8	20.0
37CL-2378-TCDD	1.07	1.02	0.91	0.95	1.00	1.04	1.00	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	0.91	0.91	0.91	0.92	0.92	0.95	0.92	2.0	35.0
13C-12378-PeCDD	0.65	0.64	0.63	0.65	0.69	0.75	0.67	6.5	35.0
13C-123478-HxCDD	1.00	1.02	1.02	1.06	1.03	1.05	1.03	2.0	35.0
13C-123678-HxCDD	1.14	1.17	1.13	1.17	1.15	1.13	1.15	1.7	35.0
13C-1234678-HpCDD	0.76	0.78	0.80	0.77	0.81	0.81	0.79	2.6	35.0
13C-OCDD	0.65	0.67	0.69	0.65	0.75	0.77	0.70	7.5	35.0
13C-2378-TCDF	1.19	1.19	1.17	1.19	1.20	1.20	1.19	0.9	35.0
13C-12378-PeCDF	0.87	0.90	0.86	0.89	0.92	0.98	0.90	4.7	35.0
13C-23478-PeCDF	0.85	0.87	0.84	0.86	0.89	0.96	0.88	4.9	35.0
13C-123478-HxCDF	1.05	1.14	1.08	1.17	1.07	1.07	1.10	4.2	35.0
13C-123678-HxCDF	1.16	1.22	1.20	1.24	1.17	1.13	1.19	3.5	35.0
13C-234678-HxCDF	1.07	1.08	1.02	1.05	1.02	1.00	1.04	3.1	35.0
13C-123789-HxCDF	0.90	0.98	0.96	0.94	0.95	0.92	0.94	2.9	35.0
13C-1234678-HpCDF	0.80	0.85	0.82	0.83	0.83	0.81	0.83	2.4	35.0
13C-1234789-HpCDF	0.58	0.62	0.61	0.60	0.63	0.61	0.61	2.9	35.0

6DFB - Form VI-HR CDD-2

CDD/CDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY

HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES, INC.	Contract:	SAIC
Lab Code:	WS91	Case No.:	NPDES
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1		
Init.Calib.Date CSL:	20-Jun-13	Init.Calib.Time CSL:	12:34:03
Init.Calib.Date CS1:	20-Jun-13	Init.Calib.Time CS1:	13:43:04
Init.Calib.Date CS2:	20-Jun-13	Init.Calib.Time CS2:	14:33:31
Init.Calib.Date CS3:	20-Jun-13	Init.Calib.Time CS3:	15:25:46
Init.Calib.Date CS4:	20-Jun-13	Init.Calib.Time CS4:	16:18:06
Init.Calib.Date CS5:	20-Jun-13	Init.Calib.Time CS5:	17:10:20

Target Analytes	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits#
		CSL	CS1	CS2	CS3	CS4	CS5		
2378-TCDD	320/322	0.00	0.79	0.81	0.77	0.76	0.75		0.65 - 0.89
2378-TCDF	304/306	0.00	0.74	0.77	0.72	0.72	0.74		0.65 - 0.89
12378-PeCDF	340/342	1.34	1.68	1.50	1.53	1.50	1.49		1.32 - 1.78
12378-PeCDD	356/358	1.68	1.46	1.45	1.53	1.49	1.51		1.32 - 1.78
23478-PeCDF	340/342	1.66	1.59	1.47	1.50	1.50	1.49		1.32 - 1.78
123478-HxCDF	374/376	1.30	1.16	1.26	1.21	1.21	1.21		1.05 - 1.43
123678-HxCDF	374/376	1.26	1.27	1.25	1.22	1.20	1.20		1.05 - 1.43
123478-HxCDD	390/392	1.42	1.31	1.27	1.24	1.22	1.22		1.05 - 1.43
123678-HxCDD	390/392	1.34	1.26	1.20	1.20	1.22	1.21		1.05 - 1.43
123789-HxCDD	390/392	1.38	1.18	1.19	1.23	1.24	1.22		1.05 - 1.43
234678-HxCDF	374/376	1.31	1.32	1.18	1.23	1.20	1.20		1.05 - 1.43
123789-HxCDF	374/376	1.33	1.19	1.25	1.24	1.16	1.20		1.05 - 1.43
1234678-HpCDF	408/410	1.06	1.04	1.02	1.00	1.00	1.00		0.89 - 1.21
1234678-HpCDD	424/426	0.98	1.00	1.04	1.02	1.02	1.01		0.89 - 1.21
1234789-HpCDF	408/410	0.93	0.99	0.94	1.02	0.97	0.98		0.89 - 1.21
OCDD	458/460	0.83	1.00	0.87	0.88	0.87	0.86		0.76 - 1.02
OCDF	442/444	0.90	0.88	0.86	0.89	0.90	0.88		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	0.78	0.77	0.76	0.78	0.78	0.77		0.65 - 0.89
13C-12378-PeCDD	368/370	1.56	1.56	1.58	1.53	1.52	1.53		1.32 - 1.78
13C-123478-HxCDD	402/404	1.22	1.20	1.28	1.24	1.23	1.25		1.05 - 1.43
13C-123678-HxCDD	402/404	1.26	1.20	1.22	1.18	1.22	1.24		1.05 - 1.43
13C-1234678-HpCDD	436/438	1.04	1.00	1.04	1.04	1.01	1.05		0.89 - 1.21
13C-OCDD	470/472	0.87	0.89	0.90	0.88	0.89	0.88		0.76 - 1.02
13C-2378-TCDF	316/318	0.76	0.76	0.76	0.76	0.75	0.76		0.65 - 0.89
13C-12378-PeCDF	352/354	1.50	1.54	1.54	1.54	1.50	1.55		1.32 - 1.78
13C-23478-PeCDF	352/354	1.55	1.54	1.53	1.55	1.54	1.56		1.32 - 1.78
13C-123478-HxCDF	384/386	0.50	0.50	0.50	0.51	0.51	0.51		0.43 - 0.59
13C-123678-HxCDF	384/386	0.50	0.51	0.52	0.53	0.51	0.51		0.43 - 0.59
13C-234678-HxCDF	384/386	0.50	0.50	0.50	0.51	0.52	0.51		0.43 - 0.59
13C-123789-HxCDF	384/386	0.49	0.51	0.49	0.52	0.51	0.51		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.43	0.43	0.41	0.44	0.43	0.44		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.42	0.43	0.44	0.43	0.43	0.44		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	0.77	0.78	0.78	0.78	0.78	0.79		0.65 - 0.89
13C-123789-HxCDD	402/404	1.24	1.22	1.21	1.24	1.22	1.21		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.

WS91 : 092152

7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES, INC	Contract:	SAIC
Lab Code:	WS91	Case No.:	NPDES
TO No.:		SDG No..	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID.	13062402
Date Analysed	24-Jun-13	Time Analysed	09:56:39
Init Calib.Date:	20-JUN-13	Init.Calib Time:	12:34

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	0.94	0.94	0.3		0.77		0.65 - 0.89
2378-TCDF	304/306	0.80	0.77	3.2		0.74		0.65 - 0.89
12378-PeCDF	340/342	0.81	0.81	-0.4		1 50		1.32 - 1.78
12378-PeCDD	356/358	0.89	0.89	-0.2		1 53		1.32 - 1.78
23478-PeCDF	340/342	0.83	0.84	-1.1		1.51		1.32 - 1.78
123478-HxCDF	374/376	0.98	0.97	1.2		1.22		1.05 - 1.43
123678-HxCDF	374/376	0.94	0.95	-1.3		1.23		1.05 - 1.43
123478-HxCDD	390/392	0.89	0.90	-0 4		1.23		1.05 - 1.43
123678-HxCDD	390/392	0.81	0.82	-1.1		1.22		1.05 - 1.43
123789-HxCDD	390/392	0.81	0.79	2.5		1.21		1.05 - 1.43
234678-HxCDF	374/376	1.03	1.00	2.8		1.21		1.05 - 1.43
123789-HxCDF	374/376	0.92	0.87	5.1		1.23		1.05 - 1.43
1234678-HpCDF	408/410	1.13	1.07	5.6		1.03		0.89 - 1.21
1234678-HpCDD	424/426	0.91	0.88	3.9		1.03		0.89 - 1.21
1234789-HpCDF	408/410	1.15	1.09	5.9		1.00		0.89 - 1.21
OCDD	458/460	0.90	0.88	3.0		0.87		0.76 - 1.02
OCDF	442/444	0.96	0.88	9.7		0.89		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	0.94	0.92	2.4		0.77		0.65 - 0.89
13C-12378-PeCDD	368/370	0.70	0.67	5.0		1.54		1.32 - 1.78
13C-123478-HxCDD	402/404	1.04	1.03	1.3		1.24		1.05 - 1.43
13C-123678-HxCDD	402/404	1.16	1.15	1.1		1.26		1.05 - 1 43
13C-1234678-HpCDD	436/438	0.82	0 79	3.5		1.04		0.89 - 1.21
13C-OCDD	470/472	0.70	0.70	0.7		0.86		0.76 - 1.02
13C-2378-TCDF	316/318	1.25	1.19	4.7		0.76		0.65 - 0.89
13C-12378-PeCDF	352/354	0.98	0.90	8.3		1 53		1.32 - 1.78
13C-23478-PeCDF	352/354	0.94	0.88	7.4		1.56		1.32 - 1.78
13C-123478-HxCDF	384/386	1.15	1.10	4.5		0 51		0.43 - 0.59
13C-123678-HxCDF	384/386	1.27	1.19	6.9		0.51		0.43 - 0.59
13C-234678-HxCDF	384/386	1.05	1.04	1.3		0.51		0.43 - 0.59
13C-123789-HxCDF	384/386	0.97	0.94	2.7		0.51		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.86	0.83	4.5		0.44		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.63	0.61	3 6		0.44		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	0.99	1.00	-0.6		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	0.78		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, INC.	Contract:	SAIC
Lab Code:	WS91	Case No.:	NPDES
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	13062402
Date Analysed	24-Jun-13	Time Analysed	09:56:39
Init.Calib.Date:	20-JUN-13	Init.Calib.Time:	12:34

Target Analytes	RRT#	RT
2378-TCDD	1.00	27.23
2378-TCDF	1.00	26.59
12378-PeCDF	1.00	30.74
12378-PeCDD	1.00	32.34
23478-PeCDF	1.00	32.09
123478-HxCDF	1.00	35.77
123678-HxCDF	1.00	35.93
123478-HxCDD	1.00	37.00
123678-HxCDD	1.00	37.12
123789-HxCDD	1.01	37.54
234678-HxCDF	1.00	36.87
123789-HxCDF	1.00	37.98
1234678-HpCDF	1.00	40.08
1234678-HpCDD	1.00	41.94
1234789-HpCDF	1.00	42.86
OCDD	1.00	48.07
OCDF	1.01	48.36

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	27.21
13C-12378-PeCDD	1.22	32.32
13C-123478-HxCDD	0.99	36.98
13C-123678-HxCDD	0.99	37.11
13C-1234678-HpCDD	1.12	41.92
13C-OCDD	1.28	48.04
13C-2378-TCDF	1.01	26.57
13C-12378-PeCDF	1.16	30.73
13C-23478-PeCDF	1.22	32.08
13C-123478-HxCDF	0.95	35.75
13C-123678-HxCDF	0.96	35.90
13C-234678-HxCDF	0.98	36.85
13C-123789-HxCDF	1.01	37.95
13C-1234678-HpCDF	1.07	40.06
13C-1234789-HpCDF	1.14	42.85

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1.03	27.23

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	26.39
13C-123789-HxCDD	0.00	37.53

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound)

WS91 : 98134

7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES, INC	Contract:	SAIC
Lab Code.	WS91	Case No.:	NPDES
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID.	AUTOSPEC1	Lab File ID:	13062414
Date Analysed	24-Jun-13	Time Analysed	20:38:11
Init.Calib.Date:	20-JUN-13	Init.Calib.Time:	12:34

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	0.98	0.94	4.2		0.75		0.65 - 0.89
2378-TCDF	304/306	0.83	0.77	7.1		0.75		0.65 - 0.89
12378-PeCDF	340/342	0.83	0.81	2.1		1.52		1.32 - 1.78
12378-PeCDD	356/358	0.92	0.89	2.6		1.53		1.32 - 1 78
23478-PeCDF	340/342	0.85	0.84	2.2		1.52		1.32 - 1.78
123478-HxCDF	374/376	0.98	0.97	1.4		1.23		1.05 - 1 43
123678-HxCDF	374/376	0.96	0.95	1.2		1.23		1.05 - 1 43
123478-HxCDD	390/392	0.92	0.90	2.3		1.26		1.05 - 1.43
123678-HxCDD	390/392	0.84	0.82	3.0		1 18		1.05 - 1.43
123789-HxCDD	390/392	0.88	0.79	11.0		1.21		1.05 - 1 43
234678-HxCDF	374/376	1.05	1.00	4.5		1.21		1.05 - 1.43
123789-HxCDF	374/376	0.93	0.87	6.4		1 19		1.05 - 1.43
1234678-HpCDF	408/410	1.12	1.07	4.6		1.00		0.89 - 1.21
1234678-HpCDD	424/426	0.93	0.88	5.4		1.02		0.89 - 1.21
1234789-HpCDF	408/410	1.12	1.09	2.9		1.00		0.89 - 1.21
OCDD	458/460	0.91	0.88	4 0		0.87		0.76 - 1.02
OCDF	442/444	0.94	0.88	6.9		0.89		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	0.99	0.92	7.1		0.76		0.65 - 0.89
13C-12378-PeCDD	368/370	0.74	0.67	10.0		1.56		1.32 - 1.78
13C-123478-HxCDD	402/404	1.00	1.03	-3.0		1.24		1.05 - 1.43
13C-123678-HxCDD	402/404	1.05	1.15	-8.4		1.22		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.75	0.79	-4.9		1.06		0.89 - 1.21
13C-OCDD	470/472	0.57	0.70	-18.0		0.89		0.76 - 1.02
13C-2378-TCDF	316/318	1.32	1.19	11.0		0.76		0.65 - 0.89
13C-12378-PeCDF	352/354	1.04	0.90	15.0		1.53		1.32 - 1.78
13C-23478-PeCDF	352/354	1.00	0.88	13.7		1.56		1.32 - 1.78
13C-123478-HxCDF	384/386	1.09	1.10	-0.9		0.51		0.43 - 0 59
13C-123678-HxCDF	384/386	1.13	1.19	-4.9		0.50		0.43 - 0.59
13C-234678-HxCDF	384/386	1.02	1.04	-2.3		0.51		0.43 - 0.59
13C-123789-HxCDF	384/386	0.99	0.94	5.2		0.52		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.78	0.83	-5 5		0.43		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.60	0.61	-1 3		0.44		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	1.00	5.6		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	0.78		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.22		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, INC.	Contract:	SAIC
Lab Code:	WS91	Case No.:	NPDES
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	13062414
Date Analysed	24-Jun-13	Time Analysed	20:38:11
Init.Calib.Date:	20-JUN-13	Init.Calib.Time:	12:34

Target Analytes	RRT#	RT
2378-TCDD	1.00	27.20
2378-TCDF	1.00	26.57
12378-PeCDF	1.00	30.73
12378-PeCDD	1.00	32.33
23478-PeCDF	1.00	32.08
123478-HxCDF	1.00	35.76
123678-HxCDF	1.00	35.92
123478-HxCDD	1.00	36.99
123678-HxCDD	1.00	37.11
123789-HxCDD	1.01	37.53
234678-HxCDF	1.00	36.86
123789-HxCDF	1.00	37.97
1234678-HpCDF	1.00	40.07
1234678-HpCDD	1.00	41.94
1234789-HpCDF	1.00	42.87
OCDD	1.00	48.07
OCDF	1.01	48.36

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	27.18
13C-12378-PeCDD	1.23	32.31
13C-123478-HxCDD	0.99	36.97
13C-123678-HxCDD	0.99	37.10
13C-1234678-HpCDD	1.12	41.92
13C-OCDD	1.28	48.04
13C-2378-TCDF	1.01	26.54
13C-12378-PeCDF	1.16	30.71
13C-23478-PeCDF	1.22	32.06
13C-123478-HxCDF	0.95	35.74
13C-123678-HxCDF	0.96	35 89
13C-234678-HxCDF	0.98	36.84
13C-123789-HxCDF	1.01	37.94
13C-1234678-HpCDF	1.07	40.06
13C-1234789-HpCDF	1.14	42.84

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1.03	27.20

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	26.36
13C-123789-HxCDD	0.00	37.52

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound)

WS91 - 00136

Pesticide Analysis
Report and Summary QC Forms

ARI Job ID: WS91

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: CL-MH-SPS-20130605-S
SAMPLE

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/21/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/13/13
Date Analyzed: 06/18/13 17:53
Instrument/Analyst: ECD6/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 59.3%

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	3.4	< 3.4 Y
319-86-8	delta-BHC	0.41	2.5	< 2.5 U
58-89-9	gamma-BHC (Lindane)	0.24	2.5	< 2.5 U
76-44-8	Heptachlor	0.65	2.5	< 2.5 U
309-00-2	Aldrin	0.27	2.5	< 2.5 U
1024-57-3	Heptachlor Epoxide	0.42	5.0	< 5.0 U
959-98-8	Endosulfan I	0.36	2.5	< 2.5 U
60-57-1	Dieldrin	0.49	5.0	< 5.0 U
72-55-9	4,4'-DDE	0.61	5.0	< 5.0 U
72-20-8	Endrin	1.1	8.6	< 8.6 Y
33213-65-9	Endosulfan II	0.57	5.0	< 5.0 U
72-54-8	4,4'-DDD	0.67	5.0	< 5.0 U
1031-07-8	Endosulfan Sulfate	0.95	13	< 13 Y
50-29-3	4,4'-DDT	0.95	12	< 12 Y
72-43-5	Methoxychlor	3.5	25	< 25 U
53494-70-5	Endrin Ketone	0.59	24	< 24 Y
7421-93-4	Endrin Aldehyde	1.1	5.0	< 5.0 U
5103-74-2	trans-Chlordane	0.38	45	< 45 Y
5103-71-9	cis-Chlordane	0.25	2.5	< 2.5 U
8001-35-2	Toxaphene	170	500	< 500 U
118-74-1	Hexachlorobenzene	0.46	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.68	5.0	< 5.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	NR
Tetrachlorometaxylene	92.4%

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: WS91-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP	TCMX	TOT OUT
MB-061313	84.8%	71.0%	0
LCS-061313	102%	81.5%	0
LCSD-061313	82.8%	70.5%	0
CL-MH-SPS-20130605-S	NR	92.4%	0
CL-MH-SPS-20130605-S MS	69.4%	82.0%	0
CL-MH-SPS-20130605-S MSD	88.2%	79.1%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(60-149)	(36-182)
(TCMX) = Tetrachlorometaxylene	(47-124)	(34-169)

Prep Method: SW3546
Log Number Range: 13-12076 to 13-12076

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Page 1 of 1

Sample ID: CL-MH-SPS-20130605-S
MS/MSD

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/21/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted MS/MSD: 06/13/13

Date Analyzed MS: 06/18/13 18:11
MSD: 06/18/13 18:28
Instrument/Analyst MS: ECD6/JGR
MSD: ECD6/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount MS: 12.6 g-dry-wt
MSD: 12.6 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: 59.3%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
alpha-BHC	< 2.47	2.12 JP	3.96	53.5%	1.93 JP	3.96	48.7%	9.4%
beta-BHC	< 3.43	4.08	3.96	103%	3.71	3.96	93.7%	9.5%
delta-BHC	< 2.47	1.06 J	3.96	26.8%	1.19 J	3.96	30.1%	11.6%
gamma-BHC (Lindane)	< 2.47	6.21 JP	3.96	157%	4.91 JP	3.96	124%	23.4%
Heptachlor	< 2.47	2.41 J	3.96	60.9%	2.43 J	3.96	61.4%	0.8%
Aldrin	< 2.47	3.51 JP	3.96	88.6%	3.06 J	3.96	77.3%	13.7%
Heptachlor Epoxide	< 4.95	5.39 J	3.96	136%	4.92 J	3.96	124%	9.1%
Endosulfan I	< 2.47	3.08 JP	3.96	77.8%	3.56 JP	3.96	89.9%	14.5%
Dieldrin	< 4.95	6.93	7.91	87.6%	7.11	7.92	89.8%	2.6%
4,4'-DDE	< 4.95	10.5 P	7.91	133%	11.5 P	7.92	145%	9.1%
Endrin	< 8.55	9.01 JP	7.91	114%	9.06 P	7.92	114%	0.6%
Endosulfan II	< 4.95	6.51 JP	7.91	82.3%	5.23 JP	7.92	66.0%	21.8%
4,4'-DDD	< 4.95	3.65 J	7.91	46.1%	1.83 J	7.92	23.1%	66.4%
Endosulfan Sulfate	< 13.4	1.97 JP	7.91	24.9%	1.51 J	7.92	19.1%	26.4%
4,4'-DDT	< 11.7	8.92 P	7.91	113%	7.50	7.92	94.7%	17.3%
Methoxychlor	< 24.7	36.1 JP	39.6	91.2%	37.8 JP	39.6	95.5%	4.6%
Endrin Ketone	< 23.6	9.62 P	7.91	122%	8.31 JP	7.92	105%	14.6%
Endrin Aldehyde	< 4.95	1.62 J	7.91	20.5%	5.25 JP	7.92	66.3%	106%
trans-Chlordane	< 45.1	4.22	3.96	NA	4.37	3.96	NA	3.5%
cis-Chlordane	< 2.47	2.77 J	3.96	69.9%	2.78 JP	3.96	70.2%	0.4%
Hexachlorobenzene	< 4.95	5.74 JP	3.96	145%	4.21 J	3.96	106%	30.8%
Hexachlorobutadiene	< 4.95	4.71 JP	3.96	119%	4.43 JP	3.96	112%	6.1%

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: CL-MH-SPS-20130605-S
MATRIX SPIKE

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/21/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/13/13
Date Analyzed: 06/18/13 18:11
Instrument/Analyst: ECD6/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 59.3%

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	0.41	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	0.36	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	3.5	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	69.4%
Tetrachlorometaxylene	82.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: CL-MH-SPS-20130605-S
MATRIX SPIKE DUP

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/21/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/13/13
Date Analyzed: 06/18/13 18:28
Instrument/Analyst: ECD6/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 59.3%

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	0.41	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	5.0	---
959-98-8	Endosulfan I	0.36	2.5	---
60-57-1	Dieldrin	0.49	5.0	---
72-55-9	4,4'-DDE	0.61	5.0	---
72-20-8	Endrin	1.1	5.0	---
33213-65-9	Endosulfan II	0.57	5.0	---
72-54-8	4,4'-DDD	0.67	5.0	---
1031-07-8	Endosulfan Sulfate	0.95	5.0	---
50-29-3	4,4'-DDT	0.95	5.0	---
72-43-5	Methoxychlor	3.5	25	---
53494-70-5	Endrin Ketone	0.59	5.0	---
7421-93-4	Endrin Aldehyde	1.1	5.0	---
5103-74-2	trans-Chlordane	0.38	2.5	---
5103-71-9	cis-Chlordane	0.25	2.5	---
8001-35-2	Toxaphene	170	500	< 500 U
118-74-1	Hexachlorobenzene	0.47	5.0	---
87-68-3	Hexachlorobutadiene	0.68	5.0	---

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	88.2%
Tetrachlorometaxylene	79.1%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD

Sample ID: LCS-061313
LCS/LCSD

Lab Sample ID: LCS-061313
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/21/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted LCS/LCSD: 06/13/13

Date Analyzed LCS: 06/18/13 17:00
LCSD: 06/18/13 17:17
Instrument/Analyst LCS: ECD6/JGR
LCSD: ECD6/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount LCS: 12.5 g-dry-wt
LCSD: 12.5 g-dry-wt
Final Extract Volume LCS: 2.5 mL
LCSD: 2.5 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Silica Gel: Yes

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
alpha-BHC	3.66	4.00	91.5%	3.14	4.00	78.5%	15.3%
beta-BHC	3.88	4.00	97.0%	3.28	4.00	82.0%	16.8%
delta-BHC	3.12	4.00	78.0%	2.54	4.00	63.5%	20.5%
gamma-BHC (Lindane)	3.92	4.00	98.0%	3.34	4.00	83.5%	16.0%
Heptachlor	3.90	4.00	97.5%	3.32	4.00	83.0%	16.1%
Aldrin	3.90	4.00	97.5%	3.34	4.00	83.5%	15.5%
Heptachlor Epoxide	4.50	4.00	112%	3.78	4.00	94.5%	17.4%
Endosulfan I	4.46	4.00	112%	3.74	4.00	93.5%	17.6%
Dieldrin	9.22	8.00	115%	7.72	8.00	96.5%	17.7%
4,4'-DDE	9.76	8.00	122%	8.18	8.00	102%	17.6%
Endrin	8.46	8.00	106%	6.84	8.00	85.5%	21.2%
Endosulfan II	7.88	8.00	98.5%	6.34	8.00	79.2%	21.7%
4,4'-DDD	7.18	8.00	89.8%	5.80	8.00	72.5%	21.3%
Endosulfan Sulfate	7.32	8.00	91.5%	6.06	8.00	75.8%	18.8%
4,4'-DDT	7.76	8.00	97.0%	6.22	8.00	77.8%	22.0%
Methoxychlor	36.8	40.0	92.0%	29.8	40.0	74.5%	21.0%
Endrin Ketone	7.54	8.00	94.2%	6.14	8.00	76.8%	20.5%
Endrin Aldehyde	4.98	8.00	62.2%	4.22	8.00	52.8%	16.5%
trans-Chlordane	4.46	4.00	112%	3.74	4.00	93.5%	17.6%
cis-Chlordane	4.42	4.00	110%	3.68	4.00	92.0%	18.3%
Hexachlorobenzene	3.76	4.00	94.0%	3.32	4.00	83.0%	12.4%
Hexachlorobutadiene	3.20	4.00	80.0%	2.84	4.00	71.0%	11.9%

Pest/PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	102%	82.8%
Tetrachlorometaxylene	81.5%	70.5%

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

FORM III

FORM 4
PESTICIDE METHOD BLANK SUMMARY

BLANK NO.

WS91MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WS91
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WS91MBS1
Lab File ID: 0618A022

Date Extracted: 06/13/13
Matrix: SOLID

Date Analyzed: 06/18/13
Instrument ID: ECD6

Time Analyzed: 1642
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	WS91LCSS1	WS91LCSS1	06/18/13
02	WS91LCSDS1	WS91LCSDS1	06/18/13
03	CL-MH-SPS-20130605-	WS91A	06/18/13
04	CL-MH-SPS-20130 MS	WS91AMS	06/18/13
05	CL-MH-SPS-20130 MSD	WS91AMSD	06/18/13

ALL RUNS ARE DUAL COLUMN

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: MB-061313
METHOD BLANK

Lab Sample ID: MB-061313
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/21/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/13/13
Date Analyzed: 06/18/13 16:42
Instrument/Analyst: ECD6/JGR
GPC Cleanup: No
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	84.8%
Tetrachlorometaxylene	71.0%

FORM I

6D
8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS91 Project: NPDES

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

Calibration Date: 05/14/13

COMPOUND	RT OF STANDARDS							MEAN	RT WINDOW	
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	RT	FROM	TO
alpha-BHC	4.33	4.33	4.33	4.33	4.28	4.33	4.33	4.32	4.23	4.33
beta-BHC	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.59	4.69
delta-BHC	4.86	4.86	4.86	4.86	4.81	4.86	4.86	4.85	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	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.30	5.25	5.35
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	6.90	6.90	6.90	6.90	6.90	6.90	6.90	6.90	6.85	6.95
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	6.99	6.99	6.99	6.99	6.99	6.99	6.99	6.99	6.94	7.04
Methoxychlor	7.42	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	7.92	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	6.12	6.12	6.12	6.12	6.12	6.12	6.12	6.12	6.07	6.17
Hexachlorobutadiene	2.34	2.34	2.34	2.34	2.31	2.34	2.34	2.34	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	3.84	3.84	3.84	3.84	3.80	3.84	3.83	3.83	3.75	3.85
Decachlorobiphenyl	8.77	8.77	8.77	8.77	8.77	8.77	8.77	8.77	8.72	8.82

WS91 : 8015

6D
8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS91 Project: NPDES

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

Calibration Date: 05/14/13

COMPOUND	RT OF STANDARDS							MEAN RT	RT WINDOW FROM	RT WINDOW TO
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7			
alpha-BHC	4.76	4.76	4.76	4.75	4.71	4.75	4.75	4.75	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)	5.06	5.06	5.06	5.06	5.06	5.06	5.06	5.06	5.01	5.11
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	7.36	7.36	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	7.54	7.54	7.49	7.59
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	8.14	8.14	8.14	8.14	8.09	8.14	8.13	8.13	8.04	8.14
4,4'-DDT	7.75	7.75	7.75	7.75	7.69	7.74	7.74	7.74	7.64	7.74
Methoxychlor	8.33	8.33	8.33	8.33	8.28	8.33	8.33	8.32	8.23	8.33
Endrin ketone	8.63	8.63	8.63	8.63	8.58	8.63	8.63	8.62	8.53	8.63
Endrin aldehyde	7.90	7.90	7.89	7.89	7.84	7.89	7.89	7.89	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	4.64	4.64	4.64	4.63	4.58	4.63	4.63	4.63	4.53	4.63
Tetrachloro-m-xylene	4.17	4.17	4.17	4.17	4.13	4.17	4.17	4.16	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.: WS91 Project: NPDES

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

Calibration Date: 05/14/13

COMPOUND	CALIBRATION FACTORS LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	R^2 %RSD
alpha-BHC	1.5968	1.5392	1.5872	1.6901	1.7297	1.7443	2.0426	1.7043	9.9
beta-BHC	0.7301	0.6823	0.6738	0.6482	0.6413	0.6319	0.7220	0.6756	5.7
delta-BHC	1.2786	1.2619	1.3188	1.4477	1.4389	1.4775	1.7328	1.4223	11.4
gamma-BHC (Lindane)	1.3776	1.3221	1.3739	1.4737	1.5045	1.5173	1.7699	1.4770	10.1
Heptachlor	1.4402	1.3545	1.3699	1.4447	1.4364	1.4095	1.5937	1.4356	5.4
Aldrin	1.3391	1.3219	1.3589	1.4306	1.4442	1.4284	1.6236	1.4210	7.2
Heptachlor epoxide b	1.3188	1.2294	1.2355	1.2904	1.2630	1.2402	1.3930	1.2815	4.6
Endosulfan I	1.3372	1.2241	1.1948	1.2064	1.1670	1.1231	1.2589	1.2159	5.6
Dieldrin	1.2814	1.2331	1.2629	1.3180	1.2916	1.2529	1.4056	1.2922	4.4
4,4'-DDE	1.0790	0.9920	0.9834	1.0026	1.0023	1.0038	1.1801	1.0347	6.9
Endrin	1.0004	0.9514	0.9880	1.0588	1.0584	1.0706	1.2004	1.0468	7.7
Endosulfan II	1.1252	1.0889	1.0545	1.1510	1.1162	1.1303	1.2764	1.1346	6.2
4,4'-DDD	1.2252	1.1470	1.1595	1.2032	1.1608	1.1774	1.3268	1.2000	5.2
Endosulfan sulfate	1.0443	0.9656	0.9745	1.0088	0.9846	1.0061	1.1424	1.0180	6.0
4,4'-DDT	1.0032	0.9598	0.9927	1.0672	1.0551	1.1004	1.2648	1.0633	9.5
Methoxychlor	0.5427	0.5024	0.4926	0.4960	0.4752	0.4831	0.5639	0.5080	6.4
Endrin ketone	1.4418	1.2742	1.2510	1.2600	1.2054	1.2244	1.3916	1.2926	6.9
Endrin aldehyde	1.0145	0.9294	0.9220	0.9490	0.9087	0.9217	1.0364	0.9545	5.3
gamma-Chlordane	1.3433	1.2904	1.3019	1.3866	1.3786	1.3702	1.5490	1.3743	6.2
alpha-Chlordane	1.2651	1.1864	1.2049	1.2783	1.2847	1.2776	1.4501	1.2782	6.7
Hexachlorobutadiene	1.7932	1.6939	1.7496	1.7815	1.7512	1.7130	1.9878	1.7814	5.5
Hexachlorobenzene	1.4975	1.3905	1.3345	1.3248	1.2691	1.2270	1.3907	1.3477	6.6
Tetrachloro-m-xylene	1.0573	1.0250	1.0491	1.0957	1.1043	1.0784	1.2256	1.0908	6.0
Decachlorobiphenyl	1.3691	1.1703	1.1864	1.0954	1.0150	0.9957	1.1297	1.1374	11.0

6E
8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS91 Project: NPDES

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

Calibration Date: 05/14/13

COMPOUND	CALIBRATION FACTORS LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	R^2 %RSD
alpha-BHC	1.5964	1.6078	1.7179	1.8556	1.8716	1.8406	2.0861	1.7966	9.6
beta-BHC	0.6754	0.6491	0.6617	0.6966	0.7003	0.6895	0.7649	0.6911	5.4
delta-BHC	1.2504	1.2562	1.3640	1.5177	1.5783	1.5735	1.7885	1.4755	13.3
gamma-BHC (Lindane)	1.4128	1.3982	1.4757	1.5963	1.6109	1.5910	1.8271	1.5588	9.5
Heptachlor	1.5214	1.4662	1.5073	1.5651	1.5171	1.4171	1.4920	1.4980	3.1
Aldrin	1.3673	1.3404	1.3839	1.4765	1.4663	1.3818	1.4814	1.4139	4.2
Heptachlor epoxide b	1.3111	1.1809	1.2247	1.2731	1.2517	1.1802	1.2468	1.2384	3.8
Endosulfan I	1.1289	1.0916	1.1276	1.1988	1.1753	1.1147	1.1712	1.1440	3.4
Dieldrin	1.2194	1.2005	1.1957	1.2291	1.1560	1.0591	1.1010	1.1658	5.5
4,4'-DDE	1.2420	1.2138	1.2482	1.2889	1.2055	1.1204	1.1599	1.2112	4.7
Endrin	1.5490	1.4864	1.5394	1.5891	1.5221	1.4268	1.4967	1.5156	3.4
Endosulfan II	1.8235	1.7385	1.7960	1.8865	1.7723	1.6578	1.7732	1.7782	4.0
4,4'-DDD	1.8815	1.7757	1.8133	1.8367	1.7370	1.6484	1.7986	1.7844	4.2
Endosulfan sulfate	1.4746	1.3972	1.4421	1.4952	1.4478	1.4024	1.5233	1.4546	3.2
4,4'-DDT	1.4079	1.3584	1.4277	1.5130	1.4495	1.4659	1.6656	1.4697	6.7
Methoxychlor	0.6750	0.6230	0.6058	0.5795	0.5179	0.4760	0.4876	0.5664	13.2
Endrin ketone	1.7032	1.5827	1.5941	1.6097	1.5259	1.4661	1.6076	1.5842	4.7
Endrin aldehyde	1.5133	1.4032	1.4138	1.4303	1.3655	1.3052	1.4070	1.4055	4.5
gamma-Chlordane	1.2795	1.2138	1.2586	1.3396	1.3316	1.2796	1.3829	1.2979	4.4
alpha-Chlordane	1.1495	1.1150	1.1611	1.2432	1.2285	1.1863	1.2871	1.1958	5.0
Hexachlorobutadiene	1.6005	1.4941	1.4733	1.5378	1.4342	1.4100	1.5669	1.5024	4.6
Hexachlorobenzene	1.9113	1.8141	1.8472	1.9384	1.8917	1.8032	1.9964	1.8860	3.7
Tetrachloro-m-xylene	1.3675	1.3120	1.3324	1.3607	1.2884	1.2131	1.2297	1.3005	4.7
Decachlorobiphenyl	1.8027	1.6202	1.5938	1.5991	1.5250	1.4884	1.6834	1.6161	6.4

WS91:0614S

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date: 18-JUN-2013 15:48 Init. Calib. Date: 14-MAY-2013

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

COMPOUND	RT	AREA
4,4'-DDE	6.179	150258
Endrin	6.695	7352110
4,4'-DDD	6.736	571292
4,4'-DDT	6.994	7136078
Endrin ketone	7.923	483422
Endrin aldehyde	7.278	212956

DDT Percent Breakdown = 9.2 %
((150258+571292) * 100)/(150258+571292+7136078)

Endrin Percent Breakdown = 8.7 %
((212956+483422) * 100)/(212956+483422+7352110)

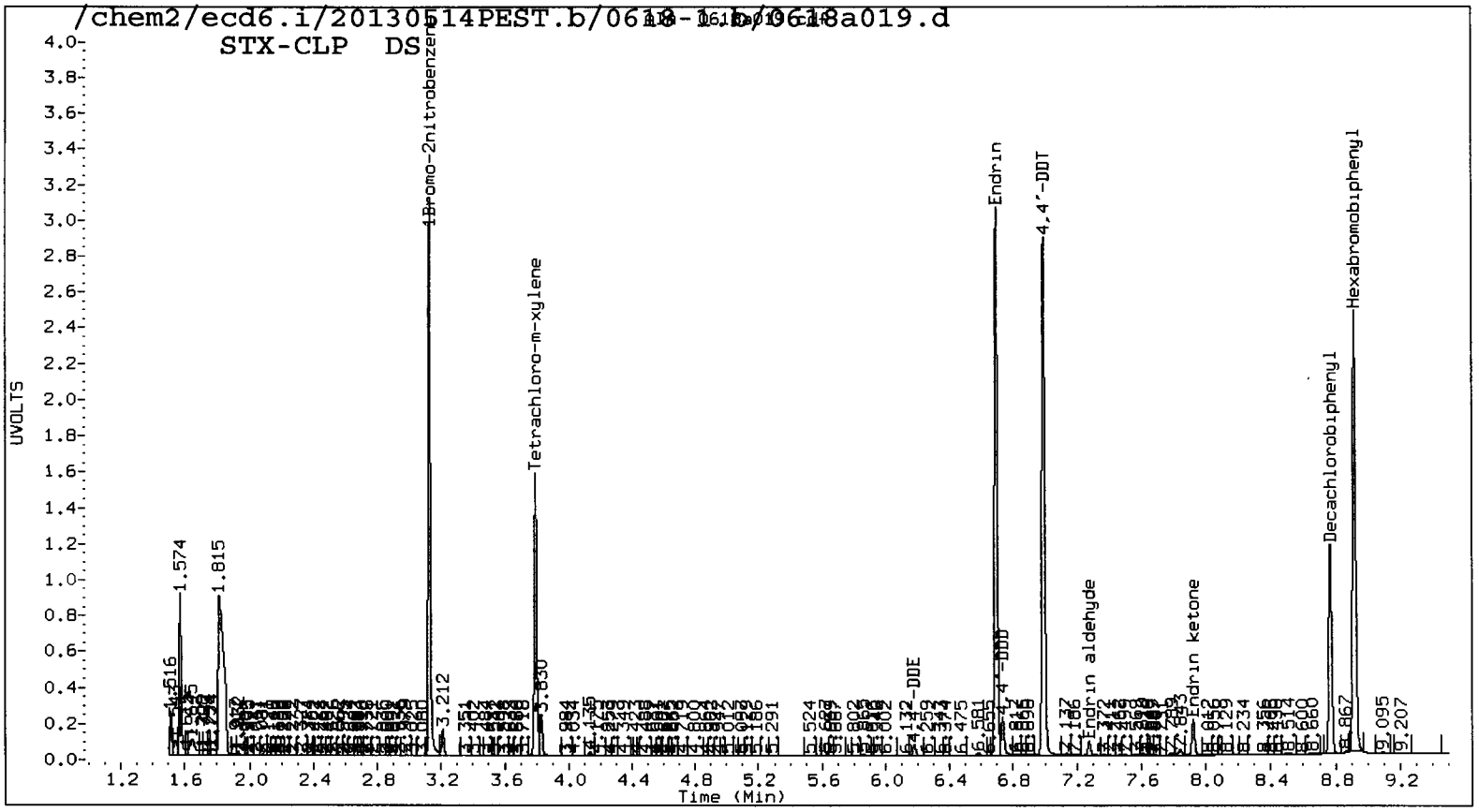
6/21/13

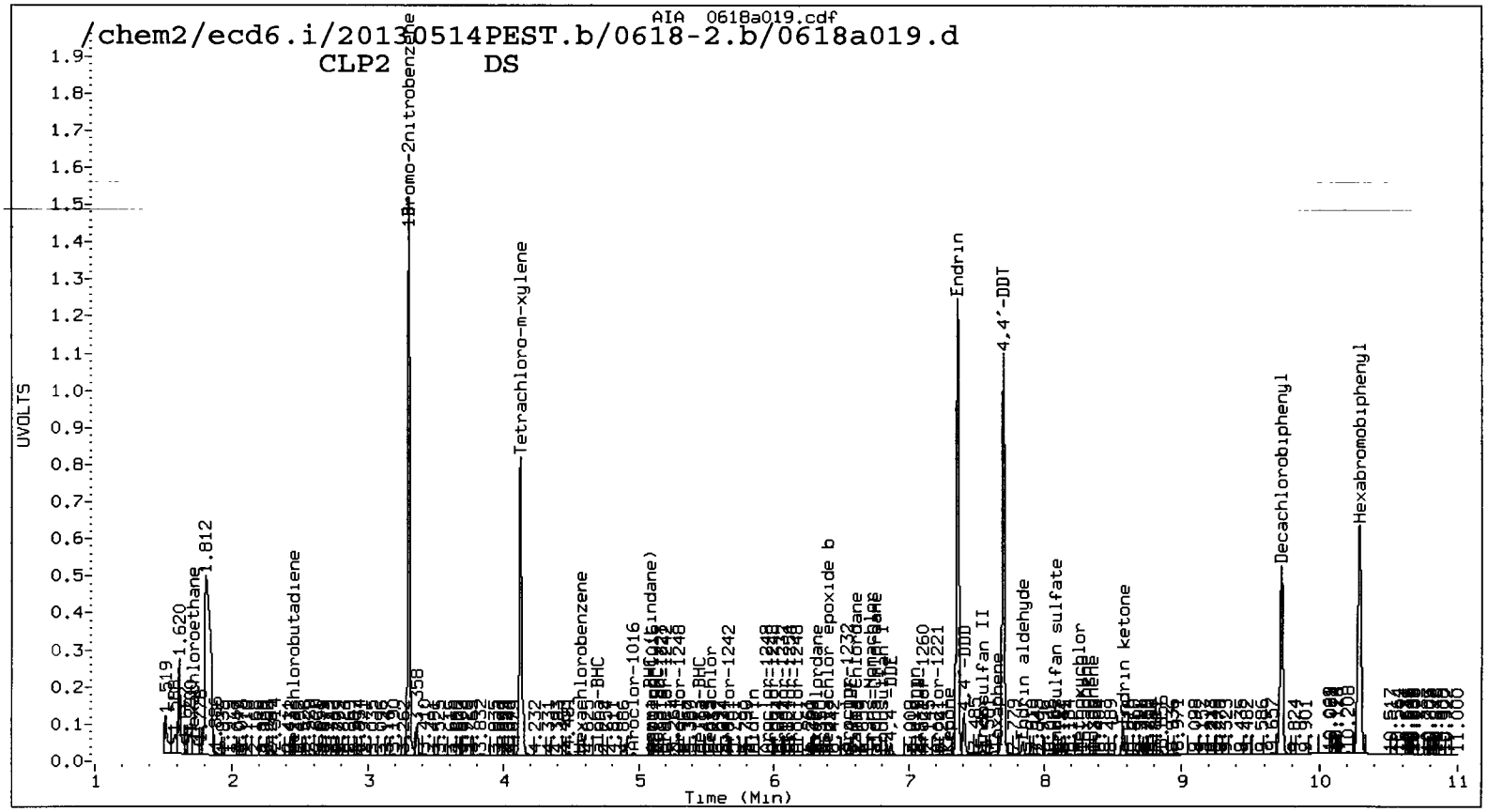
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.867	797984
Endrin	7.353	30655540
4,4'-DDD	7.404	3084167
4,4'-DDT	7.692	26235149
Endrin ketone	8.574	1835868
Endrin aldehyde	7.840	979815

DDT Percent Breakdown = 12.9 %
((797984+3084167) * 100)/(797984+3084167+26235149)

Endrin Percent Breakdown = 8.4 %
((979815+1835868) * 100)/(979815+1835868+30655540)


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a019.d
STX-CLP DS
UVOLTS
Time (Min)
1.574
1.815
3.212
4Bromo-2nitrobenzene
Tetrachloro-m-xylene
5.830
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0618a019.cdf
/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a019.d
CLP2 DS
UVOLTS
Time (Min)
1.812
4Bromo-2nitrobenzene
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.: WS91 Project: NPDES

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

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/18/13,1606

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
alpha-BHC	4.28	4.23	4.33	23.4	20.0	17.1	
beta-BHC	4.64	4.59	4.69	21.7	20.0	8.4	
delta-BHC	4.81	4.76	4.86	23.3	20.0	16.6	
gamma-BHC (Lindane)	4.56	4.52	4.62	24.2	20.0	20.8	<-
Heptachlor	5.01	4.96	5.06	23.2	20.0	16.0	
Aldrin	5.30	5.25	5.35	23.8	20.0	19.0	
Heptachlor epoxide b	5.88	5.83	5.93	24.0	20.0	20.0	
Endosulfan I	6.25	6.21	6.31	23.2	20.0	15.8	
Dieldrin	6.48	6.43	6.53	46.9	40.0	17.2	
4,4'-DDE	6.18	6.13	6.23	42.0	40.0	5.1	
Endrin	6.69	6.65	6.75	45.9	40.0	14.7	
Endosulfan II	6.90	6.85	6.95	41.0	40.0	2.5	
4,4'-DDD	6.73	6.69	6.79	39.6	40.0	-1.1	
Endosulfan sulfate	7.67	7.62	7.72	41.5	40.0	3.7	
4,4'-DDT	6.99	6.94	7.04	42.9	40.0	7.1	
Methoxychlor	7.42	7.37	7.47	198.4	200.0	-0.8	
Endrin ketone	7.92	7.88	7.98	41.0	40.0	2.5	
Endrin aldehyde	7.28	7.23	7.33	38.1	40.0	-4.6	
gamma-Chlordane	6.00	5.95	6.05	23.3	20.0	16.5	
alpha-Chlordane	6.12	6.07	6.17	23.9	20.0	19.6	
Hexachlorobutadiene	2.31	2.26	2.36	22.5	20.0	12.7	
Hexachlorobenzene	4.14	4.09	4.19	21.5	20.0	7.4	
Tetrachloro-m-xylene	3.79	3.75	3.85	46.3	40.0	15.7	
Decachlorobiphenyl	8.77	8.72	8.82	37.8	40.0	-5.5	

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS91 Project: NPDES

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

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/18/13,1606

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	24.3	20.0	21.6	<-
beta-BHC	5.13	5.09	5.19	25.0	20.0	25.0	<-
delta-BHC	5.45	5.40	5.50	25.0	20.0	24.9	<-
gamma-BHC (Lindane)	5.06	5.01	5.11	24.2	20.0	21.0	<-
Heptachlor	5.53	5.48	5.58	24.0	20.0	19.8	
Aldrin	5.86	5.82	5.92	25.2	20.0	25.8	<-
Heptachlor epoxide b	6.42	6.37	6.47	26.4	20.0	31.9	<-
Endosulfan I	6.81	6.76	6.86	25.5	20.0	27.4	<-
Dieldrin	7.06	7.02	7.12	49.6	40.0	24.0	<-
4,4'-DDE	6.87	6.82	6.92	47.4	40.0	18.4	
Endrin	7.35	7.31	7.41	43.2	40.0	8.1	
Endosulfan II	7.54	7.49	7.59	40.5	40.0	1.3	
4,4'-DDD	7.40	7.36	7.46	39.7	40.0	-0.6	
Endosulfan sulfate	8.08	8.04	8.14	41.0	40.0	2.5	
4,4'-DDT	7.69	7.64	7.74	42.8	40.0	6.9	
Methoxychlor	8.27	8.23	8.33	186.2	200.0	-6.9	
Endrin ketone	8.58	8.53	8.63	39.7	40.0	-0.9	
Endrin aldehyde	7.84	7.79	7.89	38.3	40.0	-4.3	
gamma-Chlordane	6.60	6.55	6.65	25.4	20.0	27.1	<-
alpha-Chlordane	6.74	6.69	6.79	25.6	20.0	28.1	<-
Hexachlorobutadiene	2.47	2.42	2.52	16.5	20.0	-17.4	
Hexachlorobenzene	4.58	4.53	4.63	23.8	20.0	18.8	
Tetrachloro-m-xylene	4.12	4.08	4.18	45.8	40.0	14.5	
Decachlorobiphenyl	9.72	9.67	9.77	41.4	40.0	3.5	

WS91:60159

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: 0618-1 Project: NPDES

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

Init. Calib. Date: 05/14/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 06/18/13,1624

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Toxaphene	6.95	6.91	7.01	2203.9	2500.0	-11.8
Tetrachloro-m-xylene	3.79	3.75	3.85	38.4	40.0	-4.0
Decachlorobiphenyl	8.77	8.72	8.82	32.3	40.0	-19.3

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: 0618-1 Project: NPDES

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

Init. Calib. Date: 05/14/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 06/18/13,1624

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Toxaphene	7.29	7.24	7.34	2113.2	2500.0	-15.5
Tetrachloro-m-xylene	4.12	4.08	4.18	39.2	40.0	-2.0
Decachlorobiphenyl	9.72	9.67	9.77	35.5	40.0	-11.3

FORM VII PEST-2

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.:

Analysis Date: 18-JUN-2013 18:46 Init. Calib. Date: 14-MAY-2013

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

COMPOUND	RT	AREA
4,4'-DDE	6.179	92894
Endrin	6.696	5970445
4,4'-DDD	6.735	637719
4,4'-DDT	6.993	4755175
Endrin ketone	7.923	428051
Endrin aldehyde	7.278	86214

DDT Percent Breakdown = 13.3 %
((92894+637719) * 100)/(92894+637719+4755175)

Endrin Percent Breakdown = 7.9 %
((86214+428051) * 100)/(86214+428051+5970445)

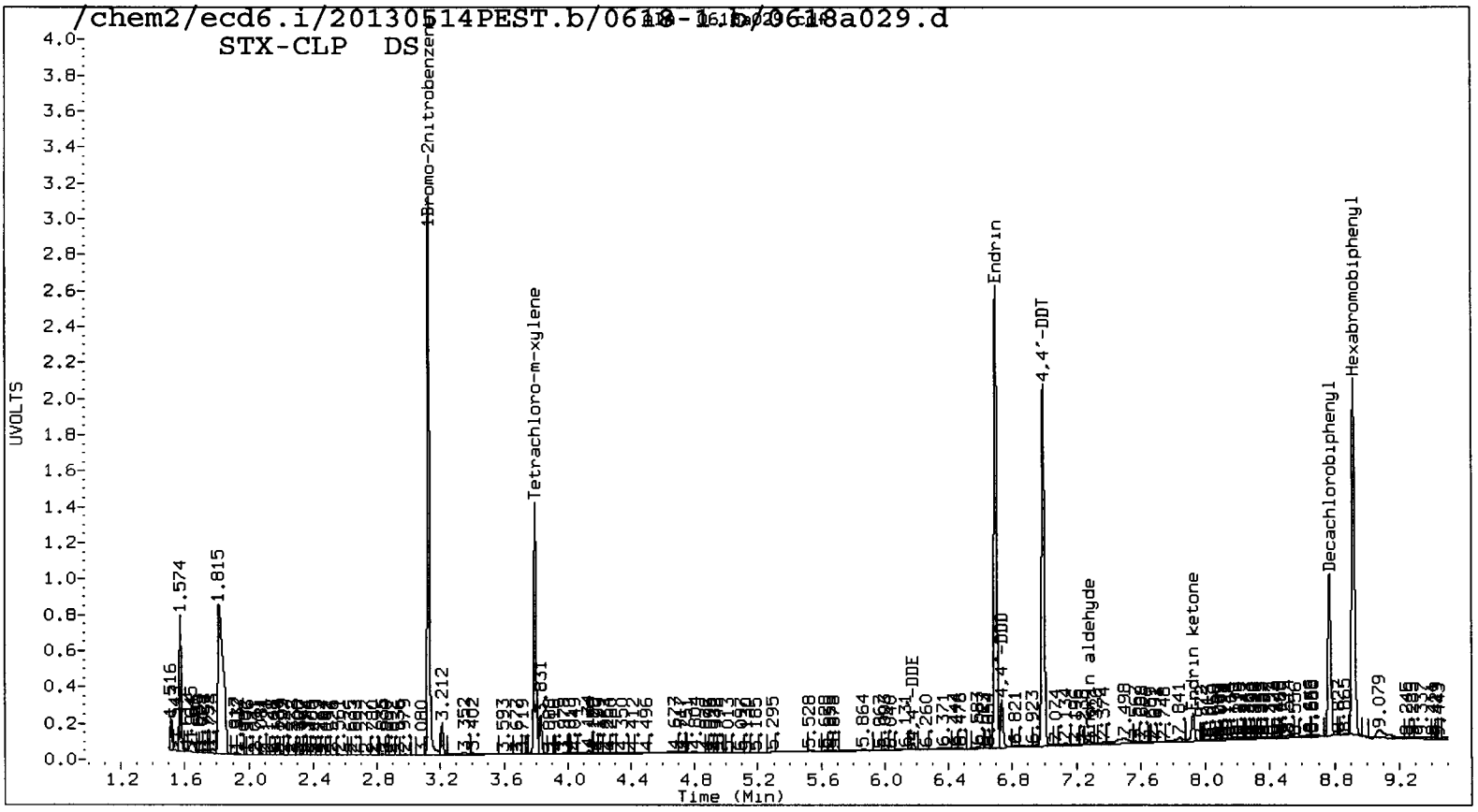
GC Column: STX-CLP2 ID: 0.53(mm)

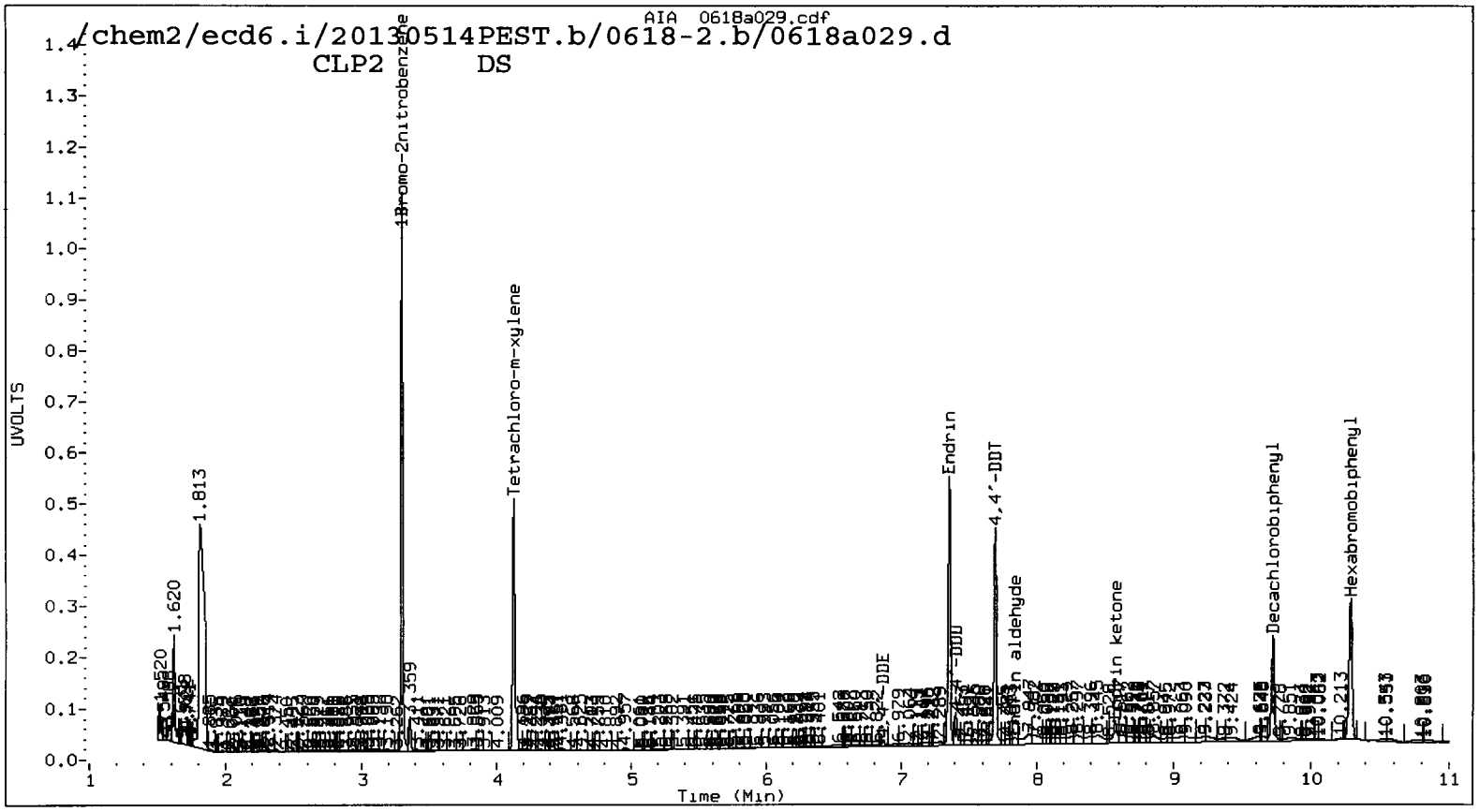
COMPOUND	RT	AREA
4,4'-DDE	6.867	462655
Endrin	7.354	12484813
4,4'-DDD	7.405	1846987
4,4'-DDT	7.692	10342500
Endrin ketone	8.576	1542992
Endrin aldehyde	7.842	634997

DDT Percent Breakdown = 18.3 %
((462655+1846987) * 100)/(462655+1846987+10342500)

Endrin Percent Breakdown = 14.9 %
((634997+1542992) * 100)/(634997+1542992+12484813)

WS91:00156


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a029.d
STX-CLP DS
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl
1.574
1.815
3.212
4,4'-DDE
Endrin aldehyde
Endrin ketone
UVOLTS
Time (Min)


AIA 0618a029.cdf
/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a029.d
CLP2 DS
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl
1.620
1.813
4,4'-DDE
Endrin aldehyde
Endrin ketone
UVOLTS
Time (Min)

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS91 Project: NPDES

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

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/18/13,1904

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
alpha-BHC	4.28	4.23	4.33	22.5	20.0	12.7	
beta-BHC	4.64	4.59	4.69	19.9	20.0	-0.4	
delta-BHC	4.81	4.76	4.86	21.3	20.0	6.5	
gamma-BHC (Lindane)	4.56	4.52	4.62	22.3	20.0	11.5	
Heptachlor	5.01	4.96	5.06	20.9	20.0	4.7	
Aldrin	5.30	5.25	5.35	22.1	20.0	10.4	
Heptachlor epoxide b	5.88	5.83	5.93	21.2	20.0	5.9	
Endosulfan I	6.25	6.21	6.31	20.5	20.0	2.7	
Dieldrin	6.48	6.43	6.53	40.0	40.0	-0.0	
4,4'-DDE	6.18	6.13	6.23	41.1	40.0	2.9	
Endrin	6.70	6.65	6.75	48.3	40.0	20.6	<-
Endosulfan II	6.90	6.85	6.95	42.2	40.0	5.4	
4,4'-DDD	6.74	6.69	6.79	44.0	40.0	9.9	
Endosulfan sulfate	7.67	7.62	7.72	39.2	40.0	-2.0	
4,4'-DDT	6.99	6.94	7.04	34.8	40.0	-13.0	
Methoxychlor	7.42	7.37	7.47	195.9	200.0	-2.0	
Endrin ketone	7.92	7.88	7.98	40.4	40.0	1.0	
Endrin aldehyde	7.28	7.23	7.33	37.3	40.0	-6.7	
gamma-Chlordane	6.00	5.95	6.05	20.1	20.0	0.6	
alpha-Chlordane	6.12	6.07	6.17	20.6	20.0	2.8	
Hexachlorobutadiene	2.31	2.26	2.36	22.4	20.0	11.8	
Hexachlorobenzene	4.14	4.09	4.19	21.2	20.0	6.1	
Tetrachloro-m-xylene	3.80	3.75	3.85	45.3	40.0	13.3	
Decachlorobiphenyl	8.77	8.72	8.82	36.9	40.0	-7.8	

FORM VII PEST-2

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS91 Project: NPDES

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

Init. Calib. Date: 05/14/13

Lab Ccal ID: INDAE Date/Time Analyzed: 06/18/13,1904

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	20.2	20.0	1.0	
beta-BHC	5.14	5.09	5.19	18.9	20.0	-5.6	
delta-BHC	5.45	5.40	5.50	18.8	20.0	-6.0	
gamma-BHC (Lindane)	5.06	5.01	5.11	19.4	20.0	-2.9	
Heptachlor	5.53	5.48	5.58	17.7	20.0	-11.5	
Aldrin	5.86	5.82	5.92	17.4	20.0	-12.9	
Heptachlor epoxide b	6.42	6.37	6.47	16.1	20.0	-19.7	
Endosulfan I	6.81	6.76	6.86	13.6	20.0	-32.2	<-
Dieldrin	7.06	7.02	7.12	27.0	40.0	-32.6	<-
4,4'-DDE	6.87	6.82	6.92	25.3	40.0	-36.8	<-
Endrin	7.35	7.31	7.41	40.4	40.0	1.0	
Endosulfan II	7.54	7.49	7.59	38.6	40.0	-3.5	
4,4'-DDD	7.40	7.36	7.46	38.5	40.0	-3.8	
Endosulfan sulfate	8.09	8.04	8.14	40.9	40.0	2.2	
4,4'-DDT	7.69	7.64	7.74	33.4	40.0	-16.4	
Methoxychlor	8.27	8.23	8.33	208.3	200.0	4.2	
Endrin ketone	8.58	8.53	8.63	37.8	40.0	-5.5	
Endrin aldehyde	7.84	7.79	7.89	33.2	40.0	-17.0	
gamma-Chlordane	6.60	6.55	6.65	14.5	20.0	-27.5	<-
alpha-Chlordane	6.74	6.69	6.79	13.7	20.0	-31.6	<-
Hexachlorobutadiene	2.47	2.42	2.52	15.3	20.0	-23.3	<-
Hexachlorobenzene	4.58	4.53	4.63	20.1	20.0	0.6	
Tetrachloro-m-xylene	4.12	4.08	4.18	41.0	40.0	2.5	
Decachlorobiphenyl	9.72	9.67	9.77	39.7	40.0	-0.8	

FORM VII PEST-2

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: 0618-1 Project: NPDES

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

Init. Calib. Date: 05/14/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 06/18/13,1922

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Toxaphene	6.95	6.91	7.01	1599.0	2500.0	-36.0	<-
Tetrachloro-m-xylene	3.80	3.75	3.85	37.6	40.0	-5.9	
Decachlorobiphenyl	8.77	8.72	8.82	30.9	40.0	-22.8	<-

WS91 : 00160

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: 0618-1 Project: NPDES

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

Init. Calib. Date: 05/14/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 06/18/13,1922

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Toxaphene	7.29	7.24	7.34	1550.7	2500.0	-38.0 <-
Tetrachloro-m-xylene	4.12	4.08	4.18	39.2	40.0	-1.9
Decachlorobiphenyl	9.72	9.67	9.77	33.9	40.0	-15.2

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WS91 Project: NPDES

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

Init. Calib. Date: 05/14/13

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

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	5500669	3.162	5319006	8.997
	UPPER LIMIT	11001338	3.212	10638012	9.047
	LOWER LIMIT	2750334	3.112	2659503	8.947

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		DS	05/14/13	1417	5564401	3.162	5015229	8.993
02		INDAE	05/14/13	1437	5500669	3.162	5319006	8.997
03		INDAA	05/14/13	1457	5276720	3.162	5051117	8.998
04		INDAB	05/14/13	1517	5534770	3.162	5379091	8.998
05		INDAC	05/14/13	1537	5478422	3.161	5322227	8.999
06		INDAD	05/14/13	1556	5395940	3.160	5185525	8.998
07		INDAF	05/14/13	1616	5385380	3.161	5022010	8.999
08		INDAG	05/14/13	1634	4447256	3.160	4183112	8.999
09	ZZZZZ	ZZZZZ	05/14/13	1654	5229139	3.162	5072678	9.001
10		TOXAPH	05/14/13	1712	5170972	3.160	5171544	8.999
11		DS	06/18/13	1548	5779804	3.126	6405594	8.918*
12		INDAE	06/18/13	1606	5270968	3.127	5535875	8.918*
13		TOXAPH	06/18/13	1624	5808987	3.126	6374042	8.918*
14	WS91MBS1	WS91MBS1	06/18/13	1642	6210449	3.126	6562051	8.918*
15	WS91LCSS1	WS91LCSS1	06/18/13	1700	5972541	3.126	6181818	8.918*
16	WS91LCSDS1	WS91LCSDS1	06/18/13	1717	6568523	3.126	6925249	8.918*
17	CL-MH-SPS-20	WS91A	06/18/13	1753	5679135	3.126	3510831	8.909*
18	CL-MH-SPS-20	WS91AMS	06/18/13	1811	5469467	3.125	5714942	8.939*
19	CL-MH-SPS-20	WS91AMSD	06/18/13	1828	5571910	3.126	5954173	8.941*
20		DS	06/18/13	1846	5657153	3.127	4976185	8.918*
21		INDAE	06/18/13	1904	5110579	3.127	4429670	8.918*
22		TOXAPH	06/18/13	1922	5636555	3.127	5352202	8.919*

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.: WS91 Project: NPDES

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

Init. Calib. Date: 05/14/13

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

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	29060499	3.331	16515704	10.370
	UPPER LIMIT	58120998	3.381	33031408	10.421
	LOWER LIMIT	14530250	3.281	8257852	10.320

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		DS	05/14/13	1417	27868012	3.331	15069896	10.368
02		INDAE	05/14/13	1437	29060499	3.331	16515704	10.370
03		INDAA	05/14/13	1457	28661245	3.331	16075431	10.370
04		INDAB	05/14/13	1517	30201103	3.331	17146317	10.371
05		INDAC	05/14/13	1537	29972511	3.330	16795593	10.372
06		INDAD	05/14/13	1556	29160968	3.329	16527116	10.370
07		INDAF	05/14/13	1616	29405183	3.330	16433920	10.372
08		INDAG	05/14/13	1634	24971444	3.329	13819406	10.371
09	ZZZZZ	ZZZZZ	05/14/13	1654	29203550	3.331	16453002	10.372
10		TOXAPH	05/14/13	1712	29085221	3.329	16639283	10.371
11		DS	06/18/13	1548	29015614	3.296	20979641	10.285*
12		INDAE	06/18/13	1606	26872349	3.297	18281546	10.286*
13		TOXAPH	06/18/13	1624	29086569	3.297	20610335	10.285*
14	WS91MBS1	WS91MBS1	06/18/13	1642	28648657	3.296	20795875	10.285*
15	WS91LCSS1	WS91LCSS1	06/18/13	1700	27678595	3.296	19586377	10.285*
16	WS91LCSDS1	WS91LCSDS1	06/18/13	1717	30227737	3.297	21386002	10.285*
17	CL-MH-SPS-20	WS91A	06/18/13	1753	18503891	3.296	13461561	10.304*
18	CL-MH-SPS-20	WS91AMS	06/18/13	1811	17261984	3.296	10252834	10.303*
19	CL-MH-SPS-20	WS91AMSD	06/18/13	1828	18213868	3.296	10667473	10.303*
20		DS	06/18/13	1846	20238754	3.297	8957842	10.286*
21		INDAE	06/18/13	1904	24583020	3.297	8981344	10.286*
22		TOXAPH	06/18/13	1922	27463584	3.297	11537137	10.287*

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: WS91

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: CL-MH-SPS-20130605-S
SAMPLE

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/20/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/17/13
Date Analyzed: 06/19/13 13:17
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 59.3%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	1.0	4.0	< 4.0 U
53469-21-9	Aroclor 1242	1.3	4.0	< 4.0 U
12672-29-6	Aroclor 1248	1.3	4.0	< 4.0 U
11097-69-1	Aroclor 1254	1.3	20	< 20 Y
11096-82-5	**Aroclor 1260**	**1.3**	**4.0**	**62**
11104-28-2	Aroclor 1221	1.3	4.0	< 4.0 U
11141-16-5	Aroclor 1232	1.3	5.9	< 5.9 Y
37324-23-5	Aroclor 1262	1.3	4.0	< 4.0 U
11100-14-4	Aroclor 1268	1.3	4.0	< 4.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	75.5%
Tetrachlorometaxylene	73.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-061713	97.0%	64-105	79.5%	54-100	0
LCS-061713	99.0%	64-105	82.2%	54-100	0
LCSD-061713	92.8%	64-105	75.8%	54-100	0
CL-MH-SPS-20130605-S	75.5%	37-128	73.0%	45-102	0
CL-MH-SPS-20130605-S MS	92.8%	35-133	87.0%	53-116	0
CL-MH-SPS-20130605-S MSD	93.0%	35-133	86.2%	53-116	0

Microwave (MARS) Control Limits PCBSMM
Prep Method: SW3546
Log Number Range: 13-12076 to 13-12076

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: CL-MH-SPS-20130605-S
MS/MSD

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/20/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted MS/MSD: 06/17/13

Date Analyzed MS: 06/19/13 13:37
MSD: 06/19/13 13:57
Instrument/Analyst MS: ECD5/JGR
MSD: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount MS: 12.6 g-dry-wt
MSD: 12.6 g-dry-wt
Final Extract Volume MS: 2.5 mL
MSD: 2.5 mL
Dilution Factor MS: 1.00
MSD: 1.00
Silica Gel: Yes

Percent Moisture: 59.3%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Aroclor 1016	< 4.0 U	75.4	99.8	75.6%	76.1	99.8	76.3%	0.9%
Aroclor 1260	62	148	99.8	86.2%	153	99.8	91.2%	3.3%

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

WS91:00167

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: CL-MH-SPS-20130605-S
MATRIX SPIKE

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/20/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/17/13
Date Analyzed: 06/19/13 13:37
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 59.3%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	1.0	4.0	---
53469-21-9	Aroclor 1242	1.3	4.0	< 4.0 U
12672-29-6	Aroclor 1248	1.3	4.0	< 4.0 U
11097-69-1	Aroclor 1254	1.3	50	< 50 Y
11096-82-5	Aroclor 1260	1.3	4.0	---
11104-28-2	Aroclor 1221	1.3	4.0	< 4.0 U
11141-16-5	Aroclor 1232	1.3	120	< 120 Y
37324-23-5	Aroclor 1262	1.3	4.0	< 4.0 U
11100-14-4	Aroclor 1268	1.3	4.0	< 4.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	92.8%
Tetrachlorometaxylene	87.0%

FORM I

WS91:00166

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: CL-MH-SPS-20130605-S
MATRIX SPIKE DUP

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/20/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted: 06/17/13
Date Analyzed: 06/19/13 13:57
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 59.3%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	1.0	4.0	---
53469-21-9	Aroclor 1242	1.3	4.0	< 4.0 U
12672-29-6	Aroclor 1248	1.3	4.0	< 4.0 U
11097-69-1	Aroclor 1254	1.3	55	< 55 Y
11096-82-5	Aroclor 1260	1.3	4.0	---
11104-28-2	Aroclor 1221	1.3	4.0	< 4.0 U
11141-16-5	Aroclor 1232	1.3	140	< 140 Y
37324-23-5	Aroclor 1262	1.3	4.0	< 4.0 U
11100-14-4	Aroclor 1268	1.3	4.0	< 4.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	93.0%
Tetrachlorometaxylene	86.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: LCS-061713
LCS/LCSD

Lab Sample ID: LCS-061713
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/20/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 06/17/13

Date Analyzed LCS: 06/19/13 11:57
LCSD: 06/19/13 12:17
Instrument/Analyst LCS: ECD5/JGR
LCSD: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount LCS: 12.5 g-dry-wt
LCSD: 12.5 g-dry-wt
Final Extract Volume LCS: 2.50 mL
LCSD: 2.50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00
Silica Gel: Yes

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	91.6	101	90.7%	80.3	101	79.5%	13.1%
Aroclor 1260	104	101	103%	91.1	101	90.2%	13.2%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	99.0%	92.8%
Tetrachlorometaxylene	82.2%	75.8%

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

PCB METHOD BLANK SUMMARY

BLANK NO.

WS91MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WS91
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WS91MBS1
Lab File ID: 0619B006

Date Extracted: 06/17/13
Matrix: SOLID

Date Analyzed: 06/19/13
Instrument ID: ECD5

Time Analyzed: 1137
GC Columns: ZB5/ZB35

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WS91LCSS1	WS91LCSS1	06/19/13
02	WS91LCSDS1	WS91LCSDS1	06/19/13
03	CL-MH-SPS-20130605-	WS91A	06/19/13
04	CL-MH-SPS-20130 MS	WS91AMS	06/19/13
05	CL-MH-SPS-20130 MSD	WS91AMSD	06/19/13

ALL RUNS ARE DUAL COLUMN

WS91:00171

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: MB-061713
METHOD BLANK

Lab Sample ID: MB-061713
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/20/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/17/13
Date Analyzed: 06/19/13 11:37
Instrument/Analyst: ECD5/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	97.0%
Tetrachlorometaxylene	79.5%

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: THE BOEING CO

ARI Job No.: WS91 Project: BOEING PLANT 2

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 05/07/13

SURROGATES

RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX 4.31- 4.51	1.2778	1.2769	1.3021	1.2444	1.1977	1.1434	1.2404	4.8
DCB 12.73-12.93	1.4525	1.2874	1.2269	1.1209	1.0641	1.0185	1.1950	13.5

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 5.96- 6.16	0.0419	0.0392	0.0380	0.0346	0.0323	0.0304	0.0361	12.1
2 6.37- 6.57	0.1293	0.1202	0.1174	0.1063	0.0998	0.0934	0.1111	12.2
3 6.52- 6.72	0.0588	0.0546	0.0526	0.0473	0.0442	0.0411	0.0498	13.5
4 6.63- 6.83	0.0432	0.0407	0.0393	0.0352	0.0334	0.0312	0.0372	12.4

AROCLOR AVERAGE %RSD = 12.6

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 9.86-10.06	0.0809	0.0714	0.0687	0.0624	0.0572	0.0524	0.0655	15.7
2 10.18-10.38	0.0749	0.0676	0.0659	0.0605	0.0560	0.0517	0.0628	11.1
3 10.56-10.76	0.1738	0.1618	0.1583	0.1468	0.1383	0.1296	0.1514	8.8
4 10.96-11.16	0.0842	0.0787	0.0766	0.0716	0.0683	0.0640	0.0739	8.2
5 11.15-11.35	0.0430	0.0421	0.0415	0.0388	0.0375	0.0354	0.0397	5.7

AROCLOR AVERAGE %RSD = 9.9

WS91 : 00173

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC

Client: THE BOEING CO

ARI Job No.: WS91

Project: BOEING PLANT 2

GC Column: ZB35

Instrument ID: ECD5

Calibration Date: 05/07/13

SURROGATES

	RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX	4.31- 4.51	1.1379	1.1032	1.0970	1.0870	1.0583	1.0077	1.0818	4.1
DCB	13.10-13.30	1.4388	1.2455	1.1622	1.0676	1.0239	0.9694	1.1512	14.9

Aroclor-1016		LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
Peak	RT WIN	.02	0.05	0.1	.25	0.5	1.0		R^2
1	6.06- 6.26	0.0514	0.0510	0.0486	0.0445	0.0410	0.0373	0.0456	12.5
2	6.70- 6.90	0.1117	0.1063	0.1043	0.0972	0.0916	0.0843	0.0992	10.2
3	7.08- 7.28	0.0278	0.0270	0.0274	0.0257	0.0247	0.0232	0.0259	6.9
4	7.26- 7.46	0.0276	0.0258	0.0256	0.0233	0.0223	0.0204	0.0242	10.9

AROCLOR AVERAGE %RSD = 10.1

Aroclor-1260		LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
Peak	RT WIN	.02	0.05	0.1	.25	0.5	1.0		R^2
1	10.16-10.36	0.0846	0.0784	0.0760	0.0710	0.0656	0.0598	0.0726	12.4
2	10.61-10.81	0.0966	0.0905	0.0885	0.0844	0.0782	0.0718	0.0850	10.5
3	10.88-11.08	0.1687	0.1671	0.1641	0.1571	0.1479	0.1368	0.1569	7.9
4	11.40-11.60	0.0485	0.0457	0.0437	0.0415	0.0392	0.0366	0.0425	10.2

AROCLOR AVERAGE %RSD = 10.3

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: THE BOEING CO

ARI Job No.: WS91 Project: BOEING PLANT 2

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 05/07/13

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	5.064	4.96- 5.16	0.03259
2	6.468	6.37- 6.57	0.00997
3	7.878	7.78- 7.98	0.01408

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	6.060	5.96- 6.16	0.01482
2	6.469	6.37- 6.57	0.04536
3	7.442	7.34- 7.54	0.02357
4	7.874	7.77- 7.97	0.02708

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.060	5.96- 6.16	0.02881
2	6.467	6.37- 6.57	0.08837
3	6.616	6.52- 6.72	0.03943
4	7.871	7.77- 7.97	0.04869

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.464	6.36- 6.56	0.05630
2	7.441	7.34- 7.54	0.06332
3	7.872	7.77- 7.97	0.08051
4	8.107	8.01- 8.21	0.05614

WS91:00175

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: THE BOEING CO

ARI Job No.: WS91 Project: BOEING PLANT 2

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 05/07/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.191	8.09- 8.29	0.07461
2	8.565	8.46- 8.66	0.04925
3	8.699	8.60- 8.80	0.10267
4	9.051	8.95- 9.15	0.10574
5	9.361	9.26- 9.46	0.03999

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	10.283	10.18-10.38	0.07490
2	10.659	10.56-10.76	0.17600
3	11.059	10.96-11.16	0.05574
4	11.247	11.15-11.35	0.07824
5	11.918	11.82-12.02	0.06005

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	11.175	11.08-11.28	0.16835
2	11.246	11.15-11.35	0.18617
3	11.632	11.53-11.73	0.13825
4	12.422	12.32-12.52	0.38949

WS91 00176

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC

Client: THE BOEING CO

ARI Job No.: WS91

Project: BOEING PLANT 2

GC Column: ZB35

Instrument ID: ECD5

Calibration Date: 05/07/13

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	3.694	3.59- 3.79	0.00820
2	5.095	4.99- 5.19	0.01373
3	5.345	5.25- 5.45	0.00748
4	5.460	5.36- 5.56	0.02352

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	6.165	6.07- 6.27	0.02053
2	6.801	6.70- 6.90	0.04099
3	7.011	6.91- 7.11	0.01709
4	8.239	8.14- 8.34	0.01434

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.162	6.06- 6.26	0.03645
2	6.800	6.70- 6.90	0.08006
3	7.008	6.91- 7.11	0.03345
4	8.235	8.13- 8.33	0.02802

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.796	6.70- 6.90	0.05013
2	7.703	7.60- 7.80	0.04157
3	8.235	8.14- 8.34	0.04304
4	8.581	8.48- 8.68	0.05593

WS91:00177

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC | Client: THE BOEING CO

ARI Job No.: WS91 | Project: BOEING PLANT 2

GC Column: ZB35 | Instrument ID: ECD5

Calibration Date: 05/07/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.296	8.20- 8.40	0.03879
2	8.472	8.37- 8.57	0.04792
3	8.994	8.89- 9.09	0.03671
4	9.145	9.04- 9.24	0.07862
5	9.931	9.83-10.03	0.04427

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	10.260	10.16-10.36	0.11065
2	10.710	10.61-10.81	0.10118
3	10.985	10.89-11.09	0.18978
4	11.567	11.47-11.67	0.12335
5	12.306	12.21-12.41	0.05956

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	11.507	11.41-11.61	0.19311
2	11.573	11.47-11.67	0.18203
3	11.969	11.87-12.07	0.14408
4	12.792	12.69-12.89	0.37318

WS91_0017G

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: THE BOEING CO

ARI Job No.: WS91
Project: BOEING PLANT 2

GC Column: ZB5
Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/19/13

Lab Standard ID: AR1254
Time Analyzed :1057

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	8.19	8.09	8.29	270.2	250.0	8.1
Aroclor-1254-2	8.56	8.46	8.66	233.5	250.0	-6.6
Aroclor-1254-3	8.70	8.60	8.80	261.8	250.0	4.7
Aroclor-1254-4	9.05	8.95	9.15	273.3	250.0	9.3
Aroclor-1254-5	9.36	9.26	9.46	279.3	250.0	11.7

AVERAGE %D = 8.1

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: THE BOEING CO

ARI Job No.: WS91
Project: BOEING PLANT 2

GC Column: ZB35
Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/19/13

Lab Standard ID: AR1254
Time Analyzed :1057

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	8.30	8.20	8.40	250.2	250.0	0.1
Aroclor-1254-2	8.47	8.37	8.57	251.6	250.0	0.6
Aroclor-1254-3	8.99	8.89	9.09	256.7	250.0	2.7
Aroclor-1254-4	9.14	9.04	9.24	246.9	250.0	-1.2
Aroclor-1254-5	9.93	9.83	10.03	261.7	250.0	4.7

AVERAGE %D = 1.9

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: THE BOEING CO

ARI Job No.: WS91
Project: BOEING PLANT 2

GC Column: ZB5
Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/19/13

Lab Standard ID: AR1660
Time Analyzed :1117

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.06	5.96	6.16	255.8	250.0	2.3
Aroclor-1016-2	6.47	6.37	6.57	258.4	250.0	3.4
Aroclor-1016-3	6.61	6.52	6.72	252.3	250.0	0.9
Aroclor-1016-4	6.73	6.63	6.83	254.4	250.0	1.8

AVERAGE %D = 2.1

Date Analyzed :06/19/13

Lab Standard ID: AR1660
Time Analyzed :1117

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.96	9.86	10.06	252.5	250.0	1.0
Aroclor-1260-2	10.28	10.18	10.38	251.9	250.0	0.7
Aroclor-1260-3	10.66	10.56	10.76	249.3	250.0	-0.3
Aroclor-1260-4	11.06	10.96	11.16	259.4	250.0	3.8
Aroclor-1260-5	11.25	11.15	11.35	257.4	250.0	3.0

AVERAGE %D = 1.8

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: THE BOEING CO

ARI Job No.: WS91
Project: BOEING PLANT 2

GC Column: ZB35
Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/19/13

Lab Standard ID: AR1660
Time Analyzed :1117

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.16	6.06	6.26	240.4	250.0	-3.8
Aroclor-1016-2	6.80	6.70	6.90	235.6	250.0	-5.8
Aroclor-1016-3	7.18	7.08	7.28	251.9	250.0	0.7
Aroclor-1016-4	7.35	7.26	7.46	239.3	250.0	-4.3

AVERAGE %D = 3.6

Date Analyzed :06/19/13

Lab Standard ID: AR1660
Time Analyzed :1117

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.26	10.16	10.36	238.4	250.0	-4.6
Aroclor-1260-2	10.71	10.61	10.81	245.9	250.0	-1.6
Aroclor-1260-3	10.98	10.88	11.08	251.1	250.0	0.4
Aroclor-1260-4	11.50	11.40	11.60	261.3	250.0	4.5

AVERAGE %D = 2.8

WS91 · 00162

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: THE BOEING CO

ARI Job No.: WS91
Project: BOEING PLANT 2

GC Column: ZB5
Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/19/13

Lab Standard ID: AR1248
Time Analyzed :1458

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	6.46	6.36	6.56	249.1	250.0	-0.4
Aroclor-1248-2	7.44	7.34	7.54	218.4	250.0	-12.6
Aroclor-1248-3	7.87	7.77	7.97	215.8	250.0	-13.7
Aroclor-1248-4	8.11	8.01	8.21	232.2	250.0	-7.1

AVERAGE %D = 8.4

FORM VII PCB

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: THE BOEING CO

ARI Job No.: WS91

Project: BOEING PLANT 2

GC Column: ZB35

Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/19/13

Lab Standard ID: AR1248

Time Analyzed :1458

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	6.80	6.70	6.90	235.5	250.0	-5.8
Aroclor-1248-2	7.70	7.60	7.80	223.4	250.0	-10.6
Aroclor-1248-3	8.24	8.14	8.34	219.3	250.0	-12.3
Aroclor-1248-4	8.58	8.48	8.68	211.7	250.0	-15.3

AVERAGE %D = 11.0

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: THE BOEING CO

ARI Job No.: WS91
Project: BOEING PLANT 2

GC Column: ZB5
Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/19/13

Lab Standard ID: AR1660
Time Analyzed :1518

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.06	5.96	6.16	243.5	250.0	-2.6
Aroclor-1016-2	6.47	6.37	6.57	241.4	250.0	-3.4
Aroclor-1016-3	6.62	6.52	6.72	233.2	250.0	-6.7
Aroclor-1016-4	6.73	6.63	6.83	231.3	250.0	-7.5

AVERAGE %D = 5.0

Date Analyzed :06/19/13

Lab Standard ID: AR1660
Time Analyzed :1518

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.97	9.86	10.06	233.6	250.0	-6.6
Aroclor-1260-2	10.28	10.18	10.38	230.9	250.0	-7.6
Aroclor-1260-3	10.66	10.56	10.76	236.7	250.0	-5.3
Aroclor-1260-4	11.06	10.96	11.16	238.3	250.0	-4.7
Aroclor-1260-5	11.25	11.15	11.35	237.1	250.0	-5.2

AVERAGE %D = 5.9

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: THE BOEING CO

ARI Job No.: WS91
Project: BOEING PLANT 2

GC Column: ZB35
Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :06/19/13

Lab Standard ID: AR1660
Time Analyzed :1518

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.16	6.06	6.26	235.5	250.0	-5.8
Aroclor-1016-2	6.80	6.70	6.90	224.3	250.0	-10.3
Aroclor-1016-3	7.18	7.08	7.28	231.5	250.0	-7.4
Aroclor-1016-4	7.36	7.26	7.46	217.0	250.0	-13.2

AVERAGE %D = 9.2

Date Analyzed :06/19/13

Lab Standard ID: AR1660
Time Analyzed :1518

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.26	10.16	10.36	221.3	250.0	-11.5
Aroclor-1260-2	10.71	10.61	10.81	228.6	250.0	-8.6
Aroclor-1260-3	10.98	10.88	11.08	237.9	250.0	-4.8
Aroclor-1260-4	11.50	11.40	11.60	243.6	250.0	-2.6

AVERAGE %D = 6.9

WS91 : 00166

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: THE BOEING CO

ARI Job No.: WS91 Project: BOEING PLANT 2

GC Column: ZB5 ID: 0.53(mm) Instrument ID: ECD5

Init. Calib. Date: 05/07/13

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

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	48977254	2.250	50004151	13.191
	UPPER LIMIT	97954508	2.350	100008302	13.291
	LOWER LIMIT	24488627	2.150	25002076	13.091

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	05/07/13	1619	48807947	2.249	51001521	13.191
02		0.25PPMAR166	05/07/13	1639	48977254	2.250	50004151	13.191
03		0.02PPMAR166	05/07/13	1659	49978735	2.250	50389911	13.191
04		0.05PPMAR166	05/07/13	1719	50752482	2.250	53170067	13.191
05		1PPMAR1660	05/07/13	1739	49361946	2.249	53269354	13.189
06		0.1PPMAR1660	05/07/13	1759	51692067	2.249	53692342	13.191
07		0.5PPMAR1660	05/07/13	1819	50537542	2.249	53291913	13.190
08		AR1242	05/07/13	1839	51594521	2.248	55145987	13.190
09		AR1248	05/07/13	1859	52790343	2.249	57162764	13.190
10		AR1254	05/07/13	1920	52930034	2.249	57859101	13.190
11		AR2162	05/07/13	1940	53739671	2.248	58323154	13.191
12		AR3268	05/07/13	2000	53262724	2.248	57460185	13.191
13	ZZZZZ	ZZZZZ	05/07/13	2021	54248541	2.248	60099807	13.190
14	ZZZZZ	ZZZZZ	05/07/13	2041	53651835	2.248	60660565	13.190
15	ZZZZZ	ZZZZZ	05/07/13	2101	53642771	2.248	58188446	13.191
16	ZZZZZ	ZZZZZ	05/07/13	2121	54355833	2.249	58930522	13.190
17	ZZZZZ	ZZZZZ	05/07/13	2142	54884040	2.249	58566252	13.190
18	ZZZZZ	ZZZZZ	05/07/13	2202	54747539	2.248	60316622	13.190
19		AR1254	06/19/13	1057	66370066	2.248	71531880	13.189
20		AR1660	06/19/13	1117	58311033	2.247	63859886	13.189
21	WS91MBS1	WS91MBS1	06/19/13	1137	51669858	2.246	61229864	13.187
22	WS91LCSS1	WS91LCSS1	06/19/13	1157	52530292	2.247	54176320	13.186
23	WS91LCSDS1	WS91LCSDS1	06/19/13	1217	56304450	2.248	63263145	13.188
24	CL-MH-SPS-20	WS91A	06/19/13	1317	61789803	2.247	55508024	13.198
25	CL-MH-SPS-20	WS91AMS	06/19/13	1337	46513754	2.248	41911810	13.198
26	CL-MH-SPS-20	WS91AMSD	06/19/13	1357	45605755	2.249	38571109	13.198
27		AR1248	06/19/13	1458	62495385	2.249	51380439	13.188
28		AR1660	06/19/13	1518	62739409	2.249	56834433	13.188

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: THE BOEING CO

ARI Job No.: WS91 Project: BOEING PLANT 2

GC Column: ZB35 ID: 0.53(mm) Instrument ID: ECD5

Init. Calib. Date: 05/07/13

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

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	14839715	2.727	9345340	14.074
	UPPER LIMIT	29679430	2.827	18690680	14.174
	LOWER LIMIT	7419858	2.627	4672670	13.974

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	05/07/13	1619	15184482	2.727	9588268	14.075
02		0.25PPMAR166	05/07/13	1639	14839715	2.727	9345340	14.074
03		0.02PPMAR166	05/07/13	1659	14776833	2.727	9354827	14.073
04		0.05PPMAR166	05/07/13	1719	15017003	2.726	9808139	14.073
05		1PPMAR1660	05/07/13	1739	14864205	2.727	9909484	14.072
06		0.1PPMAR1660	05/07/13	1759	15354151	2.725	9856374	14.073
07		0.5PPMAR1660	05/07/13	1819	14890872	2.725	9751846	14.073
08		AR1242	05/07/13	1839	15094795	2.728	10120992	14.073
09		AR1248	05/07/13	1859	15297537	2.725	10392760	14.073
10		AR1254	05/07/13	1920	15196733	2.725	10477901	14.072
11		AR2162	05/07/13	1940	15340978	2.724	10583916	14.072
12		AR3268	05/07/13	2000	15239954	2.725	10518547	14.073
13	ZZZZZ	ZZZZZ	05/07/13	2021	15658755	2.725	10888882	14.072
14	ZZZZZ	ZZZZZ	05/07/13	2041	15441440	2.724	10952020	14.072
15	ZZZZZ	ZZZZZ	05/07/13	2101	15360402	2.725	10510294	14.073
16	ZZZZZ	ZZZZZ	05/07/13	2121	15522820	2.725	10608758	14.073
17	ZZZZZ	ZZZZZ	05/07/13	2142	15378234	2.725	10470042	14.073
18	ZZZZZ	ZZZZZ	05/07/13	2202	15307215	2.724	10773388	14.074
19		AR1254	06/19/13	1057	19250982	2.723	12973064	14.071
20		AR1660	06/19/13	1117	16870216	2.722	11582137	14.070
21	WS91MBS1	WS91MBS1	06/19/13	1137	14900896	2.722	10968384	14.068
22	WS91LCSS1	WS91LCSS1	06/19/13	1157	15112397	2.724	9717074	14.068
23	WS91LCSDS1	WS91LCSDS1	06/19/13	1217	15837614	2.723	11339654	14.069
24	CL-MH-SPS-20	WS91A	06/19/13	1317	18200563	2.725	11024844	14.075
25	CL-MH-SPS-20	WS91AMS	06/19/13	1337	13443179	2.724	8095531	14.076
26	CL-MH-SPS-20	WS91AMSD	06/19/13	1357	13028897	2.724	7373470	14.076
27		AR1248	06/19/13	1458	17296182	2.724	9037745	14.070
28		AR1660	06/19/13	1518	17396133	2.724	9906504	14.070

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: WS91

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID
Extraction Method: SW3546
Page 1 of 1

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977

Matrix: Sediment

Date Received: 06/05/13

Data Release Authorized: MW
Reported: 06/13/13

ARI ID	Sample ID	Analysis Date	DF	Range	Result	RL	MDL
MB-060813	Method Blank	06/11/13	1.0	Diesel	< 5.0 U	5.0	1.4
13-12076		FID3B		Motor Oil	< 10 U	10	2.5
				HC ID	---		
				o-Terphenyl	98.7%		
WS91A	CL-MH-SPS-20130605-S	06/11/13	5.0	**Diesel**	**1,700**	61	17
13-12076		FID3B		**Motor Oil**	**3,600**	120	30
				HC ID	DIESEL/MOTOR OIL		
				o-Terphenyl	68.0%		

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.

WS91 : 06199

ANALYTICAL RESOURCES INCORPORATED

TPHD SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977

Client ID	OTER	TOT OUT
060813MBS	98.7%	0
060813LCS	91.5%	0
CL-MH-SPS-20130605-S	68.0%	0
CL-MH-SPS-20130605-S MS	67.0%	0
CL-MH-SPS-20130605-S MSD	71.2%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(50-150)	(50-150)

Prep Method: SW3546
Log Number Range: 13-12076 to 13-12076

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID
Page 1 of 1

Sample ID: CL-MH-SPS-20130605-S
MS/MSD

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/13/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Date Extracted MS/MSD: 06/08/13

Date Analyzed MS: 06/11/13 16:32
MSD: 06/11/13 16:51
Instrument/Analyst MS: FID3B/JLW
MSD: FID3B/JLW

Sample Amount MS: 4.07 g-dry-wt
MSD: 4.08 g-dry-wt
Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL
Dilution Factor MS: 5.00
MSD: 5.00
Percent Moisture: 59.3%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	1,700	2,260	369	NA	2,250	368	NA	0.4%

TPHD Surrogate Recovery

	MS	MSD
o-Terphenyl	67.0%	71.2%

Results reported in mg/kg
NA-No recovery due to high concentration of analyte in original sample and/or calculated negative recovery.
RPD calculated using sample concentrations per SW846.

WS91 : 20192

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID
Page 1 of 1

Sample ID: LCS-060813
LAB CONTROL

Lab Sample ID: LCS-060813
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/13/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/08/13
Date Analyzed: 06/11/13 15:55
Instrument/Analyst: FID3B/JLW

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00

Range	Lab Control	Spike Added	Recovery
Diesel	132	150	88.0%

TPHD Surrogate Recovery

o-Terphenyl	91.5%

Results reported in mg/kg

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Sediment
Date Received: 06/05/13

ARI Job: WS91
Project: NPDES Sampling Support
209977

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-12076-060813MB1	Method Blank	10.0 g	1.00 mL	-	06/08/13
13-12076-060813LCS1	Lab Control	10.0 g	1.00 mL	-	06/08/13
13-12076-WS91A	CL-MH-SPS-20130605-4.07 g		1.00 mL	D	06/08/13
13-12076-WS91AMS	CL-MH-SPS-20130605-4.07 g		1.00 mL	D	06/08/13
13-12076-WS91AMSD	CL-MH-SPS-20130605-4.08 g		1.00 mL	D	06/08/13

Basis: D=Dry Weight W=As Received

WS91 : 0219U

4

TPH METHOD BLANK SUMMARY

BLANK NO.

WS91MBS1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

SDG No.: WS91

Project No.: NPDES SAMPLING

Date Extracted: 06/08/13

Matrix: SOLID

Date Analyzed : 06/11/13

Instrument ID : FID3B

Time Analyzed : 1536

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WS91LCSS1	WS91LCSS1	06/11/13
02	CL-MH-SPS-20	WS91A	06/11/13
03	CL-MH-SPS-20	WS91AMS	06/11/13
04	CL-MH-SPS-20	WS91AMSD	06/11/13
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

FORM IV TPH

WS91 : 00195

6a
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: SAIC

Instrument: FID3B.I

Project: NPDES Sampling Support

Calibration Date: 10-MAY-2013

SDG No.: WS91

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	10856	10816	10366	10222	10078	9806	10358	4.0
AK Diesel	12969	12897	12393	12178	12035	11673	12357	4.1
OR Diesel	13048	12968	12457	12240	12092	11727	12422	4.1
Cal Diesel	12938	12873	12366	12154	12013	11647	12332	4.1
o-Terph	13177	13696	13787	13594	13504	12941	13450	2.4

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

Quant Ranges :

WA Diesel	C12-C24	(3.049-5.760)
AK Diesel	C10-C25	(2.254-5.938)
OR Diesel	C10-C28	(2.254-6.427)
Cal Diesel	C10-C24	(2.254-5.760)

Calibration Files	Analysis Time
0510b004.d	10-MAY-2013 08:41
0510b005.d	10-MAY-2013 09:01
0510b006.d	10-MAY-2013 09:20
0510b007.d	10-MAY-2013 09:40
0510b008.d	10-MAY-2013 10:00
0510b009.d	10-MAY-2013 10:20

6a
NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

Instrument: FID3B.I Project: NPDES Sampling Support

Calibration Date: 09-MAY-2013 SDG No.: WS91

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	9838	9724	9749	9868	9957	10101	9873	1.4
Triac Surr	12017	12392	13110	13138	13711	13920	13048	5.6

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

Calibration Files	Analysis Time
0509b019.d	09-MAY-2013 17:30
0509b020.d	09-MAY-2013 17:50
0509b021.d	09-MAY-2013 18:09
0509b022.d	09-MAY-2013 18:29
0509b023.d	09-MAY-2013 18:49
0509b024.d	09-MAY-2013 19:08

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 10-MAY-2013
Project: NPDES Sampling Supp

CCal Date: 11-JUN-2013
SDG No.: WS91

Analysis Time: 14:31
Lab ID: DIESEL#2

Instrument: FID3B.I
Lab File Name: 0611b019.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies(C12-C24)	2477389	239.2	250	-4.3
AK102 (C10-C25)	2949183	238.7	250	-4.5
ITDIES (C10-C24)	2942629	213.4	250	-14.6
Terphenyl	646838	48.1	45	6.9

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA Diesel C12-C24
AK Diesel C10-C25
IT Diesel C10-C24

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 09-MAY-2013
Project: NPDES Sampling Supp

CCal Date: 11-JUN-2013
SDG No.: WS91

Analysis Time: 14:49
Lab ID: MOIL#2

Instrument: FID3B.I
Lab File Name: 0611b020.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D	
WAMoil(C24-C38)	5434419	550.4	500	10.1	
AK103 (C25-C36)	4763399	670.1	500	34.0	<-
n-Triacontane	714976	54.8	45	21.8	<-

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA M.Oil C24-C38
AK M.Oil C25-C36

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: SAIC

ICal Date: 10-MAY-2013

Project: NPDES Sampling Supp

CCal Date: 11-JUN-2013

SDG No.: WS91

Analysis Time: 17:10

Lab ID: DIESEL#3

Instrument: FID3B.I

Lab File Name: 0611b027.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies(C12-C24)	2480326	239.5	250	-4.2
AK102 (C10-C25)	2947230	238.5	250	-4.6
ITDIES (C10-C24)	2941155	213.3	250	-14.7
Terphenyl	647130	48.1	45	6.9

* Surrogate areas are subtracted from range areas

<- Indicates a %D outside QC limits

Quant Ranges : WA Diesel C12-C24
AK Diesel C10-C25
IT Diesel C10-C24

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 09-MAY-2013
Project: NPDES Sampling Supp

CCal Date: 11-JUN-2013
SDG No.: WS91

Analysis Time: 17:28
Lab ID: MOIL#3

Instrument: FID3B.I
Lab File Name: 0611b028.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D	
WAMoil(C24-C38)	5140280	520.6	500	4.1	
AK103 (C25-C36)	4497587	632.7	500	26.5	<-
n-Triacontane	705588	54.1	45	20.2	<-

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

Quant Ranges : WA M.Oil C24-C38
AK M.Oil C25-C36

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WS91 Project: NPDES SAMPLING

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.69 TRIAC: 6.80

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	06/11/13	0803	4.70	6.80
02		RT0611	06/11/13	0821	4.69	6.80
03	ZZZZZ	ZZZZZ	06/11/13	0839	4.69	6.79
04	POS SEAPORT	DIESEL#1	06/11/13	0858	4.69	6.80
05	POS SEAPORT	MOIL#1	06/11/13	0916	4.69	6.79
06	ZZZZZ	ZZZZZ	06/11/13	1029	4.70	6.79
07	ZZZZZ	ZZZZZ	06/11/13	1048	4.68	6.78
08	ZZZZZ	ZZZZZ	06/11/13	1106	4.69	6.79
09	ZZZZZ	ZZZZZ	06/11/13	1124	4.69	6.79
10	ZZZZZ	ZZZZZ	06/11/13	1143	4.68	6.78
11	ZZZZZ	ZZZZZ	06/11/13	1201	4.68	6.78
12	ZZZZZ	ZZZZZ	06/11/13	1220	4.68	6.78
13	ZZZZZ	ZZZZZ	06/11/13	1238	4.68	6.78
14	ZZZZZ	ZZZZZ	06/11/13	1257	4.69	6.79
15	ZZZZZ	ZZZZZ	06/11/13	1316	4.69	6.79
16	ZZZZZ	ZZZZZ	06/11/13	1334	4.68	6.78
17	ZZZZZ	ZZZZZ	06/11/13	1353	4.68	6.77
18	ZZZZZ	ZZZZZ	06/11/13	1412	4.68	6.78
19	NPDES SAMPLI	DIESEL#2	06/11/13	1431	4.69	6.80
20	NPDES SAMPLI	MOIL#2	06/11/13	1449	4.70	6.79
21	ZZZZZ	ZZZZZ	06/11/13	1518	4.69	6.79
22	WS91MBS1	WS91MBS1	06/11/13	1536	4.69	6.79
23	WS91LCSS1	WS91LCSS1	06/11/13	1555	4.69	6.79
24	CL-MH-SPS-20	WS91A	06/11/13	1614	4.68	6.79
25	CL-MH-SPS-20	WS91AMS	06/11/13	1632	4.68	6.79
26	CL-MH-SPS-20	WS91AMSD	06/11/13	1651	4.68	6.79
27	NPDES SAMPLI	DIESEL#3	06/11/13	1710	4.69	6.80
28	NPDES SAMPLI	MOIL#3	06/11/13	1728	4.69	6.79

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

WS91 : 88282

8
TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WS91 Project: NPDES Sampling Support

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	05/09/13	0822	4.67	6.72
02		RT0509	05/09/13	0840	4.68	6.72
03	ZZZZZ	ZZZZZ	05/09/13	0859	4.68	6.72
04	ZZZZZ	ZZZZZ	05/09/13	0919	4.68	6.73
05	ZZZZZ	ZZZZZ	05/09/13	0938	4.67	6.72
06	ZZZZZ	ZZZZZ	05/09/13	1021	4.67	6.72
07	ZZZZZ	ZZZZZ	05/09/13	1040	4.68	6.72
08		RT0509	05/09/13	1100	4.68	6.72
09	ZZZZZ	ZZZZZ	05/09/13	1120	4.68	6.72
10	ZZZZZ	ZZZZZ	05/09/13	1140	4.68	6.72
11	ZZZZZ	ZZZZZ	05/09/13	1200	4.67	6.72
12	ZZZZZ	ZZZZZ	05/09/13	1514	4.67	6.73
13	ZZZZZ	ZZZZZ	05/09/13	1533	4.67	6.72
14	ZZZZZ	ZZZZZ	05/09/13	1552	4.68	6.72
15	ZZZZZ	ZZZZZ	05/09/13	1612	4.68	6.72
16	ZZZZZ	ZZZZZ	05/09/13	1632	4.69	6.73
17	ZZZZZ	ZZZZZ	05/09/13	1651	4.70	6.73
18		DIESEL ICV 2	05/09/13	1711	4.68	6.72
19		MOIL 100	05/09/13	1730	4.67	6.72*
20		MOIL 250	05/09/13	1750	4.68	6.72
21		MOIL 500	05/09/13	1809	4.68	6.73
22		MOIL 1000	05/09/13	1829	4.67	6.74
23		MOIL 2500	05/09/13	1849	4.67	6.75
24		MOIL 5000	05/09/13	1908	4.68	6.77
25		MOIL ICV 500	05/09/13	1928	4.68	6.73
26	ZZZZZ	ZZZZZ	05/09/13	1947	4.67	6.73
27	ZZZZZ	ZZZZZ	05/09/13	2006	4.67	6.73
28	ZZZZZ	ZZZZZ	05/09/13	2026	4.68	6.73
29	ZZZZZ	ZZZZZ	05/09/13	2045	4.68	6.73
30	ZZZZZ	ZZZZZ	05/09/13	2104	4.69	6.72
31	ZZZZZ	ZZZZZ	05/09/13	2123	4.71	6.72
32	ZZZZZ	ZZZZZ	05/09/13	2143	4.68	6.72*

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

8
TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	05/09/13	2202	4.67	6.72
02	ZZZZZ	ZZZZZ	05/09/13	2221	4.68	6.73
03	ZZZZZ	ZZZZZ	05/09/13	2241	4.68	6.74
04	ZZZZZ	ZZZZZ	05/09/13	2300	4.68	6.75
05	ZZZZZ	ZZZZZ	05/09/13	2319	4.68	6.77
06		AK103 ICV 50	05/09/13	2339	4.67	6.72

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.: WS91 Project: NPDES Sampling Support

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	05/10/13	0743	4.69	6.78
02		RT0510	05/10/13	0802	4.68	6.72
03		IB0510	05/10/13	0821	4.68	6.72
04		DIESEL 50	05/10/13	0841	4.67	6.72
05		DIESEL 100	05/10/13	0901	4.67	6.72
06		DIESEL 250	05/10/13	0920	4.68	6.72
07		DIESEL 500	05/10/13	0940	4.69	6.73
08		DIESEL 1000	05/10/13	1000	4.69	6.72
09		DIESEL 2500	05/10/13	1020	4.71	6.72
10		DIESEL ICV 2	05/10/13	1040	4.68	6.72
11		DIESEL#1	05/10/13	1331	4.67	6.78
12		JETA#1	05/10/13	1350	4.68	6.78
13		DIESEL#2	05/10/13	1410	4.68	6.76
14	ZZZZZ	ZZZZZ	05/10/13	1438	4.67	6.72
15	ZZZZZ	ZZZZZ	05/10/13	1457	4.68	6.72
16	ZZZZZ	ZZZZZ	05/10/13	1517	4.68	6.72
17	ZZZZZ	ZZZZZ	05/10/13	1537	4.67	6.72*
18	ZZZZZ	ZZZZZ	05/10/13	1556	4.67	6.71*
19	ZZZZZ	ZZZZZ	05/10/13	1616	4.67	6.72*
20	ZZZZZ	ZZZZZ	05/10/13	1635	4.68	6.72
21	ZZZZZ	ZZZZZ	05/10/13	1655	4.68	6.72
22	ZZZZZ	ZZZZZ	05/10/13	1714	4.68	6.72
23		DIESEL#3	05/10/13	1733	4.68	6.77
24		JETA#2	05/10/13	1753	4.68	6.77
25		MOIL#1	05/10/13	1812	4.68	6.76
26		WP23MBS1	05/10/13	1832	4.68	6.77
27		WP23LCSS1	05/10/13	1851	4.68	6.76
28		WP23A	05/10/13	1910	4.68	6.77
29		WP23A	05/10/13	1930	4.67	6.76
30		WP23B	05/10/13	1949	4.68	6.77
31		WP23B	05/10/13	2009	4.67	6.76
32		WP23C	05/10/13	2029	4.68	6.76

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

USA : 002207

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		WP23C	05/10/13	2048	4.67	6.77
02		DIESEL#4	05/10/13	2107	4.68	6.77
03		MOIL#2	05/10/13	2127	4.68	6.76
04		WP24MBS1	05/10/13	2151	4.68	6.76
05		WP24LCSS1	05/10/13	2209	4.68	6.77
06		WN70A	05/10/13	2229	4.68	6.77
07		WP24A	05/10/13	2306	4.69	6.77

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

TPHG Analysis
Report and Summary QC Forms

ARI Job ID: WS91

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Matrix: Sediment

Data Release Authorized:
Reported: 06/18/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

ARI ID	Client ID	Analysis Date	Range	Result	LOQ	DL
MB-061313	Method Blank	06/13/13	Gasoline	< 5.0 U	5.0	1.7
13-12076		PID1	HC ID	---		
			Trifluorotoluene	94.1%		
			Bromobenzene	90.6%		
WS91A	CL-MH-SPS-20130606	06/13/13	Gasoline	< 18 U	18	5.8
13-12076		PID1	HC ID	---		
			Trifluorotoluene	105%		
			Bromobenzene	103%		

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: WS91
Matrix: Sediment

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
Event: 209977

Client ID	BFB	TFT	BBZ	TOT OUT
MB-061313	NA	94.1%	90.6%	0
LCS-061313	NA	100%	90.2%	0
LCSD-061313	NA	103%	95.6%	0
CL-MH-SPS-20130605-S	NA	105%	103%	0

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

Log Number Range: 13-12076 to 13-12076

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: LCS-061313
LAB CONTROL SAMPLE

Lab Sample ID: LCS-061313
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized: MW
Reported: 06/18/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 06/13/13 10:34
LCSD: 06/13/13 11:03
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	47.9	50.0	95.8%	53.1	50.0	106%	10.3%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	100%	103%
Bromobenzene	90.2%	95.6%

BETX/GAS METHOD BLANK SUMMARY

BLANK NO.

MB0613

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WS91 Project No.: NPDES SAMPLING SUPPORT

Date Analyzed : 06/13/13 Matrix: SOIL

Time Analyzed : 1132 Instrument ID : PID1

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	LCS0613	LCS0613	06/13/13
02	LCSD0613	LCSD0613	06/13/13
03	CL-MH-SPS-20	WS91A	06/13/13
04			
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

WS91 : 99213

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.: WS91

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: 13-JUN-2013 SDG No.: WS91

Lab File Name: 0613a003.d Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	798882	2.23	2.50	-10.8
AKGas (C6-C10)	1243662	2.13	2.50	-14.7
NWGas (Tol-Nap)	852642	2.27	2.50	-9.1
8015C (2MP-TMB)	1536070	2.12	2.50	-15.1

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

WS91:09215

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

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

CCal Date: 13-JUN-2013
SDG No.: WS91

Lab File Name: 0613a003.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	45139	106.2	100.0	6.2
Bromobenzene	17260	90.3	100.0	-9.7

USS1 : 00216

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

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

CCal Date: 13-JUN-2013
SDG No.: WS91

Lab File Name: 0613a014.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	807233	2.25	2.50	-9.8
AKGas (C6-C10)	1300404	2.23	2.50	-10.8
NWGas (Tol-Nap)	845363	2.25	2.50	-9.9
8015C (2MP-TMB)	1611103	2.23	2.50	-11.0

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

WS91:00217

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

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

CCal Date: 13-JUN-2013
SDG No.: WS91

Lab File Name: 0613a014.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	48155	114.5	100.0	14.5
Bromobenzene	18503	102.1	100.0	2.1

WS91:00218

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

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

CCal Date: 13-JUN-2013
SDG No.: WS91

Lab File Name: 0613a025.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	780236	2.18	2.50	-12.9
AKGas (C6-C10)	1186568	2.04	2.50	-18.6
NWGas (Tol-Nap)	819084	2.18	2.50	-12.7
8015C (2MP-TMB)	1481694	2.05	2.50	-18.1

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

WS91:00219

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

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

CCal Date: 13-JUN-2013
SDG No.: WS91

Lab File Name: 0613a025.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	46063	109.1	100.0	9.1
Bromobenzene	17780	101.5	100.0	1.5

WS91 : 00229

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WS91 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	S1 #	S2 RT	S2 #
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.

BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WS91 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	S1 #	S2 RT	S2 #
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

WS91 00222

BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WS91 Project: NPDES SAMPLING SUPPORT

Instrument ID: PID1 GC Detector: RTX 502-2 FID

Run Date: 06/13/13

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

METHOD SURROGATE RT
S1 : 7.85 S2 : 15.38

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	S1 #	S2 RT	S2 #
01	RT0613+BCAL	RT0613+BCAL	06/13/13	0914	7.85		15.38	
02	NPDES SAMPLI	GCAL 1	06/13/13	0943	7.85		15.38	
03	LCS0613	LCS0613	06/13/13	1034	7.85		15.38	
04	LCSD0613	LCSD0613	06/13/13	1103	7.85		15.38	
05	MB0613	MB0613	06/13/13	1132	7.85		15.38	
06	NPDES SAMPLI	GCAL 2	06/13/13	1638	7.85		15.38	
07	CL-MH-SPS-20	WS91A	06/13/13	1904	7.85		15.38	
08	NPDES SAMPLI	GCAL 3	06/13/13	2159	7.85		15.38	

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)

S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

WS91 : 06223

Metals Analysis
Report and Summary QC Forms

ARI Job ID: WS91

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS91

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
CL-MH-SPS-20130605	WS91A	13-12076	
CL-MH-SPS-20130605D	WS91ADUP	13-12076	
CL-MH-SPS-20130605S	WS91ASPK	13-12076	
PBS	WS91MB1	13-12076	
LCSS	WS91MB1SPK	13-12076	

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: Eric Larsen for Name: Jay Kuhn

Date: 6-14-13 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: CL-MH-SPS-20130605-S
SAMPLE

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/14/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Percent Total Solids: 36.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
3050B	06/12/13	200.8	06/13/13	7440-36-0	Antimony	0.036	0.5	0.5	U
3050B	06/12/13	200.8	06/13/13	**7440-38-2**	**Arsenic**	0.24	0.5	**5.2**	
3050B	06/12/13	6010C	06/13/13	7440-41-7	Beryllium	0.027	0.3	0.3	U
3050B	06/12/13	200.8	06/13/13	**7440-43-9**	**Cadmium**	0.033	0.3	**0.4**	
3050B	06/12/13	200.8	06/13/13	**7440-47-3**	**Chromium**	0.10	1	**27**	
3050B	06/12/13	6010C	06/13/13	**7440-50-8**	**Copper**	0.13	0.5	**76.1**	
3050B	06/12/13	200.8	06/13/13	**7439-92-1**	**Lead**	0.13	0.3	**10.4**	
CLP	06/12/13	7471A	06/14/13	7439-97-6	Mercury	0.0031	0.06	0.06	U
3050B	06/12/13	200.8	06/13/13	**7440-02-0**	**Nickel**	0.13	1	**24**	
3050B	06/12/13	200.8	06/13/13	7782-49-2	Selenium	0.27	1	1	U
3050B	06/12/13	200.8	06/13/13	7440-22-4	Silver	0.022	0.5	0.5	U
3050B	06/12/13	200.8	06/13/13	7440-28-0	Thallium	0.0082	0.5	0.5	U
3050B	06/12/13	6010C	06/13/13	**7440-66-6**	**Zinc**	0.32	3	**236**	

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: CL-MH-SPS-20130605-S
MATRIX SPIKE

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/14/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	0.5 U	4.4	68.8	6.4%	N
Arsenic	200.8	5.2	72.2	68.8	97.4%	
Beryllium	6010C	0.3 U	128	135	94.8%	
Cadmium	200.8	0.4	66.5	68.8	96.1%	
Chromium	200.8	27	88	68.8	88.7%	
Copper	6010C	76.1	203	135	94.0%	
Lead	200.8	10.4	76.7	68.8	96.4%	
Mercury	7471A	0.06 U	0.67	0.586	114%	
Nickel	200.8	24	92	68.8	98.8%	
Selenium	200.8	1 U	218	220	99.1%	
Silver	200.8	0.5 U	60.9	68.8	88.5%	
Thallium	200.8	0.5 U	66.5	68.8	96.7%	
Zinc	6010C	236	330	135	69.6%	N

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: CL-MH-SPS-20130605-S
DUPLICATE

Lab Sample ID: WS91A
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/14/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/05/13
Date Received: 06/05/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	0.5 U	0.6 U	0.0%	+/- 0.5	L
Arsenic	200.8	5.2	6.3	19.1%	+/- 20%	
Beryllium	6010C	0.3 U	0.3 U	0.0%	+/- 0.3	L
Cadmium	200.8	0.4	0.4	0.0%	+/- 0.3	L
Chromium	200.8	27	26	3.8%	+/- 20%	
Copper	6010C	76.1	62.1	20.3%	+/- 20%	*
Lead	200.8	10.4	9.7	7.0%	+/- 20%	
Mercury	7471A	0.06 U	0.06 U	0.0%	+/- 0.06	L
Nickel	200.8	24	24	0.0%	+/- 20%	
Selenium	200.8	1 U	1 U	0.0%	+/- 1	L
Silver	200.8	0.5 U	0.6 U	0.0%	+/- 0.5	L
Thallium	200.8	0.5 U	0.6 U	0.0%	+/- 0.5	L
Zinc	6010C	236	202	15.5%	+/- 20%	

Reported in mg/kg-dry

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

WS91 · 09228

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: WS91LCS
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/14/13

QC Report No: WS91-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	24.6	25.0	98.4%	
Arsenic	200.8	24.7	25.0	98.8%	
Beryllium	6010C	48.1	50.0	96.2%	
Cadmium	200.8	24.9	25.0	99.6%	
Chromium	200.8	24.1	25.0	96.4%	
Copper	6010C	51.9	50.0	104%	
Lead	200.8	25.4	25.0	102%	
Mercury	7471A	0.52	0.50	104%	
Nickel	200.8	25.5	25.0	102%	
Selenium	200.8	80.4	80.0	100%	
Silver	200.8	24.1	25.0	96.4%	
Thallium	200.8	25.0	25.0	100%	
Zinc	6010C	51	50	102%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: WS91MB
LIMS ID: 13-12076
Matrix: Sediment
Data Release Authorized:
Reported: 06/14/13

QC Report No: WS91-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	06/12/13	200.8	06/13/13	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	06/12/13	200.8	06/13/13	7440-38-2	Arsenic	0.087	0.2	0.2	U
3050B	06/12/13	6010C	06/13/13	7440-41-7	Beryllium	0.010	0.1	0.1	U
3050B	06/12/13	200.8	06/13/13	7440-43-9	Cadmium	0.012	0.1	0.1	U
3050B	06/12/13	200.8	06/13/13	7440-47-3	Chromium	0.038	0.5	0.5	U
3050B	06/12/13	6010C	06/13/13	7440-50-8	Copper	0.050	0.2	0.2	U
3050B	06/12/13	200.8	06/13/13	7439-92-1	Lead	0.047	0.1	0.1	U
CLP	06/12/13	7471A	06/14/13	7439-97-6	Mercury	0.0013	0.02	0.02	U
3050B	06/12/13	200.8	06/13/13	7440-02-0	Nickel	0.049	0.5	0.5	U
3050B	06/12/13	200.8	06/13/13	7782-49-2	Selenium	0.099	0.5	0.5	U
3050B	06/12/13	200.8	06/13/13	7440-22-4	Silver	0.0080	0.2	0.2	U
3050B	06/12/13	200.8	06/13/13	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	06/12/13	6010C	06/13/13	7440-66-6	Zinc	0.12	1	1	U

Reported in mg/kg (ppm).
U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

WS91 : 09239

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS91

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Antimony	SB	PMS	MS061312	50.0	49.26	**98.5**	50.0	48.51	**97.0**	49.62	**99.2**	48.21	**96.4**	49.14	**98.3**	49.15	**98.3**
Arsenic	AS	PMS	MS061312	50.0	49.18	**98.4**	50.0	48.46	**96.9**	49.78	**99.6**	49.47	**98.9**	49.71	**99.4**	49.74	**99.5**
Beryllium	BE	ICP	IP061371	1000.0	1004.40	**100.4**	1000.0	998.56	**99.9**	1005.26	**100.5**	1005.04	**100.5**	987.32	**98.7**	986.08	**98.6**
Cadmium	CD	PMS	MS061312	50.0	47.66	**95.3**	50.0	49.28	**98.6**	50.19	**100.4**	49.02	**98.0**	49.26	**98.5**	50.00	**100.0**
Chromium	CR	PMS	MS061312	50.0	48.83	**97.7**	50.0	49.16	**98.3**	48.85	**97.7**	48.13	**96.3**	47.49	**95.0**	47.13	**94.3**
Copper	CU	ICP	IP061371	1000.0	1012.30	**101.2**	1000.0	1046.28	**104.6**	1058.02	**105.8**	1015.82	**101.6**	1014.97	**101.5**	1011.95	**101.2**
Lead	PB	PMS	MS061312	50.0	49.97	**99.9**	50.0	50.03	**100.1**	49.72	**99.4**	50.08	**100.2**	49.18	**98.4**	49.39	**98.8**
Mercury	HG	CVA	HG061401	8.0	8.27	**103.4**	4.0	4.04	**101.0**	4.07	**101.8**	4.04	**101.0**	4.00	**100.0**		
Nickel	NI	PMS	MS061312	50.0	49.81	**99.6**	50.0	48.28	**96.6**	50.53	**101.1**	49.35	**98.7**	49.02	**98.0**	50.01	**100.0**
Selenium	SE	PMS	MS061312	80.0	76.79	**96.0**	50.0	49.83	**99.7**	51.41	**102.8**	50.79	**101.6**	51.56	**103.1**	51.51	**103.0**
Silver	AG	PMS	MS061312	50.0	49.22	**98.4**	50.0	49.12	**98.2**	48.15	**96.3**	47.21	**94.4**	47.84	**95.7**	47.03	**94.1**
Thallium	TL	PMS	MS061312	50.0	49.06	**98.1**	50.0	49.95	**99.9**	49.91	**99.8**	49.72	**99.4**	48.75	**97.5**	49.30	**98.6**
Zinc	ZN	ICP	IP061371	1000.0	1017.20	**101.7**	1000.0	1008.21	**100.8**	1019.49	**101.9**	1018.86	**101.9**	1016.76	**101.7**	1011.44	**101.1**

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ug/L

SDG: WS91

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Antimony	SB	PMS	MS061312	50.0	49.50	**99.0**										
Arsenic	AS	PMS	MS061312	50.0	49.80	**99.6**										
Beryllium	BE	ICP	IP061371	1000.0	985.58	**98.6**										
Cadmium	CD	PMS	MS061312	50.0	49.90	**99.8**										
Chromium	CR	PMS	MS061312	50.0	47.38	**94.8**										
Copper	CU	ICP	IP061371	1000.0	1008.54	**100.9**										
Lead	PB	PMS	MS061312	50.0	50.15	**100.3**										
Mercury	HG	CVA	HG061401	4.0												
Nickel	NI	PMS	MS061312	50.0	50.04	**100.1**										
Selenium	SE	PMS	MS061312	50.0	51.88	**103.8**										
Silver	AG	PMS	MS061312	50.0	47.30	**94.6**										
Thallium	TL	PMS	MS061312	50.0	49.65	**99.3**										
Zinc	ZN	ICP	IP061371	1000.0	1029.94	**103.0**										

Control Limits: Mercury 80-120; Other Metals 90-110

FORM II (1)

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS91

UNITS: ug/L

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	MS061312	0.2	0.16	**80.0**										
Arsenic	AS	PMS	MS061312	0.2	0.20	**100.0**										
Beryllium	BE	ICP	IP061371	1.0	0.96	**96.0**										
Cadmium	CD	PMS	MS061312	0.1	0.09	**90.0**										
Chromium	CR	PMS	MS061312	0.5	0.54	**108.0**										
Copper	CU	ICP	IP061371	2.0	1.94	**97.0**										
Lead	PB	PMS	MS061312	0.1	0.10	**100.0**										
Mercury	HG	CVA	HG061401	0.1	0.10	**100.0**										
Nickel	NI	PMS	MS061312	0.5	0.51	**102.0**										
Selenium	SE	PMS	MS061312	0.5	0.56	**112.0**										
Silver	AG	PMS	MS061312	0.2	0.20	**100.0**										
Thallium	TL	PMS	MS061312	0.2	0.20	**100.0**										
Zinc	ZN	ICP	IP061371	10.0	8.76	**87.6**										

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: WS91

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Antimony	SB	PMS	MS061312	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	MS061312	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Beryllium	BE	ICP	IP061371	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	MS061312	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	MS061312	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	IP061371	25.0	2.0	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Lead	PB	PMS	MS061312	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	HG061401	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U		
Nickel	NI	PMS	MS061312	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	MS061312	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	MS061312	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	MS061312	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Zinc	ZN	ICP	IP061371	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: WS91

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Antimony	SB	PMS	MS061312	60.0	0.2	0.2	U										
Arsenic	AS	PMS	MS061312	10.0	0.2	0.2	U										
Beryllium	BE	ICP	IP061371	5.0	1.0	1.0	U										
Cadmium	CD	PMS	MS061312	5.0	0.1	0.1	U										
Chromium	CR	PMS	MS061312	10.0	0.5	0.5	U										
Copper	CU	ICP	IP061371	25.0	2.0	2.0	U										
Lead	PB	PMS	MS061312	3.0	0.1	0.1	U										
Mercury	HG	CVA	HG061401	0.2	0.1												
Nickel	NI	PMS	MS061312	40.0	0.5	0.5	U										
Selenium	SE	PMS	MS061312	5.0	0.5	0.5	U										
Silver	AG	PMS	MS061312	10.0	0.2	0.2	U										
Thallium	TL	PMS	MS061312	10.0	0.2	0.2	U										
Zinc	ZN	ICP	IP061371	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: IP061371

SDG: WS91

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	201925.2	201736.3	**100.9**						
Antimony		1000	11.7	1018.4	**101.8**						
Arsenic		1000	19.0	1017.7	**101.8**						
Barium		1000	-1.2	1017.1	**101.7**						
Beryllium		1000	0.1	985.8	**98.6**						
Boron			-2.9	-6.2							
Cadmium		1000	0.7	1025.0	**102.5**						
Calcium	100000	100000	100629.6	100027.4	**100.0**						
Chromium		1000	1.5	1022.4	**102.2**						
Cobalt		1000	-0.1	948.6	**94.9**						
Copper		1000	-0.2	1057.9	**105.8**						
Iron	200000	200000	200516.9	197063.7	**98.5**						
Lead		1000	-2.7	986.1	**98.6**						
Magnesium	100000	100000	103966.8	99335.1	**99.3**						
Manganese		1000	0.5	966.6	**96.7**						
Molybdenum			1.0	0.7							
Nickel		1000	-0.2	967.0	**96.7**						
Potassium			14.4	-23.5							
Selenium		1000	15.0	1010.2	**101.0**						
Silicon			-5.2	-5.0							
Silver		1000	-1.2	1064.2	**106.4**						
Sodium			11.2	2.4							
Strontium			5.4	5.4							
Thallium		1000	1.2	937.7	**93.8**						
Tin			-10.6	-10.9							
Titanium			1.9	2.0							
Vanadium		1000	1.5	1004.3	**100.4**						
Zinc		1000	2.9	956.6	**95.7**						

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS91

ICS SOURCE: I.V.

RUNID: MS061312

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Arsenic		20	0.1	19.3	**96.5**						
Cadmium		20	0.2	19.4	**97.0**						
Chromium		20	0.6	19.8	**99.0**						
Cobalt		20	0.0	18.8	**94.0**						
Copper		20	1.0	20.5	**102.5**						
Manganese		20	0.0	19.4	**97.0**						
Molybdenum	400	400	414.9	417.8	**104.5**						
Nickel		20	0.3	20.0	**100.0**						
Selenium			-0.2	-0.2							
Silver		20	0.0	18.8	**94.0**						
Vanadium			0.1	0.2							
Zinc		20	0.7	19.4	**97.0**						

Post Digest Spike Sample Recovery

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

ANALYSIS METHOD: ICP

SDG: WS91

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	RUNID	SPIKED SAMPLE RESULT	C	SAMPLE RESULT	C	SPIKE ADDED	MATRIX	%R
Zinc	CL-MH-SPS-20130605	WS91APOST	IP061371	2772.44		1749.62		1000	Sediment	**102.3**
Antimony	CL-MH-SPS-20130605	WS91APOST	MS061312	481.32	**B**	1000.00	**U**	500	Sediment	**96.3**

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS91 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	ICP	OPTIMA ICP 2	313.04		5	1.0	4/1/2012	5000.0	1/22/2013
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	ICP	OPTIMA ICP 2	324.75		25	2.0	4/1/2012	40000.0	1/22/2013
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	ICP	OPTIMA ICP 2	213.86		20	10.0	4/1/2012	100000.0	1/22/2013

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

IEC DATE: 6/10/2013

SDG: WS91

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: WS91

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

Triplicate

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS91

ANALYSIS METHOD: ICP

ARI PREP CODE: SWC

PREPDATE: 6/12/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
CL-MH-SPS-20130605	WS91A	1.027	0.0	50.0
CL-MH-SPS-20130605D	WS91ADUP	1.025	0.0	50.0
CL-MH-SPS-20130605S	WS91ASPK	1.022	0.0	50.0
PBS	WS91MB1	1.000	0.0	50.0
LCSS	WS91MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS91

ANALYSIS METHOD: PMS

ARI PREP CODE: SWN

PREPDATE: 6/12/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
CL-MH-SPS-20130605	WS91A	1.008	0.0	50.0
CL-MH-SPS-20130605D	WS91ADUP	1.003	0.0	50.0
CL-MH-SPS-20130605S	WS91ASPK	1.006	0.0	50.0
PBS	WS91MB1	1.000	0.0	50.0
LCSS	WS91MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WS91

ANALYSIS METHOD: CVA

ARI PREP CODE: SMM

PREPDATE: 6/12/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
CL-MH-SPS-20130605	WS91A	0.232	0.0	50.0
CL-MH-SPS-20130605D	WS91ADUP	0.234	0.0	50.0
CL-MH-SPS-20130605S	WS91ASPK	0.236	0.0	50.0
PBS	WS91MB1	0.200	0.0	50.0
LCSW	WS91MB1SPK	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: 6/13/2013

SDG: WS91 | RUNID: IP061371 | METHOD: ICP | END DATE: 6/13/2013

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	08473							X					X																		X
S2	S2	1.00	08514												X																		
S3	S3	1.00	08533							X																							X
S4	S4	1.00	08560																														
S5	S5	1.00	08582																														
ICV	ICV	1.00	09010							X					X																		X
ICB	ICB	1.00	09045							X					X																		X
CRI	CRII	1.00	09091							X					X																		X
ICSA	ICSAI	1.00	09132							X					X																		X
ICSAB	ICSABI	1.00	09174							X					X																		X
CCV	CCV1	1.00	09214							X					X																		X
CCB	CCB1	1.00	09250							X					X																		X
ZZZZZZ	WT64MB	2.00	09291																														
ZZZZZZ	WT64A	50.00	09333																														
ZZZZZZ	WT64MBSPK	2.00	09375																														
ZZZZZZ	WT64A	20.00	09415																														
CCV	CCV2	1.00	09470							X					X																		X
CCB	CCB2	1.00	09510							X					X																		X
ZZZZZZ	WT64A	10.00	09552																														
CCV	CCV3	1.00	10010							X					X																		X
CCB	CCB3	1.00	10042							X					X																		X
ZZZZZZ	WS30MB1	2.00	10083																														
ZZZZZZ	WS30A	2.00	10125																														
ZZZZZZ	WS30B	2.00	10171																														
ZZZZZZ	WS30C	2.00	10211																														
ZZZZZZ	WS30D	2.00	10252																														
ZZZZZZ	WS30E	2.00	10294																														
ZZZZZZ	WS30F	2.00	10340																														
ZZZZZZ	WS30G	2.00	10380																														
ZZZZZZ	WS30REF1	2.00	10422																														
ZZZZZZ	WS30MB1SPK	2.00	10462																														
CCV	CCV4	1.00	10502							X					X																		X
CCB	CCB4	1.00	10534							X					X																		X
ZZZZZZ	WS30H	2.00	10575																														
ZZZZZZ	WS30IDUP	2.00	11020																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 6/13/2013

SDG: WS91 | RUNID: IP061371 | METHOD: ICP | END DATE: 6/13/2013

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	WS30I	2.00	11061																													
ZZZZZZ	WS30ISPK	2.00	11103																													
ZZZZZZ	WS30IPOST	2.00	11145																													
ZZZZZZ	WS30J	2.00	11180																													
CCV	CCV5	1.00	11222							X					X																	X
CCB	CCB5	1.00	11263							X					X																	X
PBS	WS91MB1	2.00	11304							X					X																	X
CL-MH-SPS-20130605D	WS91ADUP	2.00	11350							X					X																	X
CL-MH-SPS-20130605	WS91A	2.00	11391							X					X																	X
CL-MH-SPS-20130605S	WS91ASPK	2.00	11433							X					X																	X
CL-MH-SPS-20130605A	WS91APOST	2.00	11475																													X
LCSS	WS91MB1SPK	2.00	11511							X					X																	X
CCV	CCV6	1.00	11551							X					X																	X
CCB	CCB6	1.00	11592							X					X																	X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: NEXION 300D MS | START DATE: 6/13/2013

SDG: WS91 | RUNID: MS061312 | METHOD: PMS | END DATE: 6/13/2013

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	10250		X		X					X		X									X	X	X	X				X			
S1	S1	1.00	10290		X		X					X		X									X	X	X	X				X			
S2	S2	1.00	10330		X		X					X		X									X	X	X	X				X			
S3	S3	1.00	10380		X		X					X		X									X	X	X	X				X			
S4	S4	1.00	10420		X		X					X		X									X	X	X	X				X			
S5	S5	1.00	10470																														
ZZZZZZ	Rinse sampl	1.00	10530																														
ICV	MICV	1.00	11000		X		X					X		X									X	X	X	X				X			
ICB	ICB	1.00	11070		X		X					X		X									X	X	X	X				X			
CCV	MCCV1	1.00	11110		X		X					X		X									X	X	X	X				X			
CCB	CCB1	1.00	11170		X		X					X		X									X	X	X	X				X			
CRI	MCRI	1.00	11210		X		X					X		X									X	X	X	X				X			
ICSA	ICSAI	1.00	11260		X		X					X		X									X	X	X	X				X			
ICSAB	ICSABI	1.00	11320		X		X					X		X									X	X	X	X				X			
ZZZZZZ	LR200	1.00	11390																														
ZZZZZZ	LR300	1.00	11460																														
ZZZZZZ	B1	1.00	11530																														
CCV	MCCV2	1.00	12010		X		X					X		X									X	X	X	X				X			
CCB	CCB2	1.00	12080		X		X					X		X									X	X	X	X				X			
ZZZZZZ	WS30MB1	20.00	12150																														
ZZZZZZ	WS90F	2.00	12190																														
ZZZZZZ	WS61AaDUP	1.00	12230																														
ZZZZZZ	WS61Aa	1.00	12270																														
ZZZZZZ	WS61AaSPK	20.00	12310																														
ZZZZZZ	WS30IDUP	20.00	12350																														
ZZZZZZ	WS30I	20.00	12390																														
ZZZZZZ	WS30ISPK	20.00	12440																														
ZZZZZZ	WS30REF1	50.00	12480																														
ZZZZZZ	WS30MB1SPK	20.00	12520																														
CCV	MCCV3	1.00	12570		X		X					X		X									X	X	X	X				X			
CCB	CCB3	1.00	13040		X		X					X		X									X	X	X	X				X			
ZZZZZZ	WS30A	20.00	13100																														
ZZZZZZ	WS30B	20.00	13140																														
ZZZZZZ	WS30C	20.00	13180																														
ZZZZZZ	WS30D	20.00	13220																														

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: NEXION 300D MS | START DATE: 6/13/2013

SDG: WS91 | RUNID: MS061312 | METHOD: PMS | END DATE: 6/13/2013

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	WS30E	20.00	13260																														
ZZZZZZ	WS30F	20.00	13300																														
ZZZZZZ	WS30G	20.00	13350																														
ZZZZZZ	WS30H	20.00	13390																														
ZZZZZZ	WS30J	20.00	13430																														
CCV	MCCV4	1.00	13470		X		X					X		X									X	X	X	X				X			
CCB	CCB4	1.00	13540		X		X					X		X									X	X	X	X				X			
ZZZZZZ	WT48MB1	20.00	14010																														
ZZZZZZ	WS95C	5.00	14050																														
ZZZZZZ	WS95D	5.00	14100																														
ZZZZZZ	WS95E	50.00	14140																														
ZZZZZZ	WS95ADUP	5.00	14180																														
ZZZZZZ	WS95A	5.00	14220																														
ZZZZZZ	WS95ASPK	5.00	14260																														
ZZZZZZ	WT48A	20.00	14300																														
ZZZZZZ	WT48B	20.00	14340																														
ZZZZZZ	WT48MB1SPK	20.00	14380																														
CCV	MCCV5	1.00	14430		X		X					X		X									X	X	X	X				X			
CCB	CCB5	1.00	14490		X		X					X		X									X	X	X	X				X			
PBS	WS91MB1	20.00	14550		X		X					X		X									X	X	X	X				X			
ZZZZZZ	WS61Aa	2.00	14590																														
ZZZZZZ	WS61AaDUP	2.00	15030																														
ZZZZZZ	WT28W	2.00	15070																														
ZZZZZZ	WT28X	2.00	15120																														
CL-MH-SPS-20130605D	WS91ADUP	20.00	15160		X		X					X		X									X	X	X	X				X			
CL-MH-SPS-20130605	WS91A	20.00	15200		X		X					X		X									X	X	X	X				X			
CL-MH-SPS-20130605S	WS91ASPK	20.00	15240		X		X					X		X									X	X	X	X				X			
CL-MH-SPS-20130605A	WS91APOST	20.00	15280																						X								
LCSS	WS91MB1SPK	20.00	15330		X		X					X		X									X	X	X	X				X			
CCV	MCCV6	1.00	15380		X		X					X		X									X	X	X	X				X			
CCB	CCB6	1.00	15450		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: 6/14/2013

SDG: WS91 | RUNID: HG061401 METHOD: CVA | END DATE: 6/14/2013

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	09390														X																
S0.1	S0.1	1.00	09404														X																
S0.5	S0.5	1.00	09421														X																
S1	S1	1.00	09435														X																
S2	S2	1.00	09453														X																
S5	S5	1.00	09470														X																
S10	S10	1.00	09484														X																
ICV	AICV	1.00	09520														X																
ICB	ICB	1.00	09533														X																
CCV	ACCV1	1.00	09551														X																
CCB	CCB1	1.00	09565														X																
CRA	CRA	1.00	09583														X																
ZZZZZZ	WS42MB1	1.00	10000																														
ZZZZZZ	WS42MB1SPK	1.00	10014																														
ZZZZZZ	WS42MB1SPD	1.00	10032																														
ZZZZZZ	WS42A	1.00	10045																														
ZZZZZZ	WS42ADUP	1.00	10063																														
ZZZZZZ	WS42ASPK	1.00	10081																														
ZZZZZZ	WS42B	1.00	10094																														
ZZZZZZ	WS42D	1.00	10112																														
ZZZZZZ	WS42E	1.00	10130																														
CCV	ACCV2	1.00	10144														X																
CCB	CCB2	1.00	10162														X																
ZZZZZZ	WS42F	1.00	10180																														
ZZZZZZ	WT56MB1	1.00	10193																														
ZZZZZZ	WT56MB1SPK	1.00	10211																														
ZZZZZZ	WT56A	1.00	10224																														
ZZZZZZ	WT56ADUP	1.00	10242																														
ZZZZZZ	WT56ASPK	1.00	10255																														
ZZZZZZ	WT56B	1.00	10273																														
ZZZZZZ	WT56C	1.00	10291																														
ZZZZZZ	WT56D	1.00	10305																														
ZZZZZZ	WT56E	1.00	10322																														
CCV	ACCV3	1.00	10340														X																
CCB	CCB3	1.00	10354														X																

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 6/14/2013

SDG: WS91 | RUNID: HG061401 | METHOD: CVA | END DATE: 6/14/2013

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	WT56F	1.00	10372																														
ZZZZZZ	WT56G	1.00	10390																														
PBW	WS91MB1	1.00	10404														X																
LCSW	WS91MB1SPK	1.00	10421														X																
CL-MH-SPS-20130605	WS91A	1.00	10435														X																
CL-MH-SPS-20130605D	WS91ADUP	1.00	10453														X																
CL-MH-SPS-20130605S	WS91ASPK	1.00	10470														X																
ZZZZZZ	WS30MB1	1.00	10484																														
ZZZZZZ	WS30MB1SPK	1.00	10502																														
ZZZZZZ	WS30REF1	5.00	10515																														
CCV	ACCV4	1.00	10533														X																
CCB	CCB4	1.00	10551														X																

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: WS91

SAMPLE RESULTS-CONVENTIONALS
WS91-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MB
Reported: 06/20/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Client ID: CL-MH-SPS-20130605-S
ARI ID: 13-12076 WS91A

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/17/13 061713#1	SM2540B	Percent	0.01	33.96
Total Organic Carbon	06/19/13 061913#1	Plumb,1981	Percent	0.020	2.62

RL Analytical reporting limit
U Undetected at reported detection limit

WS91 : 092252

MS/MSD RESULTS-CONVENTIONALS
WS91-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/20/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Analyte	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: WS91A Client ID: CL-MH-SPS-20130605-S						
Total Organic Carbon	06/19/13	Percent	2.62	5.61	3.41	87.6%

WS91 : 09259

REPLICATE RESULTS-CONVENTIONALS
WS91-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/20/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/05/13
Date Received: 06/05/13

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: WS91A Client ID: CL-MH-SPS-20130605-S					
Total Solids	06/17/13	Percent	33.96	35.03 37.07	4.5%
Total Organic Carbon	06/19/13	Percent	2.62	3.00 2.53	9.2%

WS91 : 209254

LAB CONTROL RESULTS-CONVENTIONALS
WS91-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: DB
Reported: 06/20/13

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	06/19/13	Percent	0.100	0.100	100.0%

WS91 : 00255

METHOD BLANK RESULTS-CONVENTIONALS
WS91-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 06/20/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	Blank	QC ID
Total Solids	06/17/13	Percent	< 0.01 U	ICB
Total Organic Carbon	06/19/13	Percent	< 0.020 U	ICB

WS91 : 90256

STANDARD REFERENCE RESULTS-CONVENTIONALS
WS91-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized: MR
Reported: 06/20/13

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	06/19/13	Percent	2.66	2.99	89.0%

Geotechnical Analysis
Report and.Summary QC Forms

ARI Job ID: WS91

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
CL-MH-SPS-20130605-S	100.0	100.0	98.9	95.2	85.5	67.5	54.7	43.8	42.2	9.1	5.9	4.1	3.3	2.6
	100.0	100.0	98.7	95.8	86.8	70.7	57.8	47.3	45.8	13.2	6.4	5.1	4.4	1.7
	100.0	100.0	99.3	96.7	87.9	72.2	60.0	49.6	48.3	14.2	7.3	5.3	4.6	3.7

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.

WS91

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)
CL-MH-SPS-20130605-S	1.1	3.7	9.7	18.0	12.8	10.9	1.6	33.1	3.2	1.8	0.8	0.7	2.6	43.8
	1.3	2.9	8.9	16.1	12.9	10.5	1.5	32.6	6.8	1.3	0.7	2.7	1.7	47.3
	0.7	2.6	8.7	15.7	12.2	10.4	1.3	34.1	6.9	2.0	0.7	0.9	3.7	49.6

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.

WS91

QA SUMMARY

Client	SAIC	Client Project	NPDES Sampling Support
ARI Trip Sample ID	WS91A	Client Project No	209977
Client Trip. Sample ID	CL-MH-SPS-20130605-S	Batch No	WS91 -1

Relative Standard Deviation, By Phi Size

Sample ID	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
CL-MH-SPS-20130605-S	100.0	100 0	98.9	95 2	85.5	67.5	54.7	43 8	42.2	9.1	5.9	4 1	3.3	2 6
	100 0	100.0	98.7	95.8	86.8	70.7	57.8	47.3	45.8	13 2	6.4	5 1	4.4	1.7
	100.0	100 0	99.3	96.7	87 9	72 2	60.0	49 6	48.3	14 2	7.3	5 3	4.6	3 7
AVE	100 00	100.00	98 95	95 87	86.74	70 14	57.52	46.91	45 43	12.17	6 53	4.83	4.10	2.67
STDEV	0 00	0 00	0 29	0.75	1.23	2.41	2.66	2.90	3.07	2.70	0 71	0 64	0.70	1.00
%RSD	0 00	0 00	0 29	0.78	1 42	3 44	4.62	6.17	6.75	22.21	10.86	13 30	17.07	37.56

The Triplicate Applies To The Following Samples

Client ID	Date Sampled	Date Extracted	Date Complete	Data Qualifier	Sedigraph Fine Portion Dry Mass (g)
CL-MH-SPS-20130605-S	6/5/2013	6/10/2013	6/18/2013		4.4
	6/5/2013	6/10/2013	6/18/2013		4.8
	6/5/2013	6/10/2013	6/18/2013		5 0

* 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

Total Solids

ARI Job ID: WS91

Volatiles Total Solids-voats
Data By: Pat Basilio
Created: 6/18/13

Worklist: 2582
Analyst: PAB
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. WS91A 13-12076	_____	_____	*	36.13

Worklist ID: 2582 Page: 1
* - VOA TS Copied From BETX TS
% - VOA TS Copied From Metals TS
$ - VOA TS Copied From Extraction TS

Extractions Total Solids-extts
Data By: Alex Choeng
Created: 6/ 6/13

Worklist: 9593
Analyst: AC
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.	WS91A 13-12076 CL-MH-SPS-20130605-S	1.17	13.89	6.35	40.7	NR

WS91 : 902854

Extractions Total Solids-extts
Data By: Alex Choeng
Created: 6/ 6/13

Worklist: 9593
Analyst: AC
Comments:

Oven ID: 015

Balance ID: B14642614

Samples In: Date: 6-6-13 Time: 18:20 Temp: 105°C Analyst: AC

Samples Out: Date: 6-7-13 Time: 15:00 Temp: 108°C Analyst: SP

	ARI ID / CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	WS91A 13-12076 CL-MH-SPS-20130605-S	1.17	13.89	6.35g		NR

WS91 : 88265

BETX/TPHG Total Solids-betxts
Data By: Paul K. Campbell
Created: 6/17/13

Worklist: 2392
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. WS91A 13-12076	_____	_____		% 36.13

Worklist ID: 2392 Page: 1
* - BETX TS Copied From VOA TS
% - BETX TS Copied From Metals TS
$ - BETX TS Copied From Extraction TS

WS91 : 09266

Solids Data Entry Report Checked by: DM Date: 6/13/13
Date: 06/13/13 Data Analyst: CB

Solids Determination performed on 06/12/13 by CB

JOB	SAMPLE	CLIENTID	TAREWEIGHT	SAMPDISH	DRYWEIGHT	SOLIDS
WS91	A	CL-MH-SPS-20130605-	0.995	10.472	4.419	36.13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Total Solids Bench Sheet

Laboratory Section metals

Oven Identification: 07 **Balance ID:** 0697SS

Samples in Oven: Date: 6-12-13 Time: 0945 Temp: 103°C Analyst: CB

Removed from Oven: Date: 6-13-13 Time: 0720 Temp: 102°C Analyst: CB

ARI Sample ID		Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs[1]
WS91	A	0.995	10.472	4.419	—	√
WS30	A	0.971	10.120	7.033	—	√
"	B	0.954	10.040	7.819	—	√
"	C	0.943	10.423	8.180	—	√
"	D	1.006	10.820	7.734	—	√
"	E	1.011	10.502	7.797	—	√
"	F	1.010	10.155	8.050	—	√
"	G	1.006	10.776	8.142	—	√
"	H	0.981	10.634	8.081	—	√
"	I	0.969	10.044	7.303	—	√
"	J	0.994	10.136	7.244	—	√
WT48	A	0.970	5.037	4.946	—	√
"	B	0.971	5.442	5.376	—	√
WT64	A	0.994	10.664	10.390	—	√

CB 6-12-13

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.

WS91 : 00258

Total Solids Targets-Extractions
Data By: Jim Hawk
Created: 6/ 7/13

Worklist: 9611
Analyst: JBH
Comments:

	ARI ID	Target Dry Wt (g)	Total Solids	Min Wet Wt (g)
1.	WS91A	10.00	40.7	24.57

WS91:00269

Volatile Raw Data
Preparation Log

ARI Job ID: WS91

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
WSQ1		6/14/12		

	Lab ID	Vial No.	Preservative			Method 5035 Sample Weight					Comments
			$NaHSO_3$	CH_3OH	Lot #	Vial Weight (g)	Tare (from vial) (g)	Sample Weight (g)	Extract Volume (mL)	MeOH Split Volume (µL)	
1	WSQ1 A	1	—		W795-1	41.18	34.44	6.74			
2	B	1						5m			
3	A2	2	—		W795-1	42.86	34.87	7.99			
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
					Balance ID:						

Volatile Raw Data
Initial Calibration Notes and Raw Data

ARI Job ID: WS91

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): 6/11/13 Internal Standard ID B000643/B000644 Expiration 12/11/13

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
~~Bor~~ ultra	B000348	10/10/13	accustd	W794-4	10/10/13
ultra	B000196	6/27/13	SPEX	W797-3	6/30/13
restek	B000612	12/5/13			
6/11/13 ~~B000164~~ restek	B000164	6/30/13	ultra	I8201	7/31/13

Detail problems, corrective actions and/or other pertinent information below:

linear - iodomethane, DCM quadratic - acetone (39% RSD before changing to quadratic)
ICV - DCDFM 128%R, acrolein 68%R, 1,1DCE 78%R, bromomethane 98%R, iodomethane 69%R
carbon disulfide 75%R, VA 48%R, trans 1,4 dichloro-2-butene 77%R

Analyst: [signature] **Date:** 6/12/13

Reviewer: [signature] **Date:** 6/12/13

WS91 : 00273

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-5 Serial No.:GC=US10228086, MS=US10462818

Date: 6/11/17 Analysis: SMC Analyst: [illegible]

GC Program: [illegible] Column No: 928152 Column Type: [illegible]

Instrument Tune (.U or .CT.): PAF(100) EM Voltage: 1412

Inj. Vol: 5 Calibration File: bfb0611a Curve Date: 6/11/17

IS/SS	Ical/Ccal	LCS/ICV
B000643	B000648	W797-4
B000644	B000649	W797-3
		F8201

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt5.i/11JUN13.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF								
1	0702	bfb0611.d	BFB0611	BFB0611			1								
2	0810	bfb0611a.d	BFB0611	BFB0611			1								
3	0833	0010611.d	IC0611	VSTD1			1	4.67	463596	5.12	1698223	7.59	2010959	9.67	1071536
4	0857	2000611.d	IC0611	VSTD200			1	4.65	507140	5.10	1861384	7.60	2123406	9.68	1103824
5	0921	1500611.d	IC0611	VSTD150			1	4.66	496348	5.11	1843399	7.60	2125124	9.68	1137532
6	1009	0500611.d	IC0611	VSTD50			1	4.66	459631	5.11	1692431	7.59	1987215	9.67	1075398
7	1057	0050611.d	IC0611	VSTD5			1	4.65	459587	5.11	1687157	7.59	2006212	9.67	1096782
8	1120	0020611.d	IC0611	VSTD2			1	4.67	444324	5.12	1641355	7.60	1959754	9.67	1061365
9	1221	0100611.d	IC0611	VSTD10			1	4.66	441694	5.11	1634225	7.59	1921755	9.67	1018367
10	1245	1000611.d	IC0611	VSTD100			1	4.67	457306	5.11	1695367	7.60	1980001	9.67	1049557
11	1404	icv0611.d	ICV0611	ICV0611			1	4.66	434681	5.11	1638920	7.59	1920237	9.67	1043748

6/12/17

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/11JUN13.b/bfb0611a.d

Date : 11-JUN-2013 08:10

Client ID: BFB0611

Instrument: nt5.i

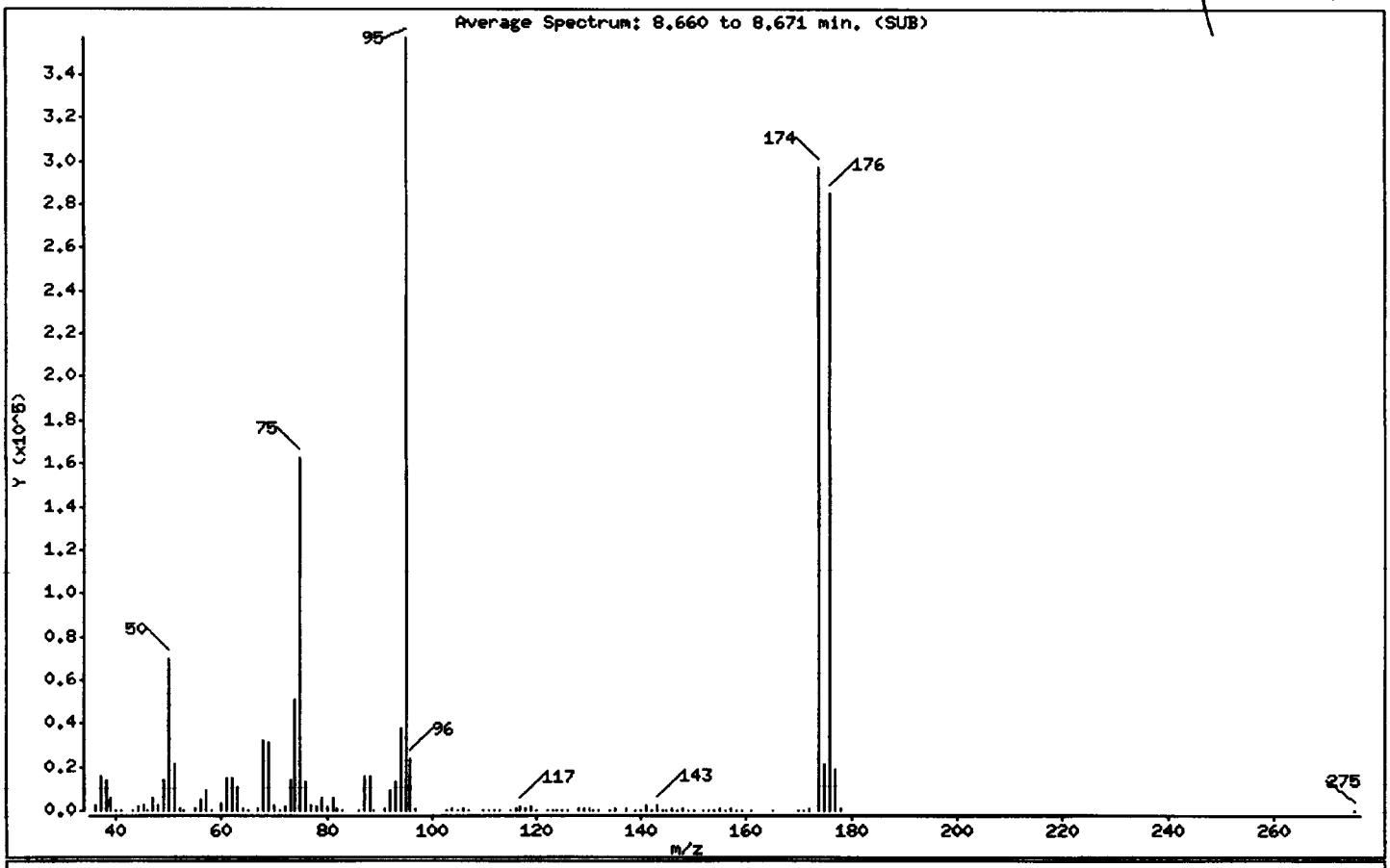
Sample Info: BFB0611,BFB0611,,1,11JUN13,,

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	19.44
75	30.00 - 66.00% of mass 95	45.50
96	5.00 - 9.00% of mass 95	6.62
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 101.00% of mass 95	83.24
175	4.00 - 9.00% of mass 174	5.93 (7.13)
176	95.00 - 101.00% of mass 174	79.81 (95.87)
177	5.00 - 9.00% of mass 176	5.28 (6.62)

Data File: /chem1/nt5.i/11JUN13.b/bfb0611a.d

Date : 11-JUN-2013 08:10

Client ID: BFB0611

Instrument: nt5.i

Sample Info: BFB0611,BFB0611,,1,11JUN13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0611a.d

Spectrum: Average Spectrum: 8.660 to 8.671 min. (SUB)

Location of Maximum: 95.00

Number of points: 114

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2585	69.00	31560	106.00	1039	143.00	2774
37.00	15758	70.00	2162	107.00	406	144.00	87
38.00	14282	71.00	152	110.00	127	145.00	279
39.00	5446	72.00	1664	111.00	233	146.00	442
40.00	199	73.00	13686	112.00	62	147.00	204
41.00	33	74.00	50952	113.00	147	148.00	835
43.00	68	75.00	162496	115.00	313	149.00	204
44.00	1313	76.00	13541	116.00	963	150.00	290
45.00	2849	77.00	2132	117.00	1613	152.00	191
46.00	224	78.00	1365	118.00	982	153.00	267
47.00	5973	79.00	5772	119.00	1358	154.00	151
48.00	2167	80.00	1621	120.00	33	155.00	696
49.00	13976	81.00	5425	122.00	33	156.00	35
50.00	69456	82.00	1135	123.00	34	157.00	555
51.00	21576	83.00	160	124.00	137	158.00	35
52.00	926	86.00	393	125.00	37	159.00	370
53.00	46	87.00	15463	126.00	146	161.00	308
55.00	773	88.00	15414	128.00	958	165.00	42
56.00	4763	89.00	39	129.00	526	170.00	38
57.00	8891	91.00	1008	130.00	976	171.00	121
58.00	400	92.00	8689	131.00	312	172.00	690
60.00	3017	93.00	13378	132.00	33	174.00	297408
61.00	14478	94.00	37584	134.00	78	175.00	21192
62.00	14832	95.00	357248	135.00	442	176.00	285120
63.00	11037	96.00	23664	137.00	439	177.00	18864
64.00	1085	97.00	720	139.00	129	178.00	644
65.00	410	103.00	98	140.00	309	275.00	36
67.00	916	104.00	1121	141.00	2541		
68.00	31776	105.00	409	142.00	336		

US91 : 00276

Data File: /chem1/nt5.i/11JUN13.b/bfb0611a.d

Date : 11-JUN-2013 08:10

Client ID: BFB0611

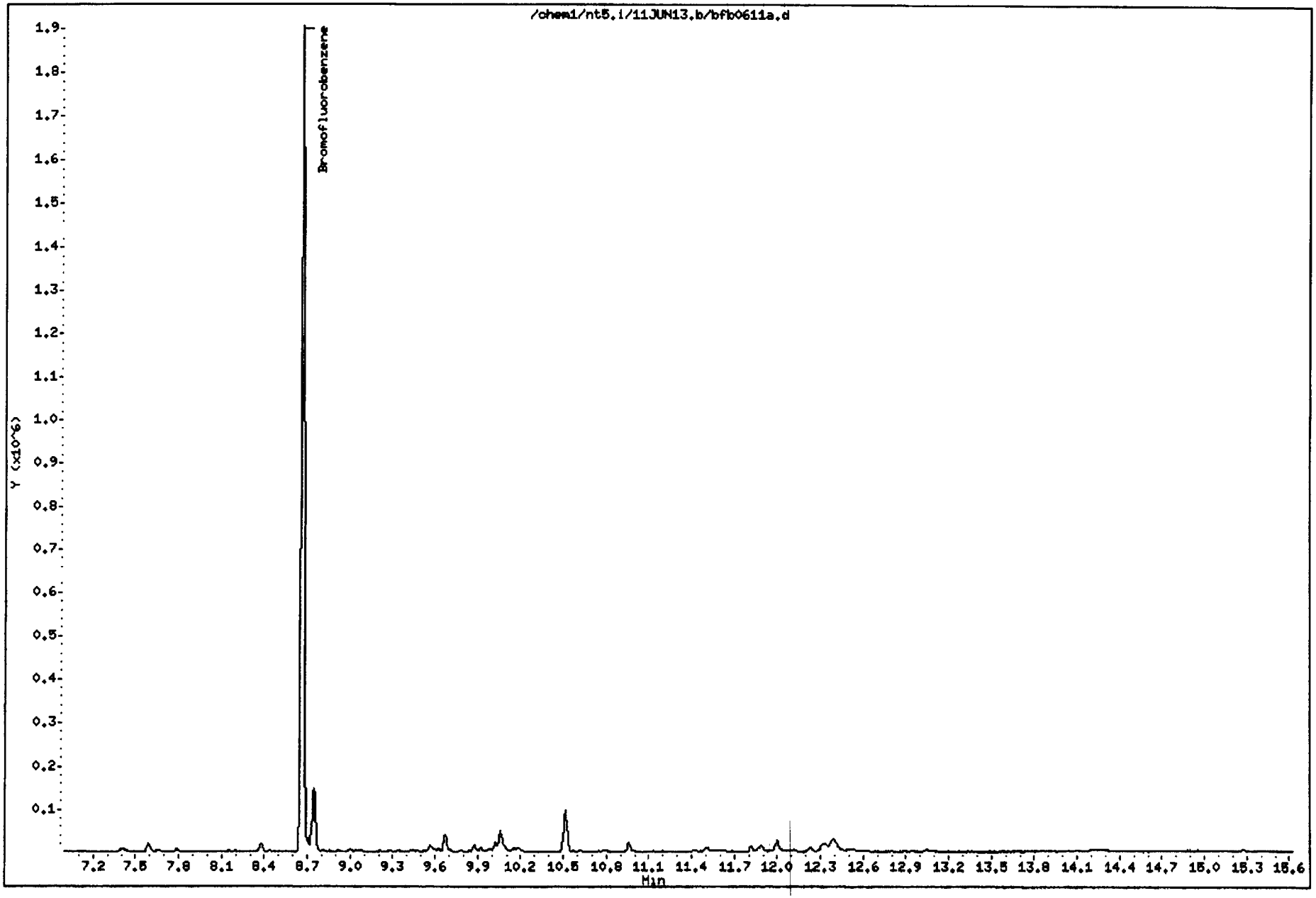
Sample Info: BFB0611,BFB0611,,1,11JUN13,,

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB

Column diameter: 0.18



Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb

Calibration File Names:
Level 1: /chem1/nt5.i/11JUN13.b/0010611.d
Level 2: /chem1/nt5.i/11JUN13.b/0020611.d
Level 3: /chem1/nt5.i/11JUN13.b/0050611.d
Level 4: /chem1/nt5.i/11JUN13.b/0100611.d
Level 5: /chem1/nt5.i/11JUN13.b/0500611.d
Level 6: /chem1/nt5.i/11JUN13.b/1000611.d
Level 7: /chem1/nt5.i/11JUN13.b/1500611.d
Level 8: /chem1/nt5.i/11JUN13.b/2000611.d

6/12/13

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	1.15985	0.73837	0.81617	0.97672	0.76826	0.93849					
	0.79058	0.90335					AVRG		0.88647		15.71883
2 Chloromethane	2.15349	1.61138	1.83391	1.64416	1.66363	1.79429					
	1.69561	1.72662					AVRG		1.76539		9.84141
3 Vinyl Chloride	1.99937	1.53098	1.63129	1.73824	1.65547	1.82428					
	1.70517	1.57850					AVRG		1.70791		8.74330

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 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	1.11455	0.86975	0.91088	0.92848	0.79696	0.79674					
	0.73429	0.69266					AVRG		0.85554		15.54370
5 Chloroethane	1.25605	1.02043	1.01004	1.07308	0.97124	1.05913					
	0.90276	0.84183					AVRG		1.01682		12.21323
6 Trichlorofluoromethane	2.07228	1.60710	1.76839	1.76278	1.58603	1.90520					
	1.73276	1.76116					AVRG		1.77446		8.81816
7 1,1-Dichloroethene	1.43304	1.08901	1.15351	1.11525	1.12017	1.31347					
	1.17918	1.18071					AVRG		1.19804		9.77444
8 Carbon Disulfide	4.58125	3.66022	3.85094	3.73277	3.70547	4.26429					
	3.74349	3.60790					AVRG		3.89329		8.85505
9 112Trichloro122Trifluoroethan	1.17268	0.97547	1.01328	0.99965	0.97764	1.19118					
	1.04090	1.06600					AVRG		1.05460		8.00004
10 Iodomethane	8399	11499	29970	63217	397931	1129814					
	1522399	2117934					LINR	0.000e+00	1.06229		0.99016

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 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	0.88018	0.67676	0.68947	0.73889	0.74005	0.80712					
	0.68285	0.67451					AVRG		0.73623		10.02755
12 Acrolein	0.29925	0.25834	0.22950	0.26818	0.27716	0.27081					
	0.21873	0.20006					AVRG		0.25275		13.23048
13 Methylene Chloride	+++++	34934	57838	123231	512608	983128					
	+++++	+++++					LINR	0.000e+00	1.08730		0.99799
14 Acetone	24600	37068	61461	226490	559829	955765					
	+++++	+++++					QUAD	0.000e+00	2.37497	1.17429	0.99443
15 Trans-1,2-Dichloroethene	1.51522	1.19316	1.06078	1.31084	1.04822	1.12151					
	0.96776	0.96821					AVRG		1.14821		16.34263
16 Methyl tert butyl ether	4.24680	3.73973	3.54808	3.58528	3.27729	3.09939					
	2.58140	2.49074					AVRG		3.32109		17.78170
17 1,1-Dichloroethane	3.04856	2.60834	2.75933	2.63793	2.16132	1.73335					
	+++++	+++++					AVRG		2.49147		18.83399

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 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	0.61584	0.62139	0.59097	0.53014	0.52102	0.34450						
	+++++	+++++					AVRG		0.53731		19.27076	
19 Vinyl Acetate	3.53314	3.34998	3.55413	3.13082	3.37481	3.55041						
	3.33473	+++++					AVRG		3.40400		4.54869	
20 Cis-1,2-Dichloroethene	1.59805	1.42149	1.44697	1.36104	1.34895	1.53835						
	1.45307	1.46221					AVRG		1.45377		5.73839	
21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
22 2,2-Dichloropropane	2.46497	1.87144	2.03550	1.98910	1.86828	2.21329						
	2.05659	2.07875					AVRG		2.07224		9.38223	
23 Bromochloromethane	0.70956	0.58099	0.65002	0.62160	0.59245	0.65405						
	0.69301	0.70634					AVRG		0.65100		7.67163	
24 Chloroform	2.68014	2.25106	2.35681	2.18244	2.19549	2.32442						
	2.33200	2.33735					AVRG		2.33246		6.67056	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	150 Level 7	200 Level 8	Curve	Coefficients b	m1	m2	%RSD or R^2
25 Carbon Tetrachloride	0.54062	0.44127	0.46563	0.46093	0.43796	0.51967							
	0.48308	0.49219							AVRG		0.48017		7.56835
26 1,1,1-Trichloroethane	2.29327	1.93243	2.07658	2.01220	1.92671	2.27638							
	2.12220	2.13273							AVRG		2.09656		6.65569
28 1,1-Dichloropropene	0.61617	0.51281	0.62068	0.52279	0.51285	0.59928							
	0.55464	0.56286							AVRG		0.56276		8.00087
29 2-Butanone	0.16918	0.16292	0.17142	0.14178	0.17691	0.18360							
	0.17778	0.16657							AVRG		0.16877		7.56852
30 Benzene	1.84805	1.57317	1.68981	1.55349	1.52315	1.65205							
	1.44938	1.36132							AVRG		1.58130		9.49939
33 1,2-Dichloroethane	0.56768	0.49799	0.51314	0.45349	0.47844	0.51592							
	0.48130	0.48272							AVRG		0.49883		6.89316
34 Trichloroethene	0.41564	0.35835	0.39703	0.36359	0.35392	0.41477							
	0.38705	0.39806							AVRG		0.38605		6.39811

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 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	0.21952	0.20067	0.21029	0.18599	0.20354	0.22052						
	0.20927	0.21293					AVRG		0.20784		5.38954	
38 1,2-Dichloropropane	0.49328	0.43420	0.45002	0.40134	0.43087	0.47577						
	0.44757	0.45305					AVRG		0.44826		6.25964	
39 Bromodichloromethane	0.53594	0.46219	0.47886	0.44534	0.46824	0.51323						
	0.48458	0.48876					AVRG		0.48464		5.94815	
40 2-Chloroethyl Vinyl Ether	0.19841	0.20293	0.23640	0.21033	0.25128	0.26928						
	0.25825	0.25764					AVRG		0.23557		11.86506	
41 Cis 1,3-dichloropropene	0.68339	0.58155	0.64340	0.59087	0.61761	0.67548						
	0.62593	0.62342					AVRG		0.63020		5.74963	
43 Toluene	1.20770	1.01293	1.05832	0.96938	0.94116	1.04609						
	0.92801	0.88834					AVRG		1.00649		9.97422	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 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	0.38514	0.30744	0.34495	0.33928	0.31189	0.37507					
	0.34615	0.35904					AVRG		0.34612		7.90789
45 4-Methyl-2-Pentanone	0.16974	0.17439	0.18576	0.16064	0.18860	0.18866					
	0.17642	0.16877					AVRG		0.17662		5.82728
46 Trans 1,3-Dichloropropene	0.59371	0.52769	0.56928	0.51709	0.55879	0.60001					
	0.56007	0.55576					AVRG		0.56030		5.10521
47 1,1,2-Trichloroethane	0.32190	0.30102	0.32285	0.28762	0.31280	0.33494					
	0.31710	0.31966					AVRG		0.31474		4.62368
48 Chlorodibromomethane	0.32012	0.27454	0.29228	0.26907	0.29532	0.31946					
	0.30635	0.31197					AVRG		0.29864		6.50136
49 1,3-Dichloropropane	0.51901	0.48065	0.49420	0.44312	0.49204	0.52308					
	0.49561	0.49396					AVRG		0.49271		4.99011
50 1,2-Dibromoethane	0.33129	0.30434	0.31142	0.26902	0.30469	0.32610					
	0.30969	0.30930					AVRG		0.30823		6.04409

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 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	0.23741	0.24952	0.26845	0.23093	0.26845	0.26099					
	0.26101	0.25525					AVRG		0.25400		5.45667
53 Chlorobenzene	0.98446	0.84665	0.89684	0.83060	0.80886	0.88306					
	0.79100	0.76670					AVRG		0.85102		8.17223
54 Ethyl Benzene	1.75282	1.45312	1.60347	1.52622	1.43555	1.49669					
	1.25237	1.15591					AVRG		1.45952		12.90379
55 1,1,1,2-Tetrachloroethane	0.34130	0.28699	0.30483	0.27783	0.28695	0.32118					
	0.30101	0.30468					AVRG		0.30310		6.77955
56 m,p-xylene	0.65059	0.54198	0.60109	0.56908	0.54048	0.58022					
	0.49785	0.46745					AVRG		0.55609		10.39652
57 o-Xylene	0.58457	0.49718	0.55974	0.53285	0.53472	0.60443					
	0.55789	0.55339					AVRG		0.55310		5.94465
58 Styrene	0.92416	0.83961	0.96468	0.89093	0.90908	0.97311					
	0.85725	0.80503					AVRG		0.89548		6.62106

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 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	0.41650	0.36241	0.38509	0.34950	0.39203	0.42028						
	0.39971	0.40734					AVRG		0.39161		6.41933	
60 Isopropyl Benzene	2.84941	2.44527	2.70996	2.66892	2.46984	2.66240						
	2.20389	2.05866					AVRG		2.50854		10.72697	
61 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
63 Bromobenzene	0.74323	0.63970	0.65245	0.62106	0.62112	0.69938						
	0.64590	0.67219					AVRG		0.66188		6.33190	
64 N-Propyl Benzene	3.61873	2.96868	3.27739	3.23866	2.87644	3.04990						
	2.45529	2.30083					AVRG		2.97324		14.57911	
65 1,1,2,2-Tetrachloroethane	0.67581	0.60472	0.63261	0.58405	0.65760	0.69915						
	0.68101	0.69890					AVRG		0.65423		6.60000	
66 2-Chloro Toluene	2.18467	1.81707	1.94914	1.90504	1.79643	2.00730						
	1.73282	1.67643					AVRG		1.88361		8.70915	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 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	2.40295	2.04232	2.25252	2.21593	2.06740	2.29880					
	1.93785	1.85296					AVRG		2.13384		8.86618
68 1,2,3-Trichloropropane	0.20102	0.19256	0.19669	0.17755	0.19756	0.21011					
	0.20198	0.20682					AVRG		0.19804		5.04604
69 Trans-1,4-Dichloro 2-Butene	0.24824	0.21873	0.22791	0.21876	0.25053	0.25905					
	0.25225	0.26816					AVRG		0.24295		7.72356
70 4-Chloro Toluene	2.17384	1.90575	2.03097	1.98777	1.85226	2.07365					
	1.80914	1.77610					AVRG		1.95119		7.11624
71 T-Butyl Benzene	2.03180	1.75870	1.96374	1.91864	1.81318	2.05766					
	1.76631	1.70579					AVRG		1.87698		7.13354
72 1,2,4-Trimethylbenzene	2.36987	1.99922	2.23465	2.17477	2.04821	2.25121					
	1.89821	1.81013					AVRG		2.09828		9.13128
73 S-Butyl Benzene	3.21468	2.74086	2.98397	2.94687	2.63870	2.84729					
	2.32191	2.14813					AVRG		2.73030		12.94020

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 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	2.52535	2.17046	2.41045	2.40177	2.17215	2.39750					
	1.98160	1.86263					AVRG		2.24024		10.40128
75 1,3-Dichlorobenzene	1.49701	1.21723	1.23863	1.21345	1.13507	1.27949					
	1.12168	1.11455					AVRG		1.22714		10.13445
77 1,4-Dichlorobenzene	1.52552	1.25478	1.29725	1.23323	1.15327	1.30543					
	1.16569	1.18318					AVRG		1.26479		9.48297
78 N-Butyl Benzene	2.43566	2.05045	2.26049	2.32535	2.04956	2.33910					
	1.93032	1.85789					AVRG		2.15610		9.81684
80 1,2-Dichlorobenzene	1.42557	1.20884	1.22026	1.13860	1.10054	1.21217					
	1.10537	1.13701					AVRG		1.19355		8.83118
81 1,2-Dibromo 3-Chloropropane	0.12813	0.12901	0.11891	0.11326	0.12558	0.13123					
	0.13185	0.13547					AVRG		0.12668		5.76839
82 Hexachloro 1,3-Butadiene	0.62919	0.49029	0.53115	0.52593	0.46575	0.55951					
	0.50651	0.52885					AVRG		0.52965		9.30001

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 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	0.95414	0.79730	0.82711	0.83075	0.79062	0.92135					
	0.85622	0.90765					AVRG		0.86064		7.02538
84 Naphthalene	1.91743	1.97489	1.99429	1.70589	1.94573	1.98514					
	1.83301	1.75554					AVRG		1.88899		5.87484
85 1,2,3-Trichlorobenzene	0.90772	0.83779	0.83846	0.77253	0.76725	0.84919					
	0.81976	0.86234					AVRG		0.83188		5.54667
$ 27 Dibromofluoromethane	1.42080	1.43437	1.43045	1.43975	1.44083	1.45670					
	1.42720	1.42333					AVRG		1.43418		0.80866
$ 32 d4-1,2-Dichloroethane	1.33180	1.36151	1.34153	1.34491	1.34985	1.37034					
	1.31374	1.30630					AVRG		1.34000		1.64461
$ 42 d8-Toluene	1.46932	1.47340	1.47407	1.47279	1.46793	1.46461					
	1.44670	1.45242					AVRG		1.46515		0.69876
$ 62 4-Bromofluorobenzene	0.54277	0.54434	0.54763	0.54387	0.54537	0.54739					
	0.54962	0.54333					AVRG		0.54554		0.44515

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb

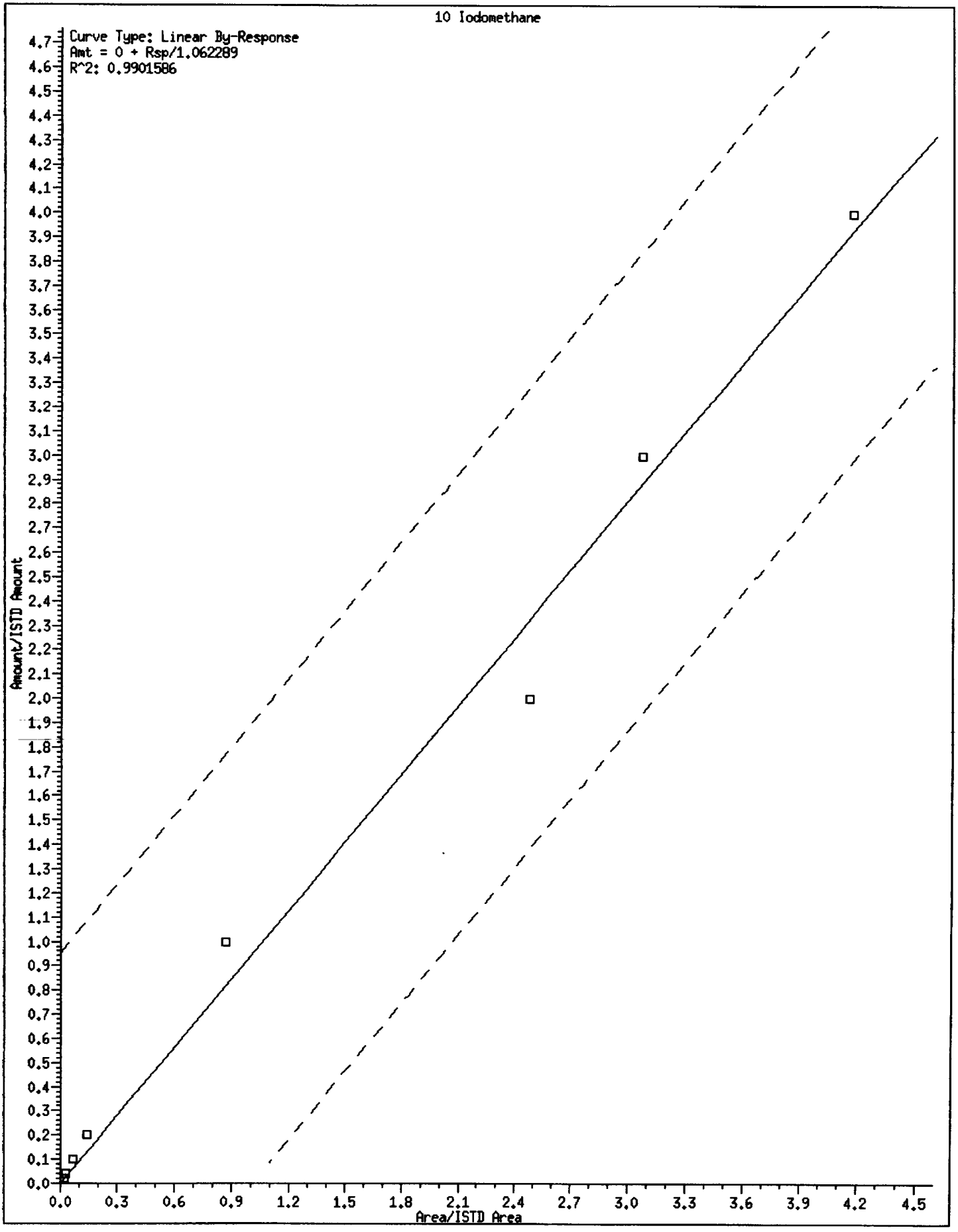
Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	 m1	 m2	%RSD or R^2
	150 Level 7	200 Level 8									
$ 79 d4-1,2-Dichlorobenzene	1.03331	1.03074	1.01817	1.03518	1.00949	1.01335					
	0.99631	1.01225					AVRG		1.01860		1.33111

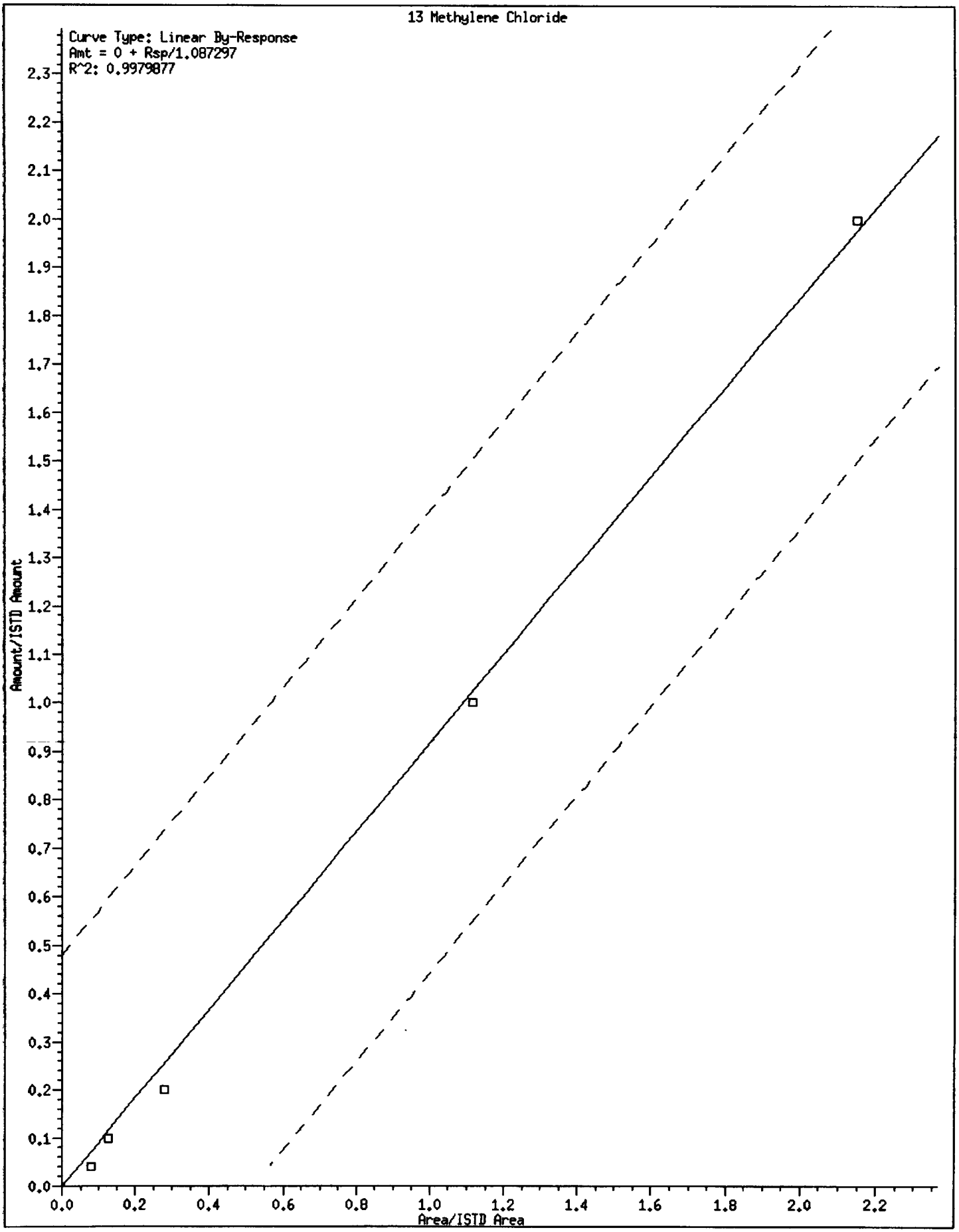
Analytical Resources, Inc.

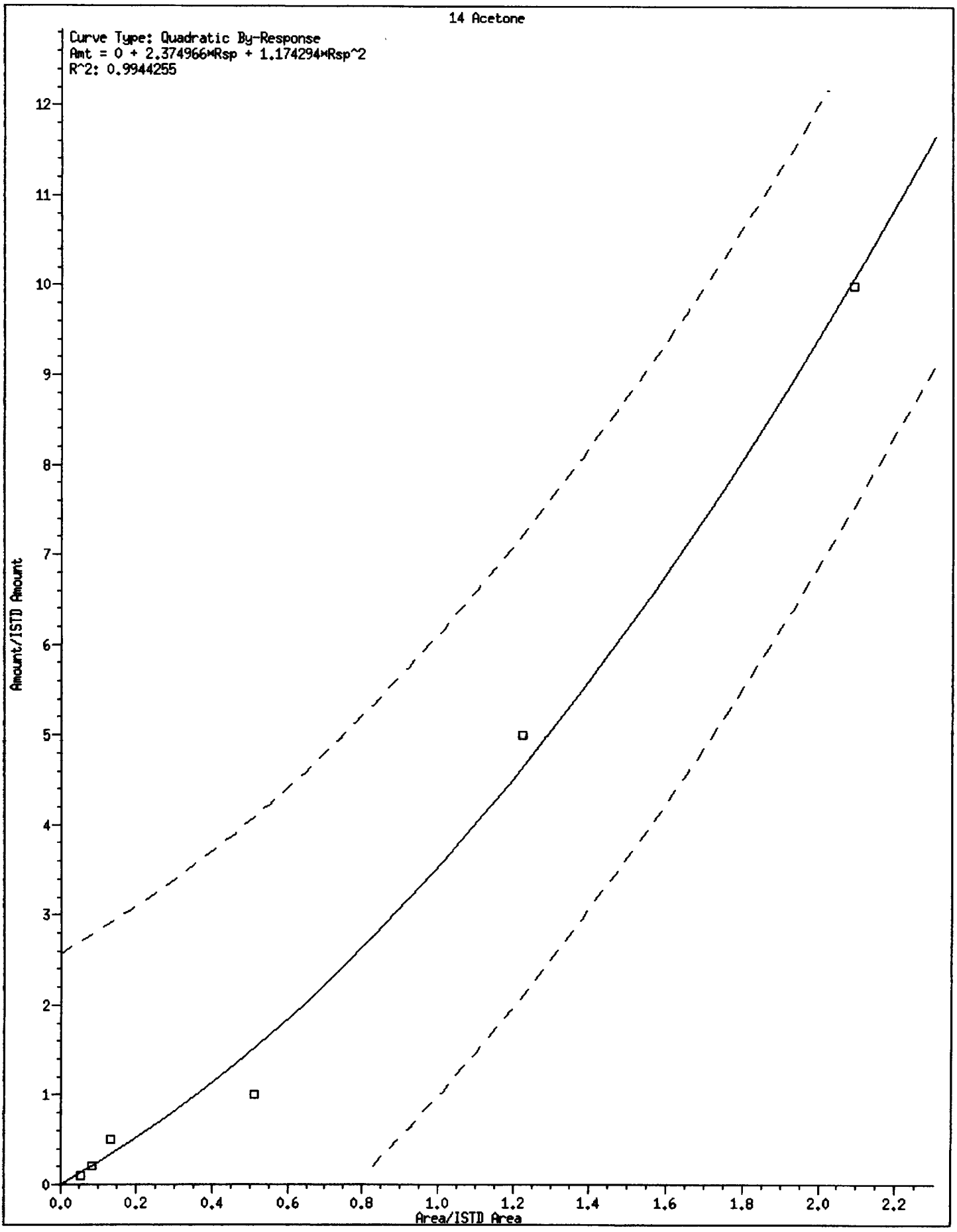
INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Linear	Amt = b + Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response


10 Iodomethane
Curve Type: Linear By-Response
Amt = 0 + Rsp/1.062289
R^2: 0.9901586
Amount/ISTD Amount
Area/ISTD Area
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


13 Methylene Chloride
Curve Type: Linear By-Response
Amt = 0 + Rsp/1.087297
R^2: 0.9979877
Amount/ISTD Amount
Area/ISTD Area


14 Acetone
Curve Type: Quadratic By-Response
Amt = 0 + 2.374966*Rsp + 1.174294*Rsp^2
R^2: 0.9944255
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/SampleInfo/V0121012S.m
Cal Date : 12-Jun-2013 11:30 patrickb
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt5.i/11JUN13.b/0010611.d
Level 2: /chem1/nt5.i/11JUN13.b/0020611.d
Level 3: /chem1/nt5.i/11JUN13.b/0050611.d
Level 4: /chem1/nt5.i/11JUN13.b/0100611.d
Level 5: /chem1/nt5.i/11JUN13.b/0500611.d
Level 6: /chem1/nt5.i/11JUN13.b/1000611.d
Level 7: /chem1/nt5.i/11JUN13.b/1500611.d
Level 8: /chem1/nt5.i/11JUN13.b/2000611.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	1.15985	0.73837	0.81617	0.97672	0.76826	0.93849		
	0.79058	0.90335					0.88647	15.719
2 Chloromethane	2.15349	1.61138	1.83391	1.64416	1.66363	1.79429		
	1.69561	1.72662					1.76539	9.841
3 Vinyl Chloride	1.99937	1.53098	1.63129	1.73824	1.65547	1.82428		
	1.70517	1.57850					1.70791	8.743
4 Bromomethane	1.11455	0.86975	0.91088	0.92848	0.79696	0.79674		
	0.73429	0.69266					0.85554	15.544
5 Chloroethane	1.25605	1.02043	1.01004	1.07308	0.97124	1.05913		
	0.90276	0.84183					1.01682	12.213
6 Trichlorofluoromethane	2.07228	1.60710	1.76839	1.76278	1.58603	1.90520		
	1.73276	1.76116					1.77446	8.818

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/SampleInfo/VO121012S.m
Cal Date : 12-Jun-2013 11:30 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	
7 1,1-Dichloroethene	1.43304	1.08901	1.15351	1.11525	1.12017	1.31347	1.17918	1.18071	1.19804	9.774	
8 Carbon Disulfide	4.58125	3.66022	3.85094	3.73277	3.70547	4.26429	3.74349	3.60790	3.89329	8.855	
9 112Trichloro122Trifluoroethan	1.17268	0.97547	1.01328	0.99965	0.97764	1.19118	1.04090	1.06600	1.05460	8.000	
10 Iodomethane	0.90585	0.64699	0.65211	0.71562	0.86576	1.23529	1.02240	1.04406	0.88601	23.646	<-
11 Bromoethane	0.88018	0.67676	0.68947	0.73889	0.74005	0.80712	0.68285	0.67451	0.73623	10.028	
12 Acrolein	0.29925	0.25834	0.22950	0.26818	0.27716	0.27081	0.21873	0.20006	0.25275	13.230	
13 Methylene Chloride	+++++	1.96557	1.25848	1.39498	1.11526	1.07491	+++++	+++++	1.36184	26.460	<-
14 Acetone	0.53063	0.41713	0.26746	0.51278	0.24360	0.20900	+++++	+++++	0.36343	39.022	<-
15 Trans-1,2-Dichloroethene	1.51522	1.19316	1.06078	1.31084	1.04822	1.12151	0.96776	0.96821	1.14821	16.343	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/SampleInfo/VO121012S.m
Cal Date : 12-Jun-2013 11:30 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	4.24680	3.73973	3.54808	3.58528	3.27729	3.09939	2.58140	2.49074	3.32109	17.782	
17 1,1-Dichloroethane	3.04856	2.60834	2.75933	2.63793	2.16132	1.73335	+++++	+++++	2.49147	18.834	
18 Acrylonitrile	0.61584	0.62139	0.59097	0.53014	0.52102	0.34450	+++++	+++++	0.53731	19.271	
19 Vinyl Acetate	3.53314	3.34998	3.55413	3.13082	3.37481	3.55041	3.33473	+++++	3.40400	4.549	
20 Cis-1,2-Dichloroethene	1.59805	1.42149	1.44697	1.36104	1.34895	1.53835	1.45307	1.46221	1.45377	5.738	
21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
22 2,2-Dichloropropane	2.46497	1.87144	2.03550	1.98910	1.86828	2.21329	2.05659	2.07875	2.07224	9.382	
23 Bromochloromethane	0.70956	0.58099	0.65002	0.62160	0.59245	0.65405	0.69301	0.70634	0.65100	7.672	
24 Chloroform	2.68014	2.25106	2.35681	2.18244	2.19549	2.32442	2.33200	2.33735	2.33246	6.671	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/SampleInfo/VO121012S.m
Cal Date : 12-Jun-2013 11:30 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	0.54062	0.44127	0.46563	0.46093	0.43796	0.51967			
	0.48308	0.49219					0.48017	7.568	
26 1,1,1-Trichloroethane	2.29327	1.93243	2.07658	2.01220	1.92671	2.27638			
	2.12220	2.13273					2.09656	6.656	
28 1,1-Dichloropropene	0.61617	0.51281	0.62068	0.52279	0.51285	0.59928			
	0.55464	0.56286					0.56276	8.001	
29 2-Butanone	0.16918	0.16292	0.17142	0.14178	0.17691	0.18360			
	0.17778	0.16657					0.16877	7.569	
30 Benzene	1.84805	1.57317	1.68981	1.55349	1.52315	1.65205			
	1.44938	1.36132					1.58130	9.499	
33 1,2-Dichloroethane	0.56768	0.49799	0.51314	0.45349	0.47844	0.51592			
	0.48130	0.48272					0.49883	6.893	
34 Trichloroethene	0.41564	0.35835	0.39703	0.36359	0.35392	0.41477			
	0.38705	0.39806					0.38605	6.398	
36 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
37 Dibromomethane	0.21952	0.20067	0.21029	0.18599	0.20354	0.22052			
	0.20927	0.21293					0.20784	5.390	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/SampleInfo/VO121012S.m
Cal Date : 12-Jun-2013 11:30 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	0.49328	0.43420	0.45002	0.40134	0.43087	0.47577		
	0.44757	0.45305					0.44826	6.260
39 Bromodichloromethane	0.53594	0.46219	0.47886	0.44534	0.46824	0.51323		
	0.48458	0.48876					0.48464	5.948
40 2-Chloroethyl Vinyl Ether	0.19841	0.20293	0.23640	0.21033	0.25128	0.26928		
	0.25825	0.25764					0.23557	11.865
41 Cis 1,3-dichloropropene	0.68339	0.58155	0.64340	0.59087	0.61761	0.67548		
	0.62593	0.62342					0.63020	5.750
43 Toluene	1.20770	1.01293	1.05832	0.96938	0.94116	1.04609		
	0.92801	0.88834					1.00649	9.974
44 Tetrachloroethene	0.38514	0.30744	0.34495	0.33928	0.31189	0.37507		
	0.34615	0.35904					0.34612	7.908
45 4-Methyl-2-Pentanone	0.16974	0.17439	0.18576	0.16064	0.18860	0.18866		
	0.17642	0.16877					0.17662	5.827
46 Trans 1,3-Dichloropropene	0.59371	0.52769	0.56928	0.51709	0.55879	0.60001		
	0.56007	0.55576					0.56030	5.105
47 1,1,2-Trichloroethane	0.32190	0.30102	0.32285	0.28762	0.31280	0.33494		
	0.31710	0.31966					0.31474	4.624

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/SampleInfo/VO121012S.m
Cal Date : 12-Jun-2013 11:30 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	0.32012	0.27454	0.29228	0.26907	0.29532	0.31946		
	0.30635	0.31197					0.29864	6.501
49 1,3-Dichloropropane	0.51901	0.48065	0.49420	0.44312	0.49204	0.52308		
	0.49561	0.49396					0.49271	4.990
50 1,2-Dibromoethane	0.33129	0.30434	0.31142	0.26902	0.30469	0.32610		
	0.30969	0.30930					0.30823	6.044
51 2-Hexanone	0.23741	0.24952	0.26845	0.23093	0.26845	0.26099		
	0.26101	0.25525					0.25400	5.457
53 Chlorobenzene	0.98446	0.84665	0.89684	0.83060	0.80886	0.88306		
	0.79100	0.76670					0.85102	8.172
54 Ethyl Benzene	1.75282	1.45312	1.60347	1.52622	1.43555	1.49669		
	1.25237	1.15591					1.45952	12.904
55 1,1,1,2-Tetrachloroethane	0.34130	0.28699	0.30483	0.27783	0.28695	0.32118		
	0.30101	0.30468					0.30310	6.780
56 m,p-xylene	0.65059	0.54198	0.60109	0.56908	0.54048	0.58022		
	0.49785	0.46745					0.55609	10.397
57 o-Xylene	0.58457	0.49718	0.55974	0.53285	0.53472	0.60443		
	0.55789	0.55339					0.55310	5.945

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/SampleInfo/VO121012S.m
Cal Date : 12-Jun-2013 11:30 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	
58 Styrene	0.92416	0.83961	0.96468	0.89093	0.90908	0.97311	0.85725	0.80503	0.89548	6.621	
59 Bromoform	0.41650	0.36241	0.38509	0.34950	0.39203	0.42028	0.39971	0.40734	0.39161	6.419	
60 Isopropyl Benzene	2.84941	2.44527	2.70996	2.66892	2.46984	2.66240	2.20389	2.05866	2.50854	10.727	
61 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
63 Bromobenzene	0.74323	0.63970	0.65245	0.62106	0.62112	0.69938	0.64590	0.67219	0.66188	6.332	
64 N-Propyl Benzene	3.61873	2.96868	3.27739	3.23866	2.87644	3.04990	2.45529	2.30083	2.97324	14.579	
65 1,1,2,2-Tetrachloroethane	0.67581	0.60472	0.63261	0.58405	0.65760	0.69915	0.68101	0.69890	0.65423	6.600	
66 2-Chloro Toluene	2.18467	1.81707	1.94914	1.90504	1.79643	2.00730	1.73282	1.67643	1.88361	8.709	
67 1,3,5-Trimethyl Benzene	2.40295	2.04232	2.25252	2.21593	2.06740	2.29880	1.93785	1.85296	2.13384	8.866	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/SampleInfo/VO121012S.m
Cal Date : 12-Jun-2013 11:30 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	0.20102	0.19256	0.19669	0.17755	0.19756	0.21011		
	0.20198	0.20682					0.19804	5.046
69 Trans-1,4-Dichloro 2-Butene	0.24824	0.21873	0.22791	0.21876	0.25053	0.25905		
	0.25225	0.26816					0.24295	7.724
70 4-Chloro Toluene	2.17384	1.90575	2.03097	1.98777	1.85226	2.07365		
	1.80914	1.77610					1.95119	7.116
71 T-Butyl Benzene	2.03180	1.75870	1.96374	1.91864	1.81318	2.05766		
	1.76631	1.70579					1.87698	7.134
72 1,2,4-Trimethylbenzene	2.36987	1.99922	2.23465	2.17477	2.04821	2.25121		
	1.89821	1.81013					2.09828	9.131
73 S-Butyl Benzene	3.21468	2.74086	2.98397	2.94687	2.63870	2.84729		
	2.32191	2.14813					2.73030	12.940
74 4-Isopropyl Toluene	2.52535	2.17046	2.41045	2.40177	2.17215	2.39750		
	1.98160	1.86263					2.24024	10.401
75 1,3-Dichlorobenzene	1.49701	1.21723	1.23863	1.21345	1.13507	1.27949		
	1.12168	1.11455					1.22714	10.134
77 1,4-Dichlorobenzene	1.52552	1.25478	1.29725	1.23323	1.15327	1.30543		
	1.16569	1.18318					1.26479	9.483

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/SampleInfo/VO121012S.m
Cal Date : 12-Jun-2013 11:30 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	2.43566	2.05045	2.26049	2.32535	2.04956	2.33910		
	1.93032	1.85789					2.15610	9.817
80 1,2-Dichlorobenzene	1.42557	1.20884	1.22026	1.13860	1.10054	1.21217		
	1.10537	1.13701					1.19355	8.831
81 1,2-Dibromo 3-Chloropropane	0.12813	0.12901	0.11891	0.11326	0.12558	0.13123		
	0.13185	0.13547					0.12668	5.768
82 Hexachloro 1,3-Butadiene	0.62919	0.49029	0.53115	0.52593	0.46575	0.55951		
	0.50651	0.52885					0.52965	9.300
83 1,2,4-Trichlorobenzene	0.95414	0.79730	0.82711	0.83075	0.79062	0.92135		
	0.85622	0.90765					0.86064	7.025
84 Naphthalene	1.91743	1.97489	1.99429	1.70589	1.94573	1.98514		
	1.83301	1.75554					1.88899	5.875
85 1,2,3-Trichlorobenzene	0.90772	0.83779	0.83846	0.77253	0.76725	0.84919		
	0.81976	0.86234					0.83188	5.547
$ 27 Dibromofluoromethane	1.42080	1.43437	1.43045	1.43975	1.44083	1.45670		
	1.42720	1.42333					1.43418	0.809
$ 32 d4-1,2-Dichloroethane	1.33180	1.36151	1.34153	1.34491	1.34985	1.37034		
	1.31374	1.30630					1.34000	1.645

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 11-JUN-2013 08:33
End Cal Date : 11-JUN-2013 12:45
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/11JUN13.b/SampleInfo/V0121012S.m
Cal Date : 12-Jun-2013 11:30 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	1.46932	1.47340	1.47407	1.47279	1.46793	1.46461		
	1.44670	1.45242					1.46515	0.699
$ 62 4-Bromofluorobenzene	0.54277	0.54434	0.54763	0.54387	0.54537	0.54739		
	0.54962	0.54333					0.54554	0.445
$ 79 d4-1,2-Dichlorobenzene	1.03331	1.03074	1.01817	1.03518	1.00949	1.01335		
	0.99631	1.01225					1.01860	1.331

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt5.i/11JUN13.b

ARI Job No.: BFB0 Method: bfb8260.m Instrument: nt5.i Date: 11-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0810	bfb0611a.d	BFB0611	BFB0611	1	NO MANUAL INTEGRATION
0833	0010611.d	IC0611	VSTD1	1	Chloromethane, Acrolein, Acetone, Acrylonitrile, 1,2,3-Trichloropropane, Trans-1,4-Dichloro 2-Butene,
0857	2000611.d	IC0611	VSTD200	1	Chloromethane, Vinyl Acetate, 2-Butanone,
0921	1500611.d	IC0611	VSTD150	1	Chloromethane,
1009	0500611.d	IC0611	VSTD50	1	Chloromethane, Acetone,
1057	0050611.d	IC0611	VSTD5	1	Chloromethane, Acetone,
1120	0020611.d	IC0611	VSTD2	1	Chloromethane, Acetone, 1,2,3-Trichloropropane,
1221	0100611.d	IC0611	VSTD10	1	Chloromethane,
1245	1000611.d	IC0611	VSTD100	1	Chloromethane, Acetone,
1404	icv0611.d	ICV0611	ICV0611	1	Chloromethane, Acetone,

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Batch File: /chem1/nt5.i/11JUN13.b
Inst ID: nt5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	0010611	2000611	1500611	0500611	0050611	0020611	0100611	1000611
INJ.DATE:	11-JUN-2013	11-JUN-2013	11-JUN-2013	11-JUN-2013	11-JUN-2013	11-JUN-2013	11-JUN-2013	11-JUN-2013
INJ.TIME:	08:33	08:57	09:21	10:09	10:57	11:20	12:21	12:45

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Dichlorodifluoromethan	1.057	1.029	1.051	1.029	1.028	1.057	1.040	1.051	1.029	0.935-1.122	1.043	0.013
2 Chloromethane	1.176	1.317	1.345	1.153	1.334	1.334	1.153	1.357	1.153	1.060-1.246	1.271	0.092
3 Vinyl Chloride	1.227	1.198	1.227	1.198	1.204	1.226	1.204	1.221	1.198	1.105-1.291	1.213	0.013
4 Bromomethane	1.430	1.402	1.430	1.408	1.407	1.436	1.413	1.430	1.408	1.314-1.501	1.420	0.013
5 Chloroethane	1.526	1.492	1.515	1.492	1.492	1.526	1.498	1.515	1.492	1.399-1.586	1.507	0.015
6 Trichlorofluoromethane	1.611	1.577	1.611	1.589	1.588	1.611	1.594	1.606	1.589	1.495-1.682	1.598	0.013
7 1,1-Dichloroethene	1.968	1.939	1.968	1.951	1.950	1.973	1.951	1.968	1.951	1.857-2.044	1.958	0.012
8 Carbon Disulfide	1.973	1.939	1.968	1.951	1.950	1.979	1.956	1.973	1.951	1.857-2.044	1.961	0.014
9 112Trichloro122Trifluo	2.019	1.985	2.013	1.990	1.990	2.018	1.996	2.013	1.990	1.897-2.083	2.003	0.014
10 Iodomethane	2.075	2.041	2.069	2.053	2.047	2.075	2.052	2.069	2.053	1.959-2.146	2.060	0.013
11 Bromoethane	2.177	2.137	2.166	2.149	2.143	2.171	2.149	2.166	2.149	2.055-2.242	2.157	0.015
12 Acrolein	2.279	2.245	2.279	2.267	2.256	2.284	2.256	2.290	2.267	2.174-2.361	2.269	0.016
13 Methylene Chloride	2.443	2.409	2.437	2.426	2.420	2.448	2.426	2.443	2.426	2.333-2.519	2.431	0.014
14 Acetone	2.630	2.601	2.635	2.697	2.590	2.641	2.578	2.663	2.697	2.604-2.791	2.629	0.039
15 Trans-1,2-Dichloroethe	2.590	2.545	2.573	2.562	2.556	2.584	2.567	2.579	2.562	2.468-2.655	2.569	0.015
16 Methyl tert butyl ethe	2.754	2.720	2.748	2.726	2.737	2.759	2.737	2.748	2.726	2.632-2.819	2.741	0.014
17 1,1-Dichloroethane	3.207	3.144	3.173	3.173	3.172	3.206	3.184	3.184	3.173	3.079-3.266	3.180	0.020

Reviewer 1 _____ Date: 6/12/13
Reviewer 2 _____ Date: 6/12/13

5959 10 Sep

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Batch File: /chem1/nt5.i/11JUN13.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	3.286	3.320	3.308	3.297	3.314	3.286	3.320	3.308	3.215-3.401	3.304	0.014
	19 Vinyl Acetate	3.535	3.518	3.529	3.518	3.517	3.534	3.518	3.529	3.518	3.424-3.611	3.525	0.008
	20 Cis-1,2-Dichloroethene	3.744	3.699	3.727	3.721	3.721	3.744	3.727	3.733	3.721	3.628-3.814	3.727	0.014
	21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.560	4.467-4.653	+++++	+++++
	22 2,2-Dichloropropane	3.834	3.795	3.817	3.817	3.817	3.840	3.823	3.829	3.817	3.724-3.911	3.822	0.014
	23 Bromochloromethane	3.925	3.891	3.914	3.908	3.908	3.925	3.914	3.919	3.908	3.815-4.001	3.913	0.011
	24 Chloroform	4.027	3.998	4.021	4.010	4.010	4.027	4.015	4.021	4.010	3.917-4.103	4.016	0.010
	25 Carbon Tetrachloride	4.117	4.072	4.095	4.095	4.094	4.117	4.106	4.100	4.095	3.992-4.197	4.099	0.015
	26 1,1,1-Trichloroethane	4.185	4.146	4.168	4.168	4.168	4.185	4.174	4.174	4.168	4.075-4.261	4.171	0.012
$	27 Dibromofluoromethane	4.196	4.174	4.191	4.180	4.179	4.196	4.179	4.191	4.180	4.086-4.273	4.186	0.009
	28 1,1-Dichloropropene	4.304	4.270	4.287	4.287	4.287	4.304	4.293	4.293	4.287	4.185-4.389	4.290	0.011
	29 2-Butanone	4.389	4.423	4.428	4.406	4.389	4.389	4.366	4.423	4.406	4.313-4.499	4.401	0.022
	30 Benzene	4.530	4.508	4.519	4.519	4.513	4.530	4.519	4.524	4.519	4.417-4.621	4.520	0.008
*	31 Pentafluorobenzene	4.672	4.649	4.660	4.660	4.654	4.671	4.660	4.666	4.660	4.567-4.754	4.662	0.008
$	32 d4-1,2-Dichloroethane	4.660	4.643	4.655	4.649	4.649	4.660	4.649	4.660	4.649	4.556-4.742	4.653	0.007
	33 1,2-Dichloroethane	4.723	4.706	4.723	4.711	4.711	4.722	4.711	4.722	4.711	4.609-4.813	4.716	0.007
	34 Trichloroethene	5.062	5.045	5.056	5.056	5.056	5.067	5.056	5.062	5.056	4.954-5.158	5.058	0.007
*	35 1,4-Difluorobenzene	5.119	5.102	5.113	5.107	5.107	5.118	5.113	5.113	5.107	5.005-5.209	5.111	0.006
	36 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.693	5.591-5.795	+++++	+++++
	37 Dibromomethane	5.418	5.407	5.418	5.413	5.407	5.418	5.407	5.418	5.413	5.311-5.515	5.413	0.006
	38 1,2-Dichloropropane	5.515	5.503	5.514	5.503	5.503	5.514	5.503	5.514	5.503	5.401-5.605	5.509	0.006
	39 Bromodichloromethane	5.588	5.582	5.588	5.582	5.582	5.588	5.582	5.588	5.582	5.480-5.685	5.585	0.003

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Batch File: /chem1/nt5.i/11JUN13.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	6.120	6.125	6.120	6.114	6.120	6.114	6.125	6.120	6.018-6.222	6.120	0.004
	41 Cis 1,3-dichloropropen	6.137	6.131	6.137	6.131	6.125	6.137	6.131	6.137	6.131	6.029-6.233	6.133	0.004
$	42 d8-Toluene	6.290	6.284	6.289	6.284	6.284	6.289	6.289	6.289	6.284	6.182-6.386	6.287	0.003
	43 Toluene	6.335	6.329	6.335	6.329	6.329	6.335	6.329	6.335	6.329	6.227-6.431	6.332	0.003
	44 Tetrachloroethene	6.640	6.640	6.646	6.640	6.640	6.646	6.640	6.646	6.640	6.488-6.792	6.642	0.003
	45 4-Methyl-2-Pentanone	6.697	6.719	6.719	6.702	6.697	6.697	6.691	6.708	6.702	6.600-6.805	6.704	0.011
	46 Trans 1,3-Dichloroprop	6.697	6.697	6.702	6.697	6.691	6.697	6.691	6.697	6.697	6.595-6.799	6.696	0.004
	47 1,1,2-Trichloroethane	6.821	6.833	6.833	6.821	6.821	6.827	6.821	6.832	6.821	6.719-6.923	6.826	0.006
	48 Chlorodibromomethane	6.963	6.963	6.968	6.957	6.957	6.962	6.957	6.963	6.957	6.805-7.109	6.961	0.004
	49 1,3-Dichloropropane	7.042	7.048	7.053	7.042	7.042	7.042	7.042	7.047	7.042	6.890-7.194	7.045	0.004
	50 1,2-Dibromoethane	7.138	7.144	7.144	7.138	7.132	7.138	7.138	7.144	7.138	7.036-7.240	7.139	0.004
	51 2-Hexanone	7.410	7.427	7.427	7.415	7.409	7.409	7.404	7.421	7.415	7.263-7.567	7.415	0.009
*	52 d5-Chlorobenzene	7.591	7.596	7.596	7.591	7.590	7.596	7.590	7.596	7.591	7.439-7.742	7.593	0.003
	53 Chlorobenzene	7.608	7.613	7.613	7.608	7.602	7.607	7.607	7.613	7.608	7.456-7.759	7.609	0.004
	54 Ethyl Benzene	7.658	7.670	7.670	7.659	7.653	7.658	7.653	7.664	7.659	7.507-7.810	7.661	0.007
	55 1,1,1,2-Tetrachloroeth	7.670	7.687	7.687	7.675	7.670	7.675	7.670	7.681	7.675	7.524-7.827	7.677	0.007
	56 m,p-xylene	7.789	7.806	7.800	7.789	7.788	7.788	7.788	7.800	7.789	7.637-7.940	7.793	0.007
	57 o-Xylene	8.151	8.162	8.162	8.151	8.150	8.150	8.151	8.156	8.151	7.999-8.302	8.154	0.005
	58 Styrene	8.202	8.213	8.207	8.202	8.196	8.201	8.201	8.207	8.202	8.050-8.353	8.204	0.005
	59 Bromoform	8.196	8.202	8.201	8.196	8.190	8.190	8.190	8.201	8.196	8.002-8.389	8.196	0.005
	60 Isopropyl Benzene	8.439	8.450	8.445	8.439	8.439	8.439	8.439	8.445	8.439	8.246-8.632	8.442	0.004
	61 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.568	8.416-8.720	+++++	+++++
$	62 4-Bromofluorobenzene	8.660	8.665	8.665	8.660	8.660	8.660	8.665	8.665	8.660	8.508-8.812	8.662	0.003
	63 Bromobenzene	8.739	8.745	8.745	8.739	8.739	8.739	8.739	8.745	8.739	8.546-8.932	8.741	0.003

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Batch File: /chem1/nt5.i/11JUN13.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	8.807	8.807	8.807	8.807	8.812	8.807	8.614-9.000	8.810	0.005
	65 1,1,2,2-Tetrachloroeth	8.869	8.897	8.886	8.869	8.869	8.869	8.869	8.875	8.869	8.676-9.062	8.875	0.011
	66 2-Chloro Toluene	8.920	8.931	8.926	8.920	8.914	8.920	8.920	8.926	8.920	8.727-9.113	8.922	0.005
	67 1,3,5-Trimethyl Benzen	8.999	9.016	9.010	8.999	8.993	8.993	8.999	9.005	8.999	8.806-9.192	9.002	0.008
	68 1,2,3-Trichloropropane	8.965	8.982	8.976	8.971	8.965	8.971	8.965	8.971	8.971	8.778-9.164	8.971	0.006
	69 Trans-1,4-Dichloro 2-B	9.022	9.039	9.039	9.027	9.022	9.022	9.022	9.033	9.027	8.834-9.221	9.028	0.008
	70 4-Chloro Toluene	9.067	9.084	9.078	9.073	9.067	9.067	9.073	9.078	9.073	8.879-9.266	9.073	0.006
	71 T-Butyl Benzene	9.271	9.282	9.282	9.271	9.270	9.270	9.271	9.276	9.271	9.077-9.464	9.274	0.005
	72 1,2,4-Trimethylbenzene	9.339	9.350	9.350	9.339	9.338	9.338	9.338	9.344	9.339	9.145-9.532	9.342	0.005
	73 S-Butyl Benzene	9.435	9.452	9.446	9.435	9.435	9.435	9.435	9.440	9.435	9.241-9.628	9.439	0.007
	74 4-Isopropyl Toluene	9.582	9.599	9.593	9.582	9.582	9.582	9.582	9.587	9.582	9.388-9.775	9.586	0.007
	75 1,3-Dichlorobenzene	9.593	9.610	9.604	9.593	9.593	9.593	9.593	9.604	9.593	9.400-9.786	9.598	0.007
*	76 d4-1,4-Dichlorobenzene	9.667	9.678	9.678	9.667	9.666	9.666	9.672	9.672	9.667	9.473-9.860	9.671	0.005
	77 1,4-Dichlorobenzene	9.678	9.695	9.695	9.684	9.678	9.678	9.684	9.689	9.684	9.490-9.877	9.685	0.007
	78 N-Butyl Benzene	9.966	9.983	9.978	9.967	9.966	9.966	9.972	9.972	9.967	9.773-10.160	9.971	0.006
$	79 d4-1,2-Dichlorobenzene	10.051	10.063	10.063	10.051	10.051	10.051	10.057	10.057	10.051	9.858-10.245	10.056	0.005
	80 1,2-Dichlorobenzene	10.063	10.074	10.068	10.063	10.057	10.057	10.063	10.068	10.063	9.869-10.256	10.064	0.006
	81 1,2-Dibromo 3-Chloropr	10.815	10.826	10.821	10.809	10.809	10.809	10.815	10.815	10.809	10.616-11.003	10.815	0.006
	82 Hexachloro 1,3-Butadie	11.494	11.505	11.499	11.488	11.488	11.488	11.505	11.494	11.488	11.295-11.682	11.495	0.007
	83 1,2,4-Trichlorobenzene	11.483	11.494	11.488	11.477	11.477	11.477	11.488	11.482	11.477	11.283-11.670	11.483	0.006
	84 Naphthalene	11.799	11.805	11.799	11.794	11.788	11.788	11.805	11.794	11.794	11.600-11.987	11.796	0.007
	85 1,2,3-Trichlorobenzene	11.980	11.992	11.986	11.975	11.969	11.969	11.986	11.980	11.975	11.781-12.168	11.980	0.008

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13.b/0010611.d
Lab Smp Id: IC0611 Client Smp ID: VSTD1
Inj Date : 11-JUN-2013 08:33
Operator : PB Inst ID: nt5.i
Smp Info : IC0611,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/11JUN13.b/VO121012S.m
Meth Date : 12-Jun-2013 11:33 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 08:33 Cal File: 0010611.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	1.057	1.029	(0.226)	10754	1.00000	1.308
2 Chloromethane	50	1.176	1.153	(0.252)	19967	1.00000	1.220(M)
3 Vinyl Chloride	62	1.227	1.198	(0.263)	18538	1.00000	1.171
4 Bromomethane	94	1.430	1.408	(0.306)	10334	1.00000	1.303
5 Chloroethane	64	1.526	1.492	(0.327)	11646	1.00000	1.235
6 Trichlorofluoromethane	101	1.611	1.589	(0.345)	19214	1.00000	1.168
7 1,1-Dichloroethene	96	1.968	1.951	(0.421)	13287	1.00000	1.196
8 Carbon Disulfide	76	1.973	1.951	(0.422)	42477	1.00000	1.177(T)
9 112Trichloro122Trifluoroethane	101	2.019	1.990	(0.432)	10873	1.00000	1.112
10 Iodomethane	142	2.075	2.053	(0.444)	8399	1.00000	0.8527
11 Bromoethane	108	2.177	2.149	(0.466)	8161	1.00000	1.196
12 Acrolein	56	2.279	2.267	(0.488)	13873	5.00000	5.920(M)
13 Methylene Chloride	84	2.443	2.426	(0.523)	32771	1.00000	3.251
14 Acetone	43	2.630	2.697	(0.563)	24600	5.00000	6.467(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	2.562	(0.554)	14049	1.00000	1.320
	16 Methyl tert butyl ether	73	2.754	2.726	(0.590)	39376	1.00000	1.279
	17 1,1-Dichloroethane	63	3.207	3.173	(0.686)	28266	1.00000	1.224
	18 Acrylonitrile	53	3.303	3.308	(0.707)	5710	1.00000	1.146(M)
	19 Vinyl Acetate	43	3.535	3.518	(0.757)	32759	1.00000	1.038
	20 Cis-1,2-Dichloroethene	96	3.744	3.721	(0.801)	14817	1.00000	1.099
	22 2,2-Dichloropropane	77	3.834	3.817	(0.821)	22855	1.00000	1.190
	23 Bromochloromethane	128	3.925	3.908	(0.840)	6579	1.00000	1.090
	24 Chloroform	83	4.027	4.010	(0.862)	24850	1.00000	1.149
	25 Carbon Tetrachloride	117	4.117	4.095	(0.804)	18362	1.00000	1.126
$	27 Dibromofluoromethane	111	4.196	4.180	(0.898)	658677	50.0000	49.534
	26 1,1,1-Trichloroethane	97	4.185	4.168	(0.896)	21263	1.00000	1.094
	28 1,1-Dichloropropene	75	4.304	4.287	(0.841)	20928	1.00000	1.095
	29 2-Butanone	72	4.389	4.406	(0.939)	7843	5.00000	5.012
	30 Benzene	78	4.530	4.519	(0.885)	62768	1.00000	1.169
*	31 Pentafluorobenzene	168	4.672	4.660	(1.000)	463596	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.649	(0.998)	617416	50.0000	49.694
	33 1,2-Dichloroethane	62	4.723	4.711	(0.923)	19281	1.00000	1.138
	34 Trichloroethene	95	5.062	5.056	(0.989)	14117	1.00000	1.077
*	35 1,4-Difluorobenzene	114	5.119	5.107	(1.000)	1698223	50.0000	
	37 Dibromomethane	93	5.418	5.413	(1.059)	7456	1.00000	1.056
	38 1,2-Dichloropropane	63	5.515	5.503	(1.077)	16754	1.00000	1.100
	39 Bromodichloromethane	83	5.588	5.582	(1.092)	18203	1.00000	1.106
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.120	(1.196)	6739	1.00000	0.8423
	41 Cis 1,3-dichloropropene	75	6.137	6.131	(1.199)	23211	1.00000	1.084
$	42 d8-Toluene	98	6.290	6.284	(1.229)	2495230	50.0000	50.142
	43 Toluene	92	6.335	6.329	(1.238)	41019	1.00000	1.200
	44 Tetrachloroethene	166	6.640	6.640	(0.875)	15490	1.00000	1.113
	45 4-Methyl-2-Pentanone	58	6.697	6.702	(1.308)	28825	5.00000	4.805
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.308)	20165	1.00000	1.060
	47 1,1,2-Trichloroethane	97	6.821	6.821	(1.333)	10933	1.00000	1.023
	48 Chlorodibromomethane	129	6.963	6.957	(0.917)	12875	1.00000	1.072
	49 1,3-Dichloropropane	76	7.042	7.042	(0.928)	20874	1.00000	1.053
	50 1,2-Dibromoethane	107	7.138	7.138	(1.395)	11252	1.00000	1.075
	51 2-Hexanone	43	7.410	7.415	(0.976)	47742	5.00000	4.673
*	52 d5-Chlorobenzene	117	7.591	7.591	(1.000)	2010959	50.0000	
	53 Chlorobenzene	112	7.608	7.608	(1.002)	39594	1.00000	1.157
	54 Ethyl Benzene	91	7.658	7.659	(1.009)	70497	1.00000	1.201
	55 1,1,1,2-Tetrachloroethane	131	7.670	7.675	(1.010)	13727	1.00000	1.126
	56 m,p-xylene	106	7.789	7.789	(1.026)	52332	2.00000	2.340
	57 o-Xylene	106	8.151	8.151	(1.074)	23511	1.00000	1.057
	58 Styrene	104	8.202	8.202	(1.080)	37169	1.00000	1.032
	59 Bromoform	173	8.196	8.196	(0.848)	8926	1.00000	1.064
	60 Isopropyl Benzene	105	8.439	8.439	(0.873)	61065	1.00000	1.136
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.141)	1091488	50.0000	49.746
	63 Bromobenzene	156	8.739	8.739	(0.904)	15928	1.00000	1.123
	64 N-Propyl Benzene	91	8.807	8.807	(0.911)	77552	1.00000	1.217

	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)	14483	1.00000	1.033
66	2-Chloro Toluene	91	8.920	8.920	(0.923)	46819	1.00000	1.160
67	1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.931)	51497	1.00000	1.126
68	1,2,3-Trichloropropane	110	8.965	8.971	(0.927)	4308	1.00000	1.015(TM)
69	Trans-1,4-Dichloro 2-Butene	53	9.022	9.027	(0.933)	5320	1.00000	1.022(M)
70	4-Chloro Toluene	91	9.067	9.073	(0.938)	46587	1.00000	1.114
71	T-Butyl Benzene	119	9.271	9.271	(0.959)	43543	1.00000	1.082
72	1,2,4-Trimethylbenzene	105	9.339	9.339	(0.966)	50788	1.00000	1.129
73	S-Butyl Benzene	105	9.435	9.435	(0.976)	68893	1.00000	1.177
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	54120	1.00000	1.127
75	1,3-Dichlorobenzene	146	9.593	9.593	(0.992)	32082	1.00000	1.220
* 76	d4-1,4-Dichlorobenzene	152	9.667	9.667	(1.000)	1071536	50.0000	
77	1,4-Dichlorobenzene	146	9.678	9.684	(1.001)	32693	1.00000	1.206
78	N-Butyl Benzene	91	9.966	9.967	(1.031)	52198	1.00000	1.130
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1107225	50.0000	50.722
80	1,2-Dichlorobenzene	146	10.063	10.063	(1.041)	30551	1.00000	1.194
81	1,2-Dibromo 3-Chloropropane	75	10.815	10.809	(1.119)	2746	1.00000	1.011
82	Hexachloro 1,3-Butadiene	225	11.494	11.488	(1.189)	13484	1.00000	1.188
83	1,2,4-Trichlorobenzene	180	11.483	11.477	(1.188)	20448	1.00000	1.109
84	Naphthalene	128	11.799	11.794	(1.221)	41092	1.00000	1.015
85	1,2,3-Trichlorobenzene	180	11.980	11.975	(1.239)	19453	1.00000	1.091

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: 0010611.d
Lab Smp Id: IC0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
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	459631	229816	919262	463596	0.86
35 1,4-Difluorobenze	1692431	846216	3384862	1698223	0.34
52 d5-Chlorobenzene	1987215	993608	3974430	2010959	1.19
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1071536	-0.36

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.67	0.24
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.22
52 d5-Chlorobenzene	7.59	7.09	8.09	7.59	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

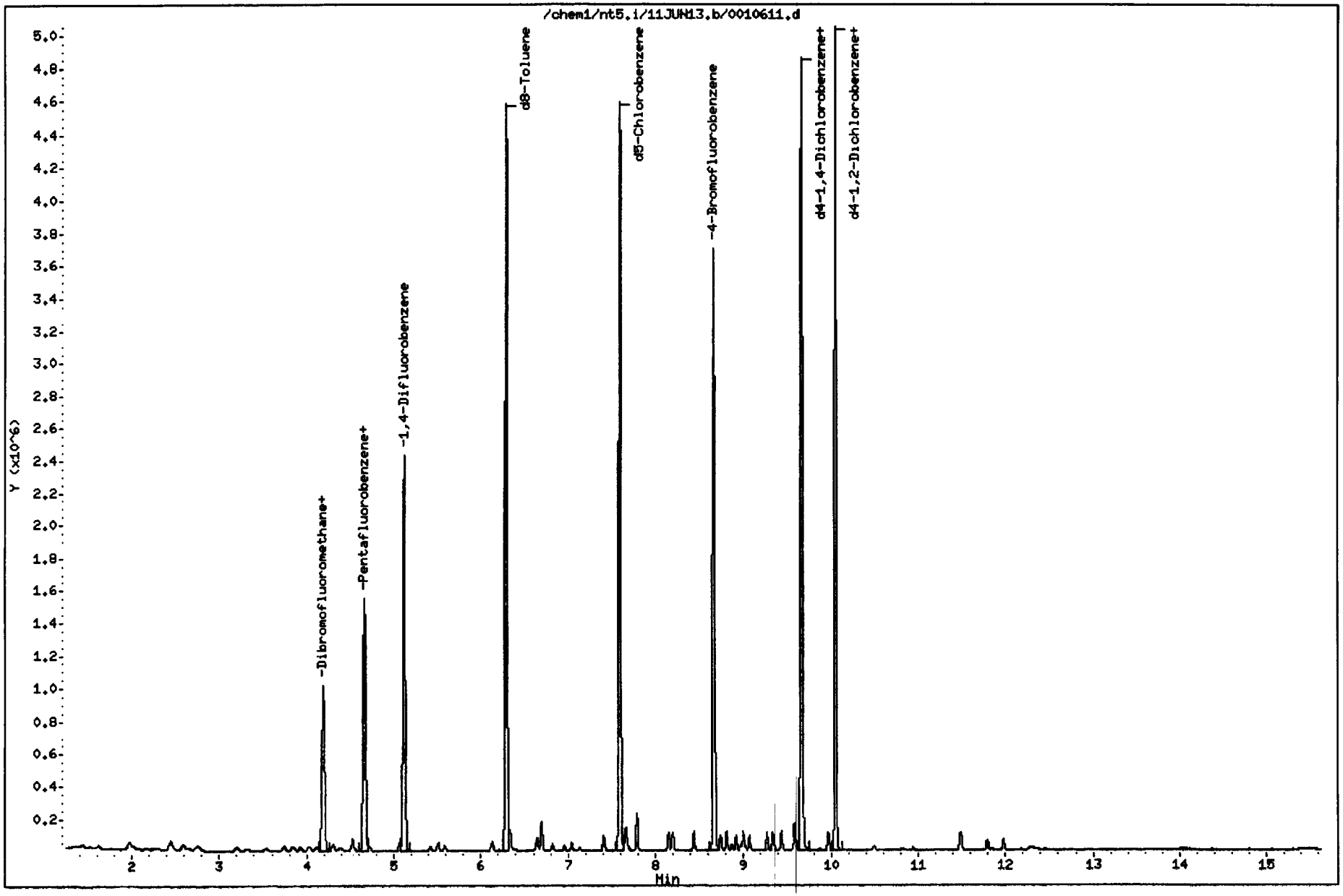
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/11JUN13.b/0010611.d
Date : 11-JUN-2013 08:33
Client ID: VSTD1
Sample Info: IC0611,5,5,0

Instrument: nt5.i

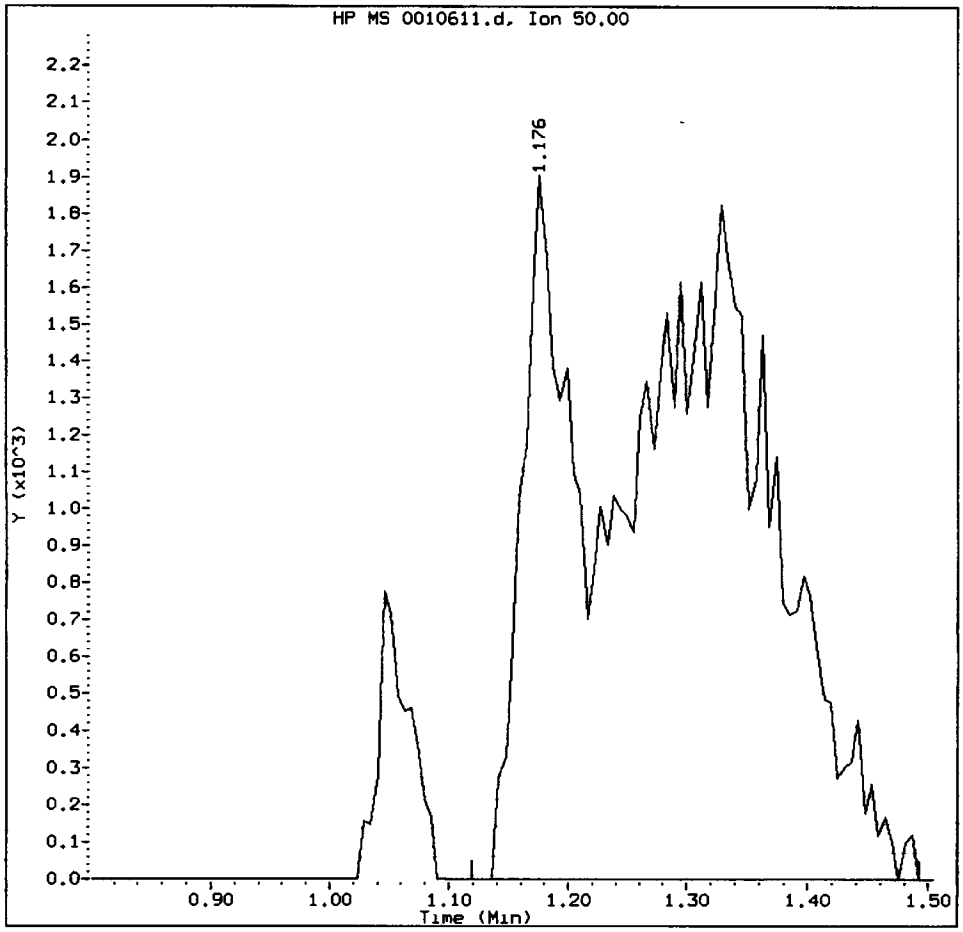
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0611, /chem1/nt5.i/11JUN13.b/0010611.d

Chloromethane Amount: 1.22 Area: 19967



MANUAL INTEGRATION for Chloromethane

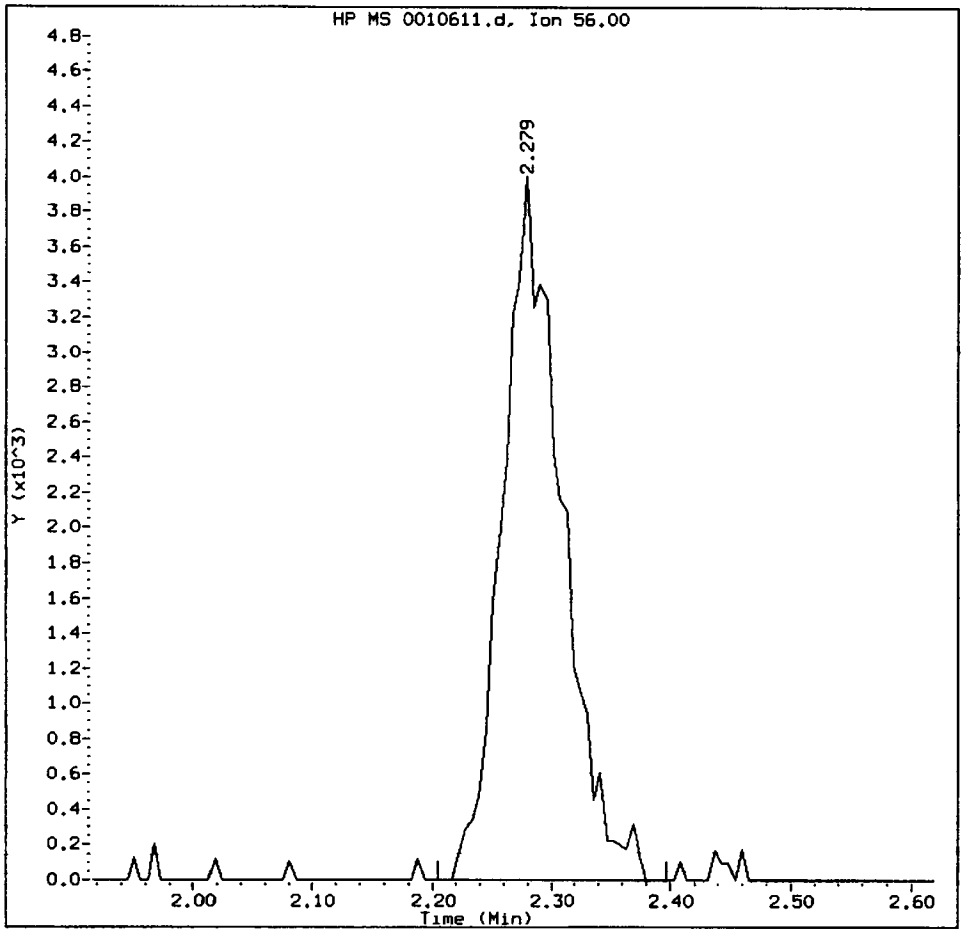
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

IC0611, /chem1/nt5.i/11JUN13.b/0010611.d

Acrolein Amount: 5.92 Area: 13873



MANUAL INTEGRATION for Acrolein

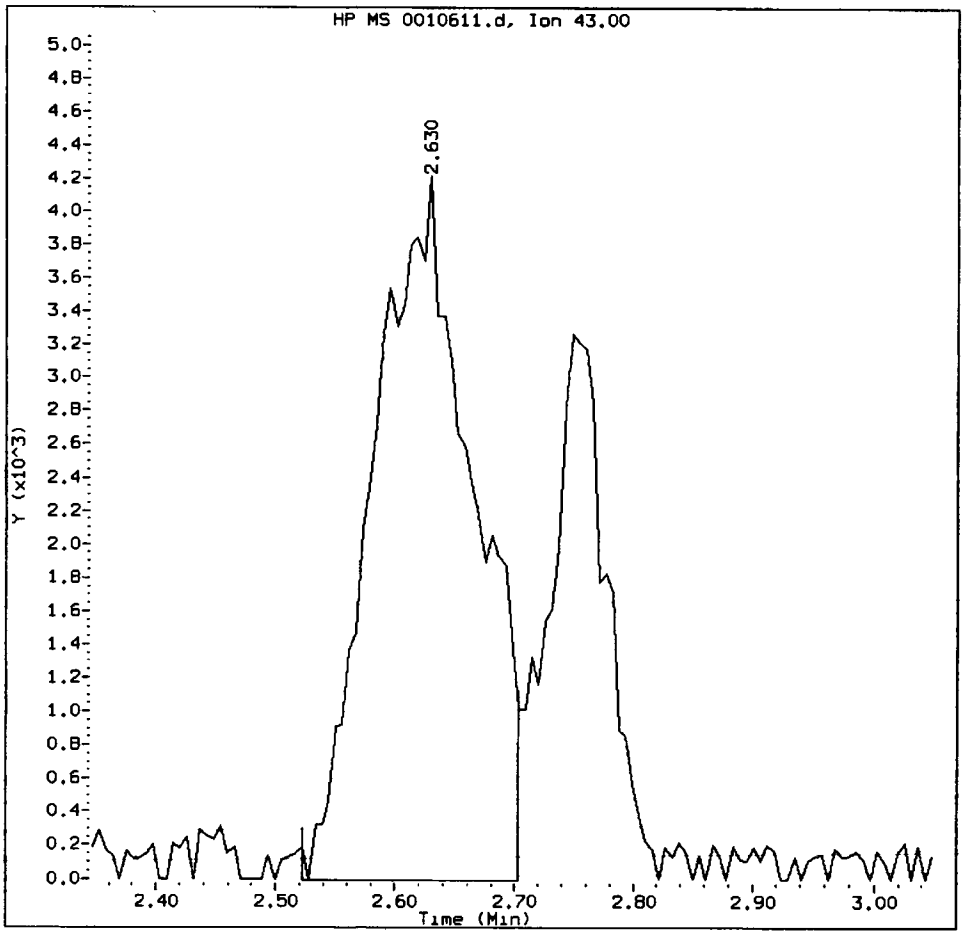
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/12/13

IC0611, /chem1/nt5.i/11JUN13.b/0010611.d

Acetone Amount: 6.47 Area: 24600



MANUAL INTEGRATION for Acetone

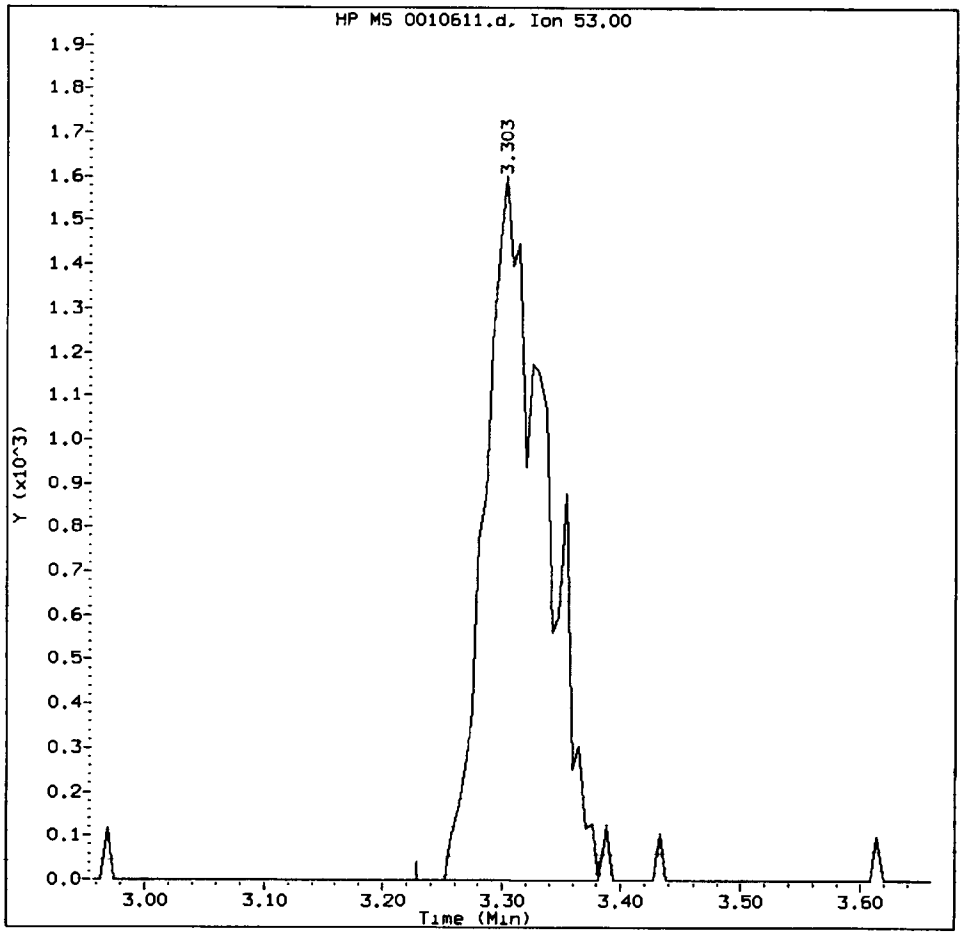
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14/13

IC0611, /chem1/nt5.i/11JUN13.b/0010611.d

Acrylonitrile Amount: 1.15 Area: 5710



MANUAL INTEGRATION for Acrylonitrile

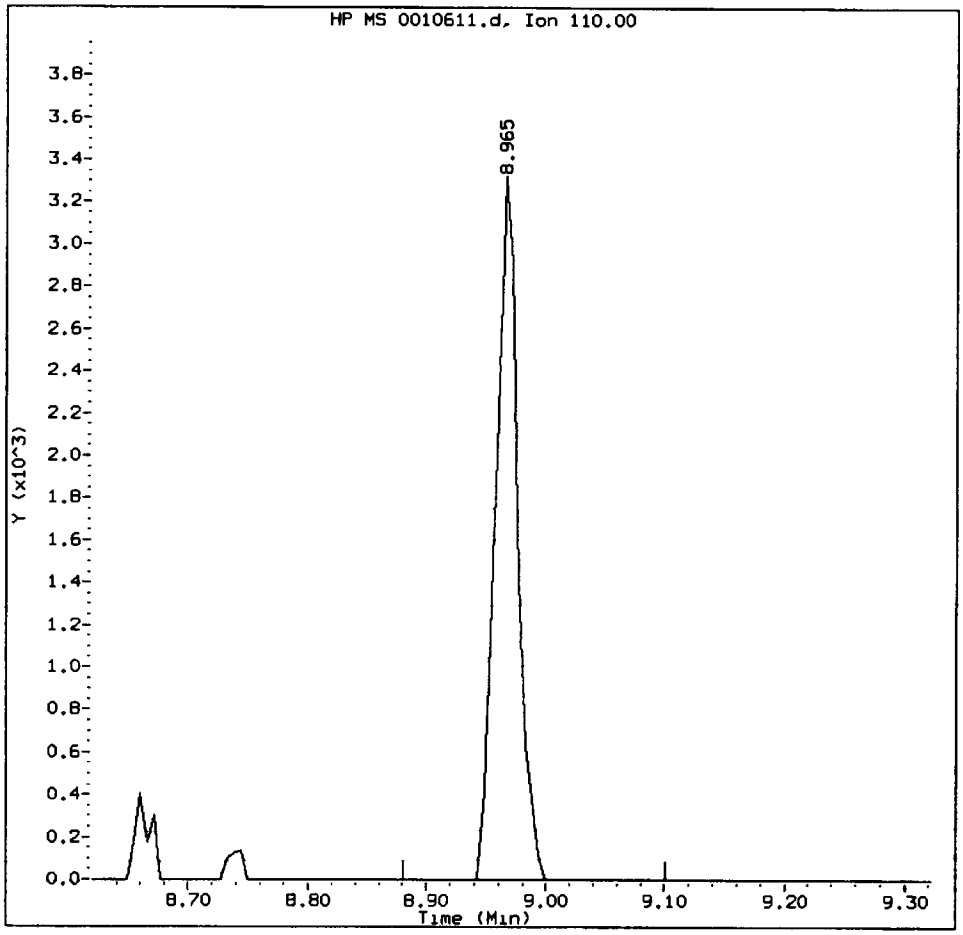
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

IC0611, /chem1/nt5.i/11JUN13.b/0010611.d

1,2,3-Trichloropropane Amount: 1.02 Area: 4308



MANUAL INTEGRATION for 1,2,3-Trichloropropane

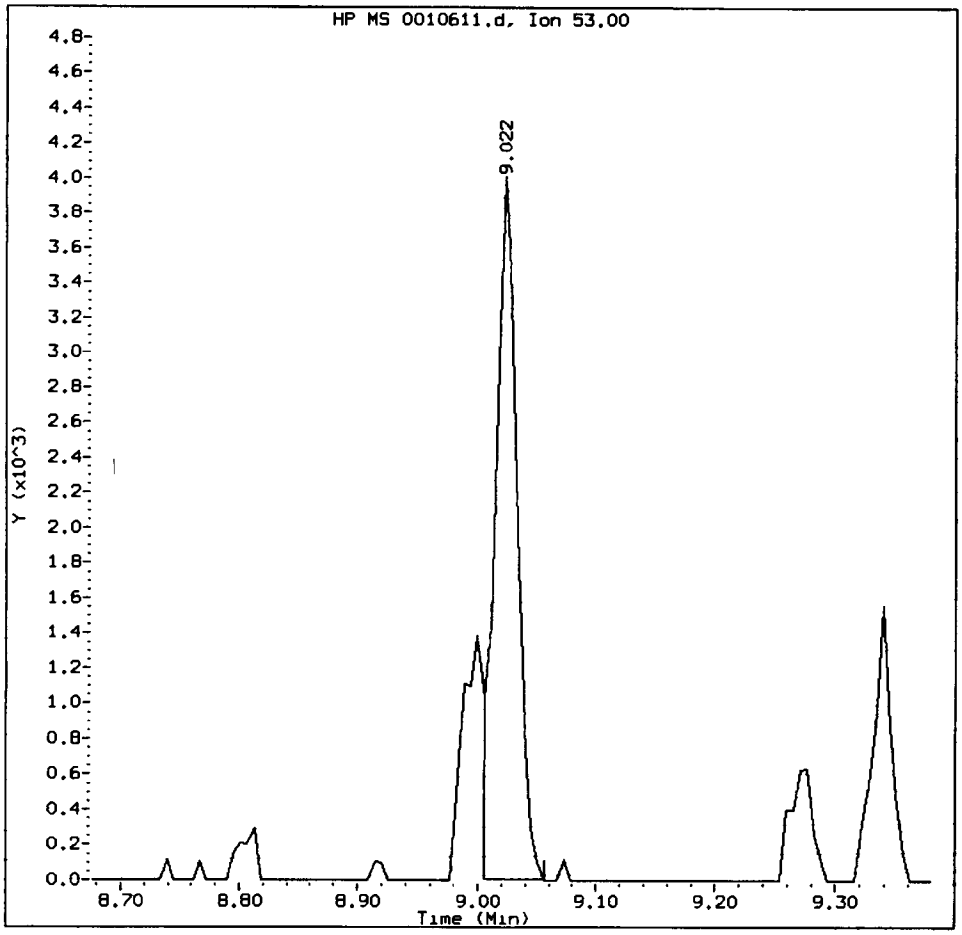
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: [signature] Date: 6/14/

IC0611, /chem1/nt5.i/11JUN13.b/0010611.d

Trans-1,4-Dichloro 2-Butene Amount: 1.02 Area: 5320



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: 6/12/13

CO-ELUTION SUMMARY FOR FILE - 0010611.d

Lab ID: IC0611, Method: VO121012S.m, Instrument: nt5.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13.b/0020611.d
Lab Smp Id: IC0611 Client Smp ID: VSTD2
Inj Date : 11-JUN-2013 11:20
Operator : PB Inst ID: nt5.i
Smp Info : IC0611,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/11JUN13.b/VO121012S.m
Meth Date : 12-Jun-2013 11:33 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 11:20 Cal File: 0020611.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	1.057	1.029	(0.226)	13123	2.00000	1.666
2 Chloromethane	50	1.334	1.153	(0.286)	28639	2.00000	1.826(TM)
3 Vinyl Chloride	62	1.226	1.198	(0.263)	27210	2.00000	1.793
4 Bromomethane	94	1.436	1.408	(0.307)	15458	2.00000	2.033
5 Chloroethane	64	1.526	1.492	(0.327)	18136	2.00000	2.007
6 Trichlorofluoromethane	101	1.611	1.589	(0.345)	28563	2.00000	1.811
7 1,1-Dichloroethene	96	1.973	1.951	(0.422)	19355	2.00000	1.818
8 Carbon Disulfide	76	1.979	1.951	(0.424)	65053	2.00000	1.880(T)
9 112Trichloro122Trifluoroethane	101	2.018	1.990	(0.432)	17337	2.00000	1.850
10 Iodomethane	142	2.075	2.053	(0.444)	11499	2.00000	1.218
11 Bromoethane	108	2.171	2.149	(0.465)	12028	2.00000	1.838
12 Acrolein	56	2.284	2.267	(0.489)	22957	10.0000	10.221
13 Methylene Chloride	84	2.448	2.426	(0.524)	34934	2.00000	3.616
14 Acetone	43	2.641	2.697	(0.565)	37068	10.0000	10.315(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	2.584	2.562	(0.553)	21206	2.00000	2.078
	16 Methyl tert butyl ether	73	2.759	2.726	(0.591)	66466	2.00000	2.252
	17 1,1-Dichloroethane	63	3.206	3.173	(0.686)	46358	2.00000	2.094
	18 Acrylonitrile	53	3.314	3.308	(0.709)	11044	2.00000	2.313
	19 Vinyl Acetate	43	3.534	3.518	(0.757)	59539	2.00000	1.968
	20 Cis-1,2-Dichloroethene	96	3.744	3.721	(0.801)	25264	2.00000	1.956
	22 2,2-Dichloropropane	77	3.840	3.817	(0.822)	33261	2.00000	1.806
	23 Bromochloromethane	128	3.925	3.908	(0.840)	10326	2.00000	1.785
	24 Chloroform	83	4.027	4.010	(0.862)	40008	2.00000	1.930
	25 Carbon Tetrachloride	117	4.117	4.095	(0.804)	28971	2.00000	1.838
$	27 Dibromofluoromethane	111	4.196	4.180	(0.898)	637324	50.0000	50.007
	26 1,1,1-Trichloroethane	97	4.185	4.168	(0.896)	34345	2.00000	1.843
	28 1,1-Dichloropropene	75	4.304	4.287	(0.841)	33668	2.00000	1.822
	29 2-Butanone	72	4.389	4.406	(0.939)	14478	10.0000	9.653
	30 Benzene	78	4.530	4.519	(0.885)	103285	2.00000	1.990
*	31 Pentafluorobenzene	168	4.671	4.660	(1.000)	444324	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.649	(0.998)	604952	50.0000	50.803
	33 1,2-Dichloroethane	62	4.722	4.711	(0.923)	32695	2.00000	1.997
	34 Trichloroethene	95	5.067	5.056	(0.990)	23527	2.00000	1.856
*	35 1,4-Difluorobenzene	114	5.118	5.107	(1.000)	1641355	50.0000	
	37 Dibromomethane	93	5.418	5.413	(1.059)	13175	2.00000	1.931
	38 1,2-Dichloropropane	63	5.514	5.503	(1.077)	28507	2.00000	1.937
	39 Bromodichloromethane	83	5.588	5.582	(1.092)	30345	2.00000	1.907
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.120	(1.196)	13323	2.00000	1.723
	41 Cis 1,3-dichloropropene	75	6.137	6.131	(1.199)	38181	2.00000	1.846
$	42 d8-Toluene	98	6.289	6.284	(1.229)	2418375	50.0000	50.281
	43 Toluene	92	6.335	6.329	(1.238)	66503	2.00000	2.013
	44 Tetrachloroethene	166	6.646	6.640	(0.875)	24100	2.00000	1.776
	45 4-Methyl-2-Pentanone	58	6.697	6.702	(1.308)	57247	10.0000	9.874
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.308)	34645	2.00000	1.884
	47 1,1,2-Trichloroethane	97	6.827	6.821	(1.334)	19763	2.00000	1.913
	48 Chlorodibromomethane	129	6.962	6.957	(0.917)	21521	2.00000	1.839
	49 1,3-Dichloropropane	76	7.042	7.042	(0.927)	37678	2.00000	1.951
	50 1,2-Dibromoethane	107	7.138	7.138	(1.395)	19981	2.00000	1.975
	51 2-Hexanone	43	7.409	7.415	(0.975)	97799	10.0000	9.823
*	52 d5-Chlorobenzene	117	7.596	7.591	(1.000)	1959754	50.0000	
	53 Chlorobenzene	112	7.607	7.608	(1.001)	66369	2.00000	1.990
	54 Ethyl Benzene	91	7.658	7.659	(1.008)	113910	2.00000	1.991
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	22497	2.00000	1.894
	56 m,p-xylene	106	7.788	7.789	(1.025)	84972	4.00000	3.898
	57 o-Xylene	106	8.150	8.151	(1.073)	38974	2.00000	1.798
	58 Styrene	104	8.201	8.202	(1.080)	65817	2.00000	1.875
	59 Bromoform	173	8.190	8.196	(0.847)	15386	2.00000	1.851
	60 Isopropyl Benzene	105	8.439	8.439	(0.873)	103813	2.00000	1.950
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.140)	1066765	50.0000	49.890
	63 Bromobenzene	156	8.739	8.739	(0.904)	27158	2.00000	1.933
	64 N-Propyl Benzene	91	8.807	8.807	(0.911)	126034	2.00000	1.997

	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)	25673	2.00000	1.849
66	2-Chloro Toluene	91	8.920	8.920	(0.923)	77143	2.00000	1.929
67	1,3,5-Trimethyl Benzene	105	8.993	8.999	(0.930)	86706	2.00000	1.914
68	1,2,3-Trichloropropane	110	8.971	8.971	(0.928)	8175	2.00000	1.945 (TM)
69	Trans-1,4-Dichloro 2-Butene	53	9.022	9.027	(0.933)	9286	2.00000	1.801
70	4-Chloro Toluene	91	9.067	9.073	(0.938)	80908	2.00000	1.953
71	T-Butyl Benzene	119	9.270	9.271	(0.959)	74665	2.00000	1.874
72	1,2,4-Trimethylbenzene	105	9.338	9.339	(0.966)	84876	2.00000	1.906
73	S-Butyl Benzene	105	9.435	9.435	(0.976)	116362	2.00000	2.008
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	92146	2.00000	1.938
75	1,3-Dichlorobenzene	146	9.593	9.593	(0.992)	51677	2.00000	1.984
* 76	d4-1,4-Dichlorobenzene	152	9.666	9.667	(1.000)	1061365	50.0000	
77	1,4-Dichlorobenzene	146	9.678	9.684	(1.001)	53271	2.00000	1.984
78	N-Butyl Benzene	91	9.966	9.967	(1.031)	87051	2.00000	1.902
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1093995	50.0000	50.596
80	1,2-Dichlorobenzene	146	10.057	10.063	(1.040)	51321	2.00000	2.026
81	1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	5477	2.00000	2.037
82	Hexachloro 1,3-Butadiene	225	11.488	11.488	(1.188)	20815	2.00000	1.851
83	1,2,4-Trichlorobenzene	180	11.477	11.477	(1.187)	33849	2.00000	1.853
84	Naphthalene	128	11.788	11.794	(1.219)	83843	2.00000	2.091
85	1,2,3-Trichlorobenzene	180	11.969	11.975	(1.238)	35568	2.00000	2.014

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: 0020611.d
Lab Smp Id: IC0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
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	459631	229816	919262	444324	-3.33
35 1,4-Difluorobenze	1692431	846216	3384862	1641355	-3.02
52 d5-Chlorobenzene	1987215	993608	3974430	1959754	-1.38
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1061365	-1.30

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.67	0.24
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.22
52 d5-Chlorobenzene	7.59	7.09	8.09	7.60	0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

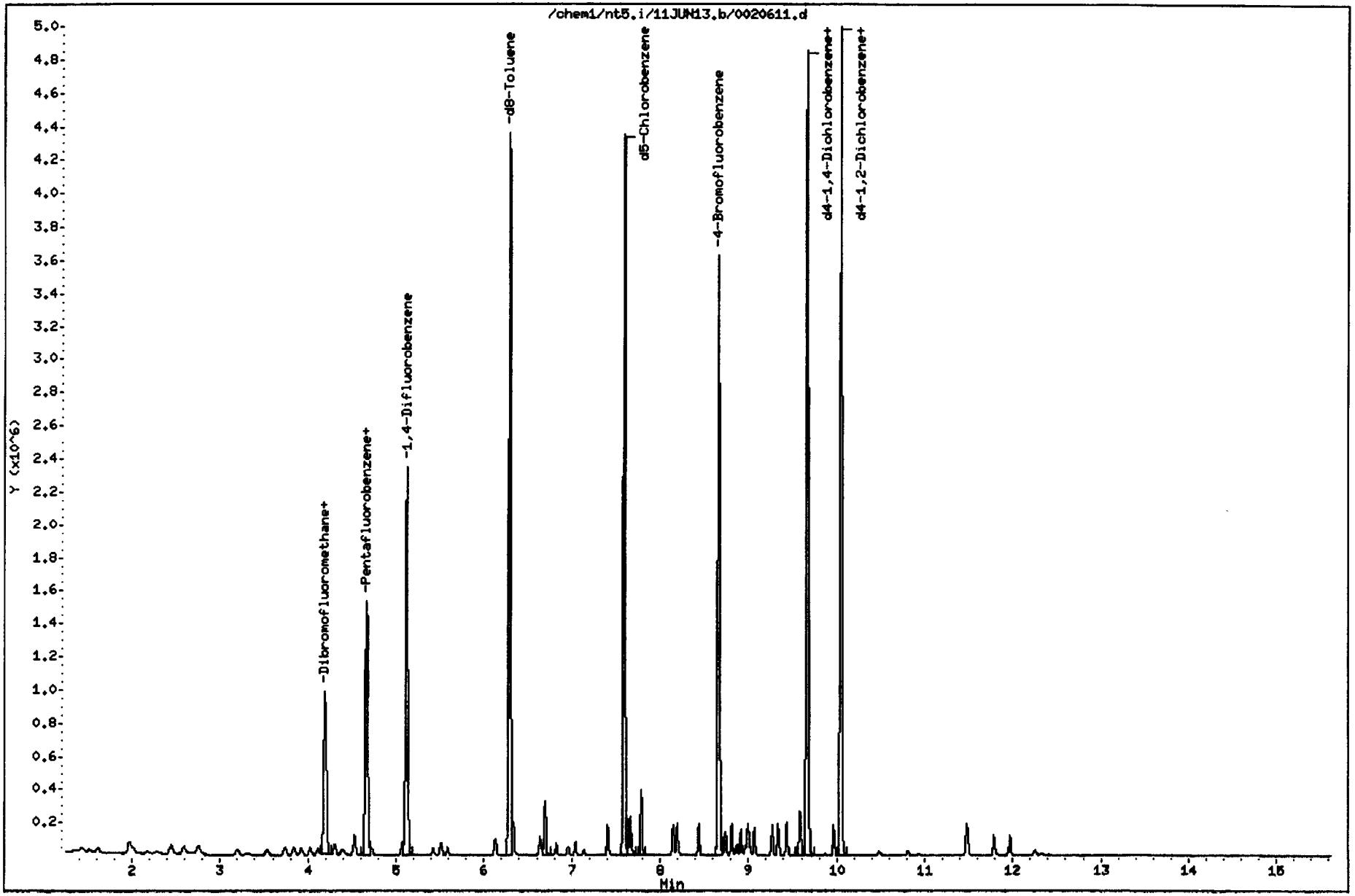
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/11JUN13.b/0020611.d
Date : 11-JUN-2013 11:20
Client ID: VSTD2
Sample Info: IC0611,5,5,0

Instrument: nt5.i

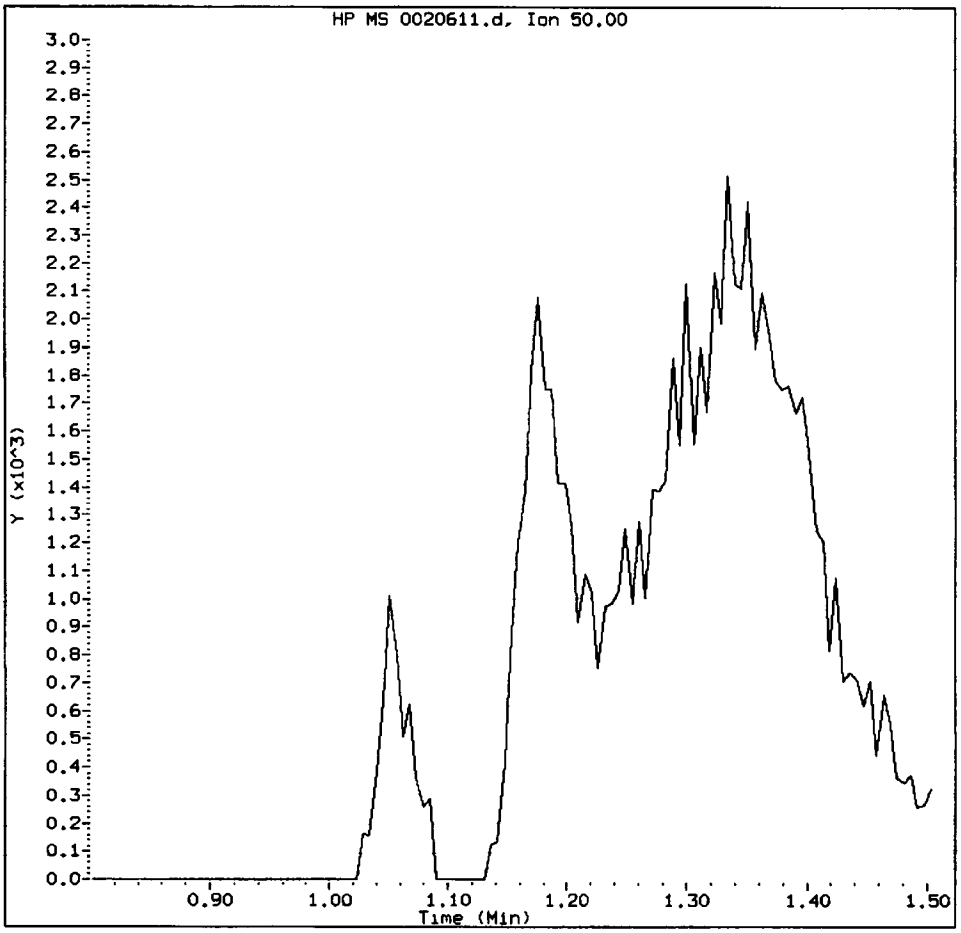
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0611, /chem1/nt5.i/11JUN13.b/0020611.d

Chloromethane Amount: 1.83 Area: 28639



MANUAL INTEGRATION for Chloromethane

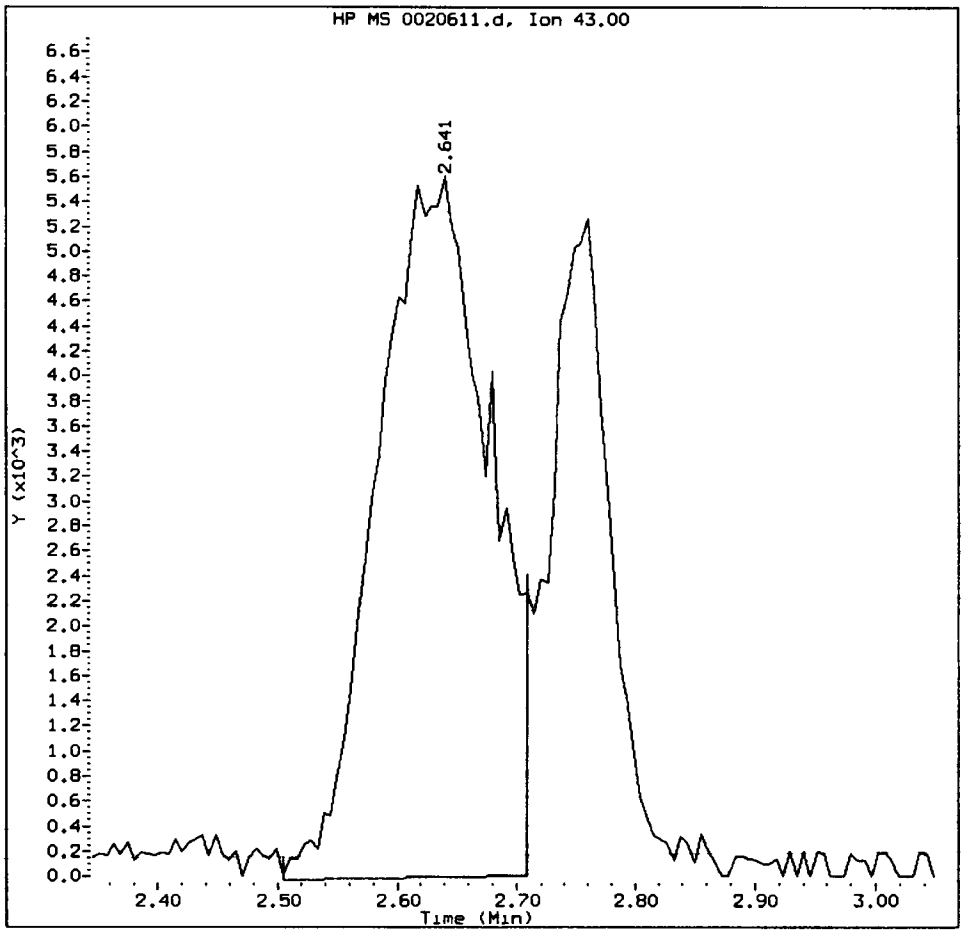
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: [signature] Date: 6/11/14

IC0611, /chem1/nt5.i/11JUN13.b/0020611.d

Acetone Amount: 10.32 Area: 37068



MANUAL INTEGRATION for Acetone

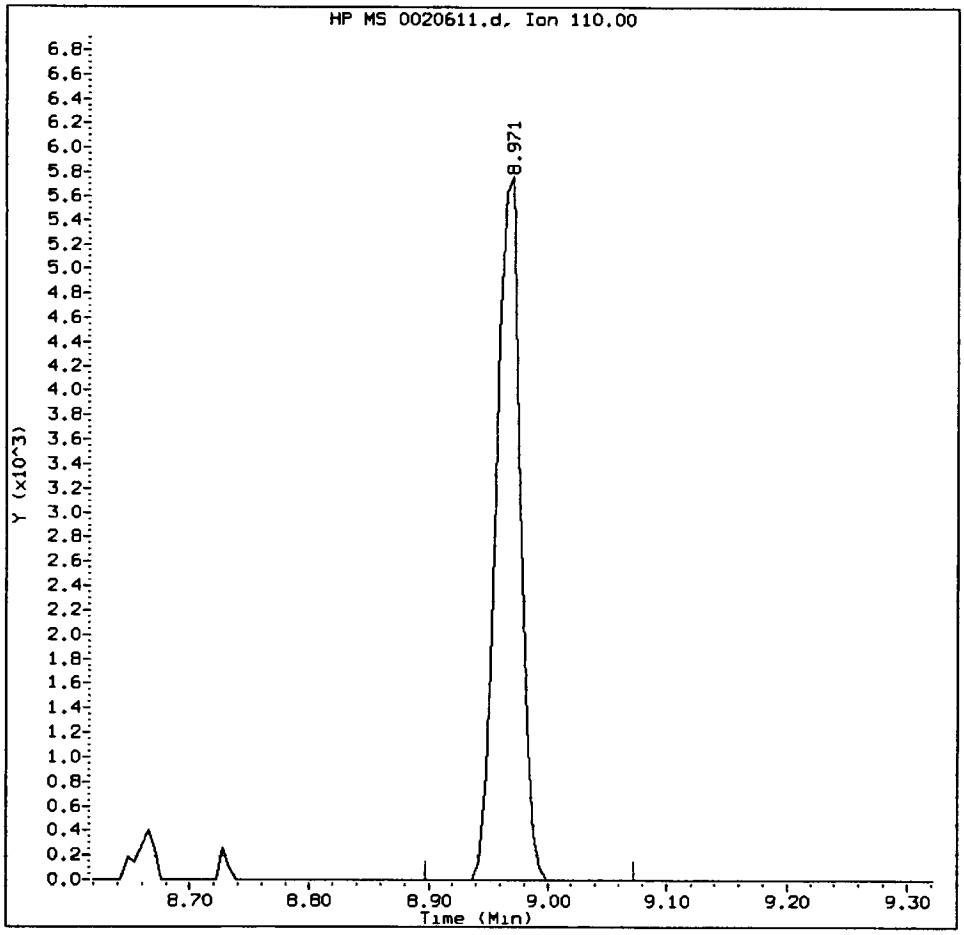
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: IR Date: 6/10/14

IC0611, /chem1/nt5.i/11JUN13.b/0020611.d

1,2,3-Trichloropropane Amount: 1.94 Area: 8175



MANUAL INTEGRATION for 1,2,3-Trichloropropane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14/13

CO-ELUTION SUMMARY FOR FILE - 0020611.d

Lab ID: IC0611, Method: VO121012S.m, Instrument: nt5.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13.b/0050611.d
Lab Smp Id: IC0611 Client Smp ID: VSTD5
Inj Date : 11-JUN-2013 10:57
Operator : PB Inst ID: nt5.i
Smp Info : IC0611,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/11JUN13.b/VO121012S.m
Meth Date : 12-Jun-2013 11:33 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 10:57 Cal File: 0050611.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	1.028	1.029	(0.221)	37510	5.00000	4.603
2 Chloromethane	50	1.334	1.153	(0.287)	84284	5.00000	5.194(TM)
3 Vinyl Chloride	62	1.204	1.198	(0.259)	74972	5.00000	4.776
4 Bromomethane	94	1.407	1.408	(0.302)	41863	5.00000	5.323
5 Chloroethane	64	1.492	1.492	(0.321)	46420	5.00000	4.967
6 Trichlorofluoromethane	101	1.588	1.589	(0.341)	81273	5.00000	4.983
7 1,1-Dichloroethene	96	1.950	1.951	(0.419)	53014	5.00000	4.814
8 Carbon Disulfide	76	1.950	1.951	(0.419)	176984	5.00000	4.946
9 112Trichloro122Trifluoroethane	101	1.990	1.990	(0.428)	46569	5.00000	4.804
10 Iodomethane	142	2.047	2.053	(0.440)	29970	5.00000	3.069
11 Bromoethane	108	2.143	2.149	(0.460)	31687	5.00000	4.682
12 Acrolein	56	2.256	2.267	(0.485)	52737	25.0000	22.700
13 Methylene Chloride	84	2.420	2.426	(0.520)	57838	5.00000	5.787
14 Acetone	43	2.590	2.697	(0.556)	61461	25.0000	16.930(TM)

	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	2.562	(0.549)	48752	5.00000	4.619
	16 Methyl tert butyl ether	73	2.737	2.726	(0.588)	163065	5.00000	5.342
	17 1,1-Dichloroethane	63	3.172	3.173	(0.682)	126815	5.00000	5.538
	18 Acrylonitrile	53	3.297	3.308	(0.708)	27160	5.00000	5.499
	19 Vinyl Acetate	43	3.517	3.518	(0.756)	163343	5.00000	5.221
	20 Cis-1,2-Dichloroethene	96	3.721	3.721	(0.799)	66501	5.00000	4.977
	22 2,2-Dichloropropane	77	3.817	3.817	(0.820)	93549	5.00000	4.911
	23 Bromochloromethane	128	3.908	3.908	(0.840)	29874	5.00000	4.992
	24 Chloroform	83	4.010	4.010	(0.861)	108316	5.00000	5.052
	25 Carbon Tetrachloride	117	4.094	4.095	(0.802)	78559	5.00000	4.849
$	27 Dibromofluoromethane	111	4.179	4.180	(0.898)	657418	50.0000	49.870
	26 1,1,1-Trichloroethane	97	4.168	4.168	(0.895)	95437	5.00000	4.952
	28 1,1-Dichloropropene	75	4.287	4.287	(0.839)	104718	5.00000	5.515
	29 2-Butanone	72	4.389	4.406	(0.943)	39392	25.0000	25.393
	30 Benzene	78	4.513	4.519	(0.884)	285098	5.00000	5.343
*	31 Pentafluorobenzene	168	4.654	4.660	(1.000)	459587	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.649	(0.999)	616549	50.0000	50.057
	33 1,2-Dichloroethane	62	4.711	4.711	(0.922)	86574	5.00000	5.143
	34 Trichloroethene	95	5.056	5.056	(0.990)	66986	5.00000	5.142
*	35 1,4-Difluorobenzene	114	5.107	5.107	(1.000)	1687157	50.0000	
	37 Dibromomethane	93	5.407	5.413	(1.059)	35480	5.00000	5.059
	38 1,2-Dichloropropane	63	5.503	5.503	(1.078)	75926	5.00000	5.020
	39 Bromodichloromethane	83	5.582	5.582	(1.093)	80792	5.00000	4.940
	40 2-Chloroethyl Vinyl Ether	63	6.114	6.120	(1.197)	39884	5.00000	5.018
	41 Cis 1,3-dichloropropene	75	6.125	6.131	(1.199)	108551	5.00000	5.105
$	42 d8-Toluene	98	6.284	6.284	(1.230)	2486982	50.0000	50.304
	43 Toluene	92	6.329	6.329	(1.239)	178556	5.00000	5.257
	44 Tetrachloroethene	166	6.640	6.640	(0.875)	69205	5.00000	4.983
	45 4-Methyl-2-Pentanone	58	6.697	6.702	(1.311)	156706	25.0000	26.294
	46 Trans 1,3-Dichloropropene	75	6.691	6.697	(1.310)	96046	5.00000	5.080
	47 1,1,2-Trichloroethane	97	6.821	6.821	(1.336)	54470	5.00000	5.129
	48 Chlorodibromomethane	129	6.957	6.957	(0.917)	58638	5.00000	4.894
	49 1,3-Dichloropropane	76	7.042	7.042	(0.928)	99146	5.00000	5.015
	50 1,2-Dibromoethane	107	7.132	7.138	(1.397)	52541	5.00000	5.052
	51 2-Hexanone	43	7.409	7.415	(0.976)	269287	25.0000	26.422
*	52 d5-Chlorobenzene	117	7.590	7.591	(1.000)	2006212	50.0000	
	53 Chlorobenzene	112	7.602	7.608	(1.001)	179925	5.00000	5.269
	54 Ethyl Benzene	91	7.653	7.659	(1.008)	321690	5.00000	5.493
	55 1,1,1,2-Tetrachloroethane	131	7.670	7.675	(1.010)	61155	5.00000	5.029
	56 m,p-xylene	106	7.788	7.789	(1.026)	241184	10.0000	10.809
	57 o-Xylene	106	8.150	8.151	(1.074)	112295	5.00000	5.060
	58 Styrene	104	8.196	8.202	(1.080)	193535	5.00000	5.386
	59 Bromoform	173	8.190	8.196	(0.847)	42236	5.00000	4.917
	60 Isopropyl Benzene	105	8.439	8.439	(0.873)	297224	5.00000	5.401
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.141)	1098671	50.0000	50.192
	63 Bromobenzene	156	8.739	8.739	(0.904)	71559	5.00000	4.929
	64 N-Propyl Benzene	91	8.807	8.807	(0.911)	359458	5.00000	5.511

	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)	69384	5.00000	4.835
66	2-Chloro Toluene	91	8.914	8.920	(0.922)	213778	5.00000	5.174
67	1,3,5-Trimethyl Benzene	105	8.993	8.999	(0.930)	247052	5.00000	5.278
68	1,2,3-Trichloropropane	110	8.965	8.971	(0.927)	21573	5.00000	4.966
69	Trans-1,4-Dichloro 2-Butene	53	9.022	9.027	(0.933)	24997	5.00000	4.690
70	4-Chloro Toluene	91	9.067	9.073	(0.938)	222753	5.00000	5.204
71	T-Butyl Benzene	119	9.270	9.271	(0.959)	215379	5.00000	5.231
72	1,2,4-Trimethylbenzene	105	9.338	9.339	(0.966)	245092	5.00000	5.325
73	S-Butyl Benzene	105	9.435	9.435	(0.976)	327277	5.00000	5.465
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	264374	5.00000	5.380
75	1,3-Dichlorobenzene	146	9.593	9.593	(0.992)	135851	5.00000	5.047
* 76	d4-1,4-Dichlorobenzene	152	9.666	9.667	(1.000)	1096782	50.0000	
77	1,4-Dichlorobenzene	146	9.678	9.684	(1.001)	142280	5.00000	5.128
78	N-Butyl Benzene	91	9.966	9.967	(1.031)	247927	5.00000	5.242
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1116716	50.0000	49.979
80	1,2-Dichlorobenzene	146	10.057	10.063	(1.040)	133836	5.00000	5.112
81	1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	13042	5.00000	4.693
82	Hexachloro 1,3-Butadiene	225	11.488	11.488	(1.188)	58256	5.00000	5.014
83	1,2,4-Trichlorobenzene	180	11.477	11.477	(1.187)	90716	5.00000	4.805
84	Naphthalene	128	11.788	11.794	(1.219)	218730	5.00000	5.279
85	1,2,3-Trichlorobenzene	180	11.969	11.975	(1.238)	91961	5.00000	5.040

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: 0050611.d
Lab Smp Id: IC0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
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	459631	229816	919262	459587	-0.01
35 1,4-Difluorobenze	1692431	846216	3384862	1687157	-0.31
52 d5-Chlorobenzene	1987215	993608	3974430	2006212	0.96
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1096782	1.99

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.65	-0.13
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.00
52 d5-Chlorobenzene	7.59	7.09	8.09	7.59	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

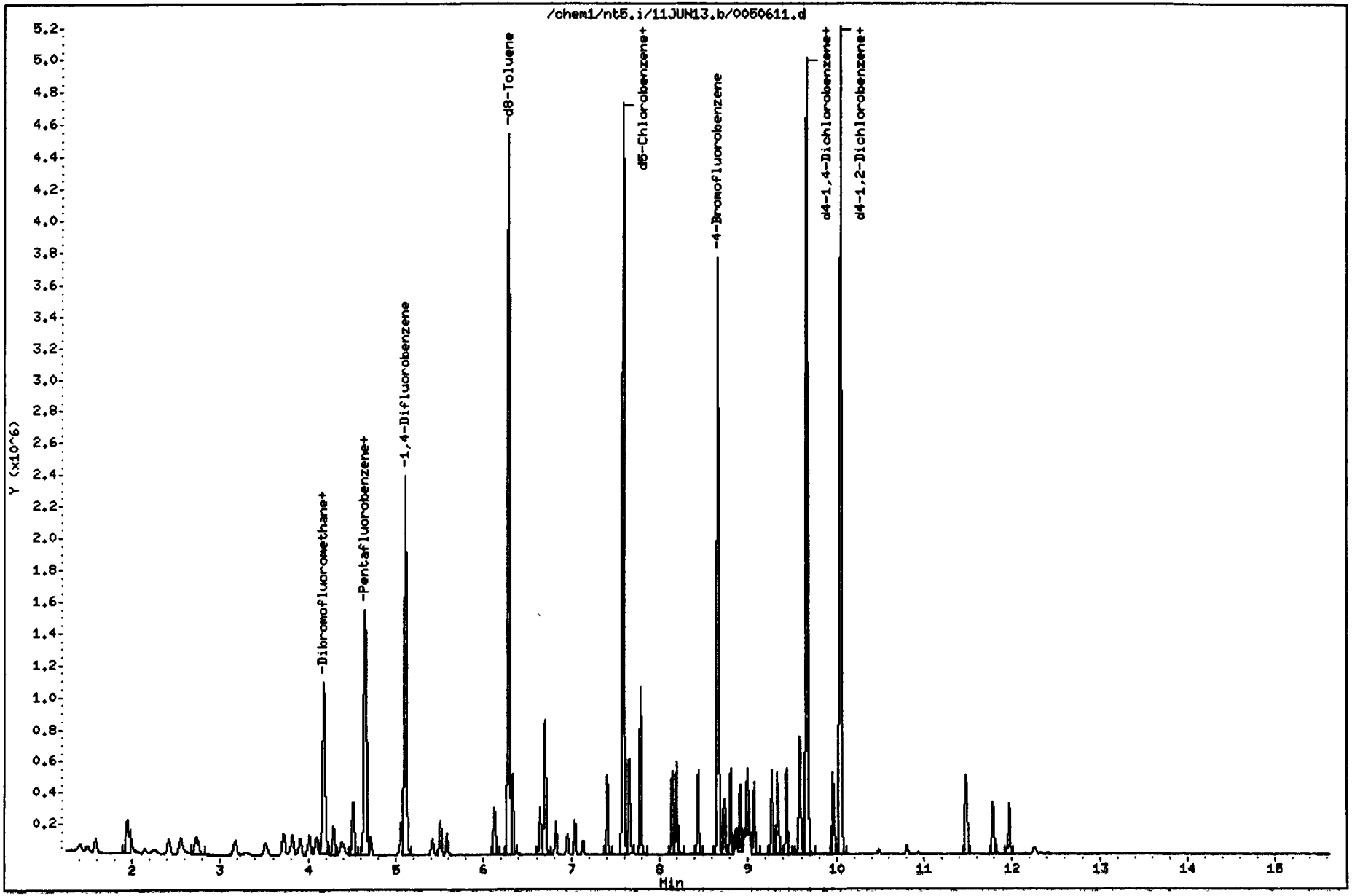
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/11JUN13.b/0050611.d
Date : 11-JUN-2013 10:57
Client ID: VSTD5
Sample Info: IC0611,5,5,0

Instrument: nt5.i

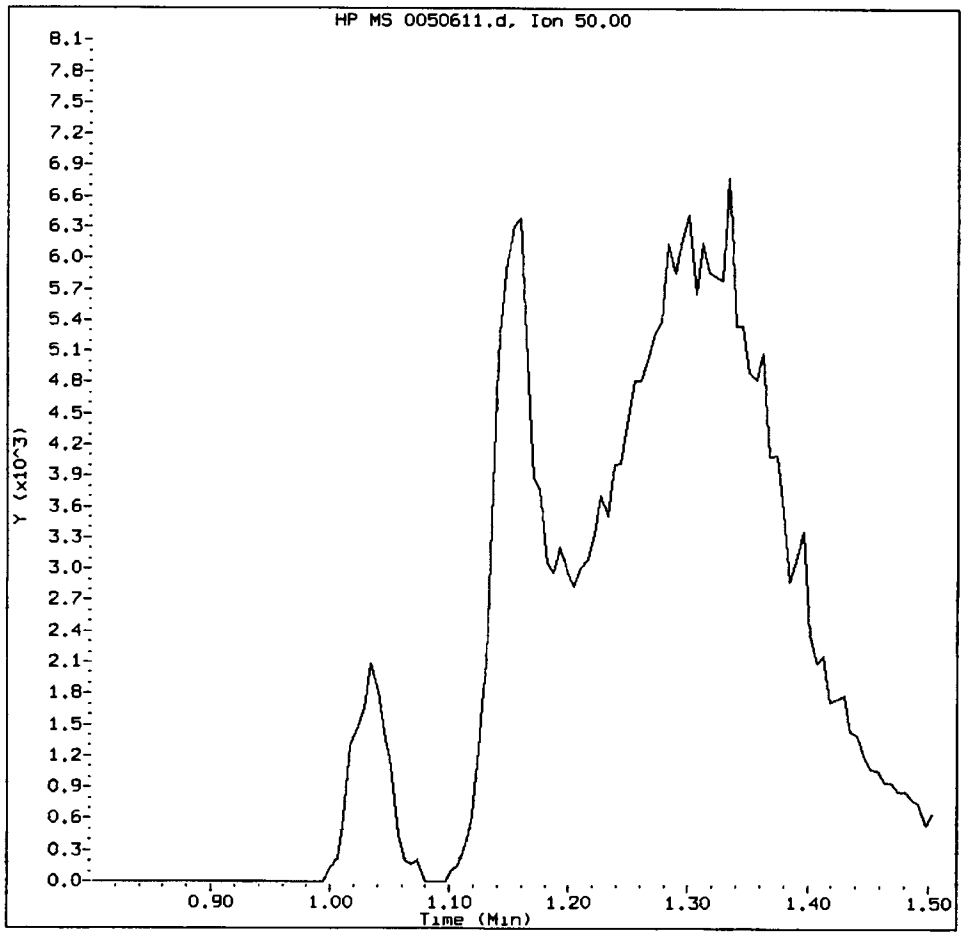
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0611, /chem1/nt5.i/11JUN13.b/0050611.d

Chloromethane Amount: 5.19 Area: 84284



MANUAL INTEGRATION for Chloromethane

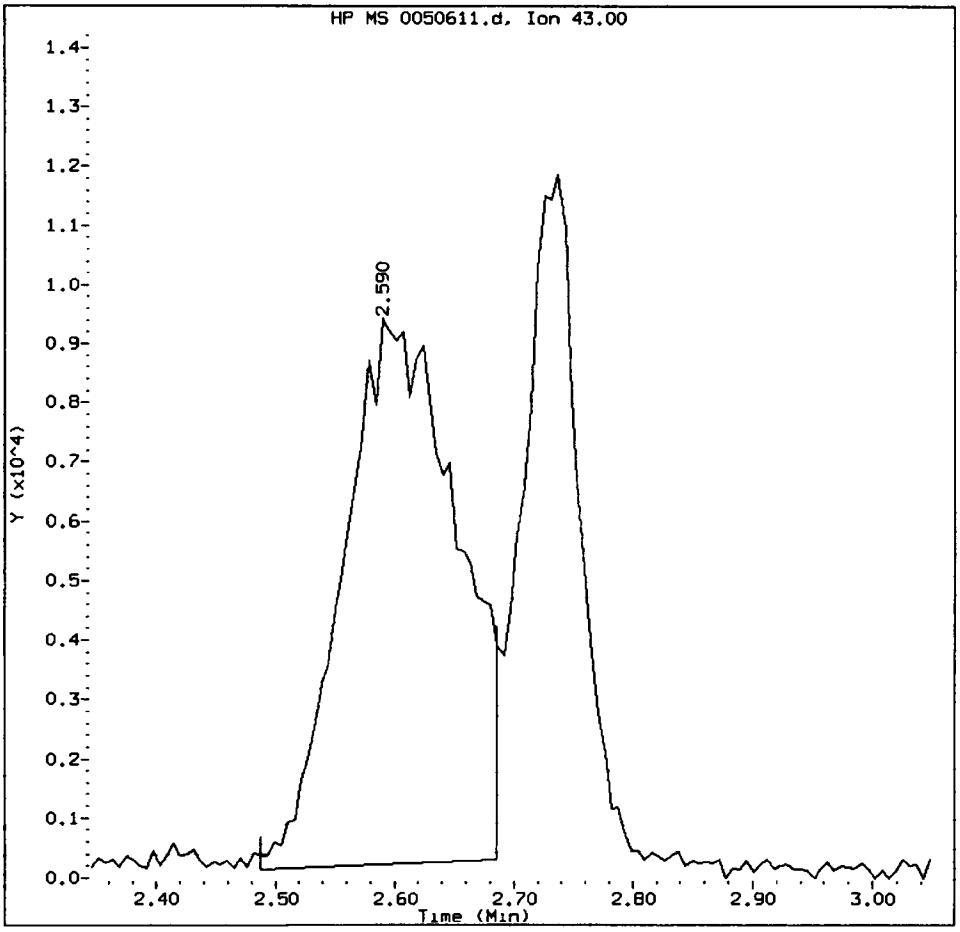
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/14

IC0611, /chem1/nt5.i/11JUN13.b/0050611.d

Acetone Amount: 16.93 Area: 61461



MANUAL INTEGRATION for Acetone

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/13/13

CO-ELUTION SUMMARY FOR FILE - 0050611.d

Lab ID: IC0611, Method: VO121012S.m, Instrument: nt5.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13.b/0100611.d
Lab Smp Id: IC0611 Client Smp ID: VSTD10
Inj Date : 11-JUN-2013 12:21
Operator : PB Inst ID: nt5.i
Smp Info : IC0611,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/11JUN13.b/VO121012S.m
Meth Date : 12-Jun-2013 11:33 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 12:21 Cal File: 0100611.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	1.040	1.029	(0.223)	86282	10.0000	11.018
2 Chloromethane	50	1.153	1.153	(0.247)	145243	10.0000	9.313(TM)
3 Vinyl Chloride	62	1.204	1.198	(0.258)	153554	10.0000	10.178
4 Bromomethane	94	1.413	1.408	(0.303)	82021	10.0000	10.853
5 Chloroethane	64	1.498	1.492	(0.321)	94795	10.0000	10.553
6 Trichlorofluoromethane	101	1.594	1.589	(0.342)	155722	10.0000	9.934
7 1,1-Dichloroethene	96	1.951	1.951	(0.419)	98520	10.0000	9.309
8 Carbon Disulfide	76	1.956	1.951	(0.420)	329748	10.0000	9.588
9 112Trichloro122Trifluoroethane	101	1.996	1.990	(0.428)	88308	10.0000	9.479
10 Iodomethane	142	2.052	2.053	(0.440)	63217	10.0000	6.737
11 Bromoethane	108	2.149	2.149	(0.461)	65273	10.0000	10.036
12 Acrolein	56	2.256	2.267	(0.484)	118454	50.0000	53.052
13 Methylene Chloride	84	2.426	2.426	(0.521)	123231	10.0000	12.830
14 Acetone	43	2.578	2.697	(0.553)	226490	50.0000	76.330(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	2.567	2.562	(0.551)	115798	10.0000	11.416
	16 Methyl tert butyl ether	73	2.737	2.726	(0.587)	316719	10.0000	10.795
	17 1,1-Dichloroethane	63	3.184	3.173	(0.683)	233032	10.0000	10.588
	18 Acrylonitrile	53	3.286	3.308	(0.705)	46832	10.0000	9.867
	19 Vinyl Acetate	43	3.518	3.518	(0.755)	276573	10.0000	9.197
	20 Cis-1,2-Dichloroethene	96	3.727	3.721	(0.800)	120233	10.0000	9.362
	22 2,2-Dichloropropane	77	3.823	3.817	(0.820)	175715	10.0000	9.599
	23 Bromochloromethane	128	3.914	3.908	(0.840)	54911	10.0000	9.548
	24 Chloroform	83	4.015	4.010	(0.862)	192794	10.0000	9.357
	25 Carbon Tetrachloride	117	4.106	4.095	(0.803)	150653	10.0000	9.599
$	27 Dibromofluoromethane	111	4.179	4.180	(0.897)	635929	50.0000	50.194
	26 1,1,1-Trichloroethane	97	4.174	4.168	(0.896)	177755	10.0000	9.598
	28 1,1-Dichloropropene	75	4.293	4.287	(0.840)	170871	10.0000	9.290
	29 2-Butanone	72	4.366	4.406	(0.937)	62622	50.0000	42.003
	30 Benzene	78	4.519	4.519	(0.884)	507751	10.0000	9.824
*	31 Pentafluorobenzene	168	4.660	4.660	(1.000)	441694	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.649	(0.998)	594039	50.0000	50.183
	33 1,2-Dichloroethane	62	4.711	4.711	(0.921)	148221	10.0000	9.091
	34 Trichloroethene	95	5.056	5.056	(0.989)	118837	10.0000	9.418
*	35 1,4-Difluorobenzene	114	5.113	5.107	(1.000)	1634225	50.0000	
	37 Dibromomethane	93	5.407	5.413	(1.058)	60791	10.0000	8.949
	38 1,2-Dichloropropane	63	5.503	5.503	(1.076)	131177	10.0000	8.953
	39 Bromodichloromethane	83	5.582	5.582	(1.092)	145557	10.0000	9.189
	40 2-Chloroethyl Vinyl Ether	63	6.114	6.120	(1.196)	68746	10.0000	8.929
	41 Cis 1,3-dichloropropene	75	6.131	6.131	(1.199)	193122	10.0000	9.376
$	42 d8-Toluene	98	6.289	6.284	(1.230)	2406864	50.0000	50.260
	43 Toluene	92	6.329	6.329	(1.238)	316837	10.0000	9.631
	44 Tetrachloroethene	166	6.640	6.640	(0.875)	130402	10.0000	9.802
	45 4-Methyl-2-Pentanone	58	6.691	6.702	(1.309)	262514	50.0000	45.474
	46 Trans 1,3-Dichloropropene	75	6.691	6.697	(1.309)	169008	10.0000	9.229
	47 1,1,2-Trichloroethane	97	6.821	6.821	(1.334)	94008	10.0000	9.139
	48 Chlorodibromomethane	129	6.957	6.957	(0.917)	103418	10.0000	9.010
	49 1,3-Dichloropropane	76	7.042	7.042	(0.928)	170313	10.0000	8.994
	50 1,2-Dibromoethane	107	7.138	7.138	(1.396)	87928	10.0000	8.728
	51 2-Hexanone	43	7.404	7.415	(0.975)	443800	50.0000	45.459
*	52 d5-Chlorobenzene	117	7.590	7.591	(1.000)	1921755	50.0000	
	53 Chlorobenzene	112	7.607	7.608	(1.002)	319243	10.0000	9.760
	54 Ethyl Benzene	91	7.653	7.659	(1.008)	586606	10.0000	10.457
	55 1,1,1,2-Tetrachloroethane	131	7.670	7.675	(1.010)	106783	10.0000	9.166
	56 m,p-xylene	106	7.788	7.789	(1.026)	437454	20.0000	20.467
	57 o-Xylene	106	8.151	8.151	(1.074)	204800	10.0000	9.634
	58 Styrene	104	8.201	8.202	(1.080)	342431	10.0000	9.949
	59 Bromoform	173	8.190	8.196	(0.847)	71183	10.0000	8.925
	60 Isopropyl Benzene	105	8.439	8.439	(0.872)	543587	10.0000	10.639
$	62 4-Bromofluorobenzene	95	8.665	8.660	(1.142)	1045193	50.0000	49.847
	63 Bromobenzene	156	8.739	8.739	(0.903)	126493	10.0000	9.383
	64 N-Propyl Benzene	91	8.807	8.807	(0.911)	659629	10.0000	10.893

	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)	118956	10.0000	8.927
66	2-Chloro Toluene	91	8.920	8.920	(0.922)	388006	10.0000	10.114
67	1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.930)	451327	10.0000	10.385
68	1,2,3-Trichloropropane	110	8.965	8.971	(0.927)	36163	10.0000	8.966
69	Trans-1,4-Dichloro 2-Butene	53	9.022	9.027	(0.933)	44555	10.0000	9.004
70	4-Chloro Toluene	91	9.073	9.073	(0.938)	404855	10.0000	10.187
71	T-Butyl Benzene	119	9.271	9.271	(0.958)	390776	10.0000	10.222
72	1,2,4-Trimethylbenzene	105	9.338	9.339	(0.965)	442943	10.0000	10.365
73	S-Butyl Benzene	105	9.435	9.435	(0.975)	600199	10.0000	10.793
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	489177	10.0000	10.721
75	1,3-Dichlorobenzene	146	9.593	9.593	(0.992)	247147	10.0000	9.888
* 76	d4-1,4-Dichlorobenzene	152	9.672	9.667	(1.000)	1018367	50.0000	
77	1,4-Dichlorobenzene	146	9.684	9.684	(1.001)	251176	10.0000	9.750
78	N-Butyl Benzene	91	9.972	9.967	(1.031)	473611	10.0000	10.785
$ 79	d4-1,2-Dichlorobenzene	152	10.057	10.051	(1.040)	1054197	50.0000	50.814
80	1,2-Dichlorobenzene	146	10.063	10.063	(1.040)	231902	10.0000	9.540
81	1,2-Dibromo 3-Chloropropane	75	10.815	10.809	(1.118)	23069	10.0000	8.941
82	Hexachloro 1,3-Butadiene	225	11.505	11.488	(1.189)	107118	10.0000	9.930
83	1,2,4-Trichlorobenzene	180	11.488	11.477	(1.188)	169201	10.0000	9.653
84	Naphthalene	128	11.805	11.794	(1.220)	347444	10.0000	9.031
85	1,2,3-Trichlorobenzene	180	11.986	11.975	(1.239)	157344	10.0000	9.287

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: 0100611.d
Lab Smp Id: IC0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
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	459631	229816	919262	441694	-3.90
35 1,4-Difluorobenze	1692431	846216	3384862	1634225	-3.44
52 d5-Chlorobenzene	1987215	993608	3974430	1921755	-3.29
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1018367	-5.30

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.66	0.00
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.11
52 d5-Chlorobenzene	7.59	7.09	8.09	7.59	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.06

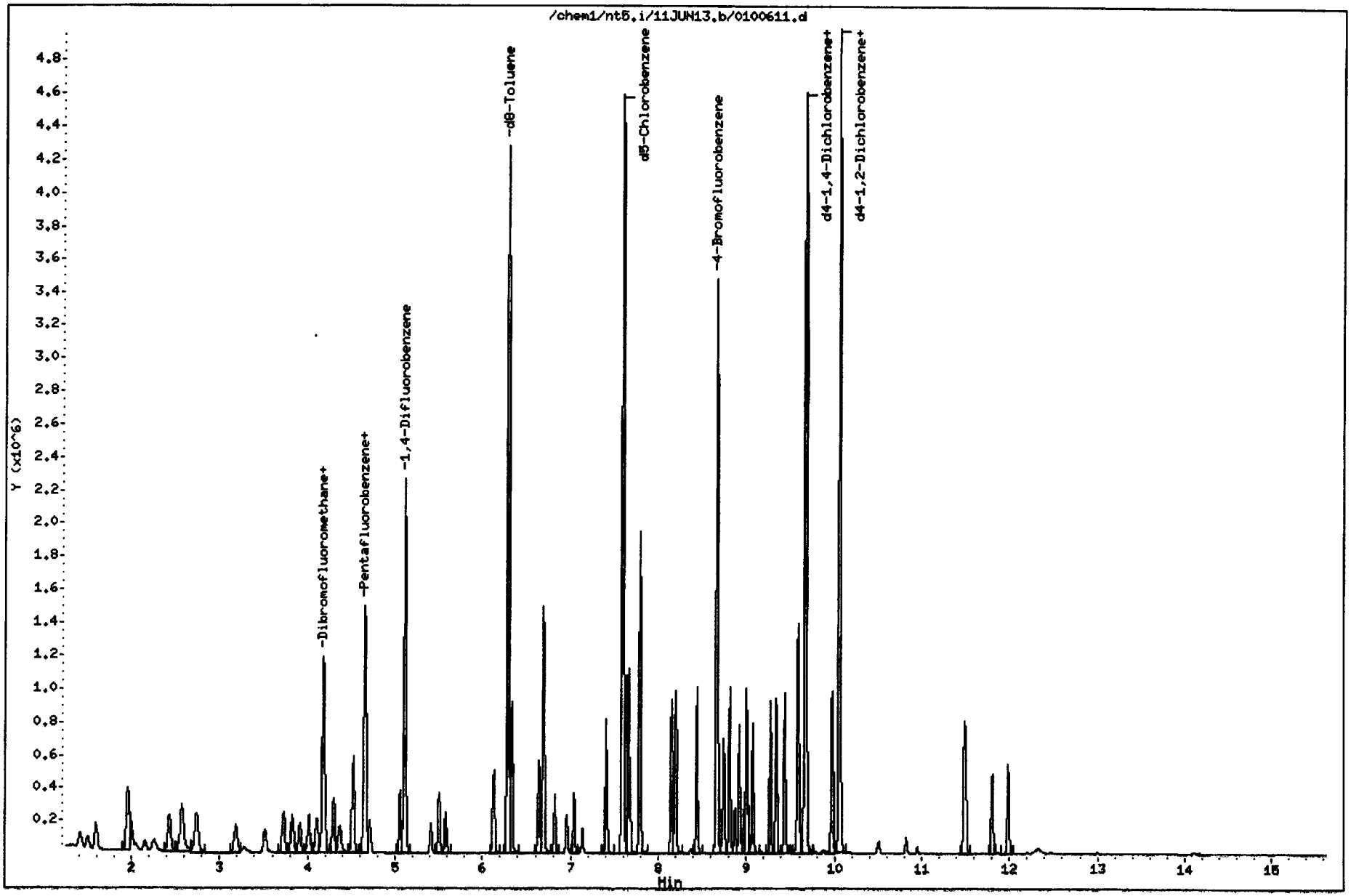
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/11JUN13.b/0100611.d
Date : 11-JUN-2013 12:21
Client ID: VSTD10
Sample Info: IC0611,5,5,0

Instrument: nt5.i

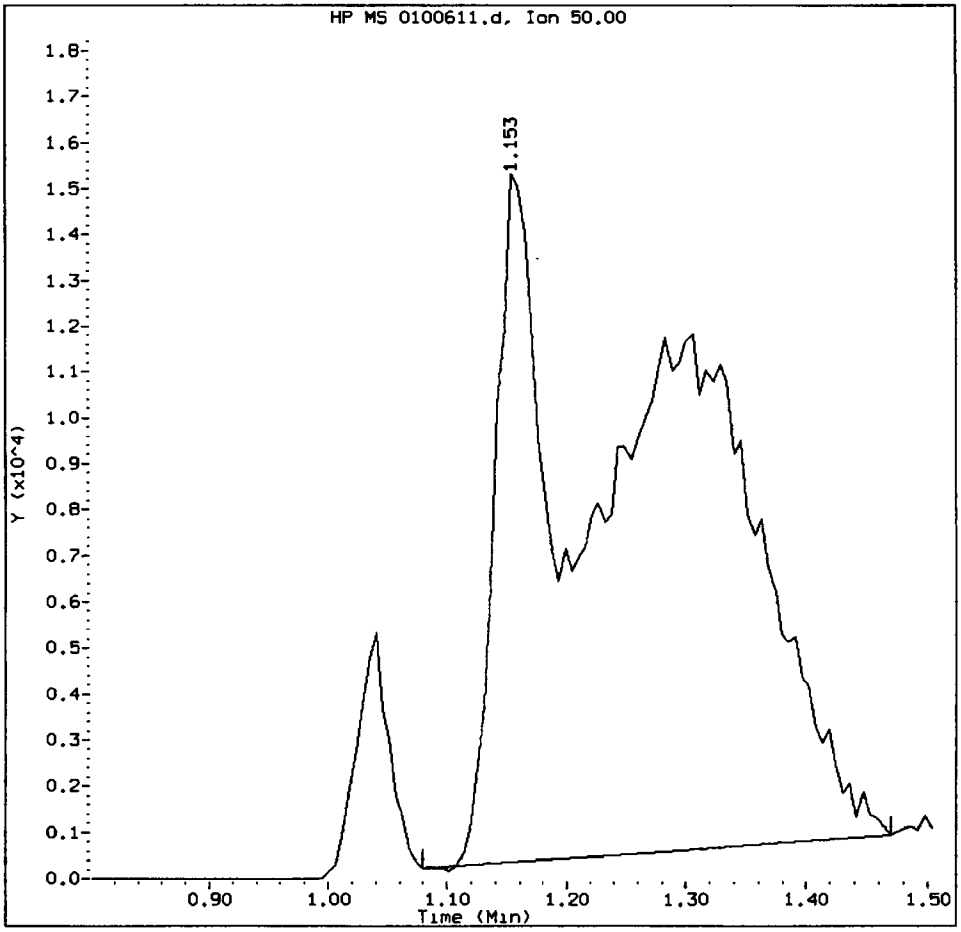
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0611, /chem1/nt5.i/11JUN13.b/0100611.d

Chloromethane Amount: 9.31 Area: 145243



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 - 0100611.d

Lab ID: IC0611, Method: VO121012S.m, Instrument: nt5.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt5.i/11JUN13.b/0500611.d
Report Date: 12-Jun-2013 11:33

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13.b/0500611.d
Lab Smp Id: IC0611 Client Smp ID: VSTD50
Inj Date : 11-JUN-2013 10:09
Operator : PB Inst ID: nt5.i
Smp Info : IC0611,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/11JUN13.b/VO121012S.m
Meth Date : 12-Jun-2013 11:33 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 10:09 Cal File: 0500611.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	1.029	1.029	(0.221)	353115	50.0000	43.332
2 Chloromethane	50	1.153	1.153	(0.247)	764654	50.0000	47.118(M)
3 Vinyl Chloride	62	1.198	1.198	(0.257)	760907	50.0000	48.465
4 Bromomethane	94	1.408	1.408	(0.302)	366307	50.0000	46.576
5 Chloroethane	64	1.492	1.492	(0.320)	446413	50.0000	47.759
6 Trichlorofluoromethane	101	1.589	1.589	(0.341)	728990	50.0000	44.690
7 1,1-Dichloroethene	96	1.951	1.951	(0.419)	514867	50.0000	46.750
8 Carbon Disulfide	76	1.951	1.951	(0.419)	1703150	50.0000	47.588
9 112Trichloro122Trifluoroethane	101	1.990	1.990	(0.427)	449354	50.0000	46.351
10 Iodomethane	142	2.053	2.053	(0.440)	397931	50.0000	40.750
11 Bromoethane	108	2.149	2.149	(0.461)	340152	50.0000	50.260
12 Acrolein	56	2.267	2.267	(0.487)	636947	250.000	274.14
13 Methylene Chloride	84	2.426	2.426	(0.521)	512608	50.0000	51.286
14 Acetone	43	2.697	2.697	(0.579)	559829	250.000	231.74(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	2.562	2.562	(0.550)	481795	50.0000	45.646
	16 Methyl tert butyl ether	73	2.726	2.726	(0.585)	1506342	50.0000	49.341
	17 1,1-Dichloroethane	63	3.173	3.173	(0.681)	993409	50.0000	43.374
	18 Acrylonitrile	53	3.308	3.308	(0.710)	239476	50.0000	48.484
	19 Vinyl Acetate	43	3.518	3.518	(0.755)	1551168	50.0000	49.571
	20 Cis-1,2-Dichloroethene	96	3.721	3.721	(0.798)	620020	50.0000	46.395
	22 2,2-Dichloropropane	77	3.817	3.817	(0.819)	858721	50.0000	45.079
	23 Bromochloromethane	128	3.908	3.908	(0.839)	272310	50.0000	45.503
	24 Chloroform	83	4.010	4.010	(0.860)	1009113	50.0000	47.064
	25 Carbon Tetrachloride	117	4.095	4.095	(0.802)	741213	50.0000	45.605
$	27 Dibromofluoromethane	111	4.180	4.180	(0.897)	662250	50.0000	50.232
	26 1,1,1-Trichloroethane	97	4.168	4.168	(0.894)	885575	50.0000	45.949
	28 1,1-Dichloropropene	75	4.287	4.287	(0.839)	867958	50.0000	45.565
	29 2-Butanone	72	4.406	4.406	(0.945)	406574	250.000	262.06
	30 Benzene	78	4.519	4.519	(0.885)	2577823	50.0000	48.161
*	31 Pentafluorobenzene	168	4.660	4.660	(1.000)	459631	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.649	(0.998)	620434	50.0000	50.368
	33 1,2-Dichloroethane	62	4.711	4.711	(0.922)	809721	50.0000	47.955
	34 Trichloroethene	95	5.056	5.056	(0.990)	598982	50.0000	45.838
*	35 1,4-Difluorobenzene	114	5.107	5.107	(1.000)	1692431	50.0000	
	37 Dibromomethane	93	5.413	5.413	(1.060)	344470	50.0000	48.964
	38 1,2-Dichloropropane	63	5.503	5.503	(1.078)	729210	50.0000	48.060
	39 Bromodichloromethane	83	5.582	5.582	(1.093)	792459	50.0000	48.307
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.120	(1.198)	425279	50.0000	53.336
	41 Cis 1,3-dichloropropene	75	6.131	6.131	(1.200)	1045254	50.0000	49.000
$	42 d8-Toluene	98	6.284	6.284	(1.230)	2484368	50.0000	50.095
	43 Toluene	92	6.329	6.329	(1.239)	1592845	50.0000	46.754
	44 Tetrachloroethene	166	6.640	6.640	(0.875)	619783	50.0000	45.055
	45 4-Methyl-2-Pentanone	58	6.702	6.702	(1.312)	1595980	250.000	266.96
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.311)	945718	50.0000	49.865
	47 1,1,2-Trichloroethane	97	6.821	6.821	(1.336)	529384	50.0000	49.692
	48 Chlorodibromomethane	129	6.957	6.957	(0.917)	586870	50.0000	49.445
	49 1,3-Dichloropropane	76	7.042	7.042	(0.928)	977791	50.0000	49.932
	50 1,2-Dibromoethane	107	7.138	7.138	(1.398)	515660	50.0000	49.425
	51 2-Hexanone	43	7.415	7.415	(0.977)	2667348	250.000	264.22
*	52 d5-Chlorobenzene	117	7.591	7.591	(1.000)	1987215	50.0000	
	53 Chlorobenzene	112	7.608	7.608	(1.002)	1607382	50.0000	47.523
	54 Ethyl Benzene	91	7.659	7.659	(1.009)	2852744	50.0000	49.179
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.011)	570228	50.0000	47.336
	56 m,p-xylene	106	7.789	7.789	(1.026)	2148101	100.000	97.192
	57 o-Xylene	106	8.151	8.151	(1.074)	1062604	50.0000	48.339
	58 Styrene	104	8.202	8.202	(1.080)	1806538	50.0000	50.759
	59 Bromoform	173	8.196	8.196	(0.848)	421583	50.0000	50.053
	60 Isopropyl Benzene	105	8.439	8.439	(0.873)	2656060	50.0000	49.229
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.141)	1083761	50.0000	49.984
	63 Bromobenzene	156	8.739	8.739	(0.904)	667951	50.0000	46.921
	64 N-Propyl Benzene	91	8.807	8.807	(0.911)	3093314	50.0000	48.372

	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)	707186	50.0000	50.258
66	2-Chloro Toluene	91	8.920	8.920	(0.923)	1931882	50.0000	47.686
67	1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.931)	2223273	50.0000	48.443
68	1,2,3-Trichloropropane	110	8.971	8.971	(0.928)	212455	50.0000	49.879
69	Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.934)	269415	50.0000	51.558
70	4-Chloro Toluene	91	9.073	9.073	(0.939)	1991916	50.0000	47.465
71	T-Butyl Benzene	119	9.271	9.271	(0.959)	1949891	50.0000	48.301
72	1,2,4-Trimethylbenzene	105	9.339	9.339	(0.966)	2202640	50.0000	48.807
73	S-Butyl Benzene	105	9.435	9.435	(0.976)	2837658	50.0000	48.323
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	2335926	50.0000	48.480
75	1,3-Dichlorobenzene	146	9.593	9.593	(0.992)	1220647	50.0000	46.248
* 76	d4-1,4-Dichlorobenzene	152	9.667	9.667	(1.000)	1075398	50.0000	
77	1,4-Dichlorobenzene	146	9.684	9.684	(1.002)	1240225	50.0000	45.591
78	N-Butyl Benzene	91	9.967	9.967	(1.031)	2204096	50.0000	47.529
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1085602	50.0000	49.553
80	1,2-Dichlorobenzene	146	10.063	10.063	(1.041)	1183518	50.0000	46.104
81	1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	135046	50.0000	49.565
82	Hexachloro 1,3-Butadiene	225	11.488	11.488	(1.188)	500871	50.0000	43.968
83	1,2,4-Trichlorobenzene	180	11.477	11.477	(1.187)	850233	50.0000	45.932
84	Naphthalene	128	11.794	11.794	(1.220)	2092430	50.0000	51.502
85	1,2,3-Trichlorobenzene	180	11.975	11.975	(1.239)	825099	50.0000	46.115

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: 0500611.d
Lab Smp Id: IC0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
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	459631	229816	919262	459631	0.00
35 1,4-Difluorobenze	1692431	846216	3384862	1692431	0.00
52 d5-Chlorobenzene	1987215	993608	3974430	1987215	0.00
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1075398	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.66	0.00
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.00
52 d5-Chlorobenzene	7.59	7.09	8.09	7.59	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

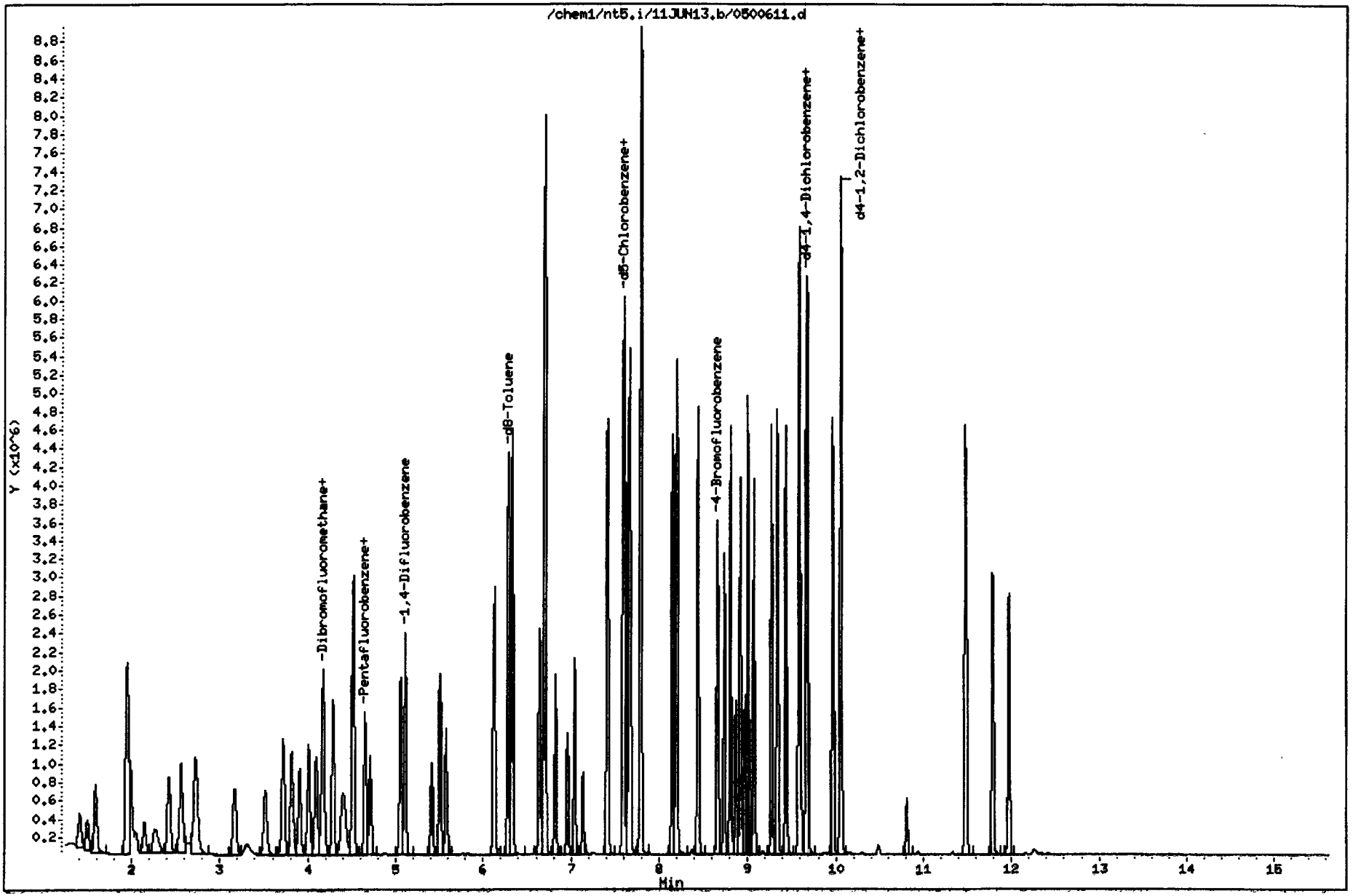
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/11JUN13.b/0500611.d
Date : 11-JUN-2013 10:09
Client ID: VSTD50
Sample Info: IC0611,5,5,0

Instrument: nt5.i

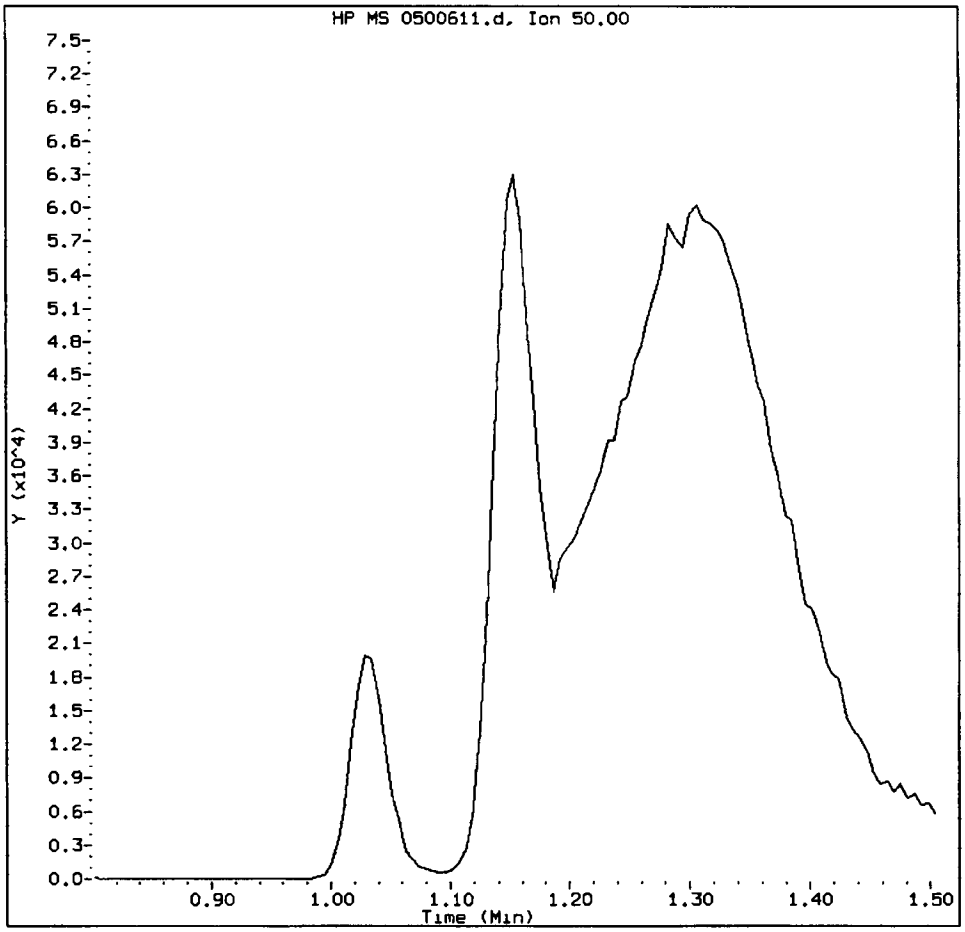
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0611, /chem1/nt5.i/11JUN13.b/0500611.d

Chloromethane Amount: 47.12 Area: 764654



MANUAL INTEGRATION for Chloromethane

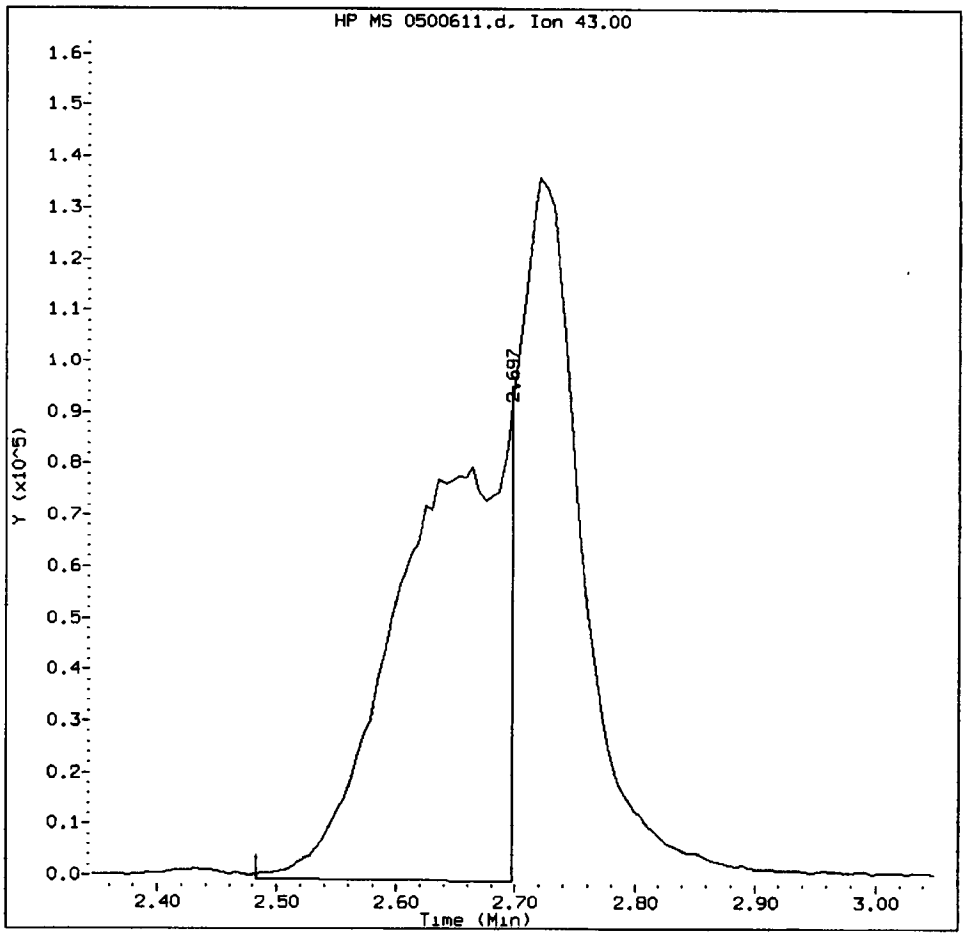
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14

IC0611, /chem1/nt5.i/11JUN13.b/0500611.d

Acetone Amount: 231.74 Area: 559829



MANUAL INTEGRATION for Acetone

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 - 0500611.d

Lab ID: IC0611, Method: VO121012S.m, Instrument: nt5.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13.b/1000611.d
Lab Smp Id: IC0611 Client Smp ID: VSTD100
Inj Date : 11-JUN-2013 12:45
Operator : PB Inst ID: nt5.i
Smp Info : IC0611,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/11JUN13.b/VO121012S.m
Meth Date : 12-Jun-2013 11:33 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 12:45 Cal File: 1000611.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)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.051	1.029	(0.225)	858354	100.000	105.87
2 Chloromethane	50	1.357	1.153	(0.291)	1641082	100.000	101.64(TM)
3 Vinyl Chloride	62	1.221	1.198	(0.262)	1668516	100.000	106.81
4 Bromomethane	94	1.430	1.408	(0.306)	728711	100.000	93.127
5 Chloroethane	64	1.515	1.492	(0.325)	968696	100.000	104.16
6 Trichlorofluoromethane	101	1.606	1.589	(0.344)	1742529	100.000	107.37
7 1,1-Dichloroethene	96	1.968	1.951	(0.422)	1201323	100.000	109.63
8 Carbon Disulfide	76	1.973	1.951	(0.423)	3900192	100.000	109.53
9 112Trichloro122Trifluoroethane	101	2.013	1.990	(0.431)	1089474	100.000	112.95
10 Iodomethane	142	2.069	2.053	(0.444)	1129814	100.000	116.29
11 Bromoethane	108	2.166	2.149	(0.464)	738208	100.000	109.63
12 Acrolein	56	2.290	2.267	(0.491)	1238440	500.000	535.72
13 Methylene Chloride	84	2.443	2.426	(0.524)	983128	100.000	98.861
14 Acetone	43	2.663	2.697	(0.571)	955765	500.000	504.65(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	2.579	2.562	(0.553)	1025747	100.000	97.674
16	Methyl tert butyl ether	73	2.748	2.726	(0.589)	2834755	100.000	93.325
17	1,1-Dichloroethane	63	3.184	3.173	(0.682)	1585352	100.000	69.571
18	Acrylonitrile	53	3.320	3.308	(0.711)	315089	100.000	64.116
19	Vinyl Acetate	43	3.529	3.518	(0.756)	3247264	100.000	104.30
20	Cis-1,2-Dichloroethene	96	3.733	3.721	(0.800)	1406997	100.000	105.82
22	2,2-Dichloropropane	77	3.829	3.817	(0.821)	2024312	100.000	106.81
23	Bromochloromethane	128	3.919	3.908	(0.840)	598201	100.000	100.47
24	Chloroform	83	4.021	4.010	(0.862)	2125955	100.000	99.655
25	Carbon Tetrachloride	117	4.100	4.095	(0.802)	1762054	100.000	108.23
$ 27	Dibromofluoromethane	111	4.191	4.180	(0.898)	666159	50.0000	50.785
26	1,1,1-Trichloroethane	97	4.174	4.168	(0.895)	2082018	100.000	108.58
28	1,1-Dichloropropene	75	4.293	4.287	(0.840)	2031996	100.000	106.49
29	2-Butanone	72	4.423	4.406	(0.948)	839604	500.000	543.93
30	Benzene	78	4.524	4.519	(0.885)	5601653	100.000	104.47
* 31	Pentafluorobenzene	168	4.666	4.660	(1.000)	457308	50.0000	
$ 32	d4-1,2-Dichloroethane	65	4.660	4.649	(0.999)	626668	50.0000	51.132
33	1,2-Dichloroethane	62	4.722	4.711	(0.924)	1749356	100.000	103.43
34	Trichloroethene	95	5.062	5.056	(0.990)	1406371	100.000	107.44
* 35	1,4-Difluorobenzene	114	5.113	5.107	(1.000)	1695367	50.0000	
37	Dibromomethane	93	5.418	5.413	(1.060)	747716	100.000	106.10
38	1,2-Dichloropropane	63	5.514	5.503	(1.079)	1613193	100.000	106.14
39	Bromodichloromethane	83	5.588	5.582	(1.093)	1740227	100.000	105.90
40	2-Chloroethyl Vinyl Ether	63	6.125	6.120	(1.198)	913048	100.000	114.31
41	Cis 1,3-dichloropropene	75	6.137	6.131	(1.200)	2290367	100.000	107.18
$ 42	d8-Toluene	98	6.289	6.284	(1.230)	2483045	50.0000	49.981
43	Toluene	92	6.335	6.329	(1.239)	3547029	100.000	103.93
44	Tetrachloroethene	166	6.646	6.640	(0.875)	1485267	100.000	108.36
45	4-Methyl-2-Pentanone	58	6.708	6.702	(1.312)	3198403	500.000	534.07
46	Trans 1,3-Dichloropropene	75	6.697	6.697	(1.310)	2034490	100.000	107.09
47	1,1,2-Trichloroethane	97	6.832	6.821	(1.336)	1135703	100.000	106.42
48	Chlorodibromomethane	129	6.963	6.957	(0.917)	1265081	100.000	106.97
49	1,3-Dichloropropane	76	7.047	7.042	(0.928)	2071413	100.000	106.17
50	1,2-Dibromoethane	107	7.144	7.138	(1.397)	1105711	100.000	105.80
51	2-Hexanone	43	7.421	7.415	(0.977)	5167635	500.000	513.76
* 52	d5-Chlorobenzene	117	7.596	7.591	(1.000)	1980001	50.0000	
53	Chlorobenzene	112	7.613	7.608	(1.002)	3496929	100.000	103.77
54	Ethyl Benzene	91	7.664	7.659	(1.009)	5926895	100.000	102.55
55	1,1,1,2-Tetrachloroethane	131	7.681	7.675	(1.011)	1271886	100.000	105.97
56	m,p-xylene	106	7.800	7.789	(1.027)	4595366	200.000	208.68
57	o-Xylene	106	8.156	8.151	(1.074)	2393545	100.000	109.28
58	Styrene	104	8.207	8.202	(1.080)	3853532	100.000	108.67
59	Bromoform	173	8.201	8.196	(0.848)	882215	100.000	107.32
60	Isopropyl Benzene	105	8.445	8.439	(0.873)	5588691	100.000	106.13
$ 62	4-Bromofluorobenzene	95	8.665	8.660	(1.141)	1083831	50.0000	50.169
63	Bromobenzene	156	8.745	8.739	(0.904)	1468069	100.000	105.67
64	N-Propyl Benzene	91	8.812	8.807	(0.911)	6402093	100.000	102.58

	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)	1467600	100.000	106.87
66	2-Chloro Toluene	91	8.926	8.920	(0.923)	4213559	100.000	106.57
67	1,3,5-Trimethyl Benzene	105	9.005	8.999	(0.931)	4825433	100.000	107.73
68	1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	441055	100.000	106.10
69	Trans-1,4-Dichloro 2-Butene	53	9.033	9.027	(0.934)	543778	100.000	106.63
70	4-Chloro Toluene	91	9.078	9.073	(0.939)	4352826	100.000	106.28
71	T-Butyl Benzene	119	9.276	9.271	(0.959)	4319272	100.000	109.63
72	1,2,4-Trimethylbenzene	105	9.344	9.339	(0.966)	4725539	100.000	107.29
73	S-Butyl Benzene	105	9.440	9.435	(0.976)	5976793	100.000	104.28
74	4-Isopropyl Toluene	119	9.587	9.582	(0.991)	5032632	100.000	107.02
75	1,3-Dichlorobenzene	146	9.604	9.593	(0.993)	2685794	100.000	104.27
* 76	d4-1,4-Dichlorobenzene	152	9.672	9.667	(1.000)	1049557	50.0000	
77	1,4-Dichlorobenzene	146	9.689	9.684	(1.002)	2740251	100.000	103.21
78	N-Butyl Benzene	91	9.972	9.967	(1.031)	4910044	100.000	108.49
$ 79	d4-1,2-Dichlorobenzene	152	10.057	10.051	(1.040)	1063567	50.0000	49.742
80	1,2-Dichlorobenzene	146	10.068	10.063	(1.041)	2544475	100.000	101.56
81	1,2-Dibromo 3-Chloropropane	75	10.815	10.809	(1.118)	275463	100.000	103.59
82	Hexachloro 1,3-Butadiene	225	11.494	11.488	(1.188)	1174471	100.000	105.64
83	1,2,4-Trichlorobenzene	180	11.482	11.477	(1.187)	1934013	100.000	107.05
84	Naphthalene	128	11.794	11.794	(1.219)	4167045	100.000	105.09
85	1,2,3-Trichlorobenzene	180	11.980	11.975	(1.239)	1782554	100.000	102.08

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: 1000611.d
Lab Smp Id: IC0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
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	459631	229816	919262	457308	-0.51
35 1,4-Difluorobenze	1692431	846216	3384862	1695367	0.17
52 d5-Chlorobenzene	1987215	993608	3974430	1980001	-0.36
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1049557	-2.40

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.67	0.12
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.11
52 d5-Chlorobenzene	7.59	7.09	8.09	7.60	0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.06

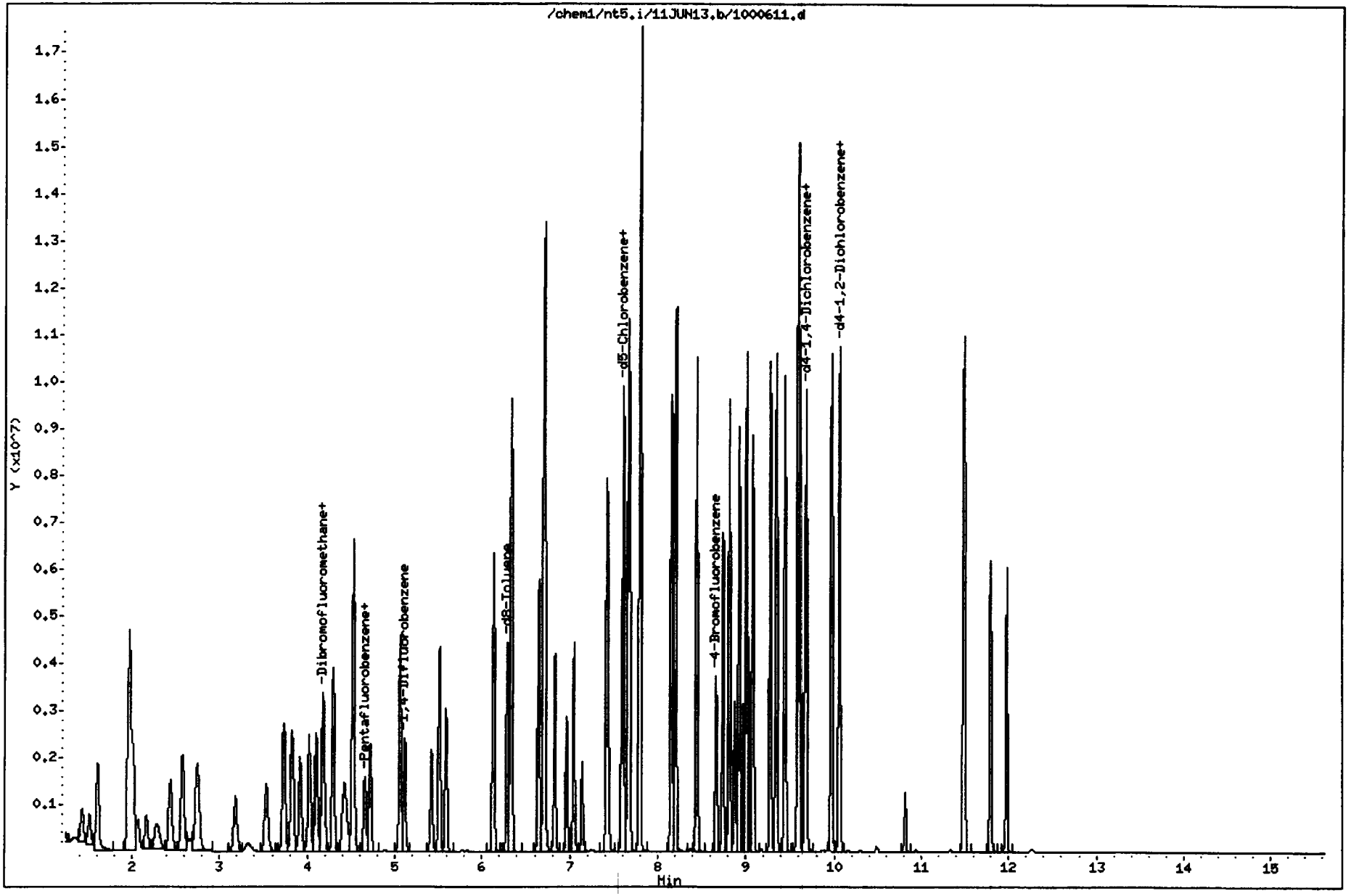
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/11JUN13.b/1000611.d
Date : 11-JUN-2013 12:45
Client ID: VSTD100
Sample Info: IC0611,5,5,0

Instrument: nt5.i

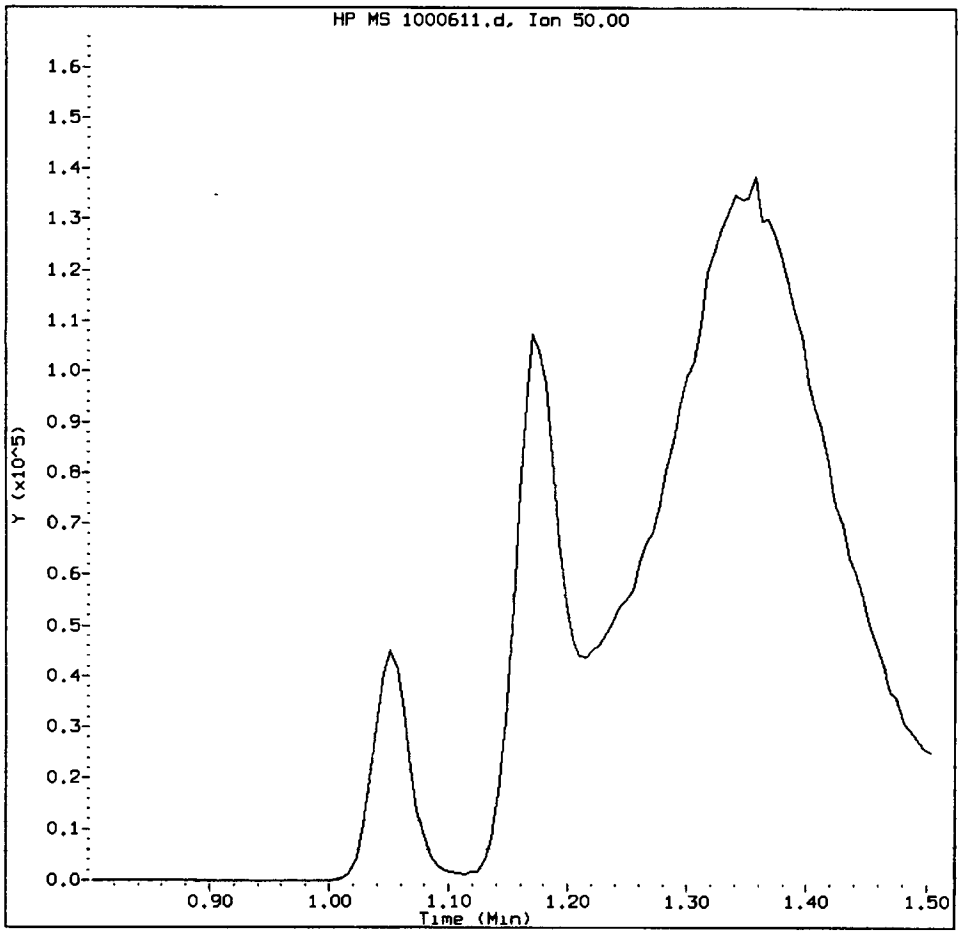
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0611, /chem1/nt5.i/11JUN13.b/1000611.d

Chloromethane Amount: 101.64 Area: 1641082



MANUAL INTEGRATION for Chloromethane

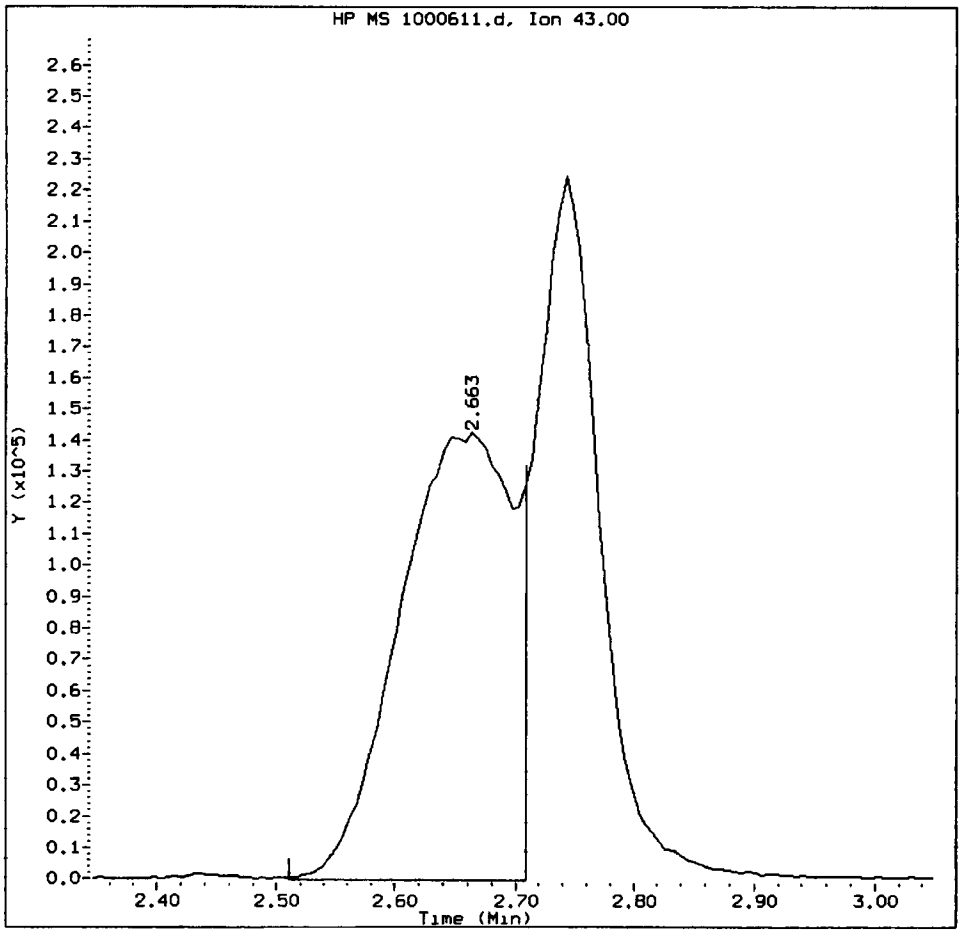
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/12/13

IC0611, /chem1/nt5.i/11JUN13.b/1000611.d

Acetone Amount: 504.65 Area: 955765



MANUAL INTEGRATION for Acetone

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14

CO-ELUTION SUMMARY FOR FILE - 1000611.d

Lab ID: IC0611, Method: VO121012S.m, Instrument: nt5.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13.b/1500611.d
Lab Smp Id: IC0611 Client Smp ID: VSTD150
Inj Date : 11-JUN-2013 09:21
Operator : PB Inst ID: nt5.i
Smp Info : IC0611,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/11JUN13.b/VO121012S.m
Meth Date : 12-Jun-2013 11:33 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 09:21 Cal File: 1500611.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	1.051	1.029	(0.226)	1177207	150.000	133.77
2 Chloromethane	50	1.345	1.153	(0.289)	2524840	150.000	144.07(TM)
3 Vinyl Chloride	62	1.227	1.198	(0.263)	2539067	150.000	149.76
4 Bromomethane	94	1.430	1.408	(0.307)	1093390	150.000	128.74
5 Chloroethane	64	1.515	1.492	(0.325)	1344249	150.000	133.17
6 Trichlorofluoromethane	101	1.611	1.589	(0.346)	2580153	150.000	146.47
7 1,1-Dichloroethene	96	1.968	1.951	(0.422)	1755844	150.000	147.64
8 Carbon Disulfide	76	1.968	1.951	(0.422)	5574219	150.000	144.23
9 112Trichloro122Trifluoroethane	101	2.013	1.990	(0.432)	1549942	150.000	148.05
10 Iodomethane	142	2.069	2.053	(0.444)	1522399	150.000	144.37
11 Bromoethane	108	2.166	2.149	(0.465)	1016801	150.000	139.13
12 Acrolein	56	2.279	2.267	(0.489)	1628498	750.000	649.05
13 Methylene Chloride	84	2.437	2.426	(0.523)	1349683	150.000	125.05
14 Acetone	43	2.635	2.697	(0.565)	1361385	750.000	767.41

	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	2.562	(0.552)	1441035	150.000	126.43
16	Methyl tert butyl ether	73	2.748	2.726	(0.590)	3843816	150.000	116.59
17	1,1-Dichloroethane	63	3.173	3.173	(0.681)	1906938	150.000	77.102
18	Acrylonitrile	53	3.320	3.308	(0.712)	303574	150.000	56.915
19	Vinyl Acetate	43	3.529	3.518	(0.757)	4965553	150.000	146.95
20	Cis-1,2-Dichloroethene	96	3.727	3.721	(0.800)	2163689	150.000	149.93
22	2,2-Dichloropropane	77	3.817	3.817	(0.819)	3062350	150.000	148.87
23	Bromochloromethane	128	3.914	3.908	(0.840)	1031917	150.000	159.68
24	Chloroform	83	4.021	4.010	(0.863)	3472449	150.000	149.97
25	Carbon Tetrachloride	117	4.095	4.095	(0.801)	2671548	150.000	150.91
$ 27	Dibromofluoromethane	111	4.191	4.180	(0.899)	708388	50.0000	49.757
26	1,1,1-Trichloroethane	97	4.168	4.168	(0.894)	3160053	150.000	151.83
28	1,1-Dichloropropene	75	4.287	4.287	(0.838)	3067277	150.000	147.84
29	2-Butanone	72	4.428	4.406	(0.950)	1323574	750.000	790.02
30	Benzene	78	4.519	4.519	(0.884)	8015334	150.000	137.49
* 31	Pentafluorobenzene	168	4.660	4.660	(1.000)	496348	50.0000	
$ 32	d4-1,2-Dichloroethane	65	4.655	4.649	(0.999)	652070	50.0000	49.020
33	1,2-Dichloroethane	62	4.723	4.711	(0.924)	2661667	150.000	144.73
34	Trichloroethene	95	5.056	5.056	(0.989)	2140477	150.000	150.39
* 35	1,4-Difluorobenzene	114	5.113	5.107	(1.000)	1843399	50.0000	
37	Dibromomethane	93	5.418	5.413	(1.060)	1157284	150.000	151.03
38	1,2-Dichloropropane	63	5.514	5.503	(1.079)	2475132	150.000	149.77
39	Bromodichloromethane	83	5.588	5.582	(1.093)	2679823	150.000	149.98
40	2-Chloroethyl Vinyl Ether	63	6.125	6.120	(1.198)	1428189	150.000	164.45
41	Cis 1,3-dichloropropene	75	6.137	6.131	(1.200)	3461526	150.000	148.98
$ 42	d8-Toluene	98	6.289	6.284	(1.230)	2666842	50.0000	49.370
43	Toluene	92	6.335	6.329	(1.239)	5132074	150.000	138.30
44	Tetrachloroethene	166	6.646	6.640	(0.875)	2206818	150.000	150.01
45	4-Methyl-2-Pentanone	58	6.719	6.702	(1.314)	4878059	750.000	749.13
46	Trans 1,3-Dichloropropene	75	6.702	6.697	(1.311)	3097314	150.000	149.94
47	1,1,2-Trichloroethane	97	6.833	6.821	(1.336)	1753638	150.000	151.13
48	Chlorodibromomethane	129	6.968	6.957	(0.917)	1953066	150.000	153.87
49	1,3-Dichloropropane	76	7.053	7.042	(0.928)	3159698	150.000	150.88
50	1,2-Dibromoethane	107	7.144	7.138	(1.397)	1712671	150.000	150.71
51	2-Hexanone	43	7.427	7.415	(0.978)	8320314	750.000	770.70
* 52	d5-Chlorobenzene	117	7.596	7.591	(1.000)	2125124	50.0000	
53	Chlorobenzene	112	7.613	7.608	(1.002)	5042901	150.000	139.42
54	Ethyl Benzene	91	7.670	7.659	(1.010)	7984332	150.000	128.71
55	1,1,1,2-Tetrachloroethane	131	7.687	7.675	(1.012)	1919032	150.000	148.97
56	m,p-xylene	106	7.800	7.789	(1.027)	6347918	300.000	268.58
57	o-Xylene	106	8.162	8.151	(1.074)	3556782	150.000	151.30
58	Styrene	104	8.207	8.202	(1.080)	5465289	150.000	143.60
59	Bromoform	173	8.201	8.196	(0.847)	1364047	150.000	153.10
60	Isopropyl Benzene	105	8.445	8.439	(0.873)	7520976	150.000	131.78
$ 62	4-Bromofluorobenzene	95	8.665	8.660	(1.141)	1168014	50.0000	50.374
63	Bromobenzene	156	8.745	8.739	(0.904)	2204193	150.000	146.38
64	N-Propyl Benzene	91	8.818	8.807	(0.911)	8378925	150.000	123.87

	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	8.886	8.869	(0.918)	2323997	150.000	156.14
66	2-Chloro Toluene	91	8.926	8.920	(0.922)	5913413	150.000	137.99
67	1,3,5-Trimethyl Benzene	105	9.010	8.999	(0.931)	6613088	150.000	136.22
68	1,2,3-Trichloropropane	110	8.976	8.971	(0.928)	689267	150.000	152.98
69	Trans-1,4-Dichloro 2-Butene	53	9.039	9.027	(0.934)	860831	150.000	155.74
70	4-Chloro Toluene	91	9.078	9.073	(0.938)	6173868	150.000	139.08
71	T-Butyl Benzene	119	9.282	9.271	(0.959)	6027688	150.000	141.16
72	1,2,4-Trimethylbenzene	105	9.350	9.339	(0.966)	6477811	150.000	135.70
73	S-Butyl Benzene	105	9.446	9.435	(0.976)	7923737	150.000	127.56
74	4-Isopropyl Toluene	119	9.593	9.582	(0.991)	6762407	150.000	132.68
75	1,3-Dichlorobenzene	146	9.604	9.593	(0.992)	3827854	150.000	137.11
* 76	d4-1,4-Dichlorobenzene	152	9.678	9.667	(1.000)	1137532	50.0000	
77	1,4-Dichlorobenzene	146	9.695	9.684	(1.002)	3978024	150.000	138.25
78	N-Butyl Benzene	91	9.978	9.967	(1.031)	6587416	150.000	134.29
$ 79	d4-1,2-Dichlorobenzene	152	10.063	10.051	(1.040)	1133332	50.0000	48.906
80	1,2-Dichlorobenzene	146	10.068	10.063	(1.040)	3772192	150.000	138.92
81	1,2-Dibromo 3-Chloropropane	75	10.821	10.809	(1.118)	449965	150.000	156.13
82	Hexachloro 1,3-Butadiene	225	11.499	11.488	(1.188)	1728512	150.000	143.45
83	1,2,4-Trichlorobenzene	180	11.488	11.477	(1.187)	2921940	150.000	149.23
84	Naphthalene	128	11.799	11.794	(1.219)	6255334	150.000	145.56
85	1,2,3-Trichlorobenzene	180	11.986	11.975	(1.238)	2797505	150.000	147.81

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: 1500611.d
Lab Smp Id: IC0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
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	459631	229816	919262	496348	7.99
35 1,4-Difluorobenze	1692431	846216	3384862	1843399	8.92
52 d5-Chlorobenzene	1987215	993608	3974430	2125124	6.94
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1137532	5.78

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.66	0.00
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.11
52 d5-Chlorobenzene	7.59	7.09	8.09	7.60	0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.68	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/nt5.i/11JUN13.b/1500611.d

Date : 11-JUN-2013 09:21

Client ID: VSTD150

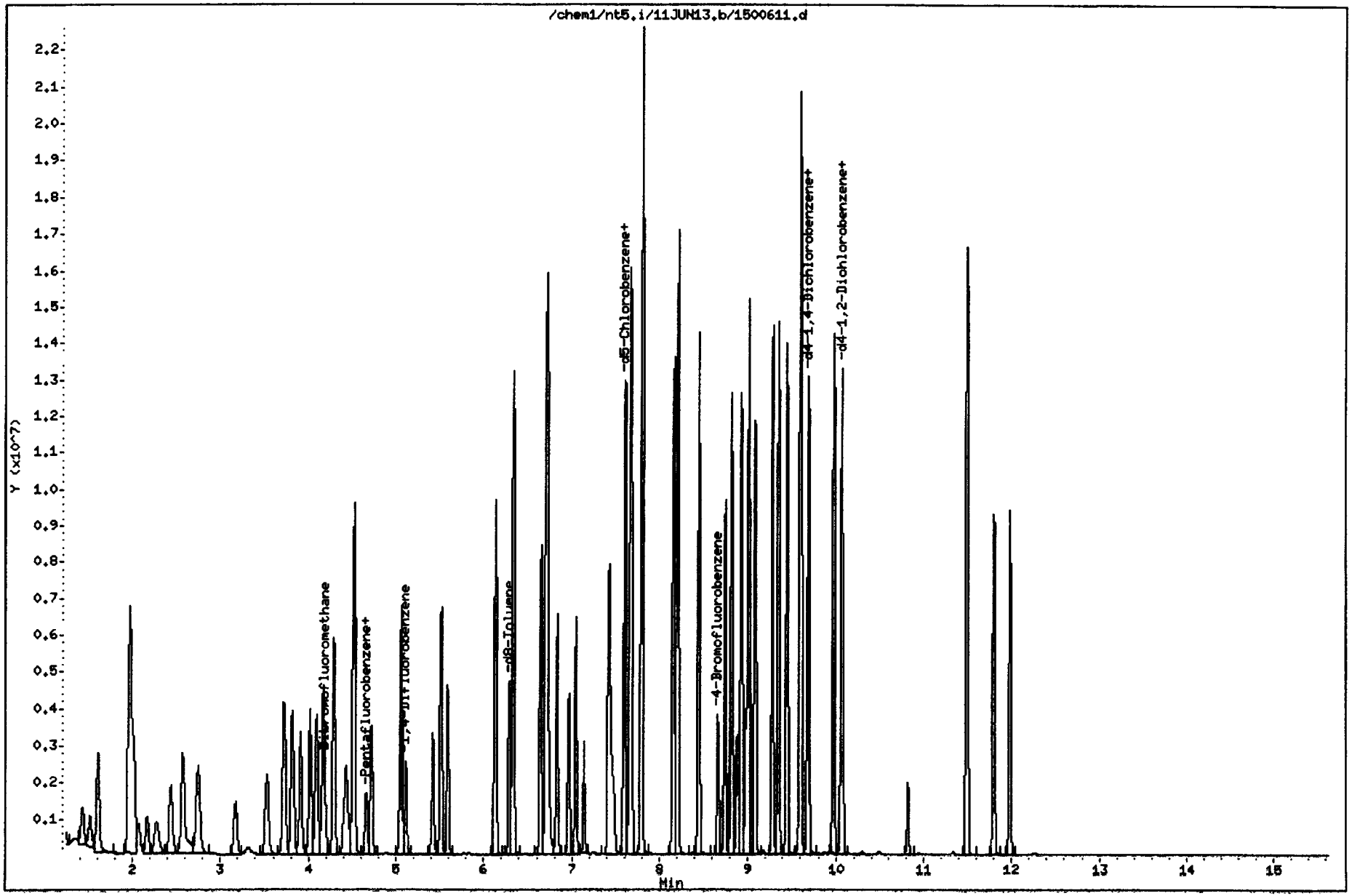
Sample Info: IC0611,5,5,0

Column phase: RTXVMS

Instrument: nt5.i

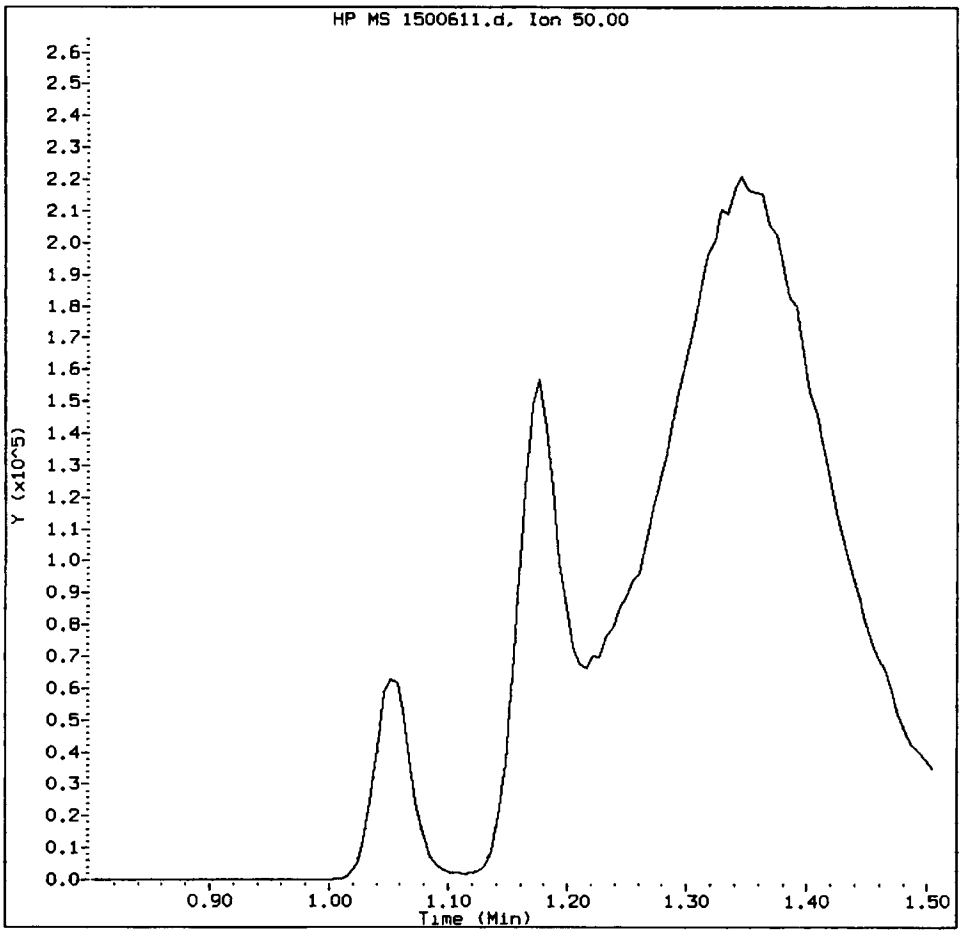
Operator: PB

Column diameter: 0.18



IC0611, /chem1/nt5.i/11JUN13.b/1500611.d

Chloromethane Amount: 144.07 Area: 2524840



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/12/13

CO-ELUTION SUMMARY FOR FILE - 1500611.d

Lab ID: IC0611, Method: VO121012S.m, Instrument: nt5.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt5.i/11JUN13.b/2000611.d
Report Date: 12-Jun-2013 11:33

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13.b/2000611.d
Lab Smp Id: IC0611 Client Smp ID: VSTD200
Inj Date : 11-JUN-2013 08:57
Operator : PB Inst ID: nt5.i
Smp Info : IC0611,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/11JUN13.b/VO121012S.m
Meth Date : 12-Jun-2013 11:33 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 08:57 Cal File: 2000611.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	1.029	1.029	(0.221)	1832491	200.000	203.81
2 Chloromethane	50	1.317	1.153	(0.283)	3502553	200.000	195.61(TM)
3 Vinyl Chloride	62	1.198	1.198	(0.258)	3202075	200.000	184.85
4 Bromomethane	94	1.402	1.408	(0.302)	1405108	200.000	161.92
5 Chloroethane	64	1.492	1.492	(0.321)	1707694	200.000	165.58
6 Trichlorofluoromethane	101	1.577	1.589	(0.339)	3572620	200.000	198.50
7 1,1-Dichloroethene	96	1.939	1.951	(0.417)	2395149	200.000	197.11
8 Carbon Disulfide	76	1.939	1.951	(0.417)	7318840	200.000	185.34
9 112Trichloro122Trifluoroethane	101	1.985	1.990	(0.427)	2162442	200.000	202.16
10 Iodomethane	142	2.041	2.053	(0.439)	2117934	200.000	196.57
11 Bromoethane	108	2.137	2.149	(0.460)	1368292	200.000	183.23
12 Acrolein	56	2.245	2.267	(0.483)	2029135	1000.00	791.51
13 Methylene Chloride	84	2.409	2.426	(0.518)	1800973	200.000	163.31
14 Acetone	43	2.601	2.697	(0.560)	1611160	1000.00	969.87(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	2.562	(0.547)	1964076	200.000	168.65
	16 Methyl tert butyl ether	73	2.720	2.726	(0.585)	5052611	200.000	150.00
	17 1,1-Dichloroethane	63	3.144	3.173	(0.676)	2493501	200.000	98.672
	18 Acrylonitrile	53	3.286	3.308	(0.707)	367407	200.000	67.416
	19 Vinyl Acetate	43	3.518	3.518	(0.757)	3129354	200.000	90.637(M)
	20 Cis-1,2-Dichloroethene	96	3.699	3.721	(0.796)	2966190	200.000	201.16
	22 2,2-Dichloropropane	77	3.795	3.817	(0.816)	4216860	200.000	200.63
	23 Bromochloromethane	128	3.891	3.908	(0.837)	1432852	200.000	217.00
	24 Chloroform	83	3.998	4.010	(0.860)	4741458	200.000	200.42
	25 Carbon Tetrachloride	117	4.072	4.095	(0.798)	3664608	200.000	205.01
$	27 Dibromofluoromethane	111	4.174	4.180	(0.898)	721830	50.0000	49.622
	26 1,1,1-Trichloroethane	97	4.146	4.168	(0.892)	4326365	200.000	203.45
	28 1,1-Dichloropropene	75	4.270	4.287	(0.837)	4190804	200.000	200.04
	29 2-Butanone	72	4.423	4.406	(0.951)	1689512	1000.00	986.98(M)
	30 Benzene	78	4.508	4.519	(0.884)	10135792	200.000	172.18
*	31 Pentafluorobenzene	168	4.649	4.660	(1.000)	507140	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.643	4.649	(0.999)	662477	50.0000	48.743
	33 1,2-Dichloroethane	62	4.706	4.711	(0.922)	3594128	200.000	193.54
	34 Trichloroethene	95	5.045	5.056	(0.989)	2963740	200.000	206.22
*	35 1,4-Difluorobenzene	114	5.102	5.107	(1.000)	1861384	50.0000	
	37 Dibromomethane	93	5.407	5.413	(1.060)	1585364	200.000	204.89
	38 1,2-Dichloropropane	63	5.503	5.503	(1.079)	3373215	200.000	202.14
	39 Bromodichloromethane	83	5.582	5.582	(1.094)	3639115	200.000	201.70
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.120	(1.200)	1918248	200.000	218.74
	41 Cis 1,3-dichloropropene	75	6.131	6.131	(1.202)	4641692	200.000	197.85
$	42 d8-Toluene	98	6.284	6.284	(1.232)	2703520	50.0000	49.566
	43 Toluene	92	6.329	6.329	(1.241)	6614200	200.000	176.52
	44 Tetrachloroethene	166	6.640	6.640	(0.874)	3049582	200.000	207.47
	45 4-Methyl-2-Pentanone	58	6.719	6.702	(1.317)	6283051	1000.00	955.57
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.313)	4137962	200.000	198.38
	47 1,1,2-Trichloroethane	97	6.833	6.821	(1.339)	2380036	200.000	203.13
	48 Chlorodibromomethane	129	6.963	6.957	(0.917)	2649737	200.000	208.93
	49 1,3-Dichloropropane	76	7.048	7.042	(0.928)	4195526	200.000	200.51
	50 1,2-Dibromoethane	107	7.144	7.138	(1.400)	2302924	200.000	200.70
	51 2-Hexanone	43	7.427	7.415	(0.978)	10840128	1000.00	1004.9
*	52 d5-Chlorobenzene	117	7.596	7.591	(1.000)	2123406	50.0000	
	53 Chlorobenzene	112	7.613	7.608	(1.002)	6512026	200.000	180.18
	54 Ethyl Benzene	91	7.670	7.659	(1.010)	9817829	200.000	158.40
	55 1,1,1,2-Tetrachloroethane	131	7.687	7.675	(1.012)	2587823	200.000	201.04
	56 m,p-xylene	106	7.806	7.789	(1.028)	7940722	400.000	336.24
	57 o-Xylene	106	8.162	8.151	(1.074)	4700253	200.000	200.11
	58 Styrene	104	8.213	8.202	(1.081)	6837651	200.000	179.80
	59 Bromoform	173	8.202	8.196	(0.847)	1798527	200.000	208.04
	60 Isopropyl Benzene	105	8.450	8.439	(0.873)	9089588	200.000	164.13
$	62 4-Bromofluorobenzene	95	8.665	8.660	(1.141)	1153708	50.0000	49.797
	63 Bromobenzene	156	8.745	8.739	(0.904)	2967911	200.000	203.12
	64 N-Propyl Benzene	91	8.818	8.807	(0.911)	10158841	200.000	154.77

	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)	3085864	200.000	213.66
66	2-Chloro Toluene	91	8.931	8.920	(0.923)	7401915	200.000	178.00
67	1,3,5-Trimethyl Benzene	105	9.016	8.999	(0.932)	8181385	200.000	173.67
68	1,2,3-Trichloropropane	110	8.982	8.971	(0.928)	913167	200.000	208.87
69	Trans-1,4-Dichloro 2-Butene	53	9.039	9.027	(0.934)	1184000	200.000	220.75
70	4-Chloro Toluene	91	9.084	9.073	(0.939)	7842027	200.000	182.05
71	T-Butyl Benzene	119	9.282	9.271	(0.959)	7531552	200.000	181.76
72	1,2,4-Trimethylbenzene	105	9.350	9.339	(0.966)	7992260	200.000	172.53
73	S-Butyl Benzene	105	9.452	9.435	(0.977)	9484616	200.000	157.35
74	4-Isopropyl Toluene	119	9.599	9.582	(0.992)	8224080	200.000	166.29
75	1,3-Dichlorobenzene	146	9.610	9.593	(0.993)	4921047	200.000	181.65
* 76	d4-1,4-Dichlorobenzene	152	9.678	9.667	(1.000)	1103824	50.0000	
77	1,4-Dichlorobenzene	146	9.695	9.684	(1.002)	5224108	200.000	187.10
78	N-Butyl Benzene	91	9.983	9.967	(1.032)	8203136	200.000	172.34
$ 79	d4-1,2-Dichlorobenzene	152	10.063	10.051	(1.040)	1117341	50.0000	49.688
80	1,2-Dichlorobenzene	146	10.074	10.063	(1.041)	5020231	200.000	190.53
81	1,2-Dibromo 3-Chloropropane	75	10.826	10.809	(1.119)	598140	200.000	213.88
82	Hexachloro 1,3-Butadiene	225	11.505	11.488	(1.189)	2335036	200.000	199.70
83	1,2,4-Trichlorobenzene	180	11.494	11.477	(1.188)	4007563	200.000	210.92
84	Naphthalene	128	11.805	11.794	(1.220)	7751229	200.000	185.87
85	1,2,3-Trichlorobenzene	180	11.992	11.975	(1.239)	3807501	200.000	207.32

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: 2000611.d
Lab Smp Id: IC0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
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	459631	229816	919262	507140	10.34
35 1,4-Difluorobenze	1692431	846216	3384862	1861384	9.98
52 d5-Chlorobenzene	1987215	993608	3974430	2123406	6.85
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1103824	2.64

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.65	-0.24
35 1,4-Difluorobenze	5.11	4.61	5.61	5.10	-0.11
52 d5-Chlorobenzene	7.59	7.09	8.09	7.60	0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.68	0.12

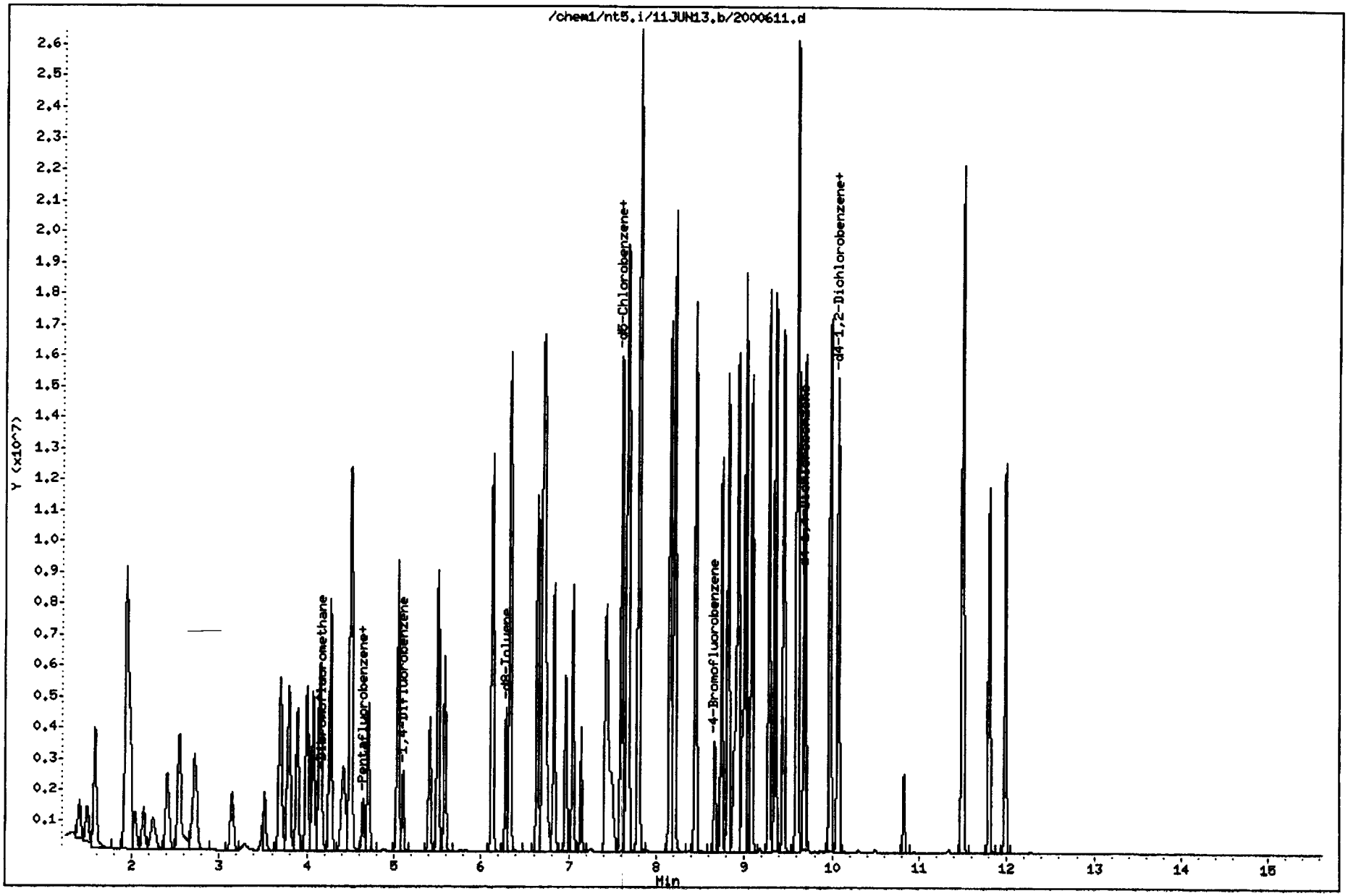
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/11JUN13.b/2000611.d
Date : 11-JUN-2013 08:57
Client ID: VSTD200
Sample Info: IC0611,5,5,0

Instrument: nt5.i

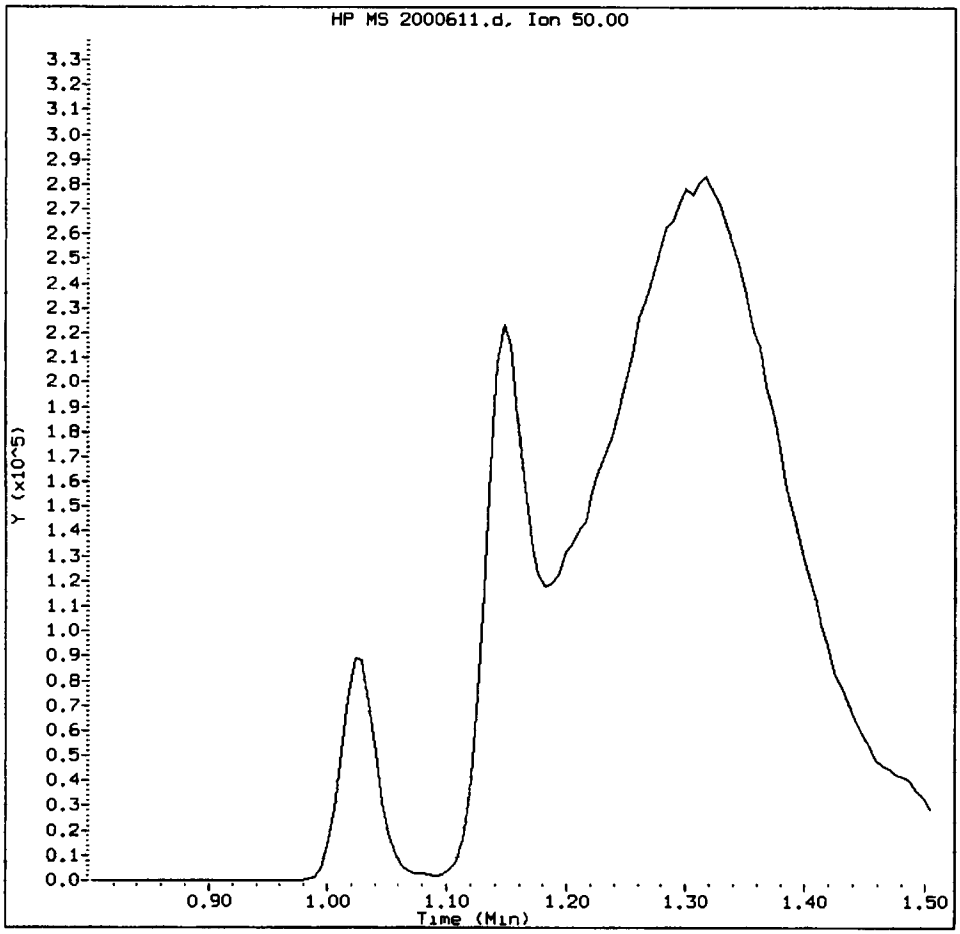
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0611, /chem1/nt5.i/11JUN13.b/2000611.d

Chloromethane Amount: 195.61 Area: 3502553



MANUAL INTEGRATION for Chloromethane

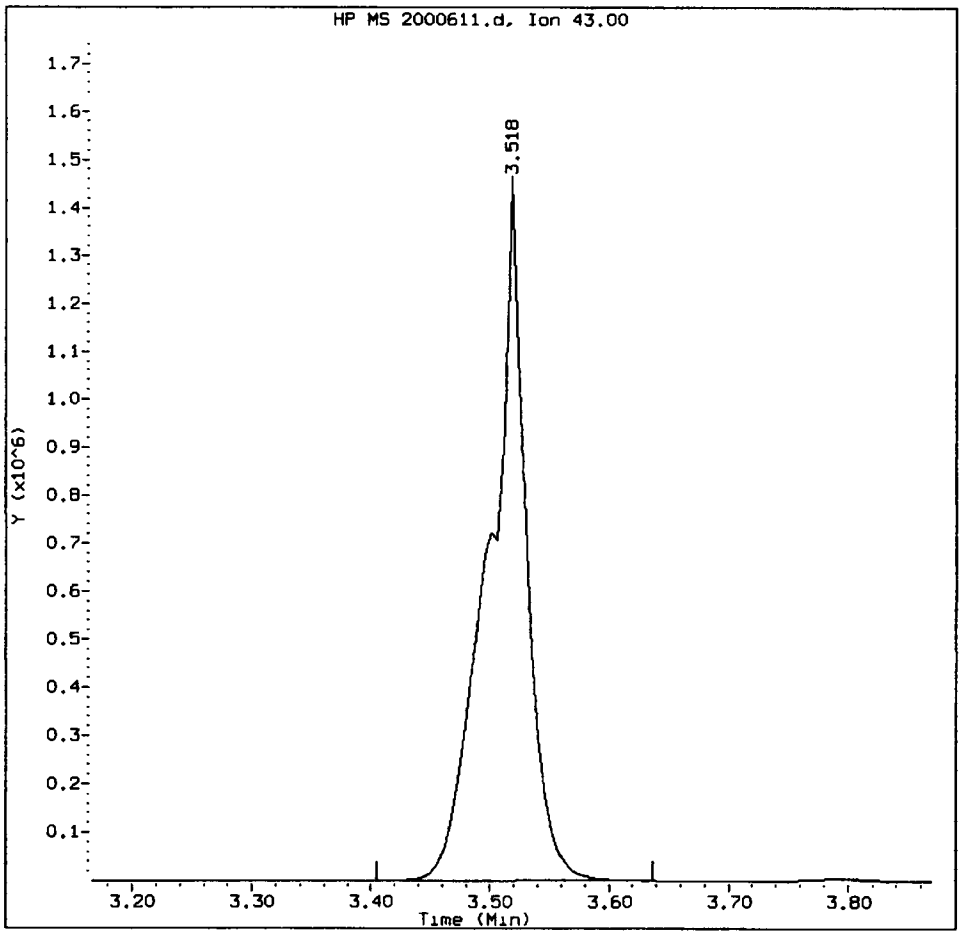
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14/13

IC0611, /chem1/nt5.i/11JUN13.b/2000611.d

Vinyl Acetate Amount: 90.64 Area: 3129354



MANUAL INTEGRATION for Vinyl Acetate

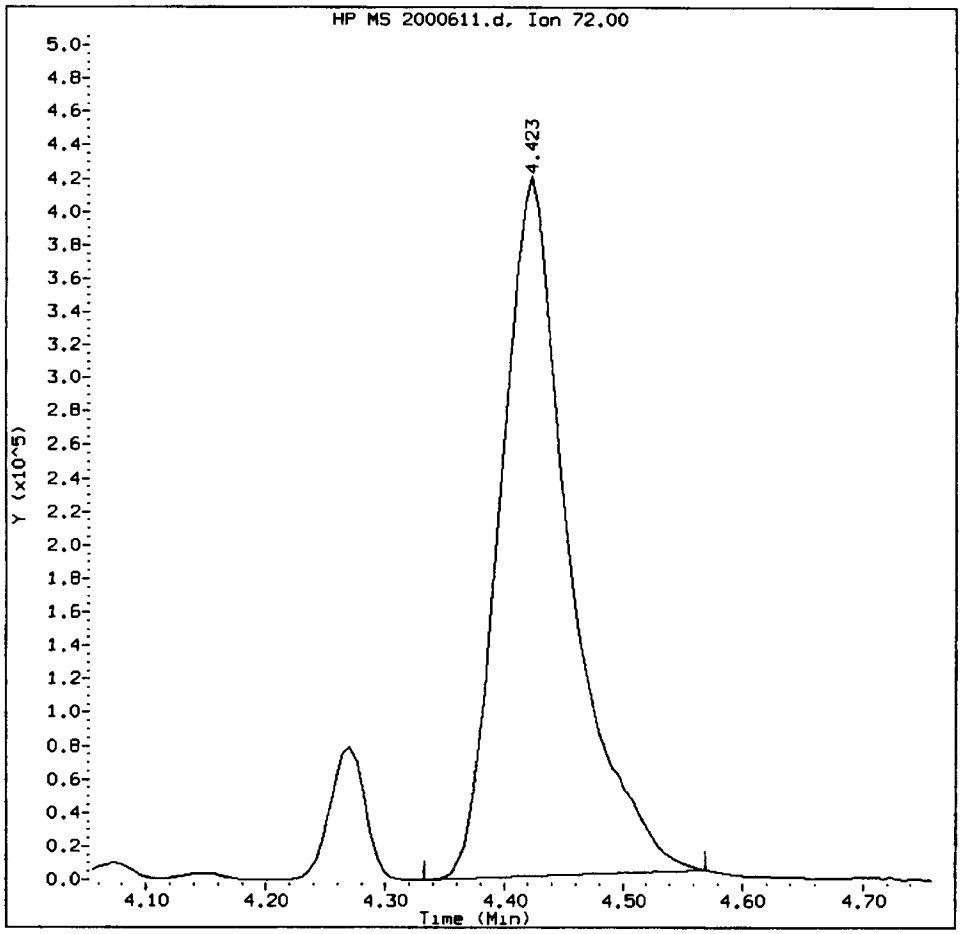
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/11/13

IC0611, /chem1/nt5.i/11JUN13.b/2000611.d

2-Butanone Amount: 986.98 Area: 1689512



MANUAL INTEGRATION for 2-Butanone

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 - 2000611.d

Lab ID: IC0611, Method: VO121012S.m, Instrument: nt5.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/11JUN13.b/icv0611.d
Lab Smp Id: ICV0611 Client Smp ID: ICV0611
Inj Date : 11-JUN-2013 14:04
Operator : PB Inst ID: nt5.i
Smp Info : ICV0611,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/11JUN13.b/VO121012S.m
Meth Date : 12-Jun-2013 11:33 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 08:57 Cal File: 2000611.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	1.040	1.029	(0.223)	493549	64.0420	64.042(R)
2 Chloromethane	50	1.159	1.153	(0.249)	768277	50.0585	50.058(QM)
3 Vinyl Chloride	62	1.210	1.198	(0.260)	885763	59.6556	59.656
4 Bromomethane	94	1.413	1.408	(0.303)	380162	51.1126	51.113
5 Chloroethane	64	1.504	1.492	(0.323)	500064	56.5693	56.569
6 Trichlorofluoromethane	101	1.594	1.589	(0.342)	799955	51.8558	51.856
7 1,1-Dichloroethene	96	1.945	1.951	(0.417)	408726	39.2427	39.243(R)
8 Carbon Disulfide	76	1.951	1.951	(0.419)	1264912	37.3717	37.372(R)
9 112Trichloro122Trifluoroethane	101	1.990	1.990	(0.427)	369310	40.2812	40.281
10 Iodomethane	142	2.047	2.053	(0.439)	317182	34.3451	34.345(R)
11 Bromoethane	108	2.143	2.149	(0.460)	249264	38.9444	38.944(R)
12 Acrolein	56	2.245	2.267	(0.482)	74644	33.9703	33.970(R)
13 Methylene Chloride	84	2.420	2.426	(0.519)	556945	58.9201	58.920(Q)
14 Acetone	43	2.562	2.697	(0.550)	156410	50.3310	50.331(MH)

	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	2.556	2.562	(0.548)	589365	59.0421	59.042(Q)
	16 Methyl tert butyl ether	73	2.748	2.726	(0.590)	1632146	56.5299	56.530
	17 1,1-Dichloroethane	63	3.178	3.173	(0.682)	1126387	52.0033	52.003
	18 Acrylonitrile	53	3.286	3.308	(0.705)	267261	57.2150	57.215
	19 Vinyl Acetate	43	3.518	3.518	(0.755)	706196	23.8635	23.864(R)
	20 Cis-1,2-Dichloroethene	96	3.727	3.721	(0.800)	625354	49.4801	49.480
	22 2,2-Dichloropropane	77	3.823	3.817	(0.820)	858129	47.6334	47.633
	23 Bromochloromethane	128	3.914	3.908	(0.840)	548144	96.8527	96.853
	24 Chloroform	83	4.015	4.010	(0.862)	949845	46.8422	46.842
	25 Carbon Tetrachloride	117	4.100	4.095	(0.802)	745262	47.3508	47.351
$	27 Dibromofluoromethane	111	4.179	4.180	(0.897)	640382	51.3612	51.361
	26 1,1,1-Trichloroethane	97	4.174	4.168	(0.896)	869724	47.7170	47.717
	28 1,1-Dichloropropene	75	4.293	4.287	(0.840)	841048	45.5943	45.594
	29 2-Butanone	72	4.372	4.406	(0.938)	72917	49.6974	49.697(Q)
	30 Benzene	78	4.519	4.519	(0.884)	2431388	46.9085	46.909
*	31 Pentafluorobenzene	168	4.660	4.660	(1.000)	434681	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.649	(0.999)	598124	51.3436	51.344
	33 1,2-Dichloroethane	62	4.711	4.711	(0.921)	714578	43.7024	43.702
	34 Trichloroethene	95	5.056	5.056	(0.989)	593270	46.8835	46.884
*	35 1,4-Difluorobenzene	114	5.113	5.107	(1.000)	1638920	50.0000	
	37 Dibromomethane	93	5.413	5.413	(1.059)	302114	44.3456	44.346
	38 1,2-Dichloropropane	63	5.509	5.503	(1.077)	662162	45.0655	45.066
	39 Bromodichloromethane	83	5.582	5.582	(1.092)	783407	49.3147	49.315
	40 2-Chloroethyl Vinyl Ether	63	6.114	6.120	(1.196)	388185	50.2736	50.274
	41 Cis 1,3-dichloropropene	75	6.131	6.131	(1.199)	1001679	48.4908	48.491
$	42 d8-Toluene	98	6.289	6.284	(1.230)	2396980	49.9107	49.911
	43 Toluene	92	6.329	6.329	(1.238)	1530262	46.3839	46.384(Q)
	44 Tetrachloroethene	166	6.646	6.640	(0.876)	621701	46.7704	46.770
	45 4-Methyl-2-Pentanone	58	6.697	6.702	(1.310)	286206	49.4365	49.437(Q)
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.310)	834858	45.4573	45.457(Q)
	47 1,1,2-Trichloroethane	97	6.821	6.821	(1.334)	467185	45.2851	45.285
	48 Chlorodibromomethane	129	6.957	6.957	(0.917)	564563	49.2245	49.224
	49 1,3-Dichloropropane	76	7.042	7.042	(0.928)	859003	45.3963	45.396
	50 1,2-Dibromoethane	107	7.138	7.138	(1.396)	441322	43.6810	43.681
	51 2-Hexanone	43	7.410	7.415	(0.976)	489133	50.1422	50.142
*	52 d5-Chlorobenzene	117	7.591	7.591	(1.000)	1920237	50.0000	
	53 Chlorobenzene	112	7.608	7.608	(1.002)	1429487	43.7376	43.738
	54 Ethyl Benzene	91	7.658	7.659	(1.009)	2773715	49.4843	49.484
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.011)	518388	44.5339	44.534
	56 m,p-xylene	106	7.789	7.789	(1.026)	2034740	95.2745	95.275(Q)
	57 o-Xylene	106	8.156	8.151	(1.075)	955038	44.9610	44.961(Q)
	58 Styrene	104	8.202	8.202	(1.080)	1697449	49.3577	49.358
	59 Bromoform	173	8.196	8.196	(0.847)	378004	46.2403	46.240
	60 Isopropyl Benzene	105	8.439	8.439	(0.872)	2438615	46.5689	46.569
$	62 4-Bromofluorobenzene	95	8.665	8.660	(1.142)	1055437	50.3757	50.376
	63 Bromobenzene	156	8.739	8.739	(0.903)	613972	44.4371	44.437
	64 N-Propyl Benzene	91	8.812	8.807	(0.911)	2942883	47.4152	47.415

	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)	601538	44.0459	44.046
66	2-Chloro Toluene	91	8.920	8.920	(0.922)	1776879	45.1898	45.190
67	1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.930)	2249984	50.5117	50.512
68	1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	180764	43.7260	43.726
69	Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	193985	38.2490	38.249(R)
70	4-Chloro Toluene	91	9.073	9.073	(0.938)	1812738	44.5052	44.505
71	T-Butyl Benzene	119	9.276	9.271	(0.959)	1806996	46.1182	46.118
72	1,2,4-Trimethylbenzene	105	9.344	9.339	(0.966)	2206118	50.3662	50.366
73	S-Butyl Benzene	105	9.440	9.435	(0.976)	2681888	47.0548	47.055
74	4-Isopropyl Toluene	119	9.587	9.582	(0.991)	2279316	48.7399	48.740
75	1,3-Dichlorobenzene	146	9.599	9.593	(0.992)	1115595	43.5499	43.550
* 76	d4-1,4-Dichlorobenzene	152	9.672	9.667	(1.000)	1043748	50.0000	(Q)
77	1,4-Dichlorobenzene	146	9.684	9.684	(1.001)	1215341	46.0312	46.031
78	N-Butyl Benzene	91	9.972	9.967	(1.031)	2338675	51.9606	51.961
$ 79	d4-1,2-Dichlorobenzene	152	10.057	10.051	(1.040)	1058515	49.7815	49.781(Q)
80	1,2-Dichlorobenzene	146	10.063	10.063	(1.040)	1050231	42.1522	42.152
81	1,2-Dibromo 3-Chloropropane	75	10.815	10.809	(1.118)	113488	42.9153	42.915
82	Hexachloro 1,3-Butadiene	225	11.499	11.488	(1.189)	505889	45.7554	45.755
83	1,2,4-Trichlorobenzene	180	11.488	11.477	(1.188)	855763	47.6326	47.633
84	Naphthalene	128	11.799	11.794	(1.220)	1852216	46.9717	46.972
85	1,2,3-Trichlorobenzene	180	11.986	11.975	(1.239)	785661	45.2427	45.243

QC Flag Legend

Q - Qualifier signal failed the ratio test.
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: nt5.i
Lab File ID: icv0611.d
Lab Smp Id: ICV0611
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 11-JUN-2013
Calibration Time: 10:09
Client Smp ID: ICV0611
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	459631	229816	919262	434681	-5.43
35 1,4-Difluorobenze	1692431	846216	3384862	1638920	-3.16
52 d5-Chlorobenzene	1987215	993608	3974430	1920237	-3.37
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1043748	-2.94

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.66	0.00
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.11
52 d5-Chlorobenzene	7.59	7.09	8.09	7.59	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: Client SDG: 11JUN13
Sample Matrix: SOLID Fraction: VOA
Lab Smp Id: ICV0611 Client Smp ID: ICV0611
Level: LOW Operator: PB
Data Type: MS DATA SampleType: LCS
SpikeList File: icv.spk Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem1/nt5.i/11JUN13.b/VO121012S.m
Misc Info: 13-

SPIKE	COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1	Dichlorodifluorome	50.000	64.042	128.08*	80-120
2	Chloromethane	50.000	50.058	100.12	80-120
3	Vinyl Chloride	50.000	59.656	119.31	80-120
4	Bromomethane	50.000	51.113	102.23	80-120
5	Chloroethane	50.000	56.569	113.14	80-120
6	Trichlorofluoromet	50.000	51.856	103.71	80-120
12	Acrolein	50.000	33.970	67.94*	80-120
9	112Trichloro122Tri	50.000	40.281	80.56	80-120
14	Acetone	50.000	50.331	100.66	80-120
7	1,1-Dichloroethene	50.000	39.243	78.49*	80-120
11	Bromoethane	50.000	38.944	77.89*	80-120
10	Iodomethane	50.000	34.345	68.69*	80-120
13	Methylene Chloride	50.000	58.920	117.84	80-120
8	Carbon Disulfide	50.000	37.372	74.74*	80-120
18	Acrylonitrile	50.000	57.215	114.43	80-120
15	Trans-1,2-Dichloro	50.000	59.042	118.08	80-120
16	Methyl tert butyl	50.000	56.530	113.06	80-120
19	Vinyl Acetate	50.000	23.864	47.73*	80-120
17	1,1-Dichloroethane	50.000	52.003	104.01	80-120
29	2-Butanone	50.000	49.697	99.39	80-120
22	2,2-Dichloropropan	50.000	47.633	95.27	80-120
20	Cis-1,2-Dichloroet	50.000	49.480	98.96	80-120
24	Chloroform	50.000	46.842	93.68	80-120
23	Bromochloromethane	100.00	96.853	96.85	80-120
26	1,1,1-Trichloroeth	50.000	47.717	95.43	80-120
28	1,1-Dichloropropen	50.000	45.594	91.19	80-120
25	Carbon Tetrachlori	50.000	47.351	94.70	80-120
33	1,2-Dichloroethane	50.000	43.702	87.40	80-120
30	Benzene	50.000	46.909	93.82	80-120
34	Trichloroethene	50.000	46.884	93.77	80-120
38	1,2-Dichloropropan	50.000	45.066	90.13	80-120
39	Bromodichlorometha	50.000	49.315	98.63	80-120
37	Dibromomethane	50.000	44.346	88.69	80-120

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
40 2-Chloroethyl Viny	50.000	50.274	100.55	80-120
45 4-Methyl-2-Pentano	50.000	49.437	98.87	80-120
41 Cis 1,3-dichloropr	50.000	48.491	96.98	80-120
43 Toluene	50.000	46.384	92.77	80-120
46 Trans 1,3-Dichloro	50.000	45.457	90.91	80-120
51 2-Hexanone	50.000	50.142	100.28	80-120
47 1,1,2-Trichloroeth	50.000	45.285	90.57	80-120
49 1,3-Dichloropropan	50.000	45.396	90.79	80-120
44 Tetrachloroethene	50.000	46.770	93.54	80-120
48 Chlorodibromometha	50.000	49.224	98.45	80-120
50 1,2-Dibromoethane	50.000	43.681	87.36	80-120
53 Chlorobenzene	50.000	43.738	87.48	80-120
55 1,1,1,2-Tetrachlor	50.000	44.534	89.07	80-120
54 Ethyl Benzene	50.000	49.484	98.97	80-120
56 m,p-xylene	100.00	95.275	95.27	80-120
57 o-Xylene	50.000	44.961	89.92	80-120
58 Styrene	50.000	49.358	98.72	80-120
60 Isopropyl Benzene	50.000	46.569	93.14	80-120
59 Bromoform	50.000	46.240	92.48	80-120
65 1,1,2,2-Tetrachlor	50.000	44.046	88.09	80-120
68 1,2,3-Trichloropro	50.000	43.726	87.45	80-120
69 Trans-1,4-Dichloro	50.000	38.249	76.50*	80-120
64 N-Propyl Benzene	50.000	47.415	94.83	80-120
63 Bromobenzene	50.000	44.437	88.87	80-120
67 1,3,5-Trimethyl Be	50.000	50.512	101.02	80-120
66 2-Chloro Toluene	50.000	45.190	90.38	80-120
70 4-Chloro Toluene	50.000	44.505	89.01	80-120
71 T-Butyl Benzene	50.000	46.118	92.24	80-120
72 1,2,4-Trimethylben	50.000	50.366	100.73	80-120
73 S-Butyl Benzene	50.000	47.055	94.11	80-120
74 4-Isopropyl Toluen	50.000	48.740	97.48	80-120
75 1,3-Dichlorobenzen	50.000	43.550	87.10	80-120
77 1,4-Dichlorobenzen	50.000	46.031	92.06	80-120
78 N-Butyl Benzene	50.000	51.961	103.92	80-120
80 1,2-Dichlorobenzen	50.000	42.152	84.30	80-120
81 1,2-Dibromo 3-Chlo	50.000	42.915	85.83	80-120
83 1,2,4-Trichloroben	50.000	47.633	95.27	80-120
82 Hexachloro 1,3-But	50.000	45.755	91.51	80-120
84 Naphthalene	50.000	46.972	93.94	80-120
85 1,2,3-Trichloroben	50.000	45.243	90.49	80-120

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	51.361	102.72	70-130

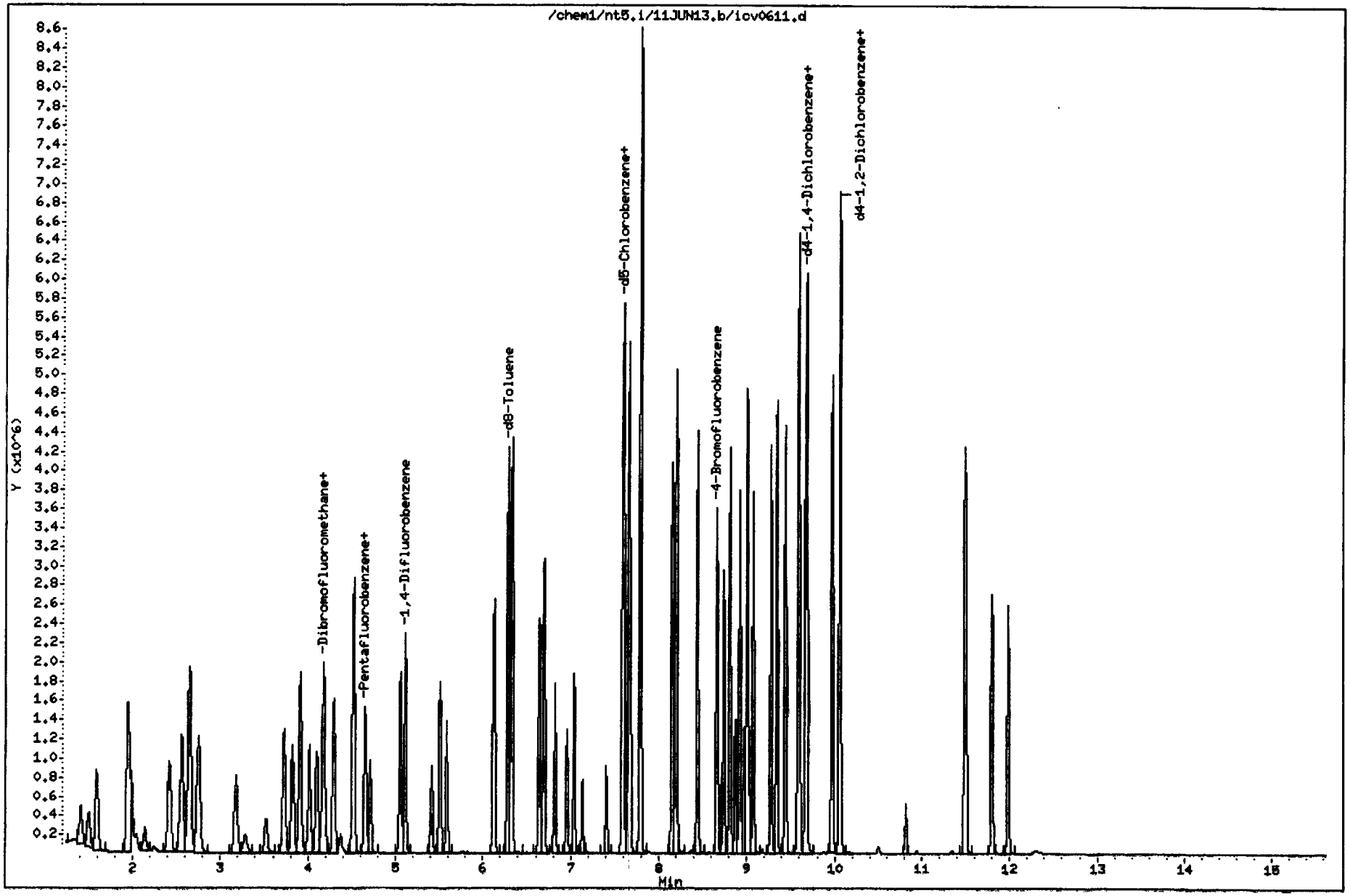
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	51.344	102.69	80-149
$ 42 d8-Toluene	50.000	49.911	99.82	77-120
$ 62 4-Bromofluorobenze	50.000	50.376	100.75	80-120
$ 79 d4-1,2-Dichloroben	50.000	49.781	99.56	80-120

Data File: /chem1/nt5.i/11JUN13.b/icv0611.d
Date : 11-JUN-2013 14:04
Client ID: ICV0611
Sample Info: ICV0611,5,5,0

Instrument: nt5.i

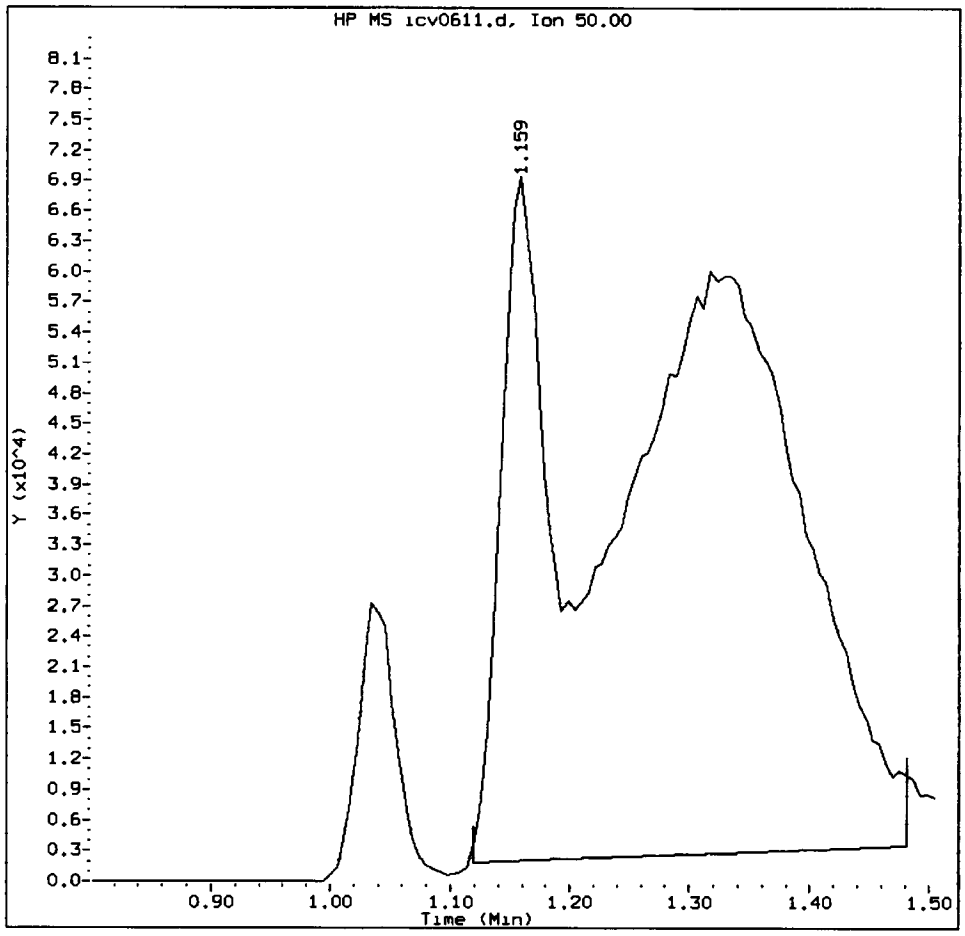
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



ICV0611, /chem1/nt5.i/11JUN13.b/icv0611.d

Chloromethane Amount: 50.06 Area: 768277



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/12/1

CO-ELUTION SUMMARY FOR FILE - icv0611.d

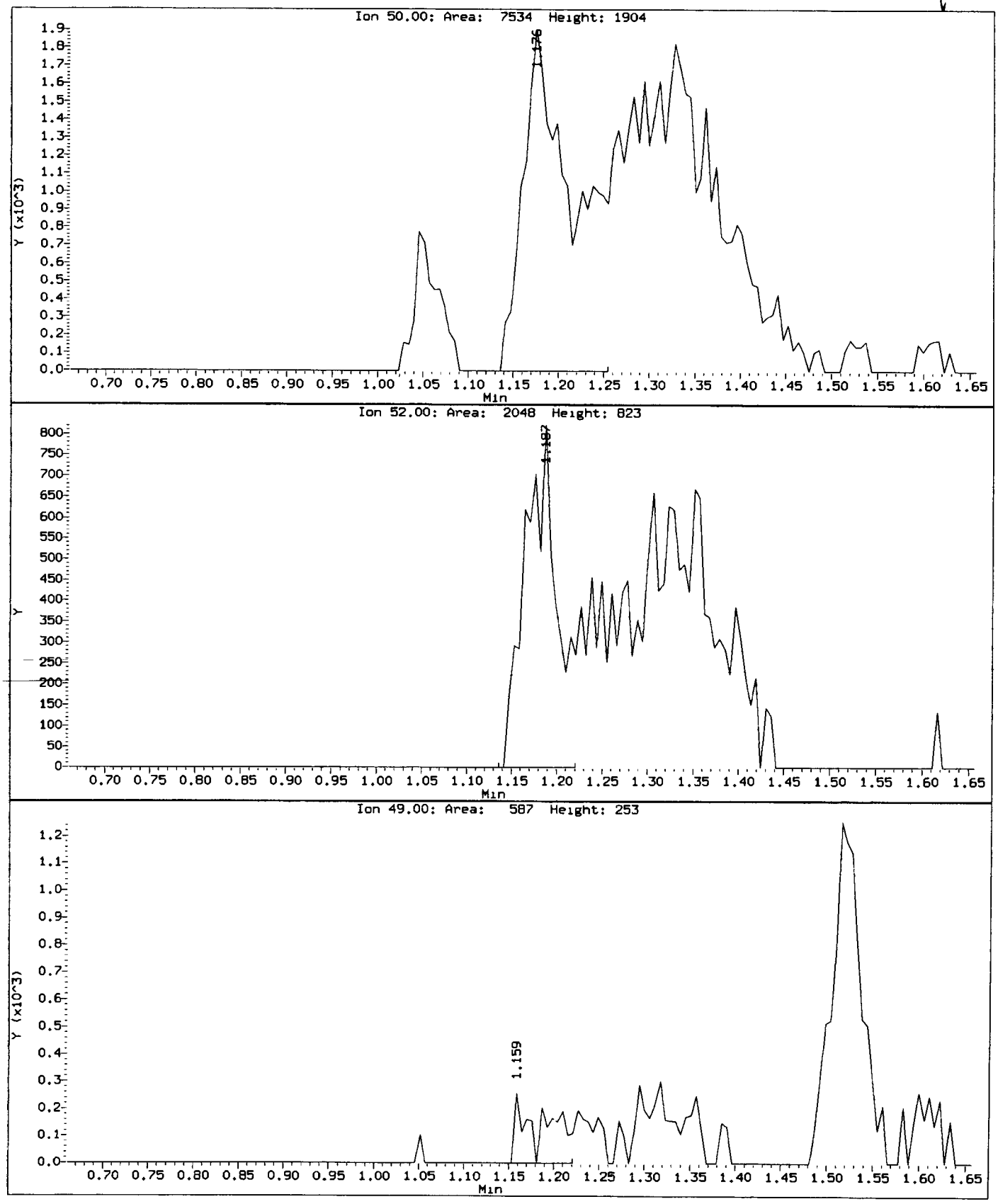
Lab ID: ICV0611, Method: VO121012S.m, Instrument: nt5.i, Date: 11-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

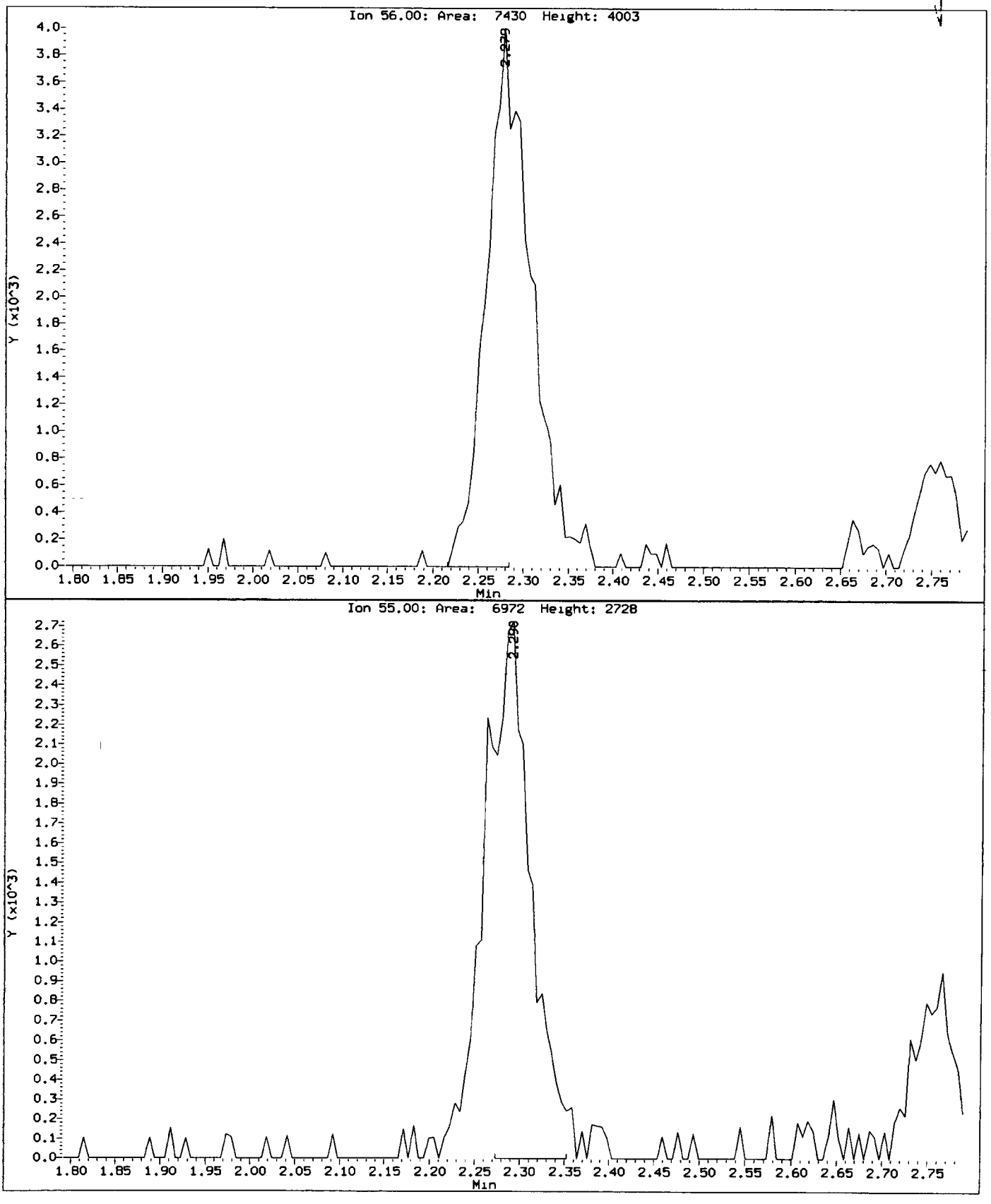
Data File: /chem1/nt5.i/11JUN13.b/0010611.d
Injection Date: 11-JUN-2013 08:33
Instrument: nt5.i
Client Sample ID: VSTD1

Compound: Chloromethane
CAS Number:



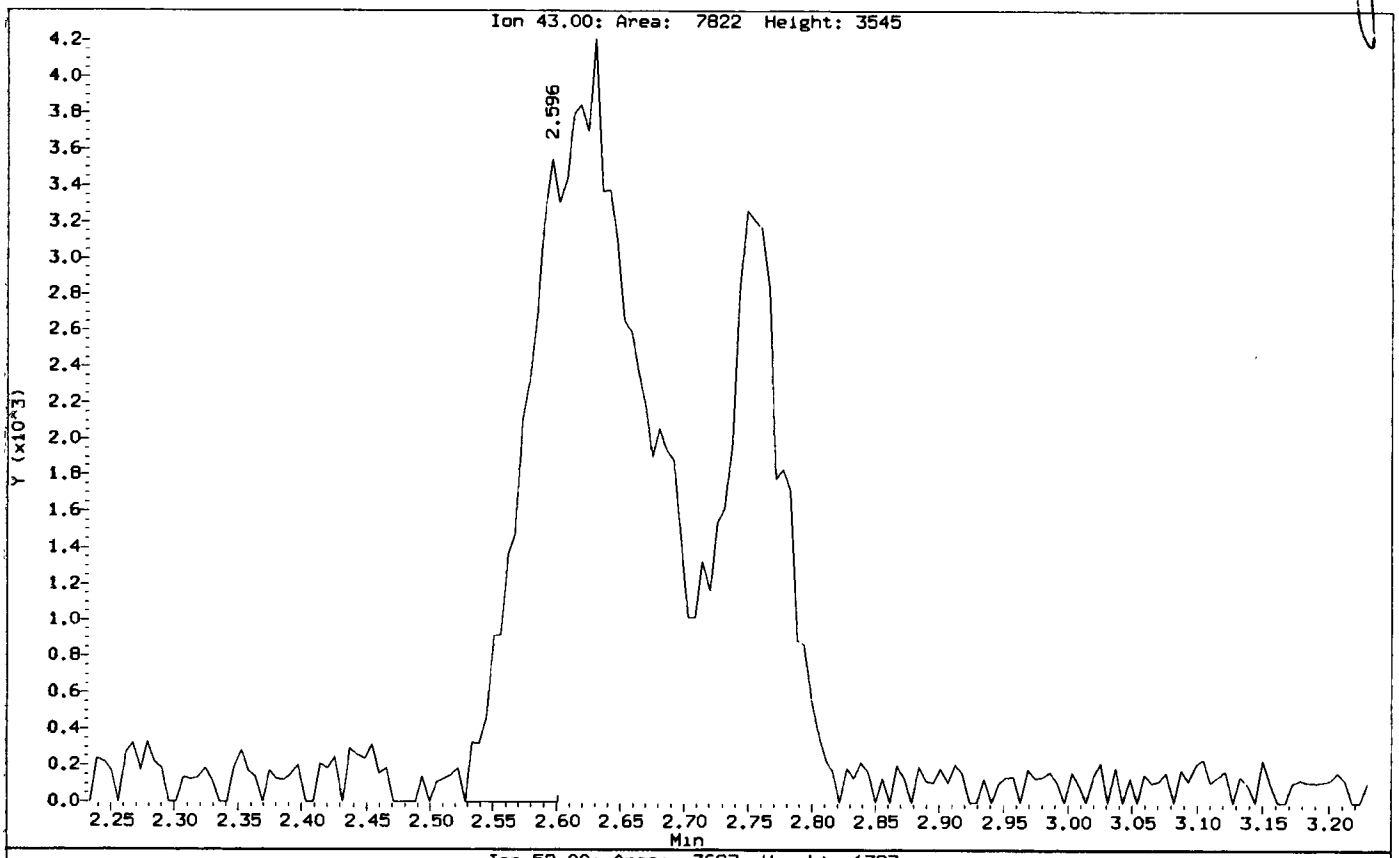
Data File: /chem1/nt5.i/11JUN13.b/0010611.d
Injection Date: 11-JUN-2013 08:33
Instrument: nt5.i
Client Sample ID: VSTD1

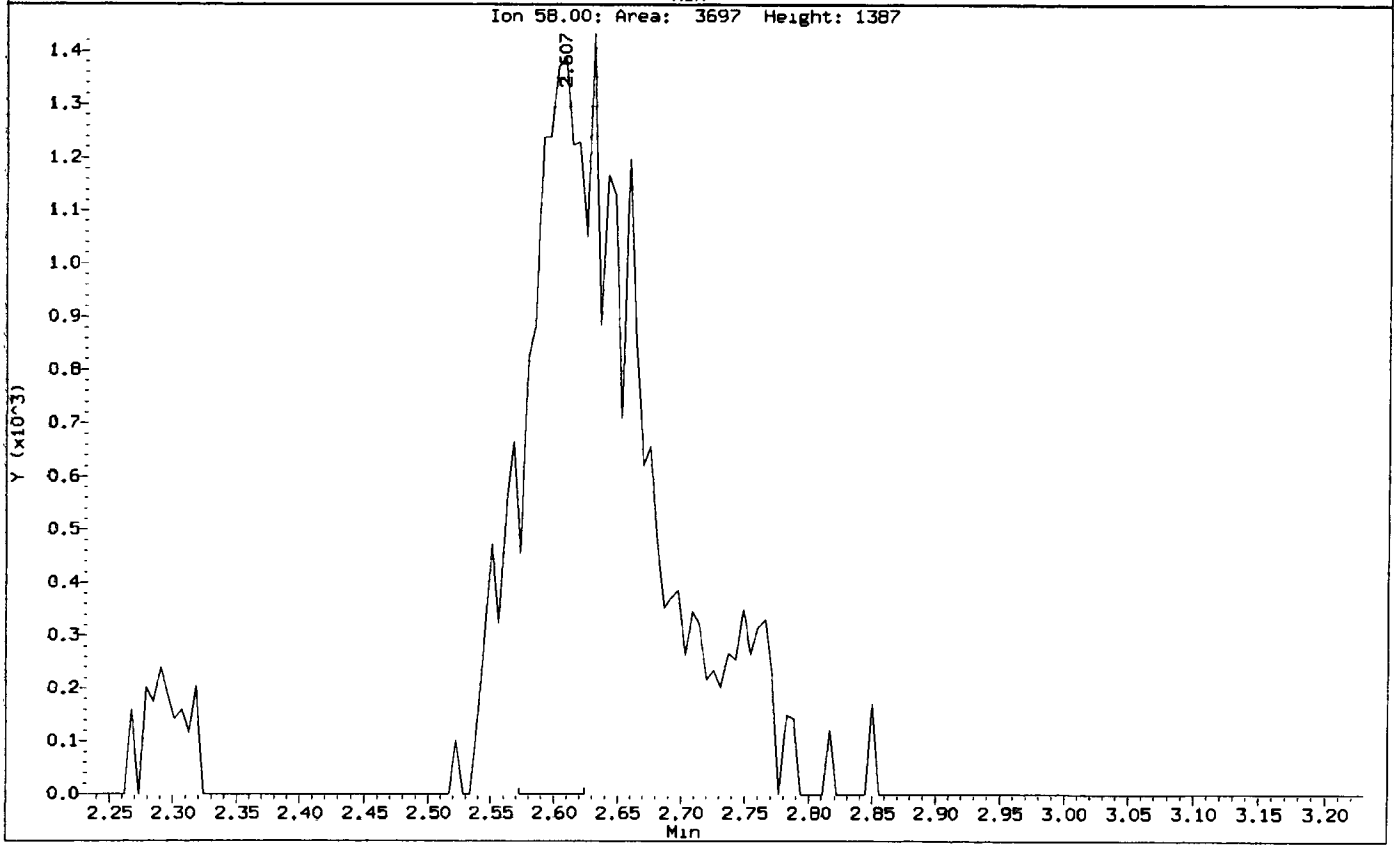
Compound: Acrolein
CAS Number:



Data File: /chem1/nt5.i/11JUN13.b/0010611.d
Injection Date: 11-JUN-2013 08:33
Instrument: nt5.i
Client Sample ID: VSTD1

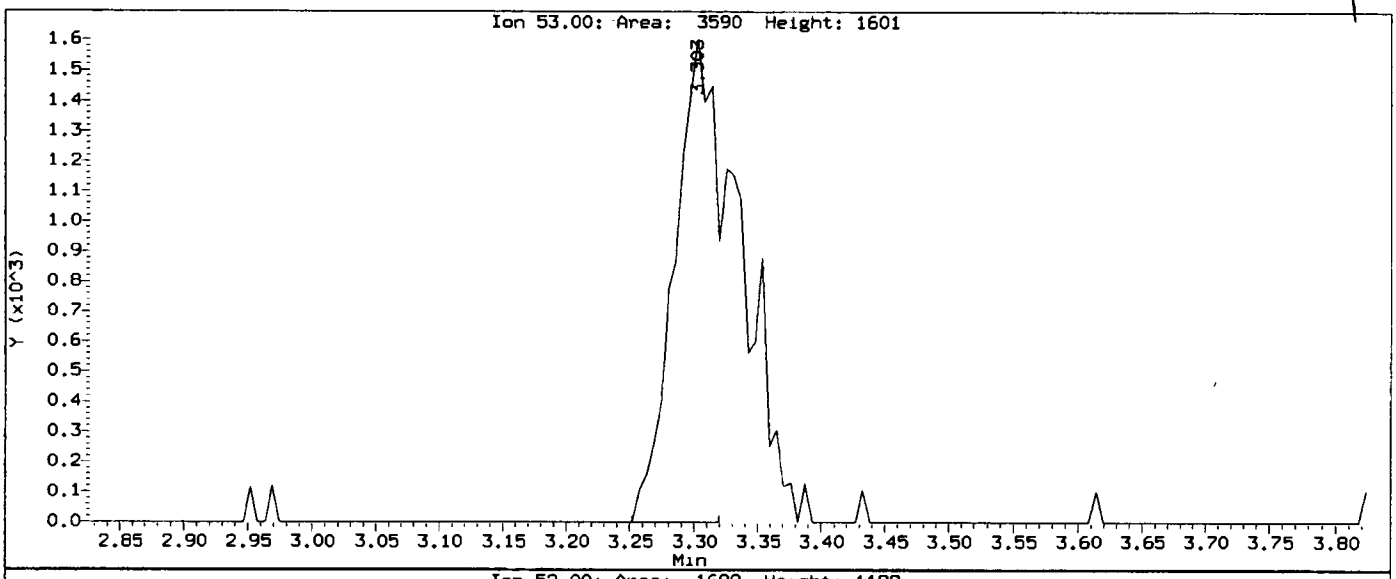
Compound: Acetone
CAS Number:

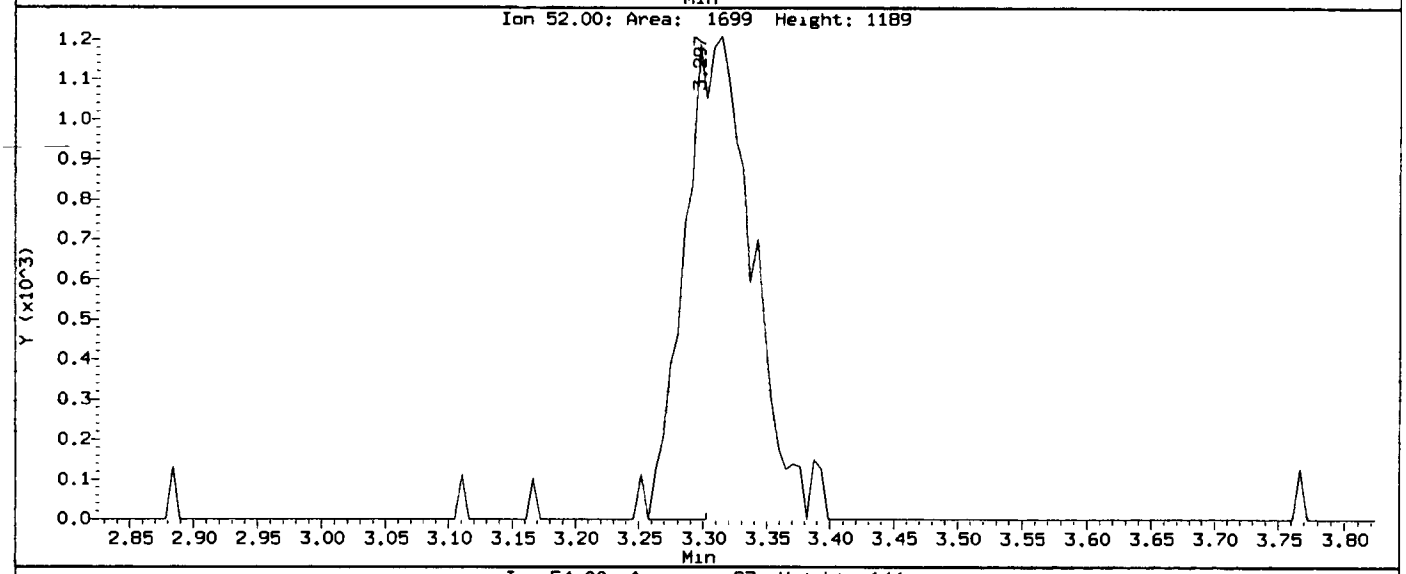


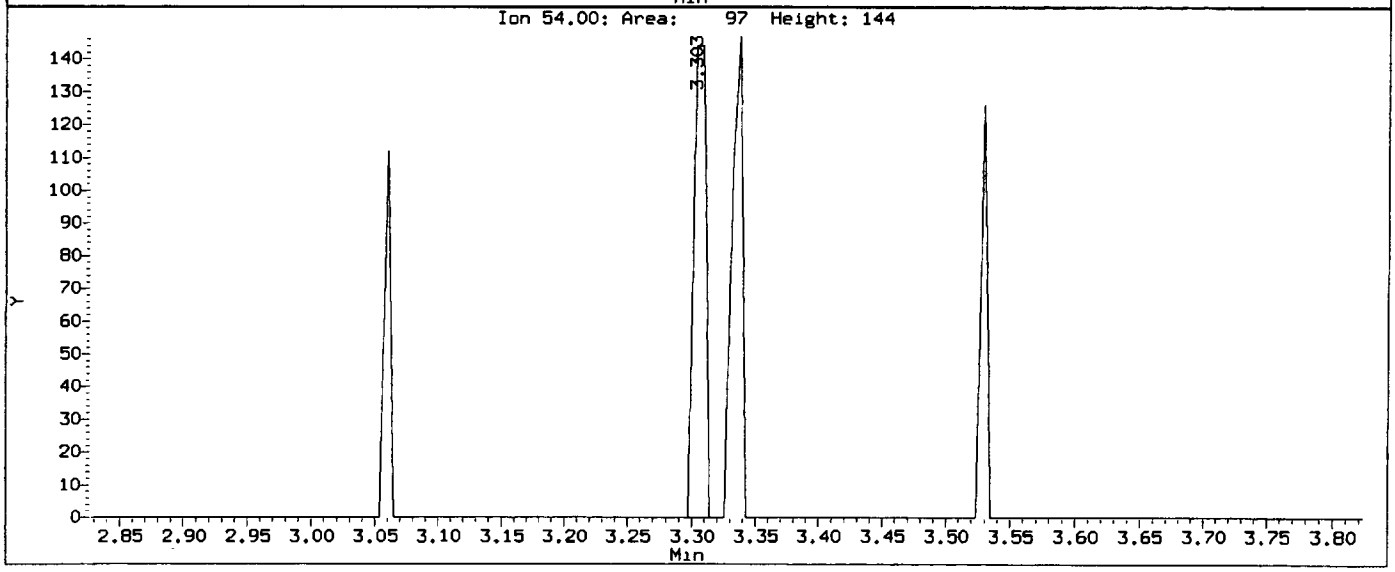


Data File: /chem1/nt5.i/11JUN13.b/0010611.d
Injection Date: 11-JUN-2013 08:33
Instrument: nt5.i
Client Sample ID: VSTD1

Compound: Acrylonitrile
CAS Number:

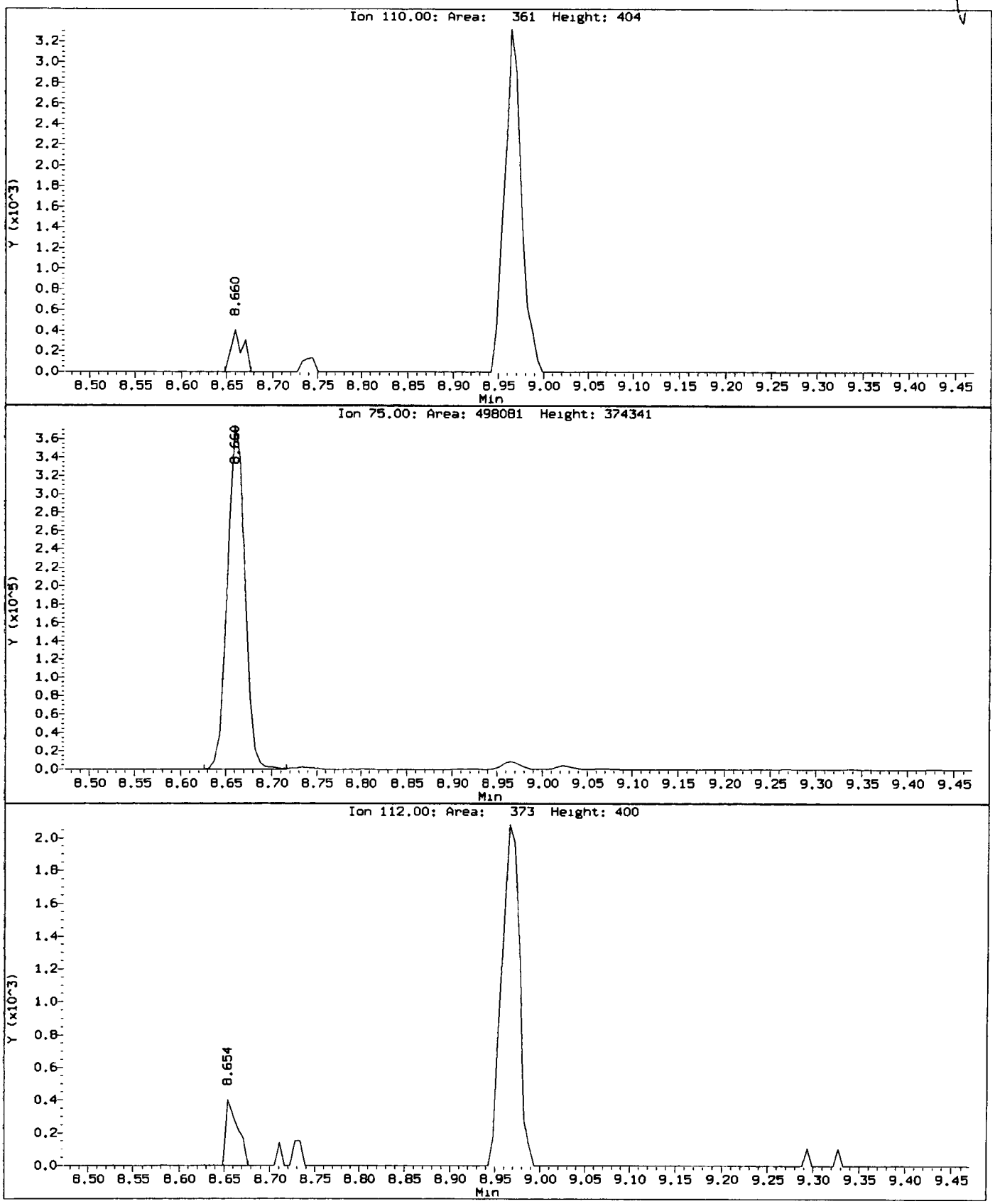






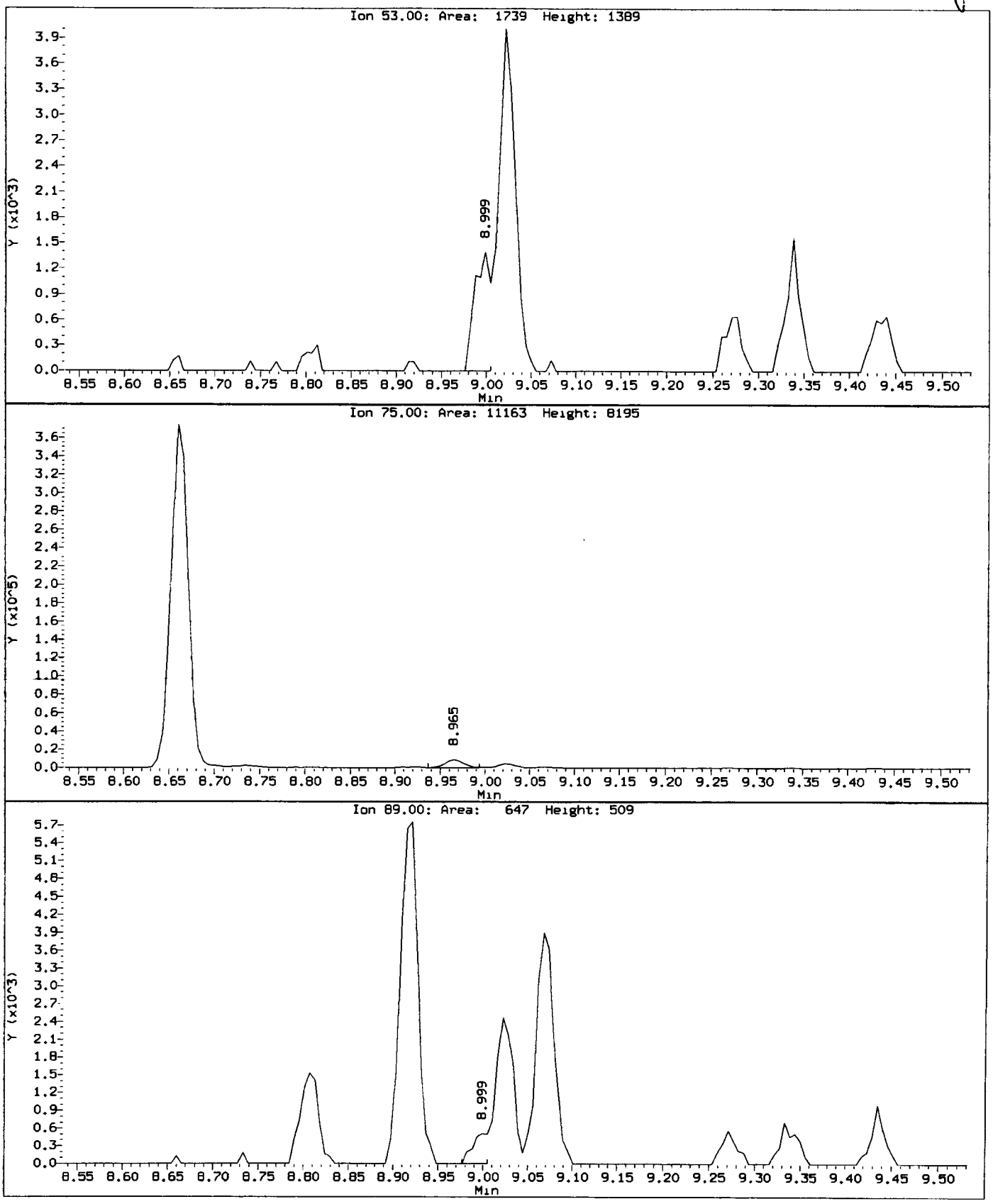
Data File: /chem1/nt5.i/11JUN13.b/0010611.d
Injection Date: 11-JUN-2013 08:33
Instrument: nt5.i
Client Sample ID: VSTD1

Compound: 1,2,3-Trichloropropane
CAS Number:



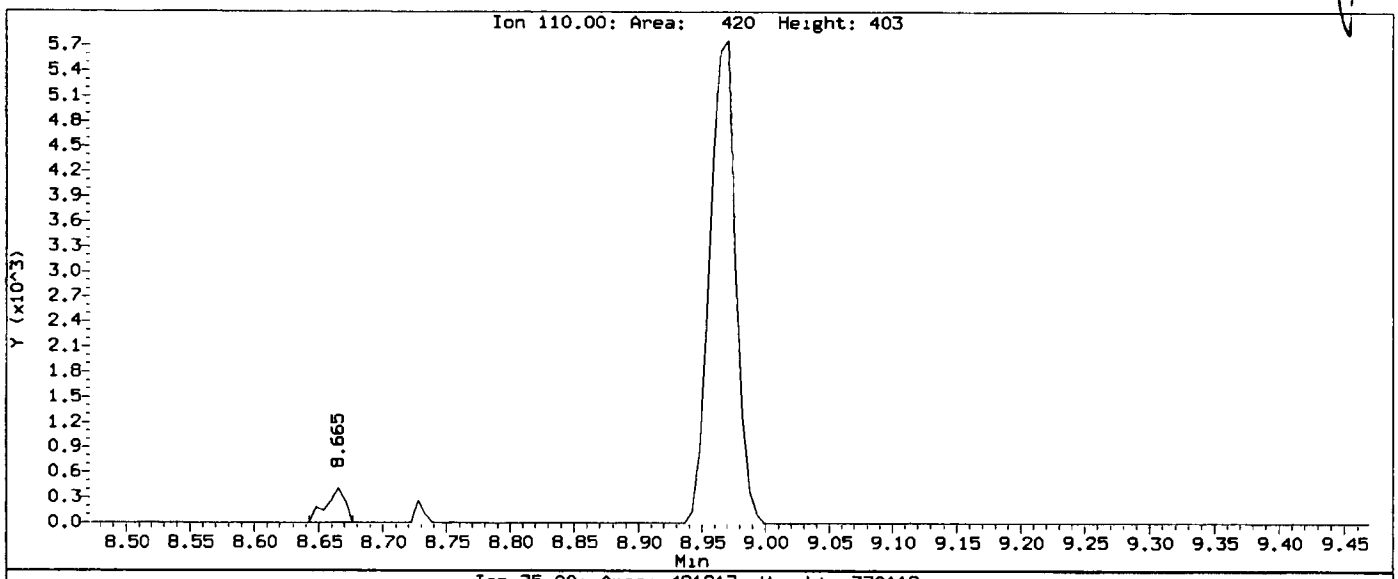
Data File: /chem1/nt5.i/11JUN13.b/0010611.d
Injection Date: 11-JUN-2013 08:33
Instrument: nt5.i
Client Sample ID: VSTD1

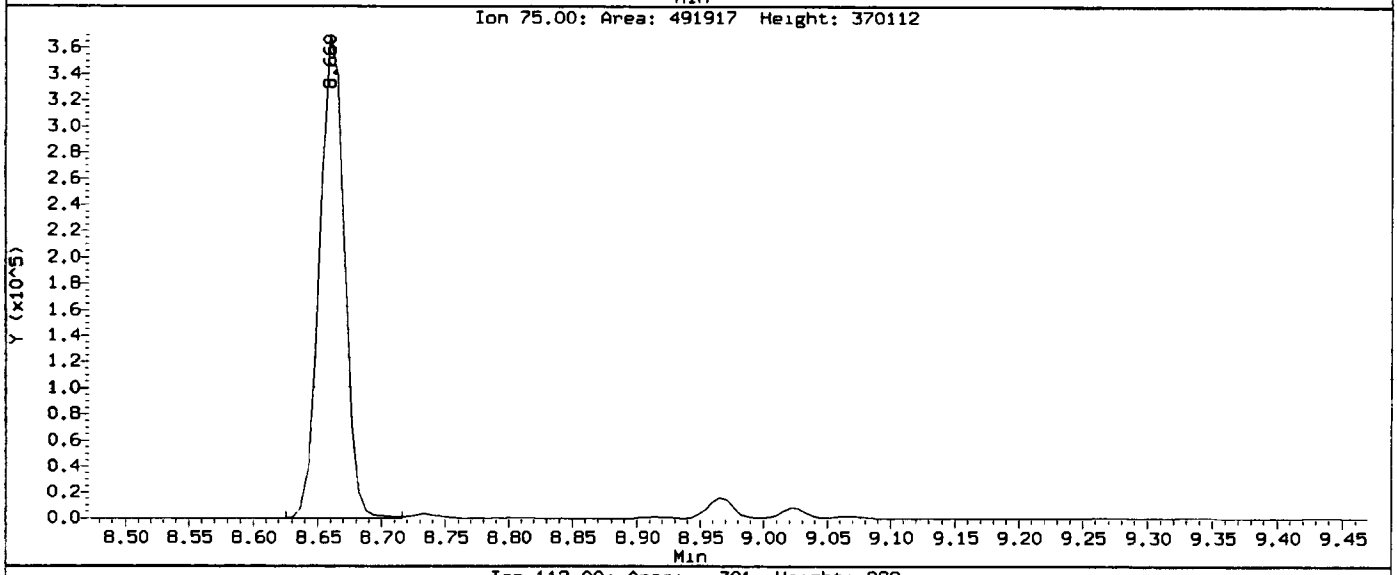
Compound: Trans-1,4-Dichloro 2-Butene
CAS Number:

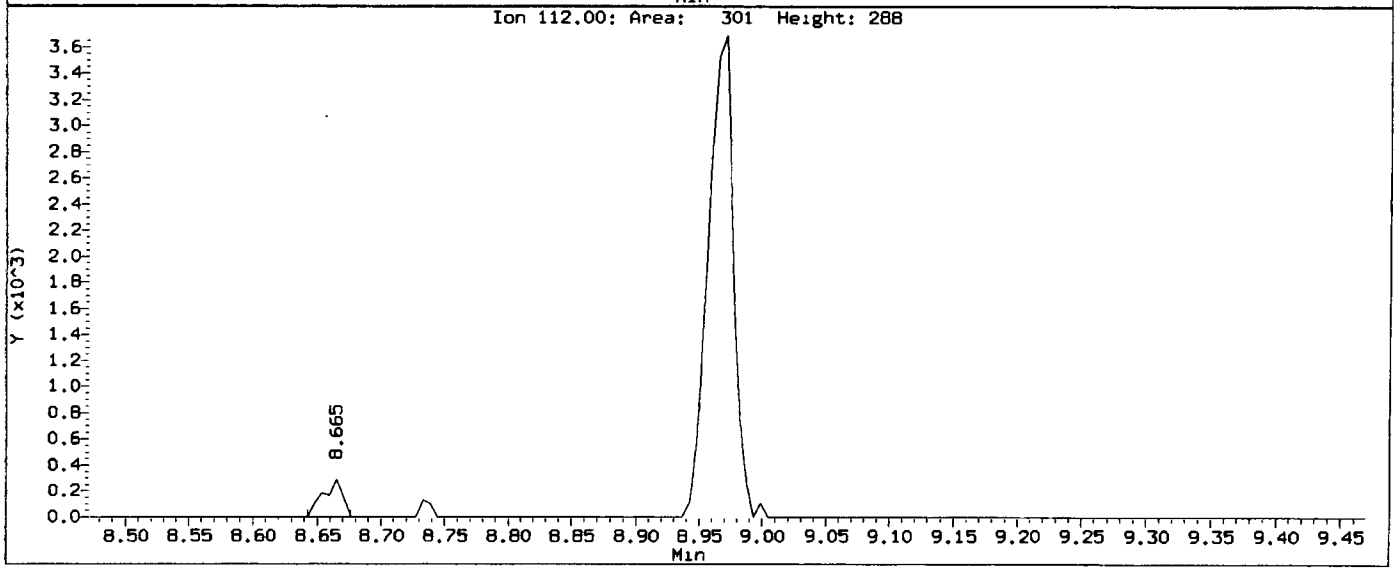


Data File: /chem1/nt5.i/11JUN13.b/0020611.d
Injection Date: 11-JUN-2013 11:20
Instrument: nt5.i
Client Sample ID: VSTD2

Compound: 1,2,3-Trichloropropane
CAS Number:

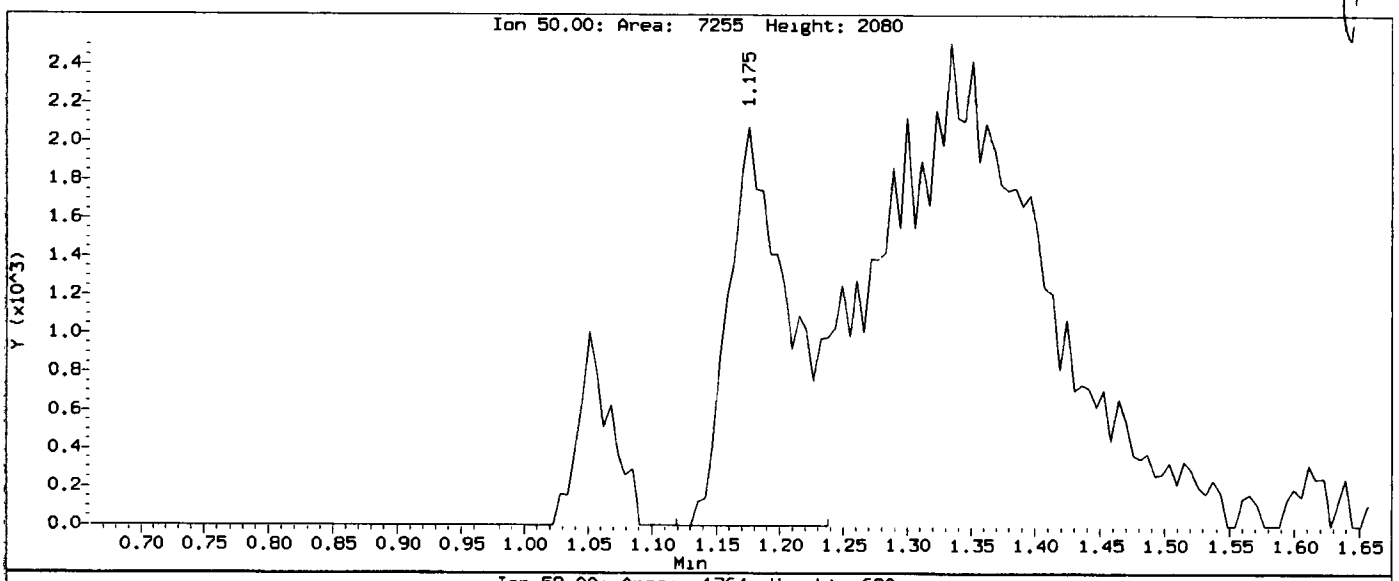


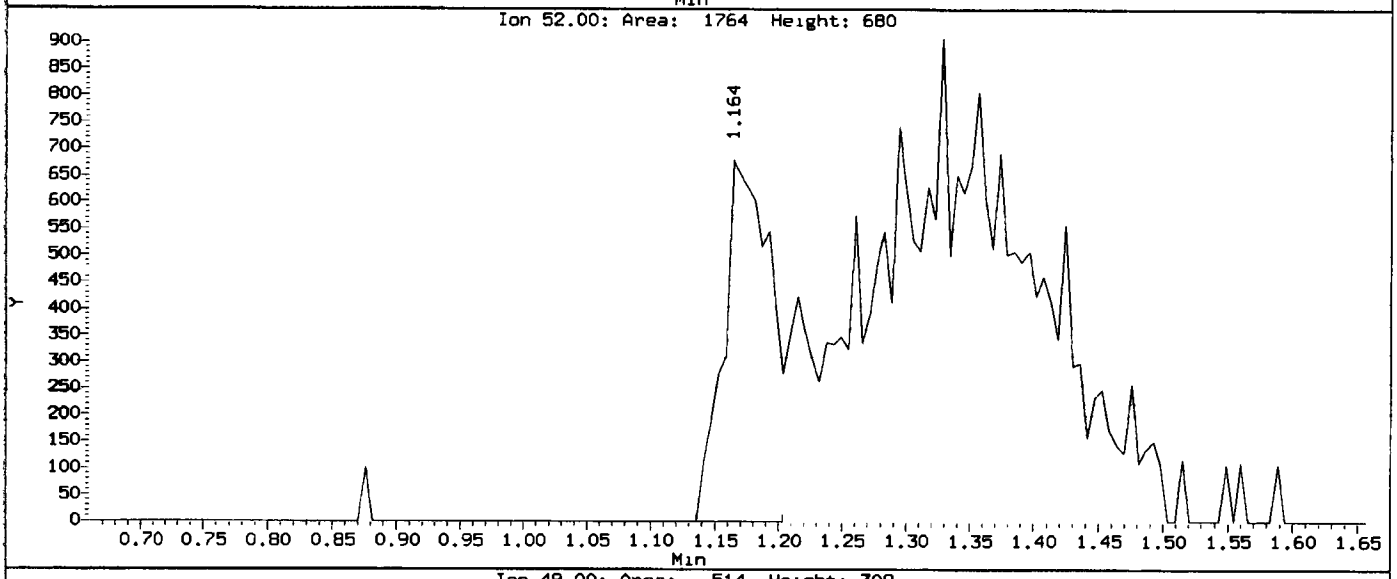


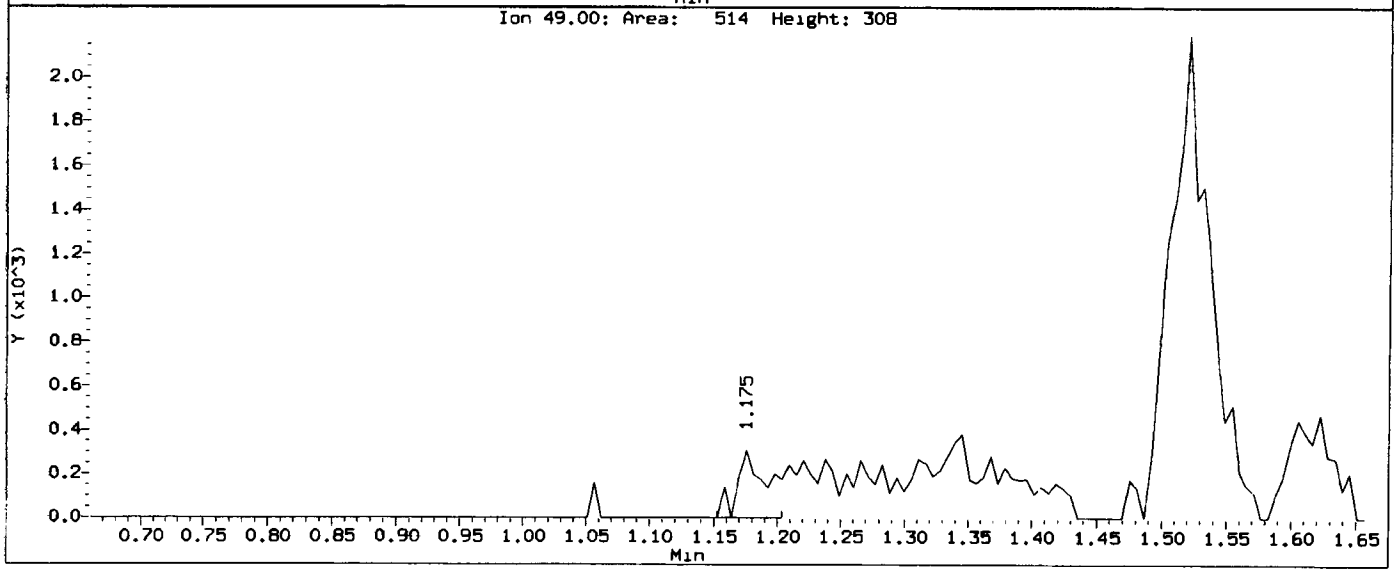


Data File: /chem1/nt5.i/11JUN13.b/0020611.d
Injection Date: 11-JUN-2013 11:20
Instrument: nt5.i
Client Sample ID: VSTD2

Compound: Chloromethane
CAS Number:

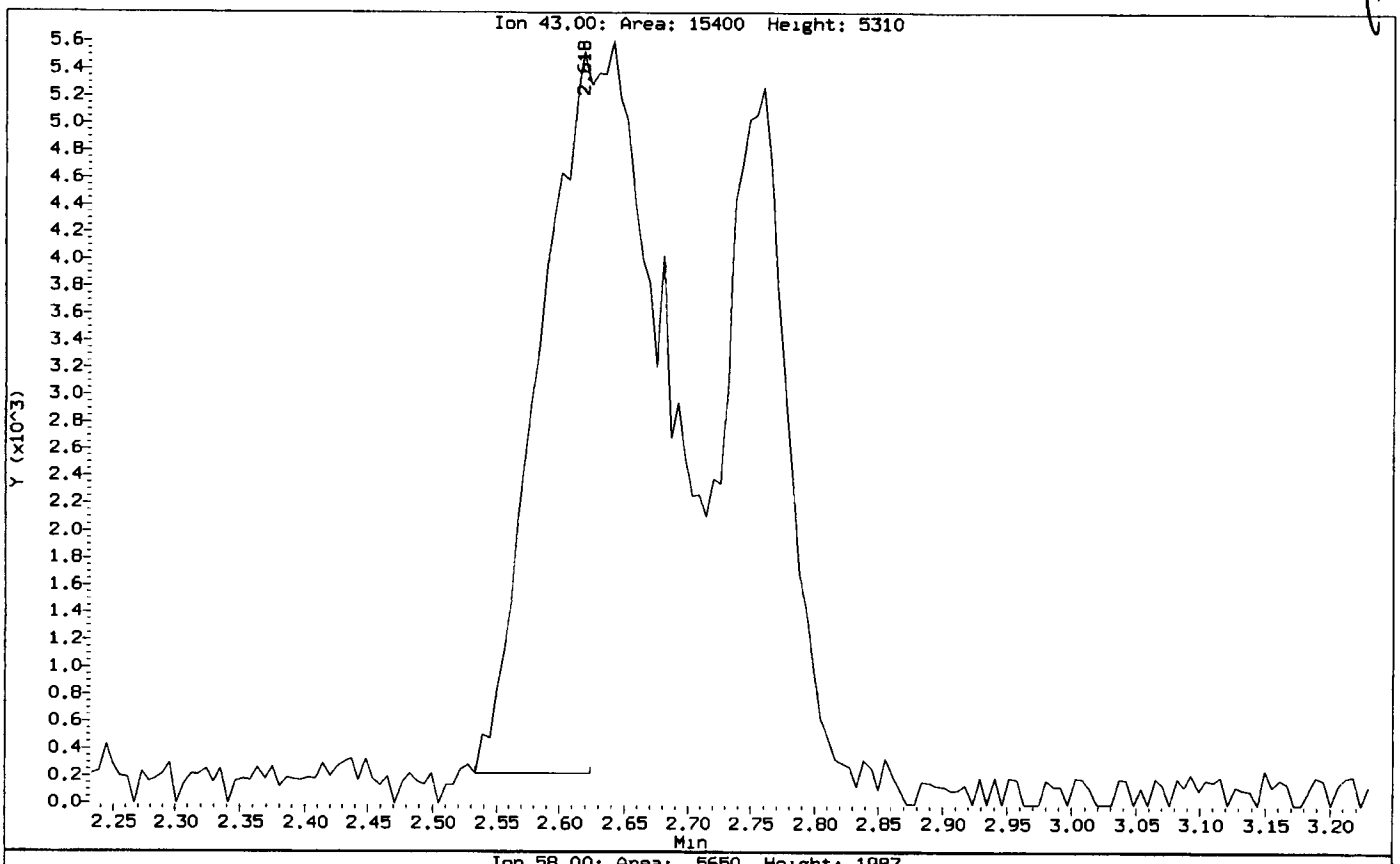


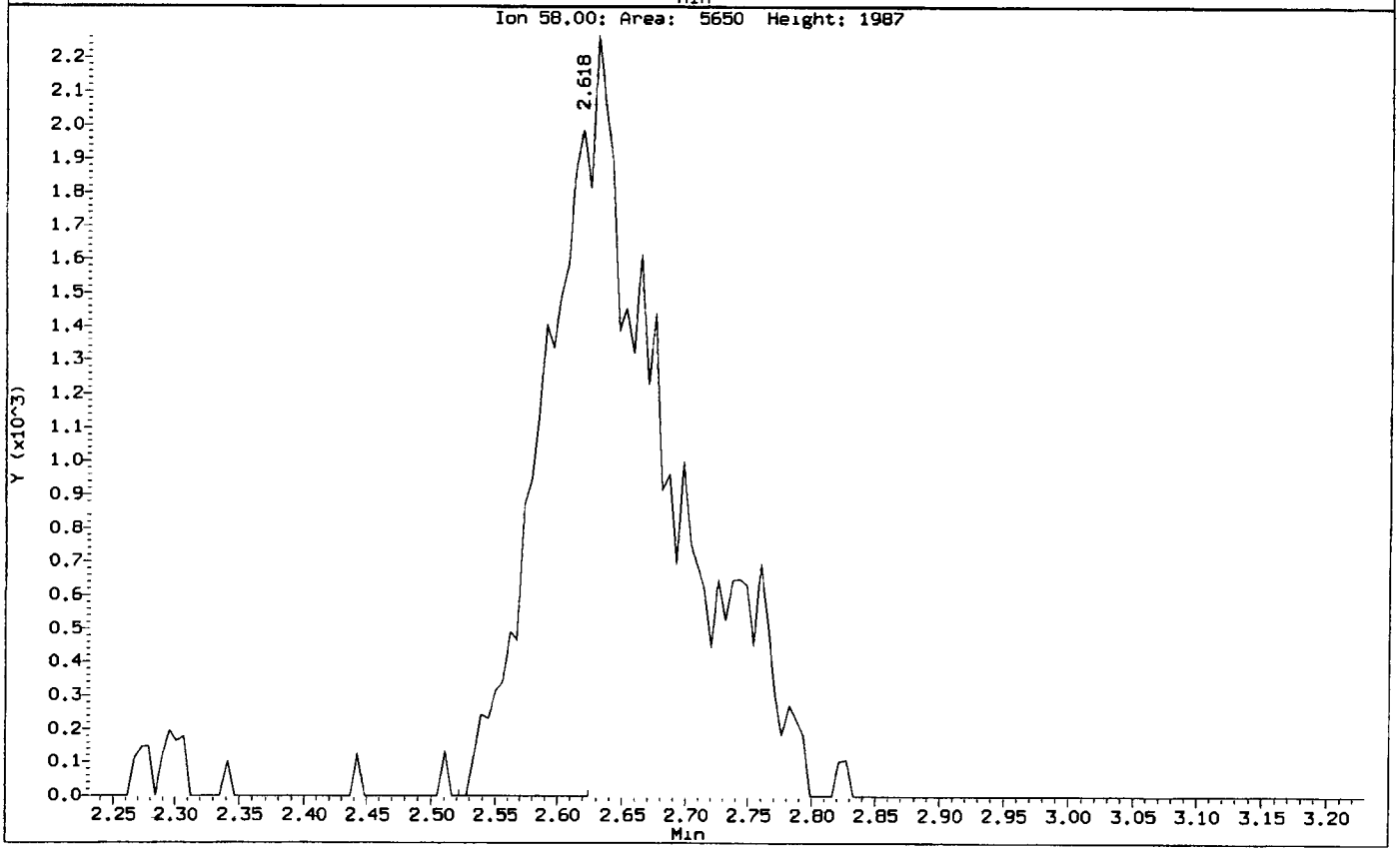




Data File: /chem1/nt5.1/11JUN13.b/0020611.d
Injection Date: 11-JUN-2013 11:20
Instrument: nt5.1
Client Sample ID: VSTD2

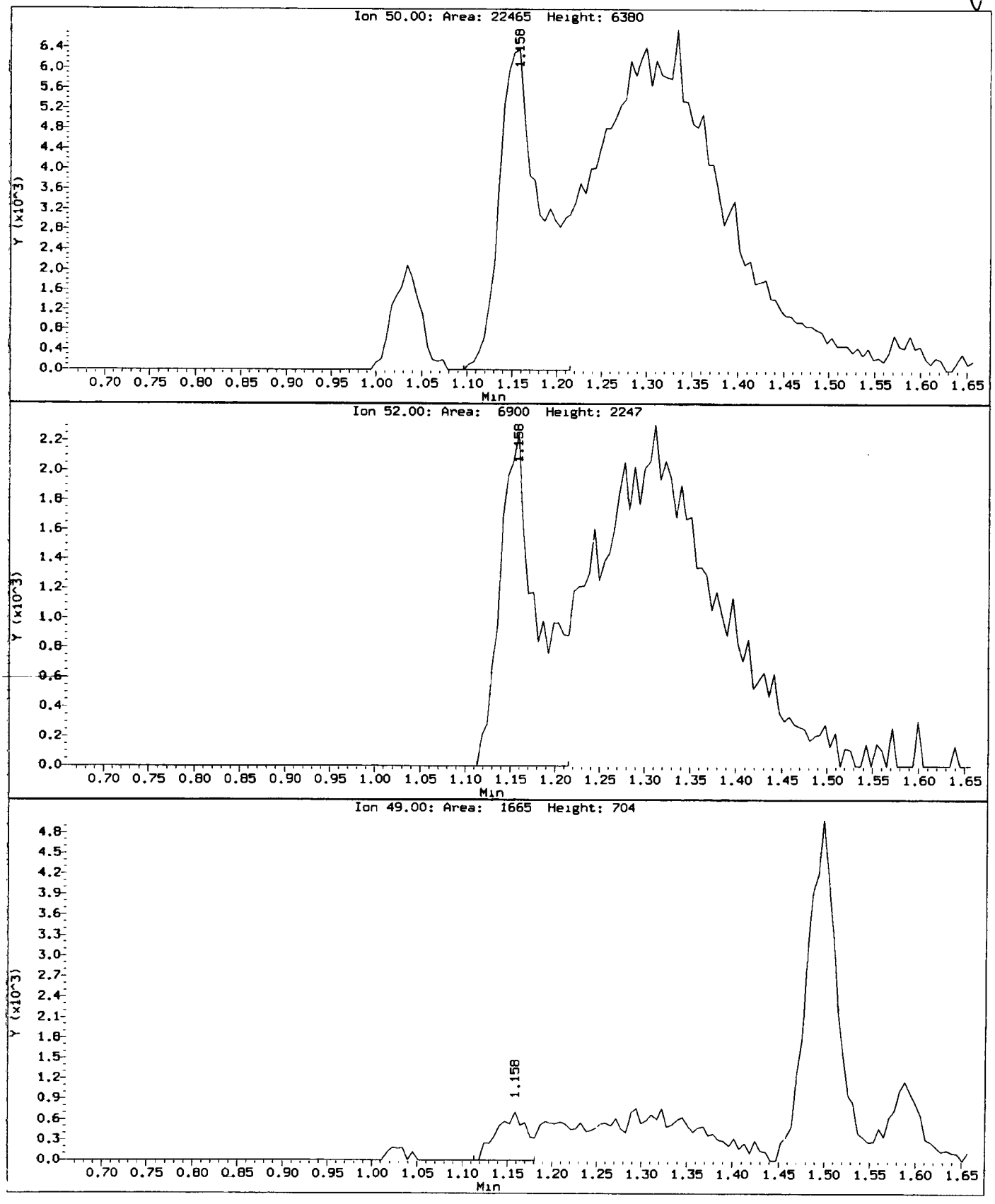
Compound: Acetone
CAS Number:





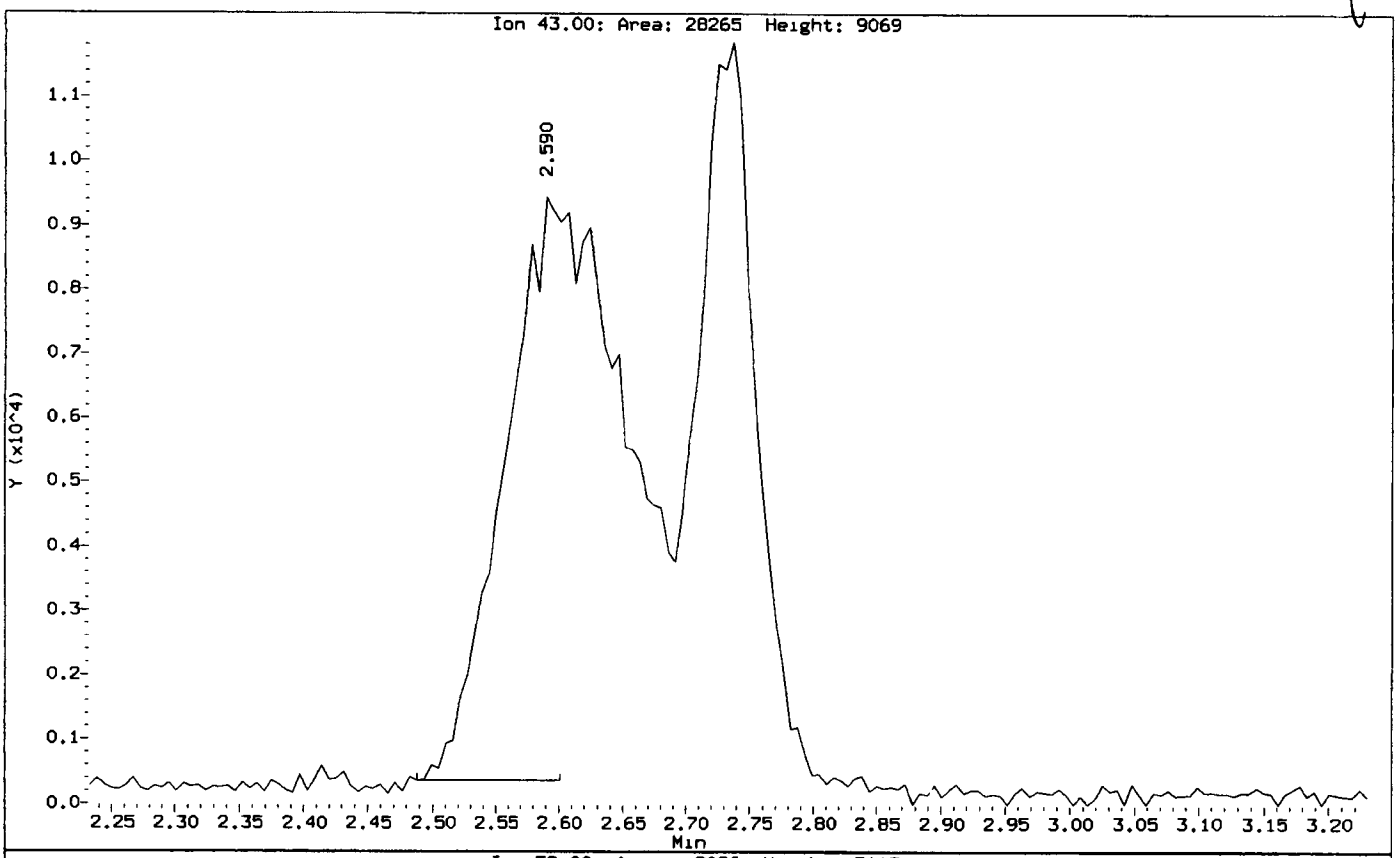
Data File: /chem1/nt5.1/11JUN13.b/0050611.d
Injection Date: 11-JUN-2013 10:57
Instrument: nt5.1
Client Sample ID: VSTD5

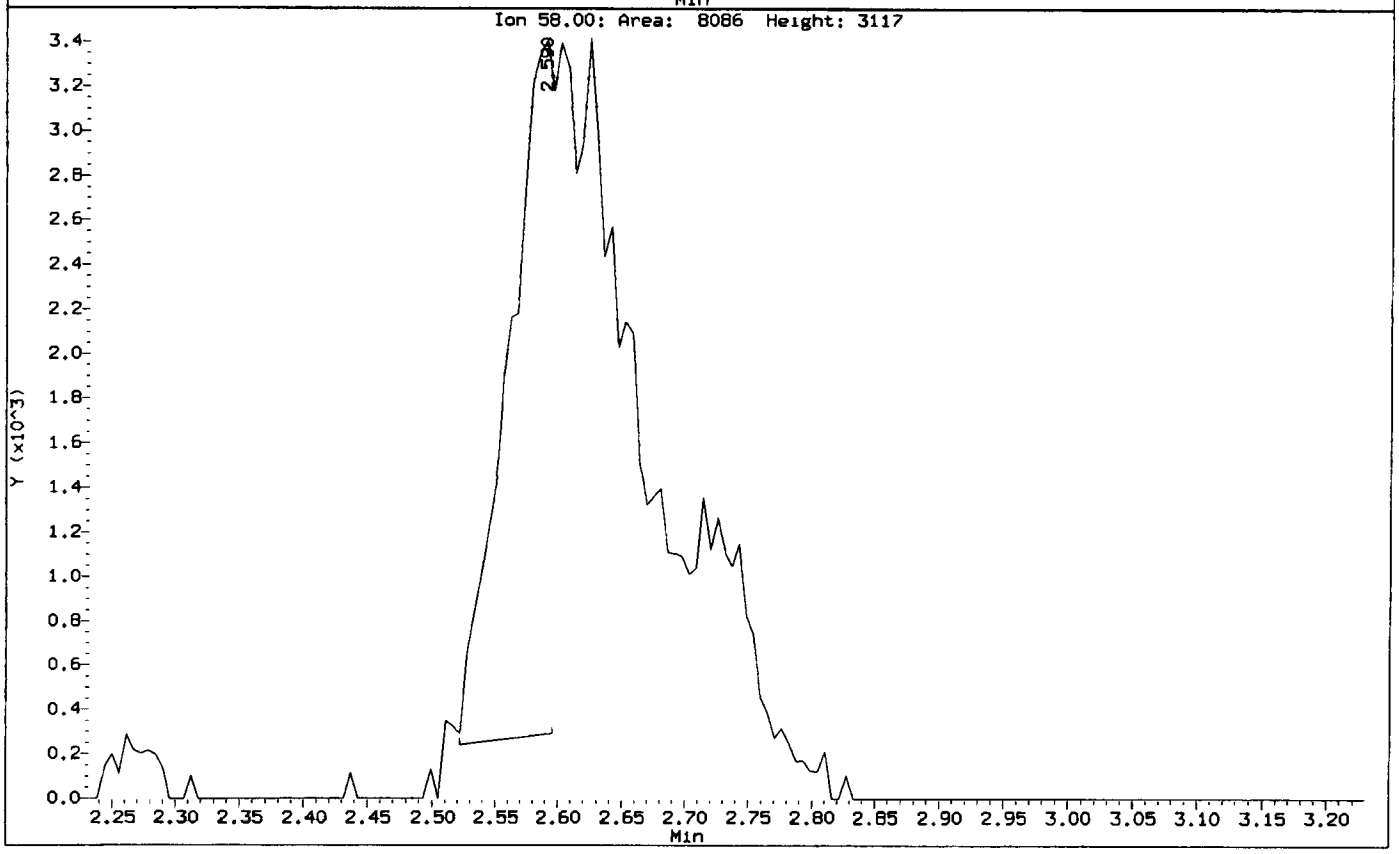
Compound: Chloromethane
CAS Number:



Data File: /chem1/nt5.i/11JUN13.b/0050611.d
Injection Date: 11-JUN-2013 10:57
Instrument: nt5.i
Client Sample ID: VSTD5

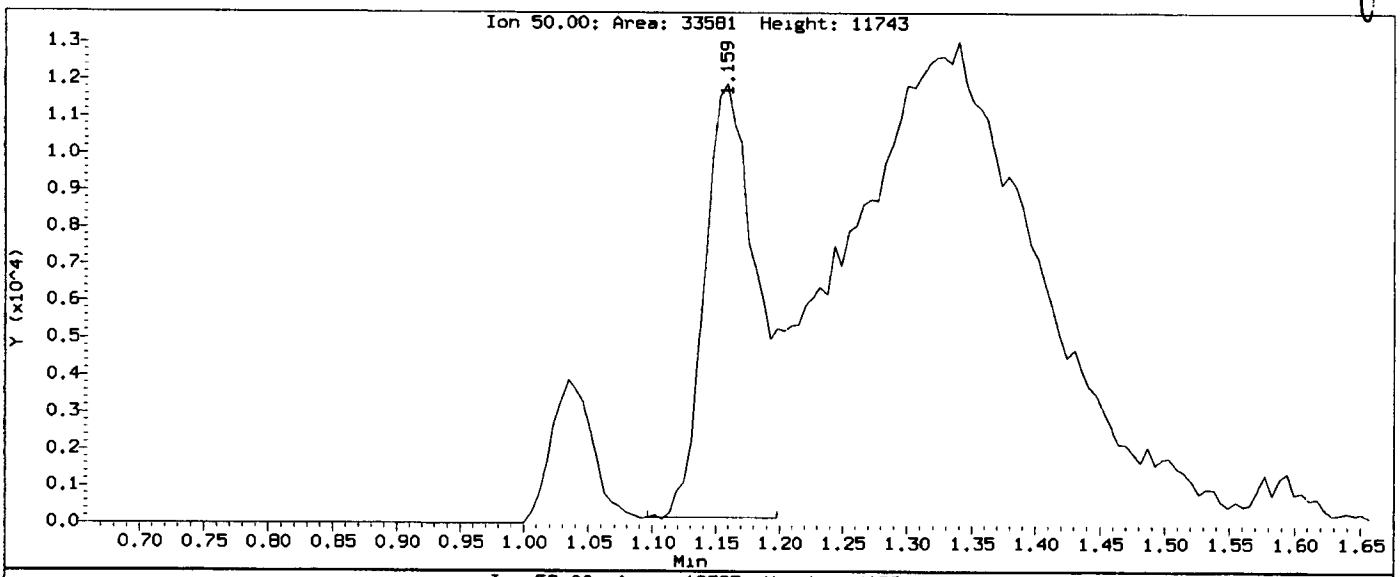
Compound: Acetone
CAS Number:

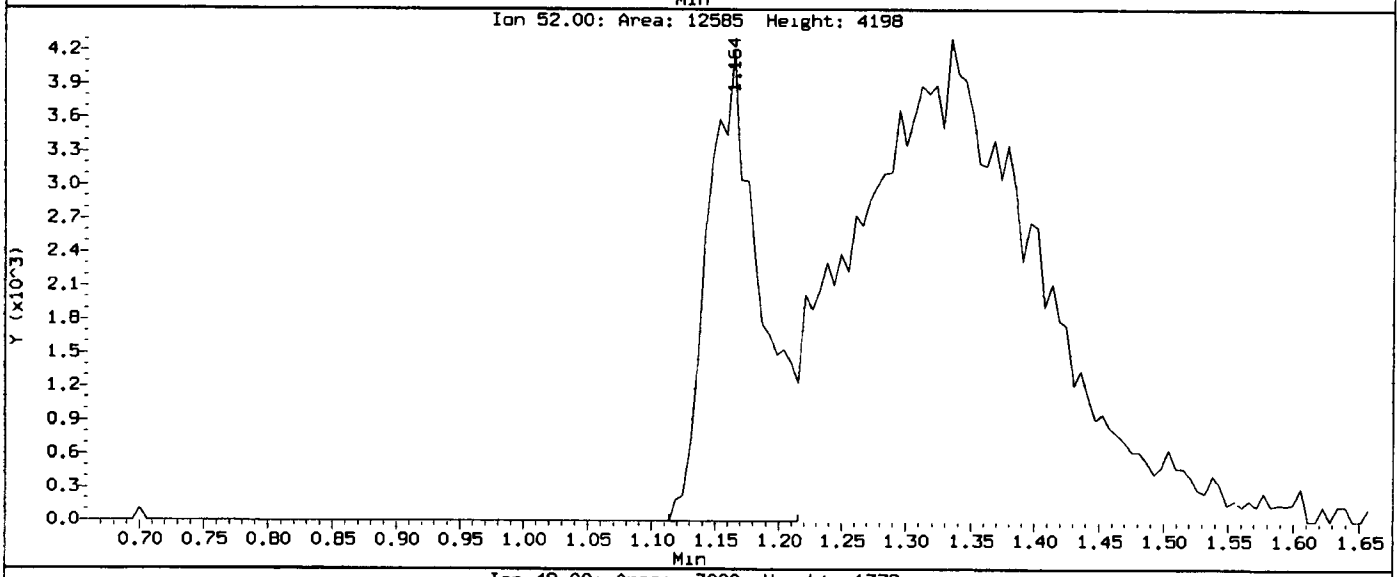


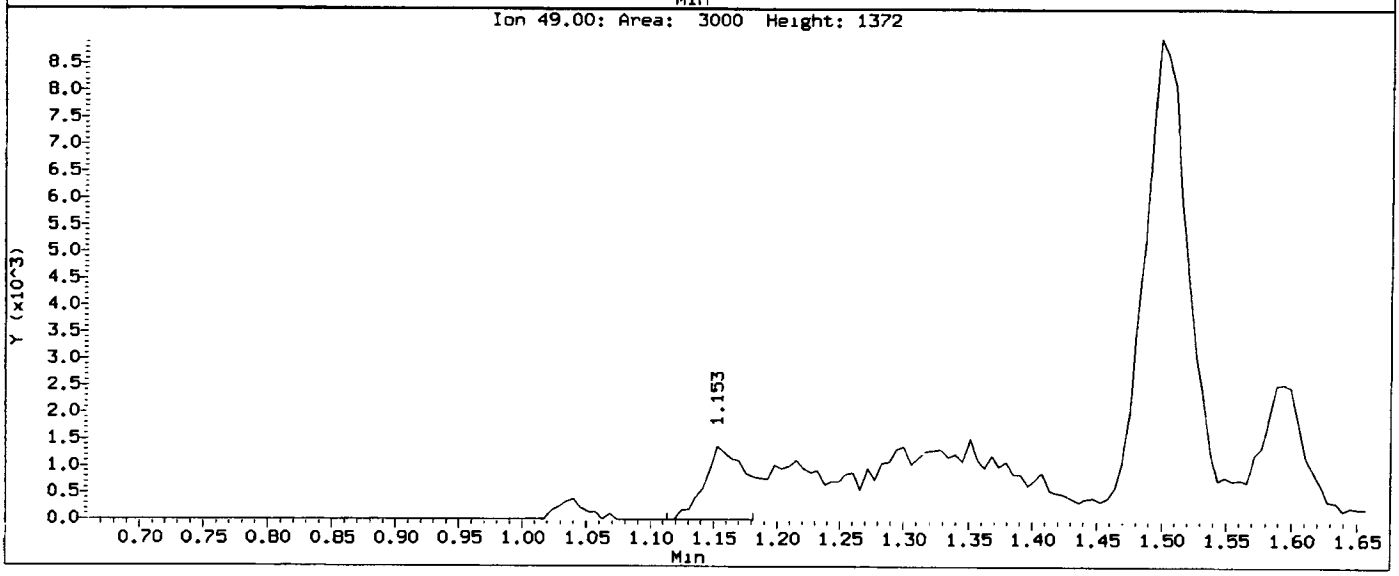


Data File: /chem1/nt5.i/11JUN13.b/0100611.d
Injection Date: 11-JUN-2013 10:33
Instrument: nt5.i
Client Sample ID: VSTD10

Compound: Chloromethane
CAS Number:

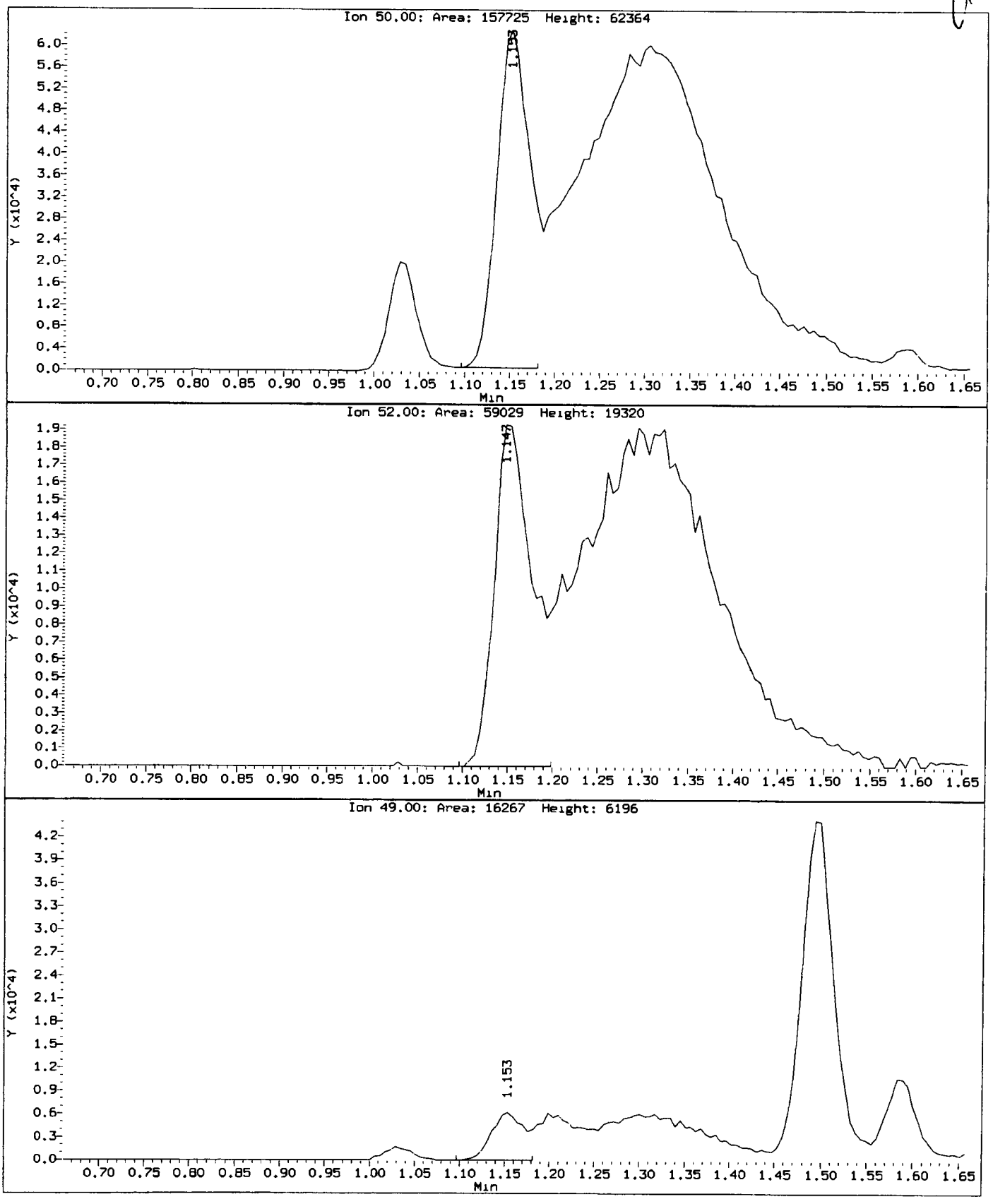






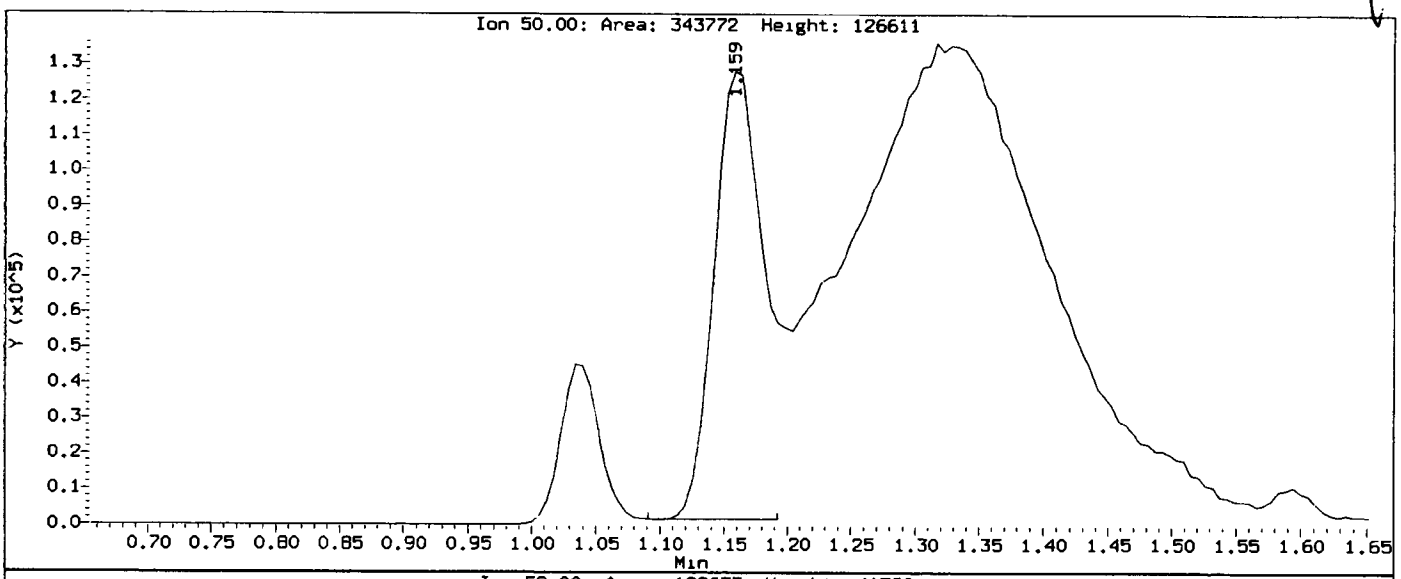
Data File: /chem1/nt5.i/11JUN13.b/0500611.d
Injection Date: 11-JUN-2013 10:09
Instrument: nt5.i
Client Sample ID: VSTD50

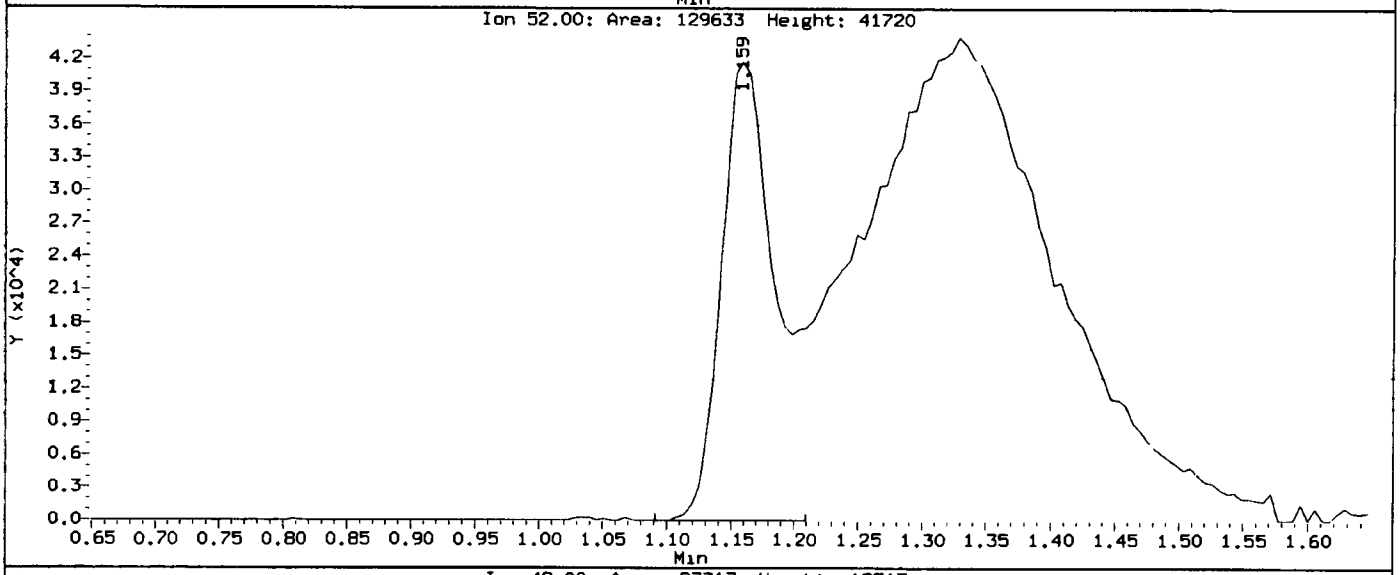
Compound: Chloromethane
CAS Number:

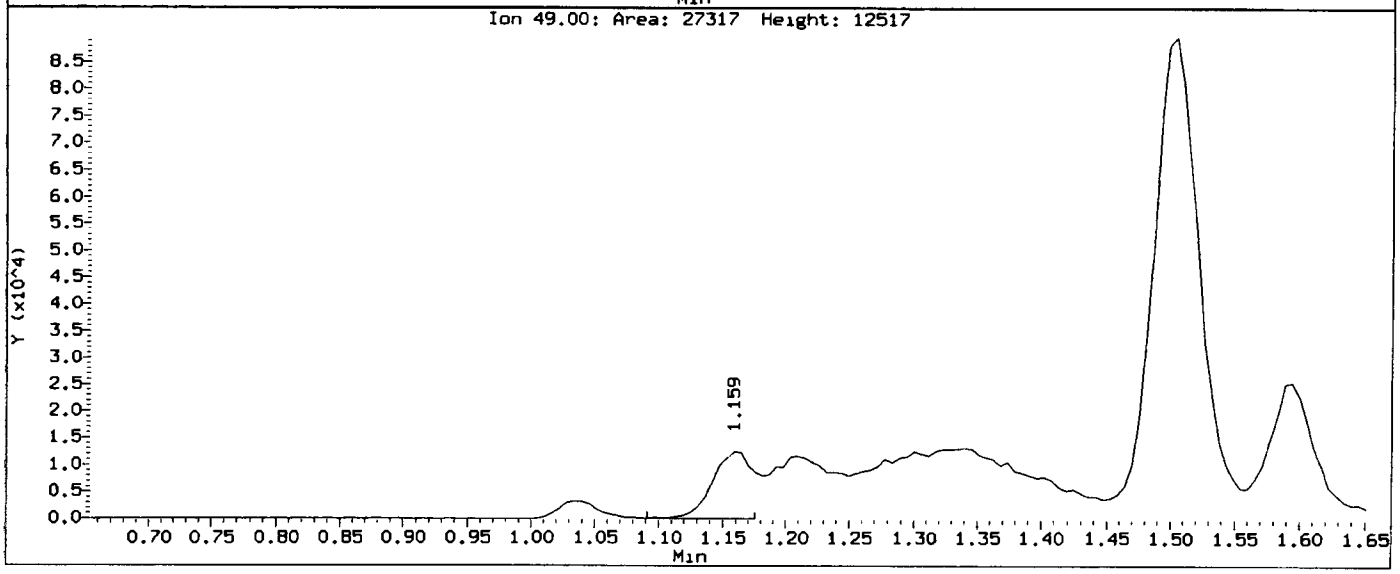


Data File: /chem1/nt5.i/11JUN13.b/1000611.d
Injection Date: 11-JUN-2013 09:45
Instrument: nt5.i
Client Sample ID: VSTD100

Compound: Chloromethane
CAS Number:

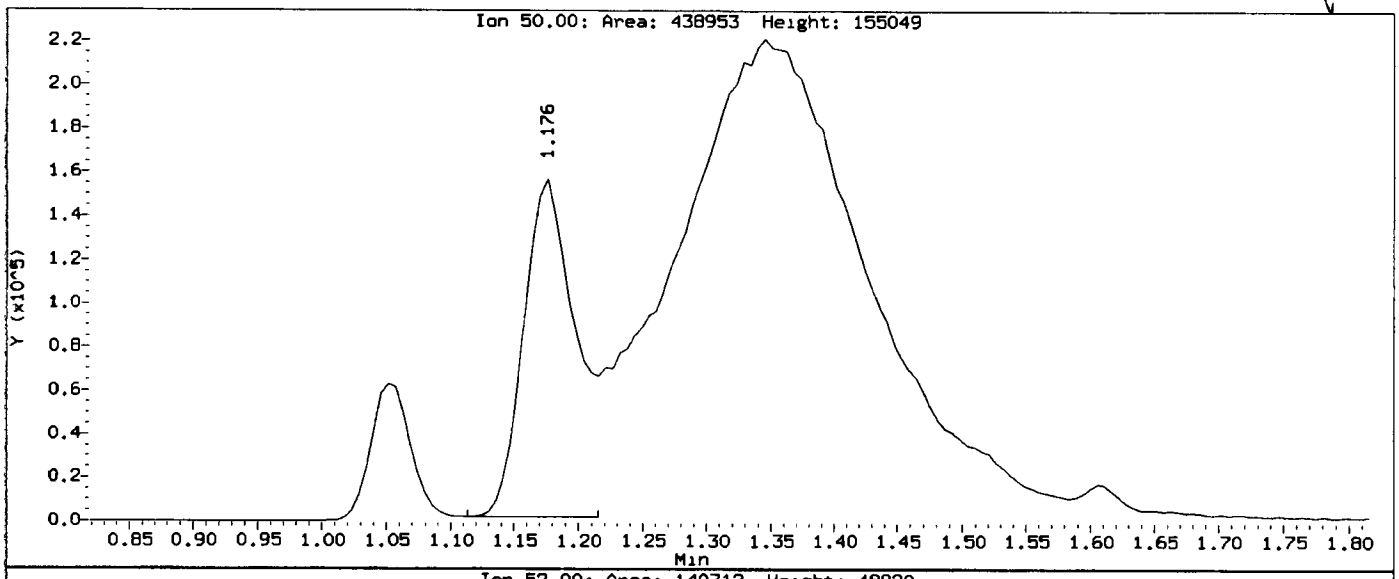


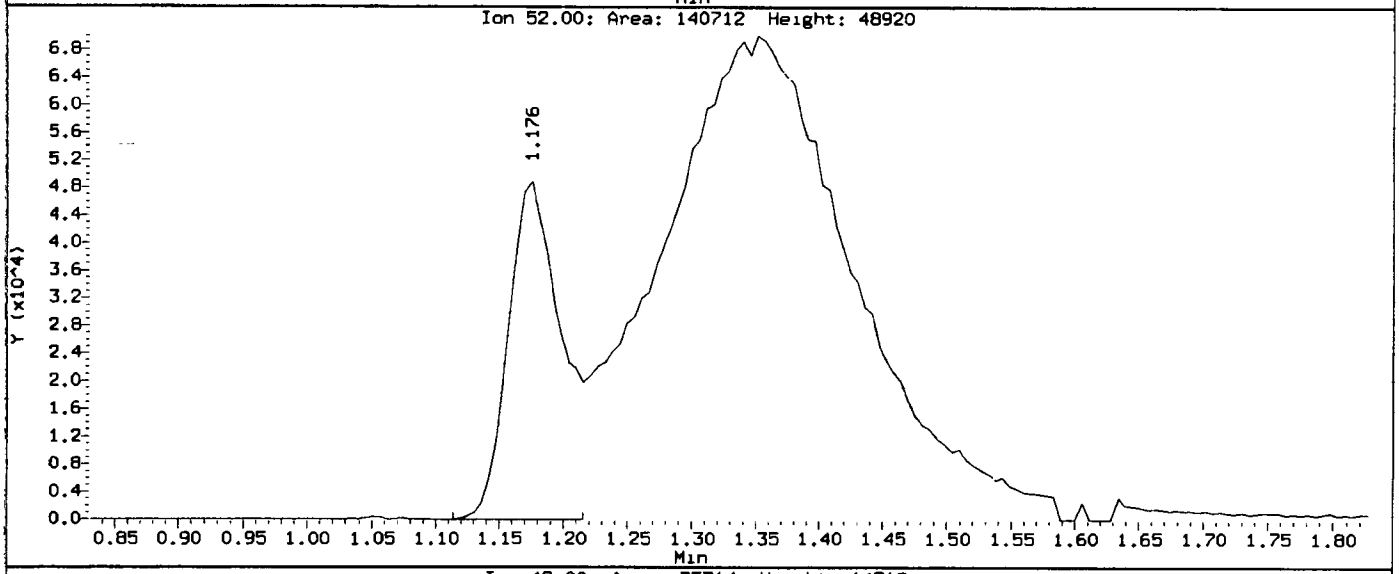


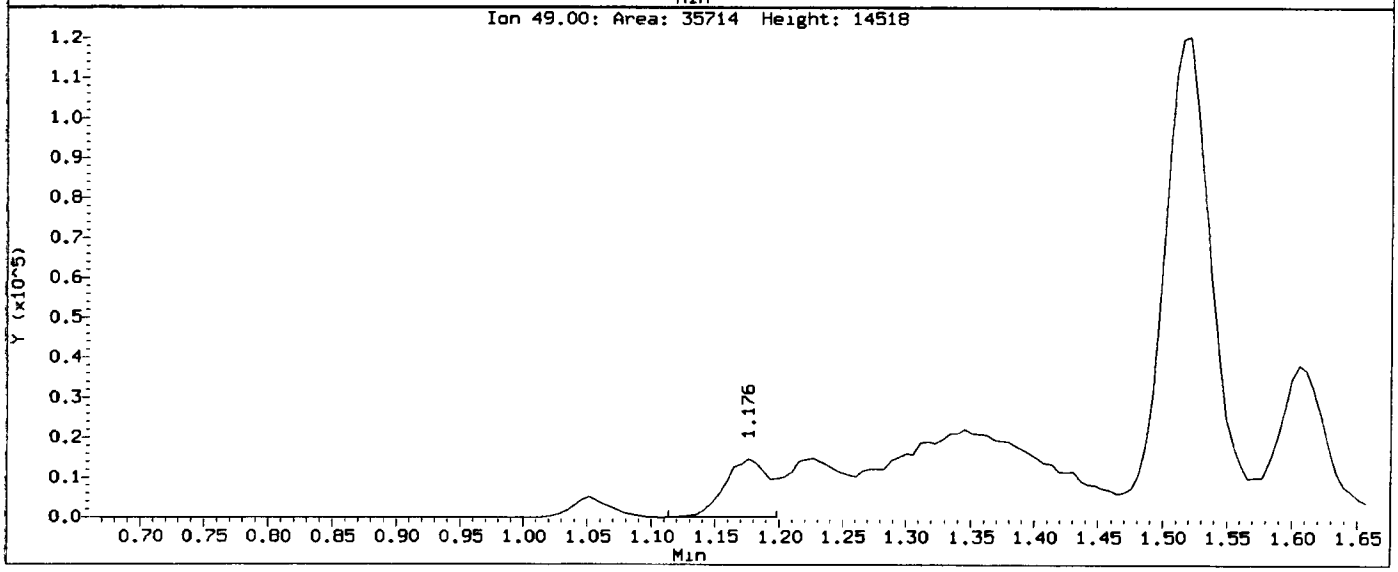


Data File: /chem1/nt5.1/11JUN13.b/1500611.d
Injection Date: 11-JUN-2013 09:21
Instrument: nt5.1
Client Sample ID: VSTD150

Compound: Chloromethane
CAS Number:

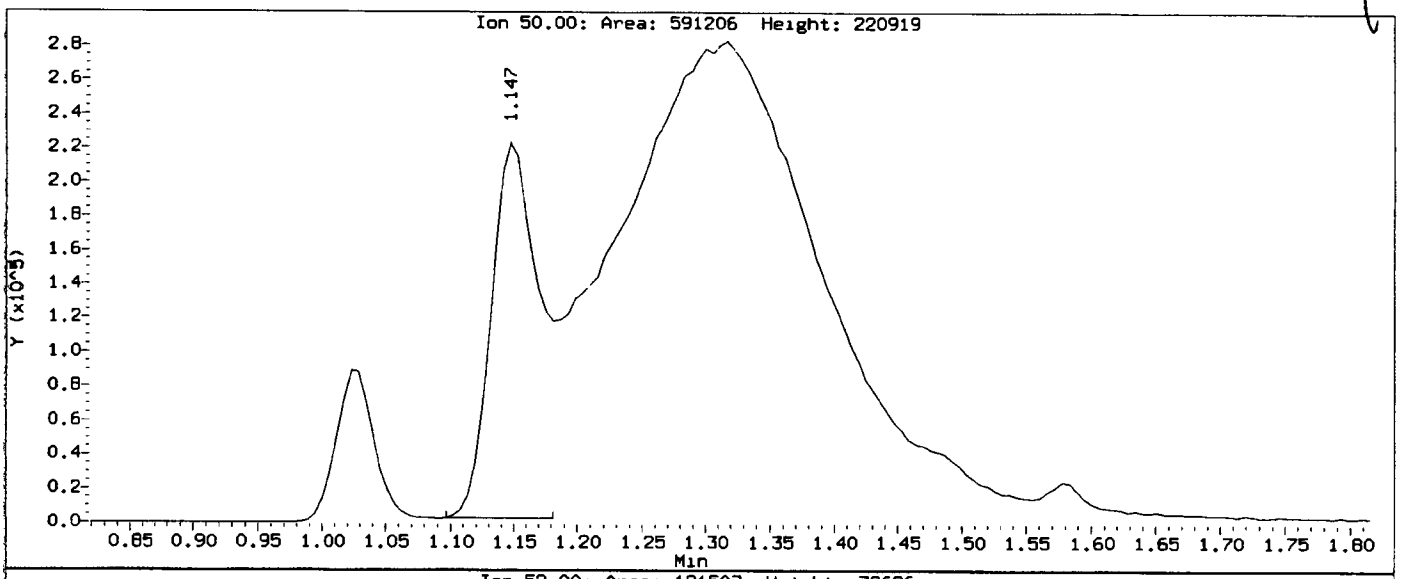


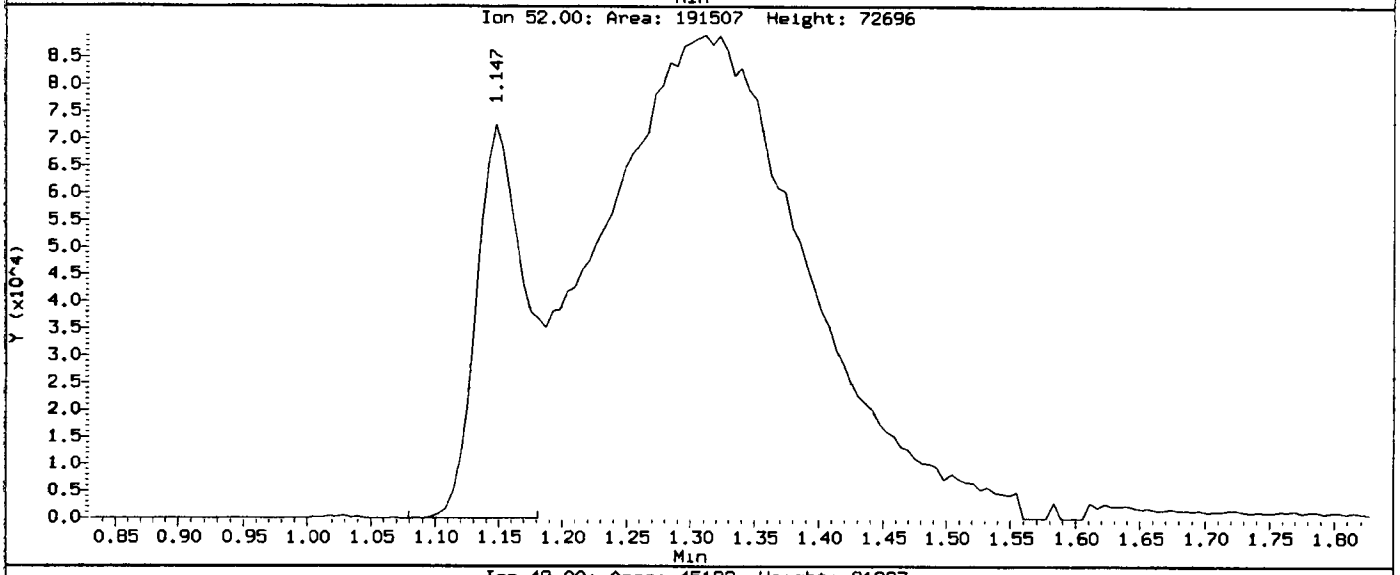


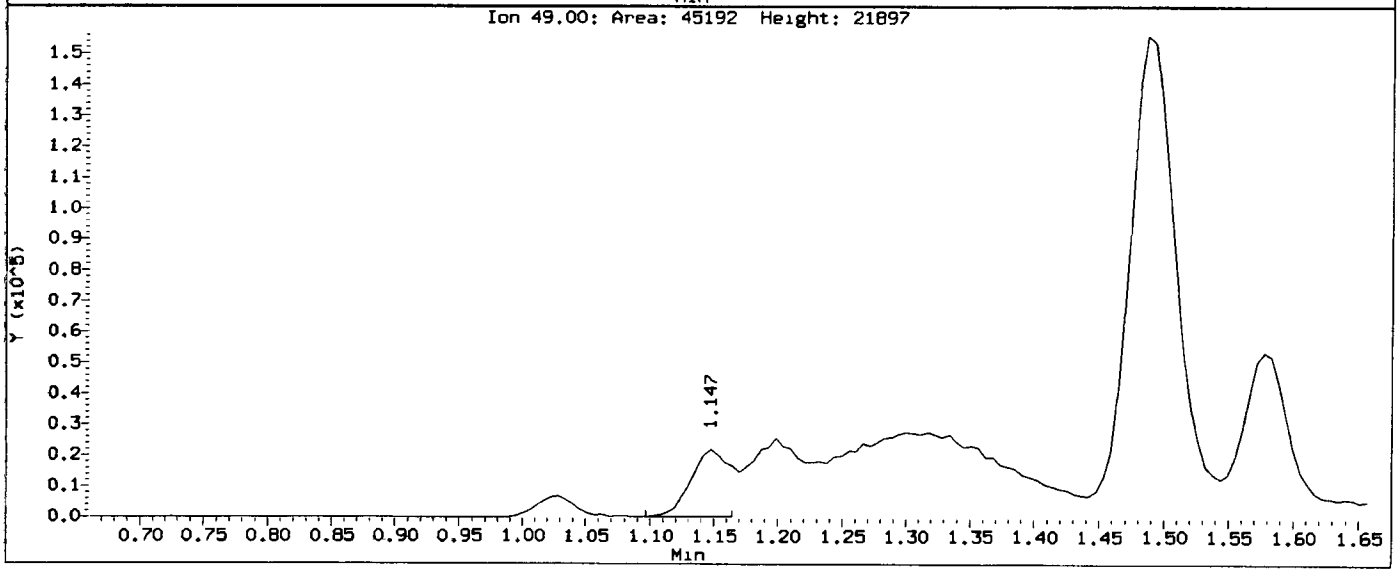


Data File: /chem1/nt5.i/11JUN13.b/2000611.d
Injection Date: 11-JUN-2013 08:57
Instrument: nt5.i
Client Sample ID: VSTD200

Compound: Chloromethane
CAS Number:

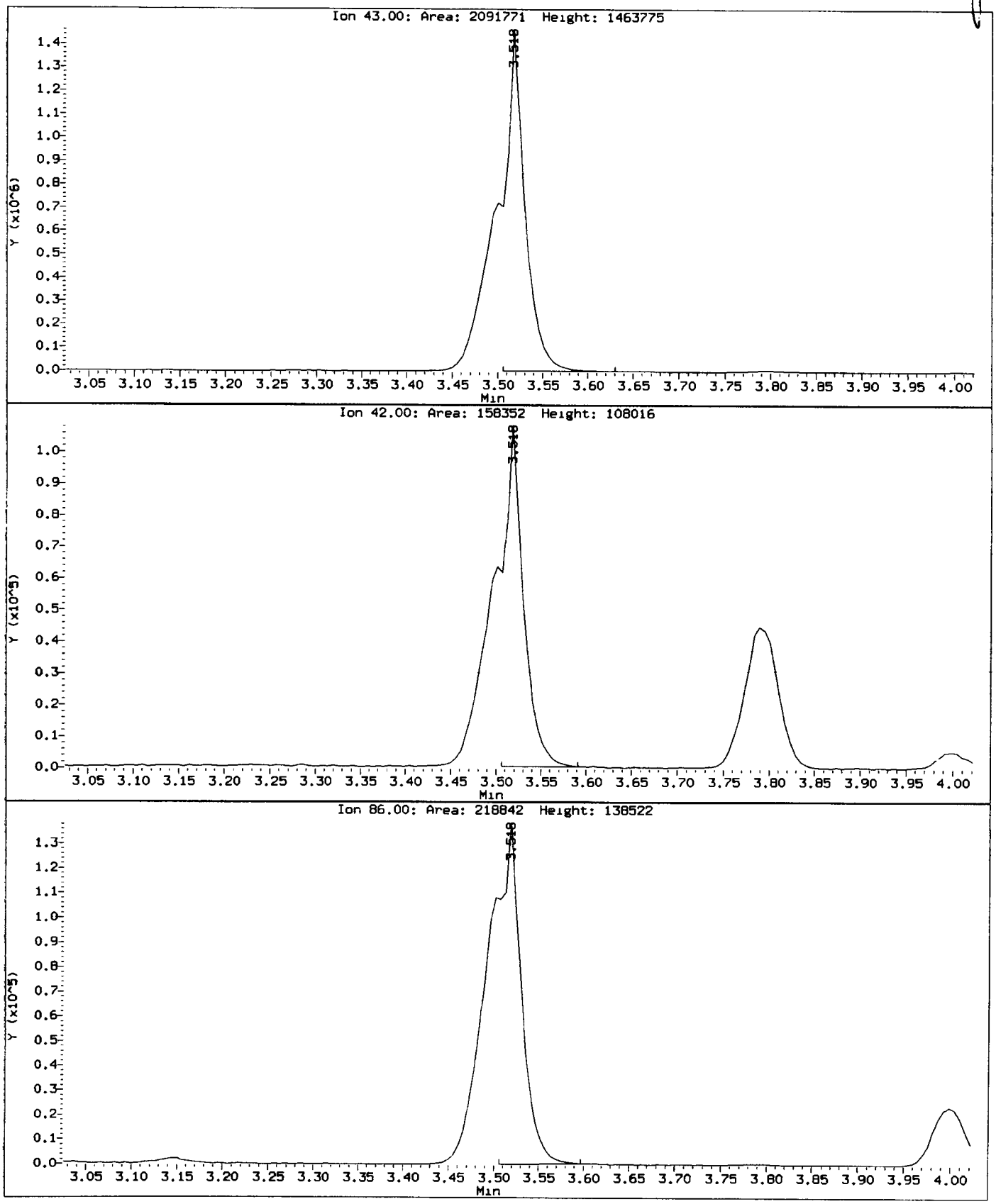






Data File: /chem1/nt5.i/11JUN13.b/2000611.d
Injection Date: 11-JUN-2013 08:57
Instrument: nt5.i
Client Sample ID: VSTD200

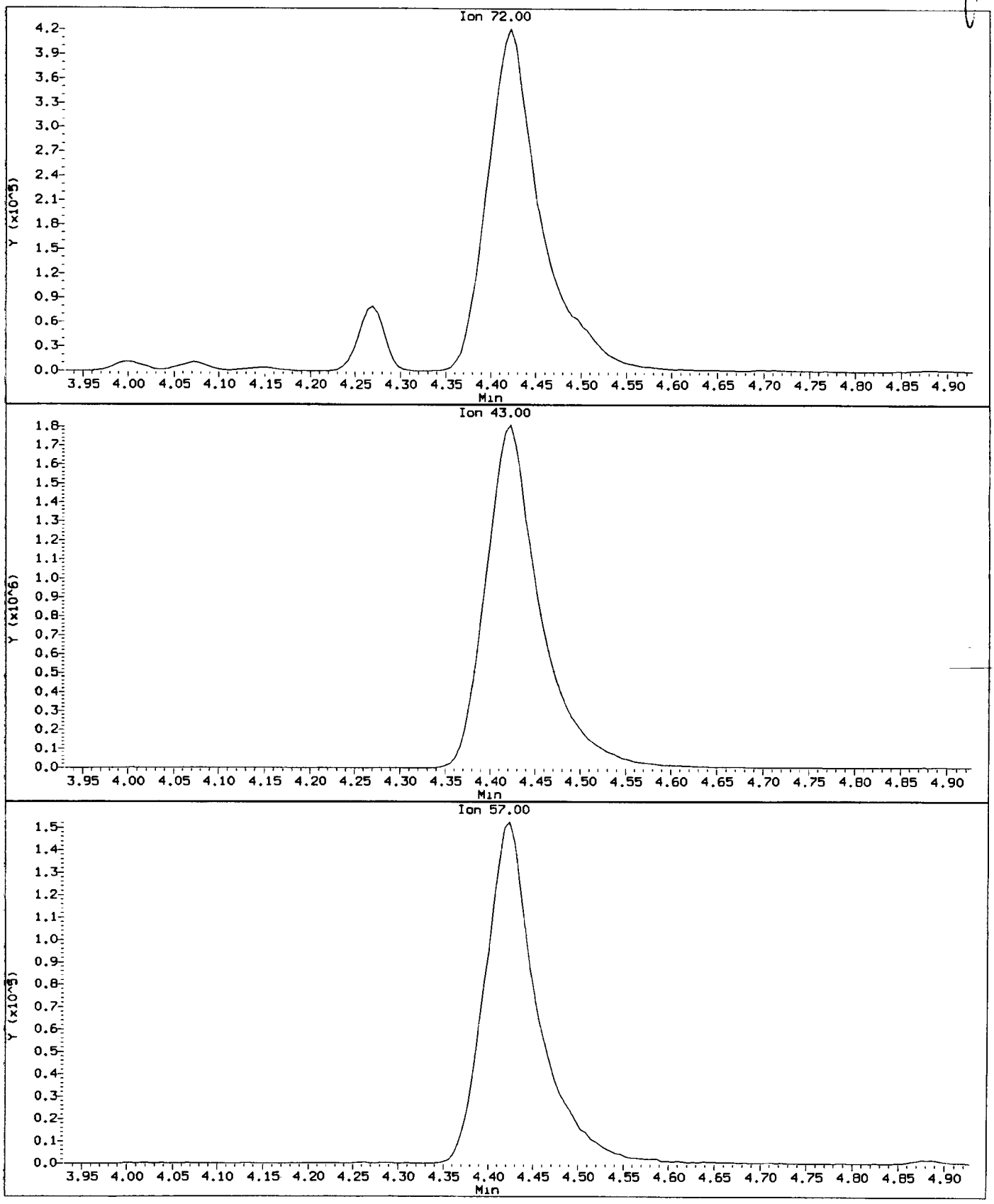
Compound: Vinyl Acetate
CAS Number:



Data File: /chem1/nt5.i/11JUN13.b/2000611.d
Injection Date: 11-JUN-2013 08:57
Instrument: nt5.i
Client Sample ID: VSTD200

Compound: 2-Butanone
CAS Number:

12/6/13



Volatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WS91

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

VOA Analyst Notes / Data Review Checklist

ARI WORK Order: WS91 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: 6/11/13 Analysis Start Date: 6/12/13

	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 /
ICAL Q flag applied?	NA / Y / N /	MS / MSD Recovery Met?	NA / Y / N /
CCAL Q Flag applied	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 /

Bubbles/Headspace: None SM (≤ 2mm •) PB (2-4mm ●) LG (> 4mm) Head Space

Detail problems, corrective actions and/or other pertinent information below:

MB - DCME 2.56 ug/kg - D flagged in LCS/LCSD/ samples

(Review 1)Analyst: [signature] **Date:** 6/18/13

(Review 2)Reviewer: MW **Date:** 6/18

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-5 Serial No.:GC=US10228086, MS=US10462818

Date: 6/12/17 Analysis: 8260C Analyst: [illegible]

GC Program: LOA10A Column No: 938152 Column Type: [illegible]

Instrument Tune (.U or .CT.): PAT1007 EM Voltage: 1412

Inj. Vol: 5 Calibration File: bfb0612 Curve Date: 6/1/4

IS/SS	Ical/Ccal	LCS/ICV
B000643	B000644	B000644
B000644		

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt5.i/12JUN13.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF
1	1109	bfb0612.d	BFB0612	BFB0612			1
2	1143	cc0612.d	CC0612	VSTD50			1 | 4 65 363673|| 5.11 1487095|| 7.59 1811057|| 9 67 972763|
3	1238	lcs0612.d	LCS0612	LCS0612			1 | 4 65 362501|| 5.11 1476772|| 7.59 1777023|| 9.67 935154|
4	1302	lcs0612a.d	LCS0612	LCS0612			1 | 4.66 376364|| 5.11 1542973|| 7.59 1893057|| 9.67 1050468|
5	1326	mb0612.d	MB0612	MB0612			1 | 4 67 355746|| 5.12 1457930|| 7 59 1809126|| 9.67 982002|
6	1407	lcs0612b.d	LCS0612	LCS0612			1 | 4 67 355434|| 5.12 1466677|| 7.60 1789446|| 9 67 974054|
7	1533	ws91a.d	WS91A	CL-MH-SPS-20130605-			1 | 4.67 338480|| 5.12 1391105|| 7.60 1577330|| 9.67 661588|
8	1557	ws91a2.d	WS91A	CL-MH-SPS-20130605-			1 | 4 67 321788|| 5.12 1326065|| 7.59 1622272|| 9.67 760102|
9	1621	ws91b.d	WS91B	CL-QC-TB-20130605-W			1 | 4.67 361246|| 5.11 1486898|| 7.59 1868335|| 9.67 1050841|
10	1644	wt12a.d	WT12A	U1			1 | 4.66 238320|| 5.11 983999|| 7 59 1251443|| 9.67 686658|
11	1708	wt12b.d	WT12B	U2			1 | 4.67 338797|| 5.12 1409953|| 7.59 1741803|| 9.67 892833|
12	1732	wt12c d	WT12C	U3			1 | 4.67 166648|| 5.12 695784|| 7 59 897852|| 9.67 494875|
13	1756	wr99d2 d	WR99D				1 | 4.66 341970|| 5 11 1405143|| 7 59 1745668|| 9.67 889247|

6/13/17

aintenance / Comments

intenance Verification (Identify ICal or CCal that demonstrates the instrument is in control):

y line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

8041F Revision 002

Logbook **Page 01641** 1/19/10

WS91 : 00408

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt5.i/12JUN13.b

ARI Job No.: BFB0 Method: bfb8260.m Instrument: nt5.i Date: 12-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1109	bfb0612.d	BFB0612	BFB0612	1	NO MANUAL INTEGRATION
1143	cc0612.d	CC0612	VSTD50	1	Chloromethane, Acetone,
1238	lcs0612.d	LCS0612	LCS0612	1	Chloromethane, Acetone,
1326	mb0612.d	MB0612	MB0612	1	NO MANUAL INTEGRATION
1407	lcs0612b.d	LCS0612	LCS0612	1	Chloromethane,
1533	ws91a.d	WS91A	CL-MH-SPS-	1	Ethyl Benzene,
1621	ws91b.d	WS91B	CL-QC-TB-2	1	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt5.i/12JUN13.b

Instrument: nt5.i Date: 12-JUN-2013 Method: VO121012S.m

INITIAL CAL: 11-JUN-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 12-JUN-2013

Compound	%D
Chloroethane	21.1
112Trichloro122Trifluoroethane	20.3
Acrylonitrile	25.0
1,1-Dichloroethane	21.7

Data File: /chem1/nt5.i/12JUN13.b/bfb0612.d

Date : 12-JUN-2013 11:09

Client ID: BFB0612

Instrument: nt5.i

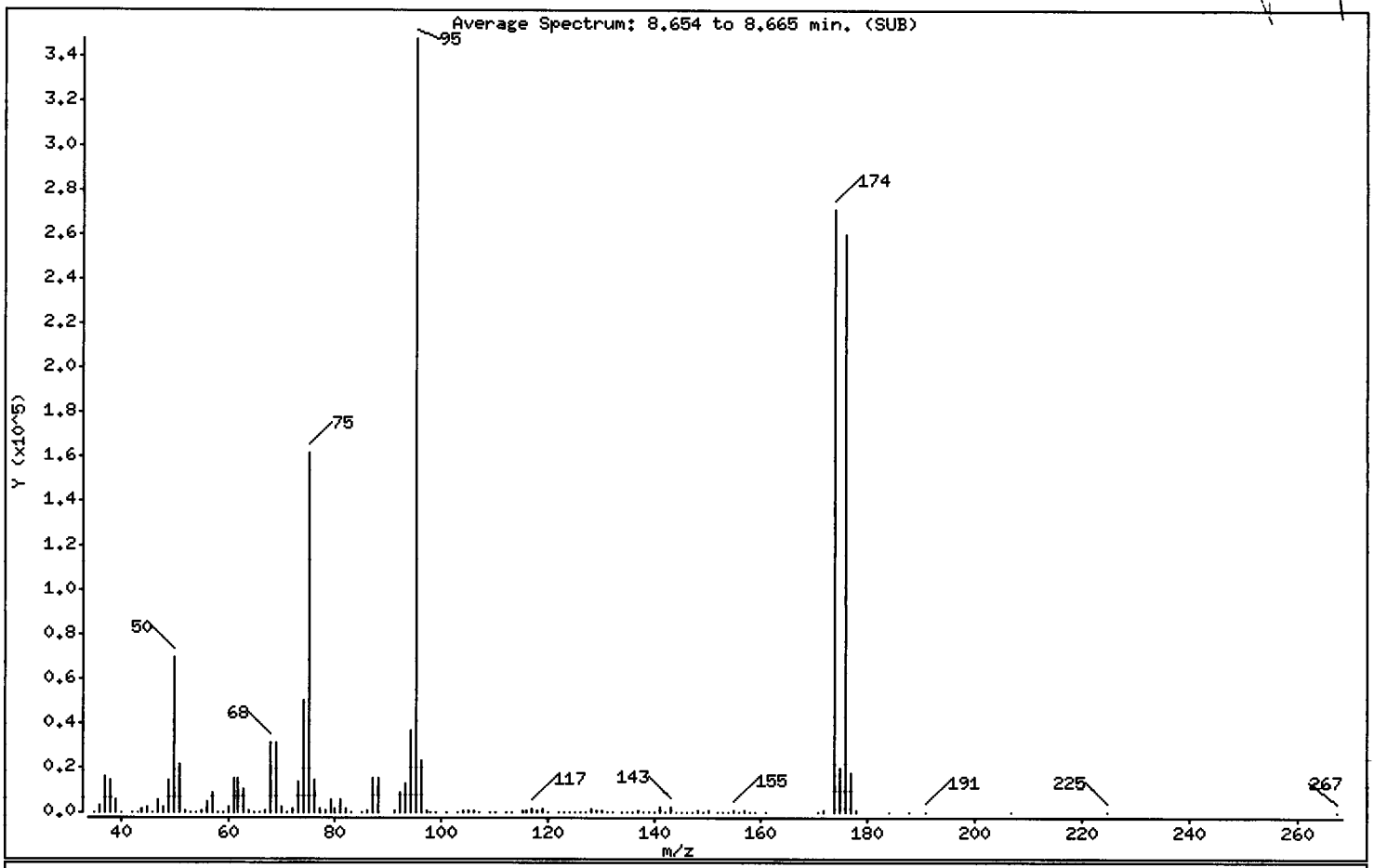
Sample Info: BFB0612,BFB0612,,1,12JUN13,,

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	19.96
75	30.00 - 66.00% of mass 95	46.32
96	5.00 - 9.00% of mass 95	6.74
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 101.00% of mass 95	77.99
175	4.00 - 9.00% of mass 174	5.73 (7.34)
176	95.00 - 101.00% of mass 174	74.78 (95.87)
177	5.00 - 9.00% of mass 176	5.05 (6.75)

Data File: /chem1/nt5.i/12JUN13.b/bfb0612.d

Date : 12-JUN-2013 11:09

Client ID: BFB0612

Instrument: nt5.i

Sample Info: BFB0612,BFB0612,,1,12JUN13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0612.d

Spectrum: Average Spectrum: 8.654 to 8.665 min. (SUB)

Location of Maximum: 95.00

Number of points: 127

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	35	68.00	31136	105.00	423	142.00	325
36.00	2810	69.00	30976	106.00	1146	143.00	2616
37.00	15854	70.00	2362	107.00	306	144.00	158
38.00	14081	71.00	139	109.00	115	145.00	188
39.00	5345	72.00	1666	110.00	214	146.00	185
40.00	250	73.00	13237	112.00	189	147.00	68
42.00	29	74.00	50376	113.00	151	148.00	885
43.00	67	75.00	161216	115.00	429	149.00	191
44.00	1365	76.00	14116	116.00	964	150.00	520
45.00	2761	77.00	1971	117.00	1421	152.00	293
46.00	116	78.00	924	118.00	872	153.00	231
47.00	5931	79.00	5315	119.00	1233	154.00	238
48.00	2101	80.00	1533	120.00	103	155.00	873
49.00	14612	81.00	5754	122.00	102	156.00	71
50.00	69472	82.00	1250	123.00	112	157.00	473
51.00	21248	83.00	79	124.00	194	158.00	36
52.00	995	85.00	15	125.00	122	159.00	316
53.00	131	86.00	702	126.00	254	161.00	386
54.00	81	87.00	15235	127.00	162	171.00	133
55.00	972	88.00	15007	128.00	1378	172.00	496
56.00	4511	91.00	831	129.00	637	174.00	271424
57.00	8713	92.00	8754	130.00	924	175.00	19928
58.00	194	93.00	12962	131.00	382	176.00	260224
59.00	47	94.00	37184	132.00	40	177.00	17560
60.00	2661	95.00	348032	134.00	153	178.00	576
61.00	15190	96.00	23440	135.00	353	184.00	45
62.00	15028	97.00	712	136.00	49	188.00	34
63.00	10323	98.00	45	137.00	554	191.00	53
64.00	1095	99.00	34	138.00	37	207.00	36
65.00	257	101.00	40	139.00	67	225.00	38
66.00	43	103.00	138	140.00	244	267.00	21
67.00	855	104.00	1060	141.00	2593		

Data File: /chem1/nt5.i/12JUN13.b/bfb0612.d

Date : 12-JUN-2013 11:09

Client ID: BFB0612

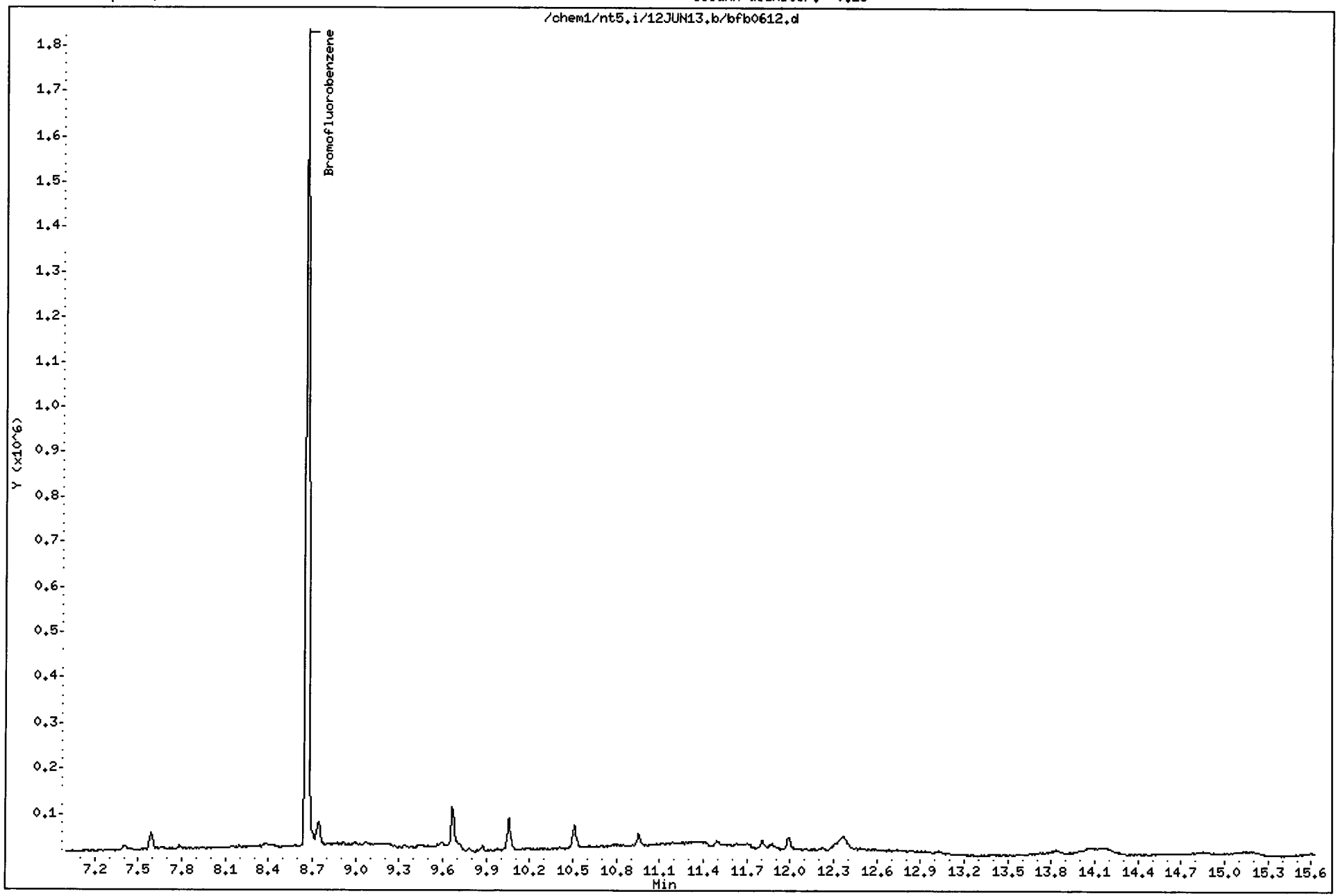
Sample Info: BFB0612,BFB0612,,1,12JUN13,,

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB

Column diameter: 0.18



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/12JUN13.b/cc0612.d
Lab Smp Id: CC0612 Client Smp ID: VSTD50
Inj Date : 12-JUN-2013 11:43
Operator : PB Inst ID: nt5.i
Smp Info : CC0612,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/12JUN13.b/VO121012S.m
Meth Date : 12-Jun-2013 12:18 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 08:57 Cal File: 2000611.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	1.028	1.028	(0.221)	365108	50.0000	56.626
2 Chloromethane	50	1.317	1.317	(0.283)	746496	50.0000	58.136(M)
3 Vinyl Chloride	62	1.198	1.198	(0.257)	689910	50.0000	55.537
4 Bromomethane	94	1.407	1.407	(0.302)	358405	50.0000	57.596
5 Chloroethane	64	1.492	1.492	(0.321)	447695	50.0000	60.534
6 Trichlorofluoromethane	101	1.583	1.583	(0.340)	759751	50.0000	58.866
7 1,1-Dichloroethene	96	1.945	1.945	(0.418)	514116	50.0000	58.999
8 Carbon Disulfide	76	1.945	1.945	(0.418)	1690500	50.0000	59.698
9 112Trichloro122Trifluoroethane	101	1.990	1.990	(0.428)	461331	50.0000	60.143
10 Iodomethane	142	2.047	2.047	(0.440)	423690	50.0000	54.836
11 Bromoethane	108	2.143	2.143	(0.460)	310177	50.0000	57.923
12 Acrolein	56	2.256	2.256	(0.485)	506406	250.000	275.46
13 Methylene Chloride	84	2.414	2.414	(0.519)	440409	50.0000	55.689
14 Acetone	43	2.607	2.607	(0.560)	465935	250.000	248.52(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	2.556	2.556	(0.549)	445600	50.0000	53.356
	16 Methyl tert butyl ether	73	2.725	2.725	(0.586)	1371870	50.0000	56.793
	17 1,1-Dichloroethane	63	3.167	3.167	(0.680)	1102840	50.0000	60.858
	18 Acrylonitrile	53	3.291	3.291	(0.707)	244345	50.0000	62.523
	19 Vinyl Acetate	43	3.512	3.512	(0.754)	1446564	50.0000	58.426
	20 Cis-1,2-Dichloroethene	96	3.715	3.715	(0.798)	612341	50.0000	57.911
	22 2,2-Dichloropropane	77	3.812	3.812	(0.819)	876271	50.0000	58.138
	23 Bromochloromethane	128	3.902	3.902	(0.838)	273438	50.0000	57.748
	24 Chloroform	83	4.004	4.004	(0.860)	994467	50.0000	58.618
	25 Carbon Tetrachloride	117	4.089	4.089	(0.801)	764814	50.0000	53.554
$	27 Dibromofluoromethane	111	4.174	4.174	(0.897)	605028	50.0000	58.000
	26 1,1,1-Trichloroethane	97	4.162	4.162	(0.894)	901088	50.0000	59.091
	28 1,1-Dichloropropene	75	4.287	4.287	(0.839)	878440	50.0000	52.483
	29 2-Butanone	72	4.389	4.389	(0.943)	355404	250.000	289.53 (Q)
	30 Benzene	78	4.513	4.513	(0.884)	2545407	50.0000	54.122
*	31 Pentafluorobenzene	168	4.654	4.654	(1.000)	363673	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.649	(0.999)	553782	50.0000	56.819
	33 1,2-Dichloroethane	62	4.705	4.705	(0.921)	770165	50.0000	51.911
	34 Trichloroethene	95	5.050	5.050	(0.989)	606317	50.0000	52.806
*	35 1,4-Difluorobenzene	114	5.107	5.107	(1.000)	1487095	50.0000	
	37 Dibromomethane	93	5.407	5.407	(1.059)	325298	50.0000	52.624
	38 1,2-Dichloropropane	63	5.503	5.503	(1.078)	704116	50.0000	52.813
	39 Bromodichloromethane	83	5.577	5.577	(1.092)	768239	50.0000	53.297
	40 2-Chloroethyl Vinyl Ether	63	6.114	6.114	(1.197)	390838	50.0000	55.785
	41 Cis 1,3-dichloropropene	75	6.125	6.125	(1.199)	1018320	50.0000	54.329
$	42 d8-Toluene	98	6.284	6.284	(1.230)	2223383	50.0000	51.023
	43 Toluene	92	6.329	6.329	(1.239)	1602304	50.0000	53.526
	44 Tetrachloroethene	166	6.640	6.640	(0.875)	644622	50.0000	51.418
	45 4-Methyl-2-Pentanone	58	6.697	6.697	(1.311)	1437551	250.000	273.66
	46 Trans 1,3-Dichloropropene	75	6.691	6.691	(1.310)	910173	50.0000	54.618
	47 1,1,2-Trichloroethane	97	6.821	6.821	(1.336)	502717	50.0000	53.704
	48 Chlorodibromomethane	129	6.957	6.957	(0.917)	560977	50.0000	51.860
	49 1,3-Dichloropropane	76	7.042	7.042	(0.928)	920013	50.0000	51.552
	50 1,2-Dibromoethane	107	7.132	7.132	(1.397)	485875	50.0000	53.001
	51 2-Hexanone	43	7.409	7.409	(0.976)	2353511	250.000	255.81
*	52 d5-Chlorobenzene	117	7.590	7.590	(1.000)	1811057	50.0000	
	53 Chlorobenzene	112	7.607	7.607	(1.002)	1600921	50.0000	51.936
	54 Ethyl Benzene	91	7.658	7.658	(1.009)	2882373	50.0000	54.523
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.011)	569371	50.0000	51.863
	56 m,p-xylene	106	7.788	7.788	(1.026)	2166110	100.000	107.54
	57 o-Xylene	106	8.150	8.150	(1.074)	1068718	50.0000	53.346
	58 Styrene	104	8.201	8.201	(1.080)	1798925	50.0000	55.462
	59 Bromoform	173	8.196	8.196	(0.847)	399232	50.0000	52.401
	60 Isopropyl Benzene	105	8.439	8.439	(0.872)	2713750	50.0000	55.605
$	62 4-Bromofluorobenzene	95	8.660	8.660	(1.141)	991195	50.0000	50.161
	63 Bromobenzene	156	8.739	8.739	(0.903)	652621	50.0000	50.681
	64 N-Propyl Benzene	91	8.812	8.812	(0.911)	3184046	50.0000	55.044

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)	644032	50.0000	50.599
66 2-Chloro Toluene	91	8.920	8.920	(0.922)	1943887	50.0000	53.045
67 1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.930)	2274936	50.0000	54.799
68 1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	195826	50.0000	50.826
69 Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	241233	50.0000	51.036
70 4-Chloro Toluene	91	9.073	9.073	(0.938)	2011489	50.0000	52.989
71 T-Butyl Benzene	119	9.276	9.276	(0.959)	2004245	50.0000	54.885
72 1,2,4-Trimethylbenzene	105	9.344	9.344	(0.966)	2236846	50.0000	54.794
73 S-Butyl Benzene	105	9.440	9.440	(0.976)	2938085	50.0000	55.312
74 4-Isopropyl Toluene	119	9.587	9.587	(0.991)	2446503	50.0000	56.132
75 1,3-Dichlorobenzene	146	9.599	9.599	(0.992)	1234495	50.0000	51.708
* 76 d4-1,4-Dichlorobenzene	152	9.672	9.672	(1.000)	972763	50.0000	
77 1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	1256695	50.0000	51.071
78 N-Butyl Benzene	91	9.972	9.972	(1.031)	2324712	50.0000	55.419
$ 79 d4-1,2-Dichlorobenzene	152	10.057	10.057	(1.040)	1006991	50.0000	50.814
80 1,2-Dichlorobenzene	146	10.062	10.062	(1.040)	1179285	50.0000	50.786
81 1,2-Dibromo 3-Chloropropane	75	10.815	10.815	(1.118)	120111	50.0000	48.734
82 Hexachloro 1,3-Butadiene	225	11.499	11.499	(1.189)	536077	50.0000	52.024
83 1,2,4-Trichlorobenzene	180	11.488	11.488	(1.188)	878110	50.0000	52.443
84 Naphthalene	128	11.799	11.799	(1.220)	1924463	50.0000	52.365
85 1,2,3-Trichlorobenzene	180	11.986	11.986	(1.239)	819043	50.0000	50.607

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: cc0612.d
Lab Smp Id: CC0612
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/12JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 12-JUN-2013
Calibration Time: 11:43
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	459631	229816	919262	363673	-20.88
35 1,4-Difluorobenze	1692431	846216	3384862	1487095	-12.13
52 d5-Chlorobenzene	1987215	993608	3974430	1811057	-8.86
76 d4-1,4-Dichlorobe	1075398	537699	2150796	972763	-9.54

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.66	4.16	5.16	4.65	-0.13
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.00
52 d5-Chlorobenzene	7.59	7.09	8.09	7.59	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.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i Injection Date: 12-JUN-2013 11:43
Lab File ID: cc0612.d Init. Cal. Date(s): 11-JUN-2013 11-JUN-2013
Analysis Type: SOIL Init. Cal. Times: 08:33 12:45
Lab Sample ID: CC0612 Quant Type: ISTD
Method: /chem1/nt5.i/12JUN13.b/VO121012S.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
1 Dichlorodifluoromethane	0.88647	1.00395	1.00395	0.100	13.25198	20.00000	Averaged	
2 Chloromethane	1.76539	2.05266	2.05266	0.100	16.27249	20.00000	Averaged	
3 Vinyl Chloride	1.70791	1.89706	1.89706	0.100	11.07490	20.00000	Averaged	
4 Bromomethane	0.85554	0.98551	0.98551	0.100	15.19222	20.00000	Averaged	
5 Chloroethane	1.01682	1.23104	1.23104	0.100	21.06744	20.00000	Averaged	<-
6 Trichlorofluoromethane	1.77446	2.08910	2.08910	0.100	17.73160	20.00000	Averaged	
7 1,1-Dichloroethene	1.19804	1.41368	1.41368	0.100	17.99871	20.00000	Averaged	
8 Carbon Disulfide	3.89329	4.64841	4.64841	0.010	19.39530	20.00000	Averaged	
9 112Trichloro122Trifluoroeth	1.05460	1.26853	1.26853	0.010	20.28564	20.00000	Averaged	<-
10 Iodomethane	54.83585	50.00000	1.16503	0.010	9.67170	20.00000	Linear	
11 Bromoethane	0.73623	0.85290	0.85290	0.100	15.84686	20.00000	Averaged	
12 Acrolein	0.25275	0.27850	0.27850	0.000	10.18515	20.00000	Averaged	
13 Methylene Chloride	55.68866	50.00000	1.21100	0.010	11.37732	20.00000	Linear	
14 Acetone	249	250	0.25624	0.001	-0.59328	20.00000	Quadratic	
15 Trans-1,2-Dichloroethene	1.14821	1.22528	1.22528	0.010	6.71170	20.00000	Averaged	
16 Methyl tert butyl ether	3.32109	3.77226	3.77226	0.100	13.58518	20.00000	Averaged	
17 1,1-Dichloroethane	2.49147	3.03250	3.03250	0.100	21.71535	20.00000	Averaged	<-
18 Acrylonitrile	0.53731	0.67188	0.67188	0.001	25.04535	20.00000	Averaged	<-
19 Vinyl Acetate	3.40400	3.97765	3.97765	0.010	16.85217	20.00000	Averaged	
20 Cis-1,2-Dichloroethene	1.45377	1.68377	1.68377	0.010	15.82101	20.00000	Averaged	
22 2,2-Dichloropropane	2.07224	2.40950	2.40950	0.010	16.27525	20.00000	Averaged	
23 Bromochloromethane	0.65100	0.75188	0.75188	0.050	15.49561	20.00000	Averaged	
24 Chloroform	2.33246	2.73451	2.73451	0.100	17.23696	20.00000	Averaged	
25 Carbon Tetrachloride	0.48017	0.51430	0.51430	0.100	7.10837	20.00000	Averaged	
$ 27 Dibromofluoromethane	1.43418	1.66366	1.66366	0.100	16.00081	20.00000	Averaged	
26 1,1,1-Trichloroethane	2.09656	2.47774	2.47774	0.100	18.18119	20.00000	Averaged	
28 1,1-Dichloropropene	0.56276	0.59071	0.59071	0.010	4.96644	20.00000	Averaged	
29 2-Butanone	0.16877	0.19545	0.19545	0.001	15.81021	20.00000	Averaged	
30 Benzene	1.58130	1.71166	1.71166	0.100	8.24396	20.00000	Averaged	
$ 32 d4-1,2-Dichloroethane	1.34000	1.52275	1.52275	0.010	13.63809	20.00000	Averaged	
33 1,2-Dichloroethane	0.49883	0.51790	0.51790	0.100	3.82186	20.00000	Averaged	
34 Trichloroethene	0.38605	0.40772	0.40772	0.100	5.61281	20.00000	Averaged	
37 Dibromomethane	0.20784	0.21875	0.21875	0.010	5.24719	20.00000	Averaged	
38 1,2-Dichloropropane	0.44826	0.47348	0.47348	0.100	5.62669	20.00000	Averaged	
39 Bromodichloromethane	0.48464	0.51660	0.51660	0.100	6.59447	20.00000	Averaged	

USGI : 2014

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i
Lab File ID: cc0612.d
Analysis Type: SOIL
Lab Sample ID: CC0612
Method: /chem1/nt5.i/12JUN13.b/VO121012S.m

Injection Date: 12-JUN-2013 11:43
Init. Cal. Date(s): 11-JUN-2013 11-JUN-2013
Init. Cal. Times: 08:33 12:45
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
40 2-Chloroethyl Vinyl Ether	0.23557	0.26282	0.26282	0.000	11.56994	20.00000	Averaged
41 Cis 1,3-dichloropropene	0.63020	0.68477	0.68477	0.100	8.65860	20.00000	Averaged
$ 42 d8-Toluene	1.46515	1.49512	1.49512	0.010	2.04515	20.00000	Averaged
43 Toluene	1.00649	1.07747	1.07747	0.100	7.05218	20.00000	Averaged
44 Tetrachloroethene	0.34612	0.35594	0.35594	0.100	2.83658	20.00000	Averaged
45 4-Methyl-2-Pentanone	0.17662	0.19334	0.19334	0.000	9.46400	20.00000	Averaged
46 Trans 1,3-Dichloropropene	0.56030	0.61205	0.61205	0.010	9.23549	20.00000	Averaged
47 1,1,2-Trichloroethane	0.31474	0.33805	0.33805	0.100	7.40857	20.00000	Averaged
48 Chlorodibromomethane	0.29864	0.30975	0.30975	0.100	3.72091	20.00000	Averaged
49 1,3-Dichloropropane	0.49271	0.50800	0.50800	0.100	3.10324	20.00000	Averaged
50 1,2-Dibromoethane	0.30823	0.32673	0.32673	0.010	6.00110	20.00000	Averaged
51 2-Hexanone	0.25400	0.25990	0.25990	0.010	2.32339	20.00000	Averaged
53 Chlorobenzene	0.85102	0.88397	0.88397	0.300	3.87182	20.00000	Averaged
54 Ethyl Benzene	1.45952	1.59154	1.59154	0.100	9.04569	20.00000	Averaged
55 1,1,1,2-Tetrachloroethane	0.30310	0.31439	0.31439	0.010	3.72506	20.00000	Averaged
56 m,p-xylene	0.55609	0.59802	0.59802	0.100	7.54027	20.00000	Averaged
57 o-Xylene	0.55310	0.59011	0.59011	0.100	6.69174	20.00000	Averaged
58 Styrene	0.89548	0.99330	0.99330	0.100	10.92360	20.00000	Averaged
59 Bromoform	0.39161	0.41041	0.41041	0.100	4.80159	20.00000	Averaged
60 Isopropyl Benzene	2.50854	2.78973	2.78973	0.010	11.20928	20.00000	Averaged
$ 62 4-Bromofluorobenzene	0.54554	0.54730	0.54730	0.200	0.32294	20.00000	Averaged
63 Bromobenzene	0.66188	0.67089	0.67089	0.010	1.36241	20.00000	Averaged
64 N-Propyl Benzene	2.97324	3.27320	3.27320	0.010	10.08861	20.00000	Averaged
65 1,1,2,2-Tetrachloroethane	0.65423	0.66206	0.66206	0.300	1.19727	20.00000	Averaged
66 2-Chloro Toluene	1.88361	1.99832	1.99832	0.010	6.08950	20.00000	Averaged
67 1,3,5-Trimethyl Benzene	2.13384	2.33863	2.33863	0.010	9.59735	20.00000	Averaged
68 1,2,3-Trichloropropane	0.19804	0.20131	0.20131	0.010	1.65221	20.00000	Averaged
69 Trans-1,4-Dichloro 2-Butene	0.24295	0.24799	0.24799	0.001	2.07210	20.00000	Averaged
70 4-Chloro Toluene	1.95119	2.06781	2.06781	0.010	5.97711	20.00000	Averaged
71 T-Butyl Benzene	1.87698	2.06036	2.06036	0.010	9.77027	20.00000	Averaged
72 1,2,4-Trimethylbenzene	2.09828	2.29948	2.29948	0.010	9.58855	20.00000	Averaged
73 S-Butyl Benzene	2.73030	3.02035	3.02035	0.010	10.62328	20.00000	Averaged
74 4-Isopropyl Toluene	2.24024	2.51500	2.51500	0.010	12.26495	20.00000	Averaged
75 1,3-Dichlorobenzene	1.22714	1.26906	1.26906	0.100	3.41628	20.00000	Averaged
77 1,4-Dichlorobenzene	1.26479	1.29188	1.29188	0.100	2.14171	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i
Lab File ID: cc0612.d
Analysis Type: SOIL
Lab Sample ID: CC0612
Method: /chem1/nt5.i/12JUN13.b/VO121012S.m

Injection Date: 12-JUN-2013 11:43
Init. Cal. Date(s): 11-JUN-2013 11-JUN-2013
Init. Cal. Times: 08:33 12:45
Quant Type: ISTD

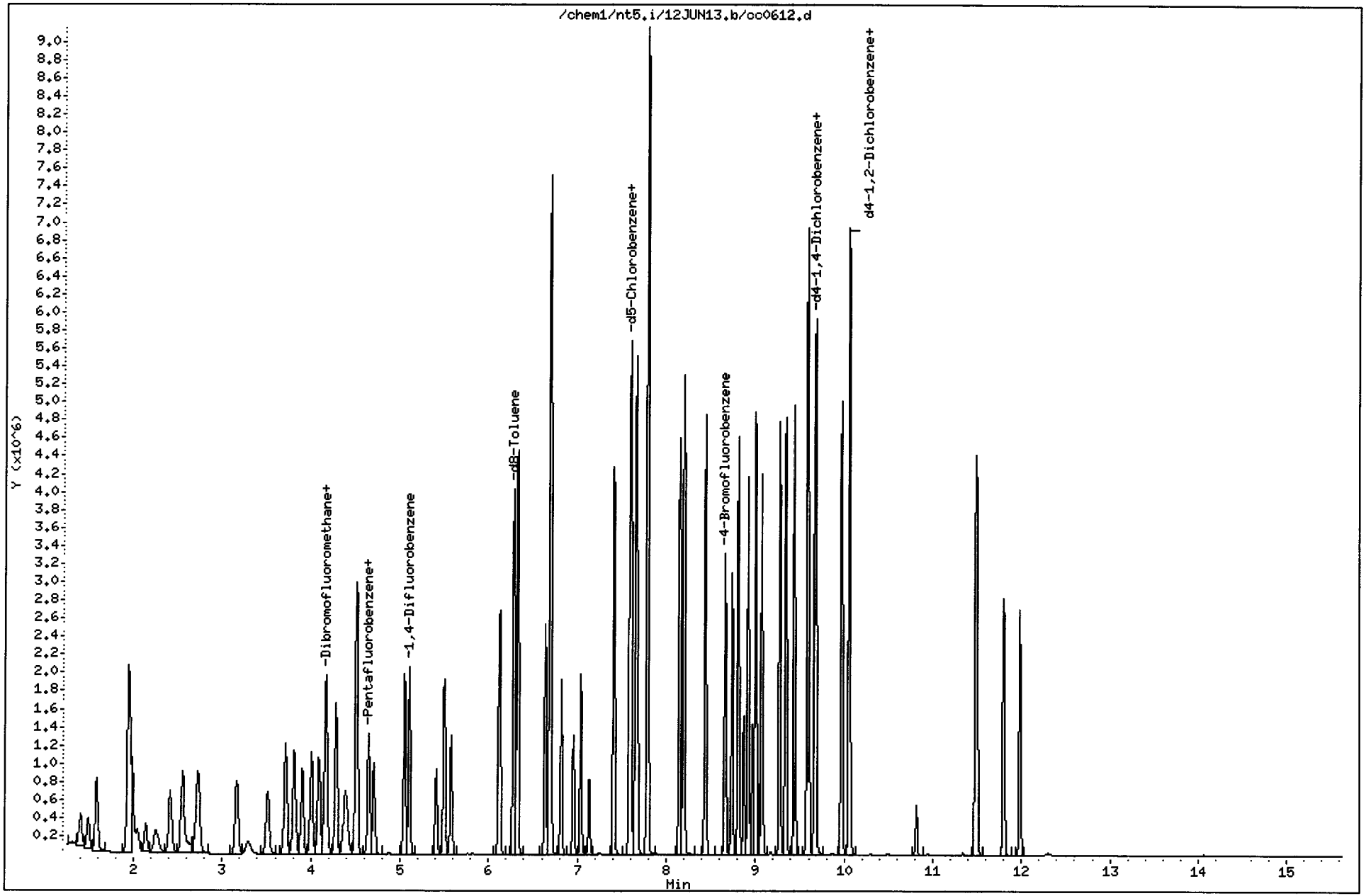
COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
78 N-Butyl Benzene	2.15610	2.38980	2.38980	0.010	10.83895	20.00000	Averaged
$ 79 d4-1,2-Dichlorobenzene	1.01860	1.03519	1.03519	0.010	1.62836	20.00000	Averaged
80 1,2-Dichlorobenzene	1.19355	1.21230	1.21230	0.100	1.57174	20.00000	Averaged
81 1,2-Dibromo 3-Chloropropane	0.12668	0.12347	0.12347	0.010	-2.53155	20.00000	Averaged
82 Hexachloro 1,3-Butadiene	0.52965	0.55109	0.55109	0.010	4.04773	20.00000	Averaged
83 1,2,4-Trichlorobenzene	0.86064	0.90270	0.90270	0.010	4.88629	20.00000	Averaged
84 Naphthalene	1.88899	1.97835	1.97835	0.010	4.73041	20.00000	Averaged
85 1,2,3-Trichlorobenzene	0.83188	0.84198	0.84198	0.010	1.21358	20.00000	Averaged

Data File: /chem1/nt5.i/12JUN13.b/cc0612.d
Date : 12-JUN-2013 11:43
Client ID: VSTD50
Sample Info: CC0612,5,5,0

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB
Column diameter: 0.18



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/12JUN13.b/lcs0612.d
Lab Smp Id: LCS0612 Client Smp ID: LCS0612
Inj Date : 12-JUN-2013 12:38
Operator : PB Inst ID: nt5.i
Smp Info : LCS0612,5,5,0
Misc Info : 13-12076
Comment :
Method : /chem1/nt5.i/12JUN13.b/VO121012S.m
Meth Date : 18-Jun-2013 08:39 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 08:57 Cal File: 2000611.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	1.028	1.028	(0.221)	371462	57.7977	57.798
2 Chloromethane	50	1.147	1.317	(0.246)	746255	58.3054	58.305(M)
3 Vinyl Chloride	62	1.198	1.198	(0.257)	733879	59.2679	59.268
4 Bromomethane	94	1.402	1.407	(0.301)	353630	57.0125	57.012
5 Chloroethane	64	1.492	1.492	(0.321)	451628	61.2629	61.263
6 Trichlorofluoromethane	101	1.583	1.583	(0.340)	761724	59.2095	59.209
7 1,1-Dichloroethene	96	1.939	1.945	(0.417)	422759	48.6722	48.672
8 Carbon Disulfide	76	1.939	1.945	(0.417)	1382758	48.9880	48.988
9 112Trichloro122Trifluoroethane	101	1.979	1.990	(0.425)	378458	49.4983	49.498
10 Iodomethane	142	2.035	2.047	(0.437)	360861	46.8552	46.855
11 Bromoethane	108	2.132	2.143	(0.458)	253195	47.4353	47.435
12 Acrolein	56	2.239	2.256	(0.481)	348964	190.435	190.43
13 Methylene Chloride	84	2.409	2.414	(0.518)	461059	58.4883	58.488
14 Acetone	43	2.731	2.607	(0.587)	370501	182.704	182.70(QM)

	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	2.545	2.556	(0.547)	541848	65.0903	65.090(R)
	16 Methyl tert butyl ether	73	2.731	2.725	(0.587)	1633595	67.8461	67.846
	17 1,1-Dichloroethane	63	3.167	3.167	(0.680)	1159973	64.2174	64.217(R)
	18 Acrylonitrile	53	3.274	3.291	(0.703)	241527	62.0014	62.001
	19 Vinyl Acetate	43	3.512	3.512	(0.754)	1395811	56.5585	56.558
	20 Cis-1,2-Dichloroethene	96	3.716	3.715	(0.798)	607803	57.6672	57.667
	22 2,2-Dichloropropane	77	3.812	3.812	(0.819)	876479	58.3394	58.339
	23 Bromochloromethane	128	3.902	3.902	(0.838)	286107	60.6187	60.619(R)
	24 Chloroform	83	4.004	4.004	(0.860)	977159	57.7845	57.784
	25 Carbon Tetrachloride	117	4.095	4.089	(0.802)	757932	53.4433	53.443
$	27 Dibromofluoromethane	111	4.174	4.174	(0.897)	595578	57.2791	57.279
	26 1,1,1-Trichloroethane	97	4.162	4.162	(0.894)	888923	58.4813	58.481
	28 1,1-Dichloropropene	75	4.287	4.287	(0.839)	878997	52.8836	52.884
	29 2-Butanone	72	4.372	4.389	(0.939)	334515	273.390	273.39(Q)
	30 Benzene	78	4.513	4.513	(0.884)	2522017	53.9995	53.999
*	31 Pentafluorobenzene	168	4.655	4.654	(1.000)	362501	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.643	4.649	(0.998)	546012	56.2030	56.203
	33 1,2-Dichloroethane	62	4.705	4.705	(0.921)	745130	50.5746	50.575
	34 Trichloroethene	95	5.051	5.050	(0.989)	608480	53.3652	53.365
*	35 1,4-Difluorobenzene	114	5.107	5.107	(1.000)	1476772	50.0000	
	37 Dibromomethane	93	5.407	5.407	(1.059)	314315	51.2023	51.202
	38 1,2-Dichloropropane	63	5.503	5.503	(1.078)	698038	52.7234	52.723
	39 Bromodichloromethane	83	5.577	5.577	(1.092)	750108	52.4031	52.403
	40 2-Chloroethyl Vinyl Ether	63	6.114	6.114	(1.197)	373830	53.7304	53.730
	41 Cis 1,3-dichloropropene	75	6.125	6.125	(1.199)	998152	53.6256	53.626
$	42 d8-Toluene	98	6.284	6.284	(1.230)	2197894	50.7902	50.790
	43 Toluene	92	6.329	6.329	(1.239)	1589447	53.4677	53.468
	44 Tetrachloroethene	166	6.640	6.640	(0.875)	650921	52.9151	52.915
	45 4-Methyl-2-Pentanone	58	6.697	6.697	(1.311)	1350987	258.979	258.98
	46 Trans 1,3-Dichloropropene	75	6.691	6.691	(1.310)	882651	53.3365	53.336
	47 1,1,2-Trichloroethane	97	6.821	6.821	(1.336)	482165	51.8688	51.869
	48 Chlorodibromomethane	129	6.957	6.957	(0.917)	544430	51.2947	51.295
	49 1,3-Dichloropropane	76	7.042	7.042	(0.928)	889340	50.7873	50.787
	50 1,2-Dibromoethane	107	7.132	7.132	(1.397)	465547	51.1381	51.138
	51 2-Hexanone	43	7.409	7.409	(0.976)	2220408	245.963	245.96
*	52 d5-Chlorobenzene	117	7.590	7.590	(1.000)	1777023	50.0000	
	53 Chlorobenzene	112	7.607	7.607	(1.002)	1583300	52.3480	52.348
	54 Ethyl Benzene	91	7.658	7.658	(1.009)	2856827	55.0746	55.075
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.011)	550338	51.0889	51.089
	56 m,p-xylene	106	7.788	7.788	(1.026)	2172845	109.941	109.94
	57 o-Xylene	106	8.150	8.150	(1.074)	1053701	53.6036	53.604
	58 Styrene	104	8.201	8.201	(1.080)	1768663	55.5732	55.573
	59 Bromoform	173	8.196	8.196	(0.847)	378743	51.7108	51.711
	60 Isopropyl Benzene	105	8.439	8.439	(0.872)	2692351	57.3848	57.385
$	62 4-Bromofluorobenzene	95	8.665	8.660	(1.142)	962635	49.6492	49.649
	63 Bromobenzene	156	8.739	8.739	(0.903)	647345	52.2932	52.293
	64 N-Propyl Benzene	91	8.812	8.812	(0.911)	3194939	57.4539	57.454

	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)	608963	49.7675	49.768
	66 2-Chloro Toluene	91	8.920	8.920	(0.922)	1926610	54.6876	54.688
	67 1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.930)	2264682	56.7456	56.746
	68 1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	183543	49.5539	49.554
	69 Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	229100	50.4184	50.418
	70 4-Chloro Toluene	91	9.073	9.073	(0.938)	2016957	55.2694	55.269
	71 T-Butyl Benzene	119	9.276	9.276	(0.959)	1983524	56.5022	56.502
	72 1,2,4-Trimethylbenzene	105	9.344	9.344	(0.966)	2235259	56.9575	56.957
	73 S-Butyl Benzene	105	9.440	9.440	(0.976)	2932701	57.4307	57.431
	74 4-Isopropyl Toluene	119	9.587	9.587	(0.991)	2452611	58.5357	58.536
	75 1,3-Dichlorobenzene	146	9.599	9.599	(0.992)	1234148	53.7726	53.773
*	76 d4-1,4-Dichlorobenzene	152	9.672	9.672	(1.000)	935154	50.0000	
	77 1,4-Dichlorobenzene	146	9.684	9.683	(1.001)	1257023	53.1386	53.139
	78 N-Butyl Benzene	91	9.972	9.972	(1.031)	2378718	58.9875	58.988
$	79 d4-1,2-Dichlorobenzene	152	10.057	10.057	(1.040)	970752	50.9556	50.956
	80 1,2-Dichlorobenzene	146	10.063	10.062	(1.040)	1157261	51.8417	51.842
	81 1,2-Dibromo 3-Chloropropane	75	10.821	10.815	(1.119)	111948	47.2489	47.249
	82 Hexachloro 1,3-Butadiene	225	11.505	11.499	(1.189)	531192	53.6230	53.623
	83 1,2,4-Trichlorobenzene	180	11.494	11.488	(1.188)	881103	54.7382	54.738
	84 Naphthalene	128	11.805	11.799	(1.220)	1830052	51.7989	51.799
	85 1,2,3-Trichlorobenzene	180	11.992	11.986	(1.240)	799036	51.3561	51.356

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: lcs0612.d
Lab Smp Id: LCS0612
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/12JUN13.b/VO121012S.m
Misc Info: 13-12076

Calibration Date: 12-JUN-2013
Calibration Time: 11:43
Client Smp ID: LCS0612
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	459631	229816	919262	362501	-21.13
35 1,4-Difluorobenze	1692431	846216	3384862	1476772	-12.74
52 d5-Chlorobenzene	1987215	993608	3974430	1777023	-10.58
76 d4-1,4-Dichlorobe	1075398	537699	2150796	935154	-13.04

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	7.59	7.09	8.09	7.59	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: LCS0612
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/12JUN13.b/VO121012S.m
Misc Info: 13-12076

Client SDG: 12JUN13
Fraction: VOA
Client Smp ID: LCS0612
Operator: PB
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1 Dichlorodifluorome	50.000	57.798	115.60	53-148
2 Chloromethane	50.000	58.305	116.61	64-125
3 Vinyl Chloride	50.000	59.268	118.54	63-137
4 Bromomethane	50.000	57.012	114.02	57-136
5 Chloroethane	50.000	61.263	122.53	64-131
6 Trichlorofluoromet	50.000	59.209	118.42	69-132
12 Acrolein	250.00	190.43	76.17	54-137
9 112Trichloro122Tri	50.000	49.498	99.00	74-130
14 Acetone	250.00	182.70	73.08	60-131
7 1,1-Dichloroethene	50.000	48.672	97.34	75-126
11 Bromoethane	50.000	47.435	94.87	76-126
10 Iodomethane	50.000	46.855	93.71	65-139
13 Methylene Chloride	50.000	58.488	116.98	70-123
8 Carbon Disulfide	50.000	48.988	97.98	71-129
18 Acrylonitrile	50.000	62.001	124.00	67-125
15 Trans-1,2-Dichloro	50.000	65.090	130.18*	80-120
19 Vinyl Acetate	50.000	56.558	113.12	60-136
17 1,1-Dichloroethane	50.000	64.217	128.43*	80-120
29 2-Butanone	250.00	273.39	109.36	70-120
22 2,2-Dichloropropan	50.000	58.339	116.68	74-123
20 Cis-1,2-Dichloroet	50.000	57.667	115.33	80-120
24 Chloroform	50.000	57.784	115.57	80-120
23 Bromochloromethane	50.000	60.619	121.24*	80-120
26 1,1,1-Trichloroeth	50.000	58.481	116.96	77-121
28 1,1-Dichloropropen	50.000	52.884	105.77	80-120
25 Carbon Tetrachlori	50.000	53.443	106.89	77-122
33 1,2-Dichloroethane	50.000	50.575	101.15	76-120
30 Benzene	50.000	53.999	108.00	80-120
34 Trichloroethene	50.000	53.365	106.73	80-120
38 1,2-Dichloropropan	50.000	52.723	105.45	80-120
39 Bromodichlorometha	50.000	52.403	104.81	77-121
37 Dibromomethane	50.000	51.202	102.40	80-120
40 2-Chloroethyl Viny	50.000	53.730	107.46	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	258.98	103.59	67-120
41 Cis 1,3-dichloropr	50.000	53.626	107.25	74-120
43 Toluene	50.000	53.468	106.94	80-120
46 Trans 1,3-Dichloro	50.000	53.336	106.67	65-120
51 2-Hexanone	250.00	245.96	98.39	65-130
47 1,1,2-Trichloroeth	50.000	51.869	103.74	80-120
49 1,3-Dichloropropan	50.000	50.787	101.57	80-120
44 Tetrachloroethene	50.000	52.915	105.83	80-121
48 Chlorodibromometha	50.000	51.295	102.59	64-120
50 1,2-Dibromoethane	50.000	51.138	102.28	75-120
53 Chlorobenzene	50.000	52.348	104.70	80-120
55 1,1,1,2-Tetrachlor	50.000	51.089	102.18	69-121
54 Ethyl Benzene	50.000	55.075	110.15	80-127
56 m,p-xylene	100.00	109.94	109.94	80-125
57 o-Xylene	50.000	53.604	107.21	78-120
58 Styrene	50.000	55.573	111.15	80-123
60 Isopropyl Benzene	50.000	57.385	114.77	80-127
59 Bromoform	50.000	51.711	103.42	60-120
65 1,1,2,2-Tetrachlor	50.000	49.768	99.54	74-120
68 1,2,3-Trichloropro	50.000	49.554	99.11	72-121
69 Trans-1,4-Dichloro	50.000	50.418	100.84	65-126
64 N-Propyl Benzene	50.000	57.454	114.91	80-132
63 Bromobenzene	50.000	52.293	104.59	80-120
67 1,3,5-Trimethyl Be	50.000	56.746	113.49	80-125
66 2-Chloro Toluene	50.000	54.688	109.38	80-125
70 4-Chloro Toluene	50.000	55.269	110.54	80-127
71 T-Butyl Benzene	50.000	56.502	113.00	87-122
72 1,2,4-Trimethylben	50.000	56.957	113.91	80-126
73 S-Butyl Benzene	50.000	57.431	114.86	80-134
74 4-Isopropyl Toluen	50.000	58.536	117.07	80-131
75 1,3-Dichlorobenzen	50.000	53.773	107.55	80-120
77 1,4-Dichlorobenzen	50.000	53.139	106.28	80-120
78 N-Butyl Benzene	50.000	58.988	117.98	80-138
80 1,2-Dichlorobenzen	50.000	51.842	103.68	80-120
81 1,2-Dibromo 3-Chlo	50.000	47.249	94.50	59-120
83 1,2,4-Trichloroben	50.000	54.738	109.48	78-130
82 Hexachloro 1,3-But	50.000	53.623	107.25	76-129
84 Naphthalene	50.000	51.799	103.60	66-120
85 1,2,3-Trichloroben	50.000	51.356	102.71	73-123

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	57.279	114.56	70-130

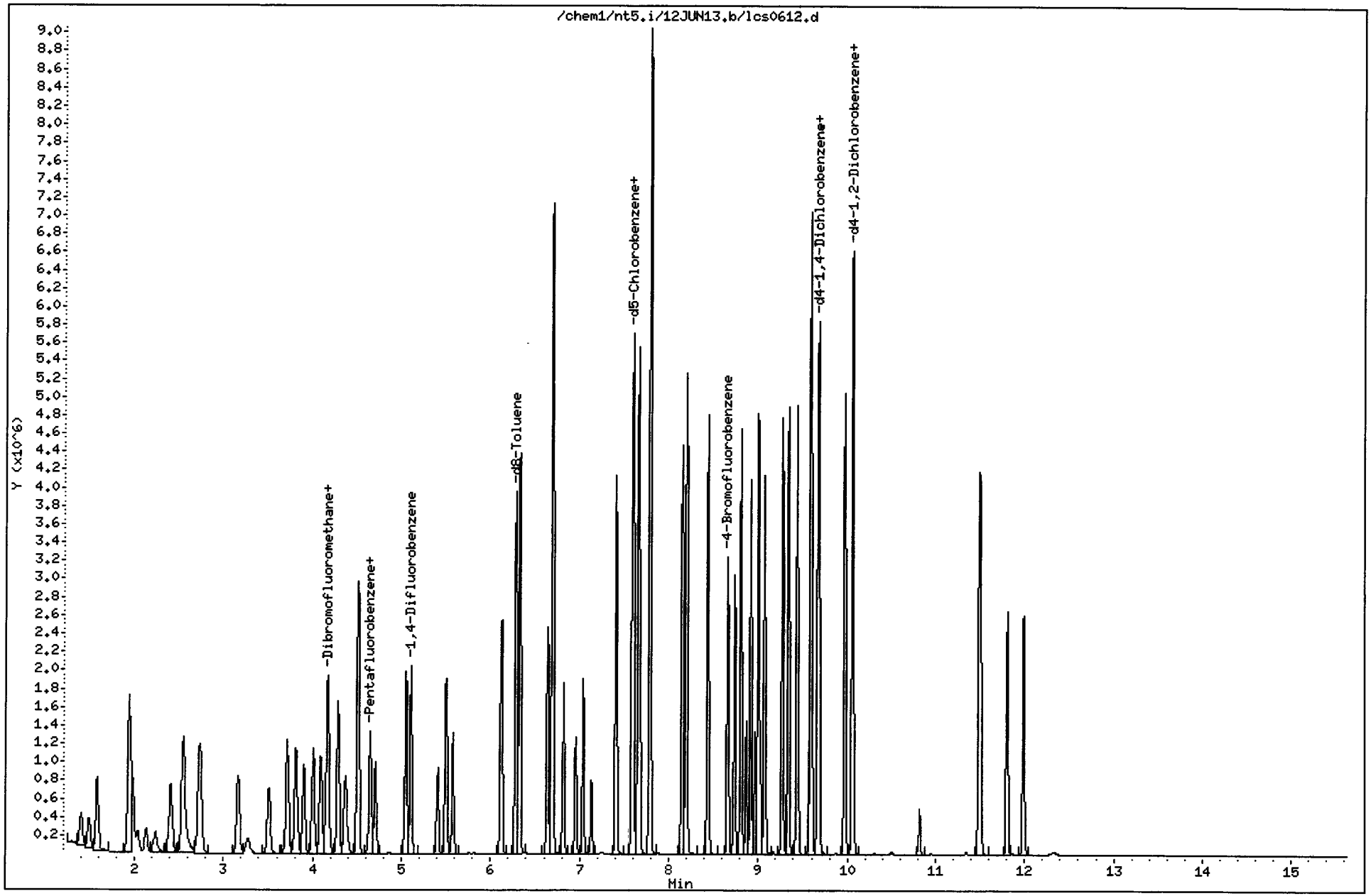
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	56.203	112.41	80-149
$ 42 d8-Toluene	50.000	50.790	101.58	77-120
$ 62 4-Bromofluorobenze	50.000	49.649	99.30	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.956	101.91	80-120

Data File: /chem1/nt5.i/12JUN13.b/lcs0612.d
Date : 12-JUN-2013 12:38
Client ID: LCS0612
Sample Info: LCS0612,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/12JUN13.b/mb0612.d
Lab Smp Id: MB0612 Client Smp ID: MB0612
Inj Date : 12-JUN-2013 13:26
Operator : PB Inst ID: nt5.i
Smp Info : MB0612,5,5,0
Misc Info : 13-12076
Comment :
Method : /chem1/nt5.i/12JUN13.b/VO121012S.m
Meth Date : 18-Jun-2013 08:39 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 08:57 Cal File: 2000611.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	2.437	2.414	(0.522)	19788	2.55790	2.558(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	4.174	(0.898)	592527	58.0677	58.068
	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	4.654	(1.000)	355746	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.649	(0.999)	548122	57.4915	57.491
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.118	5.107	(1.000)	1457930	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	(1.229)	2202760	51.5605	51.561
	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	7.590	(1.000)	1809126	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	8.660	(1.141)	990357	50.1726	50.173
	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)	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	9.667	9.672	(1.000)	982002	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)	1026561	51.3143	51.314
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	11.799	(1.219)	28422	0.76609	0.7661
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: mb0612.d
Lab Smp Id: MB0612
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/12JUN13.b/VO121012S.m
Misc Info: 13-12076

Calibration Date: 12-JUN-2013
Calibration Time: 11:43
Client Smp ID: MB0612
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	459631	229816	919262	355746	-22.60
35 1,4-Difluorobenze	1692431	846216	3384862	1457930	-13.86
52 d5-Chlorobenzene	1987215	993608	3974430	1809126	-8.96
76 d4-1,4-Dichlorobe	1075398	537699	2150796	982002	-8.68

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	7.59	7.09	8.09	7.59	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: MB0612
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/12JUN13.b/VO121012S.m
Misc Info: 13-12076

Client SDG: 12JUN13
Fraction: VOA
Client Smp ID: MB0612
Operator: PB
SampleType: BLANK
Quant Type: ISTD

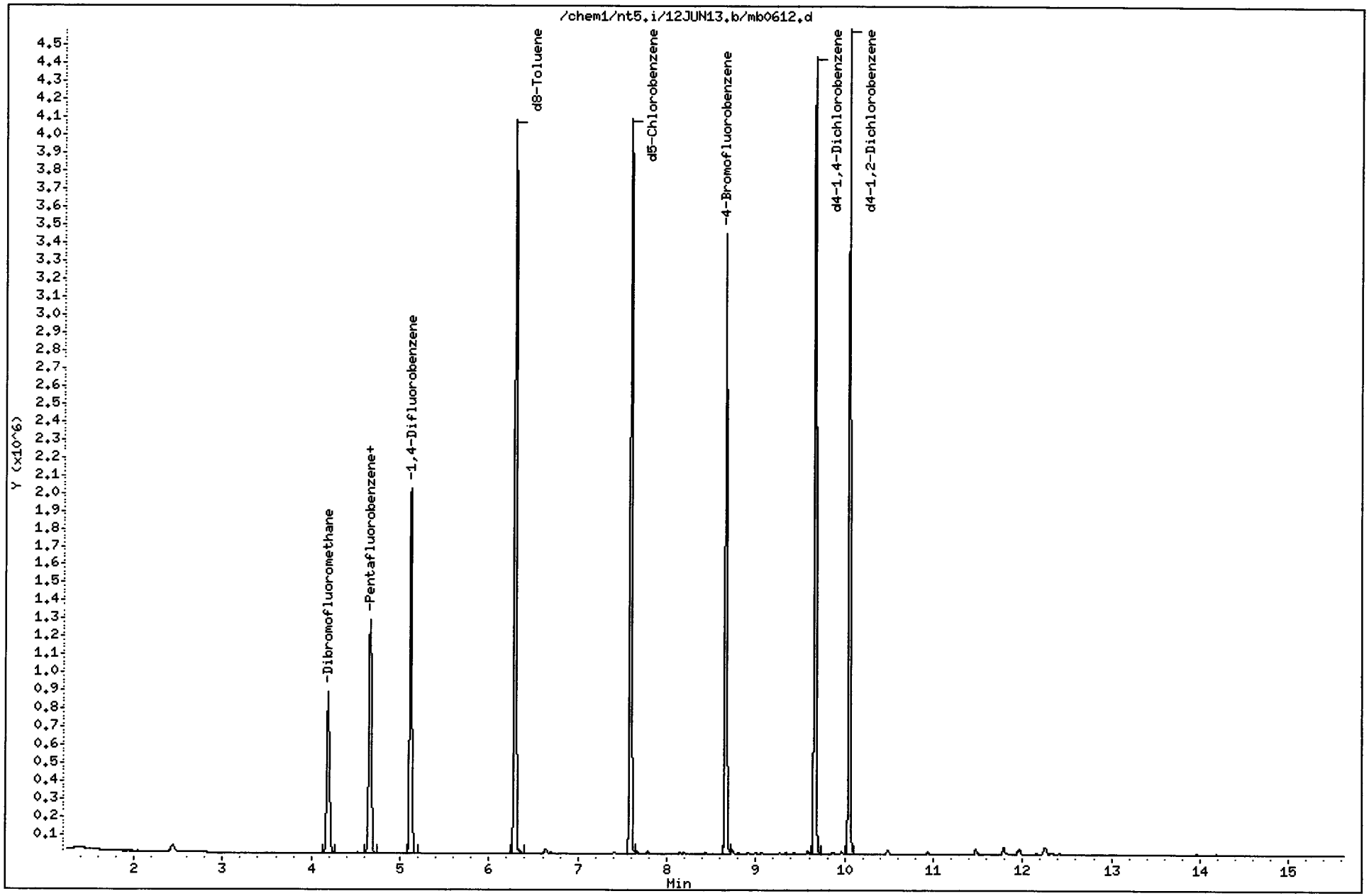
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	58.068	116.14	70-130
$ 32 d4-1,2-Dichloroeth	50.000	57.491	114.98	80-149
$ 42 d8-Toluene	50.000	51.561	103.12	77-120
$ 62 4-Bromofluorobenze	50.000	50.173	100.35	80-120
$ 79 d4-1,2-Dichloroben	50.000	51.314	102.63	80-120

Data File: /chem1/nt5.i/12JUN13.b/mb0612.d
Date : 12-JUN-2013 13:26
Client ID: MB0612
Sample Info: MB0612,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - mb0612.d

Lab ID: MB0612, Method: VO121012S.m, Instrument: nt5.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Data File: /chem1/nt5.i/12JUN13.b/mb0612.d

Date : 12-JUN-2013 13:26

Client ID: MB0612

Instrument: nt5.i

Sample Info: MB0612,5,5,0

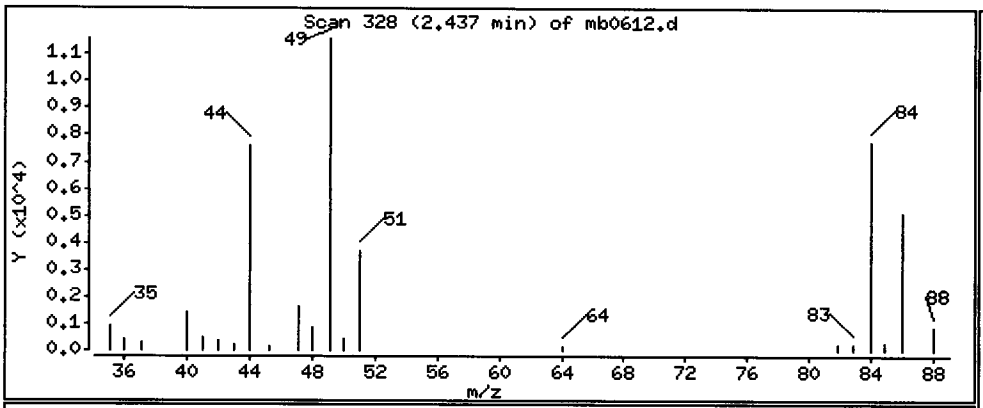
Operator: PB

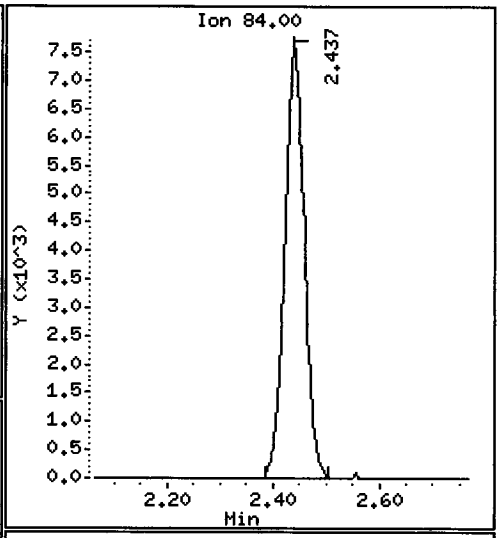
Column phase: RTXVMS

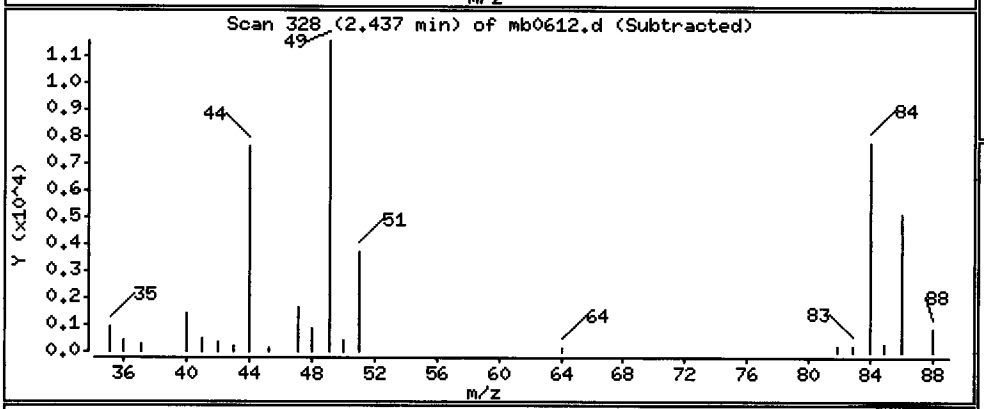
Column diameter: 0.18

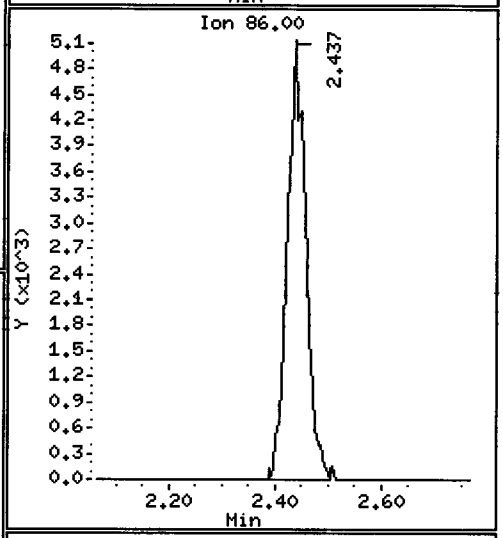
13 Methylene Chloride

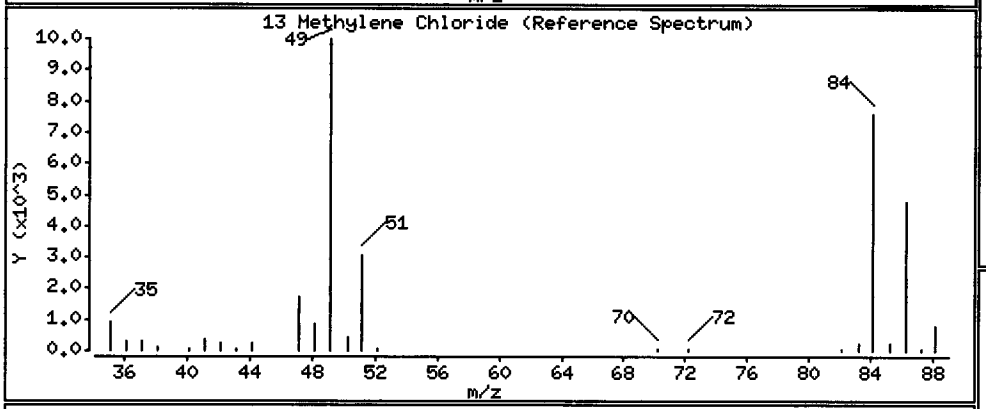
Concentration: 2.558 ug/Kg

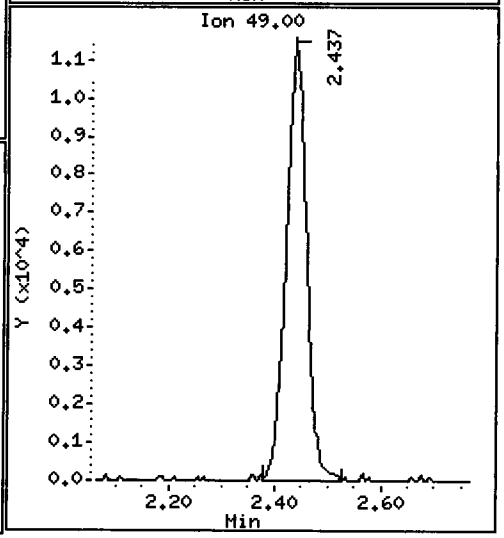


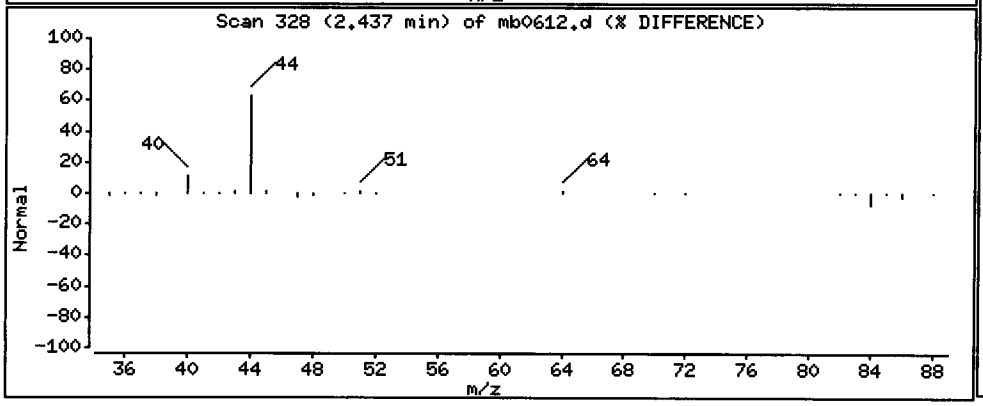












Data File: /chem1/nt5.i/12JUN13.b/mb0612.d

Date : 12-JUN-2013 13:26

Client ID: MB0612

Instrument: nt5.i

Sample Info: MB0612,5,5,0

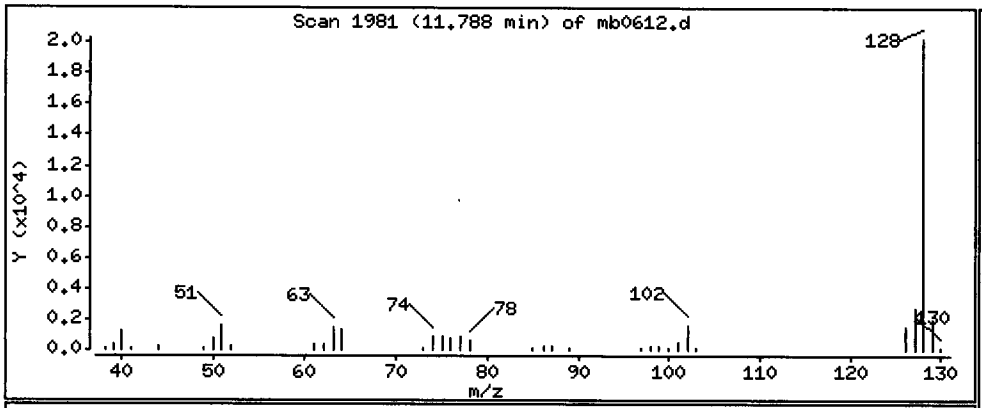
Operator: PB

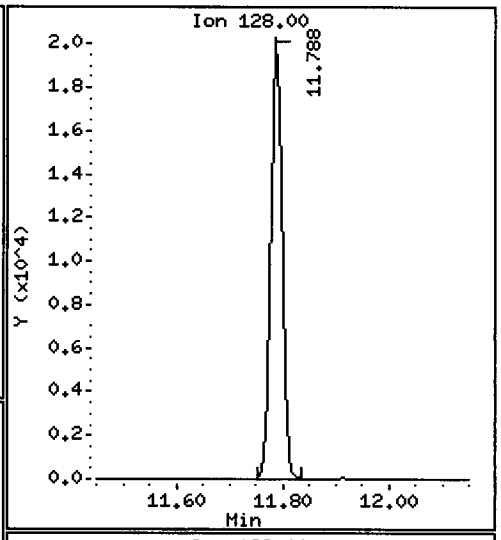
Column phase: RTXVMS

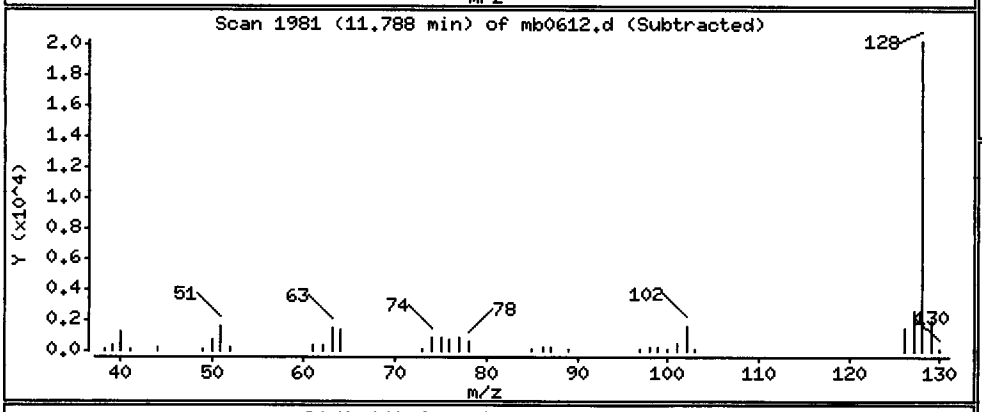
Column diameter: 0.18

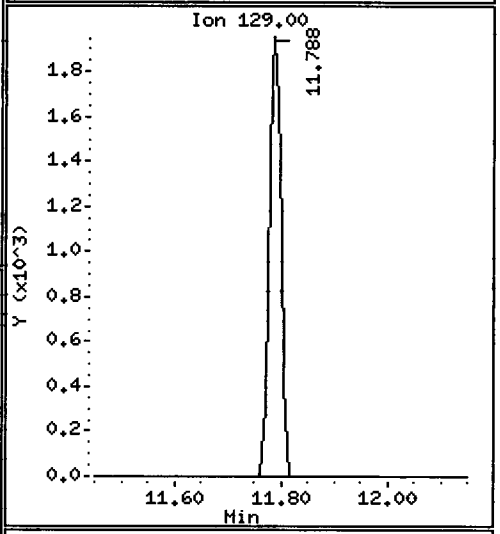
84 Naphthalene

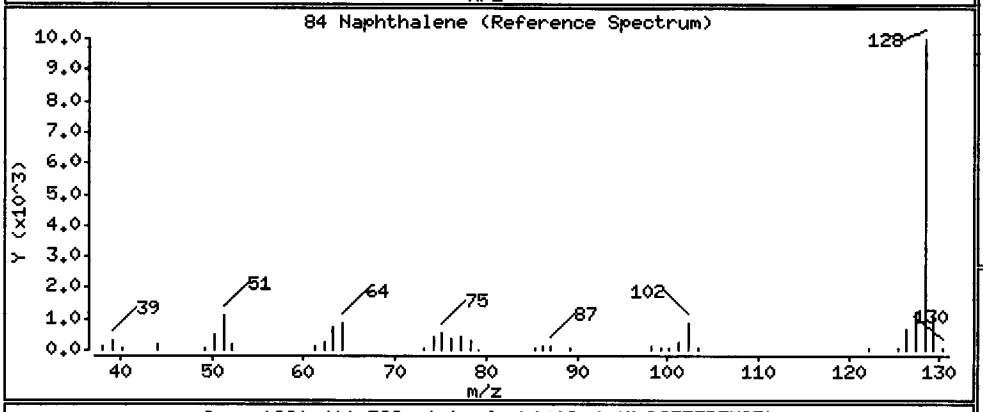
Concentration: 0.7661 ug/Kg

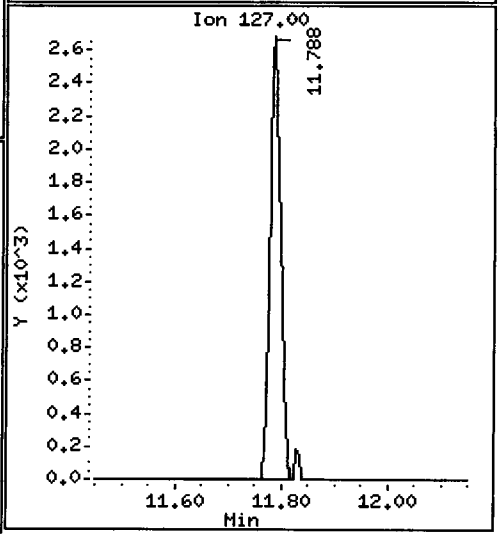


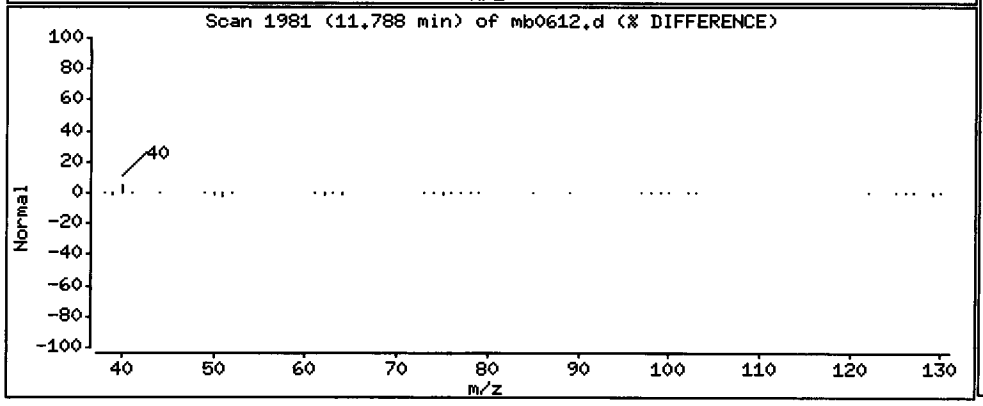












Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/12JUN13.b/lcs0612b.d
Lab Smp Id: LCS0612 Client Smp ID: LCS0612
Inj Date : 12-JUN-2013 14:07
Operator : PB Inst ID: nt5.i
Smp Info : LCS0612,5,5,0
Misc Info : 13-12076
Comment :
Method : /chem1/nt5.i/12JUN13.b/VO121012S.m
Meth Date : 18-Jun-2013 08:39 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 08:57 Cal File: 2000611.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	1.057	1.028	(0.226)	378221	60.0195	60.019
2 Chloromethane	50	1.345	1.317	(0.288)	731116	58.2583	58.258(M)
3 Vinyl Chloride	62	1.227	1.198	(0.263)	749899	61.7658	61.766
4 Bromomethane	94	1.430	1.407	(0.307)	347461	57.1317	57.132
5 Chloroethane	64	1.521	1.492	(0.326)	448467	62.0437	62.044
6 Trichlorofluoromethane	101	1.611	1.583	(0.345)	764085	60.5739	60.574
7 1,1-Dichloroethene	96	1.962	1.945	(0.420)	390499	45.8520	45.852
8 Carbon Disulfide	76	1.968	1.945	(0.422)	1257694	45.4432	45.443
9 112Trichloro122Trifluoroethane	101	2.007	1.990	(0.430)	347902	46.4066	46.407
10 Iodomethane	142	2.064	2.047	(0.442)	328692	43.5269	43.527
11 Bromoethane	108	2.160	2.143	(0.463)	240901	46.0294	46.029
12 Acrolein	56	2.262	2.256	(0.485)	368373	205.024	205.02
13 Methylene Chloride	84	2.437	2.414	(0.522)	543896	70.3685	70.369(QR)
14 Acetone	43	2.765	2.607	(0.593)	359459	180.145	180.15(QH)

	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	2.573	2.556	(0.551)	580403	71.1080	71.108(R)
	16 Methyl tert butyl ether	73	2.765	2.725	(0.593)	1653431	70.0353	70.035
	17 1,1-Dichloroethane	63	3.195	3.167	(0.685)	1170985	66.1160	66.116(R)
	18 Acrylonitrile	53	3.297	3.291	(0.707)	238542	62.4527	62.453
	19 Vinyl Acetate	43	3.535	3.512	(0.758)	1393117	57.5717	57.572
	20 Cis-1,2-Dichloroethene	96	3.738	3.715	(0.801)	614125	59.4255	59.426
	22 2,2-Dichloropropane	77	3.834	3.812	(0.822)	881359	59.8307	59.831
	23 Bromochloromethane	128	3.925	3.902	(0.841)	286394	61.8860	61.886(R)
	24 Chloroform	83	4.027	4.004	(0.863)	989549	59.6807	59.681
	25 Carbon Tetrachloride	117	4.112	4.089	(0.803)	765087	54.3191	54.319
$	27 Dibromofluoromethane	111	4.191	4.174	(0.898)	595518	58.4121	58.412
	26 1,1,1-Trichloroethane	97	4.179	4.162	(0.896)	891711	59.8312	59.831
	28 1,1-Dichloropropene	75	4.304	4.287	(0.841)	878447	53.2143	53.214
	29 2-Butanone	72	4.383	4.389	(0.939)	346758	289.030	289.03(Q)
	30 Benzene	78	4.530	4.513	(0.885)	2544689	54.8599	54.860
*	31 Pentafluorobenzene	168	4.666	4.654	(1.000)	355434	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.649	(0.999)	541088	56.8035	56.803
	33 1,2-Dichloroethane	62	4.723	4.705	(0.923)	752917	51.4549	51.455
	34 Trichloroethene	95	5.062	5.050	(0.989)	610108	53.8763	53.876
*	35 1,4-Difluorobenzene	114	5.119	5.107	(1.000)	1466677	50.0000	
	37 Dibromomethane	93	5.418	5.407	(1.059)	313171	51.3671	51.367
	38 1,2-Dichloropropane	63	5.515	5.503	(1.077)	690160	52.4872	52.487
	39 Bromodichloromethane	83	5.588	5.577	(1.092)	755702	53.1573	53.157
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.114	(1.196)	374177	54.1504	54.150
	41 Cis 1,3-dichloropropene	75	6.131	6.125	(1.198)	995248	53.8376	53.838
$	42 d8-Toluene	98	6.290	6.284	(1.229)	2214067	51.5161	51.516
	43 Toluene	92	6.335	6.329	(1.238)	1605311	54.3731	54.373
	44 Tetrachloroethene	166	6.646	6.640	(0.875)	657190	53.0539	53.054
	45 4-Methyl-2-Pentanone	58	6.702	6.697	(1.309)	1340151	258.670	258.67
	46 Trans 1,3-Dichloropropene	75	6.697	6.691	(1.308)	887826	54.0184	54.018
	47 1,1,2-Trichloroethane	97	6.827	6.821	(1.334)	483005	52.3168	52.317
	48 Chlorodibromomethane	129	6.963	6.957	(0.917)	540830	50.6018	50.602
	49 1,3-Dichloropropane	76	7.048	7.042	(0.928)	891465	50.5552	50.555
	50 1,2-Dibromoethane	107	7.138	7.132	(1.395)	462491	51.1521	51.152
	51 2-Hexanone	43	7.410	7.409	(0.975)	2243683	246.816	246.82
*	52 d5-Chlorobenzene	117	7.596	7.590	(1.000)	1789446	50.0000	
	53 Chlorobenzene	112	7.608	7.607	(1.001)	1592022	52.2710	52.271
	54 Ethyl Benzene	91	7.658	7.658	(1.008)	2895486	55.4324	55.432
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	556744	51.3248	51.325
	56 m,p-xylene	106	7.794	7.788	(1.026)	2184352	109.756	109.76
	57 o-Xylene	106	8.156	8.150	(1.074)	1063233	53.7130	53.713
	58 Styrene	104	8.202	8.201	(1.080)	1784146	55.6705	55.670
	59 Bromoform	173	8.196	8.196	(0.847)	374763	49.1239	49.124
	60 Isopropyl Benzene	105	8.445	8.439	(0.873)	2723761	55.7358	55.736
$	62 4-Bromofluorobenzene	95	8.665	8.660	(1.141)	979381	50.1622	50.162
	63 Bromobenzene	156	8.739	8.739	(0.903)	650821	50.4744	50.474
	64 N-Propyl Benzene	91	8.812	8.812	(0.911)	3236677	55.8800	55.880

	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)	610793	47.9236	47.924
66	2-Chloro Toluene	91	8.920	8.920	(0.922)	1953914	53.2477	53.248
67	1,3,5-Trimethyl Benzene	105	9.005	8.999	(0.931)	2291583	55.1265	55.127
68	1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	181125	46.9482	46.948
69	Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	230505	48.7018	48.702
70	4-Chloro Toluene	91	9.073	9.073	(0.938)	2046093	53.8287	53.829
71	T-Butyl Benzene	119	9.276	9.276	(0.959)	2003443	54.7905	54.790
72	1,2,4-Trimethylbenzene	105	9.344	9.344	(0.966)	2259849	55.2844	55.284
73	S-Butyl Benzene	105	9.440	9.440	(0.976)	2979333	56.0138	56.014
74	4-Isopropyl Toluene	119	9.587	9.587	(0.991)	2498604	57.2519	57.252
75	1,3-Dichlorobenzene	146	9.599	9.599	(0.992)	1254567	52.4792	52.479
* 76	d4-1,4-Dichlorobenzene	152	9.672	9.672	(1.000)	974054	50.0000	
77	1,4-Dichlorobenzene	146	9.684	9.683	(1.001)	1278701	51.8963	51.896
78	N-Butyl Benzene	91	9.972	9.972	(1.031)	2426167	57.7614	57.761
$ 79	d4-1,2-Dichlorobenzene	152	10.057	10.057	(1.040)	1004178	50.6051	50.605
80	1,2-Dichlorobenzene	146	10.063	10.062	(1.040)	1172295	50.4179	50.418
81	1,2-Dibromo 3-Chloropropane	75	10.815	10.815	(1.118)	113772	46.1010	46.101
82	Hexachloro 1,3-Butadiene	225	11.500	11.499	(1.189)	552724	53.5683	53.568
83	1,2,4-Trichlorobenzene	180	11.488	11.488	(1.188)	911669	54.3752	54.375
84	Naphthalene	128	11.799	11.799	(1.220)	1865480	50.6930	50.693
85	1,2,3-Trichlorobenzene	180	11.986	11.986	(1.239)	828930	51.1498	51.150

QC Flag Legend

Q - Qualifier signal failed the ratio test.
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: nt5.i
Lab File ID: lcs0612b.d
Lab Smp Id: LCS0612
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/12JUN13.b/VO121012S.m
Misc Info: 13-12076

Calibration Date: 12-JUN-2013
Calibration Time: 11:43
Client Smp ID: LCS0612
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	459631	229816	919262	355434	-22.67
35 1,4-Difluorobenze	1692431	846216	3384862	1466677	-13.34
52 d5-Chlorobenzene	1987215	993608	3974430	1789446	-9.95
76 d4-1,4-Dichlorobe	1075398	537699	2150796	974054	-9.42

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	0.22
52 d5-Chlorobenzene	7.59	7.09	8.09	7.60	0.08
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: LCS0612
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/12JUN13.b/VO121012S.m
Misc Info: 13-12076

Client SDG: 12JUN13
Fraction: VOA
Client Smp ID: LCS0612
Operator: PB
SampleType: LCSD
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1	Dichlorodifluorome	50.000	60.019	120.04	53-148
2	Chloromethane	50.000	58.258	116.52	64-125
3	Vinyl Chloride	50.000	61.766	123.53	63-137
4	Bromomethane	50.000	57.132	114.26	57-136
5	Chloroethane	50.000	62.044	124.09	64-131
6	Trichlorofluoromet	50.000	60.574	121.15	69-132
12	Acrolein	250.00	205.02	82.01	54-137
9	112Trichloro122Tri	50.000	46.407	92.81	74-130
14	Acetone	250.00	180.15	72.06	60-131
7	1,1-Dichloroethene	50.000	45.852	91.70	75-126
11	Bromoethane	50.000	46.029	92.06	76-126
10	Iodomethane	50.000	43.527	87.05	65-139
13	Methylene Chloride	50.000	70.369	140.74*	70-123
8	Carbon Disulfide	50.000	45.443	90.89	71-129
18	Acrylonitrile	50.000	62.453	124.91	67-125
15	Trans-1,2-Dichloro	50.000	71.108	142.22*	80-120
19	Vinyl Acetate	50.000	57.572	115.14	60-136
17	1,1-Dichloroethane	50.000	66.116	132.23*	80-120
29	2-Butanone	250.00	289.03	115.61	70-120
22	2,2-Dichloropropan	50.000	59.831	119.66	74-123
20	Cis-1,2-Dichloroet	50.000	59.426	118.85	80-120
24	Chloroform	50.000	59.681	119.36	80-120
23	Bromochloromethane	50.000	61.886	123.77*	80-120
26	1,1,1-Trichloroeth	50.000	59.831	119.66	77-121
28	1,1-Dichloropropen	50.000	53.214	106.43	80-120
25	Carbon Tetrachlori	50.000	54.319	108.64	77-122
33	1,2-Dichloroethane	50.000	51.455	102.91	76-120
30	Benzene	50.000	54.860	109.72	80-120
34	Trichloroethene	50.000	53.876	107.75	80-120
38	1,2-Dichloropropan	50.000	52.487	104.97	80-120
39	Bromodichlorometha	50.000	53.157	106.31	77-121
37	Dibromomethane	50.000	51.367	102.73	80-120
40	2-Chloroethyl Viny	50.000	54.150	108.30	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	258.67	103.47	67-120
41 Cis 1,3-dichloropr	50.000	53.838	107.68	74-120
43 Toluene	50.000	54.373	108.75	80-120
46 Trans 1,3-Dichloro	50.000	54.018	108.04	65-120
51 2-Hexanone	250.00	246.82	98.73	65-130
47 1,1,2-Trichloroeth	50.000	52.317	104.63	80-120
49 1,3-Dichloropropan	50.000	50.555	101.11	80-120
44 Tetrachloroethene	50.000	53.054	106.11	80-121
48 Chlorodibromometha	50.000	50.602	101.20	64-120
50 1,2-Dibromoethane	50.000	51.152	102.30	75-120
53 Chlorobenzene	50.000	52.271	104.54	80-120
55 1,1,1,2-Tetrachlor	50.000	51.325	102.65	69-121
54 Ethyl Benzene	50.000	55.432	110.86	80-127
56 m,p-xylene	100.00	109.76	109.76	80-125
57 o-Xylene	50.000	53.713	107.43	78-120
58 Styrene	50.000	55.670	111.34	80-123
60 Isopropyl Benzene	50.000	55.736	111.47	80-127
59 Bromoform	50.000	49.124	98.25	60-120
65 1,1,2,2-Tetrachlor	50.000	47.924	95.85	74-120
68 1,2,3-Trichloropro	50.000	46.948	93.90	72-121
69 Trans-1,4-Dichloro	50.000	48.702	97.40	65-126
64 N-Propyl Benzene	50.000	55.880	111.76	80-132
63 Bromobenzene	50.000	50.474	100.95	80-120
67 1,3,5-Trimethyl Be	50.000	55.127	110.25	80-125
66 2-Chloro Toluene	50.000	53.248	106.50	80-125
70 4-Chloro Toluene	50.000	53.829	107.66	80-127
71 T-Butyl Benzene	50.000	54.790	109.58	87-122
72 1,2,4-Trimethylben	50.000	55.284	110.57	80-126
73 S-Butyl Benzene	50.000	56.014	112.03	80-134
74 4-Isopropyl Toluen	50.000	57.252	114.50	80-131
75 1,3-Dichlorobenzen	50.000	52.479	104.96	80-120
77 1,4-Dichlorobenzen	50.000	51.896	103.79	80-120
78 N-Butyl Benzene	50.000	57.761	115.52	80-138
80 1,2-Dichlorobenzen	50.000	50.418	100.84	80-120
81 1,2-Dibromo 3-Chlo	50.000	46.101	92.20	59-120
83 1,2,4-Trichloroben	50.000	54.375	108.75	78-130
82 Hexachloro 1,3-But	50.000	53.568	107.14	76-129
84 Naphthalene	50.000	50.693	101.39	66-120
85 1,2,3-Trichloroben	50.000	51.150	102.30	73-123

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	58.412	116.82	70-130

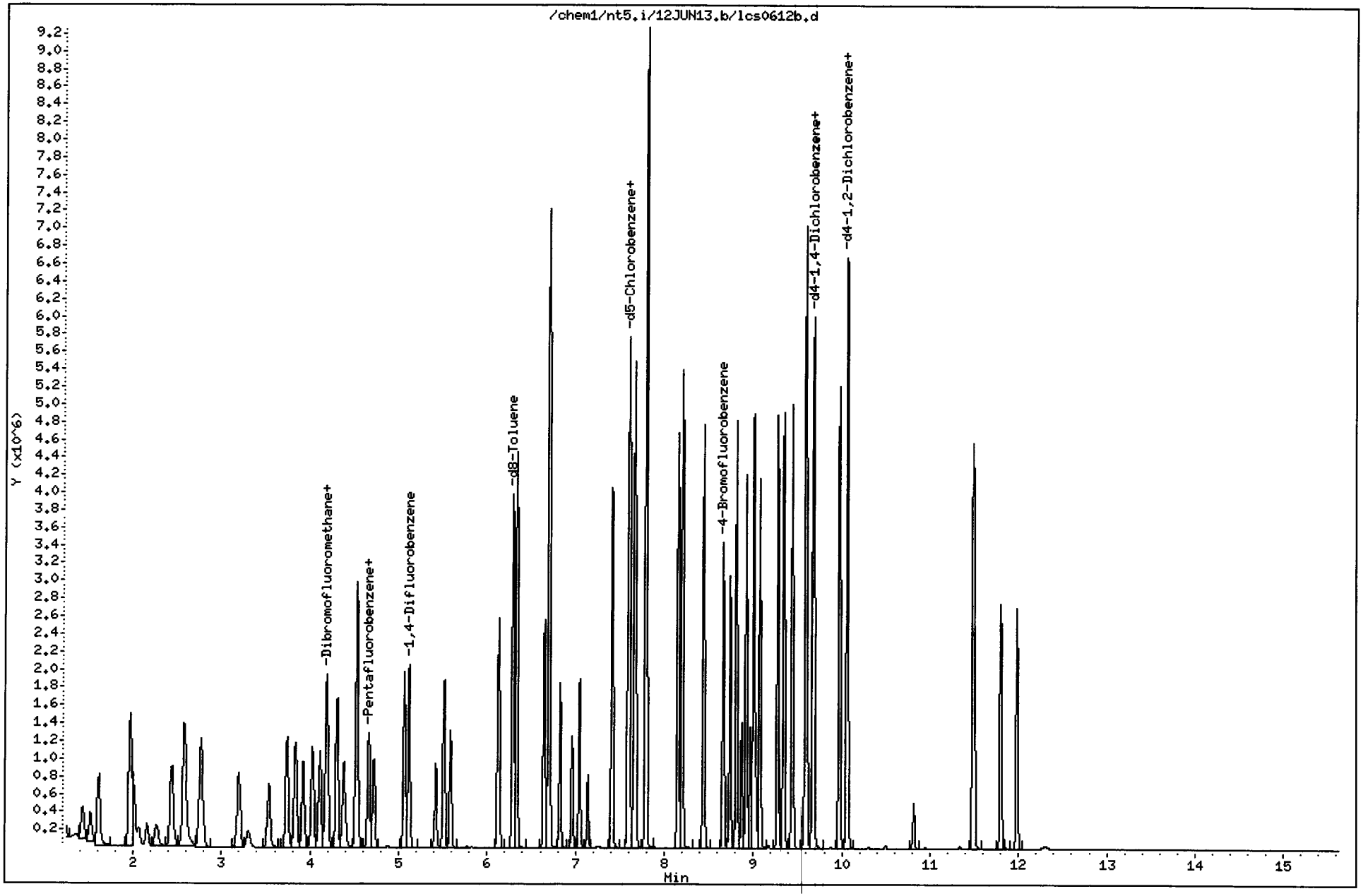
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	56.803	113.61	80-149
$ 42 d8-Toluene	50.000	51.516	103.03	77-120
$ 62 4-Bromofluorobenze	50.000	50.162	100.32	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.605	101.21	80-120

Data File: /chem1/nt5.i/12JUN13.b/lcs0612b.d
Date : 12-JUN-2013 14:07
Client ID: LCS0612
Sample Info: LCS0612,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Data File: /chem1/nt5.i/12JUN13.b/ws91a.d
Report Date: 18-Jun-2013 08:54

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/12JUN13.b/ws91a.d
Lab Smp Id: WS91A
Client Smp ID: CL-MH-SPS-20130605-
Inj Date : 12-JUN-2013 15:33
Operator : PB
Inst ID: nt5.i
Smp Info : WS91A,5,6.74,0
Misc Info : 13-12076
Comment :
Method : /chem1/nt5.i/12JUN13.b/VO121012S.m
Meth Date : 18-Jun-2013 08:54 patrickb
Quant Type: ISTD
Cal Date : 11-JUN-2013 08:57
Cal File: 2000611.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	6.74000	Sample Amount
M	63.90000	% 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	1.979	1.945	(0.424)	84964	3.22370	6.625
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	2.448	2.414	(0.524)	32066	4.35646	8.952(Q)
14 Acetone	43	2.590	2.607	(0.554)	663949	458.850	942.92
15 Trans-1,2-Dichloroethene	96	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
	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	4.027	4.004	(0.862)	37868	2.39825	4.928
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	27 Dibromofluoromethane	111	4.196	4.174	(0.898)	557633	57.4357	118.03
	26 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 1,1-Dichloropropene	75	Compound Not Detected.					
	29 2-Butanone	72	4.372	4.389	(0.936)	47239	41.3469	84.966(QM)
	30 Benzene	78	4.536	4.513	(0.886)	42944	0.97611	2.006
*	31 Pentafluorobenzene	168	4.671	4.654	(1.000)	338480	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.649	(0.998)	527666	58.1691	119.54
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.118	5.107	(1.000)	1391105	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	(1.229)	2032485	49.8602	102.46
	43 Toluene	92	6.329	6.329	(1.237)	34179	1.22056	2.508
	44 Tetrachloroethene	166	6.640	6.640	(0.874)	5484	0.50225	1.032
	45 4-Methyl-2-Pentanone	58	6.691	6.697	(1.307)	215931	43.9422	90.299
	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	7.590	(1.000)	1577330	50.0000	
	53 Chlorobenzene	112	Compound Not Detected.					
	54 Ethyl Benzene	91	7.658	7.658	(1.008)	54803	1.19026	2.446(QM)
	55 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56 m,p-xylene	106	7.788	7.788	(1.025)	149754	8.53648	17.542
	57 o-Xylene	106	8.150	8.150	(1.073)	63696	3.65056	7.502
	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	8.660	(1.141)	794325	46.1550	94.847
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	8.807	8.812	(0.910)	61701	1.56836	3.223
	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	8.999	8.999	(0.930)	202115	7.15845	14.710
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	9.344	9.344	(0.966)	590035	21.2518	43.672
73	S-Butyl Benzene	105	9.423	9.440	(0.974)	60755	1.68172	3.456(Q)
74	4-Isopropyl Toluene	119	Compound Not Detected.					
75	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 76	d4-1,4-Dichlorobenzene	152	9.672	9.672	(1.000)	661588	50.0000	
77	1,4-Dichlorobenzene	146	Compound Not Detected.					
78	N-Butyl Benzene	91	Compound Not Detected.					
$ 79	d4-1,2-Dichlorobenzene	152	10.057	10.057	(1.040)	689398	51.1504	105.11
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	11.494	11.488	(1.188)	7154	0.62821	1.291(Q)
84	Naphthalene	128	11.805	11.799	(1.220)	167710	6.70983	13.788
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: ws91a.d
Lab Smp Id: WS91A
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/12JUN13.b/VO121012S.m
Misc Info: 13-12076

Calibration Date: 12-JUN-2013
Calibration Time: 11:43
Client Smp ID: CL-MH-SPS-20130605-
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	459631	229816	919262	338480	-26.36
35 1,4-Difluorobenze	1692431	846216	3384862	1391105	-17.80
52 d5-Chlorobenzene	1987215	993608	3974430	1577330	-20.63
76 d4-1,4-Dichlorobe	1075398	537699	2150796	661588	-38.48

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	7.59	7.09	8.09	7.60	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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WS91A
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/12JUN13.b/VO121012S.m
Misc Info: 13-12076

Client SDG: WS91
Fraction: VOA
Client Smp ID: CL-MH-SPS-20130605-
Operator: PB
SampleType: SAMPLE
Quant Type: ISTD

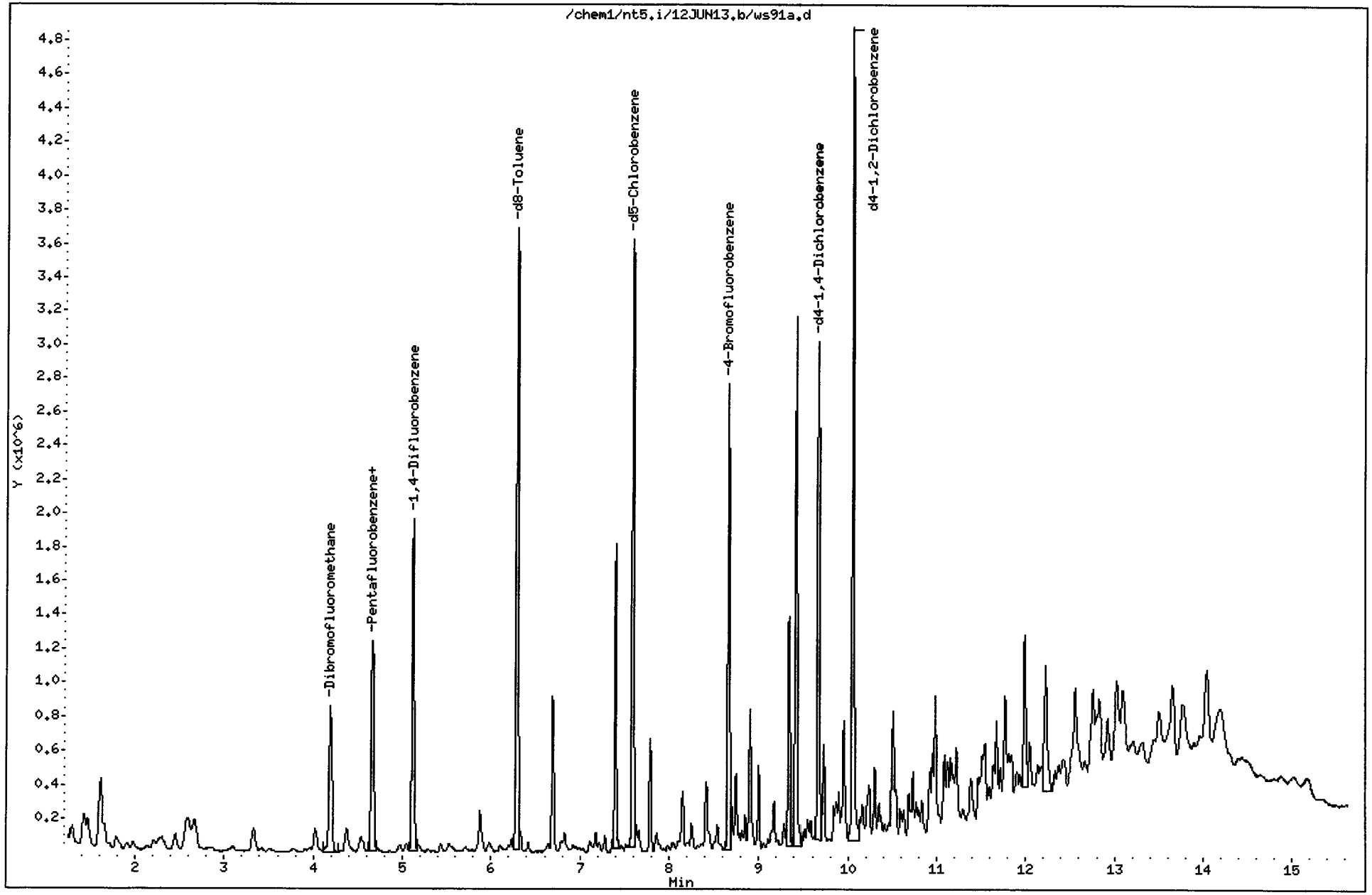
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	57.436	114.87	70-130
$ 32 d4-1,2-Dichloroeth	50.000	58.169	116.34	80-149
$ 42 d8-Toluene	50.000	49.860	99.72	77-120
$ 62 4-Bromofluorobenze	50.000	46.155	92.31	80-120
$ 79 d4-1,2-Dichloroben	50.000	51.150	102.30	80-120

Data File: /chem1/nt5.i/12JUN13.b/ws91a.d
Date : 12-JUN-2013 15:33
Client ID: CL-MH-SPS-20130605-
Sample Info: WS91A,5,6.74,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Data File: /chem1/nt5.i/12JUN13.b/ws91a.d

Date : 12-JUN-2013 15:33

Client ID: CL-MH-SPS-20130605-

Instrument: nt5.i

Sample Info: WS91A,5,6,74,0

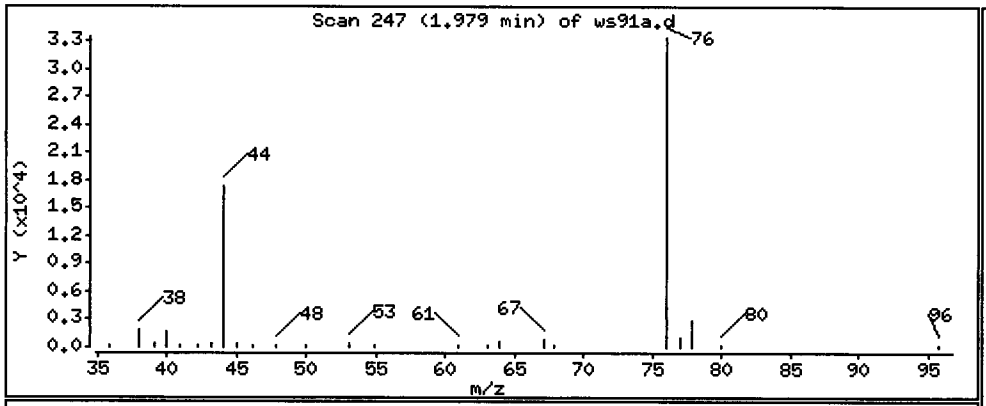
Operator: PB

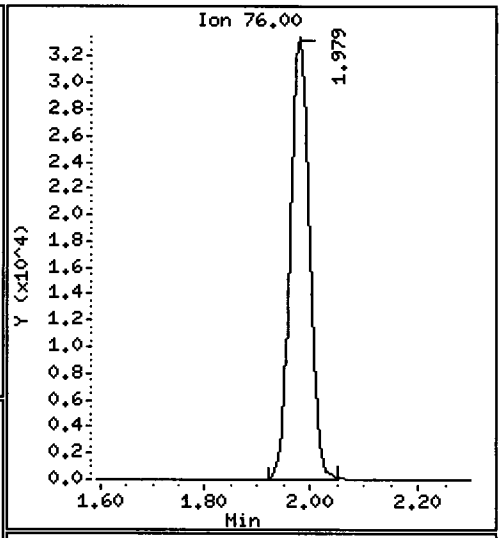
Column phase: RTXVMS

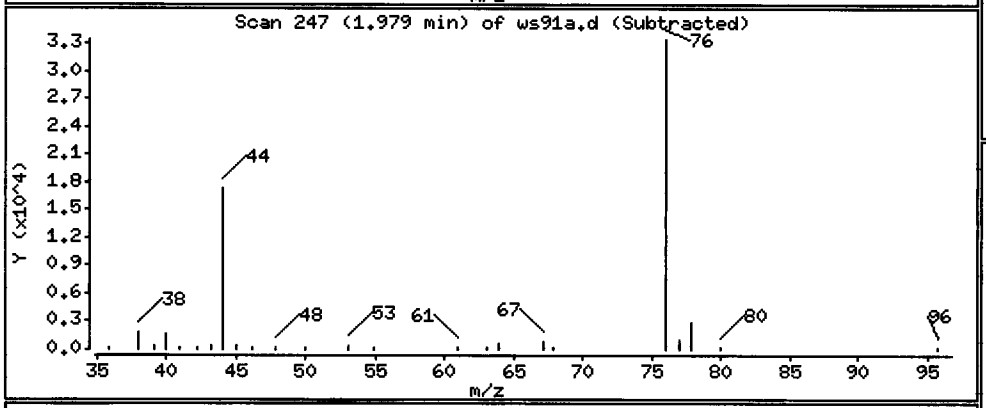
Column diameter: 0.18

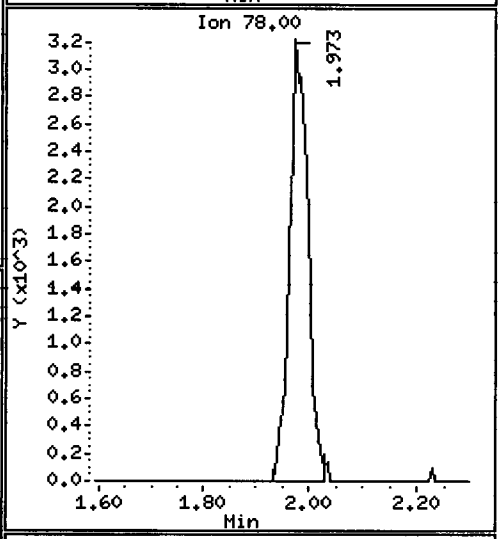
8 Carbon Disulfide

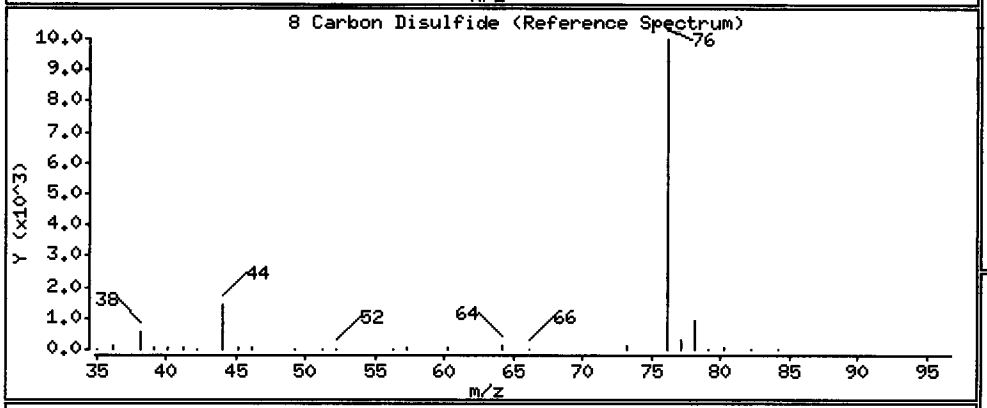
Concentration: 6.625 ug/Kg

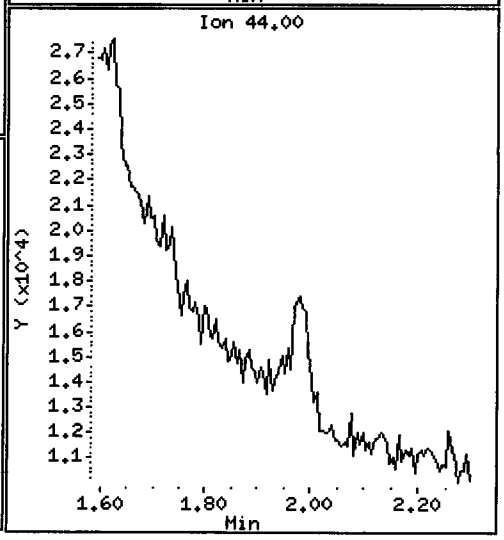


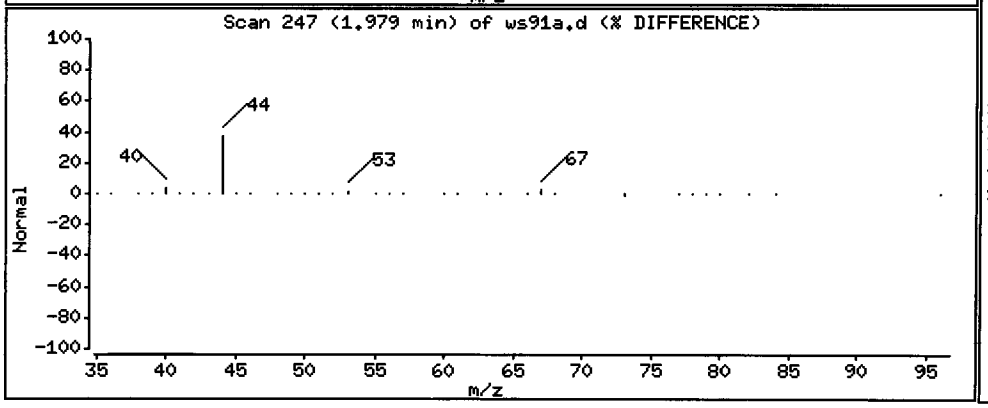












Data File: /chem1/nt5.i/12JUN13.b/ws91a.d

Date : 12-JUN-2013 15:33

Client ID: CL-MH-SPS-20130605-

Instrument: nt5.i

Sample Info: WS91A,5,6.74,0

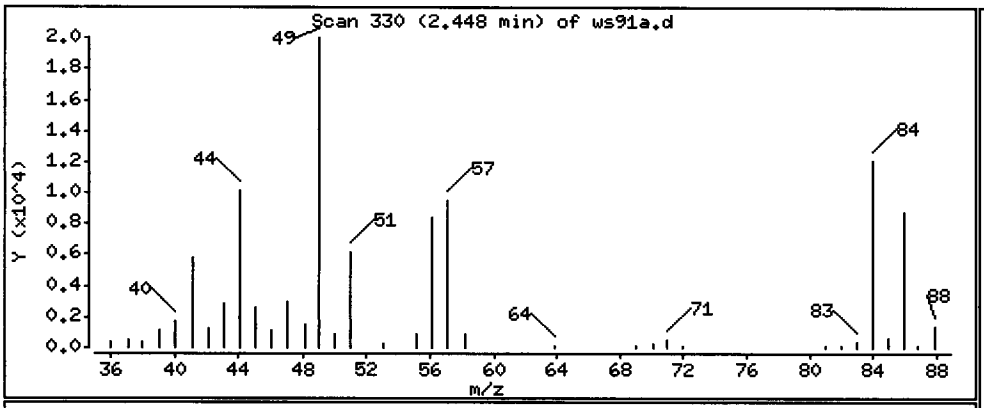
Operator: PB

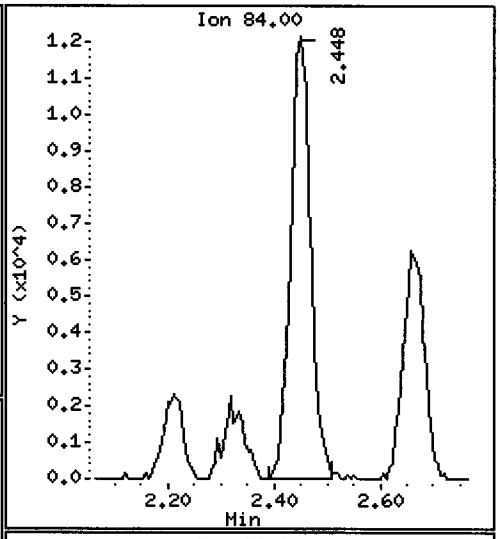
Column phase: RTXVMS

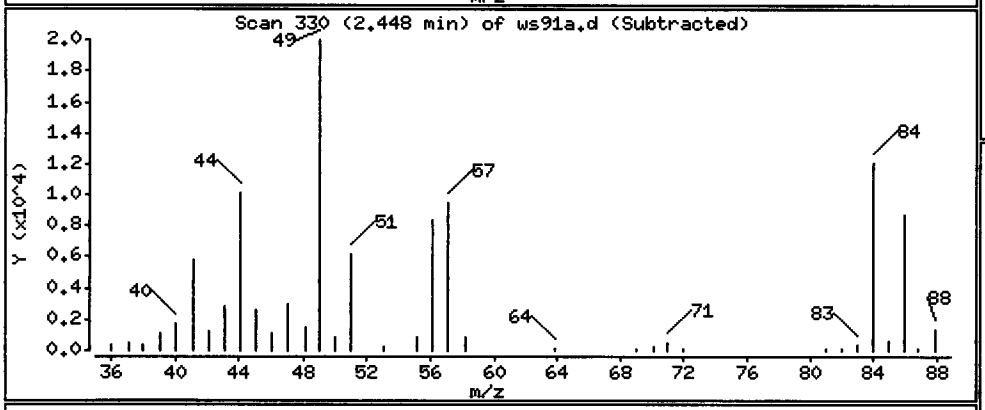
Column diameter: 0.18

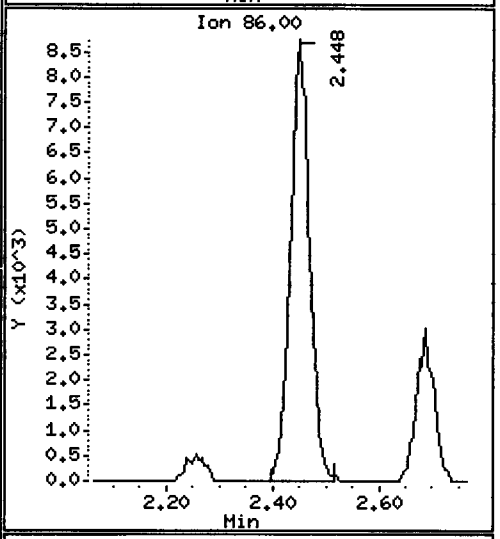
13 Methylene Chloride

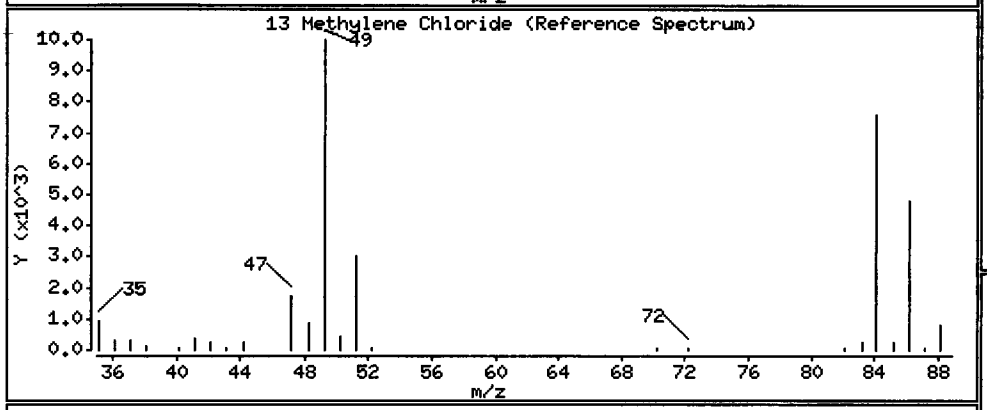
Concentration: 8.952 ug/Kg

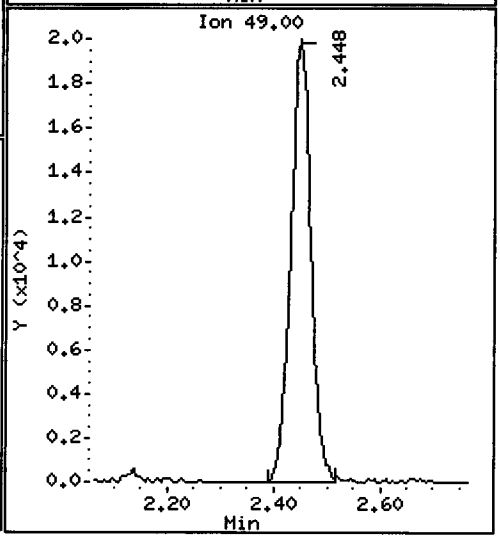


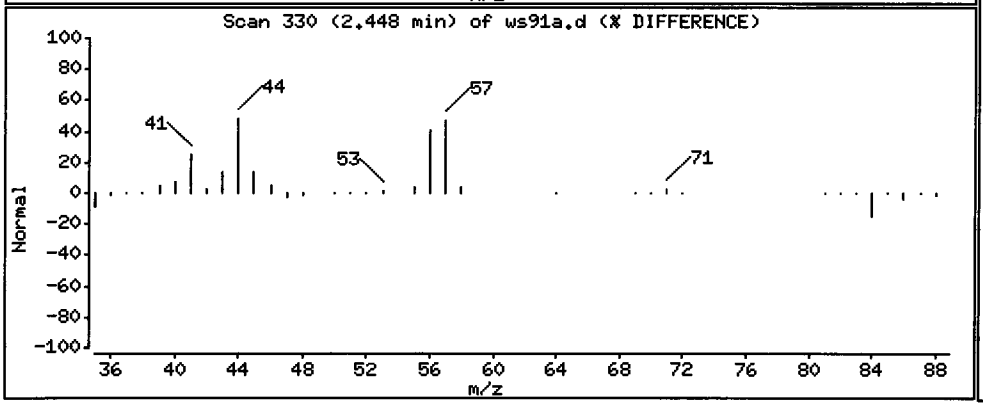












Data File: /chem1/nt5.i/12JUN13.b/ws91a.d

Date : 12-JUN-2013 15:33

Client ID: CL-MH-SPS-20130605-

Instrument: nt5.i

Sample Info: WS91A,5,6.74,0

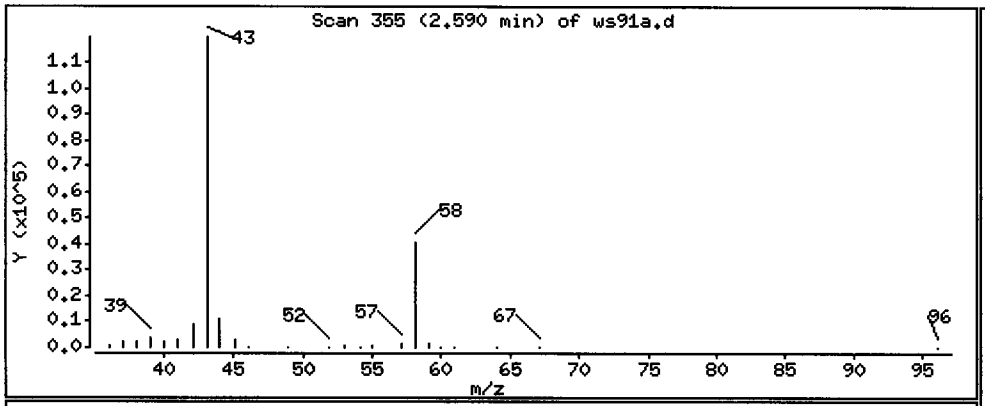
Operator: PB

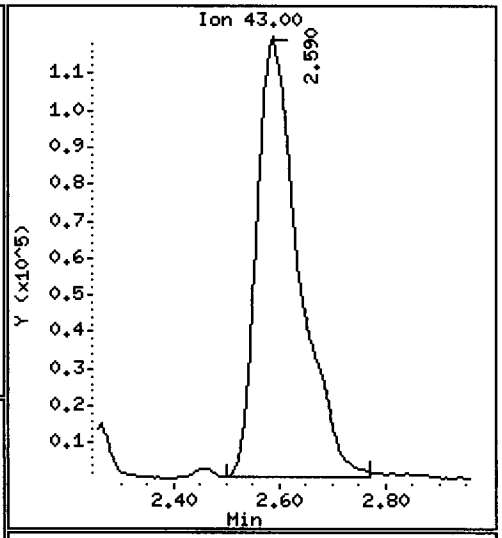
Column phase: RTXVMS

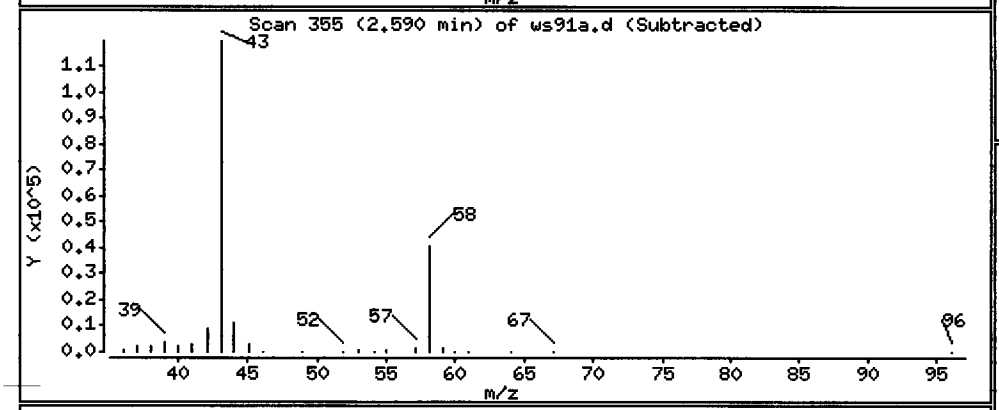
Column diameter: 0.18

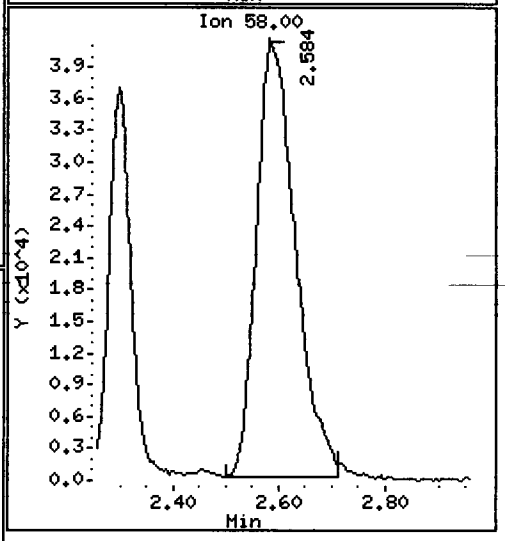
14 Acetone

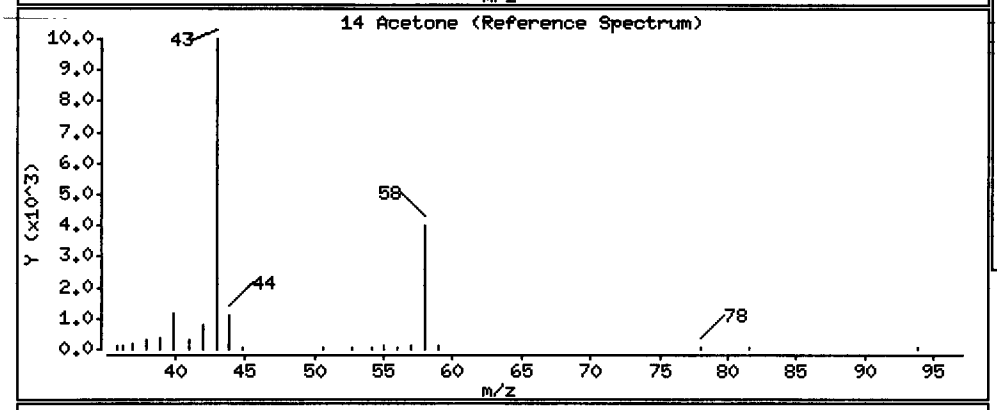
Concentration: 942.92 ug/Kg

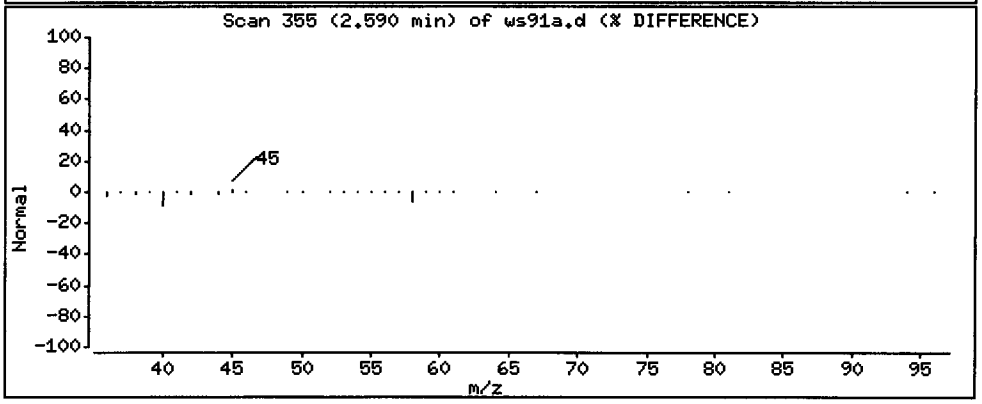












Data File: /chem1/nt5.i/12JUN13.b/ws91a.d

Date : 12-JUN-2013 15:33

Client ID: CL-MH-SPS-20130605-

Instrument: nt5.i

Sample Info: WS91A,5,6.74,0

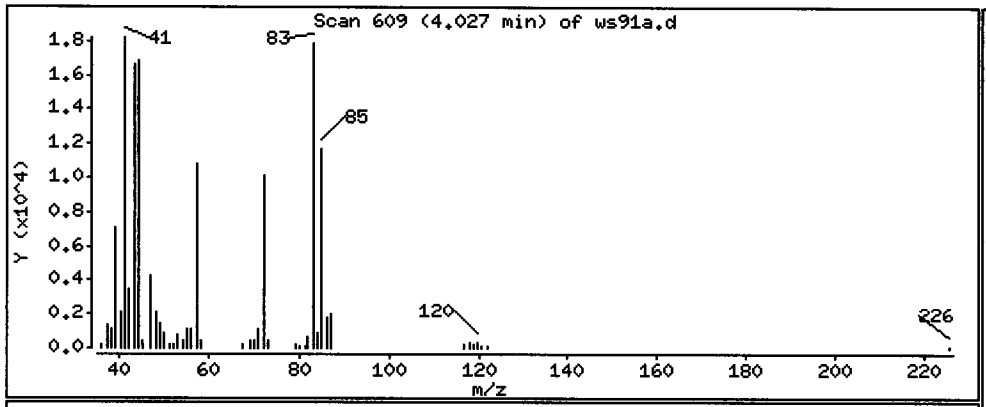
Operator: PB

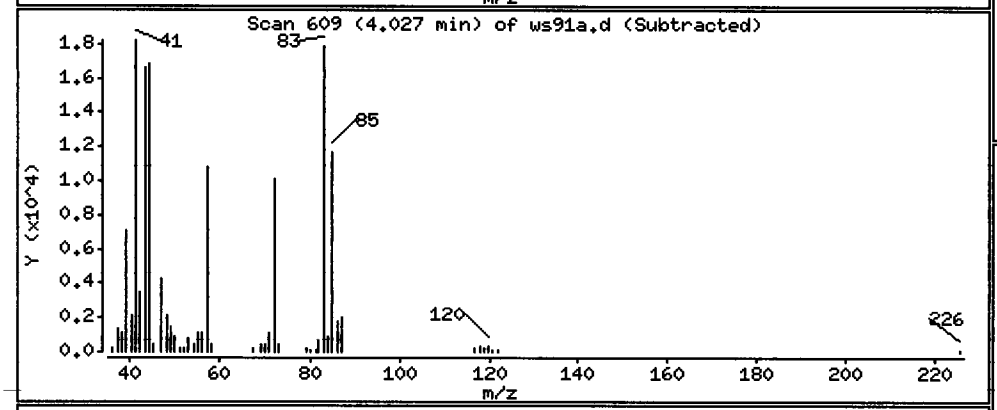
Column phase: RTXVMS

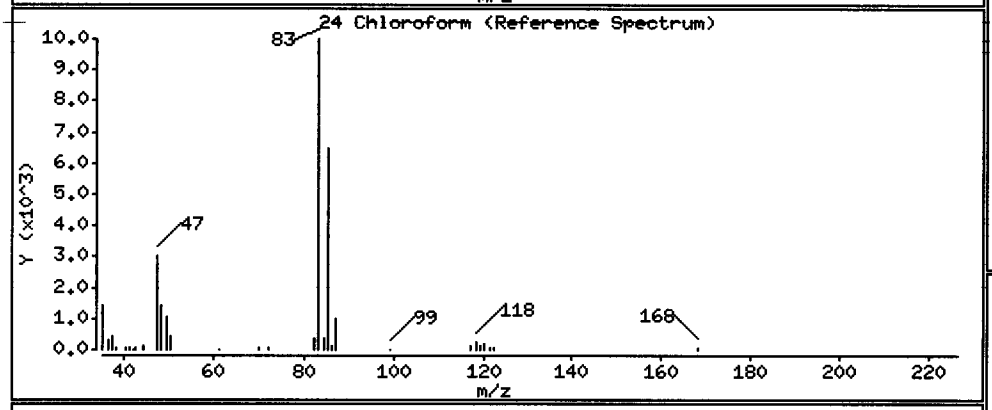
Column diameter: 0.18

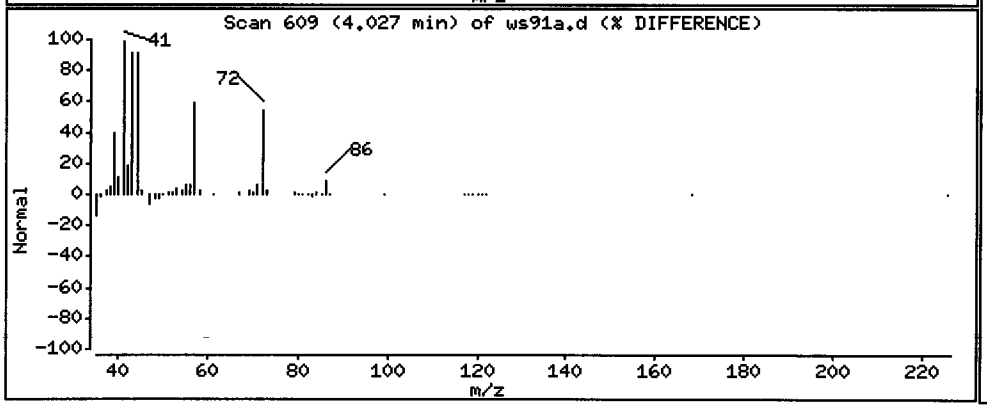
24 Chloroform

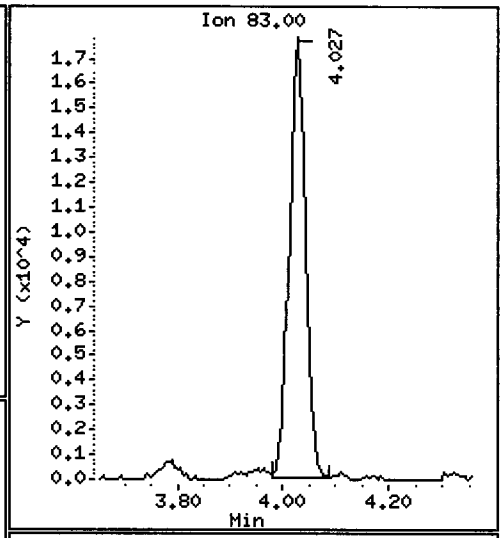
Concentration: 4.928 ug/Kg

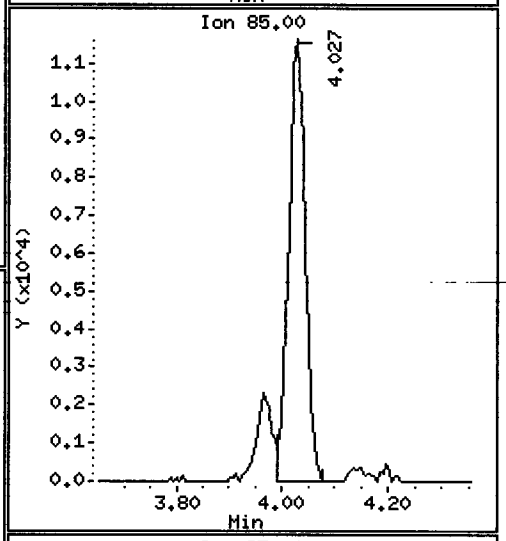


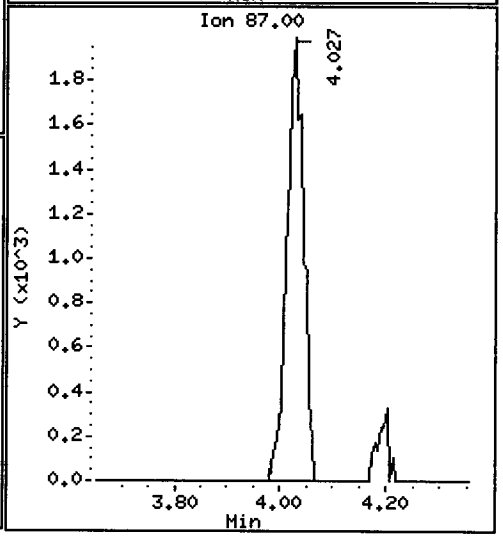












Data File: /chem1/nt5.i/12JUN13.b/ws91a.d

Date : 12-JUN-2013 15:33

Client ID: CL-MH-SPS-20130605-

Instrument: nt5.i

Sample Info: WS91A,5,6.74,0

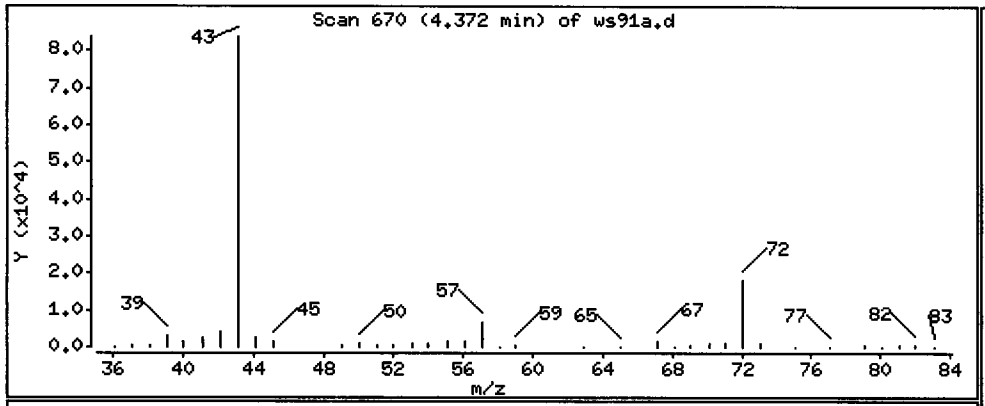
Operator: PB

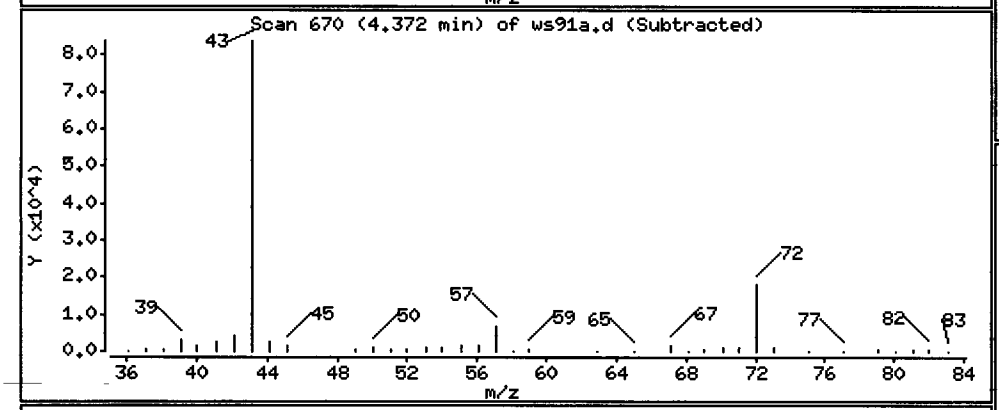
Column phase: RTXVMS

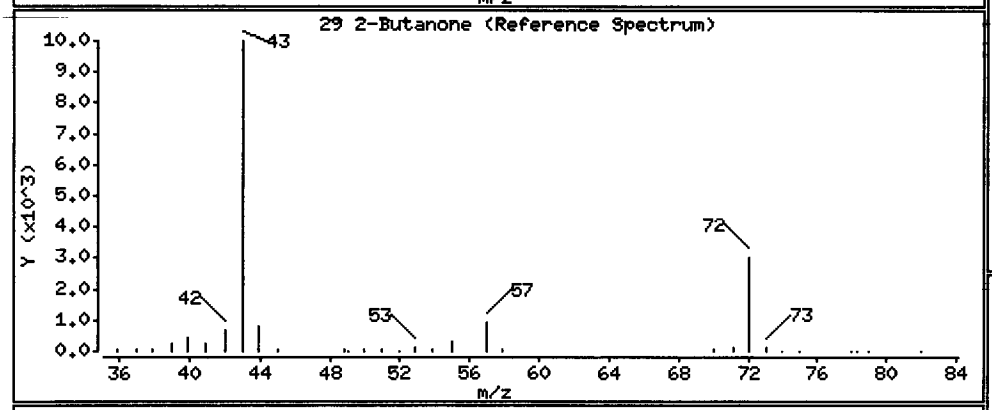
Column diameter: 0.18

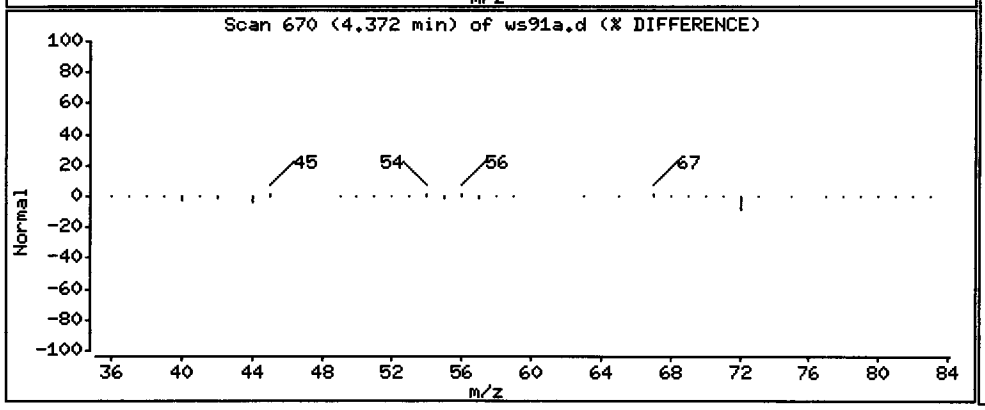
29 2-Butanone

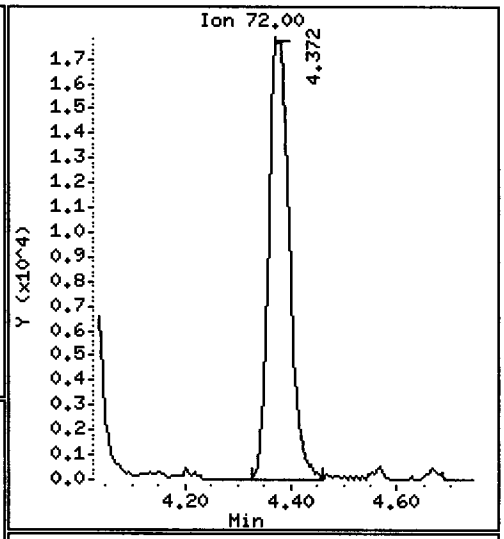
Concentration: 84.966 ug/Kg

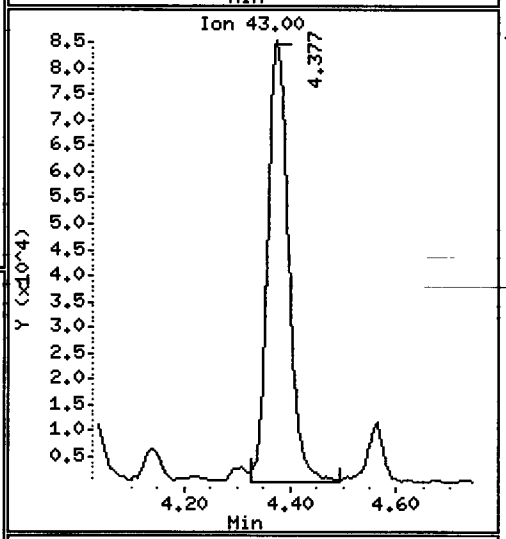


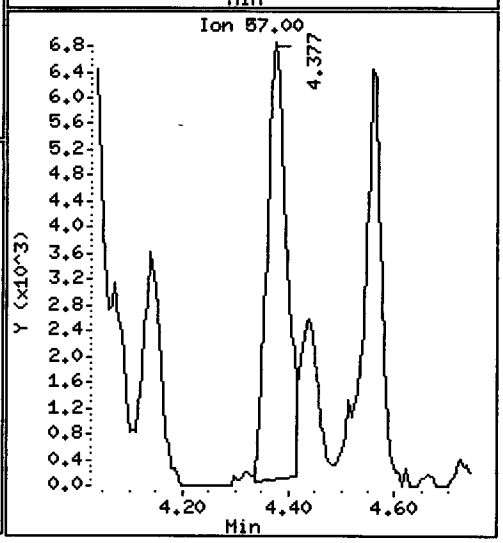












Data File: /chem1/nt5.i/12JUN13.b/ws91a.d

Date : 12-JUN-2013 15:33

Client ID: CL-MH-SPS-20130605-

Instrument: nt5.i

Sample Info: WS91A,5,6.74,0

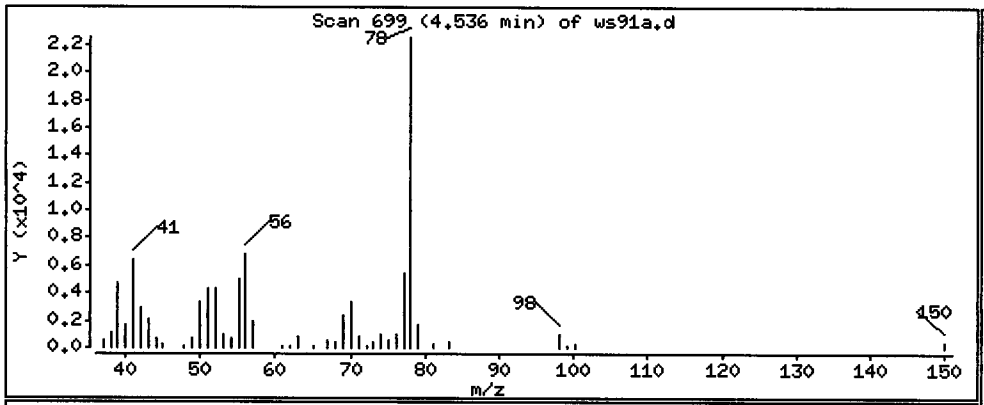
Operator: PB

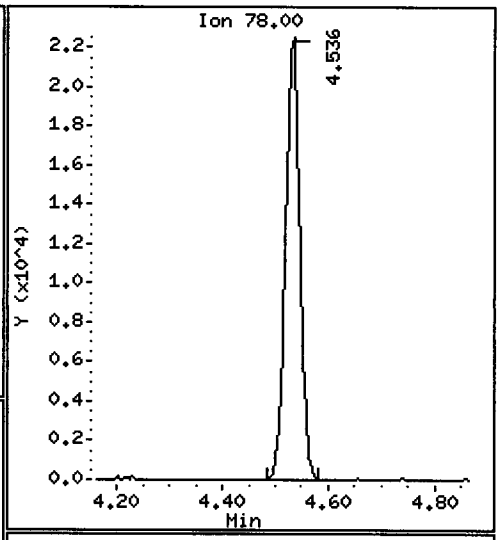
Column phase: RTXVMS

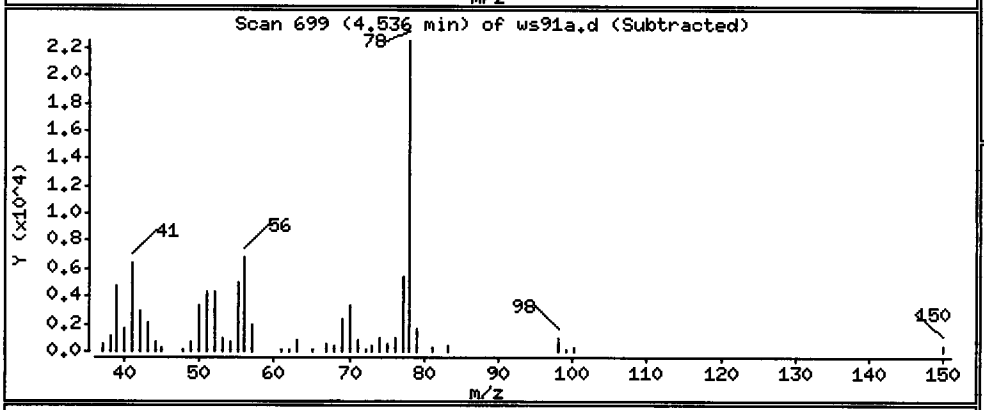
Column diameter: 0.18

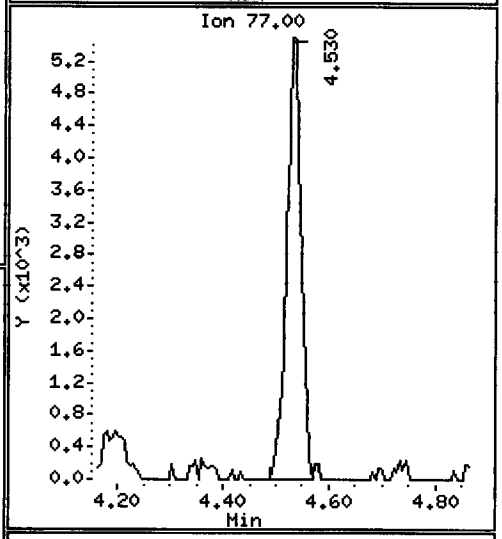
30 Benzene

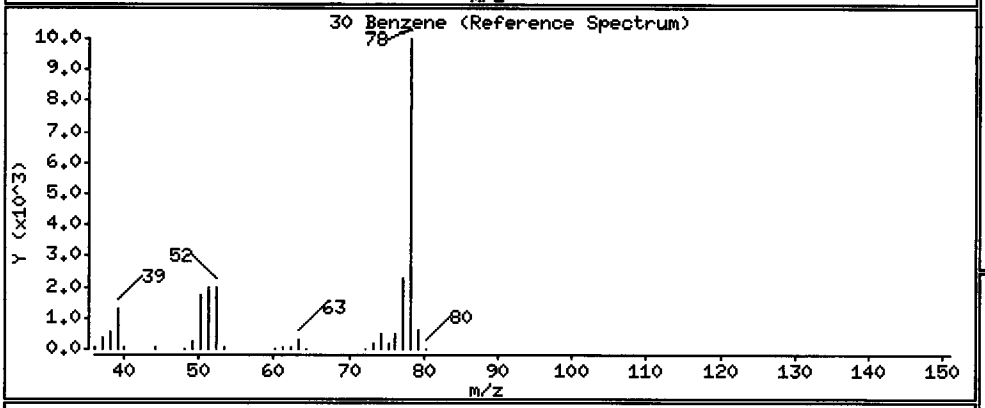
Concentration: 2.006 ug/Kg

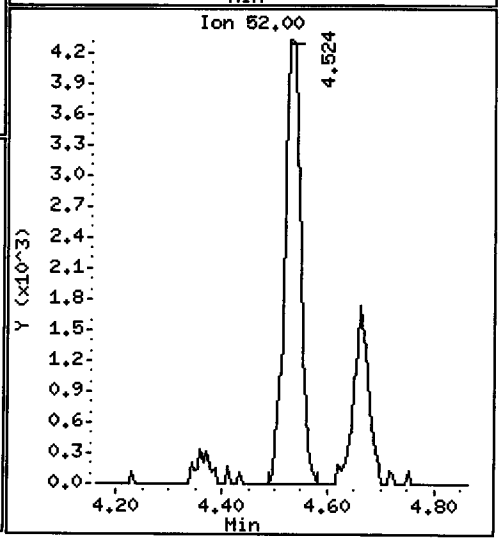


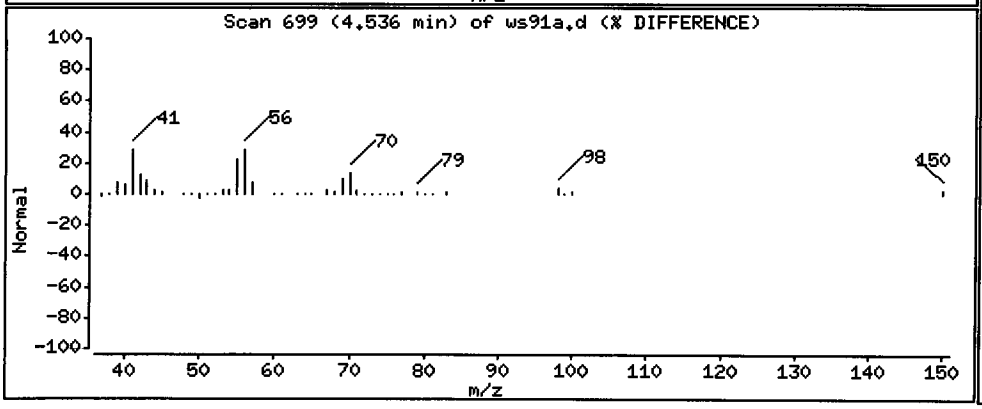












Data File: /chem1/nt5.i/12JUN13.b/ws91a.d

Date : 12-JUN-2013 15:33

Client ID: CL-MH-SPS-20130605-

Instrument: nt5.i

Sample Info: WS91A,5,6.74,0

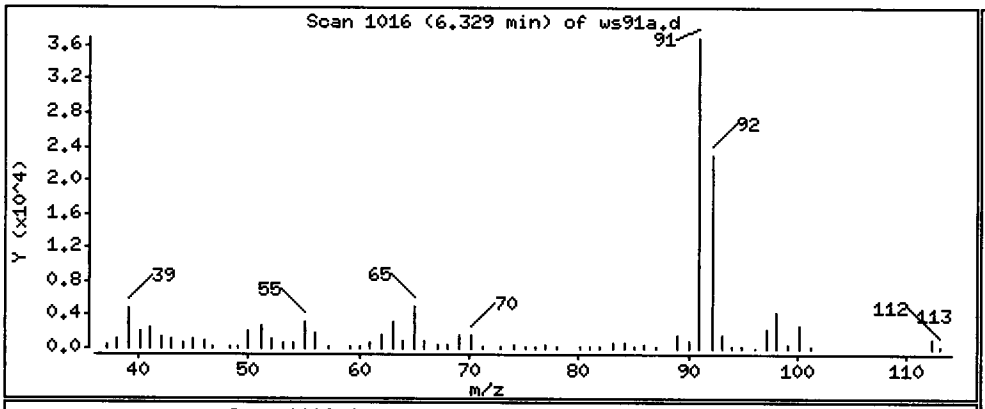
Operator: PB

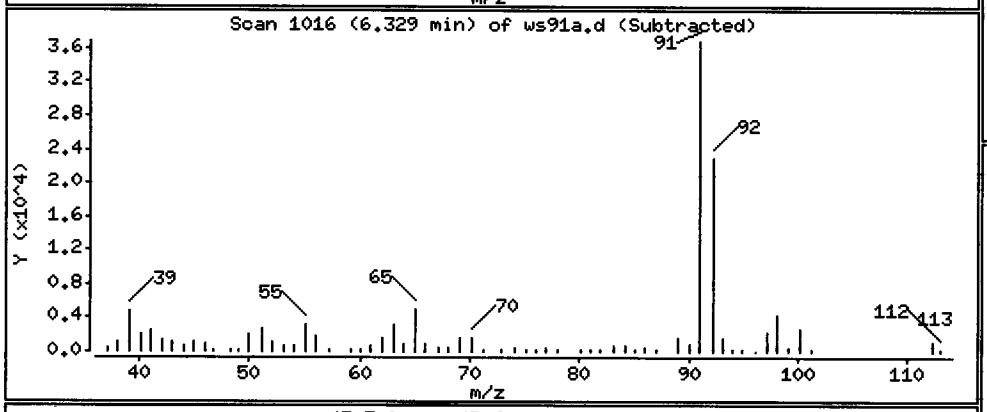
Column phase: RTXVMS

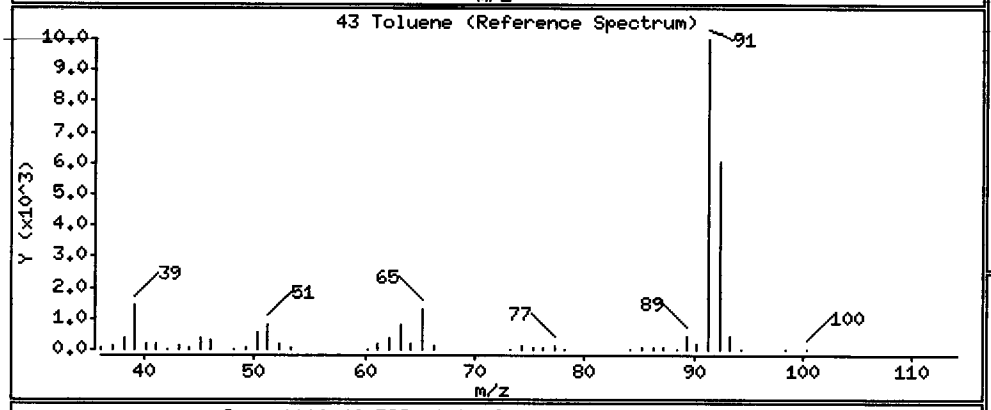
Column diameter: 0.18

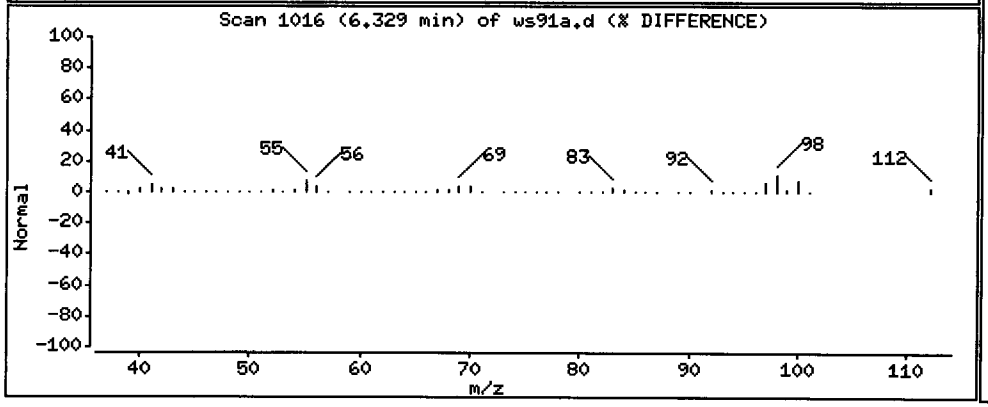
43 Toluene

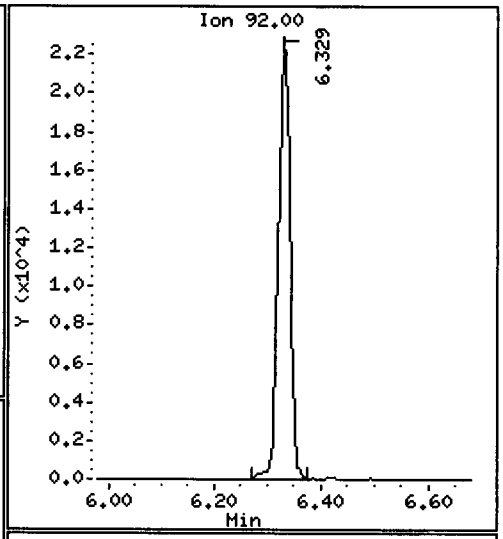
Concentration: 2.508 ug/Kg

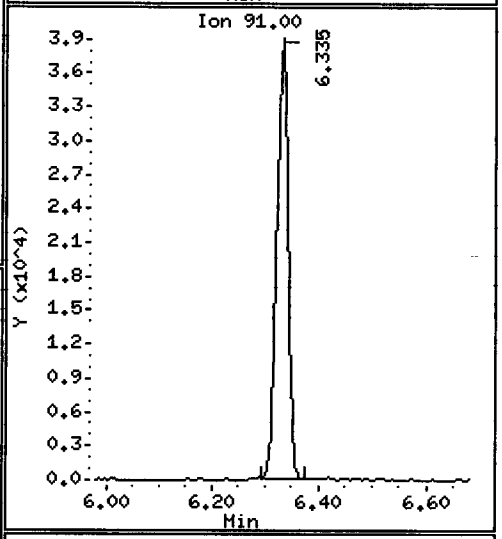


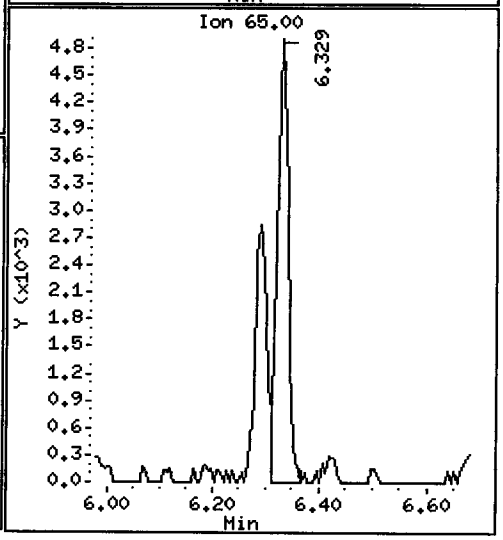












WS91 : 00459

Data File: /chem1/nt5.i/12JUN13.b/ws91a.d

Date : 12-JUN-2013 15:33

Client ID: CL-MH-SPS-20130605-

Instrument: nt5.i

Sample Info: WS91A,5,6.74,0

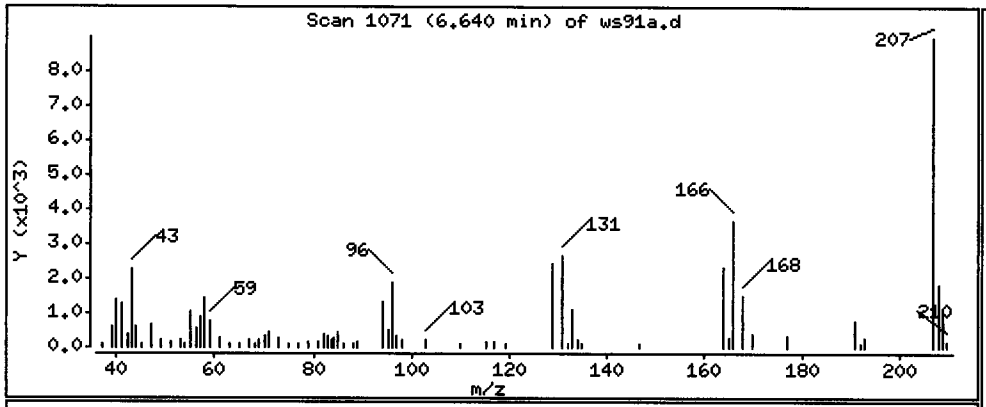
Operator: PB

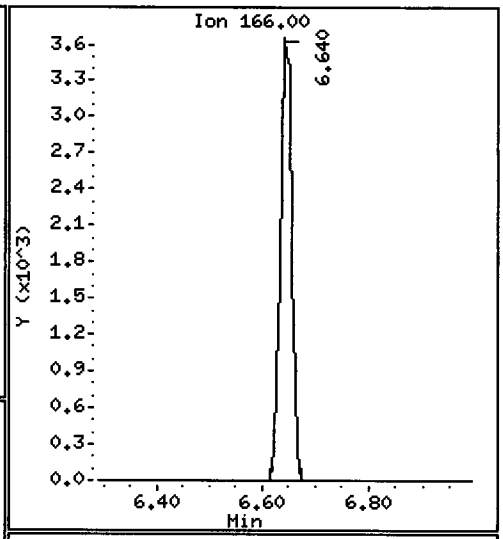
Column phase: RTXVMS

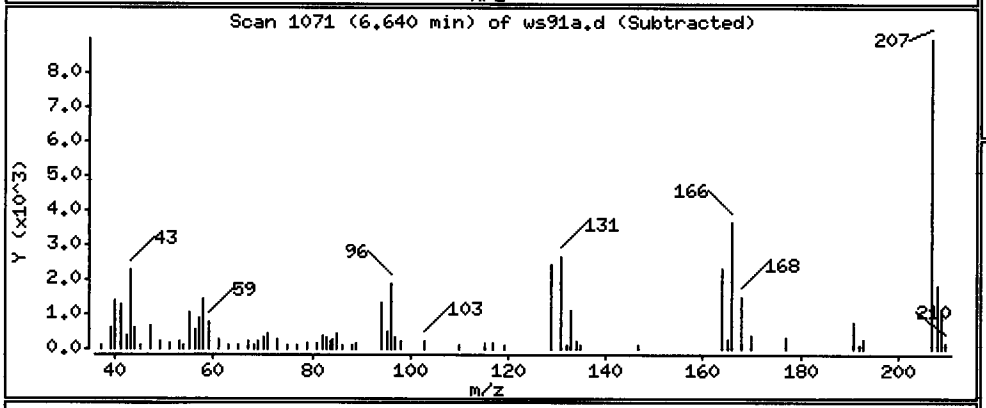
Column diameter: 0.18

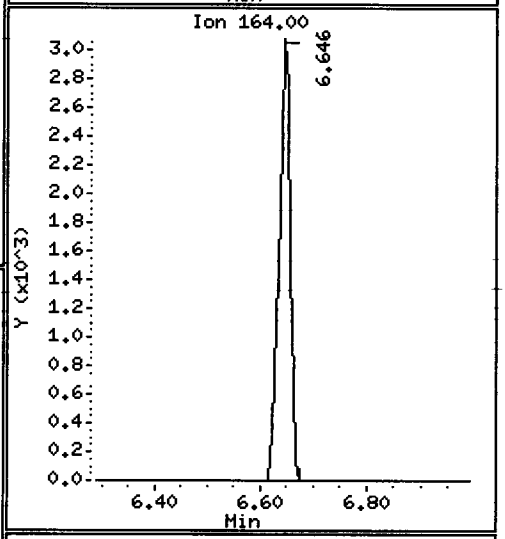
44 Tetrachloroethene

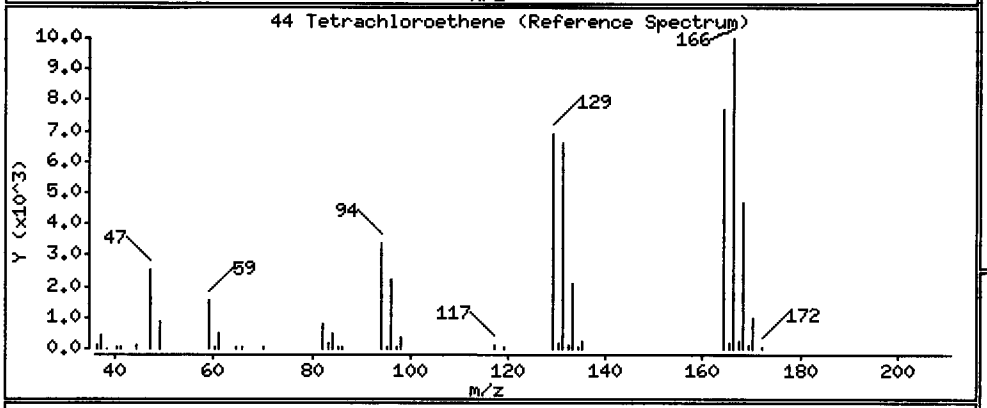
Concentration: 1.032 ug/Kg

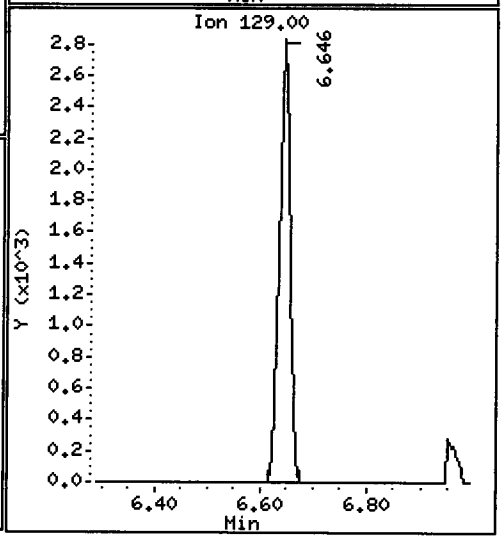


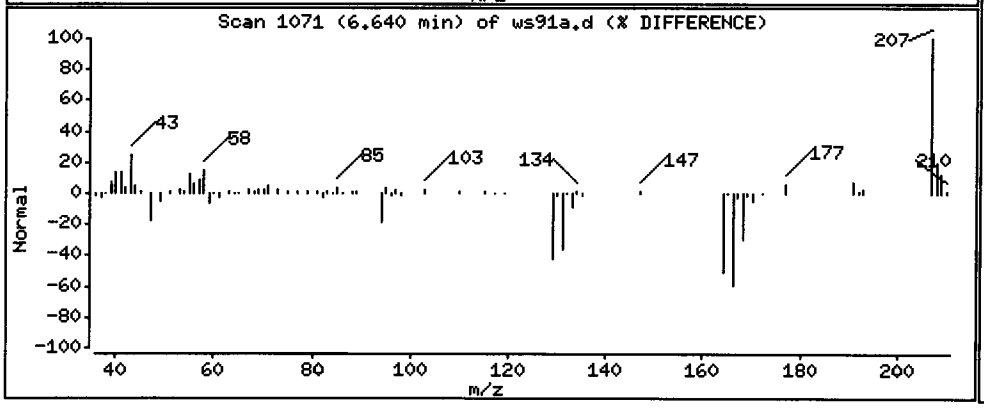












Data File: /chem1/nt5.i/12JUN13.b/ws91a.d

Date : 12-JUN-2013 15:33

Client ID: CL-MH-SPS-20130605-

Instrument: nt5.i

Sample Info: WS91A,5,6.74,0

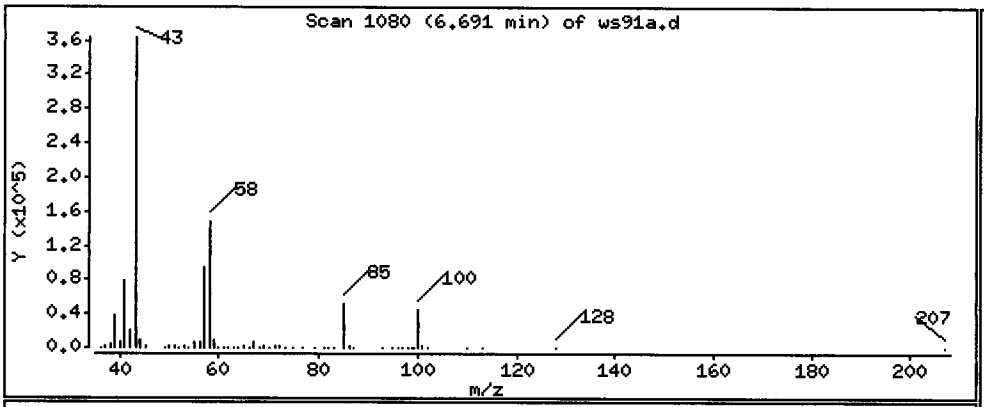
Operator: PB

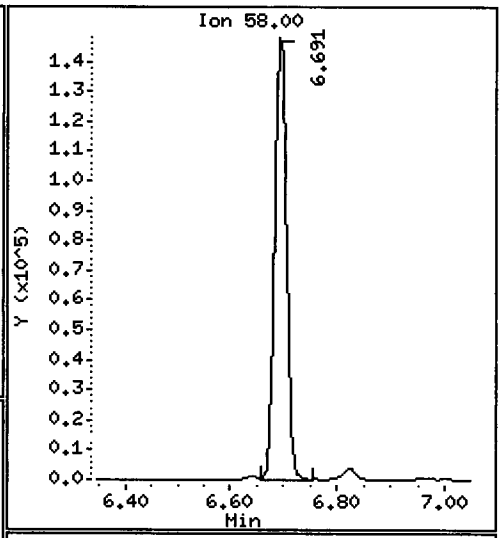
Column phase: RTXVMS

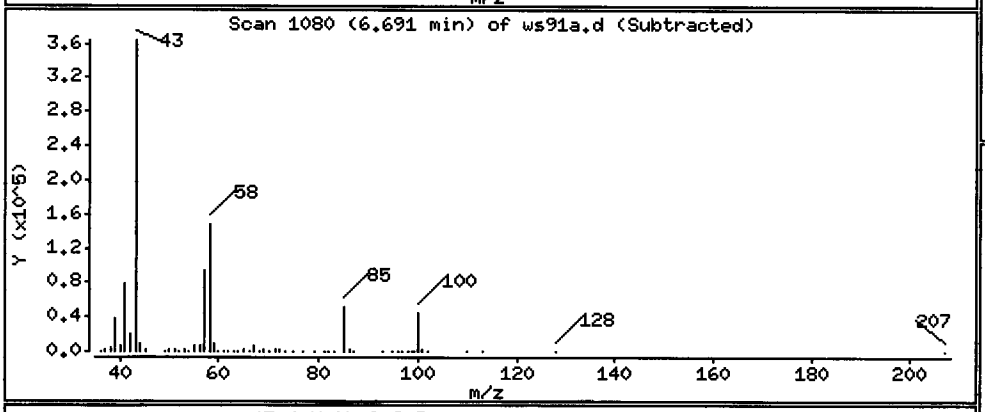
Column diameter: 0.18

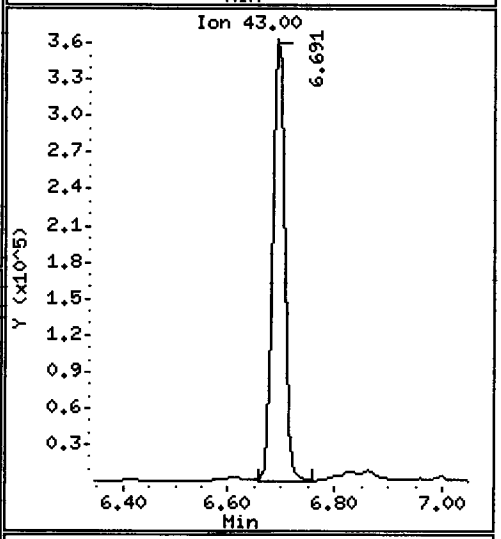
45 4-Methyl-2-Pentanone

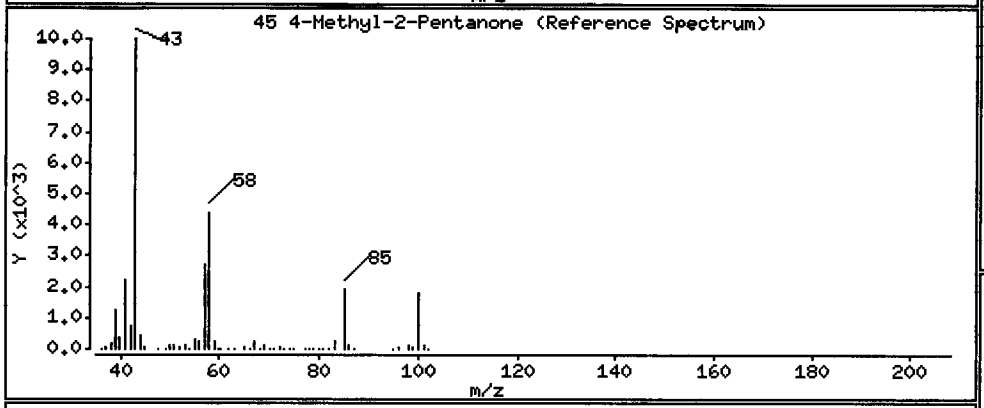
Concentration: 90.299 ug/Kg

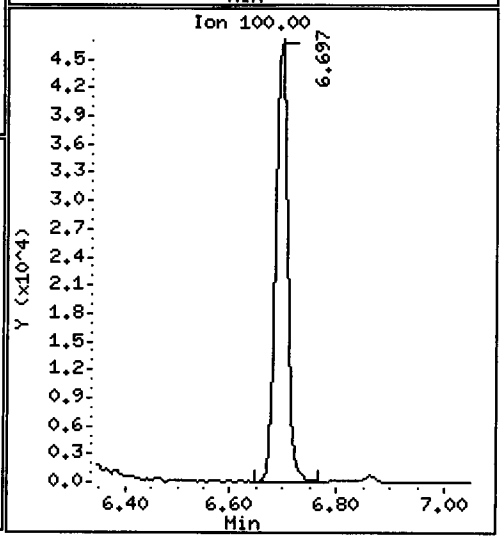


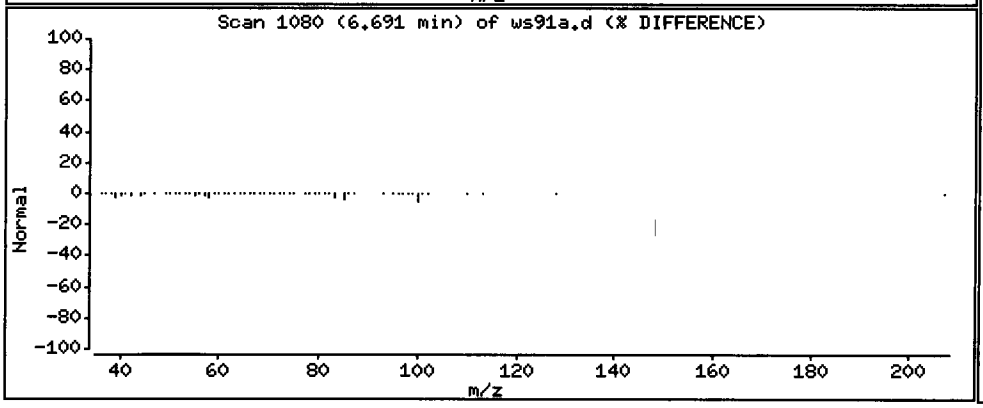












Data File: /chem1/nt5.i/12JUN13.b/ws91a.d

Date : 12-JUN-2013 15:33

Client ID: CL-MH-SPS-20130605-

Instrument: nt5.i

Sample Info: WS91A,5,6.74,0

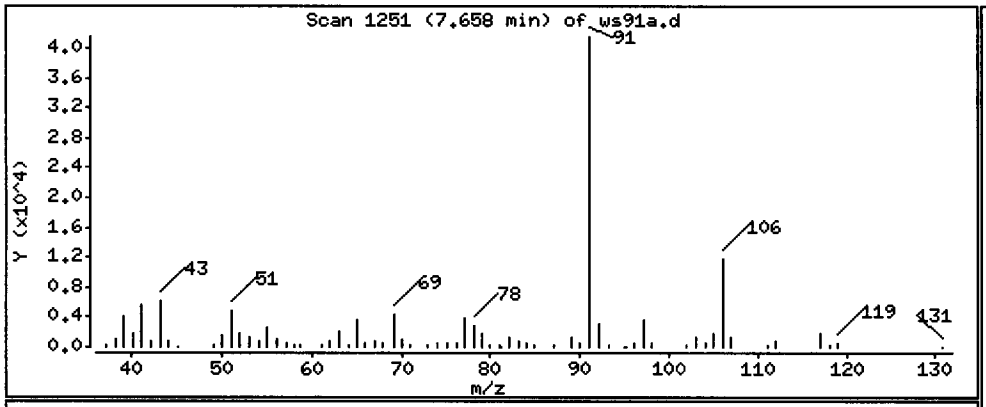
Operator: PB

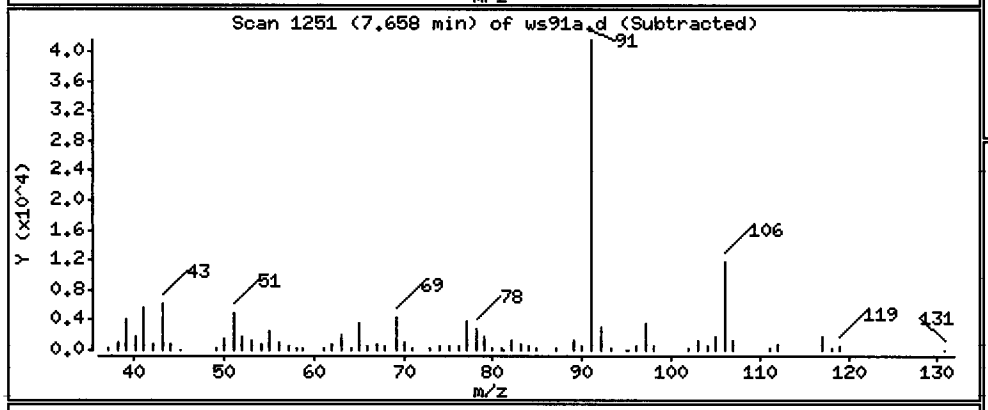
Column phase: RTXVMS

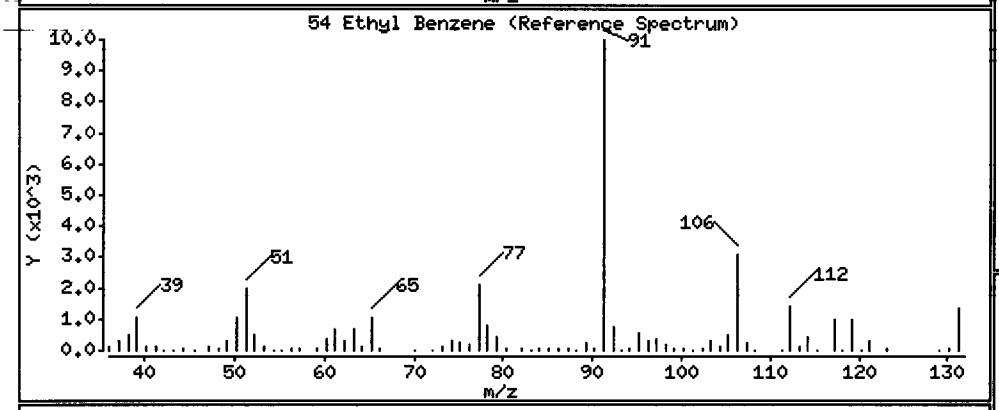
Column diameter: 0.18

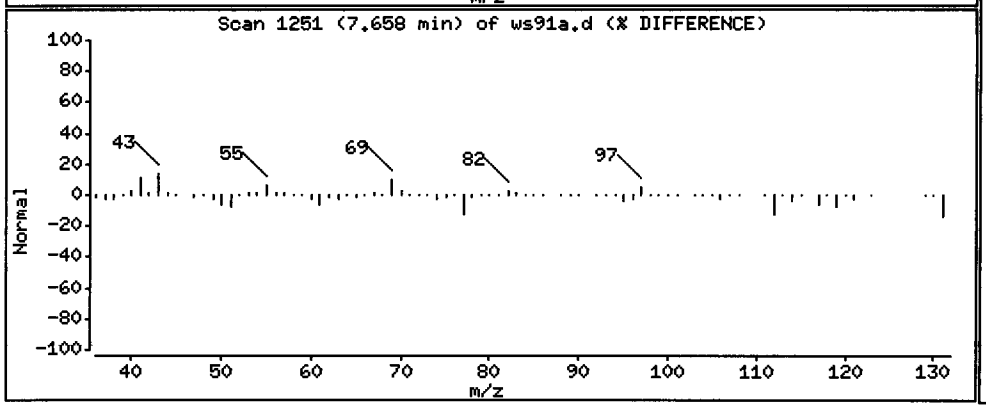
54 Ethyl Benzene

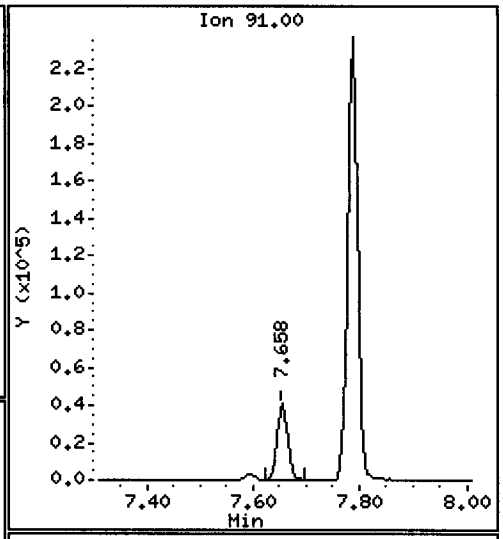
Concentration: 2.446 ug/Kg

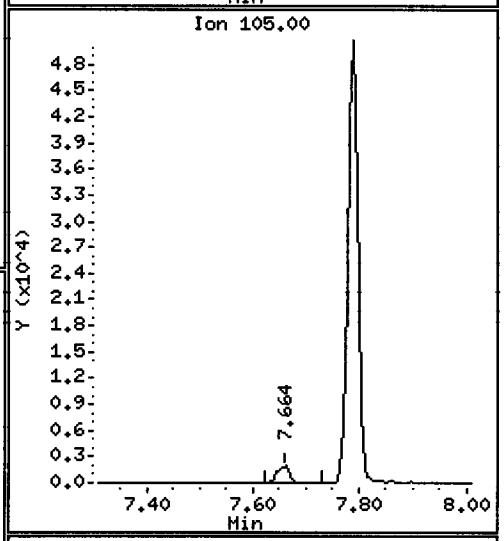


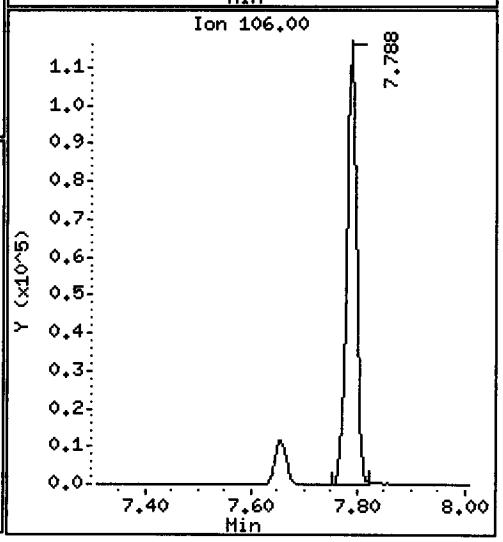












Data File: /chem1/nt5.i/12JUN13.b/ws91a.d

Date : 12-JUN-2013 15:33

Client ID: CL-MH-SPS-20130605-

Instrument: nt5.i

Sample Info: WS91A,5,6.74,0

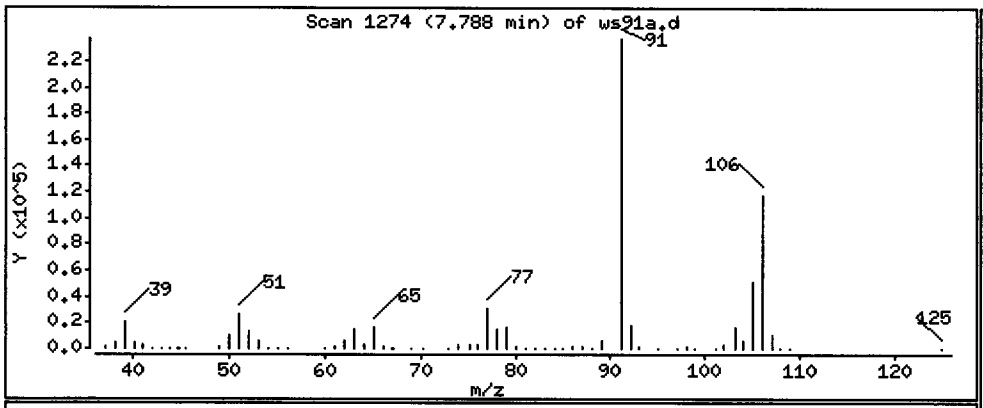
Operator: PB

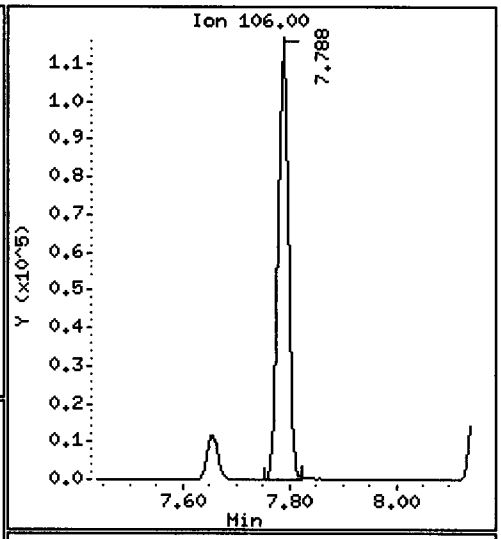
Column phase: RTXVMS

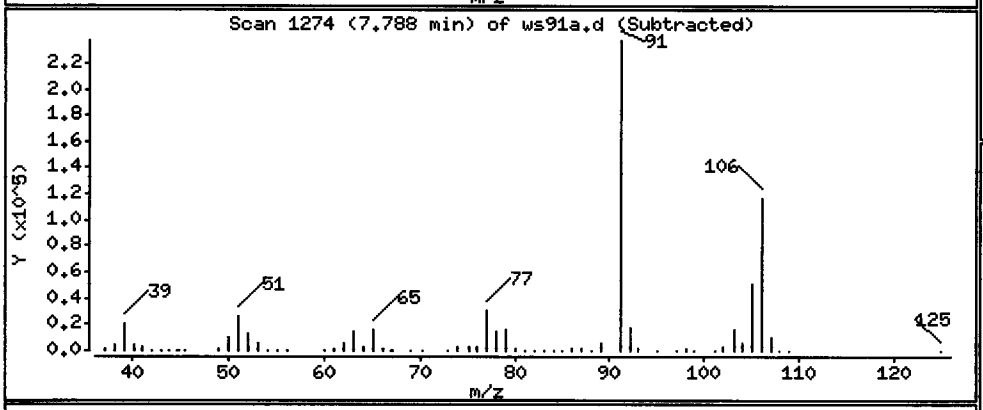
Column diameter: 0.18

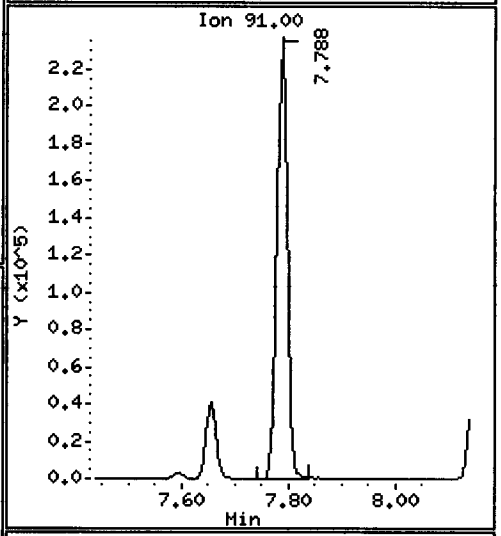
56 m,p-xylene

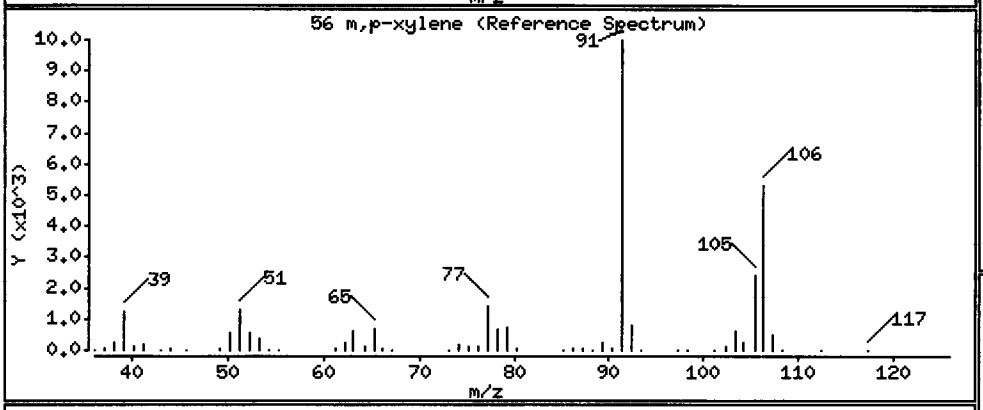
Concentration: 17.542 ug/Kg

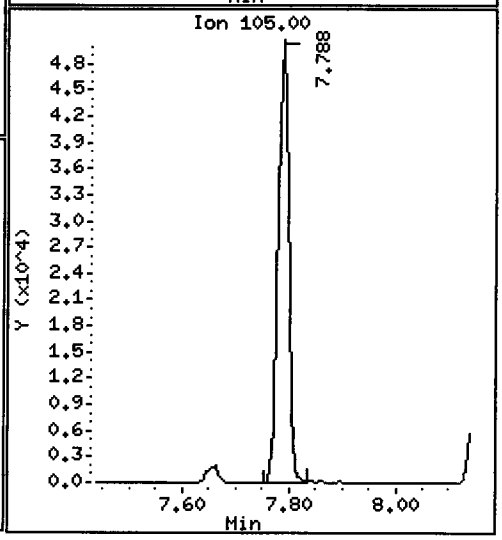


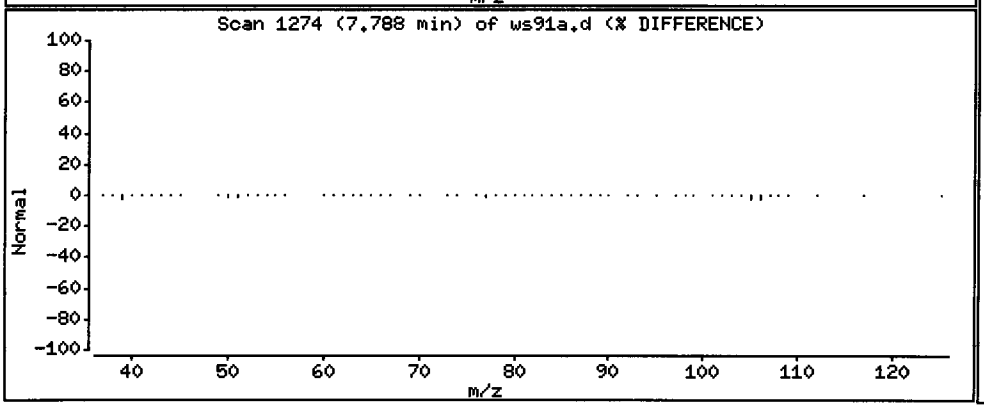












Data File: /chem1/nt5.i/12JUN13.b/ws91a.d

Date : 12-JUN-2013 15:33

Client ID: CL-MH-SPS-20130605-

Instrument: nt5.i

Sample Info: WS91A,5,6.74,0

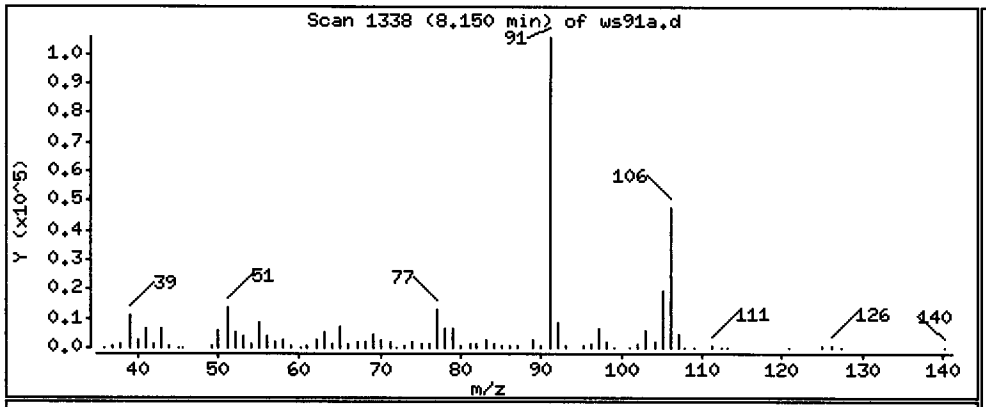
Operator: PB

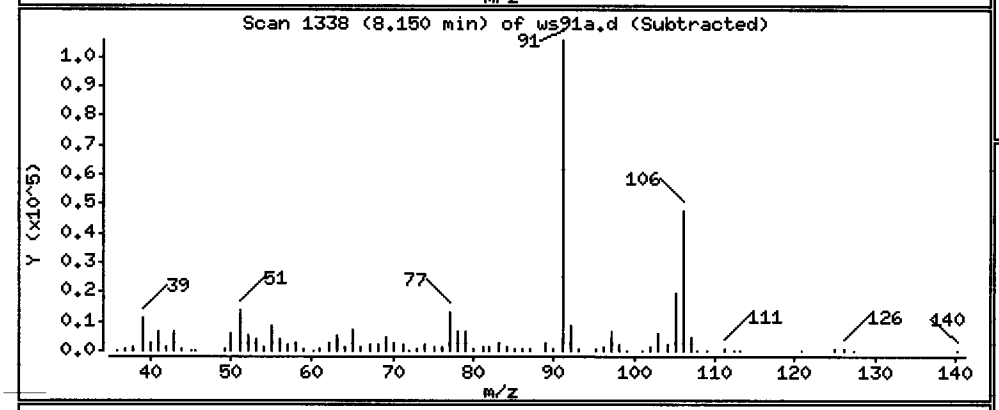
Column phase: RTXVMS

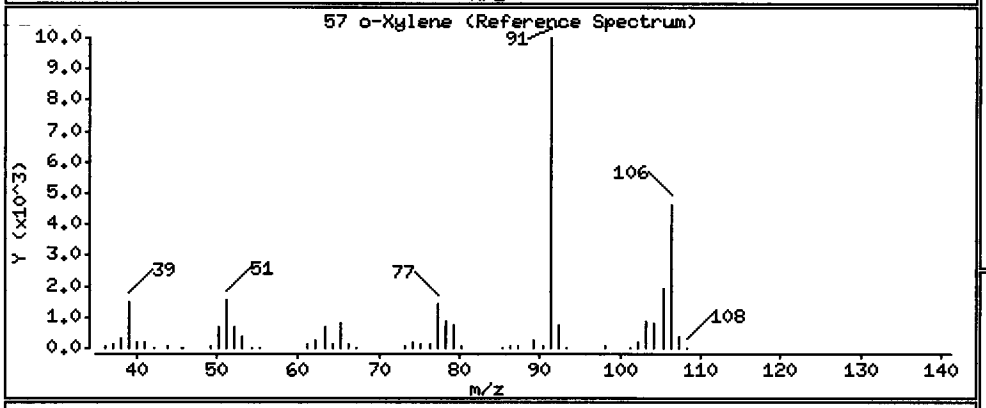
Column diameter: 0.18

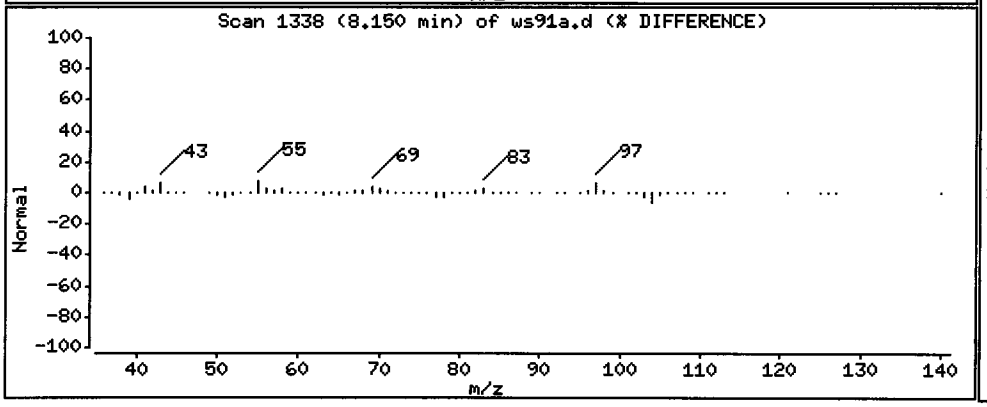
57 o-Xylene

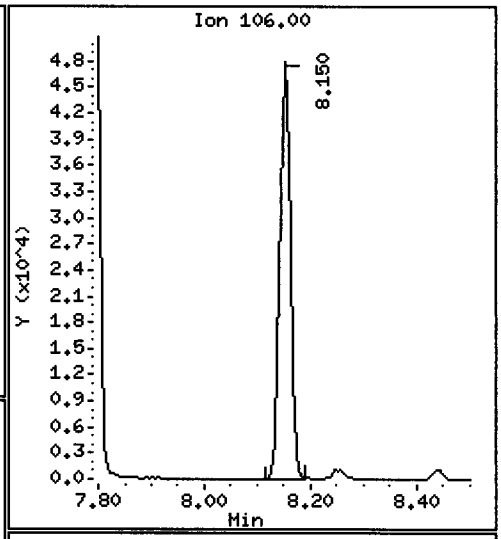
Concentration: 7.502 ug/Kg

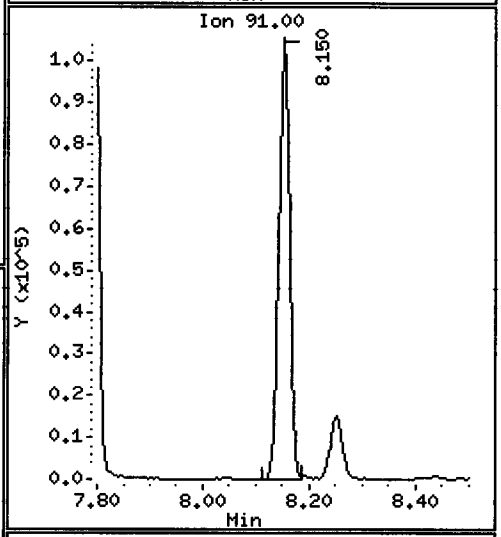


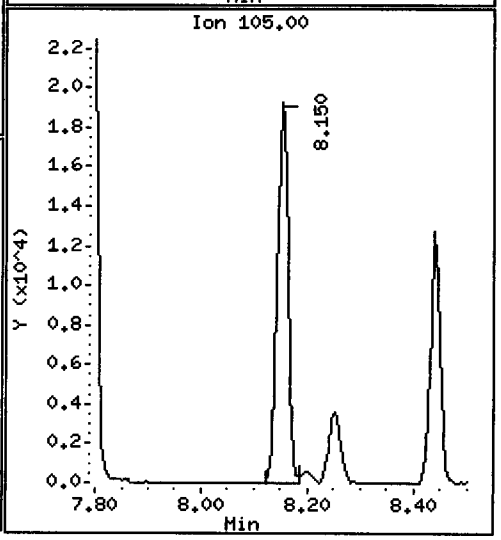












WS91 : 00464

Data File: /chem1/nt5.i/12JUN13.b/ws91a.d

Date : 12-JUN-2013 15:33

Client ID: CL-MH-SPS-20130605-

Instrument: nt5.i

Sample Info: WS91A,5,6.74,0

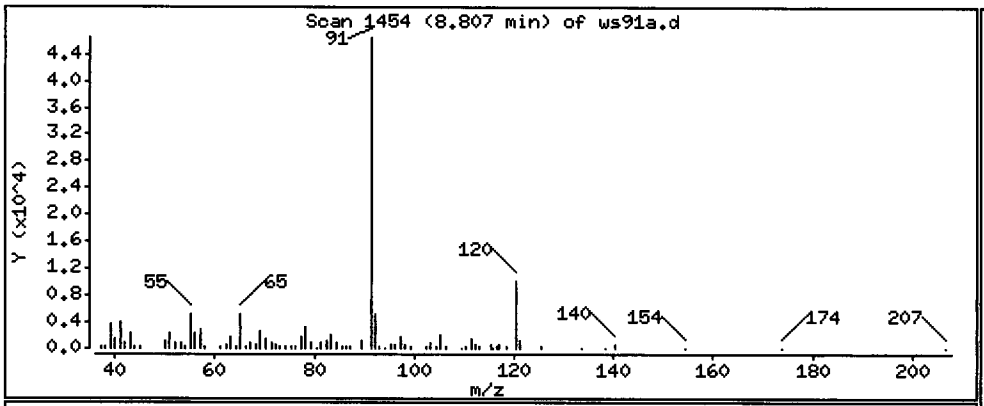
Operator: PB

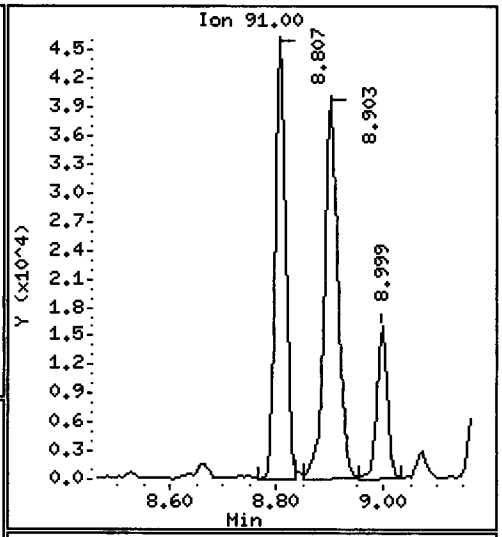
Column phase: RTXVMS

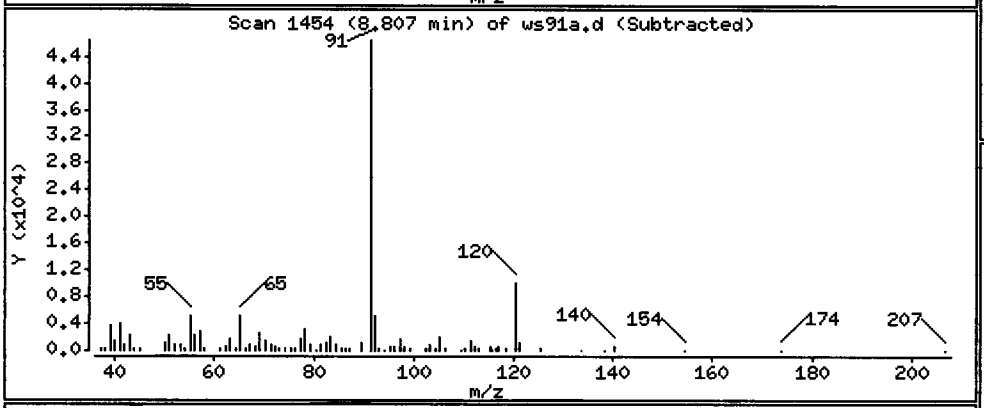
Column diameter: 0.18

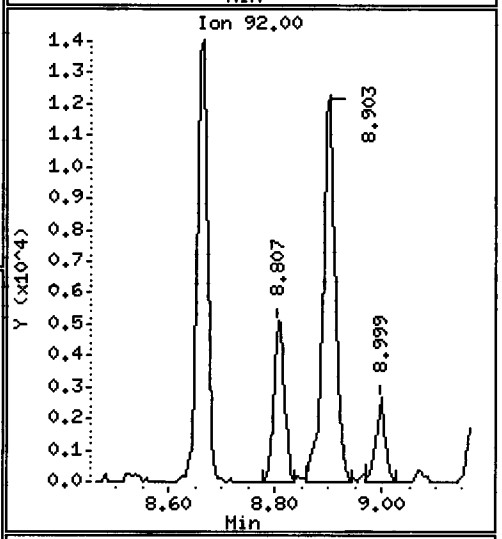
64 N-Propyl Benzene

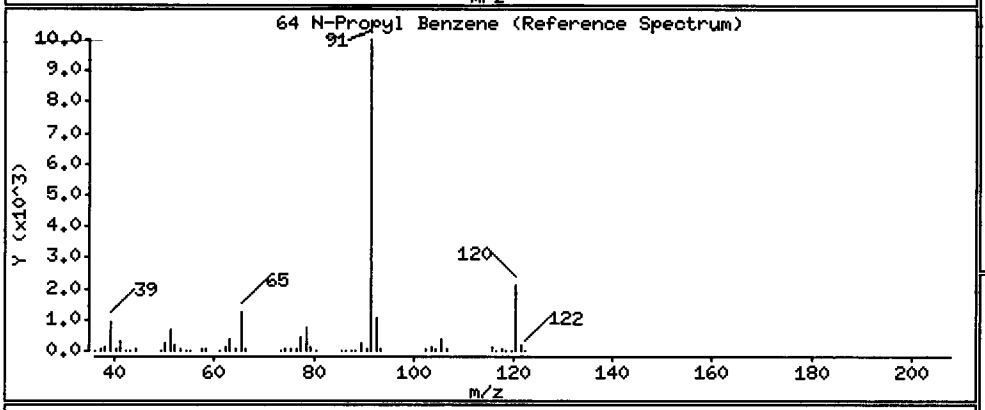
Concentration: 3.223 ug/Kg

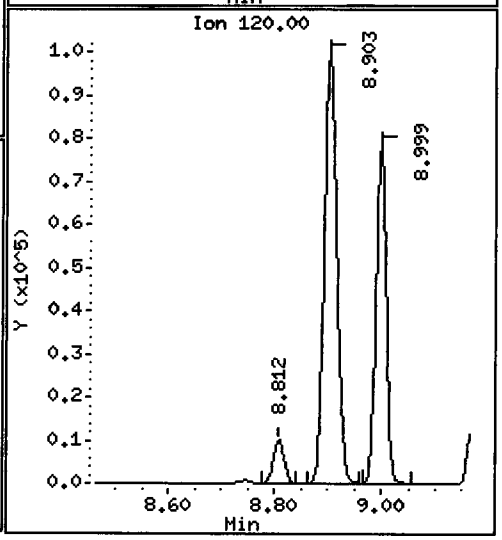


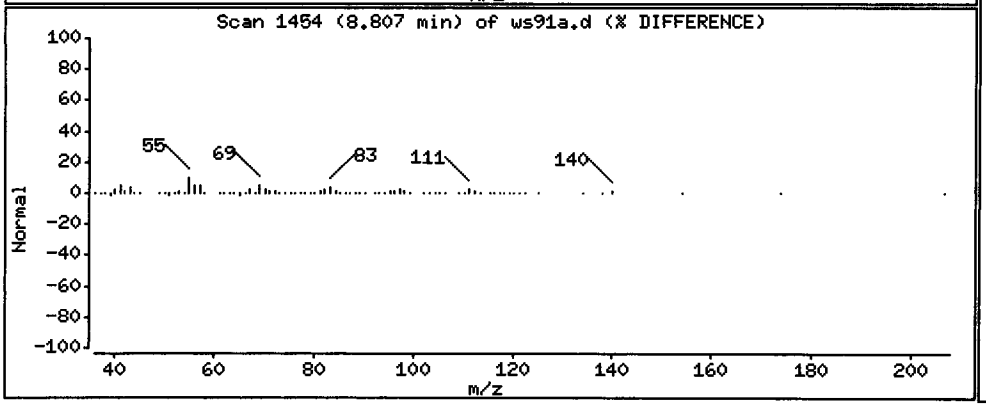












Data File: /chem1/nt5.i/12JUN13.b/ws91a.d

Date : 12-JUN-2013 15:33

Client ID: CL-MH-SPS-20130605-

Instrument: nt5.i

Sample Info: WS91A,5,6.74,0

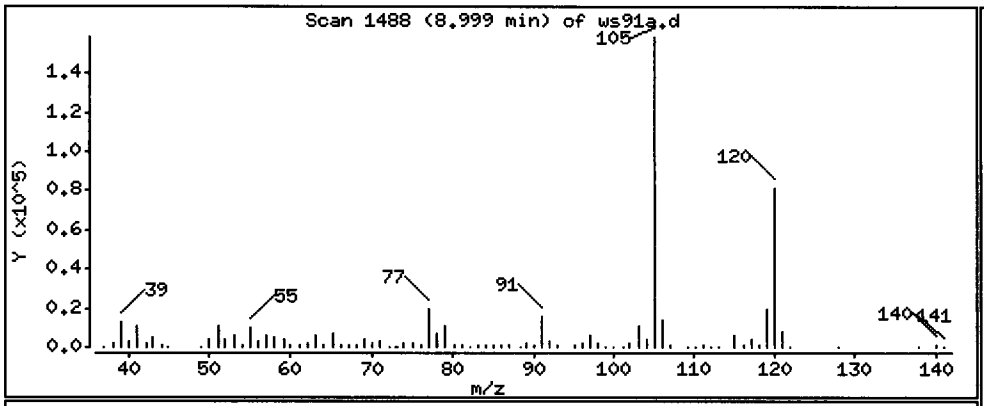
Operator: PB

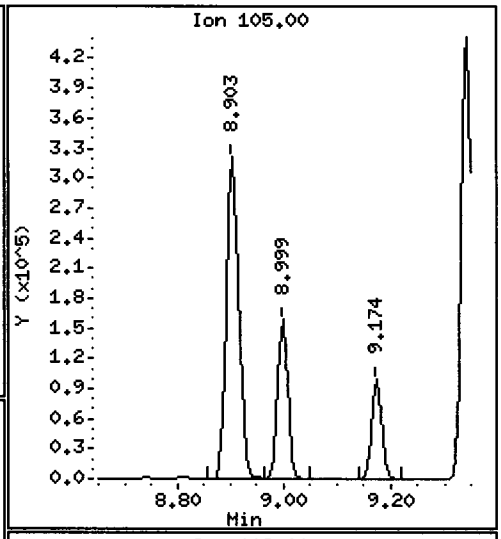
Column phase: RTXVMS

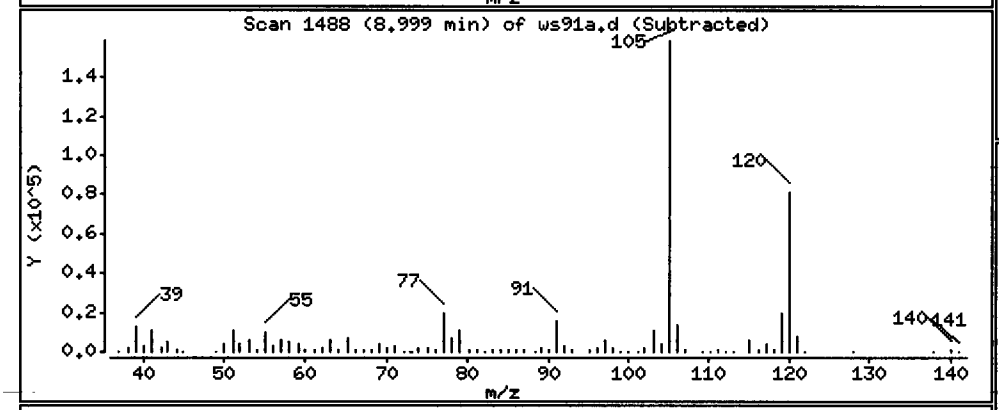
Column diameter: 0.18

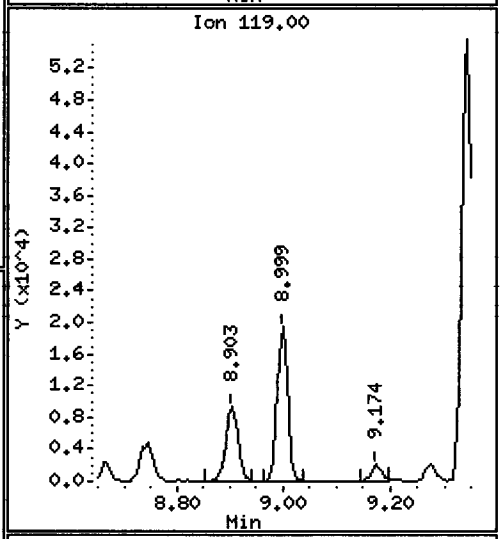
67 1,3,5-Trimethyl Benzene

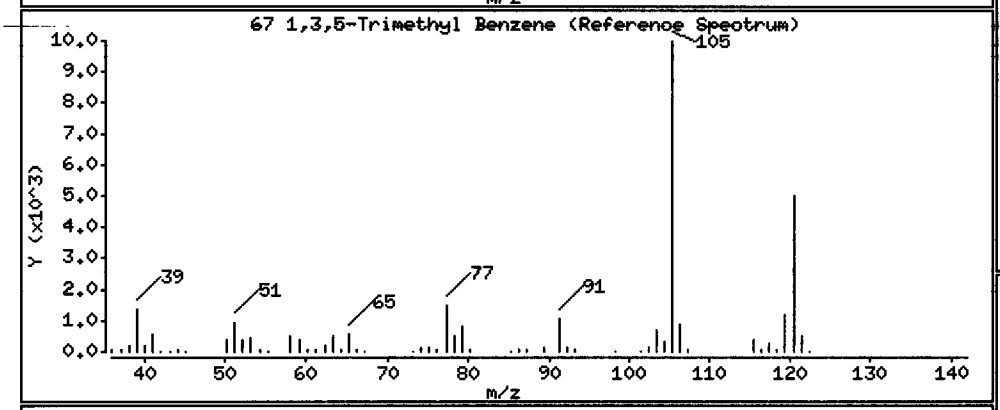
Concentration: 14.710 ug/Kg

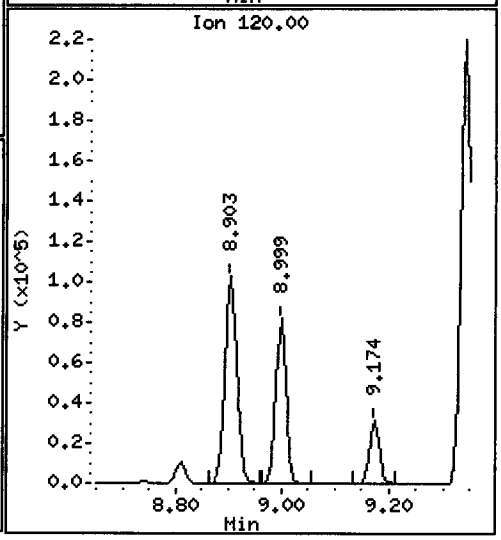


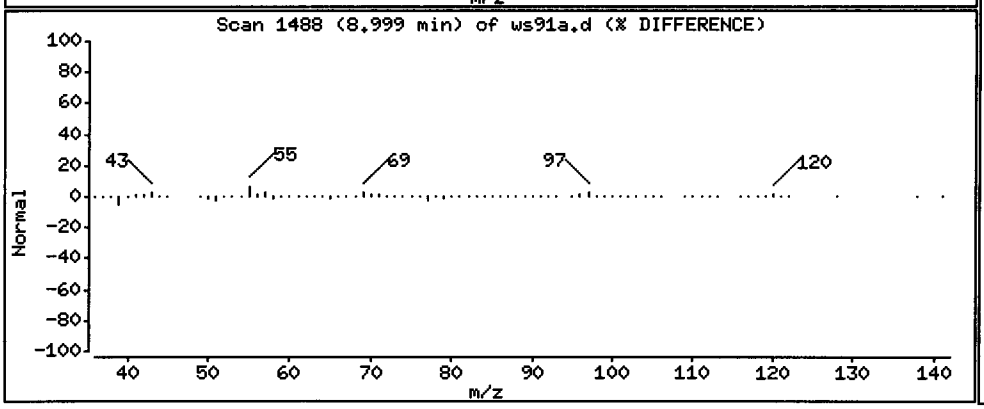












Data File: /chem1/nt5.i/12JUN13.b/ws91a.d

Date : 12-JUN-2013 15:33

Client ID: CL-MH-SPS-20130605-

Instrument: nt5.i

Sample Info: WS91A,5,6.74,0

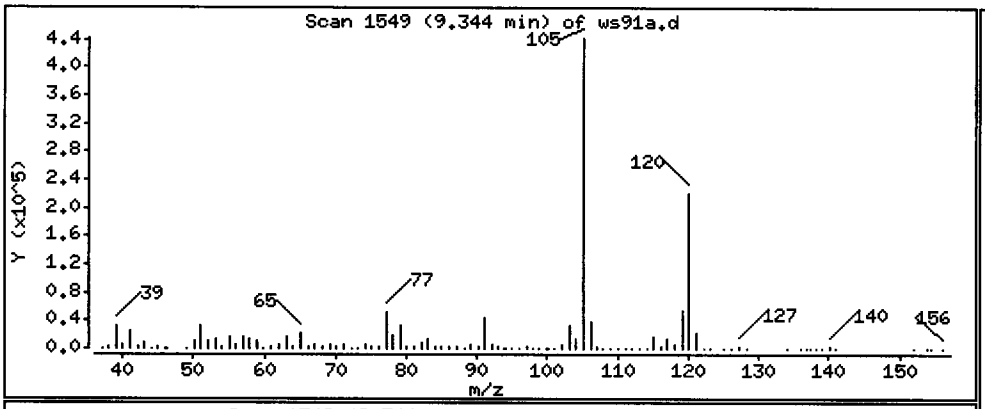
Operator: PB

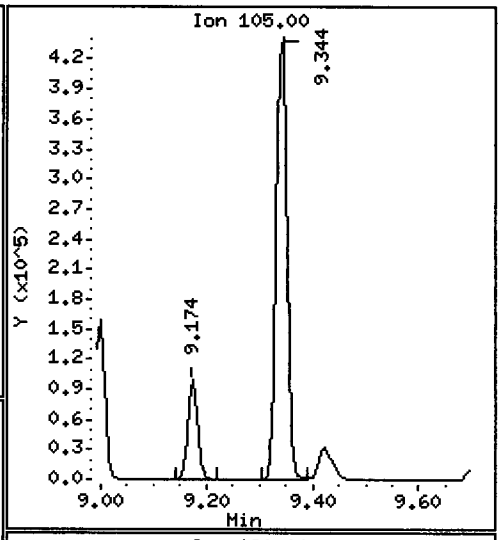
Column phase: RTXVMS

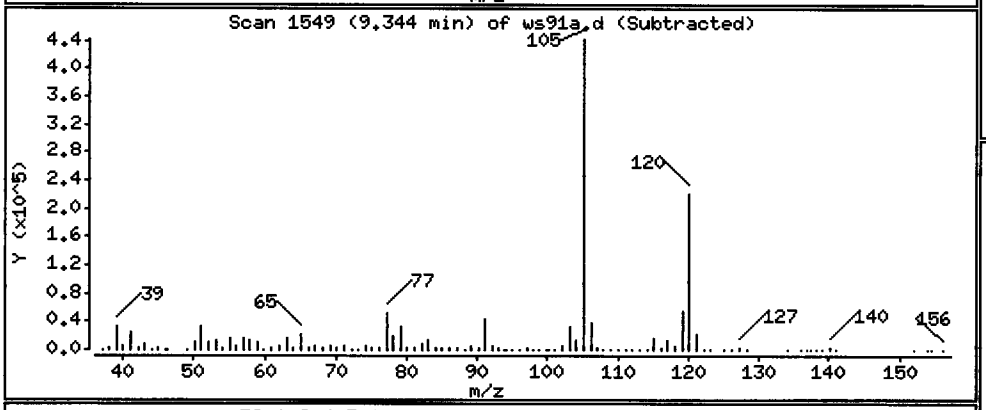
Column diameter: 0.18

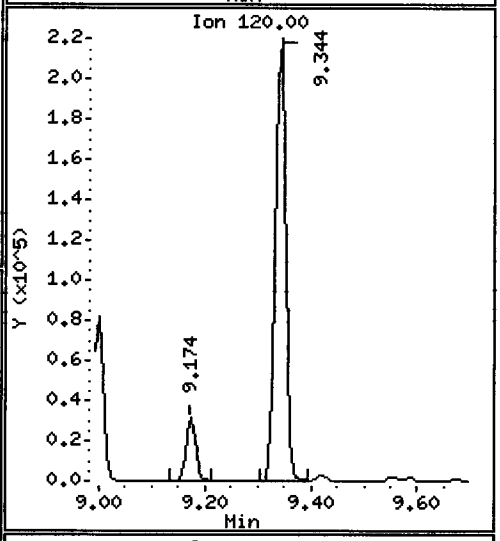
72 1,2,4-Trimethylbenzene

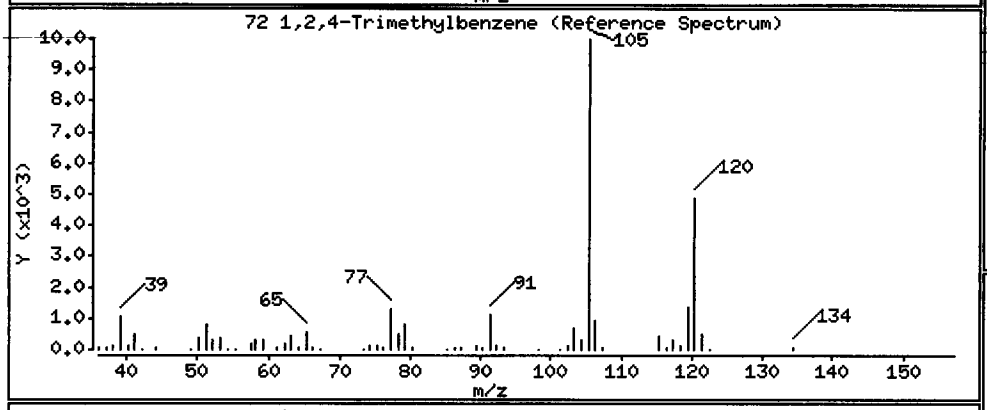
Concentration: 43.672 ug/Kg

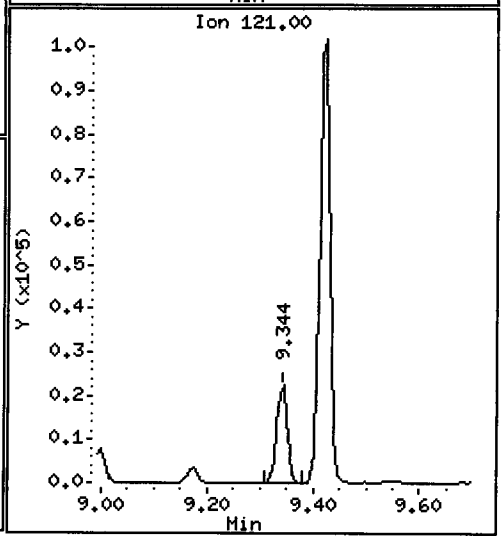


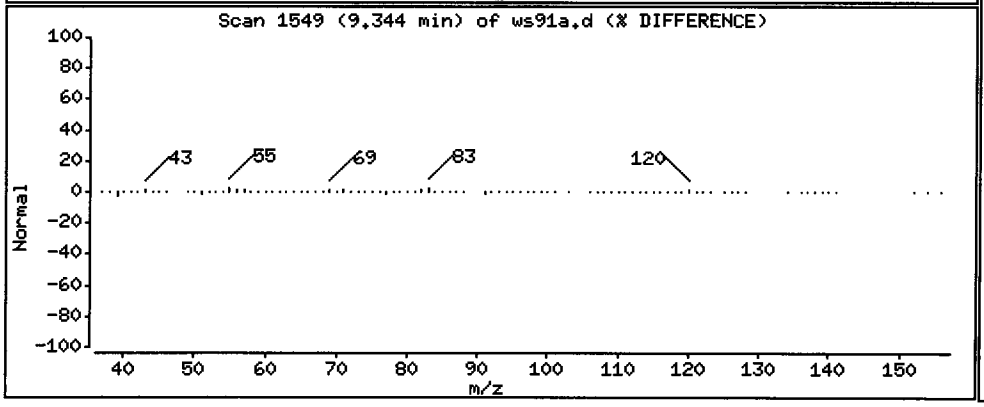












Data File: /chem1/nt5.i/12JUN13.b/ws91a.d

Date : 12-JUN-2013 15:33

Client ID: CL-MH-SPS-20130605-

Instrument: nt5.i

Sample Info: WS91A,5,6.74,0

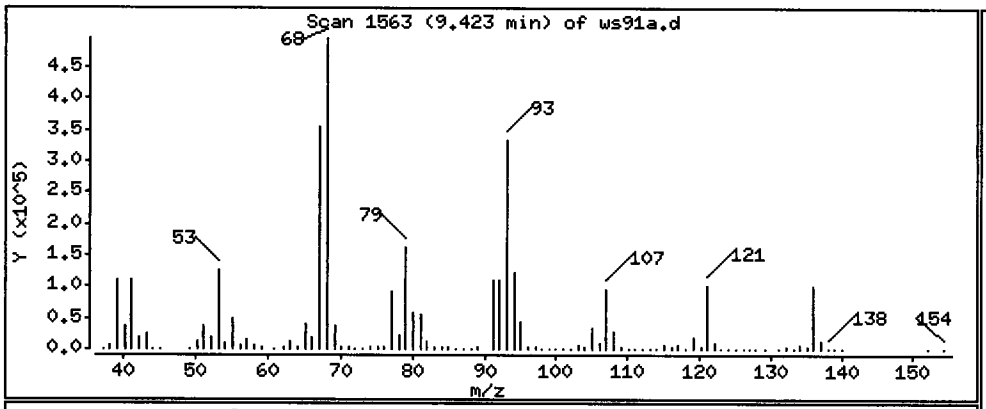
Operator: PB

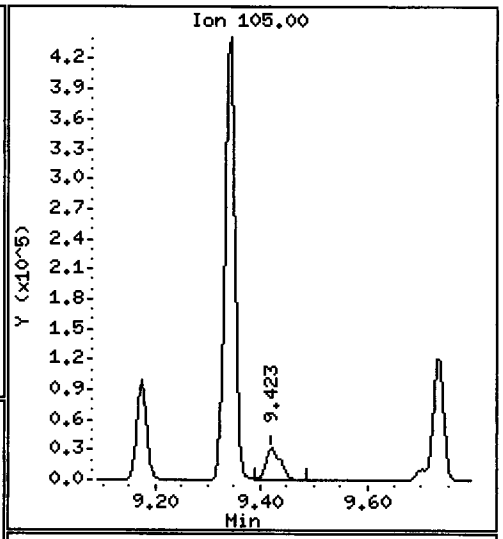
Column phase: RTXVMS

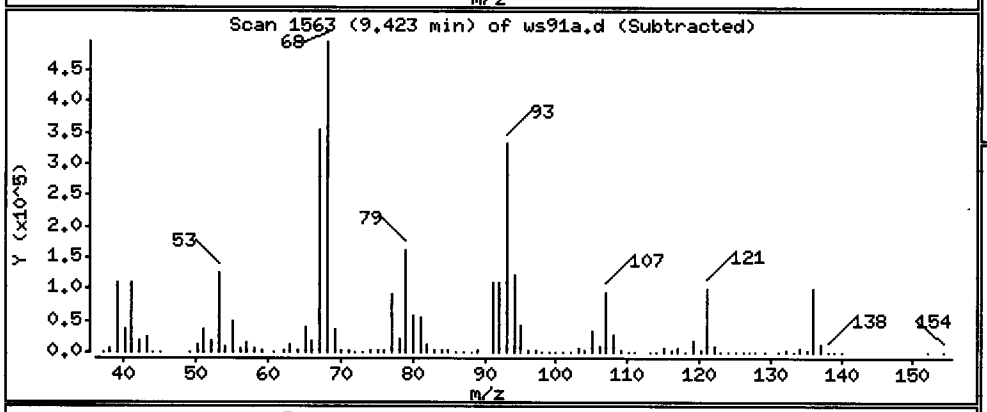
Column diameter: 0.18

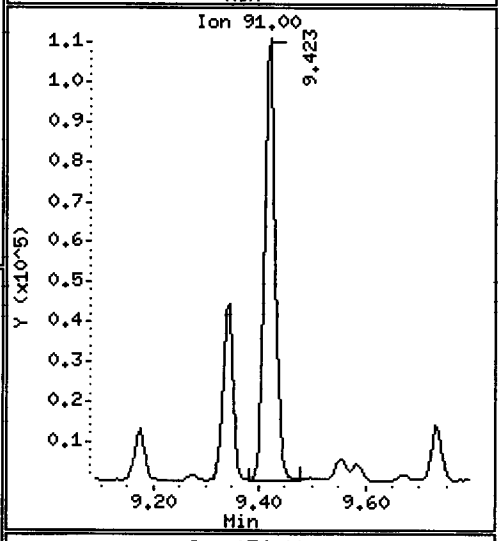
73 S-Butyl Benzene

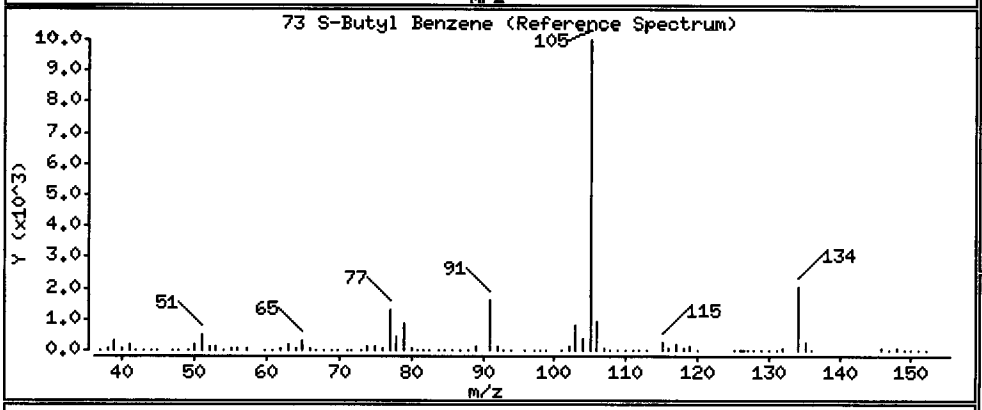
Concentration: 3.456 ug/Kg

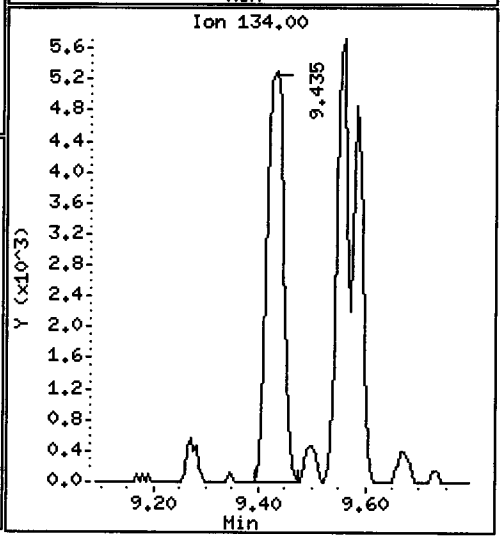


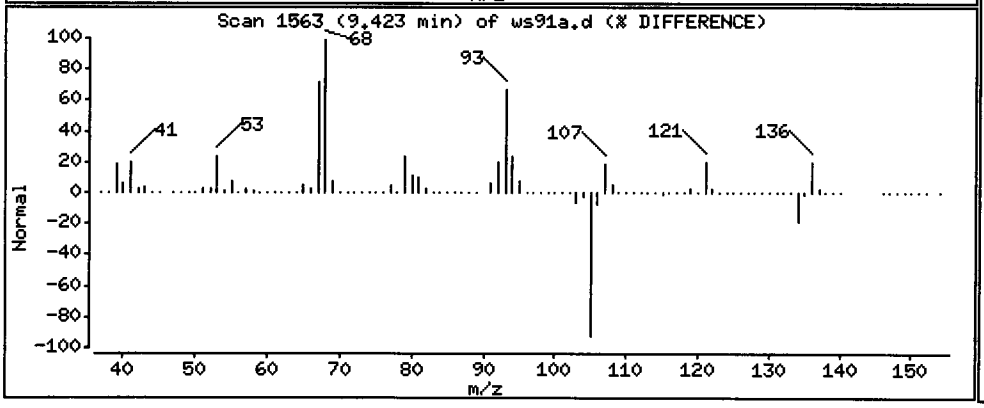












Data File: /chem1/nt5.i/12JUN13.b/ws91a.d

Date : 12-JUN-2013 15:33

Client ID: CL-MH-SPS-20130605-

Instrument: nt5.i

Sample Info: WS91A,5,6,74,0

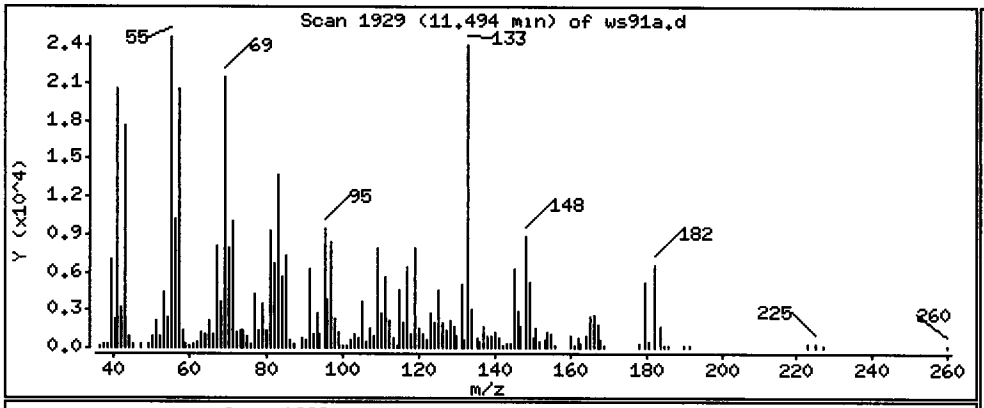
Operator: PB

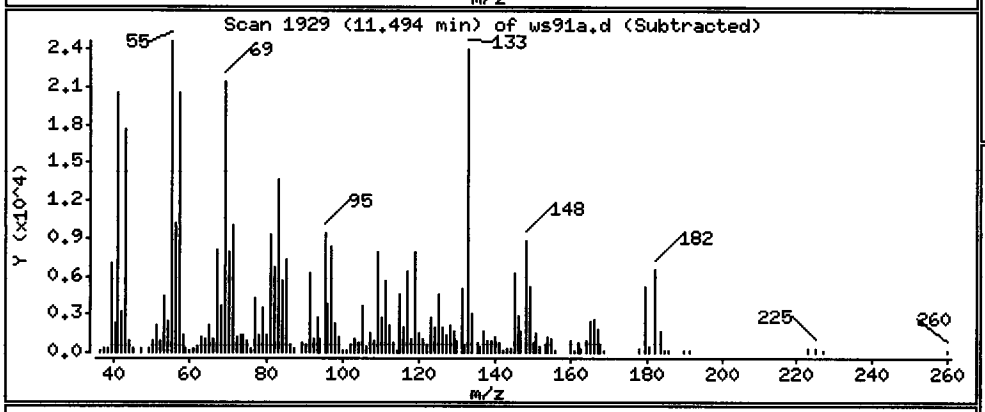
Column phase: RTXVMS

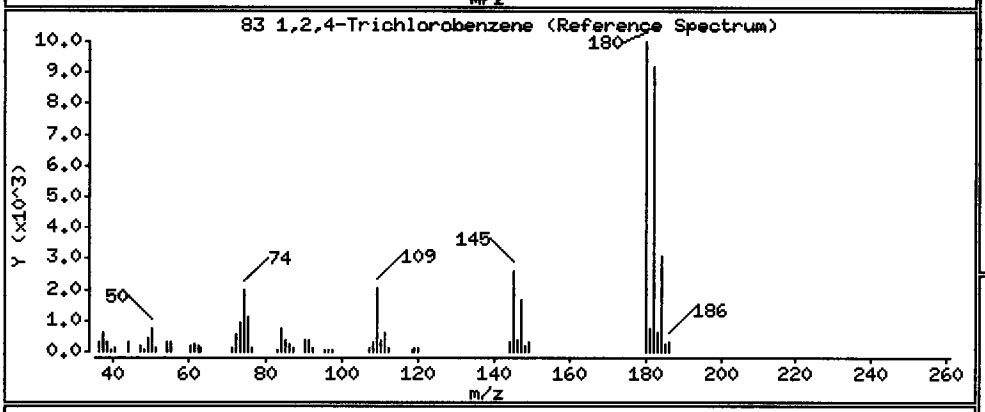
Column diameter: 0.18

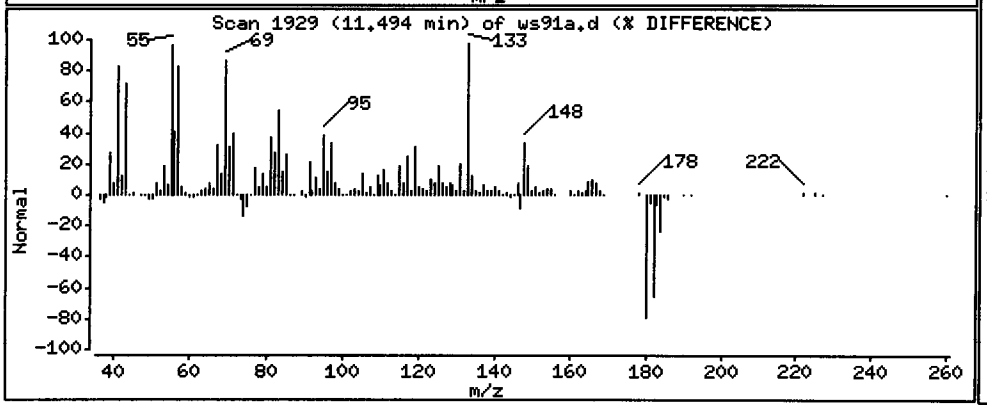
83 1,2,4-Trichlorobenzene

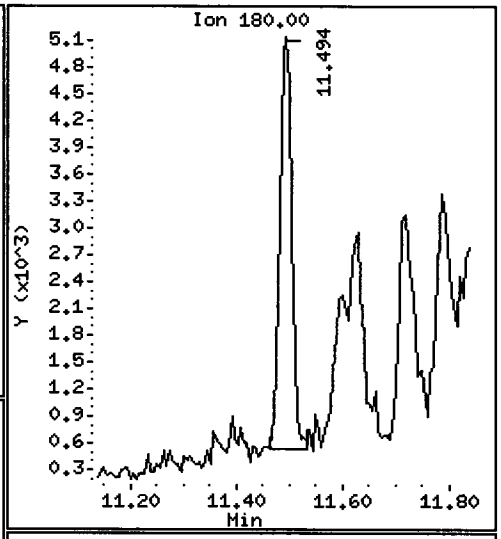
Concentration: 1.291 ug/Kg

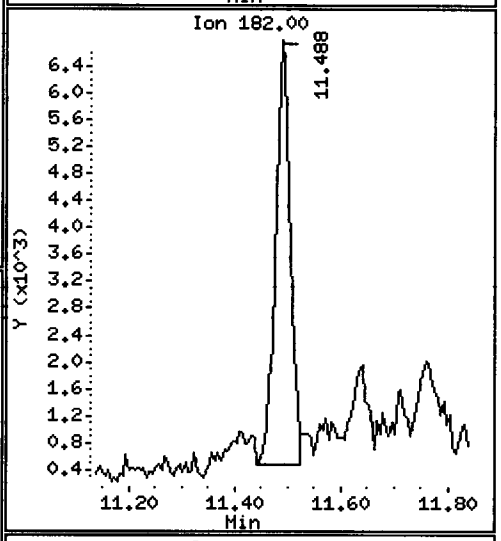


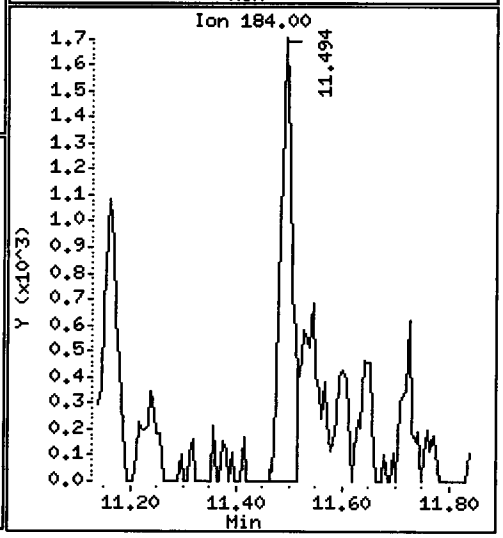












Data File: /chem1/nt5.i/12JUN13.b/ws91a.d

Date : 12-JUN-2013 15:33

Client ID: CL-MH-SPS-20130605-

Instrument: nt5.i

Sample Info: WS91A,5,6.74,0

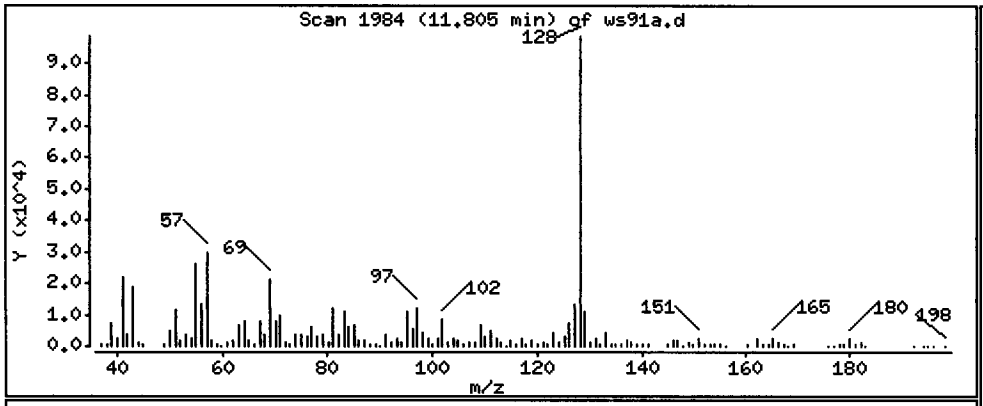
Operator: PB

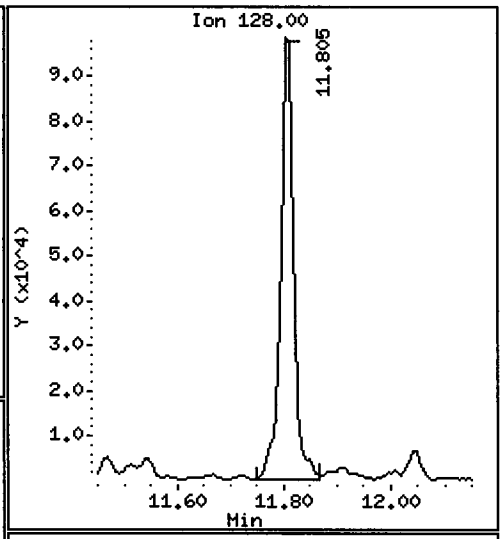
Column phase: RTXVMS

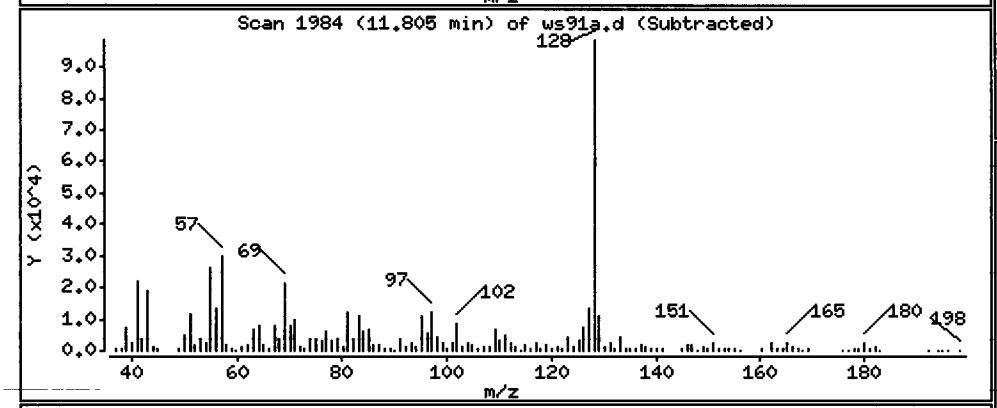
Column diameter: 0.18

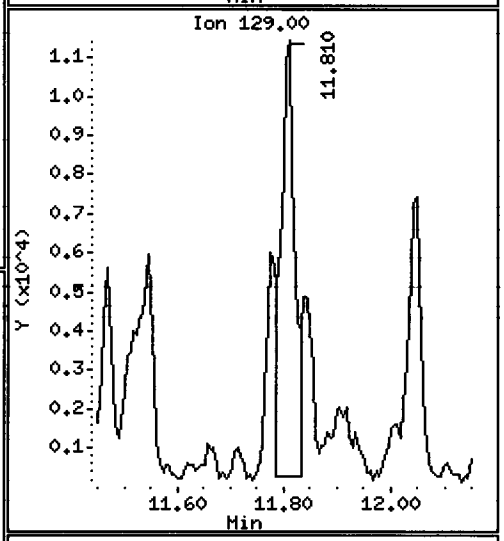
84 Naphthalene

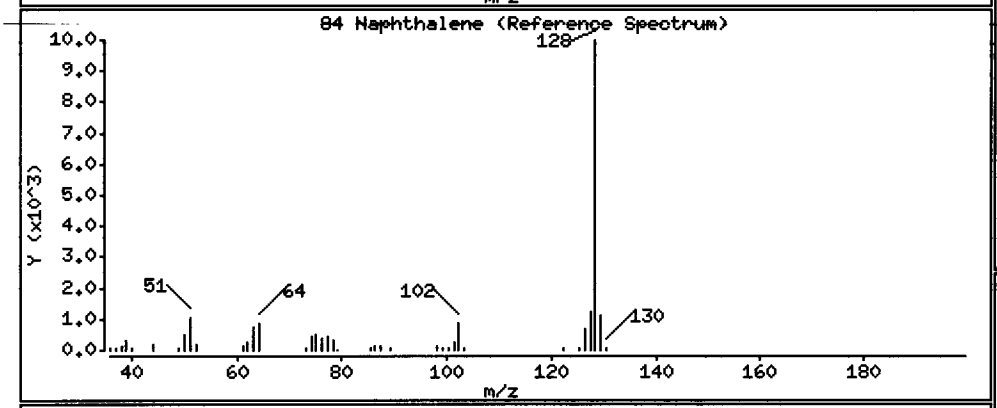
Concentration: 13.788 ug/Kg

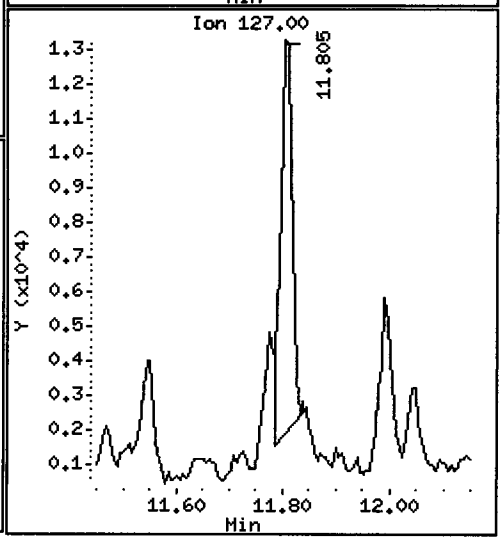


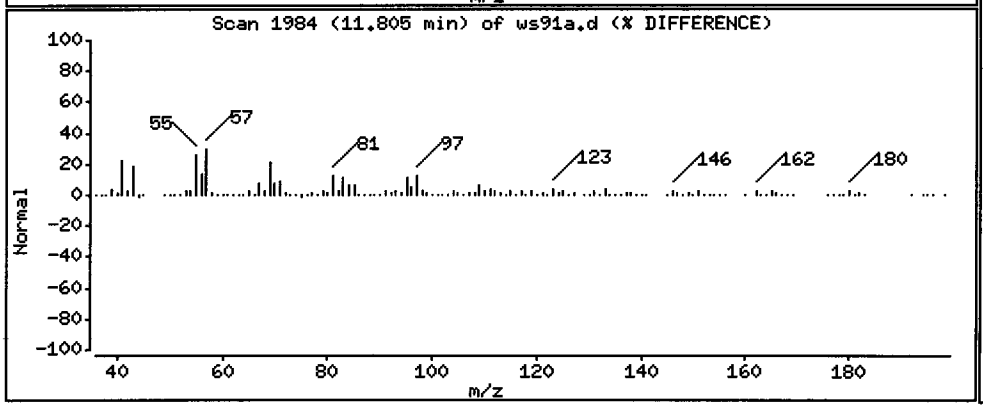






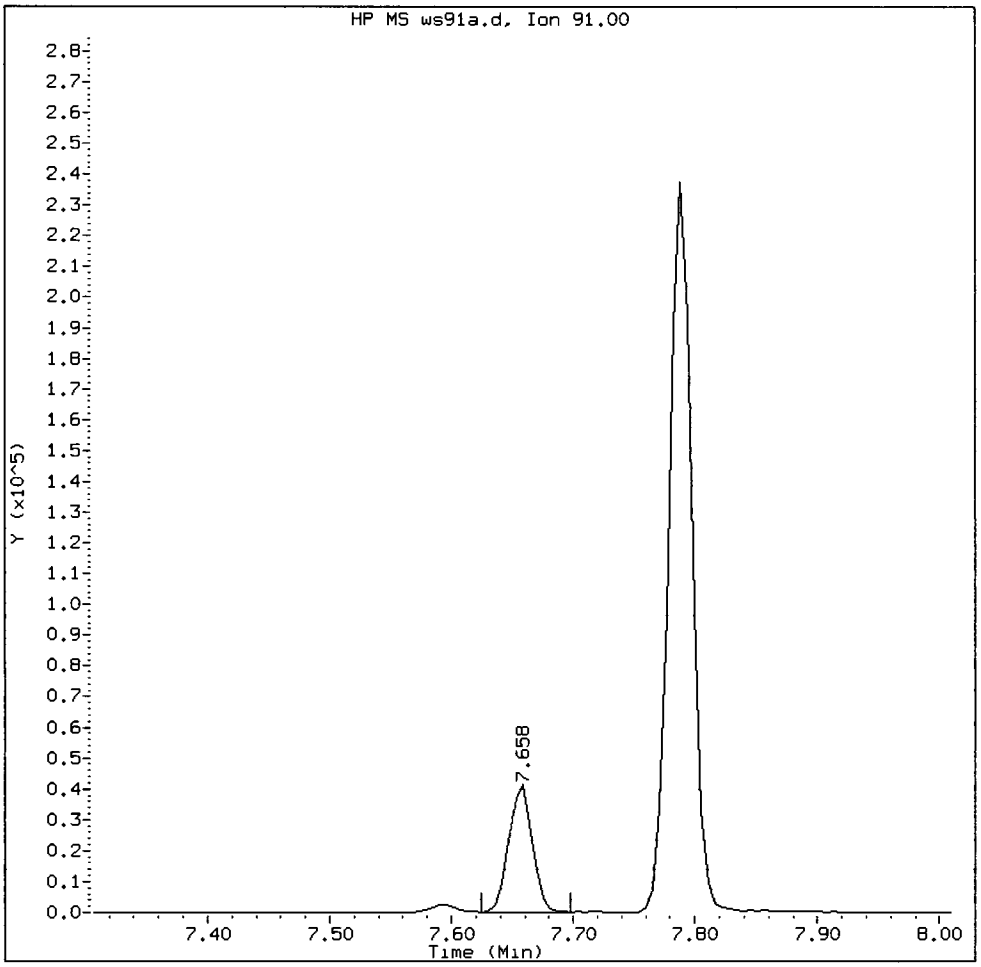






WS91A, /chem1/nt5.i/12JUN13.b/ws91a.d

Ethyl Benzene Amount: 1.19 Area: 54803



MANUAL INTEGRATION for Ethyl Benzene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: [signature] Date: 6/19/[illegible]

CO-ELUTION SUMMARY FOR FILE - ws91a.d

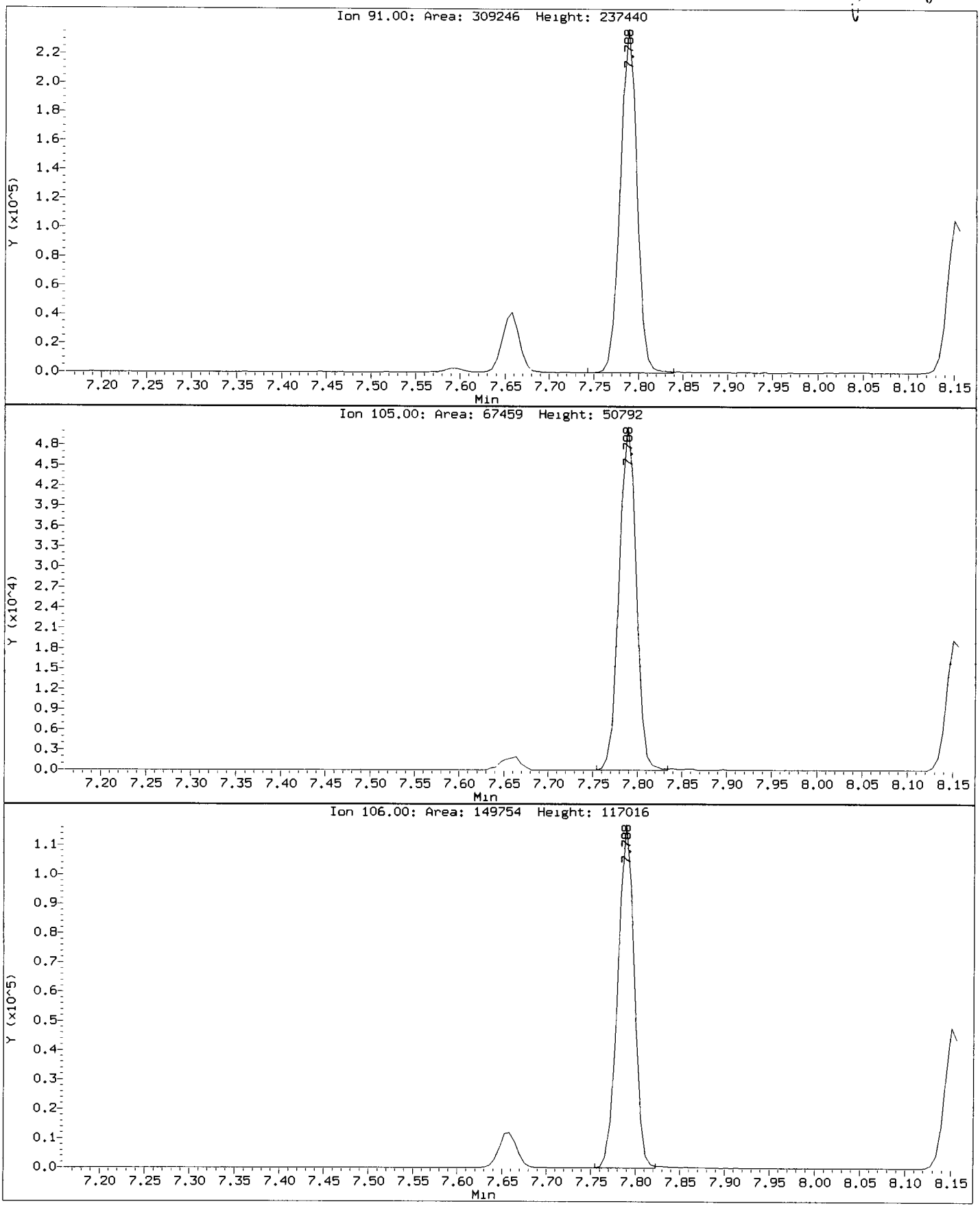
Lab ID: WS91A, Method: VO121012S.m, Instrument: nt5.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt5.1/12JUN13.b/ws91a.d
Injection Date: 12-JUN-2013 15:33
Instrument: nt5.1
Client Sample ID: CL-MH-SPS-20130605-

Compound: Ethyl Benzene
CAS Number:



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/12JUN13.b/ws91b.d
Lab Smp Id: WS91B Client Smp ID: CL-QC-TB-20130605-W
Inj Date : 12-JUN-2013 16:21
Operator : PB Inst ID: nt5.i
Smp Info : WS91B,5,5,0
Misc Info : 13-12077
Comment :
Method : /chem1/nt5.i/12JUN13.b/VO121012S.m
Meth Date : 18-Jun-2013 08:54 patrickb Quant Type: ISTD
Cal Date : 11-JUN-2013 08:57 Cal File: 2000611.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)	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	2.437	2.414	(0.522)	18197	2.31643	2.316(Q)
14 Acetone	43	Compound Not Detected.					
15 Trans-1,2-Dichloroethene	96	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS 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	4.174	(0.897)	598932	57.8018	57.802
	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	4.654	(1.000)	361246	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.654	4.649	(0.998)	552402	57.0582	57.058
	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)	1486898	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)	2259782	51.8647	51.865
	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	7.590	(1.000)	1868335	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	8.660	(1.141)	1034538	50.7499	50.750
	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)	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	9.667	9.672	(1.000)	1050841	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)	1084488	50.6587	50.659
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.					

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: ws91b.d
Lab Smp Id: WS91B
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/12JUN13.b/VO121012S.m
Misc Info: 13-12077

Calibration Date: 12-JUN-2013
Calibration Time: 11:43
Client Smp ID: CL-QC-TB-20130605-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	459631	229816	919262	361246	-21.41
35 1,4-Difluorobenze	1692431	846216	3384862	1486898	-12.14
52 d5-Chlorobenzene	1987215	993608	3974430	1868335	-5.98
76 d4-1,4-Dichlorobe	1075398	537699	2150796	1050841	-2.28

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	5.11	0.11
52 d5-Chlorobenzene	7.59	7.09	8.09	7.59	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: WS91B
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/12JUN13.b/VO121012S.m
Misc Info: 13-12077

Client SDG: WS91
Fraction: VOA
Client Smp ID: CL-QC-TB-20130605-W
Operator: PB
SampleType: SAMPLE
Quant Type: ISTD

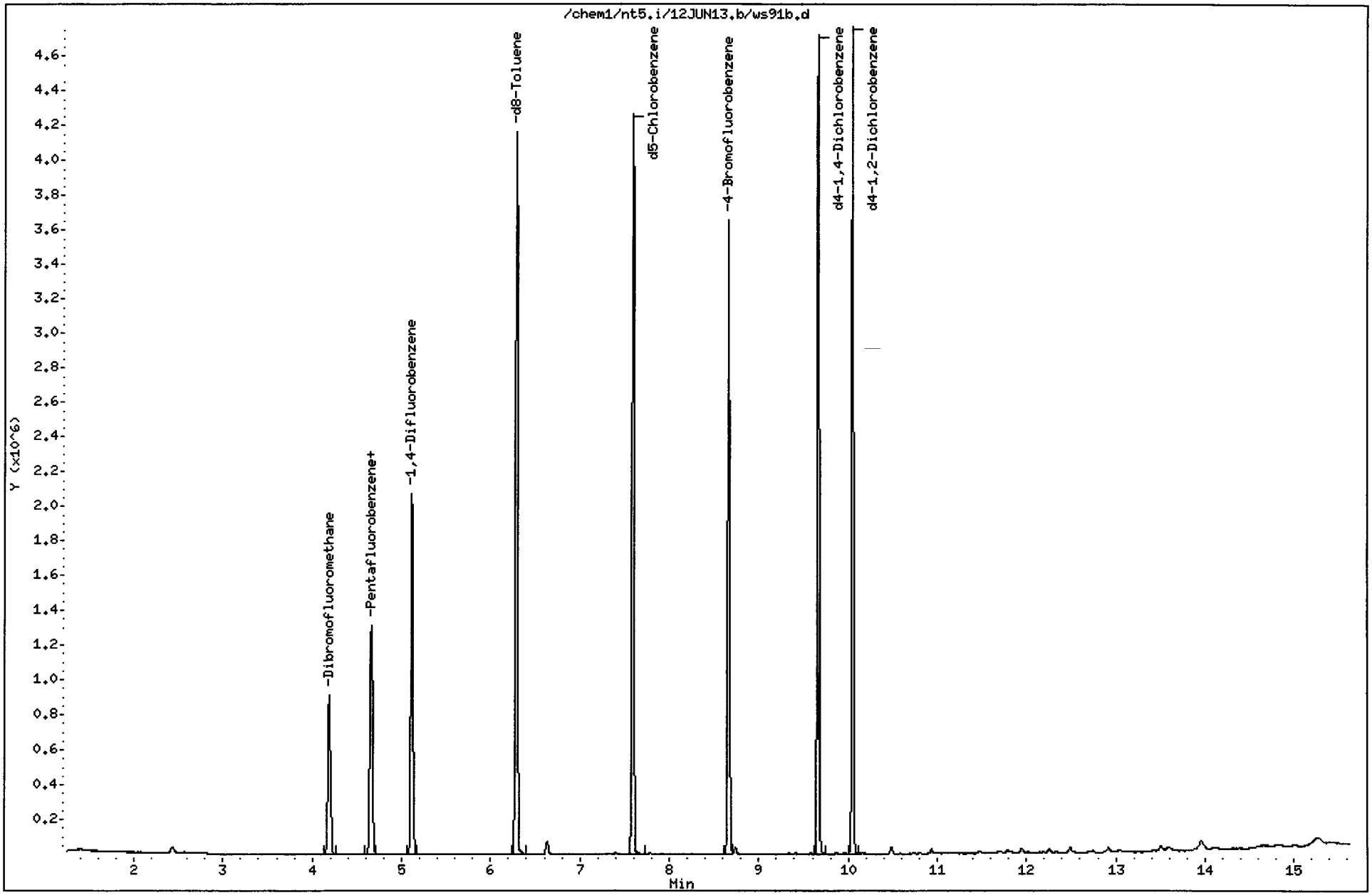
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	57.802	115.60	30-160
$ 32 d4-1,2-Dichloroeth	50.000	57.058	114.12	75-152
$ 42 d8-Toluene	50.000	51.865	103.73	82-115
$ 62 4-Bromofluorobenze	50.000	50.750	101.50	71-120
$ 79 d4-1,2-Dichloroben	50.000	50.659	101.32	80-121

Data File: /chem1/nt5.i/12JUN13.b/ws91b.d
Date : 12-JUN-2013 16:21
Client ID: CL-QC-TB-20130605-W
Sample Info: WS91B,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Data File: /chem1/nt5.i/12JUN13.b/ws91b.d

Date : 12-JUN-2013 16:21

Client ID: CL-QC-TB-20130605-W

Instrument: nt5.i

Sample Info: WS91B,5,5,0

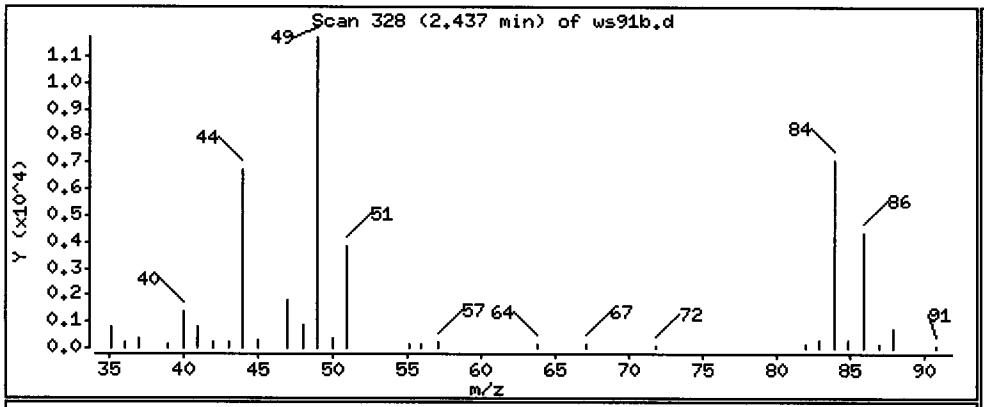
Operator: PB

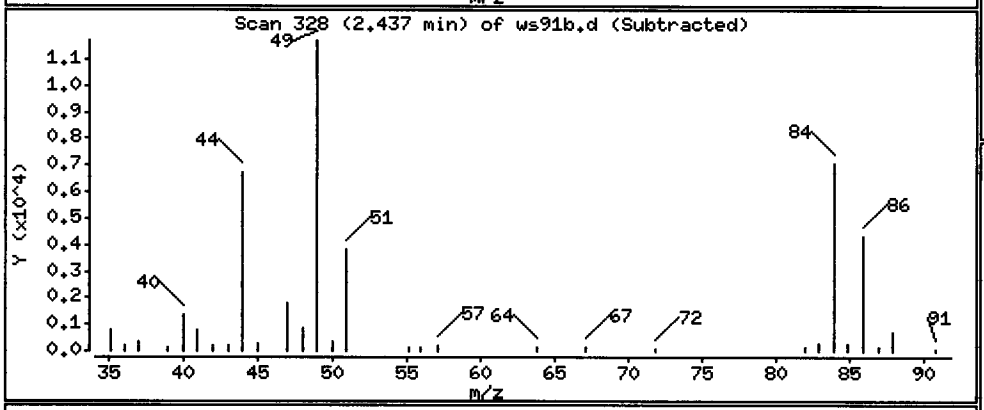
Column phase: RTXVMS

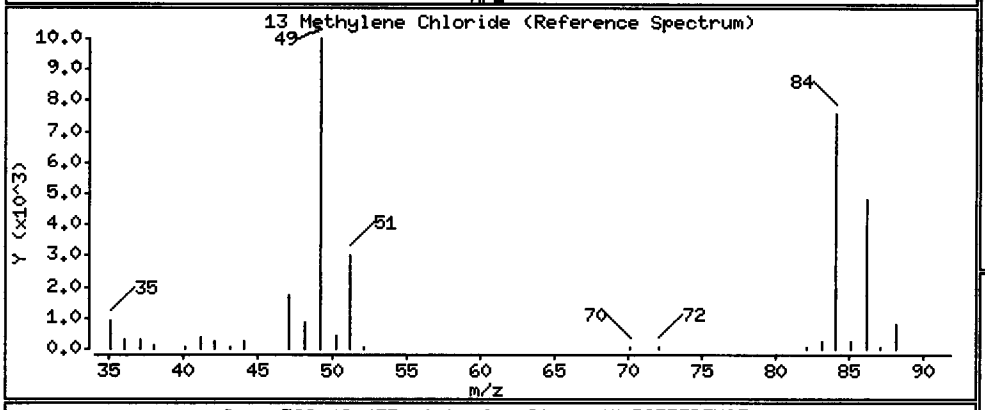
Column diameter: 0.18

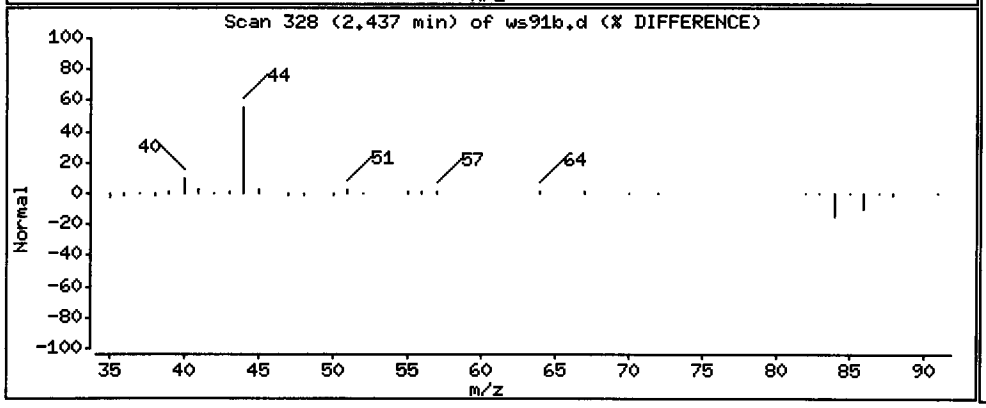
13 Methylene Chloride

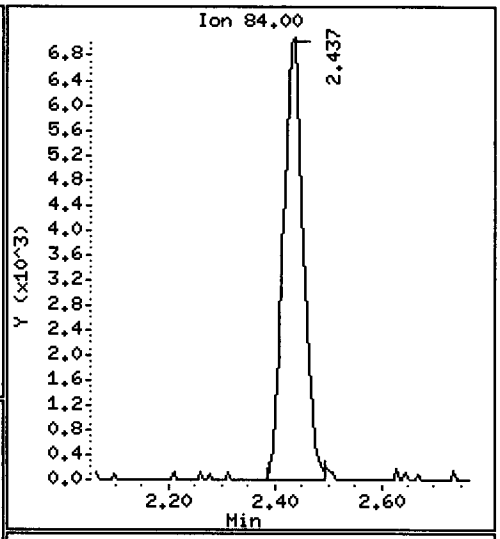
Concentration: 2.316 ug/L

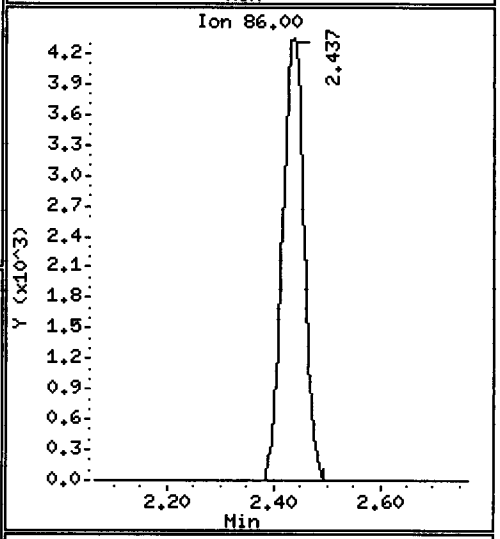


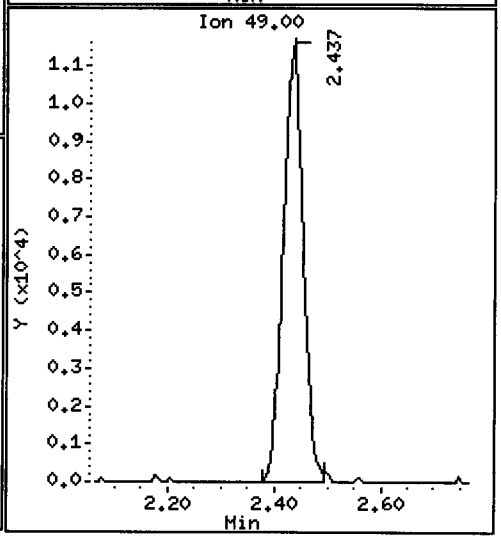












CO-ELUTION SUMMARY FOR FILE - ws91b.d

Lab ID: WS91B, Method: VO121012S.m, Instrument: nt5.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WS91

Incorporated
Analytical Chemists and Consultants

(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) W591 Page 1 of 1 Batch set up by: ~~JSH~~

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
	W591 MBS	10.00g	(1:1) (Y) / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave 0 2 3
	↓ SBS	10.00g	(1:1) (Y) / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	AC 6-17-13 Analyst/Date
	~~SBS Dup.~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	KD 80-85°C 1 2 3 4 5 6
	W591 QLS	10.00g	(1:1) (Y) / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Analyst/Date 6/18/13
	QLS (SIM)	10.00g	(1:1) (Y) / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	TurboVap 1 2 3
8	A	13.27	(1:1) (Y) / N	1mL	1mL	see Analyst Notes	CJZ 6/18/13 Analyst/Date
8	Ams	13.38	(1:1) (Y) / N	1mL	1mL	↓	GPC Prep Filter (1:1)
8	↓ AmsL	13.32	(1:1) (Y) / N	1mL	1mL	↓	CJZ 6/18/13 Analyst/Date
			(1:1) Y / N	1mL	1mL		
			(1:1) Y / N	1mL	1mL		Post GPC KD 80-85°C 1 2 3 4 5 6
			(1:1) Y / N	1mL	1mL		Analyst/Date 6/19/13
			(1:1) Y / N	1mL	1mL		
			(1:1) Y / N	1mL	1mL		TurboVap 1 2 3
Analyst/Date	AC 6-17-13		CJZ 6/18/13	CJZ 6/19/13	CJZ 6/19/13	Reviewed By CJZ 6/18/13	CJZ 6/19/13 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (2093-4)	100/150µg/mL	50µL	7/02/13	YL	AC
Full List Spike (Freezer)	7 (2065-5)	100µg/mL	50µL	1/29/14	YL	AC
Base Spike	56(2065-2)	200µg/mL	50µL	7/31/13	YL	AC
Acid Spike	38(2091-4)	100/150µg/mL	50µL	2/28/14	YL	AC
QLS Spike (14 in Freezer)	14(B###538)	100/200µg/mL	20µL	1/31/14	YL	AC
SIM QLS Spike (Freezer)	25(B###547)	1µg/mL	50µL	1/31/14	YL	AC

Extraction Time: 12:20 Balance ID: B139###00 2

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 DCM only (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)

(8270D) BAN/SIM SVOA PSDDA–Soil/Sediment
Microwave (3546) (SOP # 3304S)

ARI Job No(s) W591

(8270D) BAN/SIM SVOA PSDDA Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station:	Microwave
Pre-Deactivated Sodium Sulfate: (H# 157)	
Anhydrous Sodium Sulfate: (I# 8136 + jar date 5-24-13)	
1:1 Methylene Chloride/Acetone: (H# 294)	
Methylene Chloride: (I# 8279)	Pre-GPC KD
Pre-Deactivated Glasswool: (H#)	RR 06/18/13
Pre-GPC KD Station:	GPC Filter Prep
Pre-Deactivated Glasswool: (H# 180)	CJZ 6/18/13
Anhydrous Sodium Sulfate: (I# 8132 + jar date 6/18/13)	
Methylene Chloride: (I# 8279)	GPC
GPC Filter Prep:	CJZ 6/18/13
Methylene Chloride: (I# 8279)	
GPC Station:	Post GPC KD
Acetone: (I# 8245)	SP 6-19-13
Methylene Chloride: (I# 8279)	
Post GPC KD Station:	Vialing
Methylene Chloride: (I# 8279)	CJZ 6/19/13
Vialing Station:	
Methylene Chloride: (I# 8279)	
Hexane: (I# N/A)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: W591 Client ID: SAIC

Parameter: BAN/SIM 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)= A	AC 6-6-13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)? AC 5% small	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions). GCMS analyst,	
(Centrifuge#1 used for all Centrifugations) reduced sample extraction	
weight, based on sample pre-screen.	JH 6/13/13

3056F

Revision 009
08/14/12

W591 : 20L05

Semivolatile Raw Data
Initial Calibration

ARI Job ID: WS91

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): 04/29/13 Internal Standard ID 1998-2 Expiration 07/03/13

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	ICV Exceeding ±30%?	(YES) / NO
ICal Meets %RSD & r^2 Criteria?	(YES) / NO	Linear Fits Used?	Benzidine 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	2072-1	6/31/13	UCT	2055-1	12/05/13
	2073-1	6/31/13		2054-1	12/31/13
	2004-2	08/25/14		2053-2	08/13/13
	B006112	10/15/13			
	1998-4	7/02/13			

Detail problems, corrective actions and/or other pertinent information below:

Benzoic acid, 2,4 Dinitrophenol, 4 Nitrophenol, Benzidine
4,6 Dinitro-2-methylphenol - quadratic fit used.

- Low point of the curve dropped for Benzoic acid, 4 Nitrophenol, 2,4 Dinitrophenol, Carbazol Benzidine

Analyst: YZ **Date:** 5/3/13

Reviewer: VD **Date:** 5.4.13

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 4/29/13 Analysis: AOV/SIM AOV Analyst: YZ

GC Program: AOV_2 Column No: 247358 252945 Column Type: ~~ZB5 msi~~

Instrument Tune (.U or .CT.): B122804 EM Voltage: ~~1625~~ 1650

Calibration File: DF0429 Curve Date: 04/29/13 Injection Vol.: 1 uL

IS/SS	Ical/Ccal	LCS/ICV
1998-2	~~2036-2~~ ~~2050~~ 1,2	2053-1
	~~2066-2~~ ~~1998-4~~	2054-1
	~~2068-2~~	2053-1
	2072-1 B000112	
	2073-1 1998-4	
	2064-2	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130429.b

	Time	Filename	LabID	ClientId	DF											
1	1637	df0429.d	DFTPP	DFTPP	1	NO ISTDS FOUND										
2	1653	ic0429a.d	IC0429A		1	8.99	45250	11.64	166754	15.54	106910	18.82	179783	23.90	192841	26.35	184310	24.99	229567
3	1730	ic0429b.d	IC0429B		1	8.99	36696	11.65	136283	15.55	88131	18.83	182272	23.90	162843	26.36	160177	25.00	211292
4	1807	ic0429c.d	IC0429C		1	8.99	50456	11.64	186081	15.54	109826	18.81	184210	23.90	198580	26.34	178936	24.99	212453
5	1844	ic0429d.d	IC0429D		1	8.98	44580	11.64	164171	15.54	101406	18.81	169929	23.90	185129	26.35	168300	25.00	198625
6	1921	ic0429e.d	IC0429E		1	8.99	38285	11.65	142908	15.54	92187	18.82	160272	23.90	172225	26.36	166300	25.00	210890
7	2034	ic0429g.d	IC0429G		1	8.99	36591	11.64	137898	15.54	87308	18.82	150153	23.90	164553	26.36	152859	25.00	178975
8	2147	ic0429i.d	IC0429I		1	8.98	41602	11.64	157250	15.53	94337	18.81	159582	23.90	170666	26.35	157899	24.99	174102
9	2224	ic0429icv.d	IC0429ICV		1	8.98	41290	11.64	152009	15.53	98732	18.81	161863	23.90	175186	26.35	166766	24.99	197383

YZ 5/03/13

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.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	77 Perylene-d12	26.349	26.357	26.342	26.349	26.357	26.357	26.350	26.349	23.349-29.349	26.352	0.006
	78 Indeno(1,2,3-cd)pyrene	28.690	28.713	28.674	28.682	28.705	28.697	28.690	28.690	25.690-31.690	28.693	0.013
	79 Dibenzo(a,h)anthracene	28.713	28.737	28.698	28.705	28.729	28.721	28.698	28.713	25.713-31.713	28.714	0.015
	80 Benzo(g,h,i)perylene	29.373	29.405	29.358	29.358	29.389	29.381	29.350	29.373	26.373-32.373	29.373	0.020
$	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	4.366	4.389	4.382	4.366	4.374	4.351	4.366	4.366	1.366-7.366	4.371	0.013
	91 Aniline	8.414	8.421	8.406	8.406	8.414	8.406	8.406	8.414	5.414-11.414	8.410	0.006
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
	93 Benzidine	21.542	21.549	21.542	21.542	21.549	21.541	21.542	21.542	18.542-24.542	21.544	0.004
$	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	22.316	22.316	22.308	22.316	22.323	22.315	22.316	22.316	19.316-25.316	22.316	0.004
	99 Perylene	26.396	26.411	26.388	26.396	26.411	26.403	26.388	26.396	23.396-29.396	26.399	0.010
	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	4.382	4.389	4.420	4.397	4.374	4.374	4.397	4.382	1.382-7.382	4.390	0.016
	188 2,6-Dichlorophenol	11.874	11.890	11.866	11.866	11.882	11.866	11.867	11.874	8.874-14.874	11.873	0.009
	189 N-Nitrosomethylethylam	5.818	5.825	5.833	5.818	5.825	5.817	5.818	5.818	2.818-8.818	5.822	0.006

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0429a	ic0429b	ic0429c	ic0429d	ic0429e	ic0429g	ic0429i
INJ.DATE:	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013
INJ.TIME:	16:53	17:30	18:07	18:44	19:21	20:34	21:47

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.629	6.636	6.636	6.628	6.628	6.628	6.629	6.629	3.629-9.629	6.631	0.004
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: 5/3/13
Reviewer 2 _____ Date: 5.4.13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.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	24.994	25.002	24.994	25.002	25.002	25.002	24.995	24.994	21.994-27.994	24.999	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/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.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	16.346	16.354	16.338	16.338	16.346	16.346	16.338	16.346	13.346-19.346	16.344	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	17.103	17.118	17.095	17.095	17.111	17.103	17.095	17.103	14.103-20.103	17.103	0.009
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	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.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	13.437	13.437	13.429	13.429	13.437	13.429	13.430	13.437	10.437-16.437	13.433	0.004
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	8.344	8.352	8.336	8.336	8.344	8.336	8.337	8.344	5.344-11.344	8.341	0.006
3	Phenol	8.367	8.375	8.360	8.360	8.367	8.359	8.360	8.367	5.367-11.367	8.364	0.006
4	Bis(2-Chloroethyl)ethe	8.522	8.530	8.522	8.522	8.529	8.522	8.522	8.522	5.522-11.522	8.524	0.004
$ 5	2-Chlorophenol-d4	8.599	8.607	8.599	8.591	8.599	8.599	8.599	8.599	5.599-11.599	8.599	0.004

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
6	2-Chlorophenol	8.630	8.638	8.630	8.622	8.630	8.622	8.622	8.630	5.630-11.630	8.628	0.006
7	1,3-Dichlorobenzene	8.917	8.917	8.917	8.909	8.917	8.916	8.909	8.917	5.917-11.917	8.914	0.004
* 8	1,4-Dichlorobenzene-d4	8.986	8.986	8.986	8.979	8.986	8.986	8.979	8.986	5.986-11.986	8.984	0.004
9	1,4-Dichlorobenzene	9.017	9.017	9.017	9.010	9.017	9.017	9.018	9.017	6.017-12.017	9.016	0.003
$ 10	1,2-Dichlorobenzene-d4	9.367	9.375	9.367	9.367	9.367	9.367	9.367	9.367	6.367-12.367	9.368	0.003
11	Benzyl alcohol	9.289	9.305	9.289	9.289	9.297	9.289	9.289	9.289	6.289-12.289	9.292	0.006
12	1,2-Dichlorobenzene	9.398	9.398	9.398	9.390	9.398	9.390	9.390	9.398	6.398-12.398	9.394	0.004
13	2-Methylphenol	9.553	9.561	9.553	9.545	9.553	9.553	9.553	9.553	6.553-12.553	9.553	0.005
14	2,2'-oxybis(1-Chloropr	9.623	9.623	9.623	9.623	9.623	9.623	9.623	9.623	6.623-12.623	9.623	0.000
15	4-Methylphenol	9.848	9.856	9.840	9.840	9.848	9.840	9.840	9.848	6.848-12.848	9.845	0.006
16	N-Nitroso-di-n-propyla	9.902	9.910	9.902	9.895	9.902	9.894	9.895	9.902	6.902-12.902	9.900	0.006
17	Hexachloroethane	10.027	10.027	10.027	10.019	10.026	10.026	10.027	10.027	7.027-13.027	10.025	0.003
$ 18	Nitrobenzene-d5	10.159	10.166	10.158	10.158	10.158	10.158	10.159	10.159	7.159-13.159	10.160	0.003
19	Nitrobenzene	10.197	10.205	10.197	10.197	10.197	10.197	10.190	10.197	7.197-13.197	10.197	0.004
20	Isophorone	10.686	10.709	10.686	10.686	10.694	10.686	10.686	10.686	7.686-13.686	10.691	0.009
21	2-Nitrophenol	10.872	10.879	10.872	10.872	10.879	10.871	10.872	10.872	7.872-13.872	10.874	0.004
22	2,4-Dimethylphenol	10.964	10.980	10.964	10.964	10.972	10.964	10.964	10.964	7.964-13.964	10.967	0.006
23	Bis(2-Chloroethoxy)met	11.180	11.188	11.172	11.172	11.180	11.172	11.172	11.180	8.180-14.180	11.176	0.006
24	Benzoic acid	11.226	11.280	11.064	11.110	11.303	11.164	11.080	11.226	8.226-14.226	11.175	0.096
25	2,4-Dichlorophenol	11.365	11.380	11.365	11.365	11.372	11.365	11.365	11.365	8.365-14.365	11.368	0.006
26	1,2,4-Trichlorobenzene	11.565	11.565	11.558	11.558	11.565	11.557	11.558	11.565	8.565-14.565	11.561	0.004
* 27	Naphthalene-d8	11.643	11.650	11.643	11.643	11.650	11.642	11.643	11.643	8.643-14.643	11.645	0.004
28	Naphthalene	11.689	11.697	11.689	11.689	11.689	11.689	11.681	11.689	8.689-14.689	11.689	0.004
29	4-Chloroaniline	11.859	11.874	11.851	11.851	11.859	11.851	11.843	11.859	8.859-14.859	11.855	0.010

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	30 Hexachlorobutadiene	12.098	12.106	12.106	12.098	12.106	12.098	12.099	12.098	9.098-15.098	12.102	0.004
	31 4-Chloro-3-methylpheno	12.919	12.927	12.911	12.911	12.919	12.911	12.911	12.919	9.919-15.919	12.915	0.006
	32 2-Methylnaphthalene	13.197	13.205	13.197	13.197	13.197	13.197	13.197	13.197	10.197-16.197	13.198	0.003
	33 Hexachlorocyclopentadi	13.716	13.716	13.708	13.708	13.716	13.716	13.708	13.716	10.716-16.716	13.712	0.004
	34 2,4,6-Trichlorophenol	13.878	13.894	13.878	13.878	13.886	13.878	13.879	13.878	10.878-16.878	13.882	0.006
	35 2,4,5-Trichlorophenol	13.956	13.964	13.956	13.956	13.956	13.956	13.948	13.956	10.956-16.956	13.956	0.004
$	36 2-Fluorobiphenyl	14.064	14.064	14.056	14.056	14.064	14.056	14.057	14.064	11.064-17.064	14.060	0.004
	37 2-Chloronaphthalene	14.265	14.273	14.258	14.257	14.265	14.265	14.258	14.265	11.265-17.265	14.263	0.006
	38 2-Nitroaniline	14.559	14.575	14.559	14.552	14.567	14.559	14.552	14.559	11.559-17.559	14.560	0.008
	39 Dimethylphthalate	15.055	15.070	15.047	15.055	15.062	15.055	15.047	15.055	12.055-18.055	15.056	0.008
	40 Acenaphthylene	15.202	15.202	15.194	15.194	15.194	15.194	15.194	15.202	12.202-18.202	15.196	0.004
	41 2,6-Dinitrotoluene	15.194	15.202	15.186	15.186	15.194	15.186	15.179	15.194	12.194-18.194	15.190	0.008
*	42 Acenaphthene-d10	15.542	15.550	15.542	15.542	15.542	15.542	15.535	15.542	12.542-18.542	15.542	0.004
	43 3-Nitroaniline	15.488	15.511	15.480	15.480	15.496	15.480	15.473	15.488	12.488-18.488	15.487	0.013
	44 Acenaphthene	15.612	15.619	15.612	15.612	15.612	15.611	15.604	15.612	12.612-18.612	15.612	0.004
	45 2,4-Dinitrophenol	15.712	15.743	15.712	15.704	15.727	15.712	15.705	15.712	12.712-18.712	15.717	0.014
	46 Dibenzofuran	15.967	15.983	15.959	15.967	15.975	15.967	15.960	15.967	12.967-18.967	15.968	0.008
	47 4-Nitrophenol	15.867	15.890	15.867	15.859	15.874	15.859	15.867	15.867	12.867-18.867	15.869	0.011
	48 2,4-Dinitrotoluene	16.060	16.075	16.052	16.052	16.068	16.052	16.052	16.060	13.060-19.060	16.059	0.009
	49 Fluorene	16.740	16.748	16.733	16.733	16.740	16.732	16.733	16.740	13.740-19.740	16.737	0.006
	50 Diethylphthalate	16.640	16.663	16.632	16.632	16.647	16.640	16.632	16.640	13.640-19.640	16.641	0.011
	51 4-Chlorophenyl-phenyle	16.756	16.756	16.748	16.756	16.756	16.756	16.748	16.756	13.756-19.756	16.754	0.004
	52 4-Nitroaniline	16.856	16.895	16.856	16.848	16.872	16.856	16.841	16.856	13.856-19.856	16.861	0.018
	53 4,6-Dinitro-2-methylph	16.964	16.995	16.949	16.949	16.972	16.956	16.949	16.964	13.964-19.964	16.962	0.017

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/ABN.m
Batch File: /chem1/nt10.i/20130429.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	54 N-Nitrosodiphenylamine	17.026	17.041	17.026	17.026	17.034	17.026	17.026	17.026	14.026-20.026	17.029	0.006
$	55 2,4,6-Tribromophenol	17.319	17.327	17.311	17.311	17.319	17.311	17.311	17.319	14.319-20.319	17.316	0.006
	56 4-Bromophenyl-phenylet	17.836	17.843	17.835	17.835	17.835	17.835	17.836	17.836	14.836-20.836	17.837	0.003
	57 Hexachlorobenzene	18.160	18.160	18.153	18.153	18.160	18.152	18.153	18.160	15.160-21.160	18.156	0.004
	58 Pentachlorophenol	18.555	18.563	18.547	18.547	18.555	18.547	18.548	18.555	15.555-21.555	18.552	0.006
*	59 Phenanthrene-d10	18.818	18.826	18.810	18.810	18.818	18.818	18.811	18.818	15.818-21.818	18.816	0.006
	60 Phenanthrene	18.865	18.872	18.857	18.857	18.865	18.864	18.857	18.865	15.865-21.865	18.862	0.006
	61 Anthracene	18.965	18.973	18.957	18.957	18.965	18.957	18.958	18.965	15.965-21.965	18.962	0.006
	62 Carbazole	19.313	19.321	19.313	19.313	19.321	19.313	19.314	19.313	16.313-22.313	19.316	0.004
	63 Di-n-butylphthalate	20.188	20.188	20.188	20.188	20.188	20.187	20.188	20.188	17.188-23.188	20.188	0.000
	64 Fluoranthene	21.286	21.286	21.279	21.278	21.286	21.286	21.279	21.286	18.286-24.286	21.283	0.004
	65 Pyrene	21.704	21.704	21.696	21.696	21.704	21.704	21.697	21.704	18.704-24.704	21.701	0.004
$	66 Terphenyl-d14	22.021	22.029	22.021	22.021	22.029	22.029	22.022	22.021	19.021-25.021	22.025	0.004
	67 Butylbenzylphthalate	22.974	22.974	22.966	22.974	22.974	22.974	22.974	22.974	19.974-25.974	22.973	0.003
	68 Benzo(a)anthracene	23.872	23.880	23.864	23.864	23.872	23.872	23.864	23.872	20.872-26.872	23.870	0.006
*	69 Chrysene-d12	23.895	23.903	23.895	23.895	23.903	23.903	23.895	23.895	20.895-26.895	23.898	0.004
	70 3,3'-Dichlorobenzidine	23.849	23.857	23.841	23.849	23.856	23.849	23.841	23.849	20.849-26.849	23.849	0.006
	71 Chrysene	23.942	23.949	23.934	23.942	23.949	23.941	23.934	23.942	20.942-26.942	23.942	0.006
	72 bis(2-Ethylhexyl)phtha	24.019	24.019	24.019	24.019	24.027	24.027	24.019	24.019	21.019-27.019	24.021	0.004
	73 Di-n-octylphthalate	25.010	25.010	25.002	25.010	25.018	25.017	25.002	25.010	22.010-28.010	25.010	0.006
	74 Benzo(b)fluoranthene	25.668	25.676	25.660	25.668	25.676	25.668	25.660	25.668	22.668-28.668	25.668	0.006
	75 Benzo(k)fluoranthene	25.707	25.722	25.699	25.707	25.714	25.714	25.699	25.707	22.707-28.707	25.709	0.009
	187 Total Benzofluoranthen	25.707	25.722	25.660	25.668	25.714	25.668	25.699	25.707	22.707-28.707	25.691	0.025
	76 Benzo(a)pyrene	26.249	26.257	26.241	26.241	26.256	26.249	26.241	26.249	23.249-29.249	26.248	0.007

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Average

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Calibration File Names:
Level 1: /chem1/nt10.i/20130429.b/ic0429c.d
Level 2: /chem1/nt10.i/20130429.b/ic0429i.d
Level 3: /chem1/nt10.i/20130429.b/ic0429d.d
Level 4: /chem1/nt10.i/20130429.b/ic0429g.d
Level 5: /chem1/nt10.i/20130429.b/ic0429a.d
Level 6: /chem1/nt10.i/20130429.b/ic0429e.d
Level 7: /chem1/nt10.i/20130429.b/ic0429b.d

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	
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	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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)	1.32264	1.26754	1.24075	1.27398	1.12394	1.24670						
	1.18447						AVRG		1.23715		5.24731	
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						QUAD	0.000e+00	0.000e+00	0.000e+00	0.000e+00	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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											
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
181 3,4,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	0.70389	0.59747	0.62527	0.63990	0.63292	0.66830						
	0.67337						AVRG		0.64873		5.46363	
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 : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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										
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
161 1,2,3-Trichloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
162 1,2,3,4-Tetrachloronapthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	2.07745	2.01663	1.99013	2.15135	2.00628	2.20020					
	2.03355						AVRG		2.06794		3.85914
4 Bis(2-Chloroethyl)ether	1.56929	1.53896	1.46972	1.55326	1.37664	1.50058					
	1.40120						AVRG		1.48709		5.05358

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	1.55026	1.46704	1.47133	1.54154	1.50983	1.81549					
	1.80786						AVRG		1.59477		9.49947
7 1,3-Dichlorobenzene	1.69336	1.54473	1.58950	1.59956	1.55227	1.62846					
	1.59424						AVRG		1.60030		3.12454
9 1,4-Dichlorobenzene	1.71397	1.52647	1.51341	1.62532	1.53264	1.58116					
	1.54877						AVRG		1.57739		4.51793
11 Benzyl alcohol	0.85064	0.73516	0.83060	0.90072	0.88286	0.96932					
	0.91989						AVRG		0.86989		8.59920
12 1,2-Dichlorobenzene	1.62518	1.49204	1.50624	1.51578	1.45554	1.49728					
	1.47965						AVRG		1.51024		3.59480
13 2-Methylphenol	1.49001	1.40570	1.44998	1.54407	1.45837	1.56041					
	1.50801						AVRG		1.48808		3.66935
14 2,2'-oxybis(1-Chloropropane)	0.42611	0.44017	0.46397	0.48471	0.45795	0.47727					
	0.46264						AVRG		0.45898		4.42060

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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										
15 4-Methylphenol	1.43729	1.35493	1.48973	1.59318	1.52748	1.67713					
	1.54128						AVRG		1.51729		6.88641
16 N-Nitroso-di-n-propylamine	0.95251	0.89419	0.87815	0.98621	0.88743	0.97695					
	0.92792						AVRG		0.92905		4.74330
17 Hexachloroethane	0.68931	0.65881	0.65446	0.68375	0.62023	0.66920					
	0.64417						AVRG		0.65999		3.59193
19 Nitrobenzene	0.39510	0.39280	0.38552	0.39982	0.36572	0.40371					
	0.38522						AVRG		0.38970		3.22892
20 Isophorone	0.71195	0.66432	0.67279	0.71065	0.68101	0.86242					
	0.82790						AVRG		0.73300		10.82033
21 2-Nitrophenol	0.20754	0.18635	0.20138	0.22080	0.22866	0.24164					
	0.24290						AVRG		0.21847		9.68506
22 2,4-Dimethylphenol	0.41192	0.37230	0.39344	0.41516	0.40245	0.42253					
	0.39424						AVRG		0.40172		4.20008

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	0.44346	0.43452	0.43284	0.44204	0.41435	0.44041						
	0.41838						AVRG		0.43229		2.68164	
24 Benzoic acid	+++++	0.16051	0.25143	0.30891	0.33851	0.37356						
	0.37918						AVRG		0.30202		27.71646	<-
25 2,4-Dichlorophenol	0.31803	0.28833	0.38510	0.39343	0.39479	0.41768						
	0.39114						AVRG		0.36979		12.81889	
26 1,2,4-Trichlorobenzene	0.41240	0.34976	0.36404	0.35417	0.34495	0.35336						
	0.35130						AVRG		0.36143		6.42232	
28 Naphthalene	1.20528	1.00604	1.04043	1.06395	1.02045	1.07273						
	1.04570						AVRG		1.06494		6.20233	
29 4-Chloroaniline	0.42433	0.36449	0.40631	0.42348	0.42526	0.48932						
	0.38118						AVRG		0.41634		9.58081	
30 Hexachlorobutadiene	0.23345	0.19983	0.21390	0.20892	0.20729	0.22093						
	0.21857						AVRG		0.21470		5.08490	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	Coefficients m1	Coefficients m2	%RSD or R^2
31 4-Chloro-3-methylphenol	0.26343	0.27218	0.31153	0.34377	0.34343	0.37735					
	0.36548						AVRG		0.32531		13.65102
32 2-Methylnaphthalene	0.74054	0.67388	0.68178	0.70154	0.68736	0.73921					
	0.72726						AVRG		0.70737		3.96516
33 Hexachlorocyclopentadiene	0.44835	0.39323	0.41506	0.42533	0.44262	0.46660					
	0.48996						AVRG		0.44016		7.36429
34 2,4,6-Trichlorophenol	0.38934	0.36825	0.40727	0.42611	0.43278	0.45335					
	0.46998						AVRG		0.42101		8.44390
35 2,4,5-Trichlorophenol	0.35538	0.37249	0.41863	0.44267	0.45433	0.49279					
	0.50176						AVRG		0.43401		12.87553
37 2-Chloronaphthalene	1.25763	1.04782	1.06917	1.09796	1.07105	1.12488					
	1.11166						AVRG		1.11145		6.27651
38 2-Nitroaniline	0.20469	0.22227	0.26060	0.28971	0.28861	0.31072					
	0.30122						AVRG		0.26826		15.20234

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	1.36489	1.13508	1.17192	1.19054	1.15985	1.20823						
	1.17494						AVRG		1.20078		6.32260	
40 Acenaphthylene	2.08676	1.80273	1.83141	1.81650	1.77233	2.12941						
	1.75642						AVRG		1.88508		8.21819	
41 2,6-Dinitrotoluene	0.26069	0.25725	0.27537	0.29601	0.28450	0.30512						
	0.29050						AVRG		0.28135		6.35382	
43 3-Nitroaniline	0.20751	0.21366	0.25373	0.25128	0.24013	0.25105						
	0.20850						AVRG		0.23227		9.23578	
44 Acenaphthene	1.30679	1.09641	1.08357	1.13351	1.06627	1.13513						
	1.13044						AVRG		1.13602		7.04098	
45 2,4-Dinitrophenol	+++++	0.09212	0.14513	0.19634	0.23880	0.27206						
	0.28220						AVRG		0.20444		36.60389	<-
46 Dibenzofuran	1.67283	1.49829	1.51991	1.55200	1.47200	1.58360						
	1.57471						AVRG		1.55334		4.27158	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	+++++	0.07895	0.11479	0.15259	0.16439	0.18465						
	0.18270						AVRG		0.14635		28.48976	<-
48 2,4-Dinitrotoluene	0.30512	0.31097	0.36079	0.38342	0.37756	0.40613						
	0.39616						AVRG		0.36288		11.05203	
49 Fluorene	1.46413	1.26025	1.30008	1.33638	1.27146	1.34389						
	1.30199						AVRG		1.32546		5.15880	
50 Diethylphthalate	1.35396	1.14110	1.15749	1.20605	1.17048	1.22908						
	1.18817						AVRG		1.20662		5.91539	
51 4-Chlorophenyl-phenylether	0.73753	0.60252	0.61409	0.61582	0.59152	0.72584						
	0.67359						AVRG		0.65156		9.31141	
52 4-Nitroaniline	0.21006	0.19776	0.27062	0.24001	0.24443	0.27164						
	0.25433						AVRG		0.24126		11.76360	
53 4,6-Dinitro-2-methylphenol	0.10675	0.12341	0.16076	0.17466	0.18882	0.19809						
	0.19914						AVRG		0.16452		22.27885	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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										
54 N-Nitrosodiphenylamine	0.49563	0.42947	0.47333	0.47261	0.45791	0.46123					
	0.45114						AVRG		0.46304		4.45876
56 4-Bromophenyl-phenylether	0.22767	0.21687	0.23028	0.22247	0.22312	0.22955					
	0.23436						AVRG		0.22633		2.59516
57 Hexachlorobenzene	0.32278	0.25772	0.26649	0.25845	0.25551	0.26286					
	0.26660						AVRG		0.27006		8.75648
58 Pentachlorophenol	0.15515	0.14017	0.17294	0.19921	0.21130	0.22141					
	0.22676						AVRG		0.18956		17.84287
60 Phenanthrene	1.22947	1.01265	1.08610	1.06561	1.04600	1.09893					
	1.09863						AVRG		1.09106		6.27534
61 Anthracene	1.19624	1.06794	1.09848	1.10290	1.07915	1.13739					
	1.14221						AVRG		1.11776		3.95191
62 Carbazole	+++++	0.79964	0.83444	0.64299	0.47569	0.60549					
	0.71548						AVRG		0.67896		19.54874

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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										
63 Di-n-butylphthalate	1.23468	1.00016	1.09465	1.11547	1.14103	1.23687					
	1.25417						AVRG		1.15386		8.08770
64 Fluoranthene	1.35769	1.17978	1.24657	1.24812	1.27294	1.33427					
	1.34952						AVRG		1.28413		5.11850
65 Pyrene	1.37184	1.13560	1.19244	1.19696	1.22185	1.25931					
	1.28506						AVRG		1.23758		6.17908
67 Butylbenzylphthalate	0.42623	0.34242	0.41245	0.41654	0.43945	0.45663					
	0.46466						AVRG		0.42263		9.55905
68 Benzo(a)anthracene	1.25572	1.03482	1.09368	1.07381	1.09465	1.13986					
	1.14667						AVRG		1.11989		6.34024
70 3,3'-Dichlorobenzidine	0.51204	0.36539	0.40605	0.35790	0.38490	0.47001					
	0.48944						AVRG		0.42653		14.75318
71 Chrysene	1.17786	0.95330	0.94998	0.97296	0.97716	1.02164					
	1.04126						AVRG		1.01345		7.90157

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	1.04908	0.94427	0.87137	0.90574	0.87139	0.90498					
	0.89449						AVRG		0.92019		6.73684
73 Di-n-octylphthalate	1.05463	0.94427	0.87137	0.90574	0.87139	0.90498					
	0.89449						AVRG		0.92098		6.94061
74 Benzo(b)fluoranthene	1.35044	1.05465	1.09386	1.12584	1.21507	1.24210					
	1.23295						AVRG		1.18784		8.59752
75 Benzo(k)fluoranthene	1.42924	1.14868	1.24463	1.22609	1.13947	1.22473					
	1.34515						AVRG		1.25114		8.31220
187 Total Benzofluoranthenes	1.30881	1.05407	1.12671	1.11857	1.11816	1.16984					
	1.17534						AVRG		1.15307		6.89595
76 Benzo(a)pyrene	1.15104	0.87256	0.97331	0.97345	1.00238	1.05501					
	1.07592						AVRG		1.01481		8.78911
78 Indeno(1,2,3-cd)pyrene	1.18245	1.01361	1.10322	1.12112	1.20413	1.27168					
	1.28789						AVRG		1.16916		8.32633

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	0.92380	0.73303	0.85483	0.88584	0.92025	0.96990					
	0.99039						AVRG		0.89686		9.55761
80 Benzo(g,h,i)perylene	1.04564	0.90225	0.98911	0.99122	1.00081	1.07106					
	1.08082						AVRG		1.01156		6.05123
90 N-Nitrosodimethylamine	0.88097	0.87544	0.88313	0.96297	0.85634	0.99623					
	0.92370						AVRG		0.91125		5.67695
91 Aniline	4.00230	3.88308	3.89376	4.21542	3.95352	4.21183					
	3.92480						AVRG		4.01210		3.56908
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
93 Benzidine	+++++	8518	23877	29714	60043	110746					
	257371						QUAD	0.000e+00	8.17939	-1.16399	0.99615
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	5229	8851	20776	46252	111862	206286						
	402573						QUAD	0.000e+00	2.17724	-0.06444	0.99996	
99 Perylene	1.36017	1.09787	1.11603	1.09868	1.10144	1.16094						
	1.18529						AVRG		1.16006		8.15448	
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	0.72677	0.80583	0.78852	0.86813	0.78009	0.84643						
	0.79117						AVRG		0.80099		5.76462	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	
188 2,6-Dichlorophenol	0.60097	0.54247	0.59080	0.60713	0.60866	0.63218						
	0.61259						AVRG		0.59926		4.67591	
189 N-Nitrosomethylethylamine	1.30866	1.29196	1.30579	1.43515	1.30380	1.45857						
	1.41072						AVRG		1.35923		5.31332	
$ 1 2-Fluorophenol	1.34097	1.36474	1.37344	1.45728	1.43245	1.53225						
	1.49284						AVRG		1.42771		4.99388	
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
$ 2 Phenol-d5	1.74449	1.70146	1.73037	1.88081	1.85833	2.05451						
	1.96238						AVRG		1.84748		7.08965	
$ 5 2-Chlorophenol-d4	1.48208	1.31763	1.34482	1.41250	1.38956	1.44002						
	1.43020						AVRG		1.40240		4.04486	
$ 10 1,2-Dichlorobenzene-d4	0.98938	1.00149	0.99695	1.02158	0.98109	1.04380						
	1.02722						AVRG		1.00879		2.24119	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	0.42885	0.41732	0.41764	0.42993	0.40061	0.44115					
	0.41922						AVRG		0.42210		3.03179
$ 36 2-Fluorobiphenyl	1.56575	1.33869	1.34323	1.37457	1.33669	1.41362					
	1.40005						AVRG		1.39609		5.78874
$ 55 2,4,6-Tribromophenol	0.19995	0.17003	0.19549	0.21364	0.21873	0.24192					
	0.24098						AVRG		0.21154		12.14622
$ 66 Terphenyl-d14	0.89183	0.70027	0.75407	0.75999	0.76286	0.79419					
	0.78729						AVRG		0.77864		7.50175
$ 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

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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 : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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 : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Calibration File Names:
Level 1: /chem1/nt10.i/20130429.b/ic0429c.d
Level 2: /chem1/nt10.i/20130429.b/ic0429i.d
Level 3: /chem1/nt10.i/20130429.b/ic0429d.d
Level 4: /chem1/nt10.i/20130429.b/ic0429g.d
Level 5: /chem1/nt10.i/20130429.b/ic0429a.d
Level 6: /chem1/nt10.i/20130429.b/ic0429e.d
Level 7: /chem1/nt10.i/20130429.b/ic0429b.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	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	0.26333	0.25576	0.30846	0.32296	0.35171	0.37615						
	0.38141						AVRG		0.32283		15.66985	
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 : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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)	1.32264	1.26754	1.24075	1.27398	1.12394	1.24670						
	1.18447						AVRG		1.23715		5.24731	
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						QUAD	0.000e+00	0.000e+00	0.000e+00	0.000e+00	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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											
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
181 3,4,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	0.70389	0.59747	0.62527	0.63990	0.63292	0.66830						
	0.67337						AVRG		0.64873		5.46363	
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 : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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										
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
161 1,2,3-Trichloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
162 1,2,3,4-Tetrachloronapthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	2.07745	2.01663	1.99013	2.15135	2.00628	2.20020					
	2.03355						AVRG		2.06794		3.85914
4 Bis(2-Chloroethyl)ether	1.56929	1.53896	1.46972	1.55326	1.37664	1.50058					
	1.40120						AVRG		1.48709		5.05358

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	1.55026	1.46704	1.47133	1.54154	1.50983	1.81549					
	1.80786						AVRG		1.59477		9.49947
7 1,3-Dichlorobenzene	1.69336	1.54473	1.58950	1.59956	1.55227	1.62846					
	1.59424						AVRG		1.60030		3.12454
9 1,4-Dichlorobenzene	1.71397	1.52647	1.51341	1.62532	1.53264	1.58116					
	1.54877						AVRG		1.57739		4.51793
11 Benzyl alcohol	0.85064	0.73516	0.83060	0.90072	0.88286	0.96932					
	0.91989						AVRG		0.86989		8.59920
12 1,2-Dichlorobenzene	1.62518	1.49204	1.50624	1.51578	1.45554	1.49728					
	1.47965						AVRG		1.51024		3.59480
13 2-Methylphenol	1.49001	1.40570	1.44998	1.54407	1.45837	1.56041					
	1.50801						AVRG		1.48808		3.66935
14 2,2'-oxybis(1-Chloropropane)	0.42611	0.44017	0.46397	0.48471	0.45795	0.47727					
	0.46264						AVRG		0.45898		4.42060

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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										
15 4-Methylphenol	1.43729	1.35493	1.48973	1.59318	1.52748	1.67713					
	1.54128						AVRG		1.51729		6.88641
16 N-Nitroso-di-n-propylamine	0.95251	0.89419	0.87815	0.98621	0.88743	0.97695					
	0.92792						AVRG		0.92905		4.74330
17 Hexachloroethane	0.68931	0.65881	0.65446	0.68375	0.62023	0.66920					
	0.64417						AVRG		0.65999		3.59193
19 Nitrobenzene	0.39510	0.39280	0.38552	0.39982	0.36572	0.40371					
	0.38522						AVRG		0.38970		3.22892
20 Isophorone	0.71195	0.66432	0.67279	0.71065	0.68101	0.86242					
	0.82790						AVRG		0.73300		10.82033
21 2-Nitrophenol	0.20754	0.18635	0.20138	0.22080	0.22866	0.24164					
	0.24290						AVRG		0.21847		9.68506
22 2,4-Dimethylphenol	0.41192	0.37230	0.39344	0.41516	0.40245	0.42253					
	0.39424						AVRG		0.40172		4.20008

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	0.44346	0.43452	0.43284	0.44204	0.41435	0.44041					
	0.41838						AVRG		0.43229		2.68164
24 Benzoic acid	+++++	12620	41278	106496	282242	533852					
	1033515						QUAD	0.000e+00	2.88330	-0.03348	0.99937
25 2,4-Dichlorophenol	0.31803	0.28833	0.38510	0.39343	0.39479	0.41768					
	0.39114						AVRG		0.36979		12.81889
26 1,2,4-Trichlorobenzene	0.41240	0.34976	0.36404	0.35417	0.34495	0.35336					
	0.35130						AVRG		0.36143		6.42232
28 Naphthalene	1.20528	1.00604	1.04043	1.06395	1.02045	1.07273					
	1.04570						AVRG		1.06494		6.20233
29 4-Chloroaniline	0.42433	0.36449	0.40631	0.42348	0.42526	0.48932					
	0.38118						AVRG		0.41634		9.58081
30 Hexachlorobutadiene	0.23345	0.19983	0.21390	0.20892	0.20729	0.22093					
	0.21857						AVRG		0.21470		5.08490

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	0.26343	0.27218	0.31153	0.34377	0.34343	0.37735					
	0.36548						AVRG		0.32531		13.65102
32 2-Methylnaphthalene	0.74054	0.67388	0.68178	0.70154	0.68736	0.73921					
	0.72726						AVRG		0.70737		3.96516
33 Hexachlorocyclopentadiene	0.44835	0.39323	0.41506	0.42533	0.44262	0.46660					
	0.48996						AVRG		0.44016		7.36429
34 2,4,6-Trichlorophenol	0.38934	0.36825	0.40727	0.42611	0.43278	0.45335					
	0.46998						AVRG		0.42101		8.44390
35 2,4,5-Trichlorophenol	0.35538	0.37249	0.41863	0.44267	0.45433	0.49279					
	0.50176						AVRG		0.43401		12.87553
37 2-Chloronaphthalene	1.25763	1.04782	1.06917	1.09796	1.07105	1.12488					
	1.11166						AVRG		1.11145		6.27651
38 2-Nitroaniline	0.20469	0.22227	0.26060	0.28971	0.28861	0.31072					
	0.30122						AVRG		0.26826		15.20234

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	1.36489	1.13508	1.17192	1.19054	1.15985	1.20823					
	1.17494						AVRG		1.20078		6.32260
40 Acenaphthylene	2.08676	1.80273	1.83141	1.81650	1.77233	2.12941					
	1.75642						AVRG		1.88508		8.21819
41 2,6-Dinitrotoluene	0.26069	0.25725	0.27537	0.29601	0.28450	0.30512					
	0.29050						AVRG		0.28135		6.35382
43 3-Nitroaniline	0.20751	0.21366	0.25373	0.25128	0.24013	0.25105					
	0.20850						AVRG		0.23227		9.23578
44 Acenaphthene	1.30679	1.09641	1.08357	1.13351	1.06627	1.13513					
	1.13044						AVRG		1.13602		7.04098
45 2,4-Dinitrophenol	+++++	4345	14717	42855	127651	250805					
	497418						QUAD	0.000e+00	4.08739	-0.09870	0.99880
46 Dibenzofuran	1.67283	1.49829	1.51991	1.55200	1.47200	1.58360					
	1.57471						AVRG		1.55334		4.27158

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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
47 4-Nitrophenol	+++++	1862	5820	16653	43938	85112	161016	QUAD	0.000e+00	5.79130	-0.18557	0.99905
48 2,4-Dinitrotoluene	0.30512	0.31097	0.36079	0.38342	0.37756	0.40613	0.39616	AVRG		0.36288		11.05203
49 Fluorene	1.46413	1.26025	1.30008	1.33638	1.27146	1.34389	1.30199	AVRG		1.32546		5.15880
50 Diethylphthalate	1.35396	1.14110	1.15749	1.20605	1.17048	1.22908	1.18817	AVRG		1.20662		5.91539
51 4-Chlorophenyl-phenylether	0.73753	0.60252	0.61409	0.61582	0.59152	0.72584	0.67359	AVRG		0.65156		9.31141
52 4-Nitroaniline	0.21006	0.19776	0.27062	0.24001	0.24443	0.27164	0.25433	AVRG		0.24126		11.76360
53 4,6-Dinitro-2-methylphenol	3933	9847	27317	65565	169735	317489	606483	QUAD	0.000e+00	5.26585	-0.06370	0.99977

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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										
54 N-Nitrosodiphenylamine	0.49563	0.42947	0.47333	0.47261	0.45791	0.46123					
	0.45114						AVRG		0.46304		4.45876
56 4-Bromophenyl-phenylether	0.22767	0.21687	0.23028	0.22247	0.22312	0.22955					
	0.23436						AVRG		0.22633		2.59516
57 Hexachlorobenzene	0.32278	0.25772	0.26649	0.25845	0.25551	0.26286					
	0.26660						AVRG		0.27006		8.75648
58 Pentachlorophenol	0.15515	0.14017	0.17294	0.19921	0.21130	0.22141					
	0.22676						AVRG		0.18956		17.84287
60 Phenanthrene	1.22947	1.01265	1.08610	1.06561	1.04600	1.09893					
	1.09863						AVRG		1.09106		6.27534
61 Anthracene	1.19624	1.06794	1.09848	1.10290	1.07915	1.13739					
	1.14221						AVRG		1.11776		3.95191
62 Carbazole	+++++	0.79964	0.83444	0.64299	0.47569	0.60549					
	0.71548						AVRG		0.67896		19.54874

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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										
63 Di-n-butylphthalate	1.23468	1.00016	1.09465	1.11547	1.14103	1.23687					
	1.25417						AVRG		1.15386		8.08770
64 Fluoranthene	1.35769	1.17978	1.24657	1.24812	1.27294	1.33427					
	1.34952						AVRG		1.28413		5.11850
65 Pyrene	1.37184	1.13560	1.19244	1.19696	1.22185	1.25931					
	1.28506						AVRG		1.23758		6.17908
67 Butylbenzylphthalate	0.42623	0.34242	0.41245	0.41654	0.43945	0.45663					
	0.46466						AVRG		0.42263		9.55905
68 Benzo(a)anthracene	1.25572	1.03482	1.09368	1.07381	1.09465	1.13986					
	1.14667						AVRG		1.11989		6.34024
70 3,3'-Dichlorobenzidine	0.51204	0.36539	0.40605	0.35790	0.38490	0.47001					
	0.48944						AVRG		0.42653		14.75318
71 Chrysene	1.17786	0.95330	0.94998	0.97296	0.97716	1.02164					
	1.04126						AVRG		1.01345		7.90157

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	1.04908	0.94427	0.87137	0.90574	0.87139	0.90498					
	0.89449						AVRG		0.92019		6.73684
73 Di-n-octylphthalate	1.05463	0.94427	0.87137	0.90574	0.87139	0.90498					
	0.89449						AVRG		0.92098		6.94061
74 Benzo(b)fluoranthene	1.35044	1.05465	1.09386	1.12584	1.21507	1.24210					
	1.23295						AVRG		1.18784		8.59752
75 Benzo(k)fluoranthene	1.42924	1.14868	1.24463	1.22609	1.13947	1.22473					
	1.34515						AVRG		1.25114		8.31220
187 Total Benzofluoranthenes	1.30881	1.05407	1.12671	1.11857	1.11816	1.16984					
	1.17534						AVRG		1.15307		6.89595
76 Benzo(a)pyrene	1.15104	0.87256	0.97331	0.97345	1.00238	1.05501					
	1.07592						AVRG		1.01481		8.78911
78 Indeno(1,2,3-cd)pyrene	1.18245	1.01361	1.10322	1.12112	1.20413	1.27168					
	1.28789						AVRG		1.16916		8.32633

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	0.92380	0.73303	0.85483	0.88584	0.92025	0.96990					
	0.99039						AVRG		0.89686		9.55761
80 Benzo(g,h,i)perylene	1.04564	0.90225	0.98911	0.99122	1.00081	1.07106					
	1.08082						AVRG		1.01156		6.05123
90 N-Nitrosodimethylamine	0.88097	0.87544	0.88313	0.96297	0.85634	0.99623					
	0.92370						AVRG		0.91125		5.67695
91 Aniline	4.00230	3.88308	3.89376	4.21542	3.95352	4.21183					
	3.92480						AVRG		4.01210		3.56908
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
93 Benzidine	+++++	8518	23877	29714	60043	110746					
	257371						QUAD	0.000e+00	8.17939	-1.16399	0.99615
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	0.52664	0.41489	0.44890	0.44972	0.46406	0.47911						
	0.49534						AVRG		0.46838		7.71935	
99 Perylene	1.36017	1.09787	1.11603	1.09868	1.10144	1.16094						
	1.18529						AVRG		1.16006		8.15448	
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	0.72677	0.80583	0.78852	0.86813	0.78009	0.84643						
	0.79117						AVRG		0.80099		5.76462	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	0.60097	0.54247	0.59080	0.60713	0.60866	0.63218						
	0.61259						AVRG		0.59926		4.67591	
189 N-Nitrosomethylethylamine	1.30866	1.29196	1.30579	1.43515	1.30380	1.45857						
	1.41072						AVRG		1.35923		5.31332	
$ 1 2-Fluorophenol	1.34097	1.36474	1.37344	1.45728	1.43245	1.53225						
	1.49284						AVRG		1.42771		4.99388	
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
$ 2 Phenol-d5	1.74449	1.70146	1.73037	1.88081	1.85833	2.05451						
	1.96238						AVRG		1.84748		7.08965	
$ 5 2-Chlorophenol-d4	1.48208	1.31763	1.34482	1.41250	1.38956	1.44002						
	1.43020						AVRG		1.40240		4.04486	
$ 10 1,2-Dichlorobenzene-d4	0.98938	1.00149	0.99695	1.02158	0.98109	1.04380						
	1.02722						AVRG		1.00879		2.24119	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 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	0.42885	0.41732	0.41764	0.42993	0.40061	0.44115					
	0.41922						AVRG		0.42210		3.03179
$ 36 2-Fluorobiphenyl	1.56575	1.33869	1.34323	1.37457	1.33669	1.41362					
	1.40005						AVRG		1.39609		5.78874
$ 55 2,4,6-Tribromophenol	0.19995	0.17003	0.19549	0.21364	0.21873	0.24192					
	0.24098						AVRG		0.21154		12.14622
$ 66 Terphenyl-d14	0.89183	0.70027	0.75407	0.75999	0.76286	0.79419					
	0.78729						AVRG		0.77864		7.50175
$ 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

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/ABN.m
Cal Date : 30-Apr-2013 11:53 yev

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/ic0429a.d
Lab Smp Id: IC0429A
Inj Date : 29-APR-2013 16:53
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429A
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 16:53 Cal File: ic0429a.d
Als bottle: 2 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.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	6.629	6.629	(0.738)	81023	5.00000	5.017
$	2 Phenol-d5	99	8.344	8.337	(0.929)	105112	5.00000	5.029
	3 Phenol	94	8.367	8.360	(0.931)	113480	5.00000	4.851
$	5 2-Chlorophenol-d4	132	8.599	8.599	(0.957)	78597	5.00000	4.954
	4 Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.948)	77866	5.00000	4.629
	6 2-Chlorophenol	128	8.630	8.622	(0.960)	85400	5.00000	4.734
	7 1,3-Dichlorobenzene	146	8.917	8.909	(0.992)	87800	5.00000	4.850
*	8 1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	45250	4.00000	
	9 1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	86690	5.00000	4.858
$	10 1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.042)	55493	5.00000	4.863
	12 1,2-Dichlorobenzene	146	9.398	9.390	(1.046)	82329	5.00000	4.819
	11 Benzyl alcohol	108	9.289	9.289	(1.034)	49937	5.00000	5.075
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	25903	5.00000	4.989
	13 2-Methylphenol	108	9.553	9.553	(1.063)	82489	5.00000	4.900
	17 Hexachloroethane	117	10.027	10.027	(1.116)	35082	5.00000	4.699
	16 N-Nitroso-di-n-propylamine	70	9.902	9.895	(1.102)	50195	5.00000	4.776
	15 4-Methylphenol	108	9.848	9.840	(1.096)	86398	5.00000	5.034
$	18 Nitrobenzene-d5	82	10.159	10.159	(0.873)	83504	5.00000	4.745
	19 Nitrobenzene	77	10.197	10.190	(0.876)	76232	5.00000	4.692
	20 Isophorone	82	10.686	10.686	(0.918)	141952	5.00000	4.645
	21 2-Nitrophenol	139	10.872	10.872	(0.934)	47662	5.00000	5.233
	22 2,4-Dimethylphenol	107	10.964	10.964	(0.942)	167774	10.0000	10.02
	23 Bis(2-Chloroethoxy)methane	93	11.180	11.172	(0.960)	86369	5.00000	4.793
	24 Benzoic acid	105	11.226	11.080	(0.964)	282242	20.0000	19.18
	25 2,4-Dichlorophenol	162	11.365	11.365	(0.976)	164580	10.0000	10.68
	26 1,2,4-Trichlorobenzene	180	11.565	11.558	(0.993)	71903	5.00000	4.772
*	27 Naphthalene-d8	136	11.643	11.643	(1.000)	166754	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	11.689	11.681	(1.004)	212706	5.00000	4.791
	29 4-Chloroaniline	127	11.859	11.843	(1.019)	177286	10.0000	10.21
	30 Hexachlorobutadiene	225	12.098	12.099	(1.039)	43209	5.00000	4.828
	31 4-Chloro-3-methylphenol	107	12.919	12.911	(1.110)	143169	10.0000	10.56
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	143274	5.00000	4.859
	33 Hexachlorocyclopentadiene	237	13.716	13.708	(0.882)	118300	10.0000	10.06
	34 2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	115672	10.0000	10.28
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	121431	10.0000	10.47
$	36 2-Fluorobiphenyl	172	14.064	14.057	(0.905)	178632	5.00000	4.787
	37 2-Chloronaphthalene	162	14.265	14.258	(0.918)	143132	5.00000	4.818
	38 2-Nitroaniline	65	14.559	14.552	(0.937)	77138	10.0000	10.76
	39 Dimethylphthalate	163	15.055	15.047	(0.969)	154999	5.00000	4.830
	40 Acenaphthylene	152	15.202	15.194	(0.978)	236850	5.00000	4.701
	41 2,6-Dinitrotoluene	165	15.194	15.179	(0.978)	76040	10.0000	10.11
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	106910	4.00000	
	43 3-Nitroaniline	138	15.488	15.473	(0.997)	64182	10.0000	10.34
	44 Acenaphthene	153	15.612	15.604	(1.004)	142494	5.00000	4.693
	45 2,4-Dinitrophenol	184	15.712	15.705	(1.011)	127651	20.0000	18.96
	46 Dibenzofuran	168	15.967	15.960	(1.027)	196715	5.00000	4.738
	47 4-Nitrophenol	109	15.867	15.867	(1.021)	43938	10.0000	9.395
	48 2,4-Dinitrotoluene	165	16.060	16.052	(1.033)	100913	10.0000	10.40
	50 Diethylphthalate	149	16.640	16.632	(1.071)	156420	5.00000	4.850
	49 Fluorene	166	16.740	16.733	(1.077)	169915	5.00000	4.796
	51 4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	79049	5.00000	4.539
	52 4-Nitroaniline	138	16.856	16.841	(1.085)	65331	10.0000	10.13
	53 4,6-Dinitro-2-methylphenol	198	16.964	16.949	(0.901)	169735	20.0000	19.66
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	102905	5.00000	4.945
$	55 2,4,6-Tribromophenol	330	17.319	17.311	(1.114)	29230	5.00000	5.170
	56 4-Bromophenyl-phenylether	248	17.836	17.836	(0.948)	50141	5.00000	4.929
	57 Hexachlorobenzene	284	18.160	18.153	(0.965)	57420	5.00000	4.731
	58 Pentachlorophenol	266	18.555	18.548	(0.986)	94970	10.0000	11.15
*	59 Phenanthrene-d10	188	18.818	18.811	(1.000)	179783	4.00000	
	60 Phenanthrene	178	18.865	18.857	(1.002)	235067	5.00000	4.794
	61 Anthracene	178	18.965	18.958	(1.008)	242517	5.00000	4.827
	62 Carbazole	167	19.313	19.314	(1.026)	106901	5.00000	3.503
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	256423	5.00000	4.944
	64 Fluoranthene	202	21.286	21.279	(1.131)	286067	5.00000	4.956
	65 Pyrene	202	21.704	21.697	(0.908)	294528	5.00000	4.936
$	66 Terphenyl-d14	244	22.021	22.022	(0.922)	183888	5.00000	4.899
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	105931	5.00000	5.199
	68 Benzo(a)anthracene	228	23.872	23.864	(0.999)	263867	5.00000	4.887
*	69 Chrysene-d12	240	23.895	23.895	(1.000)	192841	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.849	23.841	(0.998)	185563	10.0000	9.024
	71 Chrysene	228	23.942	23.934	(1.002)	235545	5.00000	4.821
	72 bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	144972	5.00000	4.750(M)
*	134 Di-n-octylphthalate-d4	153	24.994	24.995	(1.000)	229567	4.00000	
	73 Di-n-octylphthalate	149	25.010	25.002	(1.001)	250054	5.00000	4.731

	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	25.668	25.660	(0.974)	279937	5.00000	5.115
75	Benzo(k)fluoranthene	252	25.707	25.699	(0.976)	262519	5.00000	4.554
76	Benzo(a)pyrene	252	26.249	26.241	(0.996)	230935	5.00000	4.939
* 77	Perylene-d12	264	26.349	26.350	(1.000)	184310	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.690	28.690	(1.089)	277417	5.00000	5.150
79	Dibenzo(a,h)anthracene	278	28.713	28.698	(1.090)	212015	5.00000	5.130
80	Benzo(g,h,i)perylene	276	29.373	29.350	(1.115)	230573	5.00000	4.947
90	N-Nitrosodimethylamine	74	4.366	4.366	(0.486)	96874	10.0000	9.397
91	Aniline	93	8.414	8.406	(0.936)	223621	5.00000	4.927
93	Benzidine	184	21.542	21.542	(0.902)	60043	10.0000	9.736
103	Pyridine	79	4.382	4.397	(0.488)	88248	10.0000	9.739
105	1-methylnaphthalene	142	13.437	13.430	(1.154)	131928	5.00000	4.878
111	Azobenzene (1,2-DP-Hydrazine)	77	17.103	17.095	(1.100)	150200	5.00000	4.542
187	Total Benzofluoranthenes	252	25.707	25.699	(0.976)	515221	10.0000	9.694
99	Perylene	252	26.396	26.388	(1.002)	253757	5.00000	4.747
98	Retene	219	22.316	22.316	(0.934)	111862	5.00000	4.954
120	2,3,4,6-Tetrachlorophenol	232	16.346	16.338	(1.052)	47002	5.00000	5.447
188	2,6-Dichlorophenol	162	11.874	11.867	(1.020)	253741	10.0000	10.16
189	N-Nitrosomethylethylamine	88	5.818	5.818	(0.647)	147492	10.0000	9.592

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: ic0429a.d
Lab Smp Id: IC0429A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

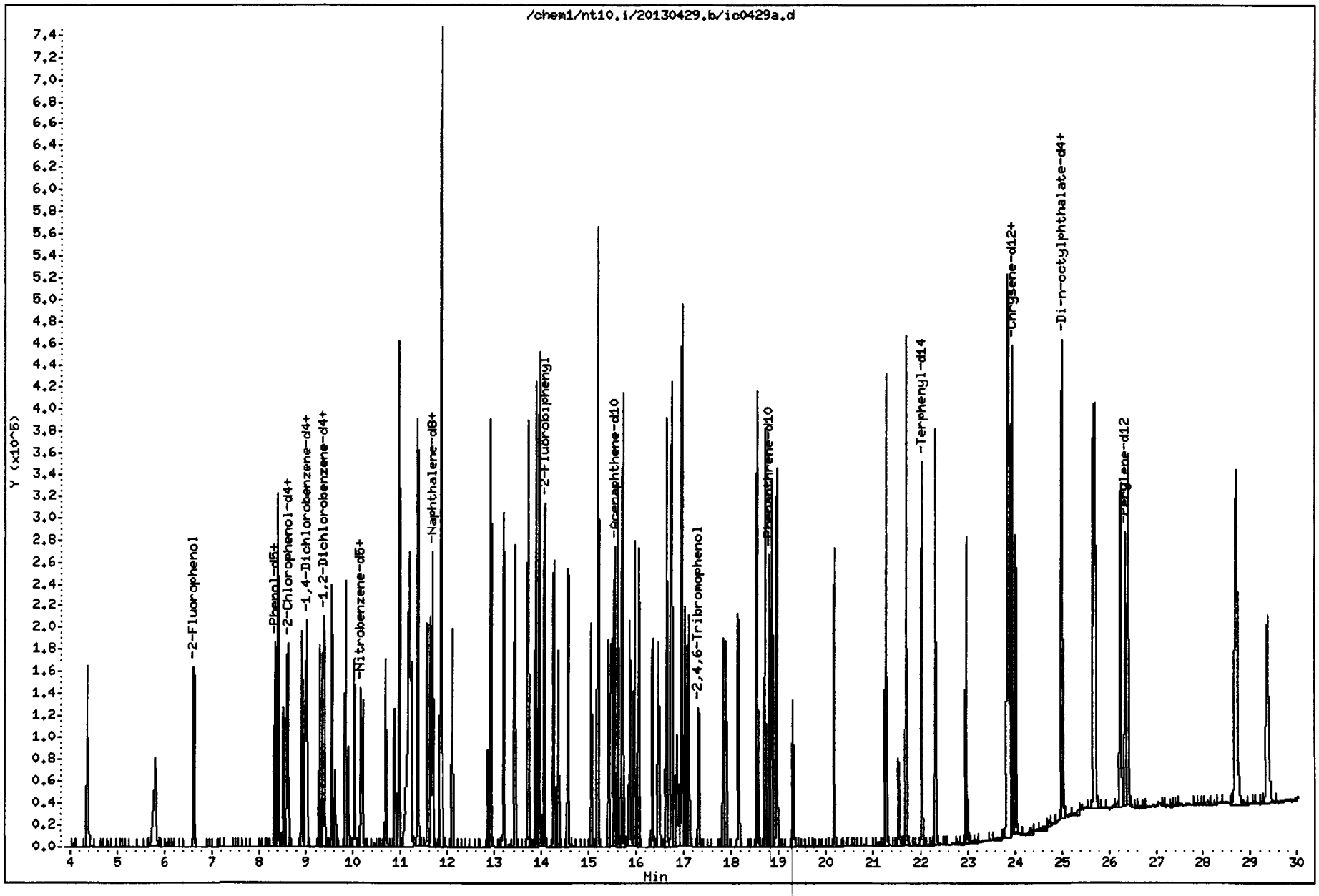
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	45250	0.00
27 Naphthalene-d8	166754	83377	333508	166754	0.00
42 Acenaphthene-d10	106910	53455	213820	106910	0.00
59 Phenanthrene-d10	179783	89892	359566	179783	0.00
69 Chrysene-d12	192841	96420	385682	192841	0.00
134 Di-n-octylphthala	229567	114784	459134	229567	0.00
77 Perylene-d12	184310	92155	368620	184310	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	24.99	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	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.

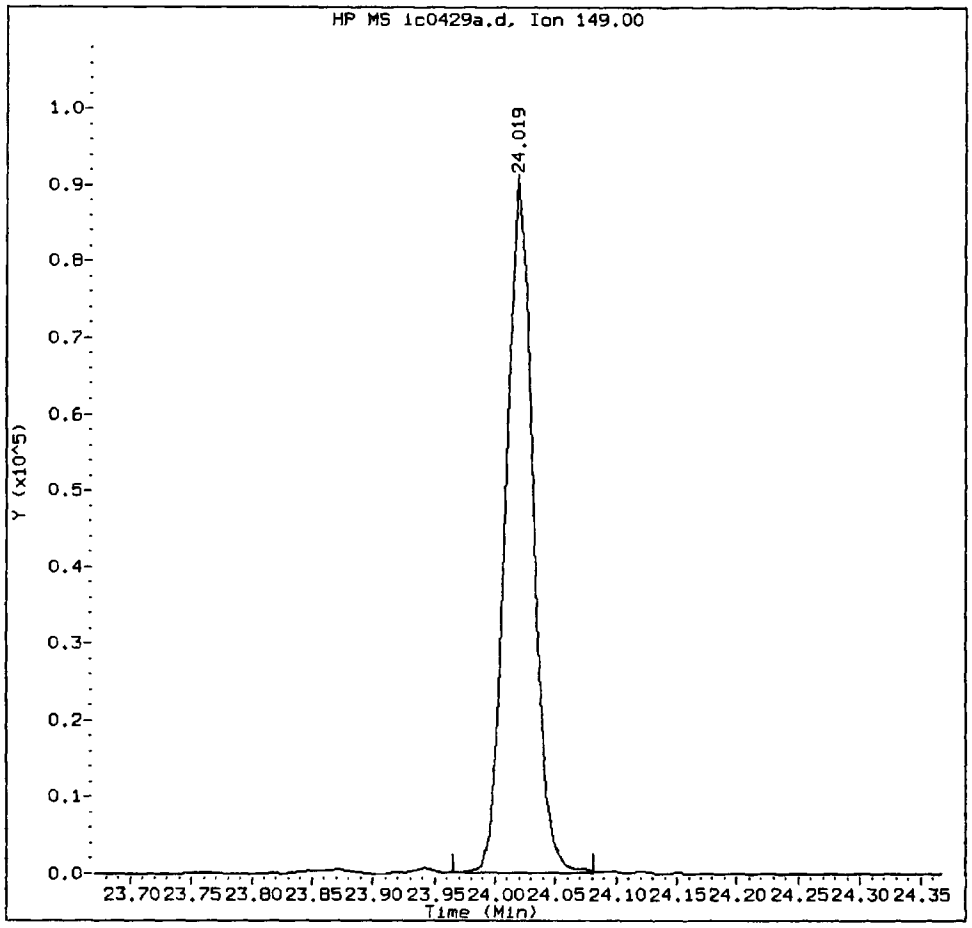
Data File: /chem1/nt10.i/20130429.b/ic0429a.d
Date : 29-APR-2013 16:53
Client ID:
Sample Info: IC0429A

Instrument: nt10.i
Operator: VTS/YZ
Column phase: ZB-5msi
Column diameter: 0.25



IC0429A, /chem1/nt10.i/20130429.b/ic0429a.d

bis(2-Ethylhexyl)phthalate Amount: 4.75 Area: 144972



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VR Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429a.d

Lab ID: IC0429A, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 5/3/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429b.d
Lab Smp Id: IC0429B
Inj Date : 29-APR-2013 17:30
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429B
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 17:30 Cal File: ic0429b.d
Als bottle: 3 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.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	6.636	6.629	(0.738)	273907	20.0000	20.91
$	2 Phenol-d5	99	8.352	8.337	(0.929)	360057	20.0000	21.24
	3 Phenol	94	8.375	8.360	(0.932)	373116	20.0000	19.67
$	5 2-Chlorophenol-d4	132	8.607	8.599	(0.958)	262414	20.0000	20.40
	4 Bis(2-Chloroethyl)ether	93	8.530	8.522	(0.949)	257095	20.0000	18.85
	6 2-Chlorophenol	128	8.638	8.622	(0.961)	331706	20.0000	22.67
	7 1,3-Dichlorobenzene	146	8.917	8.909	(0.992)	292512	20.0000	19.92
*	8 1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	36696	4.00000	
	9 1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	284169	20.0000	19.64
$	10 1,2-Dichlorobenzene-d4	152	9.375	9.367	(1.043)	188475	20.0000	20.37
	12 1,2-Dichlorobenzene	146	9.398	9.390	(1.046)	271486	20.0000	19.59
	11 Benzyl alcohol	108	9.305	9.289	(1.035)	168782	20.0000	21.15
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	84885	20.0000	20.16
	13 2-Methylphenol	108	9.561	9.553	(1.064)	276689	20.0000	20.27
	17 Hexachloroethane	117	10.027	10.027	(1.116)	118193	20.0000	19.52
	16 N-Nitroso-di-n-propylamine	70	9.910	9.895	(1.103)	170255	20.0000	19.98
	15 4-Methylphenol	108	9.856	9.840	(1.097)	282794	20.0000	20.32
$	18 Nitrobenzene-d5	82	10.166	10.159	(0.873)	285663	20.0000	19.86
	19 Nitrobenzene	77	10.205	10.190	(0.876)	262495	20.0000	19.77
	20 Isophorone	82	10.709	10.686	(0.919)	564145	20.0000	22.59
	21 2-Nitrophenol	139	10.879	10.872	(0.934)	165519	20.0000	22.24
	22 2,4-Dimethylphenol	107	10.980	10.964	(0.942)	537286	40.0000	39.26
	23 Bis(2-Chloroethoxy)methane	93	11.188	11.172	(0.960)	285091	20.0000	19.36
	24 Benzoic acid	105	11.388	11.080	(0.977)	1043882	80.0000	79.78(M)
	25 2,4-Dichlorophenol	162	11.380	11.365	(0.977)	533058	40.0000	42.31
	26 1,2,4-Trichlorobenzene	180	11.565	11.558	(0.993)	239383	20.0000	19.44
*	27 Naphthalene-d8	136	11.650	11.643	(1.000)	136283	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	11.697	11.681	(1.004)	712555	20.0000	19.64
29	4-Chloroaniline	127	11.874	11.843	(1.019)	519478	40.0000	36.62
30	Hexachlorobutadiene	225	12.106	12.099	(1.039)	148934	20.0000	20.36
31	4-Chloro-3-methylphenol	107	12.927	12.911	(1.110)	498092	40.0000	44.94
32	2-Methylnaphthalene	142	13.205	13.197	(1.133)	495565	20.0000	20.56
33	Hexachlorocyclopentadiene	237	13.716	13.708	(0.882)	431807	40.0000	44.53
34	2,4,6-Trichlorophenol	196	13.894	13.879	(0.894)	414194	40.0000	44.65
35	2,4,5-Trichlorophenol	196	13.964	13.948	(0.898)	442203	40.0000	46.24
$ 36	2-Fluorobiphenyl	172	14.064	14.057	(0.904)	616937	20.0000	20.06
37	2-Chloronaphthalene	162	14.273	14.258	(0.918)	489858	20.0000	20.00
38	2-Nitroaniline	65	14.575	14.552	(0.937)	265470	40.0000	44.92
39	Dimethylphthalate	163	15.070	15.047	(0.969)	517745	20.0000	19.57
40	Acenaphthylene	152	15.202	15.194	(0.978)	773977	20.0000	18.64
41	2,6-Dinitrotoluene	165	15.202	15.179	(0.978)	256022	40.0000	41.30
* 42	Acenaphthene-d10	164	15.550	15.535	(1.000)	88131	4.00000	
43	3-Nitroaniline	138	15.511	15.473	(0.998)	183750	40.0000	35.91
44	Acenaphthene	153	15.619	15.604	(1.004)	498134	20.0000	19.90
45	2,4-Dinitrophenol	184	15.743	15.705	(1.012)	497418	80.0000	79.70
46	Dibenzofuran	168	15.983	15.960	(1.028)	693905	20.0000	20.28
47	4-Nitrophenol	109	15.890	15.867	(1.022)	161016	40.0000	39.85
48	2,4-Dinitrotoluene	165	16.075	16.052	(1.034)	349138	40.0000	43.67
50	Diethylphthalate	149	16.663	16.632	(1.072)	523573	20.0000	19.69
49	Fluorene	166	16.748	16.733	(1.077)	573728	20.0000	19.65
51	4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	296820	20.0000	20.68
52	4-Nitroaniline	138	16.895	16.841	(1.086)	224140	40.0000	42.17
53	4,6-Dinitro-2-methylphenol	198	16.995	16.949	(0.903)	606483	80.0000	79.85
54	N-Nitrosodiphenylamine	169	17.041	17.026	(0.905)	343477	20.0000	19.49
$ 55	2,4,6-Tribromophenol	330	17.327	17.311	(1.114)	106190	20.0000	22.78
56	4-Bromophenyl-phenylether	248	17.843	17.836	(0.948)	178429	20.0000	20.71
57	Hexachlorobenzene	284	18.160	18.153	(0.965)	202975	20.0000	19.74
58	Pentachlorophenol	266	18.563	18.548	(0.986)	345299	40.0000	47.85
* 59	Phenanthrene-d10	188	18.826	18.811	(1.000)	152272	4.00000	
60	Phenanthrene	178	18.872	18.857	(1.002)	836454	20.0000	20.14
61	Anthracene	178	18.973	18.958	(1.008)	869630	20.0000	20.44
62	Carbazole	167	19.321	19.314	(1.026)	544741	20.0000	21.08
63	Di-n-butylphthalate	149	20.188	20.188	(1.072)	954876	20.0000	21.74
64	Fluoranthene	202	21.286	21.279	(1.131)	1027468	20.0000	21.02
65	Pyrene	202	21.704	21.697	(0.908)	1044384	20.0000	20.77
$ 66	Terphenyl-d14	244	22.029	22.022	(0.922)	639846	20.0000	20.22
67	Butylbenzylphthalate	149	22.974	22.974	(0.961)	377639	20.0000	21.99
68	Benzo(a)anthracene	228	23.880	23.864	(0.999)	931914	20.0000	20.48
* 69	Chrysene-d12	240	23.903	23.895	(1.000)	162543	4.00000	
70	3,3'-Dichlorobenzidine	252	23.857	23.841	(0.998)	795550	40.0000	45.90
71	Chrysene	228	23.949	23.934	(1.002)	846249	20.0000	20.55
72	bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	538822	20.0000	19.18(M)
* 134	Di-n-octylphthalate-d4	153	25.002	24.995	(1.000)	211292	4.00000	
73	Di-n-octylphthalate	149	25.010	25.002	(1.000)	944988	20.0000	19.42

	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	25.676	25.660	(0.974)	987454	20.0000	20.76
75	Benzo(k)fluoranthene	252	25.722	25.699	(0.976)	1077307	20.0000	21.50
76	Benzo(a)pyrene	252	26.257	26.241	(0.996)	861687	20.0000	21.20
* 77	Perylene-d12	264	26.357	26.350	(1.000)	160177	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.713	28.690	(1.089)	1031455	20.0000	22.03
79	Dibenzo(a,h)anthracene	278	28.737	28.698	(1.090)	793192	20.0000	22.09
80	Benzo(g,h,i)perylene	276	29.405	29.350	(1.116)	865612	20.0000	21.37
90	N-Nitrosodimethylamine	74	4.389	4.366	(0.488)	338961	40.0000	40.55
91	Aniline	93	8.421	8.406	(0.937)	720123	20.0000	19.56
93	Benzidine	184	21.549	21.542	(0.902)	257371	40.0000	40.13
103	Pyridine	79	4.389	4.397	(0.488)	290326	40.0000	39.51
105	1-methylnaphthalene	142	13.437	13.430	(1.153)	458844	20.0000	20.76
111	Azobenzene (1,2-DP-Hydrazine)	77	17.118	17.095	(1.101)	521942	20.0000	19.15
187	Total Benzofluoranthenes	252	25.722	25.699	(0.976)	1886688	40.0000	40.85
99	Perylene	252	26.411	26.388	(1.002)	949277	20.0000	20.43
98	Retene	219	22.316	22.316	(0.934)	402573	20.0000	21.15
120	2,3,4,6-Tetrachlorophenol	232	16.354	16.338	(1.052)	168064	20.0000	23.63
188	2,6-Dichlorophenol	162	11.890	11.867	(1.021)	834861	40.0000	40.89
189	N-Nitrosomethylethylamine	88	5.825	5.818	(0.648)	517676	40.0000	41.51

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: ic0429b.d
Lab Smp Id: IC0429B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	36696	-18.90
27 Naphthalene-d8	166754	83377	333508	136283	-18.27
42 Acenaphthene-d10	106910	53455	213820	88131	-17.57
59 Phenanthrene-d10	179783	89892	359566	152272	-15.30
69 Chrysene-d12	192841	96420	385682	162543	-15.71
134 Di-n-octylphthala	229567	114784	459134	211292	-7.96
77 Perylene-d12	184310	92155	368620	160177	-13.09

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.65	0.07
42 Acenaphthene-d10	15.54	15.04	16.04	15.55	0.05
59 Phenanthrene-d10	18.82	18.32	19.32	18.83	0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.03
134 Di-n-octylphthala	24.99	24.49	25.49	25.00	0.03
77 Perylene-d12	26.35	25.85	26.85	26.36	0.03

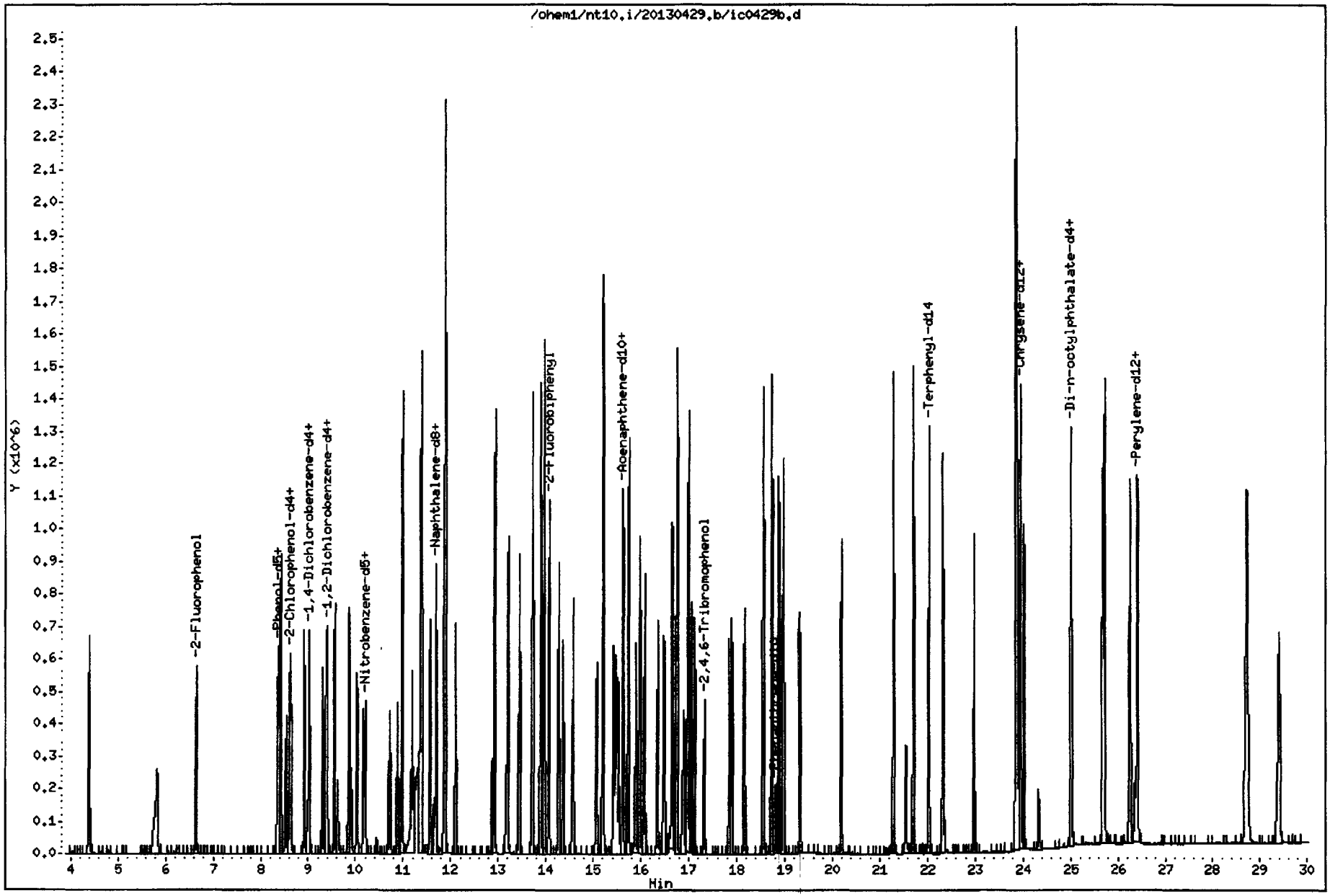
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429b.d
Date : 29-APR-2013 17:30
Client ID:
Sample Info: IC0429B

Instrument: nt10.i

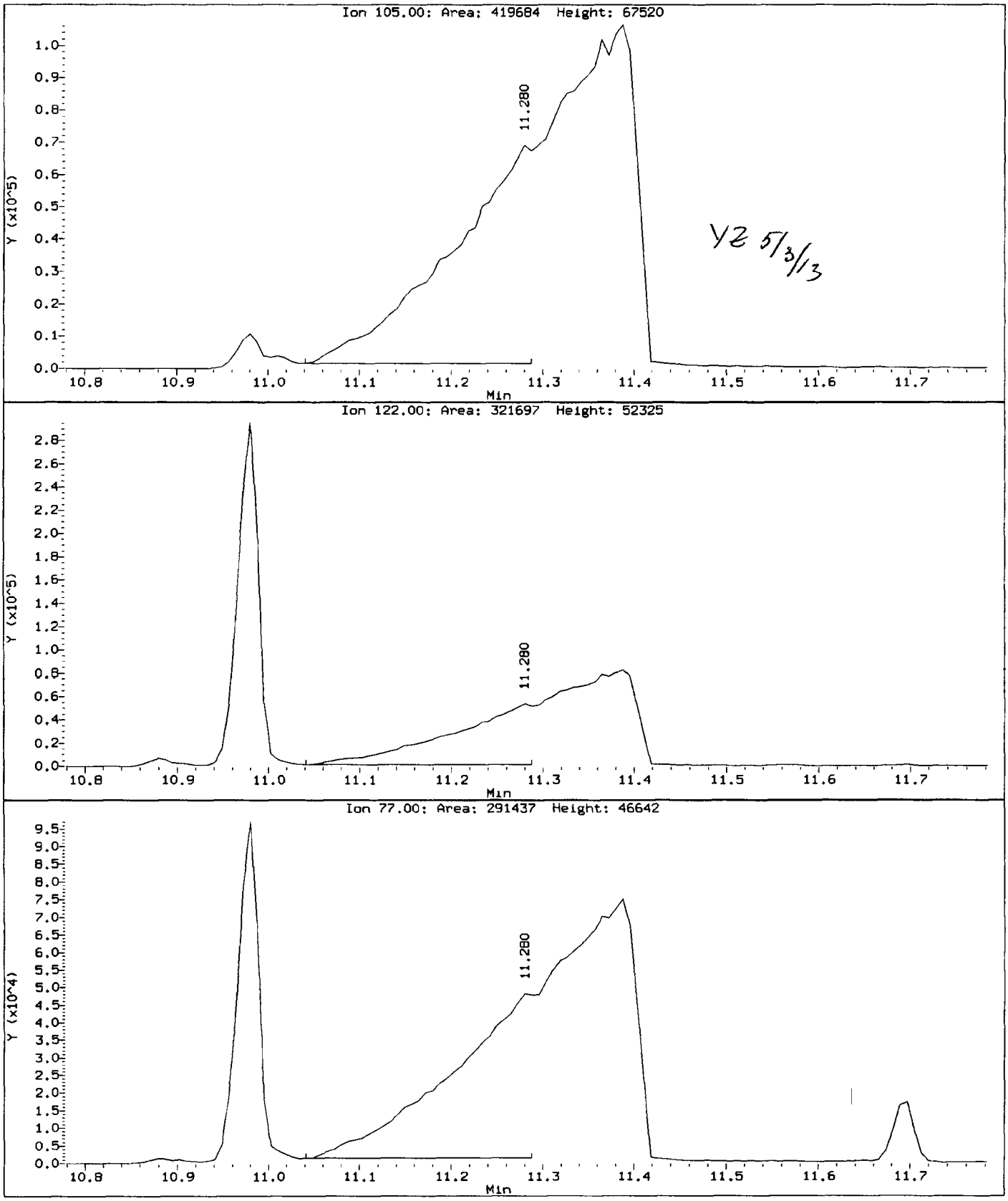
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



Data File: /chem1/nt10.i/20130429.b/1c0429b.d
Injection Date: 29-APR-2013 17:30
Instrument: nt10.i
Client Sample ID:

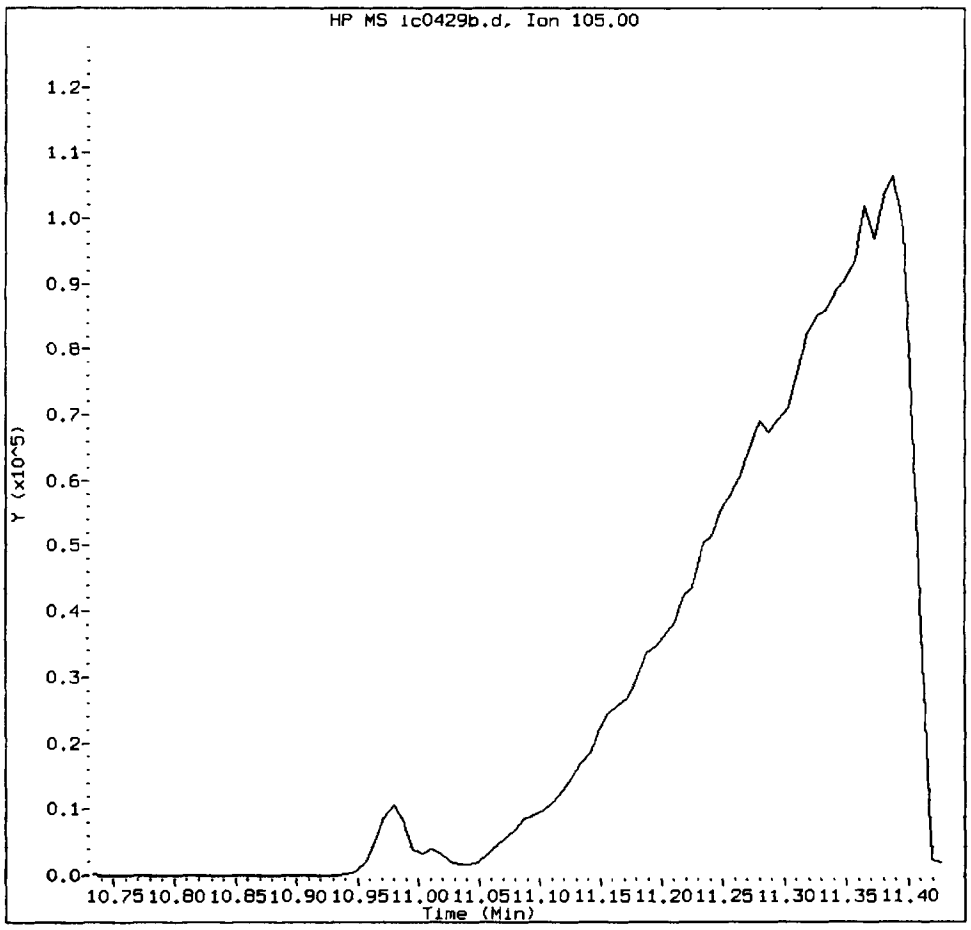
Compound: Benzoic acid
CAS Number: 65-85-0



YZ 5/3/13

IC0429B, /chem1/nt10.i/20130429.b/ic0429b.d

Benzoic acid Amount: 79.78 Area: 1043882



MANUAL INTEGRATION for Benzoic acid

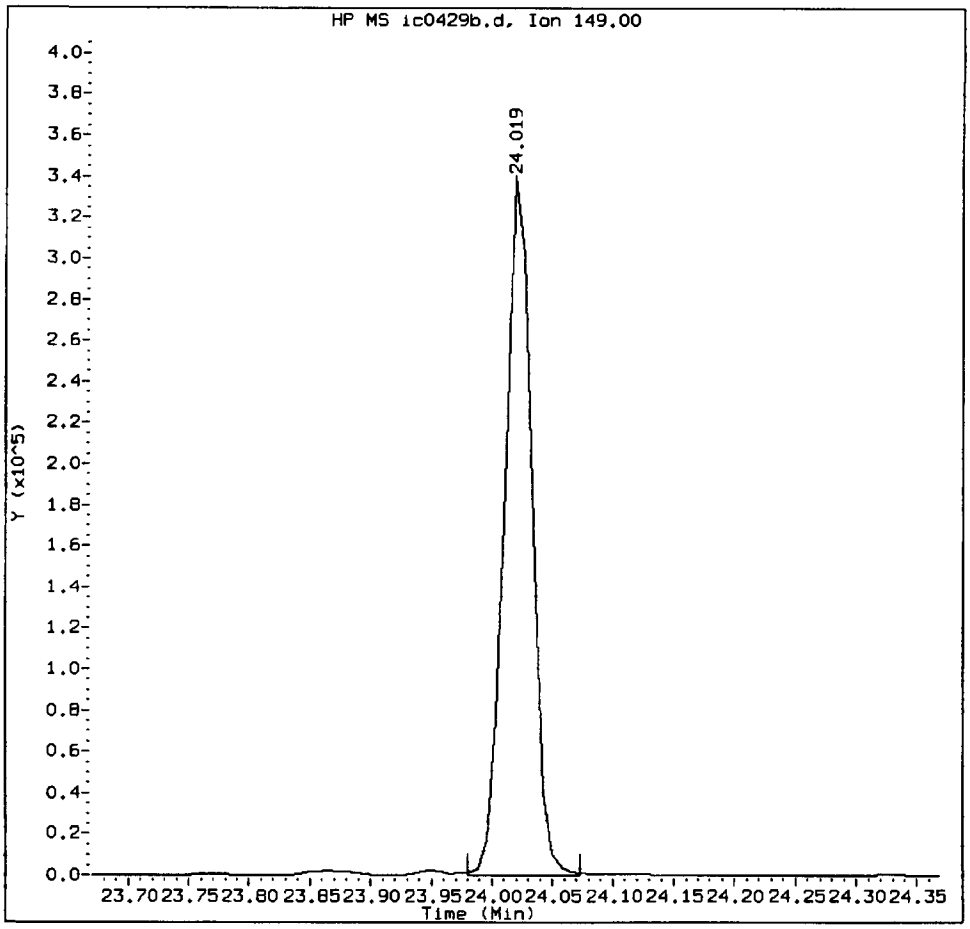
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/9/13

IC0429B, /chem1/nt10.i/20130429.b/ic0429b.d

bis(2-Ethylhexyl)phthalate Amount: 19.18 Area: 538822



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: _____ Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429b.d

Lab ID: IC0429B, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS
15.202	Acenaphthylene and 2,6-Dinitrotoluene

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429c.d
Lab Smp Id: IC0429C
Inj Date : 29-APR-2013 18:07
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429C
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 18:07 Cal File: ic0429c.d
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.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	6.636	6.629	(0.738)	3383	0.20000	0.1878
$ 2	Phenol-d5	99	8.336	8.337	(0.928)	4401	0.20000	0.1889
3	Phenol	94	8.360	8.360	(0.930)	5241	0.20000	0.2009
$ 5	2-Chlorophenol-d4	132	8.599	8.599	(0.957)	3739	0.20000	0.2114
4	Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.948)	3959	0.20000	0.2111
6	2-Chlorophenol	128	8.630	8.622	(0.960)	3911	0.20000	0.1944
7	1,3-Dichlorobenzene	146	8.917	8.909	(0.992)	4272	0.20000	0.2116
* 8	1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	50456	4.00000	
9	1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	4324	0.20000	0.2173
$ 10	1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.042)	2496	0.20000	0.1962
12	1,2-Dichlorobenzene	146	9.398	9.390	(1.046)	4100	0.20000	0.2152
11	Benzyl alcohol	108	9.289	9.289	(1.034)	2146	0.20000	0.1956
14	2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	1075	0.20000	0.1857
13	2-Methylphenol	108	9.553	9.553	(1.063)	3759	0.20000	0.2003
17	Hexachloroethane	117	10.027	10.027	(1.116)	1739	0.20000	0.2089
16	N-Nitroso-di-n-propylamine	70	9.902	9.895	(1.102)	2403	0.20000	0.2051
15	4-Methylphenol	108	9.840	9.840	(1.095)	3626	0.20000	0.1895
$ 18	Nitrobenzene-d5	82	10.158	10.159	(0.873)	3990	0.20000	0.2032
19	Nitrobenzene	77	10.197	10.190	(0.876)	3676	0.20000	0.2028
20	Isophorone	82	10.686	10.686	(0.918)	6624	0.20000	0.1943
21	2-Nitrophenol	139	10.872	10.872	(0.934)	1931	0.20000	0.1900
22	2,4-Dimethylphenol	107	10.964	10.964	(0.942)	7665	0.40000	0.4102
23	Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	4126	0.20000	0.2052
24	Benzoic acid	105	11.064	11.080	(0.950)	4976	0.80000	0.3099
25	2,4-Dichlorophenol	162	11.365	11.365	(0.976)	5918	0.40000	0.3440
26	1,2,4-Trichlorobenzene	180	11.558	11.558	(0.993)	3837	0.20000	0.2282
* 27	Naphthalene-d8	136	11.643	11.643	(1.000)	186081	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	11.689	11.681	(1.004)	11214	0.20000	0.2264
	29 4-Chloroaniline	127	11.851	11.843	(1.018)	7896	0.40000	0.4077
	30 Hexachlorobutadiene	225	12.106	12.099	(1.040)	2172	0.20000	0.2175
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	4902	0.40000	0.3239
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	6890	0.20000	0.2094
	33 Hexachlorocyclopentadiene	237	13.708	13.708	(0.882)	4924	0.40000	0.4074
	34 2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	4276	0.40000	0.3699
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	3903	0.40000	0.3275
$	36 2-Fluorobiphenyl	172	14.056	14.057	(0.904)	8598	0.20000	0.2243
	37 2-Chloronaphthalene	162	14.258	14.258	(0.917)	6906	0.20000	0.2263
	38 2-Nitroaniline	65	14.559	14.552	(0.937)	2248	0.40000	0.3052
	39 Dimethylphthalate	163	15.047	15.047	(0.968)	7495	0.20000	0.2273
	40 Acenaphthylene	152	15.194	15.194	(0.978)	11459	0.20000	0.2214
	41 2,6-Dinitrotoluene	165	15.186	15.179	(0.977)	2863	0.40000	0.3706
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	109826	4.00000	
	43 3-Nitroaniline	138	15.480	15.473	(0.996)	2279	0.40000	0.3574(M)
	44 Acenaphthene	153	15.612	15.604	(1.004)	7176	0.20000	0.2301
	45 2,4-Dinitrophenol	184	15.712	15.705	(1.011)	1264	0.80000	0.1881
	46 Dibenzofuran	168	15.959	15.960	(1.027)	9186	0.20000	0.2154
	47 4-Nitrophenol	109	15.867	15.867	(1.021)	600	0.40000	0.1265
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	3351	0.40000	0.3363
	50 Diethylphthalate	149	16.632	16.632	(1.070)	7435	0.20000	0.2244
	49 Fluorene	166	16.733	16.733	(1.077)	8040	0.20000	0.2209
	51 4-Chlorophenyl-phenylether	204	16.748	16.748	(1.078)	4050	0.20000	0.2264
	52 4-Nitroaniline	138	16.856	16.841	(1.085)	2307	0.40000	0.3483
	53 4,6-Dinitro-2-methylphenol	198	16.949	16.949	(0.901)	3933	0.80000	0.4496
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	4565	0.20000	0.2141
$	55 2,4,6-Tribromophenol	330	17.311	17.311	(1.114)	1098	0.20000	0.1890
	56 4-Bromophenyl-phenylether	248	17.835	17.836	(0.948)	2097	0.20000	0.2012
	57 Hexachlorobenzene	284	18.153	18.153	(0.965)	2973	0.20000	0.2390
	58 Pentachlorophenol	266	18.547	18.548	(0.986)	2858	0.40000	0.3274
*	59 Phenanthrene-d10	188	18.810	18.811	(1.000)	184210	4.00000	
	60 Phenanthrene	178	18.857	18.857	(1.002)	11324	0.20000	0.2254
	61 Anthracene	178	18.957	18.958	(1.008)	11018	0.20000	0.2140
	62 Carbazole	167	19.313	19.314	(1.027)	8831	0.20000	0.2824
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	11372	0.20000	0.2140
	64 Fluoranthene	202	21.279	21.279	(1.131)	12505	0.20000	0.2115
	65 Pyrene	202	21.696	21.697	(0.908)	13621	0.20000	0.2217
$	66 Terphenyl-d14	244	22.021	22.022	(0.922)	8855	0.20000	0.2291
	67 Butylbenzylphthalate	149	22.966	22.974	(0.961)	4232	0.20000	0.2017
	68 Benzo(a)anthracene	228	23.864	23.864	(0.999)	12468	0.20000	0.2243
*	69 Chrysene-d12	240	23.895	23.895	(1.000)	198580	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.841	23.841	(0.998)	10168	0.40000	0.4802
	71 Chrysene	228	23.934	23.934	(1.002)	11695	0.20000	0.2324
	72 bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	6713	0.20000	0.2377(M)
*	134 Di-n-octylphthalate-d4	153	24.994	24.995	(1.000)	212453	4.00000	
	73 Di-n-octylphthalate	149	25.002	25.002	(1.000)	11203	0.20000	0.2290

	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	25.660	25.660	(0.974)	12082	0.20000	0.2274
75	Benzo(k)fluoranthene	252	25.699	25.699	(0.976)	12787	0.20000	0.2285
76	Benzo(a)pyrene	252	26.241	26.241	(0.996)	10298	0.20000	0.2268
* 77	Perylene-d12	264	26.342	26.350	(1.000)	178934	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.674	28.690	(1.089)	10579	0.20000	0.2023
79	Dibenzo(a,h)anthracene	278	28.698	28.698	(1.089)	8265	0.20000	0.2060
80	Benzo(g,h,i)perylene	276	29.358	29.350	(1.115)	9355	0.20000	0.2067
90	N-Nitrosodimethylamine	74	4.382	4.366	(0.488)	4445	0.40000	0.3867
91	Aniline	93	8.406	8.406	(0.935)	10097	0.20000	0.1995
93	Benzidine	184	21.542	21.542	(0.902)	6811	0.40000	1.117
103	Pyridine	79	4.420	4.397	(0.492)	3667	0.40000	0.3629
105	1-methylnaphthalene	142	13.429	13.430	(1.153)	6549	0.20000	0.2170
111	Azobenzene (1,2-DP-Hydrazine)	77	17.095	17.095	(1.100)	7263	0.20000	0.2138
187	Total Benzofluoranthenes	252	25.660	25.699	(0.974)	23419	0.40000	0.4539
99	Perylene	252	26.388	26.388	(1.002)	12169	0.20000	0.2345
98	Retene	219	22.308	22.316	(0.934)	5229	0.20000	0.2249
120	2,3,4,6-Tetrachlorophenol	232	16.338	16.338	(1.051)	1446	0.20000	0.1631
188	2,6-Dichlorophenol	162	11.866	11.867	(1.019)	11183	0.40000	0.4011
189	N-Nitrosomethylethylamine	88	5.833	5.818	(0.649)	6603	0.40000	0.3851

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: ic0429c.d
Lab Smp Id: IC0429C
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	50456	11.50
27 Naphthalene-d8	166754	83377	333508	186081	11.59
42 Acenaphthene-d10	106910	53455	213820	109826	2.73
59 Phenanthrene-d10	179783	89892	359566	184210	2.46
69 Chrysene-d12	192841	96420	385682	198580	2.98
134 Di-n-octylphthala	229567	114784	459134	212453	-7.45
77 Perylene-d12	184310	92155	368620	178934	-2.92

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.81	-0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	24.99	0.00
77 Perylene-d12	26.35	25.85	26.85	26.34	-0.03

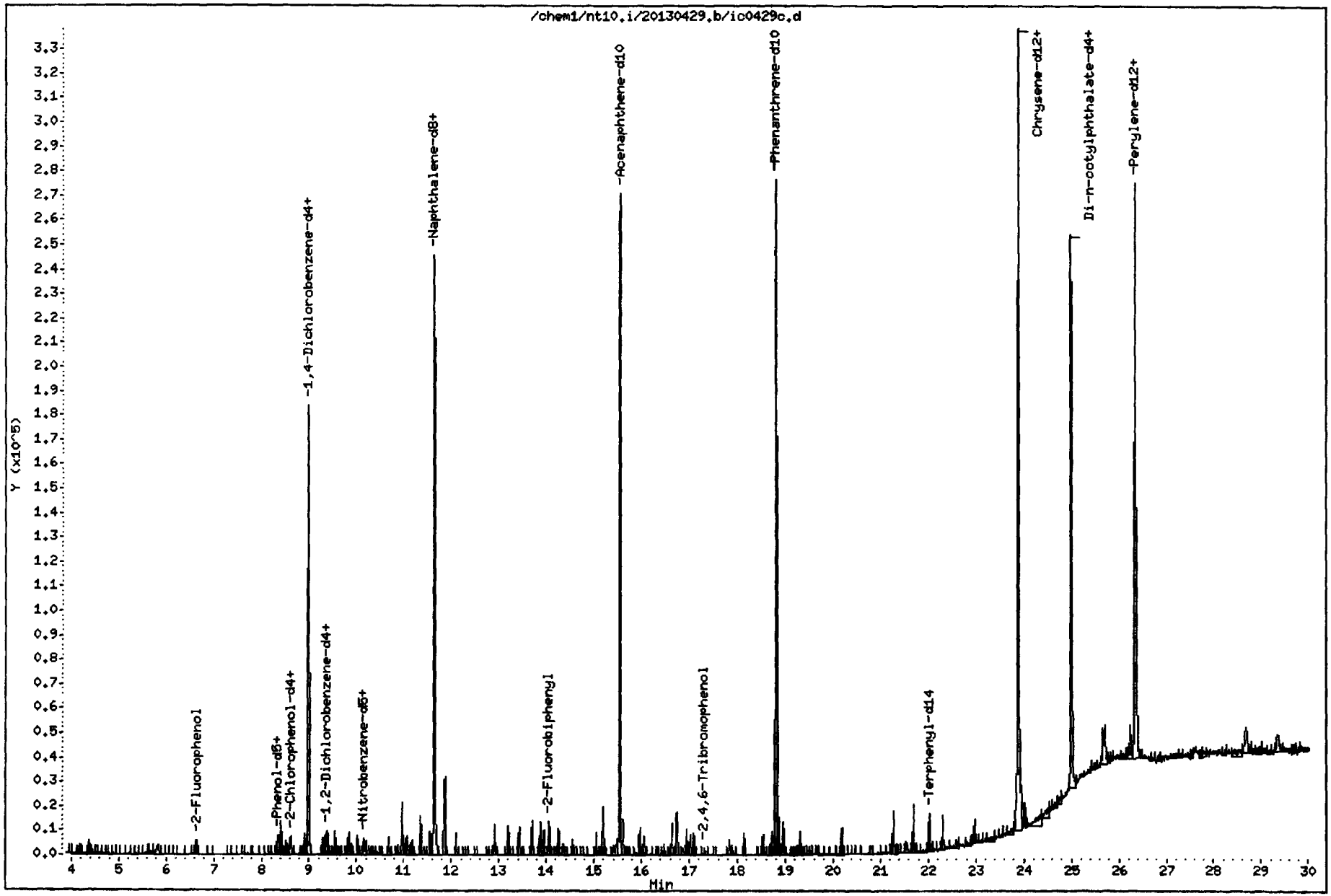
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429c.d
Date : 29-APR-2013 18:07
Client ID:
Sample Info: IC0429C

Instrument: nt10.i

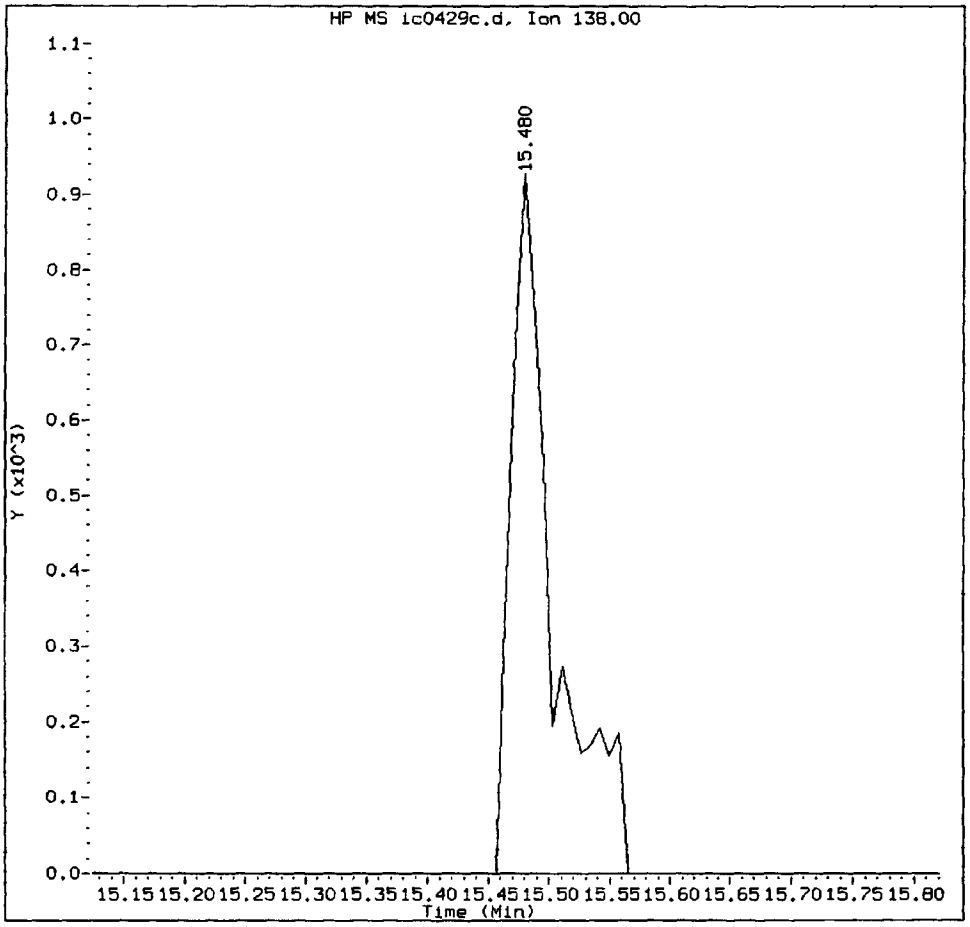
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429C, /chem1/nt10.i/20130429.b/ic0429c.d

3-Nitroaniline Amount: 0.36 Area: 2279



MANUAL INTEGRATION for 3-Nitroaniline

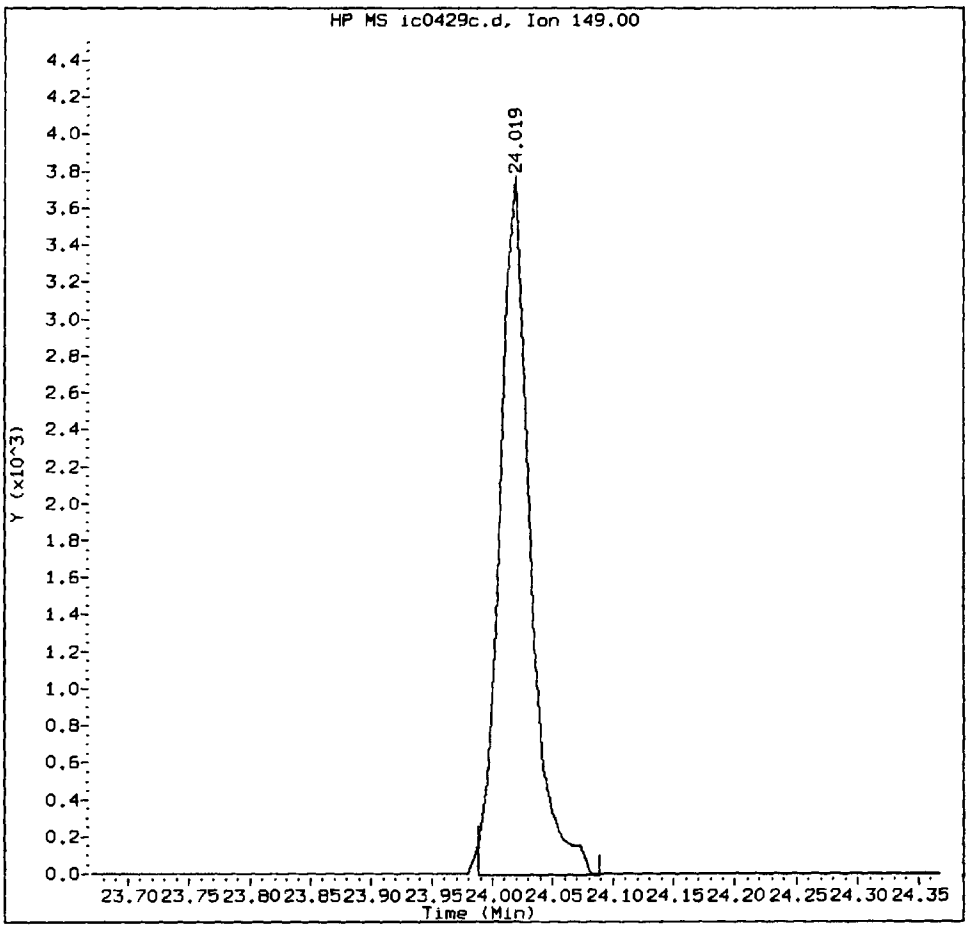
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VB Date: 5/3/13

IC0429C, /chem1/nt10.i/20130429.b/ic0429c.d

bis(2-Ethylhexyl)phthalate Amount: 0.24 Area: 6713



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/2/13

CO-ELUTION SUMMARY FOR FILE - ic0429c.d

Lab ID: IC0429C, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429d.d
Lab Smp Id: IC0429D
Inj Date : 29-APR-2013 18:44
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429D
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 18:44 Cal File: ic0429d.d
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.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	6.628	6.629	(0.738)	15307	1.00000	0.9620
$	2 Phenol-d5	99	8.336	8.337	(0.928)	19285	1.00000	0.9366
	3 Phenol	94	8.360	8.360	(0.931)	22180	1.00000	0.9624
$	5 2-Chlorophenol-d4	132	8.591	8.599	(0.957)	14988	1.00000	0.9589
	4 Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.949)	16380	1.00000	0.9883
	6 2-Chlorophenol	128	8.622	8.622	(0.960)	16398	1.00000	0.9226
	7 1,3-Dichlorobenzene	146	8.909	8.909	(0.992)	17715	1.00000	0.9933
*	8 1,4-Dichlorobenzene-d4	152	8.979	8.979	(1.000)	44580	4.00000	
	9 1,4-Dichlorobenzene	146	9.010	9.018	(1.003)	16867	1.00000	0.9594
$	10 1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.043)	11111	1.00000	0.9883
	12 1,2-Dichlorobenzene	146	9.390	9.390	(1.046)	16787	1.00000	0.9973
	11 Benzyl alcohol	108	9.289	9.289	(1.035)	9257	1.00000	0.9548
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.072)	5171	1.00000	1.011
	13 2-Methylphenol	108	9.545	9.553	(1.063)	16160	1.00000	0.9744
	17 Hexachloroethane	117	10.019	10.027	(1.116)	7294	1.00000	0.9916
	16 N-Nitroso-di-n-propylamine	70	9.895	9.895	(1.102)	9787	1.00000	0.9452
	15 4-Methylphenol	108	9.840	9.840	(1.096)	16603	1.00000	0.9818
$	18 Nitrobenzene-d5	82	10.158	10.159	(0.873)	17141	1.00000	0.9894
	19 Nitrobenzene	77	10.197	10.190	(0.876)	15823	1.00000	0.9893
	20 Isophorone	82	10.686	10.686	(0.918)	27613	1.00000	0.9178
	21 2-Nitrophenol	139	10.872	10.872	(0.934)	8265	1.00000	0.9218
	22 2,4-Dimethylphenol	107	10.964	10.964	(0.942)	32296	2.00000	1.959
	23 Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	17765	1.00000	1.001
	24 Benzoic acid	105	11.110	11.080	(0.954)	41278	4.00000	2.905
	25 2,4-Dichlorophenol	162	11.365	11.365	(0.976)	31611	2.00000	2.083
	26 1,2,4-Trichlorobenzene	180	11.558	11.558	(0.993)	14941	1.00000	1.007
*	27 Naphthalene-d8	136	11.643	11.643	(1.000)	164171	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	11.689	11.681	(1.004)	42702	1.00000	0.9770
29	4-Chloroaniline	127	11.851	11.843	(1.018)	33352	2.00000	1.952
30	Hexachlorobutadiene	225	12.098	12.099	(1.039)	8779	1.00000	0.9963
31	4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	25572	2.00000	1.915
32	2-Methylnaphthalene	142	13.197	13.197	(1.134)	27982	1.00000	0.9638
33	Hexachlorocyclopentadiene	237	13.708	13.708	(0.882)	21045	2.00000	1.886
34	2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	20650	2.00000	1.935
35	2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	21226	2.00000	1.929
$ 36	2-Fluorobiphenyl	172	14.056	14.057	(0.904)	34053	1.00000	0.9621
37	2-Chloronaphthalene	162	14.257	14.258	(0.917)	27105	1.00000	0.9620
38	2-Nitroaniline	65	14.552	14.552	(0.936)	13213	2.00000	1.943
39	Dimethylphthalate	163	15.055	15.047	(0.969)	29710	1.00000	0.9760
40	Acenaphthylene	152	15.194	15.194	(0.978)	46429	1.00000	0.9715
41	2,6-Dinitrotoluene	165	15.186	15.179	(0.977)	13962	2.00000	1.957
* 42	Acenaphthene-d10	164	15.542	15.535	(1.000)	101406	4.00000	
43	3-Nitroaniline	138	15.480	15.473	(0.996)	12865	2.00000	2.185
44	Acenaphthene	153	15.612	15.604	(1.004)	27470	1.00000	0.9538
45	2,4-Dinitrophenol	184	15.704	15.705	(1.010)	14717	4.00000	2.364
46	Dibenzofuran	168	15.967	15.960	(1.027)	38532	1.00000	0.9785
47	4-Nitrophenol	109	15.859	15.867	(1.020)	5820	2.00000	1.327
48	2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	18293	2.00000	1.988
50	Diethylphthalate	149	16.632	16.632	(1.070)	29344	1.00000	0.9593
49	Fluorene	166	16.733	16.733	(1.077)	32959	1.00000	0.9809
51	4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	15568	1.00000	0.9425
52	4-Nitroaniline	138	16.848	16.841	(1.084)	13721	2.00000	2.243
53	4,6-Dinitro-2-methylphenol	198	16.949	16.949	(0.901)	27317	4.00000	3.379
54	N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	20108	1.00000	1.022
$ 55	2,4,6-Tribromophenol	330	17.311	17.311	(1.114)	4956	1.00000	0.9242
56	4-Bromophenyl-phenylether	248	17.835	17.836	(0.948)	9783	1.00000	1.017
57	Hexachlorobenzene	284	18.153	18.153	(0.965)	11321	1.00000	0.9868
58	Pentachlorophenol	266	18.547	18.548	(0.986)	14694	2.00000	1.825
* 59	Phenanthrene-d10	188	18.810	18.811	(1.000)	169929	4.00000	
60	Phenanthrene	178	18.857	18.857	(1.002)	46140	1.00000	0.9955
61	Anthracene	178	18.957	18.958	(1.008)	46666	1.00000	0.9828
62	Carbazole	167	19.313	19.314	(1.027)	35449	1.00000	1.229
63	Di-n-butylphthalate	149	20.188	20.188	(1.073)	46503	1.00000	0.9487
64	Fluoranthene	202	21.278	21.279	(1.131)	52957	1.00000	0.9708
65	Pyrene	202	21.696	21.697	(0.908)	55189	1.00000	0.9635
$ 66	Terphenyl-d14	244	22.021	22.022	(0.922)	34900	1.00000	0.9684
67	Butylbenzylphthalate	149	22.974	22.974	(0.961)	19089	1.00000	0.9759
68	Benzo(a)anthracene	228	23.864	23.864	(0.999)	50618	1.00000	0.9766
* 69	Chrysene-d12	240	23.895	23.895	(1.000)	185129	4.00000	
70	3,3'-Dichlorobenzidine	252	23.849	23.841	(0.998)	37586	2.00000	1.904
71	Chrysene	228	23.942	23.934	(1.002)	43967	1.00000	0.9374
72	bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	26029	1.00000	0.9857(M)
* 134	Di-n-octylphthalate-d4	153	25.002	24.995	(1.000)	198625	4.00000	
73	Di-n-octylphthalate	149	25.010	25.002	(1.000)	43269	1.00000	0.9461

	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	25.668	25.660	(0.974)	46024	1.00000	0.9209
75	Benzo(k)fluoranthene	252	25.707	25.699	(0.976)	52368	1.00000	0.9948
76	Benzo(a)pyrene	252	26.241	26.241	(0.996)	40952	1.00000	0.9591
* 77	Perylene-d12	264	26.349	26.350	(1.000)	168300	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.682	28.690	(1.089)	46418	1.00000	0.9436
79	Dibenzo(a,h)anthracene	278	28.705	28.698	(1.089)	35967	1.00000	0.9531
80	Benzo(g,h,i)perylene	276	29.358	29.350	(1.114)	41617	1.00000	0.9778
90	N-Nitrosodimethylamine	74	4.366	4.366	(0.486)	19685	2.00000	1.938
91	Aniline	93	8.406	8.406	(0.936)	43396	1.00000	0.9705
93	Benzidine	184	21.542	21.542	(0.902)	23877	2.00000	4.142
103	Pyridine	79	4.397	4.397	(0.490)	17576	2.00000	1.969
105	1-methylnaphthalene	142	13.429	13.430	(1.153)	25663	1.00000	0.9638
111	Azobenzene (1,2-DP-Hydrazine)	77	17.095	17.095	(1.100)	31455	1.00000	1.003
187	Total Benzofluoranthenes	252	25.668	25.699	(0.974)	94813	2.00000	1.954
99	Perylene	252	26.396	26.388	(1.002)	46957	1.00000	0.9620
98	Retene	219	22.316	22.316	(0.934)	20776	1.00000	0.9584
120	2,3,4,6-Tetrachlorophenol	232	16.338	16.338	(1.051)	7820	1.00000	0.9555
188	2,6-Dichlorophenol	162	11.866	11.867	(1.019)	48496	2.00000	1.972
189	N-Nitrosomethylethylamine	88	5.818	5.818	(0.648)	29106	2.00000	1.921

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: ic0429d.d
Lab Smp Id: IC0429D
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	44580	-1.48
27 Naphthalene-d8	166754	83377	333508	164171	-1.55
42 Acenaphthene-d10	106910	53455	213820	101406	-5.15
59 Phenanthrene-d10	179783	89892	359566	169929	-5.48
69 Chrysene-d12	192841	96420	385682	185129	-4.00
134 Di-n-octylphthala	229567	114784	459134	198625	-13.48
77 Perylene-d12	184310	92155	368620	168300	-8.69

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.98	-0.09
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.81	-0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	25.00	0.03
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

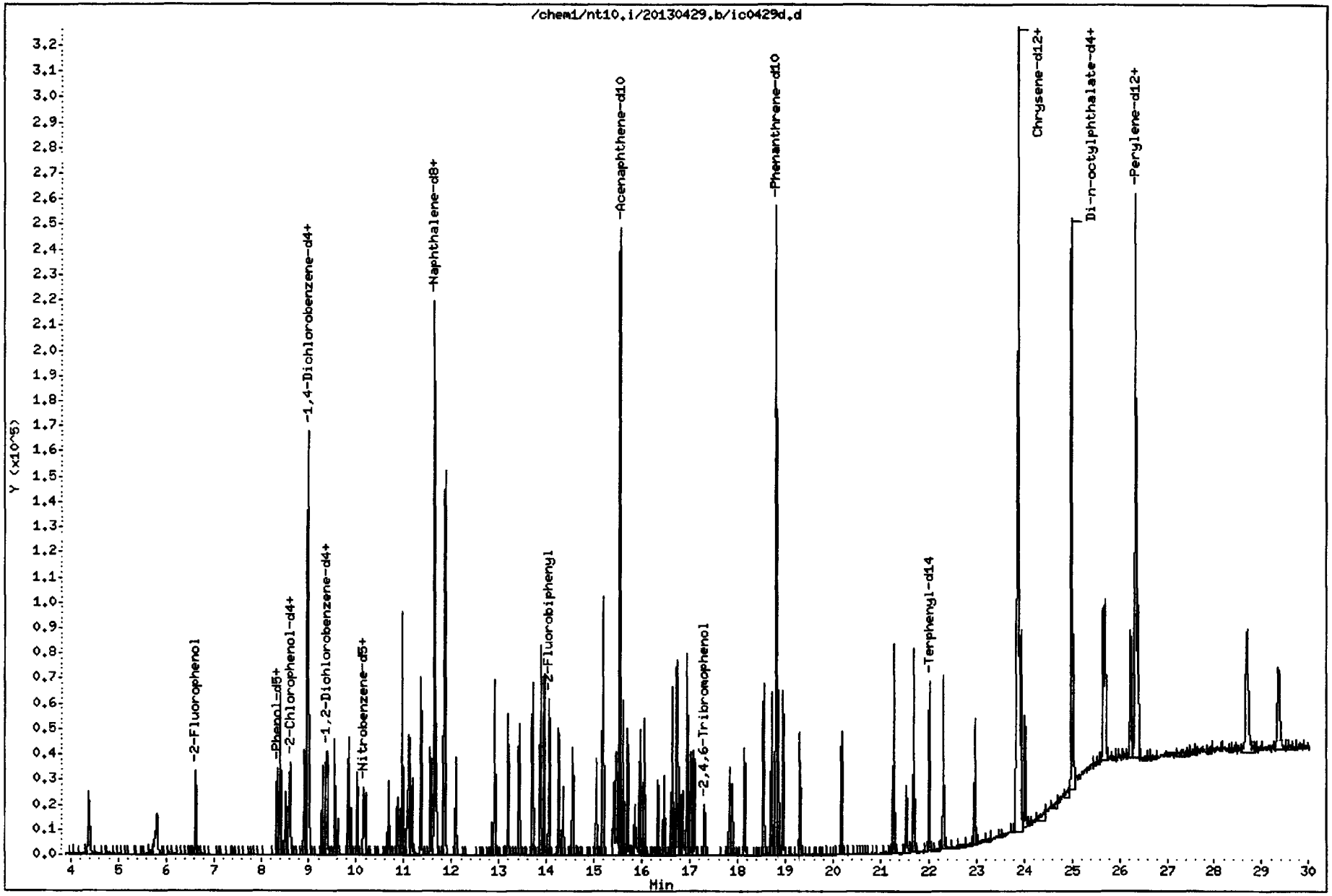
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429d.d
Date : 29-APR-2013 18:44
Client ID:
Sample Info: IC0429D

Instrument: nt10.i

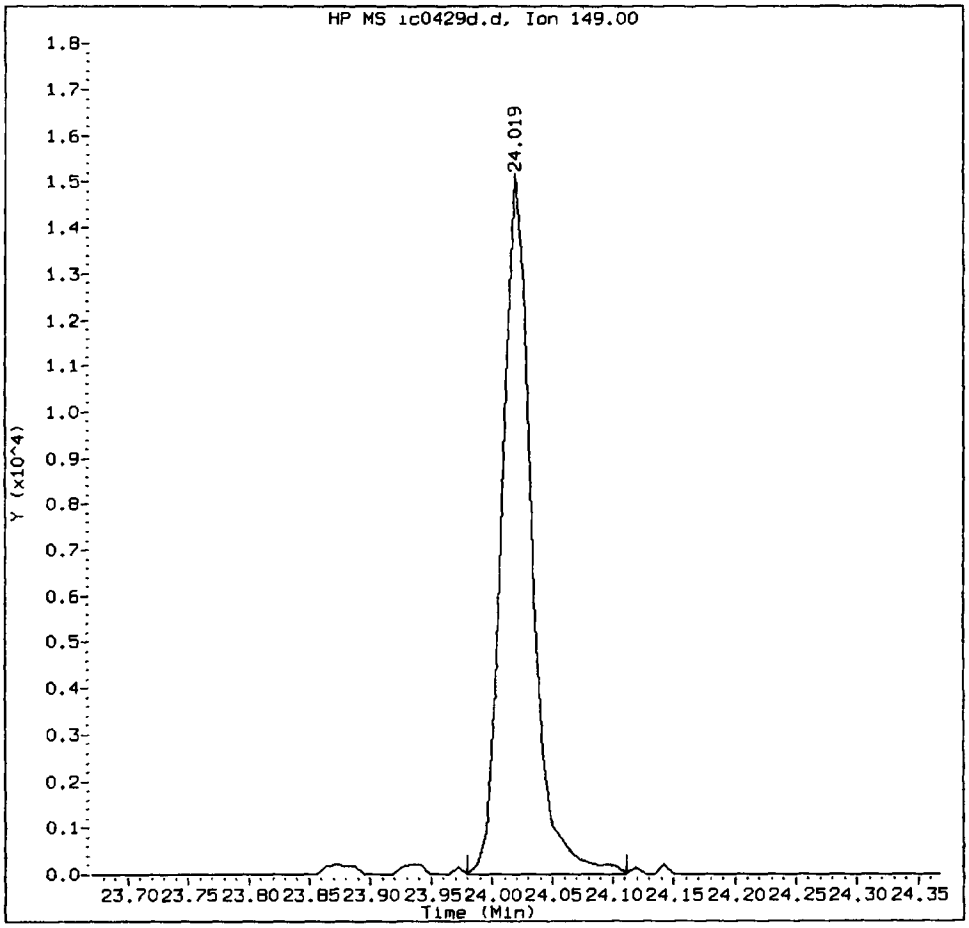
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429D, /chem1/nt10.i/20130429.b/ic0429d.d

bis(2-Ethylhexyl)phthalate Amount: 0.99 Area: 26029



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429d.d

Lab ID: IC0429D, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429e.d
Lab Smp Id: IC0429E
Inj Date : 29-APR-2013 19:21
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429E
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 19:21 Cal File: ic0429e.d
Als bottle: 6 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.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	6.628	6.629	(0.738)	146655	10.0000	10.73
$	2 Phenol-d5	99	8.344	8.337	(0.929)	196642	10.0000	11.12
	3 Phenol	94	8.367	8.360	(0.931)	210587	10.0000	10.64
$	5 2-Chlorophenol-d4	132	8.599	8.599	(0.957)	137828	10.0000	10.27
	4 Bis(2-Chloroethyl)ether	93	8.529	8.522	(0.949)	143624	10.0000	10.09
	6 2-Chlorophenol	128	8.630	8.622	(0.960)	173765	10.0000	11.38
	7 1,3-Dichlorobenzene	146	8.917	8.909	(0.992)	155864	10.0000	10.18
*	8 1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	38285	4.00000	
	9 1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	151337	10.0000	10.02
$	10 1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.042)	99905	10.0000	10.35
	12 1,2-Dichlorobenzene	146	9.398	9.390	(1.046)	143308	10.0000	9.914
	11 Benzyl alcohol	108	9.297	9.289	(1.035)	92776	10.0000	11.14
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	45681	10.0000	10.40
	13 2-Methylphenol	108	9.553	9.553	(1.063)	149351	10.0000	10.49
	17 Hexachloroethane	117	10.026	10.027	(1.116)	64051	10.0000	10.14
	16 N-Nitroso-di-n-propylamine	70	9.902	9.895	(1.102)	93506	10.0000	10.52
	15 4-Methylphenol	108	9.848	9.840	(1.096)	160522	10.0000	11.05
$	18 Nitrobenzene-d5	82	10.158	10.159	(0.872)	157610	10.0000	10.45
	19 Nitrobenzene	77	10.197	10.190	(0.875)	144235	10.0000	10.36
	20 Isophorone	82	10.694	10.686	(0.918)	308116	10.0000	11.77
	21 2-Nitrophenol	139	10.879	10.872	(0.934)	86330	10.0000	11.06
	22 2,4-Dimethylphenol	107	10.972	10.964	(0.942)	301913	20.0000	21.04
	23 Bis(2-Chloroethoxy)methane	93	11.180	11.172	(0.960)	157345	10.0000	10.19
	24 Benzoic acid	105	11.303	11.080	(0.970)	533852	40.0000	41.16
	25 2,4-Dichlorophenol	162	11.372	11.365	(0.976)	298452	20.0000	22.59
	26 1,2,4-Trichlorobenzene	180	11.565	11.558	(0.993)	126245	10.0000	9.777
*	27 Naphthalene-d8	136	11.650	11.643	(1.000)	142908	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	11.689	11.681	(1.003)	383254	10.0000	10.07
	29 4-Chloroaniline	127	11.859	11.843	(1.018)	349641	20.0000	23.51
	30 Hexachlorobutadiene	225	12.106	12.099	(1.039)	78933	10.0000	10.29
	31 4-Chloro-3-methylphenol	107	12.919	12.911	(1.109)	269630	20.0000	23.20
	32 2-Methylnaphthalene	142	13.197	13.197	(1.133)	264096	10.0000	10.45
	33 Hexachlorocyclopentadiene	237	13.716	13.708	(0.882)	215070	20.0000	21.20
	34 2,4,6-Trichlorophenol	196	13.886	13.879	(0.893)	208965	20.0000	21.54
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	227145	20.0000	22.71
$	36 2-Fluorobiphenyl	172	14.064	14.057	(0.905)	325794	10.0000	10.13
	37 2-Chloronaphthalene	162	14.265	14.258	(0.918)	259249	10.0000	10.12
	38 2-Nitroaniline	65	14.567	14.552	(0.937)	143221	20.0000	23.17
	39 Dimethylphthalate	163	15.062	15.047	(0.969)	278457	10.0000	10.06
	40 Acenaphthylene	152	15.194	15.194	(0.978)	490760	10.0000	11.30
	41 2,6-Dinitrotoluene	165	15.194	15.179	(0.978)	140641	20.0000	21.69
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	92187	4.00000	
	43 3-Nitroaniline	138	15.496	15.473	(0.997)	115718	20.0000	21.62
	44 Acenaphthene	153	15.612	15.604	(1.004)	261611	10.0000	9.992
	45 2,4-Dinitrophenol	184	15.727	15.705	(1.012)	250805	40.0000	41.56
	46 Dibenzofuran	168	15.975	15.960	(1.028)	364969	10.0000	10.19
	47 4-Nitrophenol	109	15.874	15.867	(1.021)	85112	20.0000	20.75
	48 2,4-Dinitrotoluene	165	16.068	16.052	(1.034)	187198	20.0000	22.38
	50 Diethylphthalate	149	16.647	16.632	(1.071)	283263	10.0000	10.19
	49 Fluorene	166	16.740	16.733	(1.077)	309724	10.0000	10.14
	51 4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	167282	10.0000	11.14
	52 4-Nitroaniline	138	16.872	16.841	(1.086)	125210	20.0000	22.52
	53 4,6-Dinitro-2-methylphenol	198	16.972	16.949	(0.902)	317489	40.0000	40.73
	54 N-Nitrosodiphenylamine	169	17.034	17.026	(0.905)	184807	10.0000	9.961
$	55 2,4,6-Tribromophenol	330	17.319	17.311	(1.114)	55755	10.0000	11.44
	56 4-Bromophenyl-phenylether	248	17.835	17.836	(0.948)	91977	10.0000	10.14
	57 Hexachlorobenzene	284	18.160	18.153	(0.965)	105323	10.0000	9.733
	58 Pentachlorophenol	266	18.555	18.548	(0.986)	177427	20.0000	23.36
*	59 Phenanthrene-d10	188	18.818	18.811	(1.000)	160272	4.00000	
	60 Phenanthrene	178	18.865	18.857	(1.002)	440318	10.0000	10.07
	61 Anthracene	178	18.965	18.958	(1.008)	455728	10.0000	10.18
	62 Carbazole	167	19.321	19.314	(1.027)	242608	10.0000	8.918
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	495591	10.0000	10.72
	64 Fluoranthene	202	21.286	21.279	(1.131)	534614	10.0000	10.39
	65 Pyrene	202	21.704	21.697	(0.908)	542210	10.0000	10.18
$	66 Terphenyl-d14	244	22.029	22.022	(0.922)	341948	10.0000	10.20
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	196606	10.0000	10.80
	68 Benzo(a)anthracene	228	23.872	23.864	(0.999)	490781	10.0000	10.18
*	69 Chrysene-d12	240	23.903	23.895	(1.000)	172225	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.856	23.841	(0.998)	404734	20.0000	22.04
	71 Chrysene	228	23.949	23.934	(1.002)	439878	10.0000	10.08
	72 bis(2-Ethylhexyl)phthalate	149	24.027	24.019	(0.961)	275645	10.0000	9.831(M)
*	134 Di-n-octylphthalate-d4	153	25.002	24.995	(1.000)	210890	4.00000	
	73 Di-n-octylphthalate	149	25.018	25.002	(1.001)	477130	10.0000	9.826

	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	25.676	25.660	(0.974)	516402	10.0000	10.46
75	Benzo(k)fluoranthene	252	25.714	25.699	(0.976)	509181	10.0000	9.789
76	Benzo(a)pyrene	252	26.256	26.241	(0.996)	438619	10.0000	10.40
* 77	Perylene-d12	264	26.357	26.350	(1.000)	166300	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.705	28.690	(1.089)	528701	10.0000	10.88
79	Dibenzo(a,h)anthracene	278	28.729	28.698	(1.090)	403235	10.0000	10.81
80	Benzo(g,h,i)perylene	276	29.389	29.350	(1.115)	445295	10.0000	10.59
90	N-Nitrosodimethylamine	74	4.374	4.366	(0.487)	190704	20.0000	21.87
91	Aniline	93	8.414	8.406	(0.936)	403125	10.0000	10.50
93	Benzidine	184	21.549	21.542	(0.902)	110746	20.0000	19.11
103	Pyridine	79	4.374	4.397	(0.487)	162027	20.0000	21.13
105	1-methylnaphthalene	142	13.437	13.430	(1.153)	238762	10.0000	10.30
111	Azobenzene (1,2-DP-Hydrazine)	77	17.111	17.095	(1.101)	287323	10.0000	10.08
187	Total Benzofluoranthenes	252	25.714	25.699	(0.976)	972720	20.0000	20.28
99	Perylene	252	26.411	26.388	(1.002)	482660	10.0000	10.01
98	Retene	219	22.323	22.316	(0.934)	206286	10.0000	10.23
120	2,3,4,6-Tetrachlorophenol	232	16.346	16.338	(1.052)	86691	10.0000	11.65
188	2,6-Dichlorophenol	162	11.882	11.867	(1.020)	451718	20.0000	21.10
189	N-Nitrosomethylethylamine	88	5.825	5.818	(0.648)	279207	20.0000	21.46

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: ic0429e.d
Lab Smp Id: IC0429E
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	38285	-15.39
27 Naphthalene-d8	166754	83377	333508	142908	-14.30
42 Acenaphthene-d10	106910	53455	213820	92187	-13.77
59 Phenanthrene-d10	179783	89892	359566	160272	-10.85
69 Chrysene-d12	192841	96420	385682	172225	-10.69
134 Di-n-octylphthala	229567	114784	459134	210890	-8.14
77 Perylene-d12	184310	92155	368620	166300	-9.77

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.65	0.07
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.03
134 Di-n-octylphthala	24.99	24.49	25.49	25.00	0.03
77 Perylene-d12	26.35	25.85	26.85	26.36	0.03

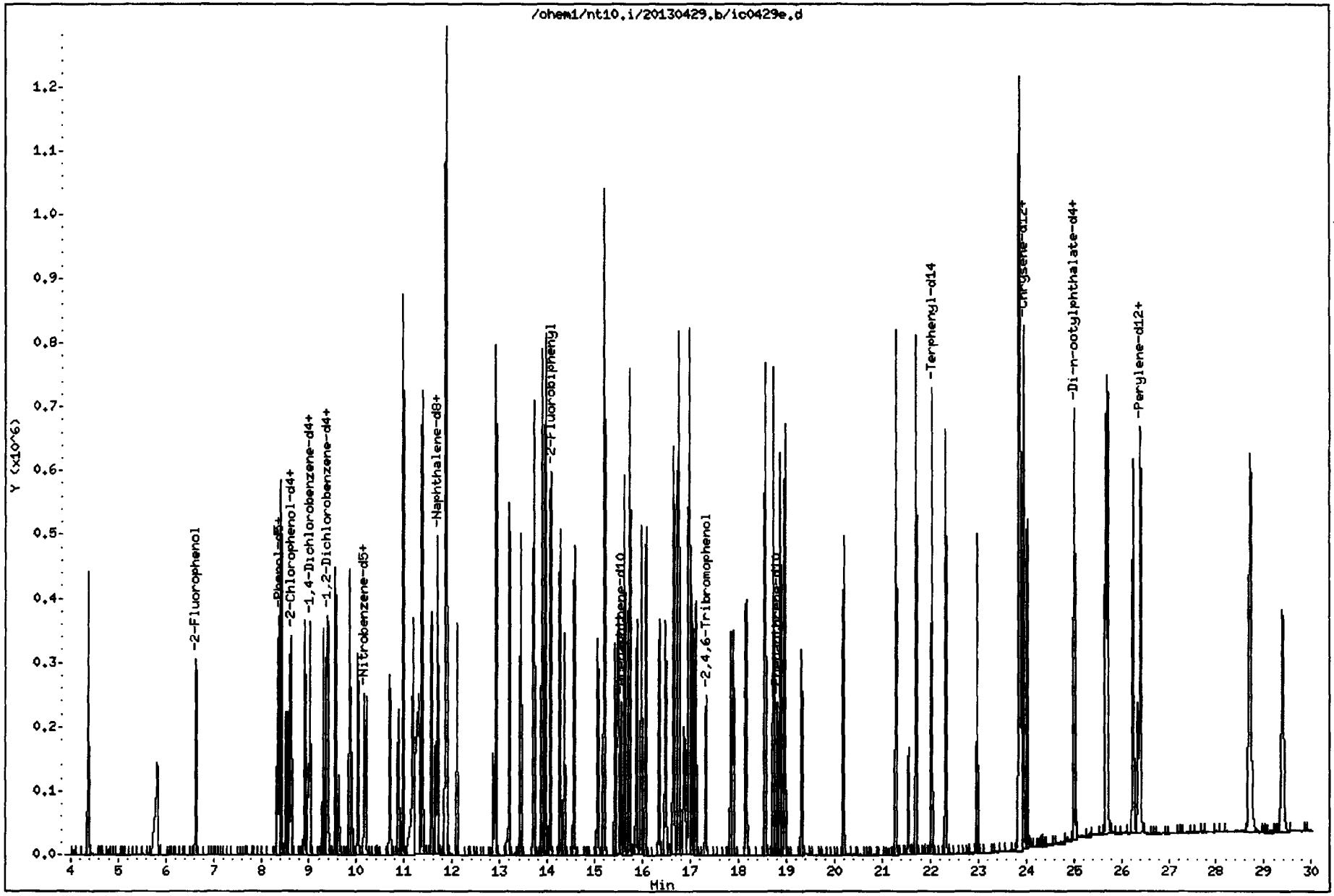
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/ic0429e.d
Date : 29-APR-2013 19:21
Client ID:
Sample Info: IC0429E

Instrument: nt10.i

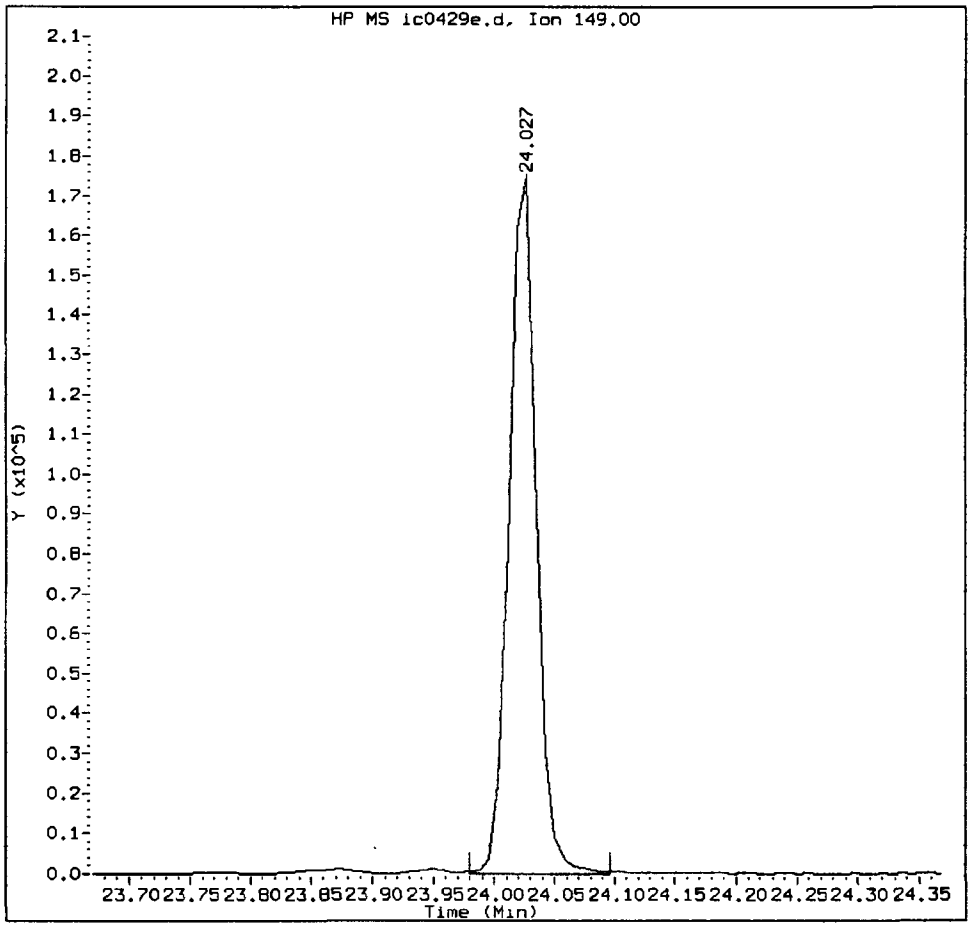
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429E, /chem1/nt10.i/20130429.b/ic0429e.d

bis(2-Ethylhexyl)phthalate Amount: 9.83 Area: 275645



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VZ Date: 5/8/13

CO-ELUTION SUMMARY FOR FILE - ic0429e.d

Lab ID: IC0429E, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS
15.194	Acenaphthylene and 2,6-Dinitrotoluene

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429g.d
Lab Smp Id: IC0429G
Inj Date : 29-APR-2013 20:34
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429G
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 20:34 Cal File: ic0429g.d
Als bottle: 8 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

YZ 5/3/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.628	6.629	(0.738)	33327	2.50000	2.552
$	2 Phenol-d5	99	8.336	8.337	(0.928)	43013	2.50000	2.545
	3 Phenol	94	8.359	8.360	(0.930)	49200	2.50000	2.601
$	5 2-Chlorophenol-d4	132	8.599	8.599	(0.957)	32303	2.50000	2.518
	4 Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.948)	35522	2.50000	2.611
	6 2-Chlorophenol	128	8.622	8.622	(0.959)	35254	2.50000	2.417
	7 1,3-Dichlorobenzene	146	8.916	8.909	(0.992)	36581	2.50000	2.499
*	8 1,4-Dichlorobenzene-d4	152	8.986	8.979	(1.000)	36591	4.00000	
	9 1,4-Dichlorobenzene	146	9.017	9.018	(1.003)	37170	2.50000	2.576
$	10 1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.042)	23363	2.50000	2.532
	12 1,2-Dichlorobenzene	146	9.390	9.390	(1.045)	34665	2.50000	2.509
	11 Benzyl alcohol	108	9.289	9.289	(1.034)	20599	2.50000	2.589
	14 2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.071)	11085	2.50000	2.640
	13 2-Methylphenol	108	9.553	9.553	(1.063)	35312	2.50000	2.594
	17 Hexachloroethane	117	10.026	10.027	(1.116)	15637	2.50000	2.590
	16 N-Nitroso-di-n-propylamine	70	9.894	9.895	(1.101)	22554	2.50000	2.654
	15 4-Methylphenol	108	9.840	9.840	(1.095)	36435	2.50000	2.625
$	18 Nitrobenzene-d5	82	10.158	10.159	(0.873)	37054	2.50000	2.546
	19 Nitrobenzene	77	10.197	10.190	(0.876)	34459	2.50000	2.565
	20 Isophorone	82	10.686	10.686	(0.918)	61248	2.50000	2.424
	21 2-Nitrophenol	139	10.871	10.872	(0.934)	19030	2.50000	2.527
	22 2,4-Dimethylphenol	107	10.964	10.964	(0.942)	71562	5.00000	5.167
	23 Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	38098	2.50000	2.556
	24 Benzoic acid	105	11.164	11.080	(0.959)	106496	10.0000	8.861
	25 2,4-Dichlorophenol	162	11.365	11.365	(0.976)	67816	5.00000	5.320
	26 1,2,4-Trichlorobenzene	180	11.557	11.558	(0.993)	30525	2.50000	2.450
*	27 Naphthalene-d8	136	11.642	11.643	(1.000)	137898	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	11.689	11.681	(1.004)	91698	2.50000	2.498
	29 4-Chloroaniline	127	11.851	11.843	(1.018)	72996	5.00000	5.086
	30 Hexachlorobutadiene	225	12.098	12.099	(1.039)	18006	2.50000	2.433
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	59257	5.00000	5.284
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	60463	2.50000	2.479
	33 Hexachlorocyclopentadiene	237	13.716	13.708	(0.882)	46418	5.00000	4.831
	34 2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	46504	5.00000	5.061
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	48311	5.00000	5.100
$	36 2-Fluorobiphenyl	172	14.056	14.057	(0.904)	75007	2.50000	2.461
	37 2-Chloronaphthalene	162	14.265	14.258	(0.918)	59913	2.50000	2.470
	38 2-Nitroaniline	65	14.559	14.552	(0.937)	31617	5.00000	5.400
	39 Dimethylphthalate	163	15.055	15.047	(0.969)	64965	2.50000	2.479
	40 Acenaphthylene	152	15.194	15.194	(0.978)	99122	2.50000	2.409
	41 2,6-Dinitrotoluene	165	15.186	15.179	(0.977)	32305	5.00000	5.261
*	42 Acenaphthene-d10	164	15.542	15.535	(1.000)	87308	4.00000	
	43 3-Nitroaniline	138	15.480	15.473	(0.996)	27423	5.00000	5.409
	44 Acenaphthene	153	15.611	15.604	(1.004)	61853	2.50000	2.494
	45 2,4-Dinitrophenol	184	15.712	15.705	(1.011)	42855	10.0000	7.930
	46 Dibenzofuran	168	15.967	15.960	(1.027)	84689	2.50000	2.498
	47 4-Nitrophenol	109	15.859	15.867	(1.020)	16653	5.00000	4.391
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	41845	5.00000	5.283
	50 Diethylphthalate	149	16.640	16.632	(1.071)	65811	2.50000	2.499
	49 Fluorene	166	16.732	16.733	(1.077)	72923	2.50000	2.521
	51 4-Chlorophenyl-phenylether	204	16.756	16.748	(1.078)	33604	2.50000	2.363
	52 4-Nitroaniline	138	16.856	16.841	(1.085)	26194	5.00000	4.974
	53 4,6-Dinitro-2-methylphenol	198	16.956	16.949	(0.901)	65565	10.0000	9.149
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	44352	2.50000	2.552
$	55 2,4,6-Tribromophenol	330	17.311	17.311	(1.114)	11658	2.50000	2.525
	56 4-Bromophenyl-phenylether	248	17.835	17.836	(0.948)	20878	2.50000	2.457
	57 Hexachlorobenzene	284	18.152	18.153	(0.965)	24254	2.50000	2.393
	58 Pentachlorophenol	266	18.547	18.548	(0.986)	37390	5.00000	5.254
*	59 Phenanthrene-d10	188	18.818	18.811	(1.000)	150153	4.00000	
	60 Phenanthrene	178	18.864	18.857	(1.002)	100003	2.50000	2.442
	61 Anthracene	178	18.957	18.958	(1.007)	103502	2.50000	2.467
	62 Carbazole	167	19.313	19.314	(1.026)	60342	2.50000	2.368
	63 Di-n-butylphthalate	149	20.187	20.188	(1.073)	104682	2.50000	2.417
	64 Fluoranthene	202	21.286	21.279	(1.131)	117131	2.50000	2.430
	65 Pyrene	202	21.704	21.697	(0.908)	123102	2.50000	2.418
$	66 Terphenyl-d14	244	22.029	22.022	(0.922)	78162	2.50000	2.440
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	42839	2.50000	2.464
	68 Benzo(a)anthracene	228	23.872	23.864	(0.999)	110437	2.50000	2.397
*	69 Chrysene-d12	240	23.903	23.895	(1.000)	164553	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.849	23.841	(0.998)	73617	5.00000	4.195
	71 Chrysene	228	23.941	23.934	(1.002)	100065	2.50000	2.400
	72 bis(2-Ethylhexyl)phthalate	149	24.027	24.019	(0.961)	59748	2.50000	2.511(M)
*	134 Di-n-octylphthalate-d4	153	25.002	24.995	(1.000)	178975	4.00000	
	73 Di-n-octylphthalate	149	25.017	25.002	(1.001)	101315	2.50000	2.459

	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	25.668	25.660	(0.974)	107559	2.50000	2.369
75	Benzo(k)fluoranthene	252	25.714	25.699	(0.976)	117137	2.50000	2.450
76	Benzo(a)pyrene	252	26.249	26.241	(0.996)	93000	2.50000	2.398
* 77	Perylene-d12	264	26.357	26.350	(1.000)	152859	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.697	28.690	(1.089)	107108	2.50000	2.397
79	Dibenzo(a,h)anthracene	278	28.721	28.698	(1.090)	84630	2.50000	2.469
80	Benzo(g,h,i)perylene	276	29.381	29.350	(1.115)	94698	2.50000	2.450
90	N-Nitrosodimethylamine	74	4.351	4.366	(0.484)	44045	5.00000	5.284
91	Aniline	93	8.406	8.406	(0.935)	96404	2.50000	2.627
93	Benzidine	184	21.541	21.542	(0.901)	29714	5.00000	5.756
103	Pyridine	79	4.374	4.397	(0.487)	39707	5.00000	5.419
105	1-methylnaphthalene	142	13.429	13.430	(1.153)	55151	2.50000	2.466
111	Azobenzene (1,2-DP-Hydrazine)	77	17.103	17.095	(1.100)	69518	2.50000	2.574
187	Total Benzofluoranthenes	252	25.668	25.699	(0.974)	213730	5.00000	4.849
99	Perylene	252	26.403	26.388	(1.002)	104964	2.50000	2.368
98	Retene	219	22.315	22.316	(0.934)	46252	2.50000	2.400
120	2,3,4,6-Tetrachlorophenol	232	16.346	16.338	(1.052)	17623	2.50000	2.501
188	2,6-Dichlorophenol	162	11.866	11.867	(1.019)	104652	5.00000	5.066
189	N-Nitrosomethylethylamine	88	5.817	5.818	(0.647)	65642	5.00000	5.279

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: ic0429g.d
Lab Smp Id: IC0429G
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	36591	-19.14
27 Naphthalene-d8	166754	83377	333508	137898	-17.30
42 Acenaphthene-d10	106910	53455	213820	87308	-18.34
59 Phenanthrene-d10	179783	89892	359566	150153	-16.48
69 Chrysene-d12	192841	96420	385682	164553	-14.67
134 Di-n-octylphthala	229567	114784	459134	178975	-22.04
77 Perylene-d12	184310	92155	368620	152859	-17.06

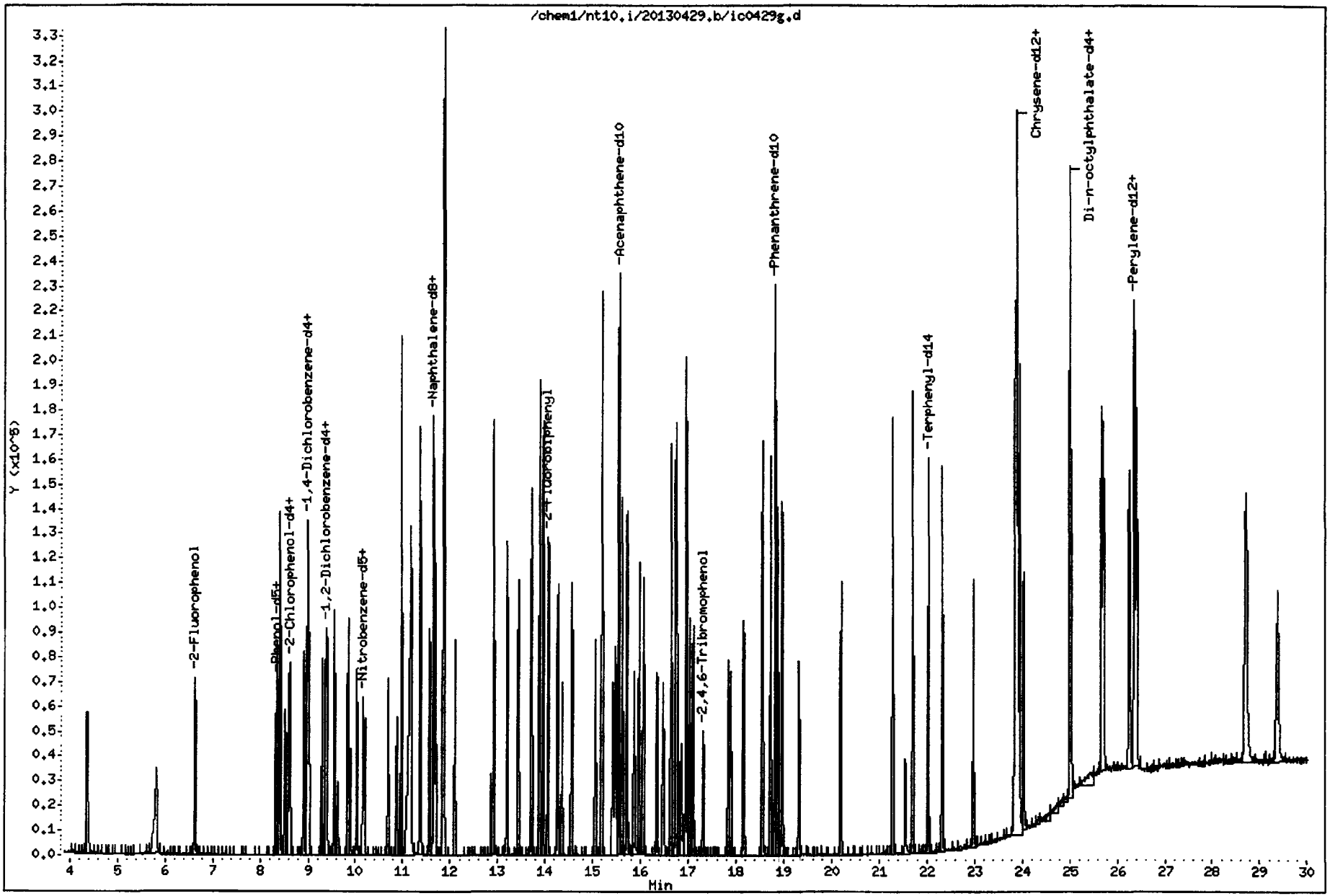
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.99	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.03
134 Di-n-octylphthala	24.99	24.49	25.49	25.00	0.03
77 Perylene-d12	26.35	25.85	26.85	26.36	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/20130429.b/ic0429g.d
Date : 29-APR-2013 20:34
Client ID:
Sample Info: IC0429G

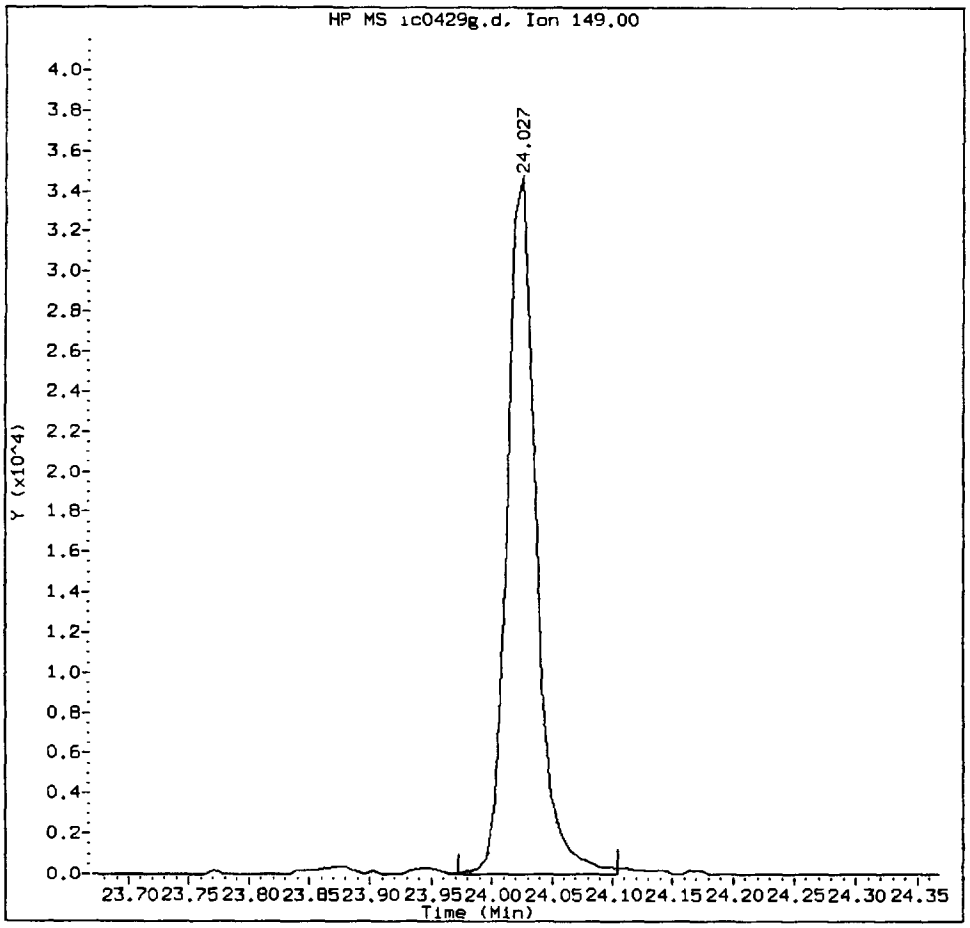
Instrument: nt10.i

Operator: VTS/YZ
Column phase: ZB-5msi
Column diameter: 0.25



IC0429G, /chem1/nt10.i/20130429.b/ic0429g.d

bis(2-Ethylhexyl)phthalate Amount: 2.51 Area: 59748



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ **Date:** 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429g.d

Lab ID: IC0429G, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/ic0429i.d
Lab Smp Id: IC0429I
Inj Date : 29-APR-2013 21:47
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429I
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 10 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.629	6.629	(0.738)	7097	0.50000	0.4779
$	2	Phenol-d5	99	8.337	8.337	(0.928)	8848	0.50000	0.4605
	3	Phenol	94	8.360	8.360	(0.931)	10487	0.50000	0.4876
$	5	2-Chlorophenol-d4	132	8.599	8.599	(0.958)	6852	0.50000	0.4698
	4	Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.949)	8003	0.50000	0.5174
	6	2-Chlorophenol	128	8.622	8.622	(0.960)	7629	0.50000	0.4600
	7	1,3-Dichlorobenzene	146	8.909	8.909	(0.992)	8033	0.50000	0.4826
*	8	1,4-Dichlorobenzene-d4	152	8.979	8.979	(1.000)	41602	4.00000	
	9	1,4-Dichlorobenzene	146	9.018	9.018	(1.004)	7938	0.50000	0.4839
$	10	1,2-Dichlorobenzene-d4	152	9.367	9.367	(1.043)	5208	0.50000	0.4964
	12	1,2-Dichlorobenzene	146	9.390	9.390	(1.046)	7759	0.50000	0.4940
	11	Benzyl alcohol	108	9.289	9.289	(1.035)	3823	0.50000	0.4226
	14	2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.072)	2289	0.50000	0.4795
	13	2-Methylphenol	108	9.553	9.553	(1.064)	7310	0.50000	0.4723
	17	Hexachloroethane	117	10.027	10.027	(1.117)	3426	0.50000	0.4991
	16	N-Nitroso-di-n-propylamine	70	9.895	9.895	(1.102)	4650	0.50000	0.4812
	15	4-Methylphenol	108	9.840	9.840	(1.096)	7046	0.50000	0.4465
$	18	Nitrobenzene-d5	82	10.159	10.159	(0.873)	8203	0.50000	0.4943
	19	Nitrobenzene	77	10.190	10.190	(0.875)	7721	0.50000	0.5040
	20	Isophorone	82	10.686	10.686	(0.918)	13058	0.50000	0.4531
	21	2-Nitrophenol	139	10.872	10.872	(0.934)	3663	0.50000	0.4265
	22	2,4-Dimethylphenol	107	10.964	10.964	(0.942)	14636	1.00000	0.9268
	23	Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	8541	0.50000	0.5026
	24	Benzoic acid	105	11.080	11.080	(0.952)	12620	2.00000	0.9294
	25	2,4-Dichlorophenol	162	11.365	11.365	(0.976)	11335	1.00000	0.7797
	26	1,2,4-Trichlorobenzene	180	11.558	11.558	(0.993)	6875	0.50000	0.4839
*	27	Naphthalene-d8	136	11.643	11.643	(1.000)	157250	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	11.681	11.681	(1.003)	19775	0.50000	0.4723
	29 4-Chloroaniline	127	11.843	11.843	(1.017)	14329	1.00000	0.8755
	30 Hexachlorobutadiene	225	12.099	12.099	(1.039)	3928	0.50000	0.4654
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	10700	1.00000	0.8367
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	13246	0.50000	0.4763
	33 Hexachlorocyclopentadiene	237	13.708	13.708	(0.882)	9274	1.00000	0.8934
	34 2,4,6-Trichlorophenol	196	13.879	13.879	(0.893)	8685	1.00000	0.8747
	35 2,4,5-Trichlorophenol	196	13.948	13.948	(0.898)	8785	1.00000	0.8583
$	36 2-Fluorobiphenyl	172	14.057	14.057	(0.905)	15786	0.50000	0.4794
	37 2-Chloronaphthalene	162	14.258	14.258	(0.918)	12356	0.50000	0.4714
	38 2-Nitroaniline	65	14.552	14.552	(0.937)	5242	1.00000	0.8286
	39 Dimethylphthalate	163	15.047	15.047	(0.969)	13385	0.50000	0.4726
	40 Acenaphthylene	152	15.194	15.194	(0.978)	21258	0.50000	0.4782
	41 2,6-Dinitrotoluene	165	15.179	15.179	(0.977)	6067	1.00000	0.9143
*	42 Acenaphthene-d10	164	15.535	15.535	(1.000)	94337	4.00000	
	43 3-Nitroaniline	138	15.473	15.473	(0.996)	5039	1.00000	0.9199
	44 Acenaphthene	153	15.604	15.604	(1.004)	12929	0.50000	0.4826
	45 2,4-Dinitrophenol	184	15.705	15.705	(1.011)	4345	2.00000	0.7522
	46 Dibenzofuran	168	15.960	15.960	(1.027)	17668	0.50000	0.4823
	47 4-Nitrophenol	109	15.867	15.867	(1.021)	1862	1.00000	0.4569
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	7334	1.00000	0.8570
	50 Diethylphthalate	149	16.632	16.632	(1.071)	13456	0.50000	0.4729
	49 Fluorene	166	16.733	16.733	(1.077)	14861	0.50000	0.4754
	51 4-Chlorophenyl-phenylether	204	16.748	16.748	(1.078)	7105	0.50000	0.4624
	52 4-Nitroaniline	138	16.841	16.841	(1.084)	4664	1.00000	0.8197
	53 4,6-Dinitro-2-methylphenol	198	16.949	16.949	(0.901)	9847	2.00000	1.299
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	8567	0.50000	0.4637
$	55 2,4,6-Tribromophenol	330	17.311	17.311	(1.114)	2005	0.50000	0.4019
	56 4-Bromophenyl-phenylether	248	17.836	17.836	(0.948)	4326	0.50000	0.4791
	57 Hexachlorobenzene	284	18.153	18.153	(0.965)	5141	0.50000	0.4772
	58 Pentachlorophenol	266	18.548	18.548	(0.986)	5592	1.00000	0.7394
*	59 Phenanthrene-d10	188	18.811	18.811	(1.000)	159582	4.00000	
	60 Phenanthrene	178	18.857	18.857	(1.002)	20200	0.50000	0.4641
	61 Anthracene	178	18.958	18.958	(1.008)	21303	0.50000	0.4777
	62 Carbazole	167	19.314	19.314	(1.027)	15951	0.50000	0.5889
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	19951	0.50000	0.4334
	64 Fluoranthene	202	21.279	21.279	(1.131)	23534	0.50000	0.4594
	65 Pyrene	202	21.697	21.697	(0.908)	24226	0.50000	0.4588
$	66 Terphenyl-d14	244	22.022	22.022	(0.922)	14939	0.50000	0.4497
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	7305	0.50000	0.4051
	68 Benzo(a)anthracene	228	23.864	23.864	(0.999)	22076	0.50000	0.4620
*	69 Chrysene-d12	240	23.895	23.895	(1.000)	170666	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.841	23.841	(0.998)	15590	1.00000	0.8567
	71 Chrysene	228	23.934	23.934	(1.002)	20337	0.50000	0.4703
	72 bis(2-Ethylhexyl)phthalate	149	24.019	24.019	(0.961)	10757	0.50000	0.4647(M)
*	134 Di-n-octylphthalate-d4	153	24.995	24.995	(1.000)	174102	4.00000	
	73 Di-n-octylphthalate	149	25.002	25.002	(1.000)	20550	0.50000	0.5126

	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	25.660	25.660	(0.974)	20816	0.50000	0.4439
75	Benzo(k)fluoranthene	252	25.699	25.699	(0.975)	22672	0.50000	0.4591
76	Benzo(a)pyrene	252	26.241	26.241	(0.996)	17222	0.50000	0.4299
* 77	Perylene-d12	264	26.350	26.350	(1.000)	157899	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.690	28.690	(1.089)	20006	0.50000	0.4335
79	Dibenzo(a,h)anthracene	278	28.698	28.698	(1.089)	14468	0.50000	0.4087
80	Benzo(g,h,i)perylene	276	29.350	29.350	(1.114)	17808	0.50000	0.4460
90	N-Nitrosodimethylamine	74	4.366	4.366	(0.486)	9105	1.00000	0.9607
91	Aniline	93	8.406	8.406	(0.936)	20193	0.50000	0.4839
93	Benzidine	184	21.542	21.542	(0.902)	8518	1.00000	1.621
103	Pyridine	79	4.397	4.397	(0.490)	8381	1.00000	1.006
105	1-methylnaphthalene	142	13.430	13.430	(1.153)	11744	0.50000	0.4605
111	Azobenzene (1,2-DP-Hydrazine)	77	17.095	17.095	(1.100)	14947	0.50000	0.5123
187	Total Benzofluoranthenes	252	25.699	25.699	(0.975)	41609	1.00000	0.9139
99	Perylene	252	26.388	26.388	(1.001)	21669	0.50000	0.4732
98	Retene	219	22.316	22.316	(0.934)	8851	0.50000	0.4429
120	2,3,4,6-Tetrachlorophenol	232	16.338	16.338	(1.052)	3016	0.50000	0.3961
188	2,6-Dichlorophenol	162	11.867	11.867	(1.019)	21326	1.00000	0.9052
189	N-Nitrosomethylethylamine	88	5.818	5.818	(0.648)	13437	1.00000	0.9505

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: ic0429i.d
Lab Smp Id: IC0429I
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	41602	-8.06
27 Naphthalene-d8	166754	83377	333508	157250	-5.70
42 Acenaphthene-d10	106910	53455	213820	94337	-11.76
59 Phenanthrene-d10	179783	89892	359566	159582	-11.24
69 Chrysene-d12	192841	96420	385682	170666	-11.50
134 Di-n-octylphthala	229567	114784	459134	174102	-24.16
77 Perylene-d12	184310	92155	368620	157899	-14.33

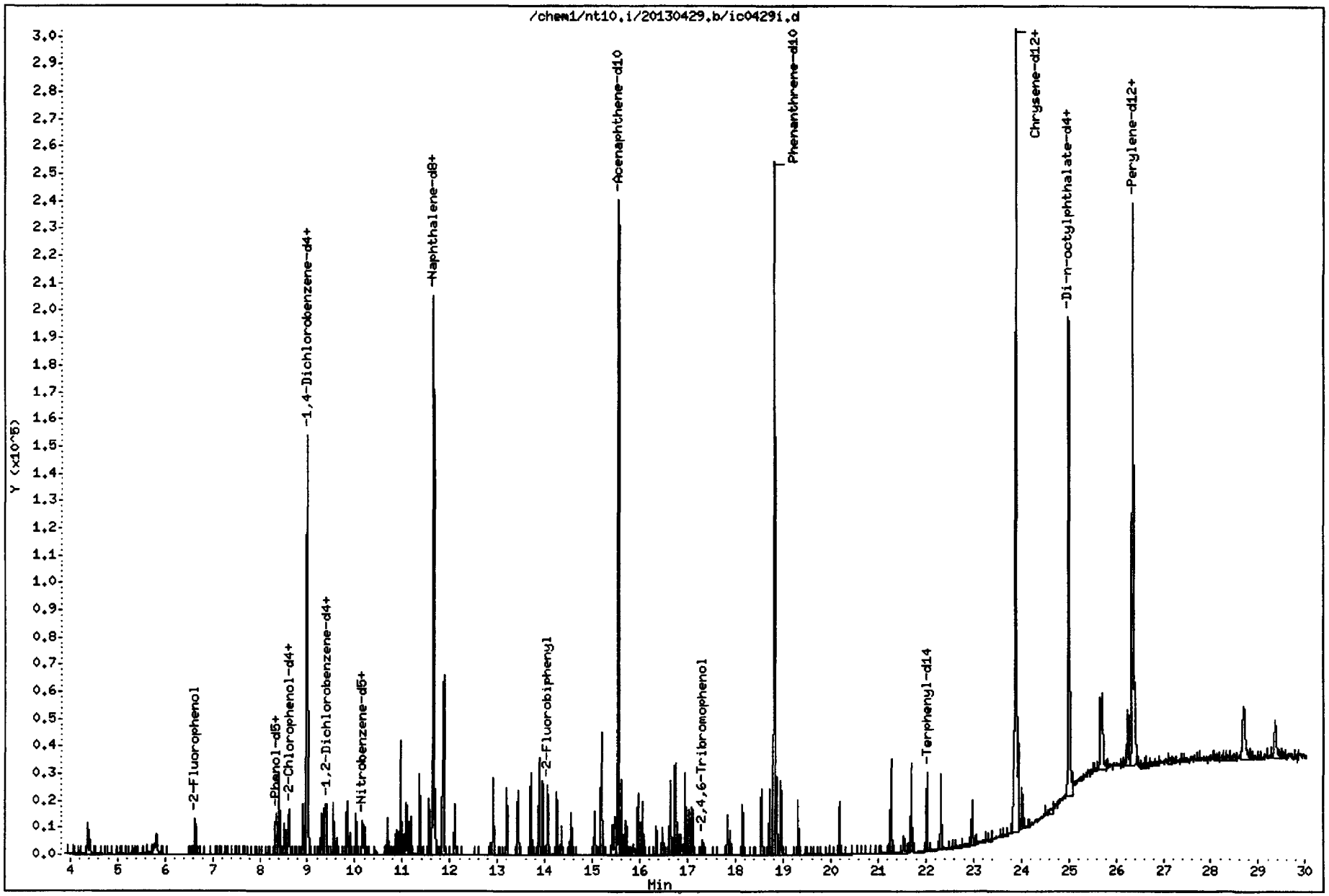
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.98	-0.08
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.53	-0.05
59 Phenanthrene-d10	18.82	18.32	19.32	18.81	-0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	24.99	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	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/20130429.b/ic0429i.d
Date : 29-APR-2013 21:47
Client ID:
Sample Info: IC0429I

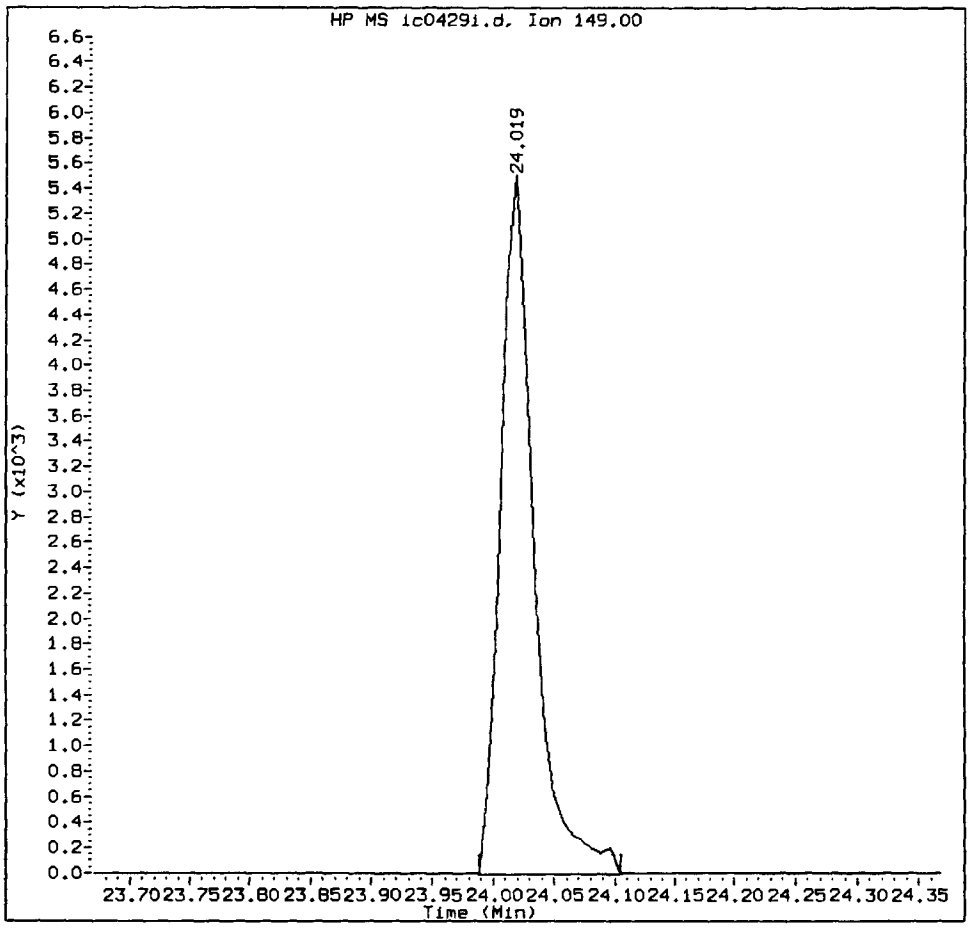
Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429I, /chem1/nt10.i/20130429.b/ic0429i.d

bis(2-Ethylhexyl)phthalate Amount: 0.46 Area: 10757



MANUAL INTEGRATION for bis(2-Ethylhexyl)phthalate

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/4/13

CO-ELUTION SUMMARY FOR FILE - ic0429i.d

Lab ID: IC0429I, Method: ABN.m, Instrument: nt10.i, Date: 29-APR-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130429.b/ic0429icv.d
Lab Smp Id: IC0429ICV
Inj Date : 29-APR-2013 22:24
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : IC0429ICV
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130429.b/ABN.m
Meth Date : 01-May-2013 11:15 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 11 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAHDR.sub
Target Version: 3.50

YZ 5/3/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$ 1	2-Fluorophenol	112	Compound Not Detected.					
$ 2	Phenol-d5	99	Compound Not Detected.					
3	Phenol	94	8.360	8.360	(0.931)	111426	5.21984	5.220
$ 5	2-Chlorophenol-d4	132	Compound Not Detected.					
4	Bis(2-Chloroethyl)ether	93	8.522	8.522	(0.949)	81953	5.33870	5.339
6	2-Chlorophenol	128	8.622	8.622	(0.960)	80570	4.89423	4.894
7	1,3-Dichlorobenzene	146	8.909	8.909	(0.992)	84507	5.11566	5.116
* 8	1,4-Dichlorobenzene-d4	152	8.979	8.979	(1.000)	41290	4.00000	
9	1,4-Dichlorobenzene	146	9.017	9.018	(1.004)	84755	5.20517	5.205
$ 10	1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
12	1,2-Dichlorobenzene	146	9.390	9.390	(1.046)	79538	5.10200	5.102
11	Benzyl alcohol	108	9.289	9.289	(1.035)	44014	4.90168	4.902
14	2,2'-oxybis(1-Chloropropane)	121	9.623	9.623	(1.072)	24983	5.27307	5.273
13	2-Methylphenol	108	9.545	9.553	(1.063)	84376	5.49292	5.493
17	Hexachloroethane	117	10.019	10.027	(1.116)	35524	5.21434	5.214
16	N-Nitroso-di-n-propylamine	70	9.895	9.895	(1.102)	51945	5.41648	5.416
15	4-Methylphenol	108	9.840	9.840	(1.096)	87603	5.59319	5.593
$ 18	Nitrobenzene-d5	82	Compound Not Detected.					
19	Nitrobenzene	77	10.190	10.190	(0.875)	79523	5.36973	5.370
20	Isophorone	82	10.686	10.686	(0.918)	173340	6.22278	6.223
21	2-Nitrophenol	139	10.872	10.872	(0.934)	42978	5.17676	5.177
22	2,4-Dimethylphenol	107	10.964	10.964	(0.942)	164268	10.7602	10.76
23	Bis(2-Chloroethoxy)methane	93	11.172	11.172	(0.960)	90256	5.49412	5.494
24	Benzoic acid	105	11.234	11.080	(0.965)	282915	21.0014	21.00
25	2,4-Dichlorophenol	162	11.365	11.365	(0.976)	155797	11.0867	11.09
26	1,2,4-Trichlorobenzene	180	11.558	11.558	(0.993)	70353	5.12215	5.122
* 27	Naphthalene-d8	136	11.643	11.643	(1.000)	152009	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	28 Naphthalene	128	11.689	11.681	(1.004)	191530	4.73263	4.733
	29 4-Chloroaniline	127	11.851	11.843	(1.018)	173412	10.9603	10.96
	30 Hexachlorobutadiene	225	12.098	12.099	(1.039)	42367	5.19271	5.193
	31 4-Chloro-3-methylphenol	107	12.911	12.911	(1.109)	147122	11.9007	11.90
	32 2-Methylnaphthalene	142	13.197	13.197	(1.134)	129228	4.80733	4.807
	33 Hexachlorocyclopentadiene	237	13.708	13.708	(0.882)	107971	10.2504	10.25
	34 2,4,6-Trichlorophenol	196	13.878	13.879	(0.893)	112509	11.1670	11.17
	35 2,4,5-Trichlorophenol	196	13.956	13.948	(0.898)	125520	12.0854	12.09
$	36 2-Fluorobiphenyl	172	Compound Not Detected.					
	37 2-Chloronaphthalene	162	14.258	14.258	(0.918)	142918	5.37333	5.373
	38 2-Nitroaniline	65	14.559	14.552	(0.937)	73989	11.5256	11.53
	39 Dimethylphthalate	163	15.055	15.047	(0.969)	152060	5.29173	5.292
	40 Acenaphthylene	152	15.194	15.194	(0.978)	207472	4.59913	4.599
	41 2,6-Dinitrotoluene	165	15.186	15.179	(0.978)	75138	11.1601	11.16
*	42 Acenaphthene-d10	164	15.534	15.535	(1.000)	95722	4.00000	
	43 3-Nitroaniline	138	15.488	15.473	(0.997)	71502	12.8642	12.86
	44 Acenaphthene	153	15.612	15.604	(1.005)	131114	4.82292	4.823
	45 2,4-Dinitrophenol	184	15.712	15.705	(1.011)	126391	20.8995	20.90
	46 Dibenzofuran	168	15.967	15.960	(1.028)	179601	4.83159	4.832
	47 4-Nitrophenol	109	15.867	15.867	(1.021)	43830	10.4514	10.45
	48 2,4-Dinitrotoluene	165	16.052	16.052	(1.033)	100486	11.5716	11.57
	50 Diethylphthalate	149	16.640	16.632	(1.071)	148426	5.14027	5.140
	49 Fluorene	166	16.733	16.733	(1.077)	152283	4.80101	4.801
	51 4-Chlorophenyl-phenylether	204	16.748	16.748	(1.078)	77730	4.98522	4.985
	52 4-Nitroaniline	138	16.856	16.841	(1.085)	68038	11.7844	11.78
	53 4,6-Dinitro-2-methylphenol	198	16.964	16.949	(0.902)	169347	21.7583	21.76
	54 N-Nitrosodiphenylamine	169	17.026	17.026	(0.905)	102490	5.46980	5.470
$	55 2,4,6-Tribromophenol	330	Compound Not Detected.					
	56 4-Bromophenyl-phenylether	248	17.836	17.836	(0.948)	49463	5.40070	5.401
	57 Hexachlorobenzene	284	18.153	18.153	(0.965)	56636	5.18261	5.183
	58 Pentachlorophenol	266	18.547	18.548	(0.986)	90998	11.8629	11.86
*	59 Phenanthrene-d10	188	18.811	18.811	(1.000)	161863	4.00000	
	60 Phenanthrene	178	18.865	18.857	(1.003)	216640	4.90686	4.907
	61 Anthracene	178	18.958	18.958	(1.008)	219969	4.86323	4.863
	62 Carbazole	167	19.313	19.314	(1.027)	146715	5.34003	5.340
	63 Di-n-butylphthalate	149	20.188	20.188	(1.073)	259155	5.55031	5.550
	64 Fluoranthene	202	21.279	21.279	(1.131)	257141	4.94850	4.949
	65 Pyrene	202	21.696	21.697	(0.908)	264541	4.88069	4.881
$	66 Terphenyl-d14	244	Compound Not Detected.					
	67 Butylbenzylphthalate	149	22.974	22.974	(0.961)	106153	5.73506	5.735
	68 Benzo(a)anthracene	228	23.872	23.864	(0.999)	240855	4.91069	4.911
*	69 Chrysene-d12	240	23.895	23.895	(1.000)	175186	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.841	23.841	(0.998)	155141	8.30491	8.305
	71 Chrysene	228	23.942	23.934	(1.002)	214847	4.84048	4.840
	72 bis(2-Ethylhexyl)phthalate	149	25.010	24.019	(1.001)	242465	5.33975	5.340
*	134 Di-n-octylphthalate-d4	153	24.995	24.995	(1.000)	197383	4.00000	
	73 Di-n-octylphthalate	149	25.010	25.002	(1.001)	242465	5.33515	5.335

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
74	Benzo(b)fluoranthene	252	25.668	25.660	(0.974)	227705	4.59796	4.598
75	Benzo(k)fluoranthene	252	25.707	25.699	(0.976)	268725	5.15172	5.152
76	Benzo(a)pyrene	252	26.249	26.241	(0.996)	203839	4.81788	4.818
* 77	Perylene-d12	264	26.349	26.350	(1.000)	166766	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.690	28.690	(1.089)	251131	5.15203	5.152
79	Dibenzo(a,h)anthracene	278	28.713	28.698	(1.090)	191446	5.12002	5.120
80	Benzo(g,h,i)perylene	276	29.373	29.350	(1.115)	209597	4.96989	4.970
90	N-Nitrosodimethylamine	74	4.358	4.366	(0.485)	105643	11.2307	11.23
91	Aniline	93	8.406	8.406	(0.936)	203803	4.92093	4.921
93	Benzidine	184	21.542	21.542	(0.902)	86479	15.0162	15.02(R)
103	Pyridine	79	4.374	4.397	(0.487)	90444	10.9387	10.94
105	1-methylnaphthalene	142	13.430	13.430	(1.153)	118938	4.82444	4.824
111	Azobenzene (1,2-DP-Hydrazine)	77	17.103	17.095	(1.101)	163298	5.51577	5.516
187	Total Benzofluoranthenes	252	25.707	25.699	(0.976)	469919	9.77502	9.775
99	Perylene	252	26.404	26.388	(1.002)	212820	4.40032	4.400
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					
188	2,6-Dichlorophenol	162	Compound Not Detected.					
189	N-Nitrosomethylethylamine	88	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: ic0429icv.d
Lab Smp Id: IC0429ICV
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 16:53

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	41290	-8.75
27 Naphthalene-d8	166754	83377	333508	152009	-8.84
42 Acenaphthene-d10	106910	53455	213820	95722	-10.46
59 Phenanthrene-d10	179783	89892	359566	161863	-9.97
69 Chrysene-d12	192841	96420	385682	175186	-9.16
134 Di-n-octylphthala	229567	114784	459134	197383	-14.02
77 Perylene-d12	184310	92155	368620	166766	-9.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.99	8.49	9.49	8.98	-0.09
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.53	-0.05
59 Phenanthrene-d10	18.82	18.32	19.32	18.81	-0.04
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
134 Di-n-octylphthala	24.99	24.49	25.49	24.99	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	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: 20130429
Sample Matrix: NONE Fraction: SV
Lab Smp Id: IC0429ICV
Level: Operator: VTS/YZ
Data Type: MS DATA SampleType: LCS
SpikeList File: ICVS.spk Quant Type: ISTD
Sublist File: PSDDAHDR.sub
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

SPIKE	COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
3	Phenol	5.000	5.220	104.40	
4	Bis(2-Chloroethyl)	5.000	5.339	106.77	
6	2-Chlorophenol	5.000	4.894	97.88	
7	1,3-Dichlorobenzen	5.000	5.116	102.31	
9	1,4-Dichlorobenzen	5.000	5.205	104.10	
11	Benzyl alcohol	5.000	4.902	98.03	
12	1,2-Dichlorobenzen	5.000	5.102	102.04	
13	2-Methylphenol	5.000	5.493	109.86	
14	2,2'-oxybis(1-Chlo	5.000	5.273	105.46	
15	4-Methylphenol	5.000	5.593	111.86	
16	N-Nitroso-di-n-pro	5.000	5.416	108.33	
17	Hexachloroethane	5.000	5.214	104.29	
19	Nitrobenzene	5.000	5.370	107.39	
20	Isophorone	5.000	6.223	124.46	
21	2-Nitrophenol	5.000	5.177	103.54	
22	2,4-Dimethylphenol	10.00	10.76	107.60	
23	Bis(2-Chloroethoxy	5.000	5.494	109.88	
24	Benzoic acid	20.00	21.00	105.01	
25	2,4-Dichlorophenol	10.00	11.09	110.87	
26	1,2,4-Trichloroben	5.000	5.122	102.44	
28	Naphthalene	5.000	4.733	94.65	
29	4-Chloroaniline	10.00	10.96	109.60	
30	Hexachlorobutadien	5.000	5.193	103.85	
31	4-Chloro-3-methylp	10.00	11.90	119.01	
32	2-Methylnaphthalen	5.000	4.807	96.15	
33	Hexachlorocyclopen	10.00	10.25	102.50	
34	2,4,6-Trichlorophe	10.00	11.17	111.67	
35	2,4,5-Trichlorophe	10.00	12.09	120.85	
37	2-Chloronaphthalen	5.000	5.373	107.47	
38	2-Nitroaniline	10.00	11.53	115.26	
39	Dimethylphthalate	5.000	5.292	105.83	
40	Acenaphthylene	5.000	4.599	91.98	
41	2,6-Dinitrotoluene	10.00	11.16	111.60	

SPIKE	COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
43	3-Nitroaniline	10.00	12.86	128.64	
44	Acenaphthene	5.000	4.823	96.46	
45	2,4-Dinitrophenol	20.00	20.90	104.50	
46	Dibenzofuran	5.000	4.832	96.63	
47	4-Nitrophenol	10.00	10.45	104.51	
48	2,4-Dinitrotoluene	10.00	11.57	115.72	
49	Fluorene	5.000	4.801	96.02	
50	Diethylphthalate	5.000	5.140	102.81	
51	4-Chlorophenyl-phe	5.000	4.985	99.70	
52	4-Nitroaniline	10.00	11.78	117.84	
53	4,6-Dinitro-2-meth	20.00	21.76	108.79	
54	N-Nitrosodiphenyla	5.000	5.470	109.40	
56	4-Bromophenyl-phen	5.000	5.401	108.01	
57	Hexachlorobenzene	5.000	5.183	103.65	
58	Pentachlorophenol	10.00	11.86	118.63	
60	Phenanthrene	5.000	4.907	98.14	
61	Anthracene	5.000	4.863	97.26	
63	Di-n-butylphthalat	5.000	5.550	111.01	
64	Fluoranthene	5.000	4.949	98.97	
65	Pyrene	5.000	4.881	97.61	
67	Butylbenzylphthala	5.000	5.735	114.70	
68	Benzo(a)anthracene	5.000	4.911	98.21	
70	3,3'-Dichlorobenzi	10.00	8.305	83.05	
71	Chrysene	5.000	4.840	96.81	
72	bis(2-Ethylhexyl)p	5.000	5.340	106.80	
73	Di-n-octylphthalat	5.000	5.335	106.70	
74	Benzo(b)fluoranthe	5.000	4.598	91.96	
75	Benzo(k)fluoranthe	5.000	5.152	103.03	
76	Benzo(a)pyrene	5.000	4.818	96.36	
78	Indeno(1,2,3-cd)py	5.000	5.152	103.04	
79	Dibenzo(a,h)anthra	5.000	5.120	102.40	
80	Benzo(g,h,i)peryle	5.000	4.970	99.40	
90	N-Nitrosodimethyla	10.00	11.23	112.31	
91	Aniline	5.000	4.921	98.42	
93	Benzidine	10.00	15.02	150.16*	
105	1-methylnaphthalen	5.000	4.824	96.49	
120	2,3,4,6-Tetrachlo	5.000	0.000	*	
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: 20130429
Sample Matrix: NONE Fraction: SV
Lab Smp Id: IC0429ICV
Level: Operator: VTS/YZ
Data Type: MS DATA SampleType: LCS
SpikeList File: ICVS.spk Quant Type: ISTD
Sublist File: PSDDAHDR.sub
Method File: /chem1/nt10.i/20130429.b/ABN.m
Misc Info:

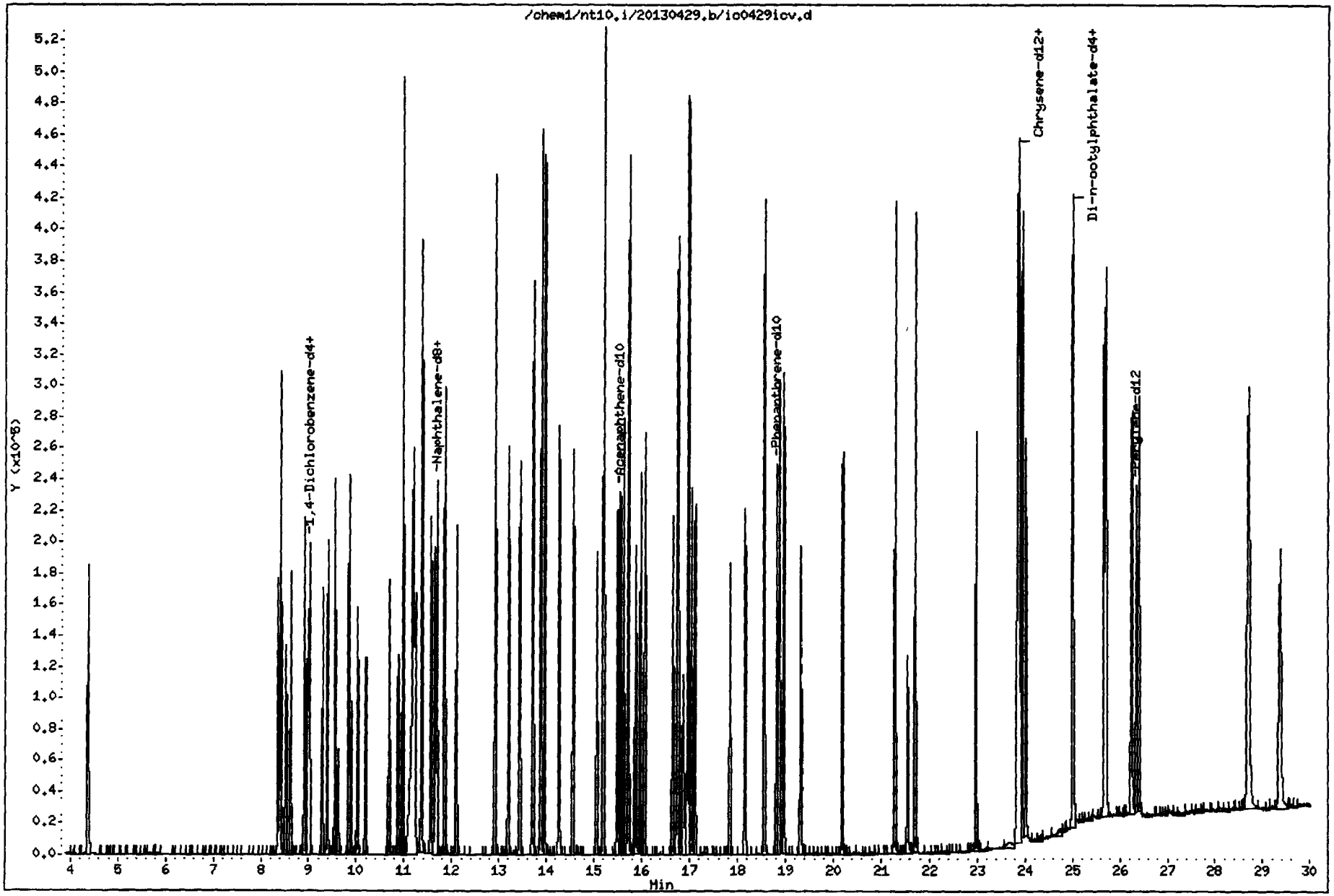
SURROGATE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	7.500	0.000	*	
$ 2 Phenol-d5	7.500	0.000	*	
$ 5 2-Chlorophenol-d4	7.500	0.000	*	
$ 10 1,2-Dichlorobenze	5.000	0.000	*	
$ 18 Nitrobenzene-d5	5.000	0.000	*	
$ 36 2-Fluorobiphenyl	5.000	0.000	*	
$ 55 2,4,6-Tribromophe	7.500	0.000	*	
$ 66 Terphenyl-d14	5.000	0.000	*	

Data File: /chem1/nt10.i/20130429.b/ic0429icv.d
Date : 29-APR-2013 22:24
Client ID:
Sample Info: IC0429ICV

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

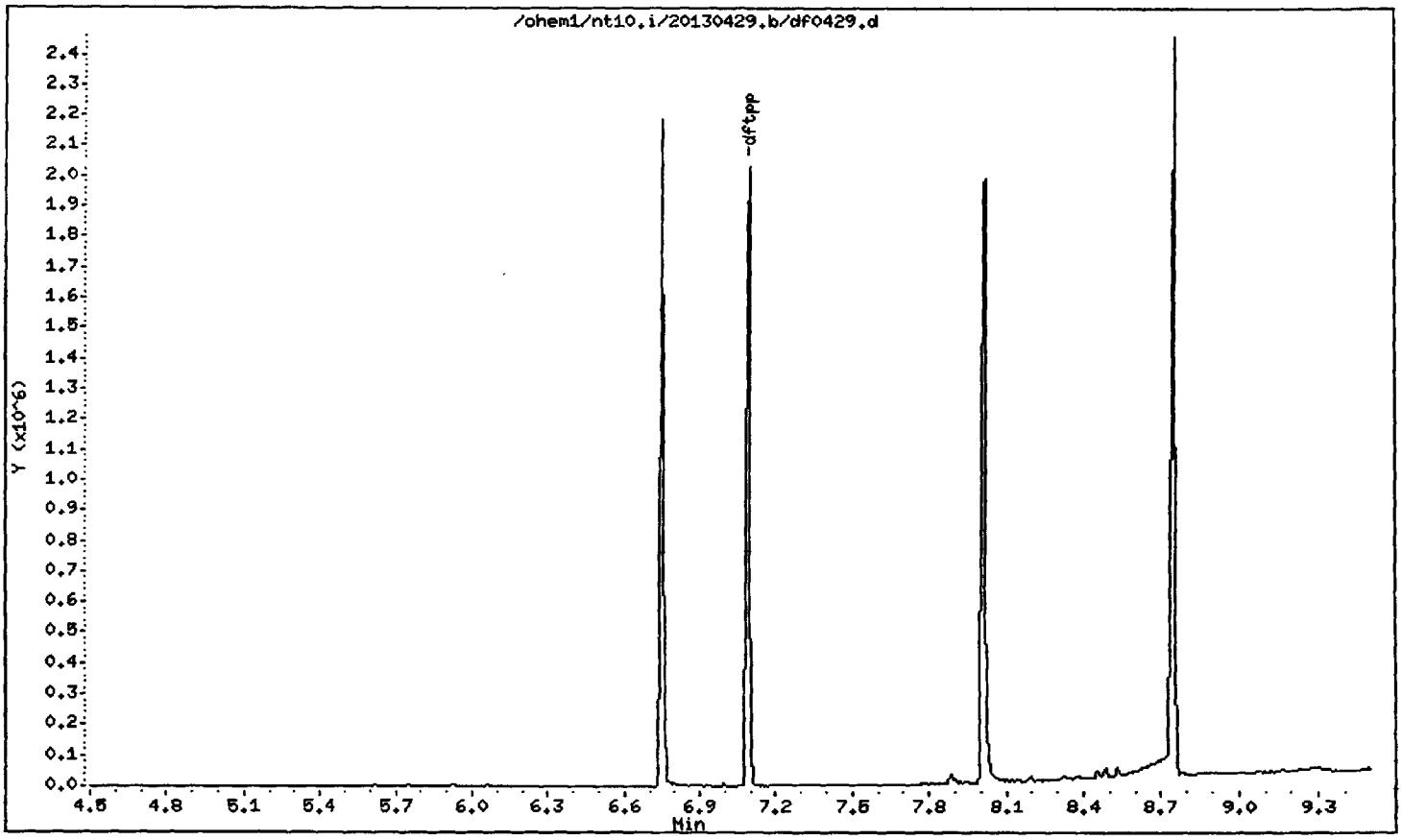
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

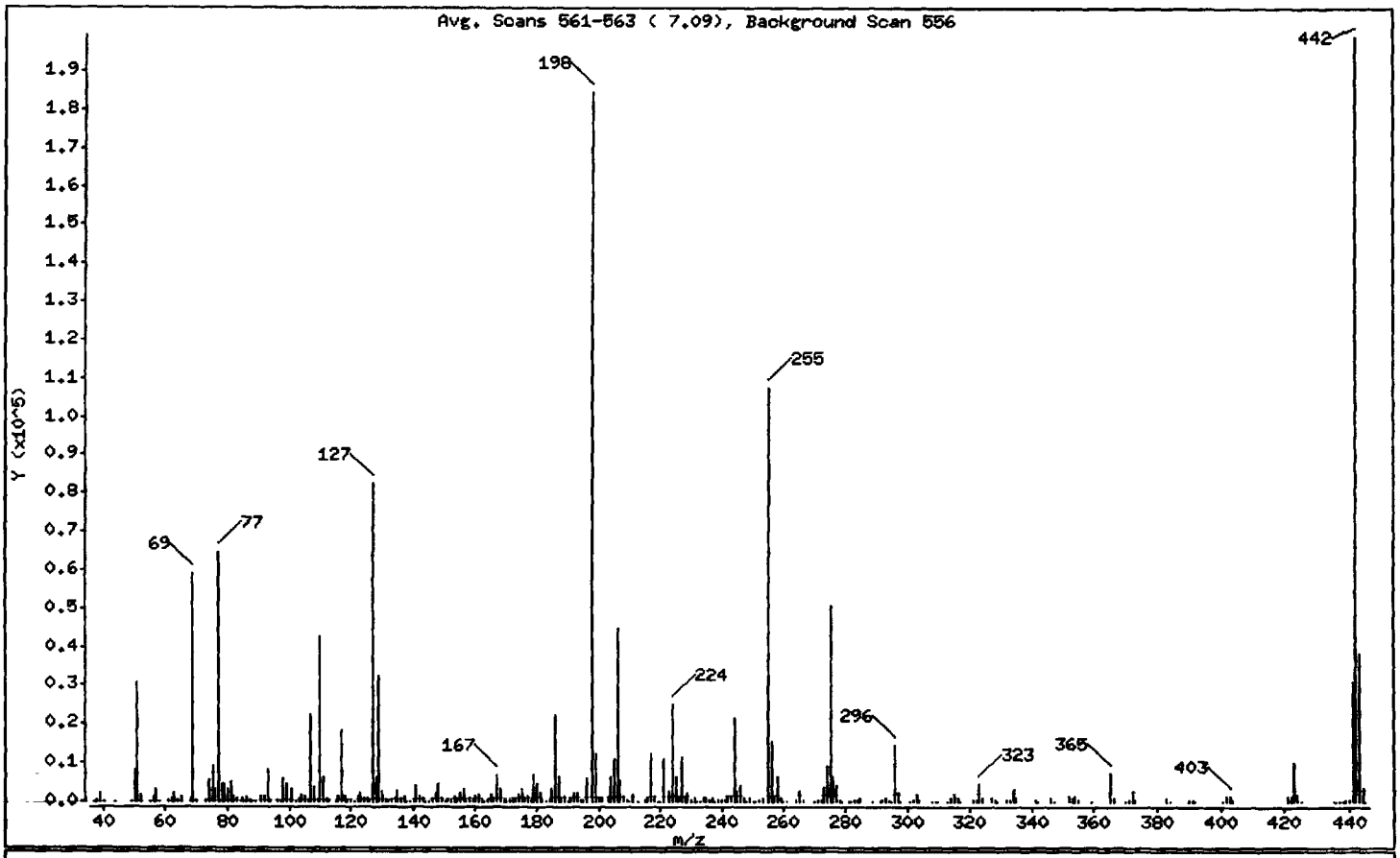
Sample Info: DFTPP

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	16.70
68	Less than 2.00% of mass 69	0.51 (1.60)
69	Mass 69 relative abundance	31.97
70	Less than 2.00% of mass 69	0.15 (0.46)
127	10.00 - 80.00% of mass 198	44.78
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	27.44
365	Greater than 1.00% of mass 198	4.00
441	0.01 - 24.00% of mass 442	16.80 (15.56)
442	50.00 - 200.00% of mass 198	107.98
443	15.00 - 24.00% of mass 442	20.84 (19.30)

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d
Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556
Location of Maximum: 442.00
Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	119	128.00	6232	203.00	1259	289.00	149
38.00	415	129.00	32664	204.00	6492	291.00	55
39.00	2393	130.00	2738	205.00	11023	292.00	248
40.00	132	131.00	547	206.00	44808	293.00	944
44.00	78	132.00	207	207.00	5716	294.00	225
49.00	203	133.00	272	208.00	1602	295.00	86
50.00	8343	134.00	858	209.00	559	296.00	14604
51.00	30808	135.00	2801	210.00	130	297.00	2070
52.00	1637	136.00	916	211.00	1868	298.00	119
55.00	158	137.00	1248	213.00	64	301.00	172
56.00	1274	138.00	214	215.00	464	302.00	318
57.00	3130	139.00	128	216.00	999	303.00	1693
58.00	121	140.00	298	217.00	12350	304.00	431
61.00	576	141.00	4004	218.00	1562	308.00	140
62.00	758	142.00	1332	219.00	107	309.00	66
63.00	2110	143.00	918	220.00	86	310.00	122
64.00	365	144.00	184	221.00	10806	313.00	127
65.00	1151	145.00	229	223.00	2947	314.00	769
68.00	946	146.00	756	224.00	25312	315.00	1728
69.00	58984	147.00	2094	225.00	6355	316.00	922
70.00	271	148.00	4544	226.00	766	317.00	88
73.00	494	149.00	885	227.00	11288	321.00	436
74.00	5693	150.00	191	228.00	1533	322.00	230
75.00	9303	151.00	532	229.00	2272	323.00	4678
76.00	3182	152.00	251	230.00	340	324.00	920
77.00	64696	153.00	1367	231.00	1037	327.00	968
78.00	4399	154.00	1025	232.00	136	328.00	465
79.00	4595	155.00	2332	233.00	163	329.00	50
80.00	3355	156.00	3268	234.00	787	332.00	367
81.00	4879	157.00	652	235.00	849	333.00	490
82.00	1244	158.00	750	236.00	522	334.00	3152
83.00	1132	159.00	624	237.00	861	335.00	753
84.00	59	160.00	1324	238.00	117	341.00	568
85.00	783	161.00	1910	239.00	422	342.00	139
86.00	1346	162.00	596	240.00	404	346.00	1068

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d

Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556

Location of Maximum: 442.00

Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
87.00	634	163.00	120	241.00	673	347.00	165
88.00	209	164.00	312	242.00	1491	352.00	1522
89.00	58	165.00	1684	243.00	1585	353.00	1048
91.00	1173	166.00	900	244.00	21560	354.00	1434
92.00	1265	167.00	7028	245.00	2828	355.00	307
93.00	8038	168.00	3167	246.00	4226	359.00	51
94.00	544	169.00	640	247.00	836	365.00	7383
96.00	486	170.00	289	248.00	173	366.00	950
97.00	173	171.00	367	249.00	766	370.00	83
98.00	5992	172.00	736	250.00	145	371.00	406
99.00	4376	173.00	984	251.00	198	372.00	2676
100.00	452	174.00	1650	252.00	278	373.00	680
101.00	3021	175.00	3419	253.00	722	383.00	692
102.00	131	176.00	1090	255.00	107624	384.00	117
103.00	907	177.00	1541	256.00	15761	390.00	337
104.00	1840	178.00	570	257.00	1160	391.00	291
105.00	1589	179.00	6738	258.00	6194	392.00	71
106.00	548	180.00	4416	259.00	1028	401.00	221
107.00	22656	181.00	2092	260.00	162	402.00	1163
108.00	3534	182.00	309	261.00	213	403.00	1545
109.00	609	183.00	166	264.00	253	404.00	599
110.00	42496	184.00	593	265.00	2547	421.00	1426
111.00	6272	185.00	3035	266.00	526	422.00	1250
112.00	744	186.00	22616	270.00	181	423.00	9992
113.00	246	187.00	6353	271.00	299	424.00	1966
115.00	56	188.00	695	272.00	416	425.00	183
116.00	1316	189.00	1391	273.00	3826	435.00	62
117.00	18496	190.00	224	274.00	8949	436.00	62
118.00	1424	191.00	864	275.00	50632	437.00	225
119.00	236	192.00	2063	276.00	6580	438.00	213
120.00	238	193.00	2223	277.00	4111	439.00	328
121.00	63	194.00	423	278.00	606	440.00	329
122.00	1437	195.00	416	279.00	122	441.00	31000
123.00	2280	196.00	5832	281.00	202	442.00	199232
124.00	999	198.00	184512	282.00	126	443.00	38448

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

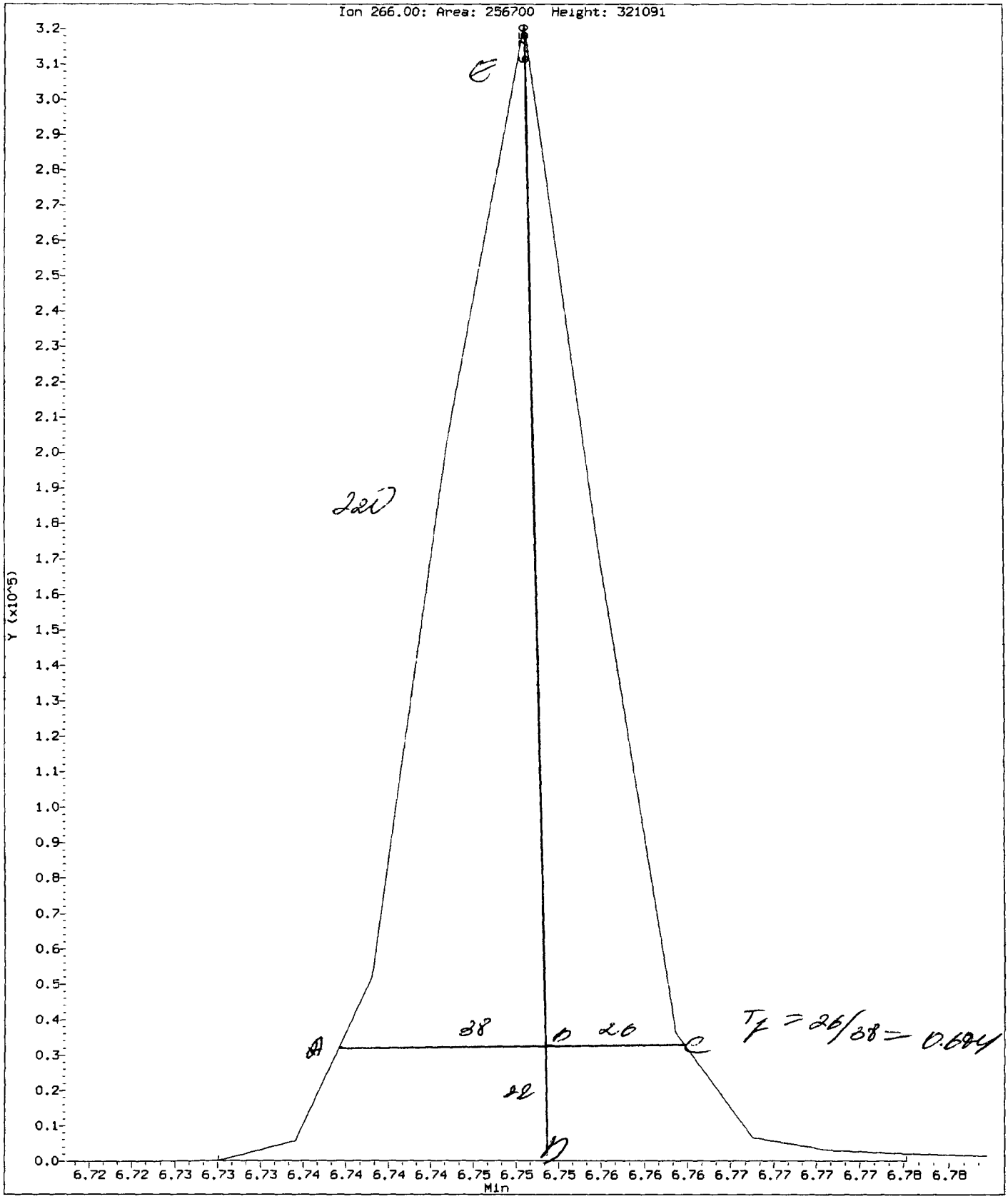
Column diameter: 0.25

Data File: df0429.d
Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556
Location of Maximum: 442.00
Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
125.00	975	199.00	12407	283.00	532	444.00	3458
126.00	347	200.00	963	284.00	336	445.00	131
127.00	82624	201.00	1058	285.00	774		

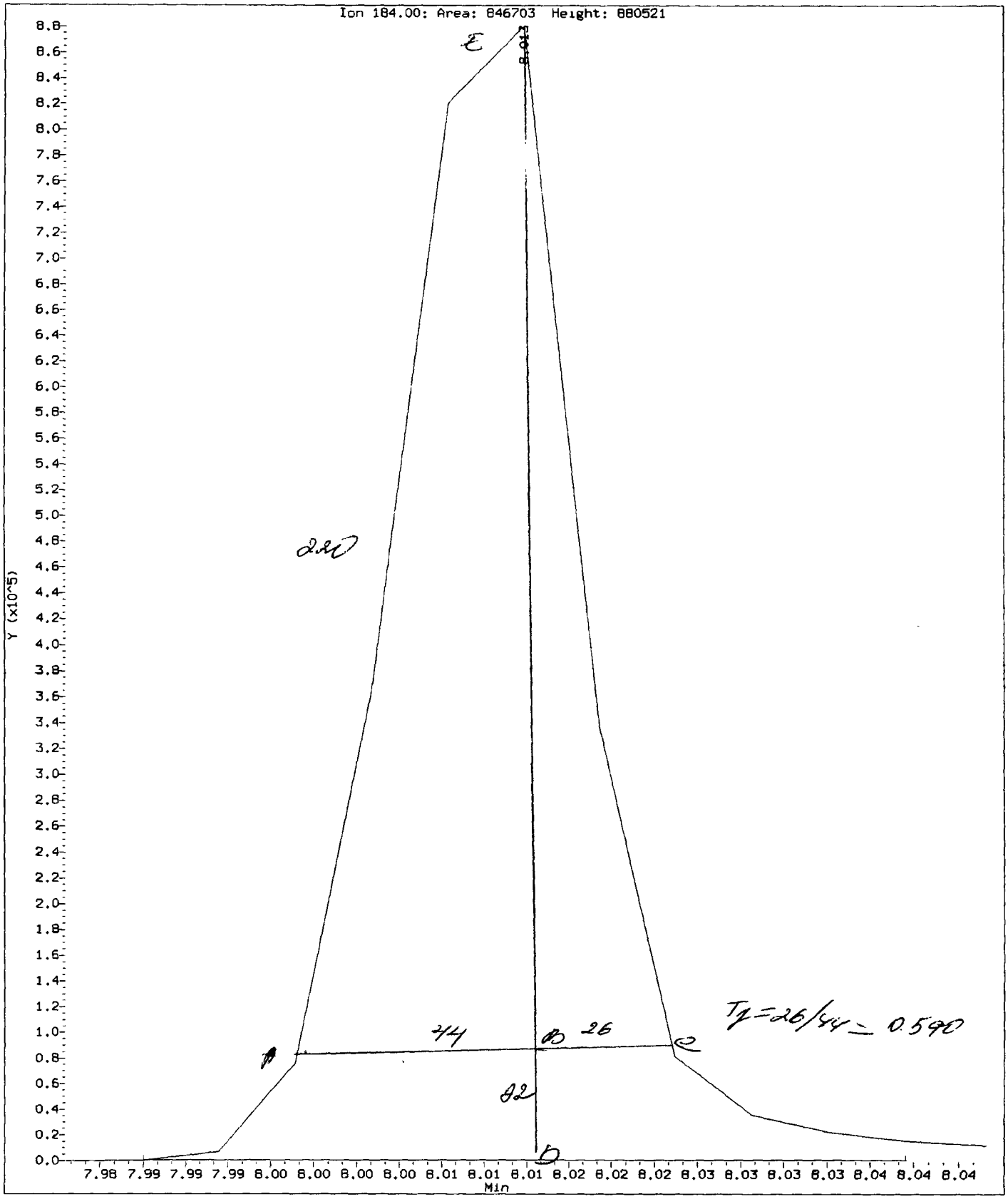
Data File: /chem1/nt10.i/20130429.b/ddt.b/df0429.d
Injection Date: 29-APR-2013 16:37
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20130429.b/ddt.b/df0429.d
Injection Date: 29-APR-2013 16:37
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/20130429.b/ddt.b/df0429.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130429.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 29-APR-2013 16:37 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.750	256700
Benzidine	8.013	846703
4,4'-DDE	8.195	1804
4,4'-DDD	8.483	6740
4,4'-DDT	8.745	445165

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(1804 + 6740) * 100}{(1804 + 6740 + 445165)}$$

DDT Percent Breakdown = 1.9 %

Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WS91

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WS91 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: 04/29/13 Analysis Start Date: 06/20/13

	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 / Acid condens.
Peak Tailing Factor ≤2?	Y / N / ✓	Method Blank in Control?	Y / N / ✓
CCAL Meets %D?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / See Form III
ICAL Q Flag applied?	Y / N / ✓	LCS / LCSD RPD ≤ 30%?	NA / See Form III
CCAL Q flag applied?	Y / N / ✓	MS / MSD Recovery in Control?	Y / N / matrix effect / Acid condensate
Surrogate Recovery met?	Y / N / ✓	MS / MSD RPD ≤ 30%?	NA / NO
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.

- All samples: aldol condensation, mbs - IS failed low.
- mbs was re-run on 06/24/13 after the H_2O wash.
- A/Ams/Amsd: Tribromophenol surr recovery low, below QC.

See chromatograms

(Review 1) Analyst: YZ **Date:** 6/25/13

(Review 2) Reviewer: [signature] **Date:** 6/25/13

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 6/20/13 Analysis: (A8260) SIM/ABN Analyst: YZ

GC Program: ABN_2 Column No: 252 947 Column Type: ZB5 ms1

Instrument Tune (.U or .CT.): 130228c1 EM Voltage: 1753

Calibration File: DE0620 Curve Date: 4/29/13 Injection Vol.: 1ul

IS/SS	Ical/Ccal	LCS/ICV
	B000670	
	B000582	
	2064-2	
	B000482	
	1998-2.	

Document All Maintenance Tasks In Element

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130620.b

	Time	Filename	LabID	ClientId	DF											
1	1003	df0620.d	DFTPP	DFTPP	1	NO ISTDS FOUND										
2	1018	cc0620 d	CC0620		1	7.69	41342	10.26	157631	14 05	100838	17.24	167850	22.45	151335	24 72	144619	23.66	189779
3	1134	wu12mb d	WU12MBS1	WU12MBS1	1	7 69	46961	10.26	174512	14.05	104777	17 24	169134	22 45	180676	24.72	147953	23 66	216953
4	1211	wu12sb d	WU12LCSS1	WU12LCSS1	1	7.69	42022	10 26	154569	14.04	95171	17.23	155218	22.45	166061	24.72	139519	23.66	204512
5	1247	wu12sbd d	WU12LCSDS1	WU12LCSDS1	1	7.69	41000	10.26	147828	14.05	92681	17 24	150291	22 45	161585	24 72	139227	23.66	195489
6	1324	wu12a.d	WU12A	SC-69N-(-5 T	1	7.69	48237	10.26	181382	14.05	106072	17.23	175920	22.45	167857	24.72	158358	23.66	210406
7	1401	wu12b d	WU12B	SC-70E-(-5 T	1	7 71	36836	10 28	140373	14.07	79525	17.30	144290	22.52	162273	24.81	135652	23.63	196876
8	1828	wt04g30.d	WT04G	RCB291-06061	30	7.69	37987	10.26	140084	14.09	87570	17.24	106847	22.46	120744	24.73	124950	23.66	153429
9	1524	wu12b20.d	WU12B	SC-70E-(-5 T	20	7.70	44702	10 26	161603	14 05	96201	17.24	152740	22.45	144736	24 73	142767	23.67	212468
10	1601	ws91sb.d	WS91LCSS1		1	7.69	43340	10.26	161474	14.05	96609	17 23	160846	22.45	168731	24.72	147323	23.66	200706
11	2244	ws91qls.d	WS91QLS		1	7.69	43439	10 26	162246	14.05	97234	17.24	156357	22.46	177760	24 73	163845	23 66	212400
12	1638	ws91a.d	WS91A		1	7.75	29777	10.29	117810	14.05	68387	17.25	100921	22.49	129376	24.78	137291	23.70	176922
13	1714	ws91ams.d	WS91AMS		1	7.75	29901	10.28	116132	14.06	66136	17.26	100502	22.50	131936	24 78	146029	23.70	173359
14	1751	ws91amsd d	WS91AMSD		1	7.75	30049	10.28	114569	14.06	66019	17.25	98471	22.49	129545	24.78	134358	23.70	173331
15	1904	wt54mbs1.d	WT54MBS1	WT54MBS1	1	7.69	39172	10.26	148168	14.05	89194	17.24	147093	22.45	151600	24.72	127738	23.66	170944
16	1941	wt541css1.d	WT54LCSS1	WT54LCSS1	1	7.69	41477	10.26	152373	14 05	93771	17.23	152654	22.46	169347	24.72	148682	23 66	201857
17	2018	wt541csds1.d	WT54LCSDS1	WT54LCSDS1	1	7.69	39787	10.26	148457	14.05	91206	17.23	146792	22.45	162727	24 72	145369	23.66	191709
18	2054	wt54a.d	WT54A	SD-PEB017	1	7.69	42977	10.26	165109	14.04	99064	17.23	163016	22.45	180599	24.72	157378	23.66	217753
19	2131	wt82a d	WT82A	SD-PEB007	1	7.68	42696	10.26	159771	14.05	94187	17.24	147729	22.45	165991	24.72	154785	23.66	198074

YZ 6/24/13

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/20130620.b

ARI Job No.: WS91 Method: ABN.m Instrument: nt10.i Date: 20-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1601	ws91sb.d	WS91LCSS1	WS91LCSS1	1	Aniline,
1638	ws91a.d	WS91A	CL-MH-SPS-	1	Di-n-octylphthalate, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, 2-Fluorophenol, Nitrobenzene-d5,
1714	ws91ams.d	WS91AMS	CL-MH-SPS-	1	N-Nitroso-di-n-propylamine, Di-n-octylphthalate, Benzo(k)fluoranthene, 2-Fluorophenol, Nitrobenzene-d5,
1751	ws91amsd.d	WS91AMSD	CL-MH-SPS-	1	2,2'-oxybis(1-Chloropropane), 3,3'-Dichlorobenzidine, Di-n-octylphthalate, Dibenzo(a,h)anthracene, 2-Fluorophenol,
1618	ws91mb.d	WS91MBS1	WS91MBS1	1	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130620.b

Instrument: nt10.i Date: 20-JUN-2013 Method: ABN.m

INITIAL CAL: 29-APR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 20-JUN-2013

Compound	%D
Benzoic acid	-29.7
Hexachlorocyclopentadiene	-38.4
2,4-Dinitrophenol	-39.9
4-Nitrophenol	-21.3
~~Benzidine~~	~~-37.1~~

Data File: /chem1/nt10.i/20130620.b/df0620.d

Date : 20-JUN-2013 10:03

Client ID: DFTPP

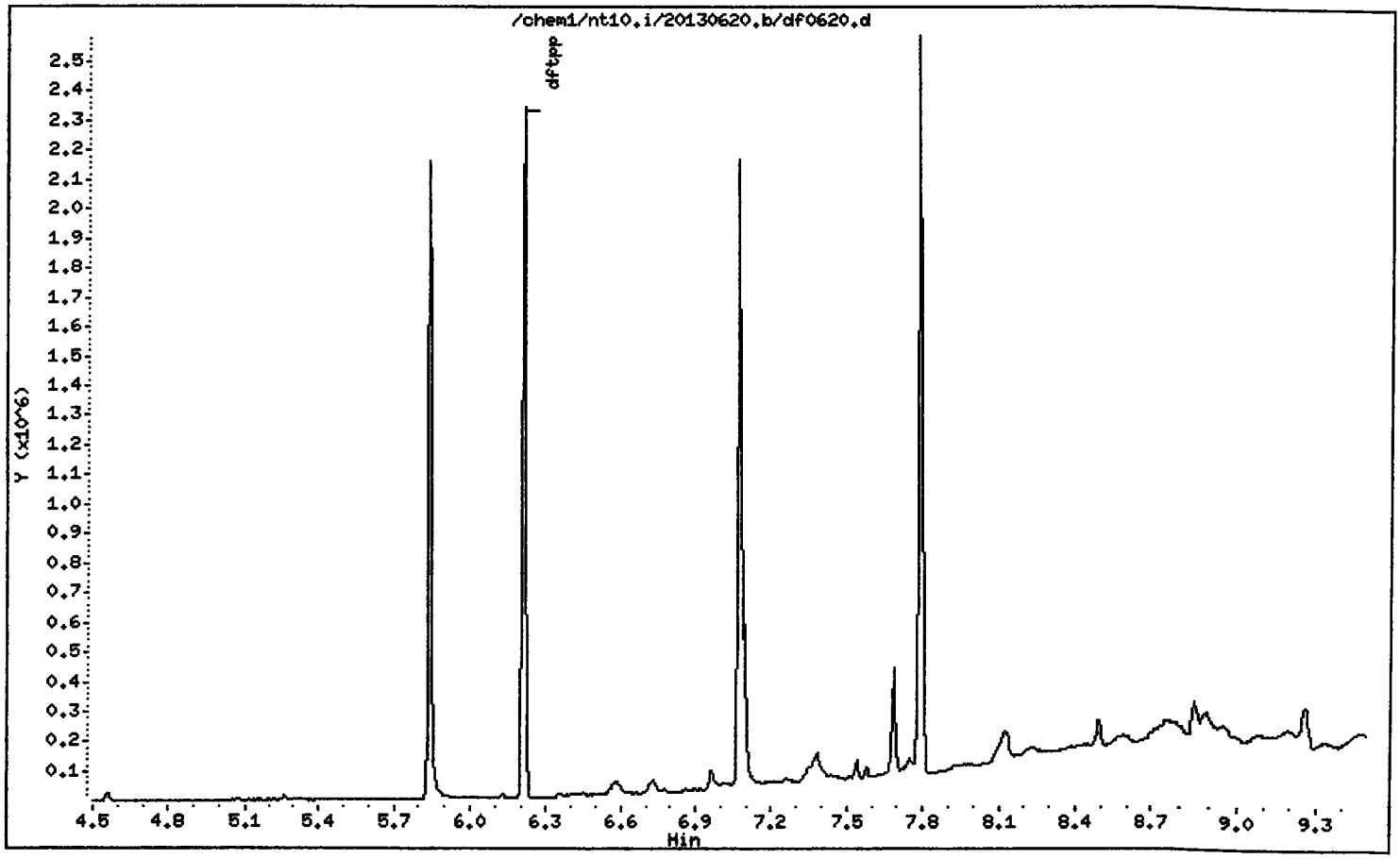
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130620.b/df0620.d

Date : 20-JUN-2013 10:03

Client ID: DFTPP

Instrument: nt10.i

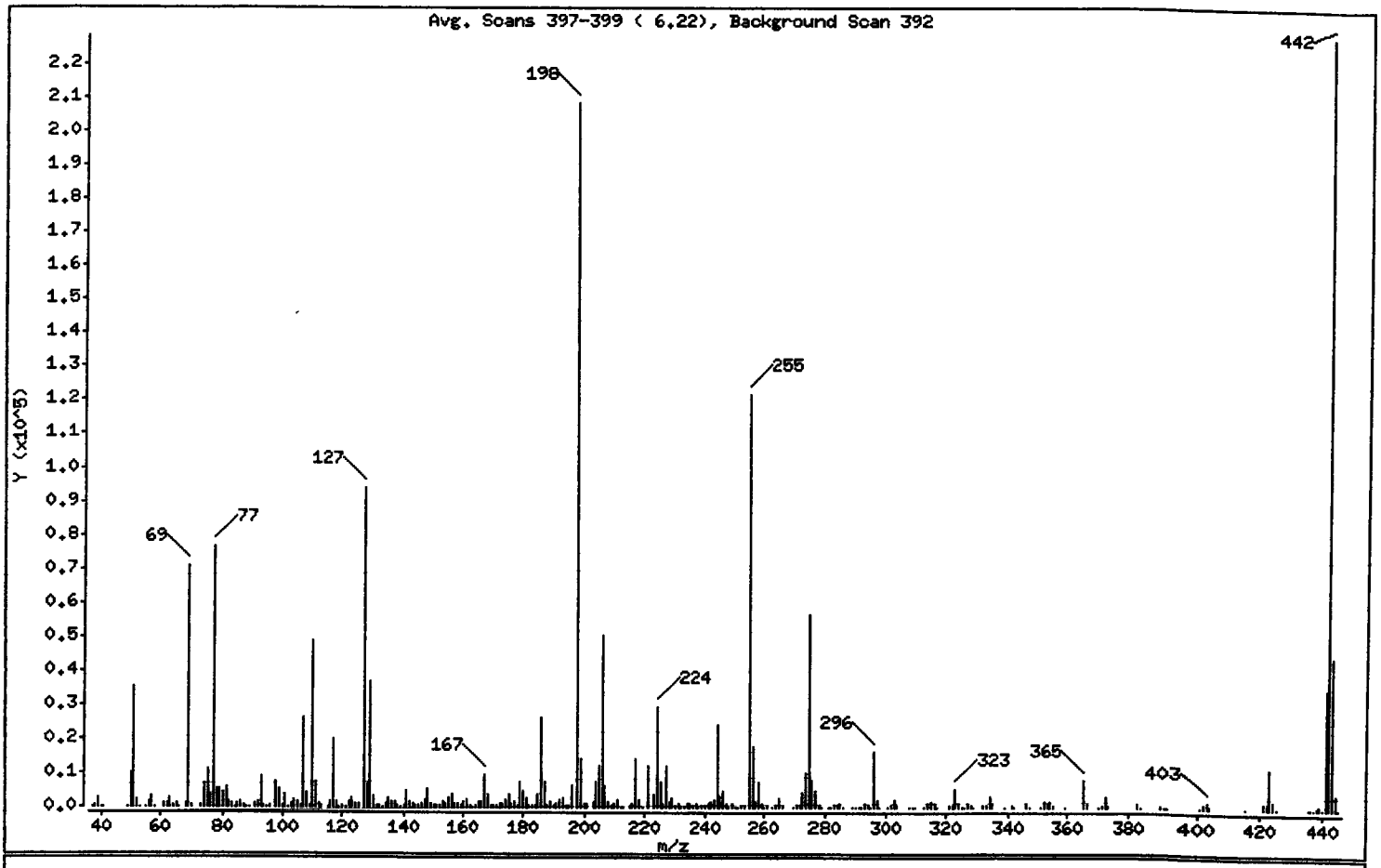
Sample Info: DFTPP

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	17.00
68	Less than 2.00% of mass 69	0.47 (1.39)
69	Mass 69 relative abundance	33.95
70	Less than 2.00% of mass 69	0.15 (0.43)
127	10.00 - 80.00% of mass 198	45.15
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.81
275	10.00 - 60.00% of mass 198	27.24
365	Greater than 1.00% of mass 198	3.90
441	0.01 - 24.00% of mass 442	16.89 (15.40)
442	50.00 - 200.00% of mass 198	109.68
443	15.00 - 24.00% of mass 442	21.40 (19.51)

Data File: /chem1/nt10.i/20130620.b/df0620.d

Date : 20-JUN-2013 10:03

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0620.d

Spectrum: Avg. Scans 397-399 (6.22), Background Scan 392

Location of Maximum: 442.00

Number of points: 300

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	157	130.00	3111	208.00	1738	295.00	256
38.00	467	131.00	686	209.00	670	296.00	16131
39.00	2807	132.00	369	210.00	990	297.00	2133
40.00	144	133.00	162	211.00	2148	298.00	140
41.00	58	134.00	1078	212.00	84	301.00	171
49.00	243	135.00	2803	213.00	197	302.00	371
50.00	9744	136.00	1322	215.00	726	303.00	1893
51.00	35400	137.00	1554	216.00	1215	304.00	581
52.00	1967	138.00	279	217.00	14285	308.00	241
53.00	51	139.00	211	218.00	1857	309.00	193
55.00	220	140.00	509	219.00	219	310.00	255
56.00	1669	141.00	4710	221.00	12110	313.00	252
57.00	3340	142.00	1569	223.00	3452	314.00	797
58.00	159	143.00	1121	224.00	29384	315.00	1825
61.00	791	144.00	336	225.00	7471	316.00	1003
62.00	942	145.00	364	226.00	834	317.00	150
63.00	2554	146.00	837	227.00	12336	321.00	563
64.00	411	147.00	2297	228.00	1665	322.00	295
65.00	1277	148.00	5045	229.00	2556	323.00	5283
66.00	50	149.00	918	230.00	414	324.00	1050
68.00	982	150.00	329	231.00	1100	325.00	57
69.00	70688	151.00	595	232.00	235	326.00	57
70.00	305	152.00	484	233.00	189	327.00	1062
73.00	275	153.00	1488	234.00	847	328.00	584
74.00	6816	154.00	1174	235.00	871	329.00	115
75.00	11028	155.00	2762	236.00	608	332.00	516
76.00	3546	156.00	3842	237.00	976	333.00	543
77.00	76552	157.00	828	238.00	150	334.00	3264
78.00	5080	158.00	930	239.00	626	335.00	836
79.00	5144	159.00	713	240.00	371	339.00	52
80.00	4173	160.00	1434	241.00	811	341.00	706
81.00	5700	161.00	2247	242.00	1727	342.00	131
82.00	1453	162.00	697	243.00	1965	346.00	1217
83.00	1122	163.00	251	244.00	24208	347.00	185
84.00	87	164.00	284	245.00	3188	351.00	110

Data File: /chem1/nt10.i/20130620.b/df0620.d

Date : 20-JUN-2013 10:03

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0620.d

Spectrum: Avg. Scans 397-399 (6.22), Background Scan 392

Location of Maximum: 442.00

Number of points: 300

m/z	Y	m/z	Y	m/z	Y	m/z	Y
85.00	898	165.00	1636	246.00	4568	352.00	1638
86.00	1563	166.00	1431	247.00	938	353.00	1164
87.00	742	167.00	9253	248.00	241	354.00	1648
88.00	212	168.00	3576	249.00	948	355.00	343
89.00	144	169.00	732	250.00	181	359.00	115
91.00	1298	170.00	361	251.00	246	365.00	8115
92.00	1583	171.00	500	252.00	307	366.00	956
93.00	9056	172.00	859	253.00	716	370.00	190
94.00	734	173.00	1102	255.00	121968	371.00	512
95.00	199	174.00	2036	256.00	17680	372.00	2920
96.00	413	175.00	3698	257.00	1467	373.00	685
98.00	7115	176.00	1238	258.00	7313	383.00	854
99.00	5286	177.00	1704	259.00	1167	384.00	256
100.00	459	178.00	667	260.00	241	390.00	429
101.00	3420	179.00	7333	261.00	266	391.00	236
102.00	133	180.00	4767	263.00	59	392.00	255
103.00	1230	181.00	2417	264.00	342	401.00	153
104.00	2169	182.00	413	265.00	2866	402.00	1219
105.00	1815	183.00	282	266.00	426	403.00	1731
106.00	725	184.00	670	270.00	247	404.00	695
107.00	26120	185.00	3801	271.00	358	415.00	52
108.00	4056	186.00	26184	272.00	413	421.00	1628
109.00	715	187.00	7508	273.00	4032	422.00	1477
110.00	48872	188.00	755	274.00	9877	423.00	11638
111.00	7265	189.00	1811	275.00	56712	424.00	2225
112.00	1050	190.00	341	276.00	7713	425.00	207
113.00	360	191.00	900	277.00	4634	435.00	55
115.00	69	192.00	2294	278.00	704	436.00	55
116.00	1560	193.00	2681	279.00	192	437.00	205
117.00	19928	194.00	595	281.00	62	438.00	439
118.00	1484	195.00	569	282.00	133	439.00	811
119.00	170	196.00	6447	283.00	591	440.00	244
120.00	379	198.00	208192	284.00	366	441.00	35160
121.00	153	199.00	14177	285.00	917	442.00	228352
122.00	1770	200.00	1193	286.00	195	443.00	44552

Data File: /chem1/nt10.i/20130620.b/df0620.d

Date : 20-JUN-2013 10:03

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0620.d

Spectrum: Avg. Scans 397-399 (6.22), Background Scan 392

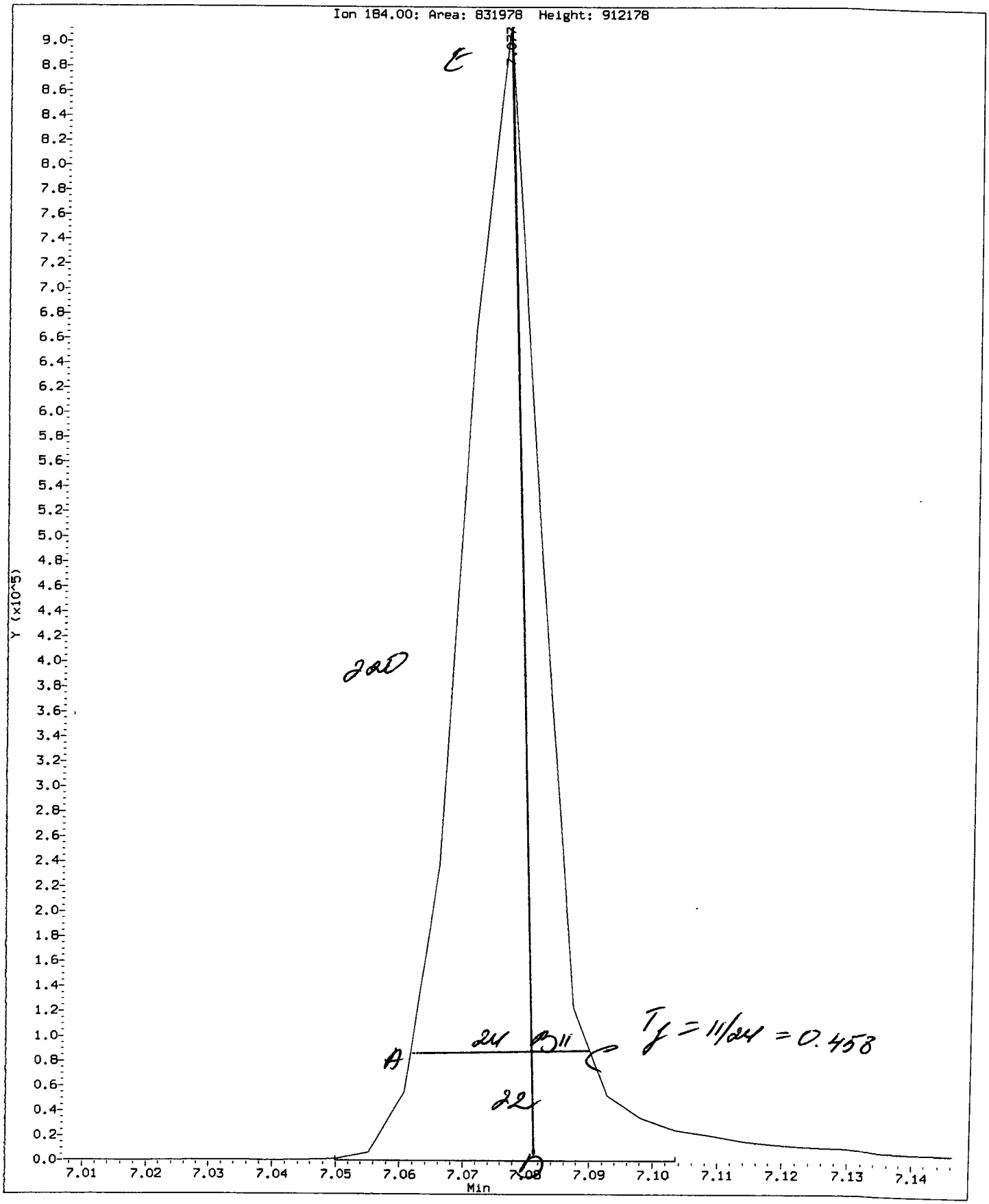
Location of Maximum: 442.00

Number of points: 300

m/z	Y	m/z	Y	m/z	Y	m/z	Y
123.00	2615	201.00	1064	289.00	245	444.00	4190
124.00	1288	203.00	1416	290.00	212	445.00	168
125.00	982	204.00	7133	291.00	131		
127.00	94000	205.00	12297	292.00	239		
128.00	6919	206.00	50344	293.00	1077		
129.00	36984	207.00	6503	294.00	274		

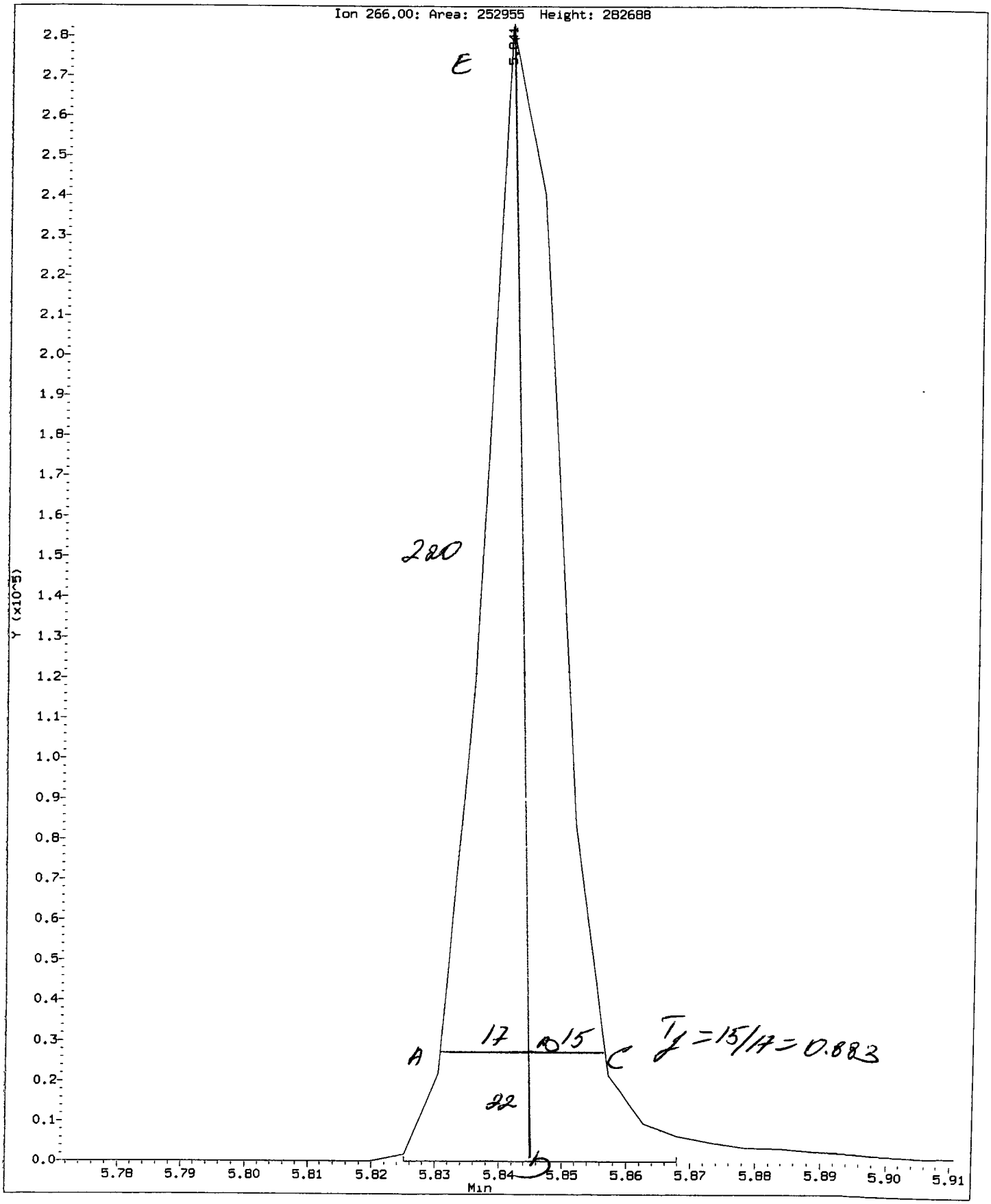
Data File: /chem1/nt10.i/20130620.b/ddt.b/df0620.d
Injection Date: 20-JUN-2013 10:03
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Data File: /chem1/nt10.i/20130620.b/ddt.b/df0620.d
Injection Date: 20-JUN-2013 10:03
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130620.b/ddt.b/df0620.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130620.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 20-JUN-2013 10:03 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	5.841	252955
Benzidine	7.077	831978
4,4'-DDE	7.259	1818
4,4'-DDD	7.542	11726
4,4'-DDT	7.793	466962

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(1818 + 11726) * 100}{(1818 + 11726 + 466962)}$$

DDT Percent Breakdown = 2.8 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0620.d
Analysis Type:
Lab Sample ID: CC0620
Method: /chem1/nt10.i/20130620.b/ABN.m

Injection Date: 20-JUN-2013 10:18
Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Init. Cal. Times: 16:53 21:47
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.42771	1.43889	1.43889	0.010	0.78275	20.00000	Averaged	
$ 2 Phenol-d5	1.84748	1.84916	1.84916	0.010	0.09105	20.00000	Averaged	
3 Phenol	2.06794	2.11458	2.11458	0.100	2.25507	20.00000	Averaged	
$ 5 2-Chlorophenol-d4	1.40240	1.44624	1.44624	0.010	3.12580	20.00000	Averaged	
4 Bis(2-Chloroethyl)ether	1.48709	1.43798	1.43798	0.700	-3.30293	20.00000	Averaged	
6 2-Chlorophenol	1.59477	1.60103	1.60103	0.800	0.39254	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.60030	1.58752	1.58752	0.010	-0.79890	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.57739	1.56668	1.56668	0.010	-0.67921	20.00000	Averaged	
$ 10 1,2-Dichlorobenzene-d4	1.00879	1.02329	1.02329	0.010	1.43738	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.51024	1.47443	1.47443	0.010	-2.37120	20.00000	Averaged	
11 Benzyl alcohol	0.86989	0.92497	0.92497	0.010	6.33211	20.00000	Averaged	
14 2,2'-oxybis(1-Chloropropane	0.45898	0.46842	0.46842	0.010	2.05848	20.00000	Averaged	
13 2-Methylphenol	1.48808	1.50532	1.50532	0.700	1.15839	20.00000	Averaged	
17 Hexachloroethane	0.65999	0.65084	0.65084	0.300	-1.38628	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	0.92905	0.96893	0.96893	0.500	4.29272	20.00000	Averaged	
15 4-Methylphenol	1.51729	1.52767	1.52767	0.600	0.68403	20.00000	Averaged	
$ 18 Nitrobenzene-d5	0.42210	0.40877	0.40877	0.010	-3.15797	20.00000	Averaged	
19 Nitrobenzene	0.38970	0.36953	0.36953	0.200	-5.17672	20.00000	Averaged	
20 Isophorone	0.73300	0.70856	0.70856	0.300	-3.33538	20.00000	Averaged	
21 2-Nitrophenol	0.21847	0.23917	0.23917	0.100	9.47438	20.00000	Averaged	
22 2,4-Dimethylphenol	0.40172	0.37816	0.37816	0.200	-5.86550	20.00000	Averaged	
23 Bis(2-Chloroethoxy)methane	0.43229	0.42444	0.42444	0.050	-1.81539	20.00000	Averaged	
24 Benzoic acid	14.06474	20.00000	0.24668	0.010	-29.67631	20.00000	Quadratic	<-
25 2,4-Dichlorophenol	0.36979	0.37399	0.37399	0.100	1.13832	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.36143	0.34529	0.34529	0.010	-4.46552	20.00000	Averaged	
28 Naphthalene	1.06494	1.00750	1.00750	0.100	-5.39404	20.00000	Averaged	
29 4-Chloroaniline	0.41634	0.45250	0.45250	0.010	8.68615	20.00000	Averaged	
30 Hexachlorobutadiene	0.21470	0.21075	0.21075	0.010	-1.83919	20.00000	Averaged	
31 4-Chloro-3-methylphenol	0.32531	0.36055	0.36055	0.200	10.83144	20.00000	Averaged	
32 2-Methylnaphthalene	0.70737	0.68496	0.68496	0.300	-3.16715	20.00000	Averaged	
33 Hexachlorocyclopentadiene	0.44016	0.27098	0.27098	0.001	-38.43607	20.00000	Averaged	<-
34 2,4,6-Trichlorophenol	0.42101	0.43773	0.43773	0.200	3.97005	20.00000	Averaged	
35 2,4,5-Trichlorophenol	0.43401	0.46953	0.46953	0.200	8.18531	20.00000	Averaged	
$ 36 2-Fluorobiphenyl	1.39609	1.31404	1.31404	0.010	-5.87658	20.00000	Averaged	
37 2-Chloronaphthalene	1.11145	1.06705	1.06705	0.700	-3.99491	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0620.d
Analysis Type:
Lab Sample ID: CC0620
Method: /chem1/nt10.i/20130620.b/ABN.m

Injection Date: 20-JUN-2013 10:18
Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Init. Cal. Times: 16:53 21:47
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
38 2-Nitroaniline	0.26826	0.29018	0.29018	0.010	8.17360	20.00000	Averaged	
39 Dimethylphthalate	1.20078	1.17360	1.17360	0.010	-2.26364	20.00000	Averaged	
40 Acenaphthylene	1.88508	1.73603	1.73603	0.900	-7.90695	20.00000	Averaged	
41 2,6-Dinitrotoluene	0.28135	0.28481	0.28481	0.100	1.23033	20.00000	Averaged	
43 3-Nitroaniline	0.23227	0.26551	0.26551	0.010	14.31520	20.00000	Averaged	
44 Acenaphthene	1.13602	1.05414	1.05414	0.100	-7.20727	20.00000	Averaged	
45 2,4-Dinitrophenol	12.02924	20.00000	0.14986	0.030	-39.85379	20.00000	Quadratic	<-
46 Dibenzofuran	1.55334	1.45802	1.45802	0.800	-6.13609	20.00000	Averaged	
47 4-Nitrophenol	7.86790	10.00000	0.13737	0.010	-21.32099	20.00000	Quadratic	<-
48 2,4-Dinitrotoluene	0.36288	0.38255	0.38255	0.200	5.42109	20.00000	Averaged	
50 Diethylphthalate	1.20662	1.18639	1.18639	0.010	-1.67672	20.00000	Averaged	
49 Fluorene	1.32546	1.23196	1.23196	0.100	-7.05354	20.00000	Averaged	
51 4-Chlorophenyl-phenylether	0.65156	0.67963	0.67963	0.100	4.30887	20.00000	Averaged	
52 4-Nitroaniline	0.24126	0.23269	0.23269	0.010	-3.55561	20.00000	Averaged	
53 4,6-Dinitro-2-methylphenol	17.51100	20.00000	0.16798	0.001	-12.44500	20.00000	Quadratic	
54 N-Nitrosodiphenylamine	0.46304	0.45636	0.45636	0.010	-1.44468	20.00000	Averaged	
$ 55 2,4,6-Tribromophenol	0.21154	0.22698	0.22698	0.010	7.30034	20.00000	Averaged	
56 4-Bromophenyl-phenylether	0.22633	0.22309	0.22309	0.100	-1.43252	20.00000	Averaged	
57 Hexachlorobenzene	0.27006	0.26498	0.26498	0.100	-1.88047	20.00000	Averaged	
58 Pentachlorophenol	0.18956	0.16800	0.16800	0.010	-11.37248	20.00000	Averaged	
60 Phenanthrene	1.09106	1.02316	1.02316	0.700	-6.22278	20.00000	Averaged	
61 Anthracene	1.11776	1.06234	1.06234	0.700	-4.95809	20.00000	Averaged	
62 Carbazole	0.67896	0.70535	0.70535	0.010	3.88793	20.00000	Averaged	
63 Di-n-butylphthalate	1.15386	1.18298	1.18298	0.010	2.52392	20.00000	Averaged	
64 Fluoranthene	1.28413	1.24779	1.24779	0.600	-2.82970	20.00000	Averaged	
65 Pyrene	1.23758	1.38591	1.38591	0.600	11.98523	20.00000	Averaged	
$ 66 Terphenyl-d14	0.77864	0.79501	0.79501	0.010	2.10189	20.00000	Averaged	
67 Butylbenzylphthalate	0.42263	0.48926	0.48926	0.010	15.76720	20.00000	Averaged	
68 Benzo(a)anthracene	1.11989	1.11090	1.11090	0.700	-0.80223	20.00000	Averaged	
70 3,3'-Dichlorobenzidine	0.42653	0.47313	0.47313	0.010	10.92476	20.00000	Averaged	
71 Chrysene	1.01345	0.98567	0.98567	0.700	-2.74120	20.00000	Averaged	
72 bis(2-Ethylhexyl)phthalate	0.53180	0.56806	0.56806	0.010	6.81795	20.00000	Averaged	
73 Di-n-octylphthalate	0.92098	0.87856	0.87856	0.010	-4.60634	20.00000	Averaged	
74 Benzo(b)fluoranthene	1.18784	1.20690	1.20690	0.700	1.60389	20.00000	Averaged	
75 Benzo(k)fluoranthene	1.25114	1.09620	1.09620	0.700	-12.38369	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0620.d
Analysis Type:
Lab Sample ID: CC0620
Method: /chem1/nt10.i/20130620.b/ABN.m

Injection Date: 20-JUN-2013 10:18
Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Init. Cal. Times: 16:53 21:47
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
76 Benzo(a)pyrene	1.01481	0.96218	0.96218	0.700	-5.18646	20.00000	Averaged	
78 Indeno(1,2,3-cd)pyrene	1.16916	1.22613	1.22613	0.500	4.87292	20.00000	Averaged	
79 Dibenzo(a,h)anthracene	0.89686	0.96219	0.96219	0.400	7.28349	20.00000	Averaged	
80 Benzo(g,h,i)perylene	1.01156	1.03028	1.03028	0.500	1.85047	20.00000	Averaged	
90 N-Nitrosodimethylamine	0.91125	0.85466	0.85466	0.010	-6.21105	20.00000	Averaged	
91 Aniline	4.01210	4.17352	4.17352	0.010	4.02321	20.00000	Averaged	
93 Benzidine	6.28977	10.00000	0.07913	0.010	-37.10234	20.00000	Quadratic	<-
103 Pyridine	0.80099	0.72044	0.72044	0.010	-10.05629	20.00000	Averaged	
105 1-methylnaphthalene	0.64873	0.62240	0.62240	0.010	-4.05892	20.00000	Averaged	
111 Azobenzene (1,2-DP-Hydrazin	1.23715	1.12093	1.12093	0.010	-9.39409	20.00000	Averaged	
187 Total Benzofluoranthenes	1.15343	1.06121	1.06121	0.010	-7.99579	20.00000	Averaged	
99 Perylene	1.16006	1.06007	1.06007	0.010	-8.61952	20.00000	Averaged	
98 Retene	0.46838	0.50149	0.50149	0.010	7.06871	20.00000	Averaged	
120 2,3,4,6-Tetrachlorophenol	0.32282	0.33742	0.33742	0.010	4.52131	20.00000	Averaged	

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130620.b/cc0620.d
Lab Smp Id: CC0620
Inj Date : 20-JUN-2013 10:18
Operator : VTS/YZ
Inst ID: nt10.i
Smp Info : CC0620
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130620.b/ABN.m
Meth Date : 20-Jun-2013 10:48 yev
Quant Type: ISTD
Cal Date : 29-APR-2013 21:47
Cal File: ic0429i.d
Als bottle: 2
Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

YZ 6/20/13

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 1 2-Fluorophenol	112	5.497	5.497	(0.715)	74358	5.00000	5.039
$ 2 Phenol-d5	99	7.174	7.174	(0.933)	95560	5.00000	5.005
3 Phenol	94	7.197	7.197	(0.936)	109276	5.00000	5.113 (H)
$ 5 2-Chlorophenol-d4	132	7.343	7.343	(0.955)	74738	5.00000	5.156
4 Bis(2-Chloroethyl)ether	93	7.289	7.289	(0.948)	74311	5.00000	4.835
6 2-Chlorophenol	128	7.367	7.367	(0.958)	82737	5.00000	5.020
7 1,3-Dichlorobenzene	146	7.622	7.622	(0.991)	82039	5.00000	4.960
* 8 1,4-Dichlorobenzene-d4	152	7.692	7.692	(1.000)	41342	4.00000	
9 1,4-Dichlorobenzene	146	7.723	7.723	(1.004)	80962	5.00000	4.966
$ 10 1,2-Dichlorobenzene-d4	152	8.057	8.057	(1.047)	52881	5.00000	5.072
12 1,2-Dichlorobenzene	146	8.080	8.080	(1.050)	76195	5.00000	4.881
11 Benzyl alcohol	108	8.033	8.033	(1.044)	47800	5.00000	5.317
14 2,2'-oxybis(1-Chloropropane)	121	8.352	8.352	(1.086)	24207	5.00000	5.103
13 2-Methylphenol	108	8.321	8.321	(1.082)	77791	5.00000	5.058
17 Hexachloroethane	117	8.685	8.685	(1.129)	33634	5.00000	4.931
16 N-Nitroso-di-n-propylamine	70	8.616	8.616	(1.120)	50072	5.00000	5.215
15 4-Methylphenol	108	8.616	8.616	(1.120)	78946	5.00000	5.034
$ 18 Nitrobenzene-d5	82	8.833	8.833	(0.861)	80544	5.00000	4.842
19 Nitrobenzene	77	8.872	8.872	(0.864)	72811	5.00000	4.741
20 Isophorone	82	9.360	9.360	(0.912)	139613	5.00000	4.833
21 2-Nitrophenol	139	9.531	9.531	(0.929)	47125	5.00000	5.474
22 2,4-Dimethylphenol	107	9.686	9.686	(0.944)	149023	10.0000	9.413
23 Bis(2-Chloroethoxy)methane	93	9.863	9.863	(0.961)	83631	5.00000	4.909
24 Benzoic acid	105	9.986	9.986	(0.973)	194423	20.0000	14.06
25 2,4-Dichlorophenol	162	10.033	10.033	(0.977)	147383	10.0000	10.11
26 1,2,4-Trichlorobenzene	180	10.187	10.187	(0.992)	68035	5.00000	4.777
* 27 Naphthalene-d8	136	10.264	10.264	(1.000)	157631	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
	28 Naphthalene	128	10.303	10.303	(1.004)	198516	5.00000	4.730
	29 4-Chloroaniline	127	10.503	10.503	(1.023)	178321	10.0000	10.87
	30 Hexachlorobutadiene	225	10.720	10.720	(1.044)	41526	5.00000	4.908
	31 4-Chloro-3-methylphenol	107	11.594	11.594	(1.130)	142083	10.0000	11.08
	32 2-Methylnaphthalene	142	11.772	11.772	(1.147)	134964	5.00000	4.842
	33 Hexachlorocyclopentadiene	237	12.283	12.283	(0.874)	68313	10.0000	6.156
	34 2,4,6-Trichlorophenol	196	12.469	12.469	(0.888)	110349	10.0000	10.40
	35 2,4,5-Trichlorophenol	196	12.554	12.554	(0.894)	118367	10.0000	10.82
$	36 2-Fluorobiphenyl	172	12.639	12.639	(0.900)	165632	5.00000	4.706
	37 2-Chloronaphthalene	162	12.802	12.802	(0.911)	134499	5.00000	4.800
	38 2-Nitroaniline	65	13.134	13.134	(0.935)	73154	10.0000	10.82
	39 Dimethylphthalate	163	13.637	13.637	(0.971)	147929	5.00000	4.887
	40 Acenaphthylene	152	13.707	13.707	(0.976)	218822	5.00000	4.605
	41 2,6-Dinitrotoluene	165	13.754	13.754	(0.979)	71799	10.0000	10.12
*	42 Acenaphthene-d10	164	14.048	14.048	(1.000)	100838	4.00000	
	43 3-Nitroaniline	138	14.040	14.040	(0.999)	66935	10.0000	11.43
	44 Acenaphthene	153	14.109	14.109	(1.004)	132872	5.00000	4.640
	45 2,4-Dinitrophenol	184	14.264	14.264	(1.015)	75559	20.0000	12.03
	46 Dibenzofuran	168	14.465	14.465	(1.030)	183780	5.00000	4.693
	47 4-Nitrophenol	109	14.504	14.504	(1.032)	34630	10.0000	7.868
	48 2,4-Dinitrotoluene	165	14.604	14.604	(1.040)	96439	10.0000	10.54
	50 Diethylphthalate	149	15.192	15.192	(1.081)	149541	5.00000	4.916
	49 Fluorene	166	15.215	15.215	(1.083)	155286	5.00000	4.647
	51 4-Chlorophenyl-phenylether	204	15.261	15.261	(1.086)	85666	5.00000	5.215
	52 4-Nitroaniline	138	15.377	15.377	(1.095)	58659	10.0000	9.644
	53 4,6-Dinitro-2-methylphenol	198	15.485	15.485	(0.898)	140974	20.0000	17.51
	54 N-Nitrosodiphenylamine	169	15.539	15.539	(0.901)	95749	5.00000	4.928
$	55 2,4,6-Tribromophenol	330	15.786	15.786	(1.124)	28610	5.00000	5.365
	56 4-Bromophenyl-phenylether	248	16.310	16.310	(0.946)	46807	5.00000	4.928
	57 Hexachlorobenzene	284	16.596	16.596	(0.963)	55596	5.00000	4.906
	58 Pentachlorophenol	266	17.006	17.006	(0.987)	70499	10.0000	8.863
*	59 Phenanthrene-d10	188	17.238	17.238	(1.000)	167850	4.00000	
	60 Phenanthrene	178	17.285	17.285	(1.003)	214672	5.00000	4.689
	61 Anthracene	178	17.385	17.385	(1.009)	222892	5.00000	4.752
	62 Carbazole	167	17.780	17.780	(1.031)	147992	5.00000	5.194
	63 Di-n-butylphthalate	149	18.778	18.778	(1.089)	248205	5.00000	5.126
	64 Fluoranthene	202	19.807	19.807	(1.149)	261802	5.00000	4.859
	65 Pyrene	202	20.232	20.232	(0.901)	262170	5.00000	5.599
$	66 Terphenyl-d14	244	20.619	20.619	(0.918)	150391	5.00000	5.105
	67 Butylbenzylphthalate	149	21.610	21.610	(0.962)	92553	5.00000	5.788
	68 Benzo(a)anthracene	228	22.431	22.431	(0.999)	210148	5.00000	4.960
*	69 Chrysene-d12	240	22.454	22.454	(1.000)	151335	4.00000	
	70 3,3'-Dichlorobenzidine	252	22.447	22.447	(1.000)	179003	10.0000	11.09
	71 Chrysene	228	22.501	22.501	(1.002)	186458	5.00000	4.863
	72 bis(2-Ethylhexyl)phthalate	149	22.687	22.687	(0.959)	134757	5.00000	5.341
*	134 Di-n-octylphthalate-d4	153	23.662	23.662	(1.000)	189779	4.00000	
	73 Di-n-octylphthalate	149	23.670	23.670	(1.000)	208415	5.00000	4.770

	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	24.181	24.181	(0.978)	218175	5.00000	5.080
75	Benzo(k)fluoranthene	252	24.212	24.212	(0.979)	198165	5.00000	4.381
76	Benzo(a)pyrene	252	24.645	24.645	(0.997)	173936	5.00000	4.741
* 77	Perylene-d12	264	24.723	24.723	(1.000)	144619	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	26.312	26.312	(1.064)	221652	5.00000	5.244
79	Dibenzo(a,h)anthracene	278	26.336	26.336	(1.065)	173938	5.00000	5.364
80	Benzo(g,h,i)perylene	276	26.763	26.763	(1.083)	186247	5.00000	5.093
90	N-Nitrosodimethylamine	74	3.304	3.304	(0.430)	88333	10.0000	9.379
91	Aniline	93	7.166	7.166	(0.932)	215677	5.00000	5.201
93	Benzidine	184	20.140	20.140	(0.897)	29936	10.0000	6.290
103	Pyridine	79	3.311	3.311	(0.430)	74461	10.0000	8.994
105	1-methylnaphthalene	142	11.997	11.997	(1.169)	122637	5.00000	4.797
111	Azobenzene (1,2-DP-Hydrazine)	77	15.601	15.601	(1.111)	141290	5.00000	4.530
187	Total Benzofluoranthenes	252	24.212	24.212	(0.979)	383677	10.0000	9.200
99	Perylene	252	24.762	24.762	(1.002)	191632	5.00000	4.569
98	Retene	219	20.890	20.890	(0.930)	94866	5.00000	5.353
120	2,3,4,6-Tetrachlorophenol	232	14.867	14.867	(1.058)	42531	5.00000	5.226

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: cc0620.d
Lab Smp Id: CC0620
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130620.b/ABN.m
Misc Info:

Calibration Date: 20-JUN-2013
Calibration Time: 10:18

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	41342	-8.64
27 Naphthalene-d8	166754	83377	333508	157631	-5.47
42 Acenaphthene-d10	106910	53455	213820	100838	-5.68
59 Phenanthrene-d10	179783	89892	359566	167850	-6.64
69 Chrysene-d12	192841	96420	385682	151335	-21.52
134 Di-n-octylphthala	229567	114784	459134	189779	-17.33
77 Perylene-d12	184310	92155	368620	144619	-21.53

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.69	7.19	8.19	7.69	0.00
27 Naphthalene-d8	10.26	9.76	10.76	10.26	0.00
42 Acenaphthene-d10	14.05	13.55	14.55	14.05	0.00
59 Phenanthrene-d10	17.24	16.74	17.74	17.24	0.00
69 Chrysene-d12	22.45	21.95	22.95	22.45	0.00
134 Di-n-octylphthala	23.66	23.16	24.16	23.66	0.00
77 Perylene-d12	24.72	24.22	25.22	24.72	0.00

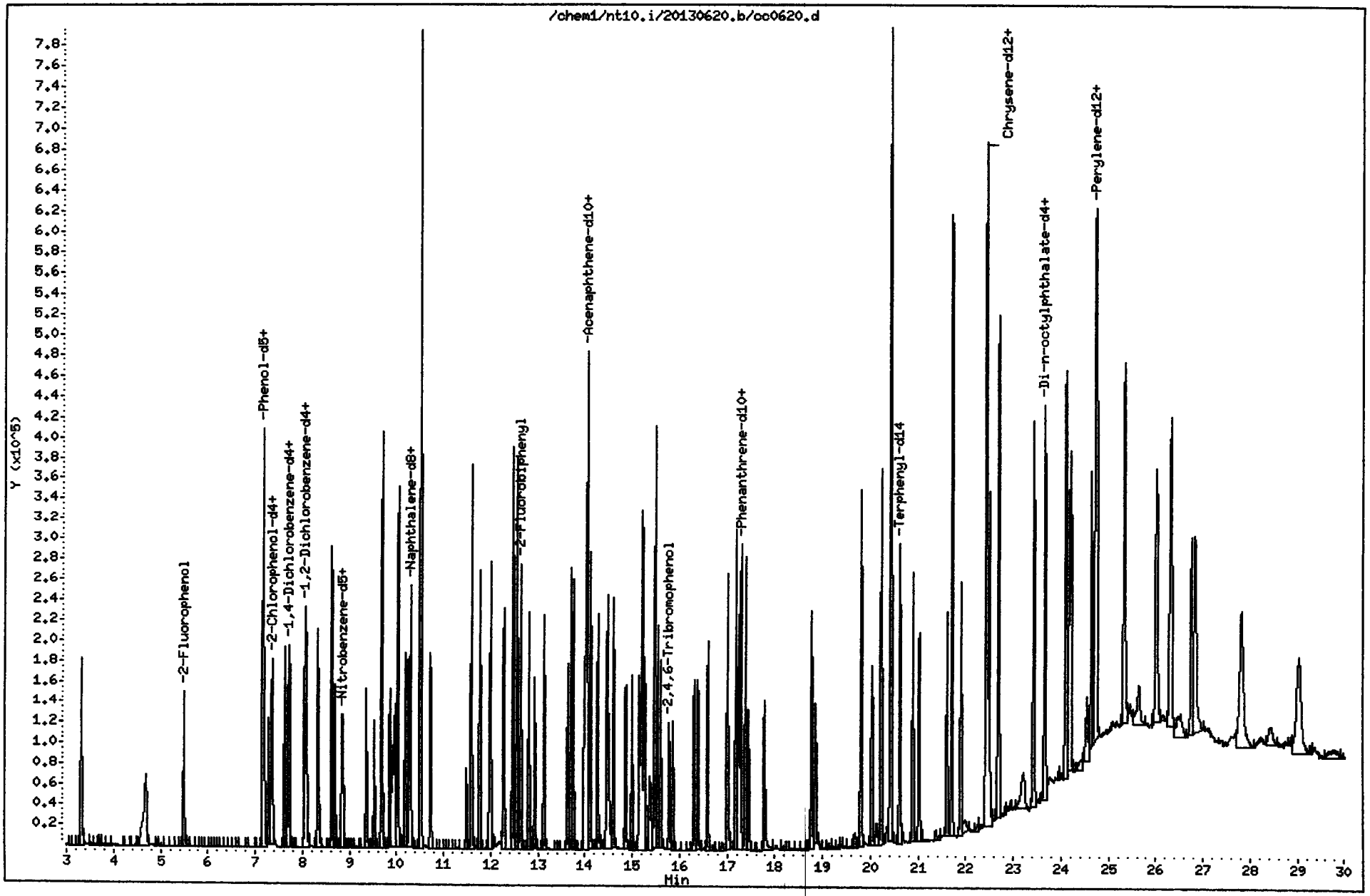
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130620.b/cc0620.d
Date : 20-JUN-2013 10:18
Client ID:
Sample Info: CC0620

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - cc0620.d

Lab ID: CC0620, Method: ABN.m, Instrument: nt10.i, Date: 20-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 6/25/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130620.b/ws91sb.d
Lab Smp Id: WS91LCSS1 Client Smp ID: WS91LCSS1
Inj Date : 20-JUN-2013 16:01
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WS91LCSS1
Misc Info : 13-12076
Comment : 1ul Injection
Method : /chem1/nt10.i/20130620.b/ABN.m
Meth Date : 25-Jun-2013 13:34 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 9 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	5.512	5.497	(0.717)	74932	4.84394	484.4
$ 2	Phenol-d5	99	7.174	7.174	(0.933)	107447	5.36767	536.8
3	Phenol	94	7.197	7.197	(0.936)	69177	3.08741	308.7
$ 5	2-Chlorophenol-d4	132	7.344	7.343	(0.955)	75846	4.99150	499.2
4	Bis(2-Chloroethyl)ether	93	7.290	7.289	(0.948)	56322	3.49551	349.6
6	2-Chlorophenol	128	7.367	7.367	(0.958)	52215	3.02183	302.2
7	1,3-Dichlorobenzene	146	7.622	7.622	(0.991)	56386	3.25192	325.2
* 8	1,4-Dichlorobenzene-d4	152	7.692	7.692	(1.000)	43340	4.00000	
9	1,4-Dichlorobenzene	146	7.723	7.723	(1.004)	56366	3.29799	329.8
$ 10	1,2-Dichlorobenzene-d4	152	8.057	8.057	(1.047)	35101	3.21137	321.1
12	1,2-Dichlorobenzene	146	8.080	8.080	(1.050)	55524	3.39316	339.3
11	Benzyl alcohol	108	8.041	8.033	(1.045)	26294	2.78975	279.0
14	2,2'-oxybis(1-Chloropropane)	121	8.344	8.352	(1.085)	17776	3.57450	357.4
13	2-Methylphenol	108	8.329	8.321	(1.083)	46738	2.89878	289.9

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	8.686	8.685	(1.129)	24051	3.36329	336.3
	16 N-Nitroso-di-n-propylamine	70	8.608	8.616	(1.119)	36683	3.64415	364.4
	15 4-Methylphenol	108	8.624	8.616	(1.121)	98696	6.00347	600.3
$	18 Nitrobenzene-d5	82	8.833	8.833	(0.861)	54824	3.21744	321.7
	19 Nitrobenzene	77	8.872	8.872	(0.865)	54663	3.47473	347.5
	20 Isophorone	82	9.353	9.360	(0.912)	100518	3.39699	339.7
	21 2-Nitrophenol	139	9.532	9.531	(0.929)	29484	3.34316	334.3
	22 2,4-Dimethylphenol	107	9.686	9.686	(0.944)	139620	8.60958	861.0
	23 Bis(2-Chloroethoxy)methane	93	9.863	9.863	(0.962)	66156	3.79101	379.1
	24 Benzoic acid	105	9.994	9.986	(0.974)	154361	10.9416	1094
	25 2,4-Dichlorophenol	162	10.033	10.033	(0.978)	151958	10.1796	1018
	26 1,2,4-Trichlorobenzene	180	10.187	10.187	(0.993)	50227	3.44250	344.3
*	27 Naphthalene-d8	136	10.257	10.264	(1.000)	161474	4.00000	
	28 Naphthalene	128	10.295	10.303	(1.004)	137825	3.20597	320.6
	29 4-Chloroaniline	127	10.504	10.503	(1.024)	17024	1.01291	101.3(R)
	30 Hexachlorobutadiene	225	10.720	10.720	(1.045)	29781	3.43610	343.6
	31 4-Chloro-3-methylphenol	107	11.602	11.594	(1.131)	153538	11.6916	1169
	32 2-Methylnaphthalene	142	11.773	11.772	(1.148)	99415	3.48149	348.1
	33 Hexachlorocyclopentadiene	237	12.283	12.283	(0.874)	51669	4.86026	486.0
	34 2,4,6-Trichlorophenol	196	12.477	12.469	(0.888)	113980	11.2092	1121
	35 2,4,5-Trichlorophenol	196	12.562	12.554	(0.894)	115128	10.9831	1098
$	36 2-Fluorobiphenyl	172	12.632	12.639	(0.899)	115941	3.43849	343.8
	37 2-Chloronaphthalene	162	12.802	12.802	(0.911)	103438	3.85329	385.3
	38 2-Nitroaniline	65	13.127	13.134	(0.934)	86868	13.4076	1341
	39 Dimethylphthalate	163	13.638	13.637	(0.971)	131819	4.54525	454.5
	40 Acenaphthylene	152	13.708	13.707	(0.976)	153679	3.37541	337.5
	41 2,6-Dinitrotoluene	165	13.754	13.754	(0.979)	88985	13.0953	1310
*	42 Acenaphthene-d10	164	14.048	14.048	(1.000)	96609	4.00000	
	43 3-Nitroaniline	138	14.032	14.040	(0.999)	12283	2.18958	219.0(R)
	44 Acenaphthene	153	14.110	14.109	(1.004)	100581	3.66584	366.6
	45 2,4-Dinitrophenol	184	14.272	14.264	(1.016)	84234	13.9552	1396
	46 Dibenzofuran	168	14.465	14.465	(1.030)	144936	3.86325	386.3
	47 4-Nitrophenol	109	14.519	14.504	(1.034)	28597	6.79204	679.2
	48 2,4-Dinitrotoluene	165	14.597	14.604	(1.039)	122791	14.0103	1401
	50 Diethylphthalate	149	15.192	15.192	(1.081)	131044	4.49666	449.7
	49 Fluorene	166	15.215	15.215	(1.083)	116968	3.65380	365.4
	51 4-Chlorophenyl-phenylether	204	15.262	15.261	(1.086)	70338	4.46971	447.0
	52 4-Nitroaniline	138	15.370	15.377	(1.094)	40475	6.94602	694.6
	53 4,6-Dinitro-2-methylphenol	198	15.478	15.485	(0.898)	144847	18.7616	1876
	54 N-Nitrosodiphenylamine	169	15.539	15.539	(0.902)	58395	3.13619	313.6
$	55 2,4,6-Tribromophenol	330	15.794	15.786	(1.124)	31529	6.17121	617.1
	56 4-Bromophenyl-phenylether	248	16.310	16.310	(0.947)	39498	4.33989	434.0
	57 Hexachlorobenzene	284	16.596	16.596	(0.963)	41097	3.78445	378.4
	58 Pentachlorophenol	266	17.022	17.006	(0.988)	71928	9.43615	943.6
*	59 Phenanthrene-d10	188	17.231	17.238	(1.000)	160846	4.00000	
	60 Phenanthrene	178	17.285	17.285	(1.003)	179311	4.08705	408.7
	61 Anthracene	178	17.378	17.385	(1.009)	167423	3.72492	372.5

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
62	Carbazole	167	17.780	17.780	(1.032)	158172	5.79345	579.3
63	Di-n-butylphthalate	149	18.771	18.778	(1.089)	228634	4.92761	492.8
64	Fluoranthene	202	19.807	19.807	(1.150)	219207	4.24518	424.5
65	Pyrene	202	20.233	20.232	(0.901)	218736	4.18999	419.0
$ 66	Terphenyl-d14	244	20.612	20.619	(0.918)	135875	4.13681	413.7
67	Butylbenzylphthalate	149	21.611	21.610	(0.962)	97244	5.45472	545.5
68	Benzo(a)anthracene	228	22.432	22.431	(0.999)	192553	4.07607	407.6
* 69	Chrysene-d12	240	22.455	22.454	(1.000)	168731	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	22.501	22.501	(1.002)	166225	3.88829	388.8
72	bis(2-Ethylhexyl)phthalate	149	22.687	22.687	(0.959)	114112	4.27644	427.6
* 134	Di-n-octylphthalate-d4	153	23.662	23.662	(1.000)	200706	4.00000	
73	Di-n-octylphthalate	149	23.670	23.670	(1.000)	182374	3.94649	394.6
74	Benzo(b)fluoranthene	252	24.173	24.181	(0.978)	194178	4.43844	443.8
75	Benzo(k)fluoranthene	252	24.212	24.212	(0.979)	173821	3.77212	377.2
76	Benzo(a)pyrene	252	24.646	24.645	(0.997)	144046	3.85396	385.4
* 77	Perylene-d12	264	24.723	24.723	(1.000)	147323	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	26.320	26.312	(1.065)	163748	3.80270	380.3
79	Dibenzo(a,h)anthracene	278	26.336	26.336	(1.065)	125368	3.79533	379.5
80	Benzo(g,h,i)perylene	276	26.763	26.763	(1.083)	125493	3.36836	336.8
90	N-Nitrosodimethylamine	74	3.343	3.304	(0.435)	88580	8.97154	897.2
91	Aniline	93	7.166	7.166	(0.932)	21752	0.50038	50.04(RM)
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	3.350	3.311	(0.436)	60655	6.98894	698.9
105	1-methylnaphthalene	142	11.997	11.997	(1.170)	97240	3.71310	371.3
111	Azobenzene (1,2-DP-Hydrazine)	77	15.593	15.601	(1.110)	114217	3.82254	382.3
187	Total Benzofluoranthenes	252	24.212	24.212	(0.979)	339968	8.00267	800.3
99	Perylene	252	24.754	24.762	(1.001)	78949	1.84781	184.8
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	14.875	14.867	(1.059)	34121	4.37620	437.6

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: ws91sb.d
Lab Smp Id: WS91LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130620.b/ABN.m
Misc Info: 13-12076

Calibration Date: 20-JUN-2013
Calibration Time: 10:18
Client Smp ID: WS91LCSS1
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	45250	22625	90500	43340	-4.22
27 Naphthalene-d8	166754	83377	333508	161474	-3.17
42 Acenaphthene-d10	106910	53455	213820	96609	-9.64
59 Phenanthrene-d10	179783	89892	359566	160846	-10.53
69 Chrysene-d12	192841	96420	385682	168731	-12.50
134 Di-n-octylphthala	229567	114784	459134	200706	-12.57
77 Perylene-d12	184310	92155	368620	147323	-20.07

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.69	7.19	8.19	7.69	0.00
27 Naphthalene-d8	10.26	9.76	10.76	10.26	-0.07
42 Acenaphthene-d10	14.05	13.55	14.55	14.05	0.00
59 Phenanthrene-d10	17.24	16.74	17.74	17.23	-0.04
69 Chrysene-d12	22.45	21.95	22.95	22.45	0.00
134 Di-n-octylphthala	23.66	23.16	24.16	23.66	0.00
77 Perylene-d12	24.72	24.22	25.22	24.72	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: WS91LCSS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDALCS.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130620.b/ABN.m
Misc Info: 13-12076

Client SDG: WS91
Fraction: SV
Client Smp ID: WS91LCSS1
Operator: VTS/YZ
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	500.0	308.7	61.75	34-105
4 Bis(2-Chloroethyl)	500.0	349.6	69.91	36-100
6 2-Chlorophenol	500.0	302.2	60.44	39-100
7 1,3-Dichlorobenzen	500.0	325.2	65.04	40-100
9 1,4-Dichlorobenzen	500.0	329.8	65.96	39-100
11 Benzyl alcohol	500.0	279.0	55.80	19-117
12 1,2-Dichlorobenzen	500.0	339.3	67.86	32-100
13 2-Methylphenol	500.0	289.9	57.98	28-100
14 2,2'-oxybis(1-Chlo	500.0	357.4	71.49	32-100
15 4-Methylphenol	1000	600.3	60.03	29-100
16 N-Nitroso-di-n-pro	500.0	364.4	72.88	30-100
17 Hexachloroethane	500.0	336.3	67.27	38-100
19 Nitrobenzene	500.0	347.5	69.49	36-100
20 Isophorone	500.0	339.7	67.94	37-101
21 2-Nitrophenol	500.0	334.3	66.86	37-101
22 2,4-Dimethylphenol	1500	861.0	57.40	10-100
23 Bis(2-Chloroethoxy	500.0	379.1	75.82	39-100
24 Benzoic acid	2750	1094	39.79	10-107
25 2,4-Dichlorophenol	1500	1018	67.86	28-112
26 1,2,4-Trichloroben	500.0	344.3	68.85	35-103
28 Naphthalene	500.0	320.6	64.12	43-100
29 4-Chloroaniline	1500	101.3	6.75*	11-100
30 Hexachlorobutadien	500.0	343.6	68.72	37-100
31 4-Chloro-3-methylp	1500	1169	77.94	32-117
32 2-Methylnaphthalen	500.0	348.1	69.63	43-100
33 Hexachlorocyclopen	1500	486.0	32.40	10-103
34 2,4,6-Trichlorophe	1500	1121	74.73	30-113
35 2,4,5-Trichlorophe	1500	1098	73.22	28-118
37 2-Chloronaphthalen	500.0	385.3	77.07	40-100
38 2-Nitroaniline	1500	1341	89.38	31-126
39 Dimethylphthalate	500.0	454.5	90.90	43-114
40 Acenaphthylene	500.0	337.5	67.51	42-102
41 2,6-Dinitrotoluene	1500	1310	87.30	33-123

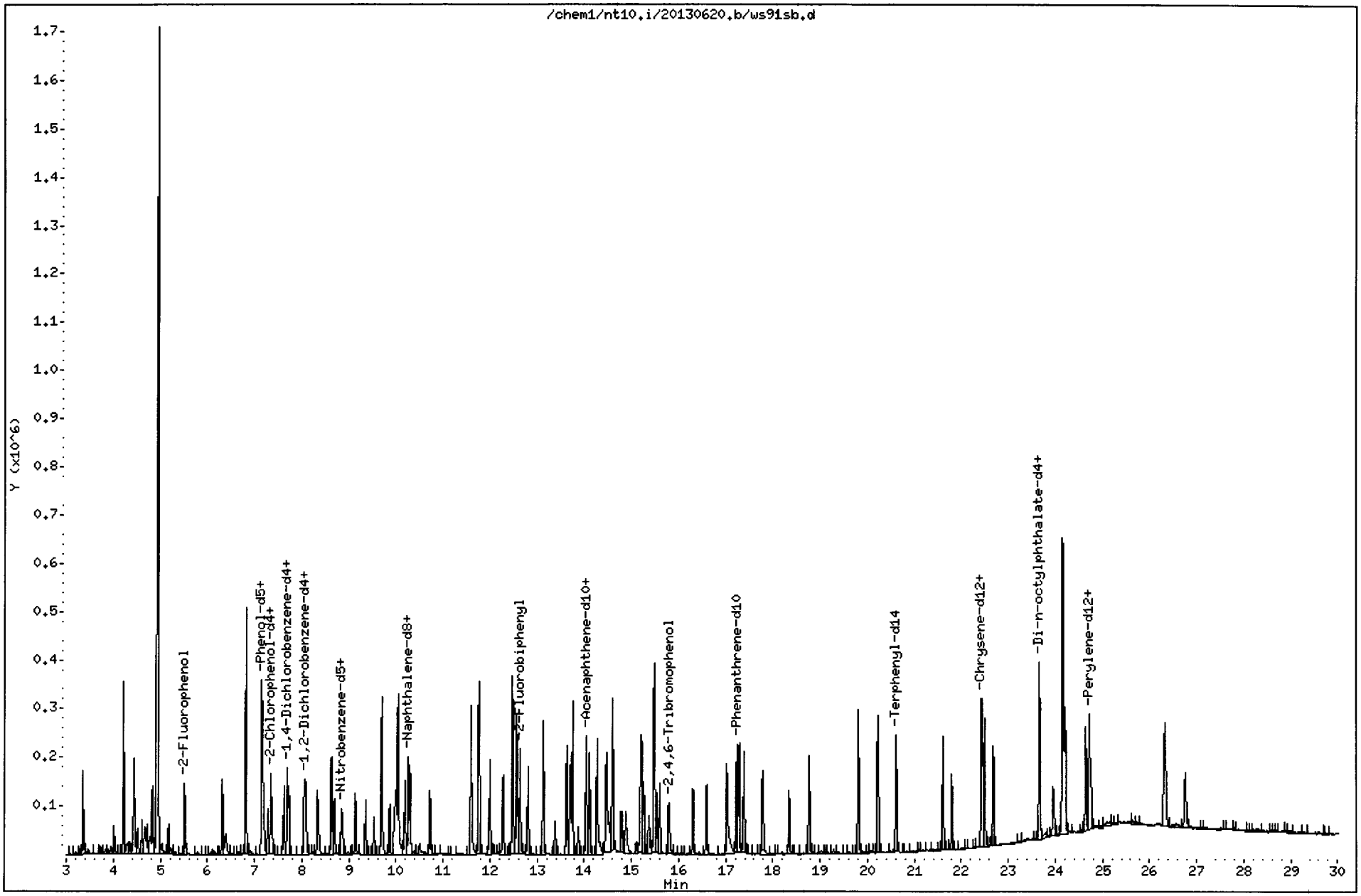
SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
43 3-Nitroaniline	1500	219.0	14.60*	22-113
44 Acenaphthene	500.0	366.6	73.32	45-100
45 2,4-Dinitrophenol	2750	1396	50.75	10-105
46 Dibenzofuran	500.0	386.3	77.27	43-103
47 4-Nitrophenol	1500	679.2	45.28	15-138
48 2,4-Dinitrotoluene	1500	1401	93.40	35-127
49 Fluorene	500.0	365.4	73.08	45-107
50 Diethylphthalate	500.0	449.7	89.93	50-120
51 4-Chlorophenyl-phe	500.0	447.0	89.39	32-116
52 4-Nitroaniline	1500	694.6	46.31	24-125
53 4,6-Dinitro-2-meth	2750	1876	68.22	24-119
54 N-Nitrosodiphenyla	500.0	313.6	62.72	36-111
56 4-Bromophenyl-phen	500.0	434.0	86.80	39-114
57 Hexachlorobenzene	500.0	378.4	75.69	33-113
58 Pentachlorophenol	1500	943.6	62.91	16-120
60 Phenanthrene	500.0	408.7	81.74	49-112
61 Anthracene	500.0	372.5	74.50	45-106
62 Carbazole	500.0	579.3	115.87	43-135
63 Di-n-butylphthalat	500.0	492.8	98.55	48-126
64 Fluoranthene	500.0	424.5	84.90	53-118
65 Pyrene	500.0	419.0	83.80	48-121
67 Butylbenzylphthala	500.0	545.5	109.09	45-132
68 Benzo(a)anthracene	500.0	407.6	81.52	49-115
70 3,3'-Dichlorobenz	1500	0.000	*	10-100
71 Chrysene	500.0	388.8	77.77	47-115
72 bis(2-Ethylhexyl)p	500.0	427.6	85.53	34-130
73 Di-n-octylphthalat	500.0	394.6	78.93	28-124
74 Benzo(b)fluoranthe	500.0	443.8	88.77	42-132
75 Benzo(k)fluoranthe	500.0	377.2	75.44	39-129
76 Benzo(a)pyrene	500.0	385.4	77.08	42-113
78 Indeno(1,2,3-cd)py	500.0	380.3	76.05	42-123
79 Dibenzo(a,h)anthra	500.0	379.5	75.91	30-133
80 Benzo(g,h,i)peryle	500.0	336.8	67.37	38-126
91 Aniline	1500	50.04	3.34*	10-134
111 Azobenzene (1,2-DP	500.0	382.3	76.45	35-112
90 N-Nitrosodimethyla	1500	897.2	59.81	17-100
105 1-methylnaphthalen	500.0	371.3	74.26	42-100
103 Pyridine	1000	698.9	69.89	10-147
187 Total Benzofluoran	1000	800.3	80.03	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	484.4	64.59	27-120

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 2 Phenol-d5	750.0	536.8	71.57	29-120
$ 5 2-Chlorophenol-d4	750.0	499.2	66.55	31-120
$ 10 1,2-Dichlorobenzen	500.0	321.1	64.23	32-120
$ 18 Nitrobenzene-d5	500.0	321.7	64.35	30-120
$ 36 2-Fluorobiphenyl	500.0	343.8	68.77	35-120
$ 55 2,4,6-Tribromophen	750.0	617.1	82.28	24-134
$ 66 Terphenyl-d14	500.0	413.7	82.74	37-120

Data File: /chem1/nt10.i/20130620.b/ws91sb.d
Date : 20-JUN-2013 16:01
Client ID: WS91LCSS1
Sample Info: WS91LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ws91sb.d

Lab ID: WS91LCSS1, Method: ABN.m, Instrument: nt10.i, Date: 20-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D 6/25/13

Data file : /chem1/nt10.i/20130620.b/ws91a.d
Lab Smp Id: WS91A Client Smp ID: CL-MH-SPS-20130605-
Inj Date : 20-JUN-2013 16:38
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WS91A
Misc Info : 13-12076
Comment : 1ul Injection
Method : /chem1/nt10.i/20130620.b/ABN.m
Meth Date : 24-Jun-2013 11:26 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 10
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	13.30000	Weight of sample extracted (g)
M	59.30000	% 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	5.937	5.497	(0.766)	34481	3.24428	599.3(M)
$	2	Phenol-d5	99	7.406	7.174	(0.956)	68258	4.96310	916.9
	3	Phenol	94	7.429	7.197	(0.959)	73463	4.77210	881.6
$	5	2-Chlorophenol-d4	132	7.537	7.343	(0.973)	43262	4.14394	765.5
	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	7.746	7.692	(1.000)	29777	4.00000	
	9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10	1,2-Dichlorobenzene-d4	152	8.111	8.057	(1.047)	24333	3.24022	598.6
	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.					

	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	8.709	8.616	(1.124)	16241	1.43788	265.6
$	18 Nitrobenzene-d5	82	8.911	8.833	(0.866)	36440	2.93115	541.5(M)
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	9.748	9.686	(0.948)	7258	0.61344	113.3
	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	10.288	10.264	(1.000)	117810	4.00000	
	28 Naphthalene	128	10.326	10.303	(1.004)	7978	0.25436	46.99
	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	11.780	11.772	(1.145)	10755	0.51623	95.37
	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	12.639	12.639	(0.900)	92210	3.86324	713.7
	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	14.048	14.048	(1.000)	68387	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	14.473	14.465	(1.030)	10641	0.40069	74.02
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	15.223	15.215	(1.084)	10599	0.46772	86.41
	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	15.547	15.539	(0.901)	4953	0.42396	78.32
$	55 2,4,6-Tribromophenol	330	15.809	15.786	(1.125)	1909	0.52785	97.51(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	17.254	17.238	(1.000)	100921	4.00000	
	60 Phenanthrene	178	17.308	17.285	(1.003)	102569	3.72604	688.3
	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	19.838	19.807	(1.150)	75681	2.33592	431.5
65	Pyrene	202	20.264	20.232	(0.901)	68024	1.69940	313.9
$ 66	Terphenyl-d14	244	20.651	20.619	(0.918)	100617	3.99520	738.1
67	Butylbenzylphthalate	149	Compound Not Detected.					
68	Benzo(a)anthracene	228	22.470	22.431	(0.999)	10290	0.28408	52.48
* 69	Chrysene-d12	240	22.493	22.454	(1.000)	129376	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	22.532	22.501	(1.002)	34392	1.04921	193.8
72	bis(2-Ethylhexyl)phthalate	149	22.726	22.687	(0.959)	264865	11.2604	2080
* 134	Di-n-octylphthalate-d4	153	23.701	23.662	(1.000)	176922	4.00000	
73	Di-n-octylphthalate	149	23.717	23.670	(1.001)	22682	0.55681	102.9(M)
74	Benzo(b)fluoranthene	252	24.228	24.181	(0.978)	31649	0.77628	143.4
75	Benzo(k)fluoranthene	252	24.228	24.212	(0.978)	31649	0.73701	136.2
76	Benzo(a)pyrene	252	24.700	24.645	(0.997)	7048	0.20235	37.38(M)
* 77	Perylene-d12	264	24.777	24.723	(1.000)	137291	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	26.398	26.312	(1.065)	6292	0.15680 J	28.97(M)
79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
80	Benzo(g,h,i)perylene	276	26.849	26.763	(1.084)	11924	0.34344	63.45
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	12.013	11.997	(1.168)	5728	0.29979	55.38
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
187	Total Benzofluoranthenes	252	24.228	24.212	(0.978)	31649	0.79944	147.7
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

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: ws91a.d
Lab Smp Id: WS91A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130620.b/ABN.m
Misc Info: 13-12076

Calibration Date: 20-JUN-2013
Calibration Time: 10:18
Client Smp ID: CL-MH-SPS-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	45250	22625	90500	29777	-34.19
27 Naphthalene-d8	166754	83377	333508	117810	-29.35
42 Acenaphthene-d10	106910	53455	213820	68387	-36.03
59 Phenanthrene-d10	179783	89892	359566	100921	-43.87
69 Chrysene-d12	192841	96420	385682	129376	-32.91
134 Di-n-octylphthala	229567	114784	459134	176922	-22.93
77 Perylene-d12	184310	92155	368620	137291	-25.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.69	7.19	8.19	7.75	0.71
27 Naphthalene-d8	10.26	9.76	10.76	10.29	0.23
42 Acenaphthene-d10	14.05	13.55	14.55	14.05	0.00
59 Phenanthrene-d10	17.24	16.74	17.74	17.25	0.09
69 Chrysene-d12	22.45	21.95	22.95	22.49	0.17
134 Di-n-octylphthala	23.66	23.16	24.16	23.70	0.16
77 Perylene-d12	24.72	24.22	25.22	24.78	0.22

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

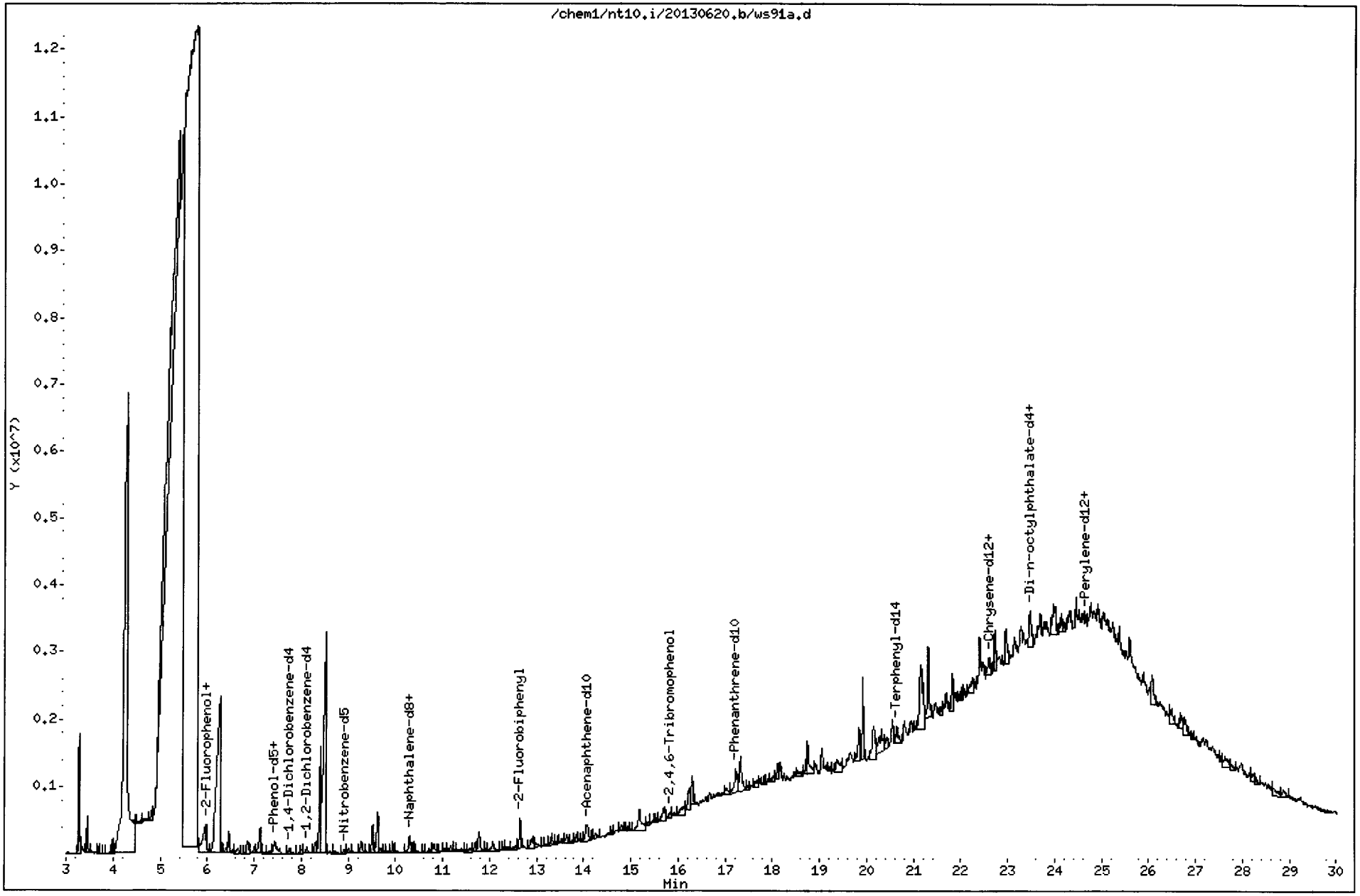
Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WS91A
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDALCS.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130620.b/ABN.m
Misc Info: 13-12076

Client SDG: WS91
Fraction: SV
Client Smp ID: CL-MH-SPS-20130605-
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	1386	599.3	43.26	27-120
$ 2 Phenol-d5	1386	916.9	66.17	29-120
$ 5 2-Chlorophenol-d4	1386	765.5	55.25	31-120
$ 10 1,2-Dichlorobenzen	923.7	598.6	64.80	32-120
$ 18 Nitrobenzene-d5	923.7	541.5	58.62	30-120
$ 36 2-Fluorobiphenyl	923.7	713.7	77.26	35-120
$ 55 2,4,6-Tribromophen	1386	97.51	7.04*	24-134
$ 66 Terphenyl-d14	923.7	738.1	79.90	37-120

Data File: /chem1/nt10.i/20130620.b/ws91a.d
Date : 20-JUN-2013 16:38
Client ID: CL-MH-SPS-20130605-
Sample Info: WS91A
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130620.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

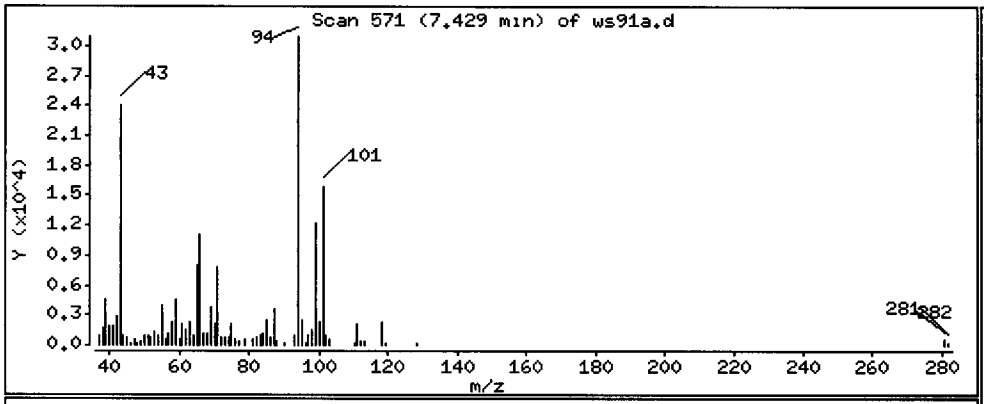
Operator: VTS/YZ

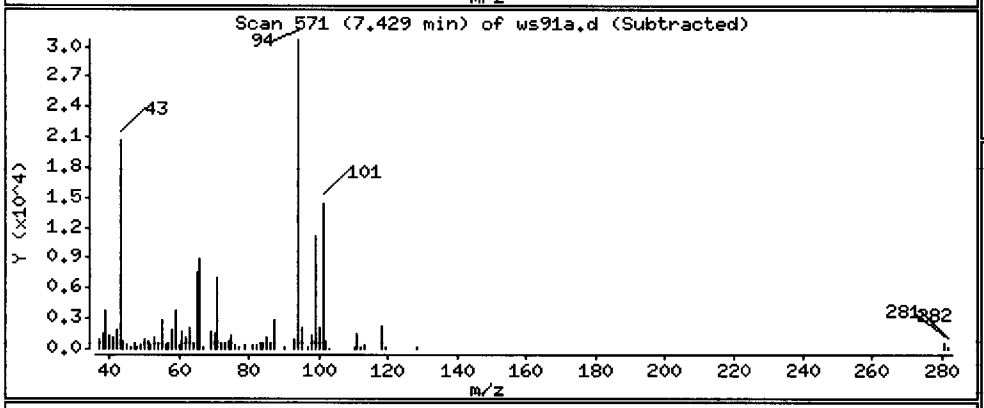
Column phase: ZB-5msi

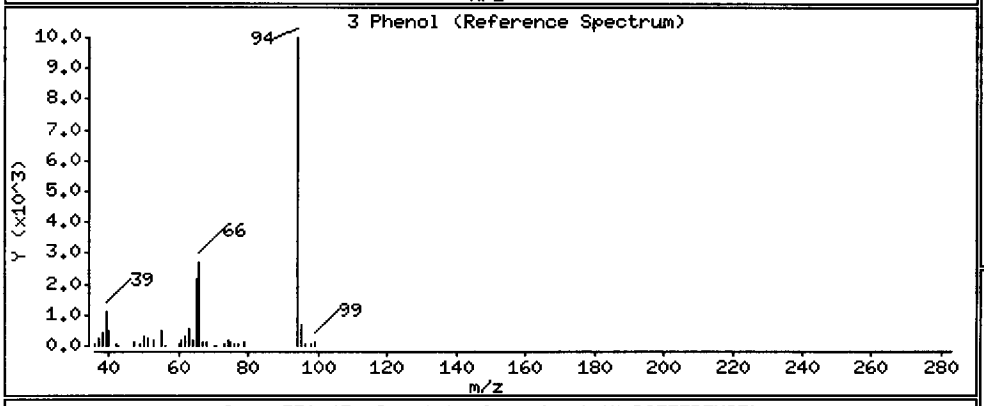
Column diameter: 0.25

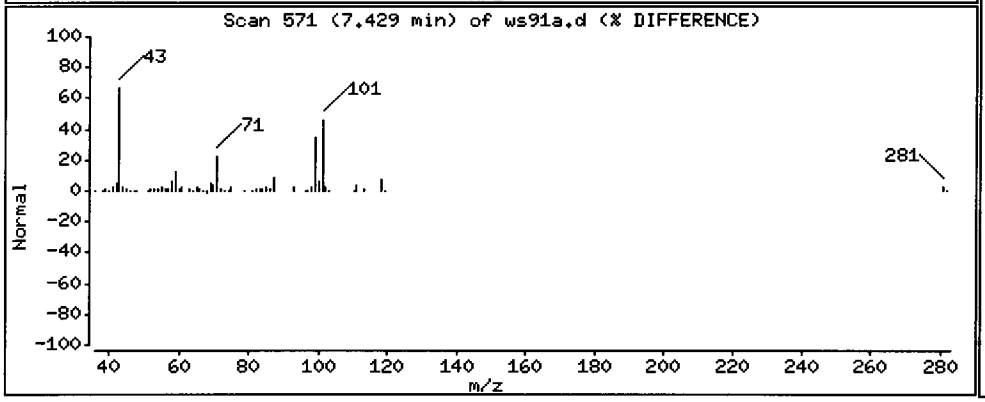
3 Phenol

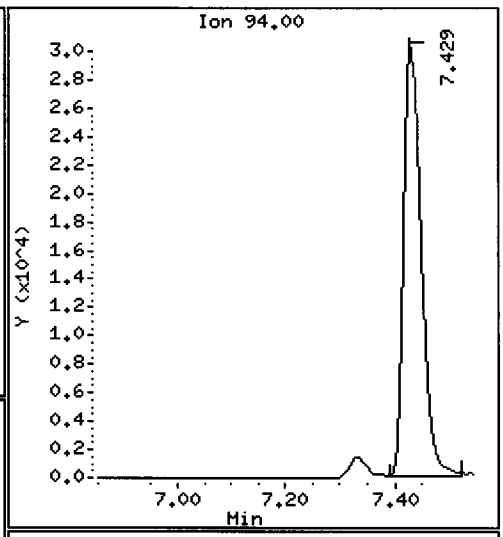
Concentration: 881.6 ug/kg

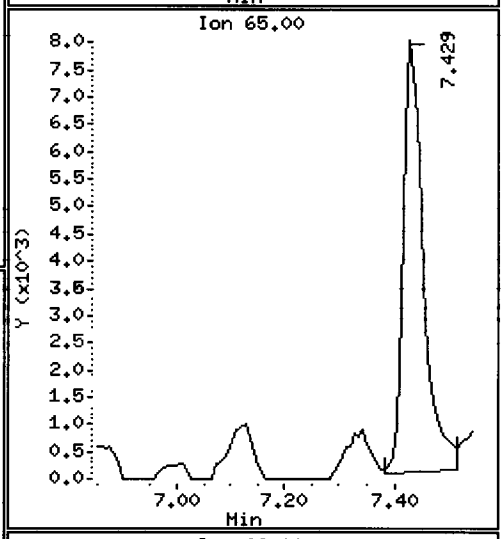


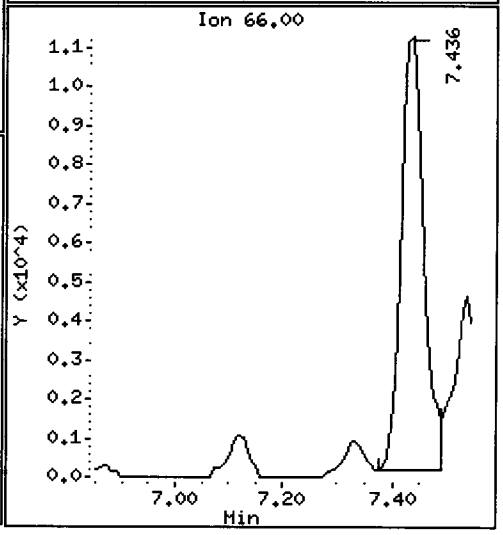












Data File: /chem1/nt10.i/20130620.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

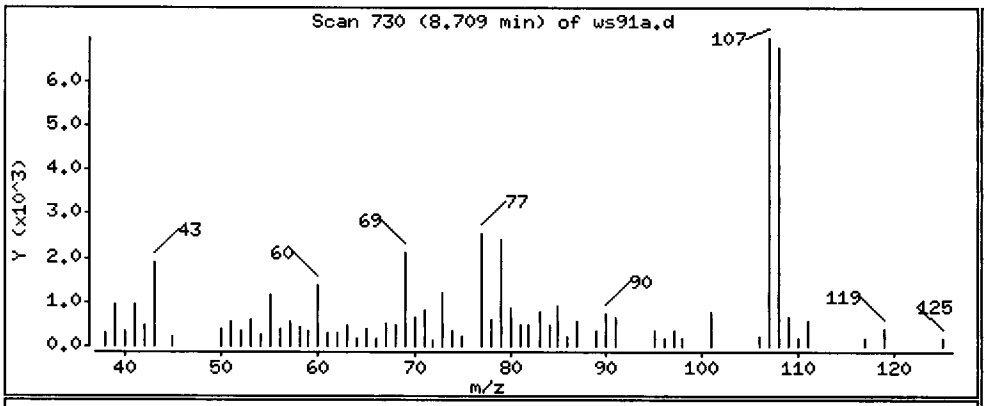
Operator: VTS/YZ

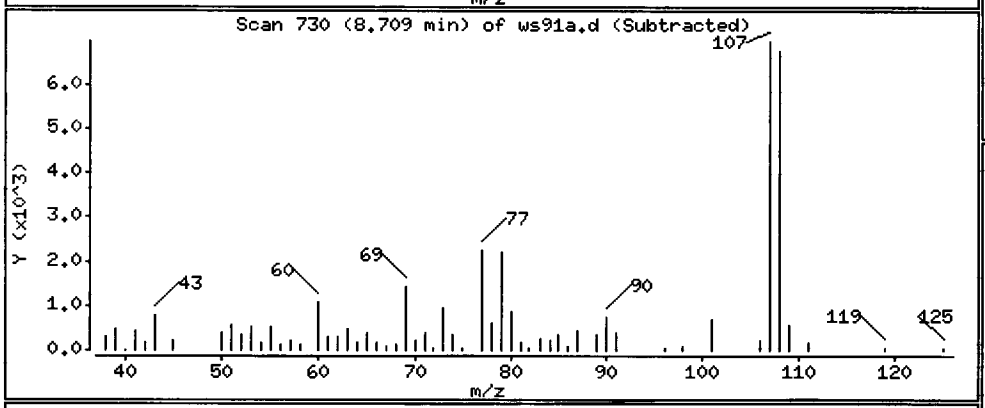
Column phase: ZB-5msi

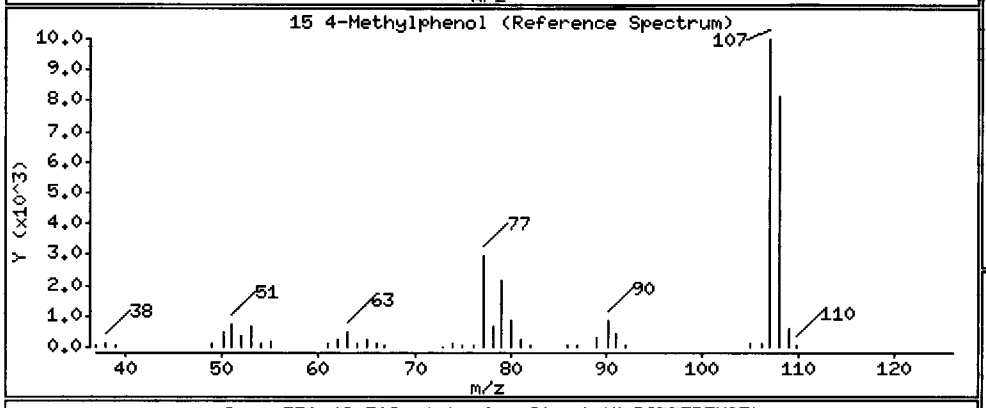
Column diameter: 0.25

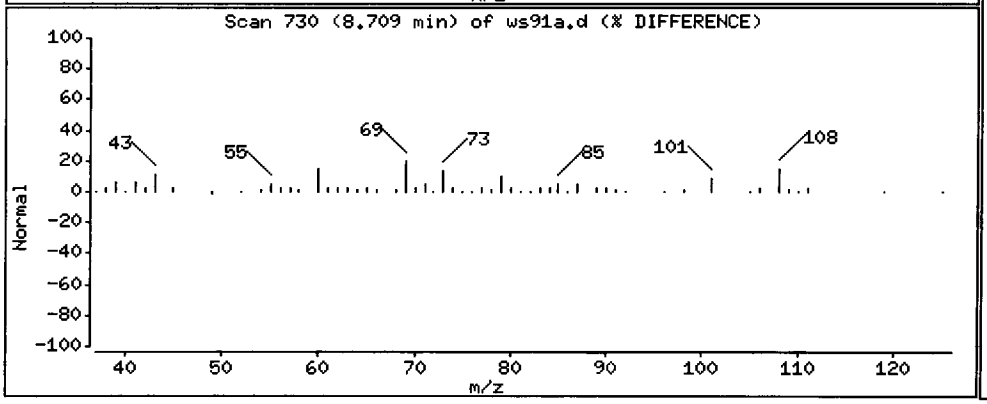
15 4-Methylphenol

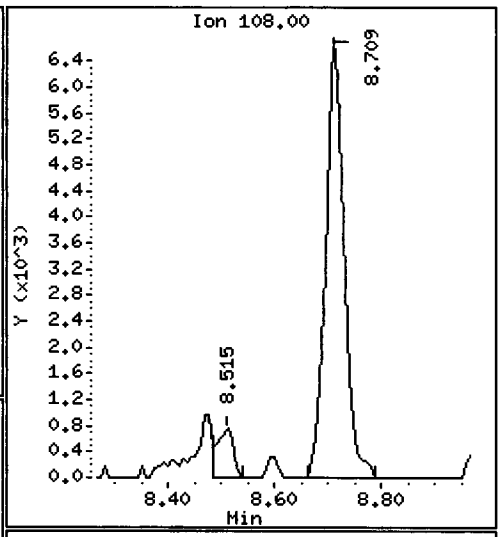
Concentration: 265.6 ug/kg

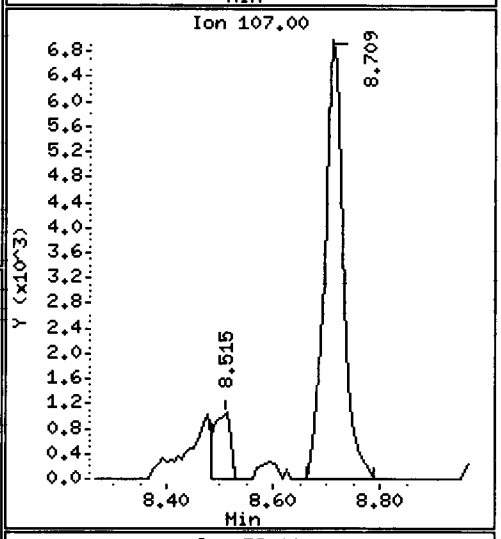


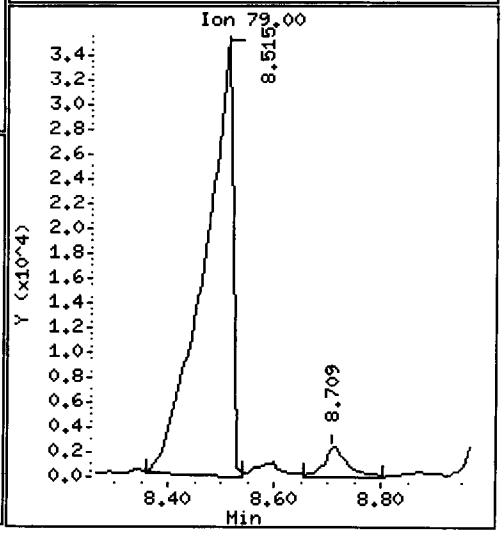












Data File: /chem1/nt10.i/20130620.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

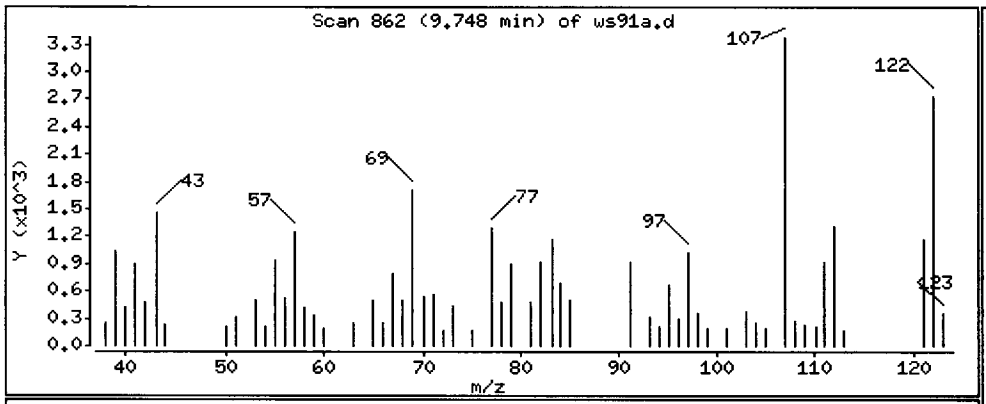
Operator: VTS/YZ

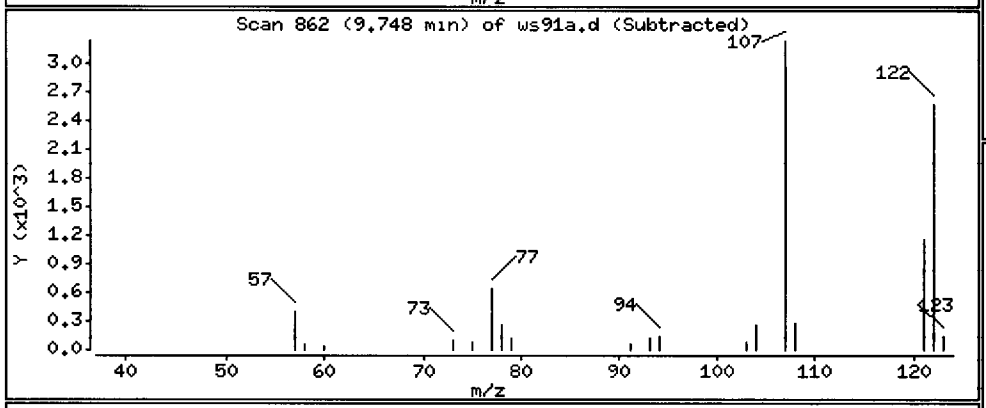
Column phase: ZB-5ms1

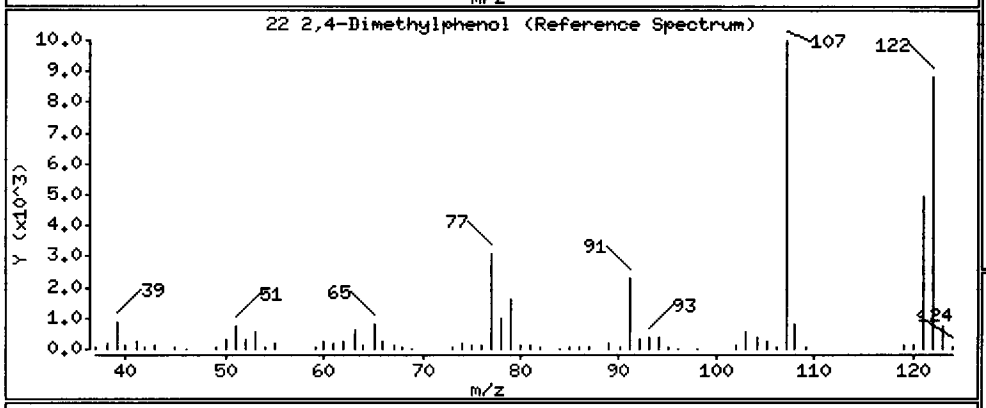
Column diameter: 0.25

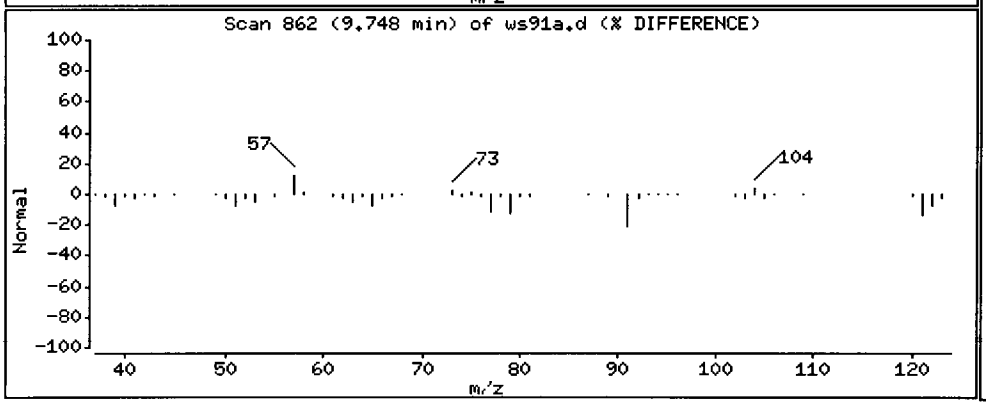
22 2,4-Dimethylphenol

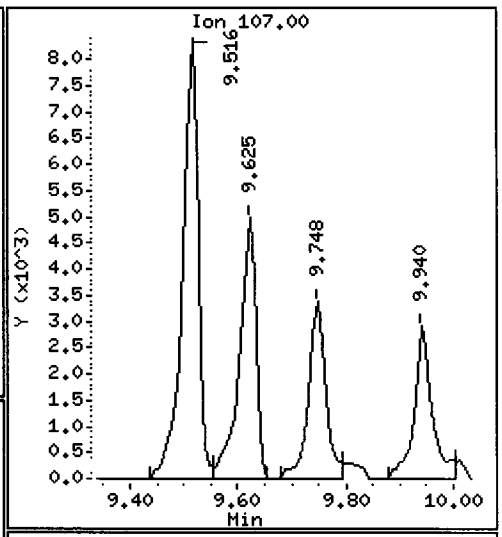
Concentration: 113.3 ug/kg

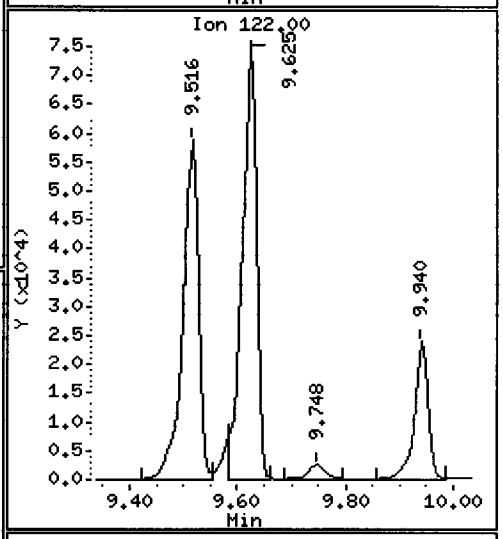


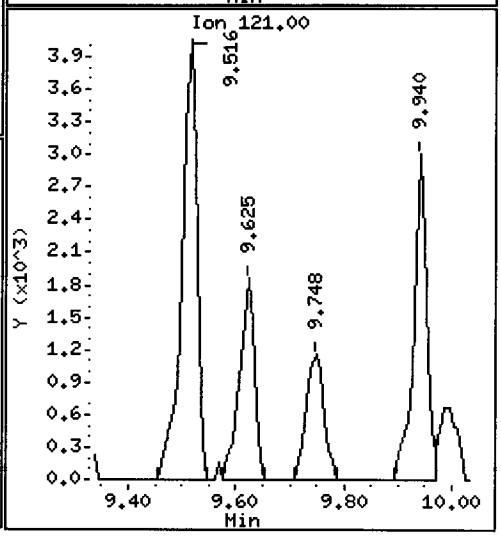












Data File: /chem1/nt10.i/20130620.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

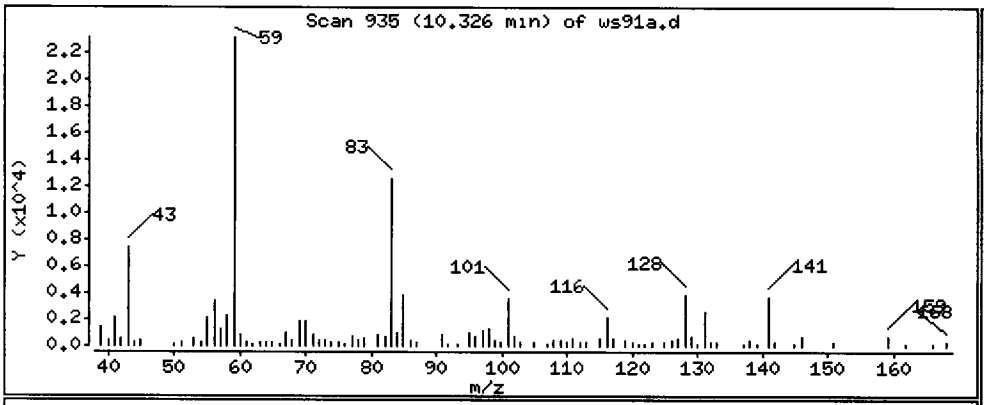
Operator: VTS/YZ

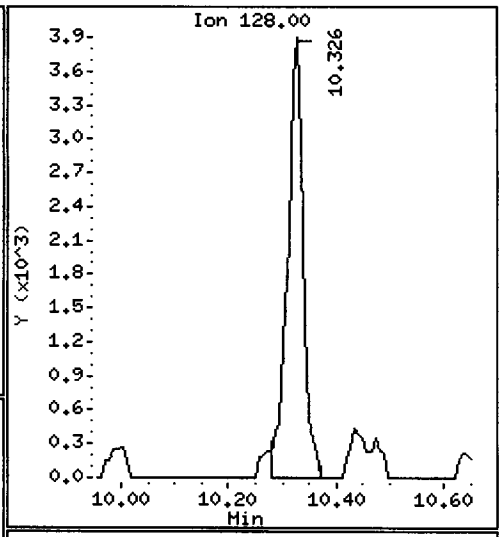
Column phase: ZB-5msi

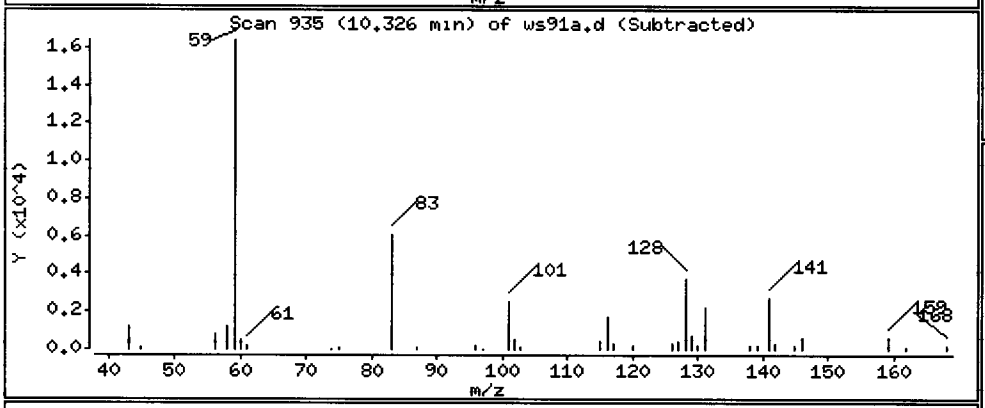
Column diameter: 0.25

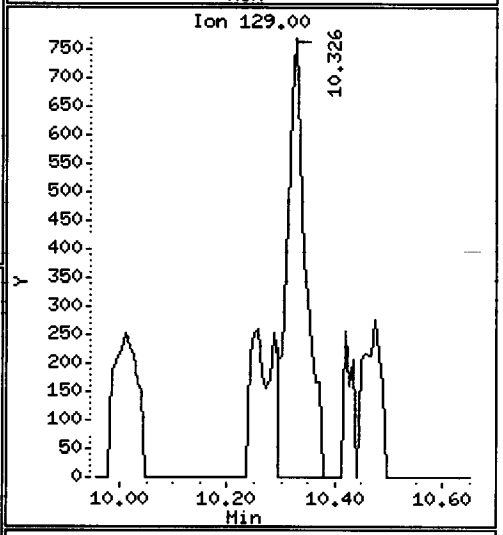
28 Naphthalene

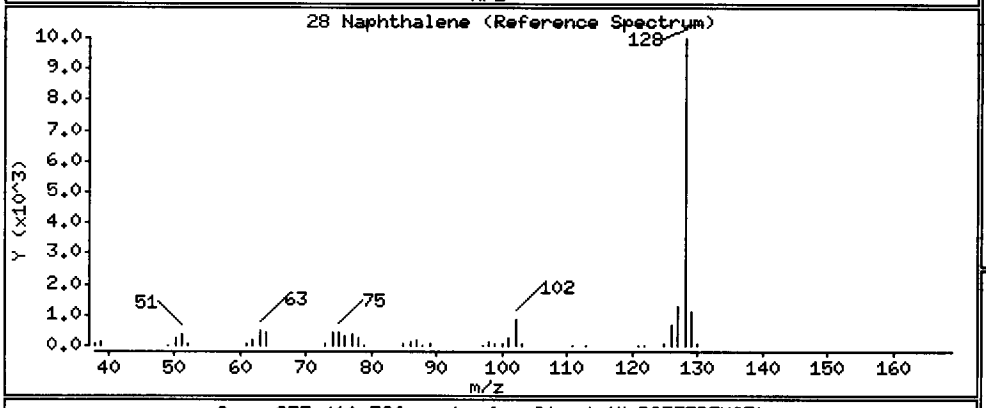
Concentration: 46.99 ug/kg

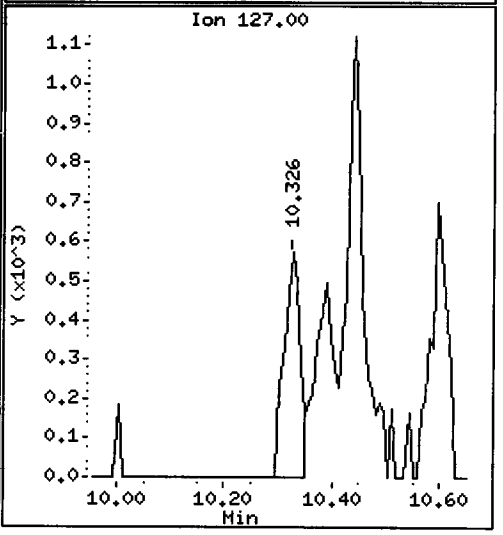


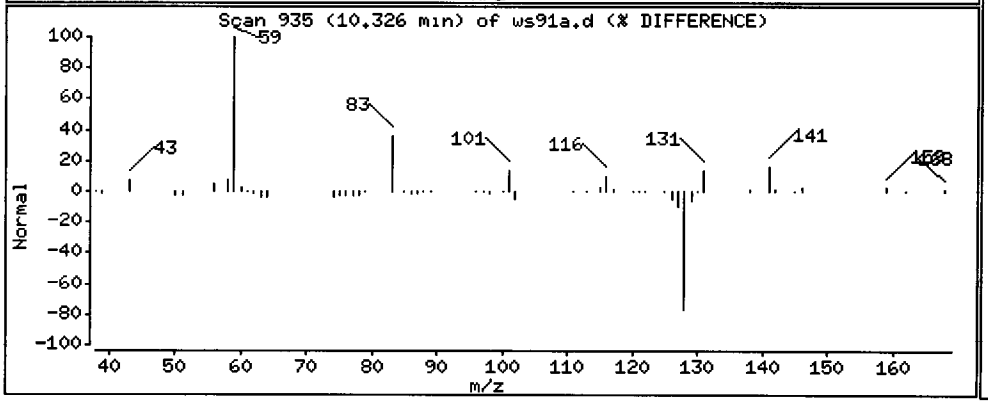












Data File: /chem1/nt10.i/20130620.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

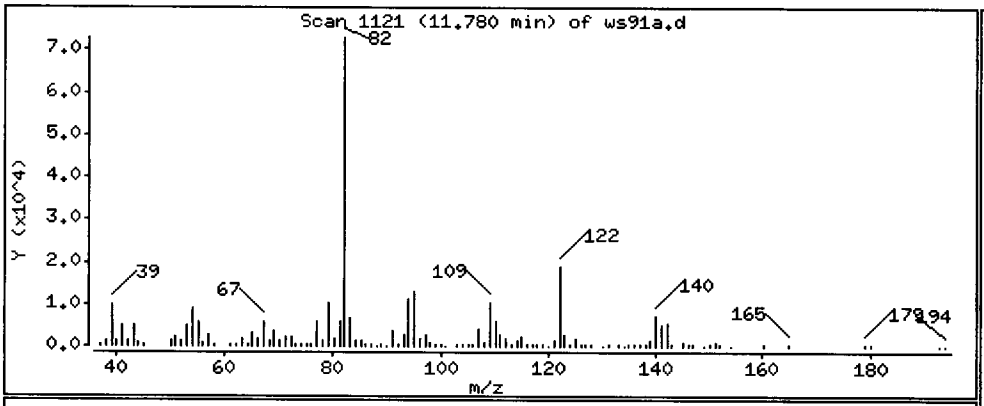
Operator: VTS/YZ

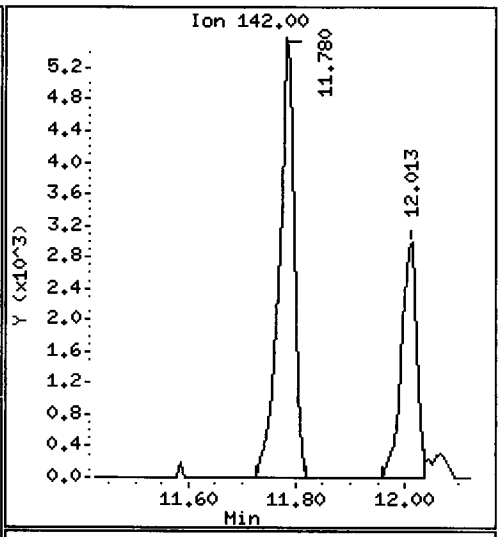
Column phase: ZB-5msi

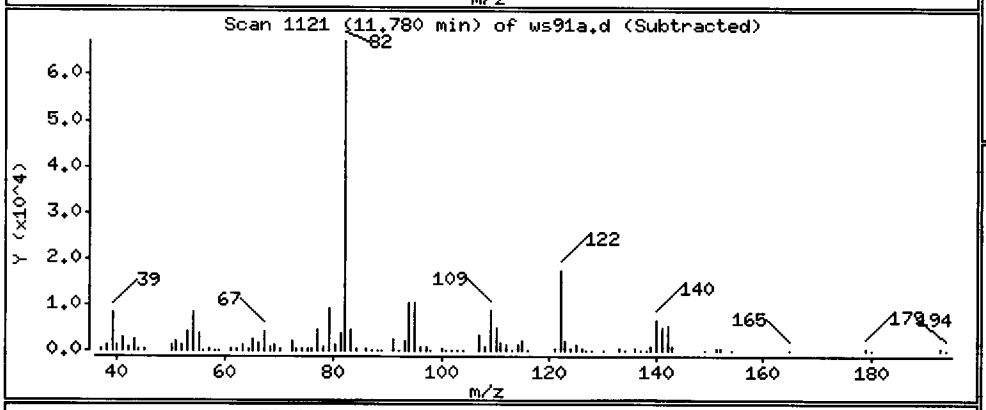
Column diameter: 0.25

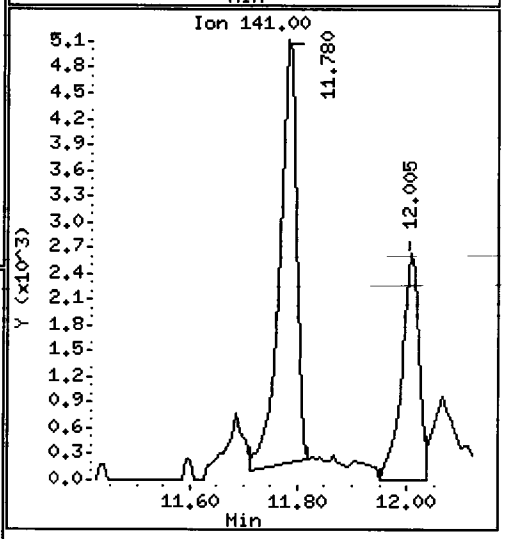
32 2-Methylnaphthalene

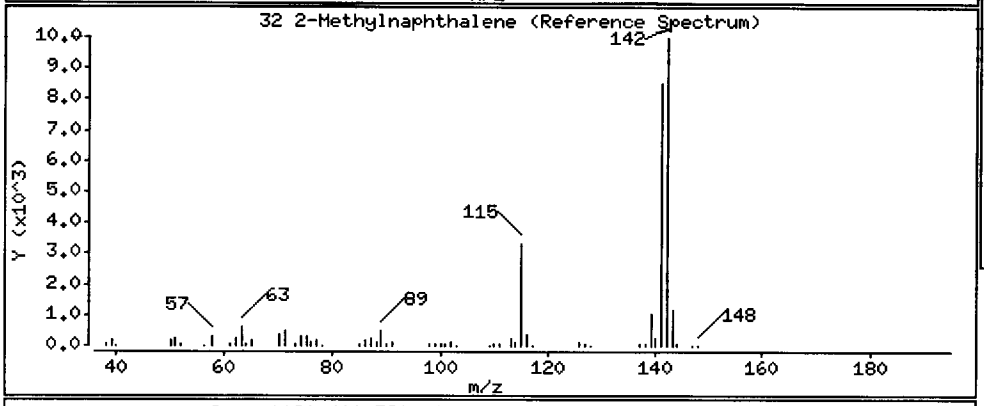
Concentration: 95.37 ug/kg

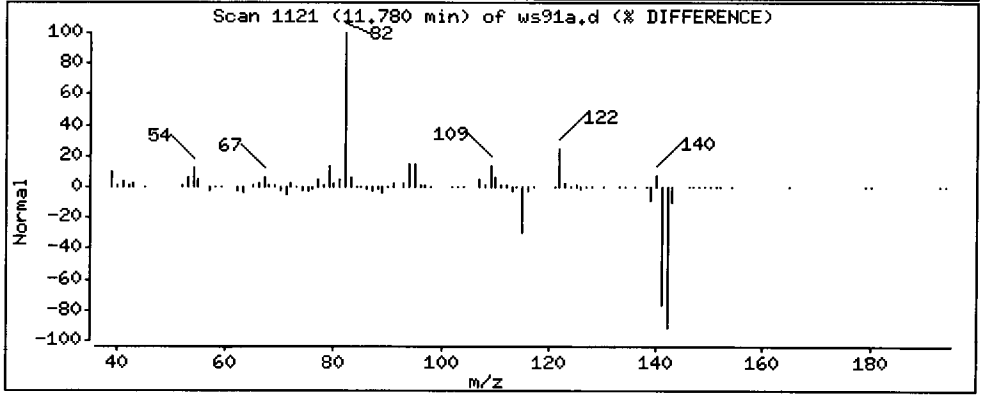












Data File: /chem1/nt10.i/20130620.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

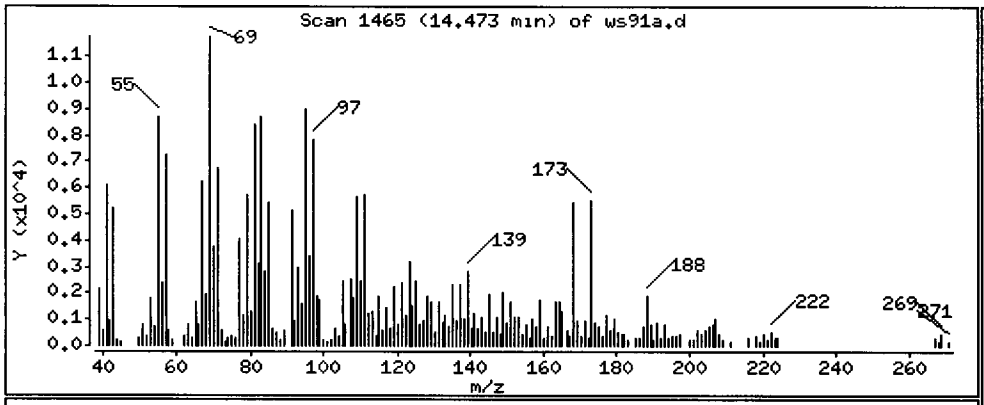
Operator: VTS/YZ

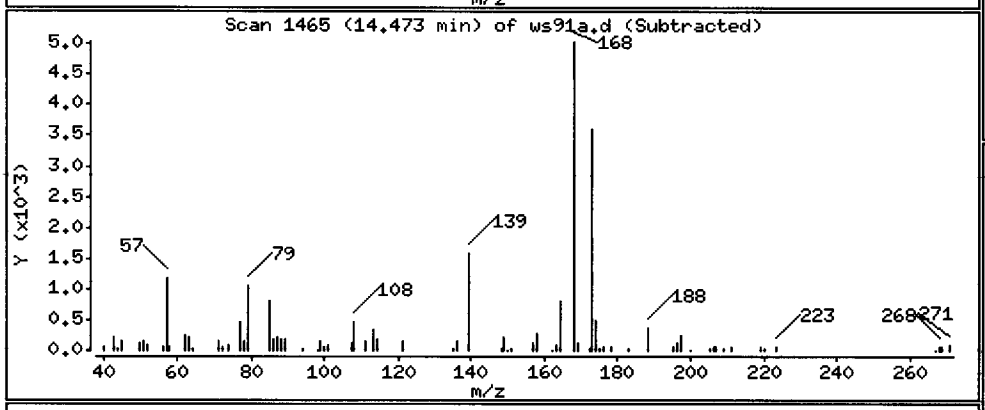
Column phase: ZB-5msi

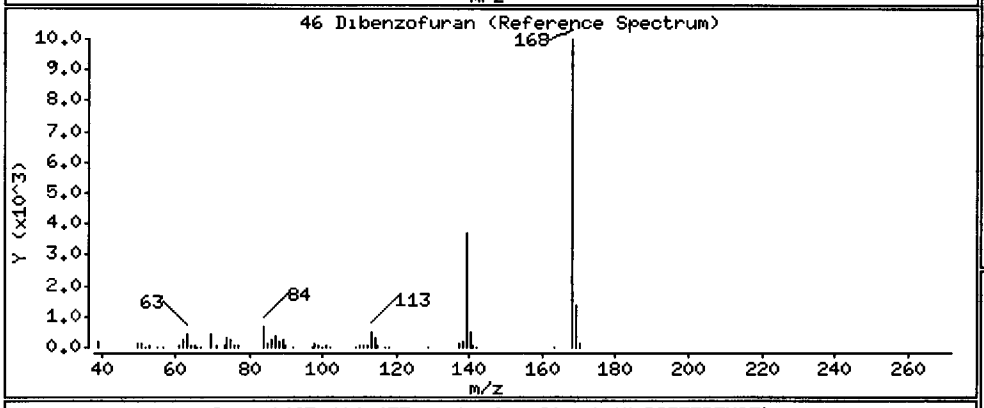
Column diameter: 0.25

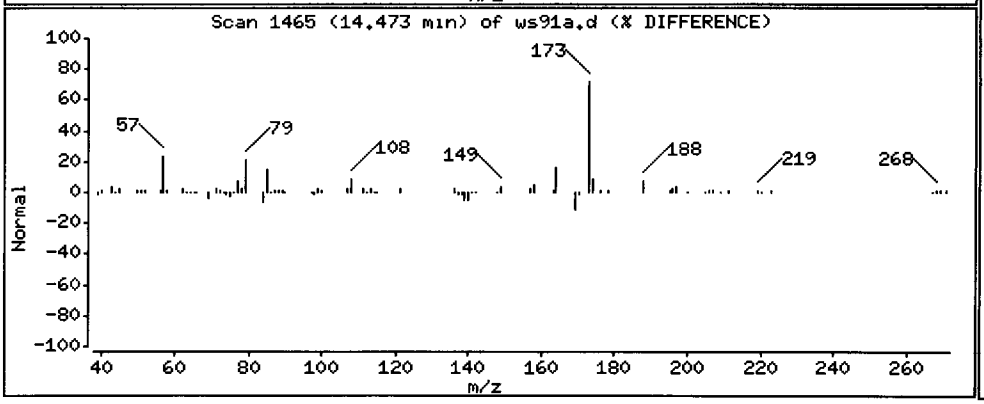
46 Dibenzofuran

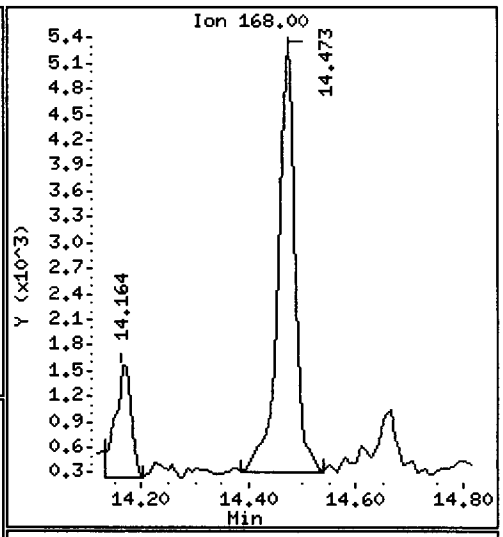
Concentration: 74.02 ug/kg

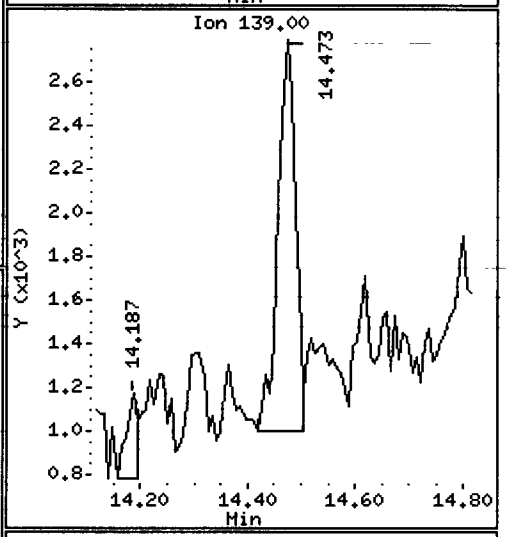


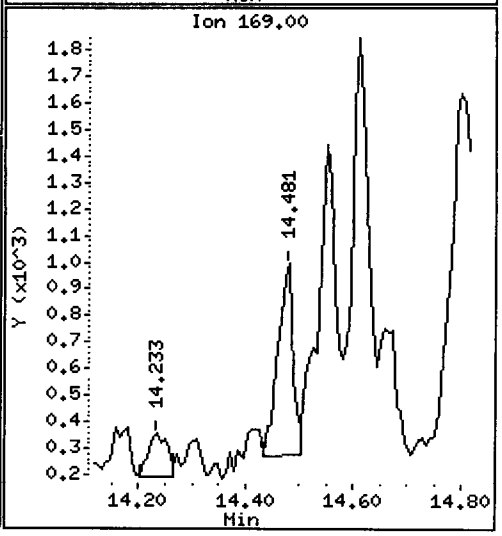












WS91 : 00649

Data File: /chem1/nt10.i/20130620.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

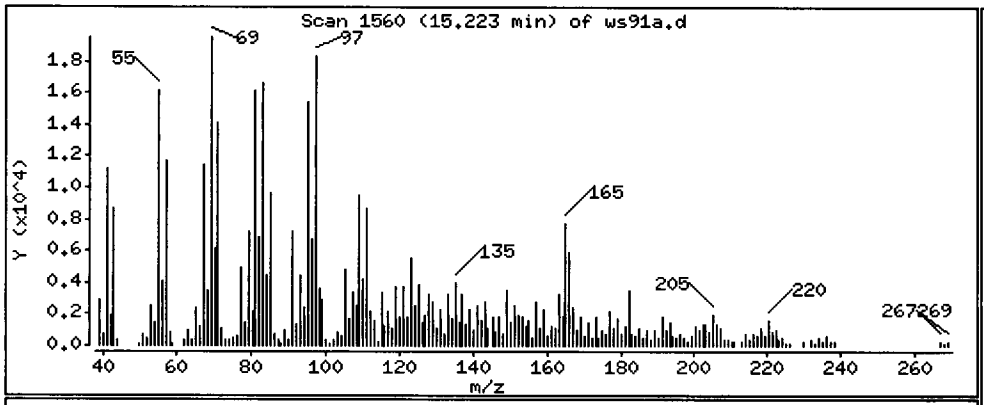
Operator: VTS/YZ

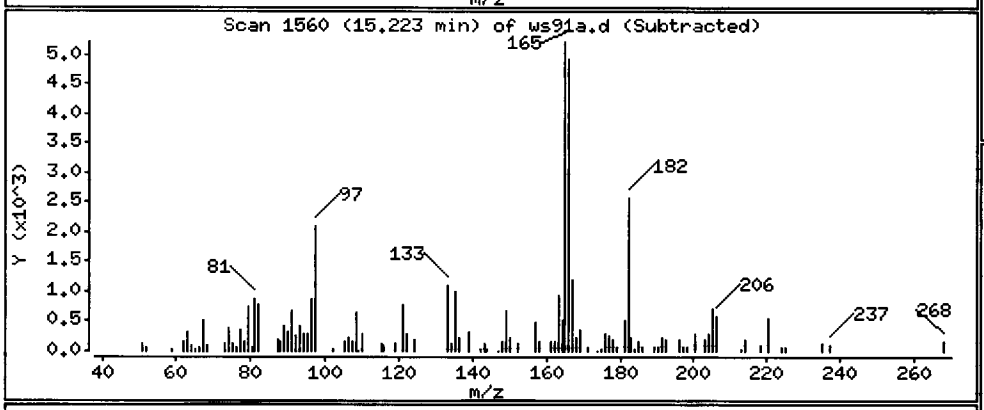
Column phase: ZB-5msi

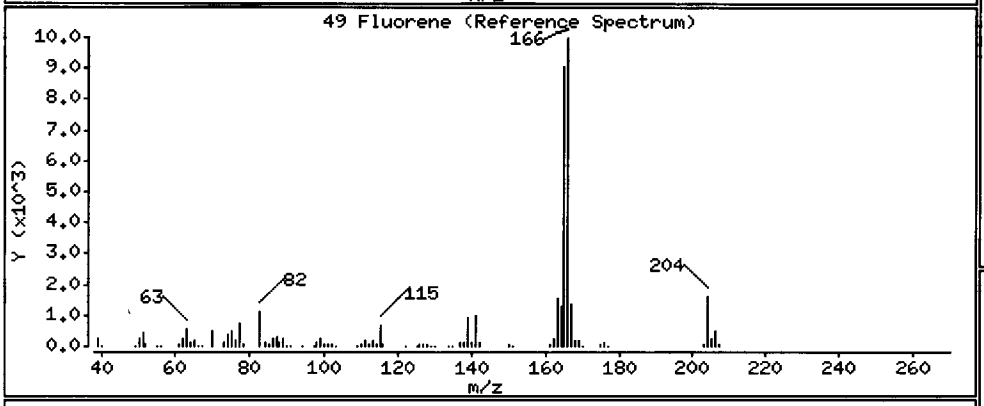
Column diameter: 0.25

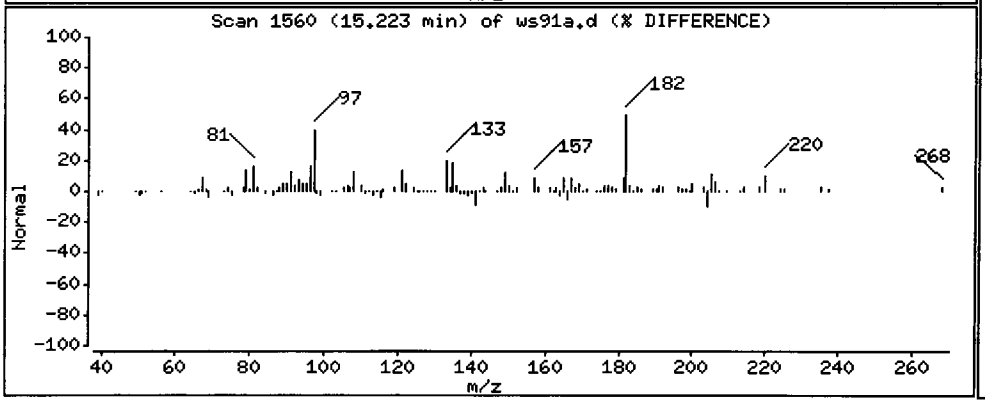
49 Fluorene

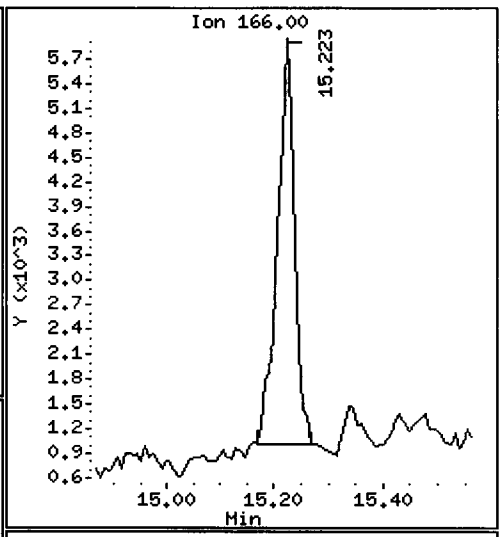
Concentration: 86.41 ug/kg

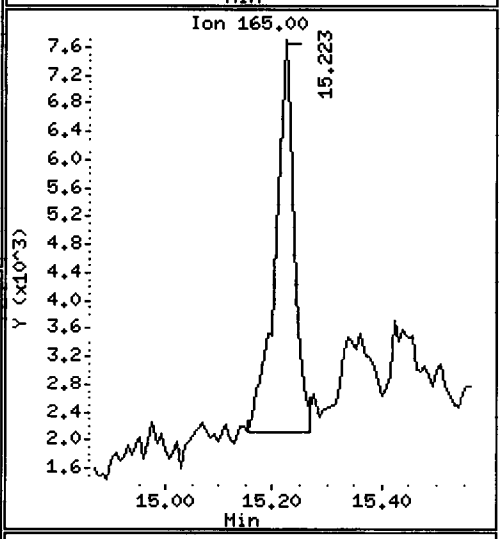


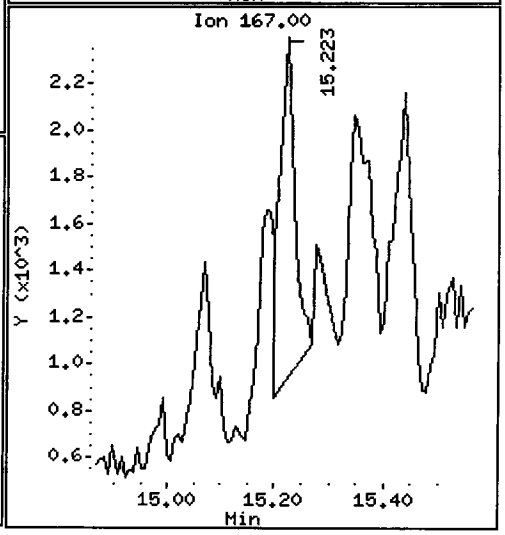












Data File: /chem1/nt10.i/20130620.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

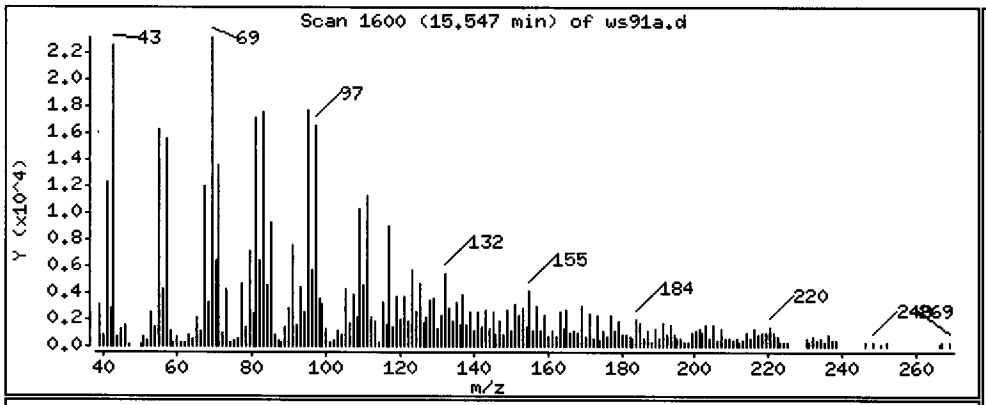
Operator: VTS/YZ

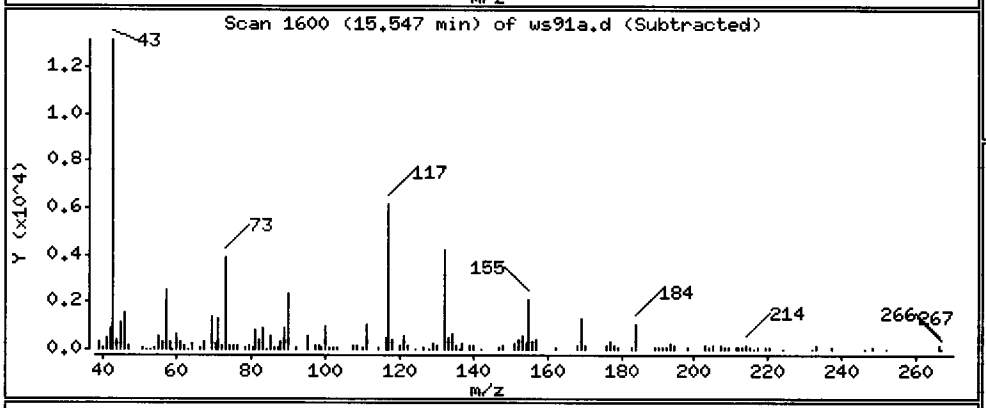
Column phase: ZB-5msi

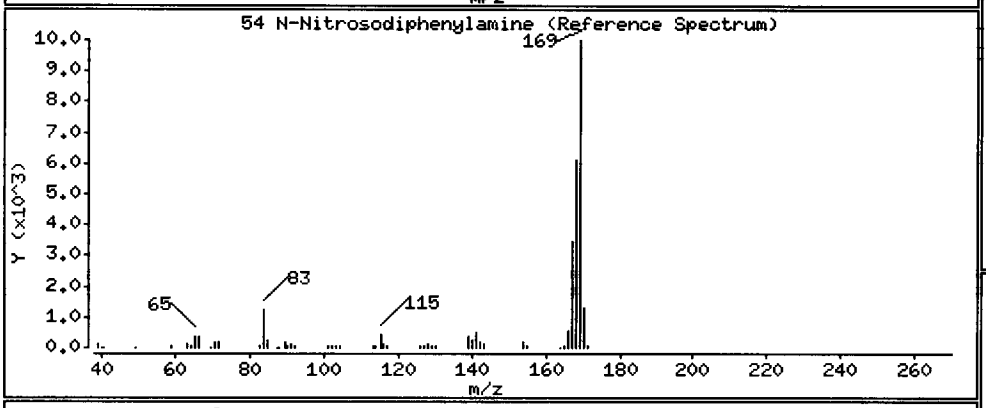
Column diameter: 0.25

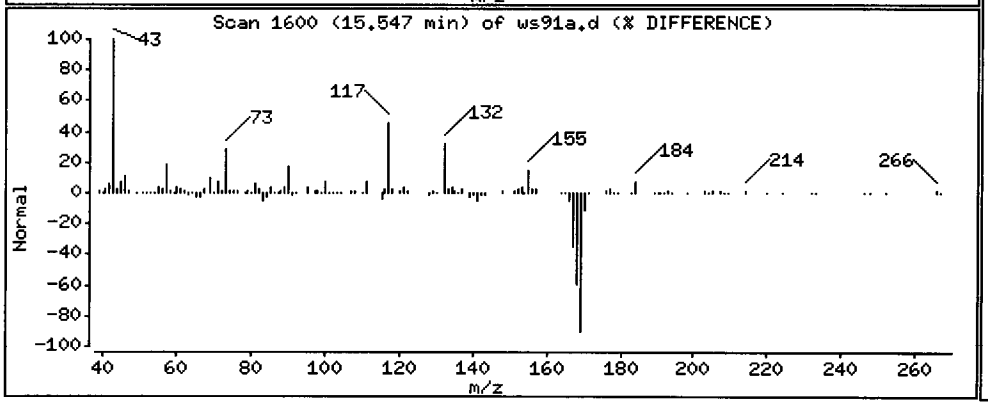
54 N-Nitrosodiphenylamine

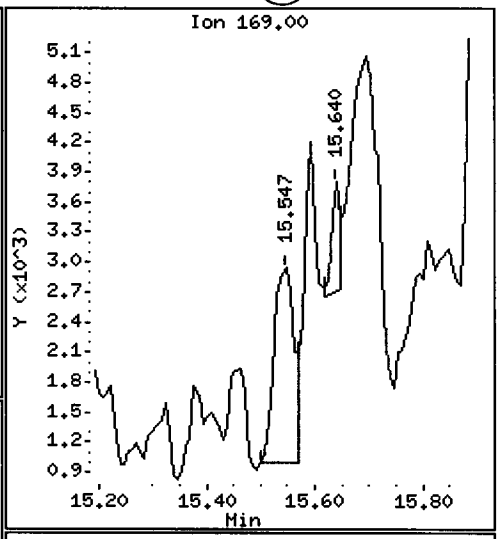
Concentration: 78.32 ug/kg

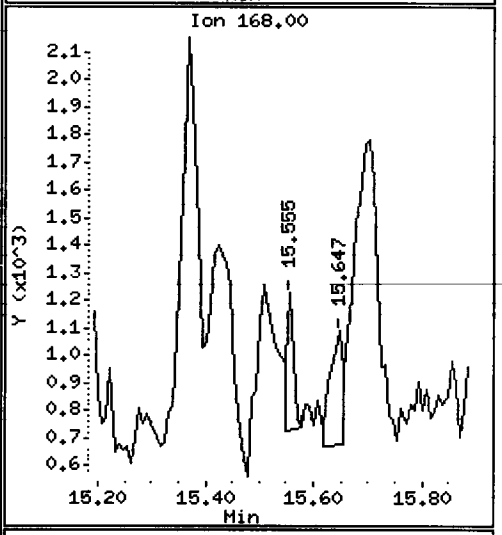


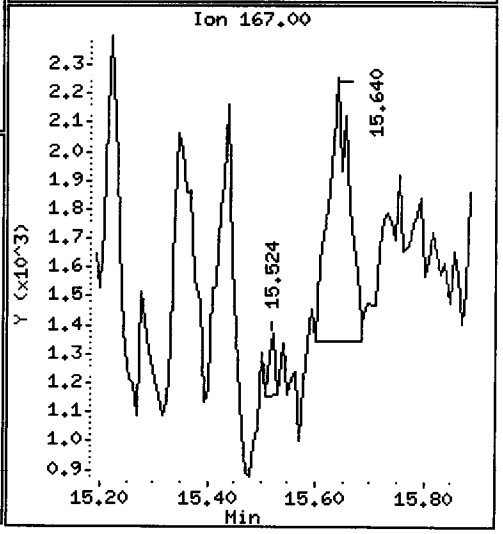












Data File: /chem1/nt10.i/20130620.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.1

Sample Info: WS91A

Volume Injected (uL): 1.0

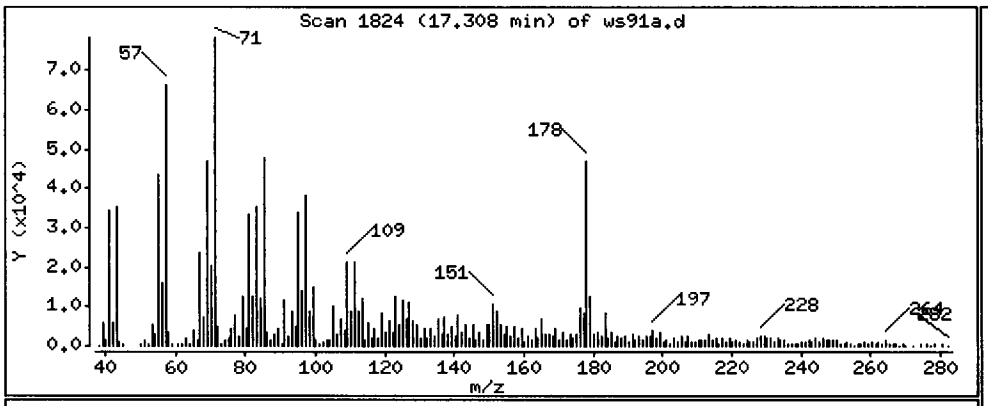
Operator: VTS/YZ

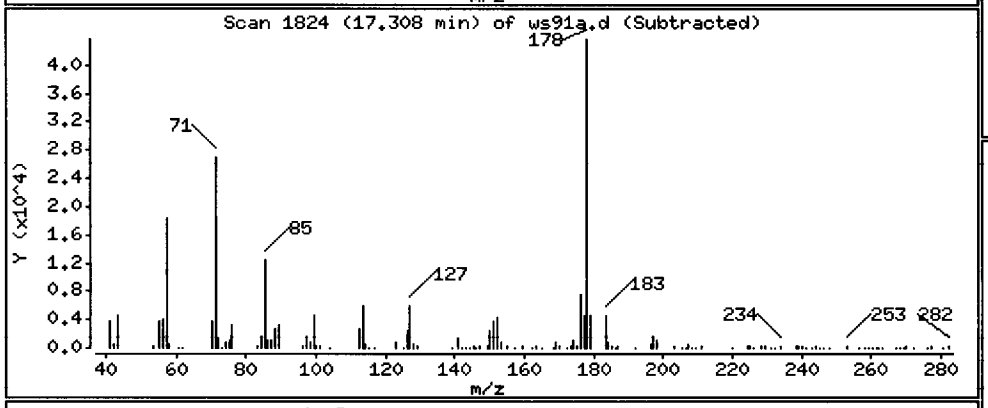
Column phase: ZB-5ms1

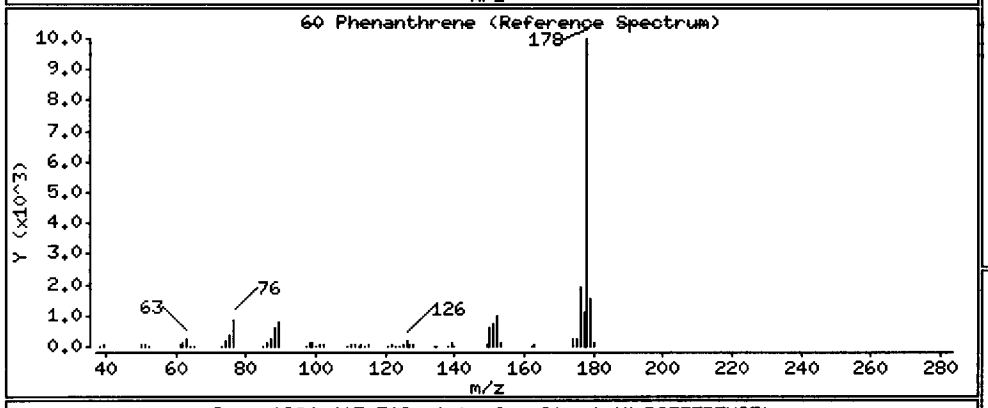
Column diameter: 0.25

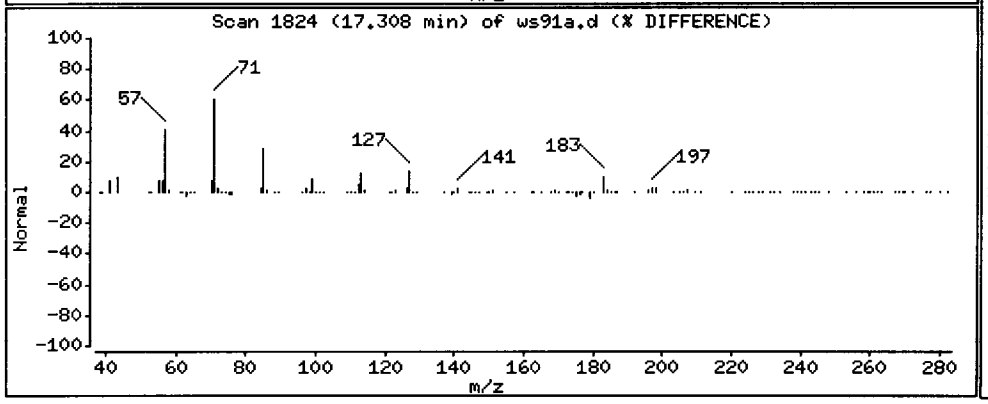
60 Phenanthrene

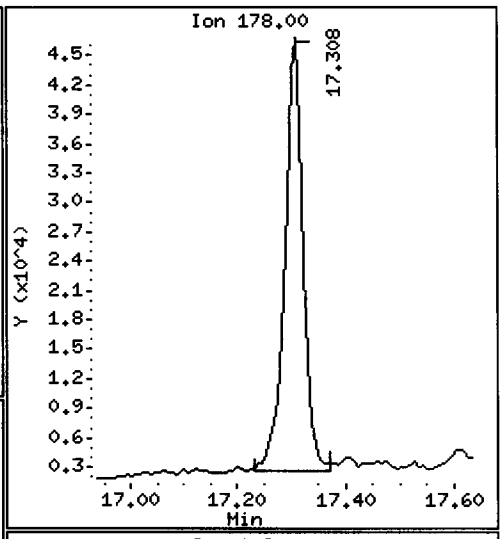
Concentration: 688.3 ug/kg

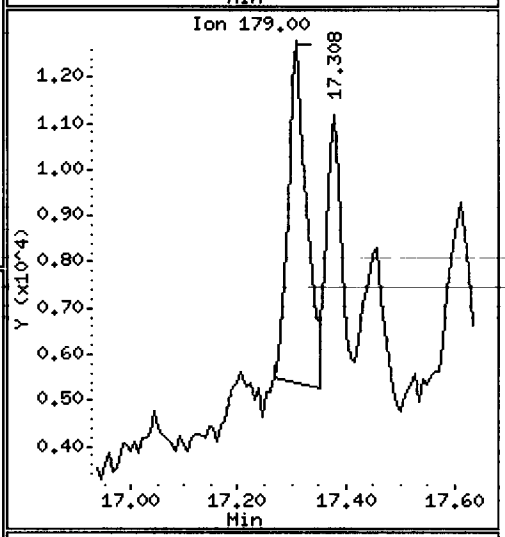


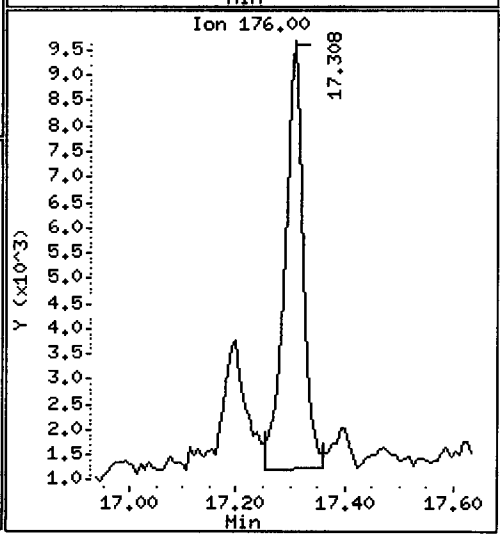












Data File: /chem1/nt10.i/20130620.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

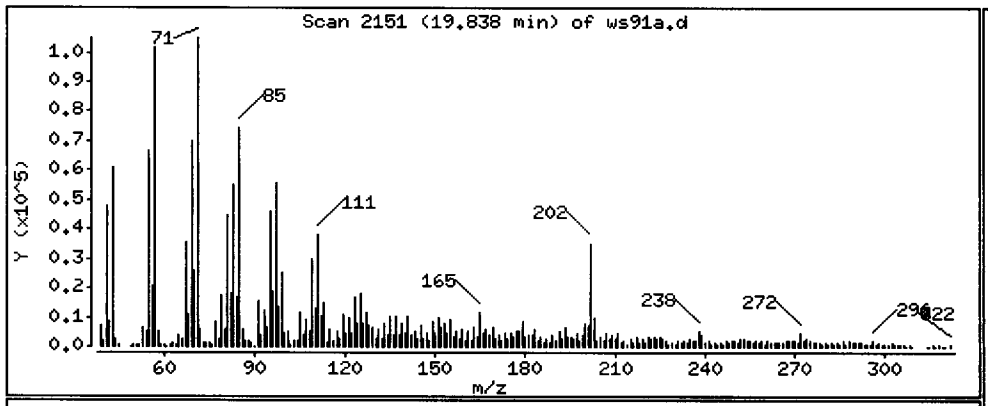
Operator: VTS/YZ

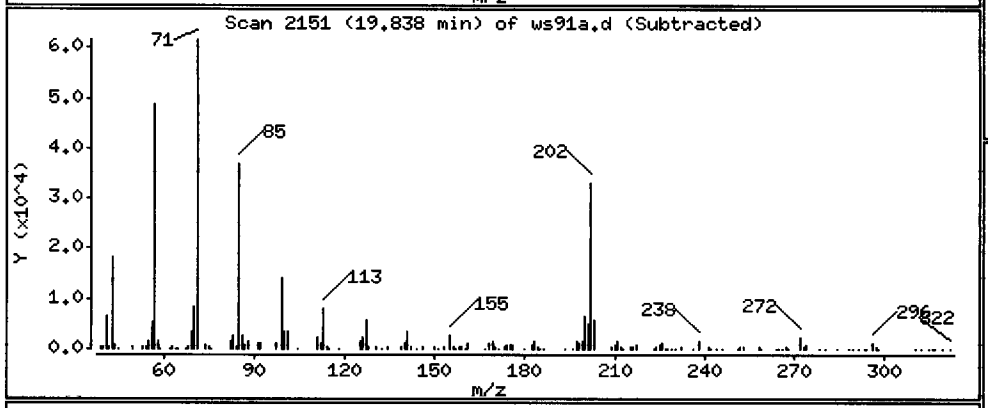
Column phase: ZB-5msi

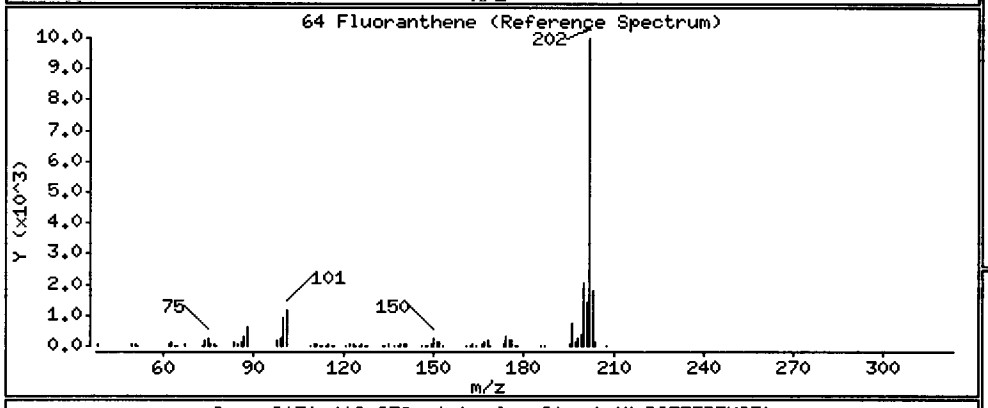
Column diameter: 0.25

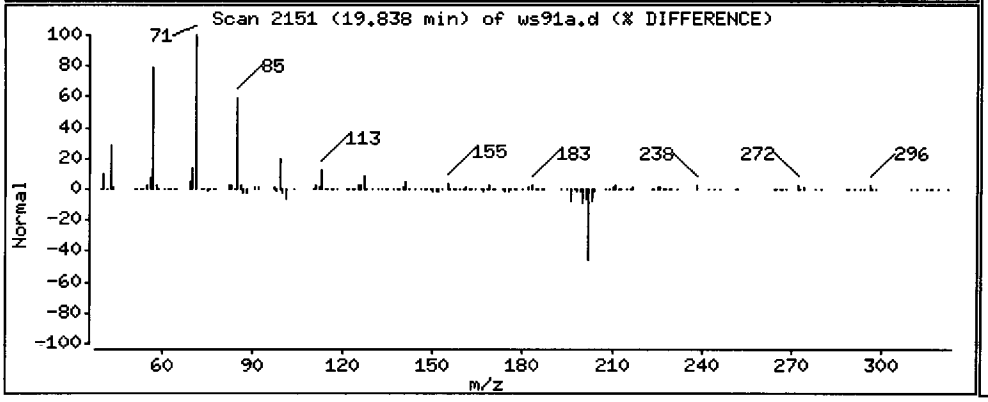
64 Fluoranthene

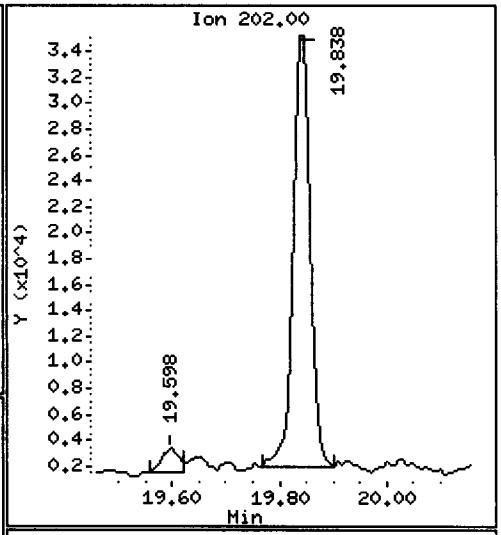
Concentration: 431.5 ug/kg

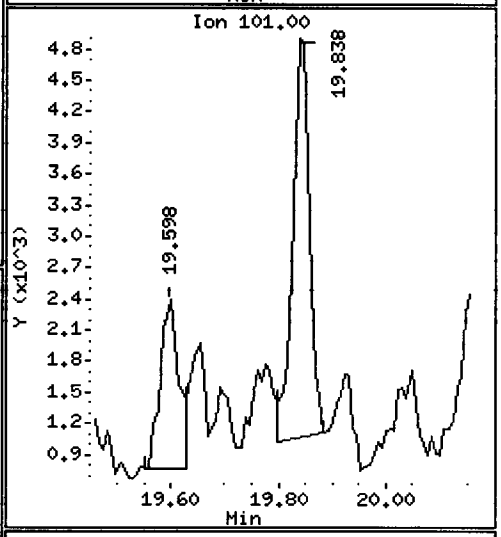


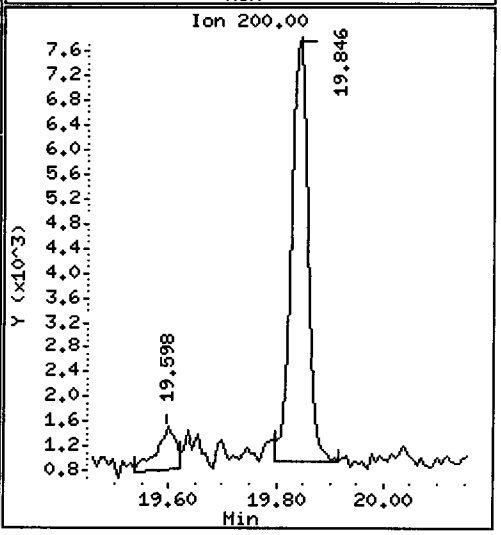












Data File: /chem1/nt10.i/20130620.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

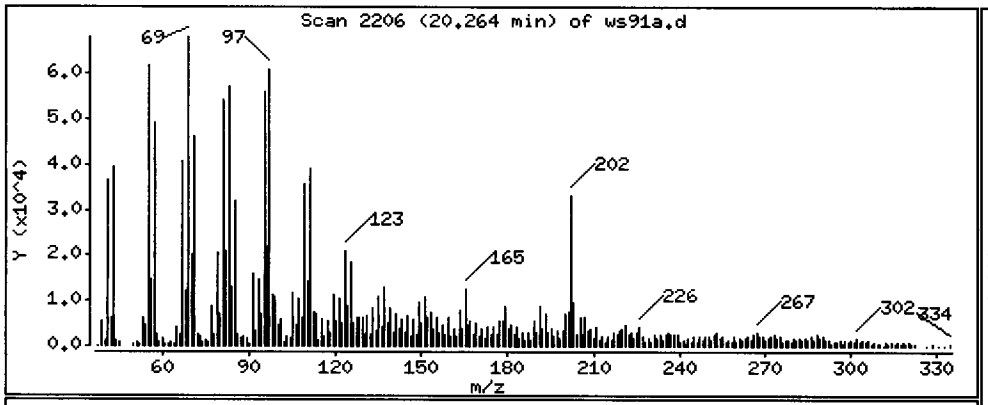
Operator: VTS/YZ

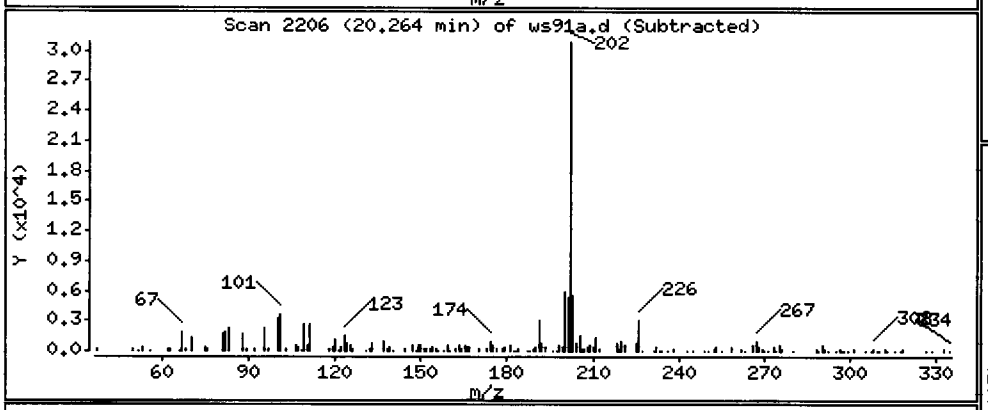
Column phase: ZB-5msi

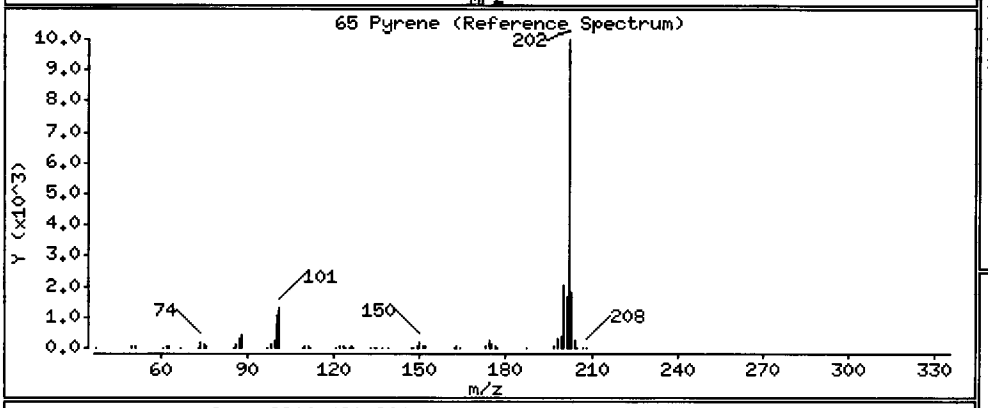
Column diameter: 0.25

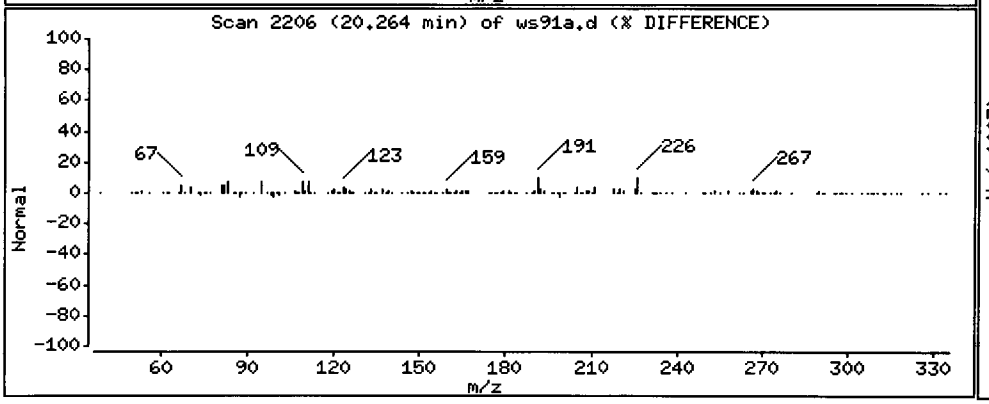
65 Pyrene

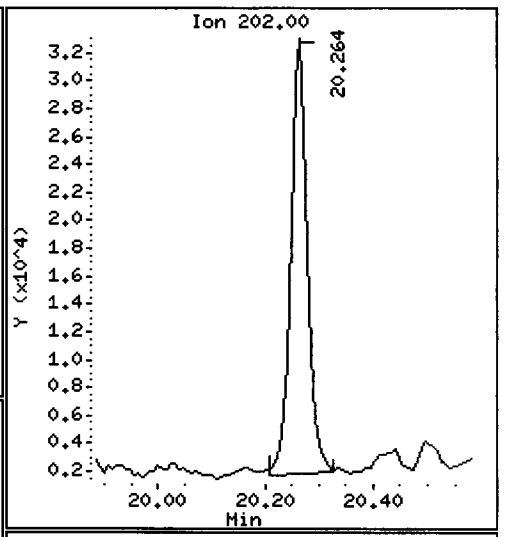
Concentration: 313.9 ug/kg

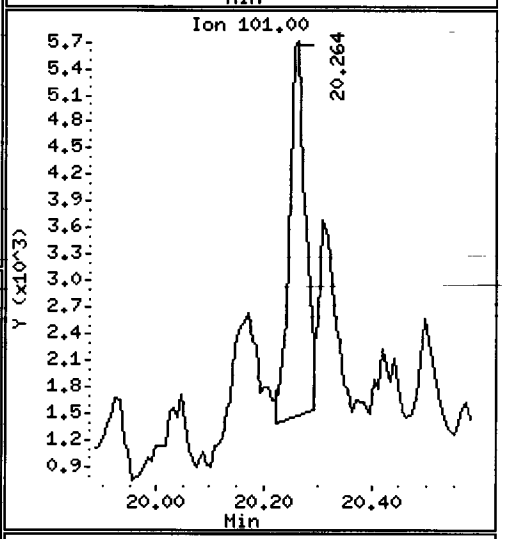


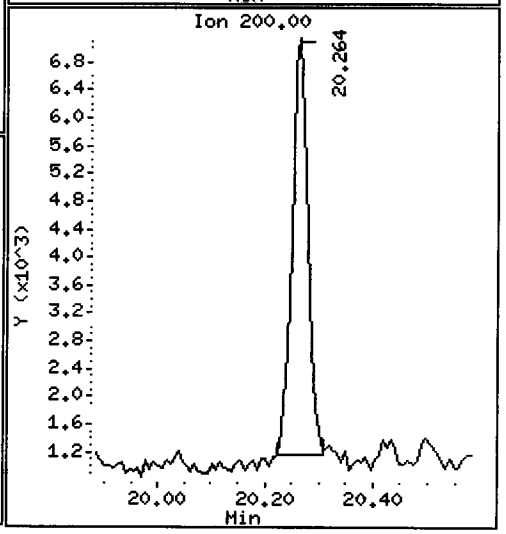












Data File: /chem1/nt10.i/20130620.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

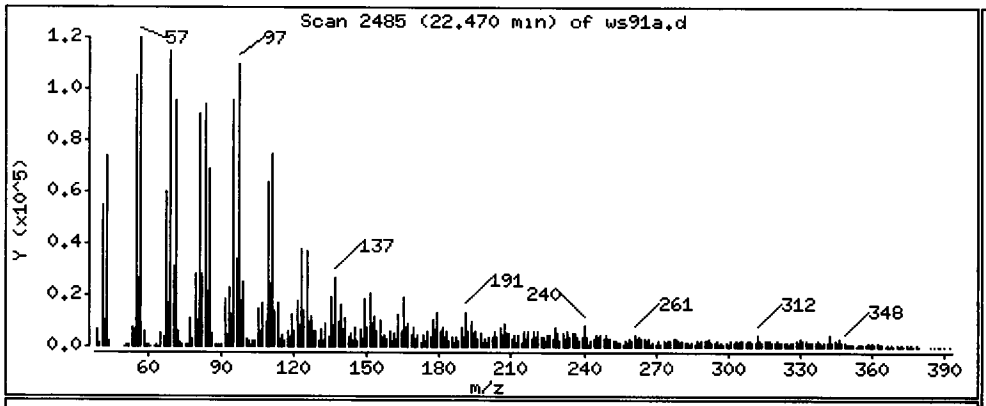
Operator: VTS/YZ

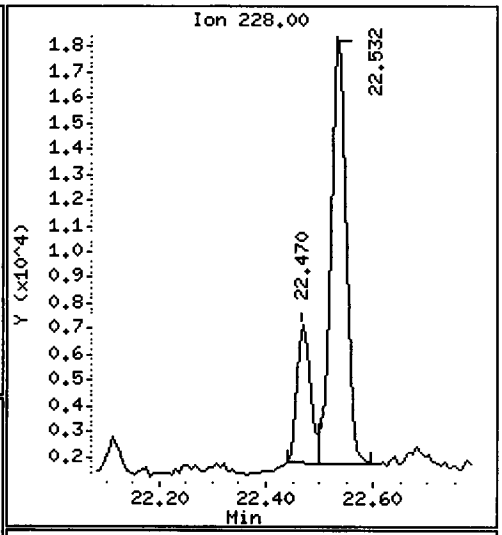
Column phase: ZB-5msi

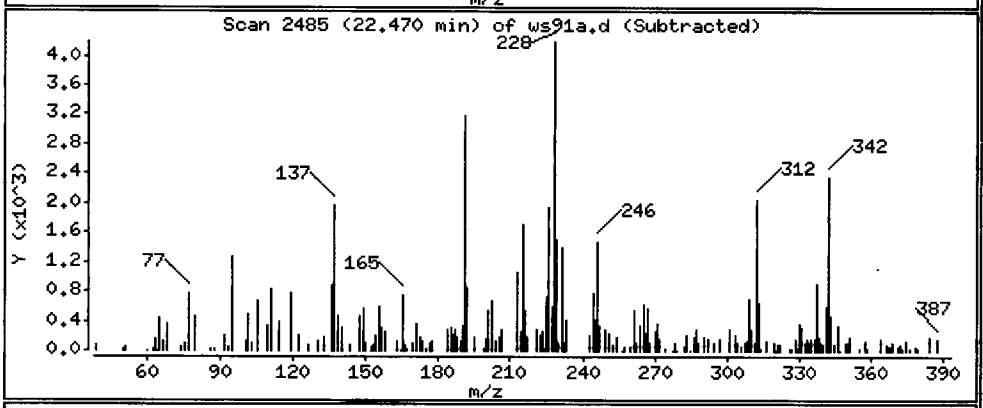
Column diameter: 0.25

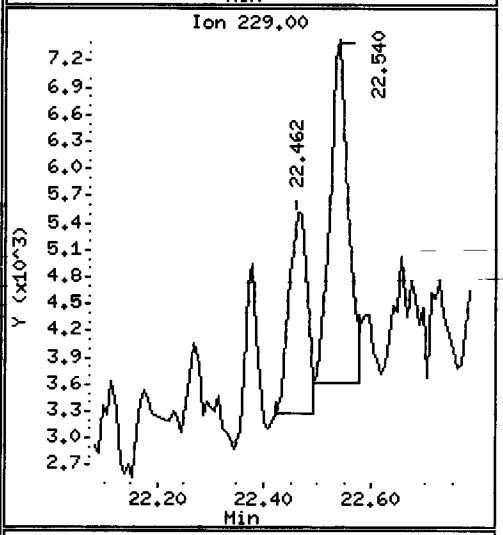
68 Benzo(a)anthracene

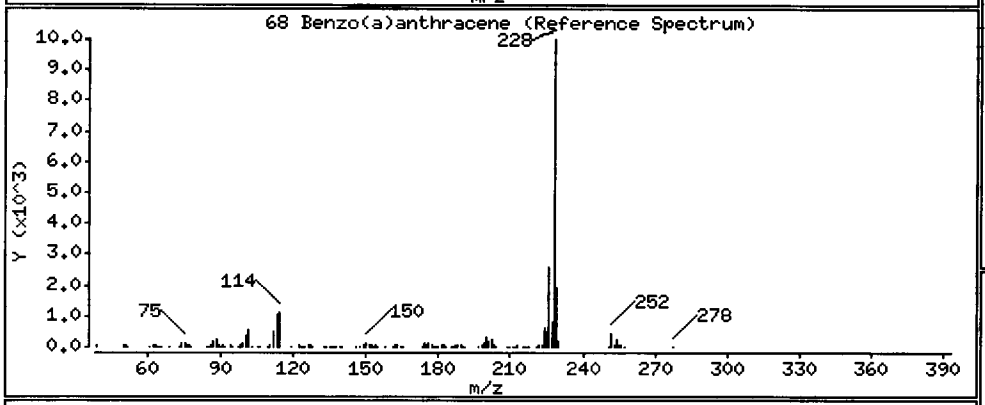
Concentration: 52.48 ug/kg

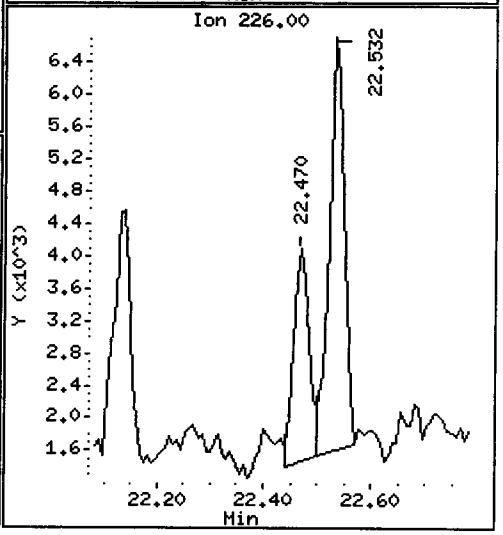


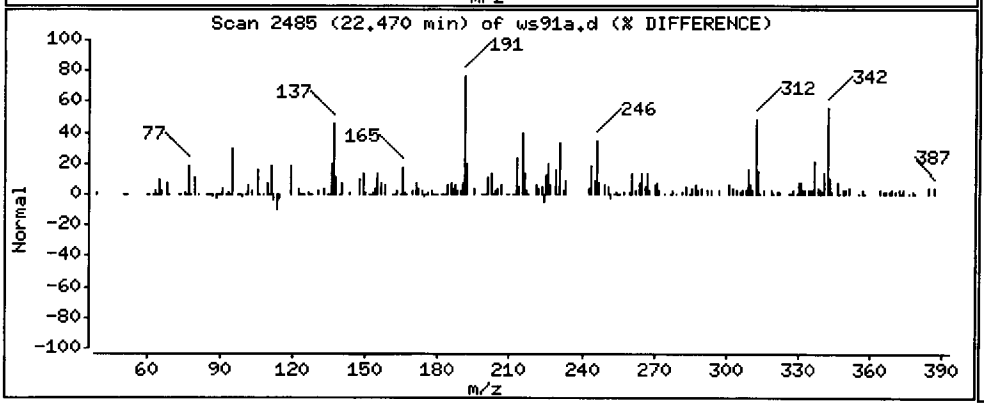












Data File: /chem1/nt10.i/20130620.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

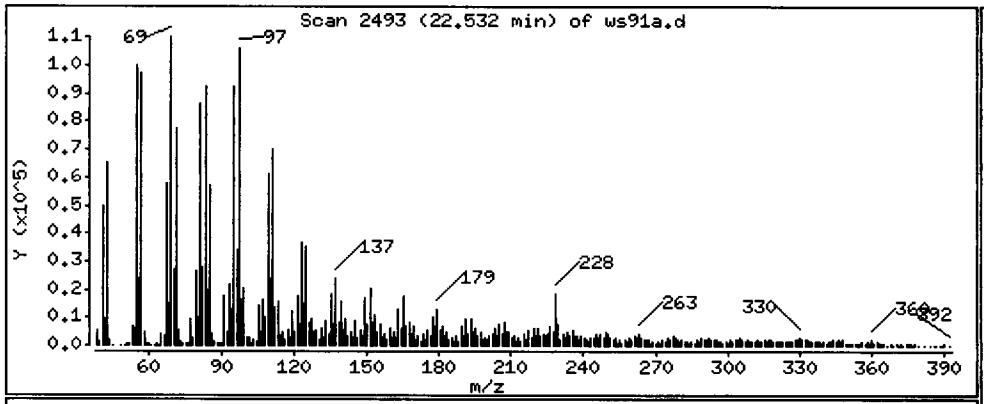
Operator: VTS/YZ

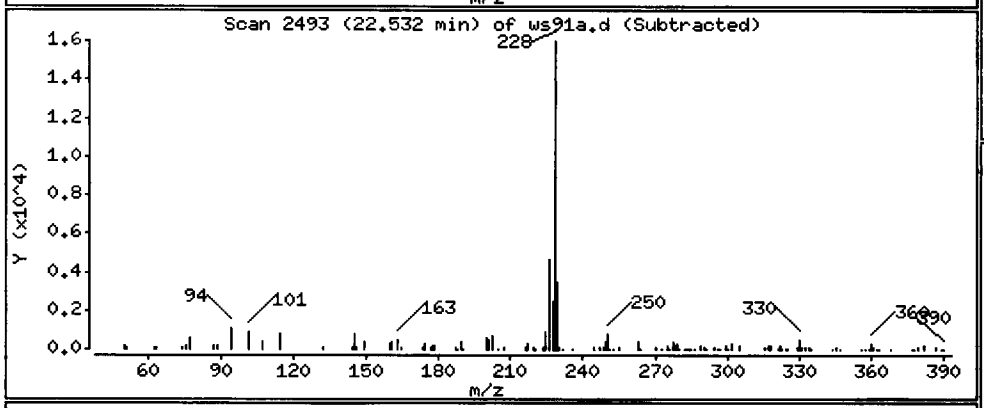
Column phase: ZB-5ms1

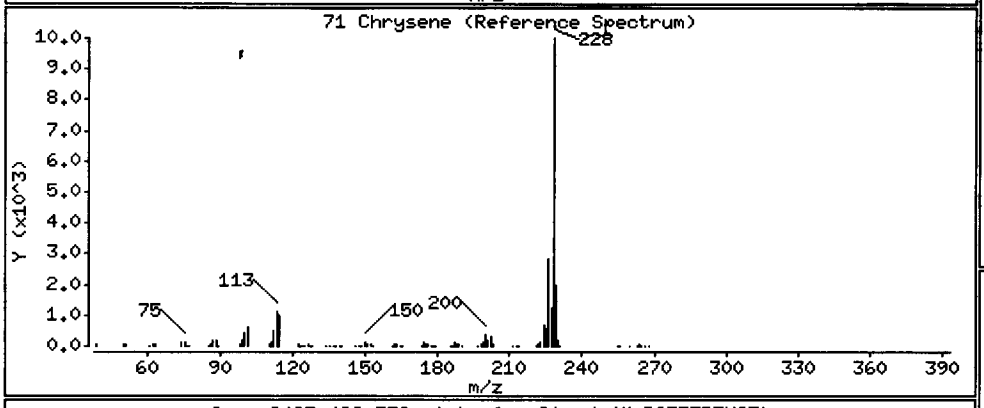
Column diameter: 0.25

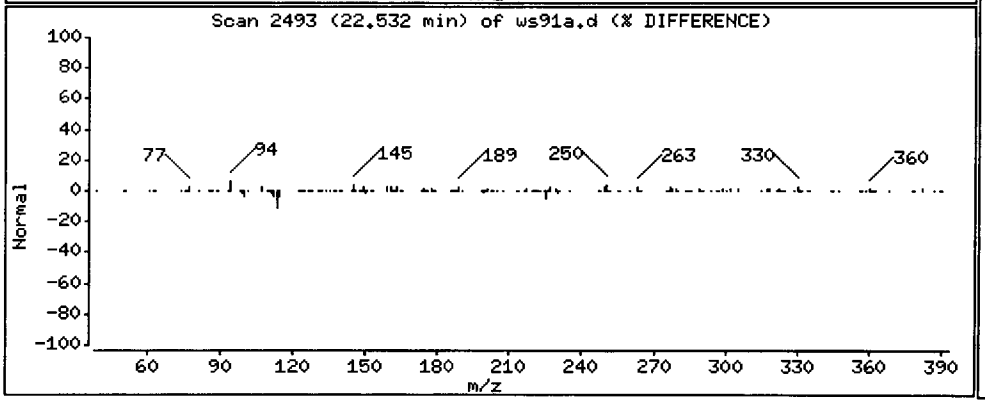
71 Chrysene

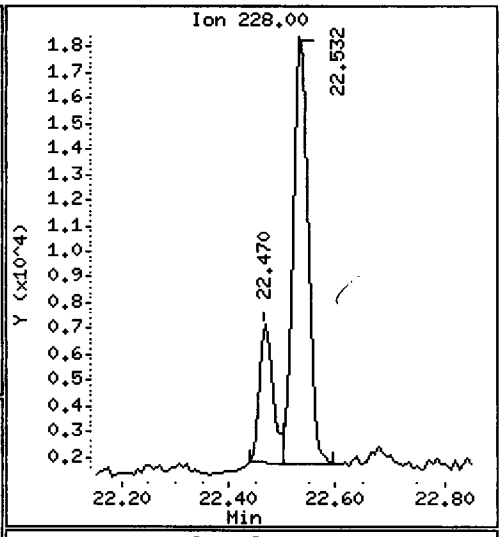
Concentration: 193.8 ug/kg

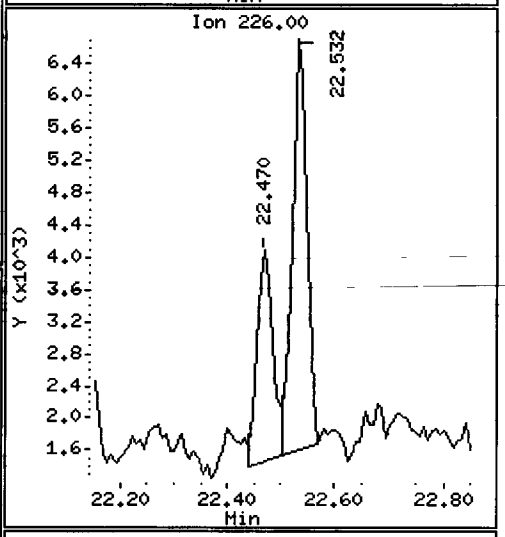


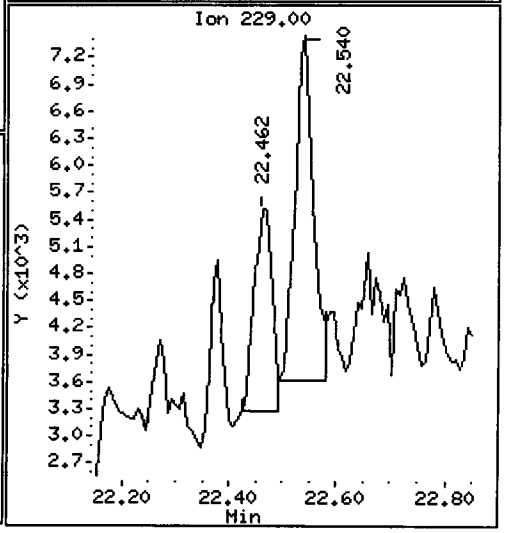












Data File: /chem1/nt10.i/20130620.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

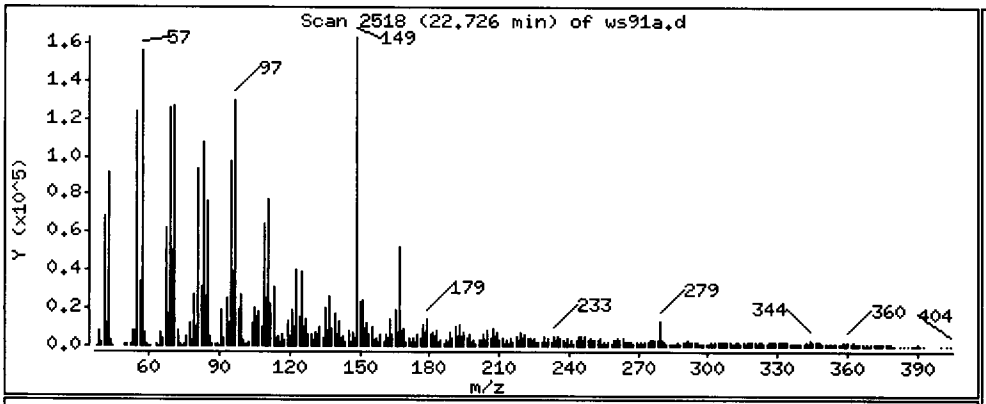
Operator: VTS/YZ

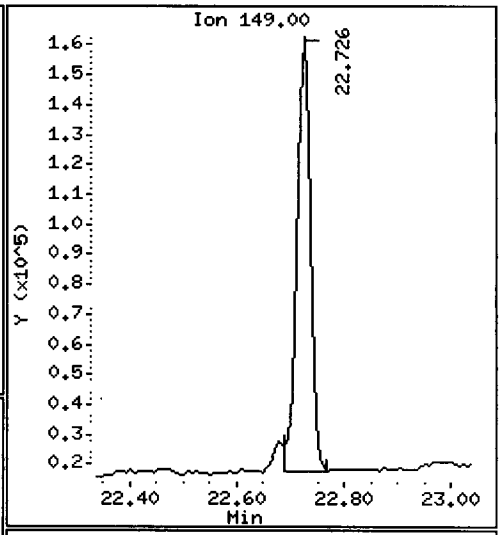
Column phase: ZB-5msi

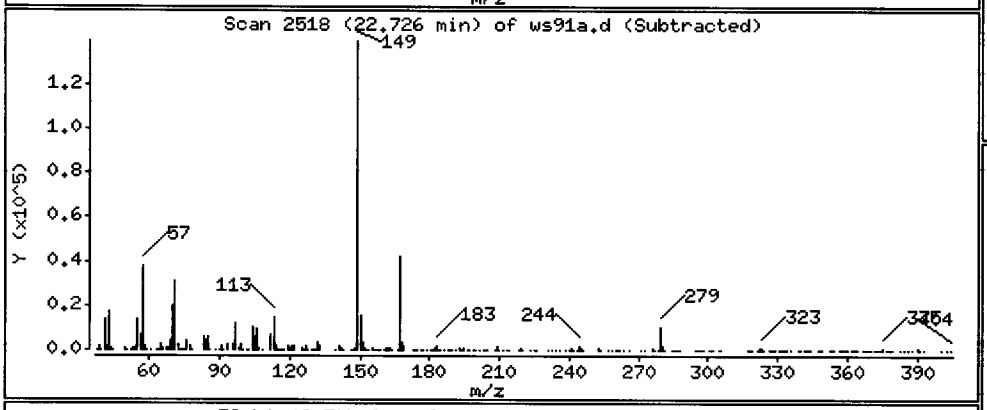
Column diameter: 0.25

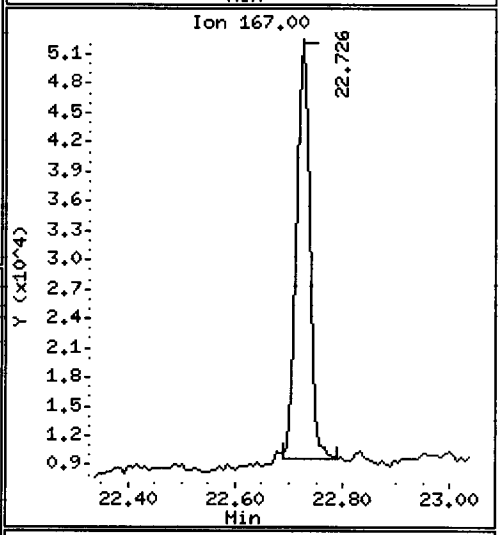
72 bis(2-Ethylhexyl)phthalate

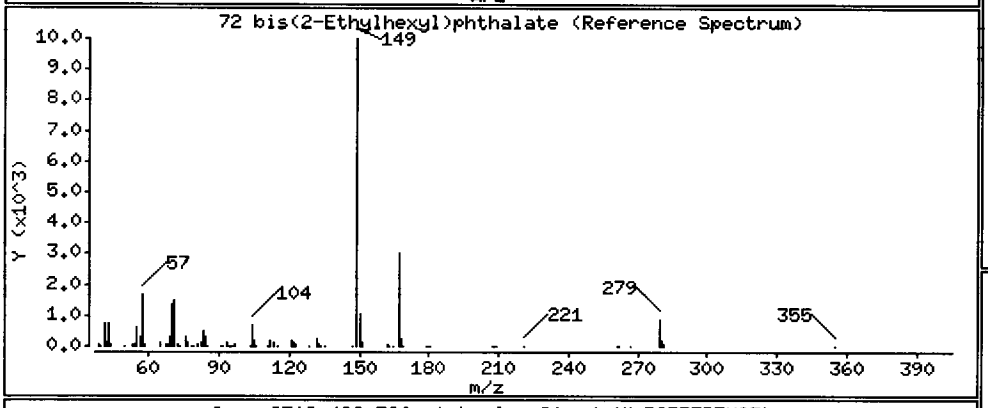
Concentration: 2080 ug/kg

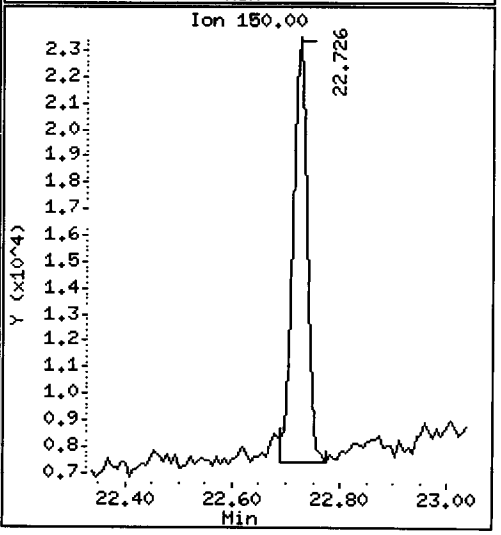


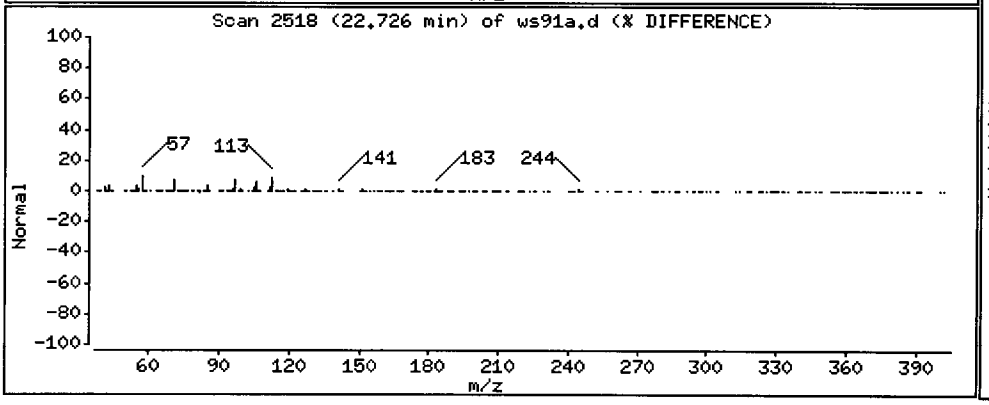












Data File: /chem1/nt10.i/20130620.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

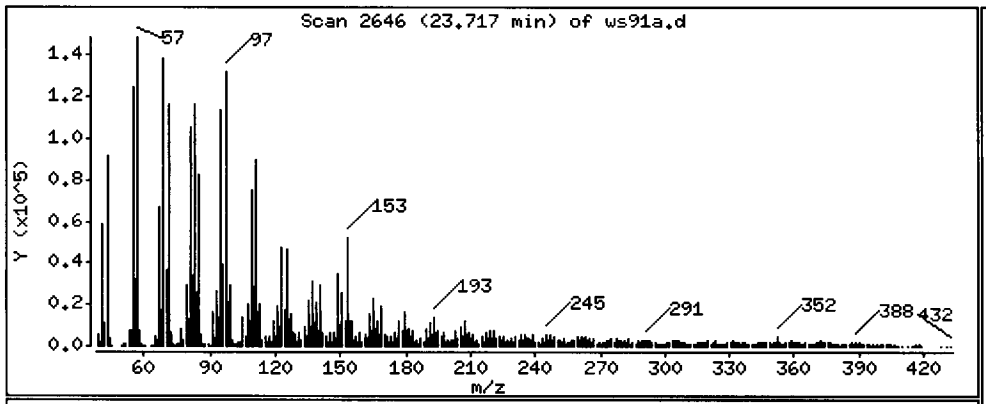
Operator: VTS/YZ

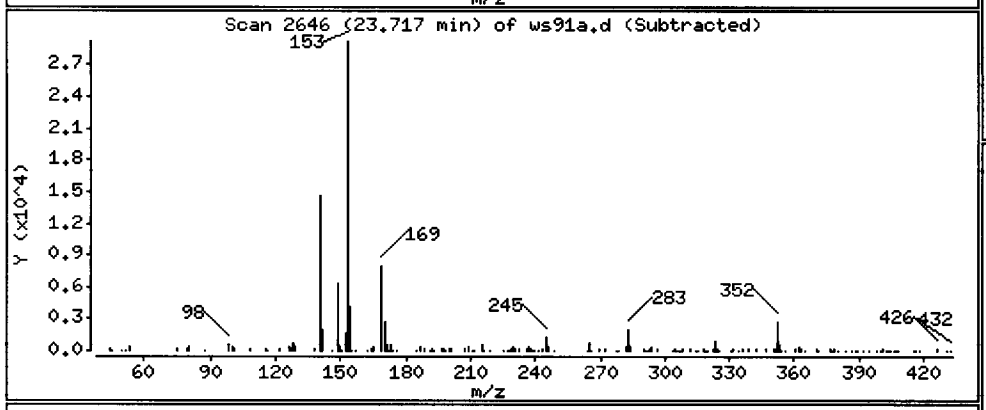
Column phase: ZB-5msi

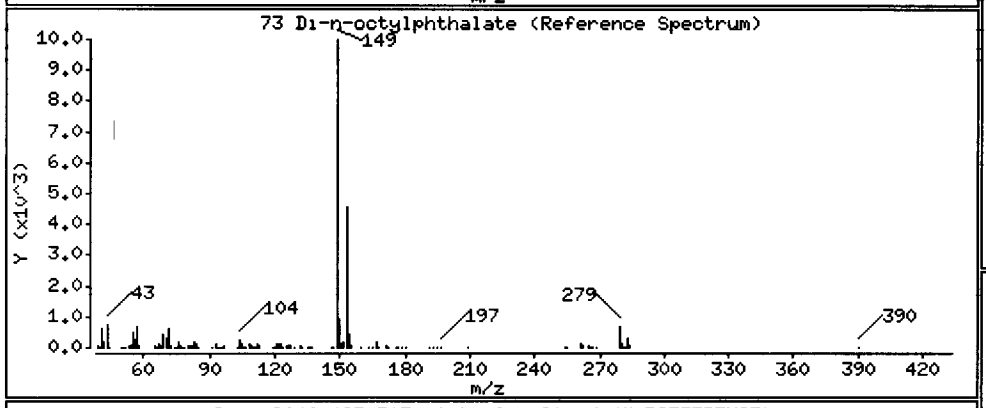
Column diameter: 0.25

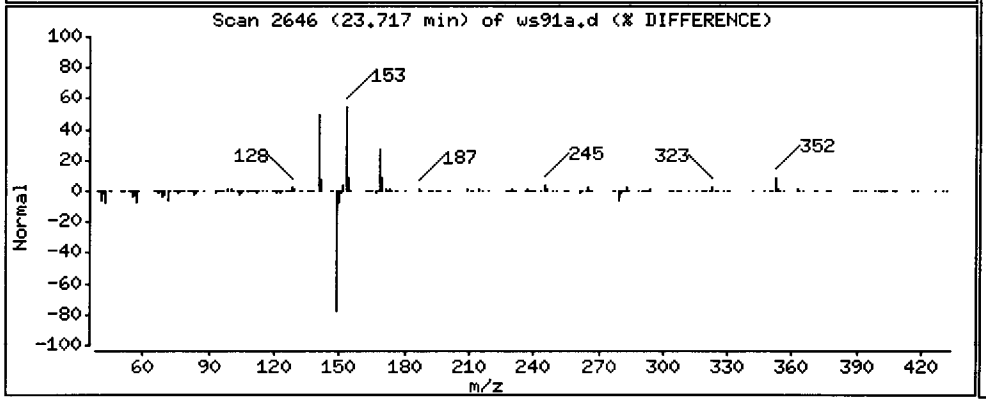
73 Di-n-octylphthalate

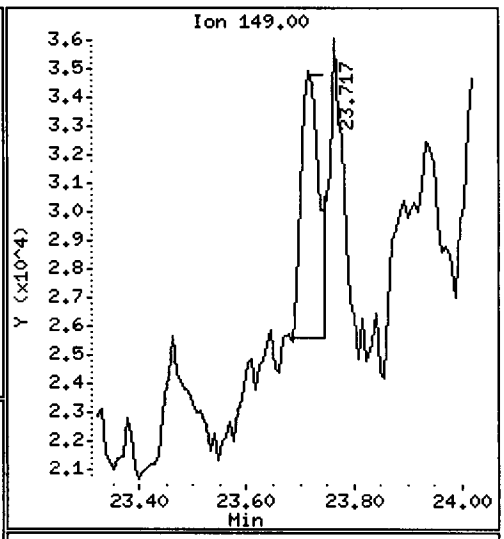
Concentration: 102.9 ug/kg

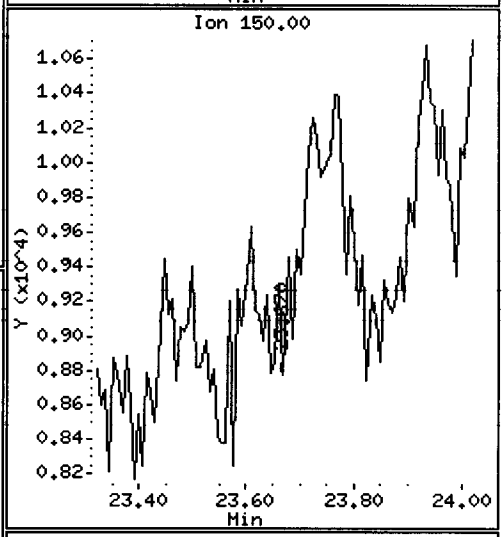


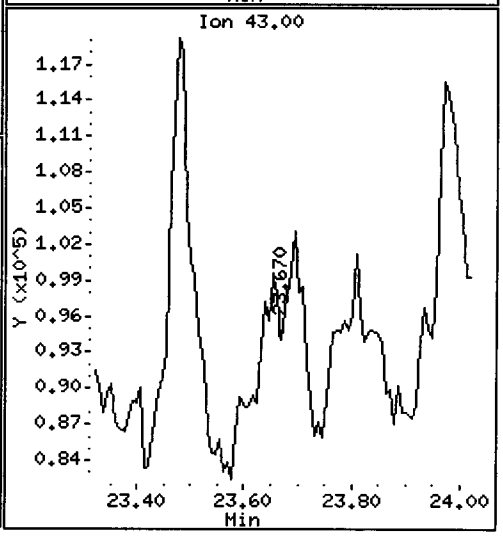












Data File: /chem1/nt10.i/20130620.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

Operator: VTS/YZ

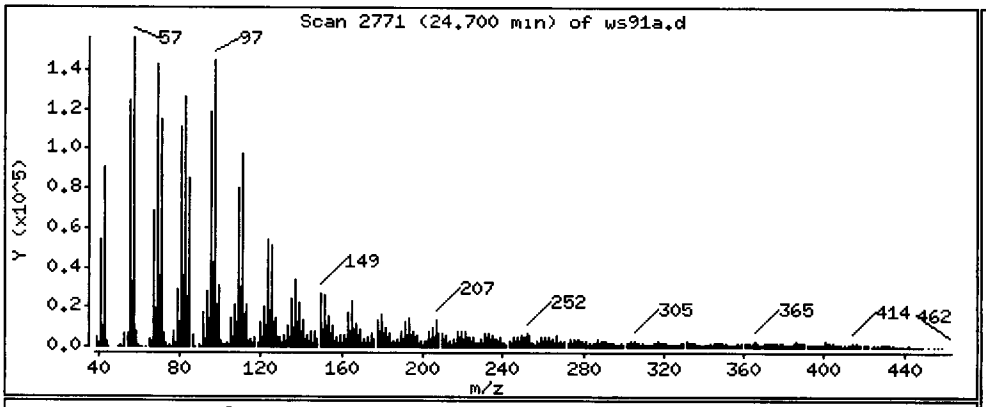
Column phase: ZB-5ms1

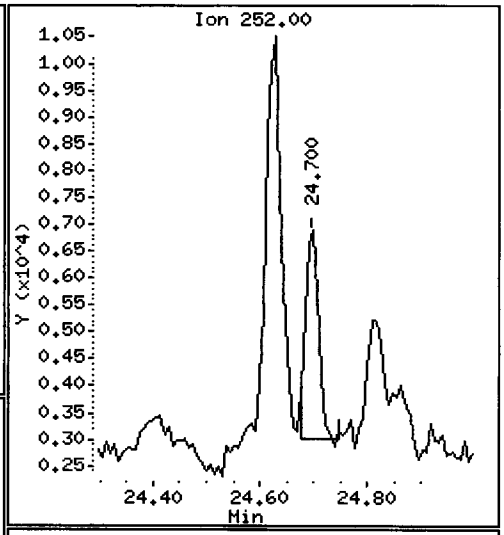
Column diameter: 0.25

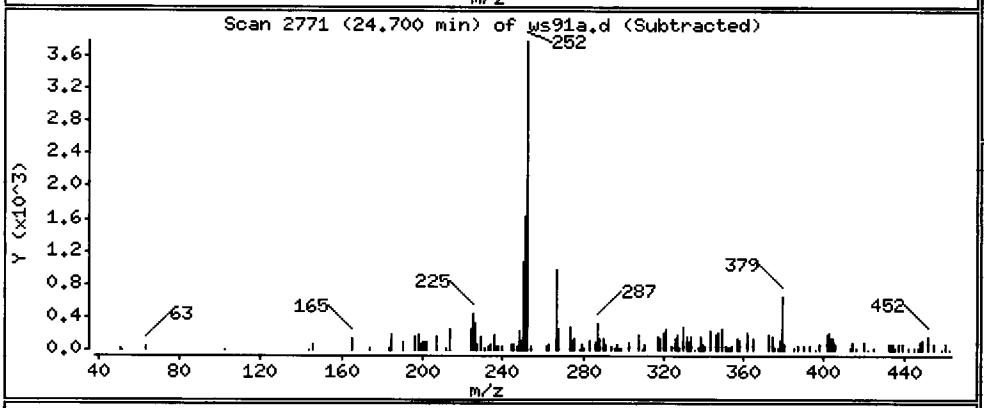
OK FJR FJR 6/5/13

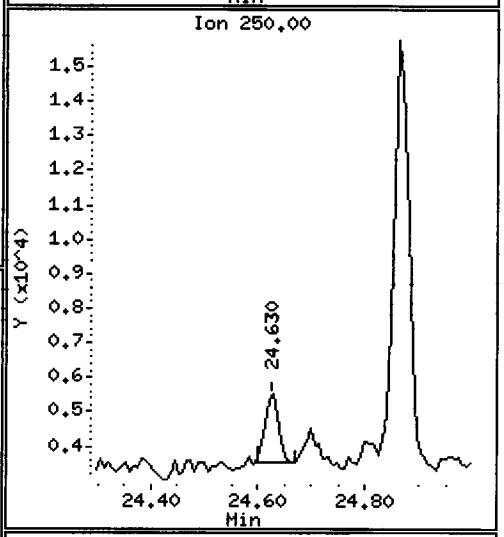
76 Benzo(a)pyrene

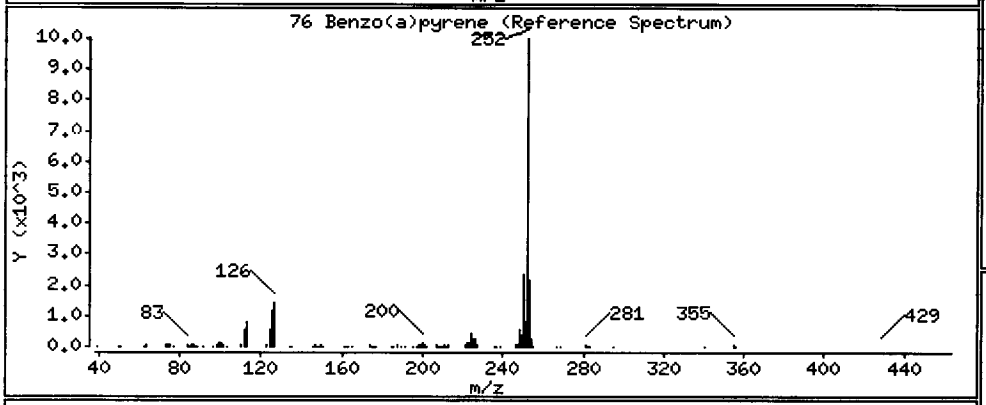
Concentration: 37.38 ug/kg

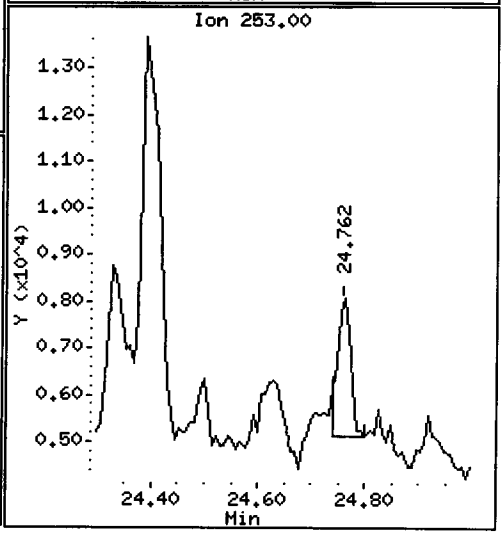


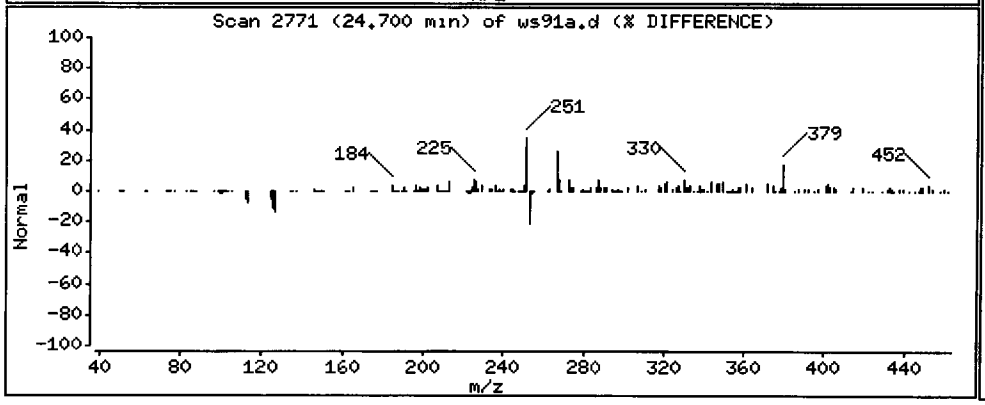












Data File: /chem1/nt10.i/20130620.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

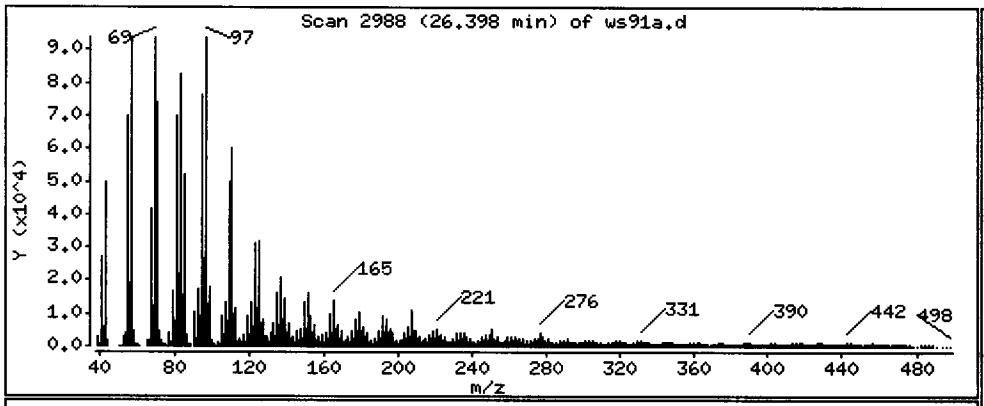
Operator: VTS/YZ

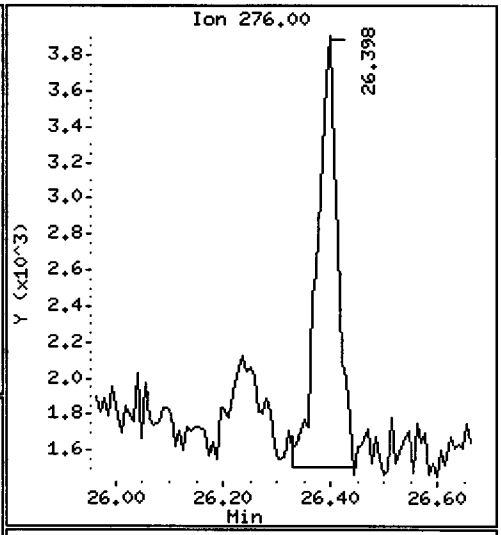
Column phase: ZB-5msi

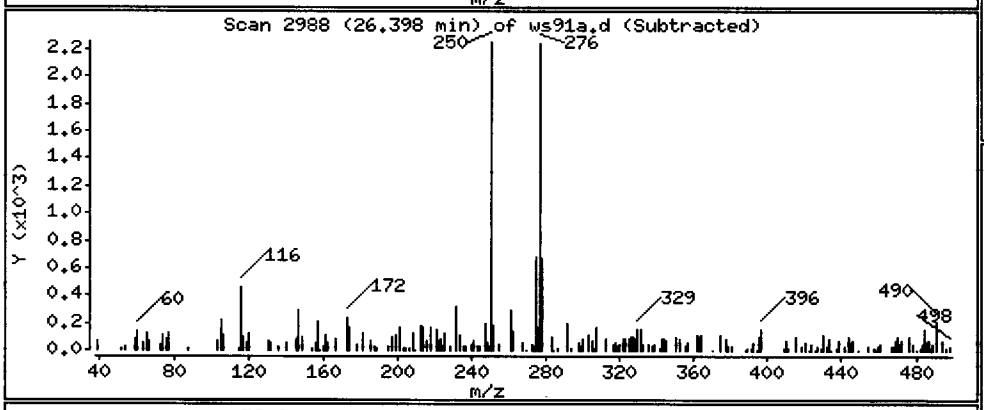
Column diameter: 0.25

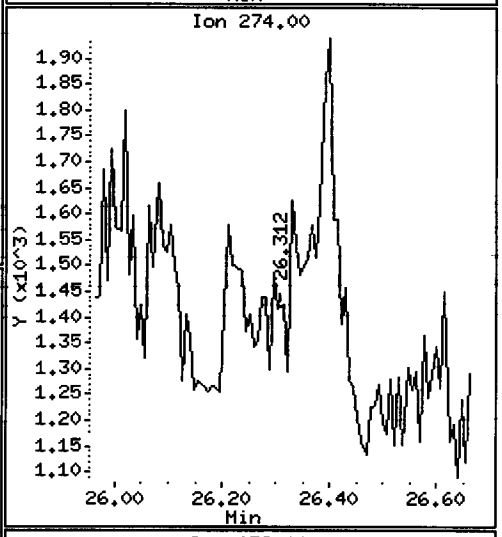
78 Indeno(1,2,3-cd)pyrene

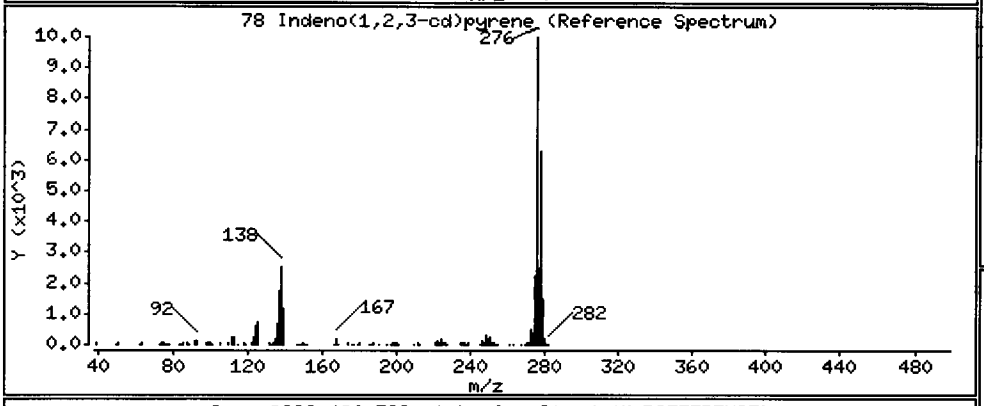
Concentration: 28.97 ug/kg

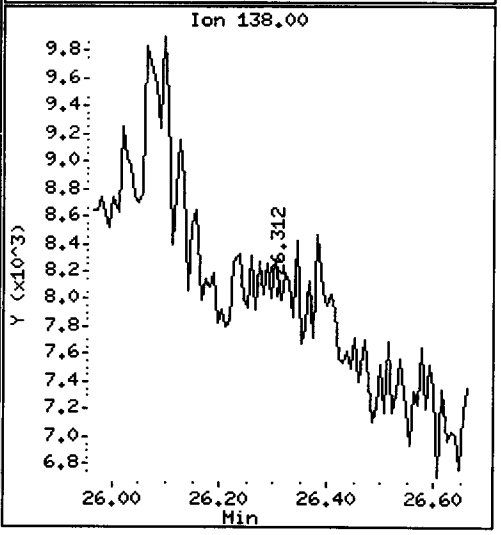


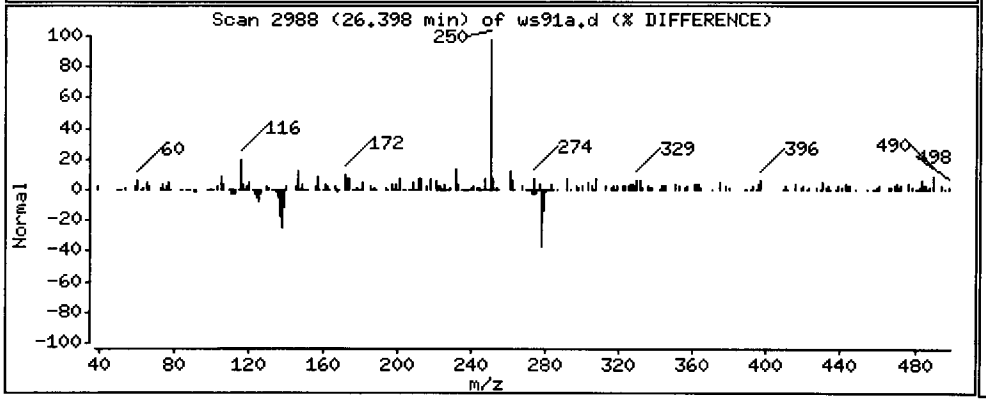












Data File: /chem1/nt10.i/20130620.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

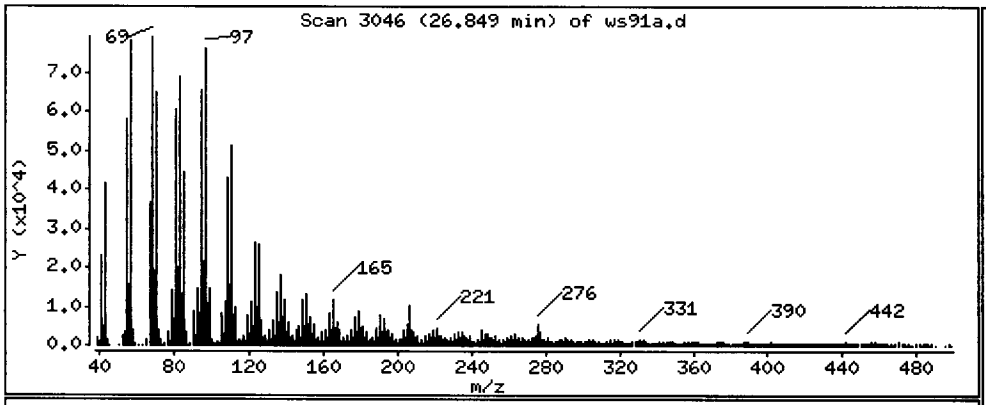
Operator: VTS/YZ

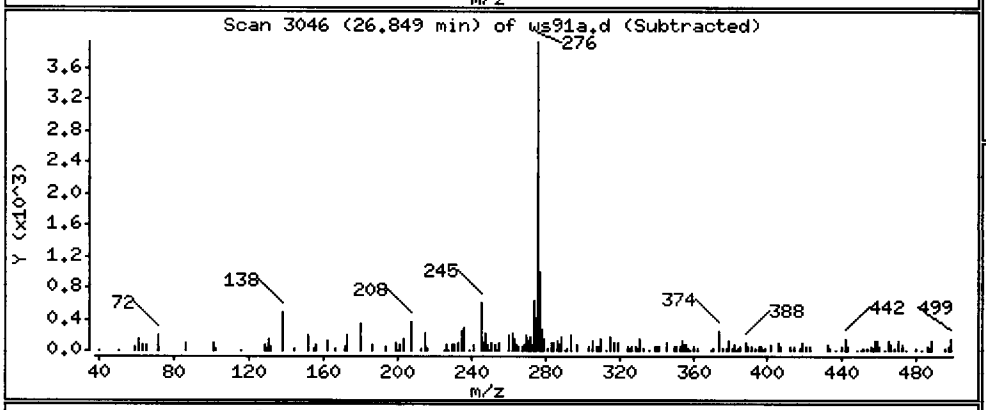
Column phase: ZB-5msi

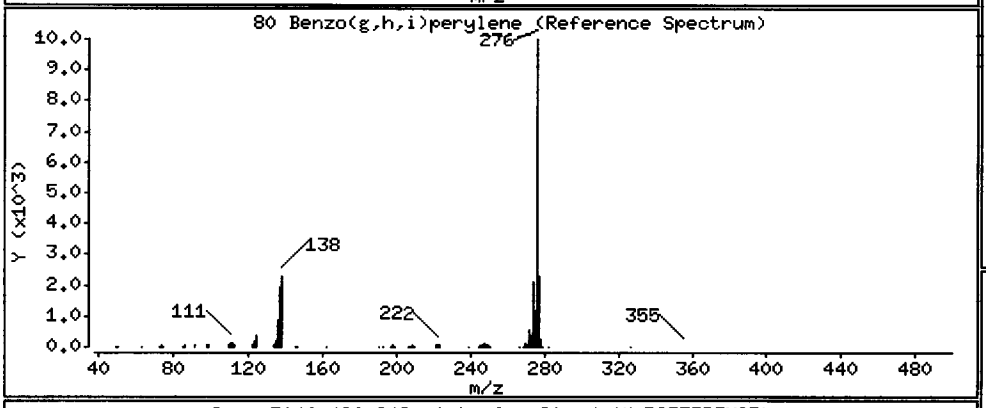
Column diameter: 0.25

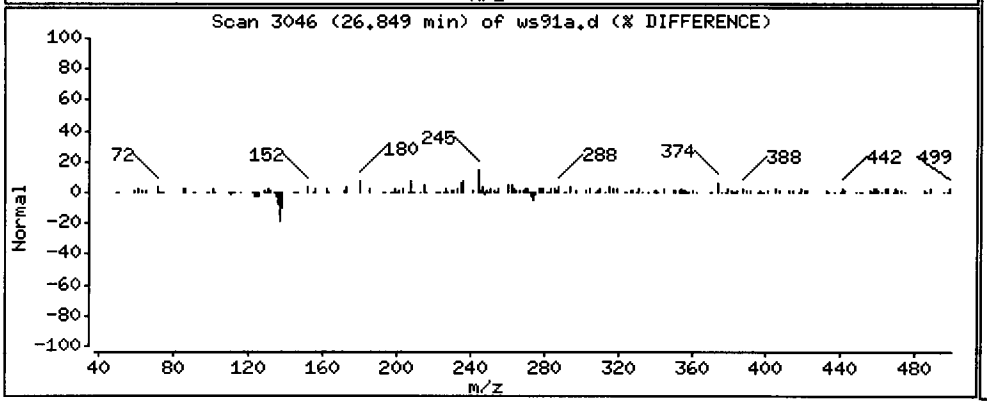
80 Benzo(g,h,i)perylene

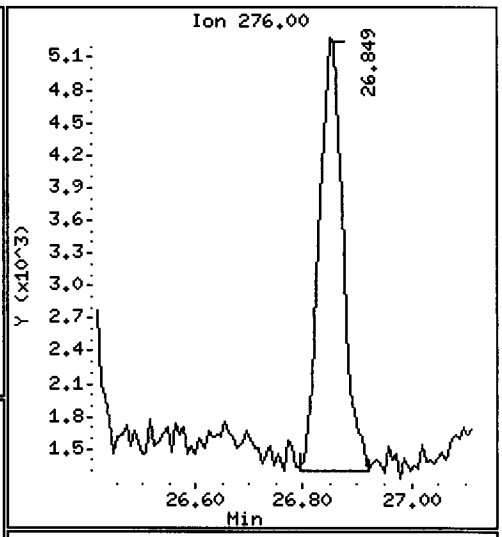
Concentration: 63.45 ug/kg

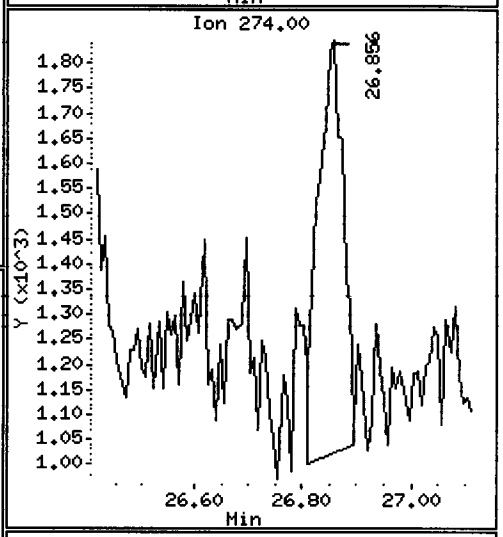


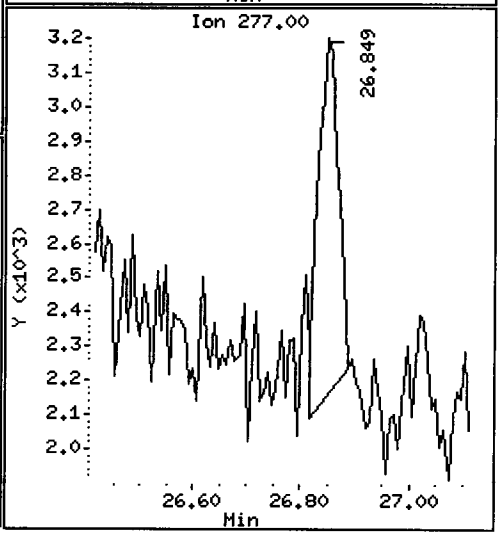












Data File: /chem1/nt10.i/20130620.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

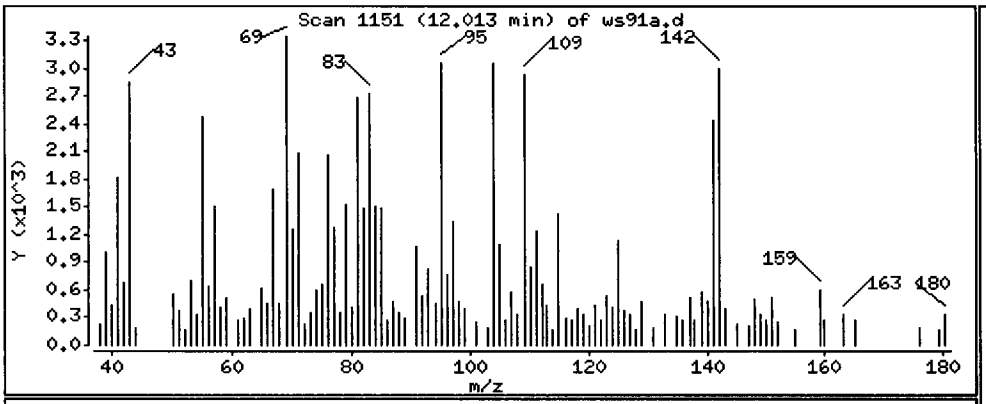
Operator: VTS/YZ

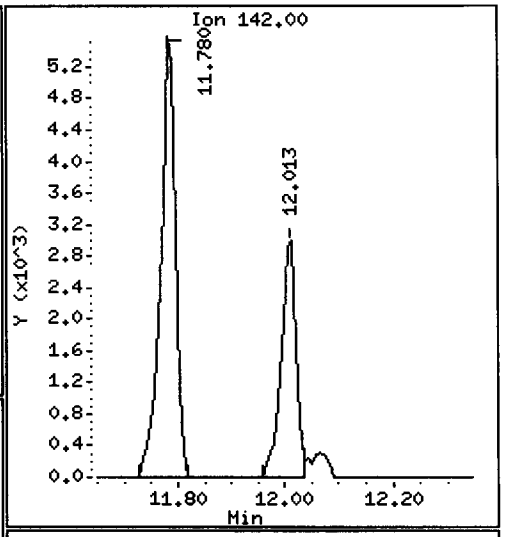
Column phase: ZB-5ms1

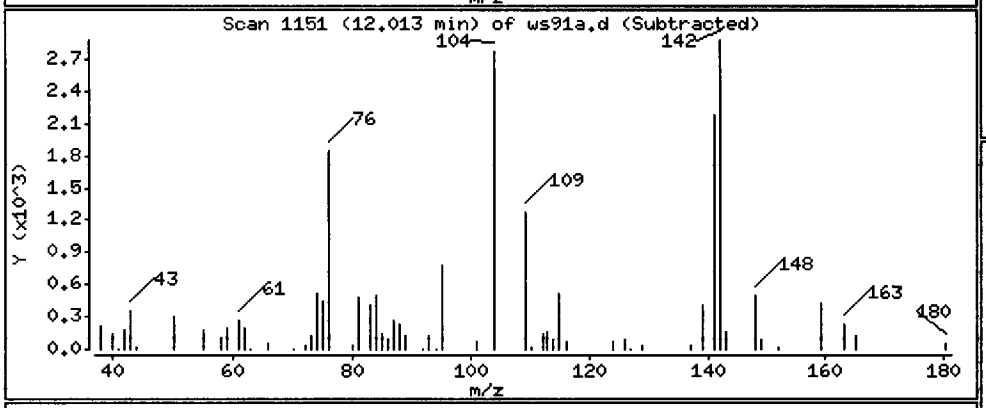
Column diameter: 0.25

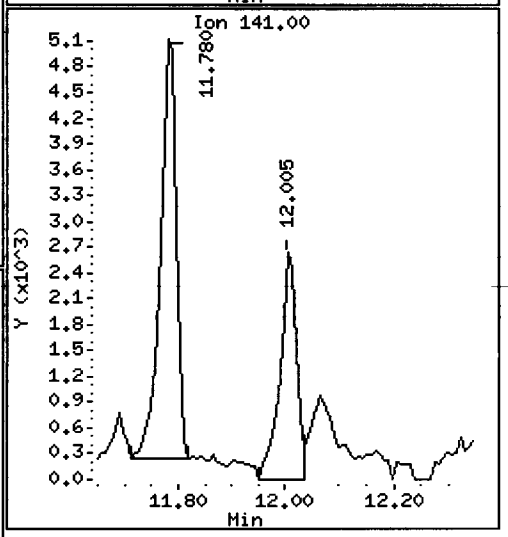
105 1-methylnaphthalene

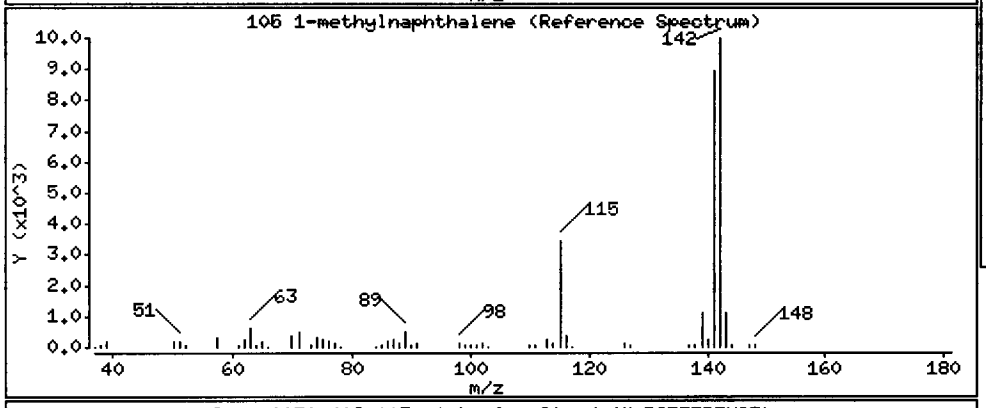
Concentration: 55.38 ug/kg

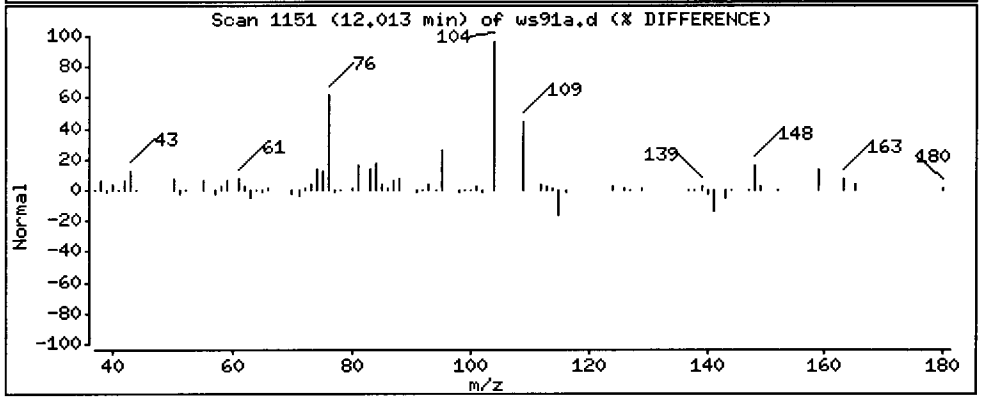












Data File: /chem1/nt10.i/20130620.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

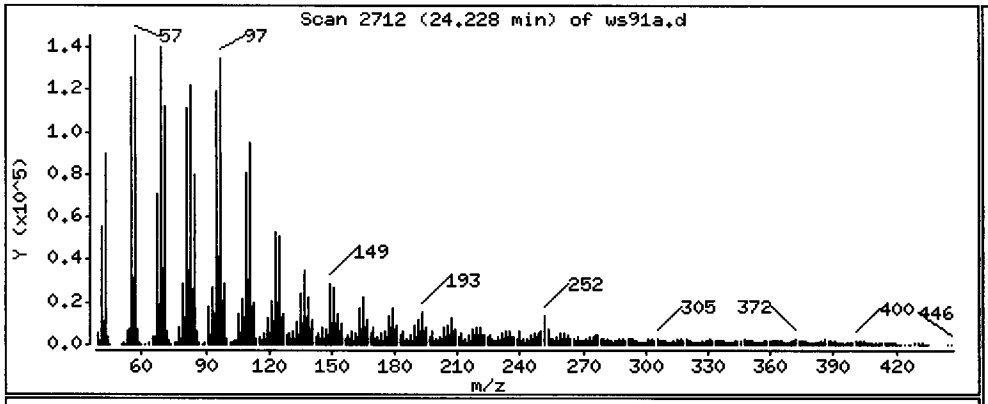
Operator: VTS/YZ

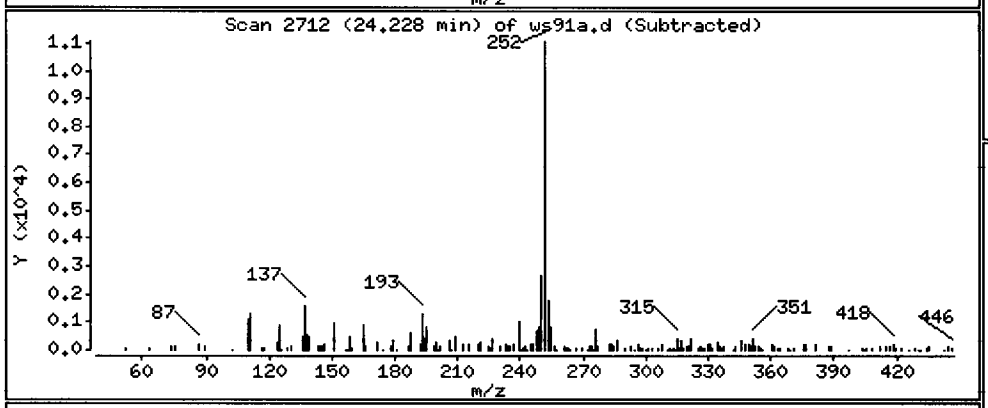
Column phase: ZB-5ms

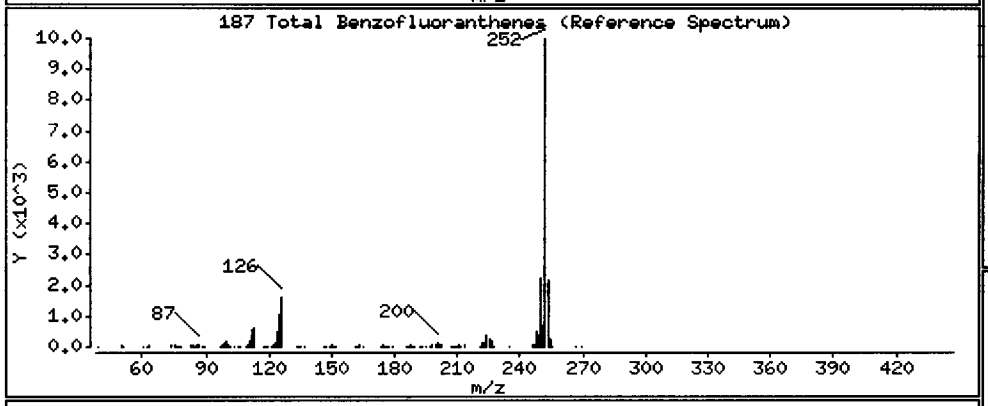
Column diameter: 0.25

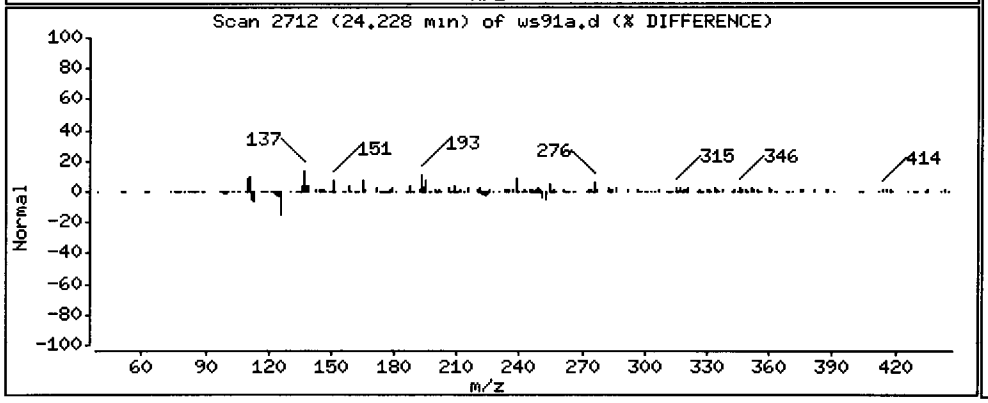
187 Total Benzofluoranthenes

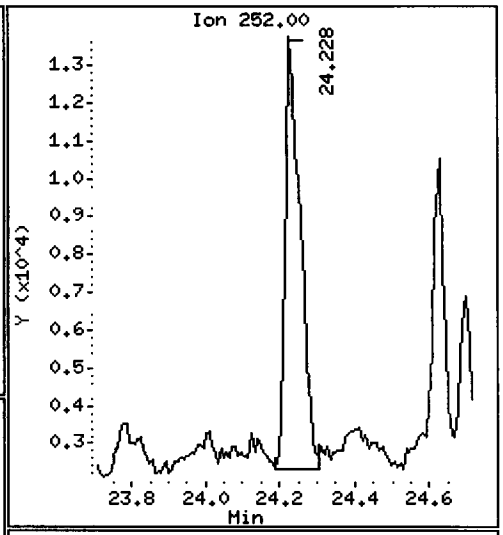
Concentration: 147.7 ug/kg

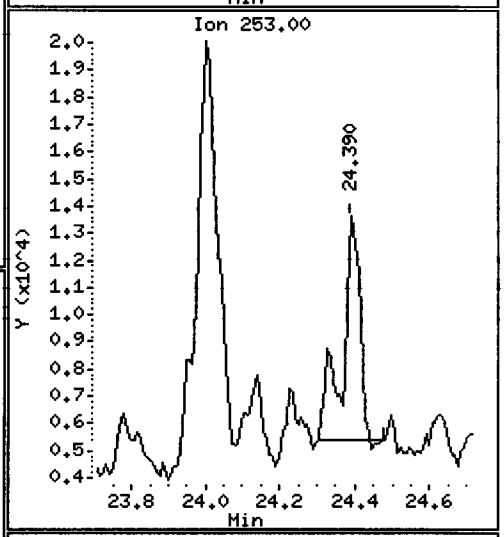


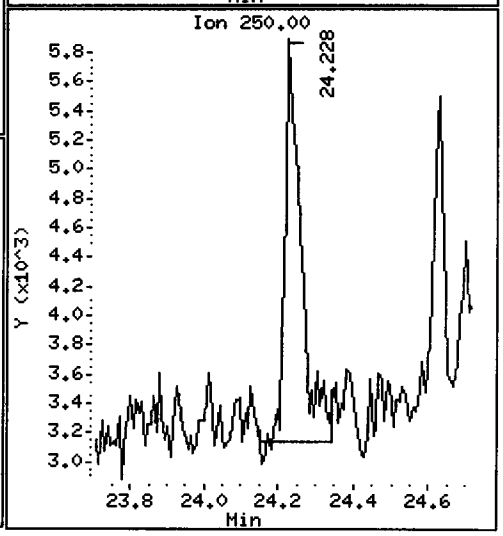






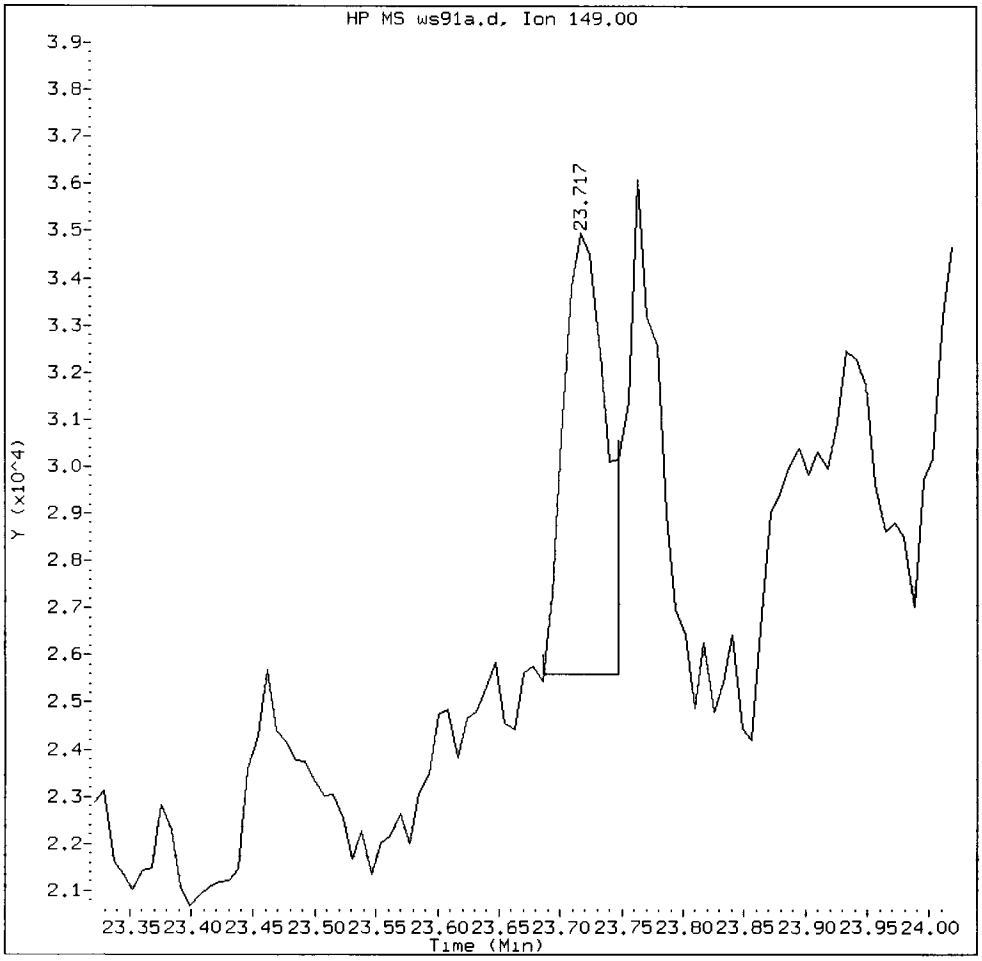






WS91A, /chem1/nt10.i/20130620.b/ws91a.d

Di-n-octylphthalate Amount: 0.56 Area: 22682



MANUAL INTEGRATION for Di-n-octylphthalate

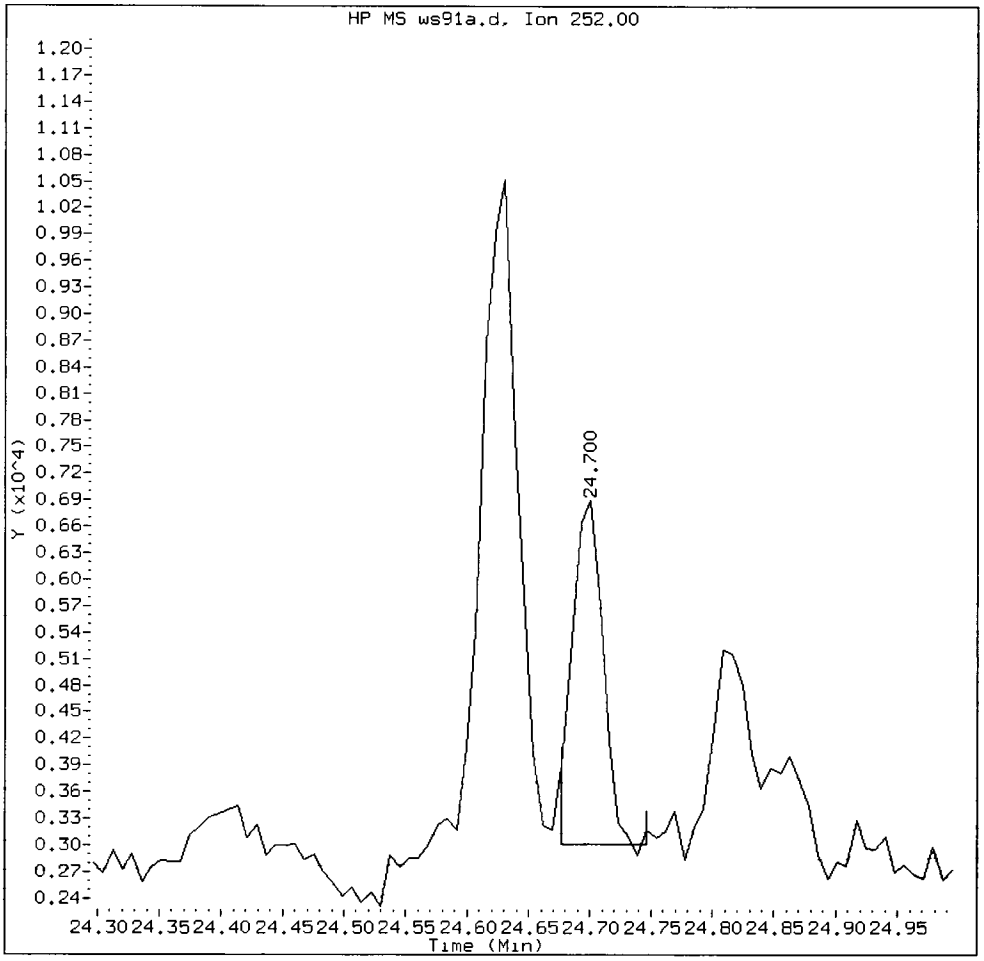
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: KR Date: 6/26/13

WS91A, /chem1/nt10.i/20130620.b/ws91a.d

Benzo(a)pyrene Amount: 0.20 Area: 7048



MANUAL INTEGRATION for Benzo(a)pyrene

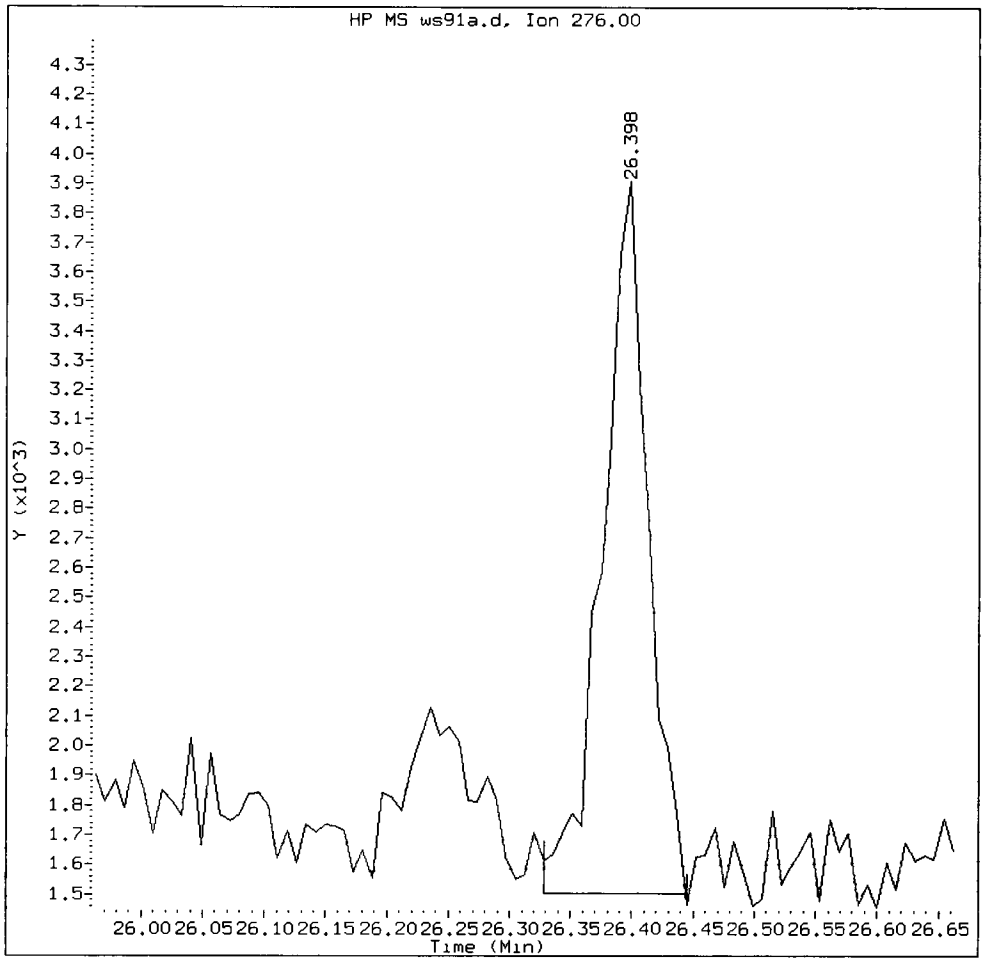
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 6/25/13

WS91A, /chem1/nt10.i/20130620.b/ws91a.d

Indeno(1,2,3-cd)pyrene Amount: 0.16 Area: 6292



MANUAL INTEGRATION for Indeno(1,2,3-cd)pyrene

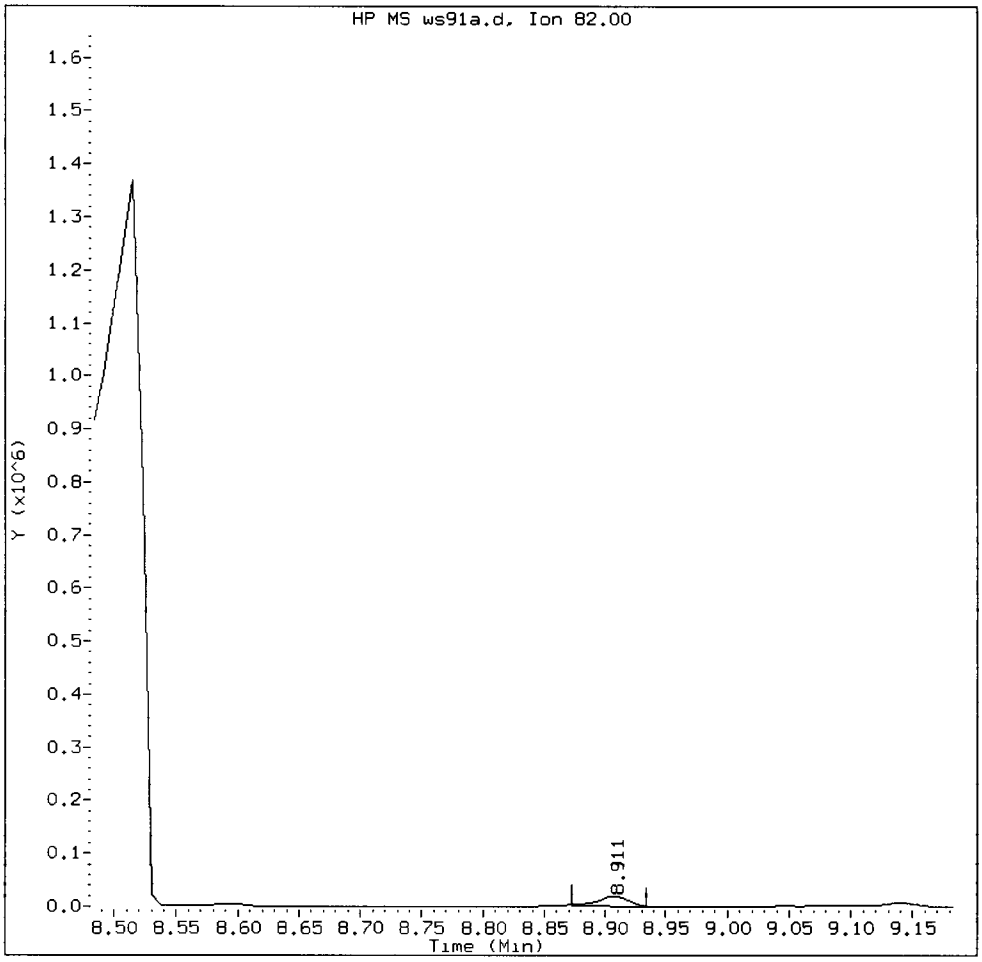
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 6/25/13

WS91A, /chem1/nt10.i/20130620.b/ws91a.d

Nitrobenzene-d5 Amount: 2.93 Area: 36440



MANUAL INTEGRATION for Nitrobenzene-d5

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 6/25/13

CO-ELUTION SUMMARY FOR FILE - ws91a.d

Lab ID: WS91A, Method: ABN.m, Instrument: nt10.i, Date: 20-JUN-2013

RT	CO-ELUTION COMPOUNDS
24.228	Benzo(k)fluoranthene and Benzo(b)fluoranthene

Analytical Resources, Inc.

YZ 6/25/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130620.b/ws91ams.d
Lab Smp Id: WS91AMS Client Smp ID: CL-MH-SPS-20130 MS
Inj Date : 20-JUN-2013 17:14
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WS91AMS
Misc Info : 13-12076
Comment : 1ul Injection
Method : /chem1/nt10.i/20130620.b/ABN.m
Meth Date : 25-Jun-2013 13:34 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 11 QC Sample: MS
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	13.40000	Weight of sample extracted (g)
M	59.30000	% 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	5.899	5.497	(0.761)	28055	2.62872	482.0(M)
$	2 Phenol-d5	99	7.382	7.174	(0.953)	64242	4.65172	852.9
	3 Phenol	94	7.406	7.197	(0.956)	110642	7.15741	1312(RH)
$	5 2-Chlorophenol-d4	132	7.514	7.343	(0.970)	27047	2.58001	473.1
	4 Bis(2-Chloroethyl)ether	93	7.390	7.289	(0.954)	42307	3.80582	697.8
	6 2-Chlorophenol	128	7.537	7.367	(0.973)	26848	2.25211	412.9
	7 1,3-Dichlorobenzene	146	7.677	7.622	(0.991)	36433	3.04556	558.4
*	8 1,4-Dichlorobenzene-d4	152	7.746	7.692	(1.000)	29901	4.00000	
	9 1,4-Dichlorobenzene	146	7.777	7.723	(1.004)	36094	3.06105	561.3
$	10 1,2-Dichlorobenzene-d4	152	8.103	8.057	(1.046)	23653	3.13661	575.1
	12 1,2-Dichlorobenzene	146	8.127	8.080	(1.049)	37095	3.28581	602.5
	11 Benzyl alcohol	108	8.181	8.033	(1.056)	26916	4.13926	759.0
	14 2,2'-oxybis(1-Chloropropane)	121	8.406	8.352	(1.085)	12367	3.60453	660.9
	13 2-Methylphenol	108	8.453	8.321	(1.091)	41247	3.70801	679.9

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
17	Hexachloroethane	117	8.709	8.685	(1.124)	9768	1.97989	363.0
16	N-Nitroso-di-n-propylamine	70	8.678	8.616	(1.120)	29075	4.18653	767.6(M)
15	4-Methylphenol	108	8.693	8.616	(1.122)	84965	7.49111	1374
$ 18	Nitrobenzene-d5	82	8.895	8.833	(0.865)	33779	2.75637	505.4(M)
19	Nitrobenzene	77	8.934	8.872	(0.869)	38256	3.38125	620.0
20	Isophorone	82	9.400	9.360	(0.914)	70728	3.32348	609.4
21	2-Nitrophenol	139	9.570	9.531	(0.931)	9329	1.47081	269.7(R)
22	2,4-Dimethylphenol	107	9.725	9.686	(0.946)	136136	11.6723	2140
23	Bis(2-Chloroethoxy)methane	93	9.886	9.863	(0.962)	47080	3.75122	687.8
24	Benzoic acid	105	9.725	9.986	(0.946)	3971	0.39622	72.65(RH)
25	2,4-Dichlorophenol	162	10.071	10.033	(0.980)	56841	5.29444	970.8
26	1,2,4-Trichlorobenzene	180	10.210	10.187	(0.993)	36867	3.51338	644.2
* 27	Naphthalene-d8	136	10.280	10.264	(1.000)	116132	4.00000	
28	Naphthalene	128	10.326	10.303	(1.004)	108804	3.51907	645.3
29	4-Chloroaniline	127	10.519	10.503	(1.023)	26627	2.20284	403.9
30	Hexachlorobutadiene	225	10.728	10.720	(1.044)	22098	3.54512	650.0
31	4-Chloro-3-methylphenol	107	11.626	11.594	(1.131)	112244	11.8843	2179
32	2-Methylnaphthalene	142	11.788	11.772	(1.147)	94648	4.60867	845.0
33	Hexachlorocyclopentadiene	237	Compound Not Detected.					
34	2,4,6-Trichlorophenol	196	12.492	12.469	(0.889)	13891	1.99554	365.9(R)
35	2,4,5-Trichlorophenol	196	12.585	12.554	(0.895)	31515	4.39179	805.3
$ 36	2-Fluorobiphenyl	172	12.639	12.639	(0.899)	88874	3.85021	706.0
37	2-Chloronaphthalene	162	12.810	12.802	(0.911)	78888	4.29282	787.1
38	2-Nitroaniline	65	13.142	13.134	(0.935)	70726	15.9459	2924
39	Dimethylphthalate	163	13.645	13.637	(0.971)	64277	3.23754	593.6
40	Acenaphthylene	152	13.715	13.707	(0.976)	131370	4.21491	772.8
41	2,6-Dinitrotoluene	165	13.762	13.754	(0.979)	57590	12.3801	2270
* 42	Acenaphthene-d10	164	14.056	14.048	(1.000)	66136	4.00000	
43	3-Nitroaniline	138	14.048	14.040	(0.999)	27708	7.21510	1323
44	Acenaphthene	153	14.125	14.109	(1.005)	101537	5.40581	991.2(R)
45	2,4-Dinitrophenol	184	14.287	14.264	(1.016)	36252	8.84328	1621
46	Dibenzofuran	168	14.473	14.465	(1.030)	177641	6.91672	1268(R)
47	4-Nitrophenol	109	Compound Not Detected.					
48	2,4-Dinitrotoluene	165	14.612	14.604	(1.040)	67069	11.1785	2050
50	Diethylphthalate	149	15.200	15.192	(1.081)	77220	3.87063	709.7
49	Fluorene	166	15.231	15.215	(1.084)	166357	7.59098	1392(R)
51	4-Chlorophenyl-phenylether	204	15.269	15.261	(1.086)	48770	4.52712	830.1
52	4-Nitroaniline	138	15.385	15.377	(1.095)	45694	11.4548	2100
53	4,6-Dinitro-2-methylphenol	198	15.493	15.485	(0.898)	63396	13.1853	2418
54	N-Nitrosodiphenylamine	169	15.555	15.539	(0.901)	59834	5.14293	943.0
$ 55	2,4,6-Tribromophenol	330	15.809	15.786	(1.125)	2998	0.85718	157.2(R)
56	4-Bromophenyl-phenylether	248	16.326	16.310	(0.946)	25812	4.53901	832.3
57	Hexachlorobenzene	284	16.619	16.596	(0.963)	29038	4.27952	784.7
58	Pentachlorophenol	266	17.045	17.006	(0.987)	9625	2.02085	370.5(R)
* 59	Phenanthrene-d10	188	17.262	17.238	(1.000)	100502	4.00000	
60	Phenanthrene	178	17.316	17.285	(1.003)	1151278	41.9971	7701(R)
61	Anthracene	178	17.409	17.385	(1.008)	139143	4.95449	908.4

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
62	Carbazole	167	17.803	17.780	(1.031)	142030	8.32575	1527(R)
63	Di-n-butylphthalate	149	18.801	18.778	(1.089)	148320	5.11601	938.1
64	Fluoranthene	202	19.854	19.807	(1.150)	1125611	34.8872	6397(R)
65	Pyrene	202	20.271	20.232	(0.901)	728184	17.8388	3271(R)
$ 66	Terphenyl-d14	244	20.643	20.619	(0.917)	96100	3.74181	686.1
67	Butylbenzylphthalate	149	21.642	21.610	(0.962)	60122	4.31295	790.8
68	Benzo(a)anthracene	228	22.470	22.431	(0.999)	230575	6.24216	1145(R)
* 69	Chrysene-d12	240	22.501	22.454	(1.000)	131936	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	22.540	22.501	(1.002)	415171	12.4200	2277(R)
72	bis(2-Ethylhexyl)phthalate	149	22.726	22.687	(0.959)	327235	14.1979	2603(R)
* 134	Di-n-octylphthalate-d4	153	23.701	23.662	(1.000)	173359	4.00000	
73	Di-n-octylphthalate	149	23.709	23.670	(1.000)	180822	4.53016	830.6(M)
74	Benzo(b)fluoranthene	252	24.235	24.181	(0.978)	405291	9.34606	1714(R)
75	Benzo(k)fluoranthene	252	24.258	24.212	(0.979)	294082	6.43847	1181(M)
76	Benzo(a)pyrene	252	24.700	24.645	(0.997)	187040	5.04861	925.7
* 77	Perylene-d12	264	24.777	24.723	(1.000)	146029	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	26.390	26.312	(1.065)	180391	4.22632	774.9
79	Dibenzo(a,h)anthracene	278	26.414	26.336	(1.066)	112621	3.43965	630.7
80	Benzo(g,h,i)perylene	276	26.849	26.763	(1.084)	144520	3.91343	717.6
90	N-Nitrosodimethylamine	74	3.335	3.304	(0.430)	22032	3.23436	593.0
91	Aniline	93	7.313	7.166	(0.944)	43088	1.43668	263.4(R)
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	3.327	3.311	(0.430)	84124	14.0497	2576
105	1-methylnaphthalene	142	12.012	11.997	(1.169)	83680	4.44288	814.6
111	Azobenzene (1,2-DP-Hydrazine)	77	15.609	15.601	(1.111)	83731	4.09343	750.6
187	Total Benzofluoranthenes	252	24.235	24.212	(0.978)	623701	14.8117	2716
99	Perylene	252	24.816	24.762	(1.002)	91435	2.15901	395.9
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	14.883	14.867	(1.059)	5132	0.96148	176.3

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: nt10.i
Lab File ID: ws91ams.d
Lab Smp Id: WS91AMS
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130620.b/ABN.m
Misc Info: 13-12076

Calibration Date: 20-JUN-2013
Calibration Time: 10:18
Client Smp ID: CL-MH-SPS-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	45250	22625	90500	29901	-33.92
27 Naphthalene-d8	166754	83377	333508	116132	-30.36
42 Acenaphthene-d10	106910	53455	213820	66136	-38.14
59 Phenanthrene-d10	179783	89892	359566	100502	-44.10
69 Chrysene-d12	192841	96420	385682	131936	-31.58
134 Di-n-octylphthala	229567	114784	459134	173359	-24.48
77 Perylene-d12	184310	92155	368620	146029	-20.77

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.69	7.19	8.19	7.75	0.71
27 Naphthalene-d8	10.26	9.76	10.76	10.28	0.15
42 Acenaphthene-d10	14.05	13.55	14.55	14.06	0.06
59 Phenanthrene-d10	17.24	16.74	17.74	17.26	0.14
69 Chrysene-d12	22.45	21.95	22.95	22.50	0.21
134 Di-n-octylphthala	23.66	23.16	24.16	23.70	0.16
77 Perylene-d12	24.72	24.22	25.22	24.78	0.22

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: WS91AMS
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDALCS.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130620.b/ABN.m
Misc Info: 13-12076

Client SDG: WS91
Fraction: SV
Client Smp ID: CL-MH-SPS-20130 MS
Operator: VTS/YZ
SampleType: MS
Quant Type: ISTD

SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	916.8	1312	143.15*	34-105
4	Bis(2-Chloroethyl)	916.8	697.8	76.12	36-100
6	2-Chlorophenol	916.8	412.9	45.04	39-100
7	1,3-Dichlorobenzen	916.8	558.4	60.91	40-100
9	1,4-Dichlorobenzen	916.8	561.3	61.22	39-100
11	Benzyl alcohol	916.8	759.0	82.79	19-117
12	1,2-Dichlorobenzen	916.8	602.5	65.72	32-100
13	2-Methylphenol	916.8	679.9	74.16	28-100
14	2,2'-oxybis(1-Chlo	916.8	660.9	72.09	32-100
15	4-Methylphenol	1834	1374	74.91	29-100
16	N-Nitroso-di-n-pro	916.8	767.6	83.73	30-100
17	Hexachloroethane	916.8	363.0	39.60	38-100
19	Nitrobenzene	916.8	620.0	67.62	36-100
20	Isophorone	916.8	609.4	66.47	37-101
21	2-Nitrophenol	916.8	269.7	29.42*	37-101
22	2,4-Dimethylphenol	2750	2140	77.82	10-100
23	Bis(2-Chloroethoxy	916.8	687.8	75.02	39-100
24	Benzoic acid	5042	72.65	1.44*	10-107
25	2,4-Dichlorophenol	2750	970.8	35.30	28-112
26	1,2,4-Trichloroben	916.8	644.2	70.27	35-103
28	Naphthalene	916.8	645.3	70.38	43-100
29	4-Chloroaniline	2750	403.9	14.69	11-100
30	Hexachlorobutadien	916.8	650.0	70.90	37-100
31	4-Chloro-3-methylp	2750	2179	79.23	32-117
32	2-Methylnaphthalen	916.8	845.0	92.17	43-100
33	Hexachlorocyclope	2750	0.000	*	10-103
34	2,4,6-Trichlorophe	2750	365.9	13.30*	30-113
35	2,4,5-Trichlorophe	2750	805.3	29.28	28-118
37	2-Chloronaphthalen	916.8	787.1	85.86	40-100
38	2-Nitroaniline	2750	2924	106.31	31-126
39	Dimethylphthalate	916.8	593.6	64.75	43-114
40	Acenaphthylene	916.8	772.8	84.30	42-102
41	2,6-Dinitrotoluene	2750	2270	82.53	33-123

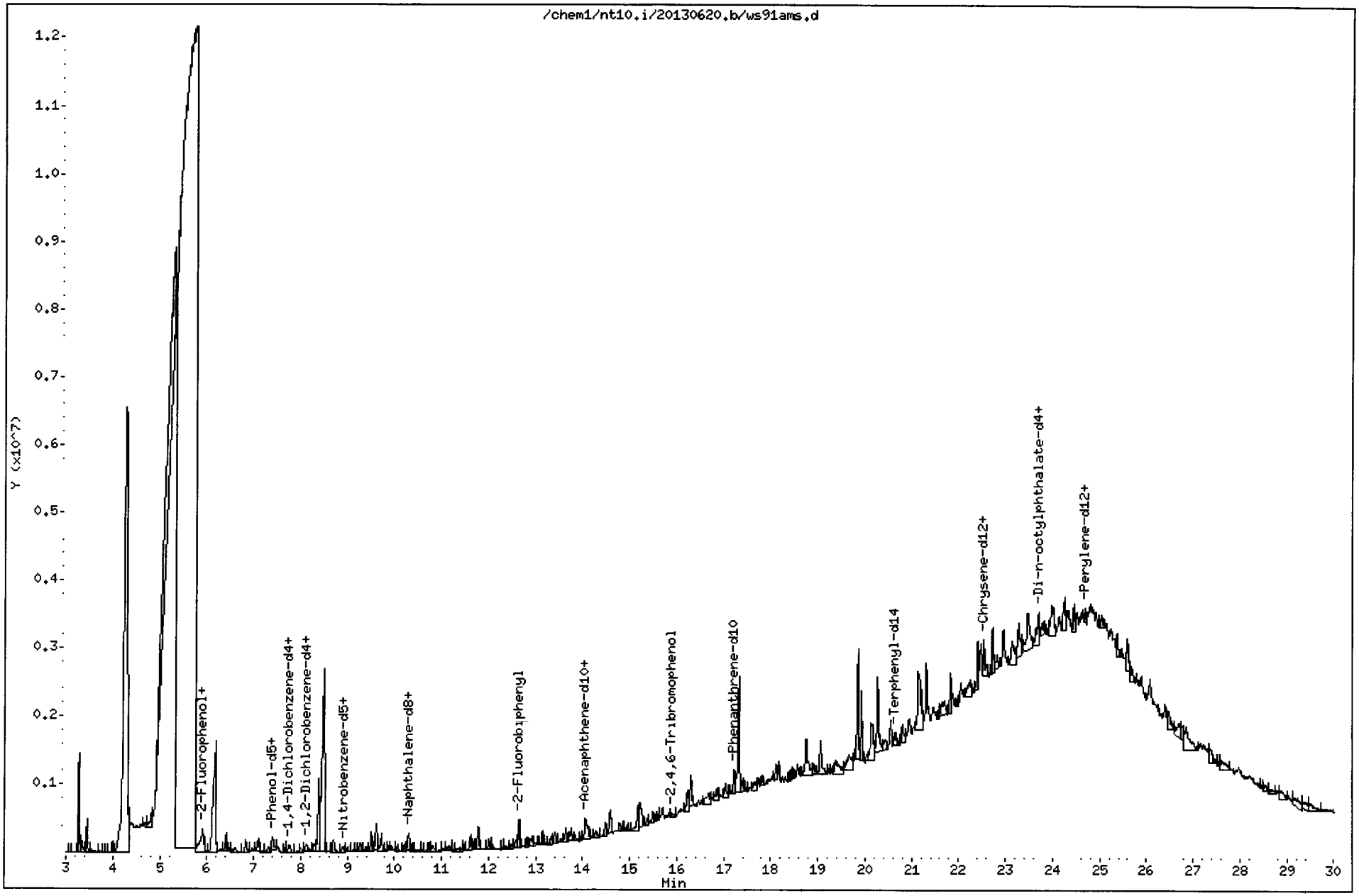
SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
43	3-Nitroaniline	2750	1323	48.10	22-113
44	Acenaphthene	916.8	991.2	108.12*	45-100
45	2,4-Dinitrophenol	5042	1621	32.16	10-105
46	Dibenzofuran	916.8	1268	138.33*	43-103
47	4-Nitrophenol	2750	0.000	*	15-138
48	2,4-Dinitrotoluene	2750	2050	74.52	35-127
49	Fluorene	916.8	1392	151.82*	45-107
50	Diethylphthalate	916.8	709.7	77.41	50-120
51	4-Chlorophenyl-phe	916.8	830.1	90.54	32-116
52	4-Nitroaniline	2750	2100	76.37	24-125
53	4,6-Dinitro-2-meth	5042	2418	47.95	24-119
54	N-Nitrosodiphenyla	916.8	943.0	102.86	36-111
56	4-Bromophenyl-phen	916.8	832.3	90.78	39-114
57	Hexachlorobenzene	916.8	784.7	85.59	33-113
58	Pentachlorophenol	2750	370.5	13.47*	16-120
60	Phenanthrene	916.8	7701	839.94*	49-112
61	Anthracene	916.8	908.4	99.09	45-106
62	Carbazole	916.8	1527	166.52*	43-135
63	Di-n-butylphthalat	916.8	938.1	102.32	48-126
64	Fluoranthene	916.8	6397	697.74*	53-118
65	Pyrene	916.8	3271	356.78*	48-121
67	Butylbenzylphthala	916.8	790.8	86.26	45-132
68	Benzo(a)anthracene	916.8	1145	124.84*	49-115
70	3,3'-Dichlorobenz	2750	0.000	*	10-100
71	Chrysene	916.8	2277	248.40*	47-115
72	bis(2-Ethylhexyl)p	916.8	2603	283.96*	34-130
73	Di-n-octylphthalat	916.8	830.6	90.60	28-124
74	Benzo(b)fluoranthe	916.8	1714	186.92*	42-132
75	Benzo(k)fluoranthe	916.8	1181	128.77	39-129
76	Benzo(a)pyrene	916.8	925.7	100.97	42-113
78	Indeno(1,2,3-cd)py	916.8	774.9	84.53	42-123
79	Dibenzo(a,h)anthra	916.8	630.7	68.79	30-133
80	Benzo(g,h,i)peryle	916.8	717.6	78.27	38-126
91	Aniline	2750	263.4	9.58*	10-134
111	Azobenzene (1,2-DP	916.8	750.6	81.87	35-112
90	N-Nitrosodimethyla	2750	593.0	21.56	17-100
105	1-methylnaphthalen	916.8	814.6	88.86	42-100
103	Pyridine	1834	2576	140.50	10-147
187	Total Benzofluoran	1834	2716	148.12	30-160

SURROGATE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	1375	482.0	35.05	27-120

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 2 Phenol-d5	1375	852.9	62.02	29-120
$ 5 2-Chlorophenol-d4	1375	473.1	34.40	31-120
$ 10 1,2-Dichlorobenzen	916.8	575.1	62.73	32-120
$ 18 Nitrobenzene-d5	916.8	505.4	55.13	30-120
$ 36 2-Fluorobiphenyl	916.8	706.0	77.00	35-120
$ 55 2,4,6-Tribromophen	1375	157.2	11.43*	24-134
$ 66 Terphenyl-d14	916.8	686.1	74.84	37-120

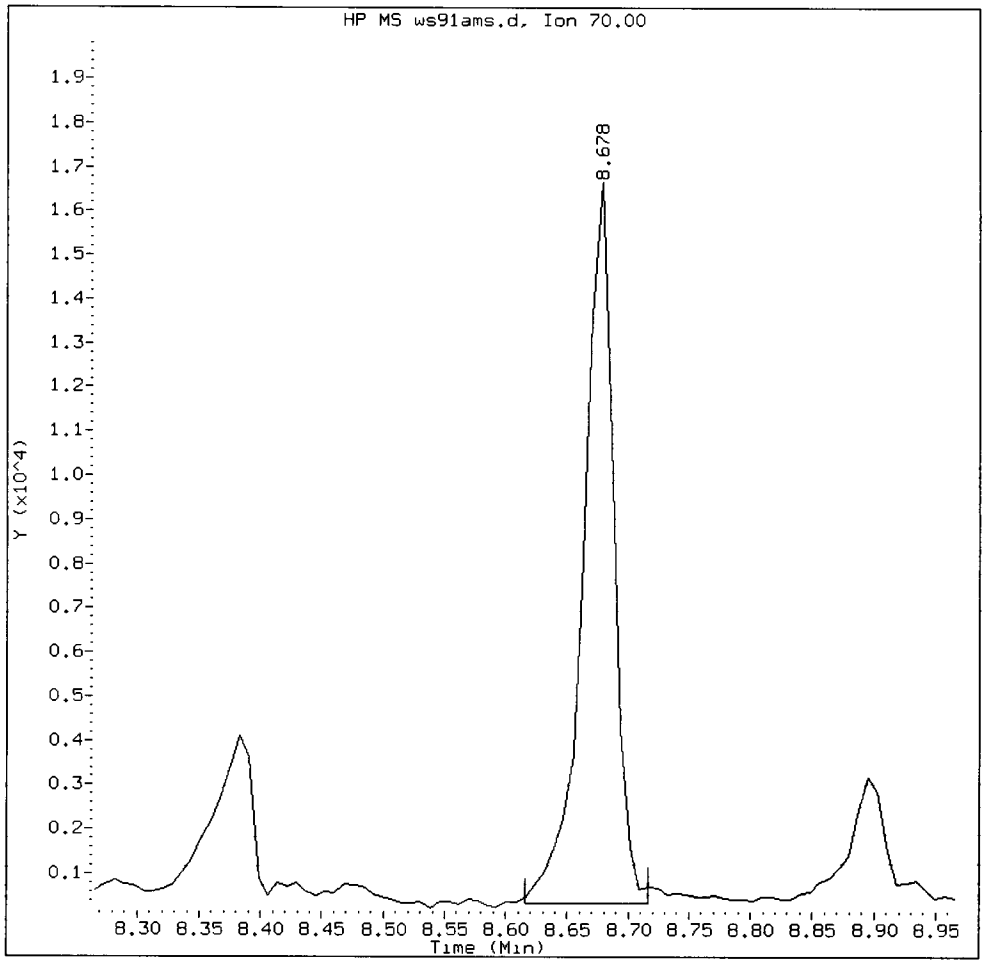
Data File: /chem1/nt10.i/20130620.b/ws91ams.d
Date : 20-JUN-2013 17:14
Client ID: CL-MH-SPS-20130 MS
Sample Info: WS91AMS
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



WS91AMS, /chem1/nt10.i/20130620.b/ws91ams.d

N-Nitroso-di-n-propylamine Amount: 4.19 Area: 29075



MANUAL INTEGRATION for N-Nitroso-di-n-propylamine

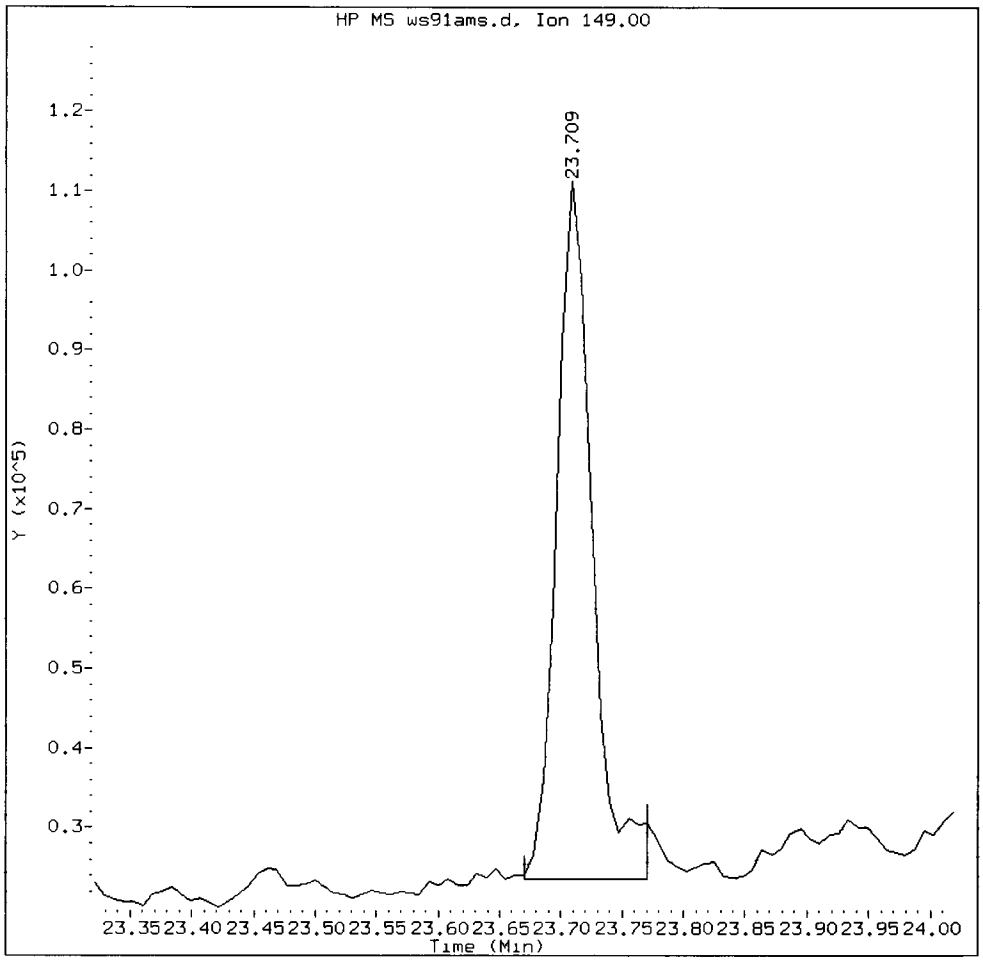
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 6/25/13

WS91AMS, /chem1/nt10.i/20130620.b/ws91ams.d

Di-n-octylphthalate Amount: 4.53 Area: 180822



MANUAL INTEGRATION for Di-n-octylphthalate

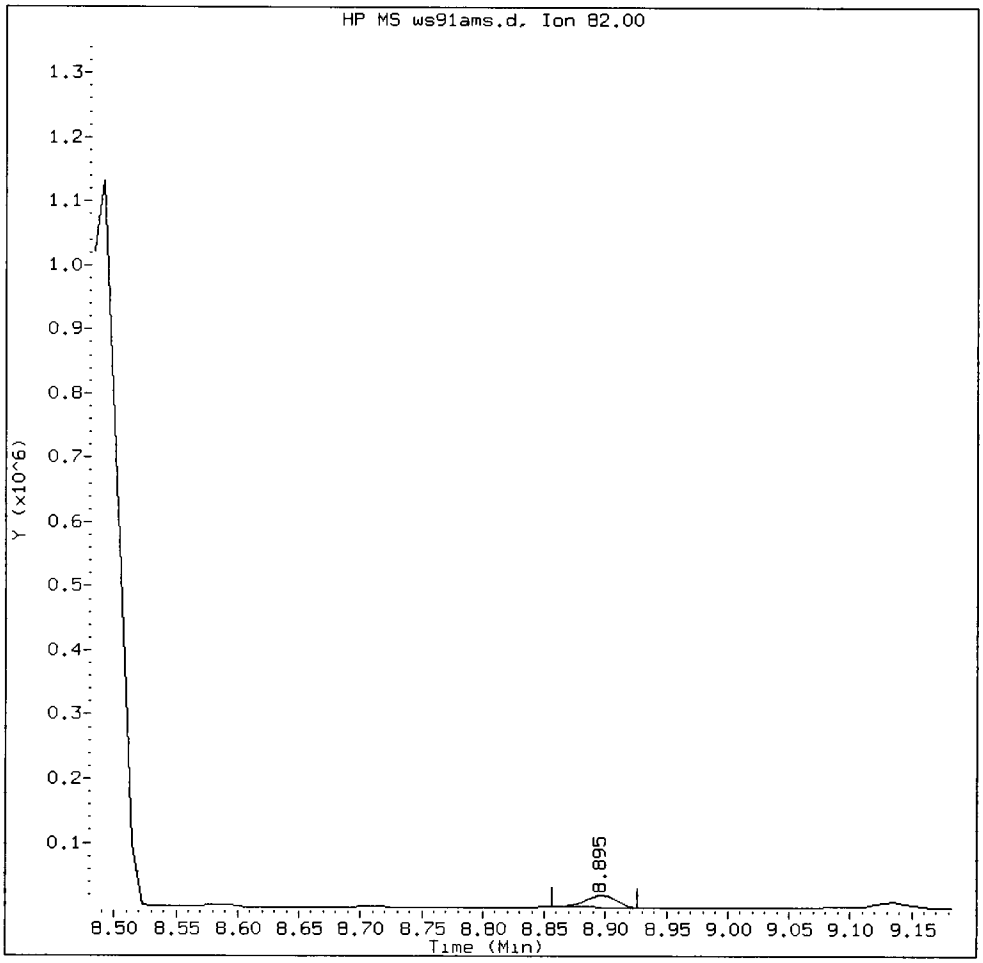
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 6/25/13

WS91AMS, /chem1/nt10.i/20130620.b/ws91ams.d

Nitrobenzene-d5 Amount: 2.76 Area: 33779



MANUAL INTEGRATION for Nitrobenzene-d5

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VR Date: 6/25/13

CO-ELUTION SUMMARY FOR FILE - ws91ams.d

Lab ID: WS91AMS, Method: ABN.m, Instrument: nt10.i, Date: 20-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

6/25/13

Data file : /chem1/nt10.i/20130620.b/ws91amsd.d
Lab Smp Id: WS91AMSD Client Smp ID: CL-MH-SPS-20130 MSD
Inj Date : 20-JUN-2013 17:51
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WS91AMSD
Misc Info : 13-12076
Comment : 1ul Injection
Method : /chem1/nt10.i/20130620.b/ABN.m
Meth Date : 25-Jun-2013 13:34 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 12 QC Sample: MSD
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	13.30000	Weight of sample extracted (g)
M	59.30000	% 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	5.883	5.497	(0.759)	25778	2.40347	444.0(M)
$	2 Phenol-d5	99	7.336	7.174	(0.947)	63038	4.54206	839.1
	3 Phenol	94	7.359	7.197	(0.950)	103933	6.69029	1236(RH)
$	5 2-Chlorophenol-d4	132	7.475	7.343	(0.965)	40209	3.81663	705.1
	4 Bis(2-Chloroethyl)ether	93	7.382	7.289	(0.953)	41970	3.75691	694.0
	6 2-Chlorophenol	128	7.490	7.367	(0.967)	17461	1.45748	269.3(R)
	7 1,3-Dichlorobenzene	146	7.677	7.622	(0.991)	39115	3.25365	601.1
*	8 1,4-Dichlorobenzene-d4	152	7.746	7.692	(1.000)	30049	4.00000	
	9 1,4-Dichlorobenzene	146	7.777	7.723	(1.004)	40033	3.37838	624.1
$	10 1,2-Dichlorobenzene-d4	152	8.103	8.057	(1.046)	24818	3.27489	605.0
	12 1,2-Dichlorobenzene	146	8.127	8.080	(1.049)	39513	3.48276	643.4
	11 Benzyl alcohol	108	8.150	8.033	(1.052)	26725	4.08965	755.5
	14 2,2'-oxybis(1-Chloropropane)	121	8.429	8.352	(1.088)	13563	3.93365	726.7(M)
	13 2-Methylphenol	108	8.422	8.321	(1.087)	36817	3.29346	608.4

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	8.709	8.685	(1.124)	13020	2.62604	485.1
	16 N-Nitroso-di-n-propylamine	70	8.662	8.616	(1.118)	29612	4.24286	783.8
	15 4-Methylphenol	108	8.678	8.616	(1.120)	85993	7.54441	1394
$	18 Nitrobenzene-d5	82	8.887	8.833	(0.865)	39310	3.25146	600.7
	19 Nitrobenzene	77	8.918	8.872	(0.868)	40010	3.58452	662.2
	20 Isophorone	82	9.392	9.360	(0.914)	72884	3.47151	641.3
	21 2-Nitrophenol	139	9.562	9.531	(0.930)	10277	1.64237	303.4(R)
	22 2,4-Dimethylphenol	107	9.717	9.686	(0.945)	133437	11.5970	2142
	23 Bis(2-Chloroethoxy)methane	93	9.886	9.863	(0.962)	50600	4.08669	755.0
	24 Benzoic acid	105	9.717	9.986	(0.945)	4303	0.43519	80.40(RH)
	25 2,4-Dichlorophenol	162	10.064	10.033	(0.979)	55709	5.25979	971.7
	26 1,2,4-Trichlorobenzene	180	10.210	10.187	(0.993)	39087	3.77576	697.5
*	27 Naphthalene-d8	136	10.280	10.264	(1.000)	114569	4.00000	
	28 Naphthalene	128	10.318	10.303	(1.004)	111667	3.66094	676.3
	29 4-Chloroaniline	127	10.519	10.503	(1.023)	44362	3.72012	687.2
	30 Hexachlorobutadiene	225	10.728	10.720	(1.044)	23256	3.78179	698.6
	31 4-Chloro-3-methylphenol	107	11.618	11.594	(1.130)	116926	12.5489	2318
	32 2-Methylnaphthalene	142	11.780	11.772	(1.146)	86366	4.26277	787.5
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	12.485	12.469	(0.888)	24928	3.58742	662.7(R)
	35 2,4,5-Trichlorophenol	196	12.577	12.554	(0.895)	36864	5.14630	950.7
$	36 2-Fluorobiphenyl	172	12.639	12.639	(0.899)	89462	3.88255	717.3
	37 2-Chloronaphthalene	162	12.810	12.802	(0.911)	81369	4.43567	819.4
	38 2-Nitroaniline	65	13.142	13.134	(0.935)	69473	15.6911	2899
	39 Dimethylphthalate	163	13.638	13.637	(0.970)	71721	3.61888	668.5
	40 Acenaphthylene	152	13.715	13.707	(0.976)	120397	3.86970	714.9
	41 2,6-Dinitrotoluene	165	13.762	13.754	(0.979)	60433	13.0143	2404
*	42 Acenaphthene-d10	164	14.055	14.048	(1.000)	66019	4.00000	
	43 3-Nitroaniline	138	14.048	14.040	(0.999)	34430	8.98138	1659
	44 Acenaphthene	153	14.125	14.109	(1.005)	79122	4.21991	779.6
	45 2,4-Dinitrophenol	184	14.280	14.264	(1.016)	30740	7.52715	1391
	46 Dibenzofuran	168	14.473	14.465	(1.030)	112604	4.39217	811.4
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	14.612	14.604	(1.040)	69913	11.6731	2156
	50 Diethylphthalate	149	15.200	15.192	(1.081)	80738	4.05415	749.0
	49 Fluorene	166	15.223	15.215	(1.083)	92662	4.23572	782.5
	51 4-Chlorophenyl-phenylether	204	15.269	15.261	(1.086)	50017	4.65110	859.2
	52 4-Nitroaniline	138	15.385	15.377	(1.095)	37511	9.42012	1740
	53 4,6-Dinitro-2-methylphenol	198	15.493	15.485	(0.898)	62657	13.2995	2457
	54 N-Nitrosodiphenylamine	169	15.555	15.539	(0.902)	60575	5.31401	981.7
$	55 2,4,6-Tribromophenol	330	15.801	15.786	(1.124)	6185	1.77153	327.3(R)
	56 4-Bromophenyl-phenylether	248	16.326	16.310	(0.946)	27109	4.86541	898.8
	57 Hexachlorobenzene	284	16.619	16.596	(0.963)	30408	4.57386	845.0
	58 Pentachlorophenol	266	17.037	17.006	(0.987)	19741	4.23027	781.5
*	59 Phenanthrene-d10	188	17.254	17.238	(1.000)	98471	4.00000	
	60 Phenanthrene	178	17.308	17.285	(1.003)	197381	7.34870	1358(R)
	61 Anthracene	178	17.401	17.385	(1.009)	121614	4.41964	816.5

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	62 Carbazole	167	17.803	17.780	(1.032)	113186	6.77178	1251(R)
	63 Di-n-butylphthalate	149	18.794	18.778	(1.089)	147647	5.19783	960.2
	64 Fluoranthene	202	19.838	19.807	(1.150)	223460	7.06876	1306(R)
	65 Pyrene	202	20.264	20.232	(0.901)	219097	5.46642	1010
$	66 Terphenyl-d14	244	20.643	20.619	(0.918)	97923	3.88316	717.4
	67 Butylbenzylphthalate	149	21.642	21.610	(0.962)	63635	4.64922	858.9
	68 Benzo(a)anthracene	228	22.470	22.431	(0.999)	163568	4.50987	833.1
*	69 Chrysene-d12	240	22.493	22.454	(1.000)	129545	4.00000	
	70 3,3'-Dichlorobenzidine	252	22.478	22.447	(0.999)	19567	1.41648	261.7(RM)
	71 Chrysene	228	22.540	22.501	(1.002)	174351	5.31204	981.3
	72 bis(2-Ethylhexyl)phthalate	149	22.726	22.687	(0.959)	377081	16.3632	3023(R)
*	134 Di-n-octylphthalate-d4	153	23.701	23.662	(1.000)	173331	4.00000	
	73 Di-n-octylphthalate	149	23.709	23.670	(1.000)	192090	4.81324	889.2(M)
	74 Benzo(b)fluoranthene	252	24.227	24.181	(0.978)	182947	4.58524	847.1
	75 Benzo(k)fluoranthene	252	24.266	24.212	(0.979)	195079	4.64195	857.5
	76 Benzo(a)pyrene	252	24.700	24.645	(0.997)	149682	4.39119	811.2
*	77 Perylene-d12	264	24.777	24.723	(1.000)	134358	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	26.390	26.312	(1.065)	161185	4.10439	758.2
	79 Dibenzo(a,h)anthracene	278	26.406	26.336	(1.066)	119015	3.95068	729.8(M)
	80 Benzo(g,h,i)perylene	276	26.849	26.763	(1.084)	128028	3.76800	696.1
	90 N-Nitrosodimethylamine	74	3.327	3.304	(0.430)	30472	4.45134	822.3
	91 Aniline	93	7.290	7.166	(0.941)	55182	1.83086	338.2
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	3.327	3.311	(0.430)	91513	15.2085	2810(R)
	105 1-methylnaphthalene	142	12.005	11.997	(1.168)	82099	4.41840	816.2
	111 Azobenzene (1,2-DP-Hydrazine)	77	15.609	15.601	(1.111)	83464	4.08761	755.1
	187 Total Benzofluoranthenes	252	24.227	24.212	(0.978)	347037	8.95735	1655
	99 Perylene	252	24.816	24.762	(1.002)	83309	2.13801	395.0
	98 Retene	219	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	14.883	14.867	(1.059)	8577	1.60976	297.4

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: nt10.i
Lab File ID: ws91amsd.d
Lab Smp Id: WS91AMSD
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130620.b/ABN.m
Misc Info: 13-12076

Calibration Date: 20-JUN-2013
Calibration Time: 10:18
Client Smp ID: CL-MH-SPS-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	45250	22625	90500	30049	-33.59
27 Naphthalene-d8	166754	83377	333508	114569	-31.29
42 Acenaphthene-d10	106910	53455	213820	66019	-38.25
59 Phenanthrene-d10	179783	89892	359566	98471	-45.23
69 Chrysene-d12	192841	96420	385682	129545	-32.82
134 Di-n-octylphthala	229567	114784	459134	173331	-24.50
77 Perylene-d12	184310	92155	368620	134358	-27.10

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.69	7.19	8.19	7.75	0.71
27 Naphthalene-d8	10.26	9.76	10.76	10.28	0.15
42 Acenaphthene-d10	14.05	13.55	14.55	14.06	0.06
59 Phenanthrene-d10	17.24	16.74	17.74	17.25	0.09
69 Chrysene-d12	22.45	21.95	22.95	22.49	0.17
134 Di-n-octylphthala	23.66	23.16	24.16	23.70	0.16
77 Perylene-d12	24.72	24.22	25.22	24.78	0.22

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: WS91AMSD
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDALCS.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130620.b/ABN.m
Misc Info: 13-12076

Client SDG: WS91
Fraction: SV
Client Smp ID: CL-MH-SPS-20130 MSD
Operator: VTS/YZ
SampleType: MSD
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	923.7	1236	133.81*	34-105
4	Bis(2-Chloroethyl)	923.7	694.0	75.14	36-100
6	2-Chlorophenol	923.7	269.3	29.15*	39-100
7	1,3-Dichlorobenzen	923.7	601.1	65.07	40-100
9	1,4-Dichlorobenzen	923.7	624.1	67.57	39-100
11	Benzyl alcohol	923.7	755.5	81.79	19-117
12	1,2-Dichlorobenzen	923.7	643.4	69.66	32-100
13	2-Methylphenol	923.7	608.4	65.87	28-100
14	2,2'-oxybis(1-Chlo	923.7	726.7	78.67	32-100
15	4-Methylphenol	1847	1394	75.44	29-100
16	N-Nitroso-di-n-pro	923.7	783.8	84.86	30-100
17	Hexachloroethane	923.7	485.1	52.52	38-100
19	Nitrobenzene	923.7	662.2	71.69	36-100
20	Isophorone	923.7	641.3	69.43	37-101
21	2-Nitrophenol	923.7	303.4	32.85*	37-101
22	2,4-Dimethylphenol	2771	2142	77.31	10-100
23	Bis(2-Chloroethoxy	923.7	755.0	81.73	39-100
24	Benzoic acid	5080	80.40	1.58*	10-107
25	2,4-Dichlorophenol	2771	971.7	35.07	28-112
26	1,2,4-Trichloroben	923.7	697.5	75.52	35-103
28	Naphthalene	923.7	676.3	73.22	43-100
29	4-Chloroaniline	2771	687.2	24.80	11-100
30	Hexachlorobutadien	923.7	698.6	75.64	37-100
31	4-Chloro-3-methylp	2771	2318	83.66	32-117
32	2-Methylnaphthalen	923.7	787.5	85.26	43-100
33	Hexachlorocyclope	2771	0.000	*	10-103
34	2,4,6-Trichlorophe	2771	662.7	23.92*	30-113
35	2,4,5-Trichlorophe	2771	950.7	34.31	28-118
37	2-Chloronaphthalen	923.7	819.4	88.71	40-100
38	2-Nitroaniline	2771	2899	104.61	31-126
39	Dimethylphthalate	923.7	668.5	72.38	43-114
40	Acenaphthylene	923.7	714.9	77.39	42-102
41	2,6-Dinitrotoluene	2771	2404	86.76	33-123

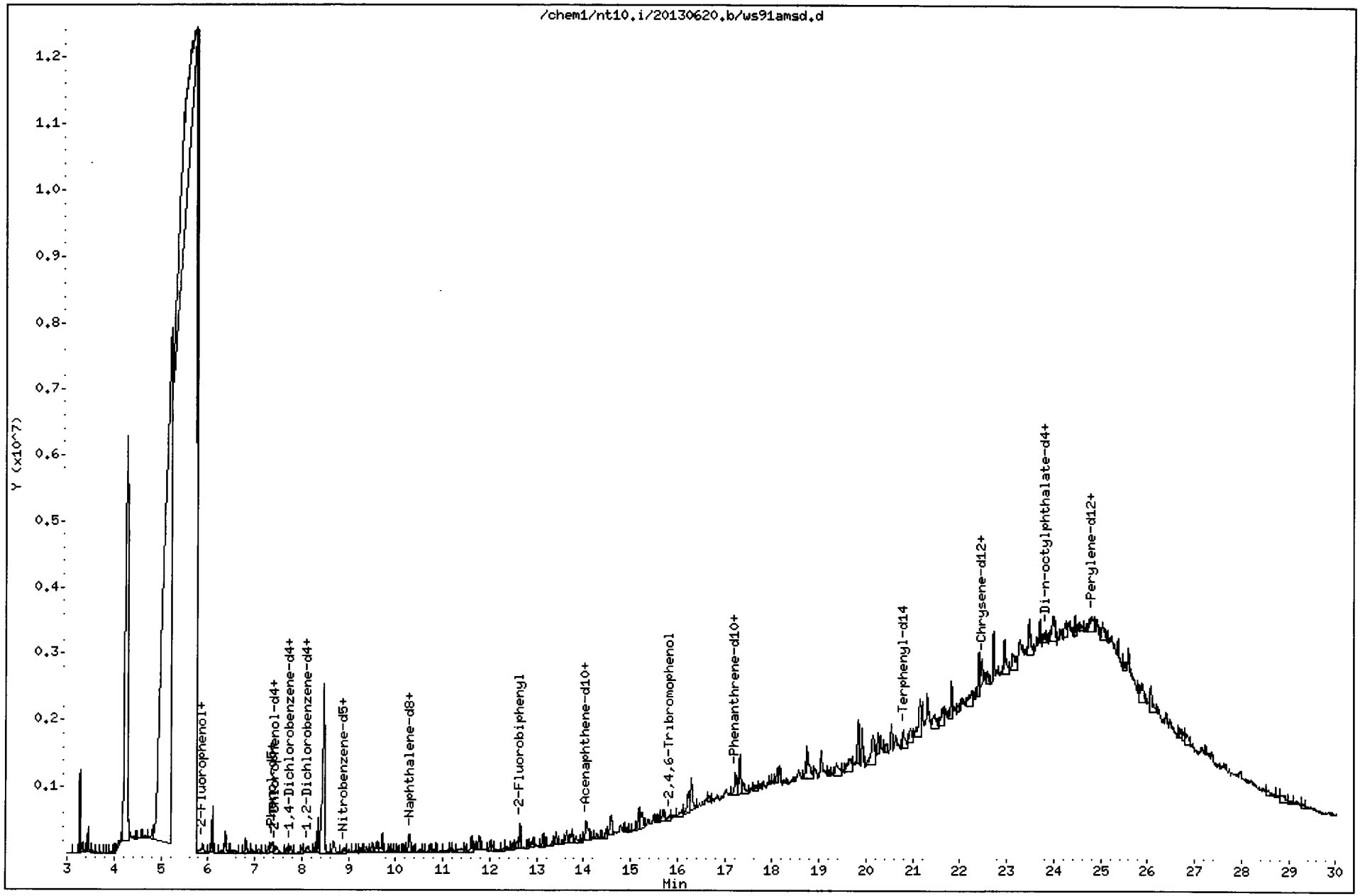
SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
43 3-Nitroaniline	2771	1659	59.88	22-113
44 Acenaphthene	923.7	779.6	84.40	45-100
45 2,4-Dinitrophenol	5080	1391	27.37	10-105
46 Dibenzofuran	923.7	811.4	87.84	43-103
47 4-Nitrophenol	2771	0.000	*	15-138
48 2,4-Dinitrotoluene	2771	2156	77.82	35-127
49 Fluorene	923.7	782.5	84.71	45-107
50 Diethylphthalate	923.7	749.0	81.08	50-120
51 4-Chlorophenyl-phe	923.7	859.2	93.02	32-116
52 4-Nitroaniline	2771	1740	62.80	24-125
53 4,6-Dinitro-2-meth	5080	2457	48.36	24-119
54 N-Nitrosodiphenyla	923.7	981.7	106.28	36-111
56 4-Bromophenyl-phen	923.7	898.8	97.31	39-114
57 Hexachlorobenzene	923.7	845.0	91.48	33-113
58 Pentachlorophenol	2771	781.5	28.20	16-120
60 Phenanthrene	923.7	1358	146.97*	49-112
61 Anthracene	923.7	816.5	88.39	45-106
62 Carbazole	923.7	1251	135.44*	43-135
63 Di-n-butylphthalat	923.7	960.2	103.96	48-126
64 Fluoranthene	923.7	1306	141.38*	53-118
65 Pyrene	923.7	1010	109.33	48-121
67 Butylbenzylphthala	923.7	858.9	92.98	45-132
68 Benzo(a)anthracene	923.7	833.1	90.20	49-115
70 3,3'-Dichlorobenzi	2771	261.7	9.44*	10-100
71 Chrysene	923.7	981.3	106.24	47-115
72 bis(2-Ethylhexyl)p	923.7	3023	327.26*	34-130
73 Di-n-octylphthalat	923.7	889.2	96.26	28-124
74 Benzo(b)fluoranthe	923.7	847.1	91.70	42-132
75 Benzo(k)fluoranthe	923.7	857.5	92.84	39-129
76 Benzo(a)pyrene	923.7	811.2	87.82	42-113
78 Indeno(1,2,3-cd)py	923.7	758.2	82.09	42-123
79 Dibenzo(a,h)anthra	923.7	729.8	79.01	30-133
80 Benzo(g,h,i)peryle	923.7	696.1	75.36	38-126
91 Aniline	2771	338.2	12.21	10-134
111 Azobenzene (1,2-DP	923.7	755.1	81.75	35-112
90 N-Nitrosodimethyla	2771	822.3	29.68	17-100
105 1-methylnaphthalen	923.7	816.2	88.37	42-100
103 Pyridine	1847	2810	152.08*	10-147
187 Total Benzofluoran	1847	1655	89.57	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	1386	444.0	32.05	27-120

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 2 Phenol-d5	1386	839.1	60.56	29-120
$ 5 2-Chlorophenol-d4	1386	705.1	50.89	31-120
$ 10 1,2-Dichlorobenzen	923.7	605.0	65.50	32-120
$ 18 Nitrobenzene-d5	923.7	600.7	65.03	30-120
$ 36 2-Fluorobiphenyl	923.7	717.3	77.65	35-120
$ 55 2,4,6-Tribromophen	1386	327.3	23.62*	24-134
$ 66 Terphenyl-d14	923.7	717.4	77.66	37-120

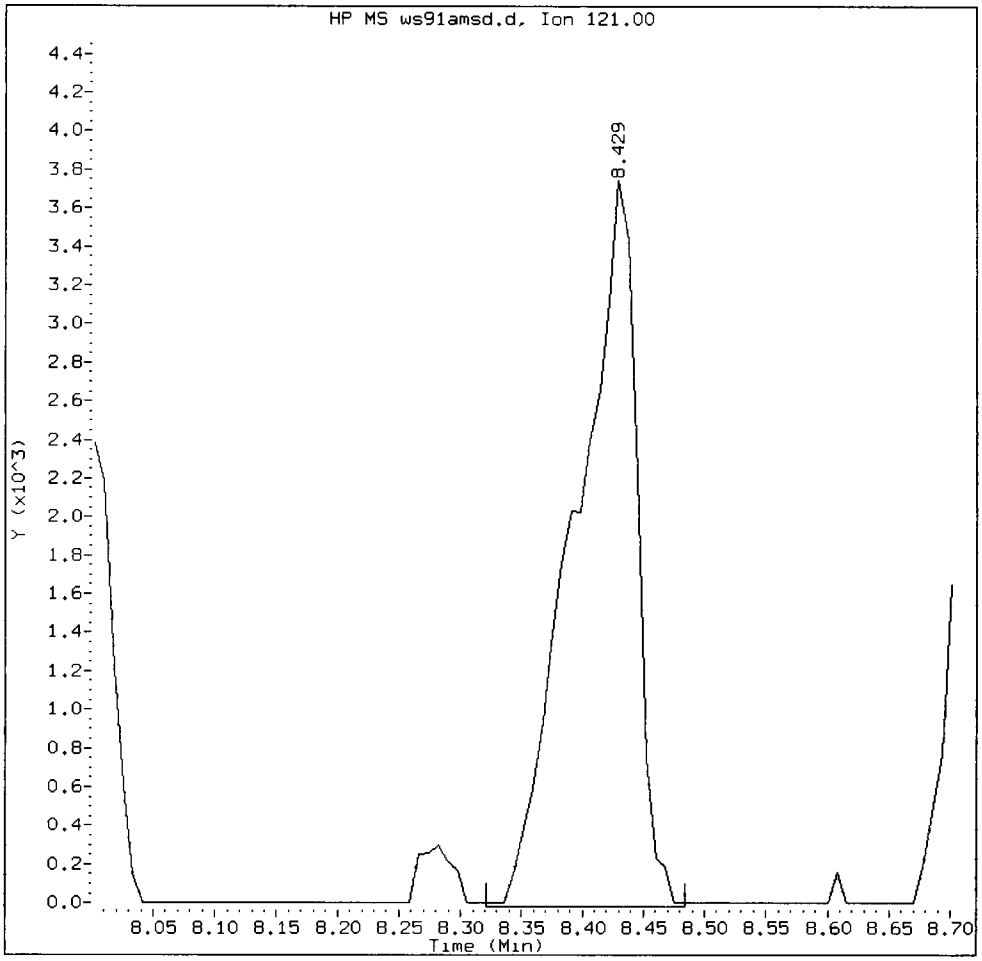
Data File: /chem1/nt10.i/20130620.b/ws91amsd.d
Date : 20-JUN-2013 17:51
Client ID: CL-MH-SPS-20130 MSD
Sample Info: WS91AMSD
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



WS91AMSD, /chem1/nt10.i/20130620.b/ws91amsd.d

2,2'-oxybis(1-Chloropropane) Amount: 3.93 Area: 13563



MANUAL INTEGRATION for 2,2'-oxybis(1-Chloropropane)

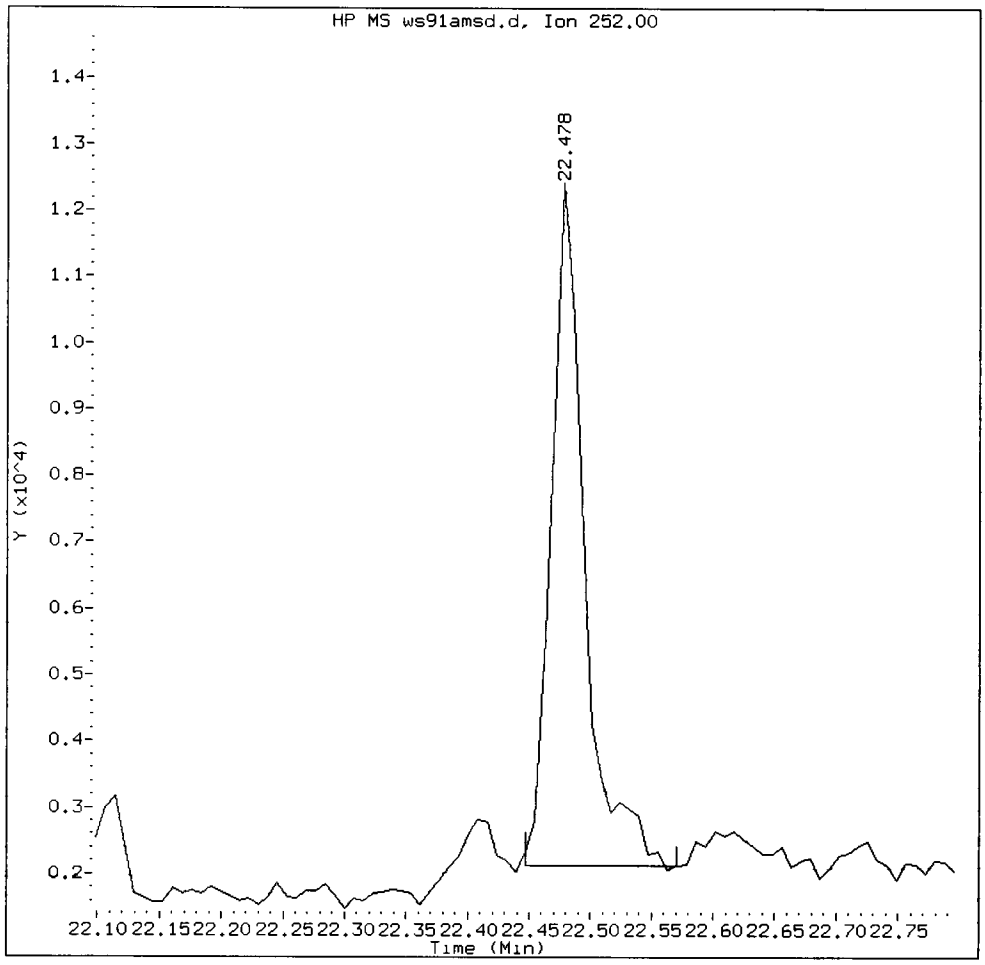
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 8/25/13

WS91AMSD, /chem1/nt10.i/20130620.b/ws91amsd.d

3,3'-Dichlorobenzidine Amount: 1.42 Area: 19567



MANUAL INTEGRATION for 3,3'-Dichlorobenzidine

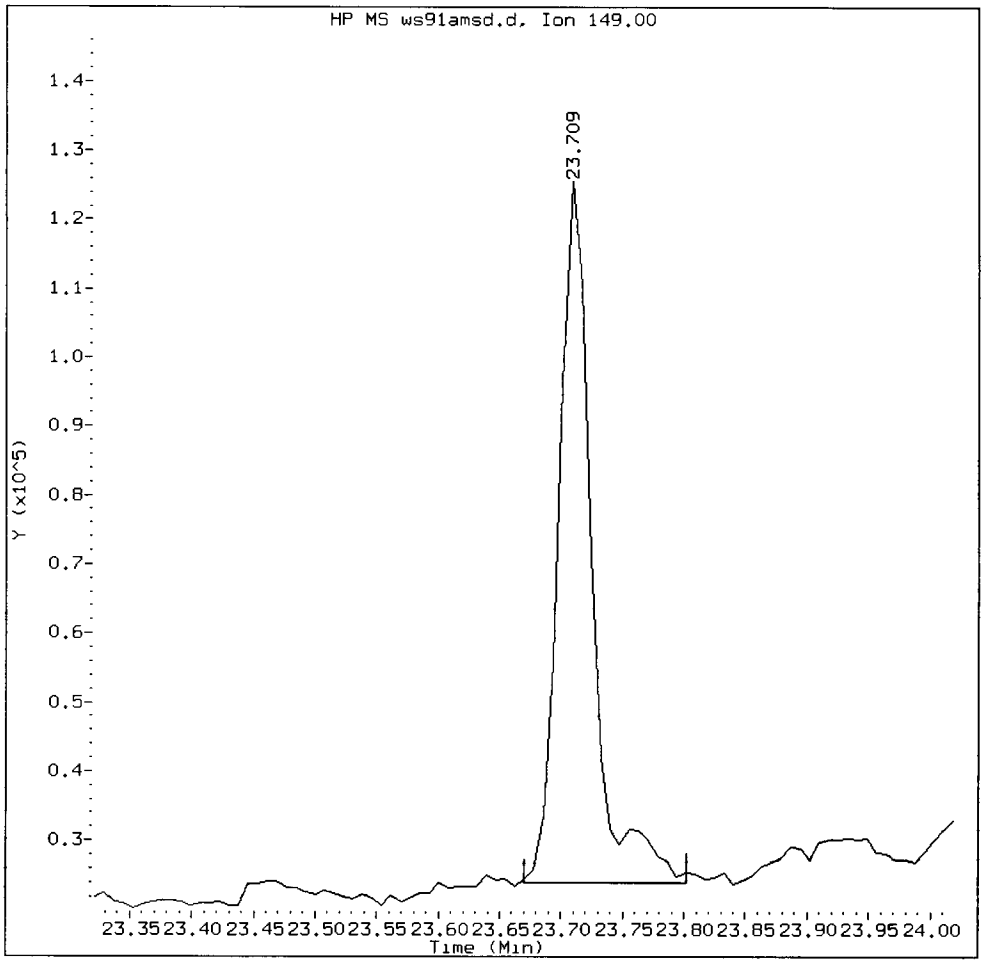
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation ✓

5. Other _____

Analyst: 1/2 Date: 6/20/13

WS91AMSD, /chem1/nt10.i/20130620.b/ws91amsd.d

Di-n-octylphthalate Amount: 4.81 Area: 192090



MANUAL INTEGRATION for Di-n-octylphthalate

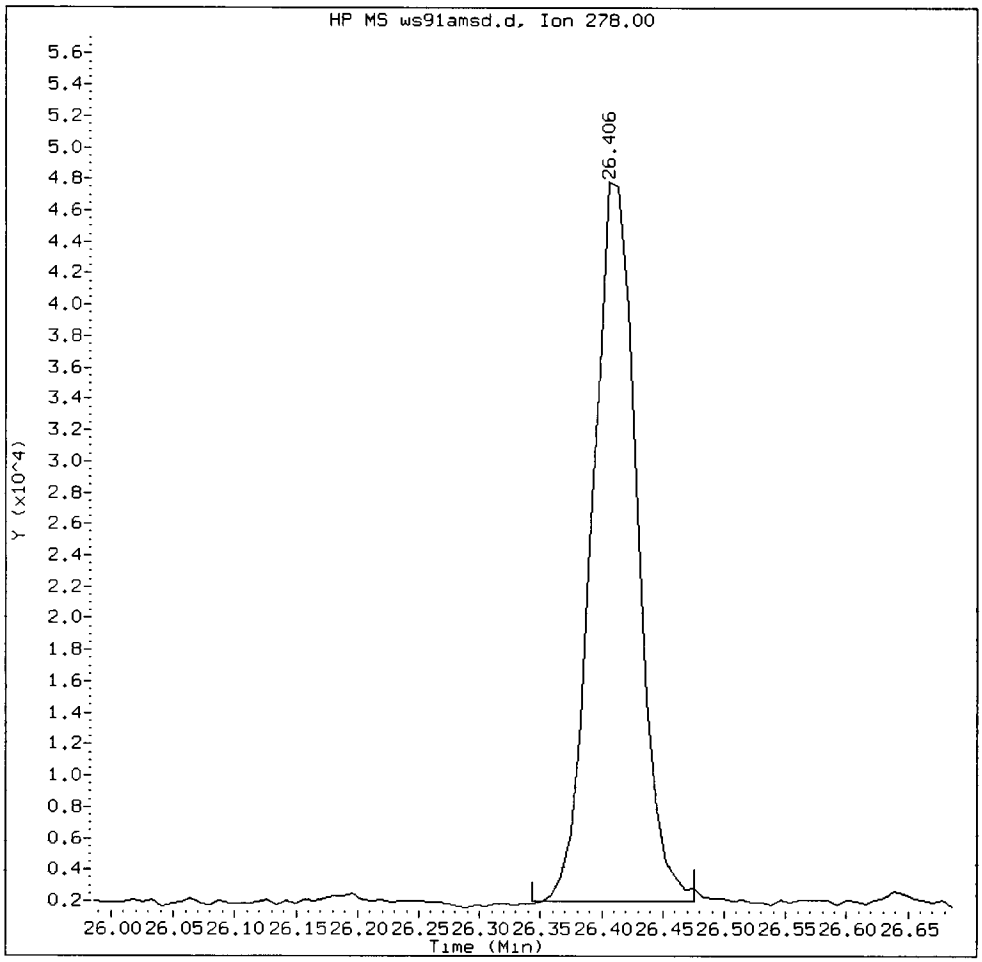
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VE Date: 6/25/13

WS91AMSD, /chem1/nt10.i/20130620.b/ws91amsd.d

Dibenzo(a,h)anthracene Amount: 3.95 Area: 119015



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 6/25/13

CO-ELUTION SUMMARY FOR FILE - ws91amsd.d

Lab ID: WS91AMSD, Method: ABN.m, Instrument: nt10.i, Date: 20-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 06/24/13 Analysis: ABN/SIMABN Analyst: YZ

GC Program: ABNZ Column No: 252947 Column Type: ZB5 ms

Instrument Tune (.U or .CT.): B0228C1 EM Voltage: 1753

Calibration File: DF0624 Curve Date: 4/29/13 Injection Vol.: 1 uL

IS/SS	Ical/Ccal	LCS/ICV
1998-2	B000670	
	B000582	
	2884-2	
	B000112	
	1998-2.	

Document All Maintenance Tasks In Element

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130624.b

	Time	Filename	LabID	ClientId	DF											
1	1450	df0624.d	DFTPP	DFTPP	1	NO ISTDS FOUND										
2	1505	cc0624 d	ABN 5		1	7.45	45845	10.03	163568	13.83	106358	17 03	177858	22.33	183565	24.62	158255	23.60	212458
3	1618	ws91mb.d	WS91MBS1	WS91MBS1	1	7 45	51969	10.02	191996	13.83	119058	17.03	205984	22.33	219414	24.62	170417	23 59	253726

YZ 6/25/13

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 Element

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130624.b

Instrument: nt10.i Date: 24-JUN-2013 Method: ABN.m

INITIAL CAL: 29-APR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 24-JUN-2013

Compound	%D
Phenol	-22.7
Bis(2-Chloroethyl)ether	-21.6
4-Methylphenol	-20.6
Benzoic acid	-23.2
Hexachlorocyclopentadiene	-42.2
2,4-Dinitrophenol	-34.0
4-Nitrophenol	-27.6
Pentachlorophenol	-27.8
3,3'-Dichlorobenzidine	21.0
N-Nitrosodimethylamine	-20.5
~~Benzidine~~	~~74.9~~
~~Pyridine~~	~~-20.9~~

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 24-JUN-2013 15:05
Lab File ID: cc0624.d Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Analysis Type: Init. Cal. Times: 16:53 21:47
Lab Sample ID: ABN 5 Quant Type: ISTD
Method: /chem1/nt10.i/20130624.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.42771	1.19702	1.19702	0.010	-16.15834	20.00000	Averaged	
$ 2 Phenol-d5	1.84748	1.47947	1.47947	0.010	-19.91966	20.00000	Averaged	
3 Phenol	2.06794	1.59933	1.59933	0.100	-22.66094	20.00000	Averaged	<-
$ 5 2-Chlorophenol-d4	1.40240	1.22309	1.22309	0.010	-12.78603	20.00000	Averaged	
4 Bis(2-Chloroethyl)ether	1.48709	1.16596	1.16596	0.700	-21.59446	20.00000	Averaged	<-
6 2-Chlorophenol	1.59477	1.29607	1.29607	0.800	-18.73000	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.60030	1.41803	1.41803	0.010	-11.38969	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.57739	1.39755	1.39755	0.010	-11.40120	20.00000	Averaged	
$ 10 1,2-Dichlorobenzene-d4	1.00879	0.89397	0.89397	0.010	-11.38216	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.51024	1.33398	1.33398	0.010	-11.67091	20.00000	Averaged	
11 Benzyl alcohol	0.86989	0.72750	0.72750	0.010	-16.36837	20.00000	Averaged	
14 2,2'-oxybis(1-Chloropropane	0.45898	0.40845	0.40845	0.010	-11.00817	20.00000	Averaged	
13 2-Methylphenol	1.48808	1.21672	1.21672	0.700	-18.23537	20.00000	Averaged	
17 Hexachloroethane	0.65999	0.58546	0.58546	0.300	-11.29284	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	0.92905	0.82694	0.82694	0.500	-10.99112	20.00000	Averaged	
15 4-Methylphenol	1.51729	1.20546	1.20546	0.600	-20.55156	20.00000	Averaged	<-
$ 18 Nitrobenzene-d5	0.42210	0.36878	0.36878	0.010	-12.63246	20.00000	Averaged	
19 Nitrobenzene	0.38970	0.33492	0.33492	0.200	-14.05783	20.00000	Averaged	
20 Isophorone	0.73300	0.64702	0.64702	0.300	-11.73090	20.00000	Averaged	
21 2-Nitrophenol	0.21847	0.21288	0.21288	0.100	-2.55847	20.00000	Averaged	
22 2,4-Dimethylphenol	0.40172	0.36860	0.36860	0.200	-8.24543	20.00000	Averaged	
23 Bis(2-Chloroethoxy)methane	0.43229	0.38654	0.38654	0.050	-10.58344	20.00000	Averaged	
24 Benzoic acid	15.36598	20.00000	0.26993	0.010	-23.17008	20.00000	Quadratic	<-
25 2,4-Dichlorophenol	0.36979	0.32450	0.32450	0.100	-12.24516	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.36143	0.32817	0.32817	0.010	-9.20267	20.00000	Averaged	
28 Naphthalene	1.06494	0.95443	0.95443	0.100	-10.37709	20.00000	Averaged	
29 4-Chloroaniline	0.41634	0.41651	0.41651	0.010	0.04107	20.00000	Averaged	
30 Hexachlorobutadiene	0.21470	0.21228	0.21228	0.010	-1.12641	20.00000	Averaged	
31 4-Chloro-3-methylphenol	0.32531	0.32349	0.32349	0.200	-0.56009	20.00000	Averaged	
32 2-Methylnaphthalene	0.70737	0.65568	0.65568	0.300	-7.30671	20.00000	Averaged	
33 Hexachlorocyclopentadiene	0.44016	0.25453	0.25453	0.001	-42.17318	20.00000	Averaged	<-
34 2,4,6-Trichlorophenol	0.42101	0.38963	0.38963	0.200	-7.45325	20.00000	Averaged	
35 2,4,5-Trichlorophenol	0.43401	0.42123	0.42123	0.200	-2.94507	20.00000	Averaged	
$ 36 2-Fluorobiphenyl	1.39609	1.26792	1.26792	0.010	-9.18012	20.00000	Averaged	
37 2-Chloronaphthalene	1.11145	1.02555	1.02555	0.700	-7.72857	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 24-JUN-2013 15:05
Lab File ID: cc0624.d Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Analysis Type: Init. Cal. Times: 16:53 21:47
Lab Sample ID: ABN 5 Quant Type: ISTD
Method: /chem1/nt10.i/20130624.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
38 2-Nitroaniline	0.26826	0.27871	0.27871	0.010	3.89462	20.00000	Averaged	
39 Dimethylphthalate	1.20078	1.13315	1.13315	0.010	-5.63245	20.00000	Averaged	
40 Acenaphthylene	1.88508	1.67133	1.67133	0.900	-11.33886	20.00000	Averaged	
41 2,6-Dinitrotoluene	0.28135	0.27467	0.27467	0.100	-2.37319	20.00000	Averaged	
43 3-Nitroaniline	0.23227	0.23398	0.23398	0.010	0.73626	20.00000	Averaged	
44 Acenaphthene	1.13602	1.02055	1.02055	0.100	-10.16390	20.00000	Averaged	
45 2,4-Dinitrophenol	13.20510	20.00000	0.16481	0.030	-33.97448	20.00000	Quadratic	<-
46 Dibenzofuran	1.55334	1.39867	1.39867	0.800	-9.95672	20.00000	Averaged	
47 4-Nitrophenol	7.23843	10.00000	0.12627	0.010	-27.61572	20.00000	Quadratic	<-
48 2,4-Dinitrotoluene	0.36288	0.36297	0.36297	0.200	0.02506	20.00000	Averaged	
50 Diethylphthalate	1.20662	1.10719	1.10719	0.010	-8.24040	20.00000	Averaged	
49 Fluorene	1.32546	1.23275	1.23275	0.100	-6.99400	20.00000	Averaged	
51 4-Chlorophenyl-phenylether	0.65156	0.55482	0.55482	0.100	-14.84756	20.00000	Averaged	
52 4-Nitroaniline	0.24126	0.24665	0.24665	0.010	2.23260	20.00000	Averaged	
53 4,6-Dinitro-2-methylphenol	17.13026	20.00000	0.16429	0.001	-14.34868	20.00000	Quadratic	
54 N-Nitrosodiphenylamine	0.46304	0.44847	0.44847	0.010	-3.14841	20.00000	Averaged	
$ 55 2,4,6-Tribromophenol	0.21154	0.22977	0.22977	0.010	8.61855	20.00000	Averaged	
56 4-Bromophenyl-phenylether	0.22633	0.22125	0.22125	0.100	-2.24641	20.00000	Averaged	
57 Hexachlorobenzene	0.27006	0.26890	0.26890	0.100	-0.43053	20.00000	Averaged	
58 Pentachlorophenol	0.18956	0.13692	0.13692	0.010	-27.76882	20.00000	Averaged	<-
60 Phenanthrene	1.09106	1.01584	1.01584	0.700	-6.89382	20.00000	Averaged	
61 Anthracene	1.11776	1.03940	1.03940	0.700	-7.01010	20.00000	Averaged	
62 Carbazole	0.67896	0.78777	0.78777	0.010	16.02660	20.00000	Averaged	
63 Di-n-butylphthalate	1.15386	1.15972	1.15972	0.010	0.50809	20.00000	Averaged	
64 Fluoranthene	1.28413	1.22523	1.22523	0.600	-4.58673	20.00000	Averaged	
65 Pyrene	1.23758	1.18979	1.18979	0.600	-3.86187	20.00000	Averaged	
$ 66 Terphenyl-d14	0.77864	0.74636	0.74636	0.010	-4.14599	20.00000	Averaged	
67 Butylbenzylphthalate	0.42263	0.46196	0.46196	0.010	9.30836	20.00000	Averaged	
68 Benzo(a)anthracene	1.11989	0.99661	0.99661	0.700	-11.00776	20.00000	Averaged	
70 3,3'-Dichlorobenzidine	0.42653	0.51602	0.51602	0.010	20.98130	20.00000	Averaged	<-
71 Chrysene	1.01345	0.92386	0.92386	0.700	-8.84011	20.00000	Averaged	
72 bis(2-Ethylhexyl)phthalate	0.53180	0.51130	0.51130	0.010	-3.85463	20.00000	Averaged	
73 Di-n-octylphthalate	0.92098	0.83148	0.83148	0.010	-9.71855	20.00000	Averaged	
74 Benzo(b)fluoranthene	1.18784	1.04150	1.04150	0.700	-12.31973	20.00000	Averaged	
75 Benzo(k)fluoranthene	1.25114	1.20958	1.20958	0.700	-3.32204	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 24-JUN-2013 15:05
Lab File ID: cc0624.d Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Analysis Type: Init. Cal. Times: 16:53 21:47
Lab Sample ID: ABN 5 Quant Type: ISTD
Method: /chem1/nt10.i/20130624.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
76 Benzo(a)pyrene	1.01481	0.93509	0.93509	0.700	-7.85499	20.00000	Averaged	
78 Indeno(1,2,3-cd)pyrene	1.16916	1.18234	1.18234	0.500	1.12765	20.00000	Averaged	
79 Dibenzo(a,h)anthracene	0.89686	0.95273	0.95273	0.400	6.22961	20.00000	Averaged	
80 Benzo(g,h,i)perylene	1.01156	0.96796	0.96796	0.500	-4.30954	20.00000	Averaged	
90 N-Nitrosodimethylamine	0.91125	0.72416	0.72416	0.010	-20.53160	20.00000	Averaged	<-
91 Aniline	4.01210	3.46286	3.46286	0.010	-13.68974	20.00000	Averaged	
93 Benzidine	17.48632	10.00000	0.23312	0.010	74.86321	20.00000	Quadratic	<-
103 Pyridine	0.80099	0.63378	0.63378	0.010	-20.87557	20.00000	Averaged	<-
105 1-methylnaphthalene	0.64873	0.59057	0.59057	0.010	-8.96578	20.00000	Averaged	
111 Azobenzene (1,2-DP-Hydrazin	1.23715	1.08509	1.08509	0.010	-12.29080	20.00000	Averaged	
187 Total Benzofluoranthenes	1.15343	1.04025	1.04025	0.010	-9.81301	20.00000	Averaged	
99 Perylene	1.16006	1.03172	1.03172	0.010	-11.06306	20.00000	Averaged	
98 Retene	0.46838	0.45698	0.45698	0.010	-2.43403	20.00000	Averaged	
120 2,3,4,6-Tetrachlorophenol	0.32282	0.32066	0.32066	0.010	-0.67081	20.00000	Averaged	

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130624.b/cc0624.d
Lab Smp Id: ABN 5
Inj Date : 24-JUN-2013 15:05
Operator : VTS/YZ Inst ID: nt10.i YZ 6/25/13
Smp Info : ABN 5
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130624.b/ABN.m
Meth Date : 24-Jun-2013 15:49 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 2 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	5.251	5.251	(0.705)	68597	5.00000	4.192
$ 2	Phenol-d5	99	6.959	6.959	(0.935)	84784	5.00000	4.004
3	Phenol	94	6.982	6.982	(0.938)	91653	5.00000	3.867
$ 5	2-Chlorophenol-d4	132	7.098	7.098	(0.953)	70092	5.00000	4.361
4	Bis(2-Chloroethyl)ether	93	7.052	7.052	(0.947)	66818	5.00000	3.920
6	2-Chlorophenol	128	7.121	7.121	(0.956)	74274	5.00000	4.063
7	1,3-Dichlorobenzene	146	7.369	7.369	(0.990)	81263	5.00000	4.431
* 8	1,4-Dichlorobenzene-d4	152	7.446	7.446	(1.000)	45845	4.00000	
9	1,4-Dichlorobenzene	146	7.477	7.477	(1.004)	80090	5.00000	4.430
$ 10	1,2-Dichlorobenzene-d4	152	7.811	7.811	(1.049)	51230	5.00000	4.431
12	1,2-Dichlorobenzene	146	7.834	7.834	(1.052)	76447	5.00000	4.416
11	Benzyl alcohol	108	7.803	7.803	(1.048)	41691	5.00000	4.182
14	2,2'-oxybis(1-Chloropropane)	121	8.114	8.114	(1.090)	23407	5.00000	4.450
13	2-Methylphenol	108	8.114	8.114	(1.090)	69727	5.00000	4.088
17	Hexachloroethane	117	8.432	8.432	(1.132)	33551	5.00000	4.435
16	N-Nitroso-di-n-propylamine	70	8.386	8.386	(1.126)	47389	5.00000	4.450
15	4-Methylphenol	108	8.409	8.409	(1.129)	69081	5.00000	3.972
$ 18	Nitrobenzene-d5	82	8.595	8.595	(0.857)	75401	5.00000	4.368
19	Nitrobenzene	77	8.634	8.634	(0.861)	68477	5.00000	4.297
20	Isophorone	82	9.131	9.131	(0.911)	132289	5.00000	4.413
21	2-Nitrophenol	139	9.294	9.294	(0.927)	43525	5.00000	4.872
22	2,4-Dimethylphenol	107	9.479	9.479	(0.945)	150726	10.0000	9.175
23	Bis(2-Chloroethoxy)methane	93	9.649	9.649	(0.962)	79031	5.00000	4.471
24	Benzoic acid	105	9.818	9.818	(0.979)	220757	20.0000	15.37
25	2,4-Dichlorophenol	162	9.811	9.811	(0.978)	132697	10.0000	8.775
26	1,2,4-Trichlorobenzene	180	9.957	9.957	(0.993)	67097	5.00000	4.540
* 27	Naphthalene-d8	136	10.027	10.027	(1.000)	163568	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	10.065	10.065	(1.004)	195143	5.00000	4.481
	29 4-Chloroaniline	127	10.281	10.281	(1.025)	170319	10.0000	10.00
	30 Hexachlorobutadiene	225	10.490	10.490	(1.046)	43403	5.00000	4.944
	31 4-Chloro-3-methylphenol	107	11.403	11.403	(1.137)	132281	10.0000	9.944
	32 2-Methylnaphthalene	142	11.550	11.550	(1.152)	134060	5.00000	4.635
	33 Hexachlorocyclopentadiene	237	12.061	12.061	(0.872)	67678	10.0000	5.783
	34 2,4,6-Trichlorophenol	196	12.262	12.262	(0.887)	103602	10.0000	9.255
	35 2,4,5-Trichlorophenol	196	12.355	12.355	(0.894)	112002	10.0000	9.705
$	36 2-Fluorobiphenyl	172	12.425	12.425	(0.899)	168567	5.00000	4.541
	37 2-Chloronaphthalene	162	12.580	12.580	(0.910)	136344	5.00000	4.614
	38 2-Nitroaniline	65	12.920	12.920	(0.934)	74106	10.0000	10.39
	39 Dimethylphthalate	163	13.439	13.439	(0.972)	150649	5.00000	4.718
	40 Acenaphthylene	152	13.485	13.485	(0.975)	222200	5.00000	4.433
	41 2,6-Dinitrotoluene	165	13.555	13.555	(0.980)	73033	10.0000	9.763
*	42 Acenaphthene-d10	164	13.826	13.826	(1.000)	106358	4.00000	
	43 3-Nitroaniline	138	13.841	13.841	(1.001)	62213	10.0000	10.07
	44 Acenaphthene	153	13.895	13.895	(1.005)	135680	5.00000	4.492
	45 2,4-Dinitrophenol	184	14.081	14.081	(1.018)	87646	20.0000	13.21
	46 Dibenzofuran	168	14.251	14.251	(1.031)	185950	5.00000	4.502
	47 4-Nitrophenol	109	14.351	14.351	(1.038)	33573	10.0000	7.238
	48 2,4-Dinitrotoluene	165	14.413	14.413	(1.042)	96511	10.0000	10.00
	50 Diethylphthalate	149	15.001	15.001	(1.085)	147198	5.00000	4.588
	49 Fluorene	166	15.001	15.001	(1.085)	163891	5.00000	4.650
	51 4-Chlorophenyl-phenylether	204	15.062	15.062	(1.089)	73761	5.00000	4.258
	52 4-Nitroaniline	138	15.186	15.186	(1.098)	65583	10.0000	10.22
	53 4,6-Dinitro-2-methylphenol	198	15.302	15.302	(0.898)	146099	20.0000	17.13
	54 N-Nitrosodiphenylamine	169	15.348	15.348	(0.901)	99704	5.00000	4.843
$	55 2,4,6-Tribromophenol	330	15.579	15.579	(1.127)	30546	5.00000	5.431
	56 4-Bromophenyl-phenylether	248	16.111	16.111	(0.946)	49188	5.00000	4.888
	57 Hexachlorobenzene	284	16.397	16.397	(0.963)	59781	5.00000	4.978
	58 Pentachlorophenol	266	16.823	16.823	(0.988)	60882	10.0000	7.223
*	59 Phenanthrene-d10	188	17.032	17.032	(1.000)	177858	4.00000	
	60 Phenanthrene	178	17.078	17.078	(1.003)	225844	5.00000	4.655
	61 Anthracene	178	17.179	17.179	(1.009)	231083	5.00000	4.649
	62 Carbazole	167	17.589	17.589	(1.033)	175139	5.00000	5.801
	63 Di-n-butylphthalate	149	18.618	18.618	(1.093)	257833	5.00000	5.025
	64 Fluoranthene	202	19.639	19.639	(1.153)	272396	5.00000	4.771
	65 Pyrene	202	20.072	20.072	(0.899)	273004	5.00000	4.807
$	66 Terphenyl-d14	244	20.475	20.475	(0.917)	171257	5.00000	4.793
	67 Butylbenzylphthalate	149	21.505	21.505	(0.963)	106001	5.00000	5.465
	68 Benzo(a)anthracene	228	22.310	22.310	(0.999)	228679	5.00000	4.450
*	69 Chrysene-d12	240	22.333	22.333	(1.000)	183565	4.00000	
	70 3,3'-Dichlorobenzidine	252	22.341	22.341	(1.000)	236811	10.0000	12.10
	71 Chrysene	228	22.380	22.380	(1.002)	211986	5.00000	4.558
	72 bis(2-Ethylhexyl)phthalate	149	22.612	22.612	(0.958)	135787	5.00000	4.807
*	134 Di-n-octylphthalate-d4	153	23.595	23.595	(1.000)	212458	4.00000	
	73 Di-n-octylphthalate	149	23.603	23.603	(1.000)	220817	5.00000	4.514

US91 : 207796

	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	24.075	24.075	(0.978)	206029	5.00000	4.384
75	Benzo(k)fluoranthene	252	24.106	24.106	(0.979)	239277	5.00000	4.834
76	Benzo(a)pyrene	252	24.540	24.540	(0.997)	184979	5.00000	4.607
* 77	Perylene-d12	264	24.625	24.625	(1.000)	158255	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	26.183	26.183	(1.063)	233889	5.00000	5.056
79	Dibenzo(a,h)anthracene	278	26.206	26.206	(1.064)	188469	5.00000	5.311
80	Benzo(g,h,i)perylene	276	26.610	26.610	(1.081)	191481	5.00000	4.785
90	N-Nitrosodimethylamine	74	3.027	3.027	(0.407)	82999	10.0000	7.947
91	Aniline	93	6.913	6.913	(0.928)	198447	5.00000	4.316
93	Benzidine	184	19.987	19.987	(0.895)	106981	10.0000	17.49
103	Pyridine	79	3.027	3.027	(0.407)	72640	10.0000	7.912
105	1-methylnaphthalene	142	11.775	11.775	(1.174)	120748	5.00000	4.552
111	Azobenzene (1,2-DP-Hydrazine)	77	15.394	15.394	(1.113)	144260	5.00000	4.385
187	Total Benzofluoranthenes	252	24.106	24.106	(0.979)	411561	10.0000	9.019
99	Perylene	252	24.664	24.664	(1.002)	204093	5.00000	4.447
98	Retene	219	20.754	20.754	(0.929)	104857	5.00000	4.878
120	2,3,4,6-Tetrachlorophenol	232	14.668	14.668	(1.061)	42630	5.00000	4.966

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0624.d
Lab Smp Id: ABN 5
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130624.b/ABN.m
Misc Info:

Calibration Date: 24-JUN-2013
Calibration Time: 15:05
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	45250	22625	90500	45845	1.31
27 Naphthalene-d8	166754	83377	333508	163568	-1.91
42 Acenaphthene-d10	106910	53455	213820	106358	-0.52
59 Phenanthrene-d10	179783	89892	359566	177858	-1.07
69 Chrysene-d12	192841	96420	385682	183565	-4.81
134 Di-n-octylphthala	229567	114784	459134	212458	-7.45
77 Perylene-d12	184310	92155	368620	158255	-14.14

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.45	6.95	7.95	7.45	0.00
27 Naphthalene-d8	10.03	9.53	10.53	10.03	0.00
42 Acenaphthene-d10	13.83	13.33	14.33	13.83	0.00
59 Phenanthrene-d10	17.03	16.53	17.53	17.03	0.00
69 Chrysene-d12	22.33	21.83	22.83	22.33	0.00
134 Di-n-octylphthala	23.60	23.10	24.10	23.60	0.00
77 Perylene-d12	24.62	24.12	25.12	24.62	0.00

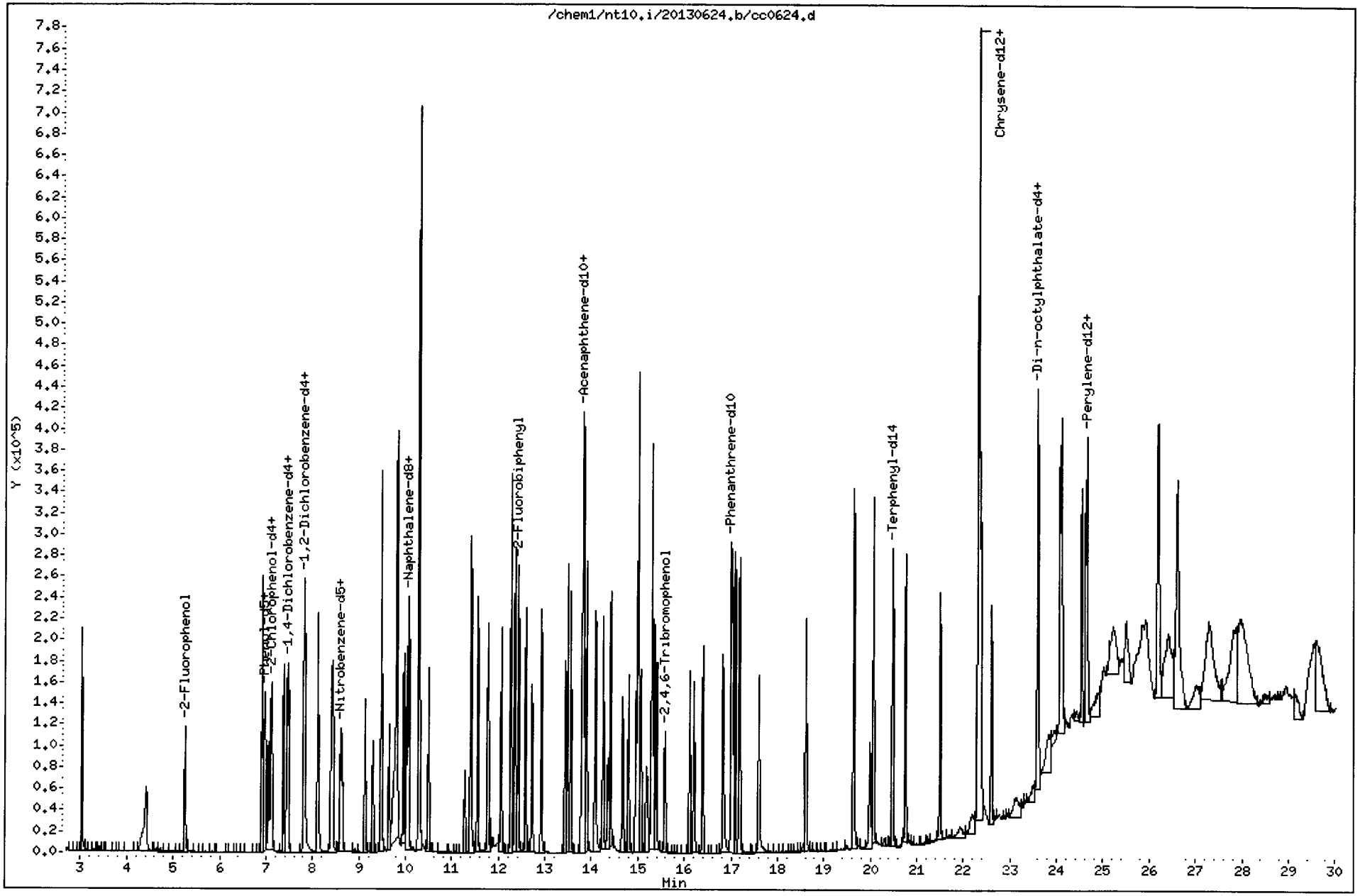
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130624.b/cc0624.d
Date : 24-JUN-2013 15:05
Client ID:
Sample Info: ABN 5

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - cc0624.d

Lab ID: ABN 5, Method: ABN.m, Instrument: nt10.i, Date: 24-JUN-2013

RT	CO-ELUTION COMPOUNDS
8.114	2,2'-oxybis(1-Chloropropane) and 2-Methylphenol

Data File: /chem1/nt10.i/20130624.b/df0624.d

Date : 24-JUN-2013 14:50

Client ID: DFTPP

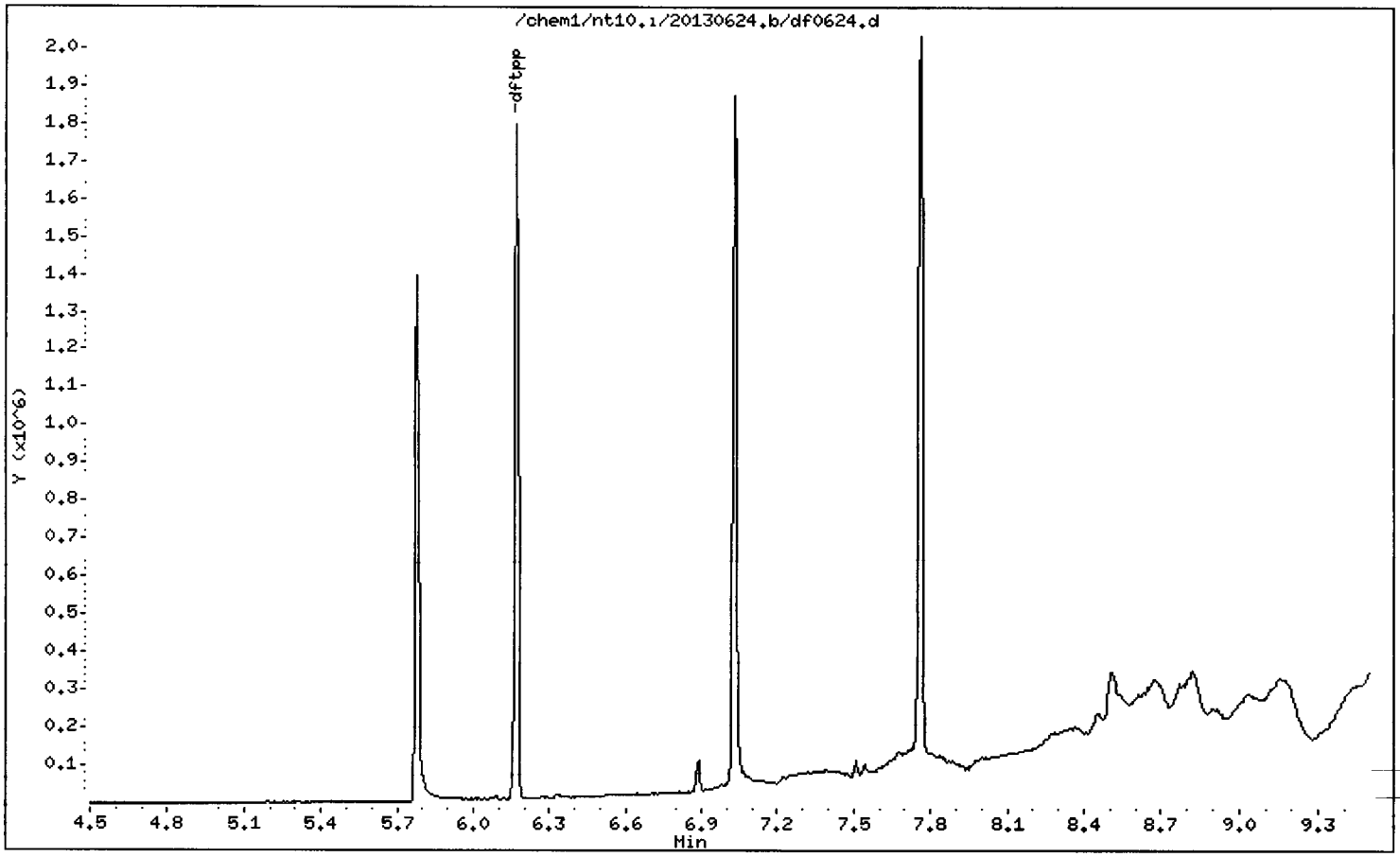
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5ms1

Column diameter: 0.25



Data File: /chem1/nt10.i/20130624.b/df0624.d

Date : 24-JUN-2013 14:50

Client ID: DFTPP

Instrument: nt10.i

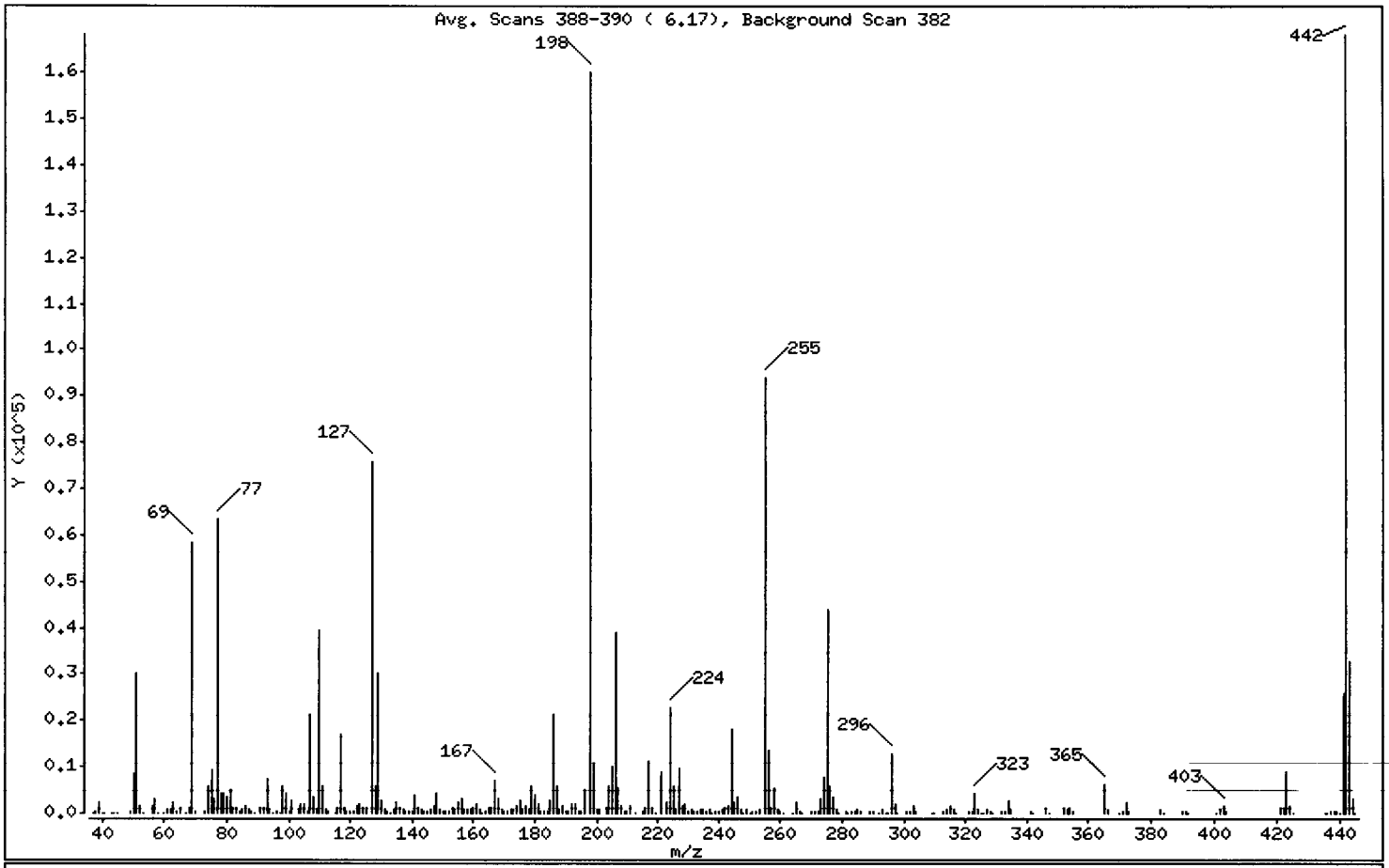
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5ms1

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	18.90
68	Less than 2.00% of mass 69	0.72 (1.98)
69	Mass 69 relative abundance	36.34
70	Less than 2.00% of mass 69	0.14 (0.39)
127	10.00 - 80.00% of mass 198	47.31
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.77
275	10.00 - 60.00% of mass 198	27.49
365	Greater than 1.00% of mass 198	3.91
441	0.01 - 24.00% of mass 442	16.20 (15.42)
442	50.00 - 200.00% of mass 198	105.04
443	15.00 - 24.00% of mass 442	20.47 (19.49)

Date : 24-JUN-2013 14:50

Client ID: DFTPP Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi Column diameter: 0.25

Data File: df0624.d
Spectrum: Avg. Scans 388-390 (6.17), Background Scan 382
Location of Maximum: 442.00
Number of points: 300

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	69	124.00	1075	203.00	1262	290.00	200
38.00	433	125.00	1026	204.00	5704	292.00	185
39.00	2345	127.00	75760	205.00	9953	293.00	868
40.00	131	128.00	5768	206.00	39056	294.00	174
41.00	117	129.00	30048	207.00	5427	295.00	160
43.00	38	130.00	2714	208.00	1513	296.00	12679
44.00	51	131.00	582	209.00	374	297.00	1761
45.00	51	132.00	288	210.00	441	298.00	110
49.00	250	133.00	117	211.00	1569	301.00	234
50.00	8351	134.00	879	213.00	140	302.00	301
51.00	30264	135.00	2304	215.00	503	303.00	1490
52.00	1670	136.00	999	216.00	1017	304.00	420
53.00	54	137.00	958	217.00	11223	308.00	139
55.00	143	138.00	317	218.00	1338	309.00	104
56.00	1492	139.00	240	219.00	142	310.00	129
57.00	3062	140.00	373	221.00	9064	313.00	209
58.00	170	141.00	3753	223.00	2506	314.00	727
60.00	6	142.00	1267	224.00	22712	315.00	1565
61.00	656	143.00	931	225.00	5811	316.00	805
62.00	734	144.00	277	226.00	648	317.00	129
63.00	2222	145.00	390	227.00	9836	321.00	480
64.00	296	146.00	651	228.00	1482	322.00	276
65.00	1059	147.00	1732	229.00	1996	323.00	4176
67.00	61	148.00	4185	230.00	335	324.00	820
68.00	1151	149.00	911	231.00	901	325.00	62
69.00	58192	150.00	273	232.00	196	326.00	119
70.00	227	151.00	521	233.00	202	327.00	925
73.00	431	152.00	378	234.00	692	328.00	382
74.00	5768	153.00	1222	235.00	696	329.00	127
75.00	9318	154.00	909	236.00	424	332.00	349
76.00	3019	155.00	2200	237.00	797	333.00	528
77.00	63400	156.00	3020	238.00	67	334.00	2746
78.00	4272	157.00	710	239.00	557	335.00	713
79.00	4258	158.00	784	240.00	308	341.00	527
80.00	3428	159.00	647	241.00	652	342.00	181

Date : 24-JUN-2013 14:50

Client ID: DFTPP Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi Column diameter: 0.25

Data File: df0624.d
Spectrum: Avg. Scans 388-390 (6.17), Background Scan 382
Location of Maximum: 442.00
Number of points: 300

m/z	Y	m/z	Y	m/z	Y	m/z	Y
81.00	4891	160.00	1154	242.00	1349	346.00	1005
82.00	1092	161.00	1742	243.00	1411	347.00	88
83.00	1052	162.00	617	244.00	18320	352.00	1329
84.00	260	163.00	132	245.00	2474	353.00	882
85.00	791	164.00	249	246.00	3543	354.00	1241
86.00	1395	165.00	1268	247.00	732	355.00	328
87.00	683	166.00	1155	248.00	157	365.00	6268
88.00	272	167.00	6790	249.00	757	366.00	913
89.00	65	168.00	3005	250.00	192	370.00	111
91.00	1126	169.00	653	251.00	254	371.00	346
92.00	1164	170.00	246	252.00	252	372.00	2186
93.00	7499	171.00	444	253.00	743	373.00	544
94.00	603	172.00	731	255.00	93784	383.00	594
95.00	88	173.00	961	256.00	13613	384.00	170
96.00	287	174.00	1630	257.00	1130	390.00	315
97.00	169	175.00	2873	258.00	5543	391.00	238
98.00	5913	176.00	899	259.00	891	392.00	109
99.00	4443	177.00	1479	260.00	195	401.00	127
100.00	433	178.00	604	261.00	151	402.00	910
101.00	2731	179.00	5657	264.00	149	403.00	1355
102.00	133	180.00	4056	265.00	2365	404.00	464
103.00	887	181.00	1870	266.00	350	421.00	1181
104.00	1774	182.00	330	267.00	186	422.00	1228
105.00	1831	183.00	288	268.00	29	423.00	8780
106.00	574	184.00	528	270.00	197	424.00	1704
107.00	21264	185.00	2872	271.00	316	425.00	132
108.00	3551	186.00	21352	272.00	348	435.00	50
109.00	836	187.00	5739	273.00	3057	436.00	57
110.00	39480	188.00	655	274.00	7727	437.00	268
111.00	5931	189.00	1460	275.00	44024	438.00	323
112.00	781	190.00	264	276.00	5699	439.00	269
113.00	291	191.00	485	277.00	3499	440.00	148
115.00	188	192.00	1871	278.00	613	441.00	25936
116.00	1239	193.00	1859	279.00	124	442.00	168192
117.00	17160	194.00	498	281.00	223	443.00	32784

Date : 24-JUN-2013 14:50

Client ID: DFTPP Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

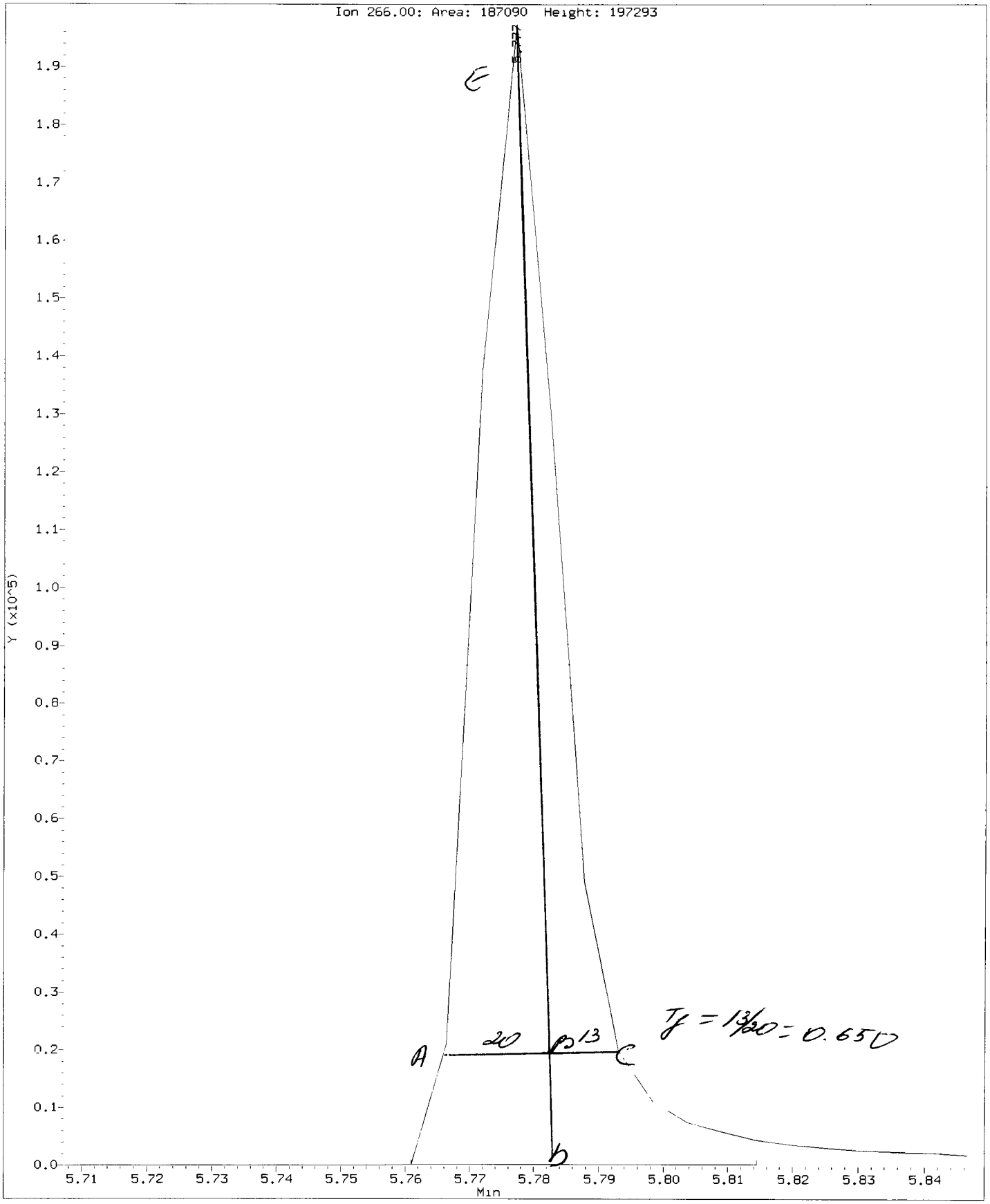
Column phase: ZB-5msi Column diameter: 0.25

Data File: df0624.d
Spectrum: Avg. Scans 388-390 (6.17), Background Scan 382
Location of Maximum: 442.00
Number of points: 300

m/z	Y	m/z	Y	m/z	Y	m/z	Y
118.00	1230	195.00	388	282.00	80	444.00	3083
119.00	235	196.00	4989	283.00	474	445.00	142
120.00	322	198.00	160128	284.00	337		
121.00	240	199.00	10848	285.00	680		
122.00	1463	200.00	890	286.00	213		
123.00	2073	201.00	916	289.00	201		

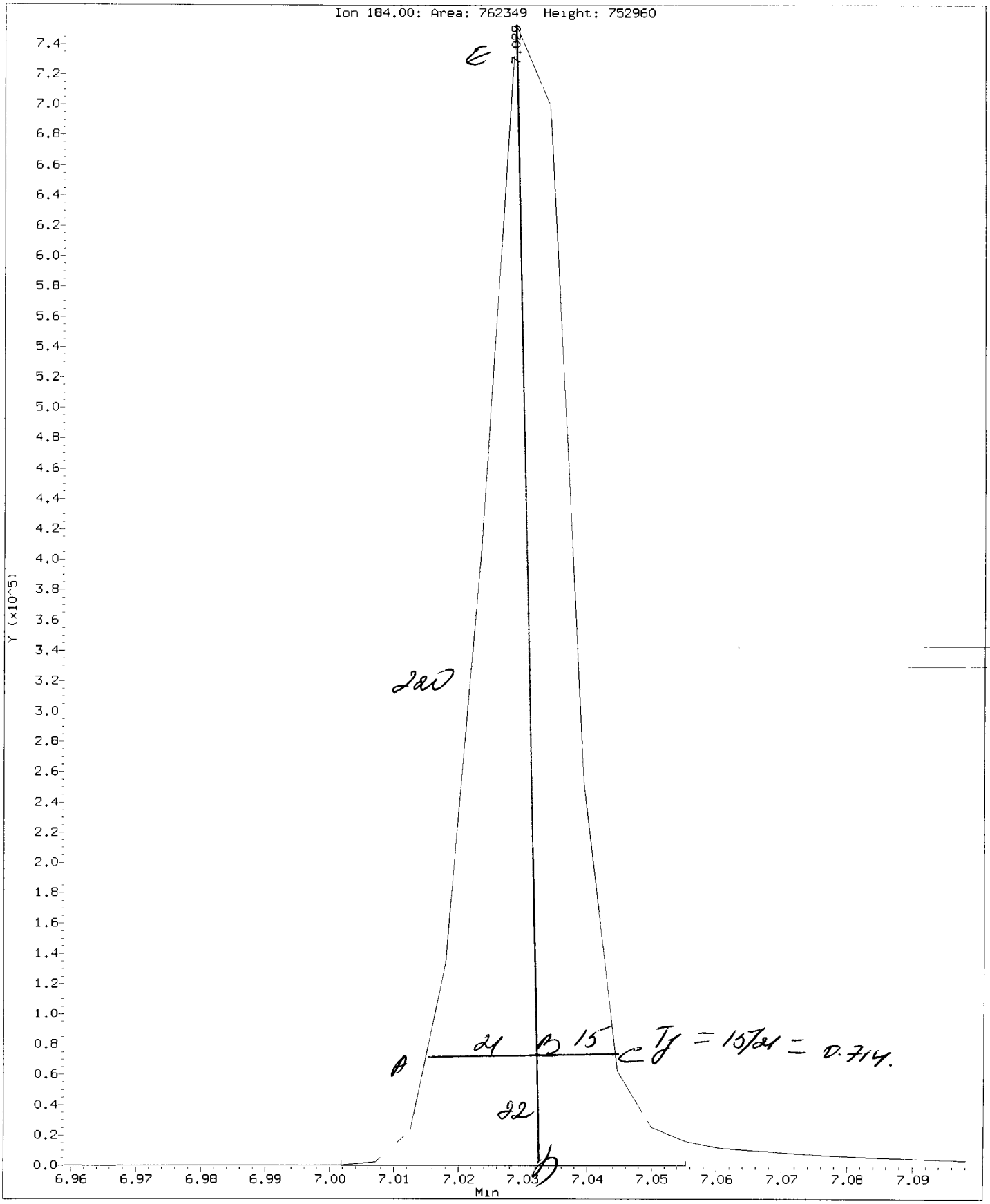
Data File: /chem1/nt10.1/20130624.b/ddt.b/df0624.d
Injection Date: 24-JUN-2013 14:50
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20130624.b/ddt.b/df0624.d
Injection Date: 24-JUN-2013 14:50
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



WSS1 : 00711

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

1/2 6/25/13

Data file : /chem1/nt10.i/20130624.b/ws91mb.d
Lab Smp Id: WS91MBS1 Client Smp ID: WS91MBS1
Inj Date : 24-JUN-2013 16:18
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WS91MBS1
Misc Info : 13-12076
Comment : 1ul Injection
Method : /chem1/nt10.i/20130624.b/ABN.m
Meth Date : 24-Jun-2013 15:49 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.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)	CONCENTRATIONS FINAL (ug/kg)
$	1	2-Fluorophenol	112	5.259	5.251	(0.706)	83536	4.50349	450.3
$	2	Phenol-d5	99	6.951	6.959	(0.934)	101116	4.21266	421.3
	3	Phenol	94	Compound Not Detected.					
$	5	2-Chlorophenol-d4	132	7.098	7.098	(0.953)	85774	4.70759	470.8
	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	7.447	7.446	(1.000)	51969	4.00000	
	9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10	1,2-Dichlorobenzene-d4	152	7.811	7.811	(1.049)	42060	3.20911	320.9
	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)	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	8.595	8.595	(0.858)	66526	3.28353	328.4
	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	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.019	10.027	(1.000)	191996	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	12.417	12.425	(0.898)	138517	3.33344	333.3
	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	13.826	13.826	(1.000)	119058	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	15.587	15.579	(1.127)	40006	6.35395	635.4
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.032	17.032	(1.000)	205984	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)	CONCENTRATIONS 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	20.475	20.475	(0.917)	183393	4.29378	429.4
67	Butylbenzylphthalate	149	Compound Not Detected.					
68	Benzo(a)anthracene	228	Compound Not Detected.					
* 69	Chrysene-d12	240	22.326	22.333	(1.000)	219414	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	23.587	23.595	(1.000)	253726	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	24.617	24.625	(1.000)	170417	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	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: ws91mb.d
Lab Smp Id: WS91MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130624.b/ABN.m
Misc Info: 13-12076

Calibration Date: 24-JUN-2013
Calibration Time: 15:05
Client Smp ID: WS91MBS1
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	45250	22625	90500	51969	14.85
27 Naphthalene-d8	166754	83377	333508	191996	15.14
42 Acenaphthene-d10	106910	53455	213820	119058	11.36
59 Phenanthrene-d10	179783	89892	359566	205984	14.57
69 Chrysene-d12	192841	96420	385682	219414	13.78
134 Di-n-octylphthala	229567	114784	459134	253726	10.52
77 Perylene-d12	184310	92155	368620	170417	-7.54

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.45	6.95	7.95	7.45	0.00
27 Naphthalene-d8	10.03	9.53	10.53	10.02	-0.08
42 Acenaphthene-d10	13.83	13.33	14.33	13.83	0.00
59 Phenanthrene-d10	17.03	16.53	17.53	17.03	0.00
69 Chrysene-d12	22.33	21.83	22.83	22.33	-0.03
134 Di-n-octylphthala	23.60	23.10	24.10	23.59	-0.03
77 Perylene-d12	24.62	24.12	25.12	24.62	-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.

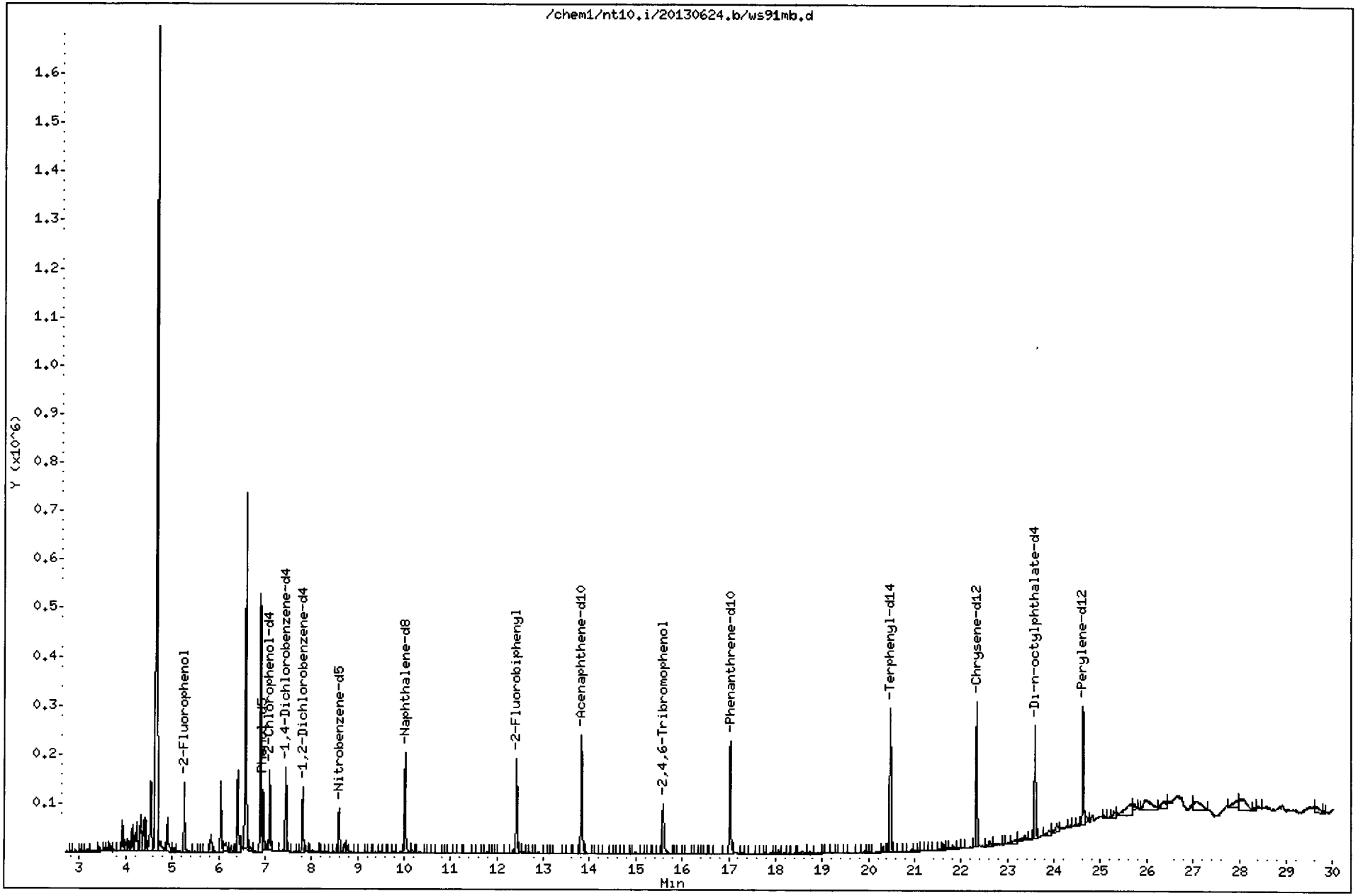
SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
43 3-Nitroaniline	1500	0.000	*	22-113
44 Acenaphthene	500.0	0.000	*	45-100
45 2,4-Dinitrophenol	2750	0.000	*	10-105
46 Dibenzofuran	500.0	0.000	*	43-103
47 4-Nitrophenol	1500	0.000	*	15-138
48 2,4-Dinitrotoluene	1500	0.000	*	35-127
49 Fluorene	500.0	0.000	*	45-107
50 Diethylphthalate	500.0	0.000	*	50-120
51 4-Chlorophenyl-ph	500.0	0.000	*	32-116
52 4-Nitroaniline	1500	0.000	*	24-125
53 4,6-Dinitro-2-met	2750	0.000	*	24-119
54 N-Nitrosodiphenyl	500.0	0.000	*	36-111
56 4-Bromophenyl-phe	500.0	0.000	*	39-114
57 Hexachlorobenzene	500.0	0.000	*	33-113
58 Pentachlorophenol	1500	0.000	*	16-120
60 Phenanthrene	500.0	0.000	*	49-112
61 Anthracene	500.0	0.000	*	45-106
62 Carbazole	500.0	0.000	*	43-135
63 Di-n-butylphthala	500.0	0.000	*	48-126
64 Fluoranthene	500.0	0.000	*	53-118
65 Pyrene	500.0	0.000	*	48-121
67 Butylbenzylphthal	500.0	0.000	*	45-132
68 Benzo(a)anthracene	500.0	0.000	*	49-115
70 3,3'-Dichlorobenz	1500	0.000	*	10-100
71 Chrysene	500.0	0.000	*	47-115
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	*	42-113
78 Indeno(1,2,3-cd)p	500.0	0.000	*	42-123
79 Dibenzo(a,h)anthr	500.0	0.000	*	30-133
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	*	35-112
90 N-Nitrosodimethyl	1500	0.000	*	17-100
105 1-methylnaphthale	500.0	0.000	*	42-100
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	450.3	60.05	27-120

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 2 Phenol-d5	750.0	421.3	56.17	29-120
$ 5 2-Chlorophenol-d4	750.0	470.8	62.77	31-120
$ 10 1,2-Dichlorobenzen	500.0	320.9	64.18	32-120
$ 18 Nitrobenzene-d5	500.0	328.4	65.67	30-120
$ 36 2-Fluorobiphenyl	500.0	333.3	66.67	35-120
$ 55 2,4,6-Tribromophen	750.0	635.4	84.72	24-134
$ 66 Terphenyl-d14	500.0	429.4	85.88	37-120

Data File: /chem1/nt10.i/20130624.b/ws91mb.d
Date : 24-JUN-2013 16:18
Client ID: WS91MBS1
Sample Info: WS91MBS1
Volume Injected (uL): 1.0
Column phase: ZB-5ms1

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ws91mb.d

Lab ID: WS91MBS1, Method: ABN.m, Instrument: nt10.i, Date: 24-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

SIM Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WS91

Analytical Chemists and Consultants

(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) W591 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
	W591 MBS	10.00g	(1:1) Y / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Analyst/Date AC 6-17-13
	SBS	10.00g	(1:1) Y / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave 0 2 3 Analyst/Date AC AC 6-17-13
	~~SBS Dup.~~	~~10.00g~~	~~(1:1) Y / N~~	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	KD 80-85°C 2 3 4 5 6
	QLS W591	10.00g	(1:1) Y / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Analyst/Date 6/18/13
	QLS (SIM)	10.00g	(1:1) Y / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	TurboVap 1 2 3
8	A	13.27	(1:1) Y / N	1mL	1mL	see Analyst Notes	CJZ 6/18/13 Analyst/Date
8	AmS	13.38	(1:1) Y / N	1mL	1mL		GPC Prep Filter (1:1)
8	AmSD	13.32	(1:1) Y / N	1mL	1mL		CJZ 6/18/13 Analyst/Date
			(1:1) Y / N	1mL	1mL		
			(1:1) Y / N	1mL	1mL		Post GPC KD 80-85°C 1 2 3 4 5 6
			(1:1) Y / N	~~1mL~~	1mL		SR 6/19/13 Analyst/Date
			(1:1) Y / N	1mL	1mL		
			(1:1) Y / N	1mL	1mL		TurboVap 1 2 3
Analyst/Date AC 6-17-13			CJZ 6/18/13	CJZ 6/19/13	CJZ 6/19/13	Reviewed By CJZ 6/18/13	CJZ 6/19/13 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (2693-4)	100/150µg/mL	50µL	7/22/13	YL	AC
Full List Spike (Freezer)	7 (2665-5)	100µg/mL	50µL	1/24/14	YL	AC
Base Spike	56(2665-2)	200µg/mL	50µL	7/31/13	YL	AC
Acid Spike	38(2691-4)	100/150µg/mL	50µL	2/28/14	YL	AC
QLS Spike (14 in Freezer)	14(B###538)	100/200µg/mL	20µL	1/31/14	YL	AC
SIM QLS Spike (Freezer)	25(B###547)	1µg/mL	50µL	1/31/14	YL	AC

Extraction Time: 12:26 Balance ID: B139248002

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 DCM only (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)

SIM Semivolatile Raw Data
Initial Calibration

ARI Job ID: WS91

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 805S(op-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date(s): 04/29/13 Internal Standard ID 1998-2 Expiration 07/03/13

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	2072-1	6/31/13	UCT-Q	2055-1	12/05/13
	2073-1	6/31/13	Full	2064-1	8/31/13
	2064-1	01/25/14	scan.	2053-2	08/13/13
	B000112	10/15/13			
	1998-4	7/02/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: YB Date: 5/3/13

Reviewer: VD Date: 5.4.13

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 4/29/13 Analysis: ABN/SimABN Analyst: YZ

GC Program: ABN2 Column No: 252945 Column Type: Rtx-5ms

Instrument Tune (.U or .CT.): L30284 EM Voltage: 1650

Calibration File: DF 04/29 Curve Date: 04/29/13 Injection Vol.: 1 uL

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2072-1 BCCH2	
	2073-1 1998-4	
	2064-2	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130429.b

	Time	Filename	LabID	ClientId	DF									
1	1637	df0429.d	DFTPP	DFTPP	1	NO ISTDS FOUND								
2	1653	ic0429a.d	ICC429A		1	8.99	53090	11.65	194944	15.55	113450	18.82	212689	23.90	235048	26.35	227736
3	1807	ic0429c.d	ICC429C		1	8.98	58845	11.65	217161	15.54	131711	18.82	222131	23.89	244600	26.38	221779
4	1844	ic0429d.d	ICC429D		1	8.98	52658	11.65	192325	15.54	109274	18.82	203933	23.90	223647	26.35	211919
5	1957	ic0429f.d	ICC429F		1	8.98	52849	11.65	195311	15.54	106586	18.82	192169	23.90	215273	26.35	195976
6	2034	ic0429g.d	ICC429G		1	8.98	43709	11.65	160165	15.54	95179	18.82	178699	23.90	199199	26.36	191026
7	2111	ic0429h.d	ICC429H		1	8.98	51614	11.65	192559	15.54	107939	18.82	194268	23.89	211275	26.35	196007
8	2147	ic0429i.d	ICC429I		1	8.98	49468	11.64	182566	15.54	105486	18.82	191121	23.90	208500	26.35	197777

YZ 5/03/13

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.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.b/SIM.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0429a	ic0429c	ic0429d	ic0429f	ic0429g	ic0429h	ic0429i
INJ.DATE:	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013	29-APR-2013
INJ.TIME:	16:53	18:07	18:44	19:57	20:34	21:11	21:47

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	+++++	6.641	6.634	6.634	6.633	6.633	6.634	6.634	6.134-7.134	6.635	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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.900	16.400-17.400	+++++	+++++
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 YB Date: 5/3/13
Reviewer 2 VD Date: 5.4.13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.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	8.365	8.365	8.357	8.365	8.364	8.365	8.365	8.365	7.865-8.865	8.364	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	8.914	8.914	8.914	8.914	8.914	8.914	8.914	8.914	8.414-9.414	8.914	0.000
*	8 1,4-Dichlorobenzene-d4	8.991	8.984	8.984	8.984	8.983	8.984	8.984	8.991	8.491-9.491	8.985	0.003
	9 1,4-Dichlorobenzene	9.015	9.015	9.015	9.015	9.015	9.015	9.015	9.015	8.515-9.515	9.015	0.000
$	10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.656	7.156-8.156	+++++	+++++
	11 Benzyl alcohol	9.294	9.294	9.286	9.294	9.294	9.294	9.294	9.294	8.794-9.794	9.293	0.003
	12 1,2-Dichlorobenzene	9.395	9.395	9.395	9.395	9.395	9.395	9.395	9.395	8.895-9.895	9.395	0.000
	13 2-Methylphenol	9.558	9.550	9.550	9.550	9.550	9.550	9.551	9.558	9.058-10.058	9.551	0.003
	14 2,2'-oxybis(1-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.998	8.498-9.498	+++++	+++++
	15 4-Methylphenol	9.853	9.845	9.845	9.845	9.845	9.845	9.846	9.853	9.353-10.353	9.846	0.003
	16 N-Nitroso-di-n-propyla	9.900	9.900	9.900	9.900	9.899	9.899	9.900	9.900	9.400-10.400	9.900	0.000
	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/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.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	10.969	10.969	10.961	10.962	10.969	10.961	10.962	10.969	10.469-11.469	10.965	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	11.563	11.563	11.563	11.563	11.563	11.563	11.563	11.563	11.063-12.063	11.563	0.000
*	27 Naphthalene-d8	11.648	11.648	11.648	11.648	11.647	11.647	11.640	11.648	11.148-12.148	11.647	0.003
	28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.518	9.018-10.018	+++++	+++++
	29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.911	9.411-10.411	+++++	+++++
	30 Hexachlorobutadiene	12.103	12.103	12.103	12.104	12.103	12.103	12.104	12.103	11.603-12.603	12.103	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	15.060	15.052	15.052	15.052	15.060	15.052	15.052	15.060	14.560-15.560	15.054	0.004
	40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.232	11.732-12.732	+++++	+++++
	41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.177	11.677-12.677	+++++	+++++
*	42 Acenaphthene-d10	15.547	15.539	15.539	15.540	15.539	15.539	15.540	15.547	15.047-16.047	15.540	0.003
	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/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.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	16.645	16.637	16.637	16.637	16.645	16.637	16.637	16.645	16.145-17.145	16.639	0.004
	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	17.031	17.023	17.031	17.031	17.031	17.023	17.023	17.031	16.531-17.531	17.028	0.004
$	55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.476	12.976-13.976	+++++	+++++
	56 4-Bromophenyl-phenylet	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.191	13.691-14.691	+++++	+++++
	57 Hexachlorobenzene	18.158	18.150	18.158	18.150	18.157	18.157	18.158	18.158	17.658-18.658	18.155	0.004
	58 Pentachlorophenol	18.552	18.545	18.552	18.553	18.552	18.552	18.553	18.552	18.052-19.052	18.551	0.003
*	59 Phenanthrene-d10	18.816	18.816	18.815	18.816	18.815	18.815	18.816	18.816	18.316-19.316	18.816	0.000
	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	22.026	22.026	22.026	22.027	22.026	22.026	22.027	22.026	21.526-22.526	22.026	0.000
	67 Butylbenzylphthalate	22.979	22.971	22.979	22.979	22.979	22.971	22.971	22.979	22.479-23.479	22.975	0.004
	68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.250	18.750-19.750	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130429.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	23.900	23.892	23.900	23.900	23.900	23.892	23.900	23.900	23.400-24.400	23.898	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	26.355	26.347	26.354	26.355	26.362	26.347	26.347	26.355	25.855-26.855	26.352	0.006
	78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.378	23.878-24.878	+++++	+++++
	79 Dibenzo(a,h)anthracene	28.718	28.703	28.710	28.726	28.718	28.710	28.703	28.718	28.218-29.218	28.713	0.009
	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	4.371	4.387	4.371	4.387	4.356	4.386	4.371	4.371	3.871-4.871	4.376	0.012
	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.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d
Level 2: /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d
Level 3: /chem1/nt10.i/20130429.b/SIM.b/ic0429c.d
Level 4: /chem1/nt10.i/20130429.b/SIM.b/ic0429i.d
Level 5: /chem1/nt10.i/20130429.b/SIM.b/ic0429d.d
Level 6: /chem1/nt10.i/20130429.b/SIM.b/ic0429g.d
Level 7: /chem1/nt10.i/20130429.b/SIM.b/ic0429a.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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

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
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	2.19342 / 1.98249	1.93668	2.06101	1.92949	1.94728	2.08759	2.01971	4.874
4 Bis(2-Chloroethyl)ether	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 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
6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
7 1,3-Dichlorobenzene	1.87553	1.75224	1.72793	1.58761	1.57264	1.59509	1.53900	1.66429	7.407
9 1,4-Dichlorobenzene	1.91943	1.70341	1.73949	1.57791	1.55213	1.57844	1.52865	1.65707	8.453
11 Benzyl alcohol	1.01421	0.92378	0.95981	0.91615	0.94937	1.02397	0.99327	0.96865	4.413
12 1,2-Dichlorobenzene	1.80136	1.61817	1.67423	1.49430	1.47632	1.51145	1.44728	1.57473	8.180
13 2-Methylphenol	1.59549	1.39187	1.48696	1.36428	1.39709	1.47085	1.40118	1.44396	5.556
14 2,2'-oxybis(1-Chloropropane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
15 4-Methylphenol	1.58792	1.37715	1.51721	1.38530	1.44358	1.52071	1.46089	1.47039	5.215
16 N-Nitroso-di-n-propylamine	0.91430	0.80598	0.85037	0.79906	0.80117	0.85017	0.78320	0.82918	5.500

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 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
17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
22 2,4-Dimethylphenol	0.40571	0.35657	0.40416	0.37154	0.38512	0.40380	0.38544	0.38748	4.824
23 Bis(2-Chloroethoxy)methane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Benzoic acid	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
26 1,2,4-Trichlorobenzene	0.44278	0.39385	0.40914	0.36326	0.36118	0.36604	0.34742	0.38338	8.776

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 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	RRF	% RSD
	5.000 Level 7							
28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
30 Hexachlorobutadiene	0.27157	0.23723	0.24399	0.22079	0.21930	0.22590		
	0.21485						0.23337	8.466
31 4-Chloro-3-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
33 Hexachlorocyclopentadiene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 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	RRF	% RSD
	5.000 Level 7							
38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
39 Dimethylphthalate	1.29548	1.18474	1.22635	1.06304	1.10760	1.11120		
	1.09034						1.15411	7.293
40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 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
48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Diethylphthalate	1.48913	1.22551	1.39412	1.18097	1.28213	1.30160	1.27512	1.30694	7.961
51 4-Chlorophenyl-phenylether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
53 4,6-Dinitro-2-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
54 N-Nitrosodiphenylamine	0.39424	0.38298	0.48476	0.43332	0.46296	0.45890	0.45294	0.43858	8.547
56 4-Bromophenyl-phenylether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
57 Hexachlorobenzene	0.37593	0.30103	0.32963	0.26764	0.27658	0.27272	0.27374	0.29961	13.400

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 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
58 Pentachlorophenol	0.14488	0.13785	0.18228	0.16591	0.19052	0.20510	0.22038	0.17813	17.090
60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
67 Butylbenzylphthalate	0.36122	0.29118	0.41472	0.31985	0.38893	0.40240	0.41936	0.37109	13.311
68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 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
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	0.97359	0.78303	0.98900	0.78861	0.87907	0.89559	0.93233	0.89160	9.207

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 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	___ RRF	% RSD
	5.000 Level 7							
80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
90 N-Nitrosodimethylamine	0.90219	0.86023	0.85122	0.86270	0.83980	0.90195		
	0.81542						0.86193	3.667
91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 yev
Curve Type : Average

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
100 3-beta-Coprostanol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
101 Cholesterol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
102 beta-Sitosterol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
103 Pyridine	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 2-Fluorophenol	1.51980 / 1.39600	1.35157	1.44617	1.31204	1.36686	1.43403	1.40378	4.930
$ 145 d8-1,4-Dioxane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 2 Phenol-d5	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 5 2-Chlorophenol-d4	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 10 1,2-Dichlorobenzene-d4	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 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
$ 18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 66 Terphenyl-d14	0.56524	0.46461	0.53843	0.44428	0.47993	0.47146	0.47799	0.49170	8.830
$ 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 : 29-APR-2013 16:53
End Cal Date : 29-APR-2013 21:47
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Cal Date : 03-May-2013 17:18 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	RRF	% RSD
	5.000 Level 7							
$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429a.d
Lab Smp Id: IC0429A
Inj Date : 29-APR-2013 16:53
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429A
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:18 yev Quant Type: ISTD
Cal Date : 29-APR-2013 16:53 Cal File: ic0429a.d
Als bottle: 2 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	6.634	6.634	(0.738)	92642	5.00000	4.972(M)
	3 Phenol	94	8.365	8.365	(0.930)	131563	5.00000	4.908
	7 1,3-Dichlorobenzene	146	8.914	8.914	(0.991)	102132	5.00000	4.624
*	8 1,4-Dichlorobenzene-d4	152	8.991	8.984	(1.000)	53090	4.00000	
	9 1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	101445	5.00000	4.613
	11 Benzyl alcohol	79	9.294	9.294	(1.034)	65916	5.00000	5.127
	12 1,2-Dichlorobenzene	146	9.395	9.395	(1.045)	96045	5.00000	4.595
	13 2-Methylphenol	108	9.558	9.551	(1.063)	92986	5.00000	4.852
	15 4-Methylphenol	108	9.853	9.846	(1.096)	96948	5.00000	4.968
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.101)	51975	5.00000	4.723
	22 2,4-Dimethylphenol	107	10.969	10.962	(0.942)	187850	10.0000	9.948
	26 1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	84659	5.00000	4.531
*	27 Naphthalene-d8	136	11.648	11.640	(1.000)	194944	4.00000	
	30 Hexachlorobutadiene	225	12.103	12.104	(1.039)	52354	5.00000	4.603
	39 Dimethylphthalate	163	15.060	15.052	(0.969)	154624	5.00000	4.724
*	42 Acenaphthene-d10	162	15.547	15.540	(1.000)	113450	4.00000	
	50 Diethylphthalate	149	16.645	16.637	(1.071)	180828	5.00000	4.878
	54 N-Nitrosodiphenylamine	169	17.031	17.023	(0.905)	120418	5.00000	5.164
	57 Hexachlorobenzene	284	18.158	18.158	(0.965)	72778	5.00000	4.568
	58 Pentachlorophenol	266	18.552	18.553	(0.986)	117179	10.0000	12.37
*	59 Phenanthrene-d10	188	18.816	18.816	(1.000)	212689	4.00000	
$	66 Terphenyl-d14	244	22.026	22.027	(0.922)	140436	5.00000	4.861
	67 Butylbenzylphthalate	149	22.979	22.971	(0.961)	123210	5.00000	5.650
*	69 Chrysene-d12	240	23.900	23.900	(1.000)	235045	4.00000	
*	77 Perylene-d12	264	26.355	26.347	(1.000)	227736	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.718	28.703	(1.090)	265405	5.00000	5.228
	90 N-Nitrosodimethylamine	74	4.371	4.371	(0.486)	108227	10.0000	9.460

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: ic0429a.d
Lab Smp Id: IC0429A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	53090	0.82
27 Naphthalene-d8	192325	96162	384650	194944	1.36
42 Acenaphthene-d10	109274	54637	218548	113450	3.82
59 Phenanthrene-d10	203933	101966	407866	212689	4.29
69 Chrysene-d12	223647	111824	447294	235045	5.10
77 Perylene-d12	211919	105960	423838	227736	7.46

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.99	0.09
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.55	0.05
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	0.00

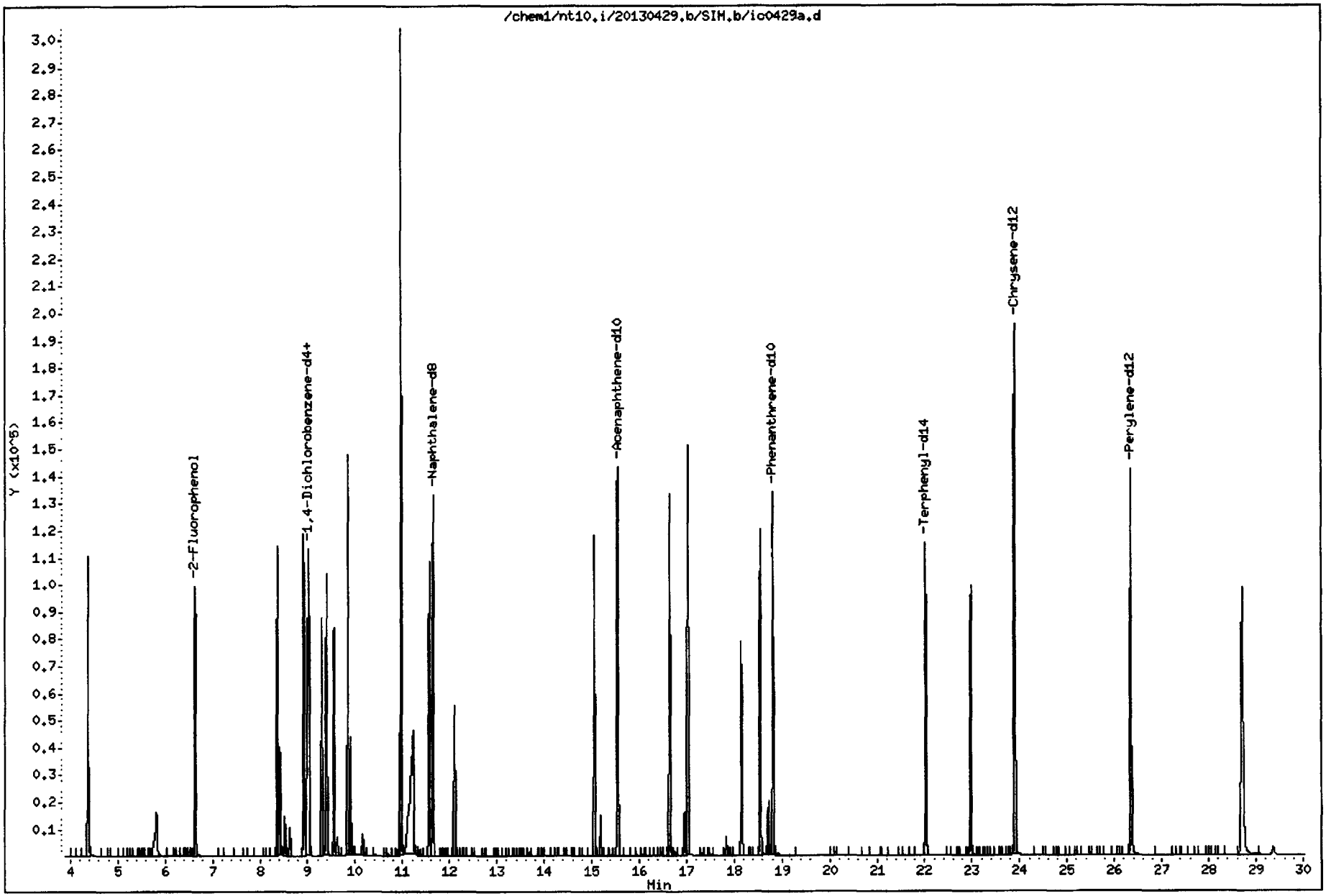
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429a.d
Date : 29-APR-2013 16:53
Client ID:
Sample Info: IC0429A

Instrument: nt10.i

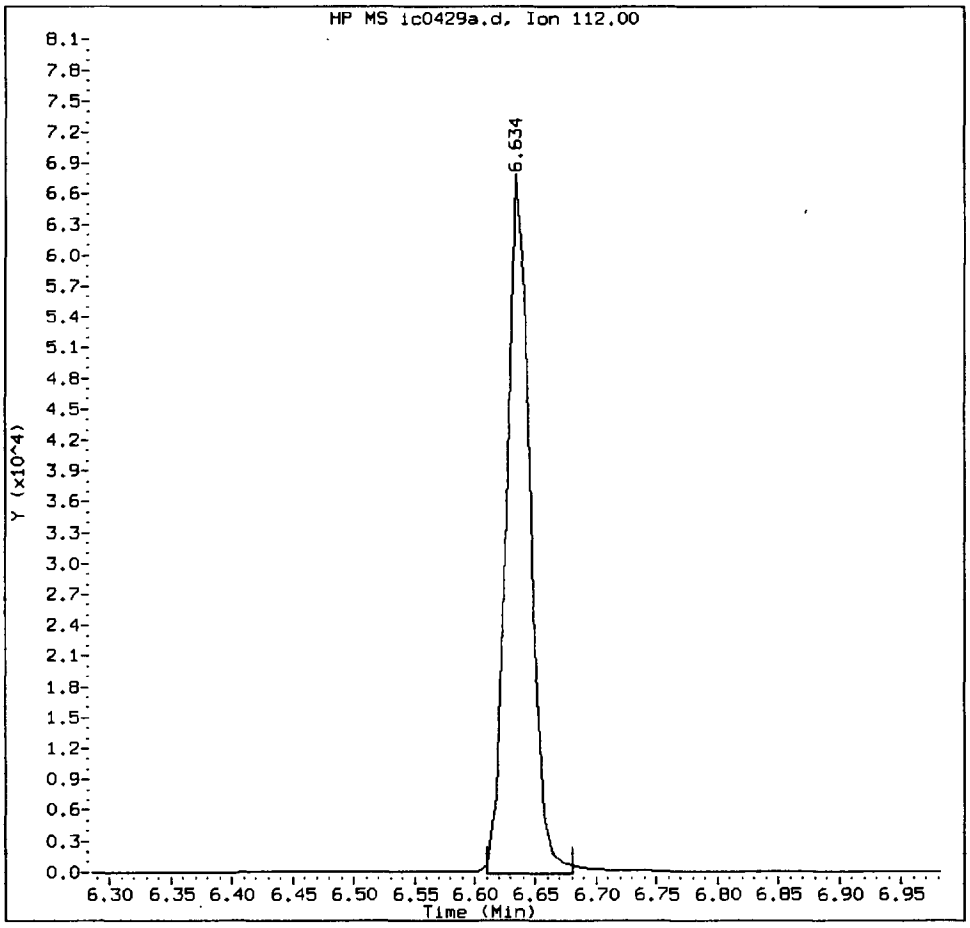
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429A, /chem1/nt10.i/20130429.b/SIM.b/ic0429a.d

2-Fluorophenol Amount: 4.97 Area: 92642



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: JZ Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429a.d

Lab ID: IC0429A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-2(

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 5/3/13

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429c.d
Lab Smp Id: IC0429C
Inj Date : 29-APR-2013 18:07
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429C
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 18:07 Cal File: ic0429c.d
Als bottle: 4 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	6.641	6.634	(0.739)	4255	0.20000	0.2058(M)
	3	Phenol	94	8.365	8.365	(0.931)	6064	0.20000	0.2041
	7	1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	5084	0.20000	0.2076
*	8	1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	58845	4.00000	
	9	1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	5118	0.20000	0.2099
	11	Benzyl alcohol	79	9.294	9.294	(1.035)	2824	0.20000	0.1982
	12	1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	4926	0.20000	0.2126
	13	2-Methylphenol	108	9.550	9.551	(1.063)	4375	0.20000	0.2060
	15	4-Methylphenol	108	9.845	9.846	(1.096)	4464	0.20000	0.2064
	16	N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.102)	2502	0.20000	0.2051
	22	2,4-Dimethylphenol	107	10.969	10.962	(0.942)	8776	0.40000	0.4172
	26	1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	4442	0.20000	0.2134
*	27	Naphthalene-d8	136	11.648	11.640	(1.000)	217141	4.00000	
	30	Hexachlorobutadiene	225	12.103	12.104	(1.039)	2649	0.20000	0.2091
	39	Dimethylphthalate	163	15.052	15.052	(0.969)	7463	0.20000	0.2125
*	42	Acenaphthene-d10	162	15.539	15.540	(1.000)	121711	4.00000	
	50	Diethylphthalate	149	16.637	16.637	(1.071)	8484	0.20000	0.2133
	54	N-Nitrosodiphenylamine	169	17.023	17.023	(0.905)	5384	0.20000	0.2211
	57	Hexachlorobenzene	284	18.150	18.158	(0.965)	3661	0.20000	0.2200
	58	Pentachlorophenol	266	18.545	18.553	(0.986)	4049	0.40000	0.3970
*	59	Phenanthrene-d10	188	18.816	18.816	(1.000)	222131	4.00000	
$	66	Terphenyl-d14	244	22.026	22.027	(0.922)	6585	0.20000	0.2190
	67	Butylbenzylphthalate	149	22.971	22.971	(0.961)	5072	0.20000	0.2235
*	69	Chrysene-d12	240	23.892	23.900	(1.000)	244600	4.00000	
*	77	Perylene-d12	264	26.347	26.347	(1.000)	221779	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.703	28.703	(1.089)	10967	0.20000	0.2218
	90	N-Nitrosodimethylamine	74	4.387	4.371	(0.488)	5009	0.40000	0.3950

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: ic0429c.d
Lab Smp Id: IC0429C
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	58845	11.75
27 Naphthalene-d8	192325	96162	384650	217141	12.90
42 Acenaphthene-d10	109274	54637	218548	121711	11.38
59 Phenanthrene-d10	203933	101966	407866	222131	8.92
69 Chrysene-d12	223647	111824	447294	244600	9.37
77 Perylene-d12	211919	105960	423838	221779	4.65

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.89	-0.03
77 Perylene-d12	26.35	25.85	26.85	26.35	-0.03

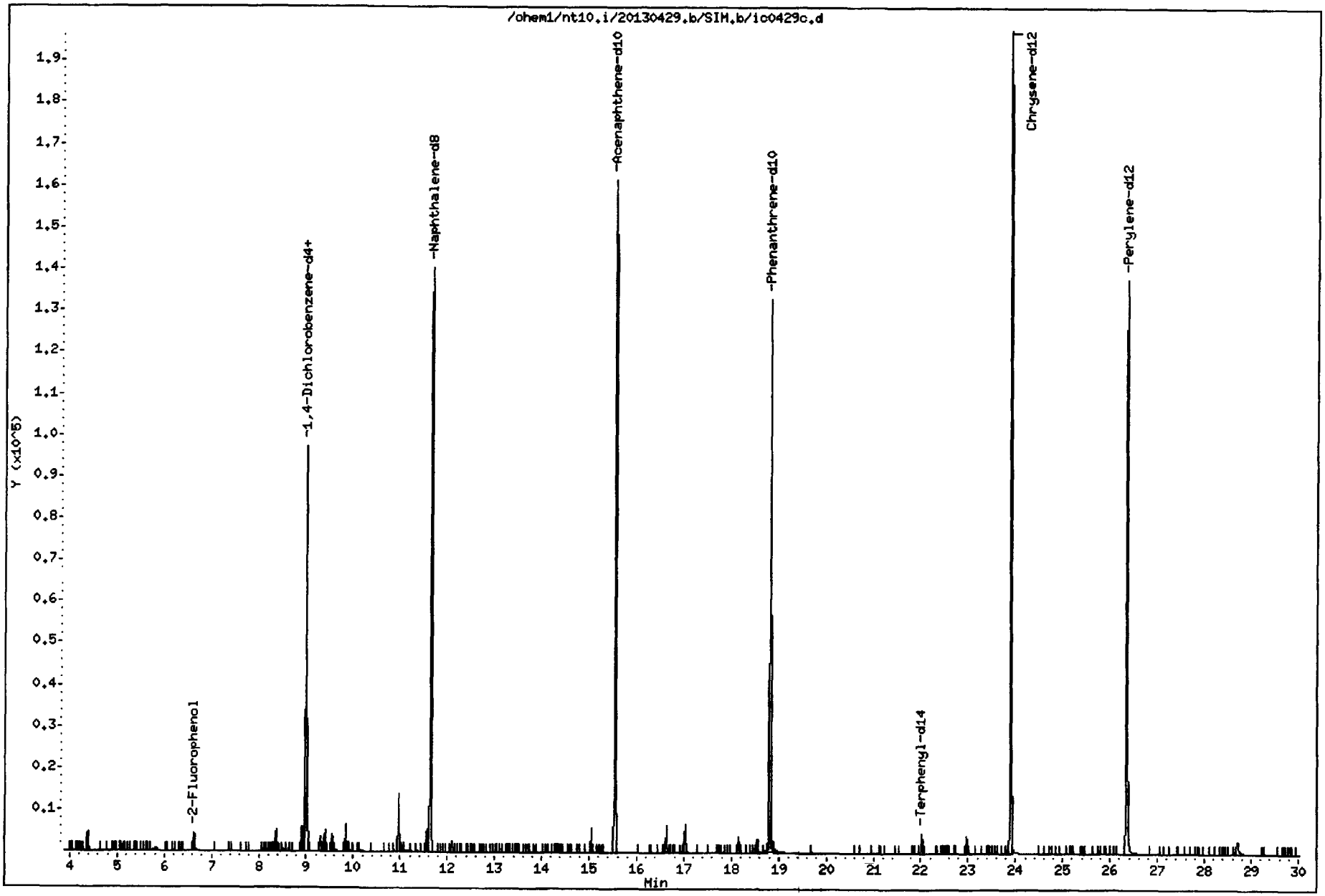
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429c.d
Date : 29-APR-2013 18:07
Client ID:
Sample Info: IC0429C

Instrument: nt10.i

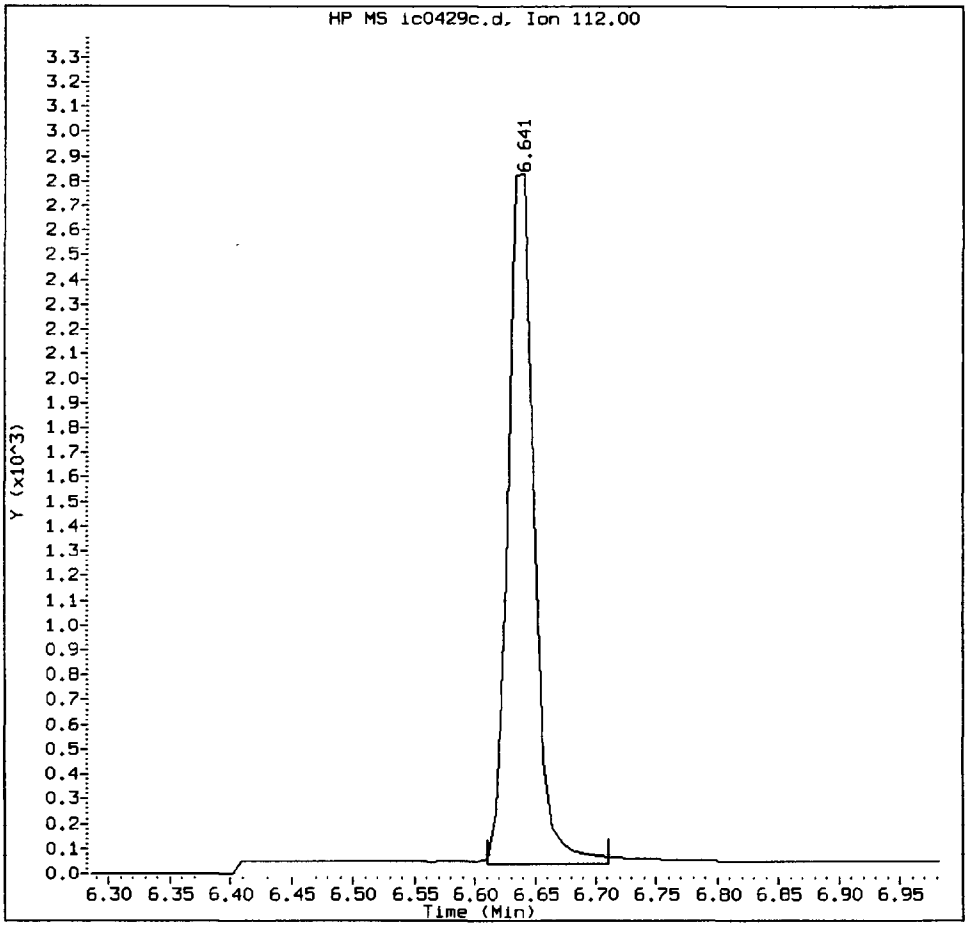
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429C, /chem1/nt10.i/20130429.b/SIM.b/ic0429c.d

2-Fluorophenol Amount: 0.21 Area: 4255



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: 1/2 Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429c.d

Lab ID: IC0429C, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-2(

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

yz 5/3/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429d.d
Lab Smp Id: IC0429D
Inj Date : 29-APR-2013 18:44
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429D
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 18:44 Cal File: ic0429d.d
Als bottle: 5 Calibration Sample, Level: 5
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)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.634	6.634	(0.738)	17994	1.00000	0.9728(M)
	3 Phenol	94	8.357	8.365	(0.930)	25635	1.00000	0.9641
	7 1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	20703	1.00000	0.9449
*	8 1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	52658	4.00000	
	9 1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	20433	1.00000	0.9367
	11 Benzyl alcohol	79	9.286	9.294	(1.034)	12498	1.00000	0.9801
	12 1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	19435	1.00000	0.9375
	13 2-Methylphenol	108	9.550	9.551	(1.063)	18392	1.00000	0.9675
	15 4-Methylphenol	108	9.845	9.846	(1.096)	19004	1.00000	0.9818
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.102)	10547	1.00000	0.9662
	22 2,4-Dimethylphenol	107	10.961	10.962	(0.941)	37034	2.00000	1.988
	26 1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	17366	1.00000	0.9421
*	27 Naphthalene-d8	136	11.648	11.640	(1.000)	192325	4.00000	
	30 Hexachlorobutadiene	225	12.103	12.104	(1.039)	10544	1.00000	0.9397
	39 Dimethylphthalate	163	15.052	15.052	(0.969)	30258	1.00000	0.9597
*	42 Acenaphthene-d10	162	15.539	15.540	(1.000)	109274	4.00000	
	50 Diethylphthalate	149	16.637	16.637	(1.071)	35026	1.00000	0.9810
	54 N-Nitrosodiphenylamine	169	17.031	17.023	(0.905)	23603	1.00000	1.056
	57 Hexachlorobenzene	284	18.158	18.158	(0.965)	14101	1.00000	0.9231
	58 Pentachlorophenol	266	18.552	18.553	(0.986)	19427	2.00000	2.075
*	59 Phenanthrene-d10	188	18.815	18.816	(1.000)	203933	4.00000	
$	66 Terphenyl-d14	244	22.026	22.027	(0.922)	26834	1.00000	0.9761
	67 Butylbenzylphthalate	149	22.979	22.971	(0.961)	21746	1.00000	1.048
*	69 Chrysene-d12	240	23.900	23.900	(1.000)	223647	4.00000	
*	77 Perylene-d12	264	26.354	26.347	(1.000)	211919	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.710	28.703	(1.089)	46573	1.00000	0.9859
	90 N-Nitrosodimethylamine	74	4.371	4.371	(0.487)	22111	2.00000	1.949

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: ic0429d.d
Lab Smp Id: IC0429D
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

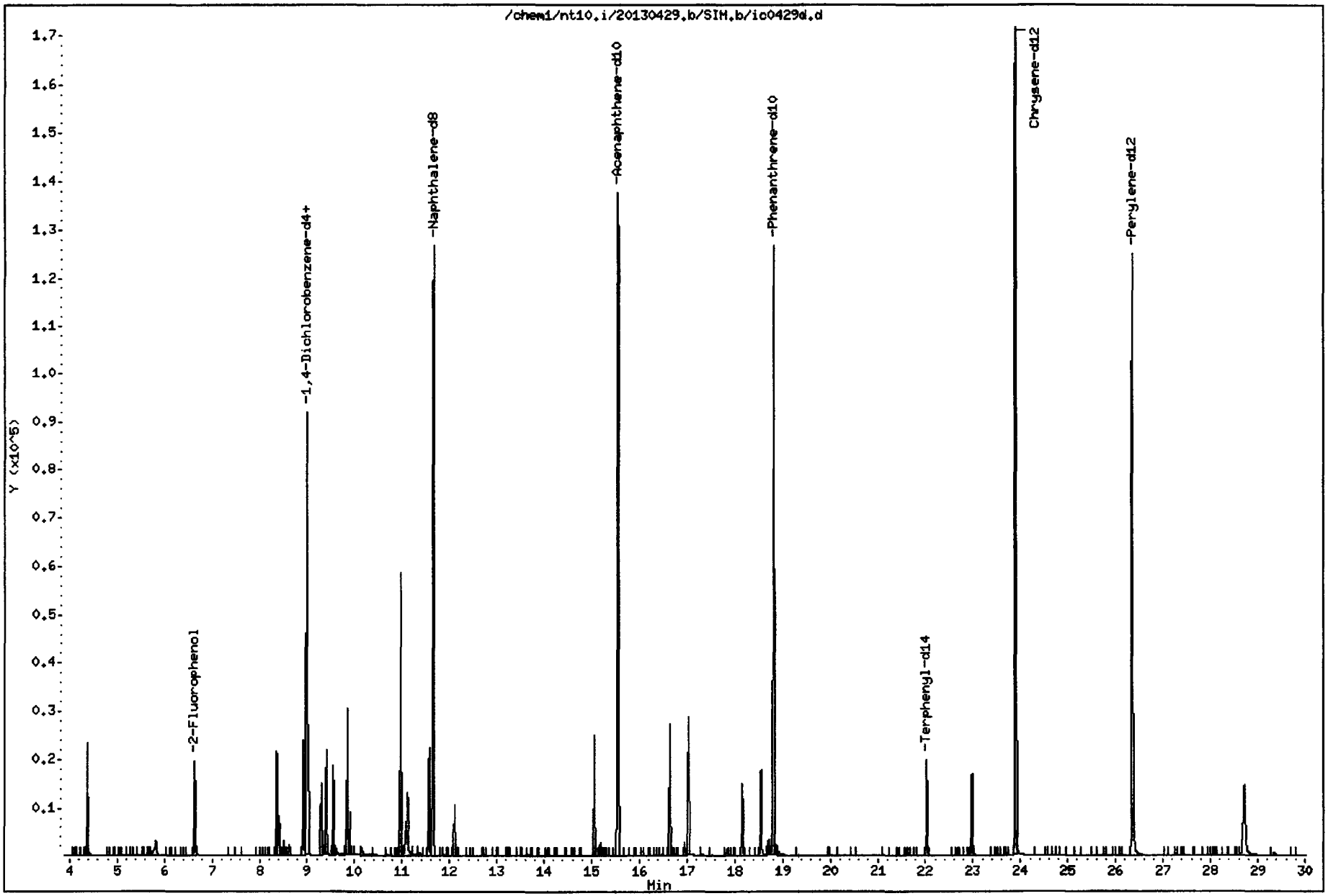
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	52658	0.00
27 Naphthalene-d8	192325	96162	384650	192325	0.00
42 Acenaphthene-d10	109274	54637	218548	109274	0.00
59 Phenanthrene-d10	203933	101966	407866	203933	0.00
69 Chrysene-d12	223647	111824	447294	223647	0.00
77 Perylene-d12	211919	105960	423838	211919	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	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.

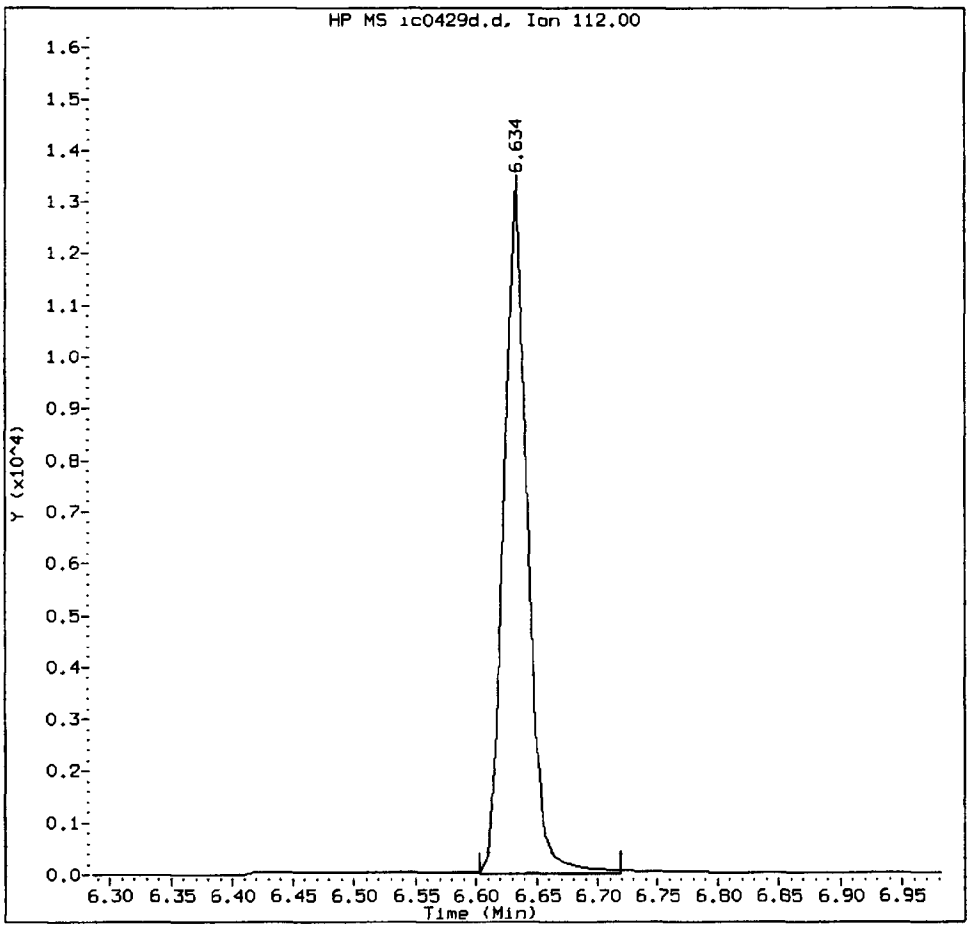
Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429d.d
Date : 29-APR-2013 18:44
Client ID:
Sample Info: IC0429D

Instrument: nt10.i
Operator: YZ
Column phase: ZB-5msi
Column diameter: 0.25



IC0429D, /chem1/nt10.i/20130429.b/SIM.b/ic0429d.d

2-Fluorophenol Amount: 0.97 Area: 17994



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: KD Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429d.d

Lab ID: IC0429D, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d
Lab Smp Id: IC0429F
Inj Date : 29-APR-2013 19:57
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429F
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 19:57 Cal File: ic0429f.d
Als bottle: 7 Calibration Sample, Level: 1
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	6.634	6.634	(0.738)	1004	0.05000	0.05408(M)
	3 Phenol	94	8.365	8.365	(0.931)	1449	0.05000	0.05430
	7 1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	1239	0.05000	0.05635(M)
*	8 1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	52849	4.00000	
	9 1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	1268	0.05000	0.05792(M)
	11 Benzyl alcohol	79	9.294	9.294	(1.035)	670	0.05000	0.05235(M)
	12 1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	1190	0.05000	0.05720
	13 2-Methylphenol	108	9.550	9.551	(1.063)	1054	0.05000	0.05525
	15 4-Methylphenol	108	9.845	9.846	(1.096)	1049	0.05000	0.05400
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.102)	604	0.05000	0.05513(M)
	22 2,4-Dimethylphenol	107	10.962	10.962	(0.941)	1981	0.10000	0.1047
	26 1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	1081	0.05000	0.05775
*	27 Naphthalene-d8	136	11.648	11.640	(1.000)	195311	4.00000	
	30 Hexachlorobutadiene	225	12.104	12.104	(1.039)	663	0.05000	0.05818(M)
	39 Dimethylphthalate	163	15.052	15.052	(0.969)	1726	0.05000	0.05612
*	42 Acenaphthene-d10	162	15.540	15.540	(1.000)	106586	4.00000	
	50 Diethylphthalate	149	16.637	16.637	(1.071)	1984	0.05000	0.05697
	54 N-Nitrosodiphenylamine	169	17.031	17.023	(0.905)	947	0.05000	0.04495(M)
	57 Hexachlorobenzene	284	18.150	18.158	(0.965)	903	0.05000	0.06274(M)
	58 Pentachlorophenol	266	18.553	18.553	(0.986)	696	0.10000	0.07888
*	59 Phenanthrene-d10	188	18.816	18.816	(1.000)	192165	4.00000	
$	66 Terphenyl-d14	244	22.027	22.027	(0.922)	1521	0.05000	0.05748
	67 Butylbenzylphthalate	149	22.979	22.971	(0.961)	972	0.05000	0.04867
*	69 Chrysene-d12	240	23.900	23.900	(1.000)	215273	4.00000	
*	77 Perylene-d12	264	26.355	26.347	(1.000)	195976	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.726	28.703	(1.090)	2385	0.05000	0.05460
	90 N-Nitrosodimethylamine	74	4.387	4.371	(0.488)	1192	0.10000	0.1047

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: ic0429f.d
Lab Smp Id: IC0429F
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	52849	0.36
27 Naphthalene-d8	192325	96162	384650	195311	1.55
42 Acenaphthene-d10	109274	54637	218548	106586	-2.46
59 Phenanthrene-d10	203933	101966	407866	192165	-5.77
69 Chrysene-d12	223647	111824	447294	215273	-3.74
77 Perylene-d12	211919	105960	423838	195976	-7.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	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/20130429.b/SIM.b/ic0429f.d

Date : 29-APR-2013 19:57

Client ID:

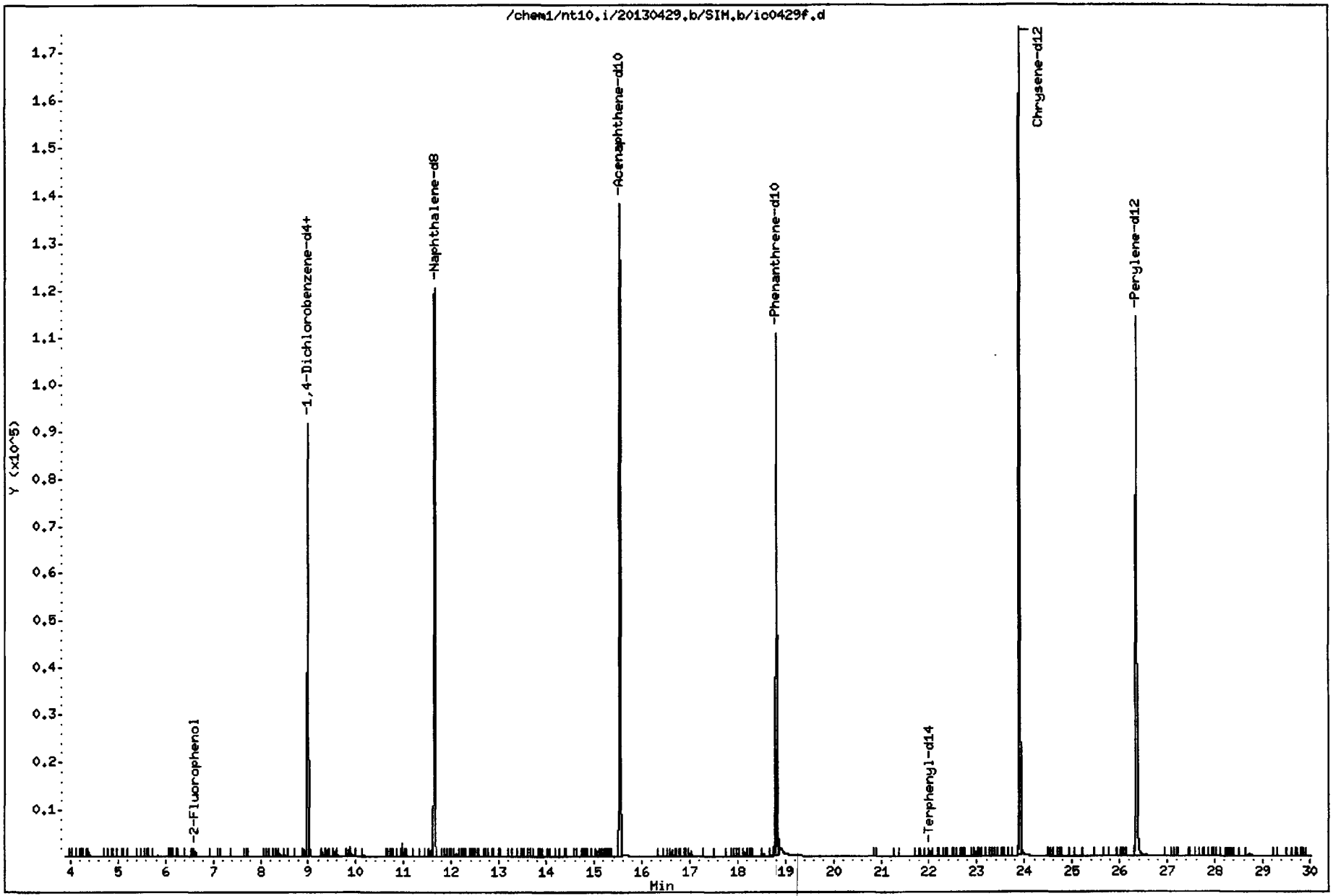
Sample Info: IC0429F

Instrument: nt10.i

Operator: YZ

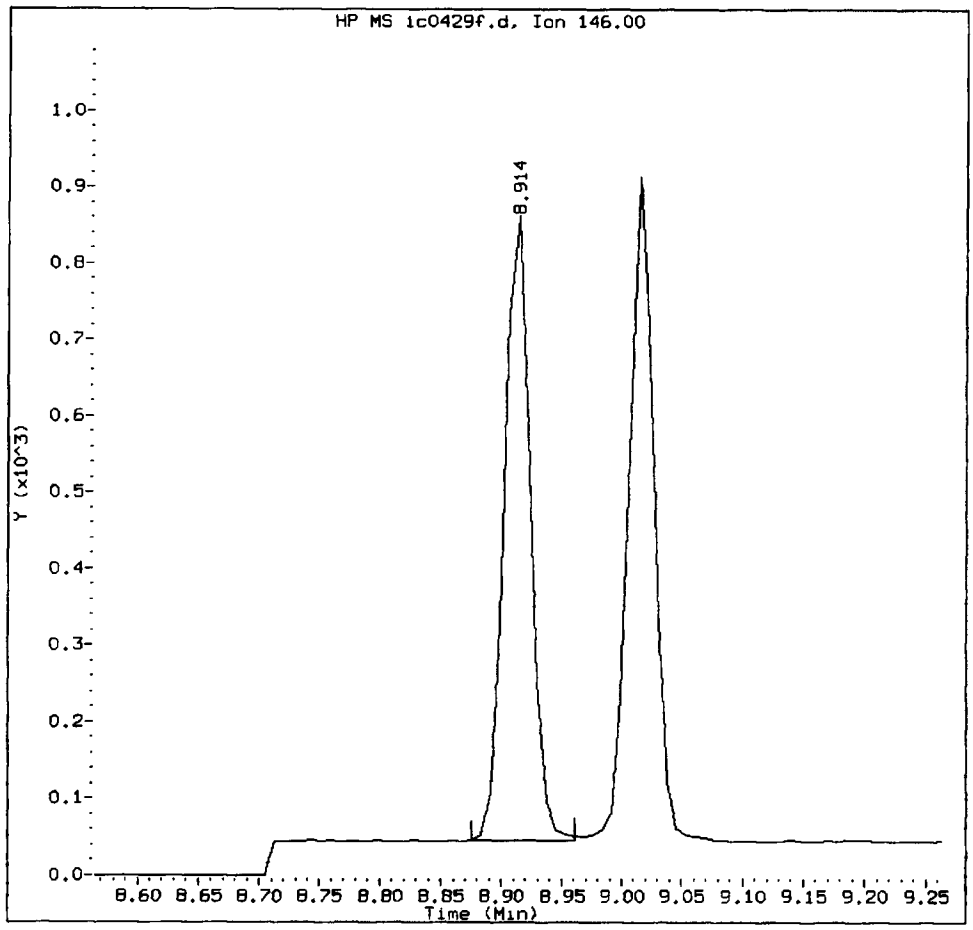
Column phase: ZB-5msi

Column diameter: 0.25



IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

1,3-Dichlorobenzene Amount: 0.06 Area: 1239



MANUAL INTEGRATION for 1,3-Dichlorobenzene

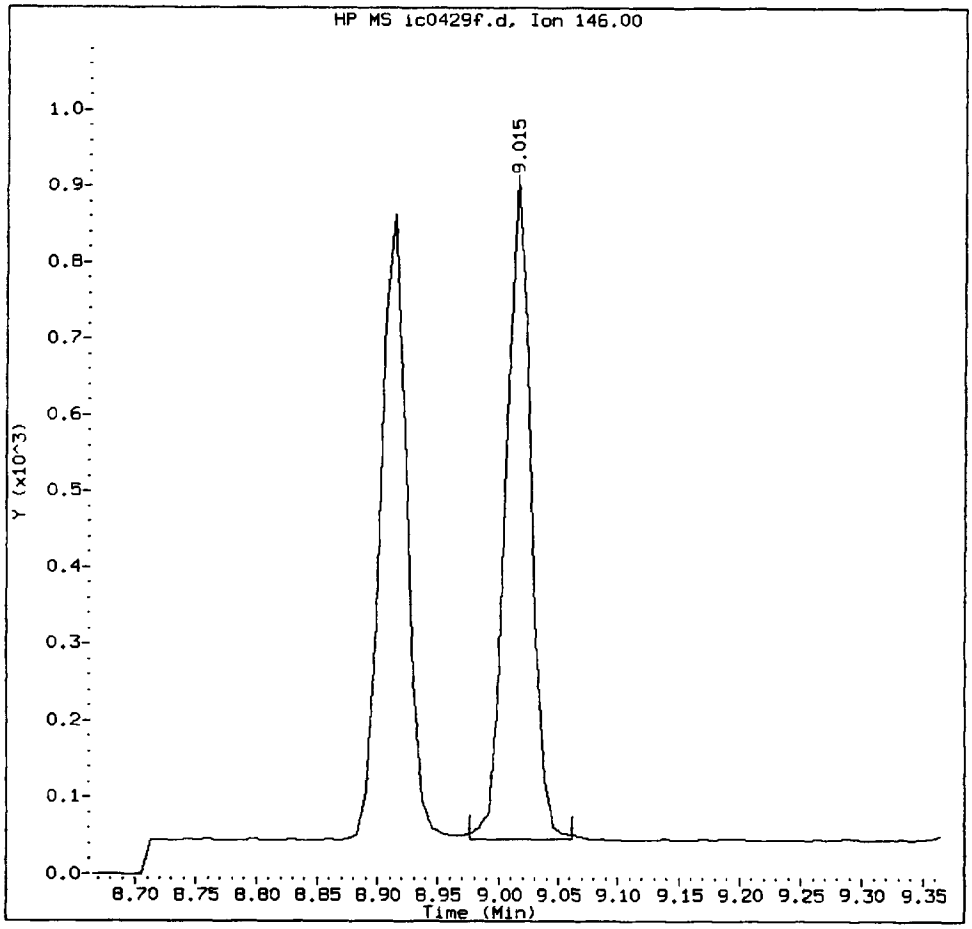
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 5/3/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

1,4-Dichlorobenzene Amount: 0.06 Area: 1268



MANUAL INTEGRATION for 1,4-Dichlorobenzene

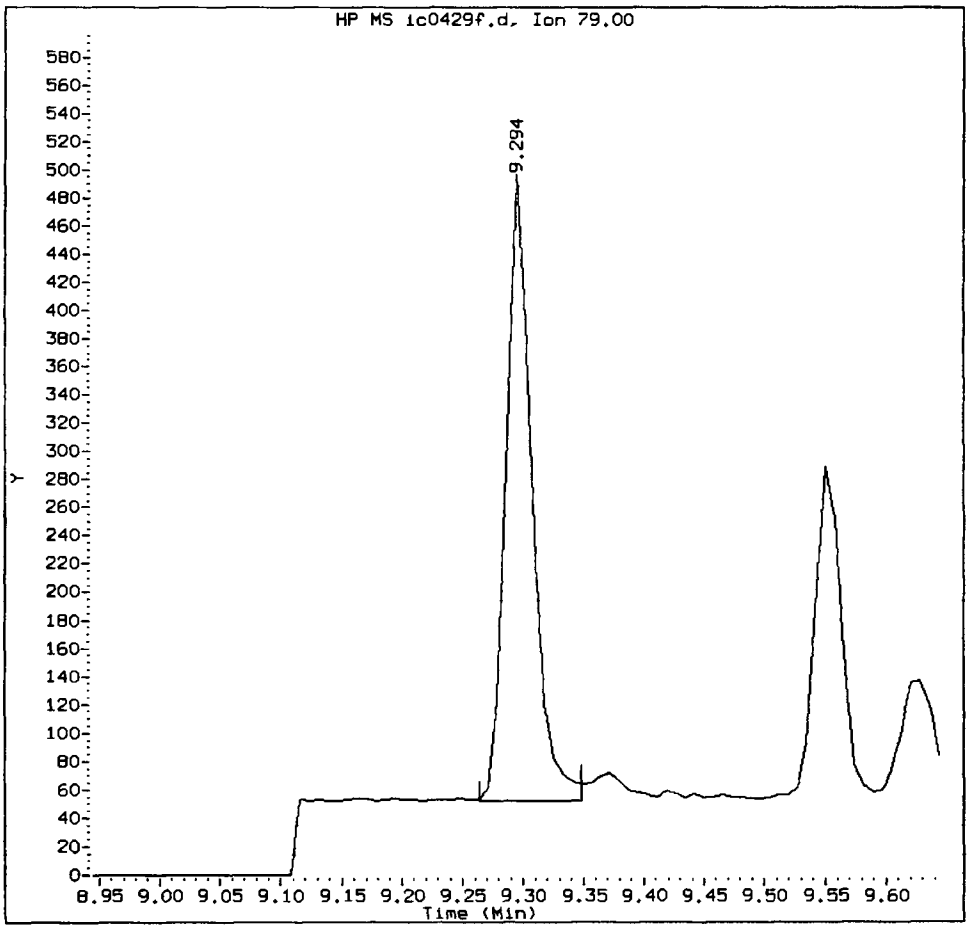
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: KZ Date: 5/9/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

Benzyl alcohol Amount: 0.05 Area: 670



MANUAL INTEGRATION for Benzyl alcohol

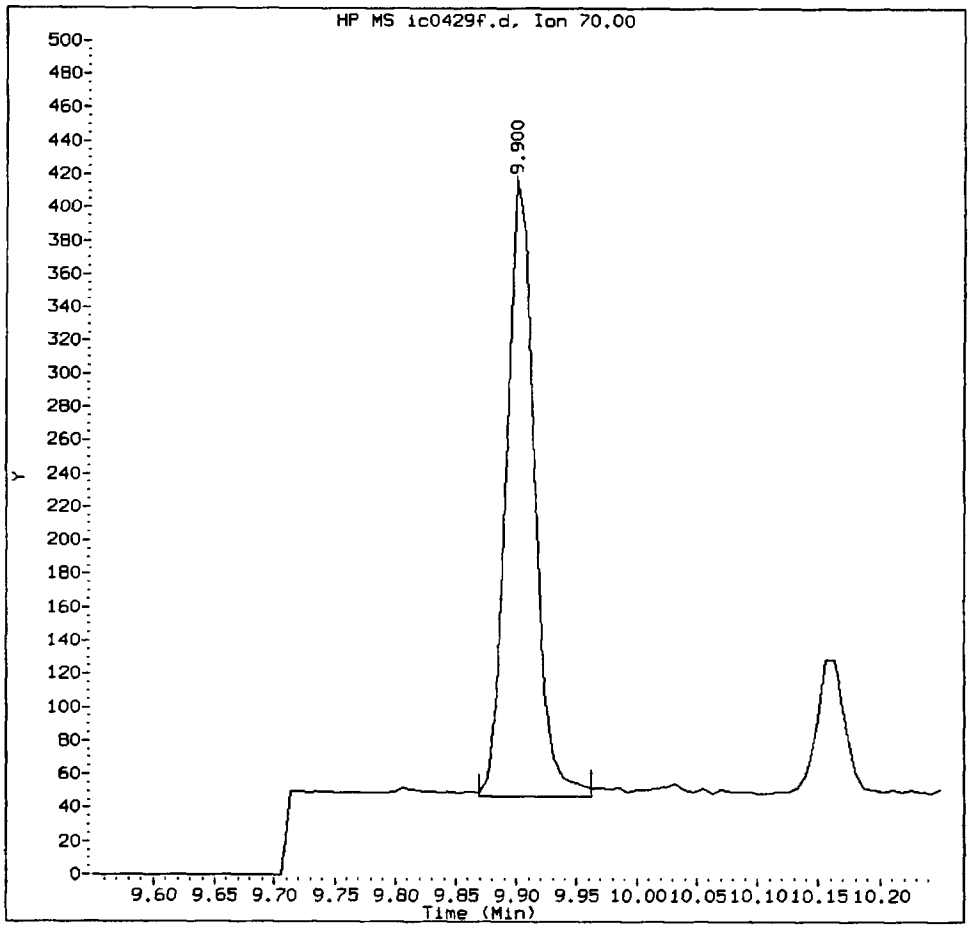
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: _____ 1/2 Date: 5/3/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

N-Nitroso-di-n-propylamine Amount: 0.06 Area: 604



MANUAL INTEGRATION for N-Nitroso-di-n-propylamine

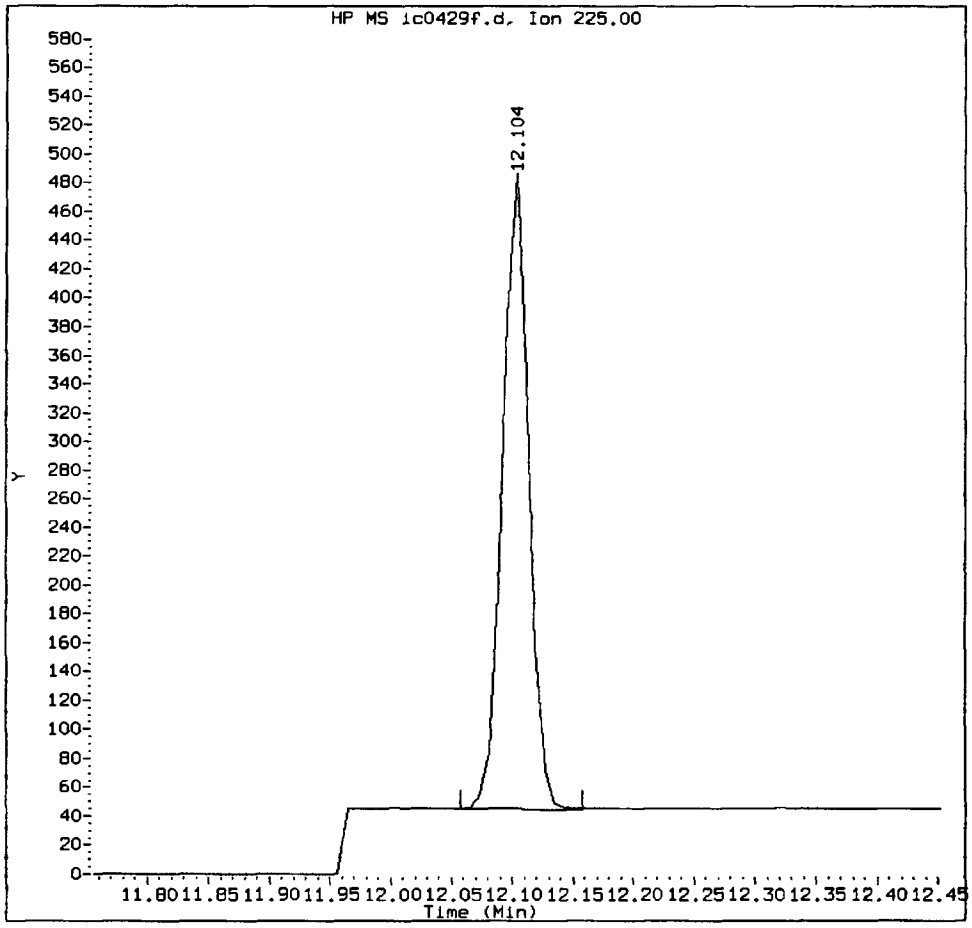
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VE Date: 5/3/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

Hexachlorobutadiene Amount: 0.06 Area: 663



MANUAL INTEGRATION for Hexachlorobutadiene

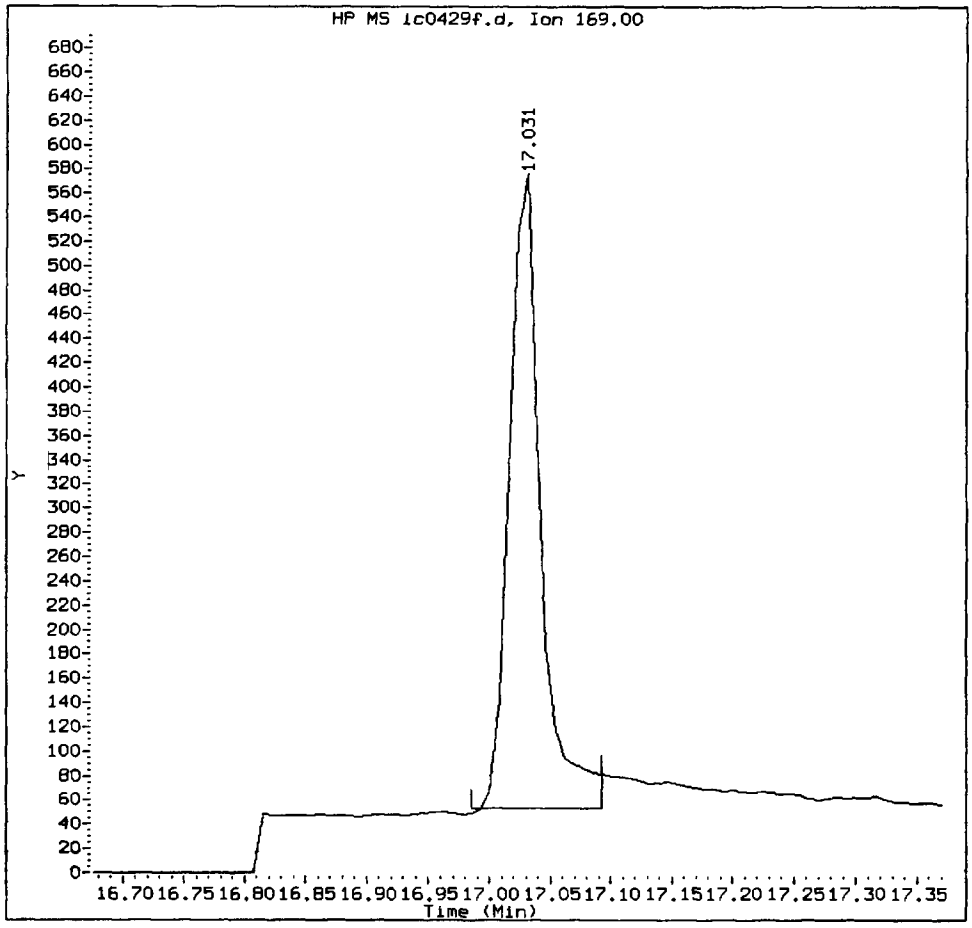
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 5/3/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

N-Nitrosodiphenylamine Amount: 0.04 Area: 947



MANUAL INTEGRATION for N-Nitrosodiphenylamine

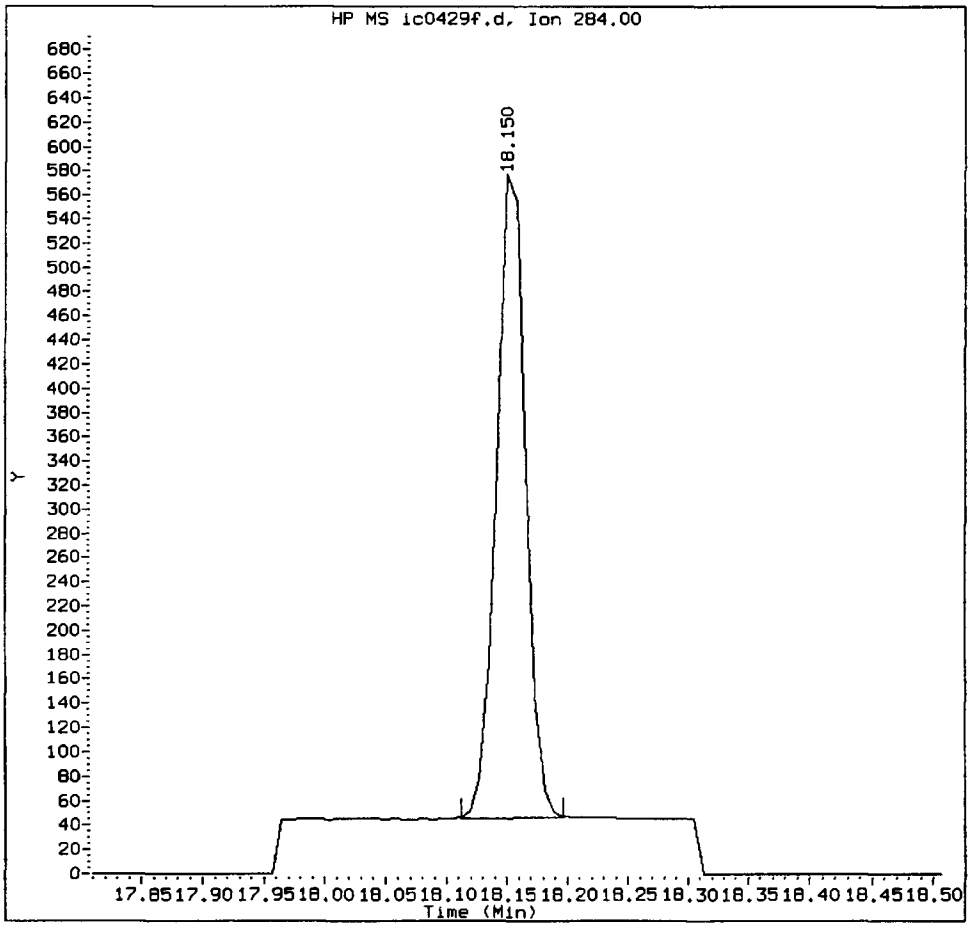
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: _____ Date: 5/3/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

Hexachlorobenzene Amount: 0.06 Area: 903



MANUAL INTEGRATION for Hexachlorobenzene

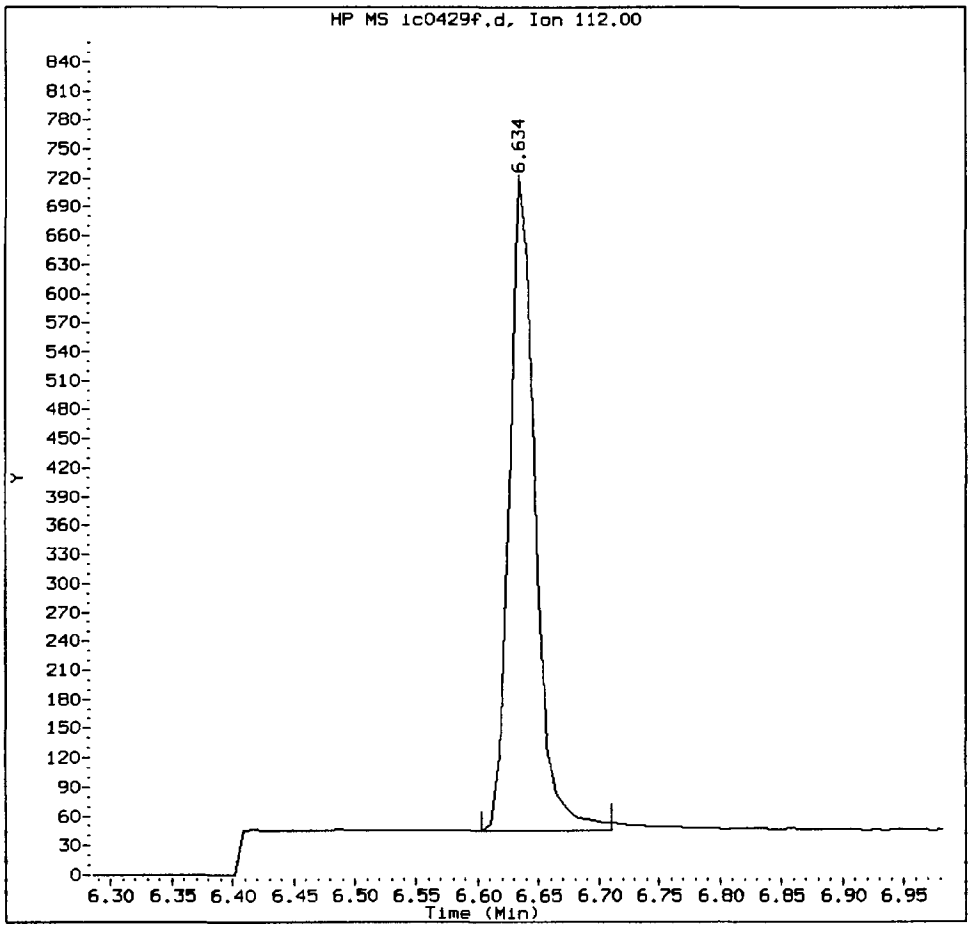
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/6/13

IC0429F, /chem1/nt10.i/20130429.b/SIM.b/ic0429f.d

2-Fluorophenol Amount: 0.05 Area: 1004



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VR Date: 5/9/13

CO-ELUTION SUMMARY FOR FILE - ic0429f.d

Lab ID: IC0429F, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-2C

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429g.d
Lab Smp Id: IC0429G
Inj Date : 29-APR-2013 20:34
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429G
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 20:34 Cal File: ic0429g.d
Als bottle: 8 Calibration Sample, Level: 6
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	6.633	6.634	(0.738)	39175	2.50000	2.552(M)
	3 Phenol	94	8.364	8.365	(0.931)	57029	2.50000	2.584
	7 1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	43575	2.50000	2.396
*	8 1,4-Dichlorobenzene-d4	152	8.983	8.984	(1.000)	43709	4.00000	
	9 1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	43120	2.50000	2.381
	11 Benzyl alcohol	79	9.294	9.294	(1.035)	27973	2.50000	2.643
	12 1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	41290	2.50000	2.400
	13 2-Methylphenol	108	9.550	9.551	(1.063)	40181	2.50000	2.547
	15 4-Methylphenol	108	9.845	9.846	(1.096)	41543	2.50000	2.586
	16 N-Nitroso-di-n-propylamine	70	9.899	9.900	(1.102)	23225	2.50000	2.563
	22 2,4-Dimethylphenol	107	10.969	10.962	(0.942)	80843	5.00000	5.211
	26 1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	36642	2.50000	2.387
*	27 Naphthalene-d8	136	11.647	11.640	(1.000)	160165	4.00000	
	30 Hexachlorobutadiene	225	12.103	12.104	(1.039)	22613	2.50000	2.420
	39 Dimethylphthalate	163	15.060	15.052	(0.969)	66102	2.50000	2.407
*	42 Acenaphthene-d10	162	15.539	15.540	(1.000)	95179	4.00000	
	50 Diethylphthalate	149	16.645	16.637	(1.071)	77428	2.50000	2.490
	54 N-Nitrosodiphenylamine	169	17.031	17.023	(0.905)	51253	2.50000	2.616
	57 Hexachlorobenzene	284	18.157	18.158	(0.965)	30459	2.50000	2.276
	58 Pentachlorophenol	266	18.552	18.553	(0.986)	45814	5.00000	5.583
*	59 Phenanthrene-d10	188	18.815	18.816	(1.000)	178699	4.00000	
$	66 Terphenyl-d14	244	22.026	22.027	(0.922)	58696	2.50000	2.397
	67 Butylbenzylphthalate	149	22.979	22.971	(0.961)	50099	2.50000	2.711
*	69 Chrysene-d12	240	23.900	23.900	(1.000)	199199	4.00000	
*	77 Perylene-d12	264	26.362	26.347	(1.000)	191024	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.718	28.703	(1.089)	106924	2.50000	2.511
	90 N-Nitrosodimethylamine	74	4.356	4.371	(0.485)	49279	5.00000	5.232

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: ic0429g.d
Lab Smp Id: IC0429G
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	43709	-16.99
27 Naphthalene-d8	192325	96162	384650	160165	-16.72
42 Acenaphthene-d10	109274	54637	218548	95179	-12.90
59 Phenanthrene-d10	203933	101966	407866	178699	-12.37
69 Chrysene-d12	223647	111824	447294	199199	-10.93
77 Perylene-d12	211919	105960	423838	191024	-9.86

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.36	0.03

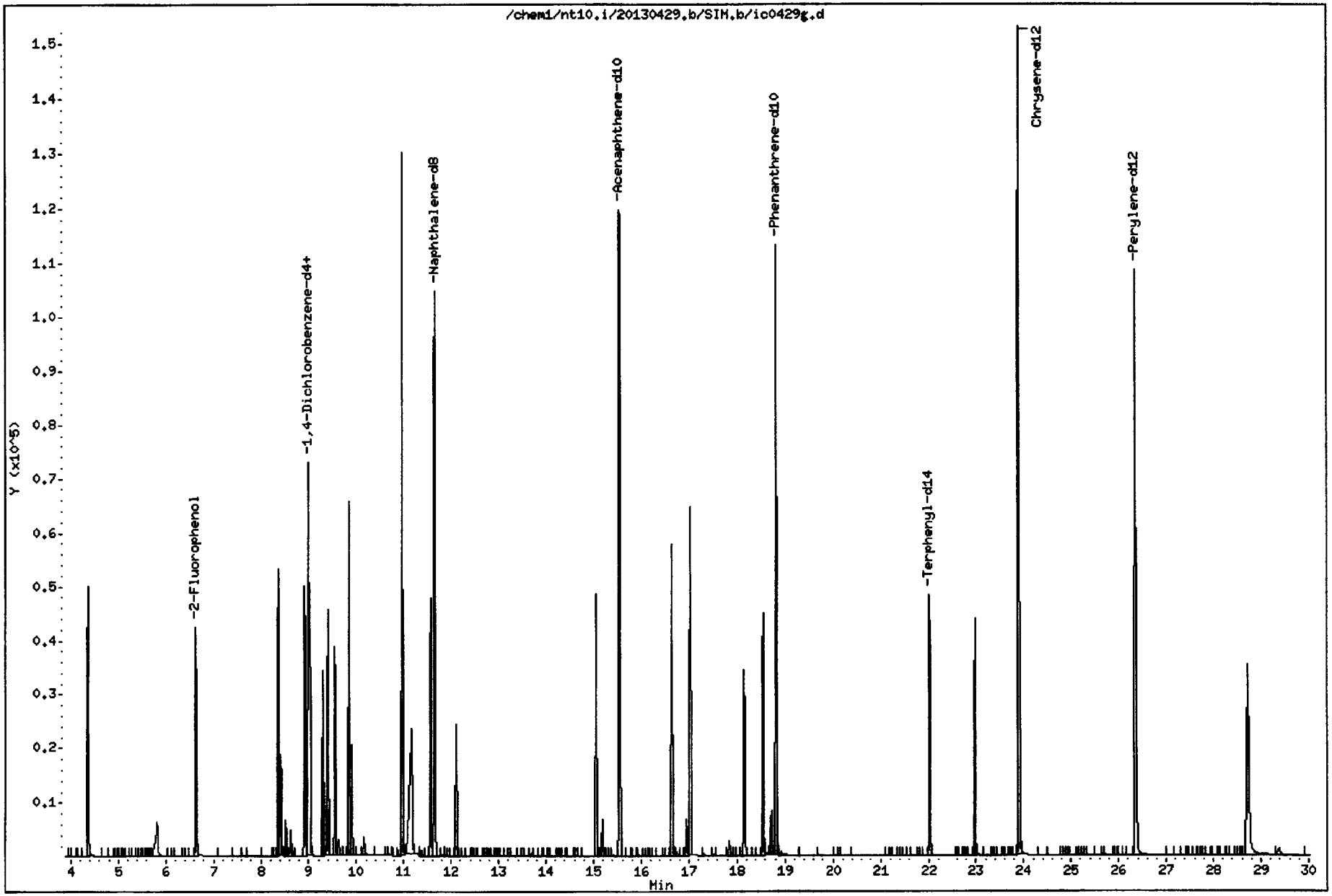
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429g.d
Date : 29-APR-2013 20:34
Client ID:
Sample Info: IC0429G

Instrument: nt10.i

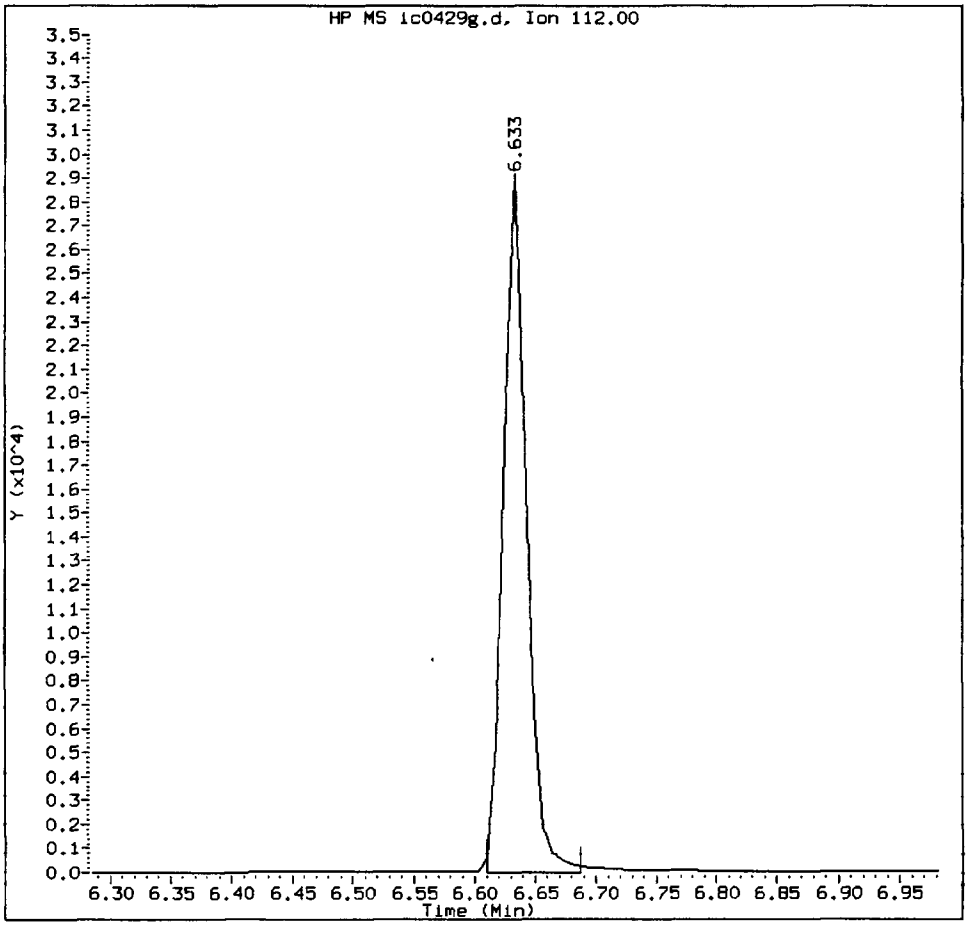
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429G, /chem1/nt10.i/20130429.b/SIM.b/ic0429g.d

2-Fluorophenol Amount: 2.55 Area: 39175



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: _____ Date: _____

CO-ELUTION SUMMARY FOR FILE - ic0429g.d

Lab ID: IC0429G, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d
Lab Smp Id: IC0429H
Inj Date : 29-APR-2013 21:11
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429H
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:11 Cal File: ic0429h.d
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

YZ 5/3/13

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 1 2-Fluorophenol	112	6.633	6.634	(0.738)	1744	0.10000	0.09619(M)
3 Phenol	94	8.365	8.365	(0.931)	2499	0.10000	0.09589
7 1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	2261	0.10000	0.1053
* 8 1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	51614	4.00000	
9 1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	2198	0.10000	0.1028(M)
11 Benzyl alcohol	79	9.294	9.294	(1.035)	1192	0.10000	0.09537
12 1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	2088	0.10000	0.1028
13 2-Methylphenol	108	9.550	9.551	(1.063)	1796	0.10000	0.09639
15 4-Methylphenol	108	9.845	9.846	(1.096)	1777	0.10000	0.09366
16 N-Nitroso-di-n-propylamine	70	9.899	9.900	(1.102)	1040	0.10000	0.09720
22 2,4-Dimethylphenol	107	10.961	10.962	(0.941)	3433	0.20000	0.1840
26 1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	1896	0.10000	0.1027(M)
* 27 Naphthalene-d8	136	11.647	11.640	(1.000)	192559	4.00000	
30 Hexachlorobutadiene	225	12.103	12.104	(1.039)	1142	0.10000	0.1017(M)
39 Dimethylphthalate	163	15.052	15.052	(0.969)	3197	0.10000	0.1027
* 42 Acenaphthene-d10	162	15.539	15.540	(1.000)	107939	4.00000	
50 Diethylphthalate	149	16.637	16.637	(1.071)	3307	0.10000	0.09377
54 N-Nitrosodiphenylamine	169	17.023	17.023	(0.905)	1860	0.10000	0.08732
57 Hexachlorobenzene	284	18.157	18.158	(0.965)	1462	0.10000	0.1005
58 Pentachlorophenol	266	18.552	18.553	(0.986)	1339	0.20000	0.1501(M)
* 59 Phenanthrene-d10	188	18.815	18.816	(1.000)	194268	4.00000	
$ 66 Terphenyl-d14	244	22.026	22.027	(0.922)	2454	0.10000	0.09449(M)
67 Butylbenzylphthalate	149	22.971	22.971	(0.961)	1538	0.10000	0.07847
* 69 Chrysene-d12	240	23.892	23.900	(1.000)	211275	4.00000	
* 77 Perylene-d12	264	26.347	26.347	(1.000)	196007	4.00000	
79 Dibenzo(a,h)anthracene	278	28.710	28.703	(1.090)	3837	0.10000	0.08782
90 N-Nitrosodimethylamine	74	4.386	4.371	(0.488)	2220	0.20000	0.1996

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: ic0429h.d
Lab Smp Id: IC0429H
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

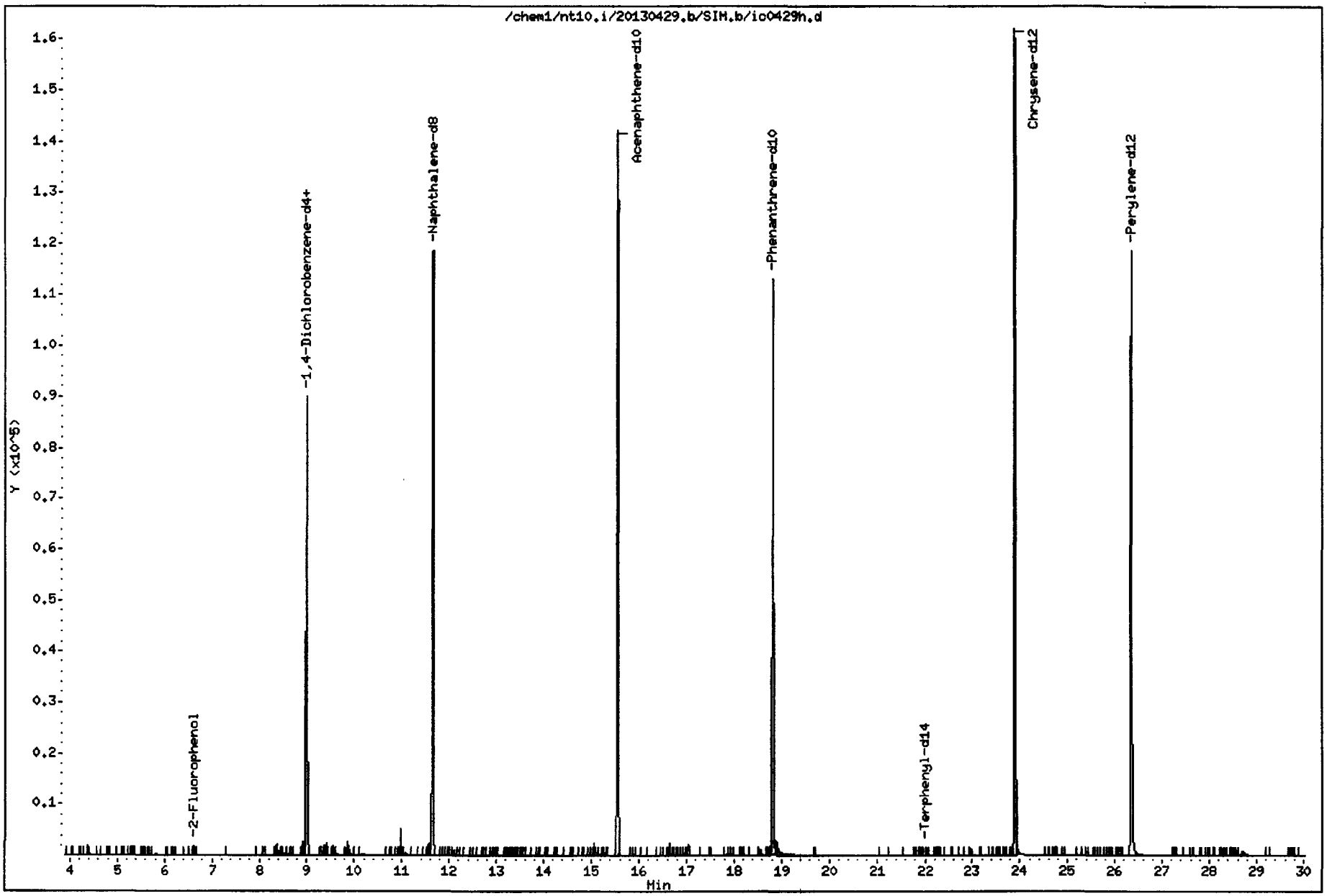
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	51614	-1.98
27 Naphthalene-d8	192325	96162	384650	192559	0.12
42 Acenaphthene-d10	109274	54637	218548	107939	-1.22
59 Phenanthrene-d10	203933	101966	407866	194268	-4.74
69 Chrysene-d12	223647	111824	447294	211275	-5.53
77 Perylene-d12	211919	105960	423838	196007	-7.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.65	0.00
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.89	-0.03
77 Perylene-d12	26.35	25.85	26.85	26.35	-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.

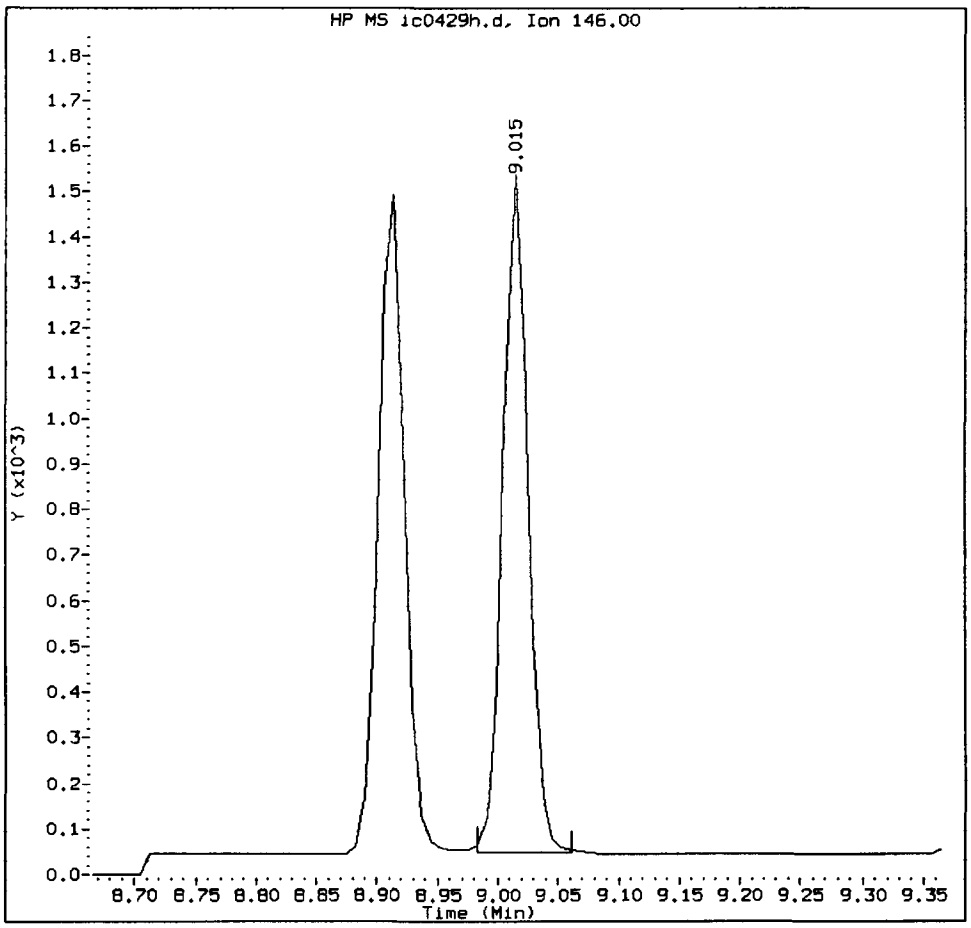
Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d
Date : 29-APR-2013 21:11
Client ID:
Sample Info: IC0429H

Instrument: nt10.i
Operator: YZ
Column phase: ZB-5msi
Column diameter: 0.25



IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

1,4-Dichlorobenzene Amount: 0.10 Area: 2198



MANUAL INTEGRATION for 1,4-Dichlorobenzene

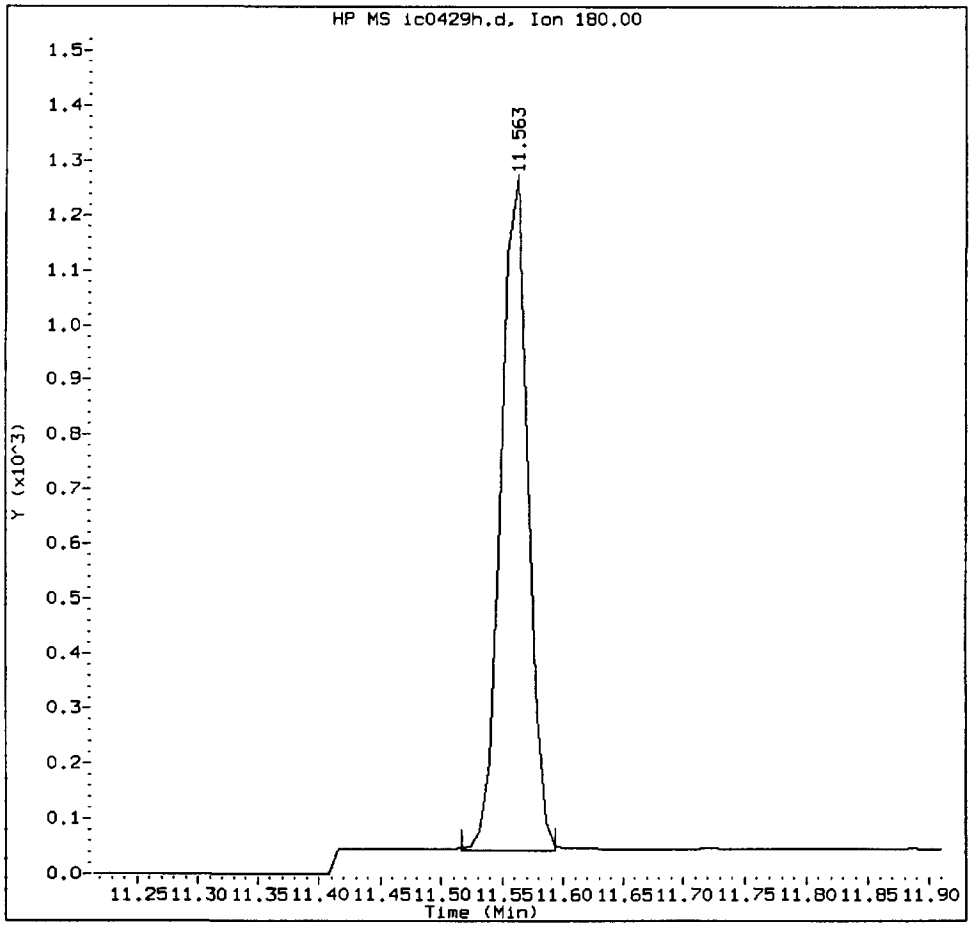
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YB Date: 5/3/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

1,2,4-Trichlorobenzene Amount: 0.10 Area: 1896



MANUAL INTEGRATION for 1,2,4-Trichlorobenzene

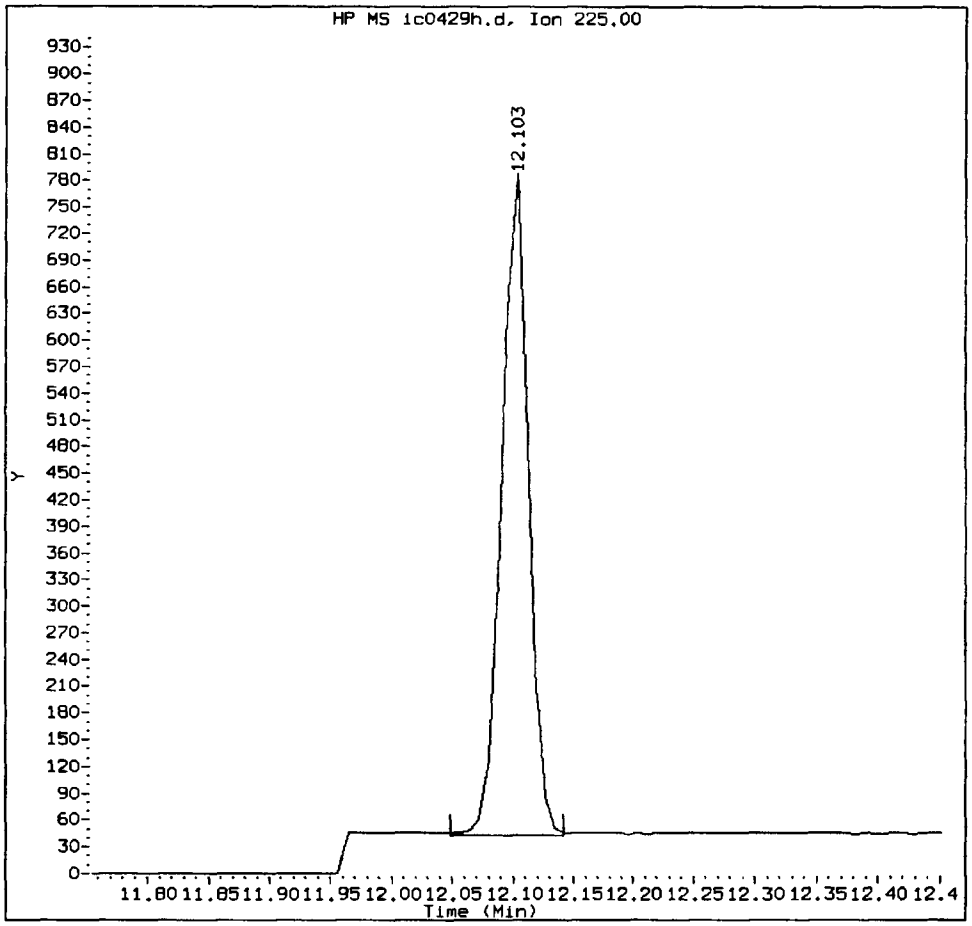
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VR Date: 5/8/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

Hexachlorobutadiene Amount: 0.10 Area: 1142



MANUAL INTEGRATION for Hexachlorobutadiene

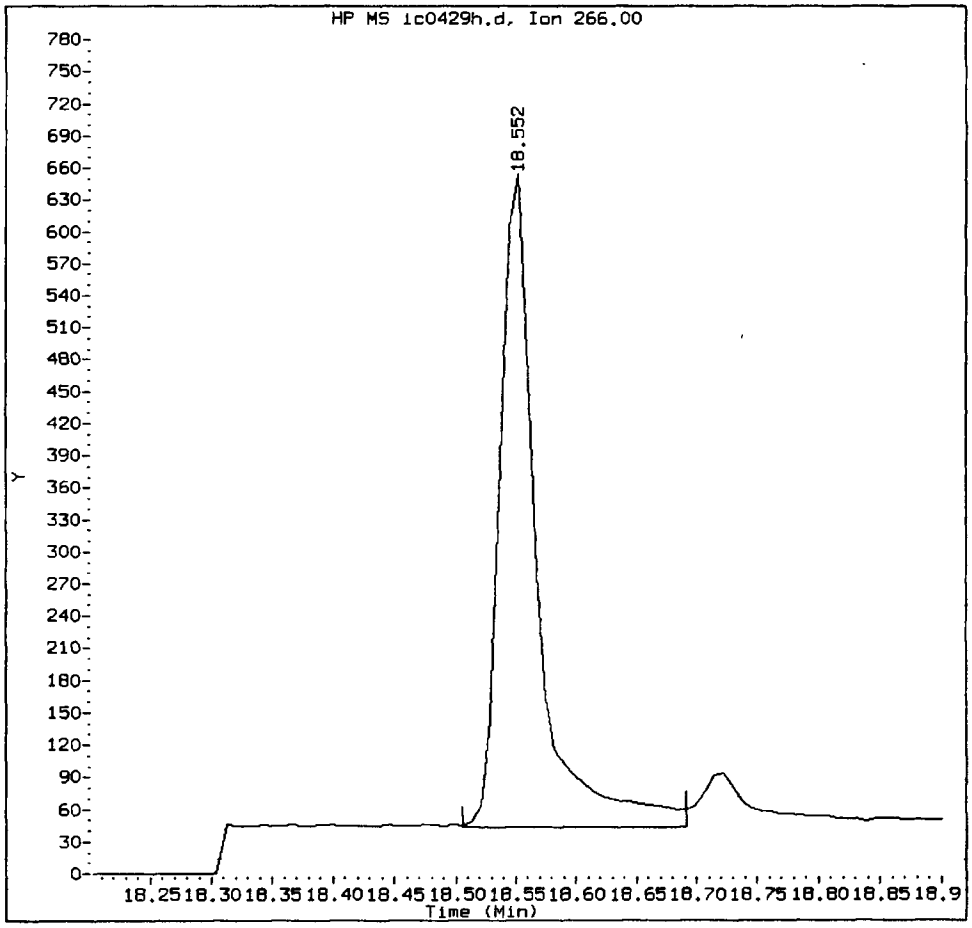
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VZ Date: 5/9/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

Pentachlorophenol Amount: 0.15 Area: 1339



MANUAL INTEGRATION for Pentachlorophenol

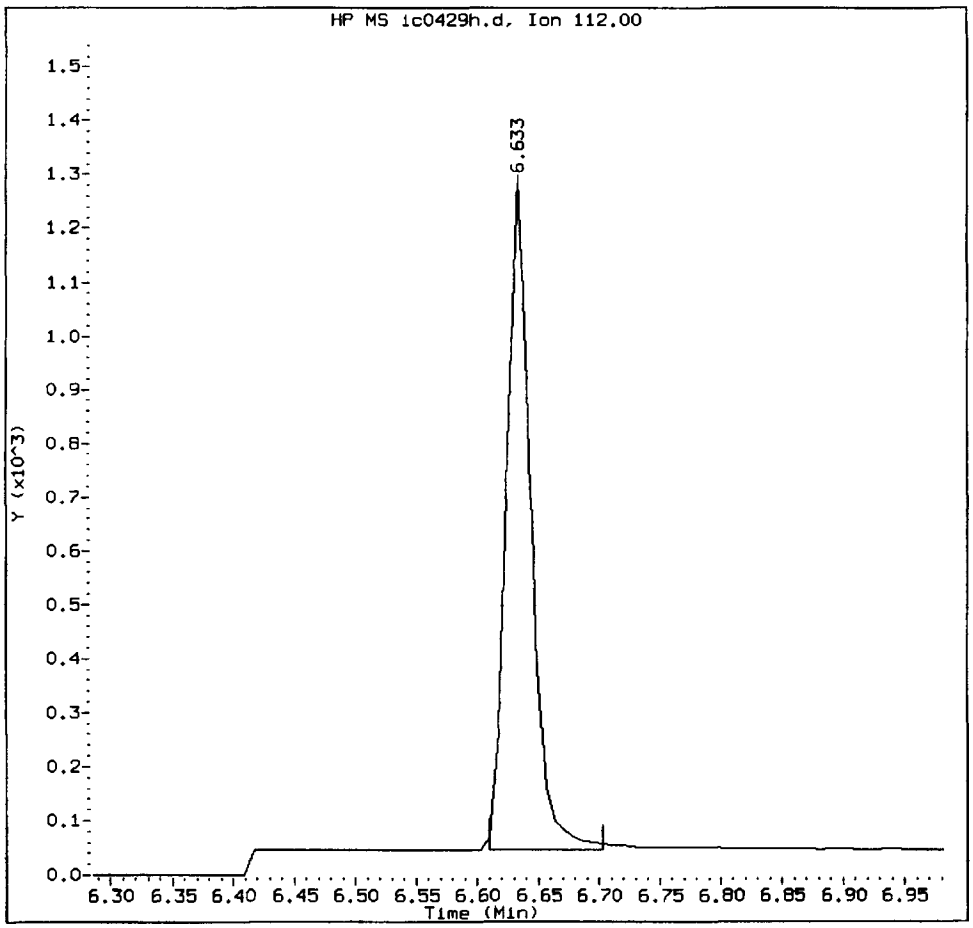
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/3/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

2-Fluorophenol Amount: 0.10 Area: 1744



MANUAL INTEGRATION for 2-Fluorophenol

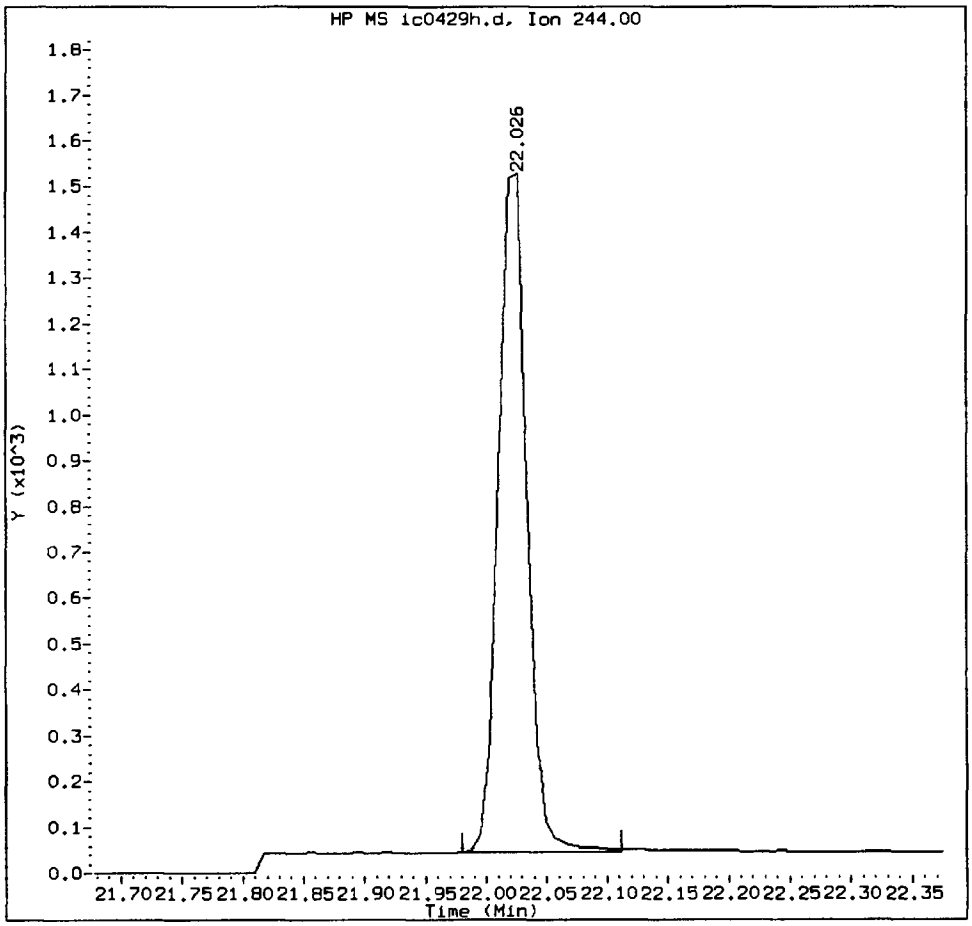
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: KC Date: 5/3/13

IC0429H, /chem1/nt10.i/20130429.b/SIM.b/ic0429h.d

Terphenyl-d14 Amount: 0.09 Area: 2454



MANUAL INTEGRATION for Terphenyl-d14

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 5/3/13

CO-ELUTION SUMMARY FOR FILE - ic0429h.d

Lab ID: IC0429H, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130429.b/SIM.b/ic0429i.d
Lab Smp Id: IC0429I
Inj Date : 29-APR-2013 21:47
Operator : YZ Inst ID: nt10.i
Smp Info : IC0429I
Misc Info :
Comment :
Method : /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Meth Date : 03-May-2013 17:11 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 10 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

YZ 5/3/13

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.634	6.634	(0.738)	8113	0.50000	0.4669(M)
	3	Phenol	94	8.365	8.365	(0.931)	11931	0.50000	0.4777
	7	1,3-Dichlorobenzene	146	8.914	8.914	(0.992)	9817	0.50000	0.4770
*	8	1,4-Dichlorobenzene-d4	152	8.984	8.984	(1.000)	49468	4.00000	
	9	1,4-Dichlorobenzene	146	9.015	9.015	(1.003)	9757	0.50000	0.4761
	11	Benzyl alcohol	79	9.294	9.294	(1.035)	5665	0.50000	0.4729
	12	1,2-Dichlorobenzene	146	9.395	9.395	(1.046)	9240	0.50000	0.4745
	13	2-Methylphenol	108	9.551	9.551	(1.063)	8436	0.50000	0.4724
	15	4-Methylphenol	108	9.846	9.846	(1.096)	8566	0.50000	0.4711
	16	N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.102)	4941	0.50000	0.4818
	22	2,4-Dimethylphenol	107	10.962	10.962	(0.942)	16956	1.00000	0.9589
	26	1,2,4-Trichlorobenzene	180	11.563	11.563	(0.993)	8289	0.50000	0.4738
*	27	Naphthalene-d8	136	11.640	11.640	(1.000)	182546	4.00000	
	30	Hexachlorobutadiene	225	12.104	12.104	(1.040)	5038	0.50000	0.4730
	39	Dimethylphthalate	163	15.052	15.052	(0.969)	14017	0.50000	0.4605
*	42	Acenaphthene-d10	162	15.540	15.540	(1.000)	105486	4.00000	
	50	Diethylphthalate	149	16.637	16.637	(1.071)	15572	0.50000	0.4518
	54	N-Nitrosodiphenylamine	169	17.023	17.023	(0.905)	10352	0.50000	0.4940
	57	Hexachlorobenzene	284	18.158	18.158	(0.965)	6394	0.50000	0.4467
	58	Pentachlorophenol	266	18.553	18.553	(0.986)	7927	1.00000	0.9033
*	59	Phenanthrene-d10	188	18.816	18.816	(1.000)	191121	4.00000	
$	66	Terphenyl-d14	244	22.027	22.027	(0.922)	11579	0.50000	0.4518
	67	Butylbenzylphthalate	149	22.971	22.971	(0.961)	8336	0.50000	0.4310
*	69	Chrysene-d12	240	23.900	23.900	(1.000)	208500	4.00000	
*	77	Perylene-d12	264	26.347	26.347	(1.000)	197777	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.703	28.703	(1.089)	19496	0.50000	0.4422
	90	N-Nitrosodimethylamine	74	4.371	4.371	(0.487)	10669	1.00000	1.001

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: ic0429i.d
Lab Smp Id: IC0429I
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130429.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 29-APR-2013
Calibration Time: 18:44
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	49468	-6.06
27 Naphthalene-d8	192325	96162	384650	182546	-5.08
42 Acenaphthene-d10	109274	54637	218548	105486	-3.47
59 Phenanthrene-d10	203933	101966	407866	191121	-6.28
69 Chrysene-d12	223647	111824	447294	208500	-6.77
77 Perylene-d12	211919	105960	423838	197777	-6.67

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.98	8.48	9.48	8.98	0.00
27 Naphthalene-d8	11.65	11.15	12.15	11.64	-0.06
42 Acenaphthene-d10	15.54	15.04	16.04	15.54	0.00
59 Phenanthrene-d10	18.82	18.32	19.32	18.82	0.00
69 Chrysene-d12	23.90	23.40	24.40	23.90	0.00
77 Perylene-d12	26.35	25.85	26.85	26.35	-0.03

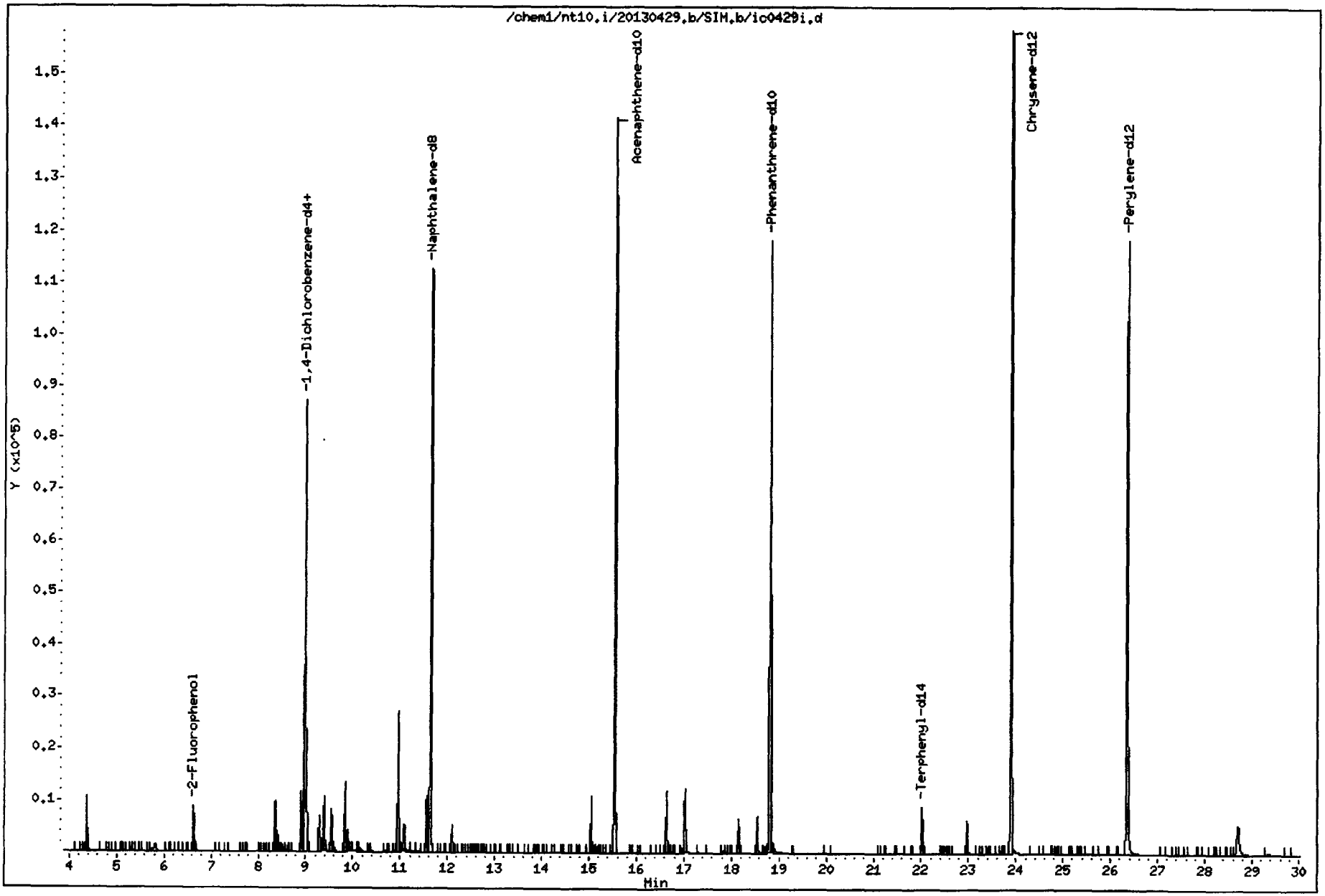
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130429.b/SIM.b/ic0429i.d
Date : 29-APR-2013 21:47
Client ID:
Sample Info: IC0429I

Instrument: nt10.i

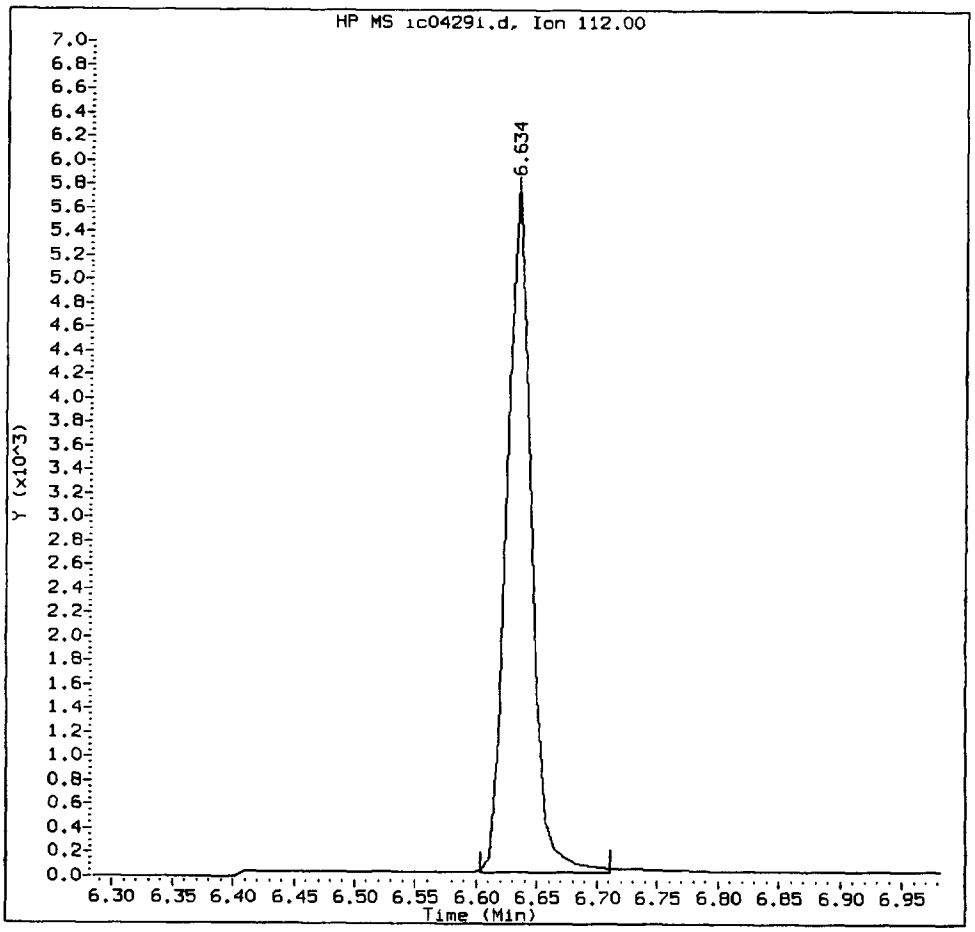
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



IC0429I, /chem1/nt10.i/20130429.b/SIM.b/ic0429i.d

2-Fluorophenol Amount: 0.47 Area: 8113



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YE Date: 5/8/13

CO-ELUTION SUMMARY FOR FILE - ic0429i.d

Lab ID: IC0429I, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 29-APR-2(

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

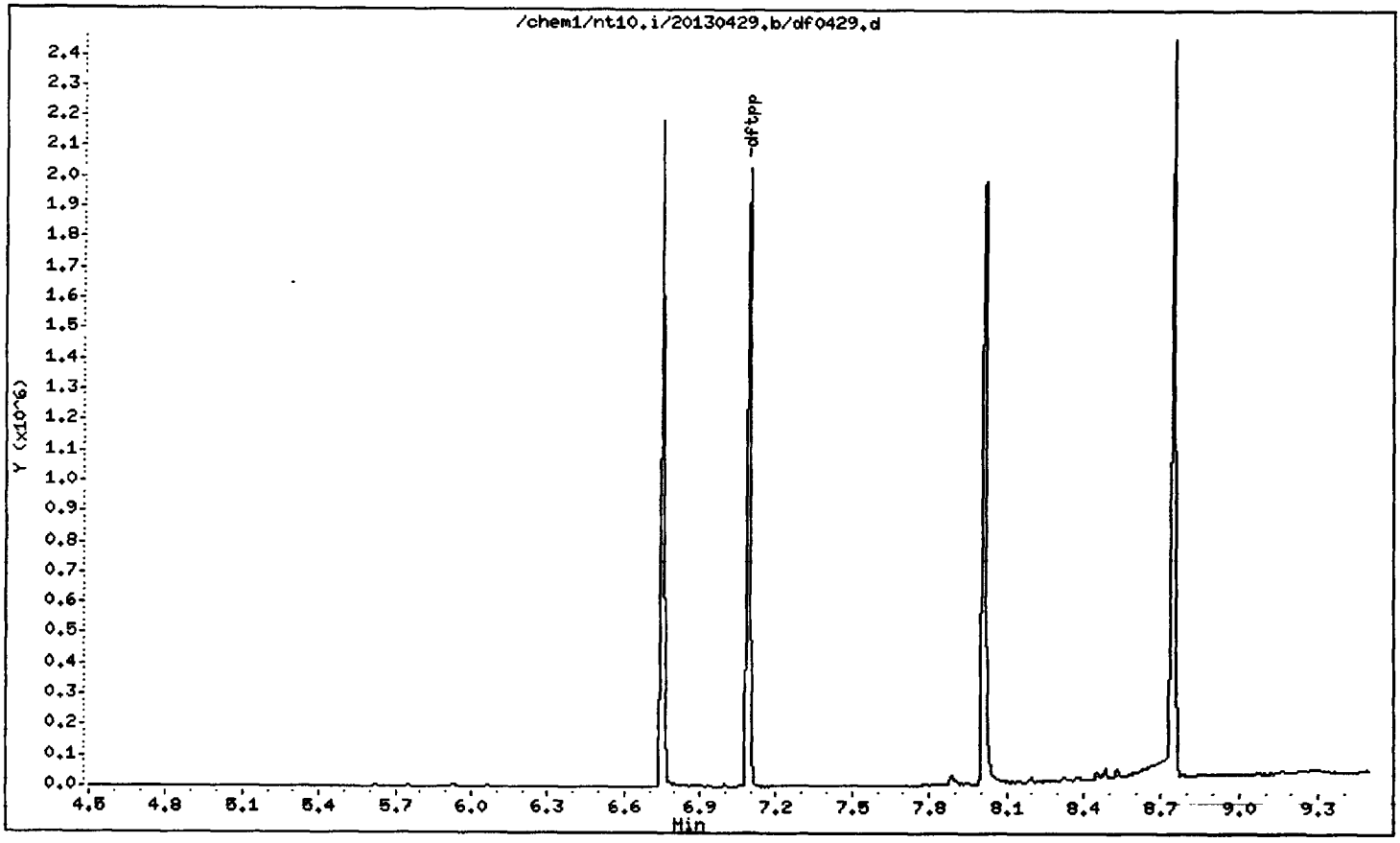
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

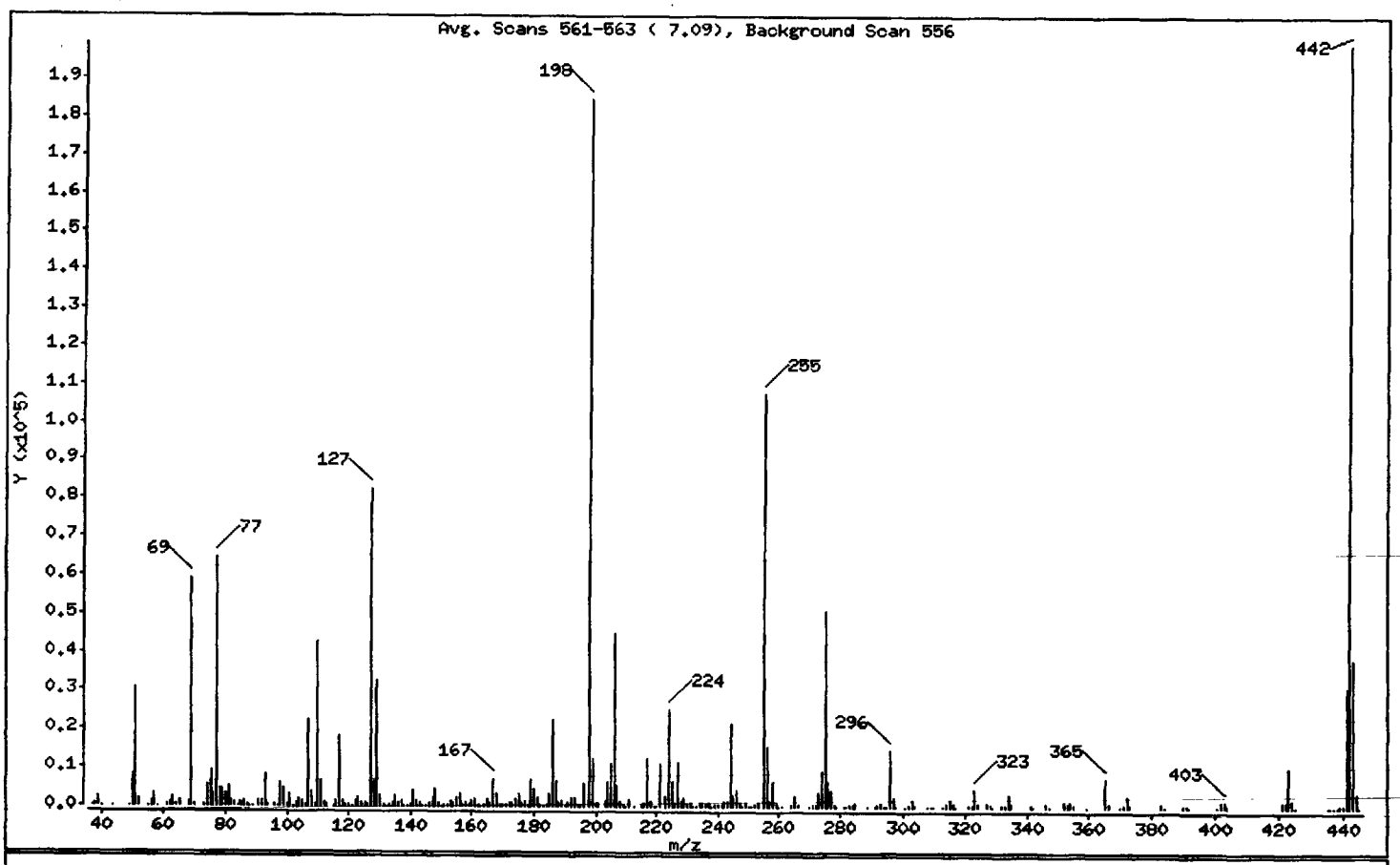
Sample Info: DFTPP

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	16.70
68	Less than 2.00% of mass 69	0.51 (1.60)
69	Mass 69 relative abundance	31.97
70	Less than 2.00% of mass 69	0.15 (0.46)
127	10.00 - 80.00% of mass 198	44.78
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	27.44
365	Greater than 1.00% of mass 198	4.00
441	0.01 - 24.00% of mass 442	16.80 (15.56)
442	50.00 - 200.00% of mass 198	107.98
443	15.00 - 24.00% of mass 442	20.84 (19.30)

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d

Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556

Location of Maximum: 442.00

Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	119	128.00	6232	203.00	1259	289.00	149
38.00	415	129.00	32664	204.00	6492	291.00	55
39.00	2393	130.00	2738	205.00	11023	292.00	248
40.00	132	131.00	547	206.00	44808	293.00	944
44.00	78	132.00	207	207.00	5716	294.00	225
49.00	203	133.00	272	208.00	1602	295.00	86
50.00	8343	134.00	858	209.00	559	296.00	14604
51.00	30808	135.00	2801	210.00	130	297.00	2070
52.00	1637	136.00	916	211.00	1868	298.00	119
55.00	158	137.00	1248	213.00	64	301.00	172
56.00	1274	138.00	214	215.00	464	302.00	318
57.00	3130	139.00	128	216.00	999	303.00	1693
58.00	121	140.00	298	217.00	12350	304.00	431
61.00	576	141.00	4004	218.00	1562	308.00	140
62.00	758	142.00	1332	219.00	107	309.00	66
63.00	2110	143.00	918	220.00	86	310.00	122
64.00	365	144.00	184	221.00	10806	313.00	127
65.00	1151	145.00	229	223.00	2947	314.00	769
68.00	946	146.00	756	224.00	25312	315.00	1728
69.00	58984	147.00	2094	225.00	6355	316.00	922
70.00	271	148.00	4544	226.00	766	317.00	88
73.00	494	149.00	885	227.00	11288	321.00	436
74.00	5693	150.00	191	228.00	1533	322.00	230
75.00	9303	151.00	532	229.00	2272	323.00	4678
76.00	3182	152.00	251	230.00	340	324.00	920
77.00	64696	153.00	1367	231.00	1037	327.00	968
78.00	4399	154.00	1025	232.00	136	328.00	465
79.00	4595	155.00	2332	233.00	163	329.00	50
80.00	3355	156.00	3268	234.00	787	332.00	367
81.00	4879	157.00	652	235.00	849	333.00	490
82.00	1244	158.00	750	236.00	522	334.00	3152
83.00	1132	159.00	624	237.00	861	335.00	753
84.00	59	160.00	1324	238.00	117	341.00	568
85.00	783	161.00	1910	239.00	422	342.00	139
86.00	1346	162.00	596	240.00	404	346.00	1068

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d
Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556
Location of Maximum: 442.00
Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
87.00	634	163.00	120	241.00	673	347.00	165
88.00	209	164.00	312	242.00	1491	352.00	1522
89.00	58	165.00	1684	243.00	1585	353.00	1048
91.00	1173	166.00	900	244.00	21560	354.00	1434
92.00	1265	167.00	7028	245.00	2828	355.00	307
93.00	8038	168.00	3167	246.00	4226	359.00	51
94.00	544	169.00	640	247.00	836	365.00	7383
96.00	486	170.00	289	248.00	173	366.00	950
97.00	173	171.00	367	249.00	766	370.00	83
98.00	5992	172.00	736	250.00	145	371.00	406
99.00	4376	173.00	984	251.00	198	372.00	2676
100.00	452	174.00	1650	252.00	278	373.00	680
101.00	3021	175.00	3419	253.00	722	383.00	692
102.00	131	176.00	1090	255.00	107624	384.00	117
103.00	907	177.00	1541	256.00	15761	390.00	337
104.00	1840	178.00	570	257.00	1160	391.00	291
105.00	1589	179.00	6738	258.00	6194	392.00	71
106.00	548	180.00	4416	259.00	1028	401.00	221
107.00	22656	181.00	2092	260.00	162	402.00	1163
108.00	3534	182.00	309	261.00	213	403.00	1545
109.00	609	183.00	166	264.00	253	404.00	599
110.00	42496	184.00	593	265.00	2647	421.00	1426
111.00	6272	185.00	3035	266.00	526	422.00	1250
112.00	744	186.00	22616	270.00	181	423.00	9992
113.00	246	187.00	6353	271.00	299	424.00	1966
115.00	56	188.00	695	272.00	416	425.00	183
116.00	1316	189.00	1391	273.00	3826	435.00	62
117.00	18496	190.00	224	274.00	8949	436.00	62
118.00	1424	191.00	864	275.00	50632	437.00	225
119.00	236	192.00	2063	276.00	6580	438.00	213
120.00	238	193.00	2223	277.00	4111	439.00	328
121.00	63	194.00	423	278.00	606	440.00	329
122.00	1437	195.00	416	279.00	122	441.00	31000
123.00	2280	196.00	5832	281.00	202	442.00	199232
124.00	999	198.00	184512	282.00	126	443.00	38448

Data File: /chem1/nt10.i/20130429.b/df0429.d

Date : 29-APR-2013 16:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0429.d

Spectrum: Avg. Scans 561-563 (7.09), Background Scan 556

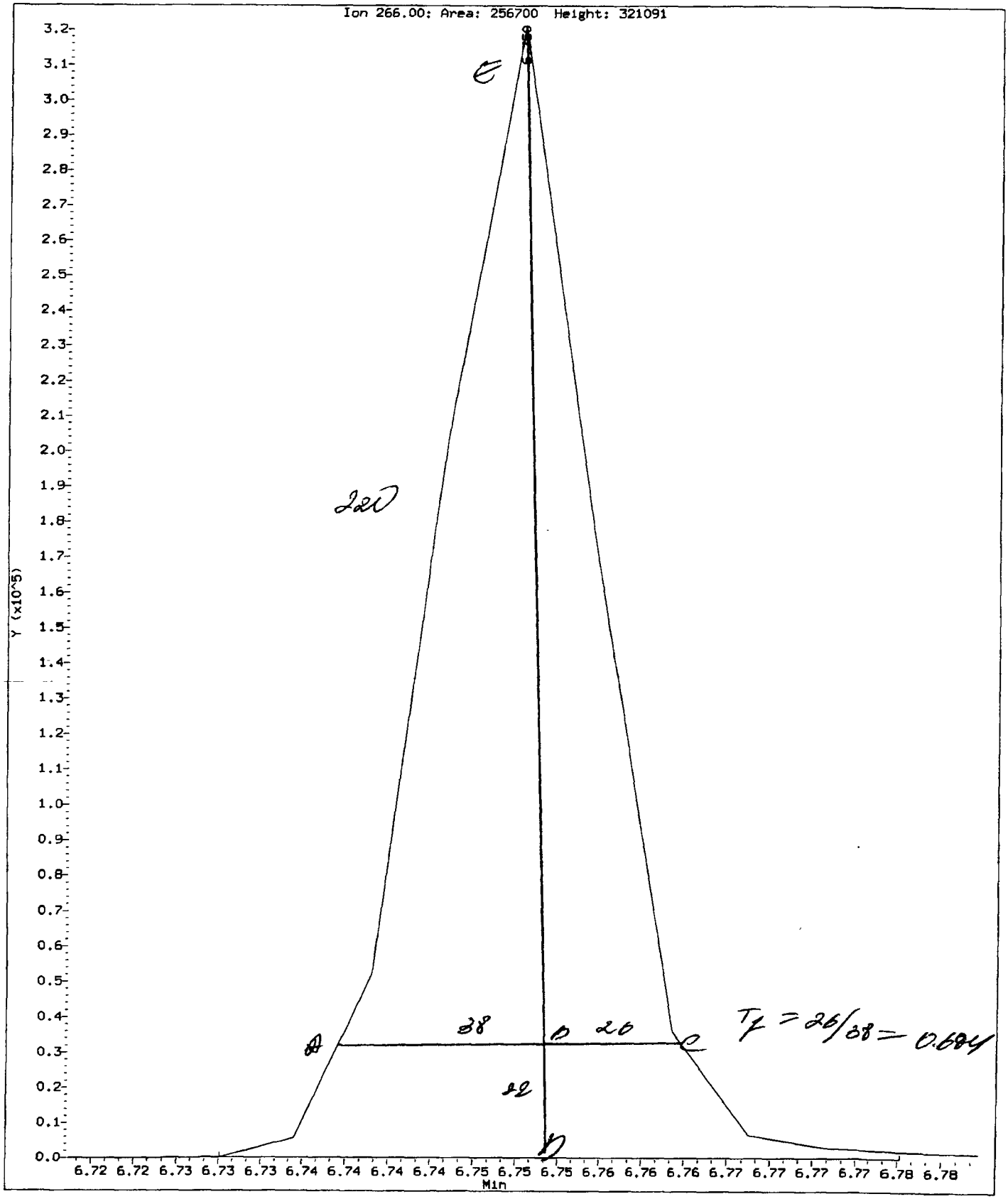
Location of Maximum: 442.00

Number of points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
125.00	975	199.00	12407	283.00	532	444.00	3455
126.00	347	200.00	963	284.00	335	445.00	131
127.00	82624	201.00	1058	285.00	774		

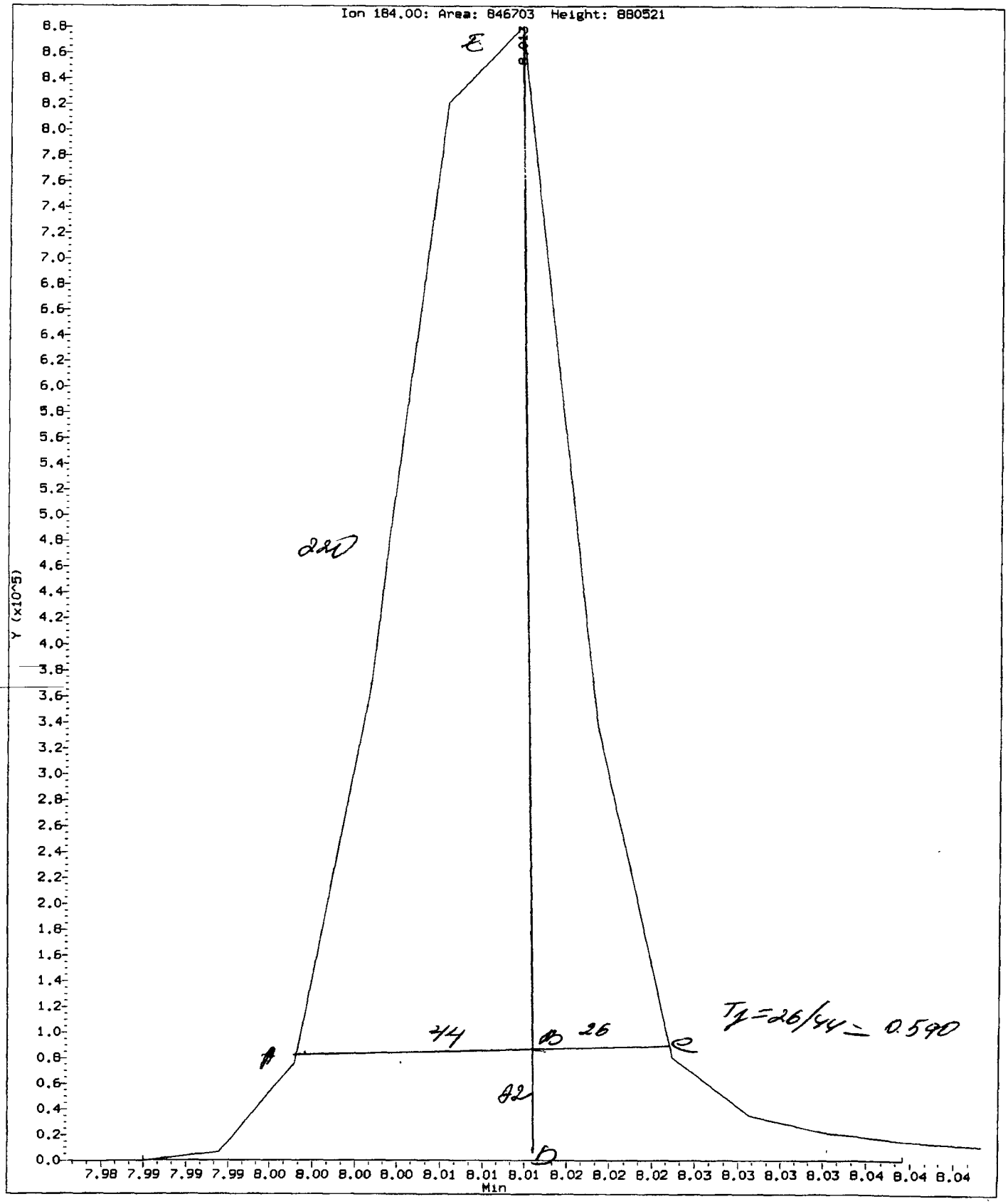
Data File: /chem1/nt10.i/20130429.b/ddt.b/df0429.d
Injection Date: 29-APR-2013 16:37
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.i/20130429.b/ddt.b/df0429.d
Injection Date: 29-APR-2013 16:37
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/20130429.b/ddt.b/df0429.d
Method: /chem1/nt10.i/20130429.b/ddt.b/sw846ddt.m
Analysis Date: 29-APR-2013 16:37

ARI ID: DFTPP
Misc: 11-
Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.750	256700
Benzidine	8.013	846703
4,4'-DDE	8.195	1804
4,4'-DDD	8.483	6740
4,4'-DDT	8.745	445165

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(1804 + 6740) * 100}{(1804 + 6740 + 445165)}$$

DDT Percent Breakdown = 1.9 %

SIM Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WS91

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WS91 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: 04/29/13 Analysis Start Date: 06/20/13

	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 / Aldol Condensation
Peak Tailing Factor ≤2?	Y / N / ✓	Method Blank in Control?	Y / N / ✓
CCAL Meets %D?	Y / N / ✓	LCS / LCSD ~~Recovery in Control~~?	Y / N / LCS only
ICAL Q Flag applied?	Y / N / ✓	LCS / LCSD ~~RPD ≤ 30%?~~	NA / LCS only
CCAL Q flag applied?	Y / N / ✓	MS / MSD Recovery in Control?	Y / N / See form III
Surrogate Recovery met?	Y / N / ✓	MS / MSD RPD ≤ 30%?	NA / Y 0-68% HP
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.

- All samples: Aldol condensation, IS failed low in mbs
- Mbs was re-run on 06/24/13 after the HPD wash.

(Review 1) Analyst: YZ **Date:** 6/25/13

(Review 2) Reviewer: [signature] **Date:** 6/28/13

Form 7015F Version 016 02/28/13

WS91 : 00606

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20130620.b/SIM.b

ARI Job No.: WS91 Method: SIM.b/SIMABN2.m Instrument: nt10.i Date: 20-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1601	ws91sb.d	WS91LCSS1	WS91LCSS1	1	NO MANUAL INTEGRATION
1714	ws91ams.d	WS91AMS	CL-MH-SPS-	1	2-Fluorophenol,
1751	ws91amsd.d	WS91AMSD	CL-MH-SPS-	1	2-Fluorophenol,
1638	ws91a.d	WS91A	CL-MH-SPS-	1	Dimethylphthalate, Diethylphthalate, Dibenzo(a,h)anthracene, 2-Fluorophenol,
1618	ws91mb.d	WS91MBS1	WS91MBS1	1	NO MANUAL INTEGRATION

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 6/20/13 Analysis: ABN / SIM ABN Analyst: YE

GC Program: ABN_2 Column No: 252947 Column Type: ZB 5MS I

Instrument Tune (.U or .CT.): B022841 EM Voltage: 1753

Calibration File: DF0620 Curve Date: 4/29/13 Injection Vol.: 1 uL

IS/SS	Ical/Ccal	LCS/ICV
1998-2	B676	
	B582	
	B112	
	20764-2	
	1998-2.	

Document All Maintenance Tasks In Element

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130620.b

	Time	Filename	LabID	ClientId	DF									
1	1003	df0620.d	DFTPP	DFTPP	1	NO ISTDS FOUND								
2	1057	cc0620a.d	CC0620A		1	7.70	56916	10.26	206638	14 05	115081	17 24	218821	22 46	227644	24.73	193988
3	1601	ws91sb.d	WS91LCSS1	WS91LCSS1	1	7 70	50644	10.26	185383	14 05	101222	17.24	185833	22.46	202139	24 73	175694
4	1638	ws91a.d	WS91A	CL-MH-SPS-20	1	7 75	34311	10 28	135587	14.05	69084	17 26	117746	22.50	153651	24.78	158023
5	1714	ws91ams.d	WS91AMS	CL-MH-SPS-20	1	7.75	33589	10.28	131953	14.05	68769	17.26	118381	22.50	153651	24 78	163622
6	1751	ws91amsd.d	WS91AMSD	CL-MH-SPS-20	1	7.75	34255	10.28	132932	14 06	67921	17.26	116920	22.50	151860	24.78	157493

YE 6/25/13

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 Element

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130620.b/SIM.b

Instrument: nt10.i Date: 20-JUN-2013 Method: SIM.b/SIMABN2.m

INITIAL CAL: 29-APR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 20-JUN-2013

Compound	%D
Pentachlorophenol	-26.4
Butylbenzylphthalate	27.4

Data File: /chem1/nt10.i/20130620.b/df0620.d

Date : 20-JUN-2013 10:03

Client ID: DFTPP

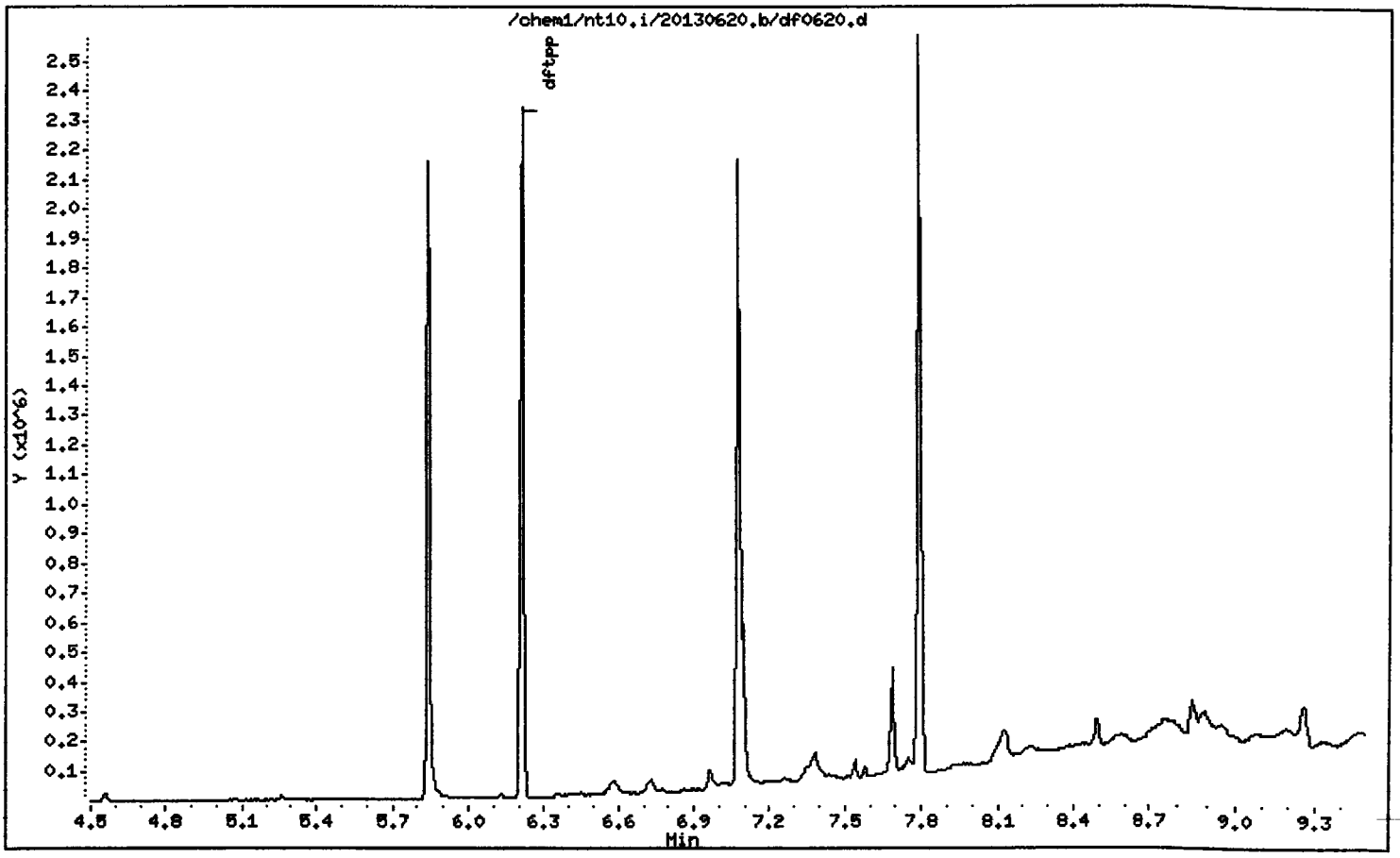
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130620.b/df0620.d

Date : 20-JUN-2013 10:03

Client ID: DFTPP

Instrument: nt10.i

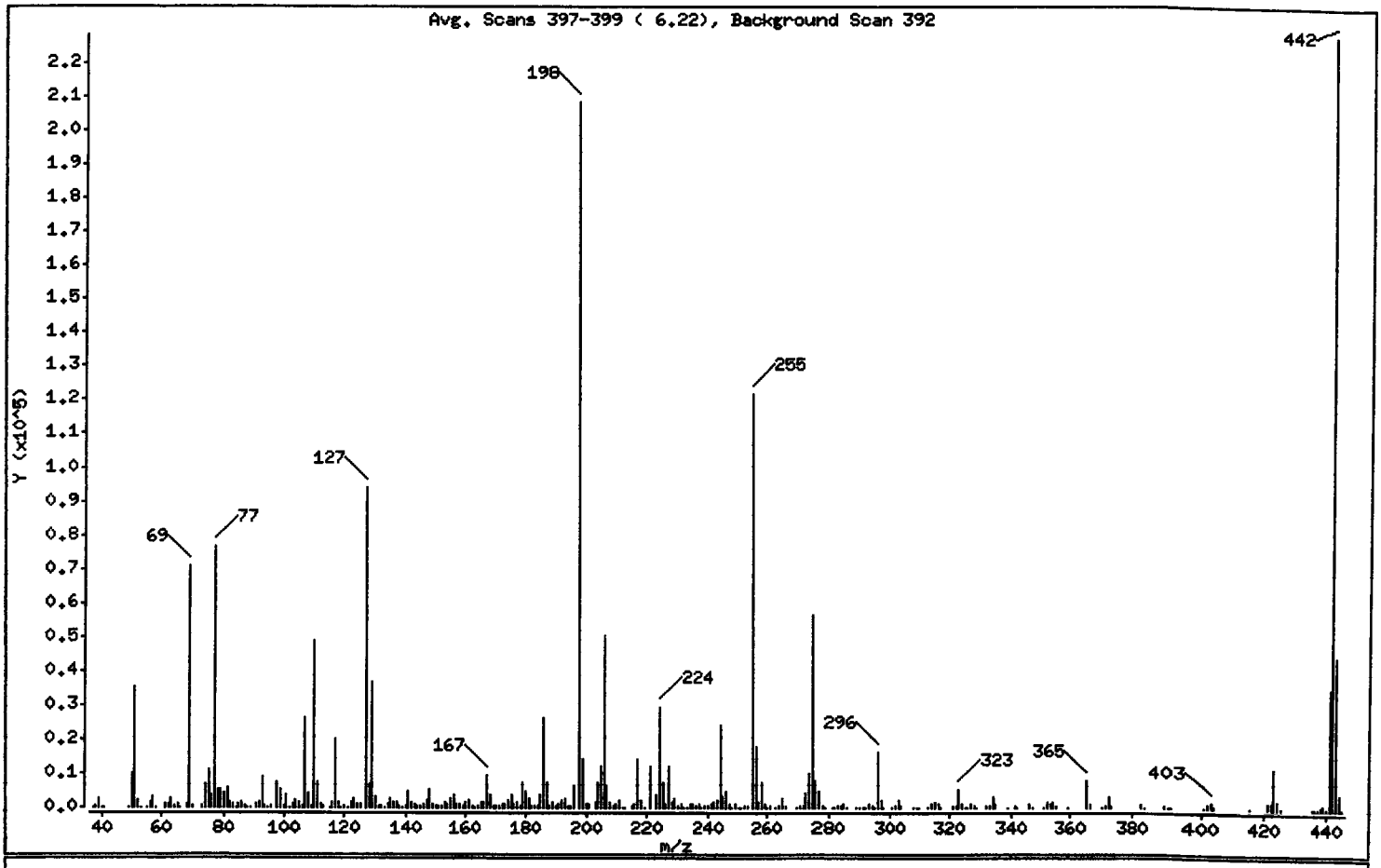
Sample Info: DFTPP

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	17.00
68	Less than 2.00% of mass 69	0.47 (1.39)
69	Mass 69 relative abundance	33.95
70	Less than 2.00% of mass 69	0.15 (0.43)
127	10.00 - 80.00% of mass 198	45.15
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.81
275	10.00 - 60.00% of mass 198	27.24
365	Greater than 1.00% of mass 198	3.90
441	0.01 - 24.00% of mass 442	16.89 (15.40)
442	50.00 - 200.00% of mass 198	109.68
443	15.00 - 24.00% of mass 442	21.40 (19.51)

Data File: /chem1/nt10.i/20130620.b/df0620.d

Date : 20-JUN-2013 10:03

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0620.d

Spectrum: Avg. Scans 397-399 (6.22), Background Scan 392

Location of Maximum: 442.00

Number of points: 300

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	157	130.00	3111	208.00	1738	296.00	256
38.00	467	131.00	686	209.00	670	296.00	16131
39.00	2807	132.00	369	210.00	990	297.00	2133
40.00	144	133.00	162	211.00	2148	298.00	140
41.00	58	134.00	1078	212.00	84	301.00	171
49.00	243	135.00	2803	213.00	197	302.00	371
50.00	9744	136.00	1322	215.00	726	303.00	1893
51.00	35400	137.00	1554	216.00	1215	304.00	581
52.00	1967	138.00	279	217.00	14285	308.00	241
53.00	51	139.00	211	218.00	1857	309.00	193
55.00	220	140.00	509	219.00	219	310.00	255
56.00	1669	141.00	4710	221.00	12110	313.00	252
57.00	3340	142.00	1569	223.00	3452	314.00	797
58.00	159	143.00	1121	224.00	29384	315.00	1825
61.00	791	144.00	336	225.00	7471	316.00	1003
62.00	942	145.00	364	226.00	834	317.00	150
63.00	2554	146.00	837	227.00	12336	321.00	563
64.00	411	147.00	2297	228.00	1665	322.00	295
65.00	1277	148.00	5045	229.00	2556	323.00	5283
66.00	50	149.00	918	230.00	414	324.00	1050
68.00	982	150.00	329	231.00	1100	325.00	57
69.00	70688	151.00	595	232.00	235	326.00	57
70.00	305	152.00	484	233.00	189	327.00	1062
73.00	275	153.00	1488	234.00	847	328.00	584
74.00	6816	154.00	1174	235.00	871	329.00	115
75.00	11028	155.00	2762	236.00	608	332.00	516
76.00	3546	156.00	3842	237.00	976	333.00	543
77.00	76552	157.00	828	238.00	150	334.00	3264
78.00	5080	158.00	930	239.00	626	335.00	836
79.00	5144	159.00	713	240.00	371	339.00	52
80.00	4173	160.00	1434	241.00	811	341.00	706
81.00	5700	161.00	2247	242.00	1727	342.00	131
82.00	1453	162.00	697	243.00	1965	346.00	1217
83.00	1122	163.00	251	244.00	24208	347.00	185
84.00	87	164.00	284	245.00	3188	351.00	110

USA1 : 99812

Data File: /chem1/nt10.i/20130620.b/df0620.d

Date : 20-JUN-2013 10:03

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0620.d

Spectrum: Avg. Scans 397-399 (6.22), Background Scan 392

Location of Maximum: 442.00

Number of points: 300

m/z	Y	m/z	Y	m/z	Y	m/z	Y
85.00	898	165.00	1636	246.00	4568	352.00	1638
86.00	1563	166.00	1431	247.00	938	353.00	1164
87.00	742	167.00	9253	248.00	241	354.00	1648
88.00	212	168.00	3576	249.00	948	355.00	343
89.00	144	169.00	732	250.00	181	359.00	116
91.00	1298	170.00	361	251.00	246	365.00	8116
92.00	1583	171.00	500	252.00	307	366.00	956
93.00	9056	172.00	859	253.00	716	370.00	190
94.00	734	173.00	1102	255.00	121968	371.00	512
95.00	199	174.00	2036	256.00	17680	372.00	2920
96.00	413	175.00	3698	257.00	1467	373.00	685
98.00	7115	176.00	1238	258.00	7313	383.00	854
99.00	5286	177.00	1704	259.00	1167	384.00	256
100.00	459	178.00	667	260.00	241	390.00	429
101.00	3420	179.00	7333	261.00	266	391.00	236
102.00	133	180.00	4767	263.00	69	392.00	255
103.00	1230	181.00	2417	264.00	342	401.00	153
104.00	2169	182.00	413	265.00	2866	402.00	1219
105.00	1815	183.00	282	266.00	426	403.00	1731
106.00	725	184.00	670	270.00	247	404.00	695
107.00	26120	185.00	3801	271.00	358	415.00	52
108.00	4056	186.00	26184	272.00	413	421.00	1628
109.00	715	187.00	7508	273.00	4032	422.00	1477
110.00	48872	188.00	756	274.00	9877	423.00	11638
111.00	7265	189.00	1811	275.00	56712	424.00	2226
112.00	1050	190.00	341	276.00	7713	425.00	207
113.00	360	191.00	900	277.00	4634	435.00	55
115.00	69	192.00	2294	278.00	704	436.00	66
116.00	1560	193.00	2681	279.00	192	437.00	205
117.00	19928	194.00	695	281.00	62	438.00	439
118.00	1484	195.00	569	282.00	133	439.00	811
119.00	170	196.00	6447	283.00	591	440.00	244
120.00	379	198.00	208192	284.00	366	441.00	35160
121.00	153	199.00	14177	285.00	917	442.00	228352
122.00	1770	200.00	1193	286.00	196	443.00	44552

Data File: /chem1/nt10.i/20130620.b/df0620.d

Date : 20-JUN-2013 10:03

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0620.d

Spectrum: Avg. Scans 397-399 (6.22), Background Scan 392

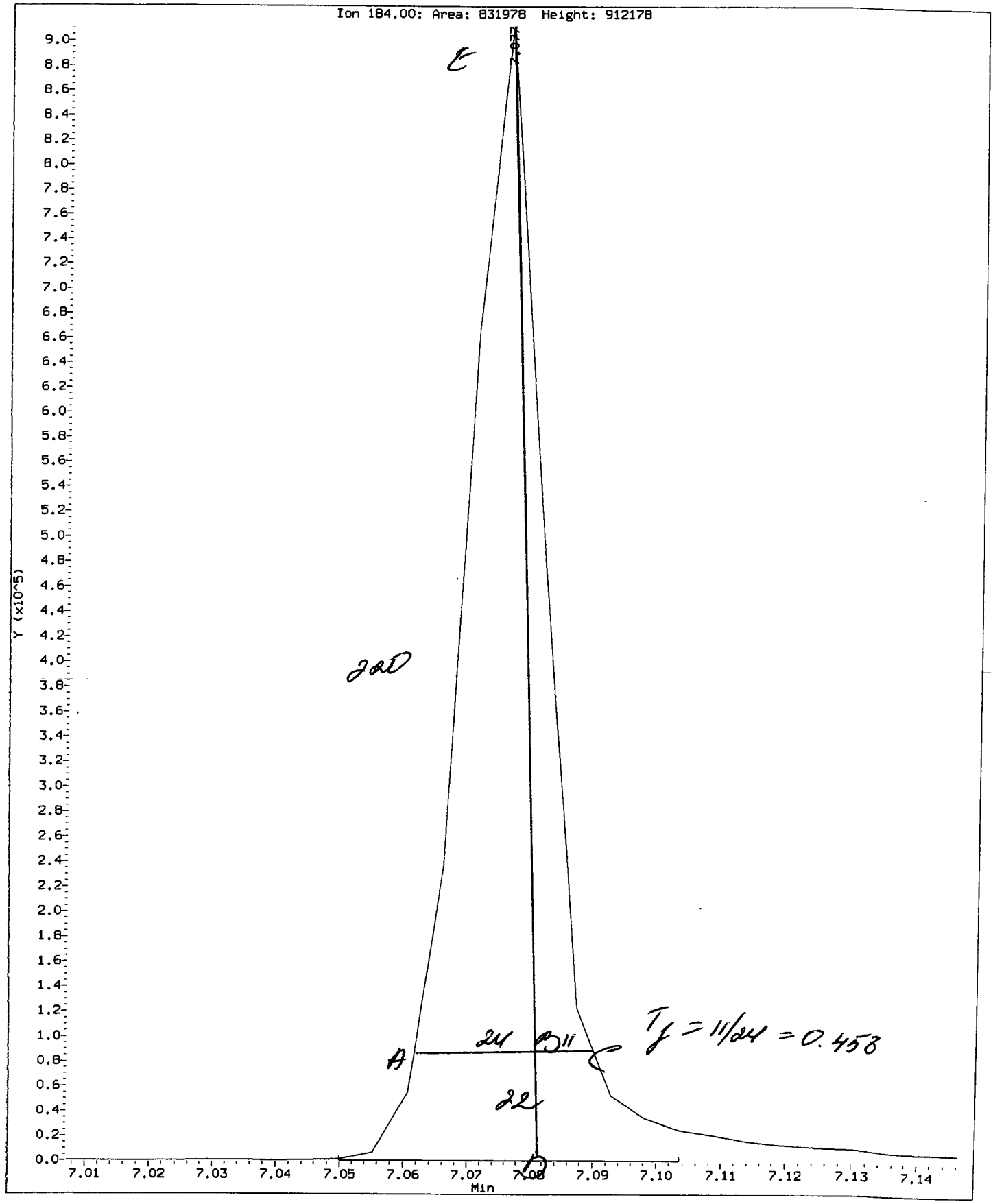
Location of Maximum: 442.00

Number of points: 300

m/z	Y	m/z	Y	m/z	Y	m/z	Y
123.00	2615	201.00	1064	289.00	245	444.00	4190
124.00	1288	203.00	1416	290.00	212	445.00	168
125.00	982	204.00	7133	291.00	131		
127.00	94000	205.00	12297	292.00	239		
128.00	6919	206.00	50344	293.00	1077		
129.00	36984	207.00	6503	294.00	274		

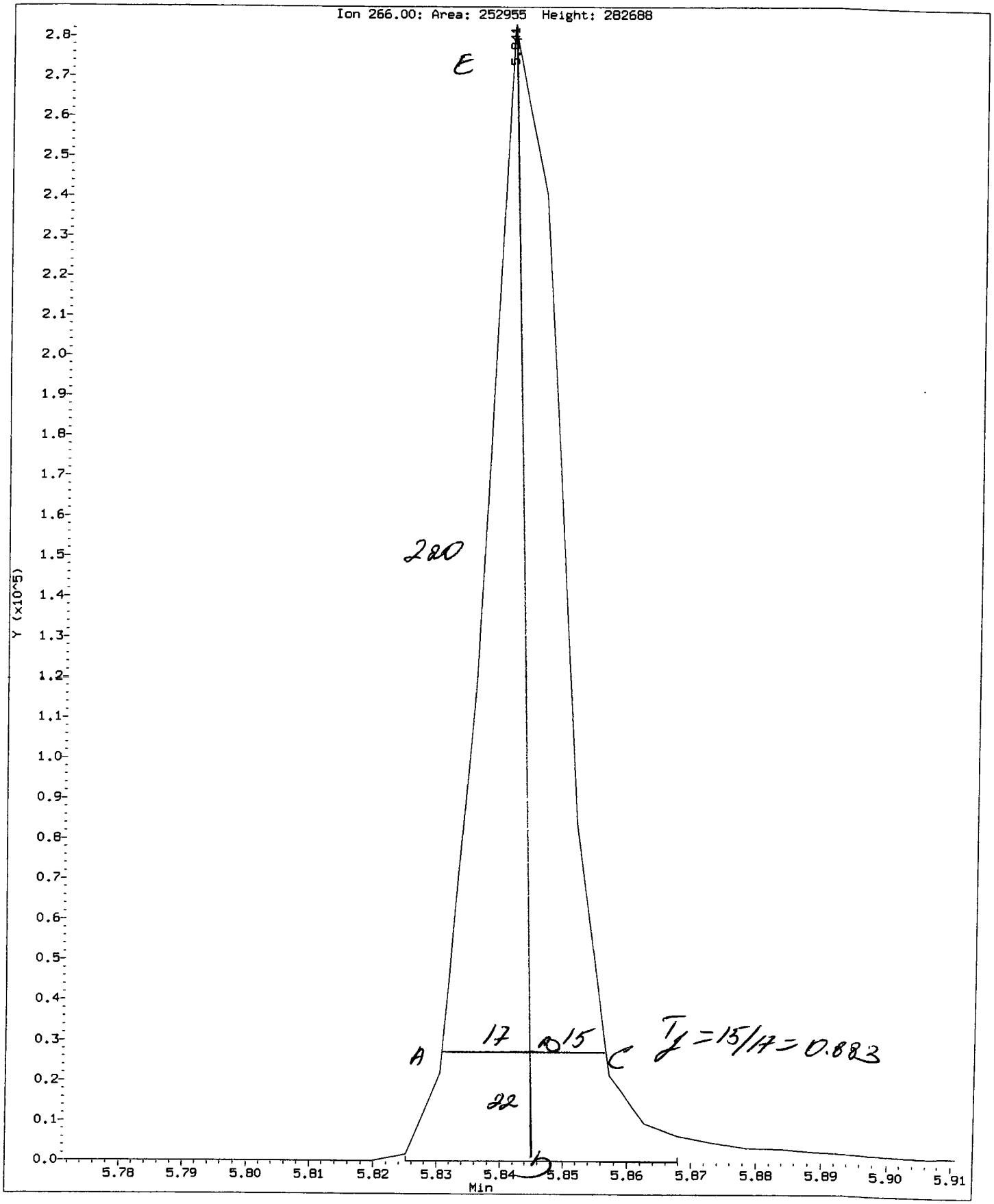
Data File: /chem1/nt10.i/20130620.b/ddt.b/df0620.d
Injection Date: 20-JUN-2013 10:03
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Data File: /chem1/nt10.i/20130620.b/ddt.b/df0620.d
Injection Date: 20-JUN-2013 10:03
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130620.b/ddt.b/df0620.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130620.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 20-JUN-2013 10:03 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	5.841	252955
Benzidine	7.077	831978
4,4'-DDE	7.259	1818
4,4'-DDD	7.542	11726
4,4'-DDT	7.793	466962

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(1818 + 11726) * 100}{(1818 + 11726 + 466962)}$$

DDT Percent Breakdown = 2.8 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 20-JUN-2013 10:57
Lab File ID: cc0620a.d Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Analysis Type: Init. Cal. Times: 16:53 21:47
Lab Sample ID: CC0620A Quant Type: ISTD
Method: /chem1/nt10.i/20130620.b/SIM.b/SIMABN2.m

COMPOUND	RRF / AMOUNT	RF1	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.40508	1.39961	0.010	-0.38947	20.00000	Averaged	
3 Phenol	2.01971	1.88917	0.010	-6.46325	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.66429	1.55563	0.010	-6.52929	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.65707	1.55513	0.010	-6.15131	20.00000	Averaged	
11 Benzyl alcohol	0.96865	0.97568	0.010	0.72591	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.57473	1.48837	0.010	-5.48411	20.00000	Averaged	
13 2-Methylphenol	1.44396	1.40052	0.010	-3.00840	20.00000	Averaged	
15 4-Methylphenol	1.47039	1.40776	0.010	-4.25967	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	0.82918	0.83442	0.050	0.63238	20.00000	Averaged	
22 2,4-Dimethylphenol	0.38748	0.37174	0.010	-4.06115	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.38338	0.36770	0.010	-4.09140	20.00000	Averaged	
30 Hexachlorobutadiene	0.23337	0.21829	0.010	-6.46092	20.00000	Averaged	
39 Dimethylphthalate	1.15411	1.19071	0.010	3.17136	20.00000	Averaged	
50 Diethylphthalate	1.30694	1.38445	0.010	5.93072	20.00000	Averaged	
54 N-Nitrosodiphenylamine	0.43858	0.46266	0.010	5.48980	20.00000	Averaged	
57 Hexachlorobenzene	0.29961	0.29014	0.010	-3.16164	20.00000	Averaged	
58 Pentachlorophenol	0.17813	0.13102	0.005	-26.44687	20.00000	Averaged	<-
$ 66 Terphenyl-d14	0.49170	0.51802	0.010	5.35177	20.00000	Averaged	
67 Butylbenzylphthalate	0.37109	0.47263	0.010	27.36186	20.00000	Averaged	<-
79 Dibenzo(a,h)anthracene	0.89160	0.99231	0.010	11.29507	20.00000	Averaged	
90 N-Nitrosodimethylamine	0.86193	0.80473	0.010	-6.63629	20.00000	Averaged	

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130620.b/SIM.b/cc0620a.d
Lab Smp Id: CC0620A
Inj Date : 20-JUN-2013 10:57
Operator : YZ Inst ID: nt10.i
Smp Info : CC0620A
Misc Info :
Comment :
Method : /chem1/nt10.i/20130620.b/SIM.b/SIMABN2.m
Meth Date : 25-Jun-2013 13:35 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 1 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)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	5.510	5.510	(0.716)	19915	1.00000	0.9961
	3 Phenol	94	7.202	7.202	(0.936)	26881	1.00000	0.9354
	7 1,3-Dichlorobenzene	146	7.627	7.627	(0.991)	22135	1.00000	0.9347
*	8 1,4-Dichlorobenzene-d4	152	7.697	7.697	(1.000)	56916	4.00000	
	9 1,4-Dichlorobenzene	146	7.728	7.728	(1.004)	22128	1.00000	0.9385
	11 Benzyl alcohol	79	8.046	8.046	(1.045)	13883	1.00000	1.007
	12 1,2-Dichlorobenzene	146	8.093	8.093	(1.051)	21178	1.00000	0.9452
	13 2-Methylphenol	108	8.326	8.326	(1.082)	19928	1.00000	0.9699
	15 4-Methylphenol	108	8.629	8.629	(1.121)	20031	1.00000	0.9574
	16 N-Nitroso-di-n-propylamine	70	8.621	8.621	(1.120)	11873	1.00000	1.006
	22 2,4-Dimethylphenol	107	9.691	9.691	(0.944)	38408	2.00000	1.919
	26 1,2,4-Trichlorobenzene	180	10.192	10.192	(0.993)	18995	1.00000	0.9591
*	27 Naphthalene-d8	136	10.262	10.262	(1.000)	206638	4.00000	
	30 Hexachlorobutadiene	225	10.725	10.725	(1.045)	11277	1.00000	0.9354
	39 Dimethylphthalate	163	13.635	13.635	(0.971)	34257	1.00000	1.032
*	42 Acenaphthene-d10	162	14.045	14.045	(1.000)	115081	4.00000	
	50 Diethylphthalate	149	15.189	15.189	(1.081)	39831	1.00000	1.059
	54 N-Nitrosodiphenylamine	169	15.537	15.537	(0.901)	25310	1.00000	1.055
	57 Hexachlorobenzene	284	16.593	16.593	(0.963)	15872	1.00000	0.9684
	58 Pentachlorophenol	266	17.011	17.011	(0.987)	14335	2.00000	1.471
*	59 Phenanthrene-d10	188	17.236	17.236	(1.000)	218821	4.00000	
$	66 Terphenyl-d14	244	20.617	20.617	(0.918)	29481	1.00000	1.054
	67 Butylbenzylphthalate	149	21.616	21.616	(0.962)	26898	1.00000	1.274
*	69 Chrysene-d12	240	22.460	22.460	(1.000)	227644	4.00000	
*	77 Perylene-d12	264	24.728	24.728	(1.000)	193988	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.333	26.333	(1.065)	48124	1.00000	1.113
	90 N-Nitrosodimethylamine	74	3.332	3.332	(0.433)	22901	2.00000	1.867

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0620a.d
Lab Smp Id: CC0620A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130620.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 20-JUN-2013
Calibration Time: 10:57

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	56916	8.09
27 Naphthalene-d8	192325	96162	384650	206638	7.44
42 Acenaphthene-d10	109274	54637	218548	115081	5.31
59 Phenanthrene-d10	203933	101966	407866	218821	7.30
69 Chrysene-d12	223647	111824	447294	227644	1.79
77 Perylene-d12	211919	105960	423838	193988	-8.46

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.70	7.20	8.20	7.70	0.00
27 Naphthalene-d8	10.26	9.76	10.76	10.26	0.00
42 Acenaphthene-d10	14.05	13.55	14.55	14.05	0.00
59 Phenanthrene-d10	17.24	16.74	17.74	17.24	0.00
69 Chrysene-d12	22.46	21.96	22.96	22.46	0.00
77 Perylene-d12	24.73	24.23	25.23	24.73	0.00

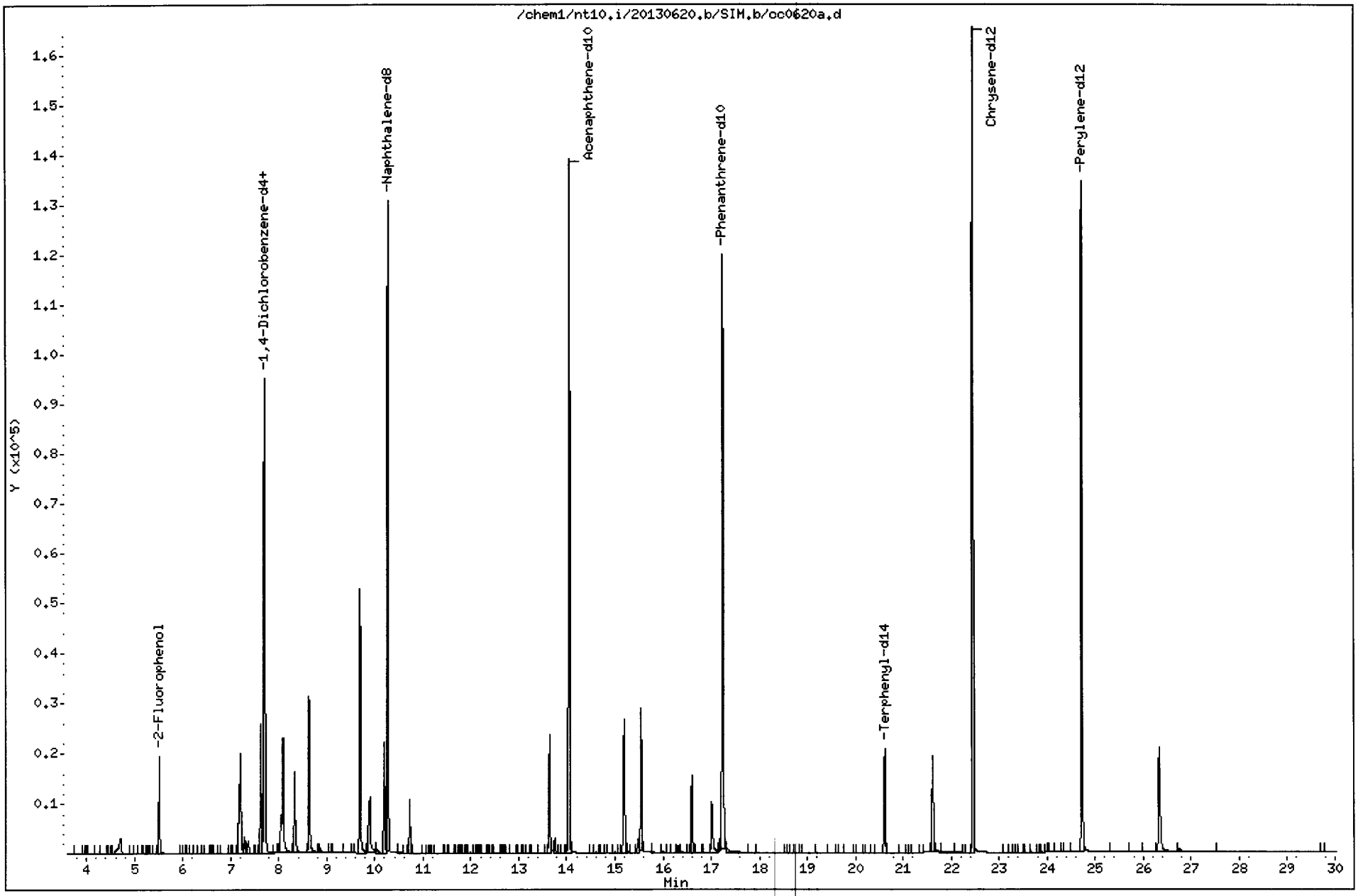
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130620.b/SIM.b/cc0620a.d
Date : 20-JUN-2013 10:57
Client ID:
Sample Info: CC0620A

Instrument: nt10.i

Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - cc0620a.d

Lab ID: CC0620A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 20-JUN-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 6/25/13

Data file : /chem1/nt10.i/20130620.b/SIM.b/ws91sb.d
Lab Smp Id: WS91LCSS1 Client Smp ID: WS91LCSS1
Inj Date : 20-JUN-2013 16:01
Operator : YZ Inst ID: nt10.i
Smp Info : WS91LCSS1
Misc Info : 13-12076
Comment :
Method : /chem1/nt10.i/20130620.b/SIM.b/SIMABN2.m
Meth Date : 25-Jun-2013 13:35 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 9 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	5.517	5.510	(0.717)	84828	4.76838	476.8
	3 Phenol	94	7.202	7.202	(0.936)	77020	3.01194	301.2
	7 1,3-Dichlorobenzene	146	7.620	7.627	(0.990)	64664	3.06877	306.9
*	8 1,4-Dichlorobenzene-d4	152	7.697	7.697	(1.000)	50644	4.00000	
	9 1,4-Dichlorobenzene	146	7.728	7.728	(1.004)	64694	3.08359	308.4
	11 Benzyl alcohol	79	8.039	8.046	(1.044)	39545	3.22445	322.4
	12 1,2-Dichlorobenzene	146	8.085	8.093	(1.050)	63404	3.18012	318.0
	13 2-Methylphenol	108	8.326	8.326	(1.082)	55480	3.03468	303.5
	15 4-Methylphenol	108	8.629	8.629	(1.121)	114478	6.14923	614.9
	16 N-Nitroso-di-n-propylamine	70	8.613	8.621	(1.119)	38010	3.62061	362.1
	22 2,4-Dimethylphenol	107	9.691	9.691	(0.944)	156694	8.72560	872.6
	26 1,2,4-Trichlorobenzene	180	10.192	10.192	(0.993)	58596	3.29782	329.8
*	27 Naphthalene-d8	136	10.262	10.262	(1.000)	185383	4.00000	
	30 Hexachlorobutadiene	225	10.725	10.725	(1.045)	34050	3.14816	314.8

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	13.635	13.635	(0.971)	130440	4.46631	446.6
*	42 Acenaphthene-d10	162	14.045	14.045	(1.000)	101222	4.00000	
	50 Diethylphthalate	149	15.189	15.189	(1.081)	149851	4.53095	453.1
	54 N-Nitrosodiphenylamine	169	15.544	15.537	(0.902)	66647	3.27088	327.1
	57 Hexachlorobenzene	284	16.593	16.593	(0.963)	49946	3.58825	358.8
	58 Pentachlorophenol	266	17.019	17.011	(0.987)	91347	11.0381	1104
*	59 Phenanthrene-d10	188	17.236	17.236	(1.000)	185833	4.00000	
$	66 Terphenyl-d14	244	20.617	20.617	(0.918)	104192	4.19315	419.3
	67 Butylbenzylphthalate	149	21.616	21.616	(0.962)	108800	5.80169	580.2
*	69 Chrysene-d12	240	22.460	22.460	(1.000)	202139	4.00000	
*	77 Perylene-d12	264	24.728	24.728	(1.000)	175694	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.341	26.333	(1.065)	153006	3.90697	390.7
	90 N-Nitrosodimethylamine	74	3.348	3.332	(0.435)	97600	8.94355	894.4

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ws91sb.d
Lab Smp Id: WS91LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130620.b/SIM.b/SIMABN2.m
Misc Info: 13-12076

Calibration Date: 20-JUN-2013
Calibration Time: 10:57
Client Smp ID: WS91LCSS1
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	52658	26329	105316	50644	-3.82
27 Naphthalene-d8	192325	96162	384650	185383	-3.61
42 Acenaphthene-d10	109274	54637	218548	101222	-7.37
59 Phenanthrene-d10	203933	101966	407866	185833	-8.88
69 Chrysene-d12	223647	111824	447294	202139	-9.62
77 Perylene-d12	211919	105960	423838	175694	-17.09

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.70	7.20	8.20	7.70	0.00
27 Naphthalene-d8	10.26	9.76	10.76	10.26	0.00
42 Acenaphthene-d10	14.05	13.55	14.55	14.05	0.00
59 Phenanthrene-d10	17.24	16.74	17.74	17.24	0.00
69 Chrysene-d12	22.46	21.96	22.96	22.46	0.00
77 Perylene-d12	24.73	24.23	25.23	24.73	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: WS91LCSS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130620.b/SIM.b/SIMABN2.m
Misc Info: 13-12076

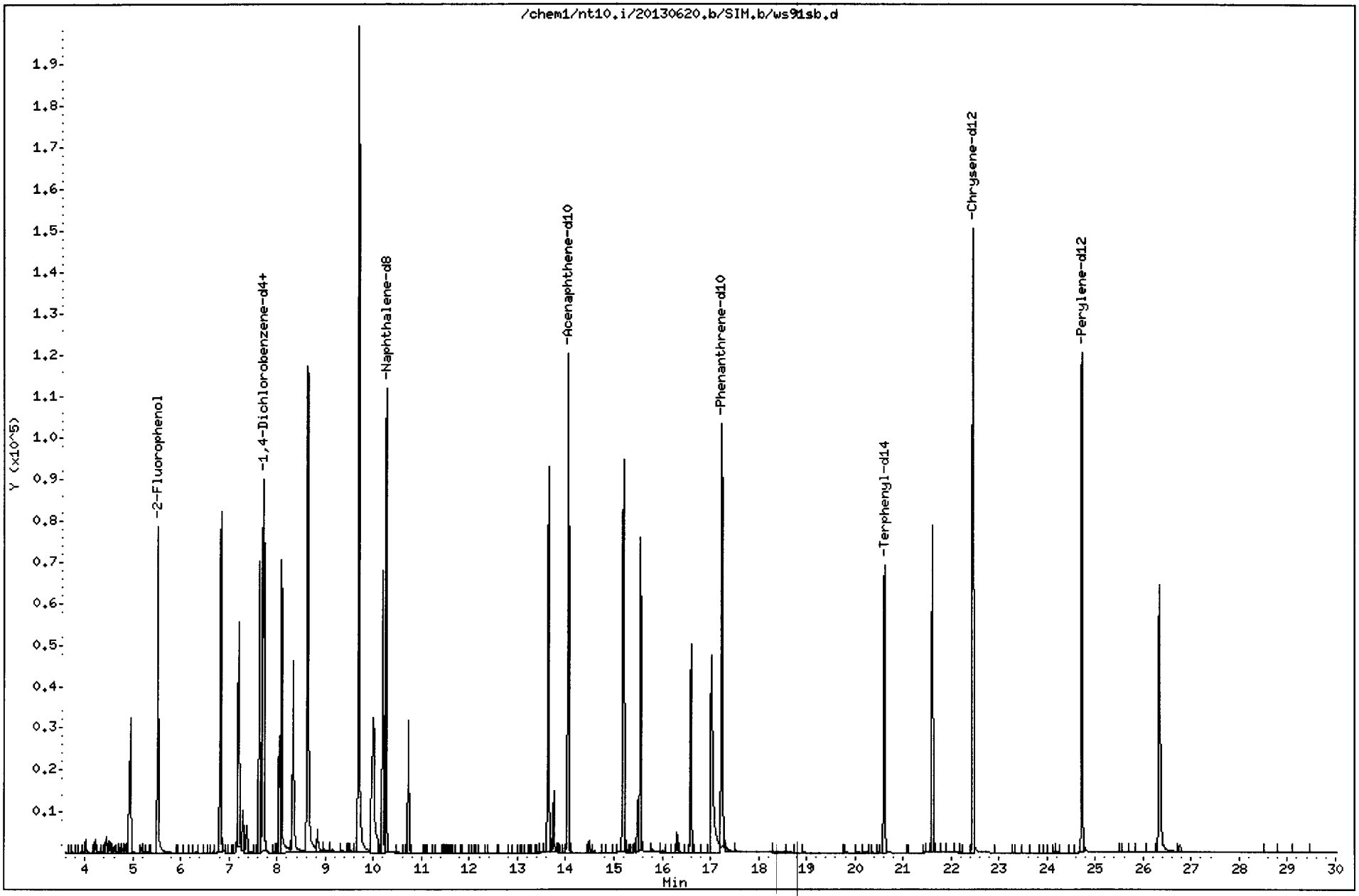
Client SDG: WS91
Fraction: SV
Client Smp ID: WS91LCSS1
Operator: YZ
SampleType: LCS
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	301.2	60.24	30-160
7	1,3-Dichlorobenzen	500.0	306.9	61.38	30-160
9	1,4-Dichlorobenzen	500.0	308.4	61.67	30-160
11	Benzyl alcohol	500.0	322.4	64.49	30-160
12	1,2-Dichlorobenzen	500.0	318.0	63.60	30-160
13	2-Methylphenol	500.0	303.5	60.69	30-160
15	4-Methylphenol	1000	614.9	61.49	30-160
16	N-Nitroso-di-n-pro	500.0	362.1	72.41	30-160
22	2,4-Dimethylphenol	1000	872.6	87.26	30-160
26	1,2,4-Trichloroben	500.0	329.8	65.96	30-160
30	Hexachlorobutadien	500.0	314.8	62.96	30-160
39	Dimethylphthalate	500.0	446.6	89.33	30-160
50	Diethylphthalate	500.0	453.1	90.62	30-160
54	N-Nitrosodiphenyla	500.0	327.1	65.42	30-160
57	Hexachlorobenzene	500.0	358.8	71.76	30-160
58	Pentachlorophenol	1000	1104	110.38	30-160
67	Butylbenzylphthala	500.0	580.2	116.03	30-160
79	Dibenzo(a,h)anthra	500.0	390.7	78.14	30-160
90	N-Nitrosodimethyla	1000	894.4	89.44	30-160

	SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	750.0	476.8	63.58	30-160
$ 66	Terphenyl-d14	500.0	419.3	83.86	30-160

Data File: /chem1/nt10.i/20130620.b/SIM.b/ws91sb.d
Date : 20-JUN-2013 16:01
Client ID: WS91LCSS1
Sample Info: WS91LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ws91sb.d

Lab ID: WS91LCSS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 20-JUN-

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 6/25/13

Data file : /chem1/nt10.i/20130620.b/SIM.b/ws91a.d
Lab Smp Id: WS91A Client Smp ID: CL-MH-SPS-20130605-
Inj Date : 20-JUN-2013 16:38
Operator : YZ Inst ID: nt10.i
Smp Info : WS91A
Misc Info : 13-12076
Comment :
Method : /chem1/nt10.i/20130620.b/SIM.b/SIMABN2.m
Meth Date : 20-Jun-2013 11:44 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 10
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	13.27000	Weight of sample extracted (g)
M	59.30000	% 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	5.943	5.510	(0.767)	38726	3.21313	594.9(M)
	3 Phenol	94	7.434	7.202	(0.959)	73748	4.25685	788.2(H)
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	7.751	7.697	(1.000)	34311	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	8.714	8.629	(1.124)	18520	1.46837	271.9
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	9.745	9.691	(0.948)	7676	0.58443	108.2
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	10.285	10.262	(1.000)	135587	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	13.627	13.635	(0.970)	1422	0.07134	13.21(M)
*	42 Acenaphthene-d10	162	14.053	14.045	(1.000)	69084	4.00000	
	50 Diethylphthalate	149	15.205	15.189	(1.082)	1735	0.07686	14.23(M)
	54 N-Nitrosodiphenylamine	169	15.544	15.537	(0.901)	6388	0.49480	91.61
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.259	17.236	(1.000)	117746	4.00000	
$	66 Terphenyl-d14	244	20.648	20.617	(0.918)	83125	4.40101	814.9
	67 Butylbenzylphthalate	149	21.647	21.616	(0.962)	2564	0.17987	33.30
*	69 Chrysene-d12	240	22.498	22.460	(1.000)	153651	4.00000	
*	77 Perylene-d12	264	24.782	24.728	(1.000)	158023	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.411	26.333	(1.066)	1924	0.05462	10.11(M)
	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: ws91a.d
Lab Smp Id: WS91A
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130620.b/SIM.b/SIMABN2.m
Misc Info: 13-12076

Calibration Date: 20-JUN-2013
Calibration Time: 10:57
Client Smp ID: CL-MH-SPS-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	52658	26329	105316	34311	-34.84
27 Naphthalene-d8	192325	96162	384650	135587	-29.50
42 Acenaphthene-d10	109274	54637	218548	69084	-36.78
59 Phenanthrene-d10	203933	101966	407866	117746	-42.26
69 Chrysene-d12	223647	111824	447294	153651	-31.30
77 Perylene-d12	211919	105960	423838	158023	-25.43

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.70	7.20	8.20	7.75	0.71
27 Naphthalene-d8	10.26	9.76	10.76	10.28	0.23
42 Acenaphthene-d10	14.05	13.55	14.55	14.05	0.06
59 Phenanthrene-d10	17.24	16.74	17.74	17.26	0.14
69 Chrysene-d12	22.46	21.96	22.96	22.50	0.17
77 Perylene-d12	24.73	24.23	25.23	24.78	0.22

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.

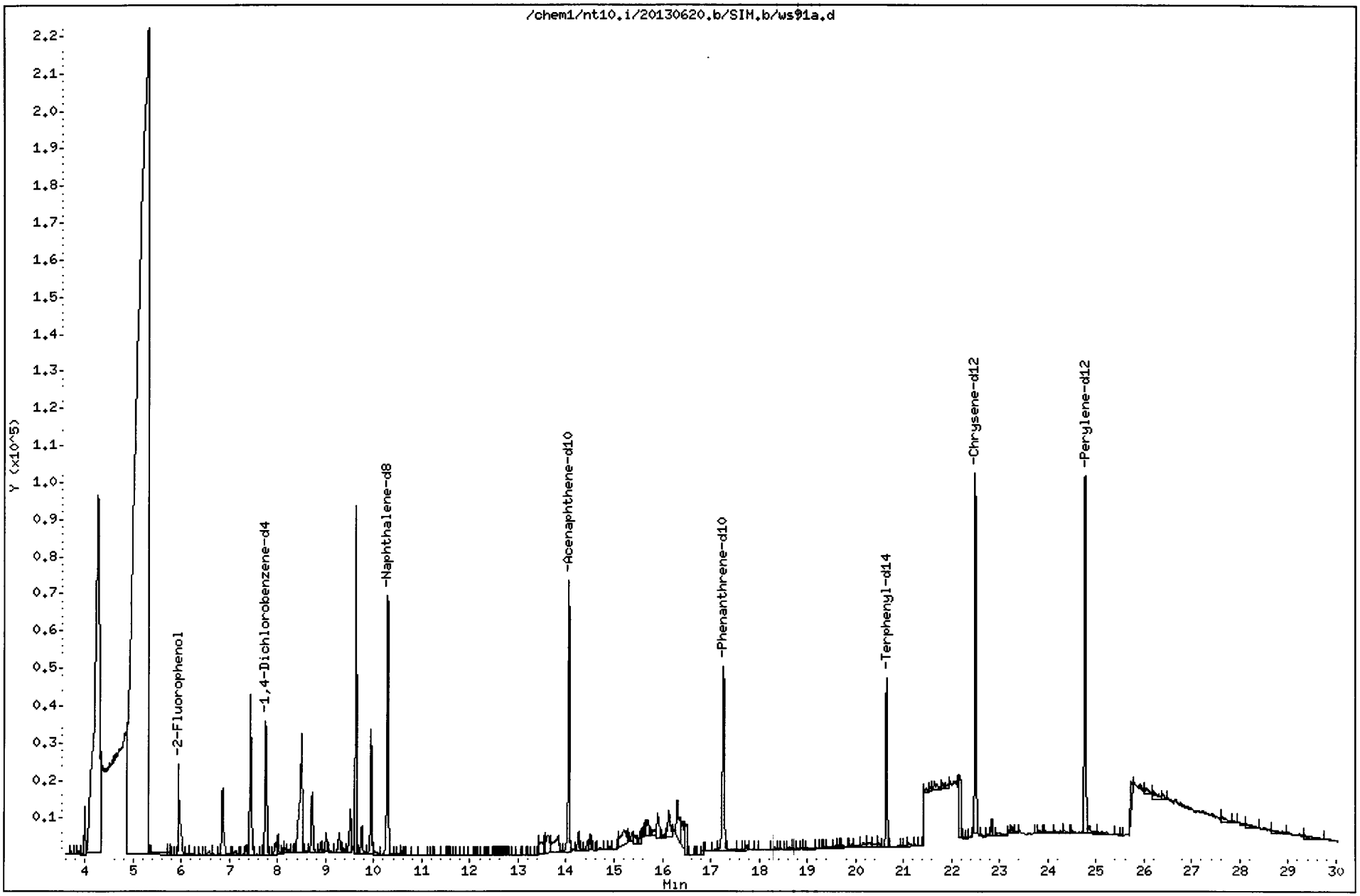
RECOVERY REPORT

Client Name: SAIC
Client SDG: WS91
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WS91A
Client Smp ID: CL-MH-SPS-20130605-
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/20130620.b/SIM.b/SIMABN2.m
Misc Info: 13-12076

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	1389	594.9	42.84	30-160
$ 66 Terphenyl-d14	925.8	814.9	88.02	30-160

Data File: /chem1/nt10.i/20130620.b/SIM.b/ws91a.d
Date : 20-JUN-2013 16:38
Client ID: CL-MH-SPS-20130605-
Sample Info: WS91A
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130620.b/SIM.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

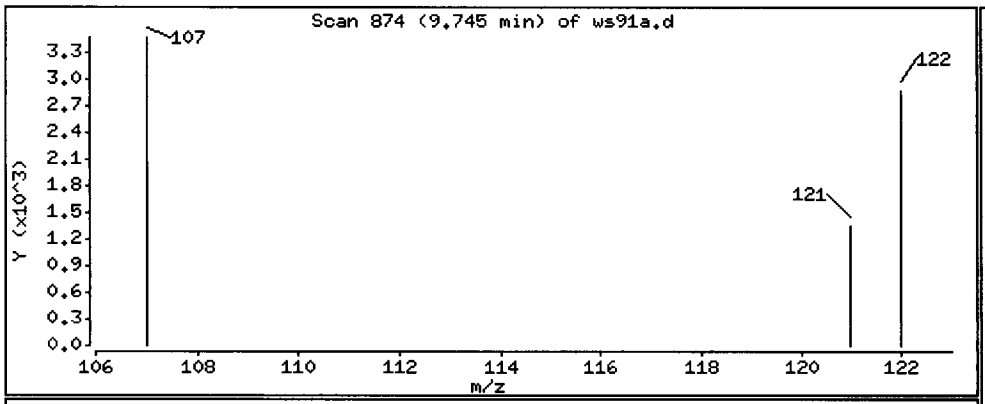
Operator: YZ

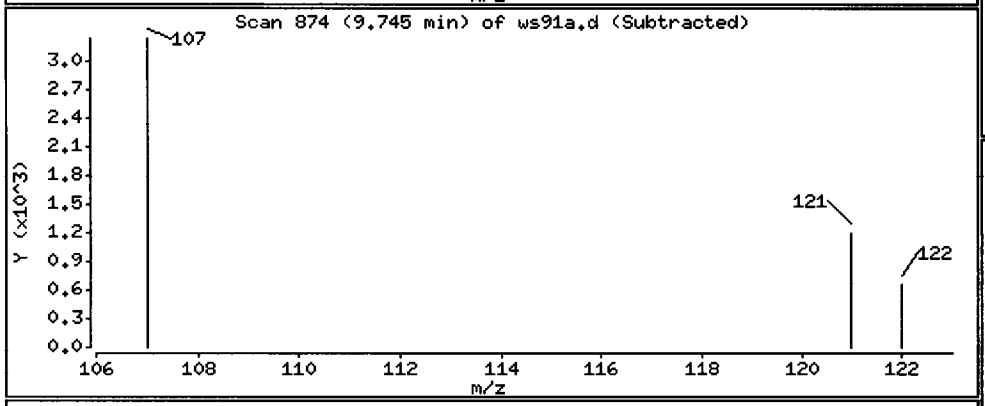
Column phase: ZB-5msi

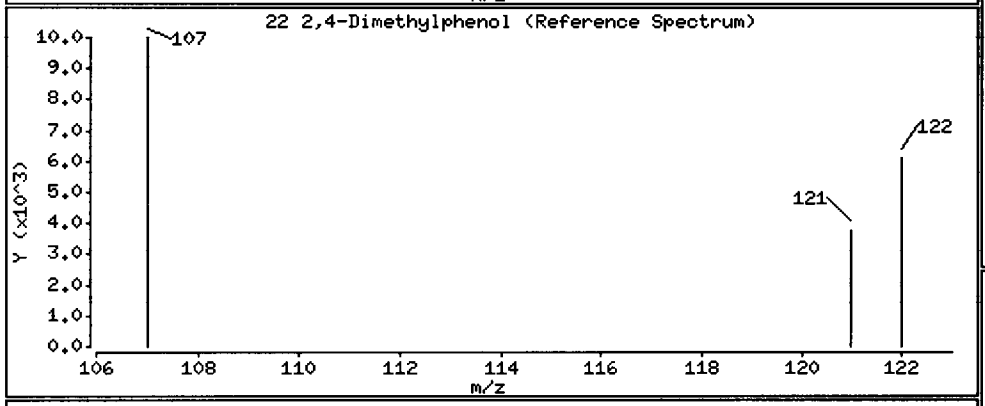
Column diameter: 0.25

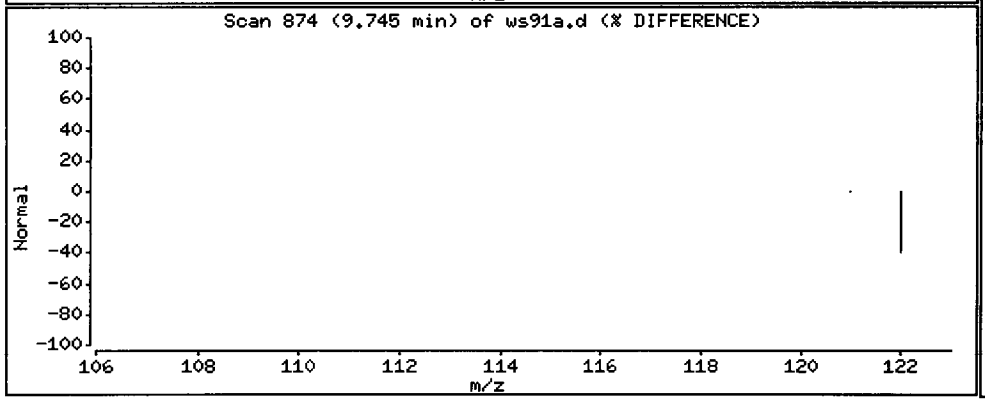
22 2,4-Dimethylphenol

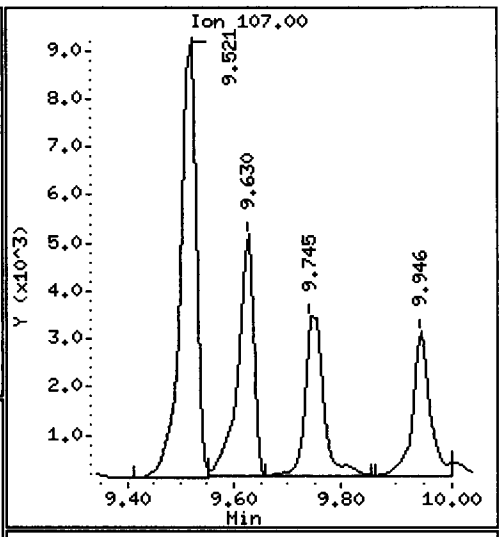
Concentration: 108.2 ug/kg

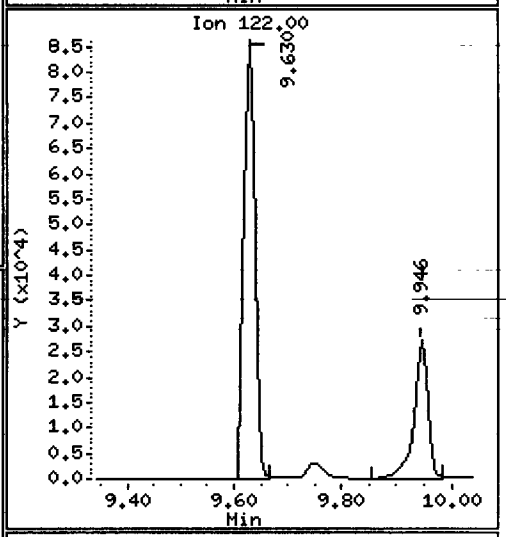


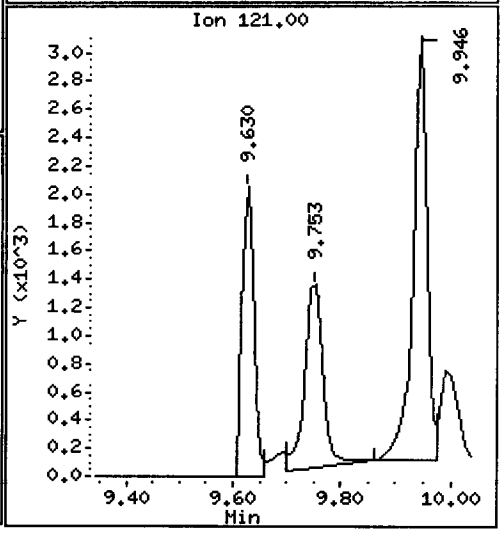












WS91 : 00634

Data File: /chem1/nt10.i/20130620.b/SIM.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

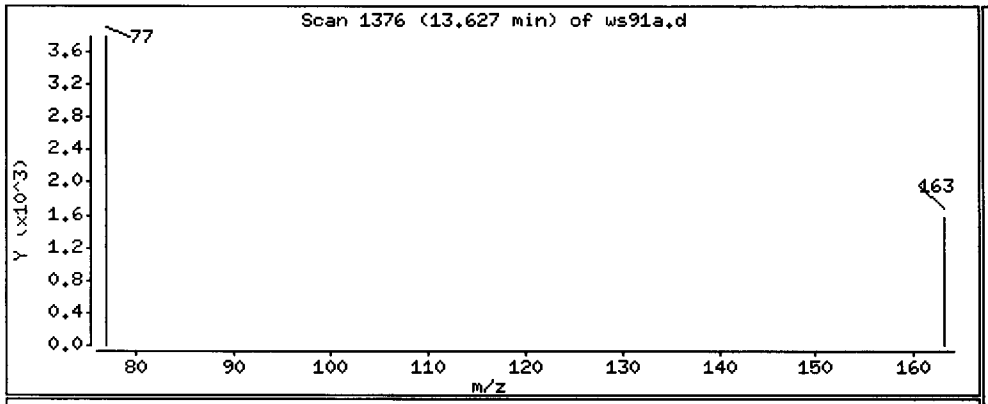
Operator: YZ

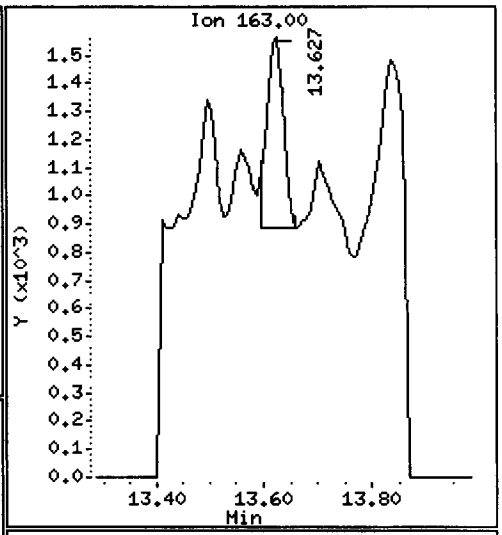
Column phase: ZB-5msi

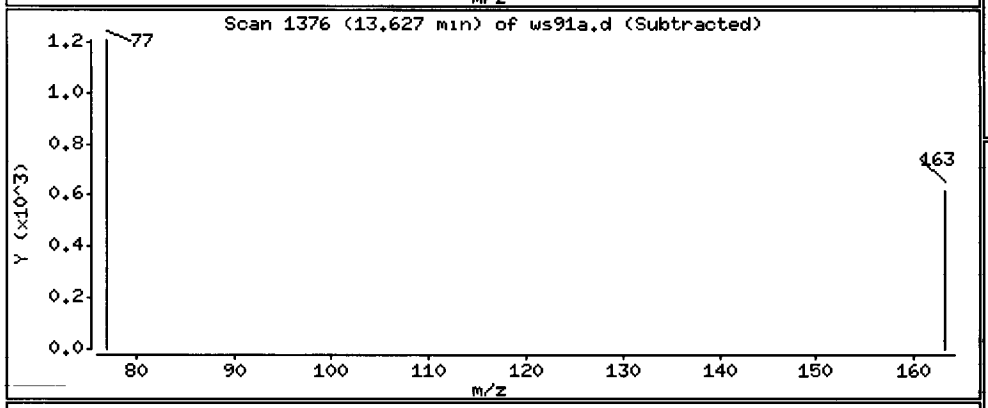
Column diameter: 0.25

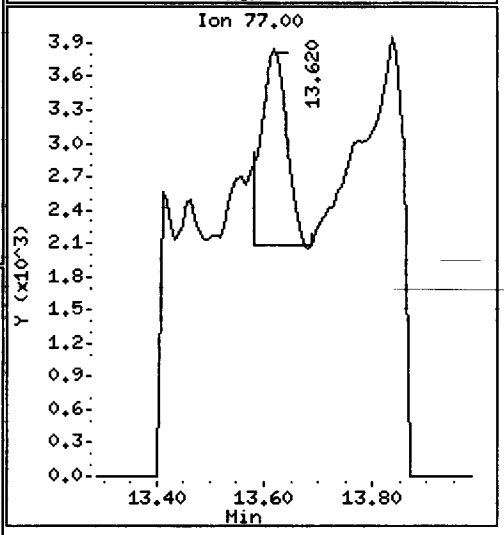
39 Dimethylphthalate

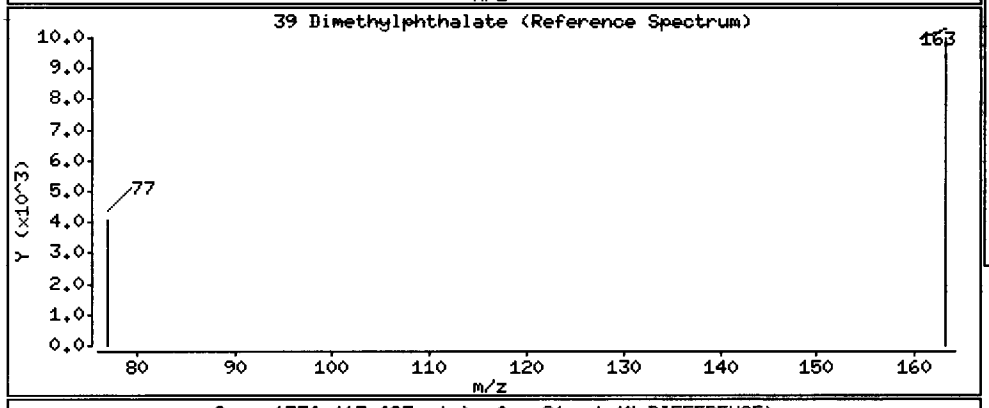
Concentration: 13.21 ug/kg

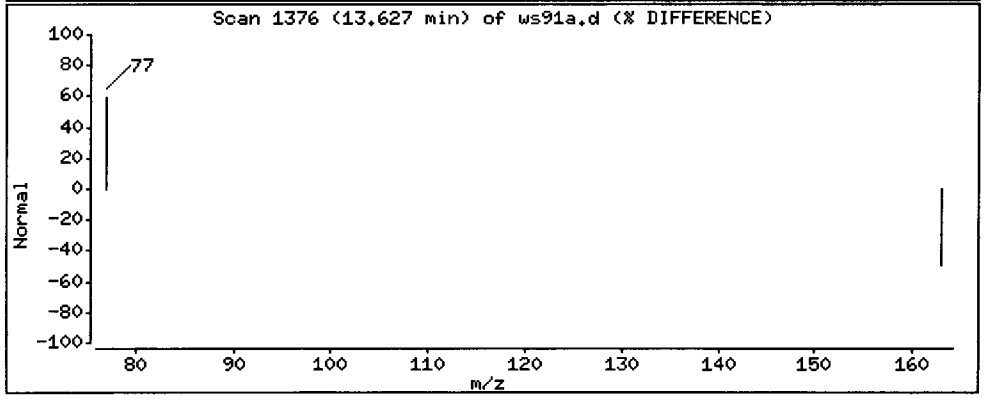












Data File: /chem1/nt10.i/20130620.b/SIM.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

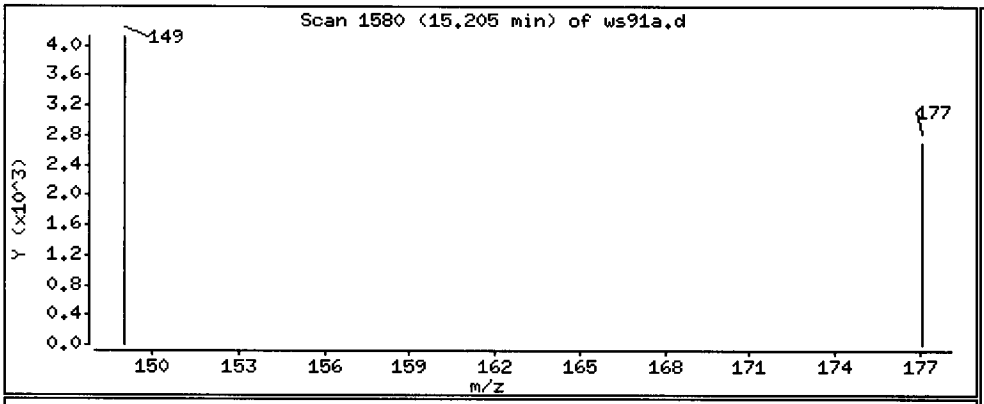
Operator: YZ

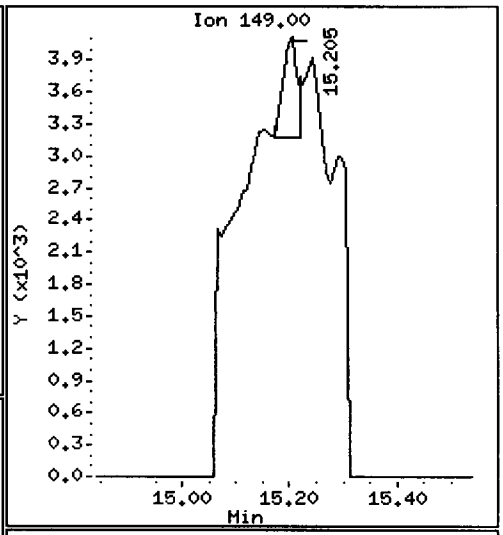
Column phase: ZB-5ms1

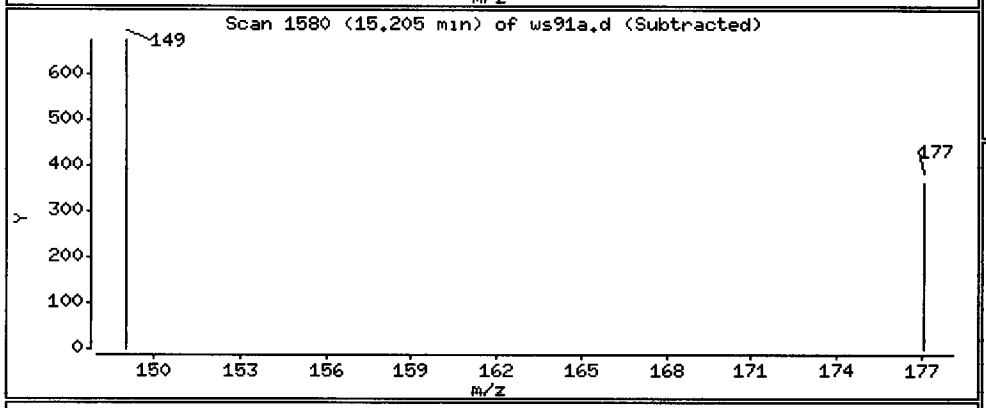
Column diameter: 0.25

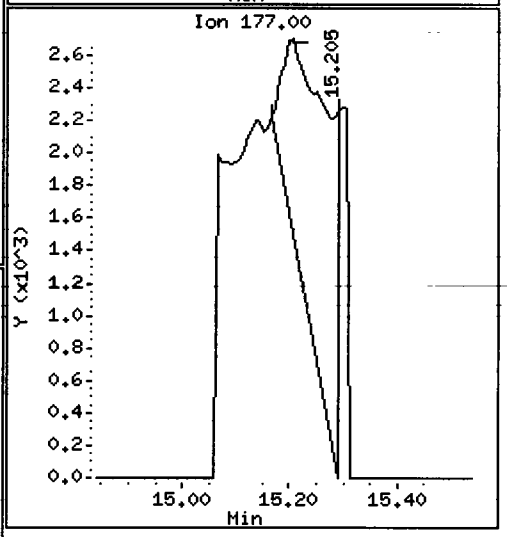
50 Diethylphthalate

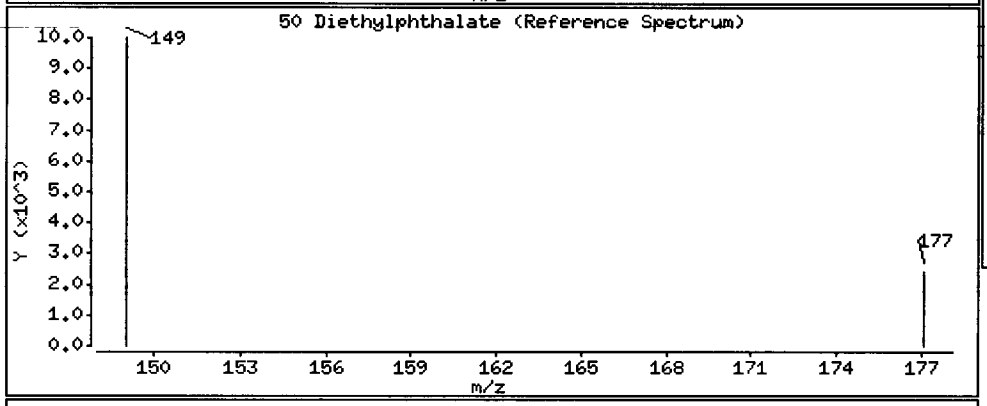
Concentration: 14.23 ug/kg

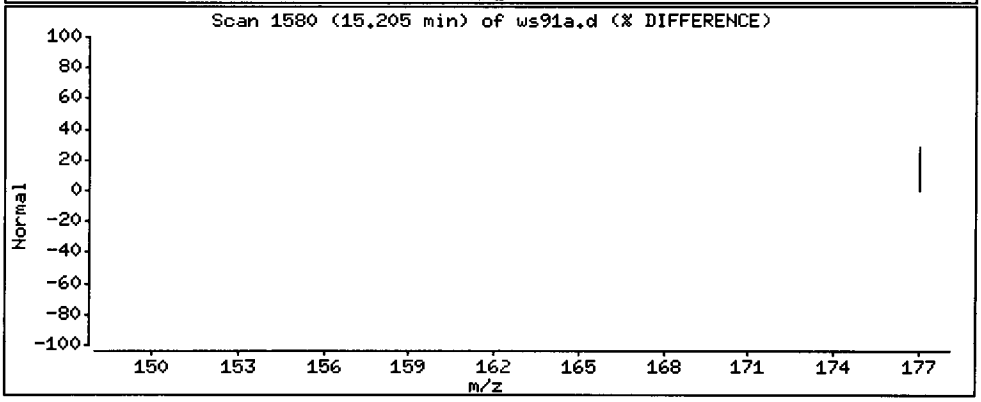












Data File: /chem1/nt10.i/20130620.b/SIM.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

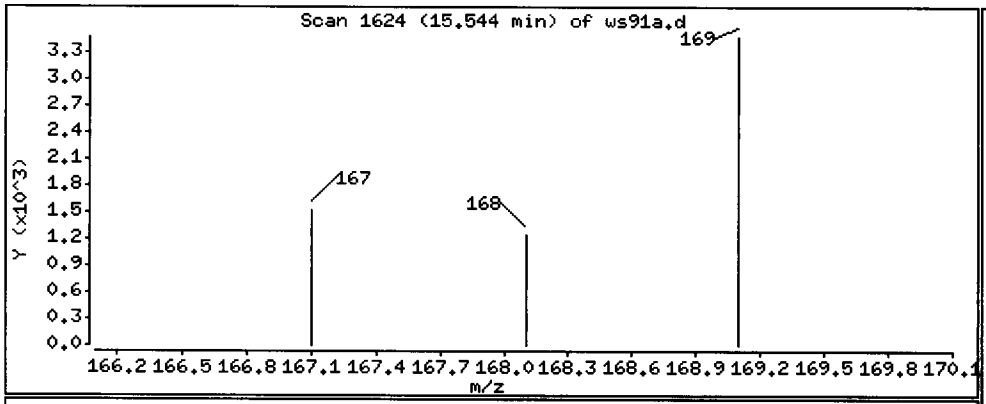
Operator: YZ

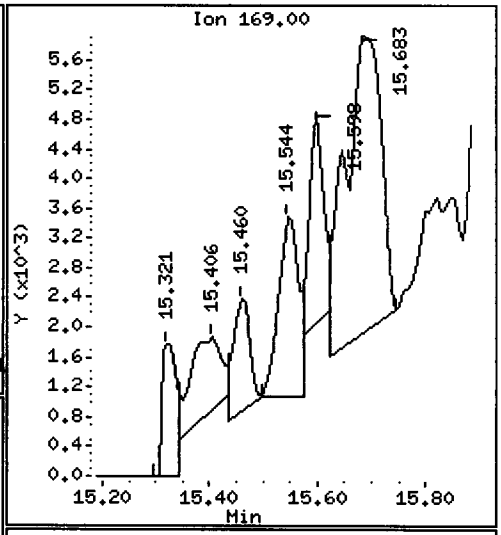
Column phase: ZB-5ms1

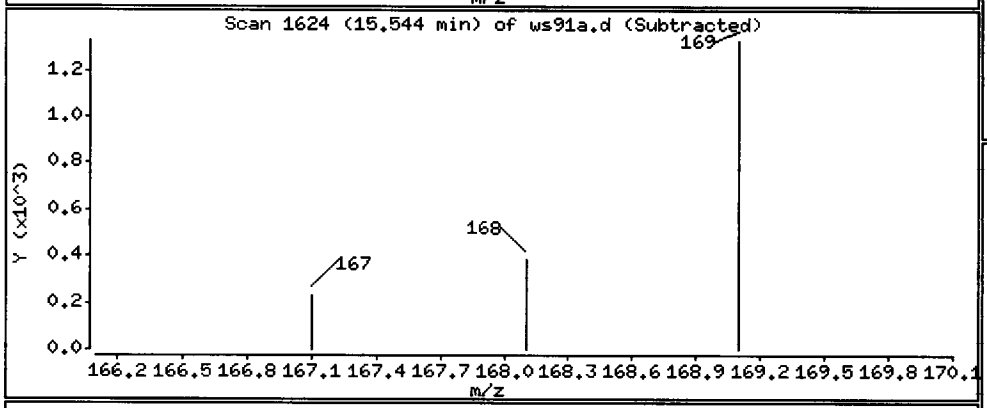
Column diameter: 0.25

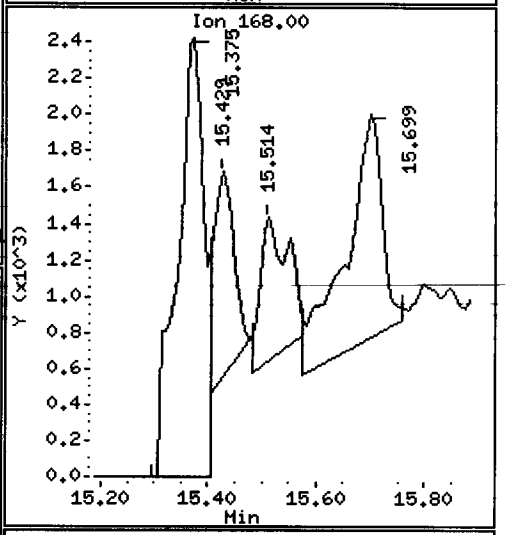
54 N-Nitrosodiphenylamine

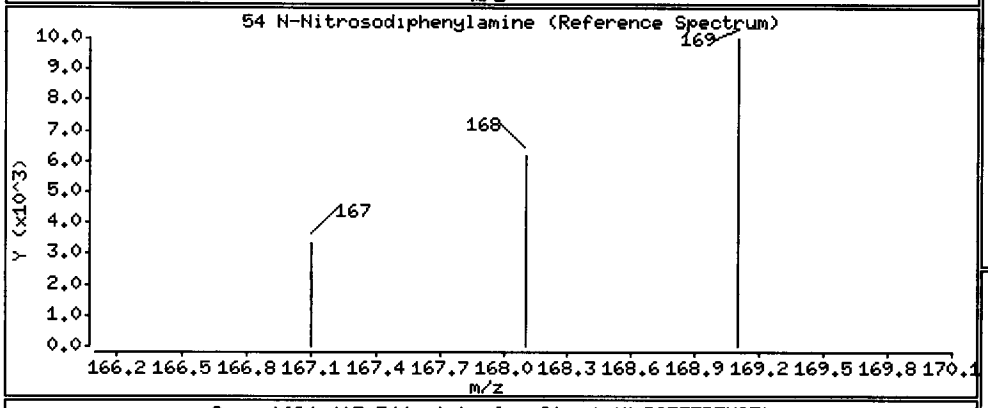
Concentration: 91.61 ug/kg

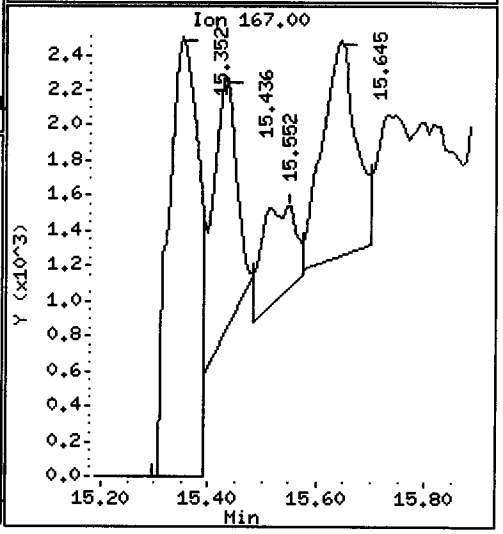


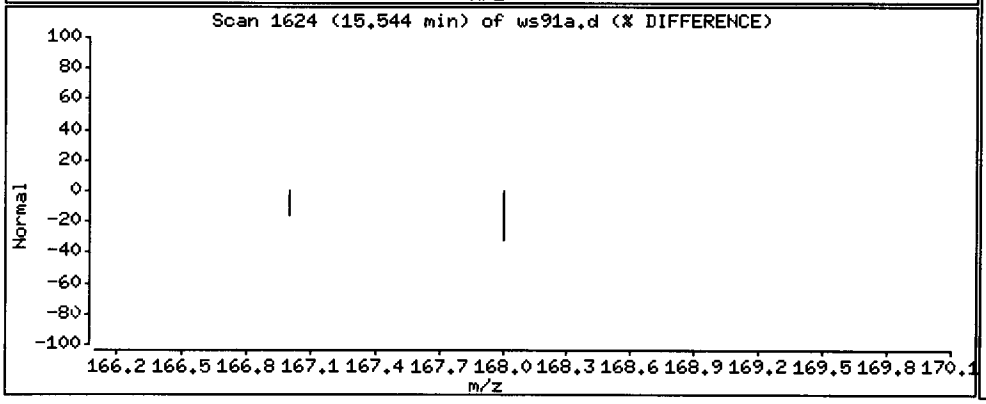












Data File: /chem1/nt10.i/20130620.b/SIM.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

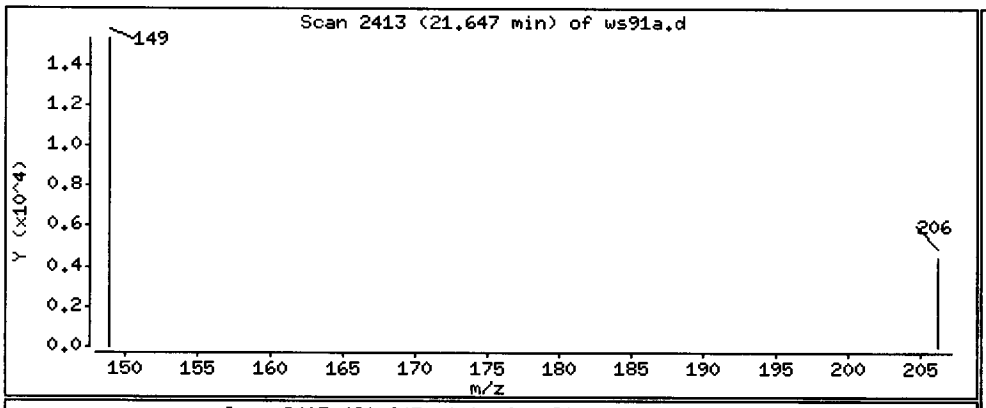
Operator: YZ

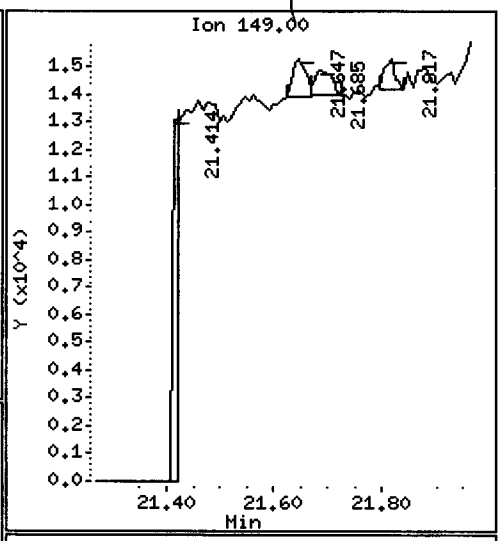
Column phase: ZB-5ms1

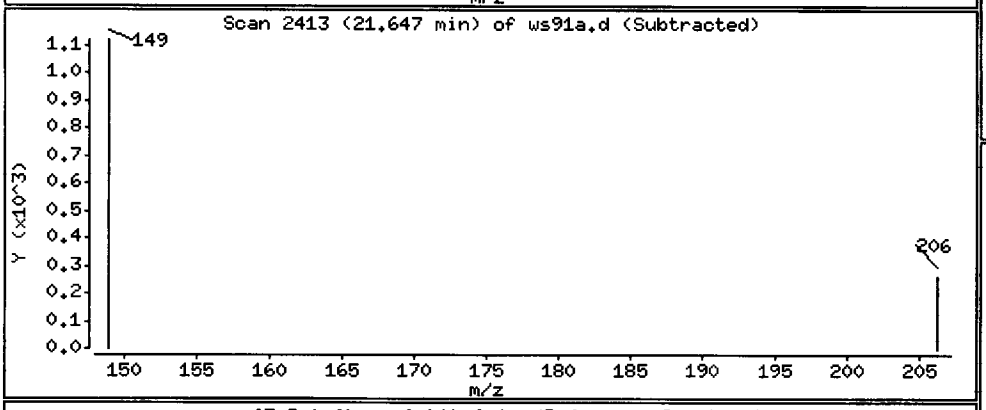
Column diameter: 0.25

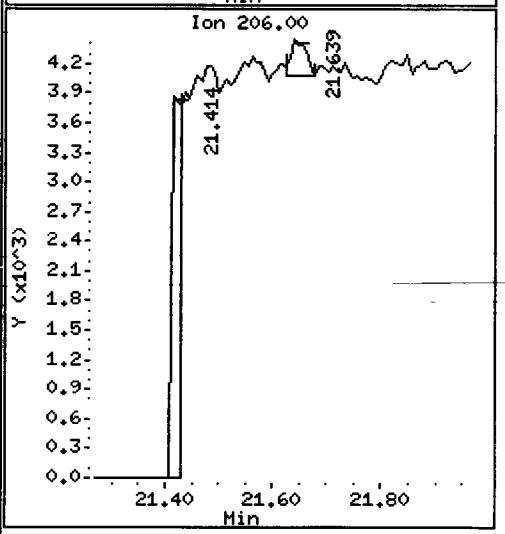
67 Butylbenzylphthalate

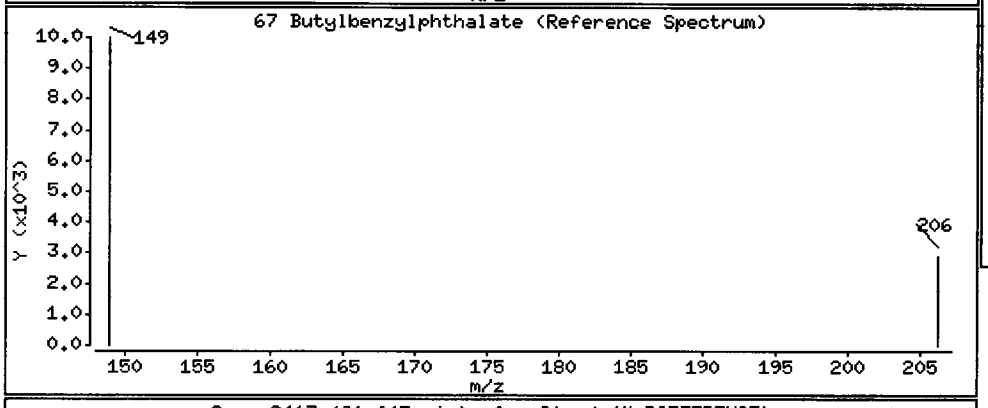
Concentration: 33.30 ug/kg

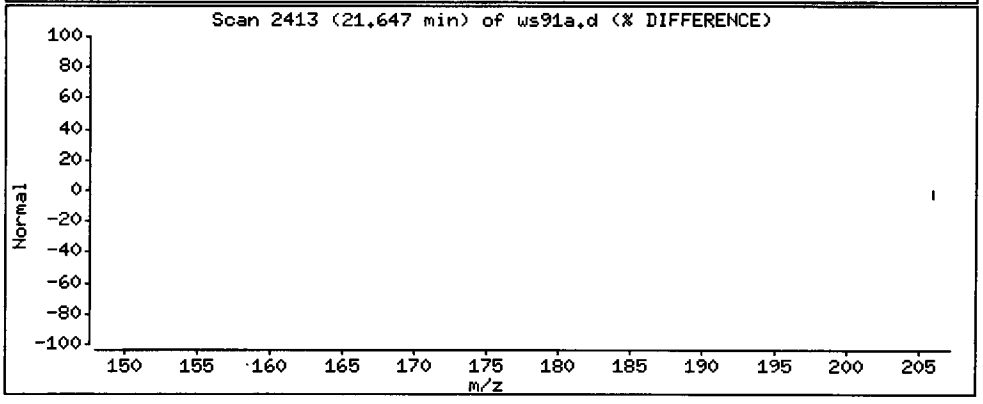












Data File: /chem1/nt10.i/20130620.b/SIM.b/ws91a.d

Date : 20-JUN-2013 16:38

Client ID: CL-MH-SPS-20130605-

Instrument: nt10.i

Sample Info: WS91A

Volume Injected (uL): 1.0

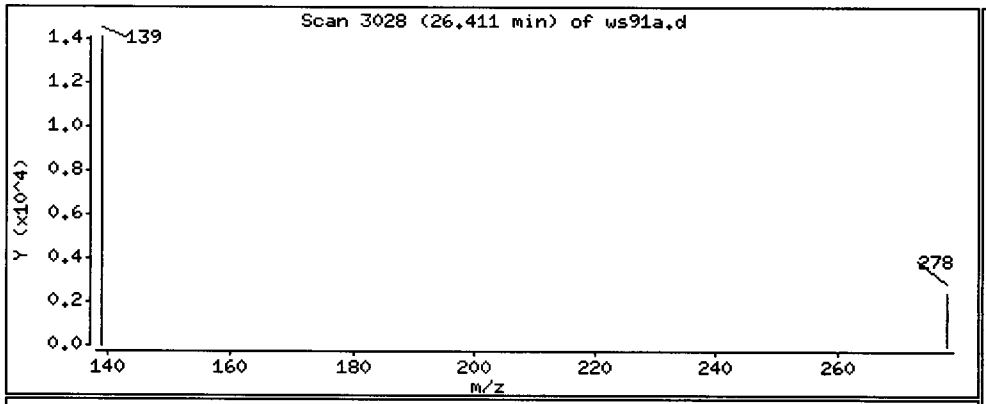
Operator: YZ

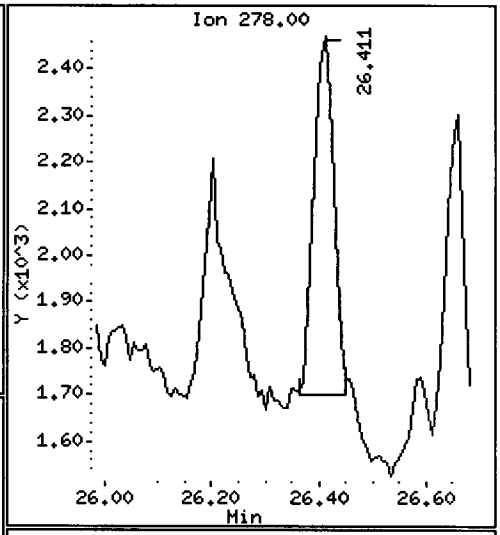
Column phase: ZB-5ms1

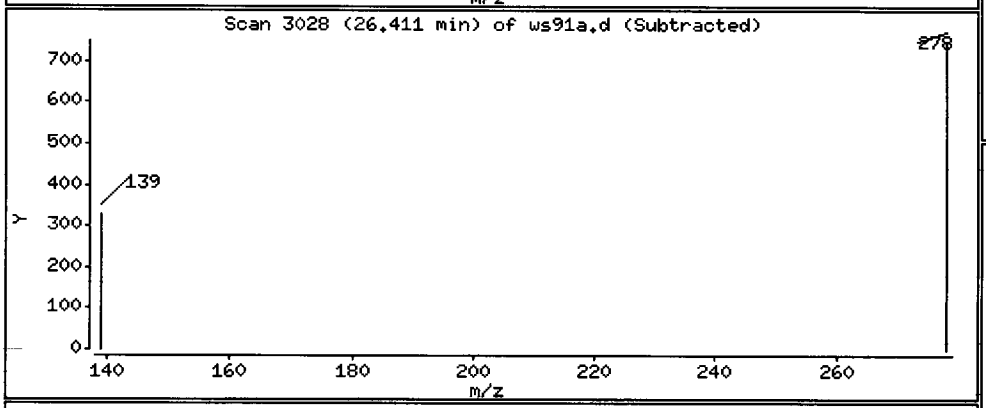
Column diameter: 0.25

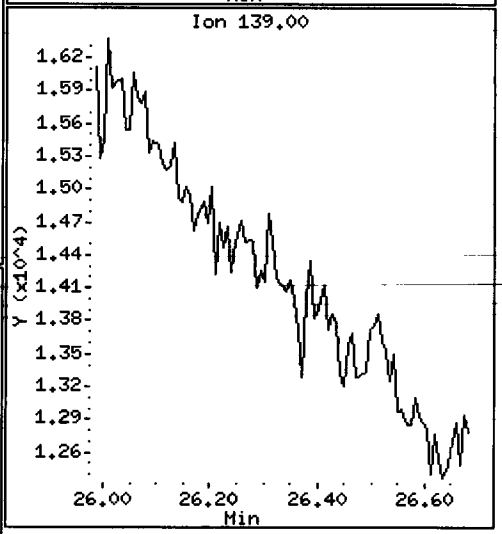
79 Dibenzo(a,h)anthracene

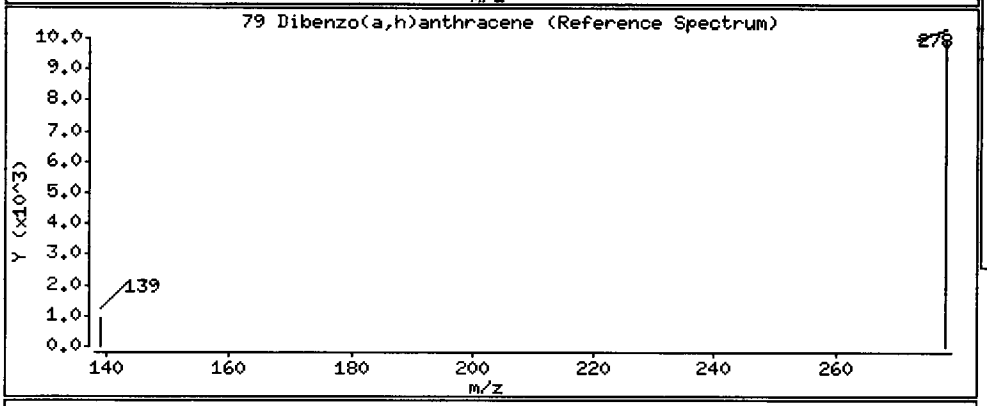
Concentration: 10.11 ug/kg

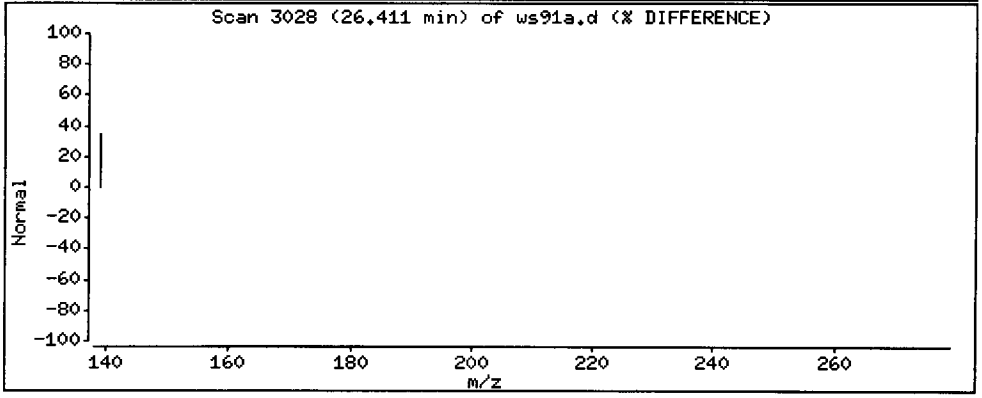






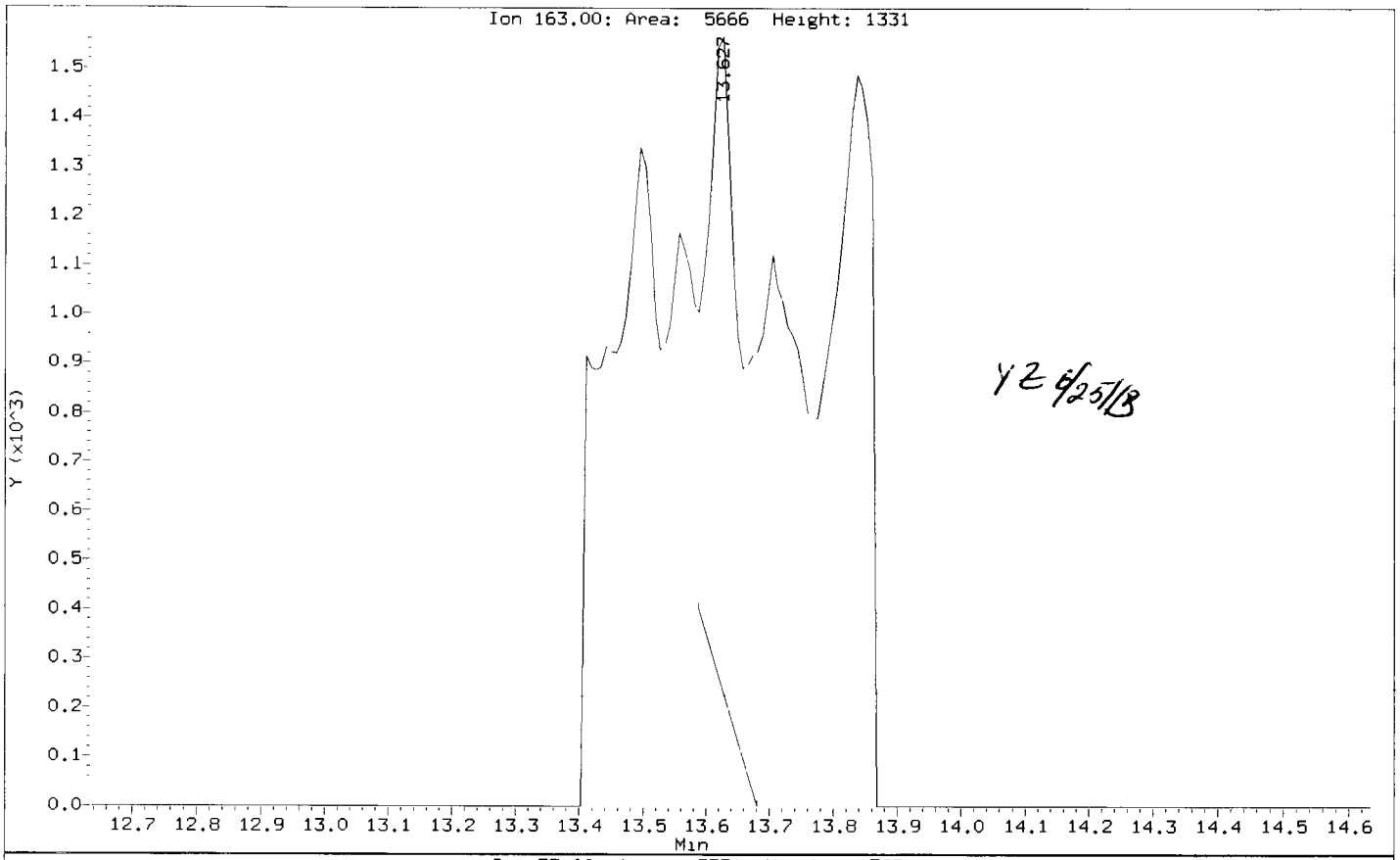




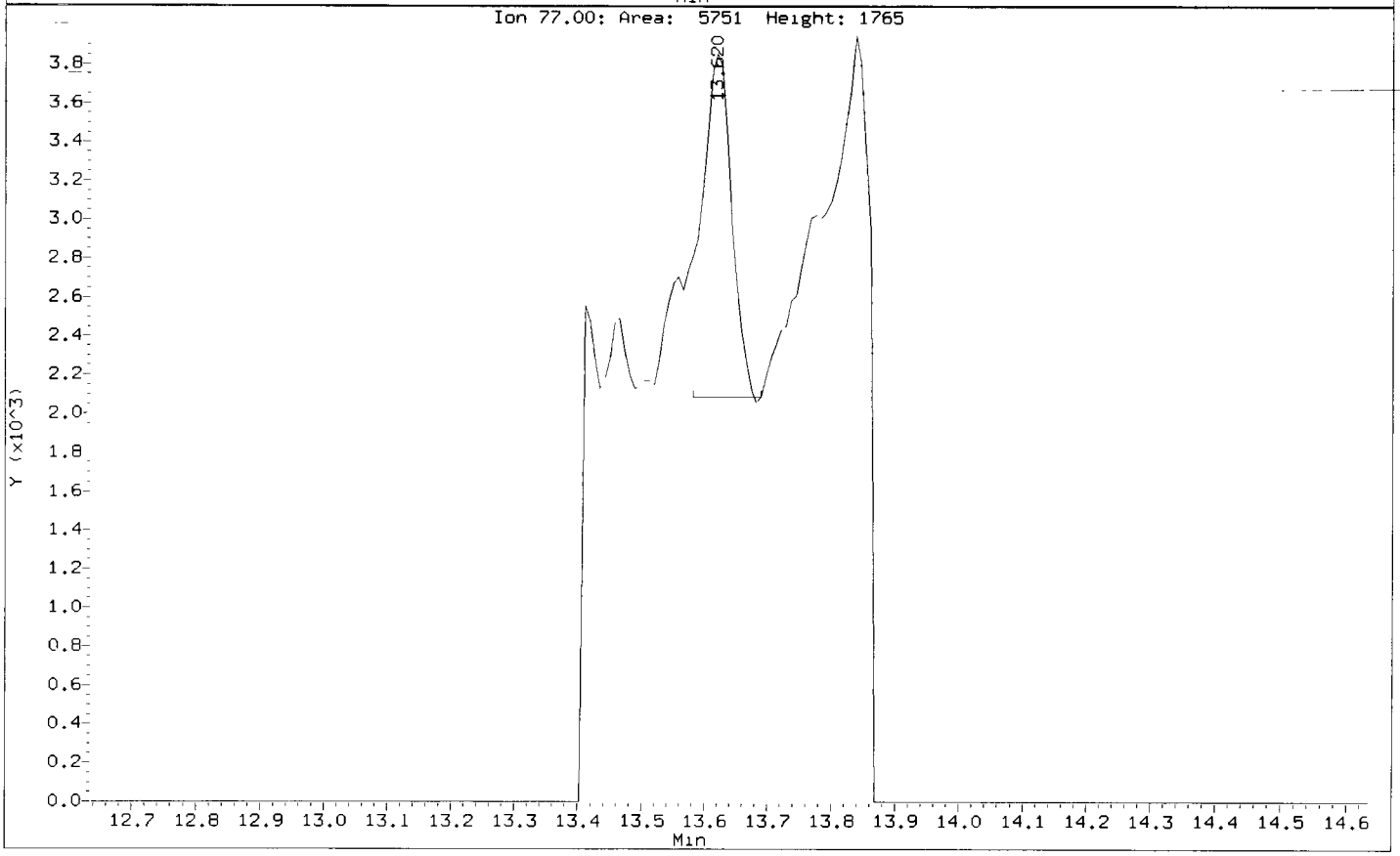


Data File: /chem1/nt10.i/20130620.b/SIM.b/ws91a.d
Injection Date: 20-JUN-2013 16:38
Instrument: nt10.i
Client Sample ID: CL-MH-SPS-20130605-

Compound: Dimethylphthalate
CAS Number: 131-11-3

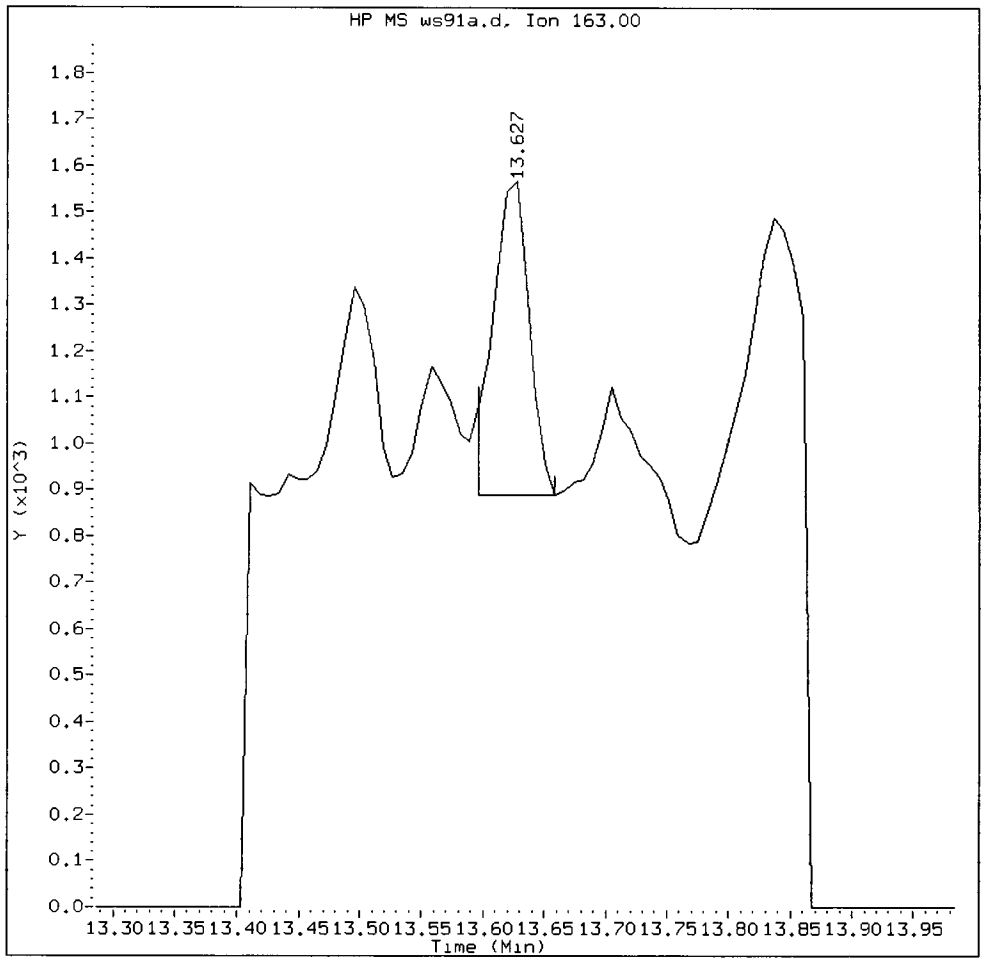


YZ 6/25/13



WS91A, /chem1/nt10.i/20130620.b/SIM.b/ws91a.d

Dimethylphthalate Amount: 0.07 Area: 1422



MANUAL INTEGRATION for Dimethylphthalate

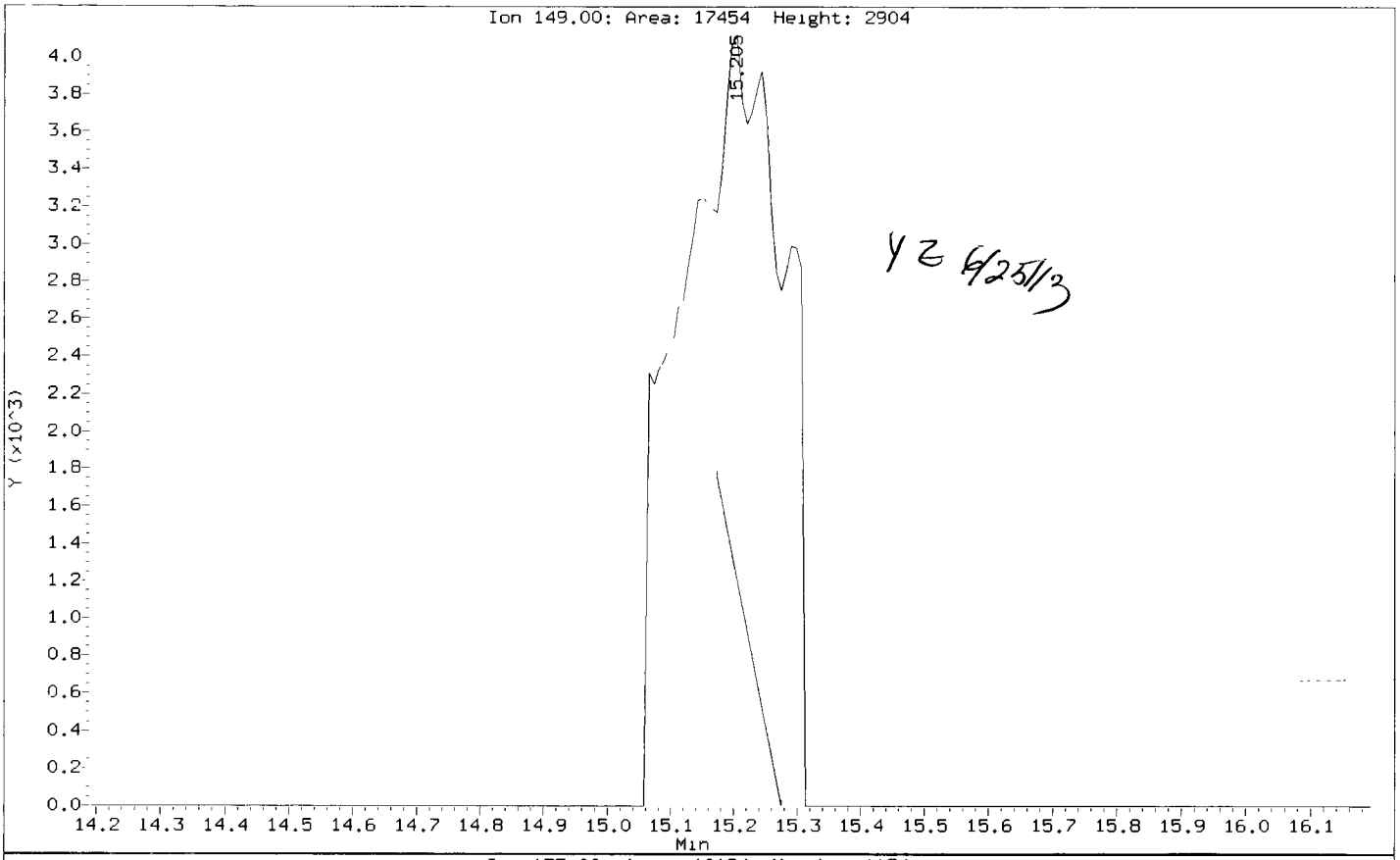
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

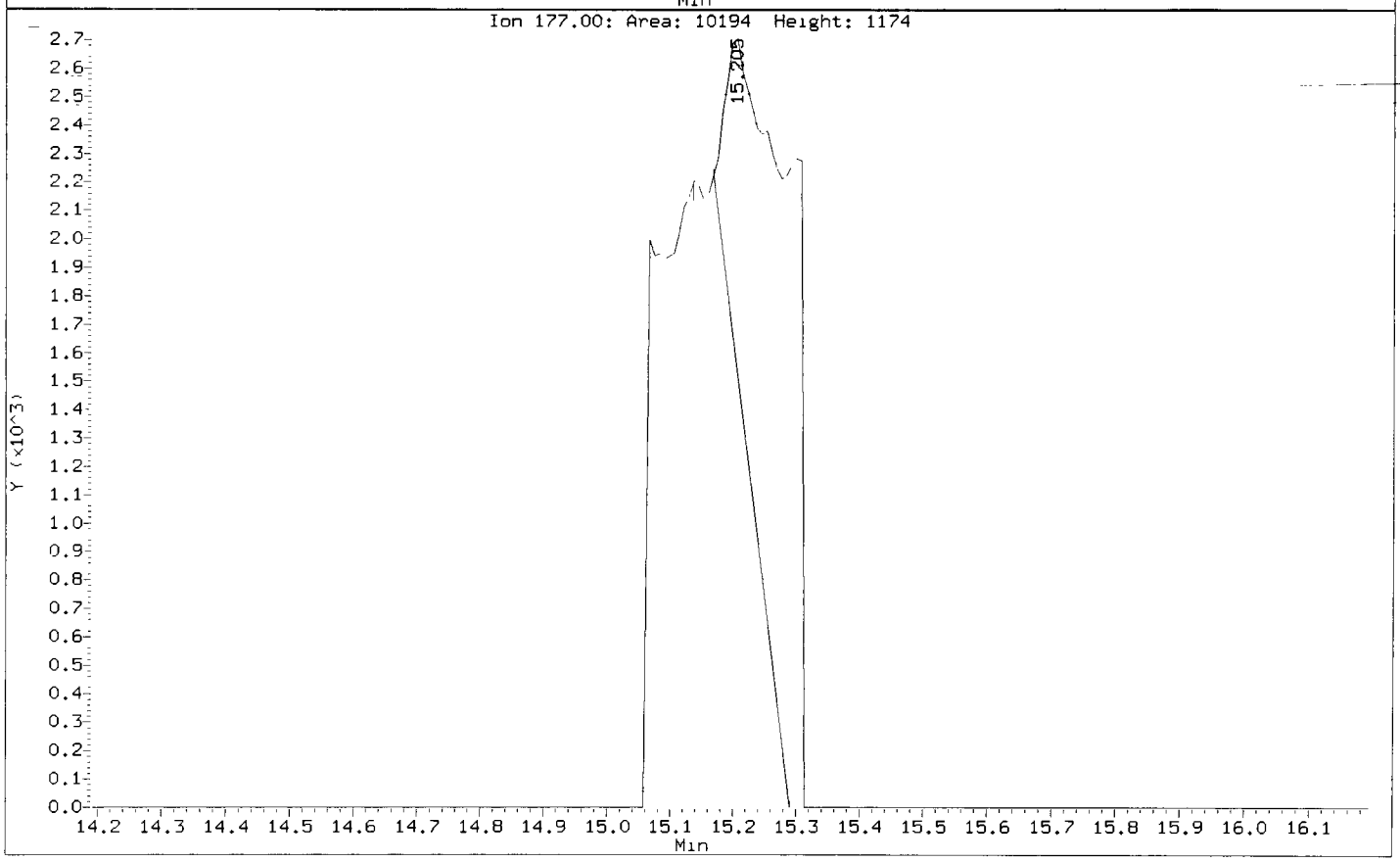
Analyst: VZ Date: 6/25/13

Data File: /chem1/nt10.i/20130620.b/SIM.b/ws91a.d
Injection Date: 20-JUN-2013 16:38
Instrument: nt10.i
Client Sample ID: CL-MH-SPS-20130605-

Compound: Diethylphthalate
CAS Number: 84-66-2

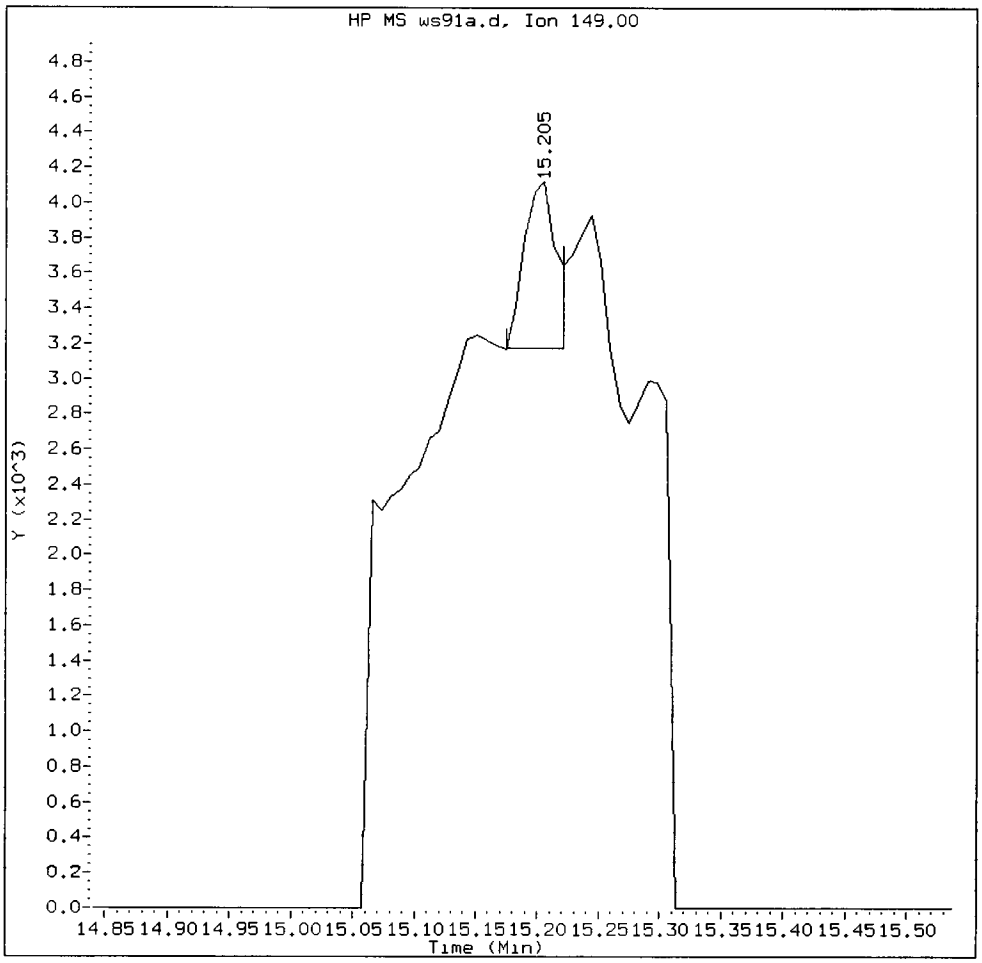


YZ 6/25/13



WS91A, /chem1/nt10.i/20130620.b/SIM.b/ws91a.d

Diethylphthalate Amount: 0.08 Area: 1735



MANUAL INTEGRATION for Diethylphthalate

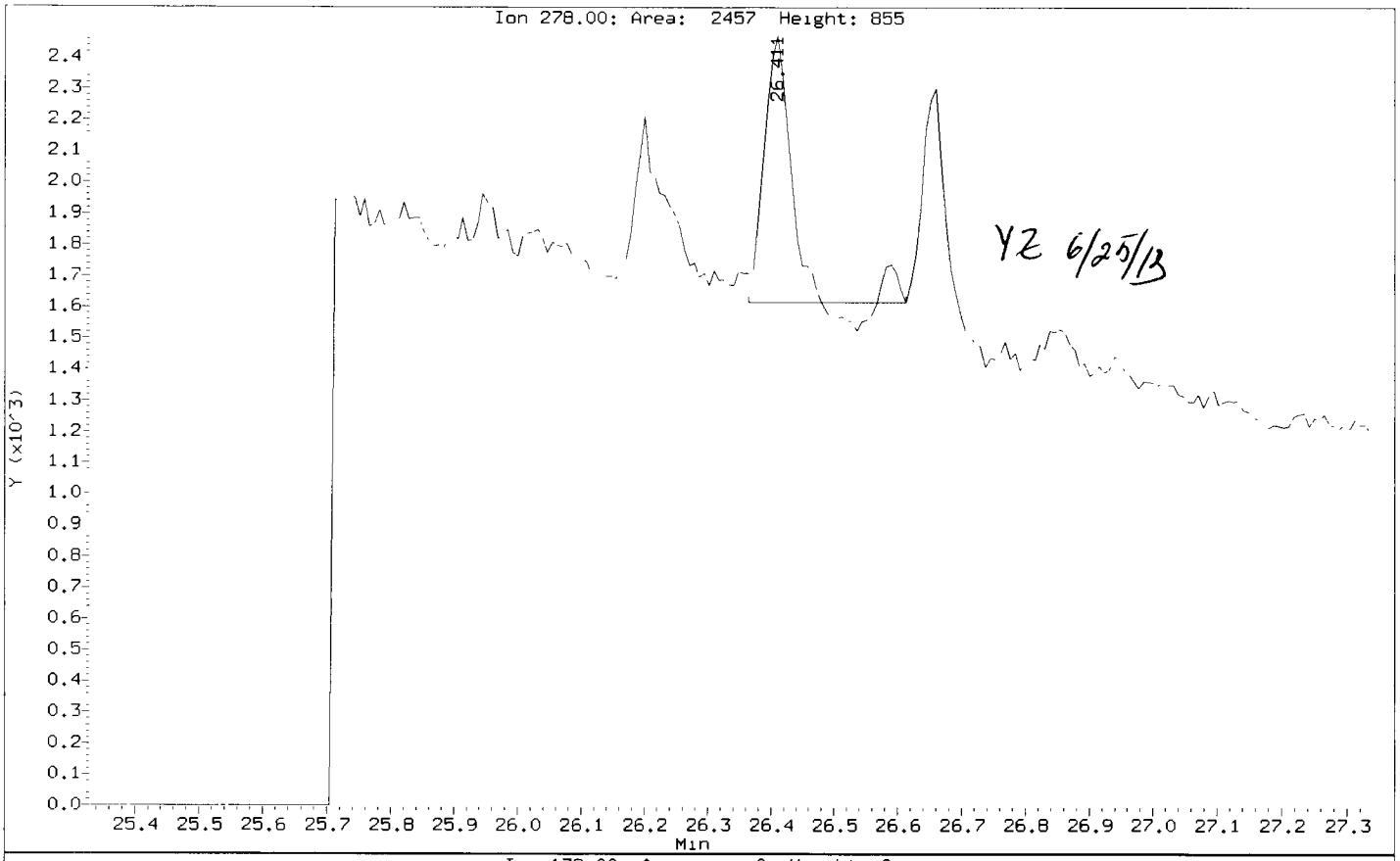
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

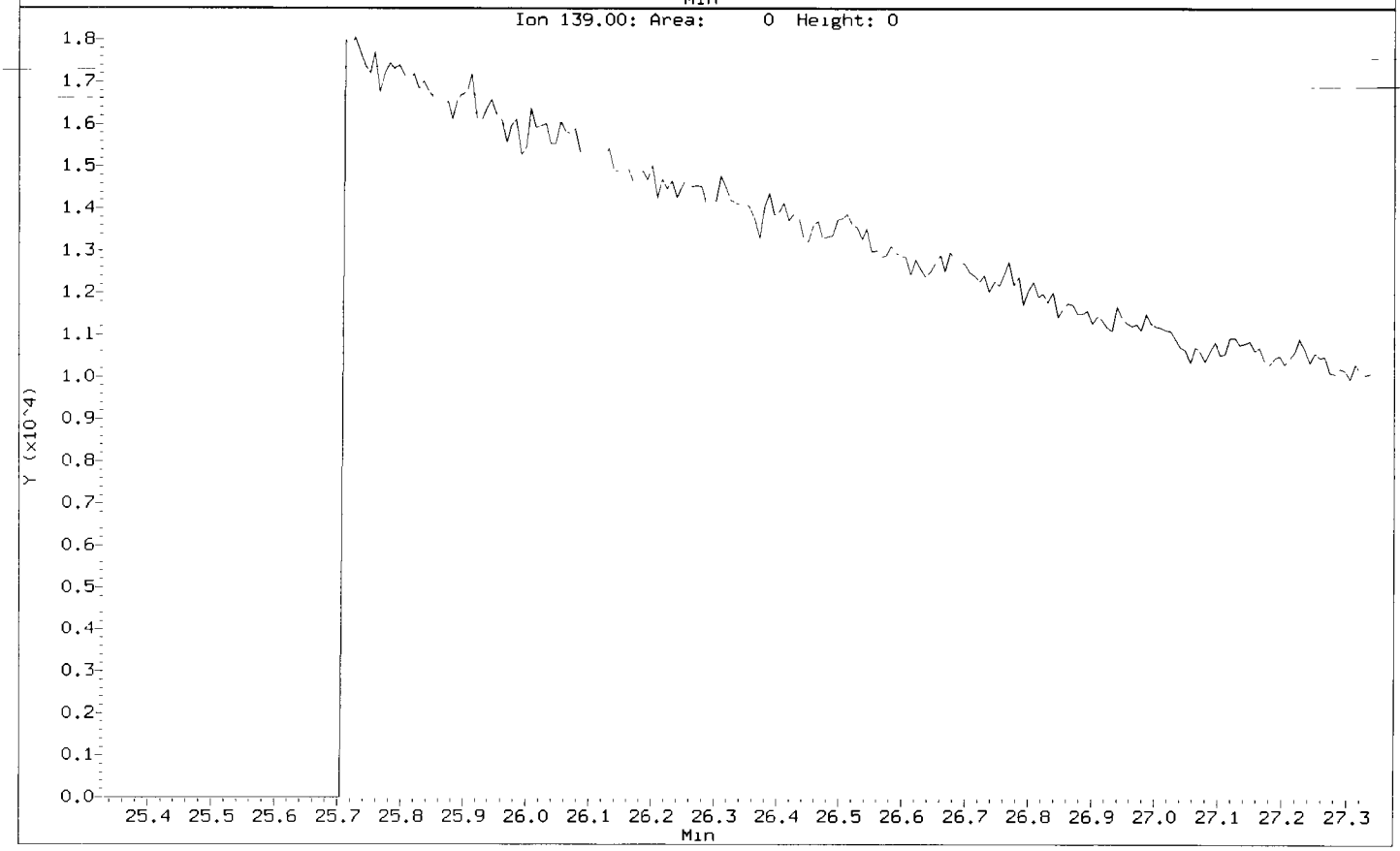
Analyst: YZ Date: 6/25/13

Data File: /chem1/nt10.1/20130620.b/SIM.b/ws91a.d
Injection Date: 20-JUN-2013 16:38
Instrument: nt10.1
Client Sample ID: CL-MH-SPS-20130605-

Compound: Dibenzo(a,h)anthracene
CAS Number: 53-70-3

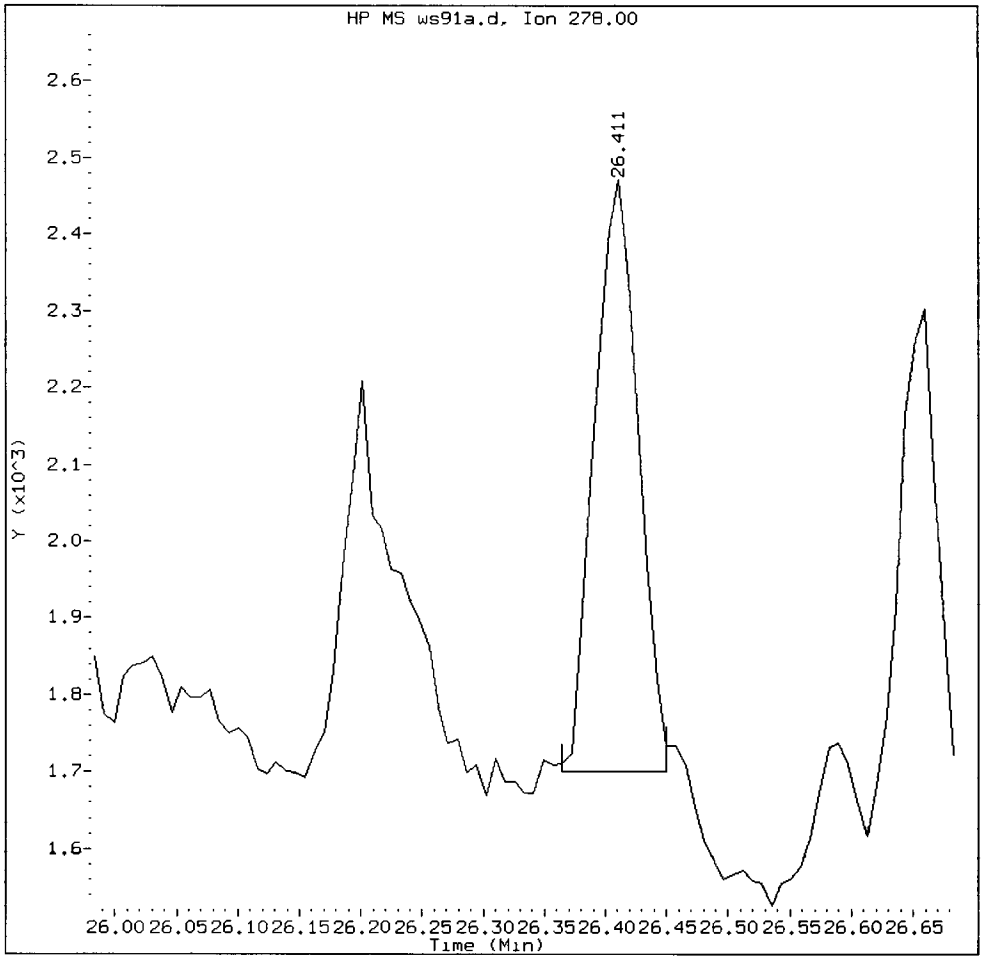


YZ 6/25/13



WS91A, /chem1/nt10.i/20130620.b/SIM.b/ws91a.d

Dibenzo(a,h)anthracene Amount: 0.05 Area: 1924



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

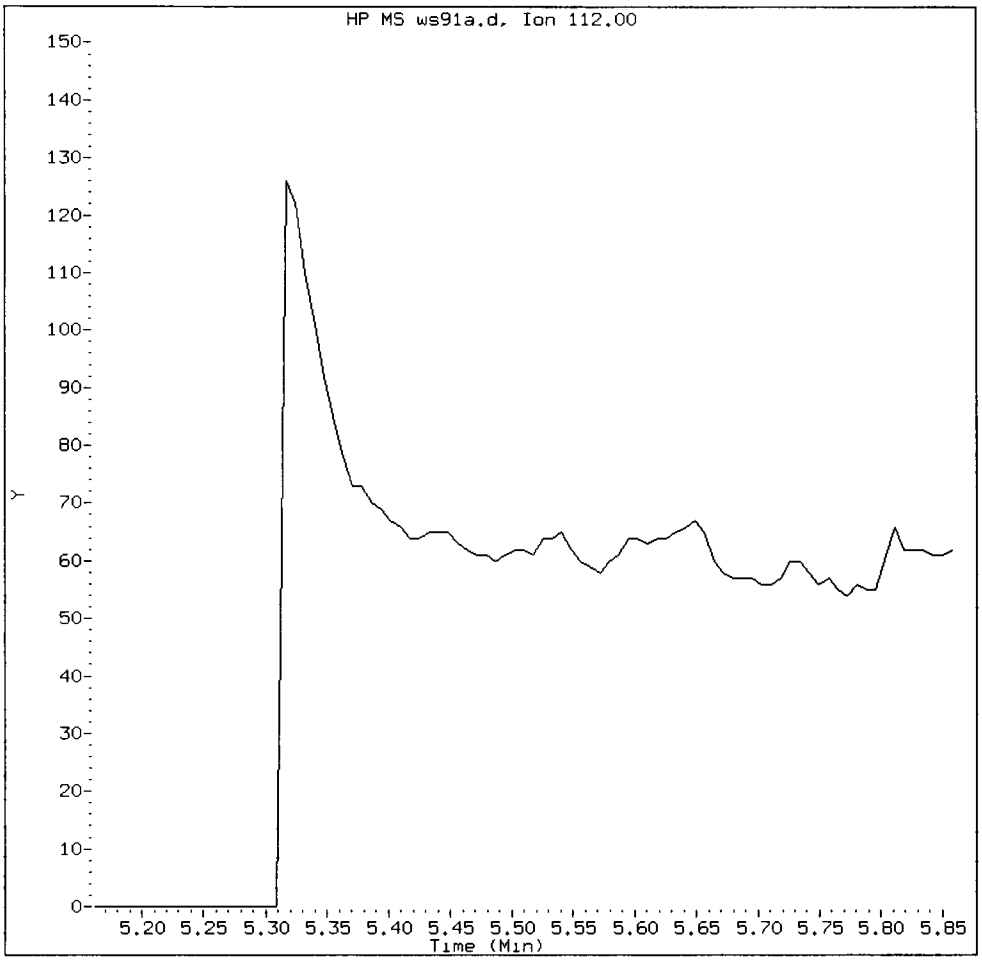
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 6/20/13

WS91A, /chem1/nt10.i/20130620.b/SIM.b/ws91a.d

2-Fluorophenol Amount: 3.21 Area: 38726



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 6/25/13

CO-ELUTION SUMMARY FOR FILE - ws91a.d

Lab ID: WS91A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 20-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 6/25/13

Data file : /chem1/nt10.i/20130620.b/SIM.b/ws91ams.d
Lab Smp Id: WS91AMS Client Smp ID: CL-MH-SPS-20130 MS
Inj Date : 20-JUN-2013 17:14
Operator : YZ Inst ID: nt10.i
Smp Info : WS91AMS
Misc Info : 13-12076
Comment :
Method : /chem1/nt10.i/20130620.b/SIM.b/SIMABN2.m
Meth Date : 25-Jun-2013 13:35 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 11 QC Sample: MS
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	13.39000	Weight of sample extracted (g)
M	59.30000	% 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	5.904	5.510	(0.762)	31698	2.68654	493.0(M)
3 Phenol	94	7.318	7.202	(0.944)	8795	0.51857	95.16(R)
7 1,3-Dichlorobenzene	146	7.682	7.627	(0.991)	41023	2.93536	538.6
* 8 1,4-Dichlorobenzene-d4	152	7.751	7.697	(1.000)	33589	4.00000	
9 1,4-Dichlorobenzene	146	7.775	7.728	(1.003)	41795	3.00364	551.2(H)
11 Benzyl alcohol	79	8.186	8.046	(1.056)	30334	3.72928	684.3(H)
12 1,2-Dichlorobenzene	146	8.132	8.093	(1.049)	41278	3.12159	572.8
13 2-Methylphenol	108	8.458	8.326	(1.091)	41059	3.38623	621.4
15 4-Methylphenol	108	8.698	8.629	(1.122)	96863	7.84490	1440
16 N-Nitroso-di-n-propylamine	70	8.675	8.621	(1.119)	31107	4.46758	819.8
22 2,4-Dimethylphenol	107	9.730	9.691	(0.946)	151592	11.8596	2176
26 1,2,4-Trichlorobenzene	180	10.215	10.192	(0.993)	43366	3.42893	629.2
* 27 Naphthalene-d8	136	10.285	10.262	(1.000)	131953	4.00000	
30 Hexachlorobutadiene	225	10.733	10.725	(1.044)	25191	3.27217	600.4

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
39 Dimethylphthalate	163	13.643	13.635	(0.971)	64967	3.27426	600.8
* 42 Acenaphthene-d10	162	14.053	14.045	(1.000)	68769	4.00000	
50 Diethylphthalate	149	15.197	15.189	(1.081)	95119	4.23330	776.8
54 N-Nitrosodiphenylamine	169	15.560	15.537	(0.902)	72770	5.60632	1029
57 Hexachlorobenzene	284	16.617	16.593	(0.963)	36575	4.12484	756.9
58 Pentachlorophenol	266	17.050	17.011	(0.988)	13663	2.59171	475.6(R)
* 59 Phenanthrene-d10	188	17.259	17.236	(1.000)	118381	4.00000	
$ 66 Terphenyl-d14	244	20.648	20.617	(0.918)	74461	3.94230	723.4
67 Butylbenzylphthalate	149	21.647	21.616	(0.962)	69630	4.88469	896.3
* 69 Chrysene-d12	240	22.498	22.460	(1.000)	153651	4.00000	
* 77 Perylene-d12	264	24.782	24.728	(1.000)	163622	4.00000	(H)
79 Dibenzo(a,h)anthracene	278	26.411	26.333	(1.070)	138105	3.78666	694.8
90 N-Nitrosodimethylamine	74	3.332	3.332	(0.430)	73332	10.1318	1859

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: nt10.i
Lab File ID: ws91ams.d
Lab Smp Id: WS91AMS
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130620.b/SIM.b/SIMABN2.m
Misc Info: 13-12076

Calibration Date: 20-JUN-2013
Calibration Time: 10:57
Client Smp ID: CL-MH-SPS-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	52658	26329	105316	33589	-36.21
27 Naphthalene-d8	192325	96162	384650	131953	-31.39
42 Acenaphthene-d10	109274	54637	218548	68769	-37.07
59 Phenanthrene-d10	203933	101966	407866	118381	-41.95
69 Chrysene-d12	223647	111824	447294	153651	-31.30
77 Perylene-d12	211919	105960	423838	163622	-22.79

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.70	7.20	8.20	7.75	0.71
27 Naphthalene-d8	10.26	9.76	10.76	10.28	0.23
42 Acenaphthene-d10	14.05	13.55	14.55	14.05	0.06
59 Phenanthrene-d10	17.24	16.74	17.74	17.26	0.13
69 Chrysene-d12	22.46	21.96	22.96	22.50	0.17
77 Perylene-d12	24.73	24.23	25.23	24.78	0.22

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.

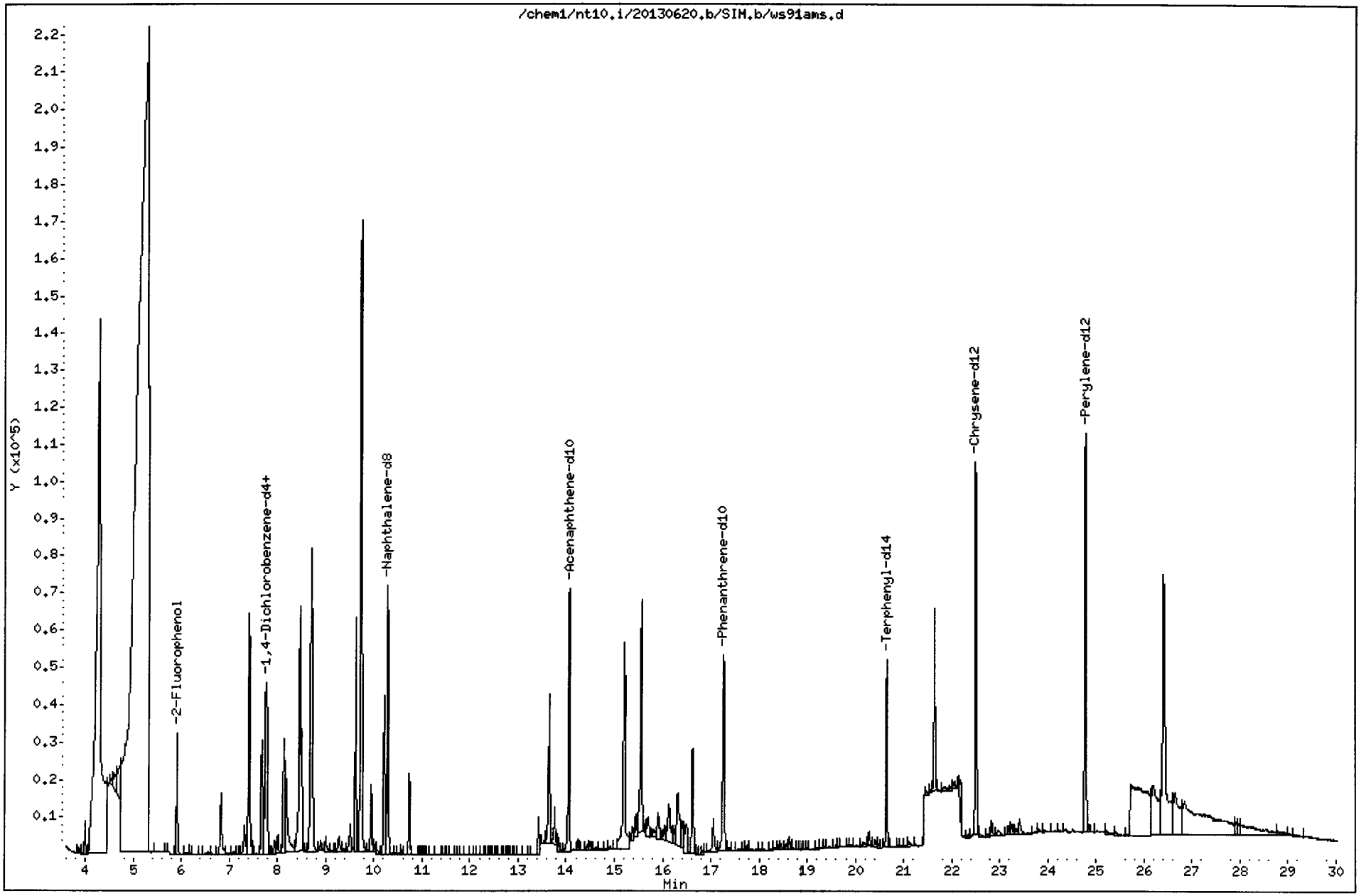
RECOVERY REPORT

Client Name: SAIC
Client SDG: WS91
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WS91AMS
Client Smp ID: CL-MH-SPS-20130 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/20130620.b/SIM.b/SIMABN2.m
Misc Info: 13-12076

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	917.5	95.16	10.37*	30-160
7 1,3-Dichlorobenzen	917.5	538.6	58.71	30-160
9 1,4-Dichlorobenzen	917.5	551.2	60.07	30-160
11 Benzyl alcohol	917.5	684.3	74.59	30-160
12 1,2-Dichlorobenzen	917.5	572.8	62.43	30-160
13 2-Methylphenol	917.5	621.4	67.72	30-160
15 4-Methylphenol	1835	1440	78.45	30-160
16 N-Nitroso-di-n-pro	917.5	819.8	89.35	30-160
22 2,4-Dimethylphenol	1835	2176	118.60	30-160
26 1,2,4-Trichloroben	917.5	629.2	68.58	30-160
30 Hexachlorobutadien	917.5	600.4	65.44	30-160
39 Dimethylphthalate	917.5	600.8	65.49	30-160
50 Diethylphthalate	917.5	776.8	84.67	30-160
54 N-Nitrosodiphenyla	917.5	1029	112.13	30-160
57 Hexachlorobenzene	917.5	756.9	82.50	30-160
58 Pentachlorophenol	1835	475.6	25.92*	30-160
67 Butylbenzylphthala	917.5	896.3	97.69	30-160
79 Dibenzo(a,h)anthra	917.5	694.8	75.73	30-160
90 N-Nitrosodimethyla	1835	1859	101.32	30-160

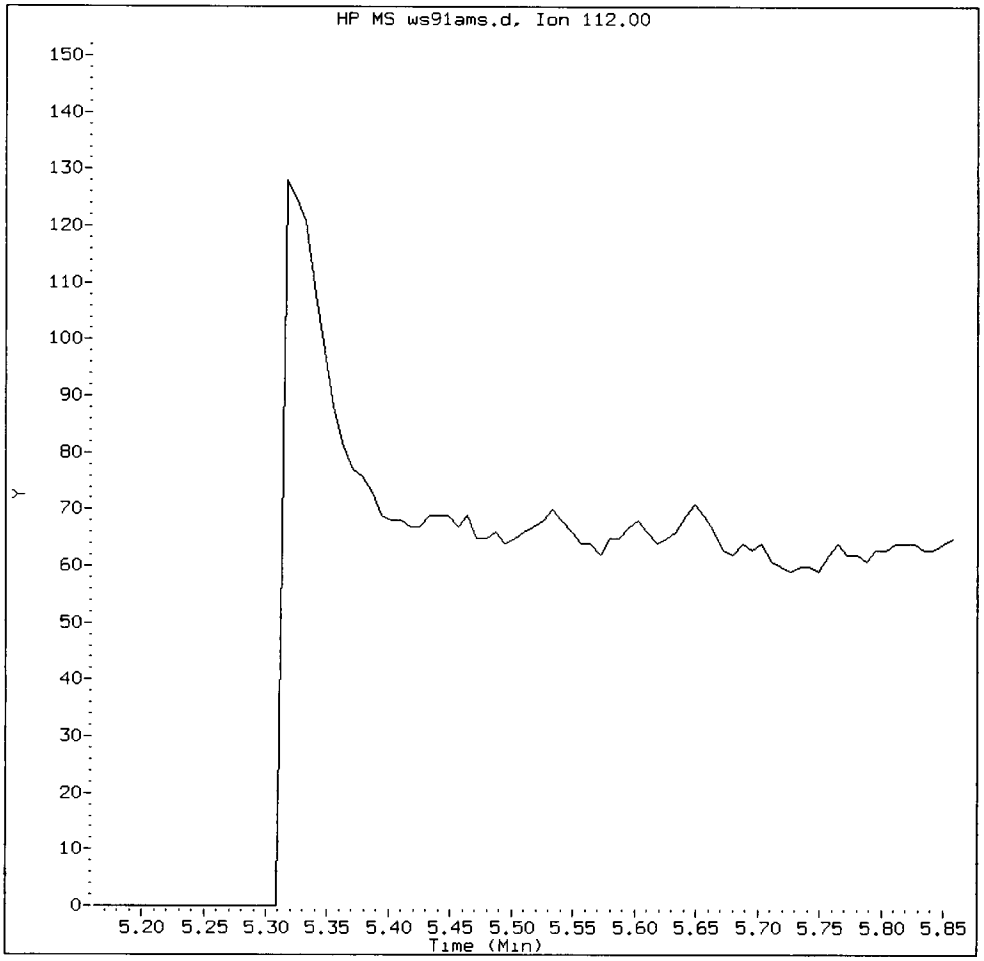
SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	1376	493.0	35.82	30-160
$ 66 Terphenyl-d14	917.5	723.4	78.85	30-160

Data File: /chem1/nt10.i/20130620.b/SIM.b/ws91ams.d
Date : 20-JUN-2013 17:14
Client ID: CL-MH-SPS-20130 MS
Instrument: nt10.i
Sample Info: WS91AMS
Volume Injected (uL): 1.0
Operator: YZ
Column phase: ZB-5msi
Column diameter: 0.25



WS91AMS, /chem1/nt10.i/20130620.b/SIM.b/ws91ams.d

2-Fluorophenol Amount: 2.69 Area: 31698



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 6/25/13

CO-ELUTION SUMMARY FOR FILE - ws91ams.d

Lab ID: WS91AMS, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 20-JUN-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 6/25/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130620.b/SIM.b/ws91amsd.d
Lab Smp Id: WS91AMSD Client Smp ID: CL-MH-SPS-20130 MSD
Inj Date : 20-JUN-2013 17:51
Operator : YZ Inst ID: nt10.i
Smp Info : WS91AMSD
Misc Info : 13-12076
Comment :
Method : /chem1/nt10.i/20130620.b/SIM.b/SIMABN2.m
Meth Date : 25-Jun-2013 13:35 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 12 QC Sample: MS
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	13.32000	Weight of sample extracted (g)
M	59.30000	% 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	5.881	5.510	(0.759)	29097	2.41815	446.1(M)
	3 Phenol	94	7.364	7.202	(0.950)	118320	6.84078	1262(H)
	7 1,3-Dichlorobenzene	146	7.674	7.627	(0.990)	44080	3.09277	570.5
*	8 1,4-Dichlorobenzene-d4	152	7.751	7.697	(1.000)	34255	4.00000	
	9 1,4-Dichlorobenzene	146	7.782	7.728	(1.004)	44448	3.13219	577.8
	11 Benzyl alcohol	79	8.147	8.046	(1.051)	37857	4.56367	841.8(H)
	12 1,2-Dichlorobenzene	146	8.132	8.093	(1.049)	44011	3.26356	602.0
	13 2-Methylphenol	108	8.427	8.326	(1.087)	41875	3.38638	624.7
	15 4-Methylphenol	108	8.683	8.629	(1.120)	97587	7.74987	1430
	16 N-Nitroso-di-n-propylamine	70	8.667	8.621	(1.118)	30706	4.32425	797.6
	22 2,4-Dimethylphenol	107	9.714	9.691	(0.945)	150483	11.6861	2156
	26 1,2,4-Trichlorobenzene	180	10.208	10.192	(0.992)	45731	3.58930	662.1
*	27 Naphthalene-d8	136	10.285	10.262	(1.000)	132932	4.00000	
	30 Hexachlorobutadiene	225	10.733	10.725	(1.044)	26672	3.43903	634.4

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	13.643	13.635	(0.970)	79689	4.06638	750.1
*	42 Acenaphthene-d10	162	14.061	14.045	(1.000)	67921	4.00000	
	50 Diethylphthalate	149	15.197	15.189	(1.081)	128924	5.80944	1072
	54 N-Nitrosodiphenylamine	169	15.552	15.537	(0.901)	75425	5.88347	1085
	57 Hexachlorobenzene	284	16.617	16.593	(0.963)	37667	4.30107	793.4
	58 Pentachlorophenol	266	17.042	17.011	(0.987)	27085	5.20191	959.5
*	59 Phenanthrene-d10	188	17.259	17.236	(1.000)	116920	4.00000	
$	66 Terphenyl-d14	244	20.648	20.617	(0.918)	74825	4.00829	739.4
	67 Butylbenzylphthalate	149	21.639	21.616	(0.962)	80148	5.68886	1049
*	69 Chrysene-d12	240	22.498	22.460	(1.000)	151860	4.00000	
*	77 Perylene-d12	264	24.782	24.728	(1.000)	157493	4.00000	
	79 Dibenzo(a,h)anthracene	278	26.411	26.333	(1.066)	145490	4.14439	764.5
	90 N-Nitrosodimethylamine	74	3.332	3.332	(0.430)	50516	6.84373	1262

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: ws91amsd.d
Lab Smp Id: WS91AMSD
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130620.b/SIM.b/SIMABN2.m
Misc Info: 13-12076

Calibration Date: 20-JUN-2013
Calibration Time: 10:57
Client Smp ID: CL-MH-SPS-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	52658	26329	105316	34255	-34.95
27 Naphthalene-d8	192325	96162	384650	132932	-30.88
42 Acenaphthene-d10	109274	54637	218548	67921	-37.84
59 Phenanthrene-d10	203933	101966	407866	116920	-42.67
69 Chrysene-d12	223647	111824	447294	151860	-32.10
77 Perylene-d12	211919	105960	423838	157493	-25.68

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.70	7.20	8.20	7.75	0.71
27 Naphthalene-d8	10.26	9.76	10.76	10.28	0.23
42 Acenaphthene-d10	14.05	13.55	14.55	14.06	0.11
59 Phenanthrene-d10	17.24	16.74	17.74	17.26	0.13
69 Chrysene-d12	22.46	21.96	22.96	22.50	0.17
77 Perylene-d12	24.73	24.23	25.23	24.78	0.22

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: WS91AMSD
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDASIMLCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130620.b/SIM.b/SIMABN2.m
Misc Info: 13-12076

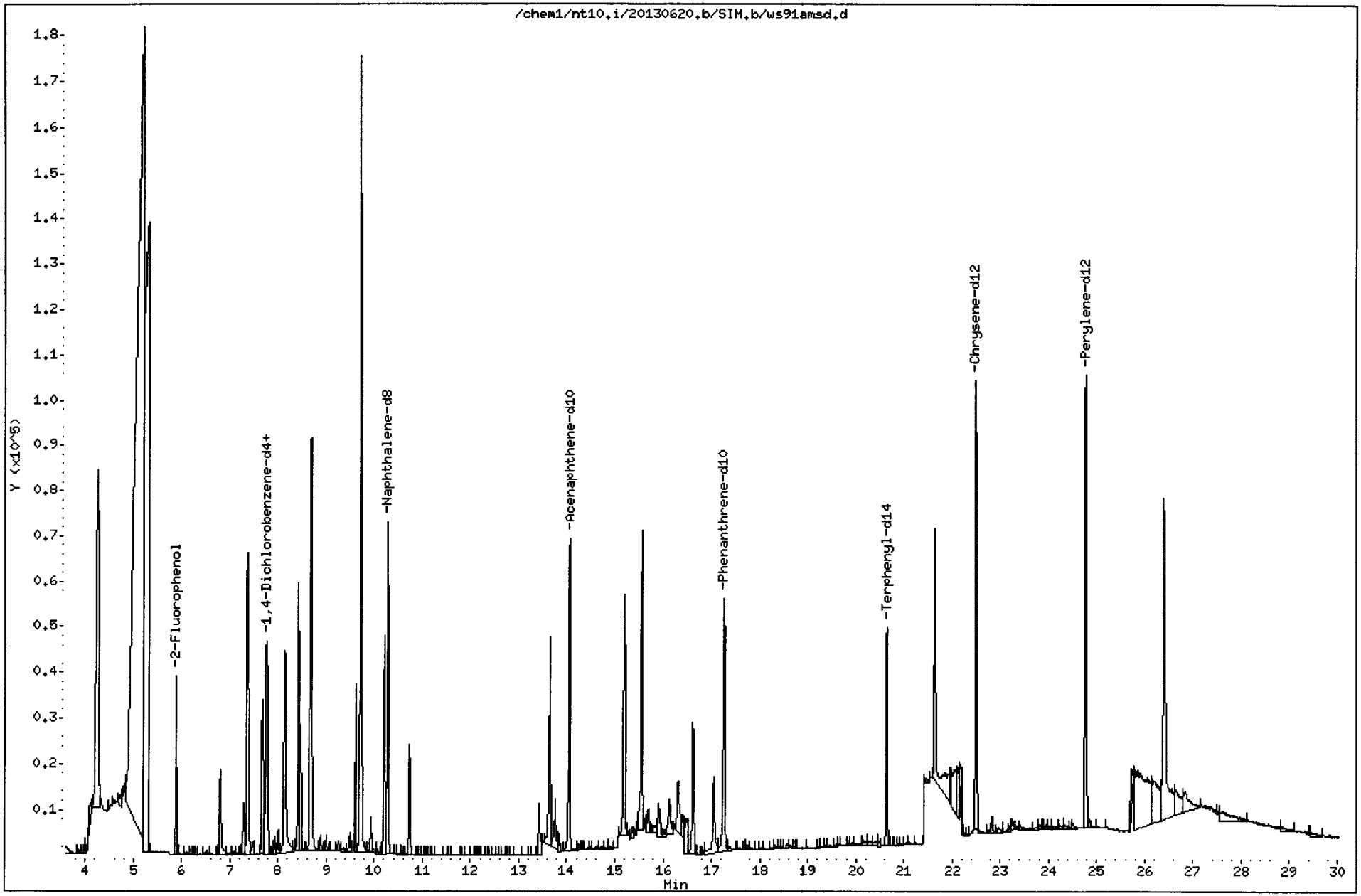
Client SDG: WS91
Fraction: SV
Client Smp ID: CL-MH-SPS-20130 MSD
Operator: YZ
SampleType: MS
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	922.3	1262	136.82	30-160
7	1,3-Dichlorobenzen	922.3	570.5	61.86	30-160
9	1,4-Dichlorobenzen	922.3	577.8	62.64	30-160
11	Benzyl alcohol	922.3	841.8	91.27	30-160
12	1,2-Dichlorobenzen	922.3	602.0	65.27	30-160
13	2-Methylphenol	922.3	624.7	67.73	30-160
15	4-Methylphenol	1845	1430	77.50	30-160
16	N-Nitroso-di-n-pro	922.3	797.6	86.49	30-160
22	2,4-Dimethylphenol	1845	2156	116.86	30-160
26	1,2,4-Trichloroben	922.3	662.1	71.79	30-160
30	Hexachlorobutadien	922.3	634.4	68.78	30-160
39	Dimethylphthalate	922.3	750.1	81.33	30-160
50	Diethylphthalate	922.3	1072	116.19	30-160
54	N-Nitrosodiphenyla	922.3	1085	117.67	30-160
57	Hexachlorobenzene	922.3	793.4	86.02	30-160
58	Pentachlorophenol	1845	959.5	52.02	30-160
67	Butylbenzylphthala	922.3	1049	113.78	30-160
79	Dibenzo(a,h)anthra	922.3	764.5	82.89	30-160
90	N-Nitrosodimethyla	1845	1262	68.44	30-160

	SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	1383	446.1	32.24	30-160
$ 66	Terphenyl-d14	922.3	739.4	80.17	30-160

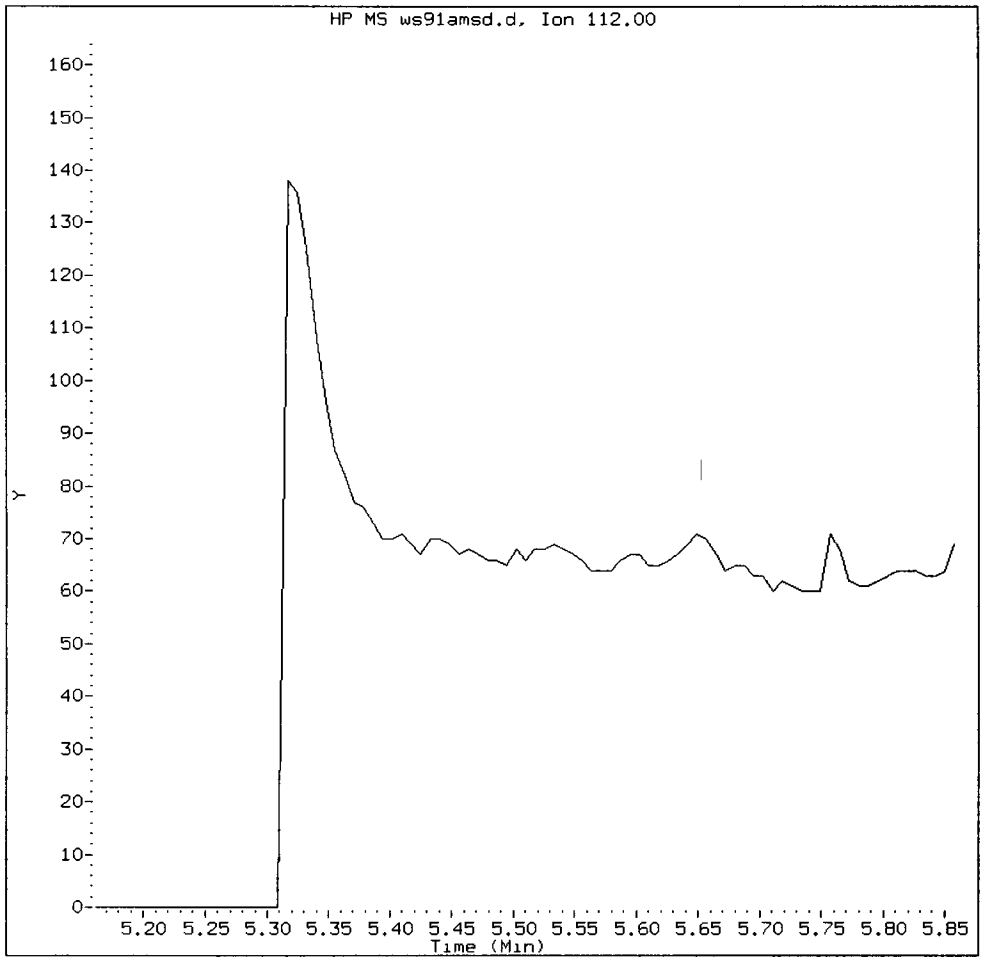
Data File: /chem1/nt10.i/20130620.b/SIM.b/ws91amsd.d
Date : 20-JUN-2013 17:51
Client ID: CL-MH-SPS-20130 MSD
Sample Info: WS91AMSD
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: YZ
Column diameter: 0.25



WS91AMSD, /chem1/nt10.i/20130620.b/SIM.b/ws91amsd.d

2-Fluorophenol Amount: 2.42 Area: 29097



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 6/25/13

CO-ELUTION SUMMARY FOR FILE - ws91amsd.d

Lab ID: WS91AMSD, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 20-JUN-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 6/24/13 Analysis: ABN 8270 SIM ABN Analyst: YZ

GC Program: ABNx Column No: 252947 Column Type: ZB5msi

Instrument Tune (.U or .CT.): 130228.U EM Voltage: 1753

Calibration File: DF0624 Curve Date: 04/29/13 Injection Vol.: 1ul

IS/SS	Ical/Ccal	LCS/ICV
1998-2	B676	
	B552	
	B112	
	2884-2	
	1998-2	

Document All Maintenance Tasks In Element

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130624.b

	Time	Filename	LabID	ClientId	DF											
1	1450	df0624.d	DFTPP	DFTPP	1	NO ISTDS FOUND										
2	1542	cc0624a.d	ABN 1		1	7.45	57222	10 02	211281	13.83	120825	17.03	240475	22 33	250154	24 62	212884
3	1618	ws91mb d	WS91MBS1	WS91MBS1	1	7.44	58748	10.02	227812	13.82	125123	17.03	247086	22.33	255820	24 62	207408

YZ 6/25/13

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 Element

WSS1 : 00862

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130624.b/SIM.b

Instrument: nt10.i Date: 24-JUN-2013 Method: SIM.b/SIMABN2.m

INITIAL CAL: 29-APR-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 24-JUN-2013

Compound	%D
~~Phenol~~	~~-28.1~~
2-Methylphenol	-23.8
~~4-Methylphenol~~	~~-26.1~~
Pentachlorophenol	-60.5
N-Nitrosodimethylamine	-23.8

Data File: /chem1/nt10.i/20130624.b/df0624.d

Date : 24-JUN-2013 14:50

Client ID: DFTPP

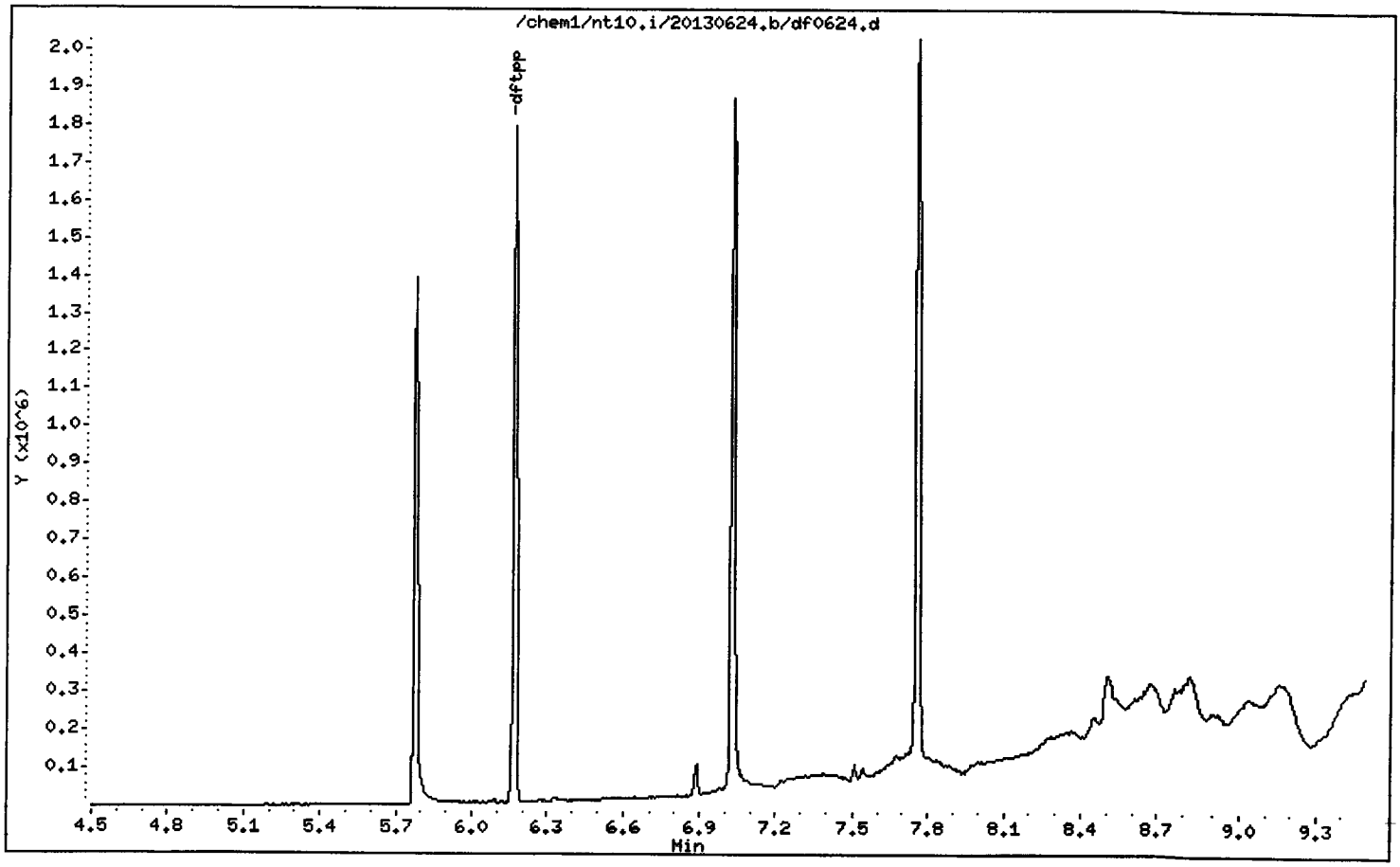
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130624.b/df0624.d

Date : 24-JUN-2013 14:50

Client ID: DFTPP

Instrument: nt10.i

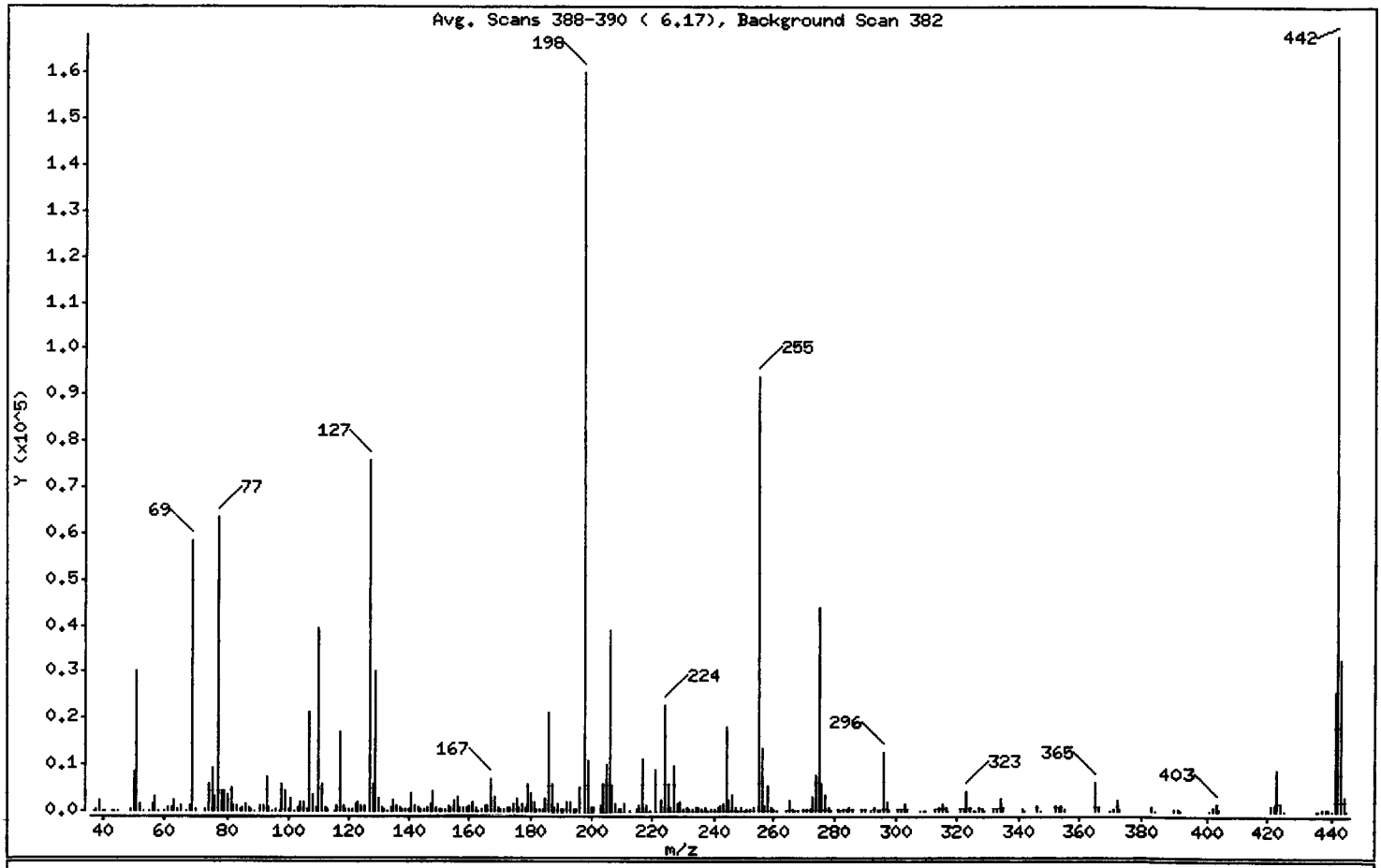
Sample Info: DFTPP

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	18.90
68	Less than 2.00% of mass 69	0.72 (1.98)
69	Mass 69 relative abundance	36.34
70	Less than 2.00% of mass 69	0.14 (0.39)
127	10.00 - 80.00% of mass 198	47.31
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.77
275	10.00 - 60.00% of mass 198	27.49
365	Greater than 1.00% of mass 198	3.91
441	0.01 - 24.00% of mass 442	16.20 (15.42)
442	50.00 - 200.00% of mass 198	105.04
443	15.00 - 24.00% of mass 442	20.47 (19.49)

Data File: /chem1/nt10.i/20130624.b/df0624.d

Date : 24-JUN-2013 14:50

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0624.d
Spectrum: Avg. Scans 388-390 (6.17), Background Scan 382
Location of Maximum: 442.00
Number of points: 300

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	69	124.00	1075	203.00	1262	290.00	200
38.00	433	125.00	1026	204.00	5704	292.00	185
39.00	2345	127.00	75760	205.00	9953	293.00	868
40.00	131	128.00	5768	206.00	39056	294.00	174
41.00	117	129.00	30048	207.00	5427	295.00	160
43.00	38	130.00	2714	208.00	1513	296.00	12679
44.00	51	131.00	582	209.00	374	297.00	1761
45.00	51	132.00	288	210.00	441	298.00	110
49.00	250	133.00	117	211.00	1569	301.00	234
50.00	8351	134.00	879	213.00	140	302.00	301
51.00	30264	135.00	2304	215.00	503	303.00	1490
52.00	1670	136.00	999	216.00	1017	304.00	420
53.00	54	137.00	958	217.00	11223	308.00	139
55.00	143	138.00	317	218.00	1338	309.00	104
56.00	1492	139.00	240	219.00	142	310.00	129
57.00	3062	140.00	373	221.00	9064	313.00	209
58.00	170	141.00	3753	223.00	2506	314.00	727
60.00	6	142.00	1267	224.00	22712	315.00	1565
61.00	656	143.00	931	225.00	5811	316.00	805
62.00	734	144.00	277	226.00	648	317.00	129
63.00	2222	145.00	390	227.00	9836	321.00	480
64.00	296	146.00	651	228.00	1482	322.00	276
65.00	1059	147.00	1732	229.00	1996	323.00	4176
67.00	61	148.00	4185	230.00	335	324.00	820
68.00	1151	149.00	911	231.00	901	325.00	62
69.00	58192	150.00	273	232.00	196	326.00	119
70.00	227	151.00	521	233.00	202	327.00	925
73.00	431	152.00	378	234.00	692	328.00	382
74.00	5768	153.00	1222	235.00	696	329.00	127
75.00	9318	154.00	909	236.00	424	332.00	349
76.00	3019	155.00	2200	237.00	797	333.00	528
77.00	63400	156.00	3020	238.00	67	334.00	2746
78.00	4272	157.00	710	239.00	557	335.00	713
79.00	4258	158.00	784	240.00	308	341.00	527
80.00	3428	159.00	647	241.00	652	342.00	181

Data File: /chem1/nt10.i/20130624.b/df0624.d

Date : 24-JUN-2013 14:50

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0624.d
Spectrum: Avg. Scans 388-390 (6.17), Background Scan 382
Location of Maximum: 442.00
Number of points: 300

m/z	Y	m/z	Y	m/z	Y	m/z	Y
81.00	4891	160.00	1154	242.00	1349	346.00	1005
82.00	1092	161.00	1742	243.00	1411	347.00	88
83.00	1052	162.00	617	244.00	18320	352.00	1329
84.00	260	163.00	132	245.00	2474	353.00	882
85.00	791	164.00	249	246.00	3543	354.00	1241
86.00	1395	165.00	1268	247.00	732	355.00	328
87.00	683	166.00	1155	248.00	157	365.00	6268
88.00	272	167.00	6790	249.00	757	366.00	913
89.00	65	168.00	3005	250.00	192	370.00	111
91.00	1126	169.00	653	251.00	254	371.00	346
92.00	1164	170.00	246	252.00	252	372.00	2186
93.00	7499	171.00	444	253.00	743	373.00	544
94.00	603	172.00	731	255.00	93784	383.00	594
95.00	88	173.00	961	256.00	13613	384.00	170
96.00	287	174.00	1630	257.00	1130	390.00	315
97.00	169	175.00	2873	258.00	5543	391.00	238
98.00	5913	176.00	899	259.00	891	392.00	109
99.00	4443	177.00	1479	260.00	195	401.00	127
100.00	433	178.00	604	261.00	151	402.00	910
101.00	2731	179.00	5657	264.00	149	403.00	1355
102.00	133	180.00	4056	265.00	2365	404.00	464
103.00	887	181.00	1870	266.00	350	421.00	1181
104.00	1774	182.00	330	267.00	186	422.00	1228
105.00	1831	183.00	288	268.00	29	423.00	8780
106.00	574	184.00	528	270.00	197	424.00	1704
107.00	21264	185.00	2872	271.00	316	425.00	132
108.00	3551	186.00	21352	272.00	348	435.00	50
109.00	836	187.00	5739	273.00	3057	436.00	57
110.00	39480	188.00	655	274.00	7727	437.00	268
111.00	5931	189.00	1460	275.00	44024	438.00	323
112.00	781	190.00	264	276.00	5699	439.00	269
113.00	291	191.00	485	277.00	3499	440.00	148
115.00	188	192.00	1871	278.00	613	441.00	25936
116.00	1239	193.00	1859	279.00	124	442.00	168192
117.00	17160	194.00	498	281.00	223	443.00	32784

Data File: /chem1/nt10.i/20130624.b/df0624.d

Date : 24-JUN-2013 14:50

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0624.d

Spectrum: Avg. Scans 388-390 (6.17), Background Scan 382

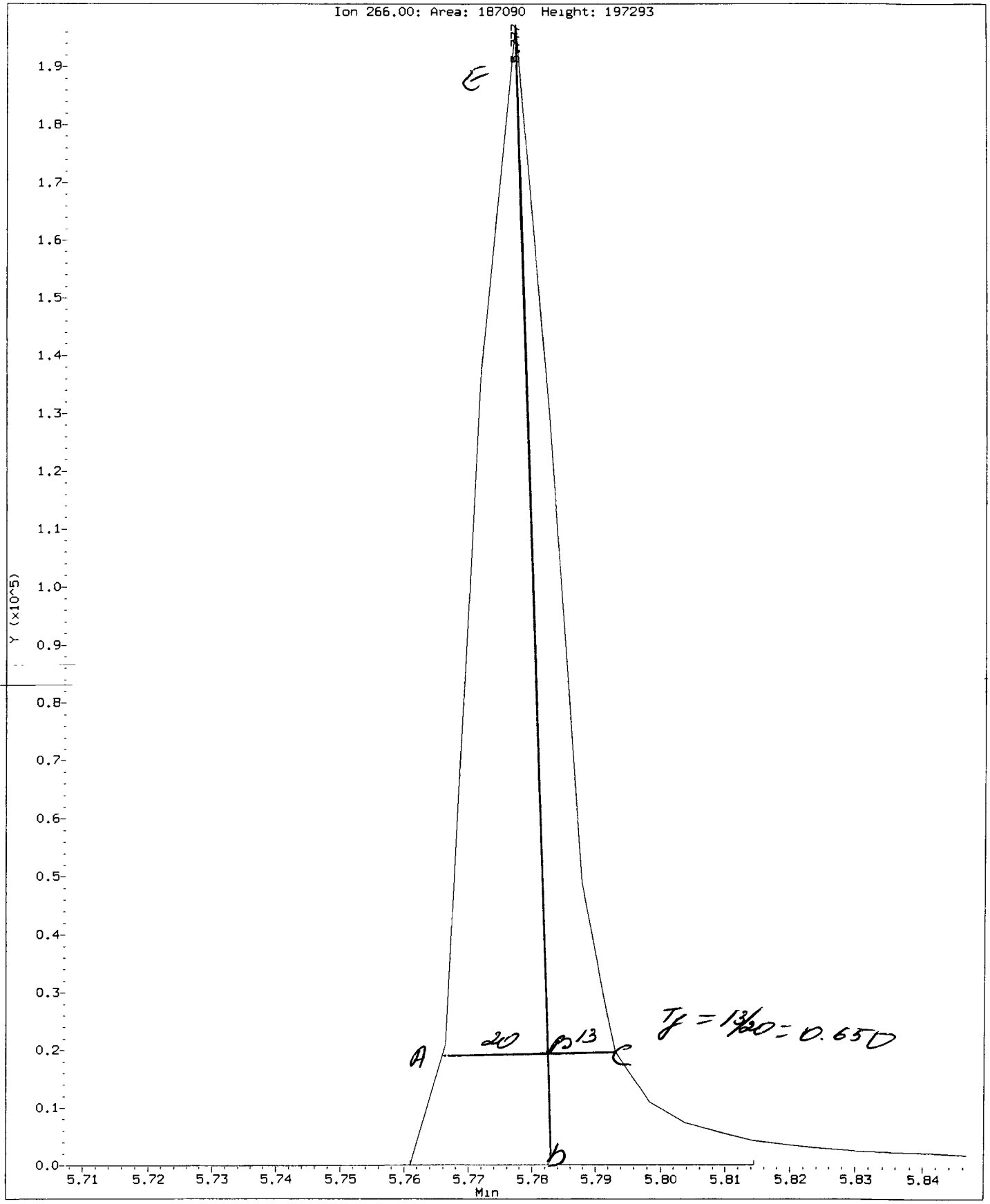
Location of Maximum: 442.00

Number of points: 300

m/z	Y	m/z	Y	m/z	Y	m/z	Y
118.00	1230	195.00	388	282.00	80	444.00	3083
119.00	235	196.00	4989	283.00	474	445.00	142
120.00	322	198.00	160128	284.00	337		
121.00	240	199.00	10848	285.00	680		
122.00	1463	200.00	890	286.00	213		
123.00	2073	201.00	916	289.00	201		

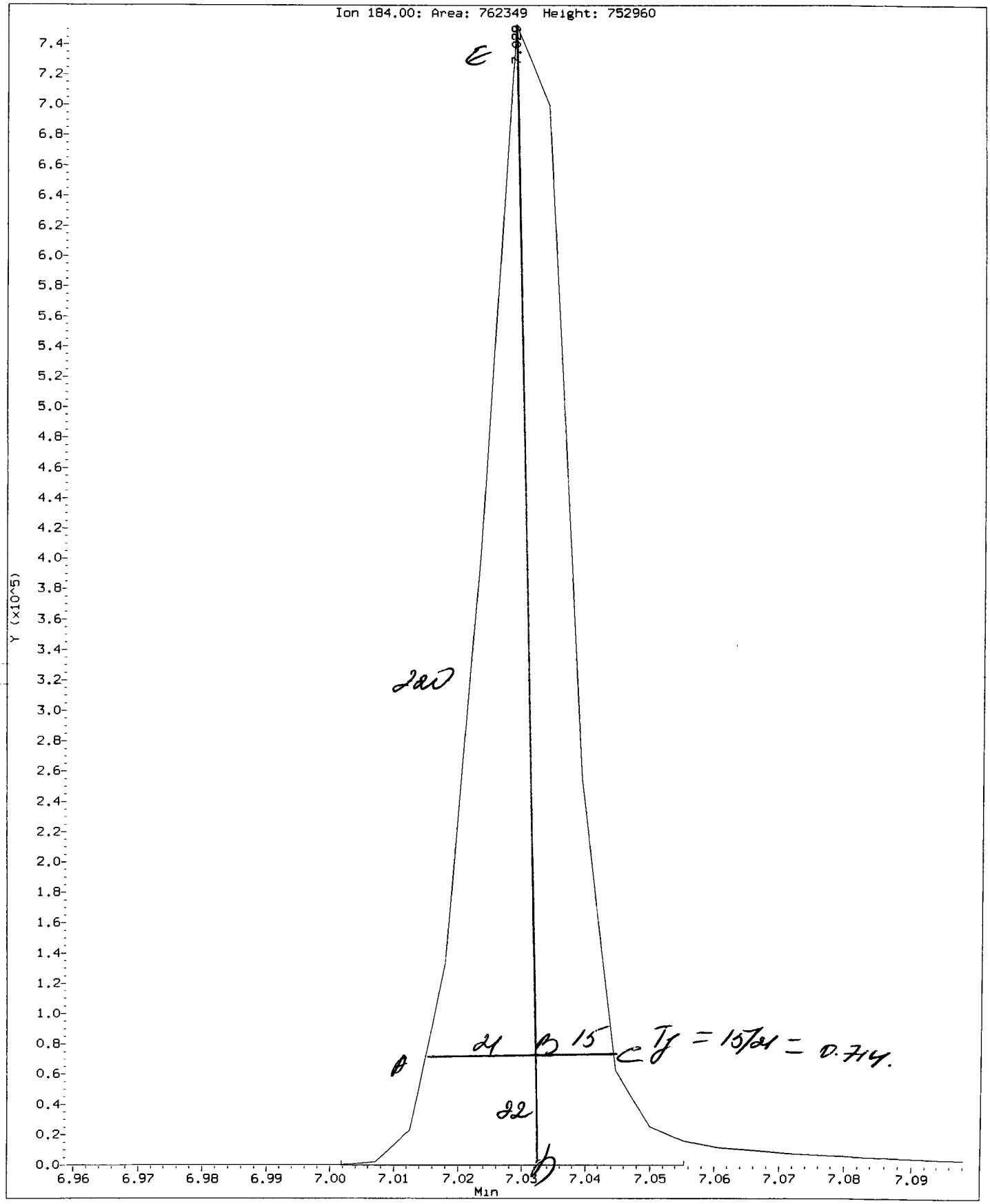
Data File: /chem1/nt10.i/20130624.b/ddt.b/df0624.d
Injection Date: 24-JUN-2013 14:50
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.1/20130624.b/ddt.b/df0624.d
Injection Date: 24-JUN-2013 14:50
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/20130624.b/ddt.b/df0624.d
Method: /chem1/nt10.i/20130624.b/ddt.b/sw846ddt.m
Analysis Date: 24-JUN-2013 14:50

ARI ID: DFTPP
Misc: 11-
Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	5.777	187089
Benzidine	7.029	762349
4,4'-DDE	7.221	1619
4,4'-DDD	7.505	8470
4,4'-DDT	7.761	392203

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(\ 1619 + 8470) * 100}{(\ 1619 + 8470 + 392203)}$$

DDT Percent Breakdown = 2.5 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 24-JUN-2013 15:42
Lab File ID: cc0624a.d Init. Cal. Date(s): 29-APR-2013 29-APR-2013
Analysis Type: Init. Cal. Times: 16:53 21:47
Lab Sample ID: ABN 1 Quant Type: ISTD
Method: /chem1/nt10.i/20130624.b/SIM.b/SIMABN2.m

COMPOUND	RRF / AMOUNT	RF1	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.40508	1.13956	0.010	-18.89695	20.00000	Averaged	
3 Phenol	2.01971	1.45245	0.010	-28.08625	20.00000	Averaged	<-
7 1,3-Dichlorobenzene	1.66429	1.37395	0.010	-17.44557	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.65707	1.37325	0.010	-17.12770	20.00000	Averaged	
11 Benzyl alcohol	0.96865	0.79333	0.010	-18.09945	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.57473	1.30390	0.010	-17.19817	20.00000	Averaged	
13 2-Methylphenol	1.44396	1.10070	0.010	-23.77244	20.00000	Averaged	<-
15 4-Methylphenol	1.47039	1.08678	0.010	-26.08880	20.00000	Averaged	<-
16 N-Nitroso-di-n-propylamine	0.82918	0.68939	0.050	-16.85931	20.00000	Averaged	
22 2,4-Dimethylphenol	0.38748	0.32595	0.010	-15.87791	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.38338	0.33798	0.010	-11.84339	20.00000	Averaged	
30 Hexachlorobutadiene	0.23337	0.19905	0.010	-14.70625	20.00000	Averaged	
39 Dimethylphthalate	1.15411	1.09457	0.010	-5.15839	20.00000	Averaged	
50 Diethylphthalate	1.30694	1.27715	0.010	-2.27915	20.00000	Averaged	
54 N-Nitrosodiphenylamine	0.43858	0.41102	0.010	-6.28478	20.00000	Averaged	
57 Hexachlorobenzene	0.29961	0.25849	0.010	-13.72483	20.00000	Averaged	
58 Pentachlorophenol	0.17813	0.07031	0.005	-60.52839	20.00000	Averaged	<-
$ 66 Terphenyl-d14	0.49170	0.47515	0.010	-3.36730	20.00000	Averaged	
67 Butylbenzylphthalate	0.37109	0.43754	0.010	17.90491	20.00000	Averaged	
79 Dibenzo(a,h)anthracene	0.89160	0.91304	0.010	2.40467	20.00000	Averaged	
90 N-Nitrosodimethylamine	0.86193	0.65678	0.010	-23.80177	20.00000	Averaged	<-

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130624.b/SIM.b/cc0624a.d
Lab Smp Id: ABN 1
Inj Date : 24-JUN-2013 15:42
Operator : YZ Inst ID: nt10.i
Smp Info : ABN 1
Misc Info :
Comment :
Method : /chem1/nt10.i/20130624.b/SIM.b/SIMABN2.m
Meth Date : 24-Jun-2013 16:37 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

YZ 6/25/13

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 1 2-Fluorophenol	112	5.256	5.256	(0.705)	16302	1.00000	0.8110
3 Phenol	94	6.980	6.980	(0.937)	20778	1.00000	0.7191
7 1,3-Dichlorobenzene	146	7.374	7.374	(0.990)	19655	1.00000	0.8255
* 8 1,4-Dichlorobenzene-d4	152	7.451	7.451	(1.000)	57222	4.00000	
9 1,4-Dichlorobenzene	146	7.482	7.482	(1.004)	19645	1.00000	0.8287
11 Benzyl alcohol	79	7.808	7.808	(1.048)	11349	1.00000	0.8190
12 1,2-Dichlorobenzene	146	7.839	7.839	(1.052)	18653	1.00000	0.8280
13 2-Methylphenol	108	8.119	8.119	(1.090)	15746	1.00000	0.7623
15 4-Methylphenol	108	8.422	8.422	(1.130)	15547	1.00000	0.7391
16 N-Nitroso-di-n-propylamine	70	8.391	8.391	(1.126)	9862	1.00000	0.8314
22 2,4-Dimethylphenol	107	9.477	9.477	(0.945)	34434	2.00000	1.682
26 1,2,4-Trichlorobenzene	180	9.962	9.962	(0.994)	17852	1.00000	0.8816(M)
* 27 Naphthalene-d8	136	10.024	10.024	(1.000)	211281	4.00000	
30 Hexachlorobutadiene	225	10.495	10.495	(1.047)	10514	1.00000	0.8529
39 Dimethylphthalate	163	13.436	13.436	(0.971)	33063	1.00000	0.9484
* 42 Acenaphthene-d10	162	13.831	13.831	(1.000)	120825	4.00000	
50 Diethylphthalate	149	15.006	15.006	(1.085)	38578	1.00000	0.9772
54 N-Nitrosodiphenylamine	169	15.345	15.345	(0.901)	24710	1.00000	0.9372
57 Hexachlorobenzene	284	16.395	16.395	(0.963)	15540	1.00000	0.8628
58 Pentachlorophenol	266	16.851	16.851	(0.990)	8454	2.00000	0.7894
* 59 Phenanthrene-d10	188	17.029	17.029	(1.000)	240475	4.00000	
$ 66 Terphenyl-d14	244	20.480	20.480	(0.917)	29715	1.00000	0.9663
67 Butylbenzylphthalate	149	21.502	21.502	(0.963)	27363	1.00000	1.179
* 69 Chrysene-d12	240	22.331	22.331	(1.000)	250154	4.00000	
* 77 Perylene-d12	264	24.622	24.622	(1.000)	212884	4.00000	
79 Dibenzo(a,h)anthracene	278	26.203	26.203	(1.064)	48593	1.00000	1.024
90 N-Nitrosodimethylamine	74	3.032	3.032	(0.407)	18791	2.00000	1.524

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: cc0624a.d
Lab Smp Id: ABN 1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130624.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 24-JUN-2013
Calibration Time: 15:42
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	52658	26329	105316	57222	8.67
27 Naphthalene-d8	192325	96162	384650	211281	9.86
42 Acenaphthene-d10	109274	54637	218548	120825	10.57
59 Phenanthrene-d10	203933	101966	407866	240475	17.92
69 Chrysene-d12	223647	111824	447294	250154	11.85
77 Perylene-d12	211919	105960	423838	212884	0.46

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.45	6.95	7.95	7.45	0.00
27 Naphthalene-d8	10.02	9.52	10.52	10.02	0.00
42 Acenaphthene-d10	13.83	13.33	14.33	13.83	0.00
59 Phenanthrene-d10	17.03	16.53	17.53	17.03	0.00
69 Chrysene-d12	22.33	21.83	22.83	22.33	0.00
77 Perylene-d12	24.62	24.12	25.12	24.62	0.00

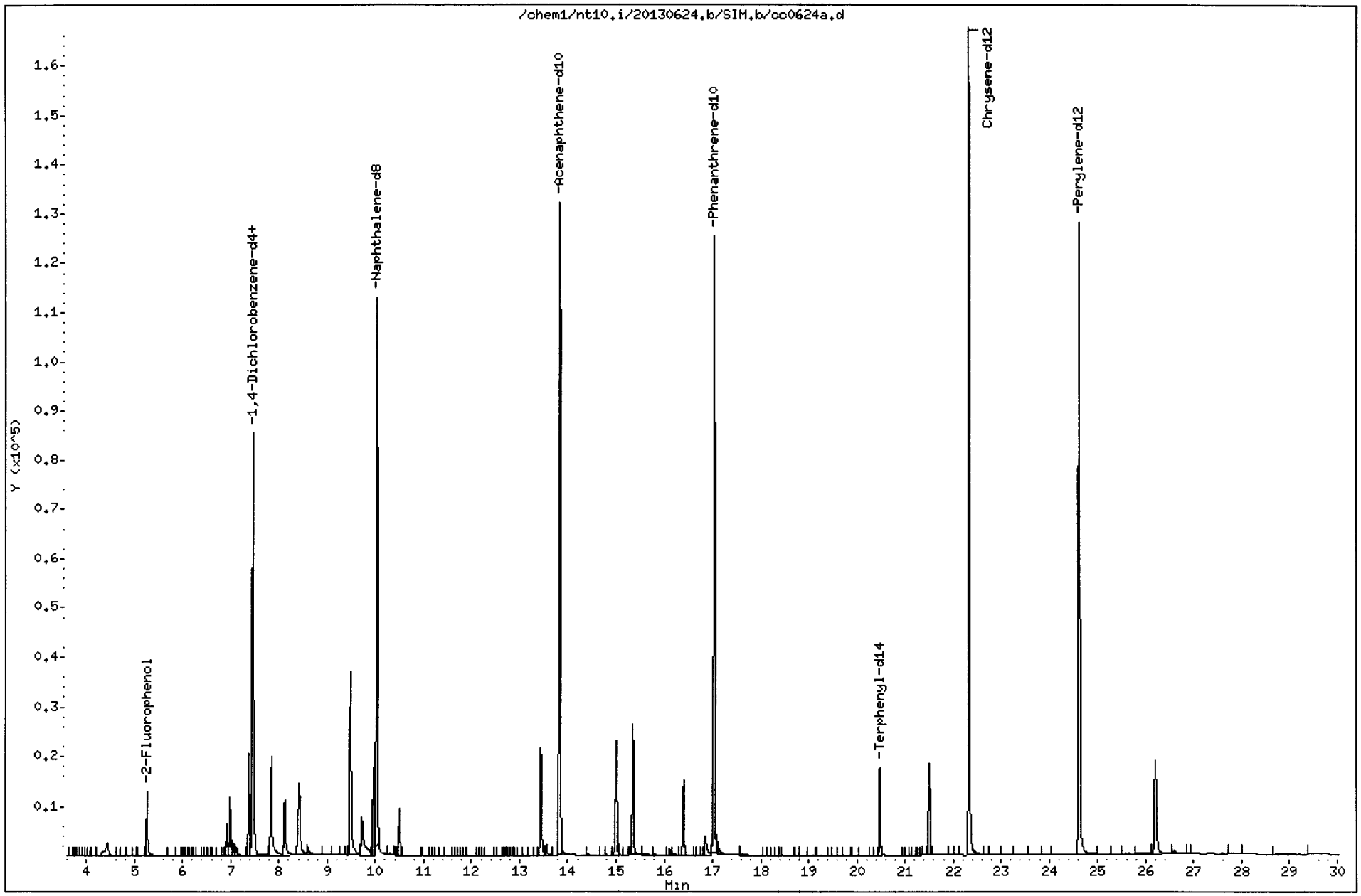
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130624.b/SIM.b/cc0624a.d
Date : 24-JUN-2013 15:42
Client ID:
Sample Info: ABN 1

Instrument: nt10.i

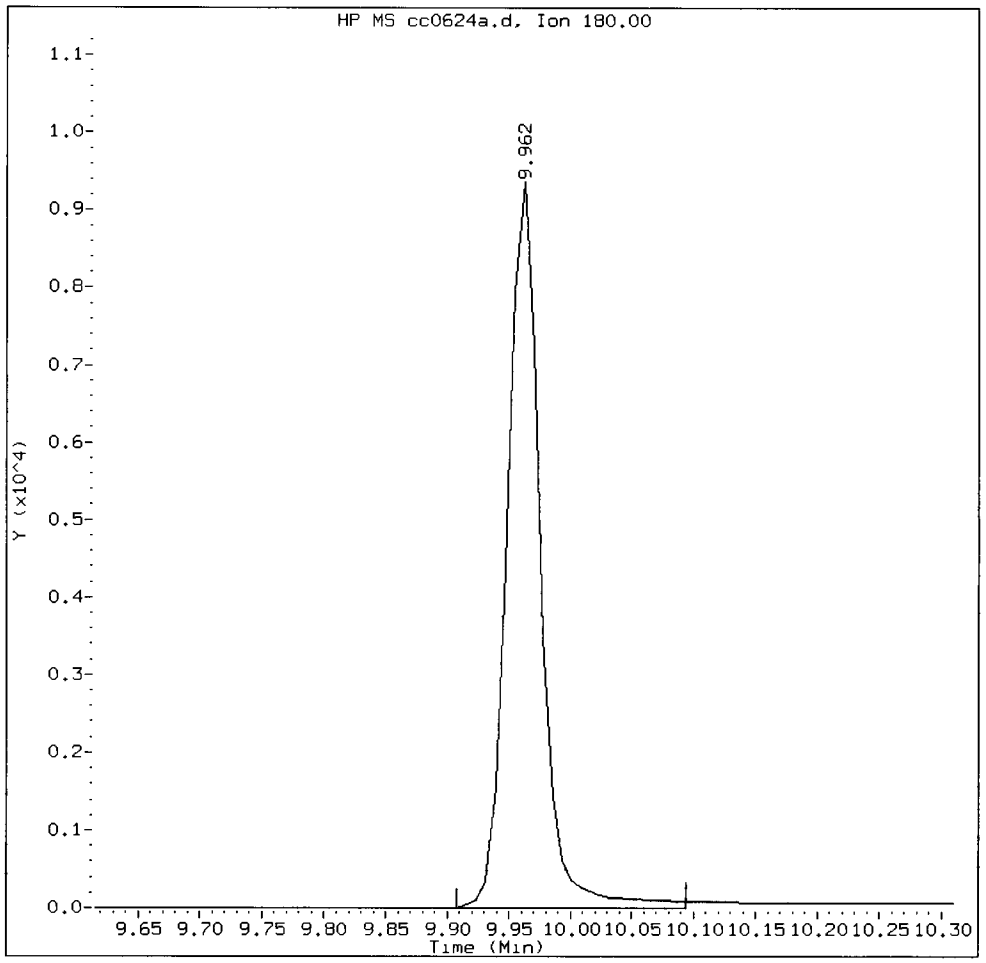
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



ABN 1, /chem1/nt10.i/20130624.b/SIM.b/cc0624a.d

1,2,4-Trichlorobenzene Amount: 0.88 Area: 17852



MANUAL INTEGRATION for 1,2,4-Trichlorobenzene

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 6/25/13

USA POST

CO-ELUTION SUMMARY FOR FILE - cc0624a.d

Lab ID: ABN 1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 24-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 6/25/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130624.b/SIM.b/ws91mb.d
Lab Smp Id: WS91MBS1 Client Smp ID: WS91MBS1
Inj Date : 24-JUN-2013 16:18
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WS91MBS1
Misc Info : 13-12076
Comment :
Method : /chem1/nt10.i/20130624.b/SIM.b/SIMABN2.m
Meth Date : 24-Jun-2013 16:37 yev Quant Type: ISTD
Cal Date : 29-APR-2013 21:47 Cal File: ic0429i.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	5.256	5.256	(0.706)	95872	4.64577	464.6
	3 Phenol	94	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	7.444	7.451	(1.000)	58748	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	10.024	10.024	(1.000)	227812	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	13.823	13.831	(1.000)	125123	4.00000	
	50 Diethylphthalate	149	14.998	15.006	(1.085)	2235	0.05467	5.467(R)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	17.029	17.029	(1.000)	247086	4.00000	
$	66 Terphenyl-d14	244	20.480	20.480	(0.917)	140861	4.47932	447.9
	67 Butylbenzylphthalate	149	Compound Not Detected.					
*	69 Chrysene-d12	240	22.331	22.331	(1.000)	255820	4.00000	
*	77 Perylene-d12	264	24.622	24.622	(1.000)	207408	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: ws91mb.d
Lab Smp Id: WS91MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130624.b/SIM.b/SIMABN2.m
Misc Info: 13-12076

Calibration Date: 24-JUN-2013
Calibration Time: 15:42
Client Smp ID: WS91MBS1
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	52658	26329	105316	58748	11.57
27 Naphthalene-d8	192325	96162	384650	227812	18.45
42 Acenaphthene-d10	109274	54637	218548	125123	14.50
59 Phenanthrene-d10	203933	101966	407866	247086	21.16
69 Chrysene-d12	223647	111824	447294	255820	14.39
77 Perylene-d12	211919	105960	423838	207408	-2.13

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.45	6.95	7.95	7.44	-0.10
27 Naphthalene-d8	10.02	9.52	10.52	10.02	0.00
42 Acenaphthene-d10	13.83	13.33	14.33	13.82	-0.06
59 Phenanthrene-d10	17.03	16.53	17.53	17.03	0.00
69 Chrysene-d12	22.33	21.83	22.83	22.33	0.00
77 Perylene-d12	24.62	24.12	25.12	24.62	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: WS91MBS1
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDALCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130624.b/SIM.b/SIMABN2.m
Misc Info: 13-12076

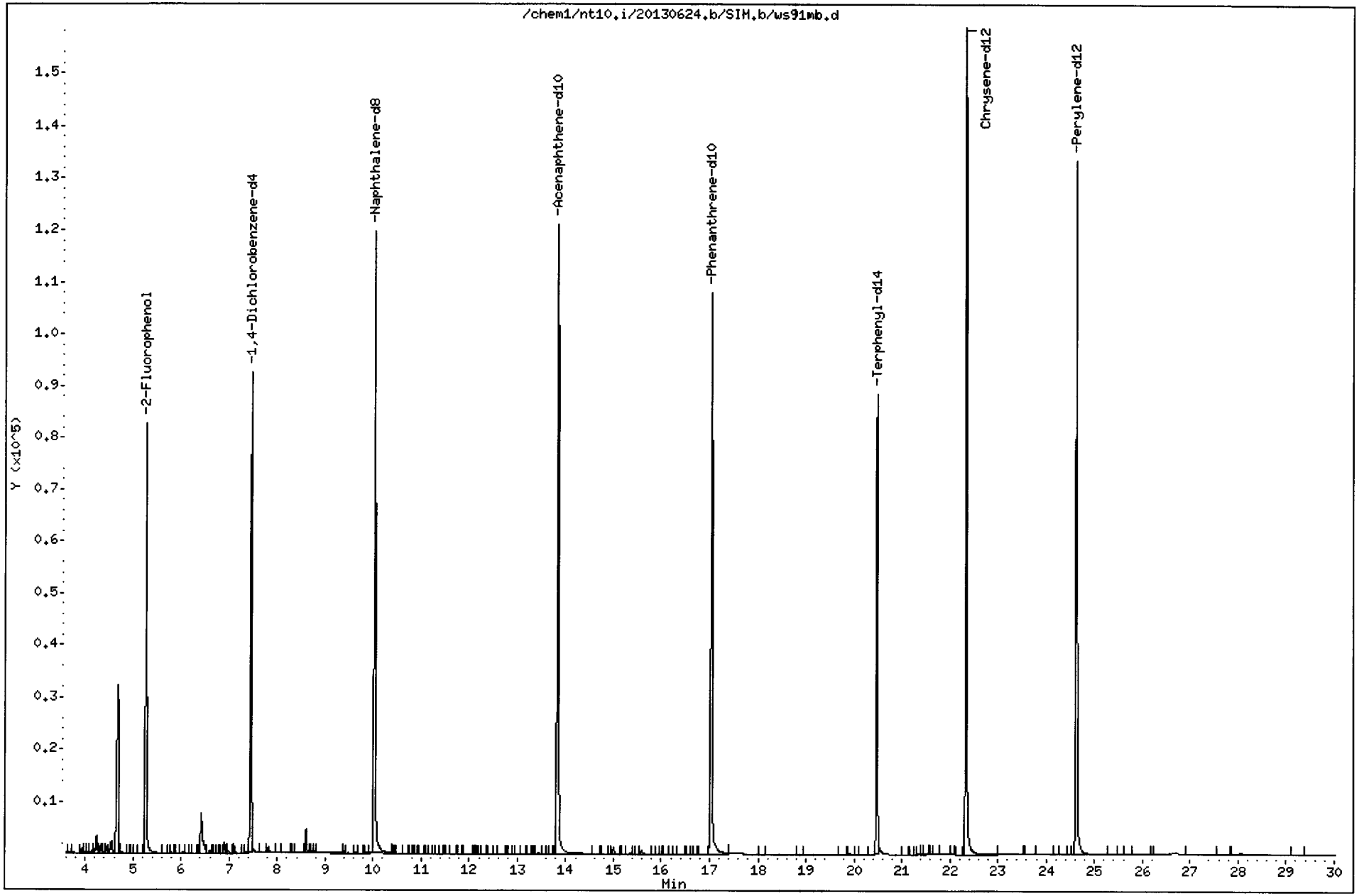
Client SDG: WS91
Fraction: SV
Client Smp ID: WS91MBS1
Operator: VTS/YZ
SampleType: BLANK
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	0.000	*	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	1000	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	500.0	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	5.467	1.09*	30-160
54	N-Nitrosodiphenyl	500.0	0.000	*	30-160
57	Hexachlorobenzene	500.0	0.000	*	30-160
58	Pentachlorophenol	500.0	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	500.0	0.000	*	30-160

	SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	750.0	464.6	61.94	30-160
$ 66	Terphenyl-d14	500.0	447.9	89.59	30-160

Data File: /chem1/nt10.i/20130624.b/SIM.b/ws91mb.d
Date : 24-JUN-2013 16:18
Client ID: WS91MBS1
Sample Info: WS91MBS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130624.b/SIM.b/ws91mb.d

Date : 24-JUN-2013 16:18

Client ID: WS91MBS1

Instrument: nt10.i

Sample Info: WS91MBS1

Volume Injected (uL): 1.0

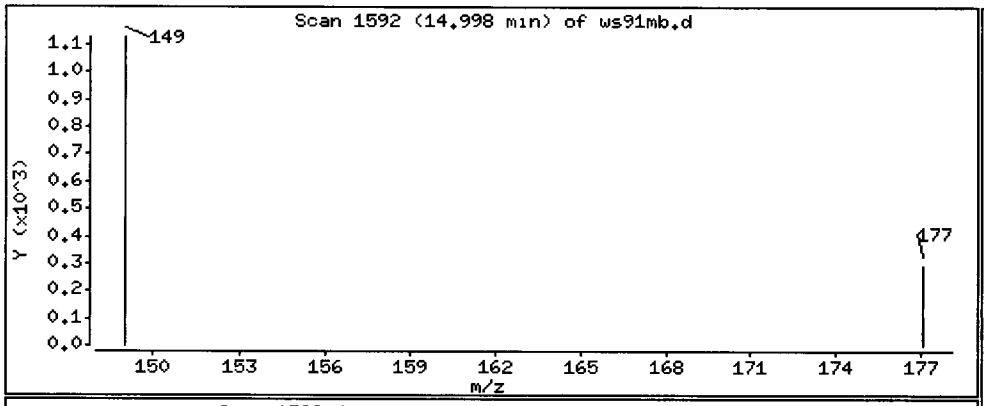
Operator: VTS/YZ

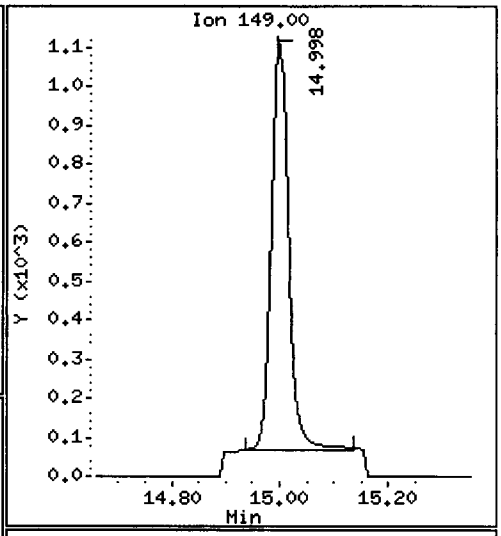
Column phase: ZB-5ms1

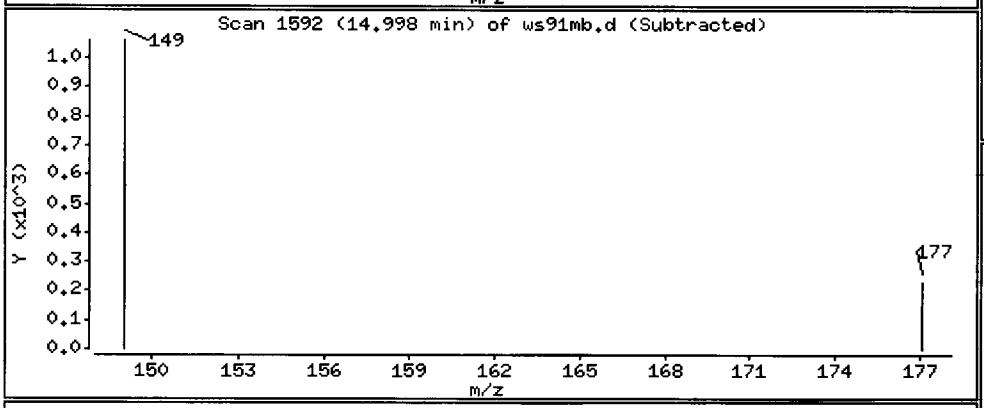
Column diameter: 0.25

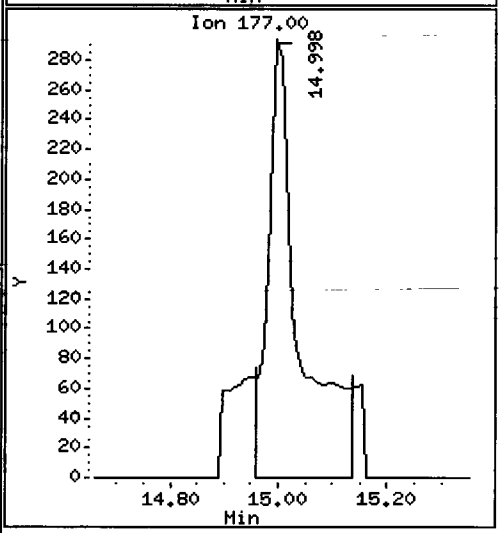
50 Diethylphthalate

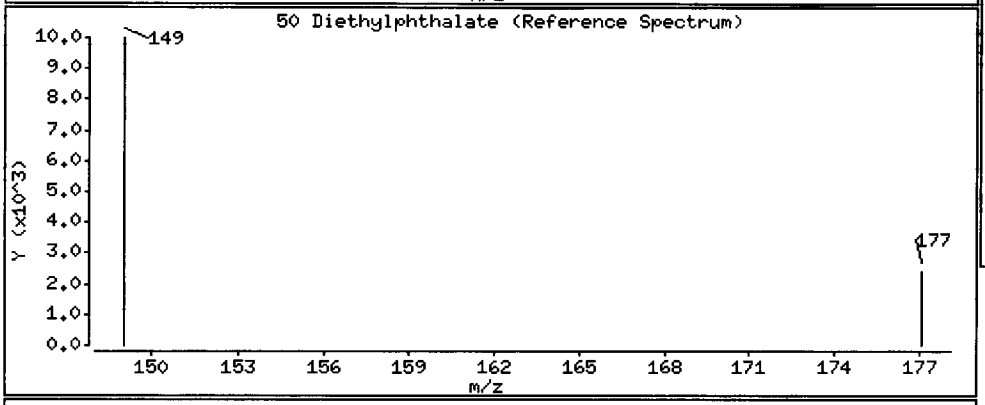
Concentration: 5.467 ug/kg

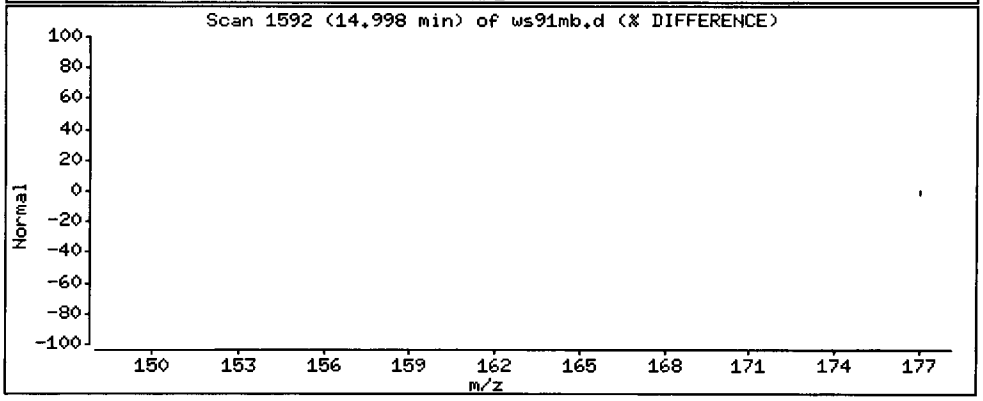












CO-ELUTION SUMMARY FOR FILE - ws91mb.d

Lab ID: WS91MBS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 24-JUN-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

WS91 : 00045

Dioxin Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WS91

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dioxin / Furan Bench Sheet EPA Methods 8290A & 1613B
Solid Samples

ARI Job No(s) WS91, WT36, WT81

Matrix (circle one)	Soil	Sediment	Oil Tissue
Extraction Method	Start Time/Date:		End Time/Date:
Soxhlet	12:08 6/19/13		05:11 6/20/13

Reagent / Standard	NA	ID / Lot Number	Initials	Date
Analytical Balance		SN 24650344	PD	6/19/13
Purified Sand		I8025	PD	6/19/13
Toluene		I8264	PD	6/19/13
Hexane		I8269	PD	6/20/13
CH_2Cl_2		I8254	PD	6/24/13
H_2SO_4		I8263	PD	6/20/13
Na_2SO_4		I8130	PD	6/21/13
Glasswool		I7996	PD	6/21/13
10 % $AgNO_3$	✓	H147 PD		
Basic Silica		H142	PD	6/21/13
Acid Silica		H166	PD	6/21/13
0% Silica		I8035	PD	6/21/13
Activated Florisil		H127	PD	6/21/13
Dual Carbon Column	✓			
Other ( )	✓			
Nonane		I8006	PD	6/21/13

Bottle ID	ARI Sample ID	Sample Weight (eq to dry wt)	Roto Vap 45 °C	Final Vol.	H20 Trap Vol (mL)	Comments 1P
6/19/13	WS91 MB	10.00g	1 (2)	10uL	0.8	0.8
↓	↓ OPR	10.00g	(1) 2	10uL	0.9	0.9
~~—~~	~~QLS~~	~~10.00g~~	~~1 / 2~~	~~10uL~~		
10	WS91A	24.58	(1) 2	10uL	12.0	12.0
4	WT36A	23.11	1 (2)	10uL	12.6	12.6
5	WT81A	23.55	(1) 2	10uL	12.9	12.9
10	↓ B	25.35	1 (2)	10uL	16.0	16.0
10	↓ C	25.32	(1) 2	10uL	15.0	15.0
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			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 6/19/13	PD 6/20/13	PD 6/21/13	PD 6/24/13	

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	NL	6/19/13	PD
Ongoing Precision /Recovery	20 µL	2069-3	10/50/100ng/mL	2/6/14	NL	6/19/13	PD
~~QLS Standard~~	~~10 µL~~	~~211~~	~~0.5/2.5/5ng/mL~~				
Clean-up Standard	1.0 mL	B 000394	0.8ng/mL	5/24/14	PDx2	6/21/13	PD
Internal Standard	10 µL		200ng/mL				

Supervisor Review: 6/21/13

Bench Sheet No.: 00054

Verify Client ID
Analyst/Date PD 6/19/13

Acid Clean
(Y)N
Analyst/Date PD 6/20/13

Silica-Florisil
(Y)N
Analyst/Date PD 6/21/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: W591 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)= A	AC 6-6-13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)? #6 5% small	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☑ Other (Details)= use double Acid silica due to brown extract= A	PD 6/21/13
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)	

3056F

Revision 009
08/14/12

Reviewed: [signature] 6/24/13

W591 [illegible]

Dioxin Raw Data
Initial Calibration

ARI Job ID: WS91

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** 6/20/13 CURVE

Curve Date: 6/20/13 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~~ low point is CS1. All others CSL.
- All %RSD < 20%.
- Man. Int. in CSL for PF, OF, HD, HPD, and OD.

(Review 1)Analyst: _____ **Date:** 6/21/13

(Review 2)Reviewer: _____ **Date:** _____

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 6/20/13 Analysis: Dioxins Analyst: JM

GC Program: 8290C Column No: F7822 Column Type: RTX-Dioxin2

Inj Vol: 1ul Instrument Tune (IPR): JUN13_1-5 Detector Voltage: 350

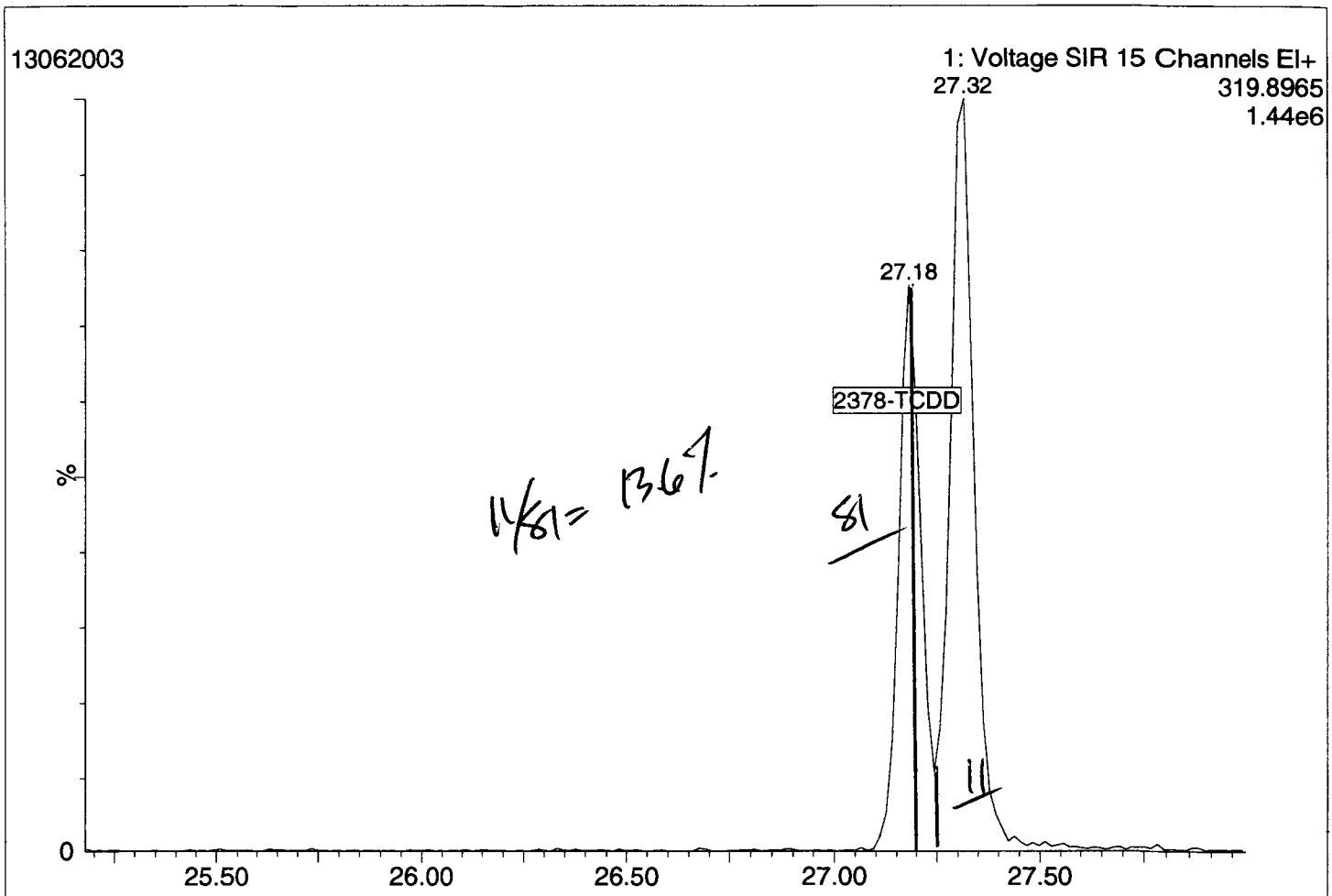
Resolution Check Files: 09:53, 19:03 Curve Date: 6/20/13

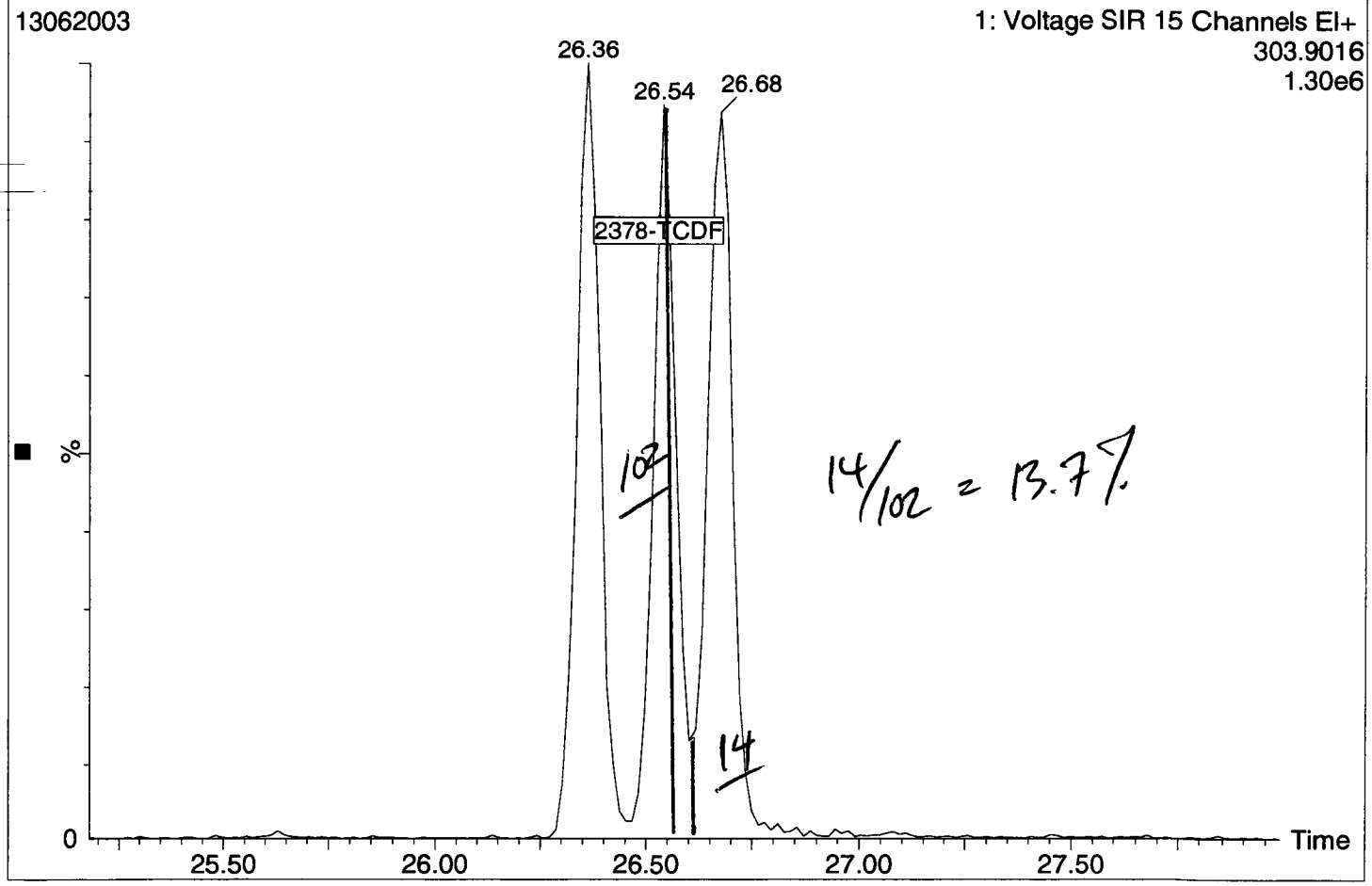
IS/SS	Ical/Ccal	LCS/ICV
	I8145-8149	
I8144	I8155	I7383
	I7708	
	PPF-2	

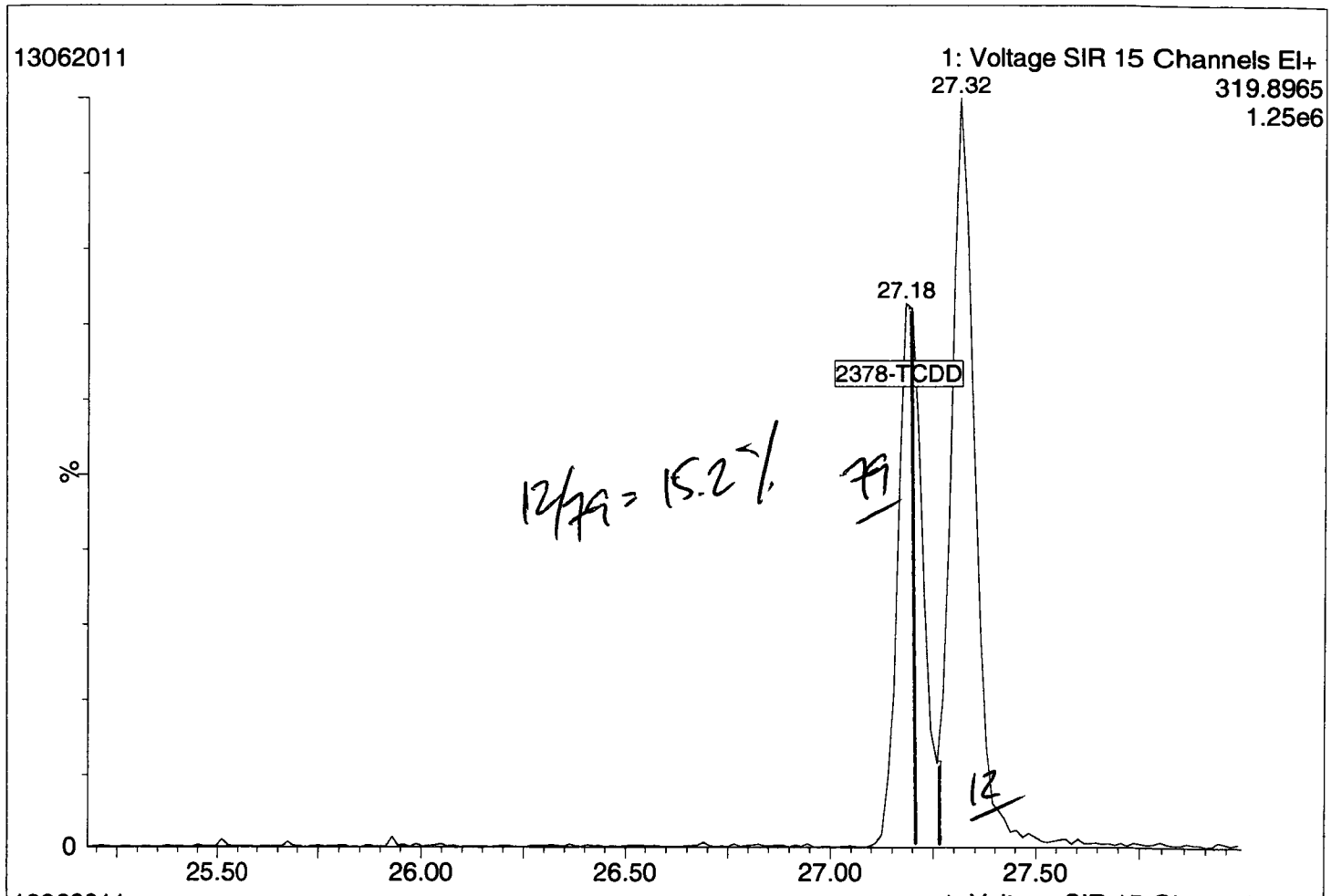
1	20-Jun-13	09:56:57	13062002	CS3WD
2	20-Jun-13	10:48:30	13062003	ISC01
3	20-Jun-13	12:34:03	13062004	CSL
4	20-Jun-13	13:43:04	13062005	CS1
5	20-Jun-13	14:33:31	13062006	CS2
6	20-Jun-13	15:25:46	13062007	CS3
7	20-Jun-13	16:18:06	13062008	CS4
8	20-Jun-13	17:10:20	13062009	CS5
9	20-Jun-13	18:02:47	13062010	ICV
10	20-Jun-13	19:03:14	13062011	ISC02

JM 6/21/13

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


13062003
1: Voltage SIR 15 Channels EI+
319.8965
1.44e6
27.32
27.18
2378-TCDD
%
0
25.50
26.00
26.50
27.00
27.50
14/81 = 13%
81
11

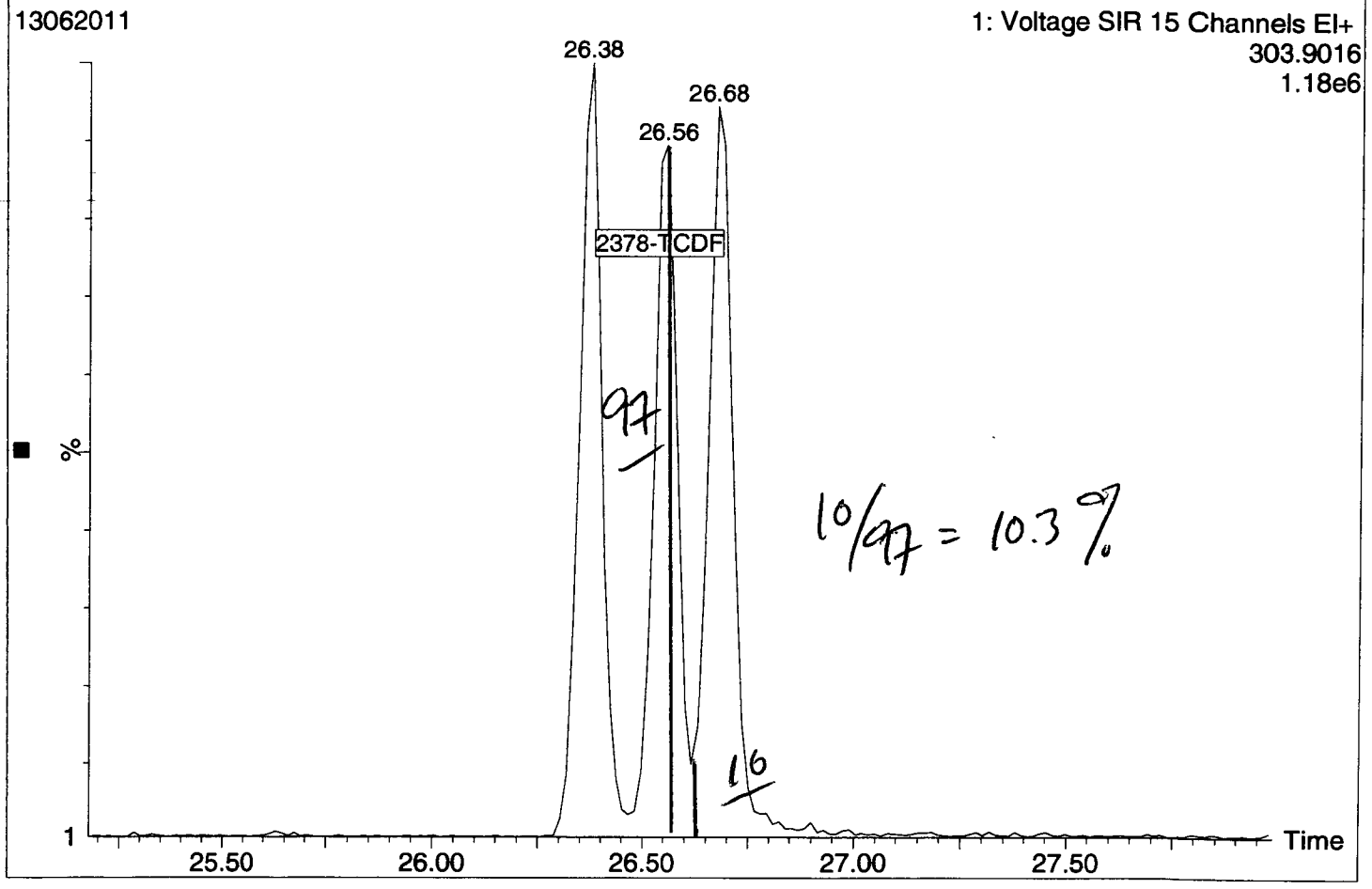

13062003
1: Voltage SIR 15 Channels EI+
303.9016
1.30e6
26.36
26.54
26.68
2378-TCDF
%
0
Time
25.50
26.00
26.50
27.00
27.50
102
14
14/102 = 13.7%



12/79 = 15.2%

79

12



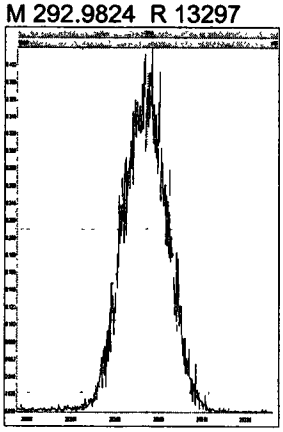
97

10/97 = 10.3%

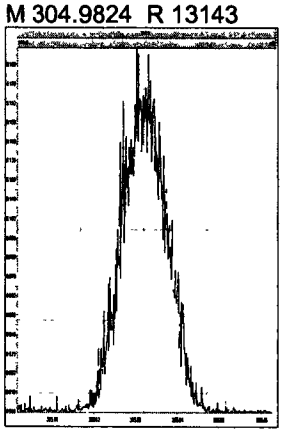
16

Printed: Thursday, June 20, 2013 09:53:14 Pacific Daylight Time

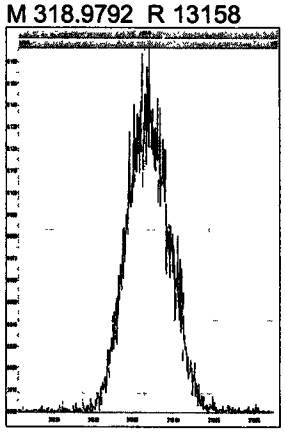
M 292.9824 R 13297



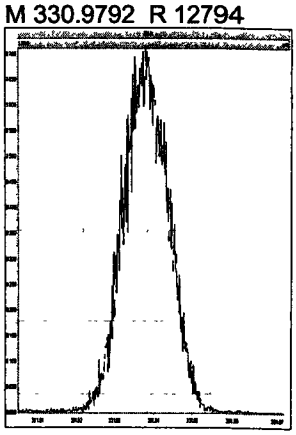
M 304.9824 R 13143



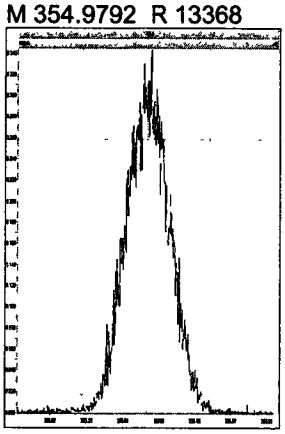
M 318.9792 R 13158



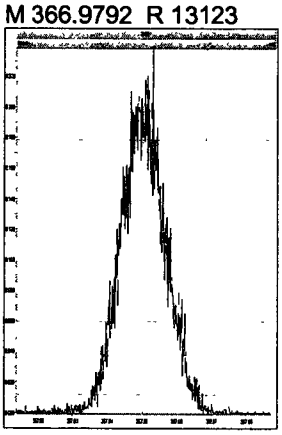
M 330.9792 R 12794



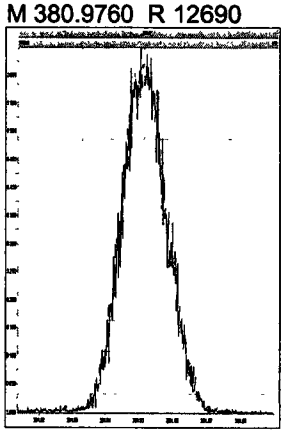
M 354.9792 R 13368



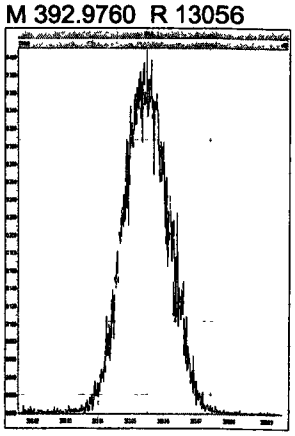
M 366.9792 R 13123



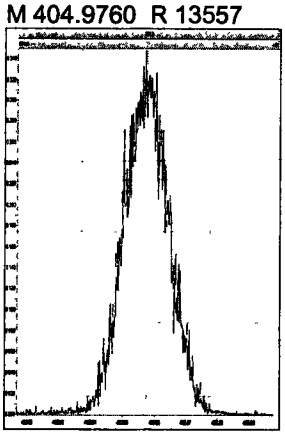
M 380.9760 R 12690



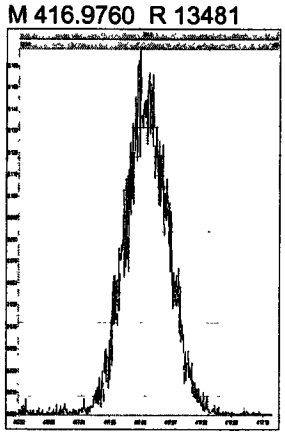
M 392.9760 R 13056



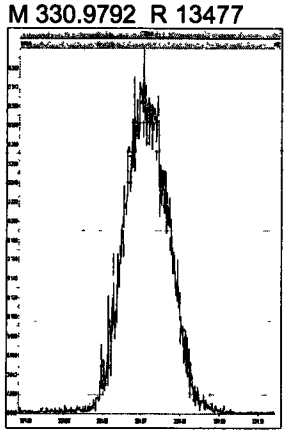
M 404.9760 R 13557



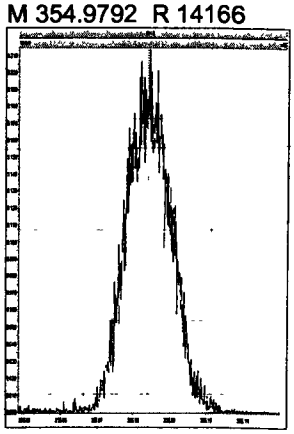
M 416.9760 R 13481



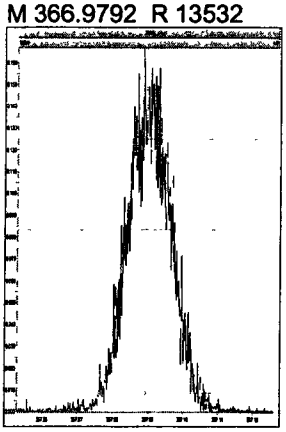
M 330.9792 R 13477



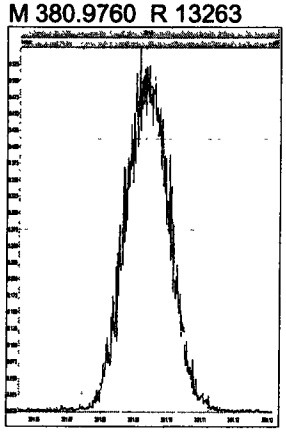
M 354.9792 R 14166



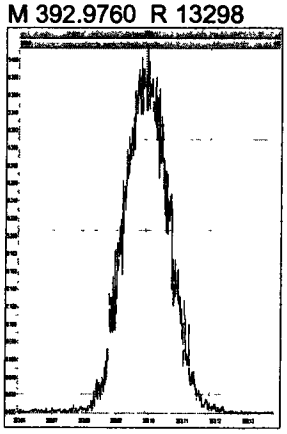
M 366.9792 R 13532



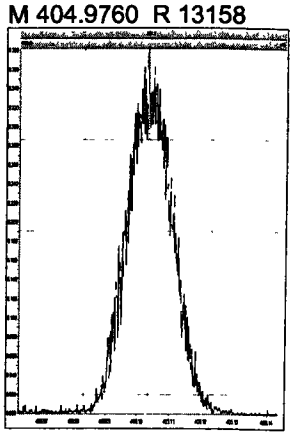
M 380.9760 R 13263



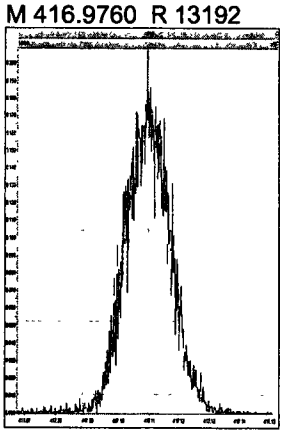
M 392.9760 R 13298



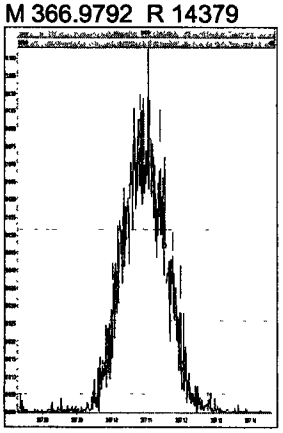
M 404.9760 R 13158



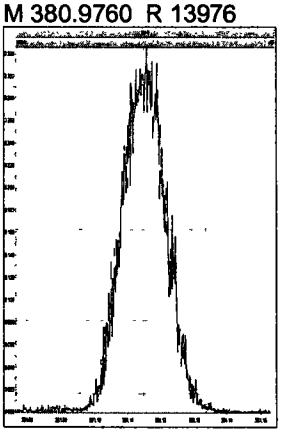
M 416.9760 R 13192



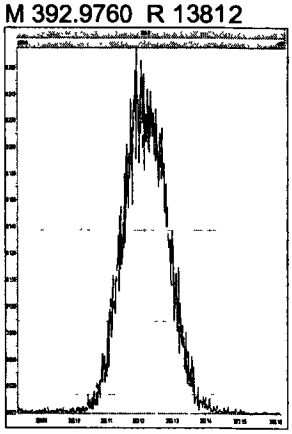
M 366.9792 R 14379



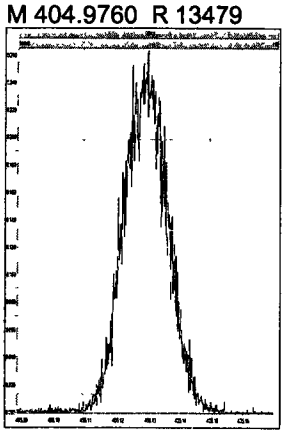
M 380.9760 R 13976



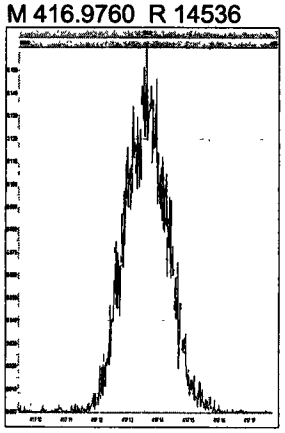
M 392.9760 R 13812



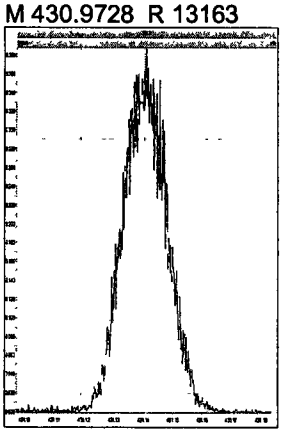
M 404.9760 R 13479



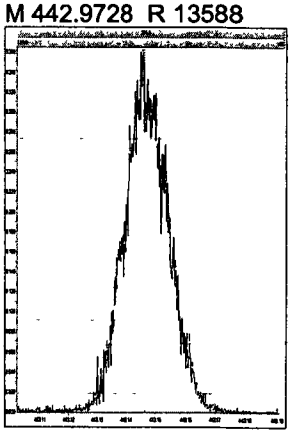
M 416.9760 R 14536



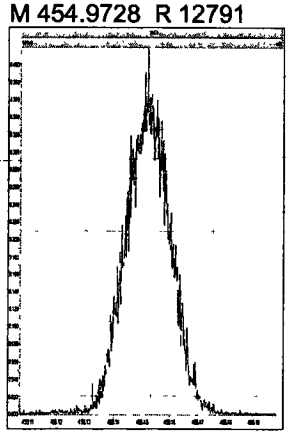
M 430.9728 R 13163



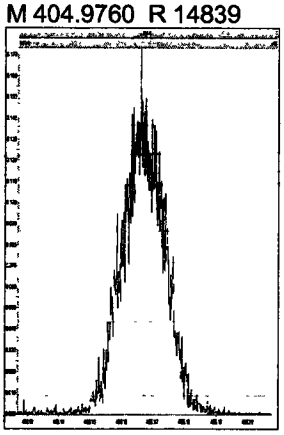
M 442.9728 R 13588



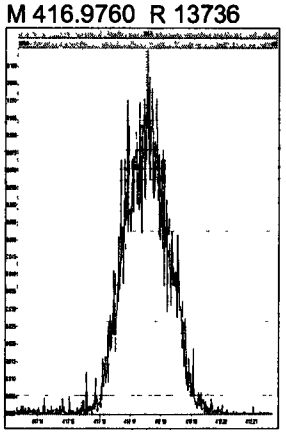
M 454.9728 R 12791



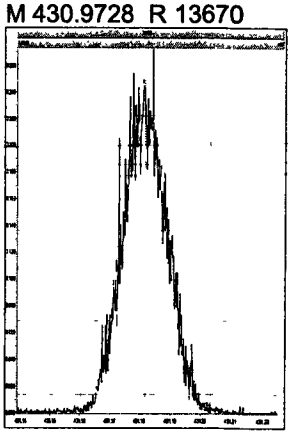
M 404.9760 R 14839



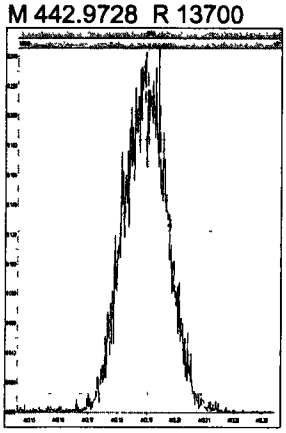
M 416.9760 R 13736



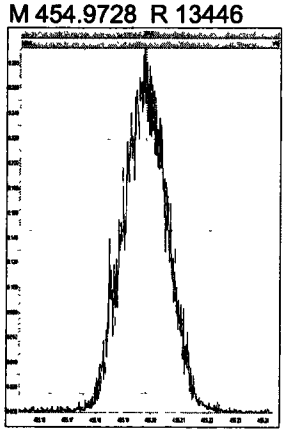
M 430.9728 R 13670



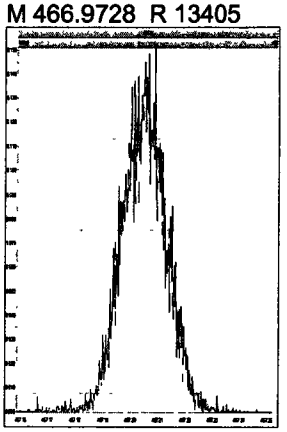
M 442.9728 R 13700



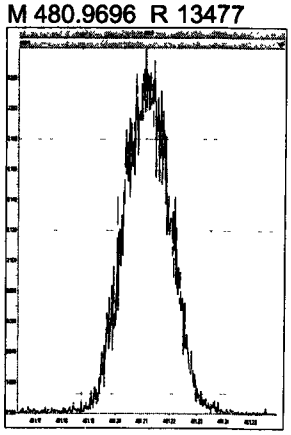
M 454.9728 R 13446



M 466.9728 R 13405

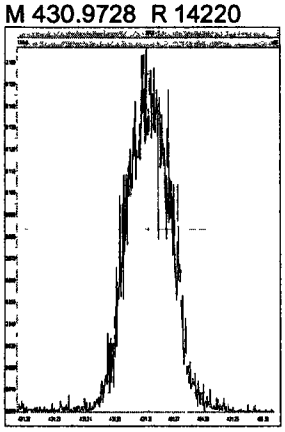


M 480.9696 R 13477

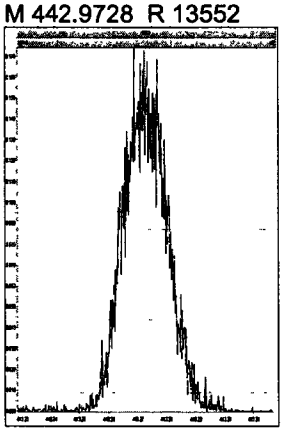


Printed: Thursday, June 20, 2013 09:53:14 Pacific Daylight Time

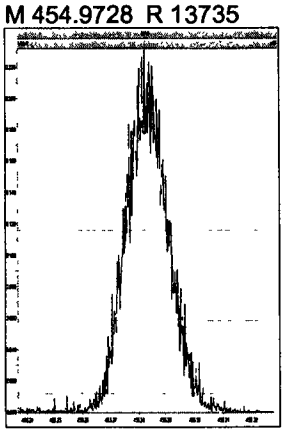
M 430.9728 R 14220



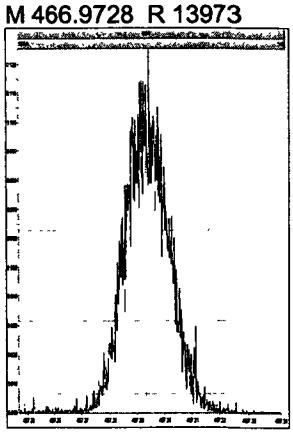
M 442.9728 R 13552



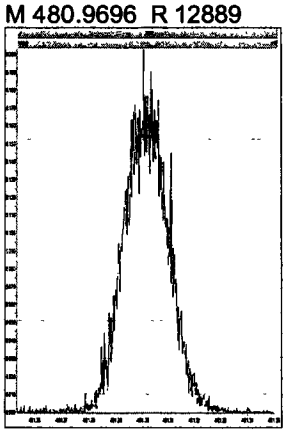
M 454.9728 R 13735



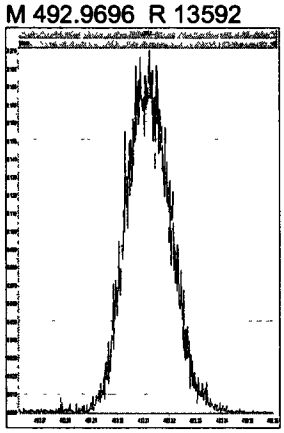
M 466.9728 R 13973



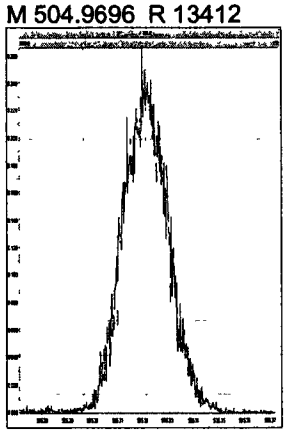
M 480.9696 R 12889



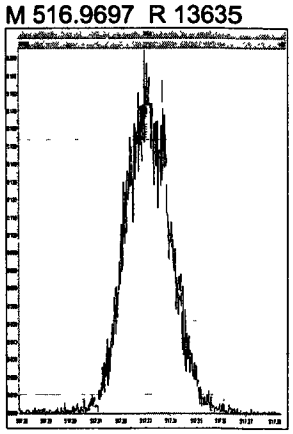
M 492.9696 R 13592



M 504.9696 R 13412

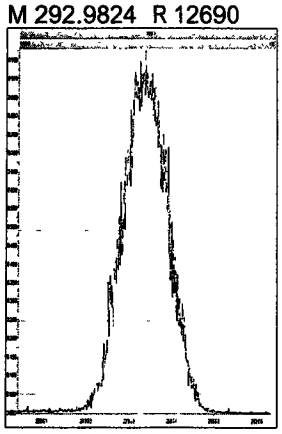


M 516.9697 R 13635

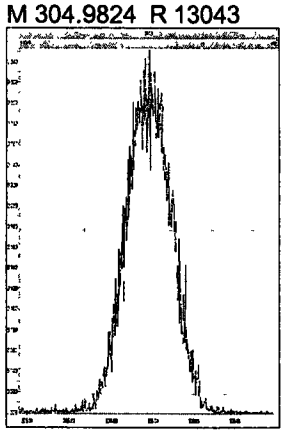


Printed: Thursday, June 20, 2013 19:03:13 Pacific Daylight Time

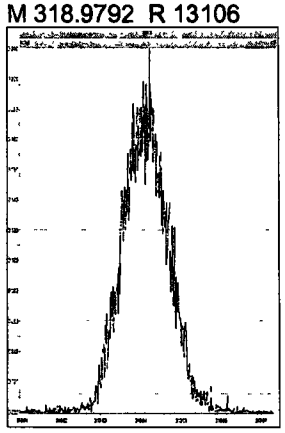
M 292.9824 R 12690



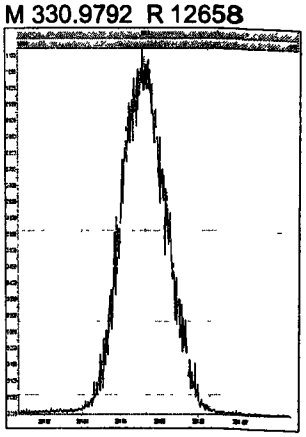
M 304.9824 R 13043



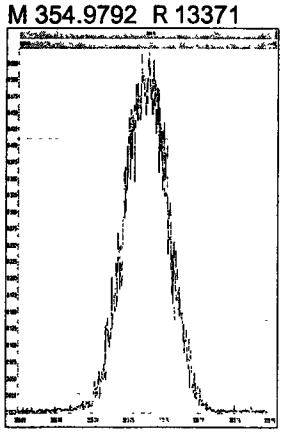
M 318.9792 R 13106



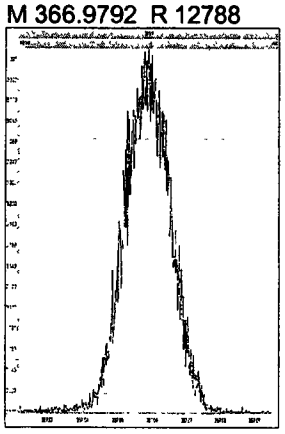
M 330.9792 R 12658



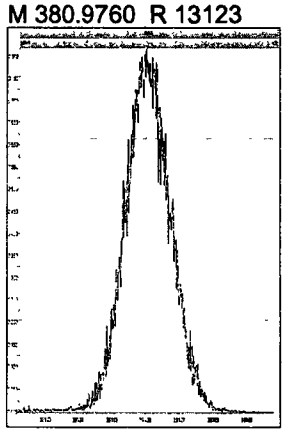
M 354.9792 R 13371



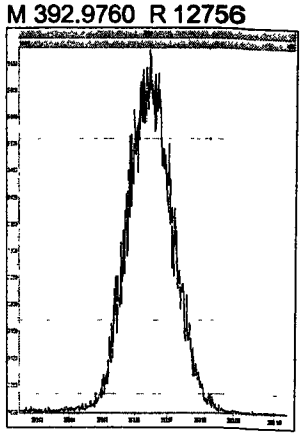
M 366.9792 R 12788



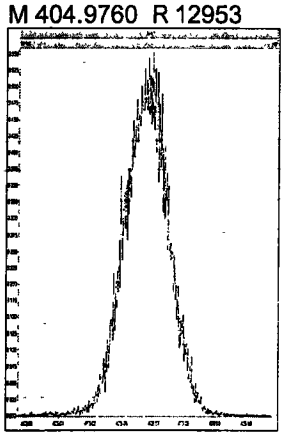
M 380.9760 R 13123



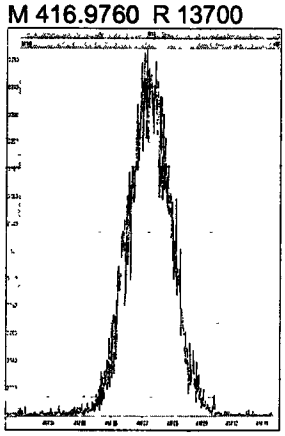
M 392.9760 R 12756



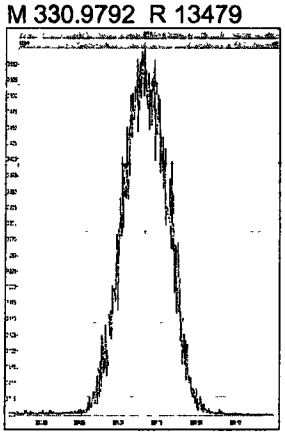
M 404.9760 R 12953



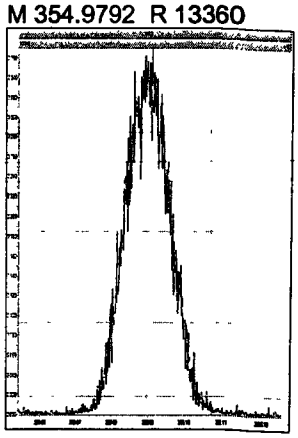
M 416.9760 R 13700



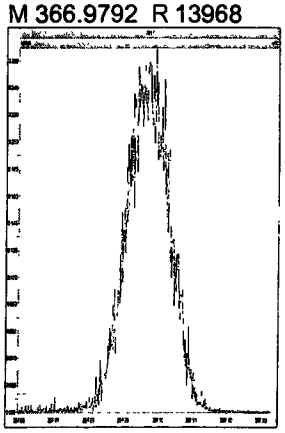
M 330.9792 R 13479



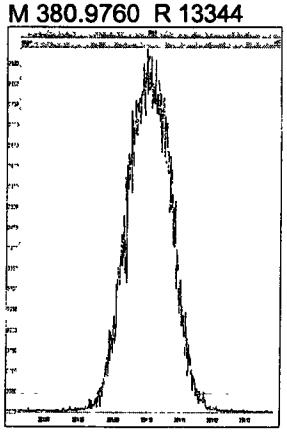
M 354.9792 R 13360



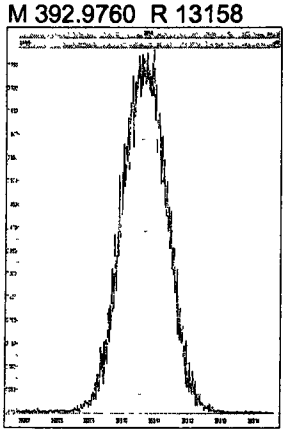
M 366.9792 R 13968



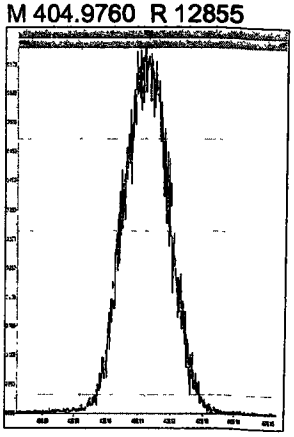
M 380.9760 R 13344



M 392.9760 R 13158

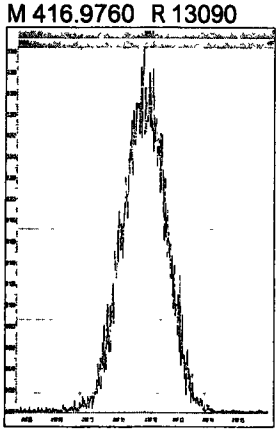


M 404.9760 R 12855

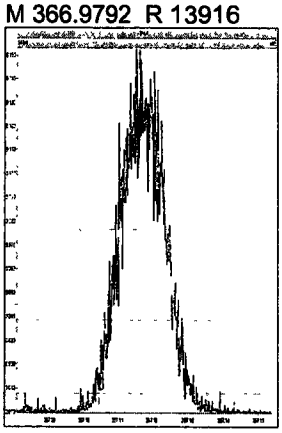


Printed: Thursday, June 20, 2013 19:03:13 Pacific Daylight Time

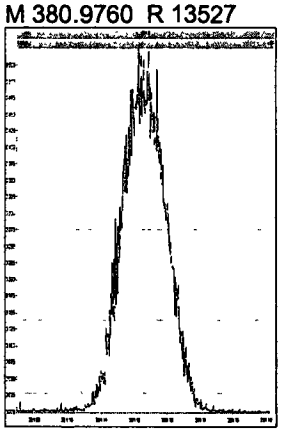
M 416.9760 R 13090



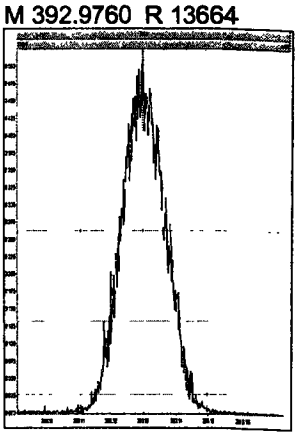
M 366.9792 R 13916



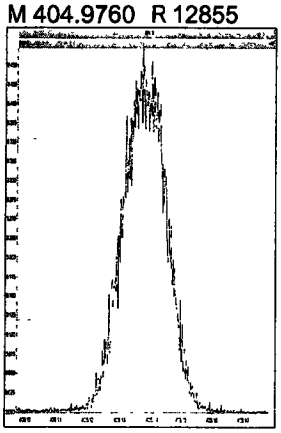
M 380.9760 R 13527



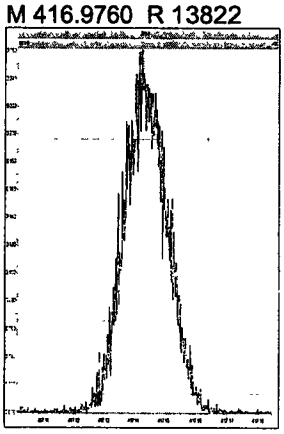
M 392.9760 R 13664



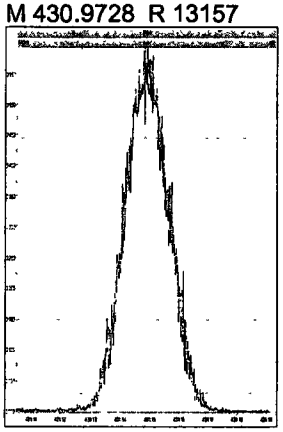
M 404.9760 R 12855



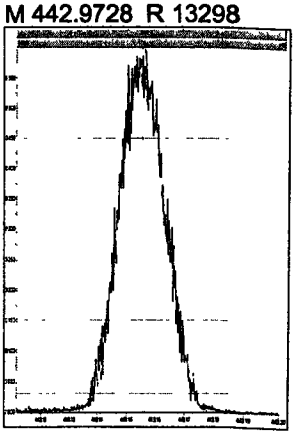
M 416.9760 R 13822



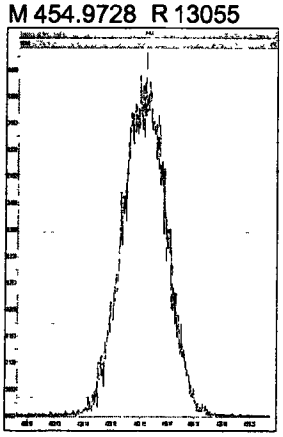
M 430.9728 R 13157



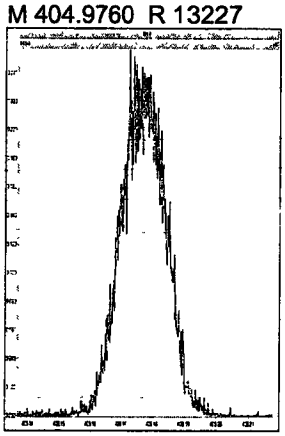
M 442.9728 R 13298



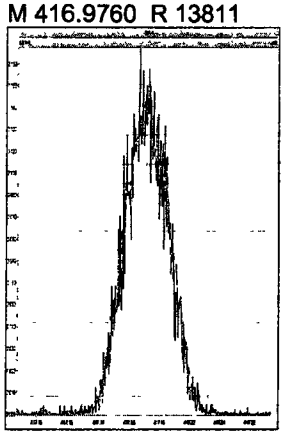
M 454.9728 R 13055



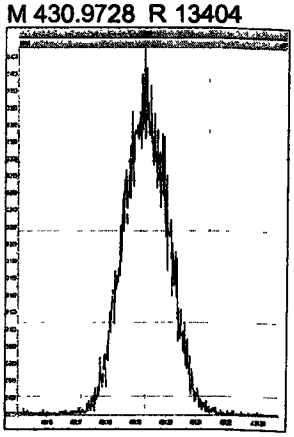
M 404.9760 R 13227



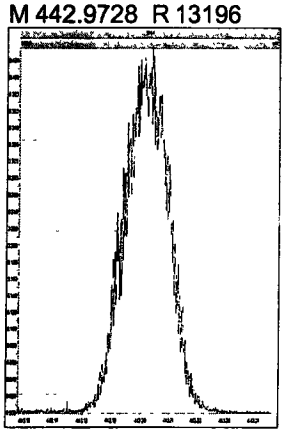
M 416.9760 R 13811



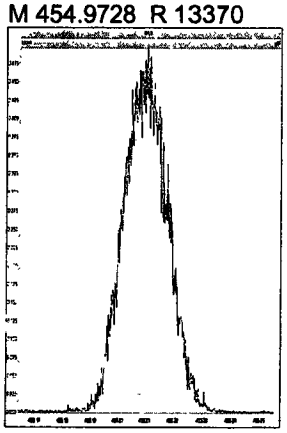
M 430.9728 R 13404



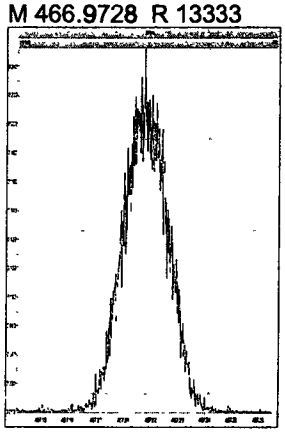
M 442.9728 R 13196



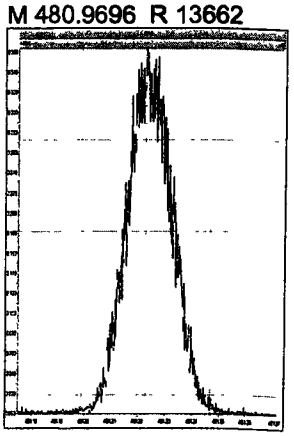
M 454.9728 R 13370



M 466.9728 R 13333



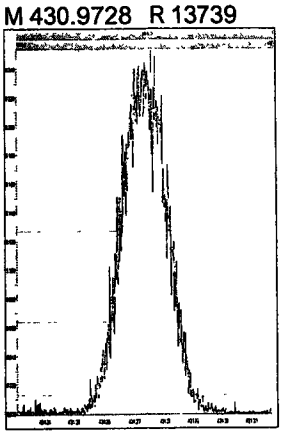
M 480.9696 R 13662



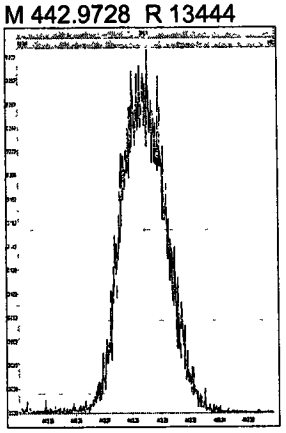
USS1 : 00898

Printed: Thursday, June 20, 2013 19:03:13 Pacific Daylight Time

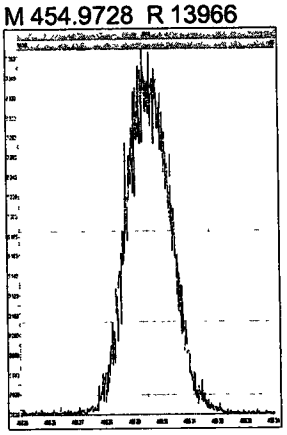
M 430.9728 R 13739



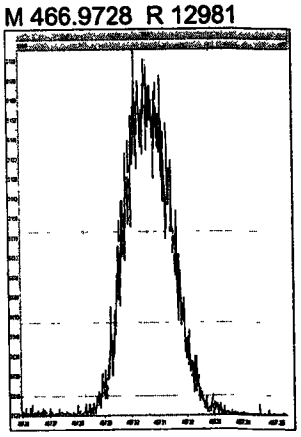
M 442.9728 R 13444



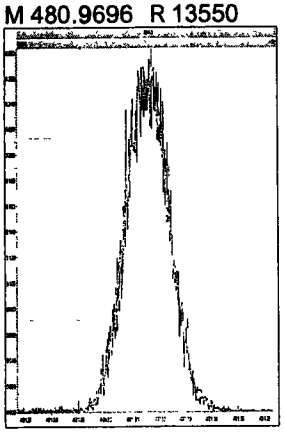
M 454.9728 R 13966



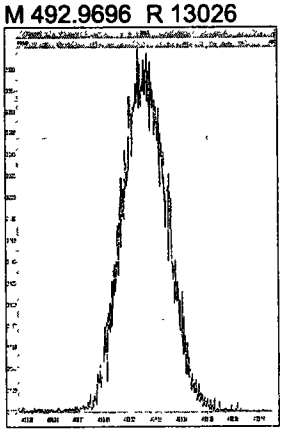
M 466.9728 R 12981



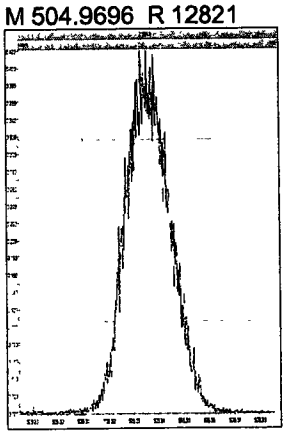
M 480.9696 R 13550



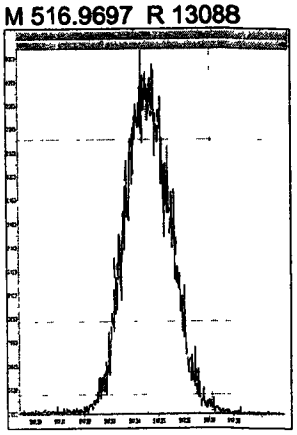
M 492.9696 R 13026

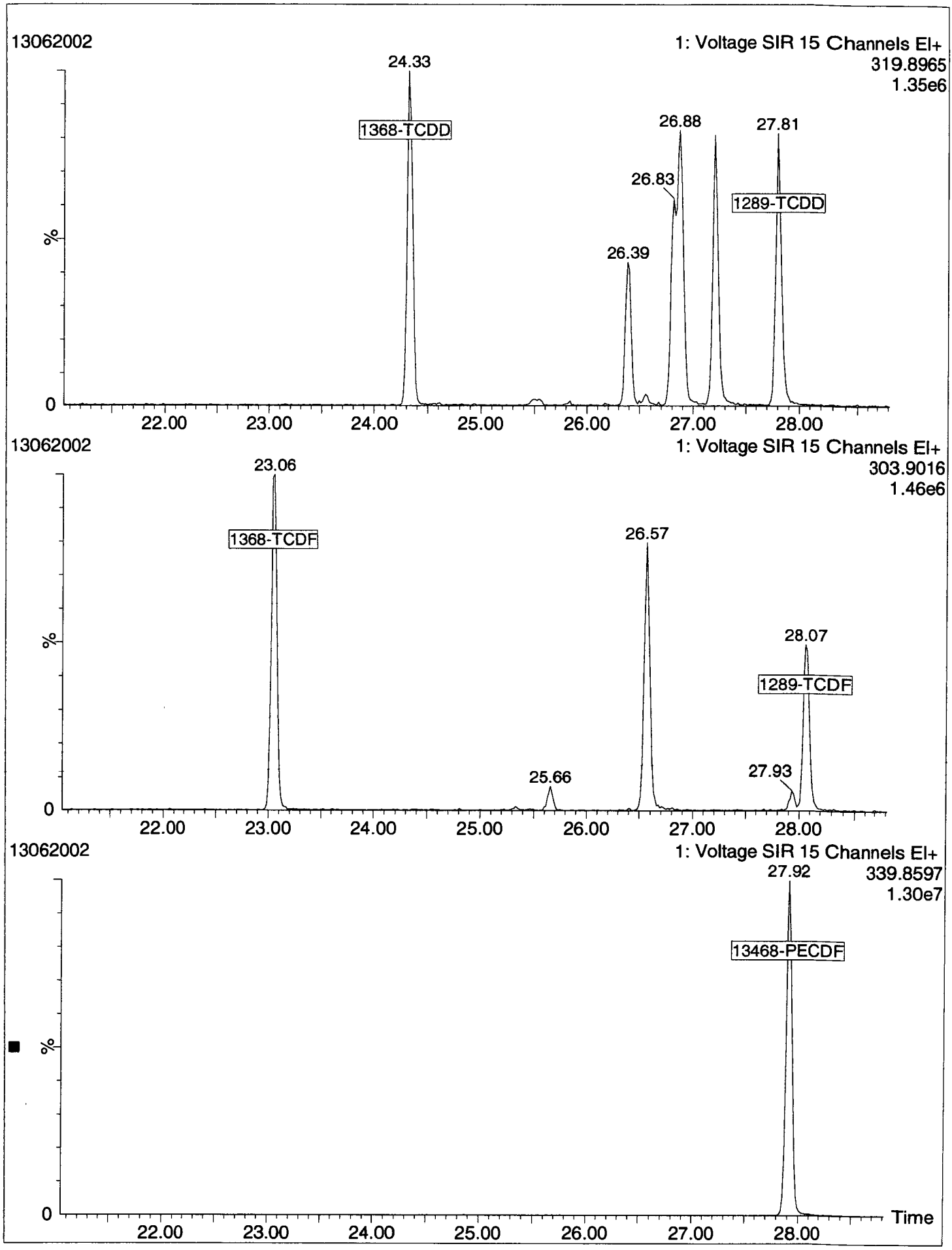


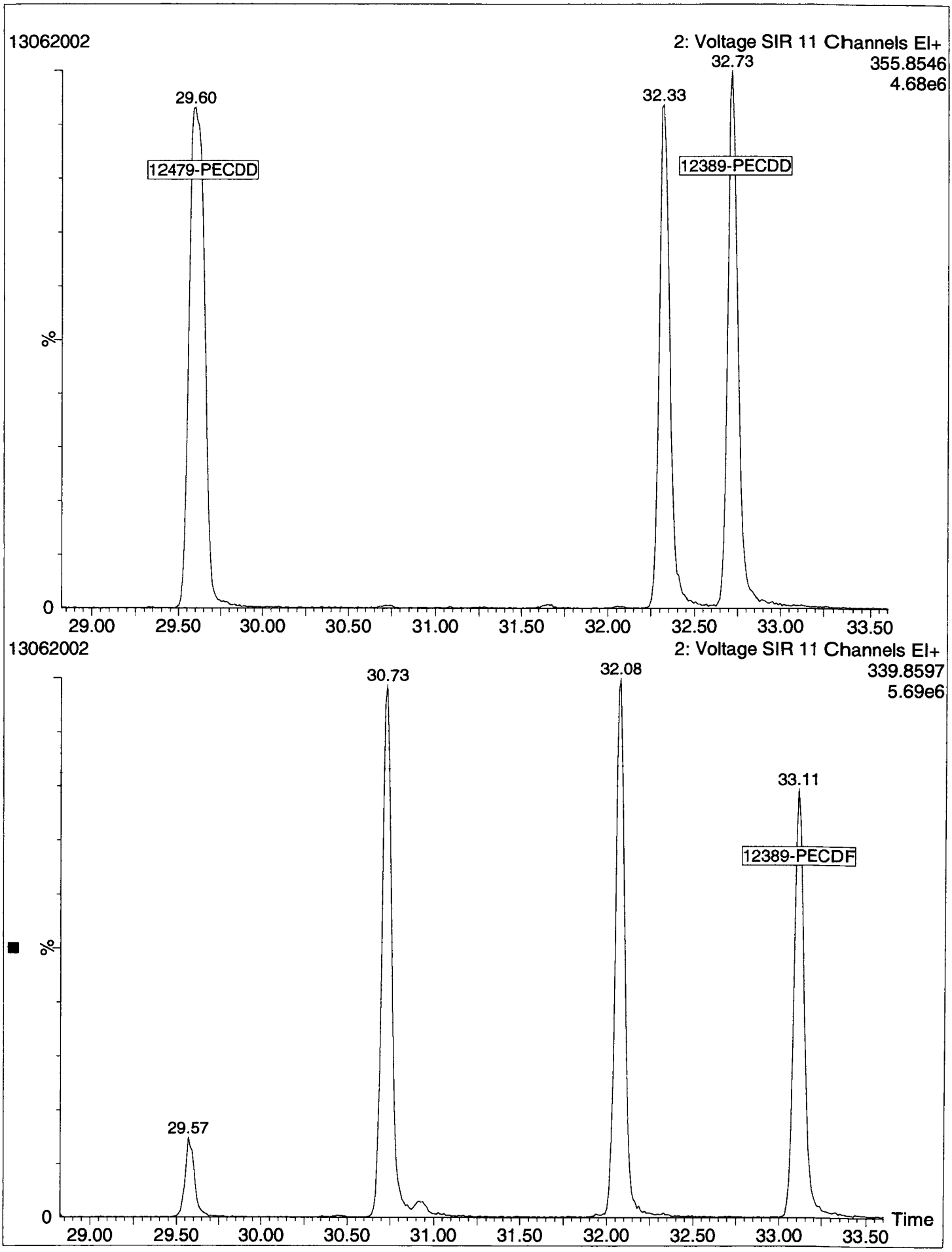
M 504.9696 R 12821

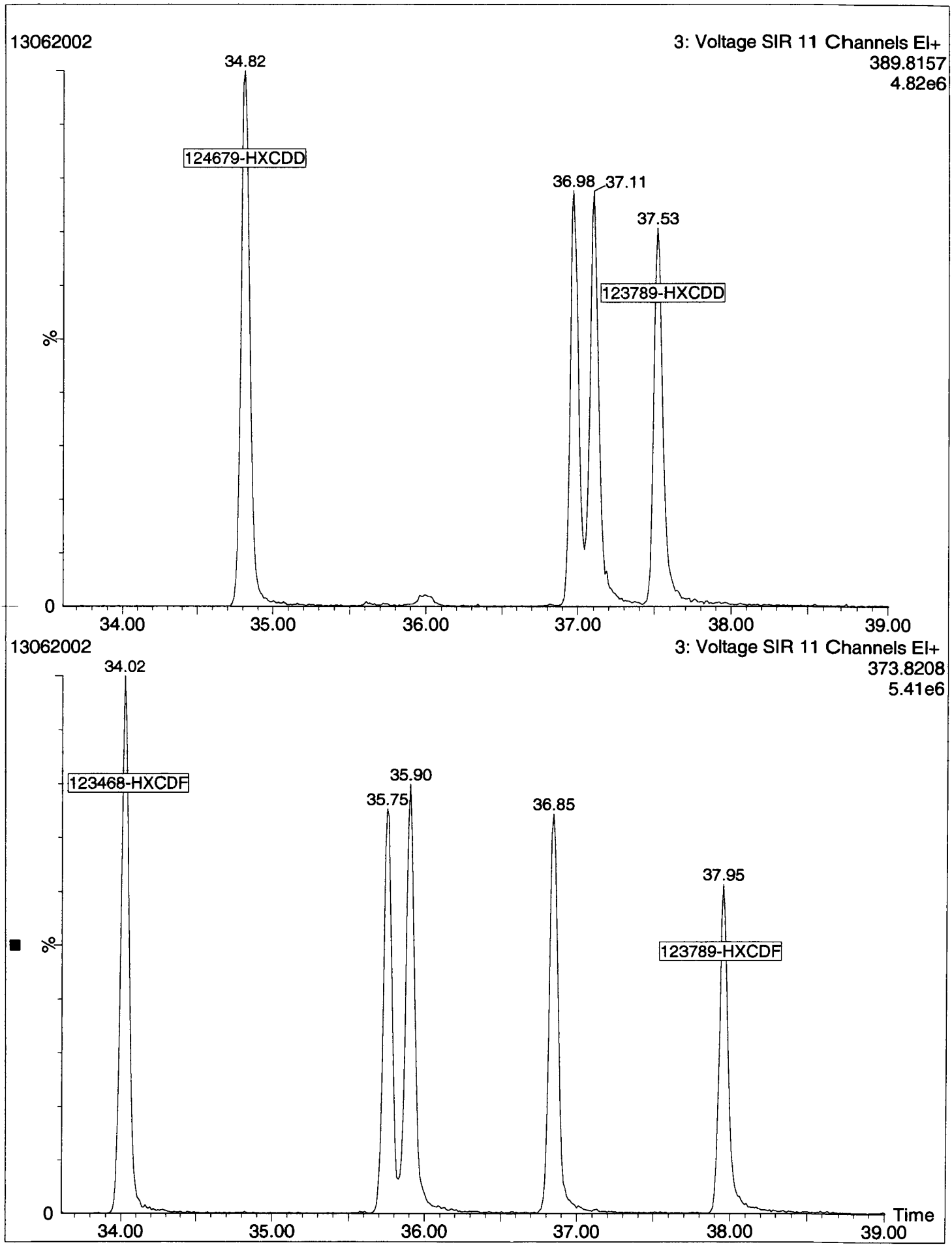


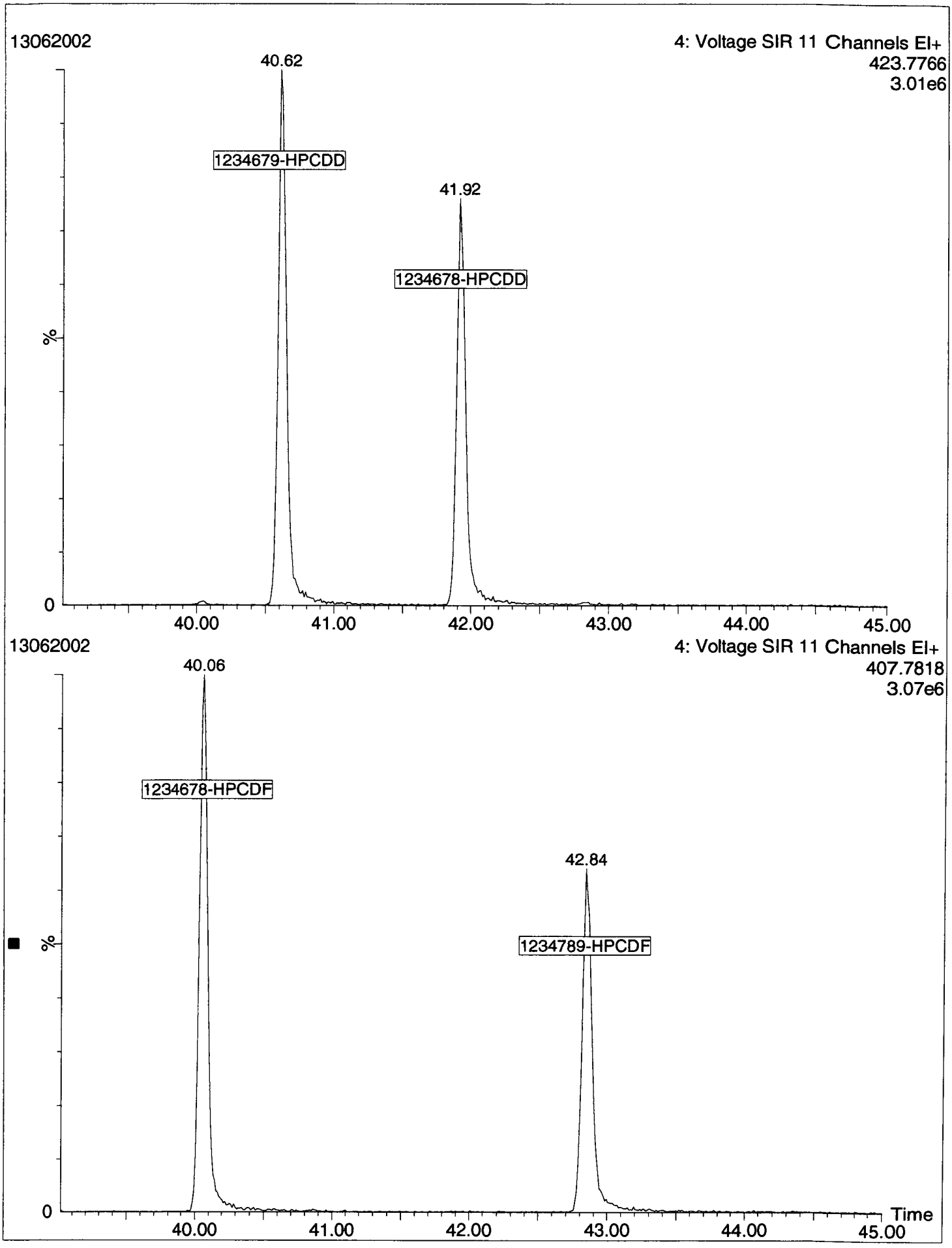
M 516.9697 R 13088




13062002
1: Voltage SIR 15 Channels EI+
319.8965
1.35e6
24.33
1368-TCDD
26.88
27.81
26.83
1289-TCDD
26.39
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
13062002
1: Voltage SIR 15 Channels EI+
303.9016
1.46e6
23.06
1368-TCDF
26.57
28.07
1289-TCDF
25.66
27.93
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
13062002
1: Voltage SIR 15 Channels EI+
339.8597
1.30e7
27.92
13468-PECDF
%
0
Time
22.00
23.00
24.00
25.00
26.00
27.00
28.00


13062002
2: Voltage SIR 11 Channels El+
355.8546
4.68e6
29.60
12479-PECDD
32.33
32.73
12389-PECDD
%
0
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50
13062002
2: Voltage SIR 11 Channels El+
339.8597
5.69e6
30.73
32.08
33.11
12389-PECDF
29.57
%
0
Time
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50


13062002
3: Voltage SIR 11 Channels EI+
389.8157
4.82e6
34.82
124679-HXCDD
36.98
37.11
37.53
123789-HXCDD
%
0
34.00
35.00
36.00
37.00
38.00
39.00
13062002
3: Voltage SIR 11 Channels EI+
373.8208
5.41e6
34.02
123468-HXCDF
35.90
35.75
36.85
37.95
123789-HXCDF
%
0
Time
34.00
35.00
36.00
37.00
38.00
39.00


13062002
4: Voltage SIR 11 Channels EI+
423.7766
3.01e6
40.62
1234679-HPCDD
41.92
1234678-HPCDD
%
0
40.00
41.00
42.00
43.00
44.00
45.00
13062002
4: Voltage SIR 11 Channels EI+
407.7818
3.07e6
40.06
1234678-HPCDF
42.84
1234789-HPCDF
%
0
Time
40.00
41.00
42.00
43.00
44.00
45.00

uantify Audit Report MassLynx 4.1 SCN 714
ataset: P:\DIOXIN8290.PRO\130620IC.qld
st Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
inted: Friday, June 21, 2013 09:17:03 Pacific Daylight Time

Process Extract		
Process Integrate		
Process Calibrate		
Process Quantify		
Dataset Created		
Peak deleted	Sample:13062004, Compound:TF, RT:26.556	1
Peak deleted	Sample:13062004, Compound:TF, RT:26.556	1
Peak deleted	Sample:13062004, Compound:TD, RT:27.184	1
Peak deleted	Sample:13062004, Compound:TD, RT:27.184	1
Dataset Saved	Saved to 'P:\DIOXIN8290.PRO\130620IC.qld'	
Pre modification peak	Sample:13062004, Compound:PF, RT:30.720	1
Peak modified	Sample:13062004, Compound:PF, RT:30.720	1
Pre modification peak	Sample:13062004, Compound:OF, RT:48.295	1
Peak modified	Sample:13062004, Compound:OF, RT:48.295	1
Pre modification peak	Sample:13062004, Compound:OF, RT:48.295	1
Peak modified	Sample:13062004, Compound:OF, RT:48.295	1
Pre modification peak	Sample:13062004, Compound:HD, RT:37.089	1
Peak modified	Sample:13062004, Compound:HD, RT:37.089	1
Pre modification peak	Sample:13062004, Compound:HD, RT:37.516	1
Peak modified	Sample:13062004, Compound:HD, RT:37.516	1
Pre modification peak	Sample:13062004, Compound:HPD, RT:41.901	1
Peak modified	Sample:13062004, Compound:HPD, RT:41.901	1
Pre modification peak	Sample:13062004, Compound:OD, RT:48.044	1
Peak modified	Sample:13062004, Compound:OD, RT:48.044	1
Pre modification peak	Sample:13062004, Compound:OD, RT:48.044	1
Peak modified	Sample:13062004, Compound:OD, RT:48.044	1
Dataset Saved	Saved to 'P:\DIOXIN8290.PRO\130620IC.qld'	

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

2378-TCDF					0.771		0.770				
12378-PeCDF	30.709	1.001	3.91e3	2.92e3	0.814	1.339	1.550	53.1	NO	0.499	0.499
23478-PeCDF	32.046	1.000	4.42e3	2.65e3	0.837	1.664	1.550	59.8	NO	0.517	0.517
123478-HxCDF	35.740	1.001	3.20e3	2.45e3	0.967	1.304	1.240	55.3	NO	0.526	0.526
234678-HxCDF	36.836	1.001	2.88e3	2.20e3	1.000	1.307	1.240	47.1	NO	0.451	0.451
123678-HxCDF	35.883	1.000	3.29e3	2.61e3	0.951	1.259	1.240	54.1	NO	0.509	0.509
123789-HxCDF	37.954	1.001	2.09e3	1.57e3	0.874	1.333	1.240	35.9	NO	0.440	0.440
1234678-HpCDF	40.048	1.000	1.94e3	1.82e3	1.072	1.064	1.050	58.5	NO	0.416	0.416
1234789-HpCDF	42.821	1.000	1.49e3	1.61e3	1.085	0.928	1.050	44.1	NO	0.467	0.467
OCDF	48.295	1.006	2.66e3	2.95e3	0.878	0.905	0.890	26.0	NO	0.933	0.933
2378-TCDD					0.936		0.770				
12378-PeCDD	32.309	1.001	3.72e3	2.22e3	0.894	1.677	1.550	49.0	NO	0.529	0.529
123478-HxCDD	36.968	1.001	2.91e3	2.05e3	0.898	1.420	1.240	28.7	NO	0.522	0.522
123678-HxCDD	37.089	1.000	2.62e3	1.96e3	0.818	1.339	1.240	24.6	NO	0.468	0.468
123789-HxCDD	37.516	1.012	2.42e3	1.76e3	0.789	1.380	1.240	23.1	NO	0.469	0.469
1234678-HpCDD	41.911	1.000	1.59e3	1.63e3	0.879	0.978	1.050	24.9	NO	0.456	0.456
OCDD	48.044	1.001	2.64e3	3.19e3	0.875	0.827	0.890	69.2	NO	0.972	0.972
13C-2378-TCDF	26.527	1.007	9.91e5	1.30e6	1.190	0.762	0.770	5699.6	NO		100.147
13C-12378-PeCDF	30.687	1.165	1.01e6	6.72e5	0.904	1.500	1.550	3834.6	NO		96.592
13C-23478-PeCDF	32.035	1.216	9.93e5	6.40e5	0.877	1.551	1.550	3828.8	NO		96.785
13C-123478-HxCDF	35.718	0.953	3.68e5	7.42e5	1.096	0.496	0.510	1462.9	NO		96.060
13C-123678-HxCDF	35.872	0.957	4.04e5	8.14e5	1.187	0.496	0.510	1583.2	NO		97.300
13C-234678-HxCDF	36.814	0.982	3.76e5	7.50e5	1.040	0.501	0.510	1475.5	NO		102.739
13C-123789-HxCDF	37.933	1.012	3.14e5	6.40e5	0.941	0.491	0.510	1211.4	NO		96.125
13C-1234678-HpCDF	40.037	1.068	2.55e5	5.87e5	0.825	0.434	0.440	1226.5	NO		96.631
13C-1234789-HpCDF	42.821	1.142	1.82e5	4.30e5	0.609	0.423	0.440	735.1	NO		95.354
13C-1234-TCDD	26.347	0.000	8.39e5	1.09e6	1.000	0.773	0.770	1459.7	NO		100.000
13C-2378-TCDD	27.169	1.031	7.65e5	9.86e5	0.920	0.776	0.770	1328.9	NO		98.967
13C-12378-PeCDD	32.287	1.225	7.64e5	4.90e5	0.669	1.559	1.550	3950.8	NO		97.331
13C-123478-HxCDD	36.946	0.985	5.82e5	4.75e5	1.032	1.225	1.240	2623.5	NO		97.140
13C-123678-HxCDD	37.078	0.989	6.68e5	5.31e5	1.146	1.257	1.240	2814.0	NO		99.242
13C-1234678-HpCDD	41.901	1.118	4.09e5	3.94e5	0.789	1.036	1.050	2429.1	NO		96.467
13C-OCDD	47.999	1.280	6.38e5	7.32e5	0.696	0.872	0.890	2166.8	NO		186.526

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

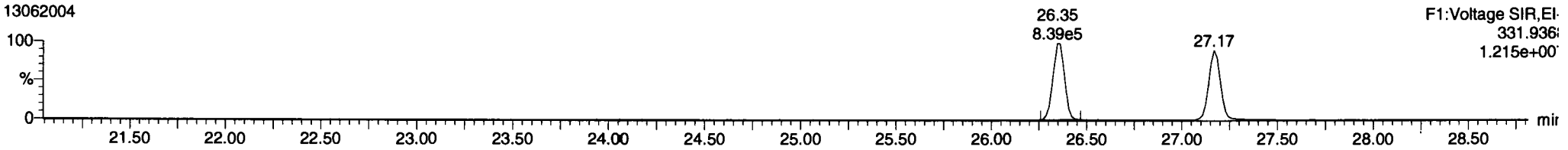
13C-123789-HxCDD	37.494	0.000	5.84e5	4.71e5	1.000	1.241	1.240	2572.0	NO	100.000
Total-tetrafurans			1.78e2		0.771					0.031
Total-penta1			0.00e0							
Total-pentafurans			8.52e3		0.826					1.055
Total-hexafurans			1.15e4		0.948					1.926
Total-heptafurans			3.43e3		1.079					0.883
Total-Furans			2.63e4		0.925					4.840
Total-tetradioxins			2.42e3		0.936					0.184
Total-pentadioxins			5.44e3		0.894					0.715
Total-hexadioxins			9.94e3		0.835					1.717
Total-heptadioxins			1.59e3		0.879					0.456
Total-Dioxins			2.22e4		0.870					4.067
Total-TEQ			4.85e4							8.907
37CL-2378-TCDD	27.199	1.032	2.06e3		1.000			15.8		0.107
FUNCTION1 PFK			6.33e5							
FUNCTION2 PFK			2.63e5							0.000
FUNCTION3 PFK			9.12e4							0.000
FUNCTION4 PFK			7.46e5							
FUNCTION5 PFK			6.89e4							
FUNCTION1 HXCDPE			7.38e1							0.000
FUNCTION1 HPCDPE			1.31e3							0.000
FUNCTION2 HPCDPE			6.06e2							0.000
FUNCTION3 OCDPE			1.12e2							0.000
FUNCTION4 NCDPE			7.37e1							0.000
FUNCTION5 DCDPE			0.00e0							

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

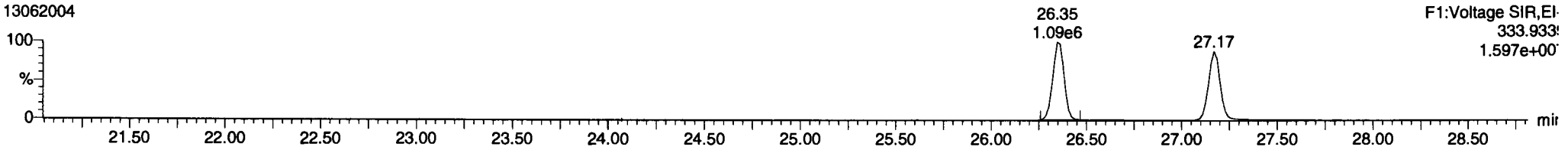
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

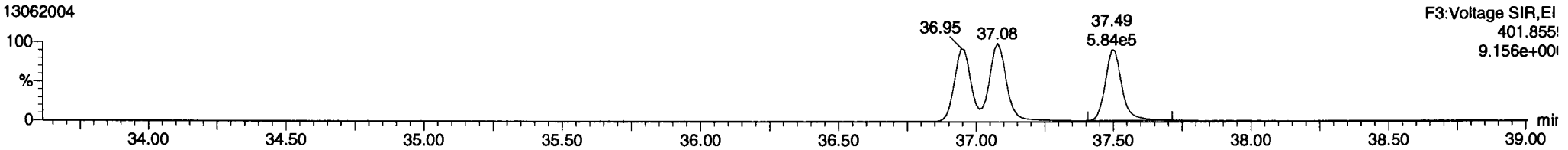
13C-1234-TCDD



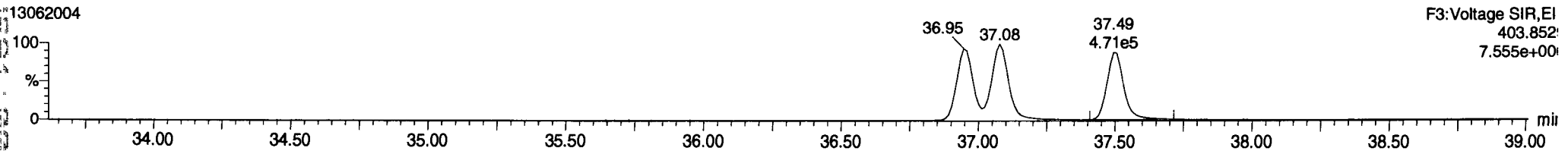
13C-1234-TCDD



13C-123789-HxCDD



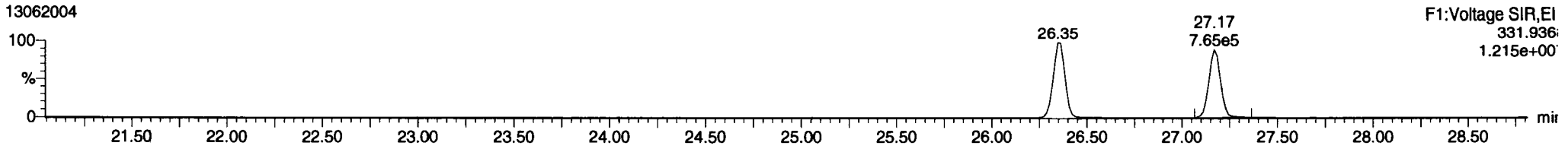
13C-123789-HxCDD



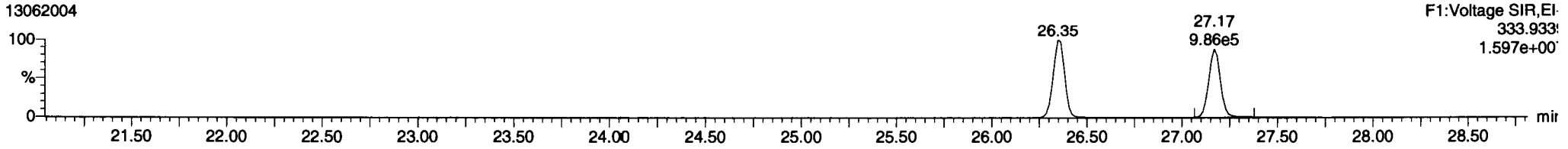
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

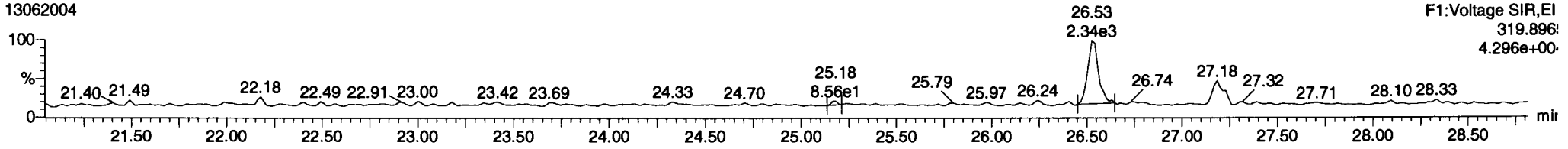
13C-2378-TCDD



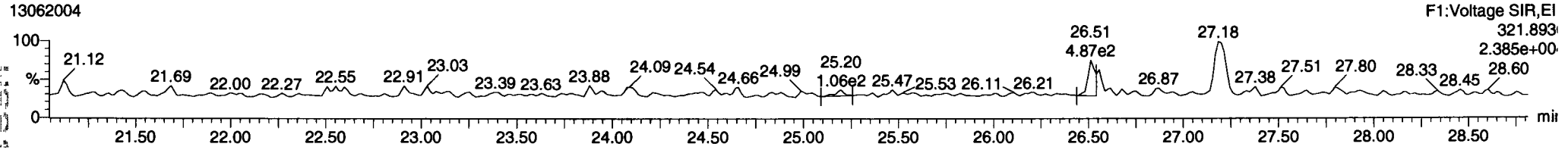
13C-2378-TCDD



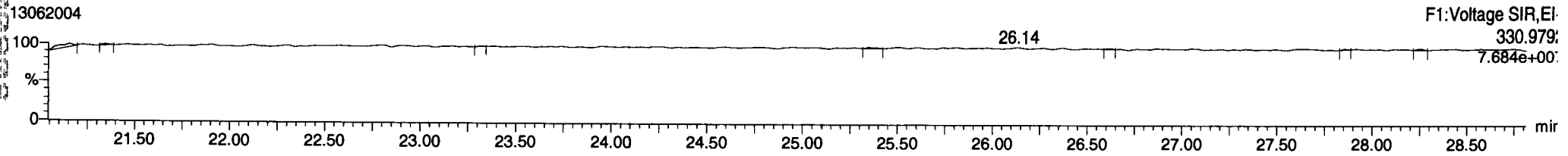
Total-tetradioxins



Total-tetradioxins



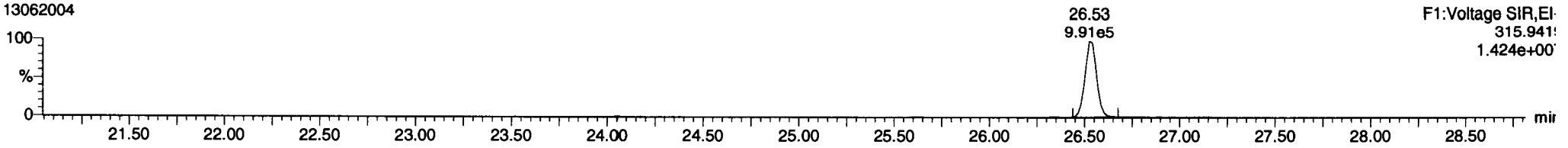
FUNCTION1 PFK



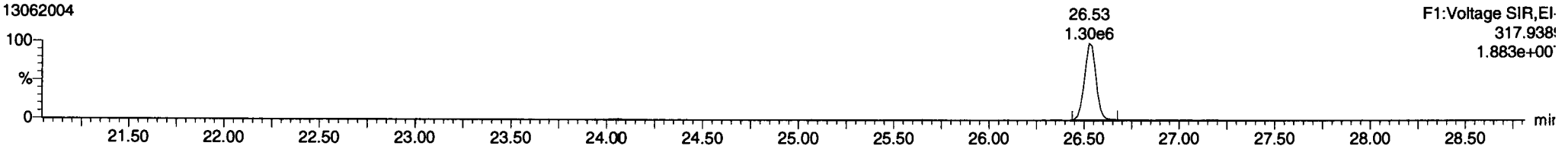
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

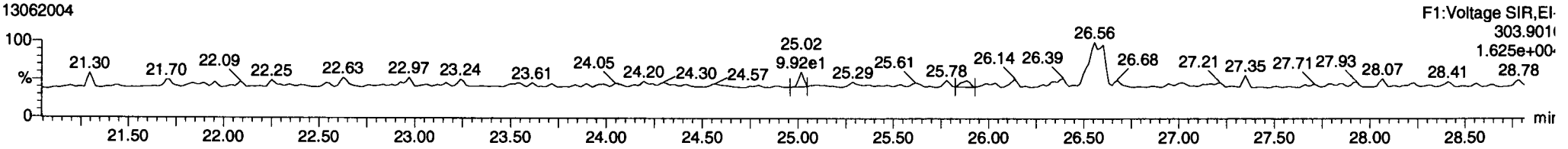
13C-2378-TCDF



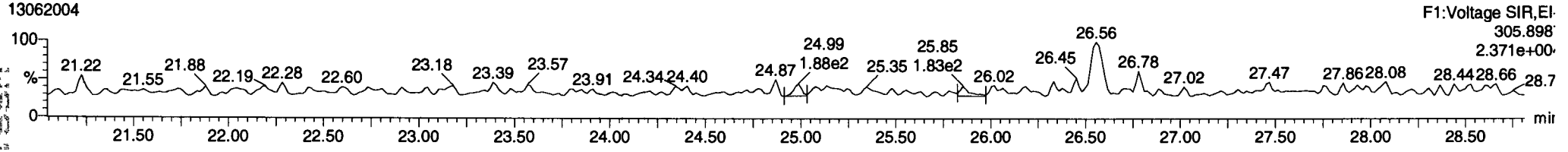
13C-2378-TCDF



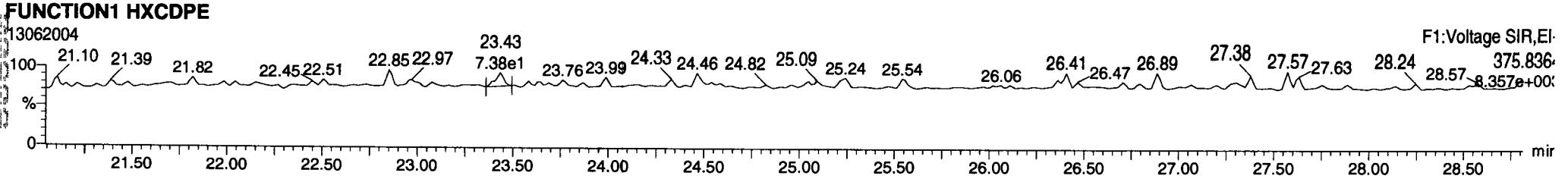
Total-tetrafurans



Total-tetrafurans



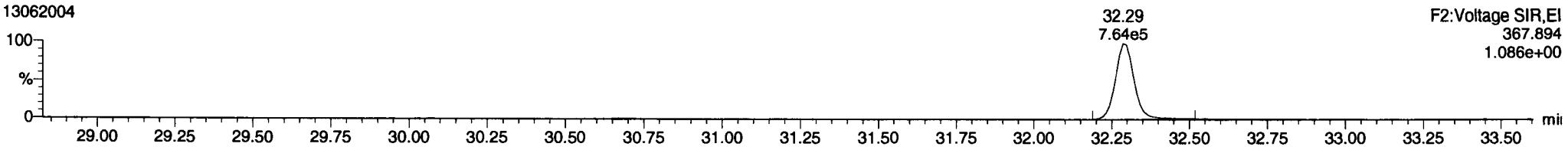
FUNCTION1 HXCDPE



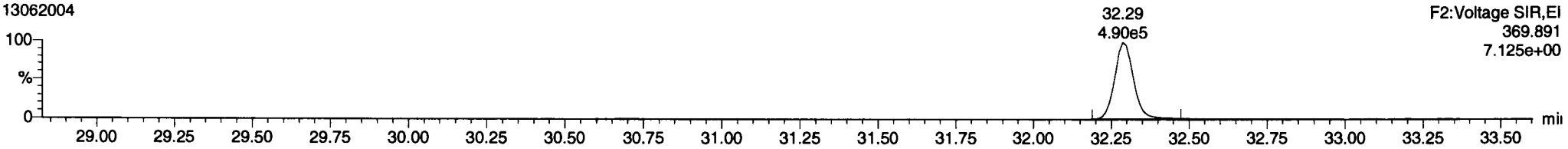
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

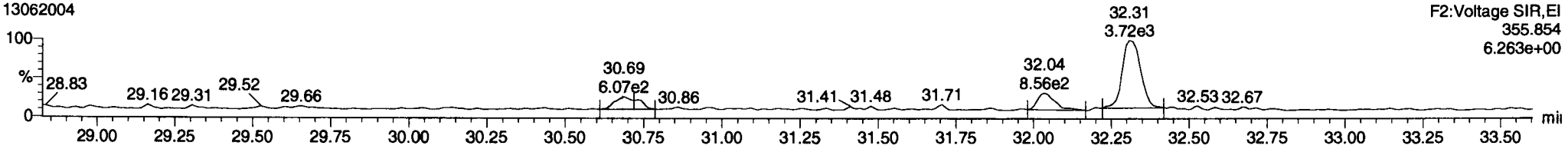
13C-12378-PeCDD



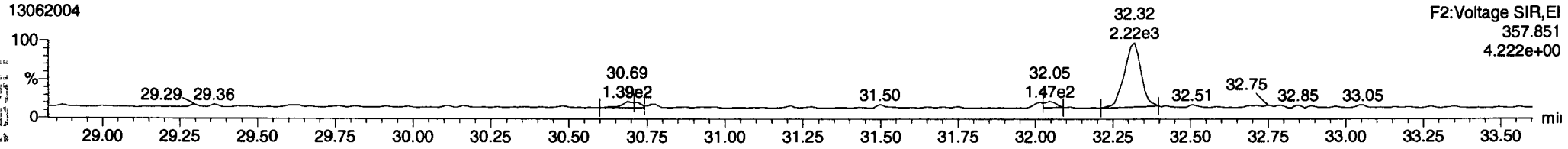
13C-12378-PeCDD



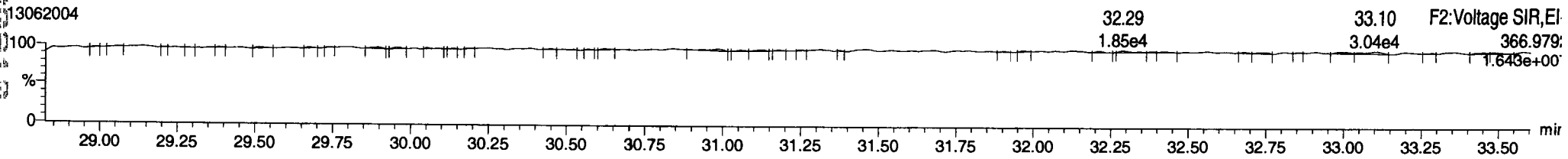
Total-pentadioxins



Total-pentadioxins



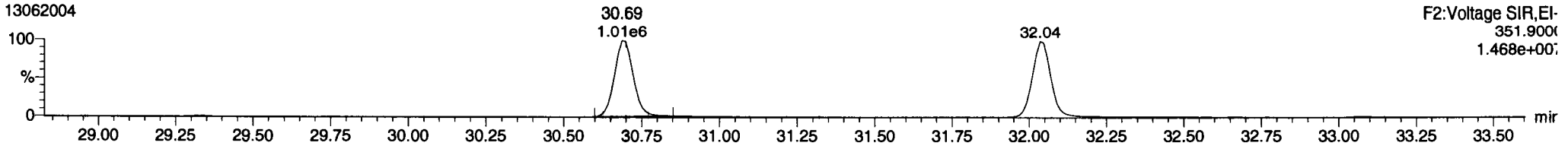
FUNCTION2 PFK



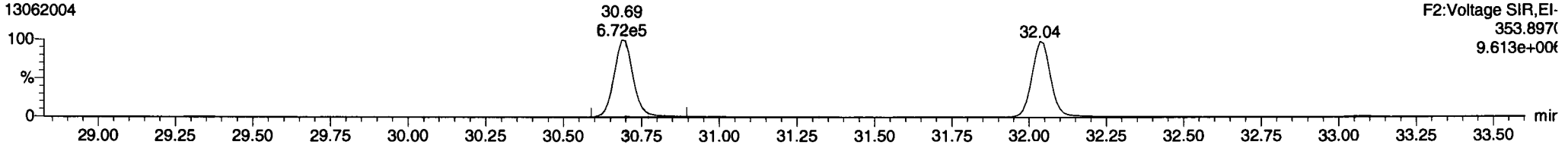
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

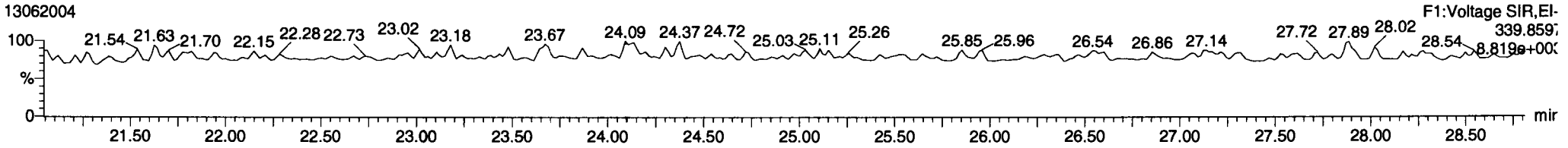
13C-12378-PeCDF



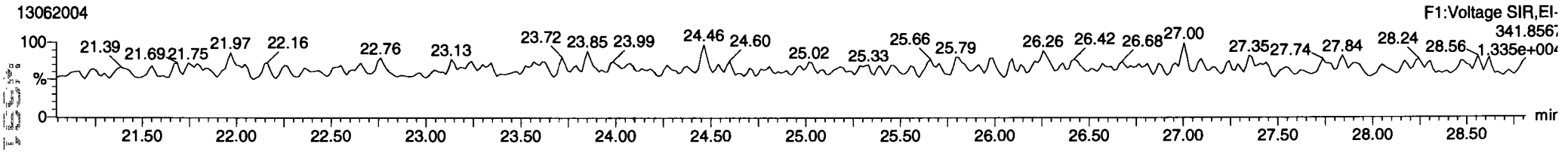
13C-12378-PeCDF



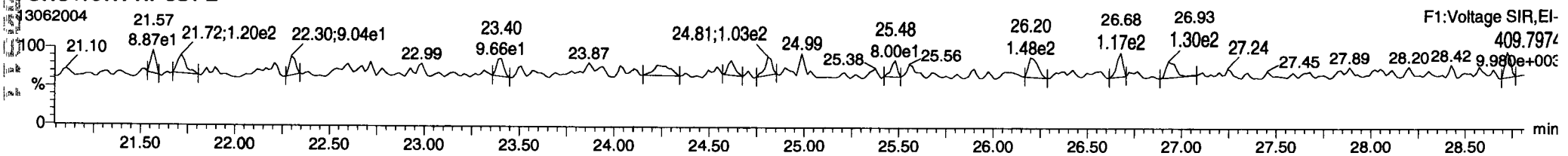
Total-penta1



Total-penta1



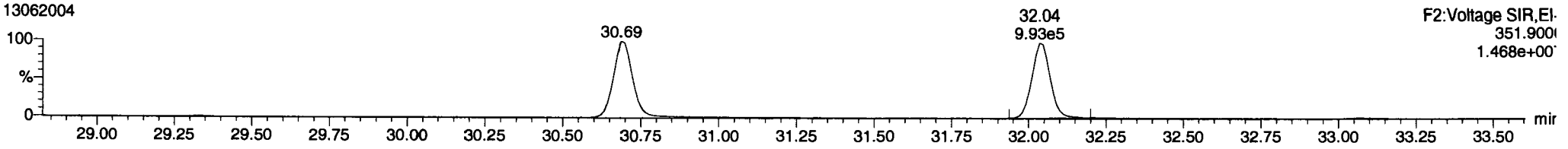
FUNCTION1 HPCDPE



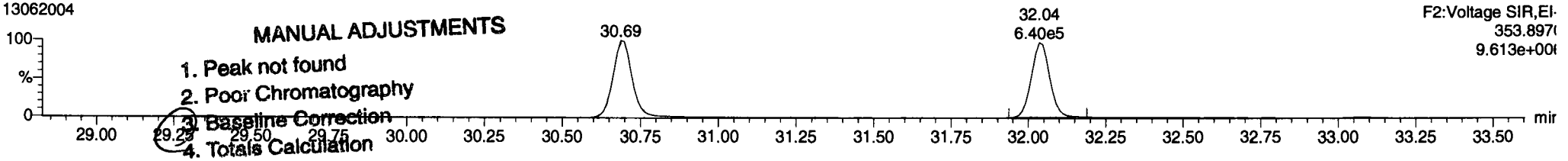
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



13C-23478-PeCDF

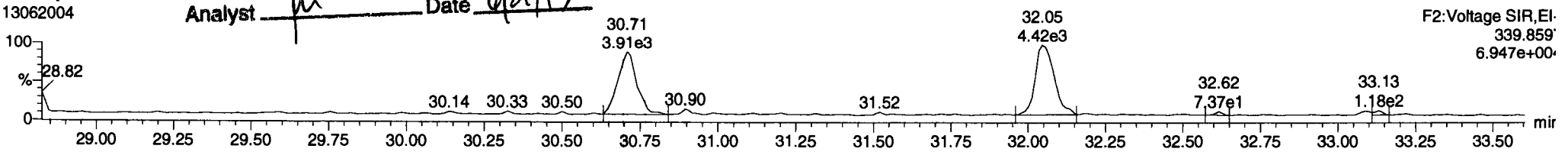


MANUAL ADJUSTMENTS

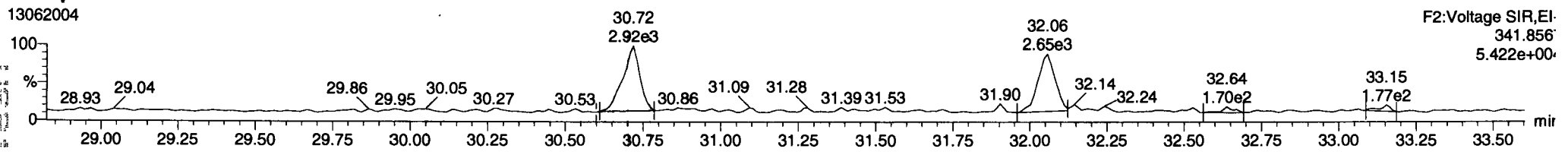
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other

Analyst _____ Date 6/21/13

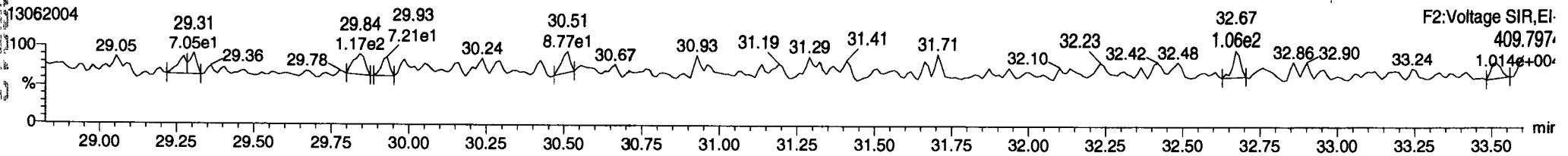
Total-pentafurans



Total-pentafurans



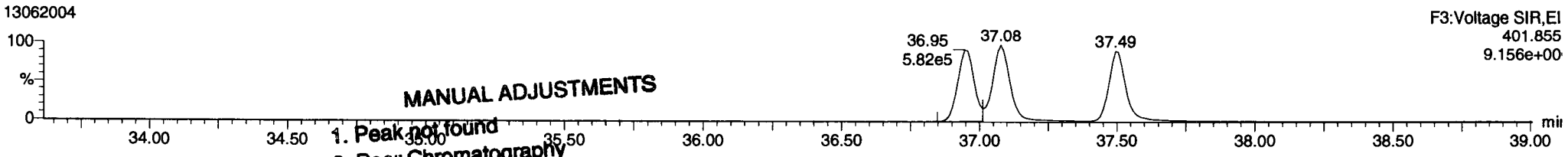
FUNCTION2 HPCDPE



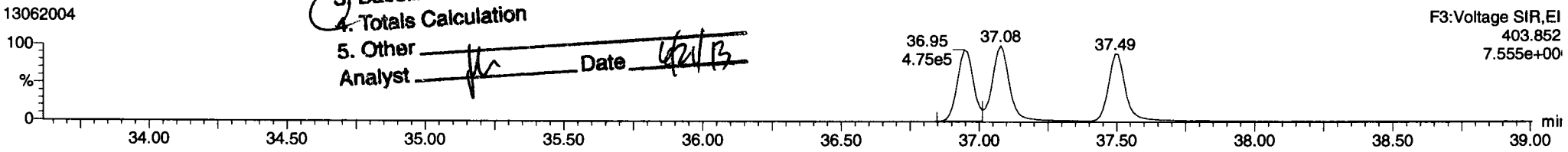
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

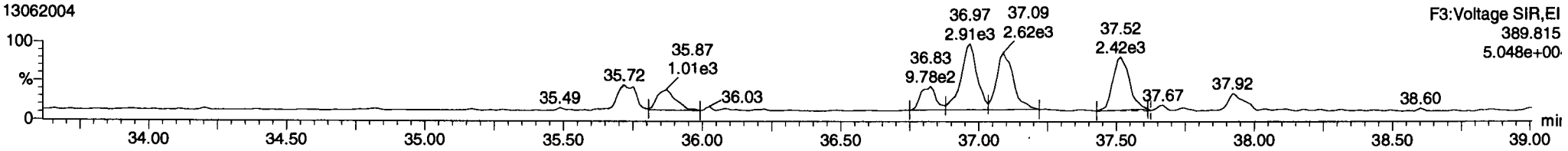
13C-123478-HxCDD



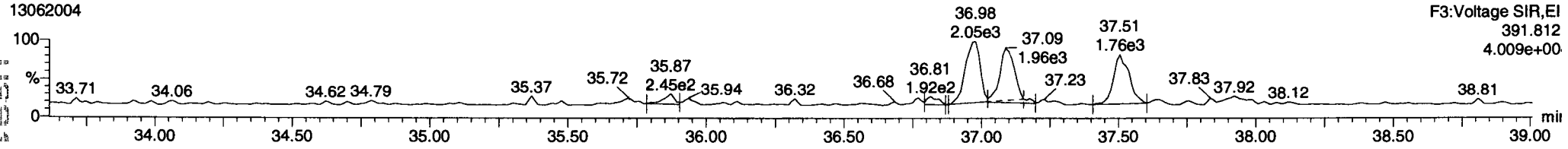
13C-123478-HxCDD



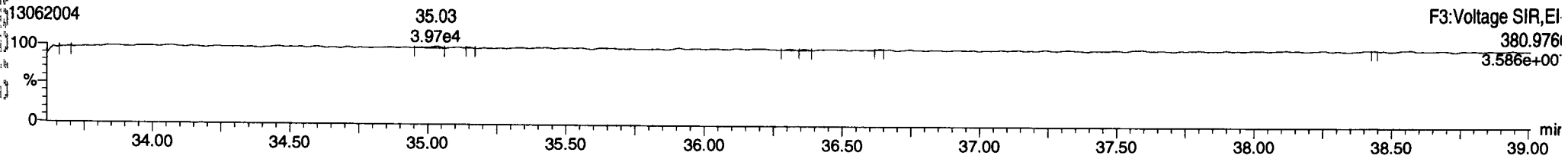
Total-hexadioxins



Total-hexadioxins



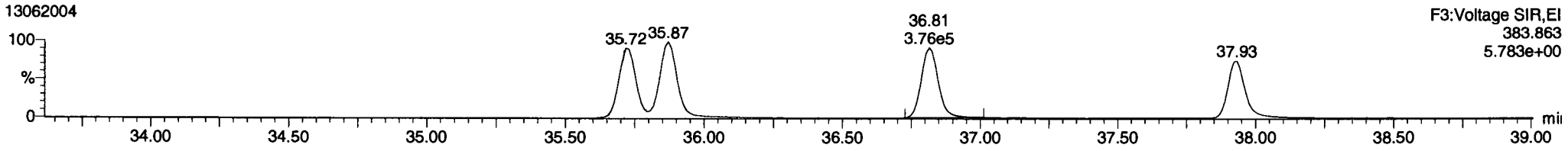
FUNCTION3 PFK



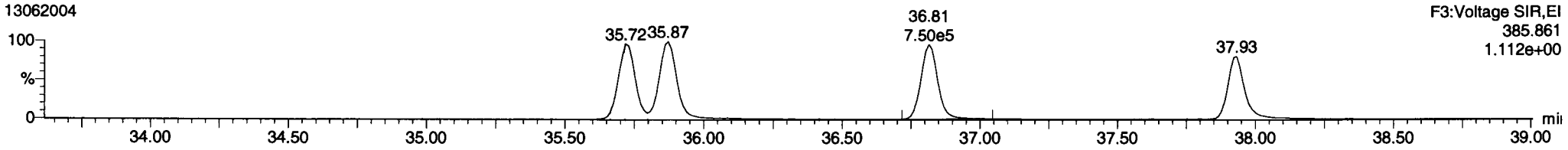
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

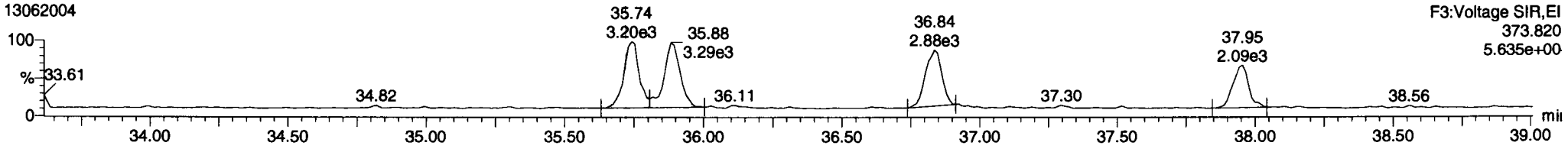
13C-234678-HxCDF



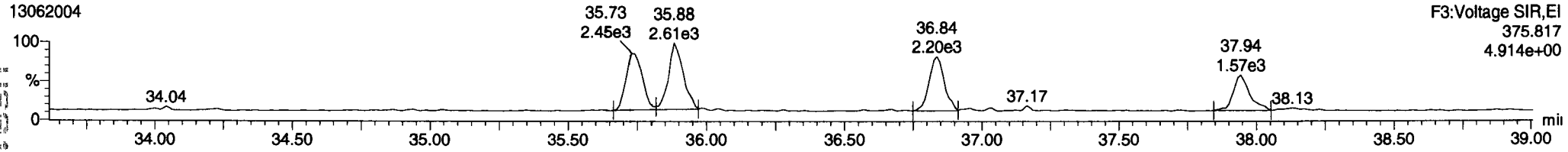
13C-234678-HxCDF



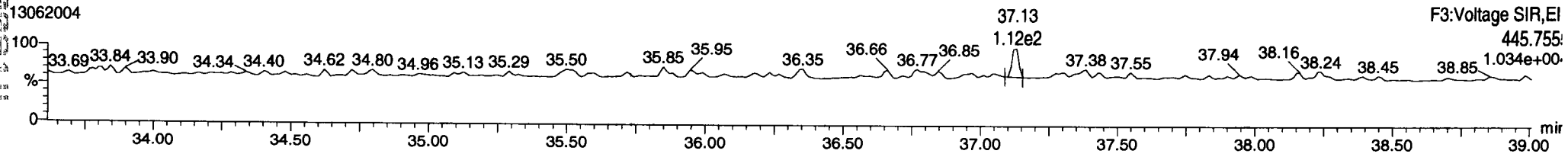
Total-hexafurans



Total-hexafurans



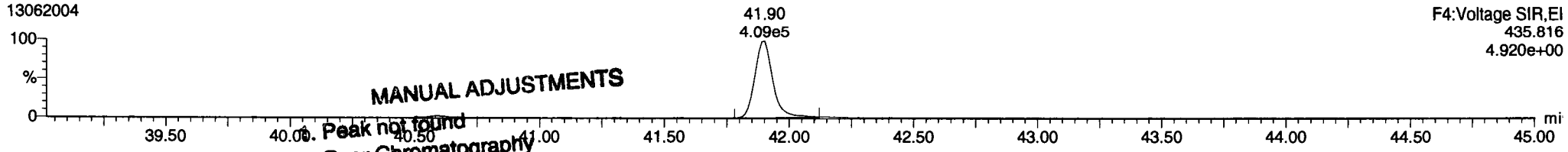
FUNCTION3 OCDPE



Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

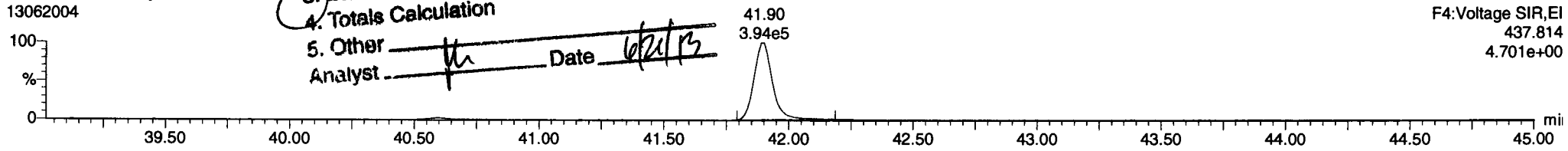
ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD

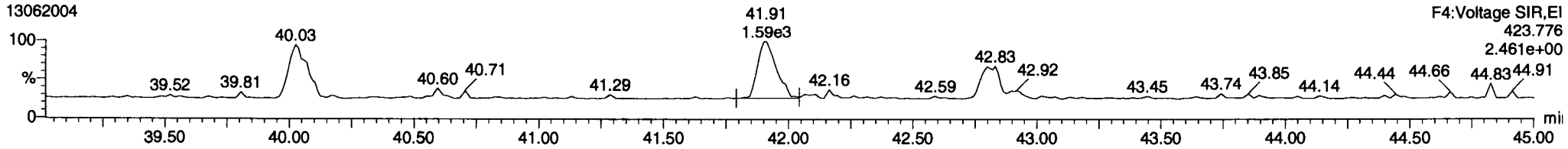


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst _____ Date 6/21/13

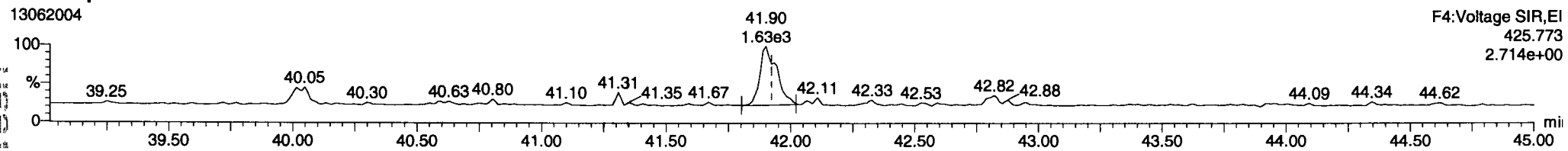
13C-1234678-HpCDD



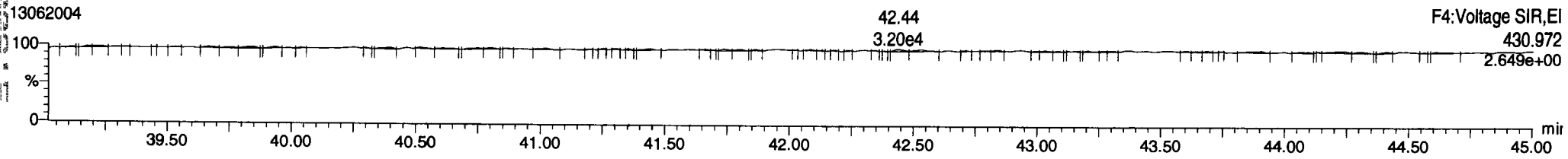
Total-heptadioxins



Total-heptadioxins



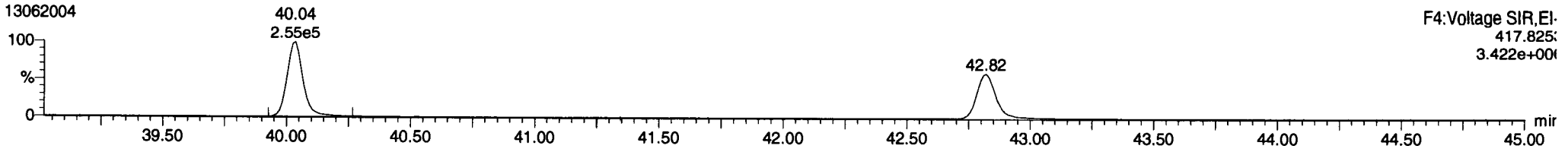
FUNCTION4 PFK



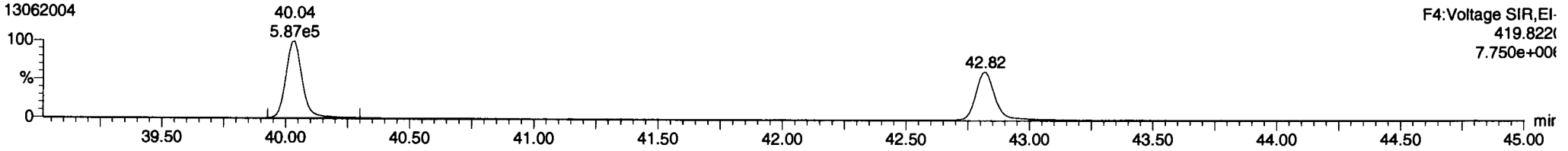
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

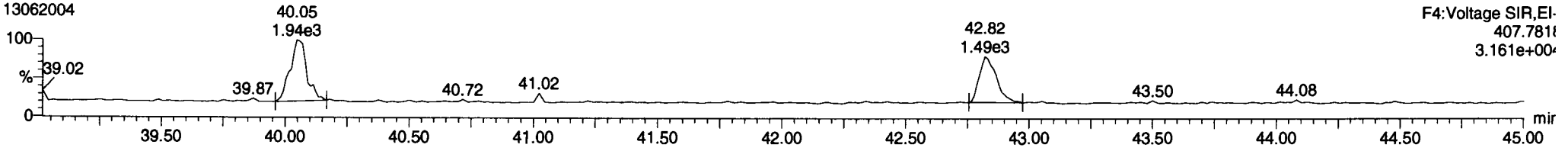
13C-1234678-HpCDF



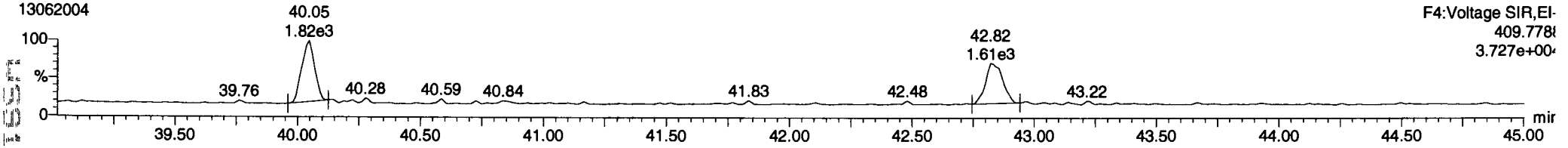
13C-1234678-HpCDF



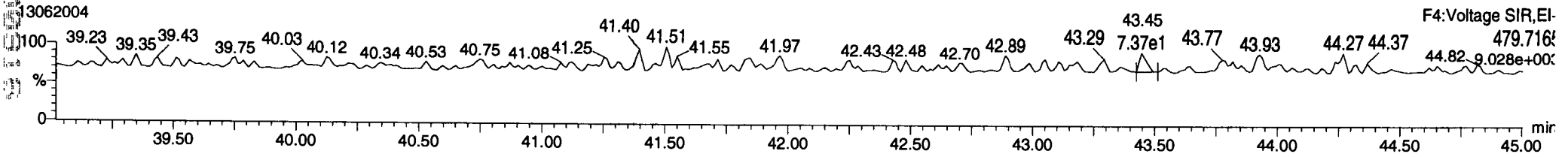
Total-heptafurans



Total-heptafurans



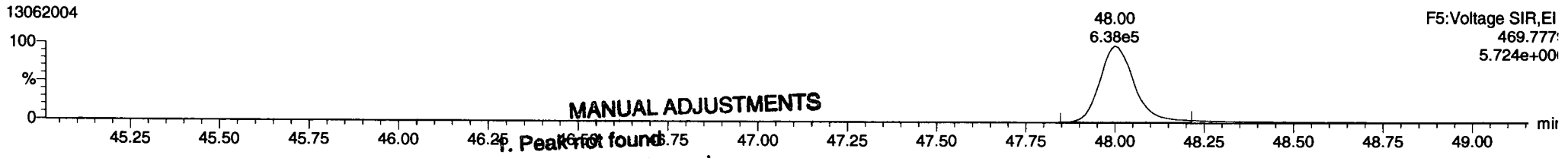
FUNCTION4 NCDPE



Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

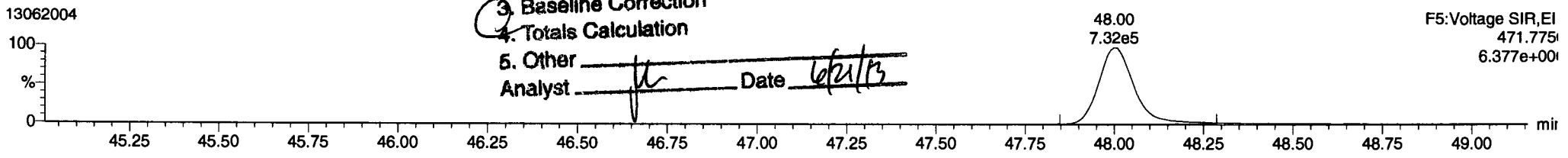
ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

13C-OCDD

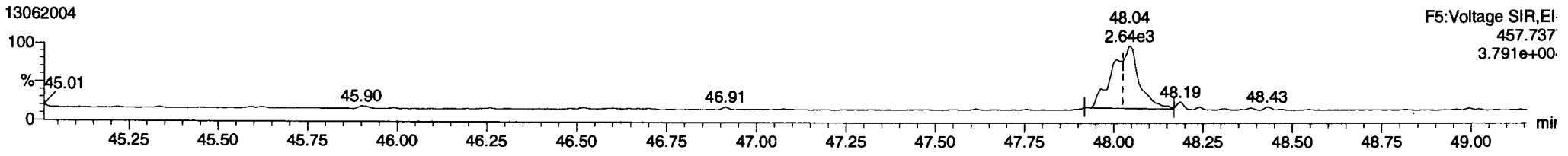


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst _____ Date 6/21/13

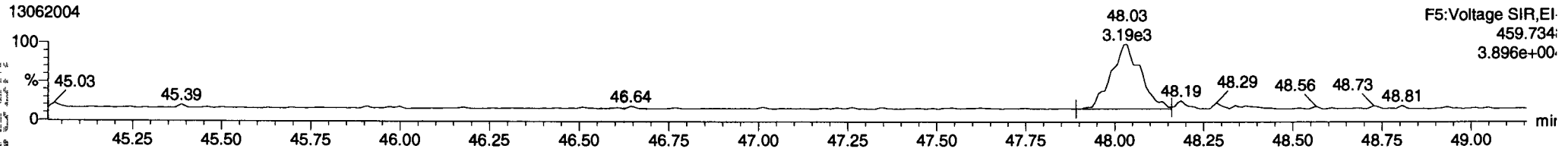
13C-OCDD



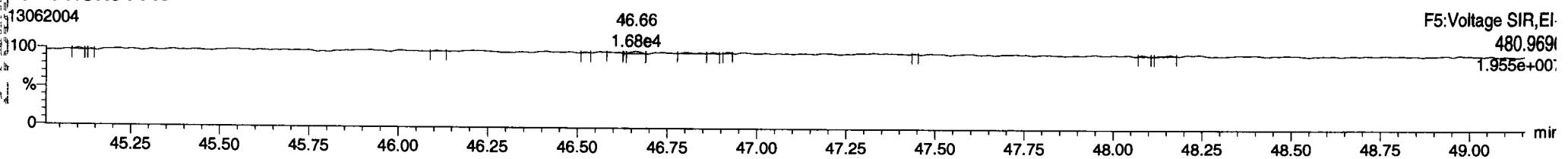
OCDD



OCDD



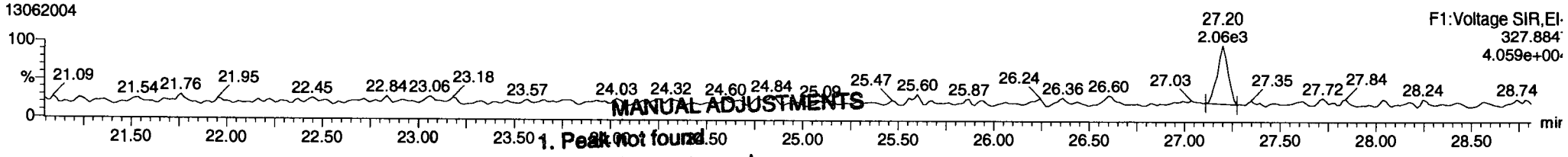
FUNCTION5 PFK



Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD

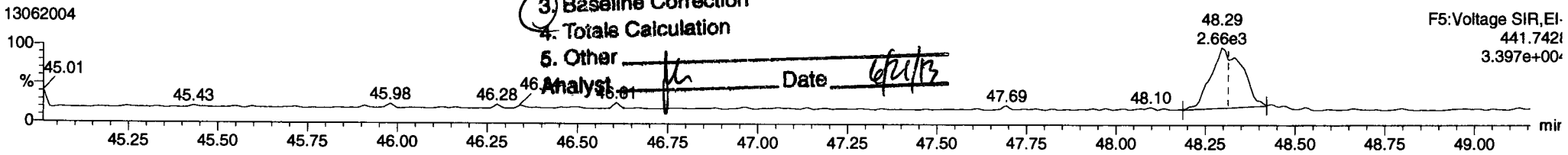


MANUAL ADJUSTMENTS

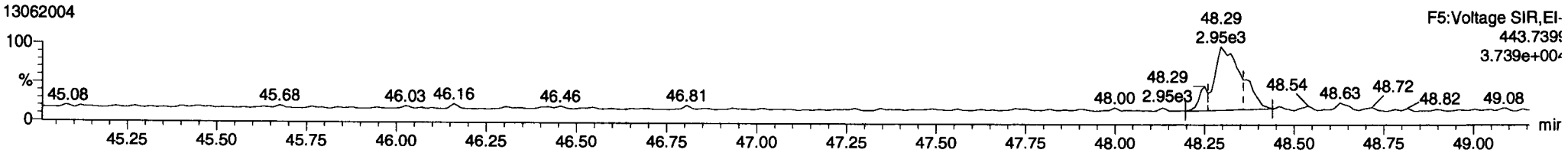
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other

Analyst _____ Date 6/21/13

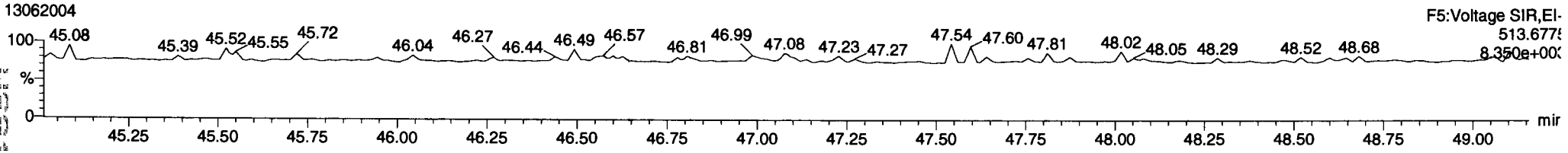
OCDF



OCDF



FUNCTION5 DCDPE



Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.571	1.001	3.39e3	4.57e3	0.771	0.741	0.770	108.4	NO	0.506	0.506
12378-PeCDF	30.730	1.001	1.96e4	1.17e4	0.814	1.678	1.550	319.8	NO	2.498	2.498
23478-PeCDF	32.068	1.000	1.96e4	1.23e4	0.837	1.590	1.550	311.3	NO	2.549	2.549
123478-HxCDF	35.761	1.001	1.38e4	1.19e4	0.967	1.160	1.240	185.0	NO	2.488	2.488
234678-HxCDF	36.847	1.001	1.48e4	1.12e4	1.000	1.318	1.240	200.4	NO	2.578	2.578
123678-HxCDF	35.904	1.001	1.56e4	1.23e4	0.951	1.269	1.240	219.7	NO	2.571	2.571
123789-HxCDF	37.965	1.001	1.10e4	9.24e3	0.874	1.193	1.240	155.3	NO	2.540	2.540
1234678-HpCDF	40.069	1.001	1.14e4	1.09e4	1.072	1.043	1.050	230.0	NO	2.620	2.620
1234789-HpCDF	42.853	1.001	7.93e3	7.99e3	1.085	0.991	1.050	160.7	NO	2.524	2.524
OCDF	48.339	1.007	1.20e4	1.37e4	0.878	0.880	0.890	90.7	NO	4.703	4.703
2378-TCDD	27.214	1.001	3.45e3	4.38e3	0.936	0.787	0.770	68.4	NO	0.539	0.539
12378-PeCDD	32.320	1.000	1.49e4	1.02e4	0.894	1.464	1.550	242.1	NO	2.565	2.565
123478-HxCDD	36.978	1.000	1.30e4	9.92e3	0.898	1.309	1.240	167.2	NO	2.684	2.684
123678-HxCDD	37.110	1.001	1.30e4	1.03e4	0.818	1.259	1.240	158.0	NO	2.610	2.610
123789-HxCDD	37.526	1.012	1.11e4	9.39e3	0.789	1.185	1.240	123.0	NO	2.547	2.547
1234678-HpCDD	41.921	1.000	7.96e3	7.98e3	0.879	0.998	1.050	141.6	NO	2.478	2.478
OCDD	48.025	1.000	1.32e4	1.31e4	0.875	1.004	0.890	180.2	NO	4.811	4.811
13C-2378-TCDF	26.556	1.007	8.80e5	1.16e6	1.190	0.759	0.770	4801.4	NO		99.953
13C-12378-PeCDF	30.709	1.164	9.32e5	6.04e5	0.904	1.544	1.550	3581.4	NO		99.104
13C-23478-PeCDF	32.057	1.215	9.07e5	5.90e5	0.877	1.538	1.550	3564.2	NO		99.532
13C-123478-HxCDF	35.739	0.953	3.54e5	7.11e5	1.096	0.498	0.510	1871.9	NO		104.247
13C-123678-HxCDF	35.882	0.956	3.84e5	7.57e5	1.187	0.507	0.510	2008.2	NO		103.077
13C-234678-HxCDF	36.825	0.982	3.37e5	6.69e5	1.040	0.504	0.510	1756.6	NO		103.811
13C-123789-HxCDF	37.943	1.011	3.09e5	6.04e5	0.941	0.512	0.510	1601.9	NO		104.100
13C-1234678-HpCDF	40.047	1.067	2.38e5	5.57e5	0.825	0.428	0.440	1404.1	NO		103.392
13C-1234789-HpCDF	42.831	1.142	1.75e5	4.06e5	0.609	0.431	0.440	825.3	NO		102.334
13C-1234-TCDD	26.377	0.000	7.53e5	9.61e5	1.000	0.783	0.770	1601.0	NO		100.000
13C-2378-TCDD	27.184	1.031	6.76e5	8.75e5	0.920	0.773	0.770	1336.1	NO		98.419
13C-12378-PeCDD	32.309	1.225	6.67e5	4.27e5	0.669	1.561	1.550	3244.6	NO		95.342
13C-123478-HxCDD	36.967	0.985	5.19e5	4.31e5	1.032	1.204	1.240	3631.4	NO		98.821
13C-123678-HxCDD	37.088	0.989	5.95e5	4.94e5	1.146	1.204	1.240	3906.8	NO		101.963
13C-1234678-HpCDD	41.910	1.117	3.65e5	3.67e5	0.789	0.997	1.050	2460.7	NO		99.505
13C-OCDD	48.016	1.280	5.86e5	6.61e5	0.696	0.886	0.890	2252.2	NO		192.064

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

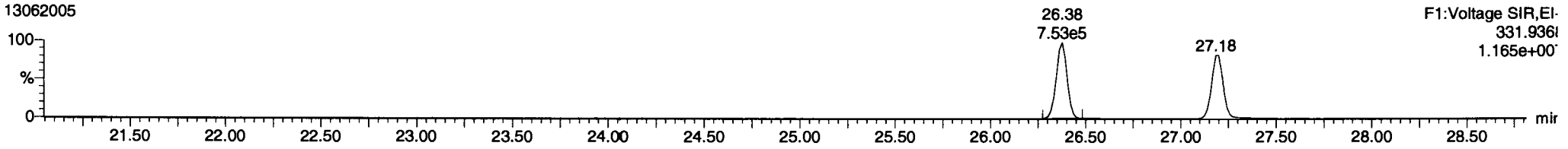
13C-123789-HxCDD	37.515	0.000	5.12e5	4.20e5	1.000	1.218	1.240	3509.6	NO		100.000
Total-tetrafurans			3.49e3		0.771						0.518
Total-penta1			1.78e2								0.029
Total-pentafurans			4.00e4		0.826						5.139
Total-hexafurans			5.52e4		0.948						10.196
Total-heptafurans			1.95e4		1.079						5.195
Total-Furans			1.31e5		0.925						25.802
Total-tetradioxins			5.86e3		0.936						0.736
Total-pentadioxins			1.65e4		0.894						2.759
Total-hexadioxins			3.91e4		0.835						8.151
Total-heptadioxins			7.96e3		0.879						2.478
Total-Dioxins			8.26e4		0.870						18.945
Total-TEQ			2.13e5								44.746
37CL-2378-TCDD	27.214	1.032	8.74e3		1.000			53.1			0.510
FUNCTION1 PFK			2.91e6								
FUNCTION2 PFK			3.10e5								0.000
FUNCTION3 PFK			6.91e6								0.000
FUNCTION4 PFK			2.20e5								
FUNCTION5 PFK			1.91e5								
FUNCTION1 HXCDPE			0.00e0								
FUNCTION1 HPCDPE			1.37e3								0.000
FUNCTION2 HPCDPE			6.10e2								0.000
FUNCTION3 OCDPE			0.00e0								
FUNCTION4 NCDPE			0.00e0								
FUNCTION5 DCDPE			0.00e0								

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

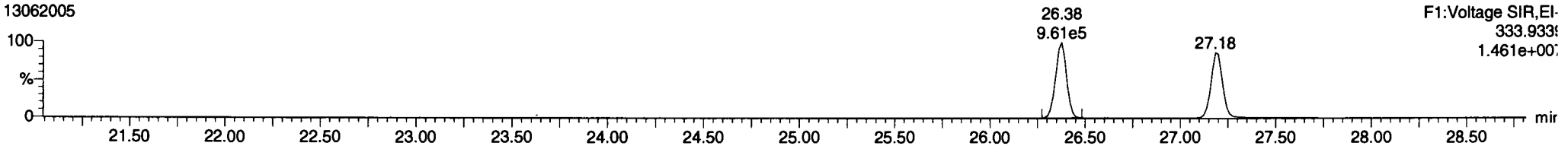
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

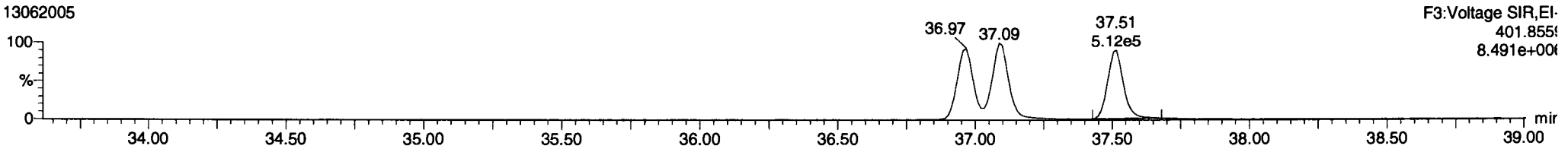
13C-1234-TCDD



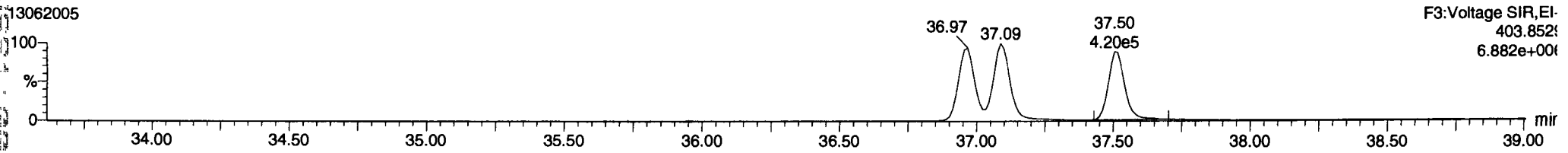
13C-1234-TCDD



13C-123789-HxCDD



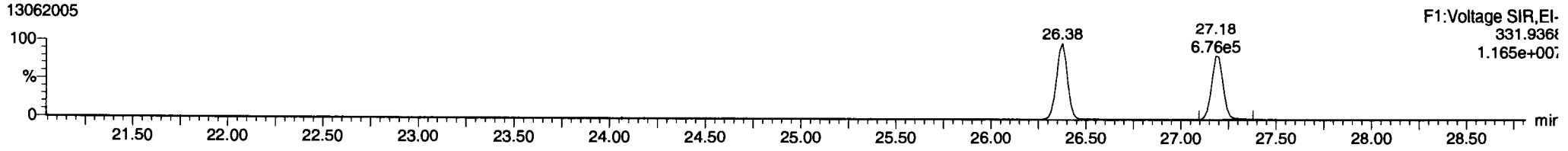
13C-123789-HxCDD



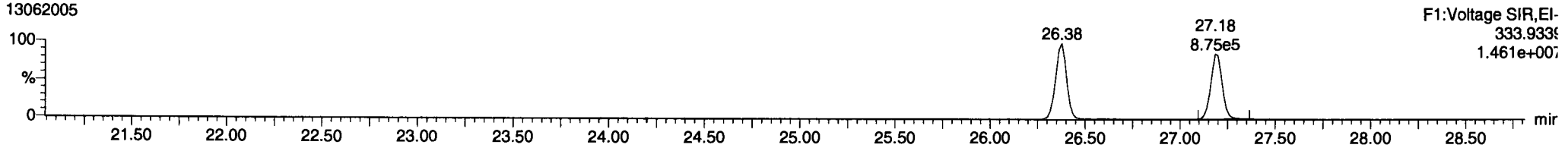
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

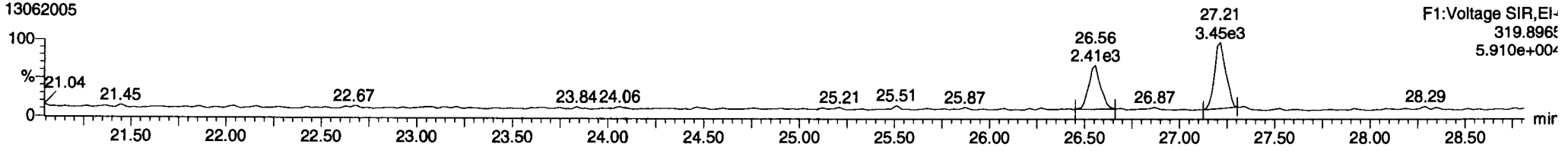
13C-2378-TCDD



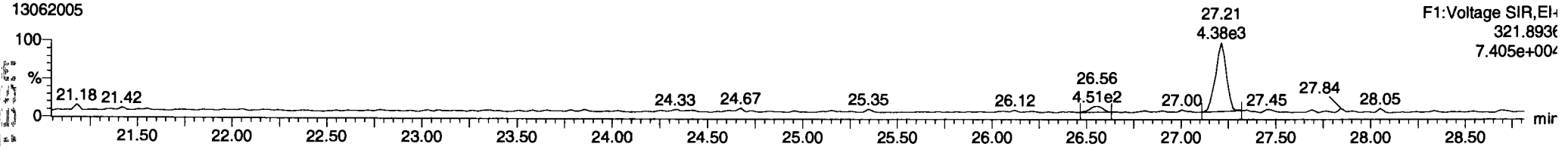
13C-2378-TCDD



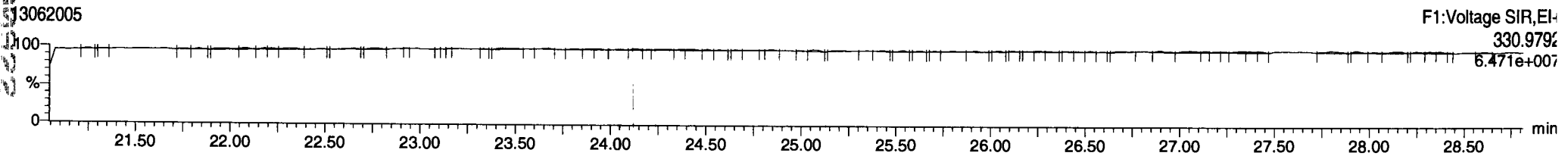
Total-tetradioxins



Total-tetradioxins



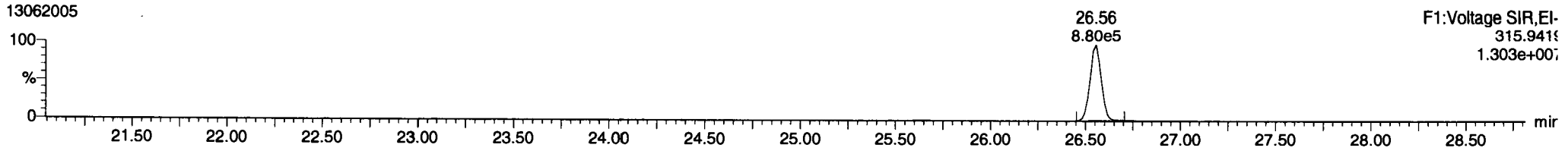
FUNCTION1 PFK



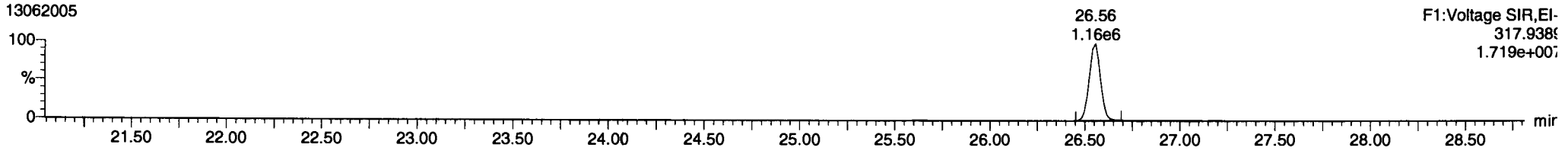
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

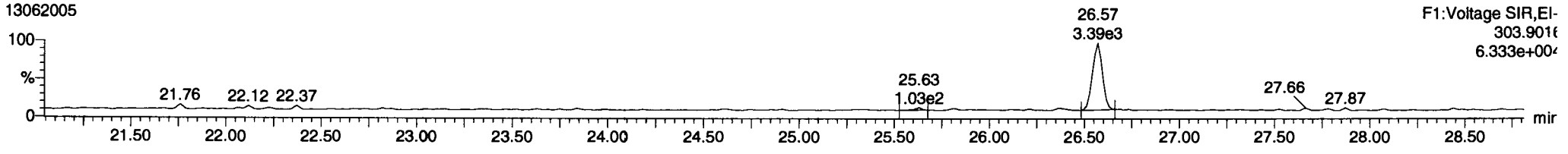
13C-2378-TCDF



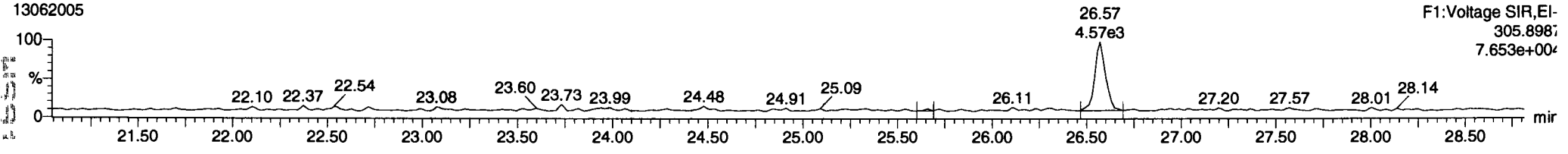
13C-2378-TCDF



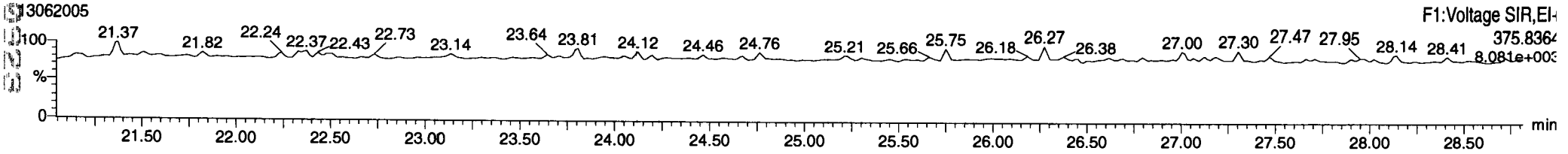
Total-tetrafurans



Total-tetrafurans



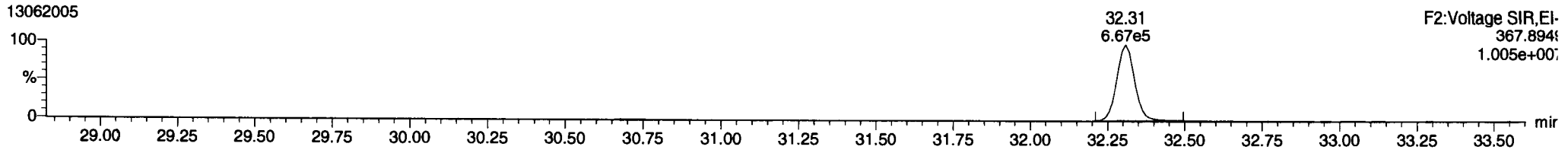
FUNCTION1 HXCDPE



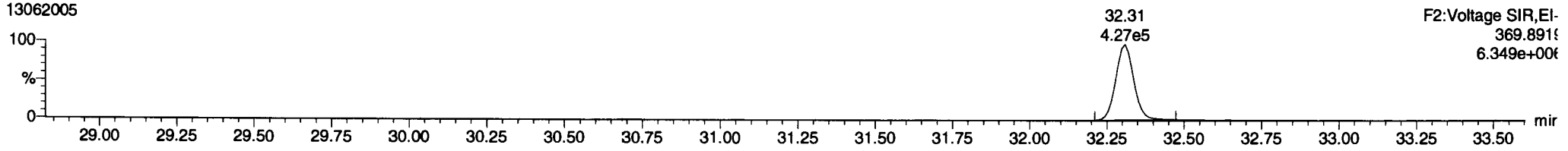
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

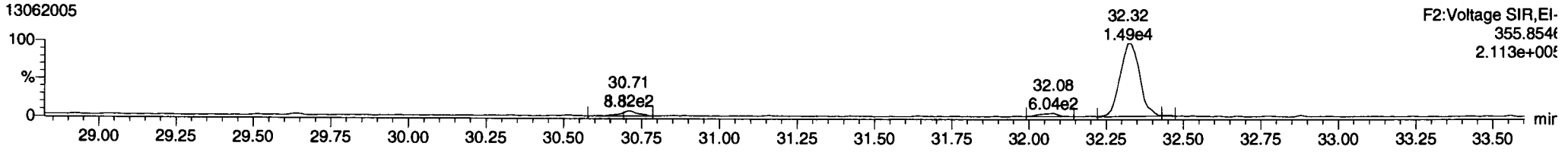
13C-12378-PeCDD



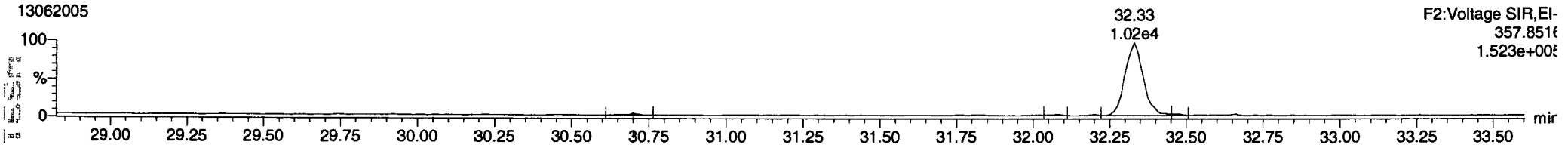
13C-12378-PeCDD



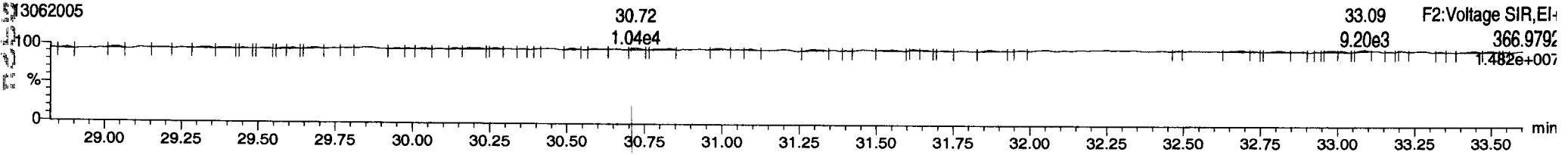
Total-pentadioxins



Total-pentadioxins



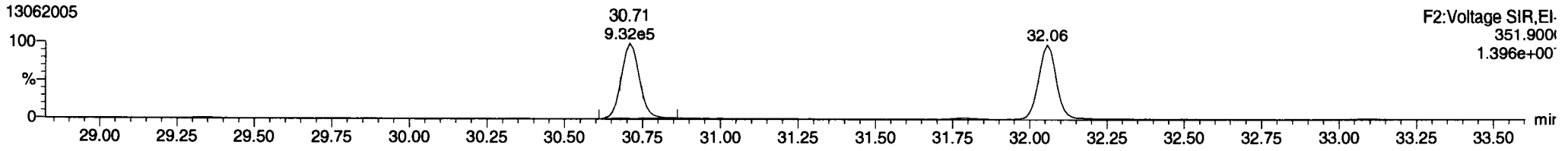
FUNCTION2 PFK



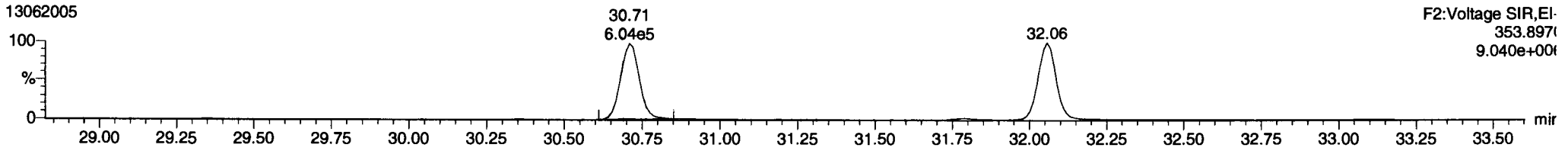
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

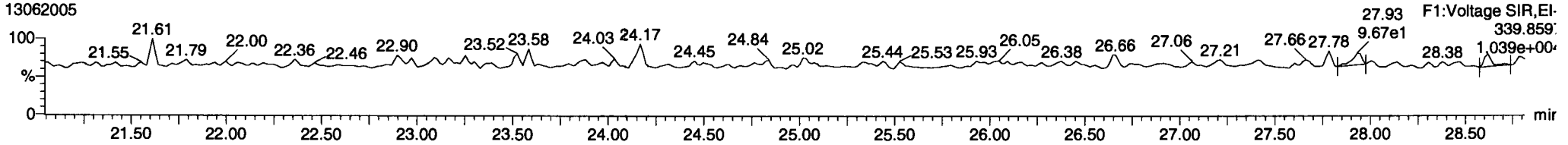
13C-12378-PeCDF



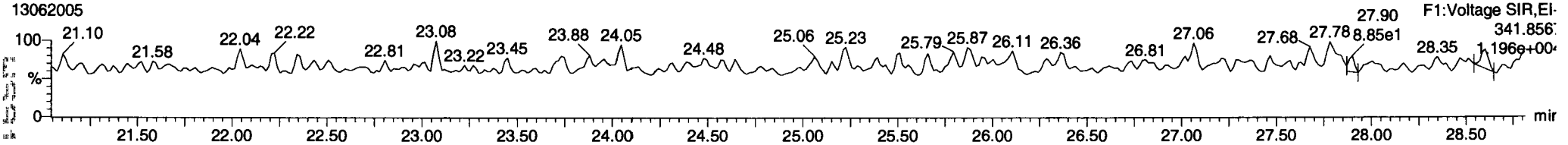
13C-12378-PeCDF



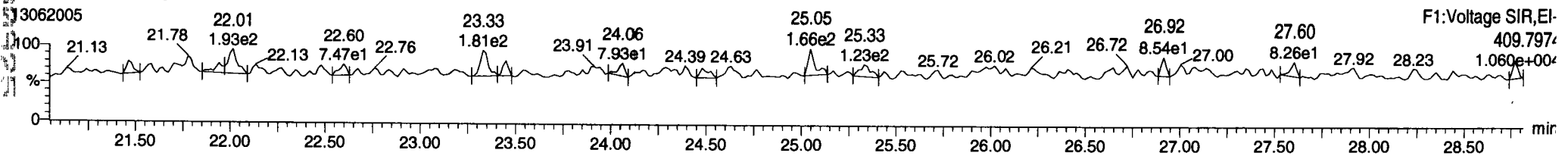
Total-penta1



Total-penta1



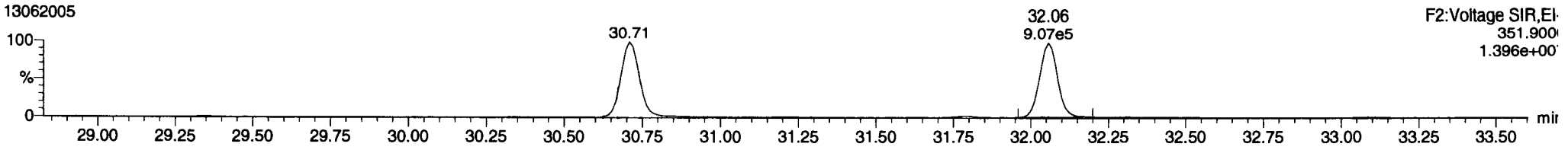
FUNCTION1 HPCDPE



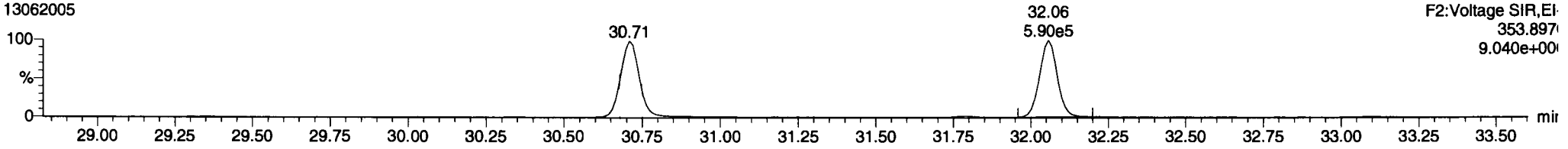
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

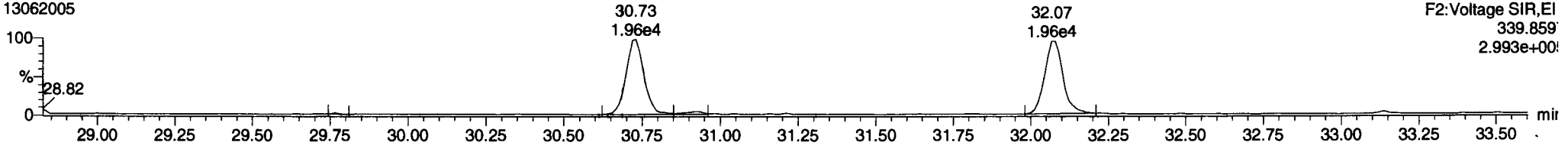
13C-23478-PeCDF



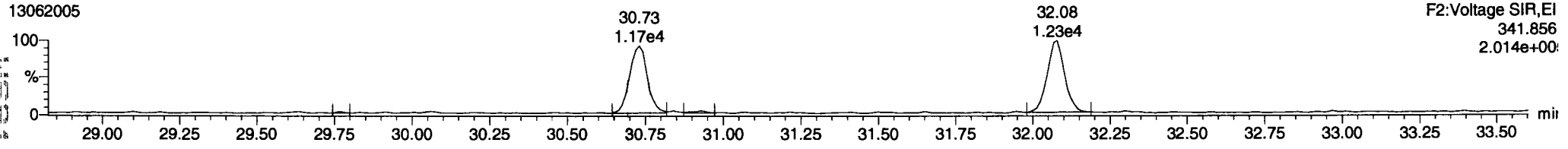
13C-23478-PeCDF



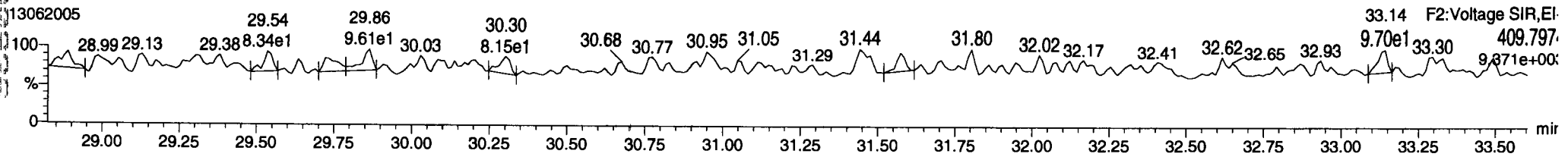
Total-pentafurans



Total-pentafurans



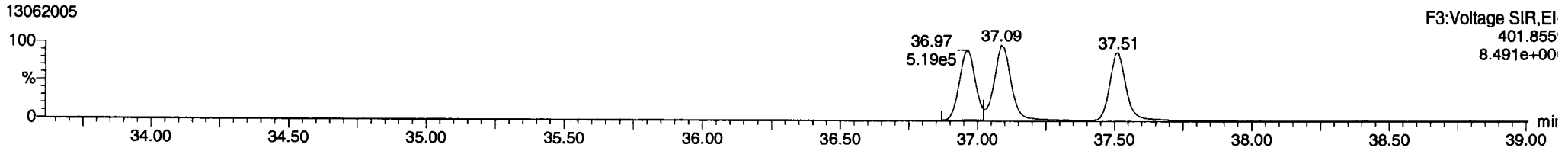
FUNCTION2 HPCDPE



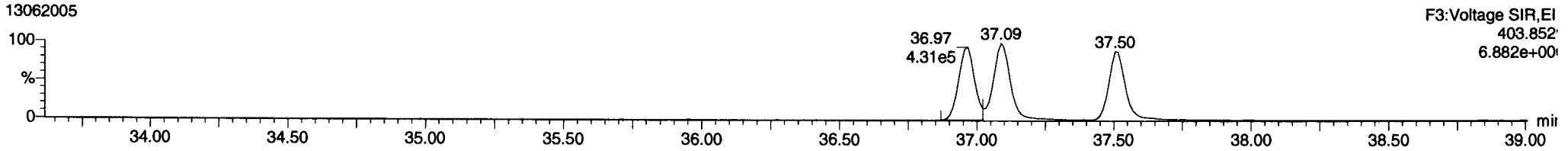
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

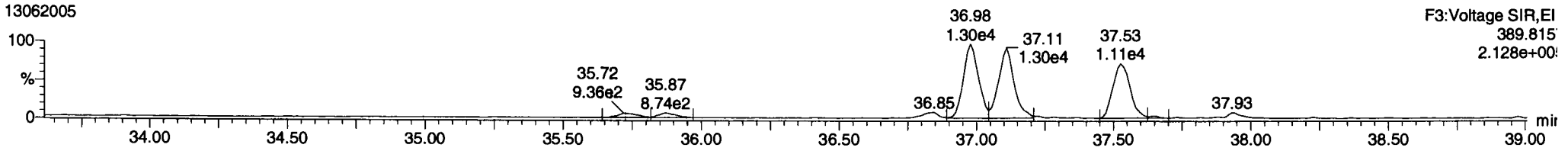
13C-123478-HxCDD



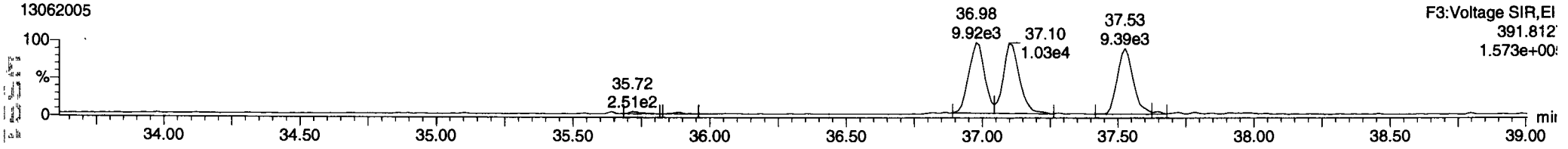
13C-123478-HxCDD



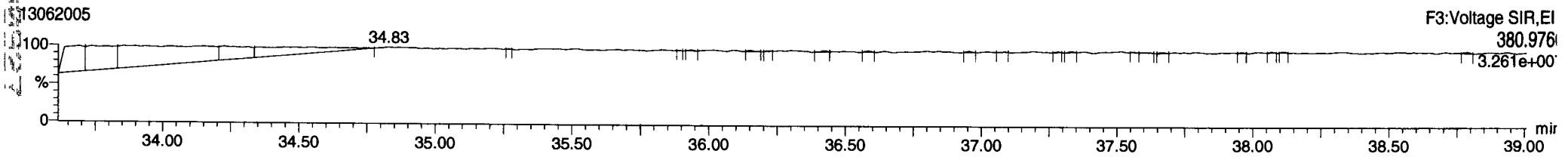
Total-hexadioxins



Total-hexadioxins



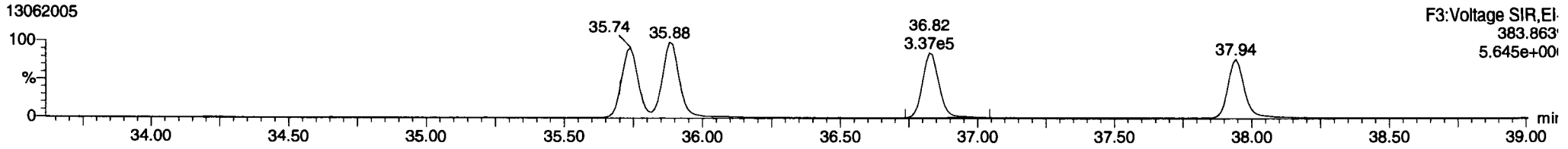
FUNCTION3 PFK



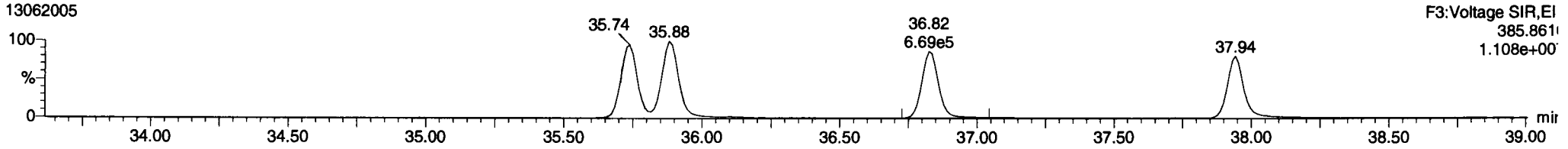
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

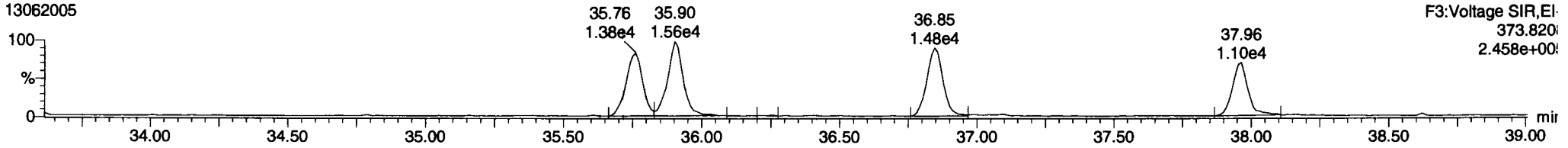
13C-234678-HxCDF



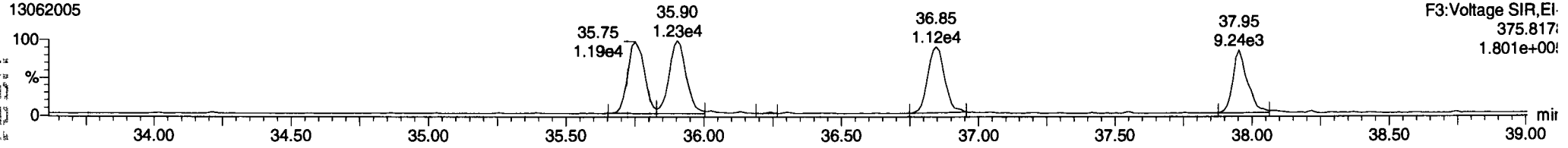
13C-234678-HxCDF



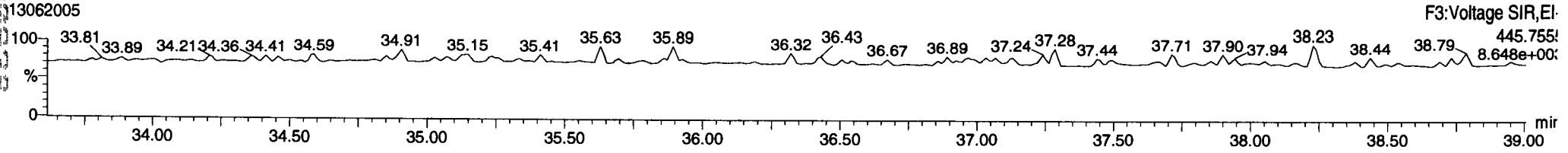
Total-hexafurans



Total-hexafurans



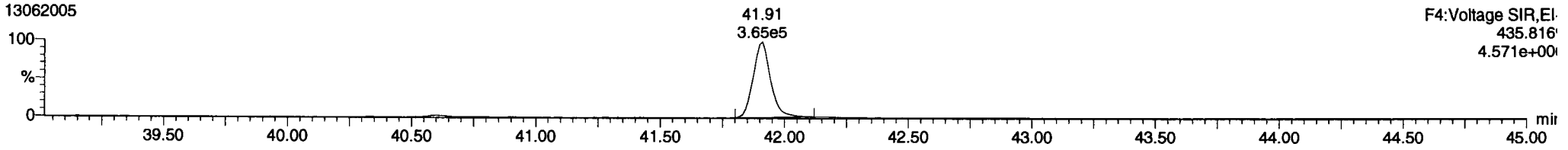
FUNCTION3 OCDPE



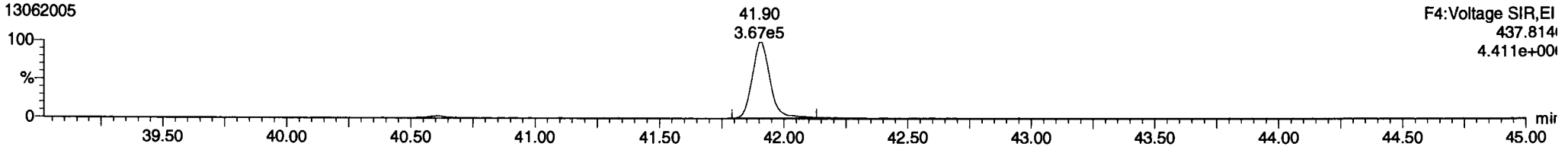
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

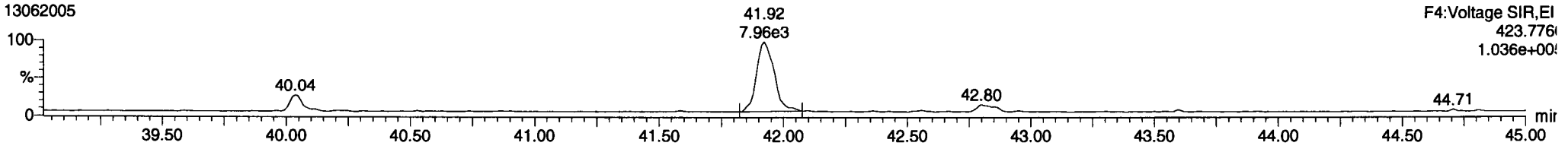
13C-1234678-HpCDD



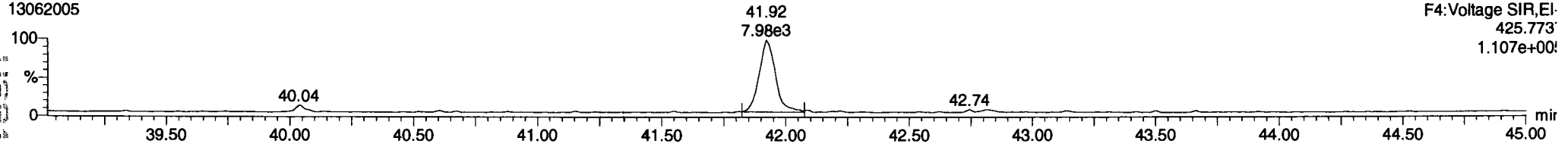
13C-1234678-HpCDD



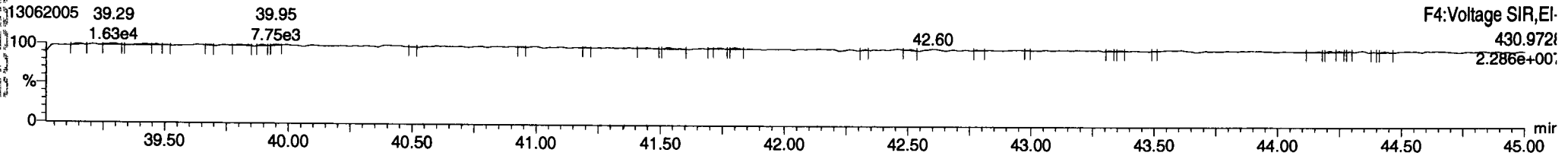
Total-heptadioxins



Total-heptadioxins



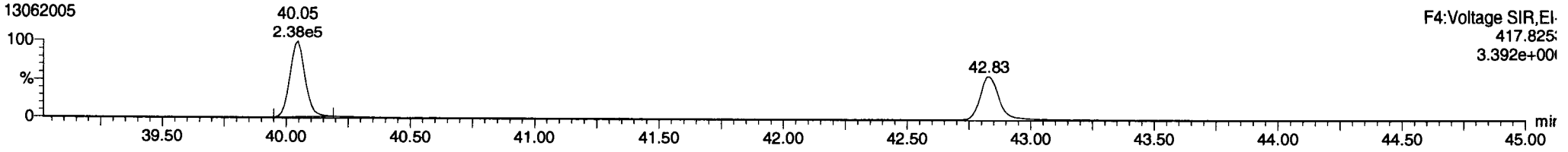
FUNCTION4 PFK



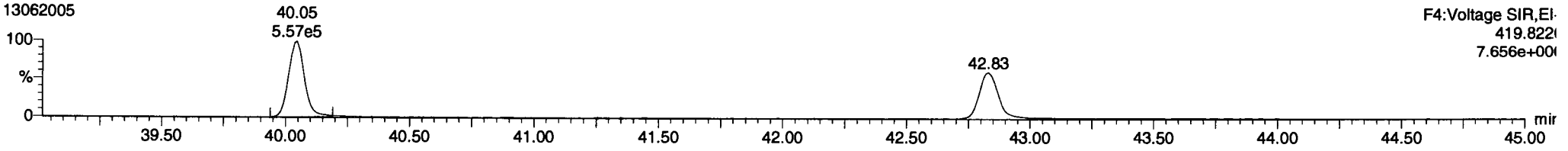
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

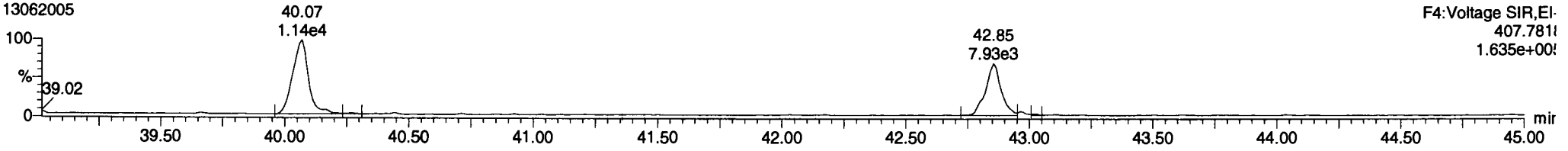
13C-1234678-HpCDF



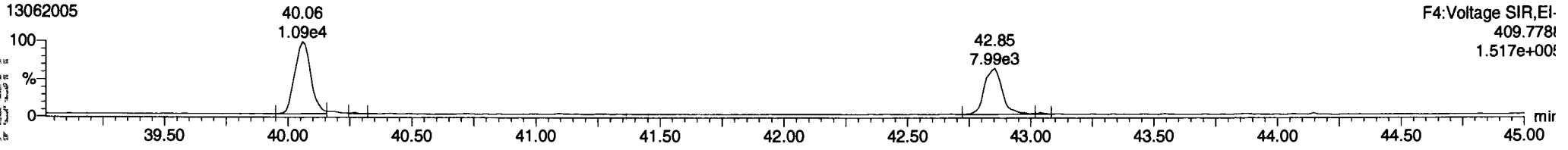
13C-1234678-HpCDF



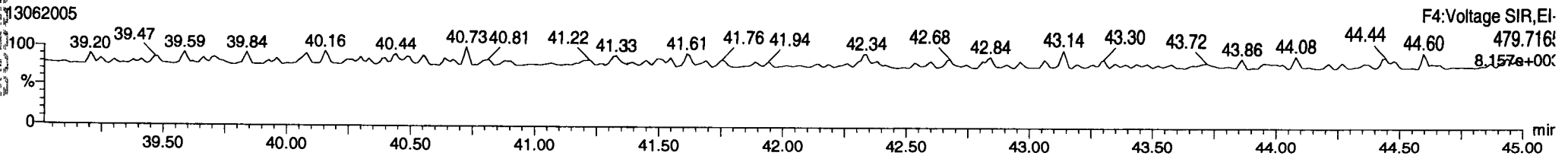
Total-heptafurans



Total-heptafurans



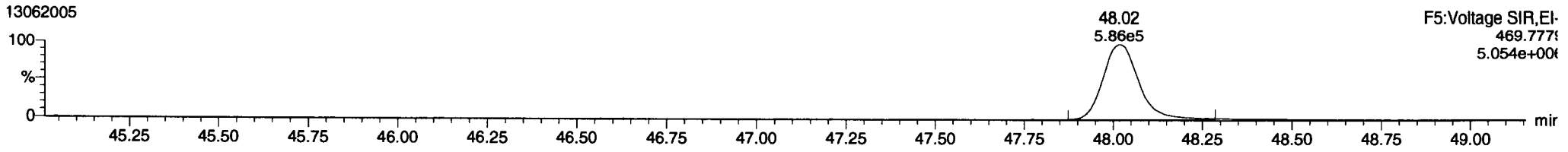
FUNCTION4 NCDPE



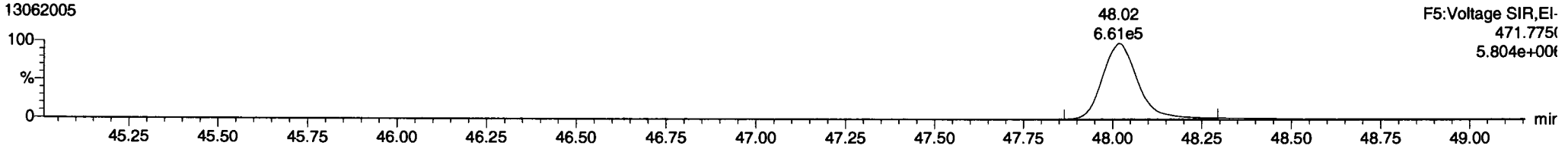
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

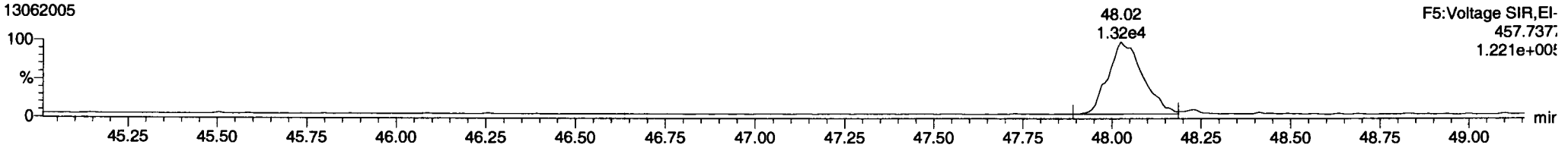
13C-OCDD



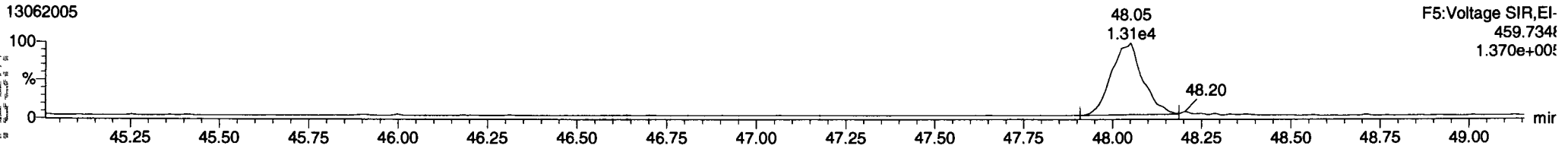
13C-OCDD



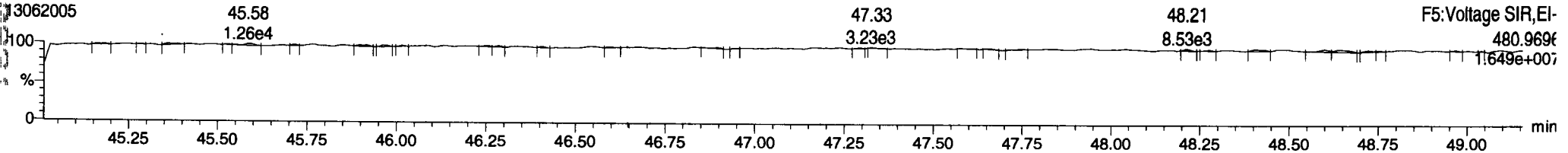
OCDD



OCDD

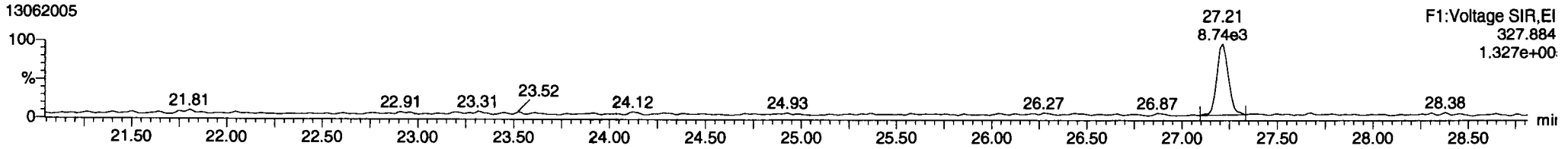


FUNCTION5 PFK

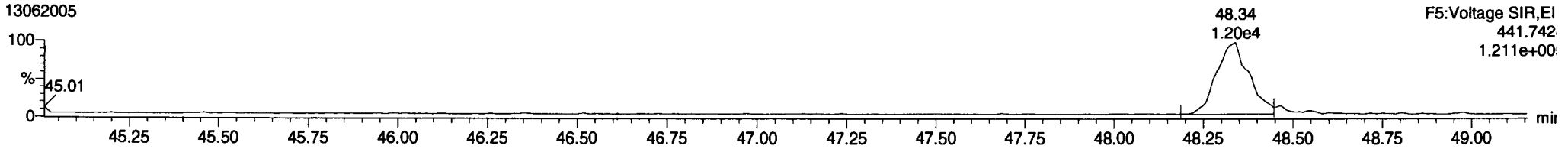


ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

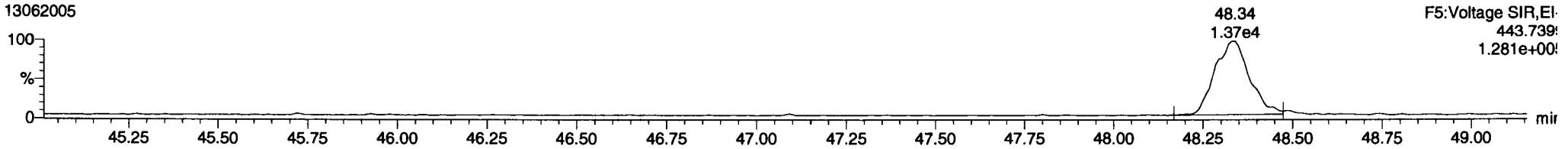
37CL-2378-TCDD



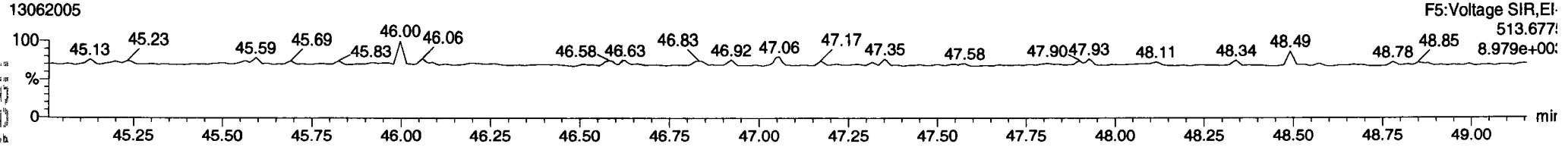
OCDF



OCDF



FUNCTION5 DCDPE



Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.542	1.001	1.63e4	2.11e4	0.771	0.770	0.770	255.6	NO	1.941	1.941
12378-PeCDF	30.698	1.000	8.78e4	5.86e4	0.814	1.498	1.550	684.0	NO	9.754	9.754
23478-PeCDF	32.046	1.000	8.53e4	5.82e4	0.837	1.465	1.550	680.6	NO	9.597	9.597
123478-HxCDF	35.729	1.000	6.68e4	5.32e4	0.967	1.256	1.240	743.0	NO	9.783	9.783
234678-HxCDF	36.825	1.001	6.41e4	5.44e4	1.000	1.178	1.240	712.3	NO	9.898	9.898
123678-HxCDF	35.883	1.001	7.18e4	5.73e4	0.951	1.253	1.240	775.0	NO	9.695	9.695
123789-HxCDF	37.943	1.001	5.31e4	4.26e4	0.874	1.246	1.240	582.5	NO	9.793	9.793
1234678-HpCDF	40.037	1.000	5.23e4	5.15e4	1.072	1.017	1.050	661.4	NO	10.040	10.040
1234789-HpCDF	42.821	1.000	3.59e4	3.83e4	1.085	0.938	1.050	402.7	NO	9.563	9.563
OCDF	48.313	1.007	6.36e4	7.40e4	0.878	0.860	0.890	482.0	NO	19.414	19.414
2378-TCDD	27.184	1.001	1.54e4	1.90e4	0.936	0.808	0.770	203.9	NO	1.901	1.901
12378-PeCDD	32.298	1.000	6.88e4	4.74e4	0.894	1.452	1.550	744.9	NO	9.612	9.612
123478-HxCDD	36.957	1.000	5.83e4	4.61e4	0.898	1.265	1.240	587.9	NO	9.706	9.706
123678-HxCDD	37.088	1.000	5.86e4	4.87e4	0.818	1.203	1.240	573.1	NO	9.967	9.967
123789-HxCDD	37.505	1.012	5.43e4	4.55e4	0.789	1.194	1.240	531.6	NO	10.063	10.063
1234678-HpCDD	41.911	1.001	4.14e4	3.98e4	0.879	1.039	1.050	444.3	NO	9.931	9.931
OCDD	48.017	1.000	6.54e4	7.51e4	0.875	0.871	0.890	542.0	NO	19.887	19.887
13C-2378-TCDF	26.527	1.007	1.08e6	1.42e6	1.190	0.760	0.770	6130.1	NO		98.347
13C-12378-PeCDF	30.687	1.165	1.12e6	7.25e5	0.904	1.542	1.550	3121.2	NO		95.493
13C-23478-PeCDF	32.035	1.216	1.08e6	7.08e5	0.877	1.526	1.550	3003.9	NO		95.501
13C-123478-HxCDF	35.718	0.953	4.24e5	8.44e5	1.096	0.502	0.510	1169.6	NO		98.937
13C-123678-HxCDF	35.861	0.956	4.79e5	9.20e5	1.187	0.520	0.510	1235.1	NO		100.725
13C-234678-HxCDF	36.803	0.982	4.01e5	7.97e5	1.040	0.503	0.510	1072.3	NO		98.459
13C-123789-HxCDF	37.921	1.011	3.70e5	7.49e5	0.941	0.493	0.510	997.6	NO		101.636
13C-1234678-HpCDF	40.026	1.068	2.80e5	6.84e5	0.825	0.410	0.440	1624.4	NO		99.908
13C-1234789-HpCDF	42.810	1.142	2.18e5	4.96e5	0.609	0.440	0.440	1043.5	NO		100.255
13C-1234-TCDD	26.347	0.000	9.37e5	1.20e6	1.000	0.783	0.770	2204.5	NO		100.000
13C-2378-TCDD	27.169	1.031	8.38e5	1.10e6	0.920	0.764	0.770	1897.3	NO		98.595
13C-12378-PeCDD	32.287	1.225	8.27e5	5.25e5	0.669	1.577	1.550	4868.3	NO		94.642
13C-123478-HxCDD	36.946	0.985	6.72e5	5.26e5	1.032	1.276	1.240	3069.2	NO		99.263
13C-123678-HxCDD	37.077	0.989	7.22e5	5.94e5	1.146	1.215	1.240	3225.0	NO		98.210
13C-1234678-HpCDD	41.889	1.117	4.73e5	4.57e5	0.789	1.036	1.050	2083.2	NO		100.781
13C-OCDD	47.999	1.280	7.66e5	8.49e5	0.696	0.902	0.890	3110.7	NO		198.271

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

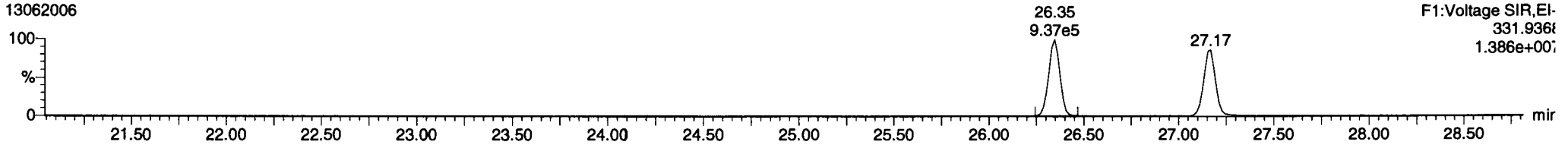
13C-123789-HxCDD	37.494	0.000	6.40e5	5.29e5	1.000	1.209	1.240	2895.7	NO	100.000
Total-tetrafurans			1.66e4		0.771					1.992
Total-penta1			7.39e1							0.011
Total-pentafurans			1.76e5		0.826					19.608
Total-hexafurans			2.58e5		0.948					39.507
Total-heptafurans			8.94e4		1.079					19.765
Total-Furans			6.04e5		0.925					100.314
Total-tetradioxins			1.84e4		0.936					2.156
Total-pentadioxins			7.05e4		0.894					9.819
Total-hexadioxins			1.74e5		0.835					30.107
Total-heptadioxins			4.17e4		0.879					9.992
Total-Dioxins			3.70e5		0.870					71.960
Total-TEQ			9.74e5							172.275
37CL-2378-TCDD	27.184	1.032	3.90e4		1.000			307.8		1.826
FUNCTION1 PFK			0.00e0							
FUNCTION2 PFK			1.90e5							0.000
FUNCTION3 PFK			1.95e5							0.000
FUNCTION4 PFK			4.18e5							
FUNCTION5 PFK			4.59e6							
FUNCTION1 HXCDPE			3.17e2							0.000
FUNCTION1 HPCDPE			7.54e2							0.000
FUNCTION2 HPCDPE			6.99e2							0.000
FUNCTION3 OCDPE			0.00e0							
FUNCTION4 NCDPE			1.56e2							0.000
FUNCTION5 DCDPE			0.00e0							

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

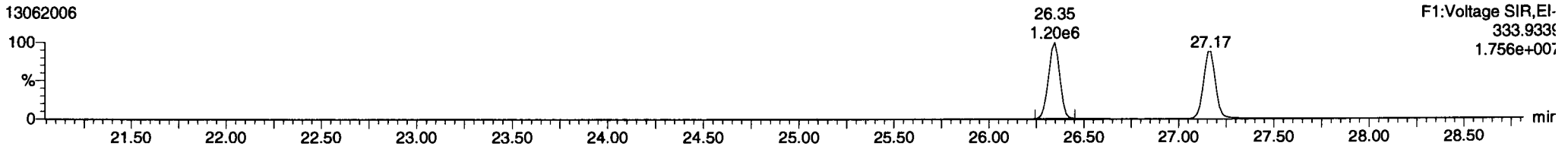
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

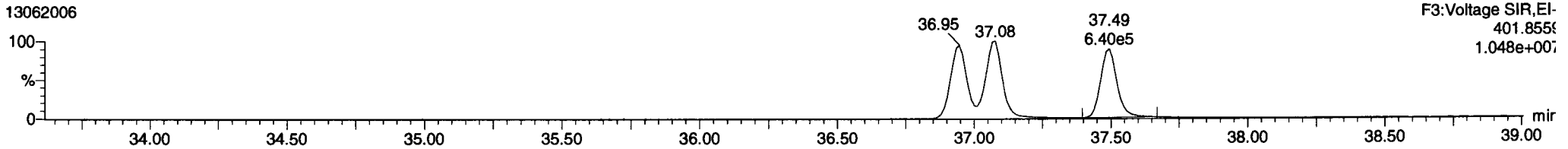
13C-1234-TCDD



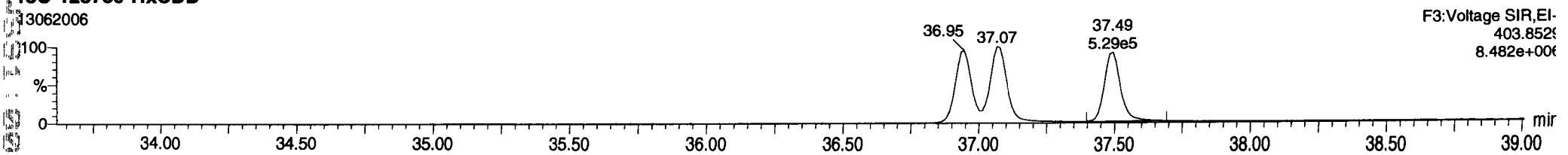
13C-1234-TCDD



13C-123789-HxCDD



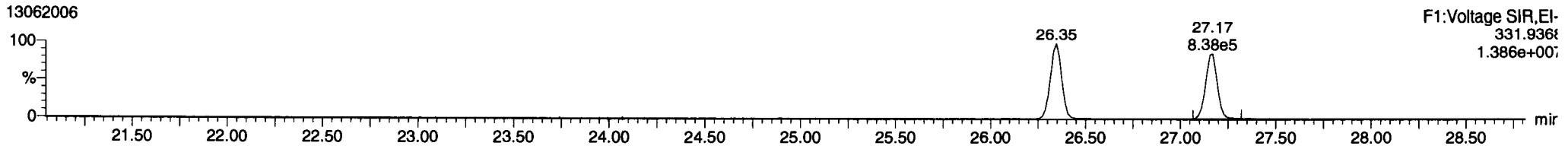
13C-123789-HxCDD



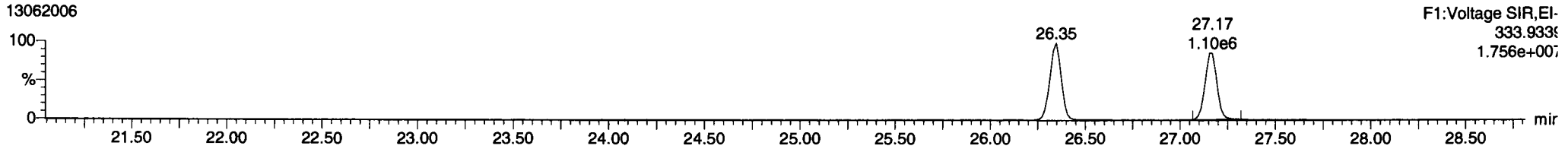
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

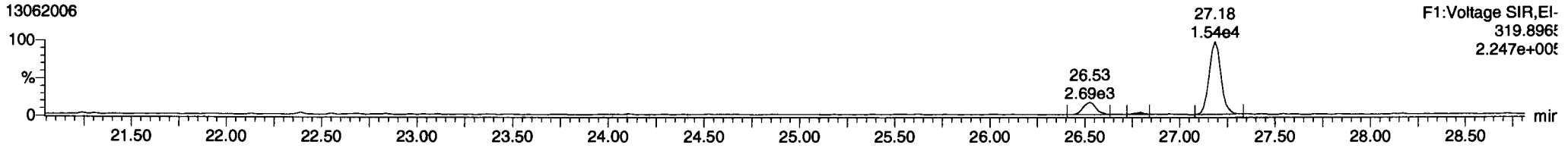
13C-2378-TCDD



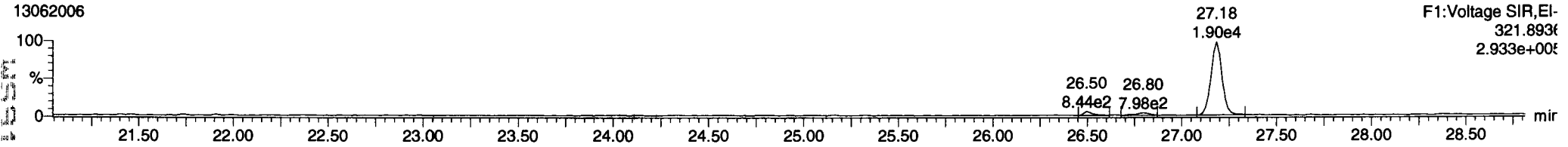
13C-2378-TCDD



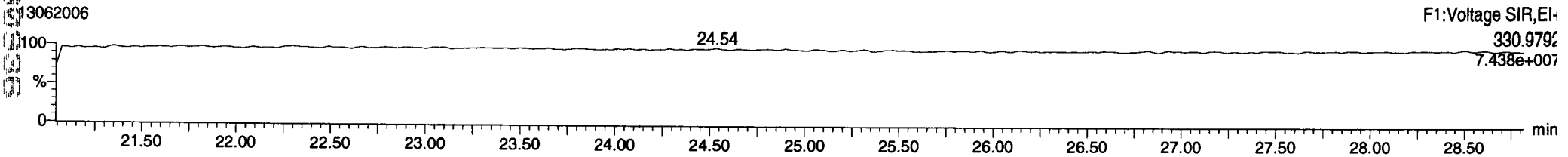
Total-tetradioxins



Total-tetradioxins



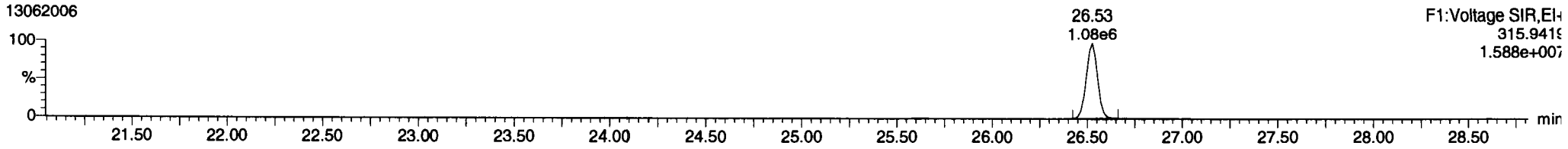
FUNCTION1 PFK



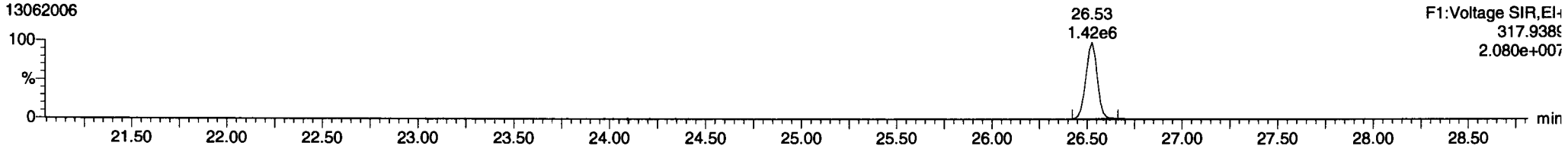
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

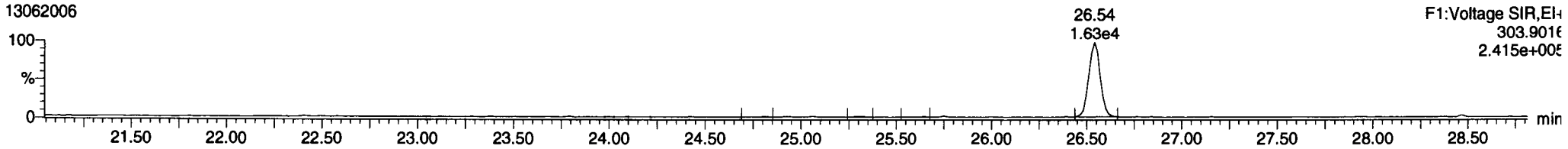
13C-2378-TCDF



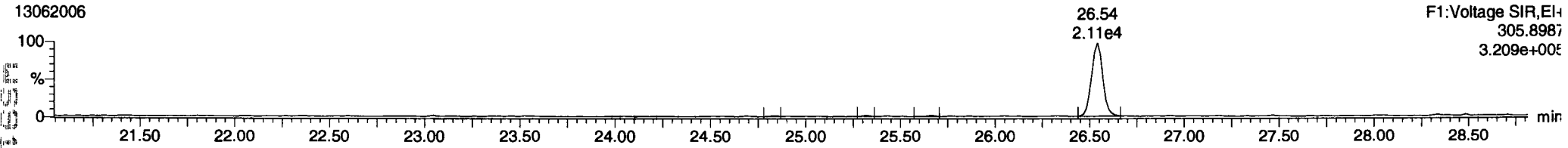
13C-2378-TCDF



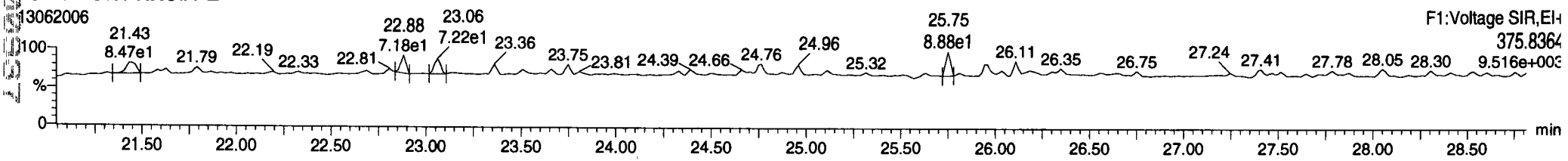
Total-tetrafurans



Total-tetrafurans



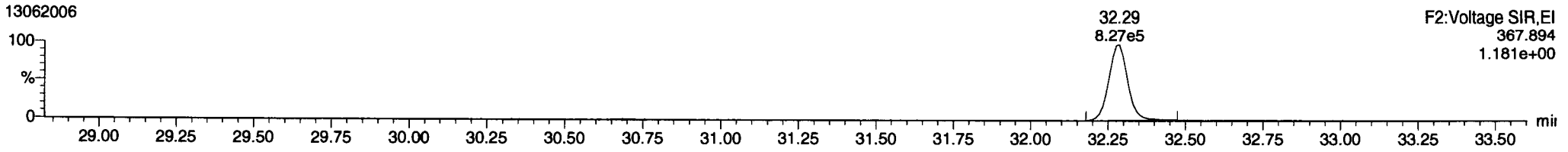
FUNCTION1 HXCDPE



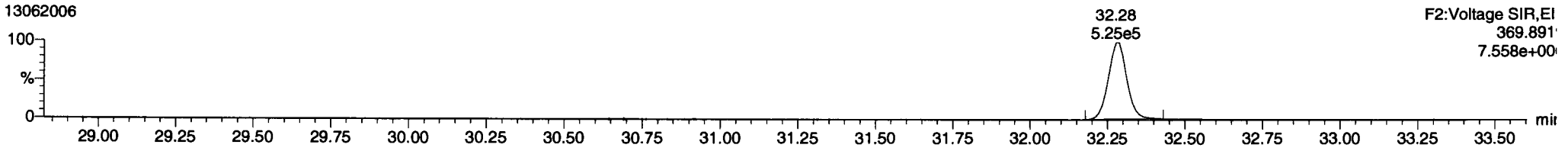
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

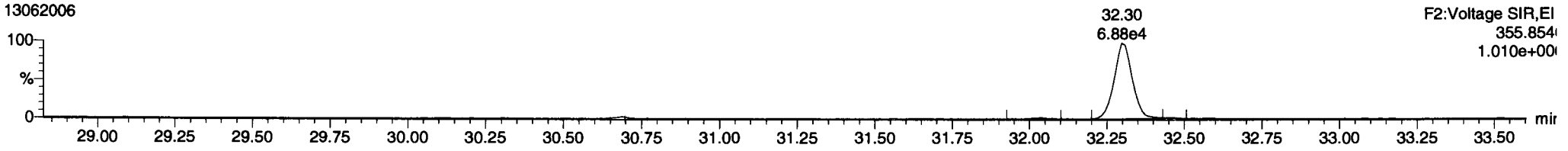
13C-12378-PeCDD



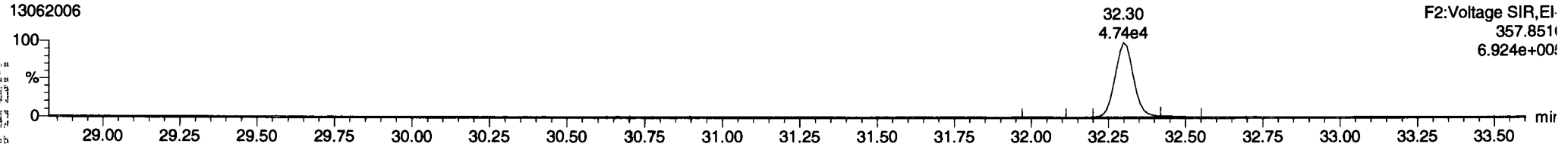
13C-12378-PeCDD



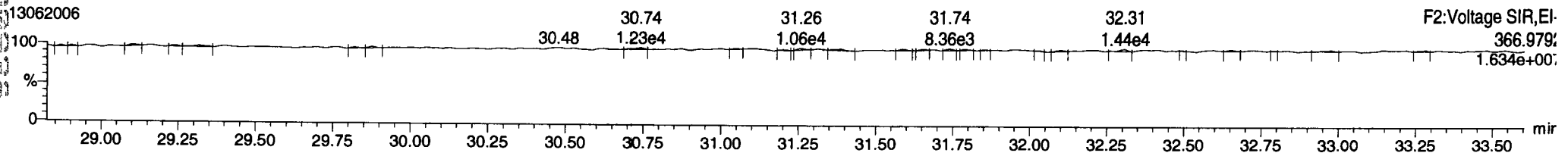
Total-pentadioxins



Total-pentadioxins



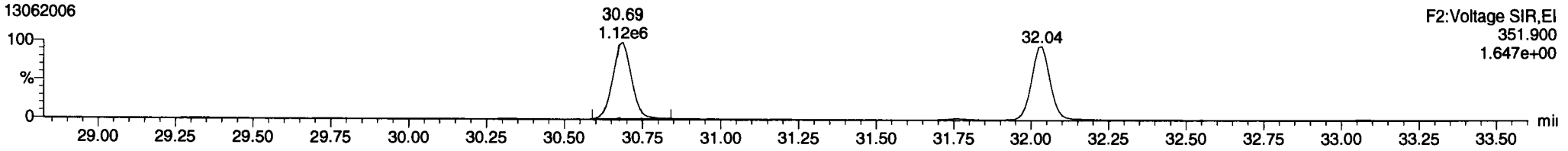
FUNCTION2 PFK



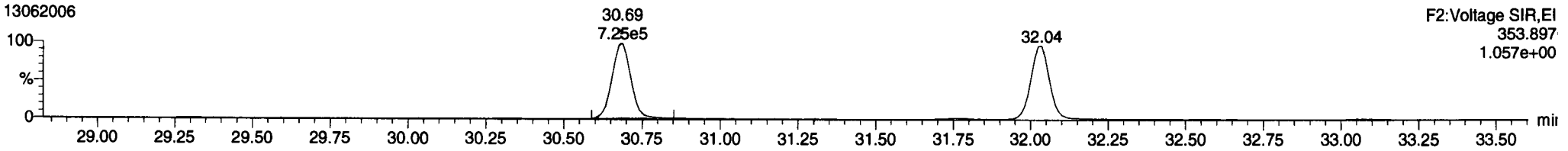
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

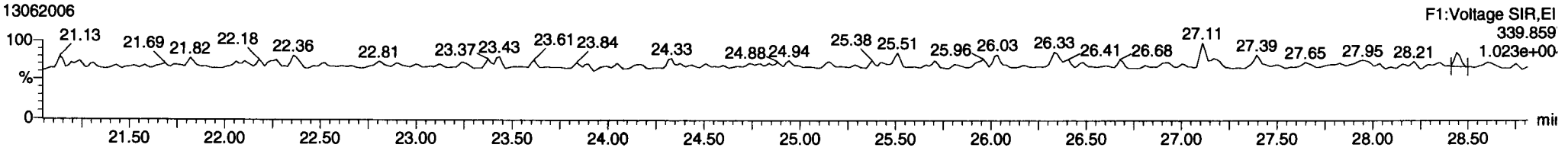
13C-12378-PeCDF



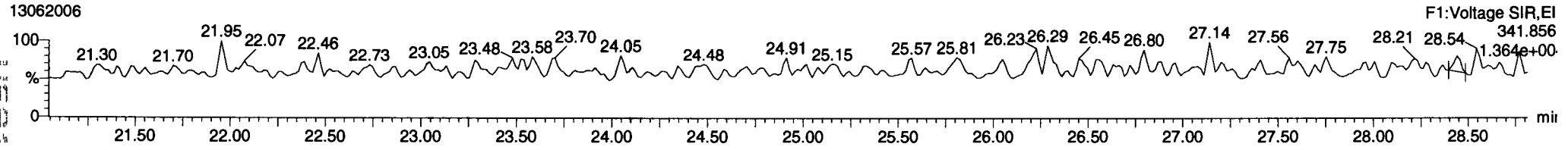
13C-12378-PeCDF



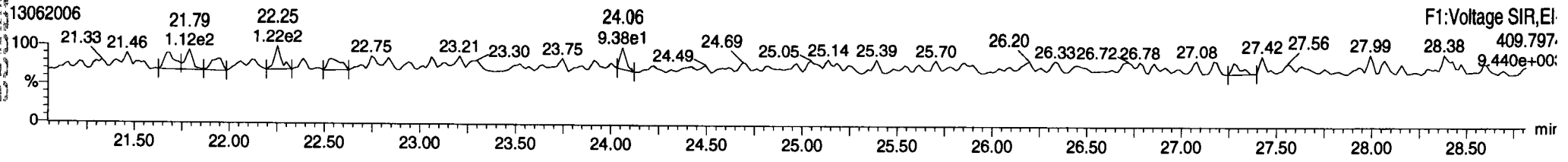
Total-penta1



Total-penta1



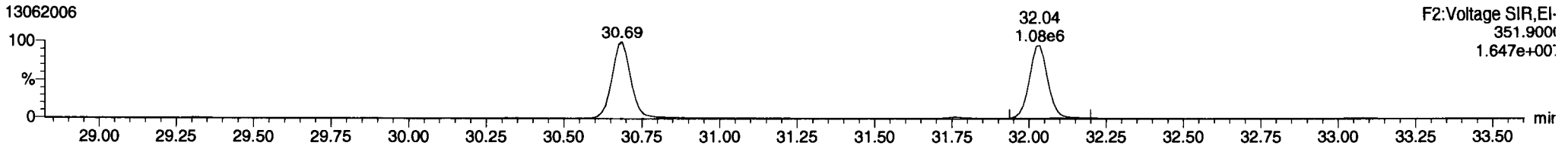
FUNCTION1 HPCDPE



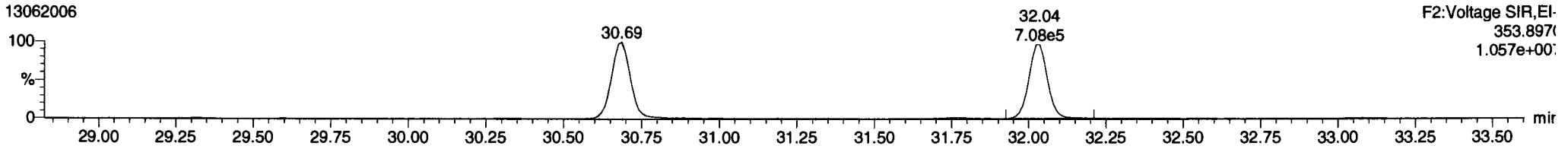
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

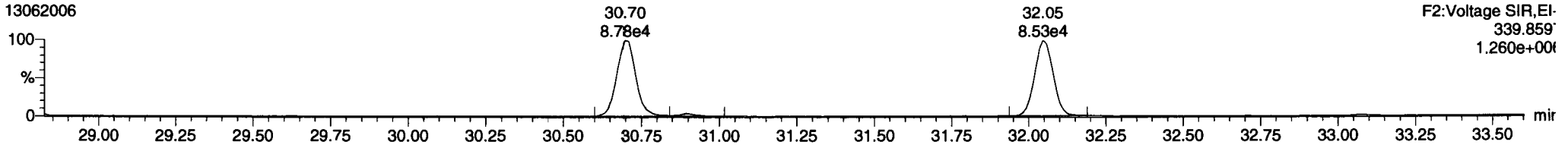
13C-23478-PeCDF



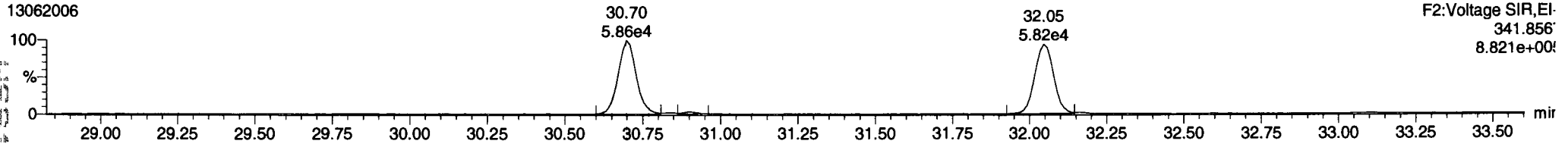
13C-23478-PeCDF



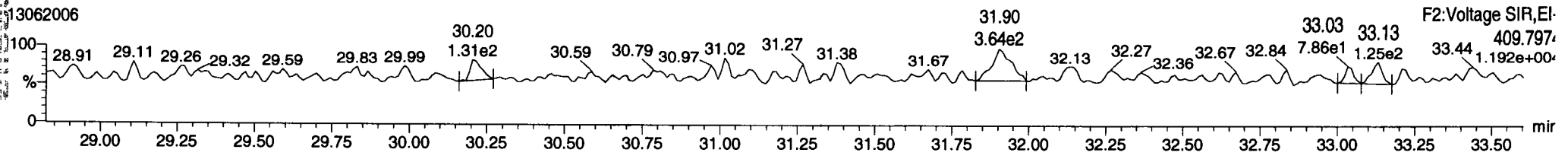
Total-pentafurans



Total-pentafurans



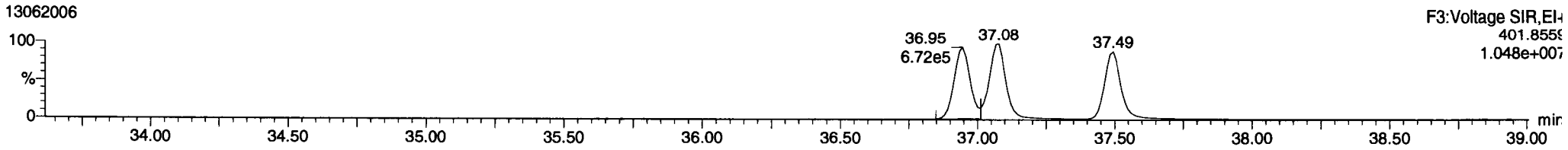
FUNCTION2 HPCDPE



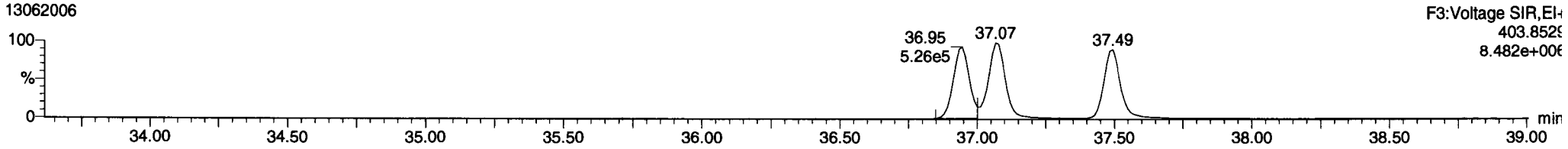
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

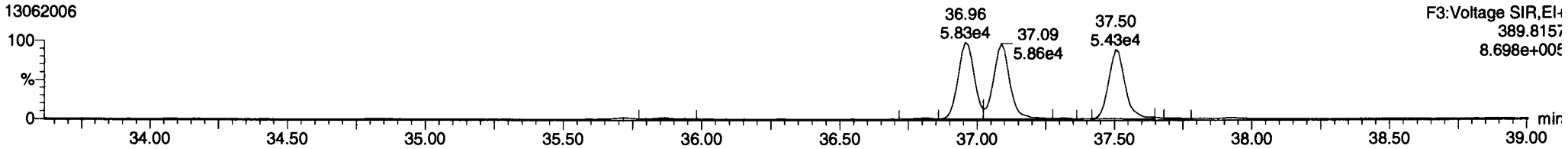
13C-123478-HxCDD



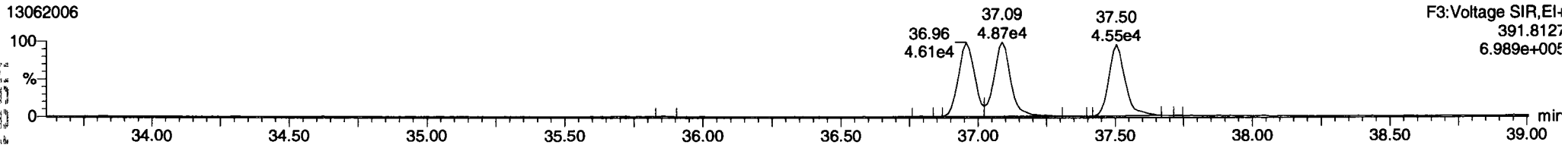
13C-123478-HxCDD



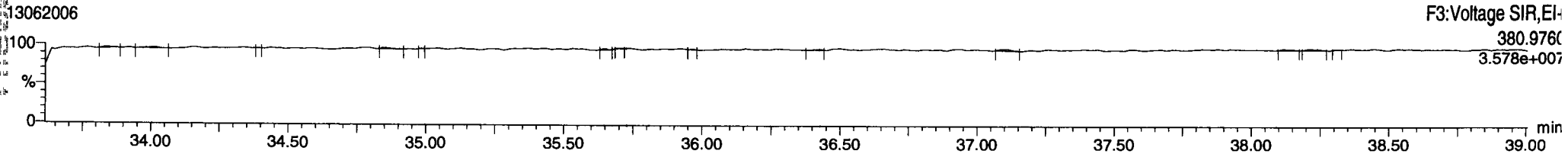
Total-hexadioxins



Total-hexadioxins



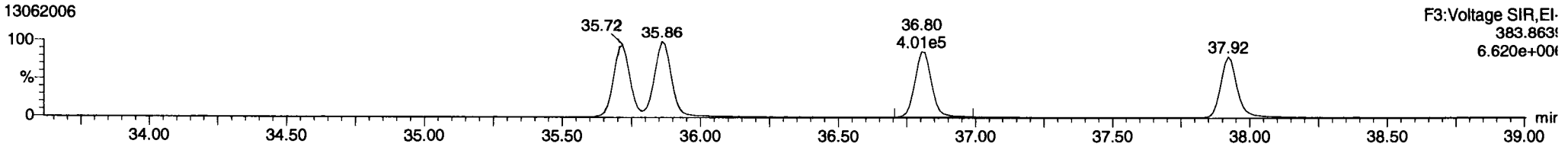
FUNCTION3 PFK



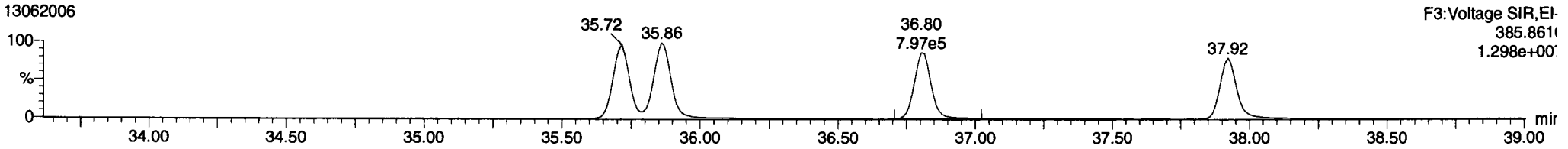
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

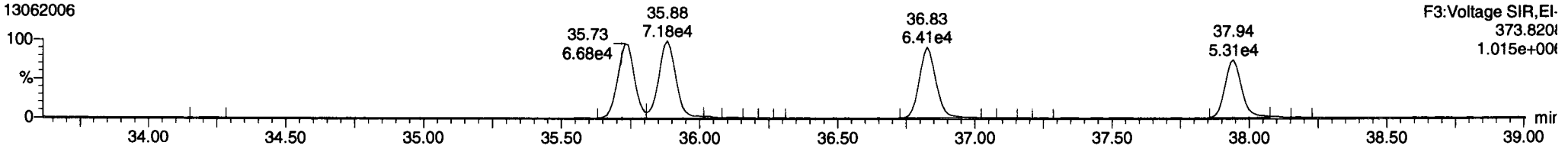
13C-234678-HxCDF



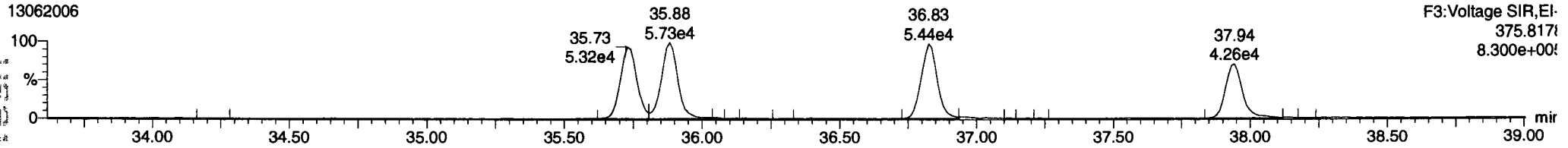
13C-234678-HxCDF



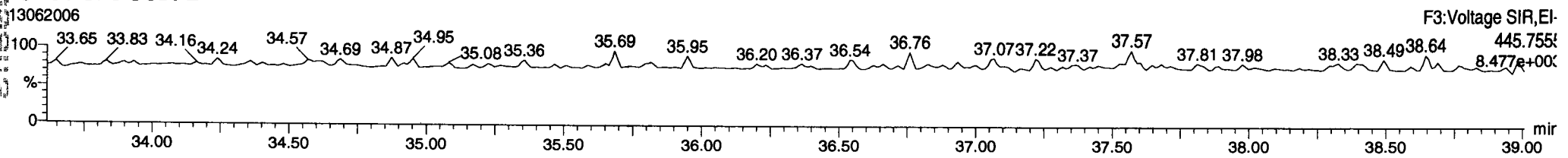
Total-hexafurans



Total-hexafurans



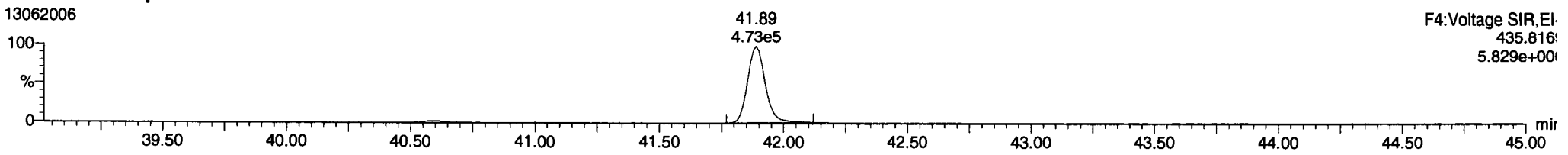
FUNCTION3 OCDPE



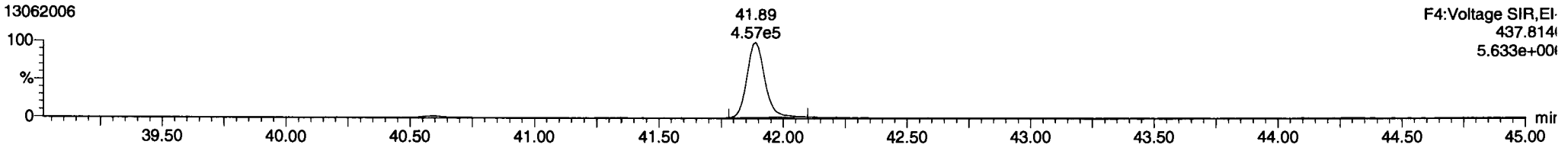
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

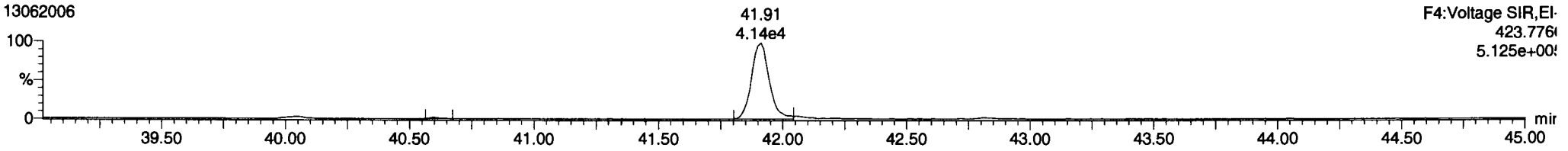
13C-1234678-HpCDD



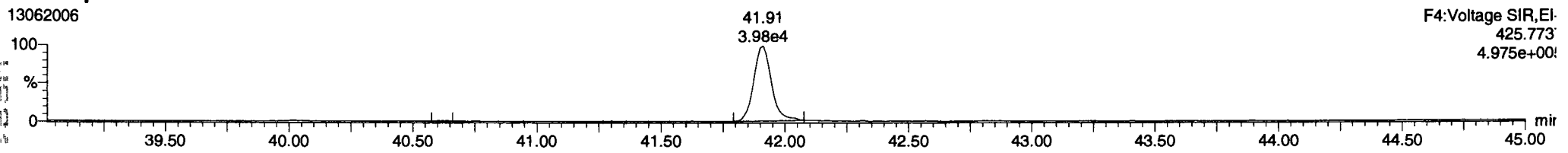
13C-1234678-HpCDD



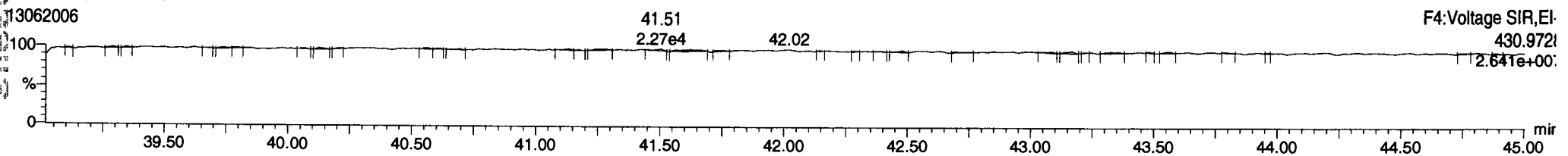
Total-heptadioxins



Total-heptadioxins

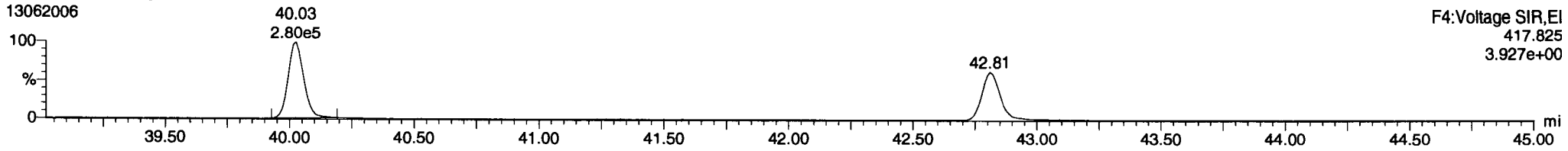


FUNCTION4 PFK

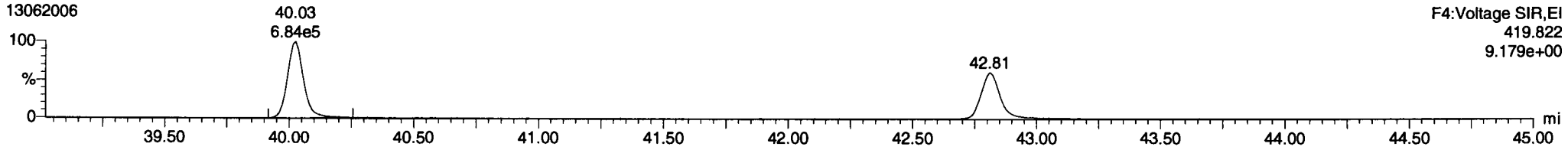


ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

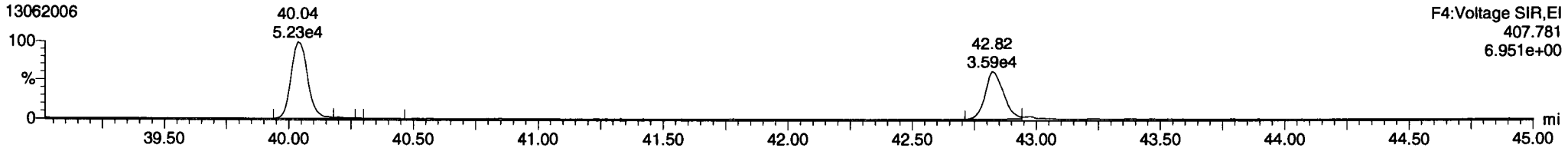
13C-1234678-HpCDF



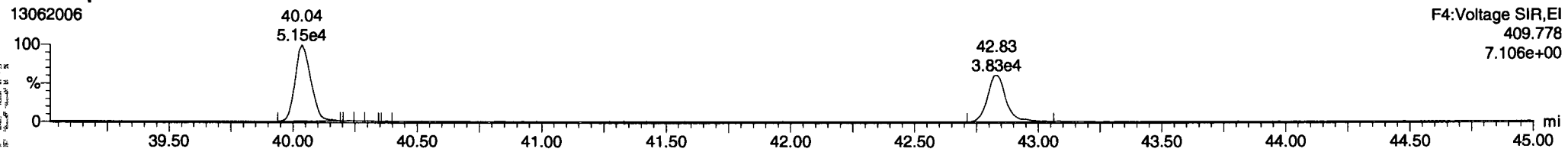
13C-1234678-HpCDF



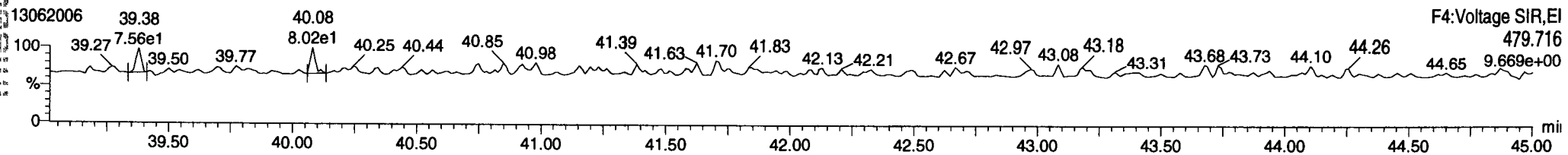
Total-heptafurans



Total-heptafurans



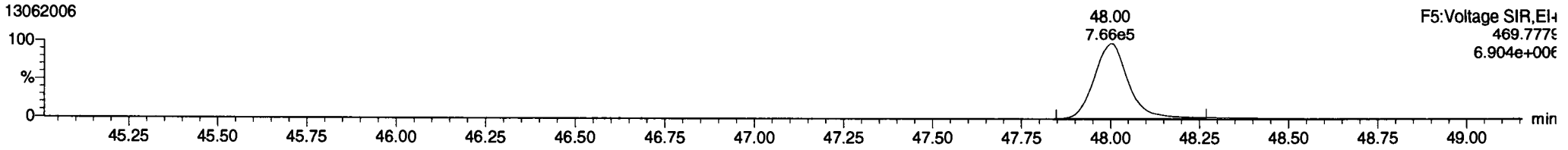
FUNCTION4 NCDPE



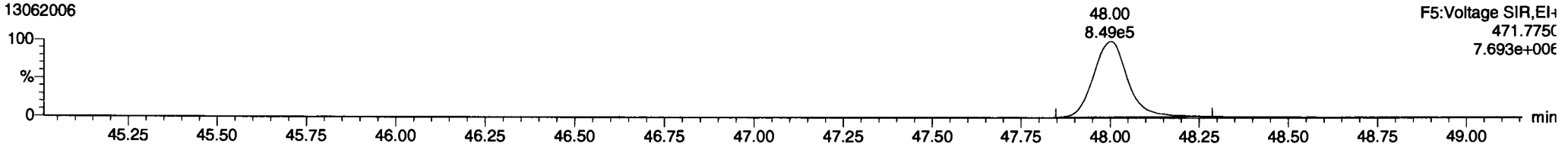
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

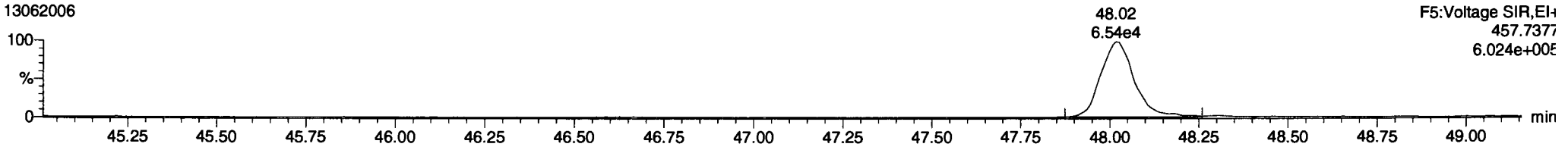
13C-OCDD



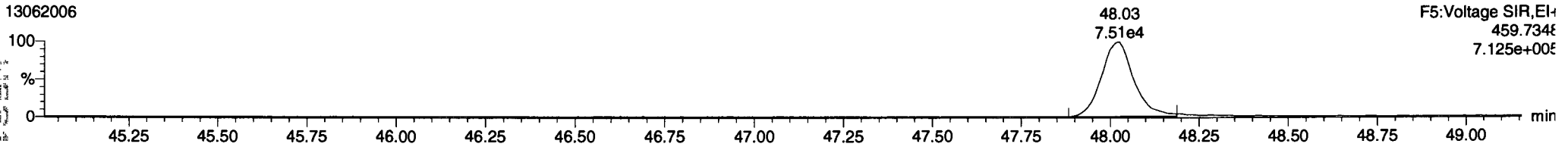
13C-OCDD



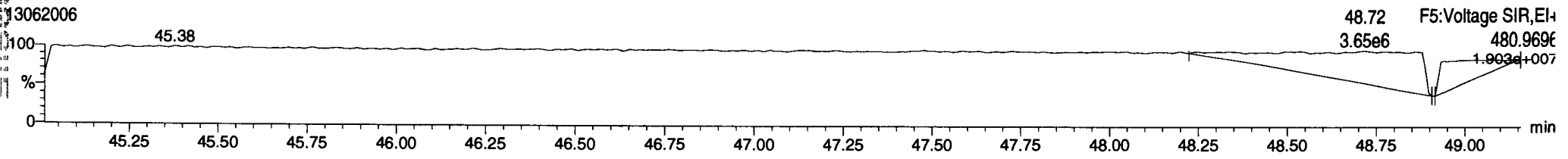
OCDD



OCDD



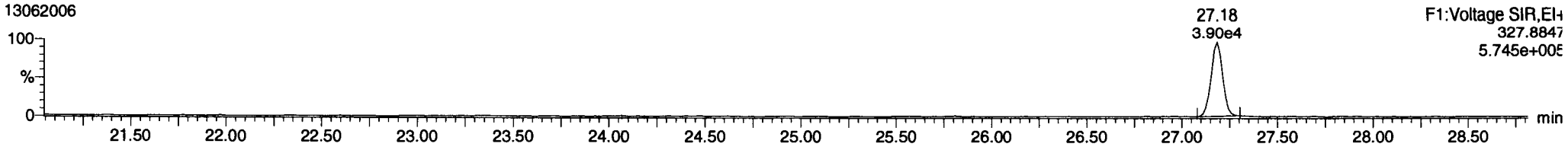
FUNCTION5 PFK



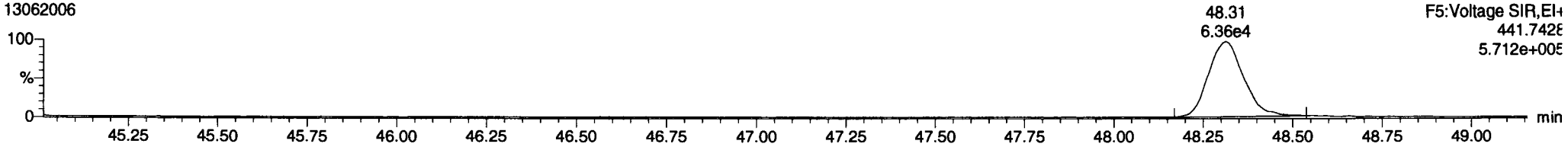
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

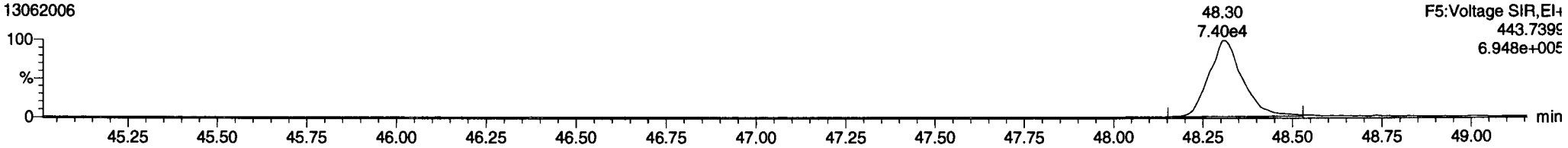
37CL-2378-TCDD



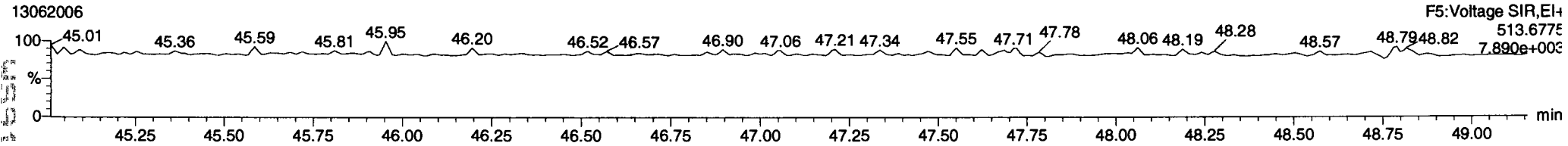
OCDF



OCDF



FUNCTION5 DCDPE



Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.541	1.001	6.92e4	9.60e4	0.771	0.721	0.770	700.8	NO	10.223	10.223
12378-PeCDF	30.698	1.000	4.03e5	2.63e5	0.814	1.533	1.550	2517.6	NO	52.226	52.226
23478-PeCDF	32.046	1.000	3.81e5	2.54e5	0.837	1.497	1.550	2498.0	NO	50.326	50.326
123478-HxCDF	35.740	1.001	2.87e5	2.37e5	0.967	1.212	1.240	915.1	NO	49.374	49.374
234678-HxCDF	36.825	1.000	2.89e5	2.36e5	1.000	1.228	1.240	880.7	NO	52.879	52.879
123678-HxCDF	35.882	1.000	3.09e5	2.53e5	0.951	1.220	1.240	950.7	NO	50.482	50.482
123789-HxCDF	37.943	1.001	2.25e5	1.82e5	0.874	1.237	1.240	691.5	NO	52.895	52.895
1234678-HpCDF	40.037	1.000	2.24e5	2.23e5	1.072	1.002	1.050	1203.5	NO	53.242	53.242
1234789-HpCDF	42.832	1.001	1.62e5	1.60e5	1.085	1.017	1.050	727.3	NO	52.767	52.767
OCDF	48.313	1.007	2.67e5	3.00e5	0.878	0.887	0.890	1640.9	NO	105.609	105.609
2378-TCDD	27.184	1.001	6.41e4	8.31e4	0.936	0.772	0.770	534.0	NO	9.738	9.738
12378-PeCDD	32.309	1.001	3.02e5	1.98e5	0.894	1.526	1.550	1753.6	NO	48.762	48.762
123478-HxCDD	36.957	1.000	2.39e5	1.92e5	0.898	1.241	1.240	879.8	NO	48.200	48.200
123678-HxCDD	37.088	1.000	2.53e5	2.10e5	0.818	1.201	1.240	890.0	NO	51.555	51.555
123789-HxCDD	37.505	1.012	2.31e5	1.88e5	0.789	1.231	1.240	838.7	NO	50.697	50.697
1234678-HpCDD	41.911	1.001	1.68e5	1.65e5	0.879	1.019	1.050	971.0	NO	52.104	52.104
OCDD	48.017	1.000	2.51e5	2.86e5	0.875	0.875	0.890	1288.0	NO	100.292	100.292
13C-2378-TCDF	26.526	1.007	9.06e5	1.19e6	1.190	0.762	0.770	4575.5	NO		100.217
13C-12378-PeCDF	30.687	1.165	9.50e5	6.17e5	0.904	1.539	1.550	2244.1	NO		98.537
13C-23478-PeCDF	32.035	1.216	9.17e5	5.91e5	0.877	1.551	1.550	2236.0	NO		97.772
13C-123478-HxCDF	35.718	0.953	3.73e5	7.25e5	1.096	0.514	0.510	1475.1	NO		106.323
13C-123678-HxCDF	35.871	0.957	4.05e5	7.66e5	1.187	0.529	0.510	1478.3	NO		104.740
13C-234678-HxCDF	36.814	0.982	3.37e5	6.55e5	1.040	0.514	0.510	1319.5	NO		101.388
13C-123789-HxCDF	37.921	1.011	3.03e5	5.79e5	0.941	0.522	0.510	1167.2	NO		99.538
13C-1234678-HpCDF	40.026	1.068	2.41e5	5.43e5	0.825	0.443	0.440	1640.5	NO		100.840
13C-1234789-HpCDF	42.810	1.142	1.70e5	3.93e5	0.609	0.433	0.440	989.6	NO		98.126
13C-1234-TCDD	26.347	0.000	7.71e5	9.87e5	1.000	0.782	0.770	1154.4	NO		100.000
13C-2378-TCDD	27.169	1.031	7.07e5	9.08e5	0.920	0.779	0.770	1030.9	NO		99.844
13C-12378-PeCDD	32.287	1.225	6.93e5	4.54e5	0.669	1.527	1.550	2843.4	NO		97.520
13C-123478-HxCDD	36.945	0.985	5.51e5	4.45e5	1.032	1.238	1.240	3475.9	NO		102.599
13C-123678-HxCDD	37.077	0.989	5.96e5	5.03e5	1.146	1.185	1.240	3611.9	NO		101.814
13C-1234678-HpCDD	41.889	1.117	3.71e5	3.55e5	0.789	1.044	1.050	2125.8	NO		97.822
13C-OCDD	47.999	1.280	5.71e5	6.52e5	0.696	0.875	0.890	2143.5	NO		186.569

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

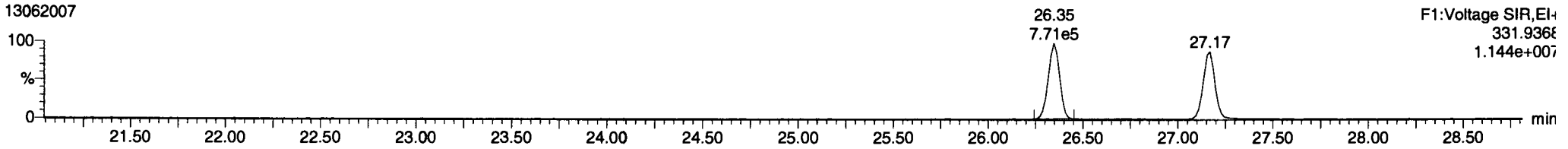
13C-123789-HxCDD	37.493	0.000	5.21e5	4.21e5	1.000	1.239	1.240	3324.8	NO		100.000
Total-tetrafurans			2.31e5		0.771						33.314
Total-penta1			7.91e5								93.600
Total-pentafurans			1.18e6		0.826						154.517
Total-hexafurans			1.48e6		0.948						273.776
Total-heptafurans			3.90e5		1.079						106.697
Total-Furans			4.34e6		0.925						767.513
Total-tetradioxins			3.69e5		0.936						56.443
Total-pentadioxins			1.10e6		0.894						176.461
Total-hexadioxins			1.07e6		0.835						222.516
Total-heptadioxins			3.76e5		0.879						115.808
Total-Dioxins			3.16e6		0.870						671.520
Total-TEQ			7.50e6								1439.032
37CL-2378-TCDD	27.184	1.032	1.67e5		1.000			962.1			9.525
FUNCTION1 PFK			4.06e7								
FUNCTION2 PFK			1.01e5								0.000
FUNCTION3 PFK			3.91e5								0.000
FUNCTION4 PFK			5.85e5								
FUNCTION5 PFK			2.06e5								
FUNCTION1 HXCDPE			1.78e2								0.000
FUNCTION1 HPCDPE			1.09e3								0.000
FUNCTION2 HPCDPE			1.78e3								0.000
FUNCTION3 OCDPE			8.07e1								0.000
FUNCTION4 NCDPE			8.74e1								0.000
FUNCTION5 DCDPE			0.00e0								

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

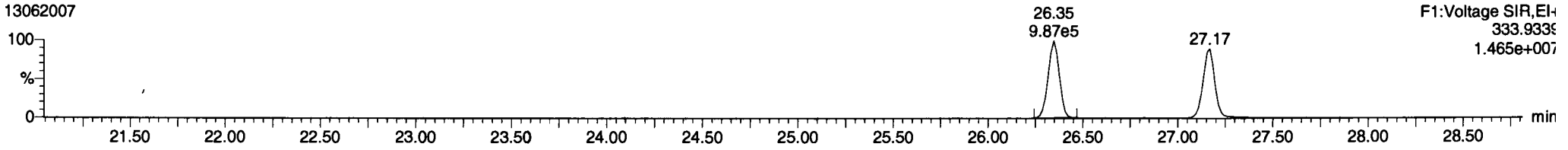
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

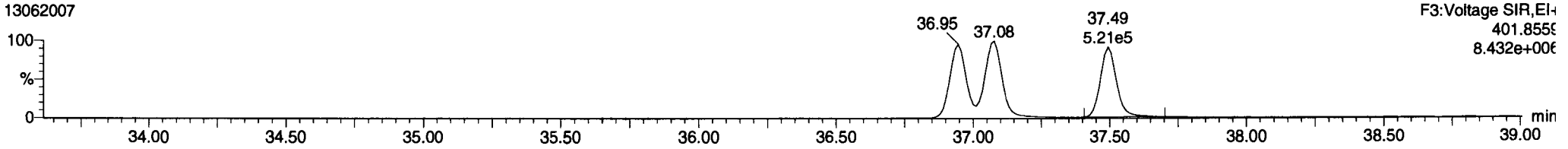
13C-1234-TCDD



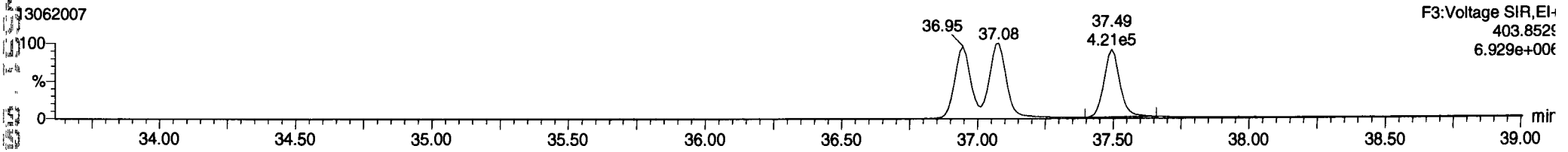
13C-1234-TCDD



13C-123789-HxCDD



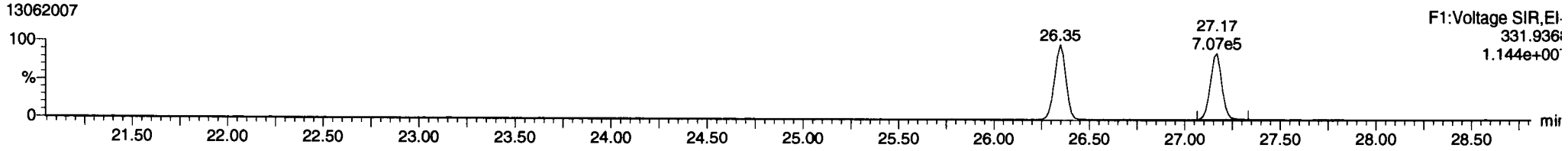
13C-123789-HxCDD



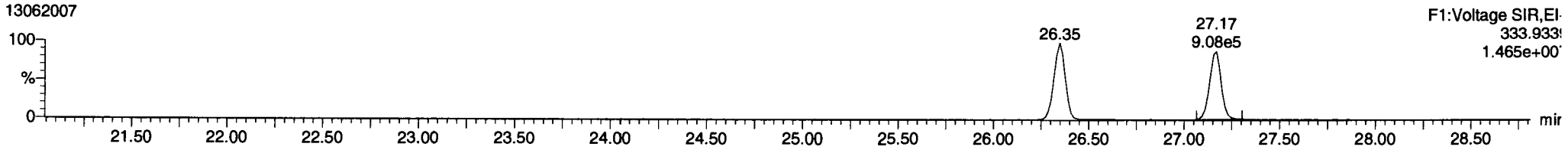
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

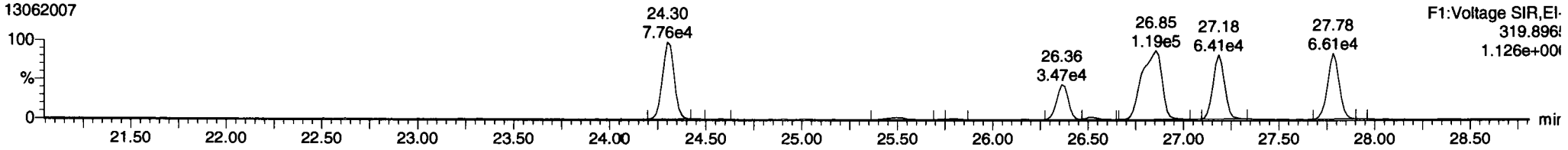
13C-2378-TCDD



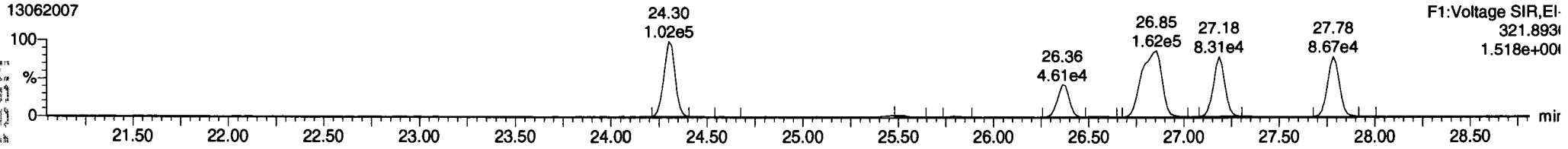
13C-2378-TCDD



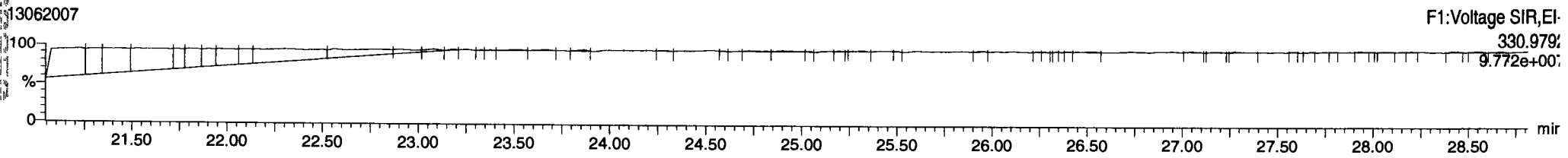
Total-tetradioxins



Total-tetradioxins

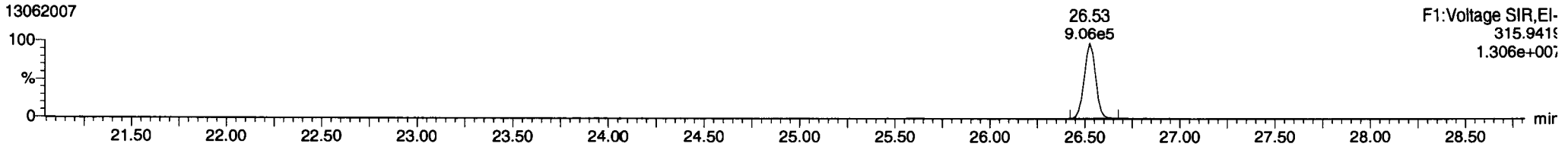


FUNCTION1 PFK

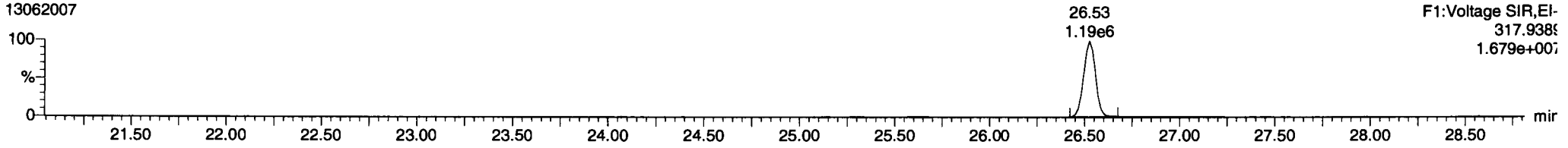


ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

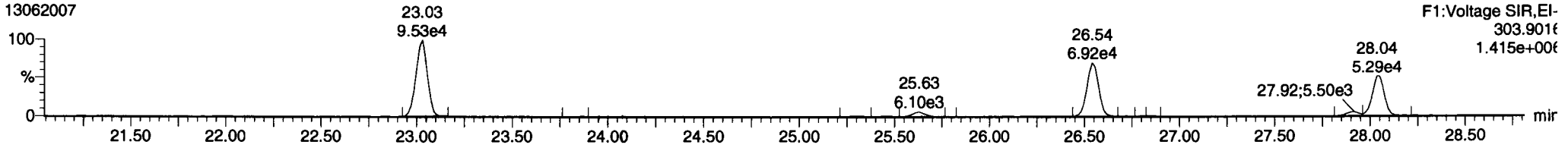
13C-2378-TCDF



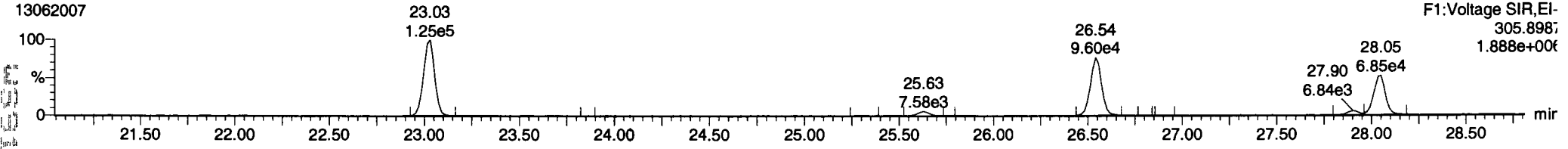
13C-2378-TCDF



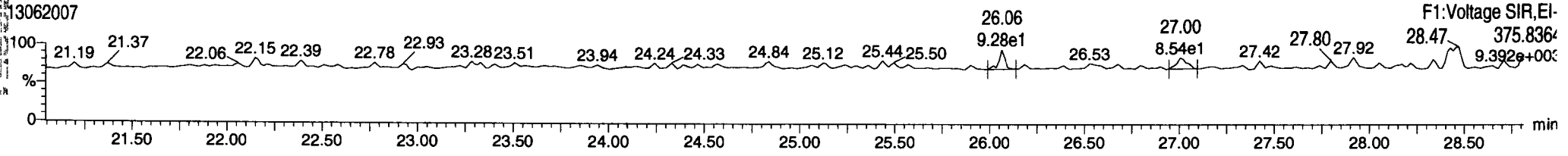
Total-tetrafurans



Total-tetrafurans

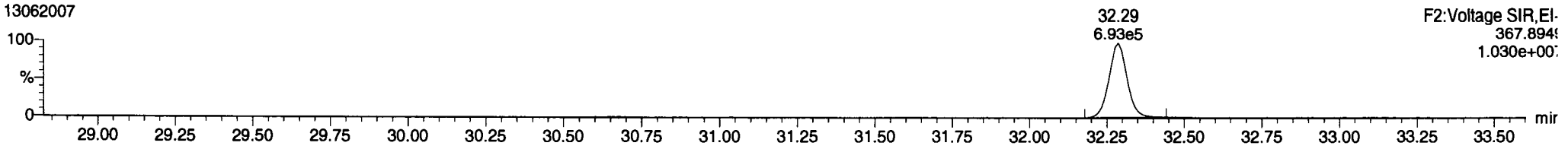


FUNCTION1 HXCDPE

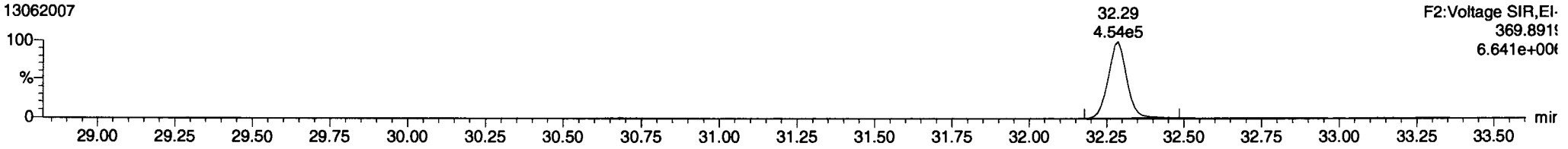


ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

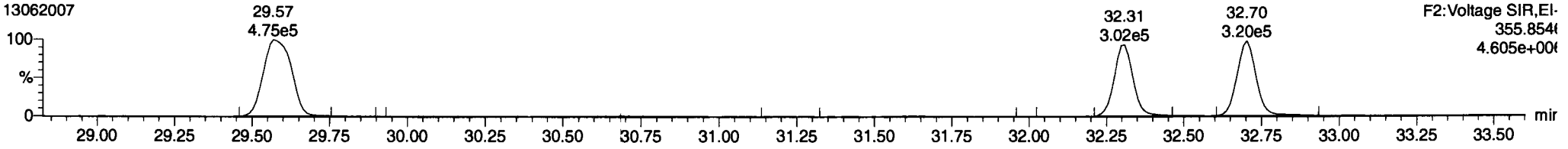
13C-12378-PeCDD



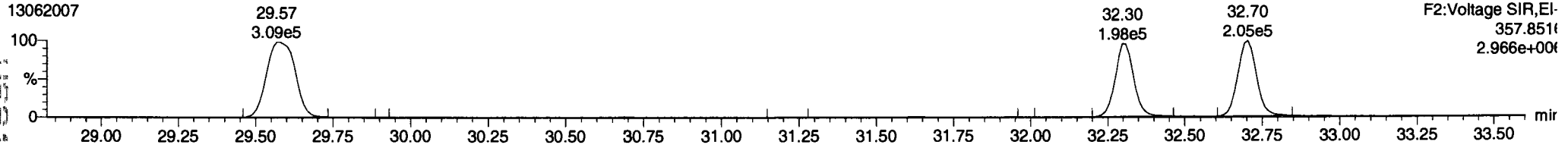
13C-12378-PeCDD



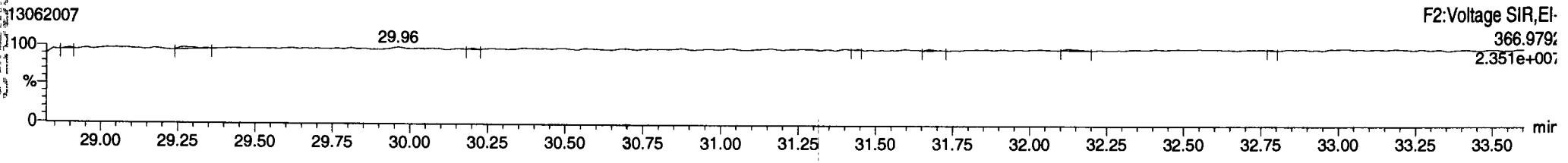
Total-pentadioxins



Total-pentadioxins



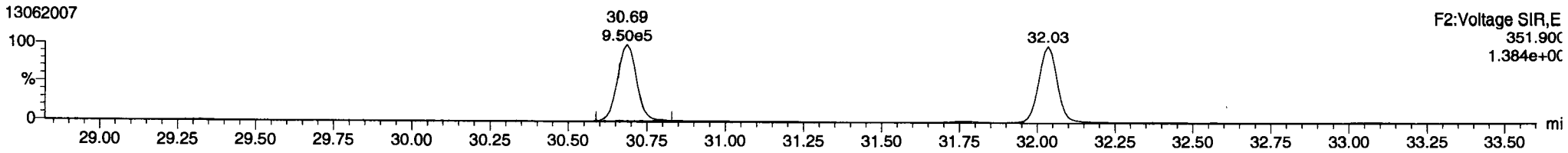
FUNCTION2 PFK



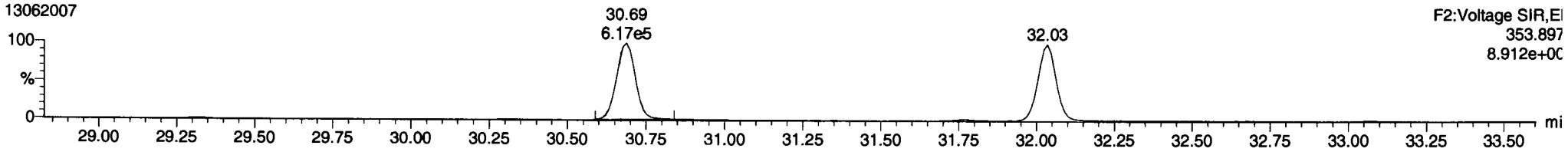
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

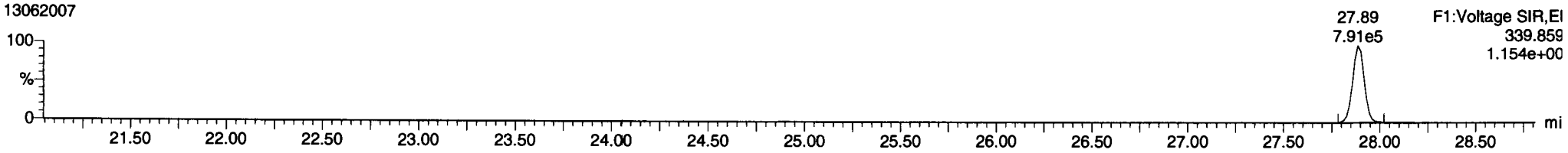
13C-12378-PeCDF



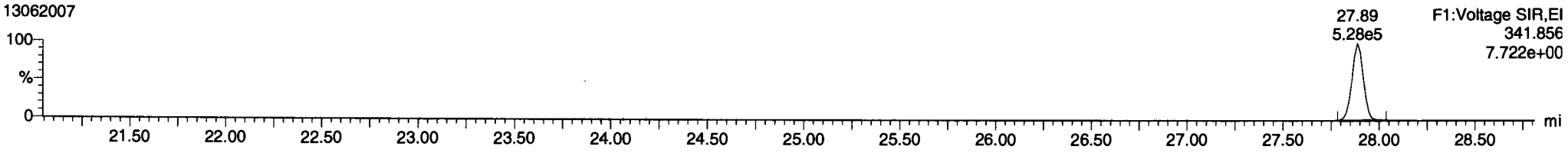
13C-12378-PeCDF



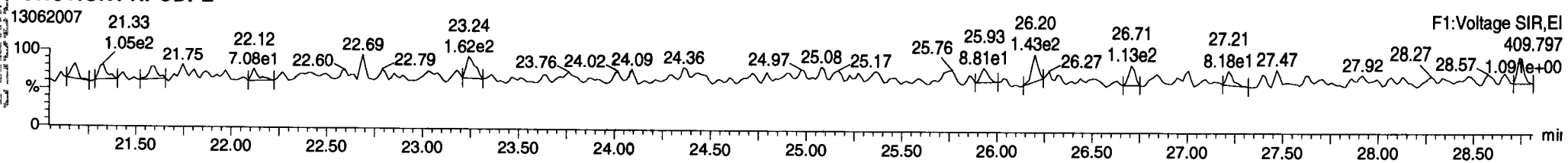
Total-penta1



Total-penta1

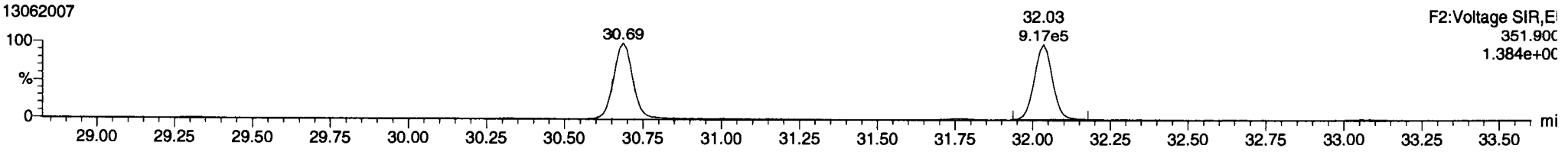


FUNCTION1 HPCDPE

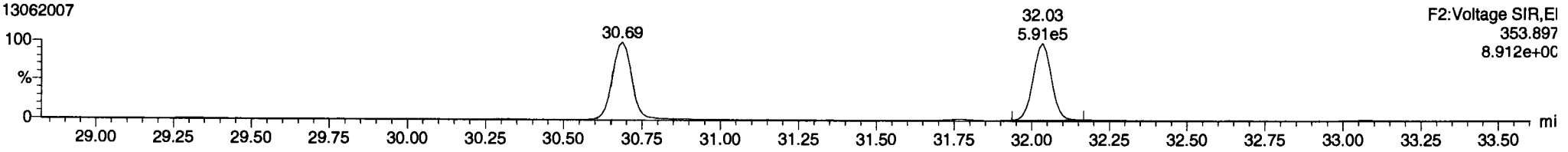


ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

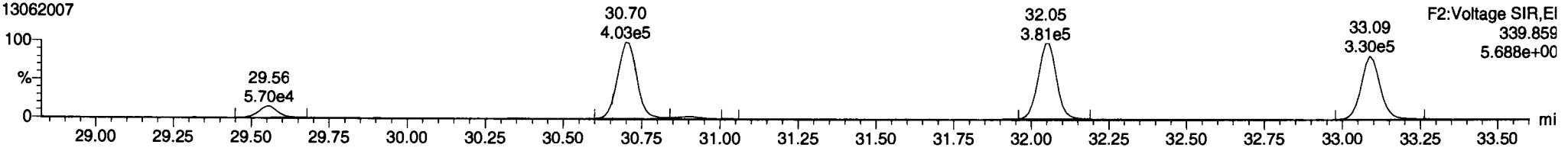
13C-23478-PeCDF



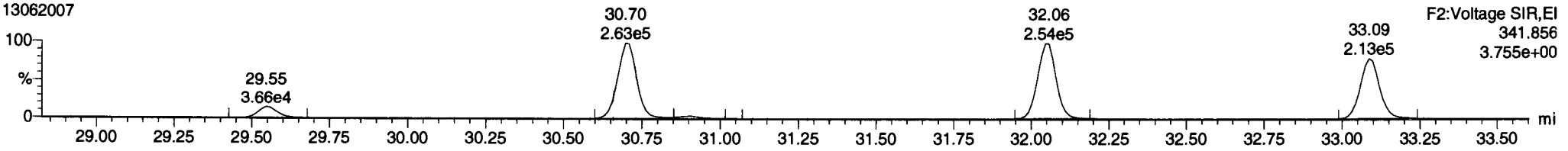
13C-23478-PeCDF



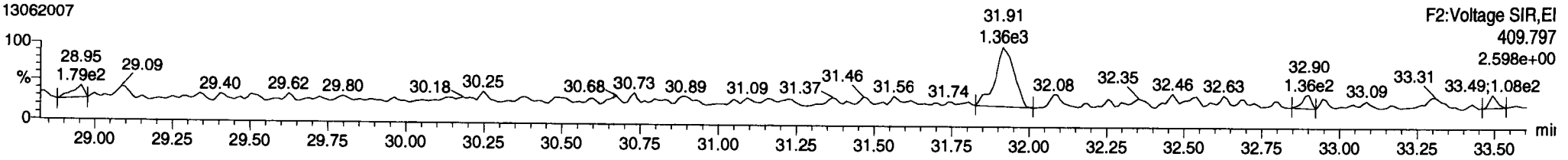
Total-pentafurans



Total-pentafurans



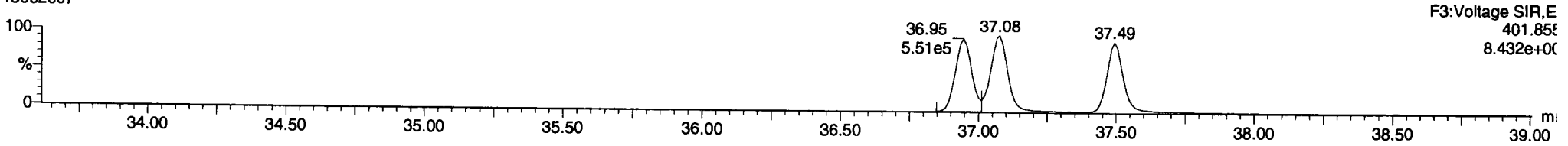
FUNCTION2 HPCDPE



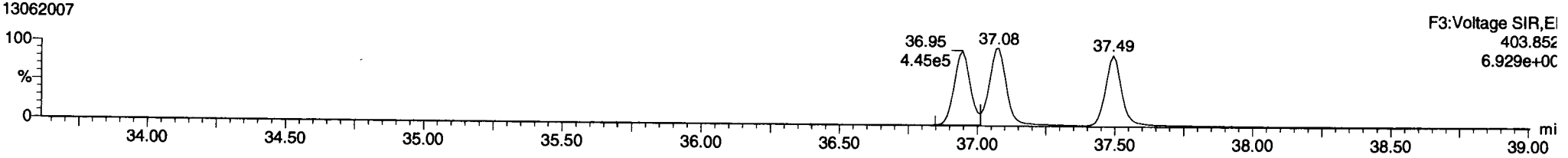
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

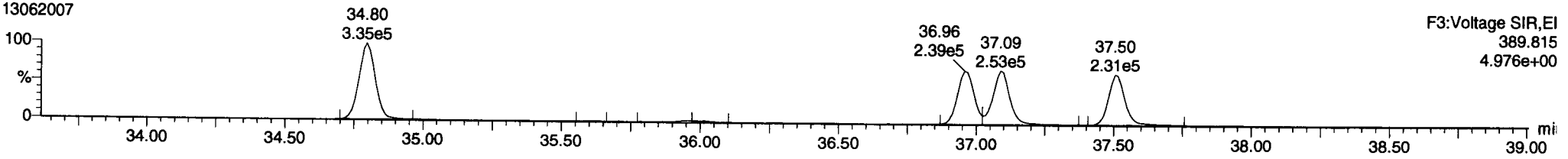
13C-123478-HxCDD
13062007



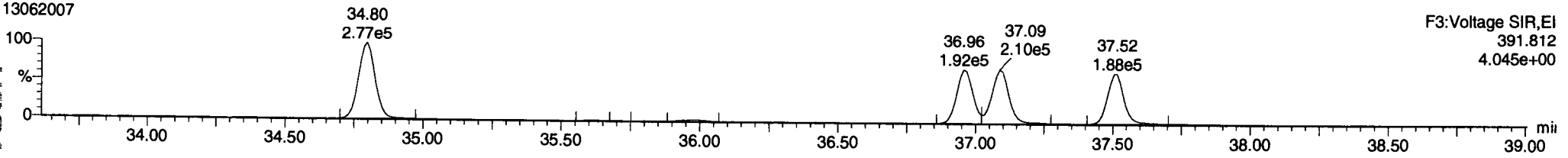
13C-123478-HxCDD
13062007



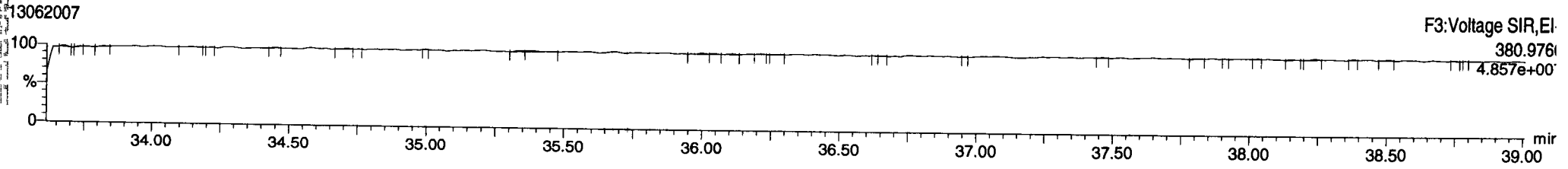
Total-hexadioxins
13062007



Total-hexadioxins
13062007



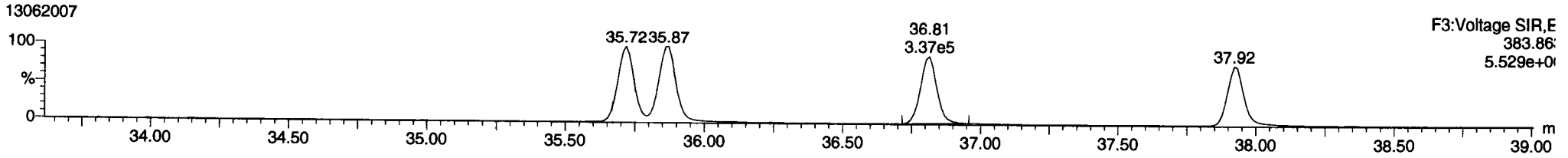
FUNCTION3 PFK
13062007



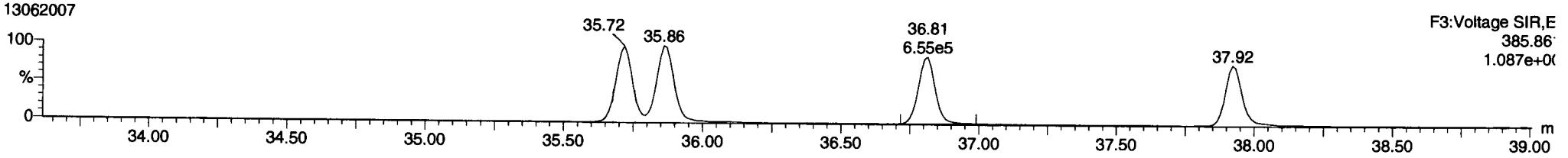
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

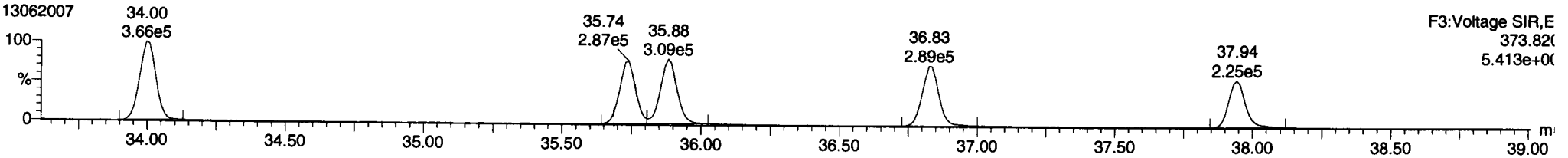
13C-234678-HxCDF



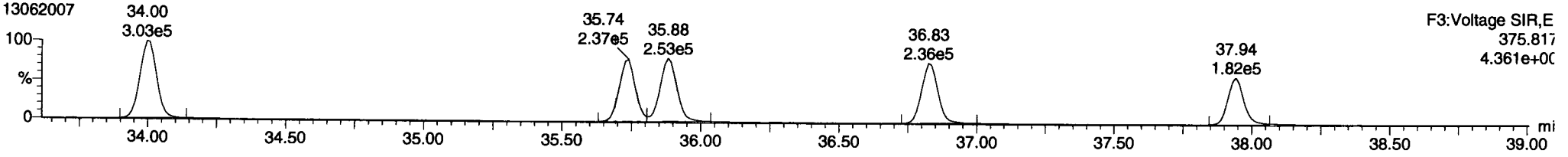
13C-234678-HxCDF



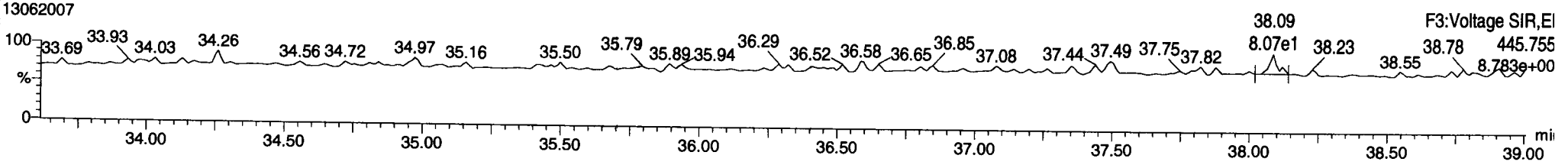
Total-hexafurans



Total-hexafurans



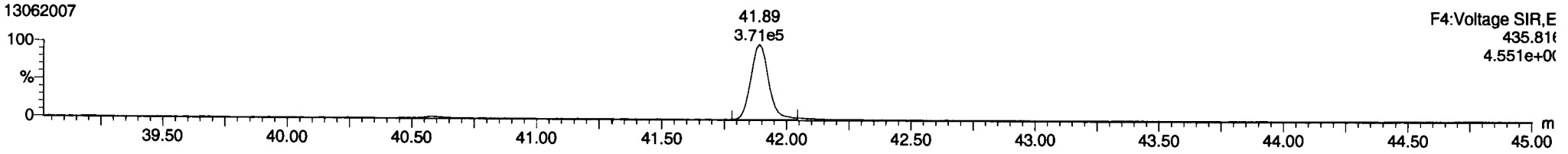
FUNCTION3 OCDPE



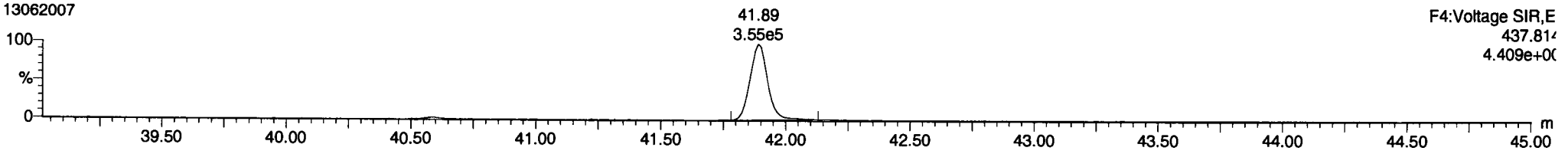
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

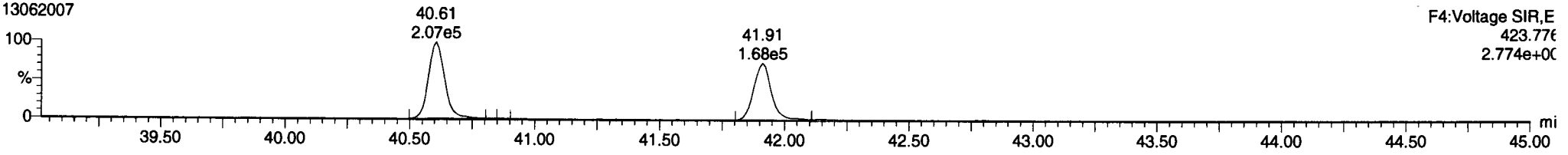
13C-1234678-HpCDD



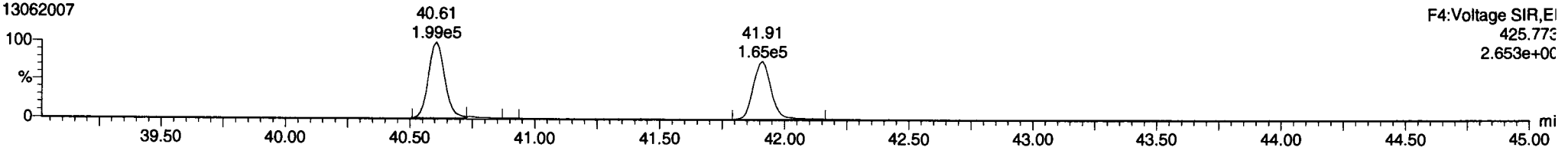
13C-1234678-HpCDD



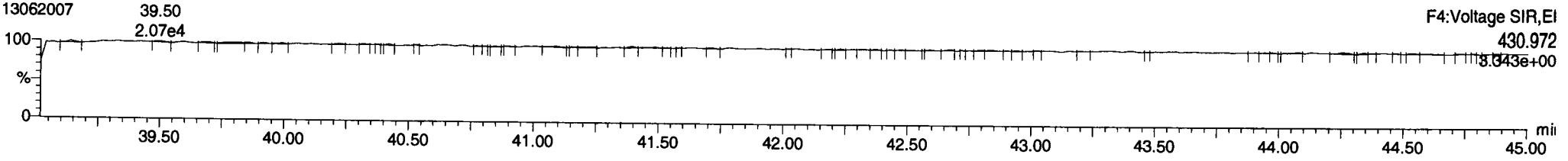
Total-heptadioxins



Total-heptadioxins



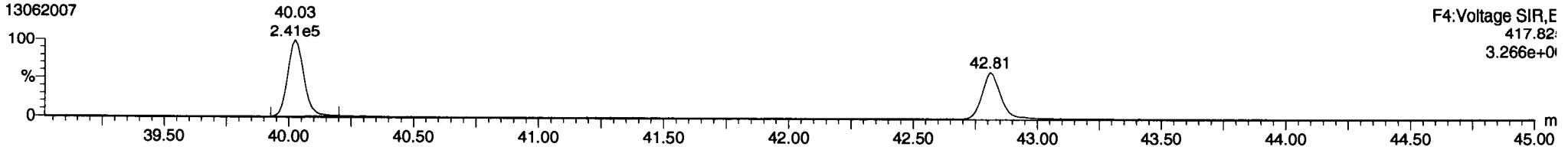
FUNCTION4 PFK



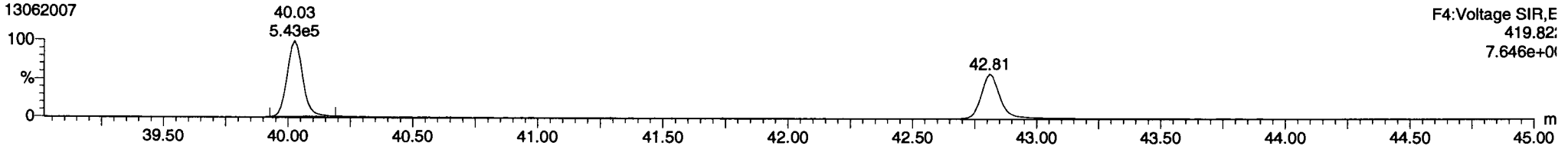
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

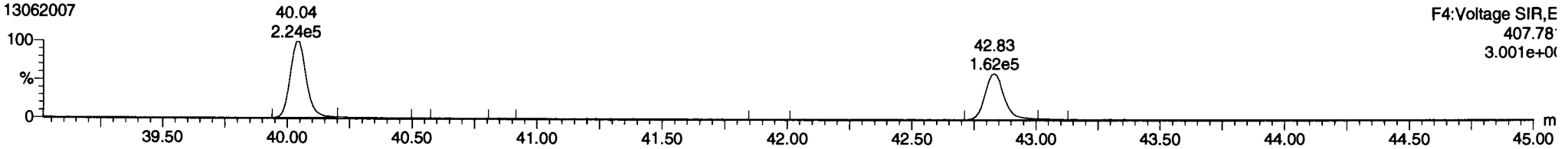
13C-1234678-HpCDF



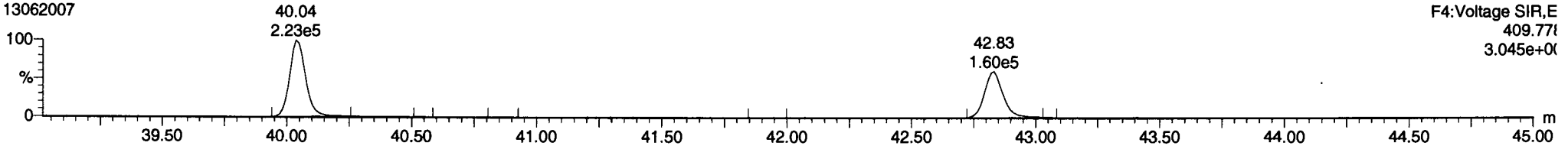
13C-1234678-HpCDF



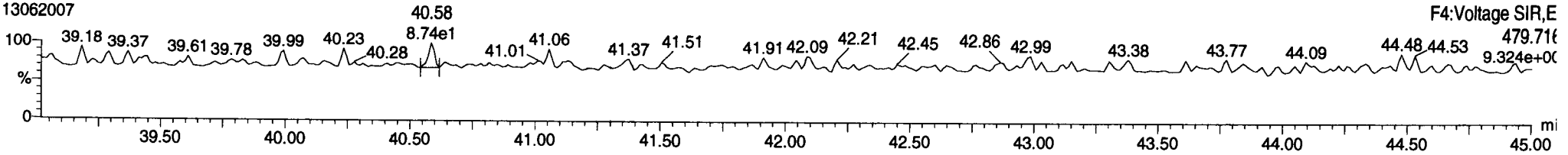
Total-heptafurans



Total-heptafurans

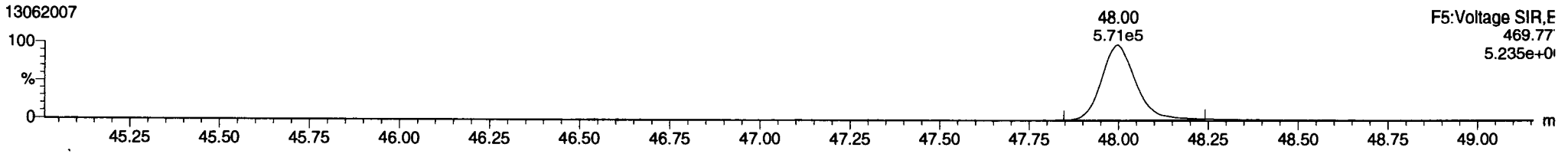


FUNCTION4 NCDPE

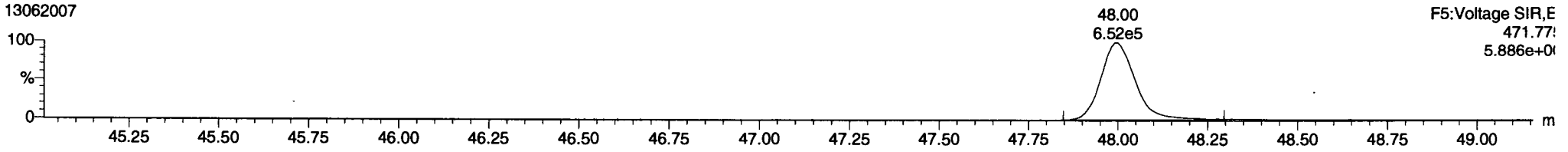


ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

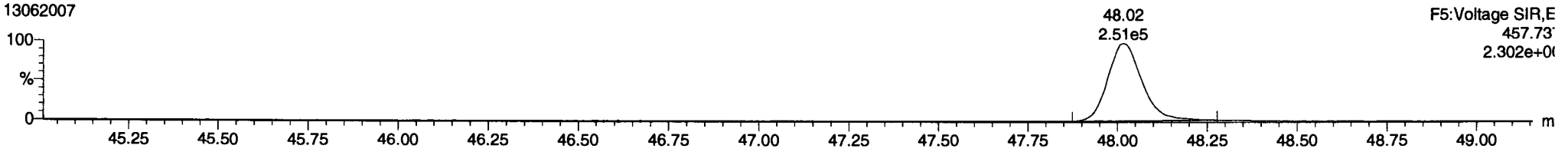
13C-OCDD



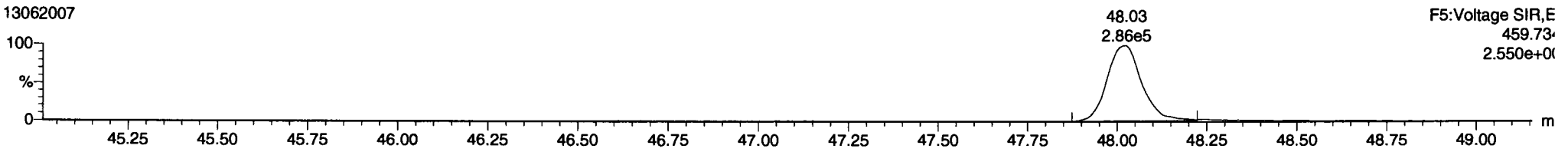
13C-OCDD



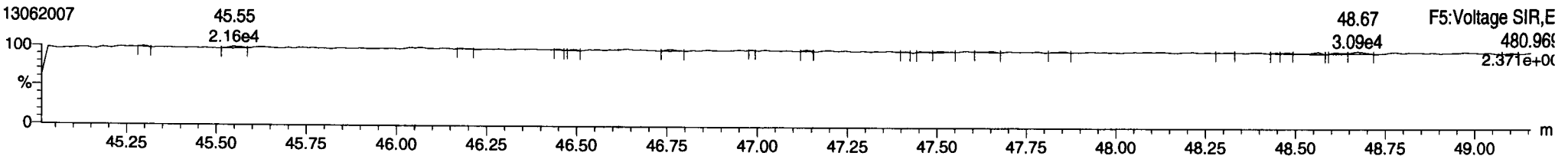
OCDD



OCDD



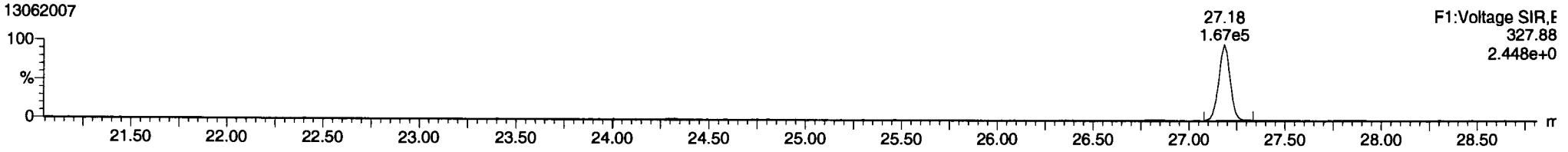
FUNCTION5 PFK



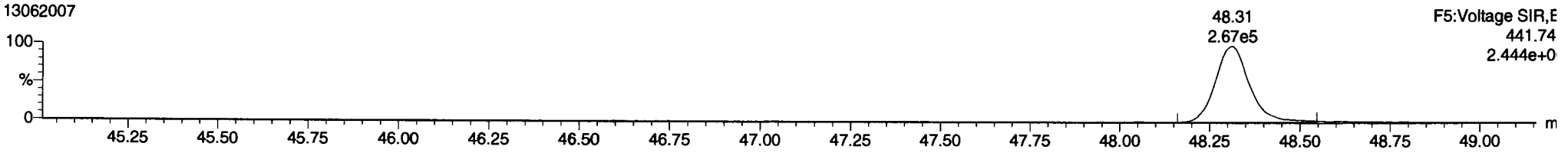
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

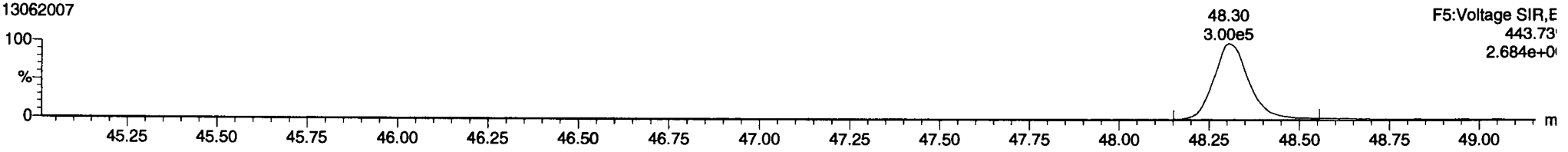
37CL-2378-TCDD



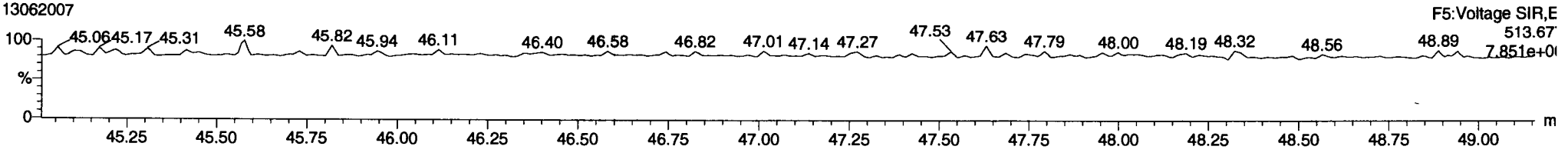
OCDF



OCDF



FUNCTION5 DCDPE



Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.541	1.001	3.29e5	4.56e5	0.771	0.722	0.770	3551.3	NO	39.672	39.672
12378-PeCDF	30.708	1.001	1.92e6	1.28e6	0.814	1.500	1.550	5774.3	NO	198.470	198.470
23478-PeCDF	32.057	1.001	1.90e6	1.26e6	0.837	1.503	1.550	5819.6	NO	198.211	198.211
123478-HxCDF	35.739	1.001	1.49e6	1.23e6	0.967	1.211	1.240	5174.4	NO	198.885	198.885
234678-HxCDF	36.835	1.001	1.48e6	1.23e6	1.000	1.204	1.240	5034.0	NO	200.498	200.498
123678-HxCDF	35.882	1.000	1.56e6	1.30e6	0.951	1.196	1.240	5347.9	NO	193.507	193.507
123789-HxCDF	37.943	1.001	1.23e6	1.06e6	0.874	1.161	1.240	4273.6	NO	206.255	206.255
1234678-HpCDF	40.047	1.001	1.20e6	1.20e6	1.072	0.997	1.050	3926.8	NO	202.012	202.012
1234789-HpCDF	42.831	1.000	8.97e5	9.28e5	1.085	0.966	1.050	2551.2	NO	201.009	201.009
OCDF	48.312	1.007	1.72e6	1.92e6	0.878	0.899	0.890	6961.5	NO	416.342	416.342
2378-TCDD	27.184	1.001	3.18e5	4.20e5	0.936	0.756	0.770	2678.5	NO	39.771	39.771
12378-PeCDD	32.309	1.001	1.57e6	1.06e6	0.894	1.486	1.550	6613.4	NO	197.395	197.395
123478-HxCDD	36.956	1.000	1.31e6	1.07e6	0.898	1.217	1.240	7029.4	NO	193.003	193.003
123678-HxCDD	37.088	1.000	1.34e6	1.10e6	0.818	1.220	1.240	6938.9	NO	195.546	195.546
123789-HxCDD	37.515	1.012	1.28e6	1.03e6	0.789	1.241	1.240	6605.2	NO	202.145	202.145
1234678-HpCDD	41.910	1.001	9.98e5	9.79e5	0.879	1.019	1.050	3838.4	NO	208.413	208.413
OCDD	48.016	1.000	1.67e6	1.93e6	0.875	0.870	0.890	5187.3	NO	412.845	412.845
13C-2378-TCDF	26.526	1.007	1.10e6	1.47e6	1.190	0.747	0.770	5175.0	NO		100.615
13C-12378-PeCDF	30.687	1.165	1.18e6	7.90e5	0.904	1.498	1.550	4416.0	NO		101.849
13C-23478-PeCDF	32.035	1.216	1.16e6	7.52e5	0.877	1.537	1.550	4404.1	NO		101.437
13C-123478-HxCDF	35.718	0.953	4.76e5	9.39e5	1.096	0.507	0.510	1667.3	NO		97.197
13C-123678-HxCDF	35.871	0.957	5.24e5	1.03e6	1.187	0.507	0.510	1764.0	NO		98.662
13C-234678-HxCDF	36.814	0.982	4.62e5	8.88e5	1.040	0.520	0.510	1572.2	NO		97.722
13C-123789-HxCDF	37.921	1.011	4.26e5	8.39e5	0.941	0.508	0.510	1496.0	NO		101.271
13C-1234678-HpCDF	40.025	1.068	3.33e5	7.76e5	0.825	0.429	0.440	1647.7	NO		101.114
13C-1234789-HpCDF	42.820	1.142	2.52e5	5.85e5	0.609	0.432	0.440	1049.1	NO		103.428
13C-1234-TCDD	26.347	0.000	9.36e5	1.21e6	1.000	0.775	0.770	1447.2	NO		100.000
13C-2378-TCDD	27.169	1.031	8.68e5	1.11e6	0.920	0.780	0.770	1281.0	NO		100.427
13C-12378-PeCDD	32.287	1.225	8.98e5	5.90e5	0.669	1.521	1.550	3048.3	NO		103.692
13C-123478-HxCDD	36.945	0.985	7.57e5	6.17e5	1.032	1.226	1.240	4122.1	NO		100.215
13C-123678-HxCDD	37.077	0.989	8.41e5	6.88e5	1.146	1.222	1.240	4182.3	NO		100.523
13C-1234678-HpCDD	41.889	1.117	5.42e5	5.37e5	0.789	1.010	1.050	2690.6	NO		102.986
13C-OCDD	47.998	1.280	9.38e5	1.05e6	0.696	0.890	0.890	3097.0	NO		215.411

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

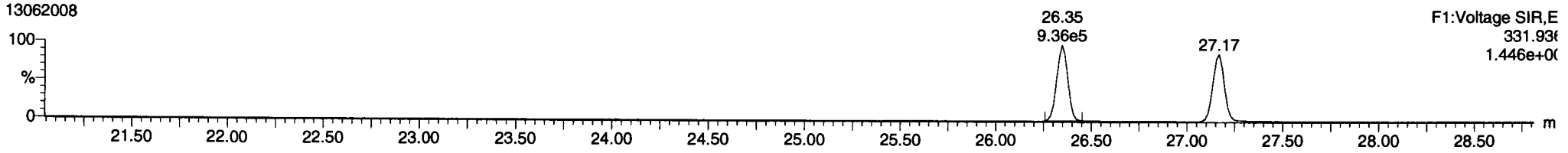
ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.493	0.000	7.31e5	5.98e5	1.000	1.222	1.240	3829.6	NO	100.000
Total-tetrafurans			3.35e5		0.771					40.449
Total-penta1			5.11e2							0.061
Total-pentafurans			3.90e6		0.826					406.193
Total-hexafurans			5.76e6		0.948					800.027
Total-heptafurans			2.10e6		1.079					403.021
Total-Furans			1.38e7		0.925					2066.093
Total-tetradioxins			3.29e5		0.936					41.108
Total-pentadioxins			1.58e6		0.894					198.153
Total-hexadioxins			3.93e6		0.835					590.790
Total-heptadioxins			1.00e6		0.879					209.414
Total-Dioxins			8.52e6		0.870					1452.309
Total-TEQ			2.23e7							3518.402
37CL-2378-TCDD	27.184	1.032	8.59e5		1.000			4912.1		40.043
FUNCTION1 PFK			2.00e6							
FUNCTION2 PFK			2.97e5							0.000
FUNCTION3 PFK			9.03e5							0.000
FUNCTION4 PFK			6.42e5							
FUNCTION5 PFK			3.10e5							
FUNCTION1 HXCDPE			3.06e2							0.000
FUNCTION1 HPCDPE			1.35e3							0.000
FUNCTION2 HPCDPE			5.16e3							0.000
FUNCTION3 OCDPE			7.26e1							0.000
FUNCTION4 NCDPE			2.00e2							0.000
FUNCTION5 DCDPE			0.00e0							

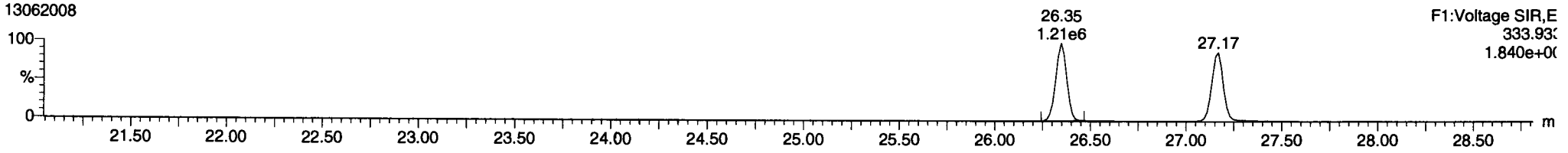
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

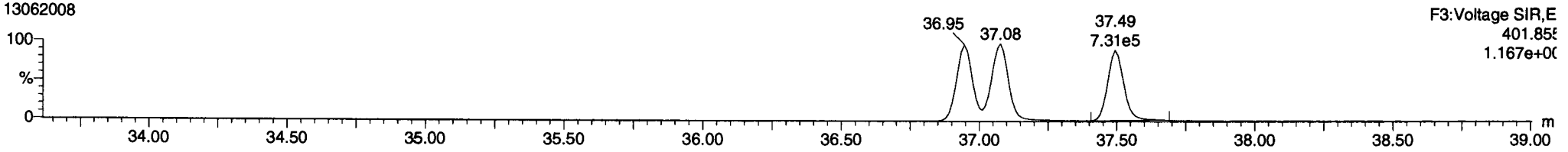
13C-1234-TCDD



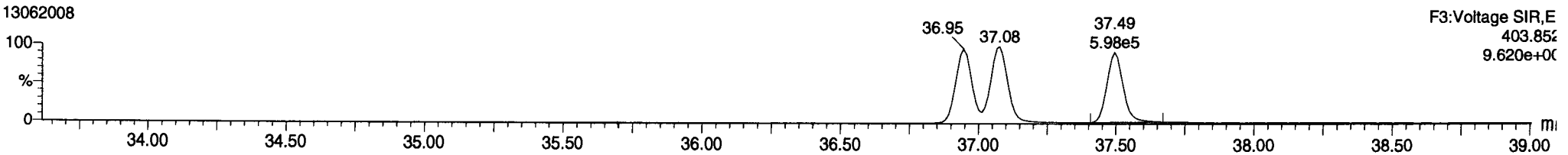
13C-1234-TCDD



13C-123789-HxCDD



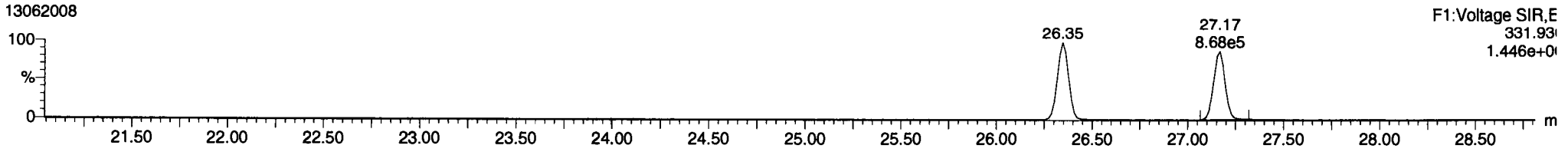
13C-123789-HxCDD



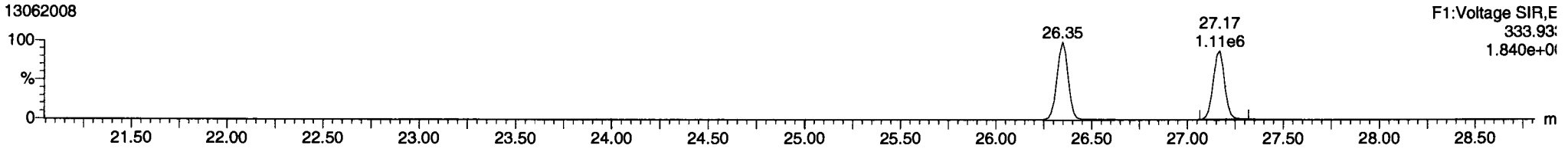
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

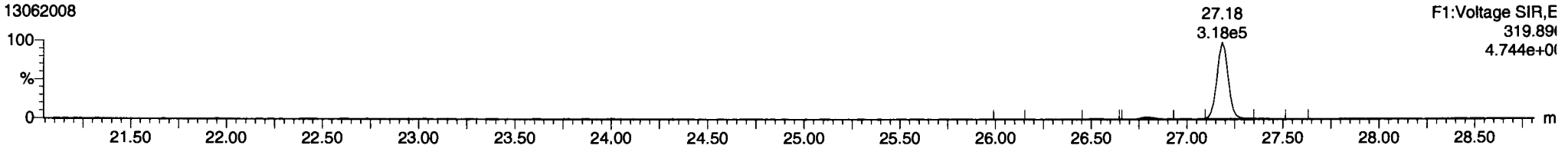
13C-2378-TCDD



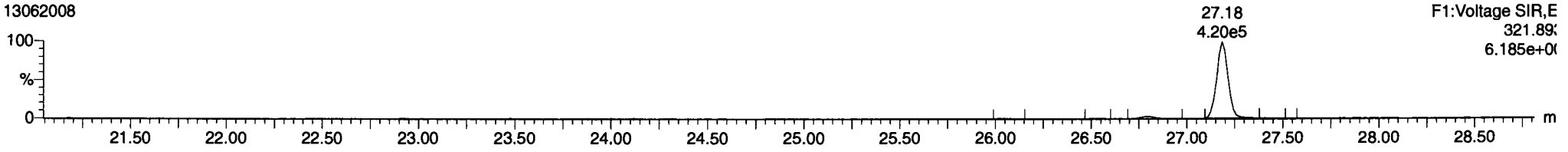
13C-2378-TCDD



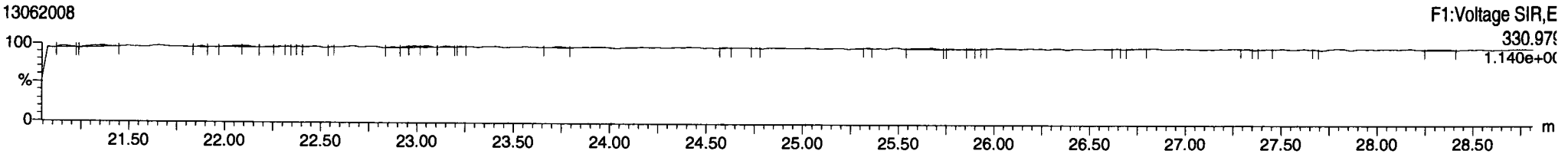
Total-tetradioxins



Total-tetradioxins

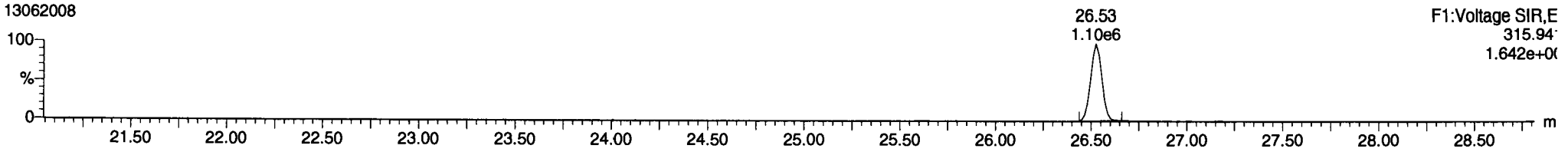


FUNCTION1 PFK

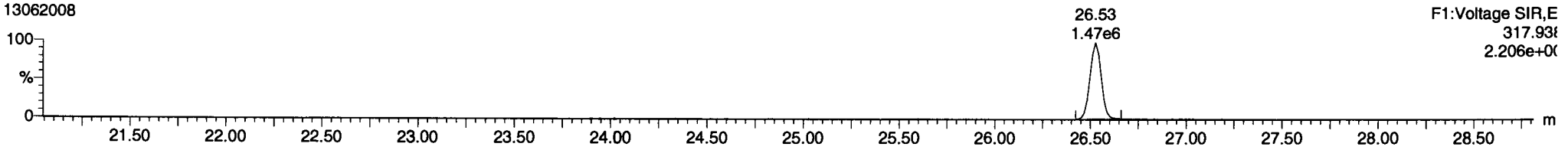


ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

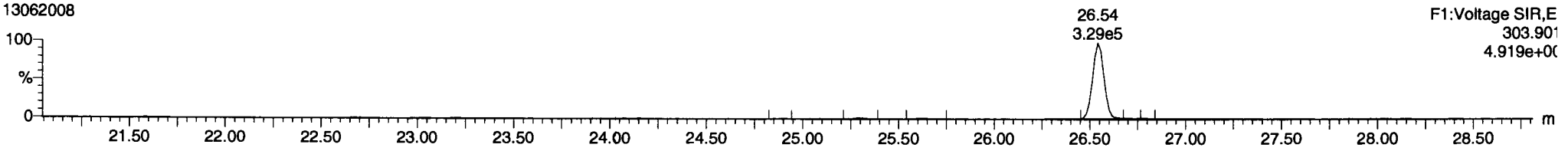
13C-2378-TCDF



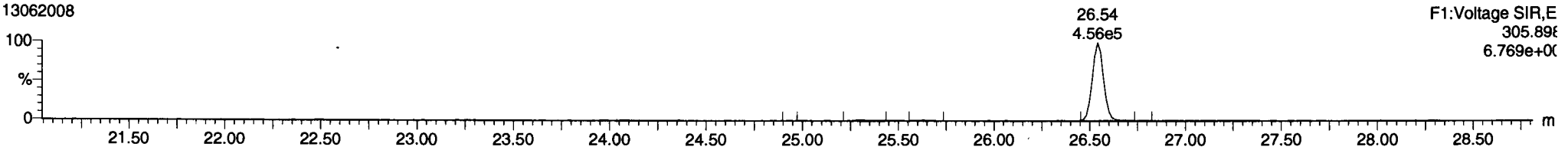
13C-2378-TCDF



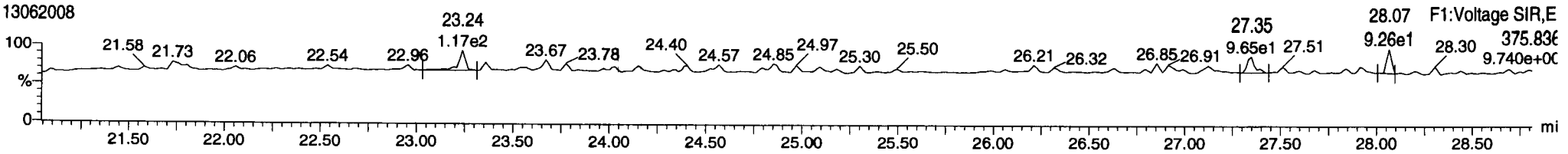
Total-tetrafurans



Total-tetrafurans



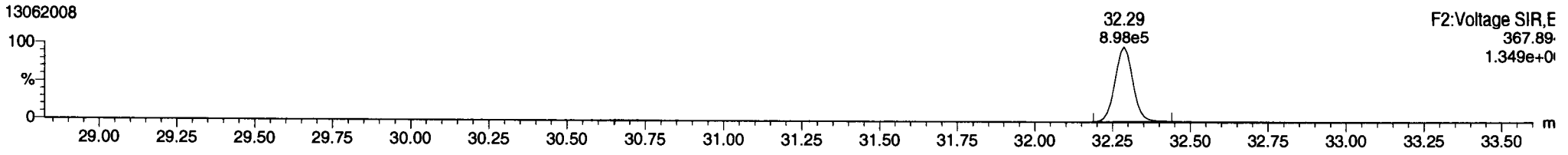
FUNCTION1 HXCDPE



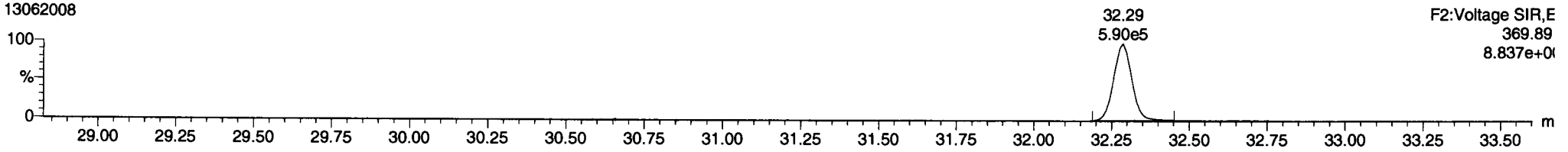
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

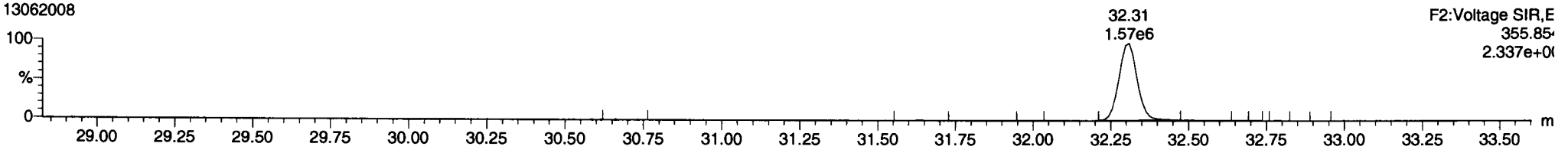
13C-12378-PeCDD



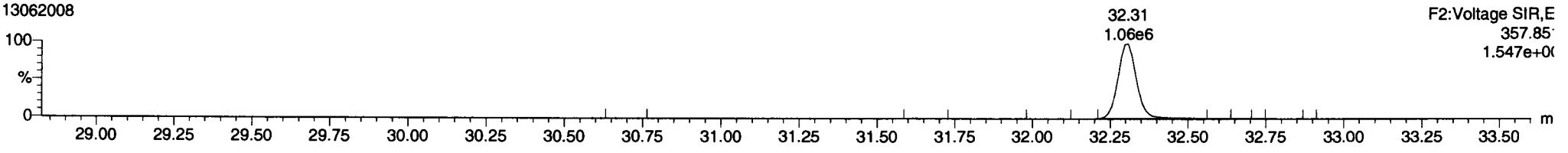
13C-12378-PeCDD



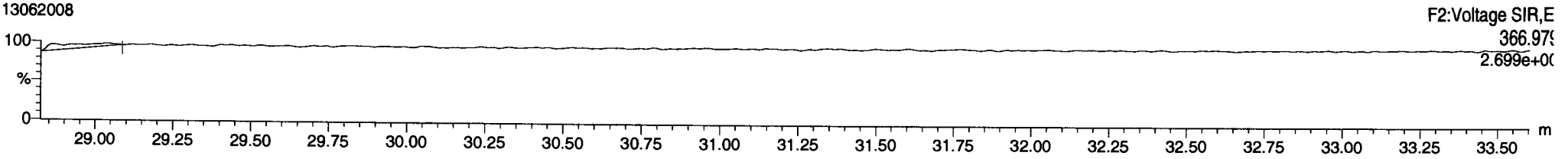
Total-pentadioxins



Total-pentadioxins



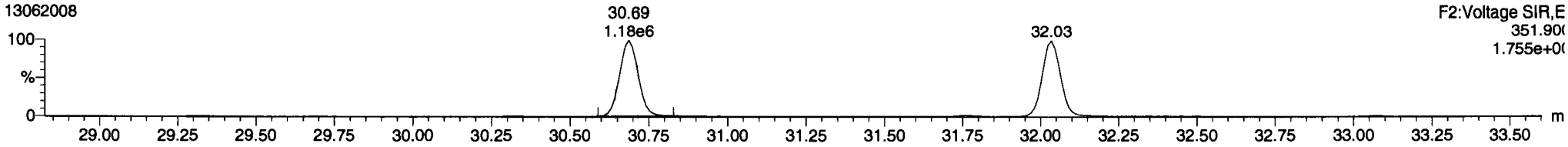
FUNCTION2 PFK



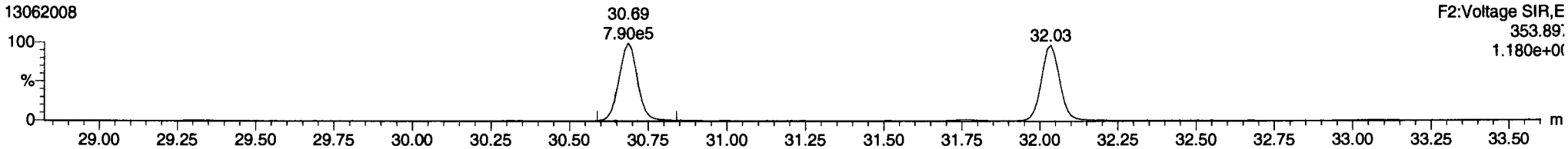
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

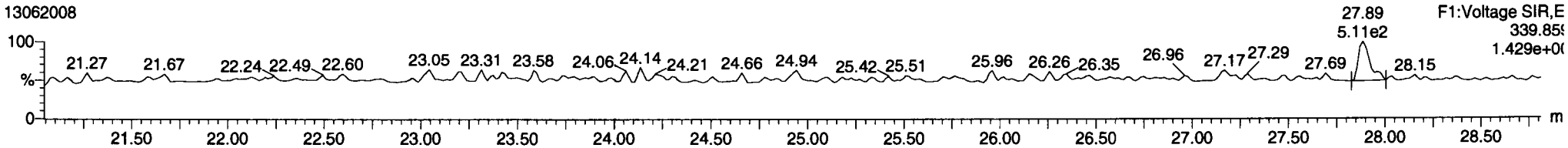
13C-12378-PeCDF



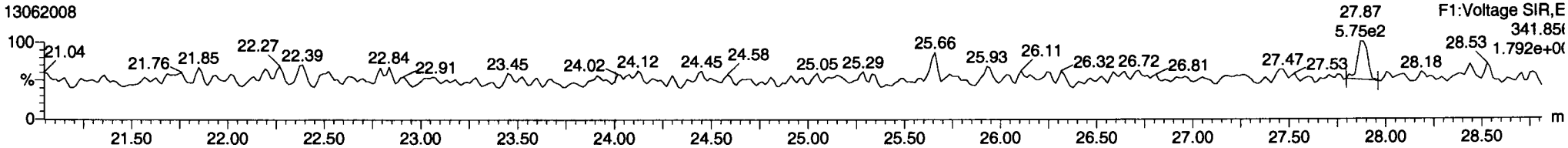
13C-12378-PeCDF



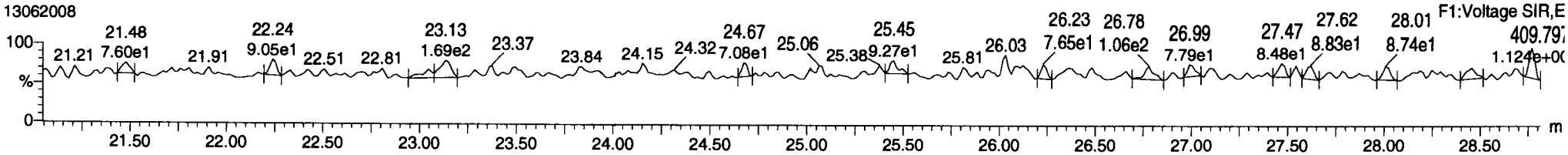
Total-penta1



Total-penta1



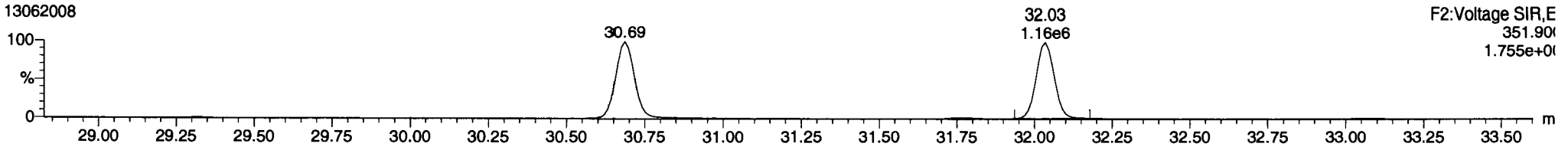
FUNCTION1 HPCDPE



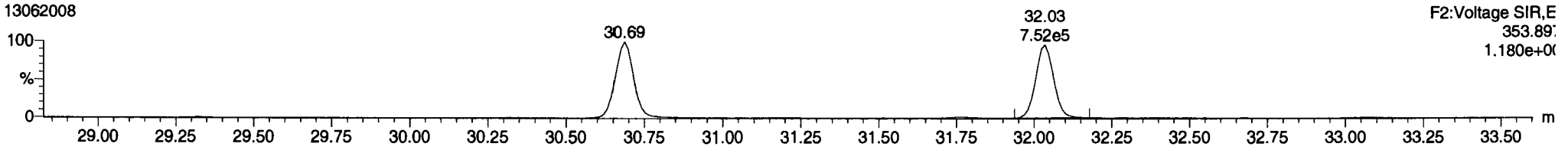
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

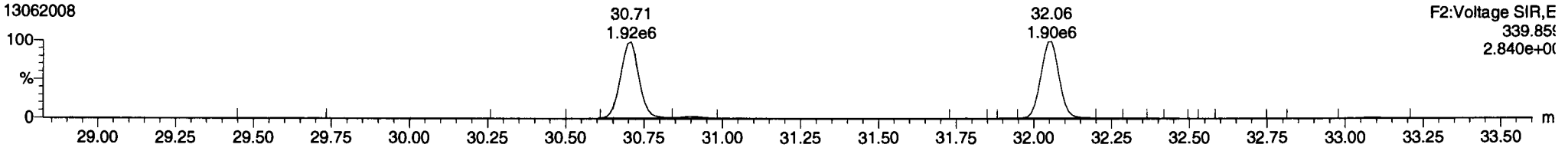
13C-23478-PeCDF



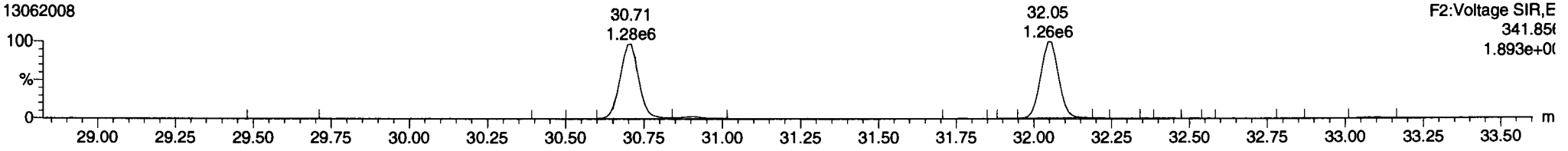
13C-23478-PeCDF



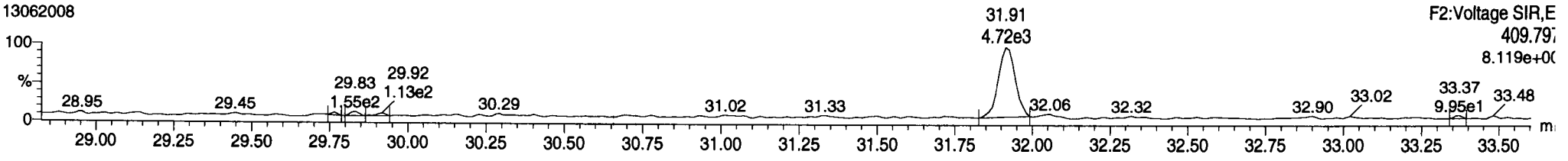
Total-pentafurans



Total-pentafurans



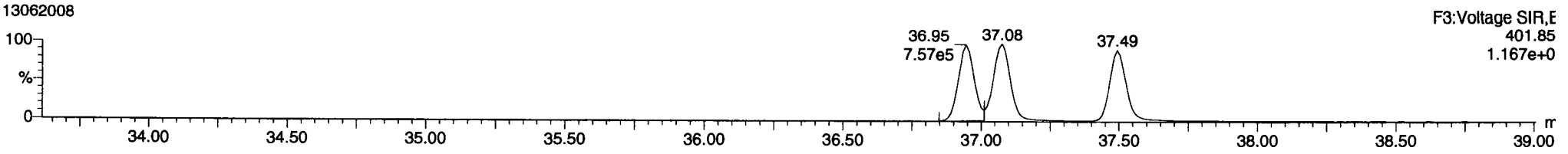
FUNCTION2 HPCDPE



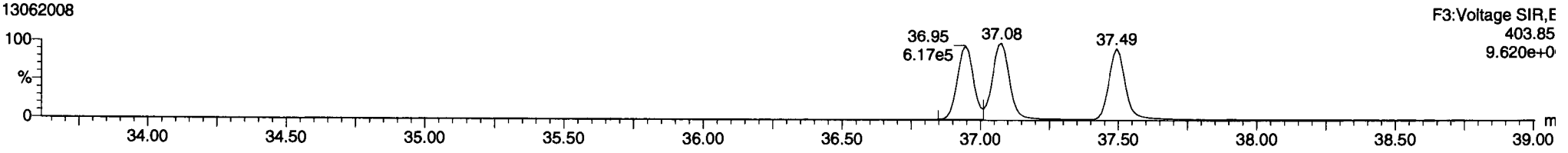
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

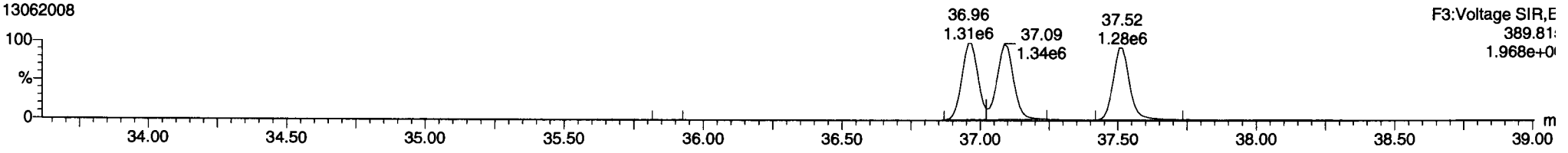
13C-123478-HxCDD



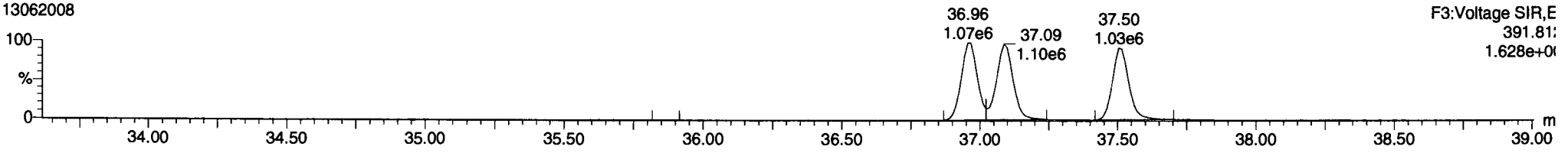
13C-123478-HxCDD



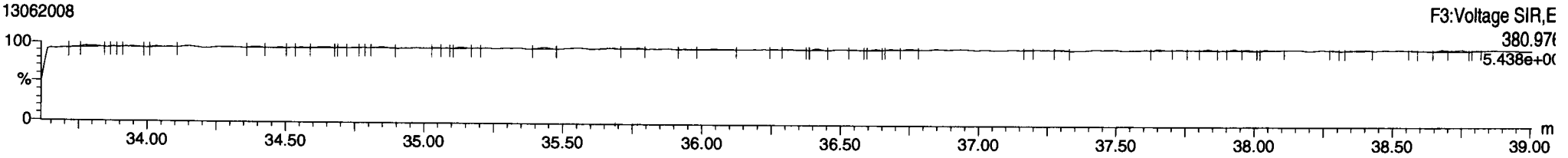
Total-hexadioxins



Total-hexadioxins



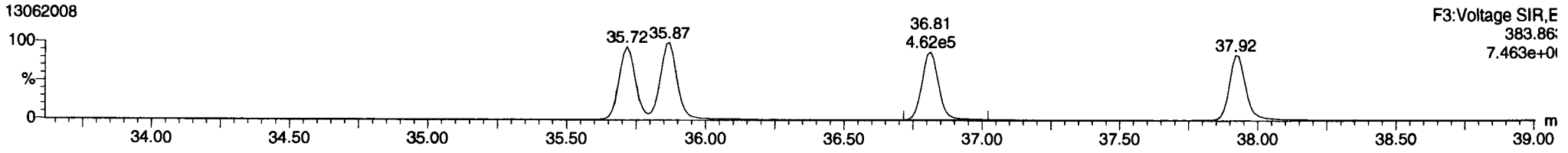
FUNCTION3 PFK



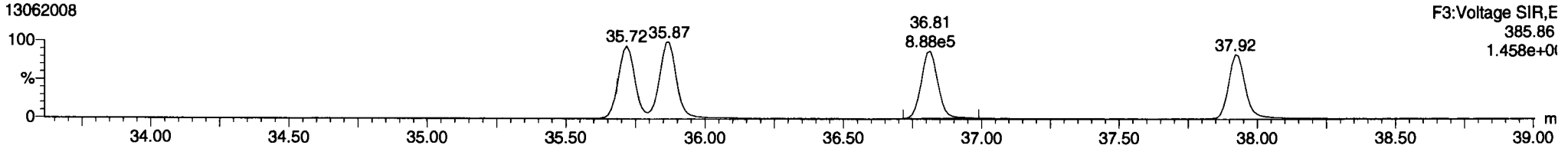
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

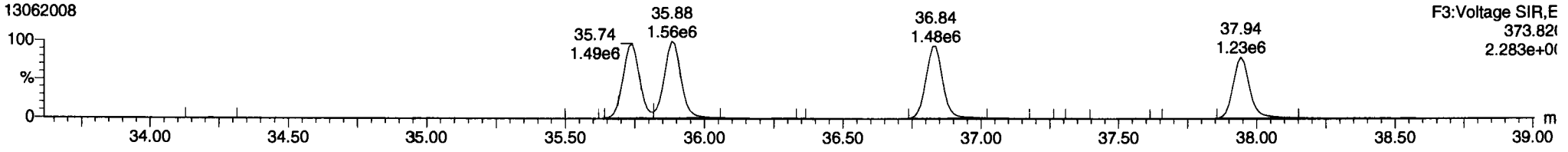
13C-234678-HxCDF



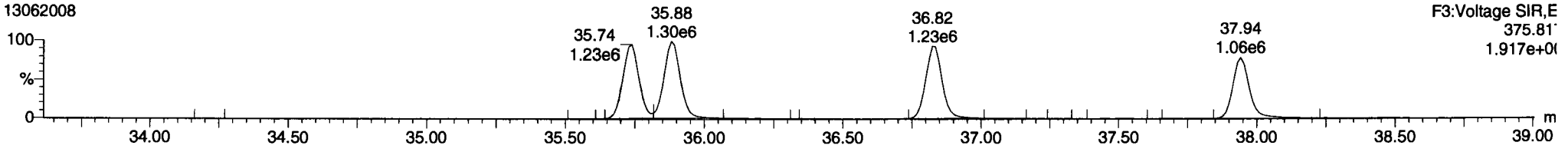
13C-234678-HxCDF



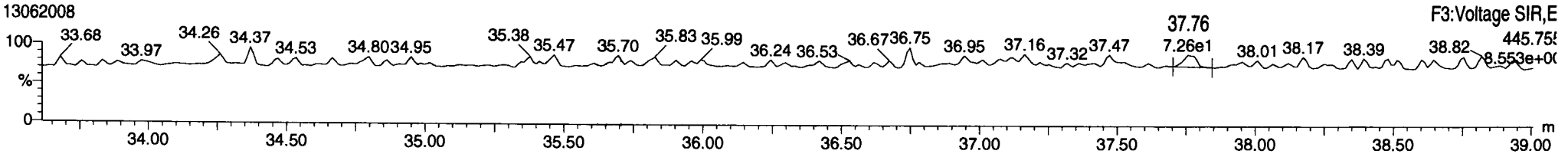
Total-hexafurans



Total-hexafurans



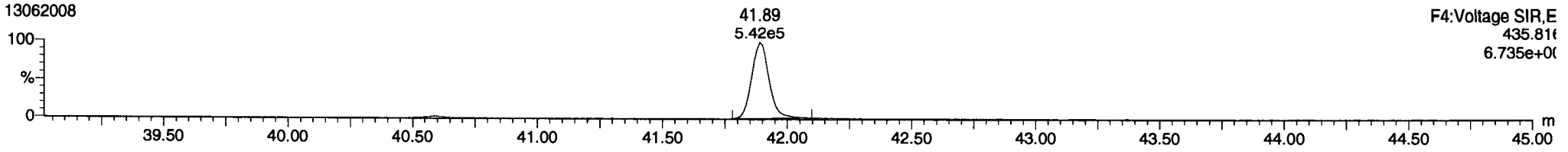
FUNCTION3 OCDPE



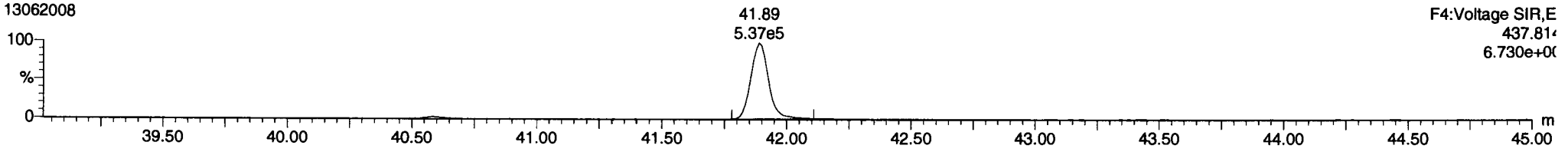
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

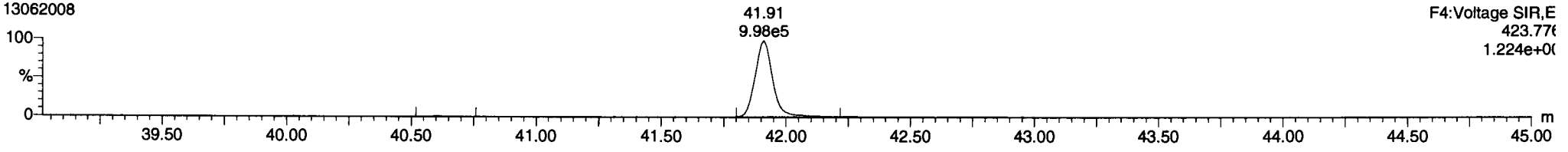
13C-1234678-HpCDD



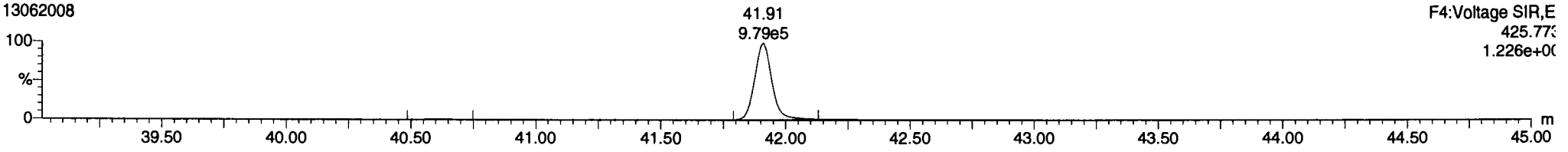
13C-1234678-HpCDD



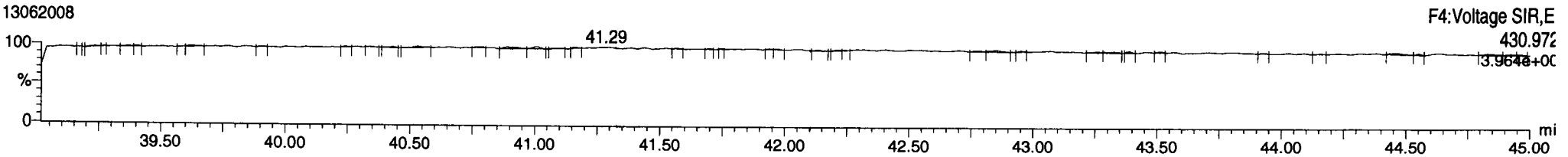
Total-heptadioxins



Total-heptadioxins



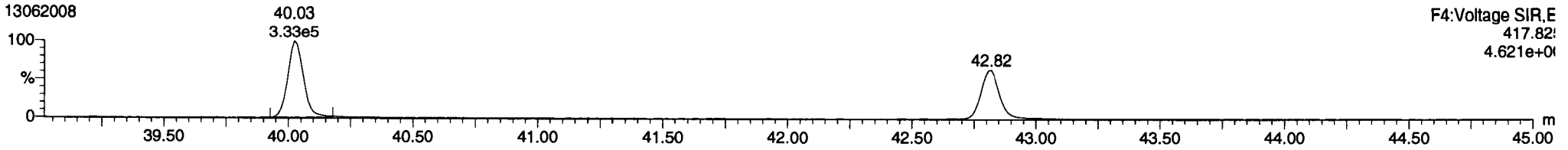
FUNCTION4 PFK



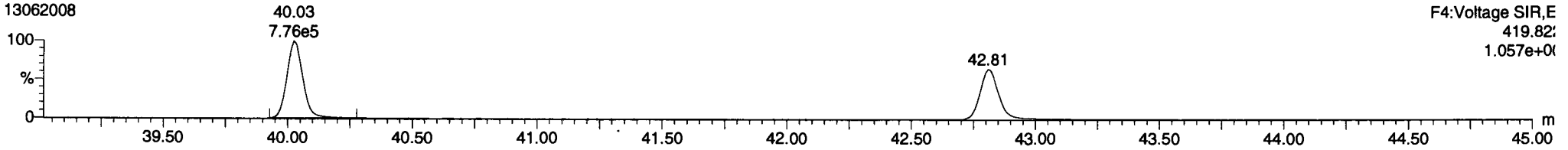
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

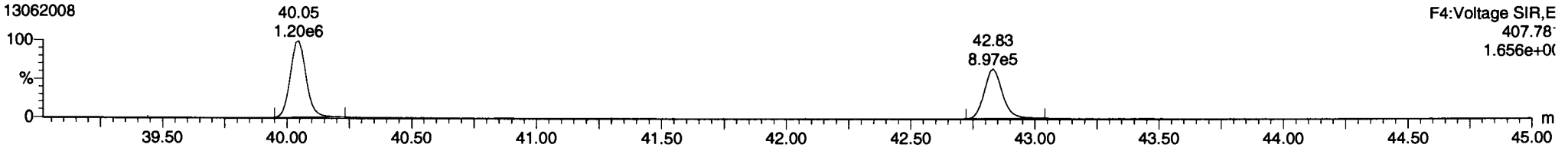
13C-1234678-HpCDF



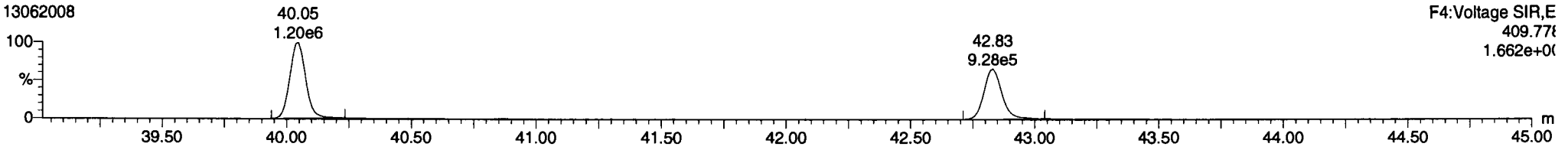
13C-1234678-HpCDF



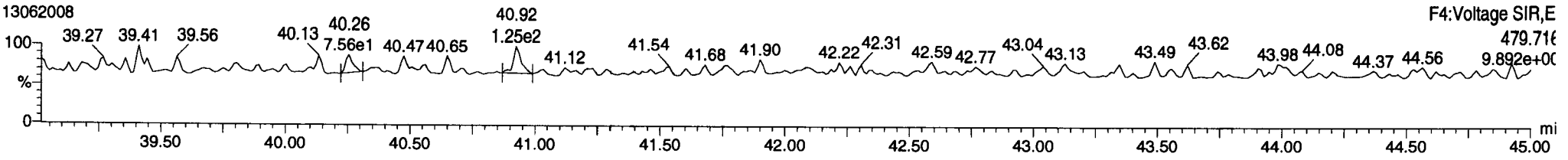
Total-heptafurans



Total-heptafurans



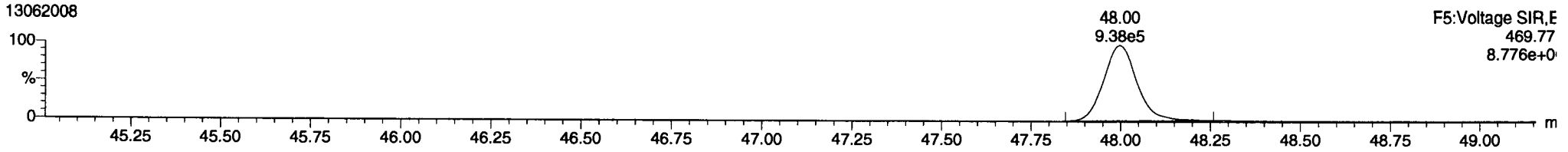
FUNCTION4 NCDPE



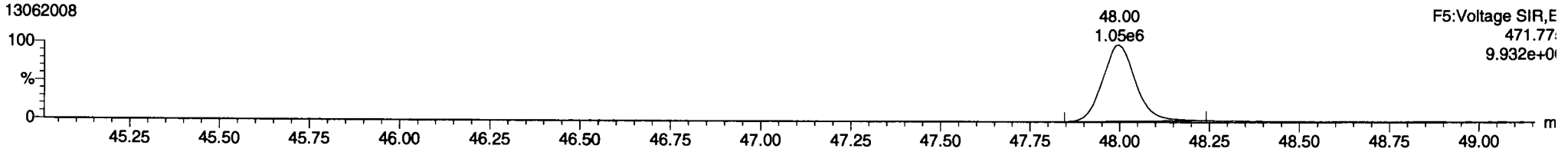
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

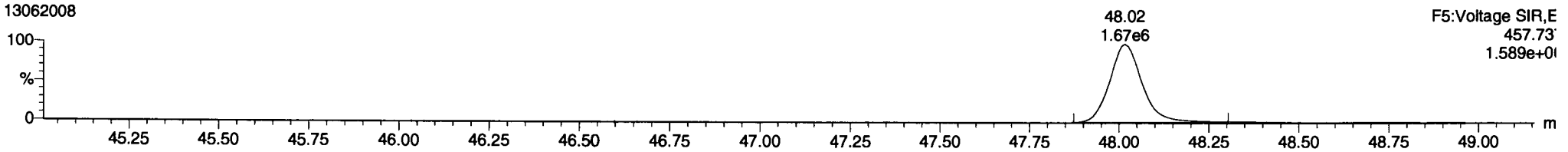
13C-OCDD



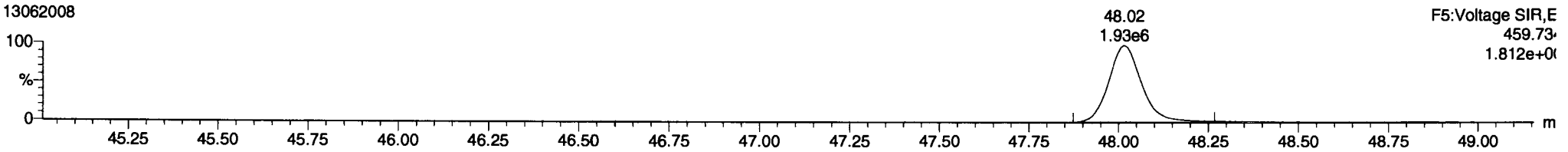
13C-OCDD



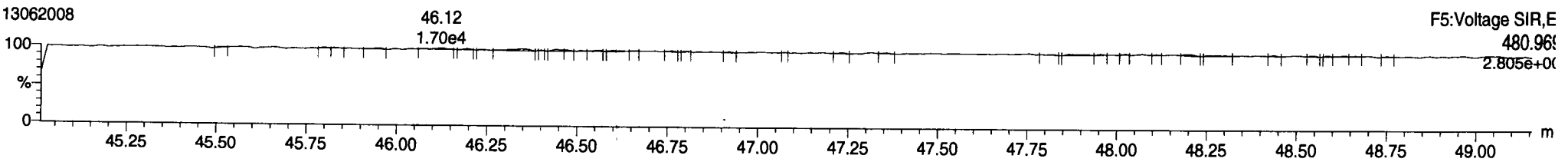
OCDD



OCDD



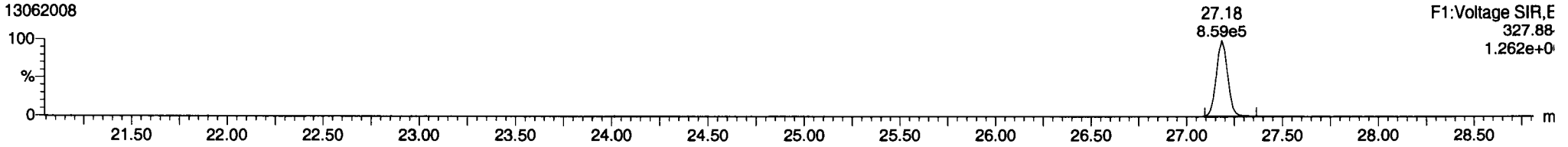
FUNCTION5 PFK



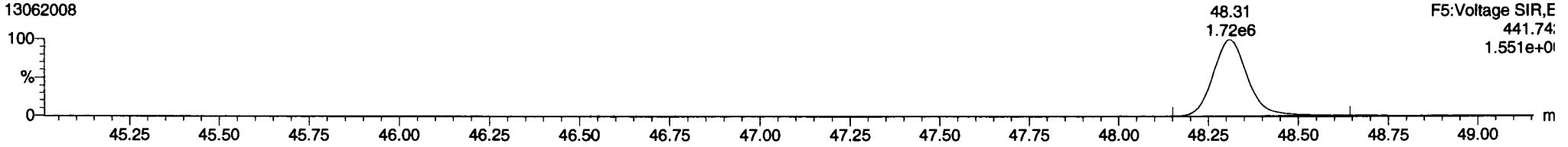
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

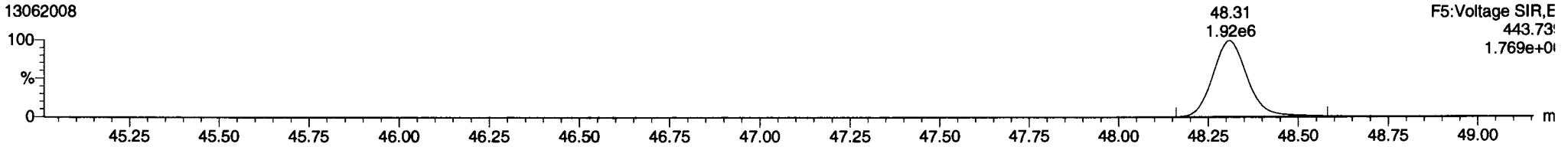
37CL-2378-TCDD



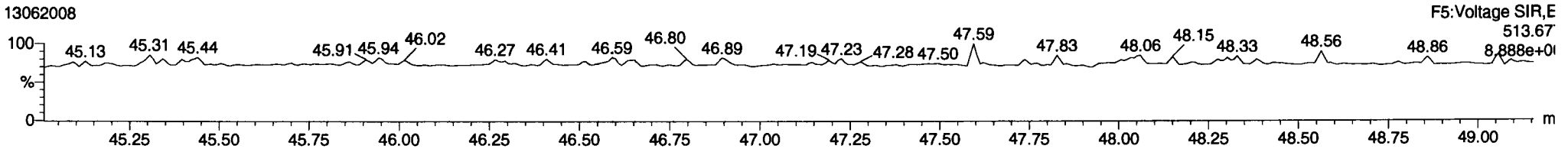
OCDF



OCDF



FUNCTION5 DCDPE



Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.542	1.001	1.99e6	2.71e6	0.771	0.737	0.770	13651.5	NO	200.666	200.666
12378-PeCDF	30.698	1.000	1.20e7	8.04e6	0.814	1.495	1.550	25651.3	NO	991.273	991.273
23478-PeCDF	32.046	1.000	1.20e7	8.05e6	0.837	1.492	1.550	26286.6	NO	988.851	988.851
123478-HxCDF	35.740	1.001	9.38e6	7.78e6	0.967	1.205	1.240	19176.7	NO	991.965	991.965
234678-HxCDF	36.825	1.000	9.28e6	7.74e6	1.000	1.199	1.240	18694.7	NO	1017.255	1017.255
123678-HxCDF	35.883	1.000	9.96e6	8.28e6	0.951	1.203	1.240	20103.0	NO	1007.214	1007.214
123789-HxCDF	37.943	1.001	7.60e6	6.33e6	0.874	1.200	1.240	15719.9	NO	1036.352	1036.352
1234678-HpCDF	40.048	1.001	7.58e6	7.58e6	1.072	1.001	1.050	14395.1	NO	1040.368	1040.368
1234789-HpCDF	42.832	1.001	5.74e6	5.86e6	1.085	0.980	1.050	9218.9	NO	1040.155	1040.155
OCDF	48.313	1.007	1.12e7	1.28e7	0.878	0.880	0.890	34078.6	NO	2116.479	2116.479
2378-TCDD	27.184	1.001	1.95e6	2.59e6	0.936	0.751	0.770	11861.9	NO	200.565	200.565
12378-PeCDD	32.298	1.000	1.01e7	6.67e6	0.894	1.515	1.550	33744.3	NO	991.908	991.908
123478-HxCDD	36.957	1.000	8.57e6	7.01e6	0.898	1.223	1.240	24918.5	NO	982.326	982.326
123678-HxCDD	37.089	1.000	8.60e6	7.09e6	0.818	1.214	1.240	24693.1	NO	1015.101	1015.101
123789-HxCDD	37.505	1.012	8.03e6	6.56e6	0.789	1.223	1.240	23170.6	NO	1011.546	1011.546
1234678-HpCDD	41.911	1.001	6.12e6	6.04e6	0.879	1.014	1.050	12131.4	NO	1019.042	1019.042
OCDD	48.017	1.000	1.08e7	1.26e7	0.875	0.859	0.890	22567.2	NO	2072.682	2072.682
13C-2378-TCDF	26.527	1.007	1.31e6	1.73e6	1.190	0.758	0.770	7806.2	NO		100.721
13C-12378-PeCDF	30.687	1.165	1.51e6	9.75e5	0.904	1.550	1.550	5819.0	NO		108.425
13C-23478-PeCDF	32.035	1.216	1.48e6	9.48e5	0.877	1.556	1.550	5854.9	NO		108.972
13C-123478-HxCDF	35.718	0.953	6.02e5	1.19e6	1.096	0.507	0.510	2340.0	NO		97.235
13C-123678-HxCDF	35.872	0.957	6.41e5	1.26e6	1.187	0.508	0.510	2393.5	NO		95.496
13C-234678-HxCDF	36.814	0.982	5.64e5	1.11e6	1.040	0.508	0.510	2123.0	NO		95.882
13C-123789-HxCDF	37.922	1.011	5.21e5	1.02e6	0.941	0.513	0.510	2009.0	NO		97.330
13C-1234678-HpCDF	40.026	1.068	4.14e5	9.46e5	0.825	0.437	0.440	2076.5	NO		98.114
13C-1234789-HpCDF	42.810	1.142	3.13e5	7.15e5	0.609	0.437	0.440	1322.9	NO		100.503
13C-1234-TCDD	26.347	0.000	1.12e6	1.42e6	1.000	0.790	0.770	2139.4	NO		100.000
13C-2378-TCDD	27.169	1.031	1.05e6	1.37e6	0.920	0.766	0.770	1926.7	NO		103.748
13C-12378-PeCDD	32.287	1.225	1.14e6	7.48e5	0.669	1.529	1.550	4483.9	NO		111.472
13C-123478-HxCDD	36.946	0.985	9.79e5	7.87e5	1.032	1.245	1.240	7123.6	NO		101.963
13C-123678-HxCDD	37.077	0.989	1.04e6	8.45e5	1.146	1.235	1.240	7563.5	NO		98.248
13C-1234678-HpCDD	41.889	1.117	6.95e5	6.62e5	0.789	1.050	1.050	3879.3	NO		102.439
13C-OCDD	47.999	1.280	1.21e6	1.38e6	0.696	0.878	0.890	3848.7	NO		221.159

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

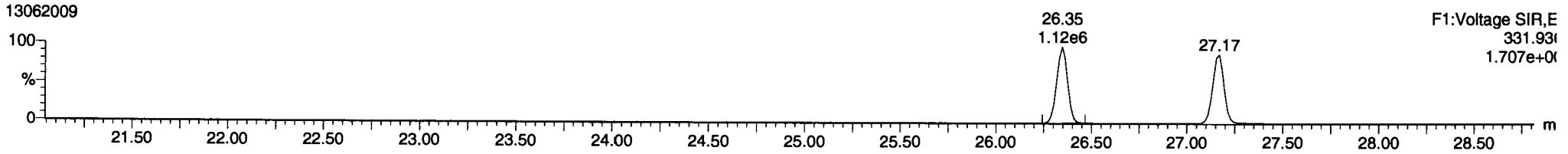
13C-123789-HxCDD	37.494	0.000	9.20e5	7.58e5	1.000	1.214	1.240	6785.6	NO	100.000
Total-tetrafurans			2.03e6		0.771					204.331
Total-penta1			1.46e2							0.011
Total-pentafurans			2.44e7		0.826					2011.927
Total-hexafurans			3.63e7		0.948					4058.443
Total-heptafurans			1.33e7		1.079					2081.399
Total-Furans			8.73e7		0.925					10472.589
Total-tetradioxins			2.01e6		0.936					206.232
Total-pentadioxins			1.01e7		0.894					994.237
Total-hexadioxins			2.52e7		0.835					3009.311
Total-heptadioxins			6.14e6		0.879					1023.165
Total-Dioxins			5.43e7		0.870					7305.627
Total-TEQ			1.42e8							17778.216
37CL-2378-TCDD	27.184	1.032	5.29e6		1.000			29971.4		208.668
FUNCTION1 PFK			2.10e5							
FUNCTION2 PFK			1.56e6							0.000
FUNCTION3 PFK			1.23e6							0.000
FUNCTION4 PFK			8.47e5							
FUNCTION5 PFK			3.29e6							
FUNCTION1 HXCDPE			2.68e2							0.000
FUNCTION1 HPCDPE			1.49e3							0.000
FUNCTION2 HPCDPE			2.91e4							0.000
FUNCTION3 OCDPE			4.23e2							0.000
FUNCTION4 NCDPE			3.37e2							0.000
FUNCTION5 DCDPE			7.33e1							0.000

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

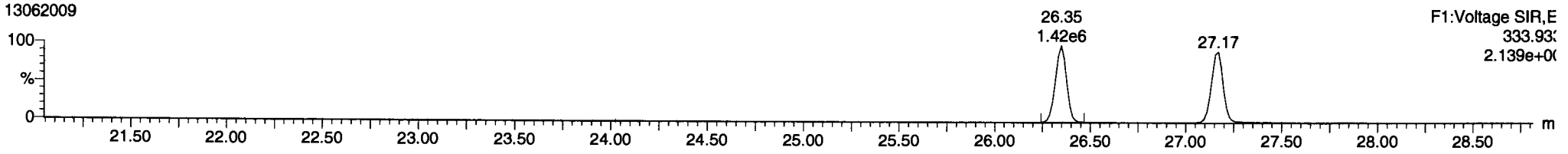
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

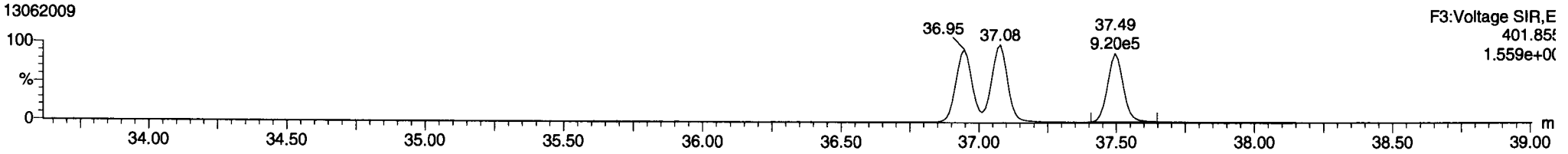
13C-1234-TCDD



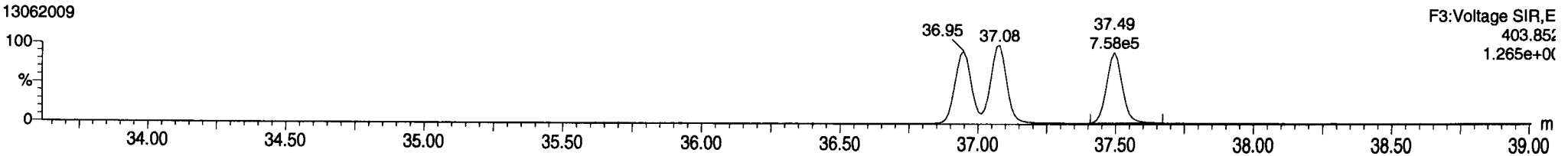
13C-1234-TCDD



13C-123789-HxCDD



13C-123789-HxCDD

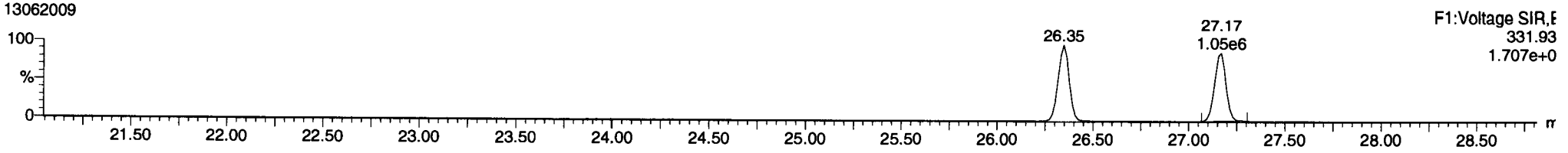


Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

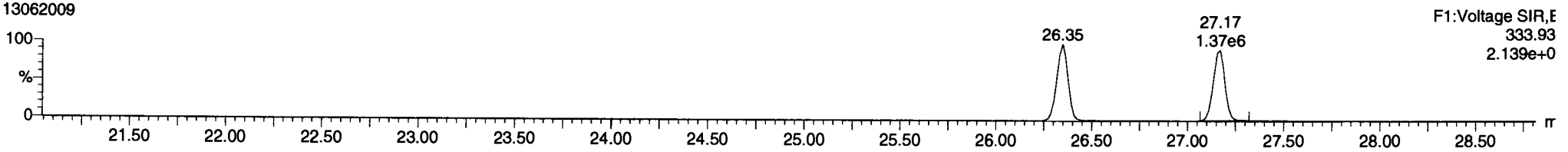
13C-2378-TCDD

13062009



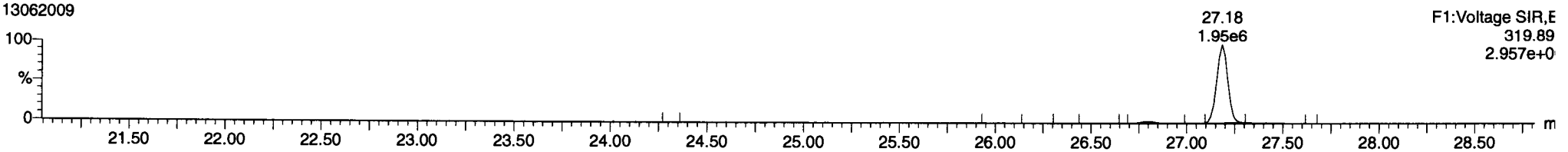
13C-2378-TCDD

13062009



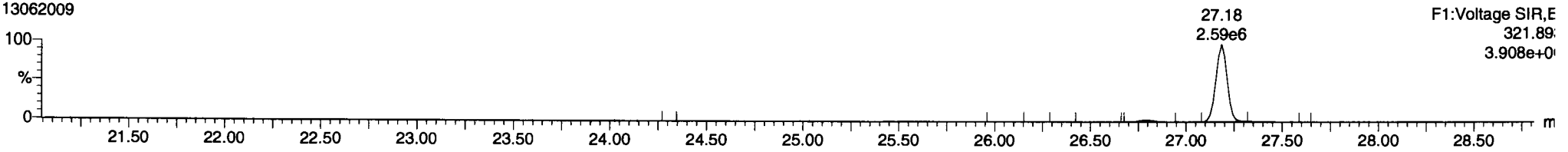
Total-tetradioxins

13062009



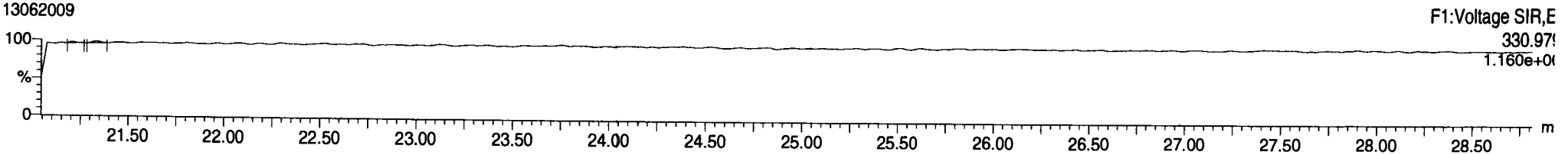
Total-tetradioxins

13062009



FUNCTION1 PFK

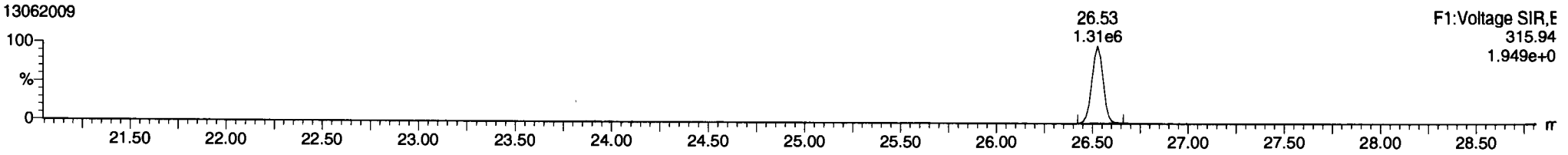
13062009



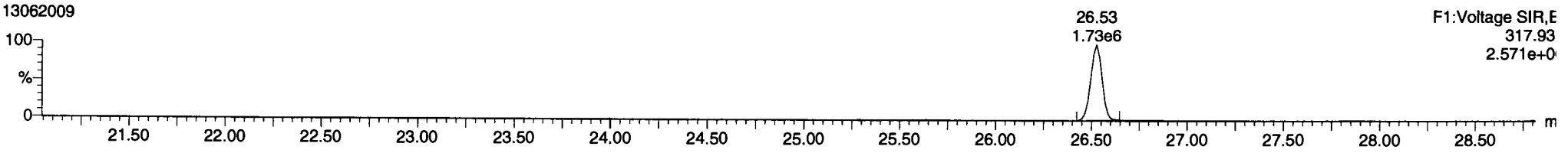
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

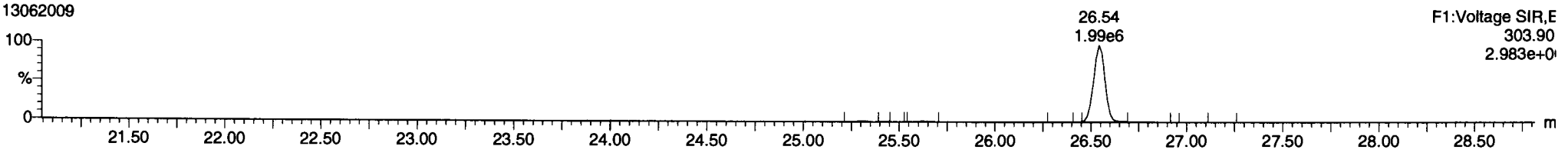
13C-2378-TCDF



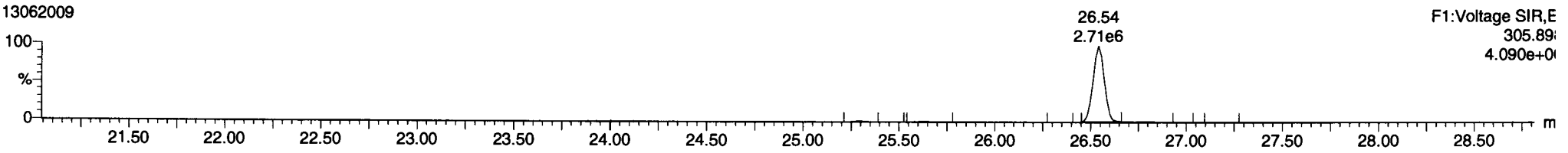
13C-2378-TCDF



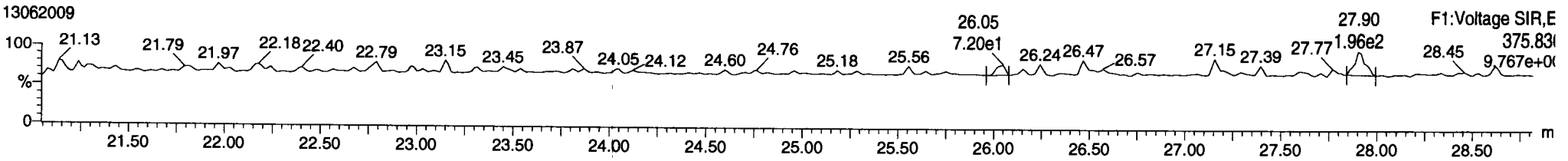
Total-tetrafurans



Total-tetrafurans



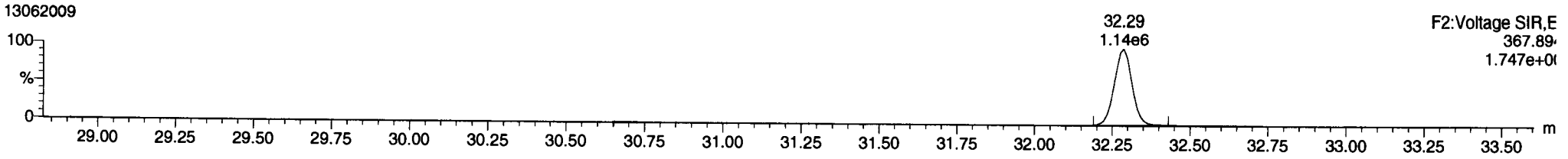
FUNCTION1 HXCDPE



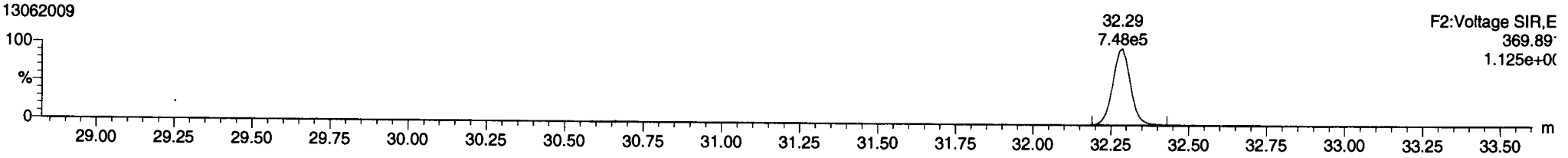
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

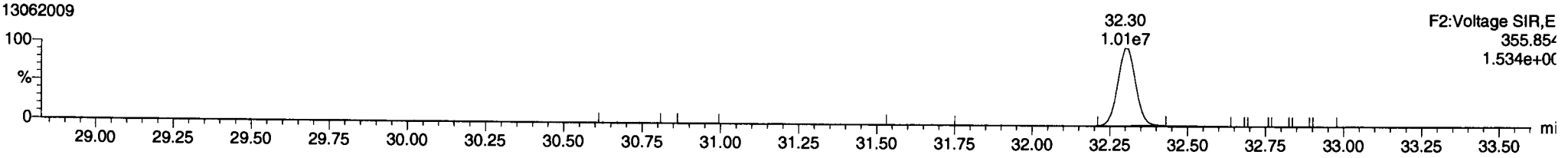
13C-12378-PeCDD



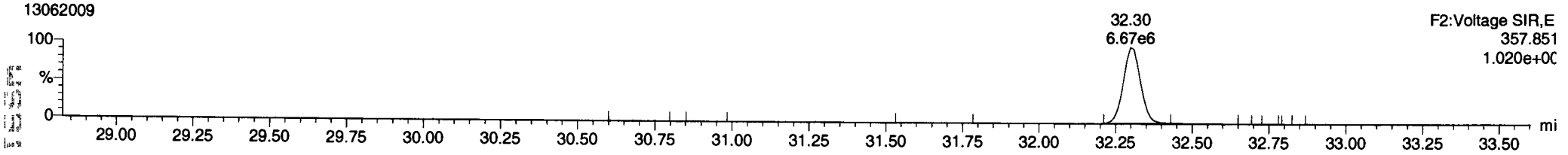
13C-12378-PeCDD



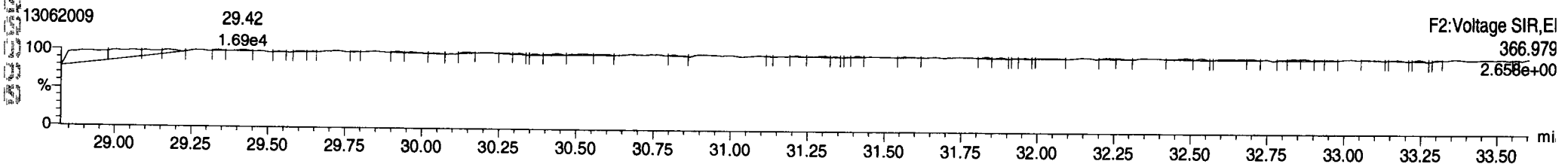
Total-pentadioxins



Total-pentadioxins

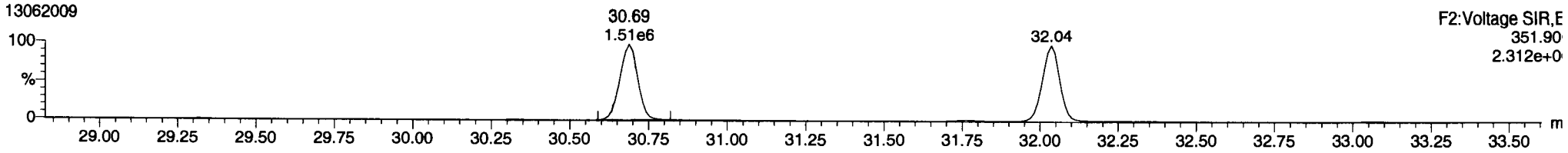


FUNCTION2 PFK

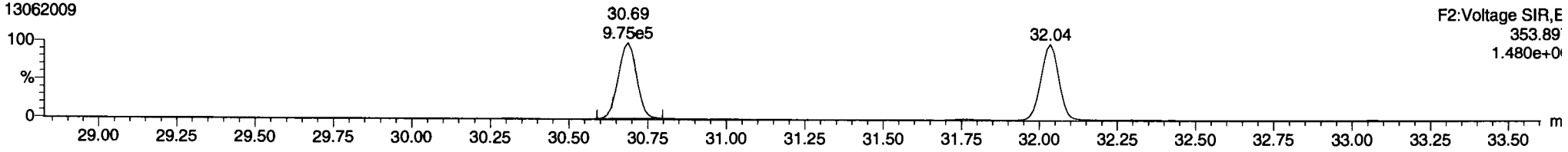


ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

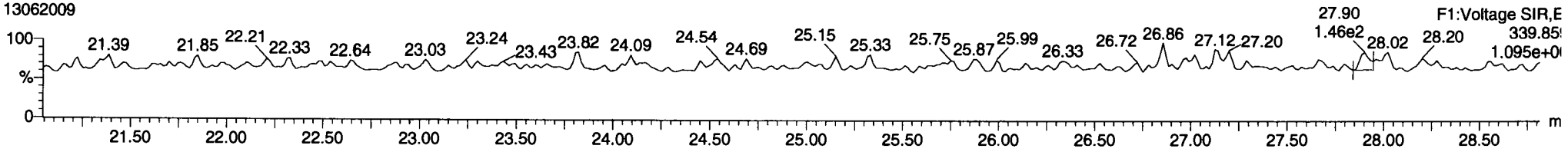
13C-12378-PeCDF



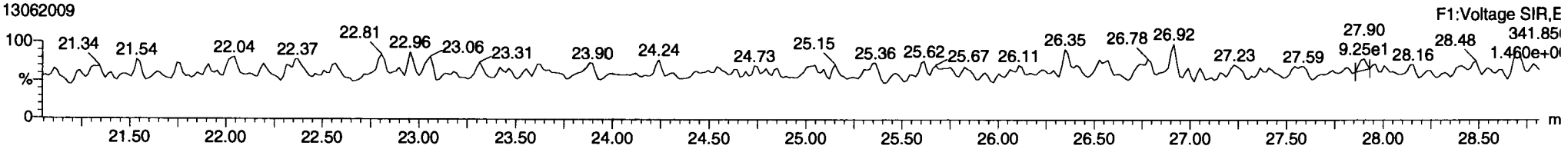
13C-12378-PeCDF



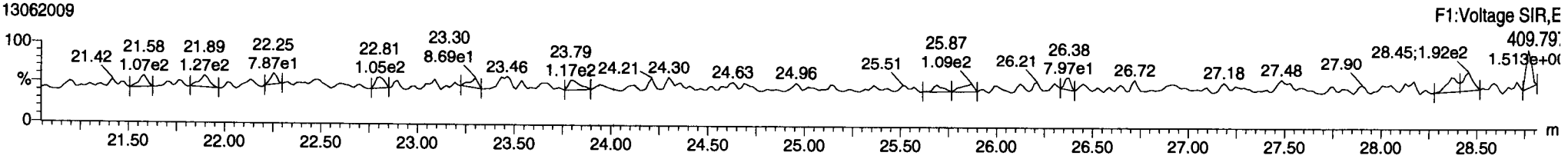
Total-penta1



Total-penta1



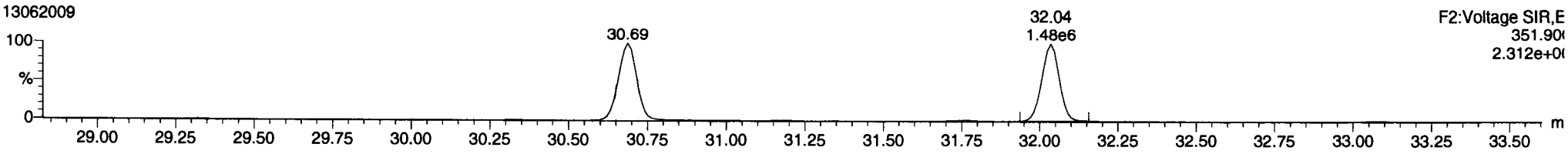
FUNCTION1 HPCDPE



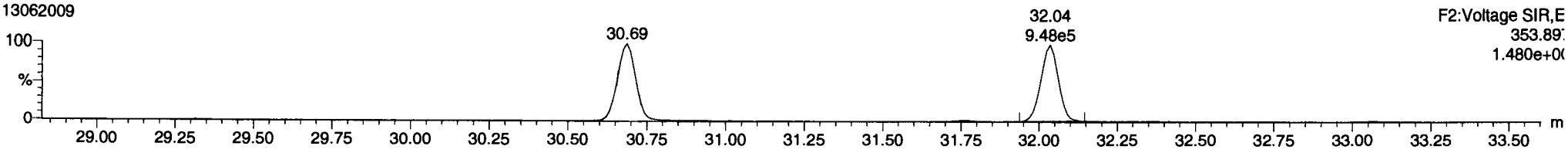
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

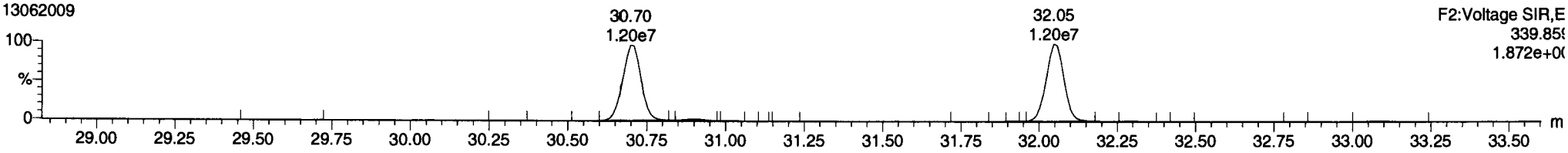
13C-23478-PeCDF



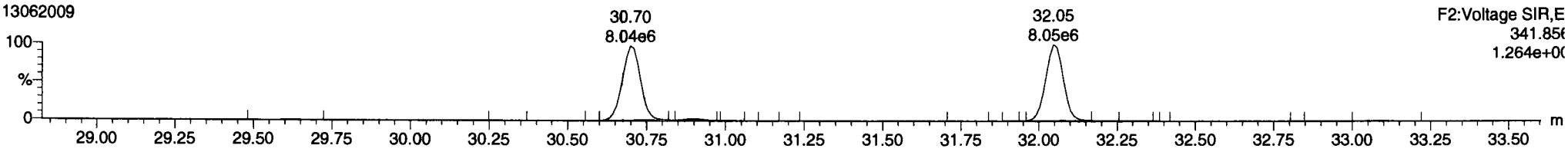
13C-23478-PeCDF



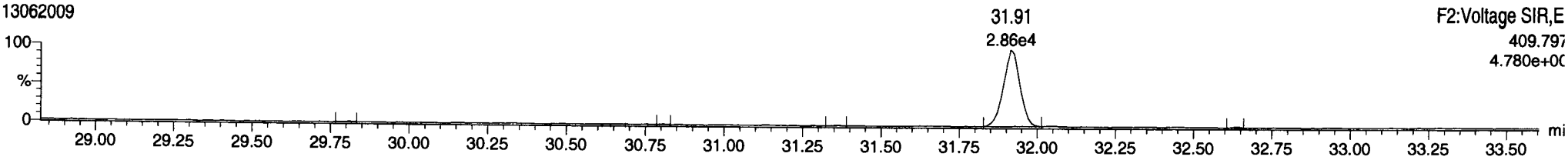
Total-pentafurans



Total-pentafurans



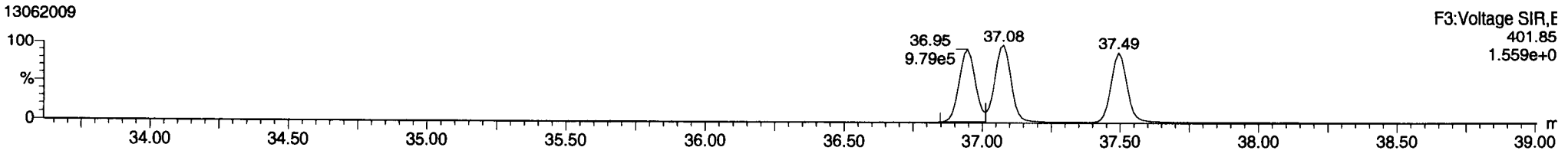
FUNCTION2 HPCDPE



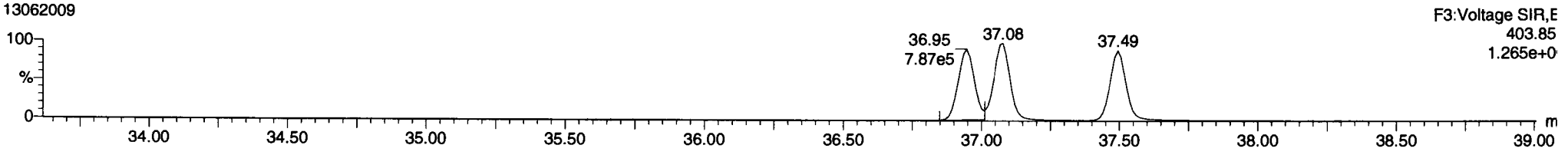
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

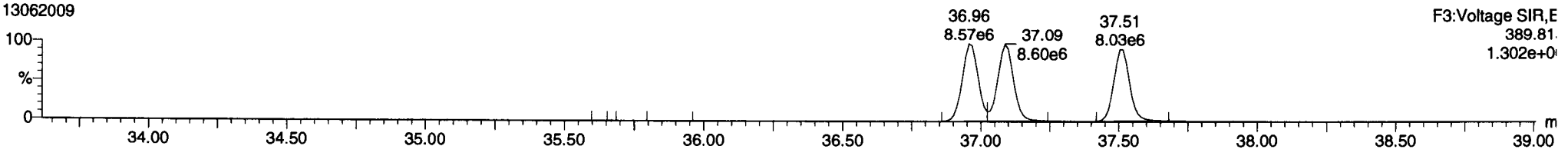
13C-123478-HxCDD



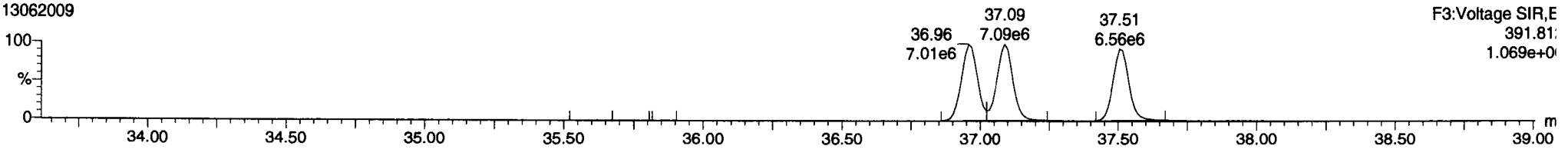
13C-123478-HxCDD



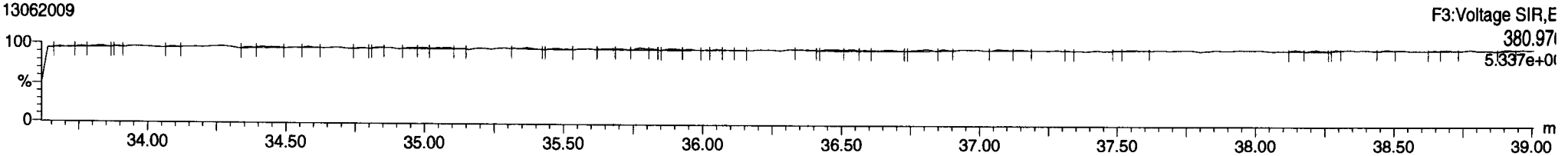
Total-hexadioxins



Total-hexadioxins



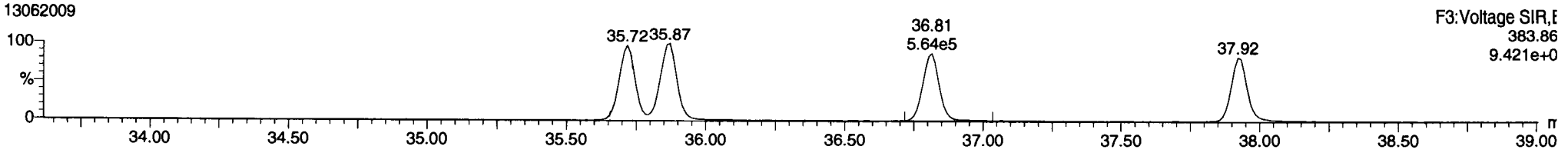
FUNCTION3 PFK



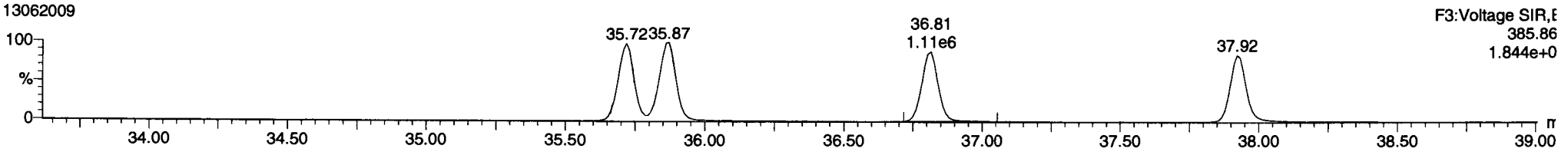
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

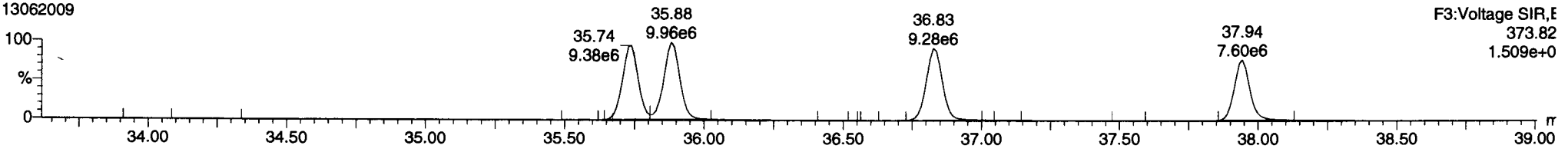
13C-234678-HxCDF



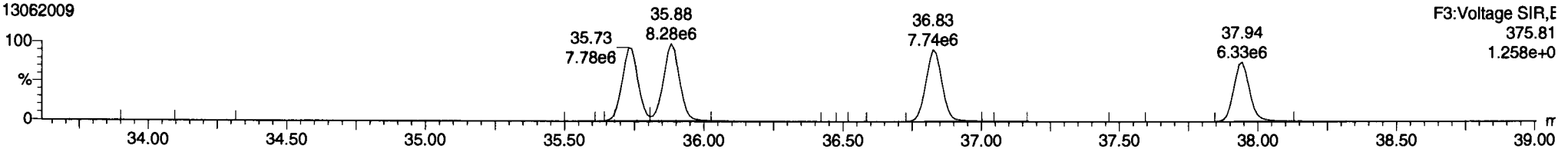
13C-234678-HxCDF



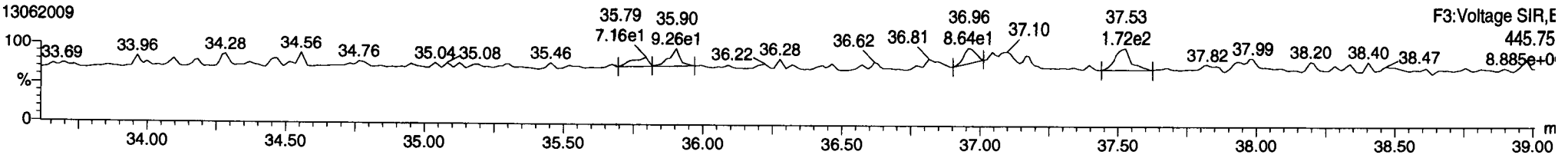
Total-hexafurans



Total-hexafurans

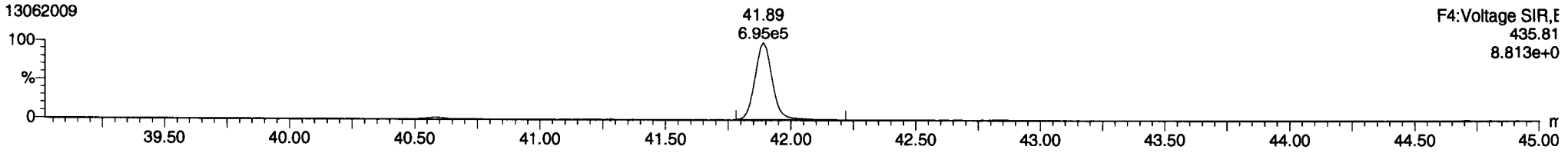


FUNCTION3 OCDPE

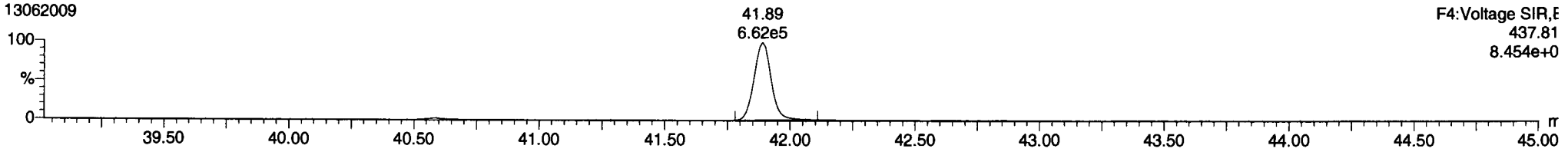


ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

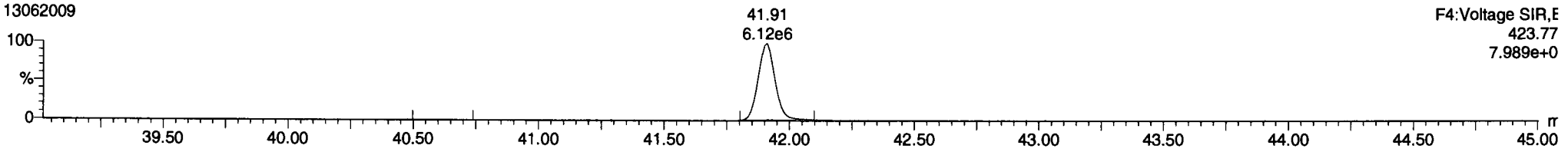
13C-1234678-HpCDD



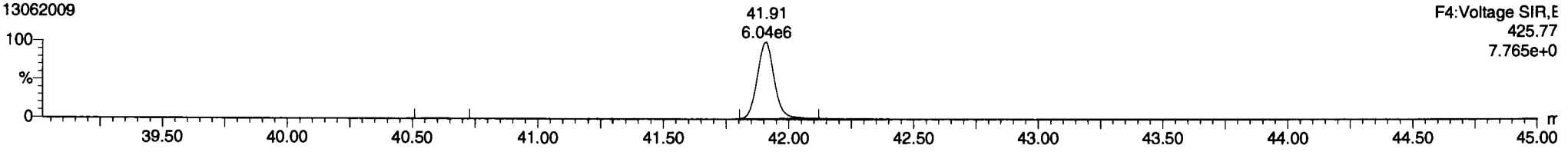
13C-1234678-HpCDD



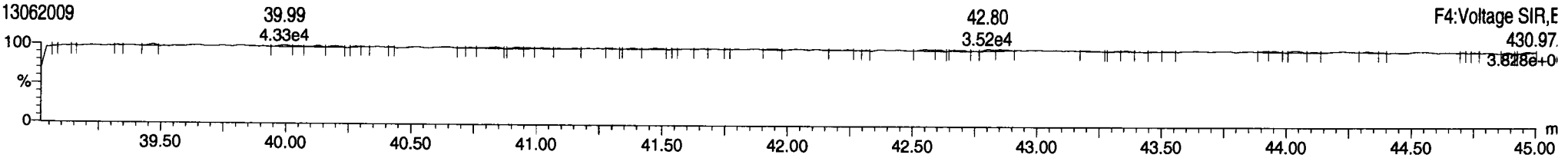
Total-heptadioxins



Total-heptadioxins

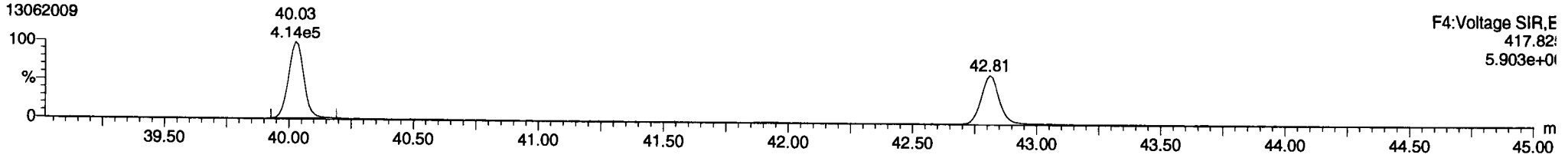


FUNCTION4 PFK

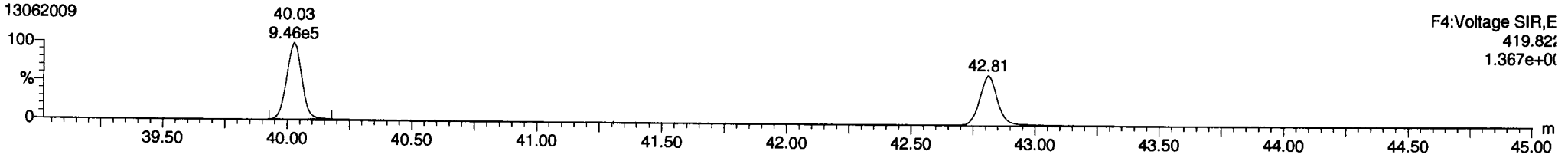


ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

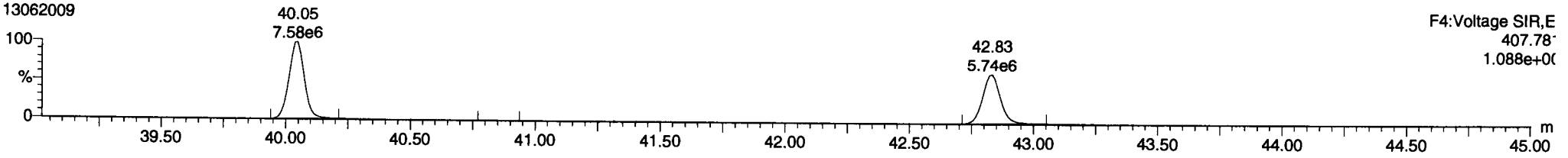
13C-1234678-HpCDF



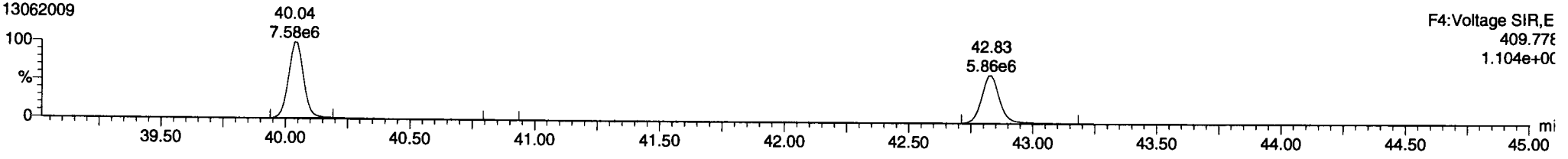
13C-1234678-HpCDF



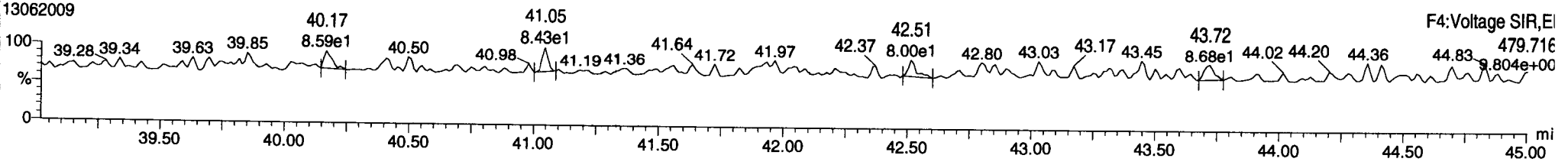
Total-heptafurans



Total-heptafurans



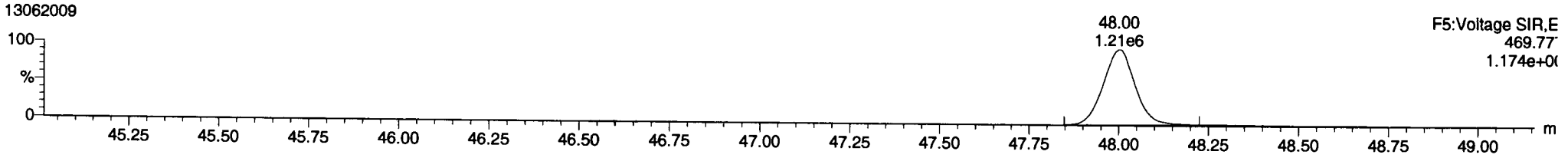
FUNCTION4 NCDPE



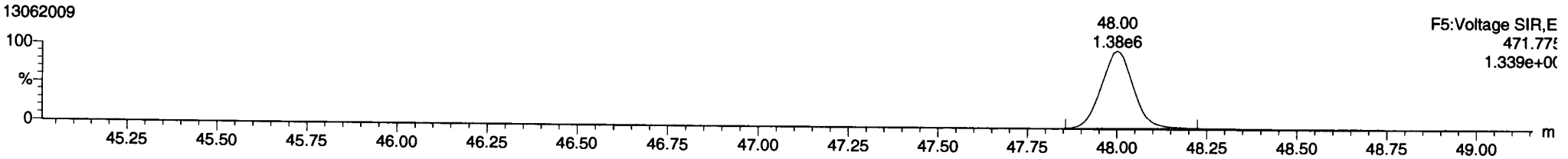
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

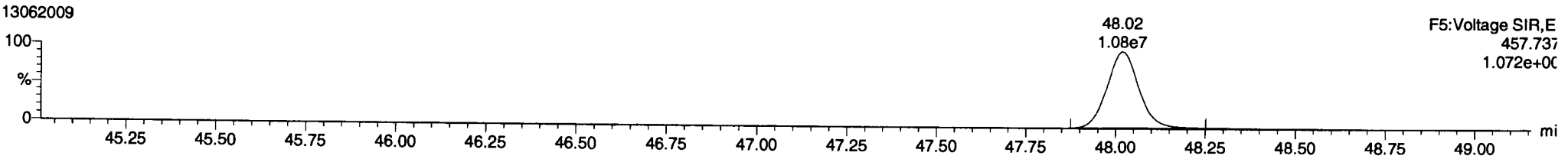
13C-OCDD



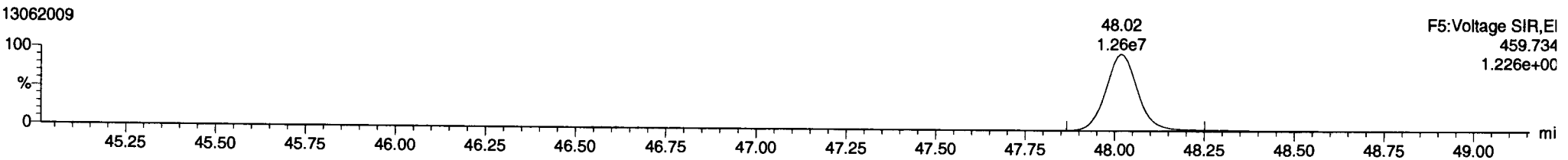
13C-OCDD



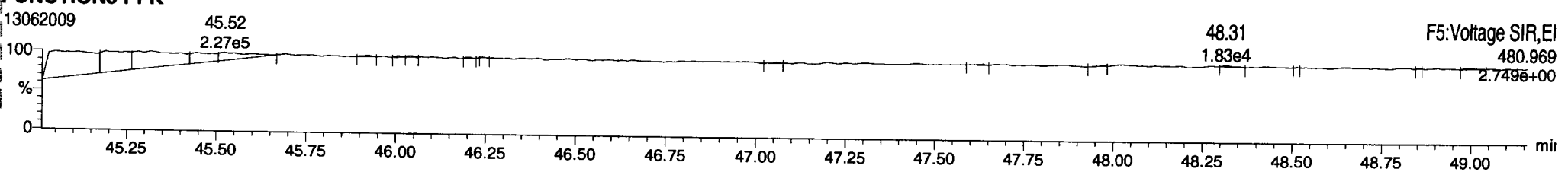
OCDD



OCDD



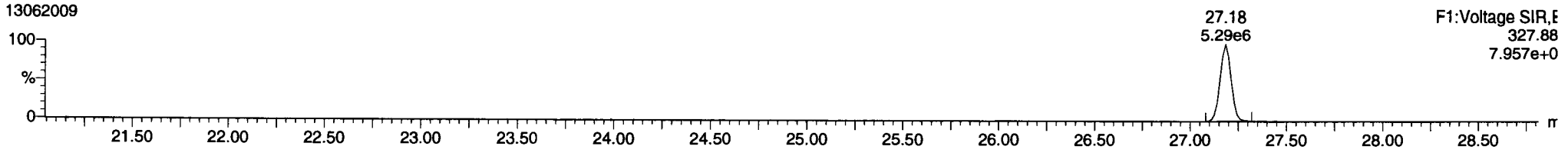
FUNCTION5 PFK



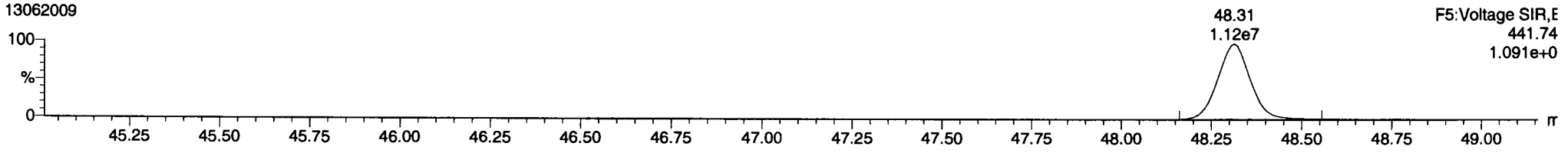
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

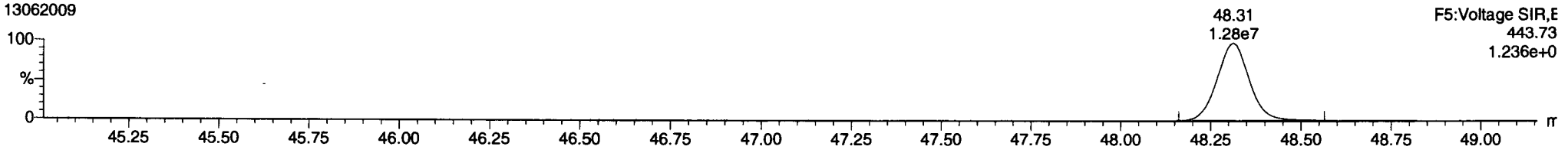
37CL-2378-TCDD



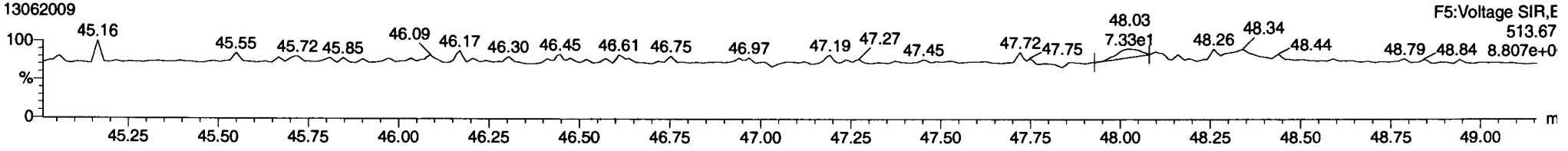
OCDF



OCDF



FUNCTION5 DCDPE



Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: P:\DIOXIN8290.PRO\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.527	1.001	7.27e4	9.92e4	0.771	0.733	0.770	964.7	1082	2458	1.04e6	1.47e6	NO	10.483	10.483
12378-PeCDF	30.687	1.001	4.09e5	2.70e5	0.814	1.513	1.550	1513.7	3954	3207	5.99e6	3.95e6	NO	52.749	52.749
23478-PeCDF	32.035	1.001	3.77e5	2.52e5	0.837	1.495	1.550	1414.0	3954	3207	5.59e6	3.76e6	NO	49.530	49.530
123478-HxCDF	35.719	1.001	3.04e5	2.53e5	0.967	1.198	1.240	1310.4	3406	3938	4.46e6	3.75e6	NO	54.677	54.677
234678-HxCDF	36.815	1.001	2.83e5	2.38e5	1.000	1.192	1.240	1199.5	3406	3938	4.09e6	3.44e6	NO	48.942	48.942
123678-HxCDF	35.872	1.001	3.20e5	2.69e5	0.951	1.187	1.240	1331.4	3406	3938	4.53e6	3.70e6	NO	50.900	50.900
123789-HxCDF	37.922	1.000	2.53e5	2.00e5	0.874	1.261	1.240	1058.0	3406	3938	3.60e6	2.89e6	NO	58.502	58.502
1234678-HpCDF	40.027	1.001	2.21e5	2.25e5	1.072	0.984	1.050	1379.6	2218	2150	3.06e6	3.09e6	NO	56.162	56.162
1234789-HpCDF	42.811	1.000	1.65e5	1.71e5	1.085	0.967	1.050	896.4	2218	2150	1.99e6	1.97e6	NO	51.305	51.305
OCDF	48.287	1.006	2.94e5	3.36e5	0.878	0.874	0.890	1481.4	1755	1580	2.60e6	3.00e6	NO	116.175	116.175
2378-TCDD	27.169	1.001	7.09e4	9.33e4	0.936	0.761	0.770	662.2	1540	1765	1.02e6	1.33e6	NO	9.703	9.703
12378-PeCDD	32.287	1.001	3.23e5	2.20e5	0.894	1.469	1.550	2156.6	2231	1469	4.81e6	3.19e6	NO	46.891	46.891
123478-HxCDD	36.946	1.001	2.55e5	2.12e5	0.898	1.206	1.240	2877.3	1300	2184	3.74e6	3.10e6	NO	51.561	51.561
123678-HxCDD	37.078	1.001	2.51e5	2.11e5	0.818	1.189	1.240	2686.9	1300	2184	3.49e6	2.92e6	NO	56.248	56.248
123789-HxCDD	37.494	1.012	2.58e5	2.07e5	0.789	1.244	1.240	2835.2	1300	2184	3.68e6	3.03e6	NO	58.440	58.440
1234678-HpCDD	41.890	1.001	1.82e5	1.84e5	0.879	0.987	1.050	1148.6	1936	1775	2.22e6	2.24e6	NO	51.874	51.874
OCDD	48.000	1.000	2.90e5	3.31e5	0.875	0.875	0.890	1382.2	1876	1416	2.59e6	3.01e6	NO	114.929	114.929
13C-2378-TCDF	26.512	1.007	9.24e5	1.20e6	1.190	0.769	0.770	4630.0	2872	5745	1.33e7	1.75e7	NO		88.728
13C-12378-PeCDF	30.665	1.165	9.61e5	6.20e5	0.904	1.549	1.550	3637.5	3697	3419	1.34e7	8.78e6	NO		86.772
13C-23478-PeCDF	32.014	1.216	9.22e5	5.98e5	0.877	1.543	1.550	3603.4	3697	3419	1.33e7	8.70e6	NO		85.979
13C-123478-HxCDF	35.697	0.953	3.56e5	6.98e5	1.096	0.510	0.510	1954.5	2624	3948	5.13e6	1.02e7	NO		91.749
13C-123678-HxCDF	35.850	0.957	4.09e5	8.07e5	1.187	0.507	0.510	2229.3	2624	3948	5.85e6	1.13e7	NO		97.757
13C-234678-HxCDF	36.793	0.982	3.56e5	7.08e5	1.040	0.504	0.510	1922.0	2624	3948	5.04e6	1.02e7	NO		97.721
13C-123789-HxCDF	37.911	1.012	3.06e5	5.80e5	0.941	0.527	0.510	1692.7	2624	3948	4.44e6	8.52e6	NO		89.850
13C-1234678-HpCDF	40.005	1.068	2.25e5	5.16e5	0.825	0.435	0.440	1426.4	2202	3934	3.14e6	7.11e6	NO		85.698
13C-1234789-HpCDF	42.800	1.142	1.83e5	4.21e5	0.609	0.434	0.440	968.2	2202	3934	2.13e6	4.75e6	NO		94.675
13C-1234-TCDD	26.332	0.000	8.83e5	1.13e6	1.000	0.780	0.770	1525.2	8518	3597	1.30e7	1.66e7	NO		100.000
13C-2378-TCDD	27.154	1.031	7.95e5	1.01e6	0.920	0.786	0.770	1288.1	8518	3597	1.10e7	1.38e7	NO		97.536
13C-12378-PeCDD	32.266	1.225	7.83e5	5.12e5	0.669	1.531	1.550	3485.1	3280	3004	1.14e7	7.53e6	NO		96.037
13C-123478-HxCDD	36.924	0.985	5.64e5	4.45e5	1.032	1.267	1.240	2837.2	2862	2203	8.12e6	6.52e6	NO		93.349
13C-123678-HxCDD	37.056	0.989	5.56e5	4.49e5	1.146	1.237	1.240	2751.8	2862	2203	7.88e6	6.33e6	NO		83.771
13C-1234678-HpCDD	41.868	1.117	4.14e5	3.90e5	0.789	1.061	1.050	2369.1	2107	2074	4.99e6	4.81e6	NO		97.245
13C-OCDD	47.982	1.280	5.70e5	6.65e5	0.696	0.857	0.890	1516.8	3418	2770	5.18e6	5.80e6	NO		169.334

Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.473	0.000	5.73e5	4.74e5	1.000	1.209	1.240	2869.6	2862	2203	8.21e6	6.79e6	NO	100.000
Total-tetrafurans			7.40e4		0.771				1082		1.07e6			10.628
Total-penta1			9.20e1						1267		2.67e3			0.014
Total-pentafurans			7.92e5		0.826				3954		1.17e7			102.988
Total-hexafurans			1.16e6		0.948				3406		1.67e7			213.316
Total-heptafurans			3.87e5		1.079				2218		5.05e6			107.467
Total-Furans			2.71e6		0.925				1082		3.71e7			550.588
Total-tetradioxins			7.36e4		0.936				1540		1.05e6			9.883
Total-pentadioxins			3.24e5		0.894				2231		4.83e6			47.037
Total-hexadioxins			7.66e5		0.835				1300		1.10e7			166.569
Total-heptadioxins			1.84e5		0.879				1936		2.26e6			52.466
Total-Dioxins			1.64e6		0.870				1540		2.17e7			390.884
Total-TEQ			4.34e6						1540		5.88e7			941.472
37CL-2378-TCDD	27.169	1.032	1.88e5		1.000			1152.1	2351		2.71e6			9.355
FUNCTION1 PFK			9.69e5						929300		1.43e7			
FUNCTION2 PFK			0.00e0						280568		0.00e0			
FUNCTION3 PFK			1.38e6						474927		3.61e7			0.000
FUNCTION4 PFK			6.37e5						349700		2.03e7			
FUNCTION5 PFK			2.58e4						260854		1.20e6			
FUNCTION1 HXCDPE			0.00e0						447		0.00e0			
FUNCTION1 HPCDPE			1.38e3						1158		3.12e4			0.000
FUNCTION2 HPCDPE			1.05e3						1629		3.12e4			0.000
FUNCTION3 OCDPE			1.71e2						483		4.86e3			0.000
FUNCTION4 NCDPE			1.21e2						901		3.04e3			0.000
FUNCTION5 DCDPE			1.28e2						887		4.50e3			0.000

ataset: P:\DIOXIN8290.PRO\130620ICV.qld
rst Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
rinted: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ethod: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
alibration: P:\DIOXIN8290.PRO\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

): ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

=

	35 Total-tetrafurans	303.9016	26.77	490.234	0.771	0.030		1.35	0.77	YES	7.6
	1 2378-TCDF	303.9016	26.53	171897.196	0.771	10.483	10.483	0.73	0.77	NO	964.7
	35 Total-tetrafurans	303.9016	25.63	1511.026	0.771	0.092		1.54	0.77	YES	12.3
	35 Total-tetrafurans	303.9016	24.05	368.851	0.771	0.022		0.69	0.77	NO	2.7

>

	36 Total-penta1	339.8597	27.96	201.103		0.014		0.84	1.55	YES	2.1

=

	2 12378-PeCDF	339.8597	30.69	679150.626	0.814	52.749	52.749	1.51	1.55	NO	1513.7
	3 23478-PeCDF	339.8597	32.04	629740.063	0.837	49.530	49.530	1.49	1.55	NO	1414.0
	37 Total-pentafurans	339.8597	31.77	3146.333	0.826	0.246		1.67	1.55	NO	7.4
	37 Total-pentafurans	339.8597	31.17	1913.626	0.826	0.150		1.15	1.55	YES	4.3
	37 Total-pentafurans	339.8597	30.99	2441.165	0.826	0.191		2.27	1.55	YES	6.6
	37 Total-pentafurans	339.8597	30.87	1577.613	0.826	0.123		2.07	1.55	YES	5.3

=

	7 123789-HxCDF	373.8208	37.92	452788.891	0.874	58.502	58.502	1.26	1.24	NO	1058.0
	5 234678-HxCDF	373.8208	36.81	520942.032	1.000	48.942	48.942	1.19	1.24	NO	1199.5
	38 Total-hexafurans	373.8208	36.10	2942.745	0.948	0.294		0.10	1.24	YES	2.5
	6 123678-HxCDF	373.8208	35.87	588824.907	0.951	50.900	50.900	1.19	1.24	NO	1331.4
	4 123478-HxCDF	373.8208	35.72	556921.016	0.967	54.677	54.677	1.20	1.24	NO	1310.4

>F

	9 1234789-HpCDF	407.7818	42.81	336346.297	1.085	51.305	51.305	0.97	1.05	NO	896.4
	8 1234678-HpCDF	407.7818	40.03	446120.485	1.072	56.162	56.162	0.98	1.05	NO	1379.6

ataset: P:\DIOXIN8290.PRO\130620ICV.qld
ast Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
inted: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

urans,TF,PP,PF,HF,HPF,OF

	35	Total-tetrafurans	303.9016	26.77	490.234	0.771	0.030		1.35	0.77	YES	7.6
	1	2378-TCDF	303.9016	26.53	171897.196	0.771	10.483	10.483	0.73	0.77	NO	964.7
	35	Total-tetrafurans	303.9016	25.63	1511.026	0.771	0.092		1.54	0.77	YES	12.3
	35	Total-tetrafurans	303.9016	24.05	368.851	0.771	0.022		0.69	0.77	NO	2.7
	2	12378-PeCDF	339.8597	30.69	679150.626	0.814	52.749	52.749	1.51	1.55	NO	1513.7
	3	23478-PeCDF	339.8597	32.04	629740.063	0.837	49.530	49.530	1.49	1.55	NO	1414.0
	37	Total-pentafurans	339.8597	31.77	3146.333	0.826	0.246		1.67	1.55	NO	7.4
	37	Total-pentafurans	339.8597	31.17	1913.626	0.826	0.150		1.15	1.55	YES	4.3
	37	Total-pentafurans	339.8597	30.99	2441.165	0.826	0.191		2.27	1.55	YES	6.6
	37	Total-pentafurans	339.8597	30.87	1577.613	0.826	0.123		2.07	1.55	YES	5.3
	7	123789-HxCDF	373.8208	37.92	452788.891	0.874	58.502	58.502	1.26	1.24	NO	1058.0
	5	234678-HxCDF	373.8208	36.81	520942.032	1.000	48.942	48.942	1.19	1.24	NO	1199.5
	38	Total-hexafurans	373.8208	36.10	2942.745	0.948	0.294		0.10	1.24	YES	2.5
	6	123678-HxCDF	373.8208	35.87	588824.907	0.951	50.900	50.900	1.19	1.24	NO	1331.4
	4	123478-HxCDF	373.8208	35.72	556921.016	0.967	54.677	54.677	1.20	1.24	NO	1310.4
	9	1234789-HpCDF	407.7818	42.81	336346.297	1.085	51.305	51.305	0.97	1.05	NO	896.4
	8	1234678-HpCDF	407.7818	40.03	446120.485	1.072	56.162	56.162	0.98	1.05	NO	1379.6
	10	OCDF	441.7428	48.29	629633.844	0.878	116.175	116....	0.87	0.89	NO	1481.4
	36	Total-penta1	339.8597	27.96	201.103		0.014		0.84	1.55	YES	2.1

)

	11	2378-TCDD	319.8965	27.17	164188.547	0.936	9.703	9.703	0.76	0.77	NO	662.2
	41	Total-tetradioxins	319.8965	26.51	3041.078	0.936	0.180		7.38	0.77	YES	21.9

)

	42	Total-pentadioxins	355.8546	30.68	1132.363	0.894	0.098		2.03	1.55	YES	5.8
	42	Total-pentadioxins	355.8546	32.67	557.934	0.894	0.048		0.63	1.55	YES	2.6
	12	12378-PeCDD	355.8546	32.29	543091.515	0.894	46.891	46.891	1.47	1.55	NO	2156.6

)

	43	Total-hexadioxins	389.8157	37.69	1274.852	0.835	0.152		14.33	1.24	YES	20.6
	15	123789-HxCDD	389.8157	37.49	464626.126	0.789	58.440	58.440	1.24	1.24	NO	2835.2
	43	Total-hexadioxins	389.8157	37.36	416.272	0.835	0.050		0.39	1.24	YES	3.8
	14	123678-HxCDD	389.8157	37.08	462369.922	0.818	56.248	56.248	1.19	1.24	NO	2686.9
	13	123478-HxCDD	389.8157	36.95	466934.297	0.898	51.561	51.561	1.21	1.24	NO	2877.3
	43	Total-hexadioxins	389.8157	35.86	990.018	0.835	0.118		2.93	1.24	YES	11.7

PD

	44	Total-heptadioxins	423.7766	42.12	2193.248	0.879	0.310		1.38	1.05	YES	13.8
	16	1234678-HpCDD	423.7766	41.89	366483.797	0.879	51.874	51.874	0.99	1.05	NO	1148.6
	44	Total-heptadioxins	423.7766	40.60	1989.886	0.879	0.282		0.74	1.05	YES	7.3

USA1 · 022992

: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

ioxins,TD,PD,HD,HPD,OD

	11 2378-TCDD	319.8965	27.17	164188.547	0.936	9.703	9.703	0.76	0.77	NO	662.2
	41 Total-tetradioxins	319.8965	26.51	3041.078	0.936	0.180		7.38	0.77	YES	21.9
	42 Total-pentadioxins	355.8546	30.68	1132.363	0.894	0.098		2.03	1.55	YES	5.8
	42 Total-pentadioxins	355.8546	32.67	557.934	0.894	0.048		0.63	1.55	YES	2.6
	12 12378-PeCDD	355.8546	32.29	543091.515	0.894	46.891	46.891	1.47	1.55	NO	2156.6
	43 Total-hexadioxins	389.8157	37.69	1274.852	0.835	0.152		14.33	1.24	YES	20.6
	15 123789-HxCDD	389.8157	37.49	464626.126	0.789	58.440	58.440	1.24	1.24	NO	2835.2
	43 Total-hexadioxins	389.8157	37.36	416.272	0.835	0.050		0.39	1.24	YES	3.8
	14 123678-HxCDD	389.8157	37.08	462369.922	0.818	56.248	56.248	1.19	1.24	NO	2686.9
	13 123478-HxCDD	389.8157	36.95	466934.297	0.898	51.561	51.561	1.21	1.24	NO	2877.3
	43 Total-hexadioxins	389.8157	35.86	990.018	0.835	0.118		2.93	1.24	YES	11.7
	44 Total-heptadioxins	423.7766	42.12	2193.248	0.879	0.310		1.38	1.05	YES	13.8
	16 1234678-HpCDD	423.7766	41.89	366483.797	0.879	51.874	51.874	0.99	1.05	NO	1148.6
	44 Total-heptadioxins	423.7766	40.60	1989.886	0.879	0.282		0.74	1.05	YES	7.3
	17 OCDD	457.7377	48.00	621102.376	0.875	114.929	114....	0.88	0.89	NO	1382.2

ataset: P:\DIOXIN8290.PRO\130620ICV.qld
ast Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
rinted: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

otalTEQ,Furans,Dioxins

	35 Total-tetrafurans	303.9016	26.77	490.234	0.771	0.030		1.35	0.77	YES	7.6
	1 2378-TCDF	303.9016	26.53	171897.196	0.771	10.483	10.483	0.73	0.77	NO	964.7
	35 Total-tetrafurans	303.9016	25.63	1511.026	0.771	0.092		1.54	0.77	YES	12.3
	35 Total-tetrafurans	303.9016	24.05	368.851	0.771	0.022		0.69	0.77	NO	2.7
	2 12378-PeCDF	339.8597	30.69	679150.626	0.814	52.749	52.749	1.51	1.55	NO	1513.7
	3 23478-PeCDF	339.8597	32.04	629740.063	0.837	49.530	49.530	1.49	1.55	NO	1414.0
	37 Total-pentafurans	339.8597	31.77	3146.333	0.826	0.246		1.67	1.55	NO	7.4
	37 Total-pentafurans	339.8597	31.17	1913.626	0.826	0.150		1.15	1.55	YES	4.3
	37 Total-pentafurans	339.8597	30.99	2441.165	0.826	0.191		2.27	1.55	YES	6.6
	37 Total-pentafurans	339.8597	30.87	1577.613	0.826	0.123		2.07	1.55	YES	5.3
	7 123789-HxCDF	373.8208	37.92	452788.891	0.874	58.502	58.502	1.26	1.24	NO	1058.0
	5 234678-HxCDF	373.8208	36.81	520942.032	1.000	48.942	48.942	1.19	1.24	NO	1199.5
	38 Total-hexafurans	373.8208	36.10	2942.745	0.948	0.294		0.10	1.24	YES	2.5
	6 123678-HxCDF	373.8208	35.87	588824.907	0.951	50.900	50.900	1.19	1.24	NO	1331.4
	4 123478-HxCDF	373.8208	35.72	556921.016	0.967	54.677	54.677	1.20	1.24	NO	1310.4
	9 1234789-HpCDF	407.7818	42.81	336346.297	1.085	51.305	51.305	0.97	1.05	NO	896.4
	8 1234678-HpCDF	407.7818	40.03	446120.485	1.072	56.162	56.162	0.98	1.05	NO	1379.6
	10 OCDF	441.7428	48.29	629633.844	0.878	116.175	116....	0.87	0.89	NO	1481.4
	36 Total-penta1	339.8597	27.96	201.103		0.014		0.84	1.55	YES	2.1
	11 2378-TCDD	319.8965	27.17	164188.547	0.936	9.703	9.703	0.76	0.77	NO	662.2
	41 Total-tetradioxins	319.8965	26.51	3041.078	0.936	0.180		7.38	0.77	YES	21.9
	42 Total-pentadioxins	355.8546	30.68	1132.363	0.894	0.098		2.03	1.55	YES	5.8
	42 Total-pentadioxins	355.8546	32.67	557.934	0.894	0.048		0.63	1.55	YES	2.6
	12 12378-PeCDD	355.8546	32.29	543091.515	0.894	46.891	46.891	1.47	1.55	NO	2156.6
	43 Total-hexadioxins	389.8157	37.69	1274.852	0.835	0.152		14.33	1.24	YES	20.6
	15 123789-HxCDD	389.8157	37.49	464626.126	0.789	58.440	58.440	1.24	1.24	NO	2835.2
	43 Total-hexadioxins	389.8157	37.36	416.272	0.835	0.050		0.39	1.24	YES	3.8
	14 123678-HxCDD	389.8157	37.08	462369.922	0.818	56.248	56.248	1.19	1.24	NO	2686.9
	13 123478-HxCDD	389.8157	36.95	466934.297	0.898	51.561	51.561	1.21	1.24	NO	2877.3
	43 Total-hexadioxins	389.8157	35.86	990.018	0.835	0.118		2.93	1.24	YES	11.7
	44 Total-heptadioxins	423.7766	42.12	2193.248	0.879	0.310		1.38	1.05	YES	13.8
	16 1234678-HpCDD	423.7766	41.89	366483.797	0.879	51.874	51.874	0.99	1.05	NO	1148.6
	44 Total-heptadioxins	423.7766	40.60	1989.886	0.879	0.282		0.74	1.05	YES	7.3
	17 OCDD	457.7377	48.00	621102.376	0.875	114.929	114....	0.88	0.89	NO	1382.2

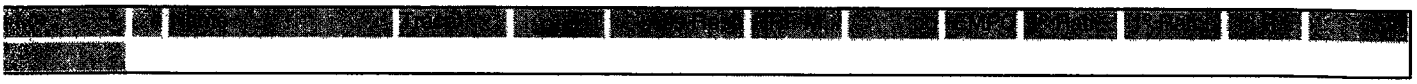
FK1

	48 FUNCTION1 PFK	330.9792	28.50	0.000							1.5
	48 FUNCTION1 PFK	330.9792	28.08	0.000							2.0
	48 FUNCTION1 PFK	330.9792	27.90	0.000							2.0
	48 FUNCTION1 PFK	330.9792	27.75	0.000							1.9
	48 FUNCTION1 PFK	330.9792	26.83	0.000							1.9
	48 FUNCTION1 PFK	330.9792	24.99	0.000							1.6
	48 FUNCTION1 PFK	330.9792	23.00	0.000							1.6
	48 FUNCTION1 PFK	330.9792	21.92	0.000							2.0
	48 FUNCTION1 PFK	330.9792	21.31	0.000							1.1

ataset: P:\DIOXIN8290.PRO\130620ICV.qld
ast Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
rinted: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

): ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

FK2



: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

FK3

	50 FUNCTION3 PFK	380.9760	34.18	0.000	0.000					0.5
	50 FUNCTION3 PFK	380.9760	34.05	0.000	0.000					1.7
	50 FUNCTION3 PFK	380.9760	33.90	0.000	0.000					2.4
	50 FUNCTION3 PFK	380.9760	33.82	0.000	0.000					2.6
	50 FUNCTION3 PFK	380.9760	33.73	0.000	0.000					2.5
	50 FUNCTION3 PFK	380.9760	35.33	0.000	0.000					1.5
	50 FUNCTION3 PFK	380.9760	35.28	0.000	0.000					0.4
	50 FUNCTION3 PFK	380.9760	35.21	0.000	0.000					1.4
	50 FUNCTION3 PFK	380.9760	35.18	0.000	0.000					1.4
	50 FUNCTION3 PFK	380.9760	35.12	0.000	0.000					0.9
	50 FUNCTION3 PFK	380.9760	35.07	0.000	0.000					0.5
	50 FUNCTION3 PFK	380.9760	35.02	0.000	0.000					2.4
	50 FUNCTION3 PFK	380.9760	34.97	0.000	0.000					1.3
	50 FUNCTION3 PFK	380.9760	34.76	0.000	0.000					0.9
	50 FUNCTION3 PFK	380.9760	34.69	0.000	0.000					1.4
	50 FUNCTION3 PFK	380.9760	34.61	0.000	0.000					1.4
	50 FUNCTION3 PFK	380.9760	34.58	0.000	0.000					1.2
	50 FUNCTION3 PFK	380.9760	34.43	0.000	0.000					0.7
	50 FUNCTION3 PFK	380.9760	34.37	0.000	0.000					0.4
	50 FUNCTION3 PFK	380.9760	34.27	0.000	0.000					0.6
	50 FUNCTION3 PFK	380.9760	34.24	0.000	0.000					0.8
	50 FUNCTION3 PFK	380.9760	36.77	0.000	0.000					0.7
	50 FUNCTION3 PFK	380.9760	36.67	0.000	0.000					1.0
	50 FUNCTION3 PFK	380.9760	36.62	0.000	0.000					0.8
	50 FUNCTION3 PFK	380.9760	36.57	0.000	0.000					1.3
	50 FUNCTION3 PFK	380.9760	36.52	0.000	0.000					0.7
	50 FUNCTION3 PFK	380.9760	36.28	0.000	0.000					1.1
	50 FUNCTION3 PFK	380.9760	36.23	0.000	0.000					1.1
	50 FUNCTION3 PFK	380.9760	36.07	0.000	0.000					1.4
	50 FUNCTION3 PFK	380.9760	35.90	0.000	0.000					0.7
	50 FUNCTION3 PFK	380.9760	35.87	0.000	0.000					0.7
	50 FUNCTION3 PFK	380.9760	35.83	0.000	0.000					0.5
	50 FUNCTION3 PFK	380.9760	35.70	0.000	0.000					1.2
	50 FUNCTION3 PFK	380.9760	35.59	0.000	0.000					2.2
	50 FUNCTION3 PFK	380.9760	35.55	0.000	0.000					2.7
	50 FUNCTION3 PFK	380.9760	35.49	0.000	0.000					1.2
	50 FUNCTION3 PFK	380.9760	35.44	0.000	0.000					0.9
	50 FUNCTION3 PFK	380.9760	38.45	0.000	0.000					1.9
	50 FUNCTION3 PFK	380.9760	38.29	0.000	0.000					0.6
	50 FUNCTION3 PFK	380.9760	38.16	0.000	0.000					0.7
	50 FUNCTION3 PFK	380.9760	38.12	0.000	0.000					1.2
	50 FUNCTION3 PFK	380.9760	38.08	0.000	0.000					1.6
	50 FUNCTION3 PFK	380.9760	37.89	0.000	0.000					1.1
	50 FUNCTION3 PFK	380.9760	37.86	0.000	0.000					1.3
	50 FUNCTION3 PFK	380.9760	37.81	0.000	0.000					2.5
	50 FUNCTION3 PFK	380.9760	37.71	0.000	0.000					2.2
	50 FUNCTION3 PFK	380.9760	37.64	0.000	0.000					1.7
	50 FUNCTION3 PFK	380.9760	37.56	0.000	0.000					1.1
	50 FUNCTION3 PFK	380.9760	37.52	0.000	0.000					1.2

ıtaset: P:\DIOXIN8290.PRO\130620ICV.qld
ıst Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
inted: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

FK3

	50 FUNCTION3 PFK	380.9760	37.28	0.000	0.000					1.0
	50 FUNCTION3 PFK	380.9760	37.03	0.000	0.000					1.5
	50 FUNCTION3 PFK	380.9760	36.96	0.000	0.000					1.5
	50 FUNCTION3 PFK	380.9760	36.85	0.000	0.000					0.6
	50 FUNCTION3 PFK	380.9760	38.95	0.000	0.000					1.2
	50 FUNCTION3 PFK	380.9760	38.79	0.000	0.000					1.4
	50 FUNCTION3 PFK	380.9760	38.71	0.000	0.000					1.5
	50 FUNCTION3 PFK	380.9760	38.67	0.000	0.000					2.3
	50 FUNCTION3 PFK	380.9760	38.58	0.000	0.000					2.0
	50 FUNCTION3 PFK	380.9760	38.49	0.000	0.000					0.9

ataset: P:\DIOXIN8290.PRO\130620ICV.qld
st Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
rinted: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

FK4

	51 FUNCTION4 PFK	430.9728	39.94	0.000							1.9
	51 FUNCTION4 PFK	430.9728	39.71	0.000							1.2
	51 FUNCTION4 PFK	430.9728	39.68	0.000							1.2
	51 FUNCTION4 PFK	430.9728	39.59	0.000							1.0
	51 FUNCTION4 PFK	430.9728	39.38	0.000							0.9
	51 FUNCTION4 PFK	430.9728	39.34	0.000							1.8
	51 FUNCTION4 PFK	430.9728	39.23	0.000							1.8
	51 FUNCTION4 PFK	430.9728	39.14	0.000							0.6
	51 FUNCTION4 PFK	430.9728	39.10	0.000							0.8
	51 FUNCTION4 PFK	430.9728	42.02	0.000							1.5
	51 FUNCTION4 PFK	430.9728	41.93	0.000							1.2
	51 FUNCTION4 PFK	430.9728	41.70	0.000							0.7
	51 FUNCTION4 PFK	430.9728	41.44	0.000							0.5
	51 FUNCTION4 PFK	430.9728	41.36	0.000							0.9
	51 FUNCTION4 PFK	430.9728	41.20	0.000							1.9
	51 FUNCTION4 PFK	430.9728	40.91	0.000							1.7
	51 FUNCTION4 PFK	430.9728	40.87	0.000							1.3
	51 FUNCTION4 PFK	430.9728	40.73	0.000							0.9
	51 FUNCTION4 PFK	430.9728	40.68	0.000							1.5
	51 FUNCTION4 PFK	430.9728	40.60	0.000							1.7
	51 FUNCTION4 PFK	430.9728	40.49	0.000							1.7
	51 FUNCTION4 PFK	430.9728	40.29	0.000							1.0
	51 FUNCTION4 PFK	430.9728	40.21	0.000							0.9
	51 FUNCTION4 PFK	430.9728	40.03	0.000							0.5
	51 FUNCTION4 PFK	430.9728	39.98	0.000							1.9
	51 FUNCTION4 PFK	430.9728	43.64	0.000							1.1
	51 FUNCTION4 PFK	430.9728	43.36	0.000							0.4
	51 FUNCTION4 PFK	430.9728	43.25	0.000							0.6
	51 FUNCTION4 PFK	430.9728	43.16	0.000							1.1
	51 FUNCTION4 PFK	430.9728	43.13	0.000							0.8
	51 FUNCTION4 PFK	430.9728	43.01	0.000							1.5
	51 FUNCTION4 PFK	430.9728	42.95	0.000							0.8
	51 FUNCTION4 PFK	430.9728	42.82	0.000							2.5
	51 FUNCTION4 PFK	430.9728	42.73	0.000							2.2
	51 FUNCTION4 PFK	430.9728	42.64	0.000							2.3
	51 FUNCTION4 PFK	430.9728	42.59	0.000							1.4
	51 FUNCTION4 PFK	430.9728	42.55	0.000							0.5
	51 FUNCTION4 PFK	430.9728	42.34	0.000							1.3
	51 FUNCTION4 PFK	430.9728	42.28	0.000							0.3
	51 FUNCTION4 PFK	430.9728	42.16	0.000							1.1
	51 FUNCTION4 PFK	430.9728	42.12	0.000							1.8
	51 FUNCTION4 PFK	430.9728	44.88	0.000							0.8
	51 FUNCTION4 PFK	430.9728	44.81	0.000							1.5
	51 FUNCTION4 PFK	430.9728	44.62	0.000							1.3
	51 FUNCTION4 PFK	430.9728	44.53	0.000							1.5
	51 FUNCTION4 PFK	430.9728	43.73	0.000							2.0

ıtaset: P:\DIOXIN8290.PRO\130620ICV.qld
st Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
inted: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

FK5

	52 FUNCTION5 PFK	480.9696	48.29	0.000							1.3
	52 FUNCTION5 PFK	480.9696	46.82	0.000							1.4
	52 FUNCTION5 PFK	480.9696	45.08	0.000							1.9

THERS1

THERS2

	54 FUNCTION1 HPCD...	409.7974	23.75	0.000	0.000						1.8
	54 FUNCTION1 HPCD...	409.7974	23.22	0.000	0.000						2.3
	54 FUNCTION1 HPCD...	409.7974	22.97	0.000	0.000						1.7
	54 FUNCTION1 HPCD...	409.7974	22.76	0.000	0.000						2.3
	54 FUNCTION1 HPCD...	409.7974	21.31	0.000	0.000						1.9
	54 FUNCTION1 HPCD...	409.7974	28.69	0.000	0.000						2.1
	54 FUNCTION1 HPCD...	409.7974	28.41	0.000	0.000						3.3
	54 FUNCTION1 HPCD...	409.7974	27.33	0.000	0.000						1.4
	54 FUNCTION1 HPCD...	409.7974	26.80	0.000	0.000						2.4
	54 FUNCTION1 HPCD...	409.7974	26.72	0.000	0.000						2.4
	54 FUNCTION1 HPCD...	409.7974	25.45	0.000	0.000						1.6
	54 FUNCTION1 HPCD...	409.7974	25.17	0.000	0.000						1.1
	54 FUNCTION1 HPCD...	409.7974	24.15	0.000	0.000						2.7

THERS3

	55 FUNCTION2 HPCD...	409.7974	32.67	0.000	0.000						1.8
	55 FUNCTION2 HPCD...	409.7974	32.29	0.000	0.000						3.2
	55 FUNCTION2 HPCD...	409.7974	31.89	0.000	0.000						1.5
	55 FUNCTION2 HPCD...	409.7974	29.67	0.000	0.000						2.0
	55 FUNCTION2 HPCD...	409.7974	29.50	0.000	0.000						1.6
	55 FUNCTION2 HPCD...	409.7974	29.44	0.000	0.000						2.1
	55 FUNCTION2 HPCD...	409.7974	29.10	0.000	0.000						4.2
	55 FUNCTION2 HPCD...	409.7974	33.29	0.000	0.000						2.7

THERS4

	56 FUNCTION3 OCDPE	445.7555	38.45	0.000	0.000						4.0
	56 FUNCTION3 OCDPE	445.7555	36.85	0.000	0.000						6.0

THERS5

	57 FUNCTION4 NCDPE	479.7165	43.97	0.000	0.000						3.4

ataset: P:\DIOXIN8290.PRO\130620ICV.qld
ast Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
rinted: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

): ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

THERS6

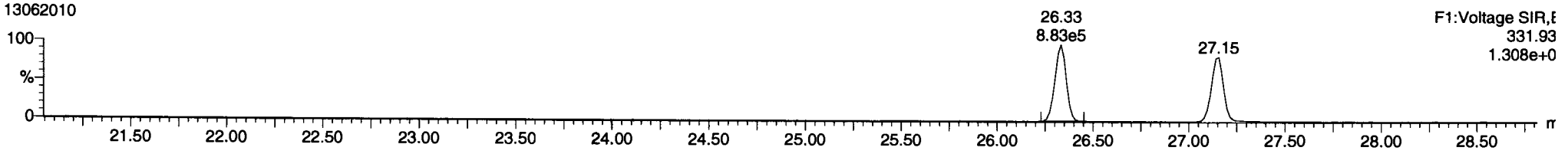
	58 FUNCTION5 DCDPE	513.6775	47.00	0.000	0.000					5.1

Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

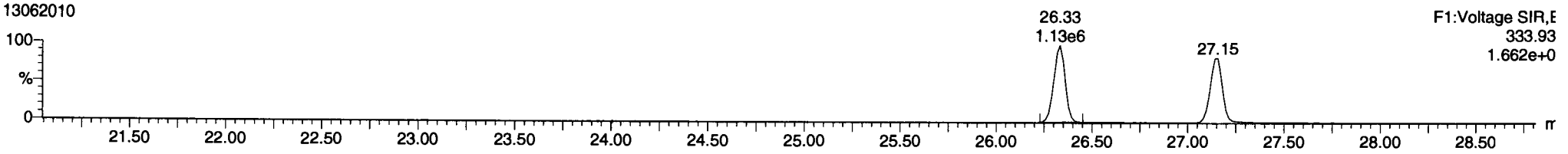
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: P:\DIOXIN8290.PRO\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

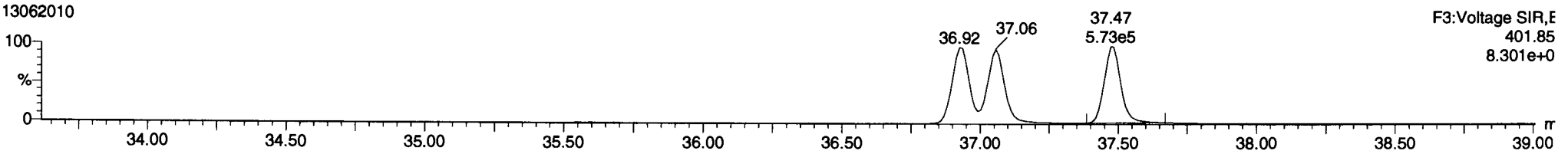
13C-1234-TCDD



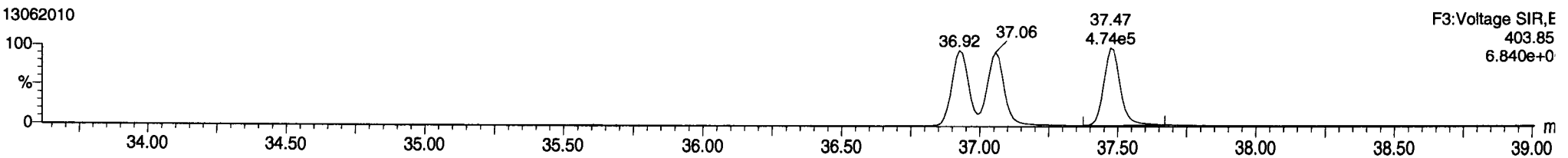
13C-1234-TCDD



13C-123789-HxCDD



13C-123789-HxCDD

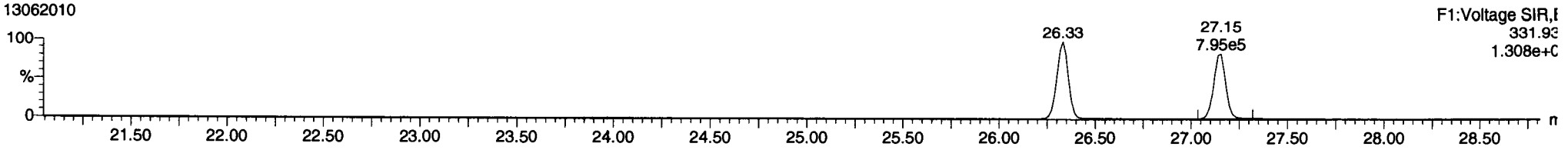


Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

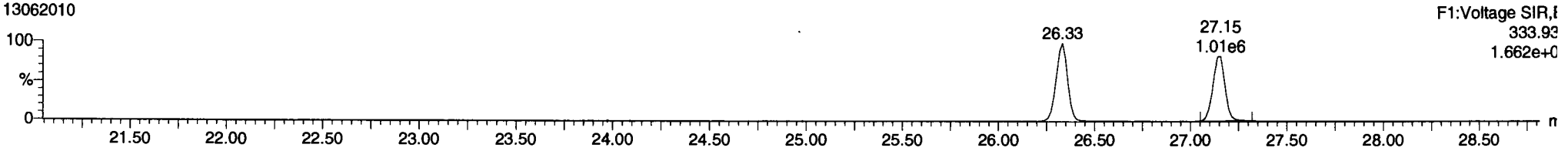
13C-2378-TCDD

13062010



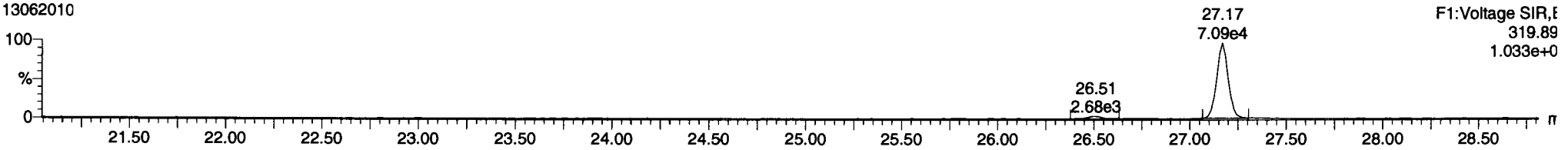
13C-2378-TCDD

13062010



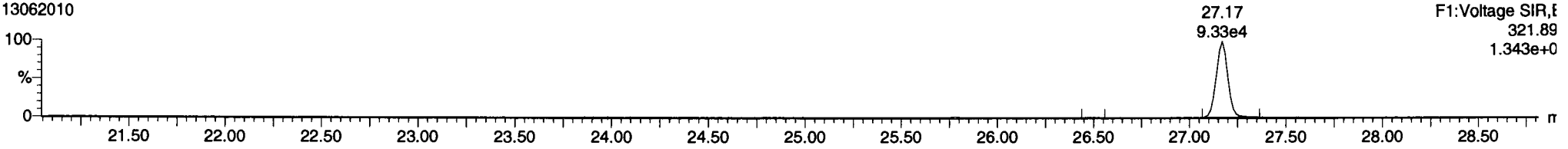
Total-tetradioxins

13062010



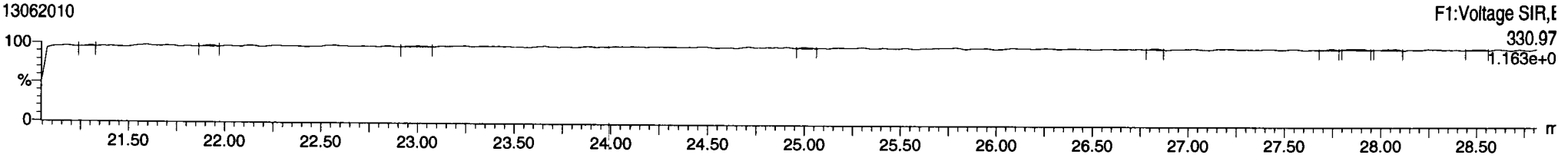
Total-tetradioxins

13062010



FUNCTION1 PFK

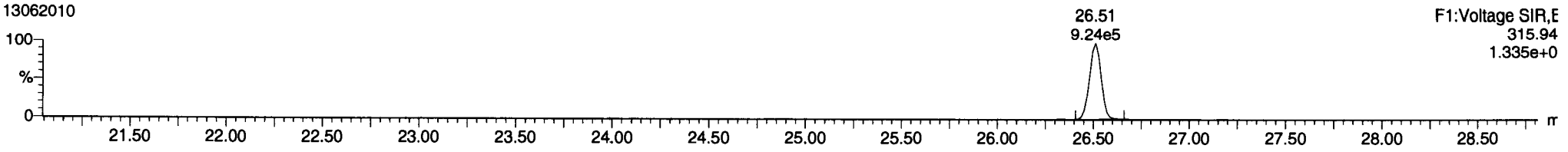
13062010



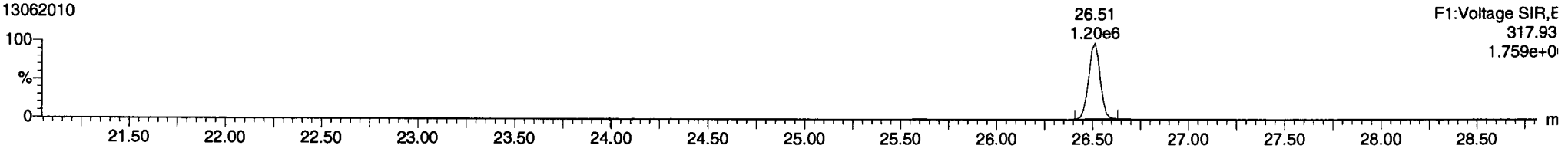
Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

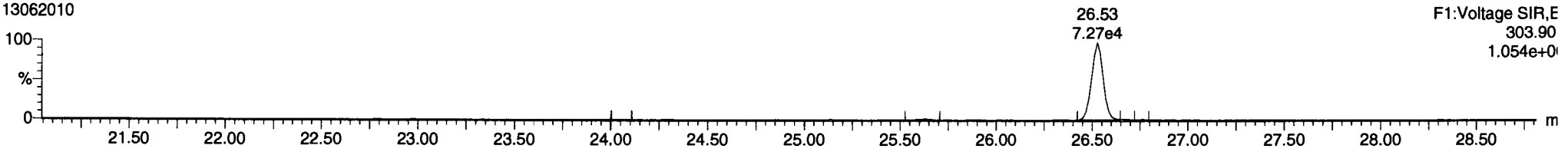
13C-2378-TCDF



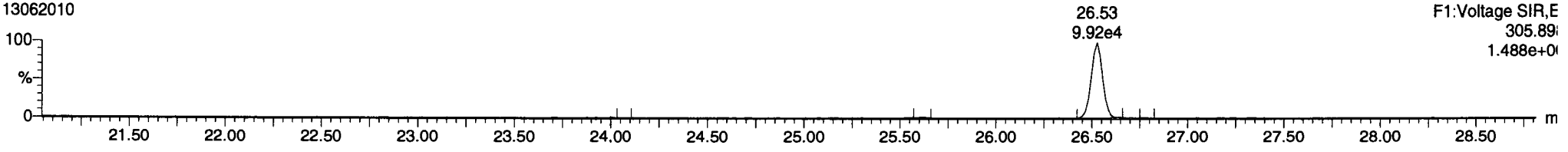
13C-2378-TCDF



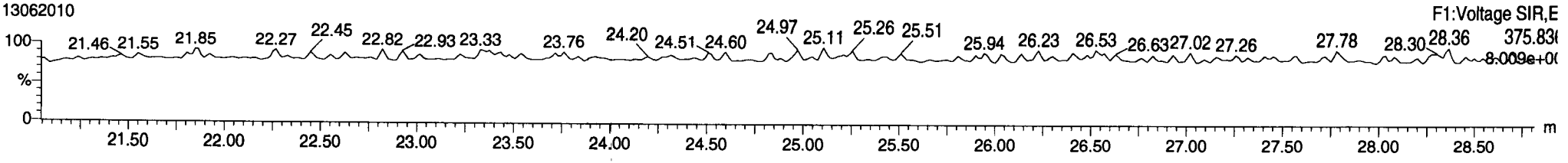
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE

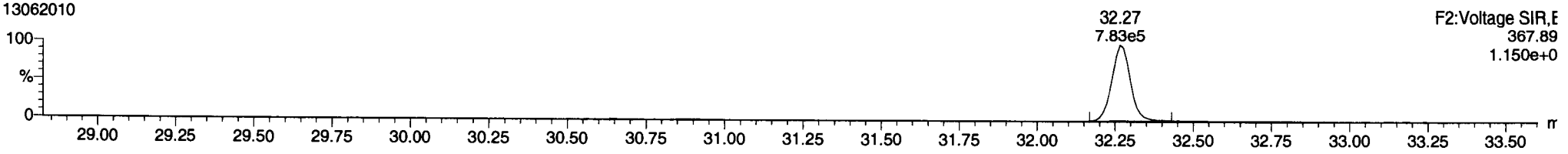


Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

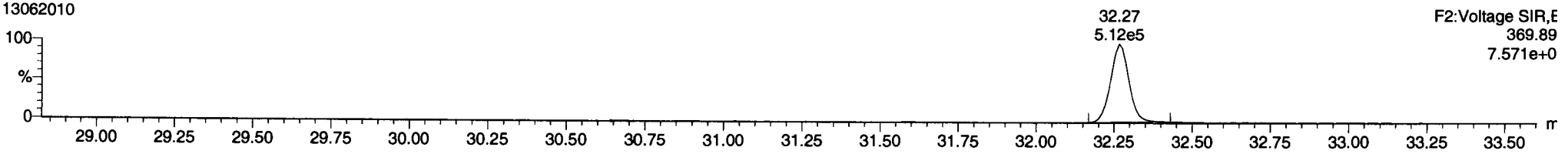
13C-12378-PeCDD

13062010



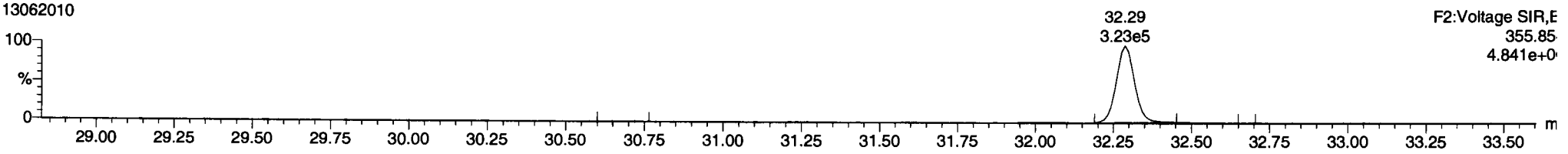
13C-12378-PeCDD

13062010



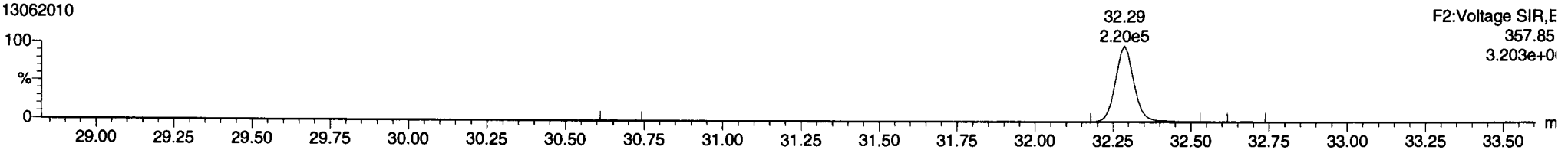
Total-pentadioxins

13062010



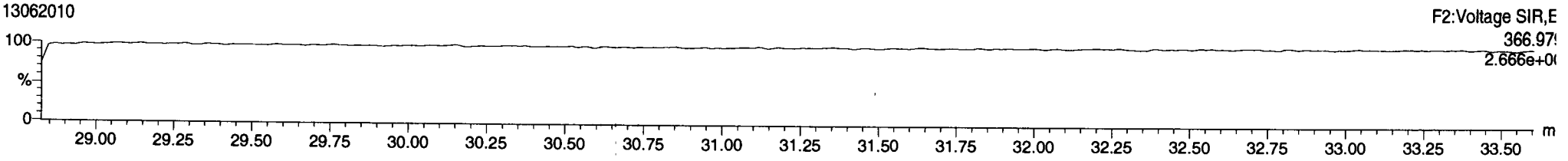
Total-pentadioxins

13062010



FUNCTION2 PFK

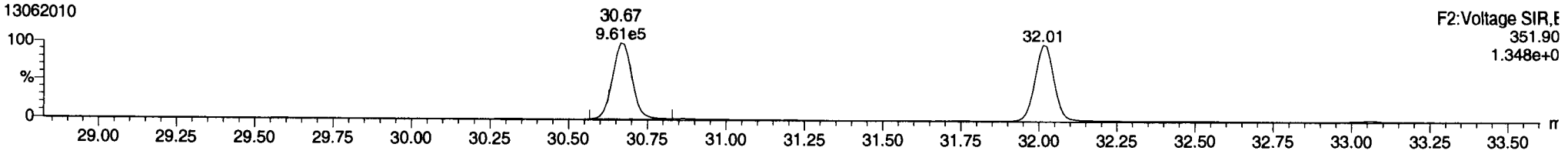
13062010



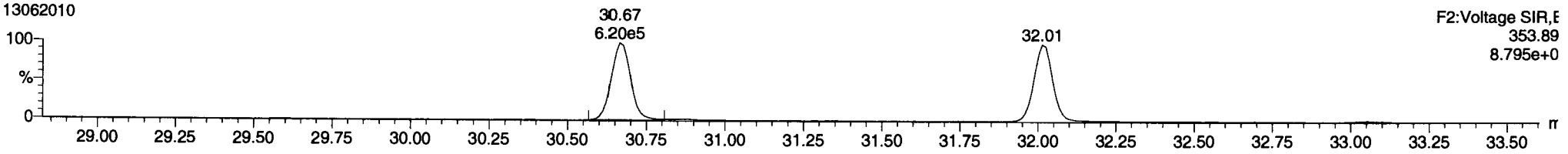
Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

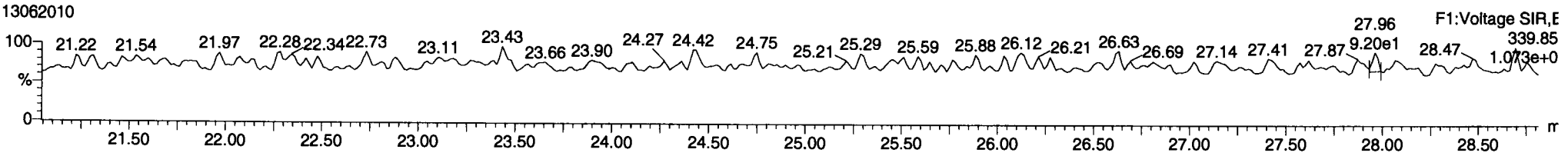
13C-12378-PeCDF



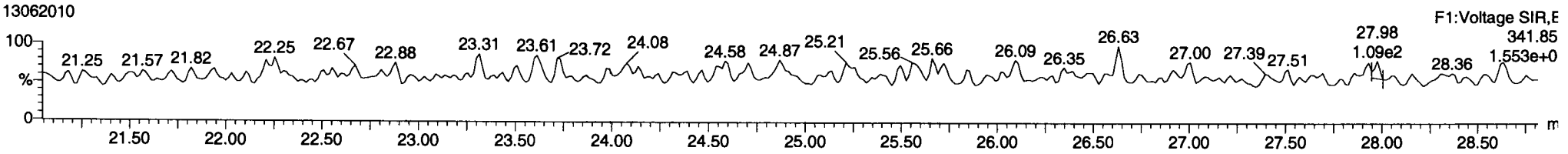
13C-12378-PeCDF



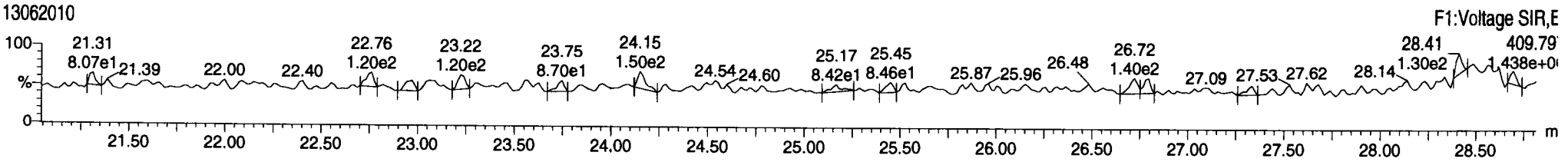
Total-penta1



Total-penta1



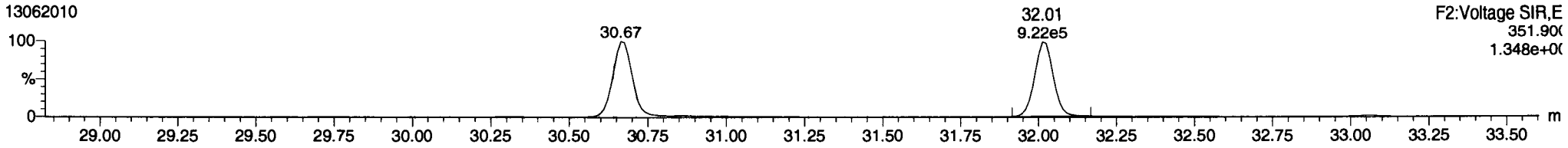
FUNCTION1 HPCDPE



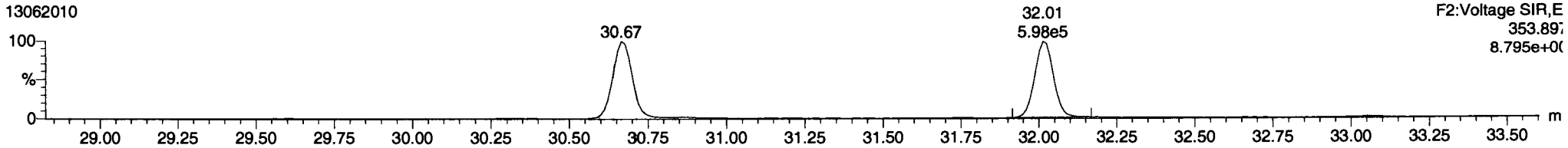
Dataset: P:\DIOXIN6290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

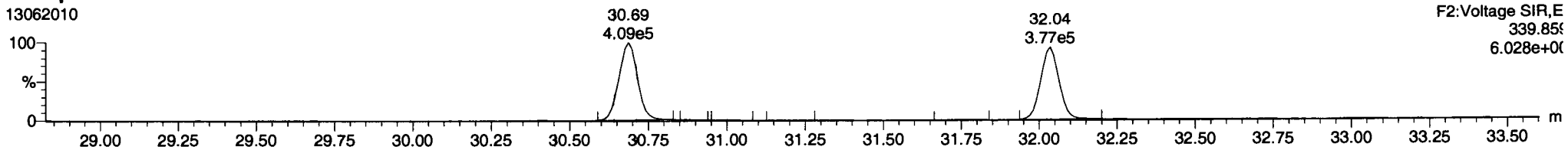
13C-23478-PeCDF



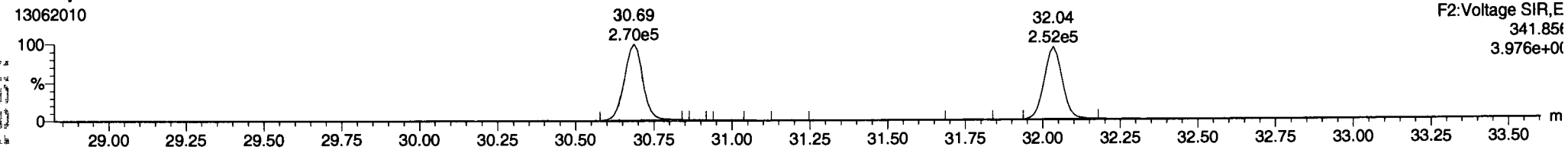
13C-23478-PeCDF



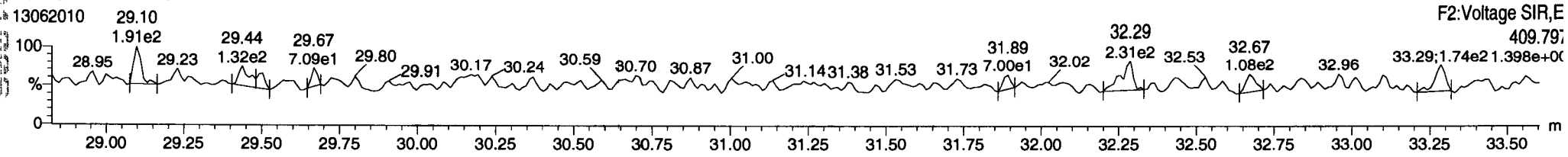
Total-pentafurans



Total-pentafurans



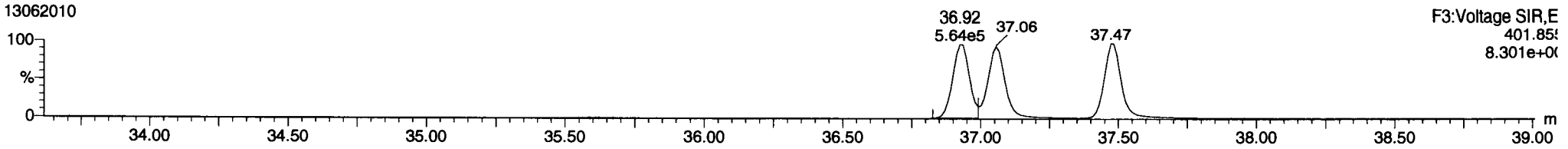
FUNCTION2 HPCDPE



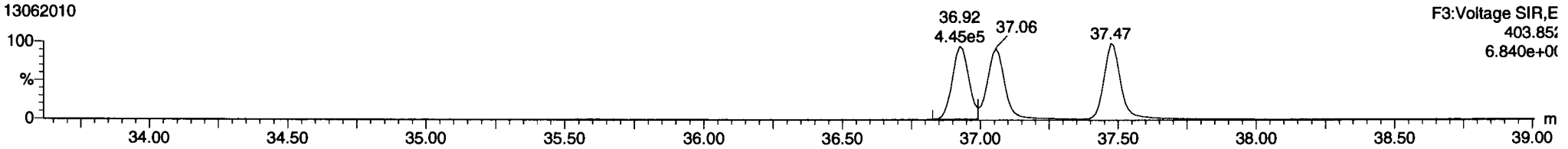
Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

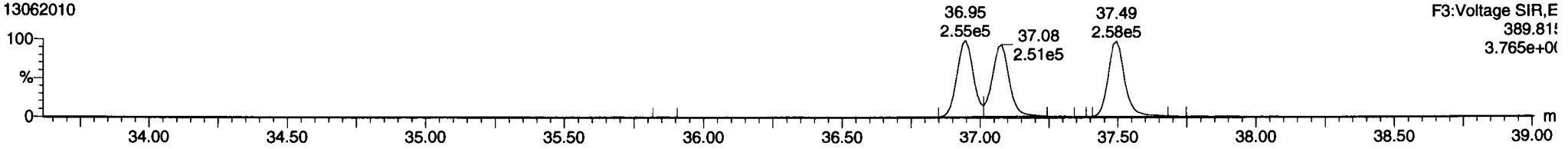
13C-123478-HxCDD



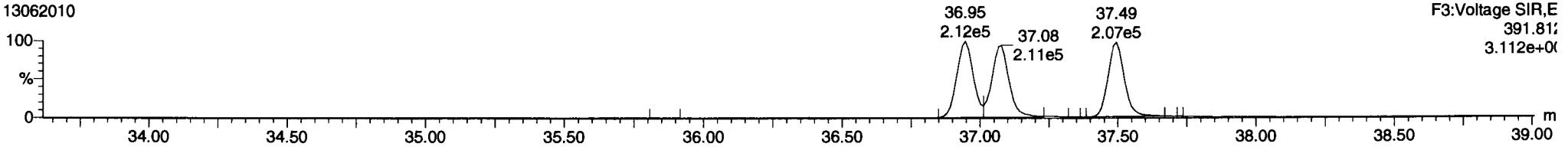
13C-123478-HxCDD



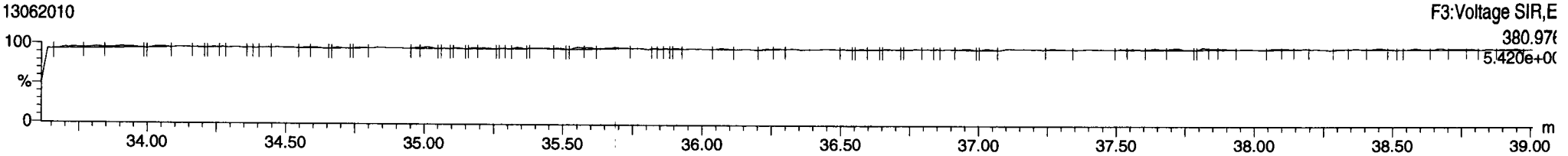
Total-hexadioxins



Total-hexadioxins



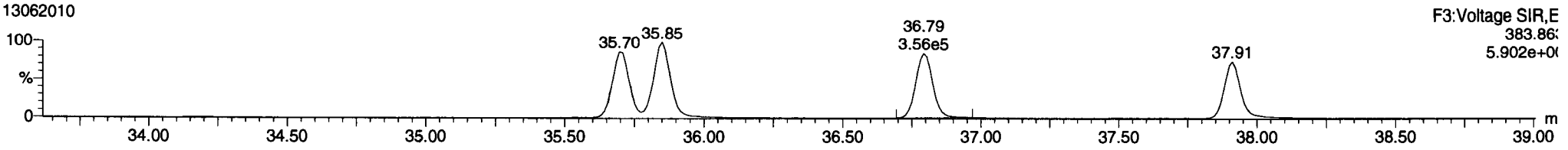
FUNCTION3 PFK



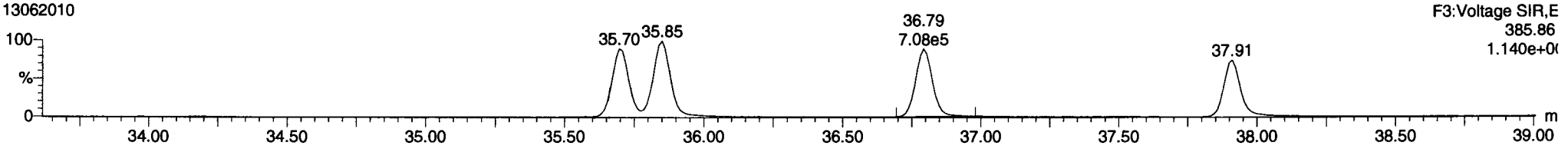
Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

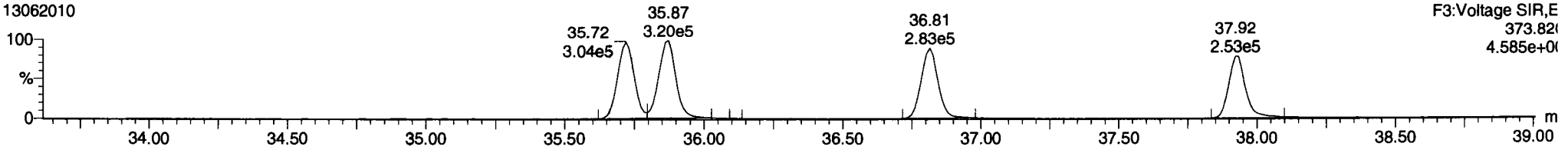
13C-234678-HxCDF



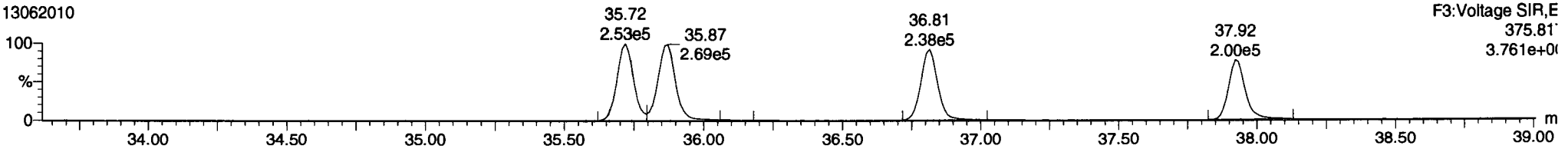
13C-234678-HxCDF



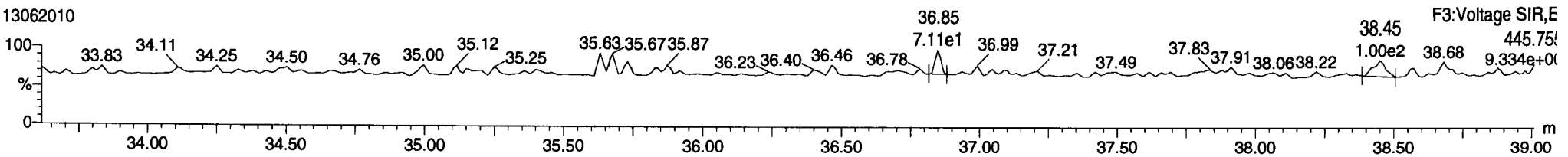
Total-hexafurans



Total-hexafurans



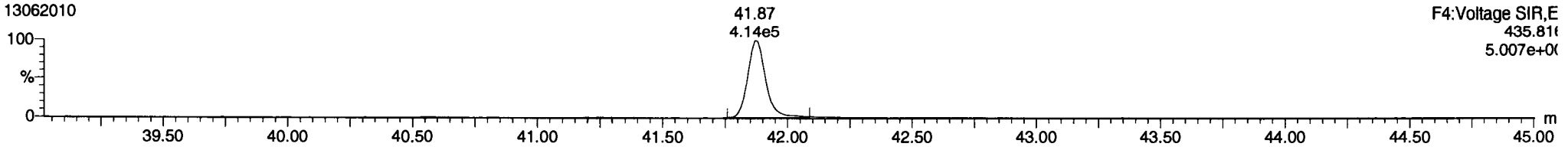
FUNCTION3 OCDPE



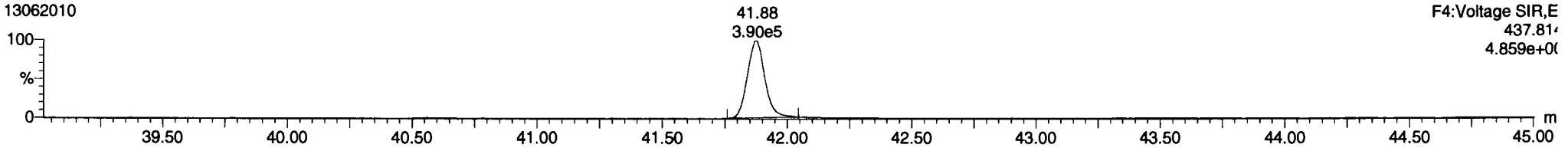
Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

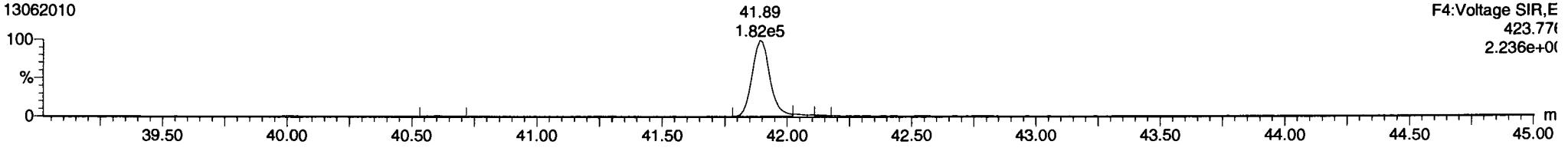
13C-1234678-HpCDD



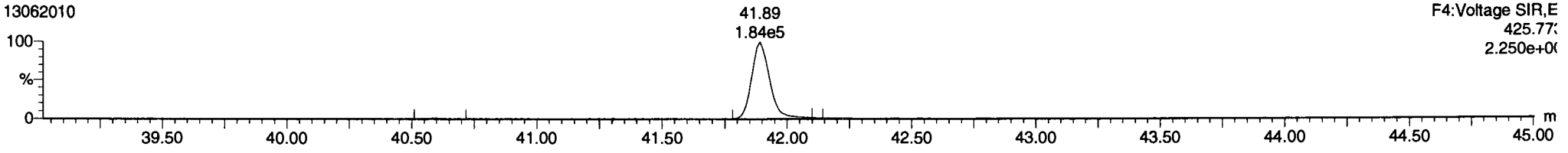
13C-1234678-HpCDD



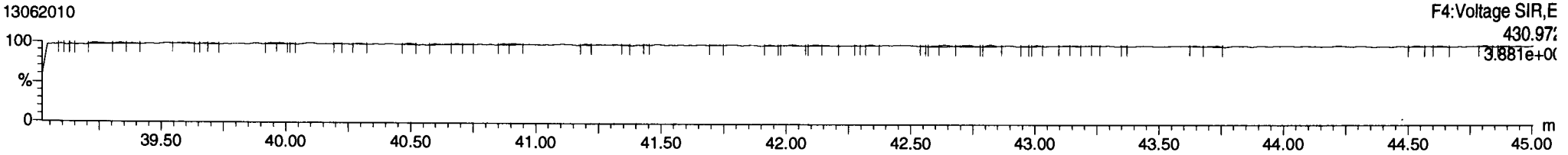
Total-heptadioxins



Total-heptadioxins



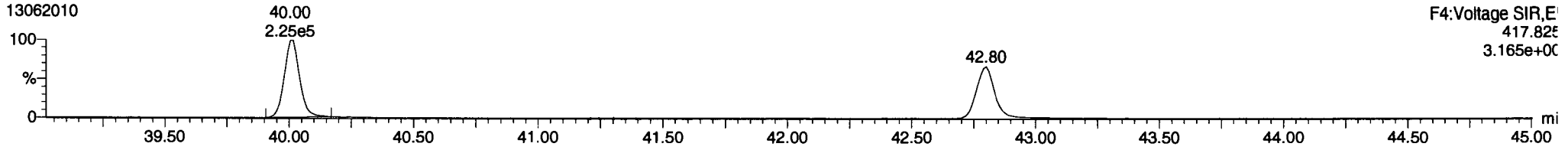
FUNCTION4 PFK



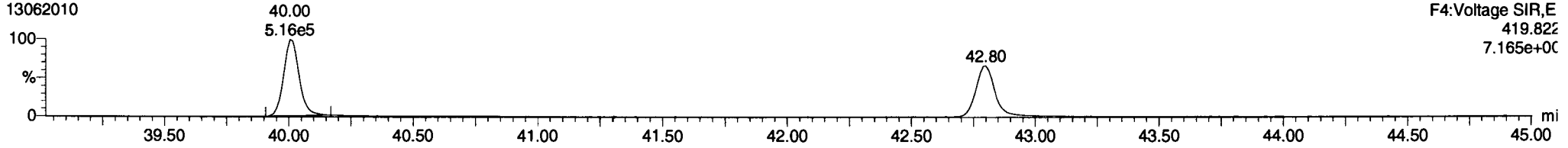
Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

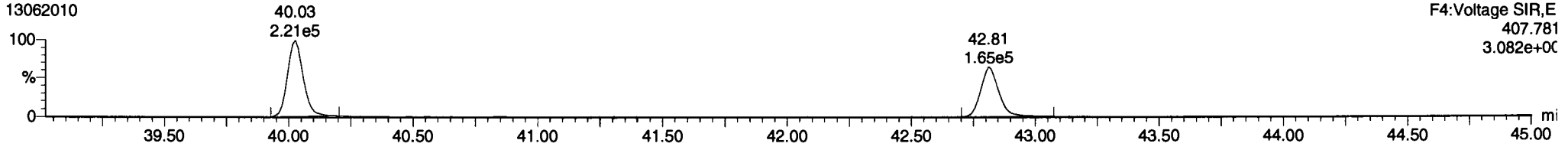
13C-1234678-HpCDF



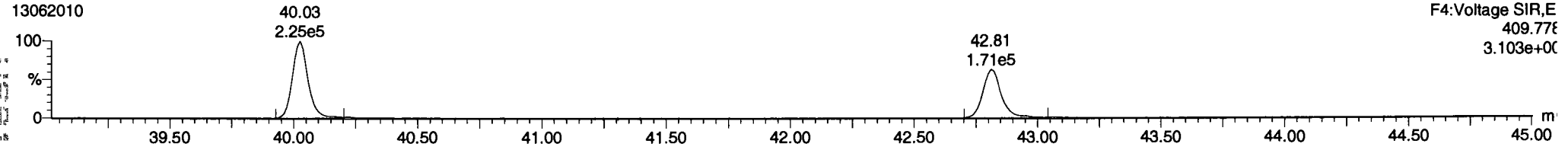
13C-1234678-HpCDF



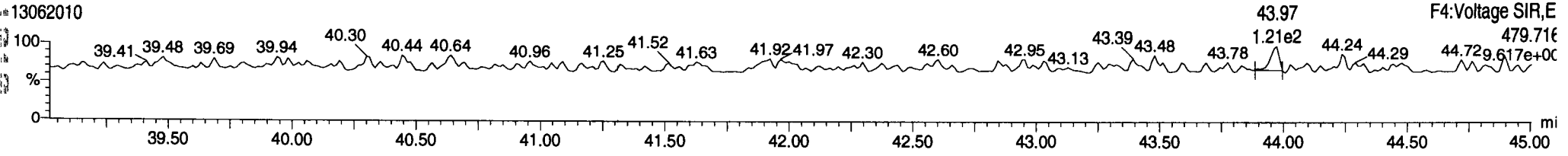
Total-heptafurans



Total-heptafurans



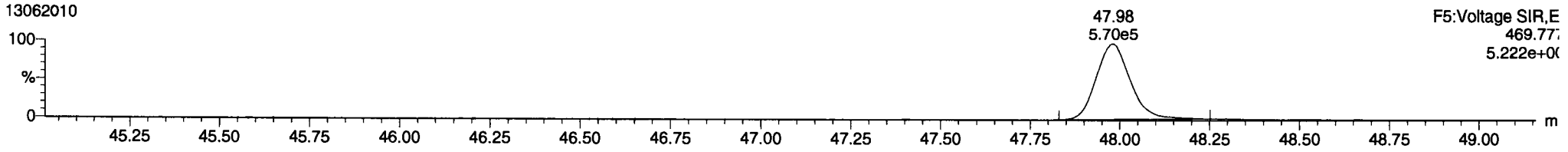
FUNCTION4 NCDPE



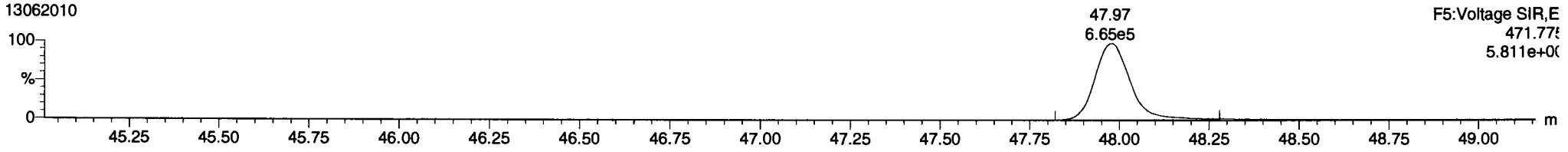
Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

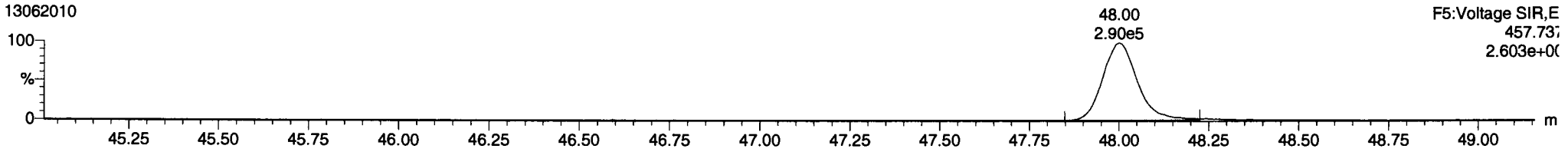
13C-OCDD



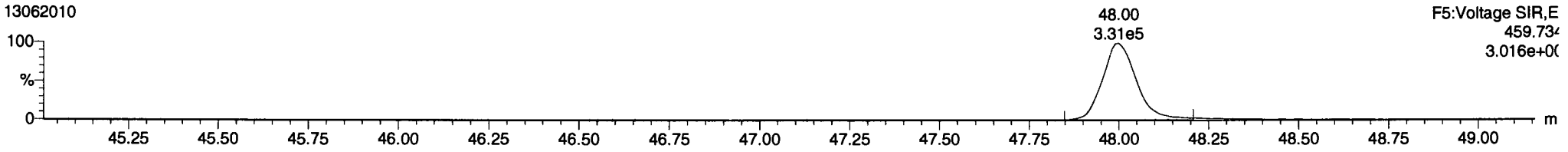
13C-OCDD



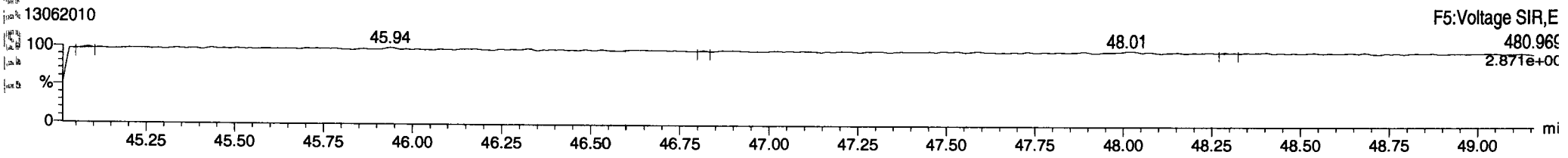
OCDD



OCDD



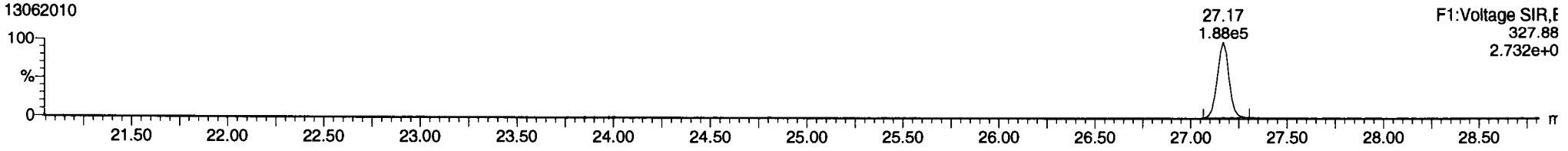
FUNCTION5 PFK



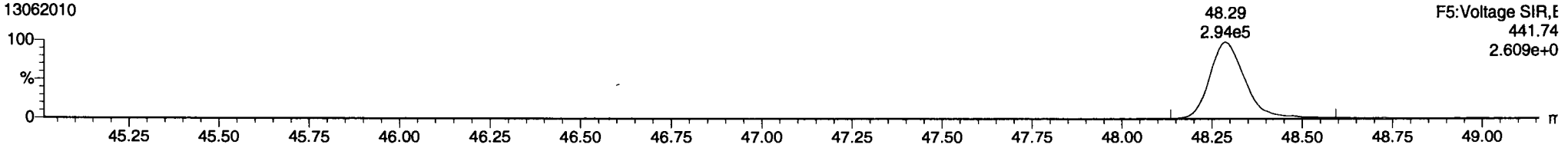
Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

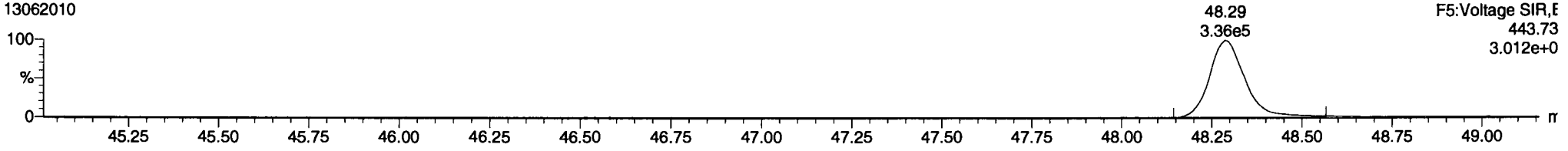
37CL-2378-TCDD



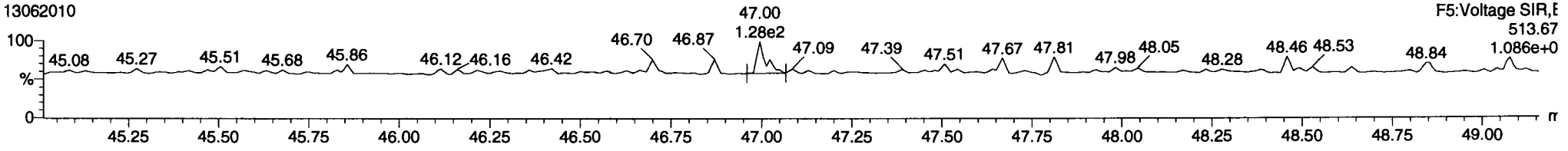
OCDF



OCDF



FUNCTION5 DCDPE



Dioxin Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WS91

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

HR-GC/MS Analyst Notes / Data Review Checklist

ARI Work Order: US91, WT81 Client ID: SASC

METHOD: **1613B** (Dioxins) **8290A** (Dioxins)

Instrument: **AutoSpec01**

Curve Date: 6/20/13 Analysis Start Date: 6/24/13

	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) 0000
Special Analysis Request?	Y / N / ____	Duplicate Sample RPD ≤ 25%?	NA / ____

Detail problems, corrective actions and/or other pertinent information below:

- HpF high in OPR
- Cleanup std relatively low in WT81 samples, but w/in Limits.

WT81 Difficulties during extract work-up with extra manipulative efforts to effect Acid clean-up. Leads to lower than expected labeled recovries.

(Review 1)Analyst: [signature] **Date:** 6/26/13

(Review 2)Reviewer: [signature] **Date:** 6/26

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 6/24/13 Analysis: Dioxins Analyst: MH

GC Program: 8290C Column No: F7822 Column Type: RTX Dioxin 2

Inj Vol: 1ul Instrument Tune (IPR): Jun1713_1-5 Detector Voltage: 350

Resolution Check Files: 09:53, 21:38, 08:17 Curve Date: 6/20/13

IS/SS	Ical/Ccal	LCS/ICV
F8144	F7708 1997-2	

1	24-Jun-13	09:56:39	13062402	CS3
2	24-Jun-13	10:47:02	13062403	ISC01
3	24-Jun-13	11:50:52	13062404	DFBLK17
4	24-Jun-13	12:48:15	13062405	WS91MBS
5	24-Jun-13	13:38:37	13062406	WS91OPR
6	24-Jun-13	14:33:58	13062407	WS91A
7	24-Jun-13	15:24:28	13062408	WT36A
8	24-Jun-13	16:16:48	13062409	WT81A
9	24-Jun-13	17:09:02	13062410	WT81B
10	24-Jun-13	18:01:22	13062411	WT81C
11	24-Jun-13	18:53:37	13062412	DFBLK19
12	24-Jun-13	19:46:03	13062413	DLCS19
13	24-Jun-13	20:38:11	13062414	CS3
14	24-Jun-13	21:38:44	13062415	ISC02
15	24-Jun-13	22:34:36	13062416	E41J6
16	24-Jun-13	23:26:43	13062417	E41J7
17	25-Jun-13	00:19:03	13062418	E41J8
18	25-Jun-13	01:11:17	13062419	E41J9
19	25-Jun-13	02:03:36	13062420	E41K0
20	25-Jun-13	02:55:50	13062421	E41K1
21	25-Jun-13	03:48:12	13062422	E41K2
22	25-Jun-13	04:40:26	13062423	E41K3
23	25-Jun-13	05:32:45	13062424	E41K5
24	25-Jun-13	06:24:52	13062425	E41K6
25	25-Jun-13	07:17:19	13062426	CS3
26	25-Jun-13	08:17:47	13062427	ISC03

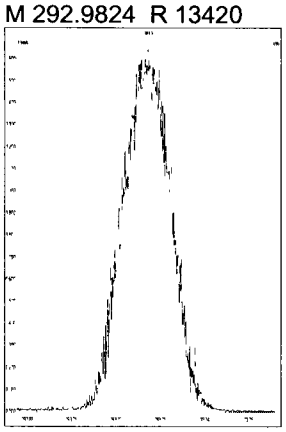
WT72

MH 6/25/13

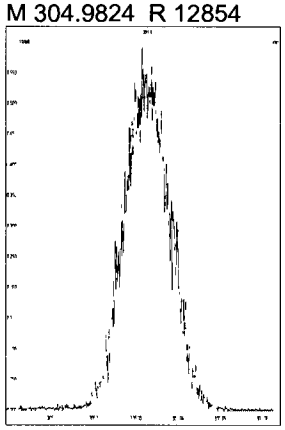
Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Printed: Monday, June 24, 2013 09:53:51 Pacific Daylight Time

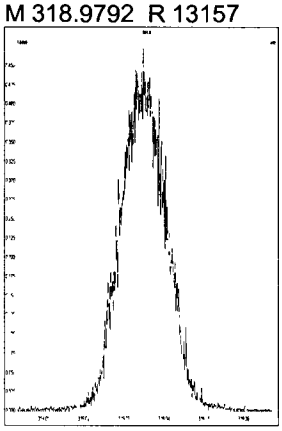
M 292.9824 R 13420



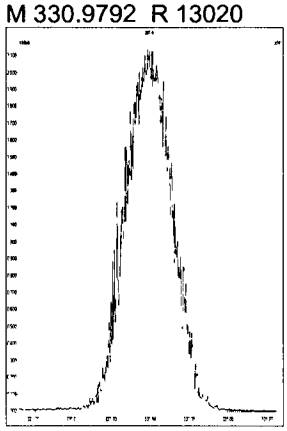
M 304.9824 R 12854



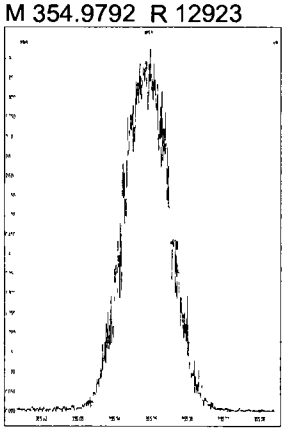
M 318.9792 R 13157



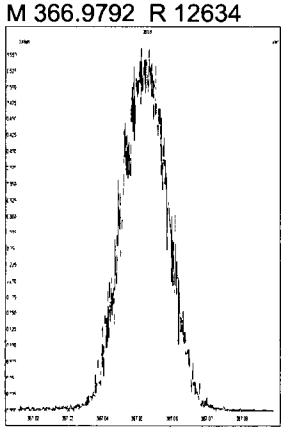
M 330.9792 R 13020



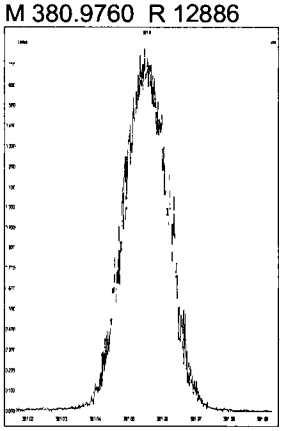
M 354.9792 R 12923



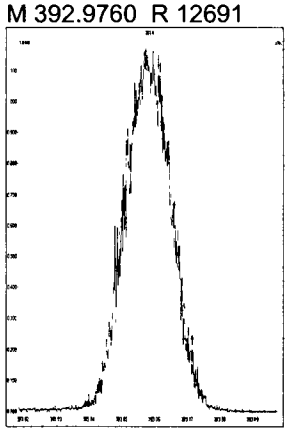
M 366.9792 R 12634



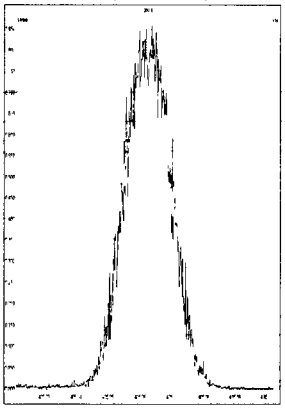
M 380.9760 R 12886



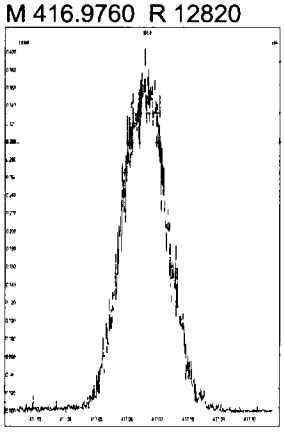
M 392.9760 R 12691



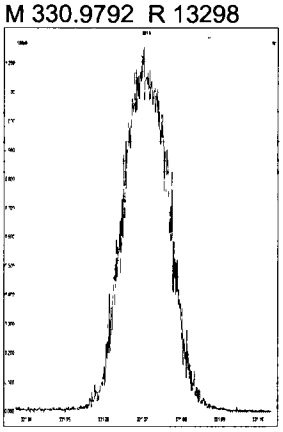
M 404.9760 R 12788



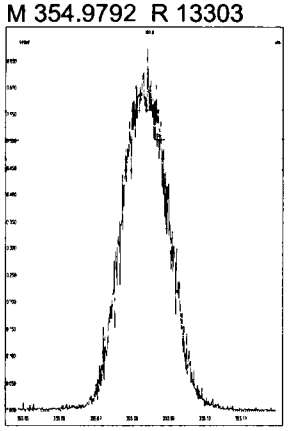
M 416.9760 R 12820



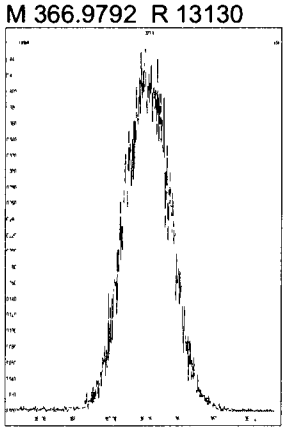
M 330.9792 R 13298



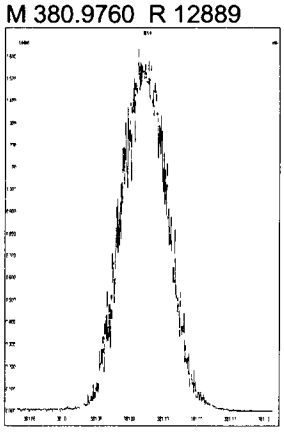
M 354.9792 R 13303



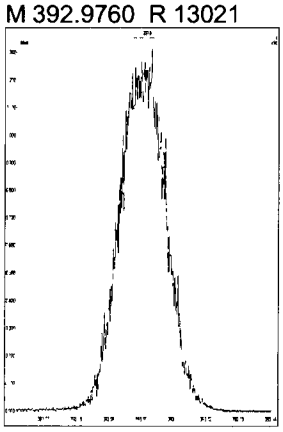
M 366.9792 R 13130



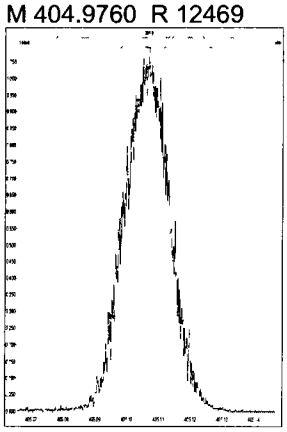
M 380.9760 R 12889



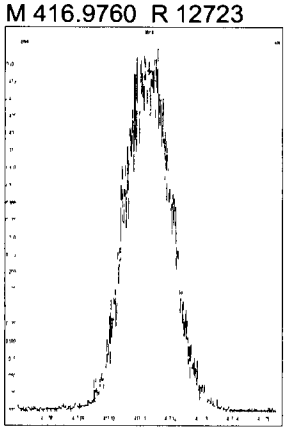
M 392.9760 R 13021



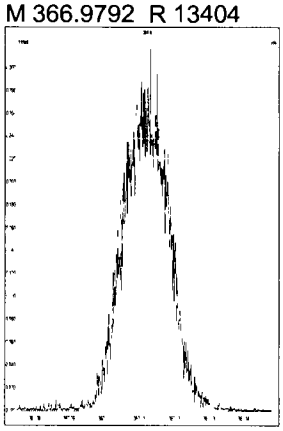
M 404.9760 R 12469



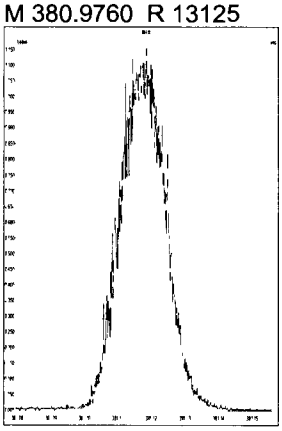
M 416.9760 R 12723



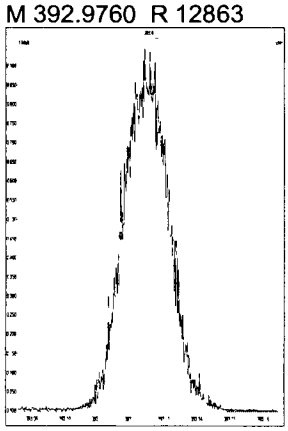
M 366.9792 R 13404



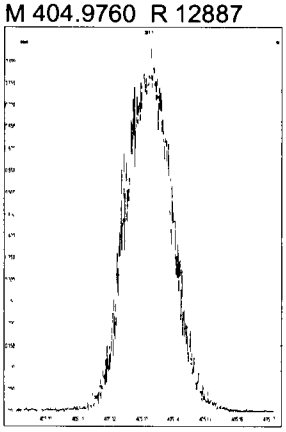
M 380.9760 R 13125



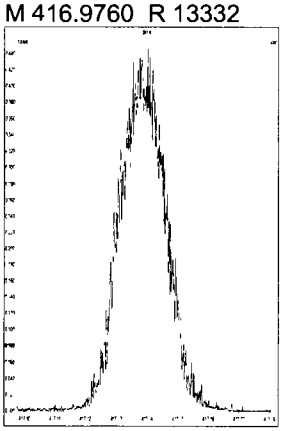
M 392.9760 R 12863



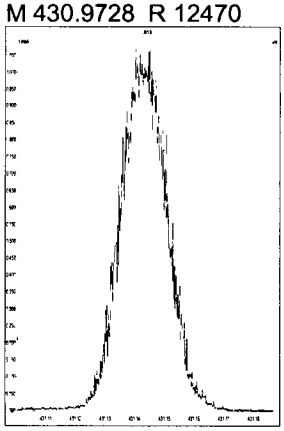
M 404.9760 R 12887



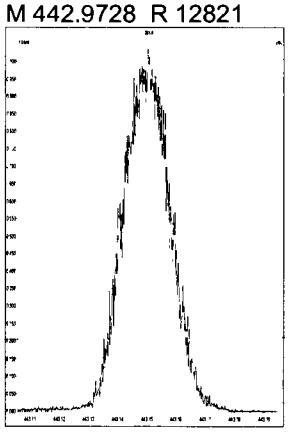
M 416.9760 R 13332



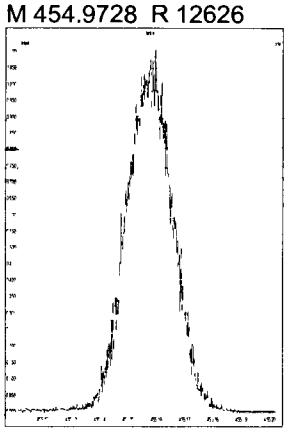
M 430.9728 R 12470



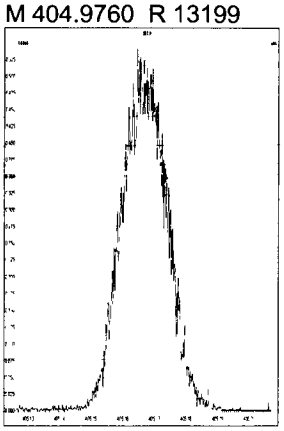
M 442.9728 R 12821



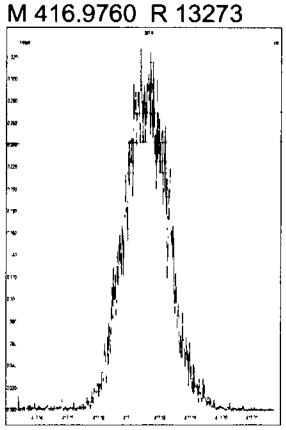
M 454.9728 R 12626



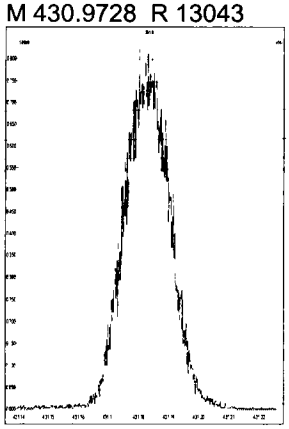
M 404.9760 R 13199



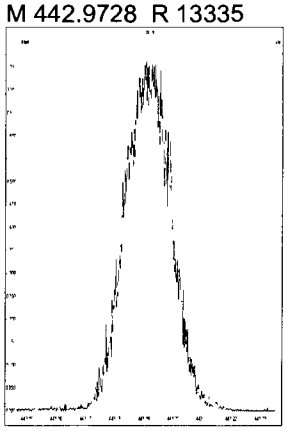
M 416.9760 R 13273



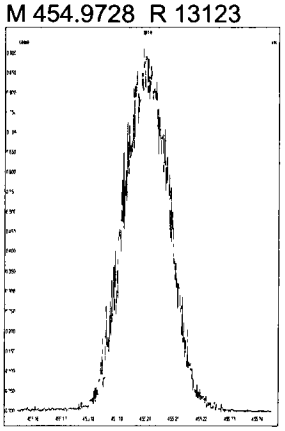
M 430.9728 R 13043



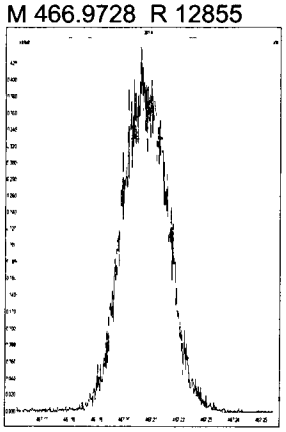
M 442.9728 R 13335



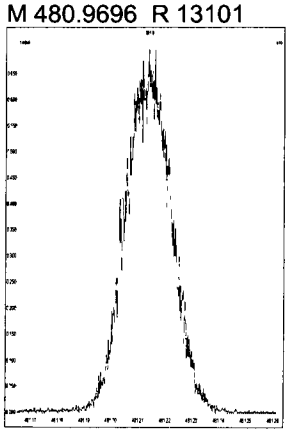
M 454.9728 R 13123



M 466.9728 R 12855



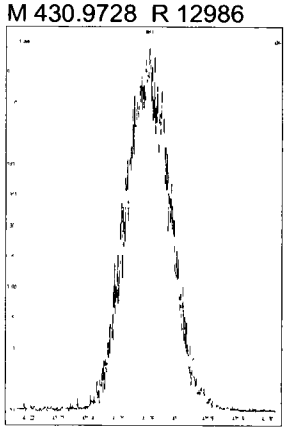
M 480.9696 R 13101



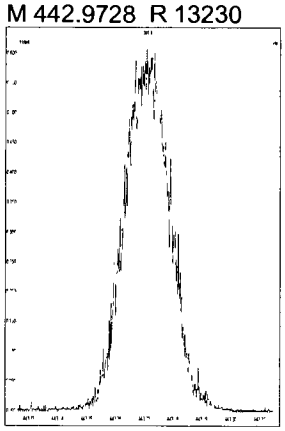
WS91 : 01017

Printed: Monday, June 24, 2013 09:53:51 Pacific Daylight Time

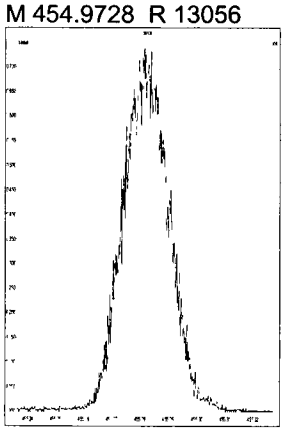
M 430.9728 R 12986



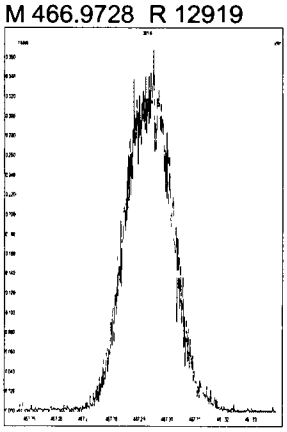
M 442.9728 R 13230



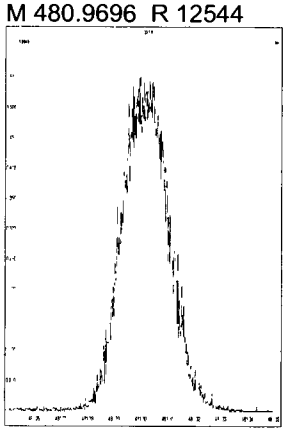
M 454.9728 R 13056



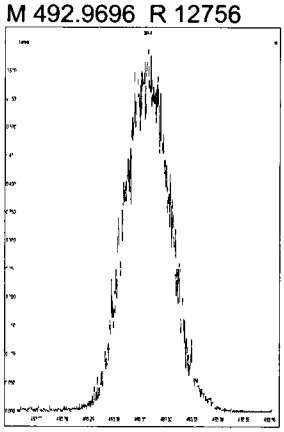
M 466.9728 R 12919



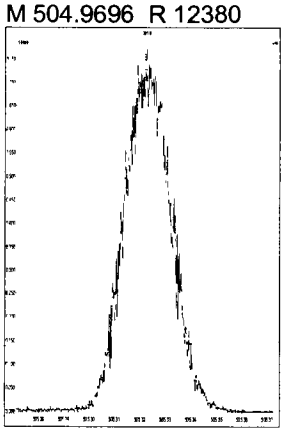
M 480.9696 R 12544



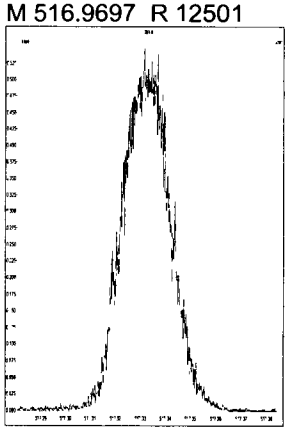
M 492.9696 R 12756

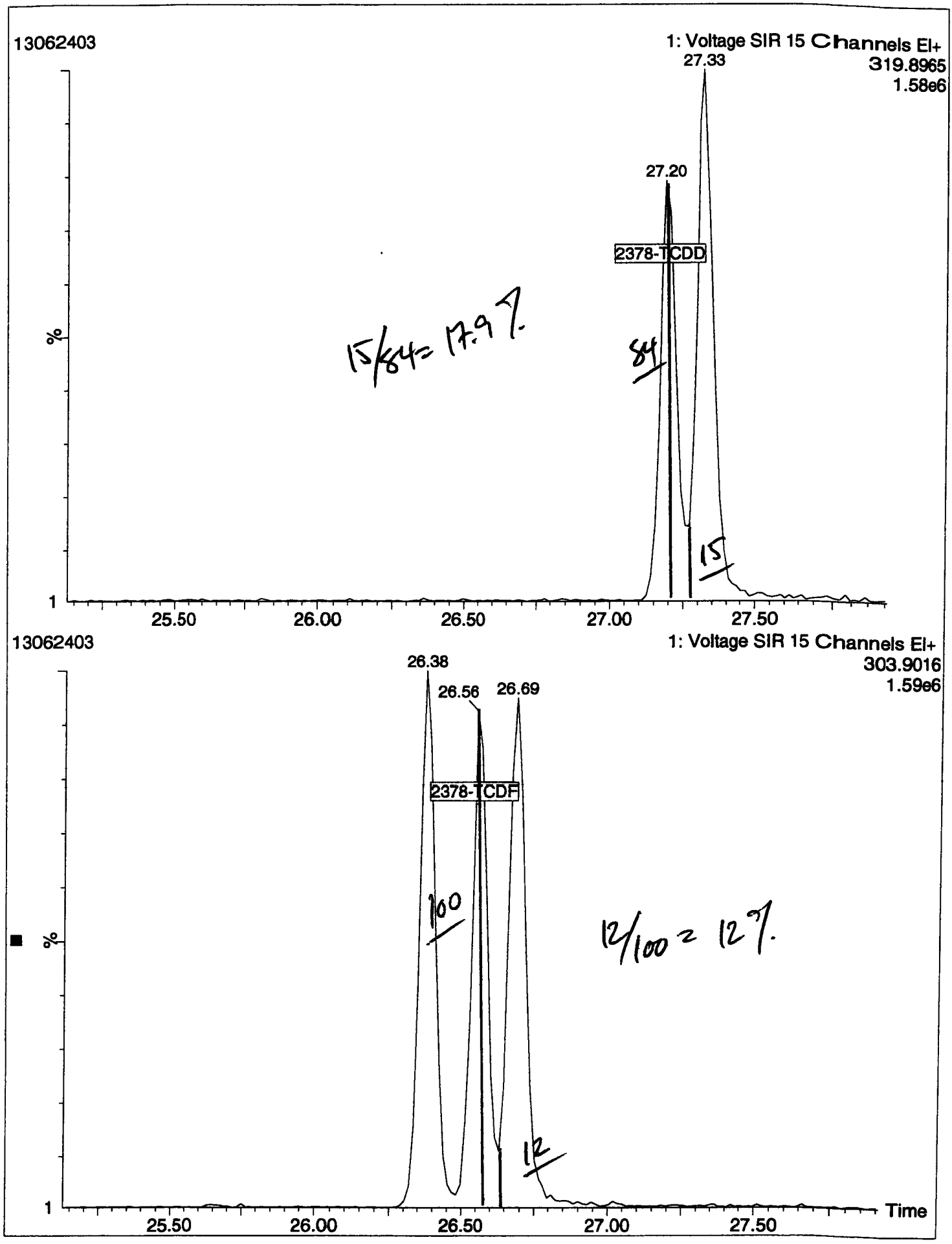


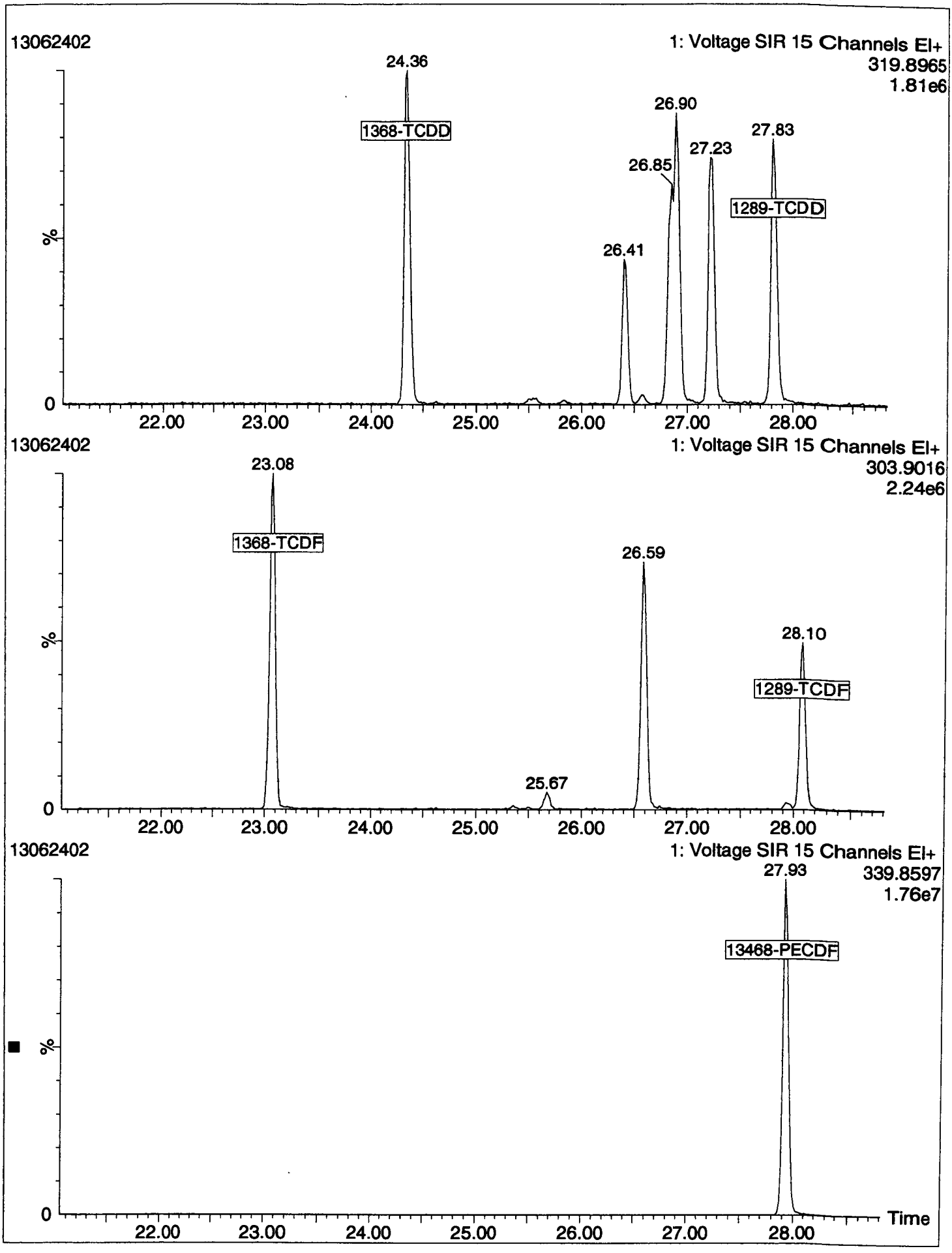
M 504.9696 R 12380

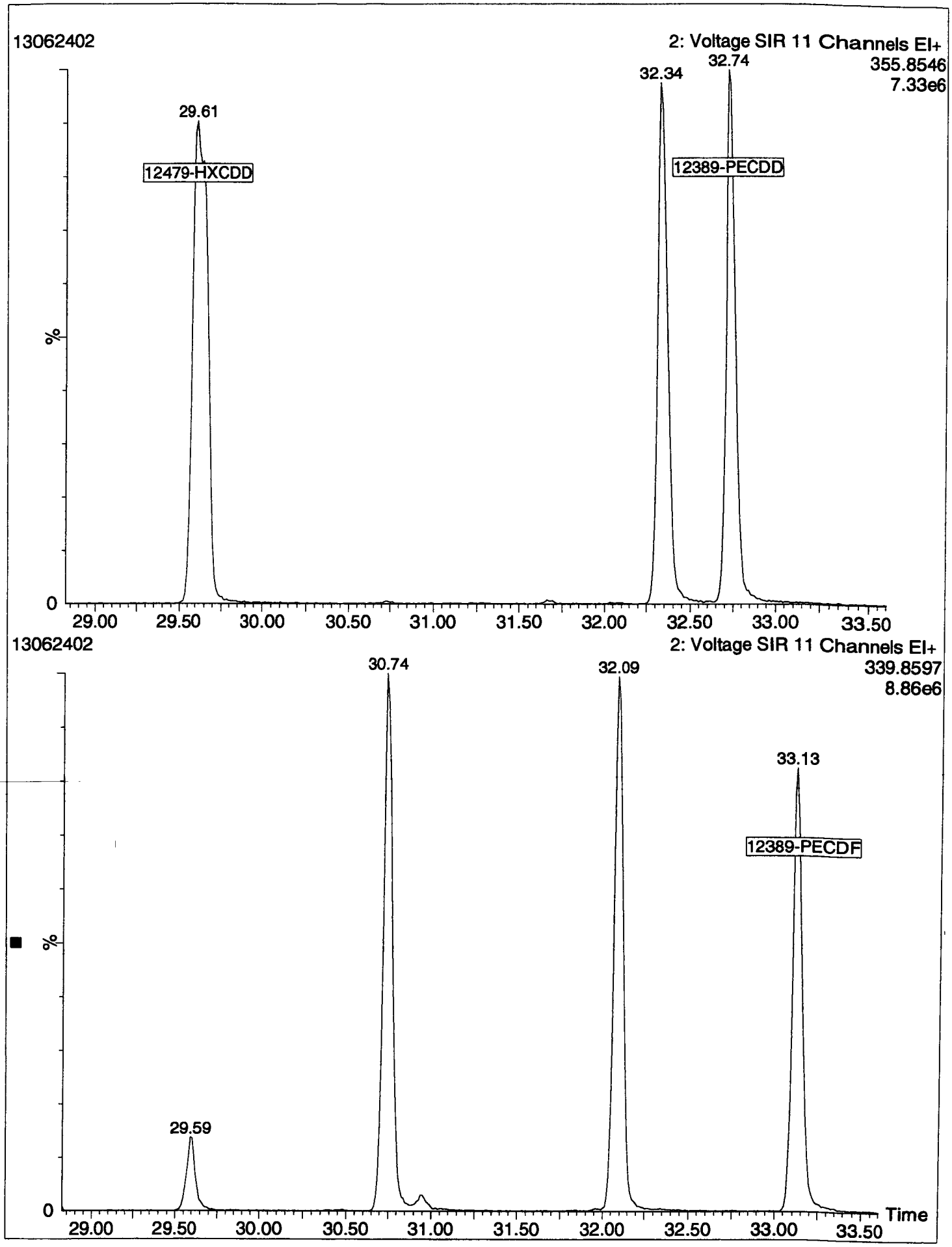


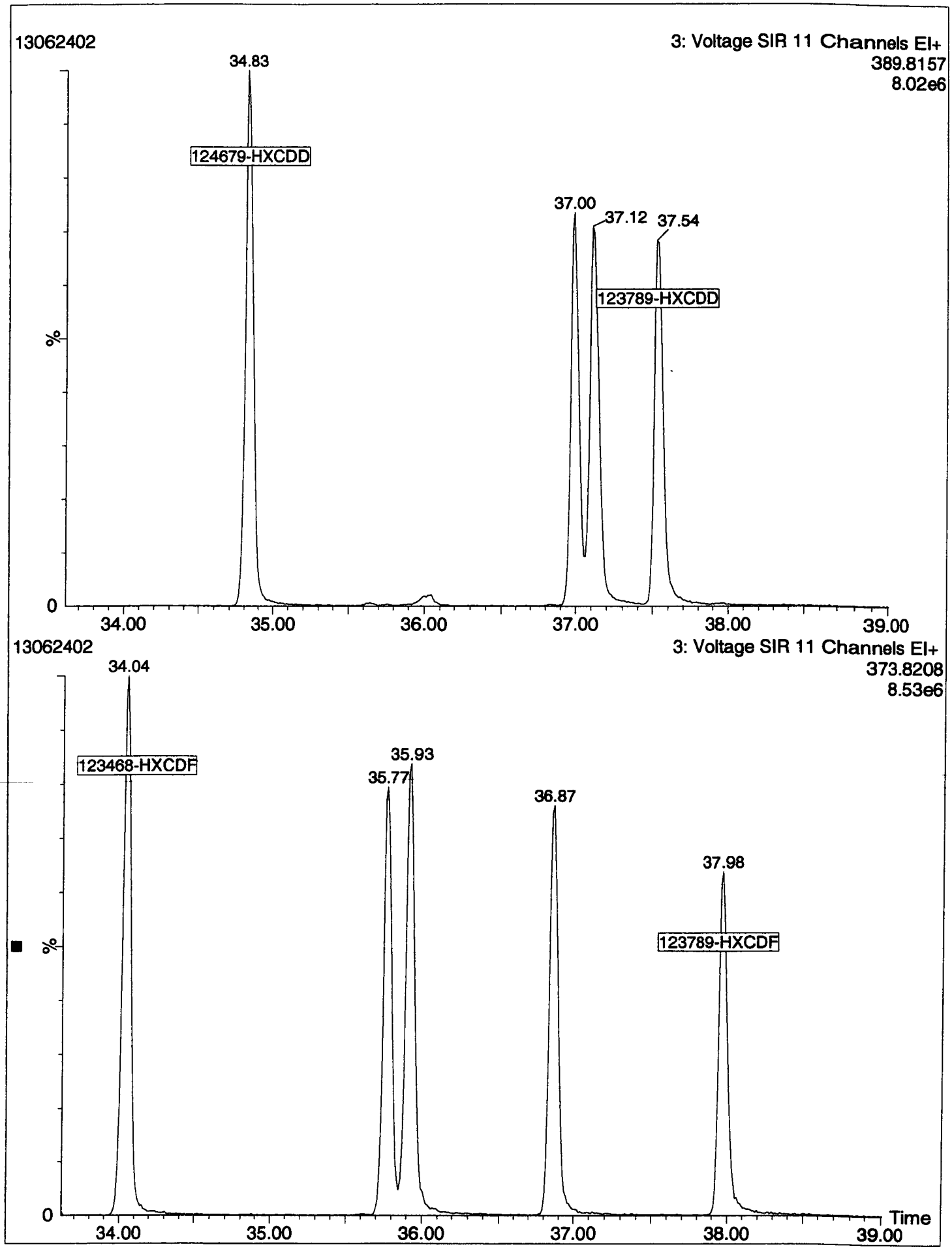
M 516.9697 R 12501

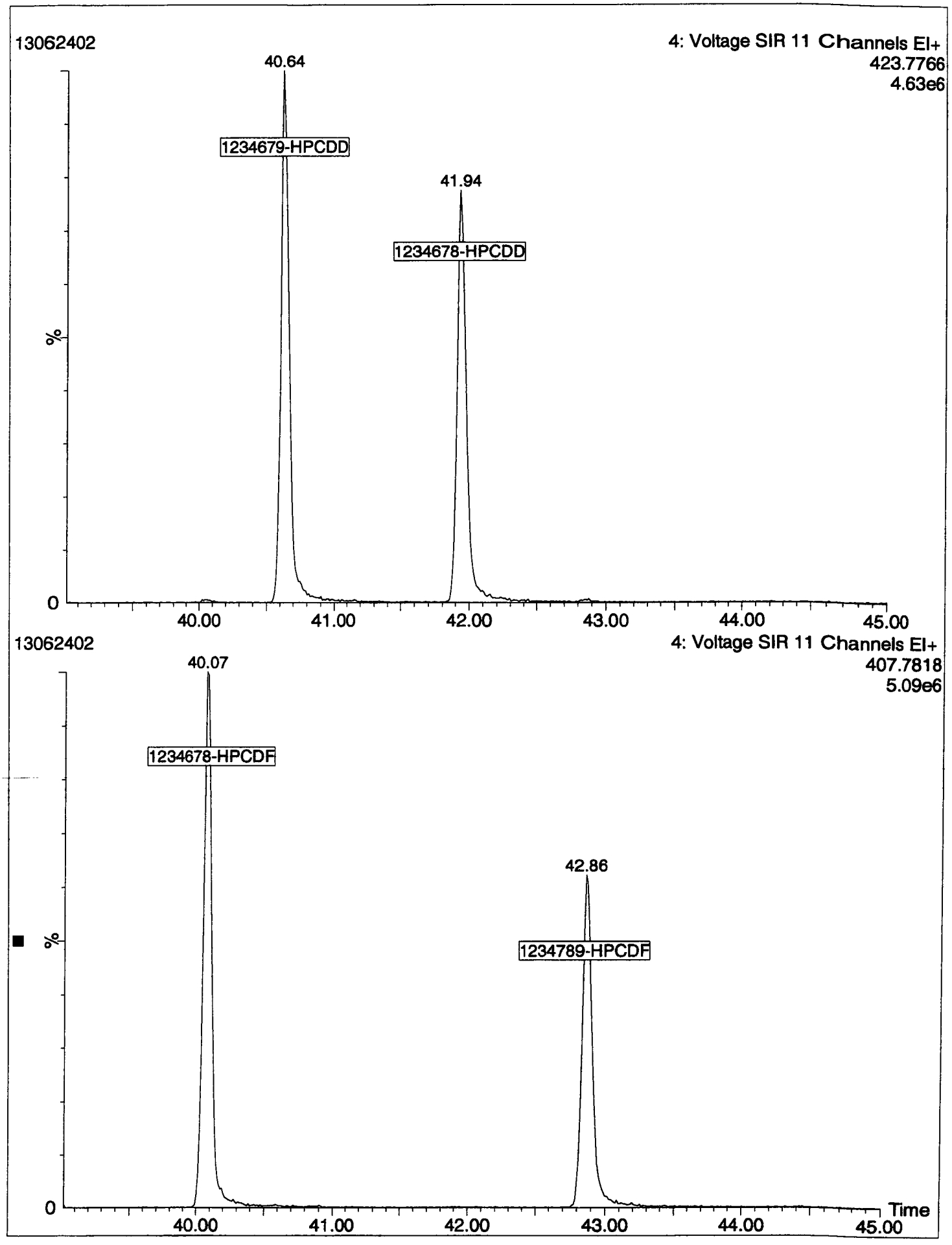



13062403
1: Voltage SIR 15 Channels EI+
319.8965
1.58e6
27.33
27.20
2378-TCDD
15/84= 17.9%
84
15
%
1
25.50
26.00
26.50
27.00
27.50
13062403
1: Voltage SIR 15 Channels EI+
303.9016
1.59e6
26.38
26.56
26.69
2378-TCDF
100
12/100 = 12%
12
%
1
Time
25.50
26.00
26.50
27.00
27.50


13062402
1: Voltage SIR 15 Channels EI+
319.8965
1.81e6
24.36
1368-TCDD
26.90
26.85
27.23
27.83
1289-TCDD
26.41
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
13062402
1: Voltage SIR 15 Channels EI+
303.9016
2.24e6
23.08
1368-TCDF
26.59
28.10
1289-TCDF
25.67
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
13062402
1: Voltage SIR 15 Channels EI+
339.8597
1.76e7
27.93
13468-PECDF
%
0
Time
22.00
23.00
24.00
25.00
26.00
27.00
28.00


13062402
2: Voltage SIR 11 Channels EI+
355.8546
7.33e6
29.61
12479-HXCDD
32.34
32.74
12389-PECDD
%
0
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50
13062402
2: Voltage SIR 11 Channels EI+
339.8597
8.86e6
30.74
32.09
33.13
12389-PECDF
29.59
%
0
Time
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50


13062402
3: Voltage SIR 11 Channels EI+
389.8157
8.02e6
34.83
124679-HXCDD
37.00
37.12
37.54
123789-HXCDD
%
0
34.00
35.00
36.00
37.00
38.00
39.00
13062402
3: Voltage SIR 11 Channels EI+
373.8208
8.53e6
34.04
123468-HXCDF
35.93
35.77
36.87
37.98
123789-HXCDF
%
0
Time
34.00
35.00
36.00
37.00
38.00
39.00


13062402
4: Voltage SIR 11 Channels EI+
423.7766
4.63e6
40.64
1234679-HPCDD
41.94
1234678-HPCDD
%
0
40.00
41.00
42.00
43.00
44.00
45.00
13062402
4: Voltage SIR 11 Channels EI+
407.7818
5.09e6
40.07
1234678-HPCDF
42.86
1234789-HPCDF
%
0
Time
40.00
41.00
42.00
43.00
44.00
45.00

Dataset: P:\DIOXIN8290.PRO\130624OPEN.qld
Last Altered: Tuesday, June 25, 2013 10:31:33 Pacific Daylight Time
Printed: Wednesday, June 26, 2013 09:19:11 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 21 Jun 2013 12:25:14
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: CS3, Name: 13062402, Date: 24-Jun-2013, Time: 09:56:39, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.586	1.001	9.90e4	1.35e5	0.771	0.735	0.770	911.1	NO	10.324	10.324
12378-PeCDF	30.741	1.000	5.62e5	3.75e5	0.814	1.498	1.550	2372.7	NO	49.799	49.799
23478-PeCDF	32.090	1.000	5.53e5	3.66e5	0.837	1.509	1.550	2386.0	NO	49.442	49.442
123478-HxCDF	35.773	1.001	4.49e5	3.69e5	0.967	1.216	1.240	1574.9	NO	50.603	50.603
234678-HxCDF	36.869	1.001	4.33e5	3.57e5	1.000	1.214	1.240	1480.9	NO	51.388	51.388
123678-HxCDF	35.926	1.001	4.80e5	3.90e5	0.951	1.233	1.240	1632.7	NO	49.364	49.364
123789-HxCDF	37.976	1.001	3.57e5	2.90e5	0.874	1.229	1.240	1246.9	NO	52.558	52.558
1234678-HpCDF	40.080	1.000	3.61e5	3.52e5	1.072	1.026	1.050	1574.8	NO	52.819	52.819
1234789-HpCDF	42.864	1.000	2.64e5	2.64e5	1.085	1.000	1.050	978.5	NO	52.931	52.931
OCDF	48.357	1.007	4.64e5	5.21e5	0.878	0.892	0.890	2479.3	NO	109.730	109.730
2378-TCDD	27.229	1.001	9.09e4	1.18e5	0.936	0.773	0.770	551.2	NO	10.029	10.029
12378-PeCDD	32.342	1.001	4.47e5	2.92e5	0.894	1.528	1.550	1824.4	NO	49.894	49.894
123478-HxCDD	37.000	1.001	3.76e5	3.06e5	0.898	1.228	1.240	1411.3	NO	49.821	49.821
123678-HxCDD	37.121	1.000	3.75e5	3.08e5	0.818	1.218	1.240	1383.0	NO	49.428	49.428
123789-HxCDD	37.537	1.012	3.56e5	2.94e5	0.789	1.211	1.240	1332.2	NO	51.242	51.242
1234678-HpCDD	41.944	1.000	2.75e5	2.68e5	0.879	1.026	1.050	1056.7	NO	51.930	51.930
OCDD	48.070	1.001	4.28e5	4.94e5	0.875	0.867	0.890	1037.7	NO	102.998	102.998
13C-2378-TCDF	26.571	1.007	1.27e6	1.66e6	1.190	0.765	0.770	6128.6	NO		104.665
13C-12378-PeCDF	30.730	1.164	1.40e6	9.14e5	0.904	1.526	1.550	5871.9	NO		108.341
13C-23478-PeCDF	32.079	1.215	1.35e6	8.68e5	0.877	1.557	1.550	5755.9	NO		107.404
13C-123478-HxCDF	35.751	0.953	5.61e5	1.11e6	1.096	0.505	0.510	2043.0	NO		104.536
13C-123678-HxCDF	35.904	0.957	6.26e5	1.23e6	1.187	0.511	0.510	2150.6	NO		106.939
13C-234678-HxCDF	36.847	0.982	5.19e5	1.02e6	1.040	0.510	0.510	1887.5	NO		101.297
13C-123789-HxCDF	37.954	1.011	4.75e5	9.35e5	0.941	0.508	0.510	1706.8	NO		102.729
13C-1234678-HpCDF	40.058	1.067	3.87e5	8.72e5	0.825	0.444	0.440	2061.5	NO		104.550
13C-1234789-HpCDF	42.853	1.142	2.81e5	6.40e5	0.609	0.438	0.440	1246.2	NO		103.577
13C-1234-TCDD	26.392	0.000	1.03e6	1.33e6	1.000	0.778	0.770	1169.4	NO		100.000
13C-2378-TCDD	27.214	1.031	9.69e5	1.25e6	0.920	0.774	0.770	1042.0	NO		102.367
13C-12378-PeCDD	32.320	1.225	1.00e6	6.52e5	0.669	1.540	1.550	3007.3	NO		104.990
13C-123478-HxCDD	36.978	0.985	8.44e5	6.79e5	1.032	1.243	1.240	3199.0	NO		101.259
13C-123678-HxCDD	37.110	0.989	9.43e5	7.47e5	1.146	1.262	1.240	3406.0	NO		101.110
13C-1234678-HpCDD	41.922	1.117	6.07e5	5.84e5	0.789	1.038	1.050	2383.2	NO		103.501
13C-OCDD	48.043	1.280	9.43e5	1.10e6	0.696	0.856	0.890	2638.2	NO		201.418

Dataset: P:\DIOXIN8290.PRO\130624OPEN.qld
Last Altered: Tuesday, June 25, 2013 10:31:33 Pacific Daylight Time
Printed: Wednesday, June 26, 2013 09:19:11 Pacific Daylight Time

ID: CS3, Name: 13062402, Date: 24-Jun-2013, Time: 09:56:39, Conditions: AUTOSPEC01, User: pk

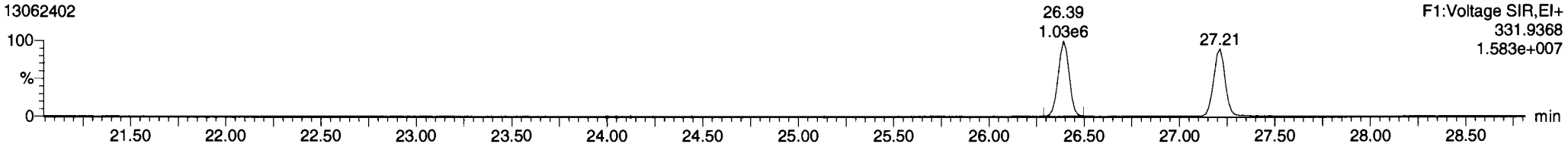
me										
13C-123789-HxCDD	37.526	0.000	8.03e5	6.55e5	1.000	1.227	1.240	3059.4	NO	100.000
Total-tetrafurans			3.16e5		0.771					32.703
Total-penta1			1.05e6							83.912
Total-pentafurans			1.69e6		0.826					150.073
Total-hexafurans			2.27e6		0.948					268.689
Total-heptafurans			6.26e5		1.079					105.850
Total-Furans			6.41e6		0.925					750.970
Total-tetradioxins			5.16e5		0.936					56.894
Total-pentadioxins			1.58e6		0.894					176.800
Total-hexadioxins			1.63e6		0.835					220.760
Total-heptadioxins			6.09e5		0.879					114.760
Total-Dioxins			4.77e6		0.870					672.212
Total-TEQ			1.12e7							1423.183
37CL-2378-TCDD	27.229	1.032	2.34e5		1.000			1049.3		9.943
FUNCTION1 PFK			2.78e6							
FUNCTION2 PFK			6.49e5							0.000
FUNCTION3 PFK			2.79e6							0.000
FUNCTION4 PFK			1.35e6							
FUNCTION5 PFK			1.92e5							
FUNCTION1 HXCDPE			5.10e2							0.000
FUNCTION1 HPCDPE			2.43e3							0.000
FUNCTION2 HPCDPE			2.21e3							0.000
FUNCTION3 OCDPE			1.54e2							0.000
FUNCTION4 NCDPE			9.79e2							0.000
FUNCTION5 DCDPE			0.00e0							

Dataset: P:\DIOXIN8290.PRO\130624OPEN.qld
Last Altered: Tuesday, June 25, 2013 10:31:33 Pacific Daylight Time
Printed: Wednesday, June 26, 2013 09:19:11 Pacific Daylight Time

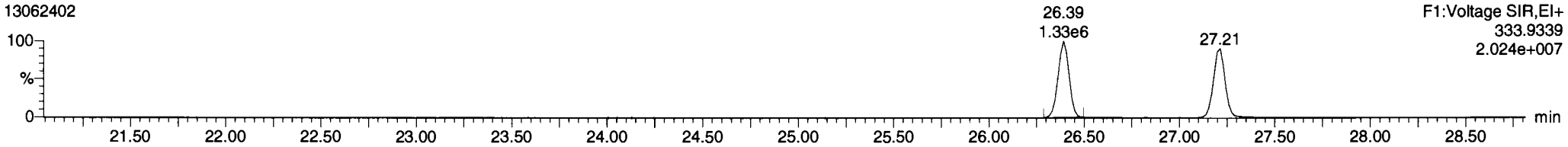
Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 21 Jun 2013 12:25:14
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: CS3, Name: 13062402, Date: 24-Jun-2013, Time: 09:56:39, Conditions: AUTOSPEC01, User: pk

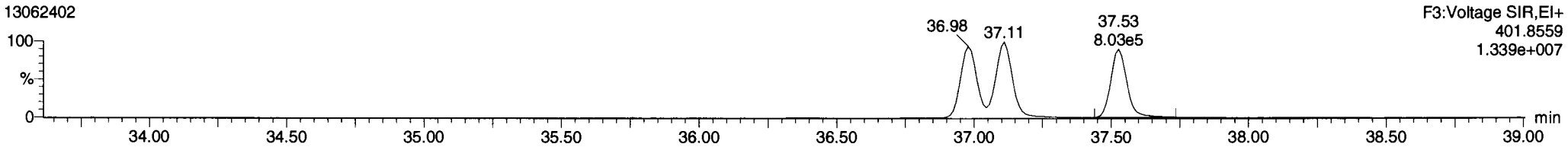
13C-1234-TCDD



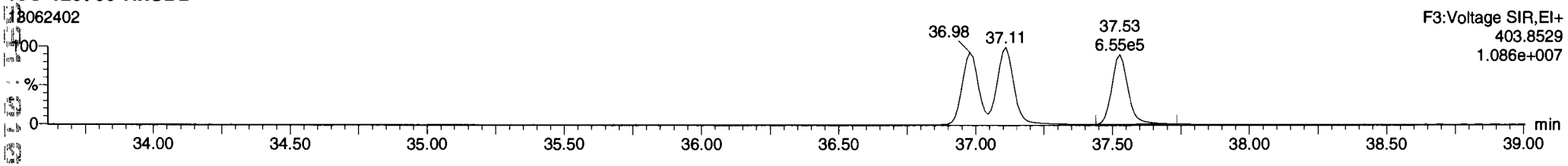
13C-1234-TCDD



13C-123789-HxCDD



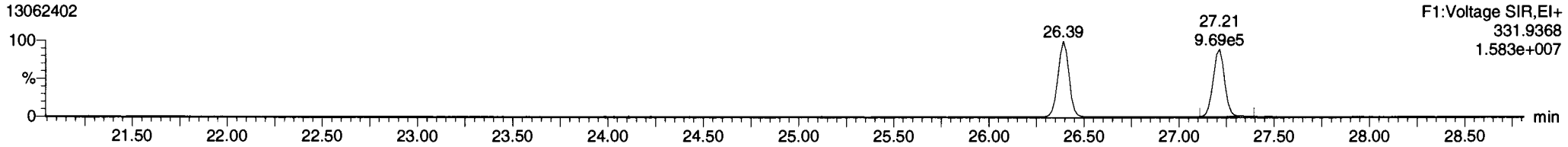
13C-123789-HxCDD



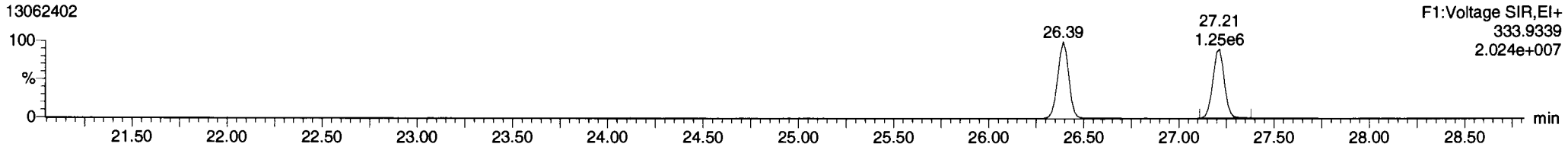
Dataset: P:\DIOXIN8290.PRO\130624OPEN.qld
Last Altered: Tuesday, June 25, 2013 10:31:33 Pacific Daylight Time
Printed: Wednesday, June 26, 2013 09:19:11 Pacific Daylight Time

ID: CS3, Name: 13062402, Date: 24-Jun-2013, Time: 09:56:39, Conditions: AUTOSPEC01, User: pk

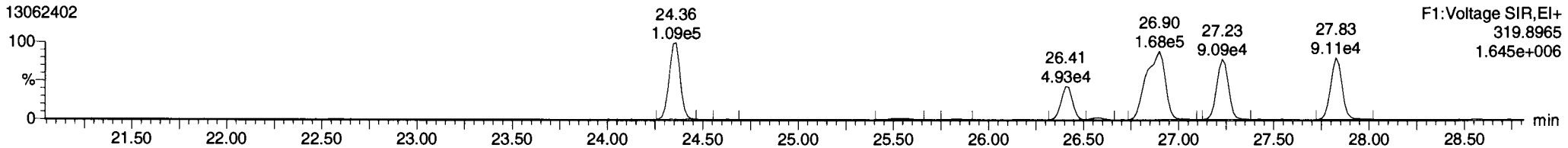
13C-2378-TCDD



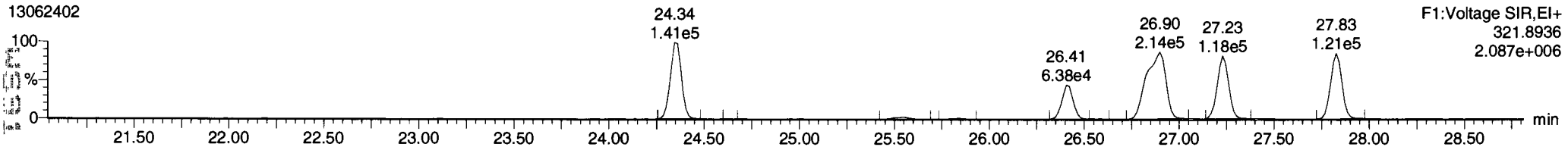
13C-2378-TCDD



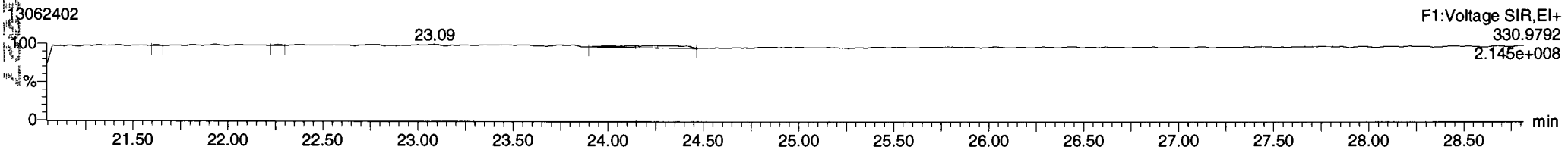
Total-tetradioxins



Total-tetradioxins



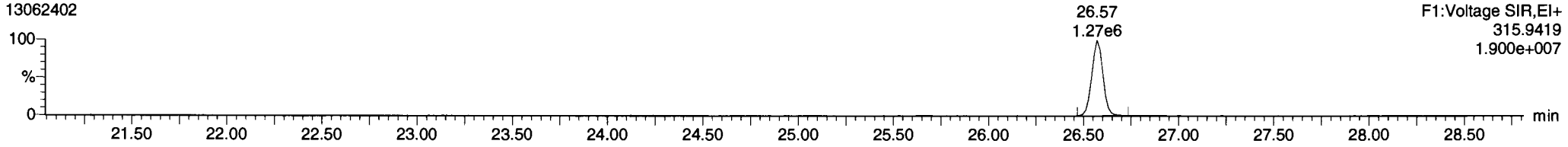
FUNCTION1 PFK



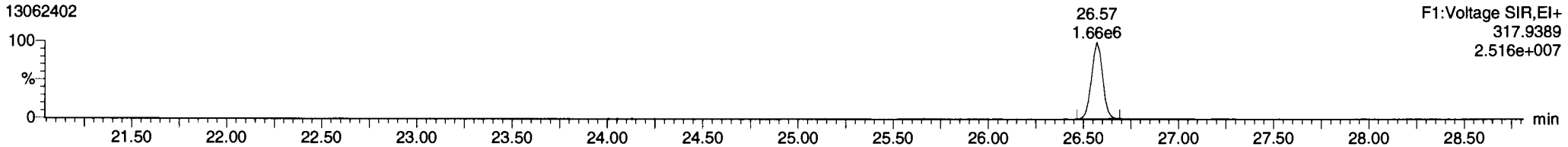
Dataset: P:\DIOXIN8290.PRO\130624OPEN.qld
Last Altered: Tuesday, June 25, 2013 10:31:33 Pacific Daylight Time
Printed: Wednesday, June 26, 2013 09:19:11 Pacific Daylight Time

ID: CS3, Name: 13062402, Date: 24-Jun-2013, Time: 09:56:39, Conditions: AUTOSPEC01, User: pk

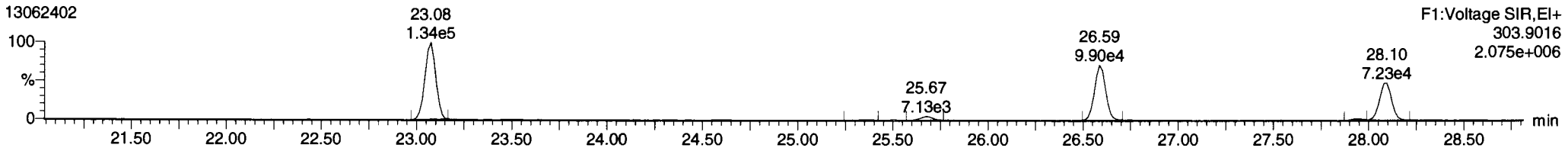
13C-2378-TCDF



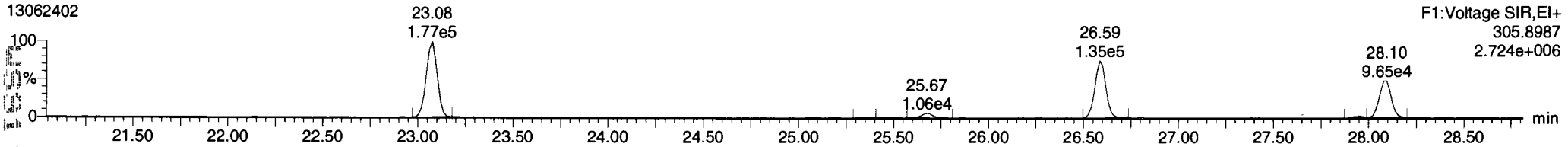
13C-2378-TCDF



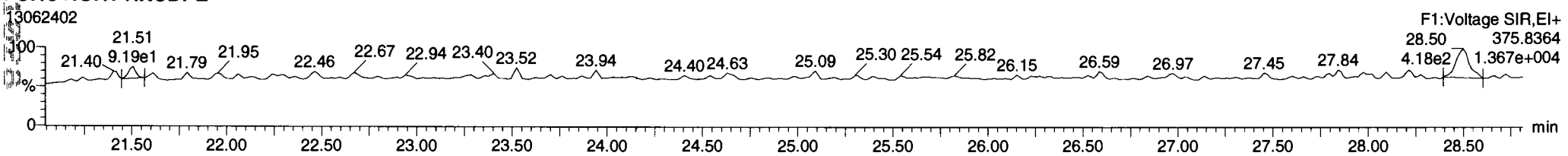
Total-tetrafurans



Total-tetrafurans



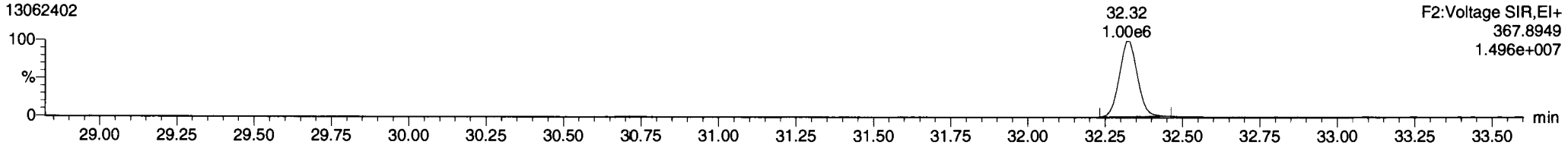
FUNCTION1 HXCDPE



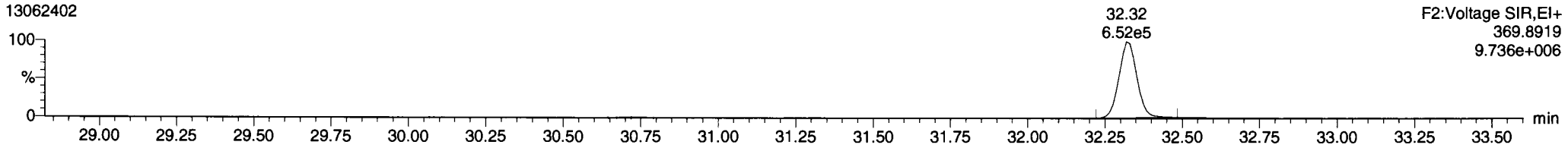
Dataset: P:\DIOXIN8290.PRO\130624OPEN.qld
Last Altered: Tuesday, June 25, 2013 10:31:33 Pacific Daylight Time
Printed: Wednesday, June 26, 2013 09:19:11 Pacific Daylight Time

ID: CS3, Name: 13062402, Date: 24-Jun-2013, Time: 09:56:39, Conditions: AUTOSPEC01, User: pk

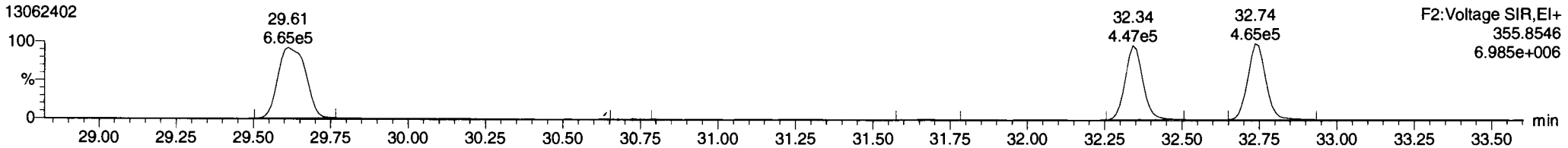
13C-12378-PeCDD



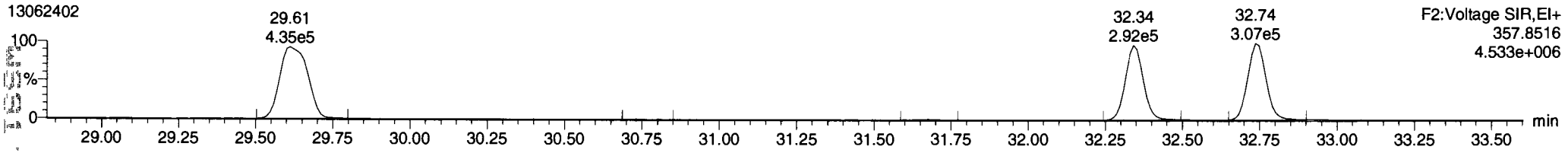
13C-12378-PeCDD



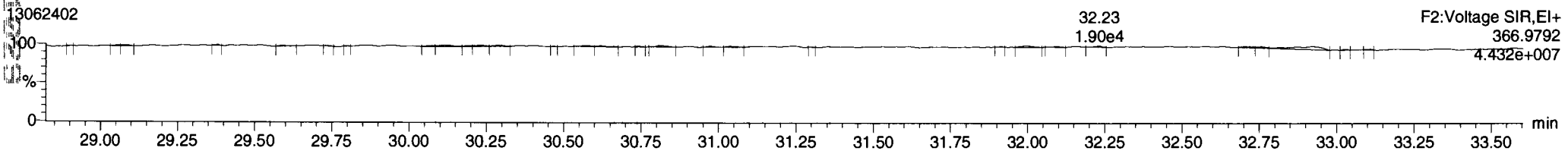
Total-pentadioxins



Total-pentadioxins



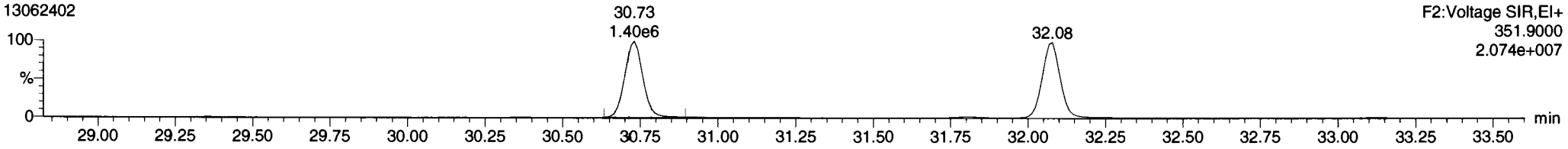
FUNCTION2 PFK



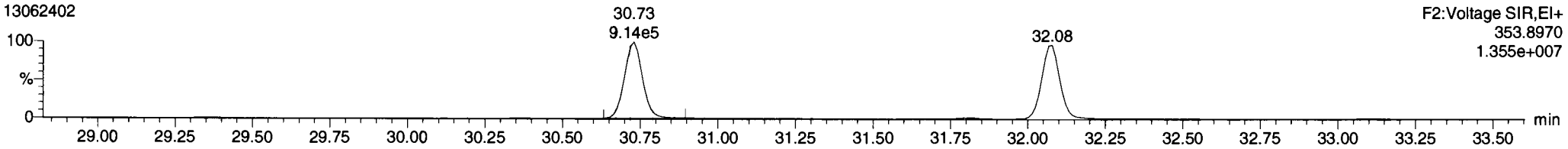
Dataset: P:\DIOXIN8290.PRO\130624OPEN.qld
Last Altered: Tuesday, June 25, 2013 10:31:33 Pacific Daylight Time
Printed: Wednesday, June 26, 2013 09:19:11 Pacific Daylight Time

ID: CS3, Name: 13062402, Date: 24-Jun-2013, Time: 09:56:39, Conditions: AUTOSPEC01, User: pk

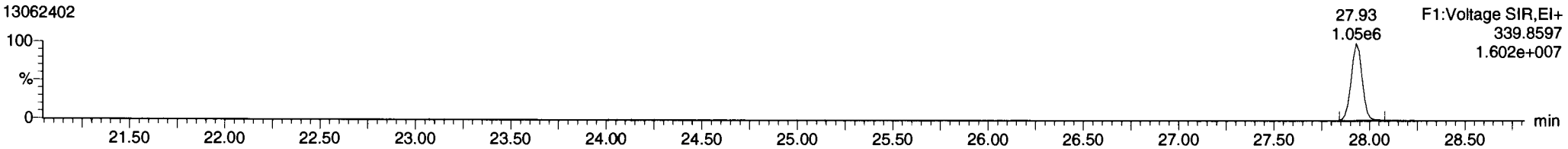
13C-12378-PeCDF



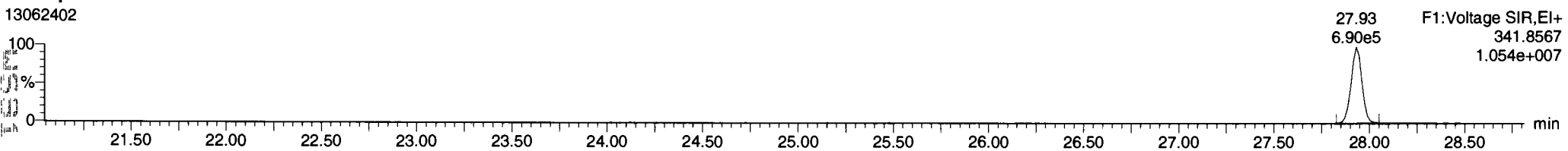
13C-12378-PeCDF



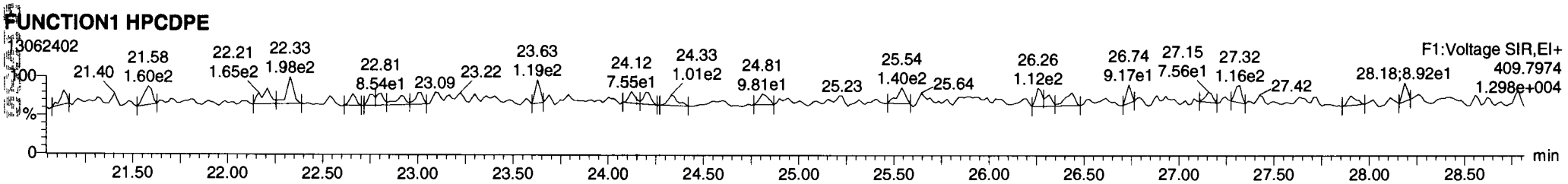
Total-penta1



Total-penta1



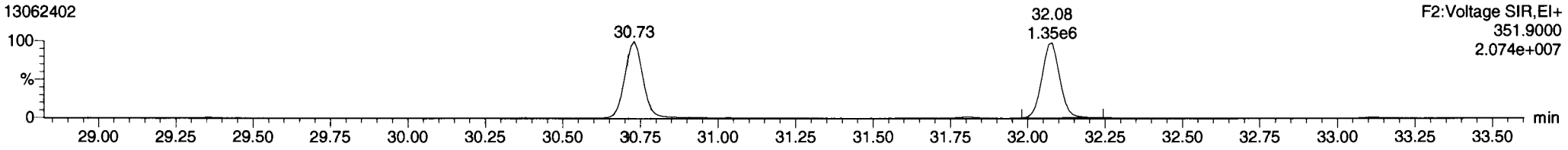
FUNCTION1 HPCDPE



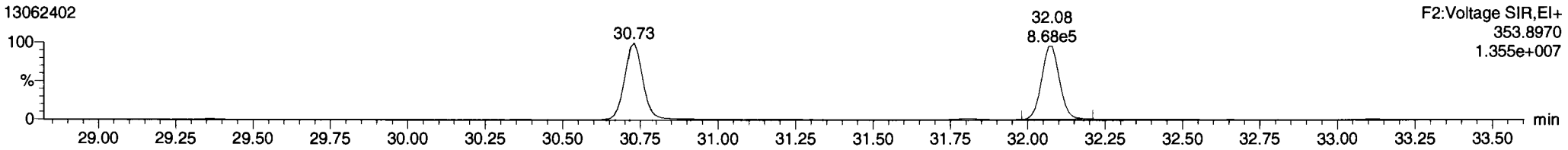
Dataset: P:\DIOXIN8290.PRO\130624OPEN.qld
Last Altered: Tuesday, June 25, 2013 10:31:33 Pacific Daylight Time
Printed: Wednesday, June 26, 2013 09:19:11 Pacific Daylight Time

ID: CS3, Name: 13062402, Date: 24-Jun-2013, Time: 09:56:39, Conditions: AUTOSPEC01, User: pk

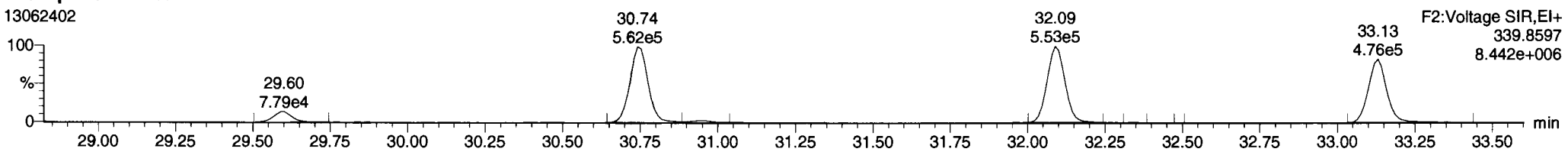
13C-23478-PeCDF



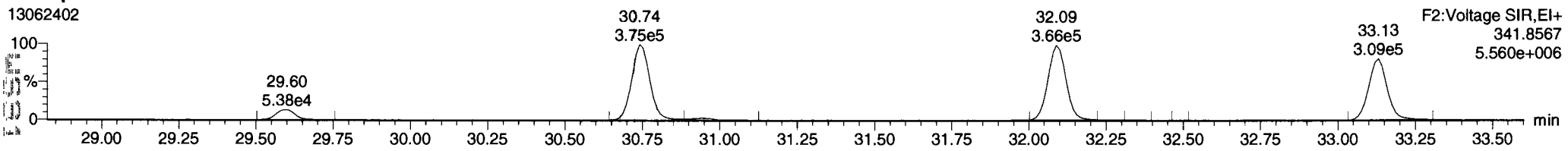
13C-23478-PeCDF



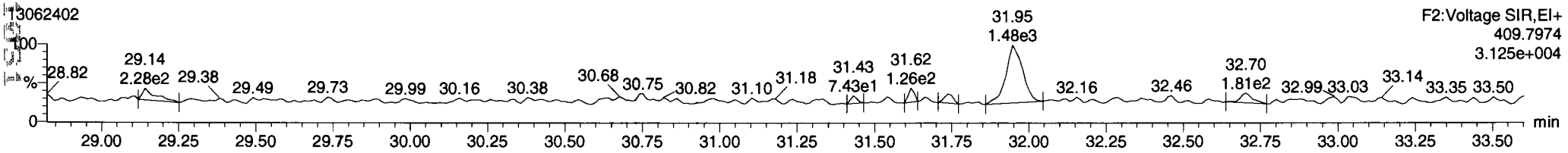
Total-pentafurans



Total-pentafurans



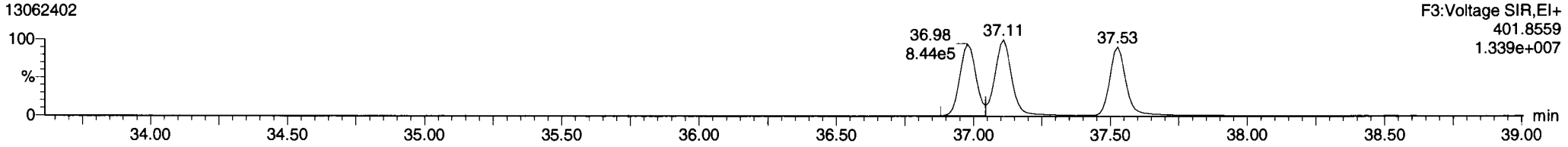
FUNCTION2 HPCDPE



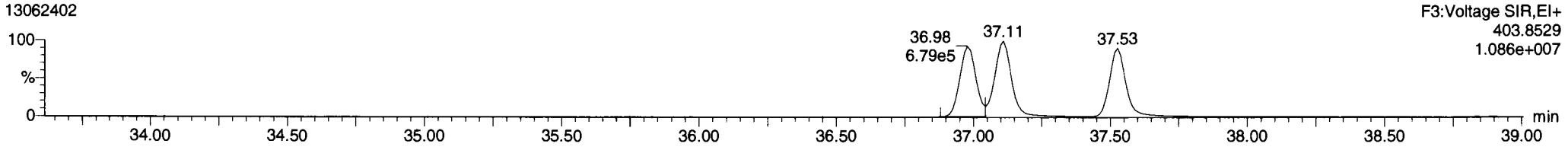
Dataset: P:\DIOXIN8290.PRO\130624OPEN.qld
Last Altered: Tuesday, June 25, 2013 10:31:33 Pacific Daylight Time
Printed: Wednesday, June 26, 2013 09:19:11 Pacific Daylight Time

ID: CS3, Name: 13062402, Date: 24-Jun-2013, Time: 09:56:39, Conditions: AUTOSPEC01, User: pk

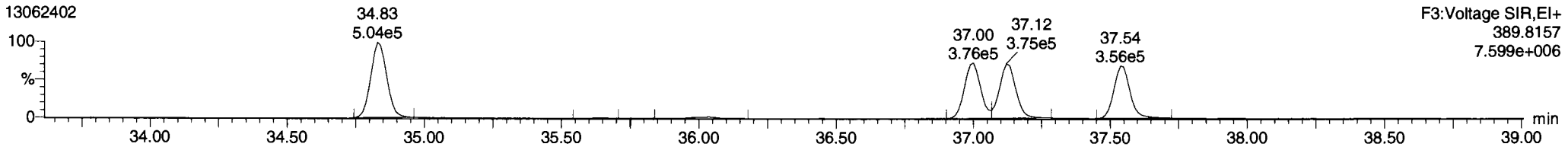
13C-123478-HxCDD



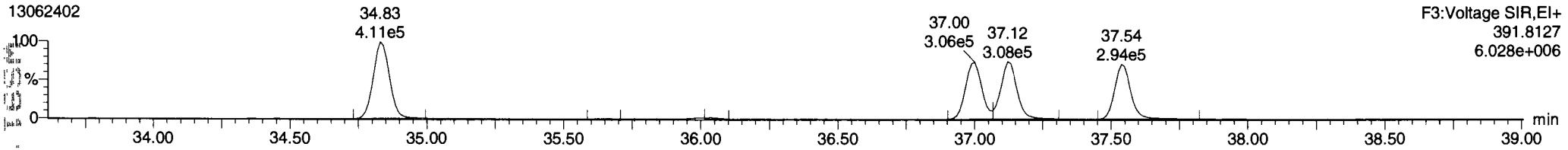
13C-123478-HxCDD



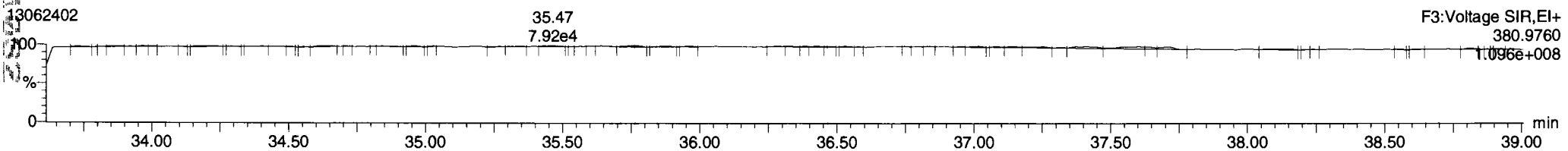
Total-hexadioxins



Total-hexadioxins



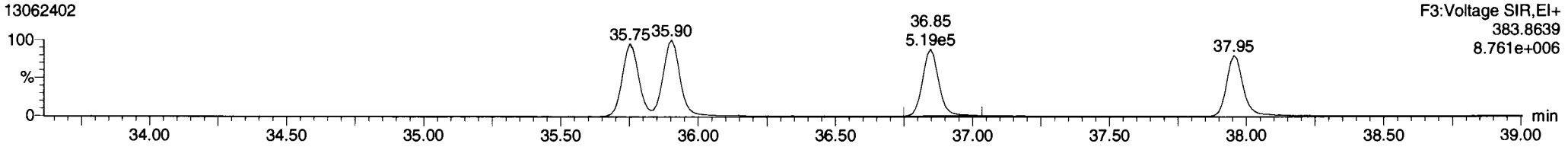
FUNCTION3 PFK



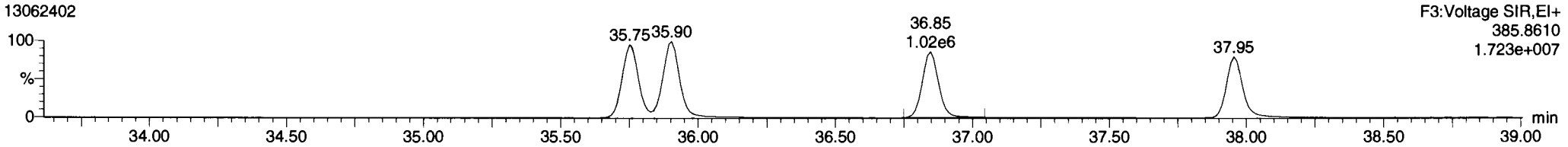
Dataset: P:\DIOXIN8290.PRO\130624OPEN.qld
Last Altered: Tuesday, June 25, 2013 10:31:33 Pacific Daylight Time
Printed: Wednesday, June 26, 2013 09:19:11 Pacific Daylight Time

ID: CS3, Name: 13062402, Date: 24-Jun-2013, Time: 09:56:39, Conditions: AUTOSPEC01, User: pk

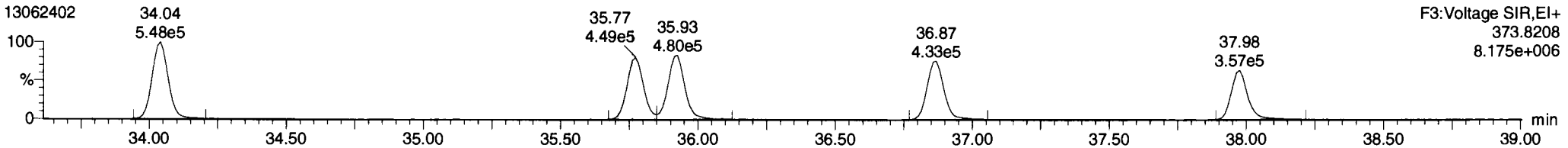
13C-234678-HxCDF



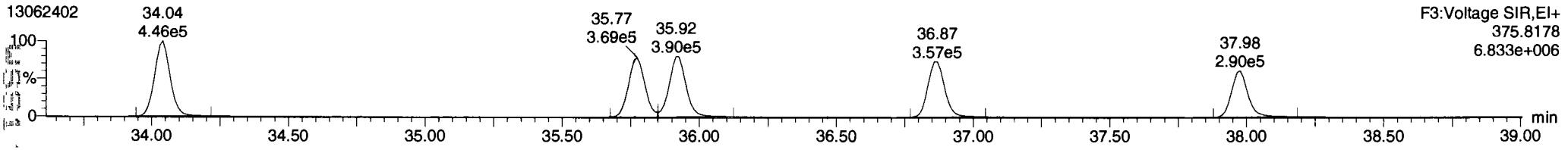
13C-234678-HxCDF



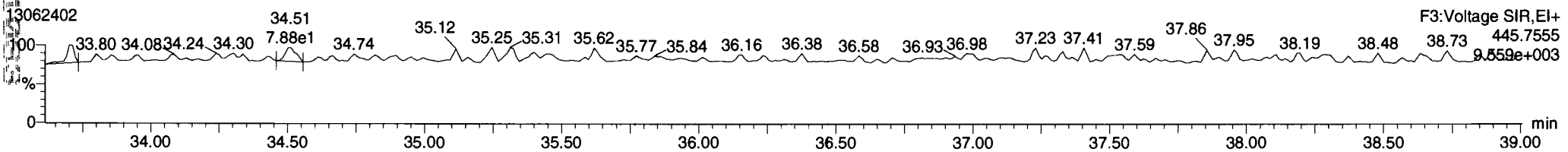
Total-hexafurans



Total-hexafurans



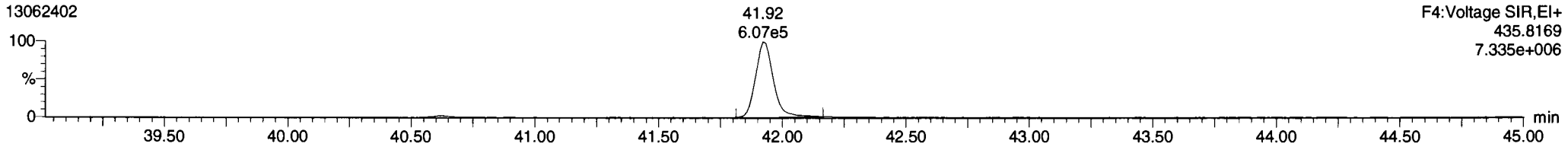
FUNCTION3 OCDPE



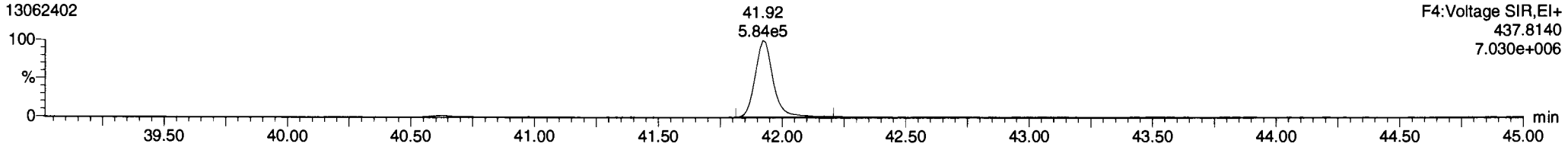
Dataset: P:\DIOXIN8290.PRO\130624OPEN.qld
Last Altered: Tuesday, June 25, 2013 10:31:33 Pacific Daylight Time
Printed: Wednesday, June 26, 2013 09:19:11 Pacific Daylight Time

ID: CS3, Name: 13062402, Date: 24-Jun-2013, Time: 09:56:39, Conditions: AUTOSPEC01, User: pk

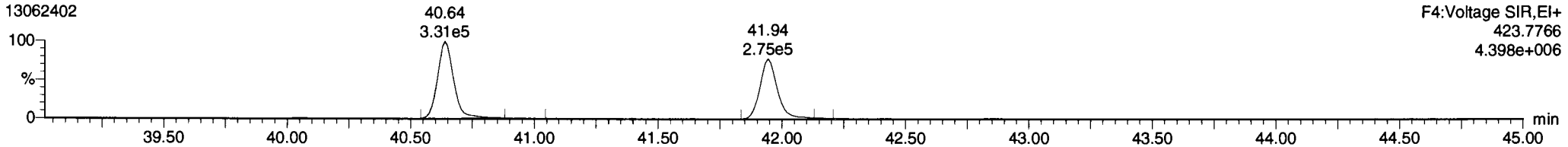
13C-1234678-HpCDD



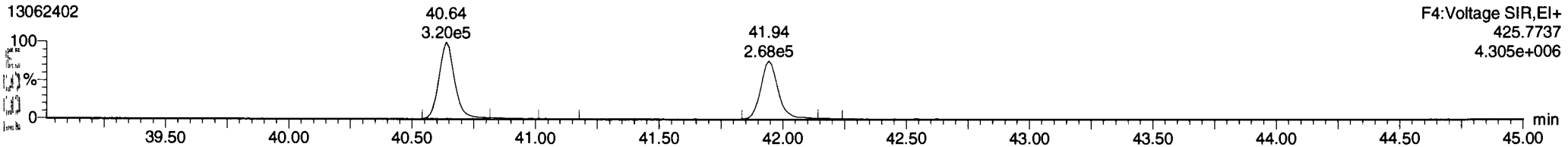
13C-1234678-HpCDD



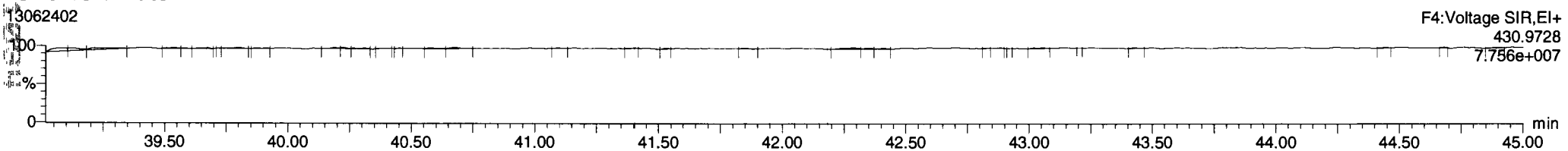
Total-heptadioxins



Total-heptadioxins



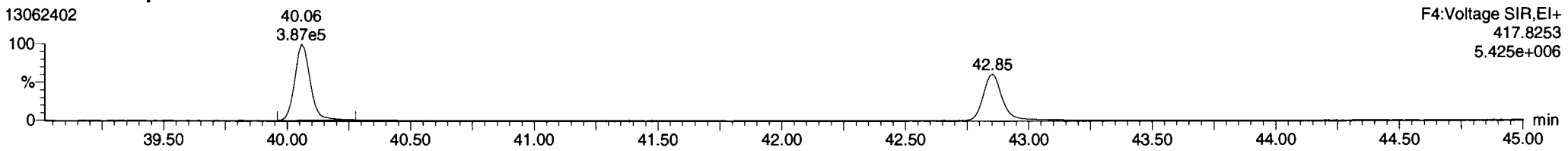
FUNCTION4 PFK



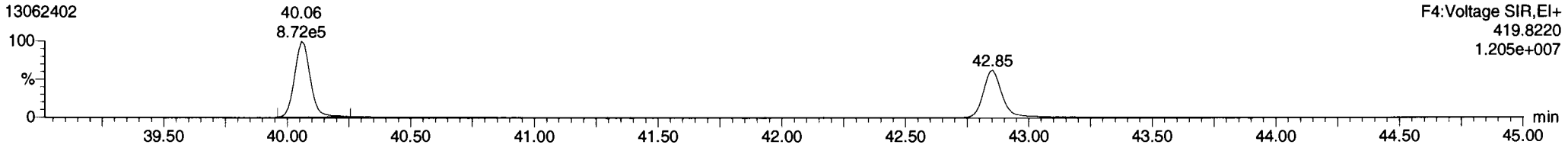
Dataset: P:\DIOXIN8290.PRO\130624OPEN.qld
Last Altered: Tuesday, June 25, 2013 10:31:33 Pacific Daylight Time
Printed: Wednesday, June 26, 2013 09:19:11 Pacific Daylight Time

ID: CS3, Name: 13062402, Date: 24-Jun-2013, Time: 09:56:39, Conditions: AUTOSPEC01, User: pk

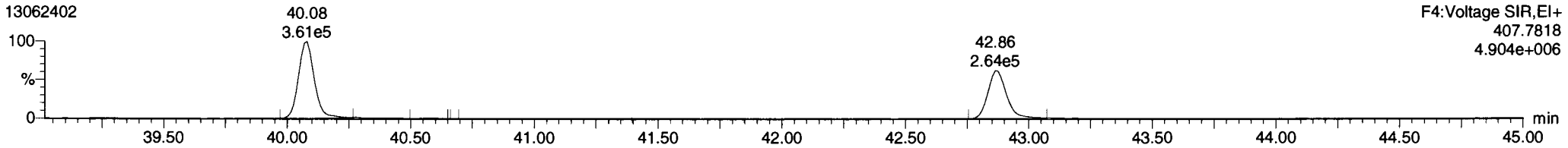
13C-1234678-HpCDF



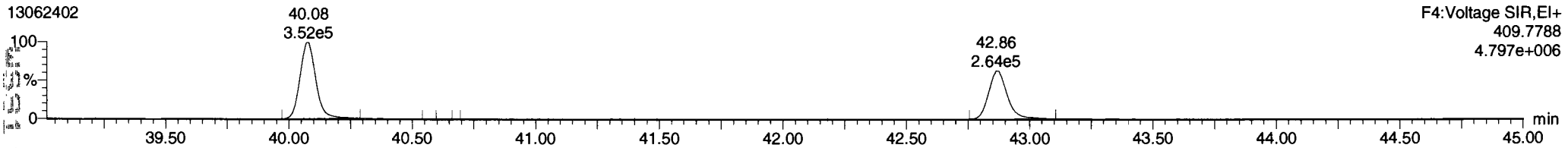
13C-1234678-HpCDF



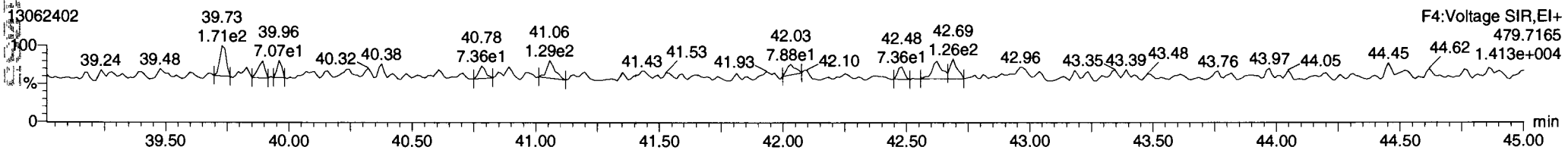
Total-heptafurans



Total-heptafurans



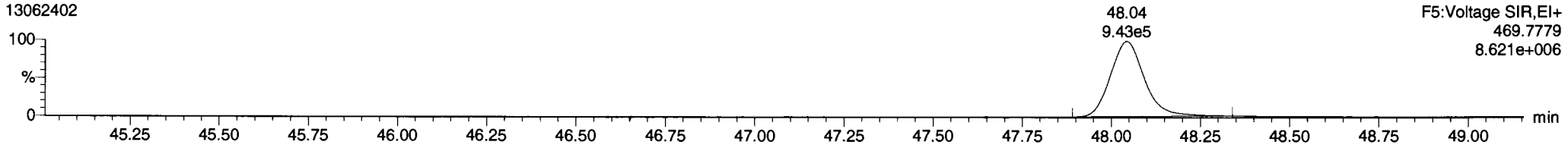
FUNCTION4 NCDPE



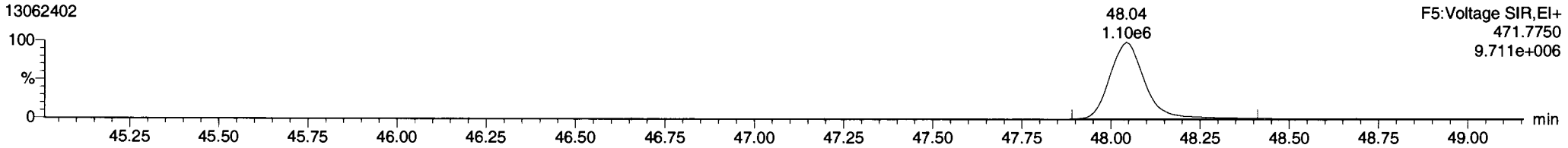
Dataset: P:\DIOXIN8290.PRO\130624OPEN.qld
Last Altered: Tuesday, June 25, 2013 10:31:33 Pacific Daylight Time
Printed: Wednesday, June 26, 2013 09:19:11 Pacific Daylight Time

ID: CS3, Name: 13062402, Date: 24-Jun-2013, Time: 09:56:39, Conditions: AUTOSPEC01, User: pk

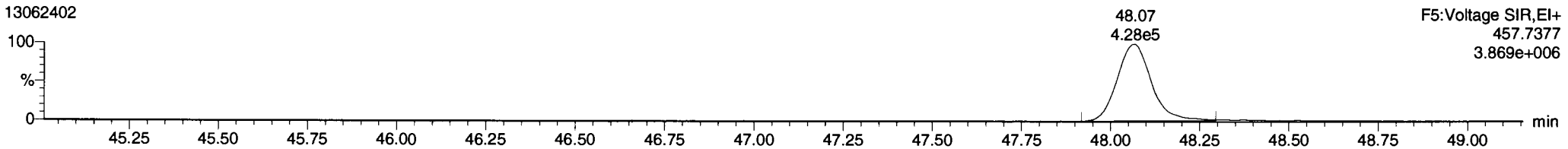
13C-OCDD



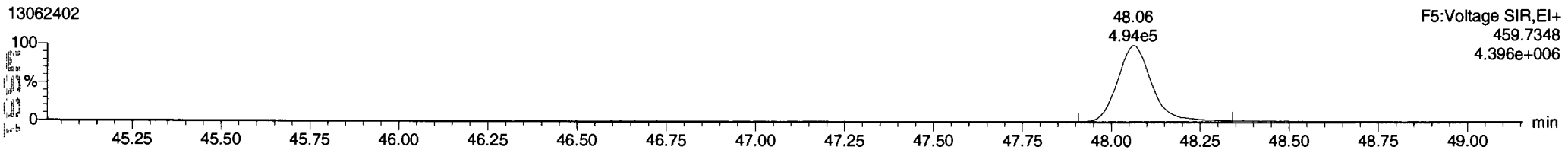
13C-OCDD



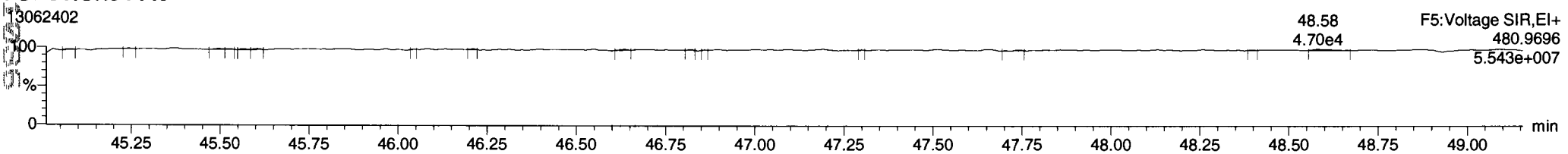
OCDD



OCDD



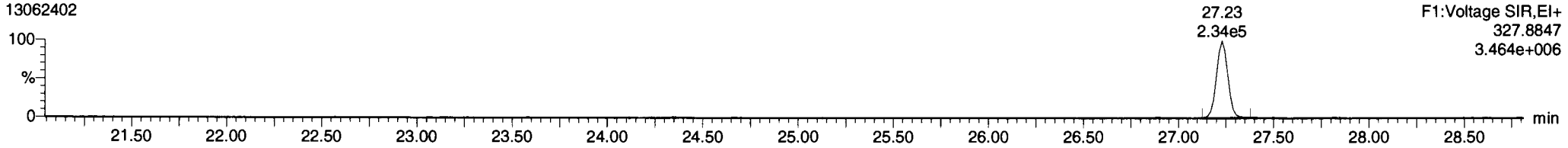
FUNCTION5 PFK



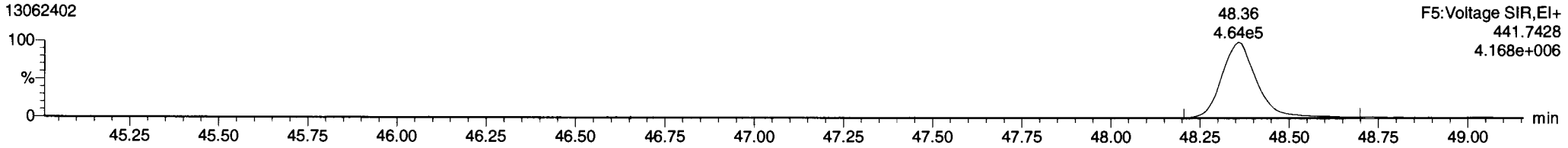
Dataset: P:\DIOXIN8290.PRO\130624OPEN.qld
Last Altered: Tuesday, June 25, 2013 10:31:33 Pacific Daylight Time
Printed: Wednesday, June 26, 2013 09:19:11 Pacific Daylight Time

ID: CS3, Name: 13062402, Date: 24-Jun-2013, Time: 09:56:39, Conditions: AUTOSPEC01, User: pk

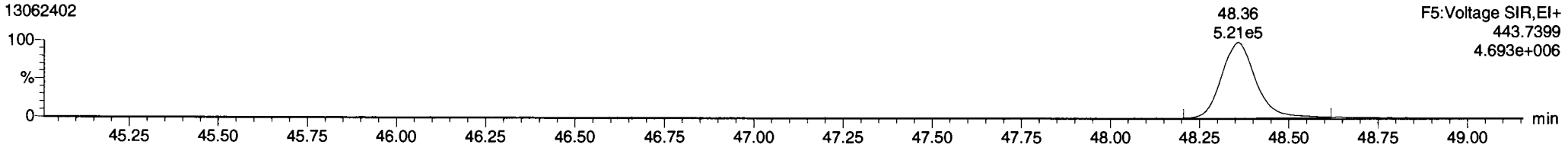
37CL-2378-TCDD



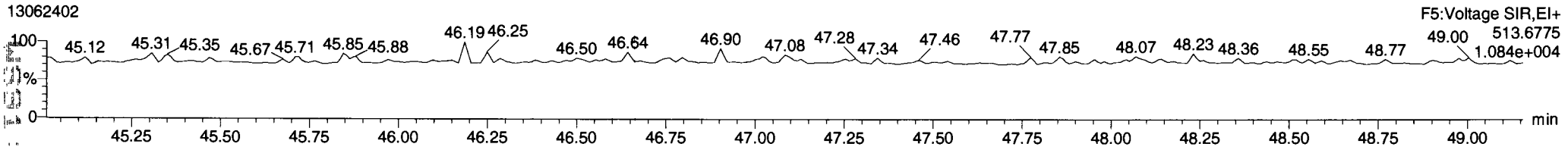
OCDF



OCDF



FUNCTION5 DCDPE



ARI
CDD/CDF EDL DATA
HIGH RESOLUTION

Lab.Sample ID: WS91MBS
Lab.File ID: 13062405
Date Analysed: 24-Jun-13

Target Analytes	Selected Ions	Peak RT	Conc	EMPC	EDL
2378-TCDD	320/322	0.00			0.037
12378-PeCDD	356/358	0.00			0.031
123478-HxCDD	390/392	0.00			0.038
123678-HxCDD	390/392	0.00			0.041
123789-HxCDD	390/392	0.00			0.043
1234678-HpCDD	424/426	41.92	0.0727	0.0610	
OCDD	458/460	48.02	0.173	0.129	
2378-TCDF	304/306	0.00			0.030
12378-PeCDF	340/342	0.00			0.033
23478-PeCDF	340/342	0.00			0.039
123478-HxCDF	374/376	0.00			0.023
234678-HxCDF	374/376	36.83	0.0223	0.0190	
123678-HxCDF	374/376	0.00			0.021
123789-HxCDF	374/376	37.95	0.0427	0.0240	
1234678-HpCDF	408/410	0.00			0.025
1234789-HpCDF	408/410	0.00			0.038
OCDF	442/444	0.00			0.091

Note: EDLs are on column values. Final EDL values are corrected for final volume of the extract (normally 20ul) and amount of sample extracted.

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:19 Pacific Daylight Time

6/25/13

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 21 Jun 2013 12:25:14
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

2378-TCDF					0.771		0.770		806	2300					
12378-PeCDF					0.814		1.550		1027	2068					
23478-PeCDF					0.837		1.550		1027	2068					
123478-HxCDF					0.967		1.240		1041	425					
234678-HxCDF	36.825	1.000	1.06e2	1.19e2	1.000	0.892	1.240	2.9	1041	425	3.05e3	1.80e3	YES	0.019	0.022
123678-HxCDF					0.951		1.240		1041	425					
123789-HxCDF	37.954	1.000	2.44e2	8.02e1	0.874	3.038	1.240	4.5	1041	425	4.66e3	2.59e3	YES	0.024	0.043
1234678-HpCDF					1.072		1.050		406	707					
1234789-HpCDF					1.085		1.050		406	707					
OCDF					0.878		0.890		559	1217					
2378-TCDD					0.936		0.770		1730	1706					
12378-PeCDD					0.894		1.550		1450	687					
123478-HxCDD					0.898		1.240		1295	1047					
123678-HxCDD					0.818		1.240		1295	1047					
123789-HxCDD					0.789		1.240		1295	1047					
1234678-HpCDD	41.923	1.000	3.19e2	2.24e2	0.879	1.425	1.050	6.7	807	604	5.38e3	3.90e3	YES	0.061	0.073
OCDD	48.017	1.000	3.27e2	6.04e2	0.875	0.542	0.890	7.2	443	692	3.21e3	6.12e3	YES	0.129	0.173
13C-2378-TCDF	26.556	1.007	9.55e5	1.26e6	1.190	0.756	0.770	4123.4	3461	6369	1.43e7	1.87e7	NO		89.156
13C-12378-PeCDF	30.709	1.164	1.15e6	7.36e5	0.904	1.569	1.550	4164.9	4195	3320	1.75e7	1.12e7	NO		99.938
13C-23478-PeCDF	32.057	1.215	9.44e5	6.07e5	0.877	1.556	1.550	3443.6	4195	3320	1.44e7	9.27e6	NO		84.552
13C-123478-HxCDF	35.740	0.953	3.65e5	7.06e5	1.096	0.517	0.510	1538.1	3590	3841	5.52e6	1.07e7	NO		83.071
13C-123678-HxCDF	35.883	0.956	4.18e5	8.15e5	1.187	0.513	0.510	1709.2	3590	3841	6.14e6	1.19e7	NO		88.288
13C-234678-HxCDF	36.836	0.982	3.44e5	6.70e5	1.040	0.513	0.510	1392.1	3590	3841	5.00e6	9.82e6	NO		82.965
13C-123789-HxCDF	37.943	1.011	2.95e5	5.73e5	0.941	0.516	0.510	1219.5	3590	3841	4.38e6	8.55e6	NO		78.453
13C-1234678-HpCDF	40.048	1.067	2.27e5	5.39e5	0.825	0.421	0.440	1598.2	1961	2653	3.13e6	7.19e6	NO		78.904
13C-1234789-HpCDF	42.843	1.142	1.81e5	4.11e5	0.609	0.440	0.440	1058.2	1961	2653	2.08e6	4.73e6	NO		82.573
13C-1234-TCDD	26.377	0.000	9.19e5	1.17e6	1.000	0.784	0.770	1304.4	10693	4589	1.39e7	1.78e7	NO		100.000
13C-2378-TCDD	27.184	1.031	7.47e5	9.66e5	0.920	0.773	0.770	1021.0	10693	4589	1.09e7	1.41e7	NO		89.039
13C-12378-PeCDD	32.309	1.225	7.79e5	5.05e5	0.669	1.544	1.550	3280.5	3616	2059	1.19e7	7.69e6	NO		91.729
13C-123478-HxCDD	36.968	0.985	6.24e5	5.05e5	1.032	1.236	1.240	2758.7	3396	3381	9.37e6	7.55e6	NO		93.006
13C-123678-HxCDD	37.088	0.989	6.63e5	5.40e5	1.146	1.227	1.240	2811.1	3396	3381	9.55e6	7.83e6	NO		89.296
13C-1234678-HpCDD	41.911	1.117	4.33e5	4.17e5	0.789	1.040	1.050	1807.8	2924	3691	5.29e6	5.20e6	NO		91.614
13C-OCDD	48.026	1.280	5.77e5	6.51e5	0.696	0.885	0.890	1845.8	2820	2763	5.20e6	5.87e6	NO		149.923

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:19 Pacific Daylight Time

ID: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.516	0.000	6.52e5	5.24e5	1.000	1.246	1.240	2884.8	3396	3381	9.80e6	7.83e6	NO	100.000
Total-tetrafurans			0.00e0		0.771				806		0.00e0			
Total-penta1			0.00e0						1251		0.00e0			
Total-pentafurans			0.00e0		0.826				1027		0.00e0			
Total-hexafurans			3.50e2		0.948				1041		7.71e3			0.065
Total-heptafurans			0.00e0		1.079				406		0.00e0			
Total-Furans			4.55e2		0.925				806		1.04e4			0.082
Total-tetradioxins			1.39e3		0.936				1730		1.95e4			0.116
Total-pentadioxins			1.09e3		0.894				1450		1.51e4			0.109
Total-hexadioxins			1.96e3		0.835				1295		3.58e4			0.246
Total-heptadioxins			5.56e2		0.879				807		9.75e3			0.139
Total-Dioxins			5.32e3		0.870				1730		8.33e4			0.785
Total-TEQ			5.78e3						1730		9.37e4			0.866
37CL-2378-TCDD	27.214	1.032	7.64e5		1.000			3402.2	3393		1.15e7			36.508
FUNCTION1 PFK			8.50e6						1338052		1.36e7			
FUNCTION2 PFK			8.57e5						411623		2.31e7			0.000
FUNCTION3 PFK			1.62e6						708975		4.16e7			0.000
FUNCTION4 PFK			1.26e6						518266		2.95e7			
FUNCTION5 PFK			7.37e5						314121		2.52e7			
FUNCTION1 HXCDPE			0.00e0						589		0.00e0			
FUNCTION1 HPCDPE			2.52e3						1166		5.41e4			0.000
FUNCTION2 HPCDPE			1.06e3						1371		2.87e4			0.000
FUNCTION3 OCDPE			0.00e0						614		0.00e0			
FUNCTION4 NCDPE			4.89e2						1008		1.51e4			0.000
FUNCTION5 DCDPE			0.00e0						442		0.00e0			

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 21 Jun 2013 12:25:14
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N

PP

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N

PF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N

HF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
	7	123789-HxCDF	373.8208	37.95	323.903	0.874	0.043	0.024	3.04	1.24	YES	4.5
	5	234678-HxCDF	373.8208	36.83	225.798	1.000	0.022	0.019	0.89	1.24	YES	2.9

HPF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
	40	Total-Furans	303.9016	28.68	342.084	0.925	0.017		0.44	0.77	YES	3.4
	7	123789-HxCDF	373.8208	37.95	323.903	0.874	0.043	0.024	3.04	1.24	YES	4.5
	5	234678-HxCDF	373.8208	36.83	225.798	1.000	0.022	0.019	0.89	1.24	YES	2.9

TD

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
	41	Total-tetradioxins	319.8965	26.54	1867.040	0.936	0.116		2.88	0.77	YES	11.3

PD

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
	42	Total-pentadioxins	355.8546	30.70	1253.120	0.894	0.109		6.73	1.55	YES	10.4

HD

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
	43	Total-hexadioxins	389.8157	35.74	1195.669	0.835	0.123		3.79	1.24	YES	11.4
	43	Total-hexadioxins	389.8157	36.84	994.643	0.835	0.102		8.04	1.24	YES	12.0
	43	Total-hexadioxins	389.8157	36.78	208.812	0.835	0.021		1.76	1.24	YES	4.2

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:19 Pacific Daylight Time

D: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

HPD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	16	1234678-HpCDD	423.7766	41.92	543.625	0.879	0.073	0.061	1.42	1.05	YES	6.7
	44	Total-heptadioxins	423.7766	40.62	496.482	0.879	0.066		0.91	1.05	NO	5.4

Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	41	Total-tetradioxins	319.8965	26.54	1867.040	0.936	0.116		2.88	0.77	YES	11.3
	42	Total-pentadioxins	355.8546	30.70	1253.120	0.894	0.109		6.73	1.55	YES	10.4
	43	Total-hexadioxins	389.8157	35.74	1195.669	0.835	0.123		3.79	1.24	YES	11.4
	43	Total-hexadioxins	389.8157	36.84	994.643	0.835	0.102		8.04	1.24	YES	12.0
	43	Total-hexadioxins	389.8157	36.78	208.812	0.835	0.021		1.76	1.24	YES	4.2
	16	1234678-HpCDD	423.7766	41.92	543.625	0.879	0.073	0.061	1.42	1.05	YES	6.7
	44	Total-heptadioxins	423.7766	40.62	496.482	0.879	0.066		0.91	1.05	NO	5.4
	17	OCDD	457.7377	48.02	931.400	0.875	0.173	0.129	0.54	0.89	YES	7.2

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	40	Total-Furans	303.9016	28.68	342.084	0.925	0.017		0.44	0.77	YES	3.4
	7	123789-HxCDF	373.8208	37.95	323.903	0.874	0.043	0.024	3.04	1.24	YES	4.5
	5	234678-HxCDF	373.8208	36.83	225.798	1.000	0.022	0.019	0.89	1.24	YES	2.9
	41	Total-tetradioxins	319.8965	26.54	1867.040	0.936	0.116		2.88	0.77	YES	11.3
	42	Total-pentadioxins	355.8546	30.70	1253.120	0.894	0.109		6.73	1.55	YES	10.4
	43	Total-hexadioxins	389.8157	35.74	1195.669	0.835	0.123		3.79	1.24	YES	11.4
	43	Total-hexadioxins	389.8157	36.84	994.643	0.835	0.102		8.04	1.24	YES	12.0
	43	Total-hexadioxins	389.8157	36.78	208.812	0.835	0.021		1.76	1.24	YES	4.2
	16	1234678-HpCDD	423.7766	41.92	543.625	0.879	0.073	0.061	1.42	1.05	YES	6.7
	44	Total-heptadioxins	423.7766	40.62	496.482	0.879	0.066		0.91	1.05	NO	5.4
	17	OCDD	457.7377	48.02	931.400	0.875	0.173	0.129	0.54	0.89	YES	7.2

PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	48	FUNCTION1 PFK	330.9792	21.42	0.000							10.2

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:19 Pacific Daylight Time

D: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

PFK2

		Name	Trace	RT	Abs Rmtn	RRT %	Pg	EMPC	1° Rati	1° Rati	12 R	SN
[redacted]	49	FUNCTION2 PFK	366.9792	29.26	0.000	0.000						2.1
[redacted]	49	FUNCTION2 PFK	366.9792	29.22	0.000	0.000						1.2
[redacted]	49	FUNCTION2 PFK	366.9792	29.16	0.000	0.000						3.2
[redacted]	49	FUNCTION2 PFK	366.9792	29.06	0.000	0.000						3.0
[redacted]	49	FUNCTION2 PFK	366.9792	29.02	0.000	0.000						2.9
[redacted]	49	FUNCTION2 PFK	366.9792	28.93	0.000	0.000						1.2
[redacted]	49	FUNCTION2 PFK	366.9792	28.89	0.000	0.000						1.8
[redacted]	49	FUNCTION2 PFK	366.9792	30.72	0.000	0.000						0.7
[redacted]	49	FUNCTION2 PFK	366.9792	30.63	0.000	0.000						1.2
[redacted]	49	FUNCTION2 PFK	366.9792	30.36	0.000	0.000						1.4
[redacted]	49	FUNCTION2 PFK	366.9792	30.20	0.000	0.000						0.6
[redacted]	49	FUNCTION2 PFK	366.9792	30.03	0.000	0.000						0.9
[redacted]	49	FUNCTION2 PFK	366.9792	29.97	0.000	0.000						0.4
[redacted]	49	FUNCTION2 PFK	366.9792	29.92	0.000	0.000						1.4
[redacted]	49	FUNCTION2 PFK	366.9792	29.85	0.000	0.000						0.9
[redacted]	49	FUNCTION2 PFK	366.9792	29.80	0.000	0.000						1.1
[redacted]	49	FUNCTION2 PFK	366.9792	29.74	0.000	0.000						1.3
[redacted]	49	FUNCTION2 PFK	366.9792	29.71	0.000	0.000						0.7
[redacted]	49	FUNCTION2 PFK	366.9792	29.66	0.000	0.000						1.0
[redacted]	49	FUNCTION2 PFK	366.9792	29.58	0.000	0.000						0.9
[redacted]	49	FUNCTION2 PFK	366.9792	29.49	0.000	0.000						0.4
[redacted]	49	FUNCTION2 PFK	366.9792	29.45	0.000	0.000						0.2
[redacted]	49	FUNCTION2 PFK	366.9792	29.36	0.000	0.000						1.3
[redacted]	49	FUNCTION2 PFK	366.9792	32.53	0.000	0.000						0.6
[redacted]	49	FUNCTION2 PFK	366.9792	32.43	0.000	0.000						1.5
[redacted]	49	FUNCTION2 PFK	366.9792	32.40	0.000	0.000						1.4
[redacted]	49	FUNCTION2 PFK	366.9792	32.32	0.000	0.000						2.3
[redacted]	49	FUNCTION2 PFK	366.9792	32.12	0.000	0.000						1.4
[redacted]	49	FUNCTION2 PFK	366.9792	32.06	0.000	0.000						0.8
[redacted]	49	FUNCTION2 PFK	366.9792	31.99	0.000	0.000						0.3
[redacted]	49	FUNCTION2 PFK	366.9792	31.65	0.000	0.000						0.3
[redacted]	49	FUNCTION2 PFK	366.9792	31.54	0.000	0.000						0.9
[redacted]	49	FUNCTION2 PFK	366.9792	31.34	0.000	0.000						1.4
[redacted]	49	FUNCTION2 PFK	366.9792	31.30	0.000	0.000						0.7
[redacted]	49	FUNCTION2 PFK	366.9792	31.26	0.000	0.000						0.5
[redacted]	49	FUNCTION2 PFK	366.9792	31.04	0.000	0.000						0.9
[redacted]	49	FUNCTION2 PFK	366.9792	30.93	0.000	0.000						1.4
[redacted]	49	FUNCTION2 PFK	366.9792	30.87	0.000	0.000						0.3
[redacted]	49	FUNCTION2 PFK	366.9792	30.76	0.000	0.000						1.0
[redacted]	49	FUNCTION2 PFK	366.9792	33.38	0.000	0.000						0.7
[redacted]	49	FUNCTION2 PFK	366.9792	33.24	0.000	0.000						0.6
[redacted]	49	FUNCTION2 PFK	366.9792	33.16	0.000	0.000						0.8
[redacted]	49	FUNCTION2 PFK	366.9792	33.04	0.000	0.000						0.6
[redacted]	49	FUNCTION2 PFK	366.9792	33.00	0.000	0.000						1.4
[redacted]	49	FUNCTION2 PFK	366.9792	32.97	0.000	0.000						0.9
[redacted]	49	FUNCTION2 PFK	366.9792	32.82	0.000	0.000						1.1
[redacted]	49	FUNCTION2 PFK	366.9792	32.78	0.000	0.000						0.9
[redacted]	49	FUNCTION2 PFK	366.9792	32.73	0.000	0.000						1.5
[redacted]	49	FUNCTION2 PFK	366.9792	32.65	0.000	0.000						1.3

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:19 Pacific Daylight Time

D: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

PFK2

	#	Name	Trace	RT	Abs Resp	RRF M	pg	EMPC	1° Rati	1° Rati	1° R	S/N
0	49	FUNCTION2 PFK	366.9792	32.58	0.000		0.000					0.9

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:19 Pacific Daylight Time

D: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

PFK3

	Name	Area	RT	Abs Resp	RRF M...	pg	EMPC	T Rati...	T Rati...	T R...	S/N
	50 FUNCTION3 PFK	380.9760	34.14	0.000	0.000						1.0
	50 FUNCTION3 PFK	380.9760	34.04	0.000	0.000						0.9
	50 FUNCTION3 PFK	380.9760	33.87	0.000	0.000						1.1
	50 FUNCTION3 PFK	380.9760	33.75	0.000	0.000						0.6
	50 FUNCTION3 PFK	380.9760	36.16	0.000	0.000						1.1
	50 FUNCTION3 PFK	380.9760	36.09	0.000	0.000						1.6
	50 FUNCTION3 PFK	380.9760	36.07	0.000	0.000						1.6
	50 FUNCTION3 PFK	380.9760	36.04	0.000	0.000						0.5
	50 FUNCTION3 PFK	380.9760	35.78	0.000	0.000						1.0
	50 FUNCTION3 PFK	380.9760	35.73	0.000	0.000						0.9
	50 FUNCTION3 PFK	380.9760	35.69	0.000	0.000						0.6
	50 FUNCTION3 PFK	380.9760	35.28	0.000	0.000						1.4
	50 FUNCTION3 PFK	380.9760	34.86	0.000	0.000						0.6
	50 FUNCTION3 PFK	380.9760	34.82	0.000	0.000						1.8
	50 FUNCTION3 PFK	380.9760	34.65	0.000	0.000						0.7
	50 FUNCTION3 PFK	380.9760	34.52	0.000	0.000						1.2
	50 FUNCTION3 PFK	380.9760	34.46	0.000	0.000						0.7
	50 FUNCTION3 PFK	380.9760	34.42	0.000	0.000						1.5
	50 FUNCTION3 PFK	380.9760	34.38	0.000	0.000						1.6
	50 FUNCTION3 PFK	380.9760	34.27	0.000	0.000						1.5
	50 FUNCTION3 PFK	380.9760	38.04	0.000	0.000						0.7
	50 FUNCTION3 PFK	380.9760	38.01	0.000	0.000						0.6
	50 FUNCTION3 PFK	380.9760	37.97	0.000	0.000						0.9
	50 FUNCTION3 PFK	380.9760	37.89	0.000	0.000						1.4
	50 FUNCTION3 PFK	380.9760	37.82	0.000	0.000						2.3
	50 FUNCTION3 PFK	380.9760	37.67	0.000	0.000						1.5
	50 FUNCTION3 PFK	380.9760	37.45	0.000	0.000						1.0
	50 FUNCTION3 PFK	380.9760	37.30	0.000	0.000						1.2
	50 FUNCTION3 PFK	380.9760	37.23	0.000	0.000						1.1
	50 FUNCTION3 PFK	380.9760	37.15	0.000	0.000						1.7
	50 FUNCTION3 PFK	380.9760	36.97	0.000	0.000						1.4
	50 FUNCTION3 PFK	380.9760	36.87	0.000	0.000						2.4
	50 FUNCTION3 PFK	380.9760	36.76	0.000	0.000						1.6
	50 FUNCTION3 PFK	380.9760	36.66	0.000	0.000						0.5
	50 FUNCTION3 PFK	380.9760	36.54	0.000	0.000						1.3
	50 FUNCTION3 PFK	380.9760	36.22	0.000	0.000						2.1
	50 FUNCTION3 PFK	380.9760	38.96	0.000	0.000						1.1
	50 FUNCTION3 PFK	380.9760	38.85	0.000	0.000						1.6
	50 FUNCTION3 PFK	380.9760	38.71	0.000	0.000						1.7
	50 FUNCTION3 PFK	380.9760	38.56	0.000	0.000						2.5
	50 FUNCTION3 PFK	380.9760	38.50	0.000	0.000						2.5
	50 FUNCTION3 PFK	380.9760	38.41	0.000	0.000						1.6
	50 FUNCTION3 PFK	380.9760	38.21	0.000	0.000						2.2
	50 FUNCTION3 PFK	380.9760	38.15	0.000	0.000						1.2
	50 FUNCTION3 PFK	380.9760	38.09	0.000	0.000						0.9

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:19 Pacific Daylight Time

D: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

PFK4

[redacted]	Id	Name	Face	RT	Abs High	RRF M...	Pd	%MPO	12 Rati...	13 Rati...	14 R...	A/N
[redacted]	51	FUNCTION4 PFK	430.9728	39.57	0.000							1.3
[redacted]	51	FUNCTION4 PFK	430.9728	39.32	0.000							2.4
[redacted]	51	FUNCTION4 PFK	430.9728	39.25	0.000							4.0
[redacted]	51	FUNCTION4 PFK	430.9728	39.18	0.000							4.1
[redacted]	51	FUNCTION4 PFK	430.9728	39.14	0.000							4.6
[redacted]	51	FUNCTION4 PFK	430.9728	39.08	0.000							5.7
[redacted]	51	FUNCTION4 PFK	430.9728	42.16	0.000							0.3
[redacted]	51	FUNCTION4 PFK	430.9728	42.05	0.000							1.2
[redacted]	51	FUNCTION4 PFK	430.9728	41.82	0.000							1.5
[redacted]	51	FUNCTION4 PFK	430.9728	41.69	0.000							0.9
[redacted]	51	FUNCTION4 PFK	430.9728	41.55	0.000							1.5
[redacted]	51	FUNCTION4 PFK	430.9728	41.40	0.000							1.3
[redacted]	51	FUNCTION4 PFK	430.9728	41.32	0.000							0.3
[redacted]	51	FUNCTION4 PFK	430.9728	41.28	0.000							1.0
[redacted]	51	FUNCTION4 PFK	430.9728	41.01	0.000							0.6
[redacted]	51	FUNCTION4 PFK	430.9728	40.38	0.000							0.4
[redacted]	51	FUNCTION4 PFK	430.9728	40.28	0.000							1.2
[redacted]	51	FUNCTION4 PFK	430.9728	40.22	0.000							0.7
[redacted]	51	FUNCTION4 PFK	430.9728	40.07	0.000							1.0
[redacted]	51	FUNCTION4 PFK	430.9728	40.00	0.000							2.9
[redacted]	51	FUNCTION4 PFK	430.9728	39.92	0.000							1.6
[redacted]	51	FUNCTION4 PFK	430.9728	39.83	0.000							1.7
[redacted]	51	FUNCTION4 PFK	430.9728	44.61	0.000							1.0
[redacted]	51	FUNCTION4 PFK	430.9728	44.54	0.000							1.0
[redacted]	51	FUNCTION4 PFK	430.9728	44.30	0.000							1.3
[redacted]	51	FUNCTION4 PFK	430.9728	43.88	0.000							0.9
[redacted]	51	FUNCTION4 PFK	430.9728	43.75	0.000							0.8
[redacted]	51	FUNCTION4 PFK	430.9728	43.71	0.000							1.0
[redacted]	51	FUNCTION4 PFK	430.9728	43.59	0.000							0.8
[redacted]	51	FUNCTION4 PFK	430.9728	43.53	0.000							1.2
[redacted]	51	FUNCTION4 PFK	430.9728	43.45	0.000							1.9
[redacted]	51	FUNCTION4 PFK	430.9728	43.24	0.000							0.8
[redacted]	51	FUNCTION4 PFK	430.9728	43.19	0.000							0.6
[redacted]	51	FUNCTION4 PFK	430.9728	43.15	0.000							0.4
[redacted]	51	FUNCTION4 PFK	430.9728	42.55	0.000							1.3
[redacted]	51	FUNCTION4 PFK	430.9728	42.50	0.000							0.4
[redacted]	51	FUNCTION4 PFK	430.9728	42.40	0.000							1.5
[redacted]	51	FUNCTION4 PFK	430.9728	42.27	0.000							0.8
[redacted]	51	FUNCTION4 PFK	430.9728	44.94	0.000							1.2

D: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

PFK5

	52	FUNCTION5 PFK	480.9696	45.93	0.000						2.2
	52	FUNCTION5 PFK	480.9696	45.88	0.000						0.8
	52	FUNCTION5 PFK	480.9696	45.80	0.000						1.0
	52	FUNCTION5 PFK	480.9696	45.75	0.000						1.4
	52	FUNCTION5 PFK	480.9696	45.66	0.000						1.4
	52	FUNCTION5 PFK	480.9696	45.57	0.000						0.6
	52	FUNCTION5 PFK	480.9696	45.40	0.000						1.0
	52	FUNCTION5 PFK	480.9696	45.36	0.000						2.0
	52	FUNCTION5 PFK	480.9696	45.31	0.000						2.1
	52	FUNCTION5 PFK	480.9696	45.27	0.000						0.7
	52	FUNCTION5 PFK	480.9696	45.19	0.000						2.6
	52	FUNCTION5 PFK	480.9696	45.14	0.000						3.0
	52	FUNCTION5 PFK	480.9696	45.09	0.000						1.6
	52	FUNCTION5 PFK	480.9696	45.06	0.000						0.7
	52	FUNCTION5 PFK	480.9696	46.76	0.000						1.0
	52	FUNCTION5 PFK	480.9696	46.73	0.000						0.7
	52	FUNCTION5 PFK	480.9696	46.62	0.000						1.0
	52	FUNCTION5 PFK	480.9696	46.58	0.000						0.8
	52	FUNCTION5 PFK	480.9696	46.49	0.000						1.7
	52	FUNCTION5 PFK	480.9696	46.46	0.000						0.9
	52	FUNCTION5 PFK	480.9696	46.43	0.000						1.0
	52	FUNCTION5 PFK	480.9696	46.38	0.000						1.8
	52	FUNCTION5 PFK	480.9696	46.32	0.000						1.9
	52	FUNCTION5 PFK	480.9696	46.29	0.000						1.6
	52	FUNCTION5 PFK	480.9696	46.21	0.000						1.8
	52	FUNCTION5 PFK	480.9696	46.16	0.000						2.0
	52	FUNCTION5 PFK	480.9696	46.12	0.000						2.1
	52	FUNCTION5 PFK	480.9696	46.10	0.000						1.4
	52	FUNCTION5 PFK	480.9696	46.03	0.000						2.6
	52	FUNCTION5 PFK	480.9696	45.96	0.000						1.9
	52	FUNCTION5 PFK	480.9696	47.93	0.000						1.2
	52	FUNCTION5 PFK	480.9696	47.84	0.000						1.4
	52	FUNCTION5 PFK	480.9696	47.78	0.000						0.7
	52	FUNCTION5 PFK	480.9696	47.72	0.000						1.0
	52	FUNCTION5 PFK	480.9696	47.65	0.000						1.9
	52	FUNCTION5 PFK	480.9696	47.50	0.000						0.6
	52	FUNCTION5 PFK	480.9696	47.45	0.000						0.7
	52	FUNCTION5 PFK	480.9696	47.41	0.000						0.8
	52	FUNCTION5 PFK	480.9696	47.34	0.000						0.7
	52	FUNCTION5 PFK	480.9696	47.30	0.000						1.3
	52	FUNCTION5 PFK	480.9696	47.25	0.000						0.6
	52	FUNCTION5 PFK	480.9696	47.19	0.000						2.1
	52	FUNCTION5 PFK	480.9696	47.06	0.000						1.4
	52	FUNCTION5 PFK	480.9696	47.00	0.000						1.1
	52	FUNCTION5 PFK	480.9696	46.88	0.000						2.0
	52	FUNCTION5 PFK	480.9696	46.80	0.000						0.5
	52	FUNCTION5 PFK	480.9696	48.95	0.000						0.4
	52	FUNCTION5 PFK	480.9696	48.86	0.000						0.7
	52	FUNCTION5 PFK	480.9696	48.77	0.000						1.4

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:19 Pacific Daylight Time

ID: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

PFK5

	#	Name	Trace	RT	Abs Resp	RRF M...	ng	EMPS	T. Ratio	T. Ratio	T. R...	S/N
	52	FUNCTION5 PFK	480.9696	48.72	0.000							0.5
	52	FUNCTION5 PFK	480.9696	48.69	0.000							0.9
	52	FUNCTION5 PFK	480.9696	48.65	0.000							1.9
	52	FUNCTION5 PFK	480.9696	48.60	0.000							0.7
	52	FUNCTION5 PFK	480.9696	48.52	0.000							0.9
	52	FUNCTION5 PFK	480.9696	48.48	0.000							0.4
	52	FUNCTION5 PFK	480.9696	48.43	0.000							0.7
	52	FUNCTION5 PFK	480.9696	48.39	0.000							1.2
	52	FUNCTION5 PFK	480.9696	48.29	0.000							0.4
	52	FUNCTION5 PFK	480.9696	48.19	0.000							1.7
	52	FUNCTION5 PFK	480.9696	48.11	0.000							1.1
	52	FUNCTION5 PFK	480.9696	48.04	0.000							1.6
	52	FUNCTION5 PFK	480.9696	47.96	0.000							0.8
	52	FUNCTION5 PFK	480.9696	49.04	0.000							0.6
	52	FUNCTION5 PFK	480.9696	49.00	0.000							0.5

ETHERS1

	#	Name	Trace	RT	Abs Resp	RRF M...	ng	EMPS	T. Ratio	T. Ratio	T. R...	S/N

ETHERS2

	#	Name	Trace	RT	Abs Resp	RRF M...	ng	EMPS	T. Ratio	T. Ratio	T. R...	S/N
	54	FUNCTION1 HPCD...	409.7974	25.59	0.000	0.000						2.6
	54	FUNCTION1 HPCD...	409.7974	25.51	0.000	0.000						3.8
	54	FUNCTION1 HPCD...	409.7974	25.09	0.000	0.000						1.6
	54	FUNCTION1 HPCD...	409.7974	25.00	0.000	0.000						1.2
	54	FUNCTION1 HPCD...	409.7974	23.81	0.000	0.000						1.7
	54	FUNCTION1 HPCD...	409.7974	23.45	0.000	0.000						2.6
	54	FUNCTION1 HPCD...	409.7974	23.10	0.000	0.000						4.9
	54	FUNCTION1 HPCD...	409.7974	23.00	0.000	0.000						1.9
	54	FUNCTION1 HPCD...	409.7974	22.84	0.000	0.000						1.8
	54	FUNCTION1 HPCD...	409.7974	22.37	0.000	0.000						1.3
	54	FUNCTION1 HPCD...	409.7974	21.45	0.000	0.000						1.0
	54	FUNCTION1 HPCD...	409.7974	21.25	0.000	0.000						1.5
	54	FUNCTION1 HPCD...	409.7974	28.33	0.000	0.000						3.6
	54	FUNCTION1 HPCD...	409.7974	28.21	0.000	0.000						2.4
	54	FUNCTION1 HPCD...	409.7974	27.51	0.000	0.000						3.8
	54	FUNCTION1 HPCD...	409.7974	27.39	0.000	0.000						2.4
	54	FUNCTION1 HPCD...	409.7974	27.17	0.000	0.000						1.7
	54	FUNCTION1 HPCD...	409.7974	26.96	0.000	0.000						1.7
	54	FUNCTION1 HPCD...	409.7974	26.78	0.000	0.000						1.2
	54	FUNCTION1 HPCD...	409.7974	25.93	0.000	0.000						2.2
	54	FUNCTION1 HPCD...	409.7974	25.75	0.000	0.000						1.7

): WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

THERS3

	#	Name	Trace	RT	Abs Resp	RRF M...	dq	EMPC	1° Rat...	1° Rat...	1° R...	S/N
	55	FUNCTION2 HPCD...	409.7974	30.70	0.000	0.000						1.6
	55	FUNCTION2 HPCD...	409.7974	30.61	0.000	0.000						2.1
	55	FUNCTION2 HPCD...	409.7974	30.23	0.000	0.000						3.0
	55	FUNCTION2 HPCD...	409.7974	29.92	0.000	0.000						1.6
	55	FUNCTION2 HPCD...	409.7974	29.77	0.000	0.000						1.9
	55	FUNCTION2 HPCD...	409.7974	28.97	0.000	0.000						1.6
	55	FUNCTION2 HPCD...	409.7974	32.67	0.000	0.000						2.4
	55	FUNCTION2 HPCD...	409.7974	32.51	0.000	0.000						1.4
	55	FUNCTION2 HPCD...	409.7974	32.11	0.000	0.000						2.4
	55	FUNCTION2 HPCD...	409.7974	32.07	0.000	0.000						1.2
	55	FUNCTION2 HPCD...	409.7974	30.75	0.000	0.000						1.6

THERS4

	#	Name	Trace	RT	Abs Resp	RRF M...	dq	EMPC	1° Rat...	1° Rat...	1° R...	S/N

THERS5

	#	Name	Trace	RT	Abs Resp	RRF M...	dq	EMPC	1° Rat...	1° Rat...	1° R...	S/N
	57	FUNCTION4 NCDPE	479.7165	43.62	0.000	0.000						2.6
	57	FUNCTION4 NCDPE	479.7165	41.89	0.000	0.000						2.4
	57	FUNCTION4 NCDPE	479.7165	41.58	0.000	0.000						5.9
	57	FUNCTION4 NCDPE	479.7165	41.39	0.000	0.000						2.7
	57	FUNCTION4 NCDPE	479.7165	39.76	0.000	0.000						1.3

THERS6

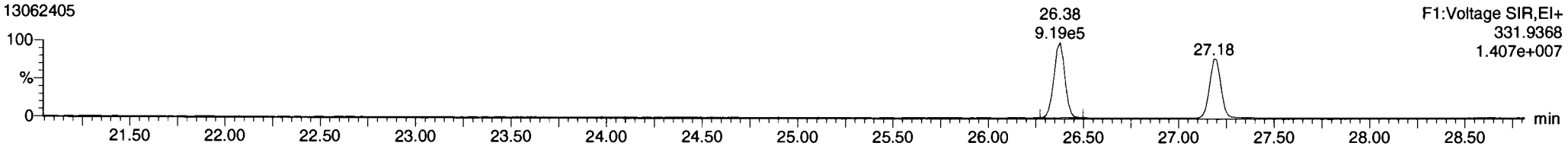
	#	Name	Trace	RT	Abs Resp	RRF M...	dq	EMPC	1° Rat...	1° Rat...	1° R...	S/N

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:19 Pacific Daylight Time

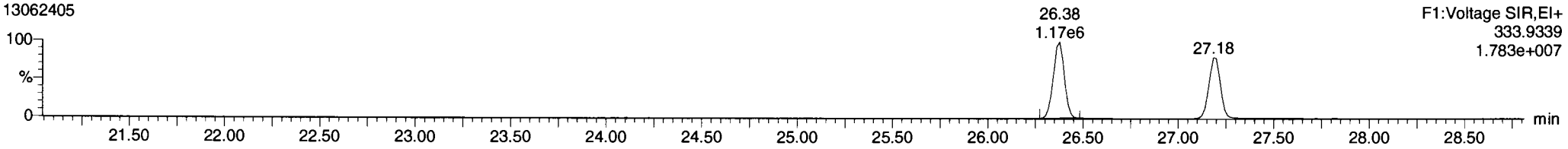
Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 21 Jun 2013 12:25:14
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

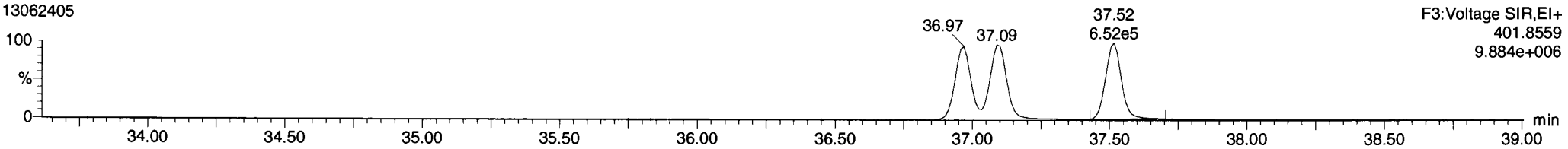
13C-1234-TCDD



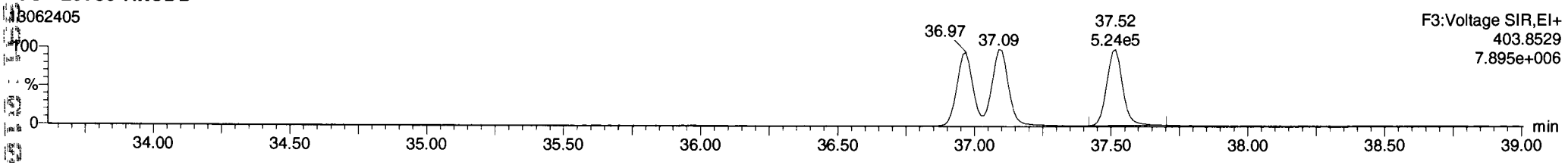
13C-1234-TCDD



13C-123789-HxCDD

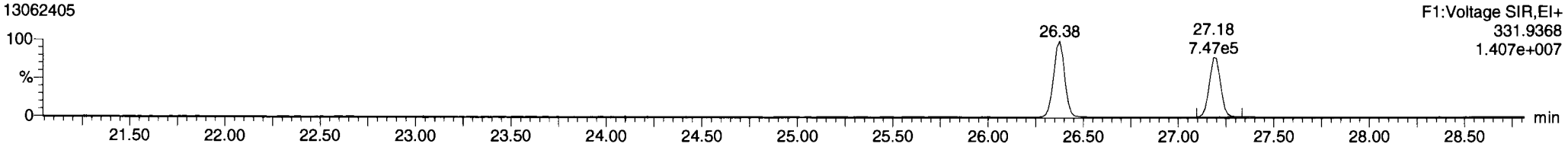


13C-123789-HxCDD

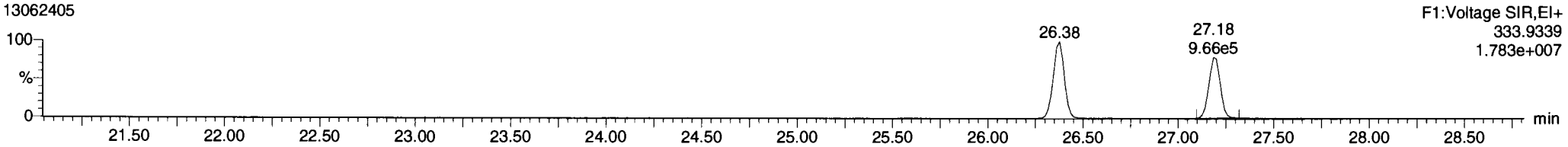


ID: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

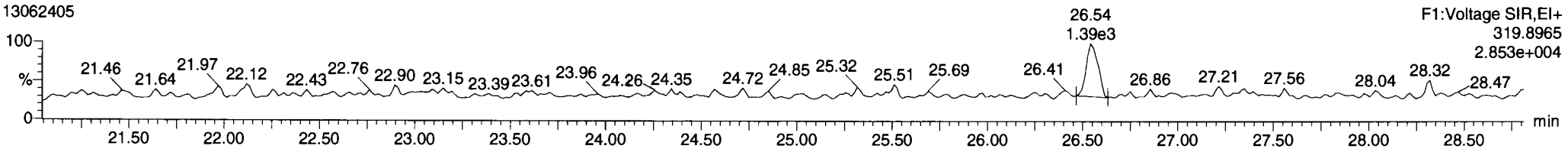
13C-2378-TCDD



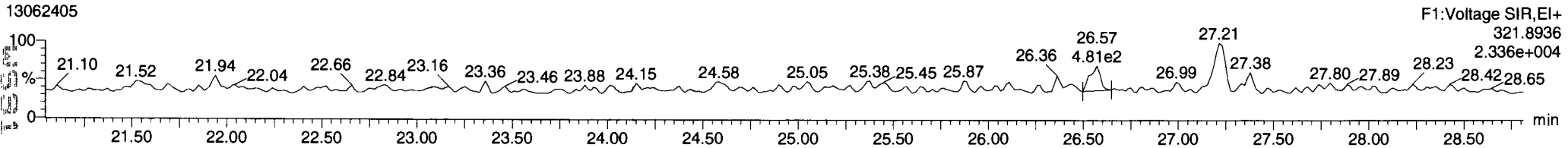
13C-2378-TCDD



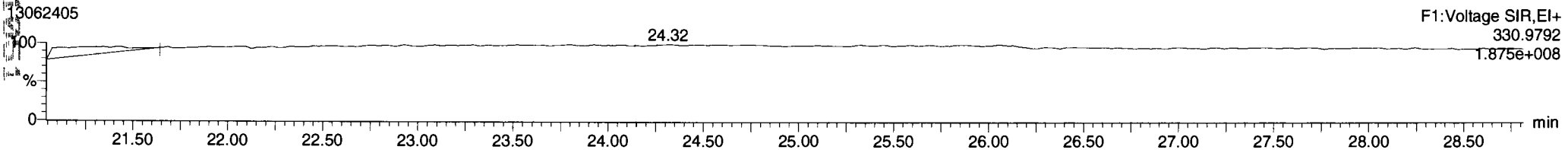
Total-tetradioxins



Total-tetradioxins



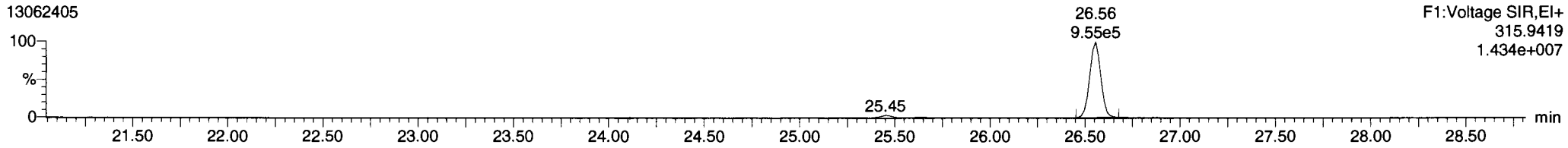
FUNCTION1 PFK



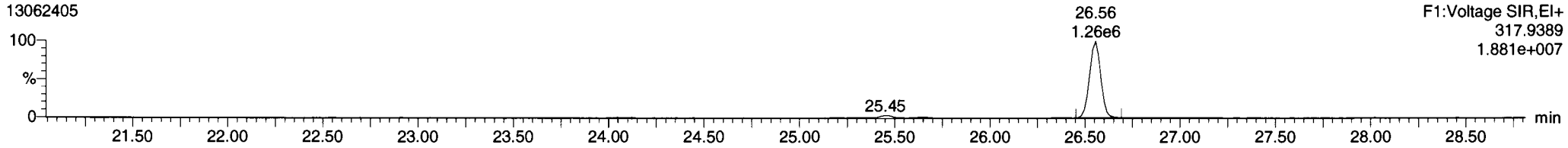
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:19 Pacific Daylight Time

ID: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

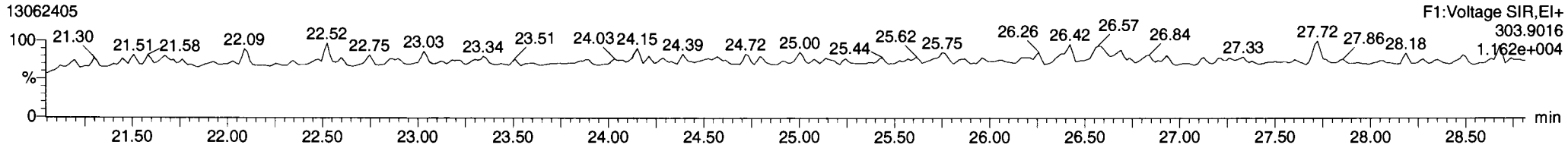
13C-2378-TCDF



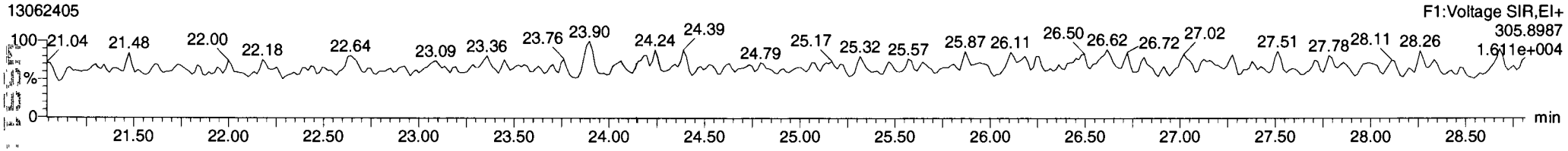
13C-2378-TCDF



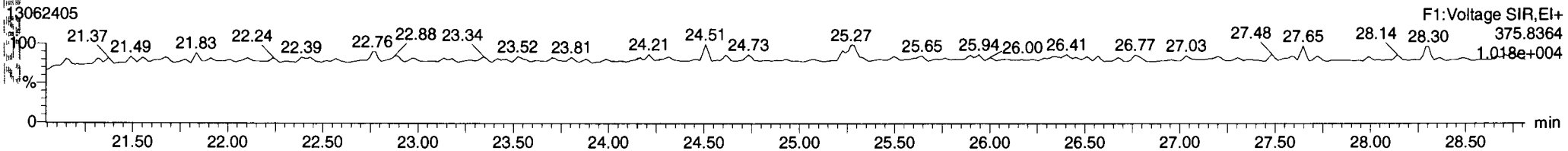
Total-tetrafurans



Total-tetrafurans



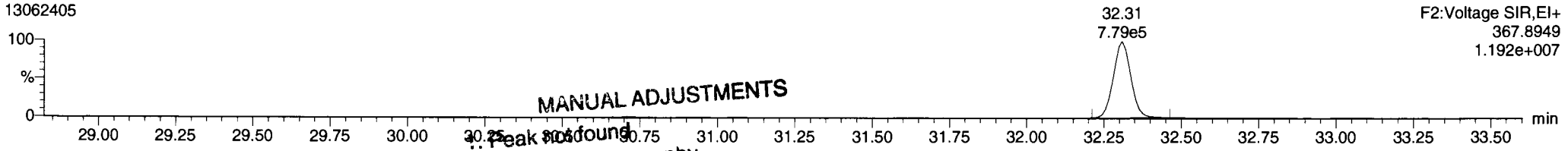
FUNCTION1 HXCDPE



Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:19 Pacific Daylight Time

ID: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD

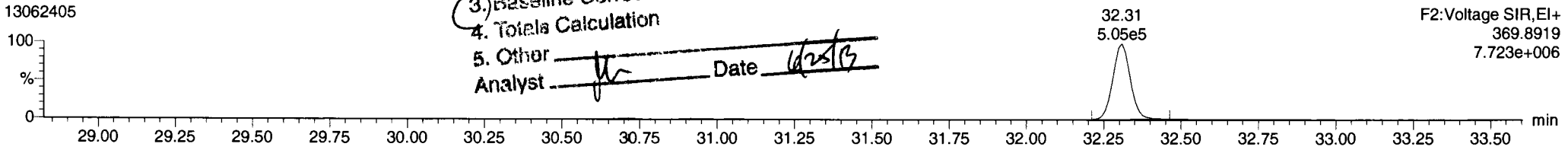


MANUAL ADJUSTMENTS

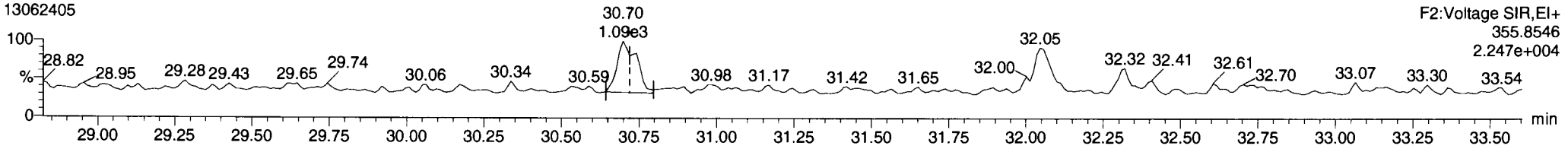
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other

Analyst _____ Date 6/25/13

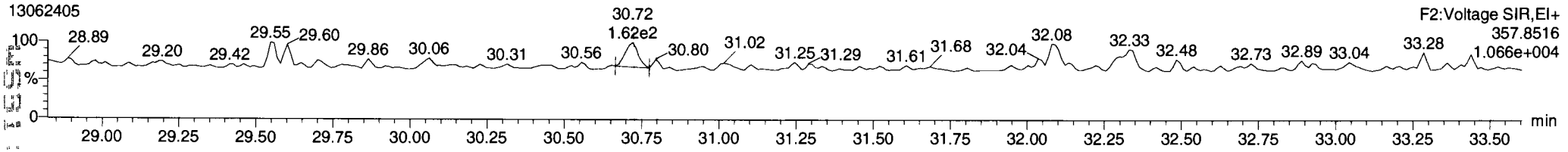
13C-12378-PeCDD



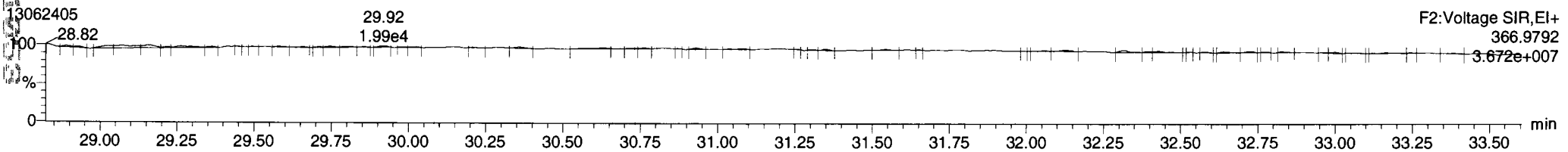
Total-pentadioxins



Total-pentadioxins



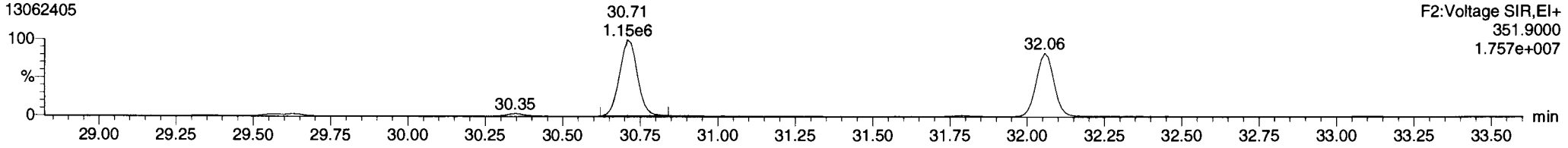
FUNCTION2 PFK



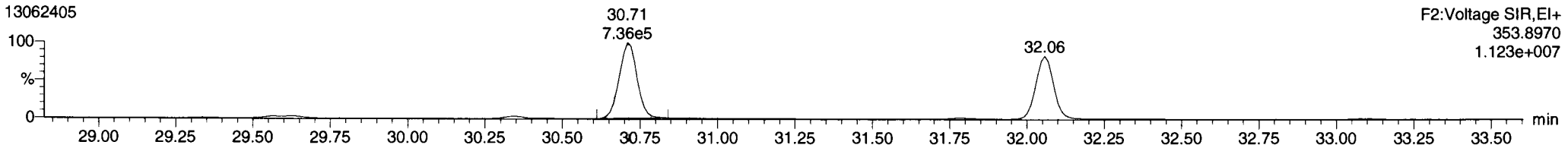
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:19 Pacific Daylight Time

ID: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

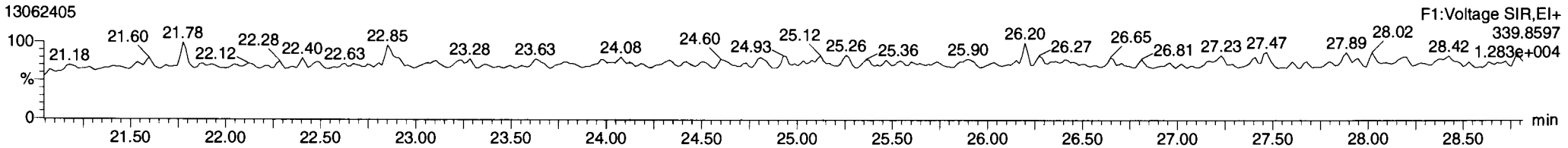
13C-12378-PeCDF



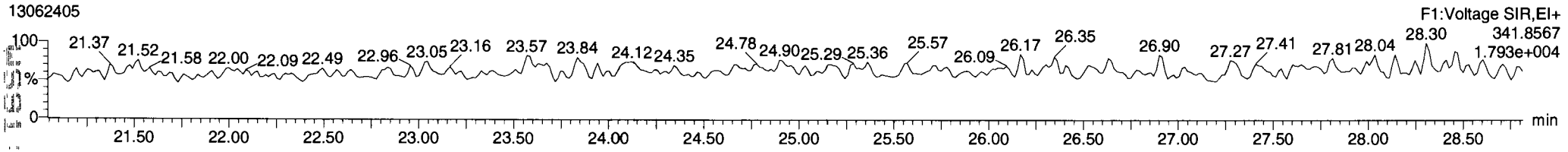
13C-12378-PeCDF



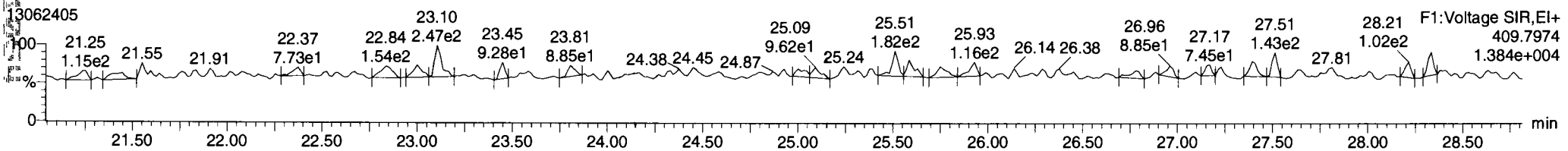
Total-penta1



Total-penta1



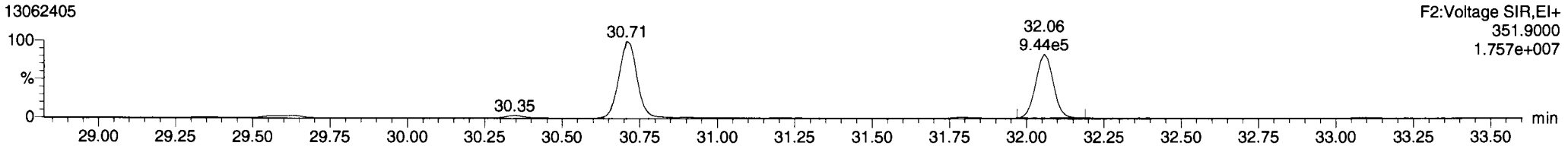
FUNCTION1 HPCDPE



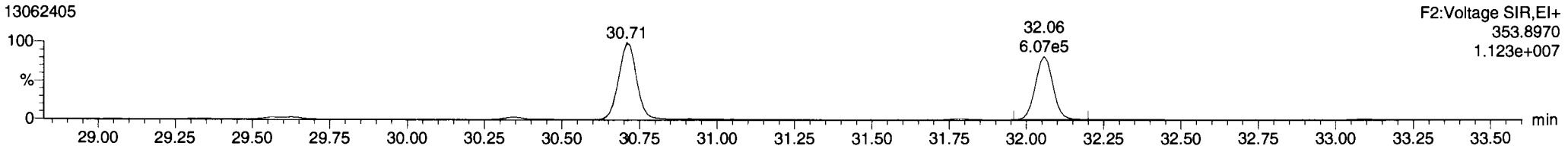
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:19 Pacific Daylight Time

ID: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

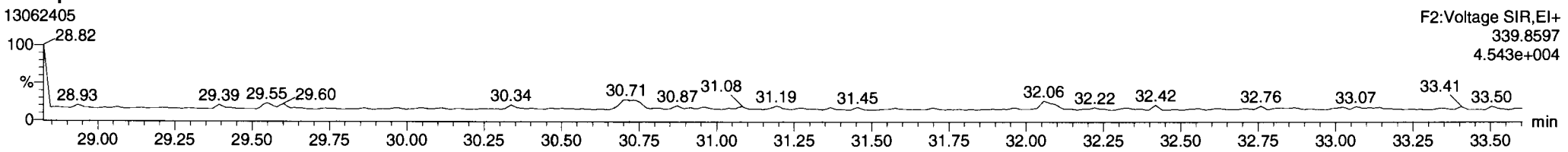
13C-23478-PeCDF



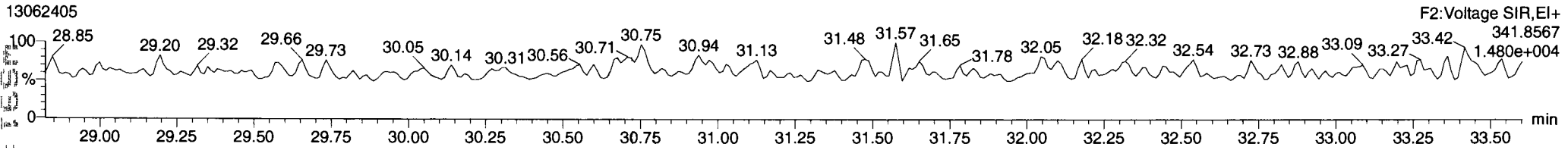
13C-23478-PeCDF



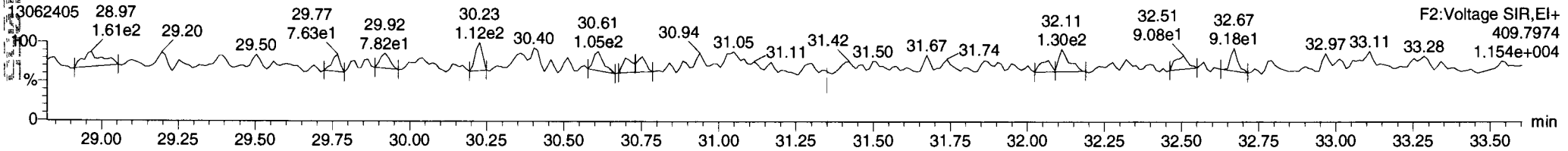
Total-pentafurans



Total-pentafurans



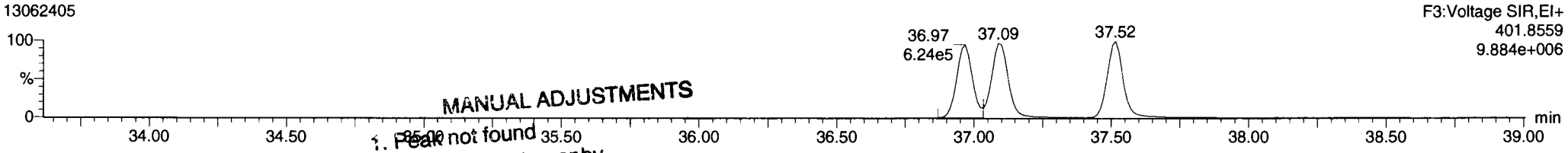
FUNCTION2 HPCDPE



Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:19 Pacific Daylight Time

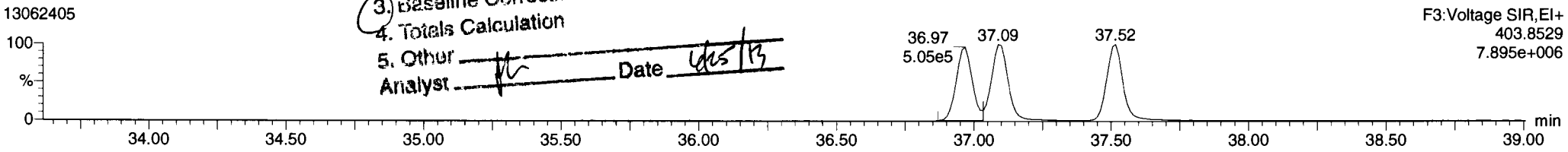
ID: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD

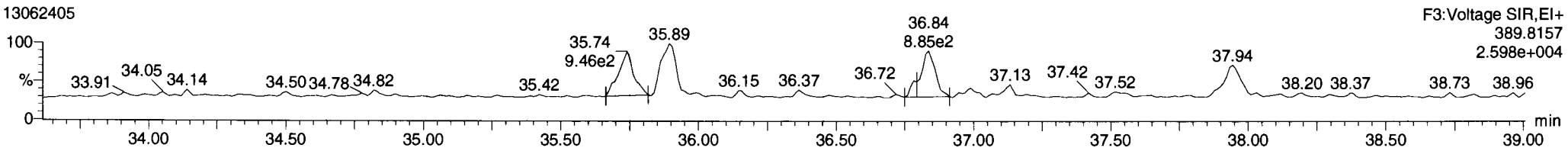


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst
Date 6/25/13

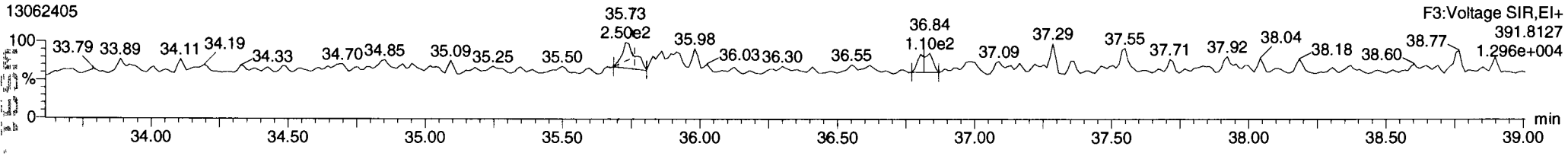
13C-123478-HxCDD



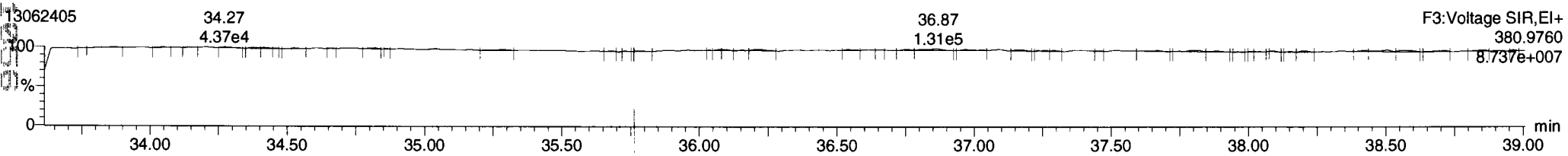
Total-hexadioxins



Total-hexadioxins



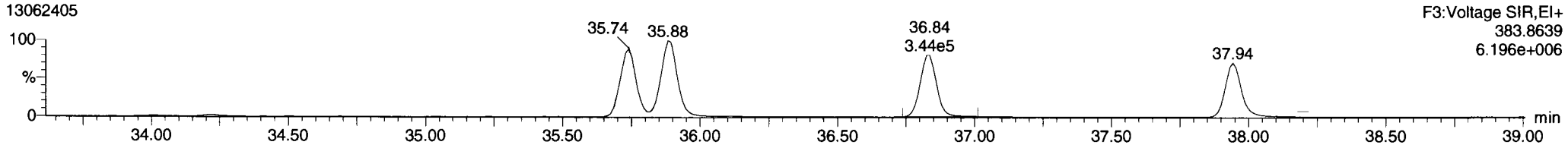
FUNCTION3 PFK



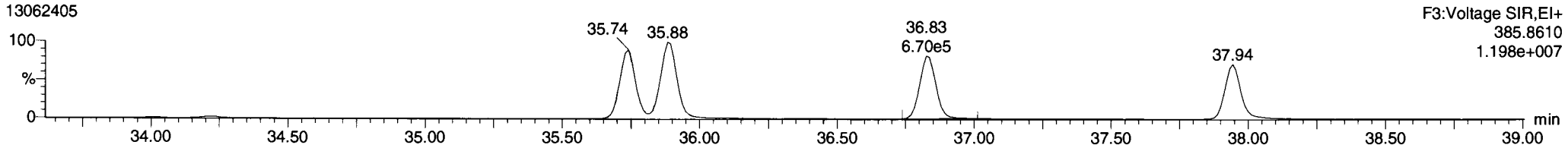
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:19 Pacific Daylight Time

ID: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

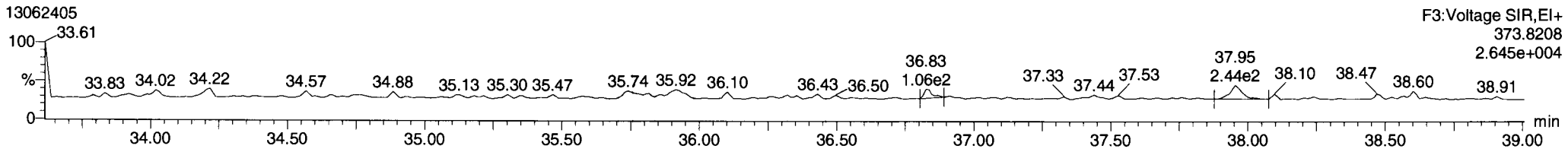
13C-234678-HxCDF



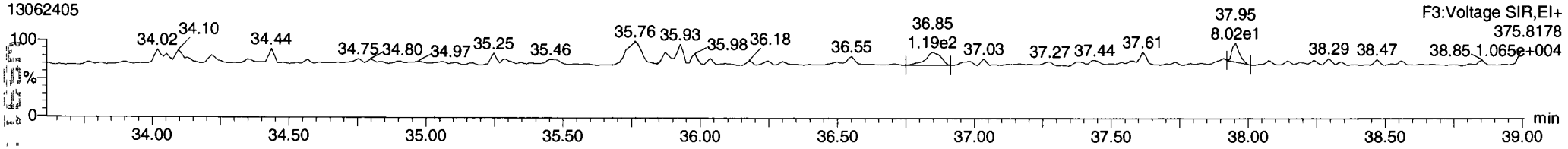
13C-234678-HxCDF



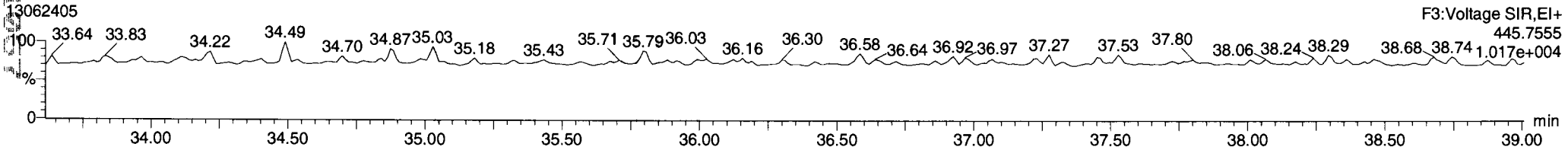
Total-hexafurans



Total-hexafurans



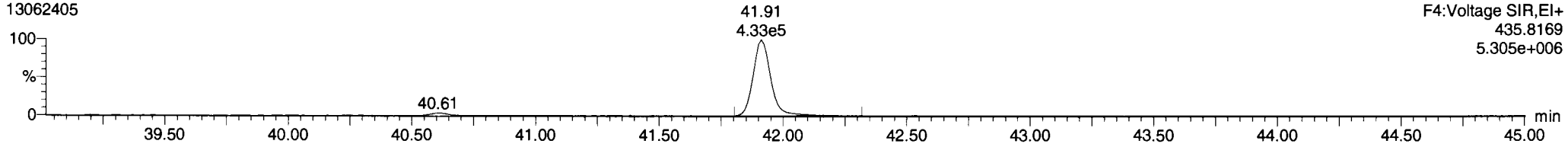
FUNCTION3 OCDPE



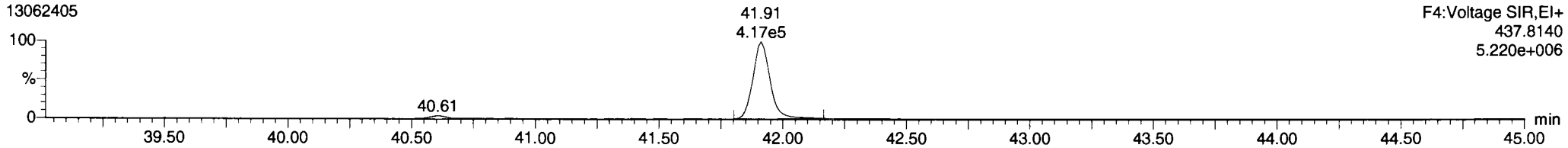
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:19 Pacific Daylight Time

ID: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

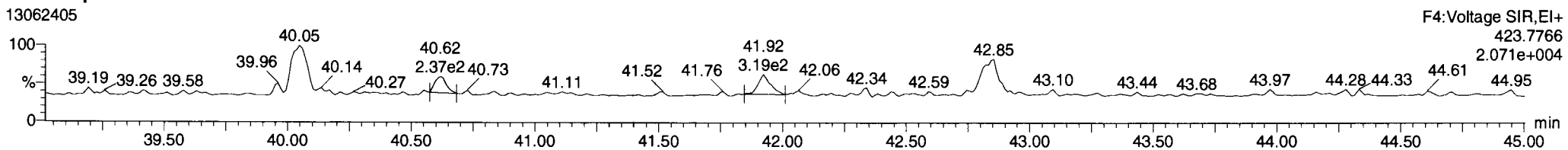
13C-1234678-HpCDD



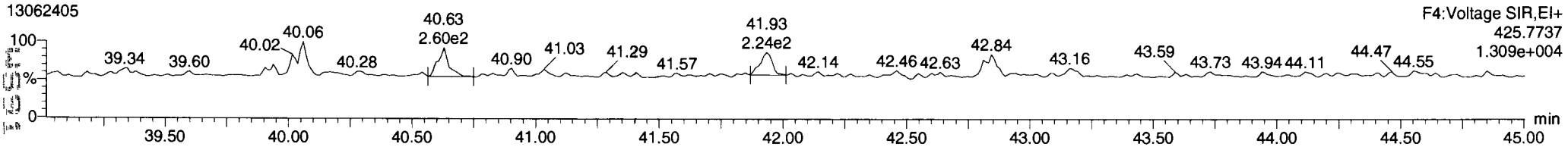
13C-1234678-HpCDD



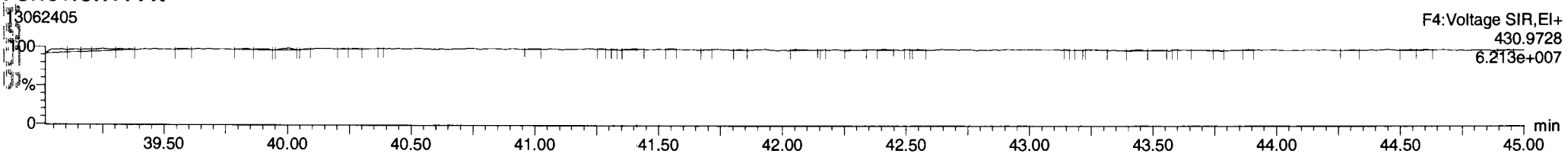
Total-heptadioxins



Total-heptadioxins



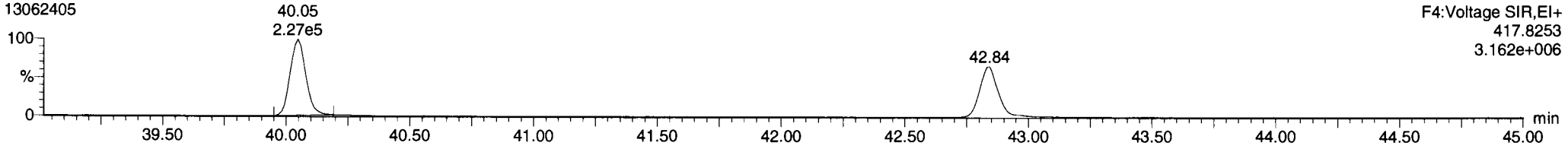
FUNCTION4 PFK



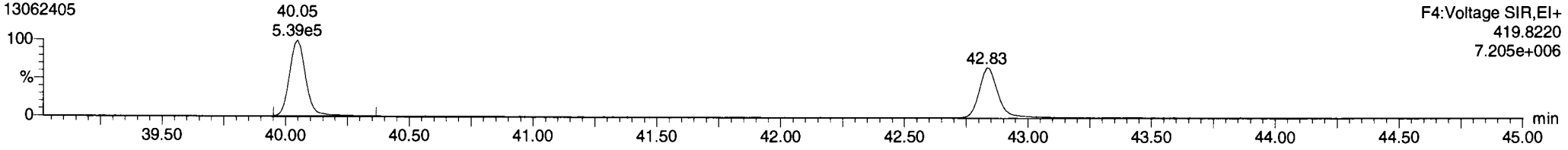
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:19 Pacific Daylight Time

ID: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

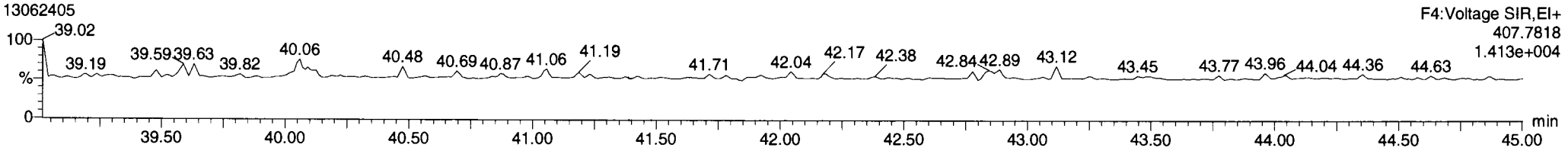
13C-1234678-HpCDF



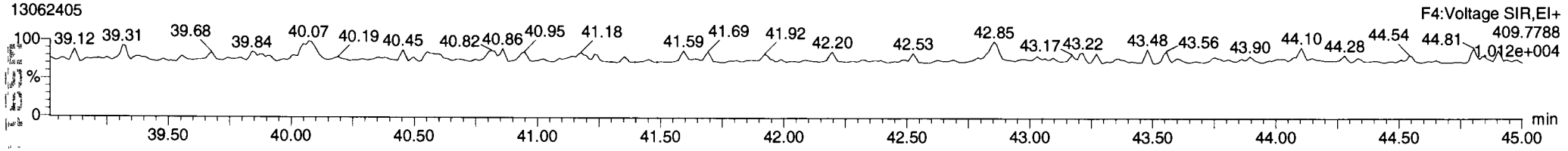
13C-1234678-HpCDF



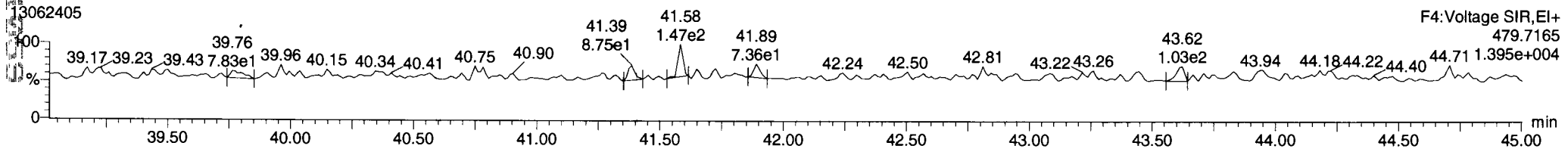
Total-heptafurans



Total-heptafurans



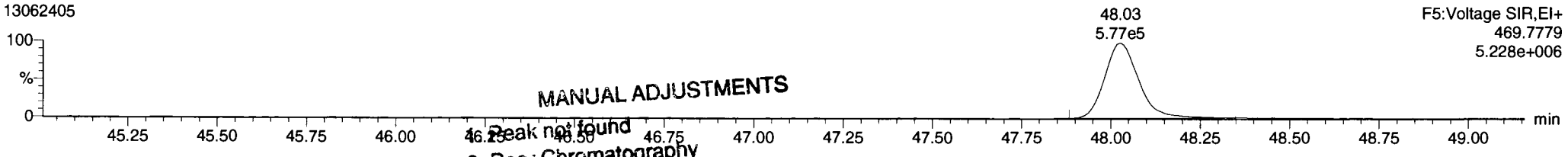
FUNCTION4 NCDPE



Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:19 Pacific Daylight Time

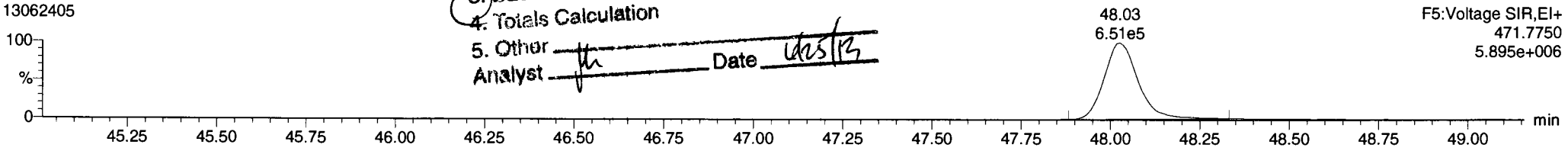
ID: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

13C-OCDD

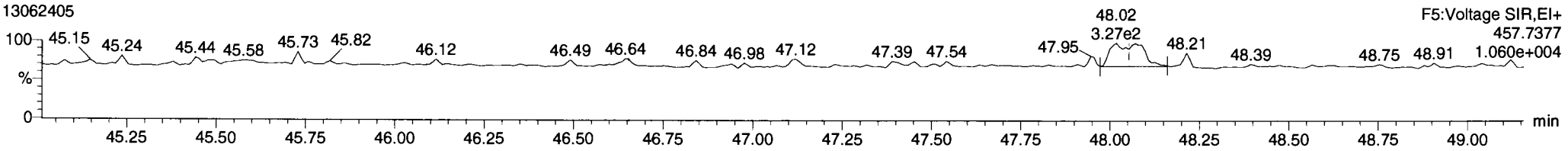


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst _____ Date 6/25/13

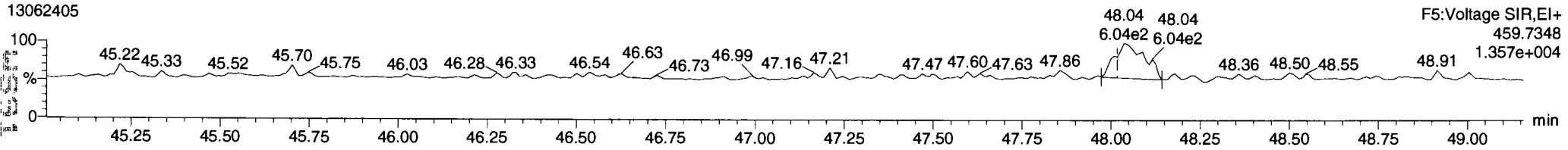
13C-OCDD



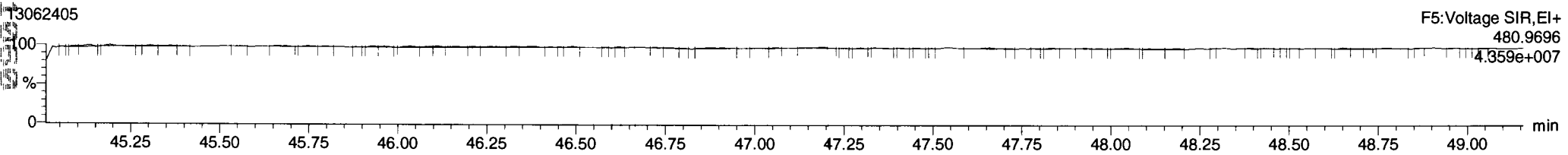
OCDD



OCDD



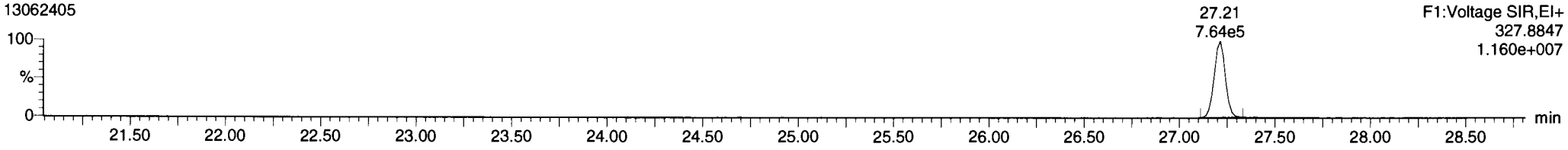
FUNCTION5 PFK



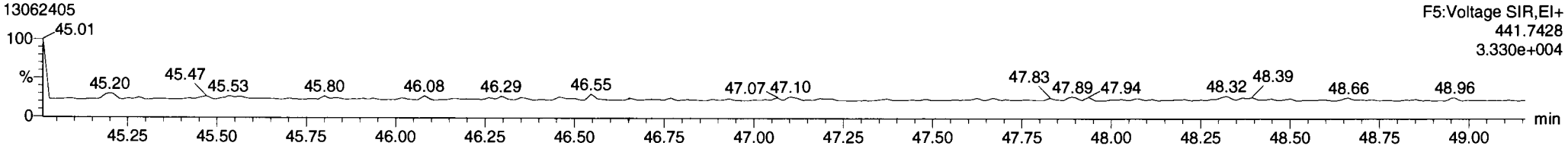
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:19 Pacific Daylight Time

ID: WS91MBS, Name: 13062405, Date: 24-Jun-2013, Time: 12:48:15, Conditions: AUTOSPEC01, User: pk

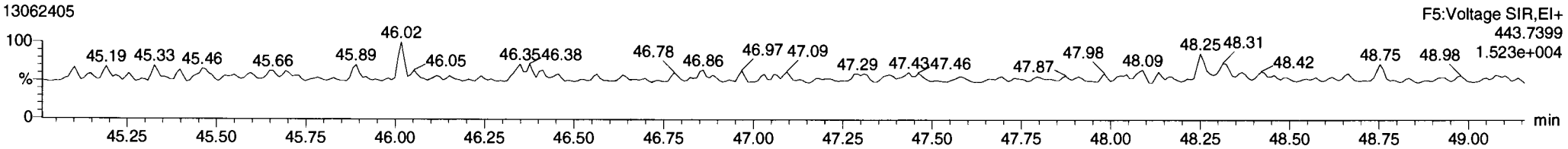
37CL-2378-TCDD



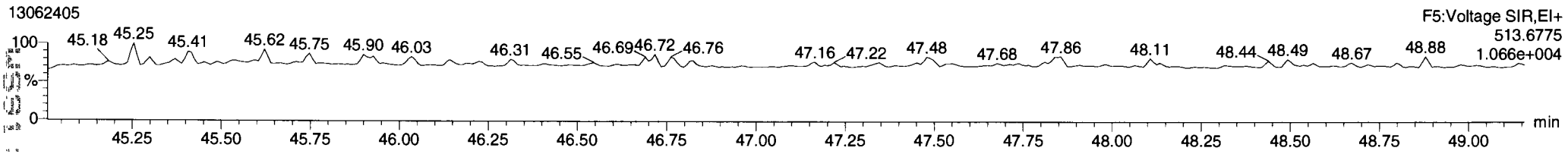
OCDF



OCDF



FUNCTION5 DCDPE



Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:40 Pacific Daylight Time

pk 6/25/13

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 21 Jun 2013 12:25:14
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.556	1.001	5.96e4	7.89e4	0.771	0.756	0.770	1040.8	858	2054	8.93e5	1.14e6	NO	11.516	11.516
12378-PeCDF	30.719	1.000	3.91e5	2.55e5	0.814	1.535	1.550	2615.2	2272	2258	5.94e6	3.94e6	NO	53.356	53.356
23478-PeCDF	32.068	1.001	3.00e5	2.03e5	0.837	1.482	1.550	2083.7	2272	2258	4.73e6	3.10e6	NO	52.453	52.453
123478-HxCDF	35.751	1.001	2.25e5	1.82e5	0.967	1.237	1.240	1324.0	2584	2042	3.42e6	2.71e6	NO	52.984	52.984
234678-HxCDF	36.847	1.001	2.18e5	1.83e5	1.000	1.194	1.240	1272.5	2584	2042	3.29e6	2.69e6	NO	54.007	54.007
123678-HxCDF	35.894	1.000	2.63e5	2.11e5	0.951	1.250	1.240	1456.1	2584	2042	3.76e6	3.13e6	NO	52.796	52.796
123789-HxCDF	37.954	1.001	1.58e5	1.33e5	0.874	1.193	1.240	932.7	2584	2042	2.41e6	1.99e6	NO	53.902	53.902
1234678-HpCDF	40.058	1.001	2.19e5	2.12e5	1.072	1.033	1.050	1409.3	2133	2847	3.01e6	2.96e6	NO	71.528	71.528
1234789-HpCDF	42.854	1.001	1.23e5	1.23e5	1.085	0.998	1.050	697.4	2133	2847	1.49e6	1.46e6	NO	54.325	54.325
OCDF	48.331	1.007	1.92e5	2.16e5	0.878	0.890	0.890	1154.3	1494	1455	1.72e6	1.97e6	NO	99.469	99.469
2378-TCDD	27.199	1.001	5.26e4	7.20e4	0.936	0.730	0.770	525.7	1549	1227	8.14e5	1.07e6	NO	10.832	10.832
12378-PeCDD	32.320	1.001	2.69e5	1.76e5	0.894	1.530	1.550	1180.6	3554	1838	4.20e6	2.73e6	NO	52.016	52.016
123478-HxCDD	36.979	1.001	2.17e5	1.74e5	0.898	1.247	1.240	1923.7	1661	3068	3.20e6	2.56e6	NO	51.755	51.755
123678-HxCDD	37.099	1.000	2.20e5	1.72e5	0.818	1.280	1.240	1932.1	1661	3068	3.21e6	2.57e6	NO	52.894	52.894
123789-HxCDD	37.516	1.012	2.01e5	1.64e5	0.789	1.224	1.240	1799.2	1661	3068	2.99e6	2.52e6	NO	52.970	52.970
1234678-HpCDD	41.922	1.001	1.54e5	1.54e5	0.879	1.000	1.050	928.9	2098	1565	1.95e6	1.90e6	NO	54.592	54.592
OCDD	48.044	1.001	2.09e5	2.39e5	0.875	0.872	0.890	2069.7	936	933	1.94e6	2.23e6	NO	109.426	109.426
13C-2378-TCDF	26.541	1.007	6.76e5	8.84e5	1.190	0.765	0.770	3193.8	3184	5089	1.02e7	1.33e7	NO		71.971
13C-12378-PeCDF	30.709	1.165	8.97e5	5.90e5	0.904	1.521	1.550	3458.5	3958	3761	1.37e7	8.90e6	NO		90.239
13C-23478-PeCDF	32.046	1.216	6.94e5	4.52e5	0.877	1.537	1.550	2707.2	3958	3761	1.07e7	6.90e6	NO		71.696
13C-123478-HxCDF	35.729	0.953	2.67e5	5.27e5	1.096	0.507	0.510	1045.0	3834	4587	4.01e6	7.94e6	NO		77.003
13C-123678-HxCDF	35.882	0.957	3.20e5	6.23e5	1.187	0.514	0.510	1211.6	3834	4587	4.64e6	9.09e6	NO		84.434
13C-234678-HxCDF	36.825	0.982	2.47e5	4.97e5	1.040	0.497	0.510	970.4	3834	4587	3.72e6	7.39e6	NO		75.957
13C-123789-HxCDF	37.932	1.011	2.05e5	4.12e5	0.941	0.497	0.510	805.9	3834	4587	3.09e6	6.20e6	NO		69.683
13C-1234678-HpCDF	40.037	1.068	1.75e5	3.87e5	0.825	0.452	0.440	1598.8	1537	2250	2.46e6	5.35e6	NO		72.389
13C-1234789-HpCDF	42.832	1.142	1.27e5	2.91e5	0.609	0.436	0.440	1006.9	1537	2250	1.55e6	3.47e6	NO		72.902
13C-1234-TCDD	26.362	0.000	7.96e5	1.03e6	1.000	0.777	0.770	1270.3	9620	2987	1.22e7	1.58e7	NO		100.000
13C-2378-TCDD	27.184	1.031	5.37e5	6.91e5	0.920	0.778	0.770	847.1	9620	2987	8.15e6	1.04e7	NO		73.269
13C-12378-PeCDD	32.298	1.225	5.81e5	3.75e5	0.669	1.549	1.550	2614.9	3412	1955	8.92e6	5.86e6	NO		78.465
13C-123478-HxCDD	36.957	0.985	4.67e5	3.74e5	1.032	1.246	1.240	2979.4	2362	2417	7.04e6	5.70e6	NO		86.612
13C-123678-HxCDD	37.088	0.989	4.94e5	4.13e5	1.146	1.197	1.240	3064.5	2362	2417	7.24e6	5.94e6	NO		84.143
13C-1234678-HpCDD	41.900	1.117	3.26e5	3.14e5	0.789	1.036	1.050	1729.4	2381	2607	4.12e6	3.92e6	NO		86.225
13C-OCDD	48.017	1.280	4.32e5	5.03e5	0.696	0.859	0.890	1883.6	2172	1665	4.09e6	4.67e6	NO		142.643

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:40 Pacific Daylight Time

ID: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

Name		RT				RRF										
13C-123789-HxCDD		37.505	0.000	5.14e5	4.27e5	1.000	1.204	1.240	3330.9	2362	2417	7.87e6	6.53e6	NO		100.000
Total-tetrafurans				7.46e4		0.771				858		1.13e6				14.444
Total-penta1				0.00e0						1327		0.00e0				
Total-pentafurans				7.43e5		0.826				2272		1.15e7				113.385
Total-hexafurans				8.77e5		0.948				2584		1.31e7				216.673
Total-heptafurans				3.45e5		1.079				2133		4.56e6				127.211
Total-Furans				2.23e6		0.925				858		3.19e7				571.181
Total-tetradioxins				5.65e4		0.936				1549		8.74e5				11.470
Total-pentadioxins				2.73e5		0.894				3554		4.26e6				52.671
Total-hexadioxins				6.40e5		0.835				1661		9.41e6				157.986
Total-heptadioxins				1.57e5		0.879				2098		2.00e6				55.747
Total-Dioxins				1.33e6		0.870				1549		1.85e7				387.300
Total-TEQ				3.57e6						1549		5.04e7				958.481
37CL-2378-TCDD		27.199	1.032	5.51e5		1.000			3196.5	2661		8.51e6				30.247
FUNCTION1 PFK				1.34e7						1466581		1.46e8				
FUNCTION2 PFK				7.98e5						354331		1.94e6				0.000
FUNCTION3 PFK				9.57e5						561751		2.69e7				0.000
FUNCTION4 PFK				2.24e6						482665		4.43e7				
FUNCTION5 PFK				2.22e5						352524		7.82e6				
FUNCTION1 HXCDPE				0.00e0						440		0.00e0				
FUNCTION1 HPCDPE				1.66e3						1162		3.35e4				0.000
FUNCTION2 HPCDPE				8.02e2						1325		1.84e4				0.000
FUNCTION3 OCDPE				7.14e1						521		2.46e3				0.000
FUNCTION4 NCDPE				7.86e2						1087		2.12e4				0.000
FUNCTION5 DCDPE				7.77e1						881		2.53e3				0.000

luantify Totals Report MassLynx 4.1 SCN 714
)ataset: P:\DIOXIN8290.PRO\130624DATA1.qld
ast Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
'rinted: Tuesday, June 25, 2013 14:46:40 Pacific Daylight Time

lethod: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 21 Jun 2013 12:25:14
:alibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

): WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

'F

	#	Name	Trace	RT	Abs Resp	RRF M...	%	EMPC	1° Rati...	1° Ratl...	1° R...	S/N
	1	2378-TCDF	303.9016	26.56	138518.398	0.771	11.516	11.516	0.76	0.77	NO	1040.8
	35	Total-tetrafurans	303.9016	26.38	1150.181	0.771	0.096		0.96	0.77	YES	10.3
	35	Total-tetrafurans	303.9016	25.64	4963.695	0.771	0.413		0.62	0.77	YES	31.9
	35	Total-tetrafurans	303.9016	25.47	26141.784	0.771	2.173		0.78	0.77	NO	208.7
	35	Total-tetrafurans	303.9016	25.32	2288.740	0.771	0.190		0.51	0.77	YES	15.9
	35	Total-tetrafurans	303.9016	24.08	666.464	0.771	0.055		0.83	0.77	NO	5.7

'P

	#	Name	Trace	RT	Abs Resp	RRF M...	%	EMPC	1° Rati...	1° Ratl...	1° R...	S/N

'F

	#	Name	Trace	RT	Abs Resp	RRF M...	%	EMPC	1° Rati...	1° Ratl...	1° R...	S/N
	37	Total-pentafurans	339.8597	30.92	15752.079	0.826	1.450		2.65	1.55	YES	70.1
	2	12378-PeCDF	339.8597	30.72	646057.047	0.814	53.356	53.356	1.53	1.55	NO	2615.2
	37	Total-pentafurans	339.8597	30.36	24008.195	0.826	2.209		1.44	1.55	NO	91.4
	37	Total-pentafurans	339.8597	29.63	22192.277	0.826	2.042		1.95	1.55	YES	90.5
	37	Total-pentafurans	339.8597	29.57	15783.866	0.826	1.452		1.07	1.55	YES	72.1
	37	Total-pentafurans	339.8597	33.11	4215.134	0.826	0.388		1.47	1.55	NO	16.6
	37	Total-pentafurans	339.8597	32.23	376.197	0.826	0.035		1.63	1.55	NO	3.5
	3	23478-PeCDF	339.8597	32.07	502894.016	0.837	52.453	52.453	1.48	1.55	NO	2083.7

IF

	#	Name	Trace	RT	Abs Resp	RRF M...	%	EMPC	1° Rati...	1° Ratl...	1° R...	S/N
	7	123789-HxCDF	373.8208	37.95	290716.751	0.874	53.902	53.902	1.19	1.24	NO	932.7
	5	234678-HxCDF	373.8208	36.85	401487.610	1.000	54.007	54.007	1.19	1.24	NO	1272.5
	38	Total-hexafurans	373.8208	36.06	2158.288	0.948	0.294		7.59	1.24	YES	13.7
	6	123678-HxCDF	373.8208	35.89	473992.406	0.951	52.796	52.796	1.25	1.24	NO	1456.1
	4	123478-HxCDF	373.8208	35.75	406976.110	0.967	52.984	52.984	1.24	1.24	NO	1324.0
	38	Total-hexafurans	373.8208	34.23	13520.747	0.948	1.841		1.13	1.24	NO	41.3
	38	Total-hexafurans	373.8208	34.01	6239.866	0.948	0.850		1.14	1.24	NO	18.4

IPF

	#	Name	Trace	RT	Abs Resp	RRF M...	%	EMPC	1° Rati...	1° Ratl...	1° R...	S/N
	39	Total-heptafurans	407.7818	40.23	3892.539	1.079	0.736		0.76	1.05	YES	16.8
	8	1234678-HpCDF	407.7818	40.06	431235.234	1.072	71.528	71.528	1.03	1.05	NO	1409.3
	9	1234789-HpCDF	407.7818	42.85	246415.711	1.085	54.325	54.325	1.00	1.05	NO	697.4
	39	Total-heptafurans	407.7818	40.87	2320.907	1.079	0.439		0.81	1.05	YES	8.3
	39	Total-heptafurans	407.7818	40.54	964.556	1.079	0.182		1.23	1.05	YES	4.5

D: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

#	Name	Trace	RT	Abs Resp	RRF M...	Conc	EMPC	1° Ratio	2° Ratio	1° R...	S/N
1	2378-TCDF	303.9016	26.56	138518.398	0.771	11.516	11.516	0.76	0.77	NO	1040.8
35	Total-tetrafurans	303.9016	26.38	1150.181	0.771	0.096		0.96	0.77	YES	10.3
35	Total-tetrafurans	303.9016	25.64	4963.695	0.771	0.413		0.62	0.77	YES	31.9
35	Total-tetrafurans	303.9016	25.47	26141.784	0.771	2.173		0.78	0.77	NO	208.7
35	Total-tetrafurans	303.9016	25.32	2288.740	0.771	0.190		0.51	0.77	YES	15.9
35	Total-tetrafurans	303.9016	24.08	666.464	0.771	0.055		0.83	0.77	NO	5.7
37	Total-pentafurans	339.8597	30.92	15752.079	0.826	1.450		2.65	1.55	YES	70.1
2	12378-PeCDF	339.8597	30.72	646057.047	0.814	53.356	53.356	1.53	1.55	NO	2615.2
37	Total-pentafurans	339.8597	30.36	24008.195	0.826	2.209		1.44	1.55	NO	91.4
37	Total-pentafurans	339.8597	29.63	22192.277	0.826	2.042		1.95	1.55	YES	90.5
37	Total-pentafurans	339.8597	29.57	15783.866	0.826	1.452		1.07	1.55	YES	72.1
37	Total-pentafurans	339.8597	33.11	4215.134	0.826	0.388		1.47	1.55	NO	16.6
37	Total-pentafurans	339.8597	32.23	376.197	0.826	0.035		1.63	1.55	NO	3.5
3	23478-PeCDF	339.8597	32.07	502894.016	0.837	52.453	52.453	1.48	1.55	NO	2083.7
7	123789-HxCDF	373.8208	37.95	290716.751	0.874	53.902	53.902	1.19	1.24	NO	932.7
5	234678-HxCDF	373.8208	36.85	401487.610	1.000	54.007	54.007	1.19	1.24	NO	1272.5
38	Total-hexafurans	373.8208	36.06	2158.288	0.948	0.294		7.59	1.24	YES	13.7
6	123678-HxCDF	373.8208	35.89	473992.406	0.951	52.796	52.796	1.25	1.24	NO	1456.1
4	123478-HxCDF	373.8208	35.75	406976.110	0.967	52.984	52.984	1.24	1.24	NO	1324.0
38	Total-hexafurans	373.8208	34.23	13520.747	0.948	1.841		1.13	1.24	NO	41.3
38	Total-hexafurans	373.8208	34.01	6239.866	0.948	0.850		1.14	1.24	NO	18.4
39	Total-heptafurans	407.7818	40.23	3892.539	1.079	0.736		0.76	1.05	YES	16.8
8	1234678-HpCDF	407.7818	40.06	431235.234	1.072	71.528	71.528	1.03	1.05	NO	1409.3
9	1234789-HpCDF	407.7818	42.85	246415.711	1.085	54.325	54.325	1.00	1.05	NO	697.4
39	Total-heptafurans	407.7818	40.87	2320.907	1.079	0.439		0.81	1.05	YES	8.3
39	Total-heptafurans	407.7818	40.54	964.556	1.079	0.182		1.23	1.05	YES	4.5
10	OCDF	441.7428	48.33	408038.156	0.878	99.469	99.469	0.89	0.89	NO	1154.3

TD

#	Name	Trace	RT	Abs Resp	RRF M...	Conc	EMPC	1° Ratio	2° Ratio	1° R...	S/N
41	Total-tetradioxins	319.8965	26.81	4430.723	0.936	0.385		0.81	0.77	NO	17.8
41	Total-tetradioxins	319.8965	26.54	1695.804	0.936	0.148		4.77	0.77	YES	15.3
41	Total-tetradioxins	319.8965	25.81	1200.863	0.936	0.104		0.84	0.77	NO	5.6
11	2378-TCDD	319.8965	27.20	124515.828	0.936	10.832	10.832	0.73	0.77	NO	525.7

PD

#	Name	Trace	RT	Abs Resp	RRF M...	Conc	EMPC	1° Ratio	2° Ratio	1° R...	S/N
12	12378-PeCDD	355.8546	32.32	445122.688	0.894	52.016	52.016	1.53	1.55	NO	1180.6
42	Total-pentadioxins	355.8546	31.08	1515.121	0.894	0.177		3.04	1.55	YES	5.0
42	Total-pentadioxins	355.8546	30.95	2088.123	0.894	0.244		2.30	1.55	YES	5.7
42	Total-pentadioxins	355.8546	30.71	1994.390	0.894	0.233		2.40	1.55	YES	6.3

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:40 Pacific Daylight Time

D: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

HD

#	Name	Theor?	RT	Abs Resp	RRF M...	pg	EMPC	T Ratio	C Ratio	T F...	S/N
15	123789-HxCDD	389.8157	37.52	365558.954	0.789	52.970	52.970	1.22	1.24	NO	1799.2
14	123678-HxCDD	389.8157	37.10	392414.250	0.818	52.894	52.894	1.28	1.24	NO	1932.1
13	123478-HxCDD	389.8157	36.98	390740.343	0.898	51.755	51.755	1.25	1.24	NO	1923.7
43	Total-hexadioxins	389.8157	35.98	2680.963	0.835	0.367		1.33	1.24	NO	11.2

HPD

#	Name	Theor?	RT	Abs Resp	RRF M...	pg	EMPC	T Ratio	C Ratio	T F...	S/N
16	1234678-HpCDD	423.7766	41.92	307277.734	0.879	54.592	54.592	1.00	1.05	NO	928.9
44	Total-heptadioxins	423.7766	40.62	6505.262	0.879	1.156		1.00	1.05	NO	23.2

Dioxins,TD,PD,HD,HPD,OD

#	Name	Theor?	RT	Abs Resp	RRF M...	pg	EMPC	T Ratio	C Ratio	T F...	S/N
41	Total-tetradioxins	319.8965	26.81	4430.723	0.936	0.385		0.81	0.77	NO	17.8
41	Total-tetradioxins	319.8965	26.54	1695.804	0.936	0.148		4.77	0.77	YES	15.3
41	Total-tetradioxins	319.8965	25.81	1200.863	0.936	0.104		0.84	0.77	NO	5.6
11	2378-TCDD	319.8965	27.20	124515.828	0.936	10.832	10.832	0.73	0.77	NO	525.7
12	12378-PeCDD	355.8546	32.32	445122.688	0.894	52.016	52.016	1.53	1.55	NO	1180.6
42	Total-pentadioxins	355.8546	31.08	1515.121	0.894	0.177		3.04	1.55	YES	5.0
42	Total-pentadioxins	355.8546	30.95	2088.123	0.894	0.244		2.30	1.55	YES	5.7
42	Total-pentadioxins	355.8546	30.71	1994.390	0.894	0.233		2.40	1.55	YES	6.3
15	123789-HxCDD	389.8157	37.52	365558.954	0.789	52.970	52.970	1.22	1.24	NO	1799.2
14	123678-HxCDD	389.8157	37.10	392414.250	0.818	52.894	52.894	1.28	1.24	NO	1932.1
13	123478-HxCDD	389.8157	36.98	390740.343	0.898	51.755	51.755	1.25	1.24	NO	1923.7
43	Total-hexadioxins	389.8157	35.98	2680.963	0.835	0.367		1.33	1.24	NO	11.2
16	1234678-HpCDD	423.7766	41.92	307277.734	0.879	54.592	54.592	1.00	1.05	NO	928.9
44	Total-heptadioxins	423.7766	40.62	6505.262	0.879	1.156		1.00	1.05	NO	23.2
17	OCDD	457.7377	48.04	447598.907	0.875	109.426	109....	0.87	0.89	NO	2069.7

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:40 Pacific Daylight Time

D: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

[redacted]	#	Name	Trace	RT	Area Resp	RRF M...	[redacted]	EMPC	1° Ratio	2° Ratio	1° R...	S/N
[redacted]	1	2378-TCDF	303.9016	26.56	138518.398	0.771	11.516	11.516	0.76	0.77	NO	1040.8
[redacted]	35	Total-tetrafurans	303.9016	26.38	1150.181	0.771	0.096		0.96	0.77	YES	10.3
[redacted]	35	Total-tetrafurans	303.9016	25.64	4963.695	0.771	0.413		0.62	0.77	YES	31.9
[redacted]	35	Total-tetrafurans	303.9016	25.47	26141.784	0.771	2.173		0.78	0.77	NO	208.7
[redacted]	35	Total-tetrafurans	303.9016	25.32	2288.740	0.771	0.190		0.51	0.77	YES	15.9
[redacted]	35	Total-tetrafurans	303.9016	24.08	666.464	0.771	0.055		0.83	0.77	NO	5.7
[redacted]	37	Total-pentafurans	339.8597	30.92	15752.079	0.826	1.450		2.65	1.55	YES	70.1
[redacted]	2	12378-PeCDF	339.8597	30.72	646057.047	0.814	53.356	53.356	1.53	1.55	NO	2615.2
[redacted]	37	Total-pentafurans	339.8597	30.36	24008.195	0.826	2.209		1.44	1.55	NO	91.4
[redacted]	37	Total-pentafurans	339.8597	29.63	22192.277	0.826	2.042		1.95	1.55	YES	90.5
[redacted]	37	Total-pentafurans	339.8597	29.57	15783.866	0.826	1.452		1.07	1.55	YES	72.1
[redacted]	37	Total-pentafurans	339.8597	33.11	4215.134	0.826	0.388		1.47	1.55	NO	16.6
[redacted]	37	Total-pentafurans	339.8597	32.23	376.197	0.826	0.035		1.63	1.55	NO	3.5
[redacted]	3	23478-PeCDF	339.8597	32.07	502894.016	0.837	52.453	52.453	1.48	1.55	NO	2083.7
[redacted]	7	123789-HxCDF	373.8208	37.95	290716.751	0.874	53.902	53.902	1.19	1.24	NO	932.7
[redacted]	5	234678-HxCDF	373.8208	36.85	401487.610	1.000	54.007	54.007	1.19	1.24	NO	1272.5
[redacted]	38	Total-hexafurans	373.8208	36.06	2158.288	0.948	0.294		7.59	1.24	YES	13.7
[redacted]	6	123678-HxCDF	373.8208	35.89	473992.406	0.951	52.796	52.796	1.25	1.24	NO	1456.1
[redacted]	4	123478-HxCDF	373.8208	35.75	406976.110	0.967	52.984	52.984	1.24	1.24	NO	1324.0
[redacted]	38	Total-hexafurans	373.8208	34.23	13520.747	0.948	1.841		1.13	1.24	NO	41.3
[redacted]	38	Total-hexafurans	373.8208	34.01	6239.866	0.948	0.850		1.14	1.24	NO	18.4
[redacted]	39	Total-heptafurans	407.7818	40.23	3892.539	1.079	0.736		0.76	1.05	YES	16.8
[redacted]	8	1234678-HpCDF	407.7818	40.06	431235.234	1.072	71.528	71.528	1.03	1.05	NO	1409.3
[redacted]	9	1234789-HpCDF	407.7818	42.85	246415.711	1.085	54.325	54.325	1.00	1.05	NO	697.4
[redacted]	39	Total-heptafurans	407.7818	40.87	2320.907	1.079	0.439		0.81	1.05	YES	8.3
[redacted]	39	Total-heptafurans	407.7818	40.54	964.556	1.079	0.182		1.23	1.05	YES	4.5
[redacted]	10	OCDF	441.7428	48.33	408038.156	0.878	99.469	99.469	0.89	0.89	NO	1154.3
[redacted]	41	Total-tetradioxins	319.8965	26.81	4430.723	0.936	0.385		0.81	0.77	NO	17.8
[redacted]	41	Total-tetradioxins	319.8965	26.54	1695.804	0.936	0.148		4.77	0.77	YES	15.3
[redacted]	41	Total-tetradioxins	319.8965	25.81	1200.863	0.936	0.104		0.84	0.77	NO	5.6
[redacted]	11	2378-TCDD	319.8965	27.20	124515.828	0.936	10.832	10.832	0.73	0.77	NO	525.7
[redacted]	12	12378-PeCDD	355.8546	32.32	445122.688	0.894	52.016	52.016	1.53	1.55	NO	1180.6
[redacted]	42	Total-pentadioxins	355.8546	31.08	1515.121	0.894	0.177		3.04	1.55	YES	5.0
[redacted]	42	Total-pentadioxins	355.8546	30.95	2088.123	0.894	0.244		2.30	1.55	YES	5.7
[redacted]	42	Total-pentadioxins	355.8546	30.71	1994.390	0.894	0.233		2.40	1.55	YES	6.3
[redacted]	15	123789-HxCDD	389.8157	37.52	365558.954	0.789	52.970	52.970	1.22	1.24	NO	1799.2
[redacted]	14	123678-HxCDD	389.8157	37.10	392414.250	0.818	52.894	52.894	1.28	1.24	NO	1932.1
[redacted]	13	123478-HxCDD	389.8157	36.98	390740.343	0.898	51.755	51.755	1.25	1.24	NO	1923.7
[redacted]	43	Total-hexadioxins	389.8157	35.98	2680.963	0.835	0.367		1.33	1.24	NO	11.2
[redacted]	16	1234678-HpCDD	423.7766	41.92	307277.734	0.879	54.592	54.592	1.00	1.05	NO	928.9
[redacted]	44	Total-heptadioxins	423.7766	40.62	6505.262	0.879	1.156		1.00	1.05	NO	23.2
[redacted]	17	OCDD	457.7377	48.04	447598.907	0.875	109.426	109....	0.87	0.89	NO	2069.7

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:40 Pacific Daylight Time

D: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

PFK1

	#	Name	Trace	RT	Abs Resp	REF M...	...	Pq	EMPC	1° Rati...	2° Rati...	1° R...	S/N
	48	FUNCTION1 PFK	330.9792	21.88	0.000								7.0
	48	FUNCTION1 PFK	330.9792	21.66	0.000								6.6
	48	FUNCTION1 PFK	330.9792	21.54	0.000								4.3
	48	FUNCTION1 PFK	330.9792	21.42	0.000								6.4
	48	FUNCTION1 PFK	330.9792	21.28	0.000								5.2
	48	FUNCTION1 PFK	330.9792	21.15	0.000								3.4
	48	FUNCTION1 PFK	330.9792	25.87	0.000								2.2
	48	FUNCTION1 PFK	330.9792	25.59	0.000								1.5
	48	FUNCTION1 PFK	330.9792	25.11	0.000								1.3
	48	FUNCTION1 PFK	330.9792	24.76	0.000								1.5
	48	FUNCTION1 PFK	330.9792	24.38	0.000								2.0
	48	FUNCTION1 PFK	330.9792	24.32	0.000								1.5
	48	FUNCTION1 PFK	330.9792	24.21	0.000								1.6
	48	FUNCTION1 PFK	330.9792	24.12	0.000								1.6
	48	FUNCTION1 PFK	330.9792	23.97	0.000								1.1
	48	FUNCTION1 PFK	330.9792	23.39	0.000								1.3
	48	FUNCTION1 PFK	330.9792	23.03	0.000								1.3
	48	FUNCTION1 PFK	330.9792	22.96	0.000								1.0
	48	FUNCTION1 PFK	330.9792	22.84	0.000								0.7
	48	FUNCTION1 PFK	330.9792	22.28	0.000								5.6
	48	FUNCTION1 PFK	330.9792	22.19	0.000								6.3
	48	FUNCTION1 PFK	330.9792	22.06	0.000								7.6
	48	FUNCTION1 PFK	330.9792	28.24	0.000								1.2
	48	FUNCTION1 PFK	330.9792	28.18	0.000								0.7
	48	FUNCTION1 PFK	330.9792	27.99	0.000								0.9
	48	FUNCTION1 PFK	330.9792	27.89	0.000								0.6
	48	FUNCTION1 PFK	330.9792	27.81	0.000								1.6
	48	FUNCTION1 PFK	330.9792	27.69	0.000								1.8
	48	FUNCTION1 PFK	330.9792	27.56	0.000								2.5
	48	FUNCTION1 PFK	330.9792	27.50	0.000								2.8
	48	FUNCTION1 PFK	330.9792	27.35	0.000								1.3
	48	FUNCTION1 PFK	330.9792	27.26	0.000								1.9
	48	FUNCTION1 PFK	330.9792	27.15	0.000								1.5
	48	FUNCTION1 PFK	330.9792	27.02	0.000								1.9
	48	FUNCTION1 PFK	330.9792	26.59	0.000								1.1
	48	FUNCTION1 PFK	330.9792	26.41	0.000								1.4
	48	FUNCTION1 PFK	330.9792	26.14	0.000								1.8
	48	FUNCTION1 PFK	330.9792	26.02	0.000								1.6
	48	FUNCTION1 PFK	330.9792	28.74	0.000								0.4
	48	FUNCTION1 PFK	330.9792	28.44	0.000								1.7
	48	FUNCTION1 PFK	330.9792	28.35	0.000								1.9

PFK2

	#	Name	Trace	RT	Abs Resp	REF M...	...	Pq	EMPC	1° Rati...	2° Rati...	1° R...	S/N
	49	FUNCTION2 PFK	366.9792	29.26	0.000			0.000					1.7
	49	FUNCTION2 PFK	366.9792	28.85	0.000			0.000					3.8

D: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

PFK3

[redacted]	Fu	Name	Trace	RT	Delta RT	RRT M	Ou	EMPC	1° Ratio	2° Ratio	1° R	S/N
[redacted]	50	FUNCTION3 PFK	380.9760	34.65	0.000		0.000					1.4
[redacted]	50	FUNCTION3 PFK	380.9760	34.34	0.000		0.000					1.7
[redacted]	50	FUNCTION3 PFK	380.9760	34.22	0.000		0.000					0.8
[redacted]	50	FUNCTION3 PFK	380.9760	34.16	0.000		0.000					1.7
[redacted]	50	FUNCTION3 PFK	380.9760	34.13	0.000		0.000					2.1
[redacted]	50	FUNCTION3 PFK	380.9760	34.06	0.000		0.000					0.7
[redacted]	50	FUNCTION3 PFK	380.9760	33.89	0.000		0.000					2.7
[redacted]	50	FUNCTION3 PFK	380.9760	33.82	0.000		0.000					3.7
[redacted]	50	FUNCTION3 PFK	380.9760	33.78	0.000		0.000					2.8
[redacted]	50	FUNCTION3 PFK	380.9760	37.36	0.000		0.000					2.0
[redacted]	50	FUNCTION3 PFK	380.9760	37.22	0.000		0.000					1.4
[redacted]	50	FUNCTION3 PFK	380.9760	36.96	0.000		0.000					1.2
[redacted]	50	FUNCTION3 PFK	380.9760	36.90	0.000		0.000					1.8
[redacted]	50	FUNCTION3 PFK	380.9760	36.72	0.000		0.000					1.5
[redacted]	50	FUNCTION3 PFK	380.9760	36.54	0.000		0.000					0.4
[redacted]	50	FUNCTION3 PFK	380.9760	36.51	0.000		0.000					0.7
[redacted]	50	FUNCTION3 PFK	380.9760	35.96	0.000		0.000					1.1
[redacted]	50	FUNCTION3 PFK	380.9760	35.93	0.000		0.000					2.0
[redacted]	50	FUNCTION3 PFK	380.9760	35.85	0.000		0.000					1.8
[redacted]	50	FUNCTION3 PFK	380.9760	35.72	0.000		0.000					0.5
[redacted]	50	FUNCTION3 PFK	380.9760	35.26	0.000		0.000					1.3
[redacted]	50	FUNCTION3 PFK	380.9760	35.14	0.000		0.000					0.7
[redacted]	50	FUNCTION3 PFK	380.9760	34.90	0.000		0.000					0.6
[redacted]	50	FUNCTION3 PFK	380.9760	34.85	0.000		0.000					0.5
[redacted]	50	FUNCTION3 PFK	380.9760	34.71	0.000		0.000					0.6
[redacted]	50	FUNCTION3 PFK	380.9760	38.74	0.000		0.000					0.4
[redacted]	50	FUNCTION3 PFK	380.9760	38.59	0.000		0.000					0.9
[redacted]	50	FUNCTION3 PFK	380.9760	38.49	0.000		0.000					1.4
[redacted]	50	FUNCTION3 PFK	380.9760	38.40	0.000		0.000					1.2
[redacted]	50	FUNCTION3 PFK	380.9760	38.36	0.000		0.000					1.6
[redacted]	50	FUNCTION3 PFK	380.9760	38.25	0.000		0.000					2.3
[redacted]	50	FUNCTION3 PFK	380.9760	38.01	0.000		0.000					0.5
[redacted]	50	FUNCTION3 PFK	380.9760	37.94	0.000		0.000					0.4
[redacted]	50	FUNCTION3 PFK	380.9760	37.90	0.000		0.000					2.1
[redacted]	50	FUNCTION3 PFK	380.9760	37.70	0.000		0.000					0.7
[redacted]	50	FUNCTION3 PFK	380.9760	37.60	0.000		0.000					0.6

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:40 Pacific Daylight Time

D: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

PFK4

	#	Name	Trace	RT	Abs Resp	RRF M...	39	EMPR	41 Ratio	1° Ratio	1° R...	S/N
	51	FUNCTION4 PFK	430.9728	39.39	0.000							2.2
	51	FUNCTION4 PFK	430.9728	39.17	0.000							10.3
	51	FUNCTION4 PFK	430.9728	39.15	0.000							9.9
	51	FUNCTION4 PFK	430.9728	39.06	0.000							13.1
	51	FUNCTION4 PFK	430.9728	41.28	0.000							0.5
	51	FUNCTION4 PFK	430.9728	41.22	0.000							1.6
	51	FUNCTION4 PFK	430.9728	41.18	0.000							0.4
	51	FUNCTION4 PFK	430.9728	41.02	0.000							0.5
	51	FUNCTION4 PFK	430.9728	40.96	0.000							0.6
	51	FUNCTION4 PFK	430.9728	40.91	0.000							1.4
	51	FUNCTION4 PFK	430.9728	40.84	0.000							1.3
	51	FUNCTION4 PFK	430.9728	40.49	0.000							0.6
	51	FUNCTION4 PFK	430.9728	40.43	0.000							0.7
	51	FUNCTION4 PFK	430.9728	40.30	0.000							0.4
	51	FUNCTION4 PFK	430.9728	40.20	0.000							0.5
	51	FUNCTION4 PFK	430.9728	39.95	0.000							1.5
	51	FUNCTION4 PFK	430.9728	39.88	0.000							0.5
	51	FUNCTION4 PFK	430.9728	39.84	0.000							0.6
	51	FUNCTION4 PFK	430.9728	39.74	0.000							0.8
	51	FUNCTION4 PFK	430.9728	39.65	0.000							1.1
	51	FUNCTION4 PFK	430.9728	42.68	0.000							1.4
	51	FUNCTION4 PFK	430.9728	42.58	0.000							1.1
	51	FUNCTION4 PFK	430.9728	42.52	0.000							0.5
	51	FUNCTION4 PFK	430.9728	42.48	0.000							0.6
	51	FUNCTION4 PFK	430.9728	42.43	0.000							1.3
	51	FUNCTION4 PFK	430.9728	42.26	0.000							0.8
	51	FUNCTION4 PFK	430.9728	42.17	0.000							0.9
	51	FUNCTION4 PFK	430.9728	42.11	0.000							0.4
	51	FUNCTION4 PFK	430.9728	42.08	0.000							0.4
	51	FUNCTION4 PFK	430.9728	42.04	0.000							0.8
	51	FUNCTION4 PFK	430.9728	41.83	0.000							0.7
	51	FUNCTION4 PFK	430.9728	41.64	0.000							0.4
	51	FUNCTION4 PFK	430.9728	41.56	0.000							1.1
	51	FUNCTION4 PFK	430.9728	41.37	0.000							0.7
	51	FUNCTION4 PFK	430.9728	41.34	0.000							0.9
	51	FUNCTION4 PFK	430.9728	41.31	0.000							0.7
	51	FUNCTION4 PFK	430.9728	43.88	0.000							1.1
	51	FUNCTION4 PFK	430.9728	43.82	0.000							1.3
	51	FUNCTION4 PFK	430.9728	43.77	0.000							1.7
	51	FUNCTION4 PFK	430.9728	43.71	0.000							1.4
	51	FUNCTION4 PFK	430.9728	43.52	0.000							0.9
	51	FUNCTION4 PFK	430.9728	43.49	0.000							1.1
	51	FUNCTION4 PFK	430.9728	43.46	0.000							1.6
	51	FUNCTION4 PFK	430.9728	43.34	0.000							0.3
	51	FUNCTION4 PFK	430.9728	43.29	0.000							1.3
	51	FUNCTION4 PFK	430.9728	43.26	0.000							1.3
	51	FUNCTION4 PFK	430.9728	43.18	0.000							0.6
	51	FUNCTION4 PFK	430.9728	43.14	0.000							0.9
	51	FUNCTION4 PFK	430.9728	43.09	0.000							0.4

D: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

PFK4

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	T Rati...	T Rati...	T R...	S/N
	51	FUNCTION4 PFK	430.9728	42.96	0.000							1.6
	51	FUNCTION4 PFK	430.9728	42.88	0.000							1.9
	51	FUNCTION4 PFK	430.9728	42.74	0.000							1.3
	51	FUNCTION4 PFK	430.9728	44.97	0.000							2.1
	51	FUNCTION4 PFK	430.9728	44.79	0.000							1.1
	51	FUNCTION4 PFK	430.9728	44.66	0.000							2.1
	51	FUNCTION4 PFK	430.9728	44.54	0.000							0.7
	51	FUNCTION4 PFK	430.9728	44.48	0.000							0.7
	51	FUNCTION4 PFK	430.9728	44.43	0.000							0.6
	51	FUNCTION4 PFK	430.9728	44.11	0.000							2.0
	51	FUNCTION4 PFK	430.9728	43.98	0.000							0.7
	51	FUNCTION4 PFK	430.9728	43.93	0.000							1.6

PFK5

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	T Rati...	T Rati...	T R...	S/N
	52	FUNCTION5 PFK	480.9696	46.67	0.000							1.0
	52	FUNCTION5 PFK	480.9696	46.02	0.000							1.8
	52	FUNCTION5 PFK	480.9696	45.85	0.000							1.9
	52	FUNCTION5 PFK	480.9696	45.55	0.000							2.0
	52	FUNCTION5 PFK	480.9696	45.29	0.000							0.9
	52	FUNCTION5 PFK	480.9696	45.06	0.000							0.8
	52	FUNCTION5 PFK	480.9696	48.71	0.000							0.9
	52	FUNCTION5 PFK	480.9696	48.68	0.000							1.4
	52	FUNCTION5 PFK	480.9696	48.64	0.000							1.5
	52	FUNCTION5 PFK	480.9696	48.48	0.000							1.8
	52	FUNCTION5 PFK	480.9696	48.12	0.000							2.2
	52	FUNCTION5 PFK	480.9696	47.74	0.000							1.1
	52	FUNCTION5 PFK	480.9696	47.57	0.000							1.5
	52	FUNCTION5 PFK	480.9696	47.16	0.000							1.0
	52	FUNCTION5 PFK	480.9696	46.99	0.000							0.8
	52	FUNCTION5 PFK	480.9696	46.75	0.000							1.4

ETHERS1

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	T Rati...	T Rati...	T R...	S/N

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:40 Pacific Daylight Time

D: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

ETHERS2

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratl...	2° Ratl...	1° R...	S/N
	54	FUNCTION1 HPCD...	409.7974	24.11	0.000		0.000					3.0
	54	FUNCTION1 HPCD...	409.7974	23.63	0.000		0.000					1.8
	54	FUNCTION1 HPCD...	409.7974	23.37	0.000		0.000					1.8
	54	FUNCTION1 HPCD...	409.7974	22.97	0.000		0.000					2.3
	54	FUNCTION1 HPCD...	409.7974	28.29	0.000		0.000					3.8
	54	FUNCTION1 HPCD...	409.7974	27.57	0.000		0.000					1.9
	54	FUNCTION1 HPCD...	409.7974	27.45	0.000		0.000					1.9
	54	FUNCTION1 HPCD...	409.7974	27.23	0.000		0.000					3.0
	54	FUNCTION1 HPCD...	409.7974	26.54	0.000		0.000					2.0
	54	FUNCTION1 HPCD...	409.7974	26.50	0.000		0.000					2.1
	54	FUNCTION1 HPCD...	409.7974	26.27	0.000		0.000					2.2
	54	FUNCTION1 HPCD...	409.7974	26.11	0.000		0.000					1.5
	54	FUNCTION1 HPCD...	409.7974	24.17	0.000		0.000					1.6

ETHERS3

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratl...	2° Ratl...	1° R...	S/N
	55	FUNCTION2 HPCD...	409.7974	32.48	0.000		0.000					1.9
	55	FUNCTION2 HPCD...	409.7974	32.25	0.000		0.000					2.1
	55	FUNCTION2 HPCD...	409.7974	32.01	0.000		0.000					1.6
	55	FUNCTION2 HPCD...	409.7974	31.60	0.000		0.000					1.4
	55	FUNCTION2 HPCD...	409.7974	30.73	0.000		0.000					2.7
	55	FUNCTION2 HPCD...	409.7974	30.47	0.000		0.000					1.4
	55	FUNCTION2 HPCD...	409.7974	33.09	0.000		0.000					2.7

ETHERS4

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratl...	2° Ratl...	1° R...	S/N
	56	FUNCTION3 OCDPE	445.7555	36.51	0.000		0.000					4.7

ETHERS5

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratl...	2° Ratl...	1° R...	S/N
	57	FUNCTION4 NCDPE	479.7165	43.97	0.000		0.000					1.5
	57	FUNCTION4 NCDPE	479.7165	43.87	0.000		0.000					2.7
	57	FUNCTION4 NCDPE	479.7165	43.62	0.000		0.000					1.3
	57	FUNCTION4 NCDPE	479.7165	43.45	0.000		0.000					2.5
	57	FUNCTION4 NCDPE	479.7165	43.39	0.000		0.000					2.4
	57	FUNCTION4 NCDPE	479.7165	43.18	0.000		0.000					1.8
	57	FUNCTION4 NCDPE	479.7165	42.78	0.000		0.000					2.4
	57	FUNCTION4 NCDPE	479.7165	41.48	0.000		0.000					3.7
	57	FUNCTION4 NCDPE	479.7165	40.16	0.000		0.000					1.3

ETHERS6

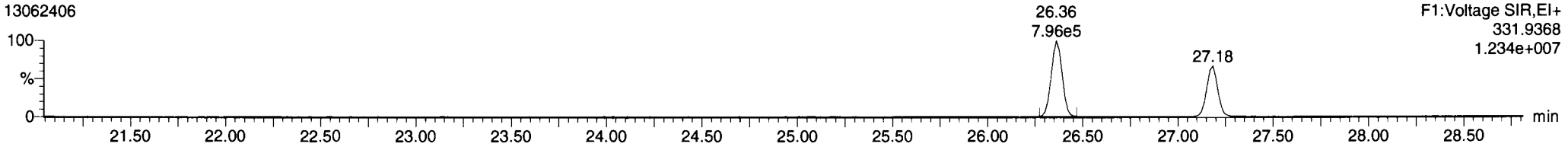
	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratl...	2° Ratl...	1° R...	S/N
	58	FUNCTION5 DCDPE	513.6775	47.34	0.000		0.000					2.9

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:40 Pacific Daylight Time

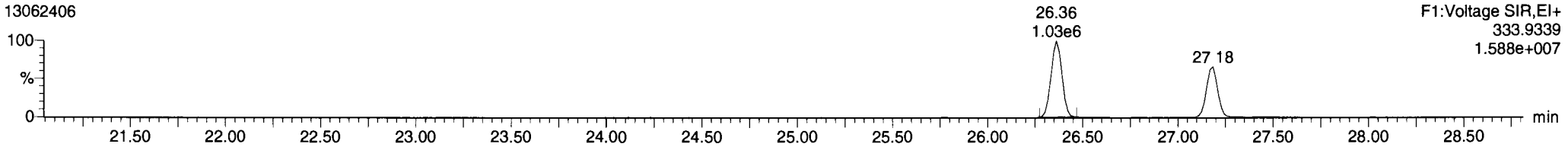
Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 21 Jun 2013 12:25:14
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

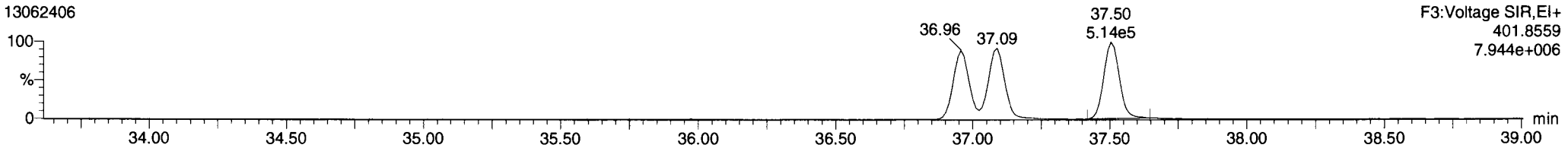
13C-1234-TCDD



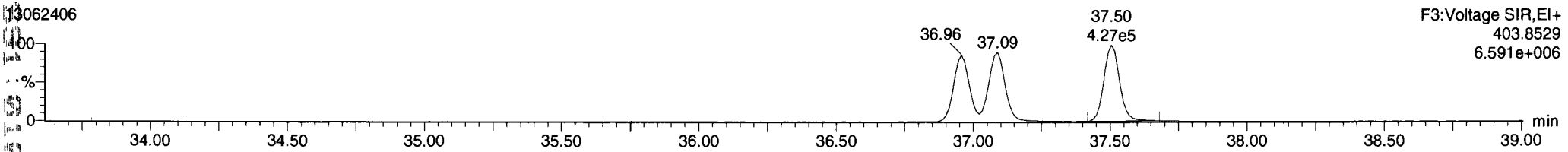
13C-1234-TCDD



13C-123789-HxCDD



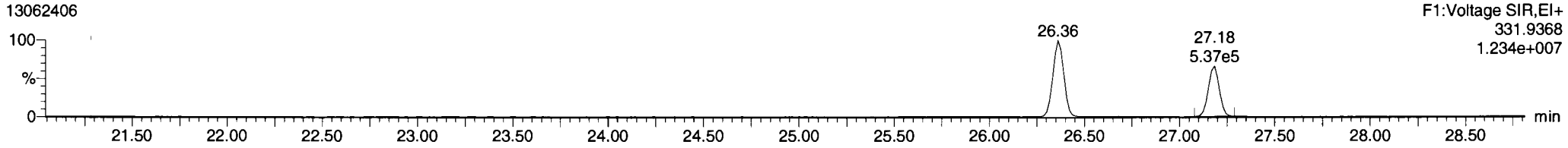
13C-123789-HxCDD



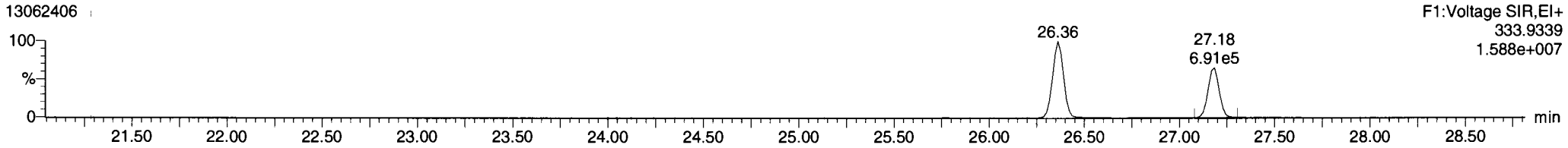
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:40 Pacific Daylight Time

ID: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

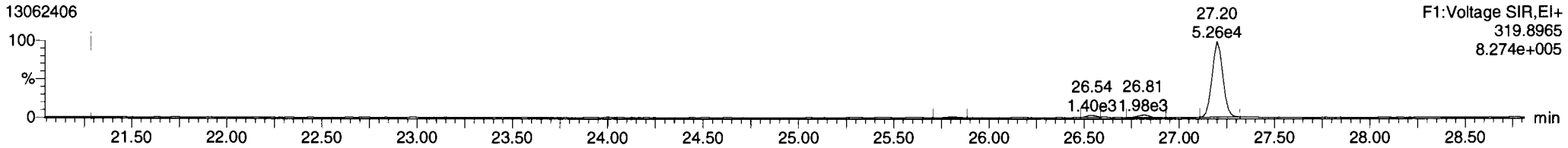
13C-2378-TCDD



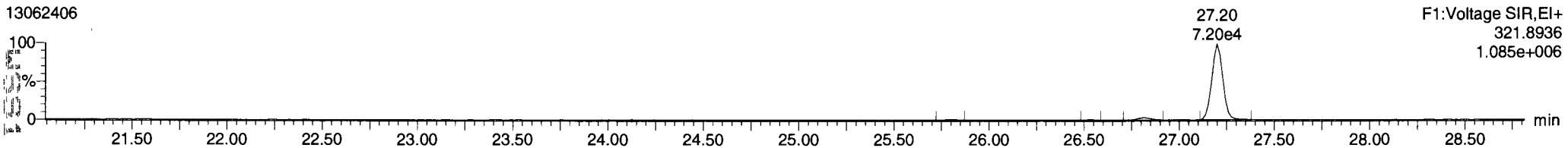
13C-2378-TCDD



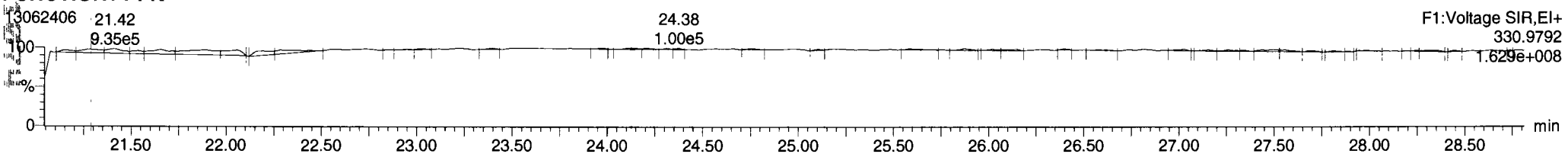
Total-tetradioxins



Total-tetradioxins

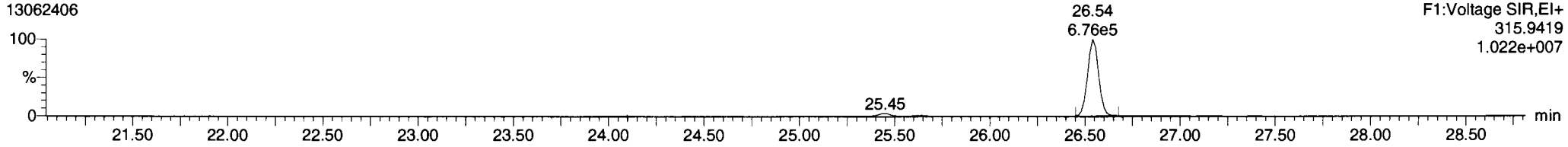


FUNCTION1 PFK

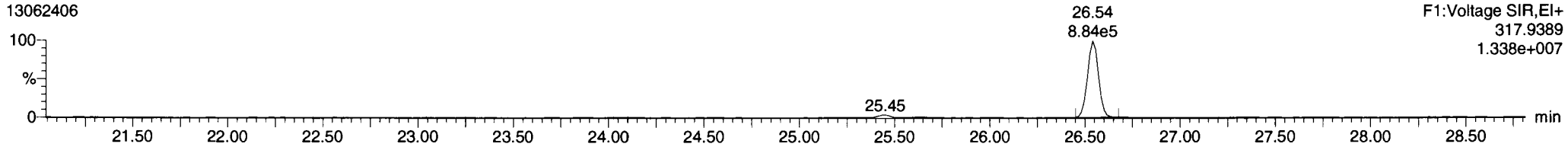


ID: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

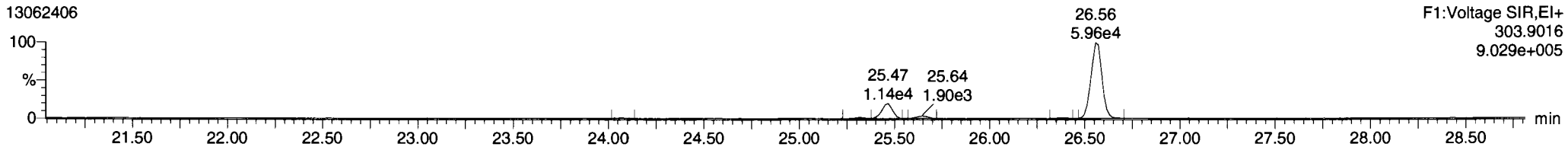
13C-2378-TCDF



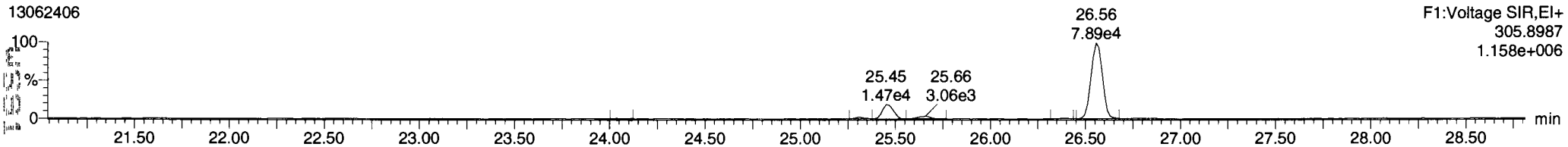
13C-2378-TCDF



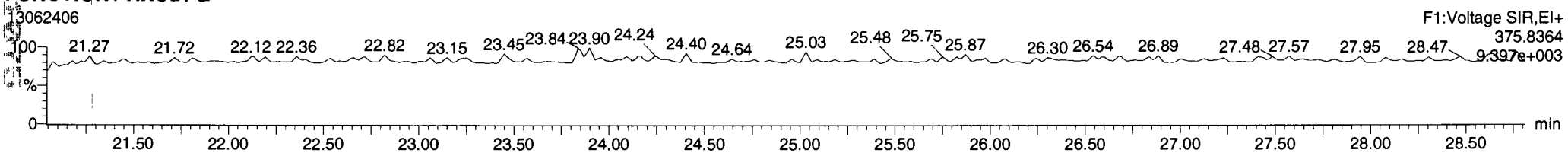
Total-tetrafurans



Total-tetrafurans



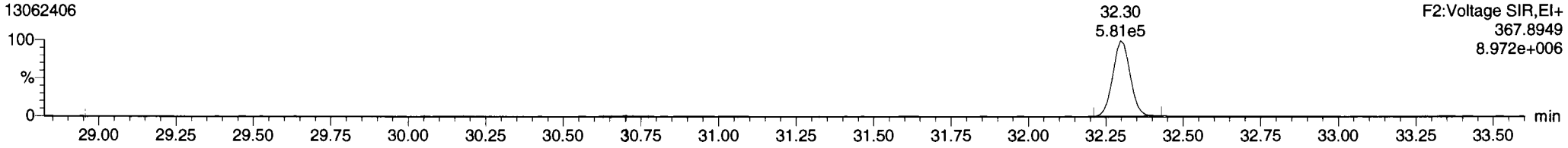
FUNCTION1 HXCDPE



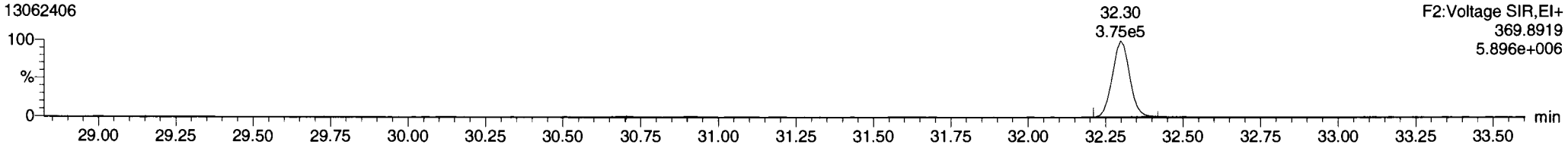
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:40 Pacific Daylight Time

ID: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

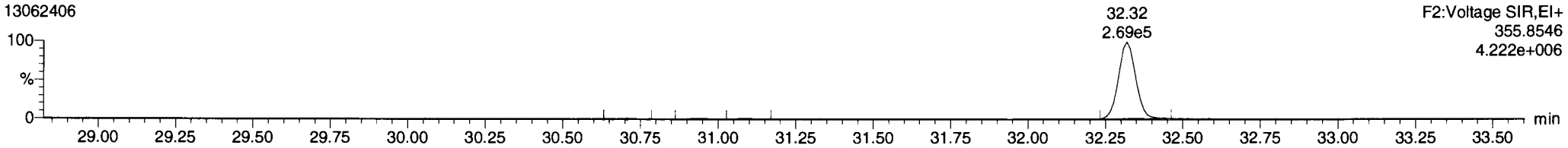
13C-12378-PeCDD



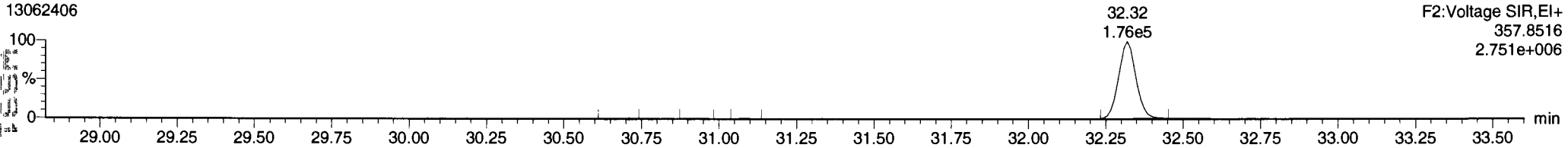
13C-12378-PeCDD



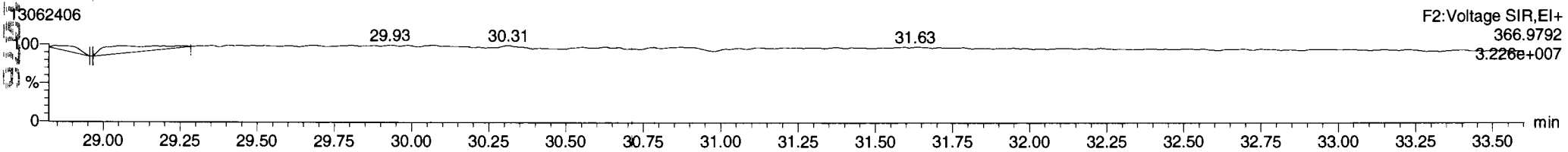
Total-pentadioxins



Total-pentadioxins



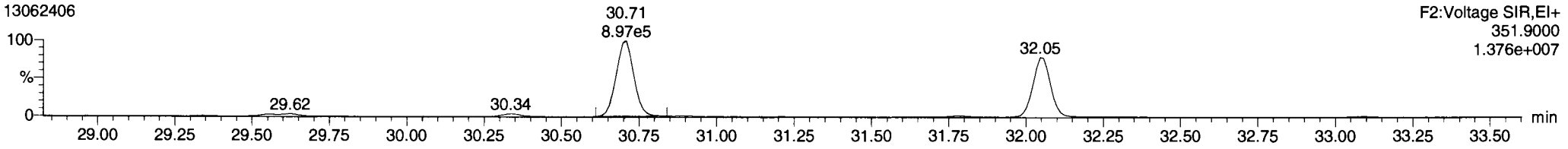
FUNCTION2 PFK



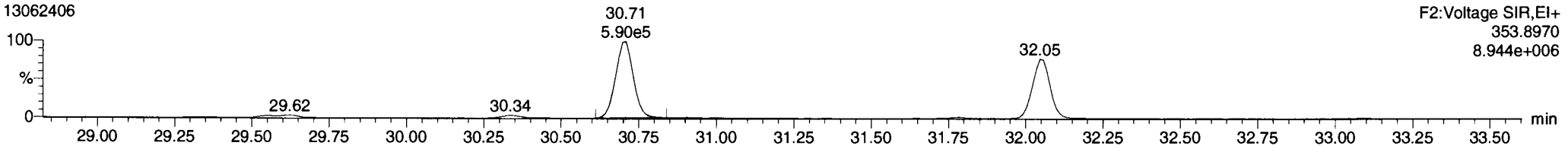
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:40 Pacific Daylight Time

ID: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

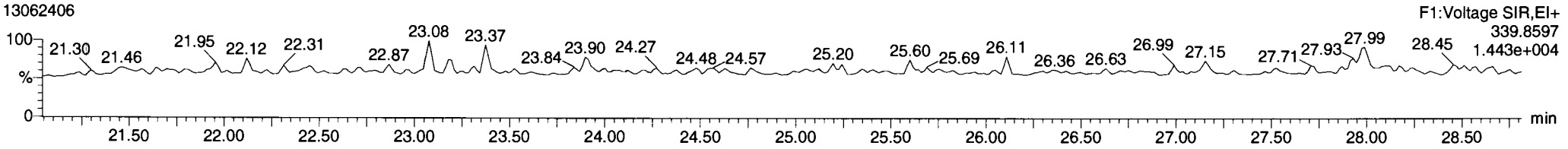
13C-12378-PeCDF



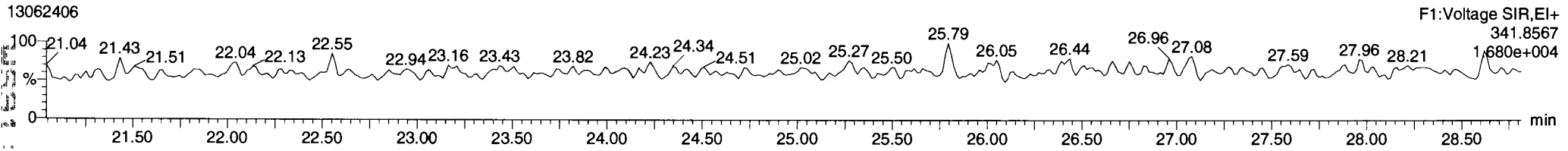
13C-12378-PeCDF



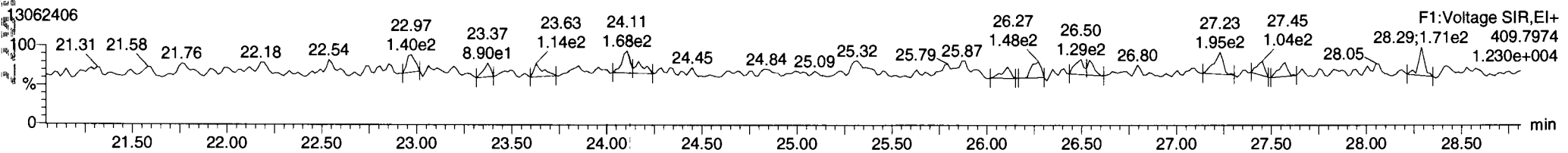
Total-penta1



Total-penta1



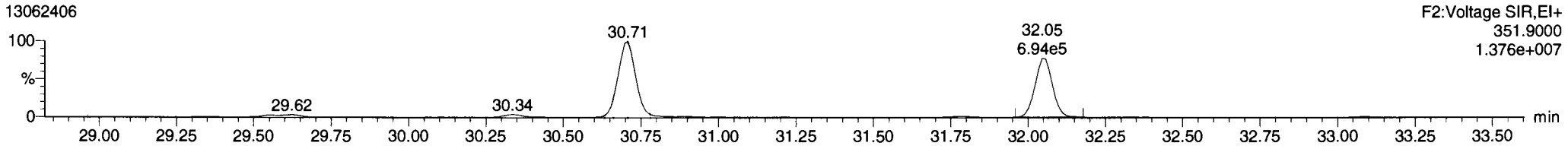
FUNCTION1 HPCDPE



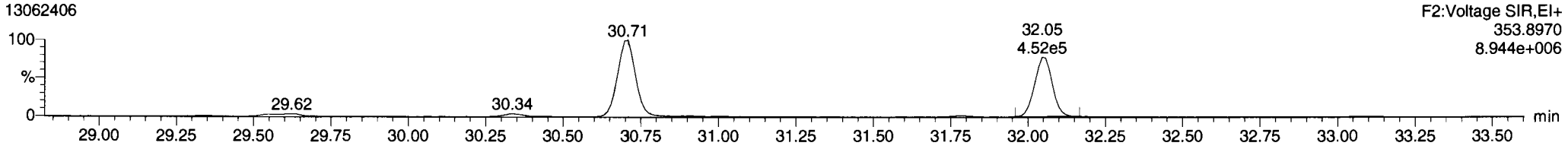
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:40 Pacific Daylight Time

ID: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

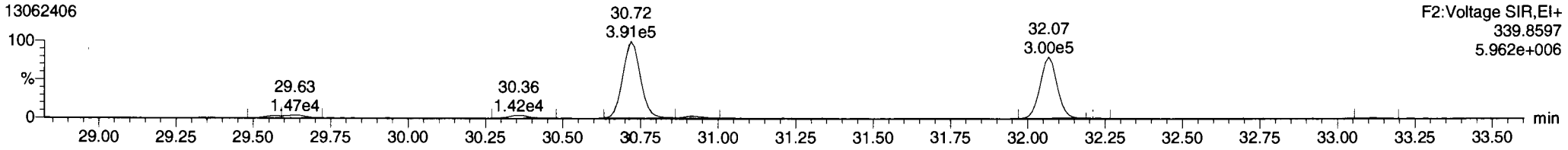
13C-23478-PeCDF



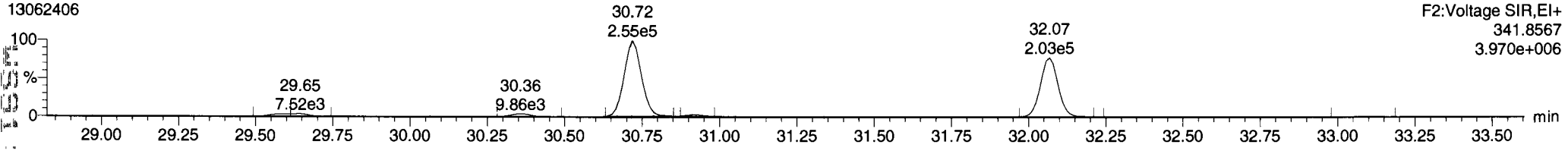
13C-23478-PeCDF



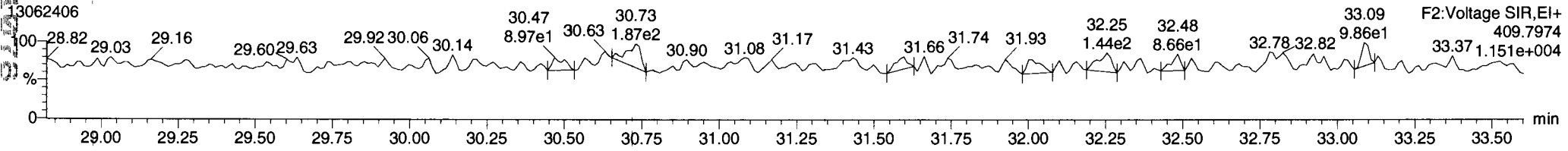
Total-pentafurans



Total-pentafurans



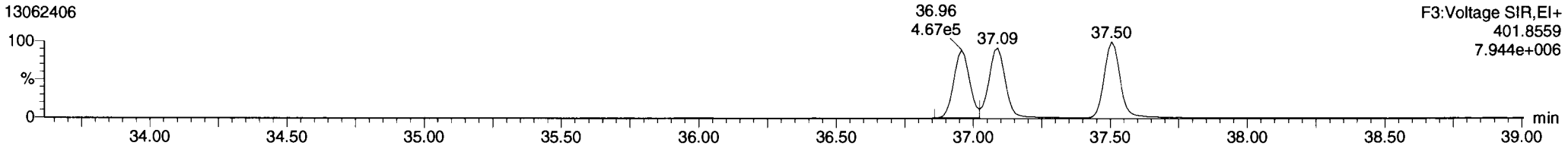
FUNCTION2 HPCDPE



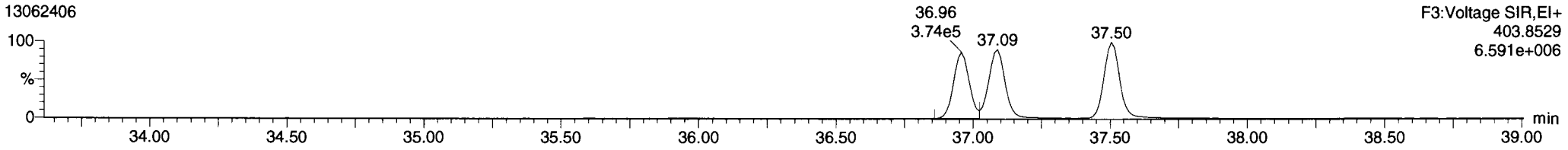
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:40 Pacific Daylight Time

ID: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

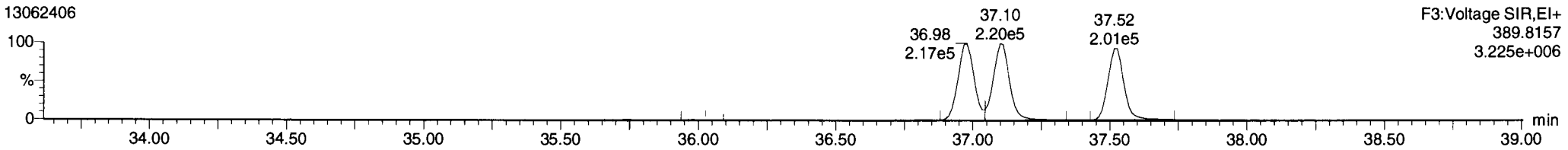
13C-123478-HxCDD



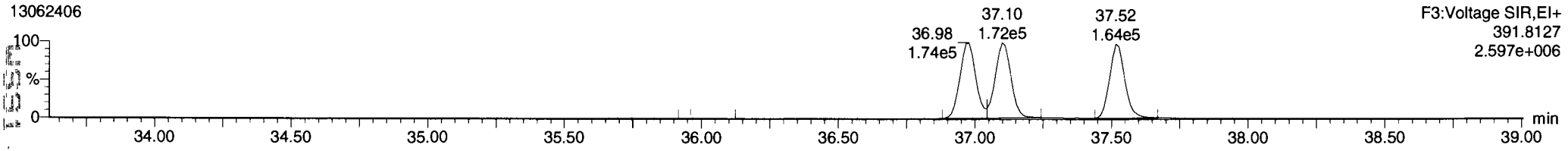
13C-123478-HxCDD



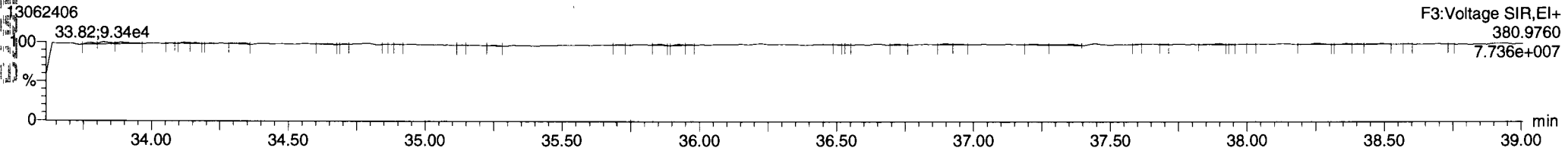
Total-hexadioxins



Total-hexadioxins



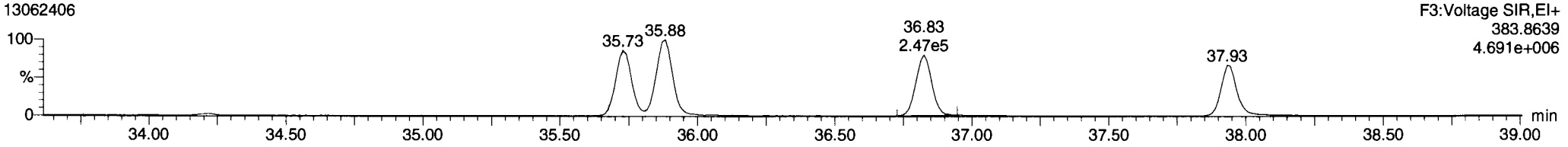
FUNCTION3 PFK



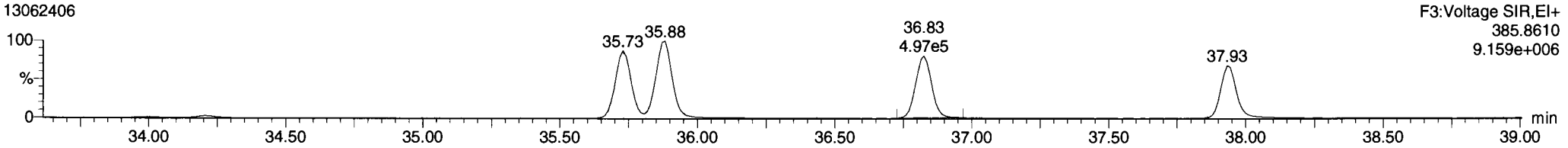
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:40 Pacific Daylight Time

ID: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

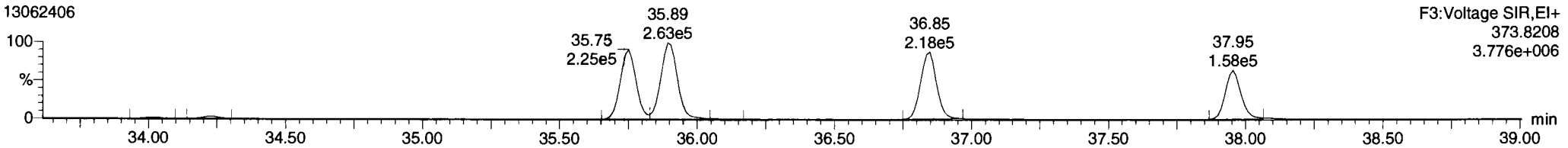
13C-234678-HxCDF



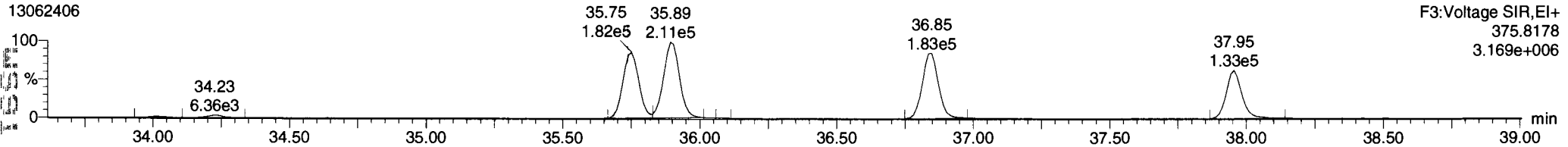
13C-234678-HxCDF



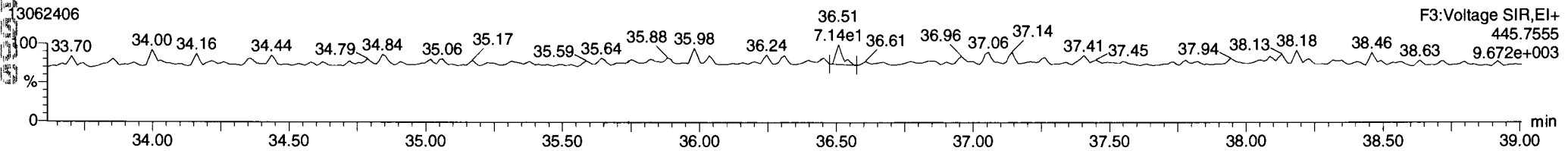
Total-hexafurans



Total-hexafurans



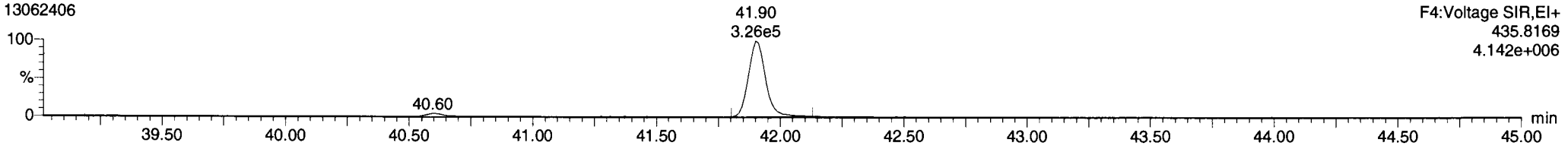
FUNCTION3 OCDPE



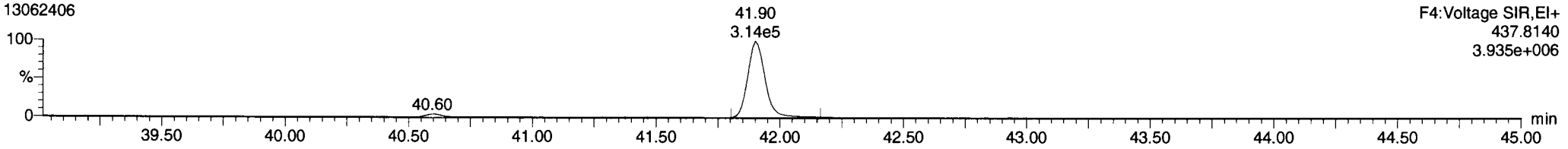
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:40 Pacific Daylight Time

ID: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

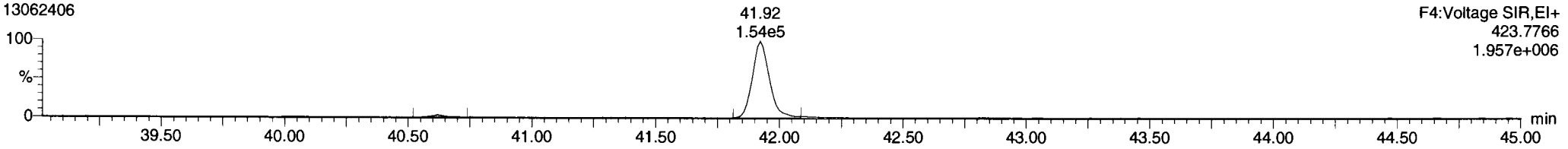
13C-1234678-HpCDD



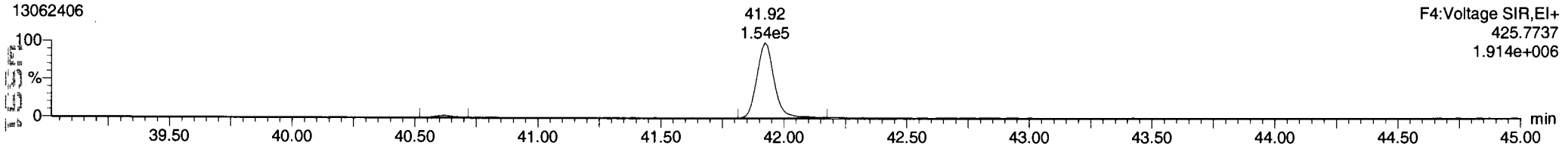
13C-1234678-HpCDD



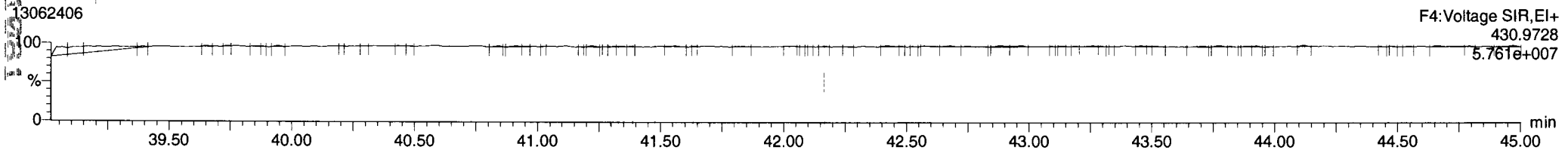
Total-heptadioxins



Total-heptadioxins



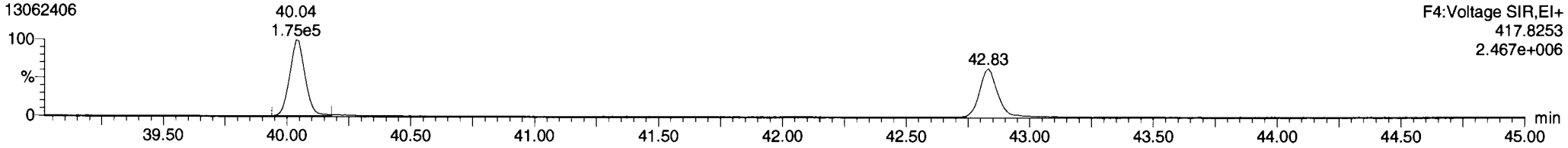
FUNCTION4 PFK



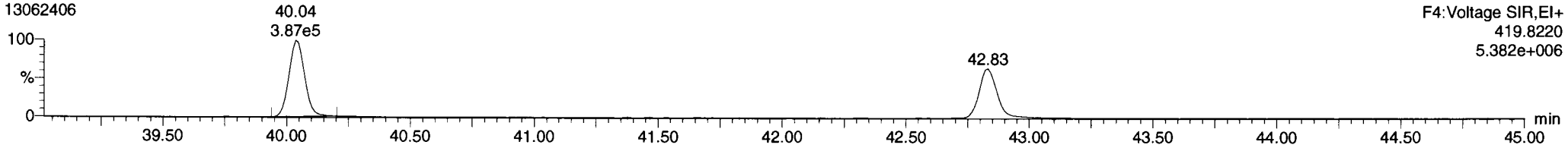
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:40 Pacific Daylight Time

ID: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

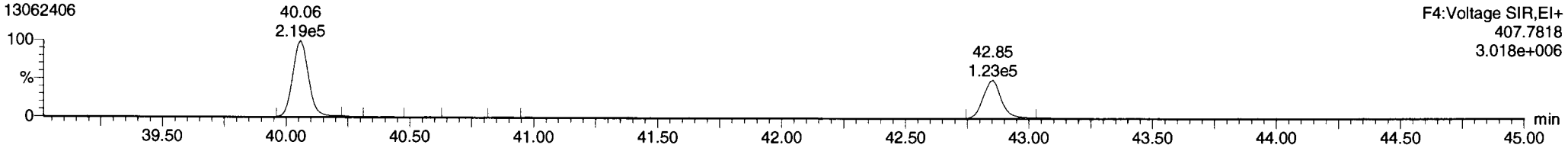
13C-1234678-HpCDF



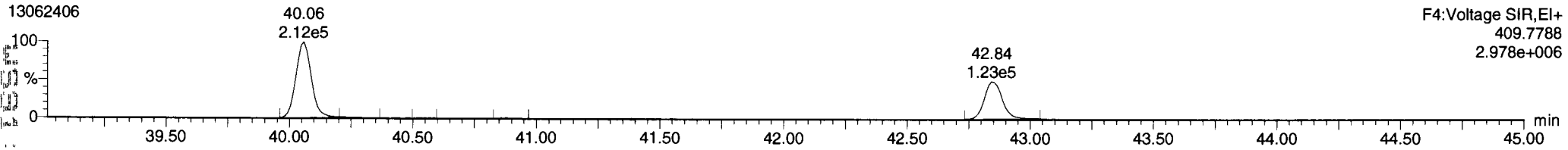
13C-1234678-HpCDF



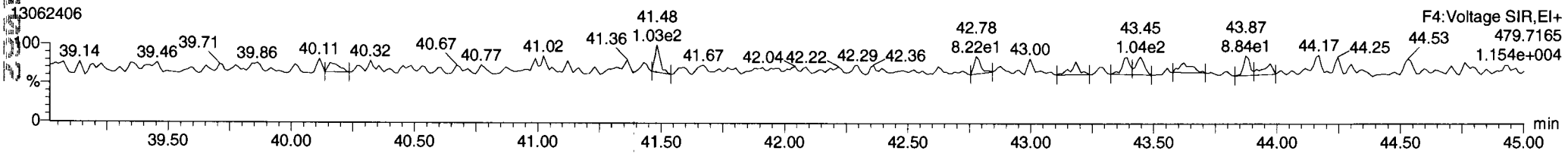
Total-heptafurans



Total-heptafurans



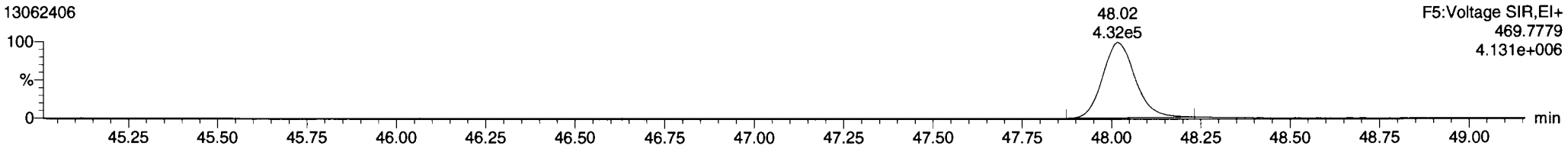
FUNCTION4 NCDPE



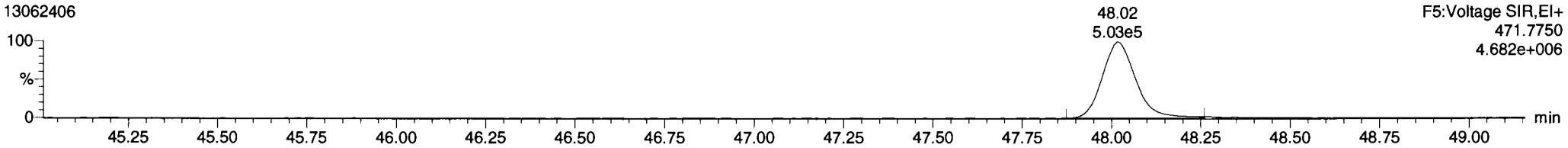
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:40 Pacific Daylight Time

ID: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

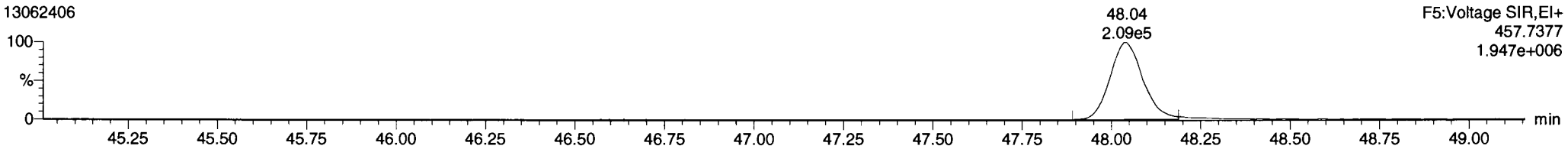
13C-OCDD



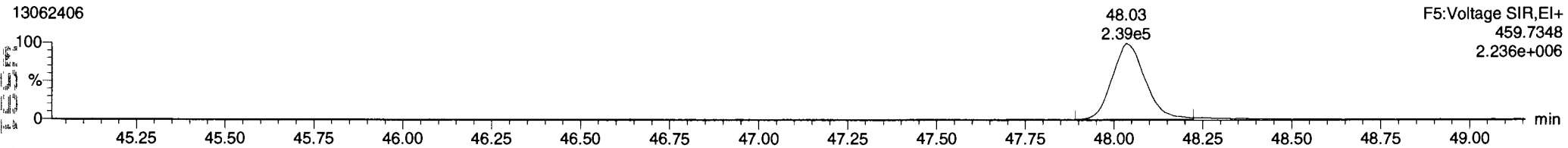
13C-OCDD



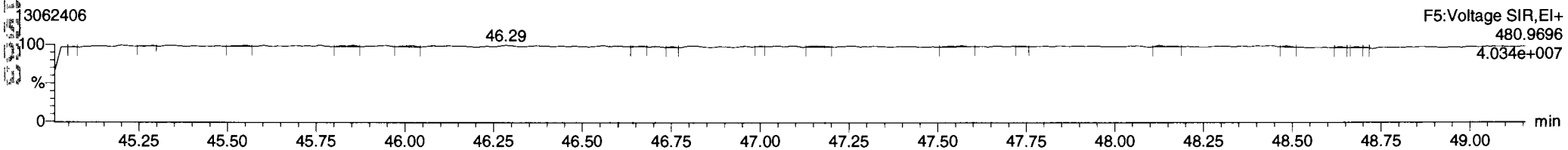
OCDD



OCDD



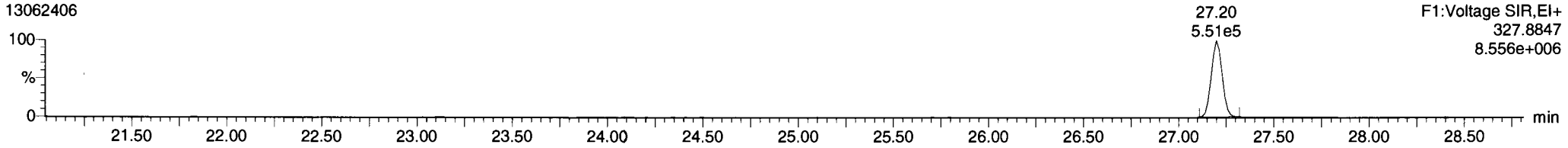
FUNCTION5 PFK



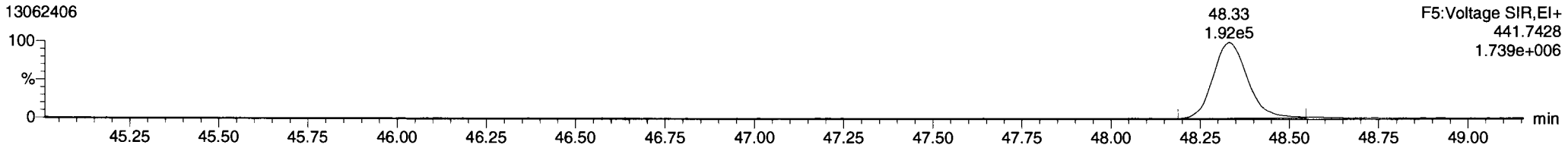
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:46:40 Pacific Daylight Time

ID: WS91OPR, Name: 13062406, Date: 24-Jun-2013, Time: 13:38:37, Conditions: AUTOSPEC01, User: pk

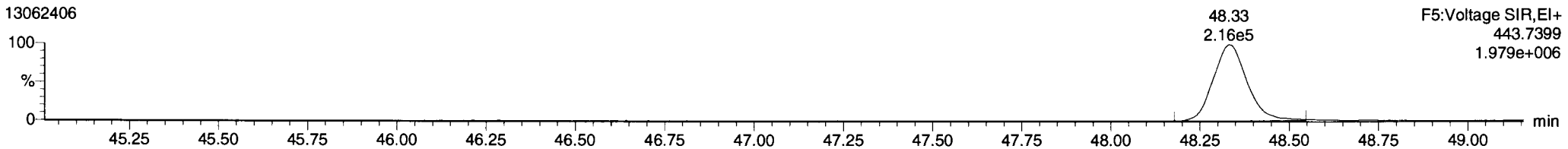
37CL-2378-TCDD



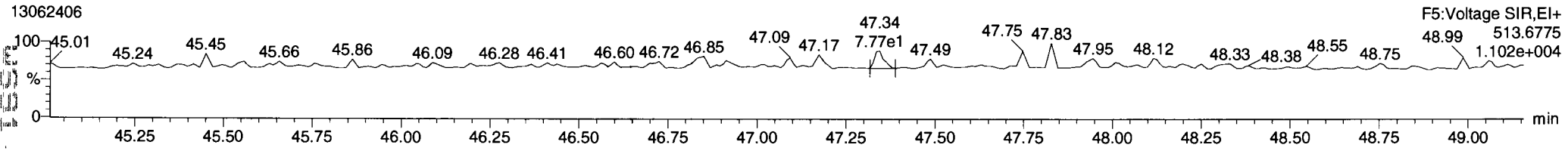
OCDF



OCDF



FUNCTION5 DCDPE



Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

pk 6/25/13

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 21 Jun 2013 12:25:14
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

[redacted]	RT	RRT	Ion1 Area	[redacted]	[redacted]	[redacted]	[redacted]	S/N	Noise 1	Noise 2	[redacted]	[redacted]	[redacted]	EMPC	[redacted]
2378-TCDF	26.571	1.001	1.94e3	3.27e3	0.771	0.592	0.770	22.3	1329	3122	2.96e4	5.11e4	YES	0.225	0.263
12378-PeCDF	30.730	1.000	3.77e3	2.07e3	0.814	1.820	1.550	34.3	1705	2647	5.84e4	3.31e4	YES	0.244	0.270
23478-PeCDF	32.078	1.000	3.79e3	2.83e3	0.837	1.340	1.550	35.3	1705	2647	6.02e4	4.55e4	NO	0.306	0.306
123478-HxCDF	35.783	1.001	5.00e3	4.91e3	0.967	1.019	1.240	72.7	1068	1448	7.76e4	7.10e4	YES	0.460	0.504
234678-HxCDF	36.879	1.000	6.32e3	5.47e3	1.000	1.156	1.240	68.6	1068	1448	7.32e4	6.78e4	NO	0.594	0.594
123678-HxCDF	35.937	1.001	5.47e3	4.38e3	0.951	1.249	1.240	78.3	1068	1448	8.36e4	6.39e4	NO	0.487	0.487
123789-HxCDF	37.986	1.001	2.04e3	1.50e3	0.874	1.365	1.240	31.2	1068	1448	3.33e4	2.40e4	NO	0.208	0.208 B
1234678-HpCDF	40.112	1.001	5.48e4	5.38e4	1.072	1.019	1.050	491.9	1595	922	7.85e5	7.63e5	NO	6.779	6.779
1234789-HpCDF	42.897	1.001	3.77e3	3.28e3	1.085	1.148	1.050	29.2	1595	922	4.66e4	4.19e4	NO	0.518	0.518
OCDF	48.419	1.007	6.17e4	7.15e4	0.878	0.863	0.890	777.5	763	1604	5.93e5	6.87e5	NO	14.045	14.045
2378-TCDD	27.213	1.001	6.30e2	1.71e3	0.936	0.368	0.770	3.0	2269	1858	6.79e3	2.83e4	YES	0.073	0.118
12378-PeCDD	32.341	1.001	3.93e3	2.73e3	0.894	1.441	1.550	37.4	1514	958	5.67e4	3.57e4	NO	0.381	0.381
123478-HxCDD	37.022	1.001	5.39e3	3.88e3	0.898	1.392	1.240	59.6	1627	2097	9.69e4	5.44e4	NO	0.512	0.512
123678-HxCDD	37.142	1.000	1.06e4	8.32e3	0.818	1.272	1.240	93.1	1627	2097	1.51e5	1.22e5	NO	1.101	1.101
123789-HxCDD	37.559	1.012	8.99e3	7.28e3	0.789	1.236	1.240	90.3	1627	2097	1.47e5	1.12e5	NO	1.002	1.002
1234678-HpCDD	41.976	1.001	1.85e5	1.79e5	0.879	1.031	1.050	1044.6	2201	2472	2.30e6	2.24e6	NO	25.473	25.473
OCDD	48.123	1.000	8.28e5	9.40e5	0.875	0.881	0.890	2384.5	3304	1069	7.88e6	8.82e6	NO	186.974	186.974
13C-2378-TCDF	26.556	1.007	1.11e6	1.46e6	1.190	0.759	0.770	6003.9	2756	5492	1.65e7	2.19e7	NO		67.872
13C-12378-PeCDF	30.719	1.165	1.61e6	1.04e6	0.904	1.547	1.550	7509.7	3260	2522	2.45e7	1.58e7	NO		92.161
13C-23478-PeCDF	32.067	1.216	1.57e6	1.01e6	0.877	1.563	1.550	7393.3	3260	2522	2.41e7	1.56e7	NO		92.525
13C-123478-HxCDF	35.761	0.952	6.89e5	1.34e6	1.096	0.513	0.510	2551.4	3930	2972	1.00e7	1.96e7	NO		73.377
13C-123678-HxCDF	35.915	0.957	7.19e5	1.41e6	1.187	0.512	0.510	2635.8	3930	2972	1.04e7	2.05e7	NO		70.794
13C-234678-HxCDF	36.868	0.982	6.75e5	1.31e6	1.040	0.515	0.510	2625.4	3930	2972	1.03e7	2.00e7	NO		75.521
13C-123789-HxCDF	37.964	1.011	6.61e5	1.29e6	0.941	0.512	0.510	2553.3	3930	2972	1.00e7	1.96e7	NO		82.057
13C-1234678-HpCDF	40.091	1.068	4.58e5	1.04e6	0.825	0.442	0.440	2989.4	2196	2097	6.56e6	1.46e7	NO		71.609
13C-1234789-HpCDF	42.875	1.142	3.81e5	8.73e5	0.609	0.437	0.440	2042.9	2196	2097	4.49e6	1.04e7	NO		81.434
13C-1234-TCDD	26.377	0.000	1.41e6	1.78e6	1.000	0.791	0.770	2157.7	9752	3413	2.10e7	2.66e7	NO		100.000
13C-2378-TCDD	27.184	1.031	9.28e5	1.19e6	0.920	0.777	0.770	1395.7	9752	3413	1.36e7	1.75e7	NO		72.525
13C-12378-PeCDD	32.319	1.225	1.19e6	7.61e5	0.669	1.563	1.550	4267.1	4189	1787	1.79e7	1.16e7	NO		91.551
13C-123478-HxCDD	37.000	0.985	1.12e6	8.97e5	1.032	1.248	1.240	5808.1	2929	2899	1.70e7	1.34e7	NO		77.296
13C-123678-HxCDD	37.131	0.989	1.16e6	9.42e5	1.146	1.230	1.240	5801.2	2929	2899	1.70e7	1.39e7	NO		72.512
13C-1234678-HpCDD	41.954	1.117	8.33e5	7.91e5	0.789	1.054	1.050	2854.6	3739	2245	1.07e7	1.02e7	NO		81.423
13C-OCDD	48.105	1.281	1.01e6	1.15e6	0.696	0.885	0.890	6725.3	1439	1630	9.68e6	1.08e7	NO		122.745

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

ID: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

Name	RT	RRT	Ion1 Area	Ion2 Area	Ion1/2	Ion1 Ratio	Ion2 Ratio	S/N	Noise 1	Noise 2	Height	Flagged	Conc	%Rec
13C-123789-HxCDD	37.548	0.000	1.40e6	1.13e6	1.000	1.238	1.240	7406.7	2929	2899	2.17e7	1.77e7	NO	100.000
Total-tetrafurans			2.91e4		0.771				1329		4.24e5			3.305
Total-penta1			4.09e4						841		5.87e5			2.837
Total-pentafurans			5.27e4		0.826				1705		7.91e5			4.043
Total-hexafurans			9.21e4		0.948				1068		1.39e6			8.908
Total-heptafurans			1.18e5		1.079				1595		1.64e6			15.170
Total-Furans			3.94e5		0.925				1329		5.43e6			48.309
Total-tetradioxins			9.50e3		0.936				2269		1.41e5			0.910
Total-pentadioxins			1.93e4		0.894				1514		2.79e5			1.846
Total-hexadioxins			9.51e4		0.835				1627		1.32e6			10.018
Total-heptadioxins			4.64e5		0.879				2201		6.25e6			64.620
Total-Dioxins			1.42e6		0.870				2269		1.59e7			264.420
Total-TEQ			1.81e6						2269		2.13e7			312.729
37CL-2378-TCDD	27.213	1.032	9.44e5		1.000			6175.1	2297		1.42e7			29.666
FUNCTION1 PFK			8.52e6						1177538		1.35e8			
FUNCTION2 PFK			1.77e5						332875		4.70e6			0.000
FUNCTION3 PFK			1.68e6						615611		4.28e7			0.000
FUNCTION4 PFK			9.60e5						510564		2.73e7			
FUNCTION5 PFK			4.17e5						357310		1.66e7			
FUNCTION1 HXCDPE			1.55e2						418		3.58e3			0.000
FUNCTION1 HPCDPE			1.07e3						1062		2.13e4			0.000
FUNCTION2 HPCDPE			1.09e3						1440		2.96e4			0.000
FUNCTION3 OCDPE			0.00e0						774		0.00e0			
FUNCTION4 NCDPE			9.02e2						1327		2.40e4			0.000
FUNCTION5 DCDPE			0.00e0						461		0.00e0			

DS-13-05-0015

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 21 Jun 2013 12:25:14
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

D: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs Resp	RRF M...	bg	EMPC	1° Ratl...	1° Ratl...	1° R...	S/N
	35	Total-tetrafurans	303.9016	24.78	2779.551	0.771	0.140		0.80	0.77	NO	12.3
	35	Total-tetrafurans	303.9016	24.66	1838.050	0.771	0.093		0.96	0.77	YES	13.6
	35	Total-tetrafurans	303.9016	24.57	2669.284	0.771	0.135		1.24	0.77	YES	16.2
	35	Total-tetrafurans	303.9016	24.30	2192.477	0.771	0.111		1.24	0.77	YES	11.2
	35	Total-tetrafurans	303.9016	23.90	8433.089	0.771	0.426		0.78	0.77	NO	45.1
	35	Total-tetrafurans	303.9016	23.31	2005.916	0.771	0.101		0.65	0.77	NO	8.3
	35	Total-tetrafurans	303.9016	26.80	3870.862	0.771	0.195		0.81	0.77	NO	18.3
	35	Total-tetrafurans	303.9016	26.71	1285.156	0.771	0.065		1.19	0.77	YES	11.4
	1	2378-TCDF	303.9016	26.57	5212.642	0.771	0.263	0.225	0.59	0.77	YES	22.3
	35	Total-tetrafurans	303.9016	26.39	8215.394	0.771	0.415		0.93	0.77	YES	34.4
	35	Total-tetrafurans	303.9016	26.06	2431.061	0.771	0.123		1.13	0.77	YES	15.4
	35	Total-tetrafurans	303.9016	25.87	1130.105	0.771	0.057		0.47	0.77	YES	4.8
	35	Total-tetrafurans	303.9016	25.64	3183.074	0.771	0.161		0.73	0.77	NO	15.0
	35	Total-tetrafurans	303.9016	25.47	6015.385	0.771	0.304		0.84	0.77	NO	29.4
	35	Total-tetrafurans	303.9016	25.33	11579.690	0.771	0.585		0.69	0.77	NO	45.9
	35	Total-tetrafurans	303.9016	25.21	2103.345	0.771	0.106		0.54	0.77	YES	12.5
	35	Total-tetrafurans	303.9016	25.15	514.255	0.771	0.026		0.69	0.77	NO	3.0

PP

	#	Name	Trace	RT	Abs Resp	RRF M...	bg	EMPC	1° Ratl...	1° Ratl...	1° R...	S/N
	36	Total-penta1	339.8597	27.99	68081.564		2.837		1.50	1.55	NO	697.6

PF

	#	Name	Trace	RT	Abs Resp	RRF M...	bg	EMPC	1° Ratl...	1° Ratl...	1° R...	S/N
	37	Total-pentafurans	339.8597	30.37	18059.376	0.826	0.836		1.35	1.55	NO	84.3
	37	Total-pentafurans	339.8597	30.25	1315.642	0.826	0.061		2.71	1.55	YES	11.2
	37	Total-pentafurans	339.8597	30.17	1272.866	0.826	0.059		0.51	1.55	YES	4.4
	37	Total-pentafurans	339.8597	29.65	11165.580	0.826	0.517		1.42	1.55	NO	75.7
	37	Total-pentafurans	339.8597	29.58	22881.391	0.826	1.059		1.66	1.55	NO	106.8
	37	Total-pentafurans	339.8597	29.46	7846.833	0.826	0.363		1.59	1.55	NO	33.4
	3	23478-PeCDF	339.8597	32.08	6619.606	0.837	0.306	0.306	1.34	1.55	NO	35.3
	37	Total-pentafurans	339.8597	31.92	2907.129	0.826	0.135		1.58	1.55	NO	14.6
	37	Total-pentafurans	339.8597	31.80	2692.817	0.826	0.125		1.99	1.55	YES	16.7
	37	Total-pentafurans	339.8597	31.04	1360.452	0.826	0.063		1.01	1.55	YES	10.1
	37	Total-pentafurans	339.8597	30.93	3127.899	0.826	0.145		1.98	1.55	YES	18.2
	2	12378-PeCDF	339.8597	30.73	5836.077	0.814	0.270	0.244	1.82	1.55	YES	34.3
	37	Total-pentafurans	339.8597	30.46	2243.737	0.826	0.104		1.63	1.55	NO	18.7

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

D: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

HF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	7	123789-HxCDF	373.8208	37.99	3542.050	0.874	0.208	0.208	1.36	1.24	NO	31.2
	5	234678-HxCDF	373.8208	36.88	11796.899	1.000	0.594	0.594	1.16	1.24	NO	68.6
	6	123678-HxCDF	373.8208	35.94	9849.255	0.951	0.487	0.487	1.25	1.24	NO	78.3
	4	123478-HxCDF	373.8208	35.78	9916.162	0.967	0.504	0.460	1.02	1.24	YES	72.7
	38	Total-hexafurans	373.8208	35.62	3527.128	0.948	0.184		1.29	1.24	NO	28.7
	38	Total-hexafurans	373.8208	35.13	34733.506	0.948	1.810		1.14	1.24	NO	274.3
	38	Total-hexafurans	373.8208	34.81	1795.153	0.948	0.094		1.31	1.24	NO	14.1
	38	Total-hexafurans	373.8208	34.52	484.173	0.948	0.025		1.32	1.24	NO	6.6
	38	Total-hexafurans	373.8208	34.40	293.433	0.948	0.015		0.46	1.24	YES	3.1
	38	Total-hexafurans	373.8208	34.26	73364.063	0.948	3.823		1.14	1.24	NO	548.9
	38	Total-hexafurans	373.8208	34.04	22325.316	0.948	1.164		1.22	1.24	NO	176.7

HPF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	39	Total-heptafurans	407.7818	40.92	114948.145	1.079	7.755		1.03	1.05	NO	498.4
	39	Total-heptafurans	407.7818	40.63	1741.307	1.079	0.117		1.43	1.05	YES	9.5
	8	1234678-HpCDF	407.7818	40.11	108598.665	1.072	6.779	6.779	1.02	1.05	NO	491.9
	9	1234789-HpCDF	407.7818	42.90	7054.085	1.085	0.518	0.518	1.15	1.05	NO	29.2

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

ID: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Area	RRF M...	pg	EMPC	IS Ratio	IS RRF	Is Flag	S/N
	35	Total-tetrafurans	303.9016	24.78	2779.551	0.771	0.140		0.80	0.77	NO	12.3
	35	Total-tetrafurans	303.9016	24.66	1838.050	0.771	0.093		0.96	0.77	YES	13.6
	35	Total-tetrafurans	303.9016	24.57	2669.284	0.771	0.135		1.24	0.77	YES	16.2
	35	Total-tetrafurans	303.9016	24.30	2192.477	0.771	0.111		1.24	0.77	YES	11.2
	35	Total-tetrafurans	303.9016	23.90	8433.089	0.771	0.426		0.78	0.77	NO	45.1
	35	Total-tetrafurans	303.9016	23.31	2005.916	0.771	0.101		0.65	0.77	NO	8.3
	35	Total-tetrafurans	303.9016	26.80	3870.862	0.771	0.195		0.81	0.77	NO	18.3
	35	Total-tetrafurans	303.9016	26.71	1285.156	0.771	0.065		1.19	0.77	YES	11.4
	1	2378-TCDF	303.9016	26.57	5212.642	0.771	0.263	0.225	0.59	0.77	YES	22.3
	35	Total-tetrafurans	303.9016	26.39	8215.394	0.771	0.415		0.93	0.77	YES	34.4
	35	Total-tetrafurans	303.9016	26.06	2431.061	0.771	0.123		1.13	0.77	YES	15.4
	35	Total-tetrafurans	303.9016	25.87	1130.105	0.771	0.057		0.47	0.77	YES	4.8
	35	Total-tetrafurans	303.9016	25.64	3183.074	0.771	0.161		0.73	0.77	NO	15.0
	35	Total-tetrafurans	303.9016	25.47	6015.385	0.771	0.304		0.84	0.77	NO	29.4
	35	Total-tetrafurans	303.9016	25.33	11579.690	0.771	0.585		0.69	0.77	NO	45.9
	35	Total-tetrafurans	303.9016	25.21	2103.345	0.771	0.106		0.54	0.77	YES	12.5
	35	Total-tetrafurans	303.9016	25.15	514.255	0.771	0.026		0.69	0.77	NO	3.0
	37	Total-pentafurans	339.8597	30.37	18059.376	0.826	0.836		1.35	1.55	NO	84.3
	37	Total-pentafurans	339.8597	30.25	1315.642	0.826	0.061		2.71	1.55	YES	11.2
	37	Total-pentafurans	339.8597	30.17	1272.866	0.826	0.059		0.51	1.55	YES	4.4
	37	Total-pentafurans	339.8597	29.65	11165.580	0.826	0.517		1.42	1.55	NO	75.7
	37	Total-pentafurans	339.8597	29.58	22881.391	0.826	1.059		1.66	1.55	NO	106.8
	37	Total-pentafurans	339.8597	29.46	7846.833	0.826	0.363		1.59	1.55	NO	33.4
	3	23478-PeCDF	339.8597	32.08	6619.606	0.837	0.306	0.306	1.34	1.55	NO	35.3
	37	Total-pentafurans	339.8597	31.92	2907.129	0.826	0.135		1.58	1.55	NO	14.6
	37	Total-pentafurans	339.8597	31.80	2692.817	0.826	0.125		1.99	1.55	YES	16.7
	37	Total-pentafurans	339.8597	31.04	1360.452	0.826	0.063		1.01	1.55	YES	10.1
	37	Total-pentafurans	339.8597	30.93	3127.899	0.826	0.145		1.98	1.55	YES	18.2
	2	12378-PeCDF	339.8597	30.73	5836.077	0.814	0.270	0.244	1.82	1.55	YES	34.3
	37	Total-pentafurans	339.8597	30.46	2243.737	0.826	0.104		1.63	1.55	NO	18.7
	7	123789-HxCDF	373.8208	37.99	3542.050	0.874	0.208	0.208	1.36	1.24	NO	31.2
	5	234678-HxCDF	373.8208	36.88	11796.899	1.000	0.594	0.594	1.16	1.24	NO	68.6
	6	123678-HxCDF	373.8208	35.94	9849.255	0.951	0.487	0.487	1.25	1.24	NO	78.3
	4	123478-HxCDF	373.8208	35.78	9916.162	0.967	0.504	0.460	1.02	1.24	YES	72.7
	38	Total-hexafurans	373.8208	35.62	3527.128	0.948	0.184		1.29	1.24	NO	28.7
	38	Total-hexafurans	373.8208	35.13	34733.506	0.948	1.810		1.14	1.24	NO	274.3
	38	Total-hexafurans	373.8208	34.81	1795.153	0.948	0.094		1.31	1.24	NO	14.1
	38	Total-hexafurans	373.8208	34.52	484.173	0.948	0.025		1.32	1.24	NO	6.6
	38	Total-hexafurans	373.8208	34.40	293.433	0.948	0.015		0.46	1.24	YES	3.1
	38	Total-hexafurans	373.8208	34.26	73364.063	0.948	3.823		1.14	1.24	NO	548.9
	38	Total-hexafurans	373.8208	34.04	22325.316	0.948	1.164		1.22	1.24	NO	176.7
	39	Total-heptafurans	407.7818	40.92	114948.145	1.079	7.755		1.03	1.05	NO	498.4
	39	Total-heptafurans	407.7818	40.63	1741.307	1.079	0.117		1.43	1.05	YES	9.5
	8	1234678-HpCDF	407.7818	40.11	108598.665	1.072	6.779	6.779	1.02	1.05	NO	491.9
	9	1234789-HpCDF	407.7818	42.90	7054.085	1.085	0.518	0.518	1.15	1.05	NO	29.2
	10	OCDF	441.7428	48.42	133163.383	0.878	14.045	14.045	0.86	0.89	NO	777.5
	36	Total-penta1	339.8597	27.99	68081.564		2.837		1.50	1.55	NO	697.6

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

D: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

TD

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratio	2° Ratio	1° R...	S/N
	41	Total-tetradioxins	319.8965	24.33	3684.165	0.936	0.185		1.05	0.77	YES	15.0
	41	Total-tetradioxins	319.8965	26.17	810.809	0.936	0.041		1.93	0.77	YES	3.4
	41	Total-tetradioxins	319.8965	25.81	1915.855	0.936	0.096		1.08	0.77	YES	7.0
	41	Total-tetradioxins	319.8965	25.56	1603.580	0.936	0.081		1.21	0.77	YES	4.1
	41	Total-tetradioxins	319.8965	24.61	2102.073	0.936	0.106		0.70	0.77	NO	6.8
	41	Total-tetradioxins	319.8965	27.35	1046.502	0.936	0.053		0.81	0.77	NO	3.7
	11	2378-TCDD	319.8965	27.21	2345.438	0.936	0.118	0.073	0.37	0.77	YES	3.0
	41	Total-tetradioxins	319.8965	26.84	1560.225	0.936	0.079		0.89	0.77	YES	3.8
	41	Total-tetradioxins	319.8965	26.54	3017.822	0.936	0.152		4.87	0.77	YES	15.2

PD

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratio	2° Ratio	1° R...	S/N
	42	Total-pentadioxins	355.8546	32.72	1483.242	0.894	0.085		1.75	1.55	NO	8.8
	42	Total-pentadioxins	355.8546	32.48	185.487	0.894	0.011		1.12	1.55	YES	2.9
	12	12378-PeCDD	355.8546	32.34	6650.990	0.894	0.381	0.381	1.44	1.55	NO	37.4
	42	Total-pentadioxins	355.8546	32.08	1373.302	0.894	0.079		4.80	1.55	YES	12.6
	42	Total-pentadioxins	355.8546	31.65	830.855	0.894	0.048		2.89	1.55	YES	5.6
	42	Total-pentadioxins	355.8546	31.26	3757.581	0.894	0.216		1.65	1.55	NO	18.7
	42	Total-pentadioxins	355.8546	31.08	2527.967	0.894	0.145		1.37	1.55	NO	16.2
	42	Total-pentadioxins	355.8546	30.96	3252.040	0.894	0.187		1.03	1.55	YES	17.7
	42	Total-pentadioxins	355.8546	30.73	3721.020	0.894	0.213		1.56	1.55	NO	26.5
	42	Total-pentadioxins	355.8546	30.13	1526.775	0.894	0.088		1.54	1.55	NO	8.4
	42	Total-pentadioxins	355.8546	29.61	6873.878	0.894	0.394		1.34	1.55	NO	29.4

HD

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratio	2° Ratio	1° R...	S/N
	43	Total-hexadioxins	389.8157	34.85	46553.615	0.835	2.709		1.18	1.24	NO	239.4
	15	123789-HxCDD	389.8157	37.56	16274.394	0.789	1.002	1.002	1.24	1.24	NO	90.3
	43	Total-hexadioxins	389.8157	37.32	3060.776	0.835	0.178		1.26	1.24	NO	17.1
	14	123678-HxCDD	389.8157	37.14	18901.543	0.818	1.101	1.101	1.27	1.24	NO	93.1
	13	123478-HxCDD	389.8157	37.02	9270.317	0.898	0.512	0.512	1.39	1.24	NO	59.6
	43	Total-hexadioxins	389.8157	36.88	1703.413	0.835	0.099		8.55	1.24	YES	16.2
	43	Total-hexadioxins	389.8157	36.17	5276.578	0.835	0.307		0.94	1.24	YES	24.7
	43	Total-hexadioxins	389.8157	36.05	57346.910	0.835	3.337		1.22	1.24	NO	195.1
	43	Total-hexadioxins	389.8157	35.76	2091.510	0.835	0.122		5.19	1.24	YES	14.4
	43	Total-hexadioxins	389.8157	35.66	10713.104	0.835	0.623		1.16	1.24	NO	56.9
	43	Total-hexadioxins	389.8157	34.96	475.813	0.835	0.028		0.57	1.24	YES	3.7

HPD

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratio	2° Ratio	1° R...	S/N
	16	1234678-HpCDD	423.7766	41.98	363667.781	0.879	25.473	25.473	1.03	1.05	NO	1044.6
	44	Total-heptadioxins	423.7766	40.67	558865.282	0.879	39.146		1.00	1.05	NO	1796.5

D: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

Dioxins,TD,PD,HD,HPD,OD

	41	Total-tetradioxins	319.8965	24.33	3684.165	0.936	0.185		1.05	0.77	YES	15.0
	45	Total-Dioxins	319.8965	22.63	347.776	0.870	0.019		3.60	0.77	YES	3.0
	45	Total-Dioxins	319.8965	21.98	211.884	0.870	0.011		1.79	0.77	YES	1.1
	41	Total-tetradioxins	319.8965	26.17	810.809	0.936	0.041		1.93	0.77	YES	3.4
	41	Total-tetradioxins	319.8965	25.81	1915.855	0.936	0.096		1.08	0.77	YES	7.0
	41	Total-tetradioxins	319.8965	25.56	1603.580	0.936	0.081		1.21	0.77	YES	4.1
	41	Total-tetradioxins	319.8965	24.61	2102.073	0.936	0.106		0.70	0.77	NO	6.8
	45	Total-Dioxins	319.8965	28.35	177.639	0.870	0.010		1.01	0.77	YES	1.3
	45	Total-Dioxins	319.8965	28.17	227.365	0.870	0.012		0.59	0.77	YES	1.1
	41	Total-tetradioxins	319.8965	27.35	1046.502	0.936	0.053		0.81	0.77	NO	3.7
	11	2378-TCDD	319.8965	27.21	2345.438	0.936	0.118	0.073	0.37	0.77	YES	3.0
	41	Total-tetradioxins	319.8965	26.84	1560.225	0.936	0.079		0.89	0.77	YES	3.8
	41	Total-tetradioxins	319.8965	26.54	3017.822	0.936	0.152		4.87	0.77	YES	15.2
	42	Total-pentadioxins	355.8546	32.72	1483.242	0.894	0.085		1.75	1.55	NO	8.8
	42	Total-pentadioxins	355.8546	32.48	185.487	0.894	0.011		1.12	1.55	YES	2.9
	12	12378-PeCDD	355.8546	32.34	6650.990	0.894	0.381	0.381	1.44	1.55	NO	37.4
	42	Total-pentadioxins	355.8546	32.08	1373.302	0.894	0.079		4.80	1.55	YES	12.6
	42	Total-pentadioxins	355.8546	31.65	830.855	0.894	0.048		2.89	1.55	YES	5.6
	42	Total-pentadioxins	355.8546	31.26	3757.581	0.894	0.216		1.65	1.55	NO	18.7
	42	Total-pentadioxins	355.8546	31.08	2527.967	0.894	0.145		1.37	1.55	NO	16.2
	42	Total-pentadioxins	355.8546	30.96	3252.040	0.894	0.187		1.03	1.55	YES	17.7
	42	Total-pentadioxins	355.8546	30.73	3721.020	0.894	0.213		1.56	1.55	NO	26.5
	42	Total-pentadioxins	355.8546	30.13	1526.775	0.894	0.088		1.54	1.55	NO	8.4
	42	Total-pentadioxins	355.8546	29.61	6873.878	0.894	0.394		1.34	1.55	NO	29.4
	43	Total-hexadioxins	389.8157	34.85	46553.615	0.835	2.709		1.18	1.24	NO	239.4
	15	123789-HxCDD	389.8157	37.56	16274.394	0.789	1.002	1.002	1.24	1.24	NO	90.3
	43	Total-hexadioxins	389.8157	37.32	3060.776	0.835	0.178		1.26	1.24	NO	17.1
	14	123678-HxCDD	389.8157	37.14	18901.543	0.818	1.101	1.101	1.27	1.24	NO	93.1
	13	123478-HxCDD	389.8157	37.02	9270.317	0.898	0.512	0.512	1.39	1.24	NO	59.6
	43	Total-hexadioxins	389.8157	36.88	1703.413	0.835	0.099		8.55	1.24	YES	16.2
	43	Total-hexadioxins	389.8157	36.17	5276.578	0.835	0.307		0.94	1.24	YES	24.7
	43	Total-hexadioxins	389.8157	36.05	57346.910	0.835	3.337		1.22	1.24	NO	195.1
	43	Total-hexadioxins	389.8157	35.76	2091.510	0.835	0.122		5.19	1.24	YES	14.4
	43	Total-hexadioxins	389.8157	35.66	10713.104	0.835	0.623		1.16	1.24	NO	56.9
	43	Total-hexadioxins	389.8157	34.96	475.813	0.835	0.028		0.57	1.24	YES	3.7
	16	1234678-HpCDD	423.7766	41.98	363667.781	0.879	25.473	25.473	1.03	1.05	NO	1044.6
	44	Total-heptadioxins	423.7766	40.67	558865.282	0.879	39.146		1.00	1.05	NO	1796.5
	17	OCDD	457.7377	48.12	1767686.001	0.875	186.974	186....	0.88	0.89	NO	2384.5

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

D: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

[redacted]	#	Name	Trace	[redacted] RT	[redacted]	REF M...	[redacted] pg	EMPC	IS Ratio	IS Ratio	IC R...	[redacted] S/N
[redacted]	35	Total-tetrafurans	303.9016	24.78	2779.551	0.771	0.140		0.80	0.77	NO	12.3
[redacted]	35	Total-tetrafurans	303.9016	24.66	1838.050	0.771	0.093		0.96	0.77	YES	13.6
[redacted]	35	Total-tetrafurans	303.9016	24.57	2669.284	0.771	0.135		1.24	0.77	YES	16.2
[redacted]	35	Total-tetrafurans	303.9016	24.30	2192.477	0.771	0.111		1.24	0.77	YES	11.2
[redacted]	35	Total-tetrafurans	303.9016	23.90	8433.089	0.771	0.426		0.78	0.77	NO	45.1
[redacted]	35	Total-tetrafurans	303.9016	23.31	2005.916	0.771	0.101		0.65	0.77	NO	8.3
[redacted]	35	Total-tetrafurans	303.9016	26.80	3870.862	0.771	0.195		0.81	0.77	NO	18.3
[redacted]	35	Total-tetrafurans	303.9016	26.71	1285.156	0.771	0.065		1.19	0.77	YES	11.4
[redacted]	1	2378-TCDF	303.9016	26.57	5212.642	0.771	0.263	0.225	0.59	0.77	YES	22.3
[redacted]	35	Total-tetrafurans	303.9016	26.39	8215.394	0.771	0.415		0.93	0.77	YES	34.4
[redacted]	35	Total-tetrafurans	303.9016	26.06	2431.061	0.771	0.123		1.13	0.77	YES	15.4
[redacted]	35	Total-tetrafurans	303.9016	25.87	1130.105	0.771	0.057		0.47	0.77	YES	4.8
[redacted]	35	Total-tetrafurans	303.9016	25.64	3183.074	0.771	0.161		0.73	0.77	NO	15.0
[redacted]	35	Total-tetrafurans	303.9016	25.47	6015.385	0.771	0.304		0.84	0.77	NO	29.4
[redacted]	35	Total-tetrafurans	303.9016	25.33	11579.690	0.771	0.585		0.69	0.77	NO	45.9
[redacted]	35	Total-tetrafurans	303.9016	25.21	2103.345	0.771	0.106		0.54	0.77	YES	12.5
[redacted]	35	Total-tetrafurans	303.9016	25.15	514.255	0.771	0.026		0.69	0.77	NO	3.0
[redacted]	37	Total-pentafurans	339.8597	30.37	18059.376	0.826	0.836		1.35	1.55	NO	84.3
[redacted]	37	Total-pentafurans	339.8597	30.25	1315.642	0.826	0.061		2.71	1.55	YES	11.2
[redacted]	37	Total-pentafurans	339.8597	30.17	1272.866	0.826	0.059		0.51	1.55	YES	4.4
[redacted]	37	Total-pentafurans	339.8597	29.65	11165.580	0.826	0.517		1.42	1.55	NO	75.7
[redacted]	37	Total-pentafurans	339.8597	29.58	22881.391	0.826	1.059		1.66	1.55	NO	106.8
[redacted]	37	Total-pentafurans	339.8597	29.46	7846.833	0.826	0.363		1.59	1.55	NO	33.4
[redacted]	3	23478-PeCDF	339.8597	32.08	6619.606	0.837	0.306	0.306	1.34	1.55	NO	35.3
[redacted]	37	Total-pentafurans	339.8597	31.92	2907.129	0.826	0.135		1.58	1.55	NO	14.6
[redacted]	37	Total-pentafurans	339.8597	31.80	2692.817	0.826	0.125		1.99	1.55	YES	16.7
[redacted]	37	Total-pentafurans	339.8597	31.04	1360.452	0.826	0.063		1.01	1.55	YES	10.1
[redacted]	37	Total-pentafurans	339.8597	30.93	3127.899	0.826	0.145		1.98	1.55	YES	18.2
[redacted]	2	12378-PeCDF	339.8597	30.73	5836.077	0.814	0.270	0.244	1.82	1.55	YES	34.3
[redacted]	37	Total-pentafurans	339.8597	30.46	2243.737	0.826	0.104		1.63	1.55	NO	18.7
[redacted]	7	123789-HxCDF	373.8208	37.99	3542.050	0.874	0.208	0.208	1.36	1.24	NO	31.2
[redacted]	5	234678-HxCDF	373.8208	36.88	11796.899	1.000	0.594	0.594	1.16	1.24	NO	68.6
[redacted]	6	123678-HxCDF	373.8208	35.94	9849.255	0.951	0.487	0.487	1.25	1.24	NO	78.3
[redacted]	4	123478-HxCDF	373.8208	35.78	9916.162	0.967	0.504	0.460	1.02	1.24	YES	72.7
[redacted]	38	Total-hexafurans	373.8208	35.62	3527.128	0.948	0.184		1.29	1.24	NO	28.7
[redacted]	38	Total-hexafurans	373.8208	35.13	34733.506	0.948	1.810		1.14	1.24	NO	274.3
[redacted]	38	Total-hexafurans	373.8208	34.81	1795.153	0.948	0.094		1.31	1.24	NO	14.1
[redacted]	38	Total-hexafurans	373.8208	34.52	484.173	0.948	0.025		1.32	1.24	NO	6.6
[redacted]	38	Total-hexafurans	373.8208	34.40	293.433	0.948	0.015		0.46	1.24	YES	3.1
[redacted]	38	Total-hexafurans	373.8208	34.26	73364.063	0.948	3.823		1.14	1.24	NO	548.9
[redacted]	38	Total-hexafurans	373.8208	34.04	22325.316	0.948	1.164		1.22	1.24	NO	176.7
[redacted]	39	Total-heptafurans	407.7818	40.92	114948.145	1.079	7.755		1.03	1.05	NO	498.4
[redacted]	39	Total-heptafurans	407.7818	40.63	1741.307	1.079	0.117		1.43	1.05	YES	9.5
[redacted]	8	1234678-HpCDF	407.7818	40.11	108598.665	1.072	6.779	6.779	1.02	1.05	NO	491.9
[redacted]	9	1234789-HpCDF	407.7818	42.90	7054.085	1.085	0.518	0.518	1.15	1.05	NO	29.2
[redacted]	10	OCDF	441.7428	48.42	133163.383	0.878	14.045	14.045	0.86	0.89	NO	777.5
[redacted]	36	Total-penta1	339.8597	27.99	68081.564		2.837		1.50	1.55	NO	697.6
[redacted]	41	Total-tetradioxins	319.8965	24.33	3684.165	0.936	0.185		1.05	0.77	YES	15.0
[redacted]	45	Total-Dioxins	319.8965	22.63	347.776	0.870	0.019		3.60	0.77	YES	3.0

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

D: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

[redacted]	#	Name	Trace	RT	Area	RRF M	pg	EMPC	I Ratio	IC Ratio	Y/N	S/N
[redacted]	45	Total-Dioxins	319.8965	21.98	211.884	0.870	0.011		1.79	0.77	YES	1.1
[redacted]	41	Total-tetradioxins	319.8965	26.17	810.809	0.936	0.041		1.93	0.77	YES	3.4
[redacted]	41	Total-tetradioxins	319.8965	25.81	1915.855	0.936	0.096		1.08	0.77	YES	7.0
[redacted]	41	Total-tetradioxins	319.8965	25.56	1603.580	0.936	0.081		1.21	0.77	YES	4.1
[redacted]	41	Total-tetradioxins	319.8965	24.61	2102.073	0.936	0.106		0.70	0.77	NO	6.8
[redacted]	45	Total-Dioxins	319.8965	28.35	177.639	0.870	0.010		1.01	0.77	YES	1.3
[redacted]	45	Total-Dioxins	319.8965	28.17	227.365	0.870	0.012		0.59	0.77	YES	1.1
[redacted]	41	Total-tetradioxins	319.8965	27.35	1046.502	0.936	0.053		0.81	0.77	NO	3.7
[redacted]	11	2378-TCDD	319.8965	27.21	2345.438	0.936	0.118	0.073	0.37	0.77	YES	3.0
[redacted]	41	Total-tetradioxins	319.8965	26.84	1560.225	0.936	0.079		0.89	0.77	YES	3.8
[redacted]	41	Total-tetradioxins	319.8965	26.54	3017.822	0.936	0.152		4.87	0.77	YES	15.2
[redacted]	42	Total-pentadioxins	355.8546	32.72	1483.242	0.894	0.085		1.75	1.55	NO	8.8
[redacted]	42	Total-pentadioxins	355.8546	32.48	185.487	0.894	0.011		1.12	1.55	YES	2.9
[redacted]	12	12378-PeCDD	355.8546	32.34	6650.990	0.894	0.381	0.381	1.44	1.55	NO	37.4
[redacted]	42	Total-pentadioxins	355.8546	32.08	1373.302	0.894	0.079		4.80	1.55	YES	12.6
[redacted]	42	Total-pentadioxins	355.8546	31.65	830.855	0.894	0.048		2.89	1.55	YES	5.6
[redacted]	42	Total-pentadioxins	355.8546	31.26	3757.581	0.894	0.216		1.65	1.55	NO	18.7
[redacted]	42	Total-pentadioxins	355.8546	31.08	2527.967	0.894	0.145		1.37	1.55	NO	16.2
[redacted]	42	Total-pentadioxins	355.8546	30.96	3252.040	0.894	0.187		1.03	1.55	YES	17.7
[redacted]	42	Total-pentadioxins	355.8546	30.73	3721.020	0.894	0.213		1.56	1.55	NO	26.5
[redacted]	42	Total-pentadioxins	355.8546	30.13	1526.775	0.894	0.088		1.54	1.55	NO	8.4
[redacted]	42	Total-pentadioxins	355.8546	29.61	6873.878	0.894	0.394		1.34	1.55	NO	29.4
[redacted]	43	Total-hexadioxins	389.8157	34.85	46553.615	0.835	2.709		1.18	1.24	NO	239.4
[redacted]	15	123789-HxCDD	389.8157	37.56	16274.394	0.789	1.002	1.002	1.24	1.24	NO	90.3
[redacted]	43	Total-hexadioxins	389.8157	37.32	3060.776	0.835	0.178		1.26	1.24	NO	17.1
[redacted]	14	123678-HxCDD	389.8157	37.14	18901.543	0.818	1.101	1.101	1.27	1.24	NO	93.1
[redacted]	13	123478-HxCDD	389.8157	37.02	9270.317	0.898	0.512	0.512	1.39	1.24	NO	59.6
[redacted]	43	Total-hexadioxins	389.8157	36.88	1703.413	0.835	0.099		8.55	1.24	YES	16.2
[redacted]	43	Total-hexadioxins	389.8157	36.17	5276.578	0.835	0.307		0.94	1.24	YES	24.7
[redacted]	43	Total-hexadioxins	389.8157	36.05	57346.910	0.835	3.337		1.22	1.24	NO	195.1
[redacted]	43	Total-hexadioxins	389.8157	35.76	2091.510	0.835	0.122		5.19	1.24	YES	14.4
[redacted]	43	Total-hexadioxins	389.8157	35.66	10713.104	0.835	0.623		1.16	1.24	NO	56.9
[redacted]	43	Total-hexadioxins	389.8157	34.96	475.813	0.835	0.028		0.57	1.24	YES	3.7
[redacted]	16	1234678-HpCDD	423.7766	41.98	363667.781	0.879	25.473	25.473	1.03	1.05	NO	1044.6
[redacted]	44	Total-heptadioxins	423.7766	40.67	558865.282	0.879	39.146		1.00	1.05	NO	1796.5
[redacted]	17	OCDD	457.7377	48.12	1767686.001	0.875	186.974	186....	0.88	0.89	NO	2384.5

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

D: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

PFK1

	48	FUNCTION1	PFK	330.9792	22.28	0.000					1.0
	48	FUNCTION1	PFK	330.9792	22.21	0.000					1.1
	48	FUNCTION1	PFK	330.9792	22.06	0.000					2.1
	48	FUNCTION1	PFK	330.9792	21.97	0.000					0.6
	48	FUNCTION1	PFK	330.9792	21.88	0.000					1.5
	48	FUNCTION1	PFK	330.9792	21.76	0.000					2.8
	48	FUNCTION1	PFK	330.9792	21.66	0.000					2.4
	48	FUNCTION1	PFK	330.9792	21.58	0.000					1.1
	48	FUNCTION1	PFK	330.9792	21.54	0.000					1.0
	48	FUNCTION1	PFK	330.9792	21.48	0.000					2.1
	48	FUNCTION1	PFK	330.9792	21.37	0.000					1.4
	48	FUNCTION1	PFK	330.9792	21.33	0.000					0.7
	48	FUNCTION1	PFK	330.9792	21.24	0.000					0.5
	48	FUNCTION1	PFK	330.9792	21.18	0.000					1.1
	48	FUNCTION1	PFK	330.9792	23.99	0.000					2.1
	48	FUNCTION1	PFK	330.9792	23.93	0.000					1.9
	48	FUNCTION1	PFK	330.9792	23.85	0.000					2.7
	48	FUNCTION1	PFK	330.9792	23.76	0.000					2.8
	48	FUNCTION1	PFK	330.9792	23.69	0.000					2.4
	48	FUNCTION1	PFK	330.9792	23.60	0.000					2.9
	48	FUNCTION1	PFK	330.9792	23.49	0.000					3.5
	48	FUNCTION1	PFK	330.9792	23.40	0.000					3.0
	48	FUNCTION1	PFK	330.9792	23.30	0.000					2.2
	48	FUNCTION1	PFK	330.9792	23.25	0.000					2.9
	48	FUNCTION1	PFK	330.9792	23.19	0.000					1.9
	48	FUNCTION1	PFK	330.9792	22.99	0.000					2.4
	48	FUNCTION1	PFK	330.9792	22.84	0.000					1.2
	48	FUNCTION1	PFK	330.9792	22.78	0.000					0.9
	48	FUNCTION1	PFK	330.9792	22.61	0.000					1.2
	48	FUNCTION1	PFK	330.9792	22.40	0.000					0.8
	48	FUNCTION1	PFK	330.9792	25.79	0.000					0.5
	48	FUNCTION1	PFK	330.9792	25.69	0.000					1.4
	48	FUNCTION1	PFK	330.9792	25.53	0.000					0.6
	48	FUNCTION1	PFK	330.9792	25.47	0.000					0.9
	48	FUNCTION1	PFK	330.9792	25.18	0.000					0.6
	48	FUNCTION1	PFK	330.9792	24.88	0.000					1.1
	48	FUNCTION1	PFK	330.9792	24.84	0.000					1.8
	48	FUNCTION1	PFK	330.9792	24.75	0.000					1.3
	48	FUNCTION1	PFK	330.9792	24.67	0.000					2.0
	48	FUNCTION1	PFK	330.9792	24.63	0.000					2.5
	48	FUNCTION1	PFK	330.9792	24.48	0.000					1.6
	48	FUNCTION1	PFK	330.9792	24.43	0.000					1.4
	48	FUNCTION1	PFK	330.9792	24.37	0.000					1.2
	48	FUNCTION1	PFK	330.9792	24.24	0.000					3.0
	48	FUNCTION1	PFK	330.9792	24.11	0.000					1.8
	48	FUNCTION1	PFK	330.9792	24.06	0.000					2.0
	48	FUNCTION1	PFK	330.9792	27.39	0.000					1.3
	48	FUNCTION1	PFK	330.9792	27.30	0.000					1.8
	48	FUNCTION1	PFK	330.9792	27.27	0.000					1.8

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

D: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
[illegible]	48	FUNCTION1 PFK	330.9792	27.18	0.000							1.6
[illegible]	48	FUNCTION1 PFK	330.9792	27.05	0.000							1.5
[illegible]	48	FUNCTION1 PFK	330.9792	26.96	0.000							2.2
[illegible]	48	FUNCTION1 PFK	330.9792	26.80	0.000							1.2
[illegible]	48	FUNCTION1 PFK	330.9792	26.68	0.000							1.0
[illegible]	48	FUNCTION1 PFK	330.9792	26.51	0.000							1.1
[illegible]	48	FUNCTION1 PFK	330.9792	26.32	0.000							0.5
[illegible]	48	FUNCTION1 PFK	330.9792	26.26	0.000							0.7
[illegible]	48	FUNCTION1 PFK	330.9792	26.18	0.000							0.5
[illegible]	48	FUNCTION1 PFK	330.9792	26.12	0.000							0.6
[illegible]	48	FUNCTION1 PFK	330.9792	26.08	0.000							1.2
[illegible]	48	FUNCTION1 PFK	330.9792	25.99	0.000							2.1
[illegible]	48	FUNCTION1 PFK	330.9792	25.88	0.000							1.4
[illegible]	48	FUNCTION1 PFK	330.9792	28.63	0.000							1.3
[illegible]	48	FUNCTION1 PFK	330.9792	28.51	0.000							1.0
[illegible]	48	FUNCTION1 PFK	330.9792	28.44	0.000							1.3
[illegible]	48	FUNCTION1 PFK	330.9792	28.38	0.000							1.2
[illegible]	48	FUNCTION1 PFK	330.9792	28.27	0.000							1.7
[illegible]	48	FUNCTION1 PFK	330.9792	28.20	0.000							1.7
[illegible]	48	FUNCTION1 PFK	330.9792	28.08	0.000							1.1
[illegible]	48	FUNCTION1 PFK	330.9792	27.96	0.000							2.5
[illegible]	48	FUNCTION1 PFK	330.9792	27.75	0.000							1.6
[illegible]	48	FUNCTION1 PFK	330.9792	27.69	0.000							0.7
[illegible]	48	FUNCTION1 PFK	330.9792	27.63	0.000							0.5
[illegible]	48	FUNCTION1 PFK	330.9792	27.54	0.000							1.1
[illegible]	48	FUNCTION1 PFK	330.9792	27.47	0.000							0.6

PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
[illegible]	49	FUNCTION2 PFK	366.9792	29.63	0.000		0.000					0.5
[illegible]	49	FUNCTION2 PFK	366.9792	29.06	0.000		0.000					1.3
[illegible]	49	FUNCTION2 PFK	366.9792	33.39	0.000		0.000					1.7
[illegible]	49	FUNCTION2 PFK	366.9792	33.03	0.000		0.000					1.6
[illegible]	49	FUNCTION2 PFK	366.9792	32.63	0.000		0.000					1.6
[illegible]	49	FUNCTION2 PFK	366.9792	32.46	0.000		0.000					0.7
[illegible]	49	FUNCTION2 PFK	366.9792	32.25	0.000		0.000					0.6
[illegible]	49	FUNCTION2 PFK	366.9792	31.35	0.000		0.000					1.4
[illegible]	49	FUNCTION2 PFK	366.9792	30.73	0.000		0.000					2.2
[illegible]	49	FUNCTION2 PFK	366.9792	30.66	0.000		0.000					1.3
[illegible]	49	FUNCTION2 PFK	366.9792	29.73	0.000		0.000					1.2

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

D: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

PFK3

	#	Name	Mass	RT	Area Ratio	RT Ref M...	dq	EMPG	I Ratio	C Ratio	PPM	S/N
	50	FUNCTION3 PFK	380.9760	34.05	0.000		0.000					2.9
	50	FUNCTION3 PFK	380.9760	33.91	0.000		0.000					1.4
	50	FUNCTION3 PFK	380.9760	33.88	0.000		0.000					1.1
	50	FUNCTION3 PFK	380.9760	33.83	0.000		0.000					0.5
	50	FUNCTION3 PFK	380.9760	33.74	0.000		0.000					0.6
	50	FUNCTION3 PFK	380.9760	33.68	0.000		0.000					1.1
	50	FUNCTION3 PFK	380.9760	35.62	0.000		0.000					2.0
	50	FUNCTION3 PFK	380.9760	35.48	0.000		0.000					0.5
	50	FUNCTION3 PFK	380.9760	35.42	0.000		0.000					1.0
	50	FUNCTION3 PFK	380.9760	35.38	0.000		0.000					1.4
	50	FUNCTION3 PFK	380.9760	35.25	0.000		0.000					2.2
	50	FUNCTION3 PFK	380.9760	35.11	0.000		0.000					0.8
	50	FUNCTION3 PFK	380.9760	35.06	0.000		0.000					1.2
	50	FUNCTION3 PFK	380.9760	35.00	0.000		0.000					0.4
	50	FUNCTION3 PFK	380.9760	34.85	0.000		0.000					2.0
	50	FUNCTION3 PFK	380.9760	34.77	0.000		0.000					1.8
	50	FUNCTION3 PFK	380.9760	34.60	0.000		0.000					1.0
	50	FUNCTION3 PFK	380.9760	34.41	0.000		0.000					1.9
	50	FUNCTION3 PFK	380.9760	34.37	0.000		0.000					2.0
	50	FUNCTION3 PFK	380.9760	34.30	0.000		0.000					2.3
	50	FUNCTION3 PFK	380.9760	34.24	0.000		0.000					1.4
	50	FUNCTION3 PFK	380.9760	34.16	0.000		0.000					1.8
	50	FUNCTION3 PFK	380.9760	37.42	0.000		0.000					2.3
	50	FUNCTION3 PFK	380.9760	37.35	0.000		0.000					1.1
	50	FUNCTION3 PFK	380.9760	37.24	0.000		0.000					0.8
	50	FUNCTION3 PFK	380.9760	37.16	0.000		0.000					0.7
	50	FUNCTION3 PFK	380.9760	37.02	0.000		0.000					1.4
	50	FUNCTION3 PFK	380.9760	36.87	0.000		0.000					2.0
	50	FUNCTION3 PFK	380.9760	36.68	0.000		0.000					1.2
	50	FUNCTION3 PFK	380.9760	36.58	0.000		0.000					1.7
	50	FUNCTION3 PFK	380.9760	36.55	0.000		0.000					2.3
	50	FUNCTION3 PFK	380.9760	36.43	0.000		0.000					0.4
	50	FUNCTION3 PFK	380.9760	36.27	0.000		0.000					1.1
	50	FUNCTION3 PFK	380.9760	36.19	0.000		0.000					0.6
	50	FUNCTION3 PFK	380.9760	35.93	0.000		0.000					0.8
	50	FUNCTION3 PFK	380.9760	35.88	0.000		0.000					1.0
	50	FUNCTION3 PFK	380.9760	35.84	0.000		0.000					1.1
	50	FUNCTION3 PFK	380.9760	35.77	0.000		0.000					0.9
	50	FUNCTION3 PFK	380.9760	38.83	0.000		0.000					1.4
	50	FUNCTION3 PFK	380.9760	38.64	0.000		0.000					0.8
	50	FUNCTION3 PFK	380.9760	38.47	0.000		0.000					0.8
	50	FUNCTION3 PFK	380.9760	38.38	0.000		0.000					1.0
	50	FUNCTION3 PFK	380.9760	38.33	0.000		0.000					1.0
	50	FUNCTION3 PFK	380.9760	38.19	0.000		0.000					1.3
	50	FUNCTION3 PFK	380.9760	38.15	0.000		0.000					1.9
	50	FUNCTION3 PFK	380.9760	38.07	0.000		0.000					2.0
	50	FUNCTION3 PFK	380.9760	37.98	0.000		0.000					1.5
	50	FUNCTION3 PFK	380.9760	37.93	0.000		0.000					1.4
	50	FUNCTION3 PFK	380.9760	37.87	0.000		0.000					1.9

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

D: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

PFK3

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1st Rati...	1st Rati...	1st R...	S/N
[illegible]	50	FUNCTION3 PFK	380.9760	37.62	0.000		0.000					2.2
[illegible]	50	FUNCTION3 PFK	380.9760	37.50	0.000		0.000					1.8

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

ID: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

PFK4

	#	Name	Trace	RT	Area Resp	REF M...	PD	EMPC	37 Rat...	35 Rat...	I.S.	QM
	51	FUNCTION4 PFK	430.9728	39.12	0.000							1.0
	51	FUNCTION4 PFK	430.9728	39.07	0.000							1.0
	51	FUNCTION4 PFK	430.9728	40.89	0.000							1.7
	51	FUNCTION4 PFK	430.9728	40.83	0.000							0.7
	51	FUNCTION4 PFK	430.9728	40.79	0.000							0.3
	51	FUNCTION4 PFK	430.9728	40.59	0.000							1.5
	51	FUNCTION4 PFK	430.9728	40.28	0.000							2.3
	51	FUNCTION4 PFK	430.9728	40.22	0.000							1.8
	51	FUNCTION4 PFK	430.9728	40.07	0.000							1.2
	51	FUNCTION4 PFK	430.9728	39.92	0.000							0.6
	51	FUNCTION4 PFK	430.9728	39.85	0.000							0.6
	51	FUNCTION4 PFK	430.9728	39.78	0.000							1.1
	51	FUNCTION4 PFK	430.9728	39.72	0.000							1.1
	51	FUNCTION4 PFK	430.9728	39.62	0.000							0.4
	51	FUNCTION4 PFK	430.9728	39.42	0.000							0.5
	51	FUNCTION4 PFK	430.9728	39.38	0.000							0.4
	51	FUNCTION4 PFK	430.9728	39.35	0.000							0.7
	51	FUNCTION4 PFK	430.9728	39.27	0.000							1.5
	51	FUNCTION4 PFK	430.9728	42.57	0.000							1.1
	51	FUNCTION4 PFK	430.9728	42.51	0.000							1.9
	51	FUNCTION4 PFK	430.9728	42.45	0.000							2.1
	51	FUNCTION4 PFK	430.9728	42.36	0.000							1.0
	51	FUNCTION4 PFK	430.9728	42.30	0.000							1.1
	51	FUNCTION4 PFK	430.9728	42.24	0.000							1.1
	51	FUNCTION4 PFK	430.9728	42.22	0.000							1.1
	51	FUNCTION4 PFK	430.9728	42.10	0.000							1.4
	51	FUNCTION4 PFK	430.9728	42.02	0.000							1.2
	51	FUNCTION4 PFK	430.9728	41.95	0.000							1.0
	51	FUNCTION4 PFK	430.9728	41.86	0.000							0.5
	51	FUNCTION4 PFK	430.9728	41.77	0.000							0.6
	51	FUNCTION4 PFK	430.9728	41.32	0.000							0.6
	51	FUNCTION4 PFK	430.9728	41.24	0.000							1.0
	51	FUNCTION4 PFK	430.9728	41.11	0.000							0.6
	51	FUNCTION4 PFK	430.9728	40.93	0.000							1.1
	51	FUNCTION4 PFK	430.9728	44.84	0.000							1.5
	51	FUNCTION4 PFK	430.9728	44.62	0.000							0.5
	51	FUNCTION4 PFK	430.9728	44.49	0.000							1.9
	51	FUNCTION4 PFK	430.9728	44.38	0.000							2.1
	51	FUNCTION4 PFK	430.9728	44.28	0.000							0.7
	51	FUNCTION4 PFK	430.9728	44.23	0.000							0.6
	51	FUNCTION4 PFK	430.9728	43.92	0.000							0.9
	51	FUNCTION4 PFK	430.9728	43.74	0.000							0.9
	51	FUNCTION4 PFK	430.9728	43.67	0.000							0.9
	51	FUNCTION4 PFK	430.9728	43.55	0.000							1.2
	51	FUNCTION4 PFK	430.9728	43.49	0.000							1.4
	51	FUNCTION4 PFK	430.9728	43.23	0.000							0.3
	51	FUNCTION4 PFK	430.9728	42.97	0.000							0.8
	51	FUNCTION4 PFK	430.9728	42.91	0.000							0.9
	51	FUNCTION4 PFK	430.9728	42.83	0.000							0.6

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

D: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

PFK4

[redacted]	#	Name	Trace	RT	Abs Resp	REF M...	ppb	EMPC	1° Ratio	1° Ratio	PPM	S/N
[redacted]	51	FUNCTION4 PFK	430.9728	42.67	0.000							1.8
[redacted]	51	FUNCTION4 PFK	430.9728	44.96	0.000							0.6

PFK5

[redacted]	#	Name	Trace	RT	Abs Resp	REF M...	ppb	EMPC	1° Ratio	1° Ratio	1° R...	S/N
[redacted]	52	FUNCTION5 PFK	480.9696	46.60	0.000							0.9
[redacted]	52	FUNCTION5 PFK	480.9696	46.45	0.000							1.3
[redacted]	52	FUNCTION5 PFK	480.9696	46.29	0.000							0.9
[redacted]	52	FUNCTION5 PFK	480.9696	46.14	0.000							1.0
[redacted]	52	FUNCTION5 PFK	480.9696	46.09	0.000							1.2
[redacted]	52	FUNCTION5 PFK	480.9696	46.02	0.000							1.9
[redacted]	52	FUNCTION5 PFK	480.9696	45.75	0.000							1.0
[redacted]	52	FUNCTION5 PFK	480.9696	45.67	0.000							0.4
[redacted]	52	FUNCTION5 PFK	480.9696	45.60	0.000							0.9
[redacted]	52	FUNCTION5 PFK	480.9696	45.53	0.000							1.2
[redacted]	52	FUNCTION5 PFK	480.9696	45.34	0.000							0.9
[redacted]	52	FUNCTION5 PFK	480.9696	45.31	0.000							1.2
[redacted]	52	FUNCTION5 PFK	480.9696	45.18	0.000							1.6
[redacted]	52	FUNCTION5 PFK	480.9696	45.05	0.000							1.2
[redacted]	52	FUNCTION5 PFK	480.9696	47.84	0.000							0.9
[redacted]	52	FUNCTION5 PFK	480.9696	47.72	0.000							1.1
[redacted]	52	FUNCTION5 PFK	480.9696	47.65	0.000							1.8
[redacted]	52	FUNCTION5 PFK	480.9696	47.58	0.000							0.9
[redacted]	52	FUNCTION5 PFK	480.9696	47.45	0.000							0.7
[redacted]	52	FUNCTION5 PFK	480.9696	47.41	0.000							1.3
[redacted]	52	FUNCTION5 PFK	480.9696	47.36	0.000							1.3
[redacted]	52	FUNCTION5 PFK	480.9696	47.32	0.000							1.6
[redacted]	52	FUNCTION5 PFK	480.9696	47.29	0.000							1.3
[redacted]	52	FUNCTION5 PFK	480.9696	47.11	0.000							0.6
[redacted]	52	FUNCTION5 PFK	480.9696	47.01	0.000							0.7
[redacted]	52	FUNCTION5 PFK	480.9696	46.89	0.000							0.8
[redacted]	52	FUNCTION5 PFK	480.9696	46.86	0.000							1.3
[redacted]	52	FUNCTION5 PFK	480.9696	46.79	0.000							0.6
[redacted]	52	FUNCTION5 PFK	480.9696	46.69	0.000							0.9
[redacted]	52	FUNCTION5 PFK	480.9696	46.66	0.000							1.1
[redacted]	52	FUNCTION5 PFK	480.9696	49.11	0.000							1.0
[redacted]	52	FUNCTION5 PFK	480.9696	48.72	0.000							2.0
[redacted]	52	FUNCTION5 PFK	480.9696	48.65	0.000							1.6
[redacted]	52	FUNCTION5 PFK	480.9696	48.62	0.000							1.4
[redacted]	52	FUNCTION5 PFK	480.9696	48.44	0.000							0.9
[redacted]	52	FUNCTION5 PFK	480.9696	48.39	0.000							0.9
[redacted]	52	FUNCTION5 PFK	480.9696	48.36	0.000							1.2
[redacted]	52	FUNCTION5 PFK	480.9696	48.32	0.000							1.3
[redacted]	52	FUNCTION5 PFK	480.9696	48.24	0.000							1.1
[redacted]	52	FUNCTION5 PFK	480.9696	48.21	0.000							0.9
[redacted]	52	FUNCTION5 PFK	480.9696	48.05	0.000							1.2
[redacted]	52	FUNCTION5 PFK	480.9696	47.92	0.000							0.5

D: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

ETHERS1

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
	53	FUNCTION1 HXCD...	375.8364	23.37	0.000		0.000					3.2
	53	FUNCTION1 HXCD...	375.8364	23.05	0.000		0.000					5.4

ETHERS2

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
	54	FUNCTION1 HPCD...	409.7974	27.89	0.000		0.000					2.2
	54	FUNCTION1 HPCD...	409.7974	26.24	0.000		0.000					1.0
	54	FUNCTION1 HPCD...	409.7974	25.27	0.000		0.000					1.7
	54	FUNCTION1 HPCD...	409.7974	24.93	0.000		0.000					1.7
	54	FUNCTION1 HPCD...	409.7974	24.51	0.000		0.000					2.1
	54	FUNCTION1 HPCD...	409.7974	24.06	0.000		0.000					2.1
	54	FUNCTION1 HPCD...	409.7974	23.96	0.000		0.000					1.3
	54	FUNCTION1 HPCD...	409.7974	23.69	0.000		0.000					1.3
	54	FUNCTION1 HPCD...	409.7974	23.36	0.000		0.000					1.6
	54	FUNCTION1 HPCD...	409.7974	22.63	0.000		0.000					1.1
	54	FUNCTION1 HPCD...	409.7974	22.43	0.000		0.000					1.7
	54	FUNCTION1 HPCD...	409.7974	21.57	0.000		0.000					2.2

ETHERS3

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
	55	FUNCTION2 HPCD...	409.7974	30.05	0.000		0.000					2.3
	55	FUNCTION2 HPCD...	409.7974	29.44	0.000		0.000					2.1
	55	FUNCTION2 HPCD...	409.7974	28.89	0.000		0.000					1.5
	55	FUNCTION2 HPCD...	409.7974	33.24	0.000		0.000					1.5
	55	FUNCTION2 HPCD...	409.7974	33.10	0.000		0.000					2.1
	55	FUNCTION2 HPCD...	409.7974	33.04	0.000		0.000					2.5
	55	FUNCTION2 HPCD...	409.7974	32.91	0.000		0.000					1.5
	55	FUNCTION2 HPCD...	409.7974	32.78	0.000		0.000					2.6
	55	FUNCTION2 HPCD...	409.7974	32.58	0.000		0.000					1.5
	55	FUNCTION2 HPCD...	409.7974	32.53	0.000		0.000					2.8

ETHERS4

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N

ETHERS5

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	2° Rati...	1° R...	S/N
	57	FUNCTION4 NCDPE	479.7165	43.72	0.000		0.000					4.5
	57	FUNCTION4 NCDPE	479.7165	43.54	0.000		0.000					2.2
	57	FUNCTION4 NCDPE	479.7165	42.38	0.000		0.000					1.6
	57	FUNCTION4 NCDPE	479.7165	42.25	0.000		0.000					1.7
	57	FUNCTION4 NCDPE	479.7165	41.75	0.000		0.000					2.9
	57	FUNCTION4 NCDPE	479.7165	41.15	0.000		0.000					1.7
	57	FUNCTION4 NCDPE	479.7165	39.70	0.000		0.000					1.7
	57	FUNCTION4 NCDPE	479.7165	44.72	0.000		0.000					1.7

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

D: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

ETHERS6

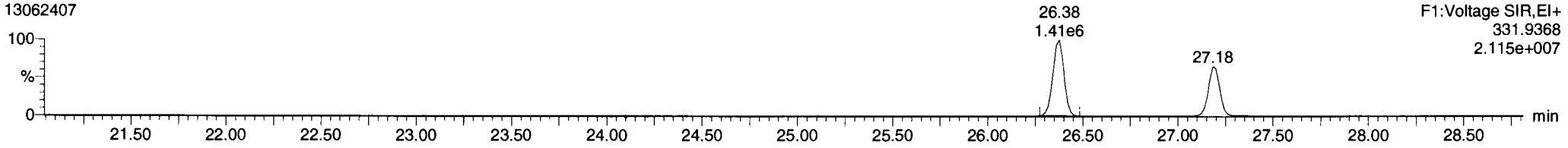
	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratio	1° Ratio	2° R...	S/N

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

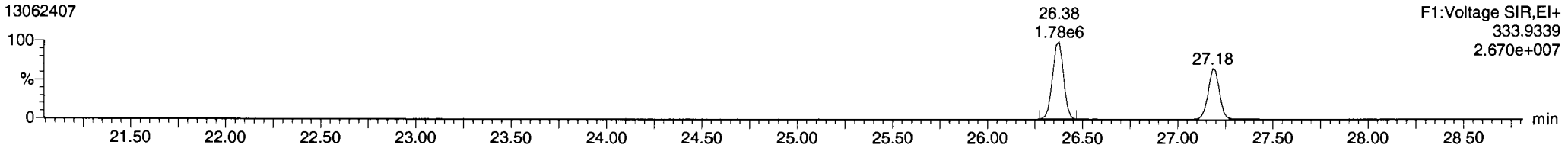
Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 21 Jun 2013 12:25:14
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

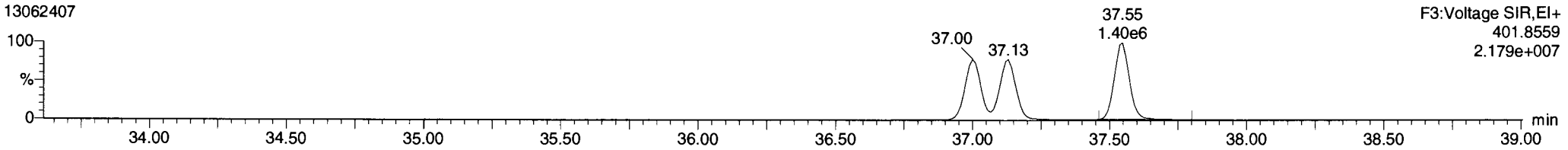
13C-1234-TCDD



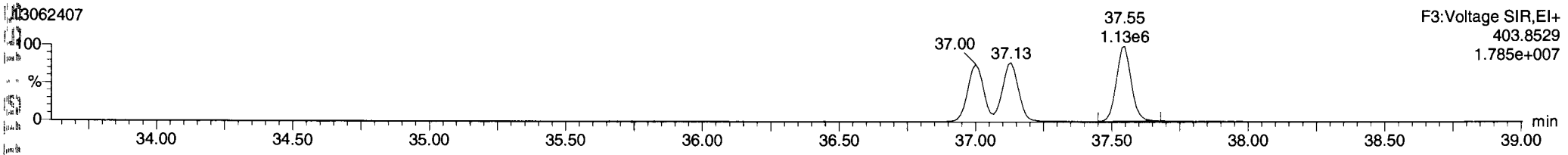
13C-1234-TCDD



13C-123789-HxCDD



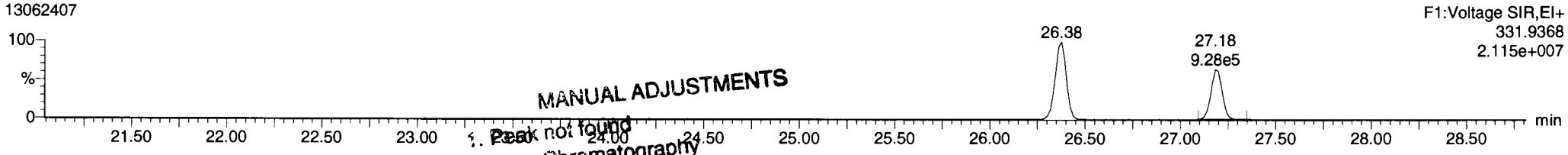
13C-123789-HxCDD



Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

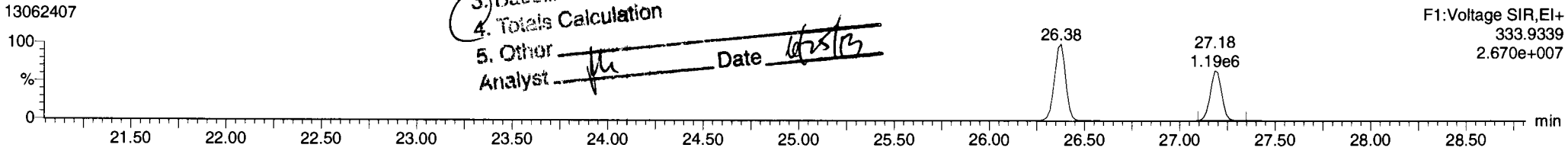
ID: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD

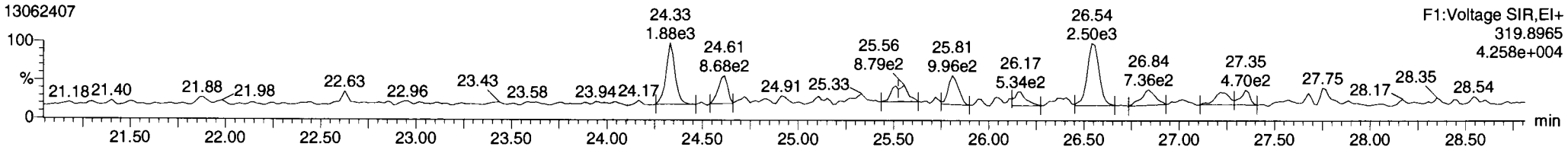


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst _____ Date 6/25/13

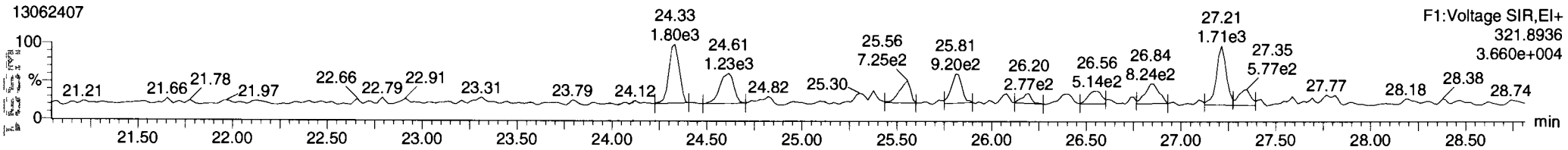
13C-2378-TCDD



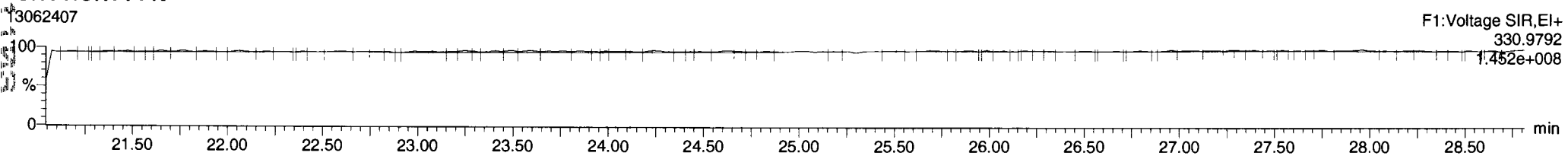
Total-tetradioxins



Total-tetradioxins



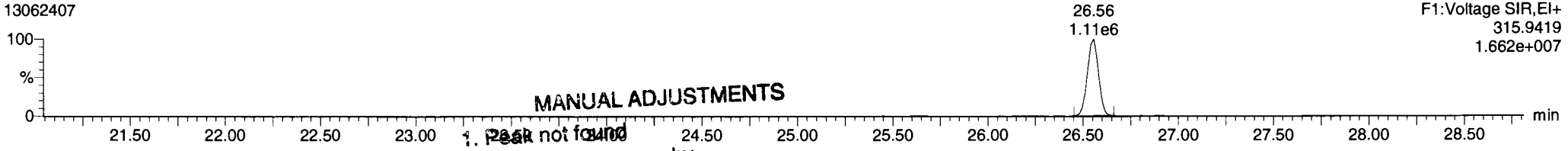
FUNCTION1 PFK



Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

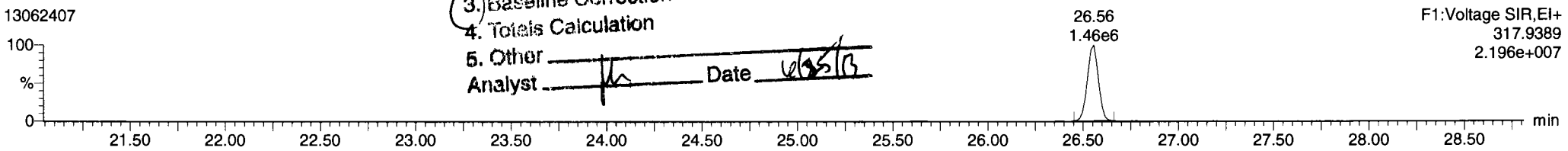
ID: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF

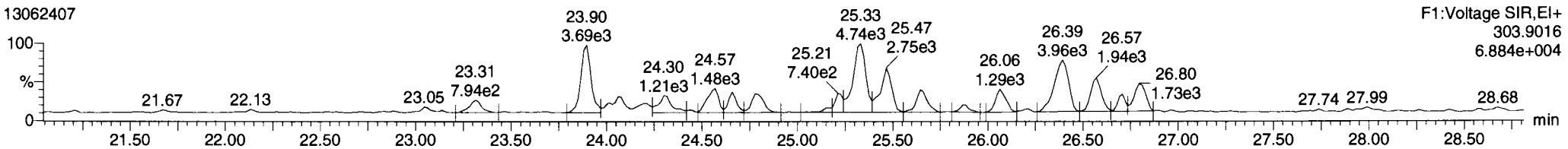


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst _____ Date 6/25/13

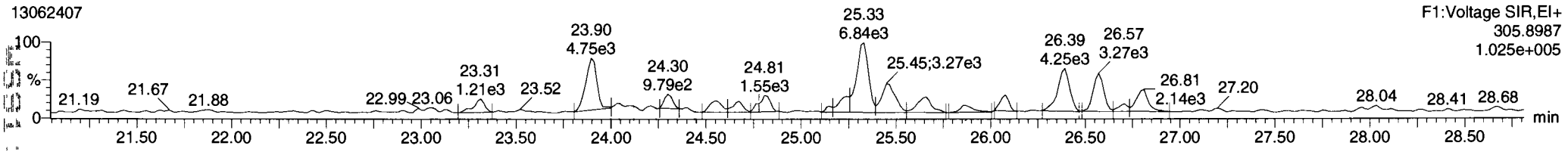
13C-2378-TCDF



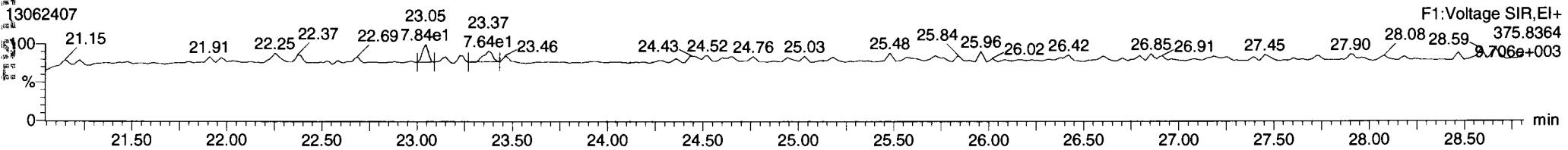
Total-tetrafurans



Total-tetrafurans



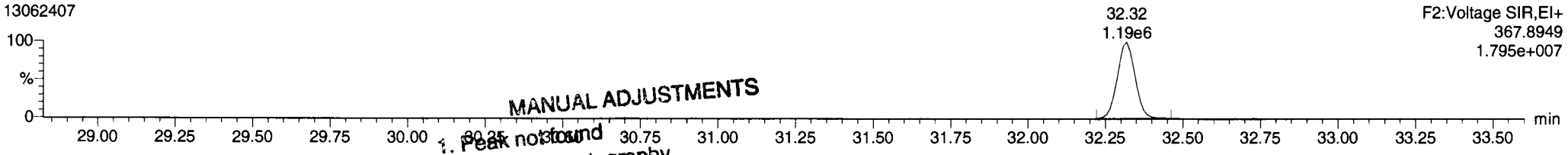
FUNCTION1 HXCDPE



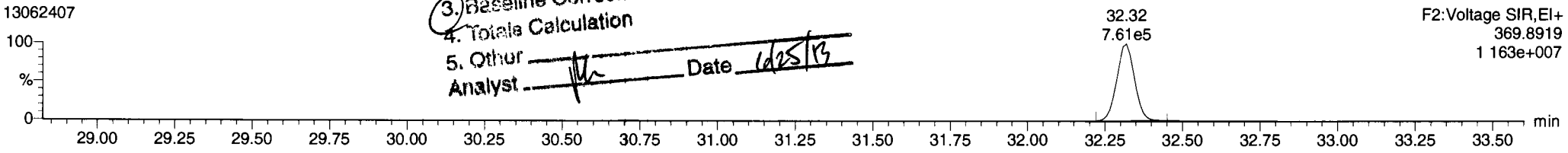
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

ID: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

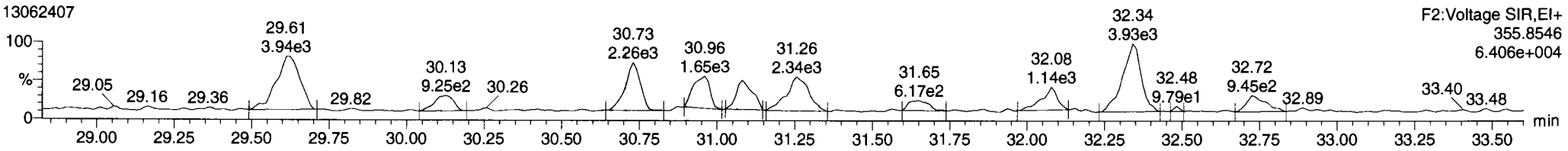
13C-12378-PeCDD



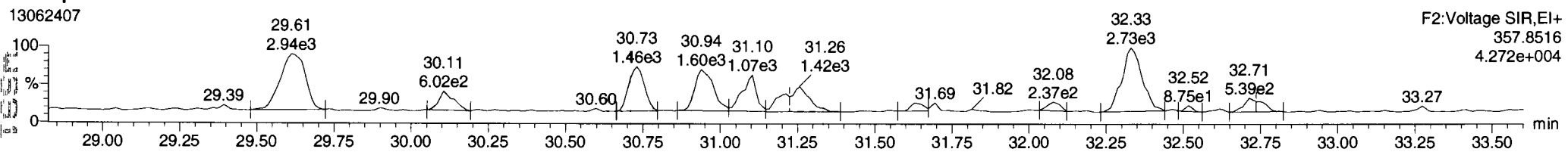
13C-12378-PeCDD



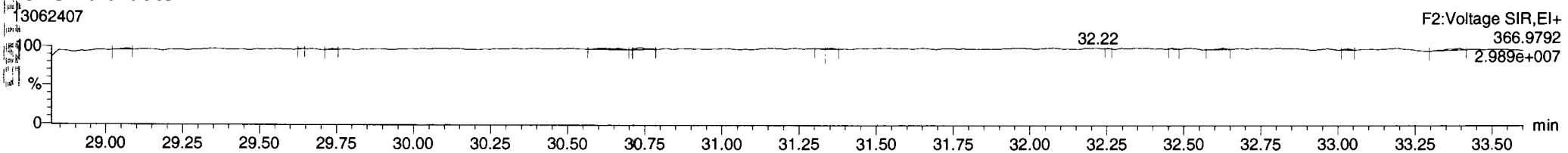
Total-pentadioxins



Total-pentadioxins



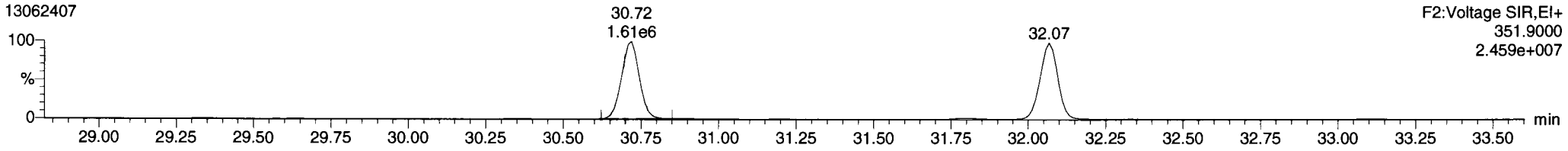
FUNCTION2 PFK



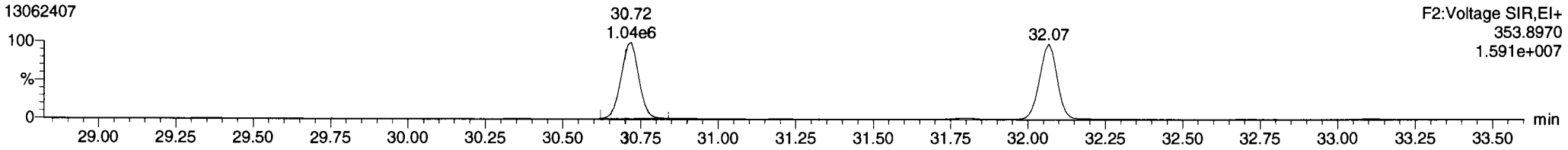
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

ID: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

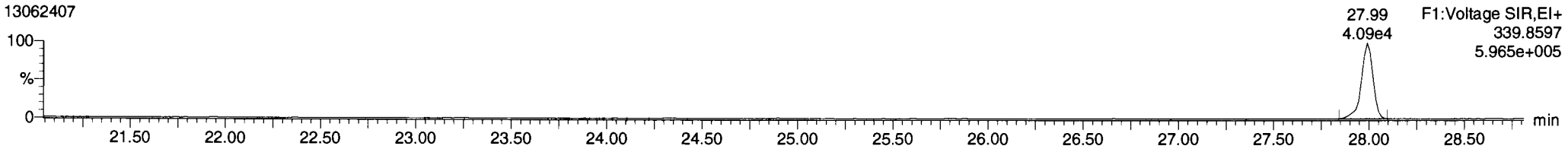
13C-12378-PeCDF



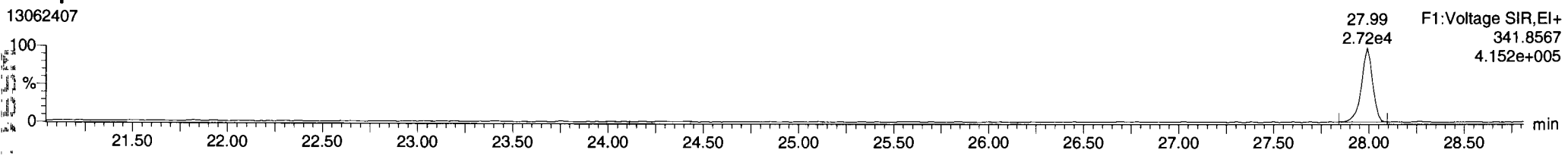
13C-12378-PeCDF



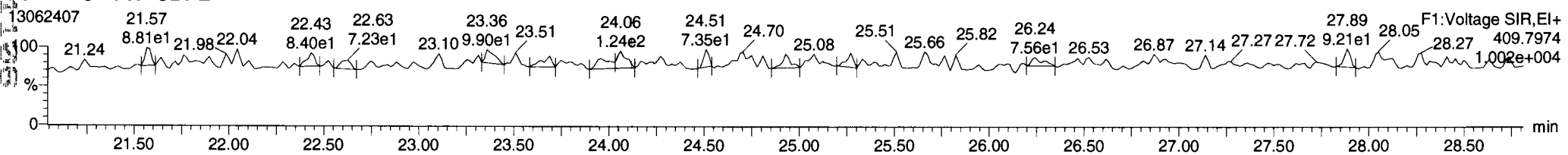
Total-penta1



Total-penta1



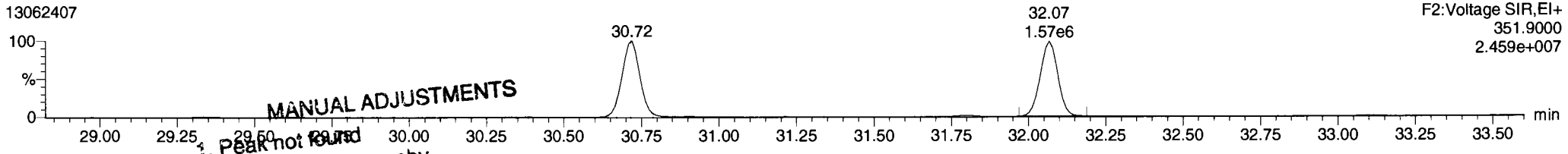
FUNCTION1 HPCDPE



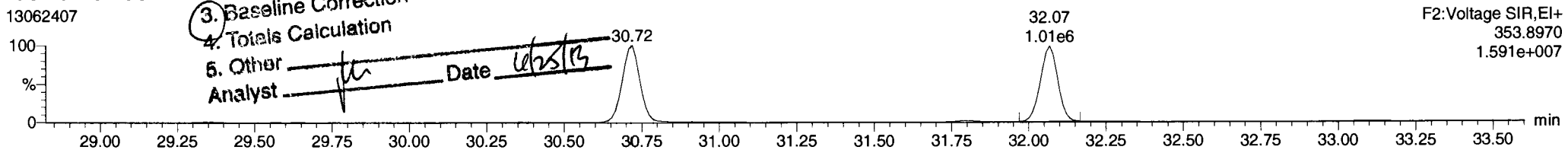
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

ID: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

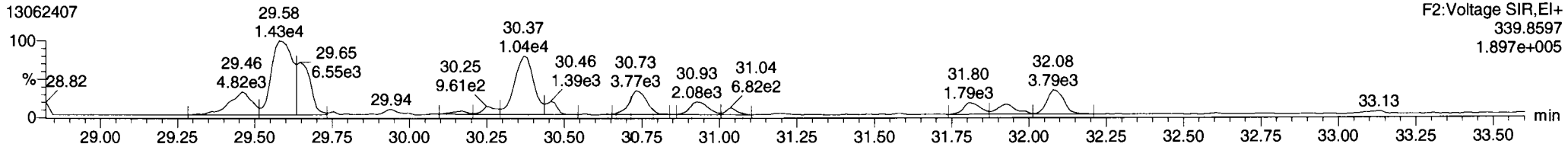
13C-23478-PeCDF



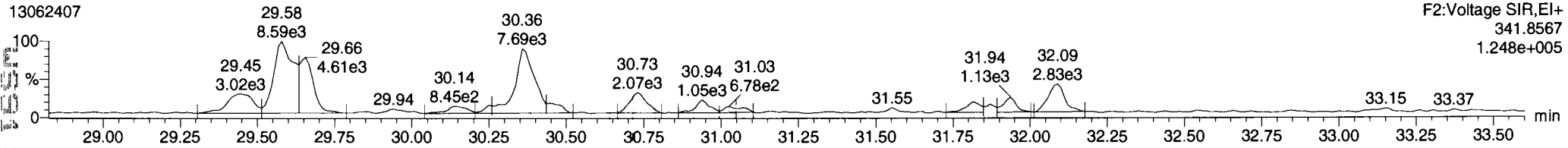
13C-23478-PeCDF



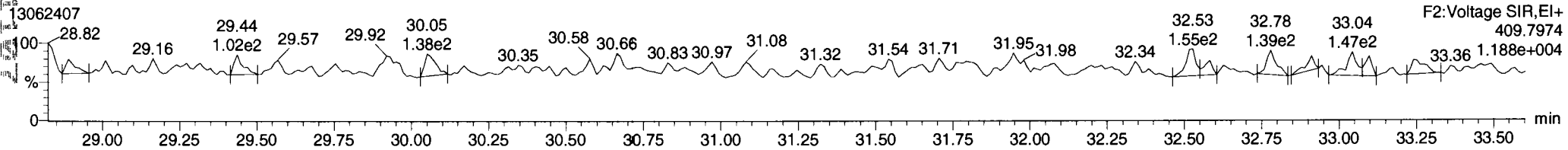
Total-pentafurans



Total-pentafurans



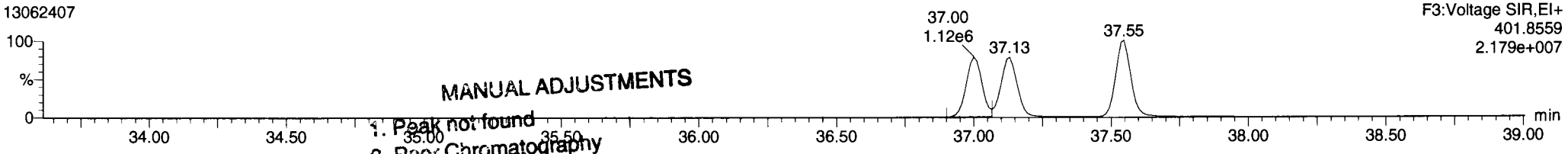
FUNCTION2 HPCDPE



Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

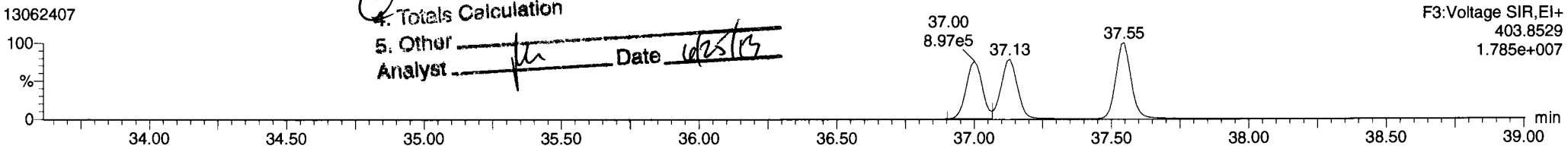
ID: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD

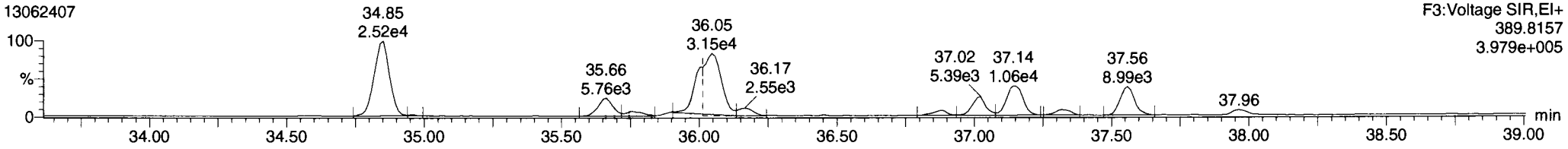


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst _____ Date 6/25/13

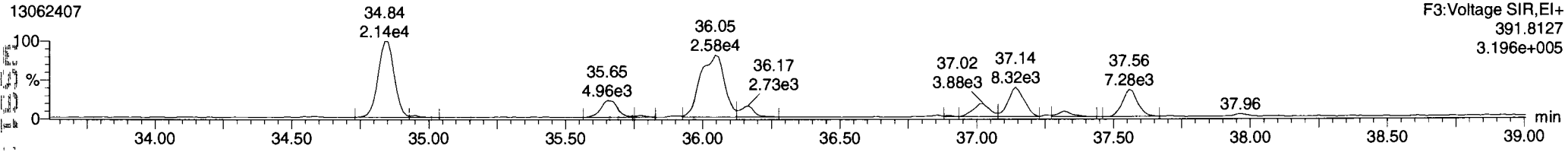
13C-123478-HxCDD



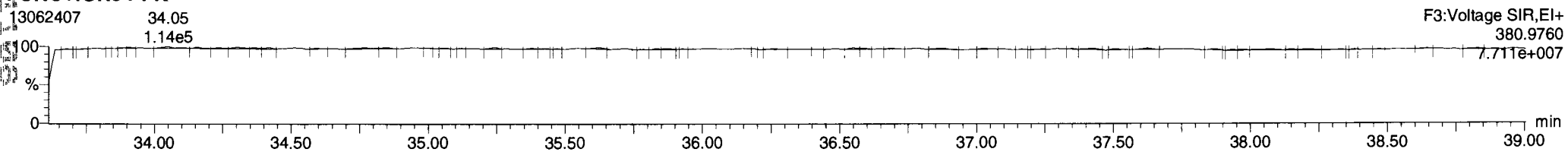
Total-hexadioxins



Total-hexadioxins



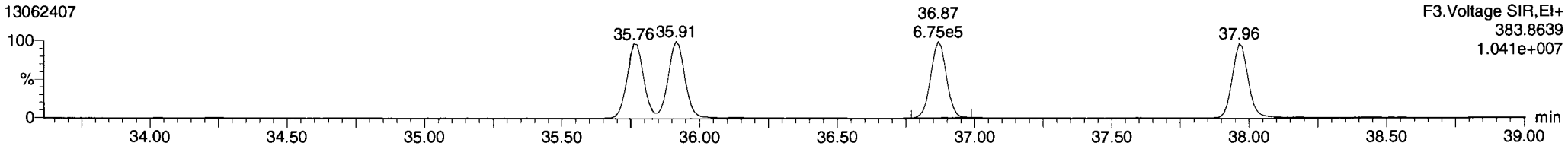
FUNCTION3 PFK



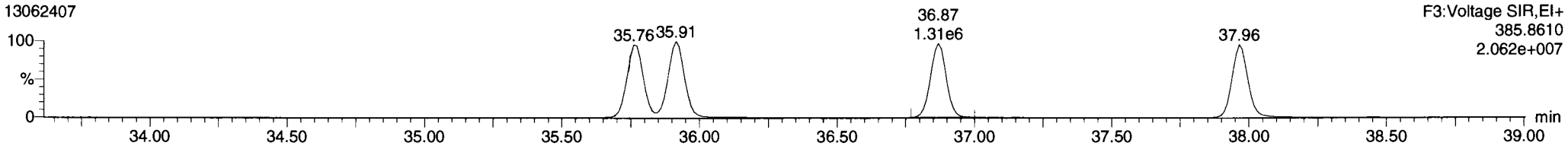
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

ID: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

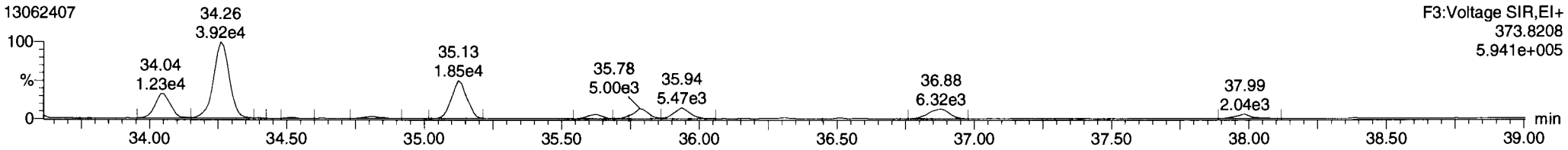
13C-234678-HxCDF



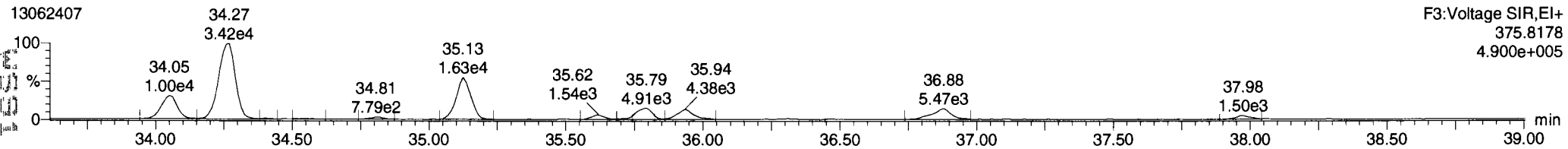
13C-234678-HxCDF



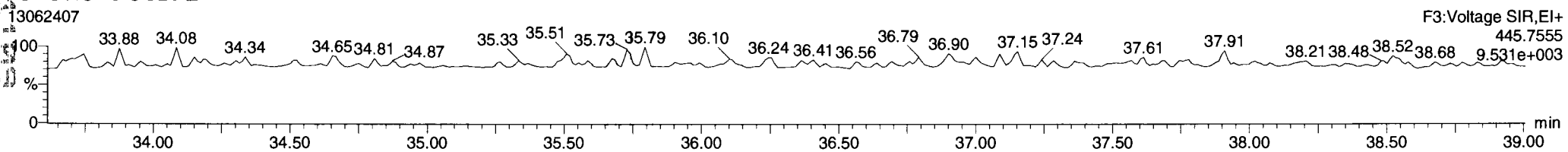
Total-hexafurans



Total-hexafurans

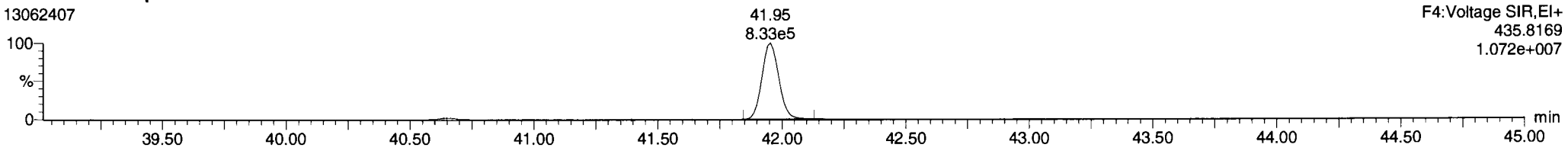


FUNCTION3 OCDPE

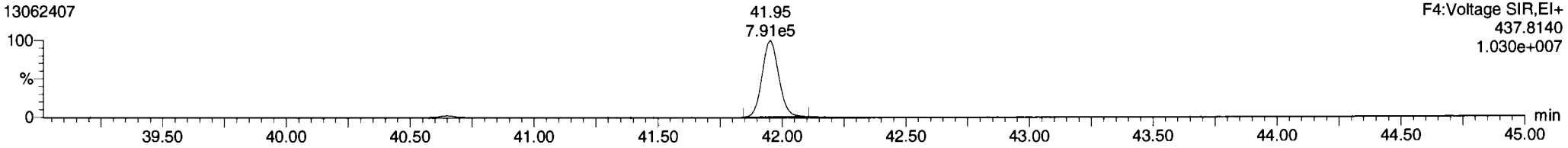


ID: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

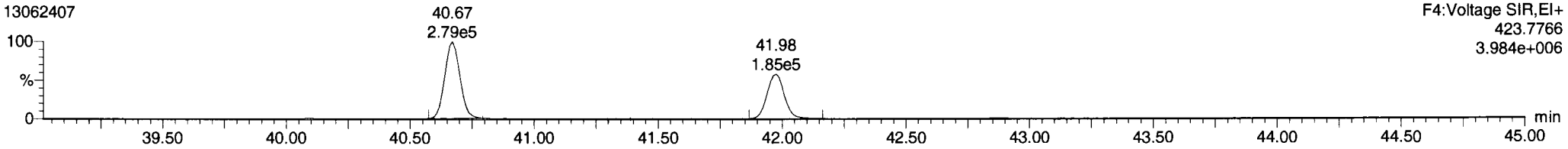
13C-1234678-HpCDD



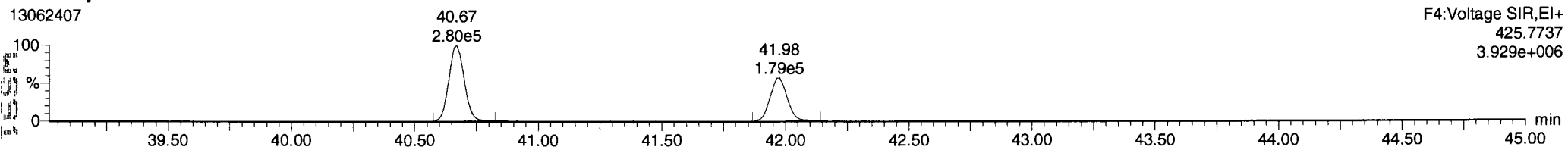
13C-1234678-HpCDD



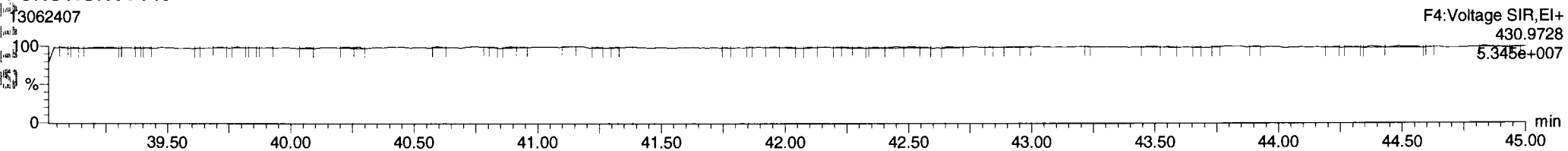
Total-heptadioxins



Total-heptadioxins



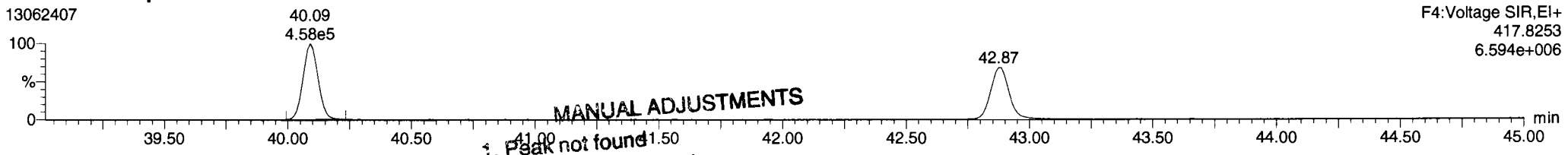
FUNCTION4 PFK



Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

ID: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF

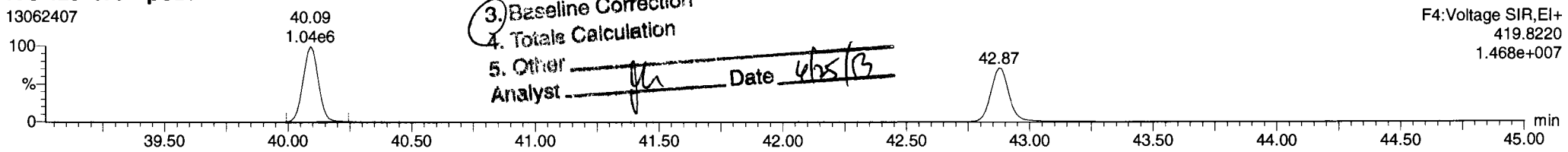


MANUAL ADJUSTMENTS

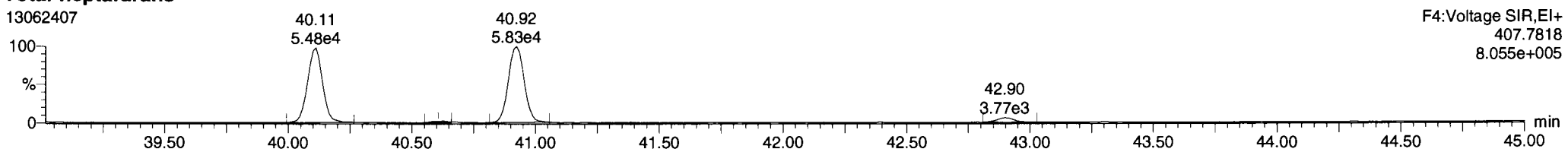
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other

Analyst _____ Date 6/25/13

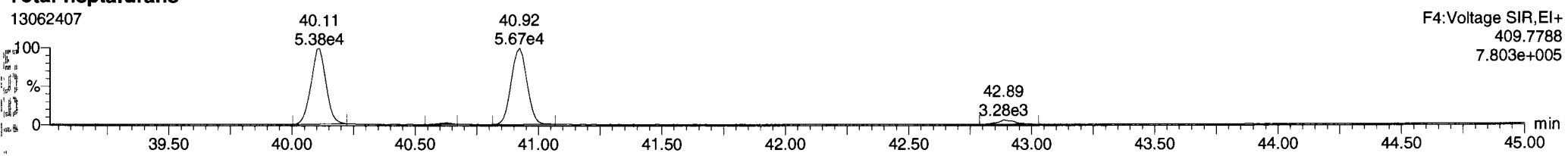
13C-1234678-HpCDF



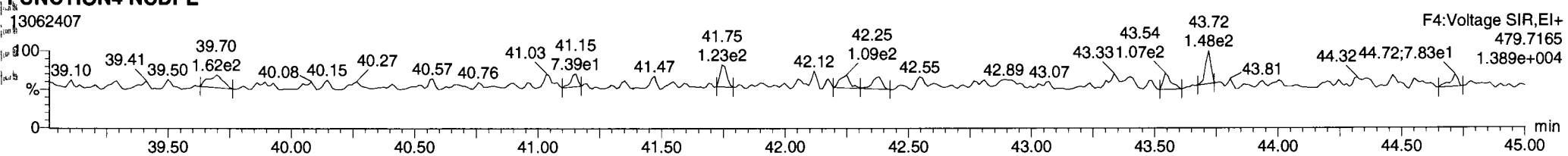
Total-heptafurans



Total-heptafurans



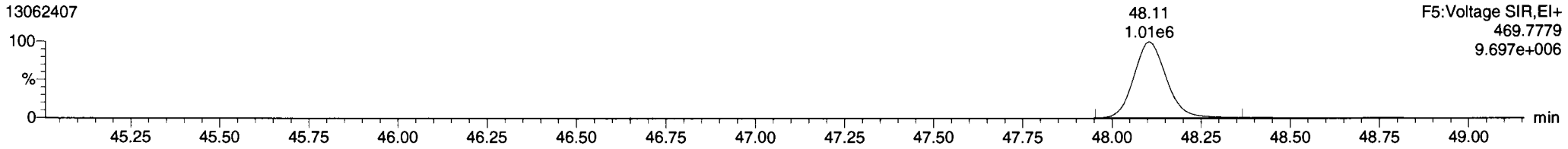
FUNCTION4 NCDPE



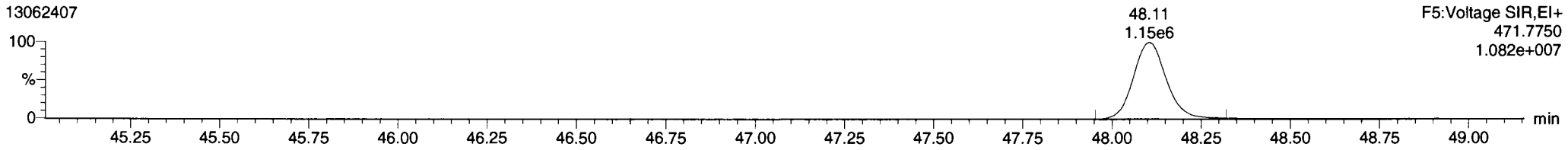
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

ID: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

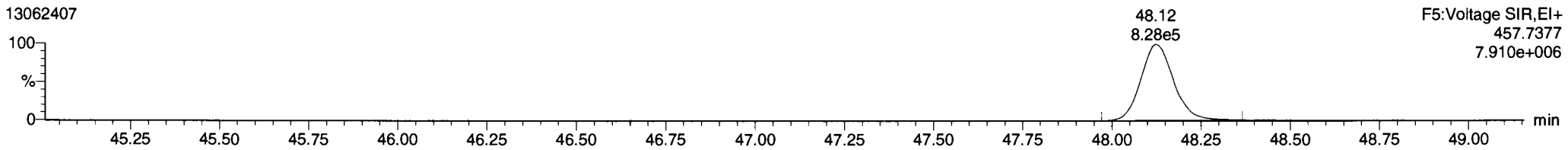
13C-OCDD



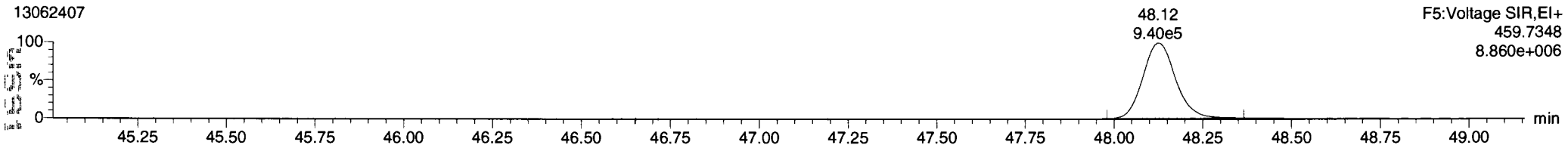
13C-OCDD



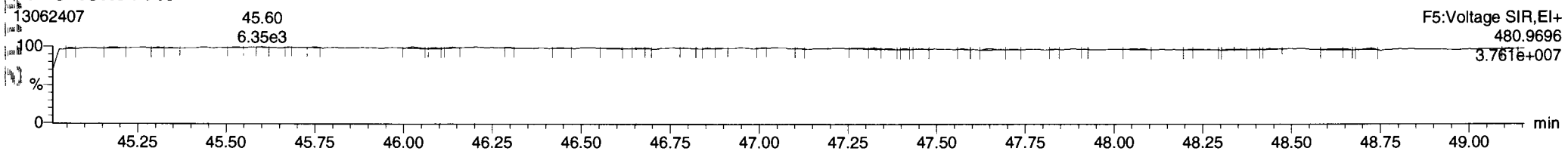
OCDD



OCDD



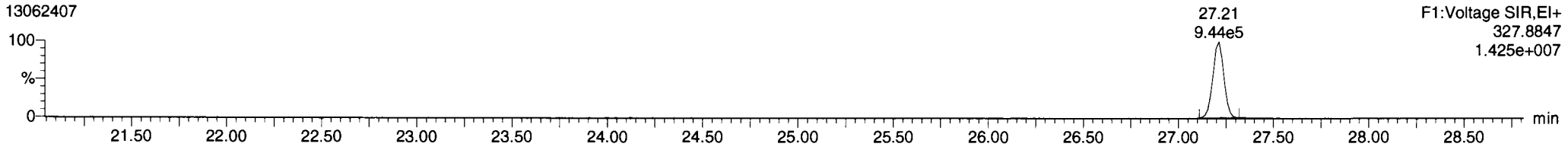
FUNCTION5 PFK



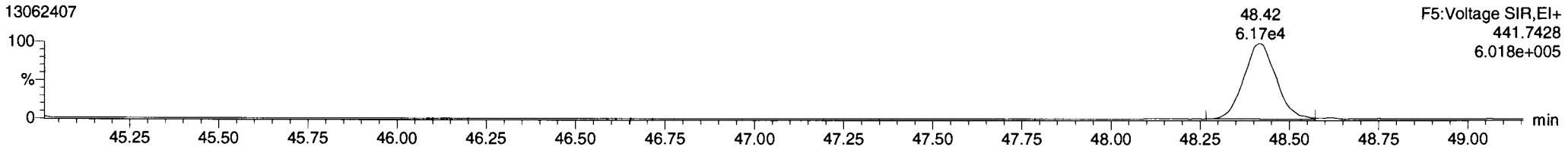
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:27:40 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 14:47:01 Pacific Daylight Time

ID: WS91A, Name: 13062407, Date: 24-Jun-2013, Time: 14:33:58, Conditions: AUTOSPEC01, User: pk

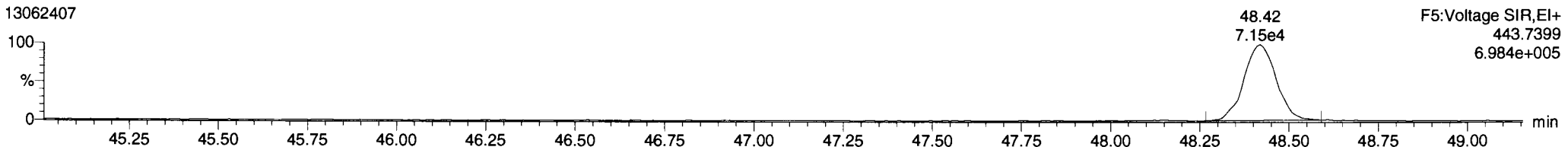
37CL-2378-TCDD



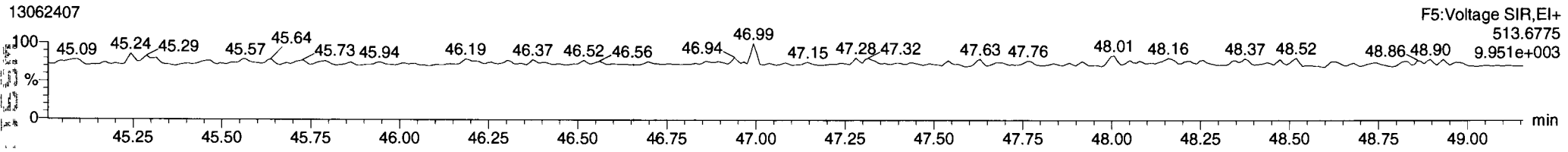
OCDF



OCDF

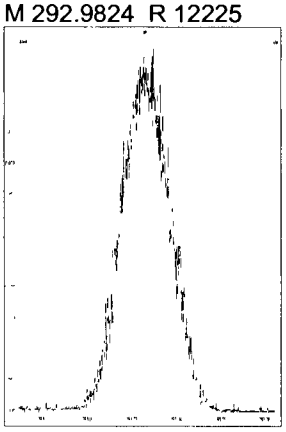


FUNCTION5 DCDPE

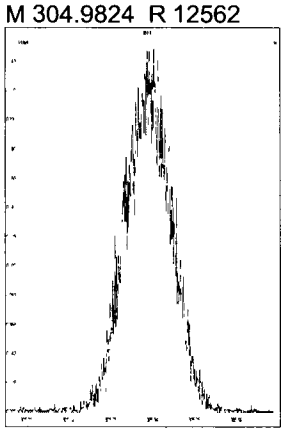


Printed: Monday, June 24, 2013 21:38:42 Pacific Daylight Time

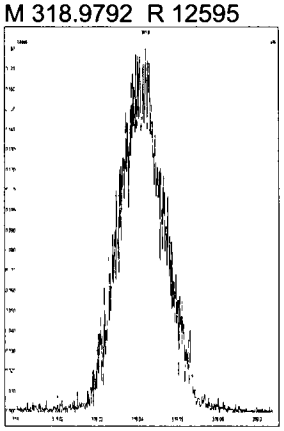
M 292.9824 R 12225



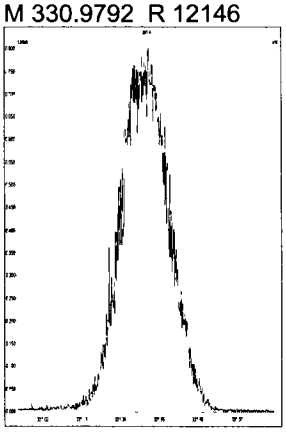
M 304.9824 R 12562



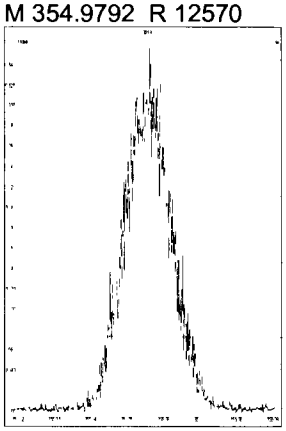
M 318.9792 R 12595



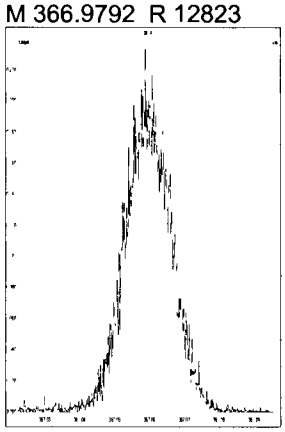
M 330.9792 R 12146



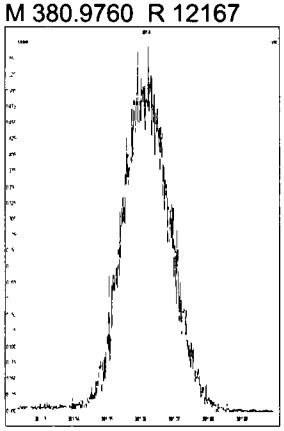
M 354.9792 R 12570



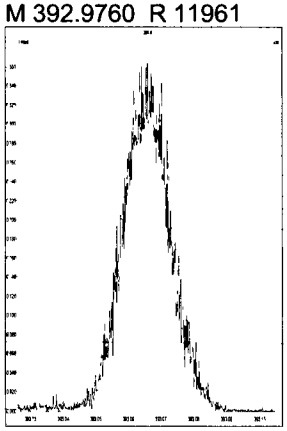
M 366.9792 R 12823



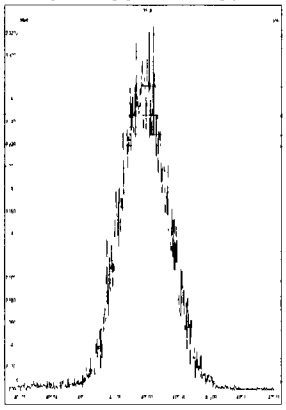
M 380.9760 R 12167



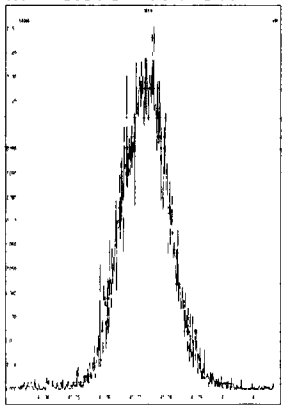
M 392.9760 R 11961



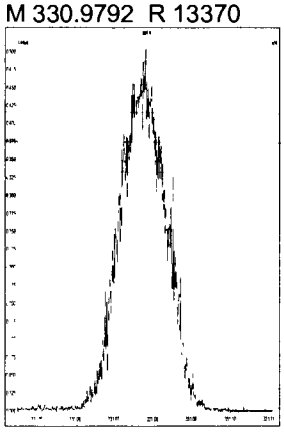
M 404.9760 R 12167



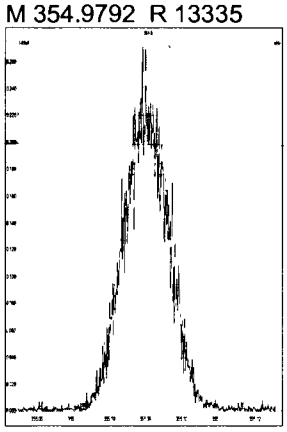
M 416.9760 R 12617



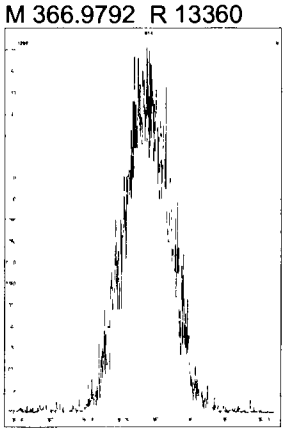
M 330.9792 R 13370



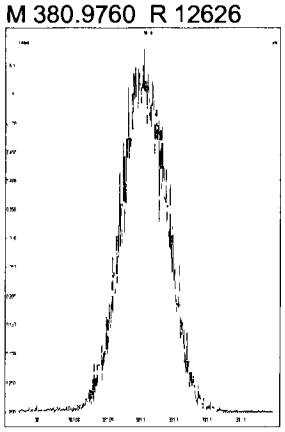
M 354.9792 R 13335



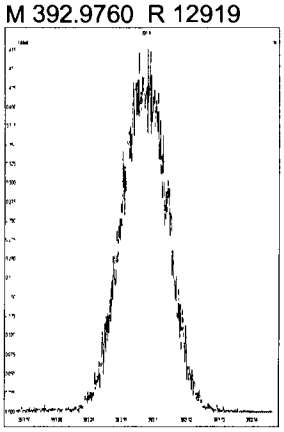
M 366.9792 R 13360



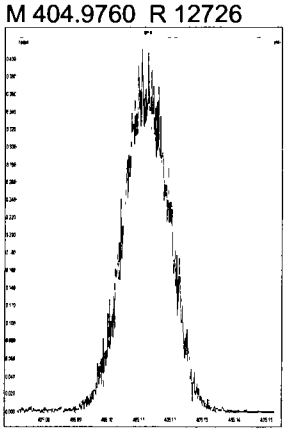
M 380.9760 R 12626



M 392.9760 R 12919

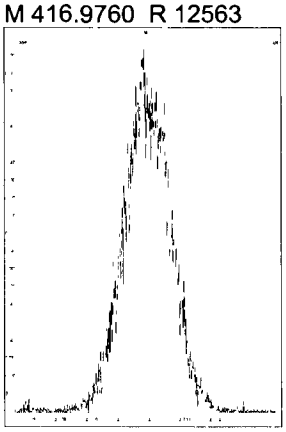


M 404.9760 R 12726

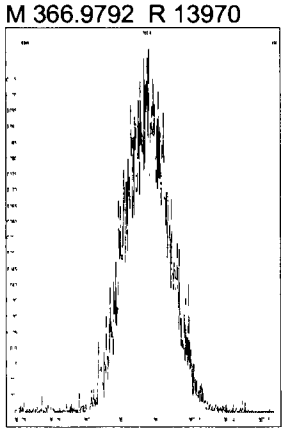


Printed: Monday, June 24, 2013 21:38:42 Pacific Daylight Time

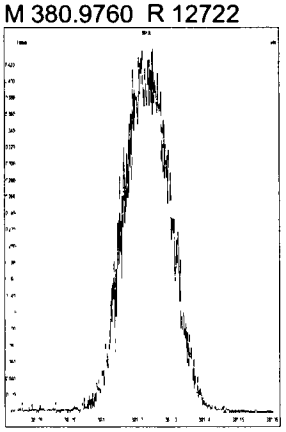
M 416.9760 R 12563



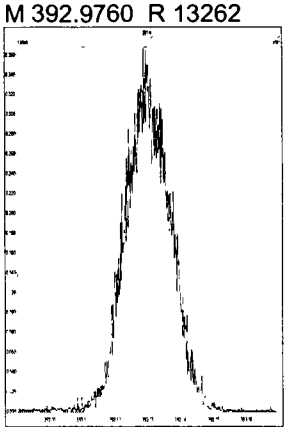
M 366.9792 R 13970



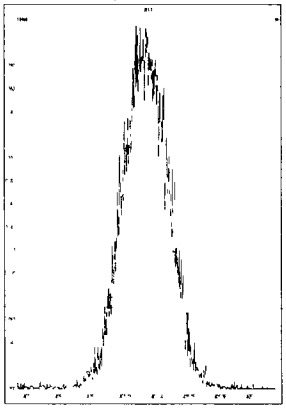
M 380.9760 R 12722



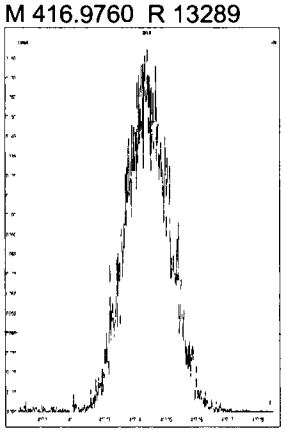
M 392.9760 R 13262



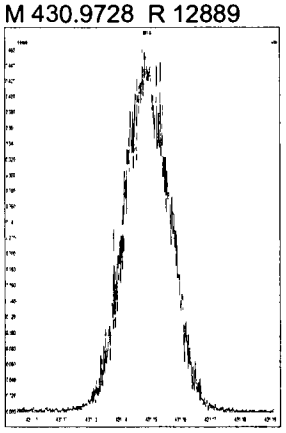
M 404.9760 R 12722



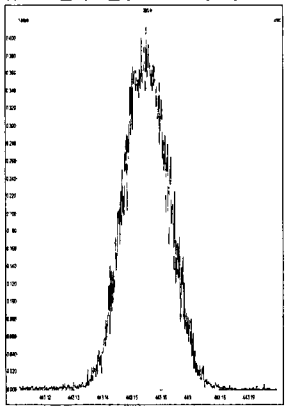
M 416.9760 R 13289



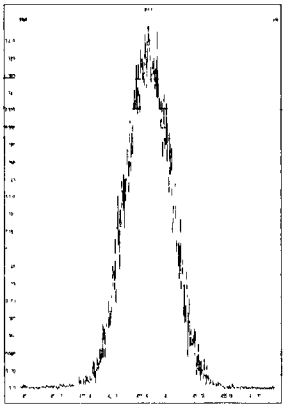
M 430.9728 R 12889



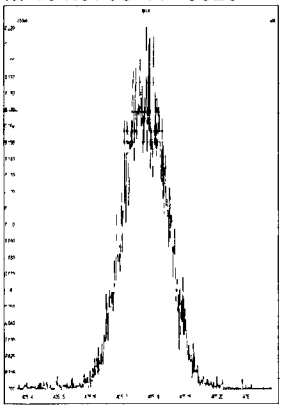
M 442.9728 R 12626



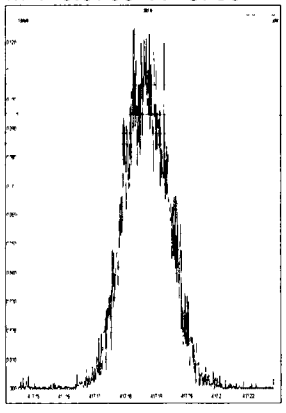
M 454.9728 R 12886



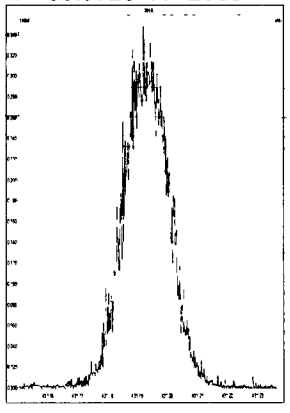
M 404.9760 R 13020



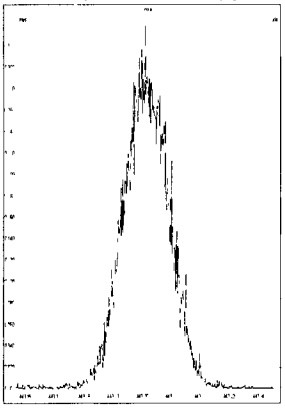
M 416.9760 R 13736



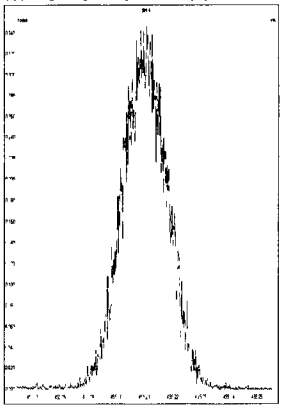
M 430.9728 R 12953



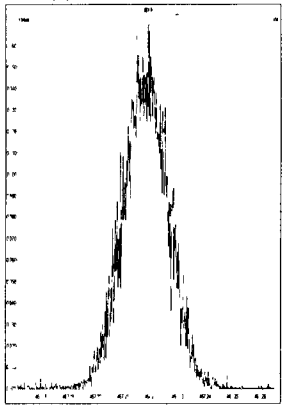
M 442.9728 R 12956



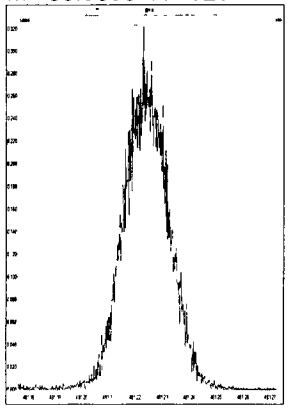
M 454.9728 R 13054



M 466.9728 R 12740

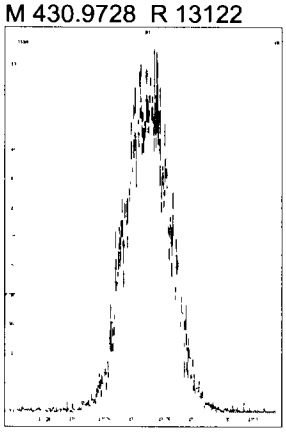


M 480.9696 R 13262

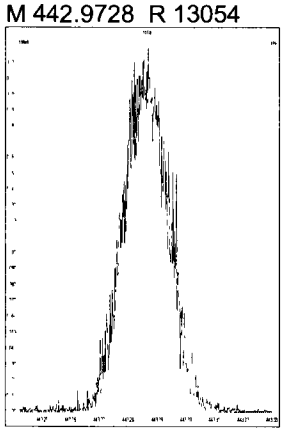


Printed: Monday, June 24, 2013 21:38:42 Pacific Daylight Time

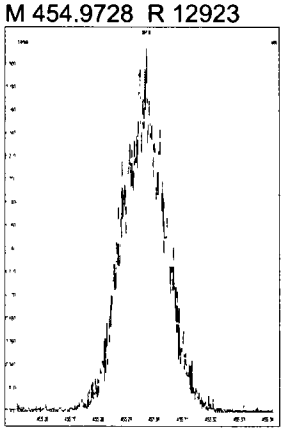
M 430.9728 R 13122



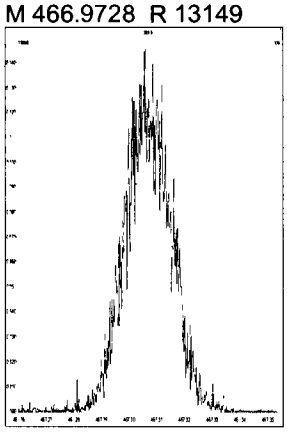
M 442.9728 R 13054



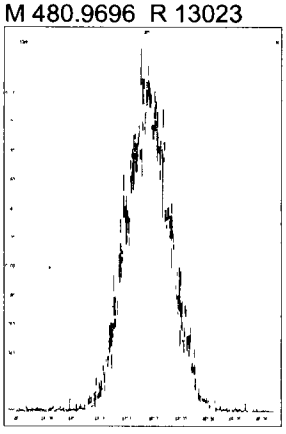
M 454.9728 R 12923



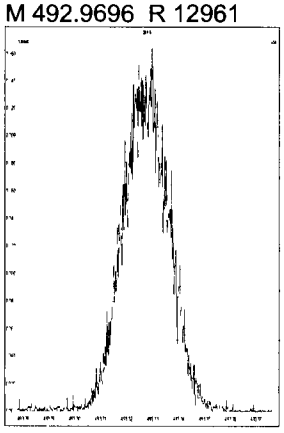
M 466.9728 R 13149



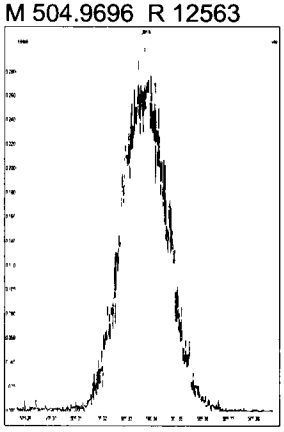
M 480.9696 R 13023



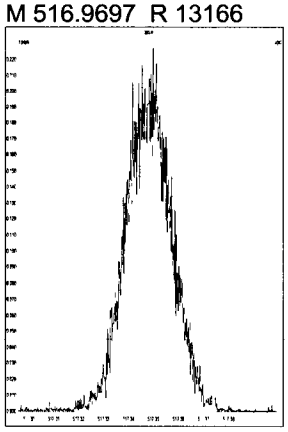
M 492.9696 R 12961



M 504.9696 R 12563



M 516.9697 R 13166



Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:56:56 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 16:27:01 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 21 Jun 2013 12:25:14
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: CS3, Name: 13062414, Date: 24-Jun-2013, Time: 20:38:11, Conditions: AUTOSPEC01, User: pk

Name											
2378-TCDF	26.571	1.001	1.12e5	1.50e5	0.771	0.749	0.770	1435.1	NO	10.705	10.705
12378-PeCDF	30.731	1.001	6.27e5	4.13e5	0.814	1.520	1.550	3888.0	NO	51.036	51.036
23478-PeCDF	32.079	1.001	6.19e5	4.06e5	0.837	1.522	1.550	3804.8	NO	51.087	51.087
123478-HxCDF	35.762	1.001	4.70e5	3.81e5	0.967	1.234	1.240	1778.0	NO	50.705	50.705
234678-HxCDF	36.858	1.001	4.65e5	3.84e5	1.000	1.213	1.240	1731.5	NO	52.257	52.257
123678-HxCDF	35.916	1.001	4.80e5	3.89e5	0.951	1.233	1.240	1774.9	NO	50.586	50.586
123789-HxCDF	37.965	1.001	3.99e5	3.36e5	0.874	1.188	1.240	1569.3	NO	53.176	53.176
1234678-HpCDF	40.070	1.000	3.49e5	3.49e5	1.072	1.000	1.050	3268.1	NO	52.281	52.281
1234789-HpCDF	42.865	1.000	2.68e5	2.69e5	1.085	0.996	1.050	2158.0	NO	51.445	51.445
OCDF	48.358	1.007	4.03e5	4.54e5	0.878	0.886	0.890	2806.5	NO	106.896	106.896
2378-TCDD	27.199	1.000	9.93e4	1.32e5	0.936	0.753	0.770	916.3	NO	10.420	10.420
12378-PeCDD	32.331	1.001	4.91e5	3.21e5	0.894	1.531	1.550	3441.8	NO	51.294	51.294
123478-HxCDD	36.990	1.001	4.09e5	3.25e5	0.898	1.258	1.240	2190.9	NO	51.136	51.136
123678-HxCDD	37.110	1.000	3.82e5	3.25e5	0.818	1.175	1.240	2010.2	NO	51.498	51.498
123789-HxCDD	37.527	1.012	3.93e5	3.25e5	0.789	1.208	1.240	2134.2	NO	55.475	55.475
1234678-HpCDD	41.944	1.000	2.81e5	2.75e5	0.879	1.023	1.050	1943.3	NO	52.693	52.693
OCDD	48.071	1.001	3.87e5	4.44e5	0.875	0.871	0.890	2559.3	NO	103.996	103.996
13C-2378-TCDF	26.541	1.007	1.37e6	1.80e6	1.190	0.761	0.770	6734.2	NO		110.978
13C-12378-PeCDF	30.709	1.165	1.51e6	9.89e5	0.904	1.530	1.550	9449.4	NO		114.983
13C-23478-PeCDF	32.057	1.216	1.46e6	9.36e5	0.877	1.562	1.550	9042.3	NO		113.682
13C-123478-HxCDF	35.740	0.953	5.89e5	1.15e6	1.096	0.513	0.510	2301.1	NO		99.107
13C-123678-HxCDF	35.894	0.957	6.05e5	1.20e6	1.187	0.504	0.510	2356.4	NO		95.113
13C-234678-HxCDF	36.836	0.982	5.51e5	1.07e6	1.040	0.513	0.510	2189.6	NO		97.699
13C-123789-HxCDF	37.944	1.011	5.38e5	1.04e6	0.941	0.515	0.510	2239.7	NO		105.172
13C-1234678-HpCDF	40.059	1.068	3.78e5	8.70e5	0.825	0.434	0.440	3389.6	NO		94.483
13C-1234789-HpCDF	42.843	1.142	2.93e5	6.69e5	0.609	0.438	0.440	2190.4	NO		98.679
13C-1234-TCDD	26.362	0.000	1.06e6	1.35e6	1.000	0.784	0.770	1796.5	NO		100.000
13C-2378-TCDD	27.184	1.031	1.03e6	1.34e6	0.920	0.765	0.770	1764.2	NO		107.144
13C-12378-PeCDD	32.309	1.226	1.08e6	6.92e5	0.669	1.557	1.550	5420.5	NO		109.958
13C-123478-HxCDD	36.968	0.985	8.86e5	7.14e5	1.032	1.241	1.240	6313.0	NO		96.977
13C-123678-HxCDD	37.099	0.989	9.21e5	7.57e5	1.146	1.216	1.240	6422.7	NO		91.629
13C-1234678-HpCDD	41.922	1.117	6.16e5	5.84e5	0.789	1.056	1.050	4445.8	NO		95.118
13C-OCDD	48.044	1.281	8.58e5	9.68e5	0.696	0.887	0.890	4937.9	NO		164.051

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:56:56 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 16:27:01 Pacific Daylight Time

ID: CS3, Name: 13062414, Date: 24-Jun-2013, Time: 20:38:11, Conditions: AUTOSPEC01, User: pk

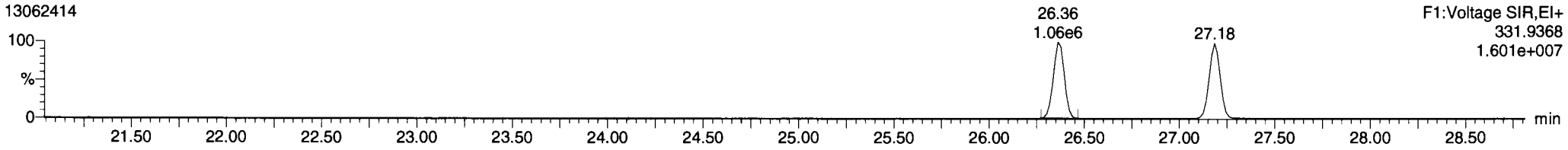
13C-123789-HxCDD	37.516	0.000	8.80e5	7.19e5	1.000	1.222	1.240	6385.3	NO	100.000
Total-tetrafurans			3.46e5		0.771					33.223
Total-penta1			1.00e6							73.701
Total-pentafurans			1.89e6		0.826					155.085
Total-hexafurans			2.37e6		0.948					269.702
Total-heptafurans			6.18e5		1.079					103.791
Total-Furans			6.63e6		0.925					742.434
Total-tetradioxins			5.52e5		0.936					57.579
Total-pentadioxins			1.71e6		0.894					178.460
Total-hexadioxins			1.70e6		0.835					227.008
Total-heptadioxins			6.11e5		0.879					114.308
Total-Dioxins			4.97e6		0.870					681.372
Total-TEQ			1.16e7							1423.807
37CL-2378-TCDD	27.199	1.032	2.54e5		1.000			1122.3		10.558
FUNCTION1 PFK			1.87e6							
FUNCTION2 PFK			2.98e5							0.000
FUNCTION3 PFK			0.00e0							
FUNCTION4 PFK			6.34e5							
FUNCTION5 PFK			5.10e5							
FUNCTION1 HXCDPE			5.13e2							0.000
FUNCTION1 HPCDPE			7.17e2							0.000
FUNCTION2 HPCDPE			1.39e3							0.000
FUNCTION3 OCDPE			5.21e2							0.000
FUNCTION4 NCDPE			4.43e2							0.000
FUNCTION5 DCDPE			0.00e0							

Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:56:56 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 16:27:01 Pacific Daylight Time

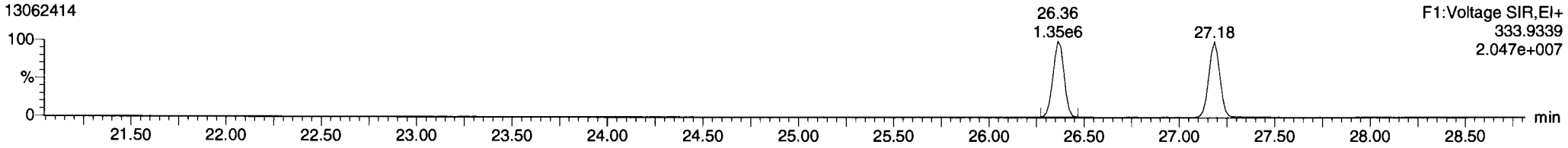
Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 21 Jun 2013 12:25:14
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: CS3, Name: 13062414, Date: 24-Jun-2013, Time: 20:38:11, Conditions: AUTOSPEC01, User: pk

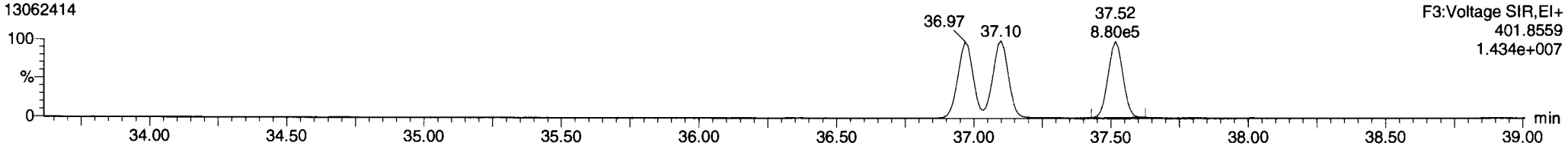
13C-1234-TCDD



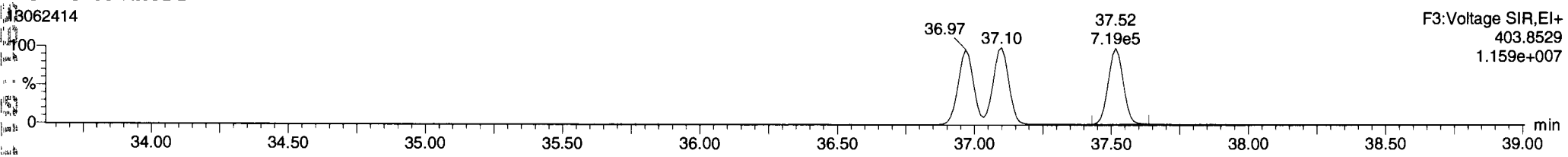
13C-1234-TCDD



13C-123789-HxCDD



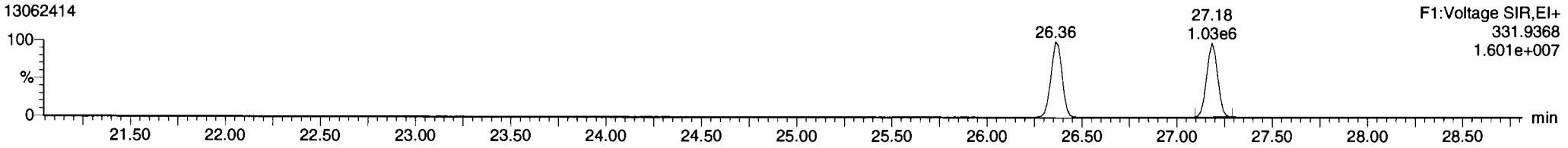
13C-123789-HxCDD



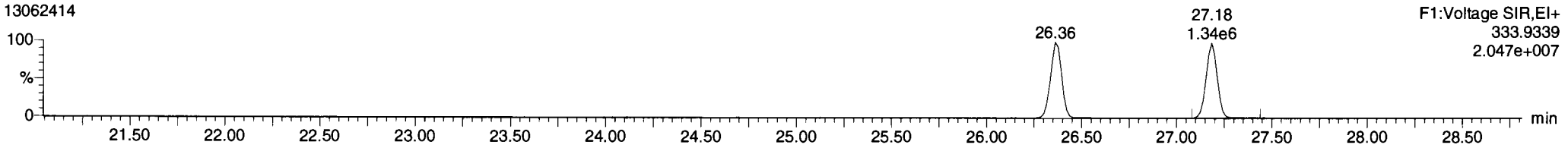
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:56:56 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 16:27:01 Pacific Daylight Time

ID: CS3, Name: 13062414, Date: 24-Jun-2013, Time: 20:38:11, Conditions: AUTOSPEC01, User: pk

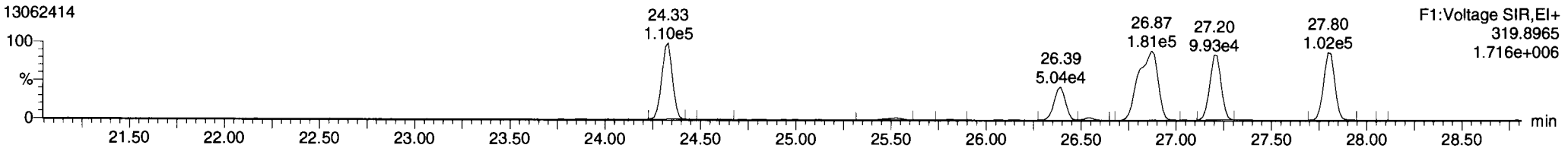
13C-2378-TCDD



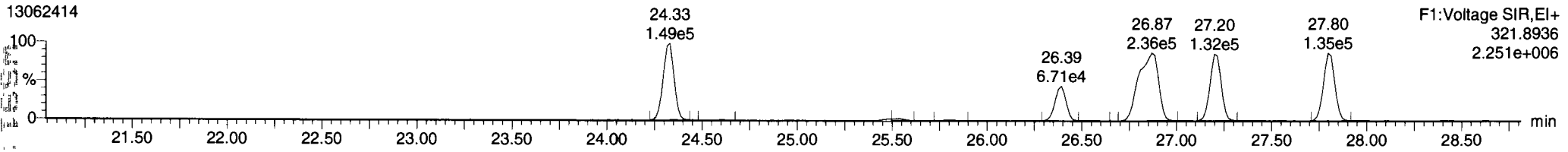
13C-2378-TCDD



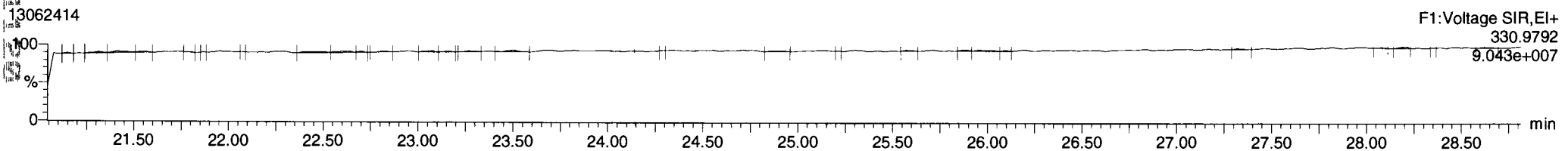
Total-tetradioxins



Total-tetradioxins



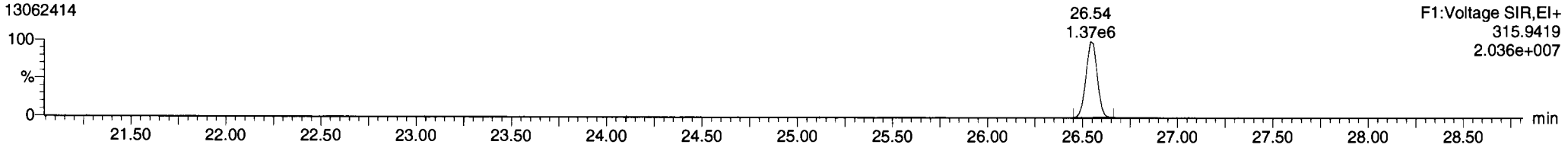
FUNCTION1 PFK



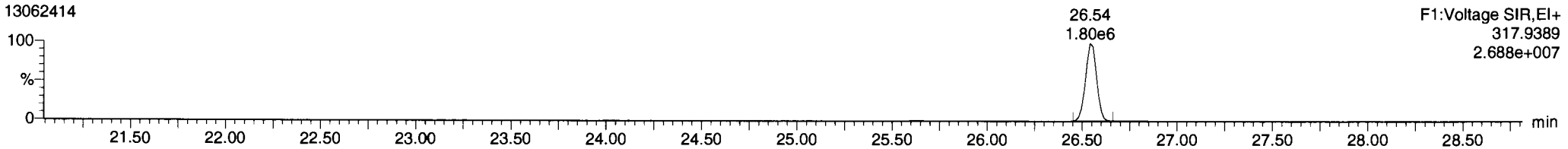
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:56:56 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 16:27:01 Pacific Daylight Time

ID: CS3, Name: 13062414, Date: 24-Jun-2013, Time: 20:38:11, Conditions: AUTOSPEC01, User: pk

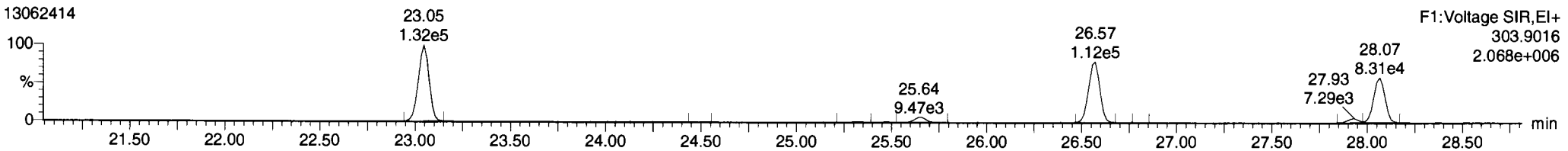
13C-2378-TCDF



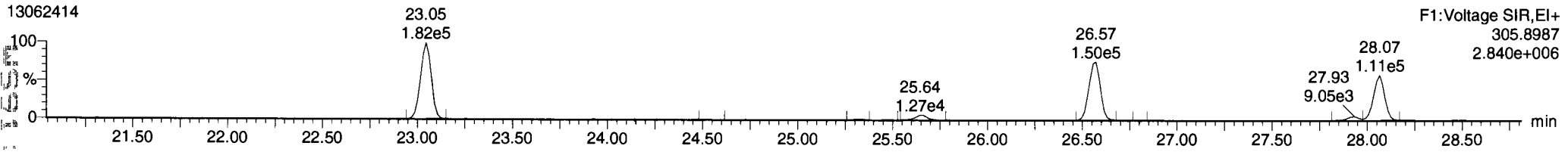
13C-2378-TCDF



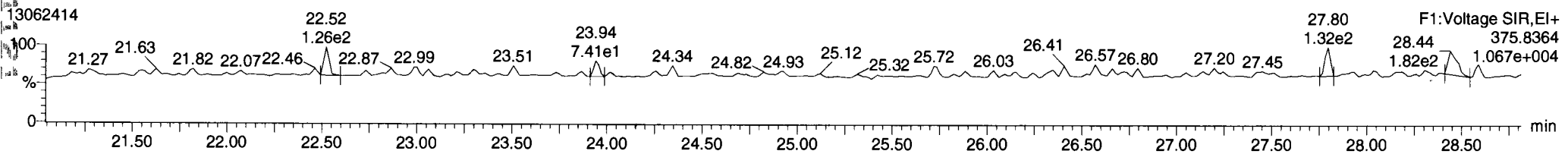
Total-tetrafurans



Total-tetrafurans



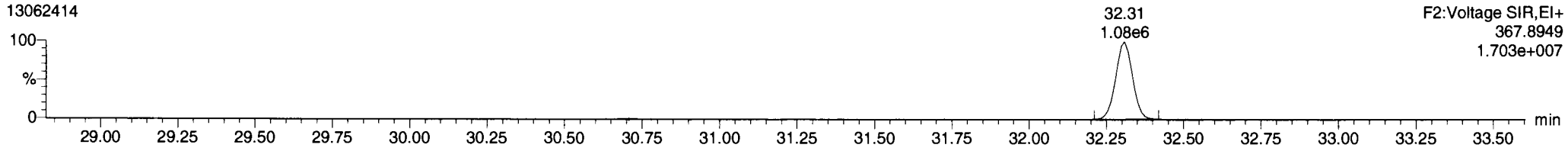
FUNCTION1 HXCDPE



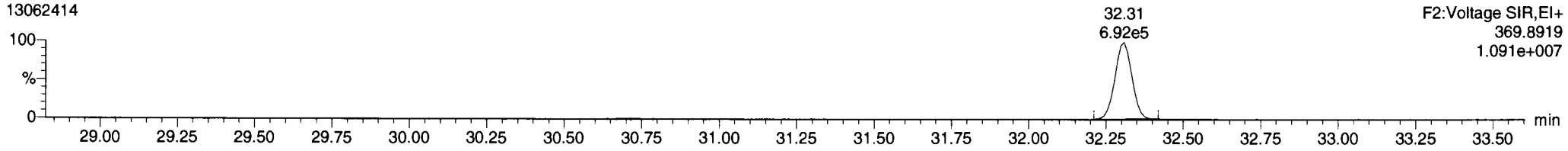
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:56:56 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 16:27:01 Pacific Daylight Time

ID: CS3, Name: 13062414, Date: 24-Jun-2013, Time: 20:38:11, Conditions: AUTOSPEC01, User: pk

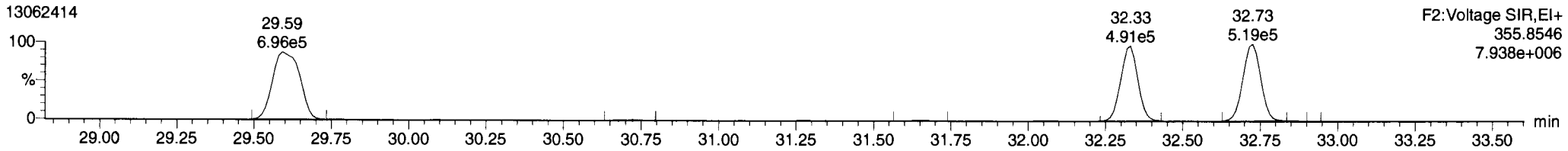
13C-12378-PeCDD



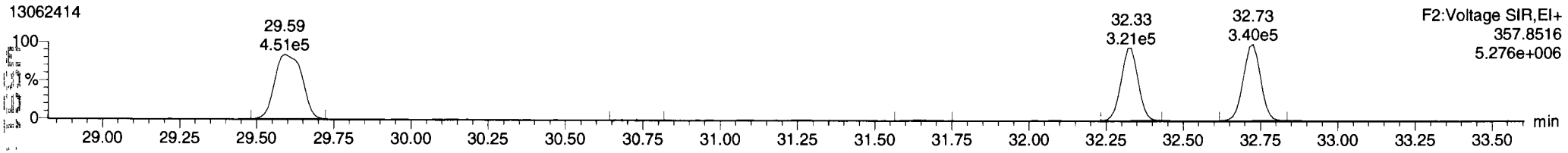
13C-12378-PeCDD



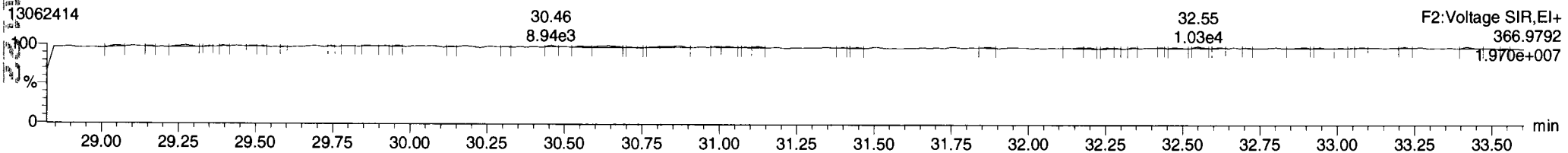
Total-pentadioxins



Total-pentadioxins



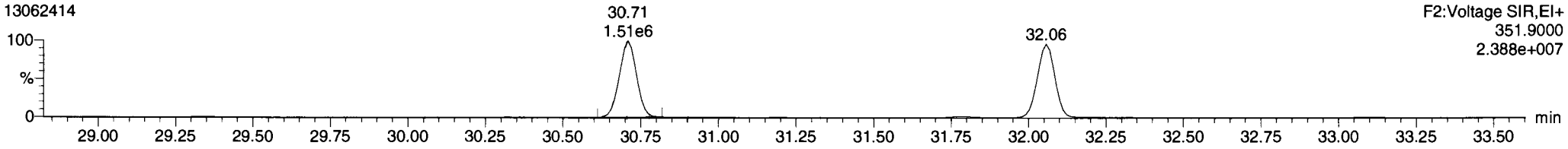
FUNCTION2 PFK



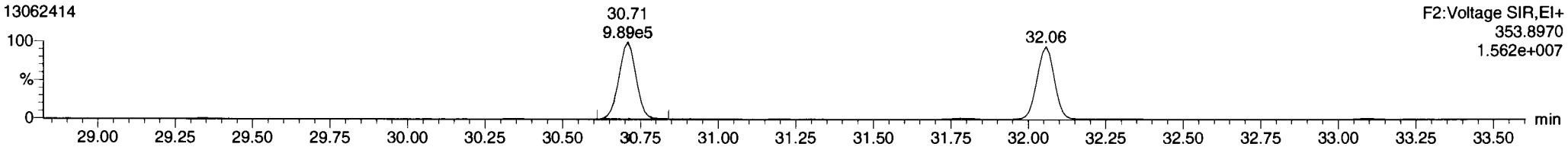
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:56:56 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 16:27:01 Pacific Daylight Time

ID: CS3, Name: 13062414, Date: 24-Jun-2013, Time: 20:38:11, Conditions: AUTOSPEC01, User: pk

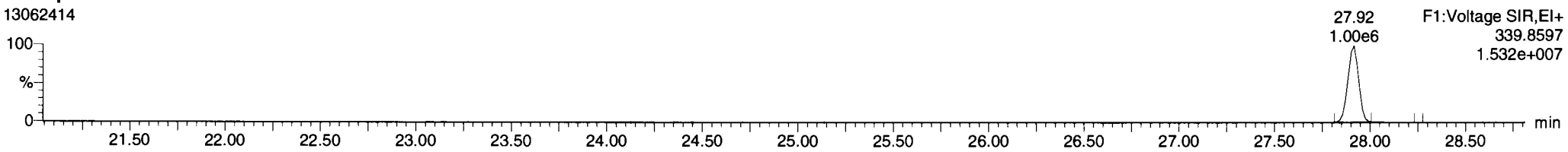
13C-12378-PeCDF



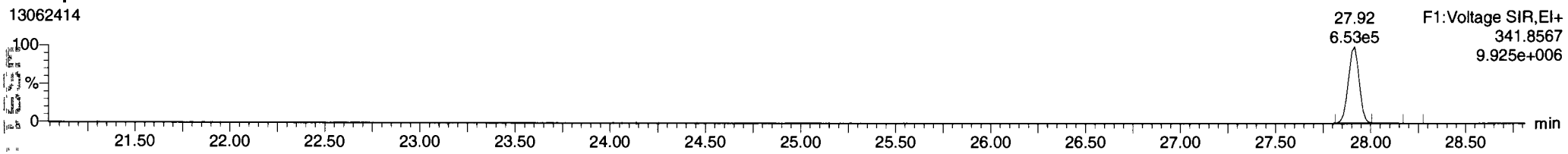
13C-12378-PeCDF



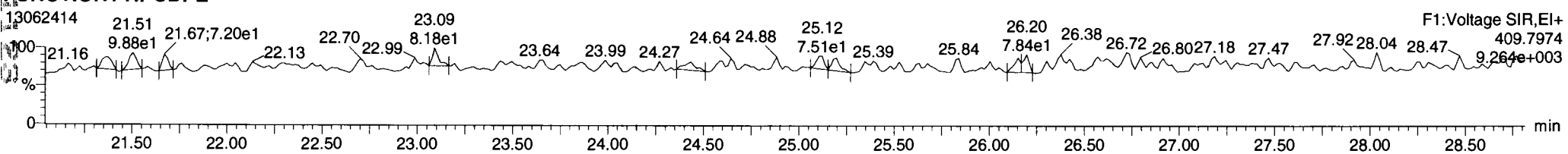
Total-penta1



Total-penta1



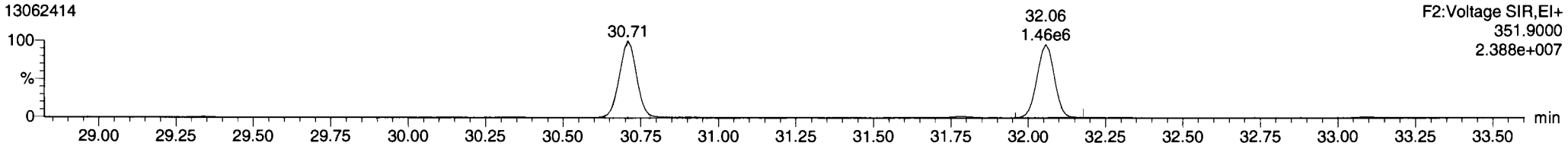
FUNCTION1 HPCDPE



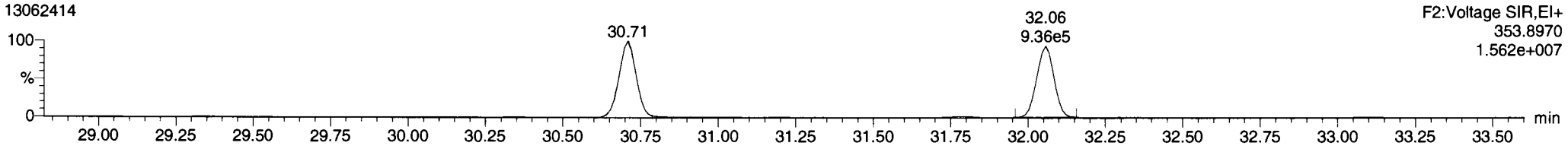
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:56:56 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 16:27:01 Pacific Daylight Time

ID: CS3, Name: 13062414, Date: 24-Jun-2013, Time: 20:38:11, Conditions: AUTOSPEC01, User: pk

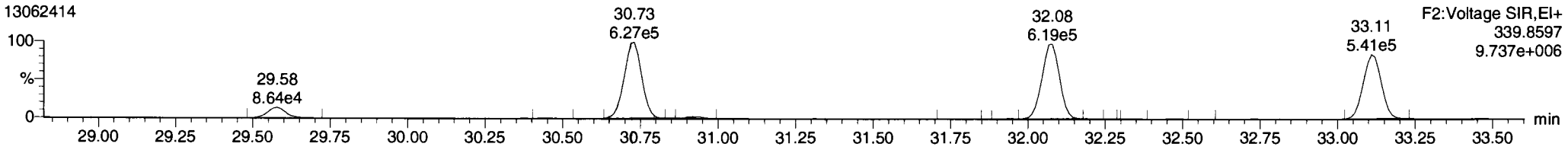
13C-23478-PeCDF



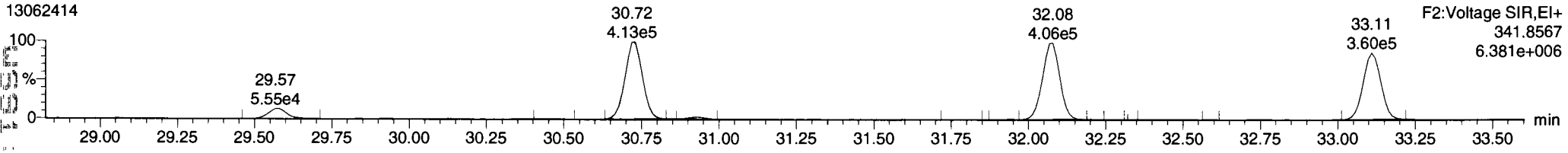
13C-23478-PeCDF



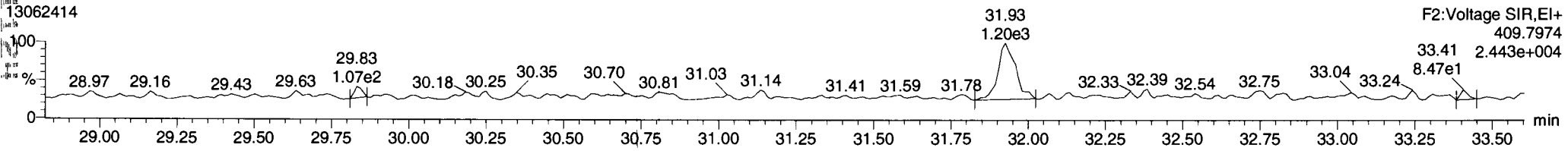
Total-pentafurans



Total-pentafurans



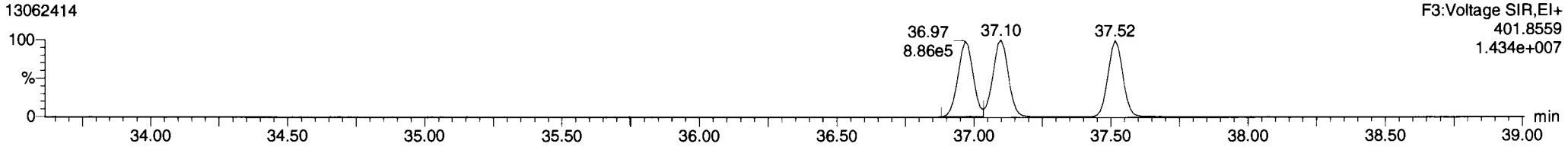
FUNCTION2 HPCDPE



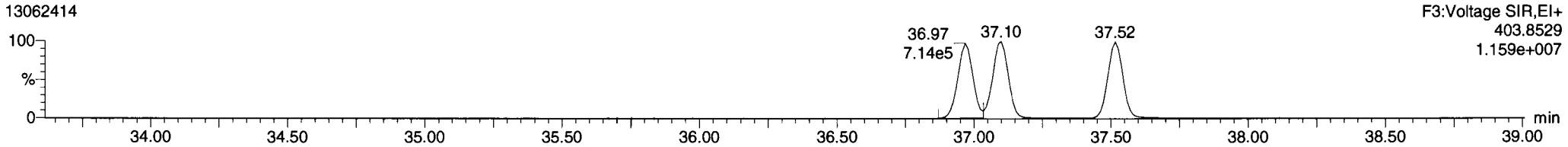
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:56:56 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 16:27:01 Pacific Daylight Time

ID: CS3, Name: 13062414, Date: 24-Jun-2013, Time: 20:38:11, Conditions: AUTOSPEC01, User: pk

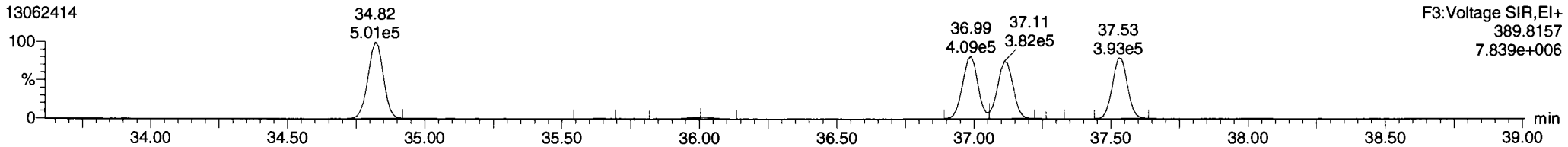
13C-123478-HxCDD



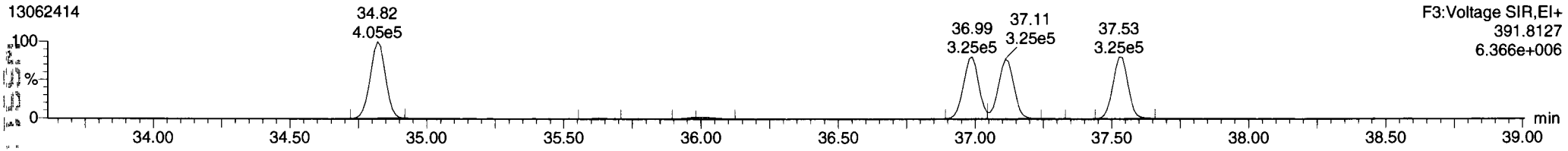
13C-123478-HxCDD



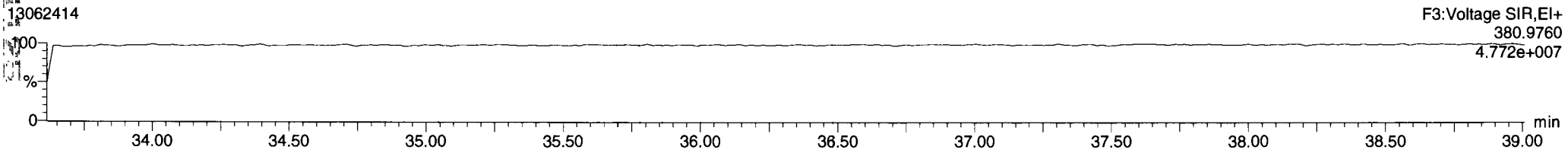
Total-hexadioxins



Total-hexadioxins

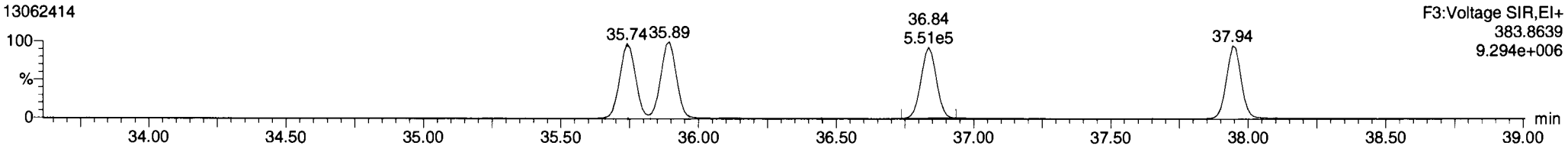


FUNCTION3 PFK

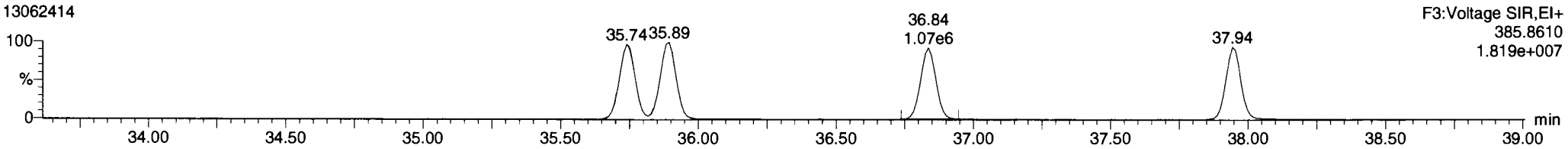


ID: CS3, Name: 13062414, Date: 24-Jun-2013, Time: 20:38:11, Conditions: AUTOSPEC01, User: pk

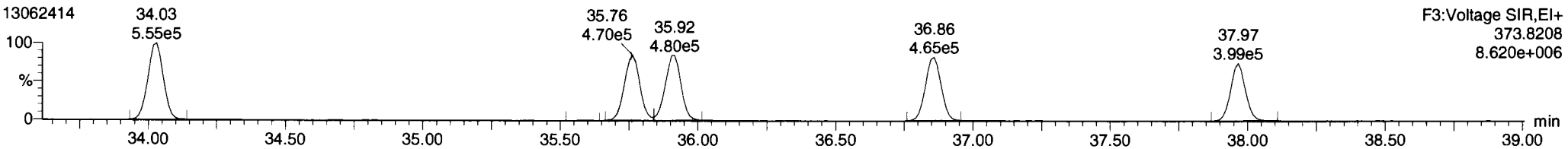
13C-234678-HxCDF



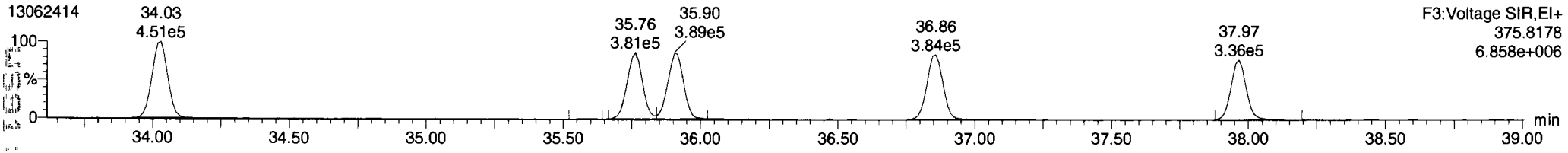
13C-234678-HxCDF



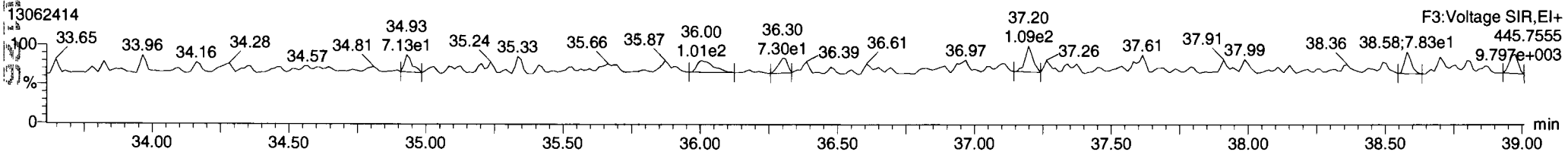
Total-hexafurans



Total-hexafurans



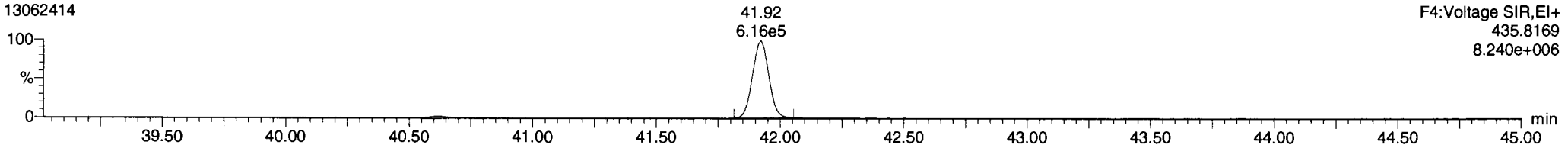
FUNCTION3 OCDPE



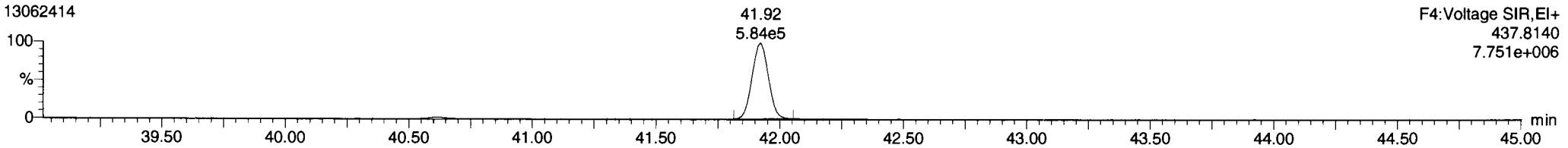
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:56:56 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 16:27:01 Pacific Daylight Time

ID: CS3, Name: 13062414, Date: 24-Jun-2013, Time: 20:38:11, Conditions: AUTOSPEC01, User: pk

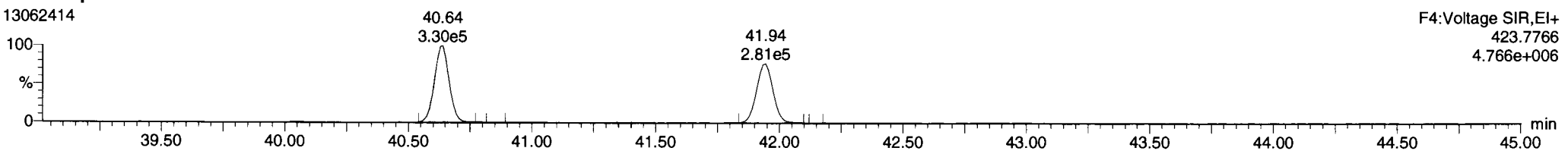
13C-1234678-HpCDD



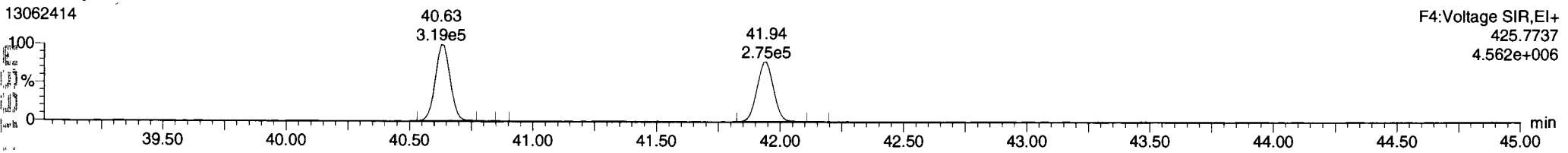
13C-1234678-HpCDD



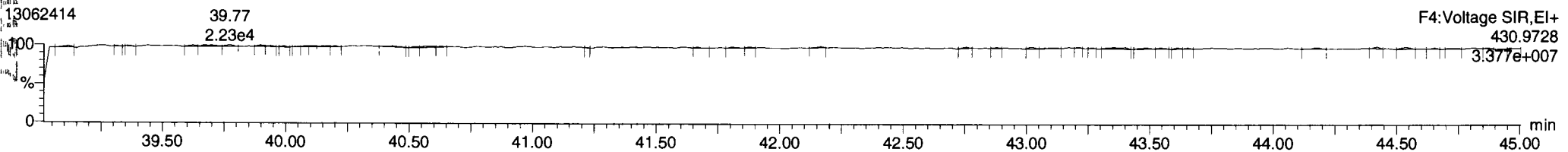
Total-heptadioxins



Total-heptadioxins



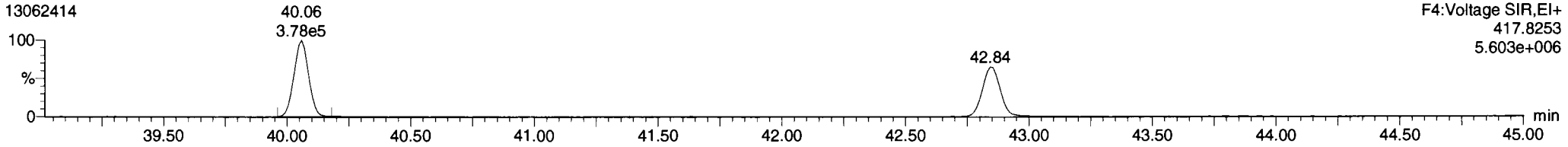
FUNCTION4 PFK



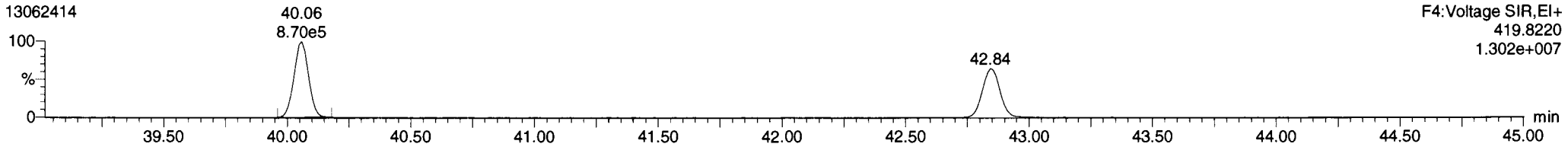
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:56:56 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 16:27:01 Pacific Daylight Time

ID: CS3, Name: 13062414, Date: 24-Jun-2013, Time: 20:38:11, Conditions: AUTOSPEC01, User: pk

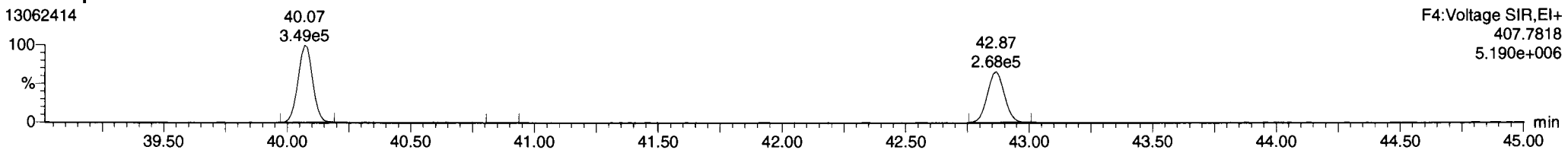
13C-1234678-HpCDF



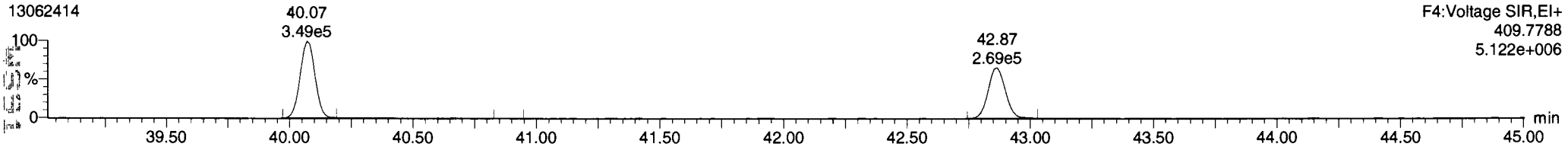
13C-1234678-HpCDF



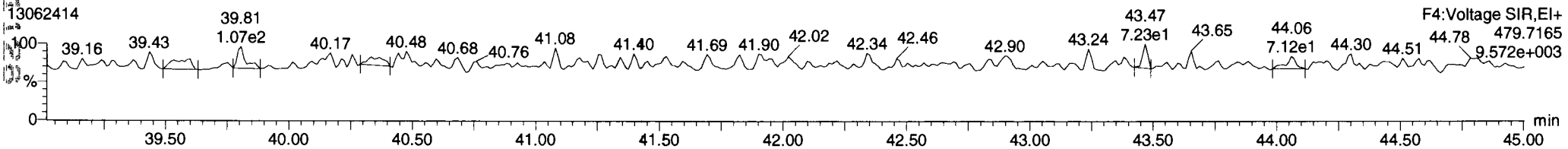
Total-heptafurans



Total-heptafurans



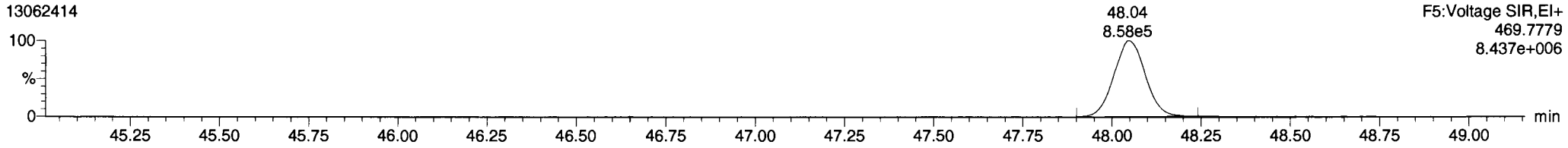
FUNCTION4 NCDPE



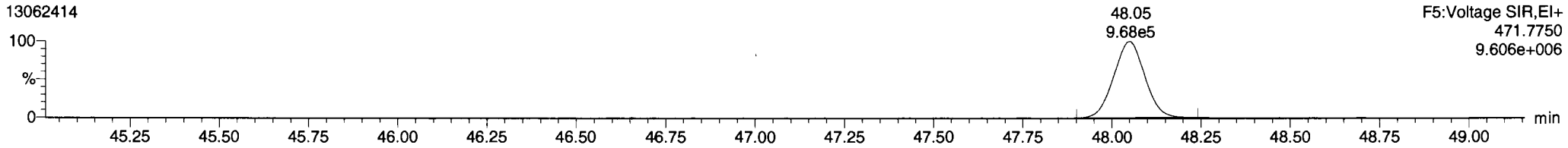
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:56:56 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 16:27:01 Pacific Daylight Time

ID: CS3, Name: 13062414, Date: 24-Jun-2013, Time: 20:38:11, Conditions: AUTOSPEC01, User: pk

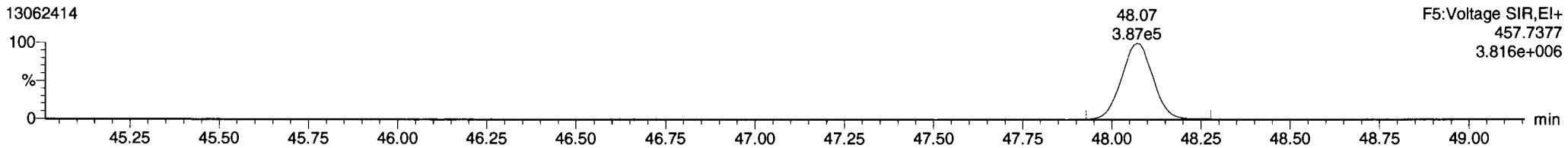
13C-OCDD



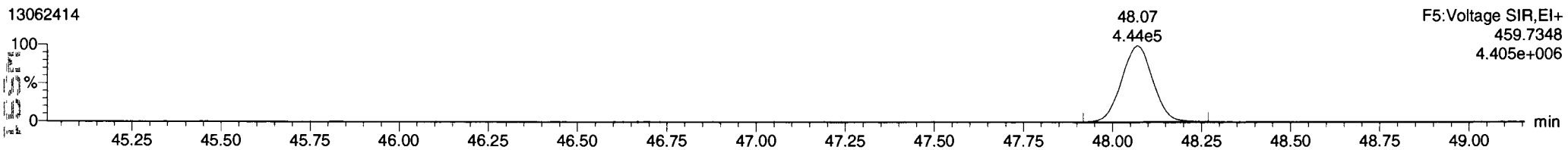
13C-OCDD



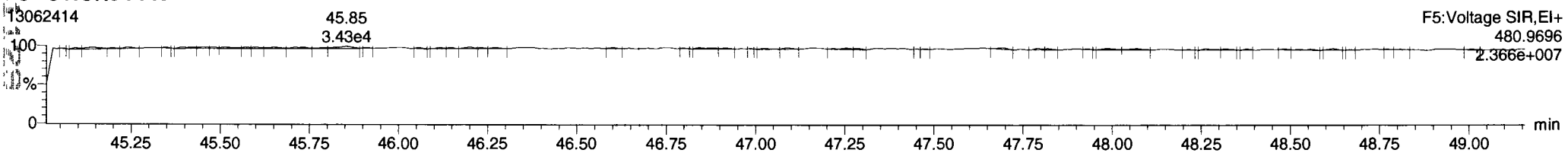
OCDD



OCDD



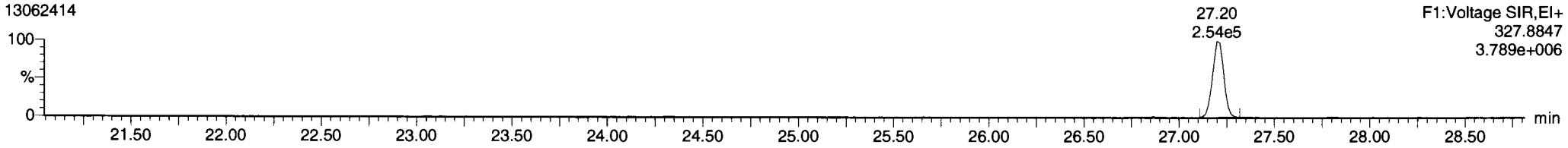
FUNCTION5 PFK



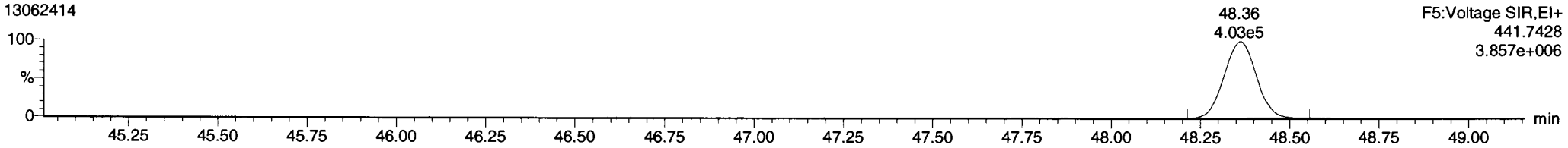
Dataset: P:\DIOXIN8290.PRO\130624DATA1.qld
Last Altered: Tuesday, June 25, 2013 14:56:56 Pacific Daylight Time
Printed: Tuesday, June 25, 2013 16:27:01 Pacific Daylight Time

ID: CS3, Name: 13062414, Date: 24-Jun-2013, Time: 20:38:11, Conditions: AUTOSPEC01, User: pk

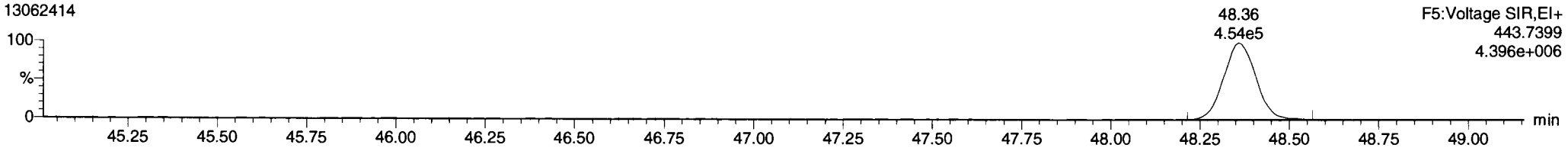
37CL-2378-TCDD



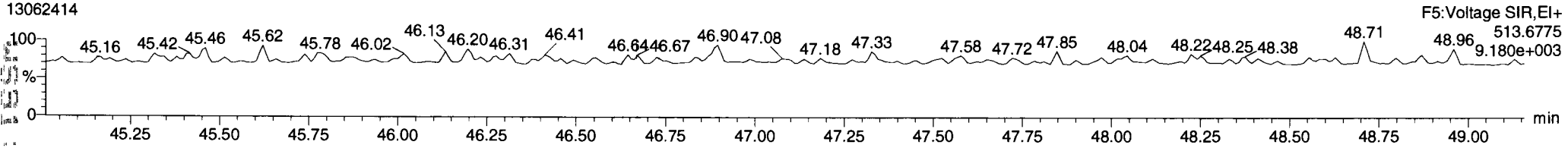
OCDF



OCDF



FUNCTION5 DCDPE



Pesticide Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WS91

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8081B) Pest PSDDA – Soil/Sed
Microwave (3546) (SOP # 3304S)

Preparation Test Pest # 5 (PESSDMP)

PSDDA (1-2ppb)

ARI Job No(s) WT36, WS91 Page 1 of 1 Batch set up by: JA

Bottle #	ARI Sample I.D.	Weight Extracted (eq. to 12.5 dry wt)	(REQ) Sulfur Clean 2mL+0.5mL Ethyl Acetate 1 2 3	(REQ) Silica Gel Clean (1:2.5)	Final Effective Volume	Volume to Lab	Comment	Verify Client ID CT 06-13-13 Analyst/Date
	WT36 MBS	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	Microwave 1 2 3 CT 06-13-13
	SBS	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	
	SBS Dup.	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	Analyst/Date
	~~QLS~~	~~12.5g~~	~~2.5mL~~	~~(1:2.5) 1mL~~	~~2.5mL~~	~~1mL~~	~~(10g Actual Wt)~~	KD 100°C Hexane Exchange (2 X 20mL) 1 2 3 4 5 6
4	WT36 A	29.02	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
10	WS91 A	31.05	2.5mL	(1:2.5) 1mL	2.5mL	1mL		YL/RR 06/14/13
10	Ams	31.06	2.5mL	(1:2.5) 1mL	2.5mL	1mL		Analyst/Date
10	Amsd	31.03	2.5mL	(1:2.5) 1mL	2.5mL	1mL		TurboVap 1 2 3 Pre-Cleanups
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		AC 6-14-13
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		Analyst/Date
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		TurboVap 1 2 3 Post Cleanups
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		SP 6-17-13
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		
Analyst/Date 6-13-13 CT			AC/SP 6-14-12	SP 6/17/13	AC 6-14-12	SP 6/17/13	Reviewed by SP 6/17/13	Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N (B000151)	2µg/mL	50µL	4/30/14	CT	AC
Spike	3 (B000650)	0.5/1/5µg/mL	100µL	12/09/13	CT	AC
~~QLS Spike~~	~~10 ( )~~	~~0.25-2.5µg/mL~~	~~25µL~~			

Extraction Time: 13:10 Balance ID: B14642614

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 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. KD (~~Small or~~ Large drying column) to 5mL at 100°C. 12. Exchange to Hexane (2 X with 20mL) 13. TurboVap. 14. Clean-ups. 15. TurboVap. 16. Vial in Hexane.

A. Need Total Solids Y / N B. Archive ~~Freeze Y~~ / N

~~WT36 only~~ JA

Revision 17
01/17/13

WS91 : 01132

Reagent and Solutions Identification

(8081B) Pest PSDDA – Soil/Sed
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WT36, W591

(8081B) Pest PSDDA Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station:	Microwave
Anhydrous Sodium Sulfate: (I# 8134 + jar date 6-3-13)	CT 6-13-13
Neutral Glasswool: (I# 7998 + jar date 5-15-13)	
1:1 Hexane/Acetone: (H# 194)	
80:20 Hexane/Acetone: (H# 177)	
Hexane: (I# 8254)	
KD Station:	KD RR/YC
Hexane: (I# 8269)	6/14/13
Anhydrous Sodium Sulfate: (I# 8130 + jar date 6/13/13	
Neutral Glasswool: (I# 7998 + jar date 5/15/13)	
Vialing Station:	Vialing
Hexane: (I# 8269)	SP
Ethyl Acetate: (I# 6079)	6/17/13
Tetrabutylammonium hydrogensulfate (TBAS): (H# 190)	
Sodium Sulfite: (I# 7704)	
Silica Gel (SPE) Darts: (I# 8427)	

Incorporated
Analytical Chemists and
Consultants

Organic Extractions Laboratory
Analyst Notes

ARI Job No.: W591

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)= A	AC 6-6-13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)? AC 5% small	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
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-Screen indicates	
possible aroclor activity.	JH 6/12/13

3056F

Revision 009
08/14/12

W591 : 01134

Pesticide Raw Data
Initial Calibration

ARI Job ID: WS91

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): 05/14/13 Internal Standard ID 2006-1 Expiration 7/26/13

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
Restek	B00037 O	8/29/13	UCT19	2023-1	10/4/13
	B000337	12/10/13			
	2048-2	05/16/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: YZ **Date:** 5/16/13

Reviewer: VD **Date:** 5.16.13

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 5/14/13 (5/10) Analysis: Pest Analyst: YZ

Column 1 Serial No.: 1085681 Column Type: 5% cap

Column 2 Serial No.: 1094709 Column Type: 5% cap

GC Method: Pest ICal Date: 05/14/13

IS	Ical/Ccal	ICV
2000-1	B000370 5/09	2023-1
	B000337 5/10	
	2048-2.	

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130514PEST.b/ical-1.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	14-MAY-2013 14:17	0514a004.d	1	DS	
2	14-MAY-2013 14:37	0514a005.d	1	INDAE	
3	14-MAY-2013 14:57	0514a006.d	1	INDAA	
4	14-MAY-2013 15:17	0514a007.d	1	INDAB	
5	14-MAY-2013 15:37	0514a008.d	1	INDAC	
6	14-MAY-2013 15:56	0514a009.d	1	INDAD	
7	14-MAY-2013 16:16	0514a010.d	1	INDAF	
8	14-MAY-2013 16:34	0514a011.d	1	INDAG	
9	14-MAY-2013 16:54	0514a012.d	1	INDAICV	
10	14-MAY-2013 17:12	0514a013.d	1	TOXAPH	
11	14-MAY-2013 17:31	0514a014.d	1	DS	
12	14-MAY-2013 17:48	0514a015.d	1	INDAE	
13	14-MAY-2013 18:06	0514a016.d	1	WO26MBS1	
14	14-MAY-2013 18:24	0514a017.d	1	WO26LCSS1	
15	14-MAY-2013 18:42	0514a018.d	1	WO26LCSDS1	
16	14-MAY-2013 19:00	0514a019.d	1	WO26QLS	
17	14-MAY-2013 19:17	0514a020.d	5	WO26A	5
18	14-MAY-2013 19:35	0514a021.d	5	WO26B	5
19	14-MAY-2013 19:53	0514a022.d	5	WO26C	5
20	14-MAY-2013 20:11	0514a023.d	5	WO26D	5
21	14-MAY-2013 20:29	0514a024.d	5	WO26E	5
22	14-MAY-2013 20:46	0514a025.d	5	WO26F	5
23	14-MAY-2013 21:04	0514a026.d	5	WO26G	5
24	14-MAY-2013 21:22	0514a027.d	5	WO26H	5
25	14-MAY-2013 21:40	0514a028.d	1	WO26MBS1	
26	14-MAY-2013 21:58	0514a029.d	1	WO26LCSS1	
27	14-MAY-2013 22:15	0514a030.d	1	WO26LCSDS1	
28	14-MAY-2013 22:33	0514a031.d	1	DS	
29	14-MAY-2013 22:51	0514a032.d	1	INDAE	
30	14-MAY-2013 23:09	0514a033.d	5	WO26I	5
31	14-MAY-2013 23:27	0514a034.d	1	WO26J	
32	14-MAY-2013 23:44	0514a035.d	1	WO26K	
33	15-MAY-2013 00:02	0514a036.d	5	WO26KMS	
34	15-MAY-2013 00:20	0514a037.d	1	WO26KMSD	
35	15-MAY-2013 00:38	0514a038.d	1	WO27MBS1	
36	15-MAY-2013 00:56	0514a039.d	1	WO27LCSS1	
37	15-MAY-2013 01:13	0514a040.d	1	WO27LCSDS1	
38	15-MAY-2013 01:31	0514a041.d	1	DS	
39	15-MAY-2013 01:49	0514a042.d	1	INDAE	
40	15-MAY-2013 02:07	0514a043.d	5	WO27A	5
41	15-MAY-2013 02:25	0514a044.d	5	WO27B	5
42	15-MAY-2013 02:42	0514a045.d	5	WO27C	5
43	15-MAY-2013 03:00	0514a046.d	5	WO27CMS	5
44	15-MAY-2013 03:18	0514a047.d	5	WO27CMSD	5
45	15-MAY-2013 03:36	0514a048.d	5	WO27D	5
46	15-MAY-2013 03:54	0514a049.d	5	WO27E	5
47	15-MAY-2013 04:11	0514a050.d	5	WO27F	5
48	15-MAY-2013 04:29	0514a051.d	5	WO27G	5
49	15-MAY-2013 04:47	0514a052.d	1	WO27MBS1	
50	15-MAY-2013 05:05	0514a053.d	1	WO27LCSS1	
51	15-MAY-2013 05:23	0514a054.d	1	WO27LCSDS1	
52	15-MAY-2013 05:40	0514a055.d	1	DS	
53	15-MAY-2013 05:58	0514a056.d	1	INDAE	
54	15-MAY-2013 06:16	0514a057.d	5	WO27H	5
55	15-MAY-2013 06:34	0514a058.d	5	WO27I	5
56	15-MAY-2013 06:52	0514a059.d	5	WO27J	5
57	15-MAY-2013 07:09	0514a060.d	5	WO27K	5
58	15-MAY-2013 07:27	0514a061.d	1	WO27MBS1	
59	15-MAY-2013 07:45	0514a062.d	1	WO27LCSS1	
60	15-MAY-2013 08:03	0514a063.d	1	WO27LCSDS1	
61	15-MAY-2013 08:21	0514a064.d	1	DS	
62	15-MAY-2013 08:38	0514a065.d	1	INDAE	

Every line mus
Start a new pa

S

YZ 5/14/13

WS91:9197

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Batch File: /chem2/ecd6.i/20130514PEST.b/ical-1.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0514a005	0514a006	0514a007	0514a008	0514a009	0514a010	0514a011
INJ.DATE:	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013
INJ.TIME:	14:37	14:57	15:17	15:37	15:56	16:16	16:34

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	2.336	2.336	2.336	2.336	2.336	2.336	2.336	2.336	2.286-2.386	2.336	0.000
*	54 1Bromo-2nitrobenzene	3.162	3.162	3.162	3.161	3.160	3.161	3.160	3.162	3.112-3.212	3.161	0.001
*	58 Hexabromobiphenyl	8.997	8.998	8.998	8.999	8.998	8.999	8.999	8.997	8.947-9.047	8.998	0.001
$	2 Tetrachloro-m-xylene	3.840	3.842	3.842	3.840	3.837	3.837	3.835	3.840	3.790-3.890	3.839	0.003
	3 Hexachlorobenzene	4.186	4.197	4.195	4.190	4.186	4.183	4.179	4.186	4.136-4.236	4.188	0.006
	4 alpha-BHC	4.332	4.331	4.332	4.331	4.328	4.329	4.326	4.332	4.282-4.382	4.330	0.002
	5 gamma-BHC (Lindane)	4.617	4.618	4.619	4.618	4.614	4.614	4.611	4.617	4.567-4.667	4.616	0.003
	6 beta-BHC	4.697	4.724	4.720	4.712	4.702	4.692	4.687	4.697	4.647-4.747	4.705	0.014
	7 delta-BHC	4.868	4.894	4.890	4.882	4.872	4.863	4.858	4.868	4.818-4.918	4.875	0.014
	8 Heptachlor	5.065	5.065	5.066	5.065	5.062	5.063	5.059	5.065	5.015-5.115	5.063	0.002
	9 Aldrin	5.359	5.359	5.360	5.359	5.356	5.357	5.353	5.359	5.309-5.409	5.358	0.002
	38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.577-13.677	+++++	+++++
	10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.819-10.919	+++++	+++++
	11 Heptachlor epoxide b	5.933	5.935	5.936	5.934	5.931	5.931	5.928	5.933	5.883-5.983	5.933	0.003
	12 gamma-Chlordane	6.054	6.060	6.059	6.057	6.052	6.051	6.048	6.054	6.004-6.104	6.054	0.005
	13 alpha-Chlordane	6.177	6.183	6.182	6.180	6.176	6.175	6.172	6.177	6.127-6.227	6.178	0.004
	14 Endosulfan I	6.310	6.315	6.314	6.313	6.309	6.309	6.306	6.310	6.260-6.360	6.311	0.003

Reviewer 1 YZ Date: 5/15/13
Reviewer 2 Date: 5-16-13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Batch File: /chem2/ecd6.i/20130514PEST.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	6.235	6.247	6.245	6.241	6.235	6.232	6.229	6.235	6.185-6.285	6.238	0.007
	16 Dieldrin	6.532	6.536	6.536	6.534	6.531	6.531	6.528	6.532	6.482-6.582	6.533	0.003
	17 Endrin	6.751	6.755	6.755	6.753	6.750	6.749	6.747	6.751	6.701-6.801	6.751	0.003
	18 4,4'-DDD	6.800	6.812	6.812	6.809	6.806	6.795	6.787	6.800	6.750-6.850	6.803	0.009
	19 Endosulfan II	6.959	6.966	6.964	6.962	6.958	6.956	6.953	6.959	6.909-7.009	6.960	0.004
	20 4,4'-DDT	7.053	7.063	7.062	7.059	7.056	7.049	7.043	7.053	7.003-7.103	7.055	0.007
	21 Endrin aldehyde	7.336	7.341	7.341	7.339	7.336	7.334	7.330	7.336	7.286-7.386	7.337	0.004
	22 Methoxychlor	7.479	7.487	7.486	7.484	7.482	7.478	7.474	7.479	7.429-7.529	7.482	0.005
	23 Endosulfan sulfate	7.727	7.731	7.730	7.729	7.726	7.725	7.721	7.727	7.677-7.777	7.727	0.003
	24 Endrin ketone	7.983	7.987	7.986	7.985	7.982	7.981	7.977	7.983	7.933-8.033	7.983	0.003
$	25 Decachlorobiphenyl	8.832	8.834	8.834	8.833	8.832	8.832	8.830	8.832	8.782-8.882	8.833	0.002
	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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.006	6.956-7.056	+++++	+++++
	39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.911	5.861-5.961	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Batch File: /chem2/ecd6.i/20130514PEST.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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.397	6.347-6.447	+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.636	6.586-6.686	+++++	+++++
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.754	1.704-1.804	+++++	+++++
43 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.840	5.790-5.890	+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.162	6.112-6.212	+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.778	6.728-6.828	+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.653	7.603-7.703	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.106-20.206	+++++	+++++
59 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.837	4.787-4.887	+++++	+++++
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/20130514PEST.b/PEST0514B.m
Batch File: /chem2/ecd6.i/20130514PEST.b/ical-2.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0514a005	0514a006	0514a007	0514a008	0514a009	0514a010	0514a011
INJ.DATE:	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013	14-MAY-2013
INJ.TIME:	14:37	14:57	15:17	15:37	15:56	16:16	16:34

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	2.493	2.492	2.493	2.492	2.492	2.493	2.493	2.493	2.443-2.543	2.493	0.000
*	52 1Bromo-2nitrobenzene	3.331	3.331	3.331	3.330	3.329	3.330	3.329	3.331	3.281-3.381	3.330	0.001
*	55 Hexabromobiphenyl	10.370	10.370	10.371	10.372	10.370	10.372	10.371	10.370	10.320-10.421	10.371	0.001
$	2 Tetrachloro-m-xylene	4.168	4.169	4.170	4.168	4.165	4.166	4.166	4.168	4.118-4.218	4.168	0.002
	3 Hexachlorobenzene	4.633	4.638	4.638	4.635	4.631	4.630	4.627	4.633	4.583-4.683	4.633	0.004
	4 alpha-BHC	4.756	4.755	4.756	4.756	4.752	4.754	4.752	4.756	4.706-4.806	4.754	0.002
	5 gamma-BHC (Lindane)	5.115	5.115	5.116	5.115	5.112	5.113	5.111	5.115	5.065-5.165	5.114	0.002
	6 beta-BHC	5.189	5.204	5.203	5.198	5.190	5.186	5.183	5.189	5.139-5.239	5.193	0.008
	7 delta-BHC	5.501	5.513	5.512	5.508	5.502	5.498	5.495	5.501	5.451-5.551	5.504	0.007
	8 Heptachlor	5.579	5.579	5.580	5.579	5.577	5.577	5.575	5.579	5.529-5.629	5.578	0.002
	37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.538-14.638	+++++	+++++
	9 Aldrin	5.917	5.917	5.917	5.917	5.915	5.916	5.913	5.917	5.867-5.967	5.916	0.001
	10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.630-12.730	+++++	+++++
	11 Heptachlor epoxide b	6.470	6.472	6.472	6.471	6.469	6.470	6.467	6.470	6.420-6.520	6.470	0.002
	12 gamma-Chlordane	6.653	6.657	6.657	6.656	6.653	6.652	6.650	6.653	6.603-6.703	6.654	0.003
	13 alpha-Chlordane	6.791	6.793	6.794	6.793	6.790	6.790	6.788	6.791	6.741-6.841	6.791	0.002
	14 Endosulfan I	6.858	6.861	6.861	6.860	6.857	6.857	6.855	6.858	6.808-6.908	6.859	0.002

Reviewer 1 YZ Date: 5/15/13
Reviewer 2 Date: 5/16/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Batch File: /chem2/ecd6.i/20130514PEST.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	6.918	6.925	6.923	6.921	6.918	6.916	6.915	6.918	6.868-6.968	6.919	0.004
	16 Dieldrin	7.116	7.117	7.118	7.116	7.114	7.115	7.113	7.116	7.066-7.166	7.116	0.002
	17 Endrin	7.405	7.407	7.407	7.406	7.404	7.404	7.403	7.405	7.355-7.455	7.405	0.002
	18 4,4'-DDD	7.460	7.466	7.465	7.464	7.462	7.457	7.454	7.460	7.410-7.510	7.461	0.004
	19 Endosulfan II	7.594	7.598	7.598	7.596	7.594	7.593	7.592	7.594	7.544-7.644	7.595	0.002
	20 4,4'-DDT	7.745	7.749	7.749	7.748	7.746	7.743	7.740	7.745	7.695-7.795	7.746	0.003
	21 Endrin aldehyde	7.892	7.895	7.896	7.893	7.892	7.891	7.889	7.892	7.842-7.942	7.892	0.002
	22 Endosulfan sulfate	8.138	8.139	8.140	8.138	8.137	8.136	8.134	8.138	8.088-8.188	8.138	0.002
	23 Methoxychlor	8.327	8.329	8.330	8.329	8.327	8.326	8.325	8.327	8.277-8.377	8.328	0.002
	24 Endrin ketone	8.629	8.631	8.631	8.630	8.629	8.628	8.627	8.629	8.579-8.679	8.629	0.002
$	25 Decachlorobiphenyl	9.791	9.791	9.792	9.792	9.790	9.791	9.791	9.791	9.741-9.841	9.791	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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.338	7.288-7.388	+++++	+++++
	38 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.631	6.581-6.681	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Batch File: /chem2/ecd6.i/20130514PEST.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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.115	7.065-7.165	+++++	+++++
40 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.404	7.354-7.454	+++++	+++++
41 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.732	1.682-1.782	+++++	+++++
42 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.385	6.335-6.435	+++++	+++++
43 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.741	6.691-6.791	+++++	+++++
44 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.465	7.415-7.515	+++++	+++++
45 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.619	8.569-8.669	+++++	+++++
46 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.449-21.549	+++++	+++++
56 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.369	5.319-5.419	+++++	+++++
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 : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a006.d
Level 2: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a007.d
Level 3: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a008.d
Level 4: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a009.d
Level 5: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a013.d
Level 6: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a010.d
Level 7: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a011.d
Level 8: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a013.d/0514a013.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	1.79325	1.69392	1.74961	1.78148	1.75119	1.71302		
	1.98781	+++++					1.78147	5.471
3 Hexachlorobenzene	1.49749	1.39055	1.33447	1.32478	1.26906	1.22701		
	1.39069	+++++					1.34772	6.607
4 alpha-BHC	1.59686	1.53923	1.58723	1.69009	1.72967	1.74432		
	2.04256	+++++					1.70428	9.858
5 gamma-BHC (Lindane)	1.37757	1.32209	1.37386	1.47369	1.50450	1.51729		
	1.76991	+++++					1.47699	10.069
6 beta-BHC	0.73008	0.68228	0.67383	0.64825	0.64133	0.63188		
	0.72204	+++++					0.67567	5.734
7 delta-BHC	1.27862	1.26192	1.31879	1.44766	1.43894	1.47751		
	1.73280	+++++					1.42232	11.390

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 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	1.44016	1.35450	1.36987	1.44472	1.43635	1.40950		
	1.59374	+++++					1.43555	5.447
9 Aldrin	1.33913	1.32192	1.35890	1.43056	1.44425	1.42846		
	1.62361	+++++					1.42098	7.160
38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Heptachlor epoxide b	1.31883	1.22935	1.23549	1.29042	1.26295	1.24015		
	1.39299	+++++					1.28146	4.594
12 gamma-Chlordane	1.34328	1.29043	1.30193	1.38657	1.37855	1.37018		
	1.54904	+++++					1.37428	6.228
13 alpha-Chlordane	1.26506	1.18635	1.20487	1.27829	1.28473	1.27759		
	1.45008	+++++					1.27814	6.667
14 Endosulfan I	1.33723	1.22412	1.19481	1.20636	1.16700	1.12310		
	1.25888	+++++					1.21593	5.636
15 4,4'-DDE	1.07900	0.99206	0.98337	1.00262	1.00227	1.00380		
	1.18006	+++++					1.03474	6.900

WS91:01145

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 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	1.28138	1.23307	1.26288	1.31804	1.29159	1.25290		
	1.40559	+++++					1.29221	4.417
17 Endrin	1.00045	0.95140	0.98797	1.05878	1.05845	1.07061		
	1.20035	+++++					1.04686	7.715
18 4,4'-DDD	1.22524	1.14701	1.15954	1.20318	1.16084	1.17739		
	1.32680	+++++					1.20000	5.184
19 Endosulfan II	1.12524	1.08894	1.05454	1.15097	1.11621	1.13029		
	1.27640	+++++					1.13466	6.160
20 4,4'-DDT	1.00324	0.95977	0.99273	1.06721	1.05511	1.10036		
	1.26486	+++++					1.06332	9.513
21 Endrin aldehyde	1.01452	0.92945	0.92202	0.94895	0.90871	0.92167		
	1.03644	+++++					0.95454	5.274
22 Methoxychlor	0.54273	0.50238	0.49266	0.49601	0.47525	0.48309		
	0.56389	+++++					0.50800	6.446
23 Endosulfan sulfate	1.04430	0.96556	0.97447	1.00876	0.98463	1.00608		
	1.14237	+++++					1.01803	5.968
24 Endrin ketone	1.44182	1.27425	1.25105	1.26006	1.20536	1.22442		
	1.39160	+++++					1.29265	6.880

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 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)	+++++	+++++	+++++	+++++	0.04979	+++++		
	+++++	0.04979					0.04979	0.000
(2)	+++++	+++++	+++++	+++++	0.03856	+++++		
	+++++	+++++					0.03856	0.000
(3)	+++++	+++++	+++++	+++++	0.05763	+++++		
	+++++	+++++					0.05763	0.000
(4)	+++++	+++++	+++++	+++++	0.05405	+++++		
	+++++	+++++					0.05405	0.000
(5)	+++++	+++++	+++++	+++++	0.03832	+++++		
	+++++	+++++					0.03832	0.000
(6)	+++++	+++++	+++++	+++++	0.03390	+++++		
	+++++	+++++					0.03390	0.000
39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 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	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
47 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
59 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Cal Date : 15-May-2013 14:43 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	1.05731	1.02496	1.04909	1.09575	1.10430	1.07844		
	1.22555	+++++					1.09077	6.002
$ 25 Decachlorobiphenyl	1.36908	1.17032	1.18645	1.09539	1.01496	0.99573		
	1.12973	+++++					1.13738	11.007

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a006.d
Level 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a007.d
Level 3: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a008.d
Level 4: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a009.d
Level 5: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a013.d
Level 6: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a010.d
Level 7: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a011.d
Level 8: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a013.d/0514a013.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	1.60053	1.49408	1.47331	1.53778	1.43422	1.40997		
	1.56693	+++++					1.50240	4.639
3 Hexachlorobenzene	1.91130	1.81415	1.84722	1.93843	1.89171	1.80326		
	1.99642	+++++					1.88607	3.694
4 alpha-BHC	1.59644	1.60778	1.71794	1.85564	1.87161	1.84057		
	2.08612	+++++					1.79658	9.554
5 gamma-BHC (Lindane)	1.41279	1.39821	1.47572	1.59627	1.61089	1.59098		
	1.82714	+++++					1.55886	9.485
6 beta-BHC	0.67540	0.64906	0.66168	0.69664	0.70034	0.68947		
	0.76488	+++++					0.69107	5.428
7 delta-BHC	1.25042	1.25618	1.36398	1.51769	1.57828	1.57346		
	1.78854	+++++					1.47551	13.302

NS91 · 01152

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 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	1.52144	1.46615	1.50731	1.56510	1.51707	1.41707		
	1.49206	+++++					1.49803	3.120
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
9 Aldrin	1.36731	1.34038	1.38390	1.47646	1.46628	1.38183		
	1.48140	+++++					1.41394	4.156
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Heptachlor epoxide b	1.31110	1.18086	1.22473	1.27311	1.25167	1.18019		
	1.24678	+++++					1.23835	3.848
12 gamma-Chlordane	1.27948	1.21377	1.25856	1.33964	1.33160	1.27964		
	1.38294	+++++					1.29795	4.382
13 alpha-Chlordane	1.14954	1.11506	1.16114	1.24321	1.22852	1.18631		
	1.28714	+++++					1.19585	5.019
14 Endosulfan I	1.12895	1.09165	1.12764	1.19879	1.17527	1.11474		
	1.17124	+++++					1.14404	3.350
15 4,4'-DDE	1.24203	1.21383	1.24821	1.28890	1.20552	1.12039		
	1.15989	+++++					1.21125	4.679

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 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	1.21939	1.20049	1.19568	1.22906	1.15598	1.05909		
	1.10103	+++++					1.16582	5.498
17 Endrin	1.54901	1.48644	1.53945	1.58915	1.52214	1.42686		
	1.49666	+++++					1.51567	3.431
18 4,4'-DDD	1.88151	1.77566	1.81334	1.83674	1.73699	1.64836		
	1.79856	+++++					1.78445	4.221
19 Endosulfan II	1.82350	1.73853	1.79597	1.88652	1.77228	1.65784		
	1.77324	+++++					1.77827	3.991
20 4,4'-DDT	1.40789	1.35837	1.42769	1.51306	1.44947	1.46591		
	1.66557	+++++					1.46971	6.727
21 Endrin aldehyde	1.51334	1.40321	1.41383	1.43030	1.36548	1.30518		
	1.40698	+++++					1.40547	4.499
22 Endosulfan sulfate	1.47464	1.39724	1.44210	1.49521	1.44784	1.40238		
	1.52333	+++++					1.45468	3.199
23 Methoxychlor	0.67502	0.62296	0.60582	0.57954	0.51795	0.47598		
	0.48760	+++++					0.56641	13.184
24 Endrin ketone	1.70322	1.58267	1.59409	1.60970	1.52594	1.46607		
	1.60759	+++++					1.58418	4.668

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 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)	+++++	+++++	+++++	+++++	0.08641	+++++		
	+++++	+++++					0.08641	0.000
(3)	+++++	+++++	+++++	+++++	0.09252	+++++		
	+++++	+++++					0.09252	0.000
(4)	+++++	+++++	+++++	+++++	0.06545	+++++		
	+++++	+++++					0.06545	0.000
(5)	+++++	+++++	+++++	+++++	0.08604	+++++		
	+++++	+++++					0.08604	0.000
38 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
39 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
40 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
41 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
42 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 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	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
44 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
45 Mirex	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
46 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
56 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAY-2013 14:37
End Cal Date : 14-MAY-2013 17:12
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130514PEST.b/PEST0514B.m
Cal Date : 15-May-2013 14:43 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	1.36753	1.31204	1.33239	1.36072	1.28841	1.21312		
	1.22974	+++++					1.30057	4.662
$ 25 Decachlorobiphenyl	1.80274	1.62026	1.59384	1.59909	1.52505	1.48844		
	1.68340	+++++					1.61612	6.428

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a005.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a005.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 14-MAY-2013 14:37
Report Date: 05/15/2013 14:42
Matrix: NONE
Dilution Factor: 1.000

YC 5/15/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.162	0.000	5500669	3.331	0.002	29060499	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.332	0.000	2378587	4.756	0.004	13597458	20.2980	20.8352	2.6	alpha-BHC
4.697	0.000	881930	5.189	0.006	5088022	18.9835	20.2683	6.5	beta-BHC
4.868	0.000	1978785	5.501	0.006	11466386	20.2337	21.3930	5.6	delta-BHC
4.617	0.000	2068937	5.115	0.004	11703292	20.3725	20.6675	1.4	gamma-BHC (Lindane)
5.065	0.000	1975223	5.579	0.004	11021714	20.0112	20.2542	1.2	Heptachlor
5.359	0.000	1986091	5.917	0.004	10652708	20.3276	20.7404	2.0	Aldrin
5.933	0.000	1736770	6.470	0.003	9093575	19.7112	20.2152	2.5	Heptachlor epoxide b
6.310	0.000	1604825	6.858	0.003	8538511	19.1953	20.5460	6.8	Endosulfan I
6.532	0.000	3552297	7.116	0.003	16796653	39.9808	39.6624	0.8	Dieldrin
6.235	0.000	2756569	6.918	0.003	17516467	38.7447	39.8107	2.7	4,4'-DDE
6.751	0.000	2814950	7.405	0.002	12569567	40.4428	40.1706	0.7	Endrin
6.959	0.000	2968558	7.594	0.003	14635204	39.3496	39.8653	1.3	Endosulfan II
6.800	0.000	3087253	7.460	0.006	14343775	38.6946	38.9360	0.6	4,4'-DDD
7.727	0.000	2618632	8.138	0.003	11956025	38.6879	39.8119	2.9	Endosulfan sulfate
7.053	0.000	2806075	7.745	0.004	11969550	39.6911	39.4493	0.6	4,4'-DDT
7.479	0.000	6319705	8.327	0.002	21385691	187.1070	182.8875	2.3	Methoxychlor
7.983	0.000	3205646	8.629	0.002	12600957	37.2987	38.5293	3.2	Endrin ketone
7.336	0.000	2416722	7.892	0.003	11275916	38.0797	38.8617	2.0	Endrin aldehyde
6.054	0.000	1895741	6.653	0.003	9674267	20.0621	20.5186	2.2	gamma-Chlordane
6.177	0.000	1766712	6.791	0.003	8925381	20.1031	20.5465	2.2	alpha-Chlordane
2.336	0.000	2408182	2.493	0.000	10419791	19.6601	19.0923	2.9	Hexachlorobutadiene
4.186	0.000	1745176	4.633	0.006	13743481	18.8327	20.0598	6.3	Hexachlorobenzene
8.997	0.000	5319006	10.370	-0.001	16515704	80.0000	80.0000	0.0	Hexabromobiphenyl
3.840	0.000	3037199	4.168	0.002	18720888	40.4962	39.6261	2.2	Tetrachloro-m-xylen
8.832	0.000	2699302	9.791	0.001	12593626	35.6948	37.7460	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	101.2	99.1	99.1~	115- 0
Decachlorobiphenyl	89.2	94.4	89.2~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

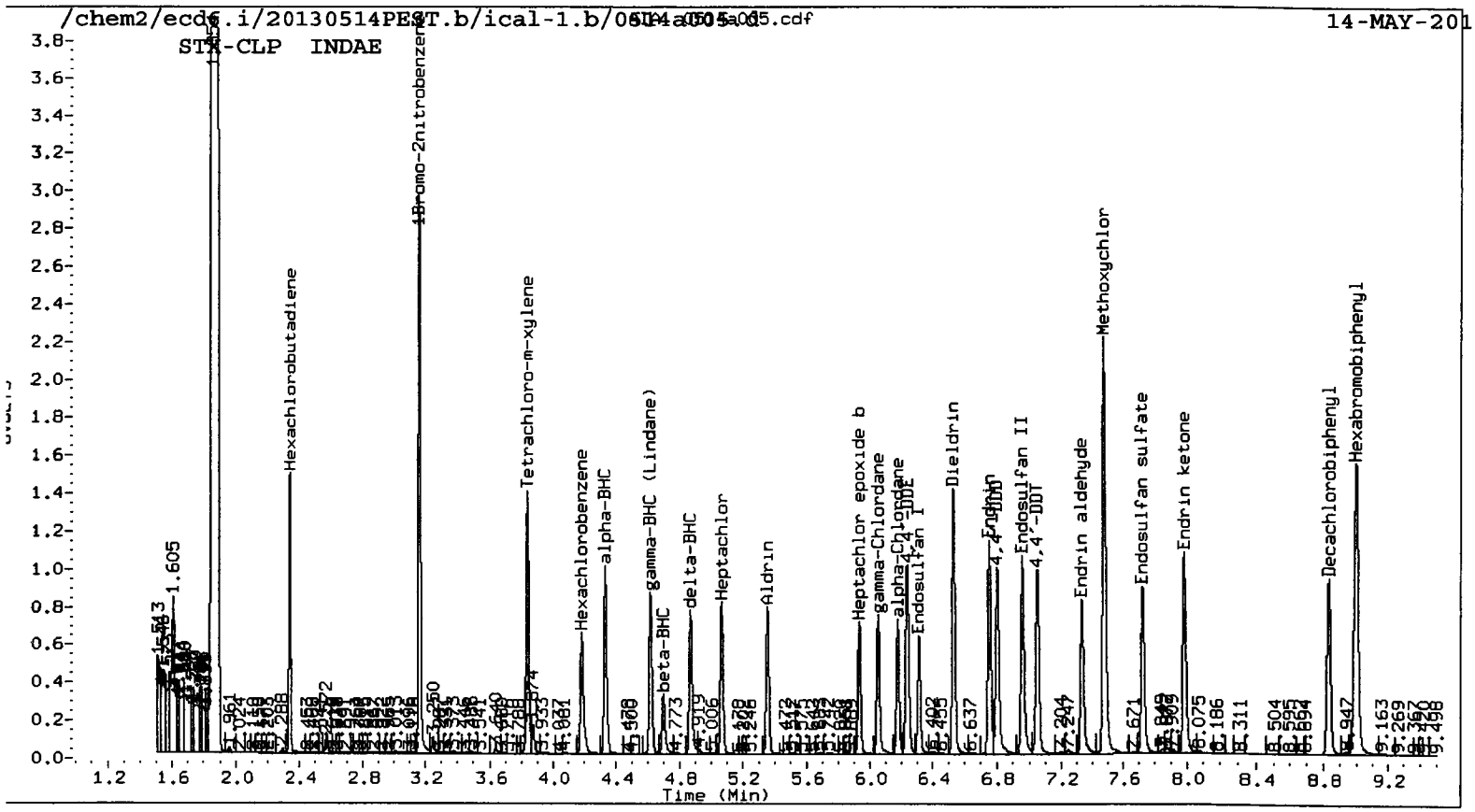
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5500669	0.0
Hexabromobiphenyl	5319006	5319006	0.0

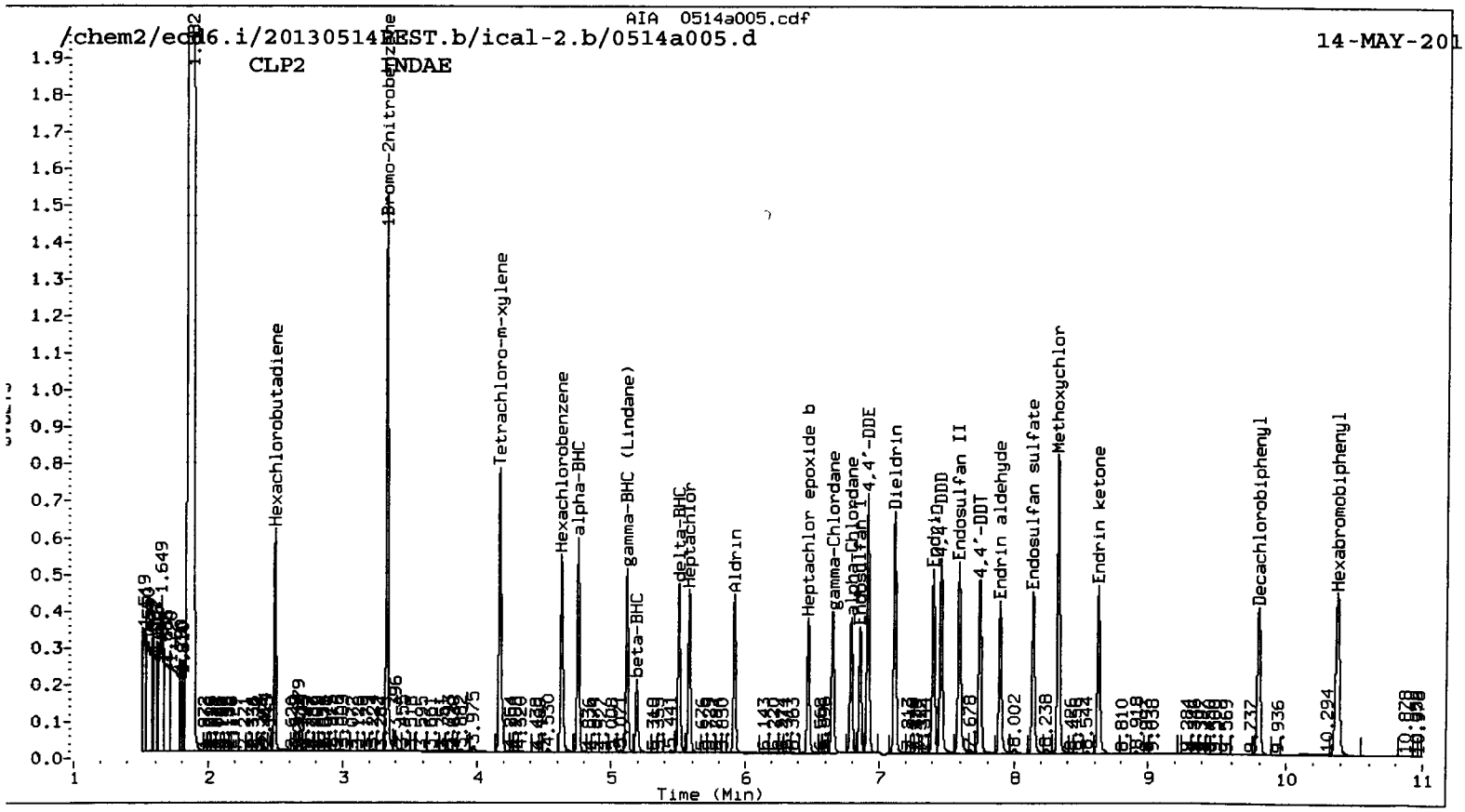
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29060499	0.0
Hexabromobiphenyl	16515704	16515704	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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


/chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a005.d
AIA 0514a005.cdf
14-MAY-201
STX-CLP INDAE
1.605
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
Time (Min)


/chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a005.d
AIA 0514a005.cdf
14-MAY-201
CLP2 INDAE
1.649
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
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
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a006.d ARI ID: INDAA
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a006.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 14-MAY-2013 14:57
Report Date: 05/15/2013 14:42
Matrix: NONE
Dilution Factor: 1.000

YZ 5/15/13

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.162	0.000	5276720	3.331	0.001	28661245	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.331	0.000	131659	4.755	0.004	714937	1.1712	1.1107	5.3	alpha-BHC
4.724	0.000	60194	5.204	0.021	302466	1.3507	1.2217	10.0	beta-BHC
4.894	0.000	105421	5.513	0.018	559976	1.1237	1.0593	5.9	delta-BHC
4.618	0.000	113579	5.115	0.004	632692	1.1659	1.1329	2.9	gamma-BHC (Lindane)
5.065	0.000	118739	5.579	0.004	681351	1.2540	1.2695	1.2	Heptachlor
5.359	0.000	110410	5.917	0.003	612325	1.1780	1.2088	2.6	Aldrin
5.935	0.000	108736	6.472	0.004	587152	1.2865	1.3234	2.8	Heptachlor epoxide b
6.315	0.000	110253	6.861	0.006	505578	1.3747	1.2335	10.8	Endosulfan I
6.536	0.000	211297	7.117	0.004	1092166	2.4791	2.6149	5.3	Dieldrin
6.247	0.000	177925	6.925	0.010	1112439	2.6069	2.5635	1.7	4,4'-DDE
6.755	0.000	157918	7.407	0.004	778157	2.3892	2.5550	6.7	Endrin
6.966	0.000	177617	7.598	0.006	916046	2.4793	2.5636	3.3	Endosulfan II
6.812	0.000	193401	7.466	0.012	945192	2.5526	2.6360	3.2	4,4'-DDD
7.731	0.000	164840	8.139	0.005	740798	2.5645	2.5343	1.2	Endosulfan sulfate
7.063	0.000	158359	7.749	0.009	707264	2.3587	2.3948	1.5	4,4'-DDT
7.487	0.000	428340	8.329	0.004	1695513	13.3544	14.8969	10.9	Methoxychlor
7.987	0.000	227587	8.631	0.004	855623	2.7885	2.6878	3.7	Endrin ketone
7.341	0.000	160140	7.895	0.007	760235	2.6571	2.6919	1.3	Endrin aldehyde
6.060	0.000	110752	6.657	0.007	572990	1.2218	1.2322	0.8	gamma-Chlordane
6.183	0.000	104303	6.793	0.006	514801	1.2372	1.2016	2.9	alpha-Chlordane
2.336	0.000	147851	2.492	-0.001	716768	1.2583	1.3316	5.7	Hexachlorobutadiene
4.197	0.000	123466	4.638	0.010	855939	1.3889	1.2667	9.2	Hexachlorobenzene
8.998	0.000	5051117	10.370	-0.001	16075431	80.0000	80.0000	0.0	Hexabromobiphenyl
3.842	0.000	174347	4.169	0.003	1224847	2.4233	2.6287	8.1	Tetrachloro-m-xylene
8.834	0.000	216105	9.791	0.001	905617	3.0093	2.7887	7.6	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	6.1	6.6	6.1~	115- 0
Decachlorobiphenyl	7.5	7.0	7.0~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

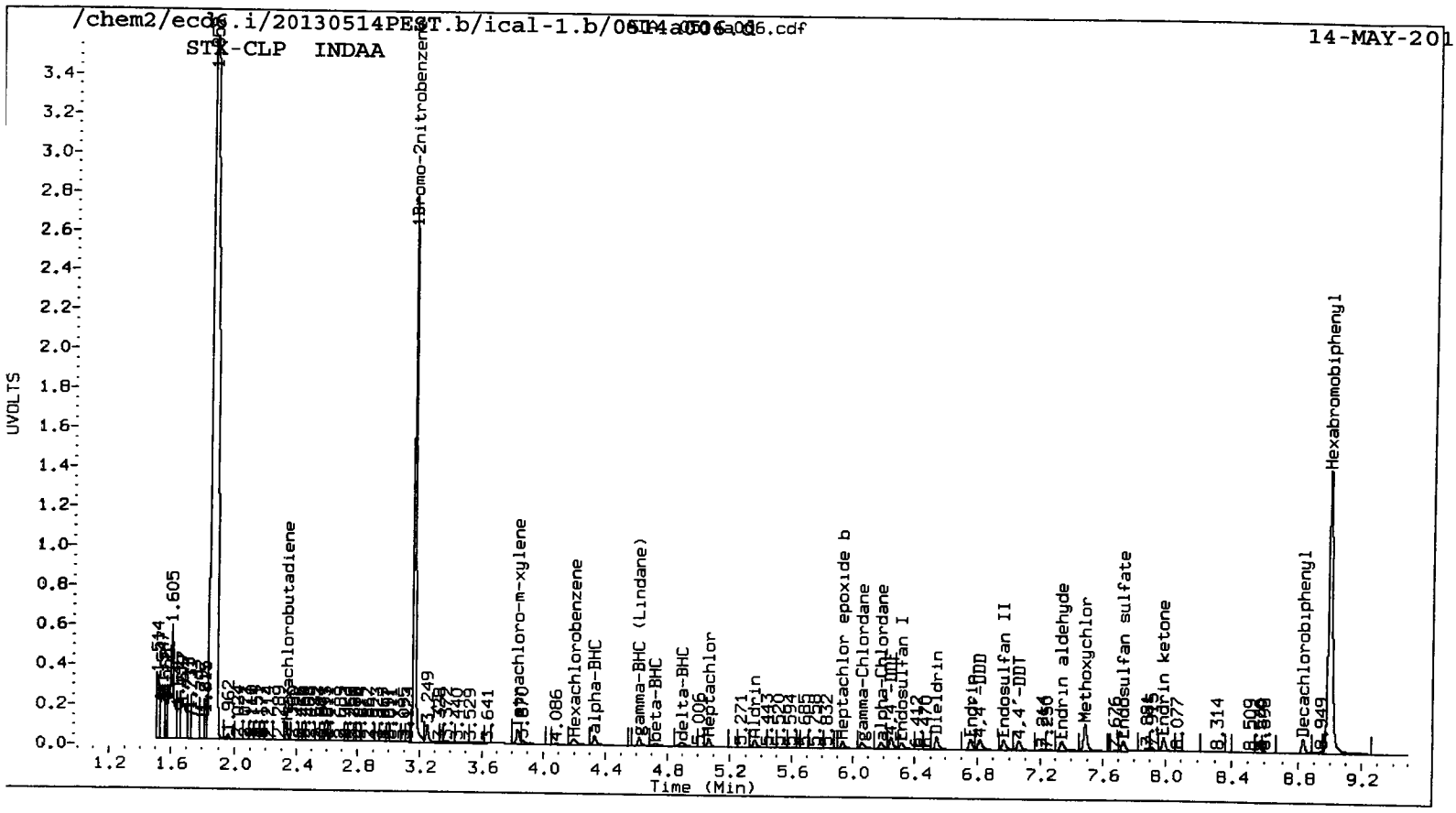
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5276720	-4.1
Hexabromobiphenyl	5319006	5051117	-5.0

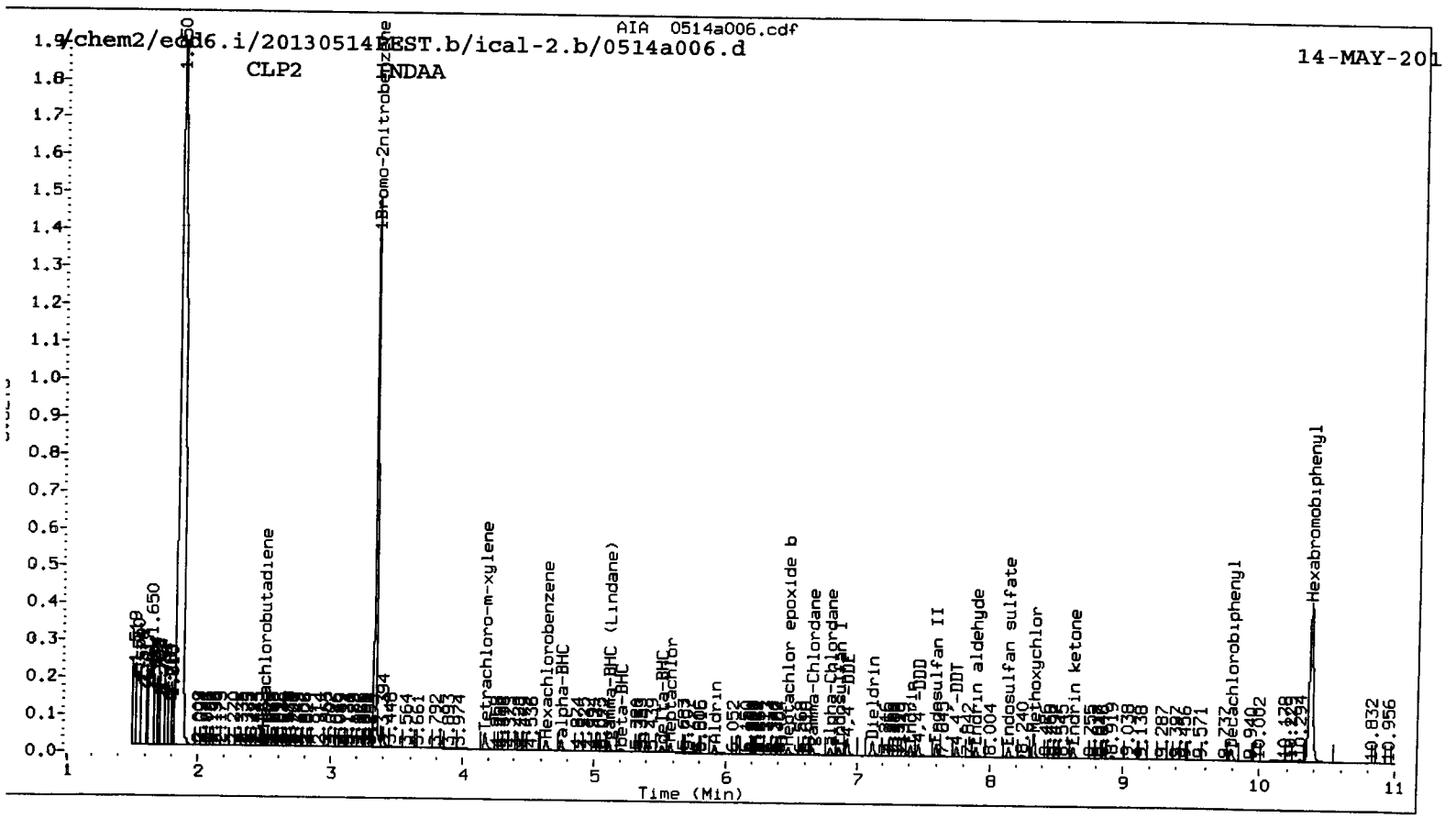
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	28661245	-1.4
Hexabromobiphenyl	16515704	16075431	-2.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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/20130514PEST.b/ical-1.b/0514a006.d
STX-CLP INDAA
14-MAY-201
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0514a006.cdf
/chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a006.d
CLP2 INDAA
14-MAY-201
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
Endosulfan I
Dieldrin
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/15/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a007.d ARI ID: INDAB
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a007.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Injection Date: 14-MAY-2013 15:17
Compound Sublist: INDA
Report Date: 05/15/2013 14:42
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
3.162	0.000	5534770	3.331	0.002	30201103	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.332	0.000	266227	4.756	0.005	1517399	2.2579	2.2373	0.9	alpha-BHC
4.720	0.000	118008	5.203	0.020	612573	2.5245	2.3480	7.2	beta-BHC
4.890	0.000	218264	5.512	0.017	1185561	2.2181	2.1284	4.1	delta-BHC
4.619	0.000	228671	5.116	0.006	1319610	2.2378	2.2424	0.2	gamma-BHC (Lindane)
5.066	0.000	234277	5.580	0.005	1383730	2.3589	2.4468	3.7	Heptachlor
5.360	0.000	228641	5.917	0.004	1265030	2.3257	2.3699	1.9	Aldrin
5.936	0.000	212631	6.472	0.005	1114482	2.3984	2.3839	0.6	Heptachlor epoxide b
6.314	0.000	211726	6.861	0.006	1030282	2.5168	2.3855	5.4	Endosulfan I
6.536	0.000	426547	7.118	0.005	2266016	4.7712	5.1487	7.6	Dieldrin
6.245	0.000	343175	6.923	0.008	2291185	4.7937	5.0106	4.4	4,4'-DDE
6.755	0.000	319855	7.407	0.004	1592938	4.5441	4.9036	7.6	Endrin
6.964	0.000	366093	7.598	0.006	1863085	4.7985	4.8883	1.9	Endosulfan II
6.812	0.000	385618	7.465	0.011	1902877	4.7792	4.9754	4.0	4,4'-DDD
7.730	0.000	324616	8.140	0.005	1497340	4.7423	4.8026	1.3	Endosulfan sulfate
7.062	0.000	322667	7.749	0.009	1455693	4.5130	4.6212	2.4	4,4'-DDT
7.486	0.000	844492	8.330	0.005	3337982	24.7235	27.4961	10.6	Methoxychlor
7.986	0.000	428395	8.631	0.005	1696063	4.9288	4.9952	1.3	Endrin ketone
7.341	0.000	312474	7.896	0.007	1503742	4.8686	4.9919	2.5	Endrin aldehyde
6.059	0.000	223194	6.657	0.007	1145536	2.3475	2.3379	0.4	gamma-Chlordane
6.182	0.000	205193	6.794	0.006	1052375	2.3205	2.3311	0.5	alpha-Chlordane
2.336	0.000	292983	2.493	0.000	1410088	2.3771	2.4861	4.5	Hexachlorobutadiene
4.195	0.000	240511	4.638	0.010	1712164	2.5794	2.4047	7.0	Hexachlorobenzene
8.998	0.000	5379091	10.371	0.000	17146317	80.0000	80.0000	0.0	Hexabromobiphenyl
3.842	0.000	354557	4.170	0.003	2476566	4.6983	5.0441	7.1	Tetrachloro-m-xylene
8.834	0.000	393452	9.792	0.002	1736343	5.1448	5.0128	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	11.7	12.6	11.7~	115- 0
Decachlorobiphenyl	12.9	12.5	12.5~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

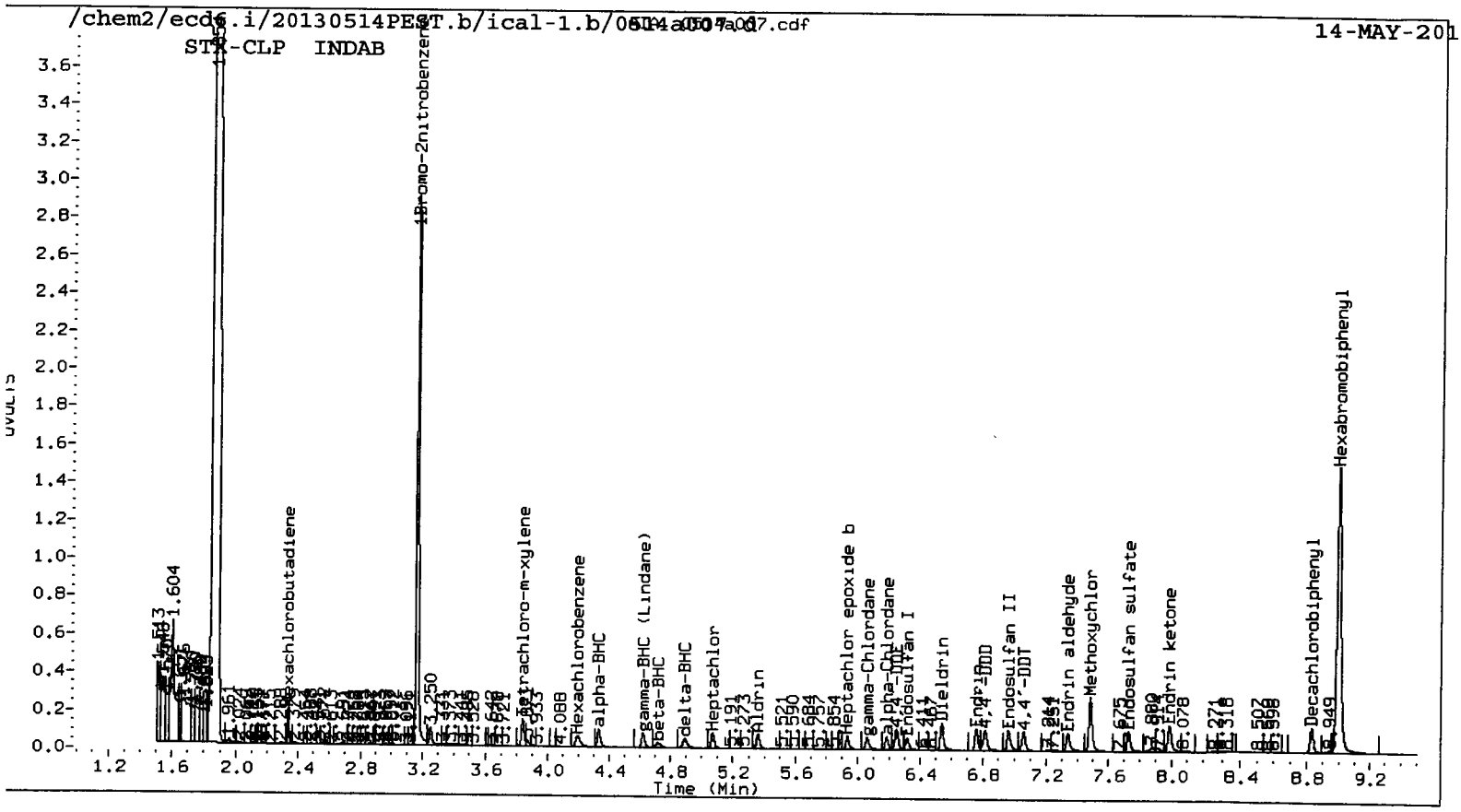
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5534770	0.6
Hexabromobiphenyl	5319006	5379091	1.1

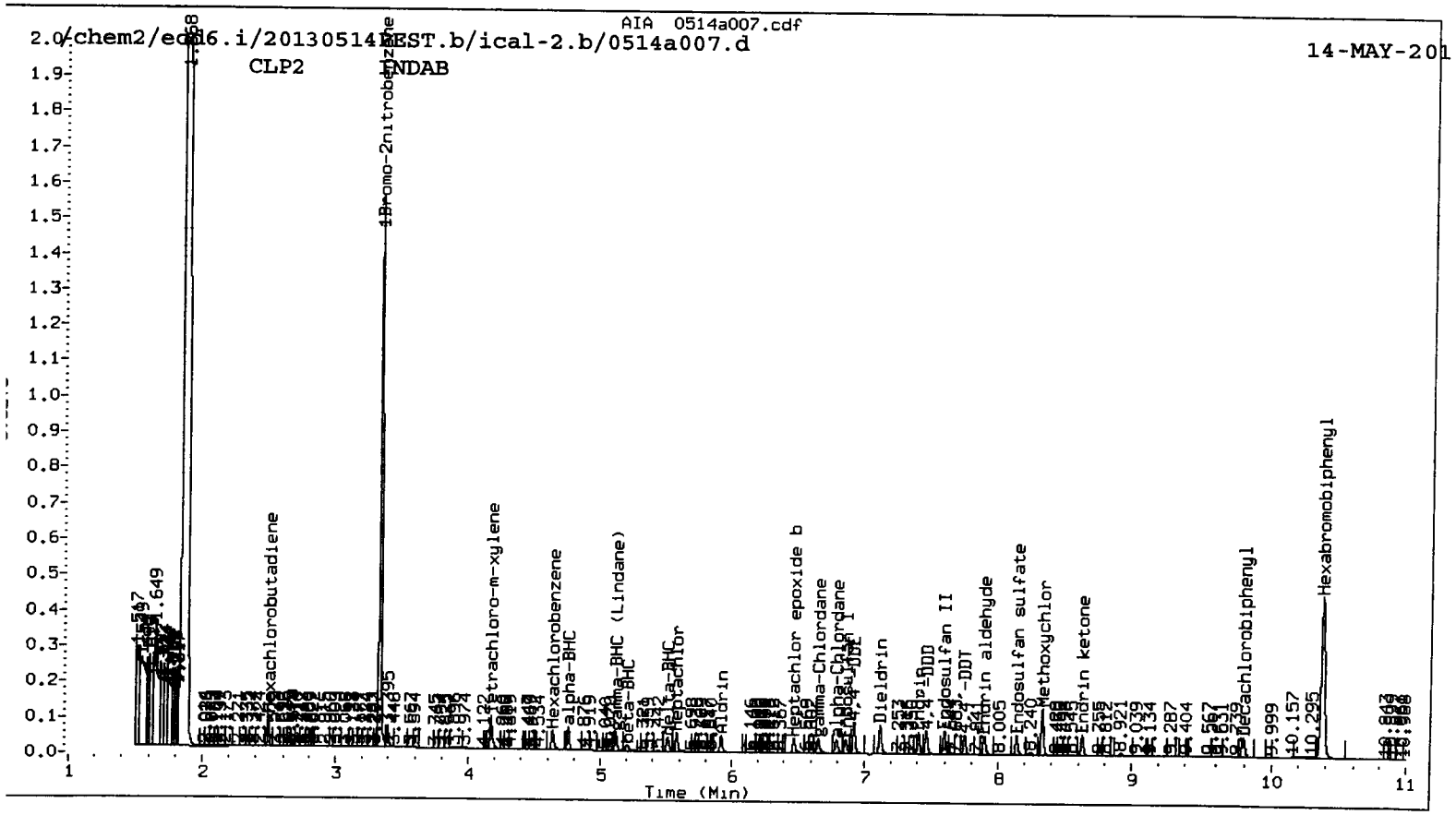
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	30201103	3.9
Hexabromobiphenyl	16515704	17146317	3.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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


/chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a007.d
AIA 0514a007.cdf
STX-CLP INDAB
14-MAY-201
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
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)


/chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a007.d
AIA 0514a007.cdf
CLP2 INDAB
14-MAY-201
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
Dieldrin
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/20130514PEST.b/ical-1.b/0514a008.d ARI ID: INDAC
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a008.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-MAY-2013 15:37
Compound Sublist: INDA Report Date: 05/15/2013 14:42
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

YZ 5/15/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.161	0.000	5478422	3.330	0.001	29972511	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.331	0.000	543471	4.756	0.004	3218177	4.6566	4.7811	2.6	alpha-BHC
4.712	0.000	230721	5.198	0.015	1239504	4.9864	4.7874	4.1	beta-BHC
4.882	0.000	451555	5.508	0.012	2555115	4.6360	4.6221	0.3	delta-BHC
4.618	0.000	470412	5.115	0.004	2764445	4.6509	4.7334	1.8	gamma-BHC (Lindane)
5.065	0.000	469047	5.579	0.004	2823616	4.7713	5.0310	5.3	Heptachlor
5.359	0.000	465290	5.917	0.004	2592438	4.7816	4.8938	2.3	Aldrin
5.934	0.000	423034	6.471	0.004	2294257	4.8207	4.9450	2.5	Heptachlor epoxide b
6.313	0.000	409103	6.860	0.004	2112396	4.9131	4.9283	0.3	Endosulfan I
6.534	0.000	864822	7.116	0.003	4479682	9.7730	10.2561	4.8	Dieldrin
6.241	0.000	673413	6.921	0.006	4676501	9.5035	10.3051	8.1	4,4'-DDE
6.753	0.000	657274	7.406	0.003	3232003	9.4374	10.1569	7.3	Endrin
6.962	0.000	701565	7.596	0.004	3770541	9.2939	10.0995	8.3	Endosulfan II
6.809	0.000	771416	7.464	0.010	3807006	9.6628	10.1619	5.0	4,4'-DDD
7.729	0.000	648297	8.138	0.004	3027616	9.5722	9.9135	3.5	Endosulfan sulfate
7.059	0.000	660441	7.748	0.007	2997363	9.3361	9.7141	4.0	4,4'-DDT
7.484	0.000	1638780	8.329	0.004	6359453	48.4899	53.4789	9.8	Methoxychlor
7.985	0.000	832294	8.630	0.003	3346715	9.6782	10.0626	3.9	Endrin ketone
7.339	0.000	613397	7.893	0.005	2968269	9.6593	10.0595	4.1	Endrin aldehyde
6.057	0.000	445784	6.656	0.006	2357637	4.7368	4.8483	2.3	gamma-Chlordane
6.180	0.000	412550	6.793	0.005	2175134	4.7134	4.8549	3.0	alpha-Chlordane
2.336	0.000	599069	2.492	-0.001	2759930	4.9106	4.9032	0.2	Hexachlorobutadiene
4.190	0.000	456923	4.635	0.008	3460369	4.9508	4.8970	1.1	Hexachlorobenzene
8.999	0.000	5322227	10.372	0.001	16795593	80.0000	80.0000	0.0	Hexabromobiphenyl
3.840	0.000	718422	4.168	0.002	4991895	9.6179	10.2447	6.3	Tetrachloro-m-xylene
8.833	0.000	789319	9.792	0.001	3346191	10.4314	9.8622	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	24.0	25.6	24.0~	115- 0
Decachlorobiphenyl	26.1	24.7	24.7~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

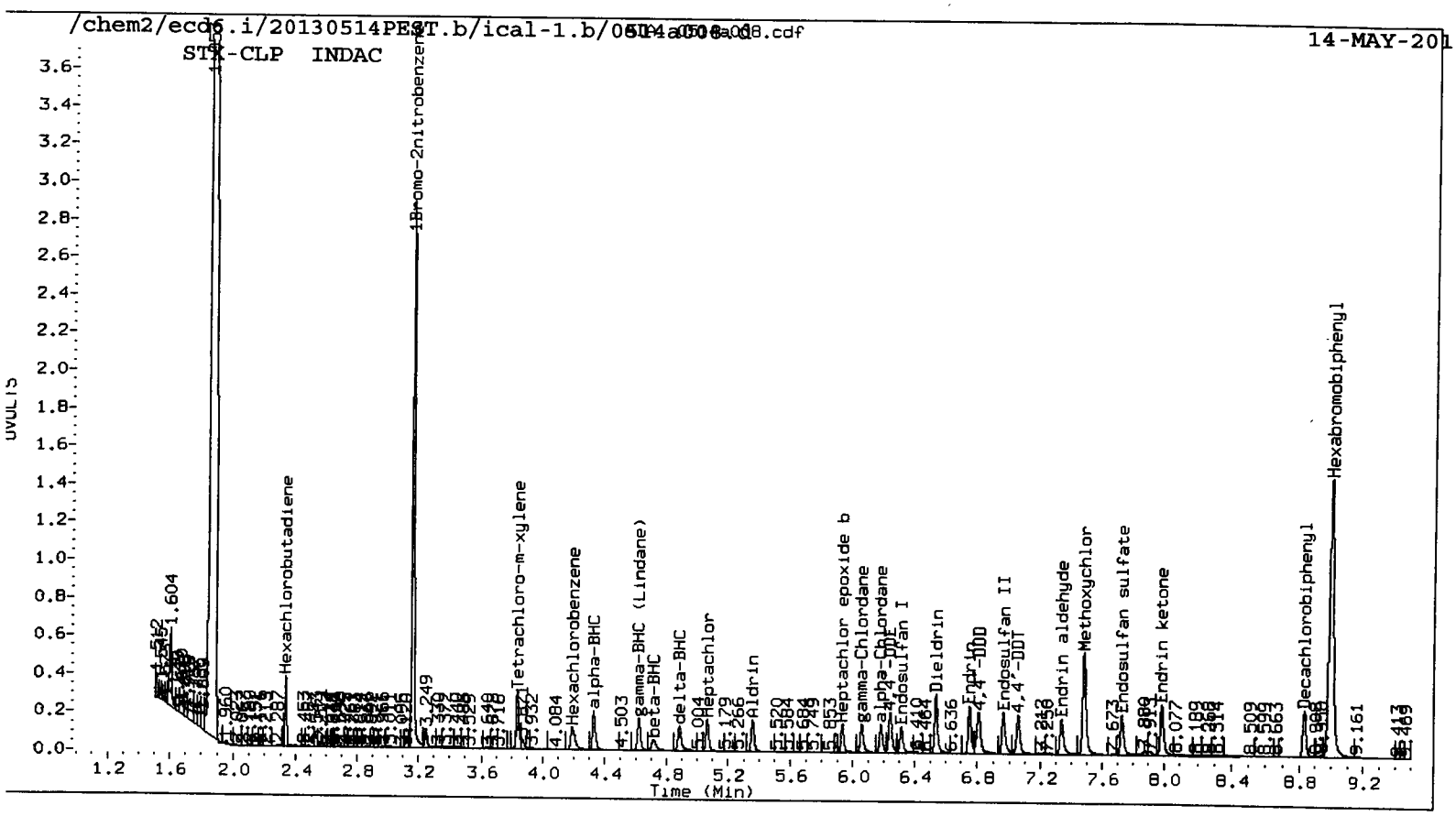
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5478422	-0.4
Hexabromobiphenyl	5319006	5322227	0.1

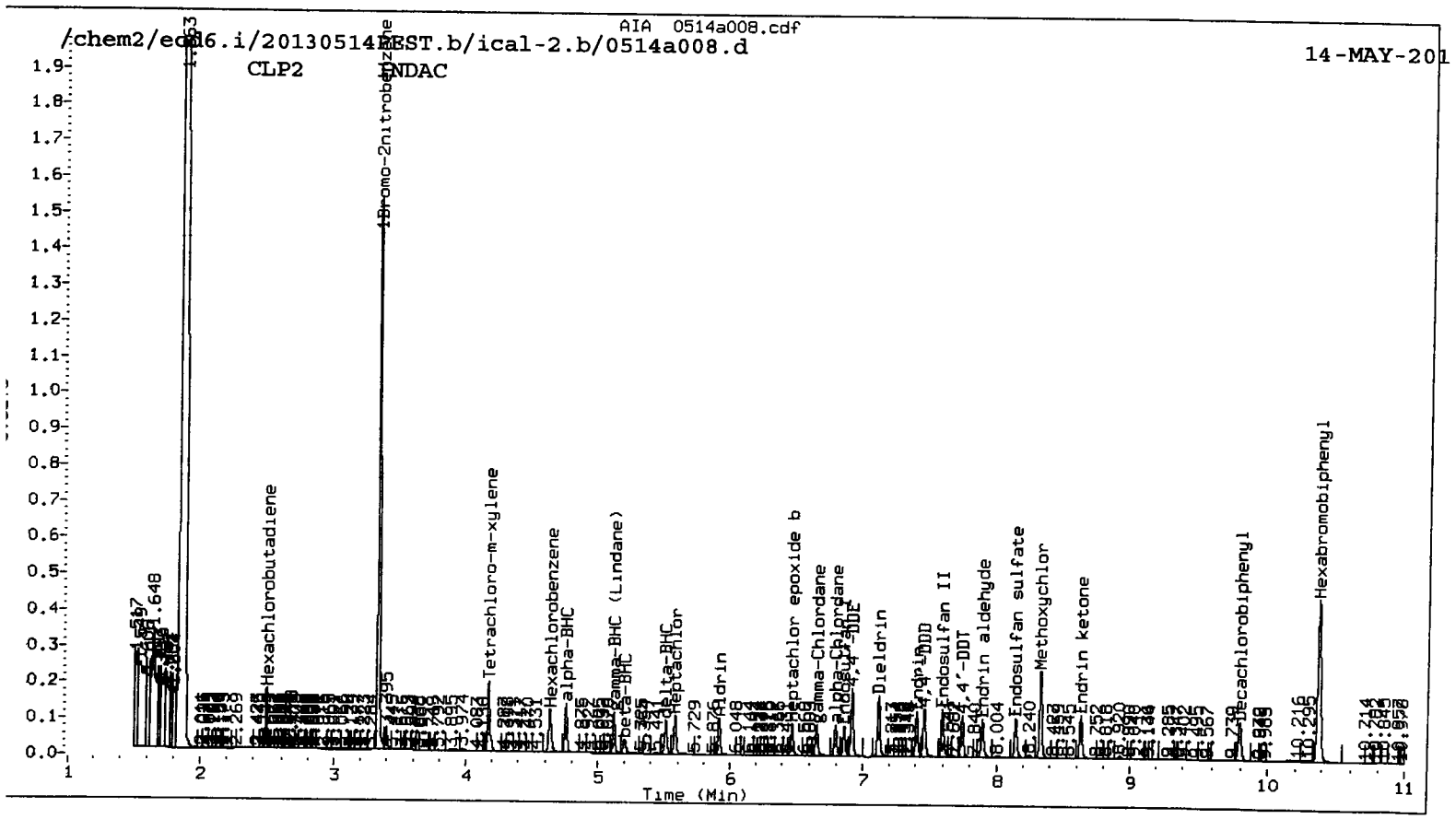
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29972511	3.1
Hexabromobiphenyl	16515704	16795593	1.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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


/chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a008.d
STX-CLP INDAC
14-MAY-201
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
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)


AIA 0514a008.cdf
/chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a008.d
CLP2 INDAC
14-MAY-201
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
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

WS91:01167

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a009.d ARI ID: INDAD
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a009.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-MAY-2013 15:56
Compound Sublist: INDA Report Date: 05/15/2013 14:42
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

YZ 5/16/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.160	0.000	5395940	3.329	0.000	29160968	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.328	0.000	1139950	4.752	0.001	6764016	9.9167	10.3287	4.1	alpha-BHC
4.702	0.000	437239	5.190	0.008	2539348	9.5942	10.0807	4.9	beta-BHC
4.872	0.000	976436	5.502	0.006	5532164	10.1781	10.2859	1.1	delta-BHC
4.614	0.000	993991	5.112	0.002	5818591	9.9777	10.2400	2.6	gamma-BHC (Lindane)
5.062	0.000	974450	5.577	0.002	5704997	10.0639	10.4478	3.7	Heptachlor
5.356	0.000	964900	5.915	0.002	5381877	10.0674	10.4422	3.7	Aldrin
5.931	0.000	870381	6.469	0.001	4640629	10.0700	10.2807	2.1	Heptachlor epoxide b
6.309	0.000	813681	6.857	0.002	4369749	9.9213	10.4786	5.5	Endosulfan I
6.531	0.000	1778022	7.114	0.001	8960153	20.3999	21.0850	3.3	Dieldrin
6.235	0.000	1352520	6.918	0.003	9396365	19.3792	21.2821	9.4	4,4'-DDE
6.750	0.000	1372588	7.404	0.001	6565999	20.2278	20.9695	3.6	Endrin
6.958	0.000	1492098	7.594	0.002	7794686	20.2876	21.2175	4.5	Endosulfan II
6.806	0.000	1559782	7.462	0.008	7589012	20.0530	20.5861	2.6	4,4'-DDD
7.726	0.000	1307738	8.137	0.003	6177871	19.8180	20.5573	3.7	Endosulfan sulfate
7.056	0.000	1383512	7.746	0.006	6251609	20.0731	20.5899	2.5	4,4'-DDT
7.482	0.000	3215078	8.327	0.002	11972694	97.6388	102.3181	4.7	Methoxychlor
7.982	0.000	1633514	8.629	0.002	6650933	19.4957	20.3222	4.2	Endrin ketone
7.336	0.000	1230206	7.892	0.003	5909701	19.8830	20.3533	2.3	Endrin aldehyde
6.052	0.000	935231	6.653	0.003	4883146	10.0894	10.3212	2.3	gamma-Chlordane
6.176	0.000	862198	6.790	0.002	4531641	10.0012	10.3961	3.9	alpha-Chlordane
2.336	0.000	1201598	2.492	-0.001	5605387	10.0001	10.2355	2.3	Hexachlorobutadiene
4.186	0.000	893552	4.631	0.004	7065810	9.8298	10.2776	4.5	Hexachlorobenzene
8.998	0.000	5185525	10.370	-0.001	16527116	80.0000	80.0000	0.0	Hexabromobiphenyl
3.837	0.000	1478146	4.165	-0.001	9919999	20.0912	20.9251	4.1	Tetrachloro-m-xylene
8.832	0.000	1420049	9.790	0.000	6607102	19.2617	19.7893	2.7	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	50.2	52.3	50.2~	115- 0
Decachlorobiphenyl	48.2	49.5	48.2~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5395940	-1.9
Hexabromobiphenyl	5319006	5185525	-2.5

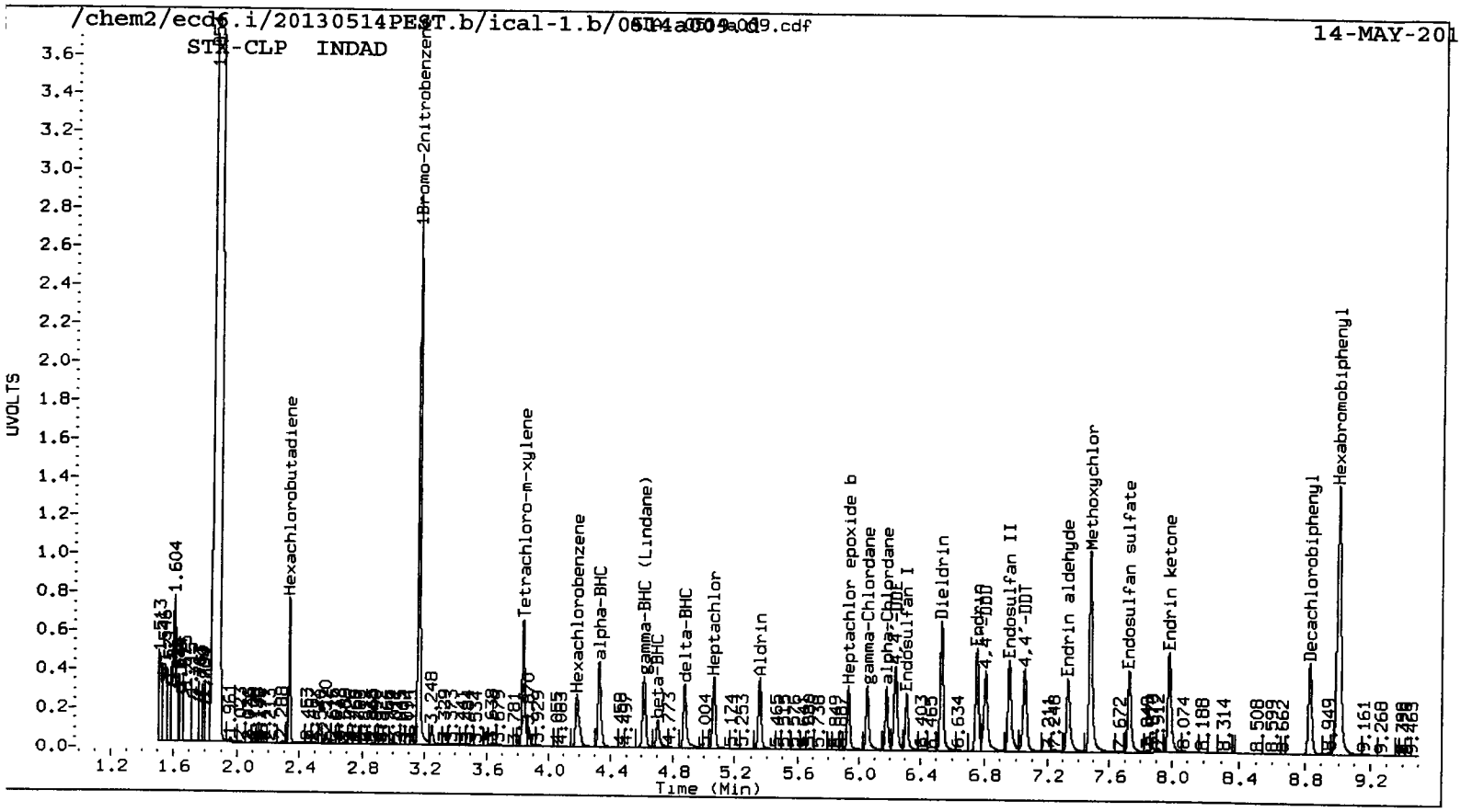
Column 2

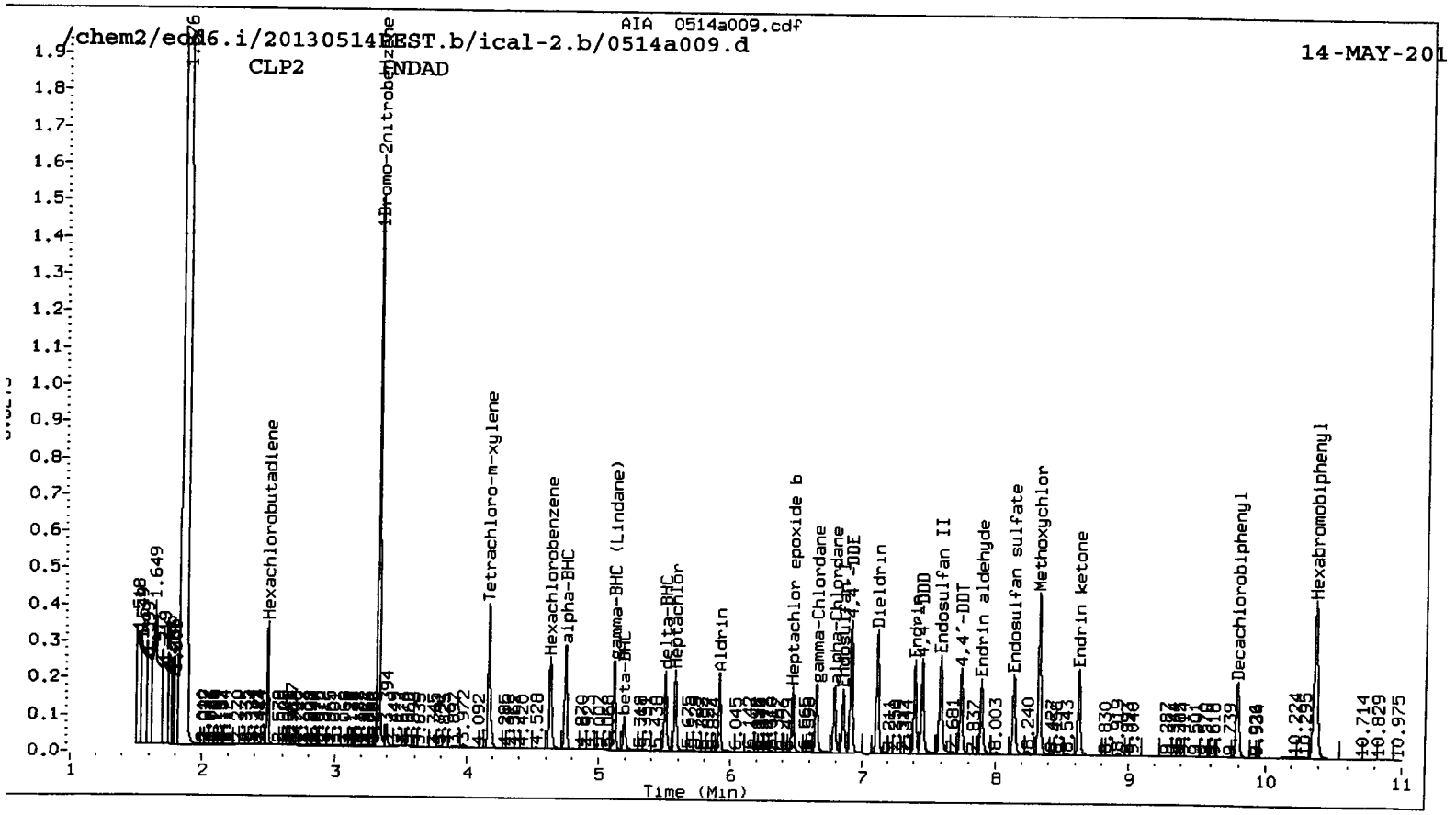
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29160968	0.3
Hexabromobiphenyl	16515704	16527116	0.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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

WSS1 : 01159


/chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a009.d
AIA 0514a009.cdf
14-MAY-201
STR-CLP INDAD
UVOLTS
Time (Min)
1.604
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/20130514PEST.b/ical-2.b/0514a009.d
AIA 0514a009.cdf
14-MAY-201
CLP2 INDAD
Time (Min)
1.649
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/20130514PEST.b/ical-1.b/0514a010.d ARI ID: INDAF YZ 5/15/13
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a010.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 14-MAY-2013 16:16
Report Date: 05/15/2013 14:42
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
3.161	0.000	5385380	3.330	0.001	29405183	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.329	0.000	4696911	4.754	0.002	27061082	40.9398	40.9793	0.1	alpha-BHC
4.692	0.000	1701444	5.186	0.003	10136932	37.4075	39.9074	6.5	beta-BHC
4.863	0.000	3978478	5.498	0.003	23133964	41.5521	42.6555	2.6	delta-BHC
4.614	0.000	4085589	5.113	0.002	23391530	41.0915	40.8243	0.7	gamma-BHC (Lindane)
5.063	0.000	3795342	5.577	0.002	20834563	39.2741	37.8382	3.7	Heptachlor
5.357	0.000	3846389	5.916	0.002	20316416	40.2106	39.0916	2.8	Aldrin
5.931	0.000	3339340	6.470	0.002	17351838	38.7107	38.1214	1.5	Heptachlor epoxide
6.309	0.000	3024165	6.857	0.002	16389635	36.9463	38.9756	5.3	Endosulfan I
6.531	0.000	6747354	7.115	0.002	31142629	77.5666	72.6760	6.5	Dieldrin
6.232	0.000	5405842	6.916	0.002	32945159	77.6079	73.9986	4.8	4,4'-DDE
6.749	0.000	5376621	7.404	0.001	23448845	81.8151	75.3121	8.3	Endrin
6.956	0.000	5676334	7.593	0.001	27244763	79.6922	74.5822	6.6	Endosulfan II
6.795	0.000	5912865	7.457	0.003	27089075	78.4926	73.8989	6.0	4,4'-DDD
7.725	0.000	5052560	8.136	0.002	23046636	79.0614	77.1240	2.5	Endosulfan sulfate
7.049	0.000	5526006	7.743	0.003	24090708	82.7862	79.7934	3.7	4,4'-DDT
7.478	0.000	12130490	8.326	0.001	39111410	380.3859	336.1400	12.4	Methoxychlor
7.981	0.000	6149035	8.628	0.002	24093264	75.7772	74.0354	2.3	Endrin ketone
7.334	0.000	4628640	7.891	0.002	21449280	77.2455	74.2914	3.9	Endrin aldehyde
6.051	0.000	3689472	6.652	0.002	18814044	39.8806	39.4359	1.1	gamma-Chlordane
6.175	0.000	3440149	6.790	0.002	17441880	39.9828	39.6812	0.8	alpha-Chlordane
2.336	0.000	4612620	2.493	-0.001	20730266	38.4630	37.5391	2.4	Hexachlorobutadiene
4.183	0.000	3303966	4.630	0.003	26512574	36.4174	38.2438	4.9	Hexachlorobenzene
8.999	0.000	5022010	10.372	0.001	16433920	80.0000	80.0000	0.0	Hexabromobiphenyl
3.837	0.000	5807812	4.166	0.000	35671955	79.0956	74.6210	5.8	Tetrachloro-m-xylen
8.832	0.000	5000587	9.791	0.001	24460912	70.0370	73.6798	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	197.7	186.6	186.6~	115- 0
Decachlorobiphenyl	175.1	184.2	175.1~	115- 0

~ Indicates recovery outside QC Limits

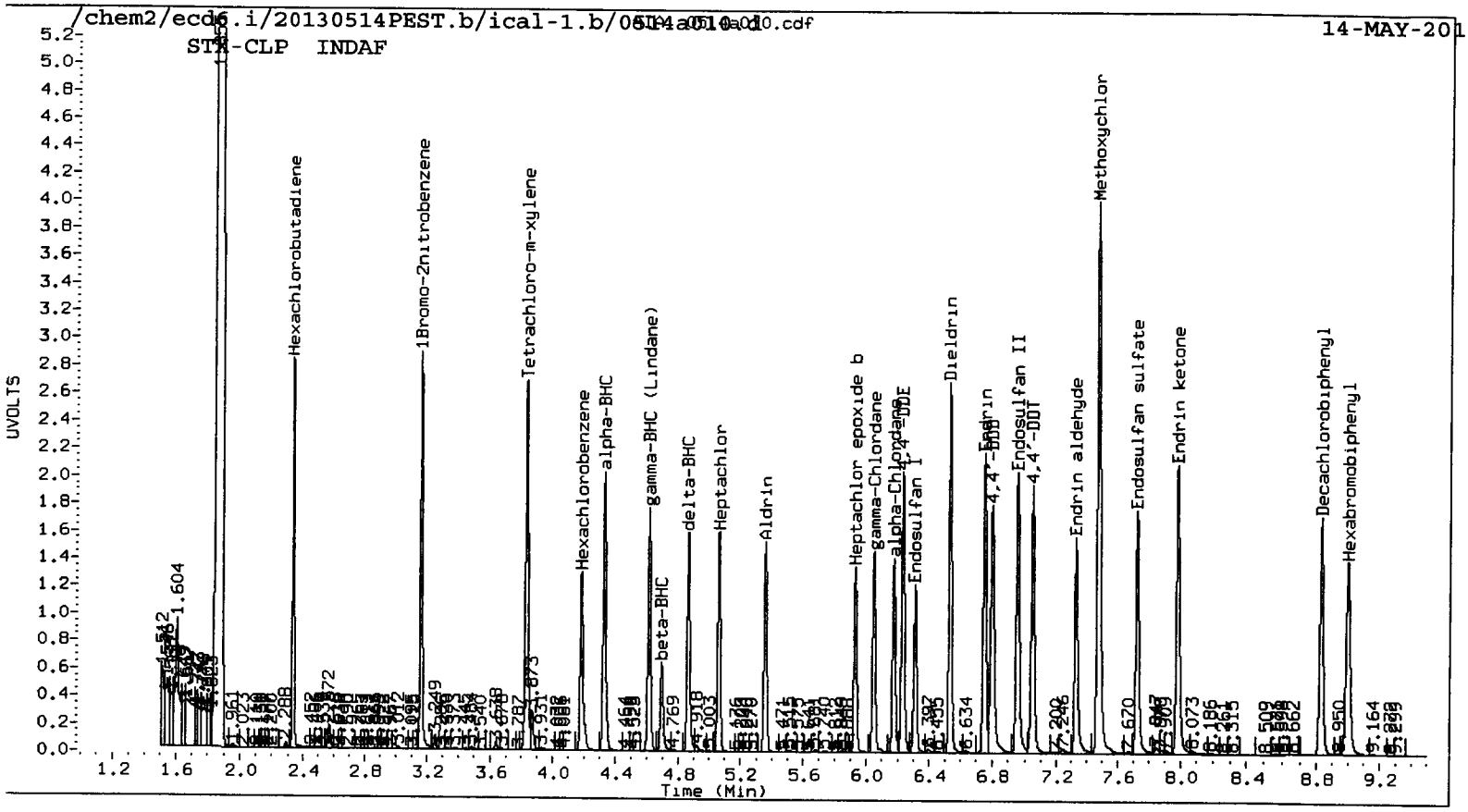
INTERNAL STANDARD SUMMARY

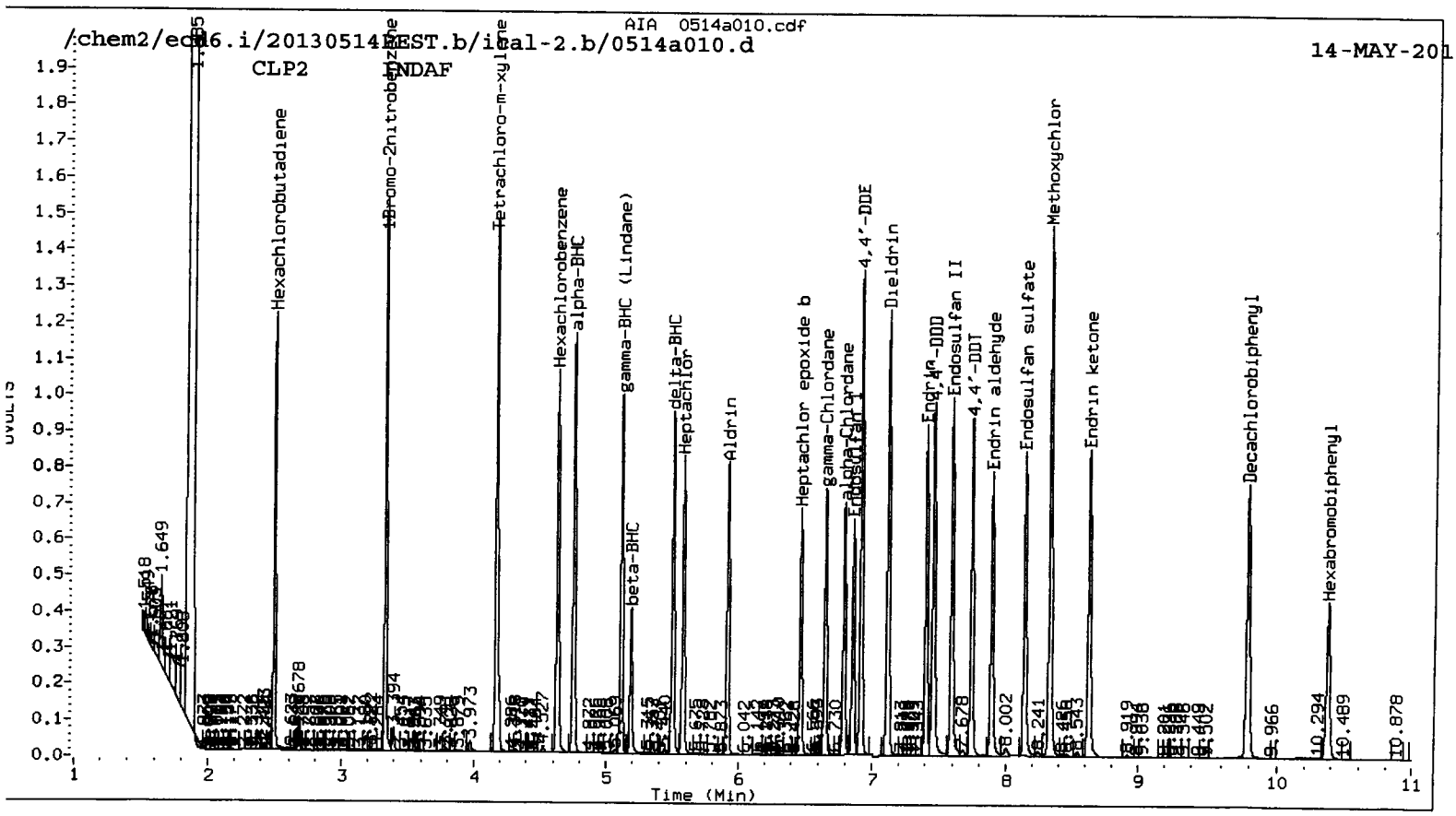
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5385380	-2.1
Hexabromobiphenyl	5319006	5022010	-5.6

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29405183	1.2
Hexabromobiphenyl	16515704	16433920	-0.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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/20130514PEST.b/ical-1.b/0514a010.d
STR-CLP INDAF
14-MAY-201
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


/chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a010.d
AIA 0514a010.cdf
CLP2 INDAF
14-MAY-201
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/20130514PEST.b/ical-1.b/0514a011.d ARI ID: INDAG
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a011.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

YZ 5/15/13

Injection Date: 14-MAY-2013 16:34
Report Date: 05/15/2013 14:42
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
3.160	0.000	4447256	3.329	0.000	24971444	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.326	0.000	9083784	4.752	0.000	52093305	95.8791	92.8926	3.2	alpha-BHC
4.687	0.000	3211079	5.183	0.000	19100075	85.4901	88.5447	3.5	beta-BHC
4.858	0.000	7706224	5.495	0.000	44662411	97.4634	96.9723	0.5	delta-BHC
4.611	0.000	7871237	5.111	0.000	45626240	95.8659	93.7681	2.2	gamma-BHC (Lindane)
5.059	0.000	7087765	5.575	0.000	37258776	88.8156	79.6810	10.8	Heptachlor
5.353	0.000	7220609	5.913	0.000	36992672	91.4082	83.8170	8.7	Aldrin
5.928	0.000	6194985	6.467	0.000	31134002	86.9630	80.5449	7.7	Heptachlor epoxide
6.306	0.000	5598549	6.855	0.000	29247673	82.8257	81.9022	1.1	Endosulfan I
6.528	0.000	12502052	7.113	0.000	54988789	174.0391	151.1088	14.1	Dieldrin
6.229	0.000	10496099	6.915	0.000	57928305	182.4713	153.2156	17.4	4,4'-DDE
6.747	0.000	10042433	7.403	0.000	41365984	183.4598	157.9933	14.9	Endrin
6.953	0.000	10678636	7.592	0.000	49010258	179.9873	159.5478	12.0	Endosulfan II
6.787	0.000	11100345	7.454	0.000	49710150	176.9071	161.2653	9.3	4,4'-DDD
7.721	0.000	9557351	8.134	0.000	42103099	179.5431	167.5514	6.9	Endosulfan sulfate
7.043	0.000	10582072	7.740	0.000	46034366	190.3247	181.3223	4.8	4,4'-DDT
7.474	0.000	23588324	8.325	0.000	67383324	888.0169	688.6854	25.3	Methoxychlor
7.977	0.000	11642474	8.627	0.000	44431774	172.2483	162.3638	5.9	Endrin ketone
7.330	0.000	8671066	7.889	0.000	38887201	173.7281	160.1712	8.1	Endrin aldehyde
6.048	0.000	6888968	6.650	0.000	34534060	90.1728	85.2387	5.6	gamma-Chlordane
6.172	0.000	6448867	6.788	0.000	32141725	90.7618	86.1074	5.3	alpha-Chlordane
2.336	0.000	8840303	2.493	0.000	39128589	89.2662	83.4361	6.8	Hexachlorobutadiene
4.179	0.000	6184773	4.627	0.000	49853539	82.5509	84.6808	2.5	Hexachlorobenzene
8.999	0.000	4183112	10.371	0.000	13819406	80.0000	80.0000	0.0	Hexabromobiphenyl
3.835	0.000	10900686	4.166	0.000	61416989	179.7703	151.2874	17.2	Tetrachloro-m-xyl
8.830	0.000	9451613	9.791	0.000	46527110	158.9243	166.6610	4.8	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	449.4	378.2	378.2~	115- 0
Decachlorobiphenyl	397.3	416.7	397.3~	115- 0

~ Indicates recovery outside QC Limits

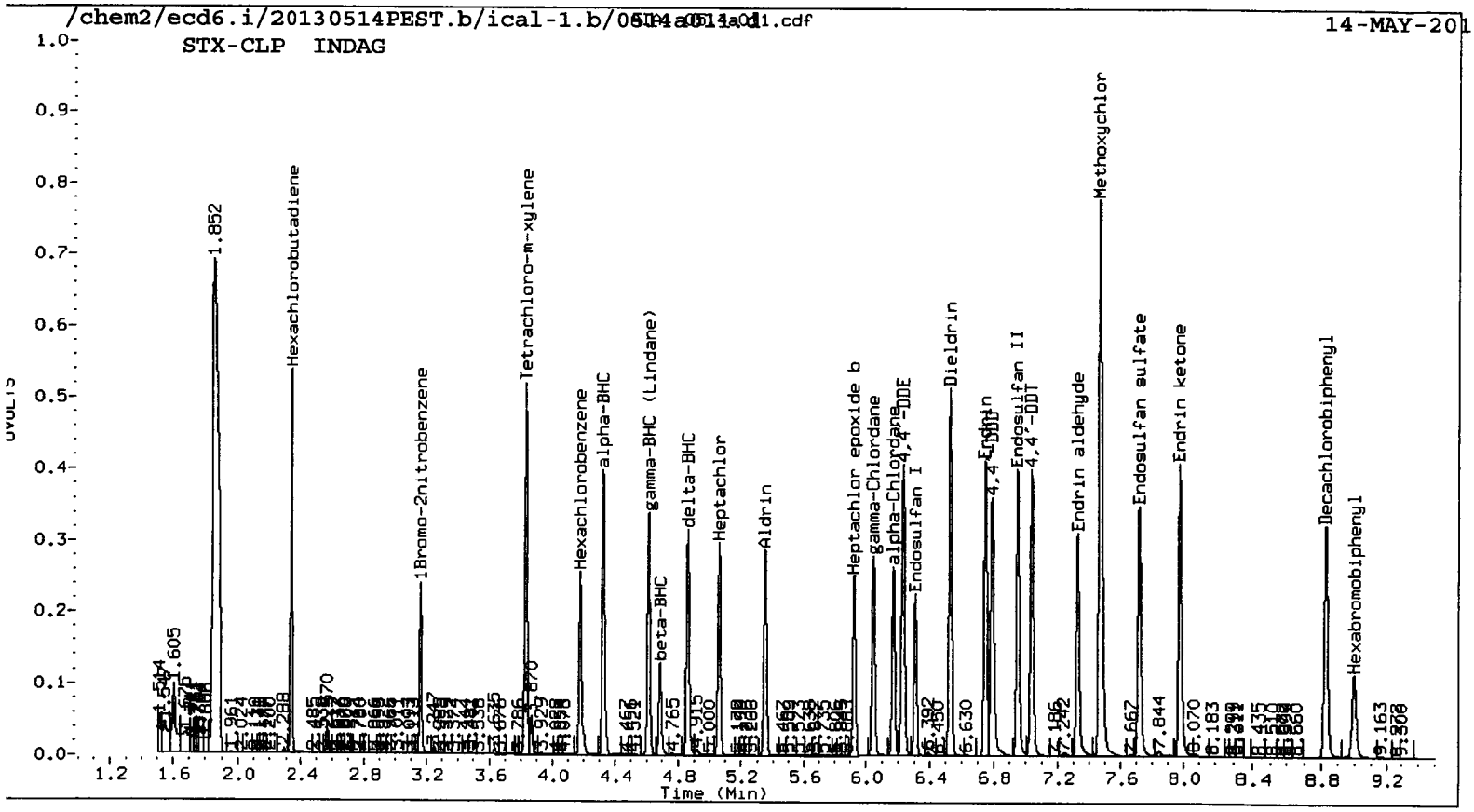
INTERNAL STANDARD SUMMARY

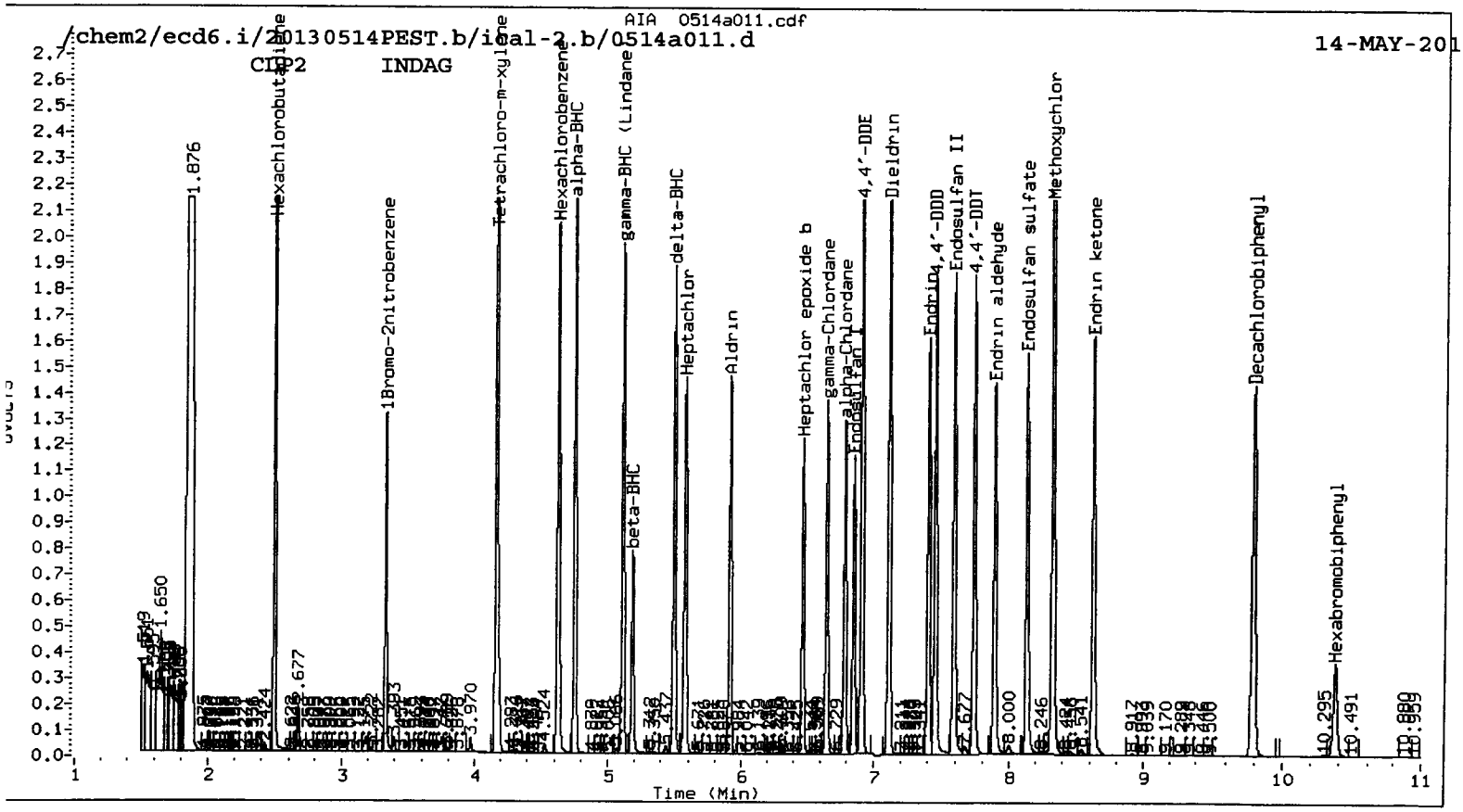
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	4447256	-19.2
Hexabromobiphenyl	5319006	4183112	-21.4

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	24971444	-14.1
Hexabromobiphenyl	16515704	13819406	-16.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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


/chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a011.cdf
14-MAY-201
STX-CLP INDAG
UVOLTS
1.852
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
Time (Min)


/chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a011.d
AIA 0514a011.cdf
14-MAY-201
CLP2 INDAG
UVOLTS
1.876
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
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/15/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a013.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a013.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m
Injection Date: 14-MAY-2013 17:12
Compound Sublist: TOXAPH
Report Date: 05/15/2013 14:43
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
3.160	0.000	5170972	3.329	0.000	29085221	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.999	0.000	5171544	10.371	0.000	16639283	80.0000	80.0000	0.0	Hexabromobiphenyl
3.837	0.003	2463544	4.165	-0.001	18029402	34.9417	38.1300	8.7	Tetrachloro-m-xylen
8.832	0.002	2745039	9.792	0.001	12769214	37.3347	37.9880	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	87.4	95.3	87.4~	150- 0
Decachlorobiphenyl	93.3	95.0	93.3~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

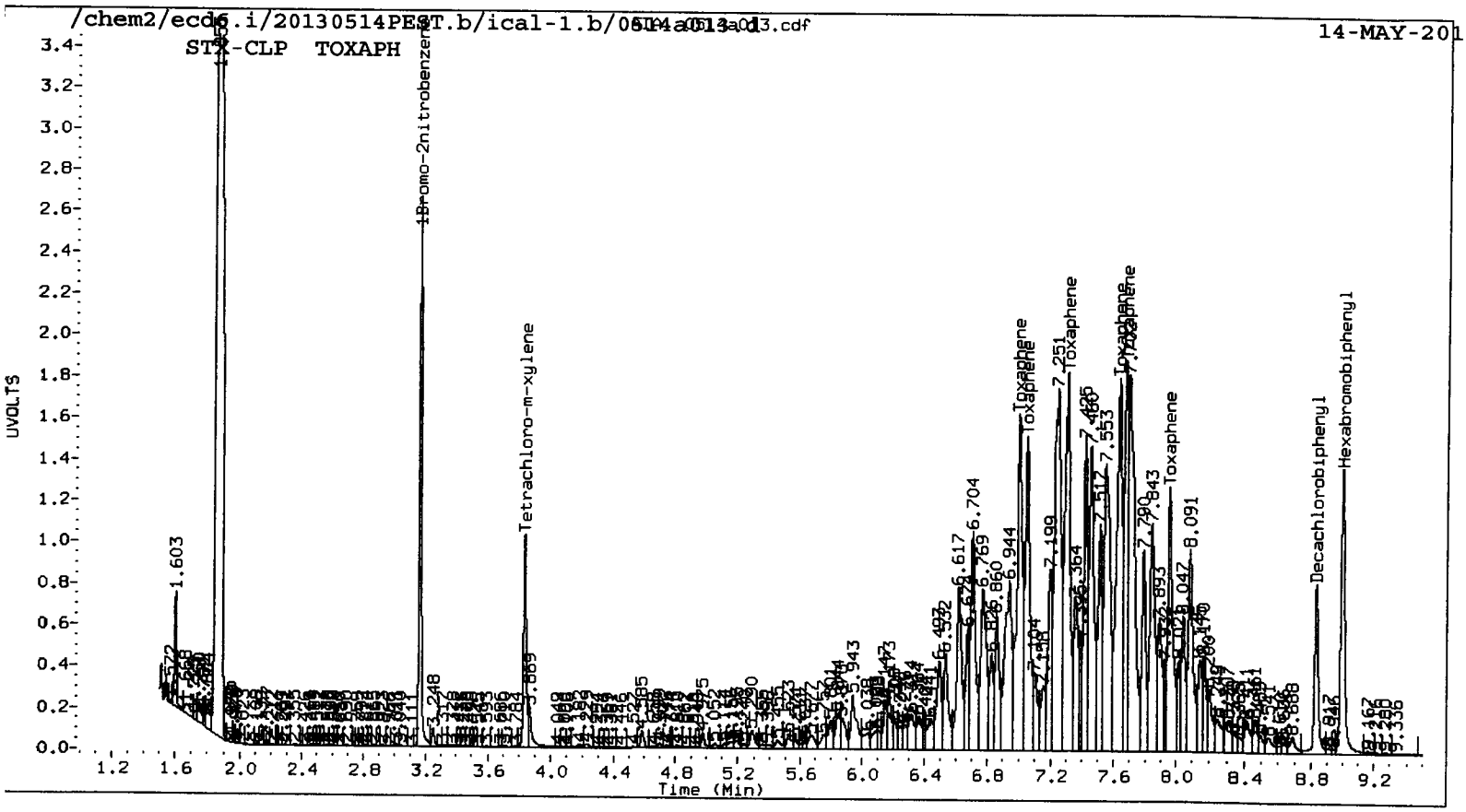
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5170972	-6.0
Hexabromobiphenyl	5319006	5171544	-2.8

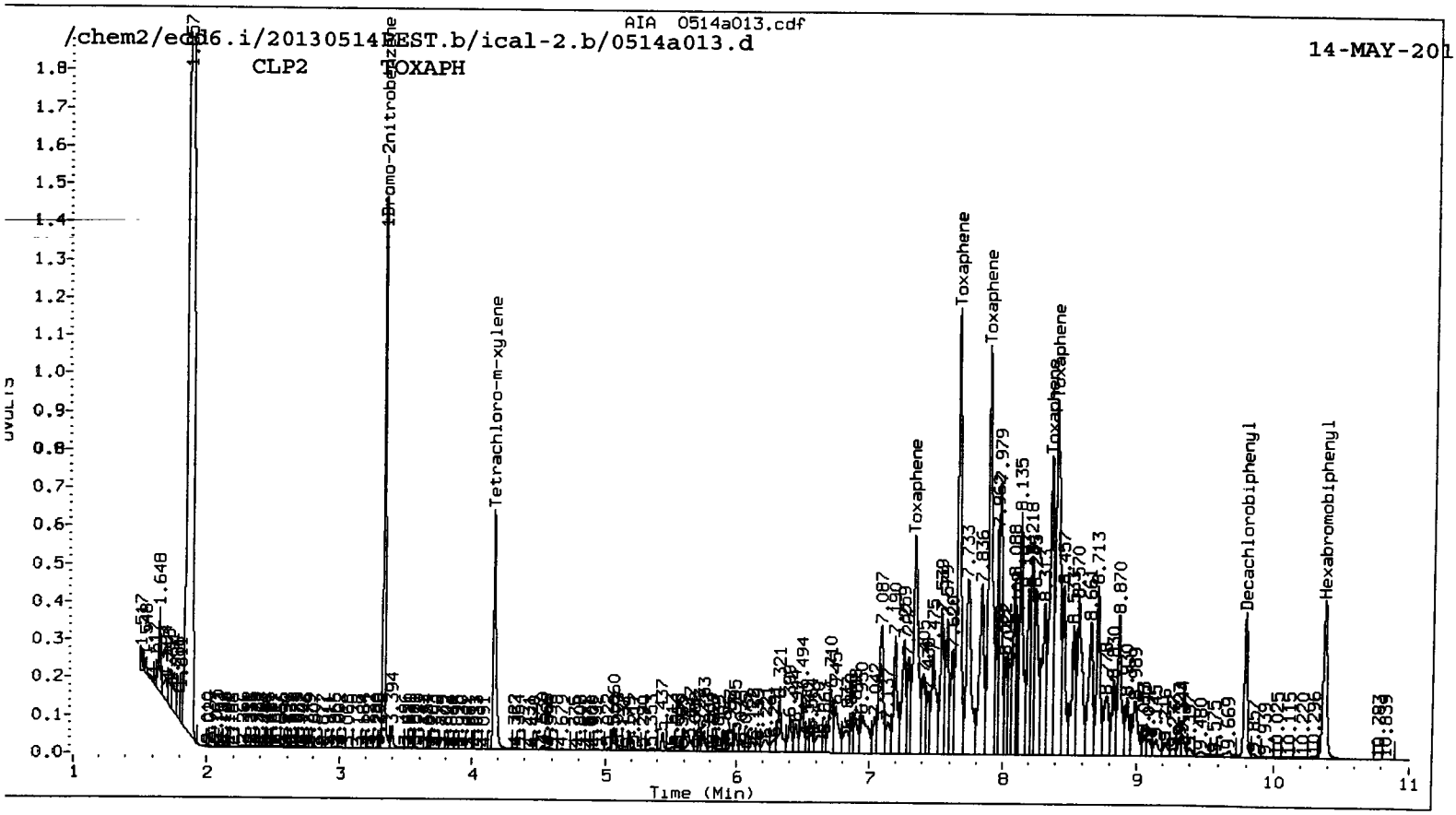
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29085221	0.1
Hexabromobiphenyl	16515704	16639283	0.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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	7.006	0.000	8045822	2500.0	1	7.338	0.000	30225007	2500.0
Toxaphene	2	7.057	0.000	6231410	2500.0	2	7.664	0.000	44930131	2500.0
Toxaphene	3	7.314	0.000	9313581	2500.0	3	7.894	0.000	48107139	2500.0
Toxaphene	4	7.640	0.000	8735760	2500.0	4	8.363	0.000	34031049	2500.0
Toxaphene	5	7.681	0.000	6192990	2500.0	5	8.401	0.000	44737734	2500.0
Toxaphene	6	7.961	0.000	5478732	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


/chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a013.d
AIA 0514a013.cdf
14-MAY-201
ST2-CLP TOXAPH
4Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)


/chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a013.d
AIA 0514a013.cdf
14-MAY-201
CLP2 TOXAPH
4Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 5/16/13

Data file 1: /chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a012.d ARI ID: INDAICV
Data file 2: /chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a012.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 14-MAY-2013 16:54
Compound Sublist: INDA Report Date: 05/16/2013 12:55
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
3.162	0.000	5229139	3.331	0.001	29203550	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.331	0.000	4591630	4.755	0.003	26999593	41.2179	41.1684	0.1	alpha-BHC
4.708	-0.015	1792584	5.197	0.014	10448458	40.5888	41.4178	2.0	beta-BHC
4.882	0.022	3879613	5.509	0.014	21726867	41.7302	40.3376	3.4	delta-BHC
4.617	-0.001	3908034	5.114	0.004	23234633	40.4801	40.8304	0.9	gamma-BHC (Lindane)
5.064	0.000	3722436	5.579	0.004	21669499	39.6706	39.6263	0.1	Heptachlor
5.359	0.000	3844529	5.916	0.003	20810347	41.3920	40.3184	2.6	Aldrin
5.933	-0.002	3258516	6.471	0.004	17450909	38.9024	38.6037	0.8	Heptachlor epoxide
6.313	-0.002	3463827	6.859	0.004	16375535	43.5821	39.2110	10.6	Endosulfan I
6.534	-0.002	3468526	7.116	0.003	17381588	41.0650	40.8426	0.5	Dieldrin
6.252	0.004	3415443	6.926	0.011	17667309	50.4982	39.9568	23.3	4,4'-DDE
6.753	-0.002	2584296	7.406	0.003	12436481	38.9320	39.8967	2.4	Endrin
6.963	-0.002	2790296	7.597	0.005	14886672	38.7828	40.7048	4.8	Endosulfan II
6.812	0.000	3064870	7.465	0.011	14854516	40.2794	40.4761	0.5	4,4'-DDD
7.729	-0.001	2508266	8.139	0.005	11996679	38.8568	40.0995	3.1	Endosulfan sulfate
7.062	0.000	2701822	7.749	0.009	12175344	40.0722	40.2805	0.5	4,4'-DDT
7.490	0.003	1272077	8.331	0.006	5107174	39.4912	43.8423	10.4	Methoxychlor
7.985	-0.002	2977417	8.631	0.004	12316529	36.3255	37.8032	4.0	Endrin ketone
7.340	-0.002	2247383	7.894	0.006	11004894	37.1310	38.0722	2.5	Endrin aldehyde
6.057	-0.003	3572622	6.656	0.006	18499116	39.7714	39.0435	1.8	gamma-Chlordane
6.179	-0.003	3331051	6.792	0.004	17217290	39.8715	39.4406	1.1	alpha-Chlordane
2.356	0.020	10785	2.481	-0.012	5157	0.0926	0.0094	163.1*	Hexachlorobutadiene
4.186	-0.011	36977	4.635	0.007	5355	0.4198	0.0078	192.7*	Hexachlorobenzene
9.001	0.003	5072678	10.372	0.001	16453002	80.0000	80.0000	0.0	Hexabromobiphenyl
3.840	-0.002	2680346	4.168	0.001	18925047	37.5939	39.8620	5.9	Tetrachloro-m-xylen
8.835	0.001	2583146	9.794	0.003	12580025	35.8175	37.8489	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	94.0	99.7	94.0~	115- 0
Decachlorobiphenyl	89.5	94.6	89.5~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

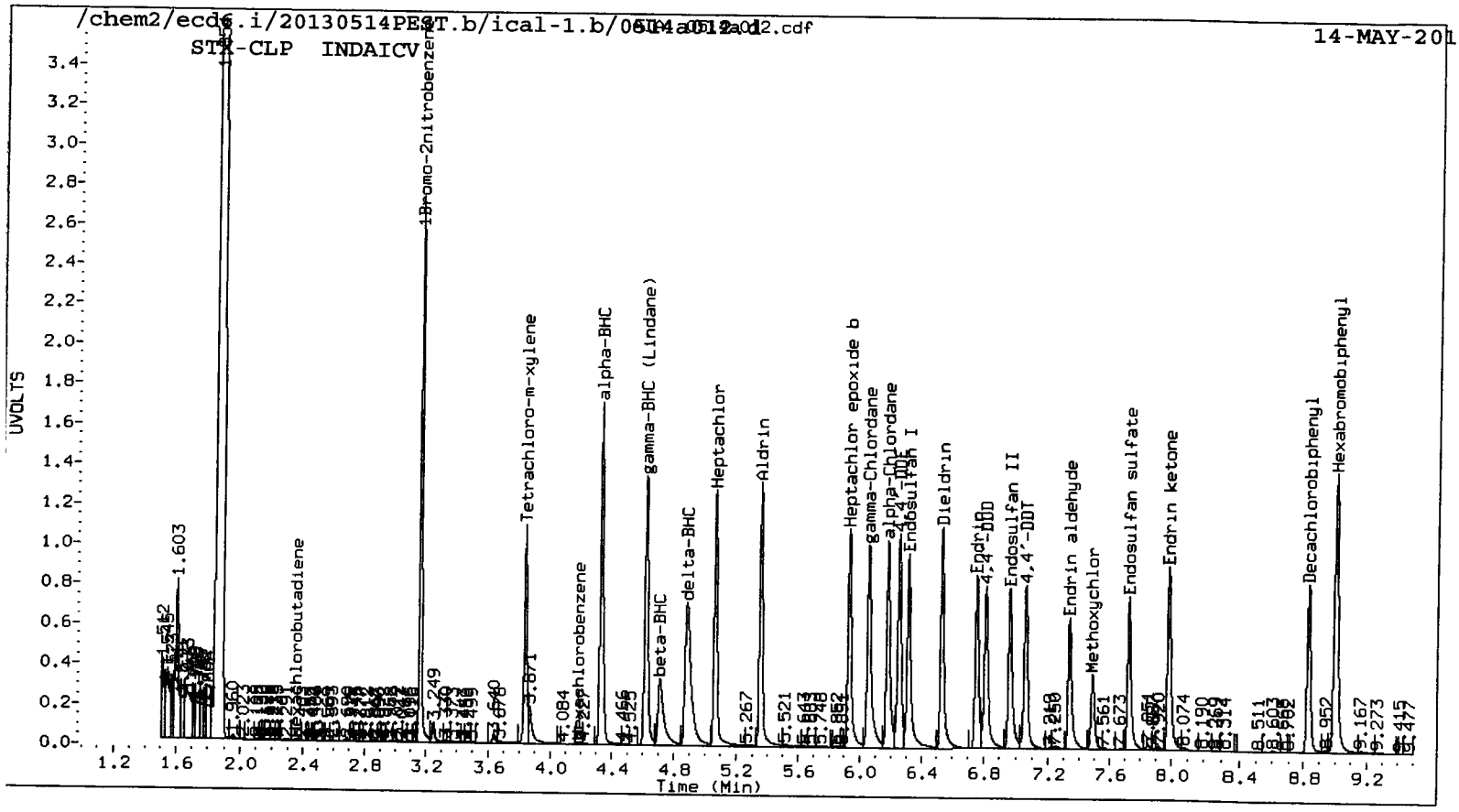
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5229139	-4.9
Hexabromobiphenyl	5319006	5072678	-4.6

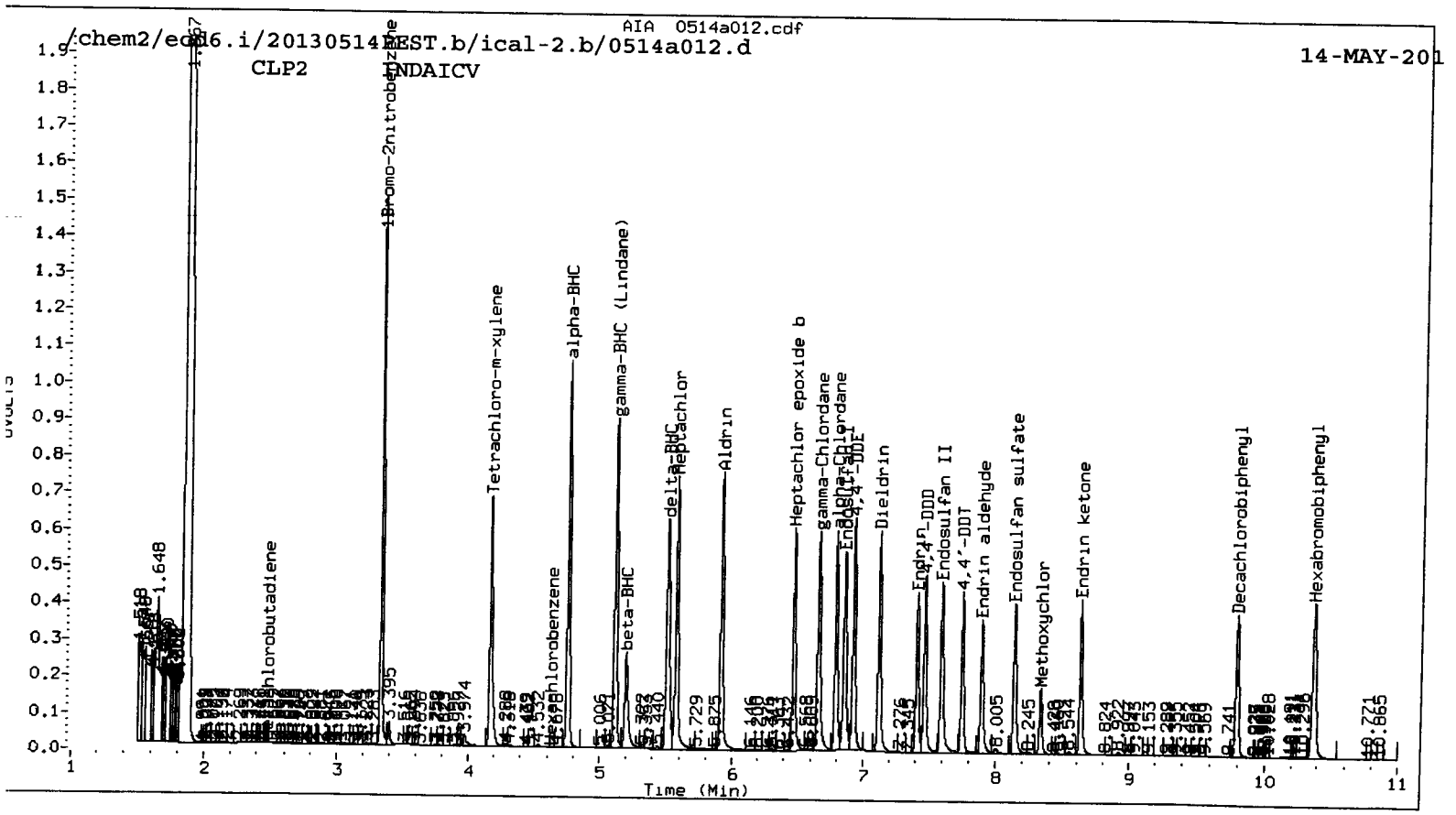
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29203550	0.5
Hexabromobiphenyl	16515704	16453002	-0.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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


/chem2/ecd6.i/20130514PEST.b/ical-1.b/0514a012.d
STX-CLP INDAICV
14-MAY-201
UVOLTS
Time (Min)
1.603
1Bromo-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


AIA 0514a012.cdf
/chem2/ecd6.i/20130514PEST.b/ical-2.b/0514a012.d
CLP2 INDAICV
14-MAY-201
Time (Min)
1.648
1Bromo-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
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Pesticide Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WS91

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WS91 Client ID: NBES

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: 05/14/13 Analysis Start Date: 06/18/13

	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 / <20%
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 / 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

samples o/y matrix neg. affects calibration, RT shift is due to instrument maintenance, DDT fails w/i on CLP2, CLP1 is w/in qC. closing INDA ccal fails high for various (see forms) diluted samples due to oily matrix skimmed baseline due to oily matrix. misc peaks throughout samples, misc peaks inflate surr ms/msd rec. affected by homogeneity/misc peaks

(Review 1) Analyst: _____ **Date:** 06/21/13

(Review 2) Reviewer: _____ **Date:** 6/24/13

WS91 : 0118U

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130514PEST.b/0618-1.b

ARI Job No.: DS Method: PEST0514.m Instrument: ecd6.i Date: 18-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1114	0618a004.d	DS		1	NO MANUAL INTEGRATION
1132	0618a005.d	INDAE		1	NO MANUAL INTEGRATION
1152	0618a006.d	TOXAPH		1	NO MANUAL INTEGRATION
1210	0618a007.d	WS90MBW1		1	NO MANUAL INTEGRATION
1228	0618a008.d	WS90LCSS1		1	NO MANUAL INTEGRATION
1246	0618a009.d	WS90LCSDS1		1	NO MANUAL INTEGRATION
1303	0618a010.d	WS90QLS		1	NO MANUAL INTEGRATION
1321	0618a011.d	WS90A		1	NO MANUAL INTEGRATION
1339	0618a012.d	WS90B		1	NO MANUAL INTEGRATION
1357	0618a013.d	WT07MBW1		1	NO MANUAL INTEGRATION
1415	0618a014.d	WT07LCSS1		1	NO MANUAL INTEGRATION
1432	0618a015.d	WT07LCSDS1		1	NO MANUAL INTEGRATION
1453	0618a016.d	WT07QLS		1	NO MANUAL INTEGRATION
1513	0618a017.d	WT07A		1	NO MANUAL INTEGRATION
1530	0618a018.d	WT07B		1	NO MANUAL INTEGRATION
1548	0618a019.d	DS		1	NO MANUAL INTEGRATION
1606	0618a020.d	INDAE		1	NO MANUAL INTEGRATION
1624	0618a021.d	TOXAPH		1	NO MANUAL INTEGRATION
1642	0618a022.d	WT36MBS1	WT36MBS1	1	NO MANUAL INTEGRATION
1700	0618a023.d	WT36LCS1		1	NO MANUAL INTEGRATION

1717	0618a024.d	WT36LCSDS1	WT36LCSDS1	1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130514PEST.b/0618-1.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1735	0618a025.d	WT36A	CL-MH-SPS-	5	NO MANUAL INTEGRATION
1753	0618a026.d	WS91A	CL-MH-SPS-	5	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Heptachlor epoxide b, Endosulfan I, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, 4,4'-DDD, Endosulfan sulfate, 4,4'-DDT, Methoxychlor, Endrin ketone, Endrin aldehyde, gamma-Chlordane, alpha-Chlord
1811	0618a027.d	WS91AMS	CL-MH-SPS-	5	beta-BHC, 4,4'-DDD, Endrin aldehyde, alpha-Chlordane,
1828	0618a028.d	WS91AMSD	CL-MH-SPS-	5	beta-BHC, alpha-Chlordane,
1846	0618a029.d	DS		1	NO MANUAL INTEGRATION
1904	0618a030.d	INDAE		1	NO MANUAL INTEGRATION
1922	0618a031.d	TOXAPH		1	NO MANUAL INTEGRATION

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a020.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a020.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 18-JUN-2013 16:06
Compound Sublist: INDA Report Date: 06/21/2013 10:05
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
3.127	-0.002	5270968	3.297	-0.003	26872349	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.282	-0.002	2630075	4.706	-0.003	14671330	23.4222	24.3112	3.7	alpha-BHC
4.640	-0.002	965038	5.135	-0.002	5803680	21.6776	25.0017	14.2	beta-BHC
4.809	-0.002	2185617	5.446	-0.002	12383743	23.3225	24.9859	6.9	delta-BHC
4.564	-0.002	2352037	5.062	-0.002	12676827	24.1695	24.2097	0.2	gamma-BHC (Lindane)
5.010	-0.002	2193622	5.526	-0.002	12060666	23.1923	23.9682	3.3	Heptachlor
5.303	-0.002	2227968	5.864	-0.002	11948759	23.7970	25.1581	5.6	Aldrin
5.877	-0.003	2025530	6.418	-0.003	10971138	23.9902	26.3750	9.5	Heptachlor epoxide
6.254	-0.003	1855368	6.806	-0.003	9789914	23.1591	25.4754	9.5	Endosulfan I
6.477	-0.002	3992739	7.063	-0.003	19417677	46.8963	49.5851	5.6	Dieldrin
6.178	-0.002	2865607	6.866	-0.002	19268783	42.0325	47.3592	11.9	4,4'-DDE
6.695	-0.002	3324047	7.353	-0.002	14971569	45.8862	43.2254	6.0	Endrin
6.901	-0.002	3219569	7.542	-0.002	16466595	41.0050	40.5214	1.2	Endosulfan II
6.735	-0.002	3285828	7.404	-0.002	16208220	39.5701	39.7473	0.4	4,4'-DDD
7.668	-0.002	2922203	8.085	-0.002	13630784	41.4816	41.0045	1.2	Endosulfan sulfate
6.993	-0.002	3153578	7.692	-0.002	14365993	42.8589	42.7741	0.2	4,4'-DDT
7.418	-0.002	6973603	8.275	-0.002	24097362	198.3785	186.1720	6.3	Methoxychlor
7.923	-0.002	3669118	8.576	-0.002	14355096	41.0189	39.6532	3.4	Endrin ketone
7.277	-0.003	2518991	7.840	-0.002	12291301	38.1362	38.2694	0.3	Endrin aldehyde
5.997	-0.002	2110396	6.602	-0.002	11083276	23.3070	25.4212	8.7	gamma-Chlordane
6.121	-0.003	2013593	6.738	-0.003	10294082	23.9108	25.6269	6.9	alpha-Chlordane
2.307	-0.001	2644856	2.465	-0.001	8333548	22.5332	16.5131	30.8	Hexachlorobutadiene
4.136	-0.002	1908291	4.582	-0.002	15053839	21.4904	23.7615	10.0	Hexachlorobenzene
8.918	-0.002	5535875	10.286	-0.004	18281546	80.0000	80.0000	0.0	Hexabromobiphenyl
3.795	-0.002	3326218	4.123	-0.002	20015201	46.2825	45.8155	1.0	Tetrachloro-m-xylen
8.769	-0.001	2974983	9.723	-0.002	15295221	37.7992	41.4152	9.1	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	115.7	114.5	114.5~	115- 0
Decachlorobiphenyl	94.5	103.5	94.5~	115- 0

~ Indicates recovery outside QC Limits

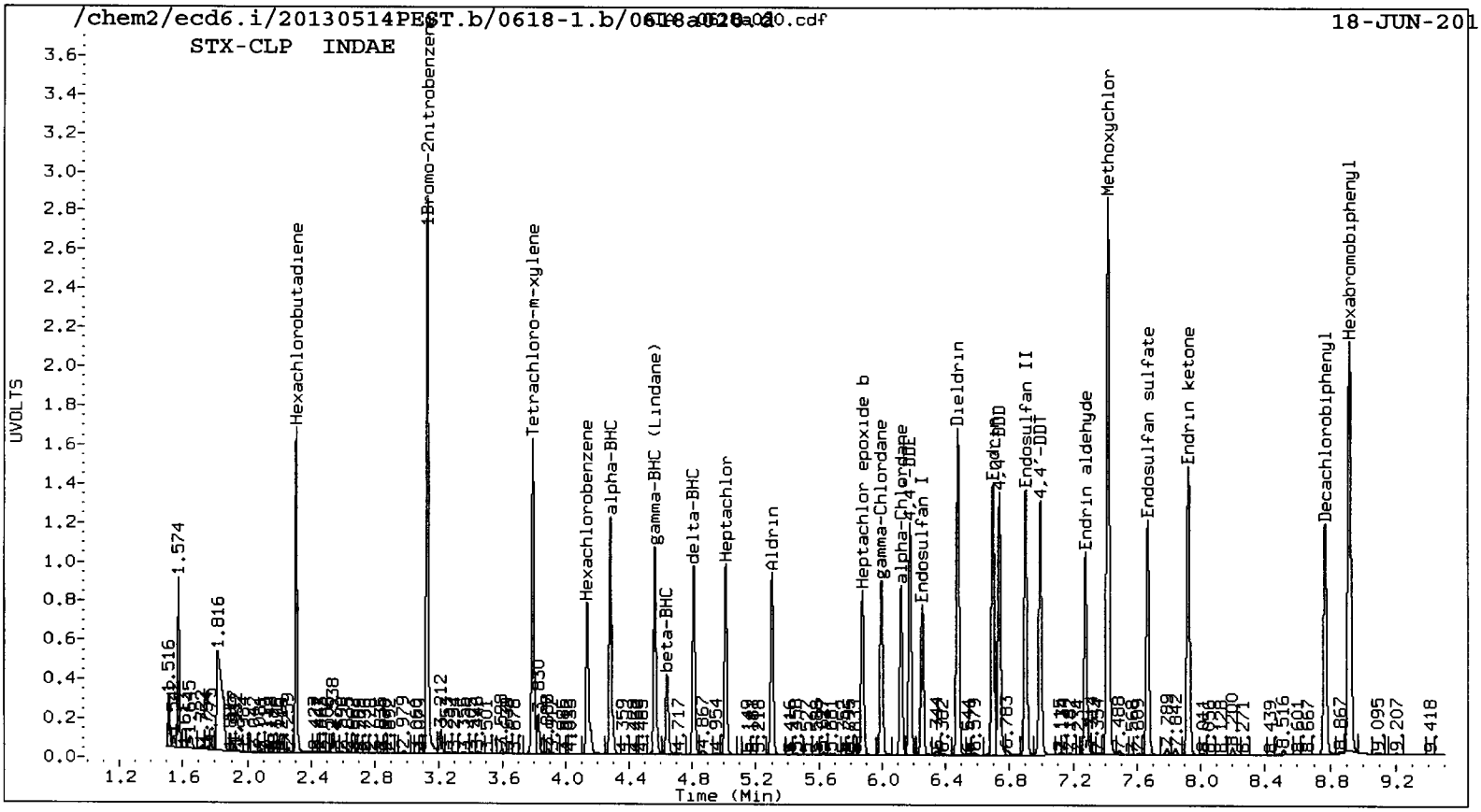
INTERNAL STANDARD SUMMARY

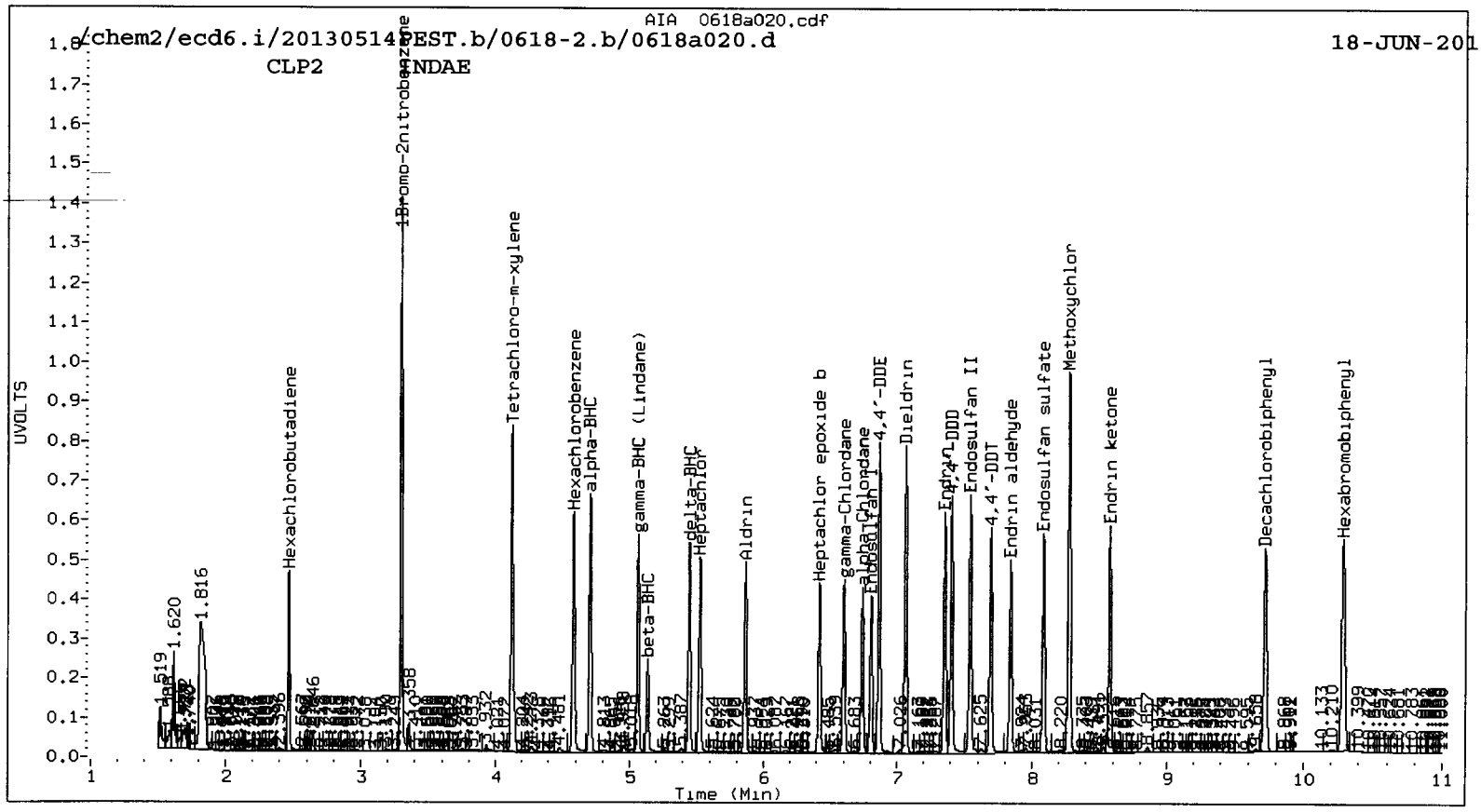
Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	5500669	5270968	-4.2
Hexabromobiphenyl	5319006	5535875	4.1

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	29060499	26872349	-7.5
Hexabromobiphenyl	16515704	18281546	10.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a020.d
AIA 0618a020.cdf
18-JUN-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.574
1.816
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/20130514PEST.b/0618-2.b/0618a020.d
AIA 0618a020.cdf
18-JUN-201
CLP2 INDAE
UVOLTS
Time (Min)
1.620
1.816
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/20130514PEST.b/0618-1.b/0618a021.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a021.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 18-JUN-2013 16:24
Compound Sublist: TOXAPH Report Date: 06/21/2013 10:05
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
3.126	-0.002	5808987	3.297	-0.003	29086569	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.918	-0.002	6374042	10.285	-0.005	20610335	80.0000	80.0000	0.0	Hexabromobiphenyl
3.795	-0.002	3040096	4.124	-0.002	18541559	38.3834	39.2113	2.1	Tetrachloro-m-xylen
8.769	-0.001	2924543	9.722	-0.003	14772347	32.2721	35.4798	9.5	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	96.0	98.0	96.0~	150- 0
Decachlorobiphenyl	80.7	88.7	80.7~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

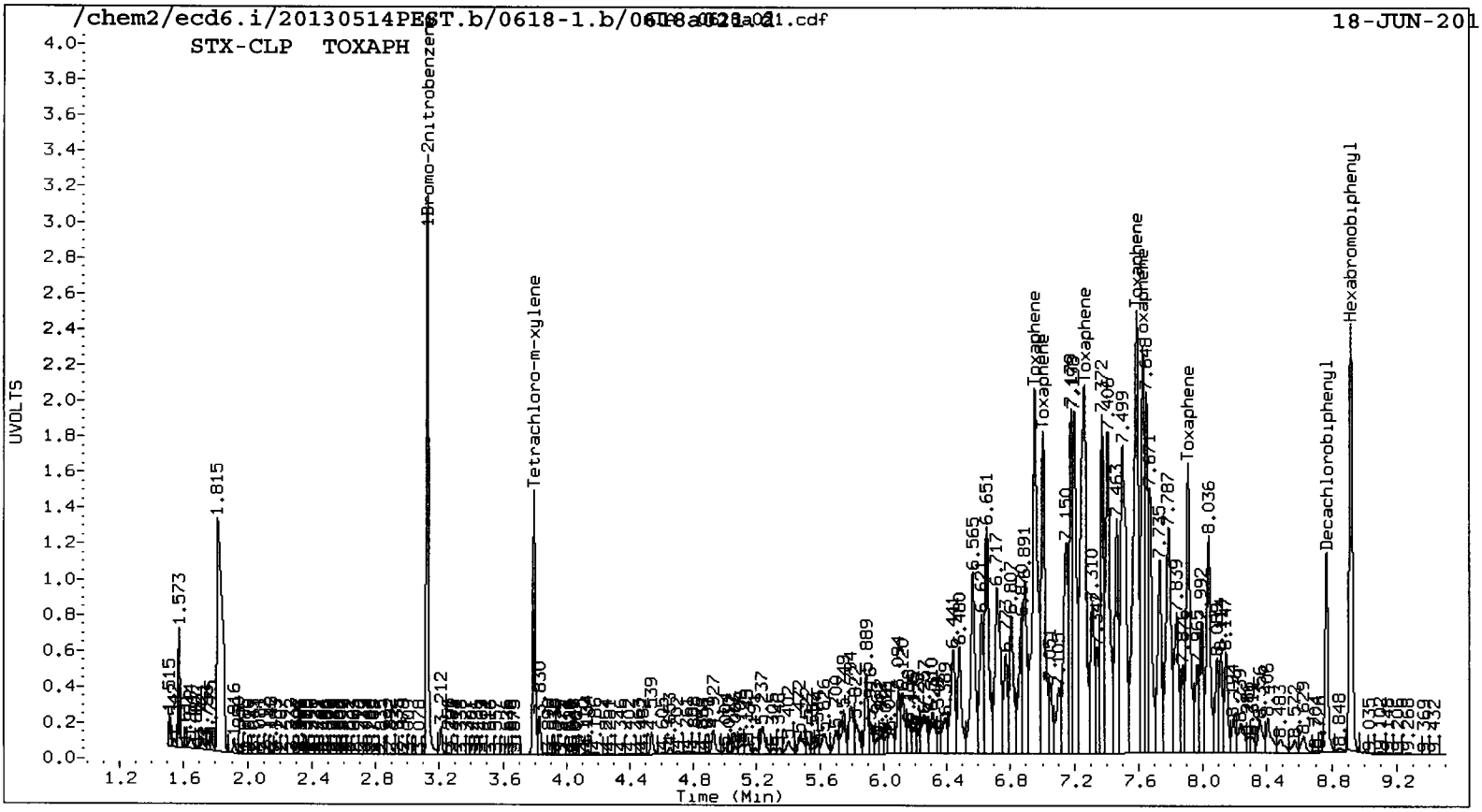
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5808987	5.6
Hexabromobiphenyl	5319006	6374042	19.8

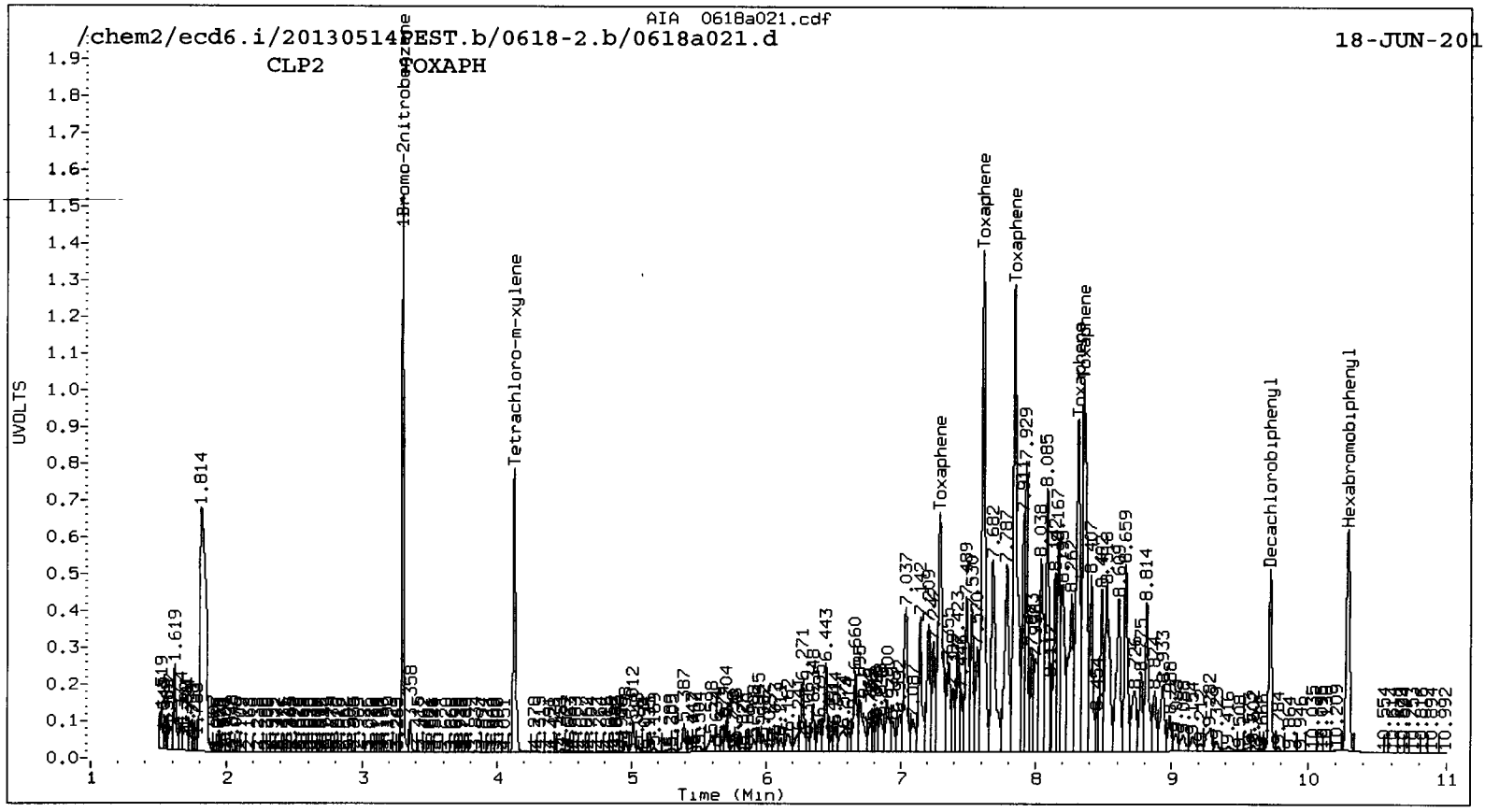
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	29086569	0.1
Hexabromobiphenyl	16515704	20610335	24.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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	6.953	-0.002	9037896	2278.5	1	7.289	-0.002	32050487	2140.2	
Toxaphene	2	7.004	-0.002	6294822	2049.0	2	7.613	-0.003	47001054	2111.3	
Toxaphene	3	7.261	-0.002	10135792	2207.4	3	7.844	-0.002	50863133	2133.9	
Toxaphene	4	7.586	-0.002	10295138	2390.4	4	8.312	-0.002	36314796	2153.8	
Toxaphene	5	7.626	-0.002	6671922	2185.2	5	8.351	-0.002	44927757	2026.9	
Toxaphene	6	7.907	-0.002	5707191	2112.9	NS	---			----	
Total STX-CLPAve (6 peaks): 2203.916						Total CLP2Ave (5 peaks): 2113.232				RPD = 4	
Corrected Ave (6 peaks): 2203.916						Corrected Ave (5 peaks): 2113.232				RPD = 4	


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a021.d
18-JUN-201
STX-CLP TOXAPH
UVOLTS
Time (Min)
1.573
1.815
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0618a021.cdf
/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a021.d
18-JUN-201
CLP2 TOXAPH
UVOLTS
Time (Min)
1.814
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a022.d ARI ID: WT36MBS1
Data file 2: /chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a022.d Client ID: WT36MBS1
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 18-JUN-2013 16:42
Compound Sublist: wpest Report Date: 06/20/2013 14:35
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 1.000

06/21/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.126	-0.003	6210449	3.296	-0.003	28648657	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.279	-0.005	12288	4.705	-0.004	92014	0.0929	0.1430	42.5*	alpha-BHC
4.616	-0.026	11767	5.148	0.011	179825	0.2243	0.7266	105.6*	beta-BHC
4.787	-0.024	25597	5.469	0.021	82447	0.2318	0.1560	39.1	delta-BHC
4.556	-0.011	16584	5.041	-0.024	264701	0.1446	0.4742	106.5*	gamma-BHC (Lindane)
5.008	-0.005	7429	5.524	-0.005	129043	0.0667	0.2405	113.2*	Heptachlor
5.322	0.017	65435	5.848	-0.018	481495	0.5932	0.9509	46.3*	Aldrin
5.882	0.002	25080	6.409	-0.012	139112	0.2521	0.3137	21.8	Heptachlor epoxide b
6.239	-0.018	15532	6.804	-0.004	212594	0.1645	0.5189	103.7*	Endosulfan I
6.477	-0.002	6953	7.057	-0.009	351273	0.0693	0.8414	169.6*	Dieldrin
6.153	-0.026	26633	6.867	-0.001	224132	0.3316	0.5167	43.7*	4,4'-DDE
6.651	-0.046	12649	7.364	0.009	240524	0.1473	0.6105	122.2*	Endrin
6.901	-0.002	10117	7.503	-0.042	375036	0.1087	0.8113	152.7*	Endosulfan II
6.734	-0.003	25742	7.398	-0.008	152142	0.2615	0.3280	22.5	4,4'-DDD
7.668	-0.002	11718	8.085	-0.002	236732	0.1403	0.6260	126.8*	Endosulfan sulfate
7.002	0.008	20510	7.695	0.001	280855	0.2352	0.7351	103.1*	4,4'-DDT
7.403	-0.016	24469	8.262	-0.015	313113	0.5872	2.1266	113.4*	Methoxychlor
7.916	-0.009	38690	8.584	0.007	308712	0.3649	0.7497	69.0*	Endrin ketone
7.268	-0.012	18001	7.841	0.000	370459	0.2299	1.0140	126.1*	Endrin aldehyde
5.994	-0.006	12877	6.604	0.000	262347	0.1207	0.5644	129.5*	gamma-Chlordane
6.123	0.000	7111	6.739	-0.002	110929	0.0717	0.2590	113.3*	alpha-Chlordane
2.292	-0.017	17136	2.437	-0.029	1242659	0.1239	2.3097	179.6*	Hexachlorobutadiene
4.133	-0.004	58517	4.564	-0.020	374339	0.5593	0.5542	0.9	Hexachlorobenzene
5.770	-0.014	12152	6.324	-0.007	93055	0.1385	0.2382	52.9*	Oxychlordane
5.845	-0.012	6161	6.566	-0.013	112440	0.0930	0.3855	122.2*	2,4-DDE
6.076	-0.031	11818	6.695	0.003	241308	0.1098	0.5172	129.9*	trans-Nonachlor
6.343	-0.001	7166	7.082	0.017	176683	0.1222	0.6810	139.1*	2,4-DDD
6.621	0.039	5945	----			0.0907	0.0000	---	2,4-DDT
----			7.445	0.029	198549	0.0000	0.4068	---	cis-Nonachlor
7.589	-0.007	26344	8.531	-0.033	478199	0.3660	1.8414	133.7*	Mirex
8.918	-0.003	6562051	10.285	-0.005	20795875	80.0000	80.0000	0.0	Hexabromobiphenyl
1.753	-0.002	27063	1.721	-0.003	1633088	0.0000	0.0000	---	Hexachloroethane
6.563	-0.018	7851	7.292	-0.044	363079	0.0000	0.0000	---	Kepone
3.794	-0.002	2408378	4.123	-0.003	12703869	28.4419	27.2766	4.2	Tetrachloro-m-xylen
8.769	-0.002	2845271	9.722	-0.003	14225687	30.4978	33.8621	10.5	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

WSDOT 9119N

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	71.1	68.2	68.2	42-112
Decachlorobiphenyl	76.2	84.7	76.2	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	6210449	12.9
Hexabromobiphenyl	5319006	6562051	23.4

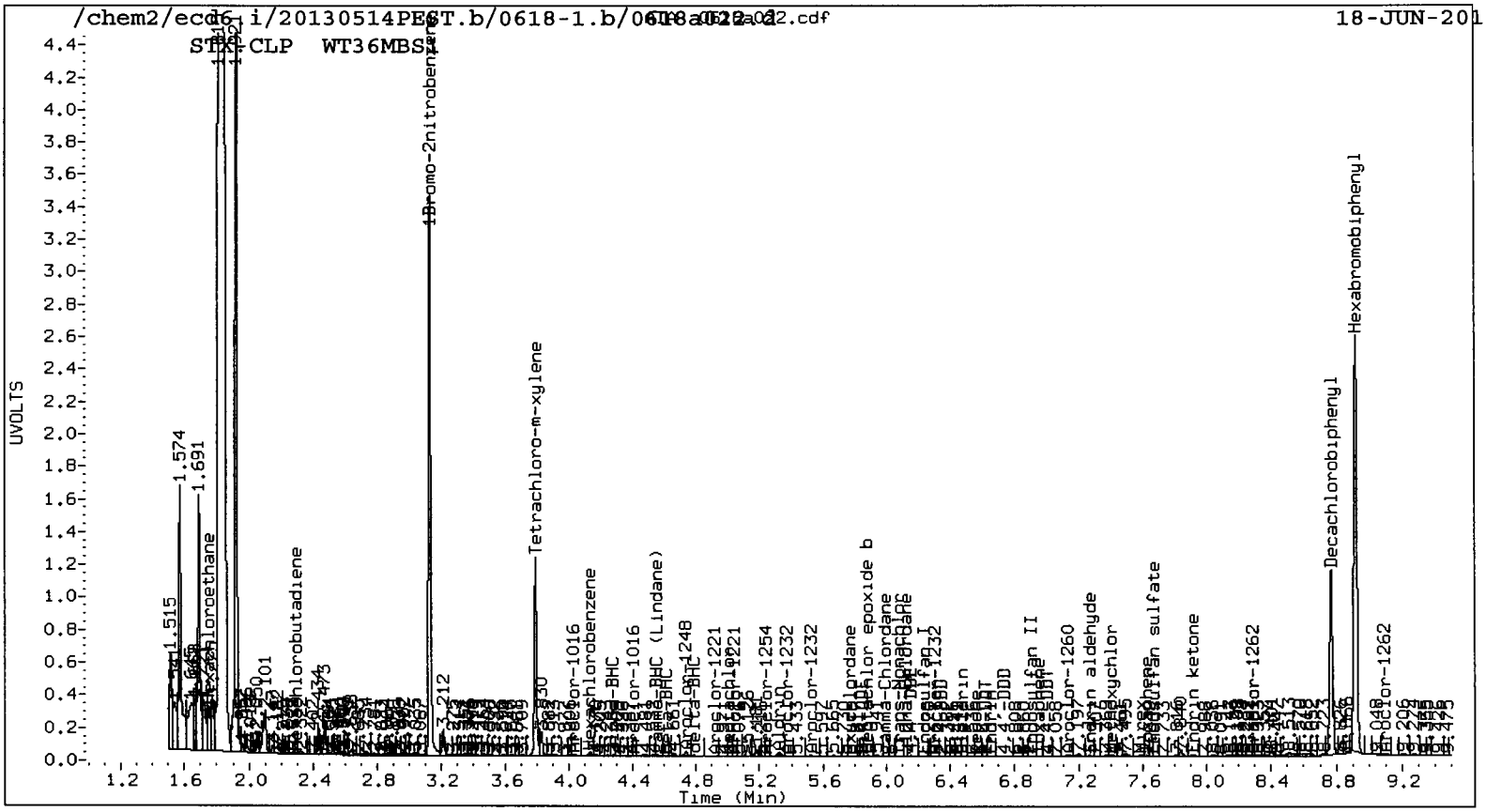
Column 2

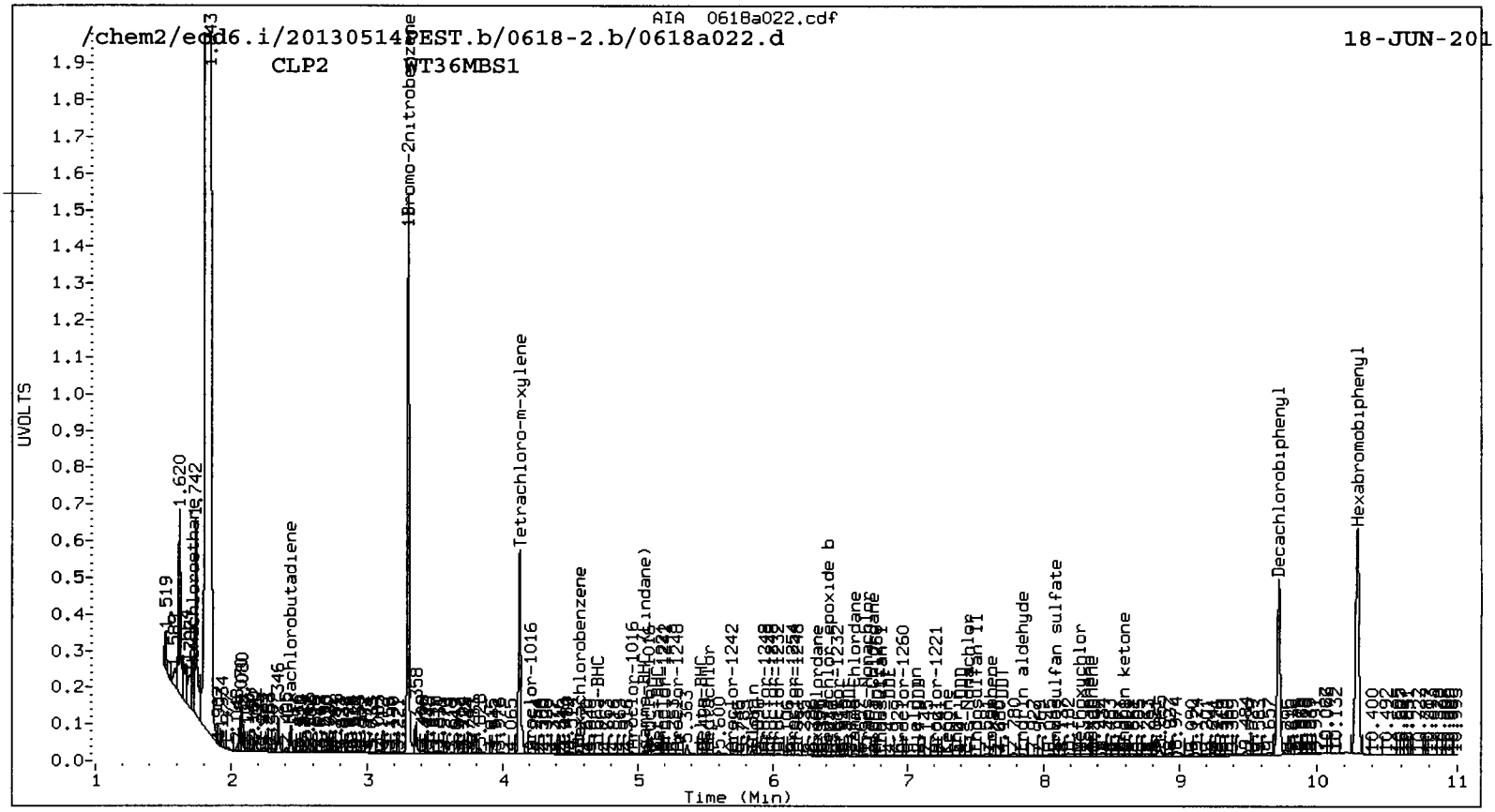
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	28648657	-1.4
Hexabromobiphenyl	16515704	20795875	25.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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	6.953	-0.002	11699	2.9	1	7.292	0.001	363079	24.0
Toxaphene	2	7.002	-0.005	20510	6.5	2	7.613	-0.003	275703	12.3
Toxaphene	3	7.268	0.004	18001	3.8	3	7.841	-0.005	370459	15.4
Toxaphene	4	7.589	0.000	26344	5.9	4	8.321	0.007	481086	28.3
Toxaphene	5	7.624	-0.003	11713	3.7	5	8.352	-0.001	168173	7.5
Toxaphene	6	7.916	0.007	38690	13.9	NS	---			----
Total STX-CLPAve (6 peaks): 6.123						Total CLP2Ave (5 peaks): 17.501				RPD = 96*
Corrected Ave (5 peaks): 4.565						Corrected Ave (5 peaks): 17.501				RPD = 117*

US91:91195


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a022.d
18-JUN-201
STX CLP WT36MBS1
UVOLTS
Time (Min)
1.574
1.691
1.515
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0618a022.cdf
/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a022.d
18-JUN-201
CLP2 WT36MBS1
UVOLTS
Time (Min)
1.620
1.742
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a023.d ARI ID: WT36LCS1
Data file 2: /chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a023.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 18-JUN-2013 17:00
Compound Sublist: wpest Report Date: 06/21/2013 06:45
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

06/21/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.126	-0.003	5972541	3.296	-0.003	27678595	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.281	-0.003	2269893	4.706	-0.003	11366709	17.8400	18.2866	2.5	alpha-BHC
4.639	-0.003	946098	5.135	-0.001	4632969	18.7557	19.3770	3.3	beta-BHC
4.808	-0.003	1597775	5.446	-0.002	7984142	15.0470	15.6399	3.9	delta-BHC
4.564	-0.003	2158746	5.063	-0.002	10154596	19.5774	18.8279	3.9	gamma-BHC (Lindane)
5.010	-0.003	2006319	5.526	-0.002	10121690	18.7203	19.5289	4.2	Heptachlor
5.302	-0.003	2007516	5.864	-0.002	9533658	18.9236	19.4884	2.9	Aldrin
5.877	-0.002	2037590	6.419	-0.002	9652535	21.2983	22.5291	5.6	Heptachlor epoxide b
6.254	-0.002	1895478	6.806	-0.002	8844473	20.8805	22.3448	6.8	Endosulfan I
6.477	-0.003	4005234	7.064	-0.003	18611326	41.5170	46.1416	10.6	Dieldrin N
6.178	-0.001	3771436	6.867	-0.001	18093238	48.8210	43.1746	12.3	4,4'-DDE
6.695	-0.002	3423036	7.353	-0.002	14485687	42.3152	39.0364	8.1	Endrin
6.900	-0.002	3453123	7.542	-0.003	14765454	39.3842	33.9145	14.9	Endosulfan II
6.735	-0.002	3325879	7.404	-0.002	15198053	35.8673	34.7872	3.1	4,4'-DDD
7.668	-0.002	2882694	8.085	-0.002	12851273	36.6449	36.0841	1.5	Endosulfan sulfate
6.992	-0.002	3187266	7.692	-0.002	12391966	38.7906	34.4385	11.9	4,4'-DDT
7.418	-0.002	7228808	8.275	-0.002	24551513	184.1510	177.0443	3.9	Methoxychlor
7.923	-0.002	3766001	8.575	-0.002	14066895	37.7028	36.2685	3.9	Endrin ketone
7.277	-0.002	1838156	7.839	-0.002	8507919	24.9209	24.7250	0.8	Endrin aldehyde
5.997	-0.002	2095111	6.601	-0.002	10032266	20.4203	22.3402	9.0	gamma-Chlordane
6.121	-0.002	1981643	6.739	-0.002	9143970	20.7672	22.1007	6.2	alpha-Chlordane
2.307	-0.002	2049293	2.465	-0.002	8292141	15.4084	15.9524	3.5	Hexachlorobutadiene
4.135	-0.003	1701562	4.582	-0.002	12251511	16.9114	18.7749	10.4	Hexachlorobenzene
5.794	0.010	14342	6.312	-0.020	96269	0.1735	0.2551	38.1	Oxychlordane
5.832	-0.025	3555	6.539	-0.041	264576	0.0570	0.9388	177.1*	2,4-DDE
6.075	-0.032	2675	6.684	-0.008	129414	0.0264	0.2945	167.1*	trans-Nonachlor
6.342	-0.001	41475	7.064	-0.001	18611326	0.7510	76.1639	196.1*	2,4-DDD
6.537	-0.045	6288	----			0.1018	0.0000	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.610	0.015	31784	8.533	-0.032	235015	0.4687	0.9609	68.9*	Mirex
8.918	-0.002	6181819	10.285	-0.005	19586377	80.0000	80.0000	0.0	Hexabromobiphenyl
1.753	-0.002	8200	1.707	-0.017	2492304	0.0000	0.0000	---	Hexachloroethane
6.579	-0.002	19163	7.287	-0.049	206181	0.0000	0.0000	---	Kepone
3.794	-0.003	2652469	4.123	-0.003	13733775	32.5722	30.5214	6.5	Tetrachloro-m-xylen
8.769	-0.001	3225164	9.723	-0.002	16112025	36.6961	40.7205	10.4	Decachlorobiphenyl

06/20/13

* 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

WSR1 : 91197

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	81.4	76.3	76.3~	130- 0
Decachlorobiphenyl	91.7	101.8	91.7~	130- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5972541	8.6
Hexabromobiphenyl	5319006	6181818	16.2

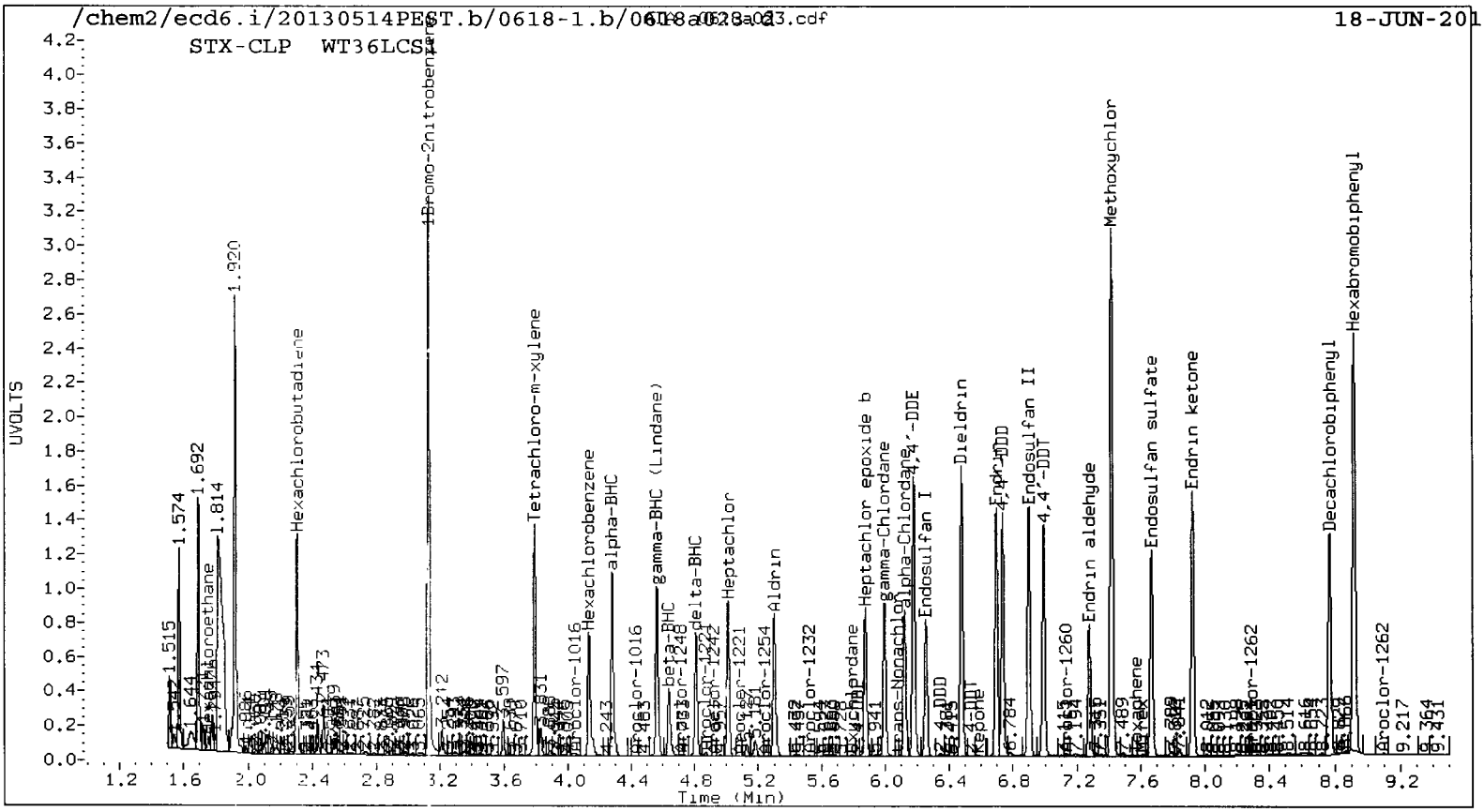
Column 2

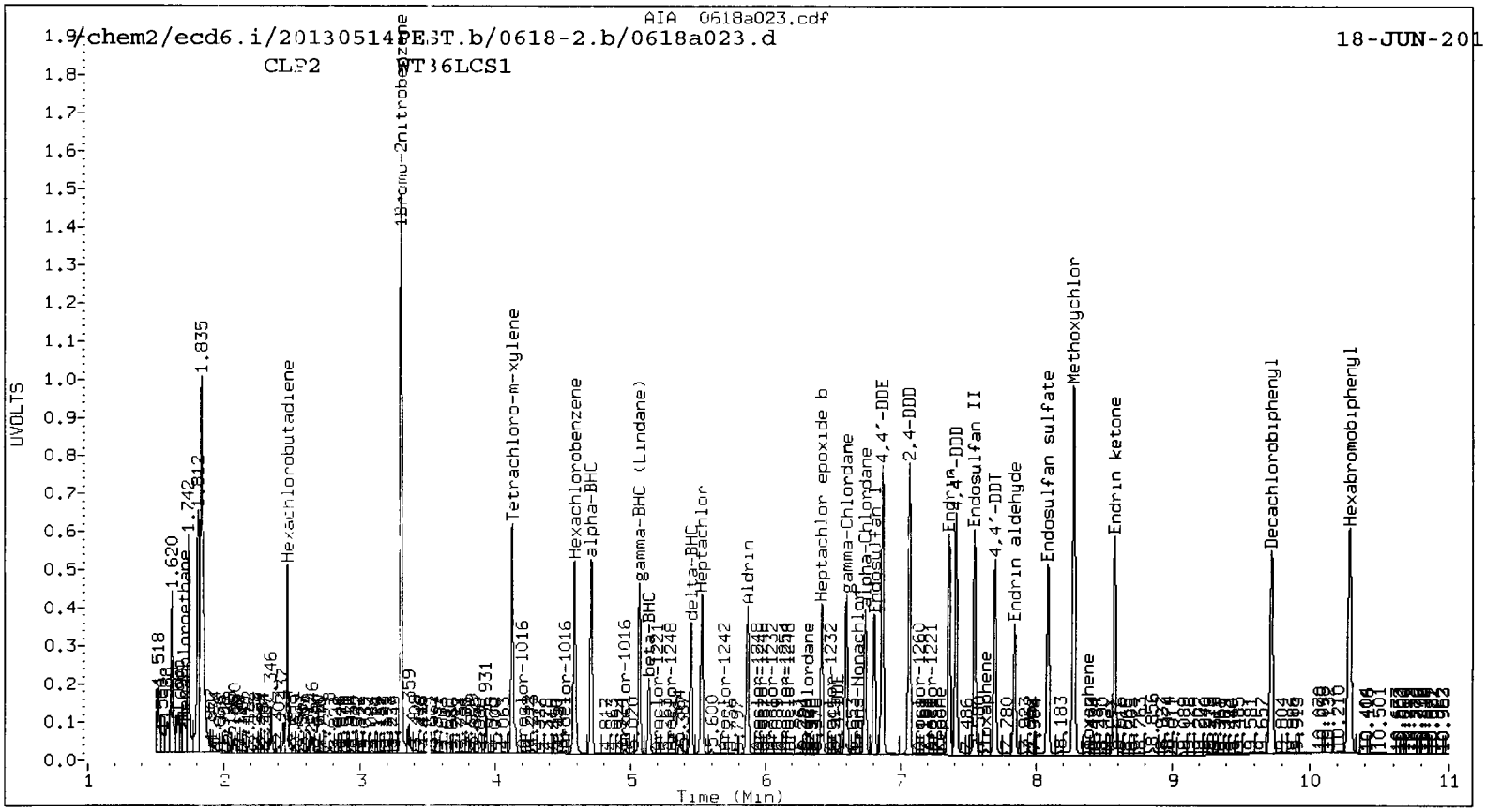
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	27678595	-4.8
Hexabromobiphenyl	16515704	19586377	18.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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	6.992	0.037	3187266	828.5	1	7.287	-0.004	206181	14.5
Toxaphene	2	---			0.000	2	7.625	0.009	730076	34.5
Toxaphene	3	7.277	0.014	1838156	412.8	3	7.839	-0.007	8507919	375.6
Toxaphene	4	7.568	-0.020	5474	1.3	4	8.275	-0.039	24551513	1532.2
Toxaphene	5	7.610	-0.018	31784	10.7	5	8.375	0.022	459047	21.8
Toxaphene	6	7.923	0.014	3766001	1437.6	NS	---			----

Total STX-CLPAve (5 peaks): 538.187 Total CLP2Ave (5 peaks): 395.725 RPD = 31
Corrected Ave (4 peaks): 313.329 Corrected Ave (4 peaks): 111.600 RPD = 95*


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a023.d
AIA 0618a023.cdf
18-JUN-201
STX-CLP WT36LCS1
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Aroclor-1262


AIA 0618a023.cdf
/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a023.d
18-JUN-201
CLP2 WT36LCS1
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
2,4-DDD
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/20130514PEST.b/0618-1.b/0618a024.d ARI ID: WT36LCSDS1
Data file 2: /chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a024.d Client ID: WT36LCSDS1
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 18-JUN-2013 17:17
Compound Sublist: wpest Report Date: 06/21/2013 06:45
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 1.000

JK 06/21/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.126	-0.002	6568523	3.297	-0.003	30227737	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.281	-0.003	2154326	4.706	-0.003	10634784	15.3955	15.6663	1.7	alpha-BHC
4.639	-0.003	889170	5.136	-0.001	4274332	16.0278	16.3694	2.1	beta-BHC
4.809	-0.002	1479659	5.446	-0.001	6656323	12.6703	11.9393	5.9	delta-BHC
4.564	-0.002	2025608	5.063	-0.002	9409104	16.7033	15.9745	4.5	gamma-BHC (Lindane)
5.010	-0.002	1892942	5.526	-0.002	9416899	16.0599	16.6369	3.5	Heptachlor
5.303	-0.002	1885486	5.864	-0.002	8913136	16.1607	16.6834	3.2	Aldrin
5.877	-0.002	1887294	6.419	-0.002	8855985	17.9373	18.9268	5.4	Heptachlor epoxide b
6.254	-0.002	1732132	6.806	-0.002	8070466	17.3498	18.6698	7.3	Endosulfan I
6.477	-0.002	3673209	7.063	-0.003	17008840	34.6207	38.6125	10.9	Dieldrin N
6.178	-0.001	3478367	6.866	-0.002	16654275	40.9418	36.3895	11.8	4,4'-DDE
6.695	-0.002	3095390	7.354	-0.002	13103651	34.1571	32.3405	5.5	Endrin
6.901	-0.002	3118322	7.542	-0.003	13071083	31.7476	27.4964	14.4	Endosulfan II
6.735	-0.002	3008231	7.404	-0.002	13746681	28.9590	28.8173	0.5	4,4'-DDD
7.668	-0.002	2594131	8.085	-0.002	11778160	29.4366	30.2880	2.9	Endosulfan sulfate
6.992	-0.002	2860032	7.692	-0.002	11080711	31.0713	28.2031	9.7	4,4'-DDT
7.418	-0.001	6545306	8.274	-0.002	22459551	148.8395	148.3301	0.3	Methoxychlor
7.923	-0.003	3436445	8.575	-0.002	12775303	30.7102	30.1666	1.8	Endrin ketone
7.278	-0.002	1703640	7.840	-0.001	7914778	20.6177	21.0657	2.1	Endrin aldehyde
5.997	-0.002	1908176	6.602	-0.002	9157009	16.9108	18.6716	9.9	gamma-Chlordane
6.121	-0.002	1820362	6.739	-0.002	8335609	17.3461	18.4479	6.2	alpha-Chlordane
2.307	-0.001	1995507	2.465	-0.001	8045424	13.6426	14.1725	3.8	Hexachlorobutadiene
4.135	-0.002	1676180	4.582	-0.002	11839790	15.1476	16.6139	9.2	Hexachlorobenzene
5.795	0.010	17023	6.311	-0.021	96793	0.1839	0.2349	24.4	Oxychlordane
5.832	-0.025	4350	6.529	-0.041	366750	0.0608	1.1916	180.6*	2,4-DDE
6.076	-0.031	4300	6.683	-0.009	133258	0.0379	0.2777	152.0*	trans-Nonachlor
6.342	-0.001	37006	7.063	-0.001	17008840	0.5981	63.7437	196.3*	2,4-DDD
6.580	-0.003	17813	----			0.2574	0.0000	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.610	0.015	33207	8.532	-0.033	324510	0.4371	1.2151	94.2*	Mirex
8.918	-0.003	6925249	10.285	-0.005	21386002	80.0000	80.0000	0.0	Hexabromobiphenyl
1.753	-0.002	12177	1.706	-0.019	3494702	0.0000	0.0000	---	Hexachloroethane
6.539	-0.042	7083	----			0.0000	0.0000	---	Kepone
3.795	-0.002	2523528	4.123	-0.002	13937711	28.1995	26.9380	4.6	Tetrachloro-m-xylen
8.770	-0.001	2869229	9.723	-0.002	14317699	29.1416	33.1406	12.8	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	70.5	67.3	67.3	42-112
Decachlorobiphenyl	72.9	82.9	72.9	59-123
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	1566285.8	1293.6	1293.6~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	1242852.6	1128.1	1128.1~	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

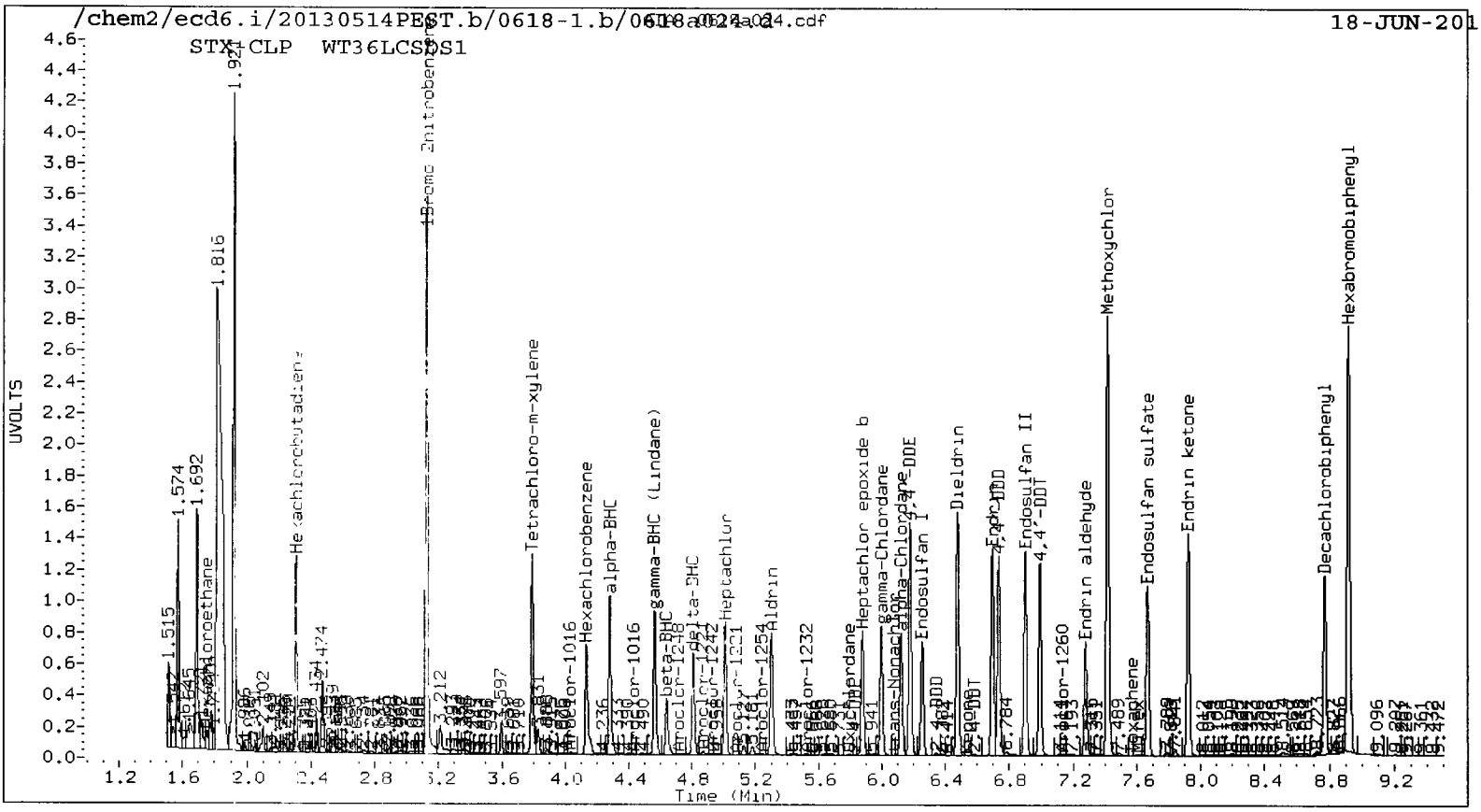
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	6568523	19.4
Hexabromobiphenyl	5319006	6925249	30.2

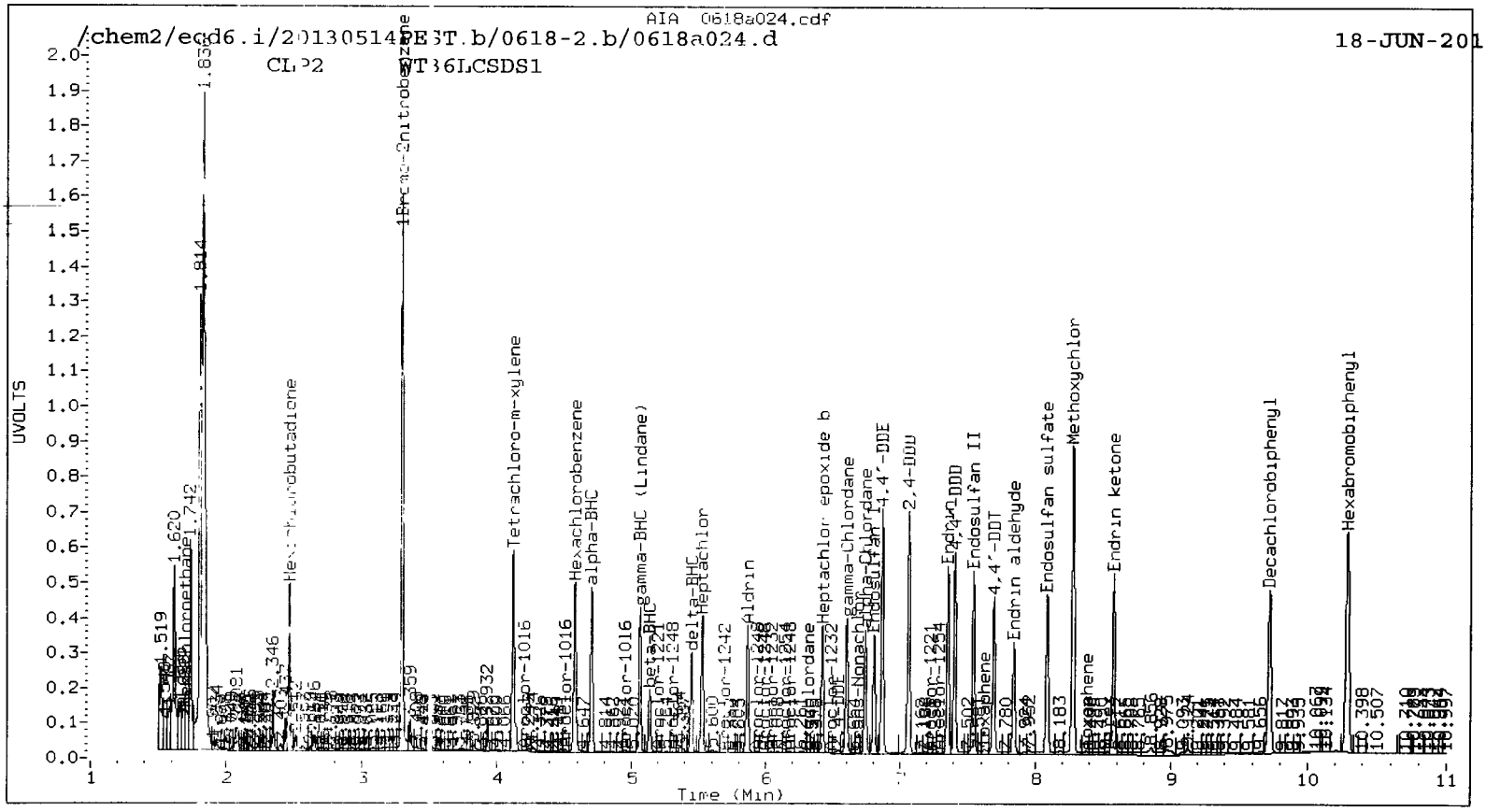
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	30227737	4.0
Hexabromobiphenyl	16515704	21386002	29.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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	6.992	0.037	2860032	663.6	1	7.286	-0.005	247713	15.9
Toxaphene	2	[illegible]			0.000	2	7.625	0.009	734437	31.8
Toxaphene	3	7.370	0.014	1703640	341.5	3	7.840	-0.006	7914778	320.0
Toxaphene	4	7.568	-0.020	4983	1.1	4	8.274	-0.039	22459551	1283.7
Toxaphene	5	7.610	-0.017	33207	10.0	5	8.376	0.023	478333	20.8
Toxaphene	6	7.923	0.014	3436445	1171.0	NS	---			----
Total STX-CLPAve (5 peaks): 437.439						Total CLP2Ave (5 peaks): 334.455				RPD = 27
Corrected Ave (4 peaks): 254.050						Corrected Ave (4 peaks): 97.138				RPD = 89*


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a024.d
0618a024.cdf
18-JUN-201
STX+CLP WT36LCSDS1
UVOLTS
Time (Min)
1.924
1.816
1.574
1.692
1.515
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
trans-Nonachlor
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


AIA 0618a024.cdf
/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a024.d
18-JUN-201
CLP2 WT36LCSDS1
UVOLTS
Time (Min)
1.814
1.620
1.742
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
4,4'-DDE
2,4-DDD
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/20130514PEST.b/0618-1.b/0618a026.d ARI ID: WS91A
Data file 2: /chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a026.d Client ID: CL-MH-SPS-20130605-
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 18-JUN-2013 17:53
Compound Sublist: wpest Report Date: 06/21/2013 07:56
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 5.000

JA 06/21/13

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	5679135	3.296	-0.004	18503891	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.270	-0.014	93077	4.704	-0.004	4146793	~~0.7693~~	~~9.9791~~	171.4*	alpha-BHC M
4.618	-0.024	166133	5.115	-0.022	553898	3.4636	3.4653 Y	0.0	beta-BHC M
4.800	-0.011	88925	5.455	0.008	437297	~~0.8807~~	~~1.2813~~	37.1	delta-BHC M
4.547	-0.020	70912	5.066	0.002	73054016	~~0.6763~~	~~202.6119~~	198.7*	gamma-BHC (Lindane
5.001	-0.012	118545	5.522	-0.006	3799352	~~1.1633~~	~~10.9652~~	161.6*	Heptachlor M
5.328	0.024	316138	5.883	0.016	521457	~~3.1340~~	~~1.5945~~	65.1*	Aldrin M
5.893	0.013	53399	6.407	-0.014	1101745	~~0.5870~~	~~3.8465~~	147.0*	Heptachlor epoxide b
6.263	0.006	586576	6.816	0.008	327272	~~6.7955~~	~~1.2368~~	138.4*	Endosulfan I MN
6.467	-0.012	242412	7.049	-0.017	3239657	2.6426	12.0142	127.9*	Dieldrin MN
6.188	0.008	312448	6.838	-0.030	436488	~~4.2536~~	~~1.5580~~	92.8*	4,4'-DDE MN
6.693	-0.004	396946	7.380	0.025	1947406	8.6402	7.6356 Y	12.3	Endrin MN
6.902	-0.001	44551	7.535	-0.009	3945871	~~0.8947~~	~~13.1868~~	174.6*	Endosulfan II MN
6.728	-0.009	1388820	7.435	0.029	596958	~~26.3721~~	~~1.9881~~	172.0*	4,4'-DDD MN
7.685	0.015	604661	8.115	0.028	1773665	13.5342	7.2460 Y	60.5*	Endosulfan sulfate
6.983	-0.012	552854	7.708	0.014	1874283	11.8474	7.5788 Y	43.9*	4,4'-DDT MN
7.387	-0.033	50239149	8.288	0.011	549200	2253.4919	5.7623 Y	199.0*	Methoxychlor MN
7.917	-0.009	1310784	8.587	0.009	6369260	23.1063	23.8934 Y	3.3	Endrin ketone MN
7.254	-0.026	1092223	7.862	0.020	910112	26.0734	3.8483 Y	148.6*	Endrin aldehyde MN
5.998	-0.001	389458	6.602	-0.002	13698648	3.9920	45.6297 Y	167.8*	gamma-Chlordane MN
6.139	0.016	50554	6.777	0.036	1025776	~~0.5572~~	~~3.7086~~	147.8*	alpha-Chlordane MN
2.304	-0.005	16195	2.469	0.003	220986	~~0.1281~~	~~0.6359~~	133.0*	Hexachlorobutadiene
4.142	0.004	151036	4.568	-0.016	1414607	~~1.5787~~	~~3.2427~~	69.0*	Hexachlorobenzene M
5.817	0.033	83359	6.319	-0.013	51440230	~~1.7759~~	~~203.9008~~	196.5*	Oxychlordane MN
5.857	0.000	562406	6.531	-0.049	1784620	15.8723	9.4724	50.5*	2,4-DDE MN
6.077	-0.030	27490016	6.687	-0.005	54895072	477.3941	181.7479	89.7*	trans-Nonachlor
6.346	0.002	388583	7.083	0.018	958651	12.3885	5.7081	73.8*	2,4-DDD MN
----			7.314	-0.038	893831	~~0.0000~~	~~5.0784~~	---	2,4-DDT
6.755	0.033	374313	7.424	0.007	494120	~~6.0176~~	~~1.5641~~	117.5*	cis-Nonachlor MN
7.568	-0.028	9490702	8.546	-0.019	1794706	246.4297	10.6762	183.4*	Mirex MN
8.909	-0.011	3510831	10.304	0.014	13461561	80.0000	80.0000	0.0	Hexabromobiphenyl
1.751	-0.005	4856	1.721	-0.003	254092	~~0.0000~~	~~0.0000~~	---	Hexachloroethane
6.545	-0.036	709385	7.353	0.017	1871666	~~0.0000~~	~~0.0000~~	---	Kepone
3.798	0.001	572359	4.125	0.000	5353976	7.3917	~~17.7980~~ NR	82.6*	Tetrachloro-m-xylene
8.776	0.005	3424253	9.748	0.024	4659707	~~68.6025~~ MR	~~17.1349~~ NR	120.1*	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

WS91 : 21293

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	18.5	44.5	18.5~	42-112
Decachlorobiphenyl	171.5	42.8	42.8~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

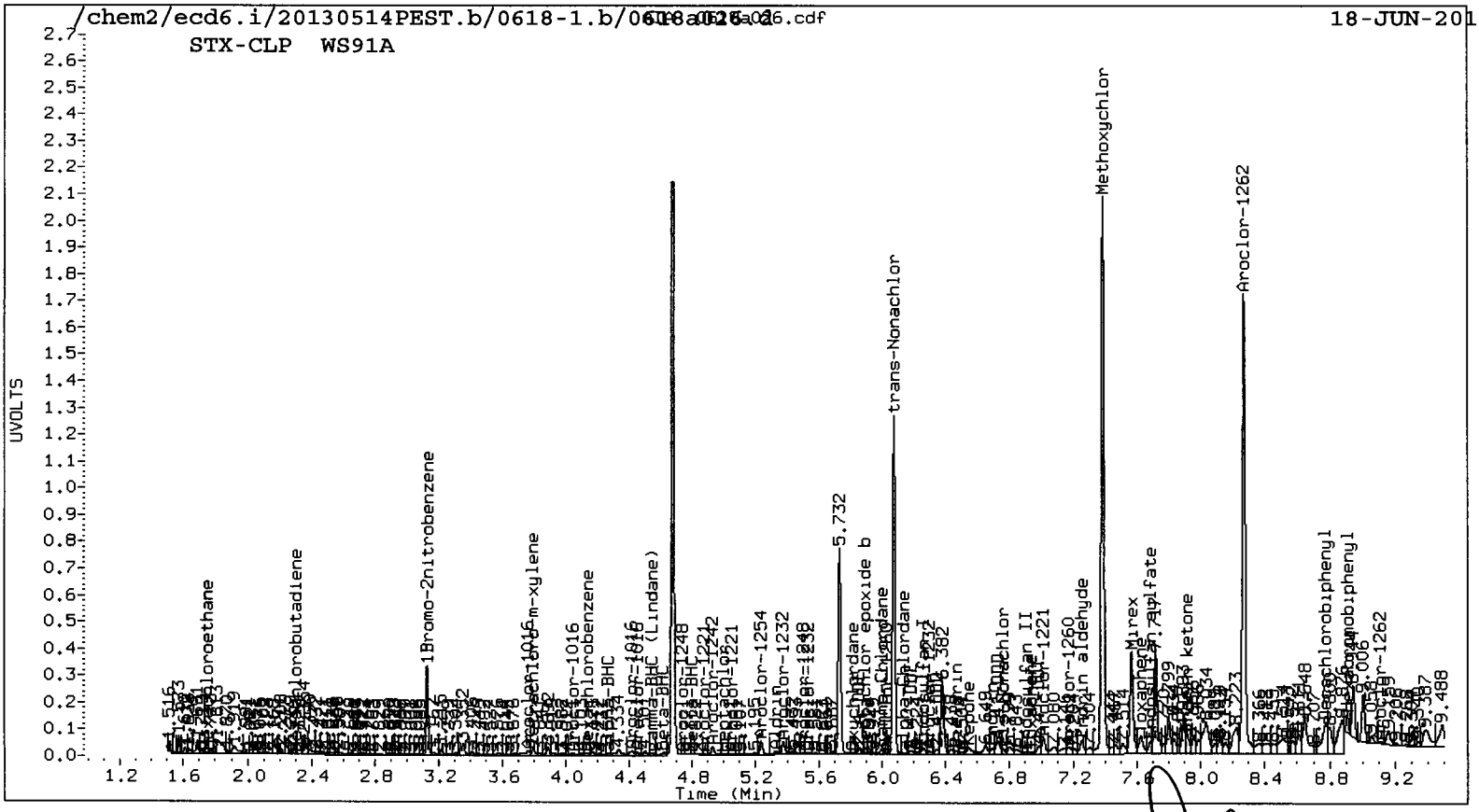
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5679135	3.2
Hexabromobiphenyl	5319006	3510831	-34.0

Column 2

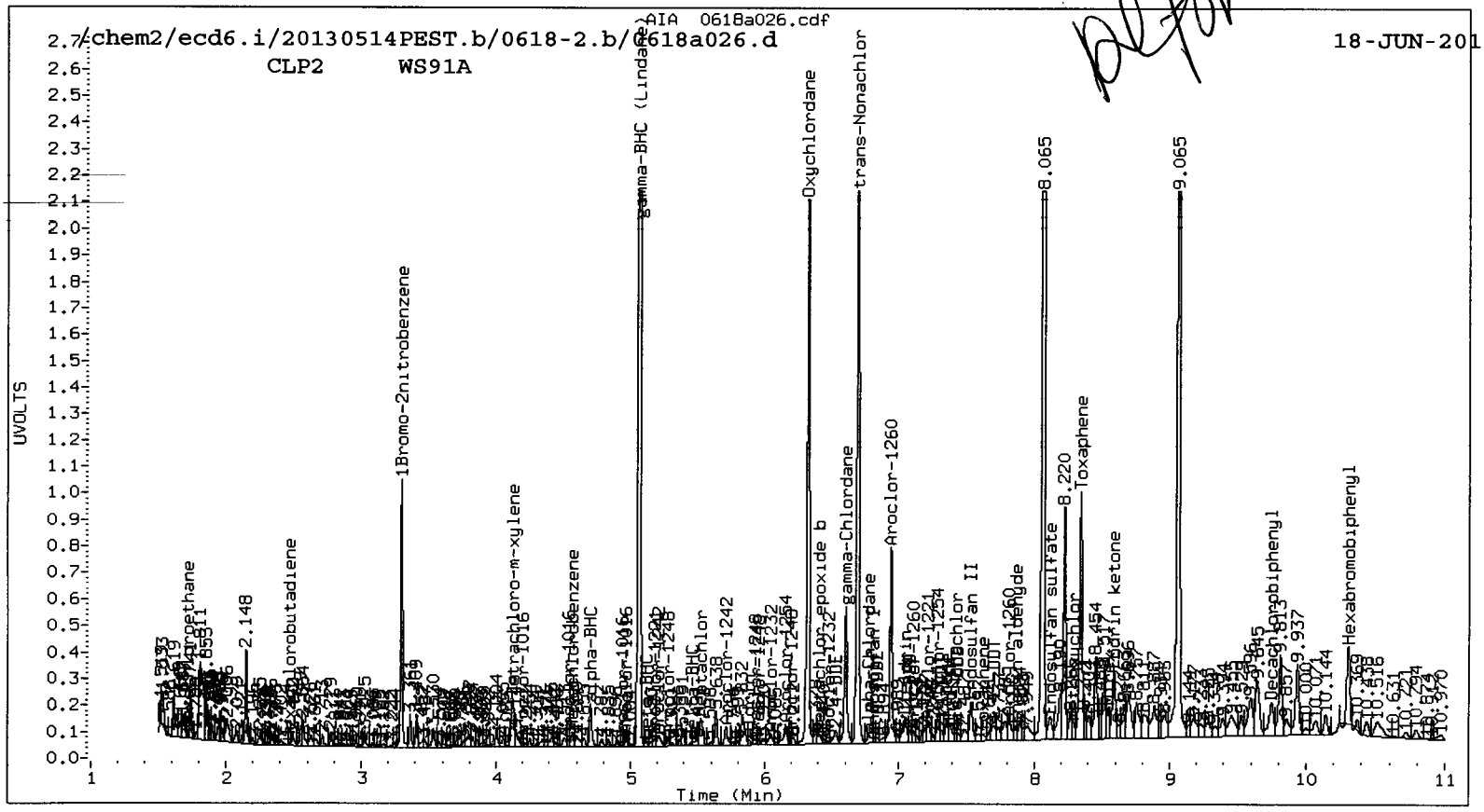
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	18503891	-36.3
Hexabromobiphenyl	16515704	13461561	-18.5

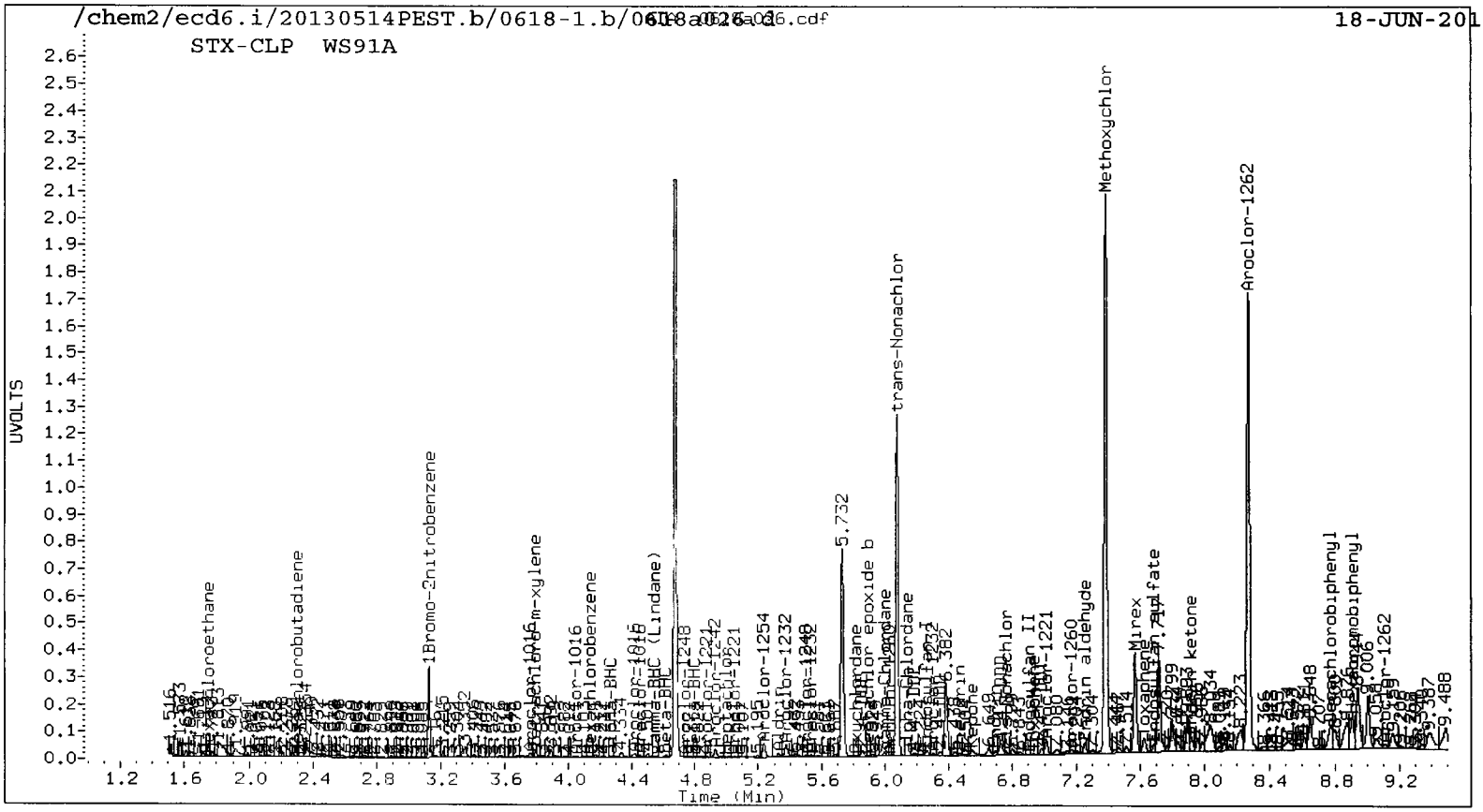
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

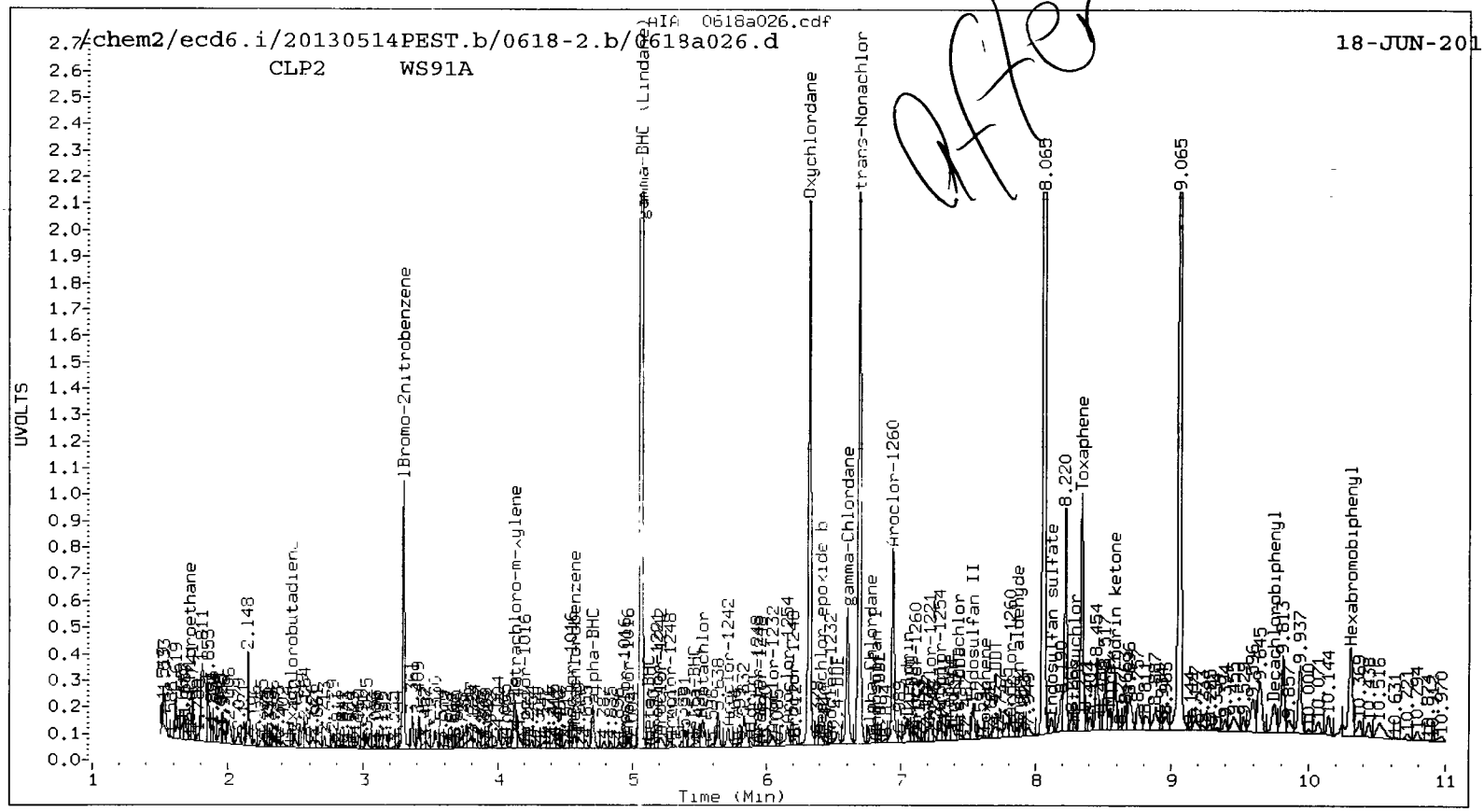
		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.933	-0.022	83767	38.3	1	7.289	-0.002	2261806	231.2
Toxaphene	2	7.013	0.007	1458063	861.7	2	7.622	0.006	300163	20.6
Toxaphene	3	7.251	-0.010	1092223	431.9	3	7.862	0.016	910112	58.5
Toxaphene	4	7.568	-0.021	9490702	4000.8	4	8.288	-0.026	549200	49.9
Toxaphene	5	7.625	-0.002	1625627	966.7	5	8.342	-0.011	23028214	1590.6
Toxaphene	6	7.917	0.008	1310784	881.1	NS	---			----
Total STX-CLPAve (6 peaks): 1196.731						Total CLP2Ave (5 peaks): 390.167				RPD = 102*
Corrected Ave (5 peaks): 635.915						Corrected Ave (4 peaks): 90.054				RPD = 150*


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a026.d
18-JUN-201
STX-CLP WS91A
UVOLTS
Time (Min)
Methoxychlor
Aroclor-1262
trans-Nonachlor
1Bromo-2nitrobenzene
5.732
9.488

before


AIA 0618a026.cdf
/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a026.d
18-JUN-201
CLP2 WS91A
UVOLTS
Time (Min)
gamma-BHC (Lindane)
Oxychlordane
trans-Nonachlor
8.065
9.065
1Bromo-2nitrobenzene
Aroclor-1260
Toxaphene
8.220
Hexabromobiphenyl
2.148


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a026.d
0618a026.cdf
18-JUN-201
STX-CLP WS91A
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachlorobutadiene
m-xylene
Aroclor-1016
Aroclor-1248
Aroclor-1254
Aroclor-1232
Aroclor-1242
Aroclor-1221
Oxychlordane
trans-Nonachlor
Methoxychlor
Aroclor-1262
Mirex
Toxaphene
Hexabromobiphenyl


/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a026.d
0618a026.cdf
18-JUN-201
CLP2 WS91A
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1248
Aroclor-1254
Aroclor-1232
Aroclor-1242
Aroclor-1221
Oxychlordane
trans-Nonachlor
gamma-Chlordane
Aroclor-1260
Endosulfan II
Endrin aldehyde
Endosulfan sulfate
Endrin ketone
Toxaphene
Hexabromobiphenyl

WS91 : 91200

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a027.d ARI ID: WS91AMS
Data file 2: /chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a027.d Client ID: CL-MH-SPS-20130 MS
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 18-JUN-2013 18:11
Compound Sublist: wpest Report Date: 06/21/2013 09:37
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
3.125	-0.003	5469467	3.296	-0.004	17261984	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.281	-0.003	249906	4.708	-0.001	433486	2.1448	1.1182	62.9*	alpha-BHC
4.645	0.003	158306	5.141	0.004	615673	3.4270	4.1289	18.6	beta-BHC M
4.801	-0.010	104281	5.453	0.005	318286	1.0724	0.9997	7.0	delta-BHC N
4.566	-0.001	150324	5.059	-0.005	2112814	1.4887	6.2814	123.4*	gamma-BHC (Lindane)
5.014	0.001	224684	5.529	0.001	787338	2.2893	2.4358	6.2	Heptachlor N
5.308	0.003	229478	5.868	0.002	1083640	2.3621	3.5518	40.2*	Aldrin N
5.881	0.002	477546	6.418	-0.003	1177269	5.4508	4.4059	21.2	Heptachlor epoxide b
6.256	-0.001	258384	6.808	-0.001	438688	3.1082	1.7771	54.5*	Endosulfan I N
6.481	0.002	619612	7.067	0.001	1455105	7.0135	5.7845	19.2	Dieldrin N
6.185	0.005	747425	6.871	0.003	1414514	10.5653	5.4122	64.5*	4,4'-DDE N
6.703	0.006	681005	7.357	0.002	967193	9.1063	4.9791	58.6*	Endrin N
6.907	0.004	275267	7.532	-0.013	1498962	3.3960	6.5772	63.8*	Endosulfan II N
6.738	0.001	316113	7.410	0.004	662698	3.6876	2.8977	24.0	4,4'-DDD MN
7.674	0.004	144582	8.088	0.001	138986	1.9881	0.7455	90.9*	Endosulfan sulfate
7.001	0.007	418059	7.706	0.012	1699027	5.5036	9.0202	48.4*	4,4'-DDT N
7.426	0.006	879991	8.278	0.002	2648724	24.2488	36.4880	40.3*	Methoxychlor N
7.927	0.002	501834	8.586	0.008	1975144	5.4345	9.7284	56.6*	Endrin ketone N
7.283	0.003	105824	7.838	-0.004	296129	1.5519	1.6440	5.8	Endrin aldehyde MN
6.001	0.002	401584	6.604	0.001	1126266	4.2741	4.0215	6.1	gamma-Chlordane N
6.128	0.004	244914	6.743	0.002	535120	2.8027	2.0738	29.9	alpha-Chlordane MN
2.307	-0.002	371805	2.464	-0.002	1543281	3.0527	4.7606	43.7*	Hexachlorobutadiene
4.137	0.000	354305	4.583	-0.001	2362281	3.8452	5.8046	40.6*	Hexachlorobenzene
5.773	-0.011	40113	6.316	-0.016	1346281	0.5250	5.7204	166.4*	Oxychlordane N
5.821	-0.037	107305	6.572	-0.008	261076	1.8604	1.4854	22.4	2,4-DDE N
6.128	0.021	244914	6.685	-0.007	963363	2.6128	4.1877	46.3*	trans-Nonachlor N
6.342	-0.001	259475	7.068	0.003	1455105	5.0819	11.3757	76.5*	2,4-DDD N
6.610	0.028	27630	7.357	0.004	967193	0.4839	7.2150	174.9*	2,4-DDT N
6.738	0.015	316113	7.440	0.023	406469	3.1220	1.6894	59.6*	cis-Nonachlor N
7.620	0.024	264398	8.543	-0.021	121642	4.2175	0.9501	126.5*	Mirex N
8.939	0.018	5714942	10.303	0.013	10252834	80.0000	80.0000	0.0	Hexabromobiphenyl
1.751	-0.005	13928	1.719	-0.005	4017326	0.0000	0.0000	---	Hexachloroethane
6.540	-0.041	131091	7.318	-0.019	232875	0.0000	0.0000	---	Kepone
3.796	-0.001	489055	4.125	-0.001	1570831	6.5580	5.5975	15.8	Tetrachloro-m-xylene
8.778	0.008	1106228	9.736	0.011	1149015	13.6150	5.5475	84.2*	Decachlorobiphenyl

06/21/13

* 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

WS91 : 91207

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	16.4	14.0	14.0~	42-112
Decachlorobiphenyl	34.0	13.9	13.9~	59-123
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	1821251.8	995.8	995.8~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	1100727.4	1804.0	1804.0~	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	5500669	5469467	-0.6
Hexabromobiphenyl	5319006	5714942	7.4

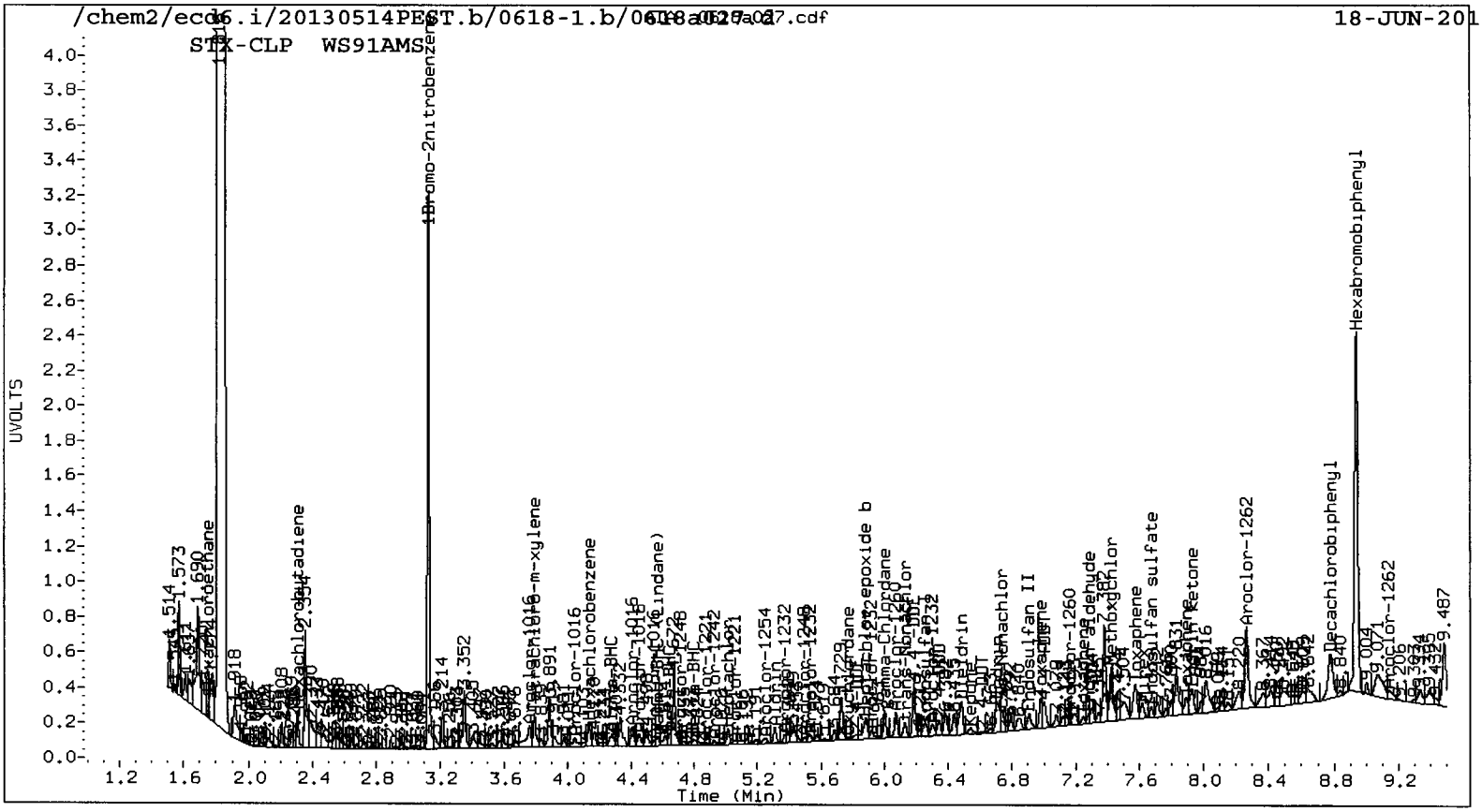
Column 2

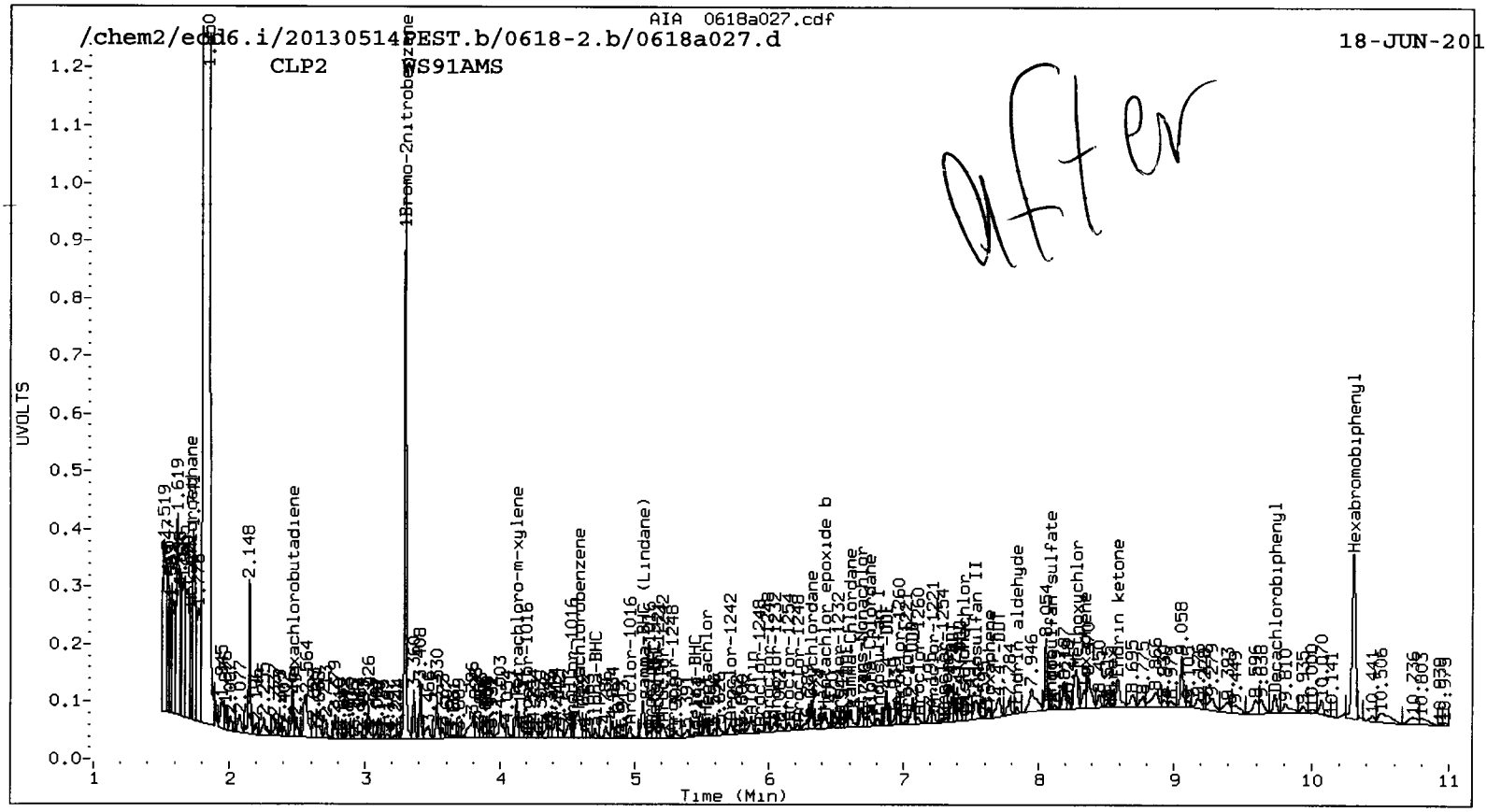
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	17261984	-40.6
Hexabromobiphenyl	16515704	10252834	-37.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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	0.024	426437	119.9	1	7.285	-0.006	187210	25.1
Toxaphene	2	7.001	-0.006	418059	151.8	2	7.627	0.011	513785	46.4
Toxaphene	3	7.248	-0.016	119734	29.1	3	7.838	-0.008	296129	25.0
Toxaphene	4	7.576	-0.012	724890	187.7	4	8.338	0.025	1130621	134.8
Toxaphene	5	7.620	-0.008	264398	96.6	5	---			0.0
Toxaphene	6	7.892	-0.017	263795	108.9	NS	---			----

Total STX-CLPAve (6 peaks): 115.666 Total CLP2Ave (4 peaks): 57.824 RPD = 67*
Corrected Ave (6 peaks): 115.666 Corrected Ave (3 peaks): 32.167 RPD = 113*


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a027.d
0618a027.cdf
18-JUN-201
STX-CLP WS91AMS
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Hexachlorobutadiene
Hexachlorobenzene
Hexabromobiphenyl
Decachlorobiphenyl
Aroclor-1262


AIA 0618a027.cdf
/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a027.d
18-JUN-201
CLP2 WS91AMS
after
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Hexachlorobutadiene
Hexachlorobenzene
Hexabromobiphenyl
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a028.d ARI ID: WS91AMSD
Data file 2: /chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a028.d Client ID: CL-MH-SPS-20130 MSD
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 18-JUN-2013 18:28
Compound Sublist: wpest Report Date: 06/21/2013 09:37
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 5.000

6/21/13

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.126	-0.003	5571910	3.296	-0.004	18213868	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.282	-0.002	231641	4.707	-0.001	418417	1.9515	1.0229 J	62.4*	alpha-BHC N
4.647	0.006	134234	5.142	0.005	589942	2.8524	3.7495 Y	27.2	beta-BHC M
4.801	-0.010	88526	5.451	0.003	403914	0.8936	1.2024 J	29.5	delta-BHC N
4.567	0.000	134799	5.059	-0.006	1759255	1.3104	4.9569	116.4*	gamma-BHC (Lindane)
5.014	0.002	229774	5.529	0.001	839927	2.2981	2.4627	6.9	Heptachlor N
5.308	0.003	223880	5.868	0.002	994594	2.2621	3.0896	30.9	Aldrin N
5.883	0.003	443578	6.419	-0.002	1226308	4.9700	4.3495	13.3	Heptachlor epoxide b
6.255	-0.002	304800	6.810	0.002	347291	3.5991	1.3333	91.9*	Endosulfan I N
6.482	0.003	646148	7.068	0.001	1516314	7.1794	5.7128	22.8	Dieldrin N
6.186	0.007	832796	6.871	0.003	1547187	11.5556	5.6104 V	69.3*	4,4'-DDE N
6.705	0.008	712796	7.358	0.003	1009534	9.1484	4.9951 Y	58.7*	Endrin N
6.907	0.005	267411	7.532	-0.012	1252276	3.1665	5.2812 J	50.1*	Endosulfan II N
----			7.410	0.004	440030	0.0000	1.8493 J	---	4,4'-DDD
7.676	0.005	116094	8.088	0.001	228094	1.5322	1.1759 Y	26.3	Endosulfan sulfate
7.003	0.009	417074	7.708	0.014	1486076	5.2701	7.5829 Y	36.0	4,4'-DDT N
7.427	0.008	713487	8.277	0.001	2887965	18.8707	38.2374 J	67.8*	Methoxychlor N
7.928	0.002	401470	8.587	0.010	1773434	4.1729	8.3953 Y	67.2*	Endrin ketone N
7.305	0.025	376673	7.839	-0.002	327724	5.3020	1.7487 J	100.8*	Endrin aldehyde N
6.002	0.003	422725	6.605	0.001	1017893	4.4164	3.4446 Y	24.7	gamma-Chlordane N
6.129	0.006	250326	6.743	0.002	352503	2.8120	1.2947 J	73.9*	alpha-Chlordane MN
2.306	-0.002	351037	2.464	-0.002	1533673	2.8292	4.4837 J	45.2*	Hexachlorobutadiene
4.139	0.001	345263	4.584	0.000	1825321	3.6782	4.2508 J	14.4	Hexachlorobenzene N
5.824	0.040	28189	6.317	-0.015	1548747	0.3541	6.2367	178.5*	Oxychlordane N
----			6.574	-0.006	249686	0.0000	1.3464	---	2,4-DDE
6.129	0.022	250326	6.686	-0.006	911216	2.5633	3.8071	39.0	trans-Nonachlor N
6.344	0.000	287420	7.067	0.003	1516314	5.4031	11.3934	71.3*	2,4-DDD N
6.608	0.025	36734	7.357	0.005	1009534	0.6174	7.2381	168.6*	2,4-DDT N
6.738	0.016	329763	7.439	0.022	166267	3.1259	0.6642	129.9*	cis-Nonachlor N
7.621	0.025	258996	8.545	-0.020	81673	3.9653	0.6131	146.4*	Mirex N
8.941	0.021	5954173	10.303	0.013	10667473	80.0000	80.0000	0.0	Hexabromobiphenyl
1.752	-0.004	4245	1.740	0.016	3550761	0.0000	0.0000	---	Hexachloroethane
6.541	-0.040	111612	7.318	-0.018	246227	0.0000	0.0000	---	Kepone
3.797	0.000	480877	4.124	-0.001	1575482	6.3297	5.3207	17.3	Tetrachloro-m-xylene
8.780	0.009	1037157	9.737	0.012	1521203	12.2520	7.0590	53.8*	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	15.8	13.3	13.3~	42-112
Decachlorobiphenyl	30.6	17.6	17.6~	59-123
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	1829680.8	999.0	999.0~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	1054012.4	1516.6	1516.6~	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

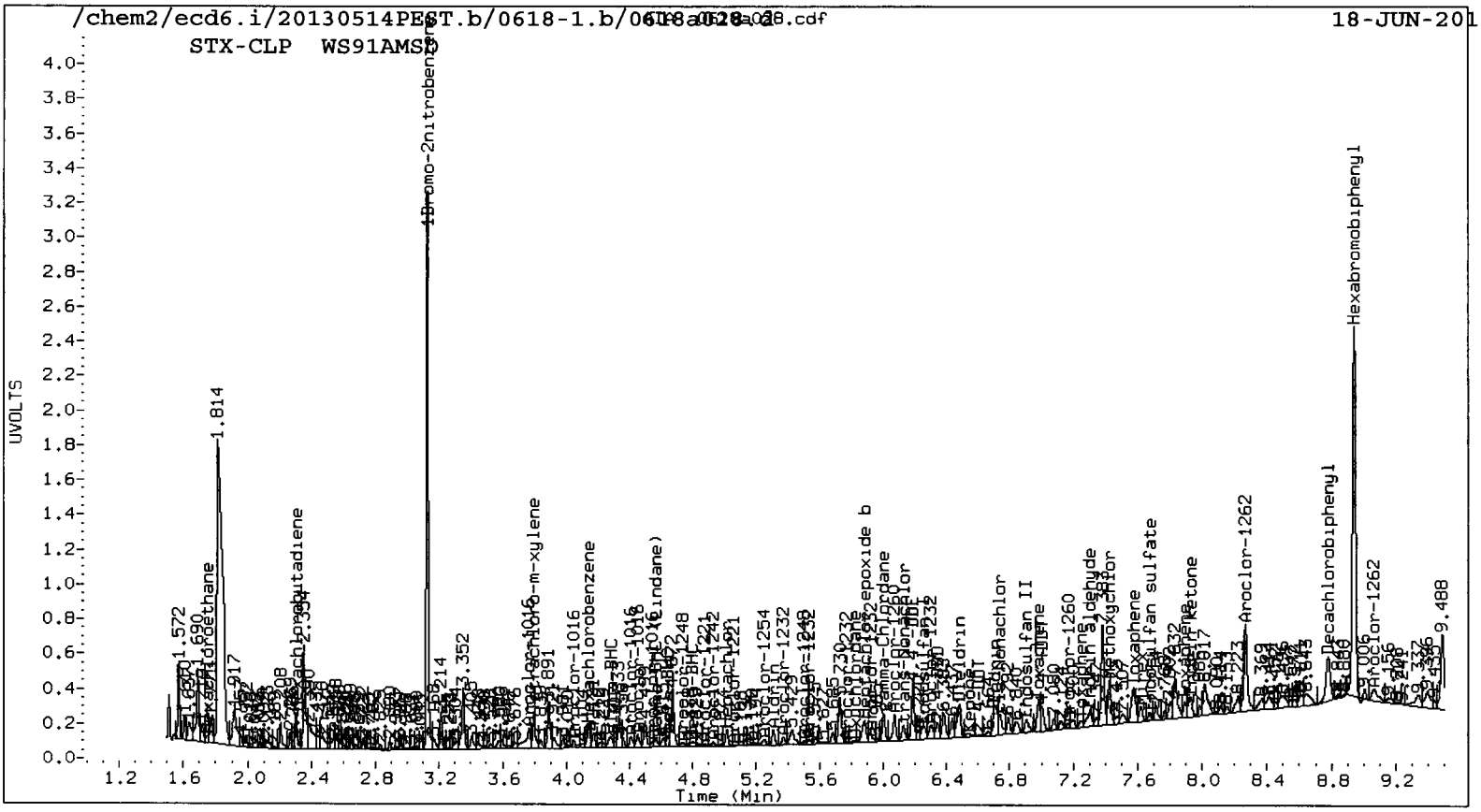
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5571910	1.3
Hexabromobiphenyl	5319006	5954173	11.9

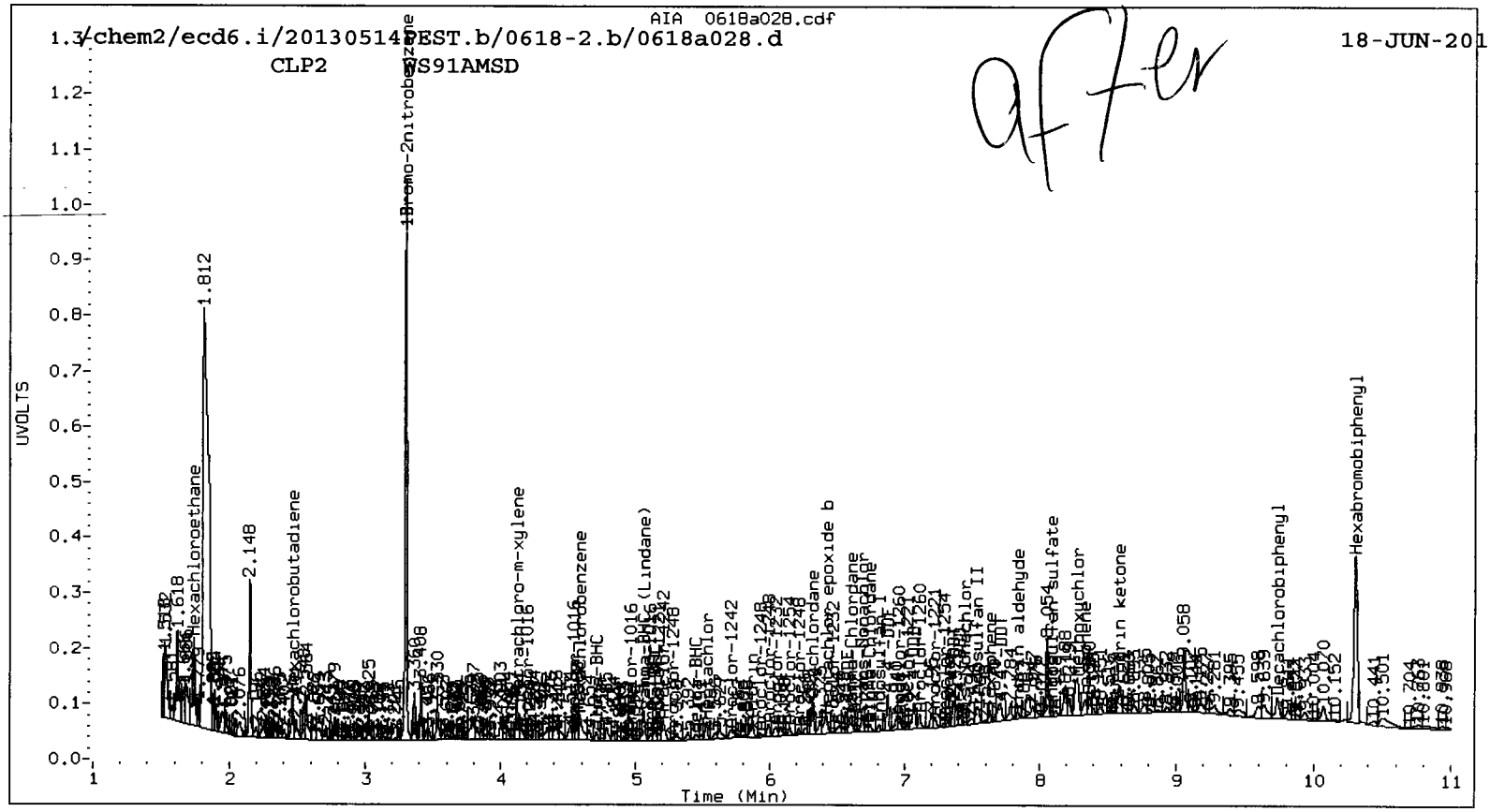
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	18213868	-37.3
Hexabromobiphenyl	16515704	10667473	-35.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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	6.981	0.026	443194	119.6	1	7.285	-0.006	175823	22.7
Toxaphene	2	7.003	-0.004	417074	145.3	2	7.628	0.012	468347	40.6
Toxaphene	3	7.249	-0.015	123324	28.8	3	7.839	-0.007	327724	26.6
Toxaphene	4	7.579	-0.010	737960	183.4	4	8.337	0.024	1031822	118.2
Toxaphene	5	7.621	-0.007	258996	90.8	5	---			0.0
Toxaphene	6	7.894	-0.015	231642	91.8	NS	---			----
Total STX-CLPAve (6 peaks): 109.957						Total CLP2Ave (4 peaks): 52.033				RPD = 72*
Corrected Ave (6 peaks): 109.957						Corrected Ave (3 peaks): 29.966				RPD = 114*


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a028.d
AIA 0618a028.cdf
18-JUN-201
STX-CLP WS91AMSD
UVOLTS
Time (Min)
1.814
Bromo-2nitrobenzene
Hexachloroethane
Hexachlorobutadiene
Hexabromobiphenyl
Decachlorobiphenyl
Aroclor-1262


AIA 0618a028.cdf
/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a028.d
18-JUN-201
CLP2 WS91AMSD
UVOLTS
Time (Min)
1.812
2.148
Bromo-2nitrobenzene
Hexachloroethane
Hexachlorobutadiene
Hexabromobiphenyl
Decachlorobiphenyl

after

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a030.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a030.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 18-JUN-2013 19:04
Compound Sublist: INDA Report Date: 06/21/2013 10:05
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
3.127	-0.002	5110579	3.297	-0.002	24583020	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.282	-0.002	2453229	4.707	-0.002	11147630	22.5329	20.1925	11.0	alpha-BHC
4.640	-0.001	859651	5.136	-0.001	4009991	19.9163	18.8834	5.3	beta-BHC
4.810	-0.001	1936073	5.447	-0.001	8524201	21.3081	18.8004	12.5	delta-BHC
4.565	-0.002	2103877	5.064	-0.001	9304831	22.2979	19.4248	13.8	gamma-BHC (Lindane)
5.011	-0.002	1920235	5.527	-0.002	8145673	20.9390	17.6954	16.8	Heptachlor
5.304	-0.001	2004845	5.864	-0.002	7568734	22.0858	17.4200	23.6	Aldrin
5.878	-0.002	1734214	6.419	-0.002	6108511	21.1845	16.0527	27.6	Heptachlor epoxide b
6.255	-0.002	1595300	6.807	-0.002	4763980	20.5378	13.5514	41.0*	Endosulfan I
6.477	-0.002	3301529	7.064	-0.002	9661847	39.9947	26.9702	38.9	Dieldrin
6.178	-0.001	2719687	6.867	-0.001	9402138	41.1441	25.2608	47.8*	4,4'-DDE
6.696	-0.001	2797015	7.354	-0.002	6877157	48.2531	40.4159	17.7	Endrin
6.901	-0.001	2649598	7.542	-0.002	7705078	42.1730	38.5948	8.9	Endosulfan II
6.735	-0.001	2920664	7.404	-0.002	7707898	43.9560	38.4751	13.3	4,4'-DDD
7.669	-0.001	2209920	8.085	-0.002	6678260	39.2045	40.8927	4.2	Endosulfan sulfate
6.993	-0.001	2047621	7.692	-0.001	5515074	34.7778	33.4248	4.0	4,4'-DDT
7.418	-0.001	5511605	8.274	-0.002	13246968	195.9433	208.3210	6.1	Methoxychlor
7.923	-0.002	2893190	8.575	-0.002	6725605	40.4217	37.8159	6.7	Endrin ketone
7.278	-0.002	1971575	7.840	-0.001	5239987	37.3026	33.2090	11.6	Endrin aldehyde
5.998	-0.002	1765846	6.602	-0.001	5781450	20.1139	14.4955	32.5	gamma-Chlordane
6.122	-0.001	1678666	6.740	-0.001	5024478	20.5592	13.6732	40.2*	alpha-Chlordane
2.308	-0.001	2544712	2.466	0.000	7082012	22.3604	15.3400	37.2	Hexachlorobutadiene
4.136	-0.002	1826828	4.583	-0.001	11660248	21.2186	20.1189	5.3	Hexachlorobenzene
8.918	-0.002	4429670	10.286	-0.004	8981344	80.0000	80.0000	0.0	Hexabromobiphenyl
3.795	-0.001	3157228	4.124	-0.001	16383464	45.3098	40.9948	10.0	Tetrachloro-m-xylen
8.769	-0.001	2323552	9.722	-0.003	7201808	36.8948	39.6933	7.3	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	113.3	102.5	102.5~	115- 0
Decachlorobiphenyl	92.2	99.2	92.2~	115- 0

~ Indicates recovery outside QC Limits

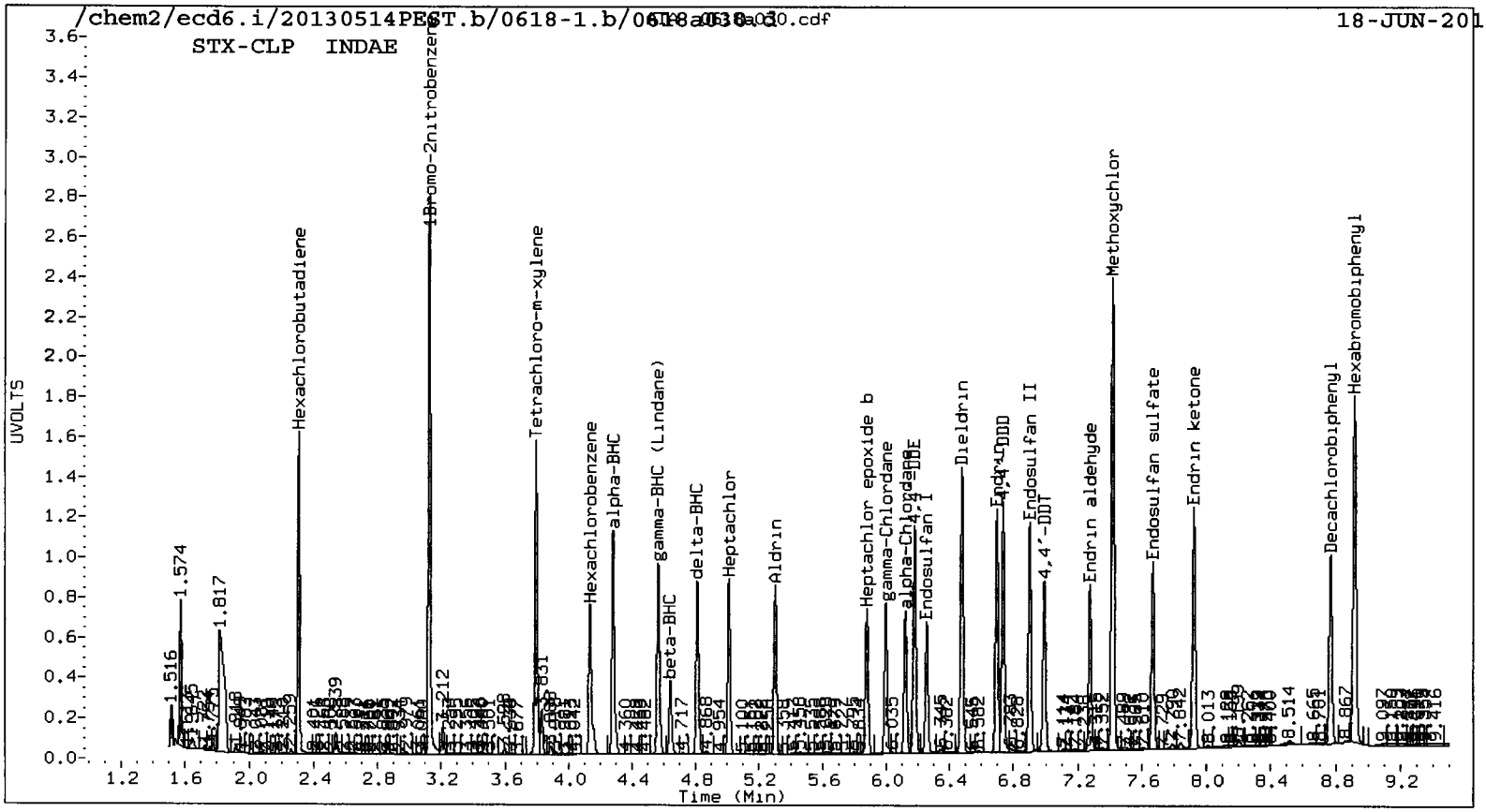
INTERNAL STANDARD SUMMARY

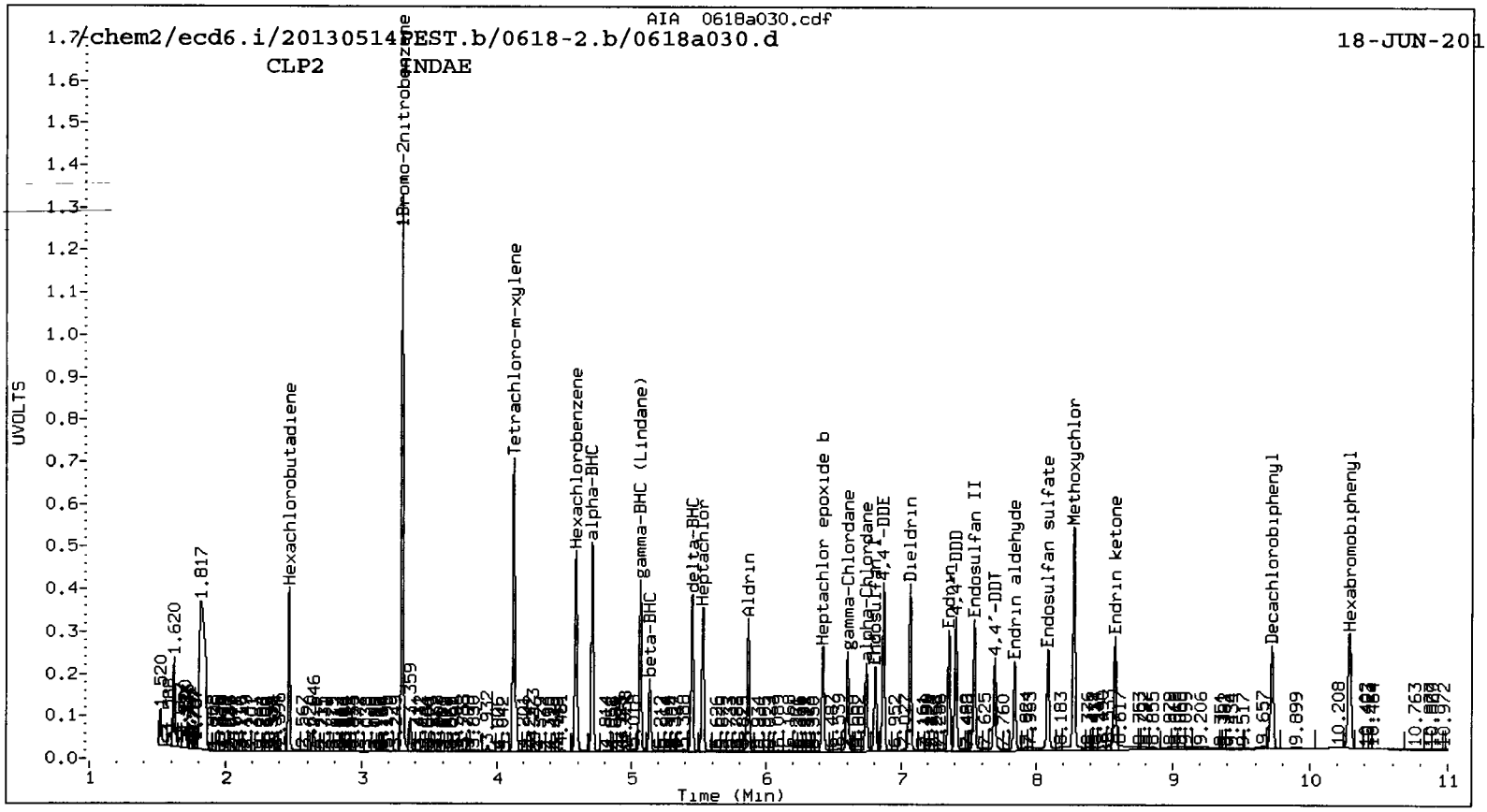
Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	5500669	5110579	-7.1
Hexabromobiphenyl	5319006	4429670	-16.7

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	29060499	24583020	-15.4
Hexabromobiphenyl	16515704	8981344	-45.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a030.d
AIA 0618a030.cdf
18-JUN-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.516
1.574
1.817
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 0618a030.cdf
/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a030.d
18-JUN-201
CLP2 INDAE
UVOLTS
Time (Min)
1.620
1.817
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/20130514PEST.b/0618-1.b/0618a031.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a031.d Client ID:
Method: /chem2/ecd6.i/20130514PEST.b/PEST0514.m Injection Date: 18-JUN-2013 19:22
Compound Sublist: TOXAPH Report Date: 06/21/2013 10:05
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
3.127	-0.002	5636555	3.297	-0.002	27463584	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.919	-0.001	5352202	10.287	-0.003	11537137	80.0000	80.0000	0.0	Hexabromobiphenyl
3.795	-0.001	2892300	4.124	-0.001	17520656	37.6345	39.2420	4.2	Tetrachloro-m-xylen
8.770	-0.001	2351057	9.723	-0.002	7908043	30.8969	33.9303	9.4	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	94.1	98.1	94.1~	150- 0
Decachlorobiphenyl	77.2	84.8	77.2~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5500669	5636555	2.5
Hexabromobiphenyl	5319006	5352202	0.6

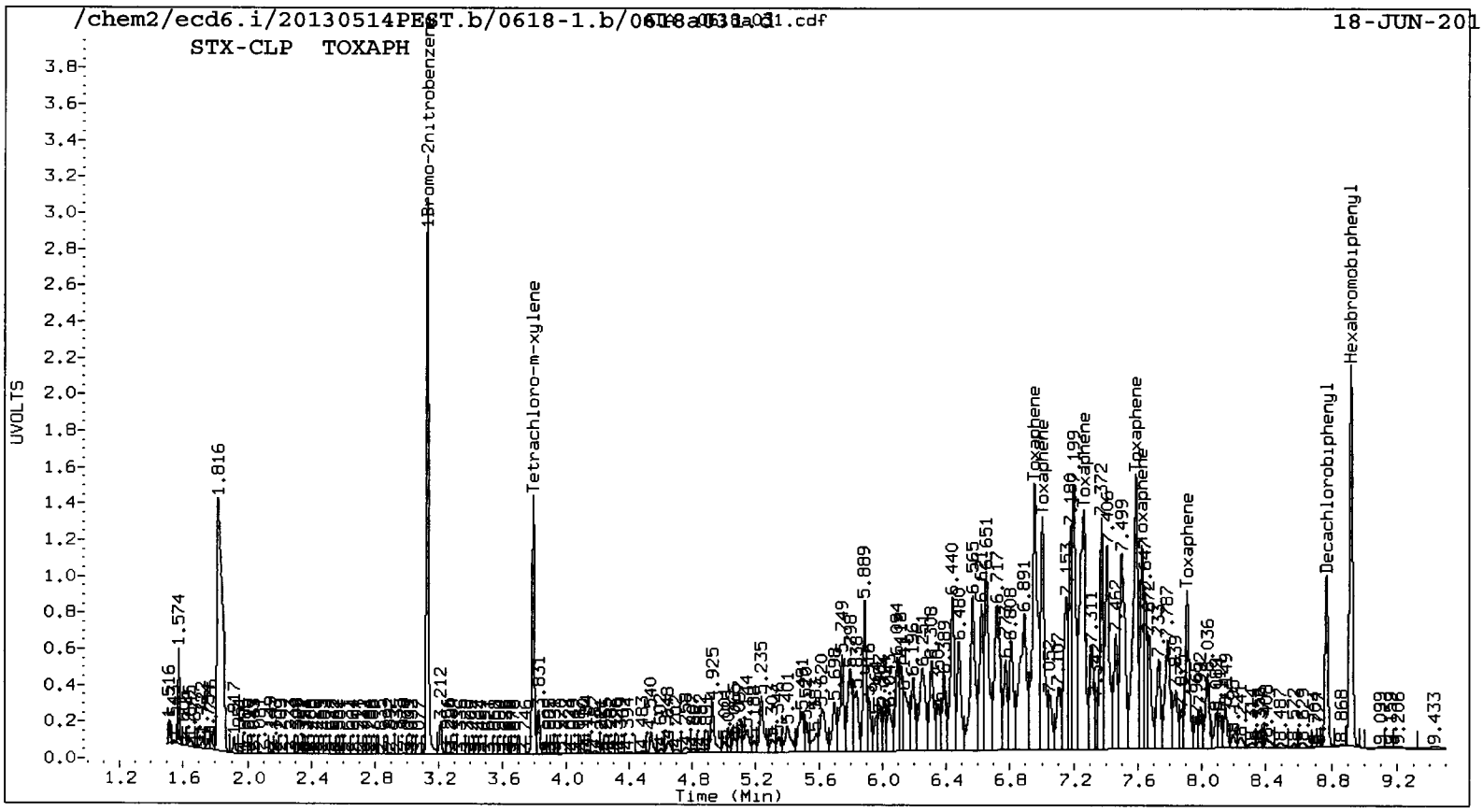
Column 2

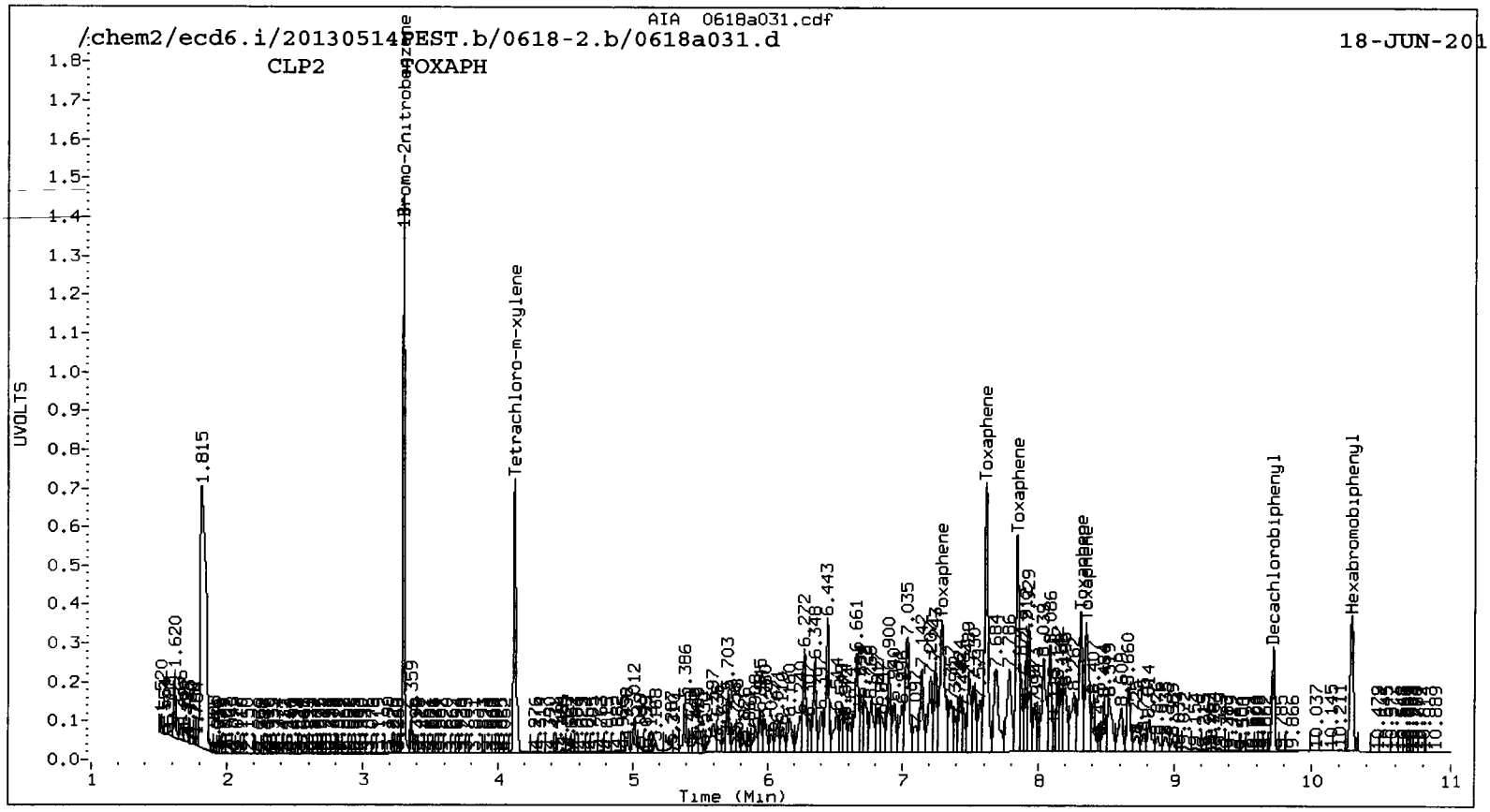
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	29060499	27463584	-5.5
Hexabromobiphenyl	16515704	11537137	-30.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 14-MAY-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	6.953	-0.002	6486969	1947.6	1	7.290	-0.001	17362212	2071.2
Toxaphene	2	7.004	-0.003	4510349	1748.4	2	7.614	-0.002	23753329	1906.2
Toxaphene	3	7.263	-0.001	6537762	1695.7	3	7.843	-0.003	17616231	1320.3
Toxaphene	4	7.588	0.000	5965050	1649.5	4	8.312	-0.001	12842457	1360.7
Toxaphene	5	7.626	-0.001	3297776	1286.3	5	8.351	-0.002	13590187	1095.3
Toxaphene	6	7.907	-0.002	2871971	1266.3	NS	---			----

Total STX-CLPAve (6 peaks): 1598.959 Total CLP2Ave (5 peaks): 1550.723 RPD = 3
Corrected Ave (6 peaks): 1598.959 Corrected Ave (5 peaks): 1550.723 RPD = 3


/chem2/ecd6.i/20130514PEST.b/0618-1.b/0618a031.d
STX-CLP TOXAPH
18-JUN-201
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0618a031.cdf
/chem2/ecd6.i/20130514PEST.b/0618-2.b/0618a031.d
CLP2 TOXAPH
18-JUN-201
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

PCB Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WS91

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) WT54, WS91 Page 1 of 1

PSDDA (4ppb)
Batch set up by: ~~SH~~

Bottle #	ARI Sample I.D.	Weight Extracted (eq. to 12.5g dry wt)	(REQ) Acid Clean (2.5mL)	(REQ) Sulfur Clean (2.5mL) Very high 1 2 (3) Sulfur	(REQ) Silica Gel Clean (1:2.5)	Extraction Final Volume	Volume to Lab	Comments	Verify Client ID
	MBS WT54	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual W)	YL 06/17/13 Analyst/Date
	SBS	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual Wt)	Microwave 1 (2) 3 CT 06/17/13 Analyst/Date
	SBSDup	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual Wt)	
	QLS	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual Wt)	KD 100°C Hexane Exchange (2 X 20mL) 1 2 3 (4) 5 6 RR 06/18/13 Analyst/Date
1	A	17.04	2.5mL	2.5mL	1mL	2.5mL	1mL		
8	WS91 A	31.04	2.5mL	2.5mL	1mL	2.5mL	1mL		
8	AMS	31.04	2.5mL	2.5mL	1mL	2.5mL	1mL		
8	AMSD	31.02	2.5mL	2.5mL	1mL	2.5mL	1mL		
			2.5mL	2.5mL	1mL	2.5mL	1mL		TurboVap (1) 2 3 Pre-Cleanups AC 6-18-13 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		
			2.5mL	2.5mL	1mL	2.5mL	1mL		TurboVap 1 2 (3) Post Cleanups AC 6-18-13 Analyst/Date
			2.5mL	2.5mL	1mL	2.5mL	1mL		
Analyst/Date	YL 06/17/13	AC 6-18-13	AC 6-18-13	AC 6-18-13	AC 6-18-13	AC 6-18-13	AC 6-18-13	Reviewed by AC 6-18-13	

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N(B0415)	2µg/mL	50µL	4/30/14	YL	AC
Spike	1 (2074-4)	20µg/mL	63µL	10/31/13	YL	AC
QLS Spike	5 (2088-3)	2µg/mL	25µL	10/31/13	YL	AC

Extraction Time: 12:32 Balance ID: B1464614

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~~ 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
WS91 only

WS91 : 012209

Reagent and Solutions Identification

(8082A) PCB - Soil / Sediment
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WT54, WS91

(8082A) PCB PSDDA (4ppb) Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station: Anhydrous Sodium Sulfate: (I# 8134 + jar date 5-24-13) Neutral Glasswool: (I# 7943 + jar date 5-15-13) 1:1 Hexane/Acetone: (H# 194) 80:20 Hexane/Acetone: (H# 177) Hexane: (I# 8250)	Microwave CT 6/17/13
KD Station: Hexane: (I# 8269) Anhydrous Sodium Sulfate: (I# 8130 + jar date 6/6/13) Neutral Glasswool: (I# 7998 + jar date 4/15/13)	KD 6/18/13
Vialing Station: Hexane: (I# 8269) Concentrated Sulfuric Acid: (I# 8156) Tetrabutylammonium hydrogensulfate (TBAS): (H# 190) Sodium Sulfite: (I# 7704) Silica Gel (SPE) Darts: (I# 8127	Vialing AC 6-18-13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: W591 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)= A	AC 6-6-13
☐ Standing Water Homogenized (Shared samples)=	✓
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)? AC 5% small	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
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-screen indicates	
possible aroclor activity.	JH 6/13/13

W591 · 21222

PCB Raw Data
Initial Calibration

ARI Job ID: WS91

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): 05/07/13 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
IB	1992-2	05/16/13	AR1660	~~B207~~ B182	04/30/14
AR1660	B161	04/30/14	AR1242	B190	
AR1242	B163		AR1248	B191	
AR1248	B172		AR1254	B192	
AR1254	B173		AR2162	B193	
AR2162	B174		AR-2268	B194	
AR-2268	B175				
BD	2067-1	05/16/13			
DDT-	1991-2	01/21/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: JR **Date:** 05/07/13

Reviewer: MD **Date:** 5-8-13

WS91 : 8122H

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130507.b/ical-1.b

ARI Job No.: IB Method: PCB1.m Instrument: ecd5.i Date: 07-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1619	0507a003.d	IB		1	NO MANUAL INTEGRATION
1639	0507a004.d	0.25PPMAR1660		1	NO MANUAL INTEGRATION
1659	0507a005.d	0.02PPMAR1660		1	NO MANUAL INTEGRATION
1719	0507a006.d	0.05PPMAR1660		1	NO MANUAL INTEGRATION
1739	0507a007.d	1PPMAR1660		1	NO MANUAL INTEGRATION
1759	0507a008.d	0.1PPMAR1660		1	NO MANUAL INTEGRATION
1819	0507a009.d	0.5PPMAR1660		1	NO MANUAL INTEGRATION
1839	0507a010.d	AR1242		1	NO MANUAL INTEGRATION
1859	0507a011.d	AR1248		1	NO MANUAL INTEGRATION
1920	0507a012.d	AR1254		1	NO MANUAL INTEGRATION
1940	0507a013.d	AR2162		1	NO MANUAL INTEGRATION
2000	0507a014.d	AR3268		1	NO MANUAL INTEGRATION
2021	0507a015.d	AR1242	ICV	1	NO MANUAL INTEGRATION
2041	0507a016.d	AR1248	ICV	1	NO MANUAL INTEGRATION
2101	0507a017.d	AR1254	ICV	1	NO MANUAL INTEGRATION
2121	0507a018.d	AR1660	ICV	1	NO MANUAL INTEGRATION
2142	0507a019.d	AR2162	ICV	1	NO MANUAL INTEGRATION
2202	0507a020.d	AR3268	ICV	1	NO MANUAL INTEGRATION

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB2.m
Batch File: /chem2/ecd5.i/20130507.b/ical-2.b
Inst ID: ecd5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0507a004	0507a005	0507a006	0507a007	0507a008	0507a009
INJ.DATE:	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013
INJ.TIME:	16:39	16:59	17:19	17:39	17:59	18:19

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	40 IS-BNB	2.727	2.727	2.726	2.727	2.725	2.725	2.724	2.624-2.824	2.726	0.001
$	2 Tetrachloro-m-xylene	4.414	4.413	4.413	4.414	4.413	4.412	4.412	4.312-4.512	4.413	0.001
	1 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	3.694	3.594-3.794	+++++	+++++
	4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	6.165	6.066-6.266	+++++	+++++
	3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	6.167	6.067-6.267	+++++	+++++
	6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	6.800	6.700-6.900	+++++	+++++
	7 Aroclor-1016	6.167	6.167	6.167	6.167	6.167	6.166	6.166	6.066-6.266	6.167	0.000
	8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	8.298	8.198-8.398	+++++	+++++
	10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.260	10.160-10.360	+++++	+++++
	9 Aroclor-1260	10.261	10.262	10.262	10.260	10.262	10.260	10.260	10.160-10.360	10.261	0.001
	11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	11.507	11.407-11.607	+++++	+++++
$	13 Decachlorobiphenyl	13.206	13.206	13.205	13.203	13.204	13.204	13.205	13.105-13.305	13.205	0.001
*	12 IS-HBBP	14.074	14.073	14.073	14.072	14.073	14.073	14.072	13.972-14.172	14.073	0.001
	41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.560	8.510-8.610	+++++	+++++
	42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.246	9.196-9.296	+++++	+++++
	44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.949	8.849-9.049	+++++	+++++
	45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.713	9.613-9.813	+++++	+++++

Reviewer 1 _____ Date: 05/08/13
Reviewer 2 _____ Date: 5-8-13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB2.m
Batch File: /chem2/ecd5.i/20130507.b/ical-2.b
Inst ID: ecd5.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.148	10.048-10.248	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB1.m
Batch File: /chem2/ecd5.i/20130507.b/ical-1.b
Inst ID: ecd5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0507a004	0507a005	0507a006	0507a007	0507a008	0507a009
INJ.DATE:	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013	07-MAY-2013
INJ.TIME:	16:39	16:59	17:19	17:39	17:59	18:19

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	2.250	2.250	2.250	2.249	2.249	2.249	2.249	2.149-2.349	2.249	0.001
$ 1 Tetrachloro-m-xylene	4.412	4.411	4.411	4.410	4.411	4.411	4.411	4.311-4.511	4.411	0.001
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	5.064	4.964-5.164	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	6.059	5.959-6.159	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	6.060	5.960-6.160	+++++	+++++
7 Aroclor-1016	6.062	6.062	6.062	6.059	6.061	6.060	6.060	5.960-6.160	6.061	0.001
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	6.467	6.367-6.567	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	8.192	8.092-8.292	+++++	+++++
9 Aroclor-1260	9.968	9.968	9.968	9.967	9.967	9.967	9.967	9.867-10.067	9.967	0.001
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.283	10.183-10.383	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	11.175	11.075-11.275	+++++	+++++
$ 13 Decachlorobiphenyl	12.829	12.828	12.828	12.827	12.828	12.827	12.828	12.728-12.928	12.828	0.001
* 12 IS-HBBP	13.191	13.191	13.191	13.189	13.191	13.190	13.191	13.091-13.291	13.190	0.001
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.156	8.106-8.206	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	8.707	8.657-8.757	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.210	9.160-9.260	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.589	8.489-8.689	+++++	+++++

Reviewer 1 _____ Date: 05/08/13
Reviewer 2 _____ Date: 5-8-13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130507.b/PCB1.m
Batch File: /chem2/ecd5.i/20130507.b/ical-1.b
Inst ID: ecd5.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.163	9.063-9.263	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.675	9.575-9.775	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd5.i/20130507.b/ical-1.b/0507a005.d
Level 2: /chem2/ecd5.i/20130507.b/ical-1.b/0507a006.d
Level 3: /chem2/ecd5.i/20130507.b/ical-1.b/0507a008.d
Level 4: /chem2/ecd5.i/20130507.b/ical-1.b/0507a004.d
Level 5: /chem2/ecd5.i/20130507.b/ical-1.b/0507a009.d
Level 6: /chem2/ecd5.i/20130507.b/ical-1.b/0507a007.d
Level 7: /chem2/ecd5.i/20130507.b/ical-1.b/0507a014.d
Level 8: /chem2/ecd5.i/20130507.b/ddt-1.b/0507a021.d/0507a021.cdf

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
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03259	+++++	0.03259	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.00997	+++++	0.00997	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.01408	+++++	0.01408	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02881	+++++	0.02881	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.08837	+++++	0.08837	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03943	+++++	0.03943	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 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)	+++++	+++++	+++++	+++++	+++++	+++++	0.04869	+++++	0.04869	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.01482	+++++	0.01482	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04536	+++++	0.04536	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02357	+++++	0.02357	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.02708	+++++	0.02708	0.000
7 Aroclor-1016(1)	0.04186	0.03922	0.03800	0.03458	0.03232	0.03038	+++++	+++++	0.03606	12.136
(2)	0.12934	0.12017	0.11740	0.10631	0.09981	0.09343	+++++	+++++	0.11108	12.195
(3)	0.05884	0.05458	0.05260	0.04727	0.04418	0.04111	+++++	+++++	0.04976	13.510
(4)	0.04321	0.04072	0.03932	0.03524	0.03340	0.03123	+++++	+++++	0.03718	12.437

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 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
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.05630	+++++	0.05630	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.06332	+++++	0.06332	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.08051	+++++	0.08051	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.05614	+++++	0.05614	0.000
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.07461	+++++	0.07461	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04925	+++++	0.04925	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.10267	+++++	0.10267	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.10574	+++++	0.10574	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.03999	+++++	0.03999	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 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
9 Aroclor-1260(1)	0.08092	0.07140	0.06872	0.06239	0.05721	0.05245	+++++	+++++	0.06551	15.742
(2)	0.07490	0.06756	0.06590	0.06047	0.05602	+++++	+++++	+++++	0.06497	11.060
(3)	0.17376	0.16180	0.15830	0.14675	0.13829	+++++	+++++	+++++	0.15578	8.810
(4)	0.08420	0.07867	0.07662	0.07158	0.06832	+++++	+++++	+++++	0.07588	8.154
(5)	0.04297	0.04212	0.04155	0.03881	0.03753	+++++	+++++	+++++	0.04060	5.708
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.07490	+++++	0.07490	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.17600	+++++	0.17600	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.05574	+++++	0.05574	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.07824	+++++	0.07824	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 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						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06005	+++++					0.06005	0.000
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.16835	+++++					0.16835	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.18617	+++++					0.18617	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.13825	+++++					0.13825	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.38949	+++++					0.38949	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1037					1037	0.000
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1111					1111	0.000
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1189					1189	0.000
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1453					1453	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB1.m
Cal Date : 08-May-2013 09:16 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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1128	1128	0.000
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1294	1294	0.000
$ 1 Tetrachloro-m-xylene	1.27779	1.27691	1.30214	1.24444	1.19768	1.14335	+++++	+++++	1.24039	4.811
$ 13 Decachlorobiphenyl	1.45250	1.28741	1.22687	1.12094	1.06410	1.01848	+++++	+++++	1.19505	13.474

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd5.i/20130507.b/ical-2.b/0507a005.d
Level 2: /chem2/ecd5.i/20130507.b/ical-2.b/0507a006.d
Level 3: /chem2/ecd5.i/20130507.b/ical-2.b/0507a008.d
Level 4: /chem2/ecd5.i/20130507.b/ical-2.b/0507a004.d
Level 5: /chem2/ecd5.i/20130507.b/ical-2.b/0507a009.d
Level 6: /chem2/ecd5.i/20130507.b/ical-2.b/0507a007.d
Level 7: /chem2/ecd5.i/20130507.b/ical-2.b/0507a014.d
Level 8: /chem2/ecd5.i/20130507.b/ddt-2.b/0507a021.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						
1 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00820	+++++					0.00820	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01373	+++++					0.01373	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00748	+++++					0.00748	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02352	+++++					0.02352	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02053	+++++					0.02053	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04099	+++++					0.04099	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 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						
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01709	+++++					0.01709	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01434	+++++					0.01434	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03645	+++++					0.03645	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.08006	+++++					0.08006	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03345	+++++					0.03345	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02802	+++++					0.02802	0.000
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05013	+++++					0.05013	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04157	+++++					0.04157	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04304	+++++					0.04304	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 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)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05593	+++++					0.05593	0.000
7 Aroclor-1016(1)	0.05136	0.05104	0.04862	0.04453	0.04104	0.03730		
	+++++	+++++					0.04565	12.493
(2)	0.11167	0.10627	0.10431	0.09724	0.09163	0.08432		
	+++++	+++++					0.09924	10.221
(3)	0.02778	0.02695	0.02737	0.02574	0.02469	0.02316		
	+++++	+++++					0.02595	6.857
(4)	0.02758	0.02578	0.02560	0.02332	0.02231	0.02042		
	+++++	+++++					0.02417	10.869
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03879	+++++					0.03879	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04792	+++++					0.04792	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03671	+++++					0.03671	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07862	+++++					0.07862	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 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						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04427	+++++					0.04427	0.000
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.11065	+++++					0.11065	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10118	+++++					0.10118	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.18978	+++++					0.18978	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.12335	+++++					0.12335	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05956	+++++					0.05956	0.000
9 Aroclor-1260(1)	0.08456	0.07842	0.07600	0.07099	0.06556	0.05983		
	+++++	+++++					0.07256	12.383
(2)	0.09657	0.09048	0.08853	0.08437	0.07825	0.07177		
	+++++	+++++					0.08500	10.489
(3)	0.16866	0.16707	0.16406	0.15713	0.14786	0.13685		
	+++++	+++++					0.15694	7.943

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 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)	0.04850	0.04574	0.04367	0.04155	0.03920	0.03660		
	+++++	+++++					0.04254	10.221
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.19311	+++++					0.19311	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.18203	+++++					0.18203	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.14408	+++++					0.14408	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.37318	+++++					0.37318	0.000
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	757					757	0.000
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	727					727	0.000
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1214					1214	0.000
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	916					916	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 07-MAY-2013 22:22
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130507.b/PCB2.m
Cal Date : 08-May-2013 09:04 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	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1037					1037	0.000
$ 2 Tetrachloro-m-xylene	1.13790	1.10316	1.09698	1.08696	1.05825	1.00770		
	+++++	+++++					1.08183	4.115
$ 13 Decachlorobiphenyl	1.43878	1.24550	1.16217	1.06757	1.02392	0.96937		
	+++++	+++++					1.15122	14.943

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a003.d
Data file 2: 20130507.b/ical-2.b/0507a003.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 07-MAY-2013 16:19
Ical Date: 07-MAY-2013
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
4.411	0.000	32061788	4.413	0.002	8759043	42.4	42.7	0.7	Tetrachloro-m-xylen
12.829	0.000	27295255	13.206	0.001	4923666	35.8	35.7	0.4	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	105.9	106.6
Decachlorobiphenyl	89.6	89.2

JK 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	48807947	-0.3
Hexabromobiphenyl	50004151	51001521	2.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15184482	2.3
Hexabromobiphenyl	9345340	9588268	2.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

US91 · 61212

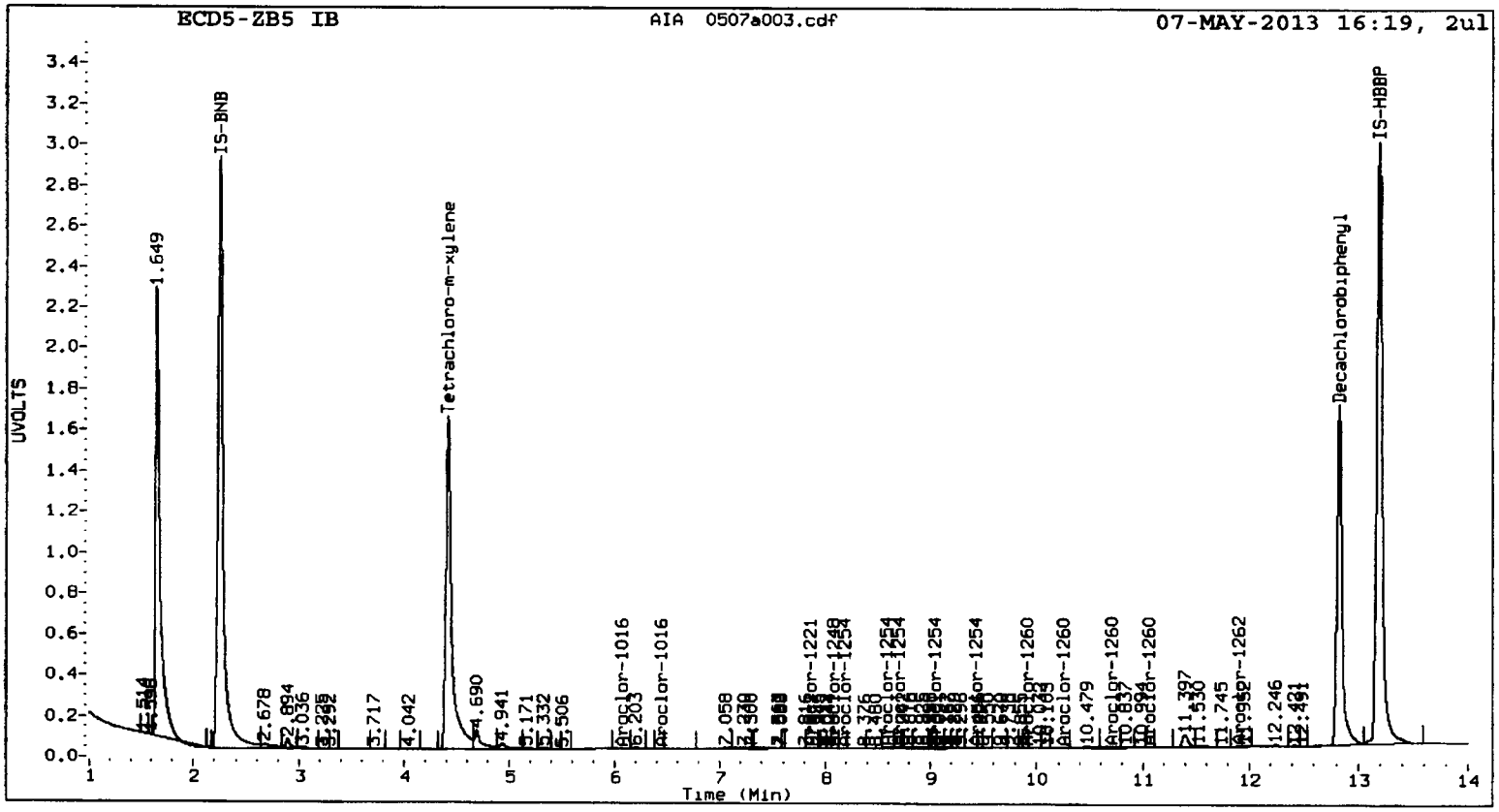
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.073	0.012	22097	1.0	1	---			0.0
Aroclor-1016	2	6.444	-0.024	12954	0.2	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.444	-0.024	12954	2.1	2	5.113	0.019	112267	43.1
Aroclor-1221	3	7.865	-0.013	88509	10.3	3	---			0.0
Aroclor-1221	NS	---			----	4	5.468	0.008	21627	4.8
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	6.073	0.012	22097	2.4	1	---			0.0
Aroclor-1232	2	6.444	-0.025	12954	0.5	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	7.865	-0.009	88509	5.4	4	---			0.0
	Total Col1Ave (3 peaks):			2.8		Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	6.073	0.013	22097	1.3	1	---			0.0
Aroclor-1242	2	6.444	-0.024	12954	0.2	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	7.865	-0.007	88509	3.0	4	---			0.0
	Total Col1Ave (3 peaks):			1.5		Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	6.444	-0.022	12954	0.4	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	7.865	-0.009	88509	1.8	3	---			0.0
Aroclor-1248	4	8.084	-0.027	42411	1.2	4	---			0.0
	Total Col1Ave (3 peaks):			1.1		Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	8.193	0.001	54179	1.2	1	---			0.0
Aroclor-1254	2	8.591	0.027	84538	2.8	2	---			0.0
Aroclor-1254	3	8.702	0.002	41716	0.7	3	---			0.0
Aroclor-1254	4	9.044	-0.009	43297	0.7	4	---			0.0
Aroclor-1254	5	9.430	0.068	73478	3.0	5	---			0.0
	Total Col1Ave (5 peaks):			1.7		Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	9.912	-0.055	26920	0.6	1	---			0.0
Aroclor-1260	2	10.257	-0.027	72723	1.8	2	---			0.0
Aroclor-1260	3	10.709	0.050	104804	1.1	3	---			0.0
Aroclor-1260	4	11.055	-0.003	13255	0.3	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
	Total Col1Ave (4 peaks):			0.9		Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	10.257	-0.026	72723	1.5	1	---			0.0
Aroclor-1262	2	10.709	0.051	104804	0.9	2	---			0.0
Aroclor-1262	3	11.055	-0.005	13255	0.4	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
Aroclor-1262	5	11.906	-0.012	20784	0.5	5	---			0.0
	Total Col1Ave (4 peaks):			0.8		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				

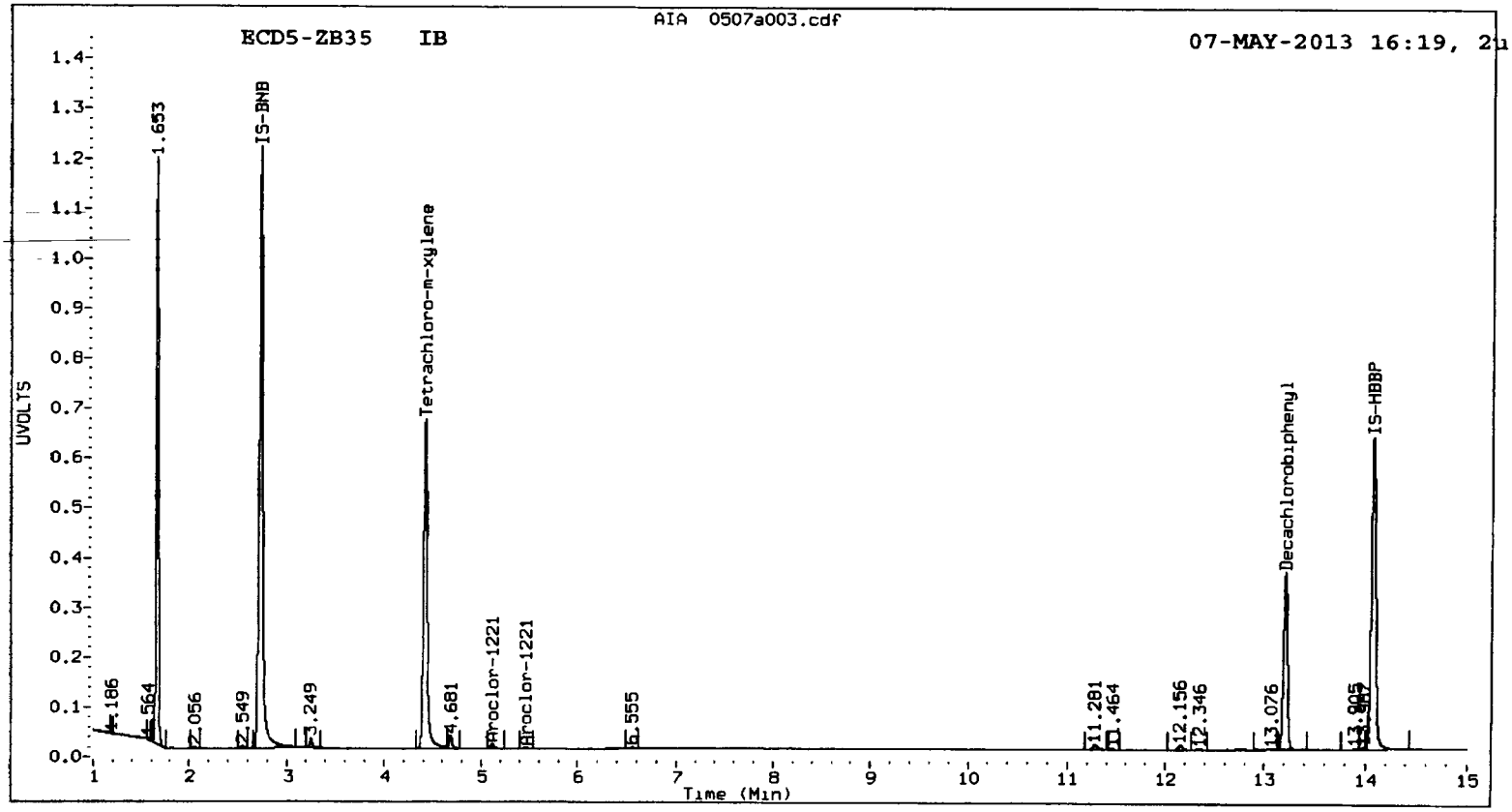
Total PCB Area Col1 (4.511 - 12.728) = 7126262 Col1 Total PCB = 0.0 ppm*

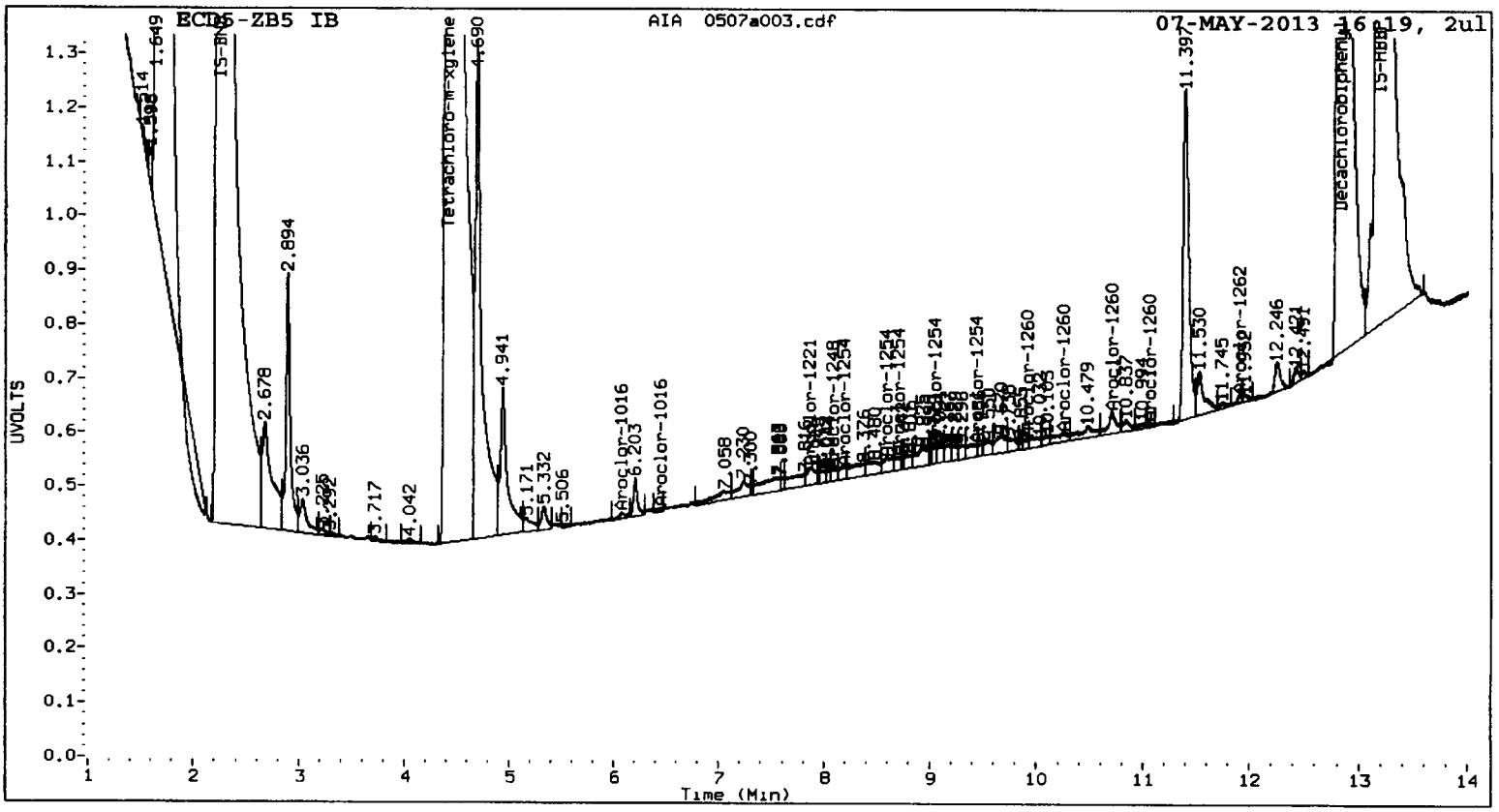
Total PCB Area Col2 (4.512 - 13.105) = 766675 Col2 Total PCB = 0.0 ppm*

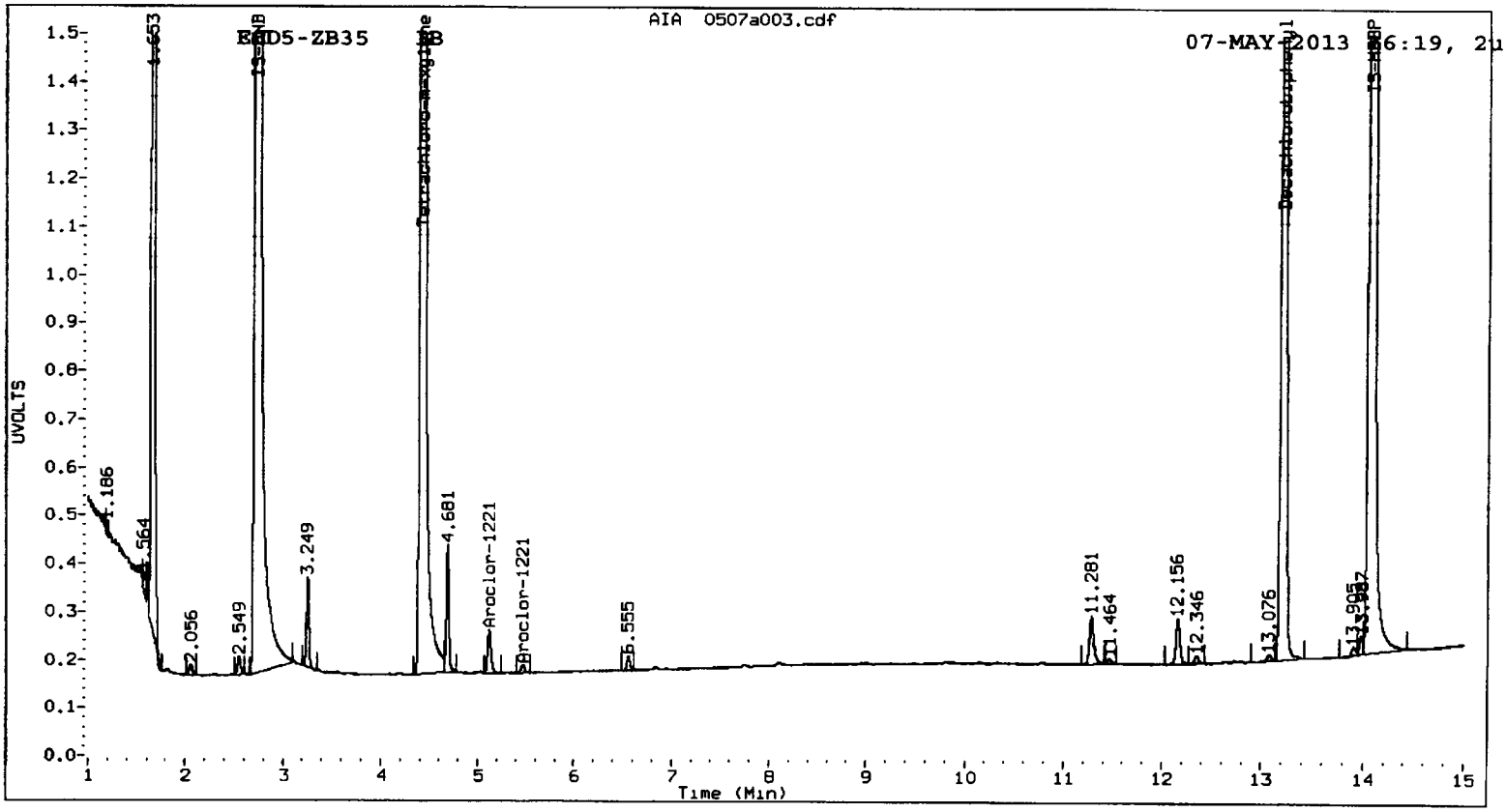
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 IB
AIA 0507a003.cdf
07-MAY-2013 16:19, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.649
4.690
Aroclor-1016
Aroclor-1260


ECD5-ZB35 IB
AIA 0507a003.cdf
07-MAY-2013 16:19, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.653
4.681
Aroclor-1221
Aroclor-1221


ECD5-ZB5 IB
AIA 0507a003.cdf
07-MAY-2013 16:19, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1254
Aroclor-1260
Aroclor-1262


ECD5-ZB35
AIA 0507a003.cdf
07-MAY-2013 16:19, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1221

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a004.d
Data file 2: 20130507.b/ical-2.b/0507a004.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 16:39
Ical Date: 07-MAY-2013
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
4.412	0.002	15237305	4.414	0.002	4032555	20.1	20.1	0.1	Tetrachloro-m-xylen
12.829	0.000	14012855	13.206	0.000	2494212	18.8	18.5	1.1	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	50.2	50.2
Decachlorobiphenyl	46.9	46.4

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	48977254	0.0
Hexabromobiphenyl	50004151	50004151	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14839715	0.0
Hexabromobiphenyl	9345340	9345340	0.0

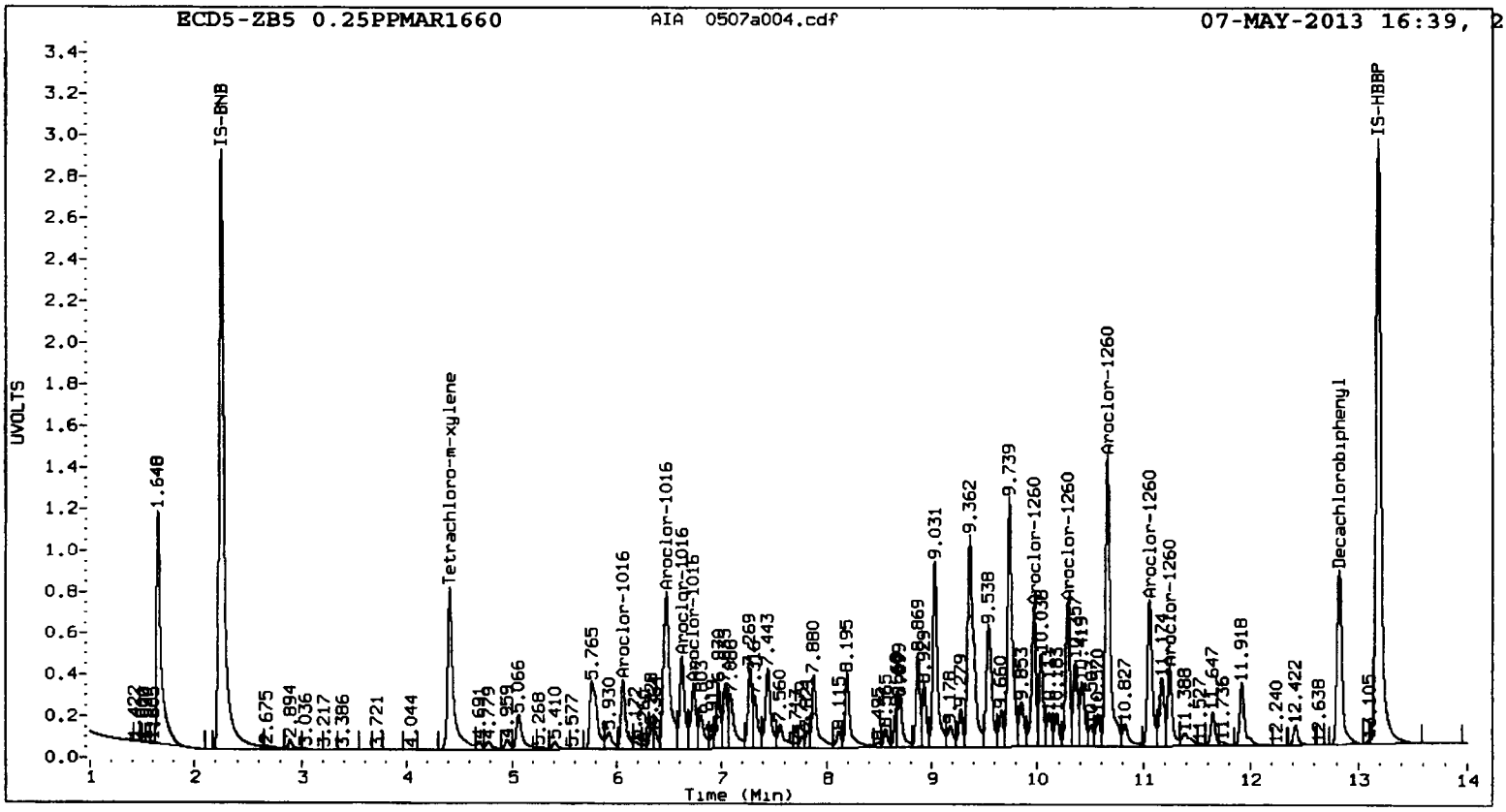
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

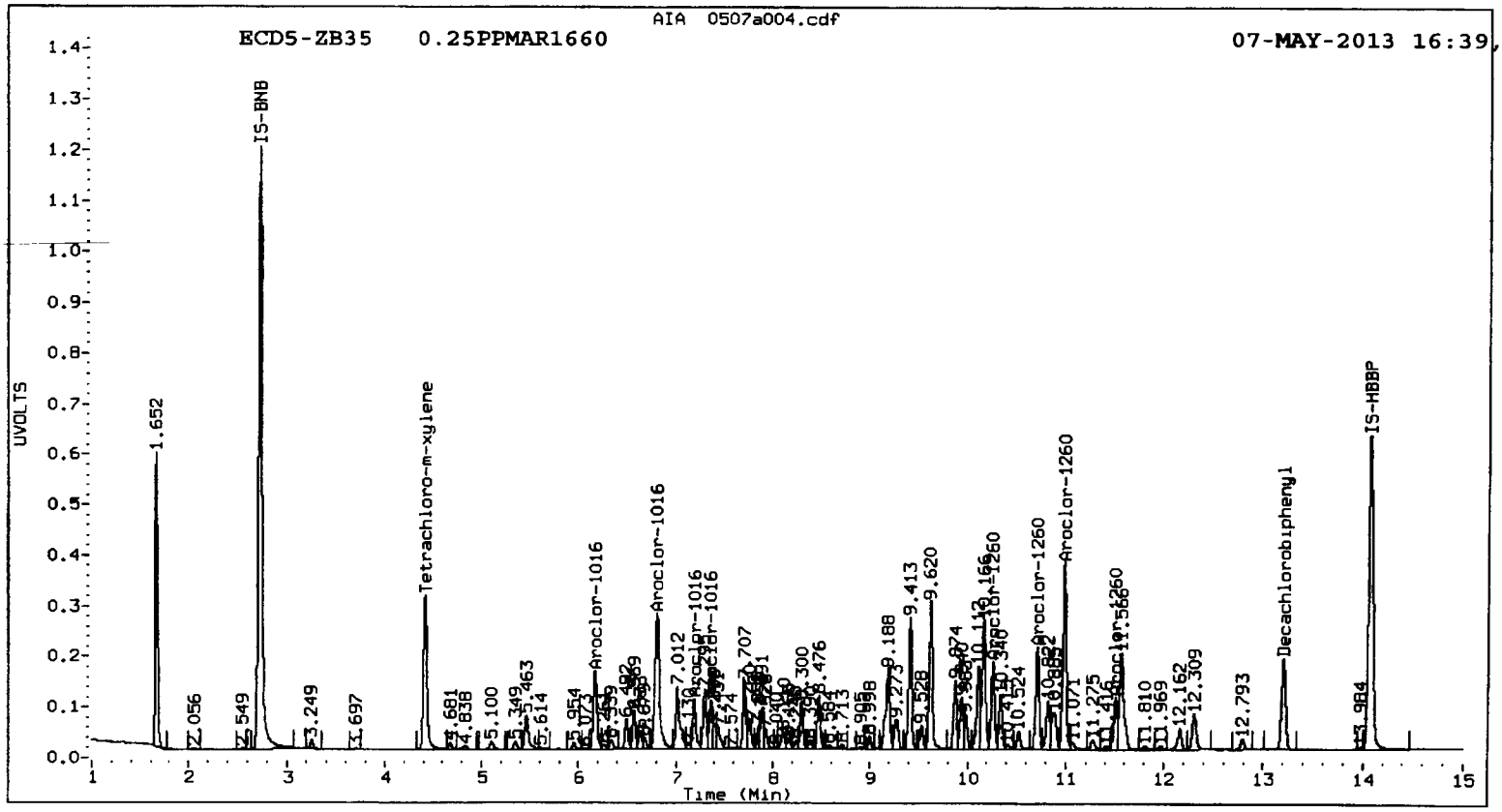
	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.062	0.001	5292322	239.7	1	6.167	0.001	2064971	243.9
Aroclor-1016	2	6.470	0.002	16270732	239.3	2	6.803	0.002	4509319	245.0
Aroclor-1016	3	6.619	0.002	7234719	237.5	3	7.187	0.002	1193712	248.0
Aroclor-1016	4	6.731	0.003	5392918	236.9	4	7.360	0.002	1081244	241.2
Total Col1Ave (4 peaks):					238.3	Total Col2Ave (4 peaks):				244.5 RPD = 3
Corrected Ave (3 peaks):					237.9	Corrected Ave (3 peaks):				243.3 RPD = 2
Aroclor-1260	1	9.968	0.001	9749945	238.1	1	10.261	0.001	2073273	244.6
Aroclor-1260	2	10.284	0.001	9449895	232.7	2	10.711	0.001	2464050	248.2
Aroclor-1260	3	10.660	0.000	22932169	235.5	3	10.986	0.001	4588966	250.3
Aroclor-1260	4	11.059	0.001	11185744	235.8	4	11.507	0.002	1213324	244.1
Aroclor-1260	5	11.247	0.000	6064816	239.0	NS	---			----
Total Col1Ave (5 peaks):					236.2	Total Col2Ave (4 peaks):				246.8 RPD = 4
Corrected Ave (4 peaks):					235.5	Corrected Ave (3 peaks):				245.6 RPD = 4

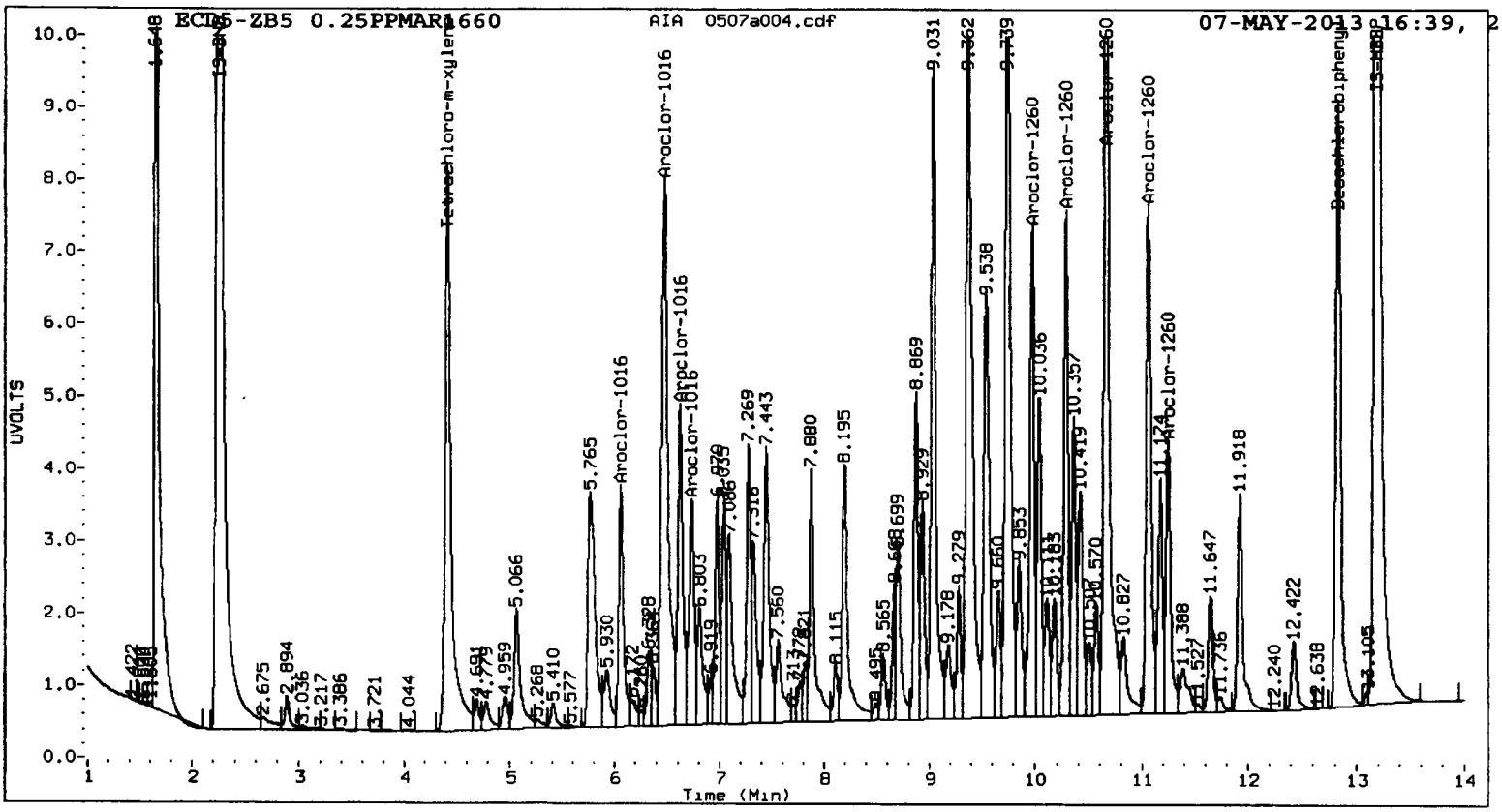
Total PCB Area Col1 (4.511 - 12.728) = 301049488 Col1 Total PCB = 0.5 ppm*

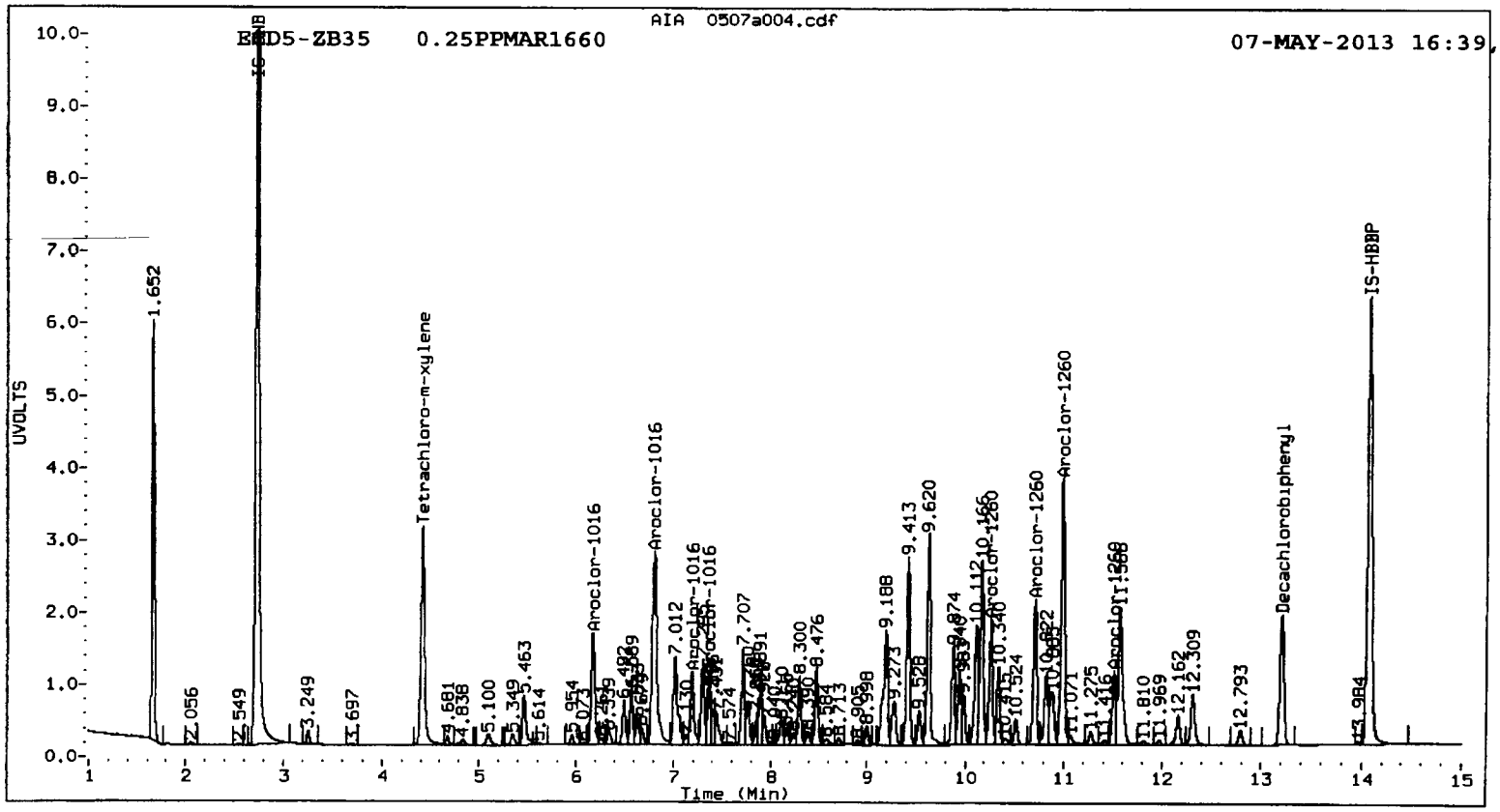
Total PCB Area Col2 (4.512 - 13.105) = 65038970 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 0.25PPMAR1660
AIA 0507a004.cdf
07-MAY-2013 16:39,
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


AIA 0507a004.cdf
ECD5-ZB35 0.25PPMAR1660
07-MAY-2013 16:39,
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD5-ZB5 0.25PPMAR1660
AIA 0507a004.cdf
07-MAY-2013 16:39,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


AIA 0507a004.cdf
ECD5-ZB35 0.25PPMAR1660
07-MAY-2013 16:39,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a005.d
Data file 2: 20130507.b/ical-2.b/0507a005.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 16:59
Ical Date: 07-MAY-2013
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
4.411	0.001	1277251	4.413	0.002	336292	1.6	1.7	2.1	Tetrachloro-m-xylen
12.828	0.000	1463829	13.206	0.001	269190	1.9	2.0	2.8	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	4.1	4.2
Decachlorobiphenyl	4.9	5.0

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	49978735	2.0
Hexabromobiphenyl	50004151	50389911	0.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14776833	-0.4
Hexabromobiphenyl	9345340	9354827	0.1

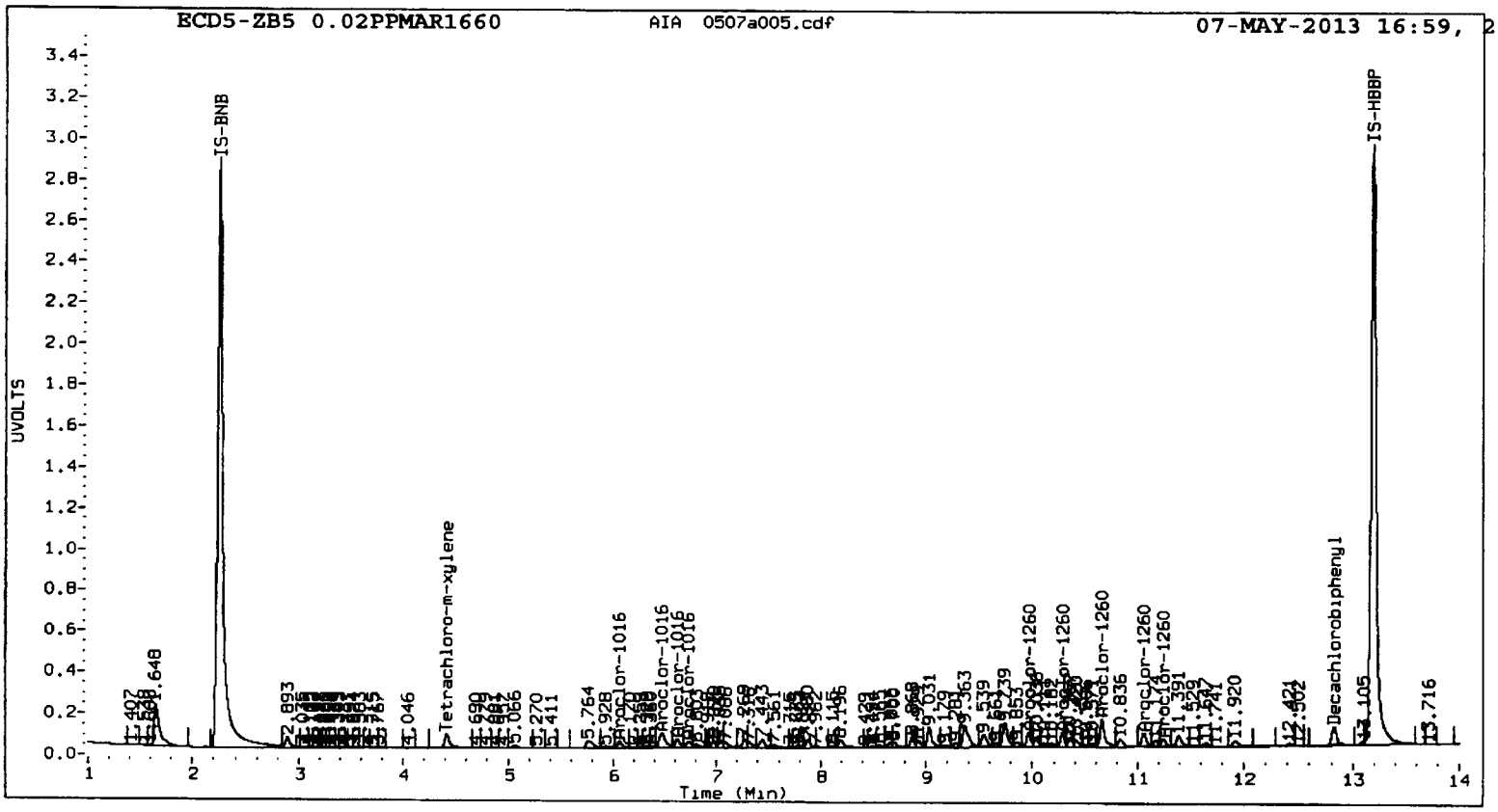
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

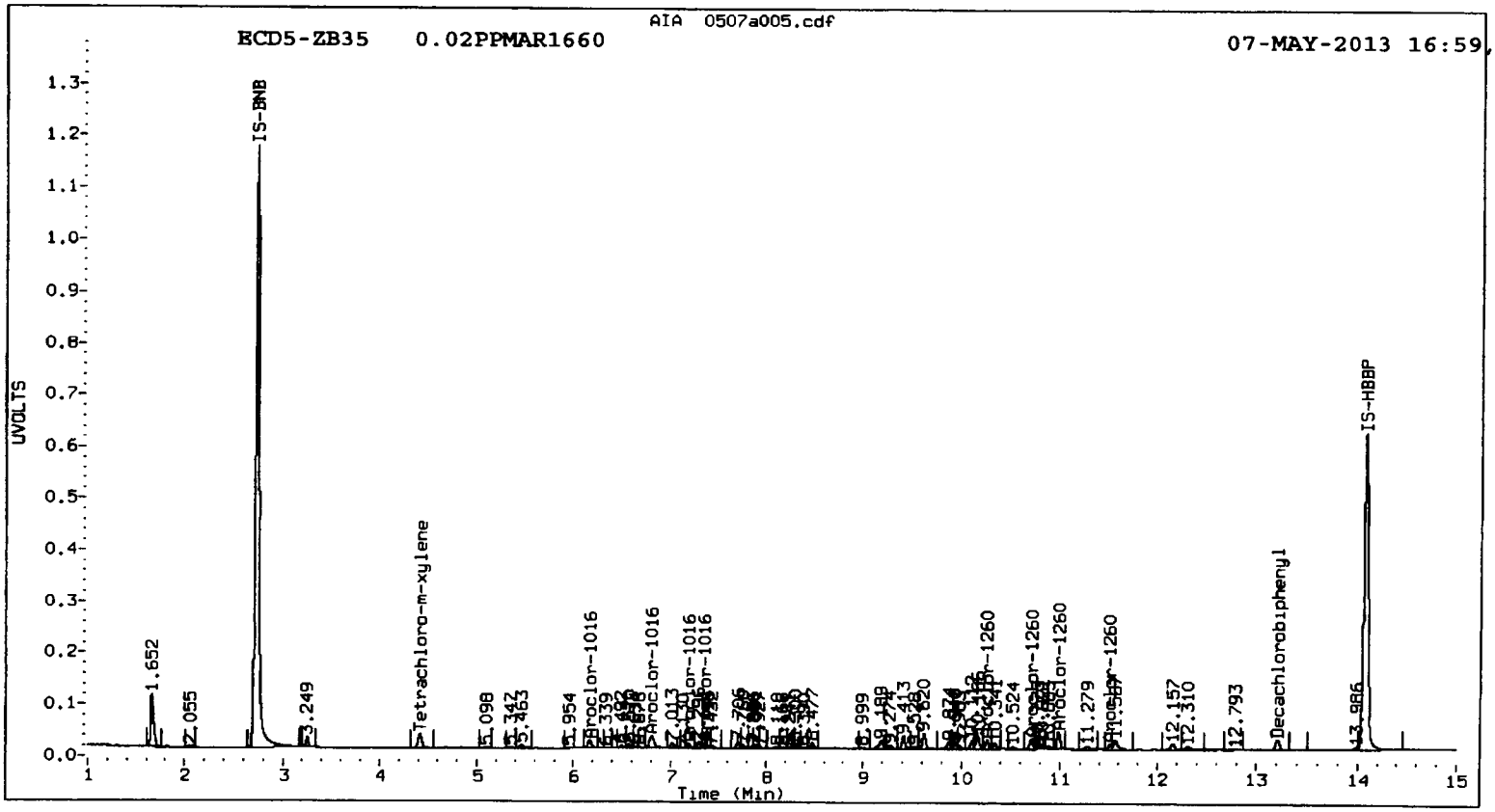
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.062	0.001	522973	23.2	1	6.167	0.001	189742	22.5
Aroclor-1016	2	6.471	0.003	1616098	23.3	2	6.805	0.004	412537	22.5
Aroclor-1016	3	6.620	0.004	735232	23.6	3	7.188	0.003	102632	21.4
Aroclor-1016	4	6.731	0.003	539914	23.2	4	7.360	0.002	101879	22.8
	Total Col1Ave (4 peaks):				23.3	Total Col2Ave (4 peaks):			22.3	RPD = 5
	Corrected Ave (3 peaks):				23.2	Corrected Ave (3 peaks):			22.1	RPD = 5
Aroclor-1260	1	9.968	0.001	1019399	24.7	1	10.262	0.002	197758	23.3
Aroclor-1260	2	10.284	0.001	943544	23.1	2	10.711	0.002	225842	22.7
Aroclor-1260	3	10.661	0.001	2188991	22.3	3	10.987	0.002	394454	21.5
Aroclor-1260	4	11.060	0.003	1060689	22.2	4	11.507	0.002	113428	22.8
Aroclor-1260	5	11.249	0.002	541330	21.2	NS	---			----
	Total Col1Ave (5 peaks):				22.7	Total Col2Ave (4 peaks):			22.6	RPD = 0
	Corrected Ave (4 peaks):				22.2	Corrected Ave (3 peaks):			22.3	RPD = 1

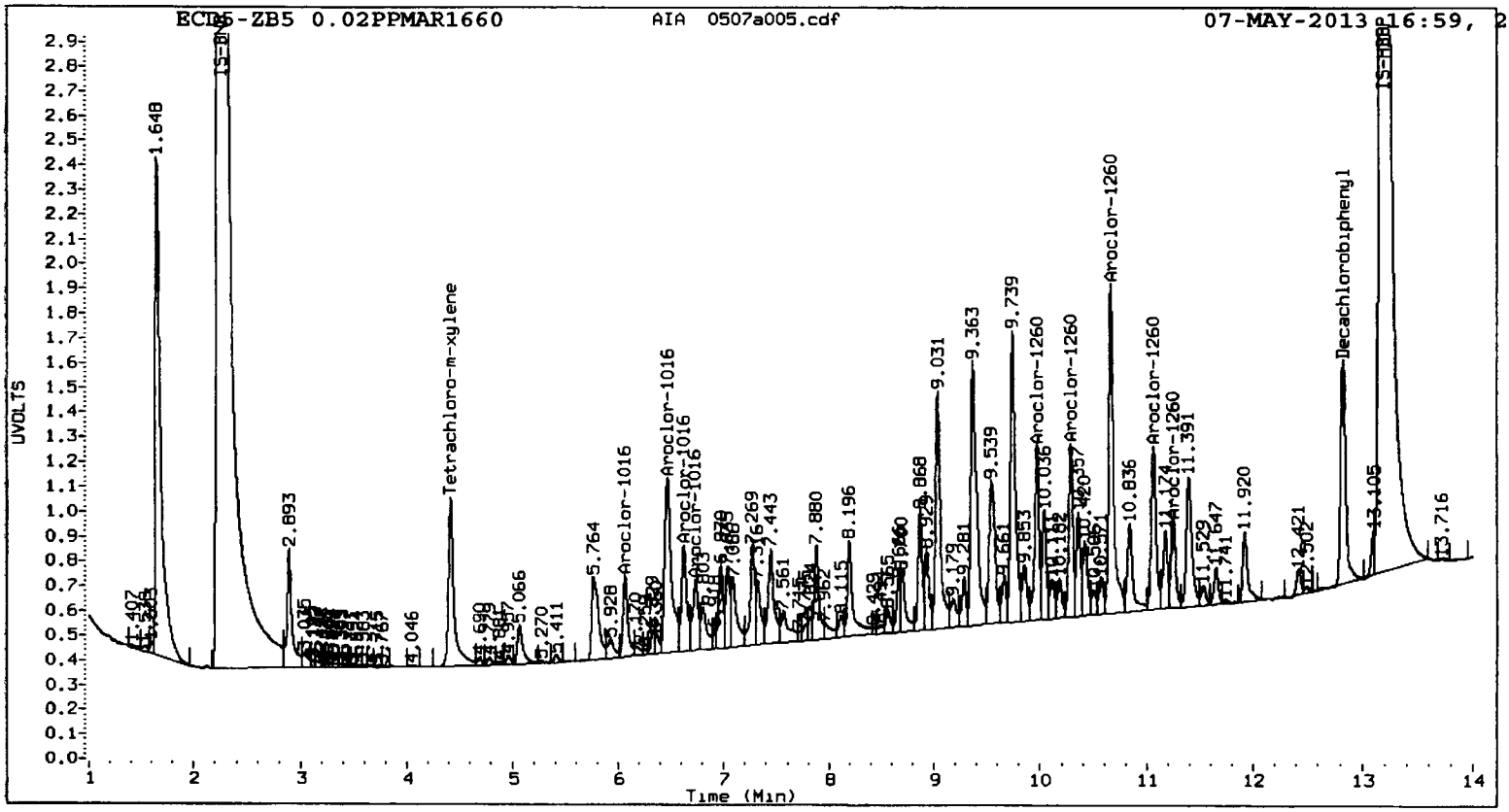
Total PCB Area Col1 (4.511 - 12.728) = 32498603 Col1 Total PCB = 0.1 ppm*

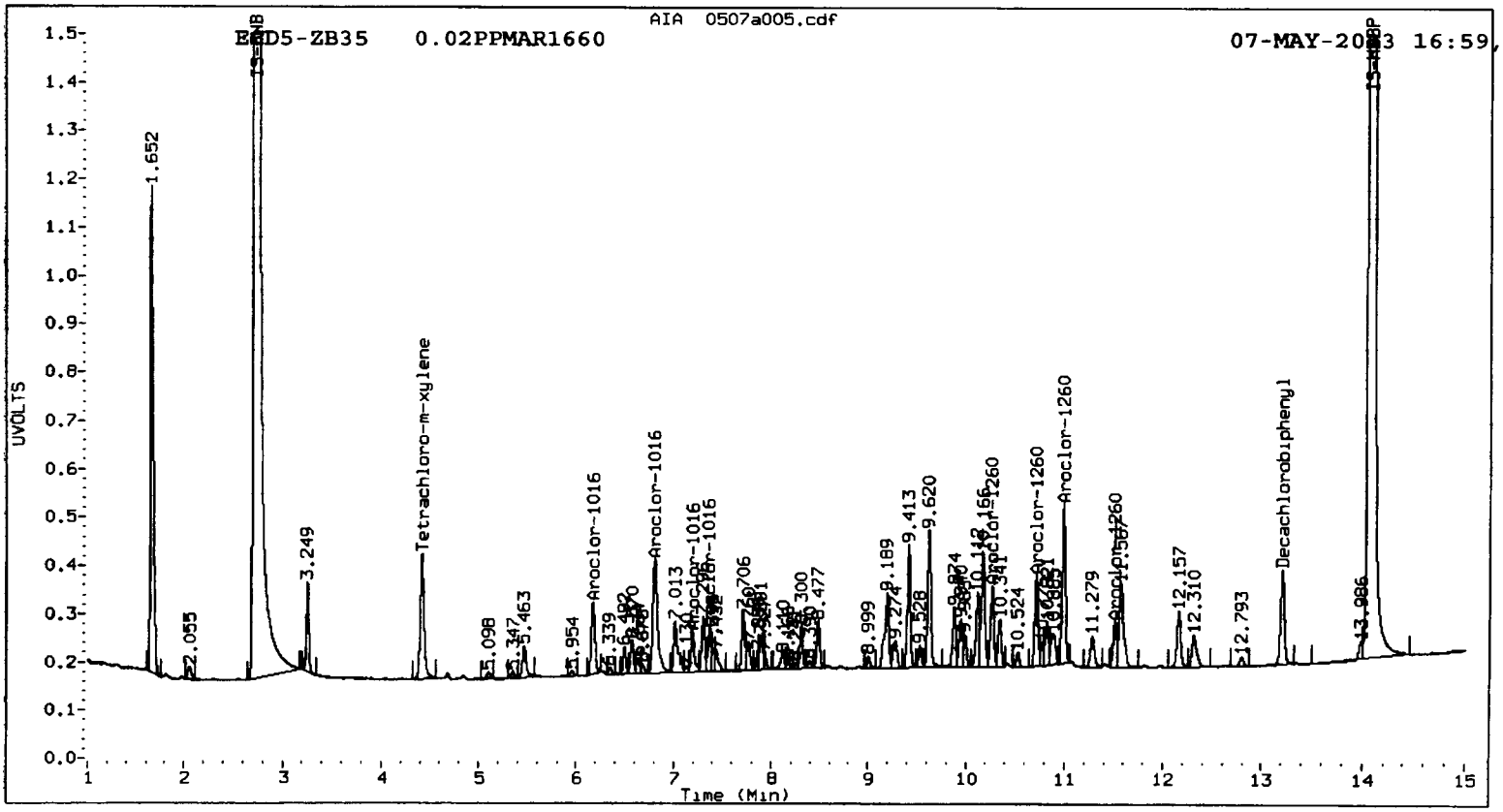
Total PCB Area Col2 (4.512 - 13.105) = 6010068 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 0.02PPMAR1660
AIA 0507a005.cdf
07-MAY-2013 16:59,
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP


AIA 0507a005.cdf
ECD5-ZB35 0.02PPMAR1660
07-MAY-2013 16:59,
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 0.02PPMAR1660
AIA 0507a005.cdf
07-MAY-2013 16:59,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl


ECD5-ZB35 0.02PPMAR1660
AIA 0507a005.cdf
07-MAY-2013 16:59,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a006.d
Data file 2: 20130507.b/ical-2.b/0507a006.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 17:19
Ical Date: 07-MAY-2013
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
4.411	0.001	3240306	4.413	0.001	828310	4.1	4.1	0.9	Tetrachloro-m-xylen
12.828	0.000	3422581	13.205	0.000	610804	4.3	4.3	0.4	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	10.3	10.2
Decachlorobiphenyl	10.8	10.8

JR 05/07/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	50752482	3.6
Hexabromobiphenyl	50004151	53170067	6.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15017003	1.2
Hexabromobiphenyl	9345340	9808139	5.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.062	0.001	1244105	54.4	1	6.167	0.001	479006	55.9
Aroclor-1016	2	6.471	0.002	3811814	54.1	2	6.804	0.003	997455	53.5
Aroclor-1016	3	6.620	0.003	1731330	54.8	3	7.187	0.002	252974	51.9
Aroclor-1016	4	6.731	0.003	1291534	54.7	4	7.359	0.001	242005	53.3
Total Col1Ave (4 peaks):					54.5	Total Col2Ave (4 peaks):				53.7 RPD = 2
Corrected Ave (3 peaks):					54.4	Corrected Ave (3 peaks):				52.9 RPD = 3
Aroclor-1260	1	9.968	0.001	2372653	54.5	1	10.262	0.002	480726	54.0
Aroclor-1260	2	10.284	0.001	2245127	52.0	2	10.711	0.002	554671	53.2
Aroclor-1260	3	10.661	0.001	5376976	51.9	3	10.987	0.003	1024158	53.2
Aroclor-1260	4	11.059	0.002	2614350	51.8	4	11.507	0.002	280398	53.8
Aroclor-1260	5	11.248	0.001	1399830	51.9	NS	---			----
Total Col1Ave (5 peaks):					52.4	Total Col2Ave (4 peaks):				53.6 RPD = 2
Corrected Ave (4 peaks):					51.9	Corrected Ave (3 peaks):				53.4 RPD = 3

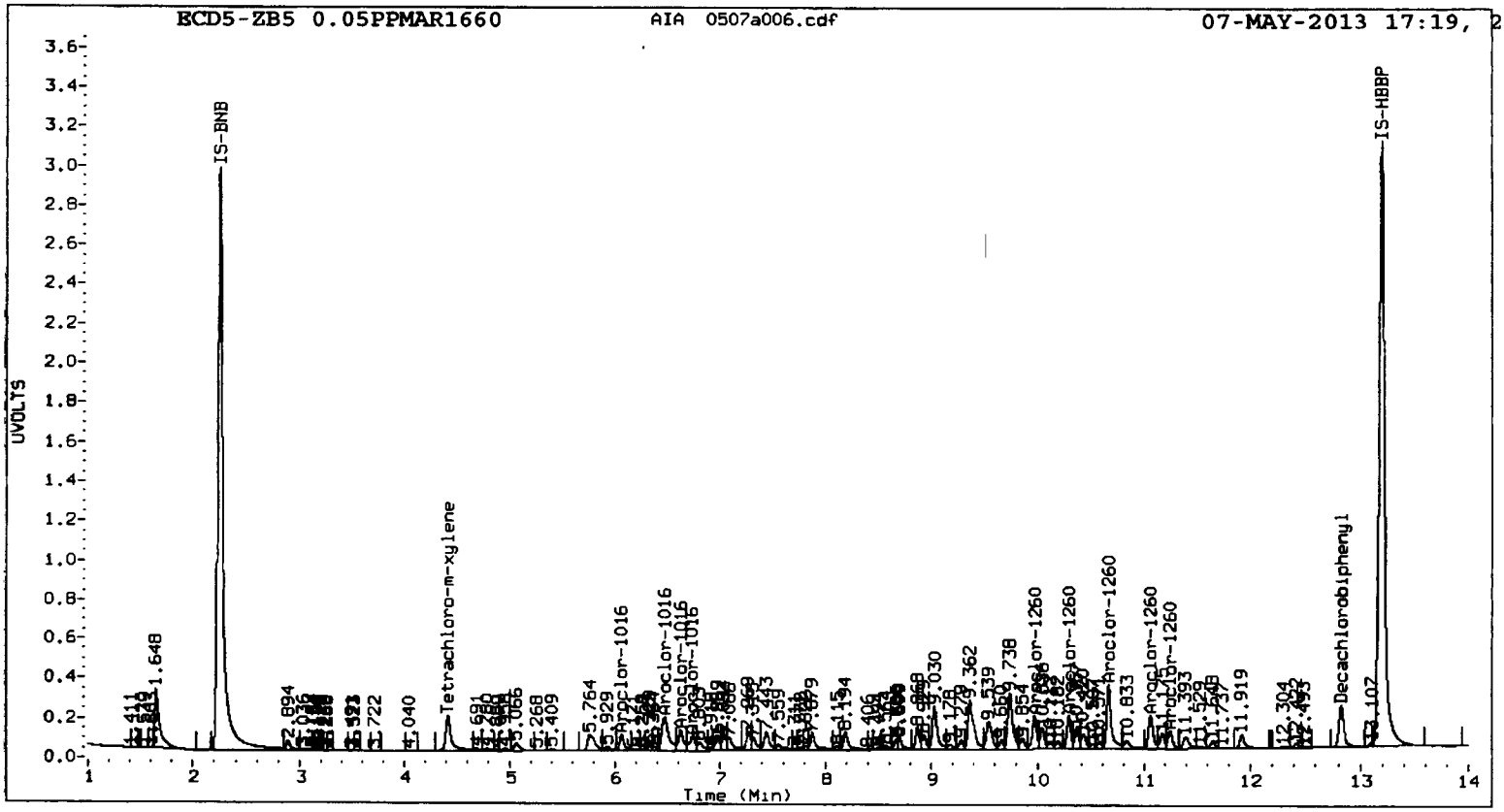
Total PCB Area Col1 (4.511 - 12.728) = 73710860 Col1 Total PCB = 0.1 ppm*

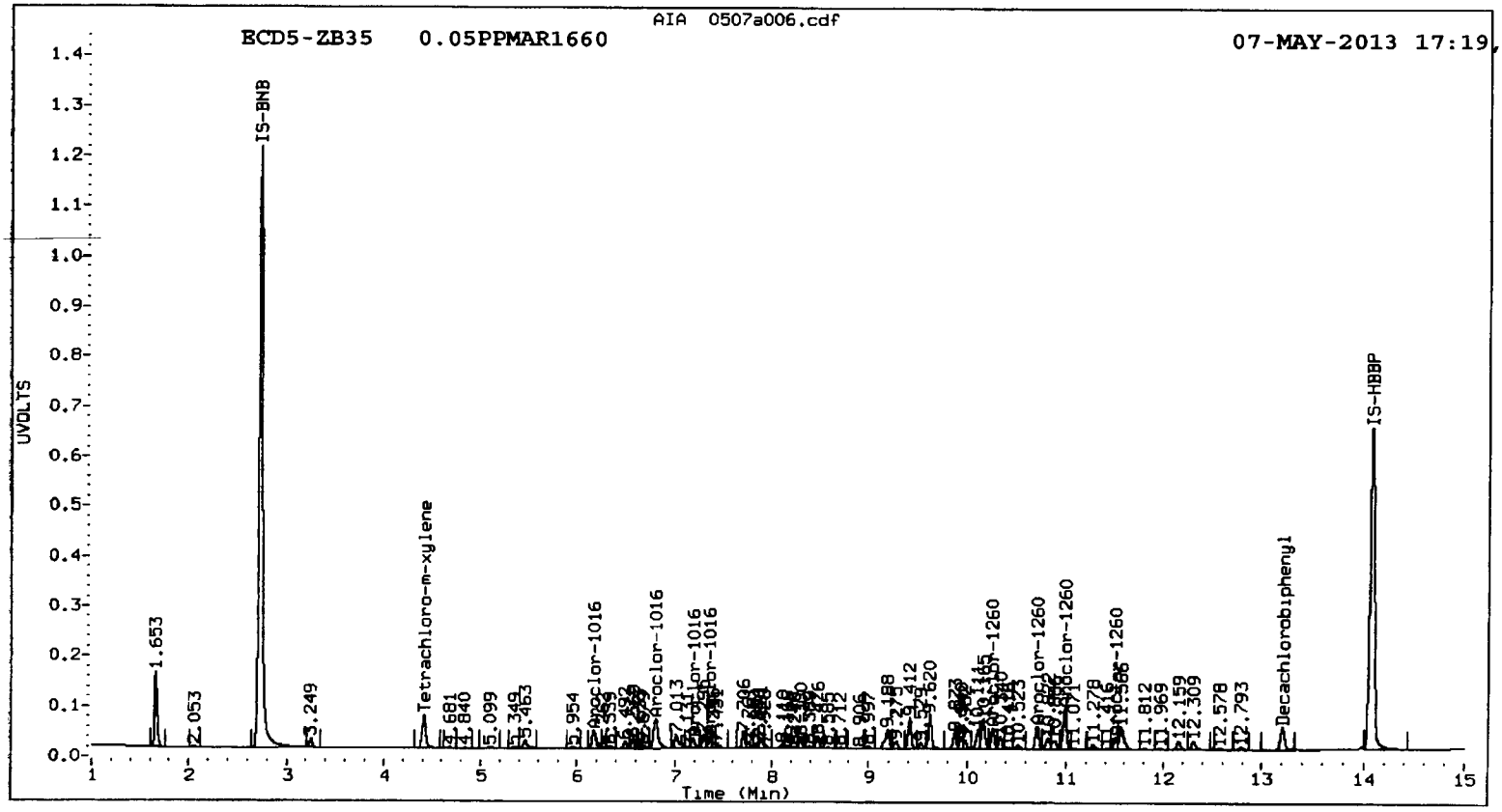
Total PCB Area Col2 (4.512 - 13.105) = 14729318 Col2 Total PCB = 0.1 ppm*

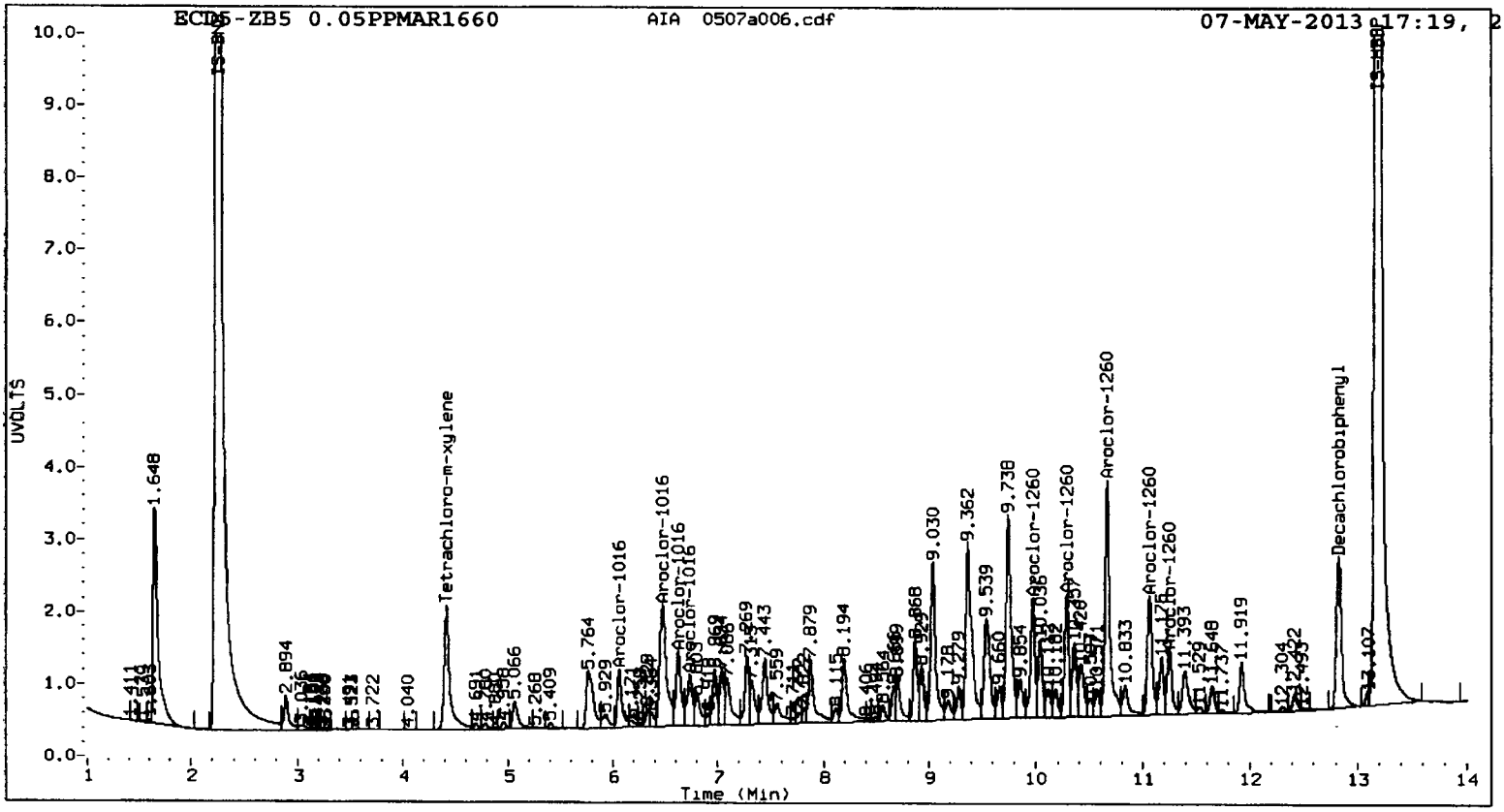
* Quantitated against AR1660 0.25ppm in Ical

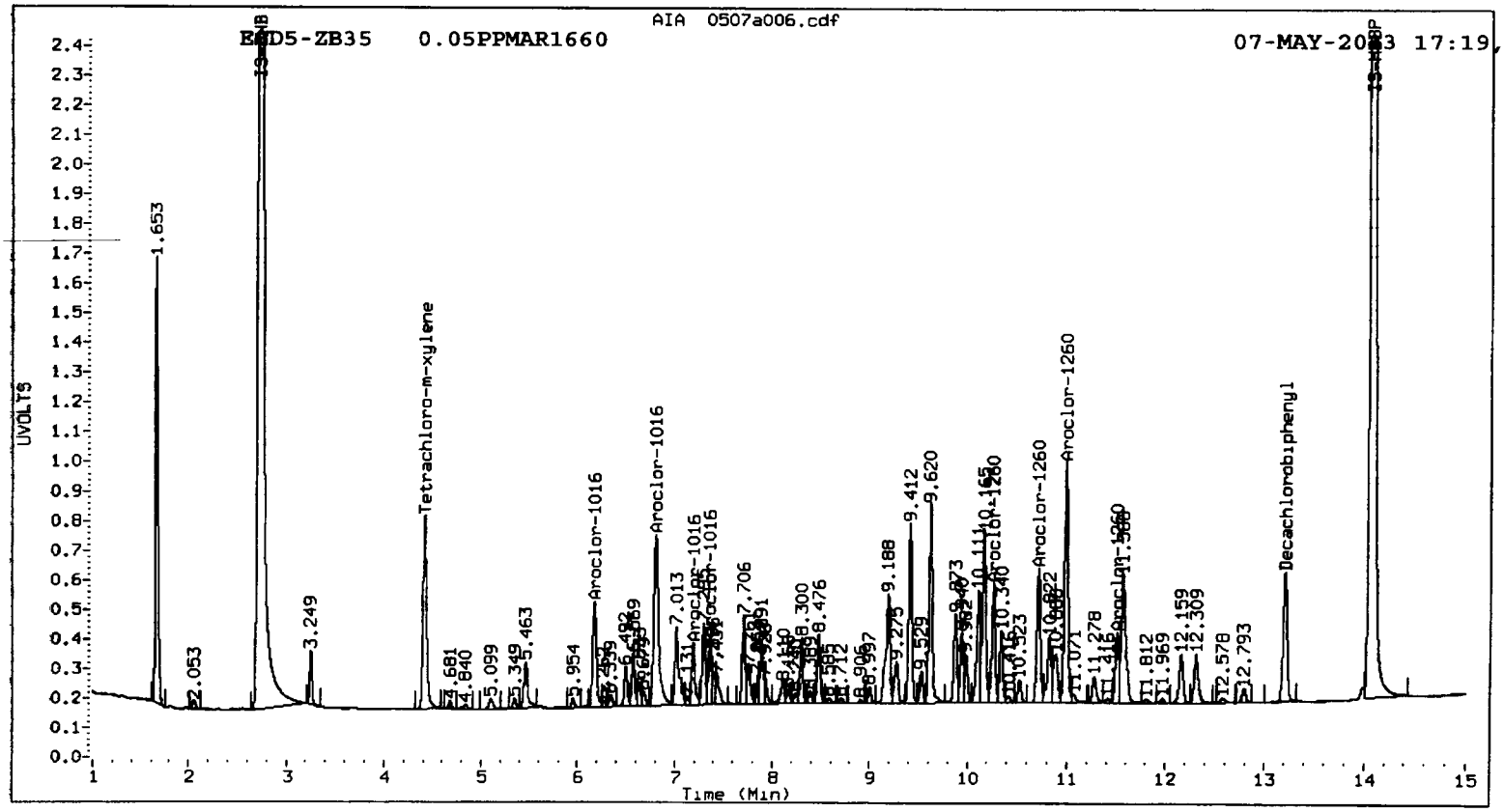
USA : 61255

PCB-Form 10 Mod.


ECD5-ZB5 0.05PPMAR1660
AIA 0507a006.cdf
07-MAY-2013 17:19,
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260
UVOLTS
Time (Min)


AIA 0507a006.cdf
ECD5-ZB35 0.05PPMAR1660
07-MAY-2013 17:19,
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260
UVOLTS
Time (Min)


ECD5-ZB5 0.05PPMAR1660
AIA 0507a006.cdf
07-MAY-2013 17:19,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl


AIA 0507a006.cdf
ECD5-ZB35 0.05PPMAR1660
07-MAY-2013 17:19,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a007.d
Data file 2: 20130507.b/ical-2.b/0507a007.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 1PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 17:39
Ical Date: 07-MAY-2013
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
4.410	0.000	56438104	4.414	0.003	14978631	73.7	74.5	1.0	Tetrachloro-m-xylen
12.827	-0.001	54253911	13.203	-0.002	9605990	68.2	67.4	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

JR 05/08/13

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	184.4	186.3
Decachlorobiphenyl	170.5	168.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	49361946	0.8
Hexabromobiphenyl	50004151	53269354	6.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14864205	0.2
Hexabromobiphenyl	9345340	9909484	6.0

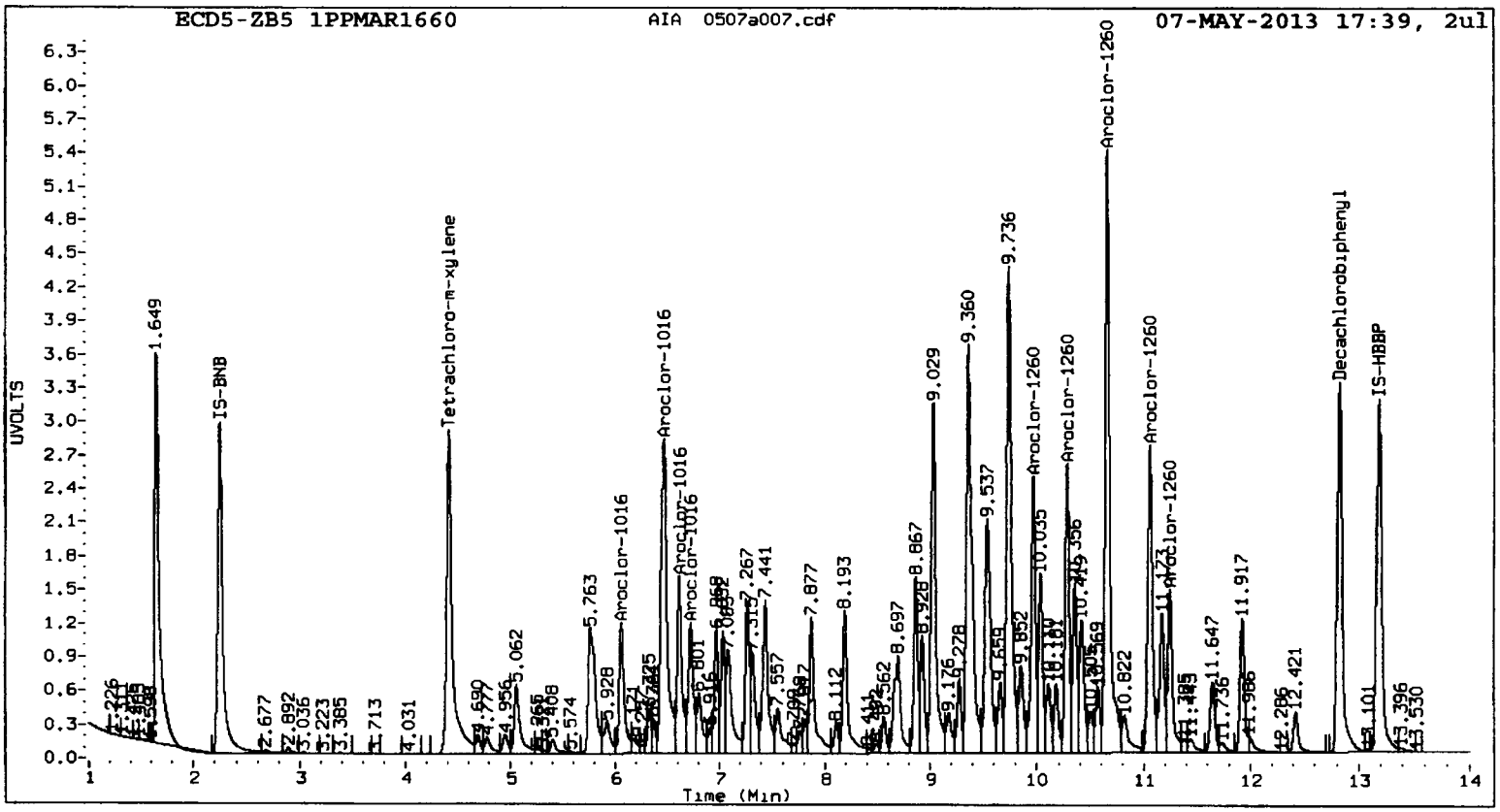
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

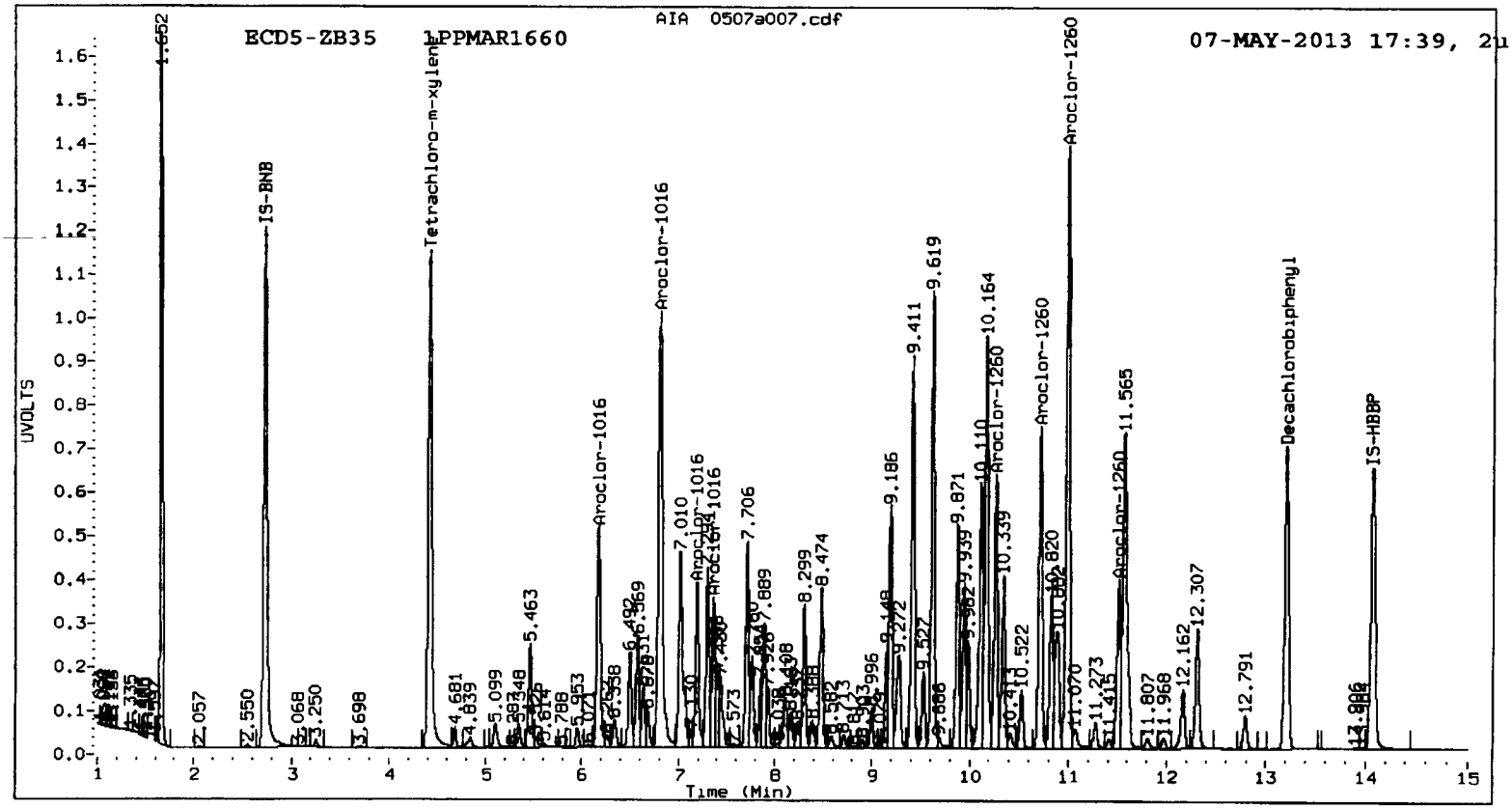
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	6.059	-0.001	18746470	842.5	1	6.167	0.001	6930745	817.2
Aroclor-1016	2	6.467	-0.002	57649136	841.1	2	6.801	0.000	15666487	849.6
Aroclor-1016	3	6.616	-0.001	25366020	826.1	3	7.186	0.000	4302384	892.4
Aroclor-1016	4	6.727	-0.001	19267159	839.8	4	7.359	0.001	3794728	845.1
Total Col1Ave (4 peaks):					837.4	Total Col2Ave (4 peaks):			851.1	RPD = 2
Corrected Ave (3 peaks):					835.7	Corrected Ave (3 peaks):			837.3	RPD = 0
Aroclor-1260	1	9.967	0.000	34921569	800.5	1	10.260	0.000	7411124	824.6
Aroclor-1260	2	10.283	-0.001	34401497	795.2	2	10.709	0.000	8889960	844.4
Aroclor-1260	3	10.659	0.000	86265488	831.6	3	10.986	0.001	16951381	872.0
Aroclor-1260	4	11.057	0.000	42604682	843.2	4	11.506	0.000	4533121	860.2
Aroclor-1260	5	11.247	0.000	23577619	872.2	NS	---			----
Total Col1Ave (5 peaks):					828.6	Total Col2Ave (4 peaks):			850.3	RPD = 3
Corrected Ave (4 peaks):					817.6	Corrected Ave (3 peaks):			843.1	RPD = 3

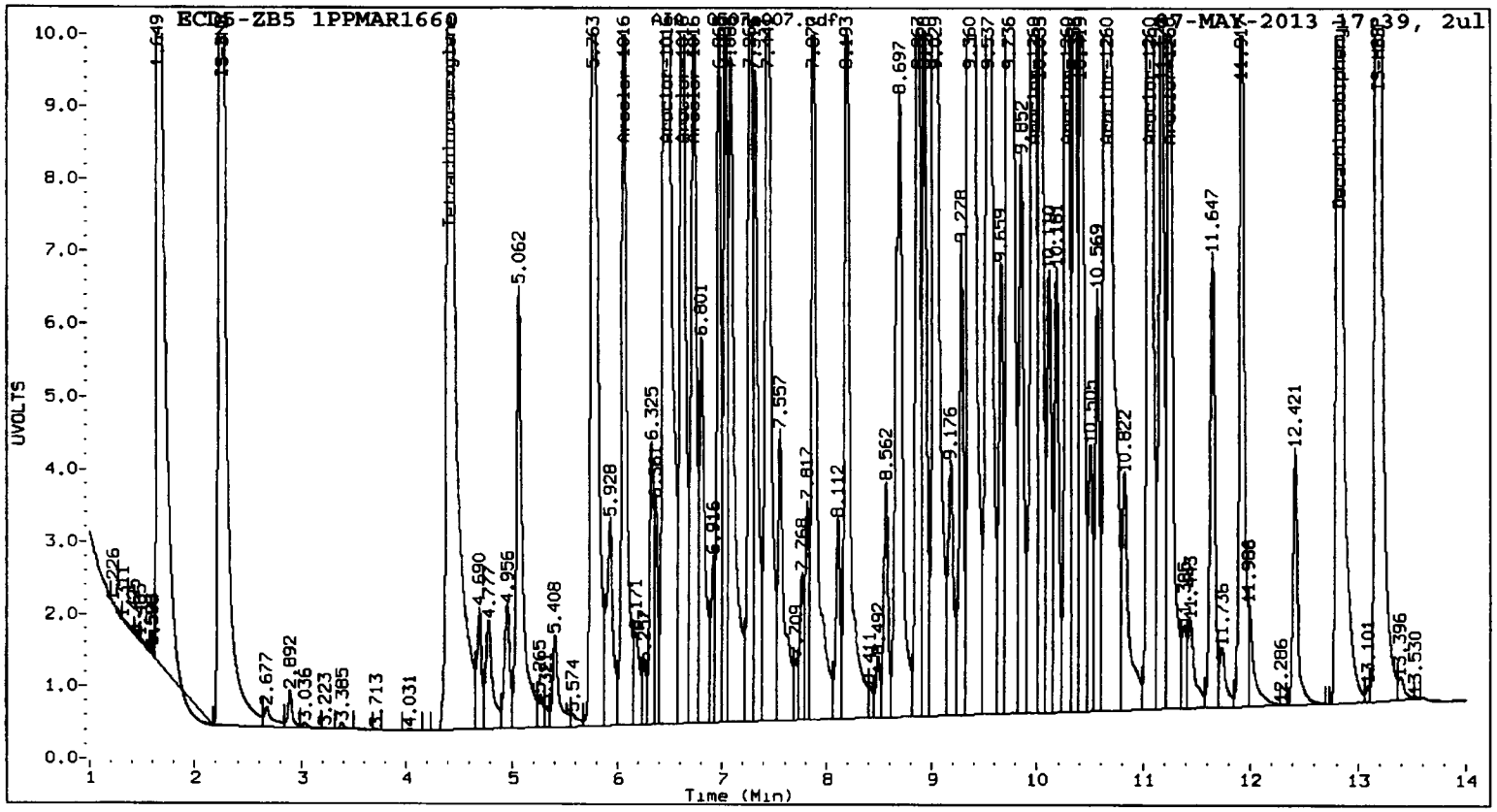
Total PCB Area Col1 (4.511 - 12.728) = 1078983721 Col1 Total PCB = 1.8 ppm*

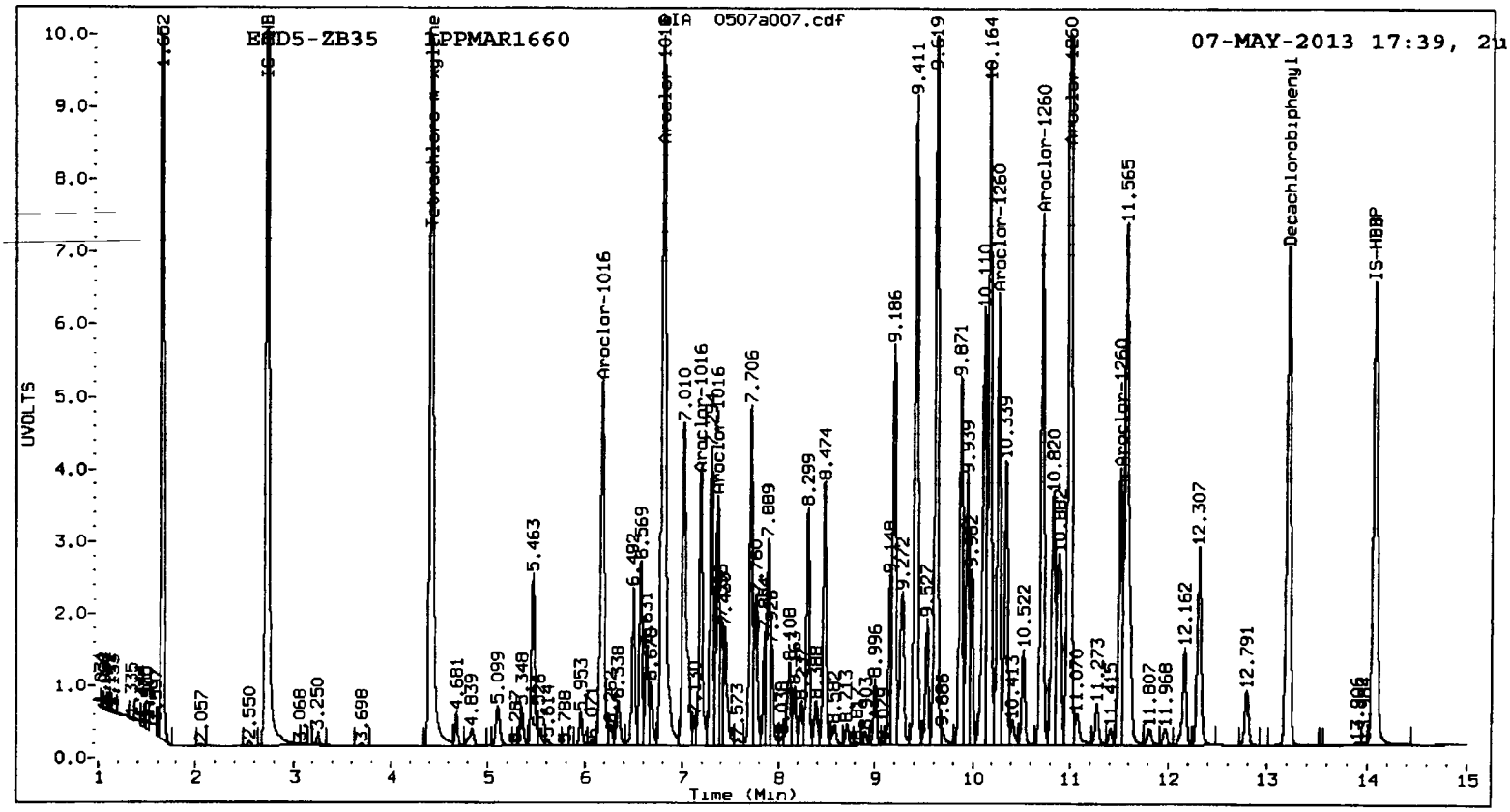
Total PCB Area Col2 (4.512 - 13.105) = 230522338 Col2 Total PCB = 1.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 1PPMAR1660
AIA 0507a007.cdf
07-MAY-2013 17:39, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 1PPMAR1660
AIA 0507a007.cdf
07-MAY-2013 17:39, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 1PPMAR1660
0507a007.cdf
07-MAY-2013 17:39, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl


ECD5-ZB35 1PPMAR1660
0507a007.cdf
07-MAY-2013 17:39, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a008.d
Data file 2: 20130507.b/ical-2.b/0507a008.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 17:59
Ical Date: 07-MAY-2013
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
4.411	0.000	6731015	4.413	0.001	1684319	8.4	8.1	3.5	Tetrachloro-m-xylen
12.828	0.000	6587362	13.204	-0.001	1145480	8.2	8.1	1.7	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	21.0	20.3
Decachlorobiphenyl	20.5	20.2

JH 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	51692067	5.5
Hexabromobiphenyl	50004151	53692342	7.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15354151	3.5
Hexabromobiphenyl	9345340	9856374	5.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.061	0.000	2455484	105.4	1	6.167	0.001	933103	106.5
Aroclor-1016	2	6.469	0.001	7585703	105.7	2	6.803	0.003	2002074	105.1
Aroclor-1016	3	6.619	0.002	3398868	105.7	3	7.187	0.002	525355	105.5
Aroclor-1016	4	6.730	0.002	2540359	105.7	4	7.359	0.001	491272	105.9

Total Col1Ave (4 peaks): 105.6 Total Col2Ave (4 peaks): 105.8 RPD = 0
Corrected Ave (3 peaks): 105.6 Corrected Ave (3 peaks): 105.5 RPD = 0

Aroclor-1260	1	9.967	0.001	4612344	104.9	1	10.262	0.002	936375	104.7
Aroclor-1260	2	10.284	0.001	4422973	101.4	2	10.710	0.001	1090787	104.2
Aroclor-1260	3	10.660	0.000	10624516	101.6	3	10.986	0.001	2021333	104.5
Aroclor-1260	4	11.059	0.001	5142675	101.0	4	11.507	0.002	538050	102.7
Aroclor-1260	5	11.248	0.001	2788613	102.3	NS	---			----

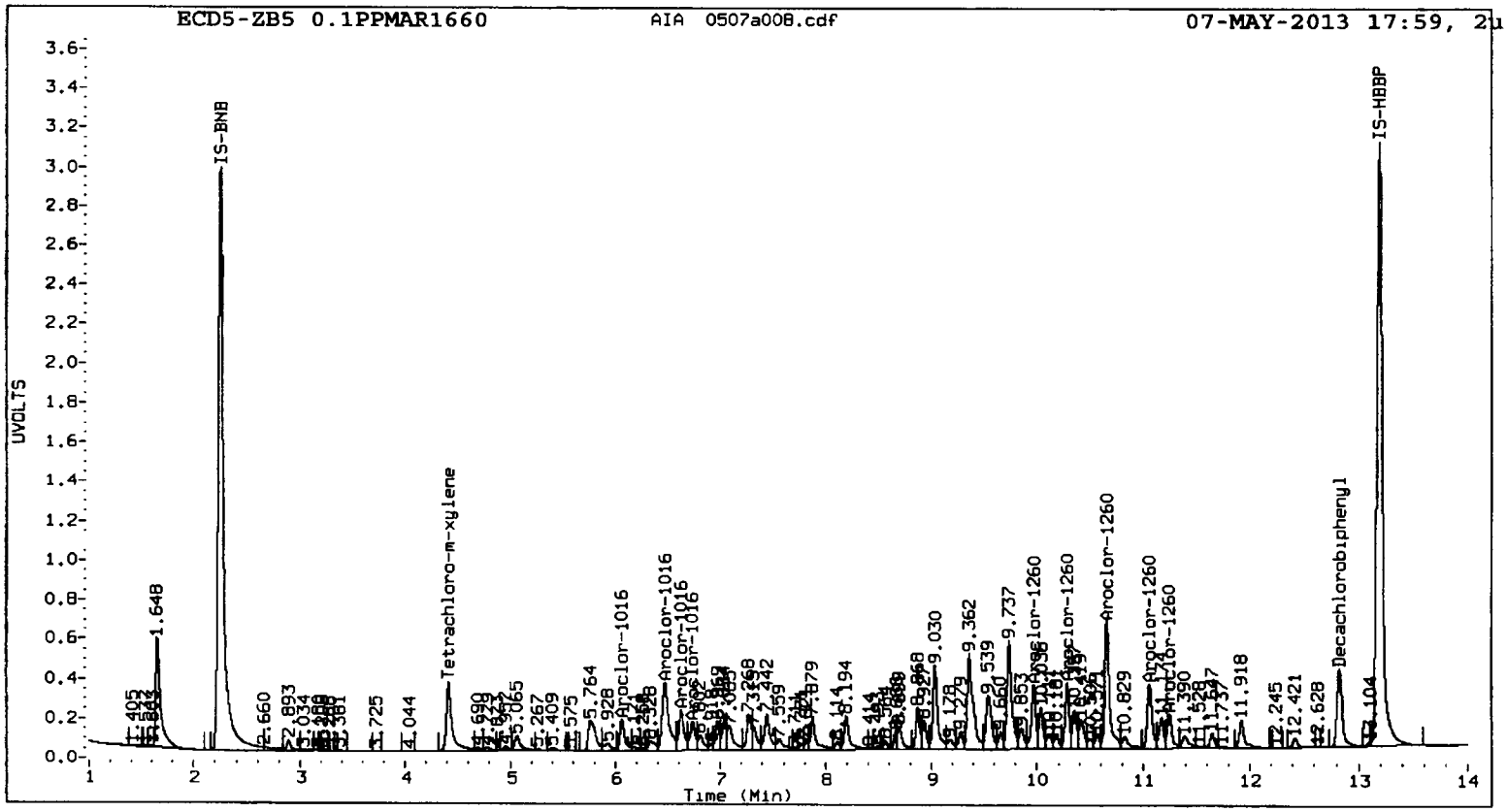
Total Col1Ave (5 peaks): 102.3 Total Col2Ave (4 peaks): 104.0 RPD = 2
Corrected Ave (4 peaks): 101.6 Corrected Ave (3 peaks): 103.8 RPD = 2

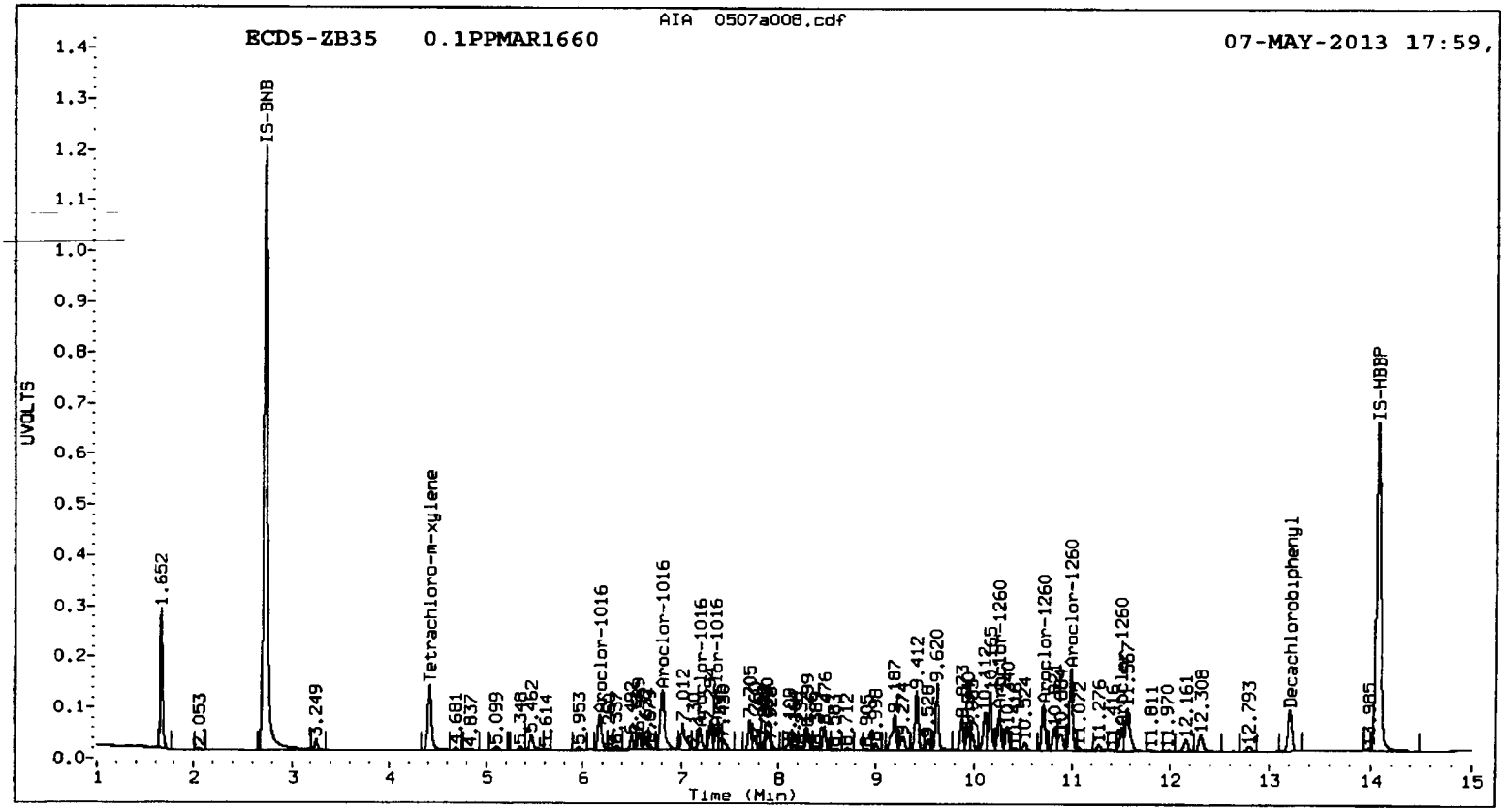
Total PCB Area Col1 (4.511 - 12.728) = 143086545 Col1 Total PCB = 0.2 ppm*

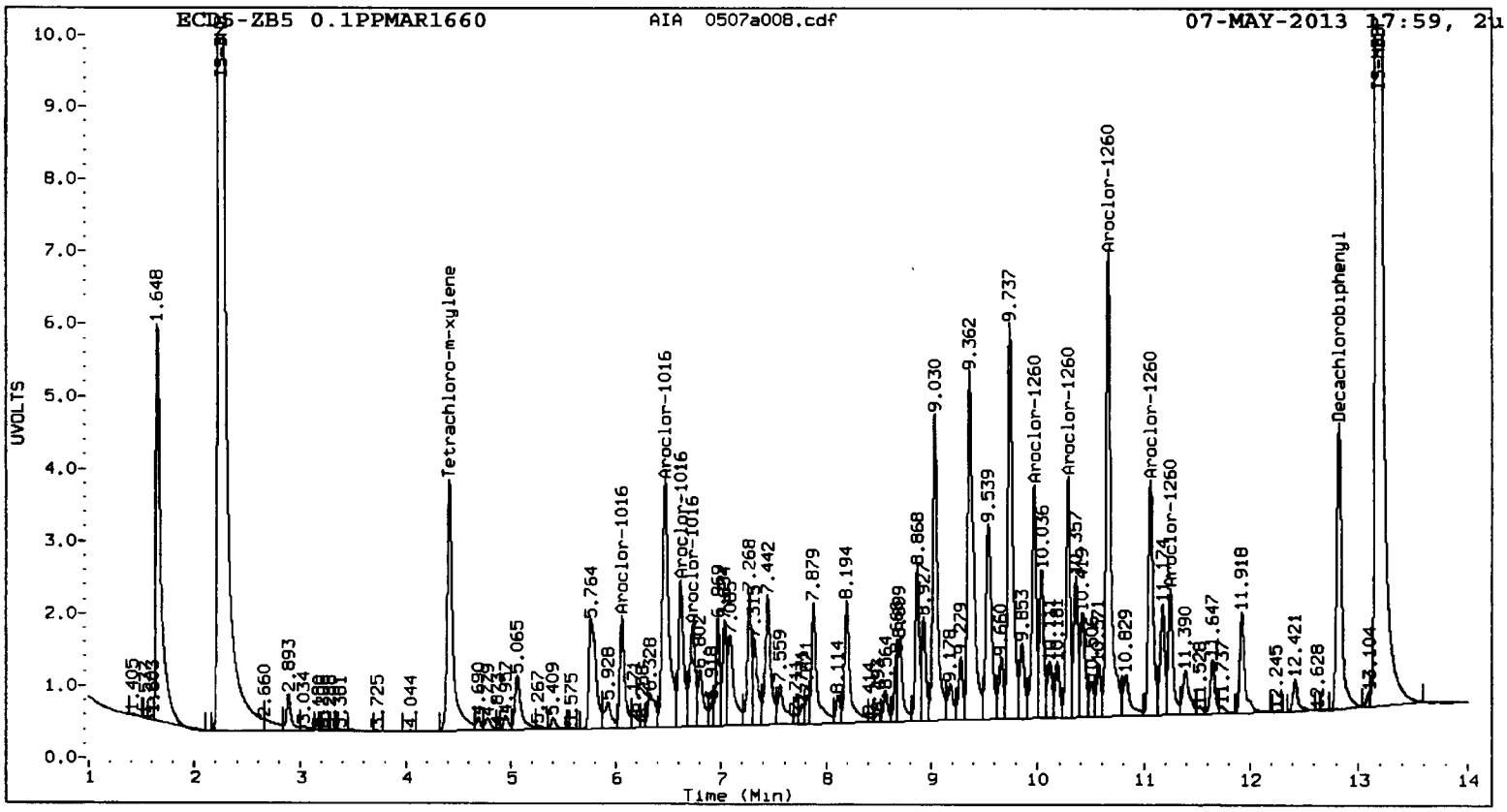
Total PCB Area Col2 (4.512 - 13.105) = 29038947 Col2 Total PCB = 0.2 ppm*

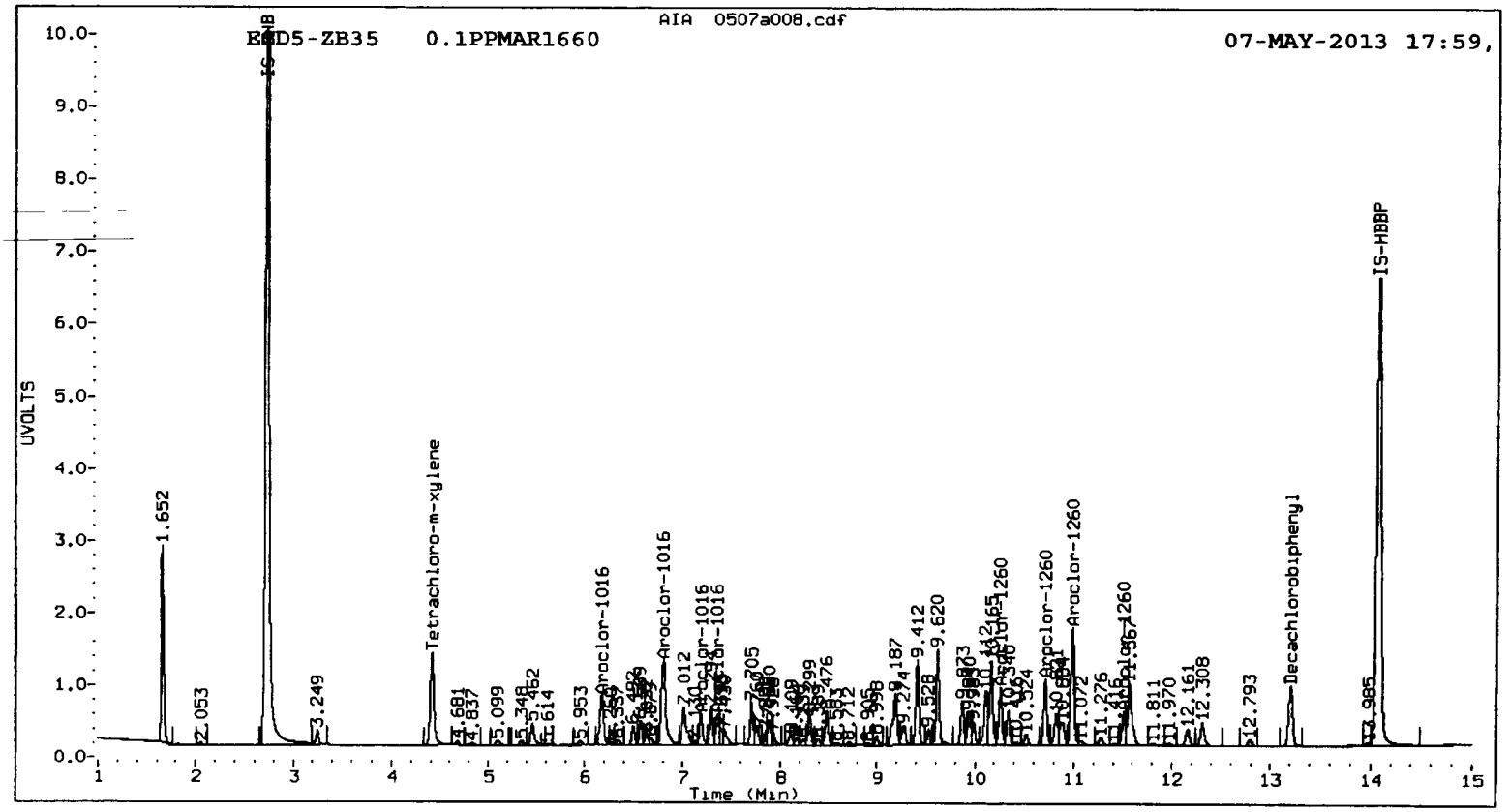
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 0.1PPMAR1660
AIA 0507a008.cdf
07-MAY-2013 17:59, 21
UVOLTS
Time (Min)
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260
1.648
5.764
9.362
9.737
10.829
11.918
12.421
12.628


AIA 0507a008.cdf
ECD5-ZB35 0.1PPMAR1660
07-MAY-2013 17:59,
UVOLTS
Time (Min)
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260
1.652
3.249
5.953
7.012
9.620
12.308
12.793
13.985


ECD5-ZB5 0.1PPMAR1660
AIA 0507a008.cdf
07-MAY-2013 17:59, 21
UVOLTS
Time (Min)
1.648
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl


AIA 0507a008.cdf
ECD5-ZB35 0.1PPMAR1660
07-MAY-2013 17:59,
UVOLTS
Time (Min)
1.652
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a009.d
Data file 2: 20130507.b/ical-2.b/0507a009.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5PPMAR1660
Client ID:
Injection Date: 07-MAY-2013 18:19
Ical Date: 07-MAY-2013
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
4.411	0.000	30263952	4.412	0.001	7879158	38.6	39.1	1.3	Tetrachloro-m-xylen
12.827	-0.001	28353890	13.204	-0.001	4992554	35.6	35.6	0.1	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	96.6	97.8
Decachlorobiphenyl	89.0	88.9

5/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	50537542	3.2
Hexabromobiphenyl	50004151	53291913	6.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14890872	0.3
Hexabromobiphenyl	9345340	9751846	4.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

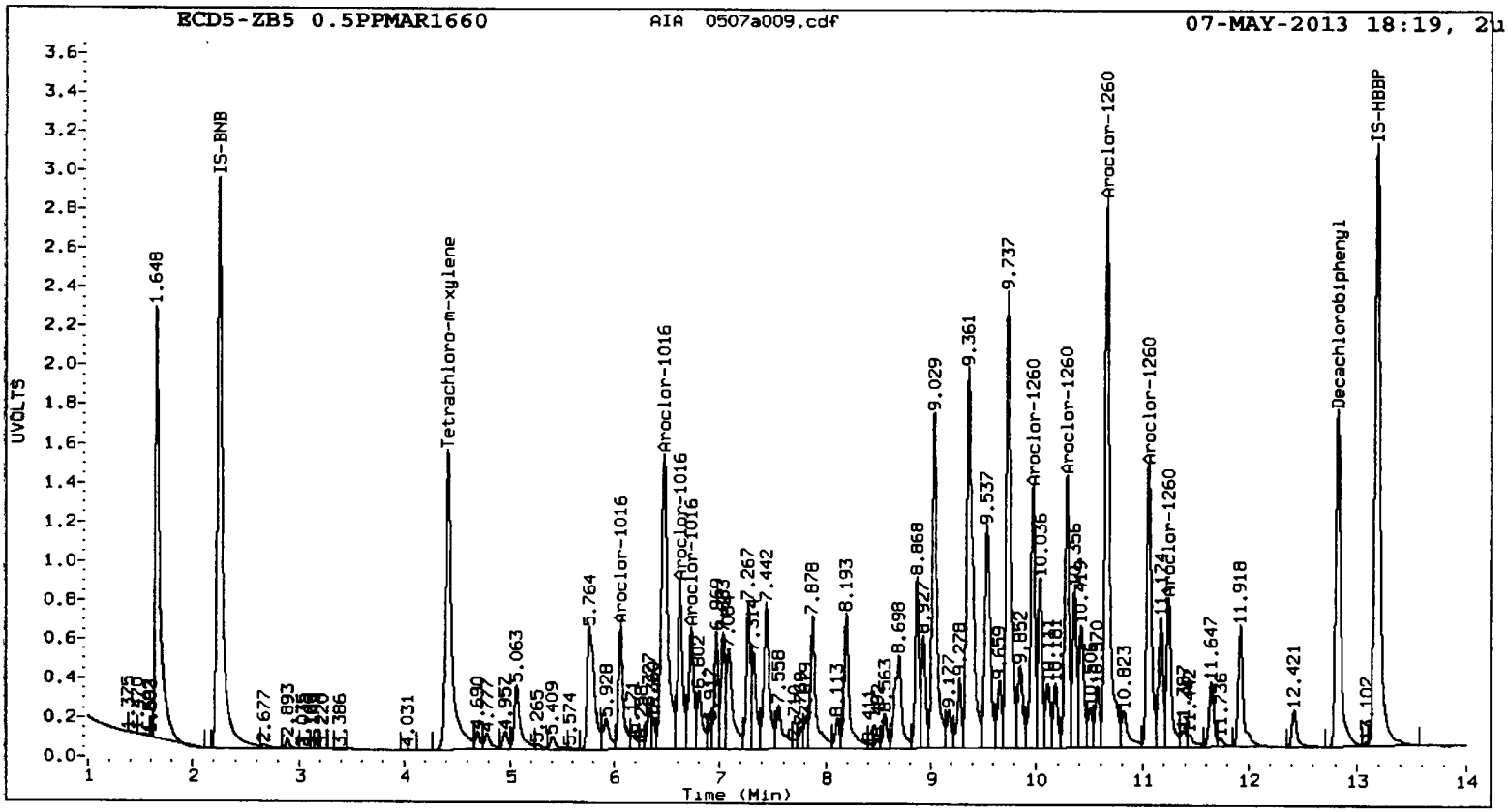
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	6.060	0.000	10209142	448.2	1	6.166	0.000	3819812	449.6
Aroclor-1016	2	6.469	0.000	31525506	449.3	2	6.801	0.000	8527560	461.6
Aroclor-1016	3	6.617	0.000	13954591	443.9	3	7.185	0.000	2297705	475.7
Aroclor-1016	4	6.728	0.000	10550969	449.2	4	7.358	0.000	2075939	461.5
Total Col1Ave (4 peaks):		447.6				Total Col2Ave (4 peaks):		462.1	RPD = 3	
Corrected Ave (3 peaks):		447.1				Corrected Ave (3 peaks):		457.6	RPD = 2	
Aroclor-1260	1	9.967	0.000	19054399	436.6	1	10.260	0.000	3995682	451.7
Aroclor-1260	2	10.284	0.000	18658025	431.1	2	10.709	0.000	4769094	460.3
Aroclor-1260	3	10.659	0.000	46060556	443.9	3	10.985	0.000	9011917	471.1
Aroclor-1260	4	11.058	0.000	22756673	450.2	4	11.505	0.000	2389092	460.7
Aroclor-1260	5	11.247	0.000	12499862	462.2	NS	---			----
Total Col1Ave (5 peaks):		444.8				Total Col2Ave (4 peaks):		461.0	RPD = 4	
Corrected Ave (4 peaks):		440.4				Corrected Ave (3 peaks):		457.6	RPD = 4	

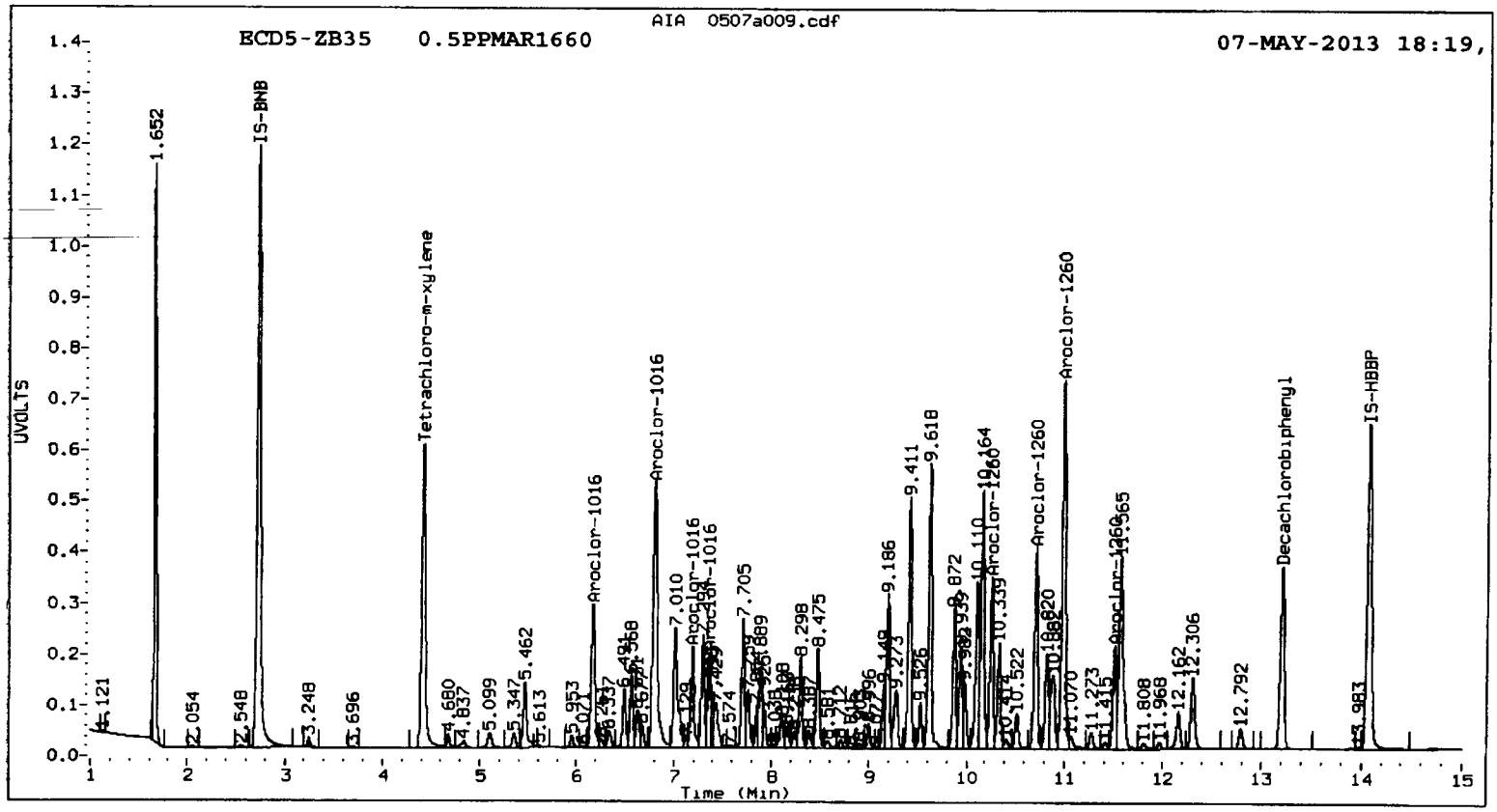
Total PCB Area Col1 (4.511 - 12.728) = 589049282 Col1 Total PCB = 0.9 ppm*

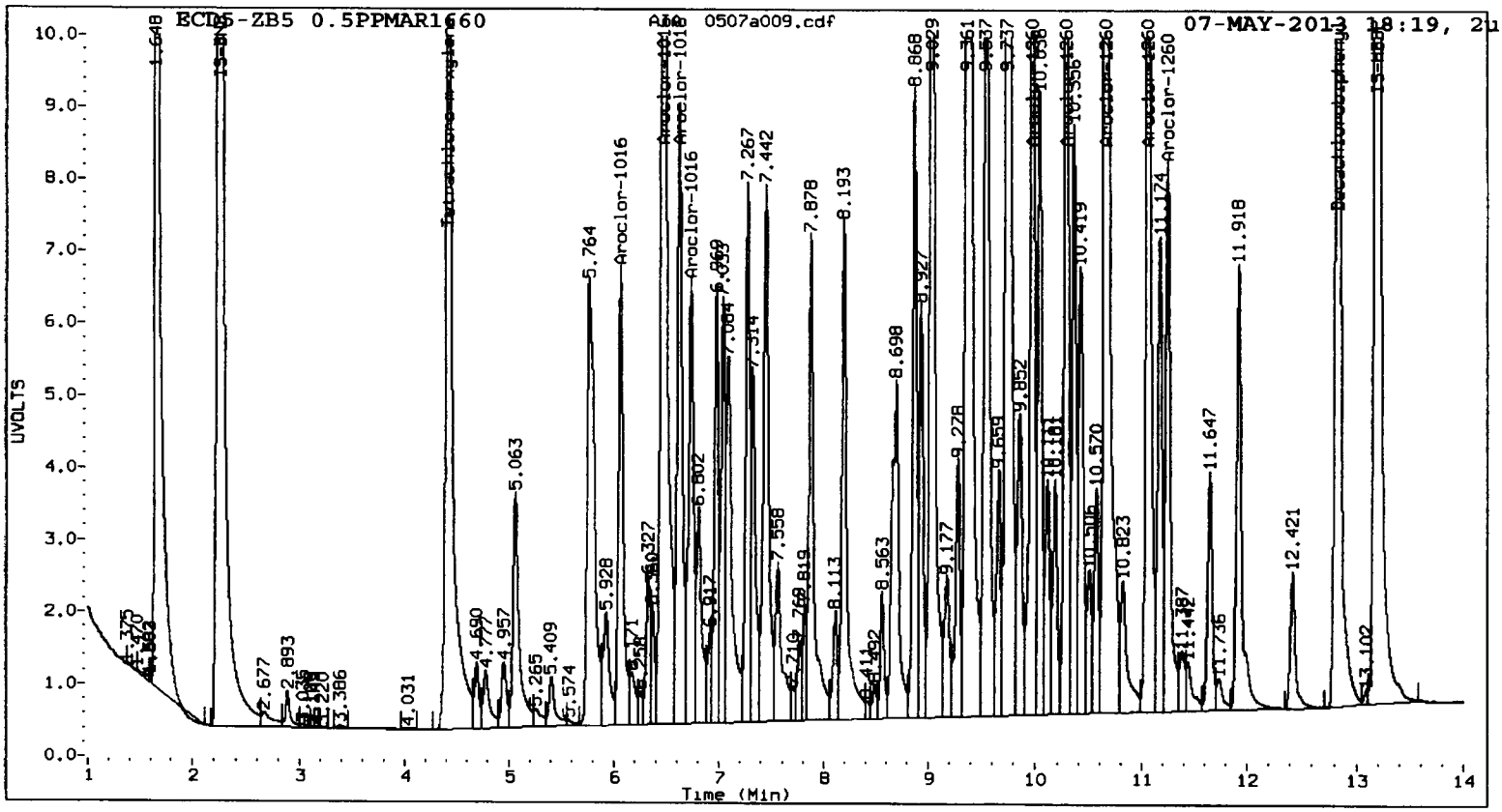
Total PCB Area Col2 (4.512 - 13.105) = 124374053 Col2 Total PCB = 1.0 ppm*

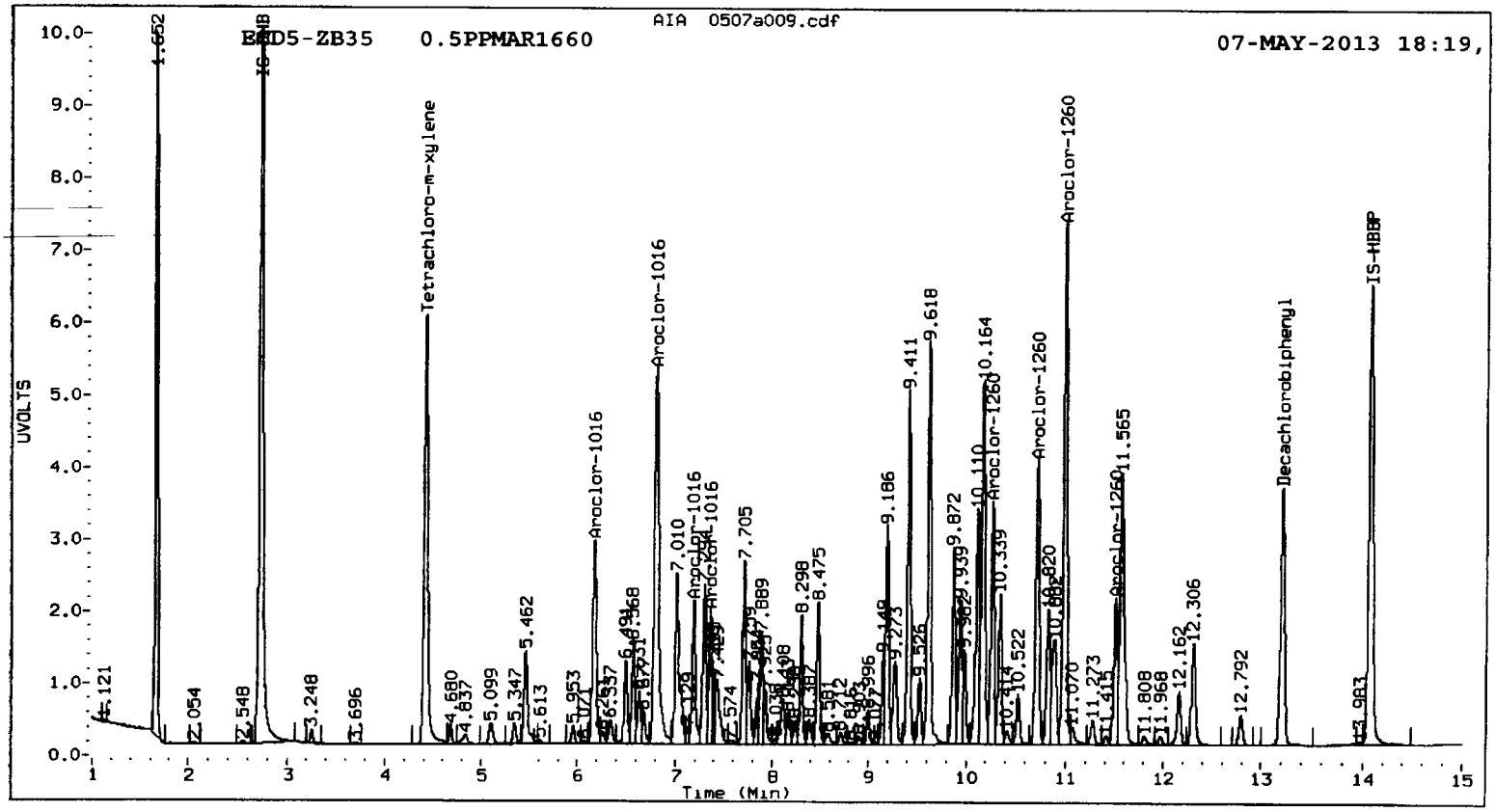
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 0.5PPMAR1660
AIA 0507a009.cdf
07-MAY-2013 18:19, 21
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


AIA 0507a009.cdf
ECD5-ZB35 0.5PPMAR1660
07-MAY-2013 18:19,
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 0.5PPMAR1660
AIA 0507a009.cdf
07-MAY-2013 18:19, 21
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBB


AIA 0507a009.cdf
ECD5-ZB35 0.5PPMAR1660
07-MAY-2013 18:19,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBB

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a010.d
Data file 2: 20130507.b/ical-2.b/0507a010.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 07-MAY-2013 18:39
Ical Date: 07-MAY-2013
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
4.410	-0.001	31274266	4.414	0.003	8134040	39.1	39.8	1.9	Tetrachloro-m-xylen
12.828	-0.001	31253738	13.204	-0.001	5452308	37.9	37.4	1.3	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	97.7	99.6
Decachlorobiphenyl	94.8	93.6

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	51594521	5.3
Hexabromobiphenyl	50004151	55145987	10.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15094795	1.7
Hexabromobiphenyl	9345340	10120992	8.3

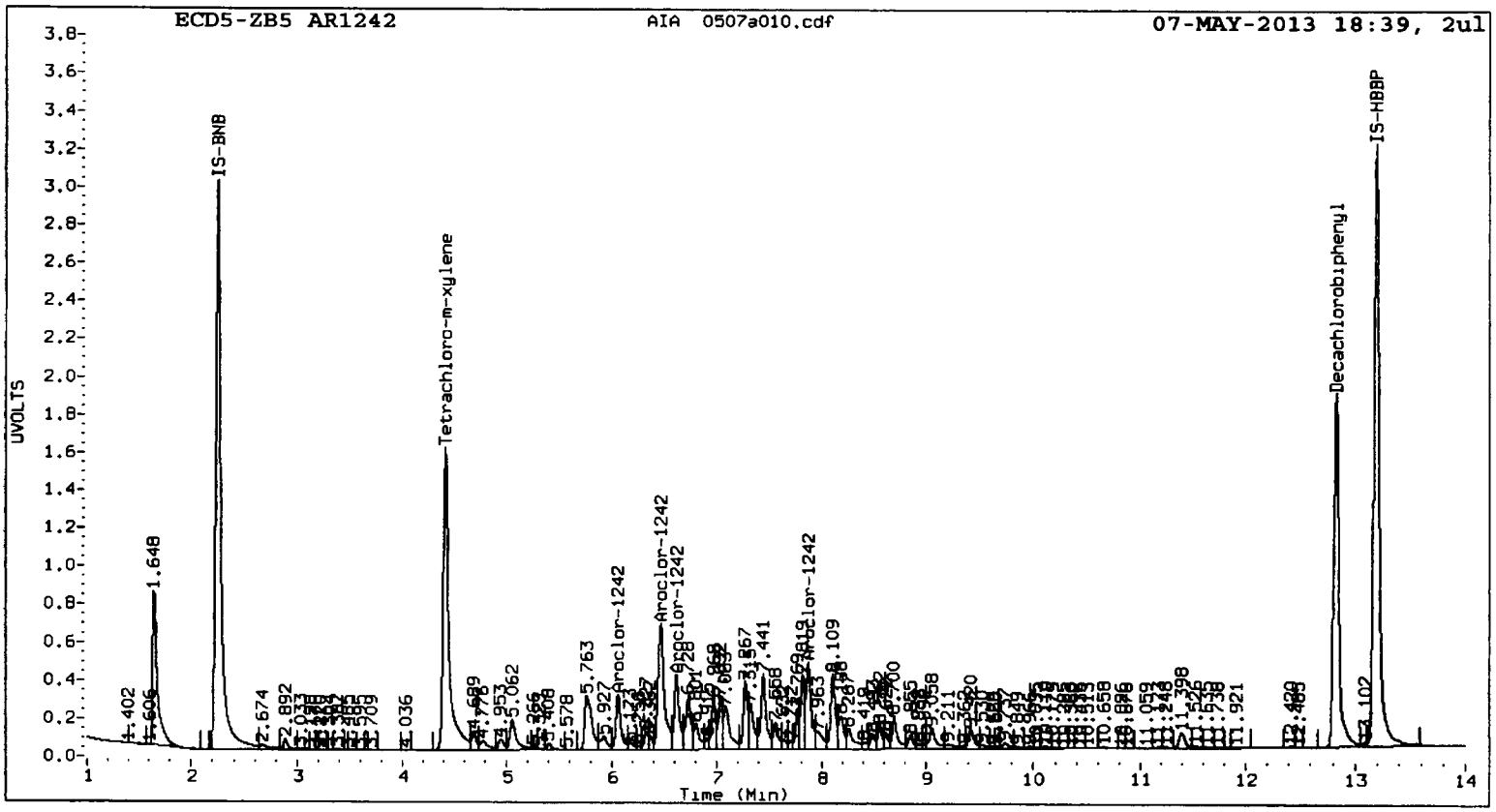
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

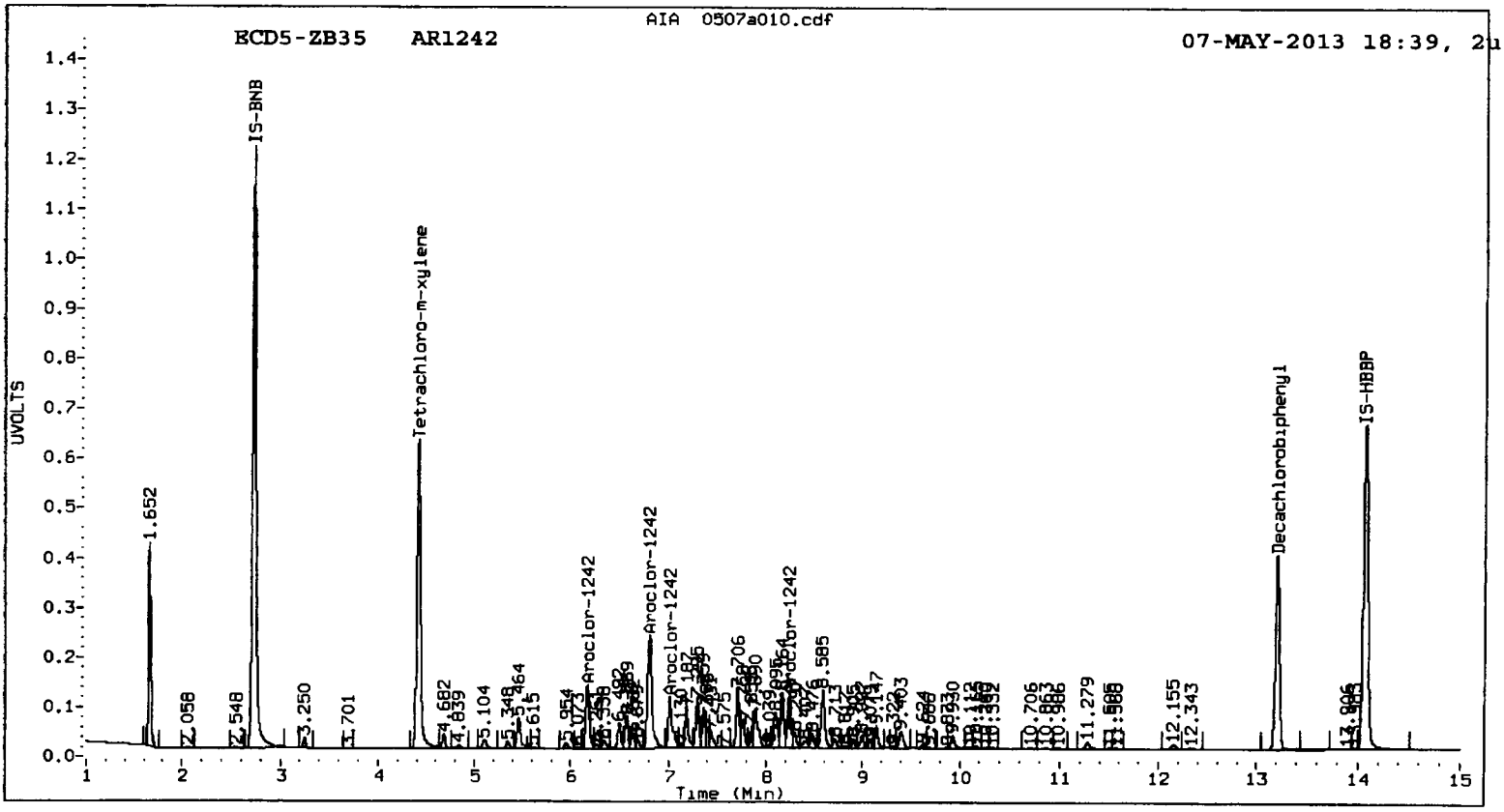
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	6.059	0.000	4645645	250.0	1	6.167	0.000	1719309	250.0
Aroclor-1242	2	6.468	0.000	14248309	250.0	2	6.803	0.000	3776677	250.0
Aroclor-1242	3	6.617	0.000	6357384	250.0	3	7.011	0.000	1577853	250.0
Aroclor-1242	4	7.873	0.000	7850170	250.0	4	8.239	0.000	1321956	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

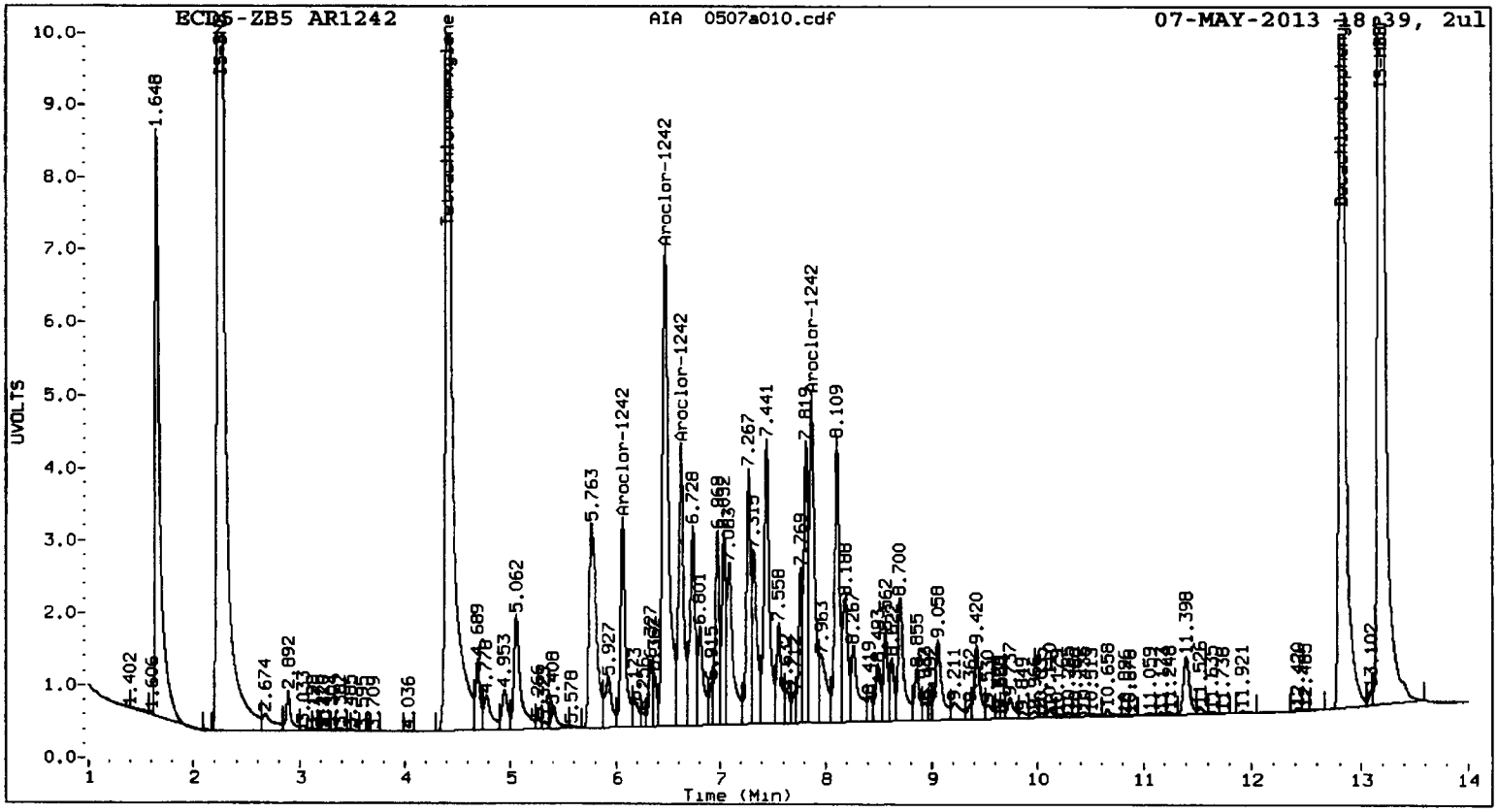
Total PCB Area Col1 (4.511 - 12.728) = 132730122 Col1 Total PCB = 0.2 ppm*

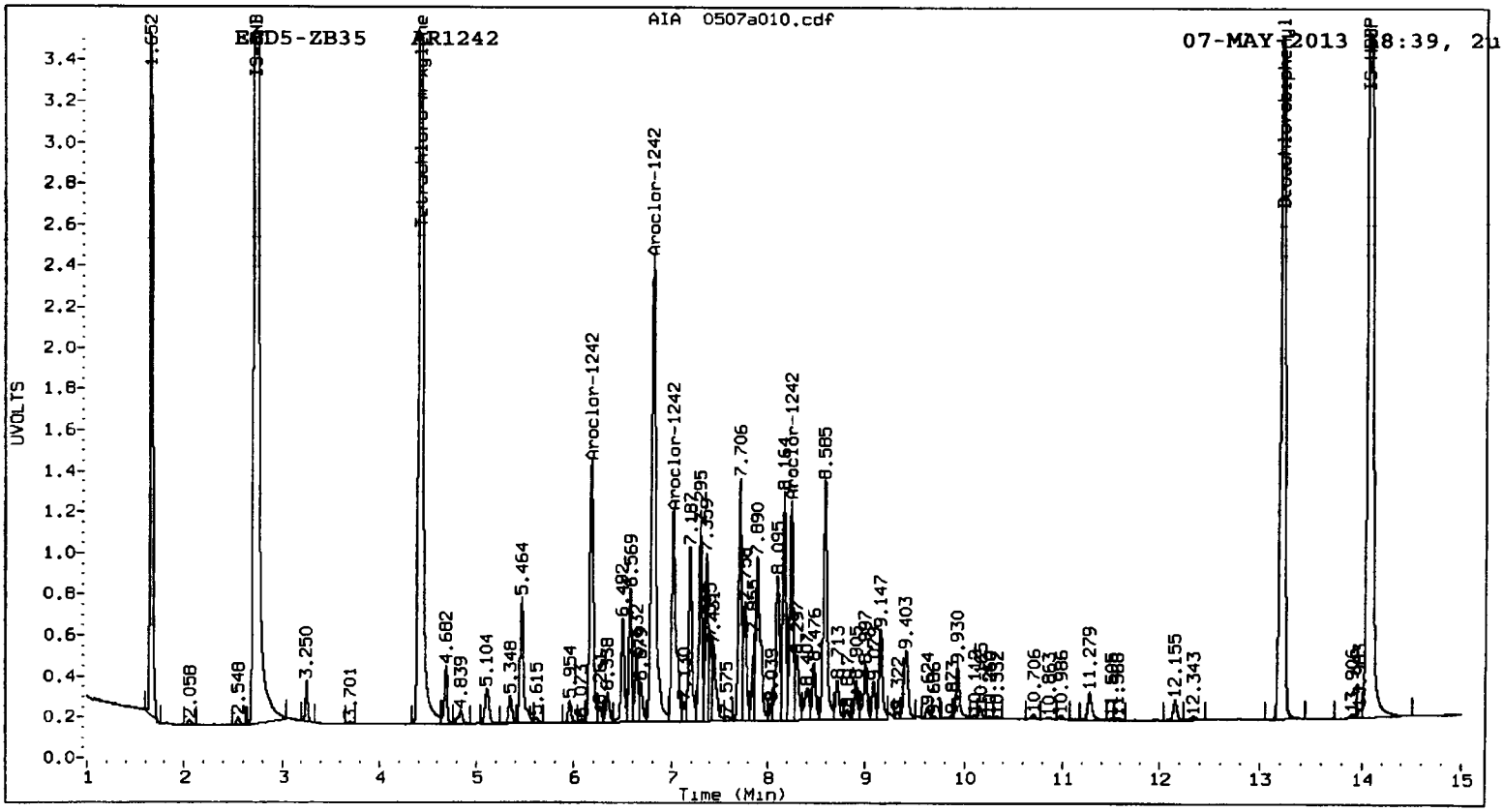
Total PCB Area Col2 (4.512 - 13.105) = 28500992 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1242
AIA 0507a010.cdf
07-MAY-2013 18:39, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR1242
AIA 0507a010.cdf
07-MAY-2013 18:39, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 AR1242
AIA 0507a010.cdf
07-MAY-2013 18:39, 2ul
UVOLTS
Time (Min)
1.648
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl


ECD5-ZB35 AR1242
AIA 0507a010.cdf
07-MAY-2013 18:39, 2u
UVOLTS
Time (Min)
1.652
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a011.d
Data file 2: 20130507.b/ical-2.b/0507a011.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 07-MAY-2013 18:59
Ical Date: 07-MAY-2013
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
4.411	0.000	31267686	4.412	0.000	8079724	38.2	39.1	2.2	Tetrachloro-m-xylen
12.828	0.000	29535239	13.204	-0.001	5138640	34.6	34.4	0.7	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	95.5	97.6
Decachlorobiphenyl	86.5	85.9

1 05/07/13
05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	52790343	7.8
Hexabromobiphenyl	50004151	57162764	14.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15297537	3.1
Hexabromobiphenyl	9345340	10392760	11.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.467	0.000	9288203	250.0	1	6.800	0.000	2396407	250.0
Aroclor-1248	2	7.442	0.000	10446110	250.0	2	7.706	0.000	1987417	250.0
Aroclor-1248	3	7.874	0.000	13282472	250.0	3	8.239	0.000	2057504	250.0
Aroclor-1248	4	8.110	0.000	9261094	250.0	4	8.584	0.000	2673699	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

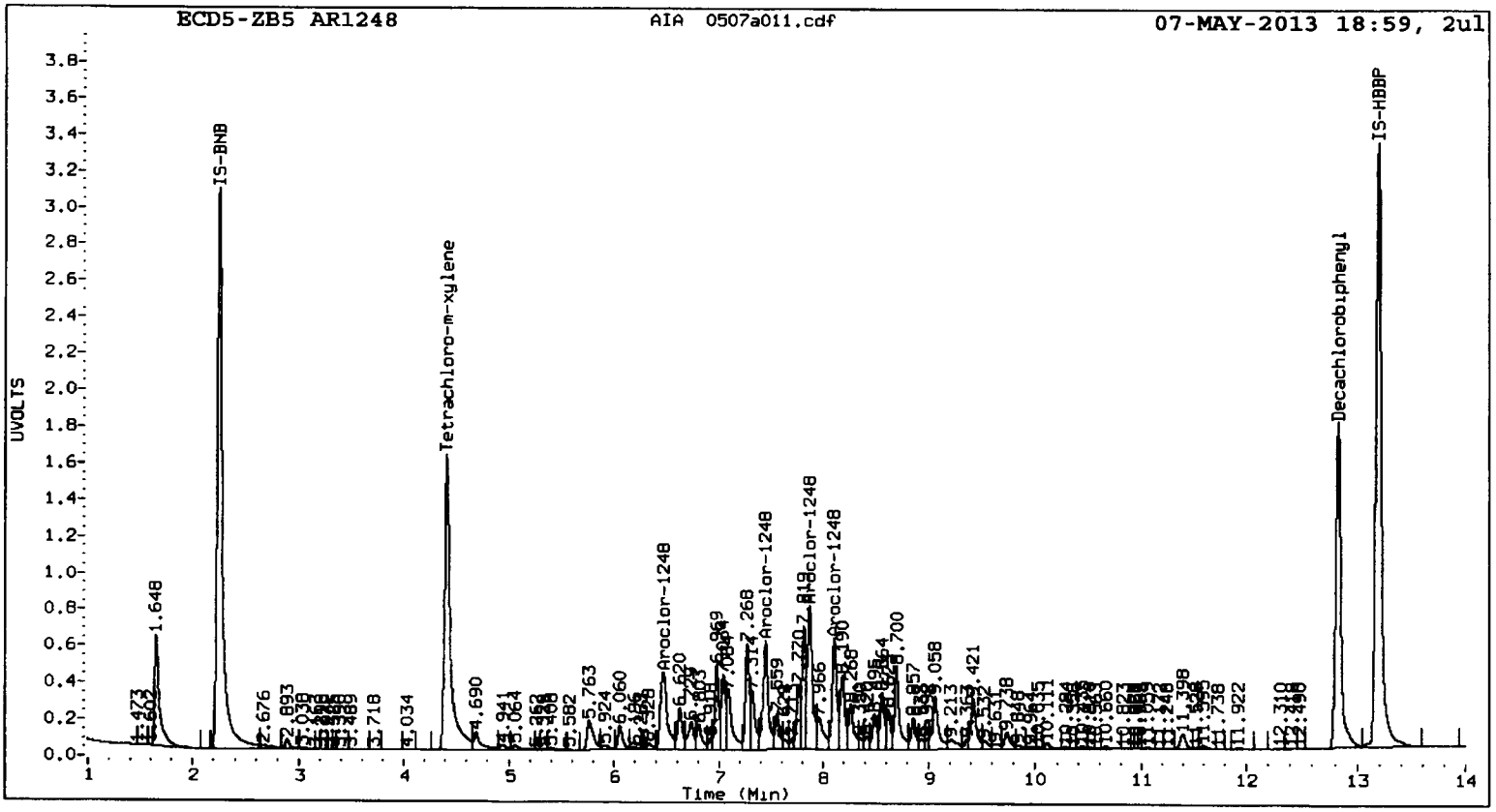
Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

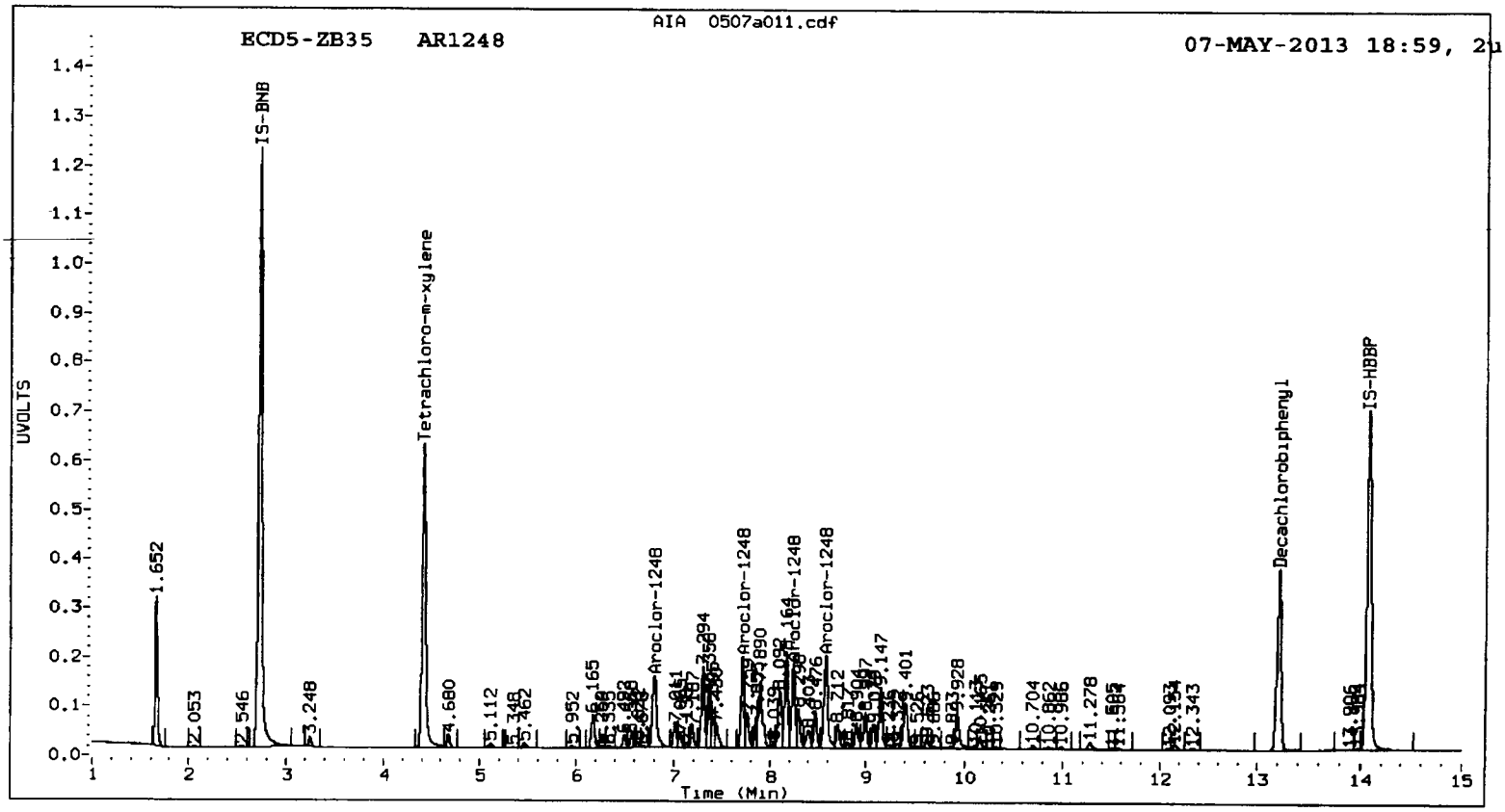
Total PCB Area Col1 (4.511 - 12.728) = 170915176 Col1 Total PCB = 0.3 ppm*

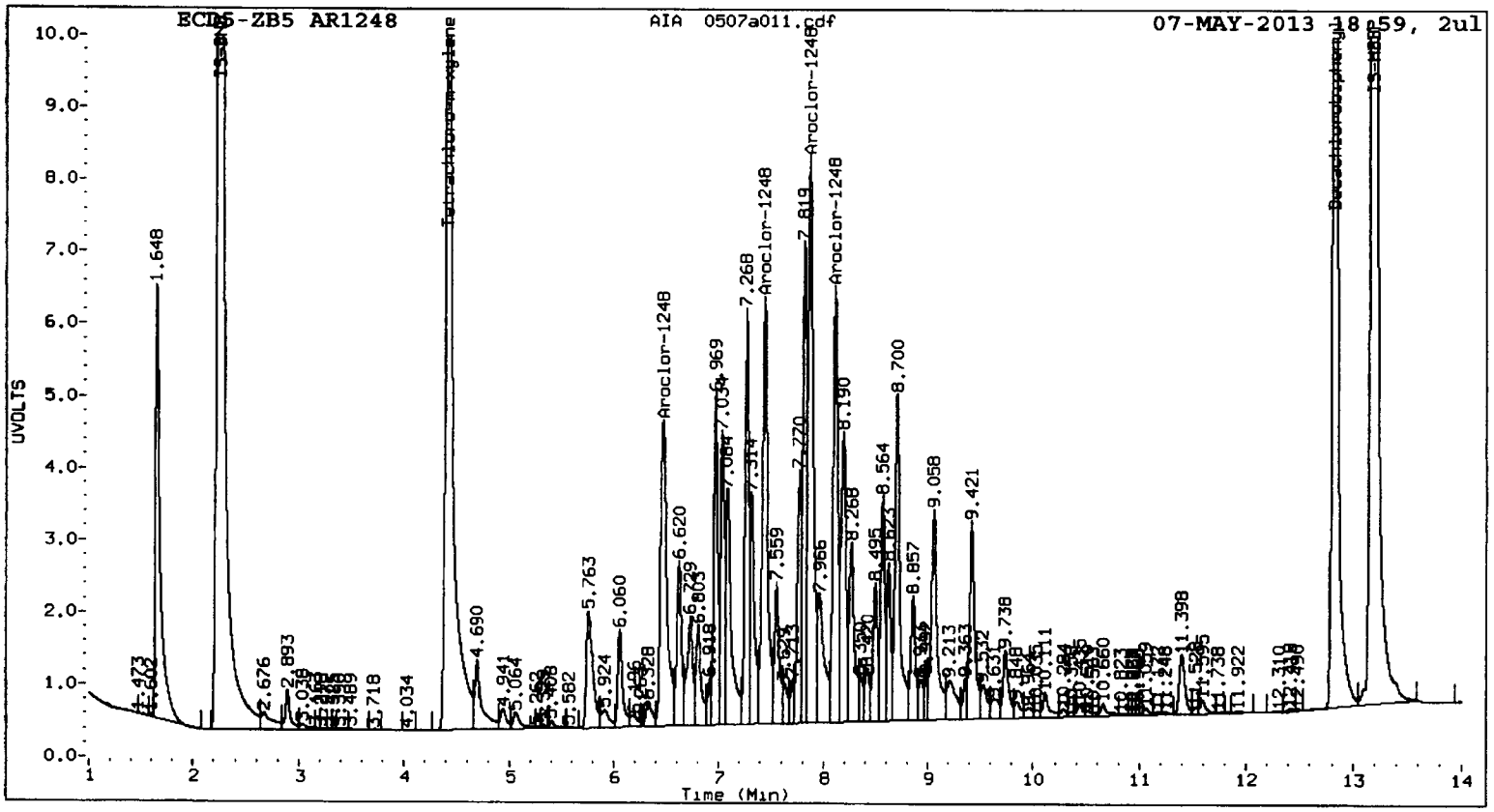
Total PCB Area Col2 (4.512 - 13.105) = 35045707 Col2 Total PCB = 0.3 ppm*

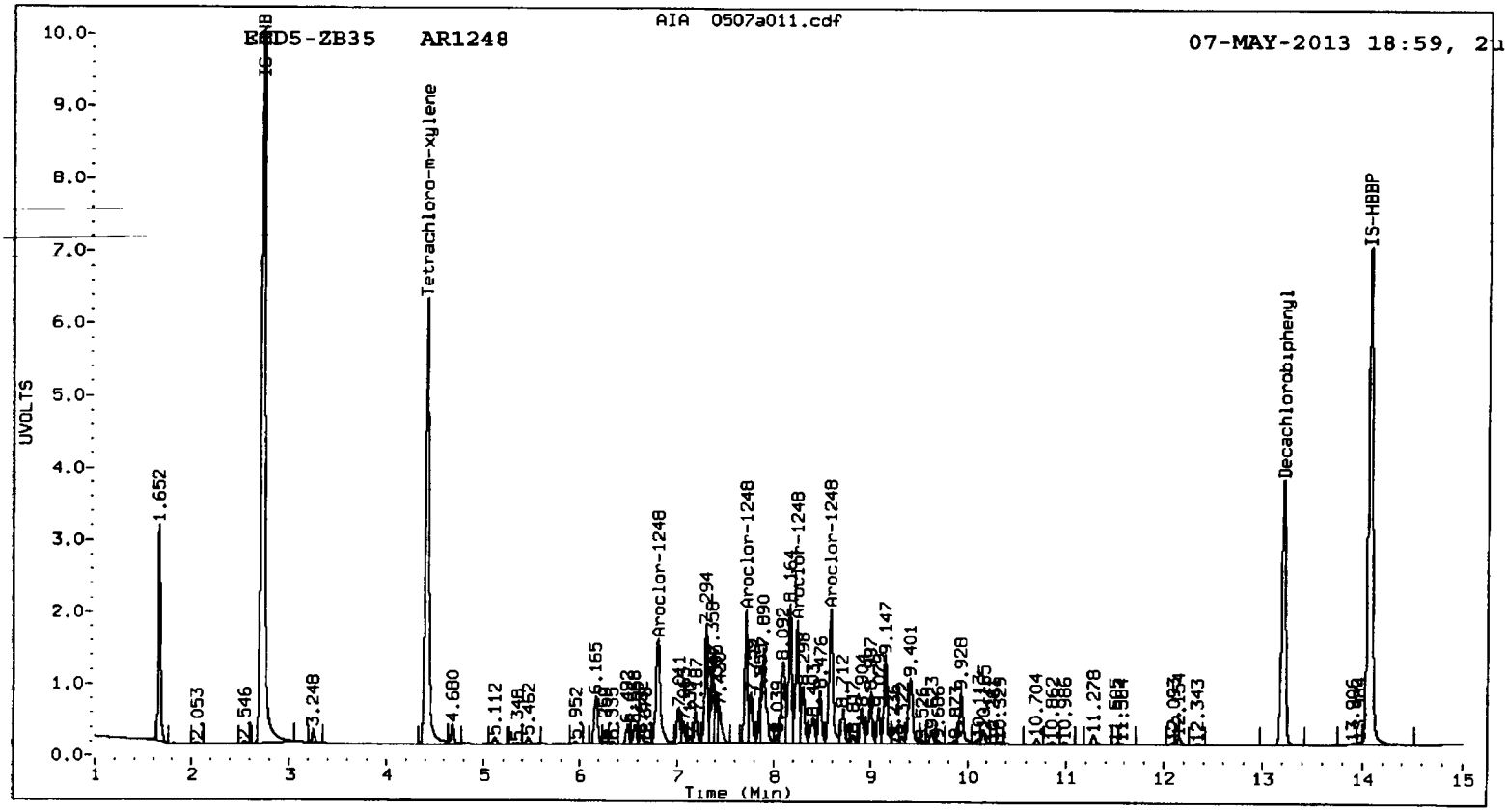
* Quantitated against AR1660 0.25ppm in Ical

US91:01279


ECD5-ZB5 AR1248
AIA 0507a011.cdf
07-MAY-2013 18:59, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
1.648
4.690
12.922


ECD5-ZB35 AR1248
AIA 0507a011.cdf
07-MAY-2013 18:59, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
1.652
4.680
13.906


ECD5-ZB5 AR1248
AIA 0507a011.cdf
07-MAY-2013 18:59, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP


AIA 0507a011.cdf
ECD5-ZB35 AR1248
07-MAY-2013 18:59, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a012.d
Data file 2: 20130507.b/ical-2.b/0507a012.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 07-MAY-2013 19:20
Ical Date: 07-MAY-2013
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
4.411	0.000	31597187	4.412	0.000	8169778	38.5	39.8	3.2	Tetrachloro-m-xylen
12.828	0.000	30575045	13.204	-0.001	5300158	35.4	35.2	0.6	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	96.3	99.4
Decachlorobiphenyl	88.4	87.9

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	52930034	8.1
Hexabromobiphenyl	50004151	57859101	15.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15196733	2.4
Hexabromobiphenyl	9345340	10477901	12.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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-1254	1	8.192	0.000	12340679	250.0	1	8.298	0.000	1842172	250.0
Aroclor-1254	2	8.564	0.000	8145566	250.0	2	8.475	0.000	2275796	250.0
Aroclor-1254	3	8.700	0.000	16981832	250.0	3	8.996	0.000	1743263	250.0
Aroclor-1254	4	9.053	0.000	17490326	250.0	4	9.147	0.000	3733641	250.0
Aroclor-1254	5	9.362	0.000	6614633	250.0	5	9.935	0.000	2102395	250.0

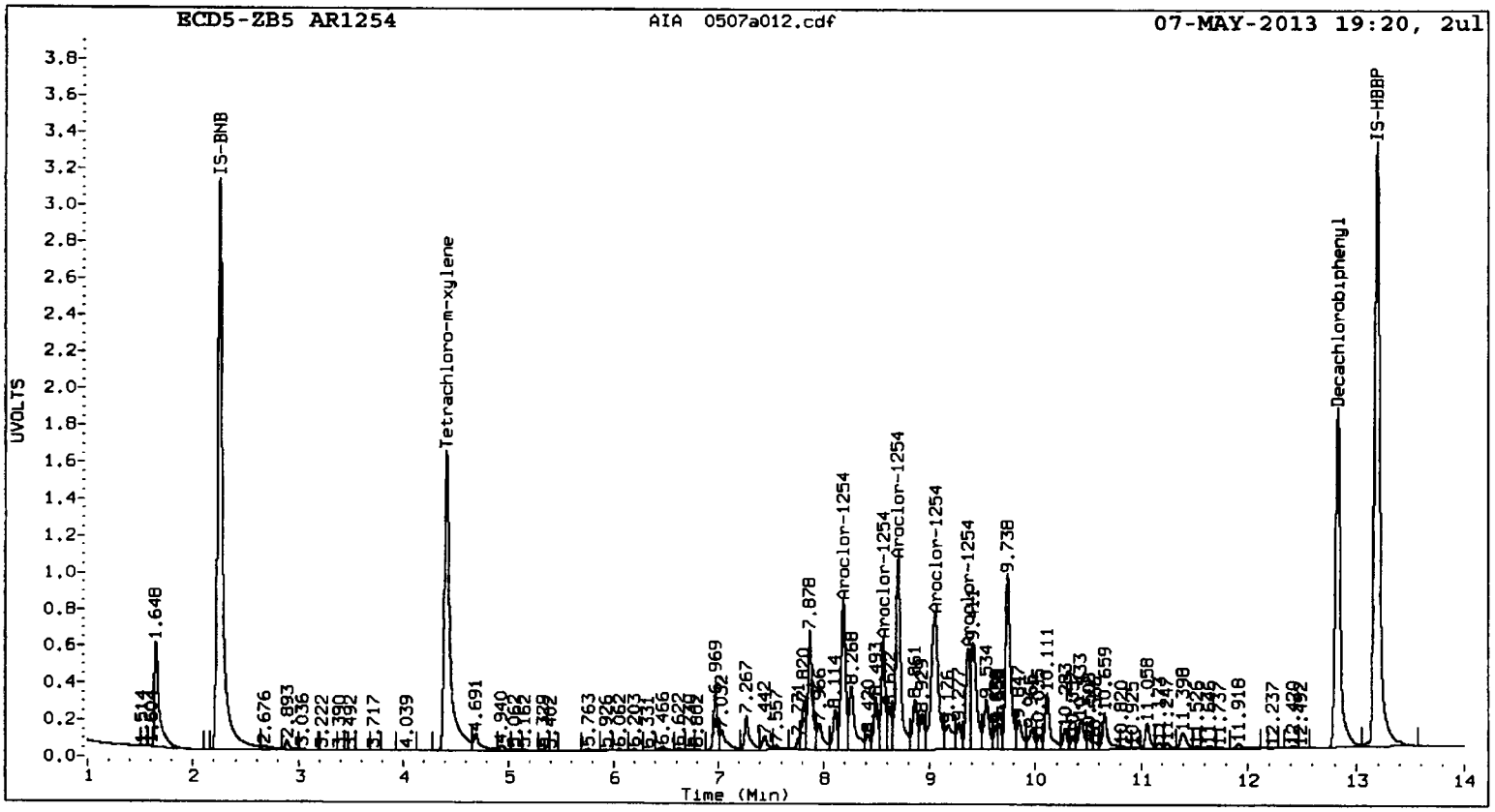
Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0
Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

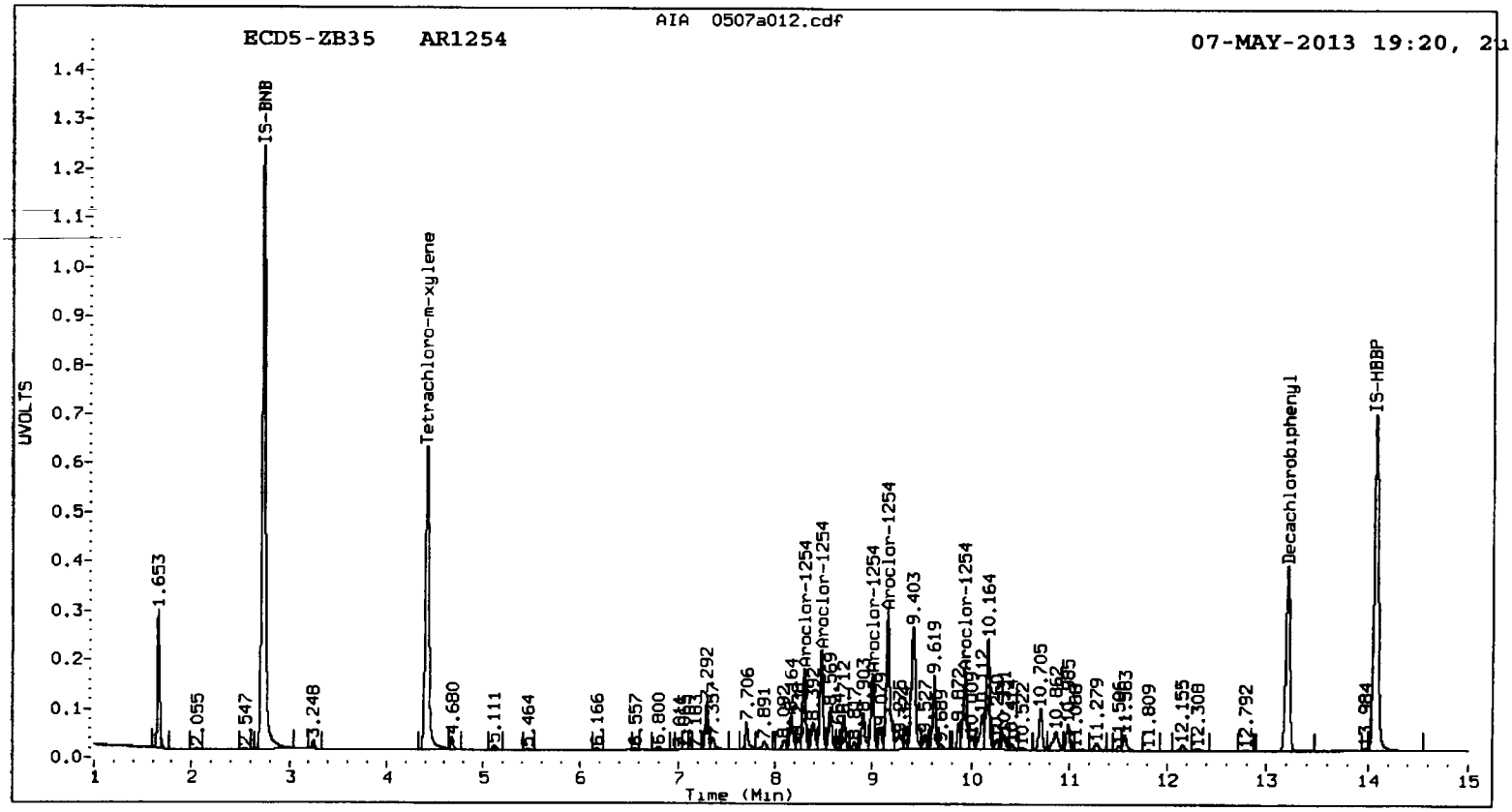
Total PCB Area Col1 (4.511 - 12.728) = 185172722 Col1 Total PCB = 0.3 ppm*

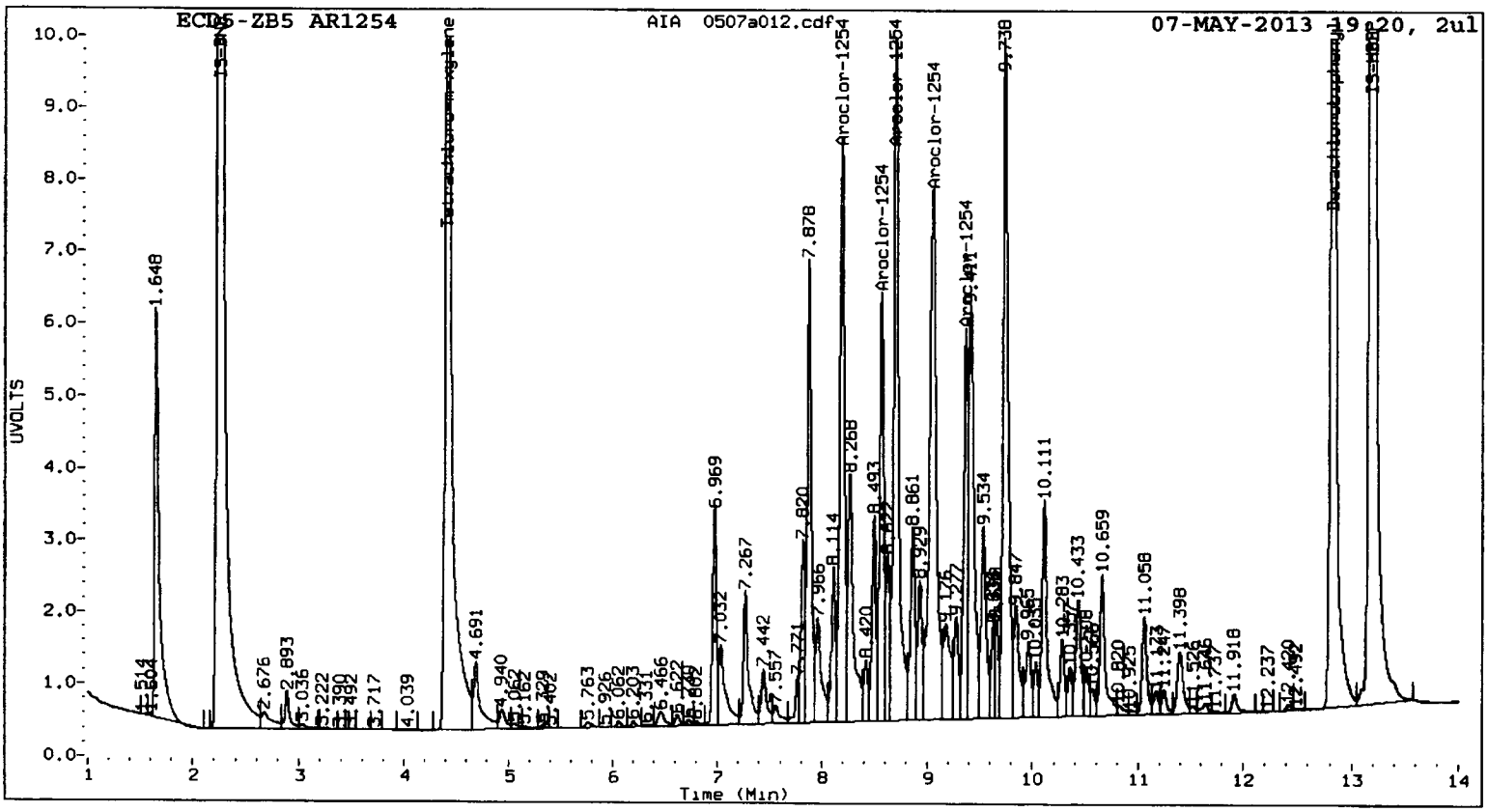
Total PCB Area Col2 (4.512 - 13.105) = 35929102 Col2 Total PCB = 0.3 ppm*

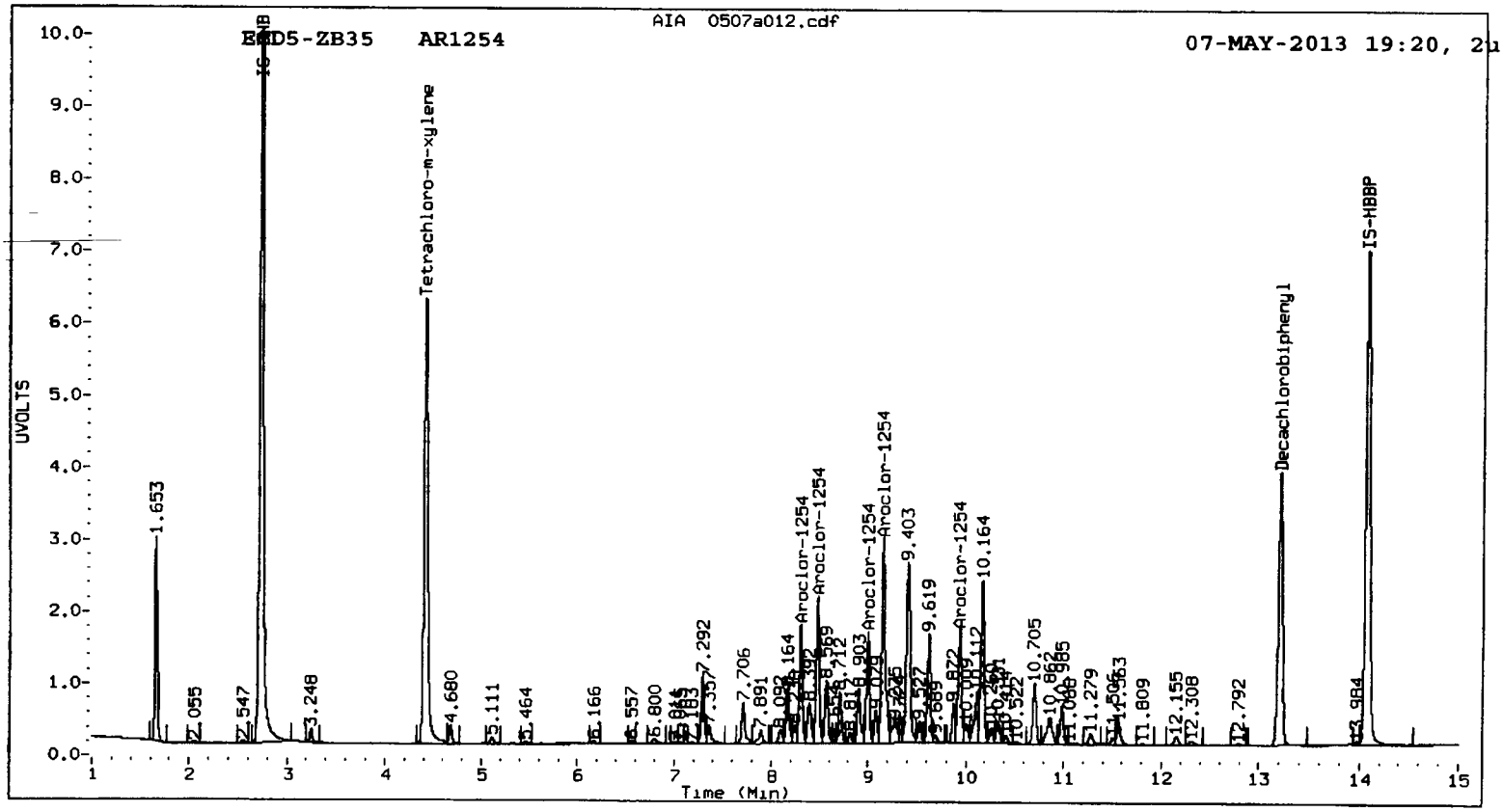
* Quantitated against AR1660 0.25ppm in Ical

WS91 01285


ECD5-ZB5 AR1254
AIA 0507a012.cdf
07-MAY-2013 19:20, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP


AIA 0507a012.cdf
ECD5-ZB35 AR1254
07-MAY-2013 19:20, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 AR1254
AIA 0507a012.cdf
07-MAY-2013 19:20, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR1254
AIA 0507a012.cdf
07-MAY-2013 19:20, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a013.d
Data file 2: 20130507.b/ical-2.b/0507a013.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR2162
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162
Client ID:
Injection Date: 07-MAY-2013 19:40
Ical Date: 07-MAY-2013
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
4.410	-0.001	32354650	4.411	-0.001	8289820	38.8	40.0	2.9	Tetrachloro-m-xylen
12.828	-0.001	30623420	13.203	-0.002	5314887	35.1	34.9	0.7	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	97.1	99.9
Decachlorobiphenyl	87.9	87.2

5/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53739671	9.7
Hexabromobiphenyl	50004151	58323154	16.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15340978	3.4
Hexabromobiphenyl	9345340	10583916	13.3

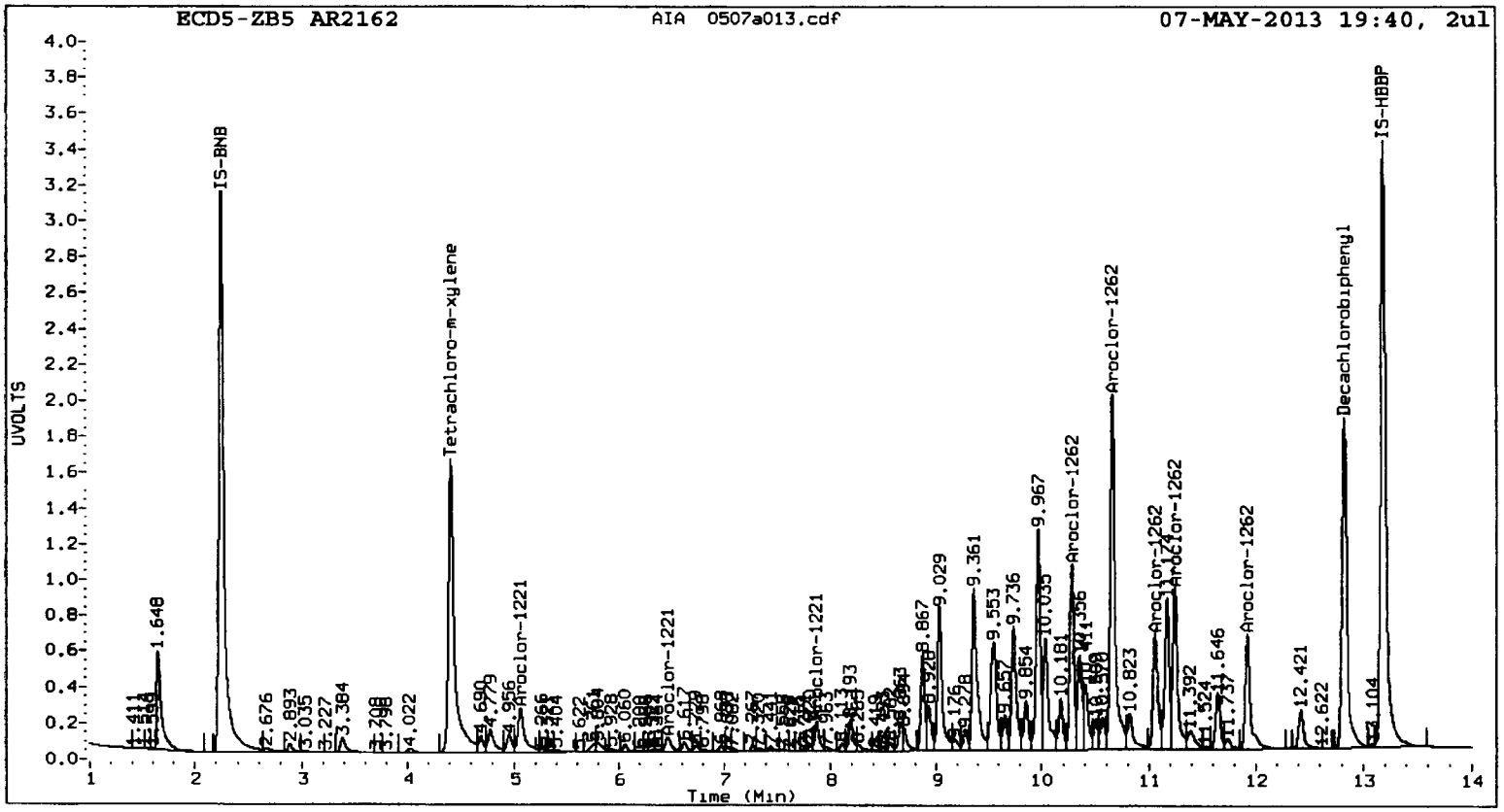
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

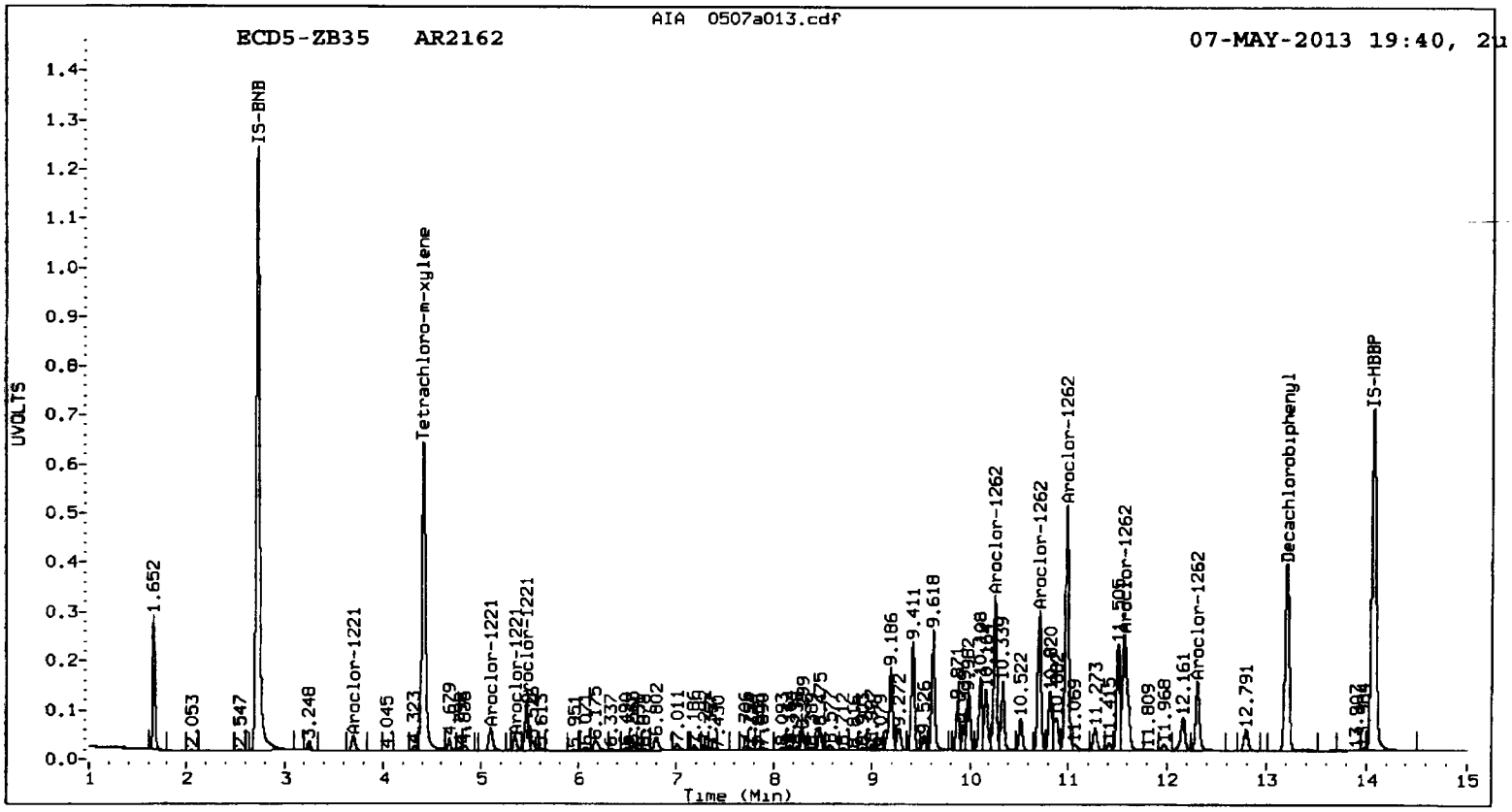
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	5.064	0.000	5473596	250.0	1	3.694	0.000	393179	250.0
Aroclor-1221	2	6.468	0.000	1674697	250.0	2	5.095	0.000	658077	250.0
Aroclor-1221	3	7.878	0.000	2364906	250.0	3	5.345	0.000	358396	250.0
Aroclor-1221	NS	---			----	4	5.460	0.000	1127517	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	10.283	0.000	13652093	250.0	1	10.260	0.000	3659800	250.0
Aroclor-1262	2	10.659	0.000	32077138	250.0	2	10.710	0.000	3346602	250.0
Aroclor-1262	3	11.059	0.000	10159557	250.0	3	10.985	0.000	6277067	250.0
Aroclor-1262	4	11.247	0.000	14260811	250.0	4	11.567	0.000	4079795	250.0
Aroclor-1262	5	11.918	0.000	10944344	250.0	5	12.306	0.000	1969832	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				

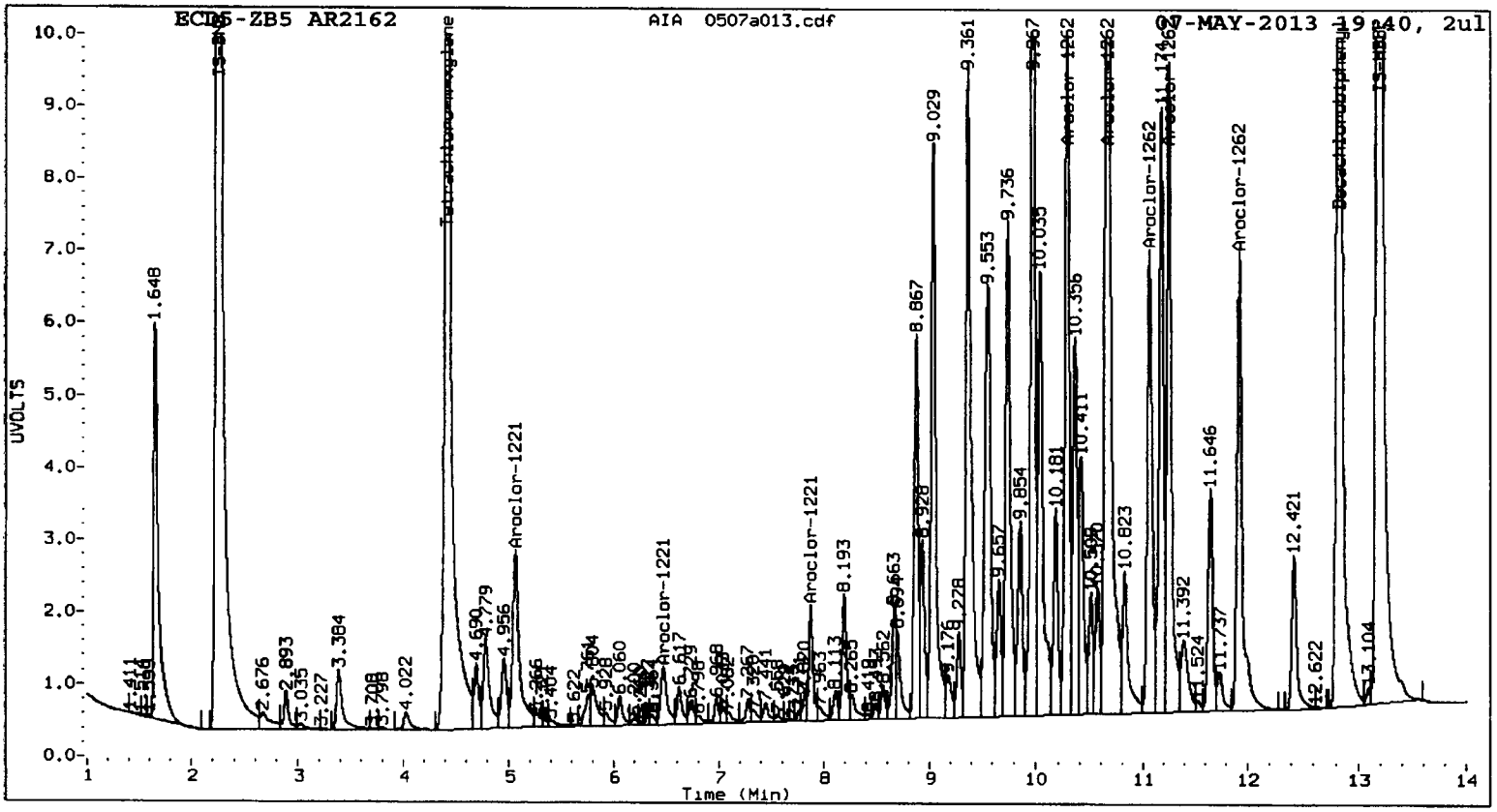
Total PCB Area Col1 (4.511 - 12.728) = 262283464 Col1 Total PCB = 0.4 ppm*

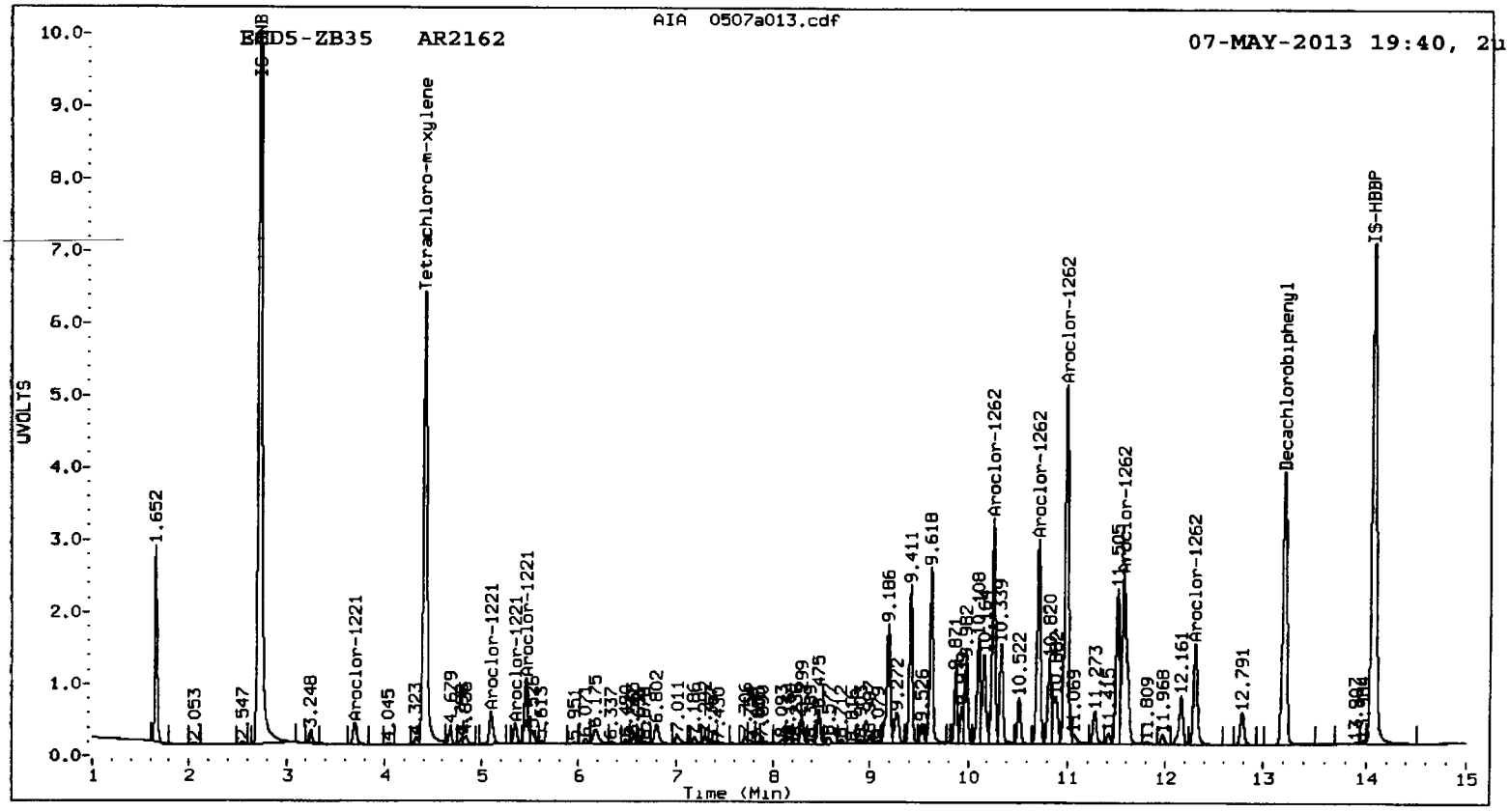
Total PCB Area Col2 (4.512 - 13.105) = 51791020 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR2162
AIA 0507a013.cdf
07-MAY-2013 19:40, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR2162
AIA 0507a013.cdf
07-MAY-2013 19:40, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 AR2162
AIA 0507a013.cdf
07-MAY-2013 19:40, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl


AIA 0507a013.cdf
ECD5-ZB35 AR2162
07-MAY-2013 19:40, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a014.d
Data file 2: 20130507.b/ical-2.b/0507a014.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR3268
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268
Client ID:
Injection Date: 07-MAY-2013 20:00
Ical Date: 07-MAY-2013
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
4.411	0.000	31984640	4.412	0.000	8241550	38.7	40.0	3.2	Tetrachloro-m-xylen
12.828	0.000	43449498	13.205	0.000	7536002	50.6	49.8	1.7	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	96.8	100.0
Decachlorobiphenyl	126.5	124.5

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53262724	8.7
Hexabromobiphenyl	50004151	57460185	14.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15239954	2.7
Hexabromobiphenyl	9345340	10518547	12.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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-1232	1	6.060	0.000	2466405	250.0	1	6.165	0.000	977839	250.0
Aroclor-1232	2	6.469	0.000	7549613	250.0	2	6.801	0.000	1952023	250.0
Aroclor-1232	3	7.442	0.000	3923778	250.0	3	7.011	0.000	813950	250.0
Aroclor-1232	4	7.874	0.000	4507818	250.0	4	8.239	0.000	683109	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	11.175	0.000	30229266	250.0	1	11.507	0.000	6347619	250.0
Aroclor-1268	2	11.246	0.000	33428922	250.0	2	11.573	0.000	5983248	250.0
Aroclor-1268	3	11.632	0.000	24825470	250.0	3	11.969	0.000	4735989	250.0
Aroclor-1268	4	12.422	0.000	69938717	250.0	4	12.792	0.000	12266670	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

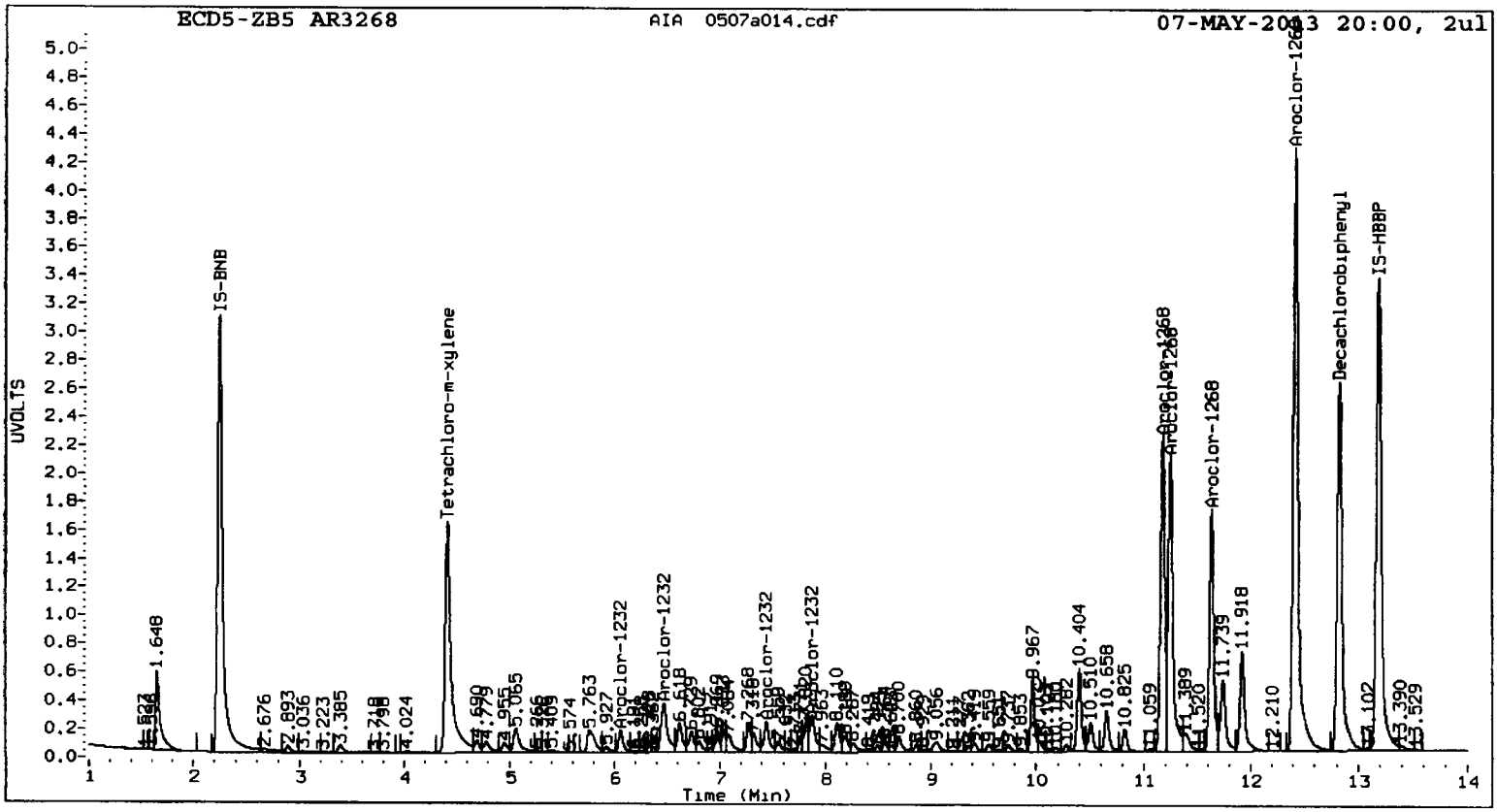
Total PCB Area Col1 (4.511 - 12.728) = 288711386 Col1 Total PCB = 0.4 ppm*

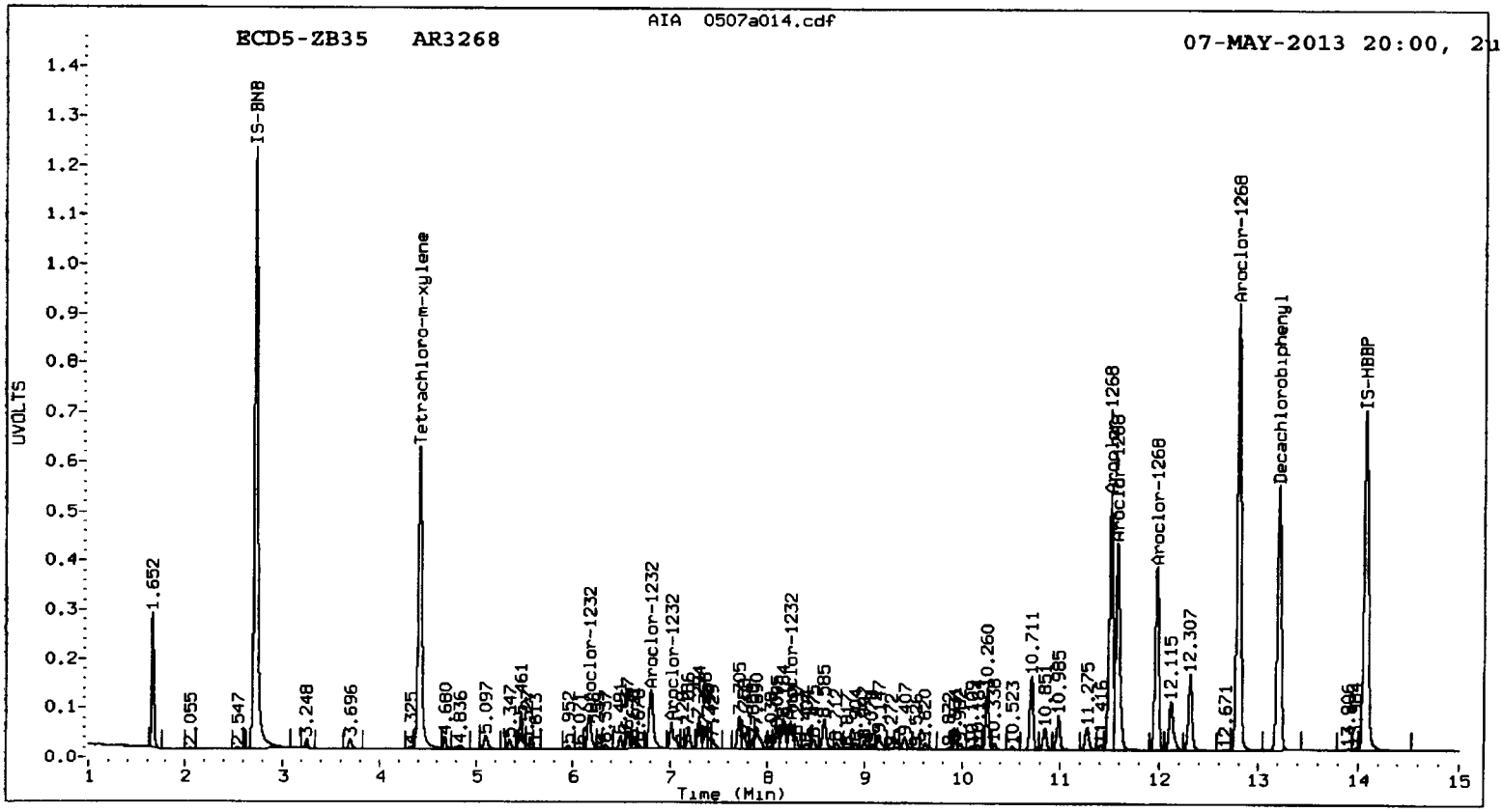
Total PCB Area Col2 (4.512 - 13.105) = 55525050 Col2 Total PCB = 0.4 ppm*

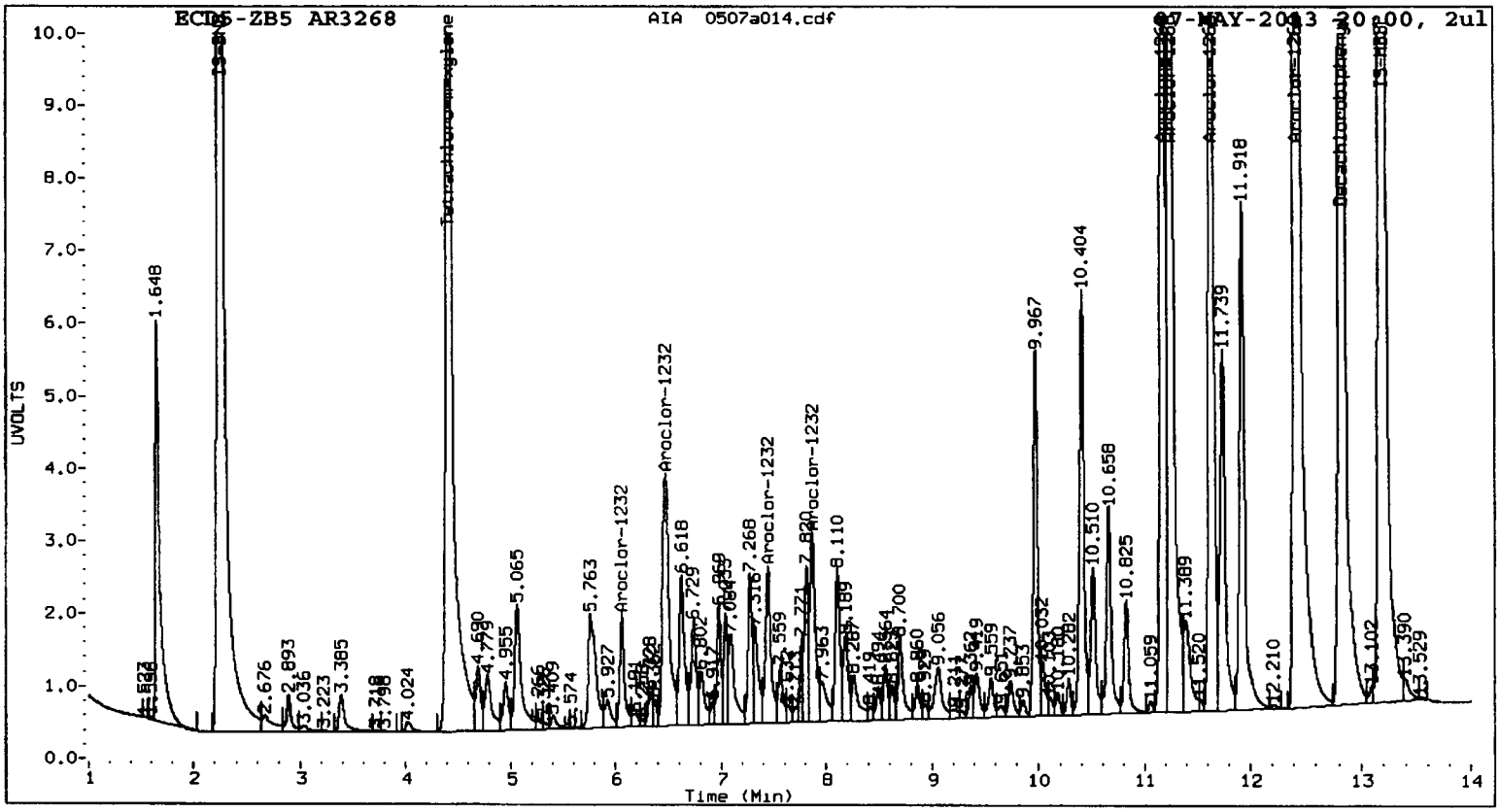
* Quantitated against AR1660 0.25ppm in Ical

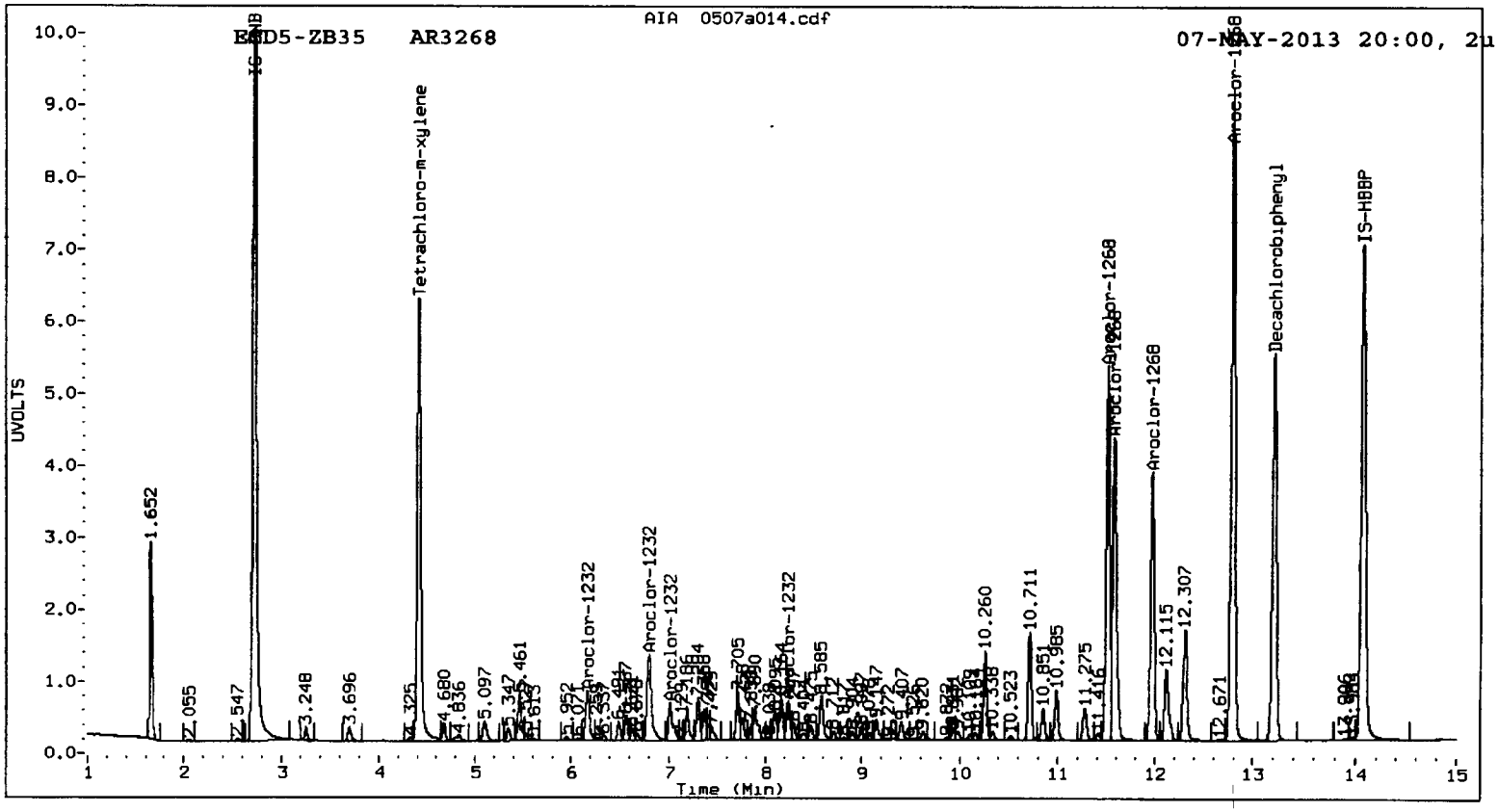
WS91_01291

PCB-Form 10 Mod.


ECD5-ZB5 AR3268
AIA 0507a014.cdf
07-MAY-2013 20:00, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR3268
AIA 0507a014.cdf
07-MAY-2013 20:00, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 AR3268
AIA 0507a014.cdf
07-MAY-2013 20:00, 2ul
UVOLTS
Time (Min)
1.648
Tetrachloro-m-xylene
5.065
5.763
Aroclor-1232
6.618
7.268
8.110
9.967
10.404
10.658
10.825
11.739
11.918
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR3268
AIA 0507a014.cdf
07-MAY-2013 20:00, 2u
UVOLTS
Time (Min)
1.652
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
10.260
10.711
12.307
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a015.d
Data file 2: 20130507.b/ical-2.b/0507a015.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242 ICV
Client ID:
Injection Date: 07-MAY-2013 20:21
Ical Date: 07-MAY-2013
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
4.410	0.000	31924156	4.411	0.000	8216234	38.0	38.8	2.2	Tetrachloro-m-xylen
12.828	0.000	30828729	13.205	0.000	5320370	34.3	34.0	1.1	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	94.9	97.0
Decachlorobiphenyl	85.8	84.9

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54248541	10.8
Hexabromobiphenyl	50004151	60099807	20.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15658755	5.5
Hexabromobiphenyl	9345340	10888882	16.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.060	-0.001	4470855	182.8	1	6.166	0.000	1663757	186.2
Aroclor-1016	2	6.468	0.000	13617695	180.8	2	6.802	0.001	3565246	183.5
Aroclor-1016	3	6.617	0.001	6113829	181.2	3	7.185	0.000	947812	186.6
Aroclor-1016	4	6.729	0.001	4549783	180.4	4	7.358	0.000	881454	186.3
	Total Col1Ave (4 peaks):				181.3	Total Col2Ave (4 peaks):				185.7 RPD = 2
	Corrected Ave (3 peaks):				180.8	Corrected Ave (3 peaks):				185.4 RPD = 2
Aroclor-1221	1	5.063	-0.001	3230823	146.2	1	---			0.0
Aroclor-1221	2	6.468	0.000	13617695	2013.8	2	5.101	0.006	254025	94.5
Aroclor-1221	3	7.874	-0.004	7607955	796.7	3	5.346	0.001	163596	111.8
Aroclor-1221	NS	---			---	4	5.461	0.001	799065	173.6
	Total Col1Ave (3 peaks):				985.6	Total Col2Ave (3 peaks):				126.6 RPD = 154*
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1232	1	6.060	-0.001	4470855	444.9	1	6.166	0.000	1663757	414.0
Aroclor-1232	2	6.468	-0.001	13617695	442.7	2	6.802	0.000	3565246	444.4
Aroclor-1232	3	7.442	0.000	6893473	431.2	3	7.009	-0.002	1501264	448.8
Aroclor-1232	4	7.874	0.000	7607955	414.3	4	8.238	-0.001	1167882	416.0
	Total Col1Ave (4 peaks):				433.3	Total Col2Ave (4 peaks):				430.8 RPD = 1
	Corrected Ave (3 peaks):				429.4	Corrected Ave (3 peaks):				424.8 RPD = 1
Aroclor-1242	1	6.060	0.000	4470855	228.8	1	6.166	-0.002	1663757	233.2
Aroclor-1242	2	6.468	0.000	13617695	227.2	2	6.802	-0.001	3565246	227.5
Aroclor-1242	3	6.617	0.001	6113829	228.7	3	7.009	-0.002	1501264	229.3
Aroclor-1242	4	7.874	0.001	7607955	230.4	4	8.238	-0.001	1167882	212.9
	Total Col1Ave (4 peaks):				228.8	Total Col2Ave (4 peaks):				225.7 RPD = 1
	Corrected Ave (3 peaks):				228.2	Corrected Ave (3 peaks):				223.2 RPD = 2
Aroclor-1248	1	6.468	0.002	13617695	356.7	1	6.802	0.002	3565246	363.4
Aroclor-1248	2	7.442	-0.001	6893473	160.5	2	7.705	-0.001	1266936	155.7
Aroclor-1248	3	7.874	-0.001	7607955	139.3	3	8.238	-0.001	1167882	138.6
Aroclor-1248	4	8.110	0.000	5502492	144.5	4	8.584	0.001	1486653	135.8
	Total Col1Ave (4 peaks):				200.3	Total Col2Ave (4 peaks):				198.4 RPD = 1
	Corrected Ave (3 peaks):				148.1	Corrected Ave (3 peaks):				143.4 RPD = 3
Aroclor-1254	1	8.190	-0.002	3647666	72.1	1	8.298	0.000	493209	65.0
Aroclor-1254	2	8.564	0.000	2121258	63.5	2	8.475	0.000	469897	50.1
Aroclor-1254	3	8.700	0.000	3853127	55.3	3	8.996	0.000	426802	59.4
Aroclor-1254	4	9.057	0.005	3495648	48.8	4	9.147	0.000	714252	46.4
Aroclor-1254	5	9.362	0.000	680928	25.1	5	9.930	-0.004	413402	47.7
	Total Col1Ave (5 peaks):				53.0	Total Col2Ave (5 peaks):				53.7 RPD = 1
	Corrected Ave (4 peaks):				48.2	Corrected Ave (4 peaks):				50.9 RPD = 5
Aroclor-1260	1	9.966	-0.001	248097	5.0	1	10.260	0.001	14609	1.5
Aroclor-1260	2	10.282	-0.001	177183	3.6	2	10.704	-0.005	88810	7.7
Aroclor-1260	3	10.658	-0.001	314580	2.7	3	10.985	0.001	50951	2.4
Aroclor-1260	4	11.058	0.000	188167	3.3	4	11.506	0.001	16977	2.9
Aroclor-1260	5	11.248	0.001	45330	1.5	NS	---			----
	Total Col1Ave (5 peaks):				3.2	Total Col2Ave (4 peaks):				3.6 RPD = 11
	Corrected Ave (4 peaks):				2.8	Corrected Ave (3 peaks):				2.3 RPD = 20
Aroclor-1262	1	10.282	0.000	177183	3.1	1	10.260	0.001	14609	1.0
Aroclor-1262	2	10.658	-0.001	314580	2.4	2	10.704	-0.006	88810	6.4
Aroclor-1262	3	11.058	-0.001	188167	4.5	3	10.985	0.000	50951	2.0
Aroclor-1262	4	11.248	0.001	45330	0.8	4	11.564	-0.003	37242	2.2
Aroclor-1262	5	11.923	0.005	55055	1.2	5	12.344	0.038	32722	4.0
	Total Col1Ave (5 peaks):				2.4	Total Col2Ave (5 peaks):				3.1 RPD = 26
	Corrected Ave (4 peaks):				1.9	Corrected Ave (4 peaks):				2.3 RPD = 20
Aroclor-1268	1	11.173	-0.002	51213	0.4	1	11.506	0.000	16977	0.6

Aroclor-1268	2	11.248	0.002	45330	0.3	2	11.564	-0.009	37242	1.5
Aroclor-1268	3	11.629	-0.004	63465	0.6	3	---			0.0
Aroclor-1268	4	12.419	-0.003	91475	0.3	4	12.791	-0.001	10921	0.2

Total Col1Ave (4 peaks): 0.4 Total Col2Ave (3 peaks): 0.8 RPD = 62*

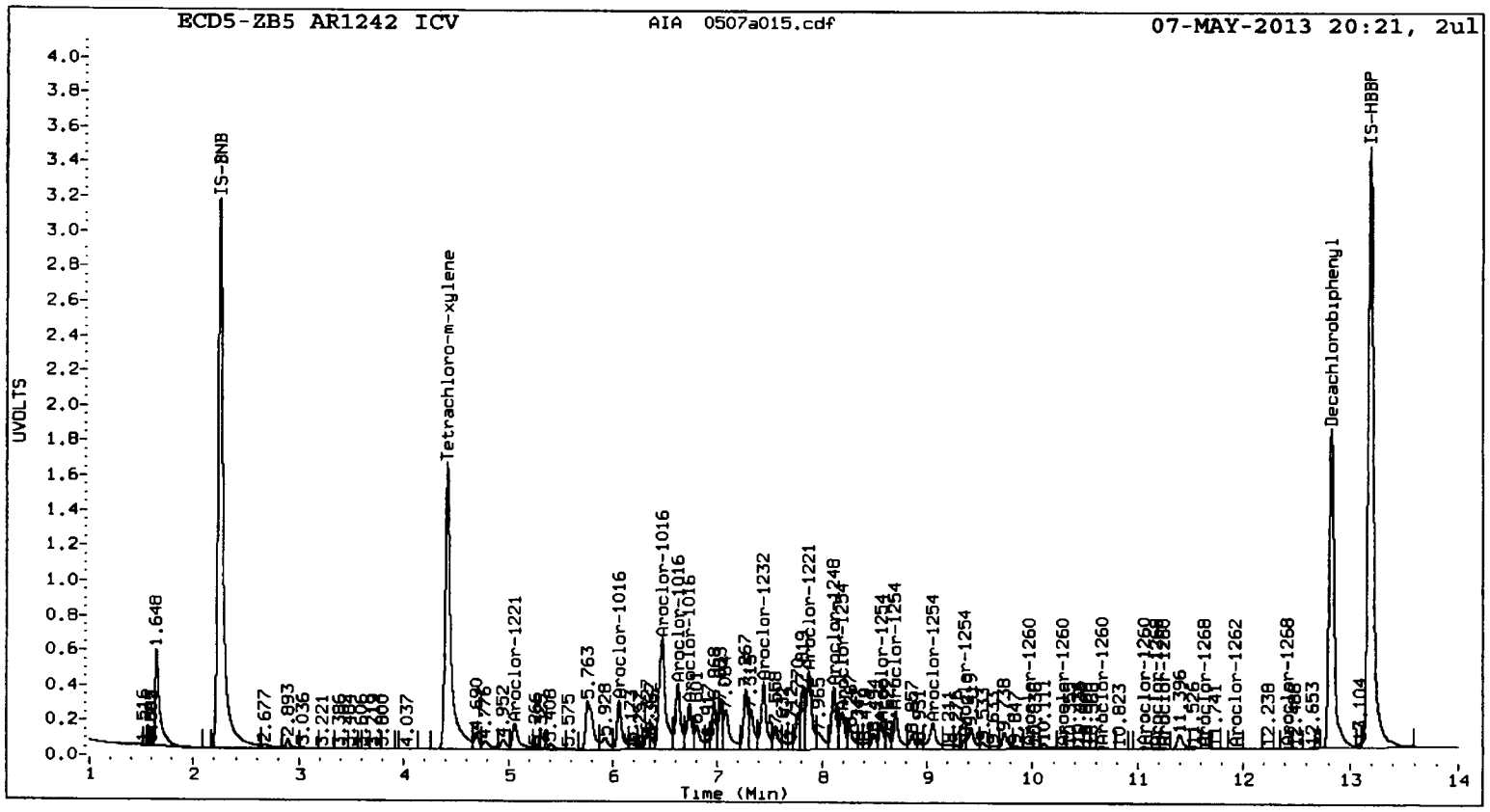
Corrected Ave (3 peaks): 0.3 Corrected Ave: < 3 Peaks

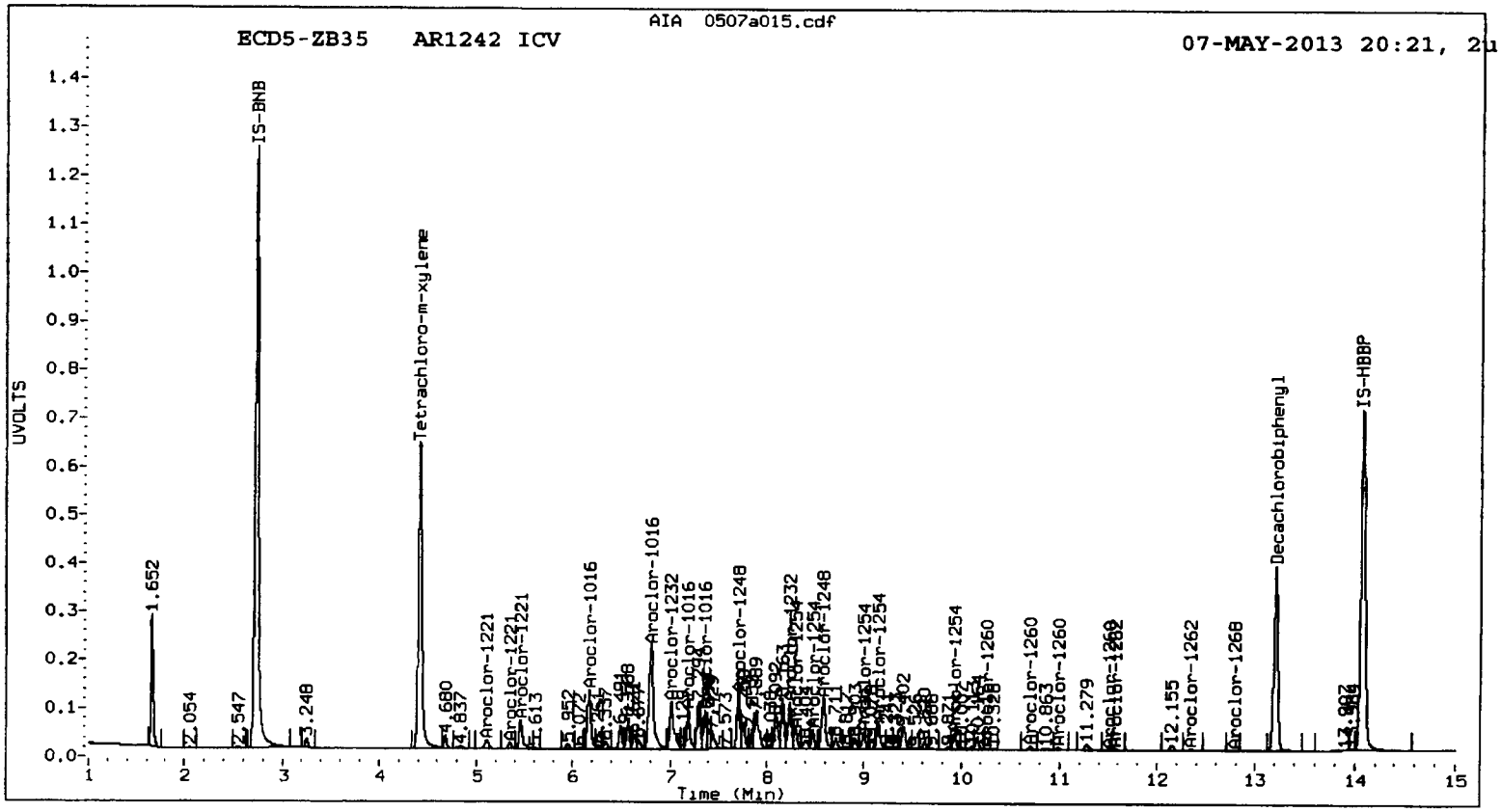
Total PCB Area Col1 (4.511 - 12.728) = 136701149 Col1 Total PCB = 0.2 ppm*

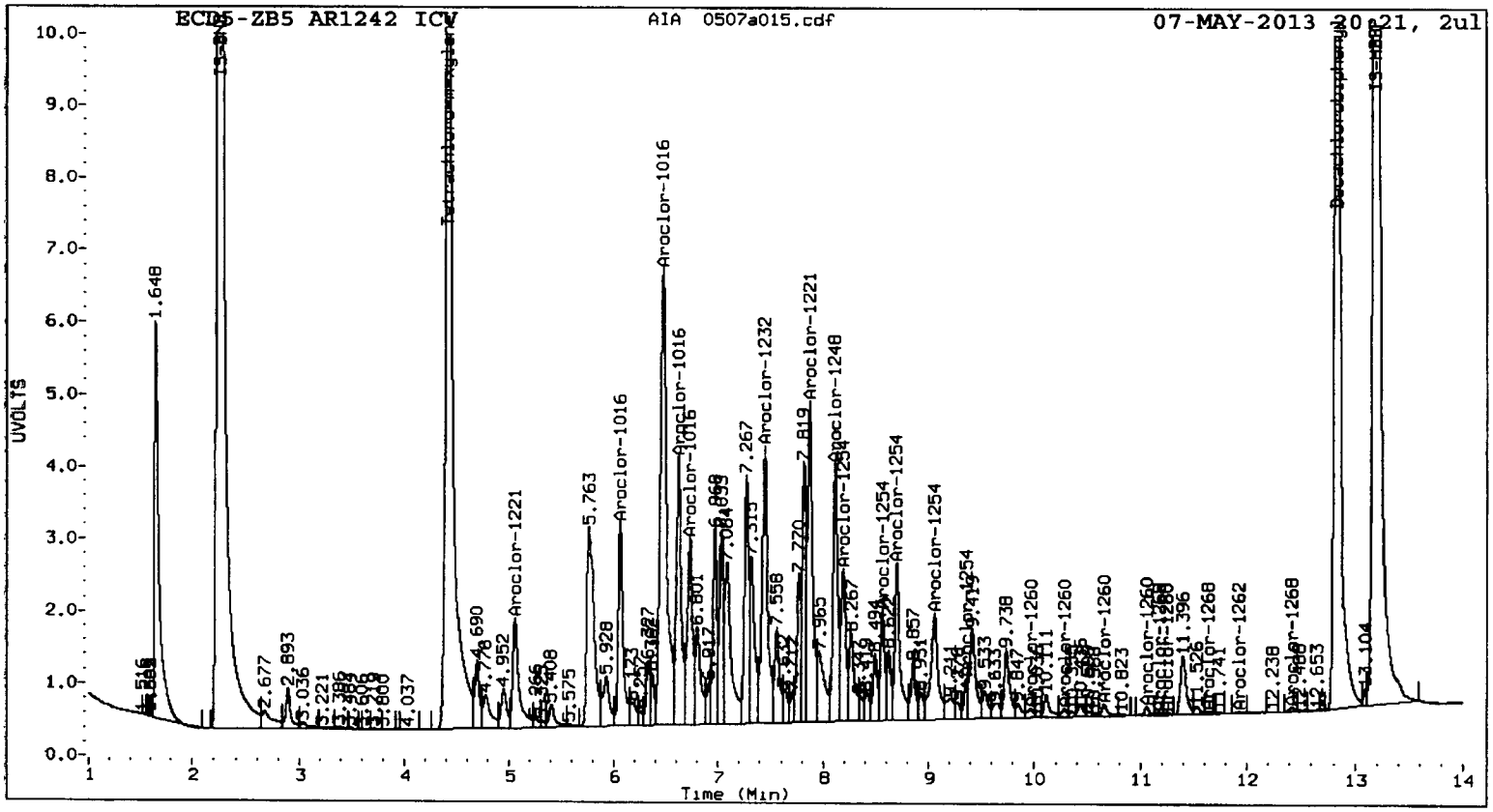
Total PCB Area Col2 (4.512 - 13.105) = 28787302 Col2 Total PCB = 0.2 ppm*

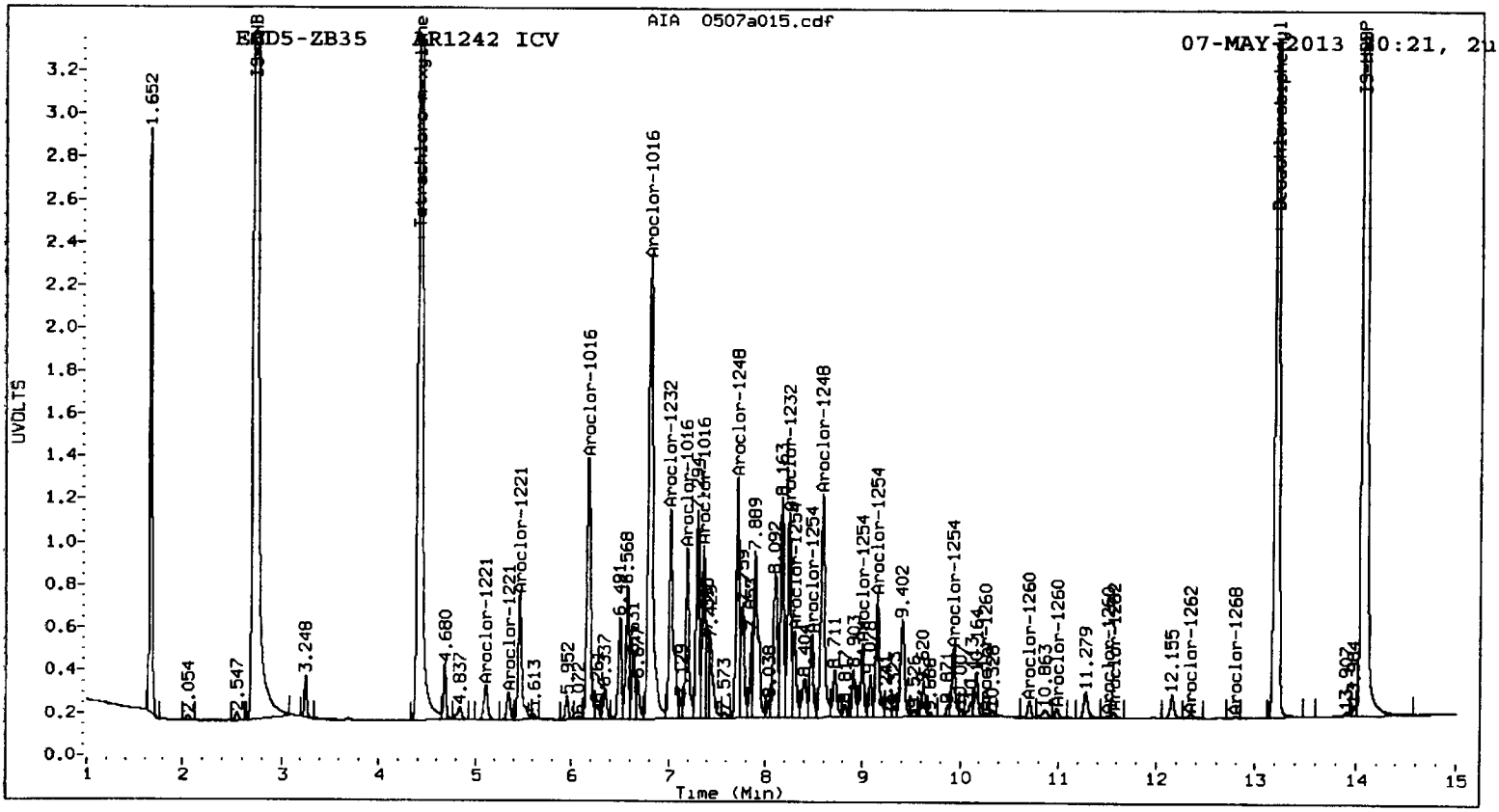
* Quantitated against AR1660 0.25ppm in Ical

WS91 : 81297


ECD5-ZB5 AR1242 ICV
AIA 0507a015.cdf
07-MAY-2013 20:21, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.648
5.763
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


AIA 0507a015.cdf
ECD5-ZB35 AR1242 ICV
07-MAY-2013 20:21, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.652
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB5 AR1242 ICV
AIA 0507a015.cdf
07-MAY-2013 10:21, 2ul
UVOLTS
Time (Min)
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB35 AR1242 ICV
AIA 0507a015.cdf
07-MAY-2013 10:21, 2u
UVOLTS
Time (Min)
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a016.d
Data file 2: 20130507.b/ical-2.b/0507a016.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248 ICV
Client ID:
Injection Date: 07-MAY-2013 20:41
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.410	-0.001	30900777	4.412	0.000	7953899	37.1	38.1	2.5	Tetrachloro-m-xylen
12.828	0.000	31048472	13.203	-0.002	5334093	34.3	33.8	1.2	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	92.9	95.2
Decachlorobiphenyl	85.7	84.6

05/03/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53651835	9.5
Hexabromobiphenyl	50004151	60660565	21.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15441440	4.1
Hexabromobiphenyl	9345340	10952020	17.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.060	-0.001	2318537	95.9	1	6.163	-0.002	909531	103.2
Aroclor-1016	2	6.467	-0.002	9438131	126.7	2	6.800	-0.001	2390530	124.8
Aroclor-1016	3	6.619	0.002	3851669	115.4	3	7.186	0.000	515984	103.0
Aroclor-1016	4	6.729	0.001	2894284	116.1	4	7.358	0.000	1263898	270.9
	Total Col1Ave (4 peaks):				113.5	Total Col2Ave (4 peaks):				150.5 RPD = 28
	Corrected Ave (3 peaks):				109.1	Corrected Ave (3 peaks):				110.3 RPD = 1
Aroclor-1221	1	5.063	0.000	864224	39.5	1	---			0.0
Aroclor-1221	2	6.467	-0.001	9438131	1411.2	2	5.110	0.015	123396	46.6
Aroclor-1221	3	7.874	-0.004	12549915	1328.9	3	5.348	0.003	31614	21.9
Aroclor-1221	NS	---			----	4	5.462	0.001	185951	41.0
	Total Col1Ave (3 peaks):				926.5	Total Col2Ave (3 peaks):				36.5 RPD = 185*
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1232	1	6.060	-0.001	2318537	233.3	1	6.163	-0.002	909531	229.5
Aroclor-1232	2	6.467	-0.002	9438131	310.3	2	6.800	-0.001	2390530	302.2
Aroclor-1232	3	7.441	0.000	9852880	623.2	3	7.010	-0.001	586053	177.7
Aroclor-1232	4	7.874	0.000	12549915	691.0	4	8.238	-0.001	1898417	685.7
	Total Col1Ave (4 peaks):				464.4	Total Col2Ave (4 peaks):				348.8 RPD = 28
	Corrected Ave (3 peaks):				388.9	Corrected Ave (3 peaks):				236.4 RPD = 49*
Aroclor-1242	1	6.060	0.000	2318537	120.0	1	6.163	-0.004	909531	129.3
Aroclor-1242	2	6.467	-0.001	9438131	159.3	2	6.800	-0.003	2390530	154.7
Aroclor-1242	3	6.619	0.003	3851669	145.7	3	7.010	-0.001	586053	90.8
Aroclor-1242	4	7.874	0.001	12549915	384.3	4	8.238	-0.001	1898417	351.0
	Total Col1Ave (4 peaks):				202.3	Total Col2Ave (4 peaks):				181.4 RPD = 11
	Corrected Ave (3 peaks):				141.6	Corrected Ave (3 peaks):				124.9 RPD = 13
Aroclor-1248	1	6.467	0.000	9438131	250.0	1	6.800	0.000	2390530	247.1
Aroclor-1248	2	7.441	-0.001	9852880	232.0	2	7.705	-0.001	1901637	237.0
Aroclor-1248	3	7.874	-0.001	12549915	232.4	3	8.238	-0.001	1898417	228.5
Aroclor-1248	4	8.110	0.000	8659425	230.0	4	8.584	0.000	2478354	229.6
	Total Col1Ave (4 peaks):				236.1	Total Col2Ave (4 peaks):				235.5 RPD = 0
	Corrected Ave (3 peaks):				231.8	Corrected Ave (3 peaks):				231.7 RPD = 0
Aroclor-1254	1	8.190	-0.003	6700207	133.9	1	8.298	0.000	911407	121.7
Aroclor-1254	2	8.563	0.000	4108008	124.4	2	8.476	0.001	848875	91.8
Aroclor-1254	3	8.700	0.000	7416000	107.7	3	8.996	0.000	845277	119.3
Aroclor-1254	4	9.057	0.005	6343972	89.5	4	9.147	0.000	1366372	90.0
Aroclor-1254	5	9.362	0.000	724814	27.0	5	9.929	-0.006	923605	108.1
	Total Col1Ave (5 peaks):				96.5	Total Col2Ave (5 peaks):				106.2 RPD = 10
	Corrected Ave (4 peaks):				87.1	Corrected Ave (4 peaks):				102.3 RPD = 16
Aroclor-1260	1	9.965	-0.002	449508	9.0	1	10.261	0.001	42393	4.3
Aroclor-1260	2	10.283	0.000	290261	5.9	2	10.705	-0.004	108079	9.3
Aroclor-1260	3	10.658	-0.001	538597	4.6	3	10.986	0.001	81136	3.8
Aroclor-1260	4	11.058	0.000	190563	3.3	4	11.505	0.000	34540	5.9
Aroclor-1260	5	11.248	0.001	168155	5.5	NS	---			----
	Total Col1Ave (5 peaks):				5.7	Total Col2Ave (4 peaks):				5.8 RPD = 3
	Corrected Ave (4 peaks):				4.8	Corrected Ave (3 peaks):				4.7 RPD = 3
Aroclor-1262	1	10.283	0.000	290261	5.1	1	10.261	0.001	42393	2.8
Aroclor-1262	2	10.658	0.000	538597	4.0	2	10.705	-0.005	108079	7.8
Aroclor-1262	3	11.058	-0.002	190563	4.5	3	10.986	0.000	81136	3.1
Aroclor-1262	4	11.248	0.000	168155	2.8	4	11.567	0.000	56086	3.3
Aroclor-1262	5	11.919	0.001	152715	3.4	5	12.341	0.035	50555	6.2
	Total Col1Ave (5 peaks):				4.0	Total Col2Ave (5 peaks):				4.6 RPD = 16
	Corrected Ave (4 peaks):				3.7	Corrected Ave (4 peaks):				3.9 RPD = 5
Aroclor-1268	1	11.173	-0.002	164171	1.3	1	11.505	-0.001	34540	1.3

Aroclor-1268	2	11.248	0.002	168155	1.2	2	11.567	-0.006	56086	2.3
Aroclor-1268	3	11.641	0.008	89736	0.9	3	---			0.0
Aroclor-1268	4	12.419	-0.002	102180	0.3	4	12.793	0.001	11794	0.2

Total Col1Ave (4 peaks): 0.9 Total Col2Ave (3 peaks): 1.3 RPD = 31

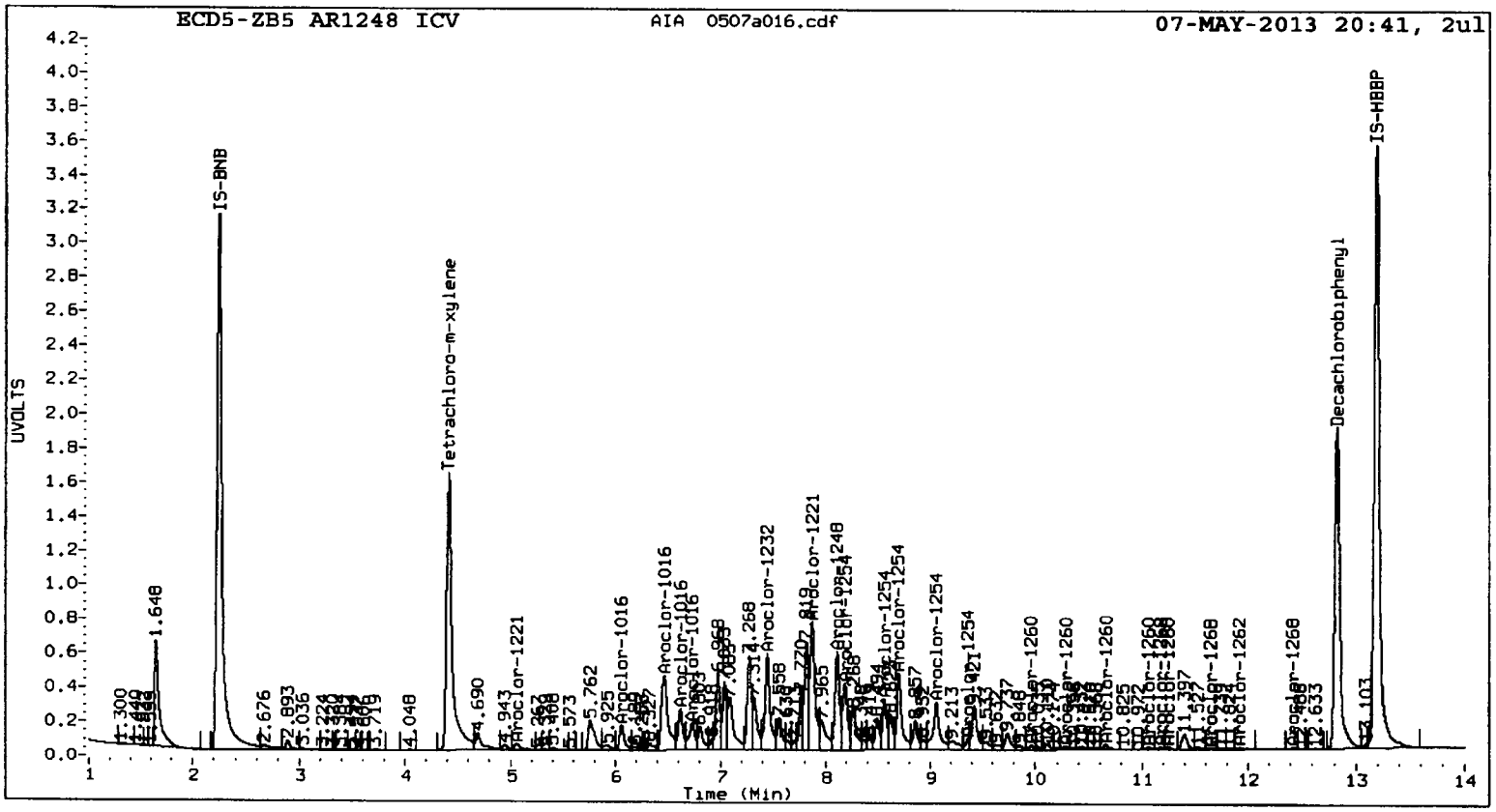
Corrected Ave (3 peaks): 0.8 Corrected Ave: < 3 Peaks

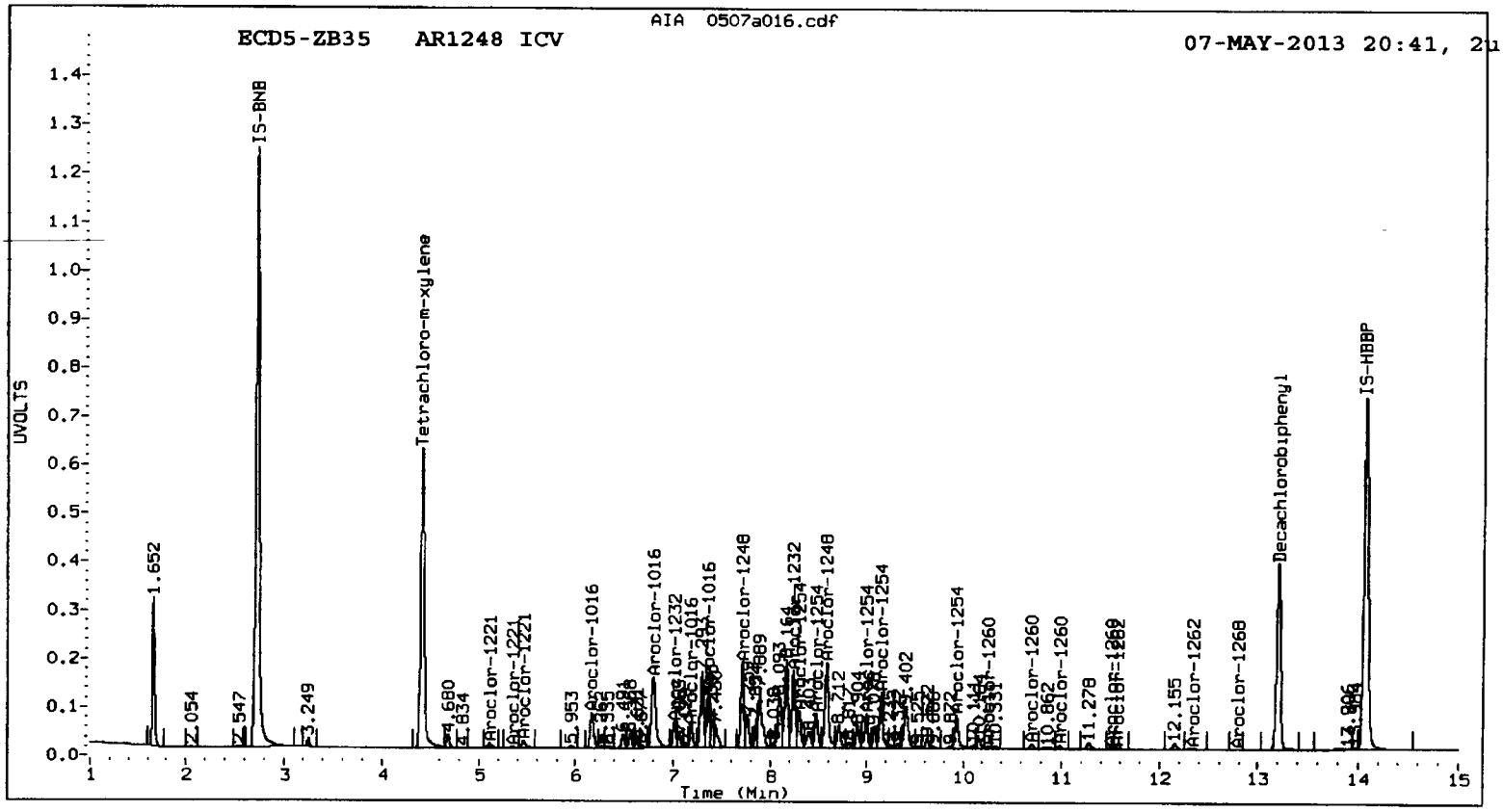
Total PCB Area Col1 (4.511 - 12.728) = 167287666 Col1 Total PCB = 0.3 ppm*

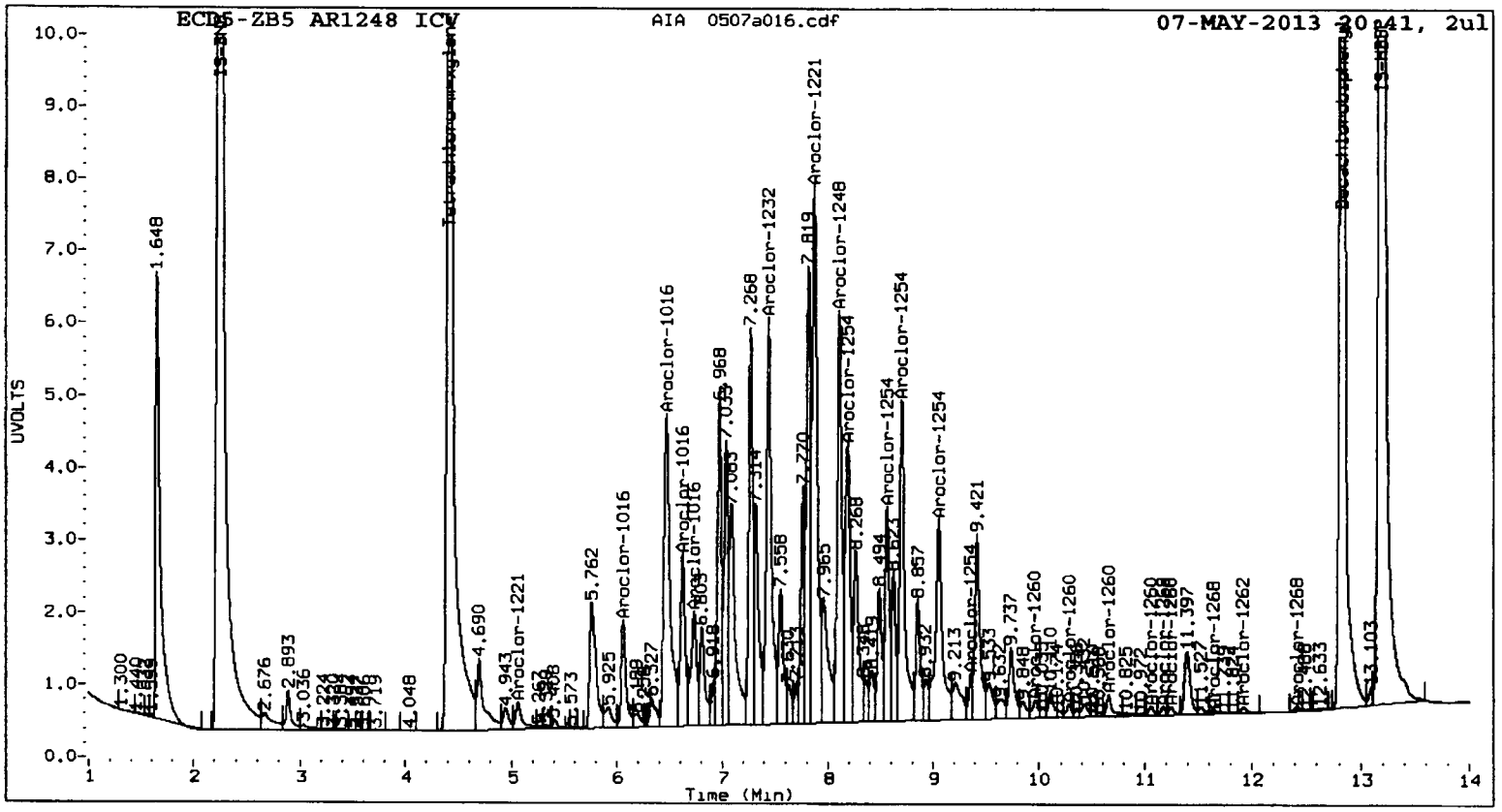
Total PCB Area Col2 (4.512 - 13.105) = 33824743 Col2 Total PCB = 0.2 ppm*

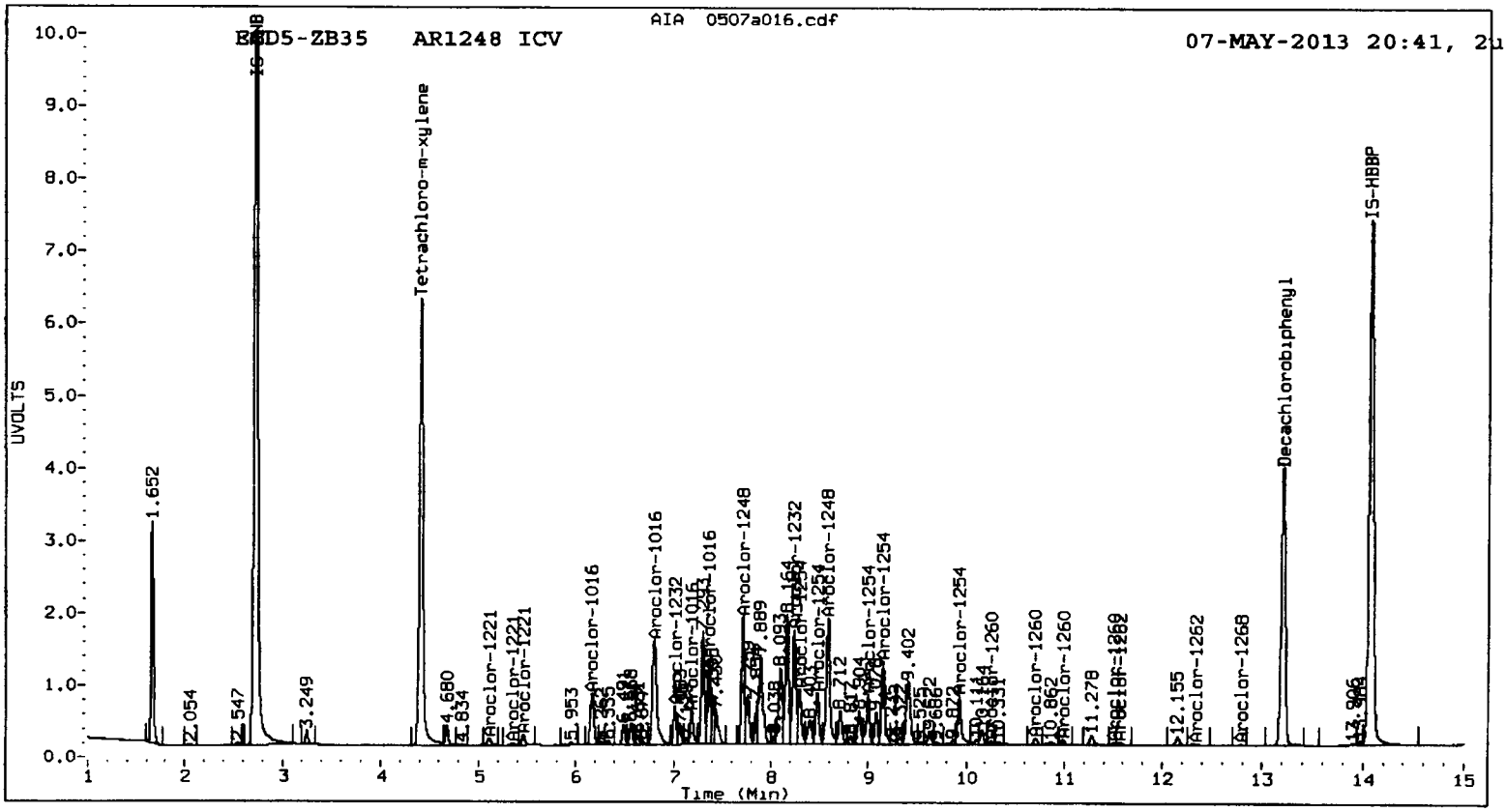
* Quantitated against AR1660 0.25ppm in Ical

WS91.01302


ECD5-ZB5 AR1248 ICV
AIA 0507a016.cdf
07-MAY-2013 20:41, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.648
4.690
12.633
13.103


ECD5-ZB35 AR1248 ICV
AIA 0507a016.cdf
07-MAY-2013 20:41, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.652
4.680
12.155
13.906


ECD5-ZB5 AR1248 ICV
AIA 0507a016.cdf
07-MAY-2013 20:41, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB35 AR1248 ICV
AIA 0507a016.cdf
07-MAY-2013 20:41, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a017.d
Data file 2: 20130507.b/ical-2.b/0507a017.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254 ICV
Client ID:
Injection Date: 07-MAY-2013 21:01
Ical Date: 07-MAY-2013
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
4.410	-0.001	31249884	4.411	0.000	8016298	37.6	38.6	2.7	Tetrachloro-m-xylen
12.828	0.000	30201361	13.205	-0.001	5162177	34.7	34.1	1.8	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	93.9	96.5
Decachlorobiphenyl	86.9	85.3

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	53642771	9.5
Hexabromobiphenyl	50004151	58188446	16.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15360402	3.5
Hexabromobiphenyl	9345340	10510294	12.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.061	0.001	74537	3.1	1	6.163	-0.003	28483	3.2
Aroclor-1016	2	6.462	-0.007	337320	4.5	2	6.793	-0.007	84978	4.5
Aroclor-1016	3	6.623	0.006	206176	6.2	3	7.187	0.001	11814	2.4
Aroclor-1016	4	6.730	0.002	85227	3.4	4	7.357	-0.001	459146	98.9
	Total Col1Ave (4 peaks):				4.3	Total Col2Ave (4 peaks):			27.3	RPD = 145*
	Corrected Ave (3 peaks):				3.7	Corrected Ave (3 peaks):			3.4	RPD = 9
Aroclor-1221	1	5.059	-0.005	147002	6.7	1	---			0.0
Aroclor-1221	2	6.462	-0.007	337320	50.4	2	5.111	0.016	103036	39.1
Aroclor-1221	3	7.878	0.000	10714695	1134.7	3	---			0.0
Aroclor-1221	NS	---			----	4	5.465	0.004	27897	6.2
	Total Col1Ave (3 peaks):				397.3	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	6.061	0.001	74537	7.5	1	6.163	-0.002	28483	7.2
Aroclor-1232	2	6.462	-0.008	337320	11.1	2	6.793	-0.008	84978	10.8
Aroclor-1232	3	7.442	0.001	1732024	109.6	3	7.010	-0.001	15916	4.9
Aroclor-1232	4	7.878	0.004	10714695	590.0	4	8.237	-0.001	361750	131.4
	Total Col1Ave (4 peaks):				179.5	Total Col2Ave (4 peaks):			38.6	RPD = 129*
	Corrected Ave (3 peaks):				42.7	Corrected Ave (3 peaks):			7.6	RPD = 139*
Aroclor-1242	1	6.061	0.002	74537	3.9	1	6.163	-0.004	28483	4.1
Aroclor-1242	2	6.462	-0.006	337320	5.7	2	6.793	-0.010	84978	5.5
Aroclor-1242	3	6.623	0.006	206176	7.8	3	7.010	-0.001	15916	2.5
Aroclor-1242	4	7.878	0.006	10714695	328.2	4	8.237	-0.002	361750	67.2
	Total Col1Ave (4 peaks):				86.4	Total Col2Ave (4 peaks):			19.8	RPD = 125*
	Corrected Ave (3 peaks):				5.8	Corrected Ave (3 peaks):			4.0	RPD = 36
Aroclor-1248	1	6.462	-0.005	337320	8.9	1	6.793	-0.007	84978	8.8
Aroclor-1248	2	7.442	0.000	1732024	40.8	2	7.705	-0.001	756815	94.8
Aroclor-1248	3	7.878	0.004	10714695	198.5	3	8.237	-0.001	361750	43.8
Aroclor-1248	4	8.113	0.003	3375422	89.7	4	8.569	-0.015	1382582	128.7
	Total Col1Ave (4 peaks):				84.5	Total Col2Ave (4 peaks):			69.0	RPD = 20
	Corrected Ave (3 peaks):				46.5	Corrected Ave (3 peaks):			49.1	RPD = 6
Aroclor-1254	1	8.192	0.000	14171059	283.3	1	8.299	0.001	2103454	282.4
Aroclor-1254	2	8.563	0.000	9711755	294.1	2	8.475	0.000	2629736	285.8
Aroclor-1254	3	8.700	0.000	19370984	281.4	3	8.996	0.000	2093024	297.0
Aroclor-1254	4	9.054	0.002	20541352	289.7	4	9.148	0.001	4267118	282.7
Aroclor-1254	5	9.362	0.000	7016935	261.7	5	9.933	-0.001	2526495	297.2
	Total Col1Ave (5 peaks):				282.0	Total Col2Ave (5 peaks):			289.0	RPD = 2
	Corrected Ave (4 peaks):				279.0	Corrected Ave (4 peaks):			287.0	RPD = 3
Aroclor-1260	1	9.964	-0.003	1762734	37.0	1	10.260	0.000	214372	22.5
Aroclor-1260	2	10.284	0.000	1461583	30.9	2	10.704	-0.005	1157323	103.6
Aroclor-1260	3	10.658	-0.001	2962044	26.1	3	10.985	0.000	606704	29.4
Aroclor-1260	4	11.057	0.000	2253674	40.8	4	11.506	0.001	77148	13.8
Aroclor-1260	5	11.247	0.000	227786	7.7	NS	---			----
	Total Col1Ave (5 peaks):				28.5	Total Col2Ave (4 peaks):			42.3	RPD = 39
	Corrected Ave (4 peaks):				25.4	Corrected Ave (3 peaks):			21.9	RPD = 15
Aroclor-1262	1	10.284	0.001	1461583	26.8	1	10.260	0.000	214372	14.7
Aroclor-1262	2	10.658	0.000	2962044	23.1	2	10.704	-0.006	1157323	87.1
Aroclor-1262	3	11.057	-0.002	2253674	55.6	3	10.985	0.000	606704	24.3
Aroclor-1262	4	11.247	0.000	227786	4.0	4	11.563	-0.004	395081	24.4
Aroclor-1262	5	11.918	0.000	149251	3.4	5	12.340	0.034	39786	5.1
	Total Col1Ave (5 peaks):				22.6	Total Col2Ave (5 peaks):			31.1	RPD = 32
	Corrected Ave (4 peaks):				14.3	Corrected Ave (4 peaks):			17.1	RPD = 18
Aroclor-1268	1	11.171	-0.004	198308	1.6	1	11.506	0.000	77148	3.0
Aroclor-1268	2	11.247	0.001	227786	1.7	2	11.563	-0.010	395081	16.5

Aroclor-1268 3	11.643	0.011	109759	1.1	3	---	0.0
Aroclor-1268 4	12.420	-0.002	62105	0.2	4	---	0.0
Total Col1Ave (4 peaks):				1.2	Col2Ave: <3 Quant Peaks		

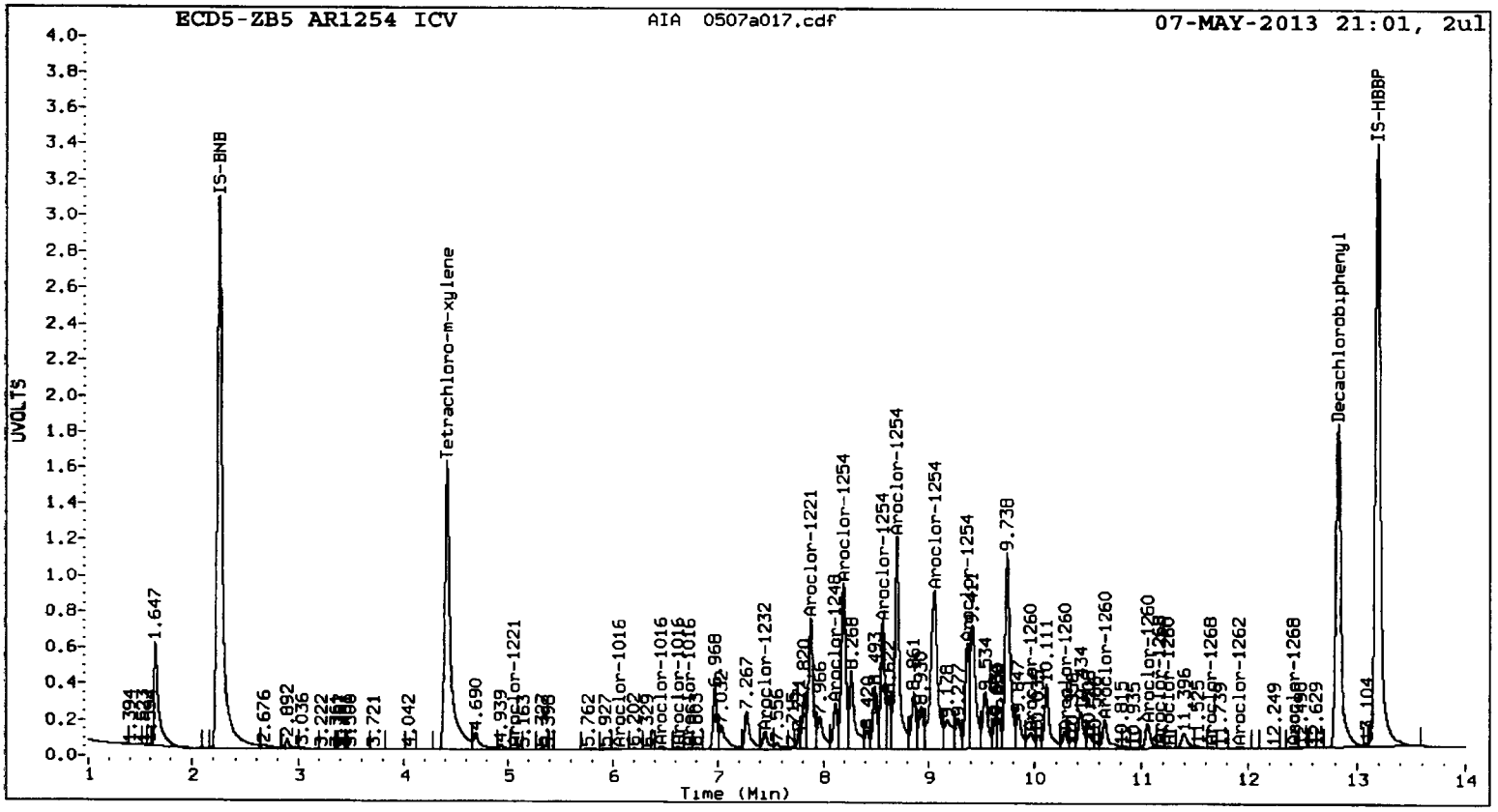
Total PCB Area Col1 (4.511 - 12.728) = 211898856 Col1 Total PCB = 0.3 ppm*

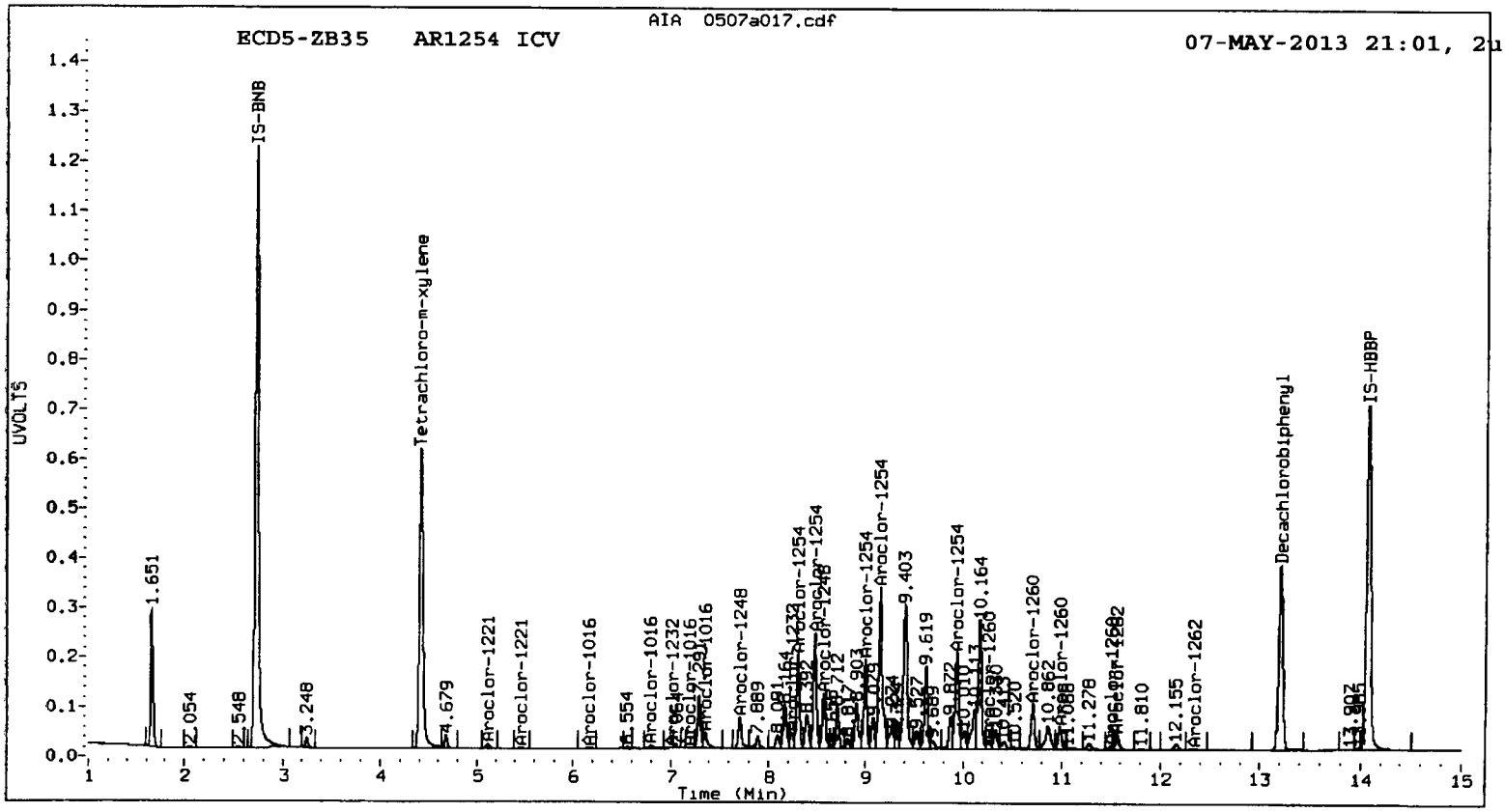
Total PCB Area Col2 (4.512 - 13.105) = 42309153 Col2 Total PCB = 0.3 ppm*

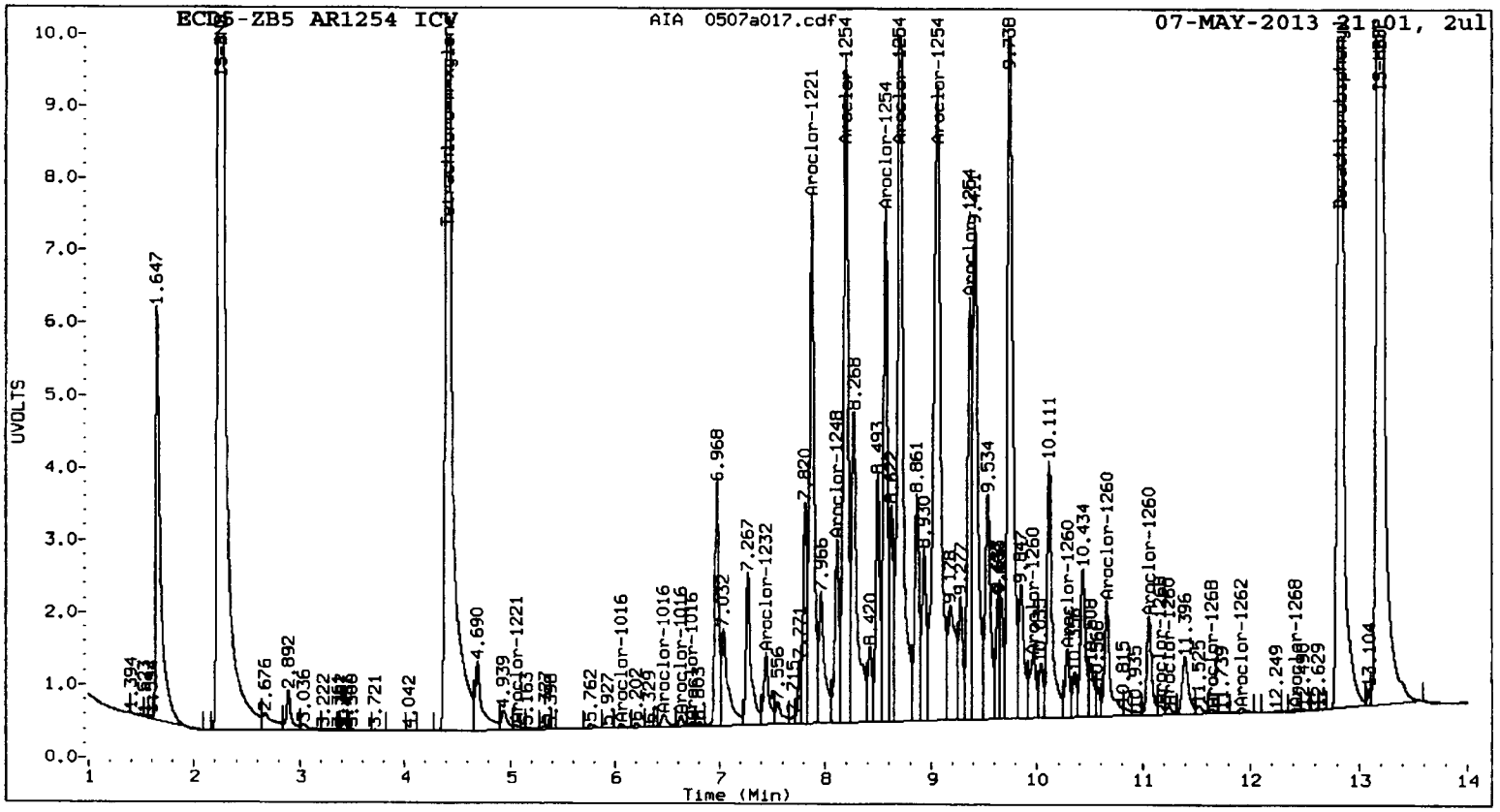
* Quantitated against AR1660 0.25ppm in Ical

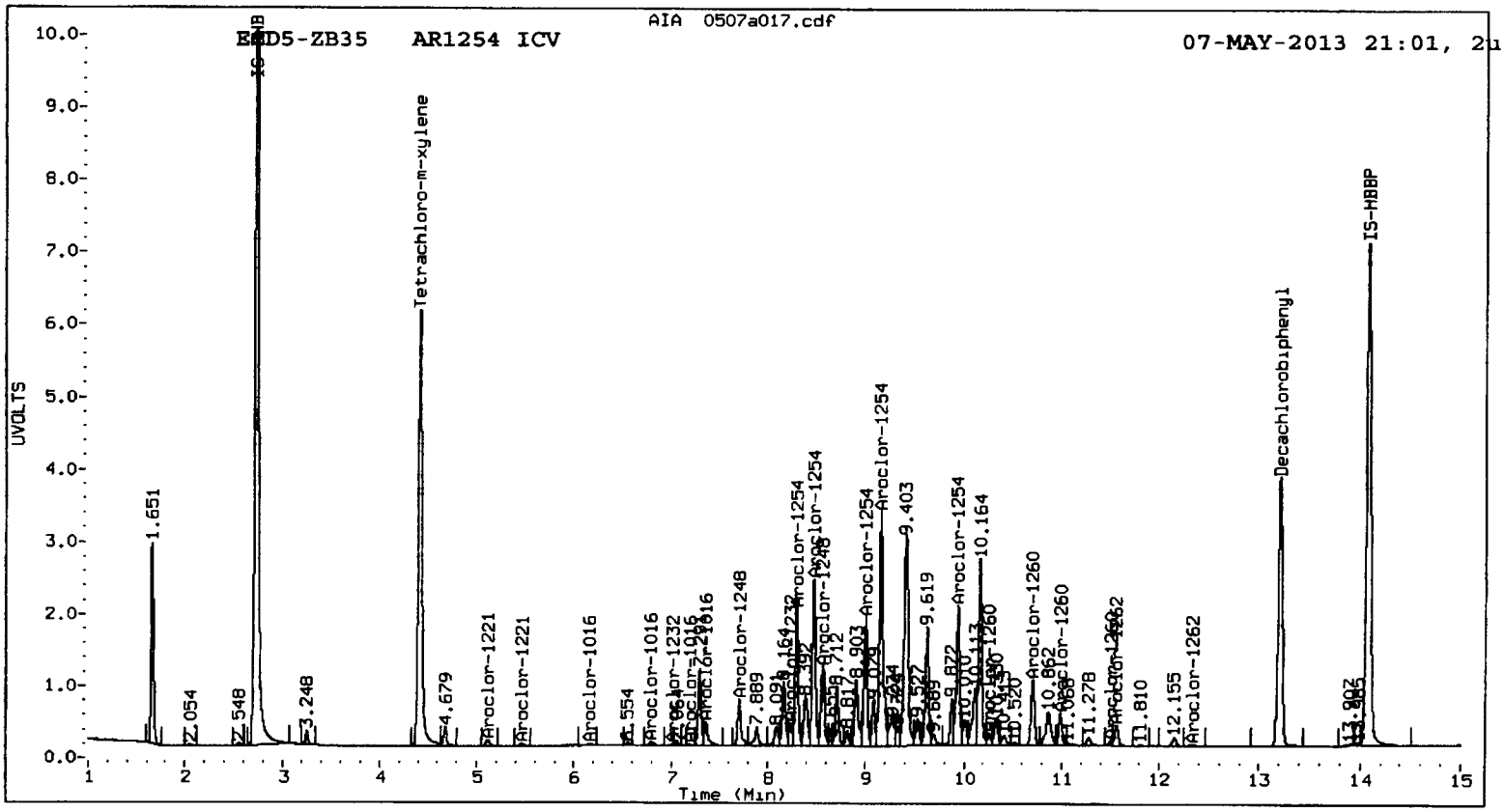
PCB-Form 10 Mod.

WS91 : 91397


ECD5-ZB5 AR1254 ICV
AIA 0507a017.cdf
07-MAY-2013 21:01, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1232
Aroclor-1016
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


AIA 0507a017.cdf
ECD5-ZB35 AR1254 ICV
07-MAY-2013 21:01, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1232
Aroclor-1016
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262


ECD5-ZB5 AR1254 ICV
AIA 0507a017.cdf
07-MAY-2013 21:01, 2ul
UVOLTS
Time (Min)
1.647
4.690
6.968
7.267
Aroclor-1232
Aroclor-1221
Aroclor-1254
Aroclor-1260
Decachlorobiphenyl


AIA 0507a017.cdf
ECD5-ZB35 AR1254 ICV
07-MAY-2013 21:01, 2u
UVOLTS
Time (Min)
1.651
4.679
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1254
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a018.d
Data file 2: 20130507.b/ical-2.b/0507a018.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 ICV
Client ID:
Injection Date: 07-MAY-2013 21:21
Ical Date: 07-MAY-2013
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
4.410	0.000	31767638	4.411	0.000	8077710	37.7	38.5	2.1	Tetrachloro-m-xylen
12.827	-0.001	30552007	13.205	0.000	5210574	34.7	34.1	1.7	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	94.2	96.2
Decachlorobiphenyl	86.8	85.3

M 05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54355833	11.0
Hexabromobiphenyl	50004151	58930522	17.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15522820	4.6
Hexabromobiphenyl	9345340	10608758	13.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.060	0.000	5710646	233.1	1	6.166	0.000	2083969	235.3
Aroclor-1016	2	6.468	0.000	17399600	230.5	2	6.800	0.000	4481969	232.8
Aroclor-1016	3	6.618	0.001	7785800	230.3	3	7.185	0.000	1171797	232.7
Aroclor-1016	4	6.729	0.001	5827980	230.7	4	7.357	-0.001	1070181	228.2
	Total Col1Ave (4 peaks):				231.1		Total Col2Ave (4 peaks):			232.2 RPD = 0
	Corrected Ave (3 peaks):				230.5		Corrected Ave (3 peaks):			231.2 RPD = 0
Aroclor-1221	1	5.063	0.000	4136002	186.8	1	3.696	0.001	11910	7.5
Aroclor-1221	2	6.468	0.000	17399600	2568.0	2	5.100	0.006	292561	109.8
Aroclor-1221	3	7.878	0.000	5153861	538.7	3	5.347	0.002	209236	144.2
Aroclor-1221	NS	---			----	4	5.461	0.001	1022087	224.0
	Total Col1Ave (3 peaks):				1097.8		Total Col2Ave (4 peaks):			121.4 RPD = 160*
	Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			87.2
Aroclor-1232	1	6.060	0.000	5710646	567.2	1	6.166	0.000	2083969	523.1
Aroclor-1232	2	6.468	-0.001	17399600	564.6	2	6.800	-0.001	4481969	563.6
Aroclor-1232	3	7.442	0.000	8239430	514.4	3	7.010	-0.001	1862855	561.7
Aroclor-1232	4	7.878	0.004	5153861	280.1	4	8.237	-0.002	198387	71.3
	Total Col1Ave (4 peaks):				481.6		Total Col2Ave (4 peaks):			429.9 RPD = 11
	Corrected Ave (3 peaks):				453.0		Corrected Ave (3 peaks):			385.4 RPD = 16
Aroclor-1242	1	6.060	0.001	5710646	291.7	1	6.166	-0.002	2083969	294.7
Aroclor-1242	2	6.468	0.000	17399600	289.8	2	6.800	-0.002	4481969	288.5
Aroclor-1242	3	6.618	0.001	7785800	290.6	3	7.010	-0.001	1862855	287.0
Aroclor-1242	4	7.878	0.006	5153861	155.8	4	8.237	-0.002	198387	36.5
	Total Col1Ave (4 peaks):				257.0		Total Col2Ave (4 peaks):			226.7 RPD = 13
	Corrected Ave (3 peaks):				245.4		Corrected Ave (3 peaks):			204.0 RPD = 18
Aroclor-1248	1	6.468	0.001	17399600	454.8	1	6.800	0.001	4481969	460.8
Aroclor-1248	2	7.442	0.000	8239430	191.5	2	7.705	-0.001	1494414	185.3
Aroclor-1248	3	7.878	0.004	5153861	94.2	3	8.237	-0.002	198387	23.8
Aroclor-1248	4	8.113	0.003	956546	25.1	4	8.584	0.000	77790	7.2
	Total Col1Ave (4 peaks):				191.4		Total Col2Ave (4 peaks):			169.2 RPD = 12
	Corrected Ave (3 peaks):				103.6		Corrected Ave (3 peaks):			72.1 RPD = 36
Aroclor-1254	1	8.194	0.002	5604593	110.6	1	8.299	0.000	888811	118.1
Aroclor-1254	2	8.563	0.000	760107	22.7	2	8.475	0.000	906791	97.5
Aroclor-1254	3	8.696	-0.004	2725232	39.1	3	8.997	0.001	149462	21.0
Aroclor-1254	4	9.029	-0.024	14910986	207.5	4	9.187	0.040	2306321	151.2
Aroclor-1254	5	9.361	-0.001	20865390	767.9	5	9.939	0.004	1000144	116.4
	Total Col1Ave (5 peaks):				229.6		Total Col2Ave (5 peaks):			100.8 RPD = 78*
	Corrected Ave (4 peaks):				95.0		Corrected Ave (4 peaks):			88.3 RPD = 7
Aroclor-1260	1	9.967	0.000	12336540	255.6	1	10.261	0.001	2515434	261.4
Aroclor-1260	2	10.283	-0.001	11792031	246.4	2	10.710	0.001	2780218	246.7
Aroclor-1260	3	10.659	-0.001	28793615	250.9	3	10.986	0.001	5491310	263.9
Aroclor-1260	4	11.059	0.001	13292663	237.8	4	11.506	0.001	1529990	271.2
Aroclor-1260	5	11.247	0.000	8346657	279.1	NS	---			----
	Total Col1Ave (5 peaks):				254.0		Total Col2Ave (4 peaks):			260.8 RPD = 3
	Corrected Ave (4 peaks):				247.7		Corrected Ave (3 peaks):			257.3 RPD = 4
Aroclor-1262	1	10.283	0.000	11792031	213.7	1	10.261	0.001	2515434	171.4
Aroclor-1262	2	10.659	0.000	28793615	222.1	2	10.710	0.000	2780218	207.2
Aroclor-1262	3	11.059	-0.001	13292663	323.7	3	10.986	0.001	5491310	218.2
Aroclor-1262	4	11.247	0.000	8346657	144.8	4	11.565	-0.002	3586824	219.3
Aroclor-1262	5	11.918	0.000	7146896	161.6	5	12.307	0.001	1281460	162.3
	Total Col1Ave (5 peaks):				213.2		Total Col2Ave (5 peaks):			195.7 RPD = 9
	Corrected Ave (4 peaks):				185.5		Corrected Ave (4 peaks):			189.8 RPD = 2
Aroclor-1268	1	11.174	-0.001	6512368	52.5	1	11.506	-0.001	1529990	59.7

Aroclor-1268	2	11.247	0.001	8346657	60.9	2	11.565	-0.008	3586824	148.6
Aroclor-1268	3	11.648	0.015	3204605	31.5	3	11.967	-0.002	50714	2.7
Aroclor-1268	4	12.420	-0.001	1403153	4.9	4	12.792	0.000	228513	4.6

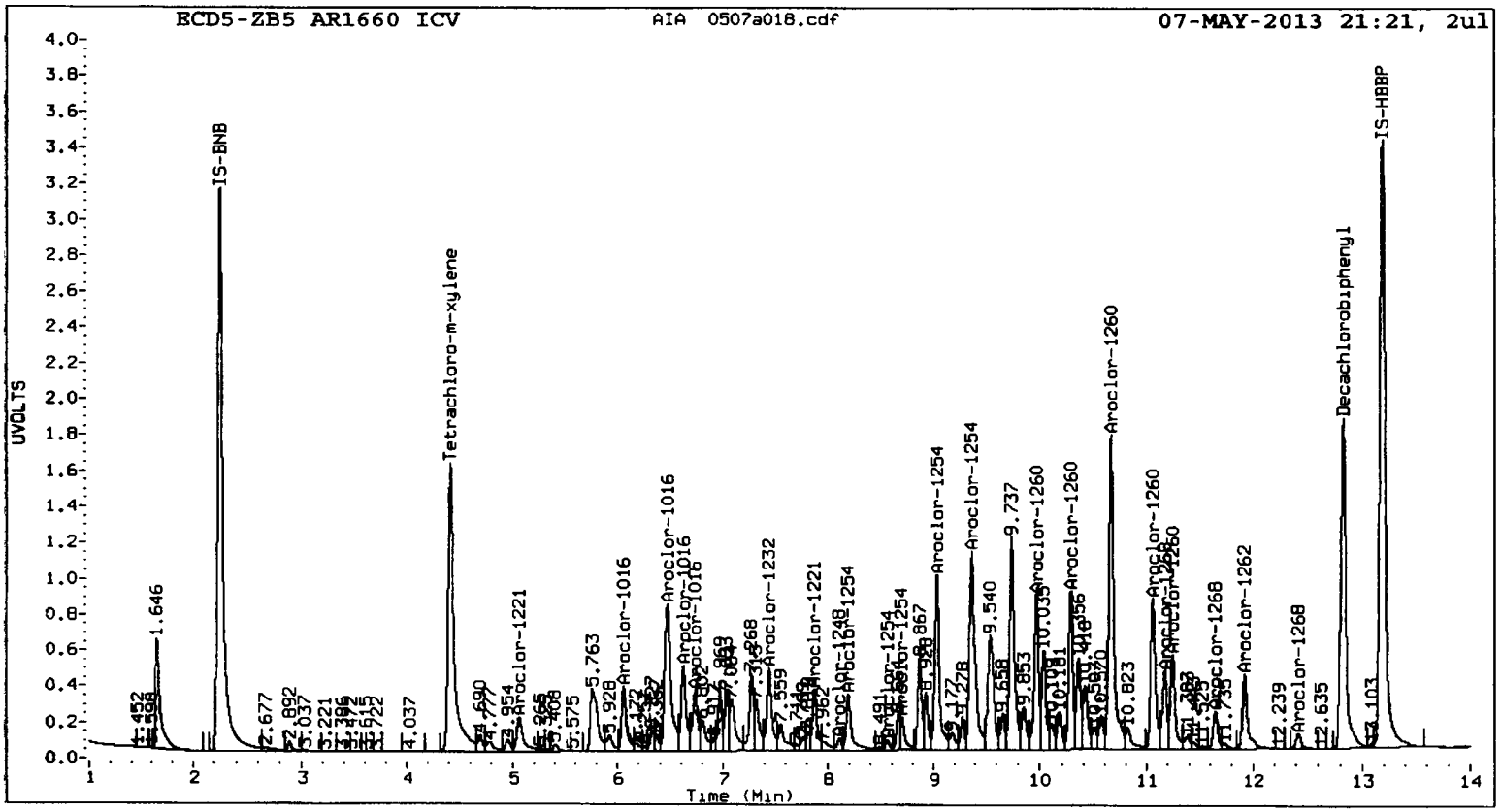
Total Col1Ave (4 peaks): 37.4 Total Col2Ave (4 peaks): 53.9 RPD = 36
Corrected Ave (3 peaks): 29.6 Corrected Ave (3 peaks): 22.3 RPD = 28

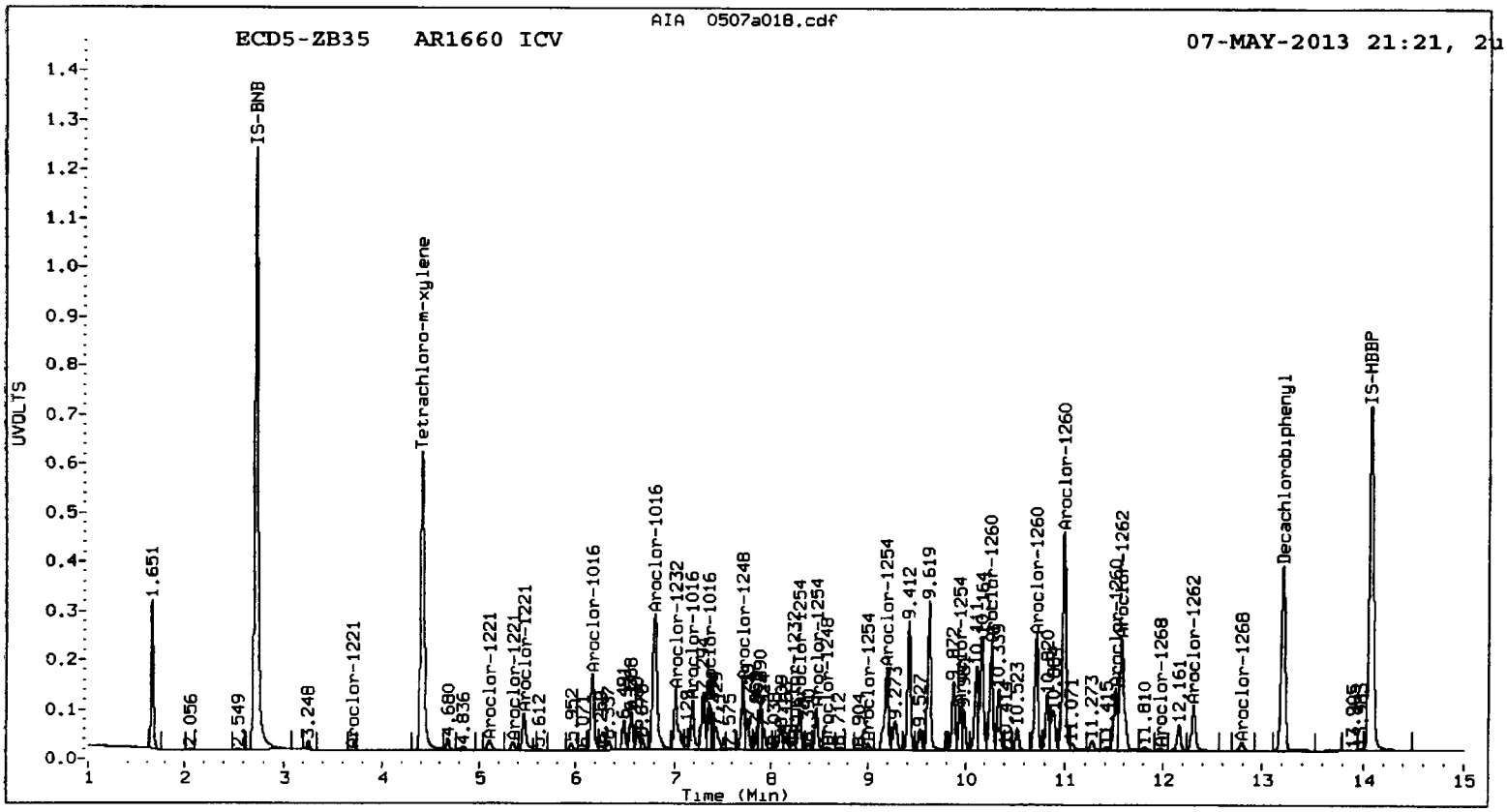
Total PCB Area Col1 (4.511 - 12.728) = 339033302 Col1 Total PCB = 0.5 ppm*

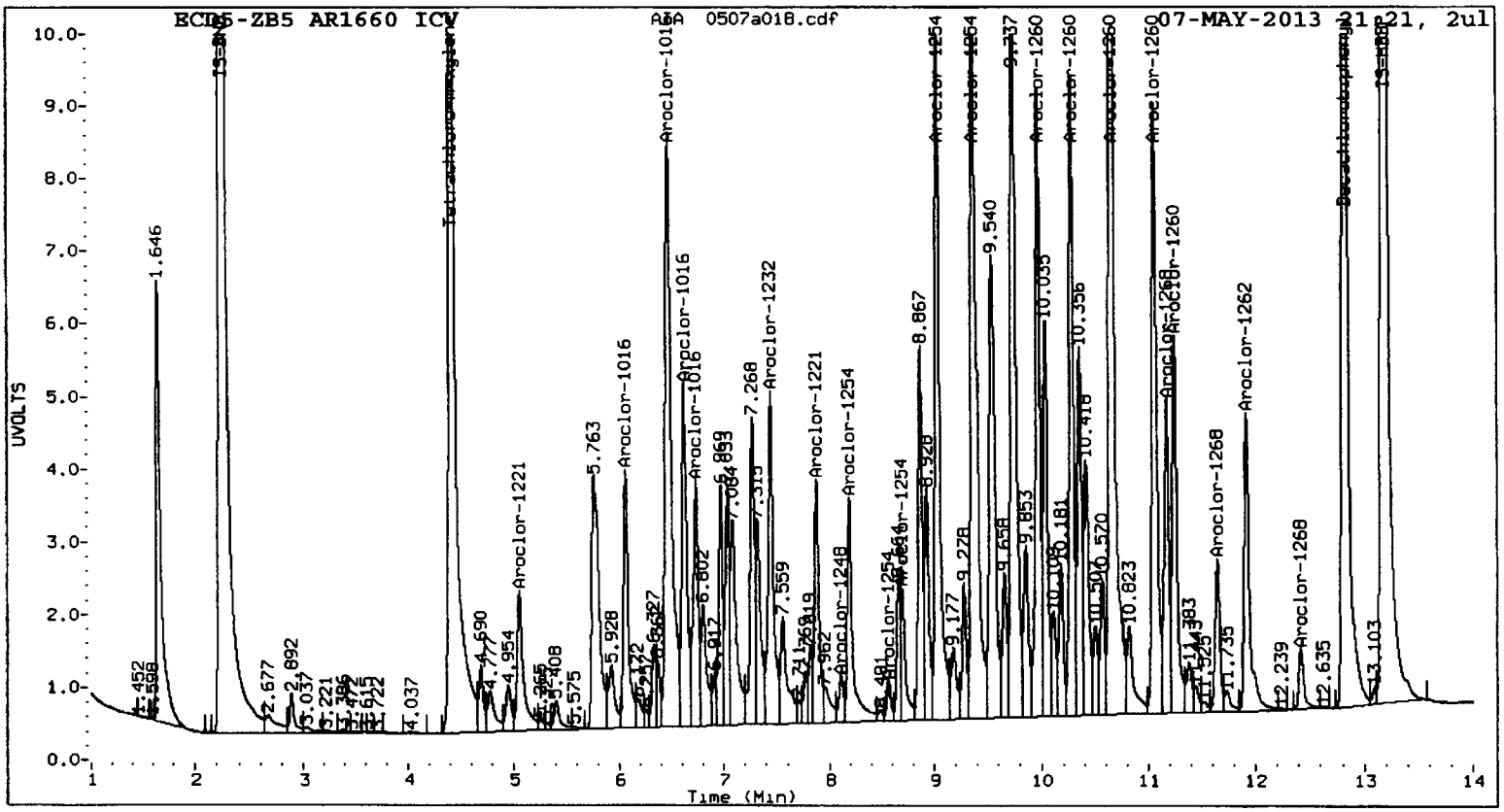
Total PCB Area Col2 (4.512 - 13.105) = 67437339 Col2 Total PCB = 0.5 ppm*

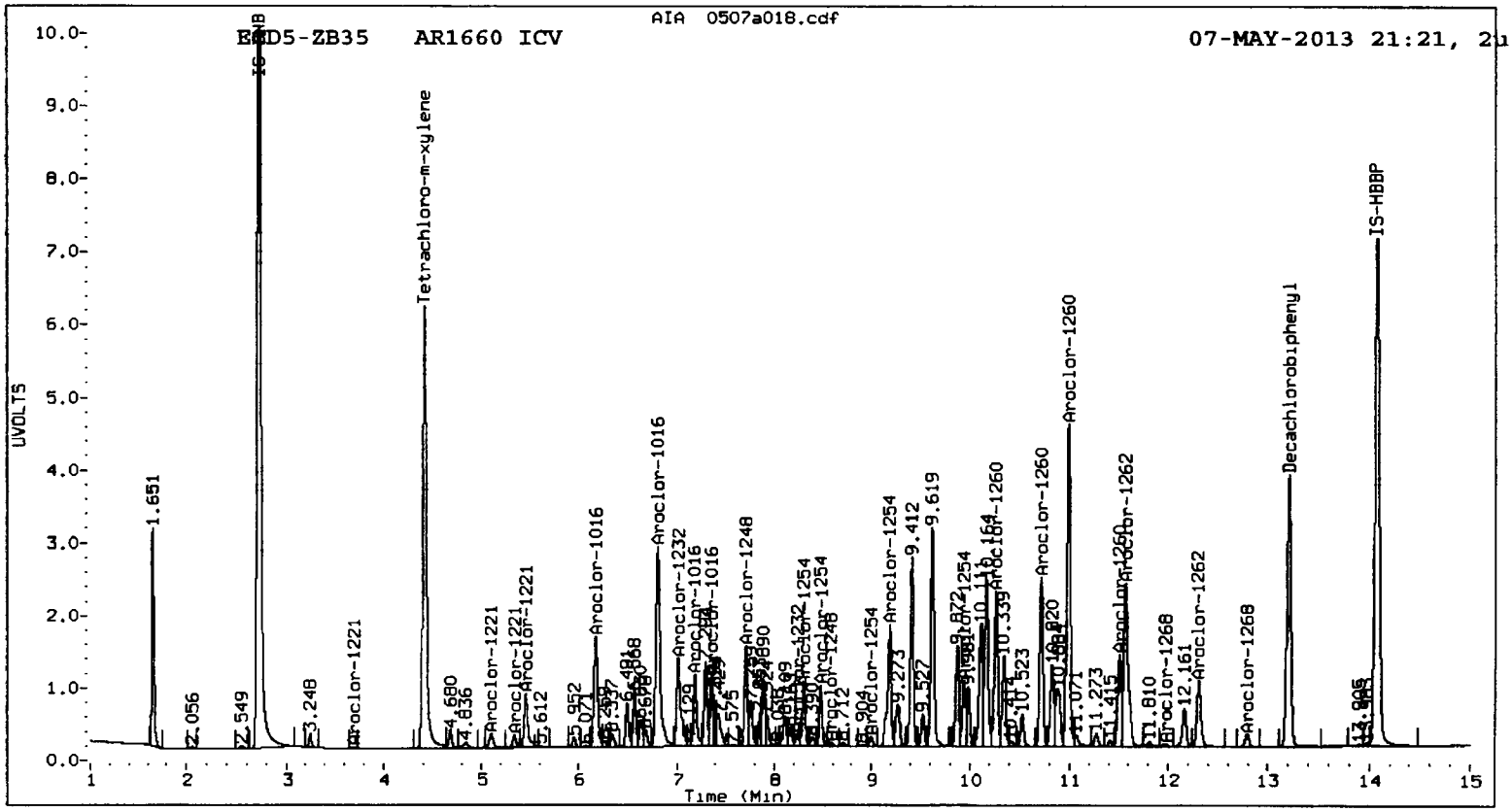
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 AR1660 ICV
AIA 0507a018.cdf
07-MAY-2013 21:21, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR1660 ICV
AIA 0507a018.cdf
07-MAY-2013 21:21, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 AR1660 ICV
AIA 0507a018.cdf
07-MAY-2013 21:21, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


AIA 0507a018.cdf
ECD5-ZB35 AR1660 ICV
07-MAY-2013 21:21, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a019.d
Data file 2: 20130507.b/ical-2.b/0507a019.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162 ICV
Client ID:
Injection Date: 07-MAY-2013 21:42
Ical Date: 07-MAY-2013
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
4.410	0.000	32723514	4.412	0.000	8175501	38.5	39.3	2.2	Tetrachloro-m-xylen
12.828	0.000	30887403	13.205	0.000	5217278	35.3	34.6	1.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

05/08/13

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.1	98.3
Decachlorobiphenyl	88.3	86.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54884040	12.1
Hexabromobiphenyl	50004151	58566252	17.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15378234	3.6
Hexabromobiphenyl	9345340	10470042	12.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.060	-0.001	613149	24.8	1	6.177	0.011	386723	44.1
Aroclor-1016	2	6.470	0.001	1448260	19.0	2	6.803	0.002	348544	18.3
Aroclor-1016	3	6.617	0.000	702982	20.6	3	7.186	0.001	92186	18.5
Aroclor-1016	4	6.729	0.001	468102	18.3	4	7.357	-0.001	67755	14.6
Total Col1Ave (4 peaks):					20.7	Total Col2Ave (4 peaks):				23.9 RPD = 14
Corrected Ave (3 peaks):					19.3	Corrected Ave (3 peaks):				17.1 RPD = 12
Aroclor-1221	1	5.064	0.000	5852175	261.7	1	3.696	0.002	409204	259.6
Aroclor-1221	2	6.470	0.002	1448260	211.7	2	5.095	0.001	683679	259.1
Aroclor-1221	3	7.878	0.000	2211598	228.9	3	5.346	0.001	375497	261.3
Aroclor-1221	NS	---			----	4	5.461	0.001	1172244	259.3
Total Col1Ave (3 peaks):					234.1	Total Col2Ave (4 peaks):				259.8 RPD = 10
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				259.3
Aroclor-1232	1	6.060	-0.001	613149	60.3	1	6.177	0.011	386723	98.0
Aroclor-1232	2	6.470	0.001	1448260	46.5	2	6.803	0.002	348544	44.2
Aroclor-1232	3	7.441	0.000	391114	24.2	3	7.011	0.000	157577	48.0
Aroclor-1232	4	7.878	0.004	2211598	119.0	4	8.239	0.001	57476	20.8
Total Col1Ave (4 peaks):					62.5	Total Col2Ave (4 peaks):				52.8 RPD = 17
Corrected Ave (3 peaks):					43.7	Corrected Ave (3 peaks):				37.7 RPD = 15
Aroclor-1242	1	6.060	0.000	613149	31.0	1	6.177	0.009	386723	55.2
Aroclor-1242	2	6.470	0.002	1448260	23.9	2	6.803	0.000	348544	22.6
Aroclor-1242	3	6.617	0.000	702982	26.0	3	7.011	0.000	157577	24.5
Aroclor-1242	4	7.878	0.005	2211598	66.2	4	8.239	0.000	57476	10.7
Total Col1Ave (4 peaks):					36.8	Total Col2Ave (4 peaks):				28.3 RPD = 26
Corrected Ave (3 peaks):					27.0	Corrected Ave (3 peaks):				19.3 RPD = 33
Aroclor-1248	1	6.470	0.003	1448260	37.5	1	6.803	0.003	348544	36.2
Aroclor-1248	2	7.441	-0.001	391114	9.0	2	7.705	-0.001	87992	11.0
Aroclor-1248	3	7.878	0.004	2211598	40.0	3	8.239	0.000	57476	6.9
Aroclor-1248	4	8.113	0.003	478072	12.4	4	8.578	-0.005	115261	10.7
Total Col1Ave (4 peaks):					24.7	Total Col2Ave (4 peaks):				16.2 RPD = 42*
Corrected Ave (3 peaks):					19.6	Corrected Ave (3 peaks):				9.6 RPD = 69*
Aroclor-1254	1	8.194	0.002	2387711	46.6	1	8.299	0.000	421166	56.5
Aroclor-1254	2	8.563	0.000	484981	14.4	2	8.475	0.000	484426	52.6
Aroclor-1254	3	8.663	-0.037	3505604	49.8	3	8.997	0.000	101058	14.3
Aroclor-1254	4	9.029	-0.024	12603810	173.7	4	9.186	0.040	2047860	135.5
Aroclor-1254	5	9.361	-0.001	15873155	578.6	5	9.939	0.004	484038	56.9
Total Col1Ave (5 peaks):					172.6	Total Col2Ave (5 peaks):				63.2 RPD = 93*
Corrected Ave (4 peaks):					71.1	Corrected Ave (4 peaks):				45.1 RPD = 45*
Aroclor-1260	1	9.967	0.000	17243313	359.5	1	10.261	0.001	3588073	377.8
Aroclor-1260	2	10.282	-0.001	14266396	299.9	2	10.711	0.002	3379274	303.8
Aroclor-1260	3	10.659	0.000	31833903	279.1	3	10.986	0.001	6071825	295.6
Aroclor-1260	4	11.059	0.002	10098810	181.8	4	11.507	0.002	2715788	487.8
Aroclor-1260	5	11.248	0.001	14639139	492.6	NS	---			----
Total Col1Ave (5 peaks):					322.6	Total Col2Ave (4 peaks):				366.3 RPD = 13
Corrected Ave (4 peaks):					280.1	Corrected Ave (3 peaks):				325.7 RPD = 15
Aroclor-1262	1	10.282	0.000	14266396	260.2	1	10.261	0.001	3588073	247.8
Aroclor-1262	2	10.659	0.000	31833903	247.1	2	10.711	0.001	3379274	255.2
Aroclor-1262	3	11.059	0.000	10098810	247.5	3	10.986	0.001	6071825	244.5
Aroclor-1262	4	11.248	0.000	14639139	255.6	4	11.569	0.002	4096791	253.8
Aroclor-1262	5	11.917	-0.001	11001330	250.3	5	12.308	0.002	1957515	251.1
Total Col1Ave (5 peaks):					252.1	Total Col2Ave (5 peaks):				250.5 RPD = 1
Corrected Ave (4 peaks):					250.1	Corrected Ave (4 peaks):				249.3 RPD = 0
Aroclor-1268	1	11.173	-0.002	12852069	104.3	1	11.507	0.000	2715788	107.5

Aroclor-1268	2	11.248	0.002	14639139	107.4	2	11.569	-0.004	4096791	172.0
Aroclor-1268	3	11.648	0.016	5026777	49.7	3	11.970	0.001	170870	9.1
Aroclor-1268	4	12.421	0.000	3714076	13.0	4	12.792	0.000	626393	12.8

Total Col1Ave (4 peaks): 68.6 Total Col2Ave (4 peaks): 75.3 RPD = 9

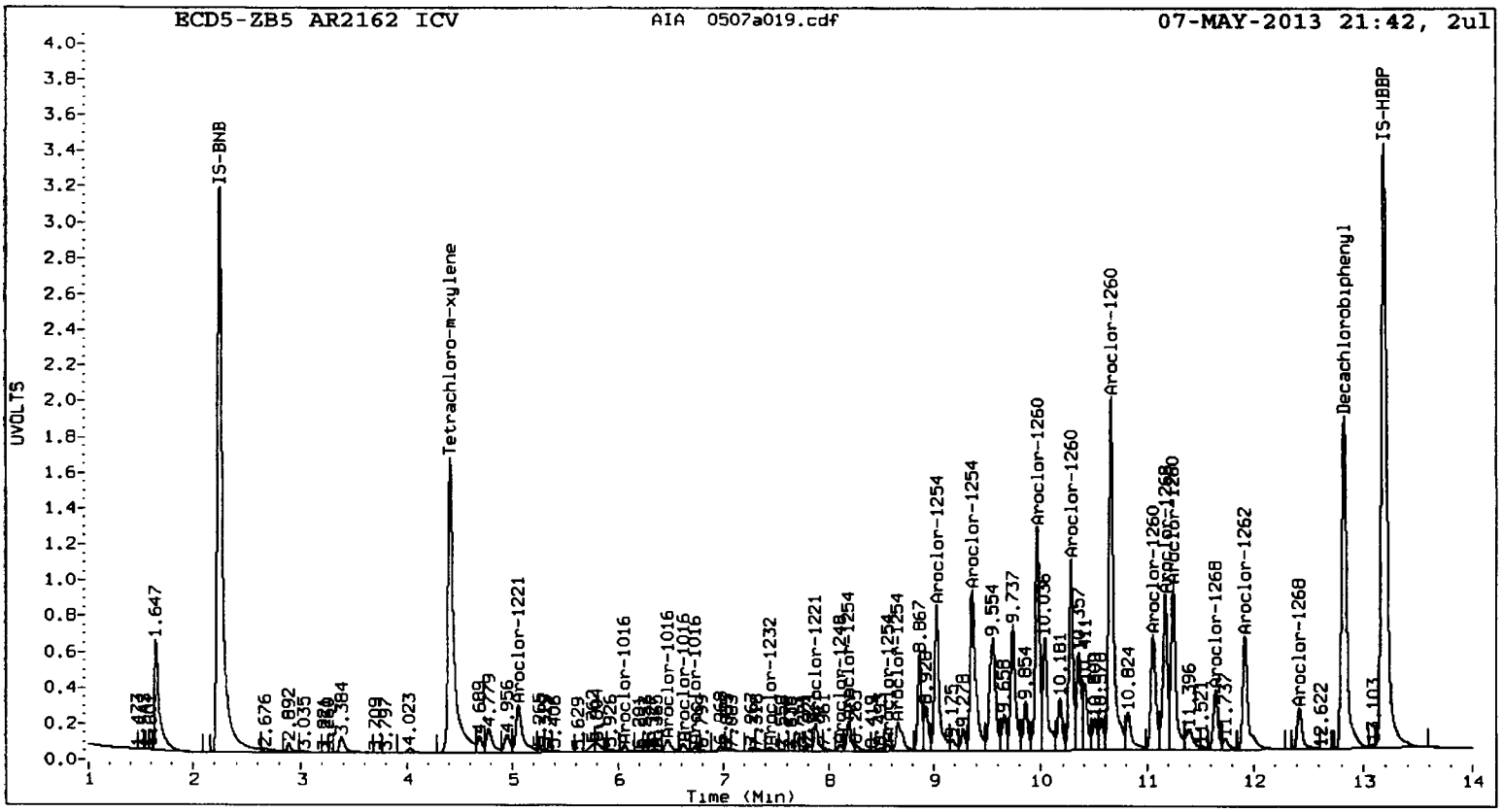
Corrected Ave (3 peaks): 55.7 Corrected Ave (3 peaks): 43.1 RPD = 25

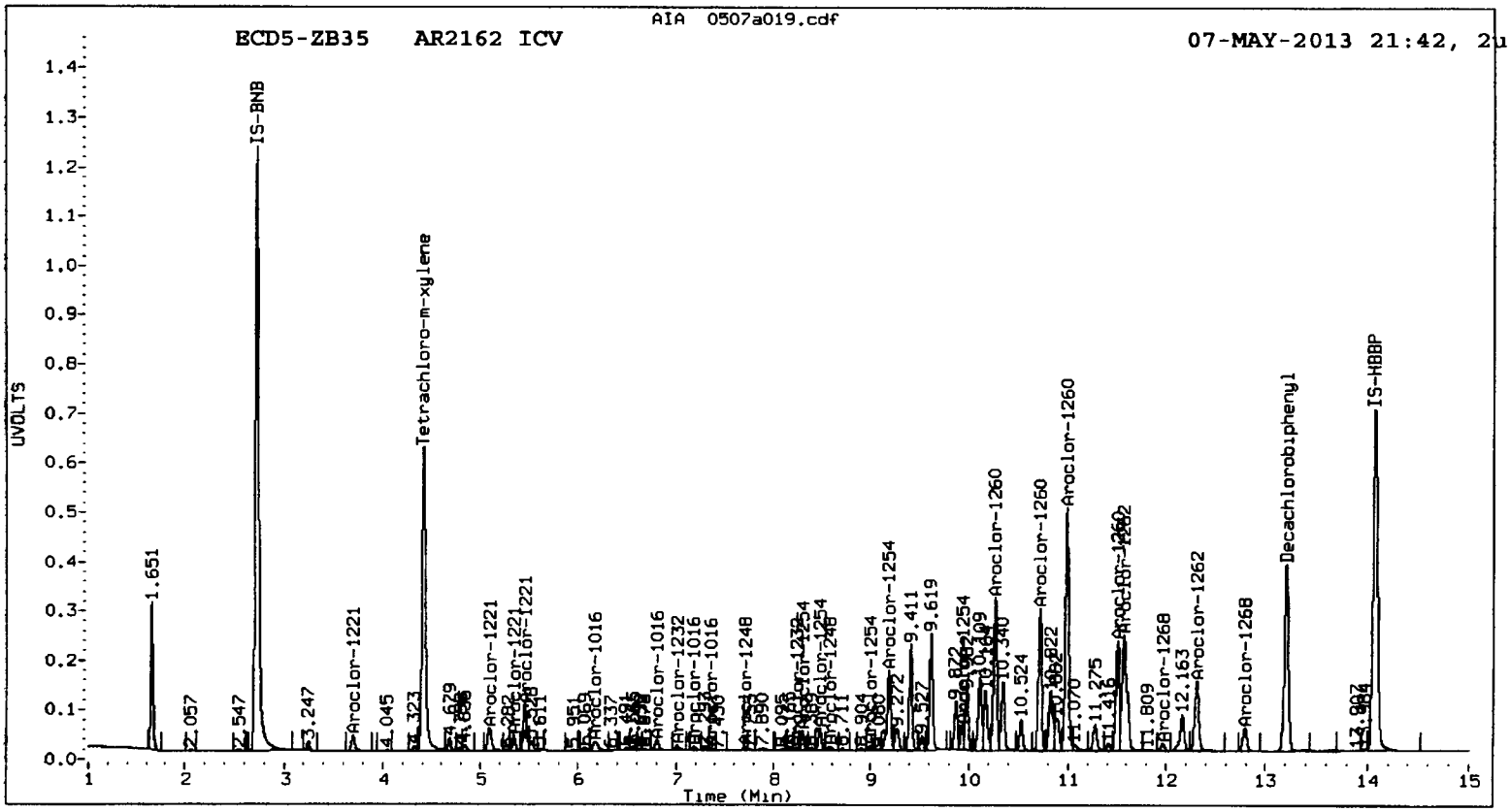
Total PCB Area Col1 (4.511 - 12.728) = 265426514 Col1 Total PCB = 0.4 ppm*

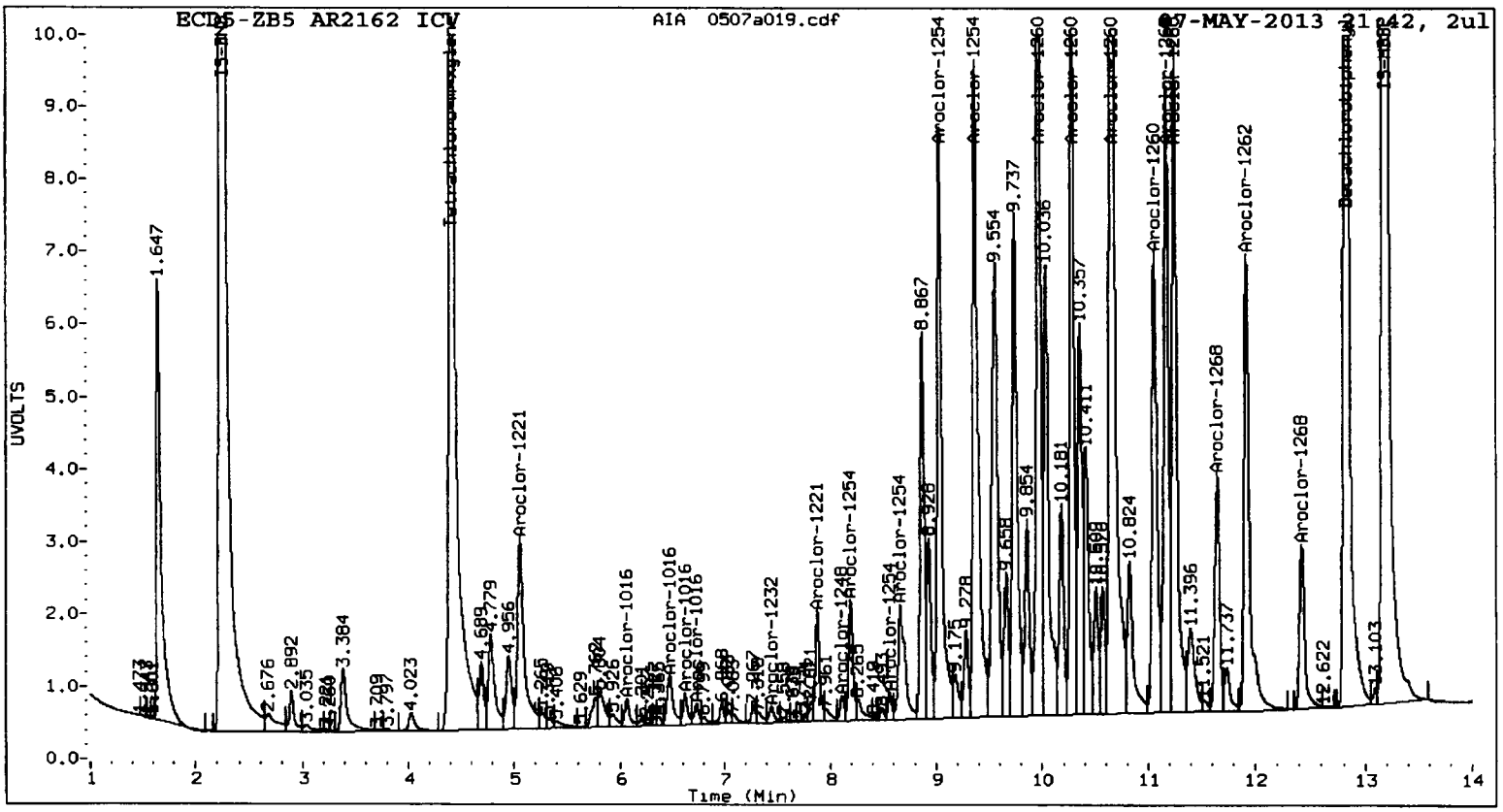
Total PCB Area Col2 (4.512 - 13.105) = 50390342 Col2 Total PCB = 0.4 ppm*

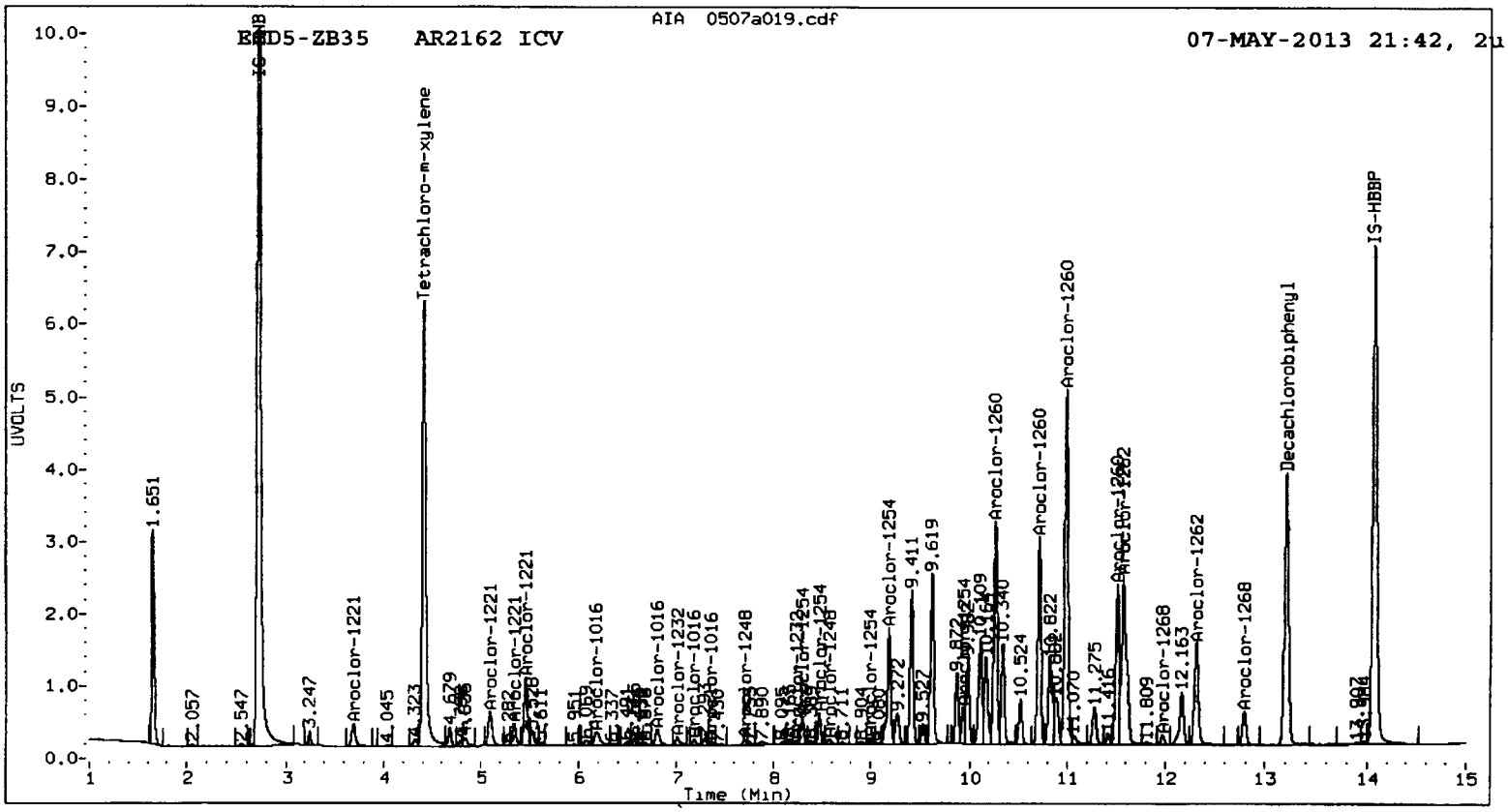
* Quantitated against AR1660 0.25ppm in Ical

USSI : 041917


ECD5-ZB5 AR2162 ICV
AIA 0507a019.cdf
07-MAY-2013 21:42, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


AIA 0507a019.cdf
ECD5-ZB35 AR2162 ICV
07-MAY-2013 21:42, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 AR2162 ICV
AIA 0507a019.cdf
07-MAY-2013 21:42, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl


AIA 0507a019.cdf
ECD5-ZB35 AR2162 ICV
07-MAY-2013 21:42, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/ical-1.b/0507a020.d
Data file 2: 20130507.b/ical-2.b/0507a020.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268 ICV
Client ID:
Injection Date: 07-MAY-2013 22:02
Ical Date: 07-MAY-2013
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
4.410	-0.001	32178954	4.411	-0.001	8089911	37.9	39.1	3.0	Tetrachloro-m-xylen
12.827	-0.001	41292857	13.204	-0.001	6993423	45.8	45.1	1.6	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	94.8	97.7
Decachlorobiphenyl	114.6	112.8

05/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	54747539	11.8
Hexabromobiphenyl	50004151	60316622	20.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15307215	3.2
Hexabromobiphenyl	9345340	10773388	15.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.060	-0.001	2754975	111.6	1	6.165	-0.001	1064635	121.9
Aroclor-1016	2	6.468	0.000	8293080	109.1	2	6.801	0.001	2096355	110.4
Aroclor-1016	3	6.617	0.000	3727765	109.5	3	7.186	0.000	553151	111.4
Aroclor-1016	4	6.729	0.001	2773984	109.0	4	7.357	-0.001	453332	98.0
	Total Col1Ave (4 peaks):				109.8		Total Col2Ave (4 peaks):			110.4 RPD = 1
	Corrected Ave (3 peaks):				109.2		Corrected Ave (3 peaks):			106.6 RPD = 2
Aroclor-1221	1	5.063	0.000	4449445	199.5	1	3.695	0.001	235147	149.8
Aroclor-1221	2	6.468	0.000	8293080	1215.2	2	5.097	0.002	434232	165.3
Aroclor-1221	3	7.874	-0.004	4148169	430.4	3	5.346	0.001	253609	177.3
Aroclor-1221	NS	---			----	4	5.461	0.000	945969	210.2
	Total Col1Ave (3 peaks):				615.0		Total Col2Ave (4 peaks):			175.7 RPD = 111*
	Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			164.2
Aroclor-1232	1	6.060	-0.001	2754975	271.7	1	6.165	0.000	1064635	271.0
Aroclor-1232	2	6.468	-0.001	8293080	267.2	2	6.801	0.000	2096355	267.3
Aroclor-1232	3	7.441	0.000	3759089	233.0	3	7.010	-0.001	874326	267.4
Aroclor-1232	4	7.874	0.000	4148169	223.8	4	8.239	0.000	645903	235.3
	Total Col1Ave (4 peaks):				248.9		Total Col2Ave (4 peaks):			260.3 RPD = 4
	Corrected Ave (3 peaks):				241.3		Corrected Ave (3 peaks):			256.7 RPD = 6
Aroclor-1242	1	6.060	0.000	2754975	139.7	1	6.165	-0.002	1064635	152.7
Aroclor-1242	2	6.468	0.000	8293080	137.1	2	6.801	-0.001	2096355	136.8
Aroclor-1242	3	6.617	0.001	3727765	138.1	3	7.010	-0.001	874326	136.6
Aroclor-1242	4	7.874	0.001	4148169	124.5	4	8.239	0.000	645903	120.5
	Total Col1Ave (4 peaks):				134.9		Total Col2Ave (4 peaks):			136.6 RPD = 1
	Corrected Ave (3 peaks):				133.3		Corrected Ave (3 peaks):			131.3 RPD = 1
Aroclor-1248	1	6.468	0.002	8293080	215.2	1	6.801	0.002	2096355	218.6
Aroclor-1248	2	7.441	-0.001	3759089	86.7	2	7.705	-0.002	686789	86.3
Aroclor-1248	3	7.874	0.000	4148169	75.3	3	8.239	0.000	645903	78.4
Aroclor-1248	4	8.111	0.001	3087951	80.4	4	8.585	0.002	769968	71.9
	Total Col1Ave (4 peaks):				114.4		Total Col2Ave (4 peaks):			113.8 RPD = 1
	Corrected Ave (3 peaks):				80.8		Corrected Ave (3 peaks):			78.9 RPD = 2
Aroclor-1254	1	8.189	-0.003	1593730	31.2	1	8.297	-0.002	213975	28.8
Aroclor-1254	2	8.564	0.000	750392	22.3	2	8.476	0.001	185955	20.3
Aroclor-1254	3	8.700	0.001	1491908	21.2	3	8.996	0.000	159149	22.7
Aroclor-1254	4	9.035	-0.018	1725047	23.8	4	9.148	0.001	236498	15.7
Aroclor-1254	5	9.362	0.000	1079040	39.4	5	9.932	-0.003	135485	16.0
	Total Col1Ave (5 peaks):				27.6		Total Col2Ave (5 peaks):			20.7 RPD = 29
	Corrected Ave (4 peaks):				24.6		Corrected Ave (4 peaks):			18.7 RPD = 28
Aroclor-1260	1	9.967	0.000	9566796	193.7	1	10.260	0.000	2036369	208.4
Aroclor-1260	2	10.283	-0.001	1540353	31.4	2	10.711	0.002	2209727	193.1
Aroclor-1260	3	10.658	-0.001	7448068	63.4	3	10.985	0.000	1398883	66.2
Aroclor-1260	4	11.059	0.002	580097	10.1	4	11.505	0.000	6860604	1197.5
Aroclor-1260	5	11.246	-0.001	39714854	1297.5	NS	---			----
	Total Col1Ave (5 peaks):				319.2		Total Col2Ave (4 peaks):			416.3 RPD = 26
	Corrected Ave (4 peaks):				74.7		Corrected Ave (3 peaks):			155.9 RPD = 70*
Aroclor-1262	1	10.283	0.000	1540353	27.3	1	10.260	0.000	2036369	136.7
Aroclor-1262	2	10.658	0.000	7448068	56.1	2	10.711	0.001	2209727	162.2
Aroclor-1262	3	11.059	0.000	580097	13.8	3	10.985	-0.001	1398883	54.7
Aroclor-1262	4	11.246	-0.001	39714854	673.2	4	11.572	0.005	7134271	429.5
Aroclor-1262	5	11.918	0.000	12822548	283.2	5	12.307	0.001	2273742	283.5
	Total Col1Ave (5 peaks):				210.7		Total Col2Ave (5 peaks):			213.3 RPD = 1
	Corrected Ave (4 peaks):				95.1		Corrected Ave (4 peaks):			159.3 RPD = 50*
Aroclor-1268	1	11.174	-0.001	33104578	260.8	1	11.505	-0.001	6860604	263.8

Aroclor-1268 2	11.246	0.000	39714854	282.9	2	11.572	-0.001	7134271	291.0
Aroclor-1268 3	11.632	-0.001	24428545	234.4	3	11.969	0.000	4550691	234.5
Aroclor-1268 4	12.422	0.000	64120345	218.3	4	12.791	-0.002	11103711	220.9

Total Col1Ave (4 peaks): 249.1 Total Col2Ave (4 peaks): 252.6 RPD = 1

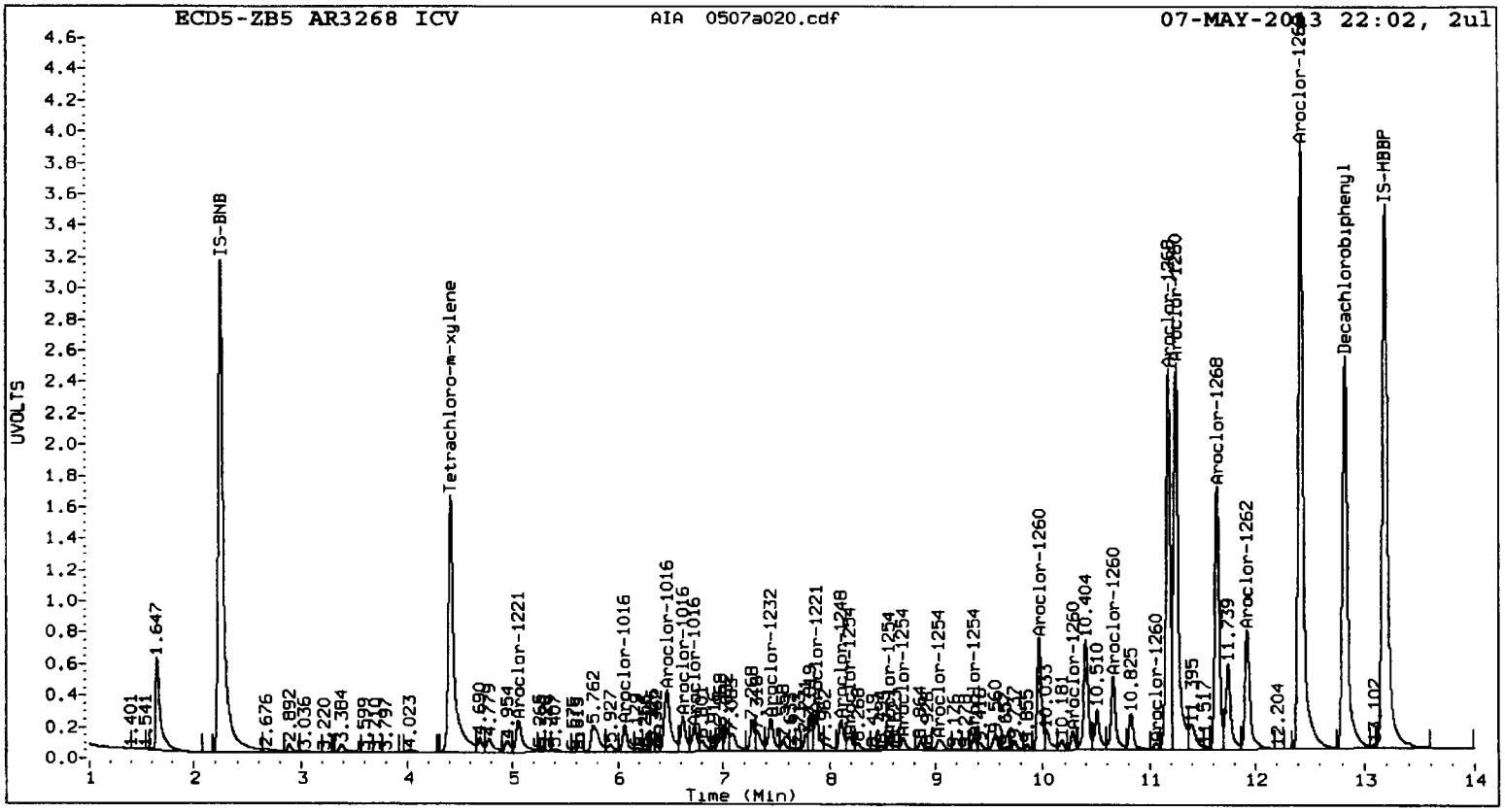
Corrected Ave (3 peaks): 237.8 Corrected Ave (3 peaks): 239.8 RPD = 1

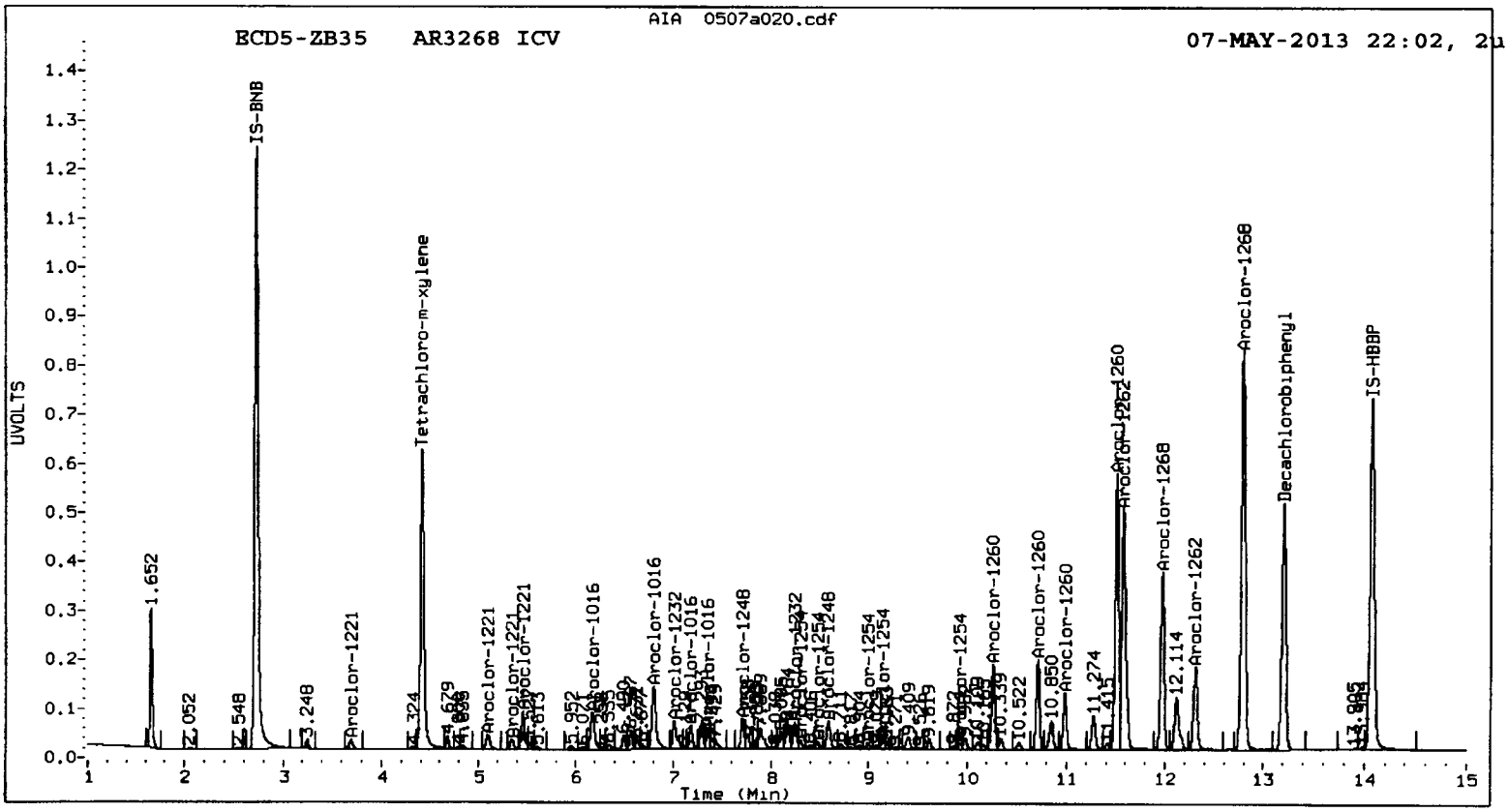
Total PCB Area Col1 (4.511 - 12.728) = 308240732 Col1 Total PCB = 0.5 ppm*

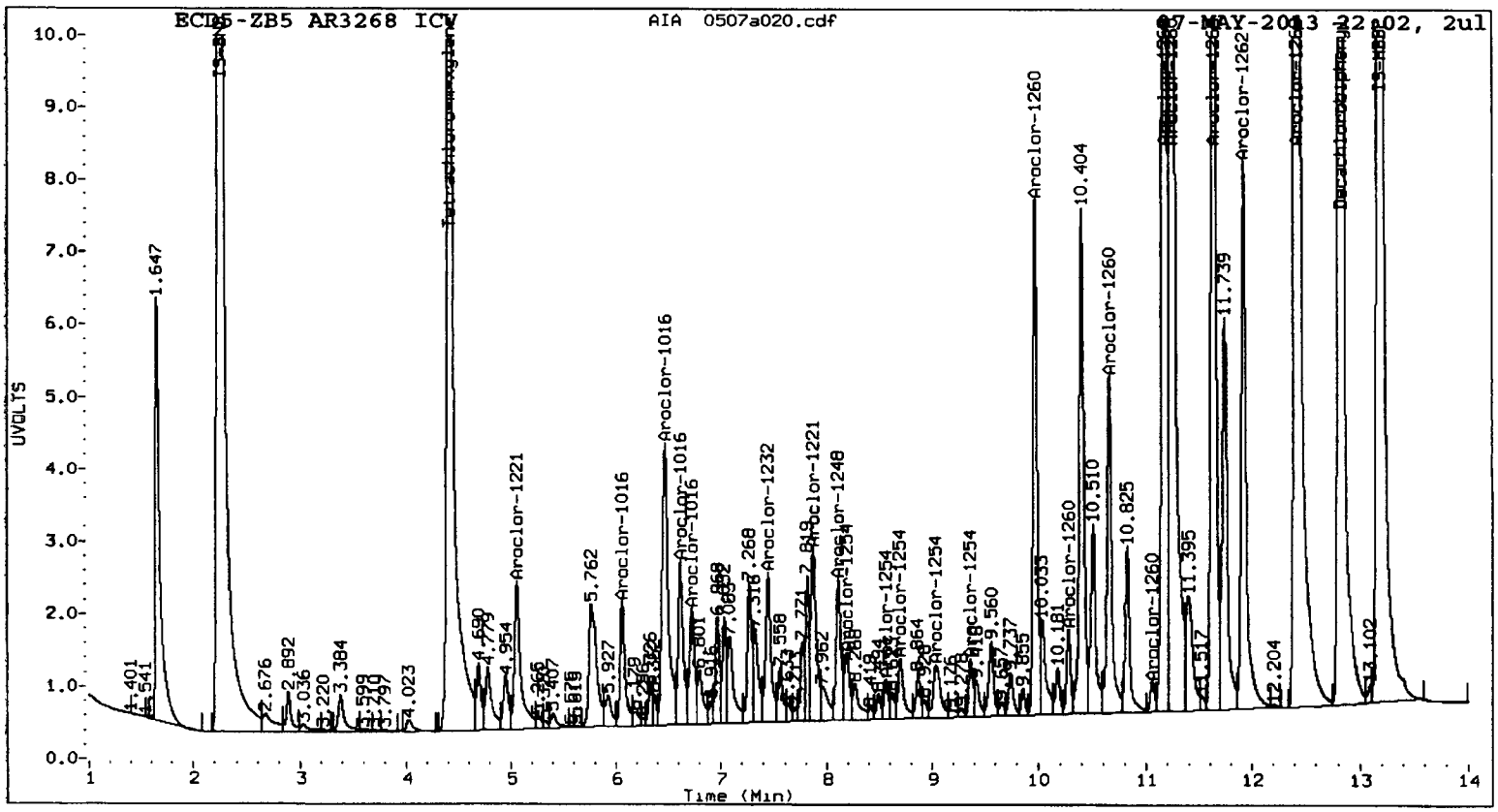
Total PCB Area Col2 (4.512 - 13.105) = 58535775 Col2 Total PCB = 0.4 ppm*

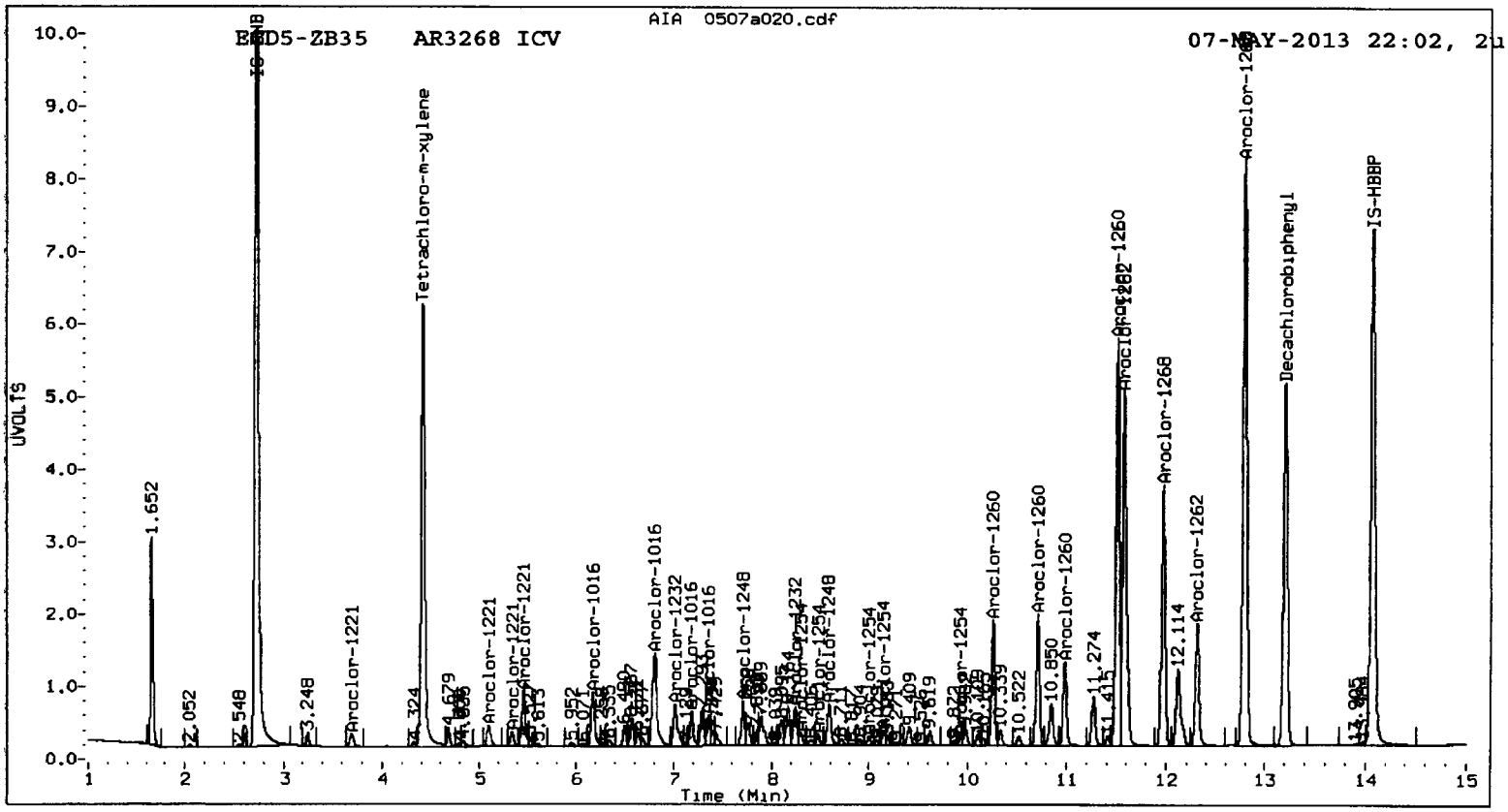
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 AR3268 ICV
AIA 0507a020.cdf
07-MAY-2013 22:02, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


AIA 0507a020.cdf
ECD5-ZB35 AR3268 ICV
07-MAY-2013 22:02, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 AR3268 ICV
AIA 0507a020.cdf
07-MAY-2013 22:02, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR3268 ICV
AIA 0507a020.cdf
07-MAY-2013 22:02, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: 20130507.b/ddt-1.b/0507a021.d ARI ID: 0.1 PPM DDTS

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
8.156	0.000	70648560	8.560	0.000	14556975	0.100	0.100	0.0	2,4-DDE
8.707	0.000	75652806	9.246	0.000	13980580	0.100	0.100	0.0	2,4-DDD
9.210	0.000	80992371	9.713	0.000	35257917	0.100	0.200#	66.7*	2,4-DDT
8.589	0.000	98960725	8.949	0.000	23356763	0.100	0.100	0.0	4,4-DDE
9.163	0.000	76831347	9.713	0.000	35257917	0.100	0.200#	66.7*	4,4-DDD
9.675	0.000	88164078	10.148	0.000	19956133	0.100	0.100	0.0	4,4-DDT

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

05/08/13

7E

8082 DDT BREAKDOWN VERIFICATION SUMMARY

Lab ID: DDT BD

Analysis Date: 07-MAY-2013 22:43 Init. Calib. Date: 07-MAY-2013

GC Column: ZB5 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	8.590	867273
4,4-DDD	9.168	6982253
4,4-DDT	9.676	87775915

Col 1: 4,4-DDT Percent Breakdown = 8.2 %

GC Column: ZB35 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	8.950	168832
4,4-DDD/2,4-DDT	9.719	1384968
4,4-DDT	10.149	20474911

Col 2: 4,4-DDT Percent Breakdown = 7.1 %

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

JA 05/08/13

PCB Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WS91

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WS91 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: 05/07/13 Analysis Start Date: 06/19/13

	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 / <15%
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

went w/ best fit, y-flags are for ranges; trimmed oily baseline rise

(Review 1) Analyst: [signature] **Date:** 06/20/13

(Review 2) Reviewer: _____ **Date:** _____

Analytical Resources Inc.: Organics Instrument Log

ECD-5 Serial No.: US00034118

Date: 06/19/13 Analysis: PCB Analyst: [illegible]

Column 1 Serial No.: 196398 Column Type: ZB5

Column 2 Serial No.: 182259 Column Type: ZB35

GC Method: PCB2 ICal Date: 05/07/13 Injection Volume: 2µl

IS	Ical/Ccal	ICV
	B161	B182
	163	191
2006-1	172	192
	173	193
	174	194
	175	
	207	

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID
1	19-JUN-2013 09:56	0619b001.d	1	RINSE
2	19-JUN-2013 10:17	0619b002.d	1	DDT
3	19-JUN-2013 10:37	0619b003.d	1	BD
4	19-JUN-2013 10:57	0619b004.d	1	AR1254
5	19-JUN-2013 11:17	0619b005.d	1	AR1660
6	19-JUN-2013 11:37	0619b006.d	1	WT54MBS1
7	19-JUN-2013 11:57	0619b007.d	1	WT54LCSS1
8	19-JUN-2013 12:17	0619b008.d	1	WT54LCSDS1
9	19-JUN-2013 12:37	0619b009.d	1	WT54QLS
10	19-JUN-2013 12:58	0619b010.d	1	WT54A
11	19-JUN-2013 13:17	0619b011.d	1	WS91A
12	19-JUN-2013 13:37	0619b012.d	1	WS91AMS
13	19-JUN-2013 13:57	0619b013.d	1	WS91AMSD
14	19-JUN-2013 14:18	0619b014.d	1	WT48MBS1
15	19-JUN-2013 14:38	0619b015.d	1	WT48LCSS1
16	19-JUN-2013 14:58	0619b016.d	1	AR1248
17	19-JUN-2013 15:18	0619b017.d	1	AR1660
18	19-JUN-2013 15:39	0619b018.d	1	WT48QLS
19	19-JUN-2013 15:59	0619b019.d	1	WT48A
20	19-JUN-2013 16:18	0619b020.d	1	WT48B
21	19-JUN-2013 16:38	0619b021.d	1	AR1242
22	19-JUN-2013 16:59	0619b022.d	1	AR1660

[illegible] 06/20/13

E
S

Revisi
2/

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130507.b/0619-1.b

ARI Job No.: RINS Method: PCB1.m Instrument: ecd5.i Date: 19-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0956	0619b001.d	RINSE		1	NO MANUAL INTEGRATION
1017	0619b002.d	DDT		1	NO MANUAL INTEGRATION
1037	0619b003.d	BD		1	NO MANUAL INTEGRATION
1057	0619b004.d	AR1254		1	NO MANUAL INTEGRATION
1117	0619b005.d	AR1660		1	NO MANUAL INTEGRATION
1137	0619b006.d	WS91MBS1	WS91MBS1	1	NO MANUAL INTEGRATION
1157	0619b007.d	WS91LCSS1	WS91LCSS1	1	NO MANUAL INTEGRATION
1217	0619b008.d	WS91LCSDS1	WS91LCSDS1	1	NO MANUAL INTEGRATION
1237	0619b009.d	WT54QLS		1	NO MANUAL INTEGRATION
1258	0619b010.d	WT54A	SD-PEB017	1	NO MANUAL INTEGRATION
1317	0619b011.d	WS91A	CL-MH-SPS-	1	Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268, Tetrachloro-m-xylene,
1337	0619b012.d	WS91AMS	CL-MH-SPS-	1	Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268,
1357	0619b013.d	WS91AMSD	CL-MH-SPS-	1	Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268, Tetrachloro-m-xylene,
1418	0619b014.d	WT48MBS1	WT48MBS1	1	NO MANUAL INTEGRATION
1438	0619b015.d	WT48LCSS1	WT48LCSS1	1	NO MANUAL INTEGRATION
1458	0619b016.d	AR1248		1	NO MANUAL INTEGRATION
1518	0619b017.d	AR1660		1	NO MANUAL INTEGRATION
1539	0619b018.d	WT48QLS		1	NO MANUAL INTEGRATION
1559	0619b019.d	WT48A	CS-060413<	1	NO MANUAL INTEGRATION

1618	0619b020.d WT48B	HL-060413<	1	NO MANUAL INTEGRATION
1638	0619b021.d AR1242		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130507.b/0619-1.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1659	0619b022.d	AR1660		1	NO MANUAL INTEGRATION

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0619-1.b/0619b004.d
Data file 2: 20130507.b/0619-2.b/0619b004.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 19-JUN-2013 10:57
Ical Date: 07-MAY-2013
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
4.409	-0.001	41974958	4.409	-0.001	10181064	40.8	39.1	4.2	Tetrachloro-m-xylen
12.826	0.000	39346730	13.202	0.000	6865015	36.8	36.8	0.1	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	102.0	97.8
Decachlorobiphenyl	92.1	91.9

jk 06/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	66370066	35.5
Hexabromobiphenyl	50004151	71531880	43.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	19250982	29.7
Hexabromobiphenyl	9345340	12973064	38.8

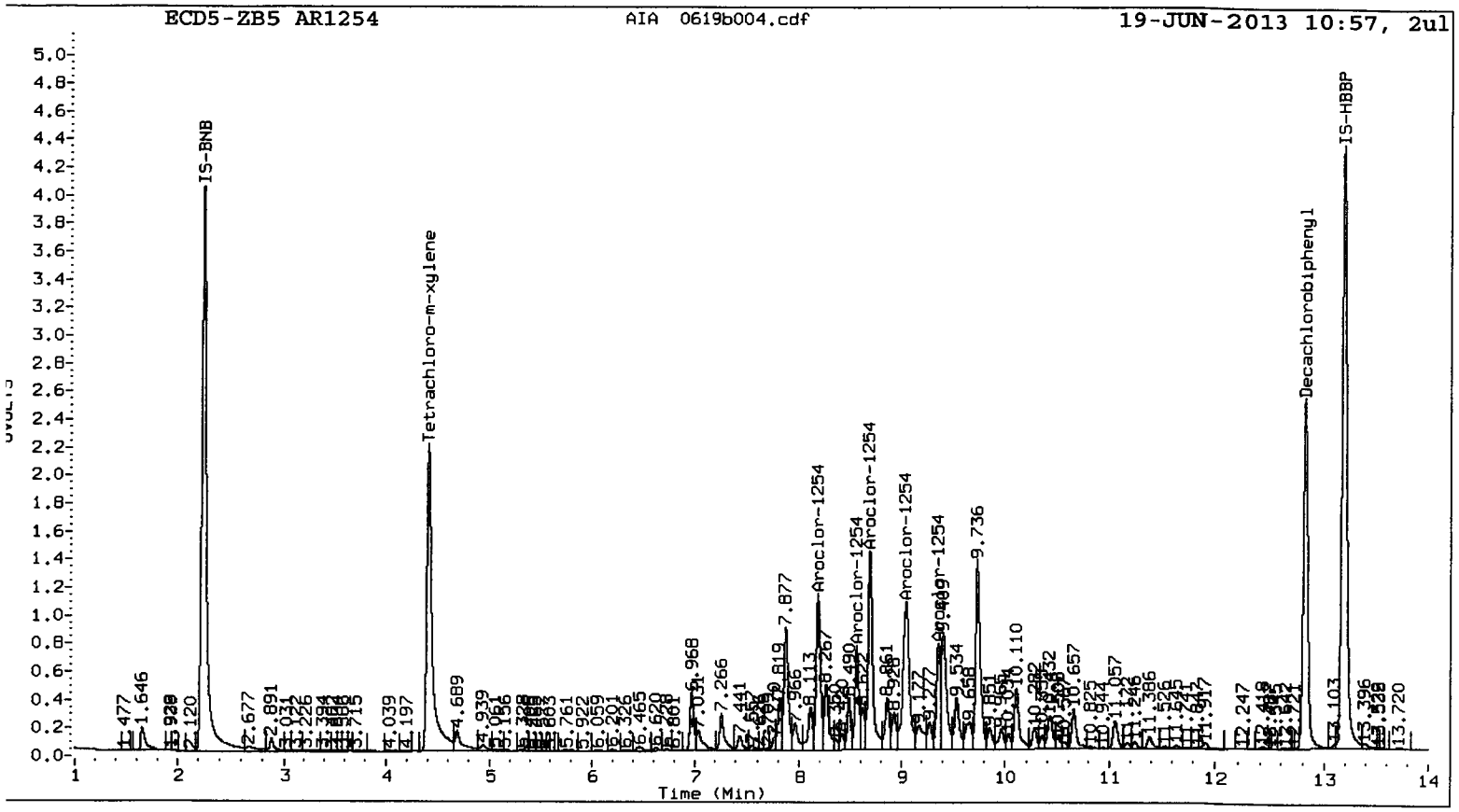
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

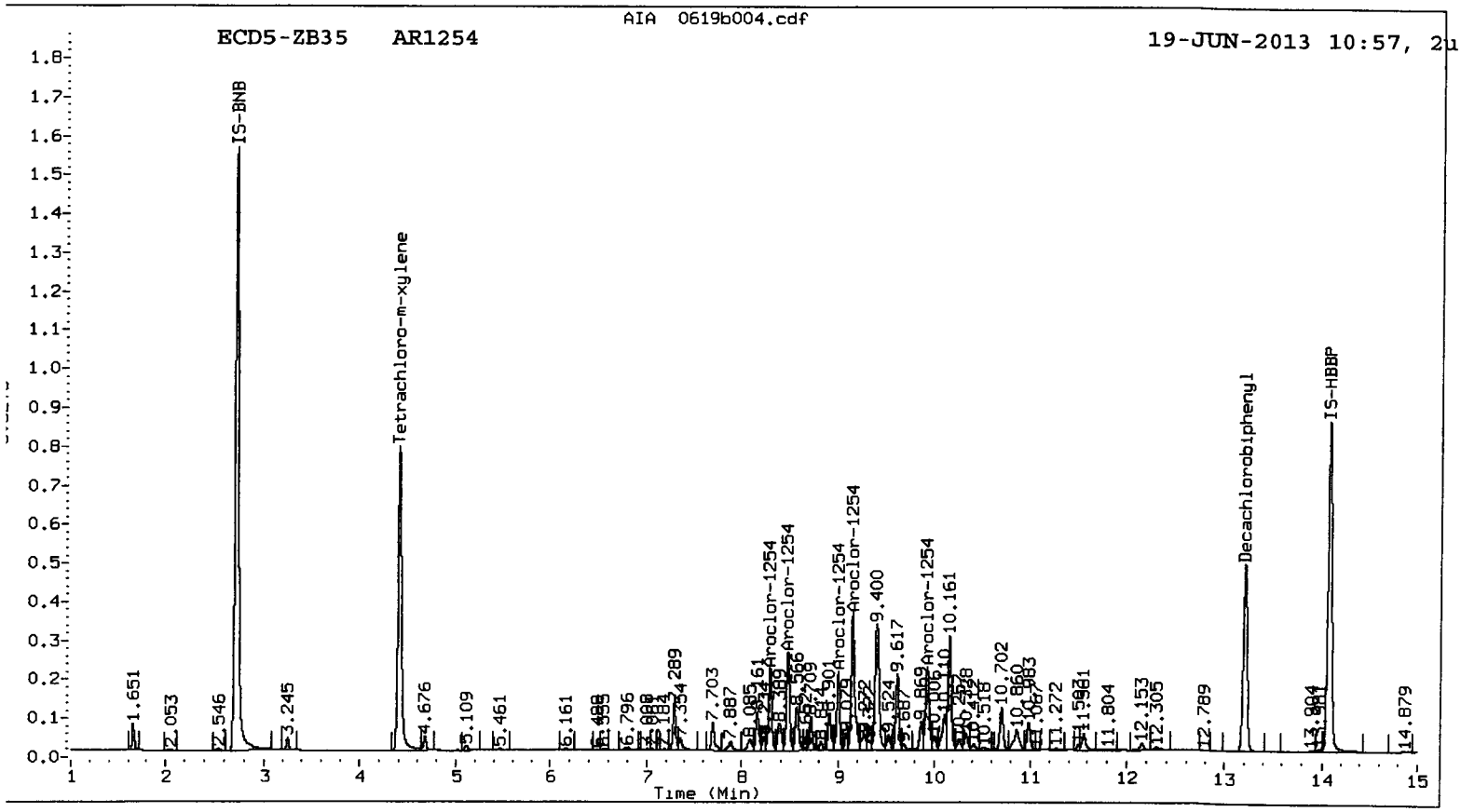
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.191	0.000	16722899	270.2	1	8.296	0.000	2335683	250.2
Aroclor-1254	2	8.565	0.000	9539783	233.5	2	8.472	0.000	2901309	251.6
Aroclor-1254	3	8.699	0.000	22296123	261.8	3	8.994	0.000	2267446	256.7
Aroclor-1254	4	9.051	0.000	23974826	273.3	4	9.145	0.000	4670196	246.9
Aroclor-1254	5	9.361	0.000	9266991	279.3	5	9.931	0.000	2788312	261.7
Total Col1Ave (5 peaks):					263.6	Total Col2Ave (5 peaks):				253.4 RPD = 4
Corrected Ave (4 peaks):					259.7	Corrected Ave (4 peaks):				251.3 RPD = 3

Total PCB Area Col1 (4.510 - 12.726) = 246530541 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.510 - 13.101) = 46819841 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1254
AIA 0619b004.cdf
19-JUN-2013 10:57, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
Time (Min)


AIA 0619b004.cdf
ECD5-ZB35 AR1254
19-JUN-2013 10:57, 2u
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0619-1.b/0619b005.d
Data file 2: 20130507.b/0619-2.b/0619b005.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 19-JUN-2013 11:17
Ical Date: 07-MAY-2013
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
4.409	-0.002	36570407	4.409	-0.001	8862585	40.4	38.8	4.0	Tetrachloro-m-xylen
12.826	0.000	35180609	13.200	-0.001	6103113	36.9	36.6	0.7	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	101.1	97.1
Decachlorobiphenyl	92.2	91.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	58311033	19.1
Hexabromobiphenyl	50004151	63859886	27.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	16870216	13.7
Hexabromobiphenyl	9345340	11582137	23.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.058	-0.001	6722423	255.8	1	6.162	-0.001	2313849	240.4
Aroclor-1016	2	6.466	-0.001	20921754	258.4	2	6.799	-0.001	4930404	235.6
Aroclor-1016	3	6.615	-0.001	9150780	252.3	3	7.181	-0.001	1378227	251.9
Aroclor-1016	4	6.726	0.000	6894781	254.4	4	7.354	-0.001	1219682	239.3

Total Col1Ave (4 peaks): 255.2 Total Col2Ave (4 peaks): 241.8 RPD = 5
Corrected Ave (3 peaks): 254.1 Corrected Ave (3 peaks): 238.4 RPD = 6

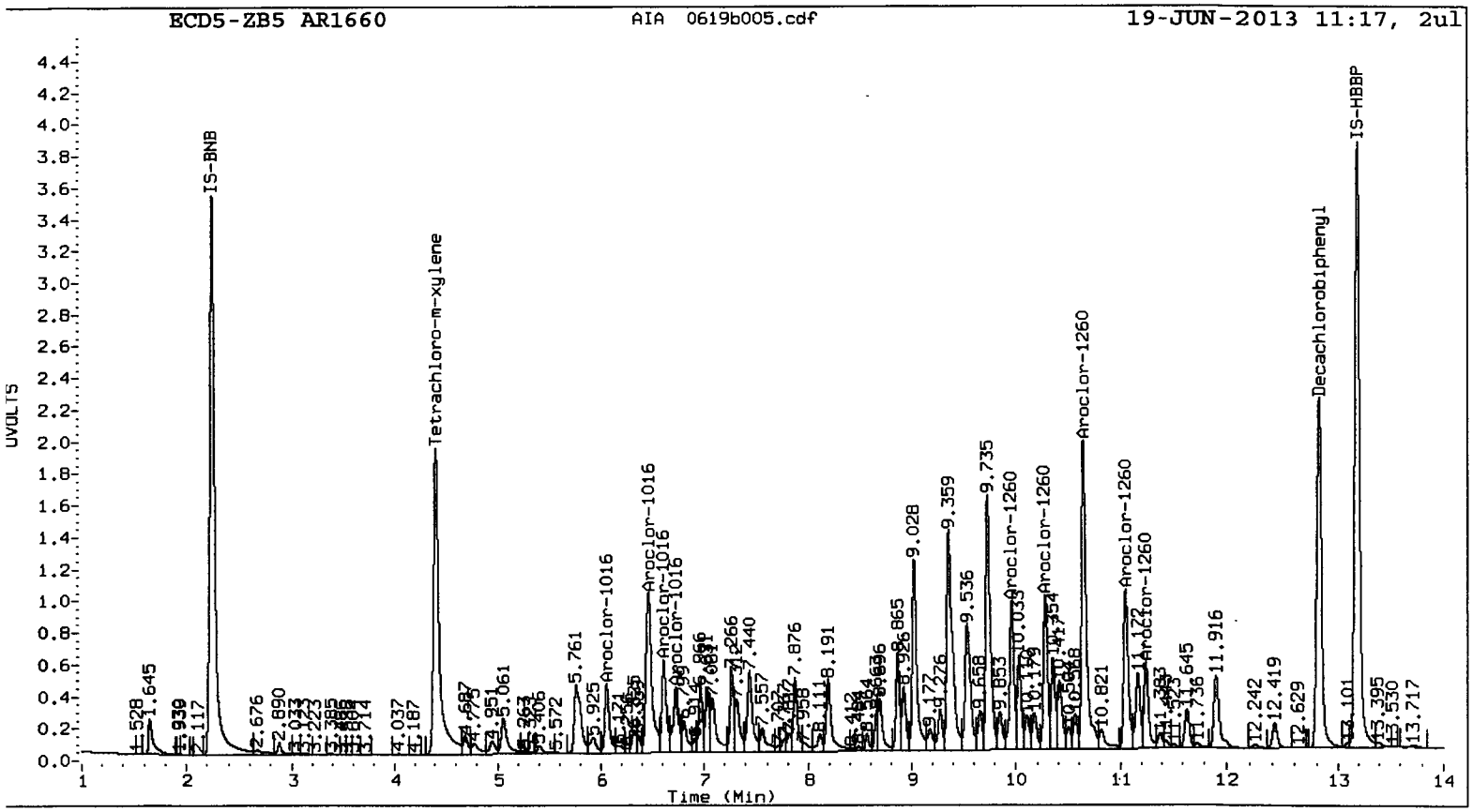
Aroclor-1260	1	9.964	-0.001	13204188	252.5	1	10.257	-0.001	2504574	238.4
Aroclor-1260	2	10.281	-0.001	13061964	251.9	2	10.706	-0.001	3026402	245.9
Aroclor-1260	3	10.656	-0.001	30995161	249.3	3	10.982	-0.001	5706176	251.1
Aroclor-1260	4	11.056	0.000	15712703	259.4	4	11.502	-0.001	1609271	261.3
Aroclor-1260	5	11.246	0.000	8342883	257.4	NS	---			----

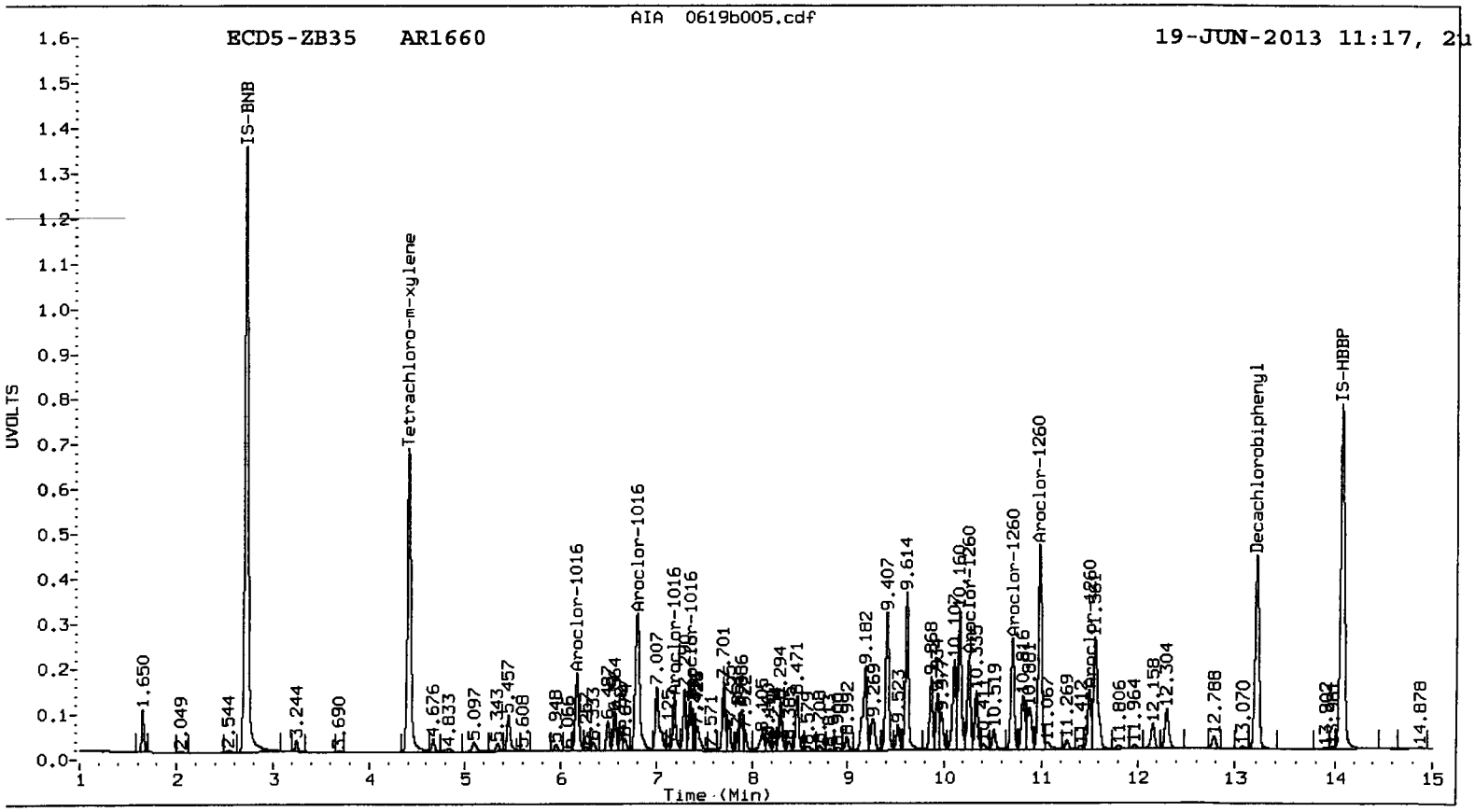
Total Col1Ave (5 peaks): 254.1 Total Col2Ave (4 peaks): 249.2 RPD = 2
Corrected Ave (4 peaks): 252.8 Corrected Ave (3 peaks): 245.2 RPD = 3

Total PCB Area Col1 (4.510 - 12.726) = 401124880 Col1 Total PCB = 0.6 ppm*

Total PCB Area Col2 (4.510 - 13.101) = 77990389 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1660
AIA 0619b005.cdf
19-JUN-2013 11:17, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 AR1660
AIA 0619b005.cdf
19-JUN-2013 11:17, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0619-1.b/0619b006.d
Data file 2: 20130507.b/0619-2.b/0619b006.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WS91MBS1
Client ID: WS91MBS1
Injection Date: 19-JUN-2013 11:37
Ical Date: 07-MAY-2013
Matrix: SOIL
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
4.407	-0.003	25444787	4.409	-0.001	6176985	31.8	30.7	3.5	Tetrachloro-m-xylen
12.825	-0.001	35466149	13.201	-0.001	5941392	38.8	37.6	3.0	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	79.4	76.6
Decachlorobiphenyl	96.9	94.1

JK 06/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	51669858	5.5
Hexabromobiphenyl	50004151	61229864	22.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	14900896	0.4
Hexabromobiphenyl	9345340	10968384	17.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

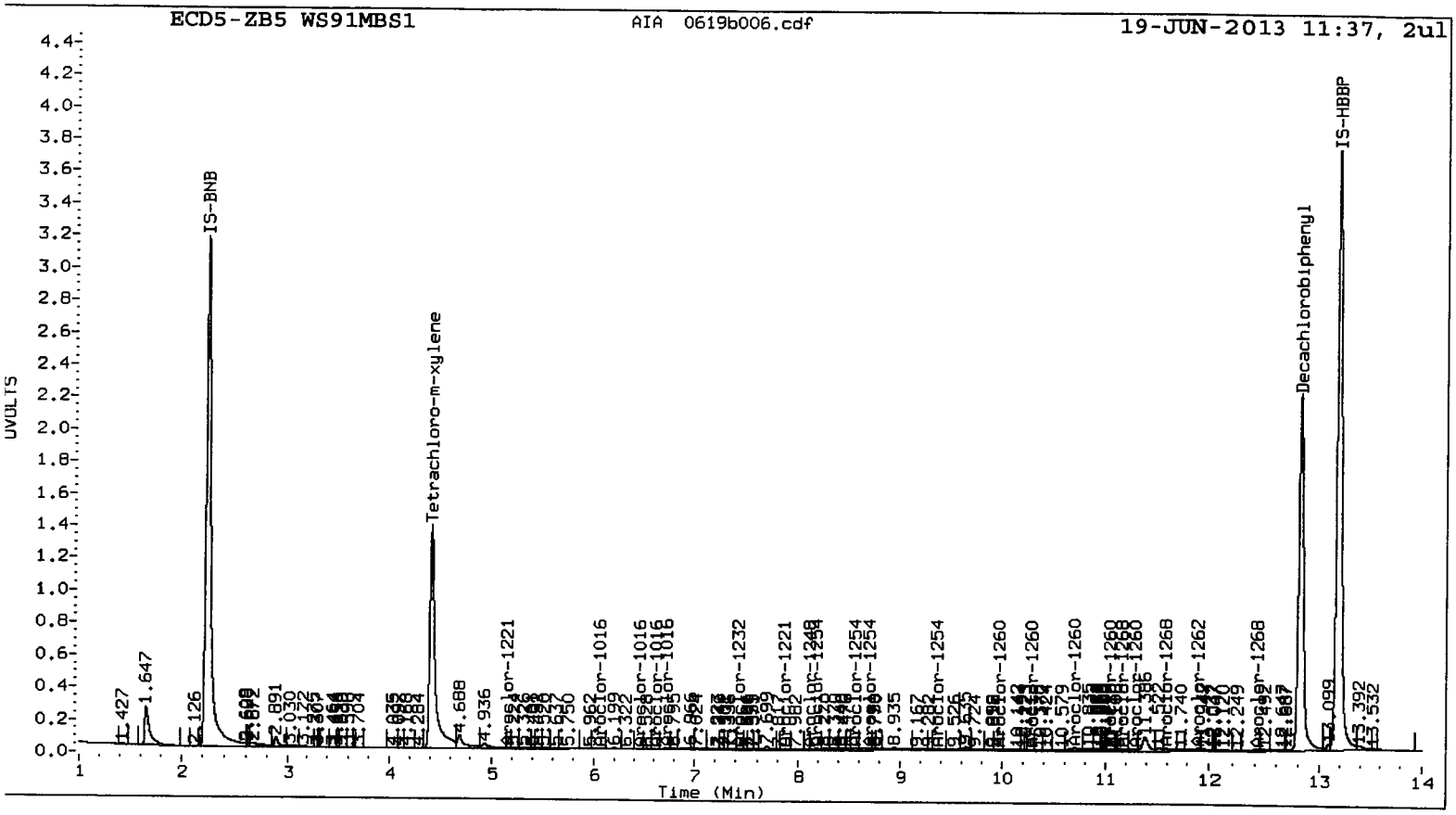
WS91-01339

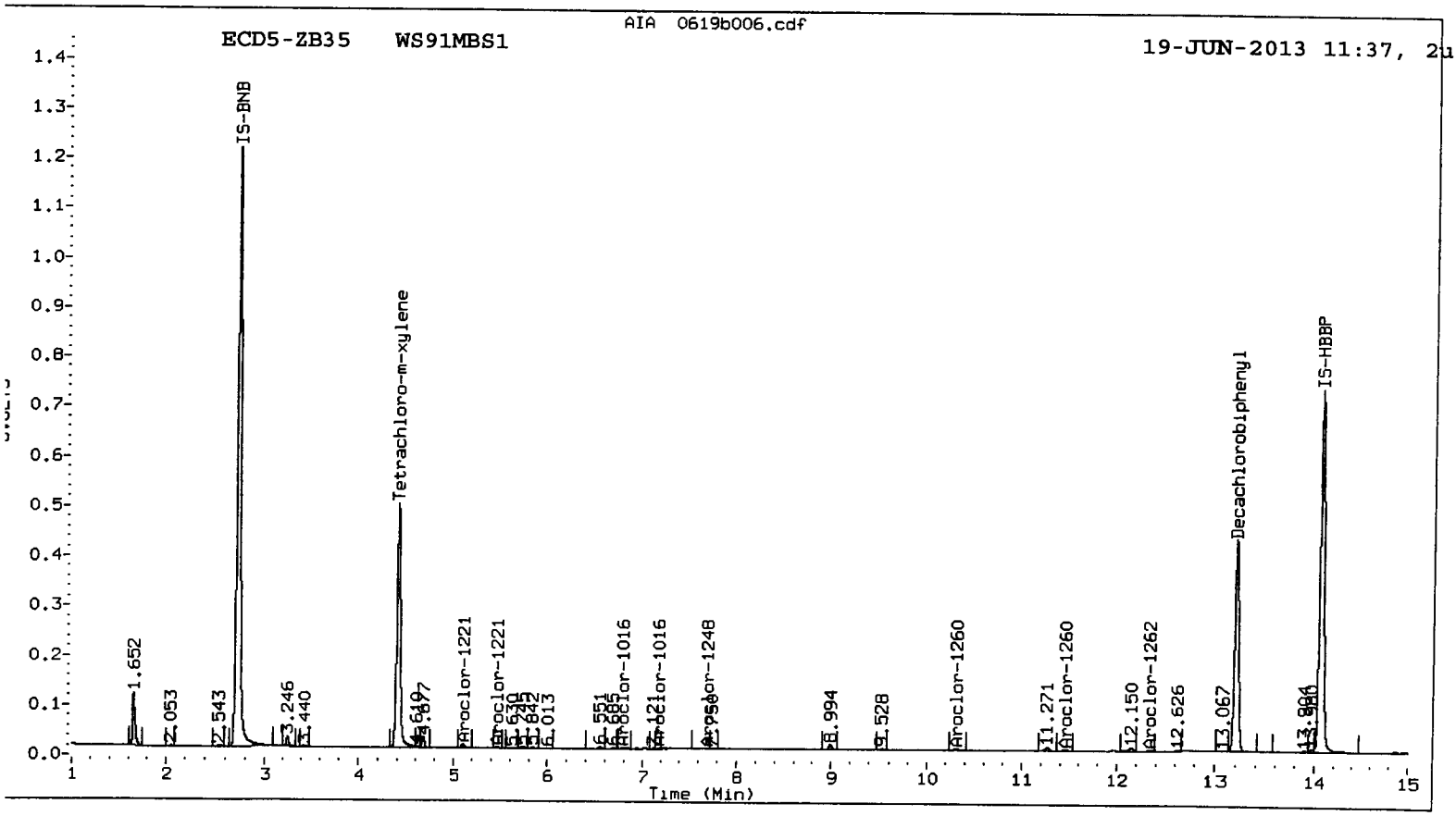
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	6.061	0.002	123219	5.3	1	---			0.0
Aroclor-1016	2	6.461	-0.006	121680	1.7	2	6.795	-0.005	19529	1.1
Aroclor-1016	3	6.624	0.008	72127	2.2	3	7.180	-0.003	11566	2.4
Aroclor-1016	4	6.724	-0.003	150119	6.3	4	---			0.0
Total Col1Ave (4 peaks):				3.9		Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	5.162	0.099	46643	2.2	1	---			0.0
Aroclor-1221	2	6.461	-0.007	121680	18.9	2	5.109	0.014	83568	32.7
Aroclor-1221	3	7.874	-0.004	224762	24.7	3	---			0.0
Aroclor-1221	NS	---			----	4	5.463	0.002	18841	4.3
Total Col1Ave (3 peaks):				15.3		Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	6.061	0.001	123219	12.9	1	---			0.0
Aroclor-1232	2	6.461	-0.008	121680	4.2	2	---			0.0
Aroclor-1232	3	7.432	-0.010	146940	9.7	3	---			0.0
Aroclor-1232	4	7.874	0.000	224762	12.8	4	---			0.0
Total Col1Ave (4 peaks):				9.9		Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	6.061	0.001	123219	6.6	1	---			0.0
Aroclor-1242	2	6.461	-0.006	121680	2.1	2	---			0.0
Aroclor-1242	3	6.624	0.008	72127	2.8	3	---			0.0
Aroclor-1242	4	7.874	0.003	224762	7.1	4	---			0.0
Total Col1Ave (4 peaks):				4.7		Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	6.461	-0.003	121680	3.3	1	6.795	-0.001	19529	2.1
Aroclor-1248	2	7.432	-0.009	146940	3.6	2	7.693	-0.010	15675	2.0
Aroclor-1248	3	7.874	0.003	224762	4.3	3	---			0.0
Aroclor-1248	4	8.117	0.010	131722	3.6	4	---			0.0
Total Col1Ave (4 peaks):				3.7		Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	8.188	-0.003	288604	6.0	1	---			0.0
Aroclor-1254	2	8.563	-0.001	185234	5.8	2	---			0.0
Aroclor-1254	3	8.704	0.005	342429	5.2	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	9.360	-0.002	367869	14.2	5	---			0.0
Total Col1Ave (4 peaks):				7.8		Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	9.968	0.003	276564	5.5	1	10.302	0.044	38093	3.8
Aroclor-1260	2	10.283	0.001	213539	4.3	2	---			0.0
Aroclor-1260	3	10.698	0.040	653014	5.5	3	---			0.0
Aroclor-1260	4	11.051	-0.006	255532	4.4	4	11.455	-0.049	26865	4.6
Aroclor-1260	5	11.290	0.044	268532	8.6	NS	---			----
Total Col1Ave (5 peaks):				5.7		Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	10.283	0.000	213539	3.7	1	10.302	0.042	38093	2.5
Aroclor-1262	2	10.698	0.039	653014	4.8	2	---			0.0
Aroclor-1262	3	11.051	-0.009	255532	6.0	3	---			0.0
Aroclor-1262	4	11.290	0.042	268532	4.5	4	---			0.0
Aroclor-1262	5	11.900	-0.018	544044	11.8	5	12.339	0.033	30862	3.8
Total Col1Ave (5 peaks):				6.2		Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	11.166	-0.009	325321	2.5	1	---			0.0
Aroclor-1268	2	11.290	0.044	268532	1.9	2	---			0.0
Aroclor-1268	3	11.591	-0.042	510990	4.8	3	---			0.0
Aroclor-1268	4	12.421	-0.001	483241	1.6	4	---			0.0
Total Col1Ave (4 peaks):				2.7		Col2Ave: <3 Quant Peaks				

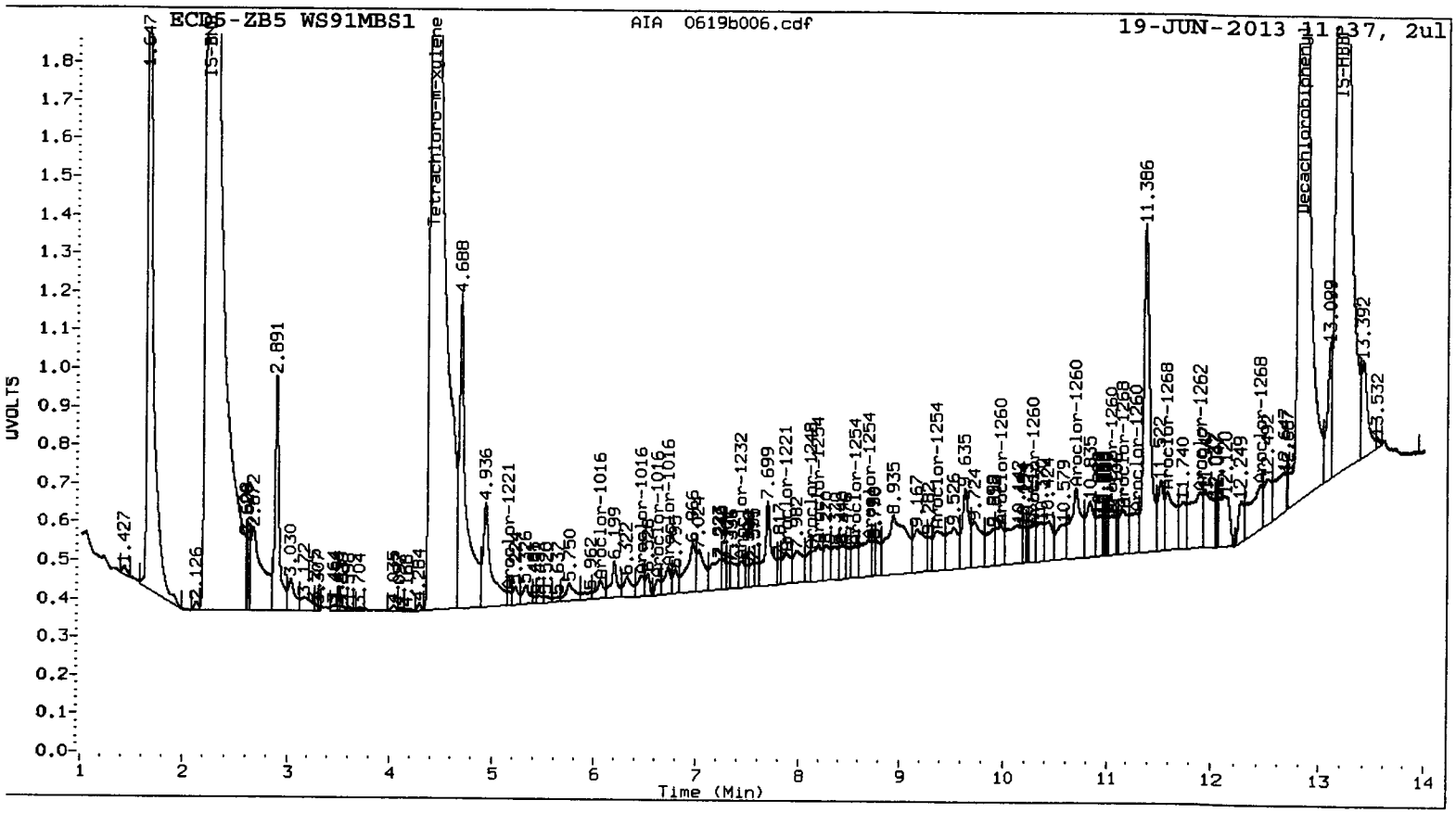
Total PCB Area Col1 (4.510 - 12.726) = 22419267 Col1 Total PCB = 0.0 ppm*

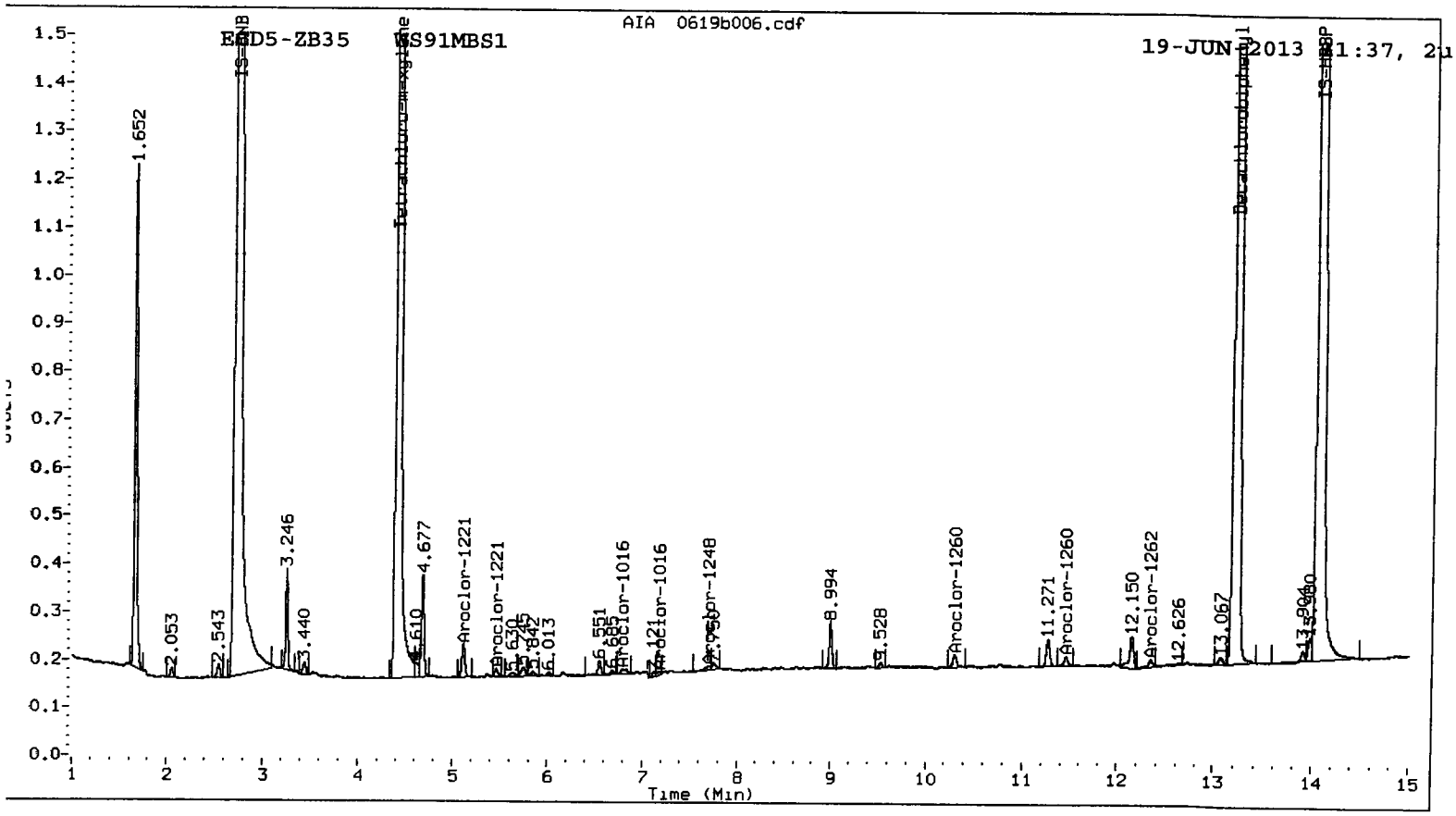
Total PCB Area Col2 (4.510 - 13.101) = 960364 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 WS91MBS1
AIA 0619b006.cdf
19-JUN-2013 11:37, 2ul
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Time (Min)


AIA 0619b006.cdf
ECD5-ZB35 WS91MBS1
19-JUN-2013 11:37, 2u
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD5-ZB5 WS91MBS1
AIA 0619b006.cdf
19-JUN-2013 11:37, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.647
2.891
4.688
4.936
11.386
13.099
13.392
13.532
1.427
2.126
3.030
5.750
7.699
8.935
10.579
11.740
12.249
Aroclor-1221
Aroclor-1016
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB35 WS91MBS1
AIA 0619b006.cdf
19-JUN-2013 11:37, 2u
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.652
2.053
2.543
3.246
3.440
4.677
4.610
6.013
6.551
8.994
9.528
11.271
12.150
12.626
13.067
13.904
Aroclor-1221
Aroclor-1016
Aroclor-1248
Aroclor-1260
Aroclor-1262

WS91:01343

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0619-1.b/0619b007.d
Data file 2: 20130507.b/0619-2.b/0619b007.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WS91LCSS1
Client ID: WS91LCSS1
Injection Date: 19-JUN-2013 11:57
Ical Date: 07-MAY-2013
Matrix: SOIL
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
4.407	-0.003	26826773	4.410	0.000	6305078	32.9	30.9	6.5	Tetrachloro-m-xylen
12.825	-0.001	32040942	13.199	-0.002	5426968	39.6	38.8	2.0	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	82.3	77.1
Decachlorobiphenyl	99.0	97.0

JF 06/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	52530292	7.3
Hexabromobiphenyl	50004151	54176320	8.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15112397	1.8
Hexabromobiphenyl	9345340	9717074	4.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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-1016	1	6.056	-0.003	10754416	454.2	1	6.162	0.000	3576482	414.8	
Aroclor-1016	2	6.464	-0.003	33651537	461.4	2	6.799	-0.001	8271656	441.2	
Aroclor-1016	3	6.613	-0.003	14843731	454.3	3	7.182	0.000	2234787	455.9	
Aroclor-1016	4	6.725	-0.002	11261193	461.2	4	7.355	0.000	2002644	438.7	
Total Col1Ave (4 peaks):					457.8	Total Col2Ave (4 peaks):				437.6	RPD = 4
Corrected Ave (3 peaks):					456.6	Corrected Ave (3 peaks):				431.5	RPD = 6
Aroclor-1221	1	5.059	-0.005	6446827	301.2	1	3.691	-0.003	17390	11.2	
Aroclor-1221	2	6.464	-0.005	33651537	5139.2	2	5.096	0.001	367383	141.7	
Aroclor-1221	3	7.875	-0.003	11238997	1215.5	3	5.346	0.001	389512	275.8	
Aroclor-1221	NS	---			----	4	5.459	-0.002	1466706	330.1	
Total Col1Ave (3 peaks):					2218.6	Total Col2Ave (4 peaks):				189.7	RPD = 168*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				142.9	
Aroclor-1232	1	6.056	-0.004	10754416	1105.3	1	6.162	-0.003	3576482	922.1	
Aroclor-1232	2	6.464	-0.006	33651537	1129.9	2	6.799	-0.003	8271656	1068.3	
Aroclor-1232	3	7.438	-0.003	14777920	954.7	3	7.007	-0.004	3450211	1068.7	
Aroclor-1232	4	7.875	0.001	11238997	632.0	4	8.235	-0.004	360462	133.0	
Total Col1Ave (4 peaks):					955.5	Total Col2Ave (4 peaks):				798.0	RPD = 18
Corrected Ave (3 peaks):					897.3	Corrected Ave (3 peaks):				707.8	RPD = 24
Aroclor-1242	1	6.056	-0.003	10754416	568.4	1	6.162	0.000	3576482	519.4	
Aroclor-1242	2	6.464	-0.003	33651537	579.9	2	6.799	-0.001	8271656	546.9	
Aroclor-1242	3	6.613	-0.003	14843731	573.3	3	7.007	-0.001	3450211	546.0	
Aroclor-1242	4	7.875	0.004	11238997	351.5	4	8.235	0.000	360462	68.1	
Total Col1Ave (4 peaks):					518.3	Total Col2Ave (4 peaks):				420.1	RPD = 21
Corrected Ave (3 peaks):					497.8	Corrected Ave (3 peaks):				377.9	RPD = 27
Aroclor-1248	1	6.464	-0.001	33651537	910.2	1	6.799	0.003	8271656	873.5	
Aroclor-1248	2	7.438	-0.002	14777920	356.4	2	7.702	-0.001	2818820	358.9	
Aroclor-1248	3	7.875	0.003	11238997	212.6	3	8.235	-0.001	360462	44.3	
Aroclor-1248	4	8.110	0.003	2546521	69.1	4	8.579	-0.002	215859	20.4	
Total Col1Ave (4 peaks):					386.8	Total Col2Ave (4 peaks):				324.3	RPD = 18
Corrected Ave (3 peaks):					212.4	Corrected Ave (3 peaks):				141.2	RPD = 40*
Aroclor-1254	1	8.190	-0.001	13446457	274.5	1	8.295	0.000	1945696	265.5	
Aroclor-1254	2	8.560	-0.004	2890399	89.4	2	8.472	0.000	2207734	243.9	
Aroclor-1254	3	8.695	-0.005	8768957	130.1	3	8.994	0.000	628848	90.7	
Aroclor-1254	4	9.027	-0.025	31051721	447.2	4	9.145	0.000	1015454	68.4	
Aroclor-1254	5	9.358	-0.003	44264792	1685.7	5	9.935	0.005	2399419	286.9	
Total Col1Ave (5 peaks):					525.4	Total Col2Ave (5 peaks):				191.1	RPD = 93*
Corrected Ave (4 peaks):					235.3	Corrected Ave (4 peaks):				167.1	RPD = 34
Aroclor-1260	1	9.964	-0.001	22870179	515.5	1	10.257	-0.001	4288230	486.6	
Aroclor-1260	2	10.280	-0.001	22570525	513.0	2	10.706	-0.001	5241272	507.7	
Aroclor-1260	3	10.656	-0.002	53590437	508.0	3	10.982	-0.002	9944653	521.7	
Aroclor-1260	4	11.055	-0.002	27576712	536.7	4	11.501	-0.002	2727769	527.9	
Aroclor-1260	5	11.245	-0.001	14821315	539.1	NS	---			----	
Total Col1Ave (5 peaks):					522.4	Total Col2Ave (4 peaks):				511.0	RPD = 2
Corrected Ave (4 peaks):					518.3	Corrected Ave (3 peaks):				505.3	RPD = 3
Aroclor-1262	1	10.280	-0.002	22570525	445.0	1	10.257	-0.003	4288230	319.1	
Aroclor-1262	2	10.656	-0.003	53590437	449.6	2	10.706	-0.004	5241272	426.5	
Aroclor-1262	3	11.055	-0.004	27576712	730.5	3	10.982	-0.004	9944653	431.4	
Aroclor-1262	4	11.245	-0.003	14821315	279.7	4	11.561	-0.006	6770329	451.9	
Aroclor-1262	5	11.914	-0.004	11619227	285.7	5	12.303	-0.003	2160996	298.7	
Total Col1Ave (5 peaks):					438.1	Total Col2Ave (5 peaks):				385.5	RPD = 13
Corrected Ave (4 peaks):					365.0	Corrected Ave (4 peaks):				368.9	RPD = 1
Aroclor-1268	1	11.171	-0.004	11970580	105.0	1	11.501	-0.005	2727769	116.3	

Aroclor-1268	2	11.245	-0.001	14821315	117.6	2	11.561	-0.012	6770329	306.2
Aroclor-1268	3	11.644	0.012	6651651	71.0	3	11.965	-0.004	180286	10.3
Aroclor-1268	4	12.417	-0.004	3826383	14.5	4	12.787	-0.006	598449	13.2

Total Col1Ave (4 peaks): 77.0 Total Col2Ave (4 peaks): 111.5 RPD = 37

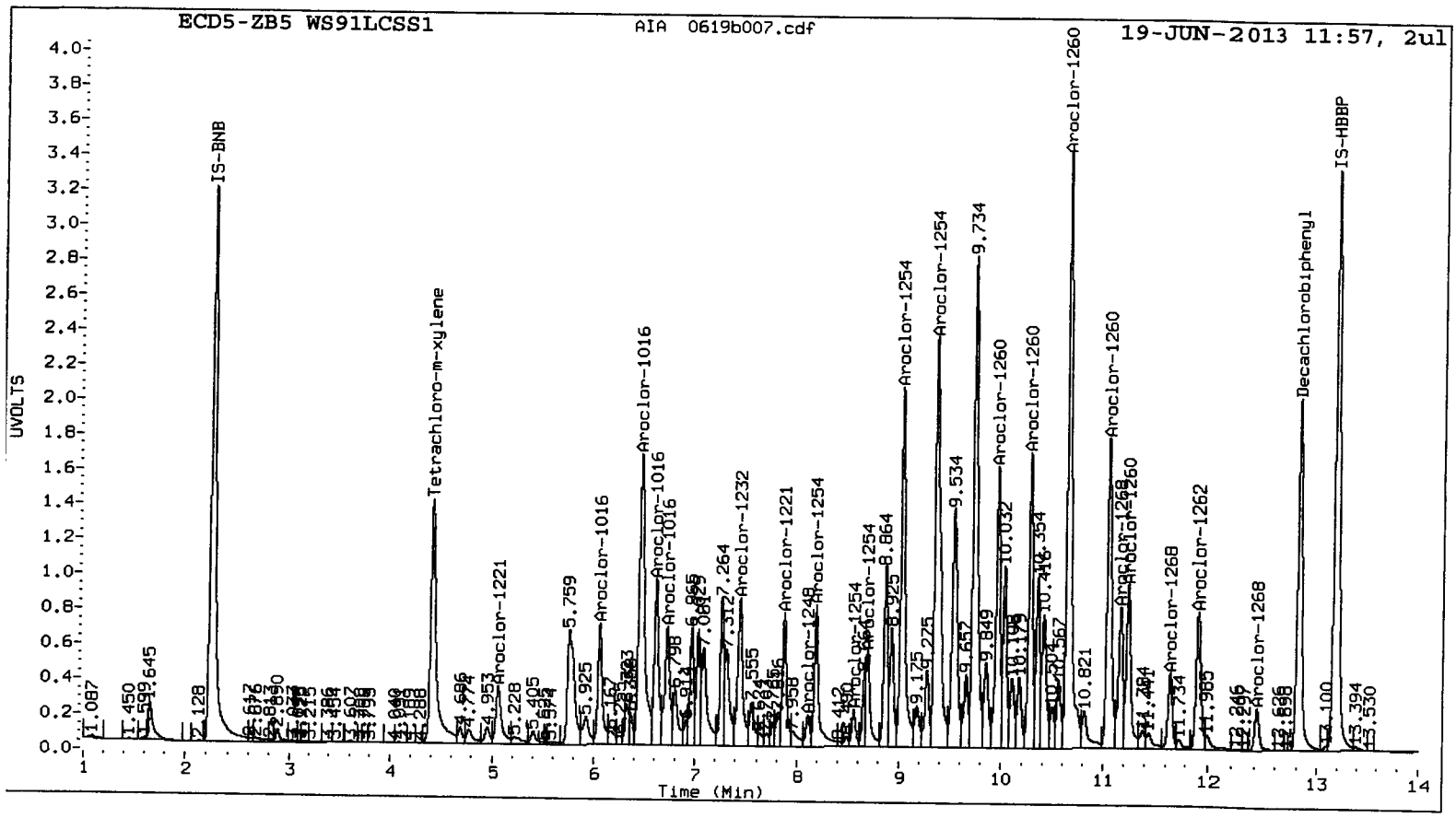
Corrected Ave (3 peaks): 63.5 Corrected Ave (3 peaks): 46.6 RPD = 31

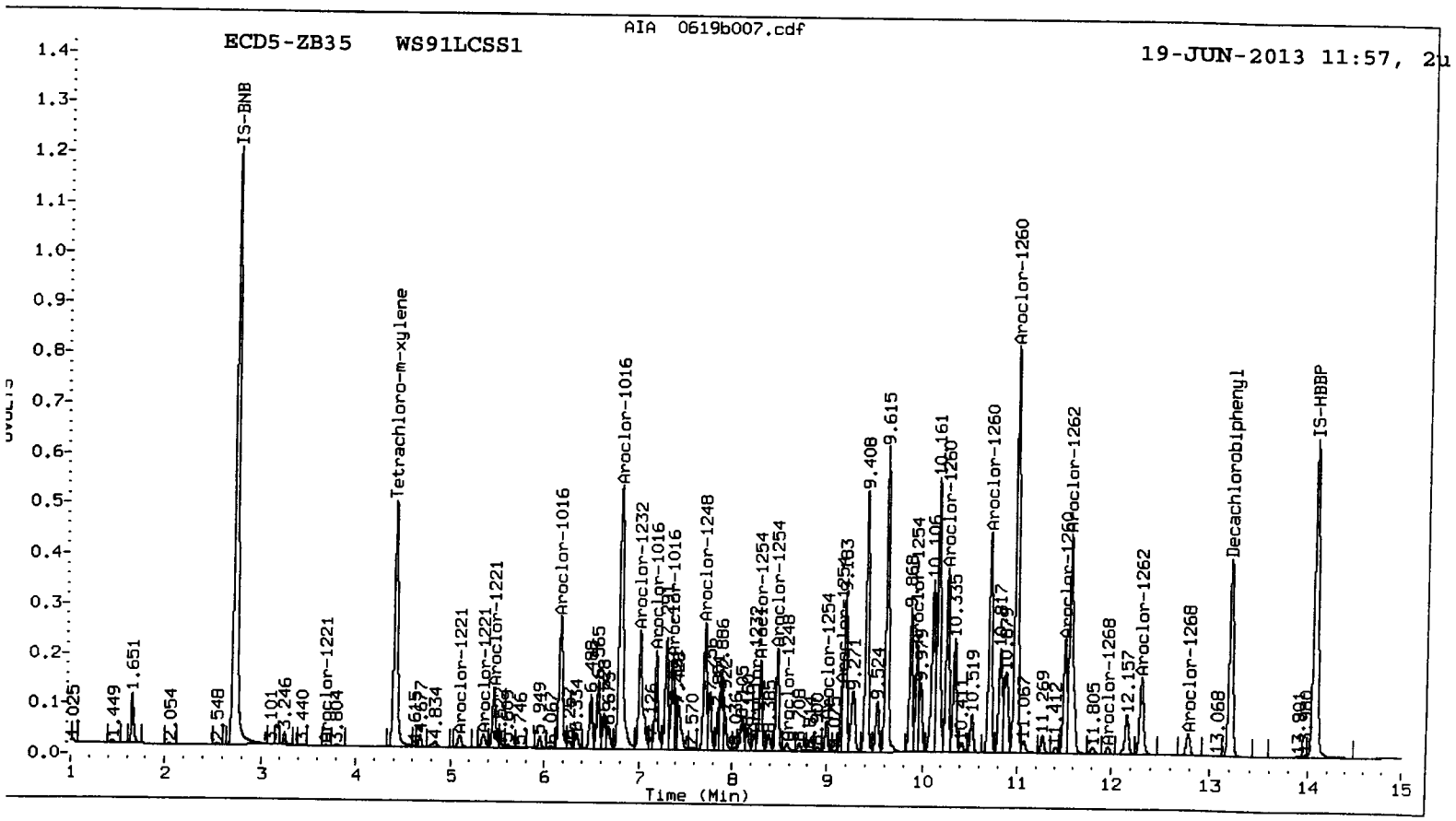
Total PCB Area Col1 (4.510 - 12.726) = 675918739 Col1 Total PCB = 1.0 ppm*

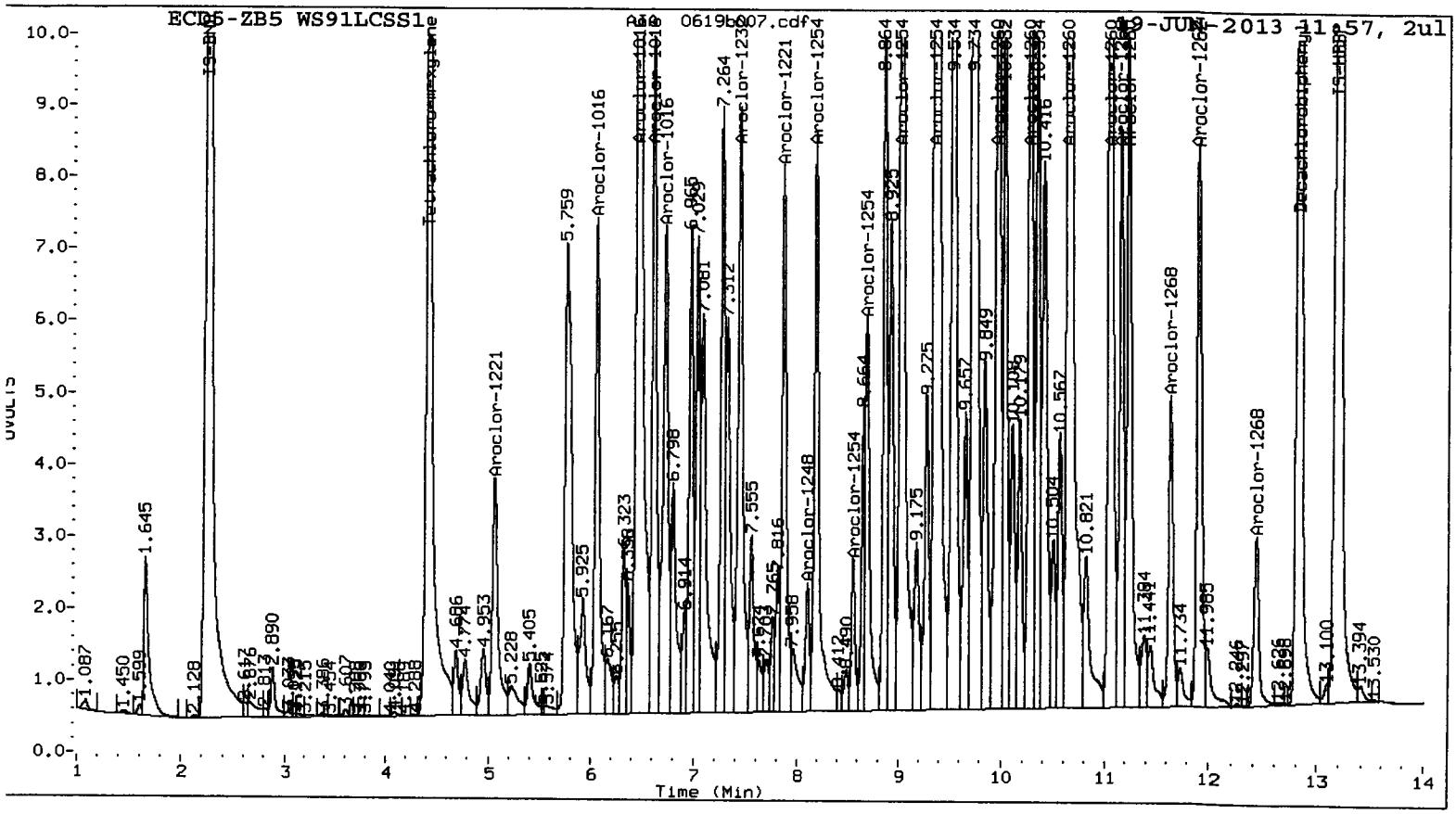
Total PCB Area Col2 (4.510 - 13.101) = 128732391 Col2 Total PCB = 1.0 ppm*

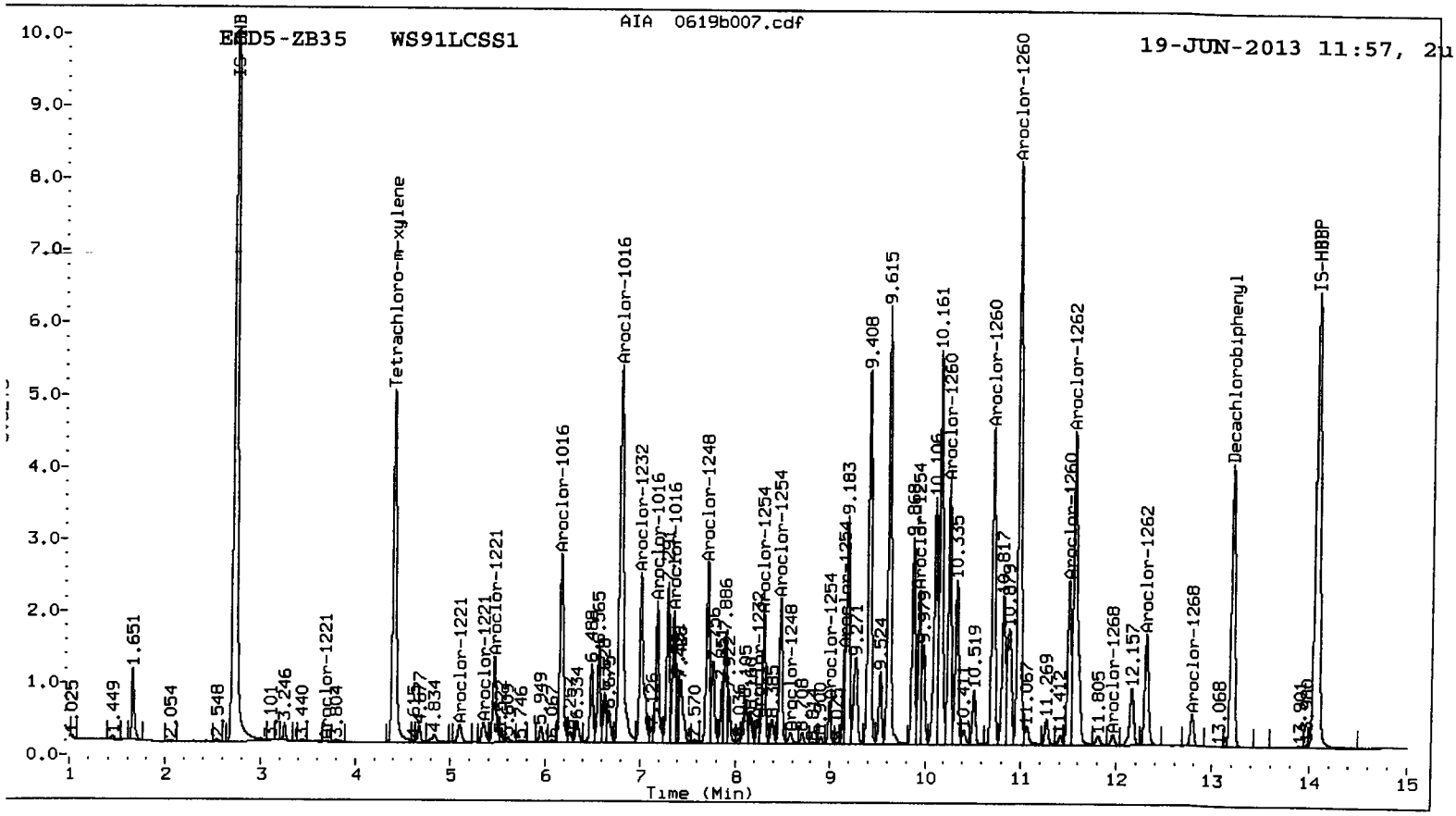
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 WS91LCSS1
AIA 0619b007.cdf
19-JUN-2013 11:57, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 WS91LCSS1
AIA 0619b007.cdf
19-JUN-2013 11:57, 2u
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 WS91LCSS1e
AIA 0619b007.cdf
19-JUN-2013 11:57, 2ul
IS-DCB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD5-ZB35 WS91LCSS1
AIA 0619b007.cdf
19-JUN-2013 11:57, 2u
IS-DCB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0619-1.b/0619b008.d
Data file 2: 20130507.b/0619-2.b/0619b008.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WS91LCSDS1
Client ID: WS91LCSDS1
Injection Date: 19-JUN-2013 12:17
Ical Date: 07-MAY-2013
Matrix: SOIL
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
4.407	-0.003	26454748	4.409	-0.001	6115220	30.3	28.6	5.9	Tetrachloro-m-xylen
12.825	-0.001	35029424	13.202	0.000	5871244	37.1	36.0	3.0	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	75.8	71.4
Decachlorobiphenyl	92.7	90.0

JR 06/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	56304450	15.0
Hexabromobiphenyl	50004151	63263145	26.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	15837614	6.7
Hexabromobiphenyl	9345340	11339654	21.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

WS91:061913

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	6.056	-0.003	10208573	402.2	1	6.161	-0.002	3414267	377.8
Aroclor-1016	2	6.464	-0.003	31993520	409.2	2	6.797	-0.003	7872799	400.7
Aroclor-1016	3	6.614	-0.002	13414384	383.0	3	7.181	-0.001	2146651	417.9
Aroclor-1016	4	6.724	-0.003	10772360	411.6	4	7.354	-0.001	1928680	403.1
Total Col1Ave (4 peaks):					401.5	Total Col2Ave (4 peaks):				399.9 RPD = 0
Corrected Ave (3 peaks):					398.2	Corrected Ave (3 peaks):				397.9 RPD = 1
Aroclor-1221	1	5.059	-0.005	6253055	272.6	1	3.688	-0.006	22189	13.7
Aroclor-1221	2	6.464	-0.004	31993520	4558.5	2	5.093	-0.002	353457	130.1
Aroclor-1221	3	7.875	-0.004	10989560	1108.8	3	5.343	-0.002	340476	230.1
Aroclor-1221	NS	---			----	4	5.457	-0.003	1397855	300.2
Total Col1Ave (3 peaks):					1980.0	Total Col2Ave (4 peaks):				168.5 RPD = 169*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				124.6
Aroclor-1232	1	6.056	-0.004	10208573	978.9	1	6.161	-0.005	3414267	840.0
Aroclor-1232	2	6.464	-0.005	31993520	1002.2	2	6.797	-0.004	7872799	970.2
Aroclor-1232	3	7.438	-0.003	14304184	862.1	3	7.006	-0.005	3261405	963.9
Aroclor-1232	4	7.875	0.001	10989560	576.5	4	8.233	-0.006	352644	124.2
Total Col1Ave (4 peaks):					854.9	Total Col2Ave (4 peaks):				724.6 RPD = 17
Corrected Ave (3 peaks):					805.9	Corrected Ave (3 peaks):				642.7 RPD = 23
Aroclor-1242	1	6.056	-0.004	10208573	503.4	1	6.161	-0.002	3414267	473.2
Aroclor-1242	2	6.464	-0.002	31993520	514.4	2	6.797	-0.003	7872799	496.7
Aroclor-1242	3	6.614	-0.002	13414384	483.4	3	7.006	-0.002	3261405	492.5
Aroclor-1242	4	7.875	0.004	10989560	320.7	4	8.233	-0.002	352644	63.6
Total Col1Ave (4 peaks):					455.5	Total Col2Ave (4 peaks):				381.5 RPD = 18
Corrected Ave (3 peaks):					435.8	Corrected Ave (3 peaks):				343.1 RPD = 24
Aroclor-1248	1	6.464	0.000	31993520	807.4	1	6.797	0.001	7872799	793.3
Aroclor-1248	2	7.438	-0.002	14304184	321.0	2	7.701	-0.002	2724530	331.0
Aroclor-1248	3	7.875	0.003	10989560	193.9	3	8.233	-0.002	352644	41.4
Aroclor-1248	4	8.110	0.003	2506187	63.4	4	8.578	-0.002	215273	19.4
Total Col1Ave (4 peaks):					346.4	Total Col2Ave (4 peaks):				296.3 RPD = 16
Corrected Ave (3 peaks):					192.8	Corrected Ave (3 peaks):				130.6 RPD = 38
Aroclor-1254	1	8.190	-0.001	13111951	249.7	1	8.295	-0.001	1892054	246.4
Aroclor-1254	2	8.559	-0.006	2839963	81.9	2	8.471	-0.001	2156792	227.3
Aroclor-1254	3	8.695	-0.004	12508810	173.1	3	8.993	-0.001	618683	85.1
Aroclor-1254	4	9.026	-0.025	30884755	415.0	4	9.145	0.000	1038058	66.7
Aroclor-1254	5	9.358	-0.004	44208554	1570.7	5	9.935	0.004	2376563	271.2
Total Col1Ave (5 peaks):					498.1	Total Col2Ave (5 peaks):				179.3 RPD = 94*
Corrected Ave (4 peaks):					229.9	Corrected Ave (4 peaks):				156.4 RPD = 38
Aroclor-1260	1	9.964	-0.001	22966934	443.3	1	10.257	-0.001	4290204	417.1
Aroclor-1260	2	10.280	-0.001	22709959	442.0	2	10.706	-0.001	5264936	437.0
Aroclor-1260	3	10.656	-0.001	54783959	444.7	3	10.982	-0.001	10140840	455.9
Aroclor-1260	4	11.056	-0.001	28247546	470.8	4	11.503	-0.001	2815511	466.9
Aroclor-1260	5	11.246	0.000	15267674	475.6	NS	---			----
Total Col1Ave (5 peaks):					455.3	Total Col2Ave (4 peaks):				444.2 RPD = 2
Corrected Ave (4 peaks):					450.2	Corrected Ave (3 peaks):				436.7 RPD = 3
Aroclor-1262	1	10.280	-0.002	22709959	383.4	1	10.257	-0.003	4290204	273.5
Aroclor-1262	2	10.656	-0.002	54783959	393.6	2	10.706	-0.004	5264936	367.1
Aroclor-1262	3	11.056	-0.004	28247546	640.8	3	10.982	-0.003	10140840	377.0
Aroclor-1262	4	11.246	-0.002	15267674	246.8	4	11.562	-0.005	6911340	395.3
Aroclor-1262	5	11.915	-0.003	12307830	259.2	5	12.305	-0.001	2294039	271.7
Total Col1Ave (5 peaks):					384.8	Total Col2Ave (5 peaks):				336.9 RPD = 13
Corrected Ave (4 peaks):					320.7	Corrected Ave (4 peaks):				322.3 RPD = 0
Aroclor-1268	1	11.172	-0.003	12319782	92.5	1	11.503	-0.004	2815511	102.9

Aroclor-1268	2	11.246	0.000	15267674	103.7	2	11.562	-0.011	6911340	267.9
Aroclor-1268	3	11.644	0.012	6853875	62.7	3	11.965	-0.004	186385	9.1
Aroclor-1268	4	12.418	-0.004	4071379	13.2	4	12.789	-0.003	643639	12.2
Total Col1Ave (4 peaks):					68.0	Total Col2Ave (4 peaks):			98.0	RPD = 36
Corrected Ave (3 peaks):					56.1	Corrected Ave (3 peaks):			41.4	RPD = 30

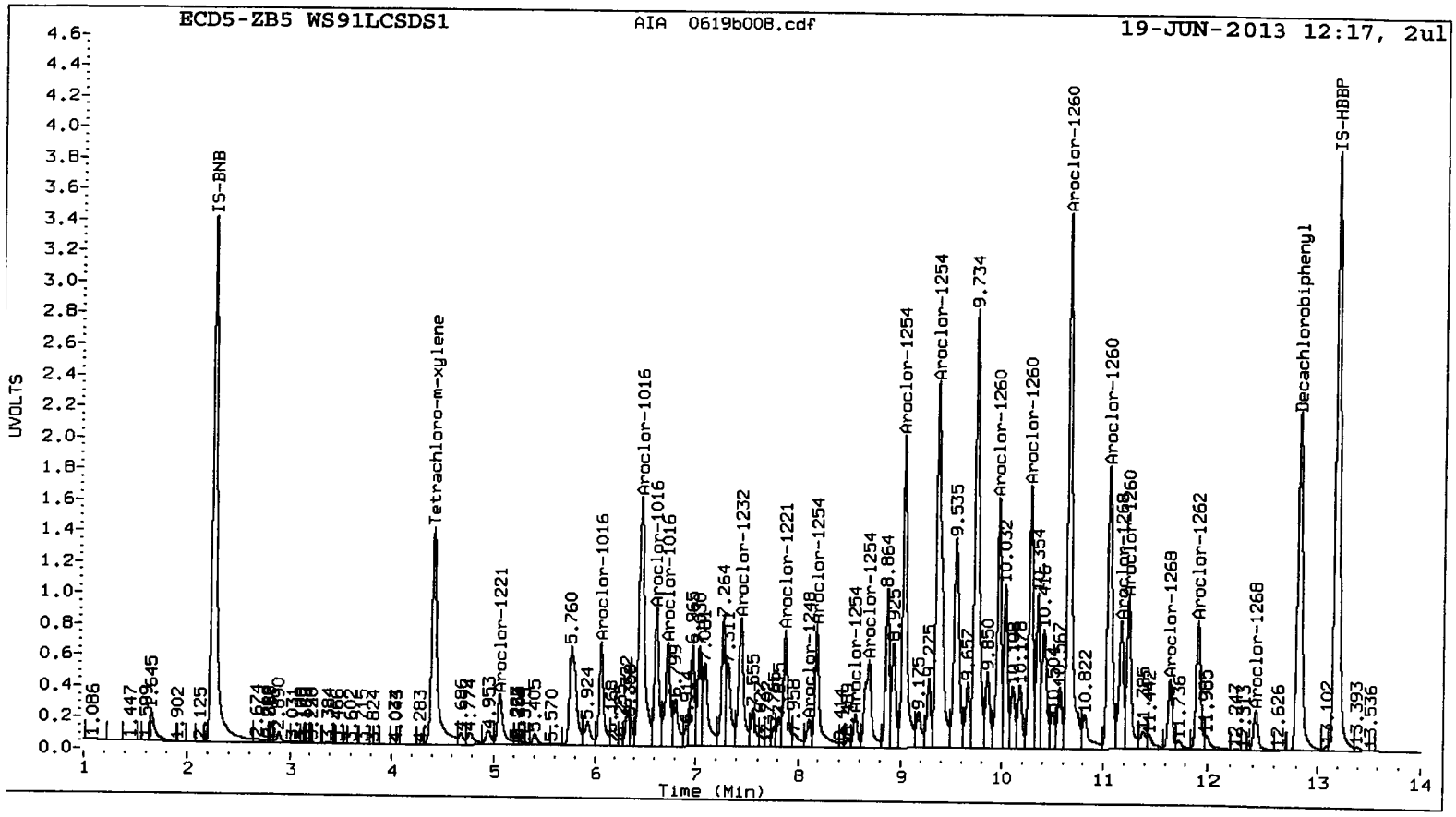
Total PCB Area Col1 (4.510 - 12.726) = 669471370 Col1 Total PCB = 1.0 ppm*

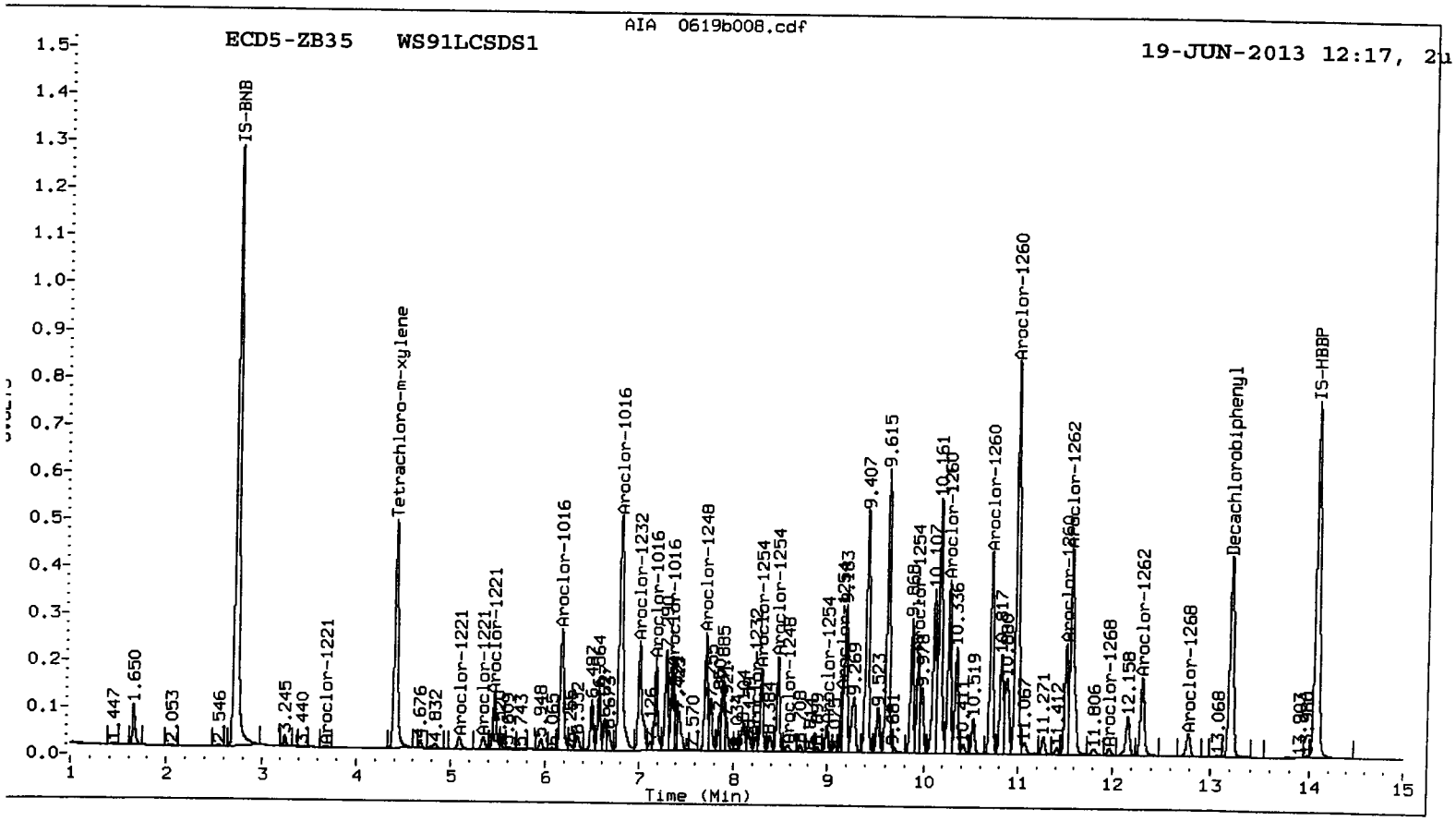
Total PCB Area Col2 (4.510 - 13.101) = 127140567 Col2 Total PCB = 0.9 ppm*

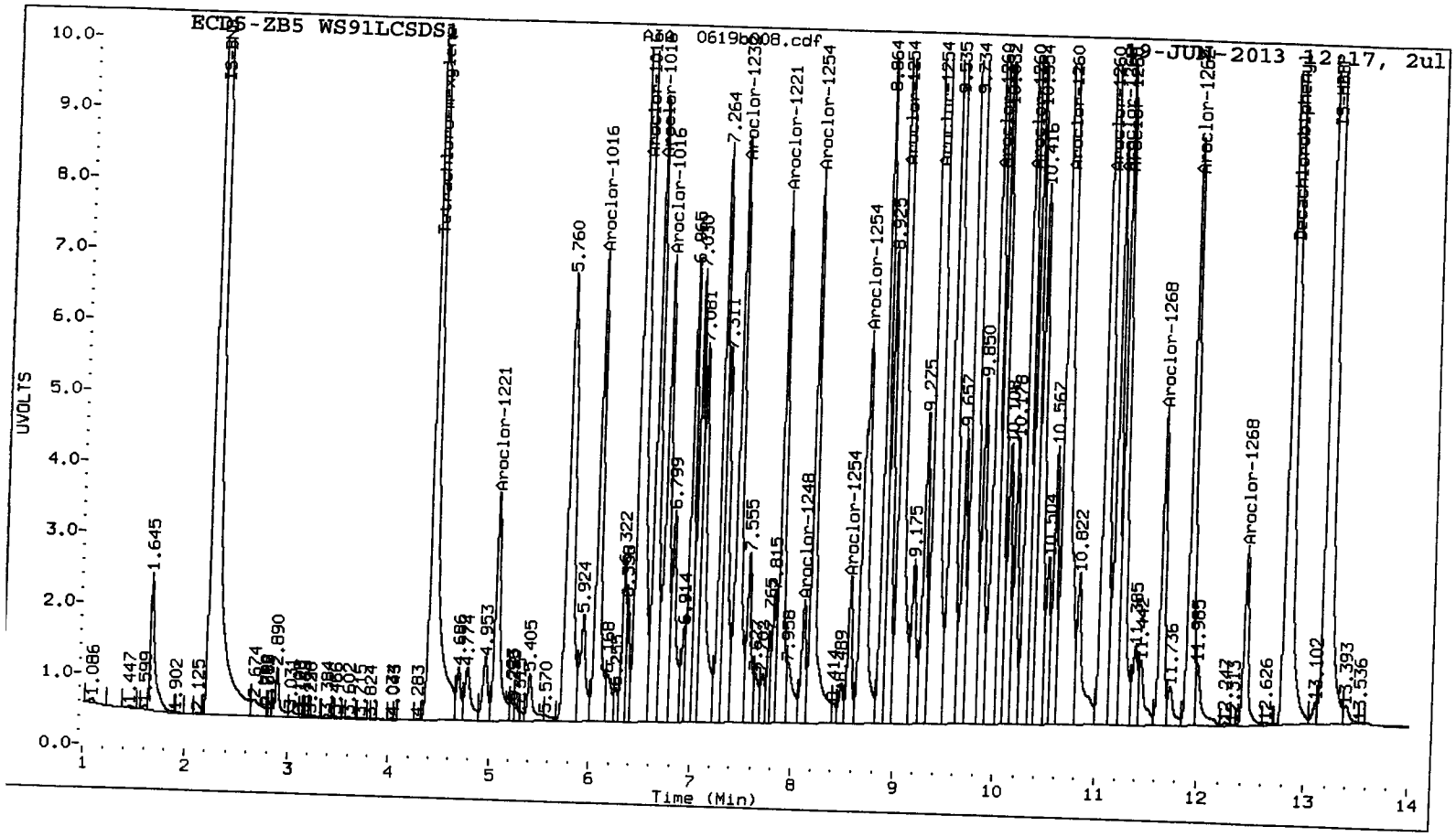
* Quantitated against AR1660 0.25ppm in Ical

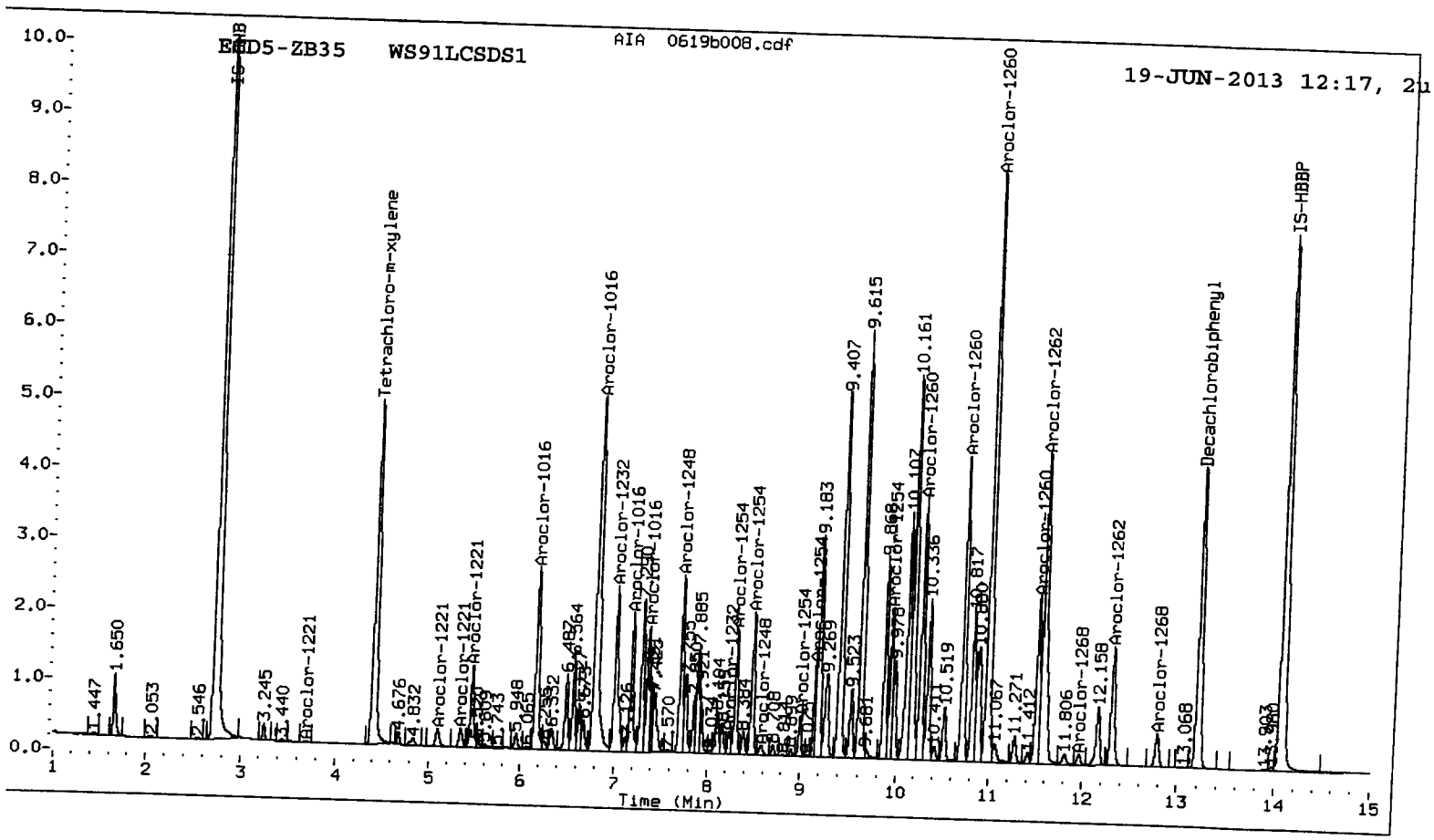
PCB-Form 10 Mod.

USA 013851


ECD5-ZB5 WS91LCSDS1
AIA 0619b008.cdf
19-JUN-2013 12:17, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 WS91LCSDS1
AIA 0619b008.cdf
19-JUN-2013 12:17, 2u
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 WS91LCSDS1
AIA 0619b008.cdf
19-JUN-2013 12:17, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB35 WS91LCSDS1
AIA 0619b008.cdf
19-JUN-2013 12:17, 2u
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0619-1.b/0619b011.d
Data file 2: 20130507.b/0619-2.b/0619b011.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WS91A
Client ID: CL-MH-SPS-20130605-
Injection Date: 19-JUN-2013 13:17
Ical Date: 07-MAY-2013
Matrix: SOIL
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
4.412	0.002	27969281	4.416	0.006	6775603	29.2	27.5	5.9	Tetrachloro-m-xylen
12.836	0.010	25023476	13.210	0.009	4395308	30.2	27.7	8.5	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	73.0	68.8
Decachlorobiphenyl	75.4	69.3

JR
06/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	61789803	26.2
Hexabromobiphenyl	50004151	55508024	11.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	18200563	22.6
Hexabromobiphenyl	9345340	11024844	18.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

WS91 : 21354

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.063	0.004	509082	18.3	1	6.170	0.007	96224	9.3
Aroclor-1016	2	6.466	-0.001	637517	7.4	2	6.799	-0.001	311277	13.8
Aroclor-1016	3	6.617	0.001	264015	6.9	3	7.186	0.004	53208	9.0
Aroclor-1016	4	6.727	0.000	213989	7.5	4	7.361	0.006	88400	16.1
	Total Col1Ave (4 peaks):				10.0	Total Col2Ave (4 peaks):				12.0 RPD = 18
	Corrected Ave (3 peaks):				7.3	Corrected Ave (3 peaks):				10.7 RPD = 38
Aroclor-1221	1	5.058	-0.006	121609	4.8	1	3.685	-0.009	1084945	581.5
Aroclor-1221	2	6.466	-0.002	637517	82.8	2	5.115	0.021	113574	36.4
Aroclor-1221	3	7.881	0.003	4269461	292.5	3	5.378	0.033	434883	255.7
Aroclor-1221	NS	---			----	4	5.488	0.027	511333	95.6
	Total Col1Ave (3 peaks):				160.0	Total Col2Ave (4 peaks):				242.3 RPD = 41*
	Corrected Ave: 4 3 Peaks					Corrected Ave (3 peaks):				129.2
Aroclor-1232	1	6.063	0.003	509082	44.5	1	6.170	0.004	96224	20.6
Aroclor-1232	2	6.466	-0.003	637517	18.2	2	6.799	-0.002	311277	33.4
Aroclor-1232	3	7.440	-0.001	332682	18.3	3	7.014	0.003	100175	25.8
Aroclor-1232	4	7.881	0.007	4269461	204.1	4	8.241	0.002	157152	48.2
	Total Col1Ave (4 peaks):				71.3	Total Col2Ave (4 peaks):				32.0 RPD = 76*
	Corrected Ave (3 peaks):				27.0	Corrected Ave (3 peaks):				26.6 RPD = 2
Aroclor-1242	1	6.063	0.004	509082	22.9	1	6.170	0.007	96224	11.6
Aroclor-1242	2	6.466	0.000	637517	9.3	2	6.799	0.000	311277	17.1
Aroclor-1242	3	6.617	0.001	264015	8.7	3	7.014	0.006	100175	13.2
Aroclor-1242	4	7.881	0.010	4269461	113.5	4	8.241	0.006	157152	24.6
	Total Col1Ave (4 peaks):				38.6	Total Col2Ave (4 peaks):				16.6 RPD = 80*
	Corrected Ave (3 peaks):				13.6	Corrected Ave (3 peaks):				14.0 RPD = 2
Aroclor-1248	1	6.466	0.002	637517	14.7	1	6.799	0.003	311277	27.3
Aroclor-1248	2	7.440	0.000	332682	6.8	2	7.712	0.009	252982	26.7
Aroclor-1248	3	7.881	0.010	4269461	68.7	3	8.241	0.005	157152	16.0
Aroclor-1248	4	8.111	0.004	1579563	36.4	4	8.578	-0.003	273132	21.5
	Total Col1Ave (4 peaks):				31.6	Total Col2Ave (4 peaks):				22.9 RPD = 32
	Corrected Ave (3 peaks):				19.3	Corrected Ave (3 peaks):				21.4 RPD = 10
Aroclor-1254	1	8.197	0.006	5421994	94.1	1	8.302	0.007	1068804	121.1
Aroclor-1254	2	8.583	0.019	3340076	87.8	2	8.481	0.008	1315683	120.7
Aroclor-1254	3	8.701	0.002	8619705	108.7	3	9.001	0.008	523285	62.7
Aroclor-1254	4	9.037	-0.014	18845913	230.8	4	9.151	0.006	909973	50.9
Aroclor-1254	5	9.369	0.007	28151240	911.4	5	9.943	0.012	1663575	165.2
	Total Col1Ave (5 peaks):				286.6	Total Col2Ave (5 peaks):				104.1 RPD = 93*
	Corrected Ave (4 peaks):				100.3	Corrected Ave (4 peaks):				108.8 RPD = 38
Aroclor-1260	1	9.974	0.009	11918506	262.2	1	10.267	0.009	2503279	250.3
Aroclor-1260	2	10.291	0.010	12588981	279.3	2	10.716	0.009	3424627	292.4
Aroclor-1260	3	10.669	0.011	40495685	374.6	3	10.994	0.011	7302472	337.6
Aroclor-1260	4	11.066	0.010	19845518	376.9	4	11.512	0.008	1588394	270.9
Aroclor-1260	5	11.259	0.013	7631924	270.9	NS	---			----
	Total Col1Ave (5 peaks):				312.8	Total Col2Ave (4 peaks):				287.8 RPD = 8
	Corrected Ave (4 peaks):				296.8	Corrected Ave (3 peaks):				271.2 RPD = 9
Aroclor-1262	1	10.291	0.008	12588981	242.2	1	10.267	0.008	2503279	164.2
Aroclor-1262	2	10.669	0.010	40495685	331.6	2	10.716	0.006	3424627	245.6
Aroclor-1262	3	11.066	0.007	19845518	513.1	3	10.994	0.009	7302472	279.2
Aroclor-1262	4	11.259	0.011	7631924	140.6	4	11.570	0.003	4678247	275.2
Aroclor-1262	5	11.925	0.007	7702217	184.9	5	12.313	0.007	1338019	163.0
	Total Col1Ave (5 peaks):				282.5	Total Col2Ave (5 peaks):				225.4 RPD = 22
	Corrected Ave (4 peaks):				224.8	Corrected Ave (4 peaks):				212.0 RPD = 6
Aroclor-1268	1	11.184	0.009	5914321	50.6	1	11.512	0.005	1588394	59.7

Aroclor-1268	2	11.259	0.013	7631924	59.1	2	11.570	-0.003	4678247	186.5
Aroclor-1268	3	11.657	0.025	4568157	47.6	3	11.974	0.005	69231	3.5
Aroclor-1268	4	12.432	0.010	1364309	5.0	4	12.798	0.005	281639	5.5

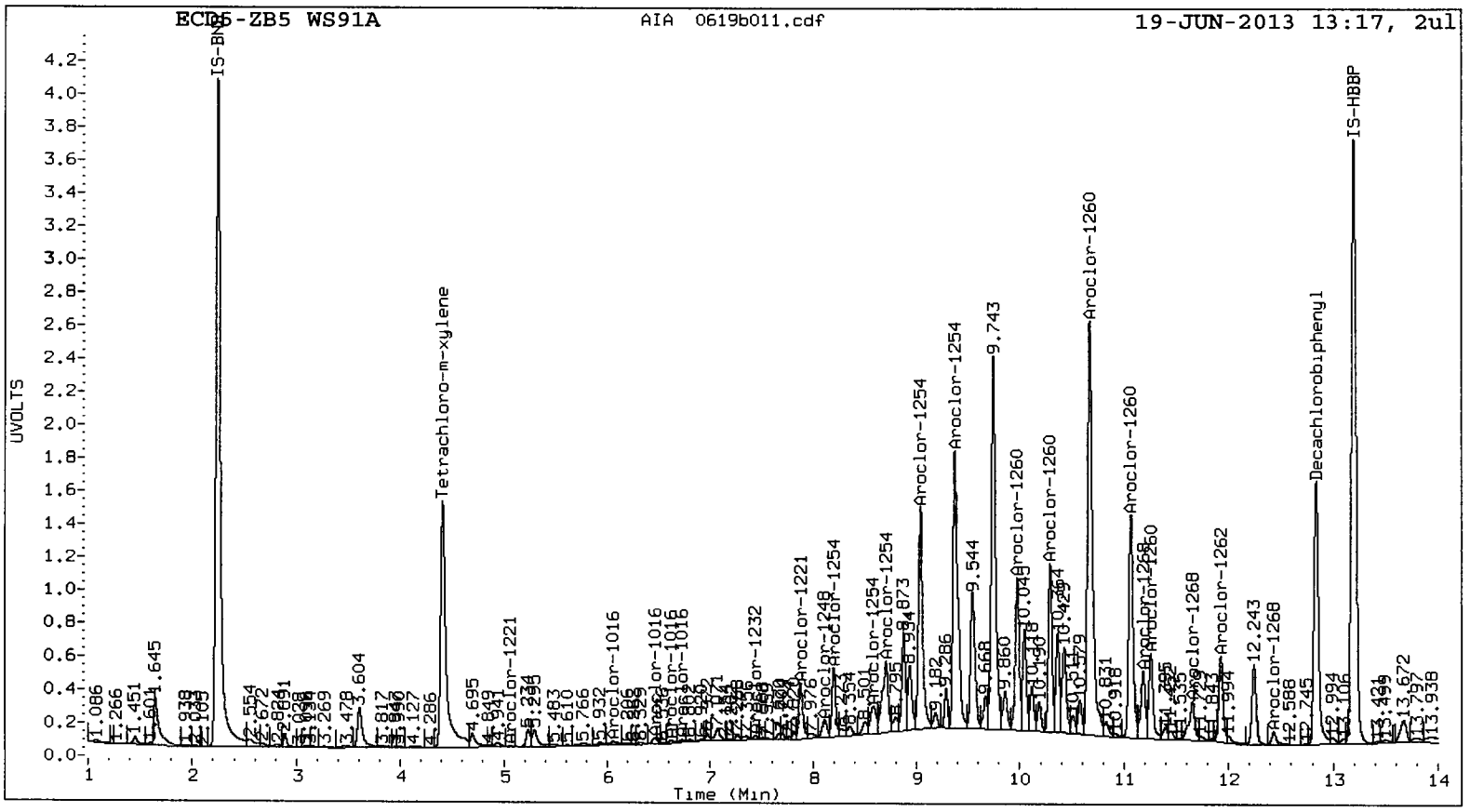
Total Col1Ave (4 peaks): 40.6 Total Col2Ave (4 peaks): 63.8 RPD = 44*
Corrected Ave (3 peaks): 34.4 Corrected Ave (3 peaks): 22.9 RPD = 40*

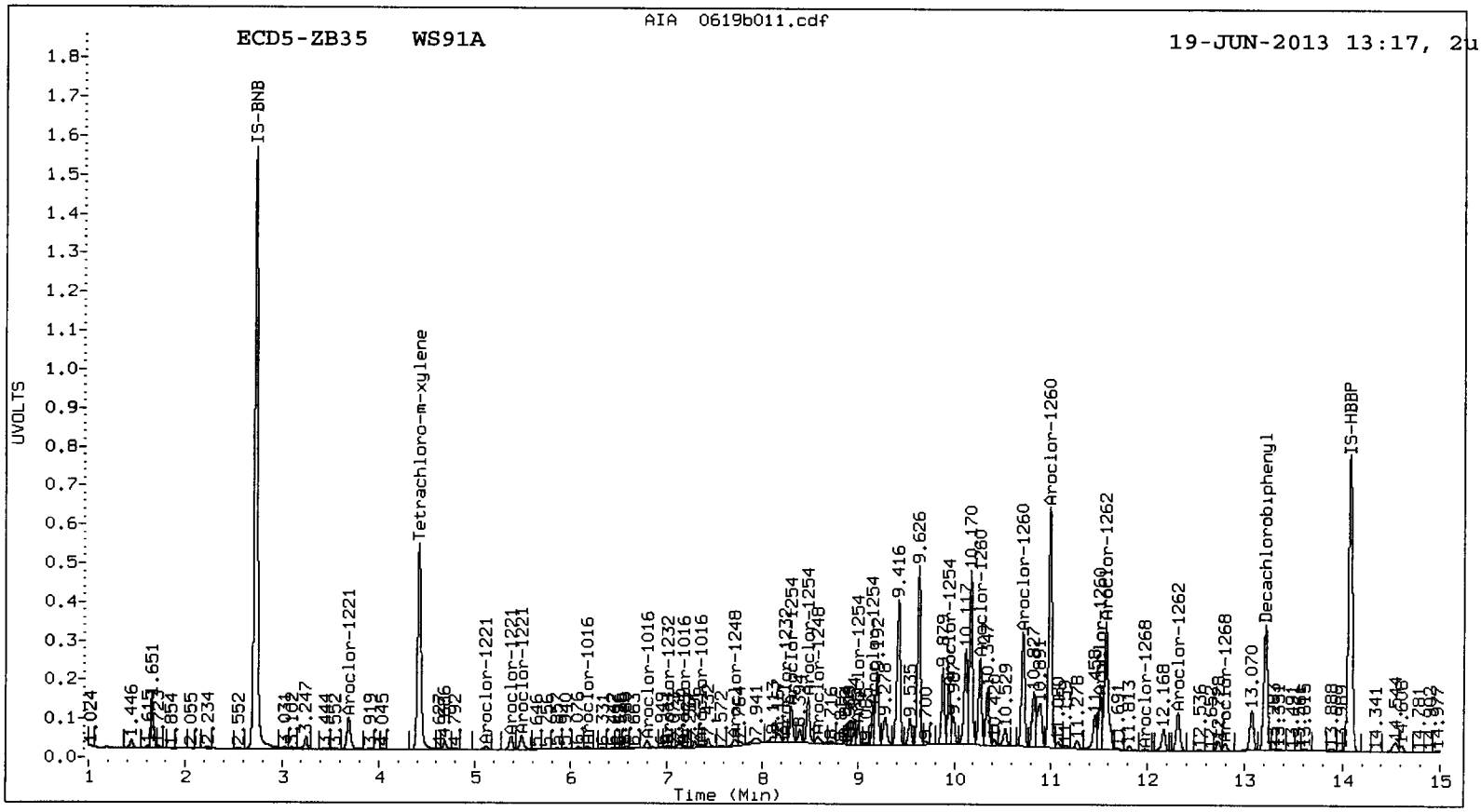
Total PCB Area Col1 (4.510 - 12.726) = 313939134 Col1 Total PCB = 0.4 ppm*

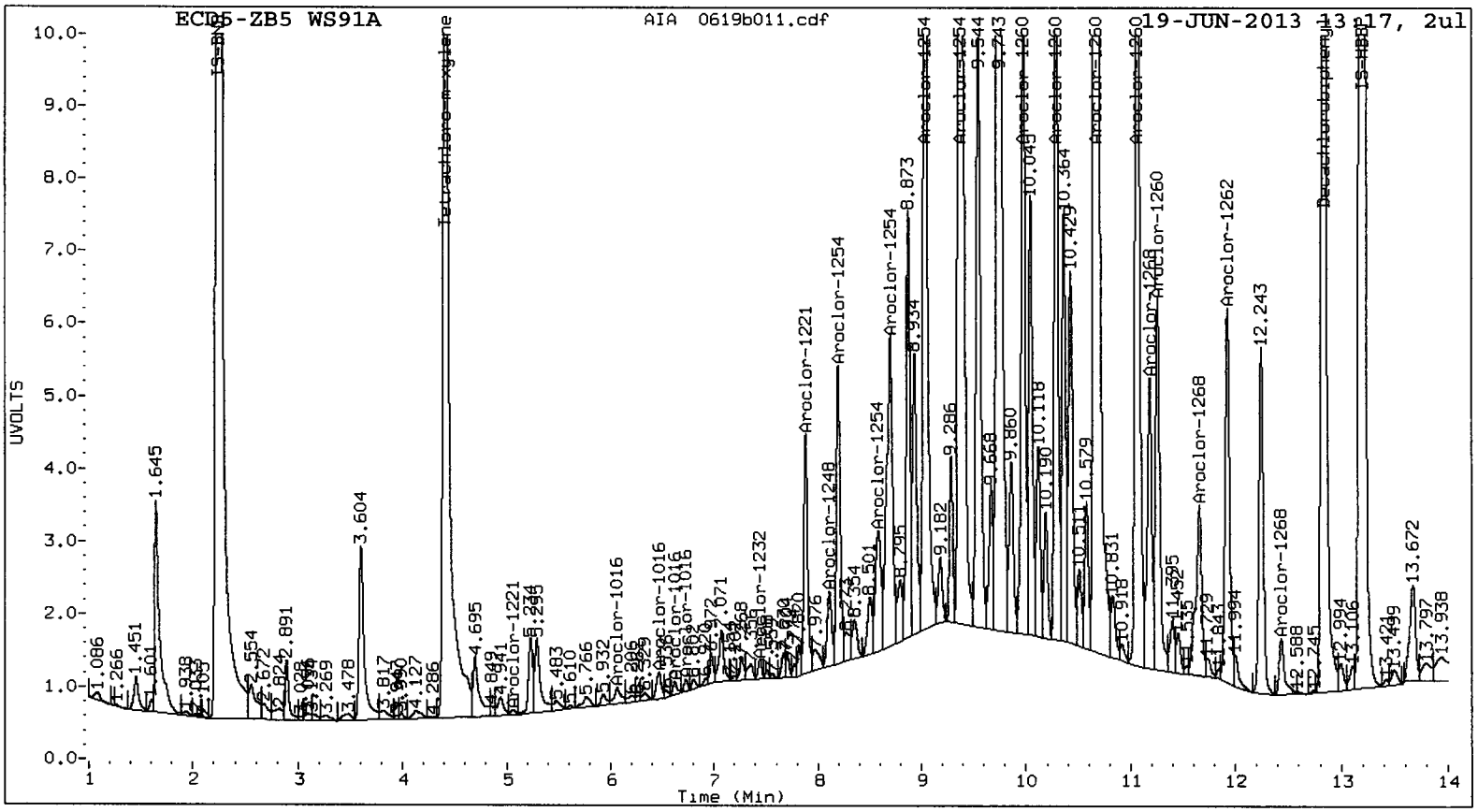
Total PCB Area Col2 (4.510 - 13.101) = 67578840 Col2 Total PCB = 0.4 ppm*

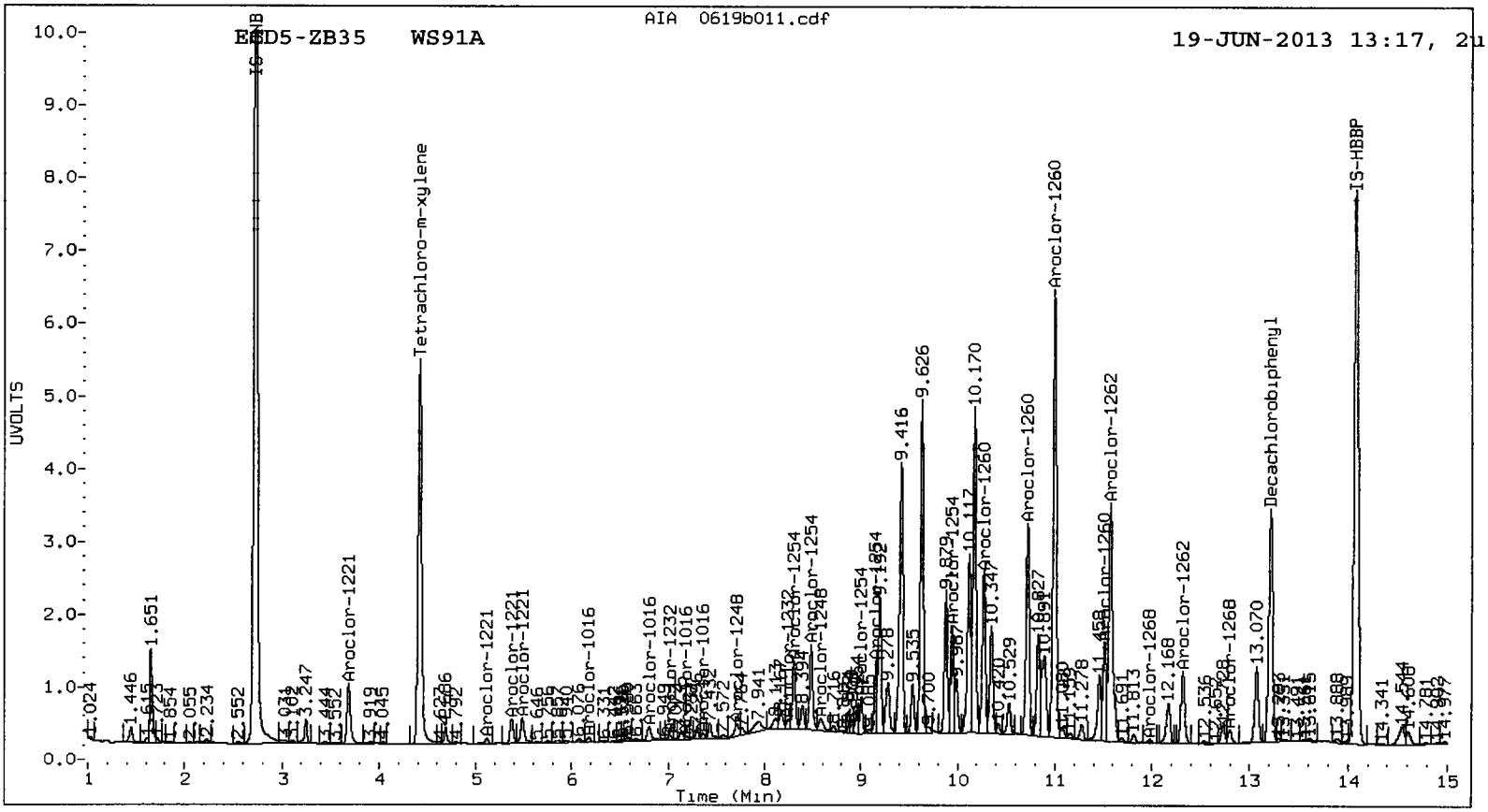
* Quantitated against AR1660 0.25ppm in Ical

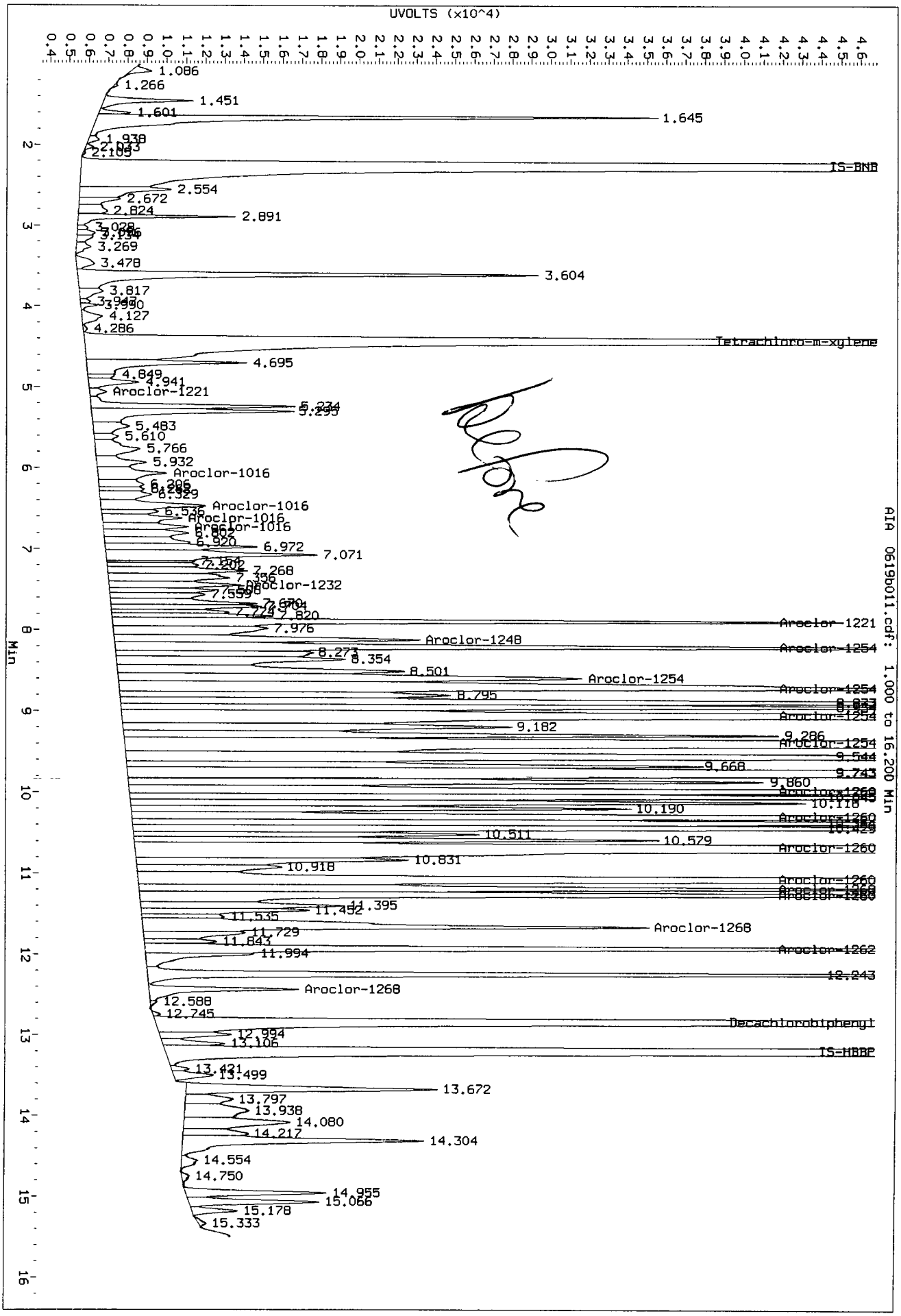
W391:01356


ECD5-ZB5 WS91A
AIA 0619b011.cdf
19-JUN-2013 13:17, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


AIA 0619b011.cdf
ECD5-ZB35 WS91A
19-JUN-2013 13:17, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 WS91A
AIA 0619b011.cdf
19-JUN-2013 13:17, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB35 WS91A
AIA 0619b011.cdf
19-JUN-2013 13:17, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268



Data File: /chem2/ecd5.i/20130507.b/0619-1.b/0619b011.d/0619b011.cdf
Injection Date: 19-JUN-2013 13:17
Instrument: ecd5.i
Client Sample ID: CL-MH-SPS-20130605-

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0619-1.b/0619b012.d
Data file 2: 20130507.b/0619-2.b/0619b012.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WS91AMS
Client ID: CL-MH-SPS-20130 MS
Injection Date: 19-JUN-2013 13:37
Ical Date: 07-MAY-2013
Matrix: SOIL
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
4.413	0.003	25089805	4.415	0.005	5947775	34.8	32.7	6.1	Tetrachloro-m-xylen
12.836	0.010	23258760	13.209	0.007	4015526	37.1	34.5	7.5	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	87.0	81.8
Decachlorobiphenyl	92.9	86.2

JL 06/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	46513754	-5.0
Hexabromobiphenyl	50004151	41911810	-16.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	13443179	-9.4
Hexabromobiphenyl	9345340	8095531	-13.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

WS91 : 91309

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	6.064	0.005	8017051	382.4	1	6.168	0.005	3025176	394.4
Aroclor-1016	2	6.469	0.002	26193914	405.6	2	6.803	0.003	6618794	396.9
Aroclor-1016	3	6.619	0.003	10753589	371.7	3	7.185	0.003	1624001	372.4
Aroclor-1016	4	6.730	0.003	7714249	356.8	4	7.360	0.005	1465238	360.8
	Total Col1Ave (4 peaks):				379.1	Total Col2Ave (4 peaks):				381.1 RPD = 1
	Corrected Ave (3 peaks):				370.3	Corrected Ave (3 peaks):				375.9 RPD = 1
Aroclor-1221	1	5.064	0.001	5171141	272.9	1	3.684	-0.010	806257	585.0
Aroclor-1221	2	6.469	0.001	26193914	4517.7	2	5.099	0.004	340146	147.5
Aroclor-1221	3	7.883	0.005	9542407	1165.5	3	5.370	0.025	631389	502.6
Aroclor-1221	NS	---			----	4	5.464	0.003	1741498	440.6
	Total Col1Ave (3 peaks):				1985.3	Total Col2Ave (4 peaks):				418.9 RPD = 130*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				363.6
Aroclor-1232	1	6.064	0.004	8017051	930.5	1	6.168	0.002	3025176	876.8
Aroclor-1232	2	6.469	0.000	26193914	993.2	2	6.803	0.001	6618794	961.0
Aroclor-1232	3	7.446	0.004	9249529	674.8	3	7.010	-0.001	2542530	885.3
Aroclor-1232	4	7.883	0.009	9542407	606.0	4	8.239	0.000	453440	188.1
	Total Col1Ave (4 peaks):				801.8	Total Col2Ave (4 peaks):				727.8 RPD = 10
	Corrected Ave (3 peaks):				737.1	Corrected Ave (3 peaks):				650.1 RPD = 13
Aroclor-1242	1	6.064	0.004	8017051	478.6	1	6.168	0.005	3025176	493.9
Aroclor-1242	2	6.469	0.003	26193914	509.8	2	6.803	0.003	6618794	492.0
Aroclor-1242	3	6.619	0.003	10753589	469.1	3	7.010	0.002	2542530	452.3
Aroclor-1242	4	7.883	0.012	9542407	337.1	4	8.239	0.004	453440	96.3
	Total Col1Ave (4 peaks):				448.6	Total Col2Ave (4 peaks):				383.6 RPD = 16
	Corrected Ave (3 peaks):				428.2	Corrected Ave (3 peaks):				346.9 RPD = 21
Aroclor-1248	1	6.469	0.005	26193914	800.2	1	6.803	0.006	6618794	785.7
Aroclor-1248	2	7.446	0.005	9249529	251.2	2	7.708	0.005	2307826	330.3
Aroclor-1248	3	7.883	0.012	9542407	203.8	3	8.239	0.004	453440	62.7
Aroclor-1248	4	8.116	0.008	2194649	67.2	4	8.580	-0.001	441387	47.0
	Total Col1Ave (4 peaks):				330.6	Total Col2Ave (4 peaks):				306.4 RPD = 8
	Corrected Ave (3 peaks):				174.1	Corrected Ave (3 peaks):				146.7 RPD = 17
Aroclor-1254	1	8.199	0.008	10725635	247.3	1	8.301	0.006	2191504	336.2
Aroclor-1254	2	8.571	0.006	3818774	133.4	2	8.479	0.006	2625847	326.1
Aroclor-1254	3	8.703	0.004	12736873	213.4	3	9.000	0.007	1165428	188.9
Aroclor-1254	4	9.037	-0.015	33501544	544.9	4	9.151	0.006	1533729	116.1
Aroclor-1254	5	9.370	0.009	49911602	2146.6	5	9.942	0.012	2918731	392.3
	Total Col1Ave (5 peaks):				657.1	Total Col2Ave (5 peaks):				271.9 RPD = 83*
	Corrected Ave (4 peaks):				284.7	Corrected Ave (4 peaks):				241.8 RPD = 16
Aroclor-1260	1	9.975	0.010	22536221	656.6	1	10.267	0.009	4862165	662.2
Aroclor-1260	2	10.292	0.010	23170777	680.7	2	10.715	0.008	6332600	736.3
Aroclor-1260	3	10.668	0.011	68238709	836.1	3	10.993	0.010	12853865	809.4
Aroclor-1260	4	11.065	0.008	33479037	842.2	4	11.512	0.008	3303852	767.4
Aroclor-1260	5	11.258	0.012	15187060	714.1	NS	---			----
	Total Col1Ave (5 peaks):				745.9	Total Col2Ave (4 peaks):				743.8 RPD = 0
	Corrected Ave (4 peaks):				721.9	Corrected Ave (3 peaks):				722.0 RPD = 0
Aroclor-1262	1	10.292	0.009	23170777	590.5	1	10.267	0.007	4862165	434.2
Aroclor-1262	2	10.668	0.010	68238709	740.1	2	10.715	0.005	6332600	618.5
Aroclor-1262	3	11.065	0.006	33479037	1146.4	3	10.993	0.008	12853865	669.3
Aroclor-1262	4	11.258	0.010	15187050	370.5	4	11.569	0.002	8528908	683.3
Aroclor-1262	5	11.927	0.009	13526856	430.0	5	12.313	0.007	2522490	418.5
	Total Col1Ave (5 peaks):				655.5	Total Col2Ave (5 peaks):				564.8 RPD = 15
	Corrected Ave (4 peaks):				532.8	Corrected Ave (4 peaks):				535.1 RPD = 0
Aroclor-1268	1	11.182	0.007	12008424	136.2	1	11.512	0.005	3303852	169.1

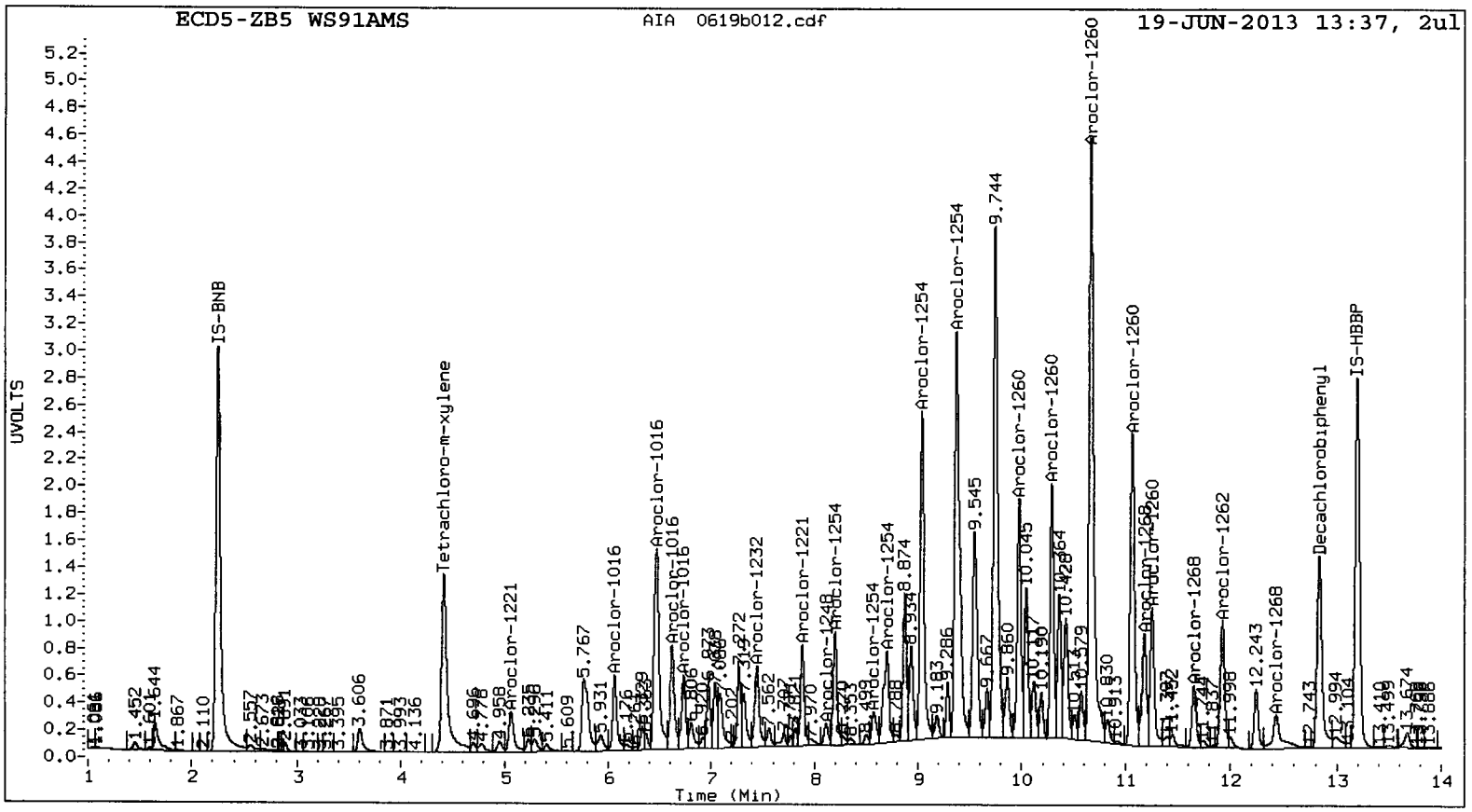
Aroclor-1268 2	11.258	0.012	15187050	155.7	2	11.569	-0.004	8528908	463.0
Aroclor-1268 3	11.655	0.023	6482691	89.5	3	11.974	0.005	165863	11.4
Aroclor-1268 4	12.431	0.009	6716324	32.9	4	12.797	0.005	630942	16.7
Total Col1Ave (4 peaks):				103.6	Total Col2Ave (4 peaks):			165.0	RPD = 46*
Corrected Ave (3 peaks):				86.2	Corrected Ave (3 peaks):			65.7	RPD = 27

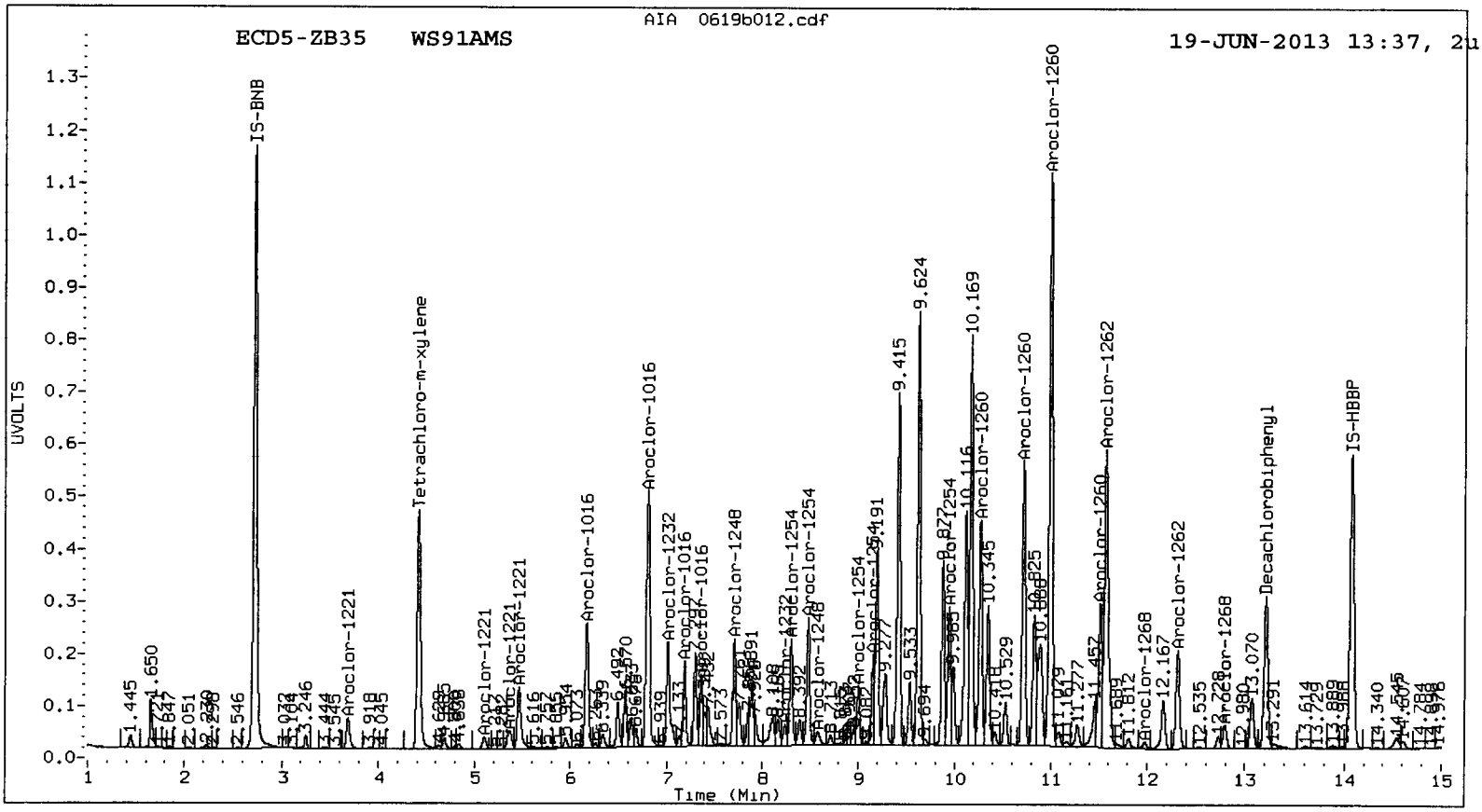
Total PCB Area Col1 (4.510 - 12.726) = 652865772 Col1 Total PCB = 1.1 ppm*

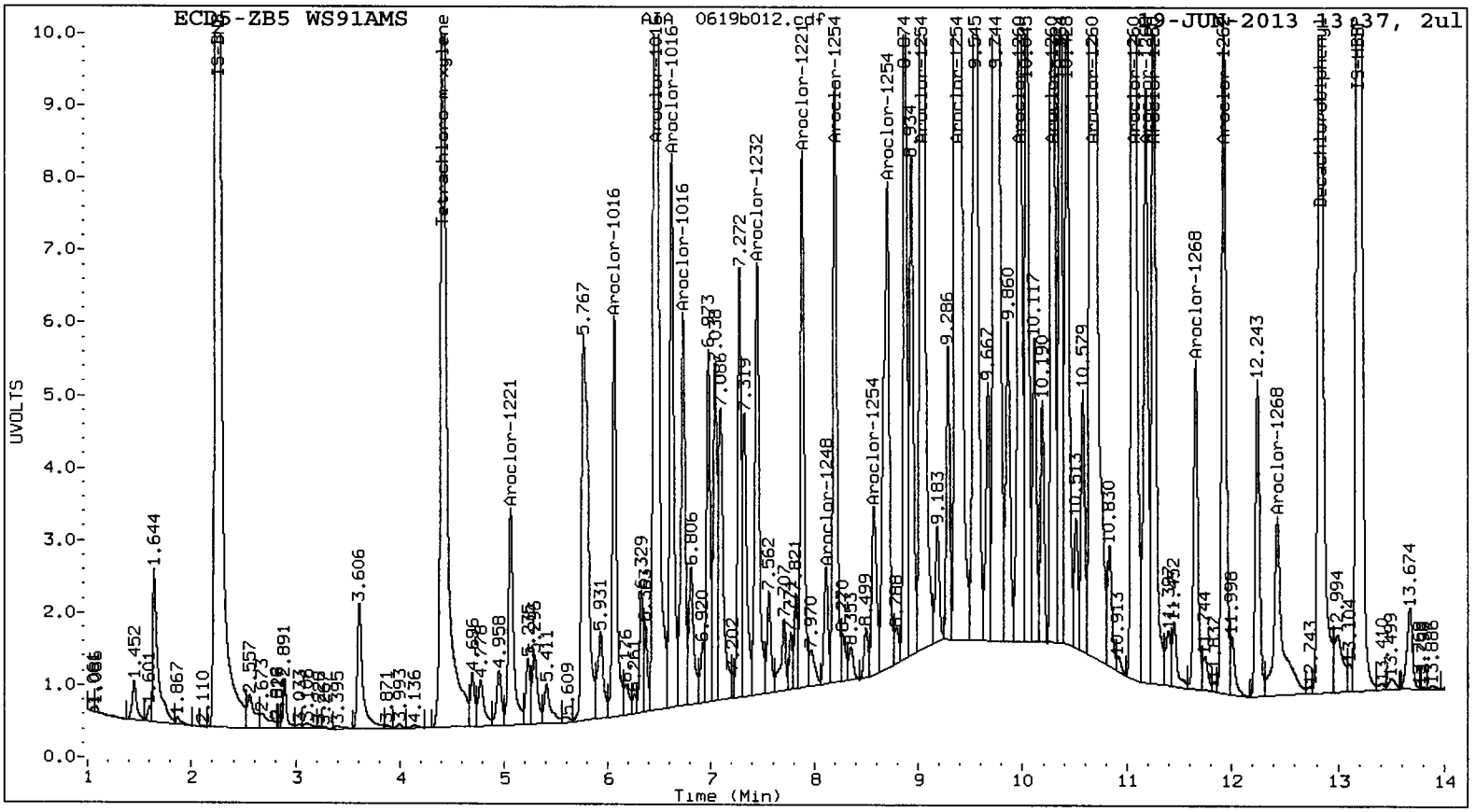
Total PCB Area Col2 (4.510 - 13.101) = 145292737 Col2 Total PCB = 1.2 ppm*

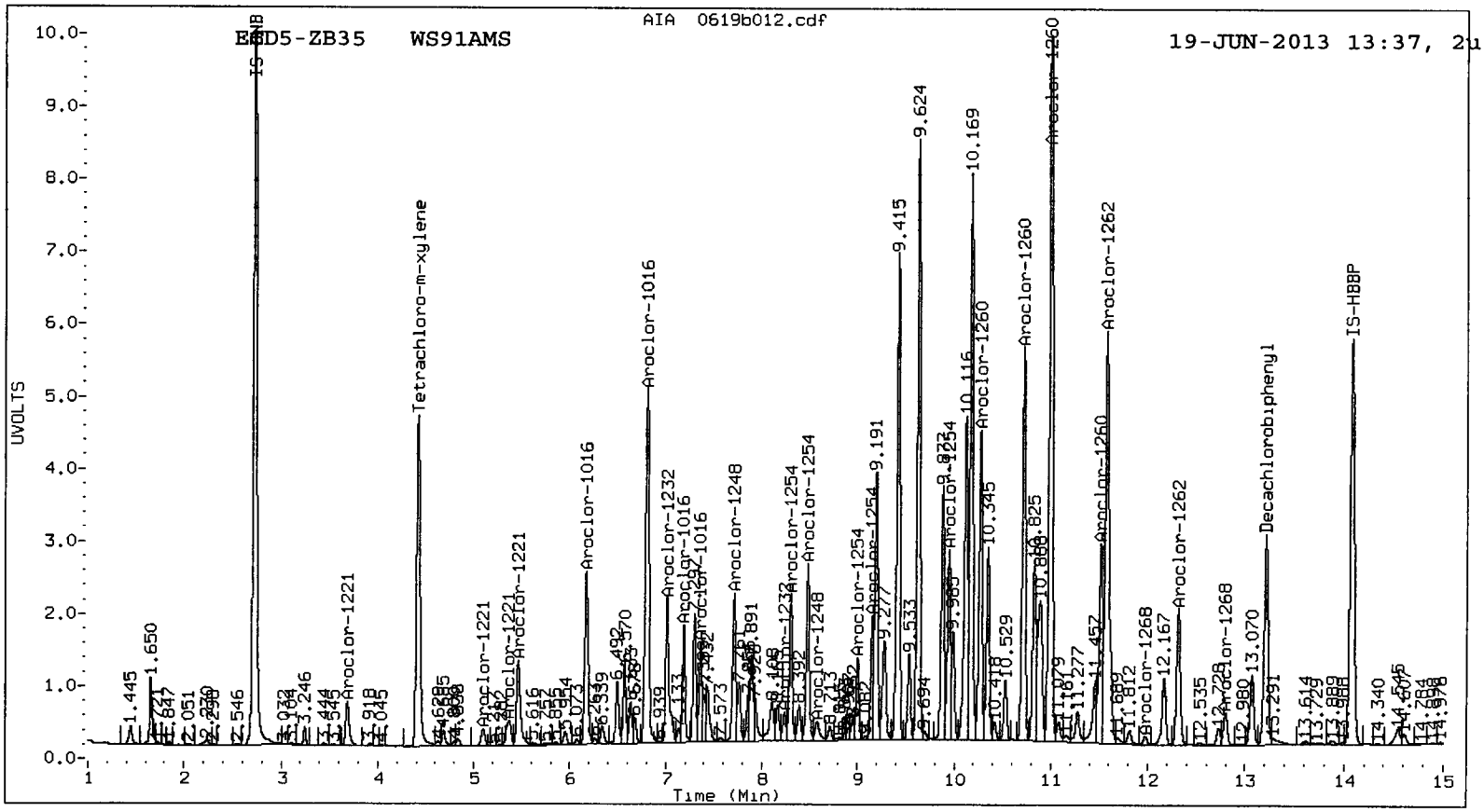
* Quantitated against AR1660 0.25ppm in Ical

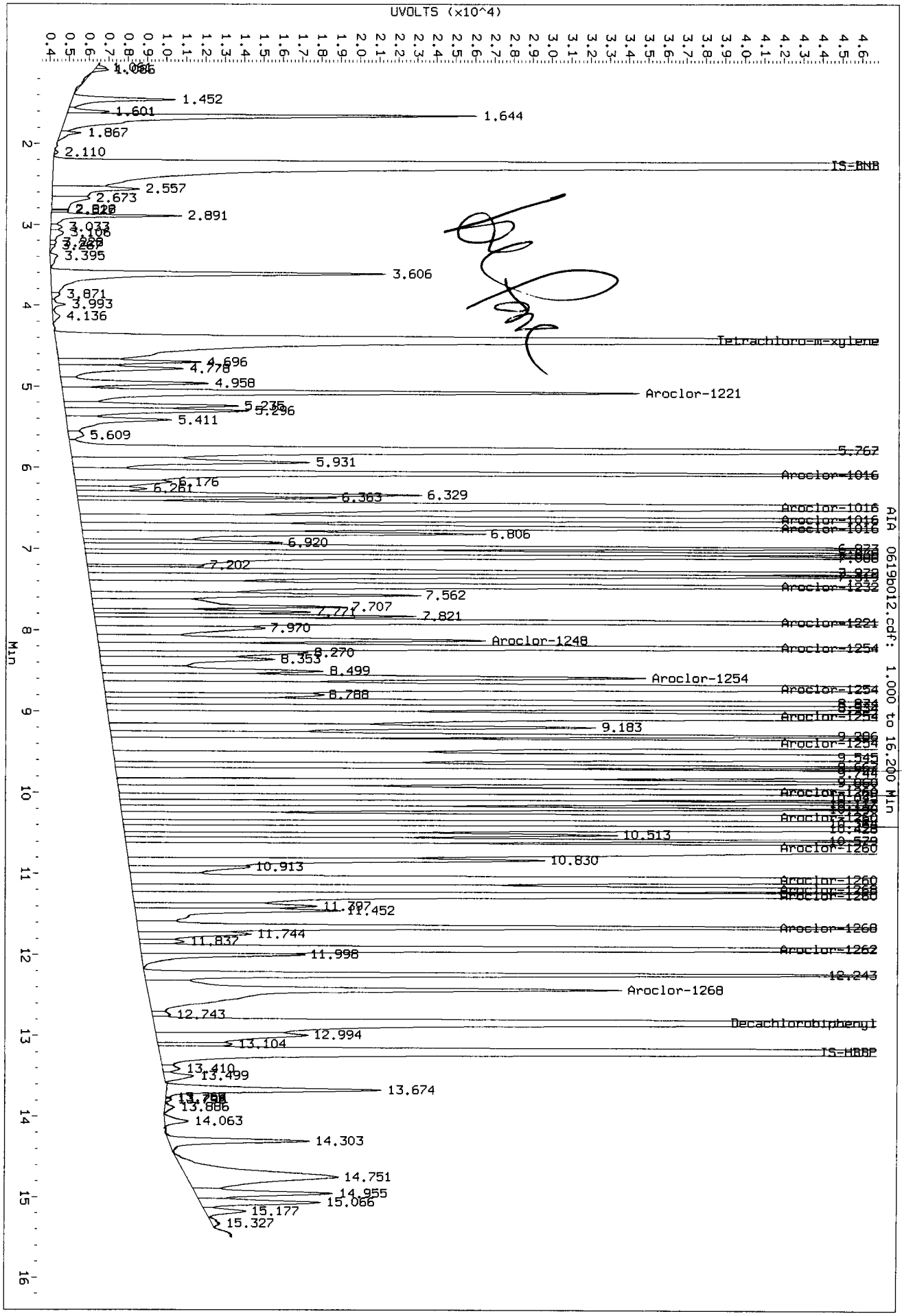
PCB-Form 10 Mod.


ECD5-ZB5 WS91AMS
AIA 0619b012.cdf
19-JUN-2013 13:37, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


AIA 0619b012.cdf
ECD5-ZB35 WS91AMS
19-JUN-2013 13:37, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 WS91AMS
AIA 0619b012.cdf
19-JUN-2013 13:37, 2ul
UVOLTS
Time (Min)
IS-TCMX
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 WS91AMS
AIA 0619b012.cdf
19-JUN-2013 13:37, 2u
UVOLTS
Time (Min)
IS-TCMX
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


UVOLTS (x10^4)
Min
1.452
1.644
1.867
2.110
IS-BNB
2.557
2.673
2.891
3.033
3.106
3.395
3.606
3.871
3.993
4.136
Tetrachloro-m-xylene
4.696
4.778
4.958
Aroclor-1221
5.235
5.296
5.411
5.609
5.931
6.176
6.261
6.329
6.363
6.806
6.920
7.202
7.562
7.707
7.771
7.821
7.970
Aroclor-1248
8.270
8.353
8.499
Aroclor-1254
8.788
9.183
10.513
10.830
10.913
11.452
11.744
11.837
11.998
Aroclor-1268
12.243
Decachlorobiphenyl
12.994
13.104
IS-HBBP
13.410
13.499
13.674
13.886
14.063
14.303
14.751
14.955
15.066
15.177
15.327
AIA 0619b012.cdf: 1.000 to 16.200 Min
Data File: /chem2/ecd5.i/20130507.b/0619-1.b/0619b012.d/0619b012.cdf
Injection Date: 19-JUN-2013 13:37
Instrument: ecd5.i
Client Sample ID: CL-MH-SPS-20130 MS

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0619-1.b/0619b013.d
Data file 2: 20130507.b/0619-2.b/0619b013.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WS91AMSD
Client ID: CL-MH-SPS-20130 MSD
Injection Date: 19-JUN-2013 13:57
Ical Date: 07-MAY-2013
Matrix: SOIL
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
4.415	0.005	24422164	4.416	0.007	5963986	34.5	33.9	2.0	Tetrachloro-m-xylen
12.837	0.011	21444419	13.210	0.008	3684482	37.2	34.7	6.9	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	86.3	84.6
Decachlorobiphenyl	93.0	86.8

06/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	45605755	-6.9
Hexabromobiphenyl	50004151	38571109	-22.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	13028897	-12.2
Hexabromobiphenyl	9345340	7373470	-21.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-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	6.064	0.005	7732053	376.1	1	6.169	0.006	2946041	396.3
Aroclor-1016	2	6.470	0.003	24909352	393.4	2	6.802	0.002	6461381	399.8
Aroclor-1016	3	6.619	0.003	9927015	349.9	3	7.186	0.003	1582117	374.4
Aroclor-1016	4	6.729	0.002	7032626	331.8	4	7.360	0.005	1449765	368.3
	Total Col1Ave (4 peaks):				362.8	Total Col2Ave (4 peaks):				384.7 RPD = 6
	Corrected Ave (3 peaks):				352.6	Corrected Ave (3 peaks):				379.7 RPD = 7
Aroclor-1221	1	5.065	0.001	4864691	261.8	1	3.684	-0.010	838061	627.4
Aroclor-1221	2	6.470	0.002	24909352	4381.7	2	5.099	0.005	330110	147.7
Aroclor-1221	3	7.883	0.005	9154468	1140.3	3	5.372	0.027	703000	577.4
Aroclor-1221	NS	---			----	4	5.465	0.004	1697954	443.3
	Total Col1Ave (3 peaks):				1927.9	Total Col2Ave (4 peaks):				448.9 RPD = 124*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				389.5
Aroclor-1232	1	6.064	0.004	7732053	915.3	1	6.169	0.003	2946041	881.0
Aroclor-1232	2	6.470	0.001	24909352	963.3	2	6.802	0.001	6461381	968.0
Aroclor-1232	3	7.447	0.006	8172281	608.1	3	7.012	0.001	2479858	890.9
Aroclor-1232	4	7.883	0.009	9154468	592.9	4	8.239	0.000	478518	204.8
	Total Col1Ave (4 peaks):				769.9	Total Col2Ave (4 peaks):				736.2 RPD = 4
	Corrected Ave (3 peaks):				705.3	Corrected Ave (3 peaks):				858.9 RPD = 7
Aroclor-1242	1	6.064	0.004	7732053	470.7	1	6.169	0.006	2946041	496.3
Aroclor-1242	2	6.470	0.003	24909352	494.5	2	6.802	0.003	6461381	495.5
Aroclor-1242	3	6.619	0.003	9927015	441.6	3	7.012	0.004	2479858	455.2
Aroclor-1242	4	7.883	0.012	9154468	329.8	4	8.239	0.004	478518	104.8
	Total Col1Ave (4 peaks):				434.2	Total Col2Ave (4 peaks):				388.0 RPD = 11
	Corrected Ave (3 peaks):				414.1	Corrected Ave (3 peaks):				351.9 RPD = 16
Aroclor-1248	1	6.470	0.006	24909352	776.1	1	6.802	0.006	6461381	791.4
Aroclor-1248	2	7.447	0.007	8172281	226.4	2	7.707	0.004	2262764	334.2
Aroclor-1248	3	7.883	0.011	9154468	199.4	3	8.239	0.004	478518	68.3
Aroclor-1248	4	8.116	0.008	2172490	67.9	4	8.580	0.000	520061	57.1
	Total Col1Ave (4 peaks):				317.5	Total Col2Ave (4 peaks):				312.8 RPD = 1
	Corrected Ave (3 peaks):				164.6	Corrected Ave (3 peaks):				153.2 RPD = 7
Aroclor-1254	1	8.199	0.008	10413184	244.8	1	8.302	0.006	2273513	359.9
Aroclor-1254	2	8.572	0.007	3969958	141.4	2	8.479	0.007	2695218	345.3
Aroclor-1254	3	8.704	0.005	13046546	222.9	3	9.000	0.006	1026403	171.7
Aroclor-1254	4	9.038	-0.013	32897452	545.7	4	9.152	0.007	1529222	119.4
Aroclor-1254	5	9.369	0.008	48060937	2108.2	5	9.940	0.010	2890280	400.9
	Total Col1Ave (5 peaks):				652.6	Total Col2Ave (5 peaks):				279.4 RPD = 80*
	Corrected Ave (4 peaks):				280.7	Corrected Ave (4 peaks):				249.1 RPD = 15
Aroclor-1260	1	9.975	0.011	21531011	681.6	1	10.267	0.009	4687302	700.9
Aroclor-1260	2	10.291	0.010	22268407	710.9	2	10.713	0.006	6092284	777.7
Aroclor-1260	3	10.669	0.011	64910839	864.2	3	10.992	0.009	12175793	841.7
Aroclor-1260	4	11.066	0.009	31825468	869.9	4	11.511	0.007	3041712	775.7
Aroclor-1260	5	11.256	0.011	14362198	733.8	NS	---			----
	Total Col1Ave (5 peaks):				772.1	Total Col2Ave (4 peaks):				774.0 RPD = 0
	Corrected Ave (4 peaks):				747.6	Corrected Ave (3 peaks):				751.4 RPD = 1
Aroclor-1262	1	10.291	0.008	22268407	616.6	1	10.267	0.008	4687302	459.6
Aroclor-1262	2	10.669	0.010	64910839	765.0	2	10.713	0.003	6092284	653.3
Aroclor-1262	3	11.066	0.007	31825468	1184.2	3	10.992	0.007	12175793	696.1
Aroclor-1262	4	11.256	0.009	14362198	380.7	4	11.569	0.002	7962581	700.4
Aroclor-1262	5	11.927	0.009	12402436	428.4	5	12.312	0.006	2328879	424.3
	Total Col1Ave (5 peaks):				675.0	Total Col2Ave (5 peaks):				586.7 RPD = 14
	Corrected Ave (4 peaks):				547.7	Corrected Ave (4 peaks):				558.3 RPD = 2
Aroclor-1268	1	11.184	0.009	11331264	139.6	1	11.511	0.004	3041712	170.9

Aroclor-1268 2	11.256	0.010	14362198	160.0	2	11.569	-0.004	7962581	474.6
Aroclor-1268 3	11.656	0.024	6242820	93.7	3	11.976	0.007	156556	11.8
Aroclor-1268 4	12.430	0.009	6190769	33.0	4	12.798	0.006	567600	16.5

Total Col1Ave (4 peaks): 106.6 Total Col2Ave (4 peaks): 168.5 RPD = 45*

Corrected Ave (3 peaks): 88.7 Corrected Ave (3 peaks): 66.4 RPD = 29

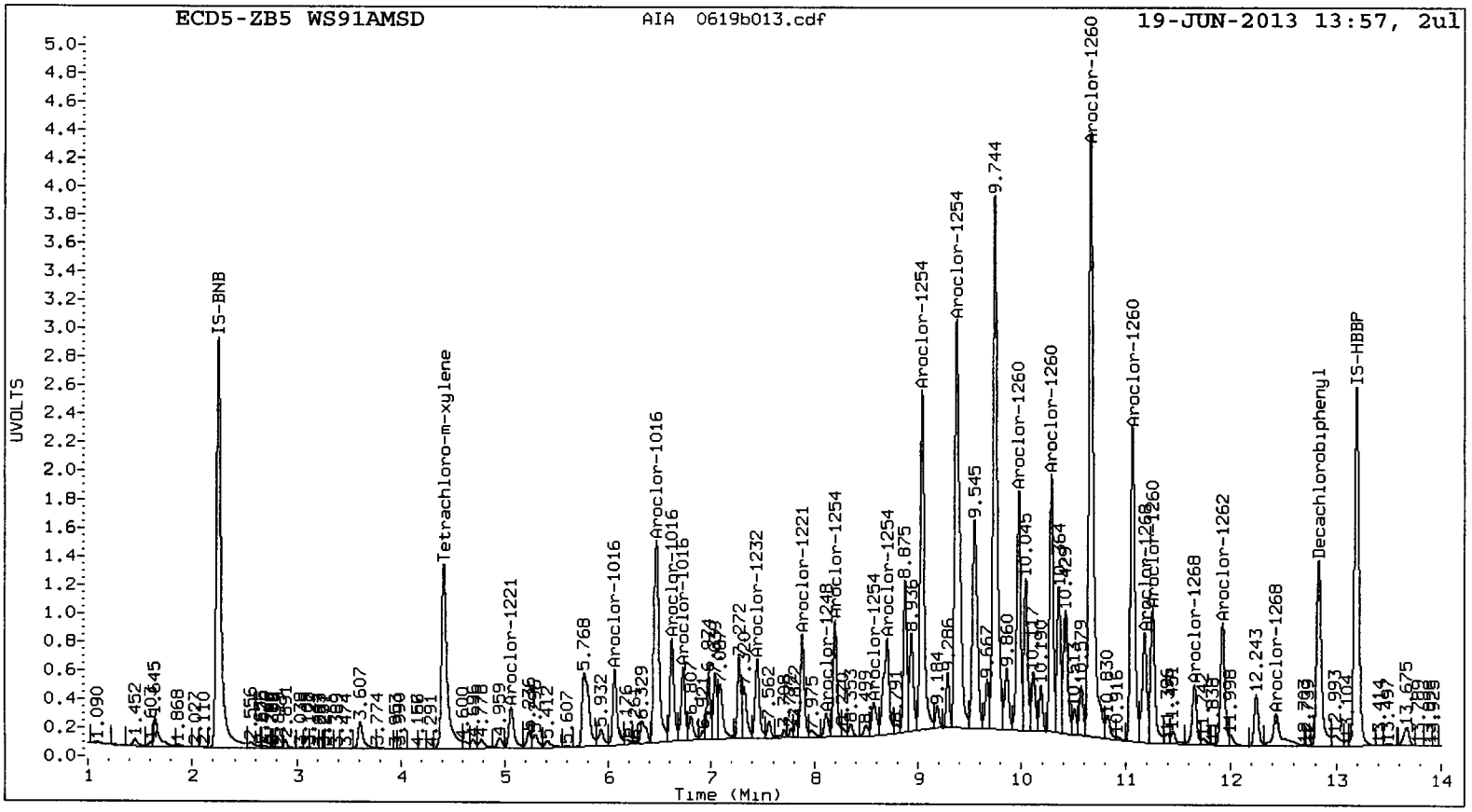
Total PCB Area Col1 (4.510 - 12.726) = 624532796 Col1 Total PCB = 1.1 ppm*

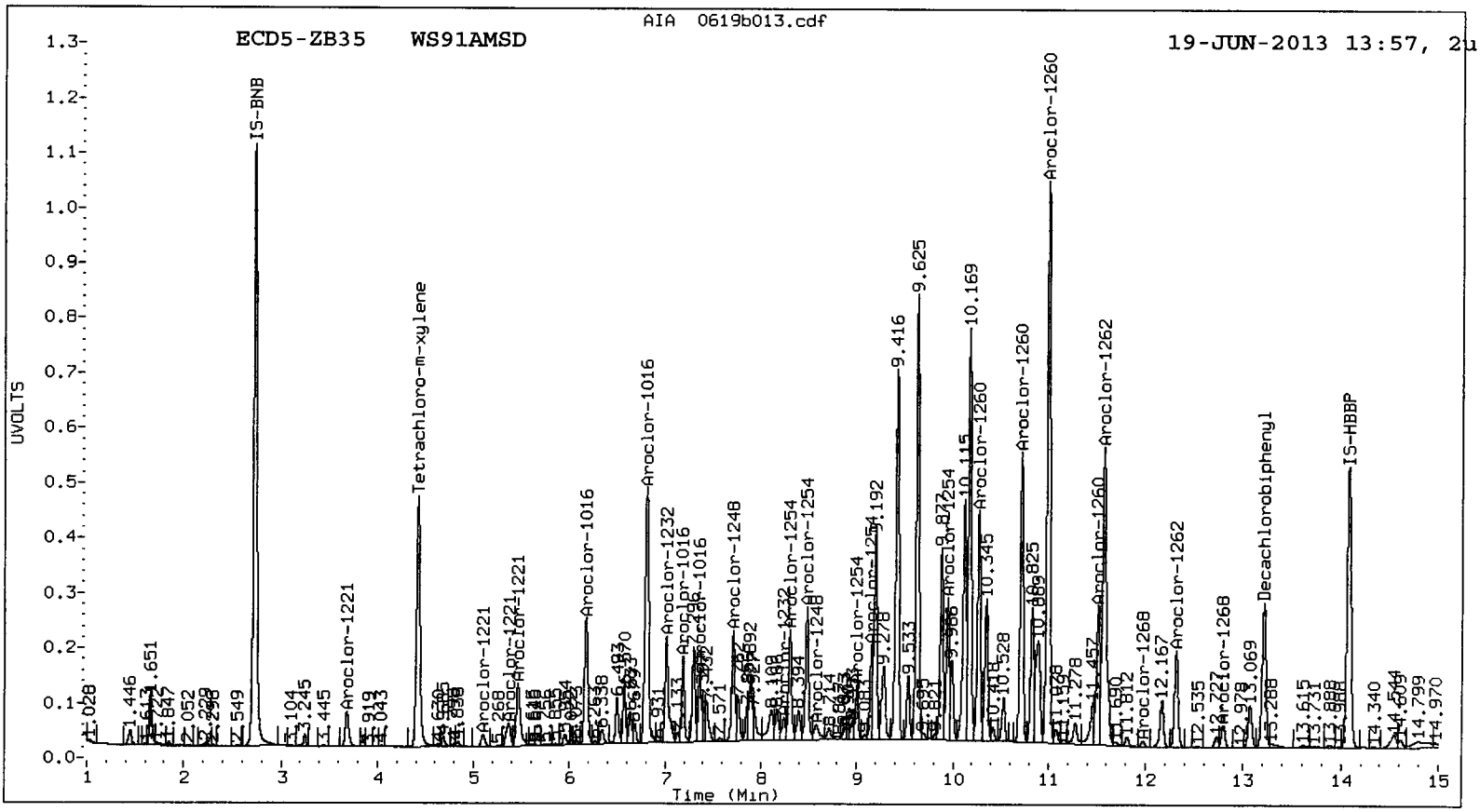
Total PCB Area Col2 (4.510 - 13.101) = 141483519 Col2 Total PCB = 1.2 ppm*

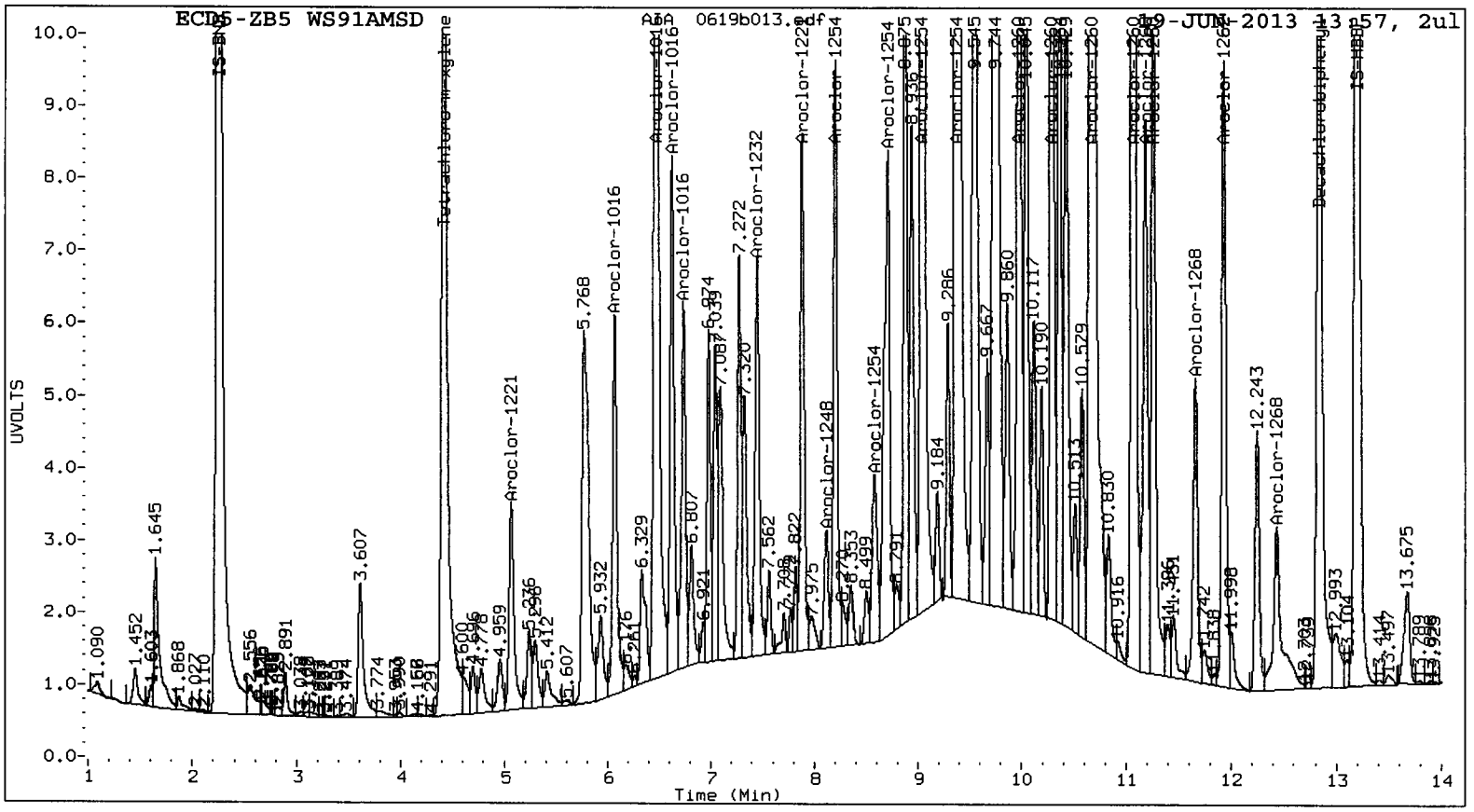
* Quantitated against AR1660 0.25ppm in Ical

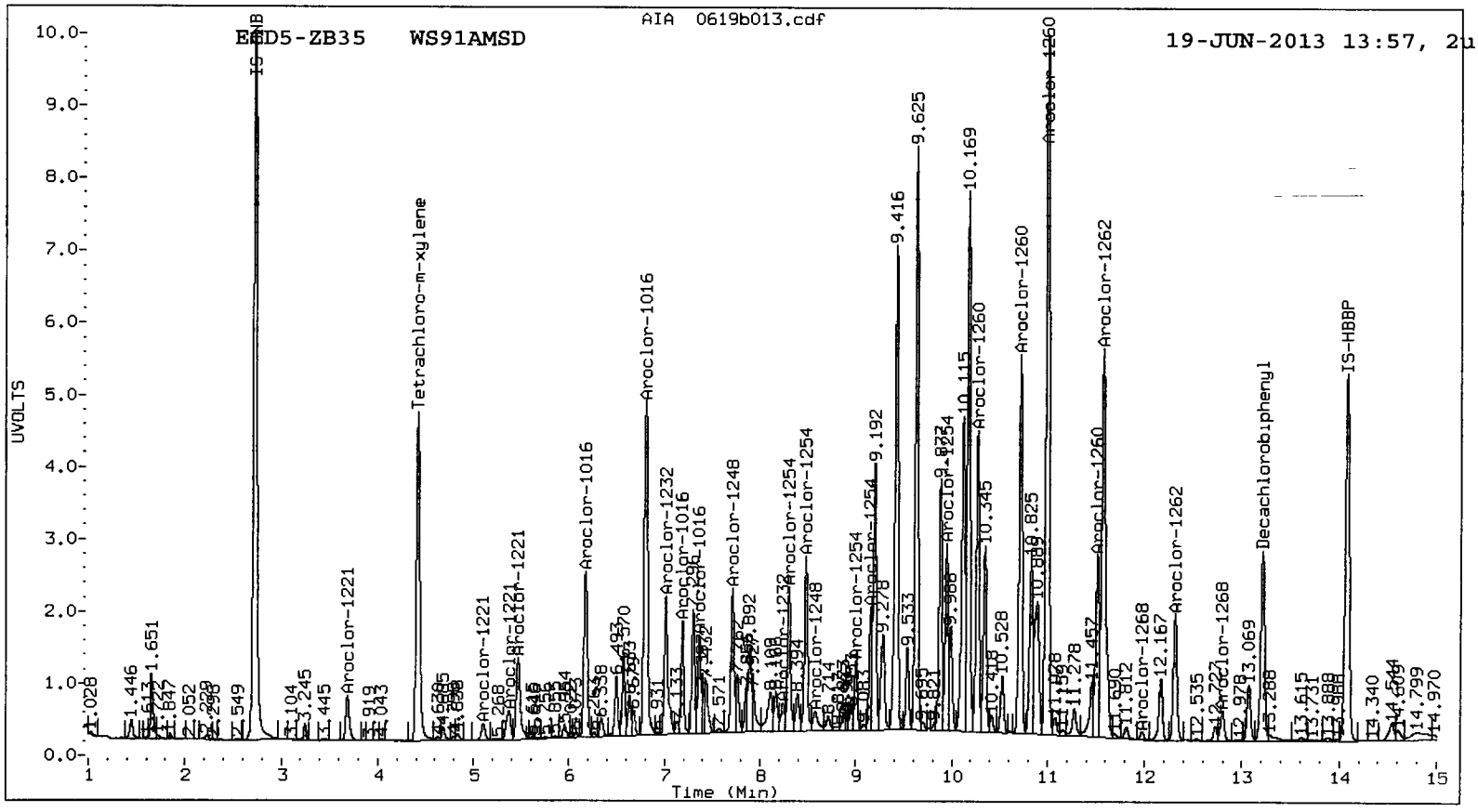
PCB-Form 10 Mod.

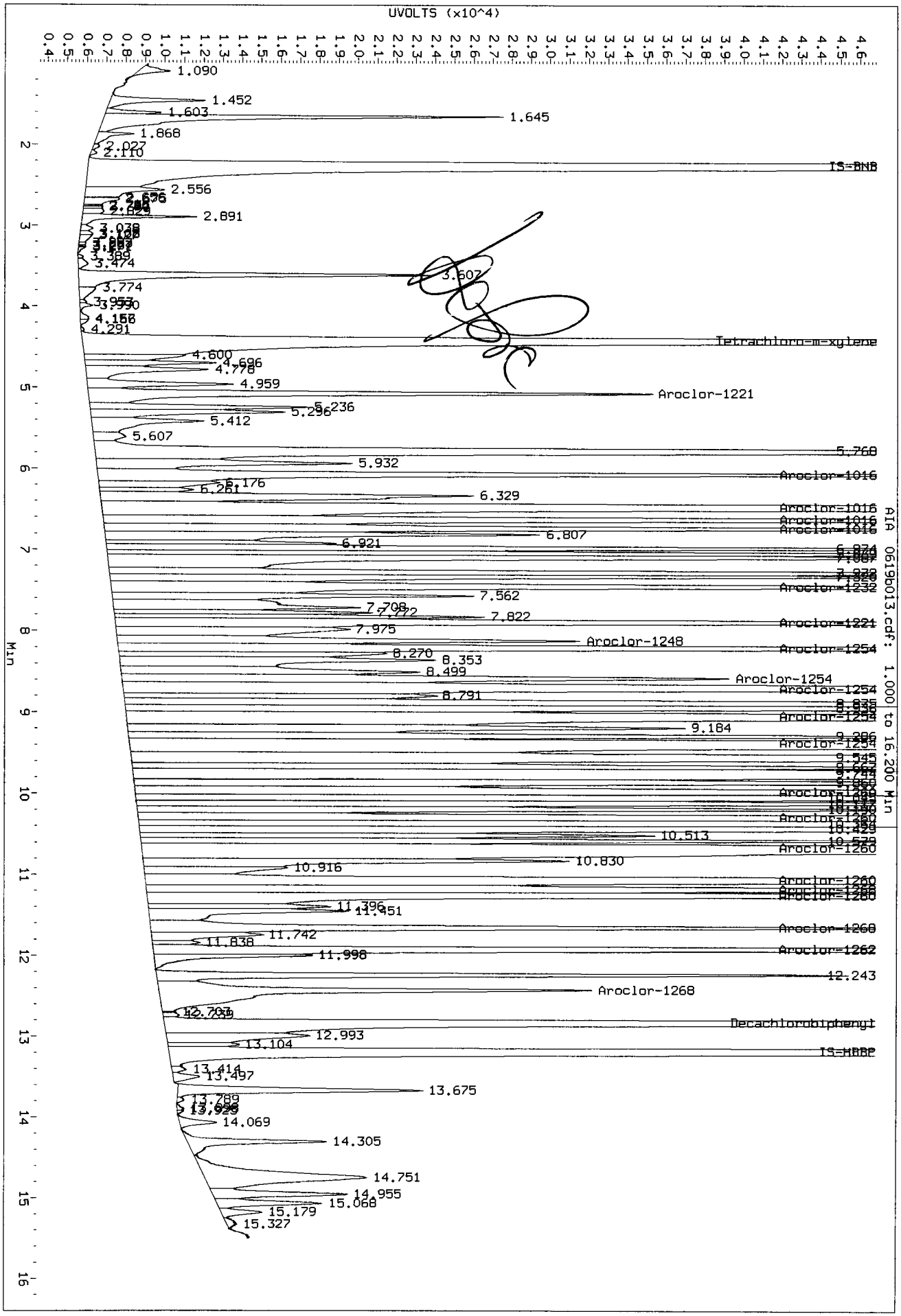
W991 : 81368


ECD5-ZB5 WS91AMSD
AIA 0619b013.cdf
19-JUN-2013 13:57, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


AIA 0619b013.cdf
ECD5-ZB35 WS91AMSD
19-JUN-2013 13:57, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 WS91AMSD
AIA 0619b013.cdf
19-JUN-2013 13:57, 2ul
UVOLTS
Time (Min)
IS-DCB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 WS91AMSD
AIA 0619b013.cdf
19-JUN-2013 13:57, 2u
UVOLTS
Time (Min)
IS-DCB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


Data File: /chem2/ecd5.i/20130507.b/0619-1.b/0619b013.d/0619b013.cdf
Injection Date: 19-JUN-2013 13:57
Instrument: ecd5.i
Client Sample ID: CL-MH-SPS-20130 MSD
UVOLTS (x10^4)
Min
AIA 0619b013.cdf: 1.000 to 16.200 Min
1.090
1.452
1.603
1.645
1.868
2.027
2.110
IS-BNB
2.556
2.891
3.038
3.474
3.607
3.774
4.158
4.291
Tetrachloro-m-xylene
4.600
4.686
4.778
4.959
Aroclor-1221
5.236
5.296
5.412
5.607
5.768
5.932
Aroclor-1016
6.176
6.261
6.329
Aroclor-1016
Aroclor-1016
Aroclor-1016
6.807
6.921
Aroclor-1232
7.562
7.708
7.772
7.822
Aroclor-1221
7.975
Aroclor-1248
Aroclor-1254
8.270
8.353
8.499
Aroclor-1254
Aroclor-1254
8.791
Aroclor-1254
9.184
Aroclor-1254
Aroclor-1260
10.513
Aroclor-1260
10.830
10.916
Aroclor-1260
Aroclor-1260
Aroclor-1260
11.396
11.451
Aroclor-1268
11.742
11.838
Aroclor-1262
11.998
12.243
Aroclor-1268
Decachlorobiphenyl
12.993
13.104
IS-HXBP
13.414
13.497
13.675
13.789
14.069
14.305
14.751
14.955
15.068
15.179
15.327

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0619-1.b/0619b016.d
Data file 2: 20130507.b/0619-2.b/0619b016.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 19-JUN-2013 14:58
Ical Date: 07-MAY-2013
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
4.411	0.000	38598310	4.411	0.001	9188762	39.8	39.3	1.4	Tetrachloro-m-xylen
12.827	0.001	28161294	13.202	0.001	4512534	36.7	34.7	5.6	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	99.6	98.2
Decachlorobiphenyl	91.7	86.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	62495385	27.6
Hexabromobiphenyl	50004151	51380439	2.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	17296182	16.6
Hexabromobiphenyl	9345340	9037745	-3.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

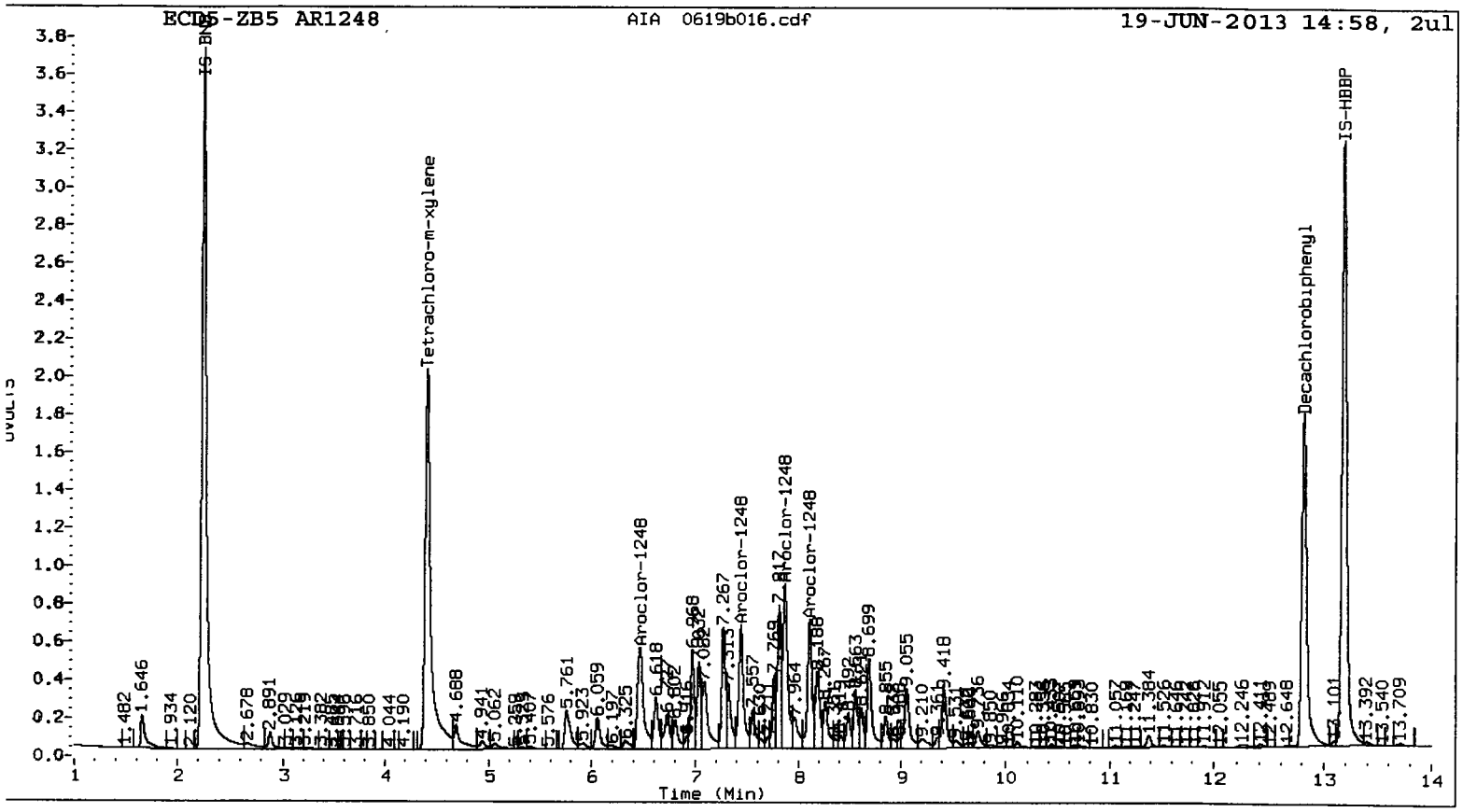
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1248	1	6.464	0.000	10954207	249.1	1	6.796	0.000	2552185	235.5
Aroclor-1248	2	7.441	0.000	10802607	218.4	2	7.703	0.000	2008051	223.4
Aroclor-1248	3	7.872	0.000	13574288	215.8	3	8.235	0.000	2040666	219.3
Aroclor-1248	4	8.107	0.000	10182552	232.2	4	8.581	0.000	2560099	211.7
Total Col1Ave (4 peaks):					228.9	Total Col2Ave (4 peaks):				222.5 RPD = 3
Corrected Ave (3 peaks):					222.1	Corrected Ave (3 peaks):				218.1 RPD = 2

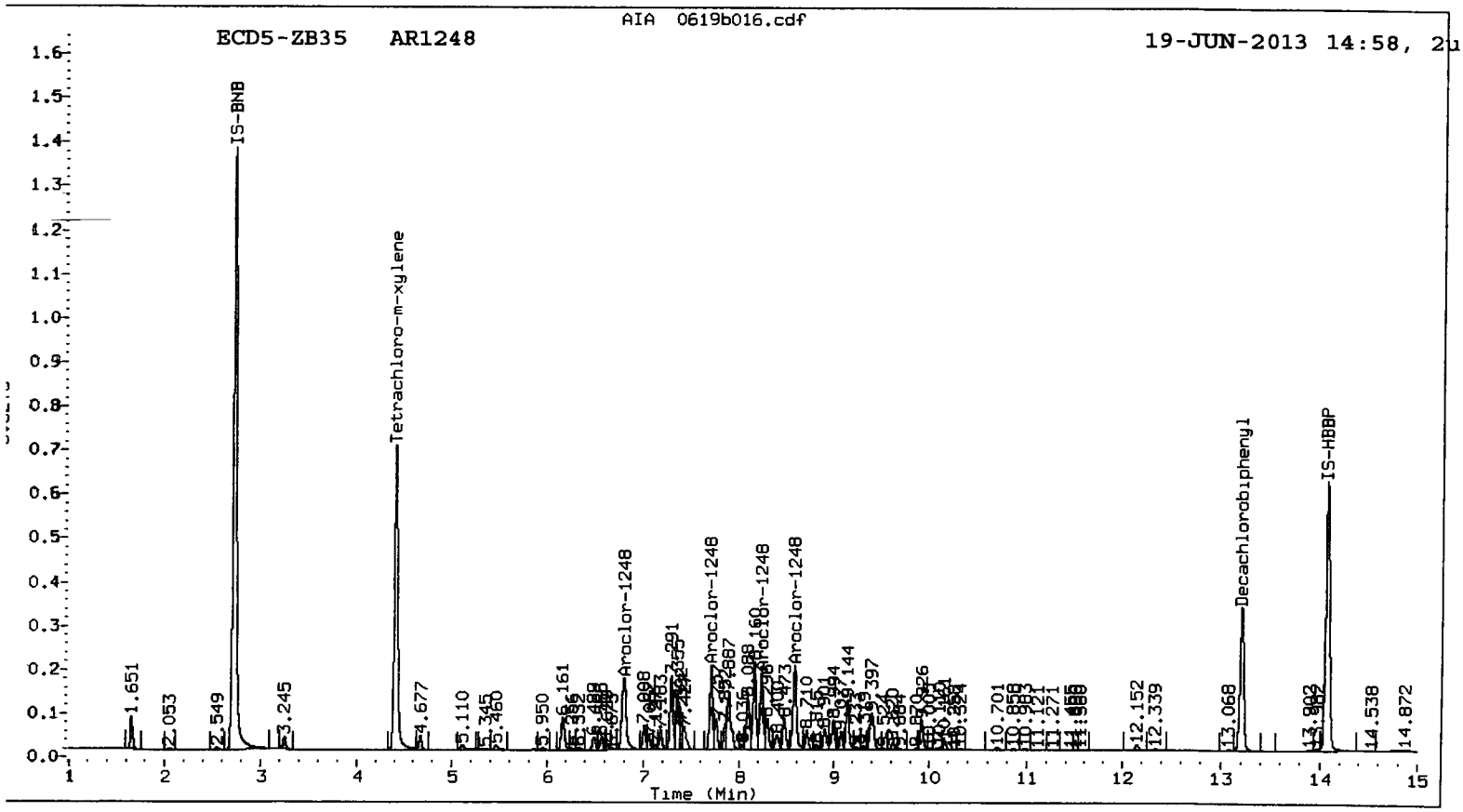
Total PCB Area Col1 (4.510 - 12.726) = 176507273 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.510 - 13.101) = 34345527 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

W891:91373


ECD5-ZB5 AR1248
AIA 0619b016.cdf
19-JUN-2013 14:58, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Aroclor-1248
Aroclor-1248
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
Time (Min)


AIA 0619b016.cdf
ECD5-ZB35 AR1248
19-JUN-2013 14:58, 2u
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Aroclor-1248
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130507.b/0619-1.b/0619b017.d
Data file 2: 20130507.b/0619-2.b/0619b017.d
Method: /chem2/ecd5.i/20130507.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 19-JUN-2013 15:18
Ical Date: 07-MAY-2013
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
4.411	0.000	38341570	4.411	0.001	9067570	39.4	38.5	2.2	Tetrachloro-m-xylen
12.826	0.000	30901665	13.200	-0.001	4934564	36.4	34.6	5.0	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	98.5	96.4
Decachlorobiphenyl	91.0	86.5

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	48977254	62739409	28.1
Hexabromobiphenyl	50004151	56834433	13.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14839715	17396133	17.2
Hexabromobiphenyl	9345340	9906504	6.0

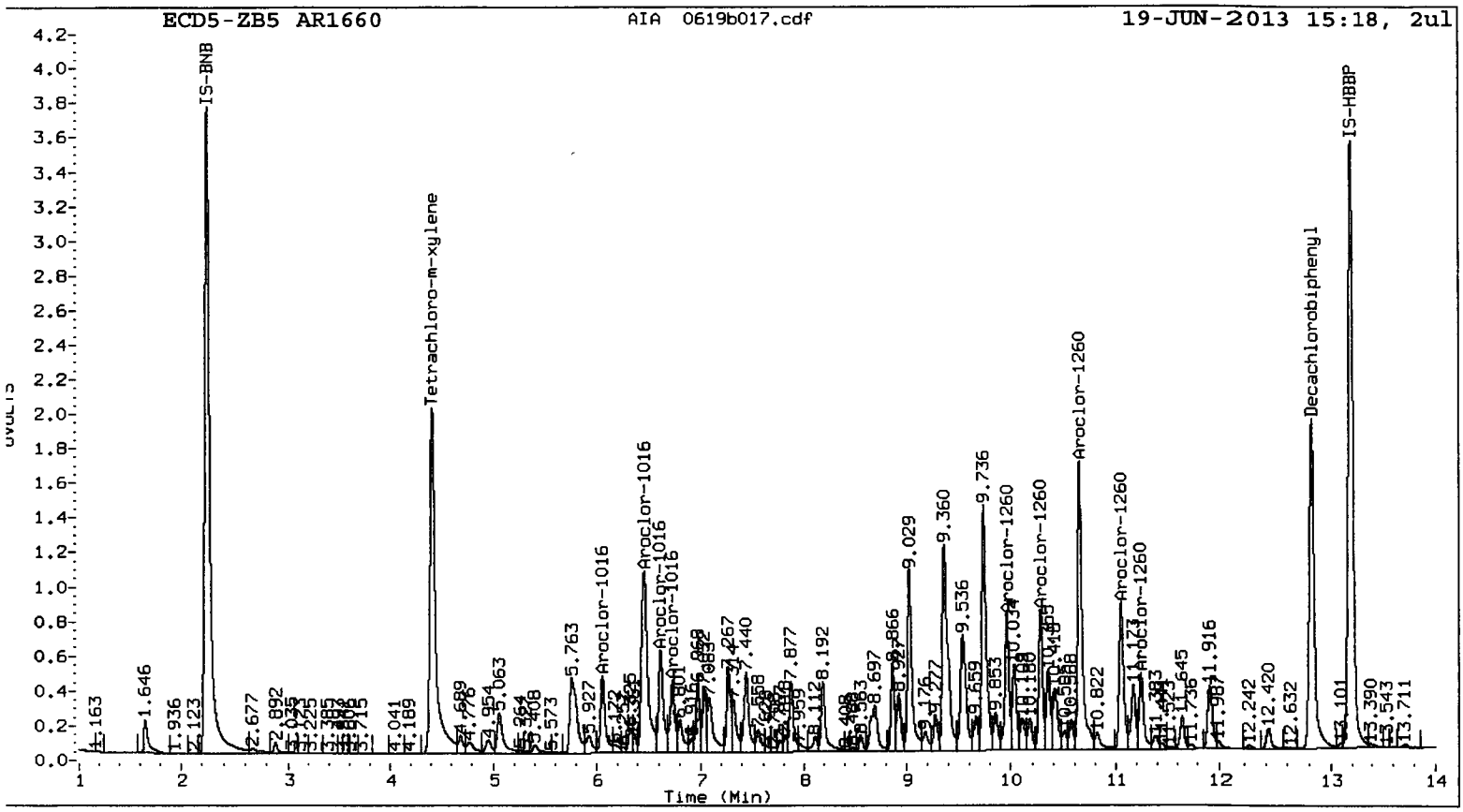
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

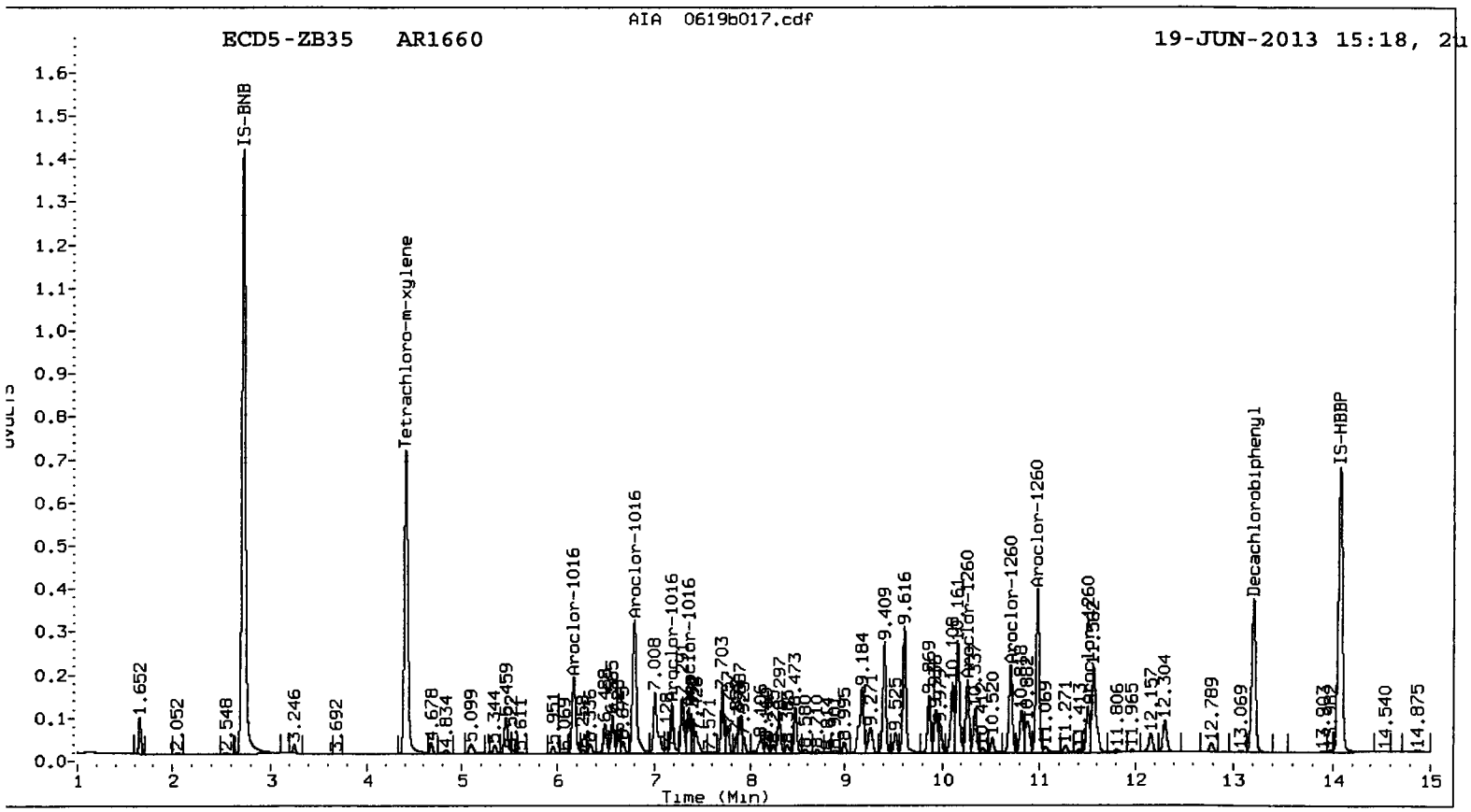
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.059	0.000	6886211	243.5	1	6.164	0.001	2337253	235.5
Aroclor-1016	2	6.467	0.000	21028337	241.4	2	6.799	-0.001	4839592	224.3
Aroclor-1016	3	6.616	0.000	9102416	233.2	3	7.183	0.000	1306194	231.5
Aroclor-1016	4	6.727	0.000	6745464	231.3	4	7.355	0.000	1140163	217.0
Total Col1Ave (4 peaks):					237.4	Total Col2Ave (4 peaks):				227.0 RPD = 4
Corrected Ave (3 peaks):					235.3	Corrected Ave (3 peaks):				224.2 RPD = 5
Aroclor-1260	1	9.965	0.000	10872238	233.6	1	10.258	0.000	1988304	221.3
Aroclor-1260	2	10.282	0.001	10657786	230.9	2	10.707	0.000	2405985	228.6
Aroclor-1260	3	10.657	0.000	26199825	236.7	3	10.983	0.000	4622615	237.9
Aroclor-1260	4	11.057	0.001	12847470	238.3	4	11.503	-0.001	1283185	243.6
Aroclor-1260	5	11.247	0.001	6838561	237.1	NS	---			----
Total Col1Ave (5 peaks):					235.3	Total Col2Ave (4 peaks):				232.8 RPD = 1
Corrected Ave (4 peaks):					234.6	Corrected Ave (3 peaks):				229.2 RPD = 2

Total PCB Area Col1 (4.510 - 12.726) = 348641064 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.510 - 13.101) = 66656197 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1660
AIA 0619b017.cdf
19-JUN-2013 15:18, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


AIA 0619b017.cdf
ECD5-ZB35 AR1660
19-JUN-2013 15:18, 2u
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)

TPHD Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WS91

Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8015C) NWTPHD-Soil(Sediment)
Microwave (3546) (SOP # 3304S)

Preparation Test TPHD # 3 (DIESMI)
ARI Job No(s) W591 Page 1 of 1 In-House (5ppm)
Batch set up by: ~~SH~~

Bottle #	Extraction Requirements	Weight Extracted (wet wt)	Acid Clean (1:1) Y/(N)	Silica Gel Clean (1:1) Y/(N)	Final Effective Volume	Volume to Lab	Comments	Verifty Client ID
	W591 MBS	10.00g	(1:1) Y/(N)	(1:1) Y/(N)	1mL	1mL		YL 06/08/13
	↓ SBS	10.00g	(1:1) Y/(N)	(1:1) Y/(N)	1mL	1mL		Analyst/Date
	~~SBS Dup~~	~~10.00g~~	~~(1:1) Y/N~~	~~(1:1) Y/N~~	~~1mL~~	~~1mL~~		
	~~QLS~~	~~10.00g~~	~~(1:1) Y/N~~	~~(1:1) Y/N~~	~~1mL~~	~~1mL~~		Microwave 1(2)3
8	W591 A	10.00	(1:1) Y/(N)	(1:1) Y/(N)	1mL	1mL		YL/CT
8	↓ Ams	10.00	(1:1) Y/(N)	(1:1) Y/(N)	1mL	1mL		06/08/13
8	↓ Amsd	10.03	(1:1) Y/(N)	(1:1) Y/(N)	1mL	1mL		Analyst/Date
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		TurboVap 1 2 3 Pre-Acid/Silica Clean
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		CJZ 6/11/13
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		Analyst/Date
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		TurboVap 1 2 3 ~~Post Acid/Silica Clean~~
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
Analyst/Date YL 06/08/13					CJZ 6/11/13	CJZ 6/11/13	Reviewed by CJZ 6/11/13	CJZ 6/11/13 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	O2(2482-5)	450µg/mL	100µL	11/19/13	YL	
Spike	11 (8444176)	15000µg/mL	100µL	5/01/14	YL	
~~QLS Spike~~	~~18 ( )~~	~~1000µg/mL~~	~~50µL~~			
Extraction Time: 1115				Balance ID: B14642614		

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 (if Silica Clean). 12. Vial in DCM.

A. Need Total Solids Y/(N) B. Archive/Freeze Y/(N)

W591 : 613729

Organic Extractions
Reagent and Solutions Identification

(8015C) NWTPHD-Soil/Sediment
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WS91

(8015C) NWTPHD Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station:	Microwave
Methylene Chloride: (I# 9249)	CT 6-8-13
Anhydrous Sodium Sulfate: (I# 8134 + jar date 5-24-13)	
Neutral Glasswool: (I# ~~8134~~ 6-7-13 7998 + jar date 5-7-13)	YC
Vialing Station:	Vialing
Methylene Chloride: (I# 8270)	CTS
Concentrated Sulfuric Acid: (I# N/A)	6/11/13
Silica Gel (SPE) Darts: (I# N/A)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Extract Dilution Bench Sheet

ARI Job#: WS91 Client ID: SAIC
Analyst: JW Date: 6/1/13

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
A	100	DCM/IS217	400	5x				
Aavg	↓	↓	↓	↓				
Amd	↓	↓	↓	↓				

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WS91 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)= A	AC 6-6-13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)? AC 5% small	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
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)	

TPHD Raw Data
Initial Calibration

ARI Job ID: WS91

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): 5/10/13 / 5/9/13 Internal Standard ID N/A Expiration N/A

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/Cal Diesel	2091-2	3/15/14	Diesel ICV/Ak102/Cal	2043-1	10/20/13
Moil	2041-4	11/27/13	Moil ICV	2043-2	11/19/13
JetA	2008-1	5/11/13	Ak103 ICV	B000202	11/19/13
Ak103	B000201	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:
Curve for JetA, Diesel, Ak102, Cal diesel (IT diesel same), Moil & Ak103.

Analyst: JW **Date:** 5/11/13

Reviewer: [illegible] **Date:** 5/13/13

WS91 : 9136H

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130509.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0509b032	0509b033	0509b034	0509b035	0509b036	0509b037
INJ.DATE:	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013
INJ.TIME:	21:43	22:02	22:21	22:41	23:00	23:19

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.660	0.560-0.760	+++++	+++++
	35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
	2 C8	0.834	0.839	0.832	0.834	0.831	0.825	0.827	0.727-0.927	0.832	0.005
	3 C10	2.251	2.254	2.255	2.256	2.253	2.254	2.254	2.204-2.304	2.254	0.002
	4 C12	3.043	3.032	3.033	3.032	3.032	3.033	3.049	2.999-3.099	3.034	0.004
	5 C14	3.624	3.622	3.613	3.618	3.618	3.619	3.621	3.571-3.671	3.619	0.004
	6 C16	4.118	4.114	4.115	4.119	4.116	4.116	4.116	4.066-4.166	4.116	0.002
	7 C18	4.573	4.574	4.570	4.572	4.567	4.565	4.565	4.515-4.615	4.570	0.004
$	8 o-terph	4.684	4.673	4.676	4.683	4.675	4.681	4.683	4.633-4.733	4.679	0.004
	9 C20	4.998	4.992	4.991	4.990	4.987	4.991	4.989	4.939-5.039	4.991	0.004
	10 C22	5.391	5.387	5.389	5.386	5.387	5.387	5.386	5.336-5.436	5.388	0.002
	11 C24	5.760	5.763	5.757	5.762	5.762	5.758	5.760	5.710-5.810	5.760	0.002
	12 C25	5.937	5.939	5.937	5.936	5.936	5.941	5.938	5.888-5.988	5.938	0.002
	13 C26	6.113	6.114	6.114	6.112	6.115	6.114	6.114	6.064-6.164	6.114	0.001
	14 C28	6.431	6.427	6.429	6.431	6.429	6.431	6.427	6.377-6.477	6.430	0.002
$	15 Triacon Surr	6.715	6.720	6.726	6.736	6.750	6.767	6.768	6.718-6.818	6.736	0.020
	16 C32	6.978	6.975	6.980	6.979	6.977	6.976	6.976	6.926-7.026	6.978	0.002

Reviewer 1 JU Date: 5/11/13
Reviewer 2 [illegible] Date: 5/13/13

CCSTD:15554

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130509.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.218	7.217	7.216	7.216	7.215	7.214	7.210	7.160-7.260	7.216	0.002
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.739	11.639-11.839	+++++	+++++
19 C36	7.431	7.435	7.437	7.436	7.436	7.430	7.435	7.385-7.485	7.434	0.003
20 C38	7.637	7.640	7.641	7.634	7.640	7.641	7.639	7.589-7.689	7.639	0.003
21 C40	7.826	7.829	7.832	7.831	7.830	7.827	7.828	7.778-7.878	7.829	0.002
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++

SGS TSR

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0509b026	0509b027	0509b028	0509b029	0509b030	0509b031
INJ.DATE:	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013
INJ.TIME:	19:47	20:06	20:26	20:45	21:04	21:23

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.651	0.551-0.751	+++++	+++++
35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
2 C8	0.842	0.843	0.835	0.832	0.839	0.842	0.821	0.721-0.921	0.839	0.004
3 C10	2.256	2.257	2.255	2.254	2.258	2.266	2.250	2.200-2.300	2.258	0.004
4 C12	3.039	3.039	3.040	3.042	3.044	3.051	3.040	2.990-3.090	3.043	0.005
5 C14	3.620	3.620	3.620	3.620	3.621	3.627	3.620	3.570-3.670	3.621	0.003
6 C16	4.122	4.121	4.118	4.118	4.116	4.119	4.117	4.067-4.167	4.119	0.002
7 C18	4.564	4.564	4.566	4.567	4.567	4.568	4.568	4.518-4.618	4.566	0.002
$ 8 o-terph	4.671	4.671	4.678	4.685	4.694	4.698	4.676	4.626-4.726	4.683	0.011
9 C20	4.992	4.989	4.990	4.991	4.990	4.989	4.989	4.939-5.039	4.990	0.001
10 C22	5.396	5.388	5.389	5.389	5.390	5.392	5.387	5.337-5.437	5.391	0.003
11 C24	5.763	5.760	5.765	5.763	5.763	5.757	5.759	5.709-5.809	5.762	0.003
12 C25	5.934	5.937	5.932	5.935	5.931	5.936	5.934	5.884-5.984	5.934	0.002
13 C26	6.116	6.112	6.117	6.112	6.112	6.116	6.112	6.062-6.162	6.114	0.002
14 C28	6.431	6.428	6.437	6.428	6.431	6.431	6.426	6.376-6.476	6.431	0.003
$ 15 Triacon Surr	6.727	6.726	6.727	6.725	6.722	6.720	6.723	6.673-6.773	6.724	0.003
16 C32	6.982	6.988	6.982	6.981	6.981	6.981	6.976	6.926-7.026	6.982	0.003

Reviewer 1 JU Date: 5/11/13
Reviewer 2 [signature] Date: 5/12/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.202	7.223	7.218	7.215	7.211	7.215	7.214	7.164-7.264	7.214	0.007
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.739	11.639-11.839	+++++	+++++
19 C36	7.437	7.444	7.442	7.438	7.418	7.443	7.432	7.382-7.482	7.437	0.010
20 C38	7.637	7.640	7.637	7.635	7.637	7.638	7.639	7.589-7.689	7.637	0.002
21 C40	7.834	7.836	7.832	7.829	7.833	7.828	7.833	7.783-7.883	7.832	0.003
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0509b019	0509b020	0509b021	0509b022	0509b023	0509b024
INJ.DATE:	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013	09-MAY-2013
INJ.TIME:	17:30	17:50	18:09	18:29	18:49	19:08

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.651	0.551-0.751	+++++	+++++
	35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
	2 C8	0.836	0.832	0.835	0.839	0.826	0.827	0.836	0.736-0.936	0.833	0.005
	3 C10	2.255	2.255	2.254	2.257	2.255	2.254	2.255	2.204-2.304	2.255	0.001
	4 C12	3.049	3.033	3.033	3.033	3.033	3.049	3.049	2.999-3.099	3.038	0.008
	5 C14	3.626	3.621	3.614	3.617	3.625	3.621	3.626	3.576-3.676	3.621	0.004
	6 C16	4.118	4.118	4.115	4.117	4.120	4.116	4.118	4.068-4.168	4.117	0.002
	7 C18	4.561	4.567	4.569	4.572	4.567	4.565	4.561	4.511-4.611	4.567	0.004
$	8 o-terph	4.673	4.682	4.681	4.673	4.672	4.683	4.673	4.623-4.723	4.677	0.005
	9 C20	4.984	4.991	4.994	4.988	4.986	4.989	4.984	4.934-5.035	4.989	0.003
	10 C22	5.386	5.389	5.387	5.384	5.383	5.386	5.386	5.336-5.436	5.386	0.002
	11 C24	5.762	5.760	5.755	5.763	5.761	5.760	5.762	5.712-5.812	5.760	0.003
	12 C25	5.938	5.939	5.938	5.935	5.936	5.938	5.938	5.888-5.987	5.937	0.001
	13 C26	6.116	6.114	6.113	6.114	6.115	6.114	6.116	6.066-6.166	6.114	0.001
	14 C28	6.435	6.428	6.431	6.431	6.429	6.427	6.435	6.385-6.485	6.430	0.003
$	15 Triacon Surr	6.717	6.720	6.728	6.738	6.752	6.768	6.717	6.667-6.767	6.737	0.020
	16 C32	6.975	6.975	6.974	6.980	6.977	6.976	6.975	6.925-7.025	6.976	0.002

Reviewer 1 JG Date: 5/10/13
Reviewer 2 Date: 5/13/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130509.b
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.215	7.220	7.217	7.214	7.214	7.210	7.215	7.165-7.266	7.215	0.004
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.739	11.639-11.839	+++++	+++++
19 C36	7.430	7.432	7.433	7.429	7.429	7.435	7.430	7.380-7.480	7.431	0.002
20 C38	7.634	7.632	7.638	7.637	7.639	7.639	7.634	7.584-7.684	7.637	0.003
21 C40	7.826	7.830	7.830	7.827	7.831	7.828	7.826	7.776-7.876	7.829	0.002
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130510.b
Inst ID: fid3b.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0510b004	0510b005	0510b006	0510b007	0510b008	0510b009
INJ.DATE:	10-MAY-2013	10-MAY-2013	10-MAY-2013	10-MAY-2013	10-MAY-2013	10-MAY-2013
INJ.TIME:	08:41	09:01	09:20	09:40	10:00	10:20

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.651	0.551-0.751	+++++	+++++
35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
2 C8	0.824	0.829	0.831	0.831	0.829	0.829	0.821	0.721-0.921	0.829	0.003
3 C10	2.255	2.255	2.256	2.256	2.254	2.257	2.250	2.200-2.300	2.255	0.001
4 C12	3.037	3.038	3.039	3.039	3.041	3.044	3.040	2.990-3.090	3.040	0.002
5 C14	3.621	3.618	3.619	3.619	3.621	3.625	3.620	3.570-3.670	3.620	0.002
6 C16	4.117	4.116	4.115	4.116	4.120	4.124	4.117	4.067-4.167	4.118	0.003
7 C18	4.564	4.564	4.565	4.569	4.570	4.577	4.568	4.518-4.618	4.568	0.005
$ 8 o-terph	4.670	4.672	4.678	4.686	4.693	4.712	4.676	4.626-4.726	4.685	0.016
9 C20	4.990	4.988	4.987	4.989	4.989	4.994	4.989	4.939-5.039	4.989	0.002
10 C22	5.382	5.389	5.386	5.387	5.385	5.389	5.387	5.337-5.437	5.386	0.003
11 C24	5.759	5.758	5.762	5.761	5.755	5.758	5.759	5.709-5.809	5.759	0.003
12 C25	5.938	5.938	5.931	5.940	5.935	5.935	5.934	5.884-5.984	5.936	0.003
13 C26	6.111	6.113	6.112	6.115	6.109	6.104	6.112	6.062-6.162	6.110	0.004
14 C28	6.432	6.426	6.424	6.426	6.423	6.424	6.426	6.376-6.476	6.426	0.003
$ 15 Triacon Surr	6.720	6.723	6.721	6.726	6.724	6.719	6.723	6.673-6.773	6.722	0.003
16 C32	6.992	6.980	6.980	6.979	6.980	6.979	6.976	6.926-7.026	6.982	0.005

Reviewer 1 JD Date: 5/11/13
Reviewer 2 PB Date: 5/13/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Batch File: /chem3/fid3b.i/20130510.b
Inst ID: fid3b.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 C34	7.213	7.211	7.219	7.212	7.218	7.212	7.214	7.164-7.264	7.214	0.004
18 Filter Peak	+++++	+++++	+++++	+++++	+++++	+++++	11.739	11.639-11.839	+++++	+++++
19 C36	7.441	7.438	7.418	7.441	7.439	7.439	7.432	7.382-7.482	7.436	0.009
20 C38	7.640	7.634	7.642	7.637	7.637	7.642	7.639	7.589-7.689	7.639	0.003
21 C40	7.833	7.844	7.834	7.835	7.831	7.835	7.833	7.783-7.883	7.835	0.005
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130510.b

ARI Job No.: RT05 Method: i/20130510.b/ftphfid3b.m Instrument: fid3b.i Date: 10-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0802	0510b002.d	RT0510		1	Toluene,
0821	0510b003.d	IB0510		1	NO MANUAL INTEGRATION
0841	0510b004.d	DIESEL 50		1	o-terph,
0901	0510b005.d	DIESEL 100		1	o-terph,
0920	0510b006.d	DIESEL 250		1	o-terph,
0940	0510b007.d	DIESEL 500		1	o-terph,
1000	0510b008.d	DIESEL 1000		1	o-terph,
1020	0510b009.d	DIESEL 2500		1	o-terph,
1040	0510b010.d	DIESEL ICV 250		1	o-terph,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130509.b

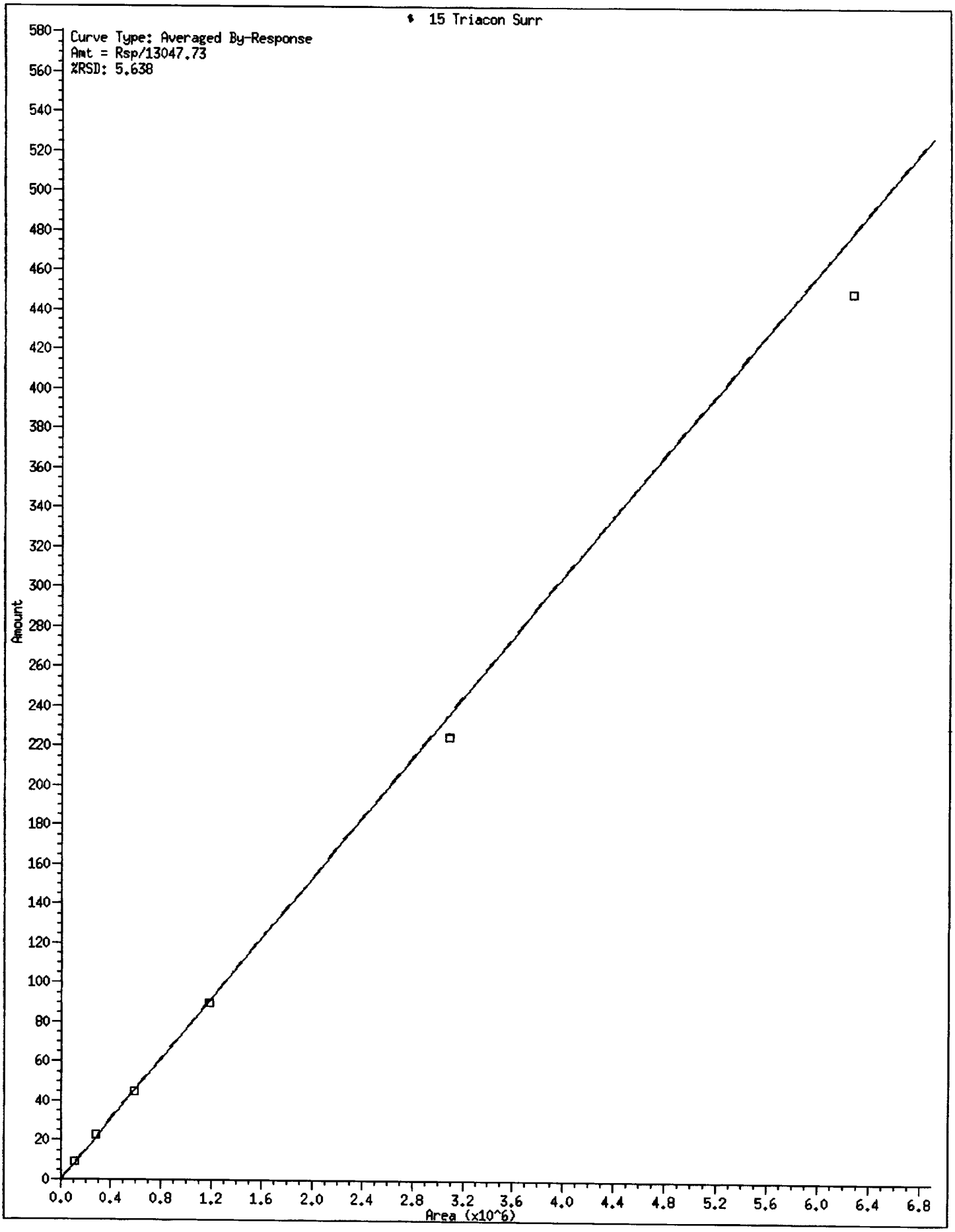
ARI Job No.: RINS Method: i/20130509.b/ftphfid3b.m Instrument: fid3b.i Date: 09-MAY-2013

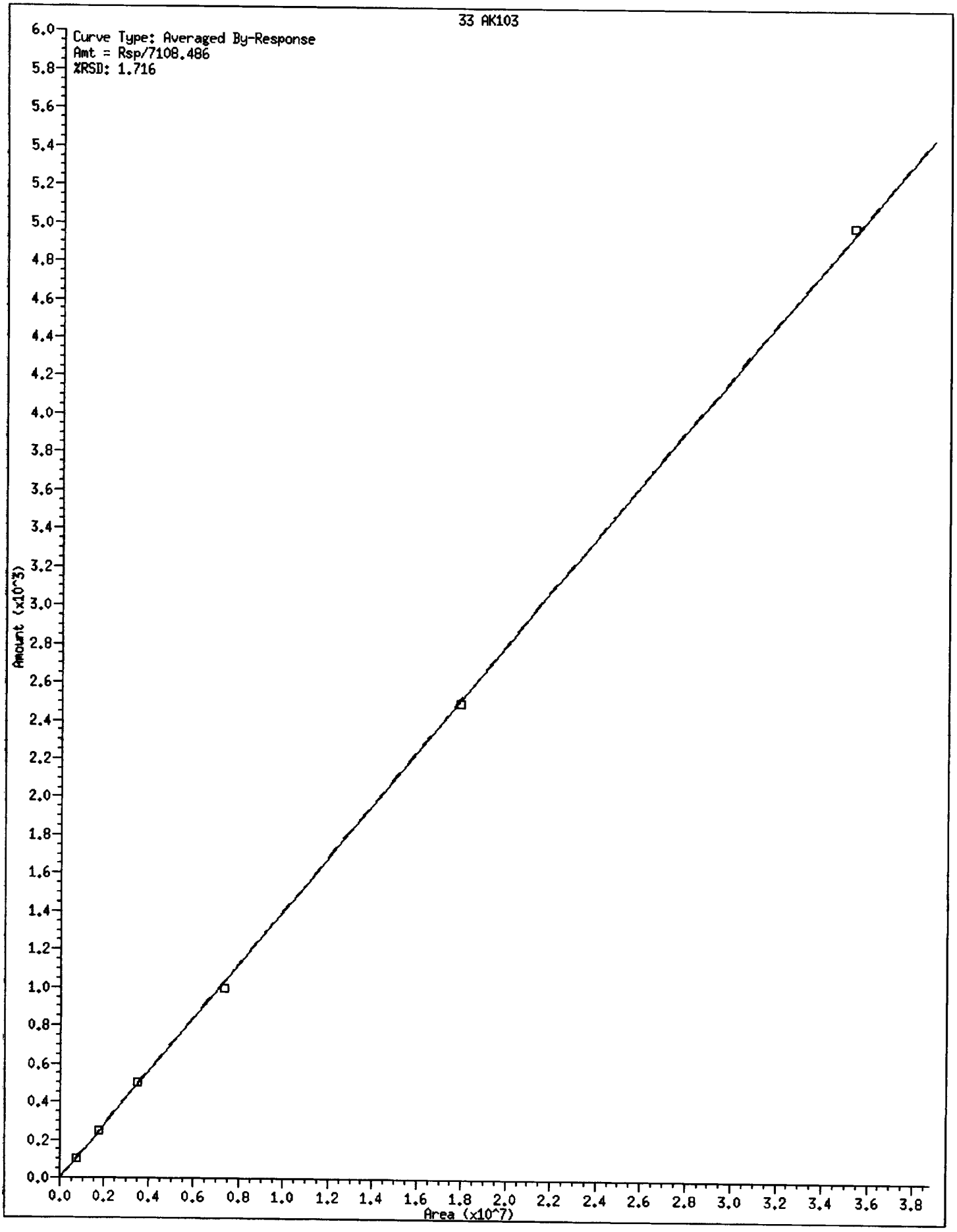
Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0822	0509b001.d	RINSE		1	NO MANUAL INTEGRATION
0840	0509b002.d	RT0509		1	Toluene,
0859	0509b003.d	IB0509		1	NO MANUAL INTEGRATION
0919	0509b004.d	DIESEL#1		1	o-terph,
0938	0509b005.d	MOIL#1		1	Triacon Surr,
1021	0509b006.d	RINSE		1	NO MANUAL INTEGRATION
1040	0509b007.d	RINSE		1	NO MANUAL INTEGRATION
1100	0509b008.d	RT0509		1	Toluene,
1120	0509b009.d	IB0509		1	NO MANUAL INTEGRATION
1140	0509b010.d	DIESEL#1		1	o-terph,
1200	0509b011.d	MOIL#1		1	Triacon Surr,
1514	0509b012.d	DIESEL 50		1	NO MANUAL INTEGRATION
1533	0509b013.d	DIESEL 100		1	NO MANUAL INTEGRATION
1552	0509b014.d	DIESEL 250		1	NO MANUAL INTEGRATION
1612	0509b015.d	DIESEL 500		1	NO MANUAL INTEGRATION
1632	0509b016.d	DIESEL 1000		1	NO MANUAL INTEGRATION
1651	0509b017.d	DIESEL 2500		1	NO MANUAL INTEGRATION
1711	0509b018.d	DIESEL ICV 250		1	NO MANUAL INTEGRATION
1730	0509b019.d	MOIL 100		1	Triacon Surr,
1750	0509b020.d	MOIL 250		1	Triacon Surr,

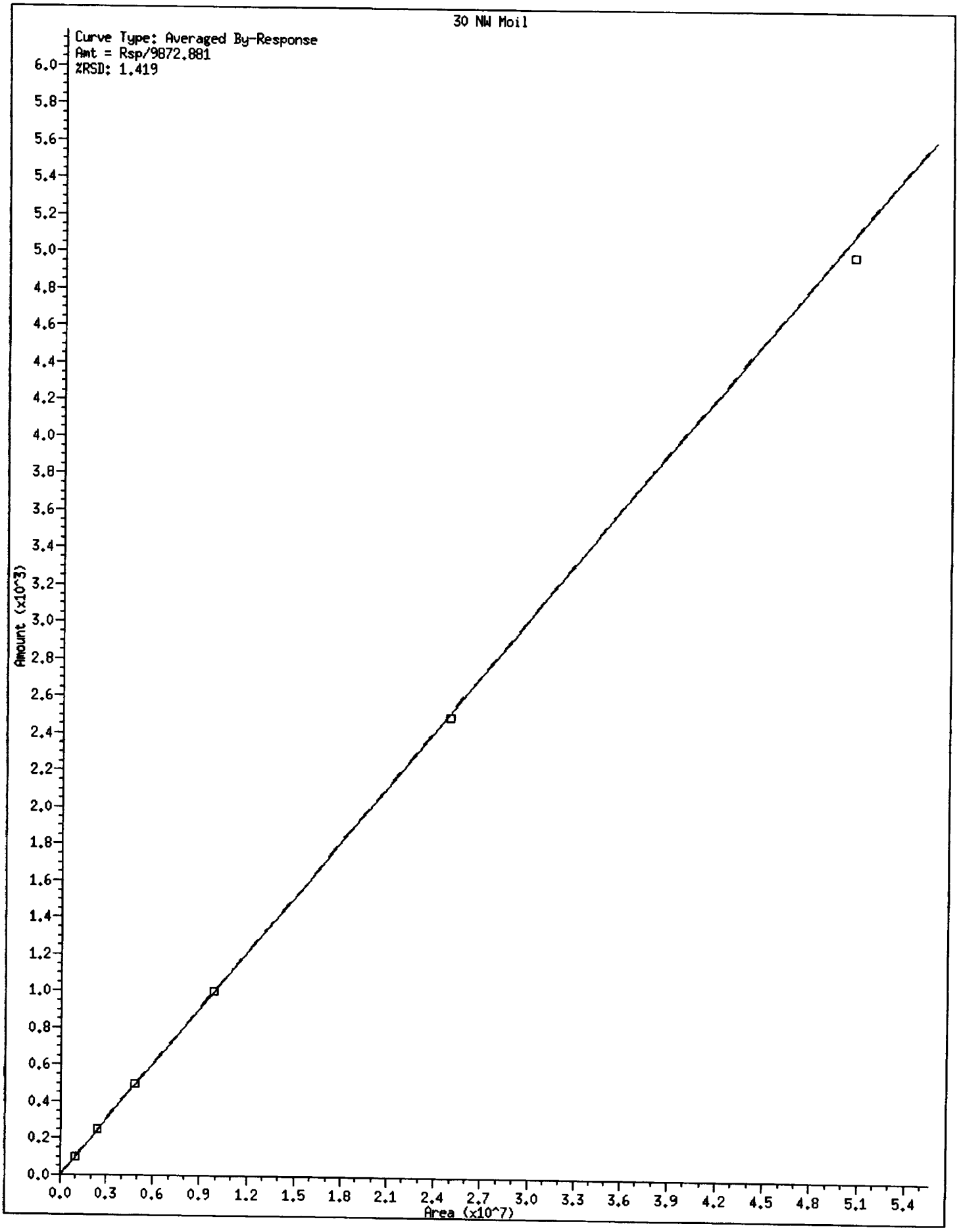
1809	0509b021.d MOIL 500	1	Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130509.b

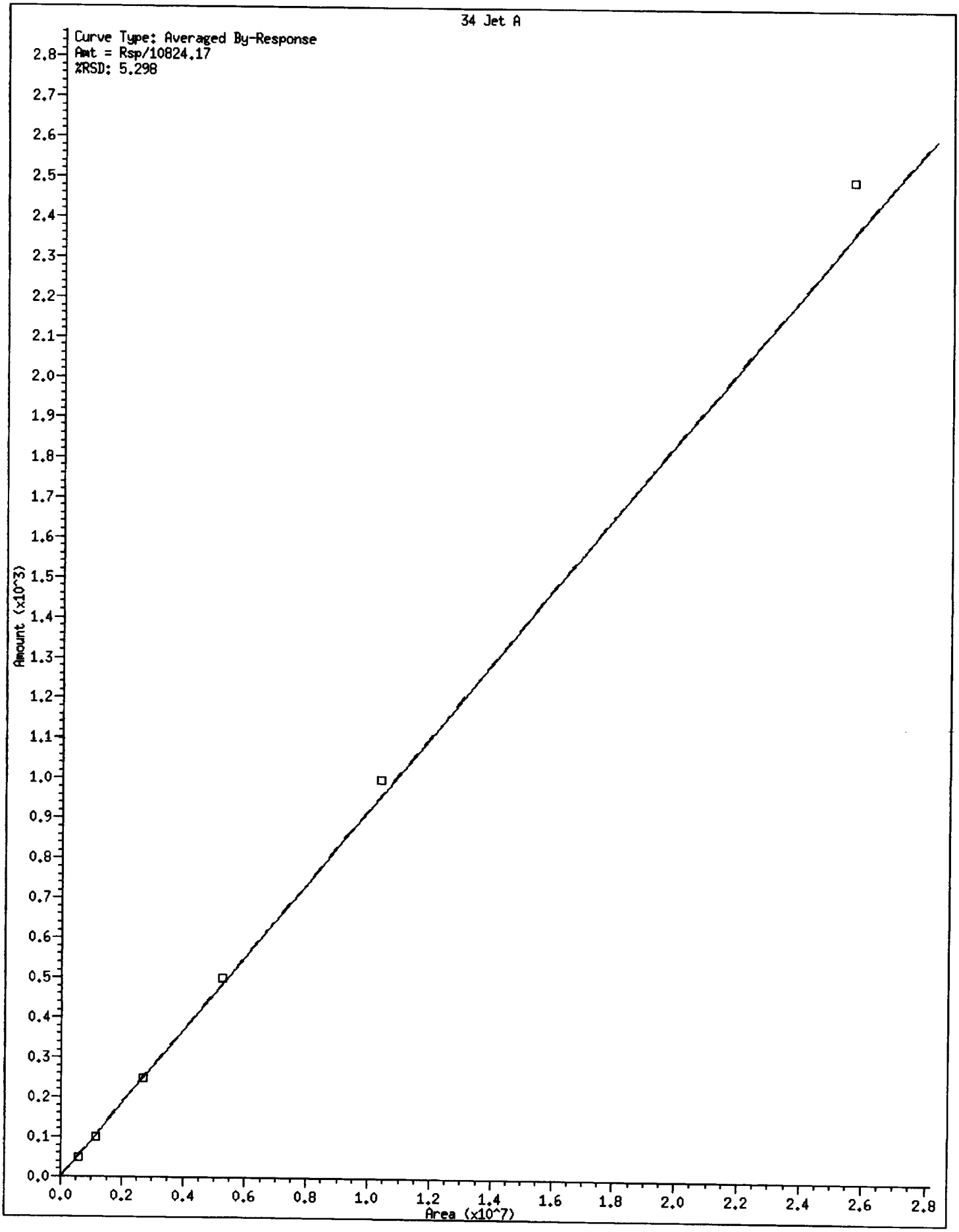
Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1829	0509b022.d	MOIL 1000		1	Triacon Surr,
1849	0509b023.d	MOIL 2500		1	Triacon Surr,
1908	0509b024.d	MOIL 5000		1	Triacon Surr,
1928	0509b025.d	MOIL ICV 500		1	Triacon Surr,
1947	0509b026.d	JETA 50		1	NO MANUAL INTEGRATION
2006	0509b027.d	JETA 100		1	NO MANUAL INTEGRATION
2026	0509b028.d	JETA 250		1	NO MANUAL INTEGRATION
2045	0509b029.d	JETA 500		1	NO MANUAL INTEGRATION
2104	0509b030.d	JETA 1000		1	NO MANUAL INTEGRATION
2123	0509b031.d	JETA 2500		1	o-terph,
2143	0509b032.d	AK103 100		1	Triacon Surr,
2202	0509b033.d	AK103 250		1	Triacon Surr,
2221	0509b034.d	AK103 500		1	Triacon Surr,
2241	0509b035.d	AK103 1000		1	Triacon Surr,
2300	0509b036.d	AK103 2500		1	Triacon Surr,
2319	0509b037.d	AK103 5000		1	Triacon Surr,
2339	0509b038.d	AK103 ICV 500		1	Triacon Surr,

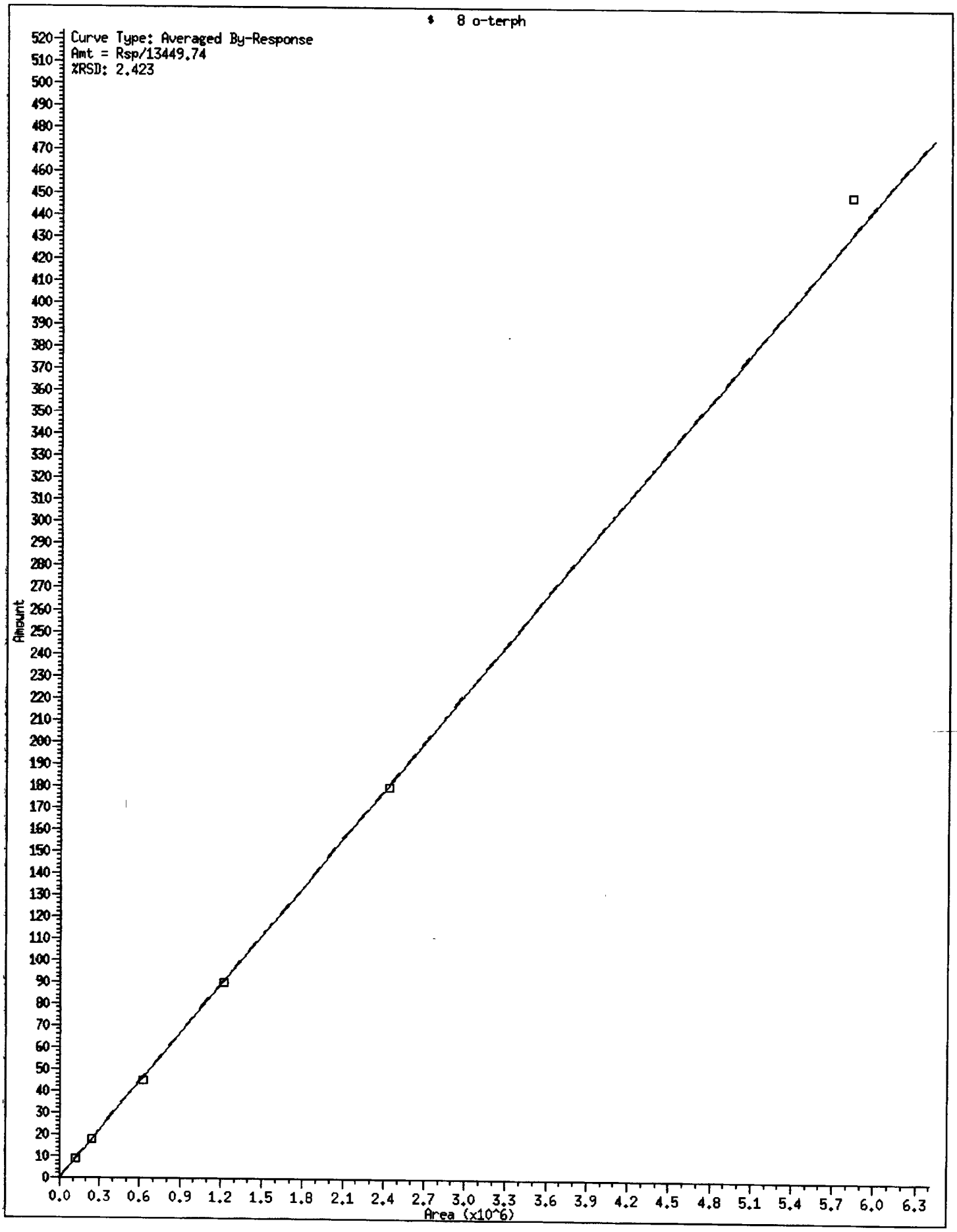

15 Triacon Surr
Curve Type: Averaged By-Response
Amt = Rsp/13047.73
%RSD: 5.638
Amount
Area (x10^6)
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
380
400
420
440
460
480
500
520
540
560
580
0.0
0.4
0.8
1.2
1.6
2.0
2.4
2.8
3.2
3.6
4.0
4.4
4.8
5.2
5.6
6.0
6.4
6.8

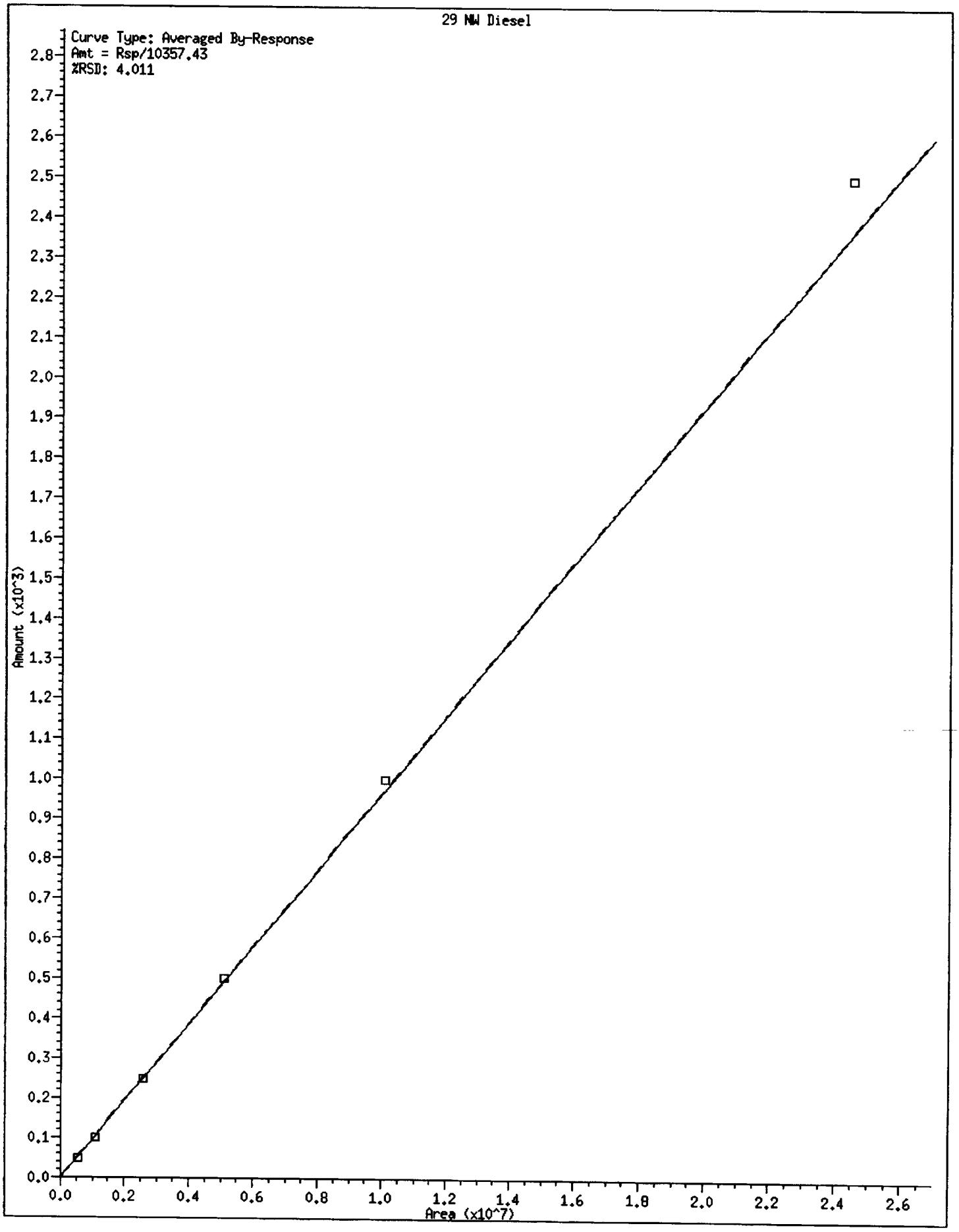

33 AK103
Curve Type: Averaged By-Response
Amt = Rsp/7108.486
%RSD: 1.716
Amount (x10^3)
Area (x10^7)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0


30 NW Moil
Curve Type: Averaged By-Response
Amt = Rsp/9872.881
%RSD: 1.419
Amount (x10^3)
Area (x10^7)

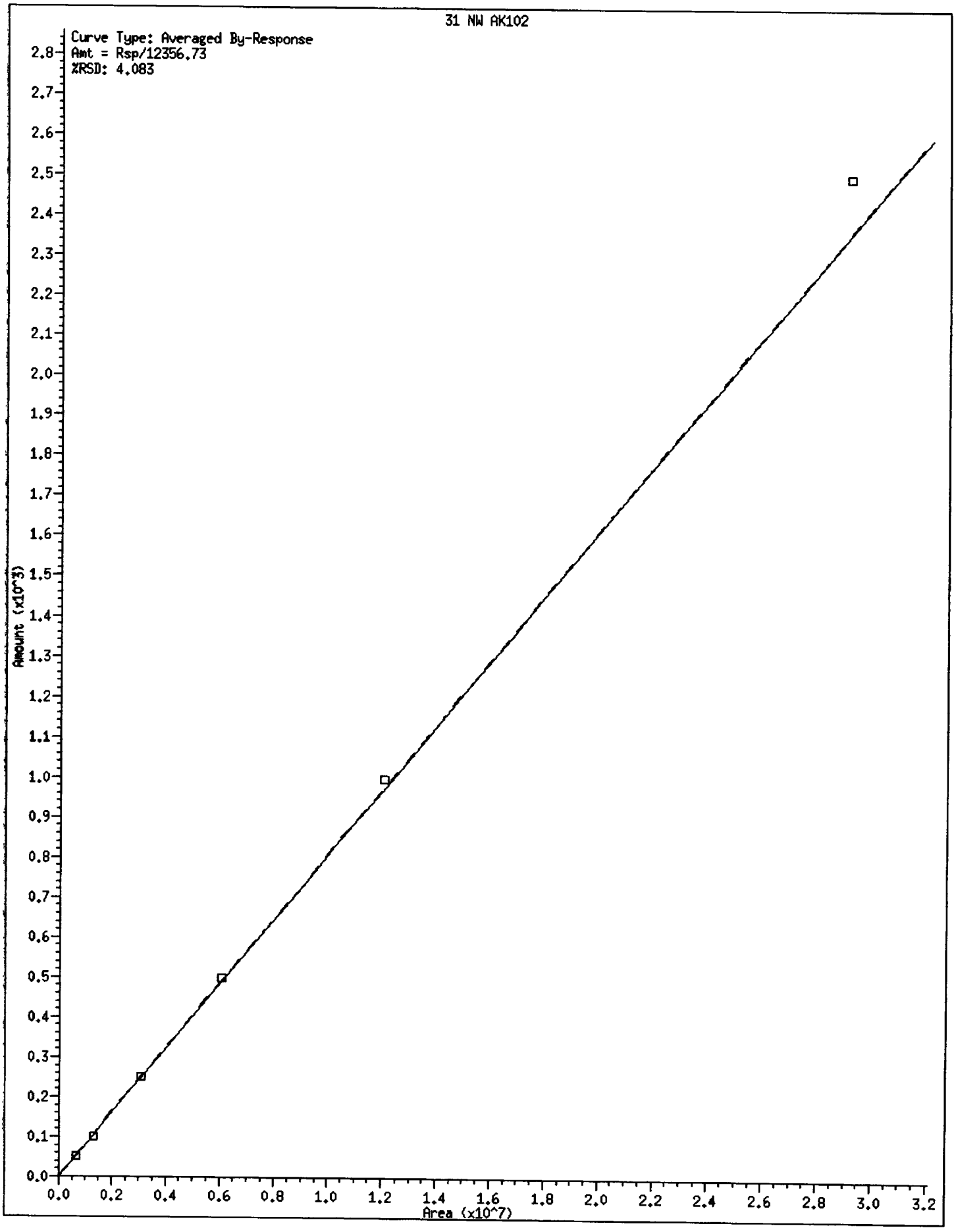
US91 : 91999


34 Jet A
Curve Type: Averaged By-Response
Amt = Rsp/10824.17
%RSD: 5.298
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
0.2
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


$ 8 o-terph
Curve Type: Averaged By-Response
Amt = Rsp/13449.74
%RSD: 2.423
Amount
Area (x10^6)
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


29 NW Diesel
Curve Type: Averaged By-Response
Amt = Rsp/10357.43
%RSD: 4.011
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
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6

WSS1 : 011402


31 NW AK102
Curve Type: Averaged By-Response
Amt = Rsp/12356.73
%RSD: 4.083
Amount (x10^3)
Area (x10^7)

6a

DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: 20130510

Instrument: FID3B.I

Project:

Calibration Date: 10-MAY-2013

SDG No.: 20130510

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	10856	10816	10366	10222	10078	9806	10358	4.0
AK Diesel	12969	12897	12393	12178	12035	11673	12357	4.1
OR Diesel	13048	12968	12457	12240	12092	11727	12422	4.1
Cal Diesel	12938	12873	12366	12154	12013	11647	12332	4.1
o-Terph	13177	13696	13787	13594	13504	12941	13450	2.4

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

Quant Ranges :

WA Diesel	C12-C24	(3.049-5.760)
AK Diesel	C10-C25	(2.254-5.938)
OR Diesel	C10-C28	(2.254-6.427)
Cal Diesel	C10-C24	(2.254-5.760)

Calibration Files	Analysis Time
0510b004.d	10-MAY-2013 08:41
0510b005.d	10-MAY-2013 09:01
0510b006.d	10-MAY-2013 09:20
0510b007.d	10-MAY-2013 09:40
0510b008.d	10-MAY-2013 10:00
0510b009.d	10-MAY-2013 10:20

6a
JET A INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: 20130509

Instrument: FID3B.I
Project:

Calibration Date: 09-MAY-2013
SDG No.: 20130509

Product Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
JET A	11588	11469	10765	10505	10366	10245	10823	5.3
o-Terph	13361	13910	13769	13905	14073	13690	13785	1.8

<- Indicates %RSD outside limits
Quant Ranges : JET A - C10-C18 (2.254-4.565)

Calibration Files	Analysis Time
0509b026.d	09-MAY-2013 19:47
0509b027.d	09-MAY-2013 20:06
0509b028.d	09-MAY-2013 20:26
0509b029.d	09-MAY-2013 20:45
0509b030.d	09-MAY-2013 21:04
0509b031.d	09-MAY-2013 21:23

FORM VI- JET A

6a

NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: 20130509

Instrument: FID3B.I

Project:

Calibration Date: 09-MAY-2013

SDG No.: 20130509

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	9838	9724	9749	9868	9957	10101	9873	1.4
Triac Surr	12017	12392	13110	13138	13711	13920	13048	5.6

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

Calibration Files	Analysis Time
0509b019.d	09-MAY-2013 17:30
0509b020.d	09-MAY-2013 17:50
0509b021.d	09-MAY-2013 18:09
0509b022.d	09-MAY-2013 18:29
0509b023.d	09-MAY-2013 18:49
0509b024.d	09-MAY-2013 19:08

FORM VI-M.Oil

WS91 · 81406

6a

NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: 20130509

Instrument: FID3B.I

Project:

Calibration Date: 09-MAY-2013

SDG No.: 20130509

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
AK M.Oil C25-C36	7138	7048	6994	7315	7153	7079	7121	1.6
Triac Surr	11701	12221	12616	13063	12991	13443	12673	5.0

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

Calibration Files	Analysis Time
0509b032.d	09-MAY-2013 21:43
0509b033.d	09-MAY-2013 22:02
0509b034.d	09-MAY-2013 22:21
0509b035.d	09-MAY-2013 22:41
0509b036.d	09-MAY-2013 23:00
0509b037.d	09-MAY-2013 23:19

FORM VI-M.Oil

WS91 : 01407

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	05/10/13	0743	4.69	6.78
02		RT0510	05/10/13	0802	4.68	6.72
03		IB0510	05/10/13	0821	4.68	6.72
04		DIESEL 50	05/10/13	0841	4.67	6.72
05		DIESEL 100	05/10/13	0901	4.67	6.72
06		DIESEL 250	05/10/13	0920	4.68	6.72
07		DIESEL 500	05/10/13	0940	4.69	6.73
08		DIESEL 1000	05/10/13	1000	4.69	6.72
09		DIESEL 2500	05/10/13	1020	4.71	6.72
10		DIESEL ICV 2	05/10/13	1040	4.68	6.72
11		DIESEL#1	05/10/13	1331	4.67	6.78
12		JETA#1	05/10/13	1350	4.68	6.78
13		DIESEL#2	05/10/13	1410	4.68	6.76
14	ZZZZZ	ZZZZZ	05/10/13	1438	4.67	6.72
15	ZZZZZ	ZZZZZ	05/10/13	1457	4.68	6.72
16	ZZZZZ	ZZZZZ	05/10/13	1517	4.68	6.72
17	ZZZZZ	ZZZZZ	05/10/13	1537	4.67	6.72*
18	ZZZZZ	ZZZZZ	05/10/13	1556	4.67	6.71*
19	ZZZZZ	ZZZZZ	05/10/13	1616	4.67	6.72*
20	ZZZZZ	ZZZZZ	05/10/13	1635	4.68	6.72
21	ZZZZZ	ZZZZZ	05/10/13	1655	4.68	6.72
22	ZZZZZ	ZZZZZ	05/10/13	1714	4.68	6.72
23		DIESEL#3	05/10/13	1733	4.68	6.77
24		JETA#2	05/10/13	1753	4.68	6.77
25		MOIL#1	05/10/13	1812	4.68	6.76
26		WP23MBS1	05/10/13	1832	4.68	6.77
27		WP23LCSS1	05/10/13	1851	4.68	6.76
28		WP23A	05/10/13	1910	4.68	6.77
29		WP23A	05/10/13	1930	4.67	6.76
30		WP23B	05/10/13	1949	4.68	6.77
31		WP23B	05/10/13	2009	4.67	6.76
32		WP23C	05/10/13	2029	4.68	6.76

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

4591 : 01406

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		WP23C	05/10/13	2048	4.67	6.77
02		DIESEL#4	05/10/13	2107	4.68	6.77
03		MOIL#2	05/10/13	2127	4.68	6.76
04		WP24MBS1	05/10/13	2151	4.68	6.76
05		WP24LCSS1	05/10/13	2209	4.68	6.77
06		WN70A	05/10/13	2229	4.68	6.77
07		WP24A	05/10/13	2306	4.69	6.77

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:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	05/09/13	0822	4.67	6.72
02		RT0509	05/09/13	0840	4.68	6.72
03	ZZZZZ	ZZZZZ	05/09/13	0859	4.68	6.72
04	ZZZZZ	ZZZZZ	05/09/13	0919	4.68	6.73
05	ZZZZZ	ZZZZZ	05/09/13	0938	4.67	6.72
06	ZZZZZ	ZZZZZ	05/09/13	1021	4.67	6.72
07	ZZZZZ	ZZZZZ	05/09/13	1040	4.68	6.72
08		RT0509	05/09/13	1100	4.68	6.72
09	ZZZZZ	ZZZZZ	05/09/13	1120	4.68	6.72
10	ZZZZZ	ZZZZZ	05/09/13	1140	4.68	6.72
11	ZZZZZ	ZZZZZ	05/09/13	1200	4.67	6.72
12	ZZZZZ	ZZZZZ	05/09/13	1514	4.67	6.73
13	ZZZZZ	ZZZZZ	05/09/13	1533	4.67	6.72
14	ZZZZZ	ZZZZZ	05/09/13	1552	4.68	6.72
15	ZZZZZ	ZZZZZ	05/09/13	1612	4.68	6.72
16	ZZZZZ	ZZZZZ	05/09/13	1632	4.69	6.73
17	ZZZZZ	ZZZZZ	05/09/13	1651	4.70	6.73
18		DIESEL ICV 2	05/09/13	1711	4.68	6.72
19		MOIL 100	05/09/13	1730	4.67	6.72*
20		MOIL 250	05/09/13	1750	4.68	6.72
21		MOIL 500	05/09/13	1809	4.68	6.73
22		MOIL 1000	05/09/13	1829	4.67	6.74
23		MOIL 2500	05/09/13	1849	4.67	6.75
24		MOIL 5000	05/09/13	1908	4.68	6.77
25		MOIL ICV 500	05/09/13	1928	4.68	6.73
26	ZZZZZ	ZZZZZ	05/09/13	1947	4.67	6.73
27	ZZZZZ	ZZZZZ	05/09/13	2006	4.67	6.73
28	ZZZZZ	ZZZZZ	05/09/13	2026	4.68	6.73
29	ZZZZZ	ZZZZZ	05/09/13	2045	4.68	6.73
30	ZZZZZ	ZZZZZ	05/09/13	2104	4.69	6.72
31	ZZZZZ	ZZZZZ	05/09/13	2123	4.71	6.72
32	ZZZZZ	ZZZZZ	05/09/13	2143	4.68	6.72*

	QC LIMITS
TERPH = o-terph	(+/- 0.05 MINUTES)
TRIAC = Triacon Surr	(+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

WS91:01410

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130510 Project:

Instrument ID: FID3B GC Column: RTX-1

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

SURROGATE RT FROM DAILY STANDARD
TERPH: 4.68 TRIAC: 6.77

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	05/09/13	2202	4.67	6.72
02	ZZZZZ	ZZZZZ	05/09/13	2221	4.68	6.73
03	ZZZZZ	ZZZZZ	05/09/13	2241	4.68	6.74
04	ZZZZZ	ZZZZZ	05/09/13	2300	4.68	6.75
05	ZZZZZ	ZZZZZ	05/09/13	2319	4.68	6.77
06		AK103 ICV 50	05/09/13	2339	4.67	6.72

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

WSS1 : 01H11

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b002.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: RT0510
Client ID:
Injection: 10-MAY-2013 08:02
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.651	0.000	278628	291395	WATPHG	(Tol-C12)	1129888	83.65 M
C8	0.821	-0.006	181633	241331	WATPHD	(C12-C24)	1664879	160.74
C10	2.250	-0.004	359200	245154	WATPHM	(C24-C38)	2584330	261.76
C12	3.040	-0.009	358905	230134	AK102	(C10-C25)	2219047	179.58
C14	3.620	-0.001	408094	260963	AK103	(C25-C36)	2235210	314.44
C16	4.117	0.001	379580	245451	OR.DIES	(C10-C28)	3488483	226.79
C18	4.568	0.002	369583	253308				
C20	4.989	0.000	363534	236583				
C22	5.387	0.001	355771	240940				
C24	5.759	-0.001	347940	242813				
C25	5.934	-0.004	345745	237993				
C26	6.112	-0.002	959349	714870				
C28	6.426	-0.001	312314	257280	IT.DIES	(C10-C24)	2207860	160.12
C32	6.976	0.000	424837	286870				
C34	7.214	0.005	432992	287900	CREOSOT	(C8-C22)	1394958	431.43
Filter Peak	----							
C36	7.432	-0.003	430689	302270	BUNKERC	(C10-C38)	4792190	977.04
o-terph	4.676	-0.007	810739	558615	JET-A	(C10-C18)	1383968	127.86
Triacon Surr	6.723	-0.045	927716	705353				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	558615	41.5	92.3
Triacontane	705353	54.1	120.1

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

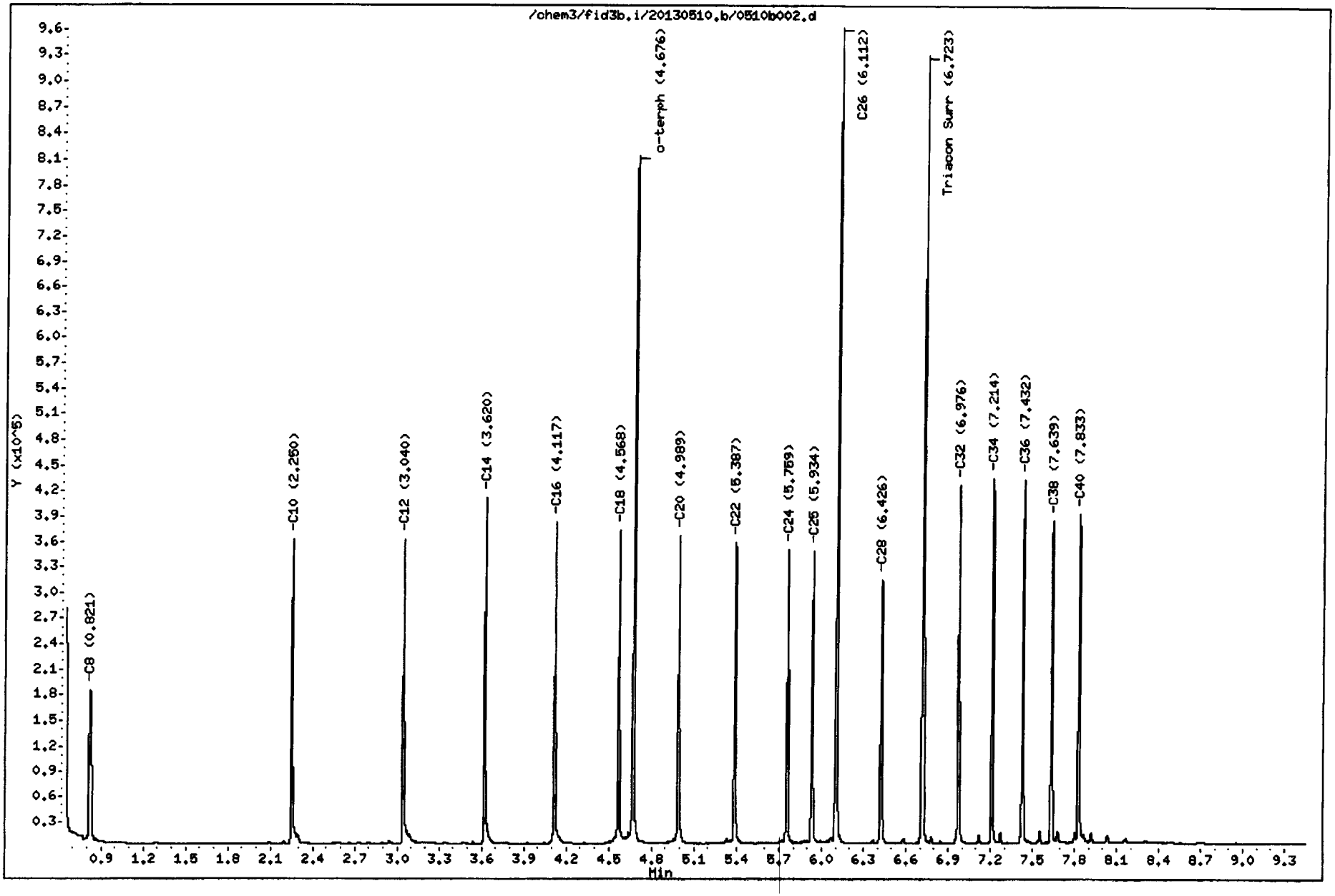
JW 5/11/13

Data File: /chem3/fid3b.i/20130510.b/0510b002.d
Date : 10-MAY-2013 08:02
Client ID:
Sample Info: RT0510

Column phase: RTX-1

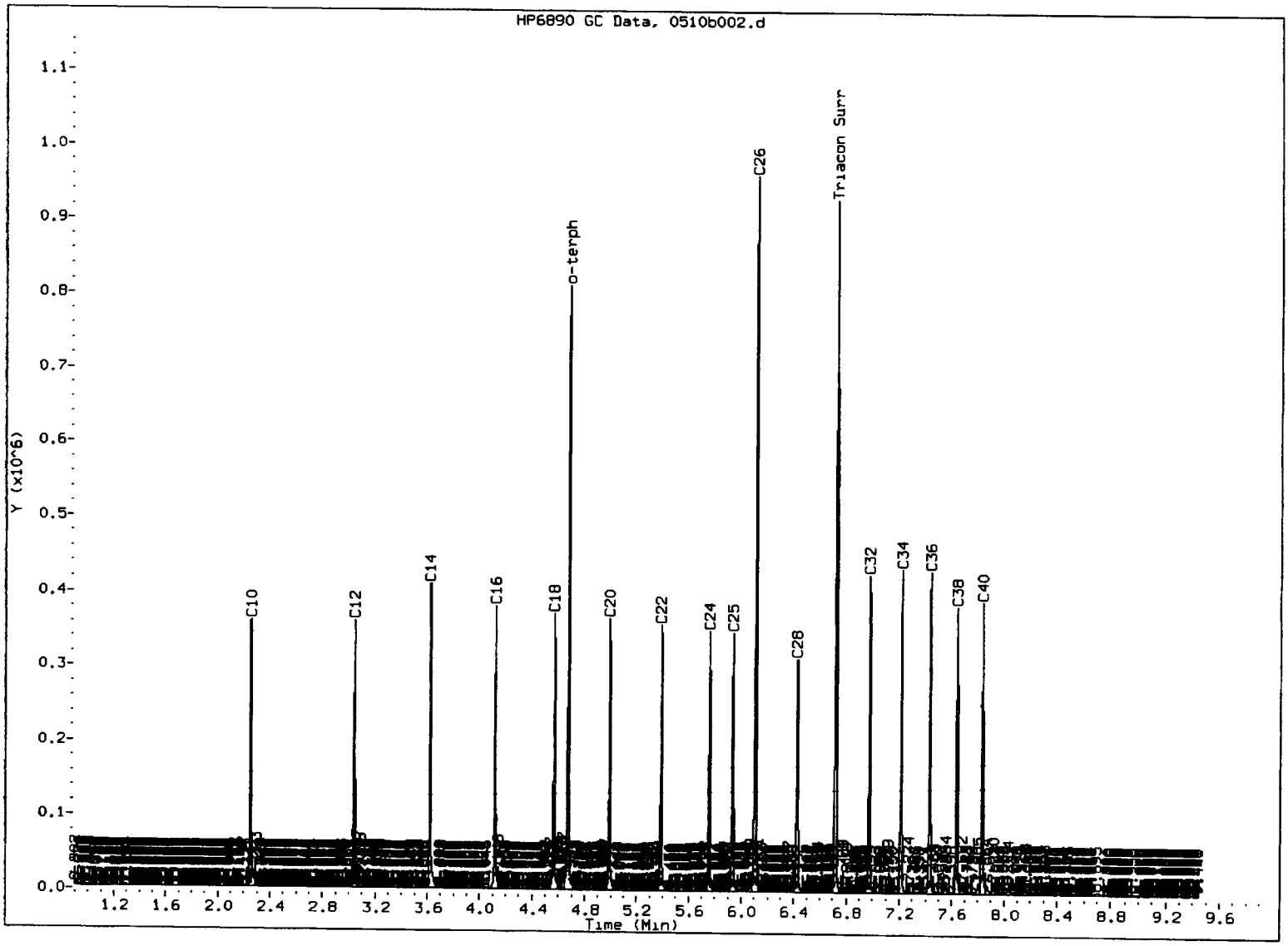
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 RT0510

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JU Date: 5/11/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b003.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: IB0510
Client ID:
Injection: 10-MAY-2013 08:21
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	82802	6
C8	0.826	-0.002	3227	2790	WATPHD	(C12-C24)	51789	5.00
C10	2.253	-0.001	538	718	WATPHM	(C24-C38)	95461	9.67
C12	3.041	-0.007	348	185	AK102	(C10-C25)	73962	5.99
C14	3.617	-0.004	310	162	AK103	(C25-C36)	71921	10.12
C16	4.116	0.000	197	74	OR.DIES	(C10-C28)	78945	5.13
C18	4.564	-0.001	233	164				
C20	4.994	0.005	271	68				
C22	5.384	-0.003	117	79				
C24	5.753	-0.006	127	110				
C25	5.933	-0.005	24	4				
C26	6.104	-0.009	79	16				
C28	6.433	0.006	531	706	IT.DIES	(C10-C24)	73322	5.32
C32	6.987	0.011	2312	2615				
C34	7.214	0.005	585	115	CREOSOT	(C8-C22)	50403	15.59
Filter Peak	----							
C36	7.418	-0.017	6058	6883	BUNKERC	(C10-C38)	168784	34.41
o-terph	4.677	-0.006	864329	578060	JET-A	(C10-C18)	45532	4.21
Triacon Surr	6.722	-0.046	725287	542624				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	578060	43.0	95.5
Triacontane	542624	41.6	92.4

JW 5/11/13

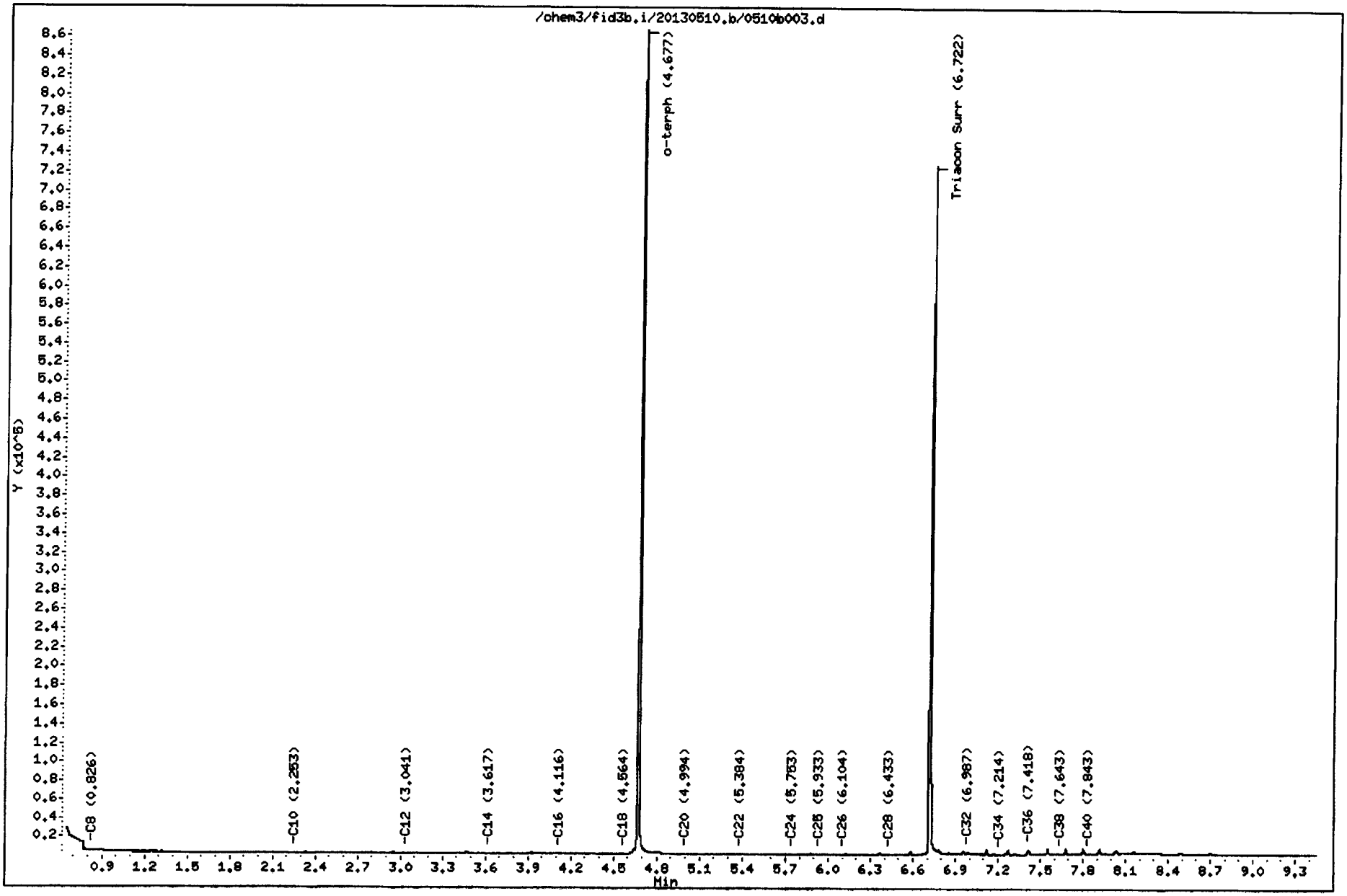
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b003.d
Date : 10-MAY-2013 08:21
Client ID:
Sample Info: IB0510

Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b004.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 50
Client ID:
Injection: 10-MAY-2013 08:41
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	193240	14
C8	0.824	-0.004	3186	2701	WATPHD	(C12-C24)	542793	52.41
C10	2.255	0.001	2818	2663	WATPHM	(C24-C38)	33378	3.38
C12	3.037	-0.011	3301	3758	AK102	(C10-C25)	648444	52.48 M
C14	3.621	0.000	7527	8721	AK103	(C25-C36)	20323	2.86
C16	4.117	0.001	11304	11840	OR.DIES	(C10-C28)	652389	42.41 M
C18	4.564	-0.001	12195	11129				
C20	4.990	0.001	4993	2568				
C22	5.382	-0.004	1288	422				
C24	5.759	-0.001	485	174				
C25	5.938	0.000	231	70				
C26	6.111	-0.003	110	48				
C28	6.432	0.006	29	8	IT.DIES	(C10-C24)	646906	46.91
C32	6.992	0.016	117	35				
C34	7.213	0.003	232	62	CREOSOT	(C8-C22)	526977	162.98
Filter Peak	----							
C36	7.441	0.006	446	167	BUNKERC	(C10-C38)	680284	138.70
o-terph	4.670	-0.013	199832	118595	JET-A	(C10-C18)	496912	45.91
Triacon Surr	6.720	-0.048	76	52				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	118595	8.8	19.6
Triacontane	52	0.0	0.0

JW
5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b004.d

Date : 10-MAY-2013 08:41

Client ID:

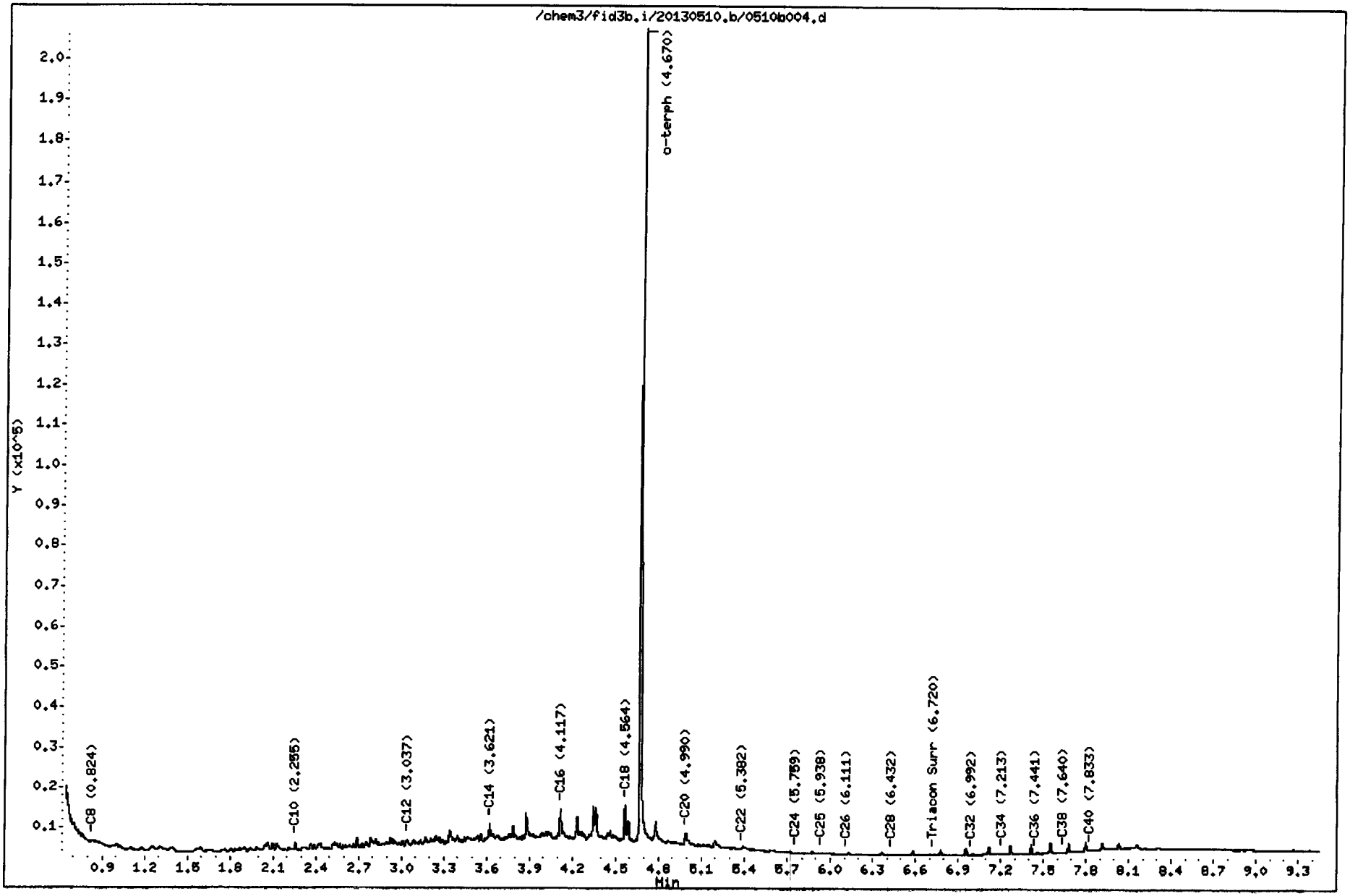
Sample Info: DIESEL 50

Column phase: RTX-1

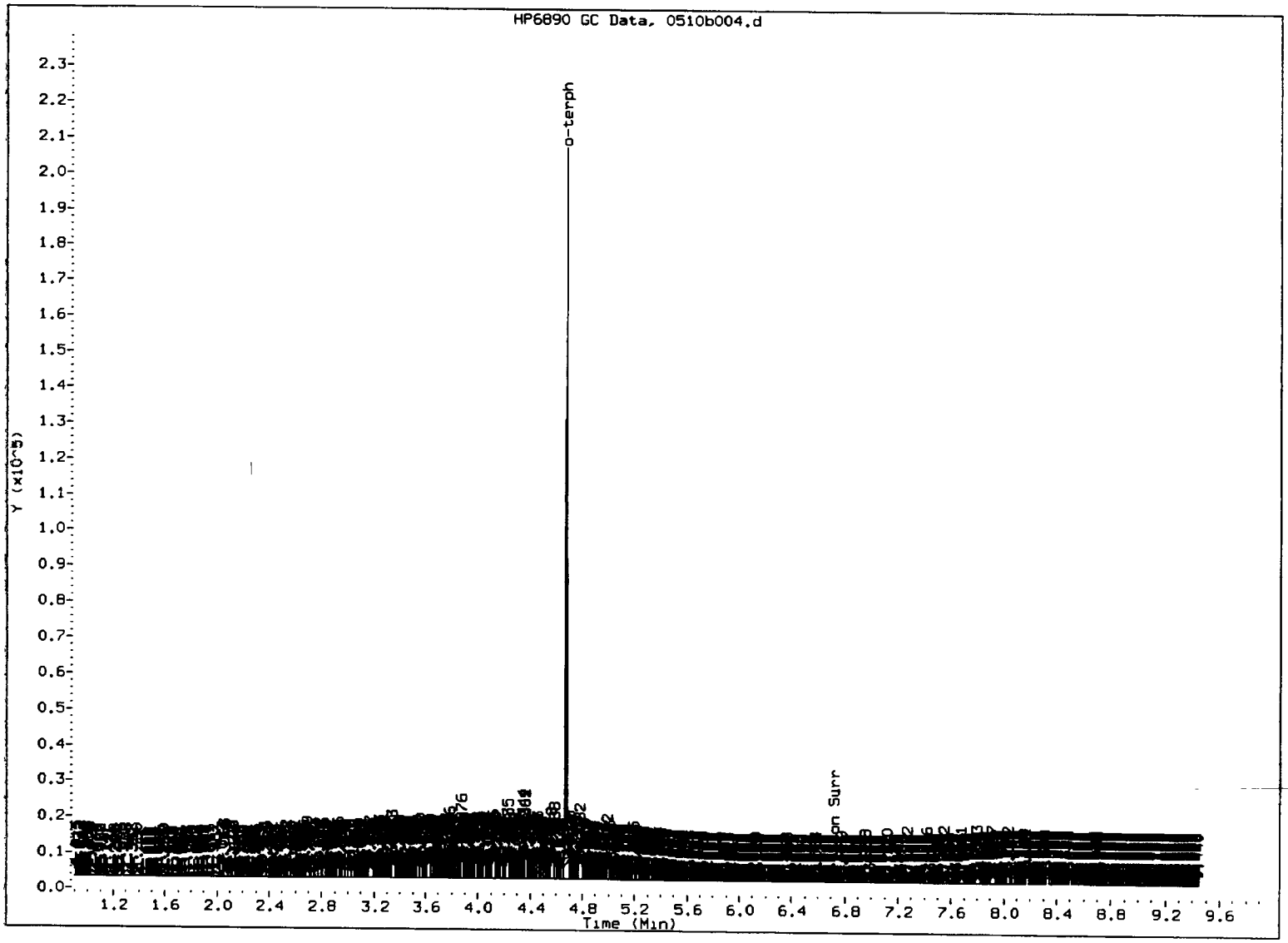
Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL 50 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b005.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 100
Client ID:
Injection: 10-MAY-2013 09:01
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	348905	26	
C8	0.829	0.001	4019	3639	WATPHD	(C12-C24)	1081580	104.43	
C10	2.255	0.001	5549	5298	WATPHM	(C24-C38)	30498	3.09	
C12	3.038	-0.011	8688	11176	AK102	(C10-C25)	1289659	104.37	M
C14	3.618	-0.003	18063	21629	AK103	(C25-C36)	18970	2.67	
C16	4.116	0.000	28732	34246	OR.DIES	(C10-C28)	1296754	84.30	M
C18	4.564	-0.001	28511	24397					
C20	4.988	-0.002	13723	21176					
C22	5.389	0.003	5048	4358					
C24	5.758	-0.001	930	234					
C25	5.938	0.000	463	108					
C26	6.113	-0.001	221	51					
C28	6.426	-0.001	46	9	IT.DIES	(C10-C24)	1287251	93.35	
C32	6.980	0.004	95	30					
C34	7.211	0.001	189	59	CREOSOT	(C8-C22)	1048198	324.18	
Filter Peak	----								
C36	7.438	0.003	375	176	BUNKERC	(C10-C38)	1317749	268.67	
o-terph	4.672	-0.011	474682	246523	JET-A	(C10-C18)	984623	90.97	
Triacon Surr	6.723	-0.045	53	24					

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	246523	18.3	40.7
Triacontane	24	0.0	0.0

JW 5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b005.d

Date : 10-MAY-2013 09:01

Client ID:

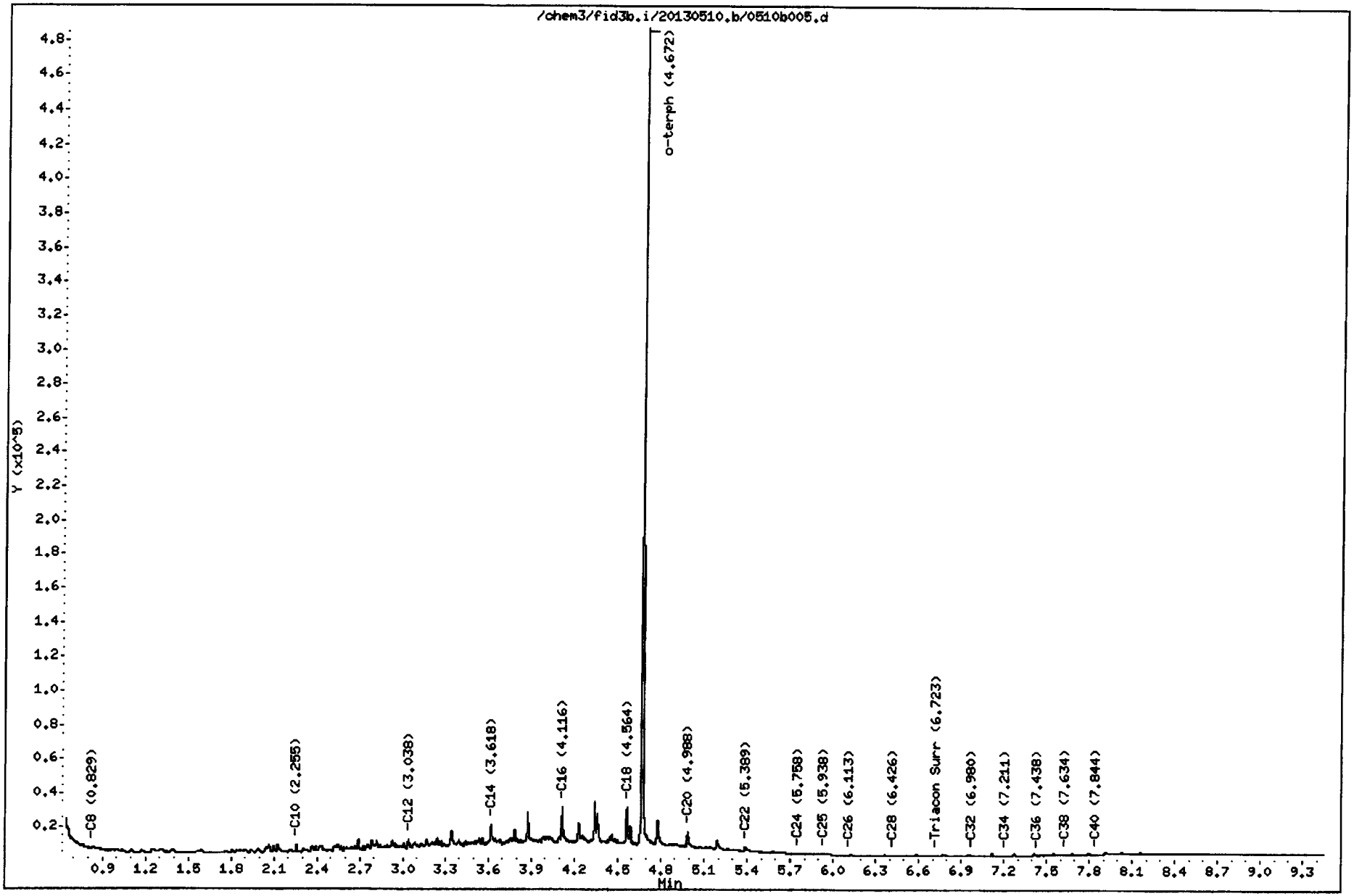
Sample Info: DIESEL 100

Column phase: RTX-1

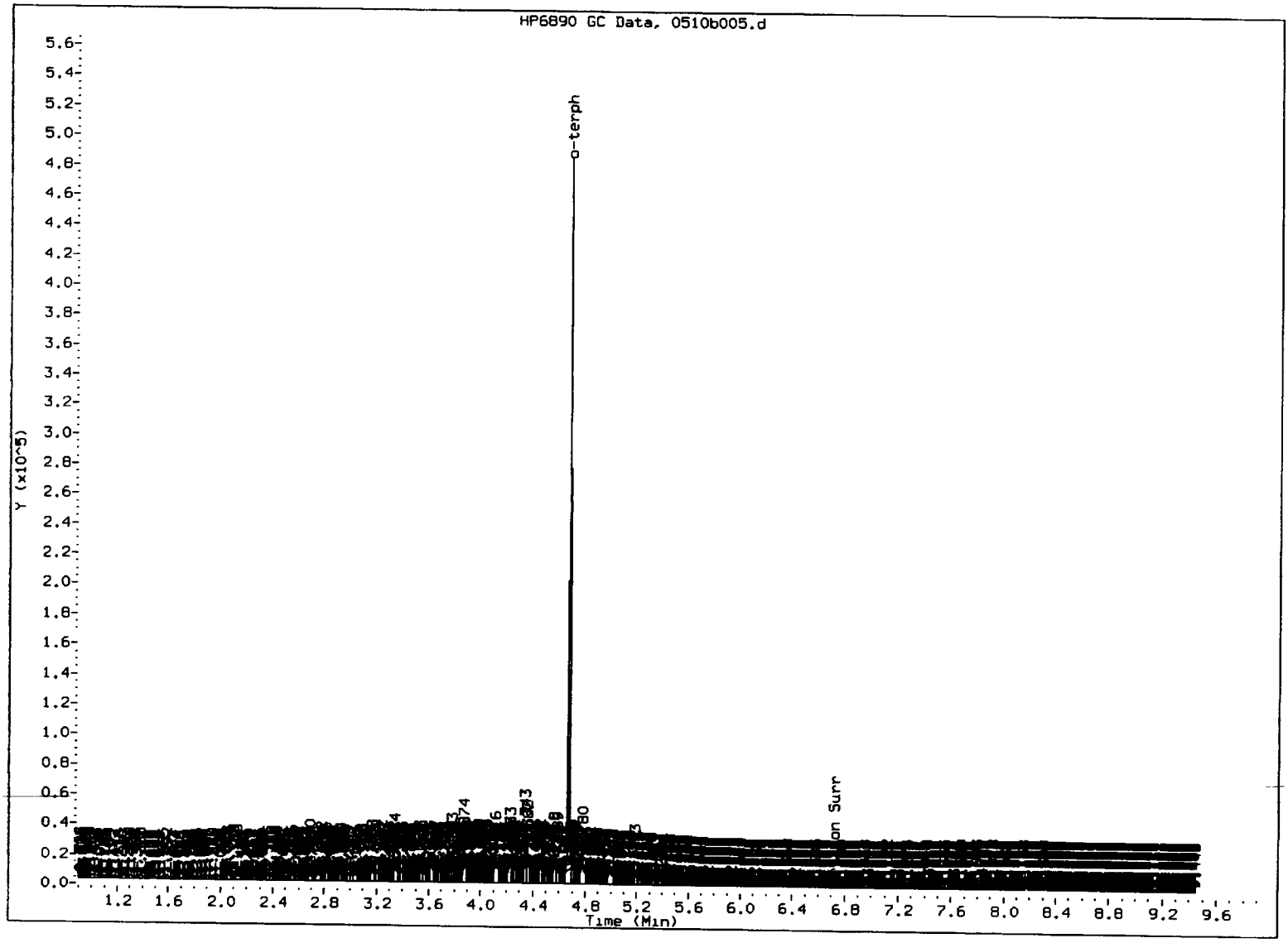
Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL 100 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b006.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 250
Client ID:
Injection: 10-MAY-2013 09:20
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	761791	56
C8	0.831	0.004	5218	8810	WATPHD	(C12-C24)	2591545	250.21
C10	2.256	0.002	15216	13003	WATPHM	(C24-C38)	38764	3.93
C12	3.039	-0.009	25438	28143	AK102	(C10-C25)	3098190	250.73 M
C14	3.619	-0.002	52194	51453	AK103	(C25-C36)	25541	3.59
C16	4.115	-0.001	83800	65685	OR.DIES	(C10-C28)	3114136	202.45 M
C18	4.565	0.000	76536	62707				
C20	4.987	-0.002	42799	46284				
C22	5.386	0.000	18091	23066				
C24	5.762	0.002	3061	2619				
C25	5.931	-0.007	1055	187				
C26	6.112	-0.002	544	242				
C28	6.424	-0.003	128	68	IT.DIES	(C10-C24)	3091557	224.20
C32	6.980	0.004	52	12				
C34	7.219	0.010	155	59	CREOSOT	(C8-C22)	2516265	778.22
Filter Peak	----							
C36	7.418	-0.017	1255	1376	BUNKERC	(C10-C38)	3130321	638.22
o-terph	4.678	-0.005	968874	620399	JET-A	(C10-C18)	2379987	219.88
Triacon Surr	6.721	-0.047	32	20				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	620399	46.1	102.5
Triacontane	20	0.0	0.0

JW 5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b006.d

Date : 10-MAY-2013 09:20

Client ID:

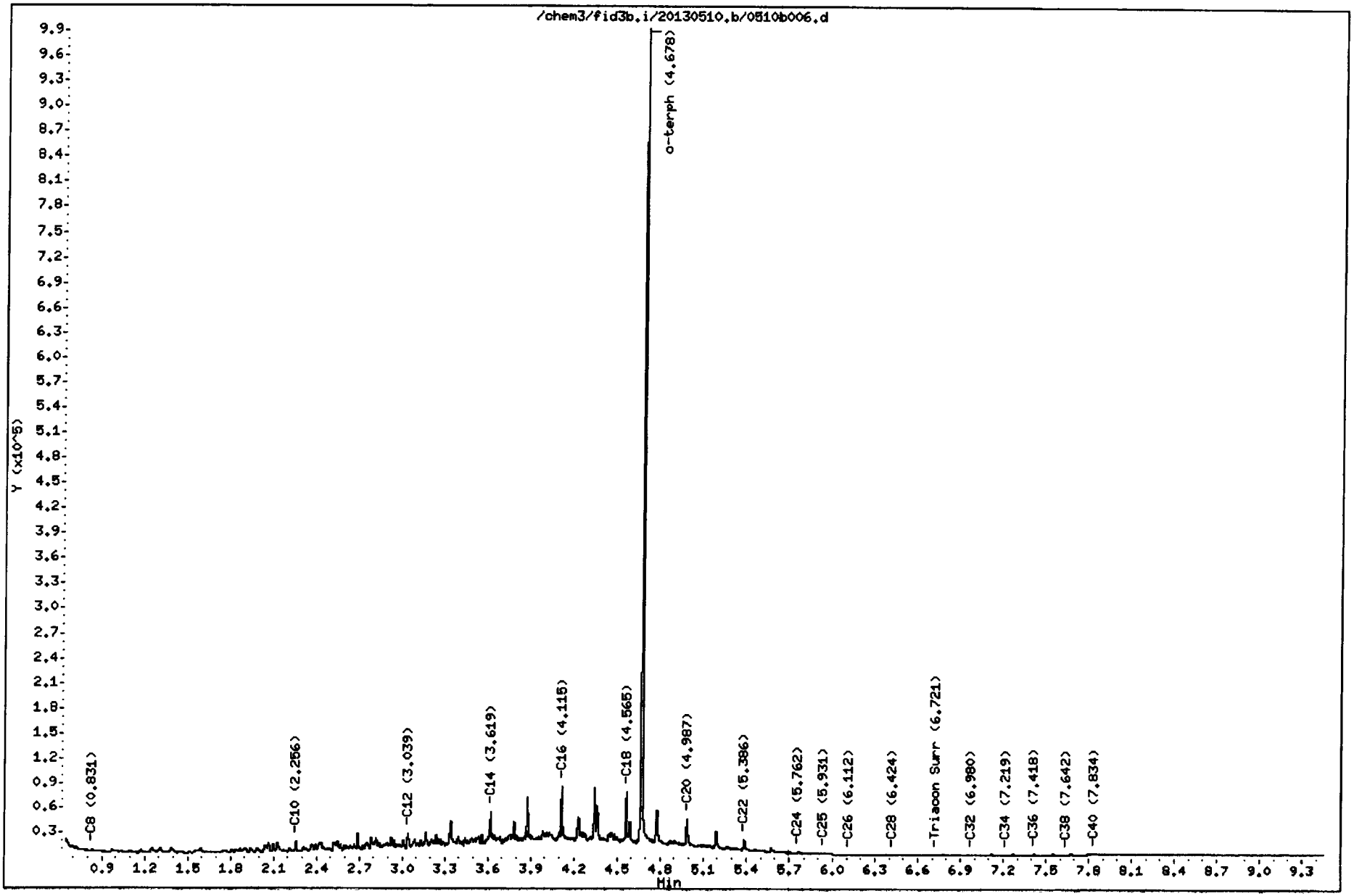
Sample Info: DIESEL 250

Column phase: RTX-1

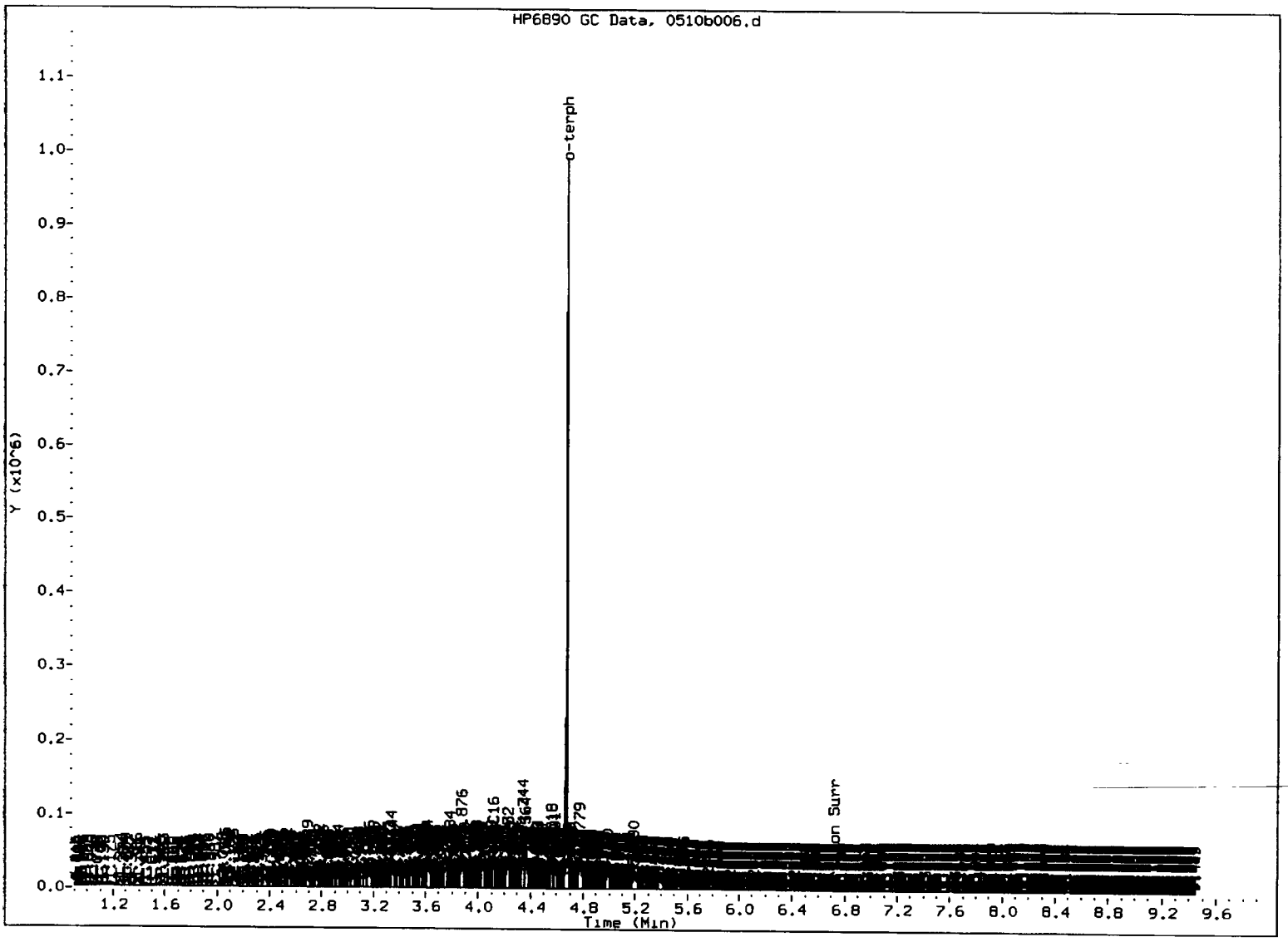
Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL 250 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: JW Date: 5/11/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b007.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 500
Client ID:
Injection: 10-MAY-2013 09:40
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	1423305	105
C8	0.831	0.004	7103	11774	WATPHD	(C12-C24)	5111212	493.48
C10	2.256	0.002	34009	26478	WATPHM	(C24-C38)	56849	5.76
C12	3.039	-0.009	59303	59524	AK102	(C10-C25)	6088980	492.77 M
C14	3.619	-0.002	108417	83752	AK103	(C25-C36)	39698	5.58
C16	4.116	0.000	169964	136442	OR.DIES	(C10-C28)	6120141	397.88 M
C18	4.569	0.003	143941	125900				
C20	4.989	0.000	84653	96402				
C22	5.387	0.000	38580	47857				
C24	5.761	0.001	7758	13975				
C25	5.940	0.002	3274	5094				
C26	6.115	0.001	1168	274				
C28	6.426	0.000	225	21	IT.DIES	(C10-C24)	6077010	440.71
C32	6.979	0.003	47	18				
C34	7.212	0.002	94	30	CREOSOT	(C8-C22)	4959474	1533.85
Filter Peak	----							
C36	7.441	0.006	250	95	BUNKERC	(C10-C38)	6133859	1250.58
o-terph	4.686	0.003	1593055	1223455	JET-A	(C10-C18)	4663065	430.80
Triacon Surr	6.726	-0.042	55	7				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1223455	91.0	202.1
Triacontane	7	0.0	0.0

JW
5/11/13

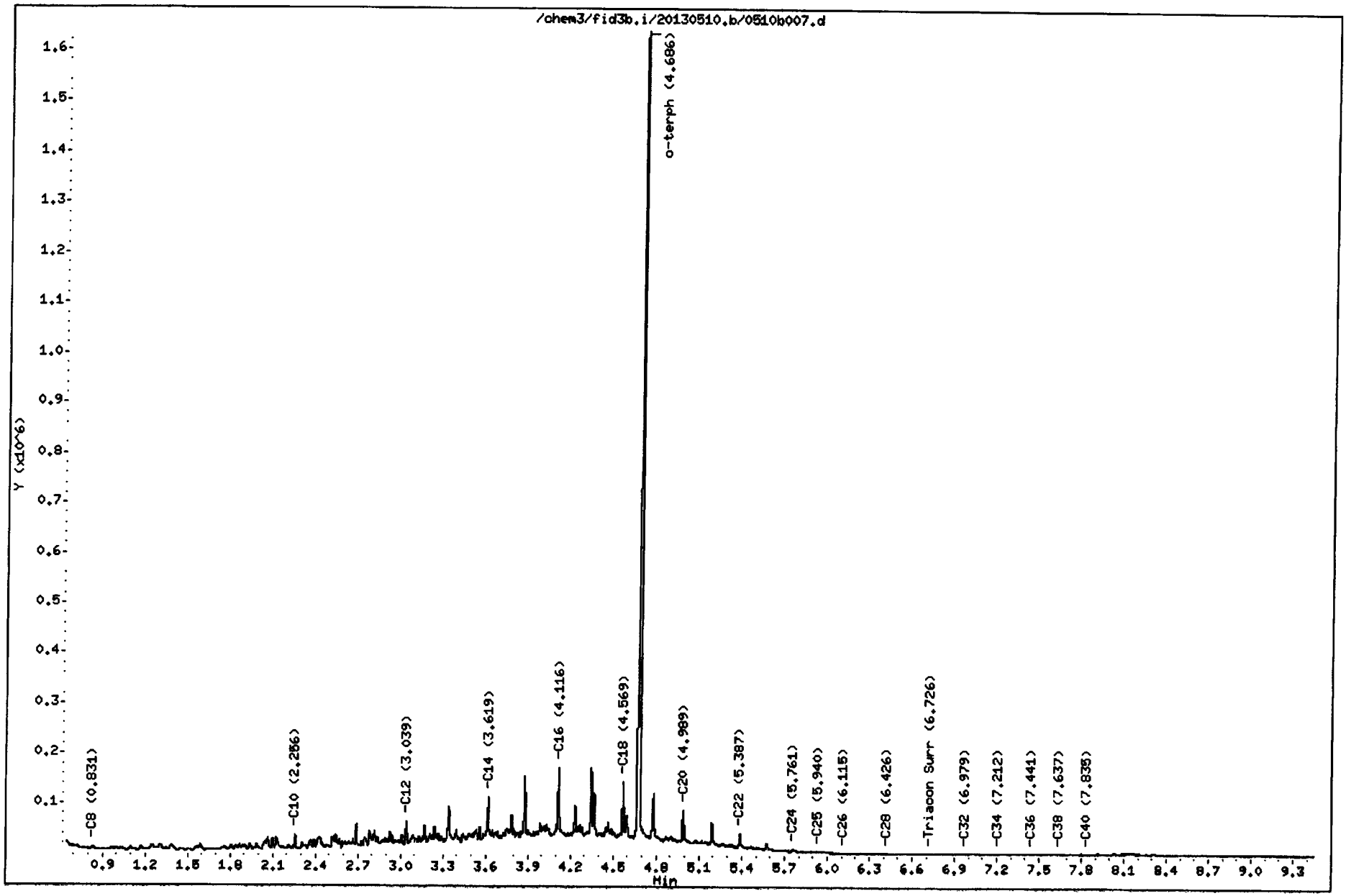
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b007.d
Date : 10-MAY-2013 09:40
Client ID:
Sample Info: DIESEL 500

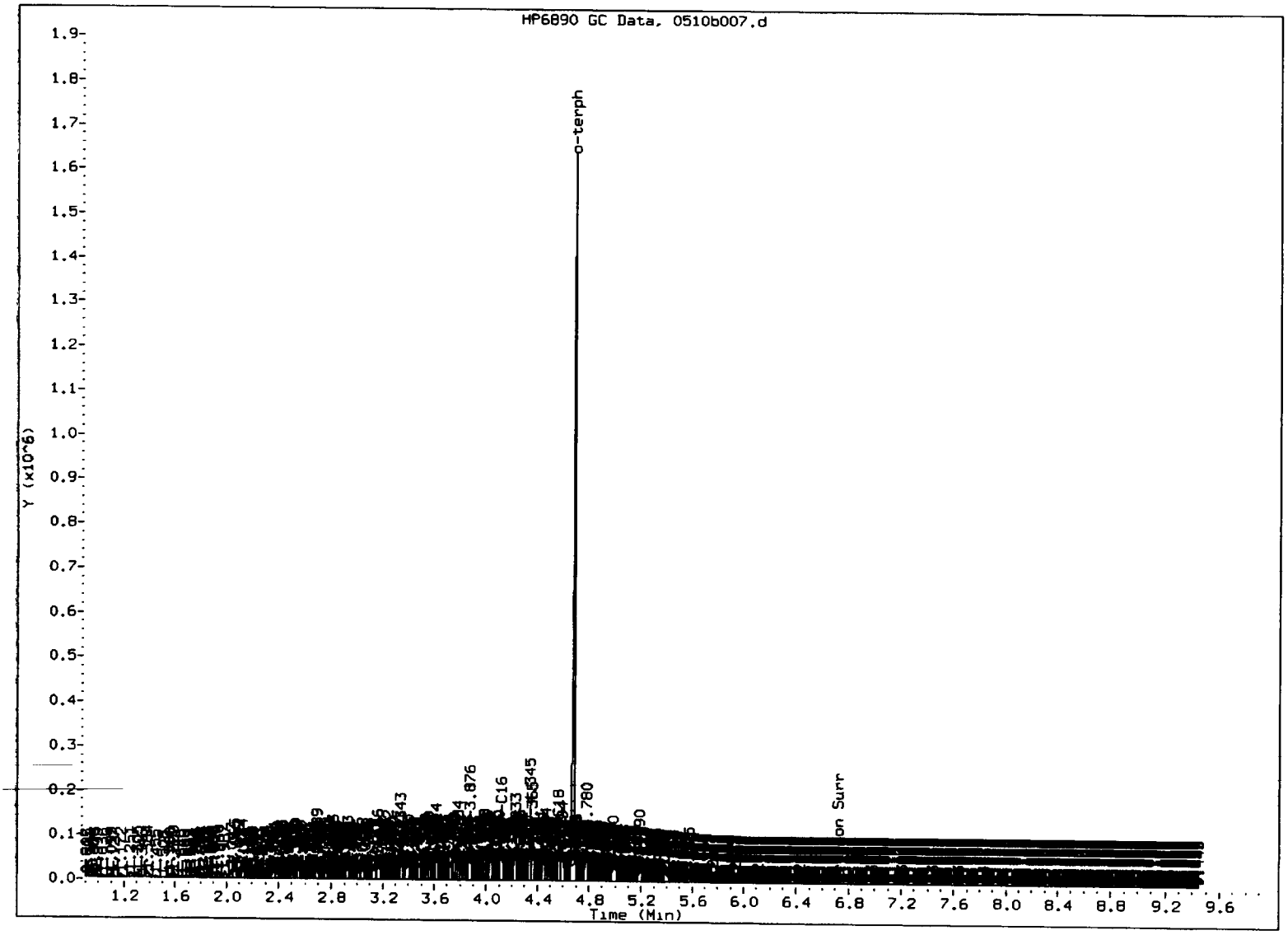
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL 500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b008.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 1000
Client ID:
Injection: 10-MAY-2013 10:00
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	2798069	207
C8	0.829	0.002	10964	16863	WATPHD	(C12-C24)	10078402	973.06
C10	2.254	0.000	70986	55849	WATPHM	(C24-C38)	93029	9.42
C12	3.041	-0.008	118758	119188	AK102	(C10-C25)	12035153	973.98 M
C14	3.621	0.000	212328	212133	AK103	(C25-C36)	65721	9.25
C16	4.120	0.003	357392	262718	OR.DIES	(C10-C28)	12092309	786.13 M
C18	4.570	0.004	265151	268202				
C20	4.989	0.000	200624	168107				
C22	5.385	-0.002	91523	83824				
C24	5.755	-0.005	18170	27279				
C25	5.935	-0.003	7287	10768				
C26	6.109	-0.005	2537	3182				
C28	6.423	-0.003	425	193	IT.DIES	(C10-C24)	12013086	871.21
C32	6.980	0.004	27	7				
C34	7.218	0.009	67	32	CREOSOT	(C8-C22)	9778215	3024.17
Filter Peak	----							
C36	7.439	0.004	181	79	BUNKERC	(C10-C38)	12106115	2468.22
o-terph	4.693	0.010	2508161	2430741	JET-A	(C10-C18)	9230123	852.73
Triacon Surr	6.724	-0.044	112	51				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2430741	180.7	401.6
Triacontane	51	0.0	0.0

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

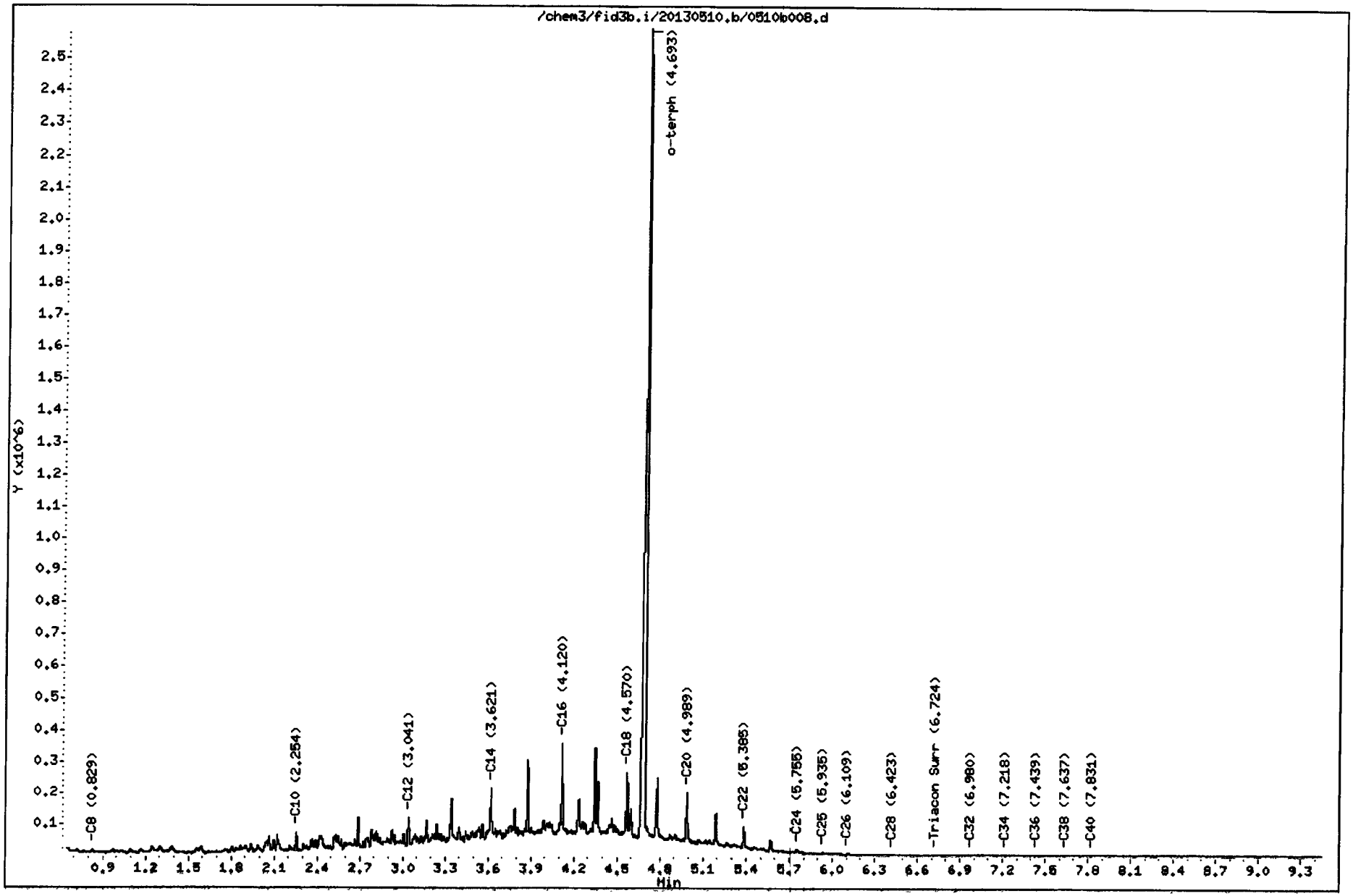
JW 5/14/13

Data File: /chem3/fid3b.i/20130510.b/0510b008.d
Date : 10-MAY-2013 10:00
Client ID:
Sample Info: DIESEL 1000

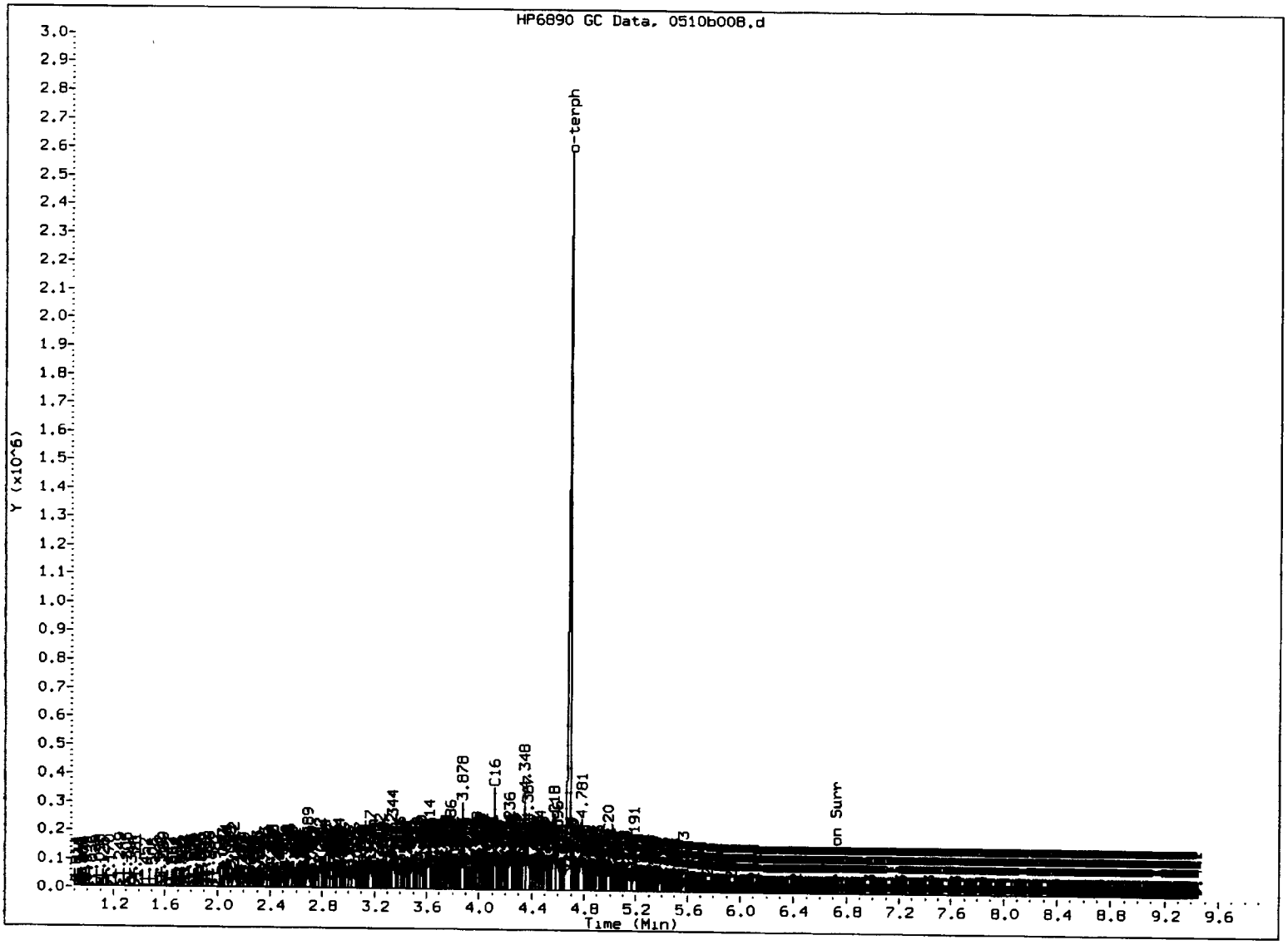
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL 1000 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
2. Peak not found
5. Skimmed surrogate

Analyst: JU Date: 5/11/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b009.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL 2500
Client ID:
Injection: 10-MAY-2013 10:20
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	6660487	493	
C8	0.829	0.002	21021	28743	WATPHD	(C12-C24)	24516037	2367.00	
C10	2.257	0.003	184252	139283	WATPHM	(C24-C38)	215472	21.82	
C12	3.044	-0.005	272636	289945	AK102	(C10-C25)	29181661	2361.60	M
C14	3.625	0.004	499091	483378	AK103	(C25-C36)	148505	20.89	
C16	4.124	0.008	776125	651861	OR.DIES	(C10-C28)	29317252	1905.95	M
C18	4.577	0.011	612833	708514					
C20	4.994	0.005	468818	417212					
C22	5.389	0.002	229153	205978					
C24	5.758	-0.002	55212	62270					
C25	5.935	-0.003	21112	30434					
C26	6.104	-0.010	7971	8000					
C28	6.424	-0.003	998	176	IT.DIES	(C10-C24)	29118650	2111.73	
C32	6.979	0.003	59	24					
C34	7.212	0.002	34	7	CREOSOT	(C8-C22)	23742752	7343.06	
Filter Peak	----								
C36	7.439	0.004	108	34	BUNKERC	(C10-C38)	29334122	5980.70	
o-terph	4.712	0.029	3746058	5823353	JET-A	(C10-C18)	22333326	2063.28	
Triacon Surr	6.719	-0.049	269	85					

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	5823353	433.0	962.2
Triacontane	85	0.0	0.0

JW 5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

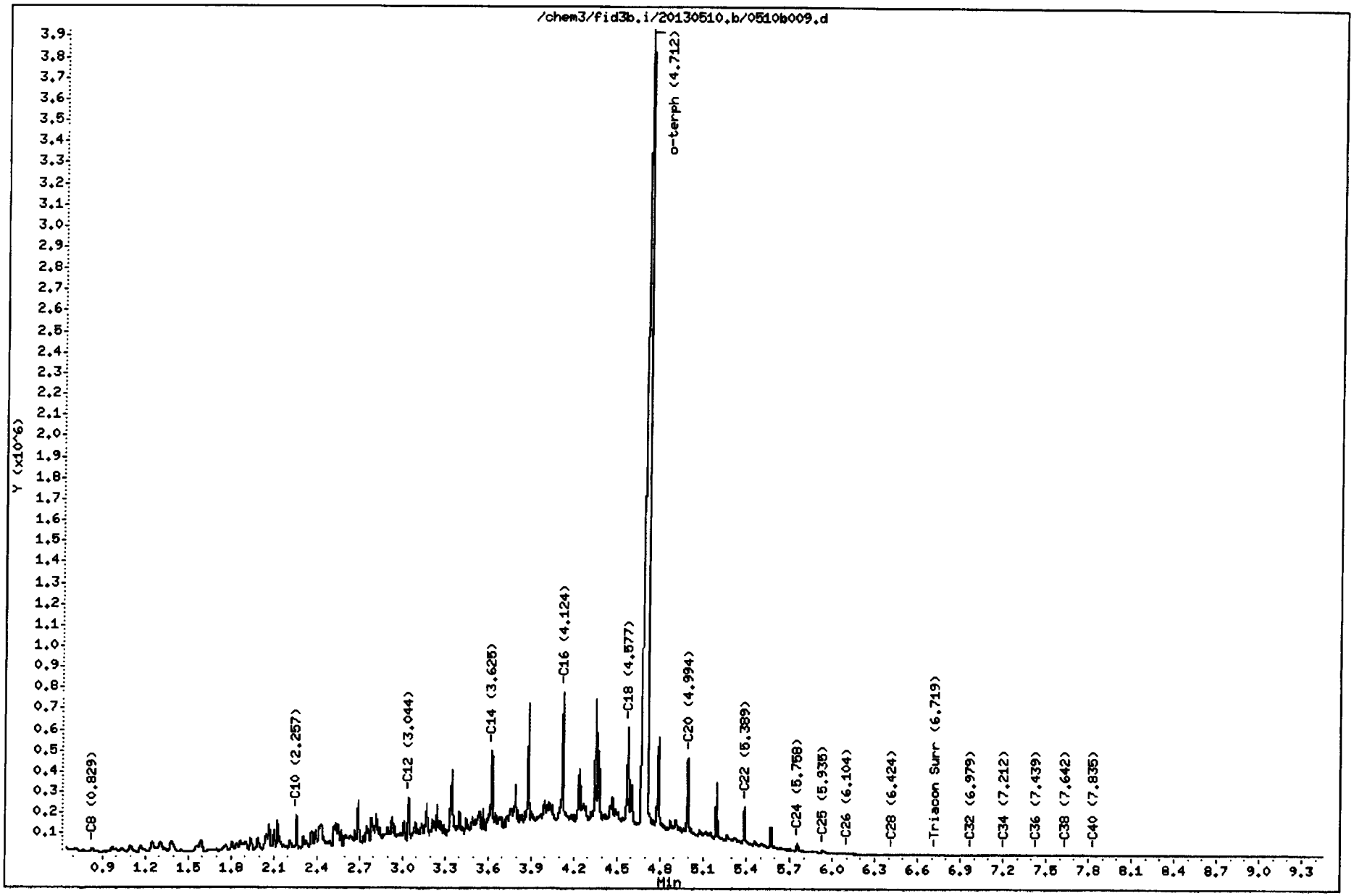
USGI : 81492

Data File: /chem3/fid3b.i/20130510.b/0510b009.d
Date : 10-MAY-2013 10:20
Client ID:
Sample Info: DIESEL 2500

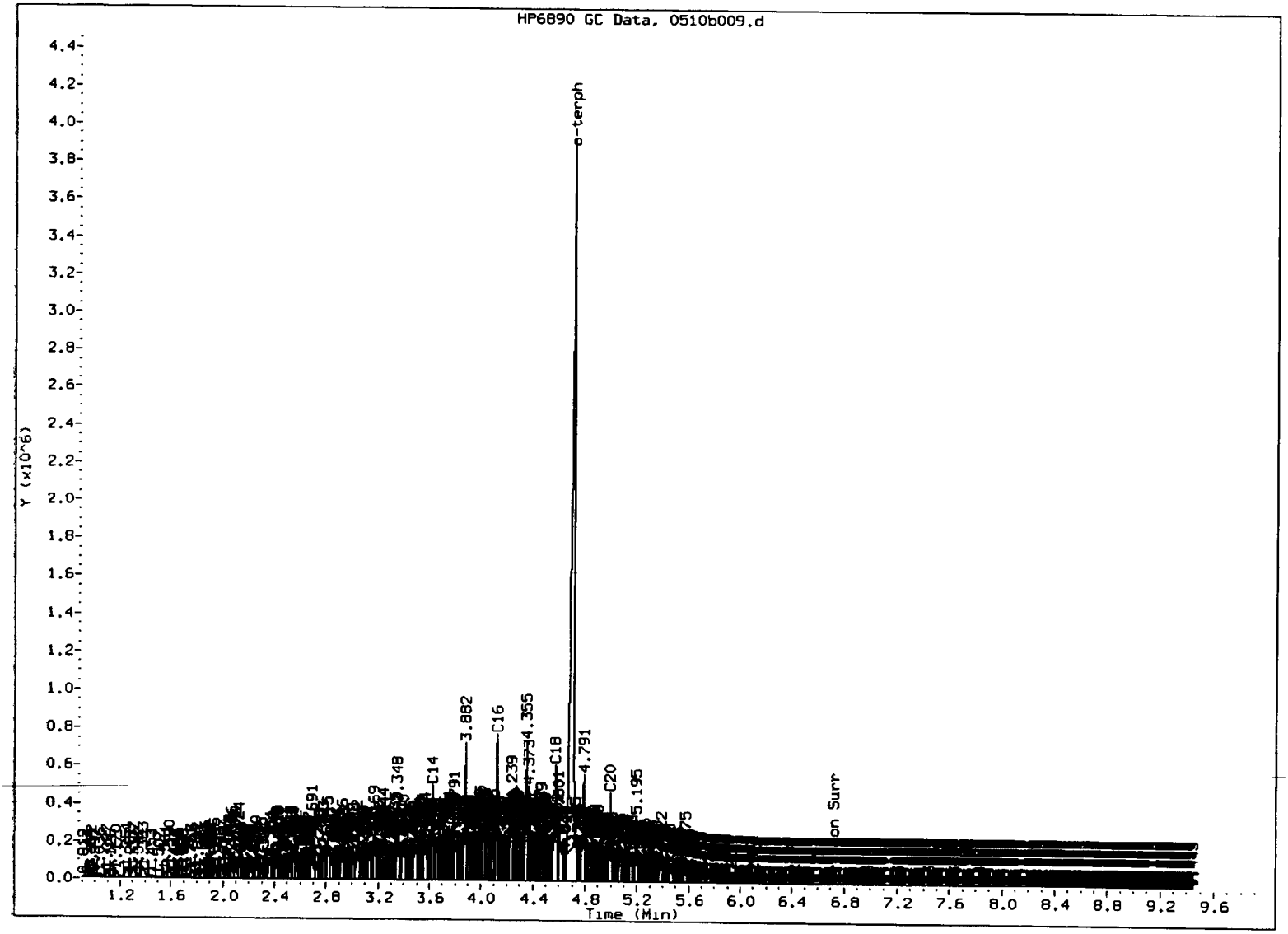
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL 2500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130510.b/0510b010.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: DIESEL ICV 250
Client ID:
Injection: 10-MAY-2013 10:40
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	1002945	74	
C8	0.827	0.000	6470	11047	WATPHD	(C12-C24)	2375892	229.39	
C10	2.256	0.003	38320	29591	WATPHM	(C24-C38)	36911	3.74	
C12	3.039	-0.009	42860	42439	AK102	(C10-C25)	3107953	251.52	M
C14	3.618	-0.003	60801	55820	AK103	(C25-C36)	25599	3.60	
C16	4.115	-0.001	56561	56130	OR.DIES	(C10-C28)	3126225	203.24	M
C18	4.566	0.001	48959	42994					
C20	4.987	-0.002	26988	31212					
C22	5.389	0.003	8625	13454					
C24	5.763	0.003	2460	3264					
C25	5.929	-0.009	1076	453					
C26	6.110	-0.004	601	224					
C28	6.428	0.001	160	83	IT.DIES	(C10-C24)	3102072	224.97	
C32	6.984	0.008	36	9					
C34	7.214	0.004	102	46	CREOSOT	(C8-C22)	2319696	717.43	
Filter Peak	----								
C36	7.442	0.007	236	116	BUNKERC	(C10-C38)	3138984	639.98	
o-terph	4.678	-0.005	962111	602869	JET-A	(C10-C18)	2497954	230.78	
Triacon Surr	6.721	-0.047	43	22					

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	602869	44.8	99.6
Triacontane	22	0.0	0.0

JW 5/11/13

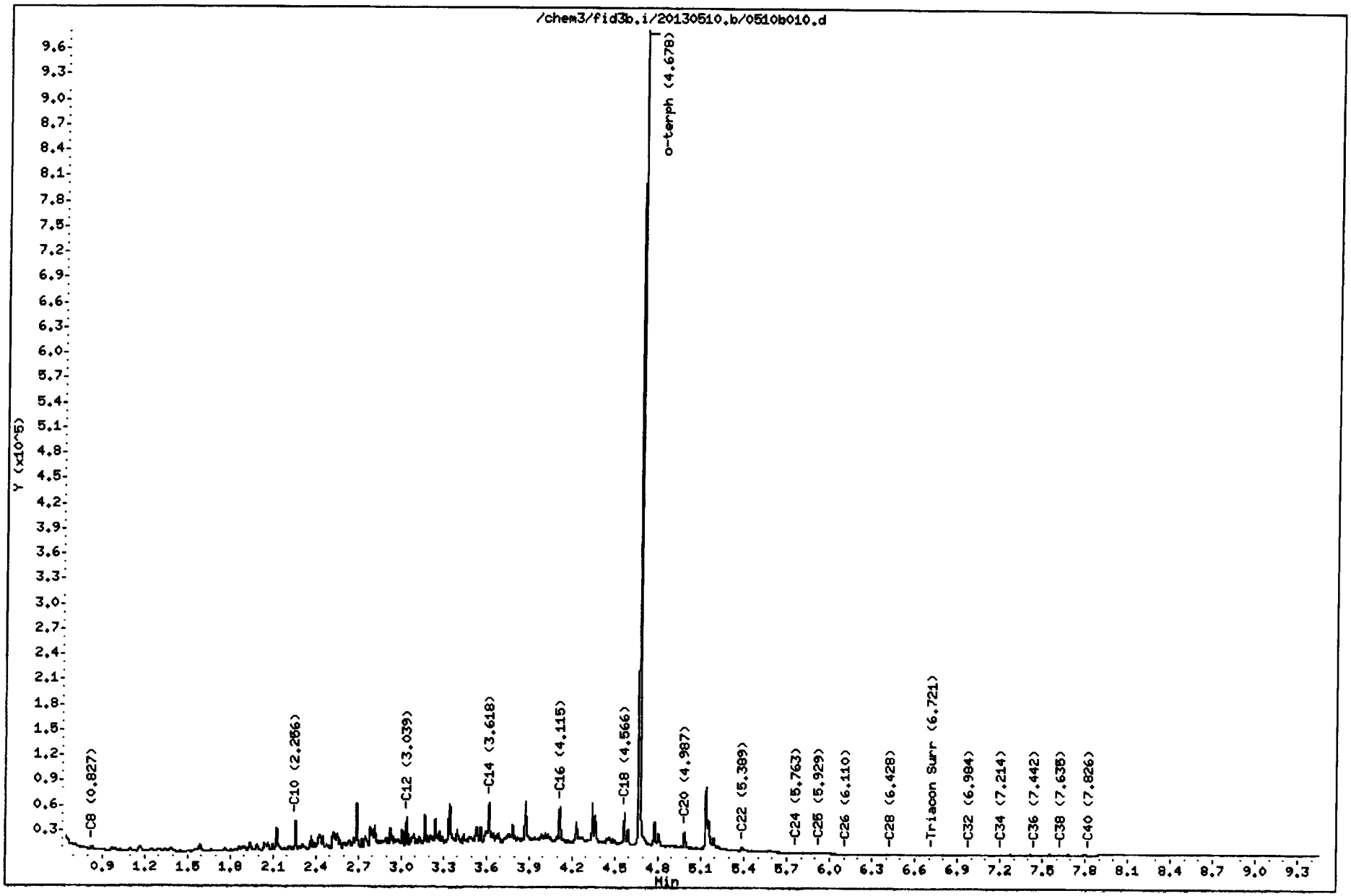
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130510.b/0510b010.d
Date : 10-MAY-2013 10:40
Client ID:
Sample Info: DIESEL ICV 250

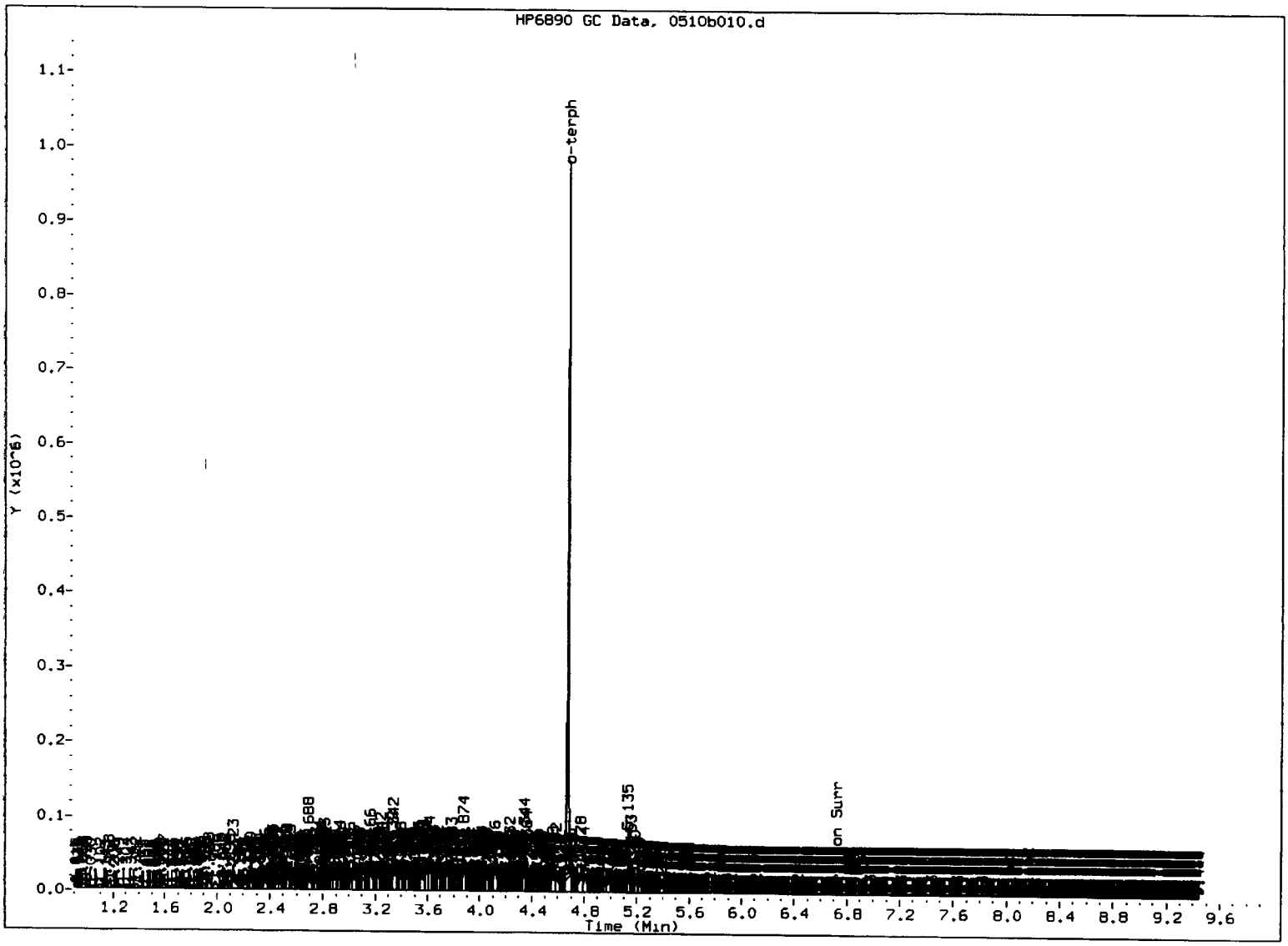
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 DIESEL ICV 250 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/10

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b008.d
Method: /chem3/fid3b.i/20130509.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: RT0509
Client ID:
Injection: 09-MAY-2013 11:00
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.660	0.000	281983	283611	WATPHG	(Tol-C12)	1136083	84.11 M
C8	0.832	0.005	213148	246004	WATPHD	(C12-C24)	1696380	149.59
C10	2.257	0.003	289258	227833	WATPHM	(C24-C38)	2294807	232.44
C12	3.042	-0.007	342225	251133	AK102	(C10-C25)	2269057	164.51
C14	3.620	-0.001	422171	257259	AK103	(C25-C36)	2029541	285.51
C16	4.118	0.002	397361	260570	OR.DIES	(C10-C28)	3505089	227.87
C18	4.568	0.003	375164	254000				
C20	4.990	0.001	342525	237388				
C22	5.389	0.003	366437	240556				
C24	5.760	0.001	344124	238634				
C25	5.937	-0.001	315093	229769				
C26	6.114	0.001	901378	700157				
C28	6.430	0.004	310083	241137	IT.DIES	(C10-C24)	2255789	163.59
C32	6.977	0.002	359459	246641				
C34	7.215	0.006	364386	243089	CREOSOT	(C8-C22)	1423173	440.15
Filter Peak	----							
C36	7.432	-0.003	319200	238105	BUNKERC	(C10-C38)	4550596	927.78
o-terph	4.677	-0.006	792786	568904	JET-A	(C10-C18)	1411903	130.44
Triacon Surr	6.725	-0.043	855331	640731				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.610 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	568904	39.2	87.1
Triacontane	640731	41.9	93.2

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	13047.7	13-APR-2013
Gas	13506.6	20-APR-2013
Diesel	11340.1	22-MAR-2013
Motor Oil	9872.9	09-MAY-2013
AK102	13793.0	22-MAR-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

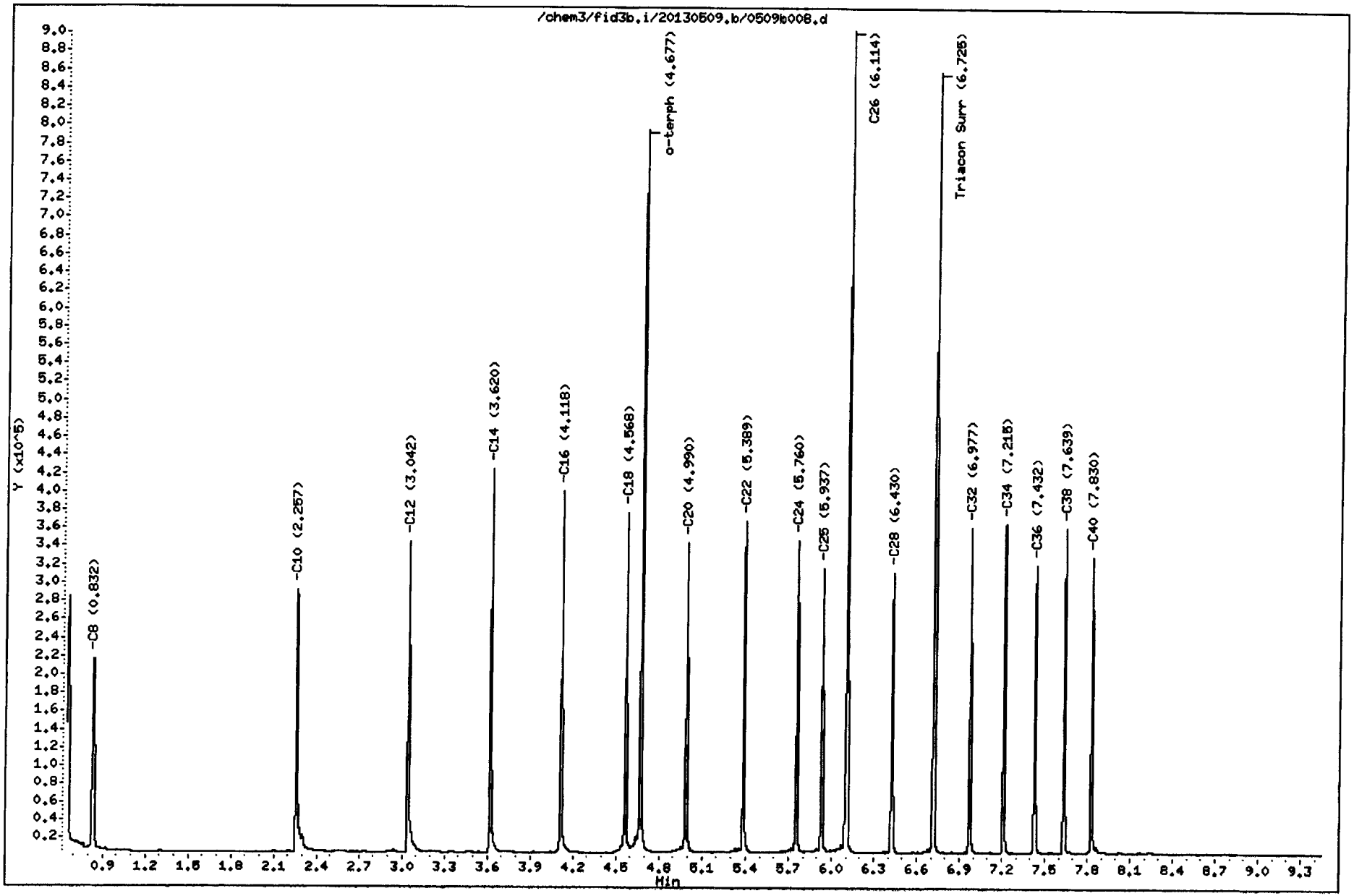
JW 5/11/13

Data File: /chem3/fid3b.i/20130509.b/0509b008.d
Date : 09-MAY-2013 11:00
Client ID:
Sample Info: RT0509

Column phase: RTX-1

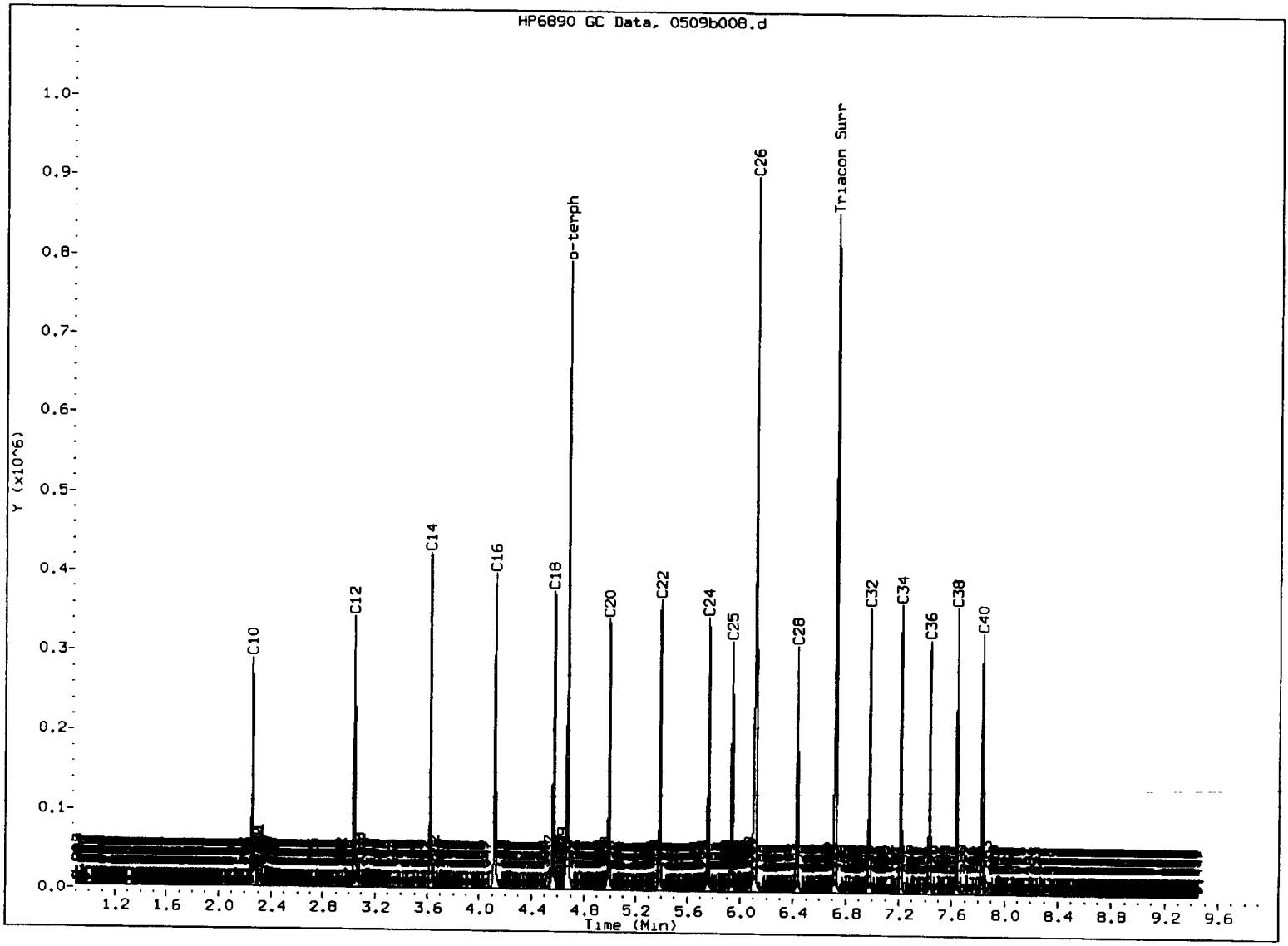
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 RT0509

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b009.d
Method: /chem3/fid3b.i/20130509.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: IB0509
Client ID:
Injection: 09-MAY-2013 11:20
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	74751	6
C8	0.831	0.003	2498	1726	WATPHD	(C12-C24)	46821	4.13
C10	2.255	0.001	494	237	WATPHM	(C24-C38)	60854	6.16
C12	3.049	0.000	374	88	AK102	(C10-C25)	70320	5.10
C14	3.625	0.004	351	262	AK103	(C25-C36)	48437	6.81
C16	4.122	0.006	171	181	OR.DIES	(C10-C28)	73092	4.75
C18	4.564	-0.001	185	134				
C20	4.991	0.001	329	205				
C22	5.386	-0.001	175	75				
C24	5.760	0.001	95	30				
C25	5.941	0.003	74	42				
C26	6.110	-0.004	236	200				
C28	6.430	0.003	439	449	IT.DIES	(C10-C24)	69995	5.08
C32	6.984	0.008	2639	2753				
C34	7.219	0.009	409	111	CREOSOT	(C8-C22)	45466	14.06
Filter Peak	----							
C36	7.417	-0.018	2269	2595	BUNKERC	(C10-C38)	130849	26.68
o-terph	4.677	-0.006	905522	623043	JET-A	(C10-C18)	45066	4.16
Triacon Surr	6.723	-0.045	696611	521004				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.610 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	623043	42.9	95.4
Triacontane	521004	34.1	75.8

Analyte	RF	Curve Date
o-Terph Surr	14512.5	22-MAR-2013
Triacon Surr	13047.7	13-APR-2013
Gas	13506.6	20-APR-2013
Diesel	11340.1	22-MAR-2013
Motor Oil	9872.9	09-MAY-2013
AK102	13793.0	22-MAR-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

5/10/13

Data File: /chem3/fid3b.i/20130509.b/0509b009.d

Date : 09-MAY-2013 11:20

Client ID:

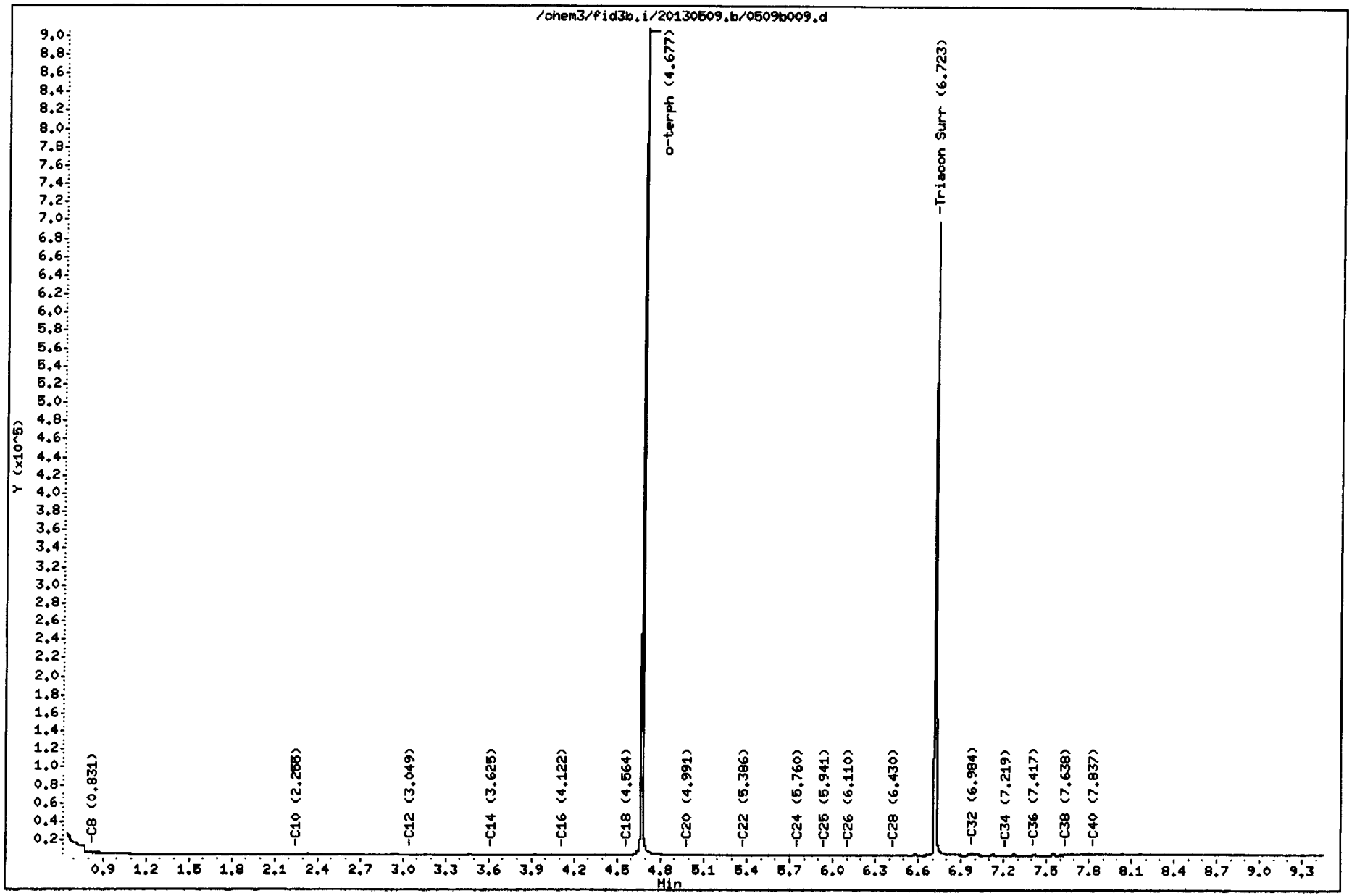
Sample Info: IB0509

Column phase: RTX-1

Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b019.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 100
Client ID:
Injection: 09-MAY-2013 17:30
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	94672	7	
C8	0.836	0.009	3898	2935	WATPHD	(C12-C24)	97099	9.37	
C10	2.255	0.001	484	102	WATPHM	(C24-C38)	983803	99.65	
C12	3.049	0.001	264	128	AK102	(C10-C25)	140753	11.39	
C14	3.626	0.005	241	281	AK103	(C25-C36)	839790	118.14	M
C16	4.118	0.002	59	16	OR.DIES	(C10-C28)	374445	24.34	
C18	4.561	-0.004	25	4					
C20	4.984	-0.005	176	134					
C22	5.386	0.000	946	428					
C24	5.762	0.002	4158	1297					
C25	5.938	0.000	5674	2319					
C26	6.116	0.002	6483	1793					
C28	6.435	0.008	7386	1030	IT.DIES	(C10-C24)	117897	8.55	
C32	6.975	-0.001	11846	9898					
C34	7.215	0.006	11088	4552	CREOSOT	(C8-C22)	32219	9.96	
Filter Peak	----								
C36	7.430	-0.005	10949	7546	BUNKERC	(C10-C38)	1101699	224.62	
o-terph	4.673	-0.010	198	73	JET-A	(C10-C18)	37057	3.42	
Triacon Surr	6.717	-0.051	163999	108151					

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	73	0.0	0.0
Triacontane	108151	8.3	18.4

JW 5/11/13

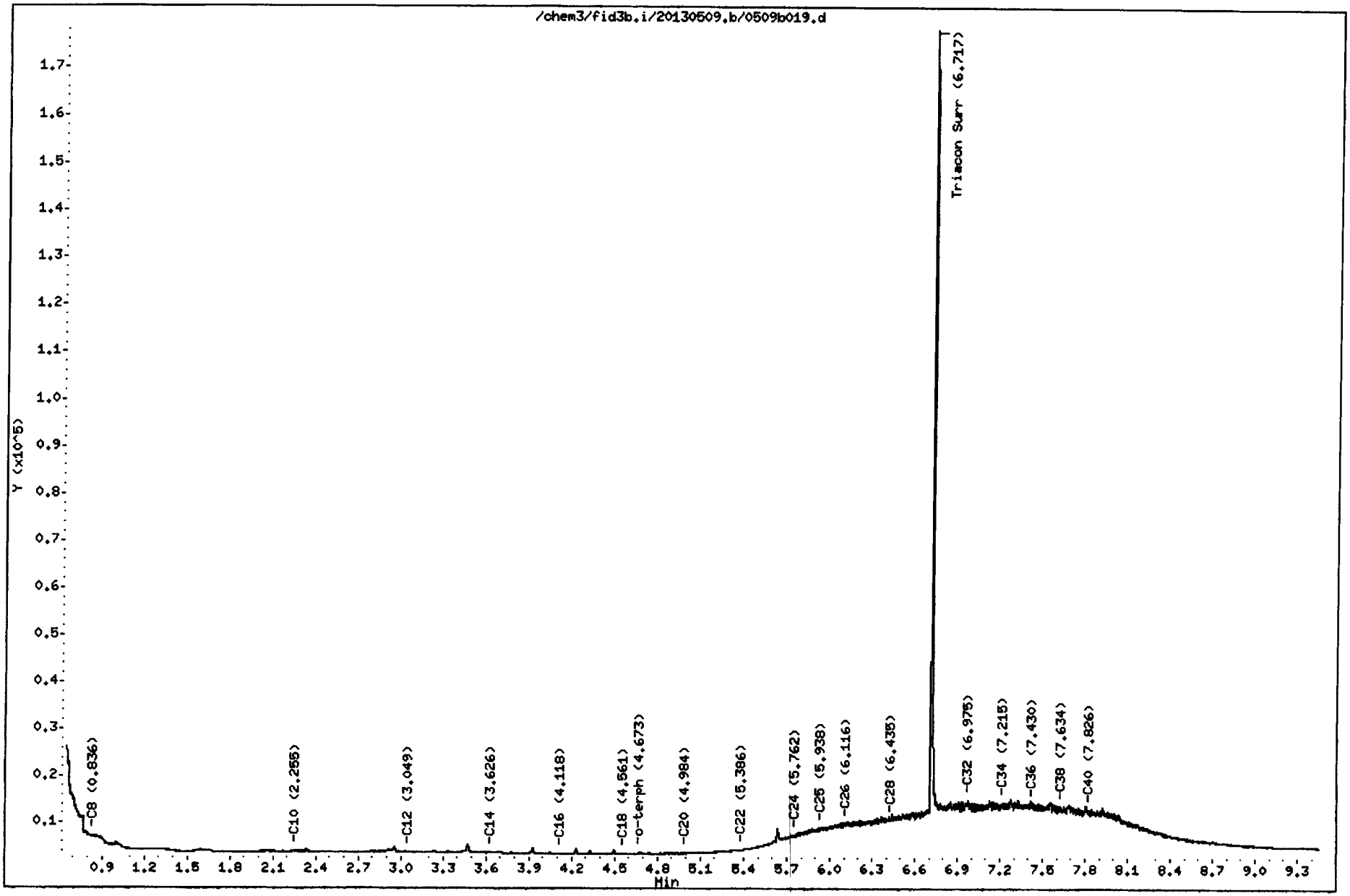
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b019.d
Date : 09-MAY-2013 17:30
Client ID:
Sample Info: MOIL 100

Column phase: RTX-1

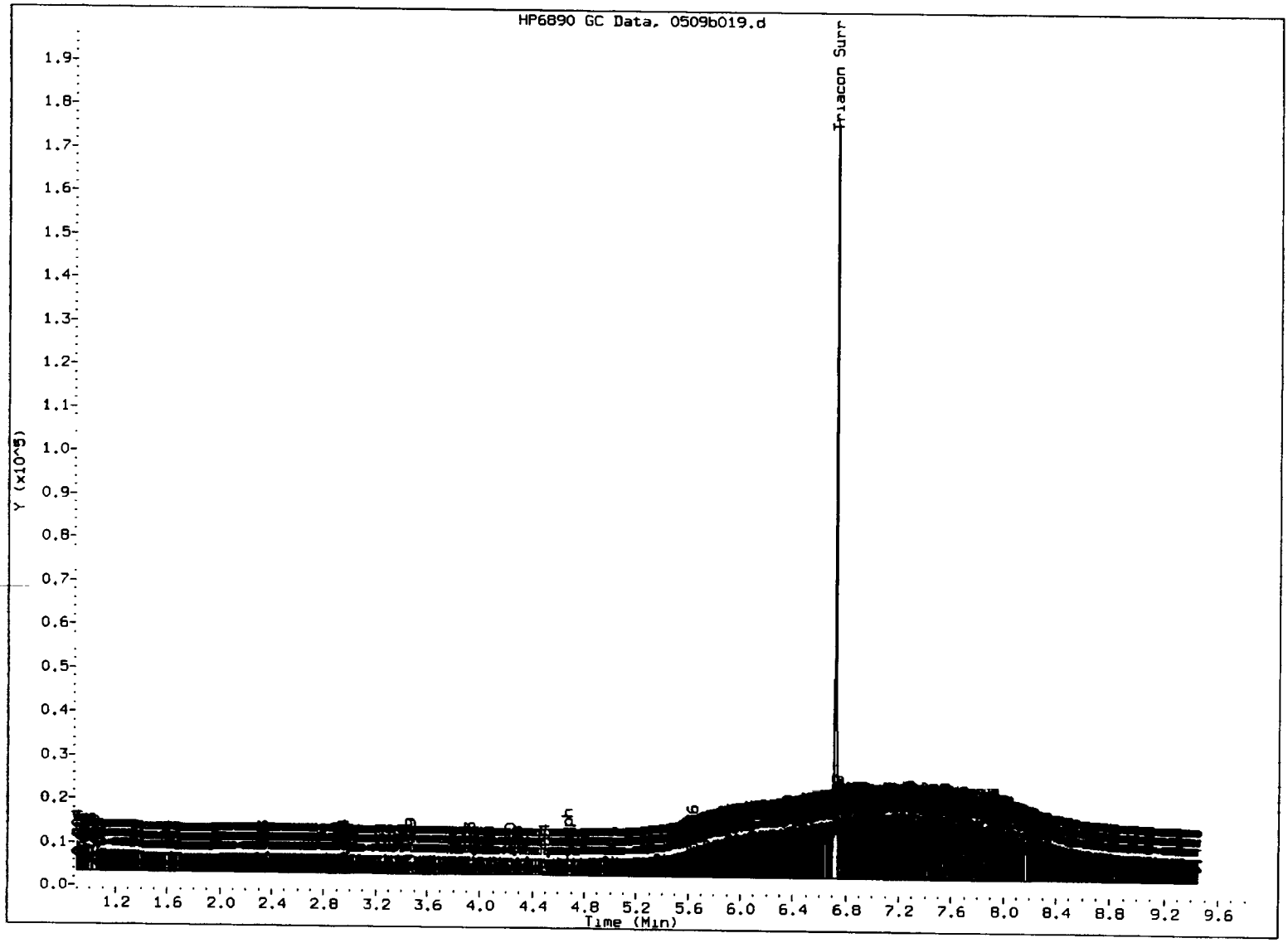
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL 100

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JCW Date: 5/11/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b020.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 250
Client ID:
Injection: 09-MAY-2013 17:50
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	94317	7
C8	0.832	0.004	3858	2902	WATPHD	(C12-C24)	222898	21.52
C10	2.255	0.001	548	468	WATPHM	(C24-C38)	2430997	246.23
C12	3.033	-0.016	495	613	AK102	(C10-C25)	302846	24.51
C14	3.621	0.000	227	107	AK103	(C25-C36)	2067243	290.81 M
C16	4.118	0.002	45	9	OR.DIES	(C10-C28)	862677	56.08
C18	4.567	0.002	77	42				
C20	4.991	0.001	463	90				
C22	5.389	0.003	2645	2457				
C24	5.760	0.000	10341	2614				
C25	5.939	0.001	14269	5543				
C26	6.114	0.001	15191	2395				
C28	6.428	0.001	18046	2866	IT.DIES	(C10-C24)	244439	17.73
C32	6.975	-0.001	30803	24376				
C34	7.220	0.011	27589	9147	CREOSOT	(C8-C22)	62726	19.40
Filter Peak	----							
C36	7.432	-0.004	27787	23456	BUNKERC	(C10-C38)	2675436	545.47
o-terph	4.682	-0.001	362	466	JET-A	(C10-C18)	40593	3.75
Triacon Surr	6.720	-0.048	413569	278811				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	466	0.0	0.1
Triacontane	278811	21.4	47.5

JW
5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b020.d

Date : 09-MAY-2013 17:50

Client ID:

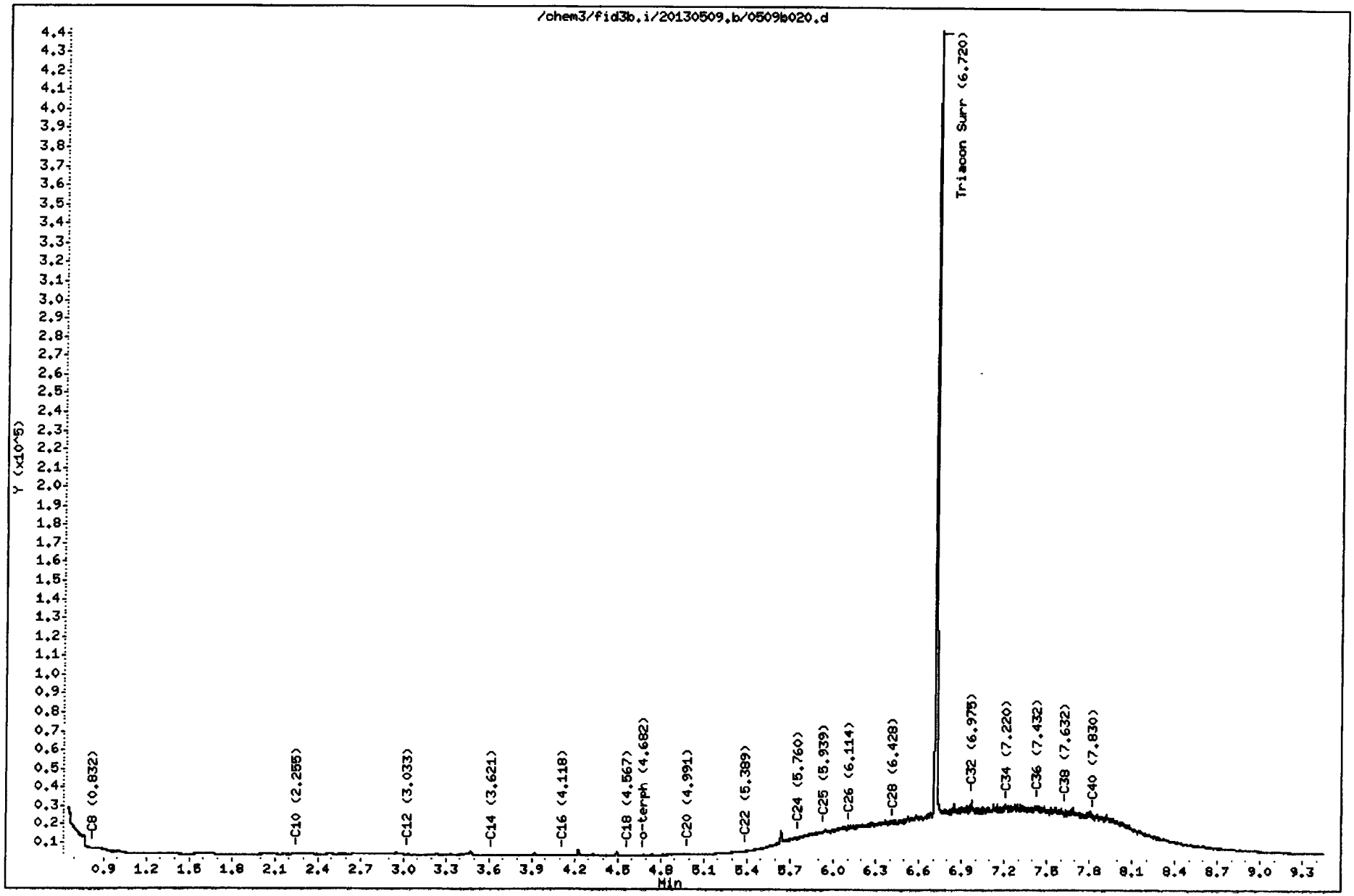
Sample Info: MOIL 250

Column phase: RTX-1

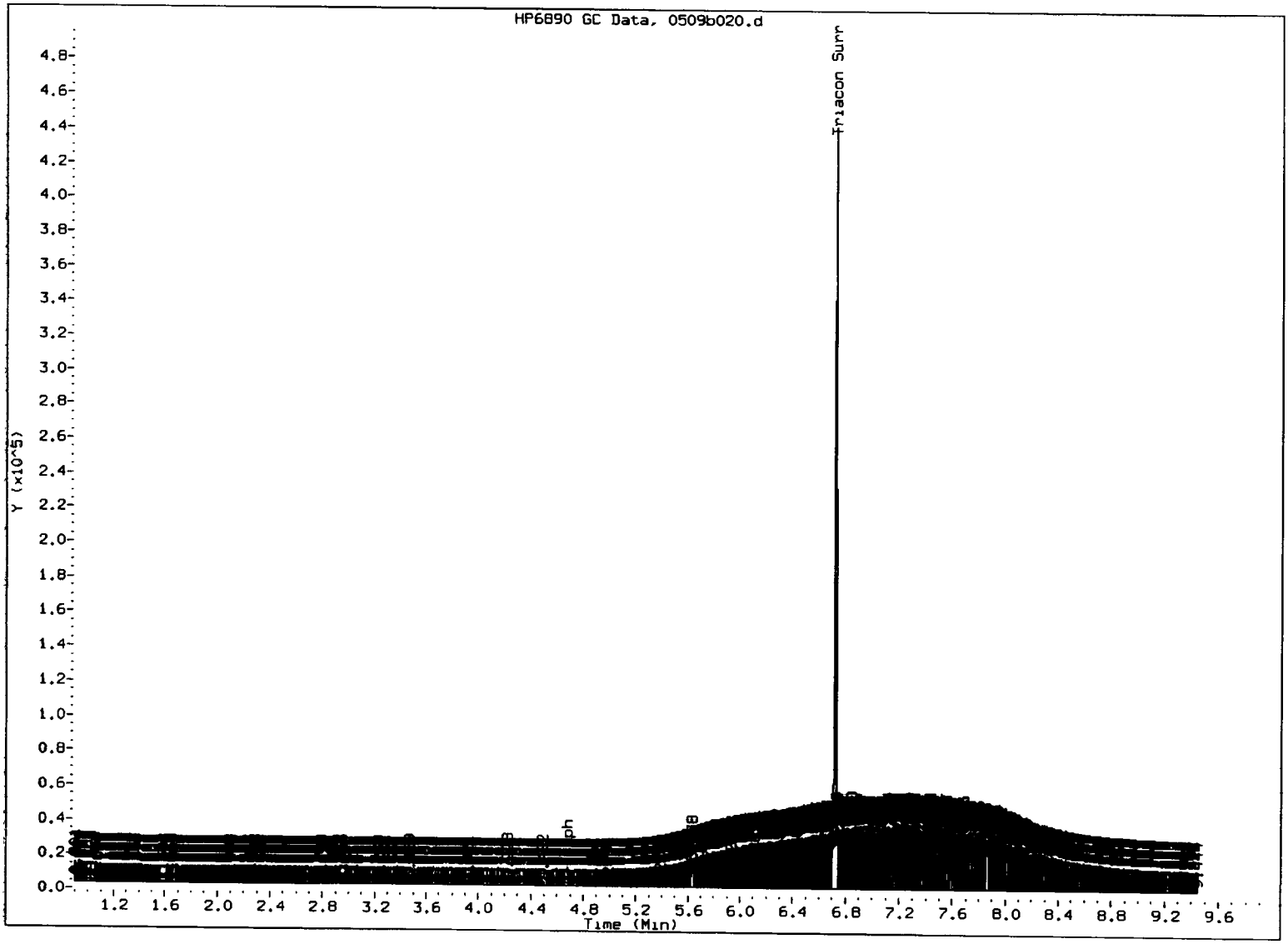
Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL 250 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b021.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 500
Client ID:
Injection: 09-MAY-2013 18:09
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	86393	6	
C8	0.835	0.008	3946	3233	WATPHD	(C12-C24)	451001	43.54	
C10	2.254	0.000	528	372	WATPHM	(C24-C38)	4874352	493.71	
C12	3.033	-0.016	470	762	AK102	(C10-C25)	583655	47.23	
C14	3.614	-0.006	163	21	AK103	(C25-C36)	4174060	587.19	M
C16	4.115	-0.001	57	21	OR.DIES	(C10-C28)	1727286	112.29	
C18	4.569	0.004	188	139					
C20	4.994	0.005	1107	174					
C22	5.387	0.001	5301	1027					
C24	5.755	-0.004	22101	17666					
C25	5.938	0.000	27334	7504					
C26	6.113	0.000	31903	17009					
C28	6.431	0.004	40634	16288	IT.DIES	(C10-C24)	471357	34.18	
C32	6.974	-0.002	60490	47282					
C34	7.217	0.008	56123	20764	CREOSOT	(C8-C22)	118683	36.71	
Filter Peak	----								
C36	7.433	-0.002	53094	12521	BUNKERC	(C10-C38)	5345709	1089.89	
o-terph	4.681	-0.002	580	602	JET-A	(C10-C18)	43423	4.01	
Triacon Surr	6.728	-0.040	753642	589937					

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	602	0.0	0.1
Triacontane	589937	45.2	100.5

JW 5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b021.d

Date : 09-MAY-2013 18:09

Client ID:

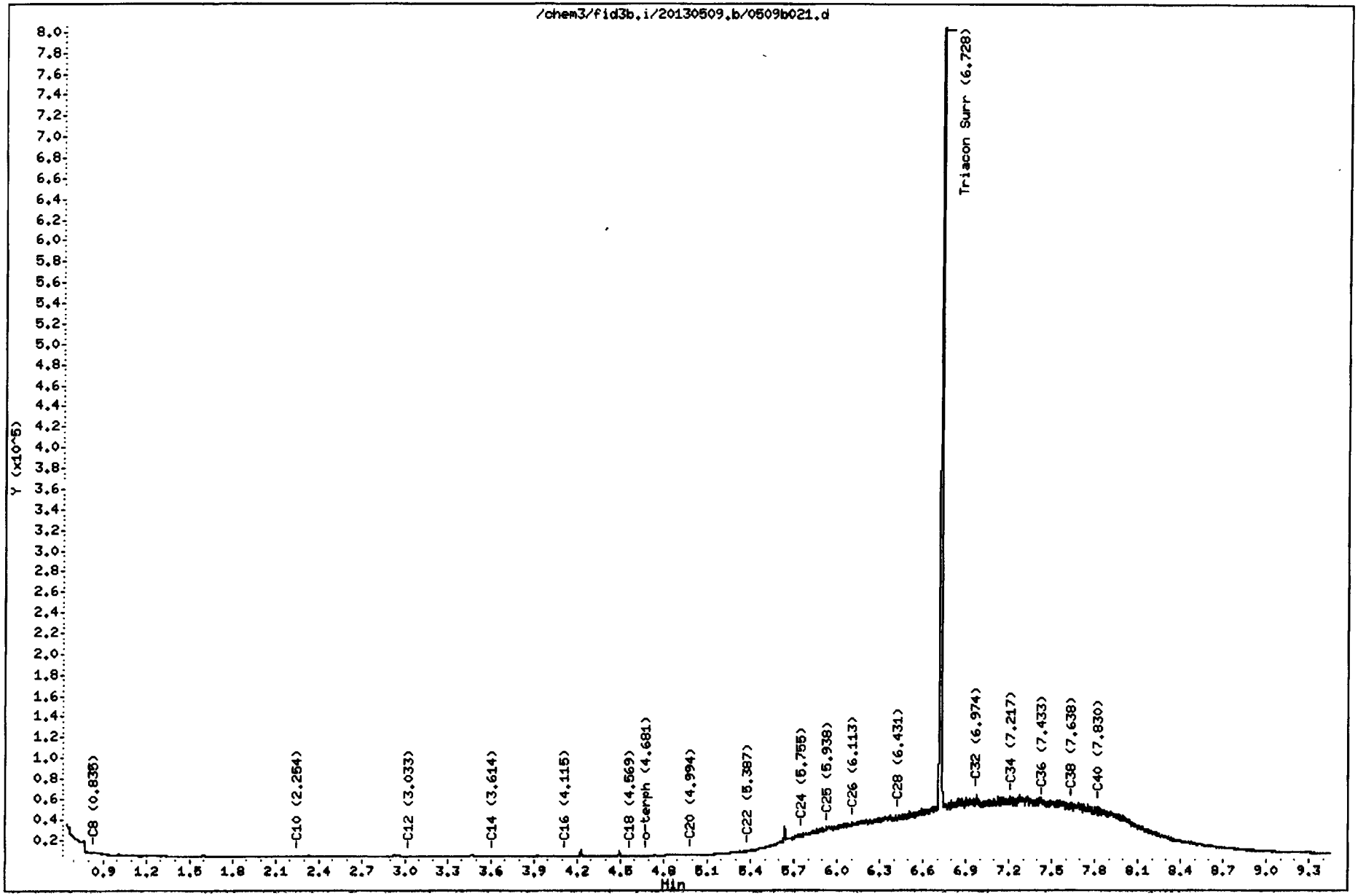
Sample Info: MOIL 500

Column phase: RTX-1

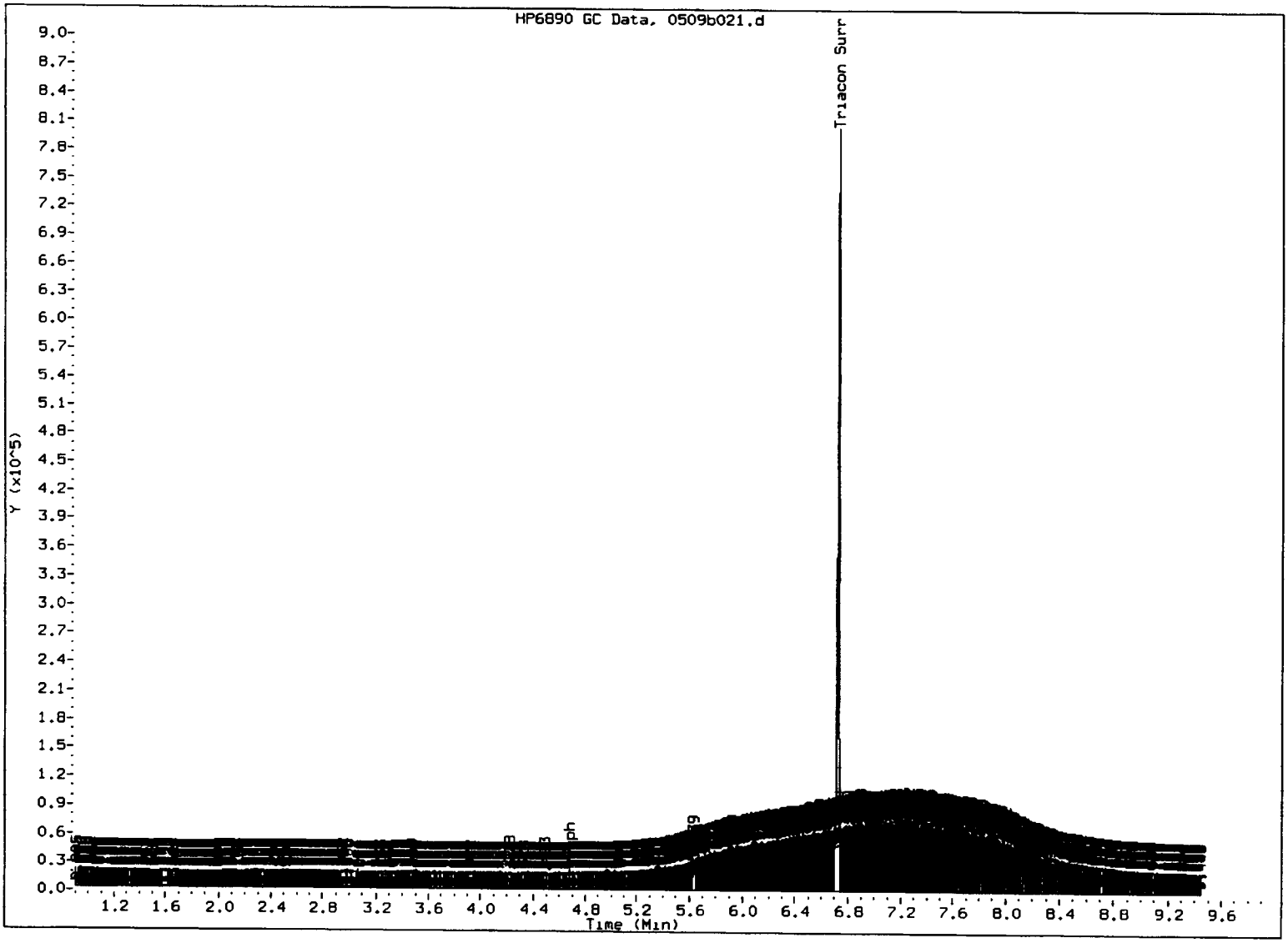
Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL 500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JH Date: 5/11/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b022.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 1000
Client ID:
Injection: 09-MAY-2013 18:29
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	78361	6
C8	0.839	0.012	3628	3009	WATPHD	(C12-C24)	874331	84.42
C10	2.257	0.003	680	612	WATPHM	(C24-C38)	9868273	999.53
C12	3.033	-0.015	596	654	AK102	(C10-C25)	1098523	88.90
C14	3.617	-0.004	289	86	AK103	(C25-C36)	8411348	1183.28 M
C16	4.117	0.001	178	66	OR.DIES	(C10-C28)	3361297	218.52
C18	4.572	0.007	532	659				
C20	4.988	-0.001	2555	1127				
C22	5.384	-0.002	10753	8200				
C24	5.763	0.003	39484	12501				
C25	5.935	-0.003	52198	10300				
C26	6.114	0.001	64456	26352				
C28	6.431	0.005	80230	54043	IT.DIES	(C10-C24)	896600	65.02
C32	6.980	0.004	126900	98292				
C34	7.214	0.005	113236	28858	CREOSOT	(C8-C22)	240131	74.27
Filter Peak	----							
C36	7.429	-0.006	113184	57310	BUNKERC	(C10-C38)	10764873	2194.76
o-terph	4.673	-0.009	1385	1372	JET-A	(C10-C18)	61579	5.69
Triacon Surr	6.738	-0.030	1129632	1182380				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1372	0.1	0.2
Triacontane	1182380	90.6	201.4

JW 5/11/13

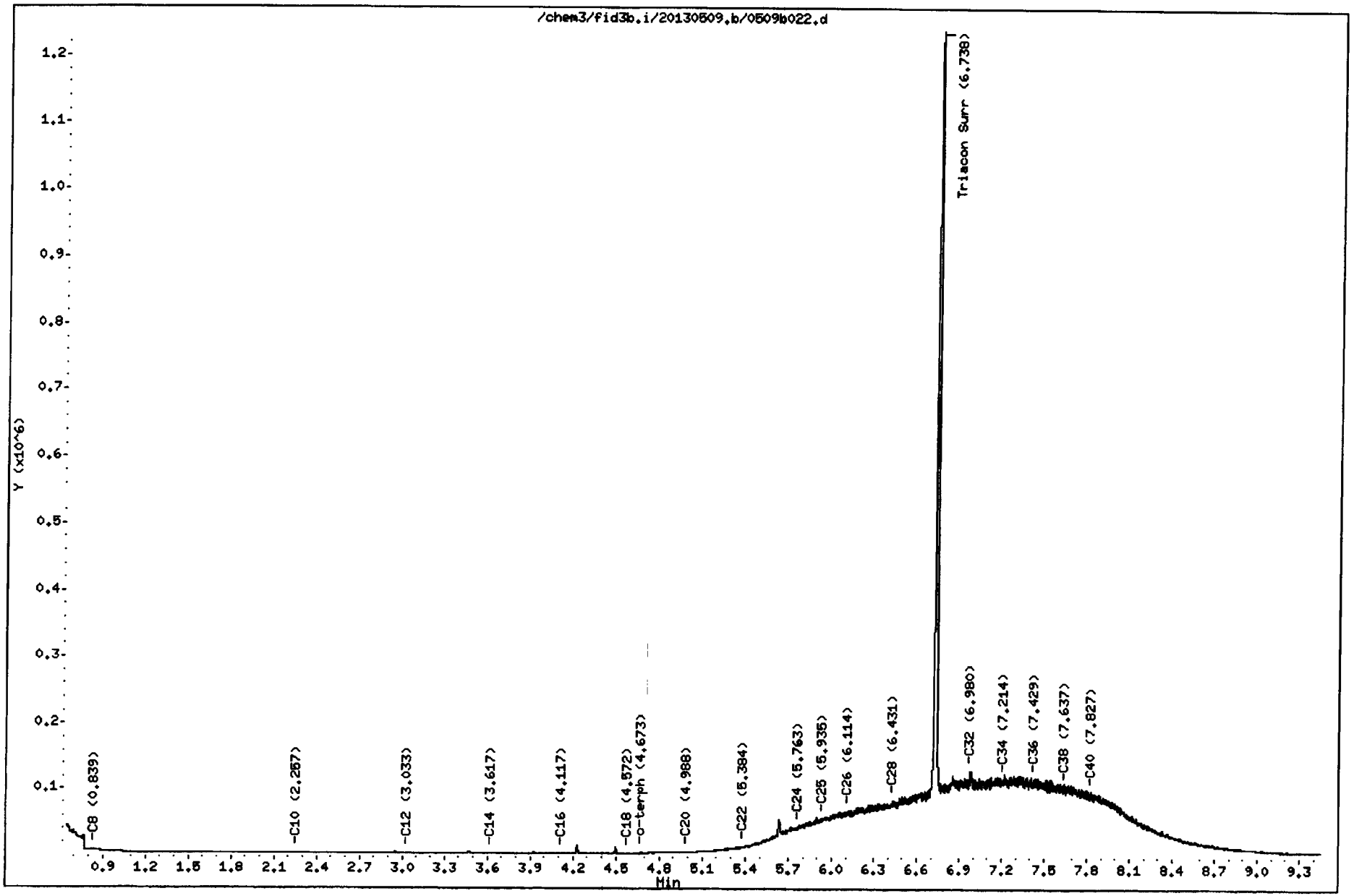
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b022.d
Date : 09-MAY-2013 18:29
Client ID:
Sample Info: MOIL 1000

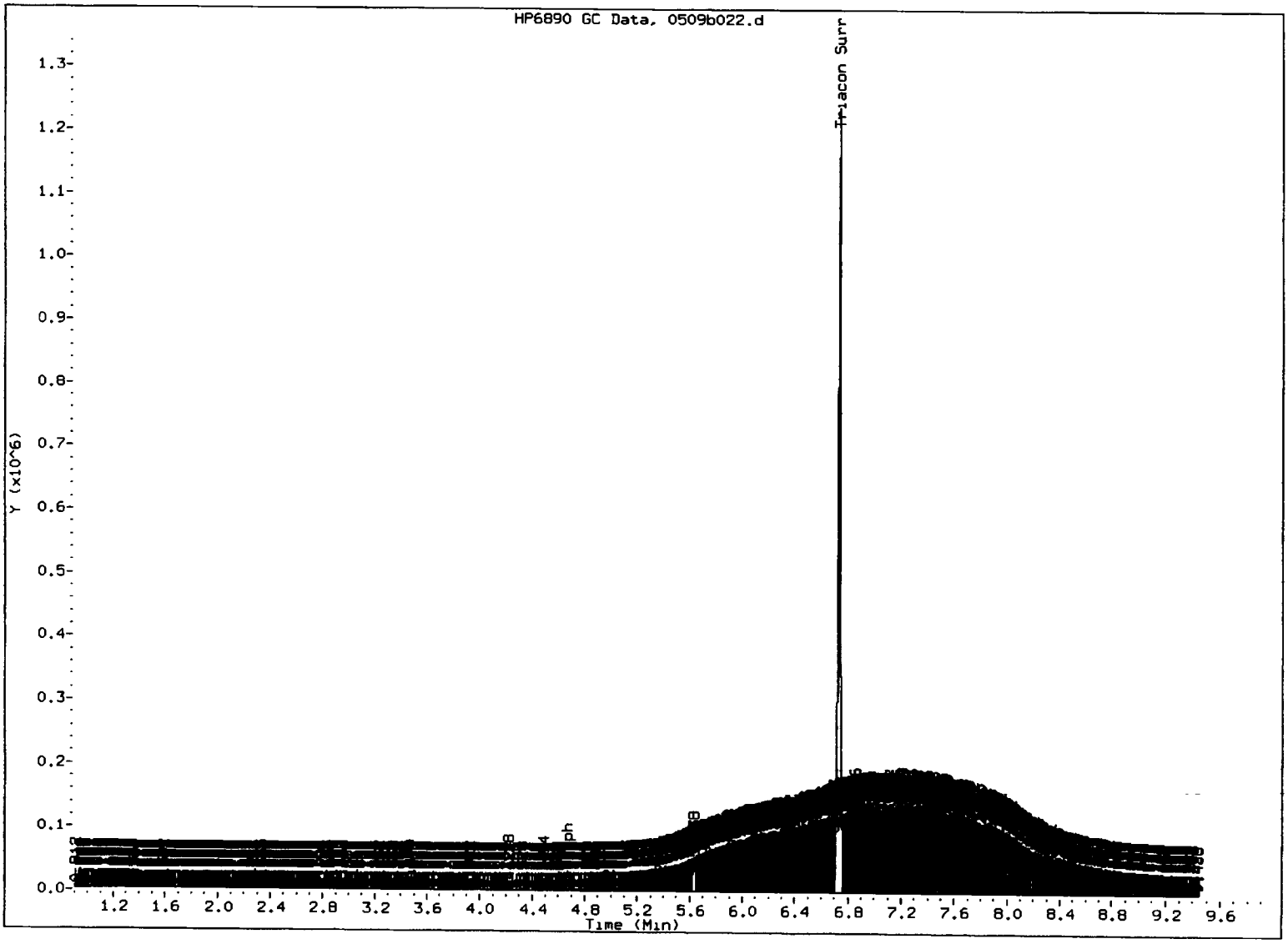
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL 1000 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/05

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b023.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 2500
Client ID:
Injection: 09-MAY-2013 18:49
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	104794	8
C8	0.826	-0.001	4378	3915	WATPHD	(C12-C24)	2194711	211.90
C10	2.255	0.001	1091	1225	WATPHM	(C24-C38)	24892471	2521.30
C12	3.033	-0.015	939	1080	AK102	(C10-C25)	2729082	220.86
C14	3.625	0.004	646	699	AK103	(C25-C36)	21251517	2989.60 M
C16	4.120	0.004	670	399	OR.DIES	(C10-C28)	8440502	548.73
C18	4.567	0.002	1755	1694				
C20	4.986	-0.003	7164	5835				
C22	5.383	-0.003	27130	11705				
C24	5.761	0.001	95353	13270				
C25	5.936	-0.002	134269	115080				
C26	6.115	0.002	165173	79024				
C28	6.429	0.003	191631	49338	IT.DIES	(C10-C24)	2230539	161.76
C32	6.977	0.002	286800	136356				
C34	7.214	0.004	290279	106480	CREOSOT	(C8-C22)	619583	191.62
Filter Peak	----							
C36	7.429	-0.006	290605	163378	BUNKERC	(C10-C38)	27123010	5529.89
o-terph	4.672	-0.011	3717	2590	JET-A	(C10-C18)	132813	12.27
Triacon Surr	6.752	-0.016	1571362	3084995				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2590	0.2	0.4
Triacontane	3084995	236.4	525.4

JW 5/11/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b023.d

Date : 09-MAY-2013 18:49

Client ID:

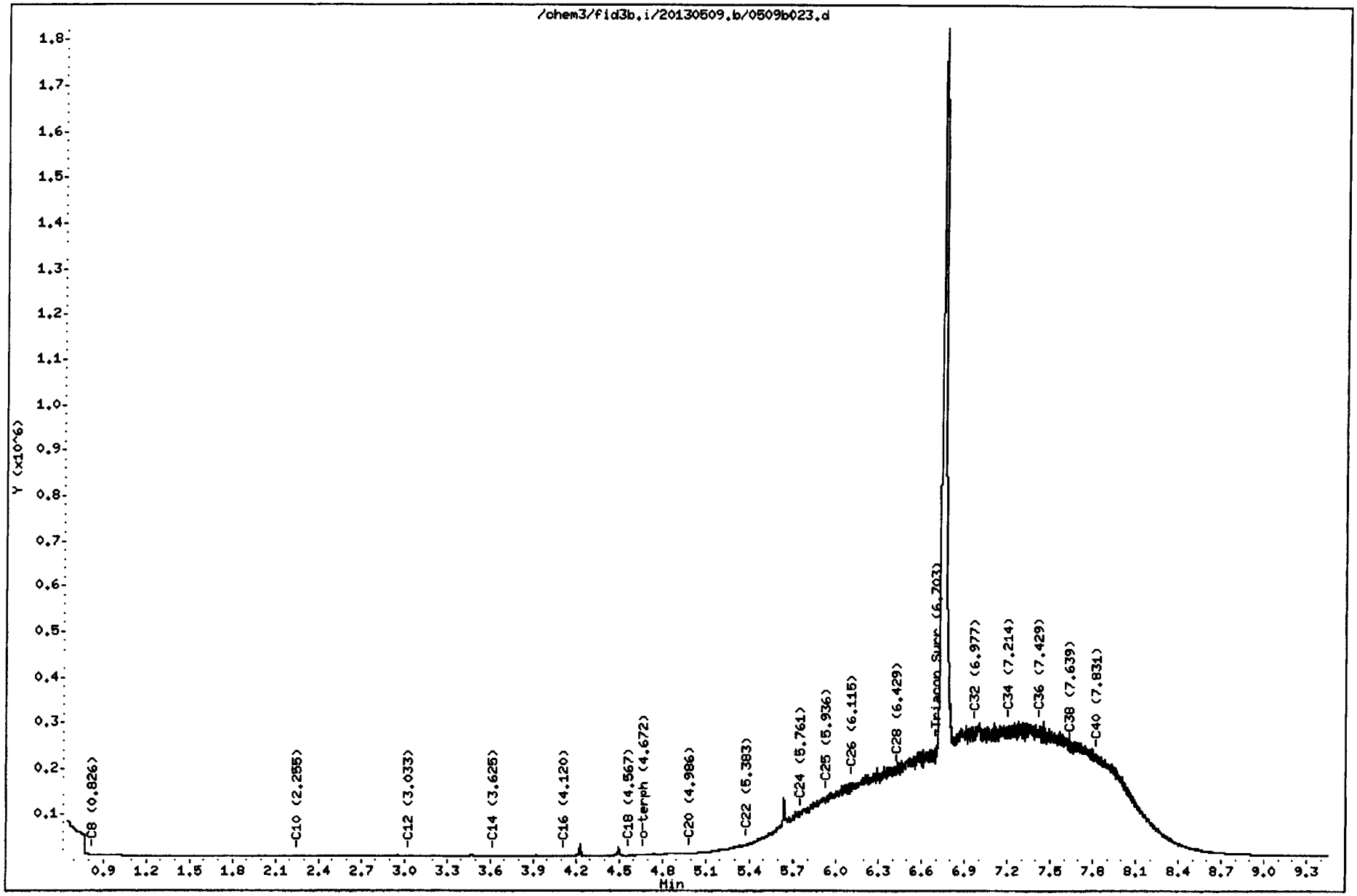
Sample Info: MOIL 2500

Column phase: RTX-1

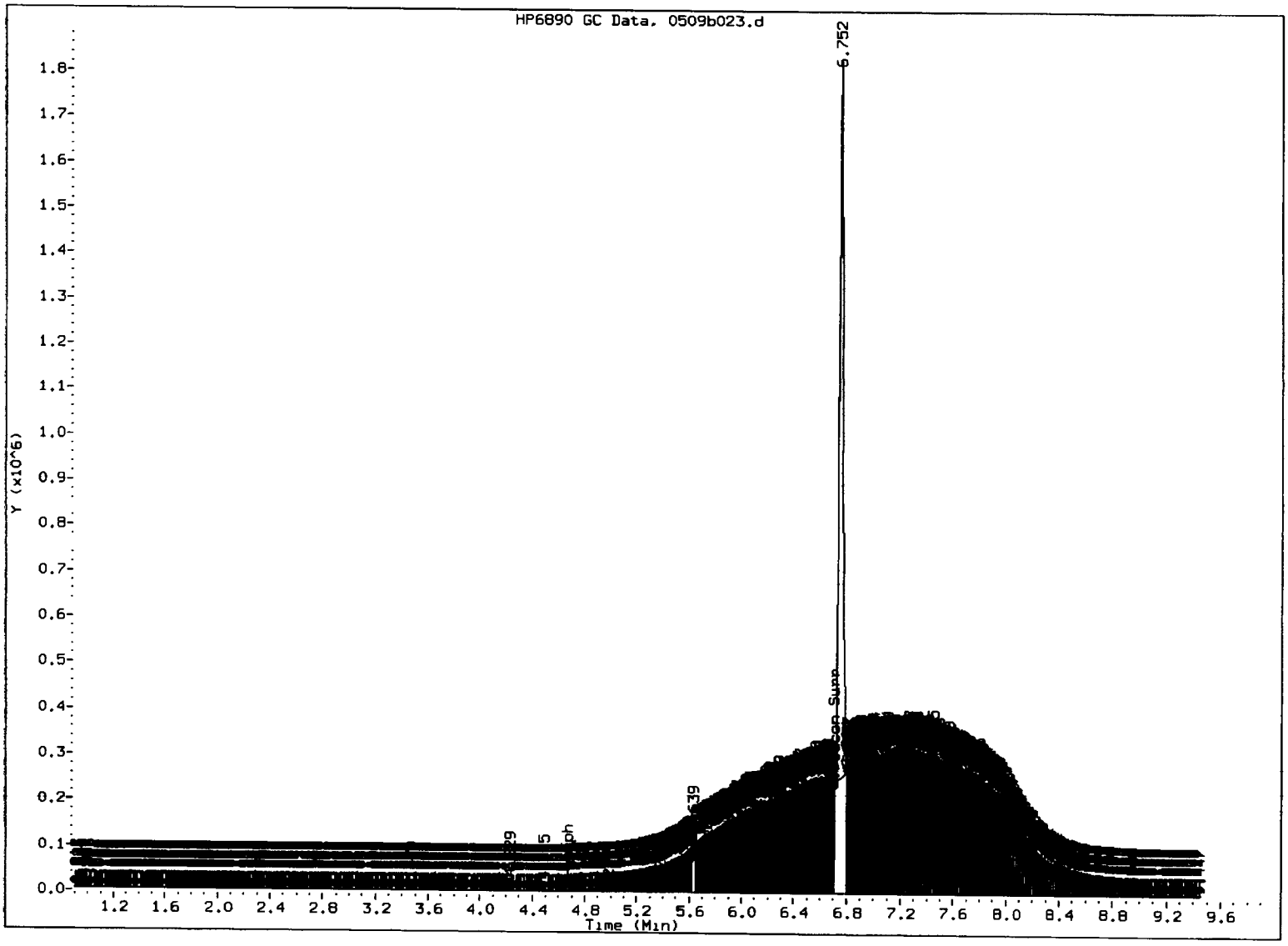
Instrument: fid3b.i

Operator: JW

Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL 2500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b024.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL 5000
Client ID:
Injection: 09-MAY-2013 19:08
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	119303	9
C8	0.827	0.000	4466	3961	WATPHD	(C12-C24)	4431911	427.90
C10	2.254	0.000	1905	1725	WATPHM	(C24-C38)	50506527	5115.68
C12	3.049	0.000	894	857	AK102	(C10-C25)	5720466	462.94
C14	3.621	0.000	1125	1543	AK103	(C25-C36)	43024953	6052.62 M
C16	4.116	0.000	1491	1370	OR.DIES	(C10-C28)	17341569	1127.39
C18	4.565	0.000	4021	4376				
C20	4.989	0.000	14741	9616				
C22	5.386	0.000	55046	28683				
C24	5.760	0.000	205583	128372				
C25	5.938	0.000	259983	66571				
C26	6.114	0.000	326387	171329				
C28	6.427	0.000	402848	245127	IT.DIES	(C10-C24)	4481981	325.04
C32	6.976	0.000	582492	328720				
C34	7.210	0.000	585534	435050	CREOSOT	(C8-C22)	1264803	391.17
Filter Peak	----							
C36	7.435	0.000	552961	65445	BUNKERC	(C10-C38)	54988508	11211.16
o-terph	4.683	0.000	5820	1701	JET-A	(C10-C18)	244722	22.61
Triacon Surr	6.768	0.000	1587931	6263834				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1701	0.1	0.3
Triacontane	6263834	480.1	1066.8

JW 5/14/13

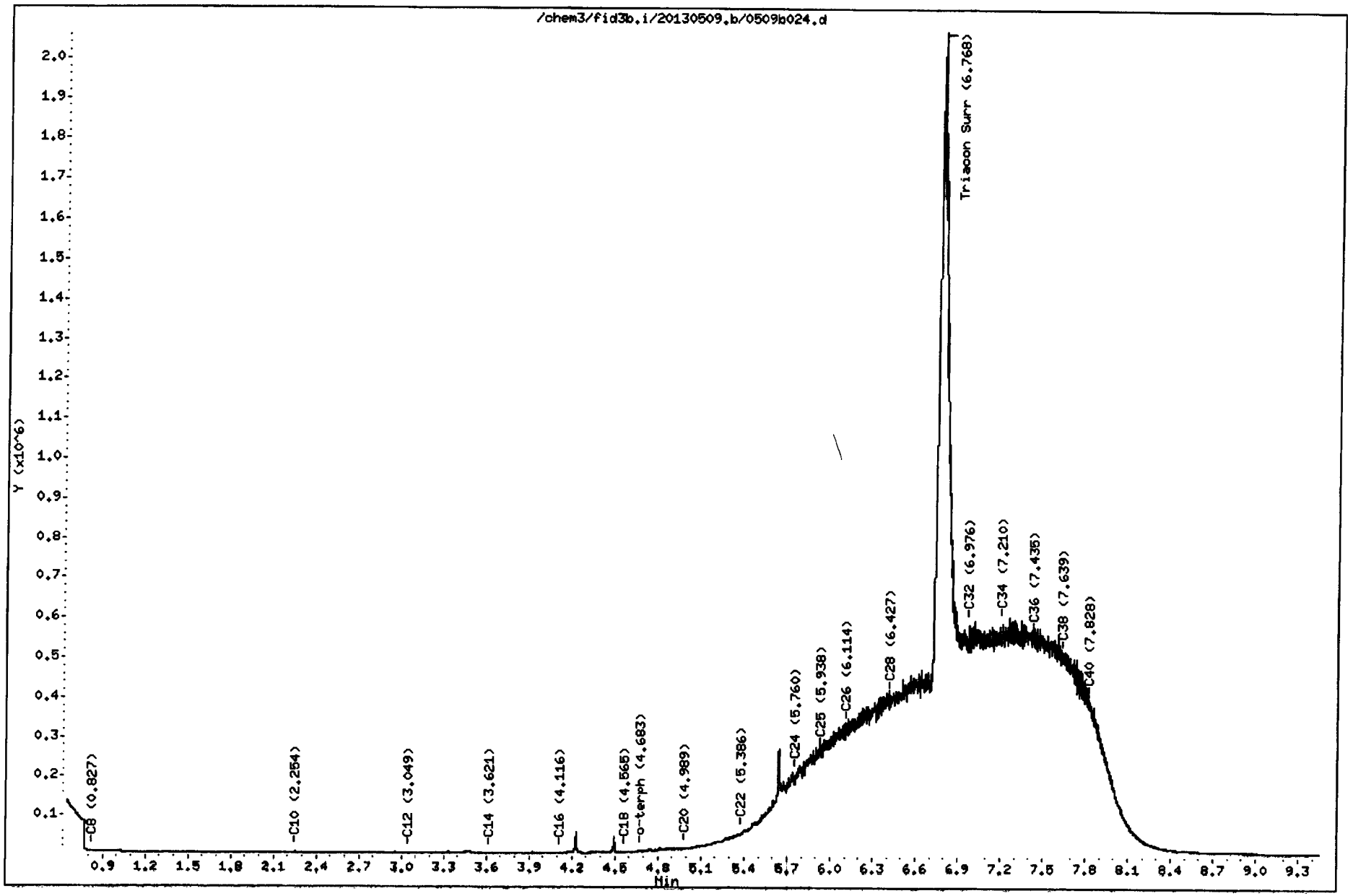
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b024.d
Date : 09-MAY-2013 19:08
Client ID:
Sample Info: MOIL 5000

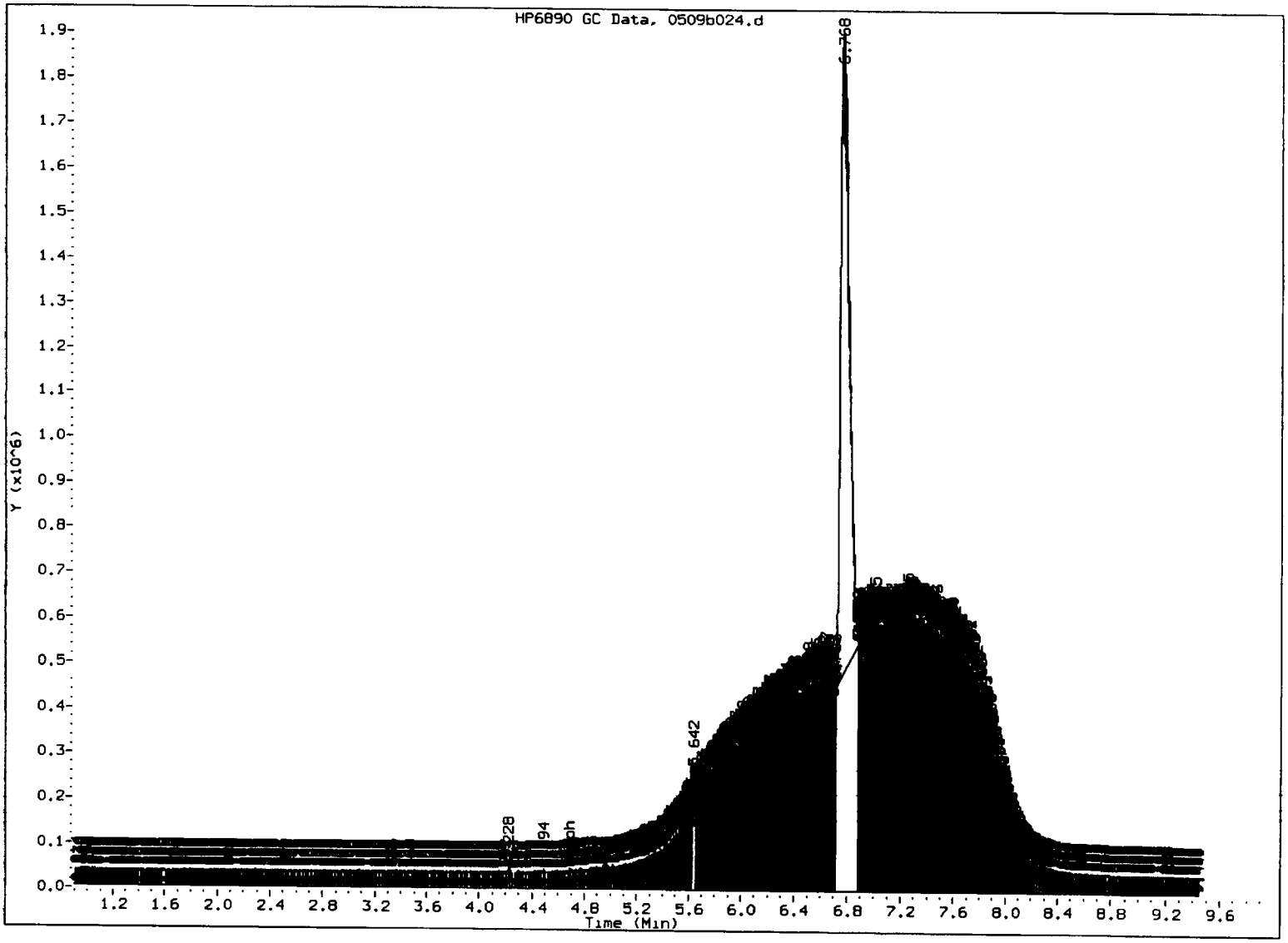
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL 5000 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/1/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130509.b/0509b025.d
Method: /chem3/fid3b.i/20130510.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 05/10/2013
Macro: FID:3B050913

ARI ID: MOIL ICV 500
Client ID:
Injection: 09-MAY-2013 19:28
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	71814	5
C8	0.827	0.000	3620	2782	WATPHD	(C12-C24)	518173	50.03
C10	2.256	0.002	478	471	WATPHM	(C24-C38)	4554535	461.32
C12	3.033	-0.015	421	481	AK102	(C10-C25)	639973	51.79
C14	3.625	0.005	282	365	AK103	(C25-C36)	3832887	539.20 M
C16	4.114	-0.002	185	70	OR.DIES	(C10-C28)	1677576	109.06
C18	4.563	-0.002	261	181				
C20	4.991	0.002	1248	666				
C22	5.385	-0.001	7293	4094				
C24	5.758	-0.001	21661	6739				
C25	5.935	-0.003	26089	4587				
C26	6.114	0.000	30955	11749				
C28	6.429	0.002	35583	18192	IT.DIES	(C10-C24)	535116	38.81
C32	6.977	0.001	58496	48694				
C34	7.212	0.003	57093	58682	CREOSOT	(C8-C22)	152793	47.26
Filter Peak	----							
C36	7.432	-0.003	56274	27657	BUNKERC	(C10-C38)	5089651	1037.69
o-terph	4.681	-0.002	607	657	JET-A	(C10-C18)	36545	3.38
Triacon Surr	6.727	-0.041	732229	563148				

Range Times: NW Diesel(3.099 - 5.810) NW Gas(0.601 - 3.099) NW M.Oil(5.810 - 7.689)
AK102(2.204 - 5.888) AK103(5.888 - 7.485) Jet A(2.204 - 4.615)

Surrogate	Area	Amount	%Rec
o-Terphenyl	657	0.0	0.1
Triacontane	563148	43.2	95.9

JW 5/11/13

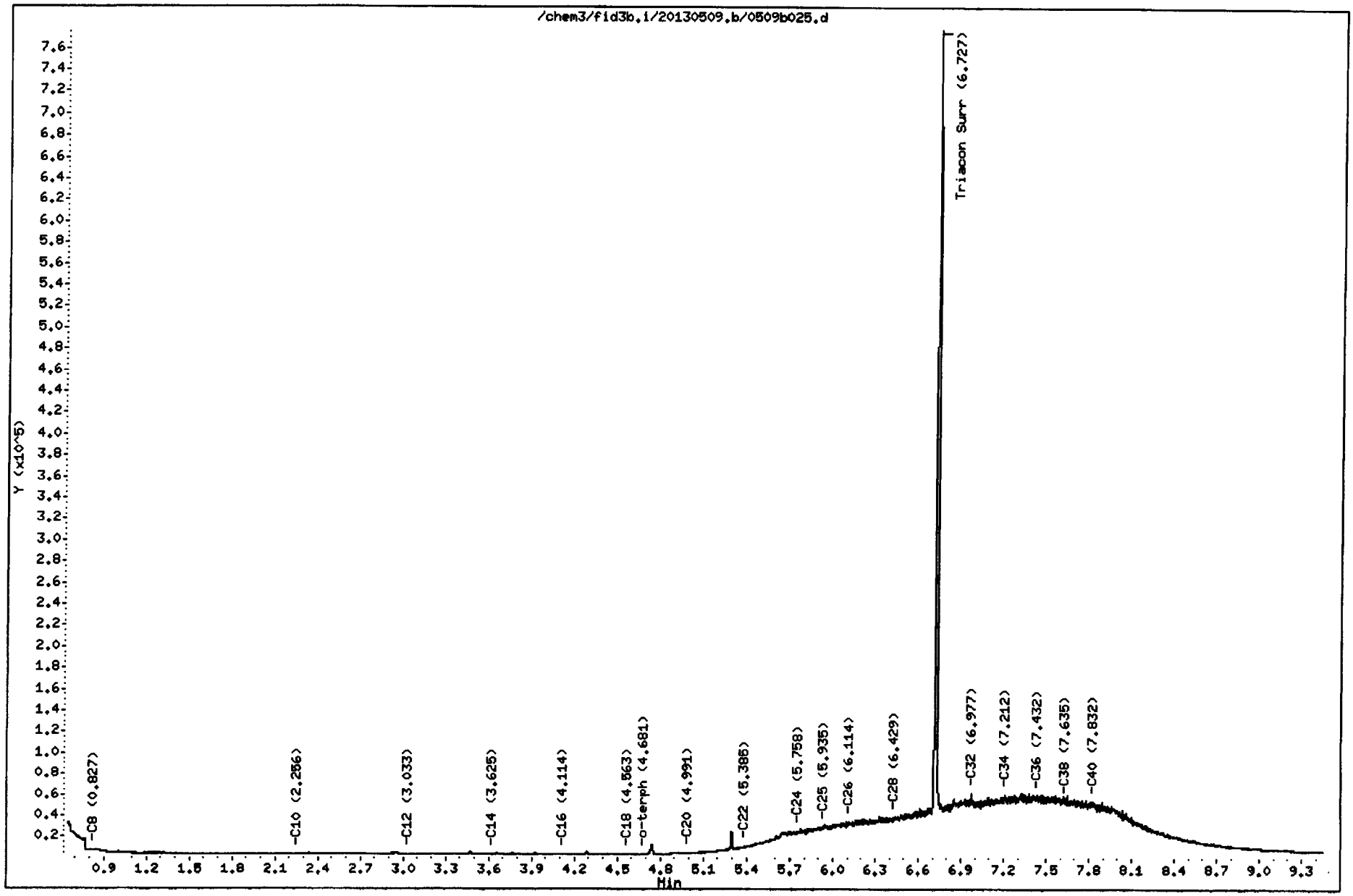
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
OR Diesel	15382.0	
IT Diesel	13789.0	
Bunker C	4904.8	14-SEP-2012
Creosote	3233.4	20-APR-2013

Data File: /chem3/fid3b.i/20130509.b/0509b025.d
Date : 09-MAY-2013 19:28
Client ID:
Sample Info: MOIL ICV 500

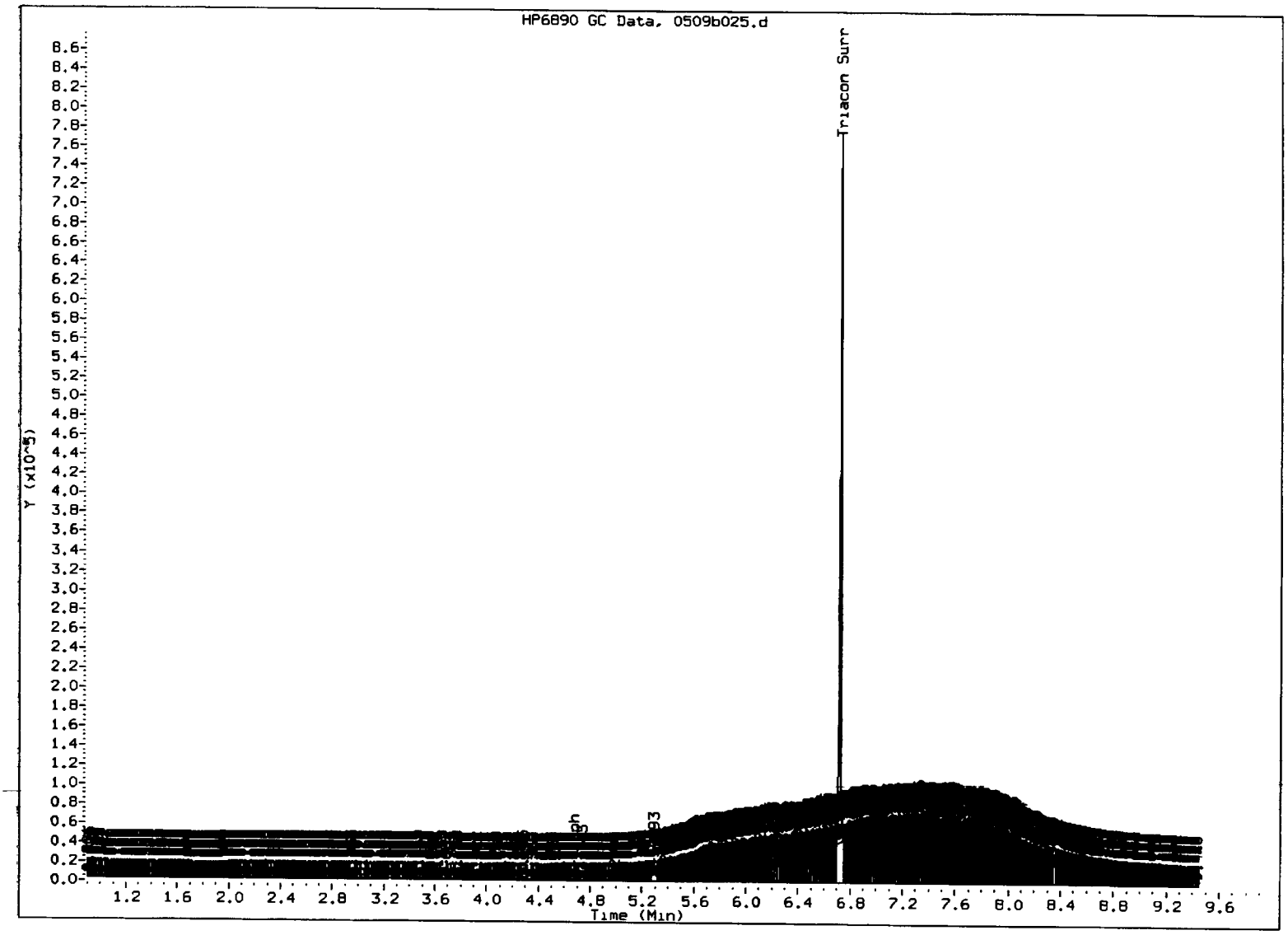
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



FID:3B-2C/RTX-1 MOIL ICV 500 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/11/03

TPHD Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WS91

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WS91 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: 5/9/13 & 5/10/13 Analysis Start Date: 6/11/13

	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) / ____	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

Sample A contain diesel and motor oil

Trifac surr out high by 6.8% in moil #2 & 5.2% high in Moil #3 CCAL, surr not requested and CCAL moil quants w/in QC limits, thus no further corrective action taken

(Review 1) Analyst: JW **Date:** 6/13/13

(Review 2) Reviewer: MW **Date:** 6/13

Analytical Resources Inc.: Organics Instrument Log

FID-3B Serial No.: US00003232

Date: 6/11/13 Analysis: TPHD Analyst: JW

Column 1 Serial No.: 1022005 Column Type: RTX-1

Column 2 Serial No.: ~~~~ Column Type: ~~~~

GC Method: TPHD3 ICal Date: 4/8/13 & 5/20/13 Injection Volume: 1µL

IS	Ical/Ccal	ICV
	2043-3,4	
	2091-2	
	2041-4	

Document All Maintenance Tasks In Element LIMS

GC LOG SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130611.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	11-JUN-2013 08:03	0611b001.d	1	RINSE	
2	11-JUN-2013 08:21	0611b002.d	1	RT0611	
3	11-JUN-2013 08:39	0611b003.d	1	IB0611	
4	11-JUN-2013 08:58	0611b004.d	1	DIESEL#1	
5	11-JUN-2013 09:16	0611b005.d	1	MOIL#1	
6	11-JUN-2013 10:29	0611b006.d	1	IBCHECK	
7	11-JUN-2013 10:48	0611b007.d	1	WR57MBS1	WR57MBS1
8	11-JUN-2013 11:06	0611b008.d	1	WR57LCSS1	WR57LCSS1
9	11-JUN-2013 11:24	0611b009.d	1	WR57LCSDS1	WR57LCSDS1
10	11-JUN-2013 11:43	0611b010.d	5	WR57A	6061052813SED
11	11-JUN-2013 12:01	0611b011.d	5	WR57B	6065052813SED
12	11-JUN-2013 12:20	0611b012.d	5	WR57C	6052052813SED
13	11-JUN-2013 12:38	0611b013.d	5	WR57D	6051052813SED
14	11-JUN-2013 12:57	0611b014.d	1	WS61MBS1	WS61MBS1
15	11-JUN-2013 13:16	0611b015.d	1	WS61LCSS1	WS61LCSS1
16	11-JUN-2013 13:34	0611b016.d	1	WS61QLS	
17	11-JUN-2013 13:53	0611b017.d	5	WS61A	CS-060413
18	11-JUN-2013 14:12	0611b018.d	5	WS61B	HL-060413
19	11-JUN-2013 14:31	0611b019.d	1	DIESEL#2	
20	11-JUN-2013 14:49	0611b020.d	1	MOIL#2	
21	11-JUN-2013 15:18	0611b021.d	1	IBCHECK	
22	11-JUN-2013 15:36	0611b022.d	1	WS91MBS1	WS91MBS1
23	11-JUN-2013 15:55	0611b023.d	1	WS91LCSS1	WS91LCSS1
24	11-JUN-2013 16:14	0611b024.d	5	WS91A	CL-MH-SPS-20130605-
25	11-JUN-2013 16:32	0611b025.d	5	WS91AMS	CL-MH-SPS-20130 MS
26	11-JUN-2013 16:51	0611b026.d	5	WS91AMSD	CL-MH-SPS-20130 MSD
27	11-JUN-2013 17:10	0611b027.d	1	DIESEL#3	
28	11-JUN-2013 17:28	0611b028.d	1	MOIL#3	

JW 6/12/13

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 LIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid3b.i/20130611.b

ARI Job No.: RT06 Method: i/20130611.b/ftphfid3b.m Instrument: fid3b.i Date: 11-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0821	0611b002.d	RT0611		1	C8, C26, C32,
0839	0611b003.d	IB0611		1	NO MANUAL INTEGRATION
1431	0611b019.d	DIESEL#2	POS Seapor	1	o-terph,
1449	0611b020.d	MOIL#2	POS Seapor	1	Triacon Surr,
1536	0611b022.d	WS91MBS1	WS91MBS1	1	NO MANUAL INTEGRATION
1555	0611b023.d	WS91LCSS1	WS91LCSS1	1	o-terph,
1614	0611b024.d	WS91A	CL-MH-SPS-	5	o-terph, Triacon Surr,
1632	0611b025.d	WS91AMS	CL-MH-SPS-	5	o-terph, Triacon Surr,
1651	0611b026.d	WS91AMSD	CL-MH-SPS-	5	o-terph, Triacon Surr,
1710	0611b027.d	DIESEL#3		1	o-terph,
1728	0611b028.d	MOIL#3		1	Triacon Surr,

Centek Laboratories

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130611.b/0611b002.d
Method: /chem3/fid3b.i/20130611.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/12/2013
Macro: FID:3B052113

ARI ID: RT0611
Client ID:
Injection: 11-JUN-2013 08:21
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	889201	66
C8	0.753	0.000	274806	276880	WATPHD	(C12-C24)	1719605	166.03
C10	2.210	0.000	379244	276977	WATPHM	(C24-C38)	2903132	294.05
C12	3.018	0.000	550537	269527	AK102	(C10-C25)	2297702	185.95
C14	3.610	0.000	490041	258465	AK103	(C25-C36)	2596684	365.29 M
C16	4.119	0.000	464684	247781				
C18	4.582	0.000	383748	243341				
C20	5.019	0.000	389573	242721				
C22	5.428	0.000	321260	267051	MSPIRIT	(Tol-C12)	889201	64.72
M								
C24	5.810	0.000	420169	289697				
C25	5.991	0.000	421707	289776				
C26	6.176	0.000	1043894	900196				
C28	6.496	0.000	450757	320197				
C32	7.050	0.000	437378	333232				
C34	7.288	0.000	441220	315437				
Filter Peak	----							
C36	7.509	0.000	403856	316451				
o-terph	4.690	0.000	906383	603338	JET-A	(C10-C18)	1387547	128.19
Triacon Surr	6.798	0.000	919414	859781				

Range Times: NW Diesel(3.068 - 5.860) NW Gas(0.609 - 3.068) NW M.Oil(5.860 - 7.763)
AK102(2.160 - 5.941) AK103(5.941 - 7.559) Jet A(2.160 - 4.632)

Surrogate	Area	Amount	%Rec
o-Terphenyl	603338	44.9	99.7
Triacontane	859781	65.9	146.4

JW 6/12/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

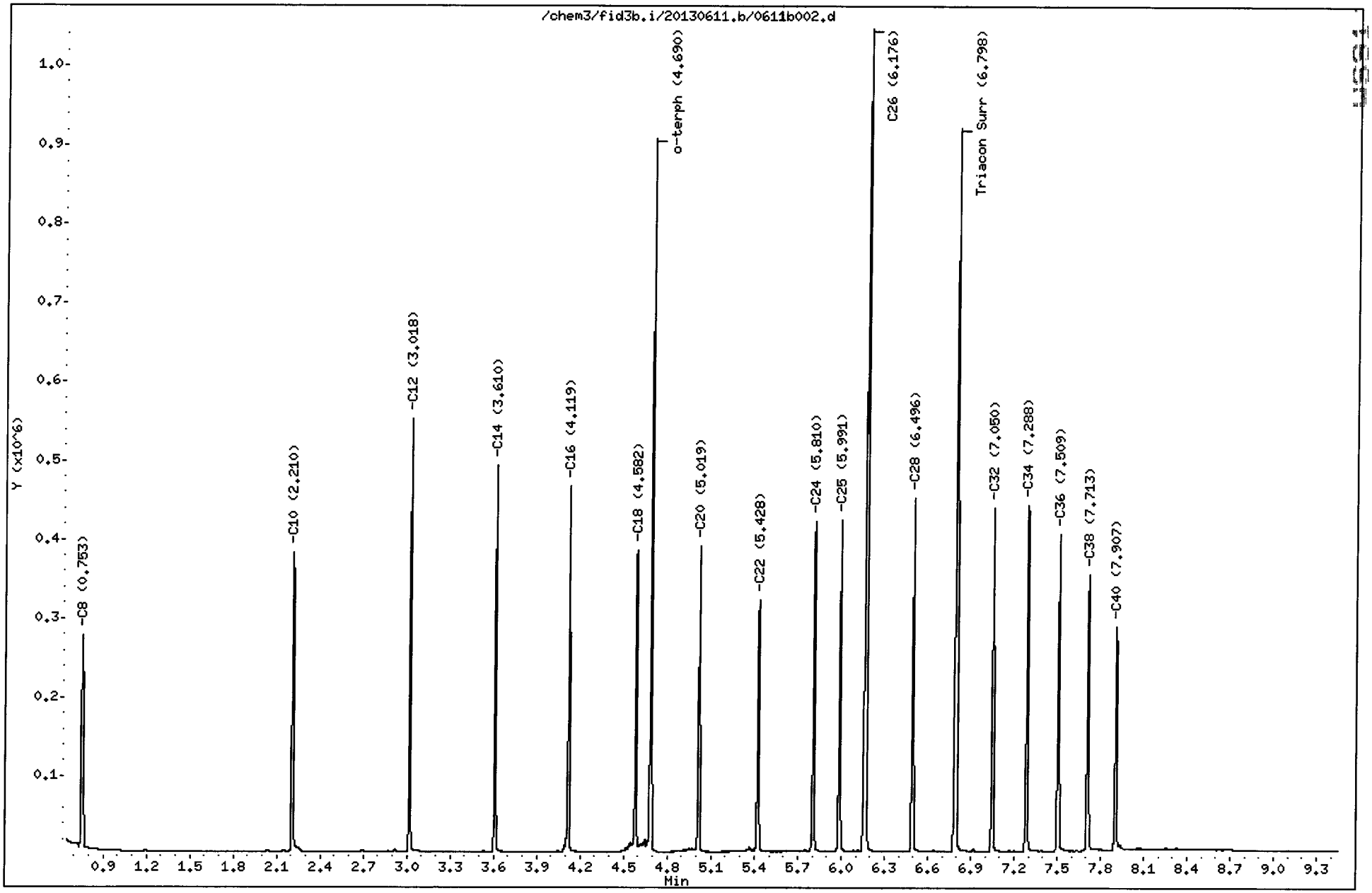
Data File: /chem3/fid3b.i/20130611.b/0611b002.d
Date : 11-JUN-2013 08:21
Client ID:
Sample Info: RT0611

Column phase: RTX-1

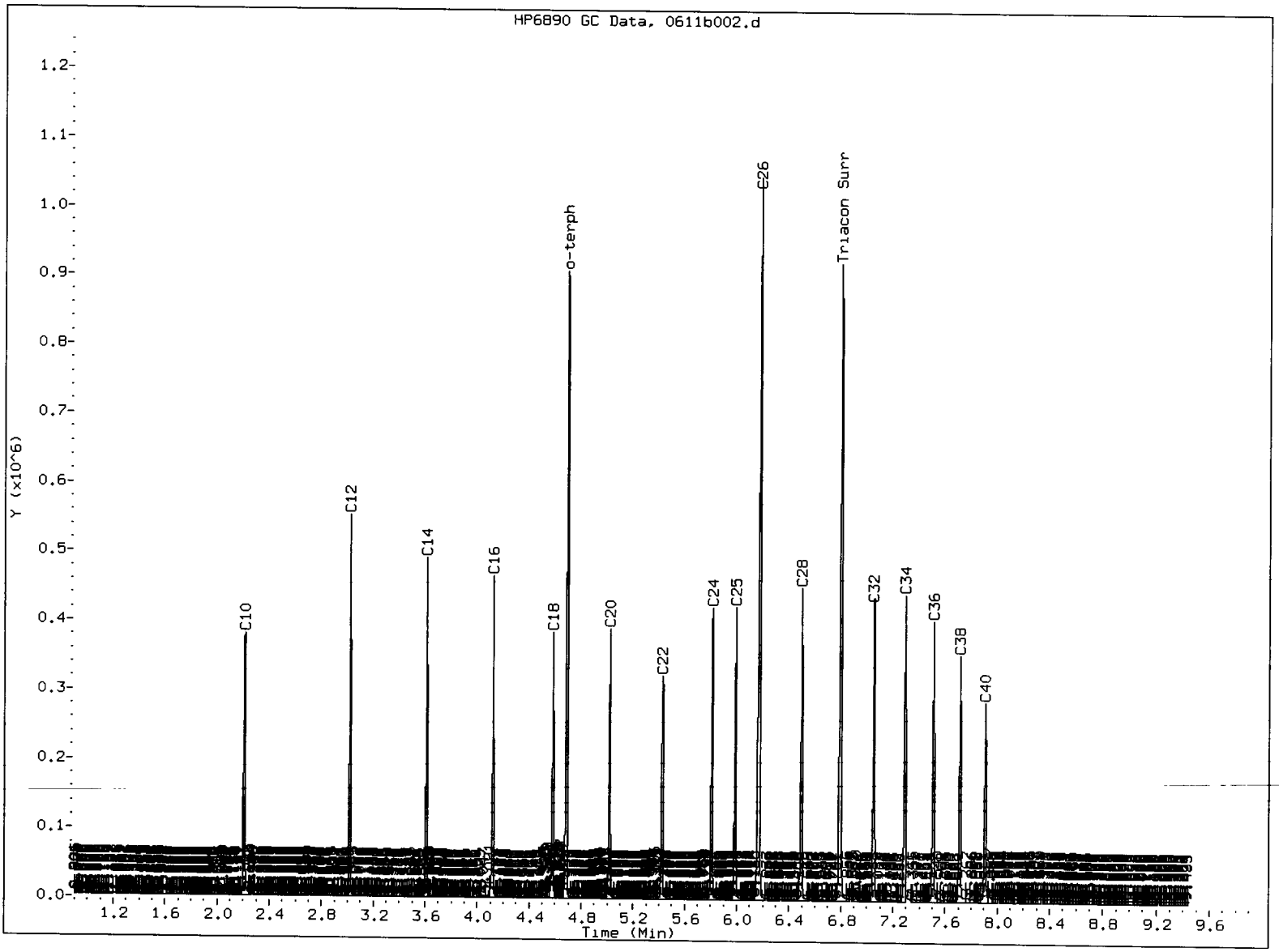
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

JW 6/12/13



FID:3B-2C/RTX-1 RT0611 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 6/12/10

WS91:01470

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130611.b/0611b003.d
Method: /chem3/fid3b.i/20130611.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/12/2013
Macro: FID:3B052113

ARI ID: IB0611
Client ID:
Injection: 11-JUN-2013 08:39
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	50410	4
C8	0.805	0.052	2505	399	WATPHD	(C12-C24)	19927	1.92
C10	2.207	-0.003	598	592	WATPHM	(C24-C38)	77508	7.85
C12	3.016	-0.002	225	230	AK102	(C10-C25)	32055	2.59
C14	3.606	-0.003	147	122	AK103	(C25-C36)	53768	7.56
C16	4.125	0.006	56	22				
C18	4.584	0.002	270	60				
C20	5.025	0.007	66	12				
C22	5.428	0.001	45	22	MSPIRIT	(Tol-C12)	50410	3.67
C24	5.818	0.008	42	5				
C25	5.989	-0.002	144	106				
C26	6.167	-0.009	71	24				
C28	6.485	-0.011	660	642				
C32	7.034	-0.016	8797	9227				
C34	7.284	-0.004	741	432				
Filter Peak	----							
C36	7.508	-0.001	1152	228				
o-terph	4.685	-0.005	1033865	683509	JET-A	(C10-C18)	21626	2.00
Triacon Surr	6.789	-0.009	898183	714170				

Range Times: NW Diesel(3.068 - 5.860) NW Gas(0.609 - 3.068) NW M.Oil(5.860 - 7.763)
AK102(2.160 - 5.941) AK103(5.941 - 7.559) Jet A(2.160 - 4.632)

Surrogate	Area	Amount	%Rec
o-Terphenyl	683509	50.8	112.9
Triacontane	714170	54.7	121.6

JW 6/12/13

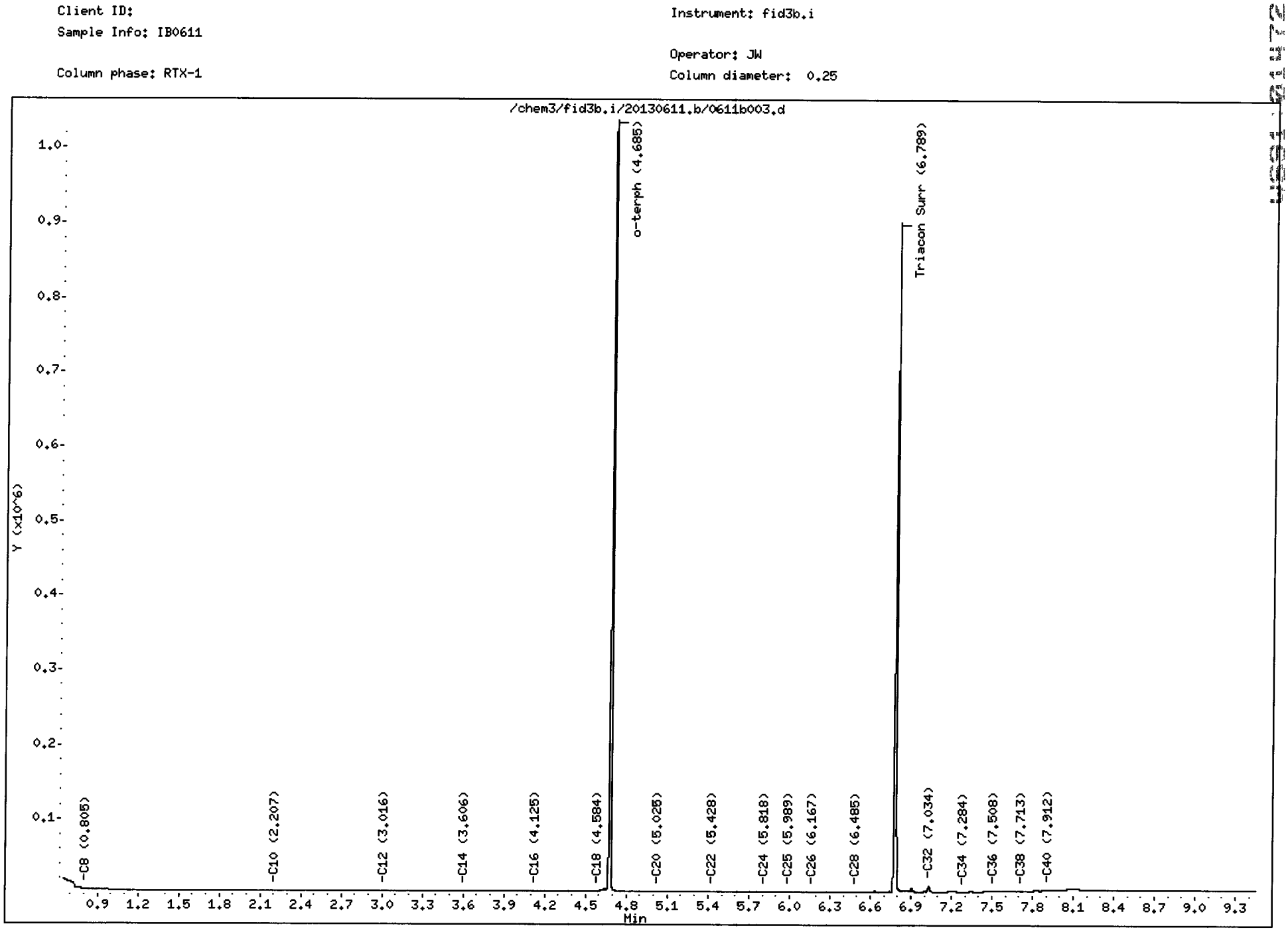
Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130611.b/0611b003.d
Date : 11-JUN-2013 08:39
Client ID:
Sample Info: IB0611

Column phase: RTX-1

Instrument: fid3b.i

Operator: JW
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130611.b/0611b019.d
Method: /chem3/fid3b.i/20130611.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/12/2013
Macro: FID:3B052113

ARI ID: DIESEL#2
Client ID:
Injection: 11-JUN-2013 14:31
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	687014	51
C8	0.810	0.057	2643	2716	WATPHD	(C12-C24)	2477389	239.19
C10	2.211	0.001	18441	14171	WATPHM	(C24-C38)	77517	7.85
C12	3.016	-0.002	32603	28459	AK102	(C10-C25)	2949183	238.67 M
C14	3.608	-0.002	58850	36381	AK103	(C25-C36)	49188	6.92
C16	4.116	-0.003	85879	62353				
C18	4.577	-0.005	67911	61289				
C20	5.009	-0.010	53650	48900				
C22	5.420	-0.008	28013	22204	MSPIRIT	(Tol-C12)	687014	50.01
C24	5.811	0.001	1981	580				
C25	5.997	0.006	862	632				
C26	6.178	0.002	394	112				
C28	6.500	0.003	103	21				
C32	7.050	0.000	335	197				
C34	7.283	-0.005	785	474				
Filter Peak	----							
C36	7.493	-0.016	1788	3547				
o-terph	4.686	-0.004	1091016	646838	JET-A	(C10-C18)	2219448	205.05
Triacon Surr	6.799	0.001	323	136				

Range Times: NW Diesel(3.068 - 5.860) NW Gas(0.609 - 3.068) NW M.Oil(5.860 - 7.763)
AK102(2.160 - 5.941) AK103(5.941 - 7.559) Jet A(2.160 - 4.632)

Surrogate	Area	Amount	%Rec
o-Terphenyl	646838	48.1	106.9
Triacontane	136	0.0	0.0

JW 6/12/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

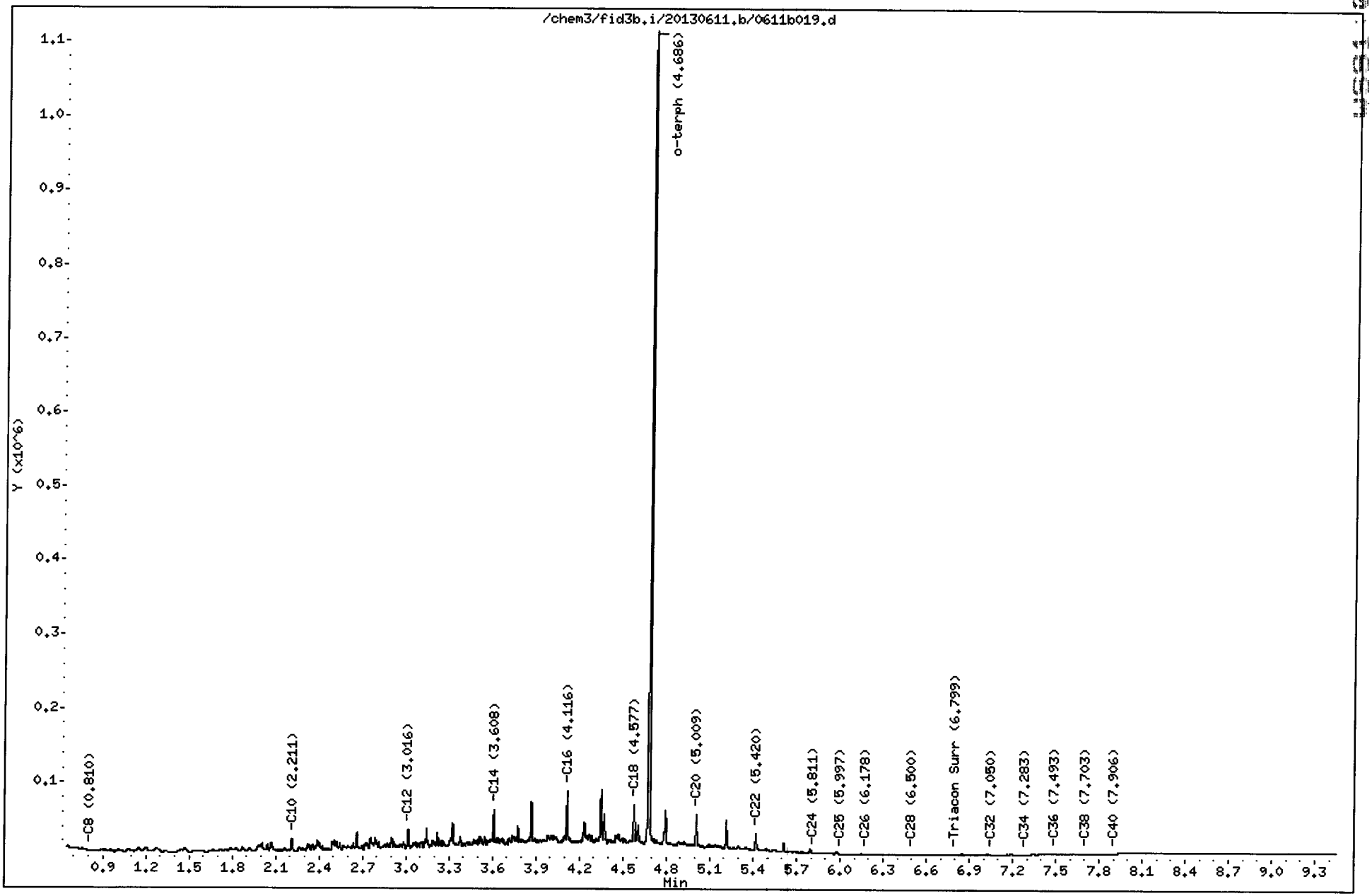
Data File: /chem3/fid3b.i/20130611.b/0611b019.d
Date : 11-JUN-2013 14:31
Client ID:
Sample Info: DIESEL#2

Column phase: RTX-1

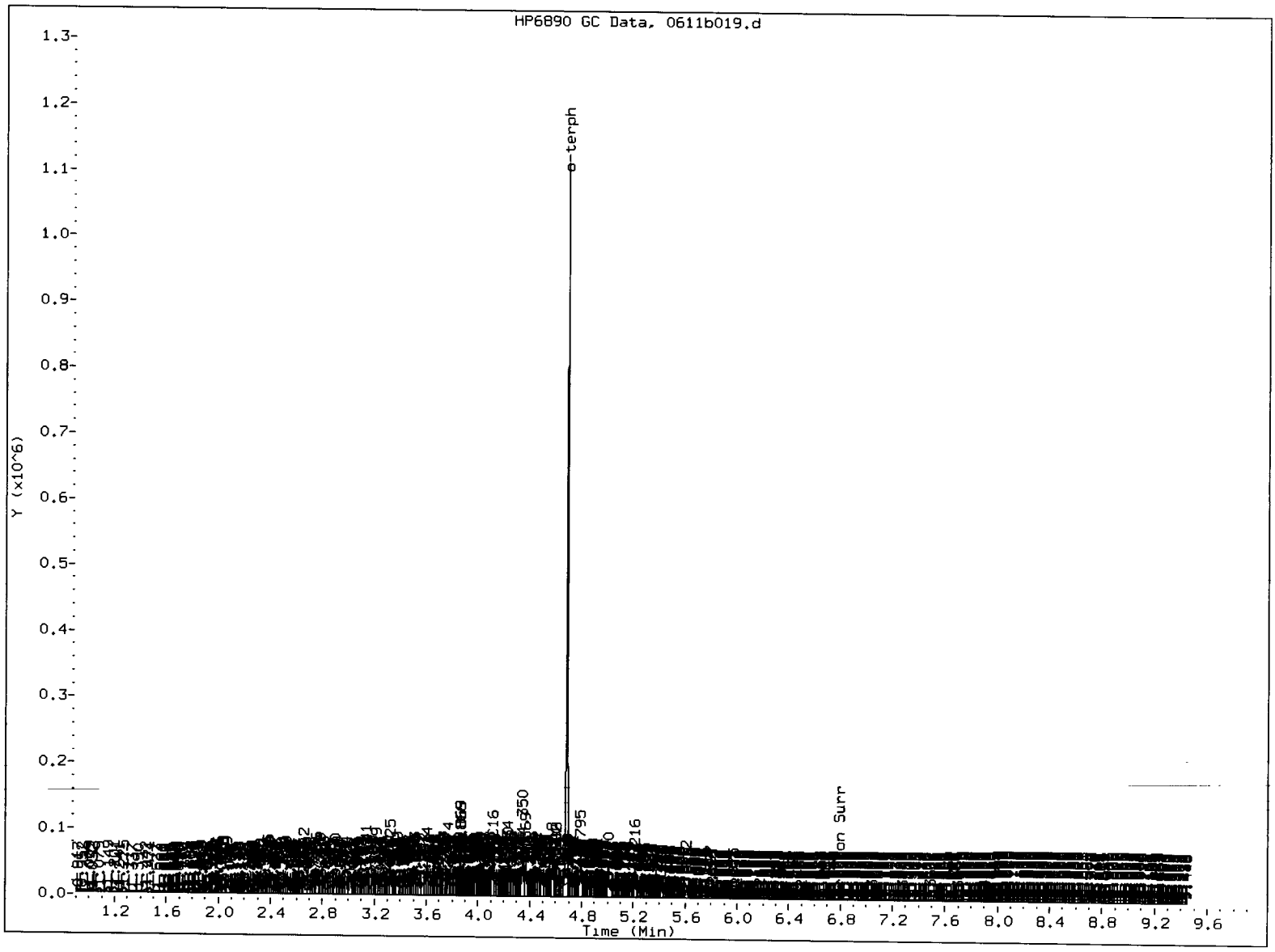
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

JW 6/12/13



FID:3B-2C/RTX-1 DIESEL#2 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 6/12/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130611.b/0611b020.d
Method: /chem3/fid3b.i/20130611.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/12/2013
Macro: FID:3B052113

ARI ID: MOIL#2
Client ID:
Injection: 11-JUN-2013 14:49
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	83004	6
C8	0.814	0.061	4362	4018	WATPHD	(C12-C24)	489749	47.28
C10	2.210	0.000	736	752	WATPHM	(C24-C38)	5434419	550.44
C12	3.019	0.001	149	111	AK102	(C10-C25)	645070	52.20
C14	3.609	0.000	161	118	AK103	(C25-C36)	4763399	670.10 M
C16	4.113	-0.006	162	114				
C18	4.572	-0.010	406	313				
C20	5.018	-0.001	1227	607				
C22	5.422	-0.006	6480	4576	MSPIRIT	(Tol-C12)	83004	6.04
C24	5.809	-0.001	24115	13373				
C25	5.992	0.001	35018	21269				
C26	6.172	-0.004	38417	31675				
C28	6.494	-0.002	48702	30521				
C32	7.053	0.003	57584	29550				
C34	7.285	-0.003	64122	29430				
Filter Peak	----							
C36	7.506	-0.003	56375	31684				
o-terph	4.696	0.005	470	152	JET-A	(C10-C18)	30417	2.81
Triacon Surr	6.788	-0.010	1018009	714976				

Range Times: NW Diesel(3.068 - 5.860) NW Gas(0.609 - 3.068) NW M.Oil(5.860 - 7.763)
AK102(2.160 - 5.941) AK103(5.941 - 7.559) Jet A(2.160 - 4.632)

Surrogate	Area	Amount	%Rec
o-Terphenyl	152	0.0	0.0
Triacontane	714976	54.8	121.8

JCD 6/12/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

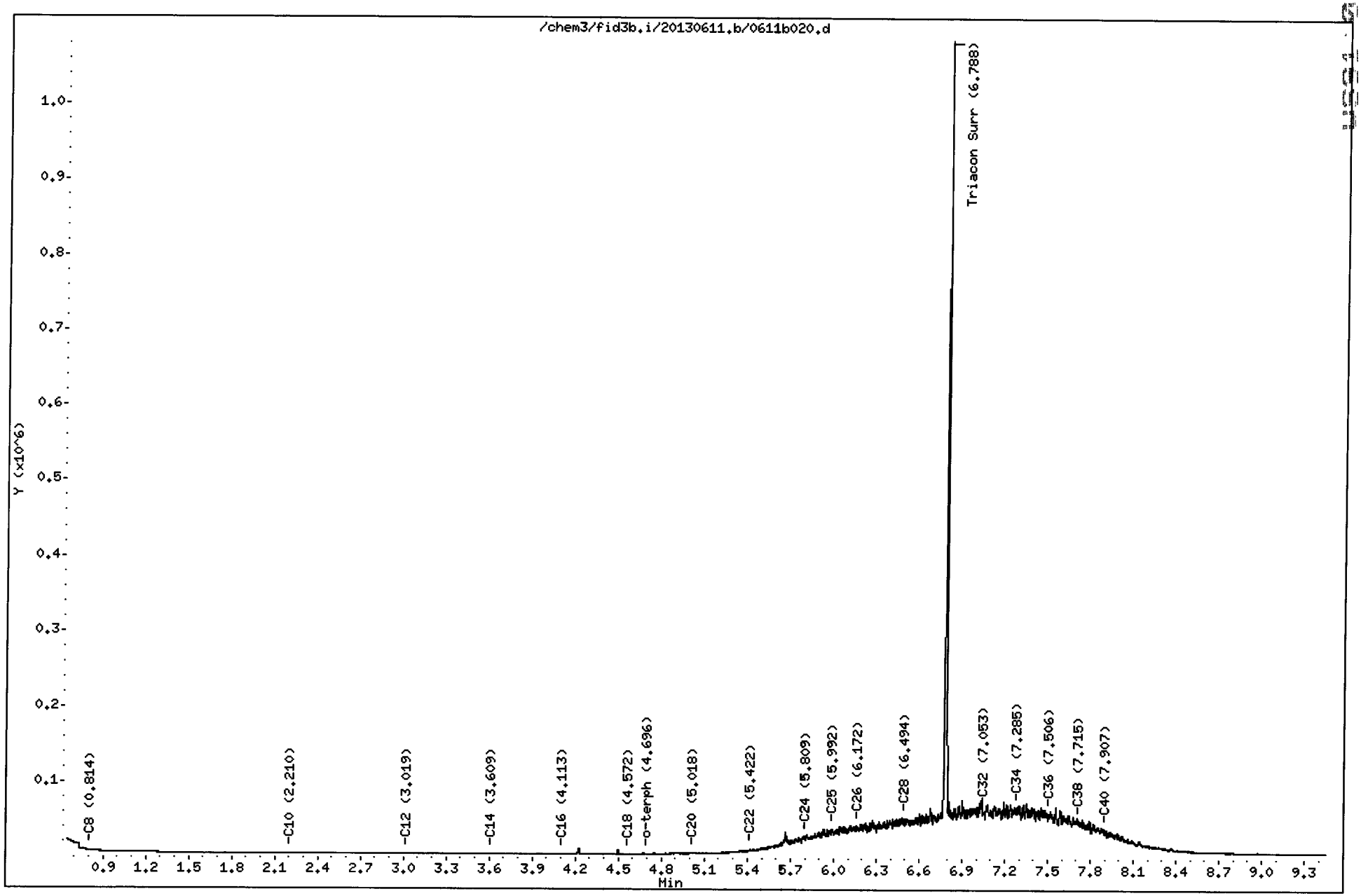
Data File: /chem3/fid3b.i/20130611.b/0611b020.d
Date : 11-JUN-2013 14:49
Client ID:
Sample Info: MOIL#2

Column phase: RTX-1

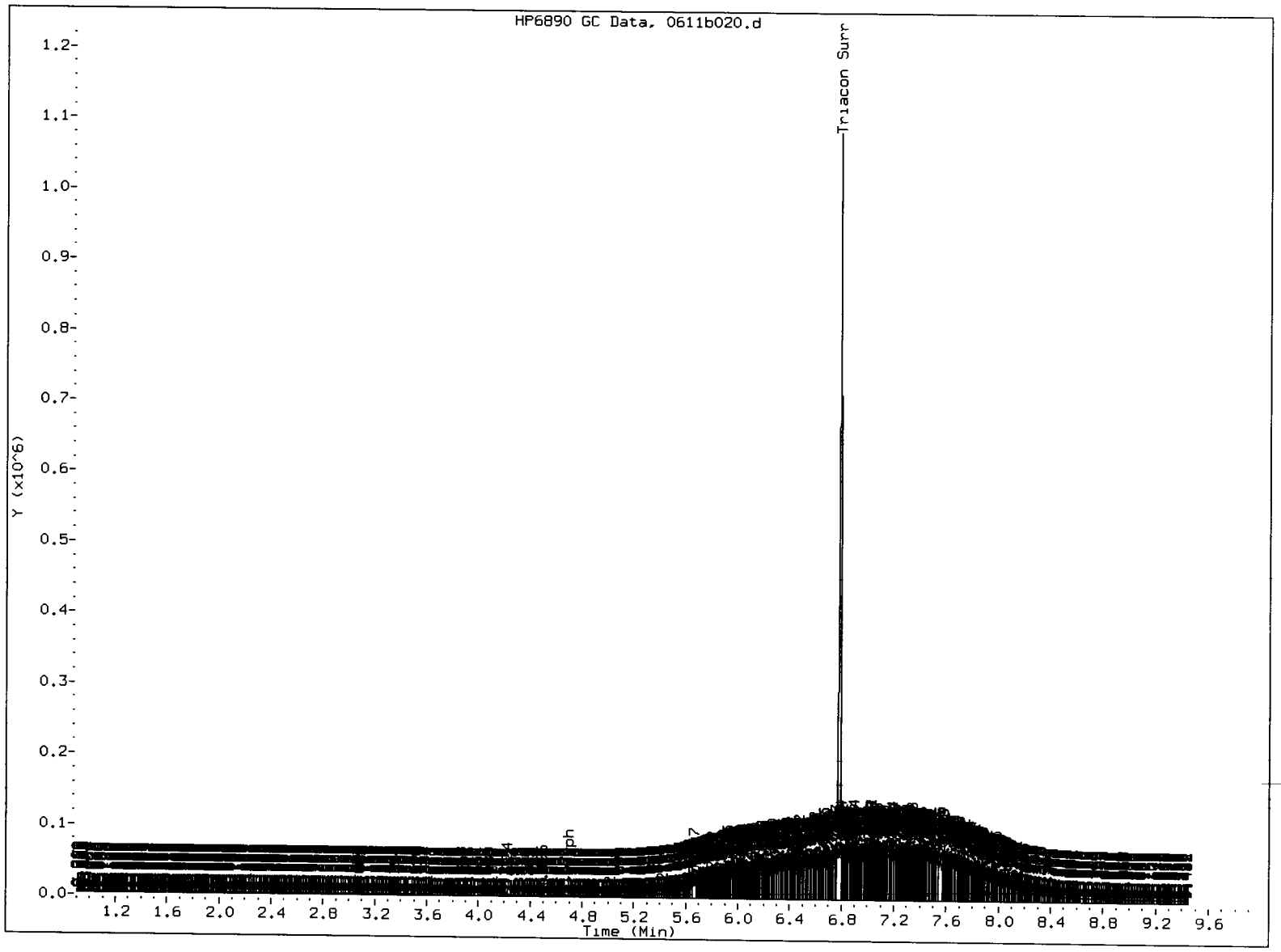
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

JW 6/12/13



FID:3B-2C/RTX-1 MOIL#2 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JCJ Date: 6/12/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130611.b/0611b022.d
Method: /chem3/fid3b.i/20130611.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/12/2013
Macro: FID:3B052113

ARI ID: WS91MBS1
Client ID: WS91MBS1
Injection: 11-JUN-2013 15:36
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	65516	5
C8	0.810	0.057	3561	2234	WATPHD	(C12-C24)	38444	3.71
C10	2.212	0.002	742	661	WATPHM	(C24-C38)	63085	6.39
C12	3.018	0.000	299	316	AK102	(C10-C25)	51589	4.17
C14	3.607	-0.003	712	529	AK103	(C25-C36)	47596	6.70
C16	4.114	-0.005	1314	898				
C18	4.575	-0.007	1315	1016				
C20	5.011	-0.007	582	462				
C22	5.437	0.010	65	19	MSPIRIT	(Tol-C12)	65516	4.77
C24	5.810	0.000	62	12				
C25	5.989	-0.002	440	321				
C26	6.166	-0.010	65	22				
C28	6.497	0.001	221	90				
C32	7.038	-0.012	8450	5215				
C34	7.293	0.005	659	343				
Filter Peak	----							
C36	7.511	0.002	1034	462				
o-terph	4.687	-0.003	1049513	597220	JET-A	(C10-C18)	39008	3.60
Triacon Surr	6.790	-0.008	734796	639379				

Range Times: NW Diesel(3.068 - 5.860) NW Gas(0.609 - 3.068) NW M.Oil(5.860 - 7.763)
AK102(2.160 - 5.941) AK103(5.941 - 7.559) Jet A(2.160 - 4.632)

Surrogate	Area	Amount	%Rec
o-Terphenyl	597220	44.4	98.7
Triacontane	639379	49.0	108.9

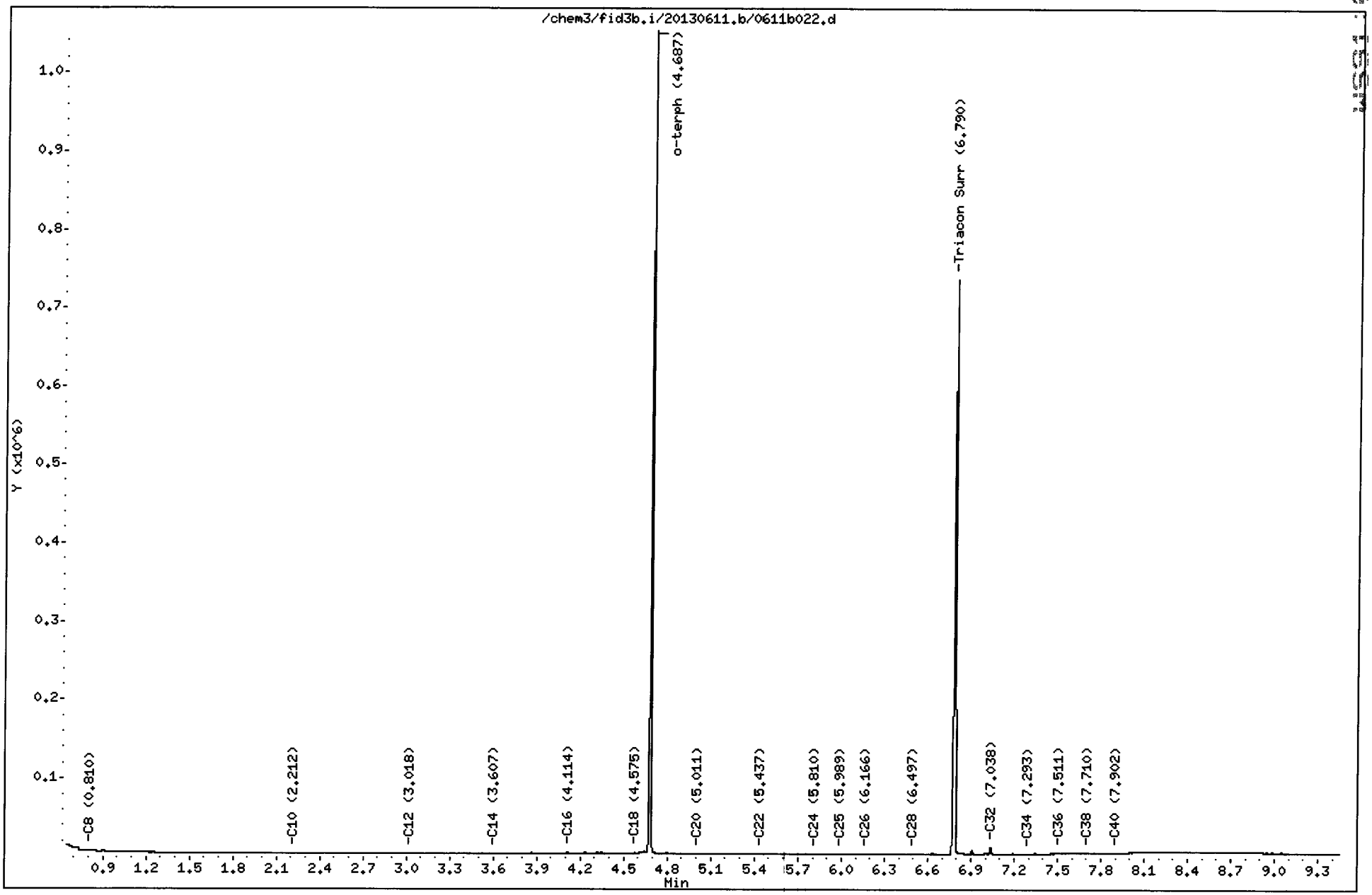
JW 6/12/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

WS91:91479

Data File: /chem3/fid3b.i/20130611.b/0611b022.d
Date : 11-JUN-2013 15:36
Client ID: WS91MBS1
Sample Info: WS91MBS1

Instrument: fid3b.i
Operator: JW
Column phase: RTX-1
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130611.b/0611b023.d
Method: /chem3/fid3b.i/20130611.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/12/2013
Macro: FID:3B052113

ARI ID: WS91LCSS1
Client ID: WS91LCSS1
Injection: 11-JUN-2013 15:55
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	3467558	257	
C8	0.802	0.048	5073	3081	WATPHD	(C12-C24)	13640480	1316.98	
C10	2.214	0.004	74533	56096	WATPHM	(C24-C38)	204266	20.69	
C12	3.018	0.000	173592	145743	AK102	(C10-C25)	16220353	1312.67	M
C14	3.609	0.000	265137	166885	AK103	(C25-C36)	151389	21.30	
C16	4.118	-0.001	392374	311961					
C18	4.580	-0.002	361467	316028					
C20	5.023	0.004	64821	16361					
C22	5.430	0.002	32023	18832	MSPIRIT	(Tol-C12)	3467558	252.40	
C24	5.813	0.003	12139	3542					
C25	6.001	0.010	6752	4705					
C26	6.172	-0.004	3768	1707					
C28	6.483	-0.013	2285	2262					
C32	7.063	0.013	164	80					
C34	7.289	0.001	82	13					
Filter Peak	----								
C36	7.518	0.009	304	129					
o-terph	4.688	-0.002	939347	554032	JET-A	(C10-C18)	12361733	1142.05	
Triacon Surr	6.787	-0.011	800250	651789					

Range Times: NW Diesel(3.068 - 5.860) NW Gas(0.609 - 3.068) NW M.Oil(5.860 - 7.763)
AK102(2.160 - 5.941) AK103(5.941 - 7.559) Jet A(2.160 - 4.632)

Surrogate	Area	Amount	%Rec
o-Terphenyl	554032	41.2	91.5
Triacontane	651789	50.0	111.0

JW 6/12/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

WS91 : 211121

Data File: /chem3/fid3b.i/20130611.b/0611b023.d

Date : 11-JUN-2013 15:55

Client ID: WS91LCSS1

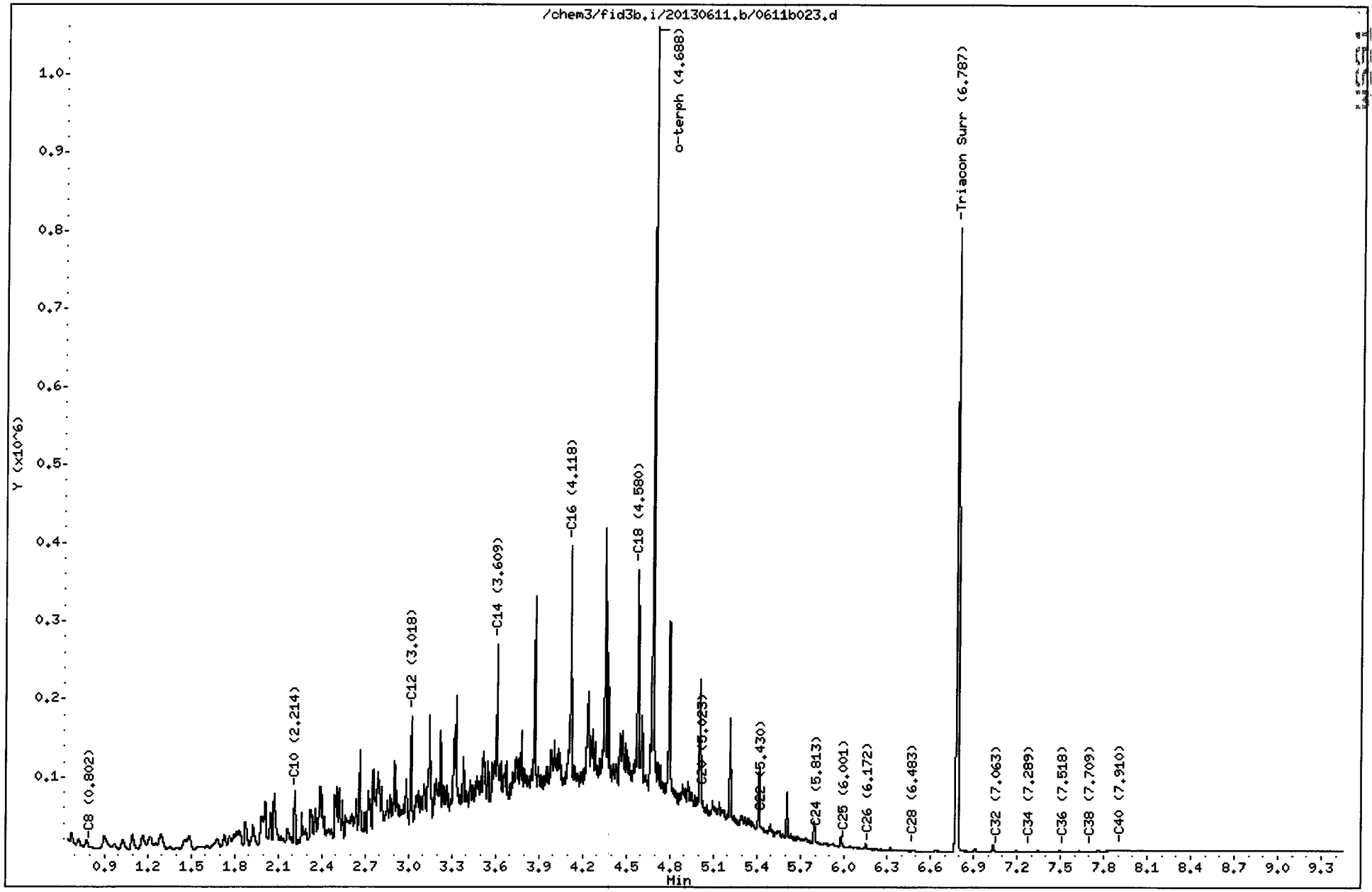
Sample Info: WS91LCSS1

Instrument: fid3b.i

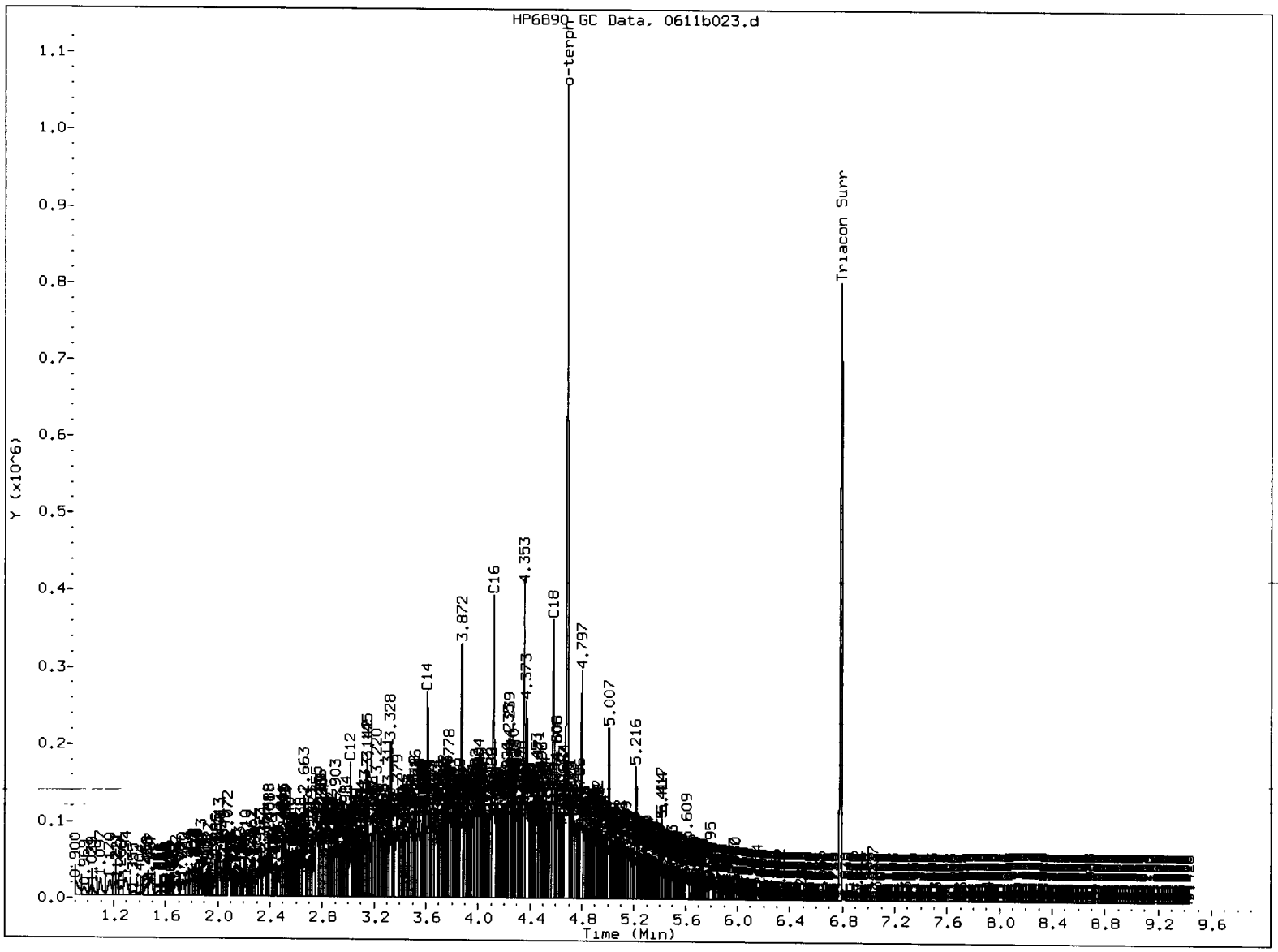
Operator: JW

Column phase: RTX-1

Column diameter: 0.25



FID:3B-2C/RTX-1 WS91LCSS1 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 6/12/13

WS91:01483

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130611.b/0611b024.d
Method: /chem3/fid3b.i/20130611.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/12/2013
Macro: FID:3B052113

ARI ID: WS91A
Client ID: CL-MH-SPS-20130605-
Injection: 11-JUN-2013 16:14
Dilution Factor: 5

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	147005	11
C8	0.817	0.063	3642	5859	WATPHD	(C12-C24)	14711561	1420.39
C10	2.212	0.002	1973	1593	WATPHM	(C24-C38)	28752376	2912.26
C12	3.016	-0.002	7004	6433	AK102	(C10-C25)	15806463	1279.18 M
C14	3.609	-0.001	26345	22586	AK103	(C25-C36)	25212944	3546.88 M
C16	4.118	-0.001	87374	92151				
C18	4.576	-0.006	155119	97196				
C20	5.014	-0.004	161773	123917				
C22	5.423	-0.005	171491	106858	MSPIRIT	(Tol-C12)	147005	10.70
C24	5.812	0.002	212184	49518				
C25	5.992	0.001	276827	127317				
C26	6.176	0.000	246832	61668				
C28	6.496	-0.001	335159	344247				
C32	7.048	-0.002	311247	150708				
C34	7.290	0.002	295858	57509				
Filter Peak	----							
C36	7.508	0.000	245838	135127				
o-terph	4.681	-0.009	186436	82363	JET-A	(C10-C18)	4359454	402.75
Triacon Surr	6.789	-0.009	259979	141331				

Range Times: NW Diesel(3.068 - 5.860) NW Gas(0.609 - 3.068) NW M.Oil(5.860 - 7.763)
AK102(2.160 - 5.941) AK103(5.941 - 7.559) Jet A(2.160 - 4.632)

Surrogate	Area	Amount	%Rec
o-Terphenyl	82363	6.1	68.0
Triacontane	141331	10.8	120.4

JW
6/12/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

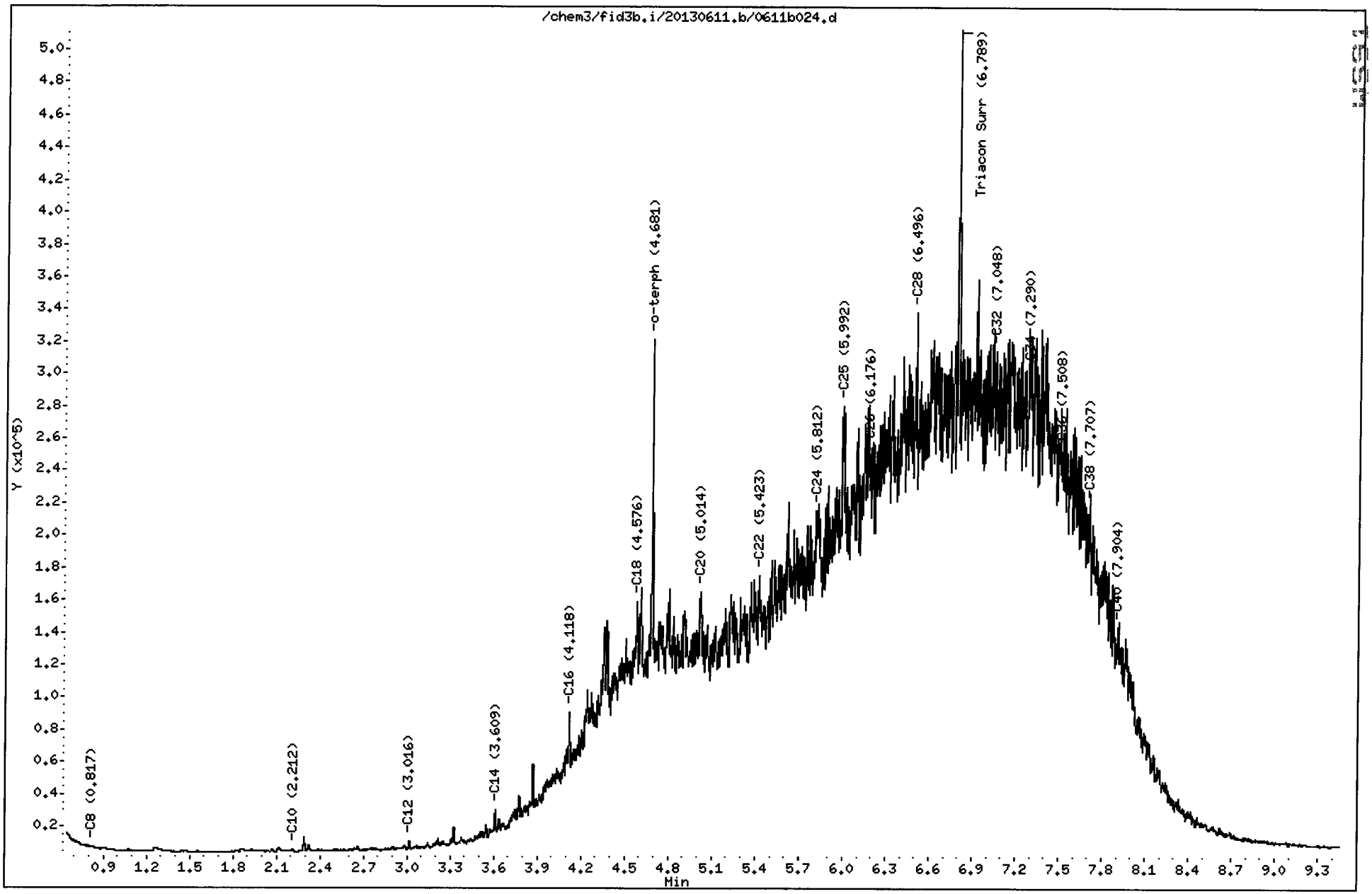
Data File: /chem3/fid3b.i/20130611.b/0611b024.d
Date : 11-JUN-2013 16:14
Client ID: CL-MH-SPS-20130605-
Sample Info: WS91A,5

Column phase: RTX-1

Instrument: fid3b.i

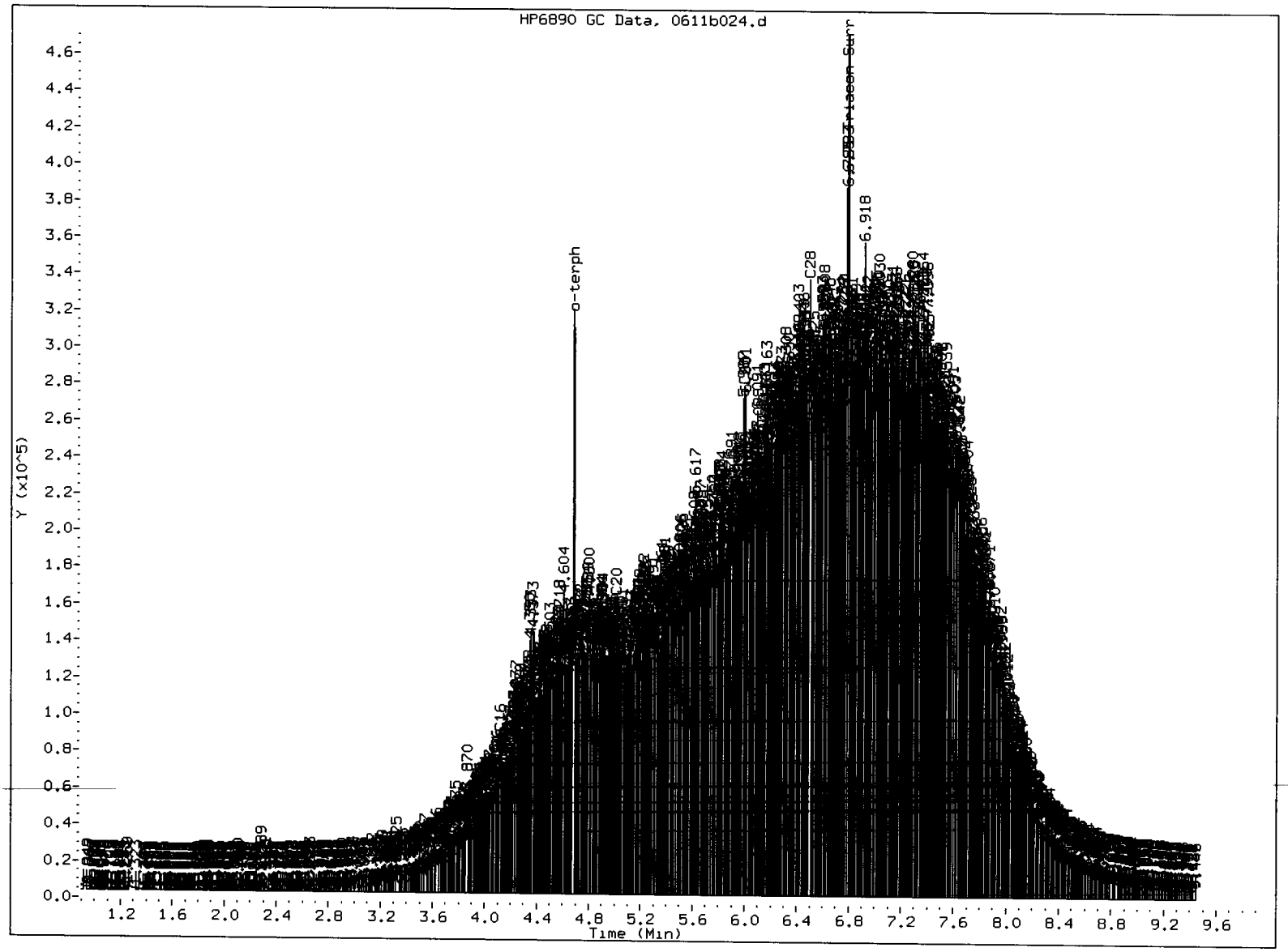
Operator: JW
Column diameter: 0.25

JW 6/12/13



FID:3B-2C/RTX-1 WS91A

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
9. Skimmed surrogate

Analyst: JW Date: 6/12/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130611.b/0611b025.d
Method: /chem3/fid3b.i/20130611.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/12/2013
Macro: FID:3B052113

ARI ID: WS91AMS
Client ID: CL-MH-SPS-20130 MS
Injection: 11-JUN-2013 16:32
Dilution Factor: 5

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	834745	62	
C8	0.807	0.054	3585	713	WATPHD	(C12-C24)	19068307	1841.03	
C10	2.211	0.001	14768	11214	WATPHM	(C24-C38)	34246451	3468.74	
C12	3.016	-0.002	34333	27576	AK102	(C10-C25)	20585773	1665.96	M
C14	3.608	-0.002	79969	55535	AK103	(C25-C36)	29948175	4213.02	M
C16	4.119	0.000	158150	170854					
C18	4.576	-0.006	231606	125707					
C20	5.022	0.003	185608	110869					
C22	5.422	-0.006	226853	178777	MSPIRIT	(Tol-C12)	834745	60.76	
C24	5.807	-0.003	274033	213070					
C25	5.990	-0.001	312851	64976					
C26	6.177	0.001	301276	112793					
C28	6.499	0.002	346732	281959					
C32	7.050	0.000	385342	355243					
C34	7.292	0.004	376149	73866					
Filter Peak	----								
C36	7.509	0.001	337438	103785					
o-terph	4.679	-0.011	195896	81140	JET-A	(C10-C18)	6716086	620.47	
Triacon Surr	6.793	-0.005	206806	123190					

Range Times: NW Diesel(3.068 - 5.860) NW Gas(0.609 - 3.068) NW M.Oil(5.860 - 7.763)
AK102(2.160 - 5.941) AK103(5.941 - 7.559) Jet A(2.160 - 4.632)

Surrogate	Area	Amount	%Rec
o-Terphenyl	81140	6.0	67.0
Triacontane	123190	9.4	104.9

JW 6/12/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130611.b/0611b025.d

Date : 11-JUN-2013 16:32

Client ID: CL-MH-SPS-20130 MS

Sample Info: WS91AMS,5

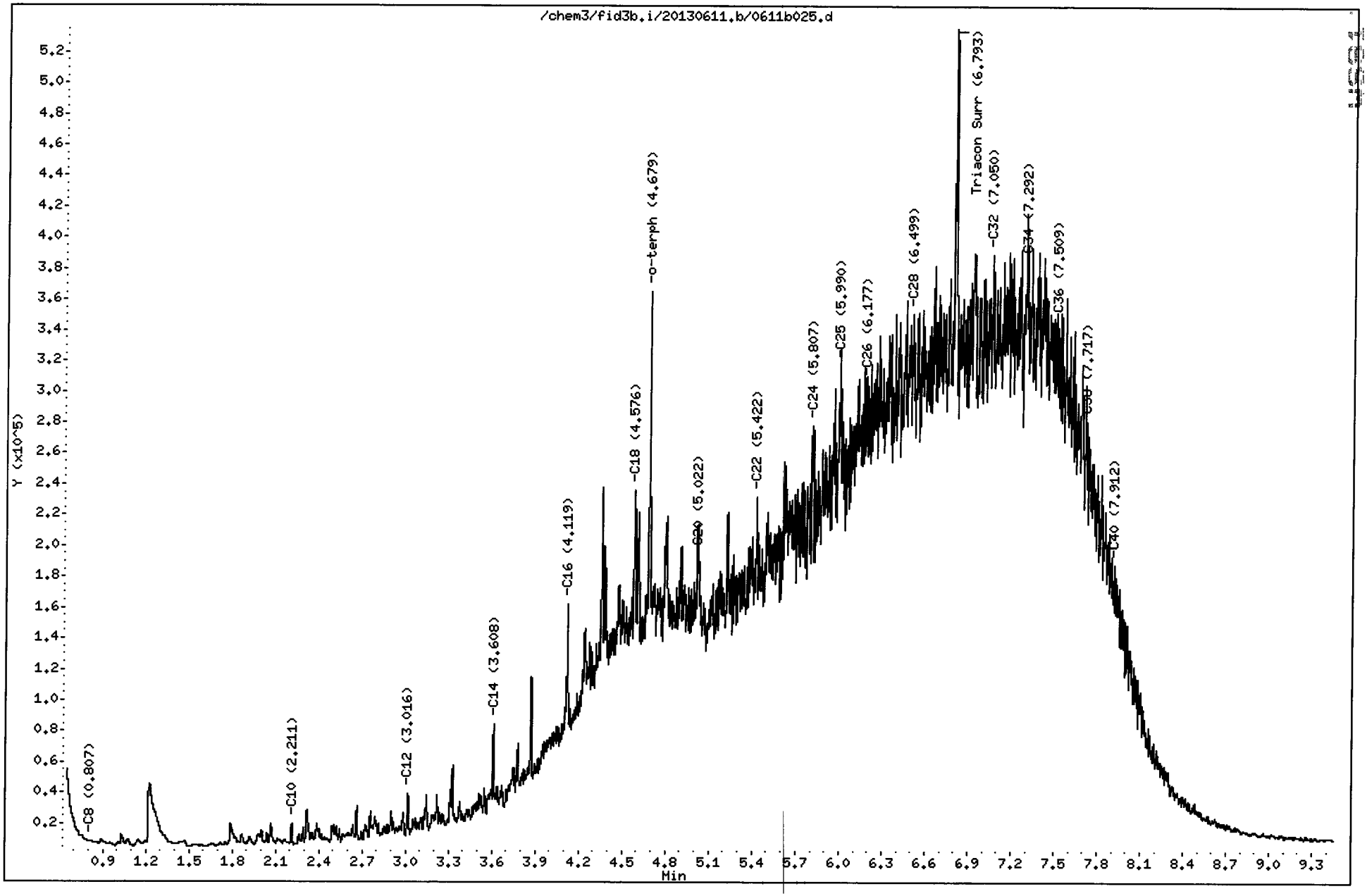
Column phase: RTX-1

Instrument: fid3b.i

Operator: JW

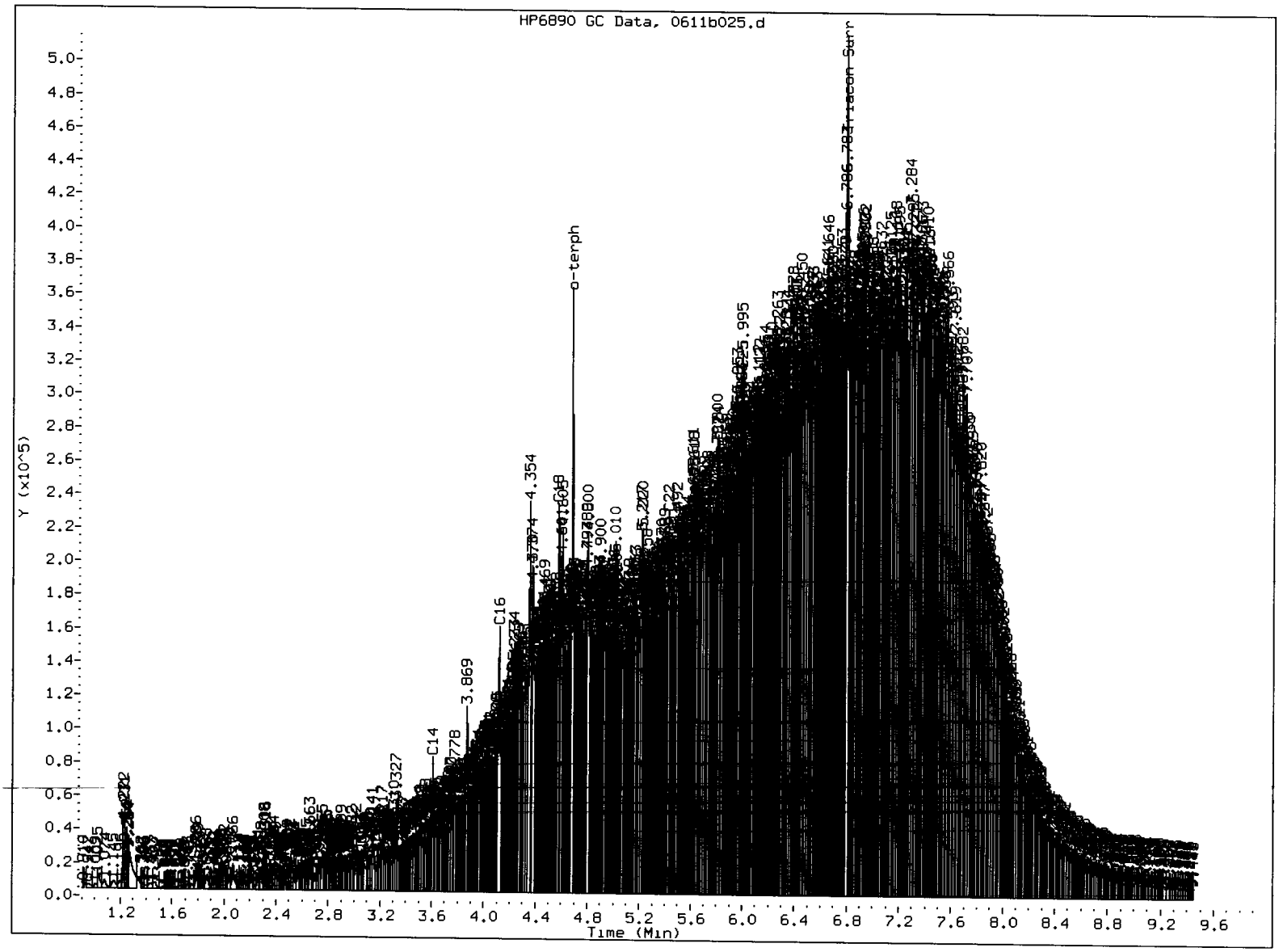
Column diameter: 0.25

JW 6/12/13



FID:3B-2C/RTX-1 WS91AMS

FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JCC Date: 6/12/13

WS91:01408

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130611.b/0611b026.d
Method: /chem3/fid3b.i/20130611.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/12/2013
Macro: FID:3B052113

ARI ID: WS91AMSD
Client ID: CL-MH-SPS-20130 MSD
Injection: 11-JUN-2013 16:51
Dilution Factor: 5

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	1082088	80	
C8	0.816	0.063	4223	3358	WATPHD	(C12-C24)	19052592	1839.51	✓
C10	2.212	0.003	14981	11005	WATPHM	(C24-C38)	31566945	3197.34	✓
C12	3.015	-0.002	30781	27957	AK102	(C10-C25)	20560460	1663.91	M
C14	3.609	0.000	78544	53276	AK103	(C25-C36)	28008574	3940.16	M
C16	4.118	0.000	144364	83391					
C18	4.578	-0.003	245164	284043					
C20	5.014	-0.004	217707	125837					
C22	5.426	-0.001	217530	102193	MSPIRIT	(Tol-C12)	1082088	78.76	
C24	5.810	0.001	257200	102173					
C25	5.990	-0.001	317720	297926					
C26	6.176	0.000	312628	212286					
C28	6.496	0.000	361066	360809					
C32	7.049	0.000	373175	244083					
C34	7.290	0.003	354014	229559					
Filter Peak	----								
C36	7.508	0.000	277425	74030					
o-terph	4.681	-0.009	178736	86198	JET-A	(C10-C18)	6943125	641.45	
Triacon Surr	6.790	-0.007	188566	93495					

Range Times: NW Diesel(3.068 - 5.860) NW Gas(0.609 - 3.068) NW M.Oil(5.860 - 7.763)
AK102(2.160 - 5.941) AK103(5.941 - 7.559) Jet A(2.160 - 4.632)

Surrogate	Area	Amount	%Rec	
o-Terphenyl	86198	6.4	71.2	✓
Triacontane	93495	7.2	79.6	

JW 6/12/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

Data File: /chem3/fid3b.i/20130611.b/0611b026.d

Date : 11-JUN-2013 16:51

Client ID: CL-MH-SPS-20130 MSD

Sample Info: WS91AMSD,5

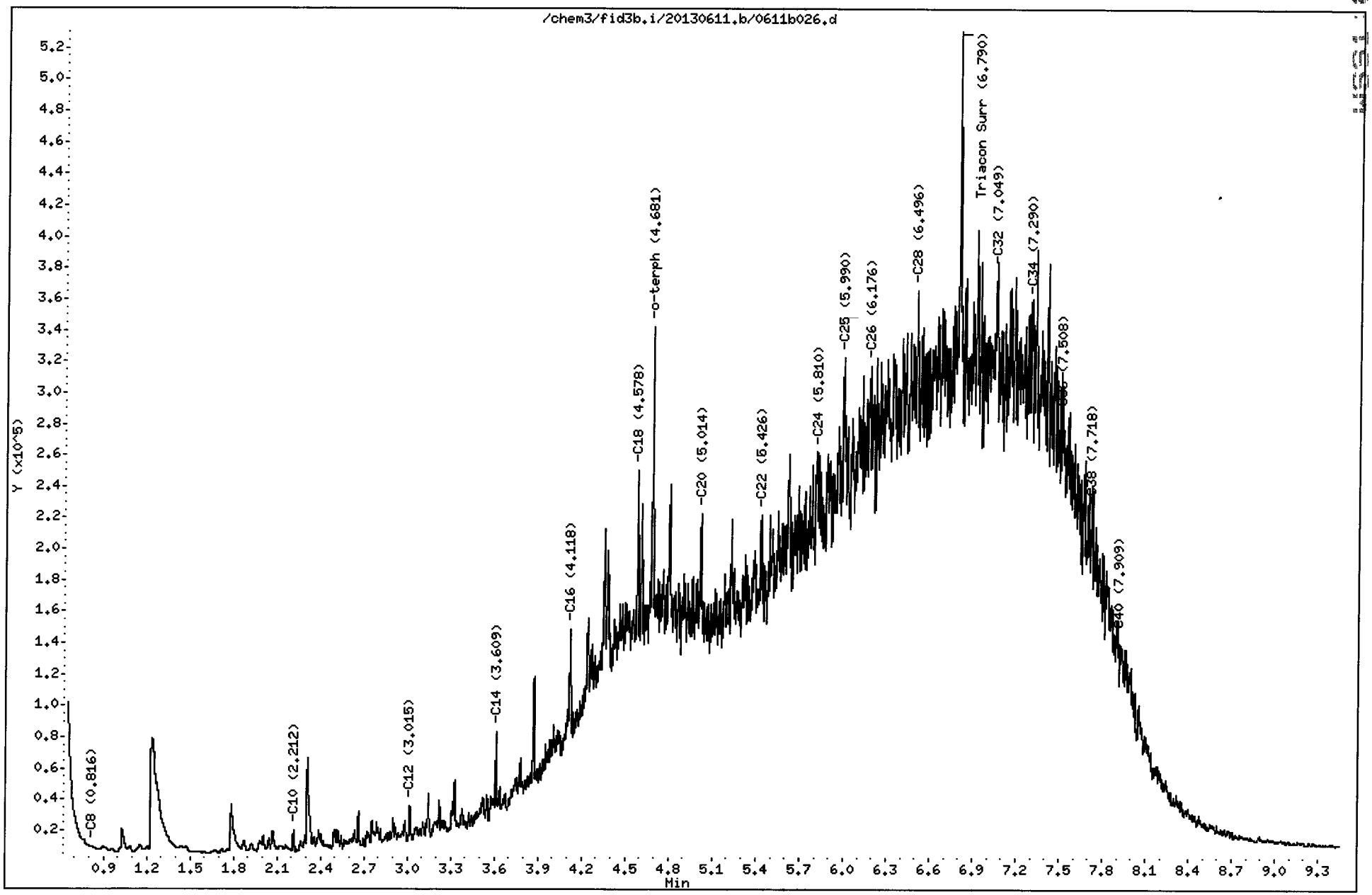
Column phase: RTX-1

Instrument: fid3b.i

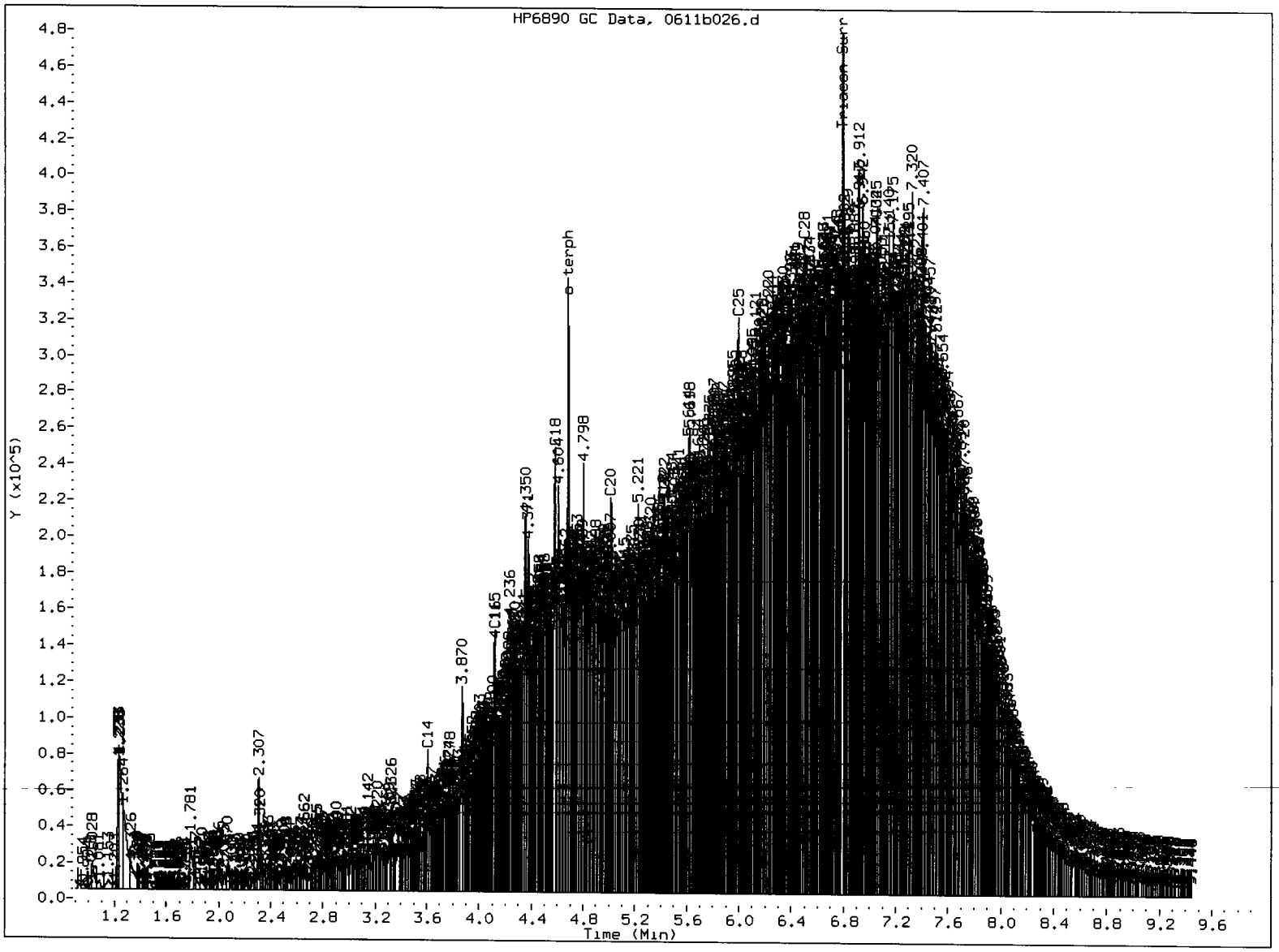
Operator: JW

Column diameter: 0.25

JW 6/12/13



FID:3B-2C/RTX-1 WS91AMSD FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5.) Skimmed surrogate

Analyst: JW Date: 6/12/12

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130611.b/0611b027.d
Method: /chem3/fid3b.i/20130611.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/12/2013
Macro: FID:3B052113

ARI ID: DIESEL#3
Client ID:
Injection: 11-JUN-2013 17:10
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	657630	49
C8	0.801	0.047	2374	1263	WATPHD	(C12-C24)	2480326	239.47
C10	2.212	0.002	18659	13634	WATPHM	(C24-C38)	94576	9.58
C12	3.016	-0.002	33860	29222	AK102	(C10-C25)	2947230	238.51 M
C14	3.606	-0.003	63460	36386	AK103	(C25-C36)	63380	8.92
C16	4.113	-0.005	80444	62898				
C18	4.588	0.006	19785	4888				
C20	5.020	0.001	13370	8167				
C22	5.432	0.004	6308	2317	MSPIRIT	(Tol-C12)	657630	47.87
C24	5.814	0.004	1910	516				
C25	5.991	0.000	976	223				
C26	6.172	-0.004	350	104				
C28	6.493	-0.003	185	124				
C32	7.048	-0.002	309	206				
C34	7.289	0.001	1149	430				
Filter Peak	----							
C36	7.515	0.006	2079	1485				
o-terph	4.686	-0.004	920995	647130	JET-A	(C10-C18)	2197330	203.00
Triacon Surr	6.796	-0.002	332	121				

Range Times: NW Diesel(3.068 - 5.860) NW Gas(0.609 - 3.068) NW M.Oil(5.860 - 7.763)
AK102(2.160 - 5.941) AK103(5.941 - 7.559) Jet A(2.160 - 4.632)

Surrogate	Area	Amount	%Rec
o-Terphenyl	647130	48.1	106.9
Triacontane	121	0.0	0.0

JW
6/12/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

WS91:01493

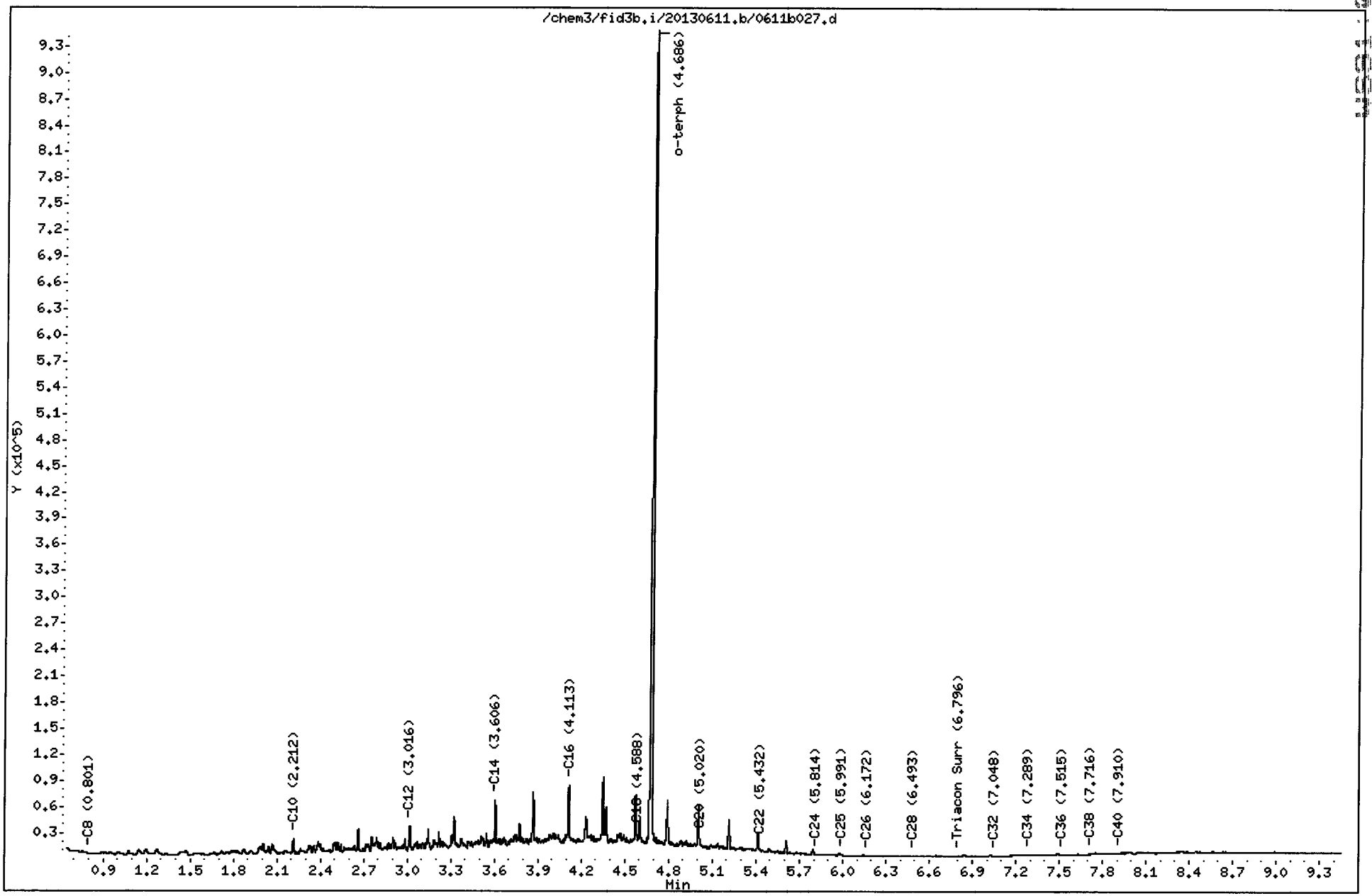
Data File: /chem3/fid3b.i/20130611.b/0611b027.d
Date : 11-JUN-2013 17:10
Client ID:
Sample Info: DIESEL#3

Column phase: RTX-1

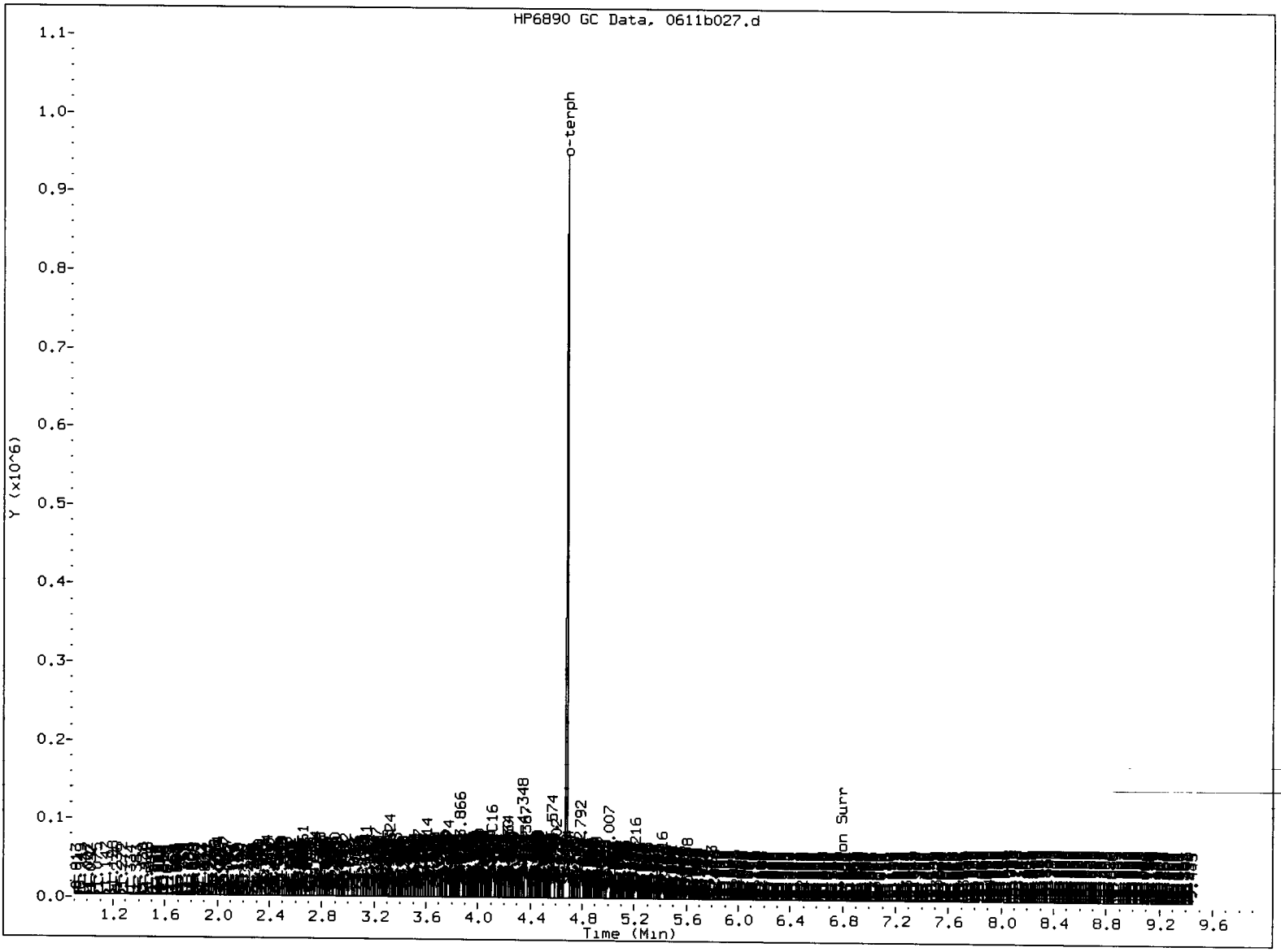
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

JW 6/12/13



FID:3B-2C/RTX-1 DIESEL#3 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 6/12/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid3b.i/20130611.b/0611b028.d
Method: /chem3/fid3b.i/20130611.b/ftphfid3b.m
Instrument: fid3b.i
Operator: JW
Report Date: 06/12/2013
Macro: FID:3B052113

ARI ID: MOIL#3
Client ID:
Injection: 11-JUN-2013 17:28
Dilution Factor: 1

FID:3B RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	39475	3
C8	0.802	0.049	2871	570	WATPHD	(C12-C24)	477201	46.07
C10	2.212	0.002	713	574	WATPHM	(C24-C38)	5140280	520.65
C12	3.015	-0.003	126	69	AK102	(C10-C25)	606940	49.12
C14	3.609	0.000	144	58	AK103	(C25-C36)	4497587	632.71 M
C16	4.113	-0.006	202	163				
C18	4.573	-0.009	467	519				
C20	5.021	0.002	1270	477				
C22	5.427	-0.001	6146	1738	MSPIRIT	(Tol-C12)	39475	2.87
C24	5.811	0.001	22698	8288				
C25	5.988	-0.003	31753	20087				
C26	6.177	0.001	35551	9046				
C28	6.491	-0.005	47875	22213				
C32	7.047	-0.003	56239	13733				
C34	7.290	0.002	59915	17922				
Filter Peak	----							
C36	7.506	-0.003	53805	12297				
o-terph	4.694	0.003	508	150	JET-A	(C10-C18)	26378	2.44
Triacon Surr	6.788	-0.010	842585	705588				

Range Times: NW Diesel(3.068 - 5.860) NW Gas(0.609 - 3.068) NW M.Oil(5.860 - 7.763)
AK102(2.160 - 5.941) AK103(5.941 - 7.559) Jet A(2.160 - 4.632)

Surrogate	Area	Amount	%Rec
o-Terphenyl	150	0.0	0.0
Triacontane	705588	54.1	120.2

JW 6/12/13

Analyte	RF	Curve Date
o-Terph Surr	13449.7	10-MAY-2013
Triacon Surr	13047.7	09-MAY-2013
Gas	13506.6	20-APR-2013
Diesel	10357.4	10-MAY-2013
Motor Oil	9872.9	09-MAY-2013
AK102	12356.7	10-MAY-2013
AK103	7108.5	09-MAY-2013
JetA	10824.2	09-MAY-2013
Min Spirit	13738.6	21-MAY-2013

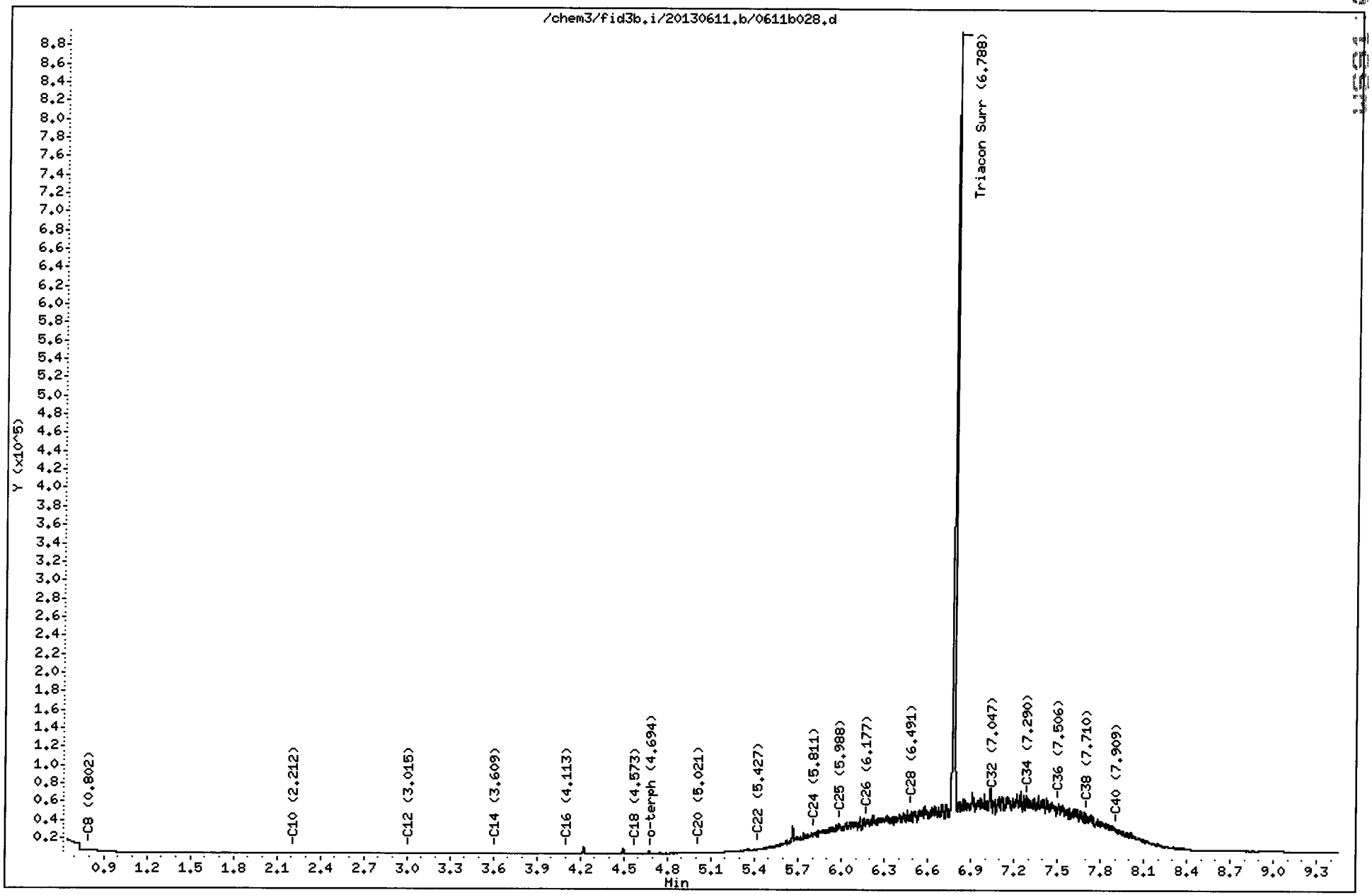
Data File: /chem3/fid3b.i/20130611.b/0611b028.d
Date : 11-JUN-2013 17:28
Client ID:
Sample Info: MOIL#3

Column phase: RTX-1

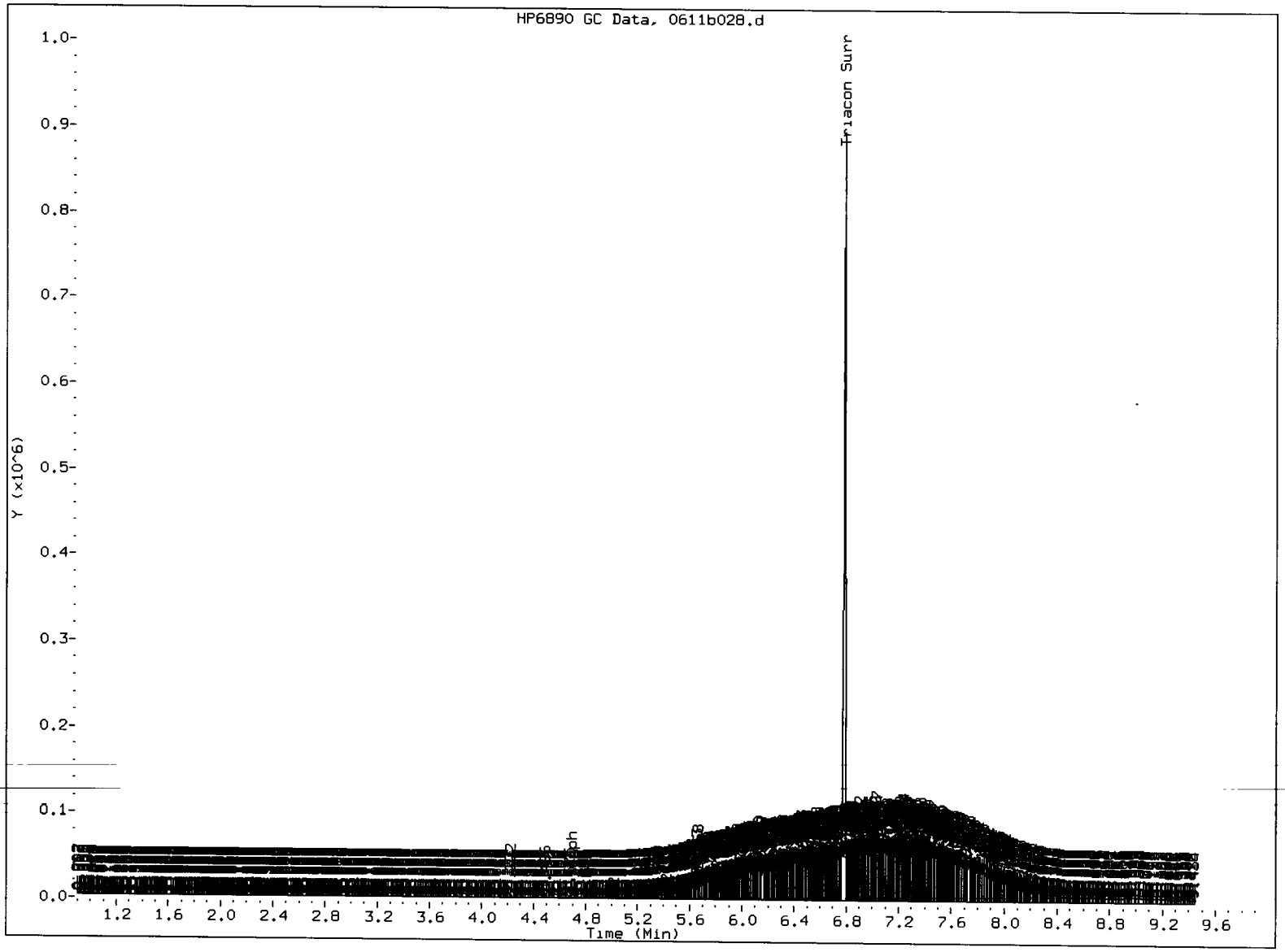
Instrument: fid3b.i

Operator: JW
Column diameter: 0.25

JW 6/12/13



FID:3B-2C/RTX-1 MOIL#3 FID:3B SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 6/12/12

TPHG Raw Data
Preparation Log

ARI Job ID: WS91

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
		6/13/13		PC

	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 Split Volume (µL)	
1	WT83A	1		X	DE695	31.76	28.304	3.456	5	900	
2	B	1		X	〃	31.68	28.200	3.48	〃	〃	
3	W591A	4		X	〃	36.14	28.121	8.019	〃	〃	
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
					Balance ID:	4005004 PT/2					

TPHG Raw Data
Initial Calibration Notes and Raw Data

ARI Job ID: WS91

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 DHH 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? 0.25 level on FID side for o-xylene	(YES) / NO DHH 5/22
Minimum Response Factors Met	(YES) / NO	Purge Volume (mL)	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: DHH **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: BBTX 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	0522a013.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	WQ48F	A2-F5-S-6	2	Soil	1
17	1641	0522a017.d	WQ46G	A2-F7-S-6	2		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	WQ46N	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	WQ48F	GTSP-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	GTSP-8-GW-Q2-7-17	2	≤2	1 Rerun
38	0255	0522a038.d	WQ49B	GTSP-38-GW-Q2-7-17	2		1
39	0324	0522a039.d	WQ49C	GTSP-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

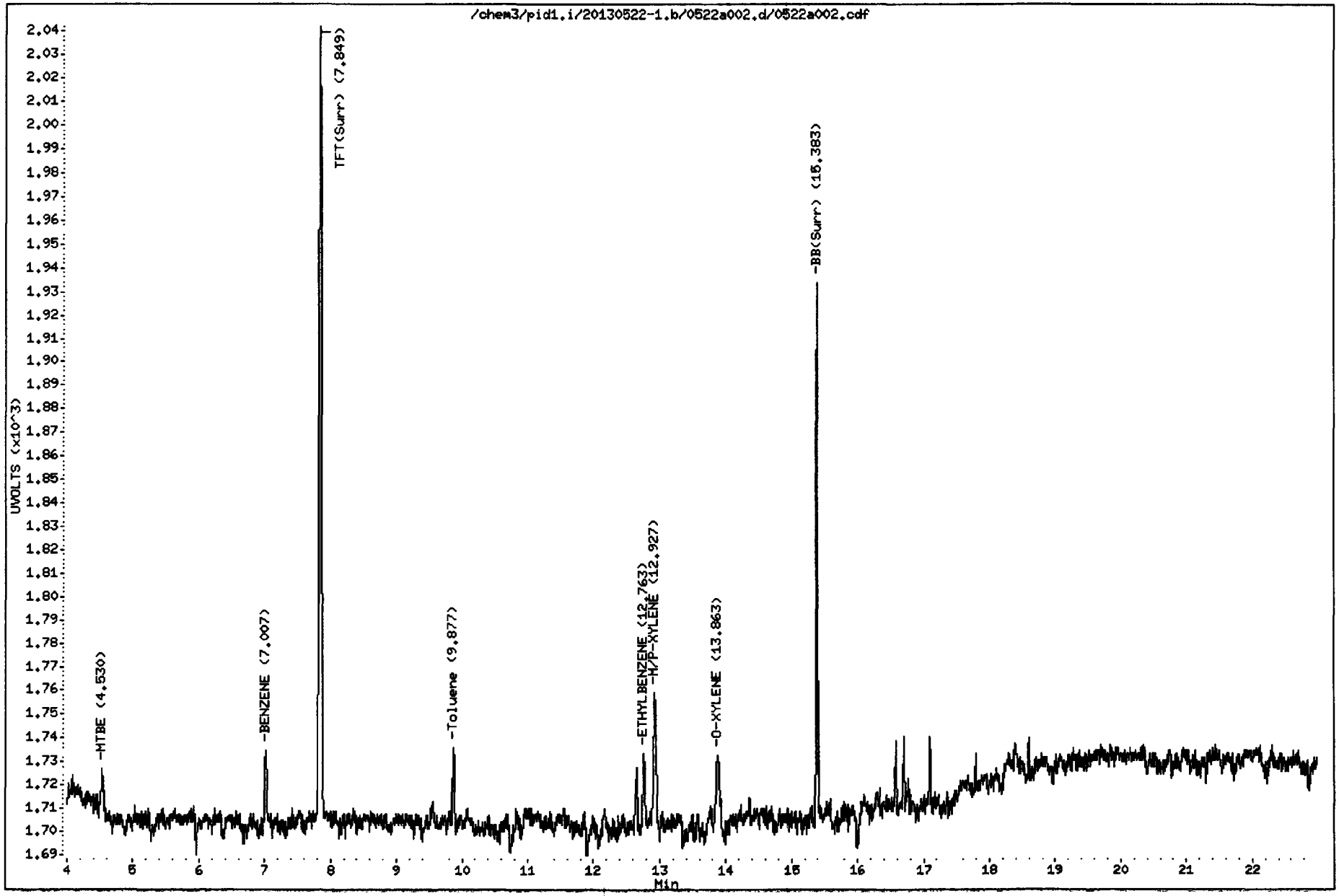
Sample Info: BCAL0.25

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

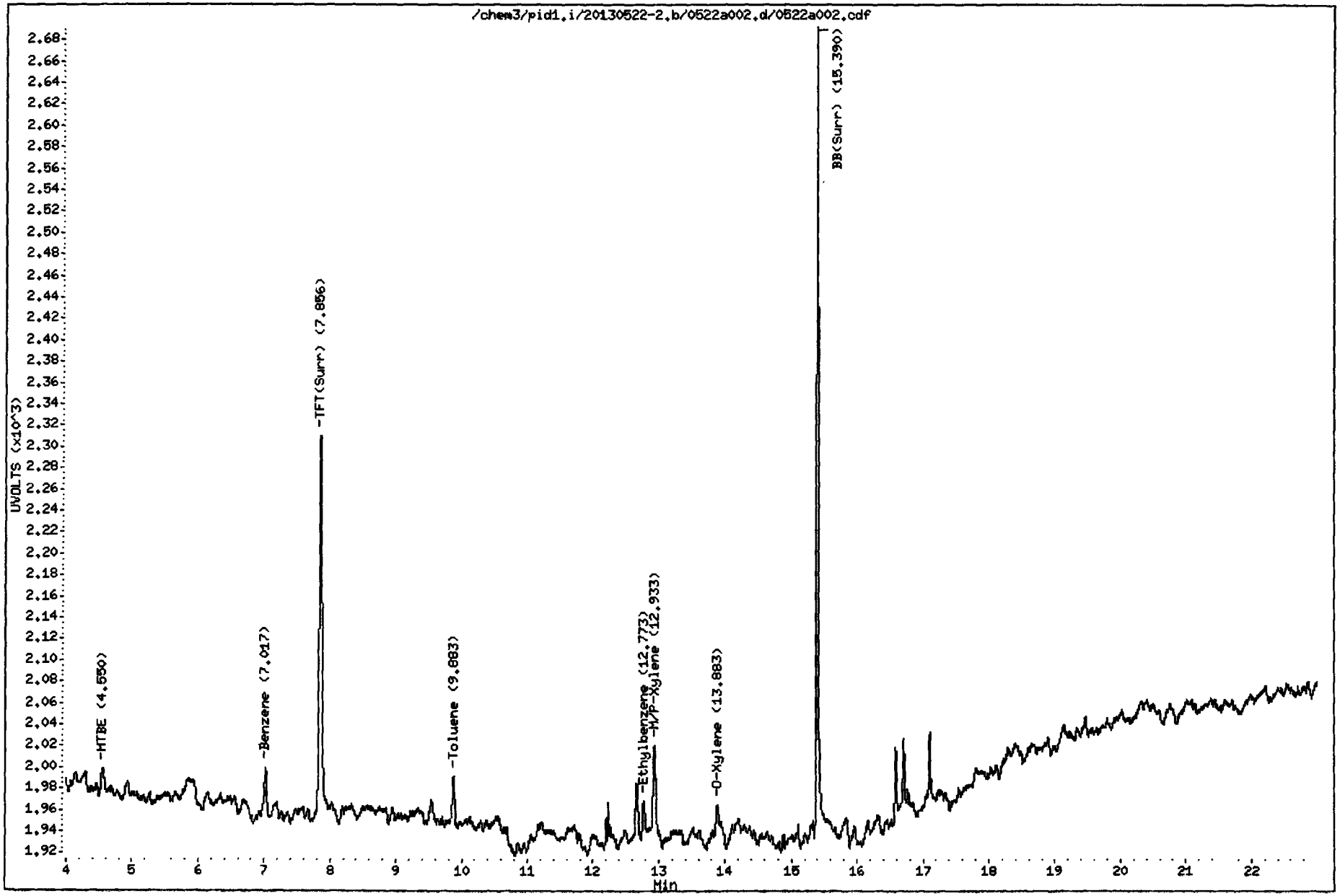
Sample Info: BCAL0.25

Column phase: RTX 502-2 PID

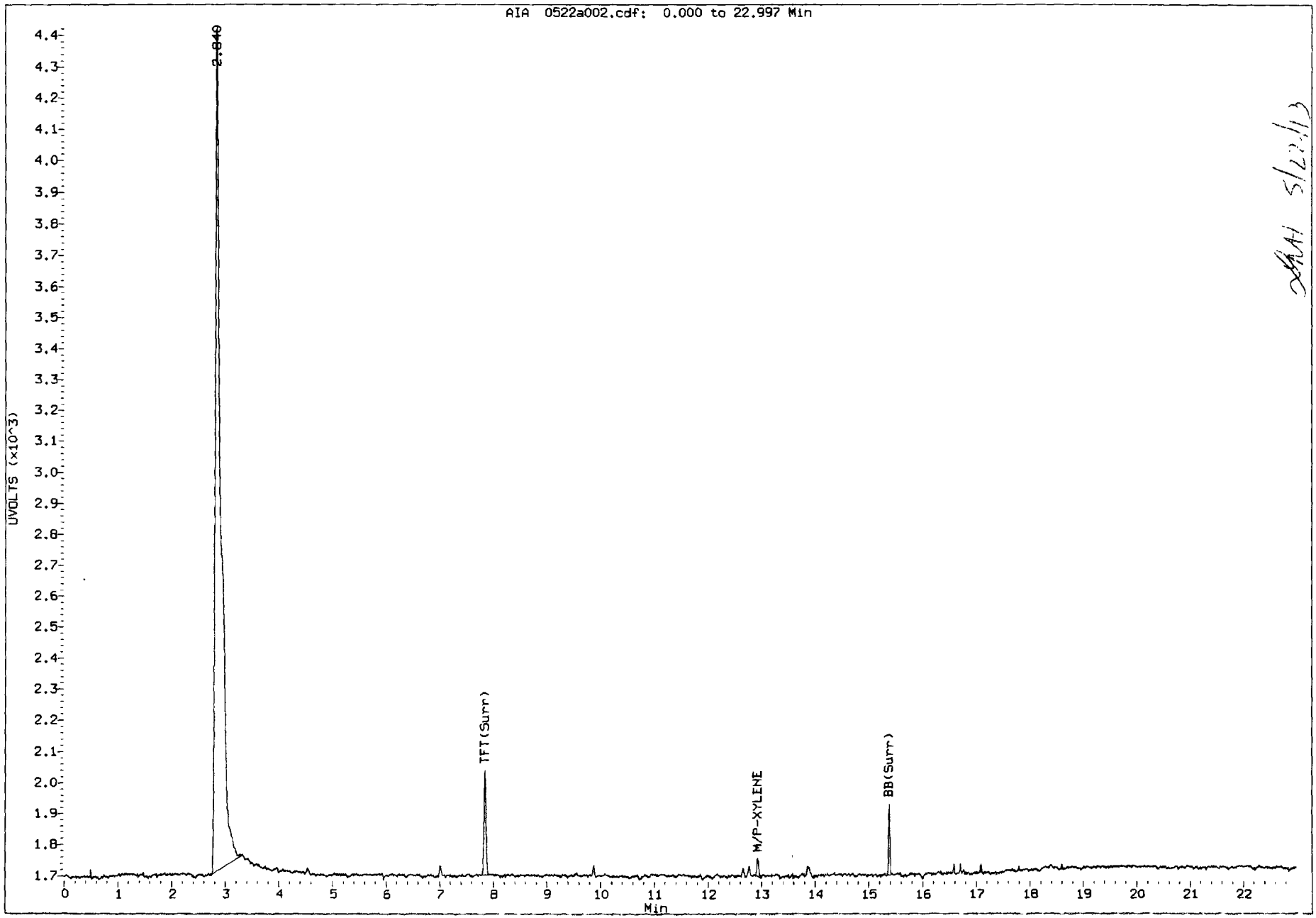
Instrument: pid1.i

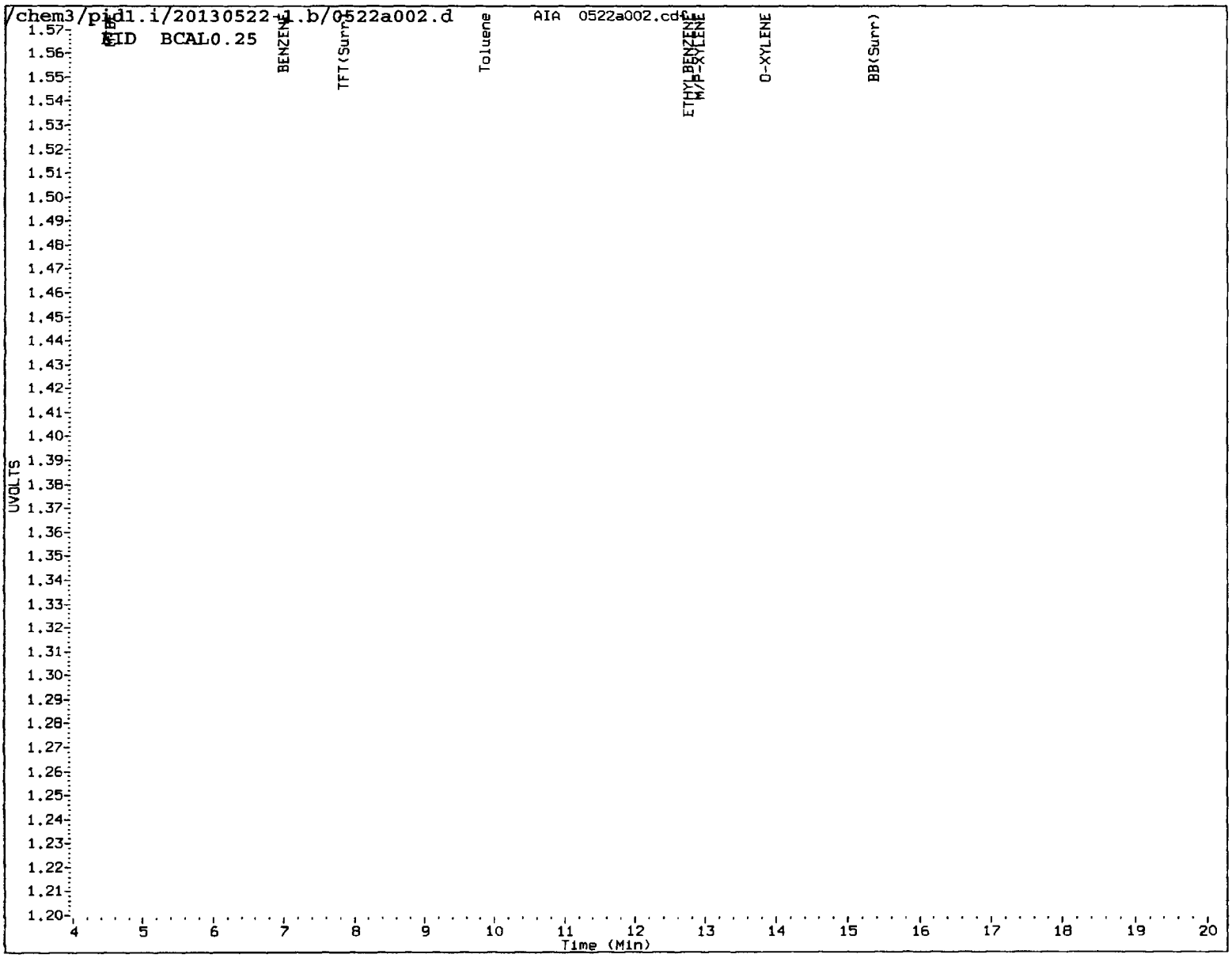
Operator: LH

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





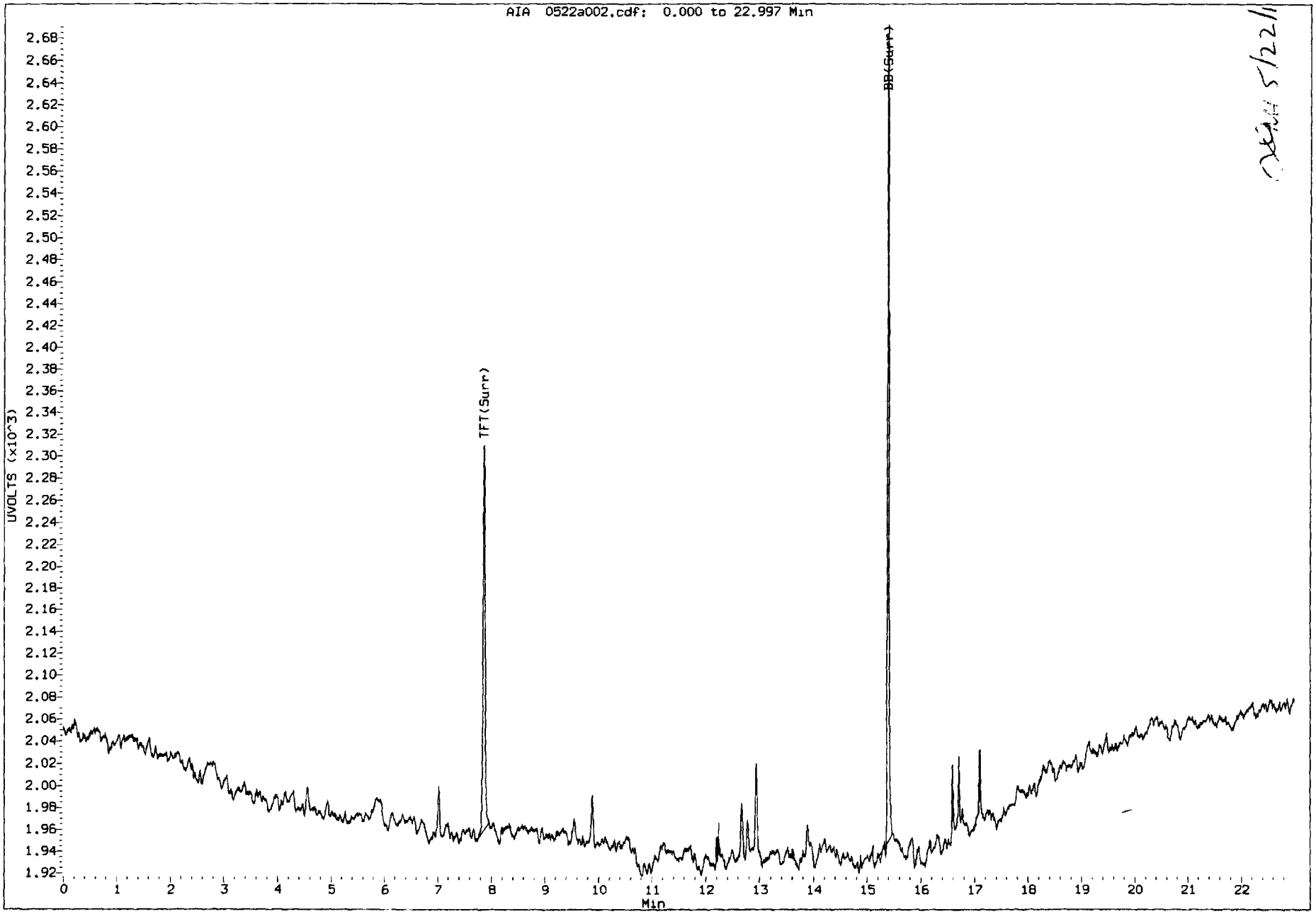
MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

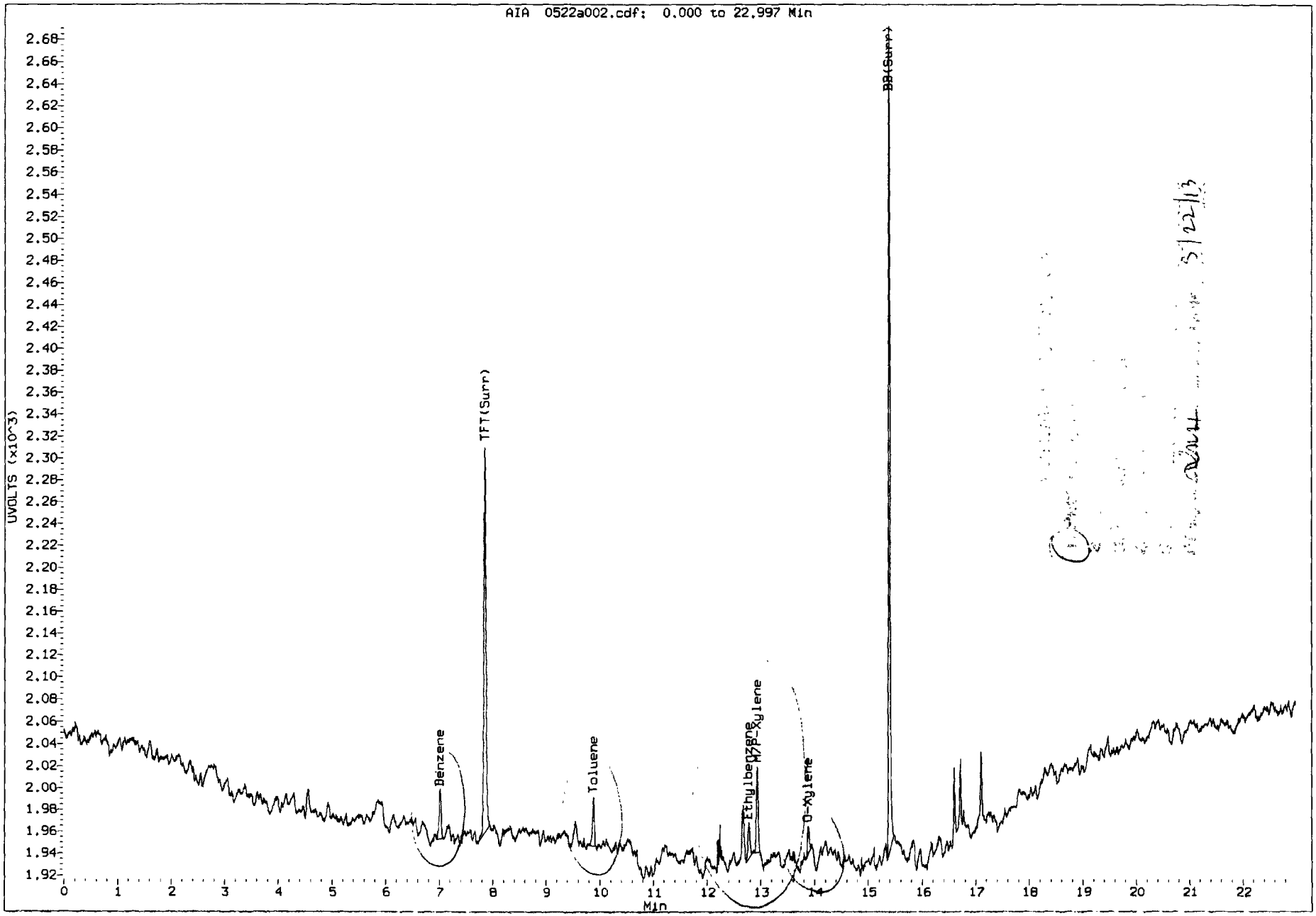
Analyst: [signature] **Date:** 5/22/13

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



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



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

						AMOUNTS	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CAL-AMT (ng/mL)	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

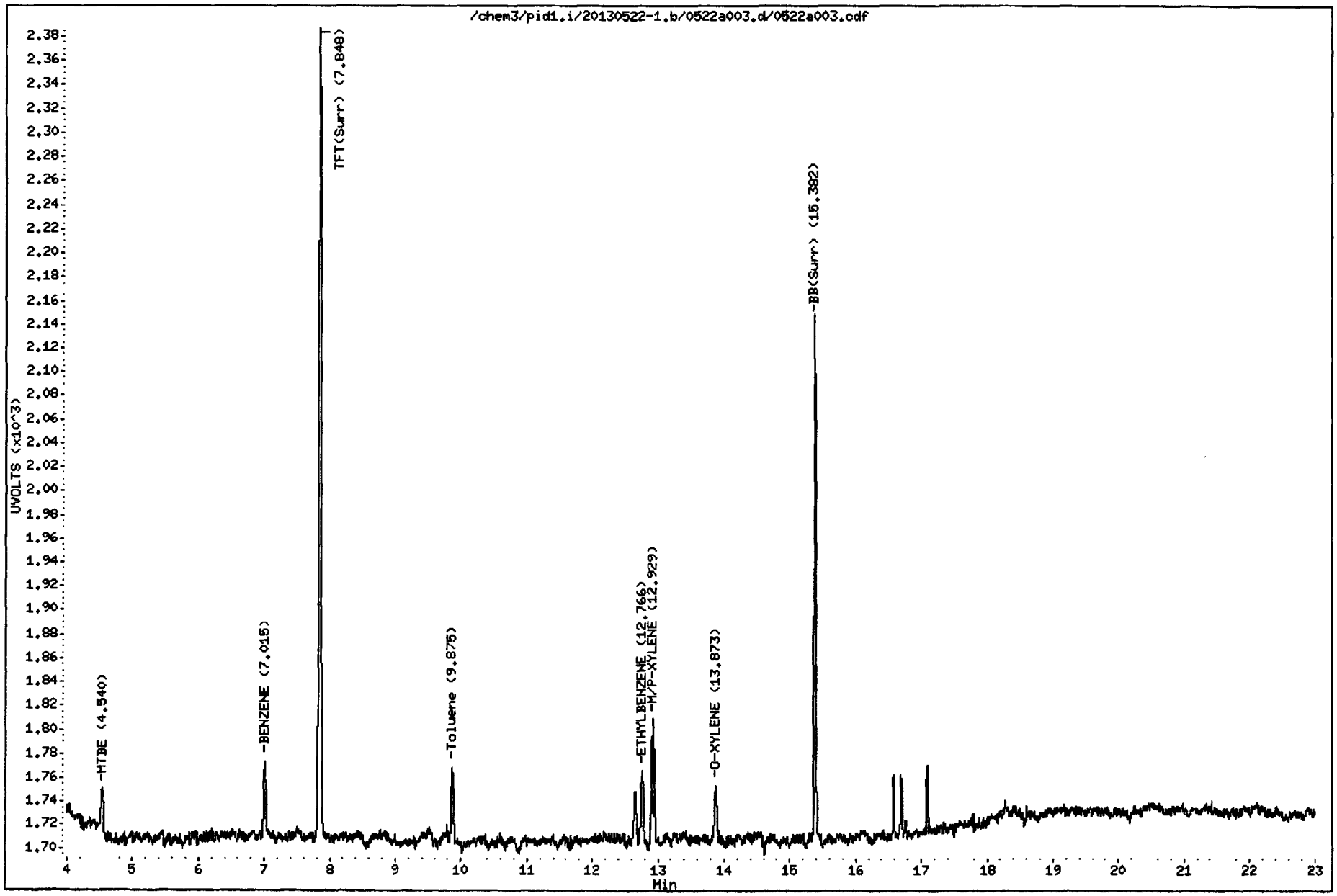
QC Flag Legend

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

Instrument: pid1.i
Operator: LH
Column diameter: 0.18

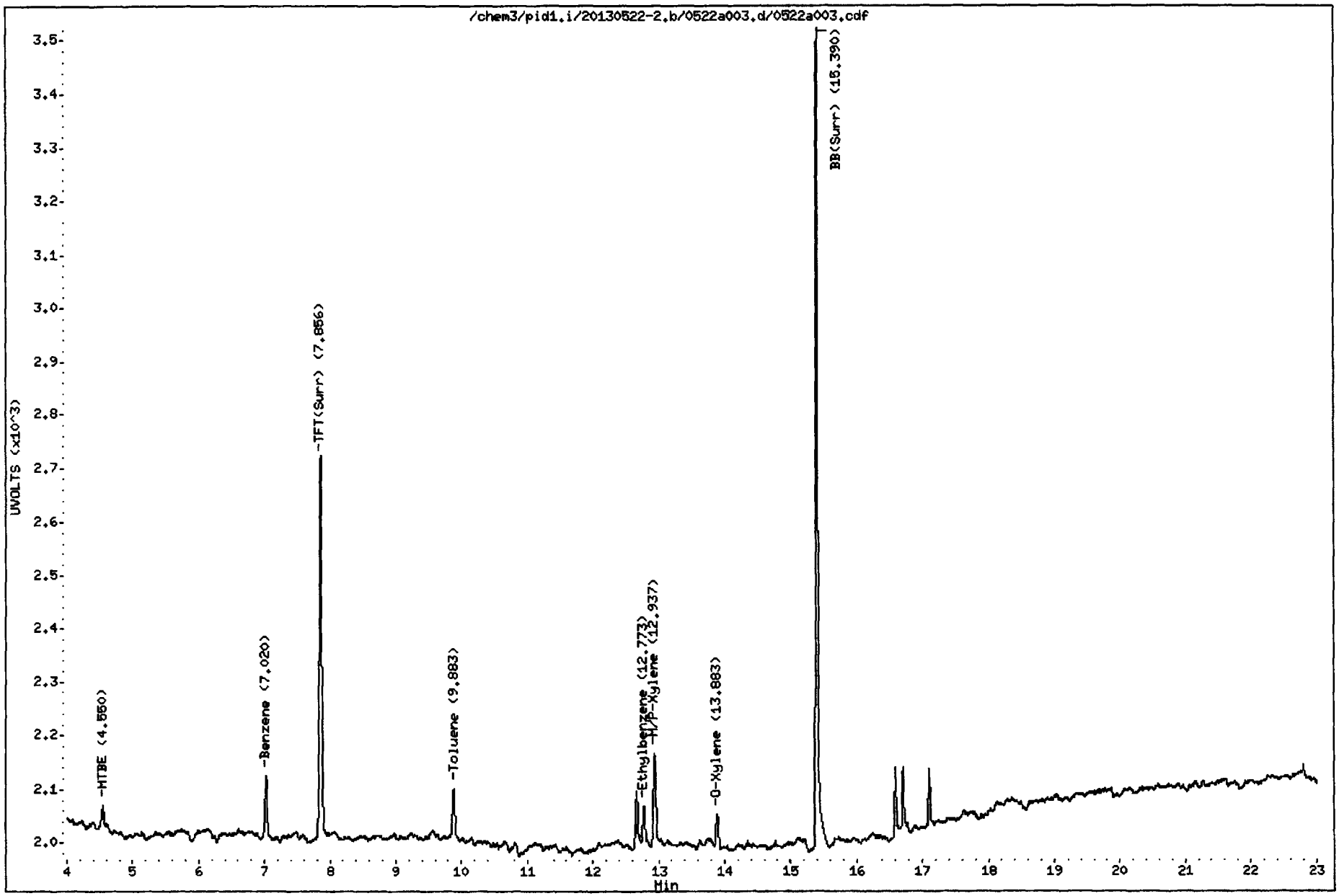
Column phase: RTX 502-2 FID



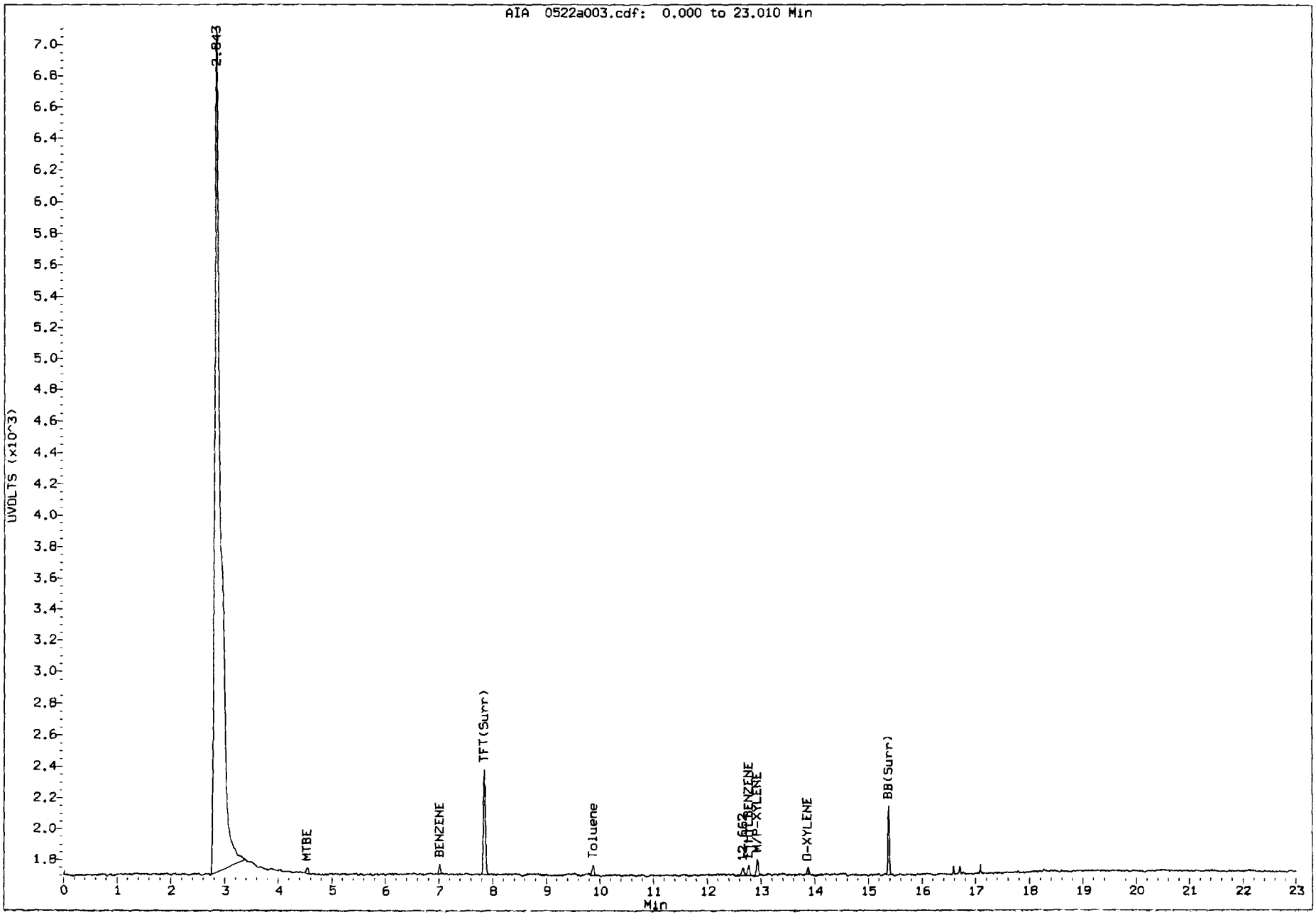
Data File: /chem3/pid1.i/20130522-2.b/0522a003.d
Date : 22-MAY-2013 09:30
Client ID: BCAL0.5
Sample Info: BCAL0.5

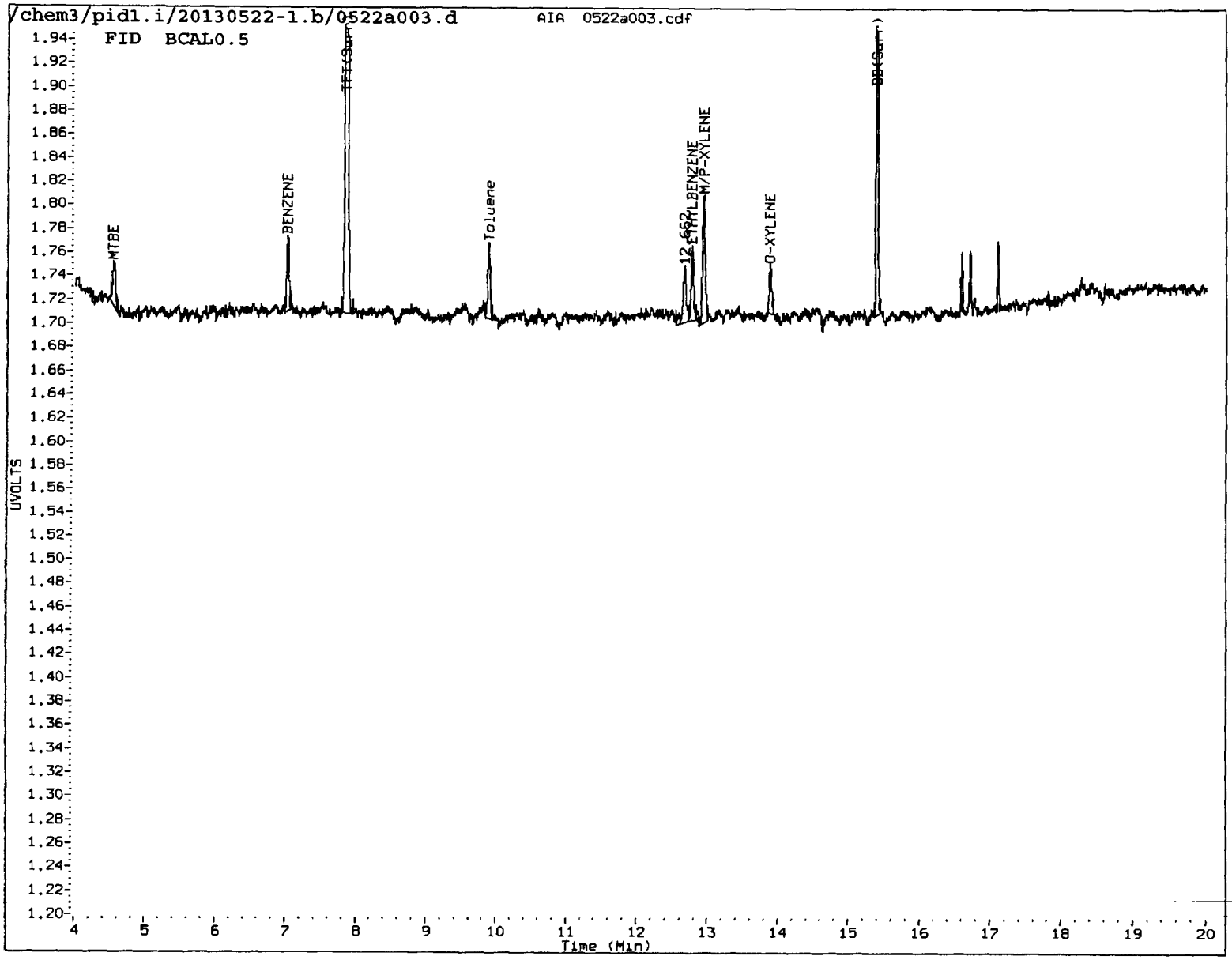
Instrument: pid1.i
Operator: LH
Column diameter: 0.18

Column phase: RTX 502-2 PID



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





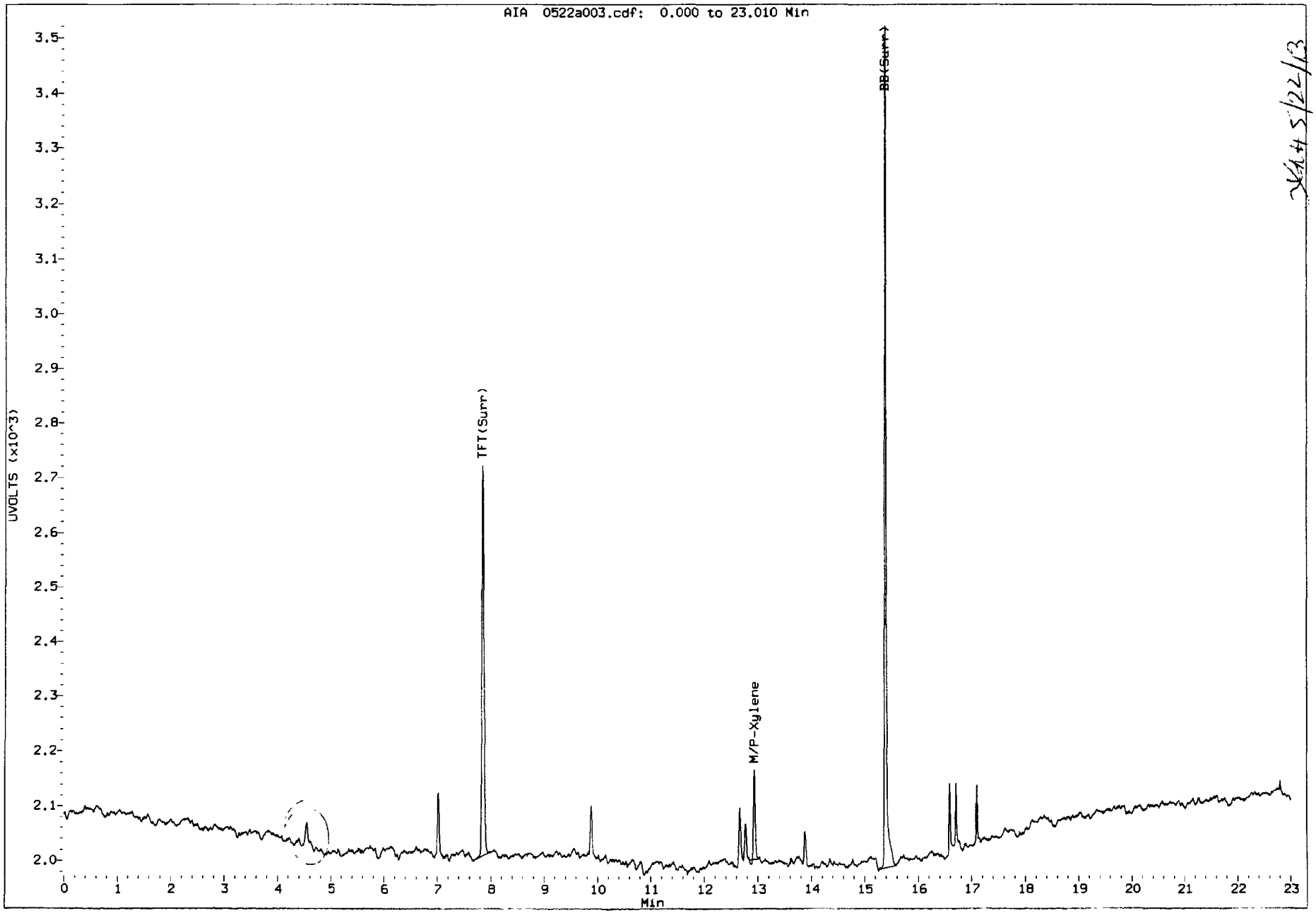
MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

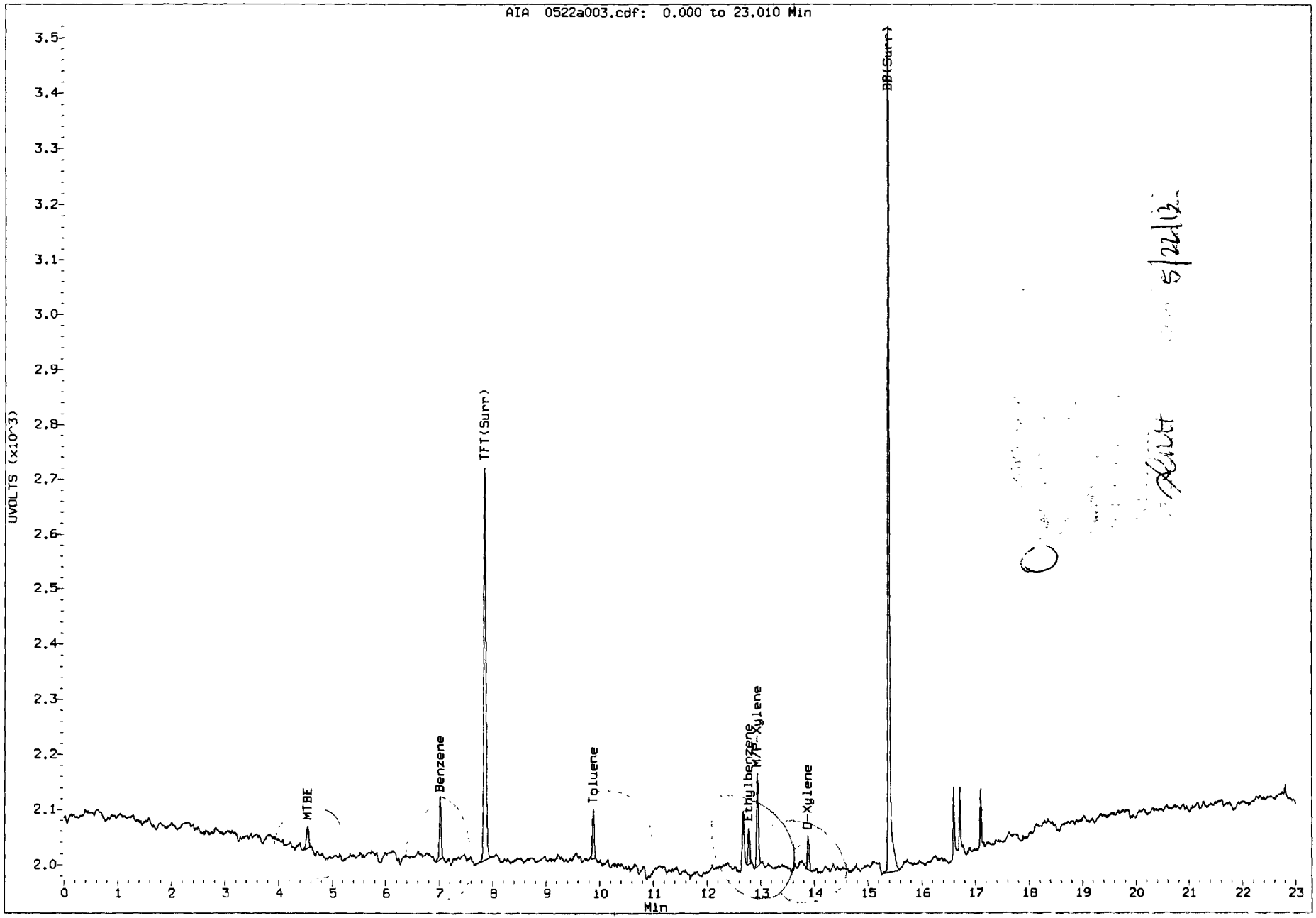
Analyst: _____ Date: 5/22/13

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



Analytical Resources Inc.
BETX/Gas Quantitation Report

2 [illegible] 5/22/13

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

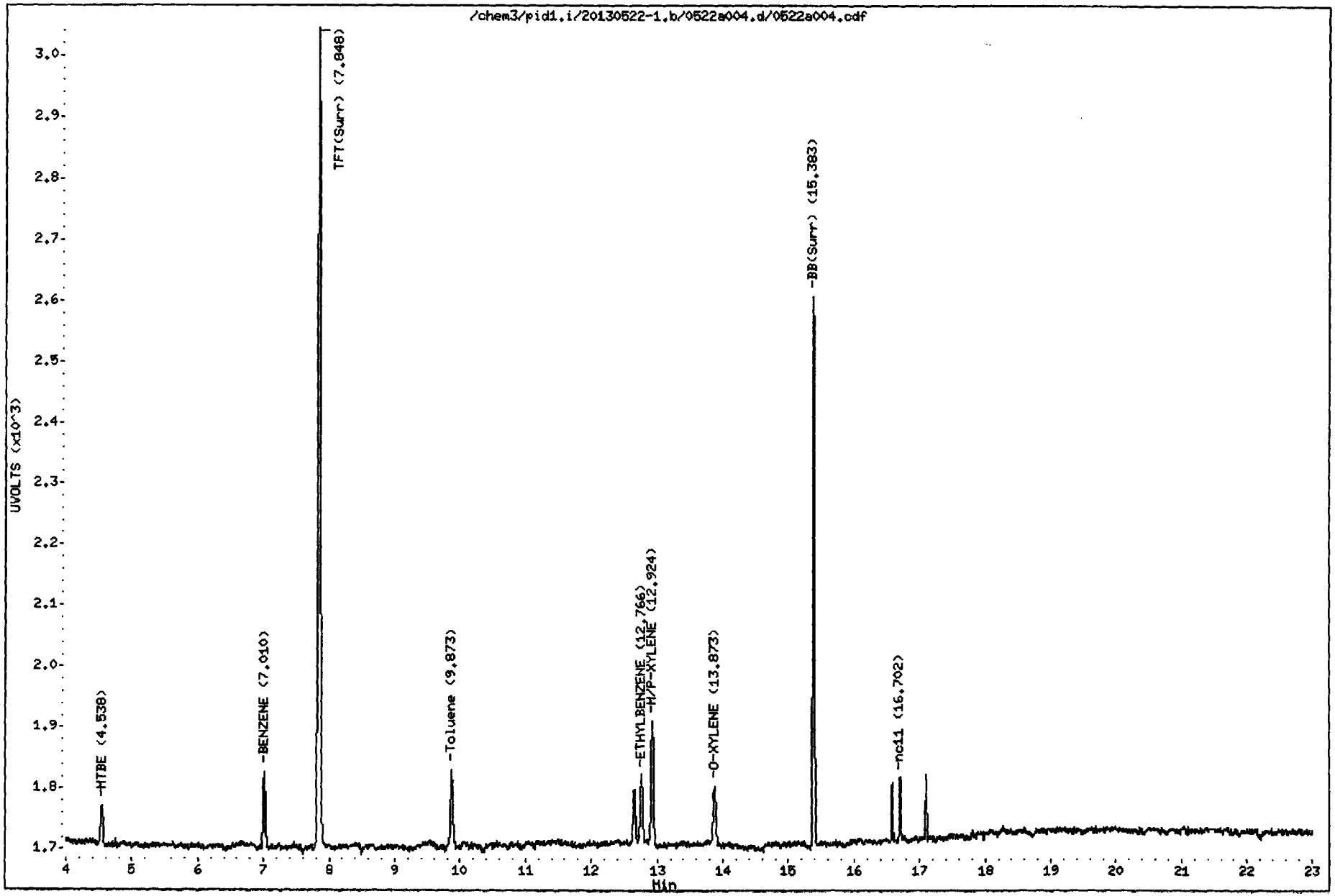
Sample Info: BCAL1

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

Page 1

Date : 22-MAY-2013 09:58

Client ID: BCAL1

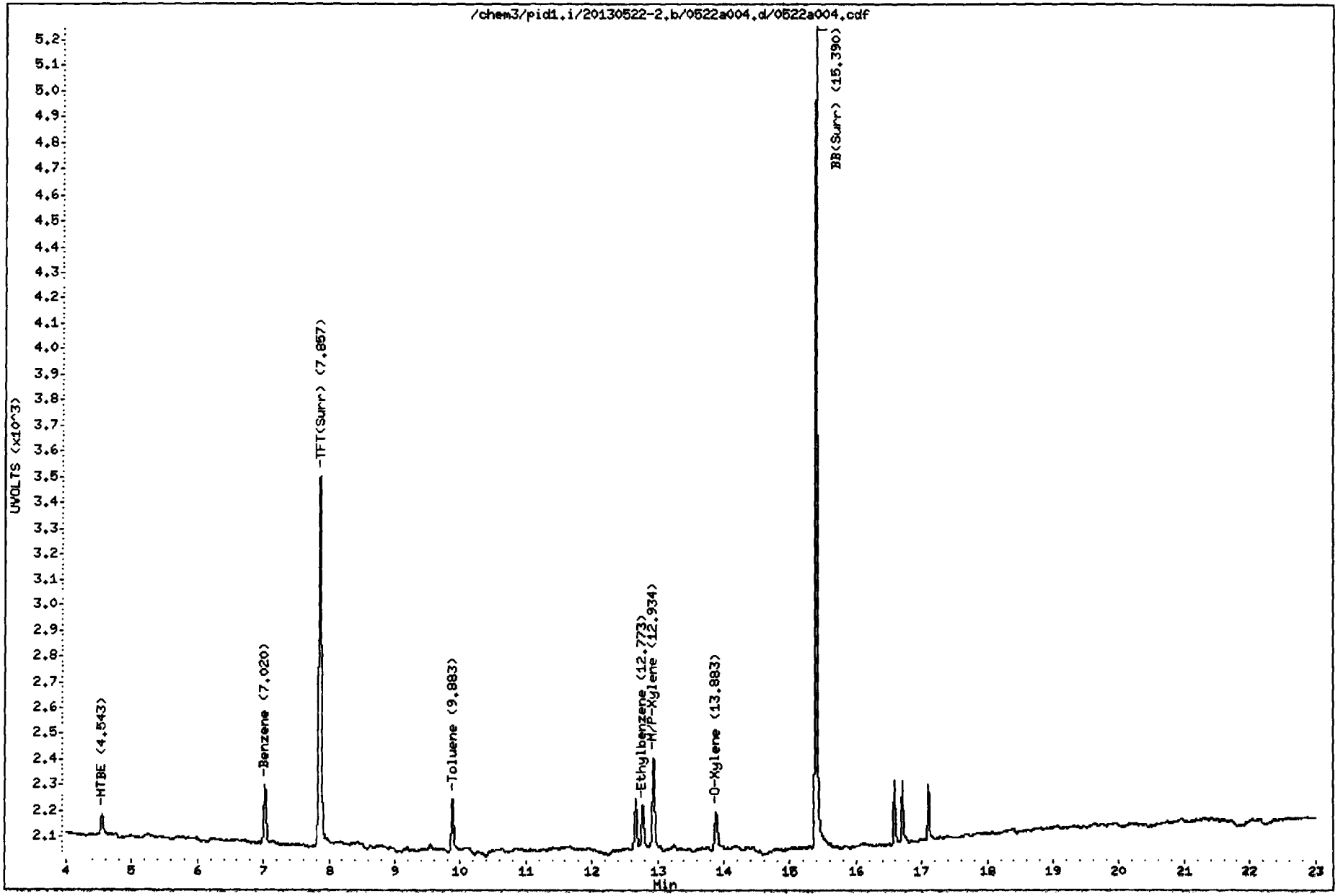
Instrument: pid1.i

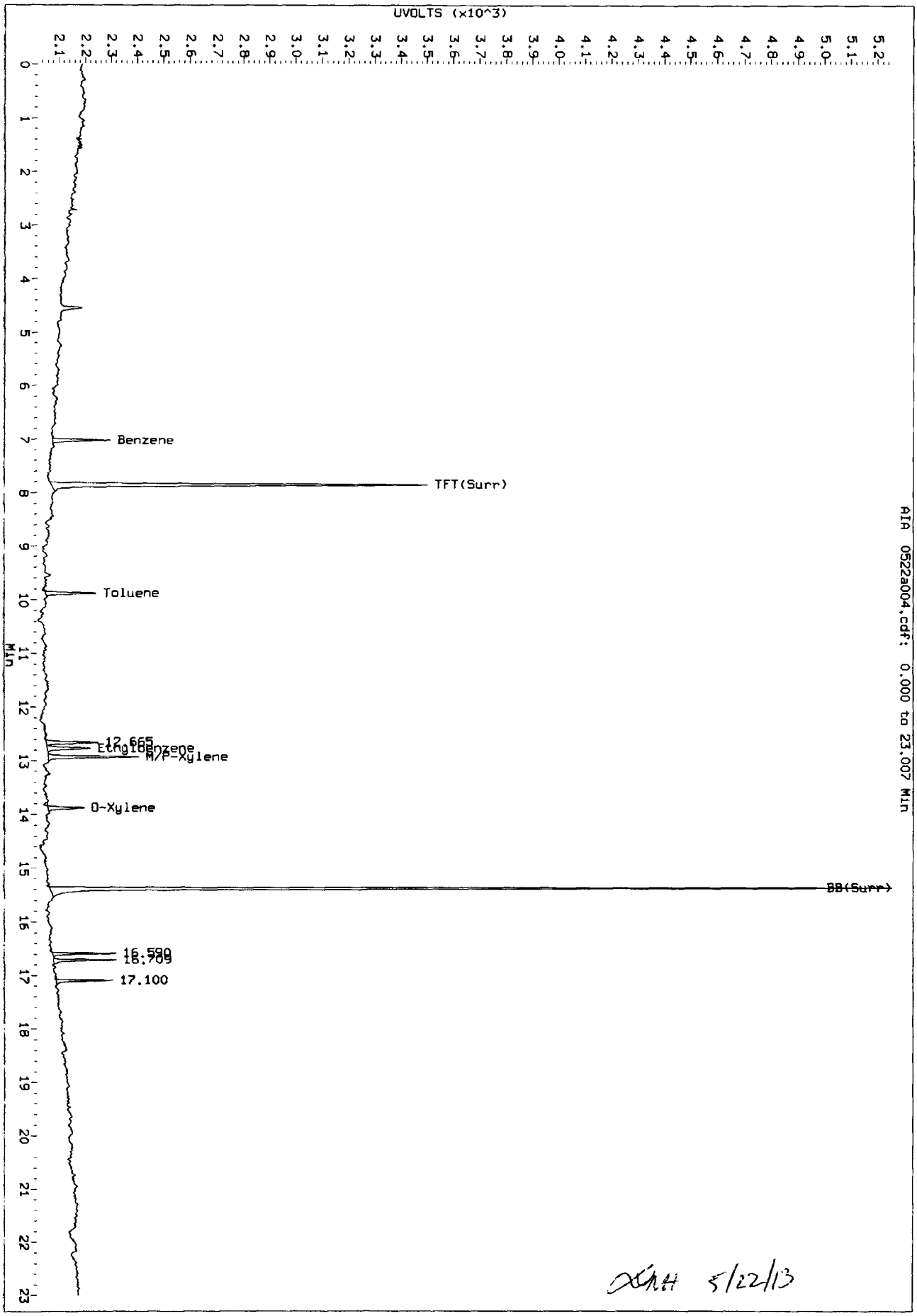
Sample Info: BCAL1

Operator: LH

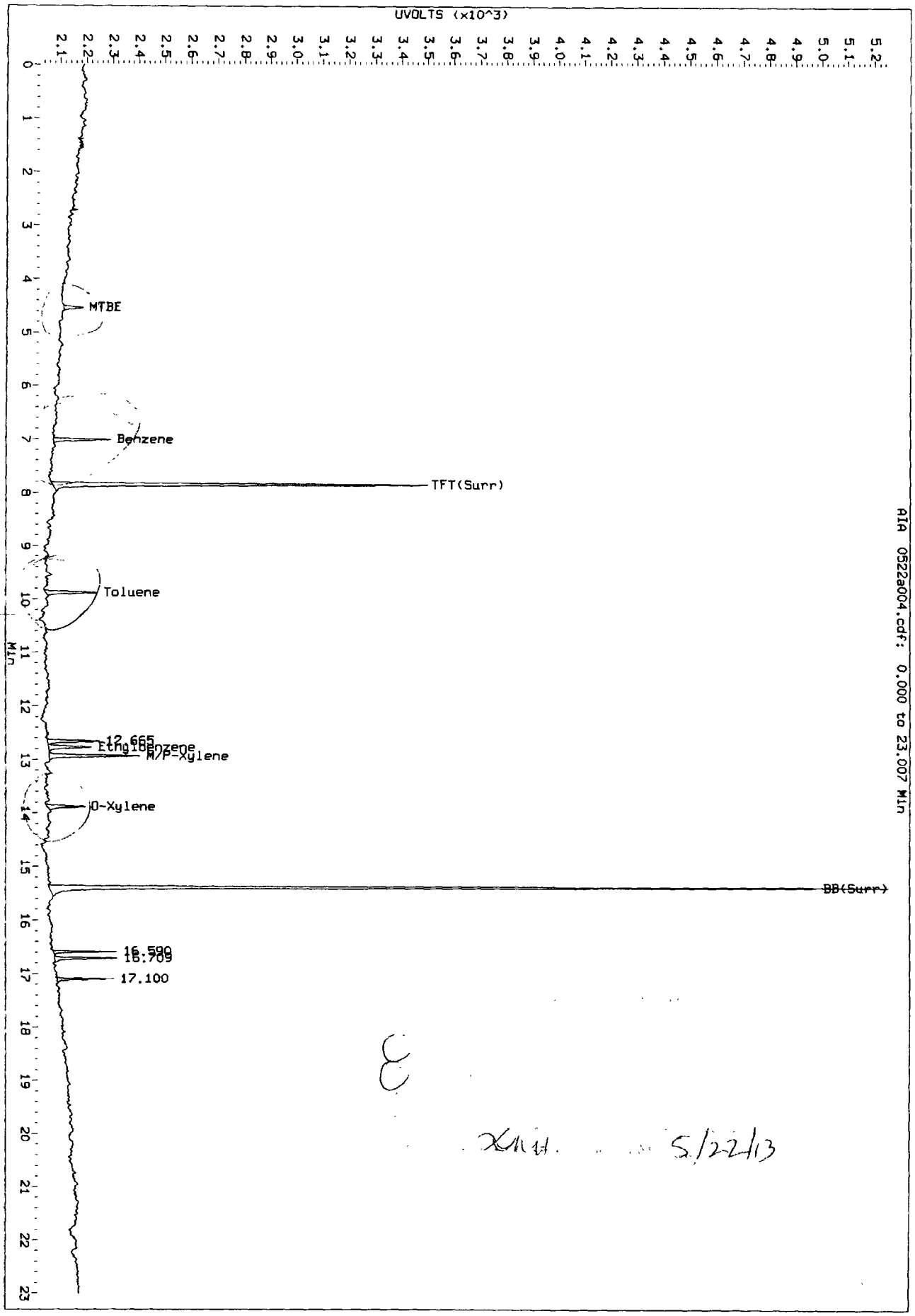
Column phase: RTX 502-2 PID

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
UVOLTS (x10^3)
Min
AIA 0522a004.cdf: 0.000 to 23.007 Min
Benzene
TFT(Surr)
Toluene
12.665
Ethylbenzene
M/P-Xylene
O-Xylene
BB(Surr)
16.590
16.709
17.100

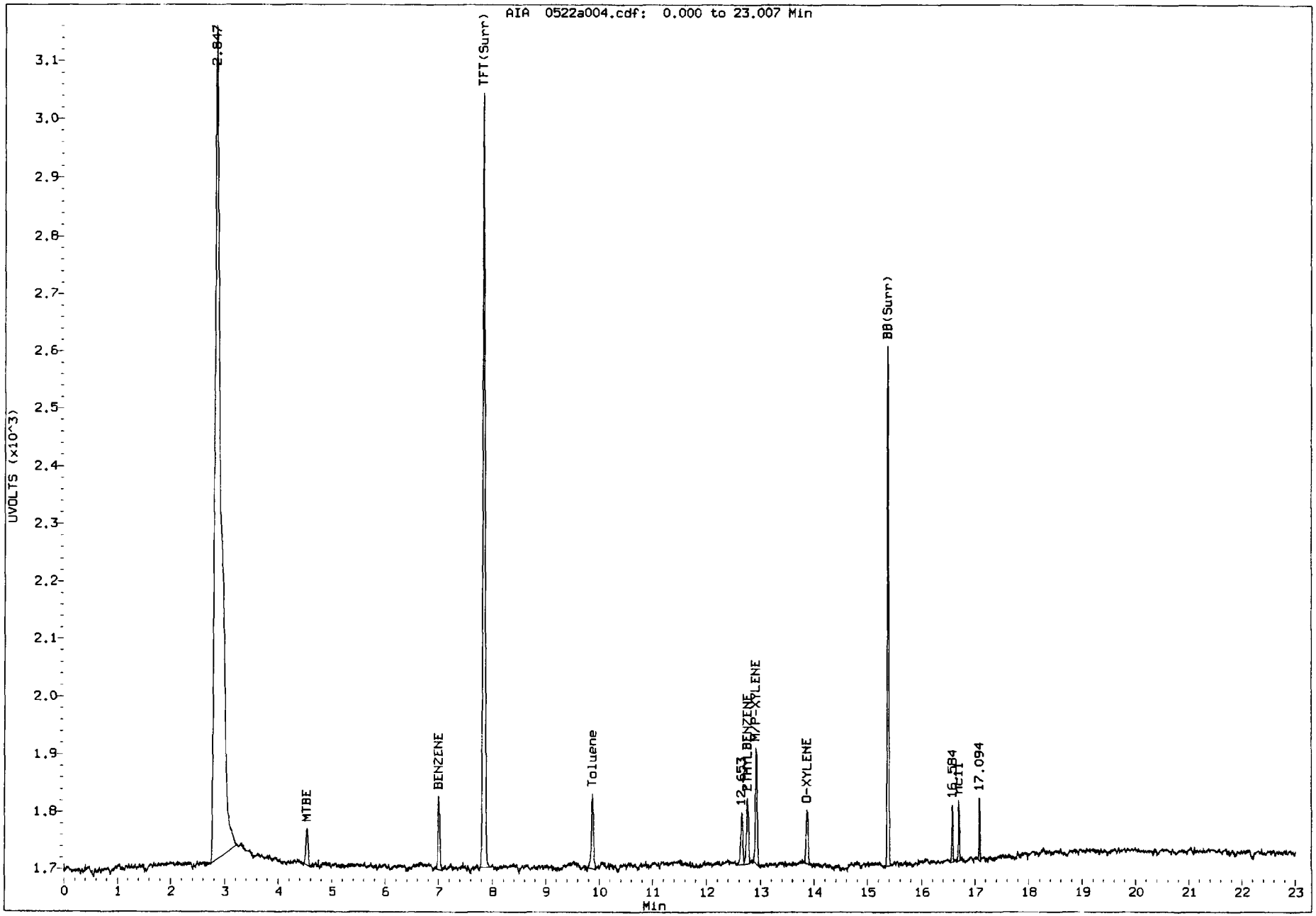
5/22/13

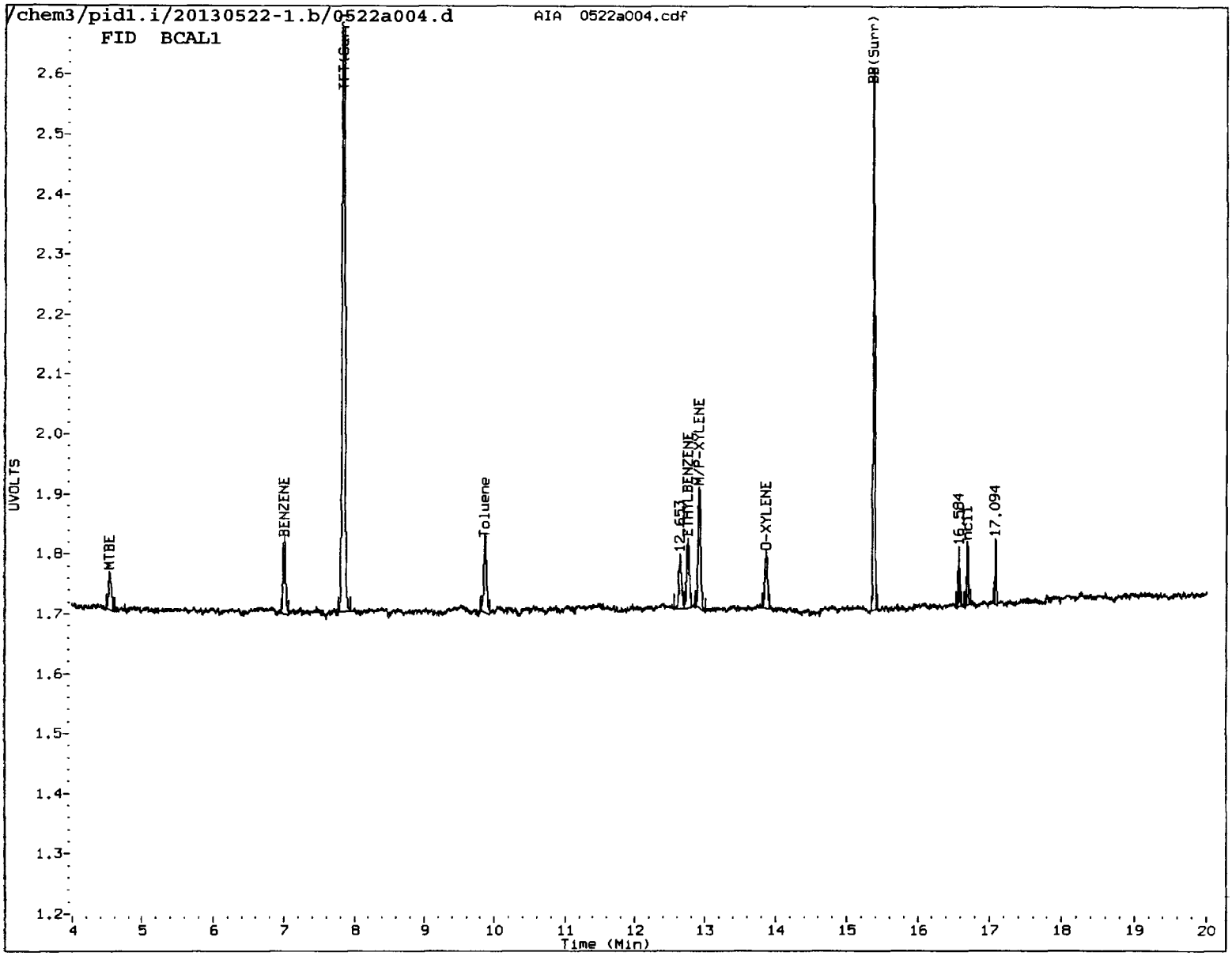

Data File: /chem3/pid1.1/20130522-2.b/0522a004.d/0522a004.cdf
Injection Date: 22-MAY-2013 09:58
Instrument: pid1.1
Client Sample ID: BCAL1
UVOLTS (x10^3)
MTBE
Benzene
TFT(Surr)
Toluene
12.665
Ethylbenzene
M/P-Xylene
O-Xylene
BB(Surr)
16.590
16.709
17.100
Min
AIA 0522a004.cdf: 0.000 to 23.007 Min

E

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

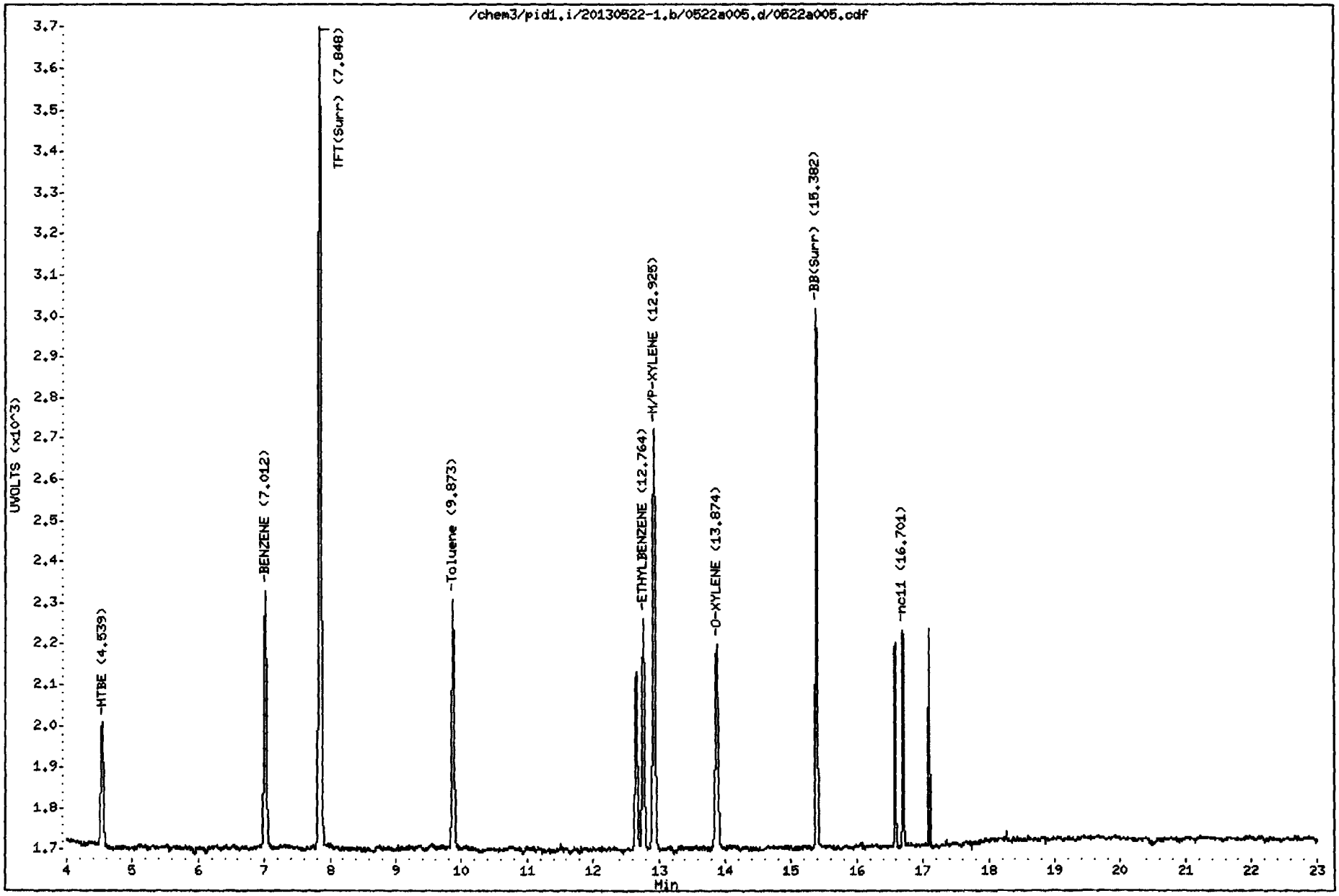
Sample Info: BCAL5

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

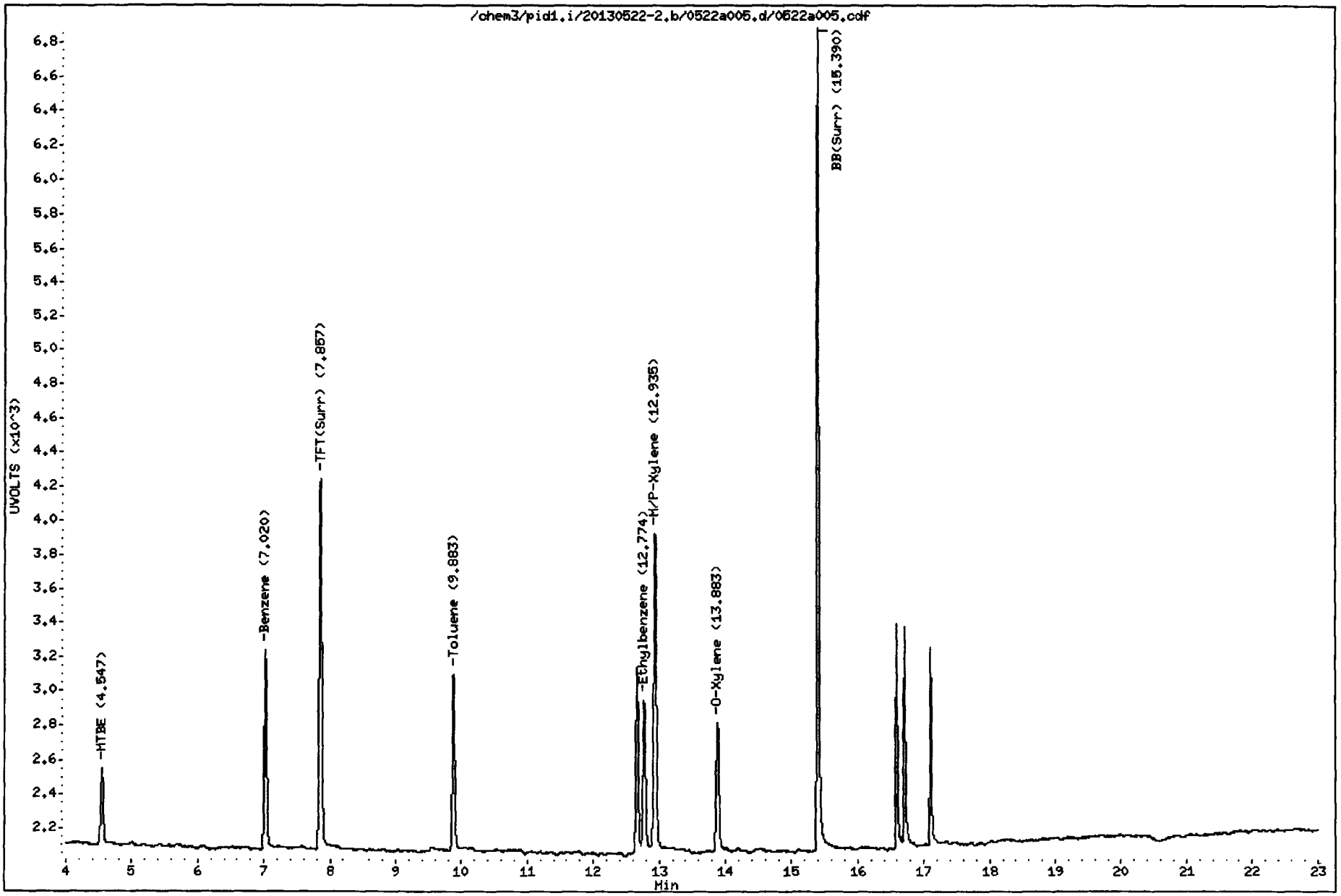
Sample Info: BCAL5

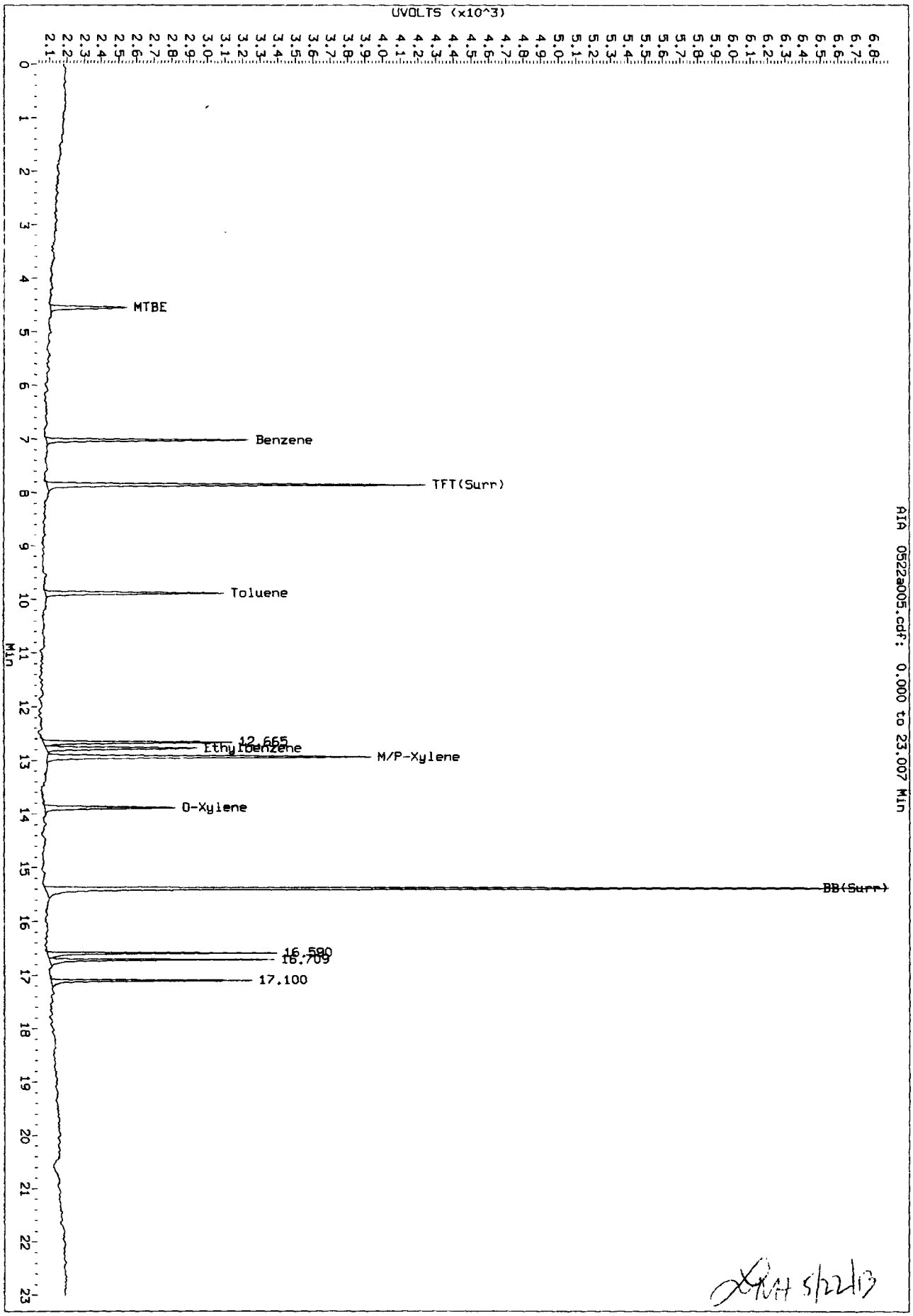
Column phase: RTX 502-2 PID

Instrument: pid1.i

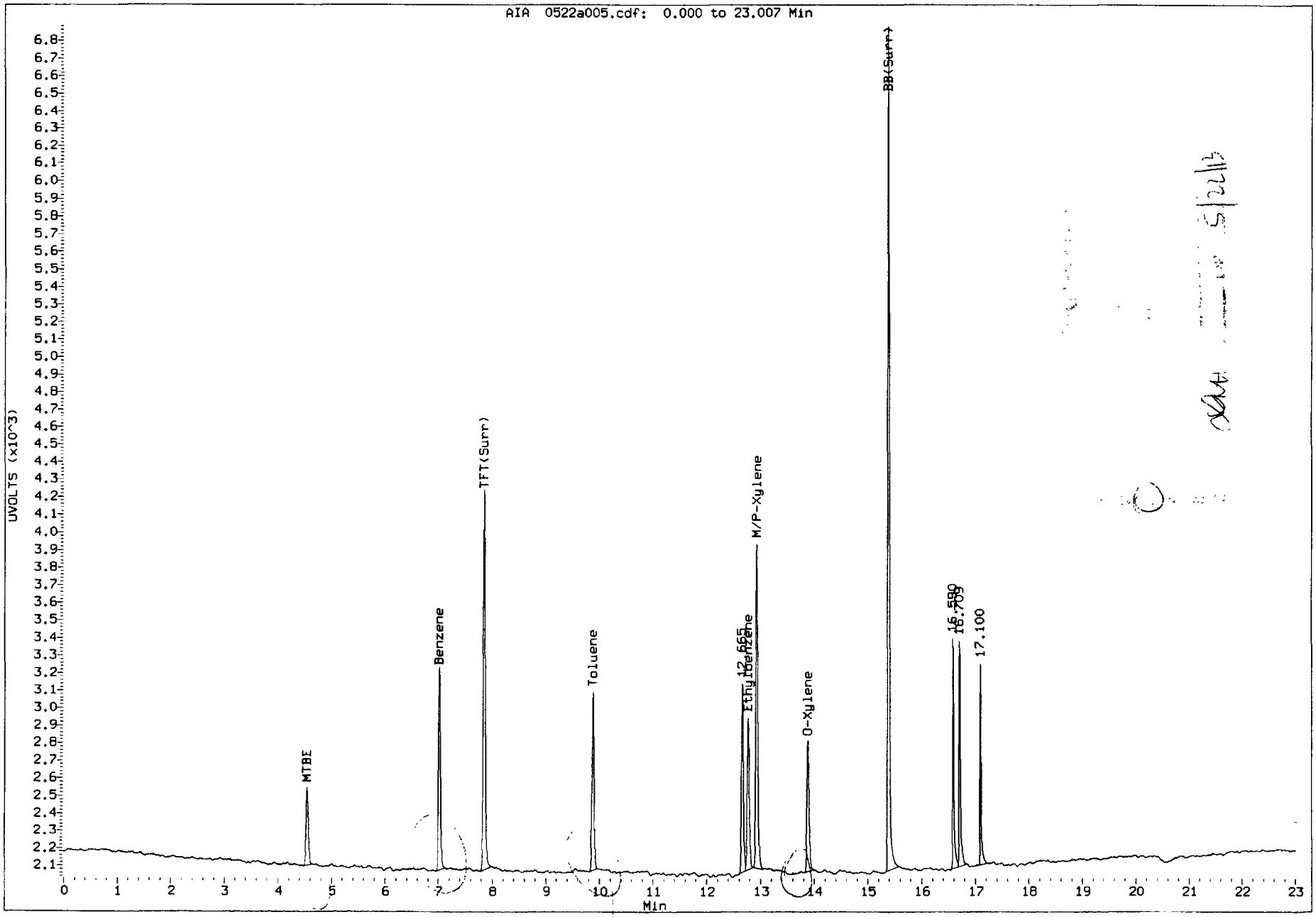
Operator: LH

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)
16.590
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)	AMOUNTS 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

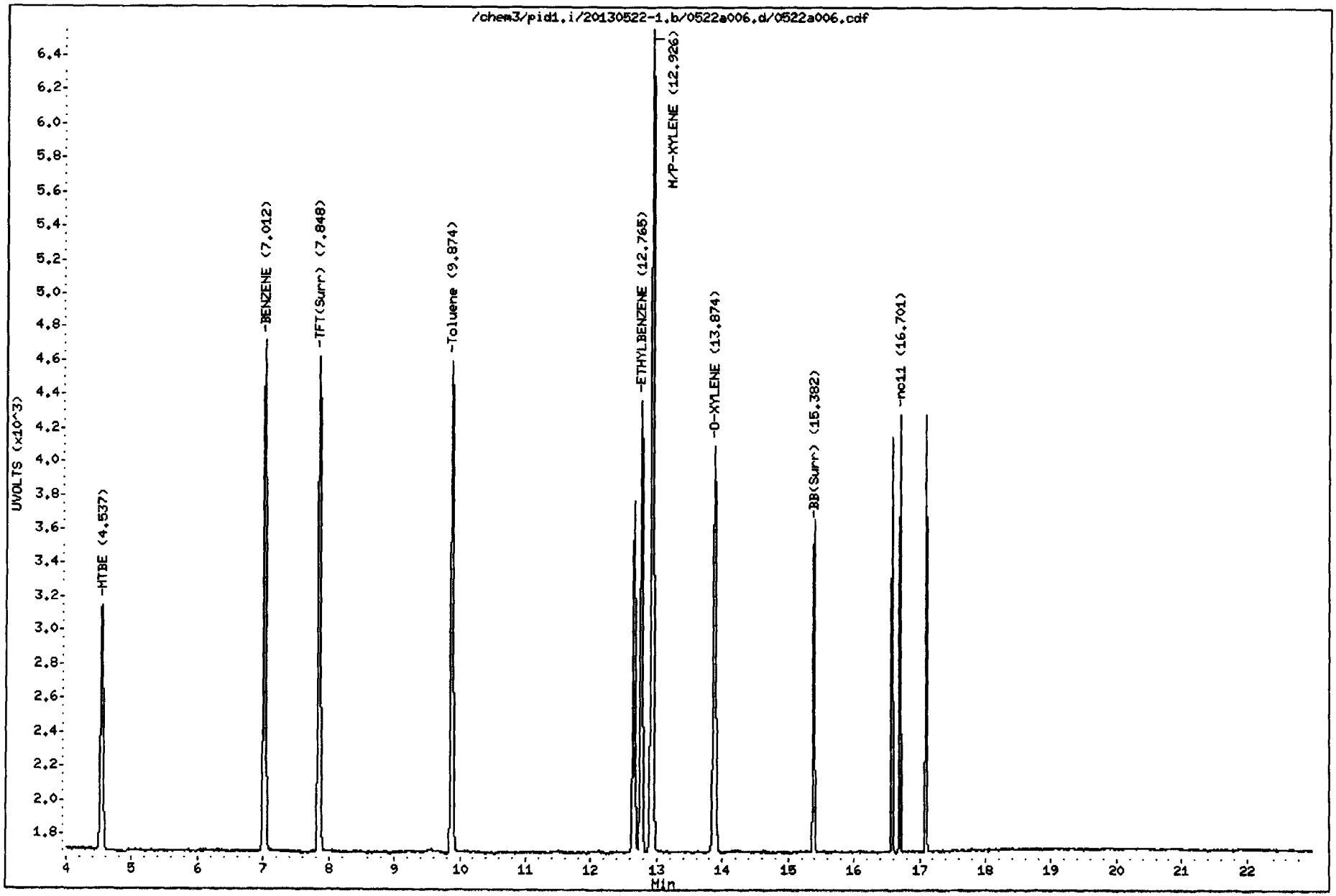
Sample Info: BCAL25

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

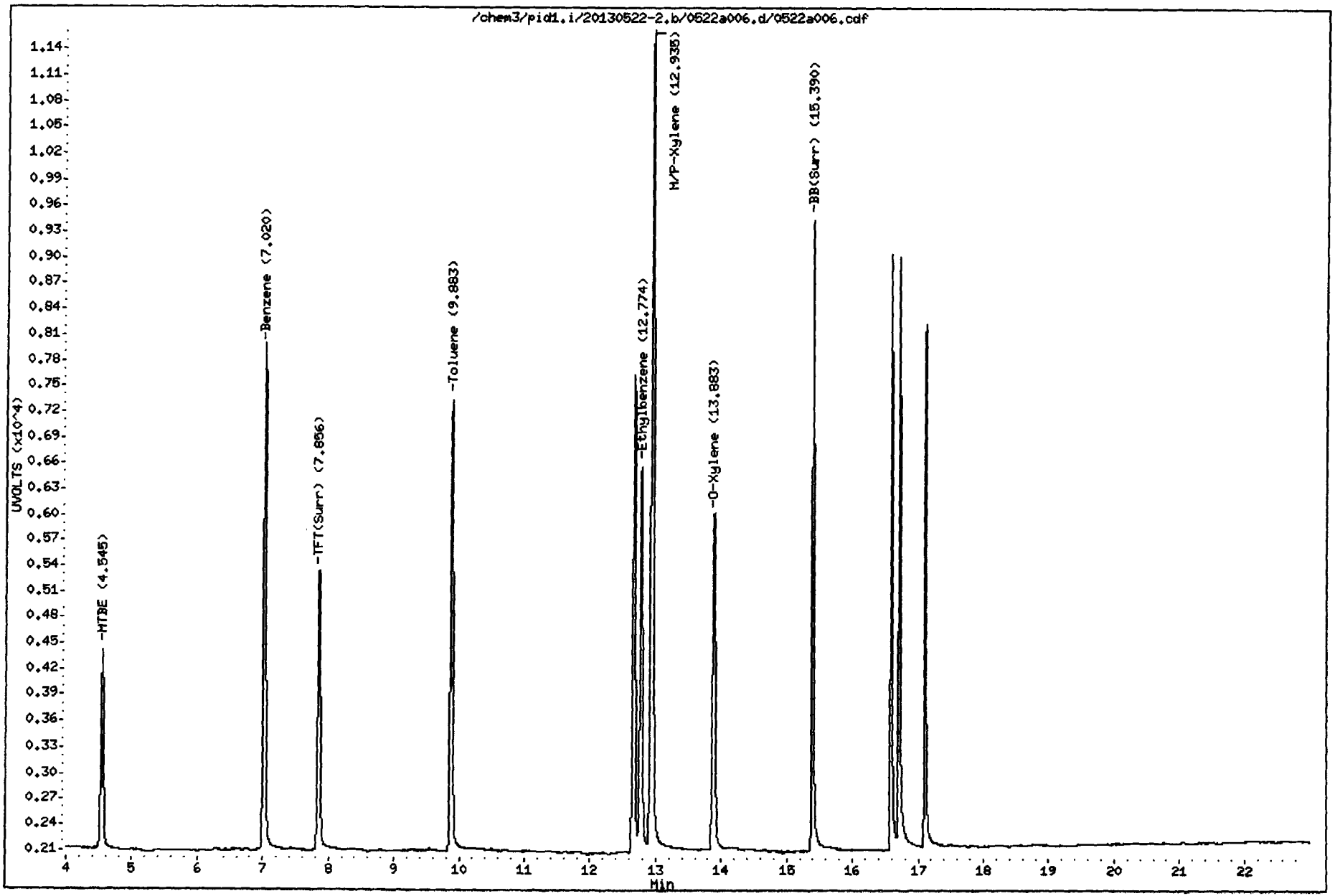
Sample Info: BCAL25

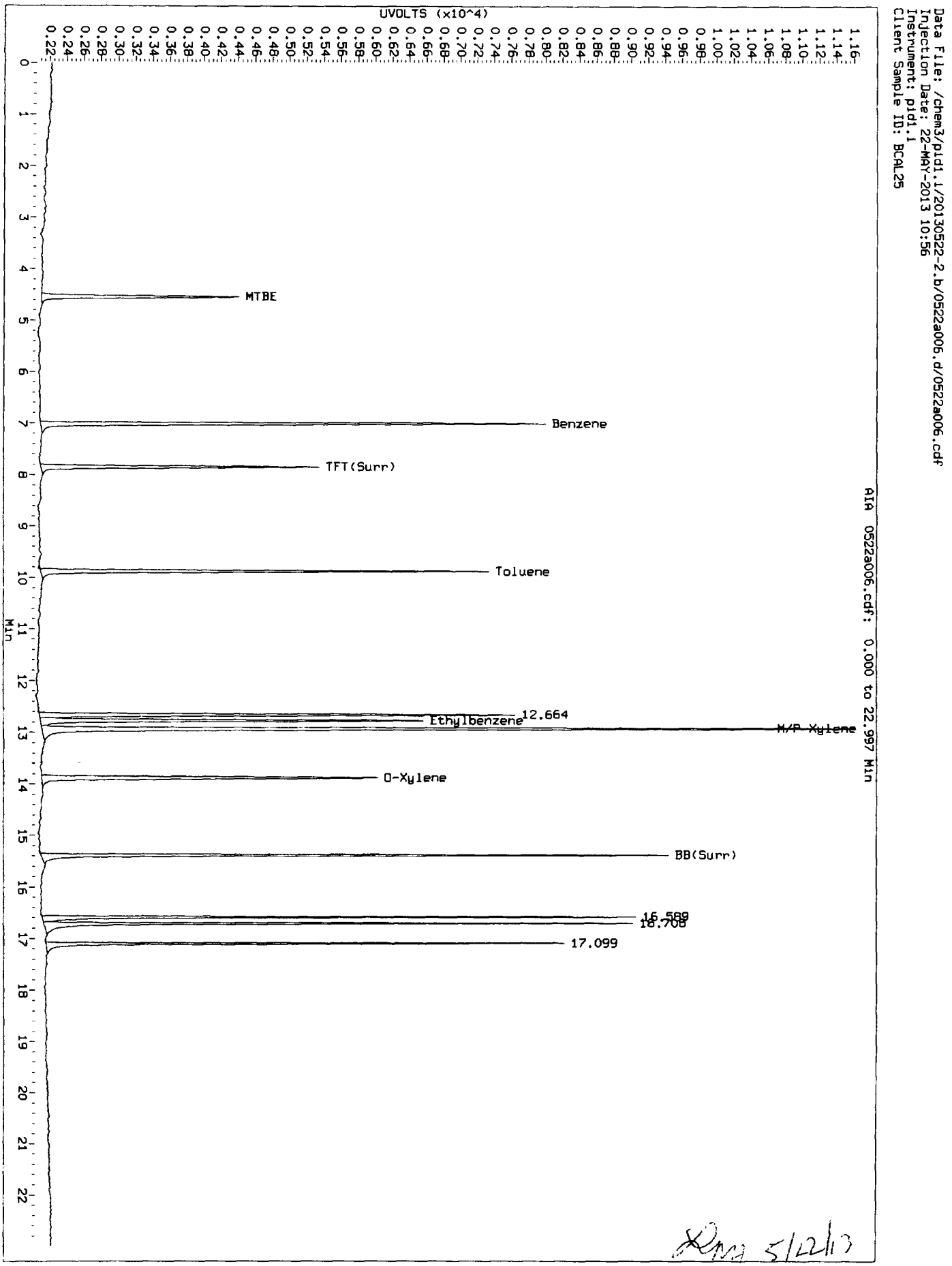
Column phase: RTX 502-2 PID

Instrument: pid1.i

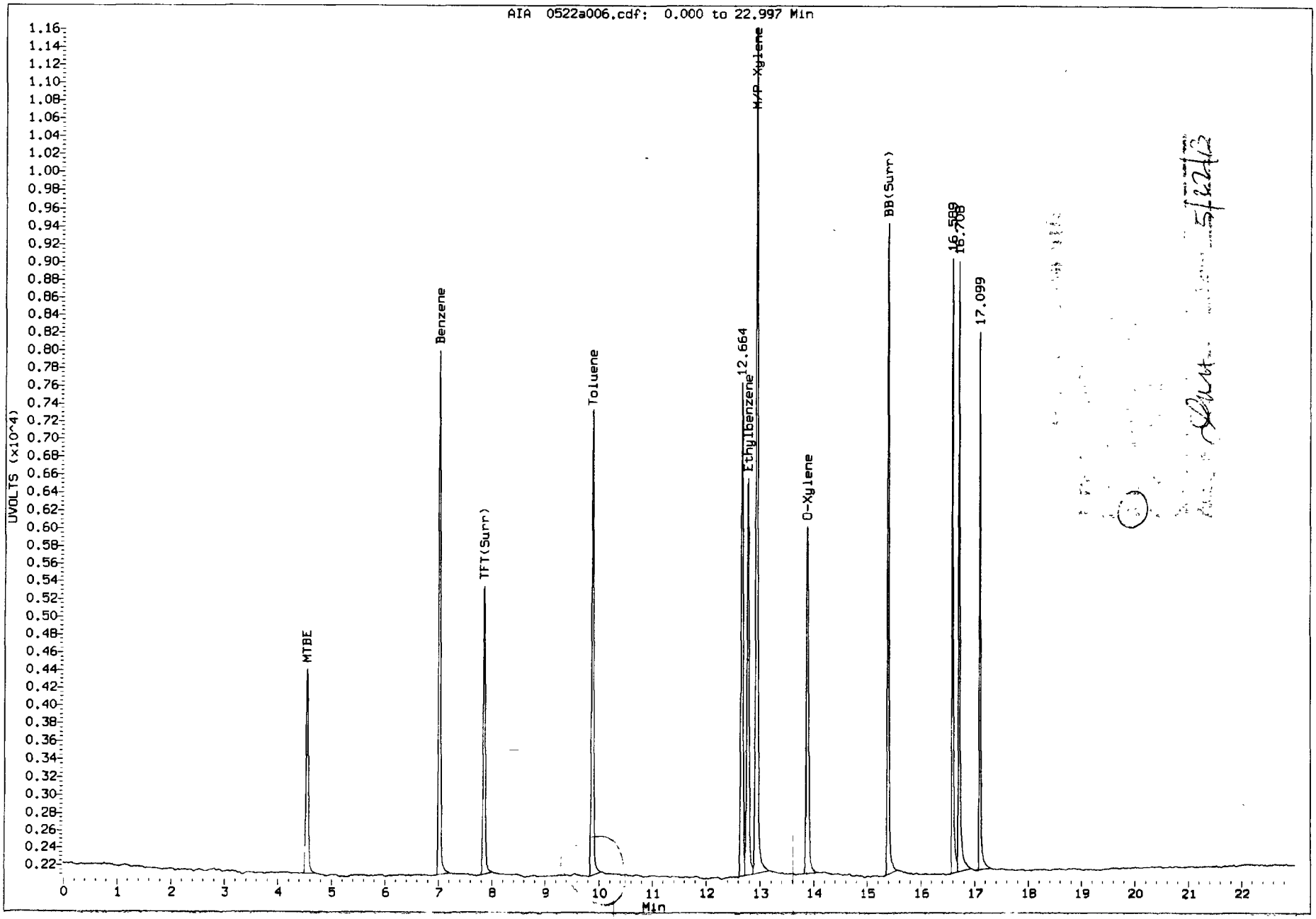
Operator: LH

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
Ethylbenzene
12.664
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

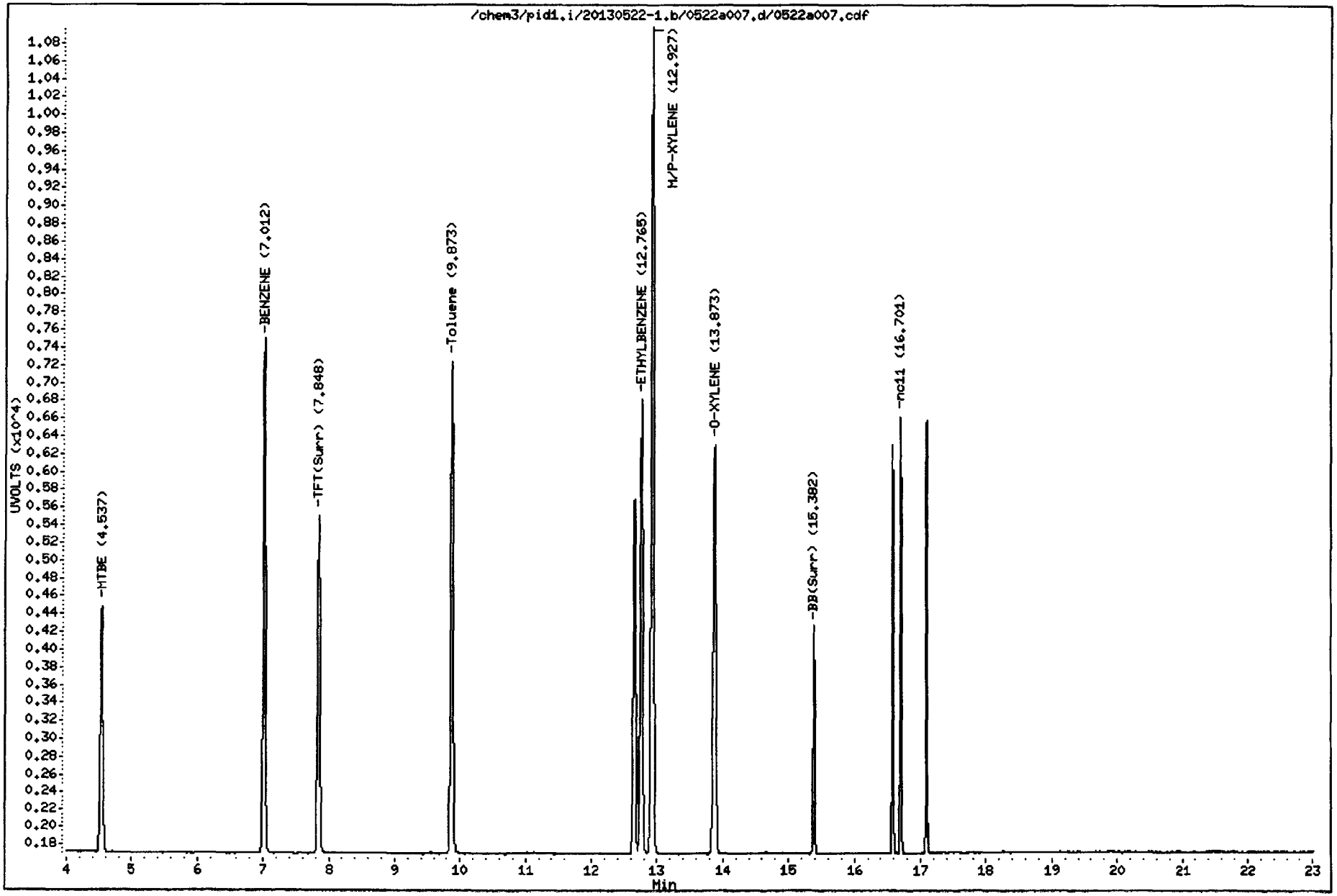
Instrument: pid1.i

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

Page 1

Date : 22-MAY-2013 11:25

Client ID: BCAL50

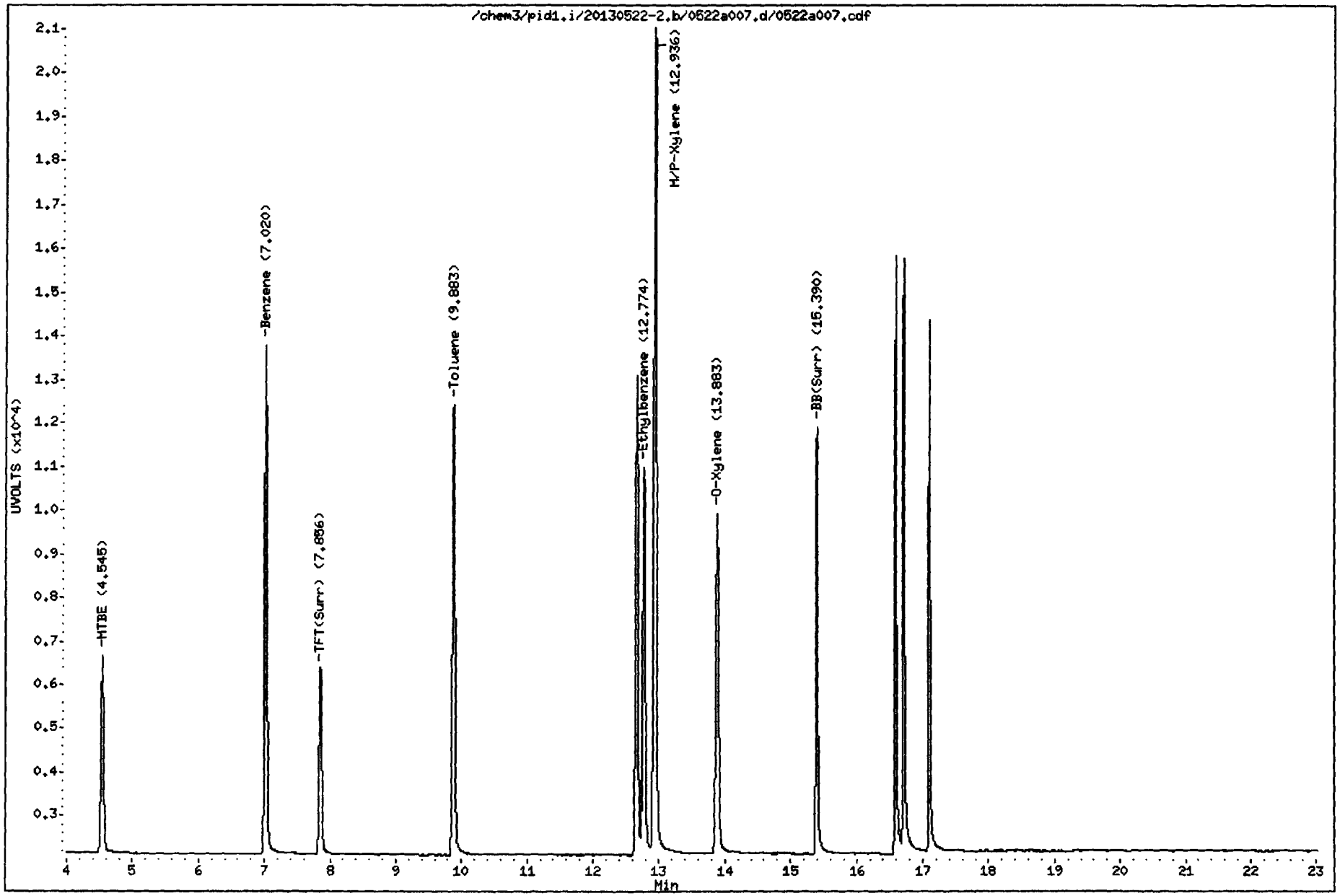
Instrument: pid1.i

Sample Info: BCAL50

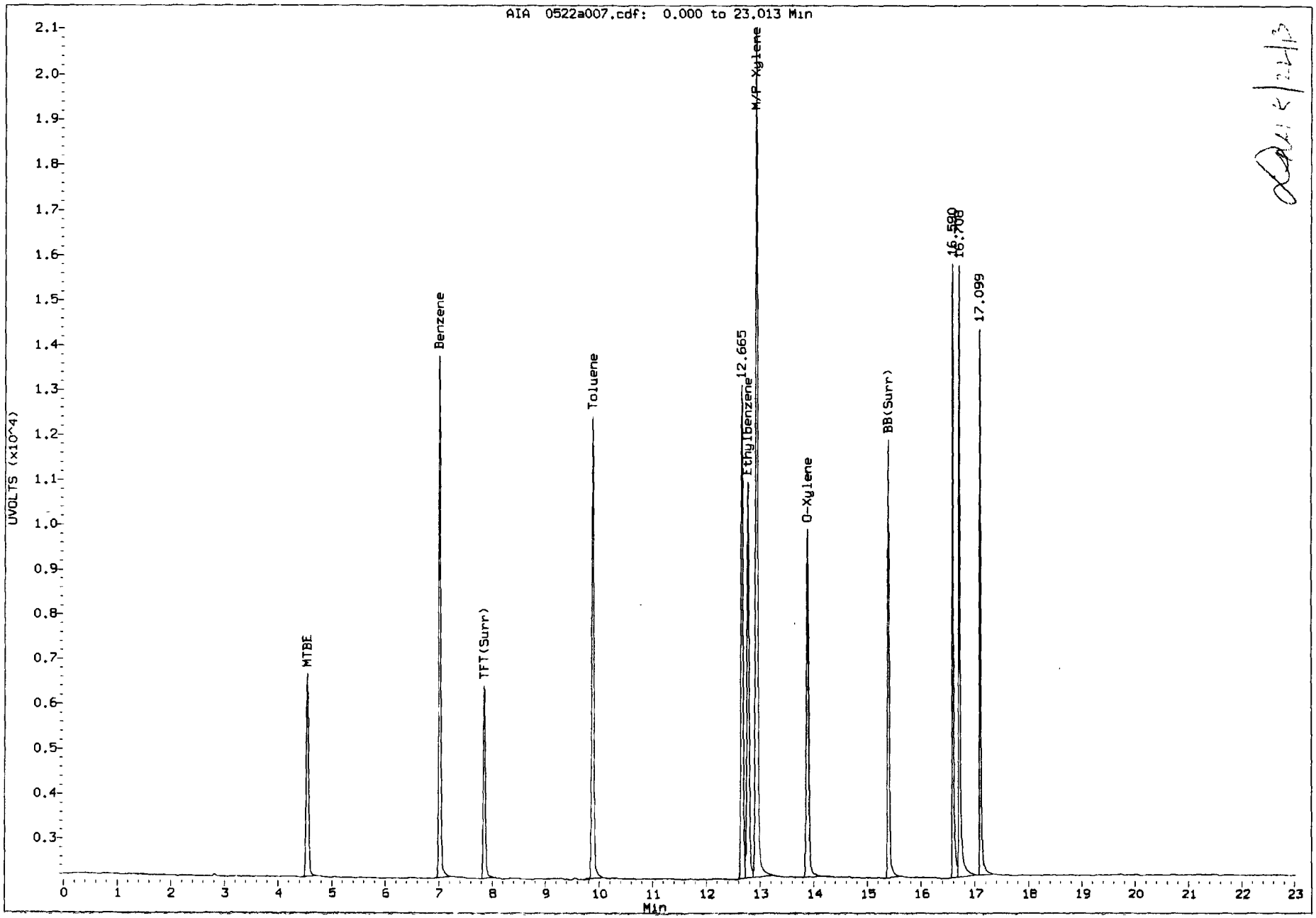
Operator: LH

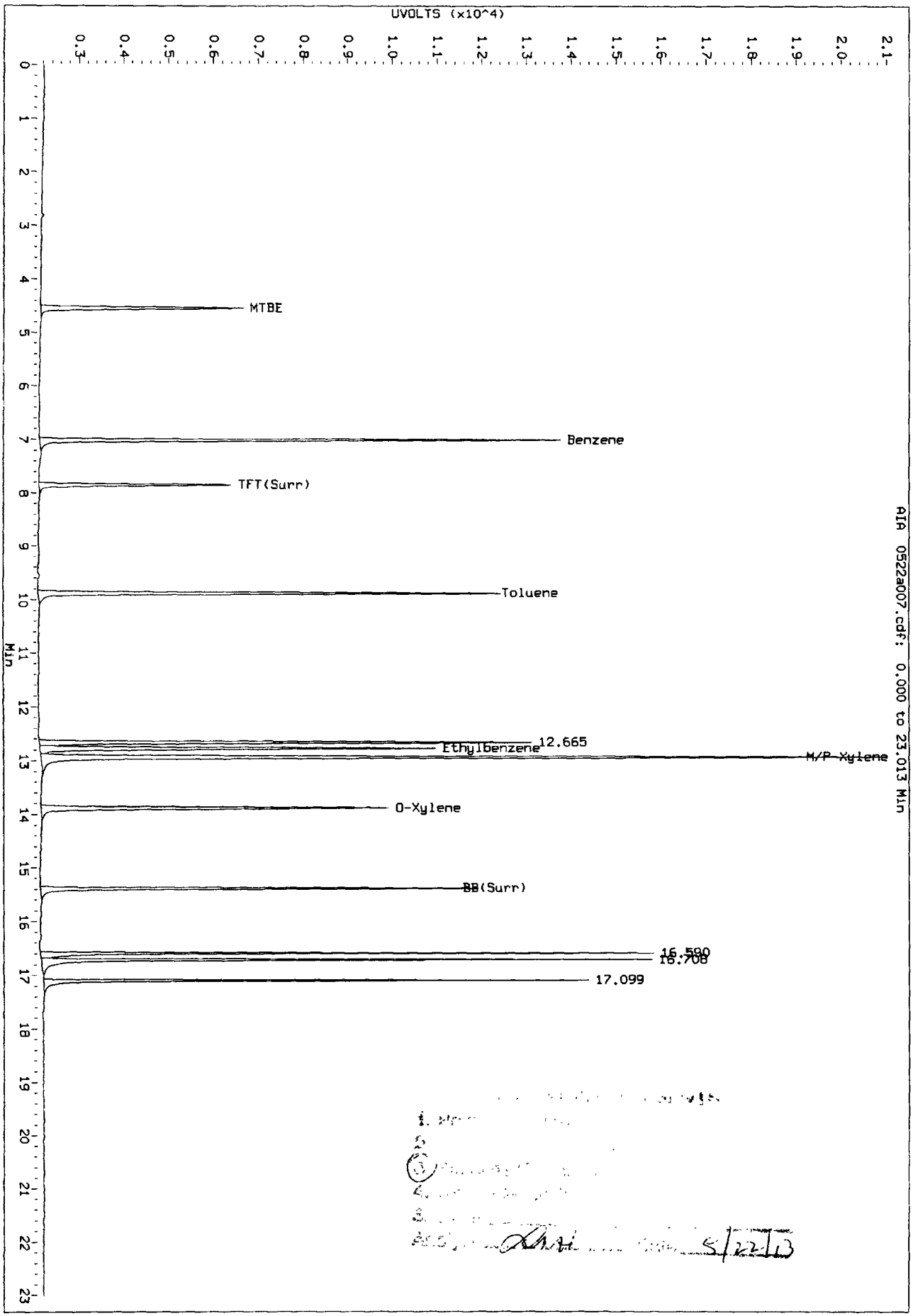
Column phase: RTX 502-2 PID

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
UVOLTS (x10^4)
Min
AIA 0522a007.cdf: 0.000 to 23.013 Min
MTBE
Benzene
TFT(Surr)
Toluene
Ethylbenzene
12.665
M/P-Xylene
O-Xylene
BB(Surr)
16.590
16.708
17.099

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

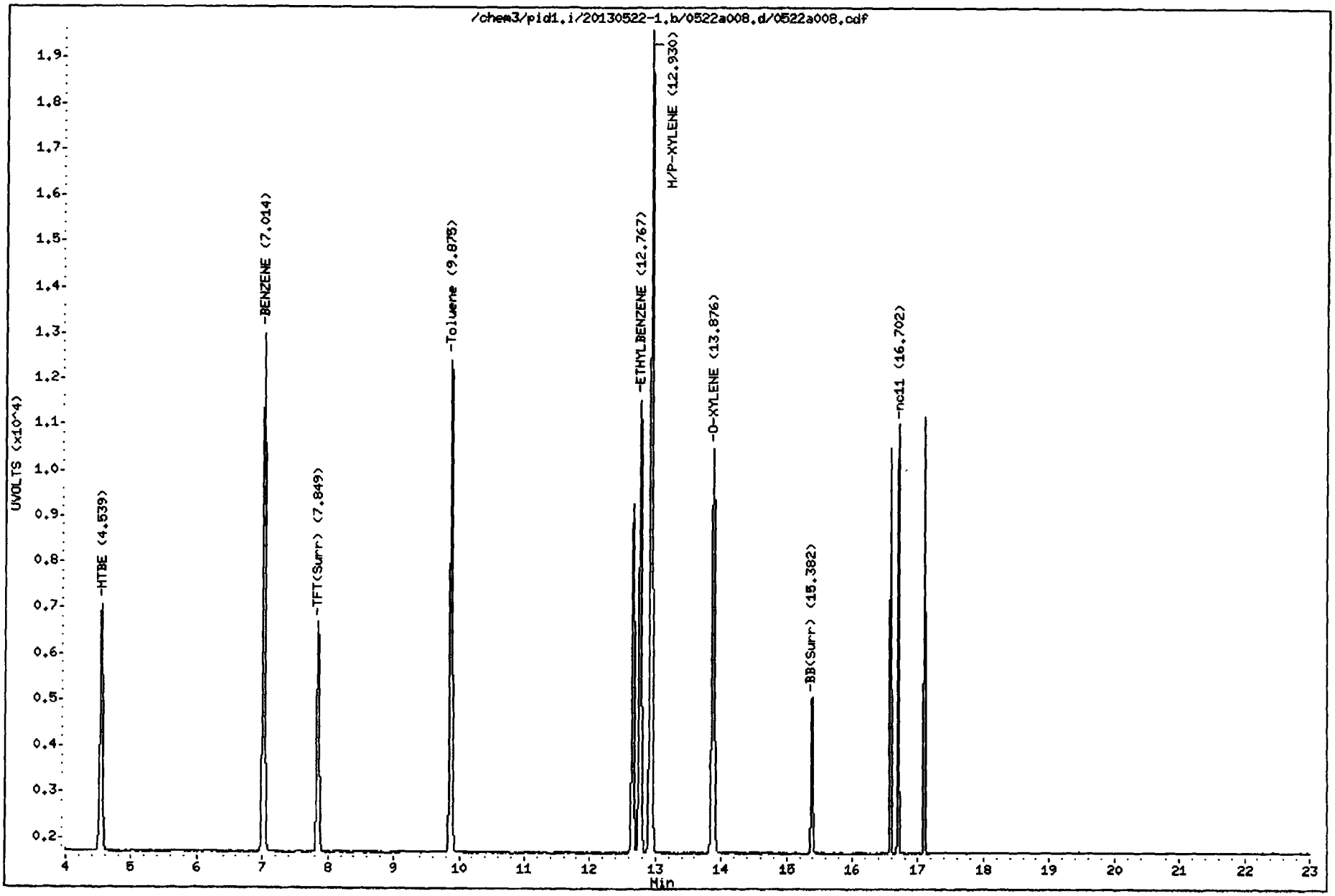
Sample Info: BCAL100

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

Date : 22-MAY-2013 11:55

Client ID: BCAL100

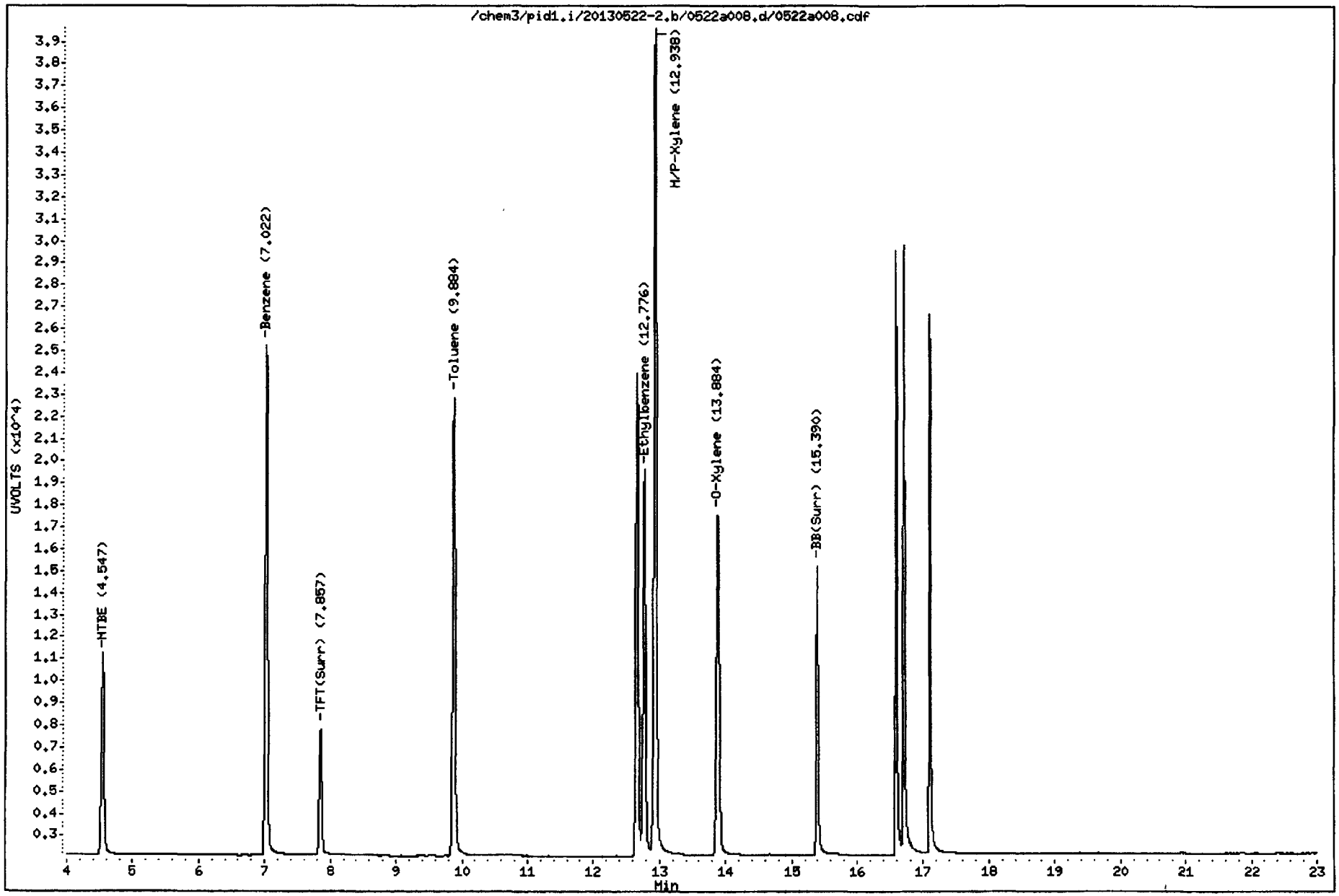
Sample Info: BCAL100

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

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

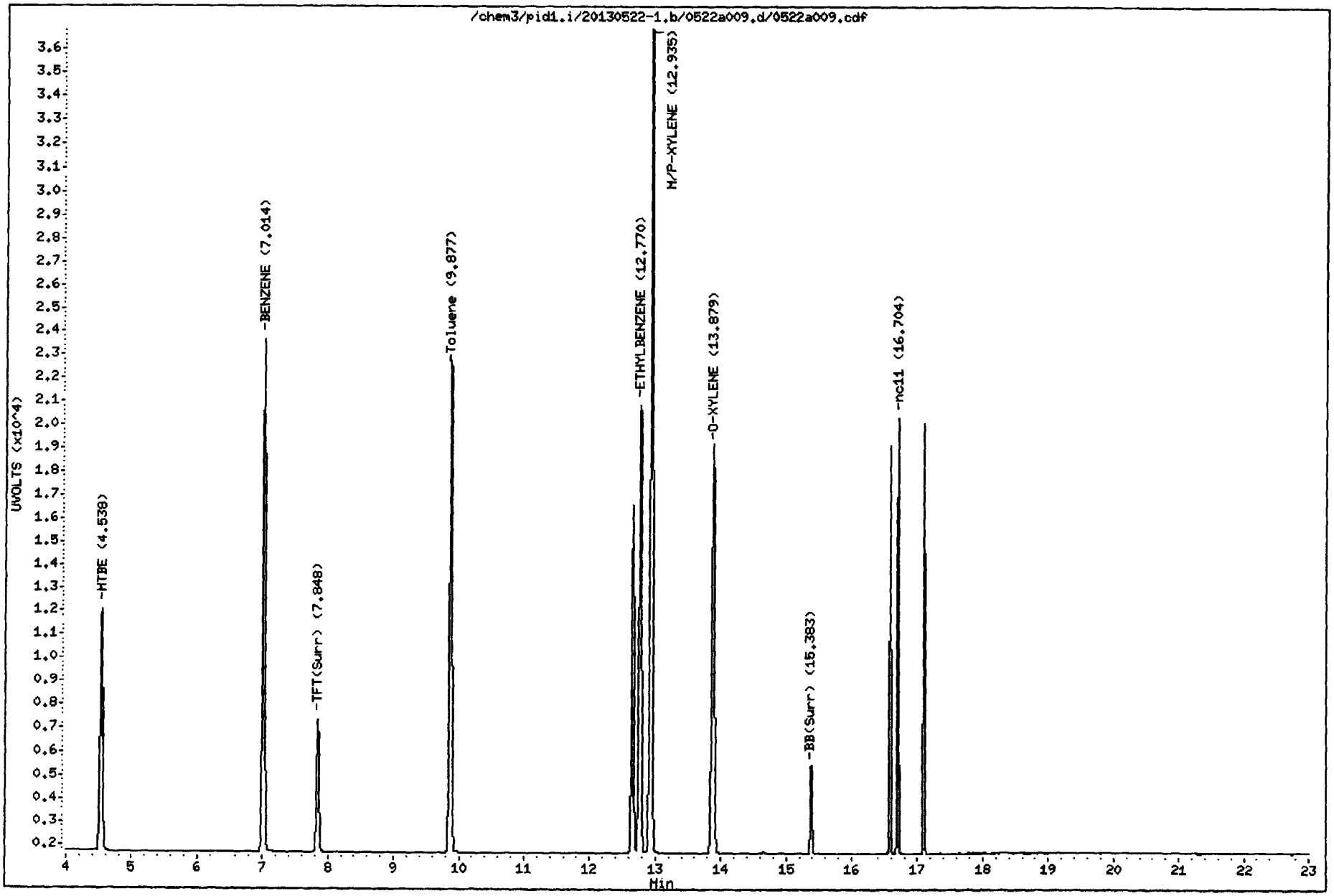
Sample Info: BCAL200

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

Page 1

Date : 22-MAY-2013 12:24

Client ID: BCAL200

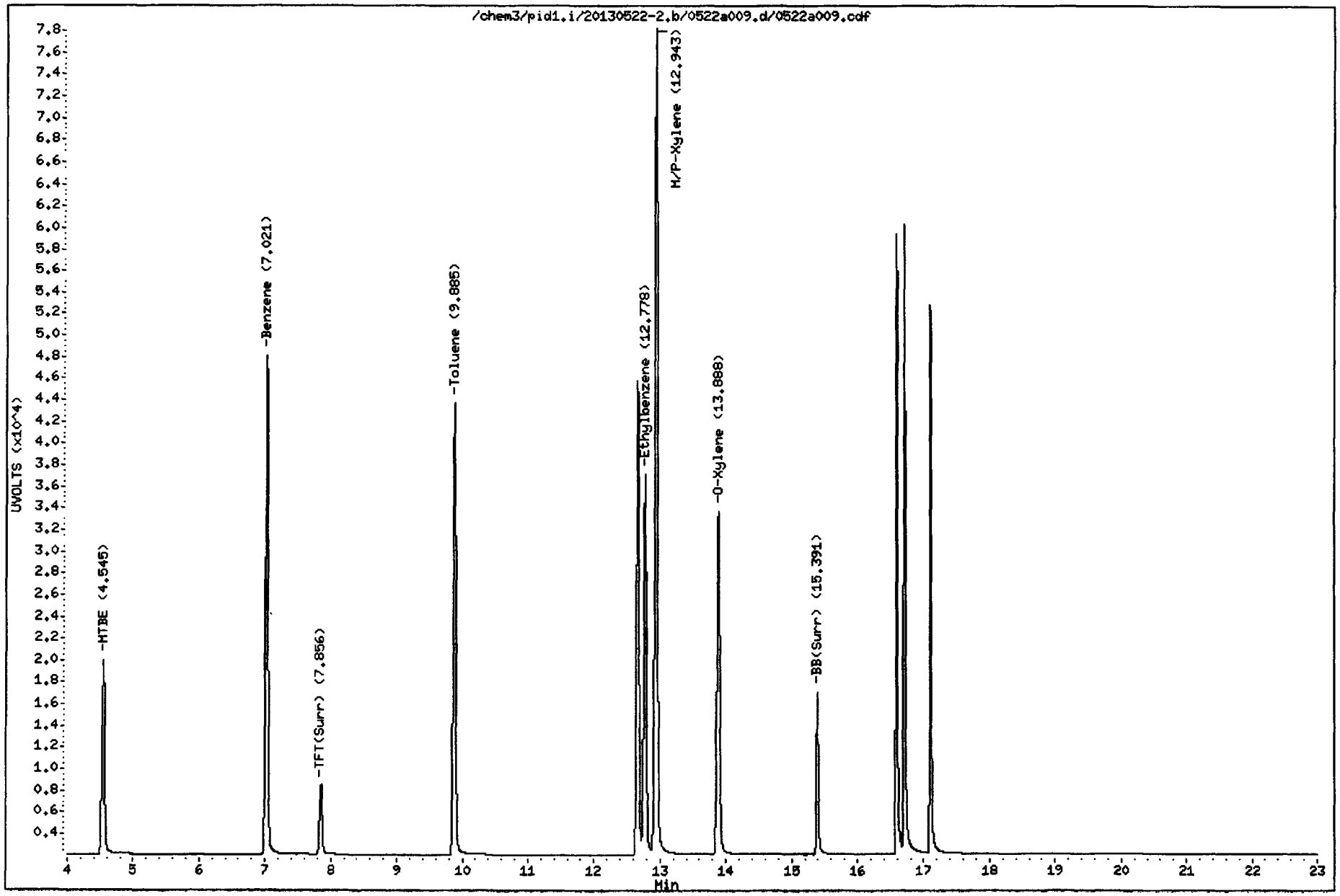
Instrument: pid1.i

Sample Info: BCAL200

Operator: LH

Column phase: RTX 502-2 PID

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

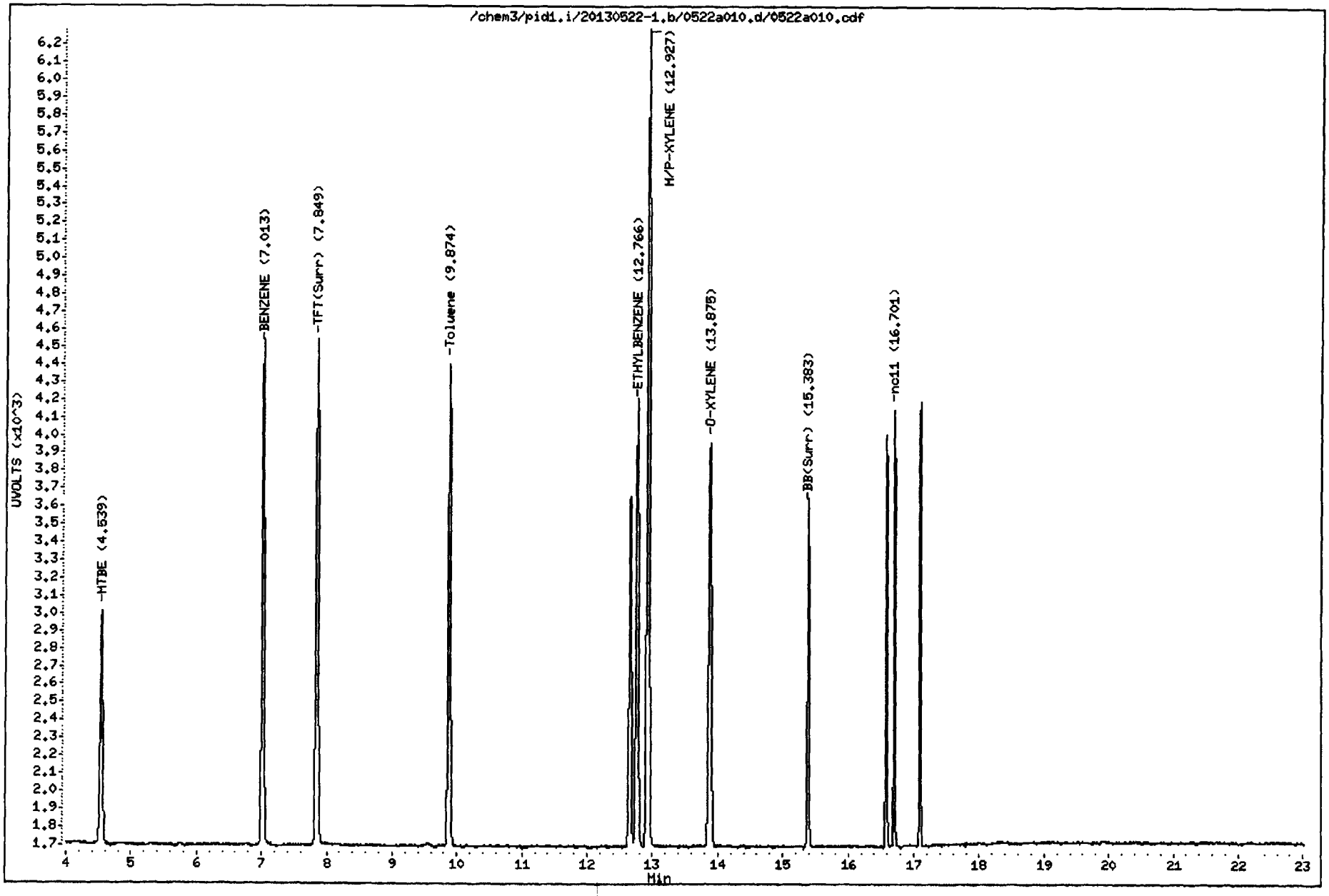
Sample Info: ICV25

Instrument: pid1.i

Operator: LH

Column phase: RTX 502-2 FID

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a010.d

Date : 22-MAY-2013 12:53

Client ID: ICV25

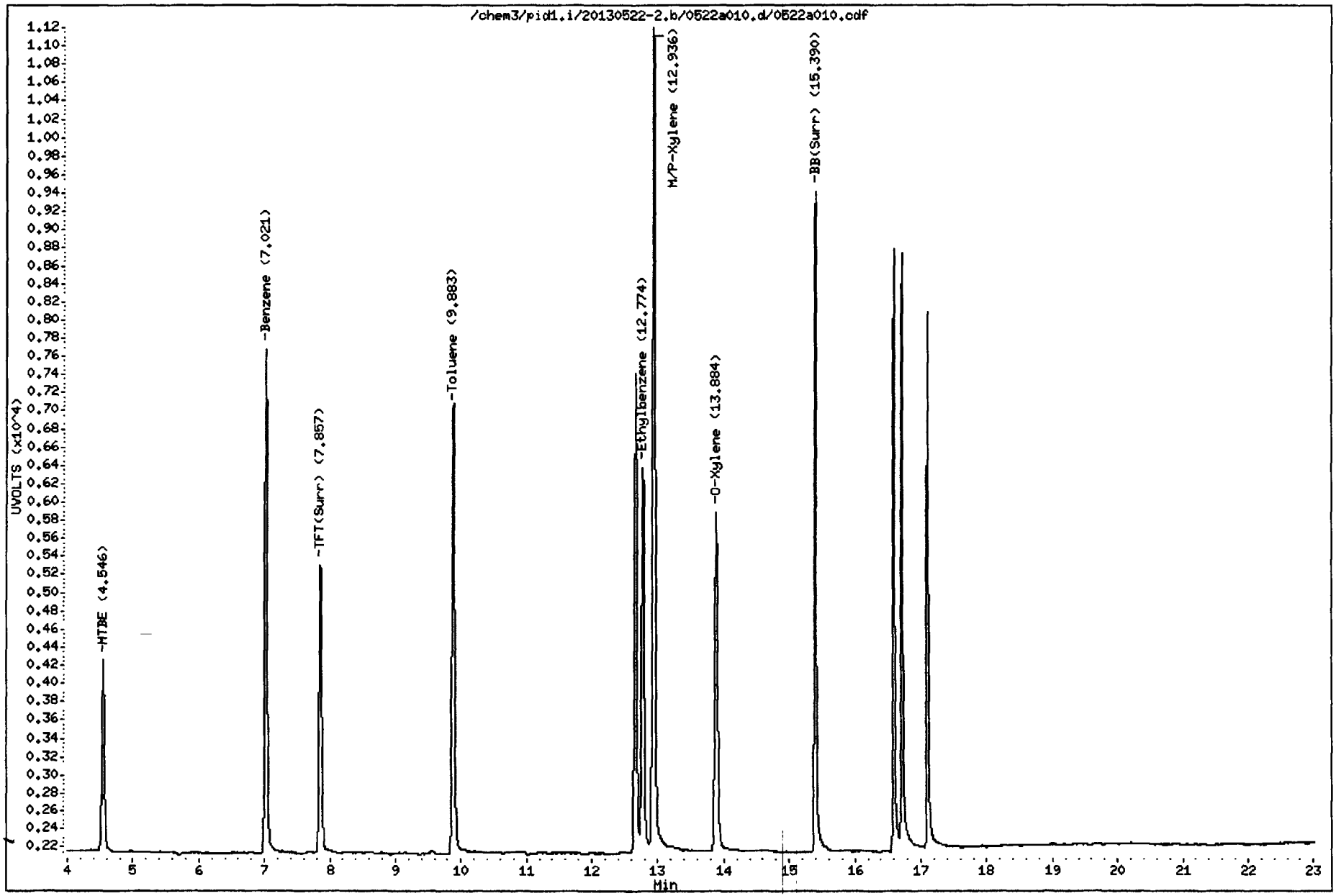
Sample Info: ICV25

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	VW765-1	3/13/12
SPEX	VW754	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 FID confirmation dropped as well for MTBE

Analyst: JW **Date:** 10/25/12

Reviewer: [signature] **Date:** 10/26/12

WSS1 · 81571

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

tart Cal Date : 23-OCT-2012 17:50
nd Cal Date : 23-OCT-2012 21:15
uant Method : ESTD
rigin : Disabled
arget Version : 3.50
ntegrator : HP Genie
ethod file : /chem3/pid1.i/20121023-2.b/PIDB.m
al Date : 24-Oct-2012 10:09 jonw
urve 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	RRF	% RSD	
	0.000e+00 Level 7	Level 8							
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)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-

WSI : 91577

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

. Indicates Peak Area was used for quantitation instead of Height
I Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a004.d

Date : 23-OCT-2012 17:50

Client ID:

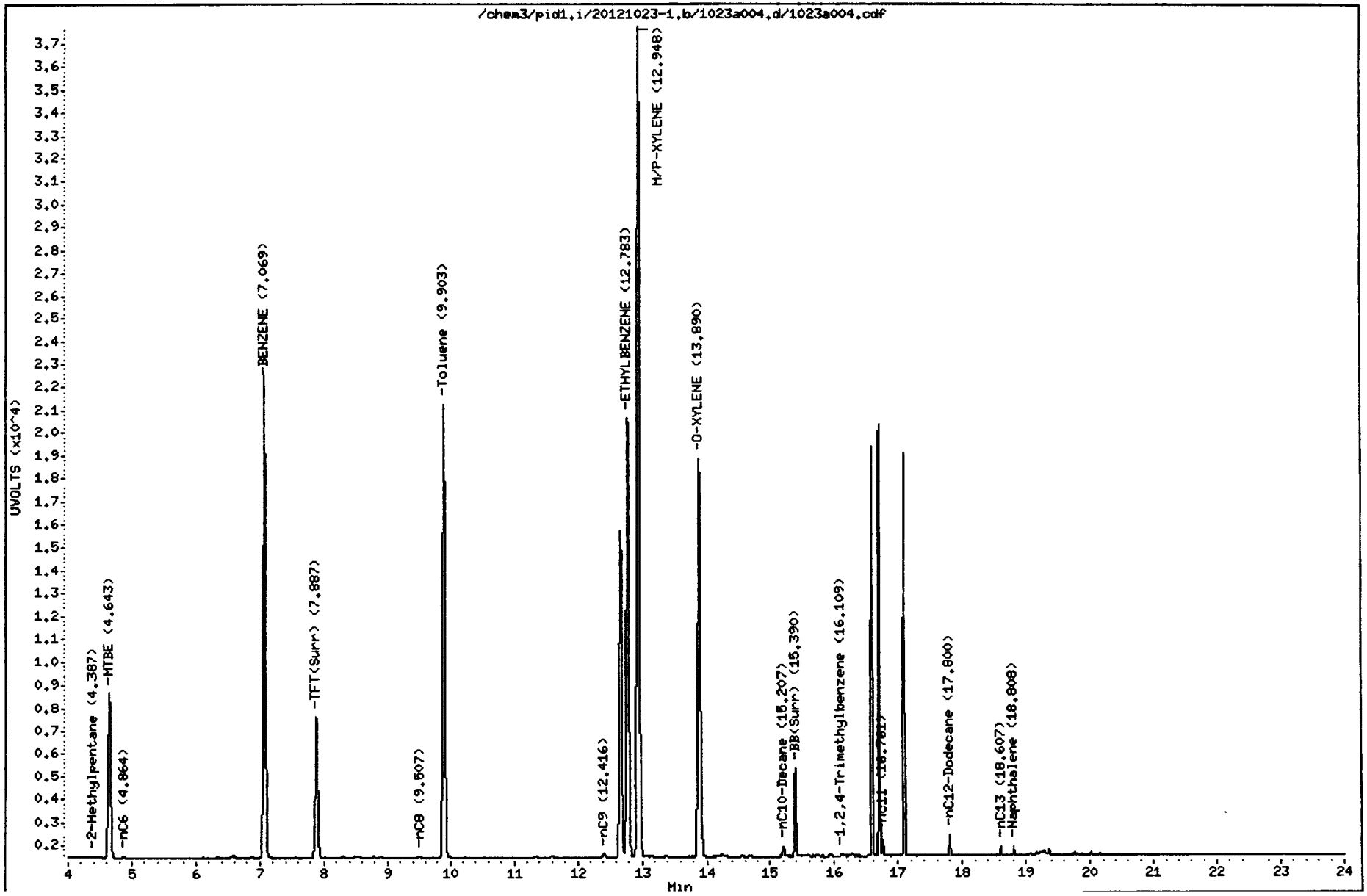
Sample Info: B 200

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:

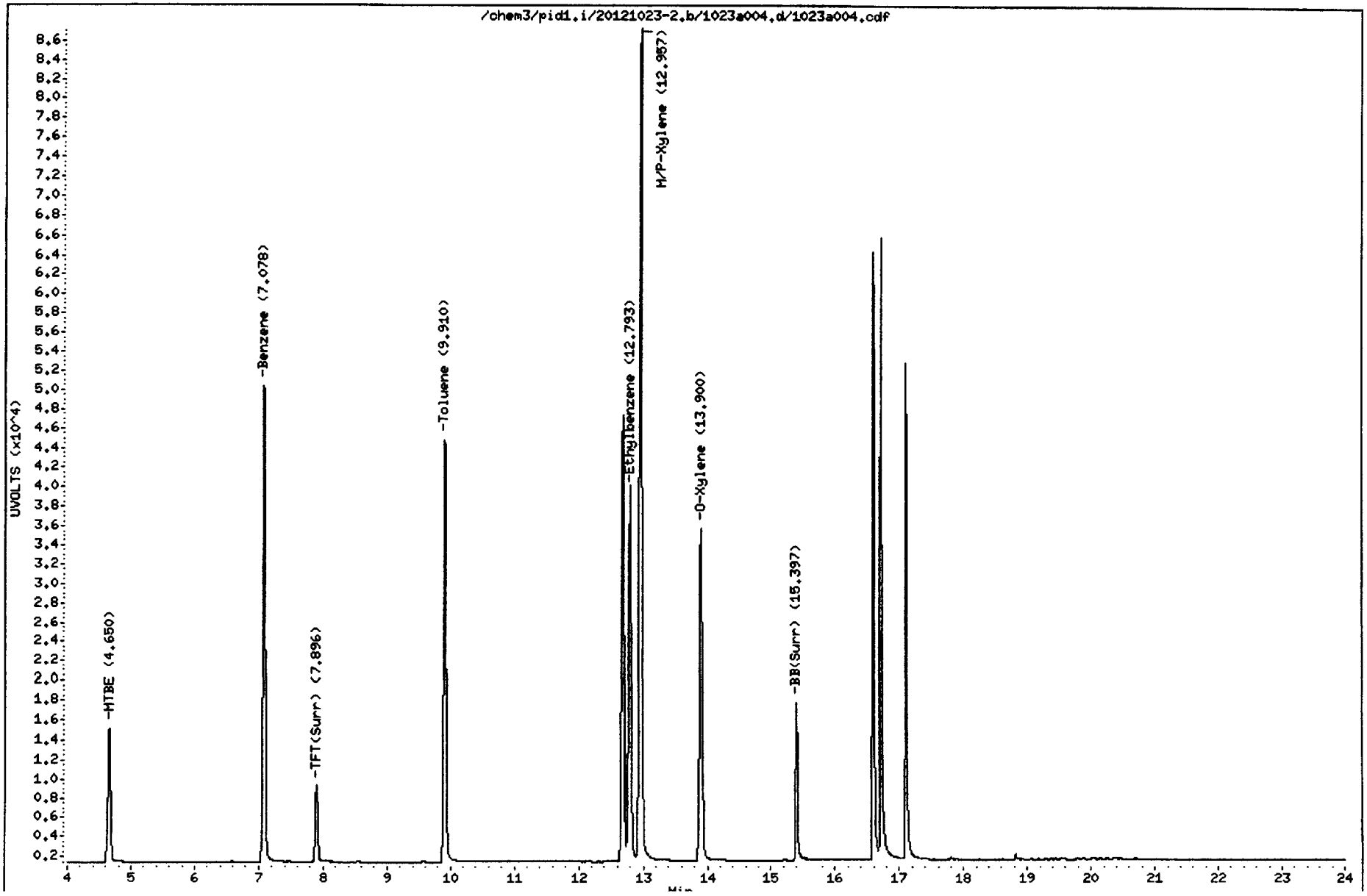
Sample Info: B 200

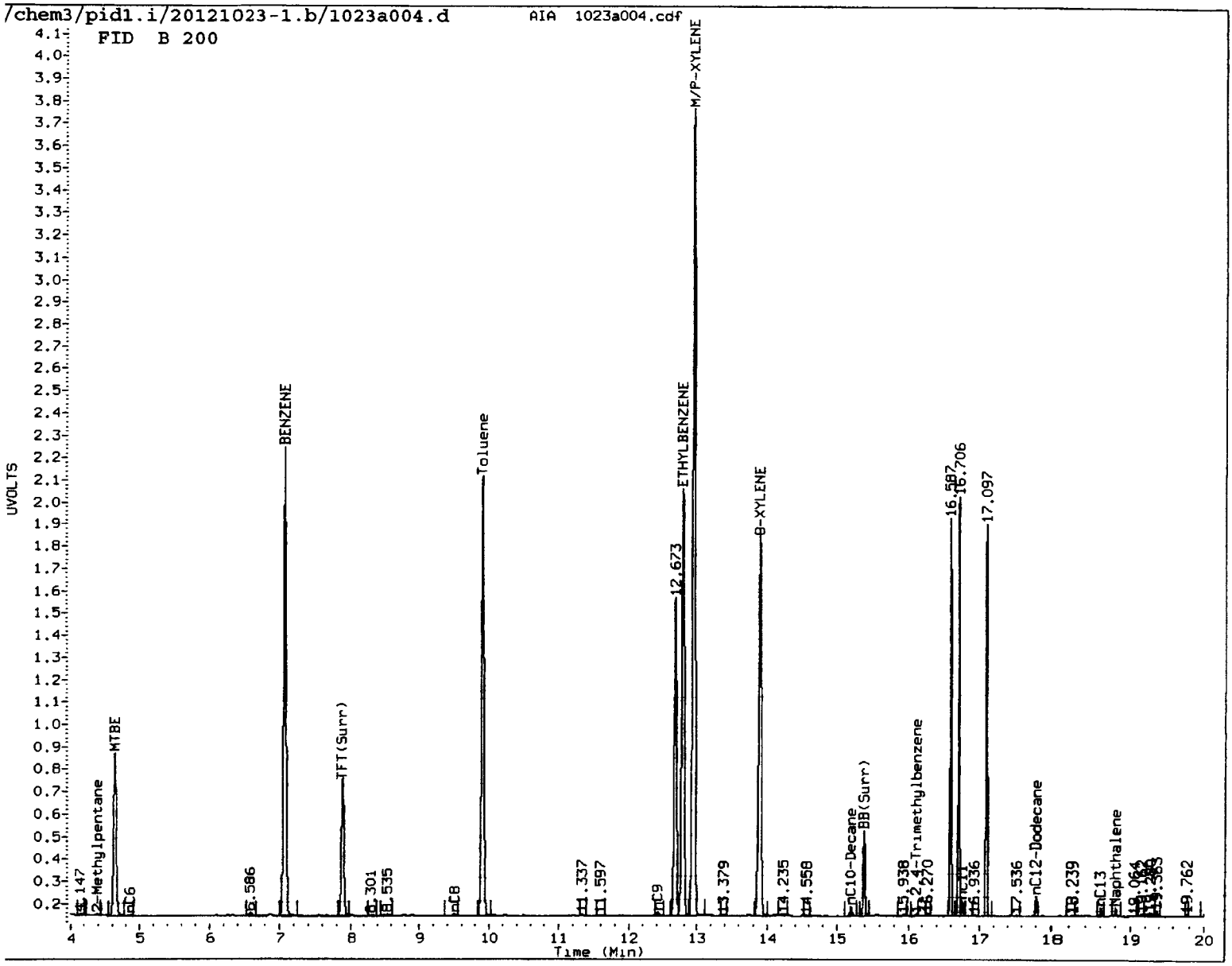
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

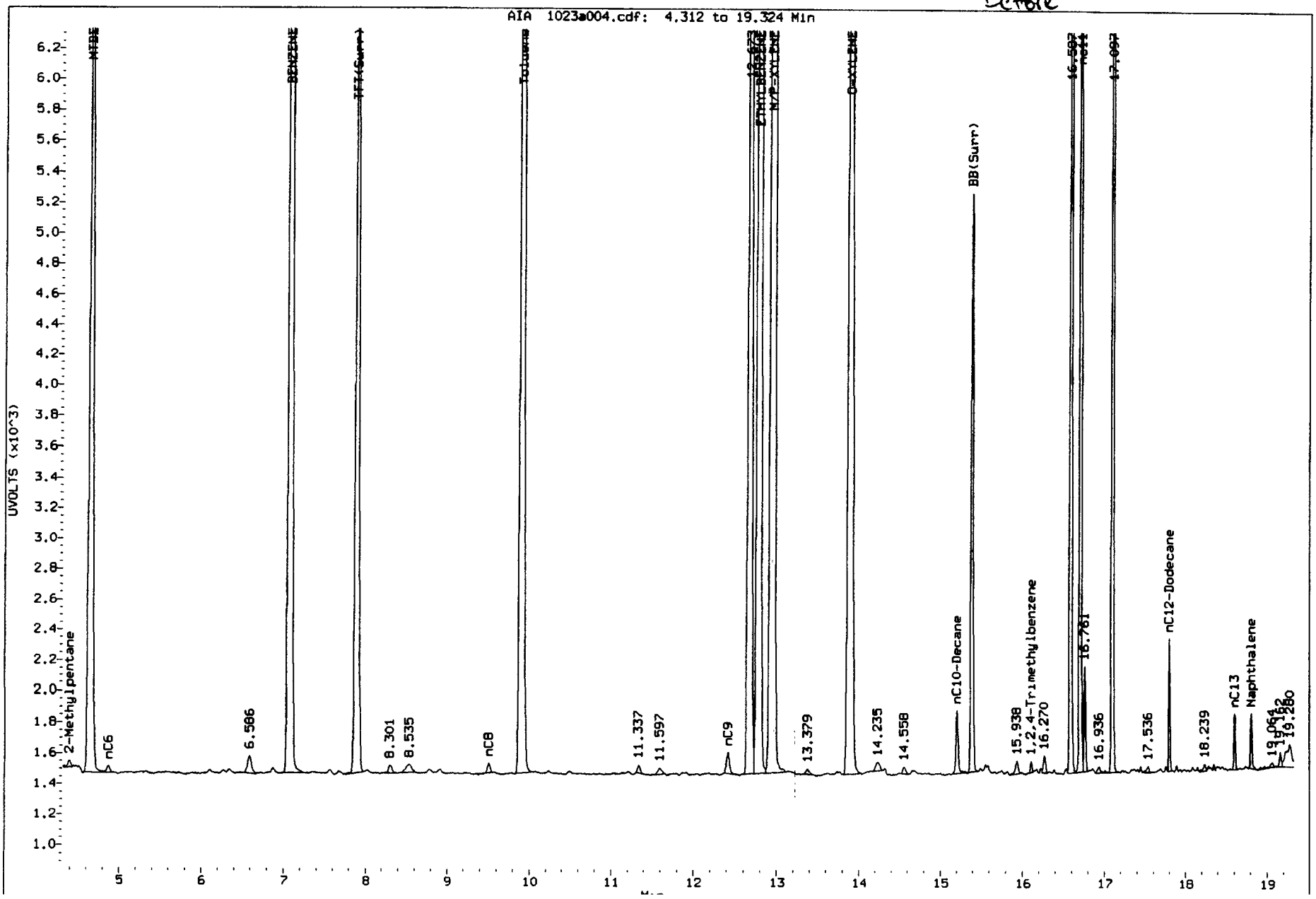
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

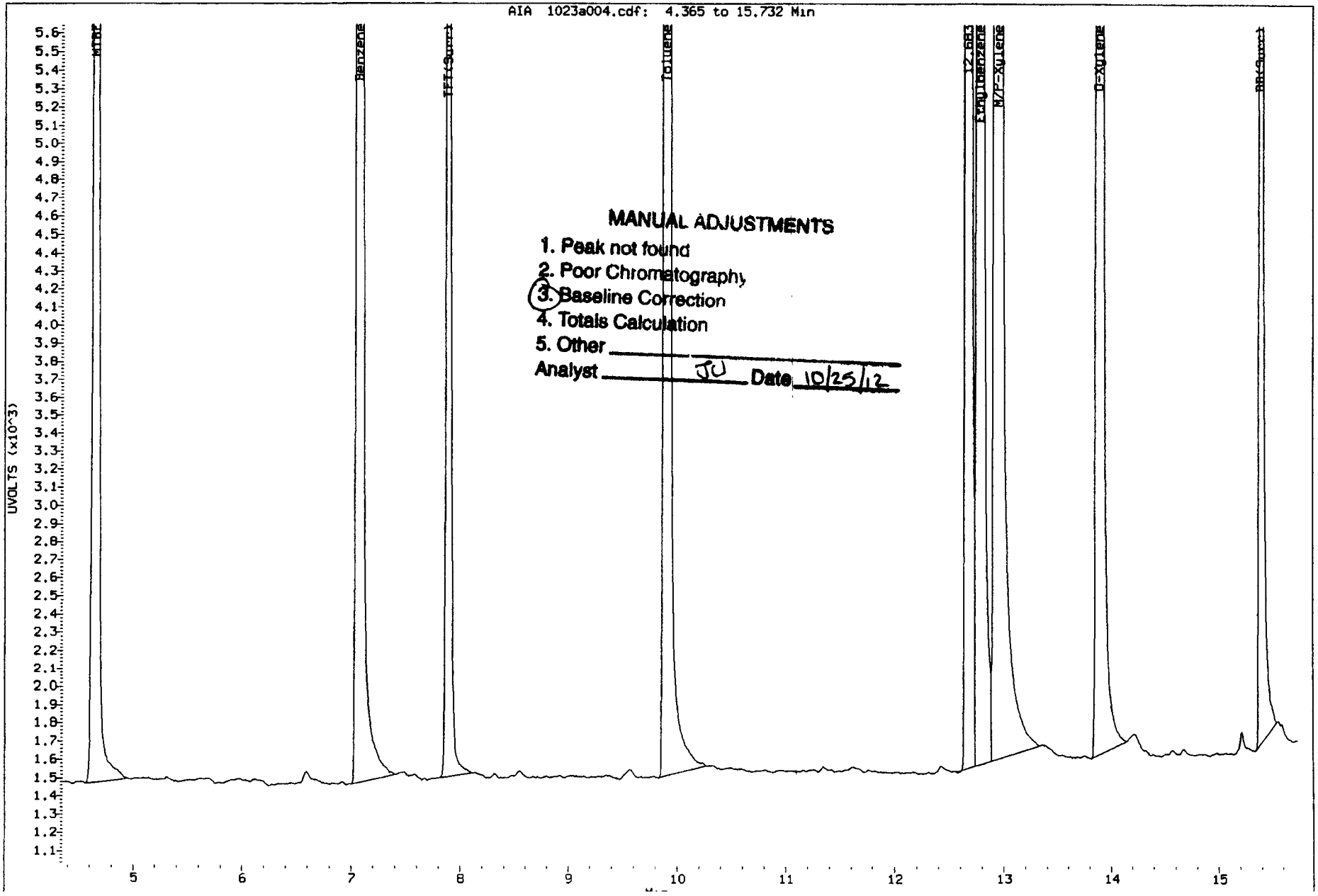
Analyst: JW Date: 10/25/12

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

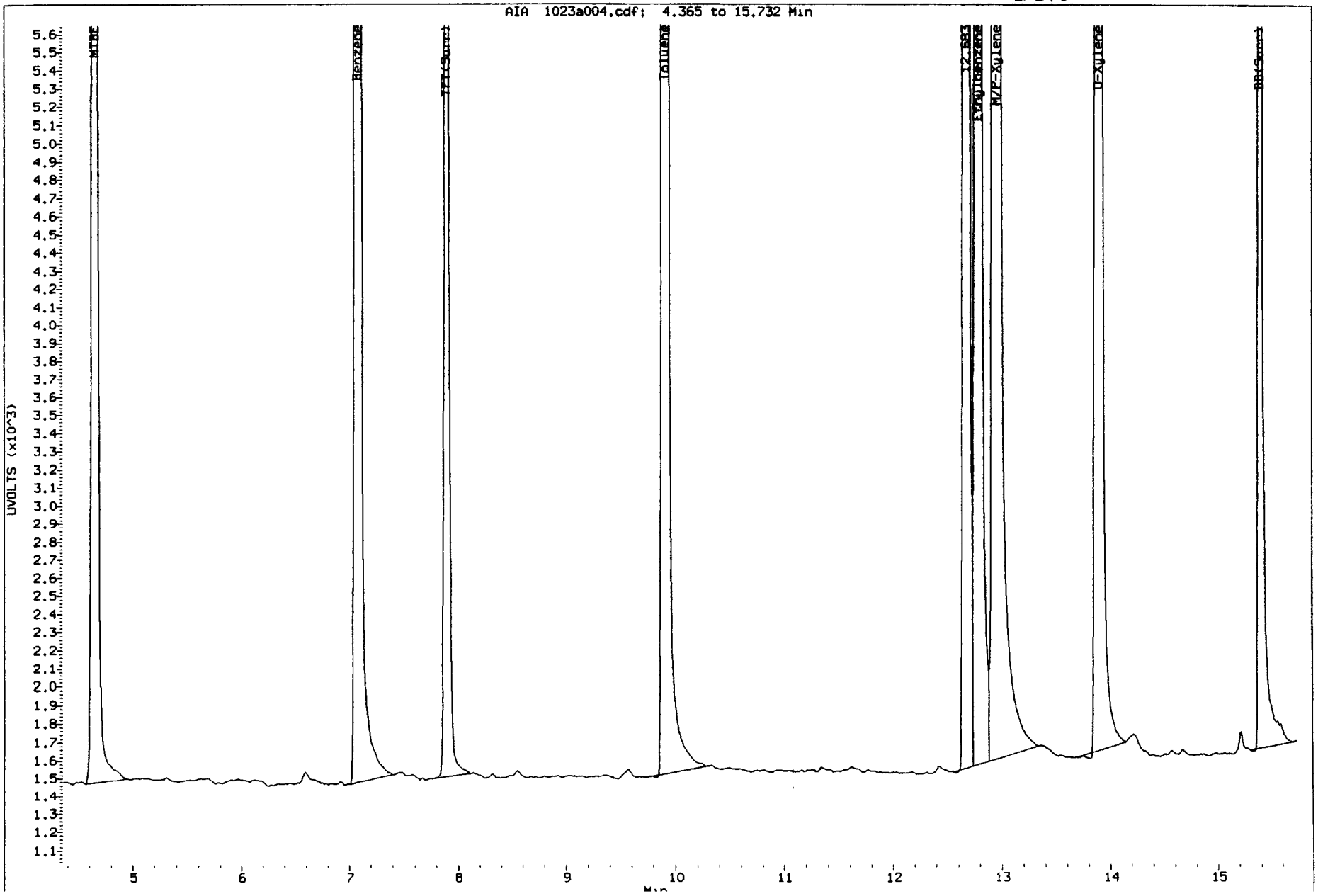


Data File: /chem3/pid1.i/20121023-2.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.i
Client Sample ID:



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:

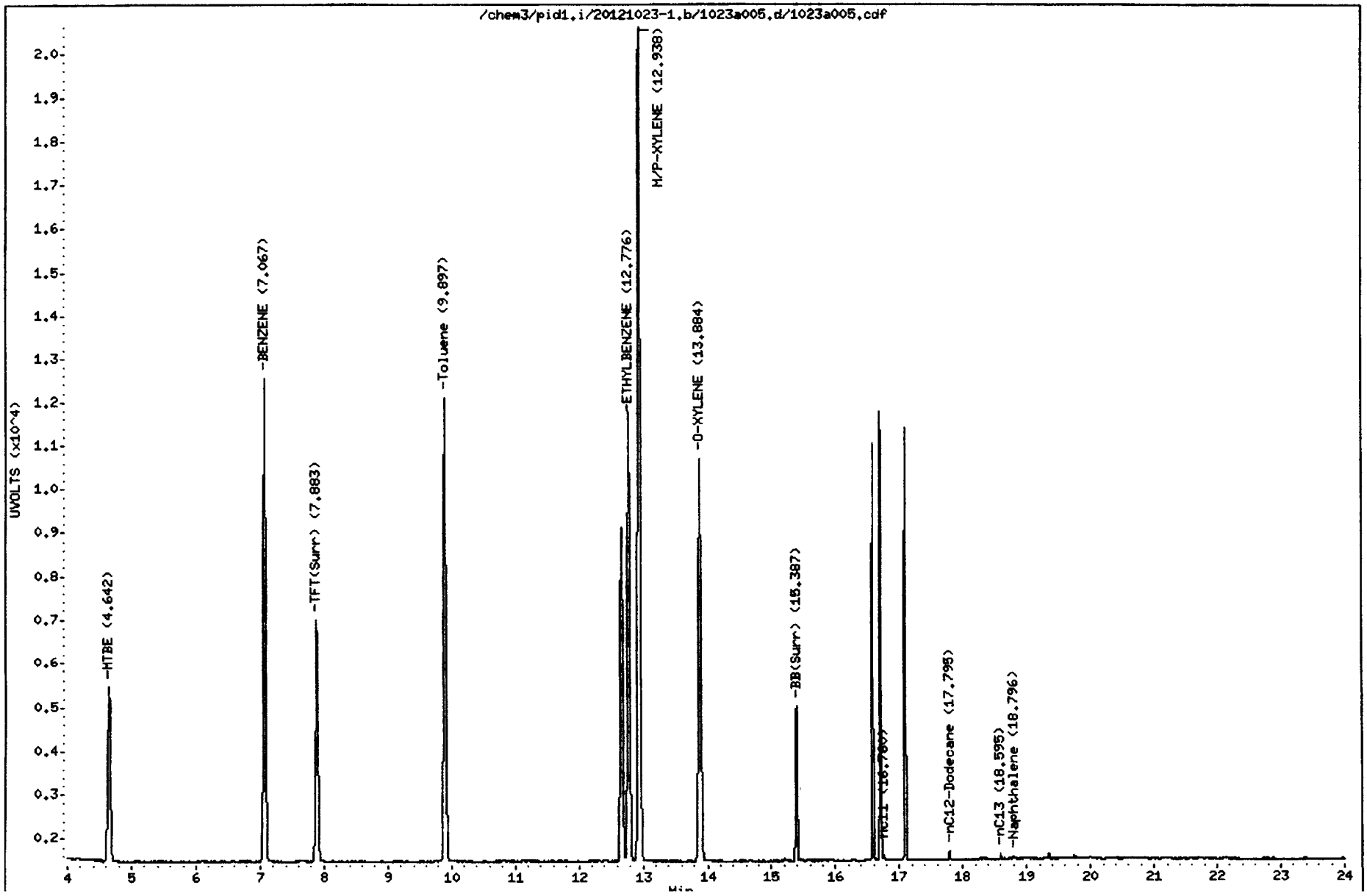
Sample Info: B 100

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:

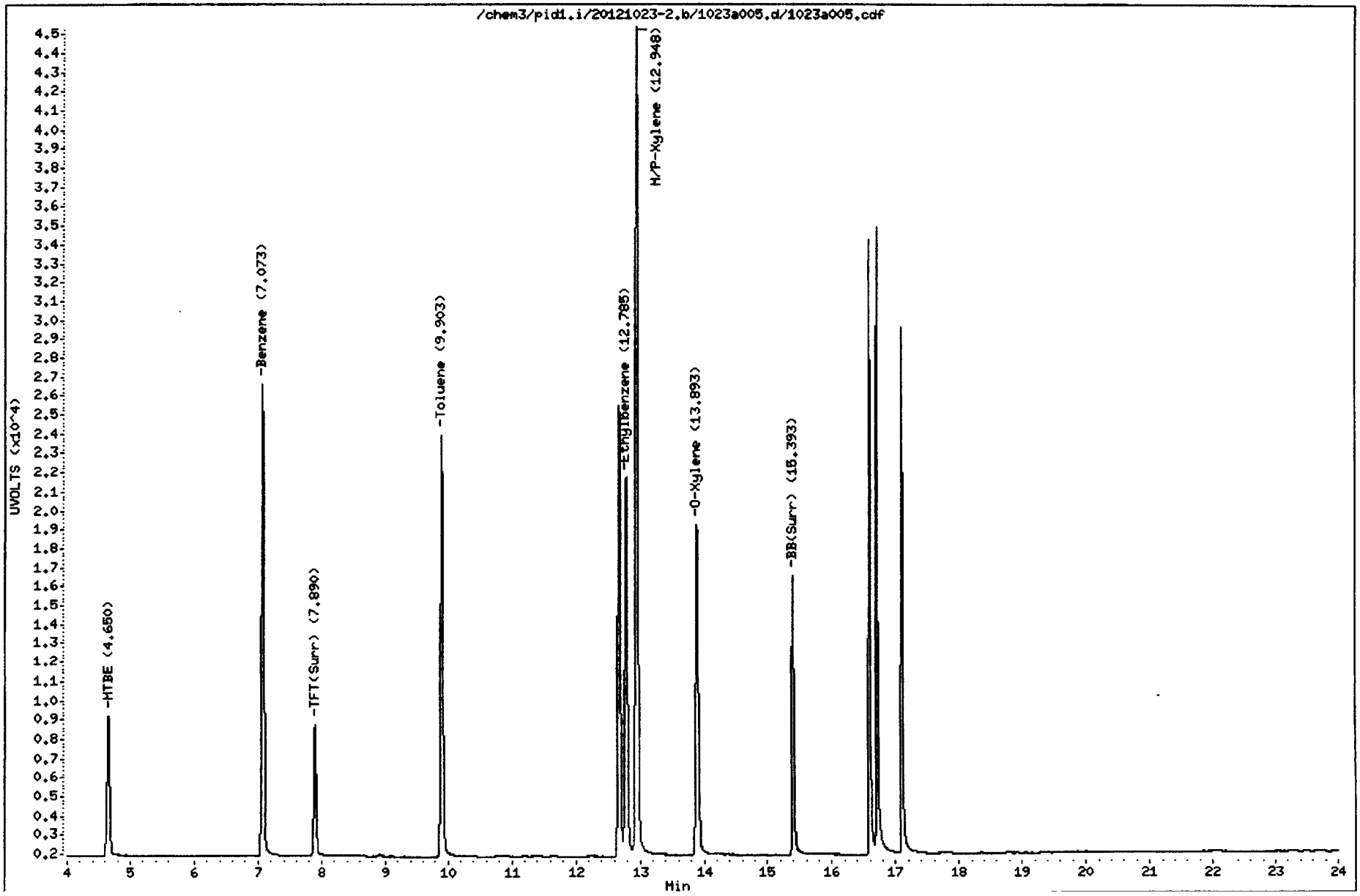
Sample Info: B 100

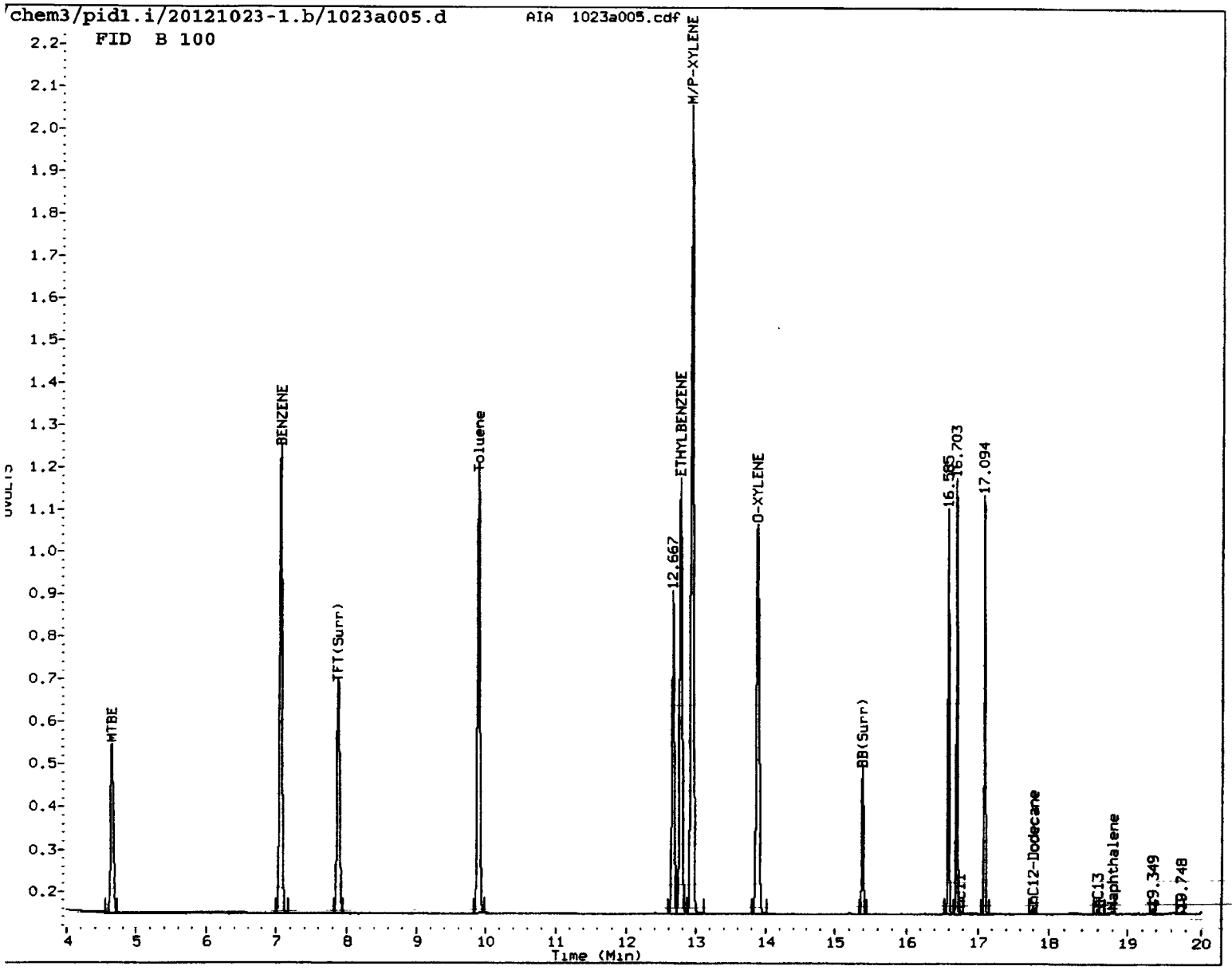
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

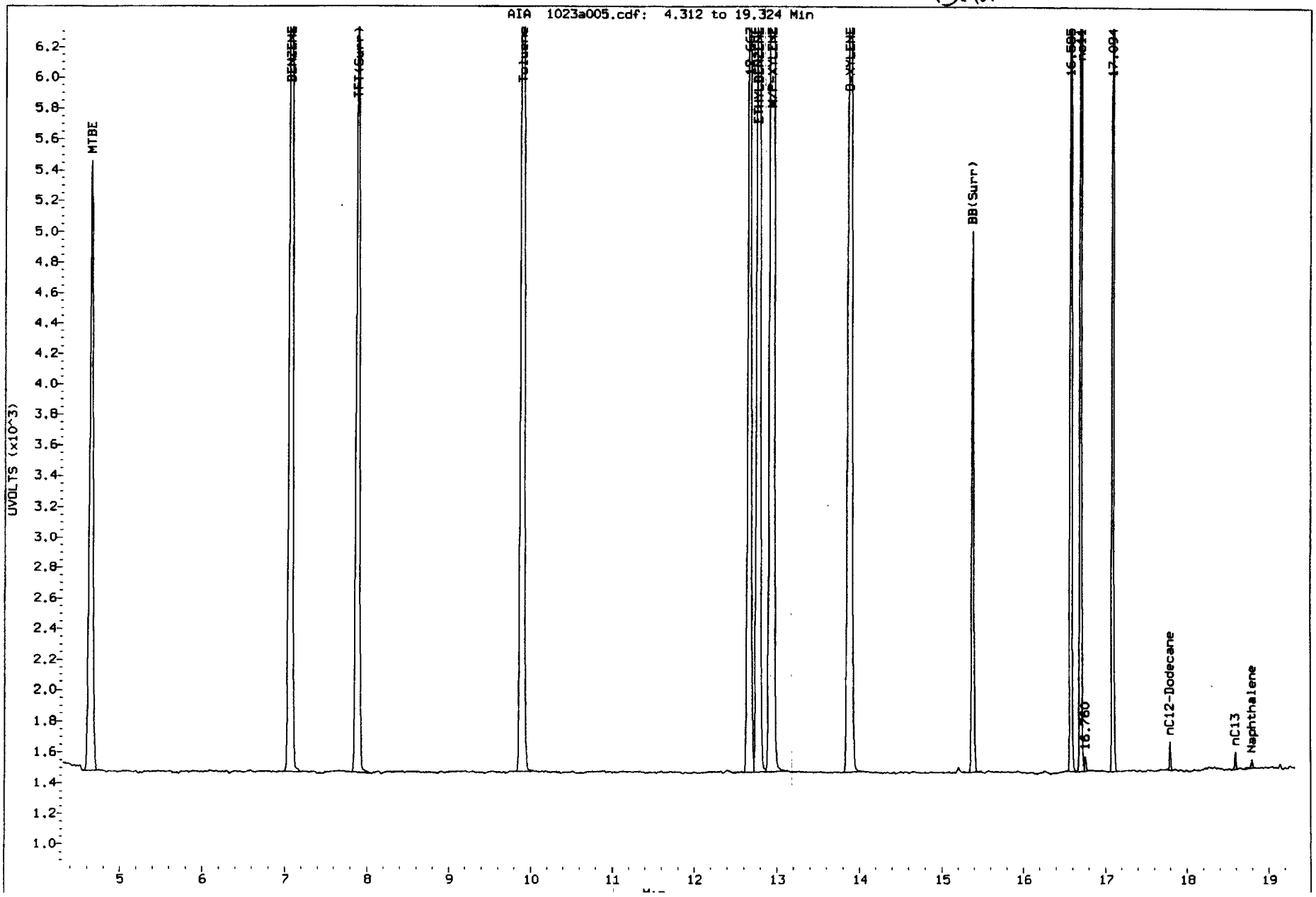
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

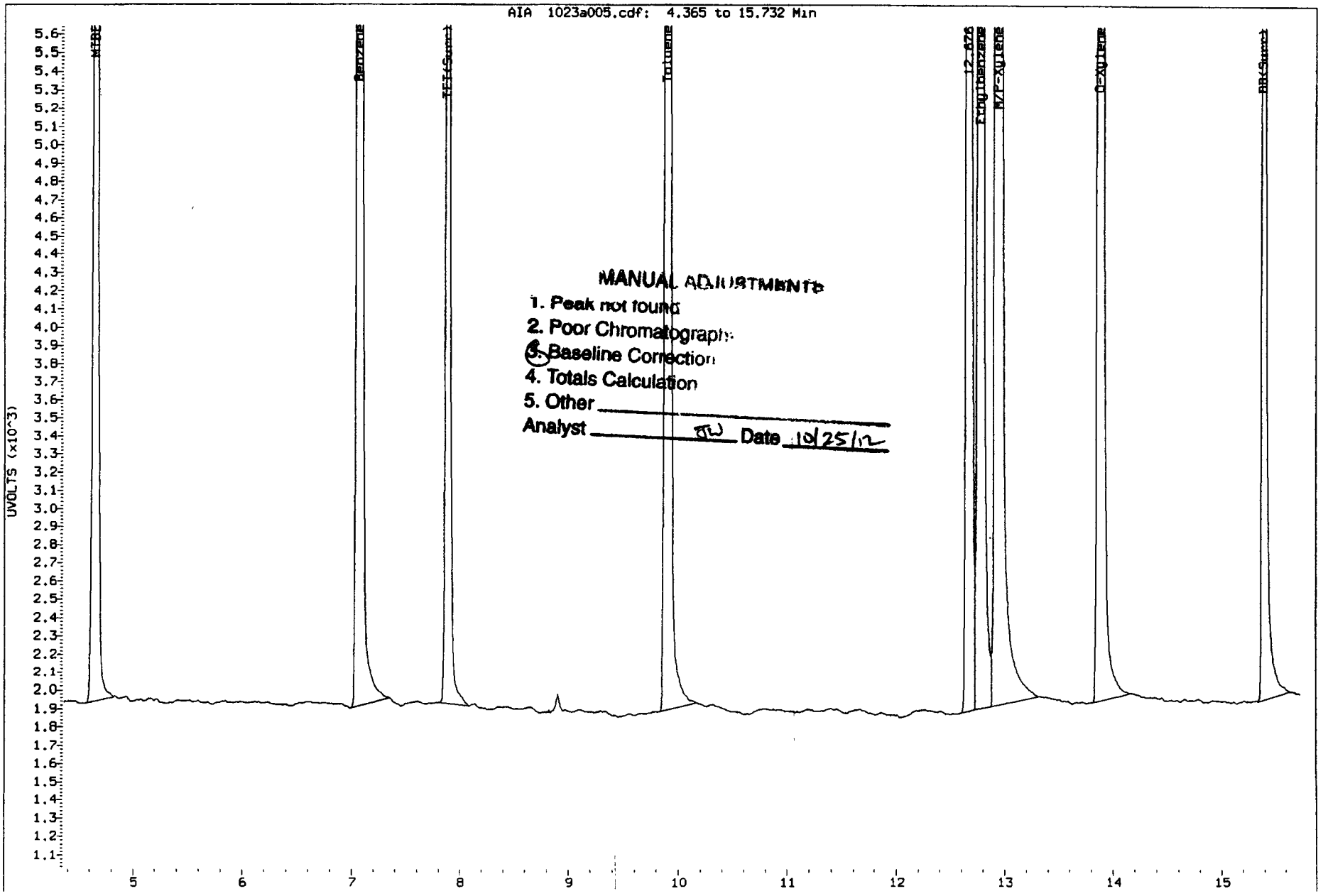
Analyst: JW Date: 10/25/12

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

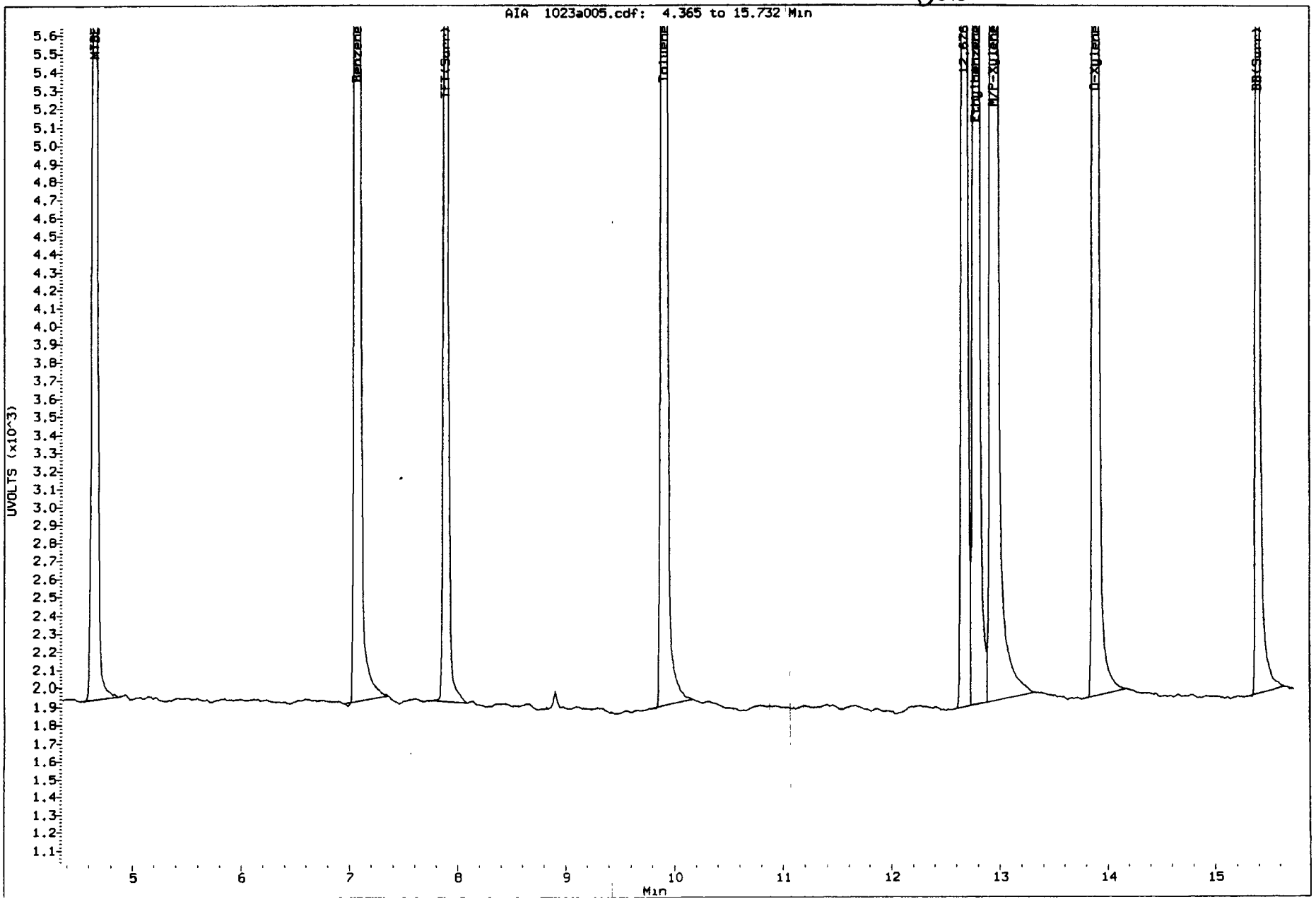


Data File: /chem3/pid1.i/20121023-2.b/1023a005.d/1023a005.cdf
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.i
Client Sample ID:



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

Indicates Peak Area was used for quantitation instead of Height
Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a006.d

Date : 23-OCT-2012 18:49

Client ID:

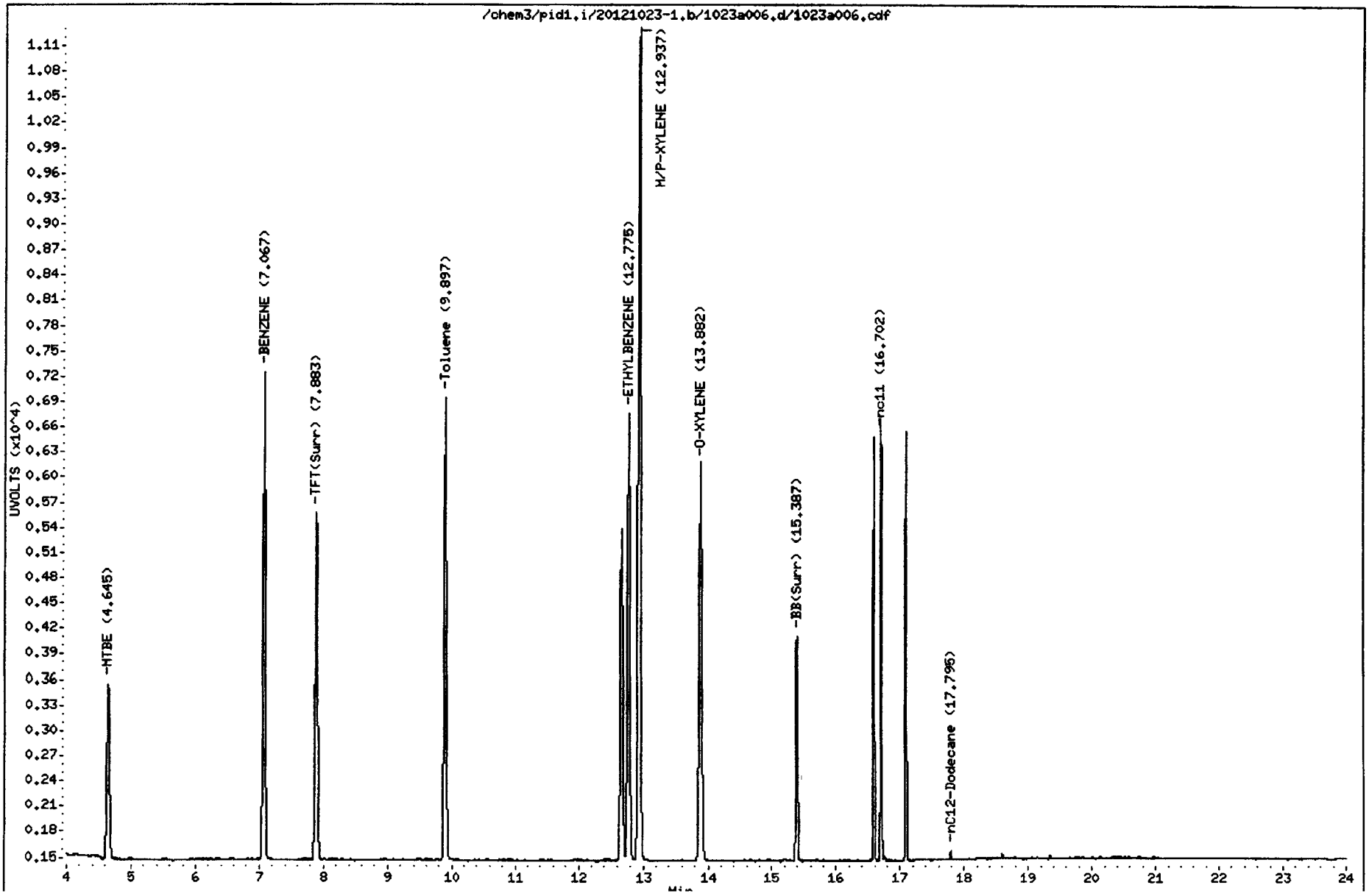
Sample Info: B 50

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:

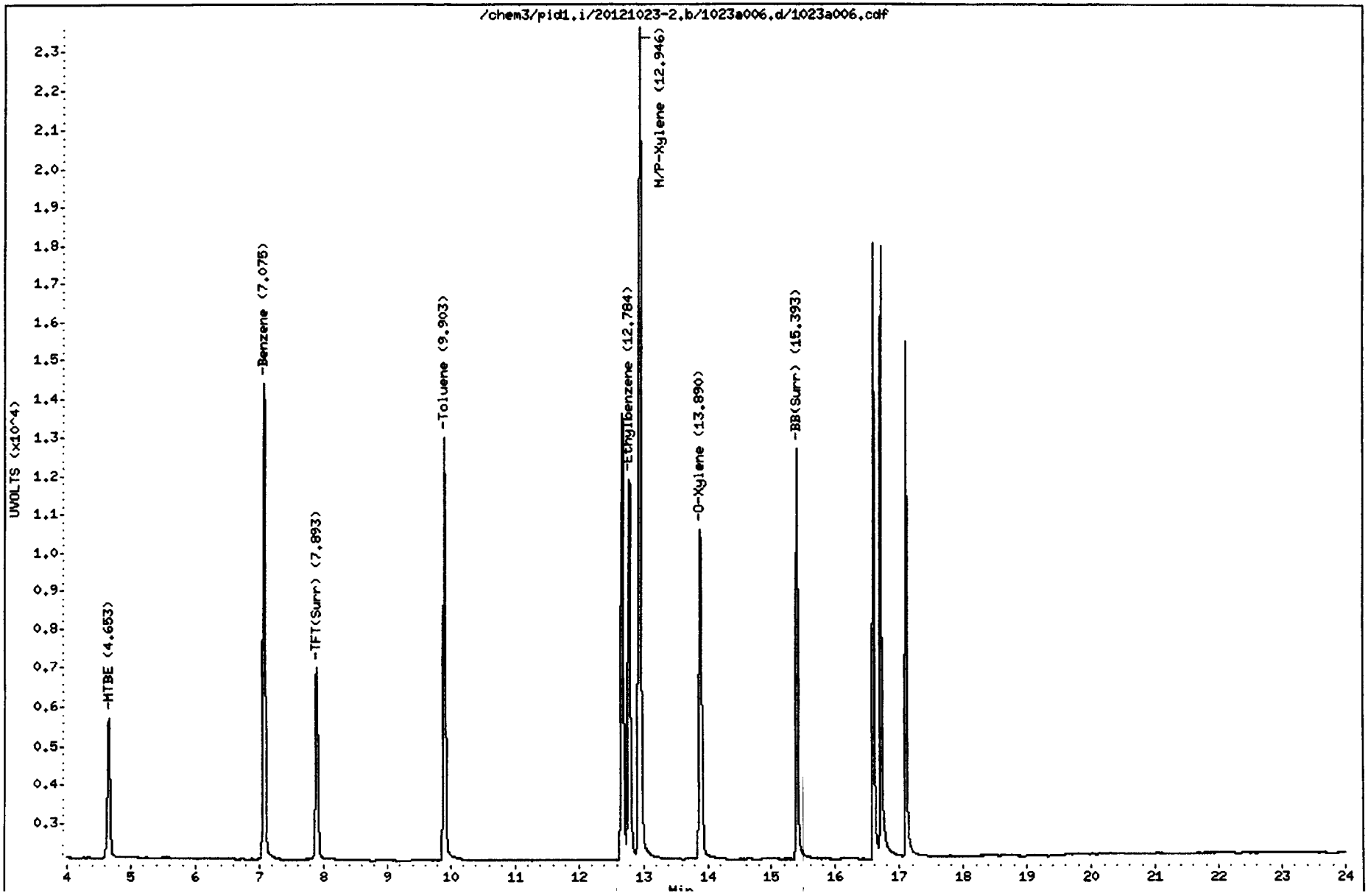
Sample Info: B 50

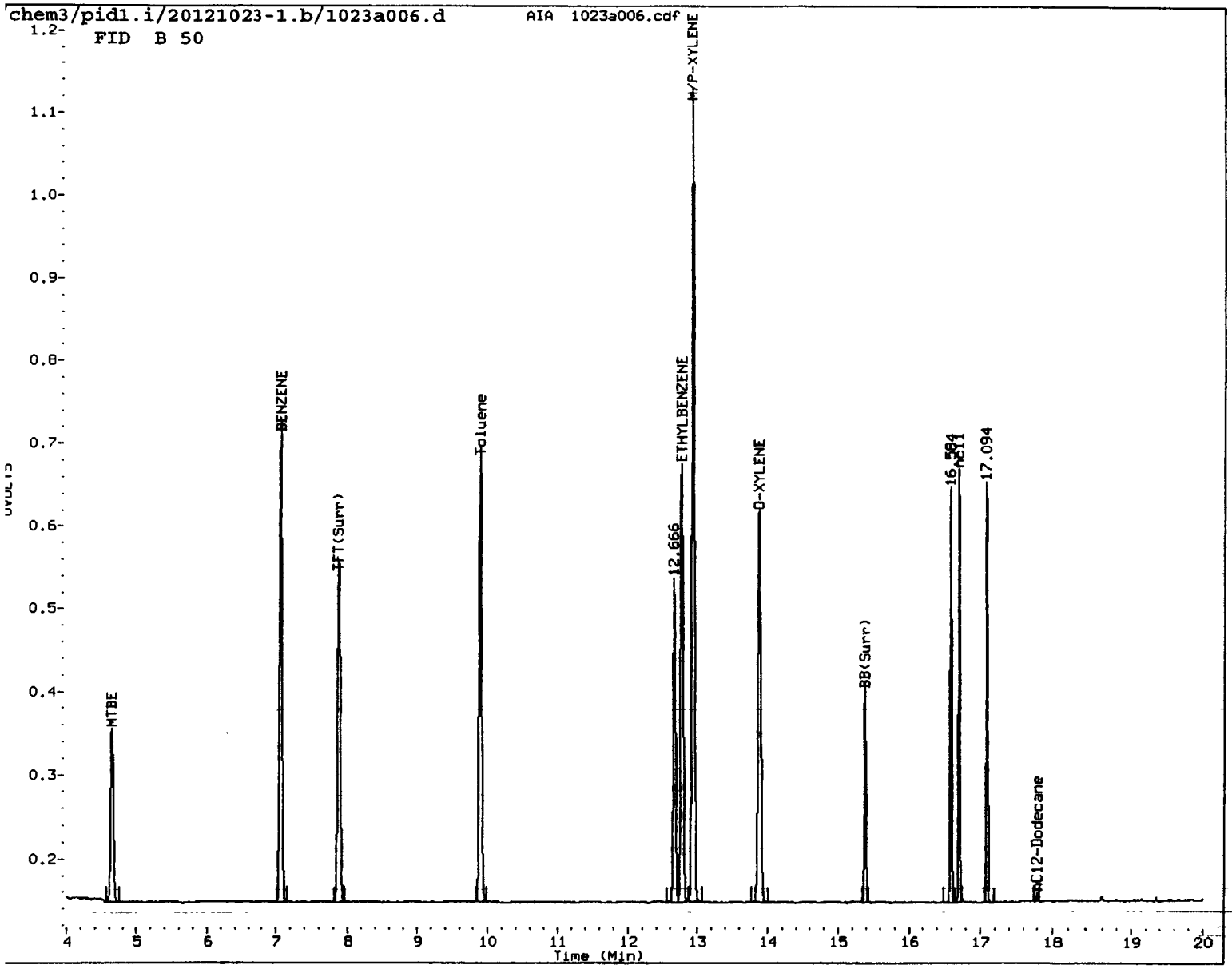
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

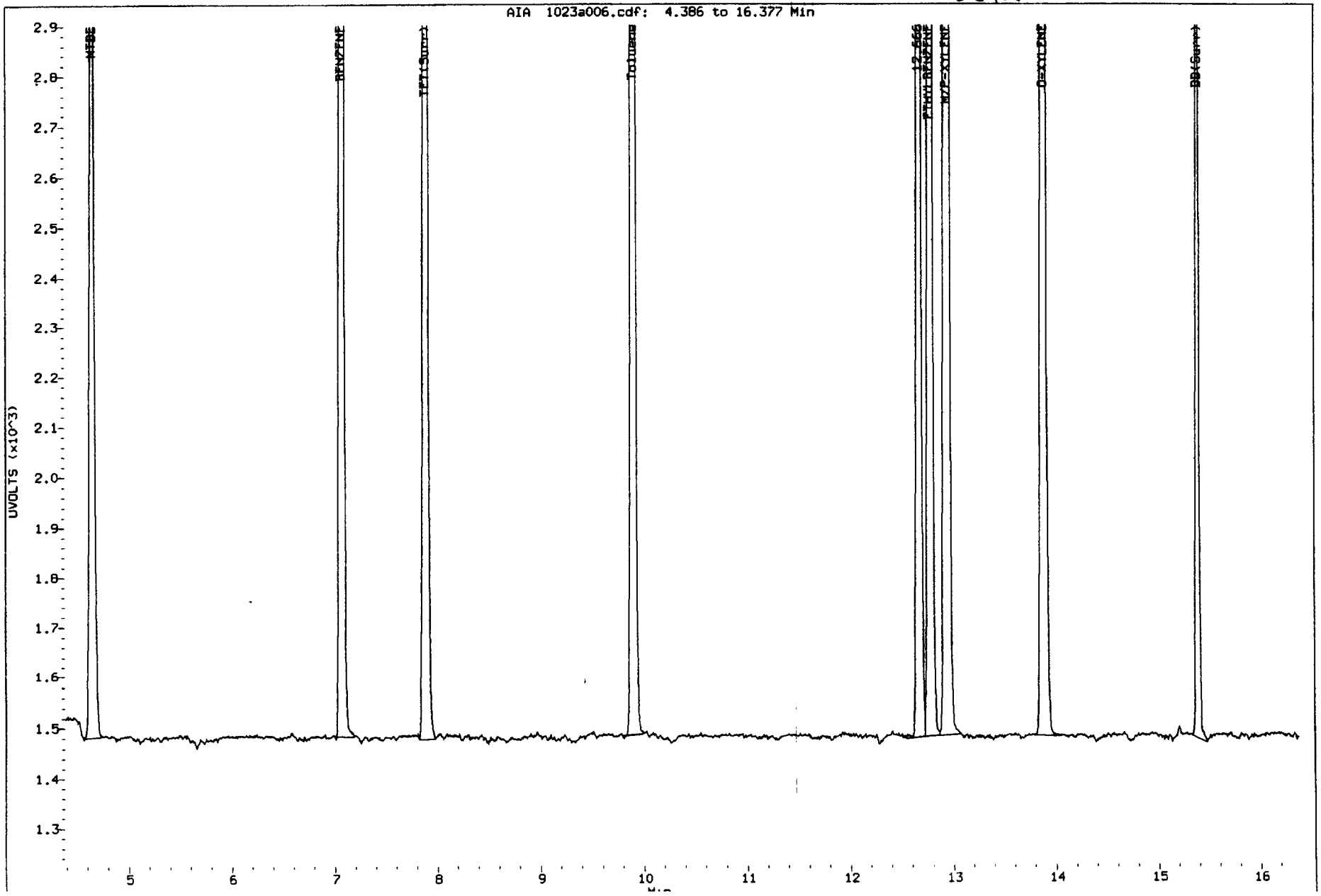
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

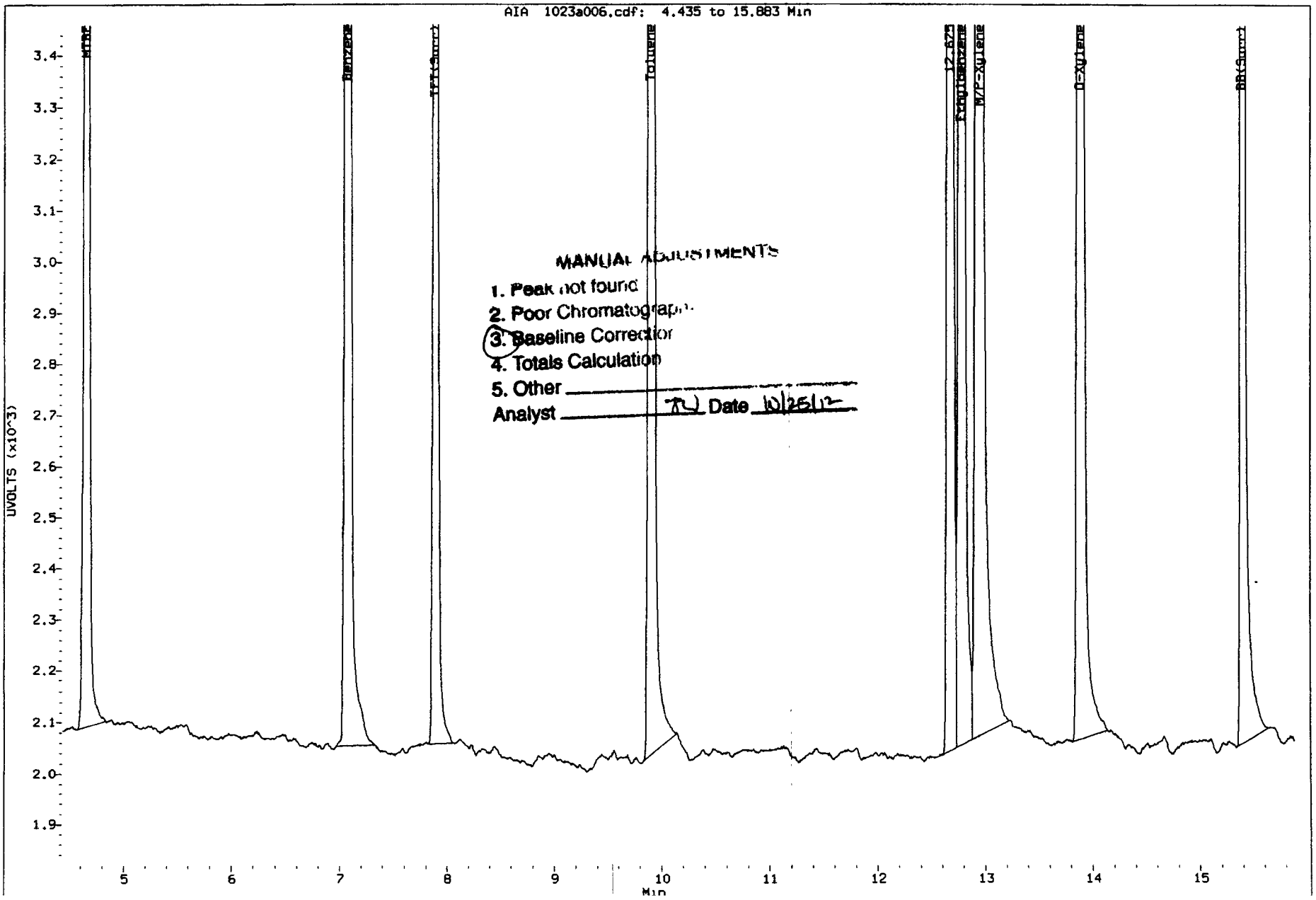
Analyst: JW Date: 10/25/12

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

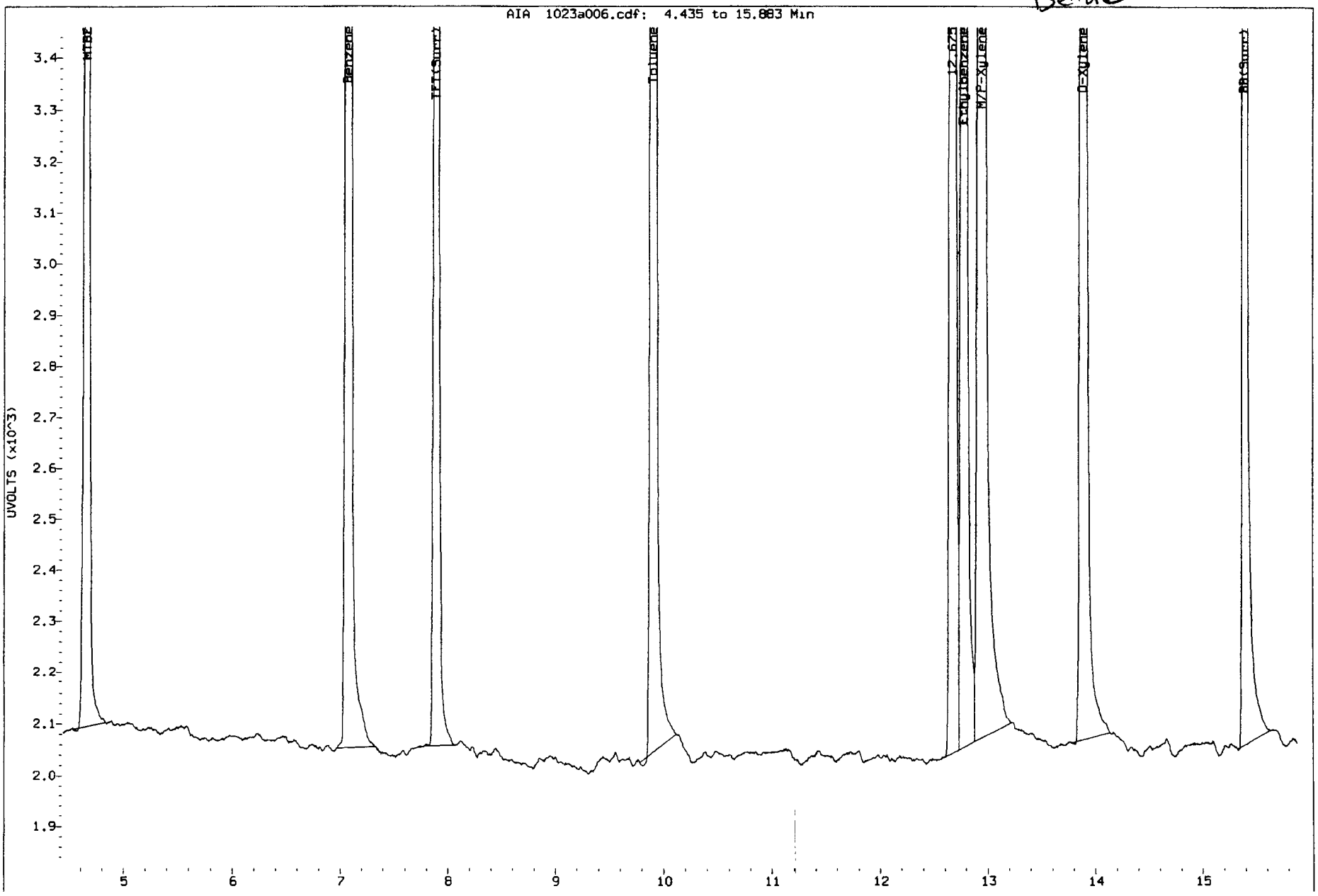


Data File: /chem3/pid1.i/20121023-2.b/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.i
Client Sample ID:



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:

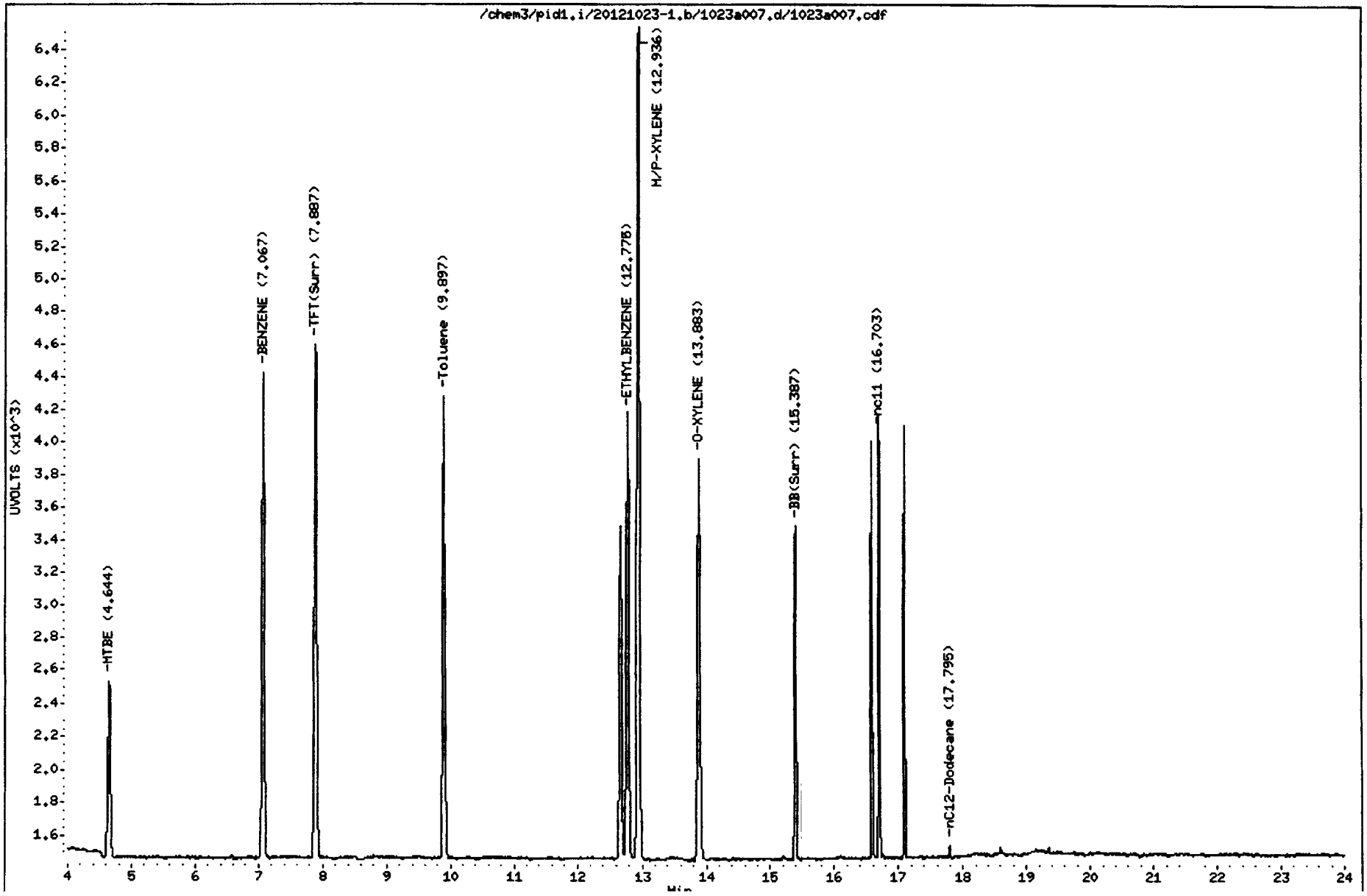
Sample Info: B 25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

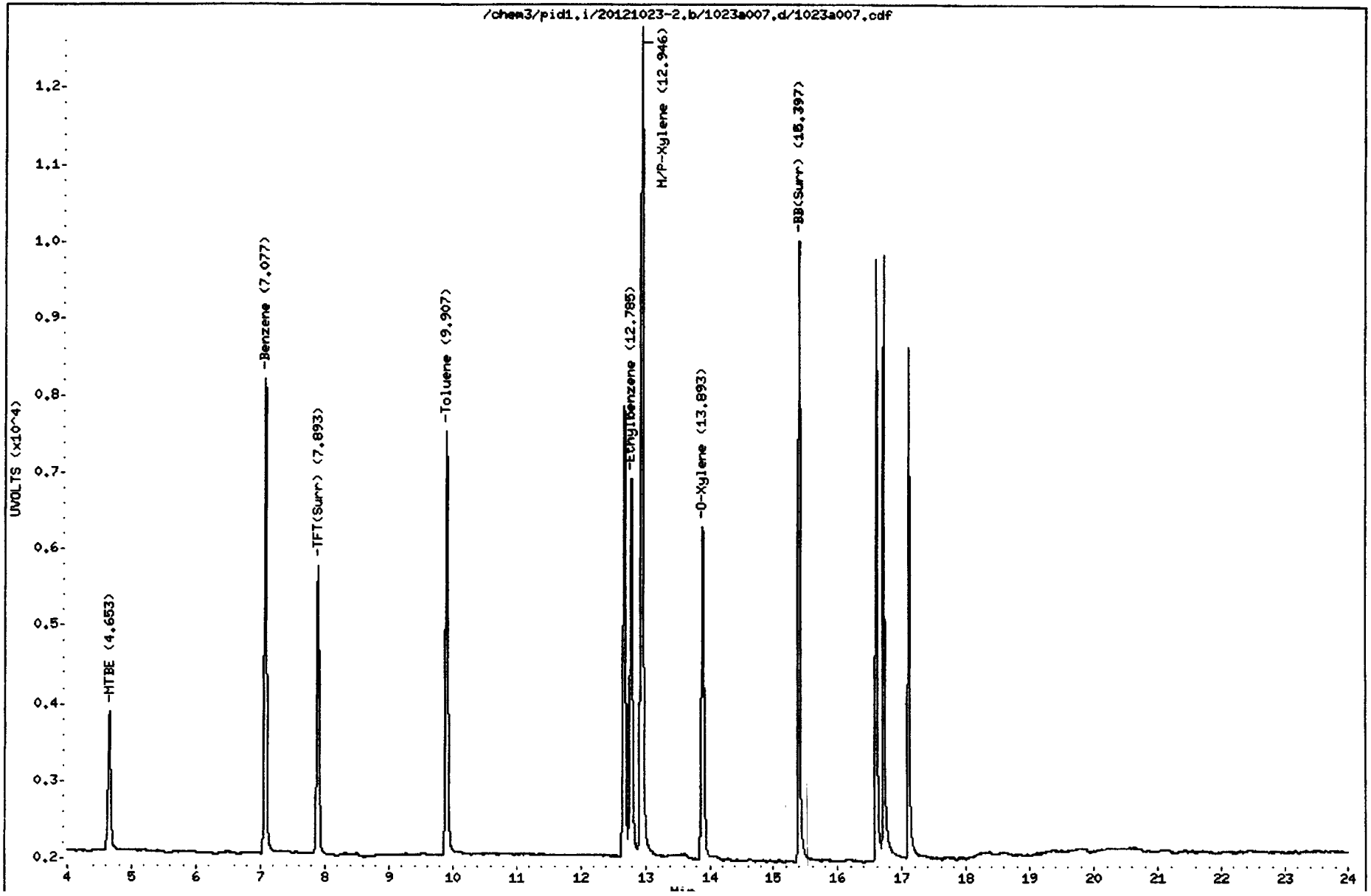


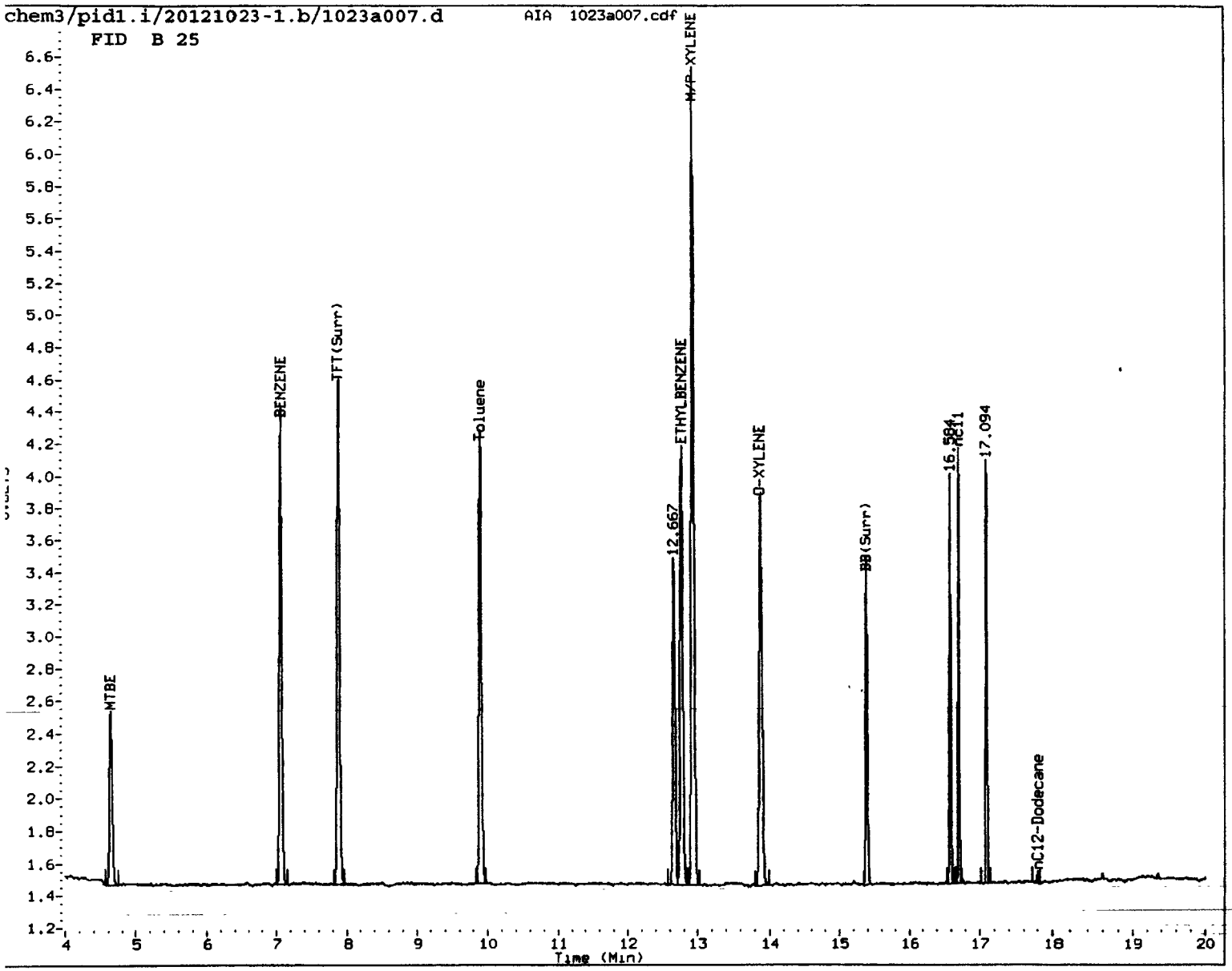
Data File: /chem3/pid1.i/20121023-2.b/1023a007.d
Date : 23-OCT-2012 19:18
Client ID:
Sample Info: B 25

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

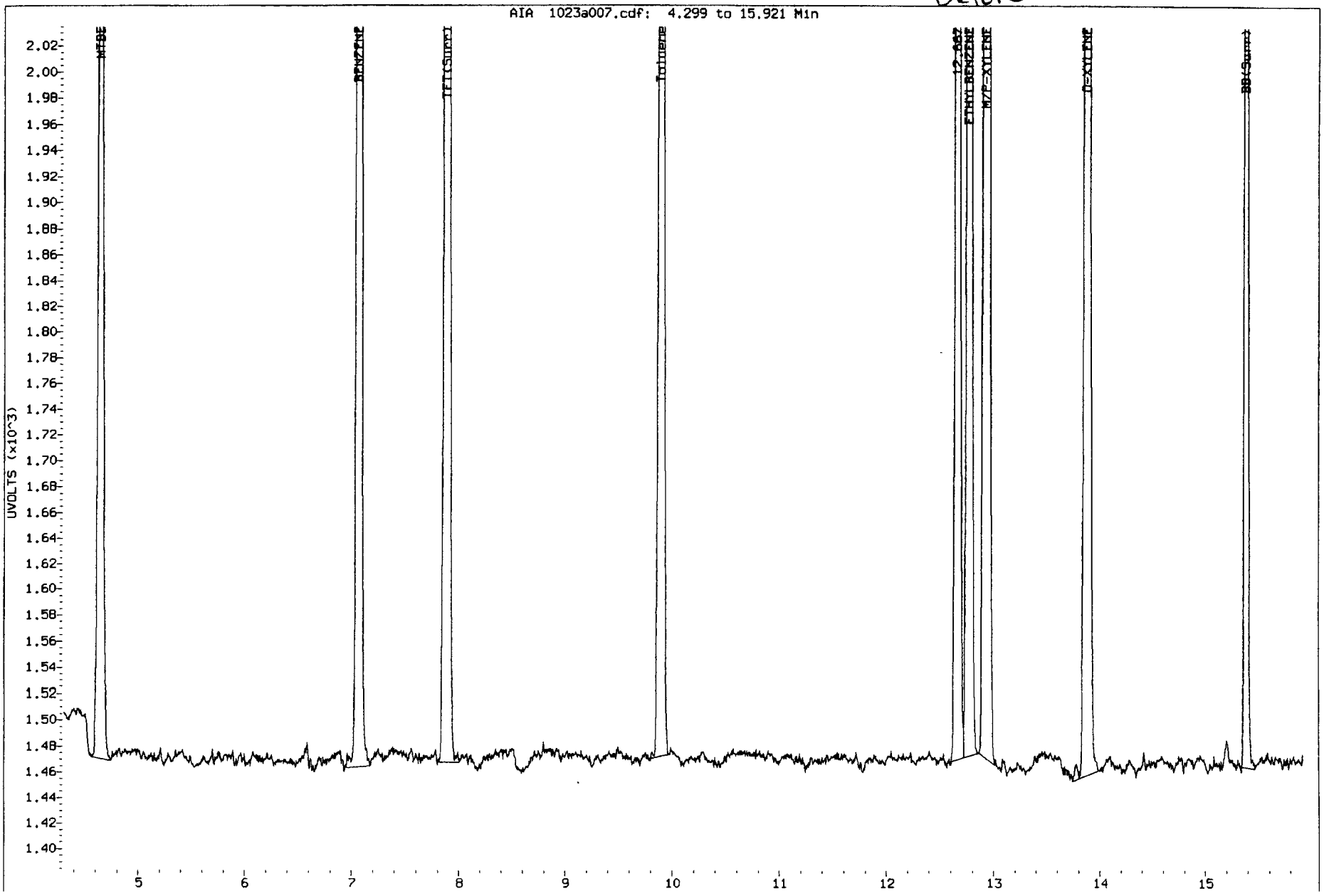
5. Other _____

Analyst: JU Date: 10/25/12

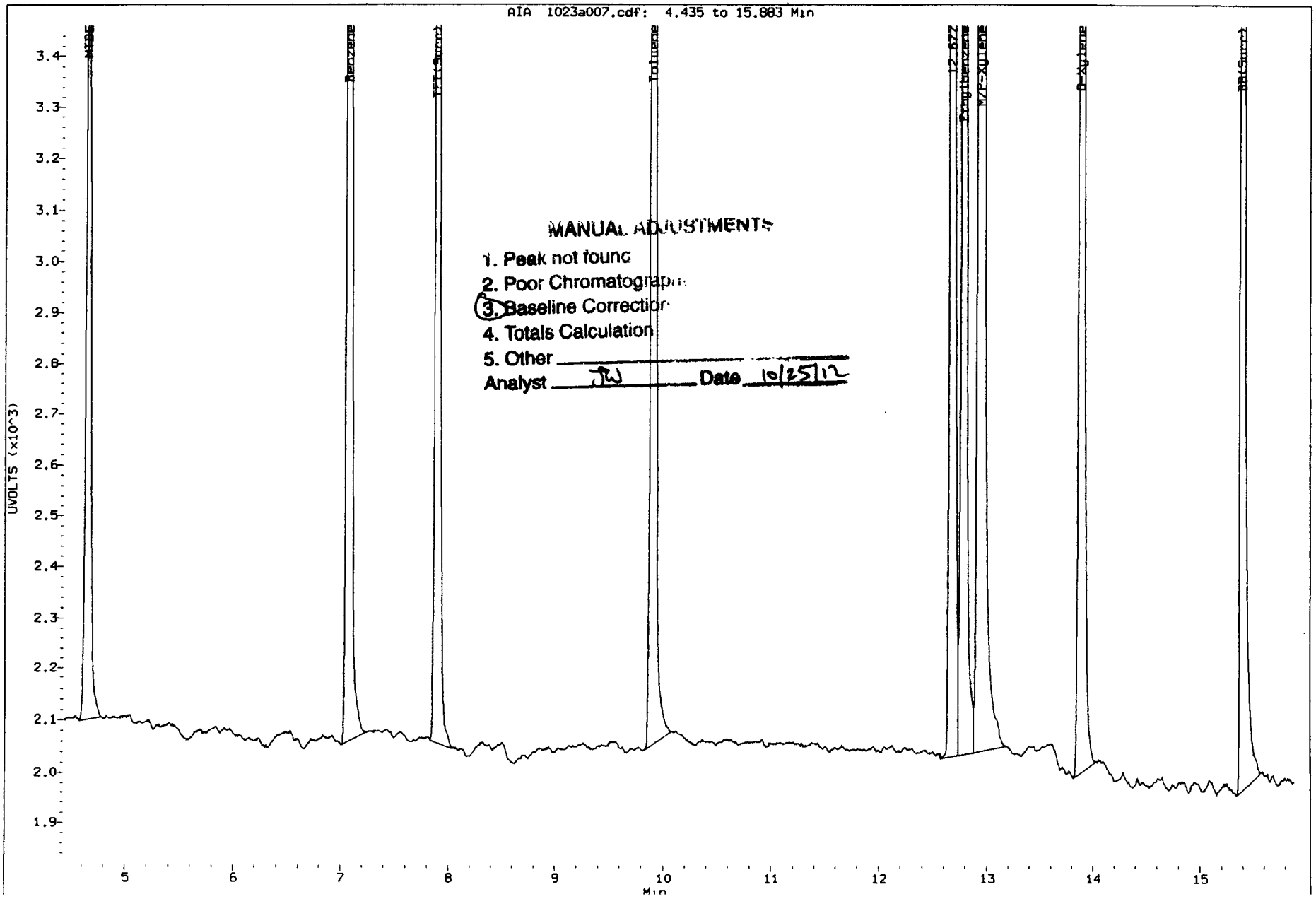
US91 : 91693

Data File: /chem3/pid1.i/20121023-1.b/1023a007.d/1023a007.cdf
Injection Date: 23-OCT-2012 19:18
Instrument: pid1.i
Client Sample ID:

Before

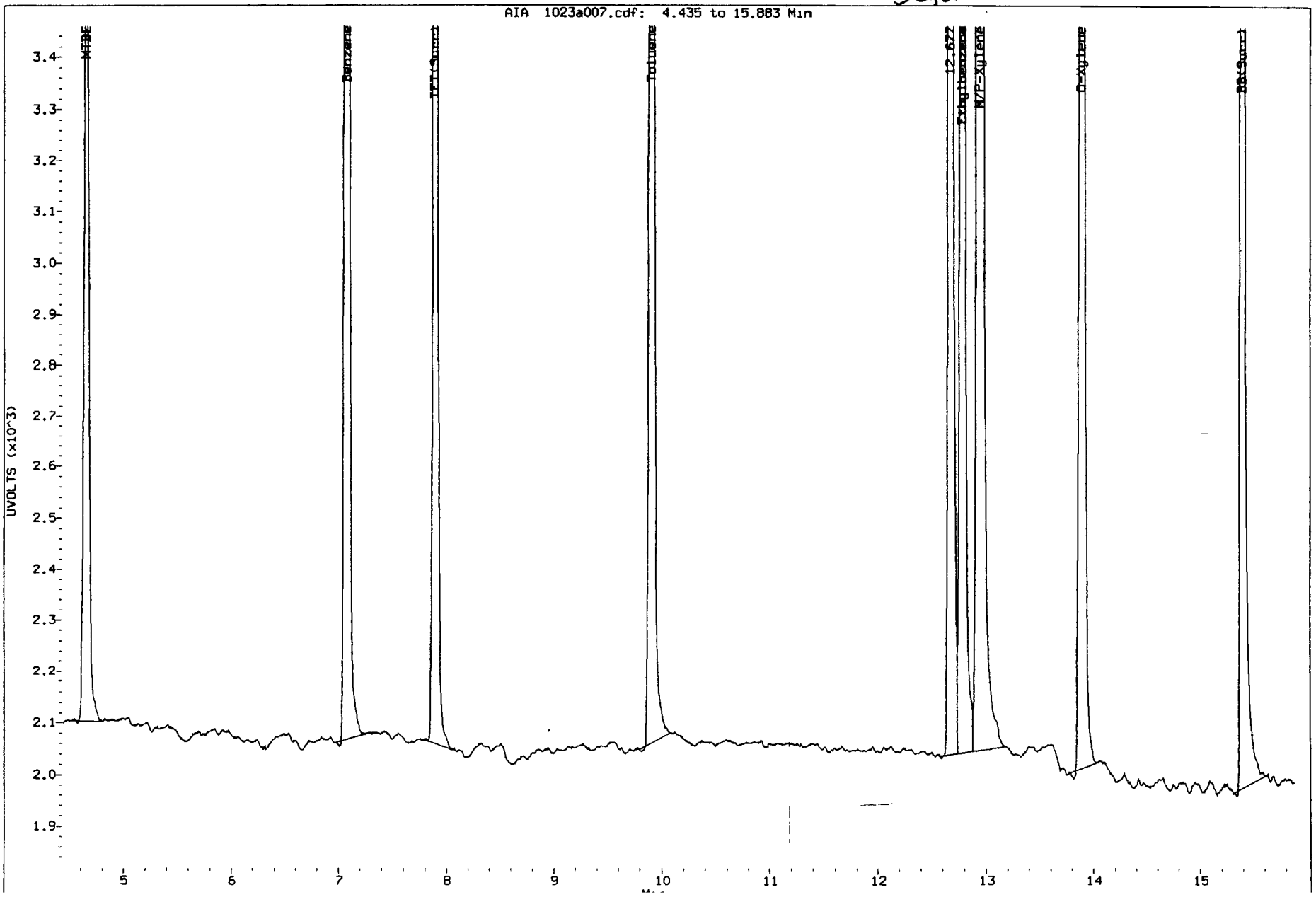


Data File: /chem3/pid1.i/20121023-2.b/1023a007.d/1023a007.cdf
Injection Date: 23-OCT-2012 19:18
Instrument: pid1.i
Client Sample ID:



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

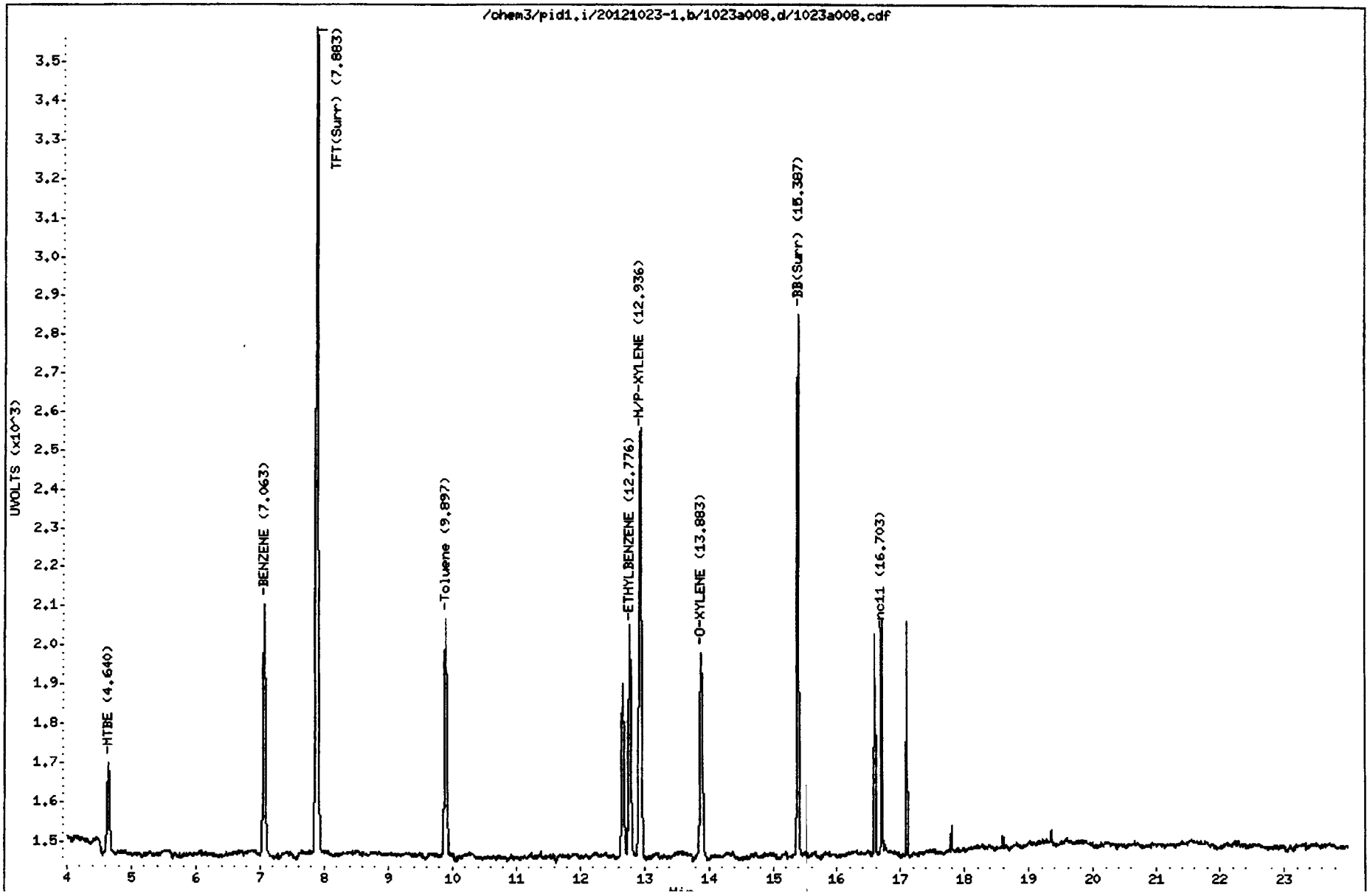
, Indicates Peak Area was used for quantitation instead of Height
I Indicates peak was manually integrated

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:

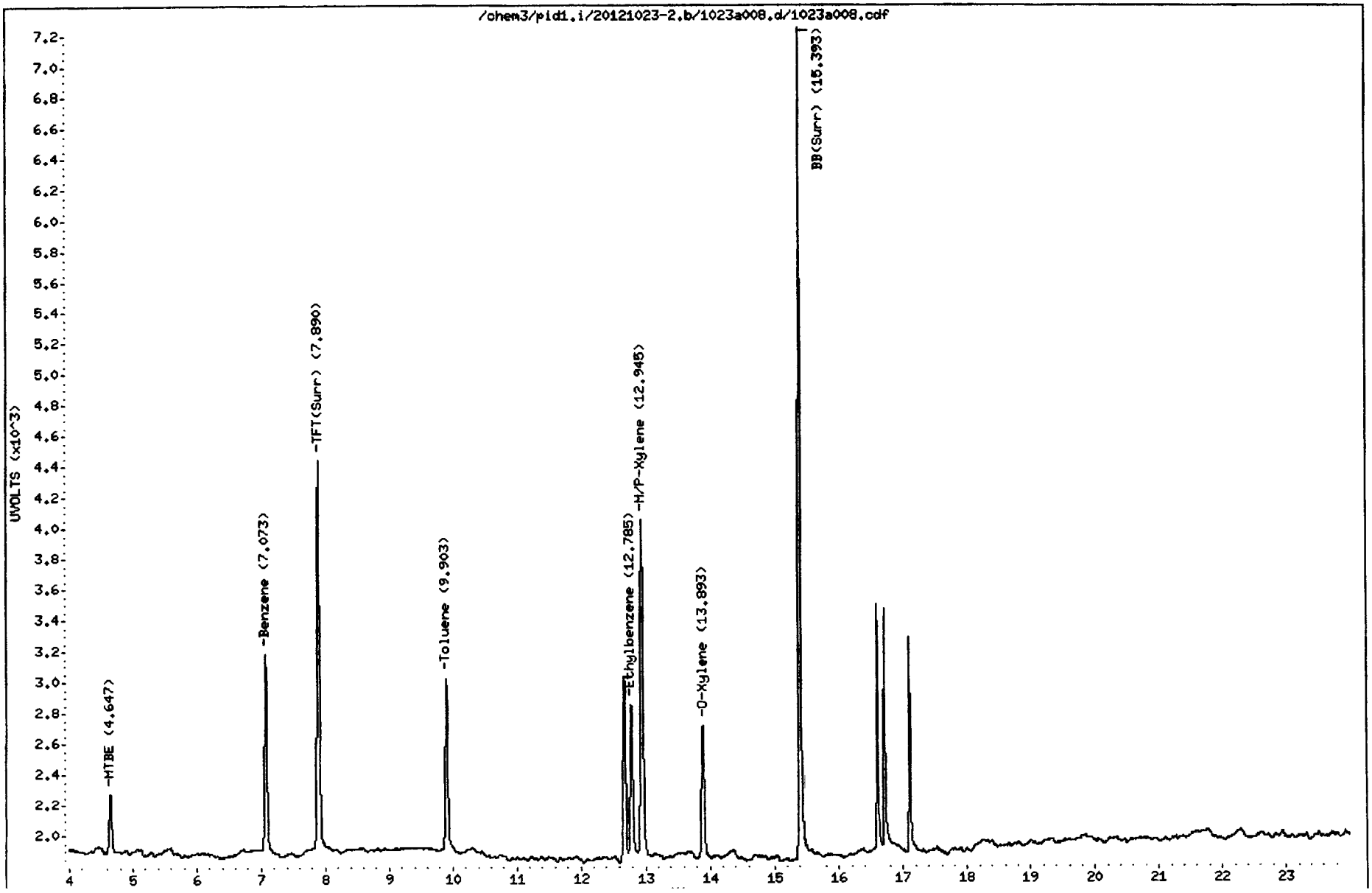
Sample Info: B 5

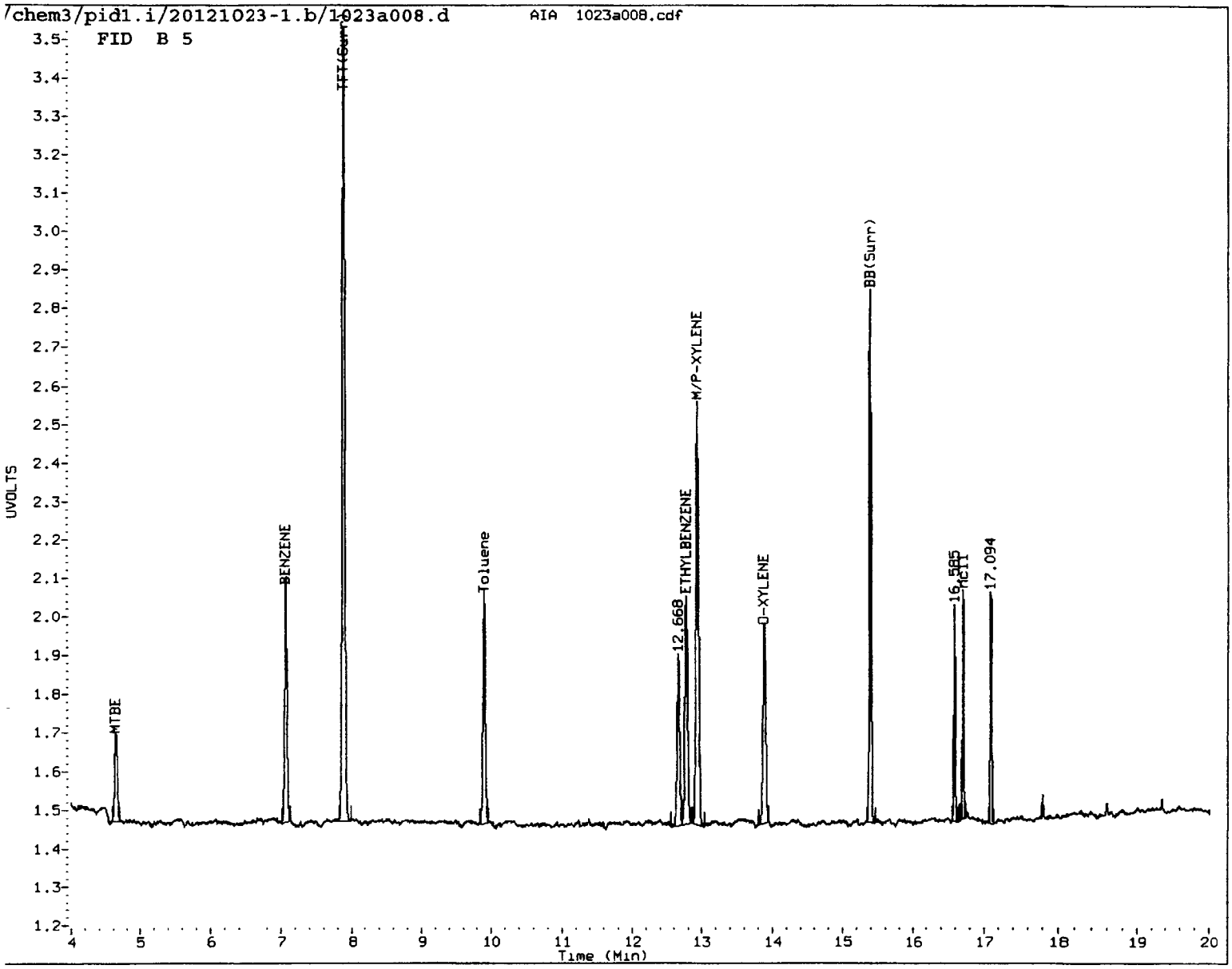
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JH

Column diameter: 0.18





MANUAL INTEGRATION

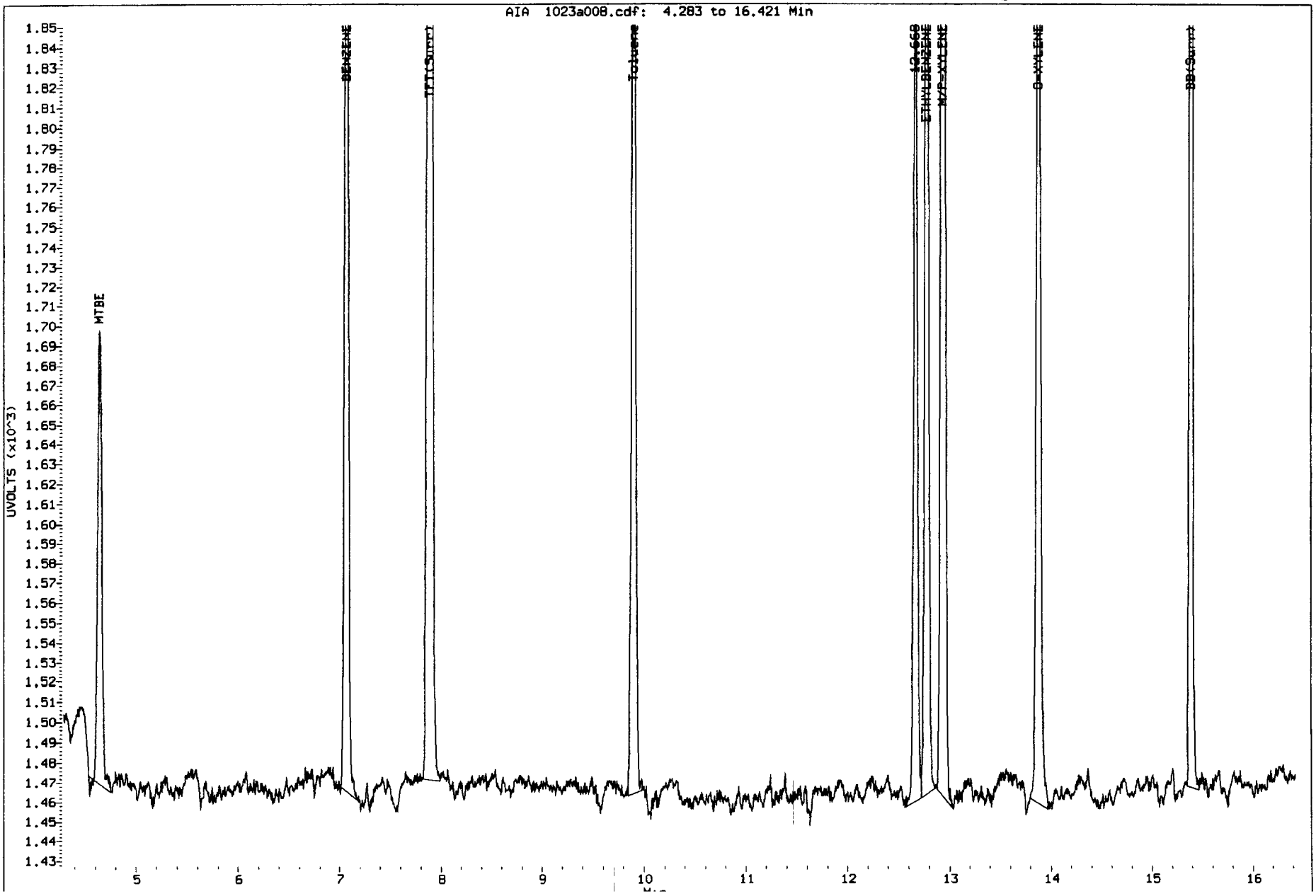
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

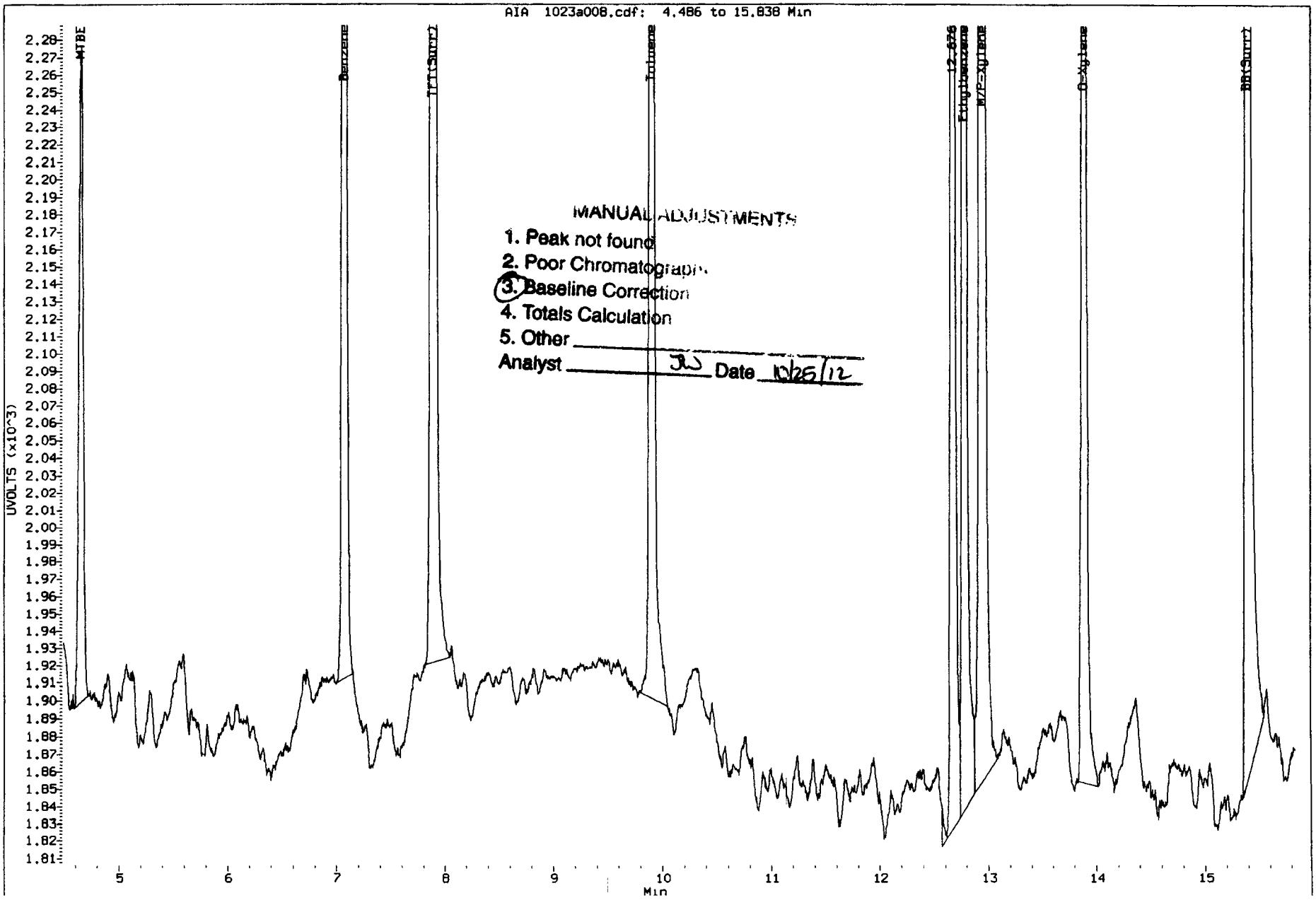
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a008.d/1023a008.cdf
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.i
Client Sample ID:

Before

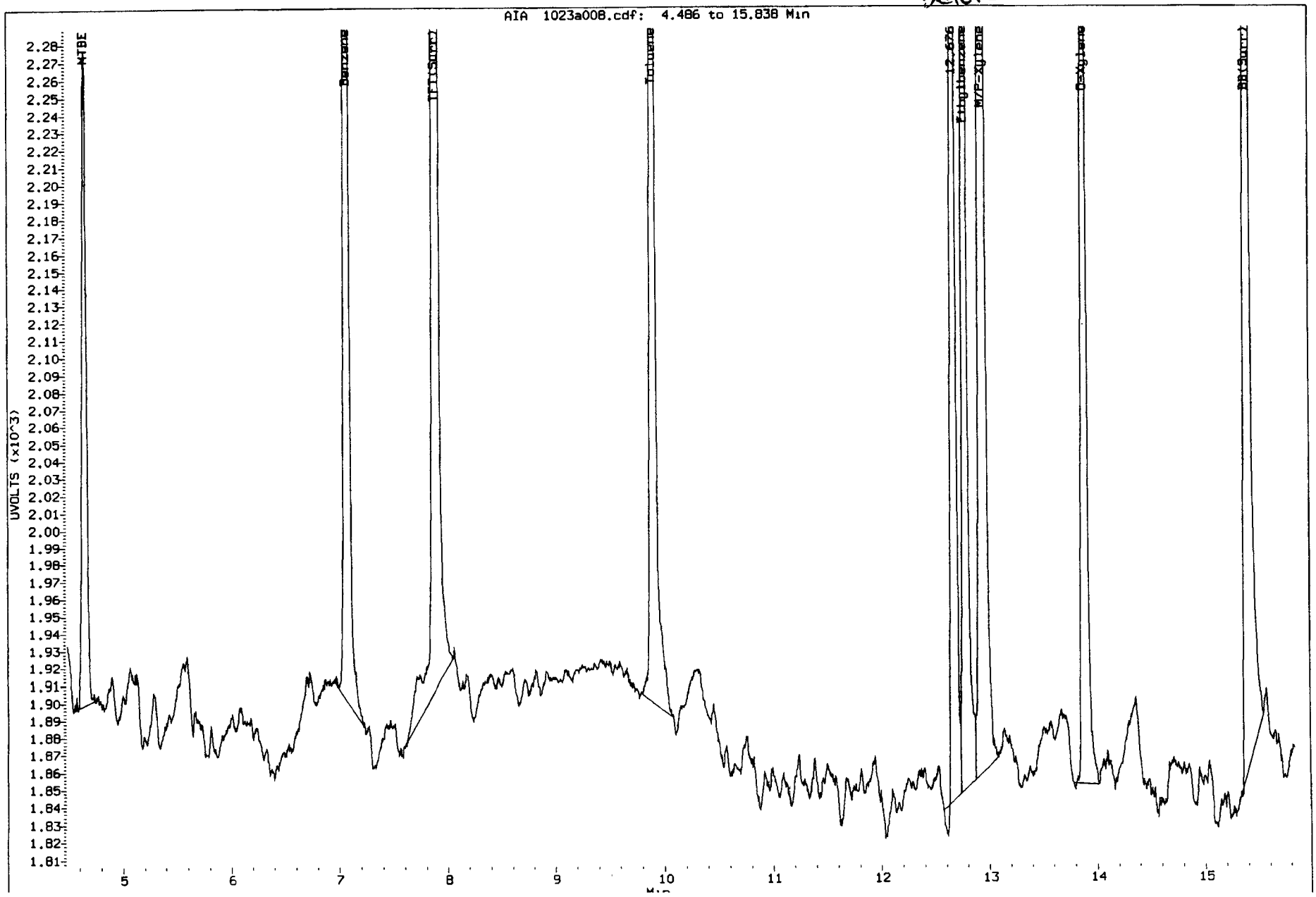


Data File: /chem3/pid1.i/20121023-2.b/1023a008.d/1023a008.cdf
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.i
Client Sample ID:



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:

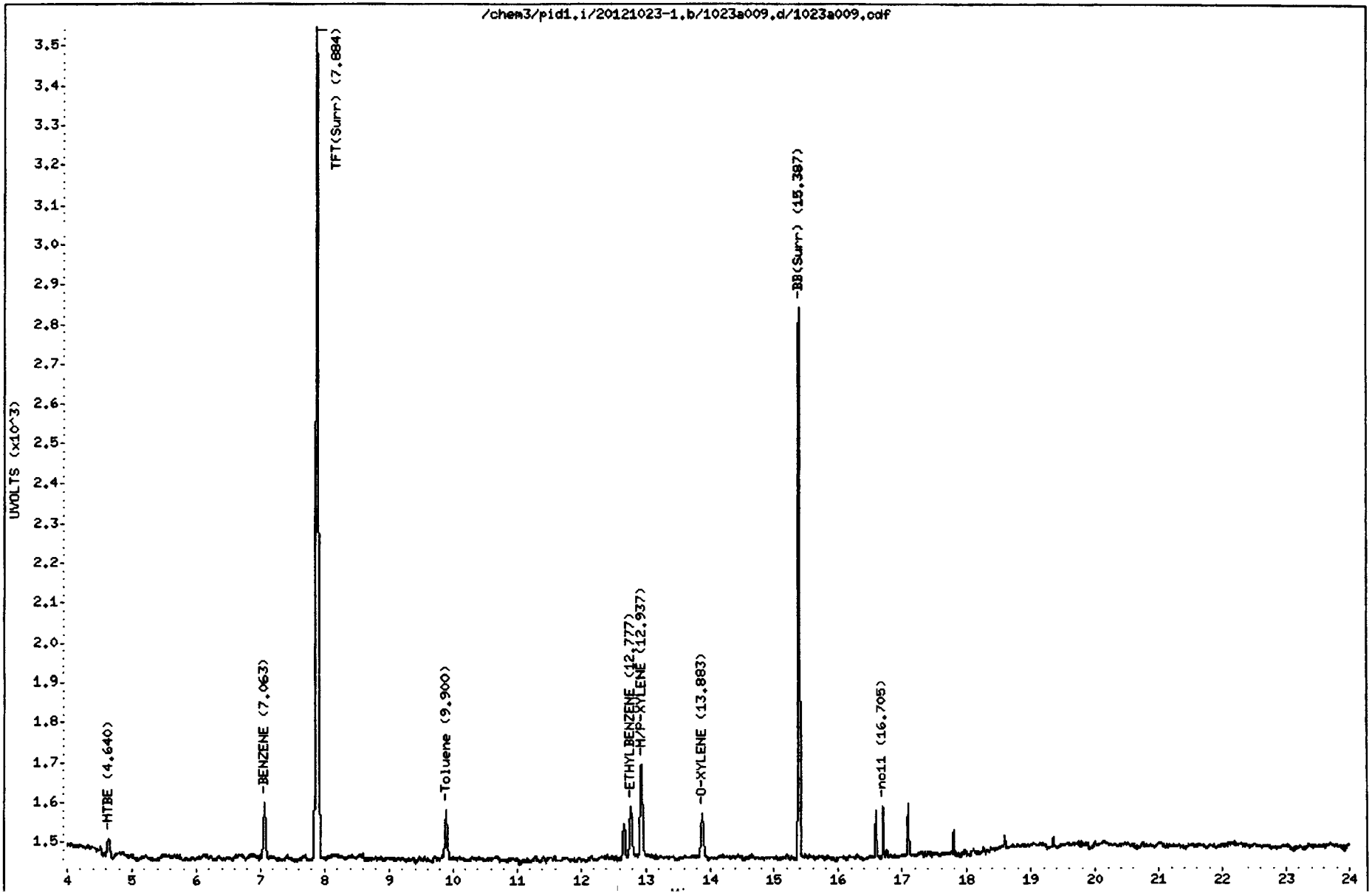
Sample Info: B 1

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

Date : 23-OCT-2012 20:16

Client ID:

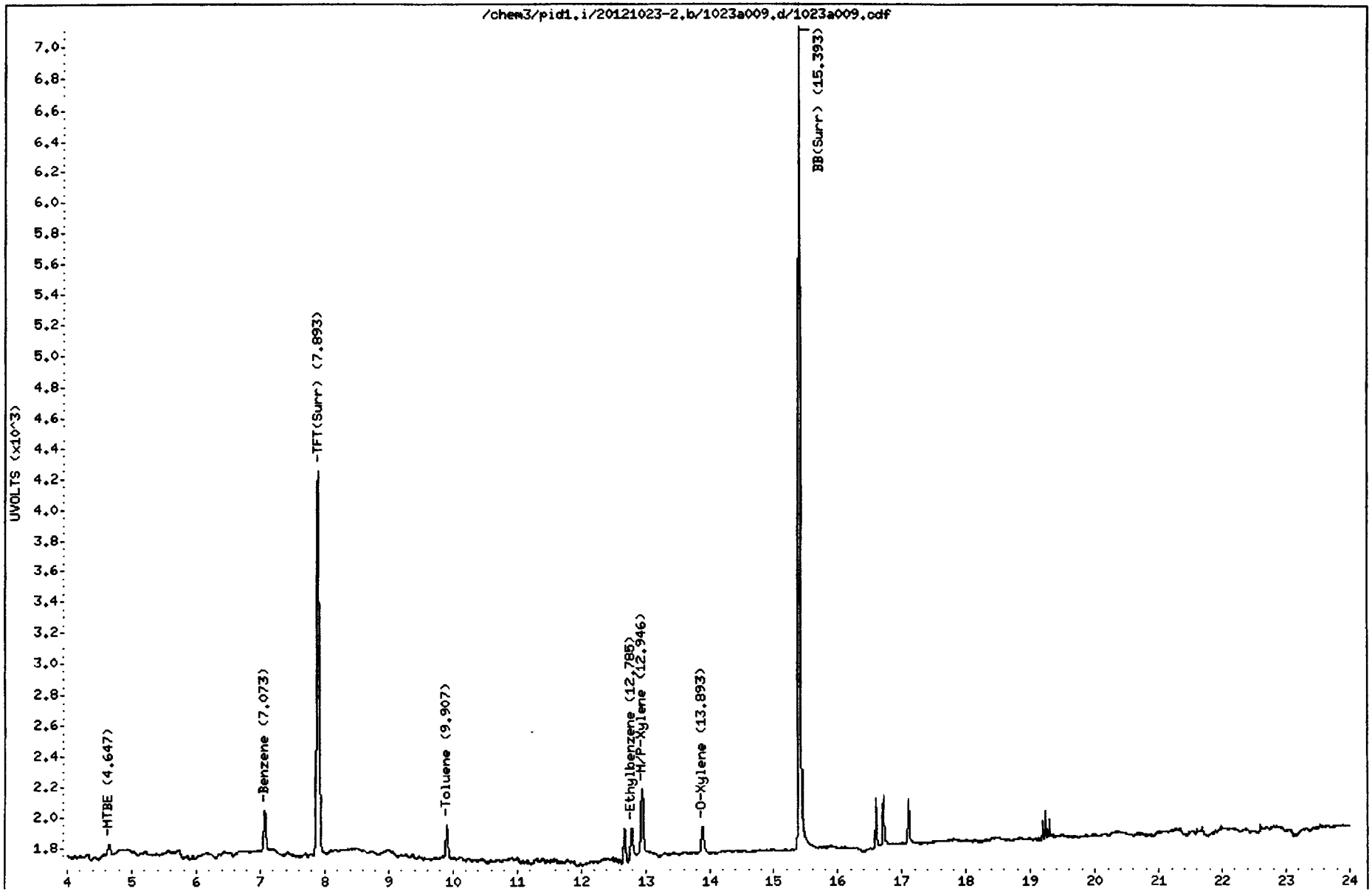
Sample Info: B 1

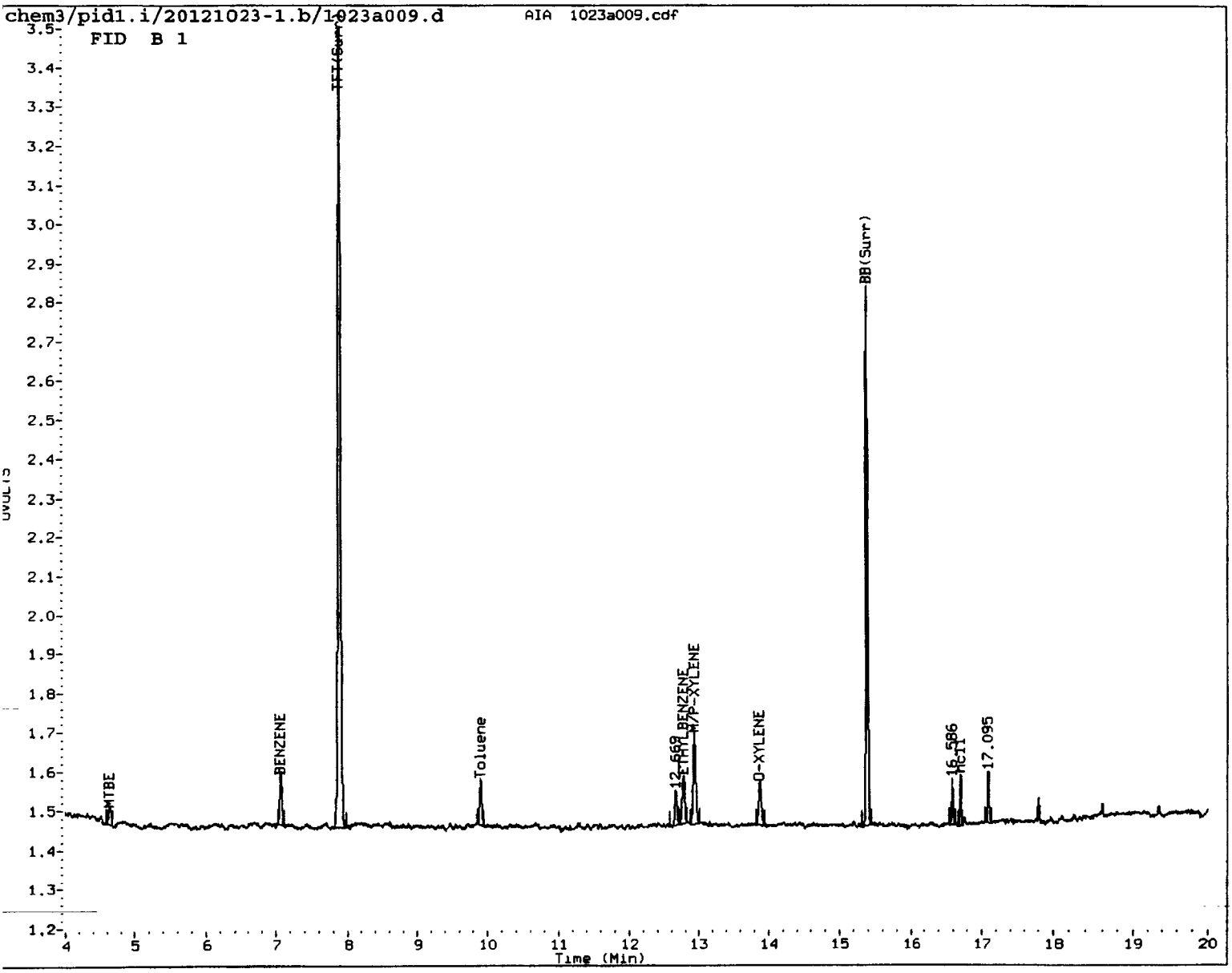
Column phase: RTX 502-2 PID

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

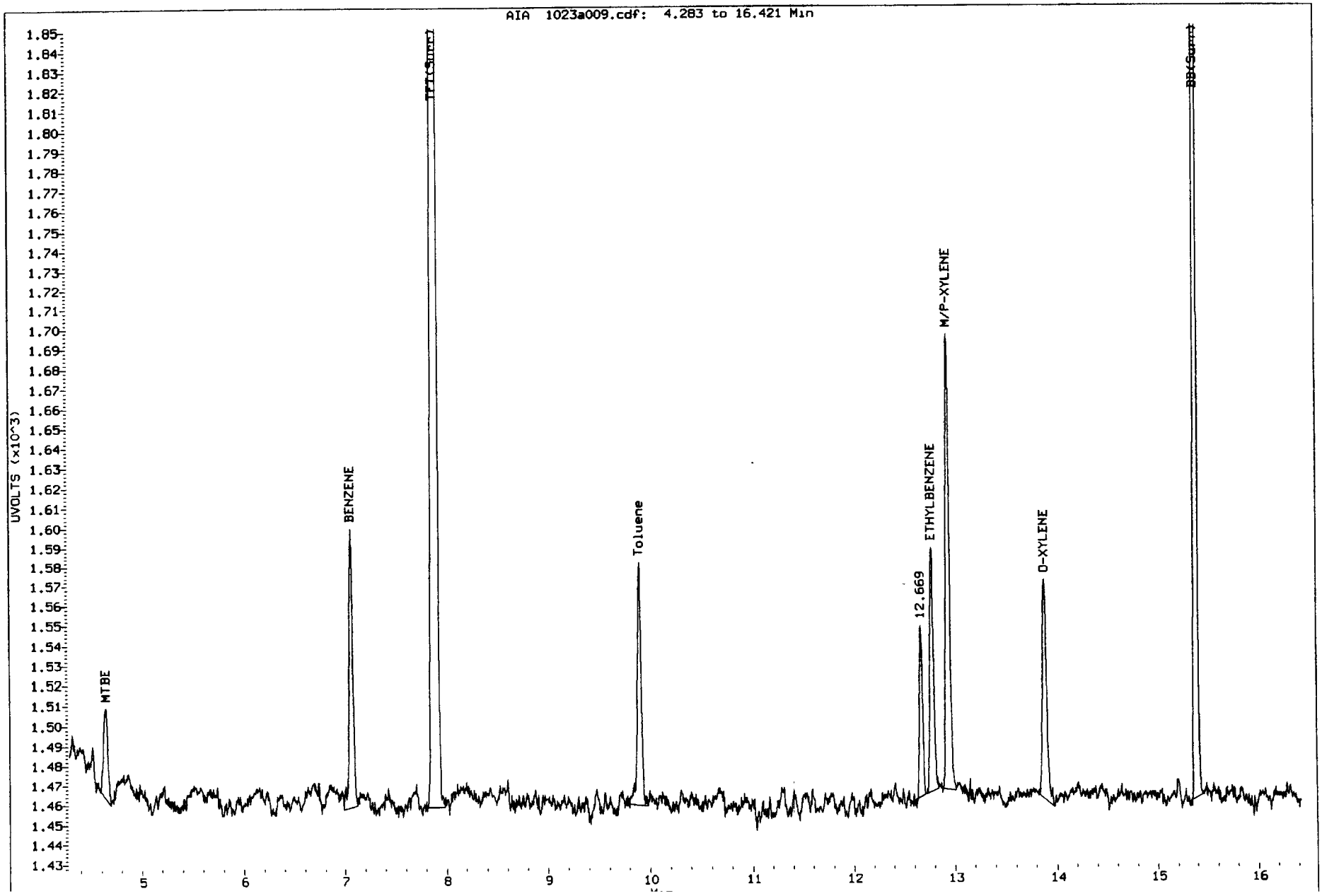
5. Other _____

Analyst: JW Date: 10/25/12

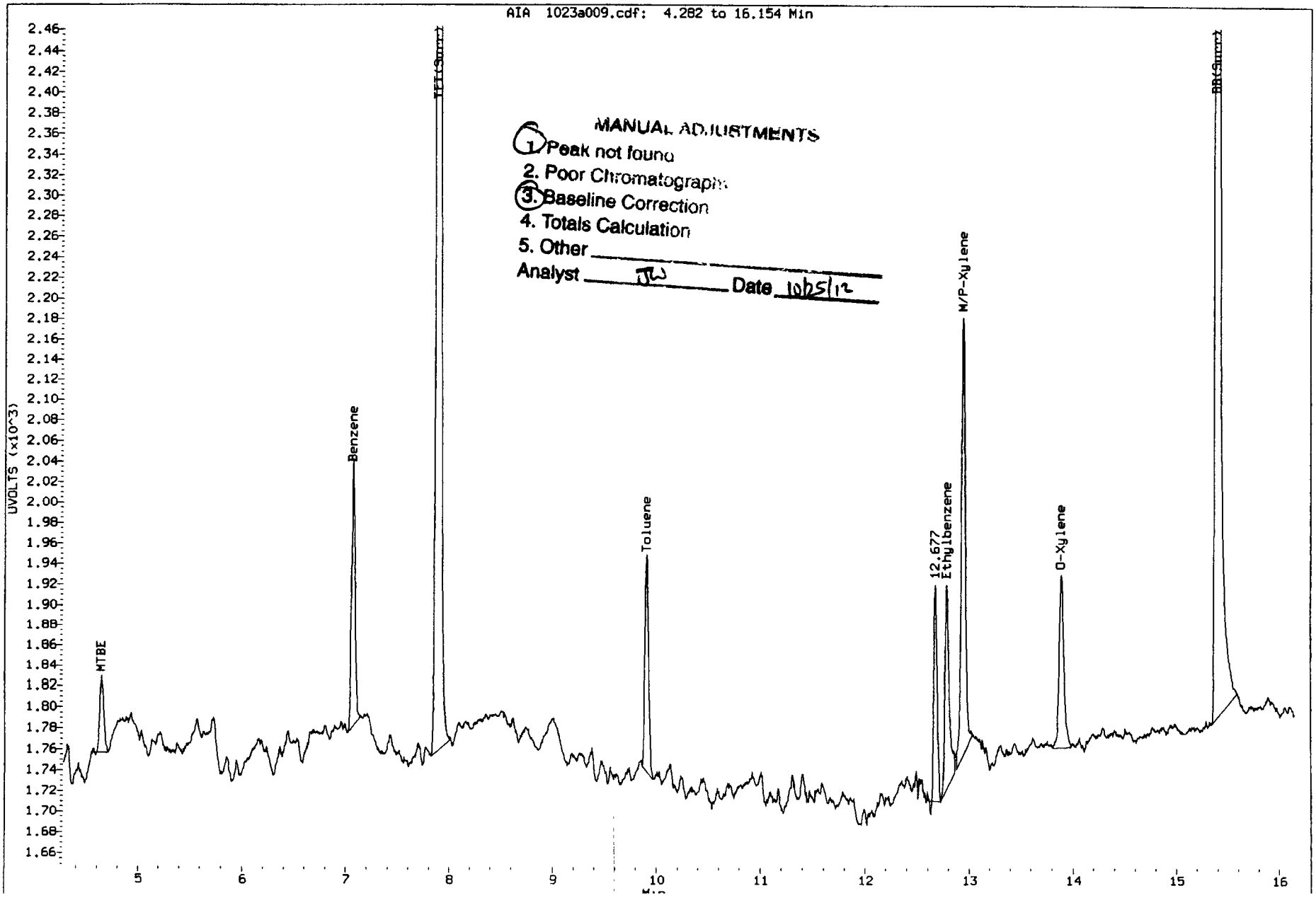
WS91 01617

Data File: /chem3/pid1.1/20121023-1.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.1
Client Sample ID:

Before

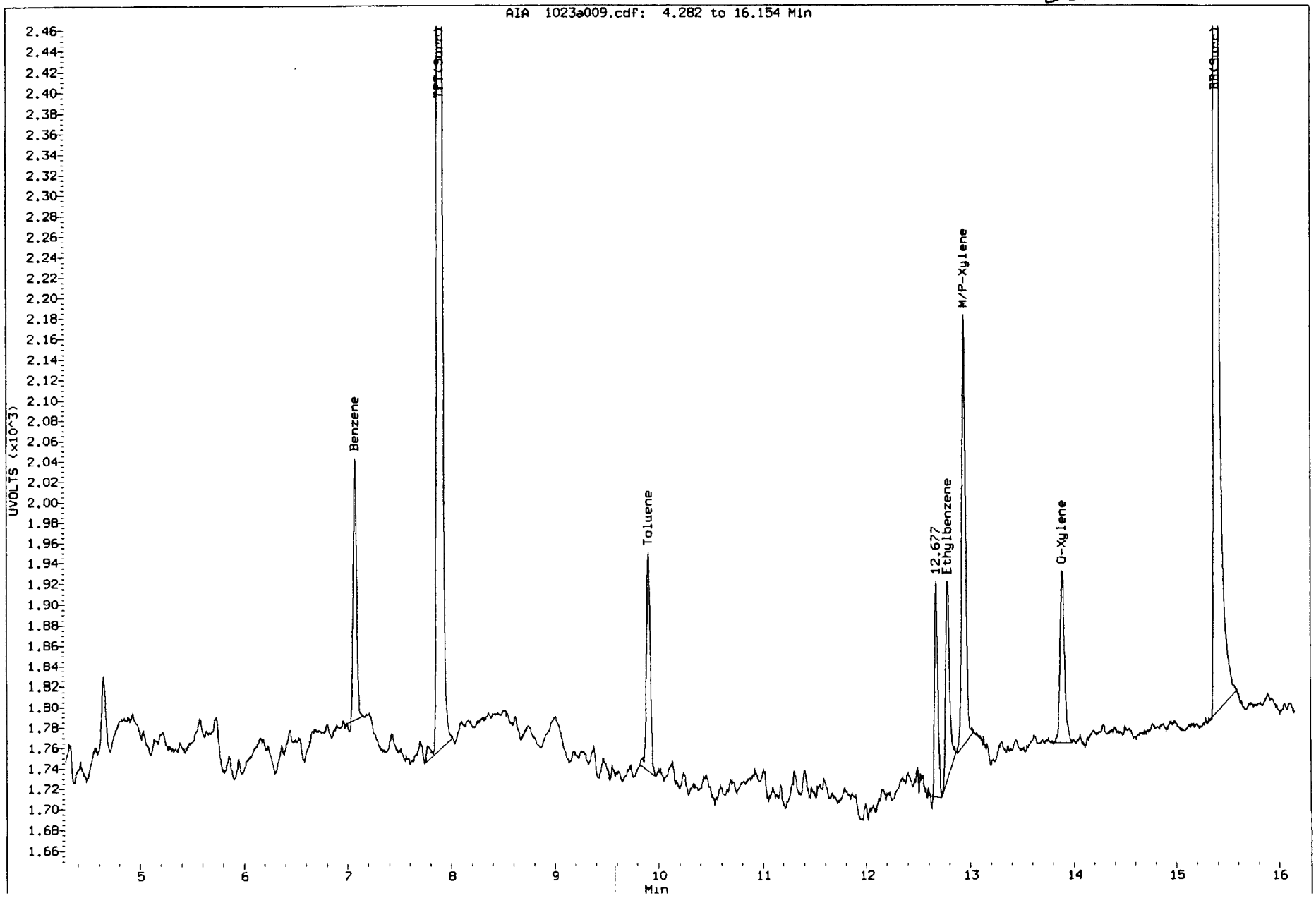


Data File: /chem3/pid1.1/20121023-2.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.1
Client Sample ID:



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

Indicates Peak Area was used for quantitation instead of Height
Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a010.d

Date : 23-OCT-2012 20:45

Client ID:

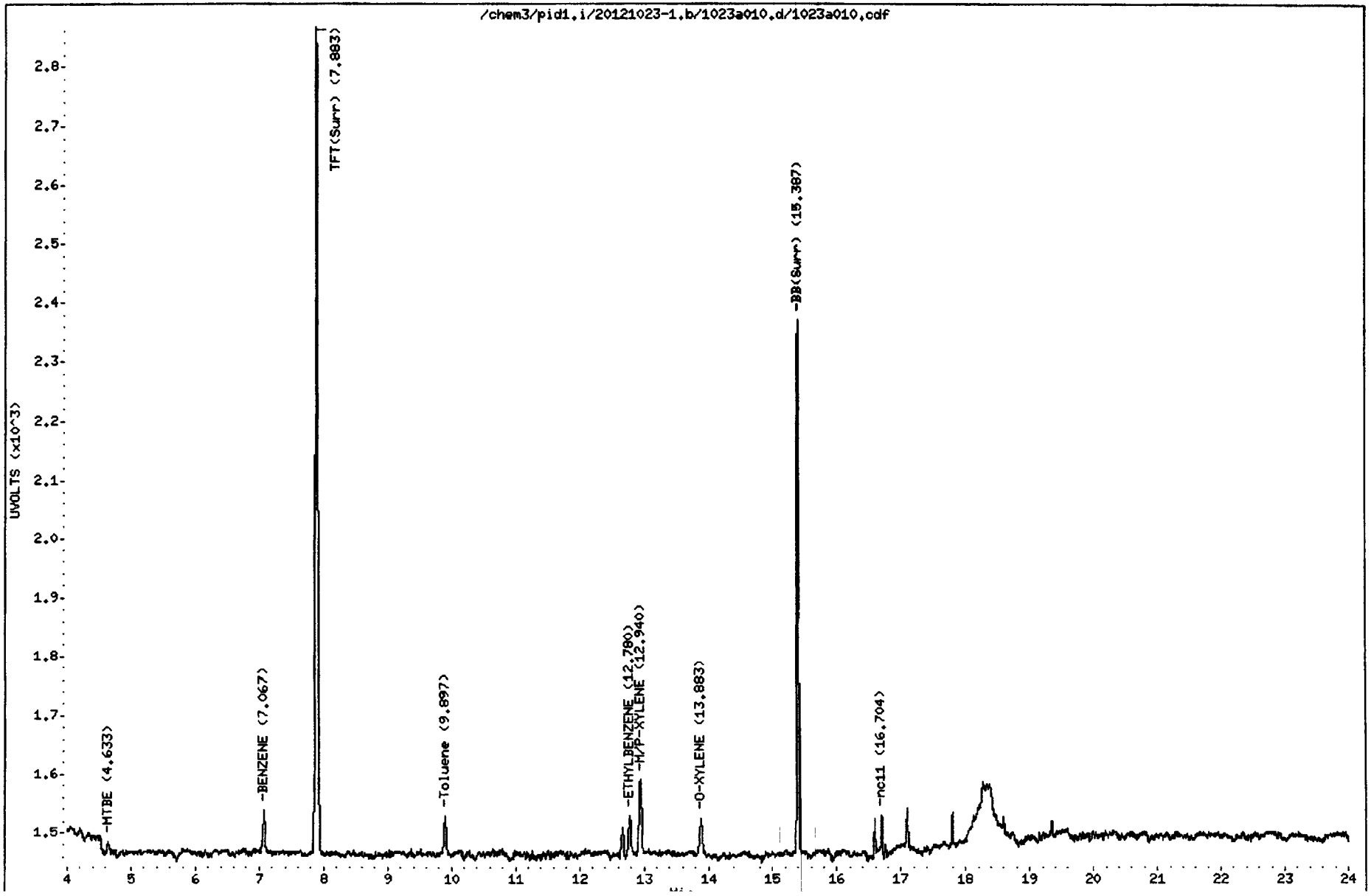
Sample Info: B 0.5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

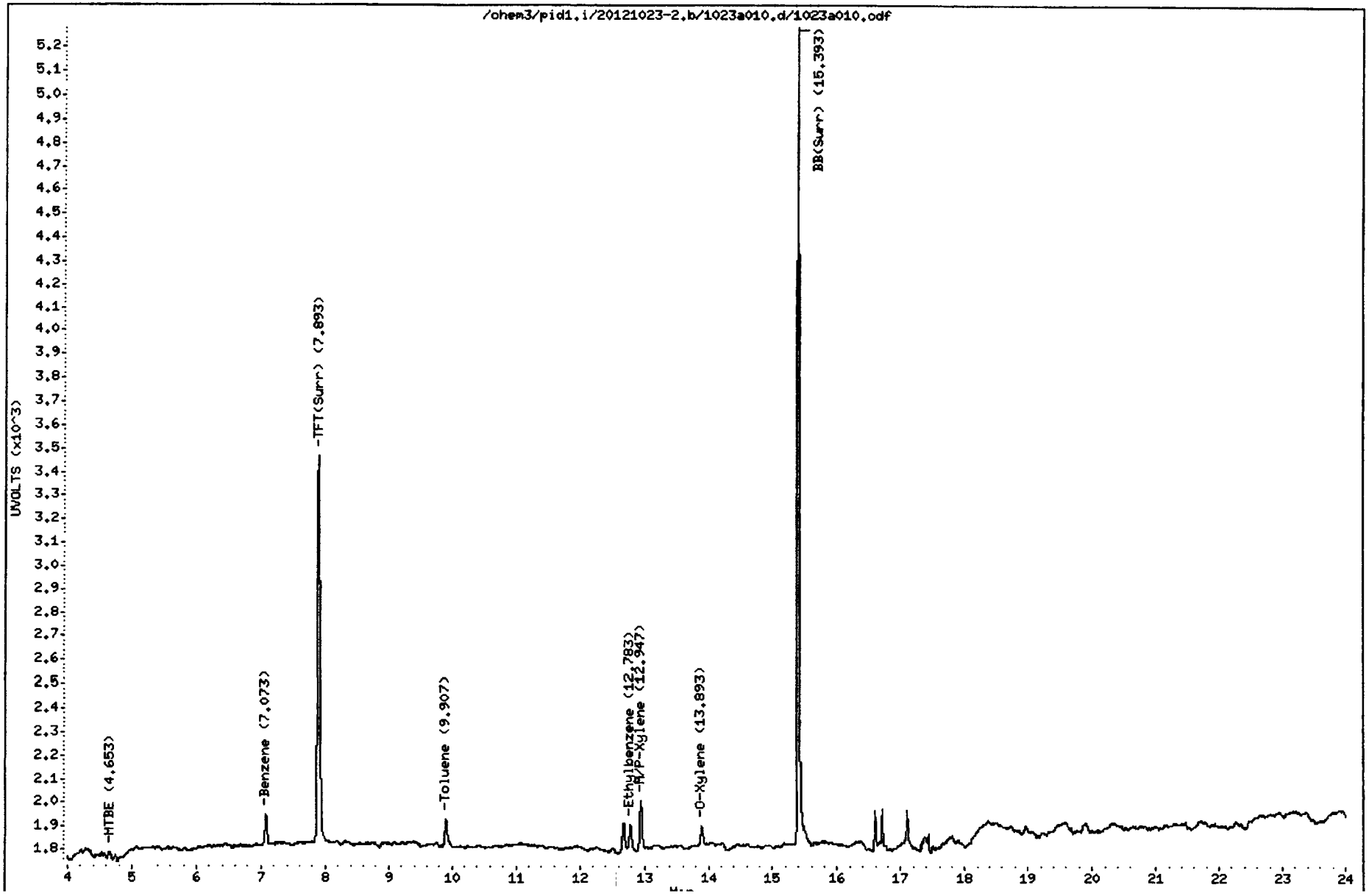


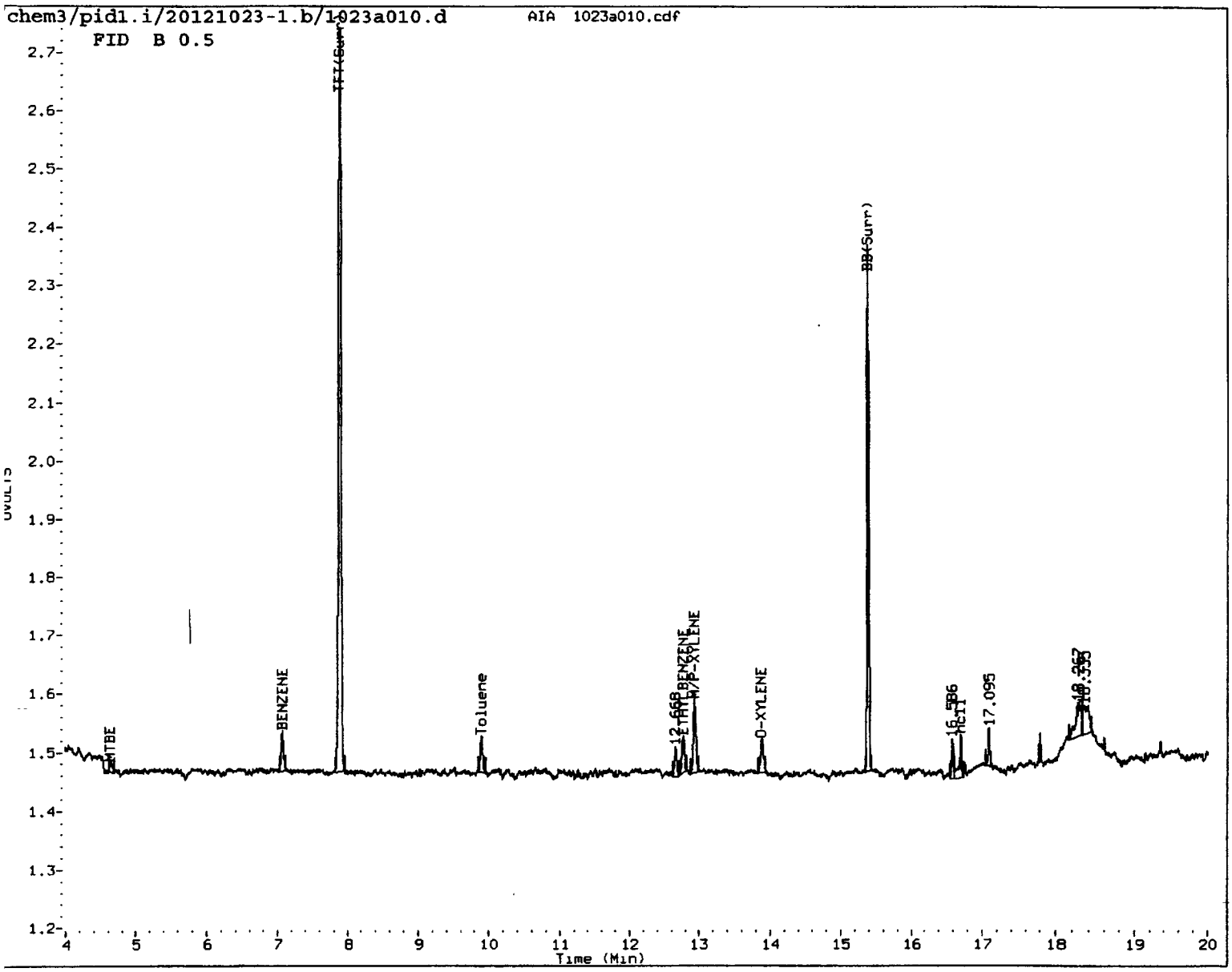
Data File: /chem3/pid1.i/20121023-2.b/1023a010.d
Date : 23-OCT-2012 20:45
Client ID:
Sample Info: B 0.5

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18





MANUAL INTEGRATION

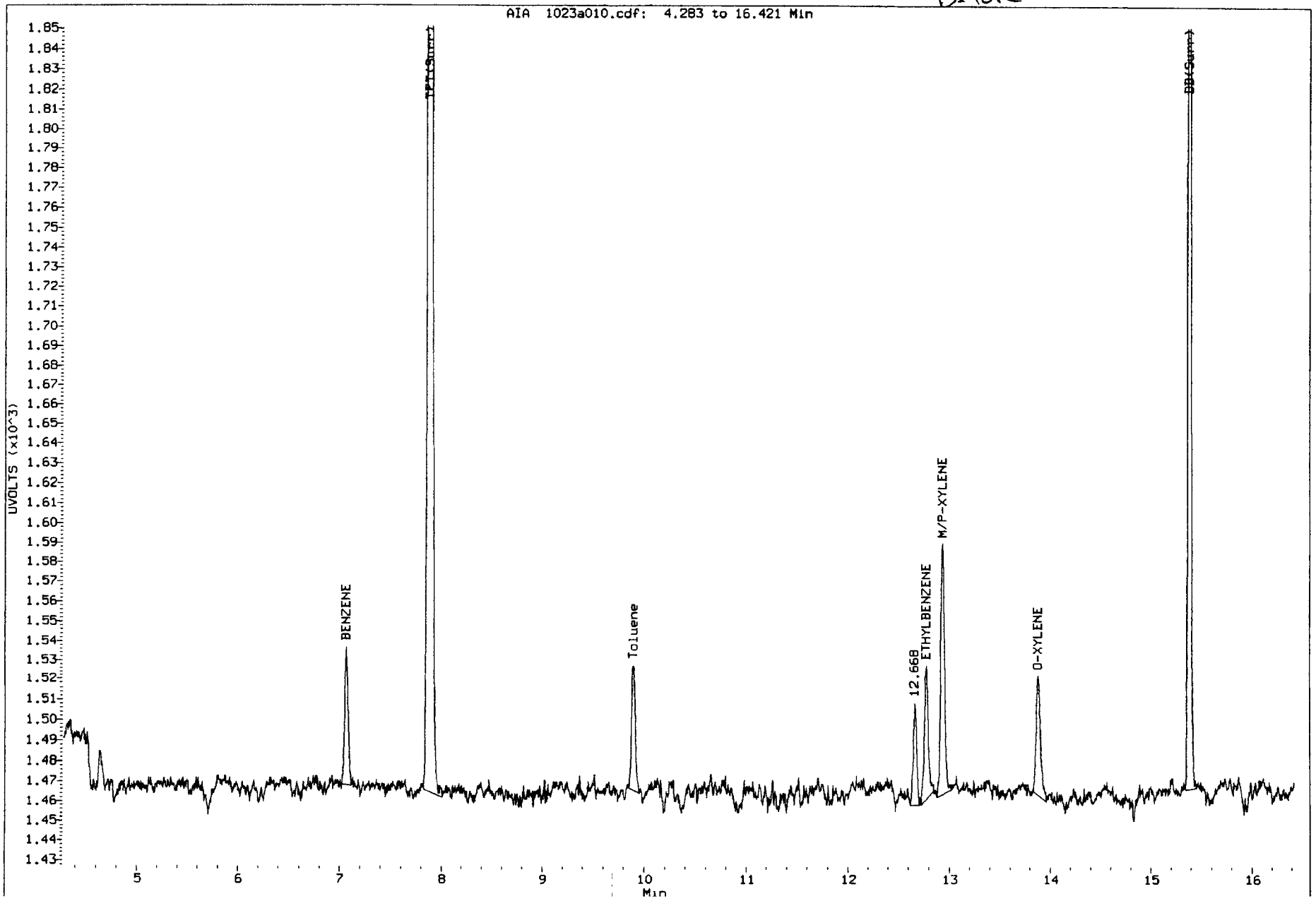
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

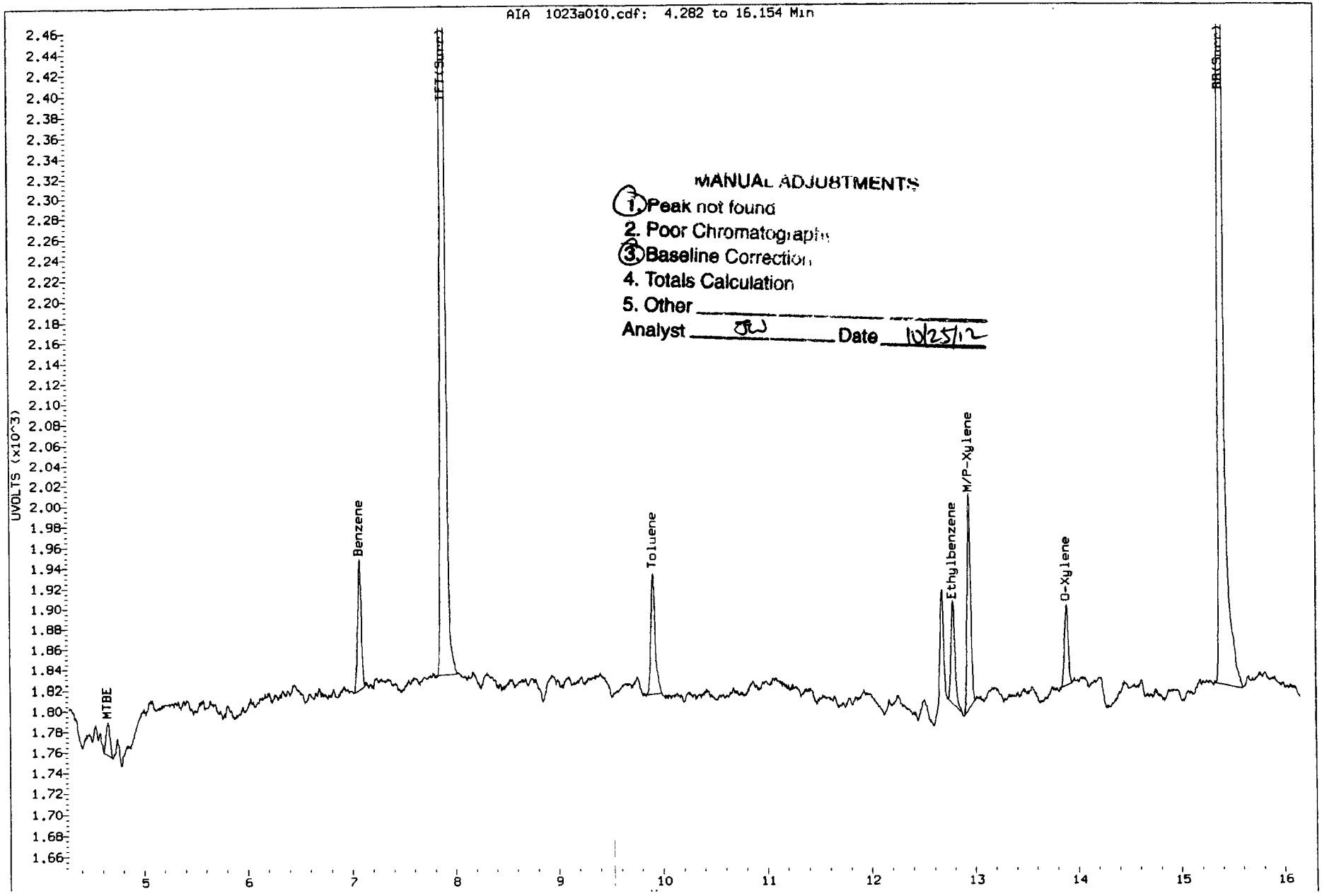
Analyst: JW Date: 10/25/12

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:

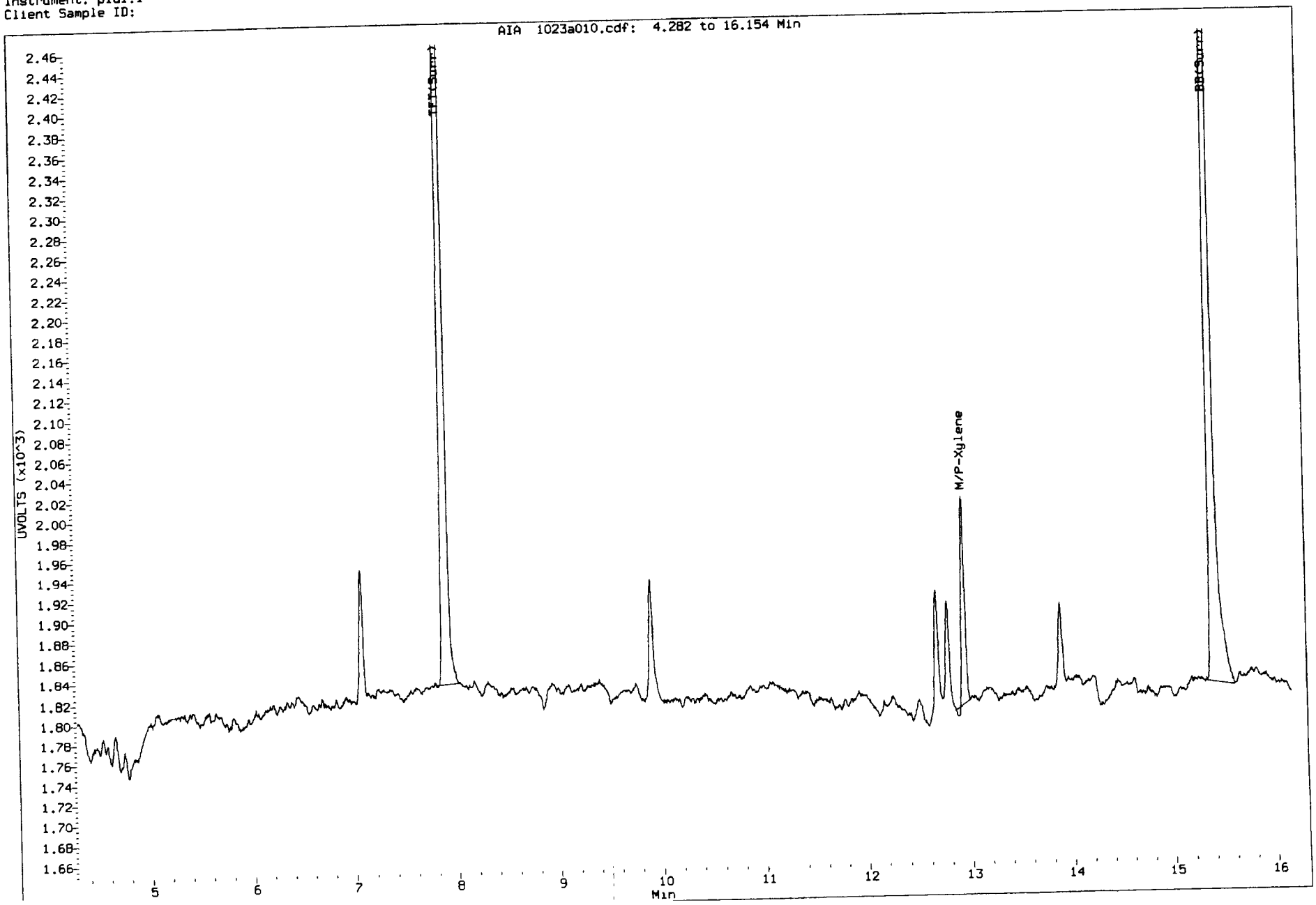
Before



Data File: /chem3/pid1.i/20121023-2.b/1023a010.d/1023a010.cdf
Injection Date: 23-OCT-2012 20:45
Instrument: pid1.i
Client Sample ID:



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:

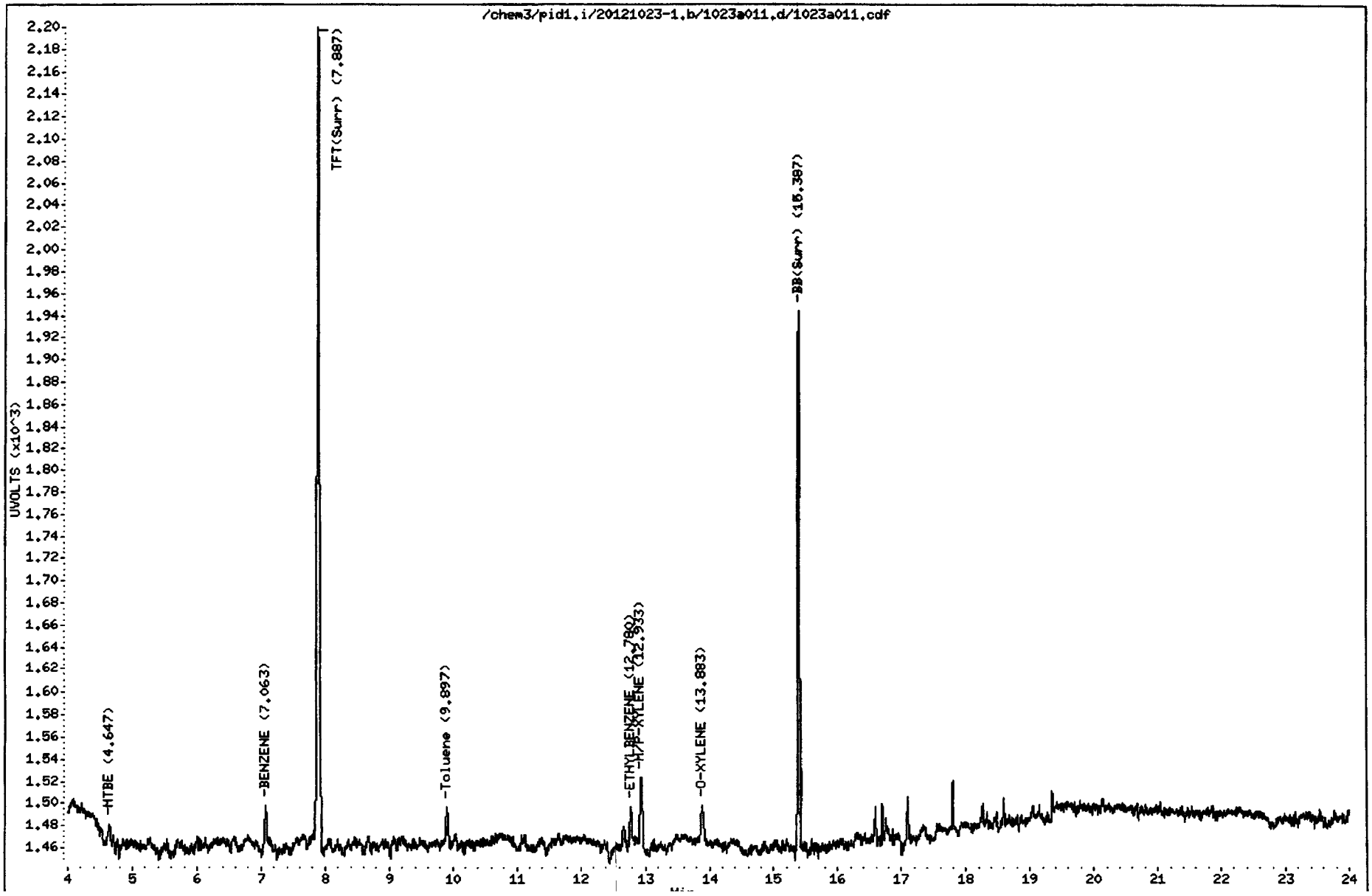
Sample Info: B 0.25

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:

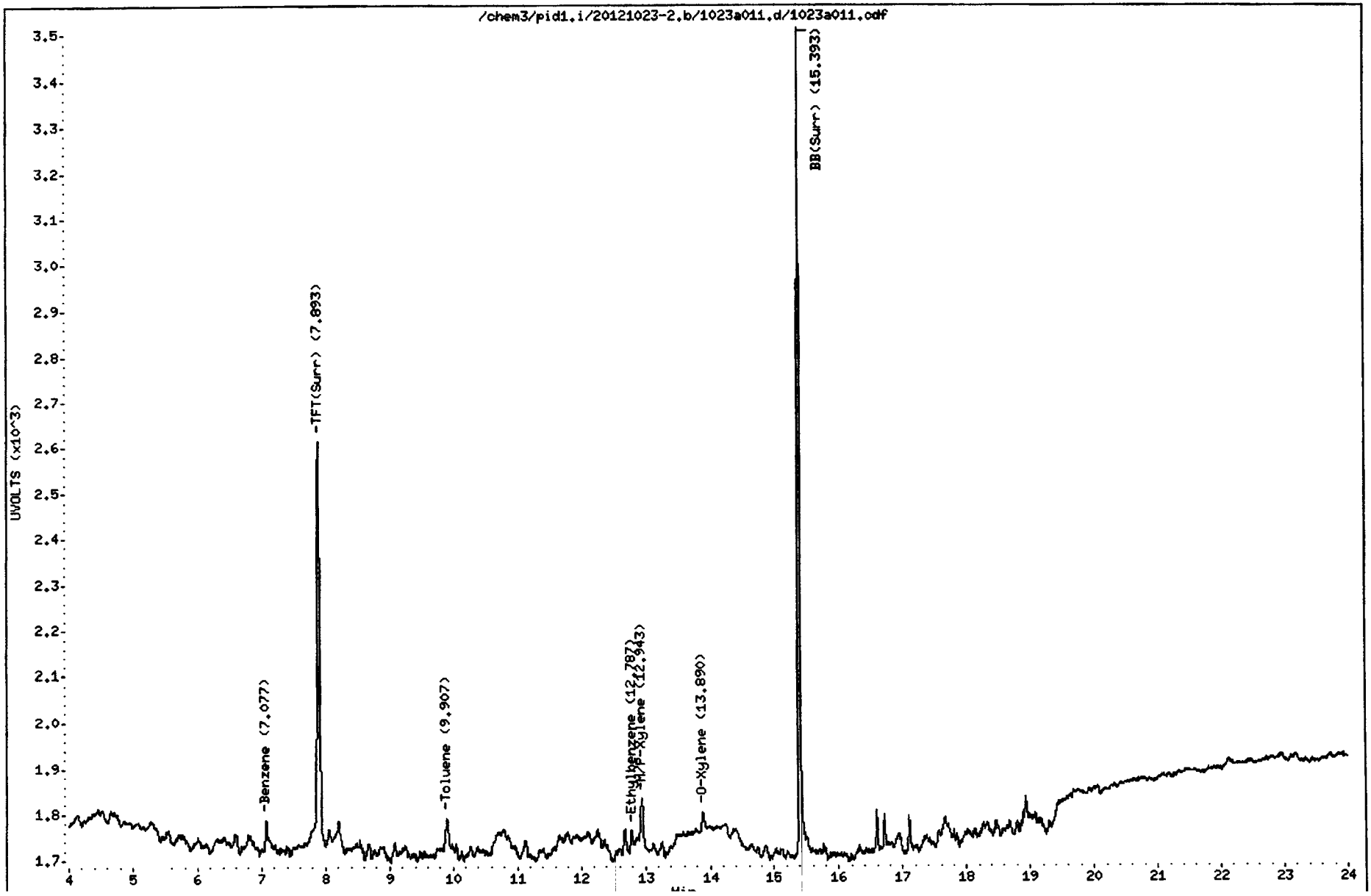
Sample Info: B 0.25

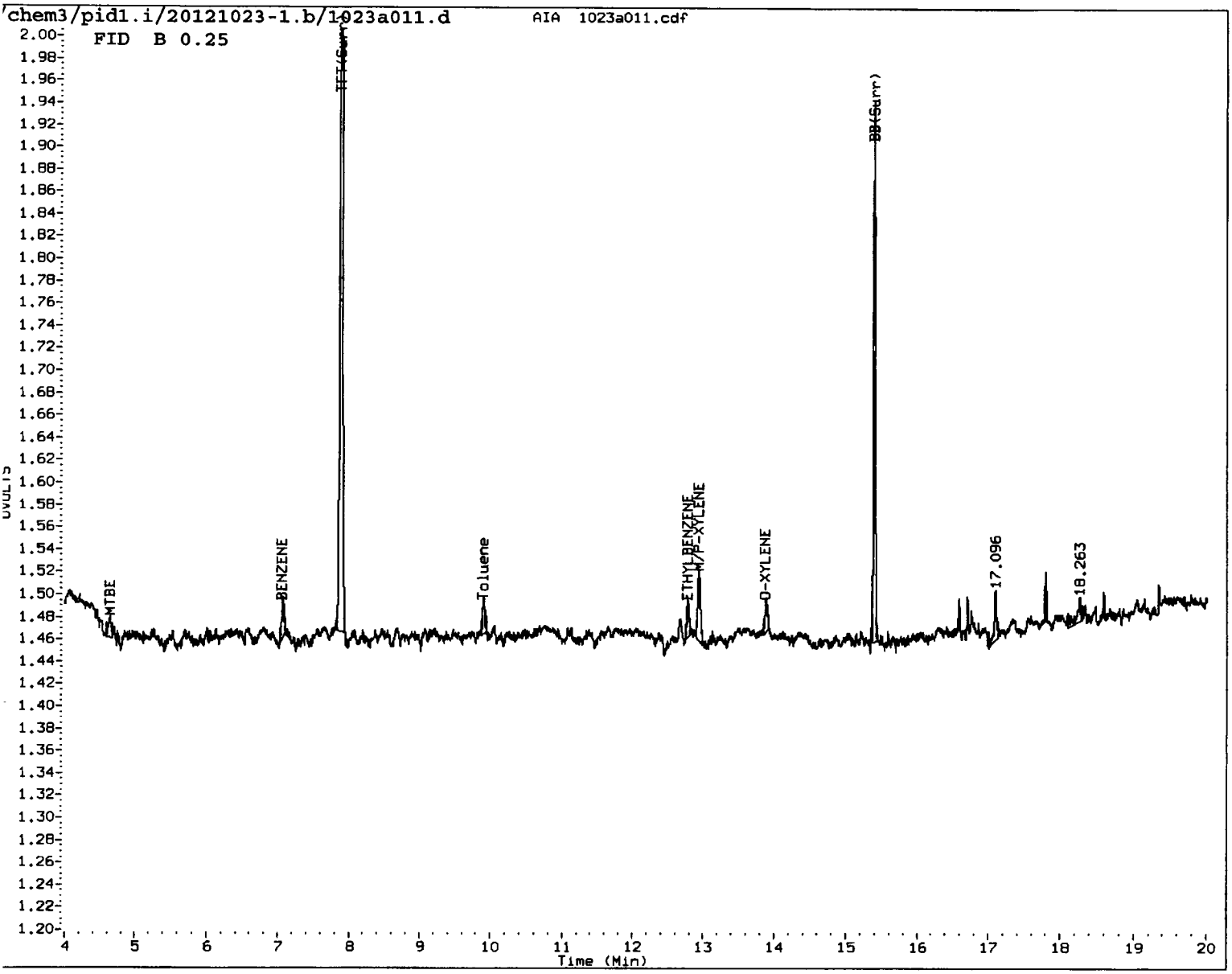
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

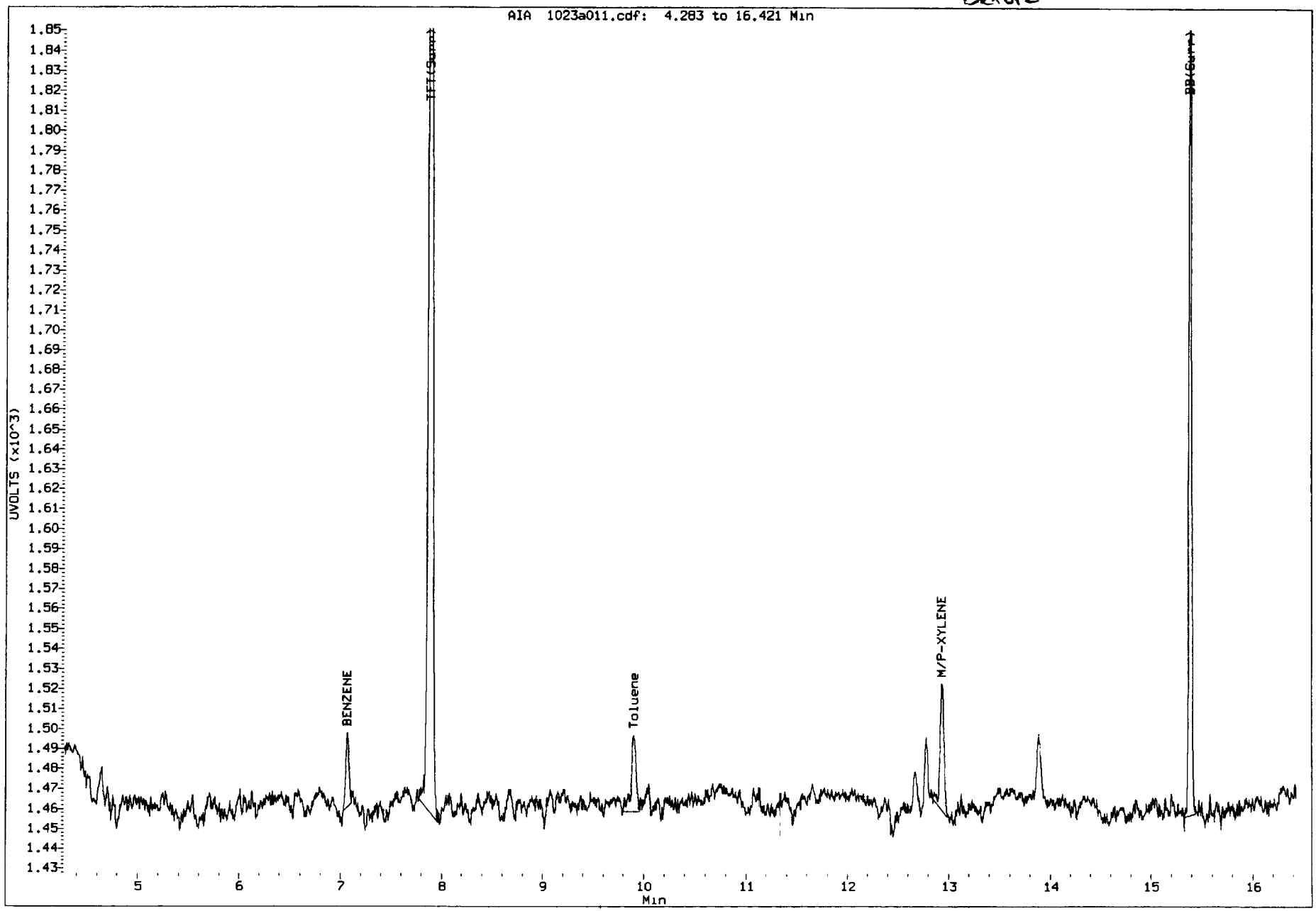
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

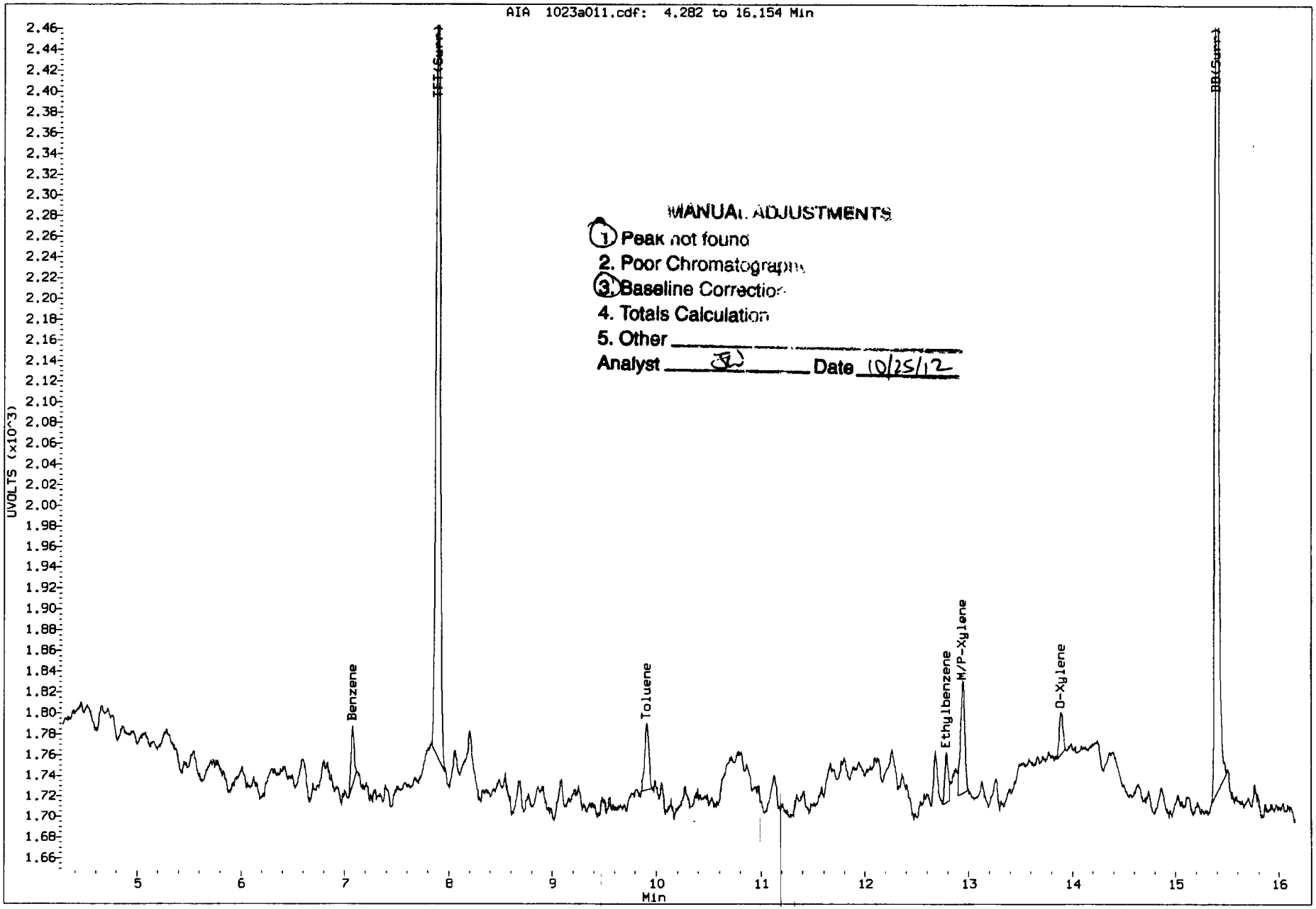
Analyst: JW Date: 10/25/12

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/pid1.1/20121023-2.b/1023a011.d/1023a011.cdf
Injection Date: 23-OCT-2012 21:15
Instrument: pid1.1
Client Sample ID:



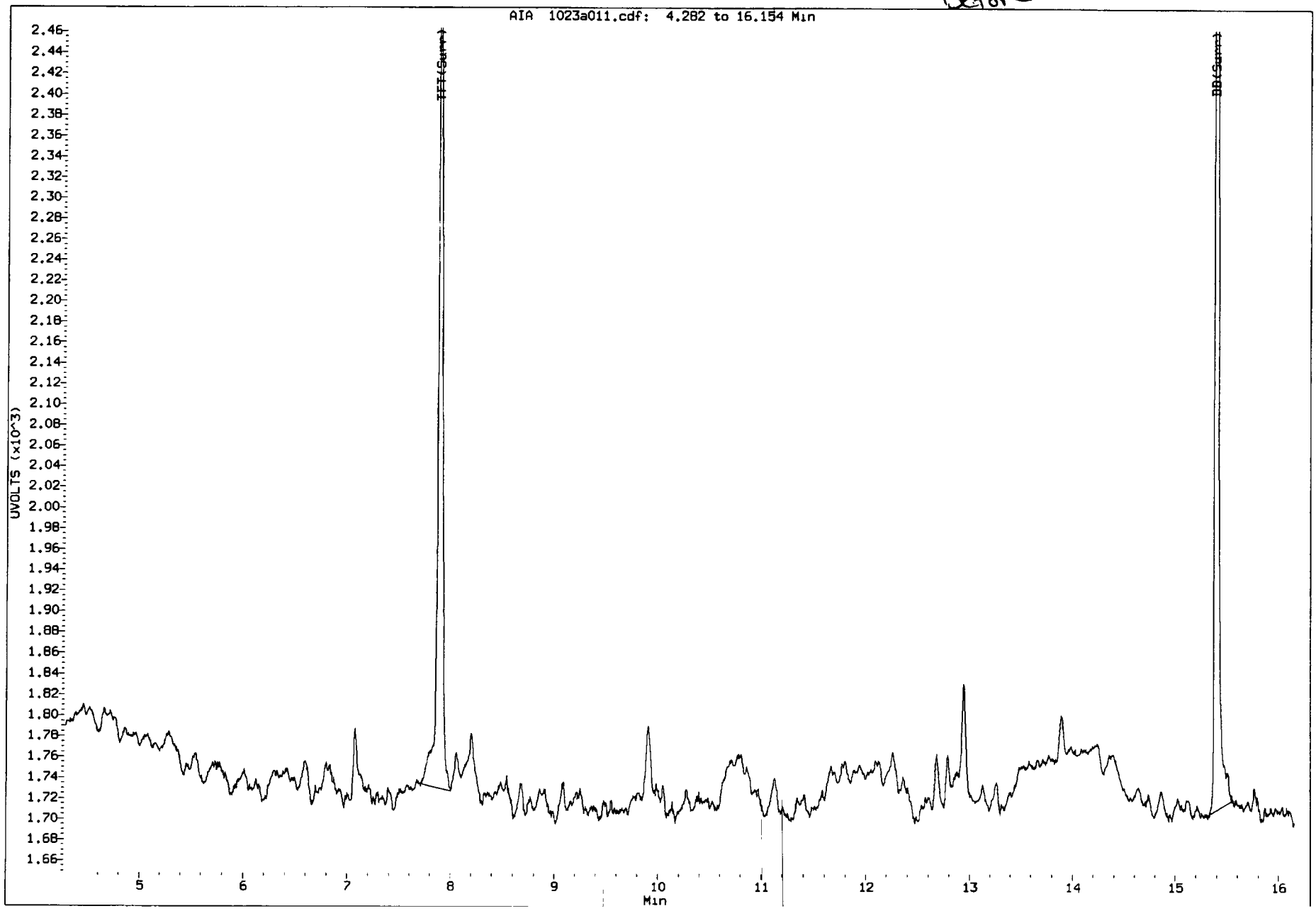
MANUAL ADJUSTMENTS

1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other _____

Analyst _____ Date 10/25/12

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:

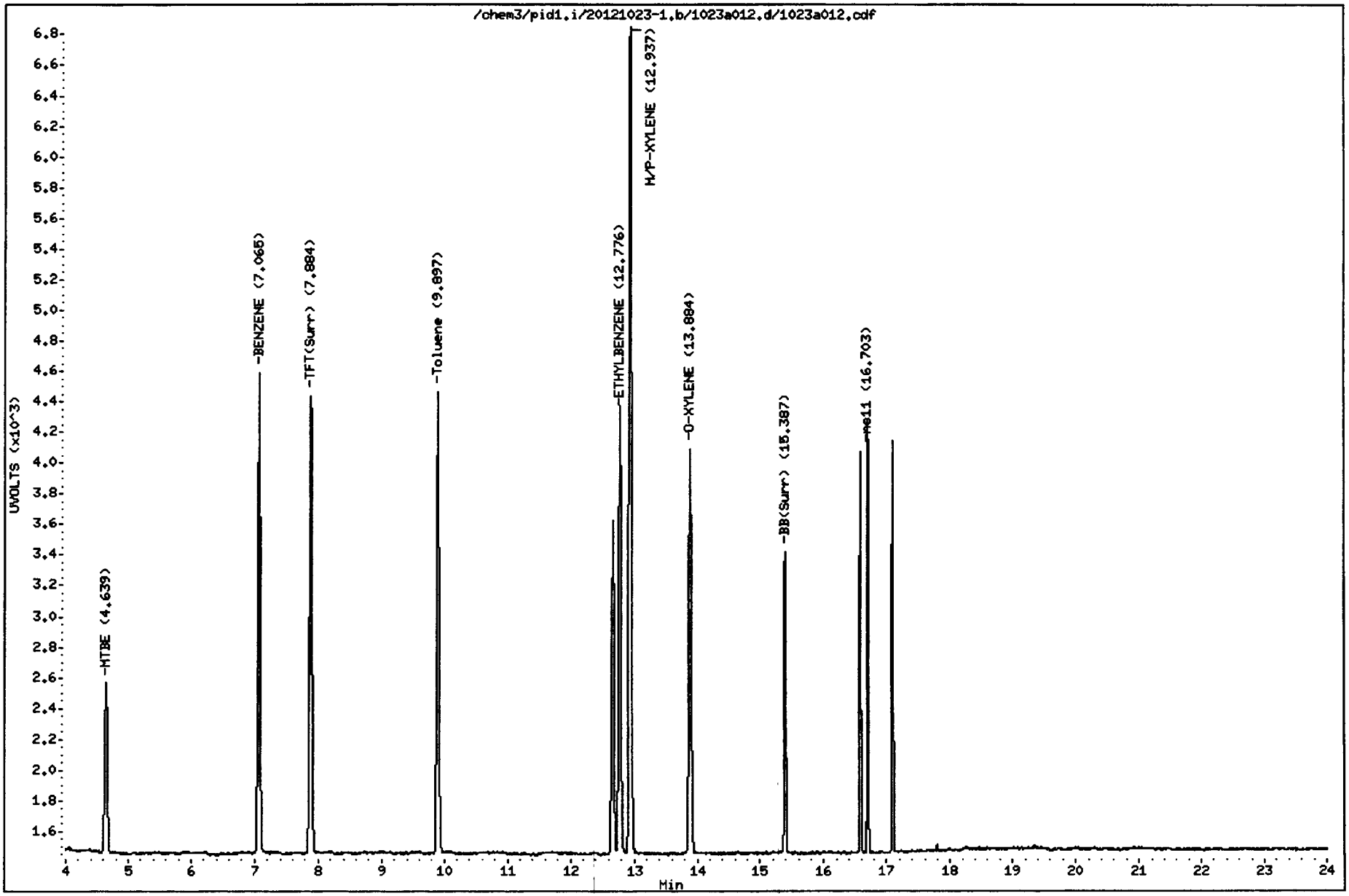
Sample Info: BICV

Instrument: pid1.i

Operator: PC/JW

Column phase: RTX 502-2 FID

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a012.d

Date : 23-OCT-2012 21:44

Client ID:

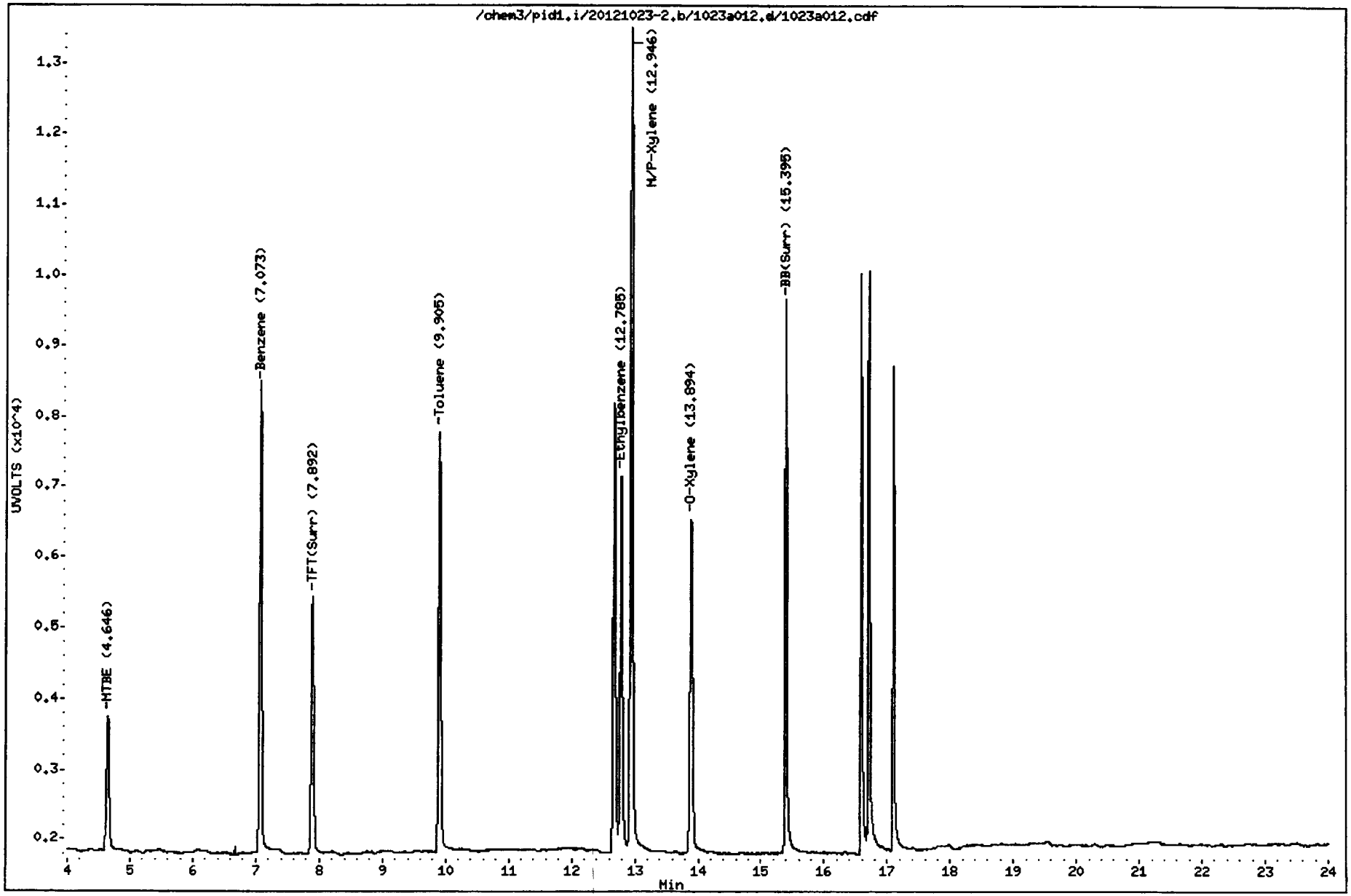
Sample Info: BICV

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

SSC1156 : 1554

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

Report Date : 25-Oct-2012 17:27

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 [illegible] Date: 10/26/12

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

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)

JW 10/25/12

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:

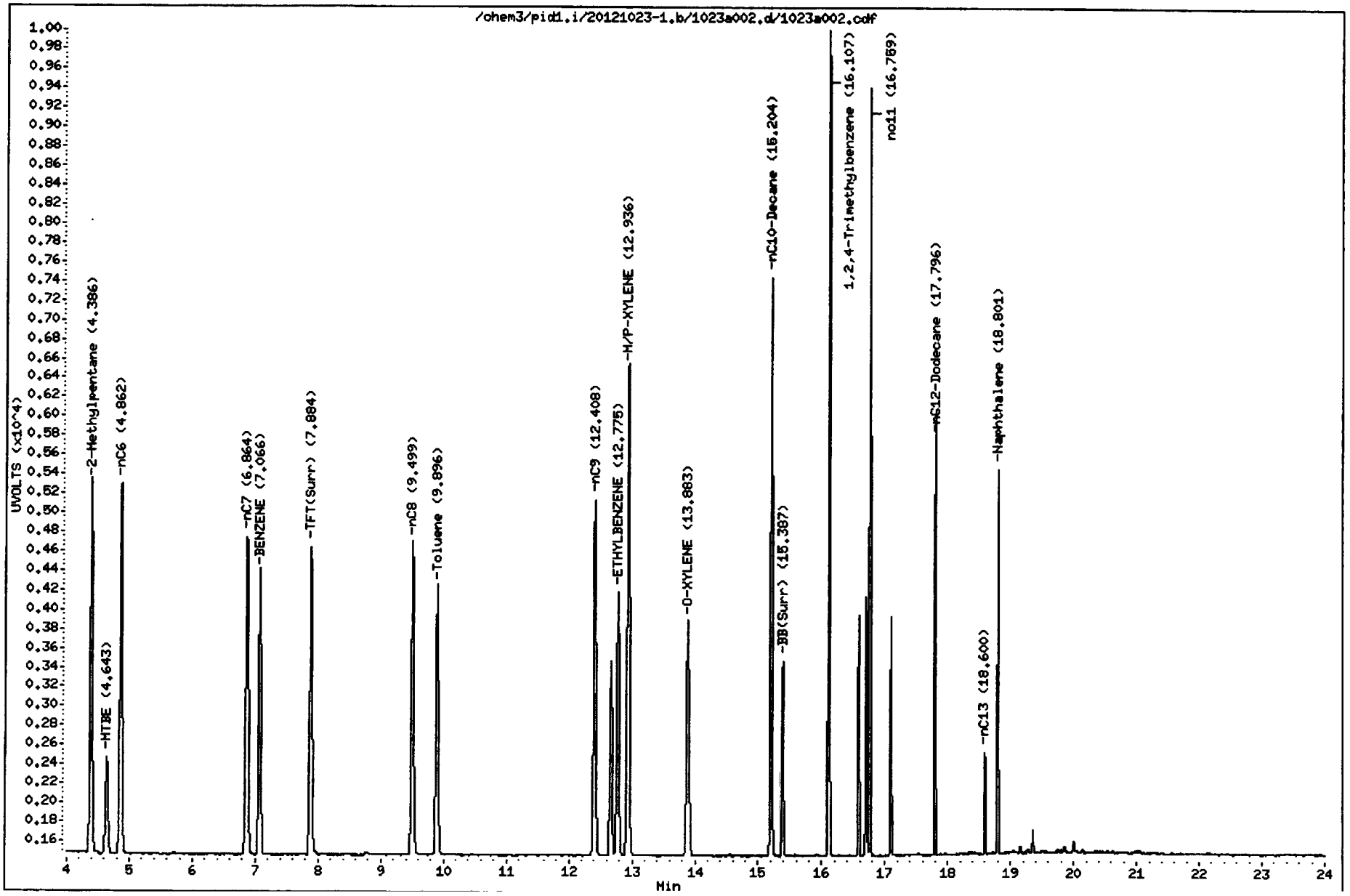
Sample Info: RT1023+BCAL1

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:

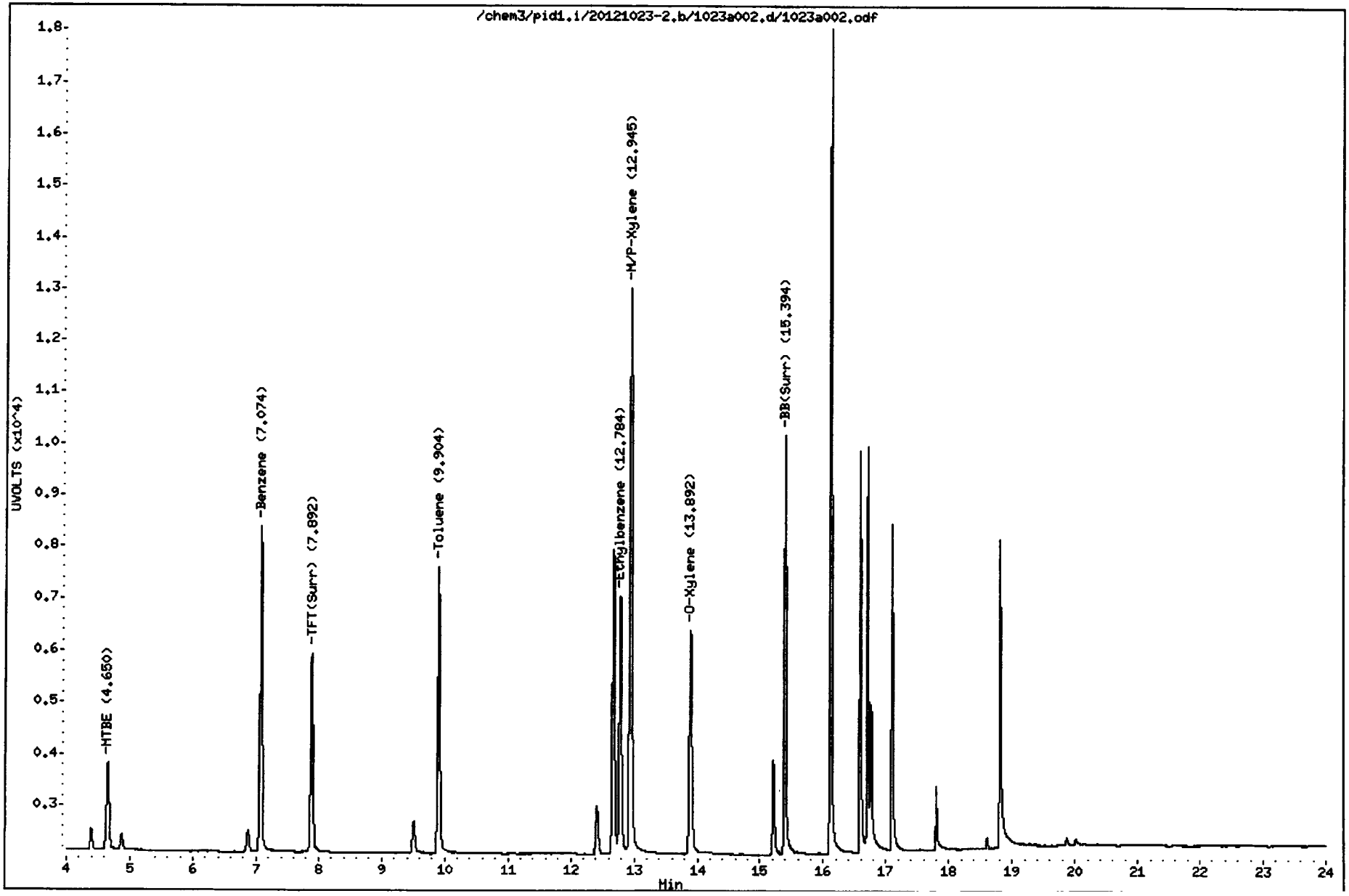
Sample Info: RT1023+BCAL1

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:

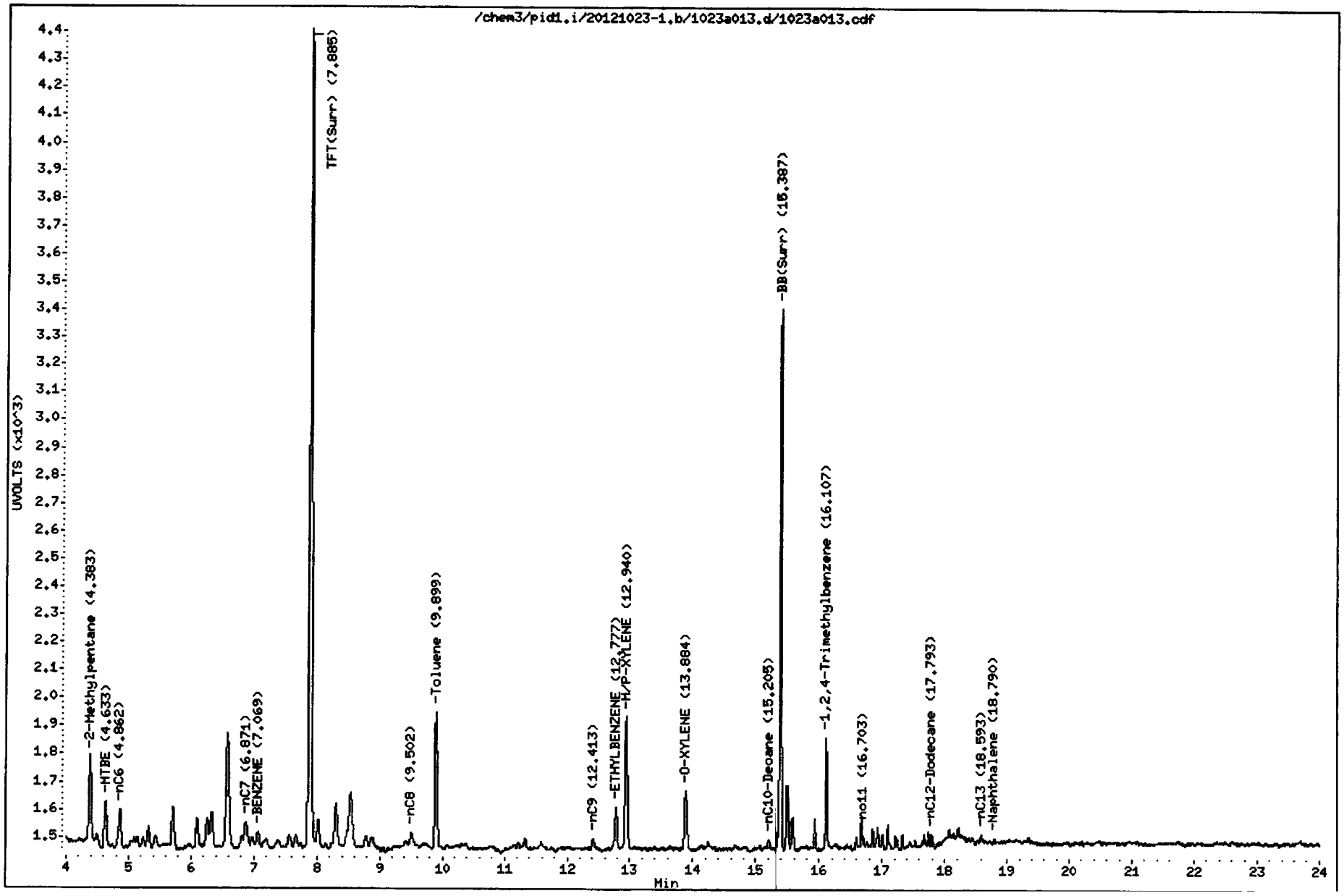
Sample Info: G 0.10

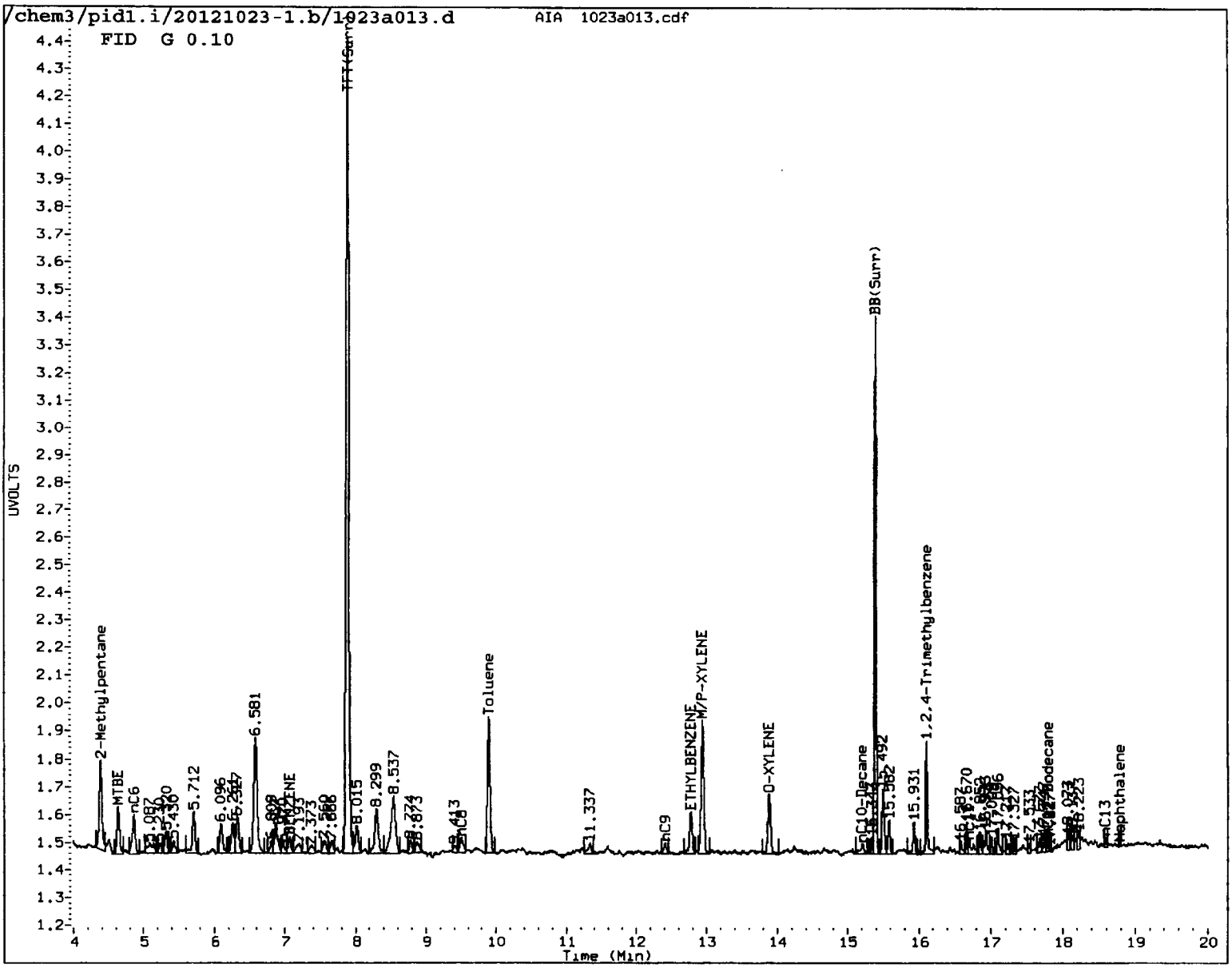
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

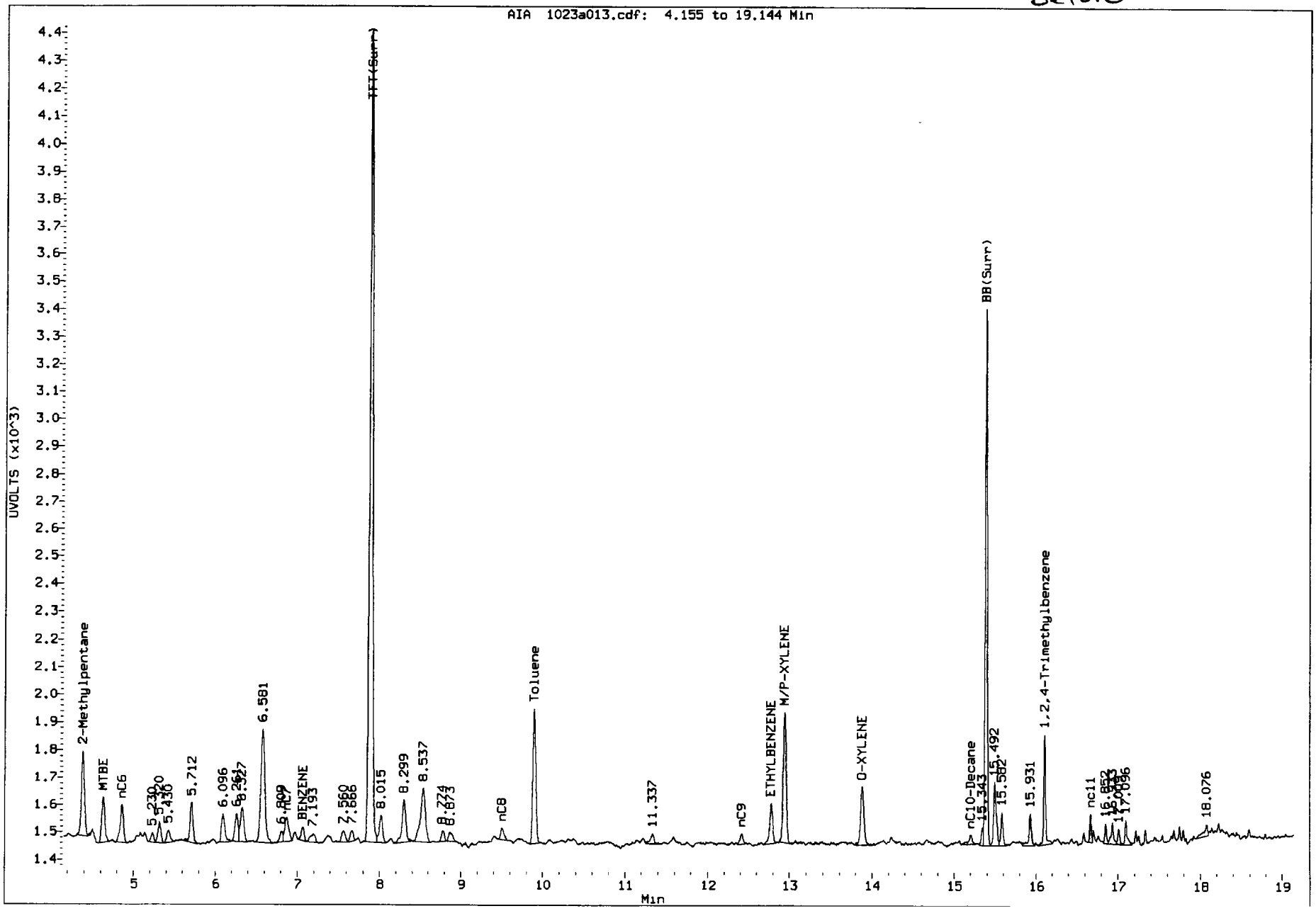
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: RW 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

SW 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:

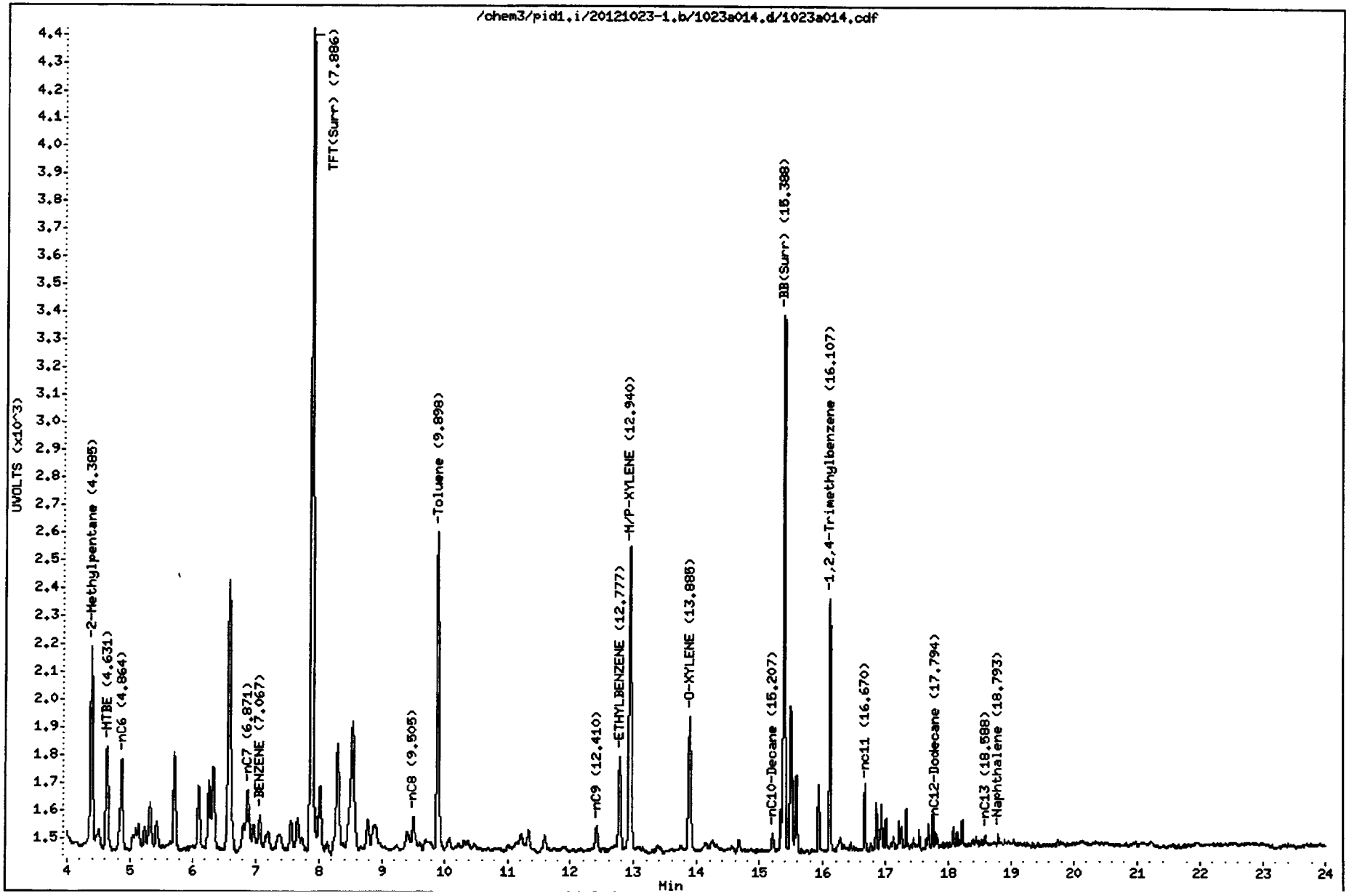
Sample Info: G 0.25

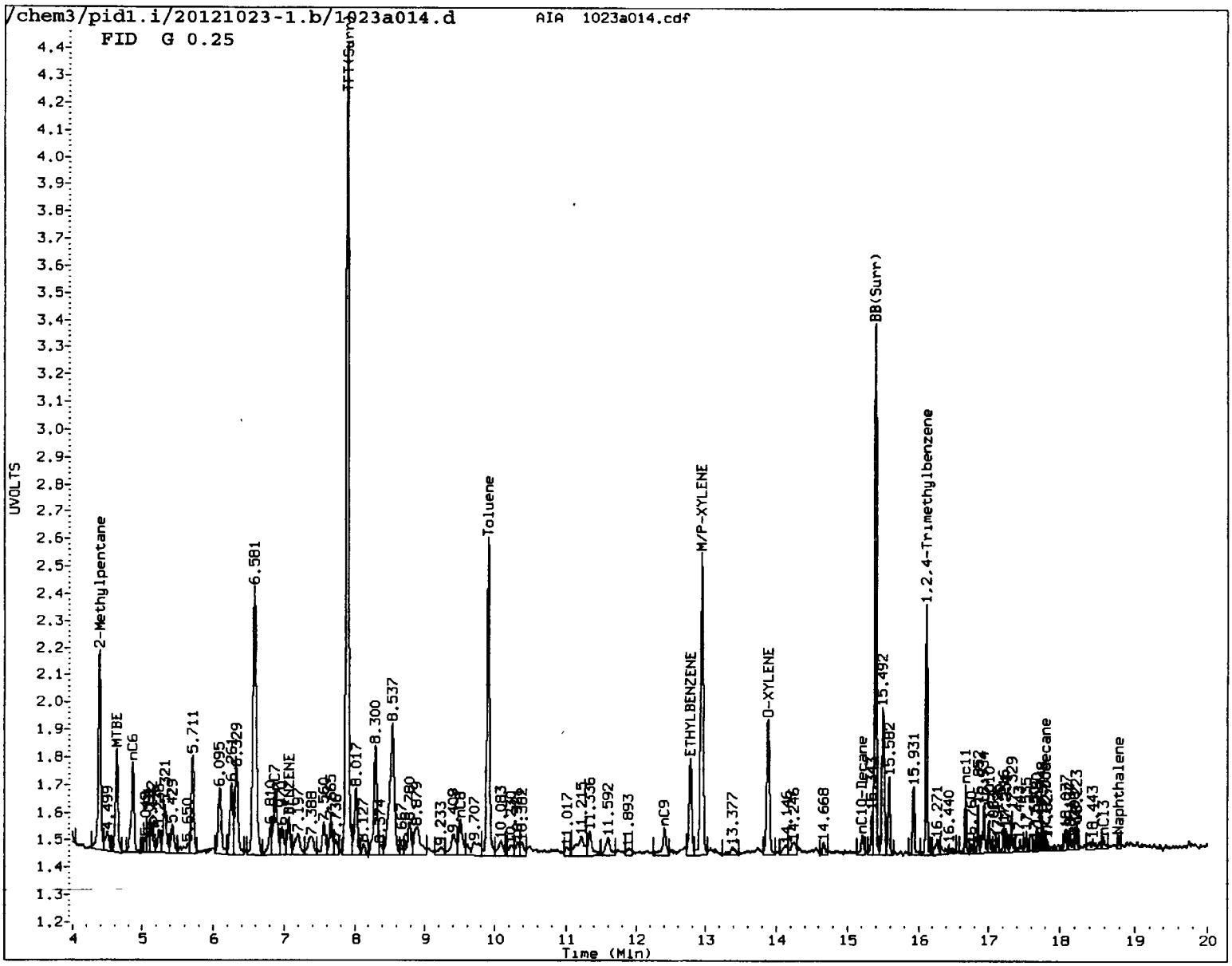
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

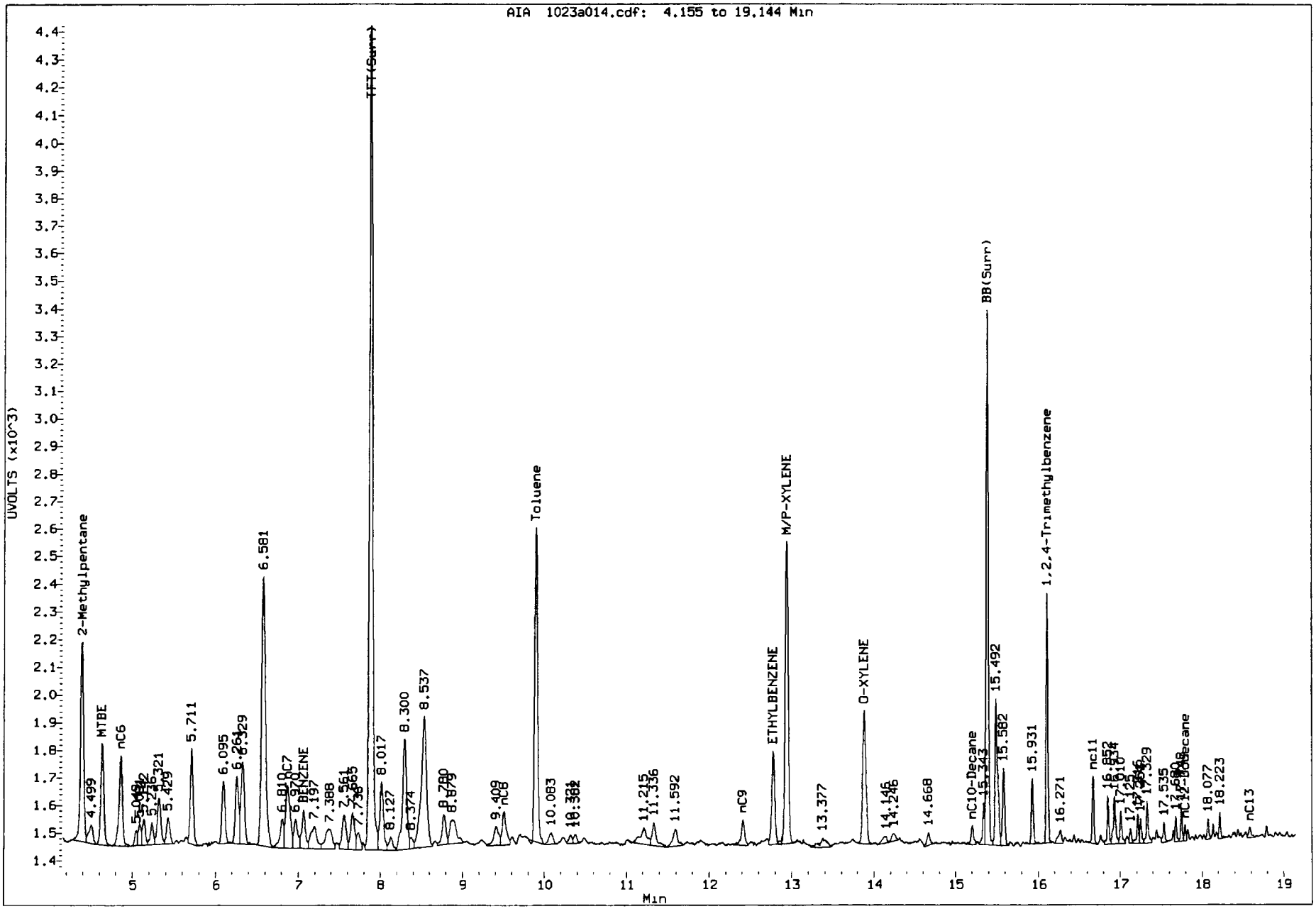
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

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:

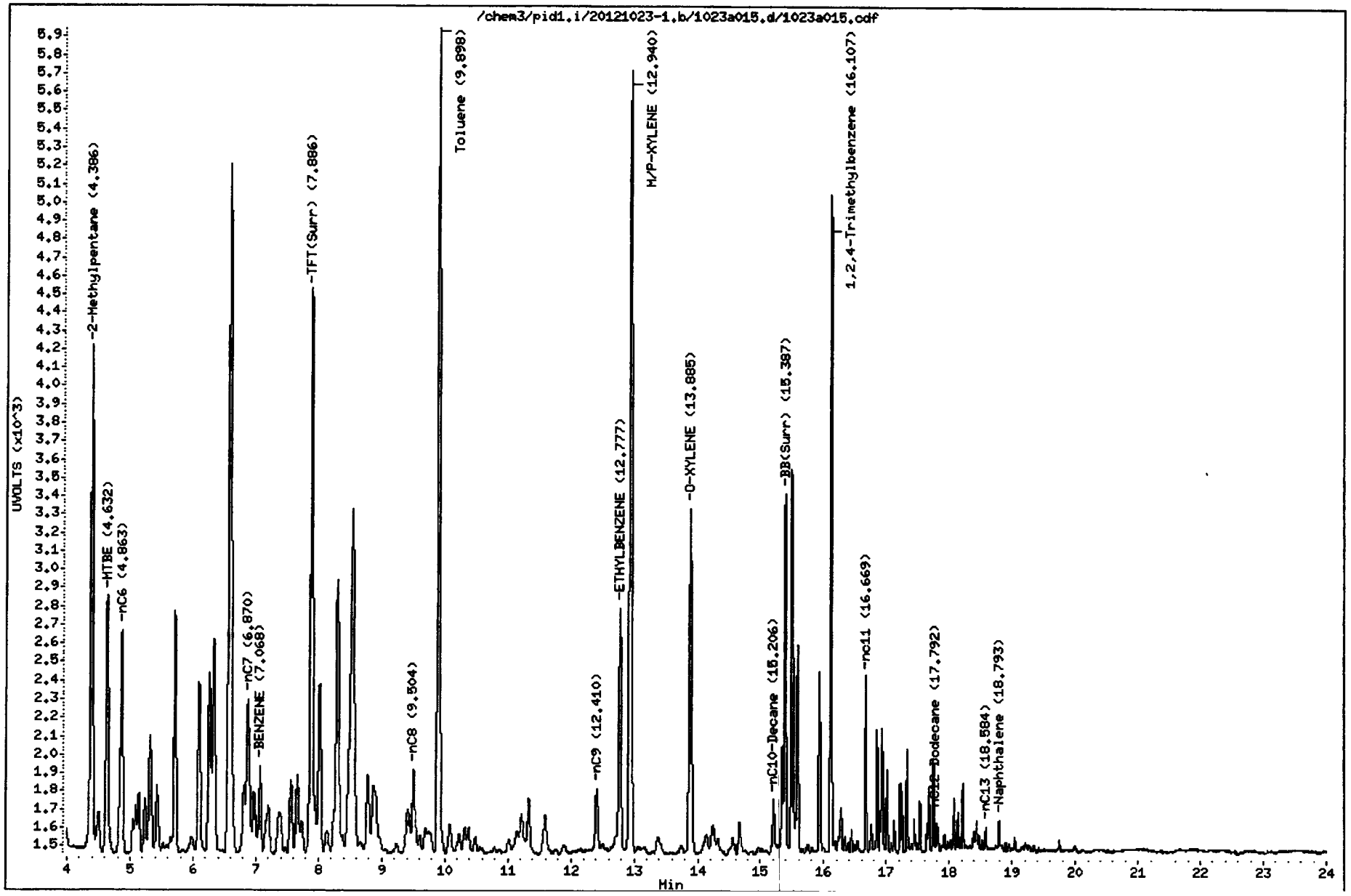
Sample Info: G 1.0

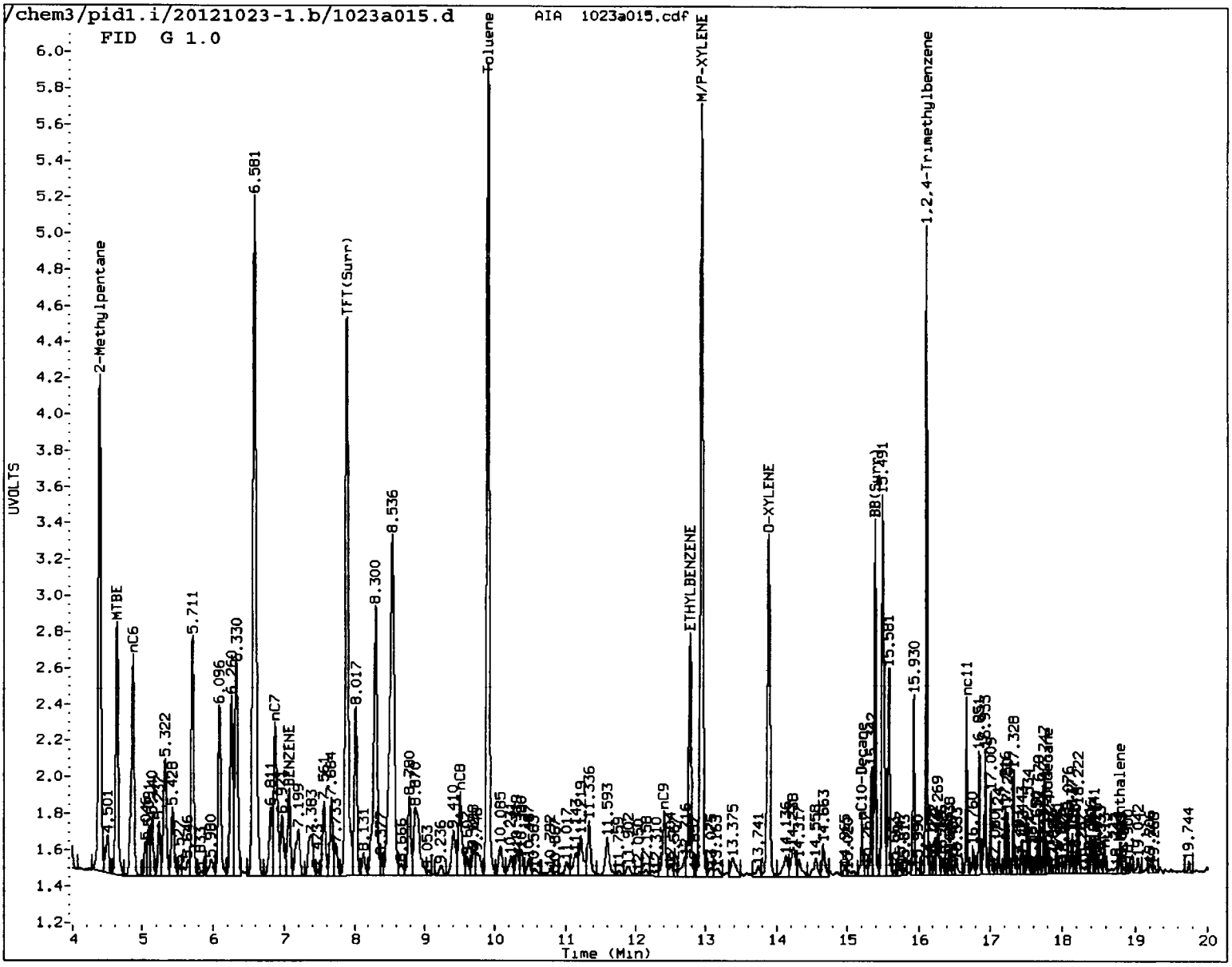
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



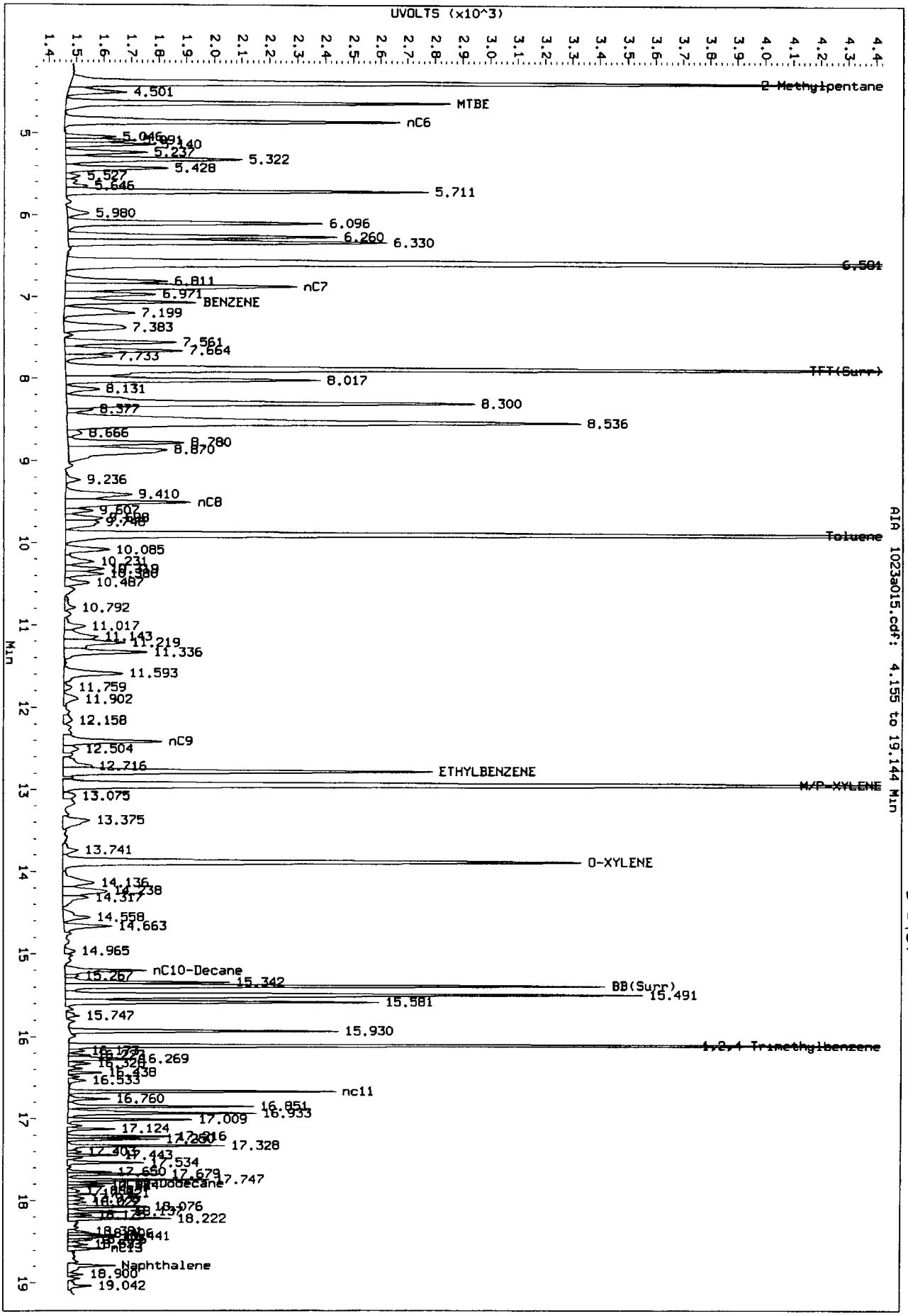


MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12


UVOLTS (x10^3)
Min
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:
AIA 1023a015.cdf: 4.155 to 19.144 Min
2-Methylpentane
MTBE
nC6
5.322
5.711
6.096
6.330
nC7
BENZENE
TFT(Surr)
8.017
8.300
8.536
nC8
Toluene
nC9
ETHYLBENZENE
M/P-XYLENE
O-XYLENE
nC10-Decane
BB(Surr)
15.491
1,2,4-Trimethylbenzene
nc11
17.328
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:

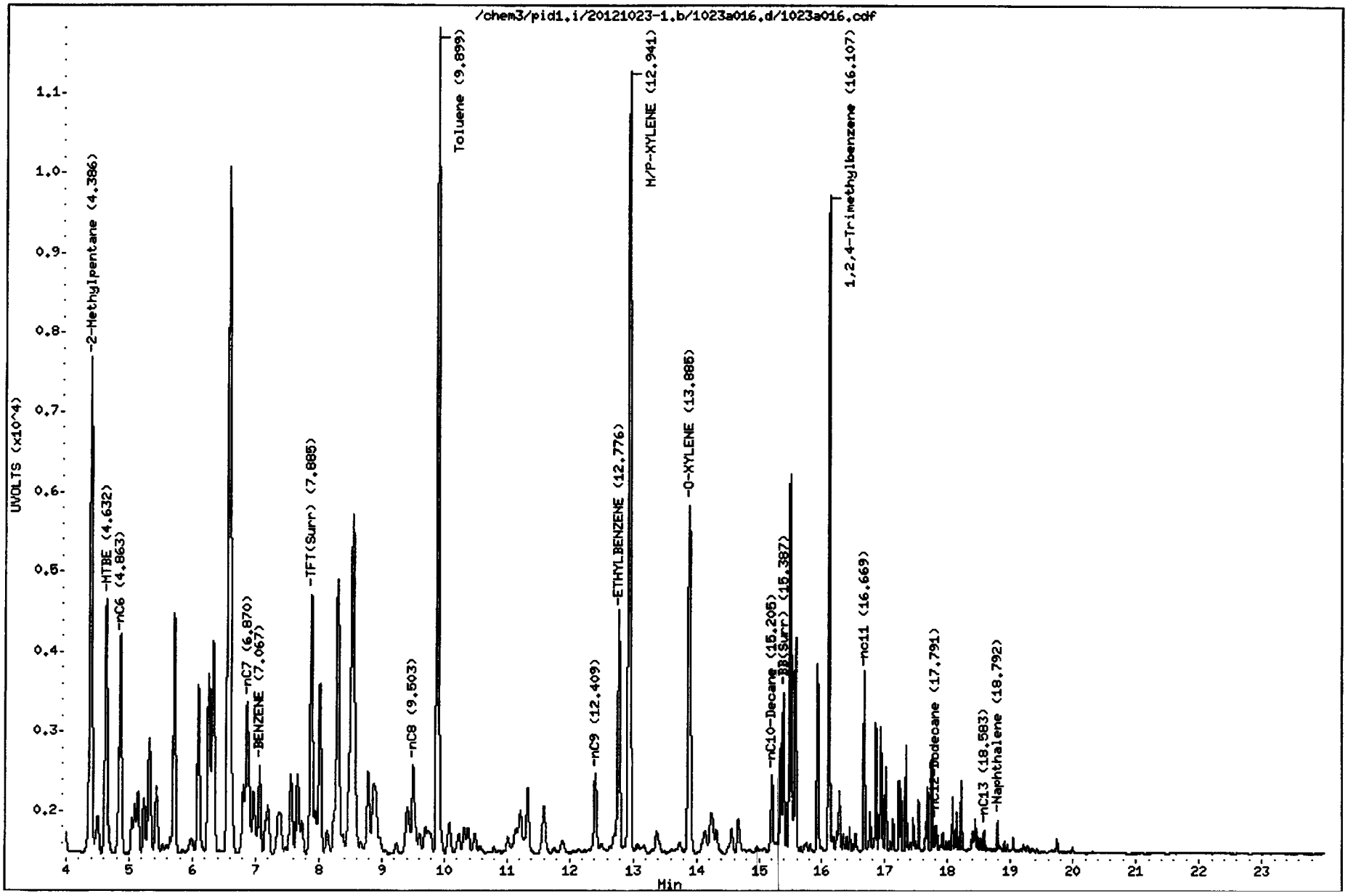
Sample Info: G 2.5

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:

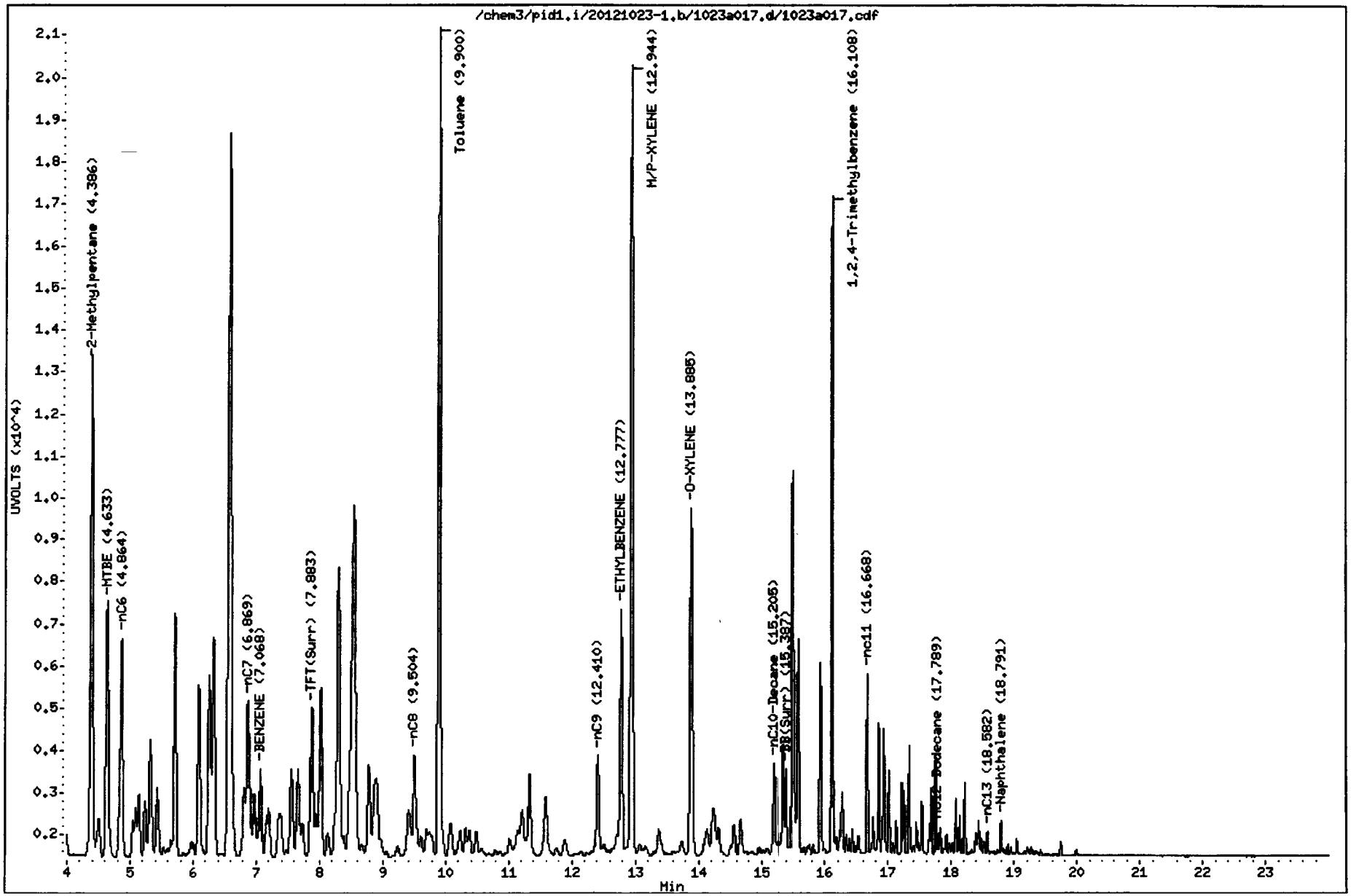
Sample Info: G 5.0

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:

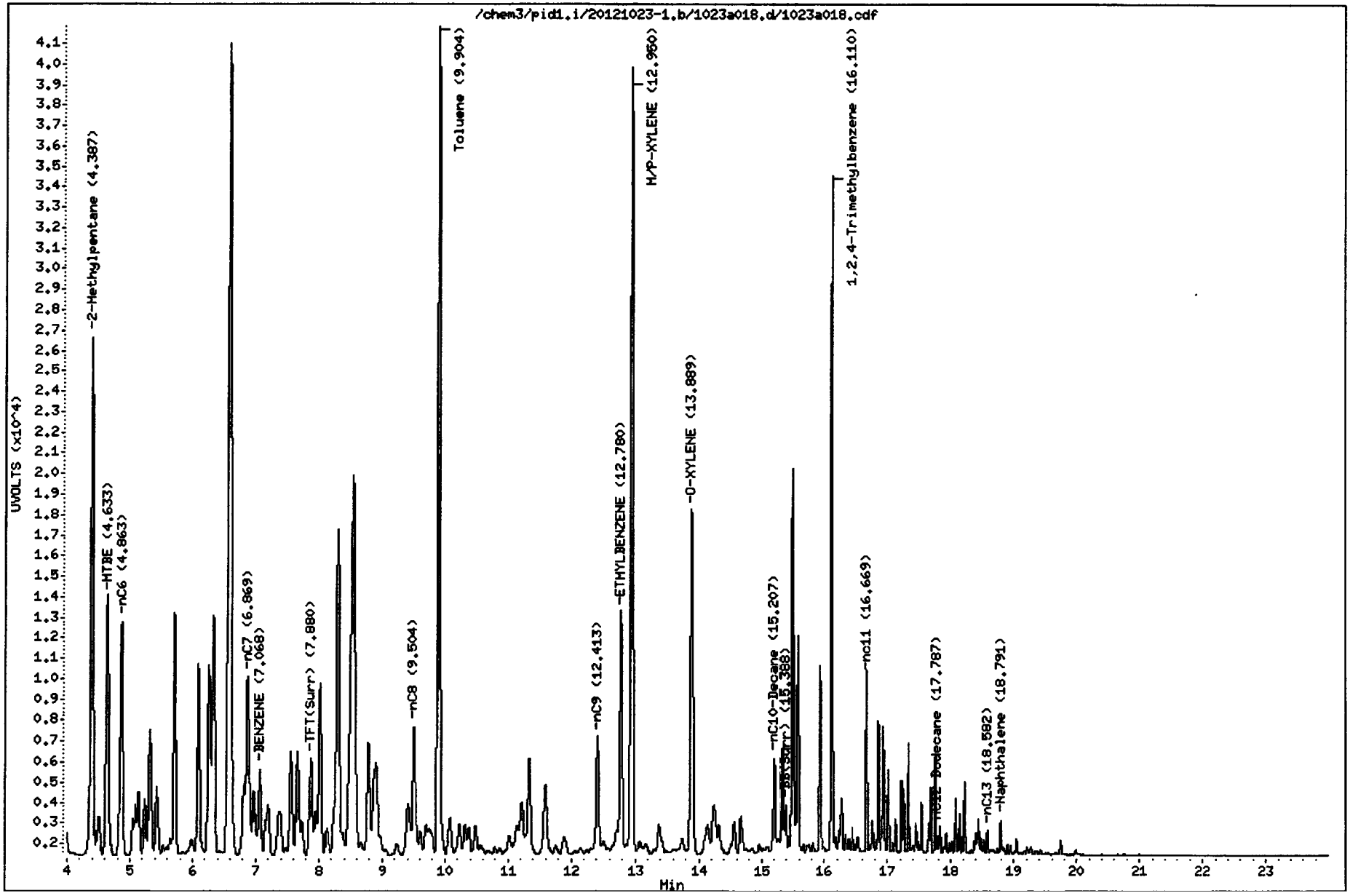
Sample Info: G 10

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:

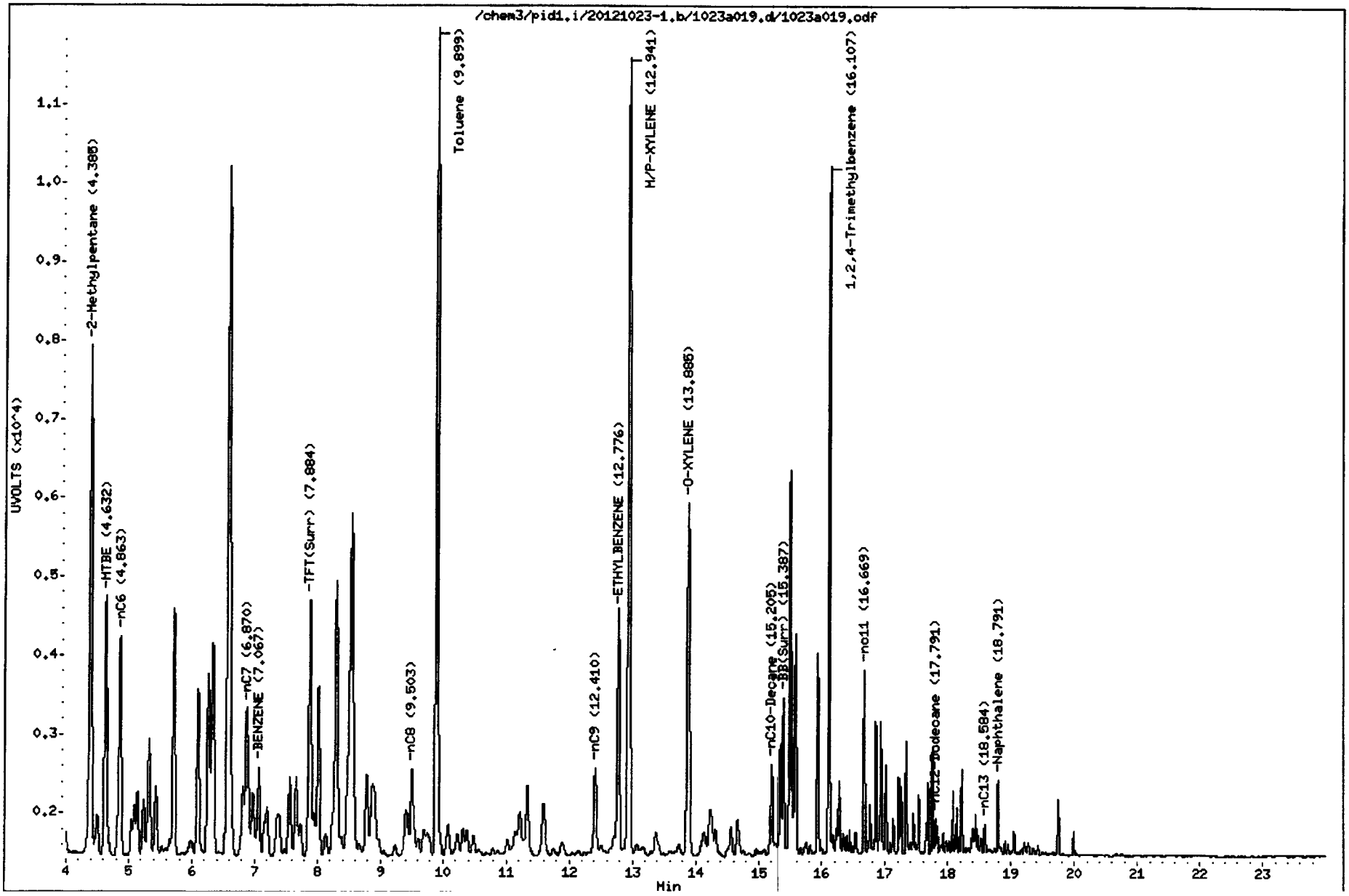
Sample Info: CICV

Instrument: pid1.i

Operator: PC/JW

Column phase: RTX 502-2 FID

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 EW Date: 10/25/12
Reviewer 2 [illegible] 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	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: WS91

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

VOA Analyst Notes / Data Review Checklist

ARI WORK Order: WS91 Client ID: SATC

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: 6/13/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
PH ≤ 2.0 / 5035 Preserved?	NA (Y) N / K	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 /
ICAL Q flag applied?	NA / Y (N)	MS / MSD Recovery Met?	(NA) Y / N /
CCAL Q Flag applied	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)

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

Only 1 TB vial - consumed by 8260C

(Review 1)Analyst: VL **Date:** 6/17/13

(Review 2)Reviewer: MW **Date:** 6/18

Analytical Resources Inc.: Organics Instrument Log

PID-1 Serial No.: 2750A-17141

Date: 6/13/13 Analysis: NWTPHG/BTEX Analyst: PC

Column 1 Serial No.: 821726 Column Type: RTX502.2

Column 2 Serial No.: — Column Type: —

GC Method: BETX ICal Date: 10/3/12, 5/22/13 Injection Volume: 5

IS	Ical/Ccal	ICV
VW7952	VW7912	B000206
B000656	B000332	
	B000206	

Document All Maintenance Tasks In StarLIMS

	Time	Filename	LabID	ClientID	Vial#	pH	DF
1	0844	0613a001.d	RINSE				1
2	0914	0613a002.d	RT0613+BCAL				1
3	0943	0613a003.d	GCAL 1				1
4	1034	0613a004.d	LCS0613				1
5	1103	0613a005.d	LCSD0613				1
6	1132	0613a006.d	MB0613				1
7	1314	0613a007.d	WT83A	SS-1, 0-.5	1	soil	1
8	1343	0613a008.d	WT83B	SS-1, 1-1.5	1	"	1
9	1412	0613a009.d	WS95A	MW-15-0613	4	02	1
10	1441	0613a010.d	WS95AMS	MW-15-0613 MS	6		1
11	1510	0613a011.d	WS95AMSD	MW-15-0613 MSD	5		1
12	1540	0613a012.d	WS95B	PGG-3-0613	2	"	1
13	1609	0613a013.d	BCAL 2				1
14	1638	0613a014.d	GCAL 2				1
15	1707	0613a015.d	WS95C	PGG-2-0613	2	02	1
16	1736	0613a016.d	WS95D	PGG-6-0613	2		1
17	1805	0613a017.d	WS95E	PGG-5-0613	1		1
18	1835	0613a018.d	WS95F	TB-0613	1	"	1
19	1904	0613a019.d	WS91A	CL-MH-SPS-20130605-4	4	soil	1
20	1933	0613a020.d	WT51A	HBKG-1	10	02	1
21	2002	0613a021.d	WT51AMS	HBKG-1 MS	11		1
22	2032	0613a022.d	WT51AMSD	HBKG-1 MSD	6	"	1
23	2101	0613a023.d	WT51B	HBKG-1-Dup	6	02	1
24	2130	0613a024.d	BCAL 3				1
25	2159	0613a025.d	GCAL 3				1

PC 6/17/13

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.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130613-1.b/0613a002.d
Data file 2: /chem3/pid1.i/20130613-2.b/0613a002.d
Method: /chem3/pid1.i/20130613-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: RT0613+BCAL
Client ID:
Injection Date: 13-JUN-2013 09:14
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.000	2977	37862	100.6	TFT(Surr)
15.378	0.000	1768	15657	89.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	439636	1.228
8015C 2MP-TMB	(4.19 to 16.20)	723723	516610	0.714
AK101 nC6-nC10	(4.69 to 15.10)	582885	368438	0.632
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	464961	1.240

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	3303	102.5	TFT(Surr)
15.385	0.000	7142	98.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.025	0.000	6067	26.99	Benzene
9.879	0.000	5428	27.40	Toluene
12.768	0.000	4597	28.16	Ethylbenzene
12.929	0.000	9957	55.34	M/P-Xylene
13.876	0.000	4053	28.54	O-Xylene
4.564	0.000	2038	23.38	MTBE

\ Indicates Peak Area was used for quantitation instead of Height
I Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130613-1.b/0613a002.d

Date : 13-JUN-2013 09:14

Client ID:

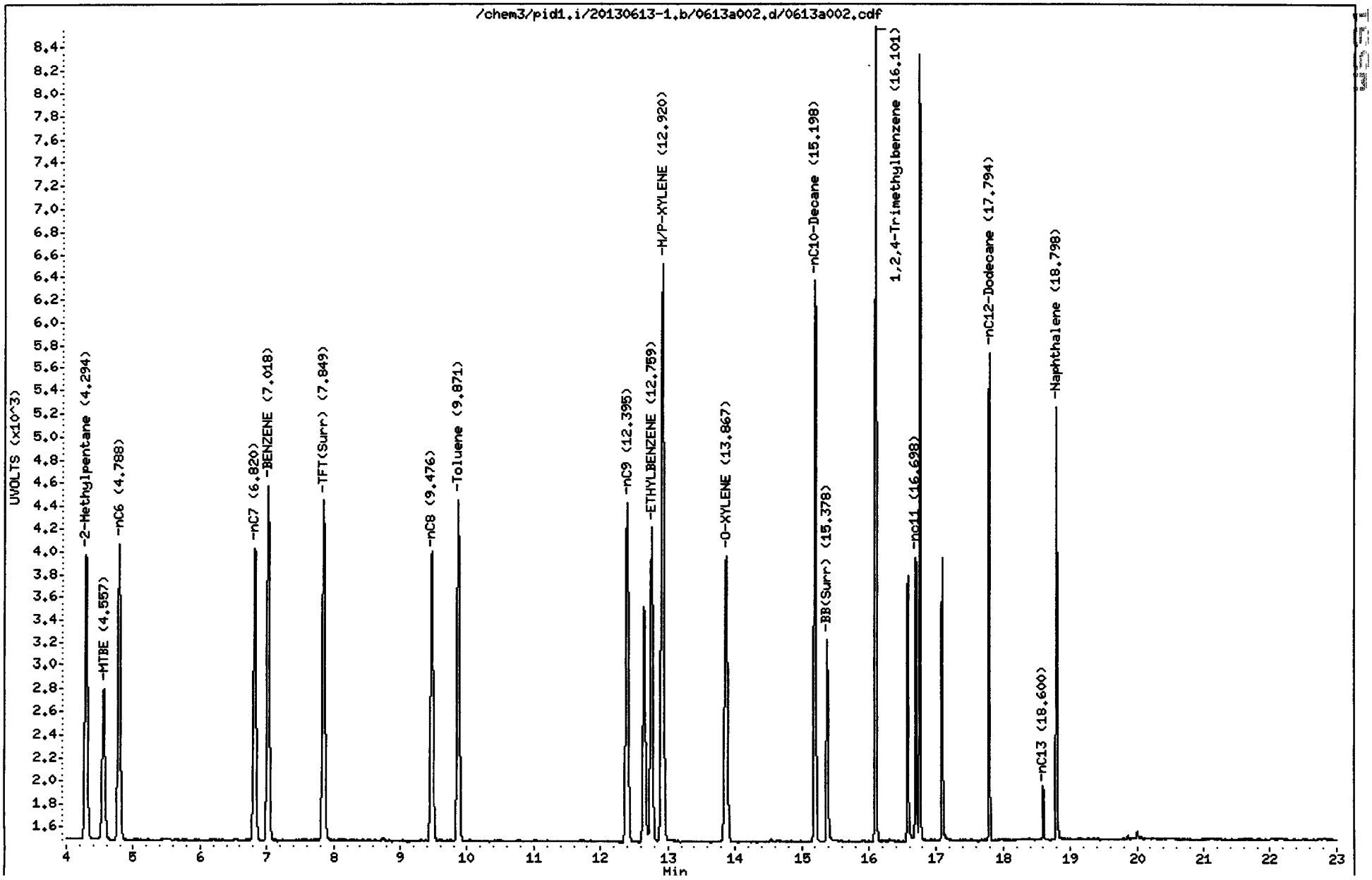
Sample Info: RT0613+BCAL

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



RK 6/17/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130613-1.b/0613a003.d
Data file 2: /chem3/pid1.i/20130613-2.b/0613a003.d
Method: /chem3/pid1.i/20130613-2.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: 13-JUN-2013 09:43
Matrix: WATER
Dilution Factor: 1.000

==========

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	-0.001	3143	45139	106.2	TFT(Surr)
15.378	0.000	1795	17260	90.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	798882	2.231 M
8015C 2MP-TMB	(4.19 to 16.20)	723723	1536070	2.122 M
AK101 nC6-nC10	(4.69 to 15.10)	582885	1243662	2.134 M
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	852642	2.273 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	3345	103.8	TFT(Surr)
15.385	0.000	7099	98.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.025	0.000	1889	8.40	Benzene
9.880	0.001	18508	93.41	Toluene
12.768	0.000	4585	28.08	Ethylbenzene
12.933	0.004	18033	100.22	M/P-Xylene
13.877	0.001	6523	45.94	O-Xylene
4.551	-0.013	279	3.20	MTBE

\ Indicates Peak Area was used for quantitation instead of Height
I Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130613-1.b/0613a003.d

Date : 13-JUN-2013 09:43

Client ID:

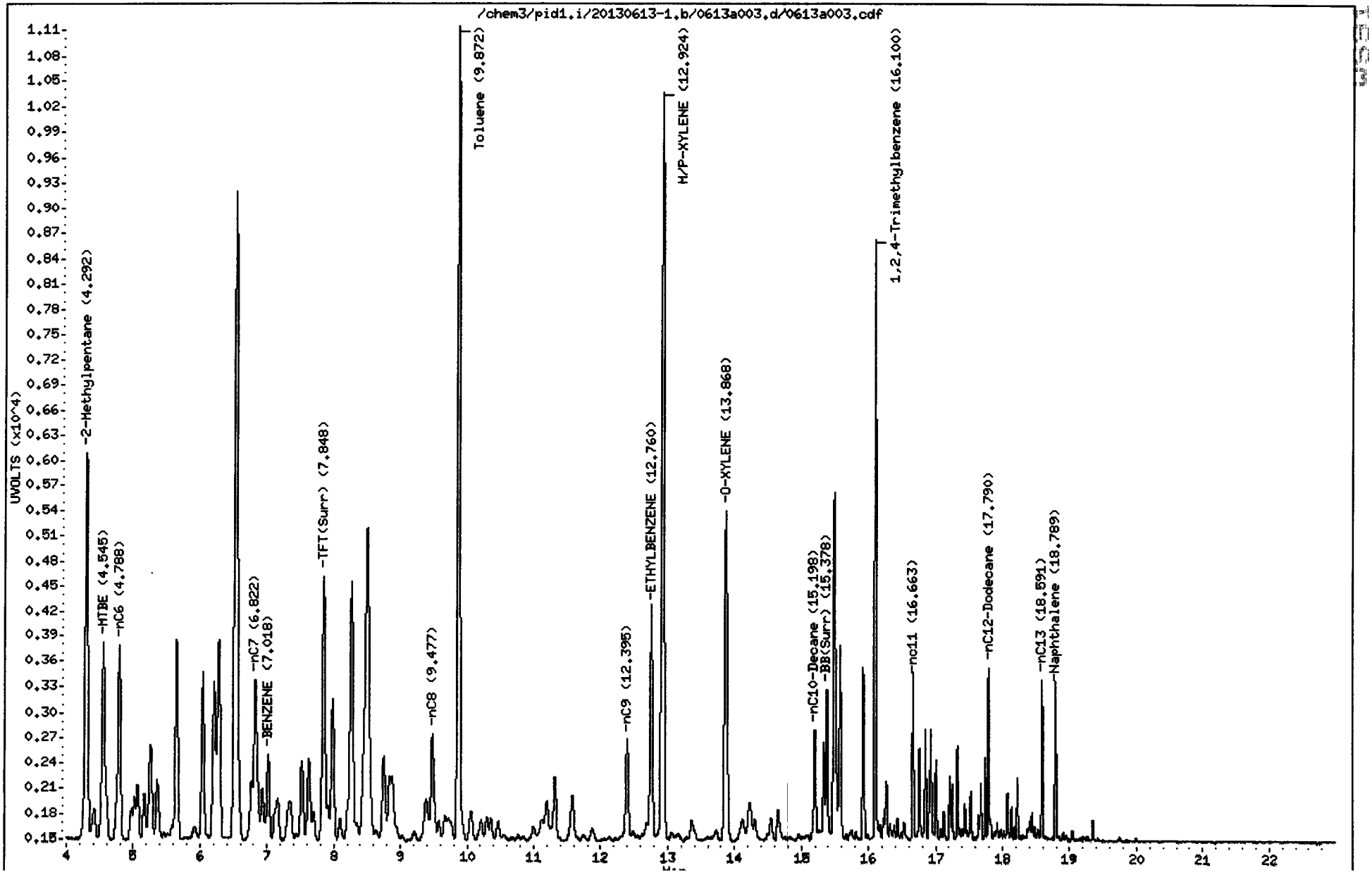
Sample Info: GCAL 1

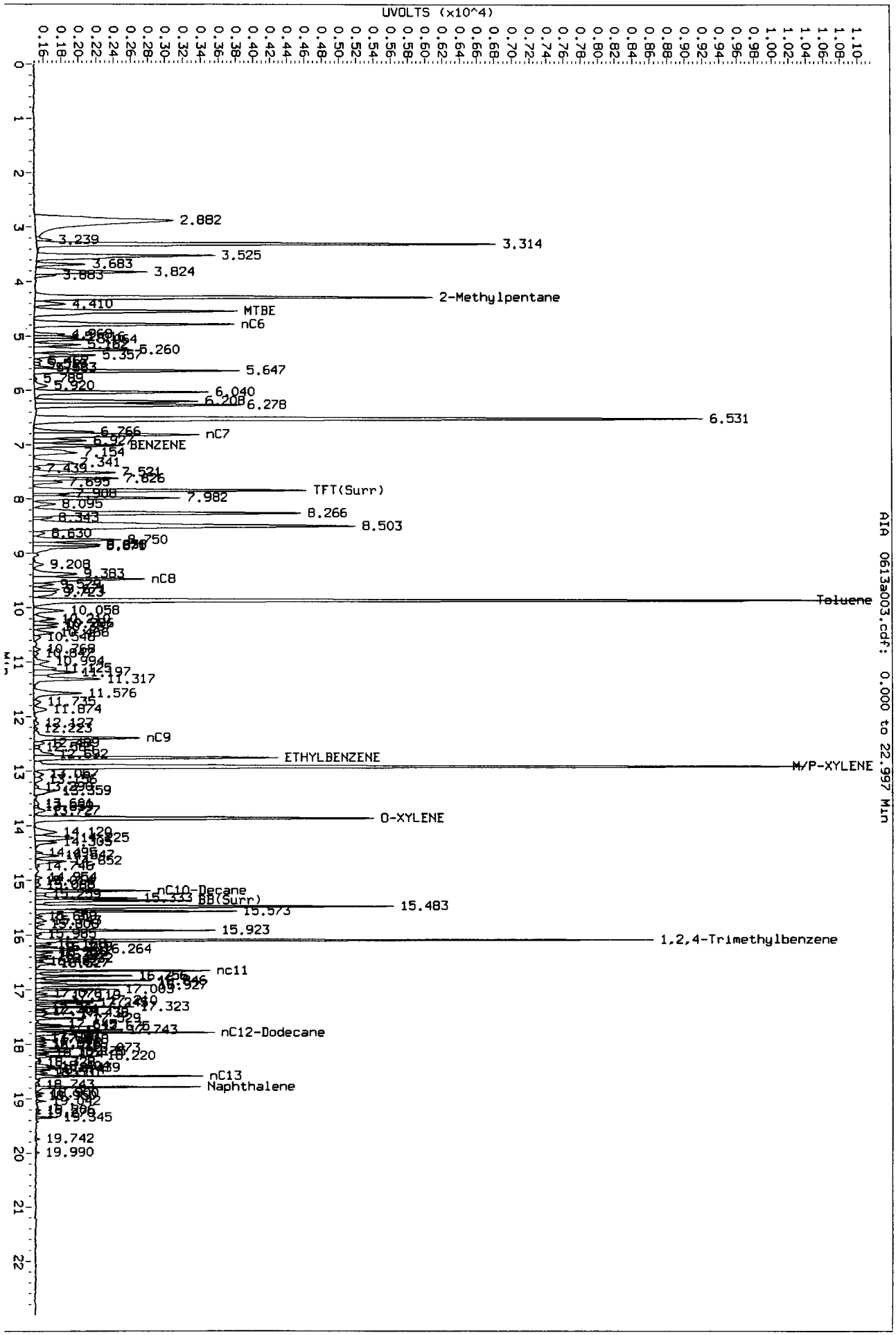
Instrument: pid1.i

Operator: PC

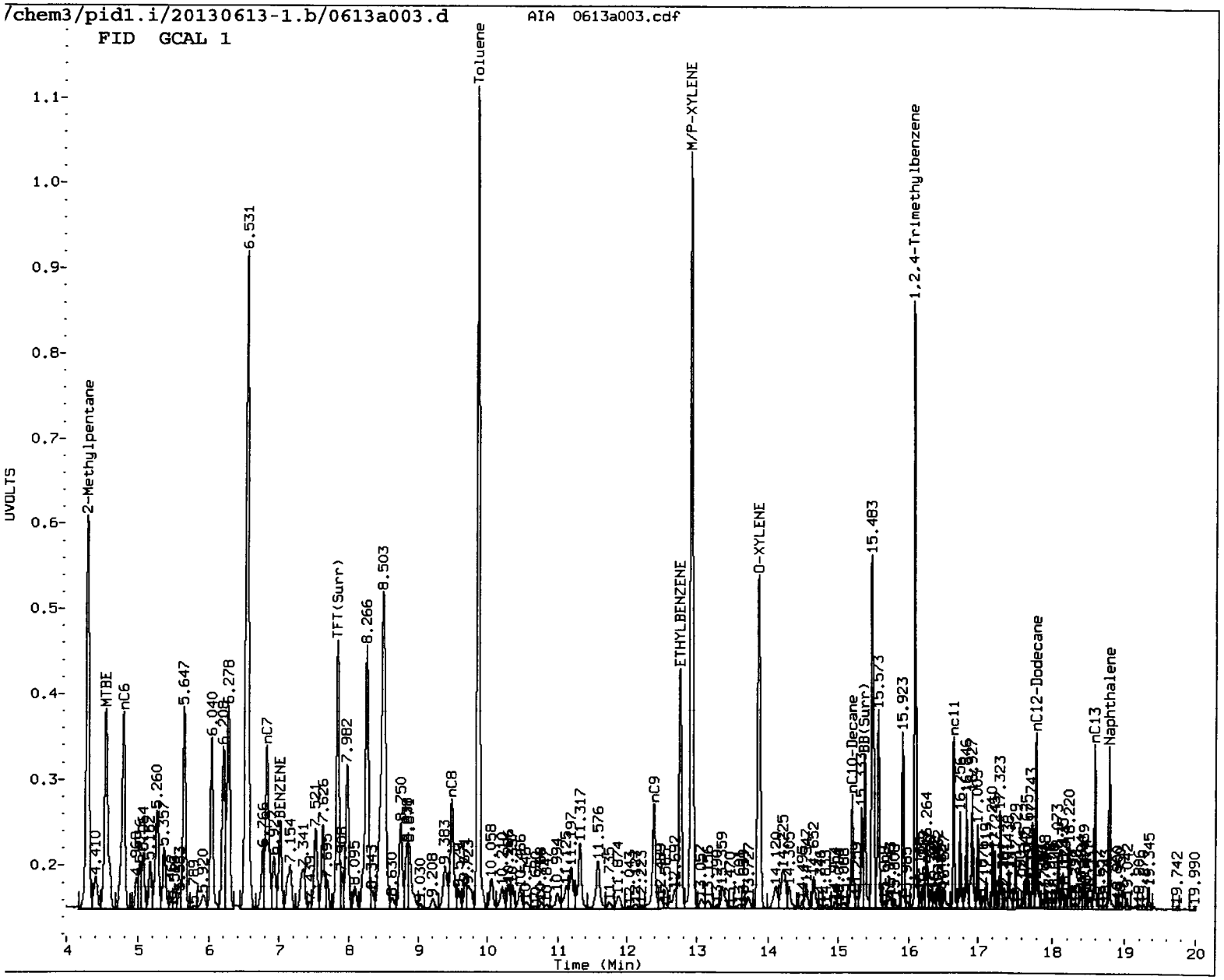
Column phase: RTX 502-2 FID

Column diameter: 0.18




UVOLTS (x10^4)
Data File: /chem3/pid1.i/20130613-1.b/0613a003.d/0613a003.cdf
Injection Date: 13-JUN-2013 09:43
Instrument: pid1.i
Client Sample ID:
AIA 0613a003.cdf: 0.000 to 22.997 Min
Min
2.882
3.239
3.314
3.525
3.683
3.824
3.883
2-Methylpentane
4.410
MTBE
nC6
5.260
5.357
5.647
5.920
6.040
6.208
6.278
6.531
6.766
nC7
BENZENE
7.154
7.341
7.439
7.626
TFT(Surr)
7.982
8.095
8.266
8.343
8.503
8.630
8.750
9.208
9.383
nC8
Toluene
10.058
11.317
11.576
11.735
11.874
12.223
nC9
ETHYLBENZENE
M/P-XYLENE
O-XYLENE
nC10-Decane
15.333
BB(Surr)
15.483
15.573
15.923
1,2,4-Trimethylbenzene
nc11
17.323
nC12-Dodecane
18.220
nC13
Naphthalene
19.742
19.990

6/17/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: RC Date: 6/17/13

KC
6/17/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130613-1.b/0613a004.d
Data file 2: /chem3/pid1.i/20130613-2.b/0613a004.d
Method: /chem3/pid1.i/20130613-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: LCS0613
Client ID:
Injection Date: 13-JUN-2013 10:34
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.852	0.003	2971	42568	100.4	TFT(Surr)
15.380	0.001	1793	16585	90.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	337818	0.943 M
8015C 2MP-TMB	(4.19 to 16.20)	723723	689316	0.952 M
AK101 nC6-nC10	(4.69 to 15.10)	582885	554448	0.951 M
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	359316	0.958 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
7.861	0.004	3264	101.3	TFT(Surr)
15.388	0.003	7017	97.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.029	0.004	783	3.48	Benzene
9.884	0.005	7473	37.72	Toluene
12.772	0.004	1794	10.99	Ethylbenzene
12.936	0.007	7205	40.04	M/P-Xylene
13.881	0.005	2611	18.39	O-Xylene
4.553	-0.011	148	1.70	MTBE

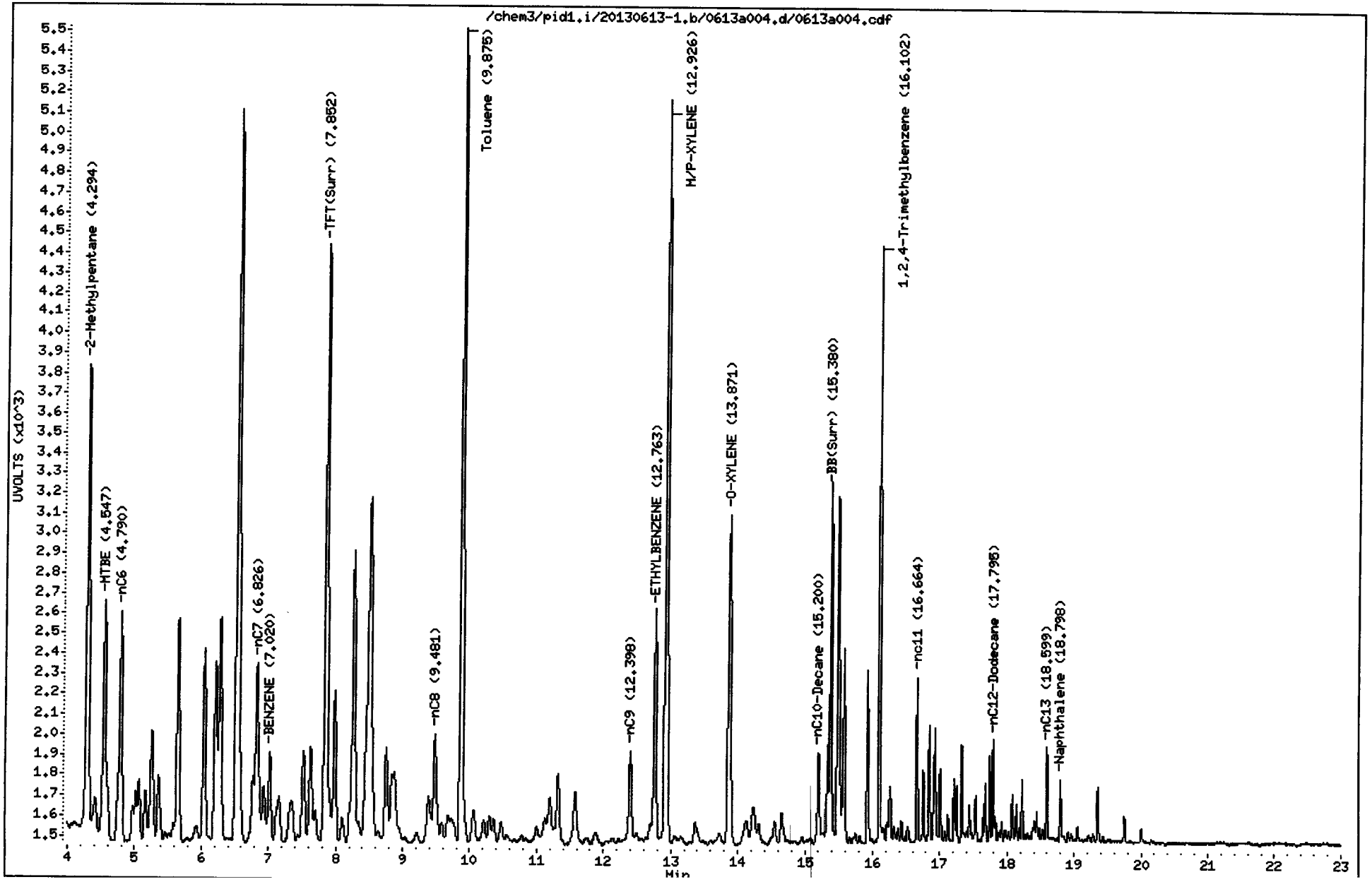
Indicates Peak Area was used for quantitation instead of Height
Indicates peak was manually integrated

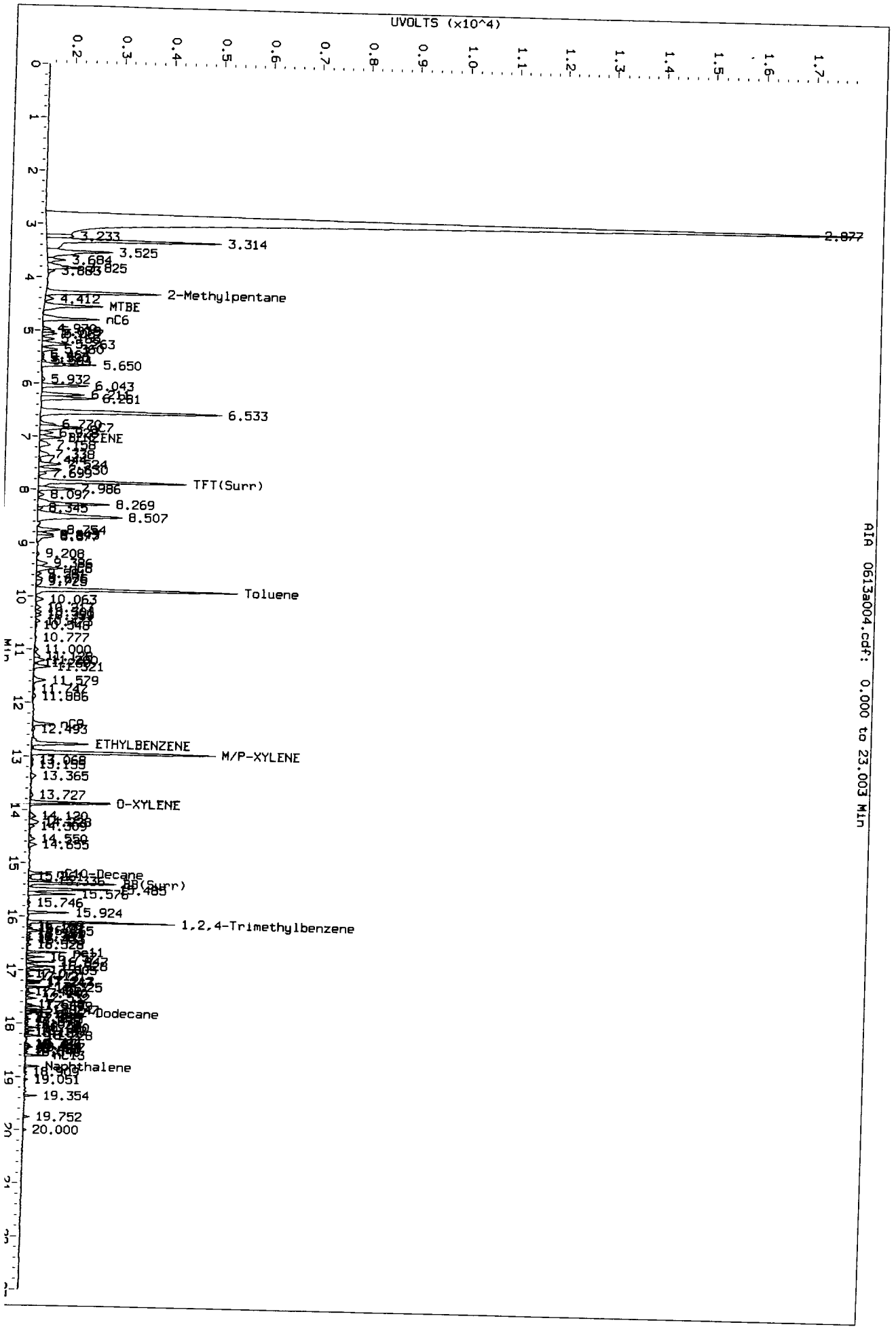
Data File: /chem3/pid1.i/20130613-1.b/0613a004.d
Date : 13-JUN-2013 10:34
Client ID:
Sample Info: LCS0613

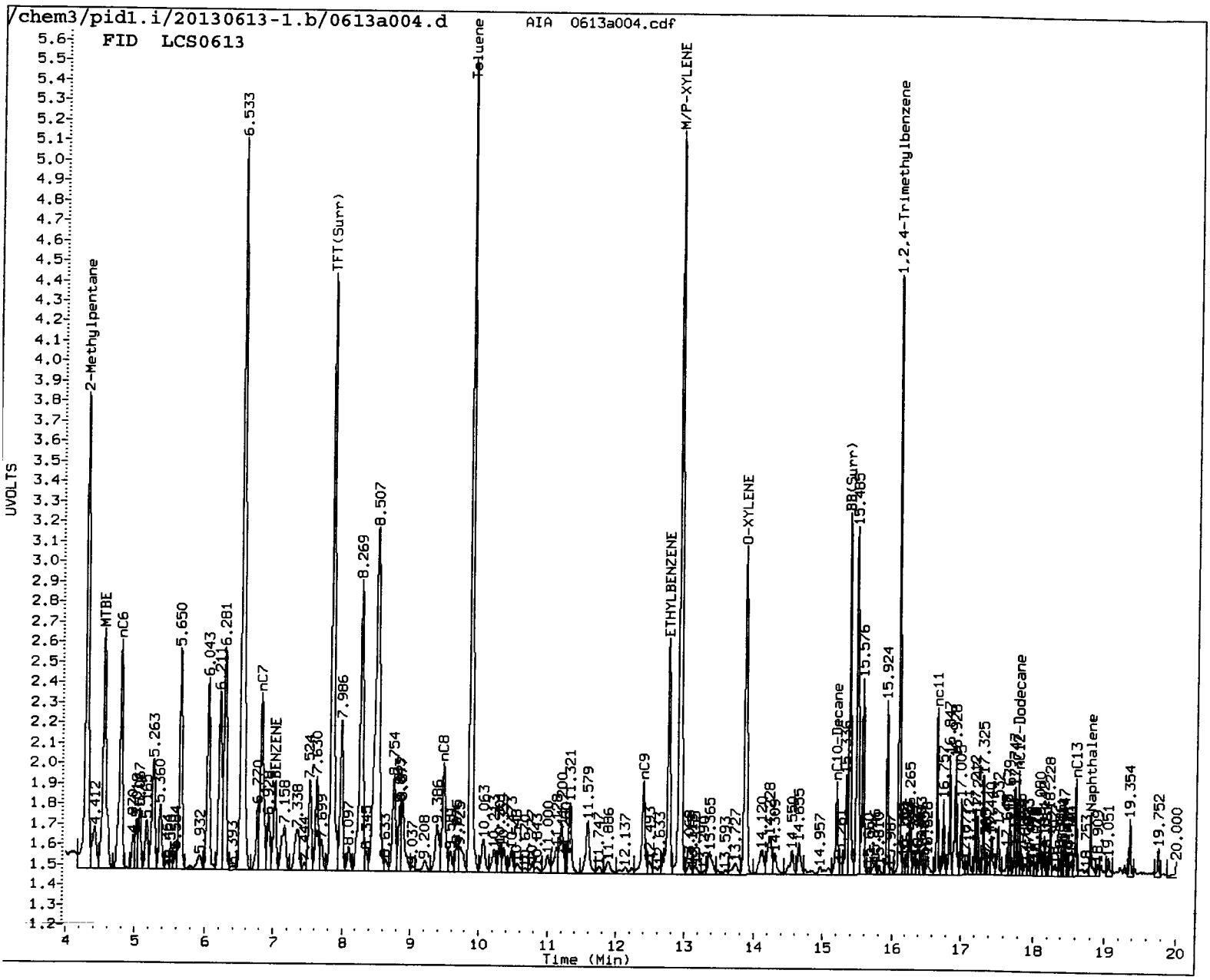
Instrument: pid1.i

Operator: PC
Column diameter: 0.18

Column phase: RTX 502-2 FID




UVOLTS (x10^4)
Data File: /chem3/pid1.1/20130613-1.b/0613a004.d/0613a004.cdf
Injection Date: 13-JUN-2013 10:34
Instrument: pid1.1
Client Sample ID:
AIA 0613a004.cdf: 0.000 to 23.003 Min
Min
2.877
3.233
3.314
3.525
3.684
3.825
2-Methylpentane
4.412
MTBE
nC6
5.650
5.932
6.043
6.533
BENZENE
TFT(Surr)
8.269
8.507
9.208
Toluene
10.063
10.777
11.000
11.579
nOB
ETHYLBENZENE
M/P-XYLENE
13.365
13.727
O-XYLENE
14.550
nC10-Decane
BP(Surr)
15.576
15.746
15.924
1,2,4-Trimethylbenzene
Dodecane
Naphthalene
19.051
19.354
19.752
20.000



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: KL Date: 6/17/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130613-1.b/0613a005.d
Data file 2: /chem3/pid1.i/20130613-2.b/0613a005.d
Method: /chem3/pid1.i/20130613-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: LCSD0613
Client ID:
Injection Date: 13-JUN-2013 11:03
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.850	0.001	3037	43350	102.6	TFT(Surr)
15.379	0.001	1900	16806	95.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	377932	1.055 M
8015C 2MP-TMB	(4.19 to 16.20)	723723	763326	1.055 M
AK101 nC6-nC10	(4.69 to 15.10)	582885	610800	1.048 M
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	398205	1.062 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
7.858	0.002	3310	102.7	TFT(Surr)
15.387	0.001	7158	99.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.026	0.001	855	3.80	Benzene
9.881	0.002	8176	41.27	Toluene
12.770	0.002	1977	12.11	Ethylbenzene
12.933	0.004	7852	43.64	M/P-Xylene
13.878	0.002	2838	19.99	O-Xylene
ND	---	---	---	MTBE

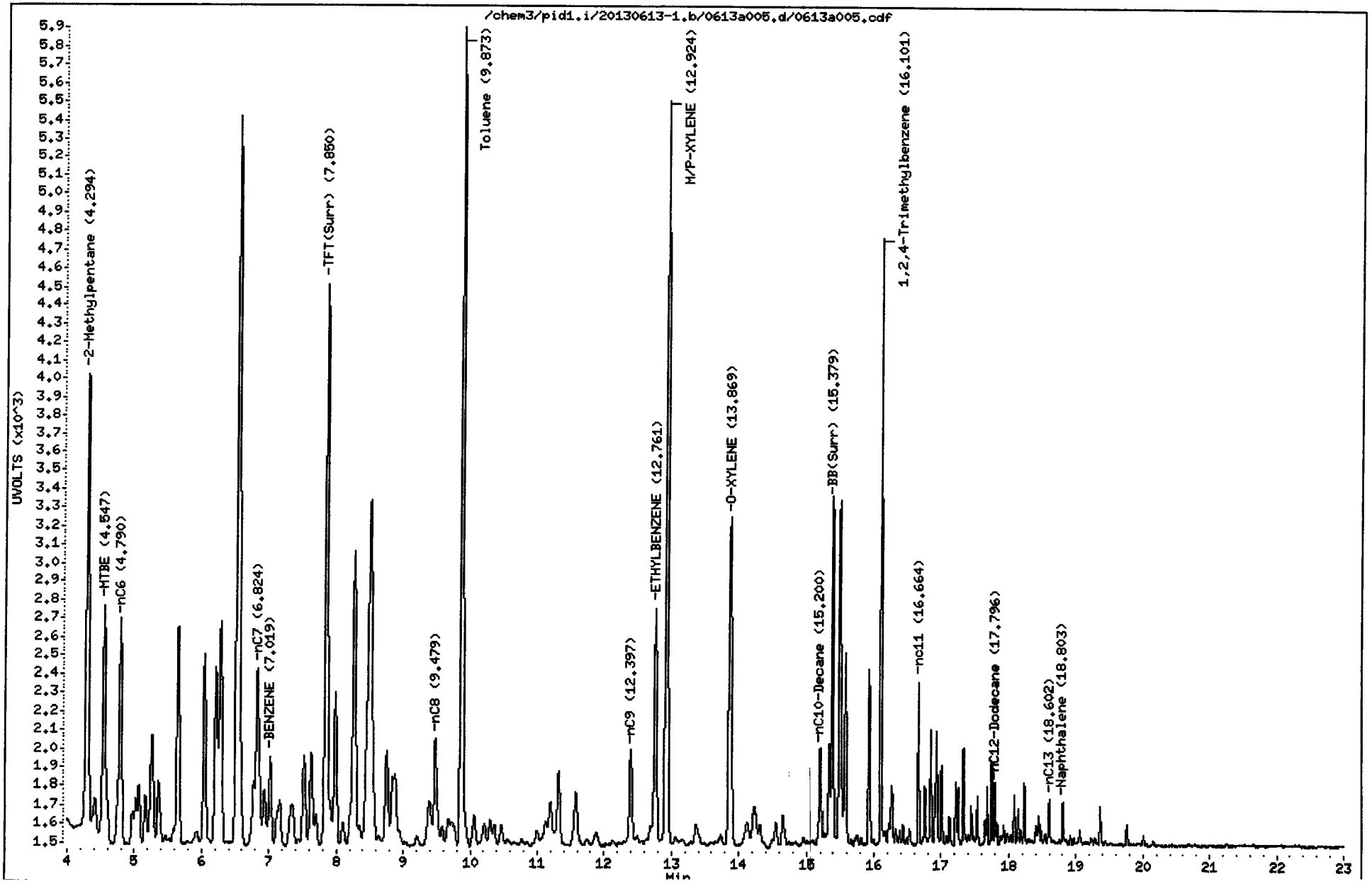
Indicates Peak Area was used for quantitation instead of Height
Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130613-1.b/0613a005.d
Date : 13-JUN-2013 11:03
Client ID:
Sample Info: LCSD0613

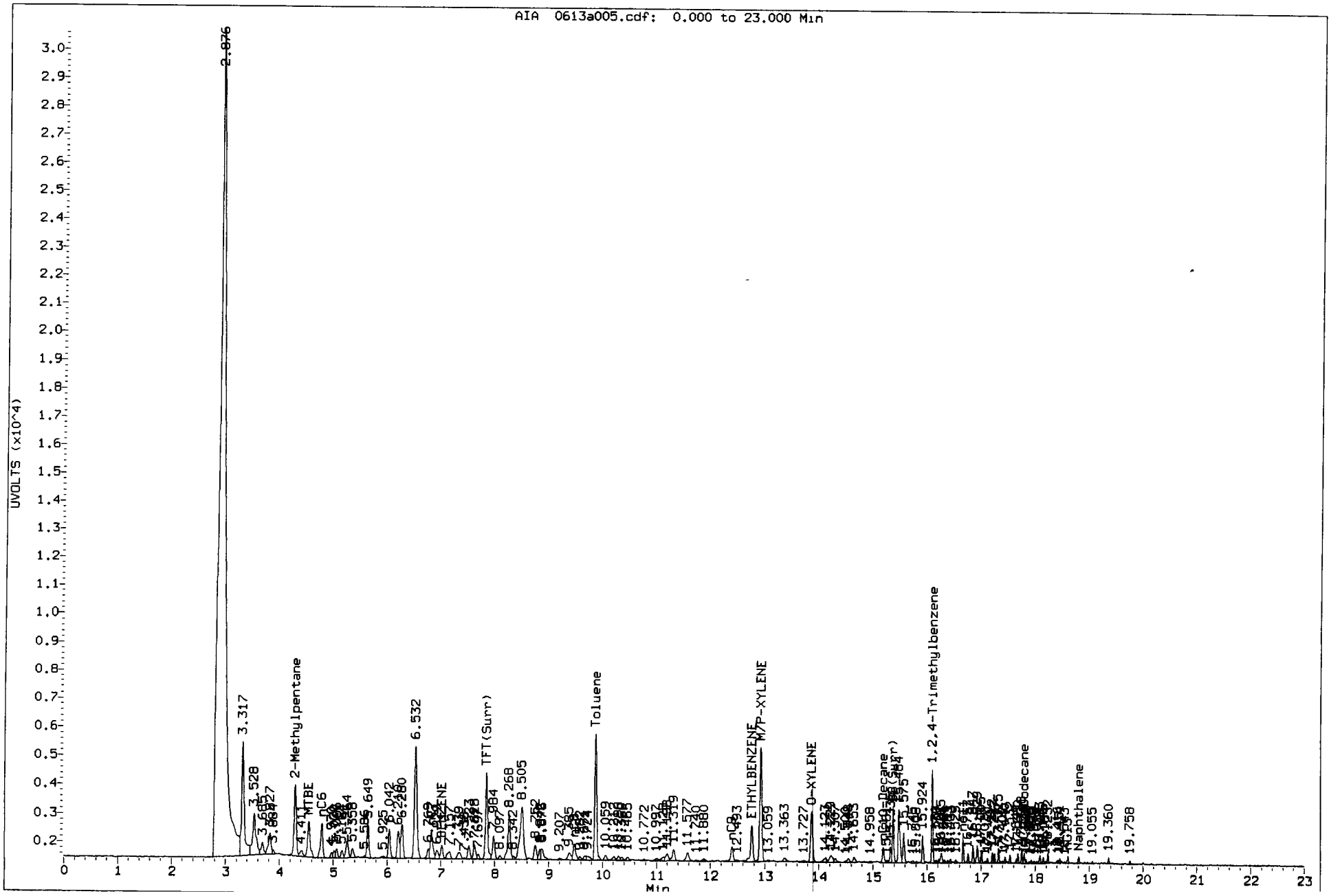
Instrument: pid1.i

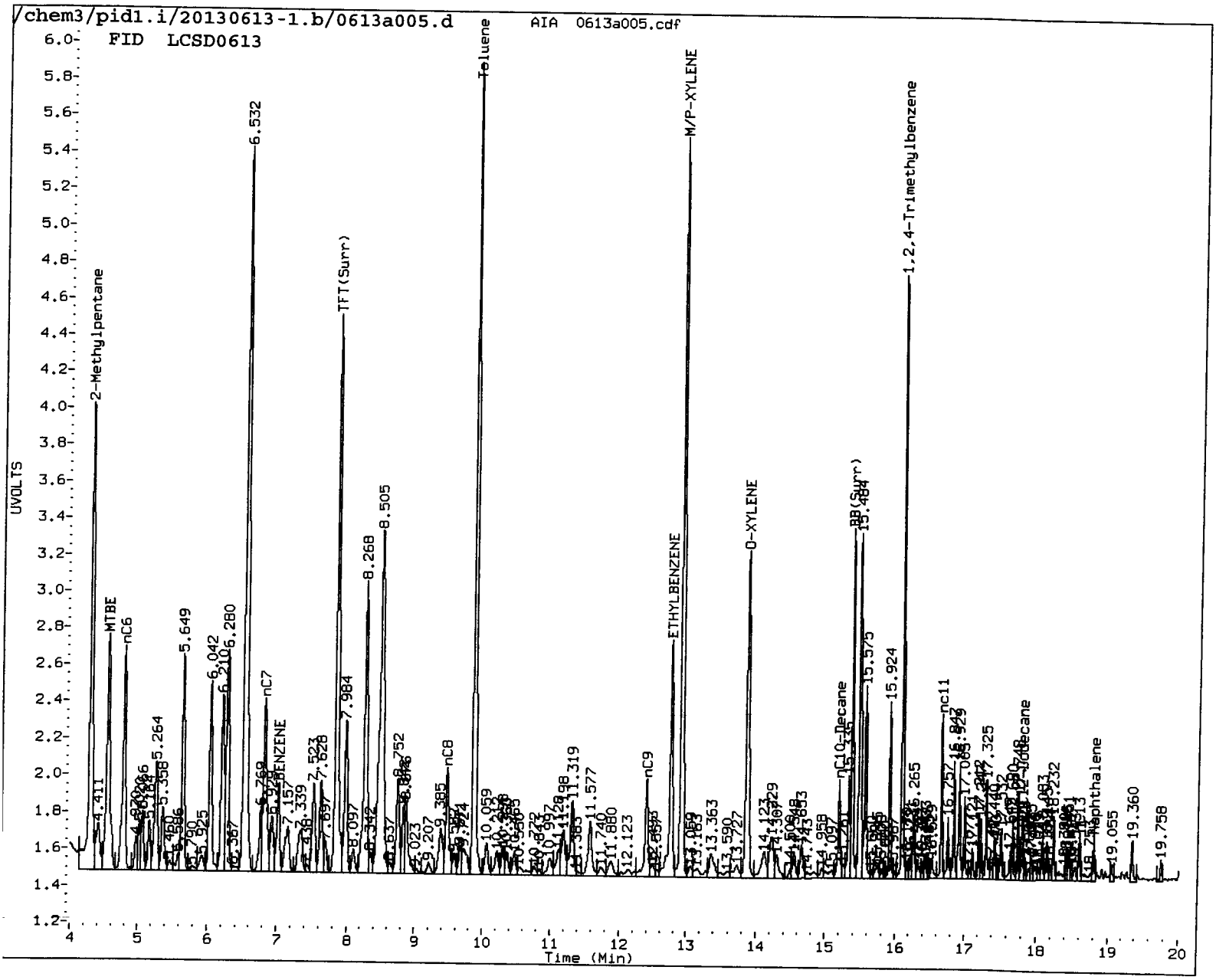
Operator: PC
Column diameter: 0.18

Column phase: RTX 502-2 FID



Data File: /chem3/pid1.i/20130613-1.b/0613a005.d/0613a005.cdf
Injection Date: 13-JUN-2013 11:03
Instrument: pid1.i
Client Sample ID:





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: KI Date: 6/17/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130613-1.b/0613a006.d
Data file 2: /chem3/pid1.i/20130613-2.b/0613a006.d
Method: /chem3/pid1.i/20130613-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: MB0613
Client ID:
Injection Date: 13-JUN-2013 11:32
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.850	0.001	2785	35300	94.1	TFT(Surr)
15.379	0.000	1800	15058	90.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	4461	0.012
8015C 2MP-TMB	(4.19 to 16.20)	723723	10348	0.014
AK101 nC6-nC10	(4.69 to 15.10)	582885	9286	0.016
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	5636	0.015

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
7.858	0.001	3046	94.5	TFT(Surr)
15.386	0.001	6740	93.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

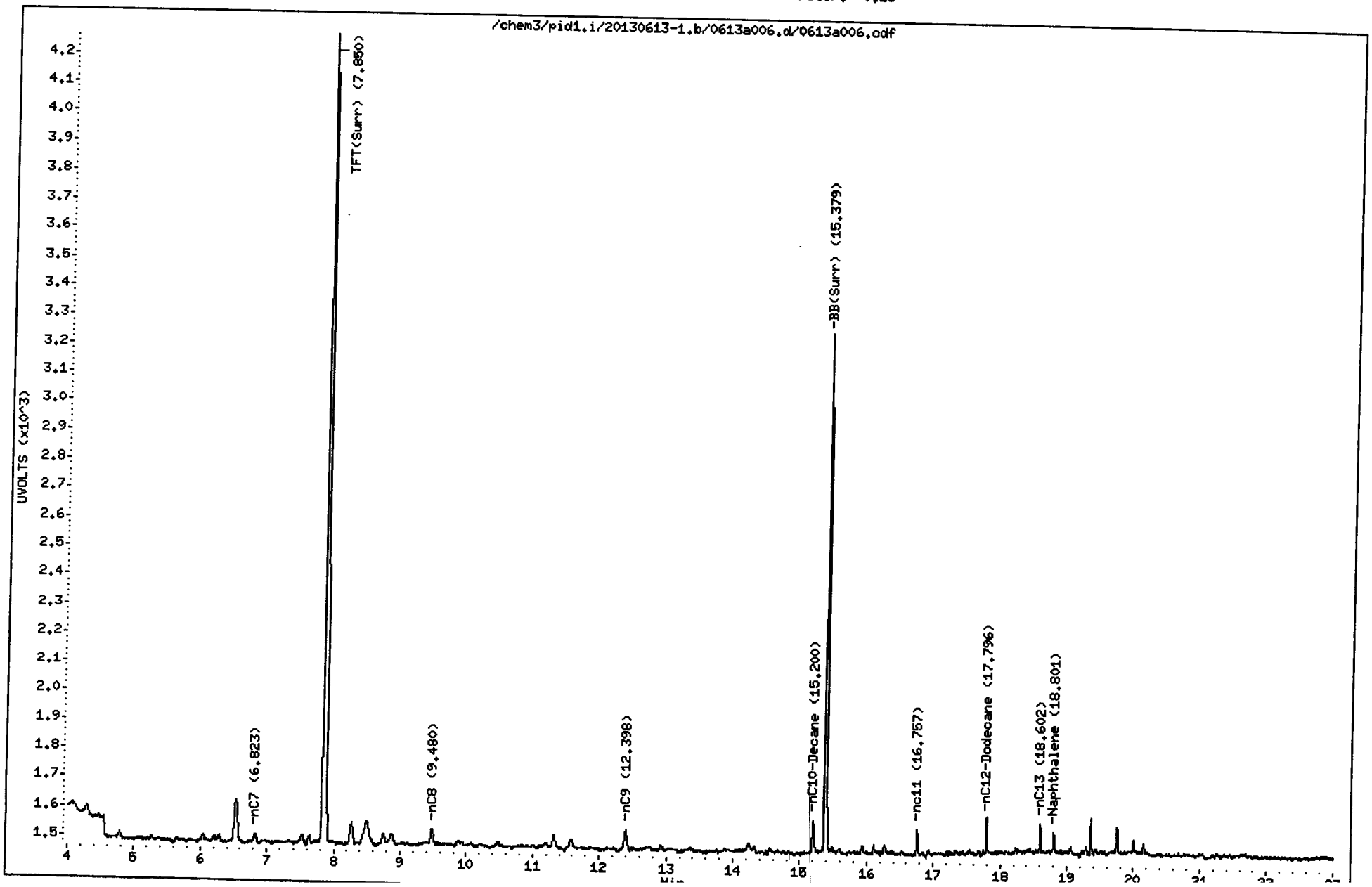
Indicates Peak Area was used for quantitation instead of Height
Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130613-1.b/0613a006.d
Date : 13-JUN-2013 11:32
Client ID:
Sample Info: MB0613

Instrument: pid1.i

Operator: PC
Column diameter: 0.18

Column phase: RTX 502-2 FID



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130613-1.b/0613a014.d
Data file 2: /chem3/pid1.i/20130613-2.b/0613a014.d
Method: /chem3/pid1.i/20130613-2.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: 13-JUN-2013 16:38
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.850	0.001	3389	48155	114.5	TFT(Surr)
15.379	0.001	2028	18503	102.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	807233	2.254 M
8015C 2MP-TMB	(4.19 to 16.20)	723723	1611103	2.226 M
AK101 nC6-nC10	(4.69 to 15.10)	582885	1300404	2.231 M
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	845363	2.254 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
7.858	0.001	3619	112.3	TFT(Surr)
15.387	0.001	7497	103.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.026	0.001	2028	9.02	Benzene
9.882	0.003	19533	98.59	Toluene
12.771	0.003	4715	28.88	Ethylbenzene
12.935	0.006	18800	104.48	M/P-Xylene
13.879	0.003	6829	48.09	O-Xylene
4.551	-0.013	321	3.68	MTBE

. Indicates Peak Area was used for quantitation instead of Height
' Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130613-1.b/0613a014.d

Date : 13-JUN-2013 16:38

Client ID:

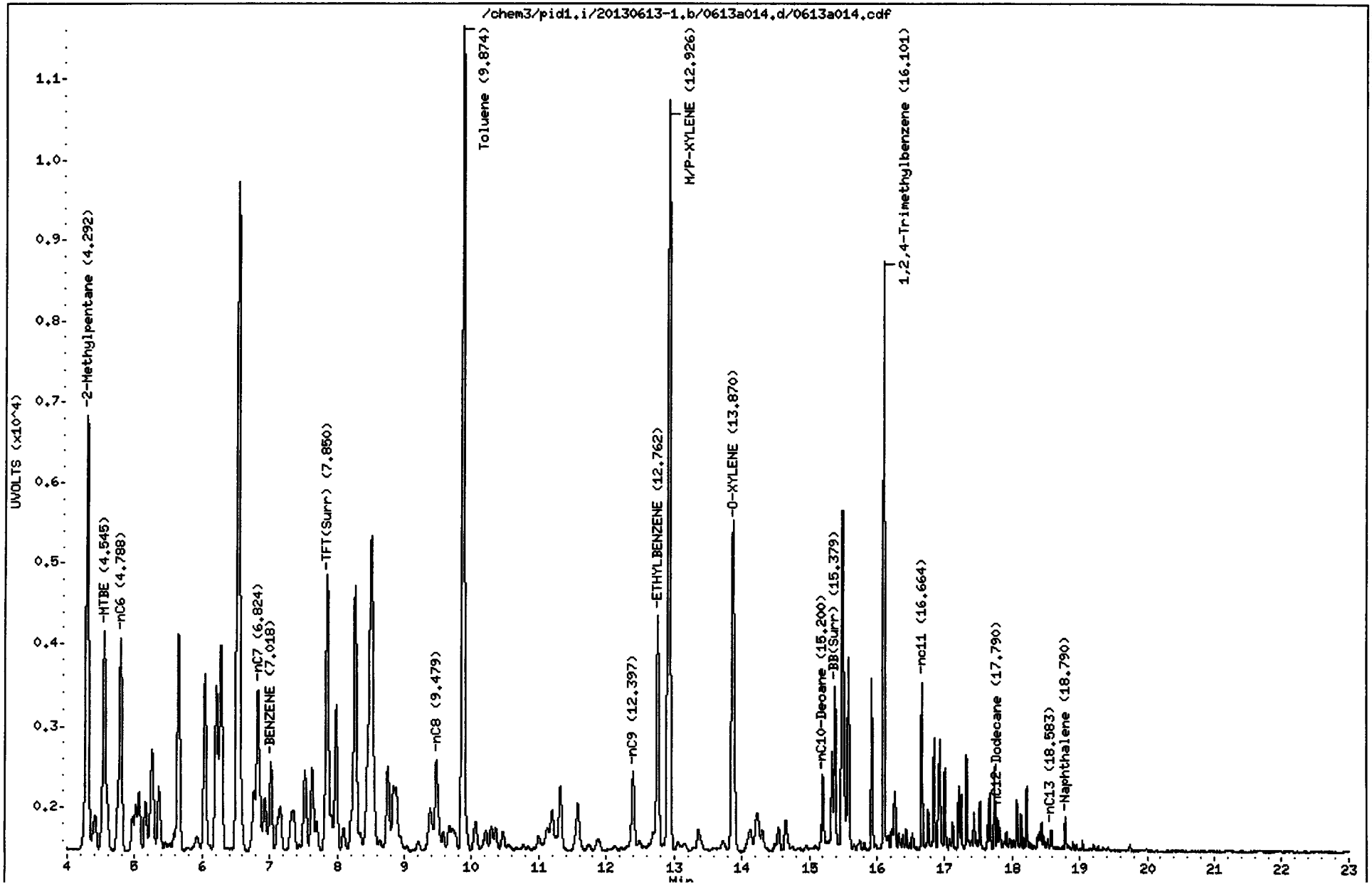
Sample Info: GCAL 2

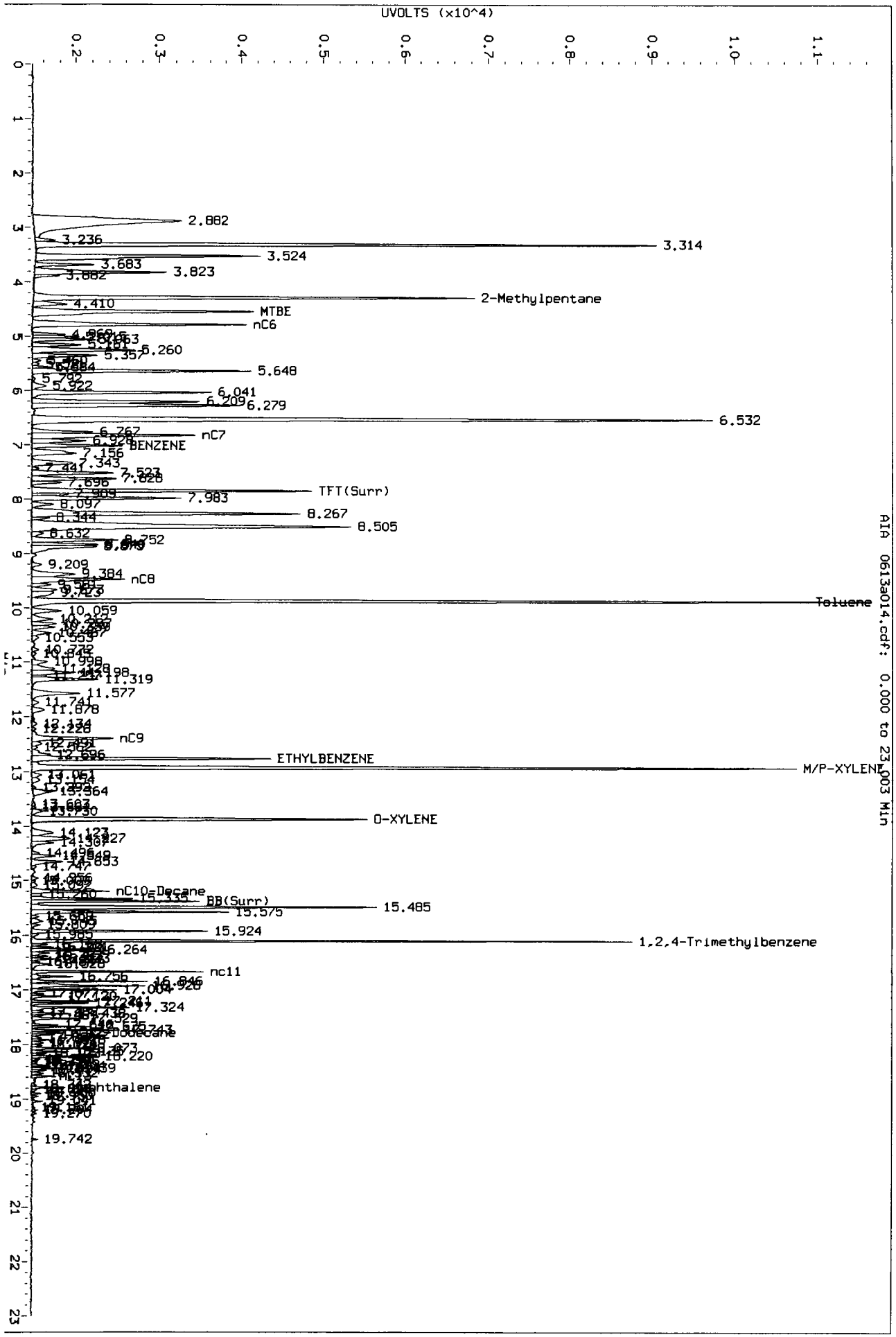
Instrument: pid1.i

Operator: PC

Column phase: RTX 502-2 FID

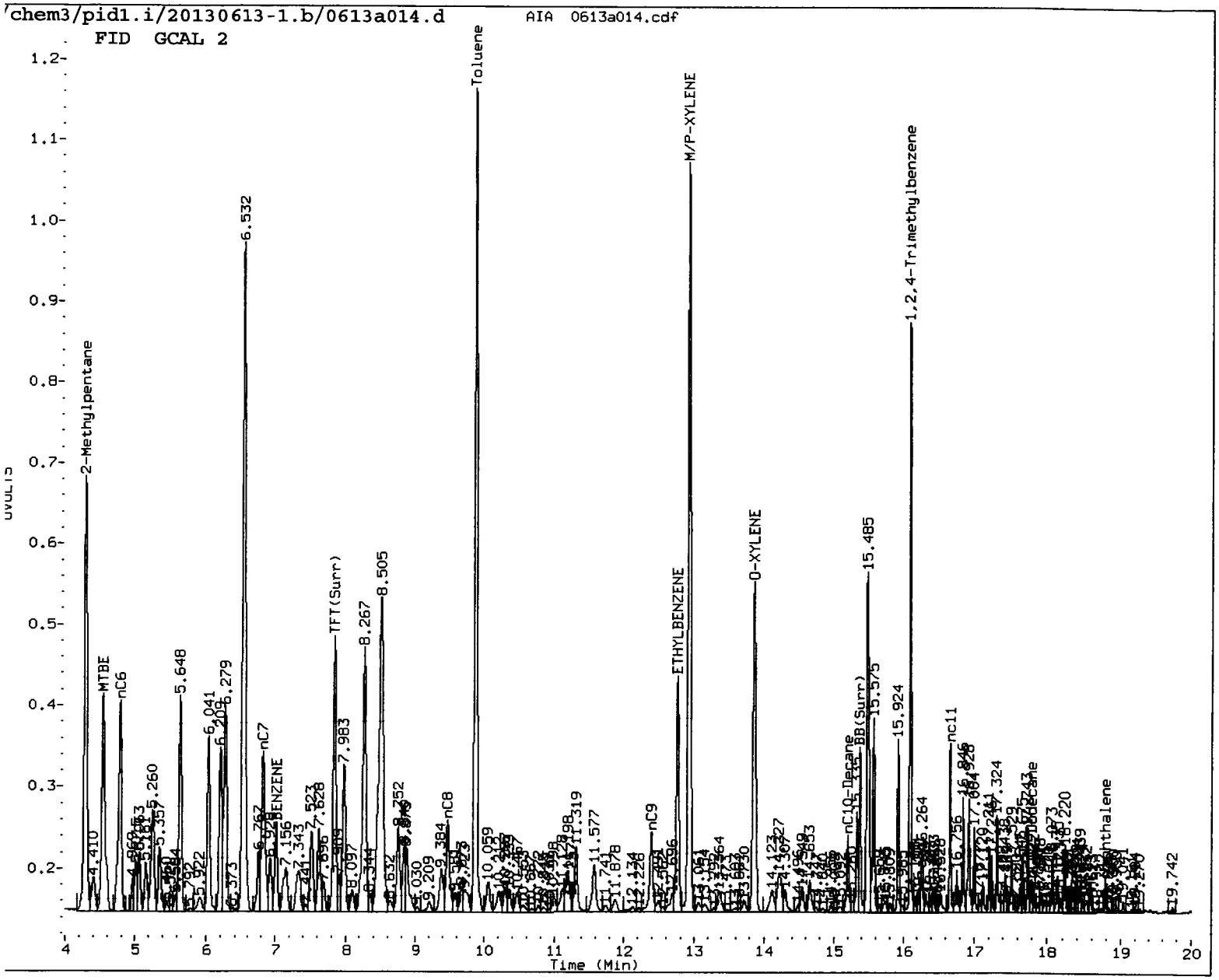
Column diameter: 0.18





Data File: /chem3/pid1.i/20130613-1.b/0613a014.d/0613a014.cdf
Injection Date: 13-JUN-2013 16:38
Instrument: pid1.i
Client Sample ID:

6/17/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: KC Date: 6/17/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130613-1.b/0613a019.d
Data file 2: /chem3/pid1.i/20130613-2.b/0613a019.d
Method: /chem3/pid1.i/20130613-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: WS91A
Client ID: CL-MH-SPS-20130605-
Injection Date: 13-JUN-2013 19:04
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.852	0.004	3094	39391	104.6	TFT(Surr)
15.380	0.002	2045	17136	102.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	2259	0.006
8015C 2MP-TMB	(4.19 to 16.20)	723723	0	0.000
AK101 nC6-nC10	(4.69 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	2259	0.006

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
7.860	0.001	3345	103.8	TFT(Surr)
15.387	0.000	7554	104.5	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/20130613-1.b/0613a019.d

Date : 13-JUN-2013 19:04

Client ID: CL-MH-SPS-20130605-

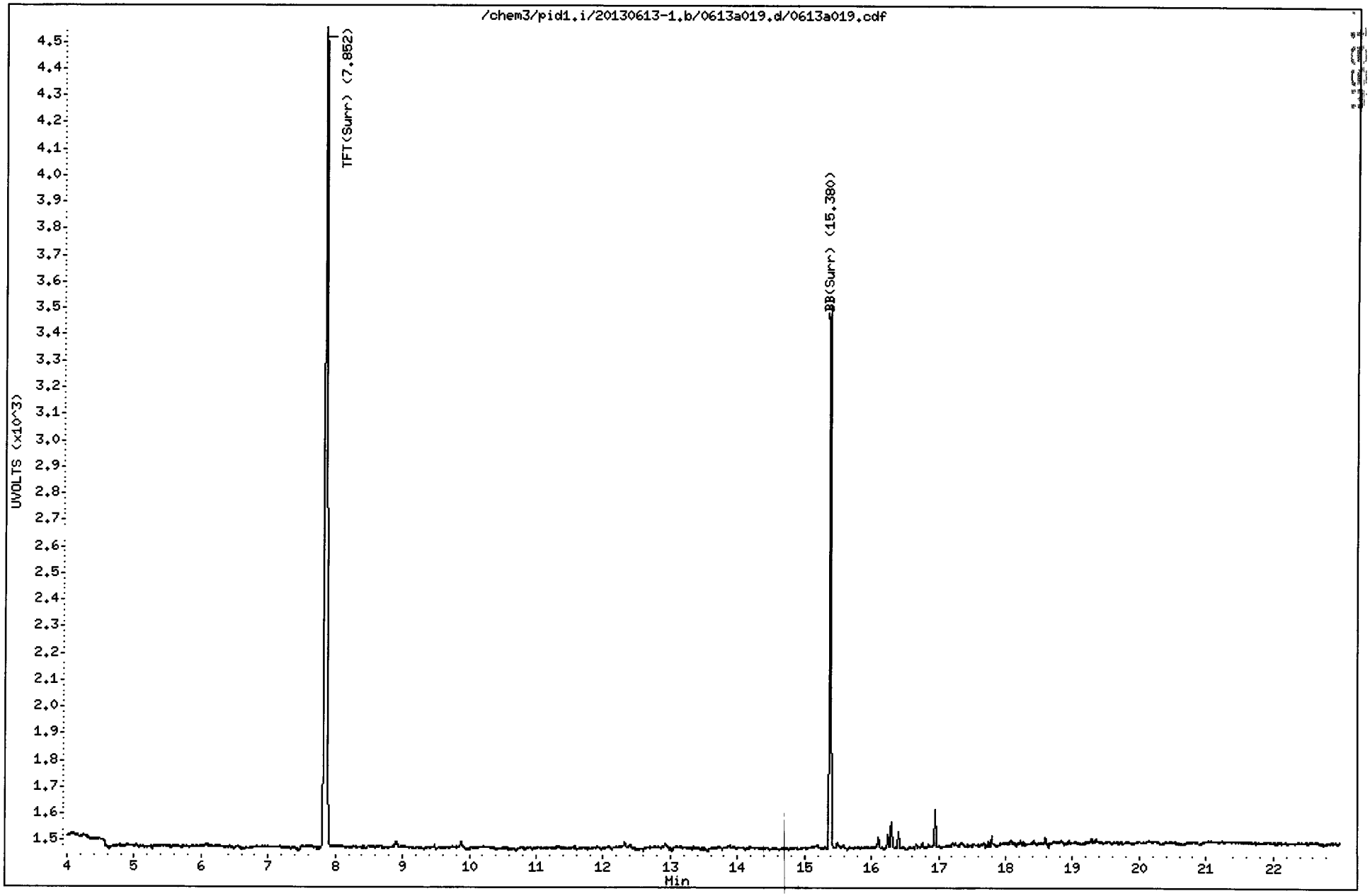
Sample Info: WS91A

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

6/17/13

Data file 1: /chem3/pid1.i/20130613-1.b/0613a025.d
Data file 2: /chem3/pid1.i/20130613-2.b/0613a025.d
Method: /chem3/pid1.i/20130613-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: GCAL 3
Client ID:
Injection Date: 13-JUN-2013 21:59
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.851	0.002	3227	46063	109.1	TFT(Surr)
15.379	0.001	2016	17780	101.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.89)	358114	780236	2.179 M
8015C 2MP-TMB	(4.19 to 16.20)	723723	1481694	2.047 M
AK101 nC6-nC10	(4.69 to 15.10)	582885	1186568	2.036 M
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	819084	2.184 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
7.859	0.003	3431	106.4	TFT(Surr)
15.387	0.001	7464	103.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.028	0.002	2018	8.98	Benzene
9.883	0.004	19380	97.81	Toluene
12.771	0.003	4665	28.57	Ethylbenzene
12.935	0.006	18610	103.43	M/P-Xylene
13.879	0.003	6814	47.98	O-Xylene
4.553	-0.011	287	3.29	MTBE

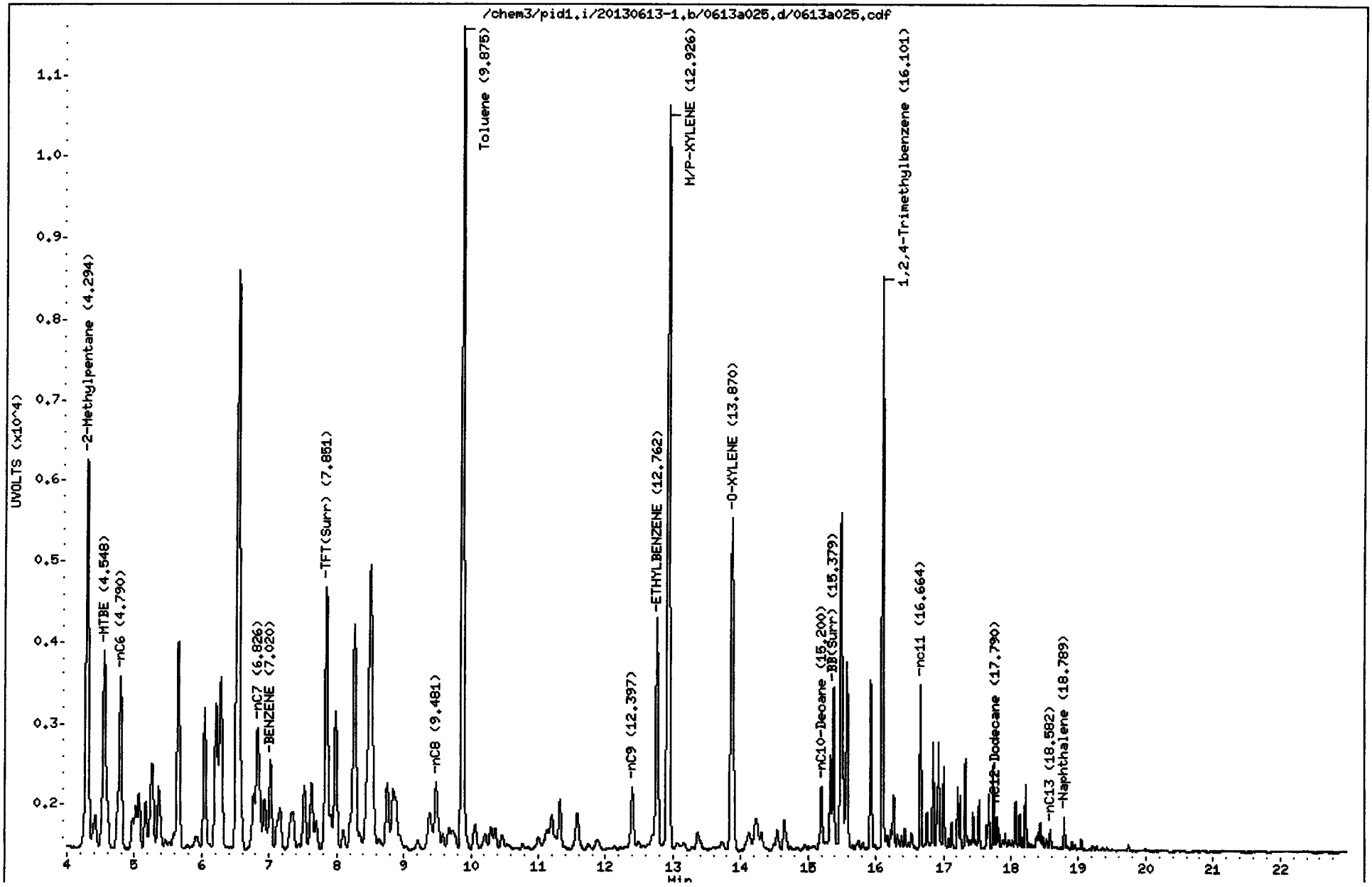
. Indicates Peak Area was used for quantitation instead of Height
Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130613-1.b/0613a025.d
Date : 13-JUN-2013 21:59
Client ID:
Sample Info: GCAL 3

Instrument: pid1.i

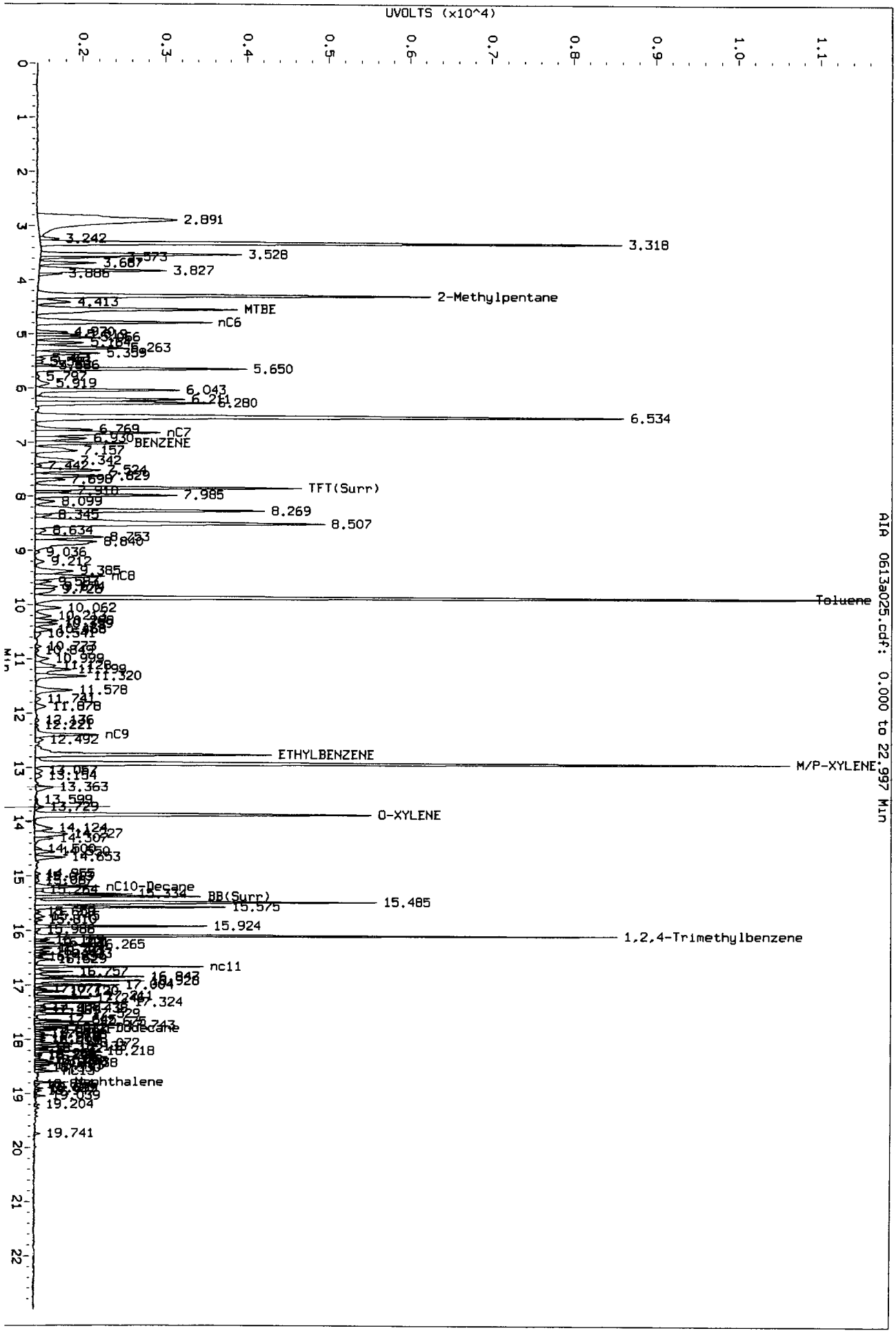
Operator: PC
Column diameter: 0.18

Column phase: RTX 502-2 FID

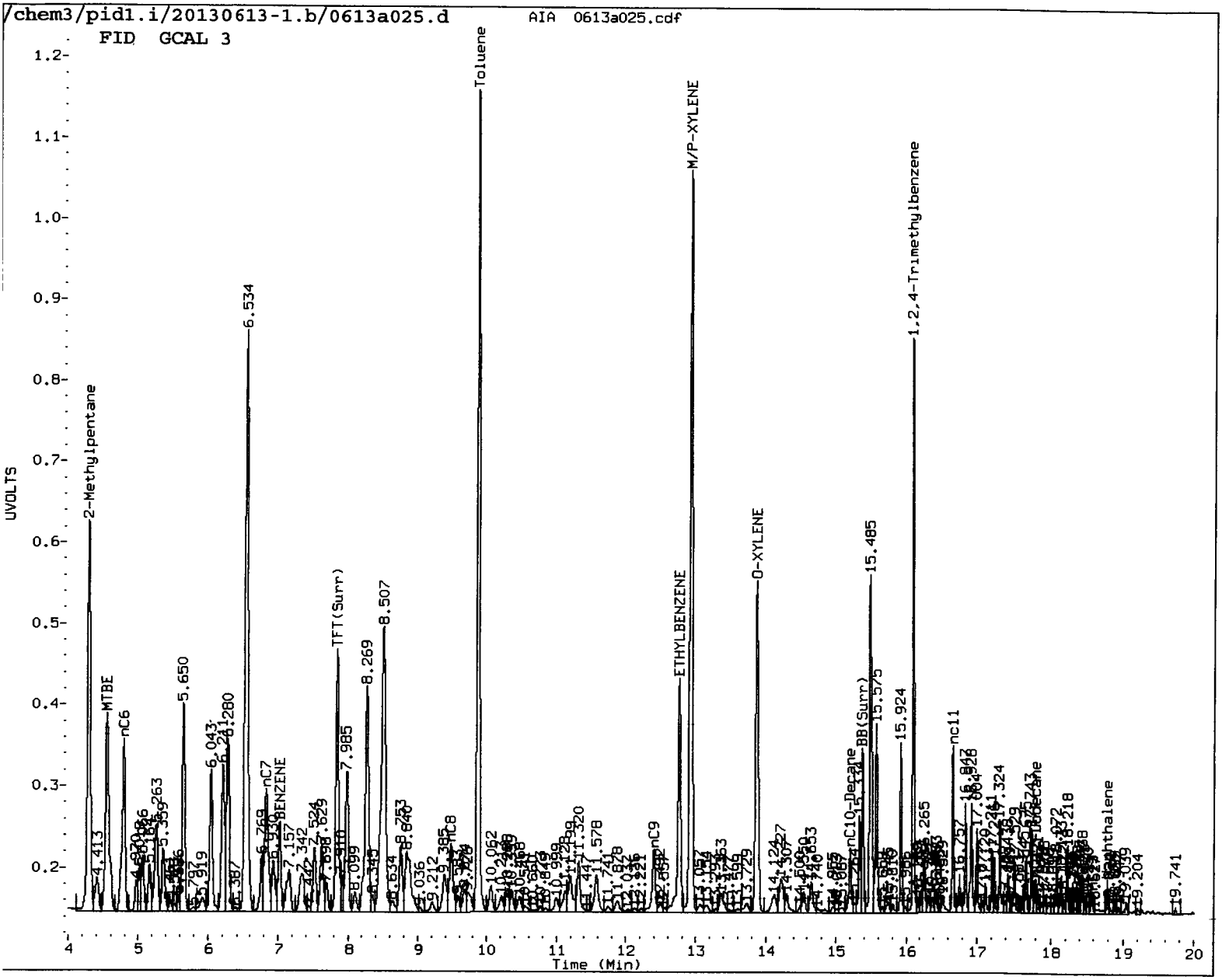


PC 6/17/13

Data File: /chem3/pid1.i/20130613-1.b/0613a025.d/0613a025.cdf
Injection Date: 13-JUN-2013 21:59
Instrument: pid1.i
Client Sample ID:



WS91:01697



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: NC Date: 6/07/13

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: WS91

Analytical Resources,Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: CB

Date: 6-12-13

Final Volume 50.0

Final Volume (Hg): 50.0

Sample ID WS91 ASpk, mBlSpk

	Prepcode:	SWC		
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:	B507		
	Vol Added (mL):	1.0		
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	

	SWN	SWN	
	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
	B510	B511	
	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	SMN	CVA	1.0	0.05	3002-13
Hg MBSPK	✓	CVA	1.0	0.10	✓
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:** 6-12-13 **Time:** 1005

Matrix: Soil **Block ID:** #5/ #4 **Block Temp:** 90°C / 90°C **Thermometer:** mA60 / mP52

ARI Sample ID	Btl #	pH<2	Prep Code: SWC Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWC Final Vol (mL)	Prep Code: SWN Initial Wt (g) ~~Vol (mL)~~	Prep Code: SWN Final Vol (mL)	Comments
WS91 A	6	-	1.027	50.0	1.008	50.0	
" Adup	6	-	1.025		1.003		
" Aspk	6	-	1.022		1.006		
" MBI	-	-	-		-		
" MBIspk	-	-	-		-		
WS30 A	2	-	1.021		1.071		
" B	2	-	1.021		1.046		
" C	2	-	1.069		1.025		
" D	2	-	1.037		1.013		
" E	2	-	1.064		1.046		
" F	2	-	1.021		1.016		
" G	2	-	1.057		1.024		
" H	2	-	1.064		1.006		
" I	3	-	1.045		1.078		
" Idup	3	-	1.042		1.081		
" Ispk	3	-	1.040		1.081		
" J	2	-	1.026		1.055		
" REF1	D053-540	-	1.006		1.008		
" MBI	-	-	-		-		
" MBIspk	-	-	-	50.0	-		
WT48 A	1	-			1.010		
" B	1	-	6/13/12		1.080		
" MBIspk	-	-	CB		-		
" MBI	-	-			-	50.0	
			CB 6/13/12				

Chemical/Reagent ID: HNO3: mP2499 I8169 H2O2: I8135 HCL: I8213 Tube lot #: mm01LKKC

5061F

Version 005
1/10/12

WS91 : 01701

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: Smm Matrix: Soil
Analyst: CB Date: 6-12-13
Bath Temp: 95°C Start Time: 1035 End Time: 1105-13

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WS91 A	6	-	0.232	50.0	6/20, 1	Y	
" AMD	6	-	0.234		1		
" ASPK	6	-	0.236		1		
" MBI	-	-	-		1		
" MBISPK	-	-	-		1		
WS30 A	2	-	0.230		6/17, 1		
" B	2	-	0.256		1		
" C	2	-	0.287		1		
" D	2	-	0.240		1		
" E	2	-	0.237		1		
" F	2	-	0.256		1		
" G	2	-	0.235		1		
" H	2	-	0.232		1		
" I	3	-	0.269		1		
" J	2	-	0.207		1		
" IDUP	3	-	0.268		1		
" ISPK	3	-	0.271		1		
" REF1	0053-540	-	0.200		1		
" MBI	-	-	-		1	↓	
" MBISPK	-	-	-		1	Y	
WT48 A	1	-	0.201		6/21, 1	N	
" B	1	-	0.231		1	↓	
" MBI	-	-	-		1	↓	
" MBISPK	-	-	-	50.0	1	N	
			EB 6/12/13				

Chemical/Reagent ID:

HNO_3: I8169 H_2SO_4: I8044 HCl: -

5% $K_2S_2O_8$: MP2491 5% $KMnO_4$: MP2475 Digest Tube Lot: MH21KK06

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	WS91
Unacceptable Blank:	☐	Date of Event:	6-13-13
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

ASPK/A Zn ↓

APOST ~102 % rec. (in control)

Samples Affected:

Corrective Action Taken:

Analyst Initials: BA **Supervisor:** [signature]

Date: 6-13-13 **Date:** 6-14-13

WS91 01709

WS91

MATRIX DUPLICATE AND MATRIX SPIKE WORKSHEET (FOR SAMPLES >5 IDL)									
DUPLICATION:					SPIKE RECOVERY:				
	DUP	BKGD				SPIKE	BKGD		
VOLUME	100	100			VOLUME	100	100		
SAMP WT	1.025	1.027			SAMP WT	1.022	1.0270		
ELEMENT	DUP	BKGD	% RPD		ELEMENT	SPIKE	BKGD	SPK'D CONC	% RECOV
	mg/L					mg/L	mg/L	mg/L	
Ag			#DIV/0!		Ag			0.5	0.0
Al			#DIV/0!		Al			2	0.0
As			#DIV/0!		As			2	0.0
B			#DIV/0!		B			0.5	0.0
Ba			#DIV/0!		Ba			2	0.0
Be	0	0	#DIV/0!		Be	0.4715	0	0.5	94.3
Ca			#DIV/0!		Ca			10	0.0
Cd			#DIV/0!		Cd			0.5	0.0
Co			#DIV/0!		Co			0.5	0.0
Cr			#DIV/0!		Cr			0.5	0.0
Cu	0.23	0.2825	20.29		Cu	0.75	0.2825	0.50	93.8
Fe			#DIV/0!		Fe			2	0.0
K			#DIV/0!		K			10	0.0
Mg			#DIV/0!		Mg			10	0.0
Mn			#DIV/0!		Mn			0.5	0.0
Mo			#DIV/0!		Mo			0.5	0.0
Na			#DIV/0!		Na			10	0.0
Ni			#DIV/0!		Ni			0.5	0.0
Pb			#DIV/0!		Pb			2	0.0
Sb			#DIV/0!		Sb			2	0.0
Se			#DIV/0!		Se			2	0.0
Si			#DIV/0!		Si			10	0.0
Sn			#DIV/0!		Sn			0.5	0.0
Sr			#DIV/0!		Sr			0.5	0.0
Ti			#DIV/0!		Ti			2	0.0
Tl			#DIV/0!		Tl			2	0.0
V			#DIV/0!		V			0.5	0.0
Zn	0.7464	0.8748	15.65		Zn	1.218	0.8748	0.5	69.5

TABLE 6

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	WS91
Unacceptable Blank:	☐	Date of Event:	6-13-13
Unacceptable Duplicate:	☑	Client ID:	
Unacceptable Spike:	☑	Method/Element:	ICPMS
Unacceptable Reference:	☐	Prep Code:	SWN

Details of Problem/Recommended Corrective Action:

20.5 % RPD for As in A, ADup

A 1.585 ppb As ADup 2.304 ppb As

60%R for Sb in A spk
Post Spike ok

Samples Affected:

Corrective Action Taken:

Analyst Initials: M **Supervisor:** [signature]

Date: 6-13-13 **Date:** 6/14/13

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: WS91

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: (ICP) ICP-MS GFA CVA **Analysis Date:** 6-13-13

ICP2	Analyst BA 6-13-13	Peer 6-14-13	Comment
Logbook(s)			
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	✓	✓	WS30, WS91
Matrix Duplicates	✓	✓	WS91
Method Blanks	✓	✓	
Data Processing			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Approvals and QAF's	✓	✓	CAF-WS30, WS91

WS91 01707

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: 6-13-13 Analyst: BA

LR Date: 6-10-13 Page: 1 of 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			B651
		2			B627
		3			B628
		4			B629
		5			B630
		ICV			B323
		ICB			
		CRI			
		ICSA			
		ICSAB			
		CCV1			
		CCB1			
		WT64 MB	SWC	2	
	✓	A		50	Overdiluted
		MBSPK		2	✓
	✓	A		20	Overdiluted
		CCV2			
		CCB2			
		WT64 A	SWC	10	
		CCV3			
		CCB3			
		WS30 MB1	SWC	2	
		A			
		B			

WS91 : 01726

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 6-13-13 Analyst: BA

LR Date: — Page: 2 of 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		WS30 C	SWC	2	
		D			
		E			
		F			
		G			
		REF1			✓
		MBISPK			✓
		CCV4			
		CCB4			
		WS30 H	SWC	2	
		IDUP			✓
		I			
		ISPK			✓ Sb ↓ (CAF)
		IPOST			✓ 0.08 mL ICP Spk, 0.016 mL 1000 ppm Sb — Sb OK
		J			
		CCV5			
		CCB5			End WS30
		WS91 MBI	SWC	2	
		ADUP			✓ Cu ↑ RPD
		A			(CAF)
		ASPK			✓ Zn ↓
		APOST			✓ 0.08 mL ICP Spk — Zn OK
		MBISPK			✓
		CCV6			

WS91 01709

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 6-13-13 Analyst: BA

LR Date: _____ Page: 3 of 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		CCB6			End Pkg (WS91)
		WS97 MB2	DMN		
		WT15 MB2			
		D			
		E			
		F			
		WS97 BDUP		✓	
		B			
		BSPK		✓	0.08mL ICP Spk
		MB2SPK		✓	
		WT15 MB2SPK		✓	
		CCV7	BA 6/13/13		
		CCB7			
		WT49 MB2	WMN		
		J			
		JDUP		✓	
		I			
		ISPK		✓	0.08mL ICP Spk, 0.008mL 500ppm Mo — Ca, Mg, Na STL
		MB2SPK		✓	
		CCV8			
		CCB8			
		WT08 MB	TWC		
		A			
		B			

WS91 01710

Nebulizer Parameters: Hg_ReAlign

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

6/13/2013 8:20:33 AM Hg ReAlign... Actual peak offset (nm): 0.003
Drift (nm): 0.000 Slit adjustment: 2

Analysis Begun

Start Time: 6/13/2013 8:23:53 AM **Plasma On Time: 6/13/2013 7:32:19 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: I2130613
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: 6/13/2013 8:23:59 AM**
Data Type: Original

Dilution: 1.000000X

BA 6/13/13

Nebulizer Parameters: B1

Analyte	Back Pressure	Flow
All	228.0 kPa	0.75 L/min

Analysis Begun

Start Time: 6/13/2013 8:47:29 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 6/13/2013 7:32:19 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETb.sif
Batch ID:
Results Data Set: I2130613
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: 6/13/2013 8:47:31 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	3184230.9	29531.83	0.93%	100.0	%
ScR 361.383	368194.8	904.76	0.25%	100.0	%
Ag 328.068†	-107.2	44.76	41.75%	[0.00]	mg/L
Al 308.215†	145.3	3.22	2.21%	[0.00]	mg/L
As 188.979†	-4.2	6.49	153.94%	[0.00]	mg/L
B 249.677†	57.3	1.16	2.03%	[0.00]	mg/L
Ba 233.527†	15.3	0.96	6.27%	[0.00]	mg/L
Be 313.042†	754.6	21.90	2.90%	[0.00]	mg/L
Ca 317.933†	133.9	6.09	4.55%	[0.00]	mg/L
Cd 228.802†	336.4	6.50	1.93%	[0.00]	mg/L
Co 228.616†	-45.2	3.81	8.44%	[0.00]	mg/L
Cr 267.716†	-92.0	4.50	4.89%	[0.00]	mg/L
Cu 324.752†	1928.4	37.32	1.94%	[0.00]	mg/L
Fe 273.955†	14.8	0.57	3.90%	[0.00]	mg/L
K 766.490†	499.3	20.63	4.13%	[0.00]	mg/L
Mg 279.077†	75.1	3.16	4.20%	[0.00]	mg/L
Mn 257.610†	127.9	3.16	2.47%	[0.00]	mg/L
Mo 202.031†	45.3	8.93	19.74%	[0.00]	mg/L
Na 589.592†	-252.2	34.41	13.64%	[0.00]	mg/L
Na 330.237†	-189.4	4.65	2.46%	[0.00]	mg/L
Ni 231.604†	-21.9	3.43	15.63%	[0.00]	mg/L
Pb 220.353†	49.5	3.89	7.85%	[0.00]	mg/L
Sb 206.836†	46.9	4.54	9.66%	[0.00]	mg/L
Se 196.026†	-33.1	7.60	22.95%	[0.00]	mg/L
Si 288.158†	51.6	7.16	13.86%	[0.00]	mg/L
Sn 189.927†	-2.2	2.60	118.50%	[0.00]	mg/L
Sr 421.552†	328.7	12.54	3.82%	[0.00]	mg/L
Ti 334.903†	-63.1	10.81	17.15%	[0.00]	mg/L
Tl 190.801†	-26.9	2.25	8.36%	[0.00]	mg/L
V 292.402†	176.2	30.30	17.19%	[0.00]	mg/L
Zn 206.200†	16.1	2.15	13.33%	[0.00]	mg/L

Sequence No.: 2
Sample ID: STD2
Autosampler Location: 2
Date Collected: 6/13/2013 8:51:46 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: STD2

Mean Corrected	Calib

Analyte	Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	3183801.4	4372.33	0.14%	99.99	%
ScR 361.383	369717.8	1369.50	0.37%	100.4	%
Ba 233.527†	45455.3	125.82	0.28%	[10]	mg/L
Cd 228.802†	346171.4	92.37	0.03%	[10]	mg/L
Co 228.616†	390617.8	771.66	0.20%	[10]	mg/L
Cr 267.716†	62979.6	103.02	0.16%	[10]	mg/L
Cu 324.752†	2951804.7	3561.66	0.12%	[10]	mg/L
Mn 257.610†	371543.0	399.60	0.11%	[10]	mg/L
V 292.402†	1439168.4	3044.23	0.21%	[10]	mg/L

Sequence No.: 3 **Autosampler Location: 3**
Sample ID: STD3 **Date Collected: 6/13/2013 8:53:34 AM**
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	3152784.7	6014.84	0.19%	99.01	%
ScR 361.383	364190.8	360.48	0.10%	98.91	%
Ag 328.068†	198929.9	344.68	0.17%	[1.0]	mg/L
As 188.979†	18133.9	40.73	0.22%	[10]	mg/L
B 249.677†	73450.0	222.71	0.30%	[10]	mg/L
Be 313.042†	3169687.6	15827.76	0.50%	[5.0]	mg/L
Na 589.592†	710752.9	428.79	0.06%	[50]	mg/L
Ni 231.604†	41422.0	127.70	0.31%	[10]	mg/L
Pb 220.353†	85439.7	205.21	0.24%	[10]	mg/L
Se 196.026†	14476.8	52.33	0.36%	[10]	mg/L
Sr 421.552†	5332301.2	24426.38	0.46%	[5]	mg/L
Tl 190.801†	24252.5	48.98	0.20%	[10]	mg/L
Zn 206.200†	40397.6	98.38	0.24%	[10]	mg/L

Sequence No.: 4 **Autosampler Location: 4**
Sample ID: STD4 **Date Collected: 6/13/2013 8:56:09 AM**
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	3193436.4	9341.52	0.29%	100.3	%
ScR 361.383	369585.7	1056.79	0.29%	100.4	%
Mo 202.031†	206186.9	937.60	0.45%	[10]	mg/L
Sb 206.836†	33727.3	199.63	0.59%	[10]	mg/L
Si 288.158†	21001.8	220.34	1.05%	[10]	mg/L
Sn 189.927†	38515.5	70.54	0.18%	[10]	mg/L
Ti 334.903†	217428.6	679.92	0.31%	[10]	mg/L

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: STD5 **Date Collected: 6/13/2013 8:58:24 AM**
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Calib Units
ScA 357.253	2986700.8	10624.24	0.36%	93.80	%
ScR 361.383	365640.9	2100.65	0.57%	99.31	%
Al 308.215†	50628.7	287.91	0.57%	[30]	mg/L
Ca 317.933†	414659.1	1688.40	0.41%	[30]	mg/L
Fe 273.955†	133055.0	613.51	0.46%	[100]	mg/L
K 766.490†	231778.2	32.94	0.01%	[100]	mg/L
Mg 279.077†	41871.9	286.89	0.69%	[30]	mg/L
Na 330.237†	2820.9	16.22	0.57%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	198900	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1688	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1813	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	7345	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	4546	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	633900	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	13820	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	34620	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	39060	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	6298	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	295200	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1331	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2318	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1396	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	37150	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	20620	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	14220	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	28.21	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	4142	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	8544	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	3373	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1448	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	2100	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3852	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	1066000	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	21740	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2425	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	143900	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	4040	0.00000	1.000000	

Analysis Begun

Start Time: 6/13/2013 9:01:05 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 6/13/2013 7:32:19 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\0613.sif
Batch ID:
Results Data Set: I2130613
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: 6/13/2013 9:01:06 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	229.0 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	3164790.5	99.39	%	0.363				0.37%
ScR 361.383	360505.9	97.91	%	0.459				0.47%
Ag 328.068†	208222.5	1.047	mg/L	0.0068	1.047	mg/L	0.0068	0.65%
Al 308.215†	3536.3	2.062	mg/L	0.0201	2.062	mg/L	0.0201	0.97%
As 188.979†	3622.6	2.026	mg/L	0.0053	2.026	mg/L	0.0053	0.26%
B 249.677†	7499.7	1.020	mg/L	0.0058	1.020	mg/L	0.0058	0.56%
Ba 233.527†	4723.1	1.039	mg/L	0.0135	1.039	mg/L	0.0135	1.30%
Be 313.042†	636891.1	1.004	mg/L	0.0045	1.004	mg/L	0.0045	0.45%
Ca 317.933†	27325.4	1.977	mg/L	0.0013	1.977	mg/L	0.0013	0.06%
Cd 228.802†	36132.6	1.034	mg/L	0.0064	1.034	mg/L	0.0064	0.62%
Co 228.616†	39377.6	1.006	mg/L	0.0101	1.006	mg/L	0.0101	1.00%
Cr 267.716†	6662.1	1.057	mg/L	0.0069	1.057	mg/L	0.0069	0.65%
Cu 324.752†	298880.3	1.012	mg/L	0.0009	1.012	mg/L	0.0009	0.09%
Fe 273.955†	2798.8	2.097	mg/L	0.0081	2.097	mg/L	0.0081	0.38%
K 766.490†	46698.2	20.15	mg/L	0.039	20.15	mg/L	0.039	0.19%
Mg 279.077†	2797.3	2.011	mg/L	0.0092	2.011	mg/L	0.0092	0.46%
Mn 257.610†	37074.1	0.9982	mg/L	0.00173	0.9982	mg/L	0.00173	0.17%
Mo 202.031†	20287.9	0.9839	mg/L	0.00821	0.9839	mg/L	0.00821	0.83%
Na 589.592†	720347.2	50.67	mg/L	0.163	50.67	mg/L	0.163	0.32%
Na 330.237†	1461.2	51.77	mg/L	0.555	51.77	mg/L	0.555	1.07%
Ni 231.604†	4263.0	1.029	mg/L	0.0069	1.029	mg/L	0.0069	0.67%
Pb 220.353†	17173.5	2.011	mg/L	0.0135	2.011	mg/L	0.0135	0.67%
Sb 206.836†	7000.8	2.075	mg/L	0.0078	2.075	mg/L	0.0078	0.38%
Se 196.026†	2920.0	2.016	mg/L	0.0056	2.016	mg/L	0.0056	0.28%
Si 288.158†	4354.0	2.078	mg/L	0.0172	2.078	mg/L	0.0172	0.83%
Sn 189.927†	3823.9	0.9944	mg/L	0.00348	0.9944	mg/L	0.00348	0.35%
Sr 421.552†	1073779.1	1.007	mg/L	0.0024	1.007	mg/L	0.0024	0.24%
Ti 334.903†	21835.9	1.003	mg/L	0.0030	1.003	mg/L	0.0030	0.30%
Tl 190.801†	5036.5	2.068	mg/L	0.0062	2.068	mg/L	0.0062	0.30%
V 292.402†	148514.0	1.036	mg/L	0.0074	1.036	mg/L	0.0074	0.71%
Zn 206.200†	4108.1	1.017	mg/L	0.0075	1.017	mg/L	0.0075	0.74%

User canceled analysis.

Analysis Begun

Start Time: 6/13/2013 9:04:53 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 6/13/2013 7:32:19 AM
Technique: ICP Continuous
Autosampler: ESI

BA 6/13/13

Sample Information File: C:\pe\metals\Sample Information\0613.sif
Batch ID:
Results Data Set: I2130613
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: 6/13/2013 9:04:54 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3169264.8	99.53	%	0.141				0.14%
ScR 361.383	369458.0	100.3	%	0.52				0.52%
Ag 328.068†	-3.2	-0.00002	mg/L	0.000179	-0.00002	mg/L	0.000179	>999.9%
Al 308.215†	5.7	0.00338	mg/L	0.002376	0.00338	mg/L	0.002376	70.34%
As 188.979†	-0.1	-0.00002	mg/L	0.001434	-0.00002	mg/L	0.001434	>999.9%
B 249.677†	20.8	0.00284	mg/L	0.001282	0.00284	mg/L	0.001282	45.22%
Ba 233.527†	0.7	0.00015	mg/L	0.000182	0.00015	mg/L	0.000182	118.22%
Be 313.042†	61.3	0.00010	mg/L	0.000042	0.00010	mg/L	0.000042	43.09%
Ca 317.933†	4.0	0.00029	mg/L	0.000618	0.00029	mg/L	0.000618	214.49%
Cd 228.802†	10.4	0.00030	mg/L	0.000254	0.00030	mg/L	0.000254	84.44%
Co 228.616†	6.7	0.00017	mg/L	0.000269	0.00017	mg/L	0.000269	157.84%
Cr 267.716†	2.5	0.00039	mg/L	0.001144	0.00039	mg/L	0.001144	293.50%
Cu 324.752†	49.4	0.00017	mg/L	0.000094	0.00017	mg/L	0.000094	56.34%
Fe 273.955†	2.1	0.00157	mg/L	0.003082	0.00157	mg/L	0.003082	196.24%
K 766.490†	6.2	0.00266	mg/L	0.010941	0.00266	mg/L	0.010941	411.82%
Mg 279.077†	-0.8	-0.00059	mg/L	0.002957	-0.00059	mg/L	0.002957	502.95%
Mn 257.610†	-1.0	-0.00003	mg/L	0.000027	-0.00003	mg/L	0.000027	100.45%
Mo 202.031†	19.6	0.00095	mg/L	0.000270	0.00095	mg/L	0.000270	28.34%
Na 589.592†	128.9	0.00907	mg/L	0.002757	0.00907	mg/L	0.002757	30.41%
Na 330.237†	-9.2	-0.3272	mg/L	0.23809	-0.3272	mg/L	0.23809	72.76%
Ni 231.604†	1.6	0.00038	mg/L	0.000483	0.00038	mg/L	0.000483	125.59%
Pb 220.353†	3.8	0.00045	mg/L	0.000921	0.00045	mg/L	0.000921	204.23%
Sb 206.836†	9.4	0.00280	mg/L	0.000151	0.00280	mg/L	0.000151	5.40%
Se 196.026†	-0.8	-0.00053	mg/L	0.001156	-0.00053	mg/L	0.001156	218.20%
Si 288.158†	2.2	0.00105	mg/L	0.002226	0.00105	mg/L	0.002226	211.20%
Sn 189.927†	4.4	0.00114	mg/L	0.000806	0.00114	mg/L	0.000806	70.90%
Sr 421.552†	49.0	0.00005	mg/L	0.000029	0.00005	mg/L	0.000029	62.70%
Ti 334.903†	12.9	0.00059	mg/L	0.000025	0.00059	mg/L	0.000025	4.19%
Tl 190.801†	3.3	0.00137	mg/L	0.001404	0.00137	mg/L	0.001404	102.16%
V 292.402†	29.6	0.00021	mg/L	0.000038	0.00021	mg/L	0.000038	18.35%
Zn 206.200†	-0.0	-0.00000	mg/L	0.000609	-0.00000	mg/L	0.000609	>999.9%

Sequence No.: 3
Sample ID: CRI

Autosampler Location: 301
Date Collected: 6/13/2013 9:09:10 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	230.0 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	3184193.0	100.00	%	0.161				0.16%
ScR 361.383	369283.9	100.3	%	0.94				0.94%
Ag 328.068†	530.9	0.00267	mg/L	0.000063	0.00267	mg/L	0.000063	2.36%
Al 308.215†	91.4	0.05403	mg/L	0.003853	0.05403	mg/L	0.003853	7.13%
As 188.979†	90.4	0.05001	mg/L	0.001022	0.05001	mg/L	0.001022	2.04%
B 249.677†	147.8	0.02012	mg/L	0.001229	0.02012	mg/L	0.001229	6.11%
Ba 233.527†	13.8	0.00302	mg/L	0.000541	0.00302	mg/L	0.000541	17.91%
Be 313.042†	606.5	0.00096	mg/L	0.000013	0.00096	mg/L	0.000013	1.37%
Ca 317.933†	661.3	0.04784	mg/L	0.000742	0.04784	mg/L	0.000742	1.55%
Cd 228.802†	88.1	0.00228	mg/L	0.000092	0.00228	mg/L	0.000092	4.03%
Co 228.616†	115.7	0.00295	mg/L	0.000026	0.00295	mg/L	0.000026	0.87%
Cr 267.716†	29.4	0.00467	mg/L	0.001295	0.00467	mg/L	0.001295	27.72%
Cu 324.752†	571.4	0.00194	mg/L	0.000279	0.00194	mg/L	0.000279	14.42%
Fe 273.955†	66.0	0.04958	mg/L	0.001239	0.04958	mg/L	0.001239	2.50%
K 766.490†	1165.9	0.5030	mg/L	0.02313	0.5030	mg/L	0.02313	4.60%
Mg 279.077†	62.8	0.04499	mg/L	0.002028	0.04499	mg/L	0.002028	4.51%
Mn 257.610†	37.6	0.00102	mg/L	0.000068	0.00102	mg/L	0.000068	6.65%
Mo 202.031†	105.1	0.00510	mg/L	0.000027	0.00510	mg/L	0.000027	0.52%
Na 589.592†	7037.0	0.4950	mg/L	0.00315	0.4950	mg/L	0.00315	0.64%
Na 330.237†	4.4	0.1545	mg/L	0.21340	0.1545	mg/L	0.21340	138.16%
Ni 231.604†	45.0	0.01086	mg/L	0.000939	0.01086	mg/L	0.000939	8.64%
Pb 220.353†	176.7	0.02070	mg/L	0.000376	0.02070	mg/L	0.000376	1.82%
Sb 206.836†	174.0	0.05165	mg/L	0.000816	0.05165	mg/L	0.000816	1.58%
Se 196.026†	76.3	0.05267	mg/L	0.001929	0.05267	mg/L	0.001929	3.66%
Si 288.158†	130.0	0.06193	mg/L	0.001431	0.06193	mg/L	0.001431	2.31%
Sn 189.927†	38.7	0.01009	mg/L	0.000394	0.01009	mg/L	0.000394	3.90%
Sr 421.552†	997.1	0.00093	mg/L	0.000031	0.00093	mg/L	0.000031	3.34%
Ti 334.903†	108.6	0.00499	mg/L	0.000484	0.00499	mg/L	0.000484	9.72%
Tl 190.801†	123.9	0.05109	mg/L	0.001272	0.05109	mg/L	0.001272	2.49%
V 292.402†	465.6	0.00325	mg/L	0.000141	0.00325	mg/L	0.000141	4.34%
Zn 206.200†	35.4	0.00876	mg/L	0.000432	0.00876	mg/L	0.000432	4.93%

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 6/13/2013 9:13:26 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3060012.9	96.10	%	0.293				0.31%
ScR 361.383	356487.3	96.82	%	0.239				0.25%
Ag 328.068†	-240.2	-0.00120	mg/L	0.000372	-0.00120	mg/L	0.000372	30.90%
Al 308.215†	340773.9	201.9	mg/L	0.30	201.9	mg/L	0.30	0.15%
As 188.979†	47.3	0.01897	mg/L	0.002572	0.01897	mg/L	0.002572	13.56%
B 249.677†	-21.5	-0.00293	mg/L	0.001982	-0.00293	mg/L	0.001982	67.53%
Ba 233.527†	148.0	-0.00122	mg/L	0.000518	-0.00122	mg/L	0.000518	42.54%
Be 313.042†	78.7	0.00012	mg/L	0.000019	0.00012	mg/L	0.000019	15.29%
Ca 317.933†	1390899.1	100.6	mg/L	0.20	100.6	mg/L	0.20	0.20%
Cd 228.802†	29.1	0.00069	mg/L	0.000085	0.00069	mg/L	0.000085	12.23%
Co 228.616†	91.7	-0.00007	mg/L	0.000092	-0.00007	mg/L	0.000092	123.44%
Cr 267.716†	19.0	0.00146	mg/L	0.000654	0.00146	mg/L	0.000654	44.86%
Cu 324.752†	-2514.8	-0.00022	mg/L	0.000034	-0.00022	mg/L	0.000034	15.61%
Fe 273.955†	266797.9	200.5	mg/L	0.64	200.5	mg/L	0.64	0.32%
K 766.490†	33.4	0.01441	mg/L	0.008401	0.01441	mg/L	0.008401	58.30%
Mg 279.077†	145295.6	104.0	mg/L	0.96	104.0	mg/L	0.96	0.92%
Mn 257.610†	42.7	0.00046	mg/L	0.000221	0.00046	mg/L	0.000221	47.60%
Mo 202.031†	46.1	0.00096	mg/L	0.000234	0.00096	mg/L	0.000234	24.39%
Na 589.592†	158.9	0.01118	mg/L	0.001400	0.01118	mg/L	0.001400	12.52%
Na 330.237†	-6.6	-0.6700	mg/L	0.12761	-0.6700	mg/L	0.12761	19.04%
Ni 231.604†	-1.0	-0.00023	mg/L	0.001272	-0.00023	mg/L	0.001272	555.33%
Pb 220.353†	-337.7	-0.00268	mg/L	0.001053	-0.00268	mg/L	0.001053	39.31%
Sb 206.836†	40.1	0.01170	mg/L	0.001951	0.01170	mg/L	0.001951	16.67%
Se 196.026†	53.8	0.01504	mg/L	0.002289	0.01504	mg/L	0.002289	15.21%
Si 288.158†	-35.6	-0.00519	mg/L	0.002364	-0.00519	mg/L	0.002364	45.55%
Sn 189.927†	-90.5	-0.01056	mg/L	0.002225	-0.01056	mg/L	0.002225	21.07%
Sr 421.552†	5745.9	0.00539	mg/L Cont.	0.000059	0.00539	mg/L	0.000059	1.09%
Ti 334.903†	178.0	0.00192	mg/L	0.000403	0.00192	mg/L	0.000403	20.97%
Tl 190.801†	-63.7	0.00122	mg/L	0.002707	0.00122	mg/L	0.002707	222.43%
V 292.402†	1750.0	0.00154	mg/L	0.000580	0.00154	mg/L	0.000580	37.67%
Zn 206.200†	16.7	0.00289	mg/L	0.000405	0.00289	mg/L	0.000405	14.02%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 6/13/2013 9:17:42 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3067956.0	96.35	%	0.225				0.23%
ScR 361.383	356841.8	96.92	%	0.055				0.06%
Ag 328.068†	211640.1	1.064	mg/L	0.0090	1.064	mg/L	0.0090	0.84%
Al 308.215†	340481.1	201.7	mg/L	0.66	201.7	mg/L	0.66	0.33%
As 188.979†	1859.3	1.018	mg/L	0.0013	1.018	mg/L	0.0013	0.13%
B 249.677†	-31.2	-0.00624	mg/L	0.001595	-0.00624	mg/L	0.001595	25.54%
Ba 233.527†	4774.8	1.017	mg/L	0.0042	1.017	mg/L	0.0042	0.41%
Be 313.042†	625118.8	0.9858	mg/L	0.00472	0.9858	mg/L	0.00472	0.48%
Ca 317.933†	1382575.7	100.0	mg/L	0.07	100.0	mg/L	0.07	0.07%
Cd 228.802†	35653.6	1.025	mg/L	0.0020	1.025	mg/L	0.0020	0.20%
Co 228.616†	37155.4	0.9486	mg/L	0.00362	0.9486	mg/L	0.00362	0.38%
Cr 267.716†	6449.0	1.022	mg/L	0.0014	1.022	mg/L	0.0014	0.14%
Cu 324.752†	309817.7	1.058	mg/L	0.0052	1.058	mg/L	0.0052	0.49%
Fe 273.955†	262211.4	197.1	mg/L	0.68	197.1	mg/L	0.68	0.34%
K 766.490†	-54.4	-0.02346	mg/L	0.020451	-0.02346	mg/L	0.020451	87.19%
Mg 279.077†	138824.0	99.34	mg/L	0.213	99.34	mg/L	0.213	0.21%
Mn 257.610†	35931.3	0.9666	mg/L	0.00335	0.9666	mg/L	0.00335	0.35%
Mo 202.031†	41.0	0.00067	mg/L	0.000227	0.00067	mg/L	0.000227	34.06%
Na 589.592†	34.6	0.00244	mg/L	0.003727	0.00244	mg/L	0.003727	152.94%
Na 330.237†	8.9	-0.4100	mg/L	0.24204	-0.4100	mg/L	0.24204	59.04%
Ni 231.604†	4004.6	0.9670	mg/L	0.00206	0.9670	mg/L	0.00206	0.21%
Pb 220.353†	8105.9	0.9861	mg/L	0.00338	0.9861	mg/L	0.00338	0.34%
Sb 206.836†	3469.1	1.018	mg/L	0.0026	1.018	mg/L	0.0026	0.26%
Se 196.026†	1496.0	1.010	mg/L	0.0025	1.010	mg/L	0.0025	0.25%
Si 288.158†	-43.7	-0.00499	mg/L	0.005047	-0.00499	mg/L	0.005047	101.16%
Sn 189.927†	-93.7	-0.01094	mg/L	0.002294	-0.01094	mg/L	0.002294	20.98%
Sr 421.552†	5730.7	0.00537	mg/L Conf.	0.000015	0.00537	mg/L	0.000015	0.29%
Ti 334.903†	182.6	0.00198	mg/L	0.000039	0.00198	mg/L	0.000039	1.97%
Tl 190.801†	2232.2	0.9377	mg/L	0.00166	0.9377	mg/L	0.00166	0.18%
V 292.402†	145445.3	1.004	mg/L	0.0059	1.004	mg/L	0.0059	0.58%
Zn 206.200†	3869.0	0.9566	mg/L	0.00134	0.9566	mg/L	0.00134	0.14%

Sequence No.: 6
Sample ID: CV

Autosampler Location: 7
Date Collected: 6/13/2013 9:21:45 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	230.0 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	3170516.9	99.57	%	0.475				0.48%
ScR 361.383	365798.3	99.35	%	0.188				0.19%
Ag 328.068†	207218.2	1.042	mg/L	0.0069	1.042	mg/L	0.0069	0.67%
Al 308.215†	3484.2	2.030	mg/L	0.0062	2.030	mg/L	0.0062	0.31%
As 188.979†	3644.6	2.039	mg/L	0.0118	2.039	mg/L	0.0118	0.58%
B 249.677†	7330.8	0.9970	mg/L	0.00835	0.9970	mg/L	0.00835	0.84%
Ba 233.527†	4693.2	1.032	mg/L	0.0069	1.032	mg/L	0.0069	0.67%
Be 313.042†	633187.2	0.9986	mg/L	0.00652	0.9986	mg/L	0.00652	0.65%
Ca 317.933†	28734.4	2.079	mg/L	0.0126	2.079	mg/L	0.0126	0.61%
Cd 228.802†	36042.1	1.031	mg/L	0.0054	1.031	mg/L	0.0054	0.52%
Co 228.616†	39537.9	1.010	mg/L	0.0064	1.010	mg/L	0.0064	0.63%
Cr 267.716†	6566.7	1.042	mg/L	0.0070	1.042	mg/L	0.0070	0.67%
Cu 324.752†	308913.2	1.046	mg/L	0.0047	1.046	mg/L	0.0047	0.45%
Fe 273.955†	2770.0	2.075	mg/L	0.0247	2.075	mg/L	0.0247	1.19%
K 766.490†	46756.7	20.17	mg/L	0.013	20.17	mg/L	0.013	0.07%
Mg 279.077†	2774.3	1.994	mg/L	0.0208	1.994	mg/L	0.0208	1.04%
Mn 257.610†	37877.8	1.020	mg/L	0.0081	1.020	mg/L	0.0081	0.79%
Mo 202.031†	20766.0	1.007	mg/L	0.0066	1.007	mg/L	0.0066	0.65%
Na 589.592†	719045.6	50.58	mg/L	0.190	50.58	mg/L	0.190	0.38%
Na 330.237†	1425.6	50.52	mg/L	0.118	50.52	mg/L	0.118	0.23%
Ni 231.604†	4222.5	1.020	mg/L	0.0073	1.020	mg/L	0.0073	0.71%
Pb 220.353†	17672.5	2.069	mg/L	0.0122	2.069	mg/L	0.0122	0.59%
Sb 206.836†	6997.7	2.074	mg/L	0.0115	2.074	mg/L	0.0115	0.56%
Se 196.026†	2923.5	2.018	mg/L	0.0144	2.018	mg/L	0.0144	0.71%
Si 288.158†	4289.5	2.047	mg/L	0.0103	2.047	mg/L	0.0103	0.50%
Sn 189.927†	3817.0	0.9926	mg/L	0.00728	0.9926	mg/L	0.00728	0.73%
Sr 421.552†	1071283.3	1.005	mg/L	0.0020	1.005	mg/L	0.0020	0.20%
Ti 334.903†	22402.9	1.029	mg/L	0.0058	1.029	mg/L	0.0058	0.57%
Tl 190.801†	5081.5	2.087	mg/L	0.0155	2.087	mg/L	0.0155	0.74%
V 292.402†	148281.7	1.034	mg/L	0.0059	1.034	mg/L	0.0059	0.57%
Zn 206.200†	4071.8	1.008	mg/L	0.0057	1.008	mg/L	0.0057	0.57%

Sequence No.: 7
Sample ID: CB

Autosampler Location: 1
Date Collected: 6/13/2013 9:25:03 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3195606.5	100.4	%	0.74				0.74%
ScR 361.383	369615.4	100.4	%	0.65				0.65%
Ag 328.068†	5.7	0.00003	mg/L	0.000091	0.00003	mg/L	0.000091	316.65%
Al 308.215†	11.1	0.00659	mg/L	0.005848	0.00659	mg/L	0.005848	88.78%
As 188.979†	1.5	0.00082	mg/L	0.000938	0.00082	mg/L	0.000938	114.66%
B 249.677†	4.6	0.00063	mg/L	0.000500	0.00063	mg/L	0.000500	79.48%
Ba 233.527†	0.5	0.00010	mg/L	0.000783	0.00010	mg/L	0.000783	746.23%
Be 313.042†	85.5	0.00013	mg/L	0.000046	0.00013	mg/L	0.000046	34.16%
Ca 317.933†	41.5	0.00301	mg/L	0.000574	0.00301	mg/L	0.000574	19.09%
Cd 228.802†	15.9	0.00045	mg/L	0.000260	0.00045	mg/L	0.000260	57.27%
Co 228.616†	8.2	0.00021	mg/L	0.000256	0.00021	mg/L	0.000256	122.36%
Cr 267.716†	-8.2	-0.00130	mg/L	0.001058	-0.00130	mg/L	0.001058	81.57%
Cu 324.752†	78.0	0.00026	mg/L	0.000031	0.00026	mg/L	0.000031	11.85%
Fe 273.955†	9.6	0.00720	mg/L	0.002520	0.00720	mg/L	0.002520	35.01%
K 766.490†	9.0	0.00390	mg/L	0.005016	0.00390	mg/L	0.005016	128.64%
Mg 279.077†	4.0	0.00284	mg/L	0.002514	0.00284	mg/L	0.002514	88.65%
Mn 257.610†	6.4	0.00017	mg/L	0.000018	0.00017	mg/L	0.000018	10.32%
Mo 202.031†	12.2	0.00059	mg/L	0.000286	0.00059	mg/L	0.000286	48.22%
Na 589.592†	44.3	0.00312	mg/L	0.000611	0.00312	mg/L	0.000611	19.58%
Na 330.237†	-1.9	-0.06786	mg/L	0.579826	-0.06786	mg/L	0.579826	854.39%
Ni 231.604†	3.1	0.00074	mg/L	0.000981	0.00074	mg/L	0.000981	132.74%
Pb 220.353†	6.9	0.00080	mg/L	0.000692	0.00080	mg/L	0.000692	86.24%
Sb 206.836†	9.1	0.00273	mg/L	0.002257	0.00273	mg/L	0.002257	82.82%
Se 196.026†	2.1	0.00148	mg/L	0.003321	0.00148	mg/L	0.003321	224.07%
Si 288.158†	-3.8	-0.00182	mg/L	0.001558	-0.00182	mg/L	0.001558	85.80%
Sn 189.927†	1.8	0.00047	mg/L	0.000555	0.00047	mg/L	0.000555	116.81%
Sr 421.552†	63.0	0.00006	mg/L	0.000025	0.00006	mg/L	0.000025	42.48%
Ti 334.903†	10.8	0.00049	mg/L	0.000361	0.00049	mg/L	0.000361	73.09%
Tl 190.801†	8.0	0.00330	mg/L	0.002092	0.00330	mg/L	0.002092	63.49%
V 292.402†	7.4	0.00005	mg/L	0.000131	0.00005	mg/L	0.000131	283.87%
Zn 206.200†	0.2	0.00006	mg/L	0.001003	0.00006	mg/L	0.001003	>999.9%

Sequence No.: 8
Sample ID: WT64 MB SWC

Autosampler Location: 304
Date Collected: 6/13/2013 9:29:18 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WT64 MB SWC

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: WT64 MB SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3211013.5	100.8	%	0.17				0.17%
ScR 361.383	375154.8	101.9	%	0.19				0.19%
Ag 328.068†	22.3	0.00011	mg/L	0.000046	0.00022	mg/L	0.000093	41.50%
Al 308.215†	7.3	0.00430	mg/L	0.000230	0.00861	mg/L	0.000460	5.34%
As 188.979†	-1.3	-0.00073	mg/L	0.000728	-0.00146	mg/L	0.001457	99.83%
B 249.677†	1.4	0.00019	mg/L	0.001322	0.00038	mg/L	0.002643	702.22%
Ba 233.527†	-0.1	-0.00001	mg/L	0.000031	-0.00002	mg/L	0.000062	254.34%
Be 313.042†	25.4	0.00004	mg/L	0.000016	0.00008	mg/L	0.000032	40.33%
Ca 317.933†	141.8	0.01026	mg/L	0.001292	0.02052	mg/L	0.002585	12.59%
Cd 228.802†	6.6	0.00020	mg/L	0.000160	0.00039	mg/L	0.000320	81.46%
Co 228.616†	-1.1	-0.00003	mg/L	0.000093	-0.00006	mg/L	0.000186	327.07%
Cr 267.716†	-4.3	-0.00068	mg/L	0.000639	-0.00135	mg/L	0.001277	94.58%
Cu 324.752†	71.8	0.00024	mg/L	0.000086	0.00049	mg/L	0.000172	35.28%
Fe 273.955†	5.8	0.00440	mg/L	0.000330	0.00879	mg/L	0.000660	7.51%
K 766.490†	-3.8	-0.00166	mg/L	0.017818	-0.00331	mg/L	0.035636	>999.9%
Mg 279.077†	3.3	0.00237	mg/L	0.009154	0.00475	mg/L	0.018308	385.72%
Mn 257.610†	-1.7	-0.00004	mg/L	0.000053	-0.00009	mg/L	0.000106	118.08%
Mo 202.031†	-2.8	-0.00014	mg/L	0.000289	-0.00027	mg/L	0.000578	211.24%
Na 589.592†	8.9	0.00062	mg/L	0.002923	0.00125	mg/L	0.005846	469.23%
Na 330.237†	-4.8	-0.1717	mg/L	0.41836	-0.3433	mg/L	0.83672	243.71%
Ni 231.604†	1.6	0.00038	mg/L	0.000382	0.00076	mg/L	0.000764	100.57%
Pb 220.353†	-2.2	-0.00026	mg/L	0.000155	-0.00052	mg/L	0.000310	60.04%
Sb 206.836†	2.3	0.00069	mg/L	0.001337	0.00138	mg/L	0.002675	193.60%
Se 196.026†	4.3	0.00295	mg/L	0.000890	0.00589	mg/L	0.001781	30.23%
Si 288.158†	34.9	0.01664	mg/L	0.000776	0.03327	mg/L	0.001552	4.66%
Sn 189.927†	1.5	0.00038	mg/L	0.000661	0.00076	mg/L	0.001322	174.42%
Sr 421.552†	-36.3	-0.00003	mg/L	0.000066	-0.00007	mg/L	0.000132	193.85%
Ti 334.903†	-3.5	-0.00016	mg/L	0.000522	-0.00033	mg/L	0.001045	320.54%
Tl 190.801†	-1.4	-0.00057	mg/L	0.000893	-0.00113	mg/L	0.001787	157.96%
V 292.402†	-12.7	-0.00009	mg/L	0.000054	-0.00018	mg/L	0.000108	59.16%
Zn 206.200†	-0.7	-0.00018	mg/L	0.000069	-0.00036	mg/L	0.000139	38.20%

Sequence No.: 9
Sample ID: WT64 A SWC

Dilution: 50.000000X

Del

Autosampler Location: 305
Date Collected: 6/13/2013 9:33:35 AM
Data Type: Original

Nebulizer Parameters: WT64 A SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WT64 A SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3130358.8	98.31	%	0.512				0.52%
ScR 361.383	360093.4	97.80	%	0.193				0.20%
Ag 328.068†	118.2	0.00061	mg/L	0.000245	0.03074	mg/L	0.012263	39.90%
Al 308.215†	7912.4	4.687	mg/L	0.0132	234.3	mg/L	0.66	0.28%
As 188.979†	29.8	0.01881	mg/L	0.002824	0.9405	mg/L	0.14122	15.02%
B 249.677†	925.3	0.1260	mg/L	0.00104	6.299	mg/L	0.0521	0.83%
Ba 233.527†	606.3	0.1281	mg/L	0.00095	6.403	mg/L	0.0477	0.74%
Be 313.042†	-519.5	-0.00084	mg/L	0.000027	-0.04198	mg/L	0.001354	3.23%
Ca 317.933†	1218753.6	88.18	mg/L	0.020	4409	mg/L	1.01	0.02%
Cd 228.802†	-8.1	-0.00030	mg/L	0.000045	-0.01522	mg/L	0.002229	14.64%
Co 228.616†	124.4	0.00229	mg/L	0.000094	0.1145	mg/L	0.00468	4.09%
Cr 267.716†	3460.3	0.5435	mg/L	0.00157	27.17	mg/L	0.079	0.29%
Cu 324.752†	22404.3	0.07684	mg/L	0.000662	3.842	mg/L	0.0331	0.86%
Fe 273.955†	41889.2	31.48	mg/L	0.149	1574	mg/L	7.45	0.47%
K 766.490†	97.8	0.04221	mg/L	0.012391	2.110	mg/L	0.6196	29.36%
Mg 279.077†	104119.5	74.57	mg/L	0.133	3728	mg/L	6.63	0.18%
Mn 257.610†	212568.0	5.721	mg/L	0.0135	286.0	mg/L	0.67	0.24%
Mo 202.031†	208.0	0.00894	mg/L	0.000193	0.4470	mg/L	0.00967	2.16%
Na 589.592†	3140.8	0.2210	mg/L	0.00104	11.05	mg/L	0.052	0.47%
Na 330.237†	7.9	-0.07883	mg/L	0.194715	-3.942	mg/L	9.7358	247.01%
Ni 231.604†	108.5	0.02619	mg/L	0.000801	1.310	mg/L	0.0401	3.06%
Pb 220.353†	141.6	0.01691	mg/L	0.000615	0.8457	mg/L	0.03074	3.63%
Sb 206.836†	29.7	0.00174	mg/L	0.001725	0.08721	mg/L	0.086264	98.92%
Se 196.026†	28.3	0.01900	mg/L	0.002709	0.9502	mg/L	0.13543	14.25%
Si 288.158†	79.0	0.04640	mg/L	0.000532	2.320	mg/L	0.0266	1.15%
Sn 189.927†	-68.4	-0.00636	mg/L	0.000555	-0.3180	mg/L	0.02774	8.72%
Sr 421.552†	94269.6	0.08839	mg/L	0.000153	4.420	mg/L	0.0076	0.17%
Ti 334.903†	6601.3	0.2980	mg/L	0.00079	14.90	mg/L	0.039	0.26%
Tl 190.801†	-5.8	0.00144	mg/L	0.000886	0.07212	mg/L	0.044297	61.42%
V 292.402†	10162.9	0.07181	mg/L	0.000732	3.591	mg/L	0.0366	1.02%
Zn 206.200†	822.8	0.2026	mg/L	0.00024	10.13	mg/L	0.012	0.12%

Sequence No.: 10
Sample ID: WT64 MBSPK SWC

Autosampler Location: 306
Date Collected: 6/13/2013 9:37:51 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WT64 MBSPK SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WT64 MBSPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3179611.0	99.85	%	0.269				0.27%
ScR 361.383	372037.1	101.0	%	0.40				0.39%
Ag 328.068†	105879.7	0.5324	mg/L	0.00251	1.065	mg/L	0.0050	0.47%
Al 308.215†	3521.0	2.078	mg/L	0.0070	4.156	mg/L	0.0141	0.34%
As 188.979†	3804.2	2.097	mg/L	0.0073	4.194	mg/L	0.0146	0.35%
B 249.677†	-1.7	-0.00132	mg/L	0.000593	-0.00264	mg/L	0.001187	45.02%
Ba 233.527†	9698.1	2.133	mg/L	0.0060	4.266	mg/L	0.0121	0.28%
Be 313.042†	311543.4	0.4913	mg/L	0.00440	0.9826	mg/L	0.00881	0.90%
Ca 317.933†	139103.5	10.06	mg/L	0.026	20.13	mg/L	0.052	0.26%
Cd 228.802†	18580.5	0.5256	mg/L	0.00298	1.051	mg/L	0.0060	0.57%
Co 228.616†	20316.8	0.5198	mg/L	0.00210	1.040	mg/L	0.0042	0.40%
Cr 267.716†	3403.7	0.5394	mg/L	0.00134	1.079	mg/L	0.0027	0.25%
Cu 324.752†	154721.4	0.5243	mg/L	0.00209	1.049	mg/L	0.0042	0.40%
Fe 273.955†	2784.2	2.089	mg/L	0.0113	4.179	mg/L	0.0226	0.54%
K 766.490†	23480.5	10.13	mg/L	0.022	20.26	mg/L	0.045	0.22%
Mg 279.077†	13918.6	9.971	mg/L	0.0103	19.94	mg/L	0.021	0.10%
Mn 257.610†	18745.2	0.5049	mg/L	0.00240	1.010	mg/L	0.0048	0.47%
Mo 202.031†	23.5	0.00098	mg/L	0.000442	0.00197	mg/L	0.000885	45.00%
Na 589.592†	144713.4	10.18	mg/L	0.025	20.36	mg/L	0.049	0.24%
Na 330.237†	291.8	10.15	mg/L	0.069	20.29	mg/L	0.138	0.68%
Ni 231.604†	2103.1	0.5068	mg/L	0.00179	1.014	mg/L	0.0036	0.35%
Pb 220.353†	17855.8	2.091	mg/L	0.0146	4.181	mg/L	0.0291	0.70%
Sb 206.836†	14.3	-0.00109	mg/L	0.001460	-0.00218	mg/L	0.002921	133.84%
Se 196.026†	3041.8	2.100	mg/L	0.0137	4.201	mg/L	0.0274	0.65%
Si 288.158†	32.9	0.01915	mg/L	0.004381	0.03829	mg/L	0.008762	22.88%
Sn 189.927†	-24.4	-0.00496	mg/L	0.000624	-0.00991	mg/L	0.001248	12.59%
Sr 421.552†	539386.9	0.5058	mg/L	0.00088	1.012	mg/L	0.0018	0.17%
Ti 334.903†	27.8	0.00055	mg/L	0.000447	0.00109	mg/L	0.000894	81.86%
Tl 190.801†	5061.1	2.082	mg/L	0.0108	4.164	mg/L	0.0217	0.52%
V 292.402†	75831.4	0.5290	mg/L	0.00232	1.058	mg/L	0.0046	0.44%
Zn 206.200†	2048.5	0.5071	mg/L	0.00196	1.014	mg/L	0.0039	0.39%

USGI : 01724

Sequence No.: 11
Sample ID: WT64 A SWC

Dilution: 20.000000X

Del

Autosampler Location: 323
Date Collected: 6/13/2013 9:41:52 AM
Data Type: Original

Nebulizer Parameters: WT64 A SWC

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: WT64 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3095289.0	97.21	%	0.302				0.31%
ScR 361.383	355482.6	96.55	%	0.355				0.37%
Ag 328.068†	387.2	0.00200	mg/L	0.000221	0.03998	mg/L	0.004428	11.07%
Al 308.215†	19907.5	11.79	mg/L	0.145	235.8	mg/L	2.90	1.23%
As 188.979†	23.6	0.01893	mg/L	0.001776	0.3785	mg/L	0.03552	9.38%
B 249.677†	2428.2	0.3306	mg/L	0.00269	6.612	mg/L	0.0538	0.81%
Ba 233.527†	1556.8	0.3288	mg/L	0.00244	6.577	mg/L	0.0489	0.74%
Be 313.042†	-1516.2	-0.00244	mg/L	0.000055	-0.04886	mg/L	0.001098	2.25%
Ca 317.933†	3137880.7	227.0	mg/L	1.50	4540	mg/L	29.99	0.66%
Cd 228.802†	4.6	0.00011	mg/L	0.000183	0.00225	mg/L	0.003661	163.02%
Co 228.616†	298.9	0.00536	mg/L	0.000080	0.1073	mg/L	0.00160	1.49%
Cr 267.716†	8894.7	1.397	mg/L	0.0082	27.93	mg/L	0.163	0.58%
Cu 324.752†	59076.0	0.2025	mg/L	0.00058	4.051	mg/L	0.0116	0.29%
Fe 273.955†	107379.6	80.70	mg/L	0.281	1614	mg/L	5.63	0.35%
K 766.490†	255.5	0.1102	mg/L	0.00983	2.205	mg/L	0.1967	8.92%
Mg 279.077†	273726.5	196.0	mg/L	1.72	3921	mg/L	34.35	0.88%
Mn 257.610†	529748.2	14.26	mg/L	0.107	285.1	mg/L	2.14	0.75%
Mo 202.031†	418.5	0.01734	mg/L	0.000137	0.3468	mg/L	0.00274	0.79%
Na 589.592†	8300.9	0.5840	mg/L	0.01215	11.68	mg/L	0.243	2.08%
Na 330.237†	35.0	0.3208	mg/L	0.24323	6.415	mg/L	4.8646	75.83%
Ni 231.604†	274.5	0.06629	mg/L	0.001468	1.326	mg/L	0.0294	2.21%
Pb 220.353†	377.7	0.04502	mg/L	0.000451	0.9003	mg/L	0.00903	1.00%
Sb 206.836†	72.0	0.00343	mg/L	0.000802	0.06857	mg/L	0.016048	23.40%
Se 196.026†	41.8	0.02745	mg/L	0.002283	0.5491	mg/L	0.04566	8.32%
Si 288.158†	220.8	0.1282	mg/L	0.00158	2.564	mg/L	0.0315	1.23%
Sn 189.927†	-81.9	0.00805	mg/L	0.000476	0.1610	mg/L	0.00951	5.91%
Sr 421.552†	242547.0	0.2274	mg/L	0.00149	4.549	mg/L	0.0297	0.65%
Ti 334.903†	16852.1	0.7606	mg/L	0.00753	15.21	mg/L	0.151	0.99%
Tl 190.801†	-17.8	0.00245	mg/L	0.001760	0.04904	mg/L	0.035191	71.76%
V 292.402†	26115.7	0.1845	mg/L	0.00027	3.690	mg/L	0.0053	0.14%
Zn 206.200†	2081.8	0.5126	mg/L	0.00302	10.25	mg/L	0.060	0.59%

Sequence No.: 12
Sample ID: CV 2

Autosampler Location: 7
Date Collected: 6/13/2013 9:47:04 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	229.0 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	3159440.3	99.22	%	0.247				0.25%
ScR 361.383	365625.5	99.30	%	0.239				0.24%
Ag 328.068†	210240.1	1.057	mg/L	0.0079	1.057	mg/L	0.0079	0.74%
Al 308.215†	3515.0	2.049	mg/L	0.0055	2.049	mg/L	0.0055	0.27%
As 188.979†	3658.2	2.045	mg/L	0.0023	2.045	mg/L	0.0023	0.11%
B 249.677†	7444.8	1.013	mg/L	0.0005	1.013	mg/L	0.0005	0.05%
Ba 233.527†	4752.7	1.045	mg/L	0.0037	1.045	mg/L	0.0037	0.36%
Be 313.042†	637439.1	1.005	mg/L	0.0109	1.005	mg/L	0.0109	1.08%
Ca 317.933†	27849.3	2.015	mg/L	0.0105	2.015	mg/L	0.0105	0.52%
Cd 228.802†	36358.2	1.040	mg/L	0.0062	1.040	mg/L	0.0062	0.59%
Co 228.616†	39996.0	1.022	mg/L	0.0020	1.022	mg/L	0.0020	0.20%
Cr 267.716†	6663.6	1.058	mg/L	0.0032	1.058	mg/L	0.0032	0.30%
Cu 324.752†	312377.5	1.058	mg/L	0.0049	1.058	mg/L	0.0049	0.46%
Fe 273.955†	2783.0	2.085	mg/L	0.0116	2.085	mg/L	0.0116	0.56%
K 766.490†	46579.3	20.10	mg/L	0.050	20.10	mg/L	0.050	0.25%
Mg 279.077†	2816.3	2.025	mg/L	0.0067	2.025	mg/L	0.0067	0.33%
Mn 257.610†	36950.2	0.9949	mg/L	0.00334	0.9949	mg/L	0.00334	0.34%
Mo 202.031†	20796.6	1.009	mg/L	0.0008	1.009	mg/L	0.0008	0.08%
Na 589.592†	723536.6	50.90	mg/L	0.349	50.90	mg/L	0.349	0.69%
Na 330.237†	1454.3	51.52	mg/L	0.101	51.52	mg/L	0.101	0.20%
Ni 231.604†	4278.7	1.033	mg/L	0.0033	1.033	mg/L	0.0033	0.32%
Pb 220.353†	17730.9	2.076	mg/L	0.0025	2.076	mg/L	0.0025	0.12%
Sb 206.836†	7009.7	2.078	mg/L	0.0035	2.078	mg/L	0.0035	0.17%
Se 196.026†	2942.0	2.031	mg/L	0.0019	2.031	mg/L	0.0019	0.10%
Si 288.158†	4341.4	2.072	mg/L	0.0030	2.072	mg/L	0.0030	0.14%
Sn 189.927†	3812.9	0.9915	mg/L	0.00396	0.9915	mg/L	0.00396	0.40%
Sr 421.552†	1073691.0	1.007	mg/L	0.0031	1.007	mg/L	0.0031	0.31%
Ti 334.903†	21839.3	1.003	mg/L	0.0030	1.003	mg/L	0.0030	0.29%
Tl 190.801†	5105.6	2.097	mg/L	0.0070	2.097	mg/L	0.0070	0.33%
V 292.402†	149549.9	1.043	mg/L	0.0086	1.043	mg/L	0.0086	0.82%
Zn 206.200†	4117.4	1.019	mg/L	0.0023	1.019	mg/L	0.0023	0.23%

Sequence No.: 13
Sample ID: CB 2

Autosampler Location: 1
Date Collected: 6/13/2013 9:51:07 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3197179.8	100.4	%	0.46				0.46%
ScR 361.383	371366.6	100.9	%	0.34				0.34%
Ag 328.068†	30.4	0.00015	mg/L	0.000141	0.00015	mg/L	0.000141	92.18%
Al 308.215†	2.8	0.00162	mg/L	0.002779	0.00162	mg/L	0.002779	171.14%
As 188.979†	-1.7	-0.00094	mg/L	0.000842	-0.00094	mg/L	0.000842	89.17%
B 249.677†	-1.1	-0.00014	mg/L	0.000779	-0.00014	mg/L	0.000779	542.13%
Ba 233.527†	1.8	0.00040	mg/L	0.000069	0.00040	mg/L	0.000069	17.36%
Be 313.042†	64.9	0.00010	mg/L	0.000031	0.00010	mg/L	0.000031	29.82%
Ca 317.933†	43.0	0.00311	mg/L	0.001412	0.00311	mg/L	0.001412	45.36%
Cd 228.802†	8.7	0.00026	mg/L	0.000293	0.00026	mg/L	0.000293	114.36%
Co 228.616†	3.0	0.00008	mg/L	0.000104	0.00008	mg/L	0.000104	137.98%
Cr 267.716†	1.3	0.00020	mg/L	0.000177	0.00020	mg/L	0.000177	87.74%
Cu 324.752†	99.3	0.00034	mg/L	0.000258	0.00034	mg/L	0.000258	76.62%
Fe 273.955†	2.5	0.00188	mg/L	0.002362	0.00188	mg/L	0.002362	125.68%
K 766.490†	16.4	0.00707	mg/L	0.003395	0.00707	mg/L	0.003395	47.99%
Mg 279.077†	-0.1	-0.00010	mg/L	0.006442	-0.00010	mg/L	0.006442	>999.9%
Mn 257.610†	8.3	0.00022	mg/L	0.000211	0.00022	mg/L	0.000211	94.60%
Mo 202.031†	12.7	0.00062	mg/L	0.000149	0.00062	mg/L	0.000149	24.16%
Na 589.592†	166.2	0.01169	mg/L	0.002182	0.01169	mg/L	0.002182	18.66%
Na 330.237†	-7.9	-0.2812	mg/L	0.32382	-0.2812	mg/L	0.32382	115.16%
Ni 231.604†	3.1	0.00075	mg/L	0.001344	0.00075	mg/L	0.001344	178.45%
Pb 220.353†	2.3	0.00027	mg/L	0.000293	0.00027	mg/L	0.000293	109.58%
Sb 206.836†	9.4	0.00280	mg/L	0.001527	0.00280	mg/L	0.001527	54.52%
Se 196.026†	4.6	0.00315	mg/L	0.002781	0.00315	mg/L	0.002781	88.22%
Si 288.158†	-1.2	-0.00058	mg/L	0.002625	-0.00058	mg/L	0.002625	450.51%
Sn 189.927†	4.6	0.00121	mg/L	0.000459	0.00121	mg/L	0.000459	38.06%
Sr 421.552†	89.1	0.00008	mg/L	0.000011	0.00008	mg/L	0.000011	13.14%
Ti 334.903†	8.0	0.00037	mg/L	0.000160	0.00037	mg/L	0.000160	43.67%
Tl 190.801†	4.5	0.00186	mg/L	0.003410	0.00186	mg/L	0.003410	183.56%
V 292.402†	44.3	0.00031	mg/L	0.000117	0.00031	mg/L	0.000117	37.79%
Zn 206.200†	0.1	-0.00003	mg/L	0.000291	-0.00003	mg/L	0.000291	869.50%

Sequence No.: 14
Sample ID: WT64 A SWC

Autosampler Location: 324
Date Collected: 6/13/2013 9:55:22 AM
Data Type: Original

Dilution: 10.000000X

Nebulizer Parameters: WT64 A SWC

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: WT64 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3058095.1	96.04	%	0.650				0.68%
ScR 361.383	355506.6	96.55	%	0.214				0.22%
Ag 328.068†	703.1	0.00363	mg/L	0.000094	0.03635	mg/L	0.000939	2.58%
Al 308.215†	39404.3	23.34	mg/L	0.047	233.4	mg/L	0.47	0.20%
As 188.979†	5.7	0.01508	mg/L	0.000292	0.1508	mg/L	0.00292	1.94%
B 249.677†	4737.9	0.6451	mg/L	0.00184	6.451	mg/L	0.0184	0.29%
Ba 233.527†	2991.3	0.6321	mg/L	0.00364	6.321	mg/L	0.0364	0.58%
Be 313.042†	-3069.1	-0.00494	mg/L	0.000139	-0.04940	mg/L	0.001389	2.81%
Ca 317.933†	5987540.3	433.2	mg/L	2.89	4332	mg/L	28.86	0.67%
Cd 228.802†	28.6	0.00090	mg/L	0.000028	0.00903	mg/L	0.000279	3.09%
Co 228.616†	541.0	0.00945	mg/L	0.000412	0.09453	mg/L	0.004117	4.36%
Cr 267.716†	17095.4	2.684	mg/L	0.0101	26.84	mg/L	0.101	0.37%
Cu 324.752†	116234.0	0.3983	mg/L	0.00297	3.983	mg/L	0.0297	0.75%
Fe 273.955†	204251.9	153.5	mg/L	1.27	1535	mg/L	12.70	0.83%
K 766.490†	576.0	0.2485	mg/L	0.00421	2.485	mg/L	0.0421	1.70%
Mg 279.077†	531418.9	380.6	mg/L	2.02	3806	mg/L	20.18	0.53%
Mn 257.610†	1037323.6	27.92	mg/L	0.163	279.2	mg/L	1.63	0.58%
Mo 202.031†	723.4	0.02944	mg/L	0.000332	0.2944	mg/L	0.00332	1.13%
Na 589.592†	16800.8	1.182	mg/L	0.0129	11.82	mg/L	0.129	1.09%
Na 330.237†	75.5	0.9301	mg/L	0.30038	9.301	mg/L	3.0038	32.30%
Ni 231.604†	512.3	0.1237	mg/L	0.00090	1.237	mg/L	0.0090	0.72%
Pb 220.353†	720.0	0.08606	mg/L	0.001093	0.8606	mg/L	0.01093	1.27%
Sb 206.836†	142.1	0.00781	mg/L	0.002764	0.07809	mg/L	0.027636	35.39%
Se 196.026†	54.9	0.03518	mg/L	0.002329	0.3518	mg/L	0.02329	6.62%
Si 288.158†	439.9	0.2543	mg/L	0.00294	2.543	mg/L	0.0294	1.16%
Sn 189.927†	-93.4	0.03170	mg/L	0.000807	0.3170	mg/L	0.00807	2.54%
Sr 421.552†	474753.9	0.4452	mg/L	0.00115	4.452	mg/L	0.0115	0.26%
Ti 334.903†	32616.9	1.473	mg/L	0.0062	14.73	mg/L	0.062	0.42%
Tl 190.801†	-44.3	0.00038	mg/L	0.002400	0.00383	mg/L	0.024002	626.34%
V 292.402†	50148.2	0.3544	mg/L	0.00334	3.544	mg/L	0.0334	0.94%
Zn 206.200†	3915.5	0.9641	mg/L	0.00416	9.641	mg/L	0.0416	0.43%

Sequence No.: 15
Sample ID: CV 3

Autosampler Location: 7
Date Collected: 6/13/2013 10:01:05 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	230.0 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	3178219.5	99.81	%	0.352				0.35%
ScR 361.383	365730.5	99.33	%	0.195				0.20%
Ag 328.068†	211841.0	1.065	mg/L	0.0043	1.065	mg/L	0.0043	0.41%
Al 308.215†	3502.1	2.041	mg/L	0.0133	2.041	mg/L	0.0133	0.65%
As 188.979†	3695.4	2.067	mg/L	0.0045	2.067	mg/L	0.0045	0.22%
B 249.677†	7386.8	1.005	mg/L	0.0081	1.005	mg/L	0.0081	0.81%
Ba 233.527†	4757.9	1.046	mg/L	0.0132	1.046	mg/L	0.0132	1.26%
Be 313.042†	637299.0	1.005	mg/L	0.0051	1.005	mg/L	0.0051	0.51%
Ca 317.933†	29186.0	2.112	mg/L	0.0203	2.112	mg/L	0.0203	0.96%
Cd 228.802†	36371.2	1.040	mg/L	0.0037	1.040	mg/L	0.0037	0.36%
Co 228.616†	39966.1	1.021	mg/L	0.0039	1.021	mg/L	0.0039	0.38%
Cr 267.716†	6627.9	1.052	mg/L	0.0070	1.052	mg/L	0.0070	0.67%
Cu 324.752†	299923.1	1.016	mg/L	0.0040	1.016	mg/L	0.0040	0.40%
Fe 273.955†	2773.2	2.078	mg/L	0.0068	2.078	mg/L	0.0068	0.33%
K 766.490†	46750.3	20.17	mg/L	0.068	20.17	mg/L	0.068	0.34%
Mg 279.077†	2815.6	2.024	mg/L	0.0125	2.024	mg/L	0.0125	0.62%
Mn 257.610†	38137.7	1.027	mg/L	0.0070	1.027	mg/L	0.0070	0.68%
Mo 202.031†	20401.6	0.9894	mg/L	0.00644	0.9894	mg/L	0.00644	0.65%
Na 589.592†	722568.3	50.83	mg/L	0.395	50.83	mg/L	0.395	0.78%
Na 330.237†	1448.5	51.33	mg/L	0.687	51.33	mg/L	0.687	1.34%
Ni 231.604†	4266.4	1.030	mg/L	0.0078	1.030	mg/L	0.0078	0.76%
Pb 220.353†	17413.2	2.039	mg/L	0.0095	2.039	mg/L	0.0095	0.46%
Sb 206.836†	7097.5	2.104	mg/L	0.0058	2.104	mg/L	0.0058	0.28%
Se 196.026†	2971.7	2.051	mg/L	0.0084	2.051	mg/L	0.0084	0.41%
Si 288.158†	4307.4	2.056	mg/L	0.0194	2.056	mg/L	0.0194	0.95%
Sn 189.927†	3865.0	1.005	mg/L	0.0022	1.005	mg/L	0.0022	0.22%
Sr 421.552†	1073135.1	1.006	mg/L	0.0022	1.006	mg/L	0.0022	0.22%
Ti 334.903†	22551.8	1.036	mg/L	0.0094	1.036	mg/L	0.0094	0.91%
Tl 190.801†	5134.9	2.109	mg/L	0.0053	2.109	mg/L	0.0053	0.25%
V 292.402†	150554.9	1.050	mg/L	0.0053	1.050	mg/L	0.0053	0.50%
Zn 206.200†	4114.8	1.019	mg/L	0.0063	1.019	mg/L	0.0063	0.62%

Sequence No.: 16
Sample ID: CB 3

Autosampler Location: 1
Date Collected: 6/13/2013 10:04:23 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	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3208614.8	100.8	%	0.26				0.26%
ScR 361.383	372551.5	101.2	%	0.44				0.44%
Ag 328.068†	-17.1	-0.00009	mg/L	0.000096	-0.00009	mg/L	0.000096	111.49%
Al 308.215†	-0.2	-0.00014	mg/L	0.004347	-0.00014	mg/L	0.004347	>999.9%
As 188.979†	-0.3	-0.00016	mg/L	0.000689	-0.00016	mg/L	0.000689	441.40%
B 249.677†	0.5	0.00007	mg/L	0.000709	0.00007	mg/L	0.000709	>999.9%
Ba 233.527†	1.3	0.00029	mg/L	0.000127	0.00029	mg/L	0.000127	43.87%
Be 313.042†	61.5	0.00010	mg/L	0.000031	0.00010	mg/L	0.000031	31.89%
Ca 317.933†	62.0	0.00448	mg/L	0.001265	0.00448	mg/L	0.001265	28.22%
Cd 228.802†	10.1	0.00029	mg/L	0.000164	0.00029	mg/L	0.000164	55.85%
Co 228.616†	6.5	0.00017	mg/L	0.000211	0.00017	mg/L	0.000211	127.60%
Cr 267.716†	-3.3	-0.00052	mg/L	0.001020	-0.00052	mg/L	0.001020	195.10%
Cu 324.752†	100.1	0.00034	mg/L	0.000147	0.00034	mg/L	0.000147	43.45%
Fe 273.955†	1.5	0.00115	mg/L	0.001733	0.00115	mg/L	0.001733	150.48%
K 766.490†	-1.4	-0.00059	mg/L	0.019100	-0.00059	mg/L	0.019100	>999.9%
Mg 279.077†	6.4	0.00461	mg/L	0.002122	0.00461	mg/L	0.002122	46.06%
Mn 257.610†	19.9	0.00054	mg/L	0.000080	0.00054	mg/L	0.000080	14.86%
Mo 202.031†	11.8	0.00057	mg/L	0.000399	0.00057	mg/L	0.000399	69.61%
Na 589.592†	295.3	0.02078	mg/L	0.003536	0.02078	mg/L	0.003536	17.02%
Na 330.237†	2.9	0.1038	mg/L	0.19762	0.1038	mg/L	0.19762	190.36%
Ni 231.604†	1.8	0.00044	mg/L	0.000308	0.00044	mg/L	0.000308	69.57%
Pb 220.353†	0.9	0.00010	mg/L	0.000691	0.00010	mg/L	0.000691	660.40%
Sb 206.836†	6.9	0.00207	mg/L	0.000756	0.00207	mg/L	0.000756	36.52%
Se 196.026†	-0.0	-0.00001	mg/L	0.003857	-0.00001	mg/L	0.003857	>999.9%
Si 288.158†	0.9	0.00042	mg/L	0.002371	0.00042	mg/L	0.002371	570.74%
Sn 189.927†	4.4	0.00114	mg/L	0.001106	0.00114	mg/L	0.001106	96.88%
Sr 421.552†	57.7	0.00005	mg/L	0.000020	0.00005	mg/L	0.000020	36.19%
Ti 334.903†	7.2	0.00033	mg/L	0.000146	0.00033	mg/L	0.000146	44.24%
Tl 190.801†	7.2	0.00295	mg/L	0.001013	0.00295	mg/L	0.001013	34.29%
V 292.402†	16.9	0.00012	mg/L	0.000078	0.00012	mg/L	0.000078	68.00%
Zn 206.200†	-0.3	-0.00006	mg/L	0.000596	-0.00006	mg/L	0.000596	945.62%

Sequence No.: 17
Sample ID: WS30 MB1 SWC

Autosampler Location: 307
Date Collected: 6/13/2013 10:08:38 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS30 MB1 SWC

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: WS30 MB1 SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3219833.8	101.1	%	0.22				0.22%
ScR 361.383	375842.1	102.1	%	0.63				0.62%
Ag 328.068†	24.9	0.00013	mg/L	0.000005	0.00025	mg/L	0.000011	4.34%
Al 308.215†	5.0	0.00296	mg/L	0.001184	0.00591	mg/L	0.002369	40.07%
As 188.979†	0.3	0.00018	mg/L	0.001298	0.00036	mg/L	0.002596	716.97%
B 249.677†	-0.5	-0.00007	mg/L	0.000325	-0.00014	mg/L	0.000651	479.14%
Ba 233.527†	-2.8	-0.00061	mg/L	0.000147	-0.00122	mg/L	0.000293	24.02%
Be 313.042†	2.4	0.00000	mg/L	0.000026	0.00001	mg/L	0.000052	698.55%
Ca 317.933†	63.2	0.00457	mg/L	0.000341	0.00914	mg/L	0.000681	7.45%
Cd 228.802†	4.9	0.00014	mg/L	0.000010	0.00028	mg/L	0.000021	7.30%
Co 228.616†	-4.1	-0.00011	mg/L	0.000043	-0.00021	mg/L	0.000085	40.46%
Cr 267.716†	0.1	0.00001	mg/L	0.001137	0.00002	mg/L	0.002275	>999.9%
Cu 324.752†	68.6	0.00023	mg/L	0.000107	0.00047	mg/L	0.000214	45.99%
Fe 273.955†	1.6	0.00123	mg/L	0.002413	0.00246	mg/L	0.004825	196.41%
K 766.490†	15.6	0.00671	mg/L	0.005952	0.01342	mg/L	0.011903	88.67%
Mg 279.077†	2.3	0.00165	mg/L	0.003494	0.00331	mg/L	0.006987	211.40%
Mn 257.610†	1.8	0.00005	mg/L	0.000108	0.00010	mg/L	0.000217	227.42%
Mo 202.031†	-3.4	-0.00017	mg/L	0.000084	-0.00033	mg/L	0.000169	50.90%
Na 589.592†	113.7	0.00800	mg/L	0.004524	0.01600	mg/L	0.009047	56.53%
Na 330.237†	-4.0	-0.1417	mg/L	0.35682	-0.2834	mg/L	0.71363	251.85%
Ni 231.604†	3.5	0.00083	mg/L	0.000858	0.00167	mg/L	0.001715	102.79%
Pb 220.353†	2.2	0.00026	mg/L	0.000227	0.00052	mg/L	0.000454	87.98%
Sb 206.836†	-2.5	-0.00075	mg/L	0.000454	-0.00151	mg/L	0.000907	60.27%
Se 196.026†	2.7	0.00184	mg/L	0.001024	0.00367	mg/L	0.002047	55.74%
Si 288.158†	28.8	0.01373	mg/L	0.001852	0.02745	mg/L	0.003704	13.49%
Sn 189.927†	-0.2	-0.00005	mg/L	0.000637	-0.00010	mg/L	0.001274	>999.9%
Sr 421.552†	-34.2	-0.00003	mg/L	0.000006	-0.00006	mg/L	0.000013	19.69%
Ti 334.903†	0.4	0.00002	mg/L	0.000380	0.00004	mg/L	0.000761	>999.9%
Tl 190.801†	3.1	0.00127	mg/L	0.001224	0.00253	mg/L	0.002448	96.74%
V 292.402†	9.1	0.00006	mg/L	0.000137	0.00013	mg/L	0.000273	217.60%
Zn 206.200†	-0.9	-0.00023	mg/L	0.000698	-0.00046	mg/L	0.001396	306.60%

Sequence No.: 18
Sample ID: WS30 A SWC

Autosampler Location: 308
Date Collected: 6/13/2013 10:12:55 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS30 A SWC

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: WS30 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3161338.0	99.28	%	0.553				0.56%
ScR 361.383	366832.9	99.63	%	0.372				0.37%
Ag 328.068†	-45.1	-0.00013	mg/L	0.000211	-0.00025	mg/L	0.000423	166.85%
Al 308.215†	118921.4	70.45	mg/L	0.354	140.9	mg/L	0.71	0.50%
As 188.979†	-157.5	0.06402	mg/L	0.003560	0.1280	mg/L	0.00712	5.56%
B 249.677†	804.4	0.1094	mg/L	0.00046	0.2189	mg/L	0.00092	0.42%
Ba 233.527†	2217.1	0.4691	mg/L	0.00221	0.9381	mg/L	0.00442	0.47%
Be 313.042†	724.8	0.00101	mg/L	0.000010	0.00202	mg/L	0.000019	0.95%
Ca 317.933†	1339129.2	96.88	mg/L	0.410	193.8	mg/L	0.82	0.42%
Cd 228.802†	81.9	0.00290	mg/L	0.000120	0.00581	mg/L	0.000241	4.15%
Co 228.616†	1879.9	0.03826	mg/L	0.000200	0.07652	mg/L	0.000399	0.52%
Cr 267.716†	879.4	0.1408	mg/L	0.00178	0.2816	mg/L	0.00356	1.26%
Cu 324.752†	116907.7	0.3999	mg/L	0.00182	0.7998	mg/L	0.00365	0.46%
Fe 273.955†	147025.8	110.5	mg/L	0.75	221.0	mg/L	1.50	0.68%
K 766.490†	21998.0	9.491	mg/L	0.0324	18.98	mg/L	0.065	0.34%
Mg 279.077†	39049.4	27.90	mg/L	0.134	55.80	mg/L	0.267	0.48%
Mn 257.610†	39899.7	1.074	mg/L	0.0092	2.147	mg/L	0.0183	0.85%
Mo 202.031†	182.9	0.00763	mg/L	0.000103	0.01527	mg/L	0.000206	1.35%
Na 589.592†	637406.3	44.84	mg/L	0.133	89.68	mg/L	0.266	0.30%
Na 330.237†	1256.7	45.37	mg/L	0.184	90.74	mg/L	0.367	0.40%
Ni 231.604†	386.9	0.09341	mg/L	0.000548	0.1868	mg/L	0.00110	0.59%
Pb 220.353†	2538.2	0.3075	mg/L	0.00118	0.6151	mg/L	0.00236	0.38%
Sb 206.836†	20.4	0.00952	mg/L	0.002891	0.01904	mg/L	0.005782	30.37%
Se 196.026†	30.2	0.01291	mg/L	0.001719	0.02582	mg/L	0.003438	13.32%
Si 288.158†	6420.8	3.061	mg/L	0.0283	6.121	mg/L	0.0565	0.92%
Sn 189.927†	-17.7	0.00887	mg/L	0.001647	0.01774	mg/L	0.003295	18.57%
Sr 421.552†	990923.8	0.9292	mg/L	0.00147	1.858	mg/L	0.0029	0.16%
Ti 334.903†	106952.7	4.913	mg/L	0.0339	9.826	mg/L	0.0679	0.69%
Tl 190.801†	-17.6	0.00633	mg/L	0.001997	0.01266	mg/L	0.003994	31.55%
V 292.402†	49880.4	0.3387	mg/L	0.00171	0.6775	mg/L	0.00343	0.51%
Zn 206.200†	2228.0	0.5509	mg/L	0.00224	1.102	mg/L	0.0045	0.41%

WS91 : 01732

Sequence No.: 19
Sample ID: WS30 B SWC

Autosampler Location: 309
Date Collected: 6/13/2013 10:17:11 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS30 B SWC

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: WS30 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3200864.0	100.5	%	0.48				0.48%
ScR 361.383	374269.7	101.6	%	0.48				0.48%
Ag 328.068†	-177.6	-0.00081	mg/L	0.000076	-0.00163	mg/L	0.000152	9.32%
Al 308.215†	87407.0	51.78	mg/L	0.182	103.6	mg/L	0.36	0.35%
As 188.979†	-236.7	0.01663	mg/L	0.001382	0.03325	mg/L	0.002763	8.31%
B 249.677†	236.4	0.03211	mg/L	0.000634	0.06422	mg/L	0.001269	1.98%
Ba 233.527†	761.1	0.1537	mg/L	0.00121	0.3075	mg/L	0.00242	0.79%
Be 313.042†	497.6	0.00067	mg/L	0.000007	0.00134	mg/L	0.000014	1.07%
Ca 317.933†	361904.5	26.18	mg/L	0.126	52.37	mg/L	0.252	0.48%
Cd 228.802†	19.0	0.00130	mg/L	0.000093	0.00260	mg/L	0.000187	7.20%
Co 228.616†	1528.9	0.03014	mg/L	0.000193	0.06029	mg/L	0.000386	0.64%
Cr 267.716†	478.4	0.07744	mg/L	0.000561	0.1549	mg/L	0.00112	0.72%
Cu 324.752†	24398.8	0.08528	mg/L	0.000486	0.1706	mg/L	0.00097	0.57%
Fe 273.955†	107698.3	80.94	mg/L	0.058	161.9	mg/L	0.12	0.07%
K 766.490†	13371.6	5.769	mg/L	0.0232	11.54	mg/L	0.046	0.40%
Mg 279.077†	25457.1	18.19	mg/L	0.003	36.37	mg/L	0.006	0.02%
Mn 257.610†	26942.3	0.7251	mg/L	0.00190	1.450	mg/L	0.0038	0.26%
Mo 202.031†	57.1	0.00243	mg/L	0.000311	0.00486	mg/L	0.000623	12.82%
Na 589.592†	398311.7	28.02	mg/L	0.129	56.04	mg/L	0.257	0.46%
Na 330.237†	767.9	28.39	mg/L	0.153	56.78	mg/L	0.306	0.54%
Ni 231.604†	238.7	0.05762	mg/L	0.000418	0.1152	mg/L	0.00084	0.73%
Pb 220.353†	97.2	0.01934	mg/L	0.000786	0.03868	mg/L	0.001572	4.06%
Sb 206.836†	3.8	0.00490	mg/L	0.001921	0.00979	mg/L	0.003841	39.23%
Se 196.026†	19.2	0.00737	mg/L	0.004017	0.01475	mg/L	0.008034	54.48%
Si 288.158†	4682.6	2.232	mg/L	0.0065	4.463	mg/L	0.0131	0.29%
Sn 189.927†	-46.1	-0.00764	mg/L	0.001039	-0.01528	mg/L	0.002078	13.60%
Sr 421.552†	270812.0	0.2539	mg/L	0.00097	0.5079	mg/L	0.00194	0.38%
Ti 334.903†	100854.8	4.637	mg/L	0.0098	9.274	mg/L	0.0197	0.21%
Tl 190.801†	-15.5	0.00346	mg/L	0.002016	0.00692	mg/L	0.004032	58.23%
V 292.402†	39490.1	0.2680	mg/L	0.00151	0.5359	mg/L	0.00301	0.56%
Zn 206.200†	671.4	0.1663	mg/L	0.00163	0.3325	mg/L	0.00325	0.98%

Sequence No.: 20
Sample ID: WS30 C SWC

Autosampler Location: 310
Date Collected: 6/13/2013 10:21:12 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS30 C SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WS30 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3185709.1	100.0	%	0.37				0.37%
ScR 361.383	369083.5	100.2	%	0.58				0.58%
Ag 328.068†	-321.5	-0.00150	mg/L	0.000114	-0.00300	mg/L	0.000227	7.57%
Al 308.215†	175668.3	104.1	mg/L	0.47	208.1	mg/L	0.94	0.45%
As 188.979†	-242.1	0.05086	mg/L	0.004794	0.1017	mg/L	0.00959	9.43%
B 249.677†	416.7	0.05661	mg/L	0.000802	0.1132	mg/L	0.00160	1.42%
Ba 233.527†	1361.4	0.2755	mg/L	0.00223	0.5511	mg/L	0.00445	0.81%
Be 313.042†	1052.7	0.00151	mg/L	0.000039	0.00301	mg/L	0.000077	2.57%
Ca 317.933†	764599.3	55.32	mg/L	0.050	110.6	mg/L	0.10	0.09%
Cd 228.802†	38.7	0.00192	mg/L	0.000099	0.00383	mg/L	0.000199	5.19%
Co 228.616†	2372.4	0.04888	mg/L	0.000280	0.09776	mg/L	0.000560	0.57%
Cr 267.716†	866.4	0.1399	mg/L	0.00128	0.2799	mg/L	0.00255	0.91%
Cu 324.752†	55264.2	0.1922	mg/L	0.00099	0.3844	mg/L	0.00197	0.51%
Fe 273.955†	188583.1	141.7	mg/L	1.14	283.5	mg/L	2.28	0.80%
K 766.490†	25028.6	10.80	mg/L	0.058	21.60	mg/L	0.115	0.53%
Mg 279.077†	46851.7	33.48	mg/L	0.139	66.95	mg/L	0.277	0.41%
Mn 257.610†	51020.9	1.373	mg/L	0.0085	2.746	mg/L	0.0171	0.62%
Mo 202.031†	113.6	0.00480	mg/L	0.000249	0.00960	mg/L	0.000499	5.20%
Na 589.592†	593410.3	41.75	mg/L	0.152	83.49	mg/L	0.303	0.36%
Na 330.237†	1164.9	42.66	mg/L	0.367	85.32	mg/L	0.734	0.86%
Ni 231.604†	429.3	0.1037	mg/L	0.00242	0.2073	mg/L	0.00483	2.33%
Pb 220.353†	115.2	0.03050	mg/L	0.000786	0.06099	mg/L	0.001571	2.58%
Sb 206.836†	5.9	0.00612	mg/L	0.002033	0.01225	mg/L	0.004066	33.20%
Se 196.026†	30.4	0.00932	mg/L	0.003345	0.01864	mg/L	0.006690	35.89%
Si 288.158†	6871.1	3.276	mg/L	0.0469	6.551	mg/L	0.0938	1.43%
Sn 189.927†	-61.8	-0.00773	mg/L	0.001298	-0.01546	mg/L	0.002595	16.79%
Sr 421.552†	609962.9	0.5720	mg/L	0.00101	1.144	mg/L	0.0020	0.18%
Ti 334.903†	127496.6	5.860	mg/L	0.0123	11.72	mg/L	0.025	0.21%
Tl 190.801†	-32.1	0.00439	mg/L	0.001309	0.00878	mg/L	0.002617	29.81%
V 292.402†	56889.8	0.3853	mg/L	0.00063	0.7706	mg/L	0.00126	0.16%
Zn 206.200†	1058.8	0.2620	mg/L	0.00245	0.5239	mg/L	0.00490	0.93%

Sequence No.: 21
Sample ID: WS30 D SWC

Autosampler Location: 311
Date Collected: 6/13/2013 10:25:29 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS30 D SWC

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: WS30 D SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3140062.1	98.61	%	0.343				0.35%
ScR 361.383	367164.6	99.72	%	0.518				0.52%
Ag 328.068†	-200.5	-0.00092	mg/L	0.000101	-0.00185	mg/L	0.000202	10.91%
Al 308.215†	117365.8	69.53	mg/L	0.267	139.1	mg/L	0.53	0.38%
As 188.979†	-149.7	0.06098	mg/L	0.003979	0.1220	mg/L	0.00796	6.52%
B 249.677†	482.4	0.06559	mg/L	0.000727	0.1312	mg/L	0.00145	1.11%
Ba 233.527†	1482.4	0.3083	mg/L	0.00269	0.6166	mg/L	0.00538	0.87%
Be 313.042†	681.3	0.00096	mg/L	0.000008	0.00191	mg/L	0.000015	0.79%
Ca 317.933†	2116847.1	153.2	mg/L	0.33	306.3	mg/L	0.66	0.22%
Cd 228.802†	43.1	0.00176	mg/L	0.000032	0.00351	mg/L	0.000064	1.82%
Co 228.616†	1727.5	0.03461	mg/L	0.000045	0.06922	mg/L	0.000090	0.13%
Cr 267.716†	787.6	0.1256	mg/L	0.00021	0.2512	mg/L	0.00042	0.17%
Cu 324.752†	101801.6	0.3485	mg/L	0.00072	0.6970	mg/L	0.00145	0.21%
Fe 273.955†	140172.9	105.3	mg/L	1.13	210.7	mg/L	2.26	1.07%
K 766.490†	19730.8	8.513	mg/L	0.1260	17.03	mg/L	0.252	1.48%
Mg 279.077†	37154.8	26.54	mg/L	0.199	53.08	mg/L	0.399	0.75%
Mn 257.610†	37072.3	0.9973	mg/L	0.00820	1.995	mg/L	0.0164	0.82%
Mo 202.031†	167.2	0.00616	mg/L	0.000269	0.01231	mg/L	0.000538	4.37%
Na 589.592†	609292.2	42.86	mg/L	0.224	85.72	mg/L	0.448	0.52%
Na 330.237†	1217.3	43.74	mg/L	0.185	87.48	mg/L	0.370	0.42%
Ni 231.604†	347.7	0.08396	mg/L	0.002428	0.1679	mg/L	0.00486	2.89%
Pb 220.353†	1094.6	0.1387	mg/L	0.00095	0.2774	mg/L	0.00190	0.69%
Sb 206.836†	15.9	0.00801	mg/L	0.001564	0.01601	mg/L	0.003129	19.54%
Se 196.026†	38.3	0.01862	mg/L	0.003426	0.03723	mg/L	0.006852	18.40%
Si 288.158†	7431.1	3.541	mg/L	0.0079	7.083	mg/L	0.0159	0.22%
Sn 189.927†	-49.8	0.00774	mg/L	0.001368	0.01547	mg/L	0.002737	17.69%
Sr 421.552†	1302234.5	1.221	mg/L	0.0027	2.442	mg/L	0.0054	0.22%
Ti 334.903†	104771.9	4.809	mg/L	0.0272	9.618	mg/L	0.0545	0.57%
Tl 190.801†	-16.6	0.00625	mg/L	0.000959	0.01251	mg/L	0.001918	15.34%
V 292.402†	41334.6	0.2796	mg/L	0.00092	0.5592	mg/L	0.00183	0.33%
Zn 206.200†	1709.0	0.4218	mg/L	0.00270	0.8435	mg/L	0.00541	0.64%

Sequence No.: 22
Sample ID: WS30 E SWC

Autosampler Location: 312
Date Collected: 6/13/2013 10:29:45 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS30 E SWC

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: WS30 E SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3202480.9	100.6	%	0.38				0.38%
ScR 361.383	370933.1	100.7	%	0.86				0.85%
Ag 328.068†	-98.2	-0.00040	mg/L	0.000065	-0.00080	mg/L	0.000130	16.29%
Al 308.215†	130547.7	77.34	mg/L	0.303	154.7	mg/L	0.61	0.39%
As 188.979†	-219.0	0.04812	mg/L	0.002070	0.09623	mg/L	0.004140	4.30%
B 249.677†	521.5	0.07091	mg/L	0.000554	0.1418	mg/L	0.00111	0.78%
Ba 233.527†	1503.8	0.3129	mg/L	0.00229	0.6257	mg/L	0.00457	0.73%
Be 313.042†	705.9	0.00098	mg/L	0.000023	0.00196	mg/L	0.000047	2.39%
Ca 317.933†	628405.0	45.46	mg/L	0.033	90.93	mg/L	0.065	0.07%
Cd 228.802†	46.5	0.00206	mg/L	0.000165	0.00411	mg/L	0.000330	8.01%
Co 228.616†	1851.6	0.03684	mg/L	0.000323	0.07368	mg/L	0.000647	0.88%
Cr 267.716†	858.2	0.1380	mg/L	0.00102	0.2760	mg/L	0.00204	0.74%
Cu 324.752†	94541.4	0.3238	mg/L	0.00218	0.6477	mg/L	0.00435	0.67%
Fe 273.955†	141331.2	106.2	mg/L	0.76	212.4	mg/L	1.51	0.71%
K 766.490†	19635.6	8.472	mg/L	0.0255	16.94	mg/L	0.051	0.30%
Mg 279.077†	35338.1	25.25	mg/L	0.128	50.50	mg/L	0.256	0.51%
Mn 257.610†	35439.4	0.9537	mg/L	0.00439	1.907	mg/L	0.0088	0.46%
Mo 202.031†	118.4	0.00516	mg/L	0.000256	0.01031	mg/L	0.000513	4.97%
Na 589.592†	563577.5	39.65	mg/L	0.177	79.29	mg/L	0.354	0.45%
Na 330.237†	1107.9	40.48	mg/L	0.478	80.97	mg/L	0.957	1.18%
Ni 231.604†	335.3	0.08096	mg/L	0.000660	0.1619	mg/L	0.00132	0.81%
Pb 220.353†	1128.4	0.1445	mg/L	0.00036	0.2889	mg/L	0.00073	0.25%
Sb 206.836†	36.6	0.01466	mg/L	0.002616	0.02932	mg/L	0.005232	17.85%
Se 196.026†	28.0	0.01066	mg/L	0.004767	0.02132	mg/L	0.009534	44.72%
Si 288.158†	5398.4	2.573	mg/L	0.0147	5.147	mg/L	0.0295	0.57%
Sn 189.927†	-24.7	0.00055	mg/L	0.001383	0.00111	mg/L	0.002765	249.16%
Sr 421.552†	468052.8	0.4389	mg/L	0.00050	0.8778	mg/L	0.00100	0.11%
Ti 334.903†	116569.2	5.358	mg/L	0.0044	10.72	mg/L	0.009	0.08%
Tl 190.801†	-20.7	0.00453	mg/L	0.005501	0.00906	mg/L	0.011002	121.44%
V 292.402†	47424.7	0.3216	mg/L	0.00232	0.6432	mg/L	0.00464	0.72%
Zn 206.200†	1776.0	0.4395	mg/L	0.00427	0.8790	mg/L	0.00855	0.97%

Sequence No.: 23
Sample ID: WS30 F SWC

Autosampler Location: 313
Date Collected: 6/13/2013 10:34:02 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS30 F SWC

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: WS30 F SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3186657.9	100.1	%	0.40				0.40%
ScR 361.383	374347.0	101.7	%	0.59				0.58%
Ag 328.068†	-221.9	-0.00102	mg/L	0.000144	-0.00205	mg/L	0.000289	14.08%
Al 308.215†	113633.2	67.32	mg/L	0.218	134.6	mg/L	0.44	0.32%
As 188.979†	-271.6	0.01824	mg/L	0.002251	0.03648	mg/L	0.004501	12.34%
B 249.677†	275.8	0.03747	mg/L	0.000773	0.07493	mg/L	0.001546	2.06%
Ba 233.527†	836.0	0.1686	mg/L	0.00183	0.3373	mg/L	0.00365	1.08%
Be 313.042†	629.8	0.00086	mg/L	0.000016	0.00173	mg/L	0.000031	1.80%
Ca 317.933†	428493.0	31.00	mg/L	0.164	62.00	mg/L	0.328	0.53%
Cd 228.802†	25.9	0.00160	mg/L	0.000062	0.00321	mg/L	0.000124	3.85%
Co 228.616†	1724.8	0.03391	mg/L	0.000267	0.06781	mg/L	0.000534	0.79%
Cr 267.716†	551.5	0.08925	mg/L	0.001033	0.1785	mg/L	0.00207	1.16%
Cu 324.752†	28073.8	0.09801	mg/L	0.000533	0.1960	mg/L	0.00107	0.54%
Fe 273.955†	120093.1	90.26	mg/L	0.134	180.5	mg/L	0.27	0.15%
K 766.490†	15201.0	6.558	mg/L	0.0339	13.12	mg/L	0.068	0.52%
Mg 279.077†	27389.3	19.57	mg/L	0.085	39.13	mg/L	0.169	0.43%
Mn 257.610†	33346.3	0.8974	mg/L	0.00103	1.795	mg/L	0.0021	0.12%
Mo 202.031†	70.1	0.00300	mg/L	0.000090	0.00600	mg/L	0.000181	3.01%
Na 589.592†	434621.7	30.57	mg/L	0.097	61.15	mg/L	0.193	0.32%
Na 330.237†	834.0	30.90	mg/L	0.278	61.80	mg/L	0.556	0.90%
Ni 231.604†	260.8	0.06297	mg/L	0.000540	0.1259	mg/L	0.00108	0.86%
Pb 220.353†	-4.5	0.01059	mg/L	0.000356	0.02117	mg/L	0.000711	3.36%
Sb 206.836†	-5.1	0.00276	mg/L	0.001222	0.00552	mg/L	0.002444	44.32%
Se 196.026†	18.8	0.00542	mg/L	0.002707	0.01084	mg/L	0.005414	49.94%
Si 288.158†	3511.8	1.674	mg/L	0.0058	3.349	mg/L	0.0116	0.35%
Sn 189.927†	-56.7	-0.00965	mg/L	0.000753	-0.01929	mg/L	0.001506	7.81%
Sr 421.552†	346275.3	0.3247	mg/L	0.00081	0.6494	mg/L	0.00162	0.25%
Ti 334.903†	115216.3	5.297	mg/L	0.0147	10.59	mg/L	0.029	0.28%
Tl 190.801†	-21.6	0.00204	mg/L	0.001050	0.00409	mg/L	0.002099	51.36%
V 292.402†	45267.7	0.3073	mg/L	0.00118	0.6146	mg/L	0.00236	0.38%
Zn 206.200†	673.8	0.1667	mg/L	0.00188	0.3334	mg/L	0.00376	1.13%

Sequence No.: 24
Sample ID: WS30 G SWC

Autosampler Location: 314
Date Collected: 6/13/2013 10:38:03 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS30 G SWC

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: WS30 G SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3190238.0	100.2	%	0.12				0.12%
ScR 361.383	367769.9	99.88	%	0.242				0.24%
Ag 328.068†	-125.8	-0.00053	mg/L	0.000002	-0.00107	mg/L	0.000004	0.33%
Al 308.215†	135829.5	80.47	mg/L	0.305	160.9	mg/L	0.61	0.38%
As 188.979†	-223.0	0.05542	mg/L	0.000468	0.1108	mg/L	0.00094	0.85%
B 249.677†	569.6	0.07745	mg/L	0.000744	0.1549	mg/L	0.00149	0.96%
Ba 233.527†	8511.4	1.854	mg/L	0.0033	3.707	mg/L	0.0065	0.18%
Be 313.042†	765.5	0.00107	mg/L	0.000004	0.00213	mg/L	0.000008	0.36%
Ca 317.933†	1187057.8	85.88	mg/L	0.240	171.8	mg/L	0.48	0.28%
Cd 228.802†	40.6	0.00190	mg/L	0.000199	0.00380	mg/L	0.000397	10.44%
Co 228.616†	1940.7	0.03826	mg/L	0.000124	0.07652	mg/L	0.000248	0.32%
Cr 267.716†	1045.6	0.1675	mg/L	0.00101	0.3349	mg/L	0.00202	0.60%
Cu 324.752†	102237.8	0.3500	mg/L	0.00039	0.7001	mg/L	0.00078	0.11%
Fe 273.955†	147397.2	110.8	mg/L	0.69	221.6	mg/L	1.37	0.62%
K 766.490†	21383.9	9.226	mg/L	0.0440	18.45	mg/L	0.088	0.48%
Mg 279.077†	36498.9	26.07	mg/L	0.133	52.15	mg/L	0.265	0.51%
Mn 257.610†	34672.3	0.9329	mg/L	0.00442	1.866	mg/L	0.0088	0.47%
Mo 202.031†	193.9	0.00830	mg/L	0.000296	0.01660	mg/L	0.000592	3.57%
Na 589.592†	572673.1	40.29	mg/L	0.124	80.57	mg/L	0.248	0.31%
Na 330.237†	1124.3	40.99	mg/L	0.103	81.99	mg/L	0.206	0.25%
Ni 231.604†	355.7	0.08587	mg/L	0.001359	0.1717	mg/L	0.00272	1.58%
Pb 220.353†	1798.4	0.2234	mg/L	0.00098	0.4468	mg/L	0.00196	0.44%
Sb 206.836†	11.0	0.00701	mg/L	0.001953	0.01403	mg/L	0.003905	27.84%
Se 196.026†	31.6	0.01281	mg/L	0.004595	0.02563	mg/L	0.009190	35.86%
Si 288.158†	5378.2	2.564	mg/L	0.0127	5.128	mg/L	0.0255	0.50%
Sn 189.927†	-34.7	0.00321	mg/L	0.002000	0.00642	mg/L	0.004000	62.33%
Sr 421.552†	597176.2	0.5600	mg/L	0.00126	1.120	mg/L	0.0025	0.22%
Ti 334.903†	125015.8	5.744	mg/L	0.0074	11.49	mg/L	0.015	0.13%
Tl 190.801†	-18.3	0.00604	mg/L	0.000905	0.01208	mg/L	0.001810	14.98%
V 292.402†	49622.8	0.3366	mg/L	0.00110	0.6731	mg/L	0.00220	0.33%
Zn 206.200†	1860.9	0.4600	mg/L	0.00059	0.9201	mg/L	0.00117	0.13%

Sequence No.: 25
Sample ID: WS30 REF1 SWC

Autosampler Location: 315
Date Collected: 6/13/2013 10:42:20 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS30 REF1 SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WS30 REF1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3206649.7	100.7	%	0.53				0.53%
ScR 361.383	374780.4	101.8	%	0.79				0.77%
Ag 328.068†	211946.2	1.066	mg/L	0.0062	2.131	mg/L	0.0125	0.59%
Al 308.215†	161326.2	95.57	mg/L	0.332	191.1	mg/L	0.66	0.35%
As 188.979†	2278.0	1.330	mg/L	0.0034	2.661	mg/L	0.0069	0.26%
B 249.677†	8324.5	1.132	mg/L	0.0065	2.265	mg/L	0.0130	0.57%
Ba 233.527†	15278.5	3.336	mg/L	0.0169	6.671	mg/L	0.0339	0.51%
Be 313.042†	540221.5	0.8519	mg/L	0.00585	1.704	mg/L	0.0117	0.69%
Ca 317.933†	563757.0	40.79	mg/L	0.133	81.57	mg/L	0.265	0.33%
Cd 228.802†	23836.0	0.6820	mg/L	0.00343	1.364	mg/L	0.0069	0.50%
Co 228.616†	29159.9	0.7401	mg/L	0.00430	1.480	mg/L	0.0086	0.58%
Cr 267.716†	4677.0	0.7460	mg/L	0.00481	1.492	mg/L	0.0096	0.65%
Cu 324.752†	203490.3	0.6954	mg/L	0.00455	1.391	mg/L	0.0091	0.65%
Fe 273.955†	201571.6	151.5	mg/L	0.49	303.0	mg/L	0.97	0.32%
K 766.490†	84715.8	36.55	mg/L	0.126	73.10	mg/L	0.253	0.35%
Mg 279.077†	37850.6	27.03	mg/L	0.041	54.05	mg/L	0.083	0.15%
Mn 257.610†	163681.9	4.406	mg/L	0.0197	8.811	mg/L	0.0395	0.45%
Mo 202.031†	9317.9	0.4514	mg/L	0.00082	0.9027	mg/L	0.00165	0.18%
Na 589.592†	81051.4	5.702	mg/L	0.0343	11.40	mg/L	0.069	0.60%
Na 330.237†	141.4	4.998	mg/L	0.0236	9.997	mg/L	0.0473	0.47%
Ni 231.604†	2305.2	0.5562	mg/L	0.00437	1.112	mg/L	0.0087	0.78%
Pb 220.353†	10917.8	1.293	mg/L	0.0057	2.586	mg/L	0.0114	0.44%
Sb 206.836†	1610.6	0.4872	mg/L	0.00122	0.9744	mg/L	0.00245	0.25%
Se 196.026†	2365.7	1.623	mg/L	0.0068	3.246	mg/L	0.0137	0.42%
Si 288.158†	5335.5	2.547	mg/L	0.0332	5.093	mg/L	0.0664	1.30%
Sn 189.927†	6210.3	1.618	mg/L	0.0032	3.237	mg/L	0.0063	0.20%
Sr 421.552†	583771.4	0.5474	mg/L	0.00172	1.095	mg/L	0.0034	0.32%
Ti 334.903†	53366.2	2.451	mg/L	0.0080	4.903	mg/L	0.0159	0.33%
Tl 190.801†	3102.2	1.293	mg/L	0.0052	2.585	mg/L	0.0104	0.40%
V 292.402†	125808.3	0.8686	mg/L	0.00621	1.737	mg/L	0.0124	0.71%
Zn 206.200†	7147.7	1.769	mg/L	0.0094	3.539	mg/L	0.0187	0.53%

Sequence No.: 26
Sample ID: WS30 MB1SPK SWC

Autosampler Location: 316
Date Collected: 6/13/2013 10:46:22 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS30 MB1SPK SWC

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: WS30 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3205693.3	100.7	%	0.14				0.14%
ScR 361.383	372174.4	101.1	%	0.33				0.32%
Ag 328.068†	104516.4	0.5255	mg/L	0.00188	1.051	mg/L	0.0038	0.36%
Al 308.215†	3475.4	2.051	mg/L	0.0074	4.103	mg/L	0.0148	0.36%
As 188.979†	3712.8	2.046	mg/L	0.0056	4.093	mg/L	0.0112	0.27%
B 249.677†	12.4	0.00061	mg/L	0.000596	0.00122	mg/L	0.001193	97.82%
Ba 233.527†	9681.1	2.129	mg/L	0.0051	4.259	mg/L	0.0103	0.24%
Be 313.042†	302398.2	0.4769	mg/L	0.00204	0.9538	mg/L	0.00407	0.43%
Ca 317.933†	136008.8	9.840	mg/L	0.0453	19.68	mg/L	0.091	0.46%
Cd 228.802†	18096.4	0.5119	mg/L	0.00182	1.024	mg/L	0.0036	0.36%
Co 228.616†	19974.8	0.5111	mg/L	0.00181	1.022	mg/L	0.0036	0.35%
Cr 267.716†	3364.1	0.5331	mg/L	0.00201	1.066	mg/L	0.0040	0.38%
Cu 324.752†	151452.7	0.5132	mg/L	0.00267	1.026	mg/L	0.0053	0.52%
Fe 273.955†	2727.1	2.046	mg/L	0.0005	4.093	mg/L	0.0010	0.02%
K 766.490†	23162.8	9.994	mg/L	0.0326	19.99	mg/L	0.065	0.33%
Mg 279.077†	13602.9	9.745	mg/L	0.0533	19.49	mg/L	0.107	0.55%
Mn 257.610†	18159.9	0.4891	mg/L	0.00338	0.9782	mg/L	0.00677	0.69%
Mo 202.031†	27.3	0.00117	mg/L	0.000105	0.00234	mg/L	0.000209	8.91%
Na 589.592†	142361.4	10.01	mg/L	0.038	20.03	mg/L	0.076	0.38%
Na 330.237†	283.8	9.863	mg/L	0.0597	19.73	mg/L	0.119	0.61%
Ni 231.604†	2085.5	0.5037	mg/L	0.00119	1.007	mg/L	0.0024	0.24%
Pb 220.353†	17441.9	2.042	mg/L	0.0153	4.084	mg/L	0.0306	0.75%
Sb 206.836†	6932.8	2.050	mg/L	0.0073	4.101	mg/L	0.0145	0.35%
Se 196.026†	2946.0	2.034	mg/L	0.0010	4.068	mg/L	0.0020	0.05%
Si 288.158†	35.1	0.02011	mg/L	0.003791	0.04022	mg/L	0.007583	18.85%
Sn 189.927†	-27.2	-0.00471	mg/L	0.000580	-0.00942	mg/L	0.001161	12.32%
Sr 421.552†	526841.2	0.4940	mg/L	0.00112	0.9880	mg/L	0.00225	0.23%
Ti 334.903†	40.5	0.00115	mg/L	0.000338	0.00230	mg/L	0.000675	29.40%
Tl 190.801†	4986.1	2.051	mg/L	0.0076	4.102	mg/L	0.0151	0.37%
V 292.402†	74501.1	0.5197	mg/L	0.00345	1.039	mg/L	0.0069	0.66%
Zn 206.200†	2022.9	0.5008	mg/L	0.00201	1.002	mg/L	0.0040	0.40%

Sequence No.: 27
Sample ID: CV 4

Autosampler Location: 7
Date Collected: 6/13/2013 10:50:23 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	229.0 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	3196221.2	100.4	%	0.22				0.22%
ScR 361.383	366195.3	99.46	%	0.481				0.48%
Ag 328.068†	211219.7	1.062	mg/L	0.0054	1.062	mg/L	0.0054	0.51%
Al 308.215†	3498.0	2.039	mg/L	0.0152	2.039	mg/L	0.0152	0.75%
As 188.979†	3649.1	2.042	mg/L	0.0019	2.042	mg/L	0.0019	0.09%
B 249.677†	7413.3	1.008	mg/L	0.0025	1.008	mg/L	0.0025	0.25%
Ba 233.527†	4826.1	1.061	mg/L	0.0041	1.061	mg/L	0.0041	0.39%
Be 313.042†	626064.3	0.9873	mg/L	0.00568	0.9873	mg/L	0.00568	0.58%
Ca 317.933†	28796.1	2.083	mg/L	0.0041	2.083	mg/L	0.0041	0.20%
Cd 228.802†	35821.3	1.025	mg/L	0.0019	1.025	mg/L	0.0019	0.18%
Co 228.616†	39611.2	1.012	mg/L	0.0042	1.012	mg/L	0.0042	0.42%
Cr 267.716†	6625.5	1.052	mg/L	0.0013	1.052	mg/L	0.0013	0.12%
Cu 324.752†	299670.7	1.015	mg/L	0.0019	1.015	mg/L	0.0019	0.18%
Fe 273.955†	2709.4	2.030	mg/L	0.0086	2.030	mg/L	0.0086	0.42%
K 766.490†	46771.5	20.18	mg/L	0.131	20.18	mg/L	0.131	0.65%
Mg 279.077†	2775.8	1.995	mg/L	0.0165	1.995	mg/L	0.0165	0.83%
Mn 257.610†	37549.3	1.011	mg/L	0.0045	1.011	mg/L	0.0045	0.45%
Mo 202.031†	20126.7	0.9761	mg/L	0.00748	0.9761	mg/L	0.00748	0.77%
Na 589.592†	722077.6	50.80	mg/L	0.145	50.80	mg/L	0.145	0.29%
Na 330.237†	1418.6	50.27	mg/L	0.064	50.27	mg/L	0.064	0.13%
Ni 231.604†	4310.6	1.041	mg/L	0.0051	1.041	mg/L	0.0051	0.49%
Pb 220.353†	17147.5	2.008	mg/L	0.0142	2.008	mg/L	0.0142	0.71%
Sb 206.836†	7048.6	2.089	mg/L	0.0040	2.089	mg/L	0.0040	0.19%
Se 196.026†	2917.7	2.014	mg/L	0.0023	2.014	mg/L	0.0023	0.11%
Si 288.158†	4291.7	2.048	mg/L	0.0091	2.048	mg/L	0.0091	0.44%
Sn 189.927†	3785.2	0.9843	mg/L	0.00726	0.9843	mg/L	0.00726	0.74%
Sr 421.552†	1069801.4	1.003	mg/L	0.0015	1.003	mg/L	0.0015	0.15%
Ti 334.903†	22462.9	1.032	mg/L	0.0044	1.032	mg/L	0.0044	0.43%
Tl 190.801†	5125.9	2.105	mg/L	0.0064	2.105	mg/L	0.0064	0.31%
V 292.402†	149352.8	1.042	mg/L	0.0048	1.042	mg/L	0.0048	0.46%
Zn 206.200†	4106.3	1.017	mg/L	0.0045	1.017	mg/L	0.0045	0.45%

Sequence No.: 28
Sample ID: CB 4

Autosampler Location: 1
Date Collected: 6/13/2013 10:53:42 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	229.0 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	3183067.5	99.96	%	0.425				0.43%
ScR 361.383	369113.3	100.2	%	0.61				0.61%
Ag 328.068†	0.6	0.00000	mg/L	0.000215	0.00000	mg/L	0.000215	>999.9%
Al 308.215†	1.4	0.00081	mg/L	0.003685	0.00081	mg/L	0.003685	456.62%
As 188.979†	-1.8	-0.00098	mg/L	0.000602	-0.00098	mg/L	0.000602	61.73%
B 249.677†	4.9	0.00067	mg/L	0.000533	0.00067	mg/L	0.000533	79.48%
Ba 233.527†	-1.3	-0.00029	mg/L	0.000719	-0.00029	mg/L	0.000719	250.26%
Be 313.042†	62.1	0.00010	mg/L	0.000001	0.00010	mg/L	0.000001	1.24%
Ca 317.933†	14.2	0.00103	mg/L	0.000869	0.00103	mg/L	0.000869	84.52%
Cd 228.802†	17.3	0.00051	mg/L	0.000092	0.00051	mg/L	0.000092	18.16%
Co 228.616†	5.6	0.00014	mg/L	0.000313	0.00014	mg/L	0.000313	220.82%
Cr 267.716†	-0.3	-0.00005	mg/L	0.000190	-0.00005	mg/L	0.000190	353.32%
Cu 324.752†	172.5	0.00058	mg/L	0.000075	0.00058	mg/L	0.000075	12.78%
Fe 273.955†	4.4	0.00330	mg/L	0.000752	0.00330	mg/L	0.000752	22.75%
K 766.490†	29.0	0.01252	mg/L	0.015884	0.01252	mg/L	0.015884	126.90%
Mg 279.077†	1.6	0.00111	mg/L	0.002317	0.00111	mg/L	0.002317	207.85%
Mn 257.610†	7.2	0.00019	mg/L	0.000043	0.00019	mg/L	0.000043	22.44%
Mo 202.031†	14.2	0.00069	mg/L	0.000258	0.00069	mg/L	0.000258	37.52%
Na 589.592†	126.0	0.00887	mg/L	0.004145	0.00887	mg/L	0.004145	46.75%
Na 330.237†	-4.6	-0.1641	mg/L	0.58179	-0.1641	mg/L	0.58179	354.54%
Ni 231.604†	7.1	0.00172	mg/L	0.000404	0.00172	mg/L	0.000404	23.44%
Pb 220.353†	1.3	0.00016	mg/L	0.000316	0.00016	mg/L	0.000316	203.46%
Sb 206.836†	20.0	0.00592	mg/L	0.001087	0.00592	mg/L	0.001087	18.36%
Se 196.026†	3.4	0.00233	mg/L	0.002788	0.00233	mg/L	0.002788	119.48%
Si 288.158†	-1.6	-0.00075	mg/L	0.001249	-0.00075	mg/L	0.001249	167.34%
Sn 189.927†	1.1	0.00028	mg/L	0.000400	0.00028	mg/L	0.000400	143.27%
Sr 421.552†	57.4	0.00005	mg/L	0.000014	0.00005	mg/L	0.000014	26.58%
Ti 334.903†	9.4	0.00043	mg/L	0.000383	0.00043	mg/L	0.000383	88.61%
Tl 190.801†	3.7	0.00152	mg/L	0.001892	0.00152	mg/L	0.001892	124.51%
V 292.402†	7.1	0.00005	mg/L	0.000072	0.00005	mg/L	0.000072	147.19%
Zn 206.200†	1.5	-0.00038	mg/L	0.000205	0.00038	mg/L	0.000205	54.05%

Sequence No.: 29
Sample ID: WS30 H SWC

Autosampler Location: 317
Date Collected: 6/13/2013 10:57:57 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS30 H SWC

Analyte	Back Pressure	Flow
A11	229.0 kPa	0.75 L/min

Mean Data: WS30 H SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3201086.6	100.5	%	0.46				0.46%
ScR 361.383	373805.1	101.5	%	0.19				0.18%
Ag 328.068†	-111.4	-0.00045	mg/L	0.000072	-0.00091	mg/L	0.000145	15.90%
Al 308.215†	144313.4	85.50	mg/L	0.044	171.0	mg/L	0.09	0.05%
As 188.979†	-250.6	0.05128	mg/L	0.002156	0.1026	mg/L	0.00431	4.20%
B 249.677†	556.3	0.07563	mg/L	0.001166	0.1513	mg/L	0.00233	1.54%
Ba 233.527†	1607.2	0.3342	mg/L	0.00178	0.6684	mg/L	0.00356	0.53%
Be 313.042†	820.3	0.00114	mg/L	0.000026	0.00229	mg/L	0.000052	2.25%
Ca 317.933†	603581.5	43.67	mg/L	0.063	87.34	mg/L	0.126	0.14%
Cd 228.802†	58.6	0.00252	mg/L	0.000096	0.00504	mg/L	0.000193	3.82%
Co 228.616†	2120.3	0.04252	mg/L	0.000067	0.08503	mg/L	0.000134	0.16%
Cr 267.716†	993.2	0.1595	mg/L	0.00098	0.3189	mg/L	0.00197	0.62%
Cu 324.752†	99603.1	0.3412	mg/L	0.00261	0.6825	mg/L	0.00521	0.76%
Fe 273.955†	152424.3	114.6	mg/L	0.20	229.1	mg/L	0.40	0.17%
K 766.490†	22060.3	9.518	mg/L	0.0315	19.04	mg/L	0.063	0.33%
Mg 279.077†	40373.3	28.85	mg/L	0.042	57.70	mg/L	0.085	0.15%
Mn 257.610†	37092.6	0.9982	mg/L	0.00103	1.996	mg/L	0.0021	0.10%
Mo 202.031†	170.8	0.00772	mg/L	0.000544	0.01545	mg/L	0.001088	7.05%
Na 589.592†	563433.3	39.64	mg/L	0.186	79.27	mg/L	0.372	0.47%
Na 330.237†	1104.8	40.56	mg/L	0.297	81.12	mg/L	0.594	0.73%
Ni 231.604†	438.0	0.1057	mg/L	0.00095	0.2115	mg/L	0.00189	0.90%
Pb 220.353†	1215.8	0.1562	mg/L	0.00066	0.3124	mg/L	0.00131	0.42%
Sb 206.836†	11.6	0.00761	mg/L	0.000420	0.01523	mg/L	0.000841	5.52%
Se 196.026†	30.8	0.01164	mg/L	0.001145	0.02328	mg/L	0.002290	9.83%
Si 288.158†	5507.6	2.626	mg/L	0.0118	5.252	mg/L	0.0235	0.45%
Sn 189.927†	-25.7	0.00019	mg/L	0.000923	0.00038	mg/L	0.001847	484.09%
Sr 421.552†	418339.9	0.3923	mg/L	0.00025	0.7845	mg/L	0.00050	0.06%
Ti 334.903†	130406.8	5.995	mg/L	0.0032	11.99	mg/L	0.006	0.05%
Tl 190.801†	-29.8	0.00173	mg/L	0.002080	0.00345	mg/L	0.004159	120.52%
V 292.402†	52375.7	0.3553	mg/L	0.00319	0.7106	mg/L	0.00638	0.90%
Zn 206.200†	1830.5	0.4530	mg/L	0.00173	0.9061	mg/L	0.00345	0.38%

Sequence No.: 30
Sample ID: WS30 IDUP SWC

Autosampler Location: 318
Date Collected: 6/13/2013 11:02:00 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS30 IDUP SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WS30 IDUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3223358.3	101.2	%	0.50				0.50%
ScR 361.383	373165.2	101.3	%	0.54				0.53%
Ag 328.068†	-113.6	-0.00048	mg/L	0.000081	-0.00096	mg/L	0.000161	16.77%
Al 308.215†	129445.2	76.69	mg/L	0.331	153.4	mg/L	0.66	0.43%
As 188.979†	-172.9	0.06374	mg/L	0.004517	0.1275	mg/L	0.00903	7.09%
B 249.677†	566.4	0.07702	mg/L	0.000835	0.1540	mg/L	0.00167	1.08%
Ba 233.527†	1472.8	0.3063	mg/L	0.00401	0.6126	mg/L	0.00803	1.31%
Be 313.042†	744.6	0.00105	mg/L	0.000016	0.00209	mg/L	0.000033	1.57%
Ca 317.933†	1085083.6	78.50	mg/L	0.345	157.0	mg/L	0.69	0.44%
Cd 228.802†	47.1	0.00194	mg/L	0.000062	0.00388	mg/L	0.000125	3.21%
Co 228.616†	1830.5	0.03671	mg/L	0.000335	0.07343	mg/L	0.000669	0.91%
Cr 267.716†	886.3	0.1420	mg/L	0.00134	0.2840	mg/L	0.00269	0.95%
Cu 324.752†	109579.8	0.3748	mg/L	0.00246	0.7495	mg/L	0.00491	0.66%
Fe 273.955†	139196.8	104.6	mg/L	0.33	209.2	mg/L	0.65	0.31%
K 766.490†	21236.0	9.162	mg/L	0.0511	18.32	mg/L	0.102	0.56%
Mg 279.077†	35966.7	25.70	mg/L	0.067	51.39	mg/L	0.134	0.26%
Mn 257.610†	32792.8	0.8824	mg/L	0.00099	1.765	mg/L	0.0020	0.11%
Mo 202.031†	196.9	0.00854	mg/L	0.000331	0.01709	mg/L	0.000662	3.88%
Na 589.592†	595513.2	41.89	mg/L	0.102	83.79	mg/L	0.204	0.24%
Na 330.237†	1181.0	42.84	mg/L	0.572	85.69	mg/L	1.144	1.34%
Ni 231.604†	346.2	0.08359	mg/L	0.001792	0.1672	mg/L	0.00358	2.14%
Pb 220.353†	1811.5	0.2243	mg/L	0.00147	0.4486	mg/L	0.00294	0.65%
Sb 206.836†	19.6	0.00927	mg/L	0.000975	0.01854	mg/L	0.001950	10.52%
Se 196.026†	32.8	0.01406	mg/L	0.002267	0.02812	mg/L	0.004533	16.12%
Si 288.158†	4662.0	2.223	mg/L	0.0143	4.446	mg/L	0.0286	0.64%
Sn 189.927†	-35.8	0.00187	mg/L	0.000707	0.00374	mg/L	0.001414	37.83%
Sr 421.552†	652612.4	0.6119	mg/L	0.00040	1.224	mg/L	0.0008	0.07%
Ti 334.903†	111599.5	5.128	mg/L	0.0167	10.26	mg/L	0.033	0.32%
Tl 190.801†	-18.4	0.00534	mg/L	0.000935	0.01068	mg/L	0.001870	17.51%
V 292.402†	44567.2	0.3020	mg/L	0.00290	0.6040	mg/L	0.00581	0.96%
Zn 206.200†	2055.2	0.5082	mg/L	0.00383	1.016	mg/L	0.0077	0.75%

Sequence No.: 31
Sample ID: WS30 I SWC

Autosampler Location: 319
Date Collected: 6/13/2013 11:06:16 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS30 I SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WS30 I SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3214618.9	101.0	%	0.20				0.20%
ScR 361.383	372626.9	101.2	%	0.46				0.45%
Ag 328.068†	-129.5	-0.00056	mg/L	0.000054	-0.00111	mg/L	0.000108	9.67%
Al 308.215†	141257.4	83.69	mg/L	0.955	167.4	mg/L	1.91	1.14%
As 188.979†	-193.2	0.06366	mg/L	0.002514	0.1273	mg/L	0.00503	3.95%
B 249.677†	562.0	0.07642	mg/L	0.001479	0.1528	mg/L	0.00296	1.93%
Ba 233.527†	1597.0	0.3326	mg/L	0.00353	0.6653	mg/L	0.00706	1.06%
Be 313.042†	792.8	0.00112	mg/L	0.000008	0.00223	mg/L	0.000017	0.76%
Ca 317.933†	1143650.8	82.74	mg/L	0.404	165.5	mg/L	0.81	0.49%
Cd 228.802†	50.2	0.00209	mg/L	0.000165	0.00418	mg/L	0.000330	7.91%
Co 228.616†	1927.0	0.03850	mg/L	0.000256	0.07699	mg/L	0.000511	0.66%
Cr 267.716†	916.0	0.1468	mg/L	0.00153	0.2936	mg/L	0.00306	1.04%
Cu 324.752†	106242.3	0.3636	mg/L	0.00168	0.7273	mg/L	0.00337	0.46%
Fe 273.955†	147056.1	110.5	mg/L	1.46	221.0	mg/L	2.92	1.32%
K 766.490†	22936.3	9.896	mg/L	0.0691	19.79	mg/L	0.138	0.70%
Mg 279.077†	38394.7	27.43	mg/L	0.332	54.86	mg/L	0.664	1.21%
Mn 257.610†	34598.4	0.9309	mg/L	0.01357	1.862	mg/L	0.0271	1.46%
Mo 202.031†	197.1	0.00850	mg/L	0.000252	0.01700	mg/L	0.000503	2.96%
Na 589.592†	610584.6	42.95	mg/L	0.139	85.91	mg/L	0.278	0.32%
Na 330.237†	1197.8	43.52	mg/L	0.218	87.03	mg/L	0.435	0.50%
Ni 231.604†	357.7	0.08635	mg/L	0.001043	0.1727	mg/L	0.00209	1.21%
Pb 220.353†	1550.4	0.1951	mg/L	0.00041	0.3902	mg/L	0.00082	0.21%
Sb 206.836†	29.7	0.01257	mg/L	0.002201	0.02515	mg/L	0.004401	17.50%
Se 196.026†	38.2	0.01701	mg/L	0.001527	0.03403	mg/L	0.003054	8.97%
Si 288.158†	5310.1	2.532	mg/L	0.0136	5.063	mg/L	0.0273	0.54%
Sn 189.927†	-30.4	0.00389	mg/L	0.000803	0.00777	mg/L	0.001606	20.67%
Sr 421.552†	541030.4	0.5073	mg/L	0.00171	1.015	mg/L	0.0034	0.34%
Ti 334.903†	119333.1	5.483	mg/L	0.0215	10.97	mg/L	0.043	0.39%
Tl 190.801†	-24.4	0.00359	mg/L	0.001163	0.00718	mg/L	0.002326	32.39%
V 292.402†	46851.6	0.3174	mg/L	0.00038	0.6347	mg/L	0.00077	0.12%
Zn 206.200†	2132.7	0.5273	mg/L	0.00335	1.055	mg/L	0.0067	0.64%

Sequence No.: 32
Sample ID: WS30 ISPK SWC

Autosampler Location: 320
Date Collected: 6/13/2013 11:10:33 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS30 ISPK SWC

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: WS30 ISPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3140581.1	98.63	%	0.447				0.45%
ScR 361.383	373554.0	101.5	%	0.24				0.24%
Ag 328.068†	102040.6	0.5132	mg/L	0.00103	1.026	mg/L	0.0021	0.20%
Al 308.215†	135614.5	80.34	mg/L	0.175	160.7	mg/L	0.35	0.22%
As 188.979†	3454.5	2.049	mg/L	0.0105	4.098	mg/L	0.0210	0.51%
B 249.677†	521.2	0.06985	mg/L	0.001236	0.1397	mg/L	0.00247	1.77%
Ba 233.527†	10637.0	2.323	mg/L	0.0109	4.646	mg/L	0.0217	0.47%
Be 313.042†	297752.4	0.4694	mg/L	0.00282	0.9389	mg/L	0.00563	0.60%
Ca 317.933†	2994341.6	216.6	mg/L	1.27	433.3	mg/L	2.55	0.59%
Cd 228.802†	18194.6	0.5155	mg/L	0.00216	1.031	mg/L	0.0043	0.42%
Co 228.616†	20713.3	0.5202	mg/L	0.00288	1.040	mg/L	0.0058	0.55%
Cr 267.716†	4043.7	0.6409	mg/L	0.00258	1.282	mg/L	0.0052	0.40%
Cu 324.752†	260838.8	0.8871	mg/L	0.00584	1.774	mg/L	0.0117	0.66%
Fe 273.955†	134374.3	101.0	mg/L	0.19	202.0	mg/L	0.39	0.19%
K 766.490†	44227.2	19.08	mg/L	0.076	38.16	mg/L	0.153	0.40%
Mg 279.077†	49231.3	35.19	mg/L	0.052	70.37	mg/L	0.104	0.15%
Mn 257.610†	49214.0	1.324	mg/L	0.0035	2.648	mg/L	0.0069	0.26%
Mo 202.031†	214.7	0.00763	mg/L	0.000113	0.01525	mg/L	0.000226	1.48%
Na 589.592†	769312.8	54.12	mg/L	0.130	108.2	mg/L	0.26	0.24%
Na 330.237†	1536.6	54.68	mg/L	0.098	109.4	mg/L	0.20	0.18%
Ni 231.604†	2254.4	0.5437	mg/L	0.00053	1.087	mg/L	0.0011	0.10%
Pb 220.353†	18235.3	2.148	mg/L	0.0110	4.296	mg/L	0.0221	0.51%
Sb 206.836†	1572.0	0.4644	mg/L	0.00240	0.9289	mg/L	0.00480	0.52%
Se 196.026†	2891.2	1.988	mg/L	0.0104	3.975	mg/L	0.0208	0.52%
Si 288.158†	5438.3	2.596	mg/L	0.0084	5.192	mg/L	0.0168	0.32%
Sn 189.927†	-58.0	0.01409	mg/L	0.000408	0.02818	mg/L	0.000815	2.89%
Sr 421.552†	2582298.1	2.421	mg/L	0.0169	4.843	mg/L	0.0338	0.70%
Ti 334.903†	108325.4	4.969	mg/L	0.0106	9.937	mg/L	0.0212	0.21%
Tl 190.801†	4494.1	1.861	mg/L	0.0103	3.721	mg/L	0.0207	0.56%
V 292.402†	114130.1	0.7876	mg/L	0.00267	1.575	mg/L	0.0053	0.34%
Zn 206.200†	3777.5	0.9330	mg/L	0.00497	1.866	mg/L	0.0099	0.53%

Sequence No.: 33
Sample ID: WS30 IPOST SWC

Autosampler Location: 321
Date Collected: 6/13/2013 11:14:51 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS30 IPOST SWC

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: WS30 IPOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3181050.1	99.90	%	0.427				0.43%
ScR 361.383	370725.5	100.7	%	0.36				0.36%
Ag 328.068†	103174.3	0.5189	mg/L	0.00299	1.038	mg/L	0.0060	0.58%
Al 308.215†	142050.3	84.15	mg/L	0.190	168.3	mg/L	0.38	0.23%
As 188.979†	3500.8	2.100	mg/L	0.0057	4.200	mg/L	0.0114	0.27%
B 249.677†	557.9	0.07482	mg/L	0.000399	0.1496	mg/L	0.00080	0.53%
Ba 233.527†	11044.2	2.411	mg/L	0.0161	4.822	mg/L	0.0322	0.67%
Be 313.042†	300377.2	0.4736	mg/L	0.00210	0.9471	mg/L	0.00420	0.44%
Ca 317.933†	1285493.4	93.00	mg/L	0.225	186.0	mg/L	0.45	0.24%
Cd 228.802†	18469.4	0.5233	mg/L	0.00120	1.047	mg/L	0.0024	0.23%
Co 228.616†	21474.1	0.5386	mg/L	0.00267	1.077	mg/L	0.0053	0.50%
Cr 267.716†	4156.8	0.6601	mg/L	0.00185	1.320	mg/L	0.0037	0.28%
Cu 324.752†	261601.0	0.8900	mg/L	0.00542	1.780	mg/L	0.0108	0.61%
Fe 273.955†	146879.9	110.4	mg/L	0.32	220.8	mg/L	0.64	0.29%
K 766.490†	46434.7	20.03	mg/L	0.054	40.07	mg/L	0.109	0.27%
Mg 279.077†	54055.0	38.65	mg/L	0.167	77.31	mg/L	0.334	0.43%
Mn 257.610†	54190.9	1.459	mg/L	0.0082	2.917	mg/L	0.0164	0.56%
Mo 202.031†	196.6	0.00832	mg/L	0.000553	0.01664	mg/L	0.001105	6.64%
Na 589.592†	756380.1	53.21	mg/L	0.208	106.4	mg/L	0.42	0.39%
Na 330.237†	1470.1	52.98	mg/L	0.188	106.0	mg/L	0.38	0.36%
Ni 231.604†	2347.6	0.5671	mg/L	0.00325	1.134	mg/L	0.0065	0.57%
Pb 220.353†	18691.3	2.202	mg/L	0.0106	4.403	mg/L	0.0213	0.48%
Sb 206.836†	6858.4	2.032	mg/L	0.0094	4.064	mg/L	0.0187	0.46%
Se 196.026†	2976.9	2.046	mg/L	0.0204	4.093	mg/L	0.0408	1.00%
Si 288.158†	5240.4	2.502	mg/L	0.0167	5.004	mg/L	0.0333	0.67%
Sn 189.927†	-46.8	0.00201	mg/L	0.000314	0.00402	mg/L	0.000628	15.63%
Sr 421.552†	1070070.9	1.003	mg/L	0.0012	2.007	mg/L	0.0024	0.12%
Ti 334.903†	119627.1	5.496	mg/L	0.0034	10.99	mg/L	0.007	0.06%
Tl 190.801†	4658.3	1.929	mg/L	0.0076	3.859	mg/L	0.0153	0.40%
V 292.402†	120381.7	0.8304	mg/L	0.00745	1.661	mg/L	0.0149	0.90%
Zn 206.200†	4058.2	1.004	mg/L	0.0020	2.008	mg/L	0.0041	0.20%

Sequence No.: 34
Sample ID: WS30 J SWC

Autosampler Location: 322
Date Collected: 6/13/2013 11:18:09 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS30 J SWC

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: WS30 J SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3215425.8	101.0	%	0.33				0.32%
ScR 361.383	370090.8	100.5	%	0.48				0.48%
Ag 328.068†	-53.5	-0.00018	mg/L	0.000286	-0.00036	mg/L	0.000571	160.27%
Al 308.215†	140935.9	83.50	mg/L	0.488	167.0	mg/L	0.98	0.58%
As 188.979†	-202.1	0.05938	mg/L	0.000682	0.1188	mg/L	0.00136	1.15%
B 249.677†	564.7	0.07679	mg/L	0.000806	0.1536	mg/L	0.00161	1.05%
Ba 233.527†	1843.6	0.3873	mg/L	0.00262	0.7746	mg/L	0.00523	0.68%
Be 313.042†	816.0	0.00116	mg/L	0.000008	0.00231	mg/L	0.000015	0.67%
Ca 317.933†	584865.1	42.31	mg/L	0.288	84.63	mg/L	0.576	0.68%
Cd 228.802†	61.5	0.00246	mg/L	0.000010	0.00493	mg/L	0.000021	0.42%
Co 228.616†	1900.8	0.03797	mg/L	0.000375	0.07595	mg/L	0.000750	0.99%
Cr 267.716†	958.0	0.1536	mg/L	0.00114	0.3072	mg/L	0.00228	0.74%
Cu 324.752†	108429.7	0.3710	mg/L	0.00187	0.7419	mg/L	0.00374	0.50%
Fe 273.955†	143905.0	108.2	mg/L	0.51	216.3	mg/L	1.02	0.47%
K 766.490†	22698.9	9.793	mg/L	0.0401	19.59	mg/L	0.080	0.41%
Mg 279.077†	40638.8	29.05	mg/L	0.076	58.09	mg/L	0.152	0.26%
Mn 257.610†	35664.8	0.9598	mg/L	0.00257	1.920	mg/L	0.0051	0.27%
Mo 202.031†	195.7	0.00895	mg/L	0.000047	0.01789	mg/L	0.000094	0.53%
Na 589.592†	614777.2	43.25	mg/L	0.105	86.50	mg/L	0.209	0.24%
Na 330.237†	1209.0	44.08	mg/L	0.379	88.16	mg/L	0.758	0.86%
Ni 231.604†	430.9	0.1040	mg/L	0.00184	0.2081	mg/L	0.00368	1.77%
Pb 220.353†	1578.0	0.1984	mg/L	0.00042	0.3968	mg/L	0.00084	0.21%
Sb 206.836†	37.7	0.01476	mg/L	0.002271	0.02952	mg/L	0.004541	15.38%
Se 196.026†	31.5	0.01239	mg/L	0.003607	0.02478	mg/L	0.007214	29.11%
Si 288.158†	5692.5	2.714	mg/L	0.0166	5.428	mg/L	0.0332	0.61%
Sn 189.927†	-24.3	0.00026	mg/L	0.000126	0.00052	mg/L	0.000251	48.21%
Sr 421.552†	407703.9	0.3823	mg/L	0.00039	0.7646	mg/L	0.00078	0.10%
Ti 334.903†	117737.3	5.412	mg/L	0.0221	10.82	mg/L	0.044	0.41%
Tl 190.801†	-24.8	0.00312	mg/L	0.004085	0.00625	mg/L	0.008170	130.82%
V 292.402†	45297.9	0.3068	mg/L	0.00070	0.6135	mg/L	0.00140	0.23%
Zn 206.200†	1999.4	0.4949	mg/L	0.00153	0.9898	mg/L	0.00306	0.31%

Sequence No.: 35
Sample ID: CV 5

Autosampler Location: 7
Date Collected: 6/13/2013 11:22:25 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	230.0 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	3207106.5	100.7	%	0.29				0.28%
ScR 361.383	369828.5	100.4	%	0.15				0.15%
Ag 328.068†	211129.7	1.062	mg/L	0.0061	1.062	mg/L	0.0061	0.57%
Al 308.215†	3499.9	2.040	mg/L	0.0045	2.040	mg/L	0.0045	0.22%
As 188.979†	3633.3	2.032	mg/L	0.0052	2.032	mg/L	0.0052	0.26%
B 249.677†	7391.3	1.005	mg/L	0.0054	1.005	mg/L	0.0054	0.54%
Ba 233.527†	4794.9	1.054	mg/L	0.0023	1.054	mg/L	0.0023	0.21%
Be 313.042†	625276.2	0.9861	mg/L	0.00572	0.9861	mg/L	0.00572	0.58%
Ca 317.933†	27442.3	1.985	mg/L	0.0063	1.985	mg/L	0.0063	0.32%
Cd 228.802†	35759.0	1.023	mg/L	0.0032	1.023	mg/L	0.0032	0.31%
Co 228.616†	39621.8	1.012	mg/L	0.0040	1.012	mg/L	0.0040	0.40%
Cr 267.716†	6630.2	1.052	mg/L	0.0051	1.052	mg/L	0.0051	0.48%
Cu 324.752†	298777.9	1.012	mg/L	0.0011	1.012	mg/L	0.0011	0.10%
Fe 273.955†	2727.5	2.043	mg/L	0.0082	2.043	mg/L	0.0082	0.40%
K 766.490†	46330.3	19.99	mg/L	0.108	19.99	mg/L	0.108	0.54%
Mg 279.077†	2785.1	2.002	mg/L	0.0108	2.002	mg/L	0.0108	0.54%
Mn 257.610†	36367.5	0.9792	mg/L	0.00317	0.9792	mg/L	0.00317	0.32%
Mo 202.031†	20139.4	0.9767	mg/L	0.00636	0.9767	mg/L	0.00636	0.65%
Na 589.592†	719943.7	50.65	mg/L	0.042	50.65	mg/L	0.042	0.08%
Na 330.237†	1430.3	50.67	mg/L	0.196	50.67	mg/L	0.196	0.39%
Ni 231.604†	4280.2	1.034	mg/L	0.0025	1.034	mg/L	0.0025	0.25%
Pb 220.353†	17171.6	2.011	mg/L	0.0116	2.011	mg/L	0.0116	0.58%
Sb 206.836†	6980.8	2.069	mg/L	0.0045	2.069	mg/L	0.0045	0.22%
Se 196.026†	2905.1	2.005	mg/L	0.0103	2.005	mg/L	0.0103	0.51%
Si 288.158†	4302.7	2.054	mg/L	0.0137	2.054	mg/L	0.0137	0.67%
Sn 189.927†	3758.4	0.9774	mg/L	0.00372	0.9774	mg/L	0.00372	0.38%
Sr 421.552†	1064452.9	0.9981	mg/L	0.00171	0.9981	mg/L	0.00171	0.17%
Ti 334.903†	21640.1	0.9940	mg/L	0.00251	0.9940	mg/L	0.00251	0.25%
Tl 190.801†	5105.7	2.097	mg/L	0.0018	2.097	mg/L	0.0018	0.09%
V 292.402†	149711.3	1.044	mg/L	0.0054	1.044	mg/L	0.0054	0.51%
Zn 206.200†	4084.8	1.011	mg/L	0.0063	1.011	mg/L	0.0063	0.62%

Sequence No.: 36
Sample ID: CB 5

Autosampler Location: 1
Date Collected: 6/13/2013 11:26:30 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	229.0 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	3229592.4	101.4	%	0.14				0.14%
ScR 361.383	373479.4	101.4	%	0.66				0.65%
Ag 328.068†	-5.9	-0.00003	mg/L	0.000152	-0.00003	mg/L	0.000152	512.06%
Al 308.215†	7.8	0.00459	mg/L	0.001164	0.00459	mg/L	0.001164	25.37%
As 188.979†	2.0	0.00113	mg/L	0.001098	0.00113	mg/L	0.001098	97.13%
B 249.677†	-4.5	-0.00061	mg/L	0.001042	-0.00061	mg/L	0.001042	170.61%
Ba 233.527†	0.7	0.00016	mg/L	0.000077	0.00016	mg/L	0.000077	48.16%
Be 313.042†	41.5	0.00007	mg/L	0.000016	0.00007	mg/L	0.000016	25.06%
Ca 317.933†	24.5	0.00177	mg/L	0.000726	0.00177	mg/L	0.000726	40.93%
Cd 228.802†	14.8	0.00042	mg/L	0.000205	0.00042	mg/L	0.000205	48.44%
Co 228.616†	5.0	0.00013	mg/L	0.000202	0.00013	mg/L	0.000202	160.58%
Cr 267.716†	-1.2	-0.00019	mg/L	0.001696	-0.00019	mg/L	0.001696	888.69%
Cu 324.752†	107.2	0.00036	mg/L	0.000022	0.00036	mg/L	0.000022	5.98%
Fe 273.955†	7.0	0.00523	mg/L	0.001397	0.00523	mg/L	0.001397	26.72%
K 766.490†	20.4	0.00881	mg/L	0.016184	0.00881	mg/L	0.016184	183.75%
Mg 279.077†	-3.2	-0.00227	mg/L	0.006416	-0.00227	mg/L	0.006416	282.57%
Mn 257.610†	1.2	0.00003	mg/L	0.000130	0.00003	mg/L	0.000130	393.40%
Mo 202.031†	9.1	0.00044	mg/L	0.000090	0.00044	mg/L	0.000090	20.29%
Na 589.592†	151.8	0.01068	mg/L	0.002894	0.01068	mg/L	0.002894	27.11%
Na 330.237†	0.0	0.00096	mg/L	0.522262	0.00096	mg/L	0.522262	>999.9%
Ni 231.604†	0.5	0.00013	mg/L	0.001370	0.00013	mg/L	0.001370	>999.9%
Pb 220.353†	4.1	0.00048	mg/L	0.000424	0.00048	mg/L	0.000424	88.94%
Sb 206.836†	6.2	0.00186	mg/L	0.001324	0.00186	mg/L	0.001324	71.19%
Se 196.026†	5.2	0.00360	mg/L	0.000761	0.00360	mg/L	0.000761	21.15%
Si 288.158†	-5.5	-0.00262	mg/L	0.003164	-0.00262	mg/L	0.003164	120.78%
Sn 189.927†	4.0	0.00104	mg/L	0.000243	0.00104	mg/L	0.000243	23.34%
Sr 421.552†	56.4	0.00005	mg/L	0.000030	0.00005	mg/L	0.000030	56.81%
Ti 334.903†	12.8	0.00059	mg/L	0.000677	0.00059	mg/L	0.000677	115.54%
~~Tl 190~~.801†	3.3	0.00135	mg/L	0.002589	0.00135	mg/L	0.002589	191.38%
V 292.402†	9.9	0.00007	mg/L	0.000197	0.00007	mg/L	0.000197	290.25%
Zn 206.200†	2.0	0.00050	mg/L	0.000405	0.00050	mg/L	0.000405	81.10%

Sequence No.: 37
Sample ID: WS91 MB1 SWC

Autosampler Location: 325
Date Collected: 6/13/2013 11:30:45 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS91 MB1 SWC

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: WS91 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3251598.6	102.1	%	0.67				0.66%
ScR 361.383	377960.5	102.7	%	0.35				0.34%
Ag 328.068†	-34.2	-0.00017	mg/L	0.000156	-0.00034	mg/L	0.000312	90.53%
Al 308.215†	10.8	0.00637	mg/L	0.003032	0.01274	mg/L	0.006064	47.61%
As 188.979†	-0.9	-0.00047	mg/L	0.000735	-0.00094	mg/L	0.001469	155.97%
B 249.677†	-7.8	-0.00106	mg/L	0.000606	-0.00212	mg/L	0.001212	57.04%
Ba 233.527†	-2.4	-0.00053	mg/L	0.001089	-0.00107	mg/L	0.002178	203.96%
Be 313.042†	14.6	0.00002	mg/L	0.000033	0.00005	mg/L	0.000065	141.08%
Ca 317.933†	169.7	0.01228	mg/L	0.000549	0.02455	mg/L	0.001097	4.47%
Cd 228.802†	7.0	0.00021	mg/L	0.000093	0.00041	mg/L	0.000185	45.02%
Co 228.616†	-3.3	-0.00009	mg/L	0.000106	-0.00017	mg/L	0.000211	123.06%
Cr 267.716†	-0.9	-0.00014	mg/L	0.000419	-0.00028	mg/L	0.000838	304.28%
Cu 324.752†	132.4	0.00045	mg/L	0.000132	0.00090	mg/L	0.000264	29.48%
Fe 273.955†	2.9	0.00220	mg/L	0.001428	0.00441	mg/L	0.002856	64.80%
K 766.490†	49.4	0.02130	mg/L	0.020649	0.04260	mg/L	0.041299	96.94%
Mg 279.077†	11.8	0.00842	mg/L	0.002767	0.01685	mg/L	0.005533	32.85%
Mn 257.610†	-1.0	-0.00003	mg/L	0.000104	-0.00006	mg/L	0.000208	377.33%
Mo 202.031†	-0.1	-0.00000	mg/L	0.000029	-0.00001	mg/L	0.000058	775.14%
Na 589.592†	92.4	0.00650	mg/L	0.000692	0.01300	mg/L	0.001384	10.64%
Na 330.237†	2.3	0.08031	mg/L	0.223601	0.1606	mg/L	0.44720	278.42%
Ni 231.604†	2.4	0.00059	mg/L	0.001515	0.00118	mg/L	0.003029	257.59%
Pb 220.353†	-1.5	-0.00017	mg/L	0.000207	-0.00034	mg/L	0.000413	120.59%
Sb 206.836†	-0.4	-0.00011	mg/L	0.000684	-0.00022	mg/L	0.001369	608.47%
Se 196.026†	8.8	0.00605	mg/L	0.003104	0.01209	mg/L	0.006208	51.34%
Si 288.158†	35.7	0.01698	mg/L	0.003012	0.03395	mg/L	0.006025	17.74%
Sn 189.927†	2.7	0.00072	mg/L	0.000945	0.00143	mg/L	0.001890	132.18%
Sr 421.552†	-27.2	-0.00003	mg/L	0.000017	-0.00005	mg/L	0.000034	65.93%
Ti 334.903†	9.7	0.00044	mg/L	0.000364	0.00089	mg/L	0.000727	81.92%
Tl 190.801†	0.8	0.00032	mg/L	0.000861	0.00065	mg/L	0.001723	266.96%
V 292.402†	9.5	0.00006	mg/L	0.000187	0.00013	mg/L	0.000373	287.50%
Zn 206.200†	1.0	0.00026	mg/L	0.000545	0.00051	mg/L	0.001090	213.04%

Sequence No.: 38
Sample ID: WS91 ADUP SWC

Autosampler Location: 326
Date Collected: 6/13/2013 11:35:01 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS91 ADUP SWC

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: WS91 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3151749.5	98.98	%	0.563				0.57%
ScR 361.383	365136.3	99.17	%	0.357				0.36%
Ag 328.068†	-123.2	-0.00056	mg/L	0.000055	-0.00113	mg/L	0.000109	9.70%
Al 308.215†	89184.3	52.83	mg/L	0.313	105.7	mg/L	0.63	0.59%
As 188.979†	-203.5	0.03014	mg/L	0.002913	0.06028	mg/L	0.005825	9.66%
B 249.677†	319.2	0.04337	mg/L	0.000504	0.08674	mg/L	0.001008	1.16%
Ba 233.527†	3931.3	0.8526	mg/L	0.00700	1.705	mg/L	0.0140	0.82%
Be 313.042†	510.1	0.00071	mg/L	0.000010	0.00142	mg/L	0.000021	1.47%
Ca 317.933†	2541060.2	183.8	mg/L	0.24	367.7	mg/L	0.49	0.13%
Cd 228.802†	46.6	0.00202	mg/L	0.000200	0.00404	mg/L	0.000401	9.94%
Co 228.616†	1751.0	0.03550	mg/L	0.000215	0.07100	mg/L	0.000431	0.61%
Cr 267.716†	657.7	0.1039	mg/L	0.00147	0.2078	mg/L	0.00295	1.42%
Cu 324.752†	67241.2	0.2300	mg/L	0.00267	0.4600	mg/L	0.00534	1.16%
Fe 273.955†	96626.8	72.62	mg/L	0.703	145.2	mg/L	1.41	0.97%
K 766.490†	8472.0	3.655	mg/L	0.0275	7.310	mg/L	0.0549	0.75%
Mg 279.077†	27991.3	19.99	mg/L	0.167	39.98	mg/L	0.334	0.84%
Mn 257.610†	48904.0	1.316	mg/L	0.0083	2.631	mg/L	0.0166	0.63%
Mo 202.031†	209.1	0.00780	mg/L	0.000537	0.01559	mg/L	0.001074	6.89%
Na 589.592†	46327.1	3.259	mg/L	0.0176	6.518	mg/L	0.0351	0.54%
Na 330.237†	74.7	3.015	mg/L	0.0375	6.031	mg/L	0.0750	1.24%
Ni 231.604†	313.2	0.07562	mg/L	0.000875	0.1512	mg/L	0.00175	1.16%
Pb 220.353†	200.4	0.03193	mg/L	0.000353	0.06385	mg/L	0.000705	1.10%
Sb 206.836†	14.4	0.00759	mg/L	0.001273	0.01519	mg/L	0.002545	16.76%
Se 196.026†	22.5	0.00959	mg/L	0.005218	0.01919	mg/L	0.010436	54.39%
Si 288.158†	3966.1	1.891	mg/L	0.0090	3.782	mg/L	0.0181	0.48%
Sn 189.927†	-8.4	0.02243	mg/L	0.001846	0.04486	mg/L	0.003692	8.23%
Sr 421.552†	680558.2	0.6381	mg/L	0.00097	1.276	mg/L	0.0019	0.15%
Ti 334.903†	105457.0	4.839	mg/L	0.0252	9.677	mg/L	0.0504	0.52%
~~Tl 190~~.801†	-10.9	0.00448	mg/L	0.001850	0.00897	mg/L	0.003701	41.26%
V 292.402†	27803.0	0.1873	mg/L	0.00147	0.3745	mg/L	0.00295	0.79%
Zn 206.200†	3023.0	0.7464	mg/L	0.00616	1.493	mg/L	0.0123	0.82%

Sequence No.: 39
Sample ID: WS91 A SWC

Autosampler Location: 327
Date Collected: 6/13/2013 11:39:18 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS91 A SWC

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: WS91 A SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3155740.9	99.11	%	0.192				0.19%
ScR 361.383	374697.0	101.8	%	0.73				0.72%
Ag 328.068†	-153.4	-0.00071	mg/L	0.000058	-0.00141	mg/L	0.000116	8.21%
Al 308.215†	104527.7	61.92	mg/L	0.109	123.8	mg/L	0.22	0.18%
As 188.979†	-225.9	0.03242	mg/L	0.002326	0.06483	mg/L	0.004652	7.17%
B 249.677†	340.3	0.04623	mg/L	0.000793	0.09246	mg/L	0.001586	1.72%
Ba 233.527†	4315.1	0.9349	mg/L	0.00565	1.870	mg/L	0.0113	0.60%
Be 313.042†	517.6	0.00071	mg/L	0.000019	0.00141	mg/L	0.000038	2.70%
Ca 317.933†	3061517.2	221.5	mg/L	0.43	443.0	mg/L	0.86	0.19%
Cd 228.802†	33.2	0.00171	mg/L	0.000039	0.00341	mg/L	0.000077	2.26%
Co 228.616†	2079.3	0.04281	mg/L	0.000136	0.08562	mg/L	0.000272	0.32%
Cr 267.716†	765.9	0.1208	mg/L	0.00083	0.2416	mg/L	0.00165	0.68%
Cu 324.752†	82598.0	0.2825	mg/L	0.00102	0.5649	mg/L	0.00205	0.36%
Fe 273.955†	113230.9	85.10	mg/L	0.734	170.2	mg/L	1.47	0.86%
K 766.490†	8928.4	3.852	mg/L	0.0174	7.704	mg/L	0.0347	0.45%
Mg 279.077†	34556.9	24.68	mg/L	0.146	49.36	mg/L	0.292	0.59%
Mn 257.610†	58403.8	1.571	mg/L	0.0105	3.142	mg/L	0.0210	0.67%
Mo 202.031†	232.6	0.00846	mg/L	0.000357	0.01692	mg/L	0.000714	4.22%
Na 589.592†	51231.3	3.604	mg/L	0.0079	7.208	mg/L	0.0159	0.22%
Na 330.237†	92.3	3.590	mg/L	0.0668	7.180	mg/L	0.1335	1.86%
Ni 231.604†	366.9	0.08858	mg/L	0.002485	0.1772	mg/L	0.00497	2.81%
Pb 220.353†	239.9	0.03799	mg/L	0.000670	0.07599	mg/L	0.001339	1.76%
Sb 206.836†	13.8	0.00780	mg/L	0.002482	0.01560	mg/L	0.004963	31.83%
Se 196.026†	27.4	0.01196	mg/L	0.004577	0.02391	mg/L	0.009154	38.28%
Si 288.158†	3309.5	1.579	mg/L	0.0144	3.157	mg/L	0.0289	0.91%
Sn 189.927†	5.3	0.03094	mg/L	0.000955	0.06189	mg/L	0.001909	3.09%
Sr 421.552†	766758.5	0.7190	mg/L	0.00229	1.438	mg/L	0.0046	0.32%
Ti 334.903†	117258.8	5.379	mg/L	0.0012	10.76	mg/L	0.002	0.02%
Tl 190.801†	-10.2	0.00629	mg/L	0.001968	0.01258	mg/L	0.003935	31.29%
V 292.402†	32789.6	0.2211	mg/L	0.00081	0.4421	mg/L	0.00161	0.36%
Zn 206.200†	3544.0	0.8748	mg/L	0.00366	1.750	mg/L	0.0073	0.42%

Sequence No.: 40
Sample ID: WS91 ASPK SWC

Autosampler Location: 328
Date Collected: 6/13/2013 11:43:35 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS91 ASPK SWC

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: WS91 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3152749.1	99.01	%	0.618				0.62%
ScR 361.383	372570.5	101.2	%	0.52				0.51%
Ag 328.068†	101790.9	0.5119	mg/L	0.00399	1.024	mg/L	0.0080	0.78%
Al 308.215†	85603.3	50.71	mg/L	0.074	101.4	mg/L	0.15	0.15%
As 188.979†	3450.9	2.027	mg/L	0.0130	4.054	mg/L	0.0260	0.64%
B 249.677†	316.0	0.04191	mg/L	0.001103	0.08382	mg/L	0.002206	2.63%
Ba 233.527†	13073.1	2.865	mg/L	0.0042	5.729	mg/L	0.0084	0.15%
Be 313.042†	299060.8	0.4715	mg/L	0.00224	0.9431	mg/L	0.00448	0.47%
Ca 317.933†	2627294.1	190.1	mg/L	1.24	380.2	mg/L	2.48	0.65%
Cd 228.802†	18340.7	0.5198	mg/L	0.00317	1.040	mg/L	0.0063	0.61%
Co 228.616†	20930.4	0.5273	mg/L	0.00295	1.055	mg/L	0.0059	0.56%
Cr 267.716†	3780.5	0.5987	mg/L	0.00226	1.197	mg/L	0.0045	0.38%
Cu 324.752†	220752.2	0.7500	mg/L	0.00322	1.500	mg/L	0.0064	0.43%
Fe 273.955†	89987.0	67.63	mg/L	0.112	135.3	mg/L	0.22	0.17%
K 766.490†	30144.9	13.01	mg/L	0.038	26.01	mg/L	0.076	0.29%
Mg 279.077†	38492.3	27.52	mg/L	0.035	55.03	mg/L	0.071	0.13%
Mn 257.610†	63199.6	1.701	mg/L	0.0027	3.401	mg/L	0.0054	0.16%
Mo 202.031†	198.2	0.00717	mg/L	0.000067	0.01433	mg/L	0.000134	0.93%
Na 589.592†	187511.6	13.19	mg/L	0.010	26.38	mg/L	0.019	0.07%
Na 330.237†	370.3	13.17	mg/L	0.079	26.33	mg/L	0.158	0.60%
Ni 231.604†	2260.7	0.5450	mg/L	0.00236	1.090	mg/L	0.0047	0.43%
Pb 220.353†	17321.7	2.036	mg/L	0.0121	4.072	mg/L	0.0242	0.60%
Sb 206.836†	29.4	0.00674	mg/L	0.001447	0.01349	mg/L	0.002893	21.45%
Se 196.026†	2925.4	2.015	mg/L	0.0197	4.029	mg/L	0.0394	0.98%
Si 288.158†	3401.0	1.625	mg/L	0.0085	3.250	mg/L	0.0169	0.52%
Sn 189.927†	-7.1	0.02354	mg/L	0.001048	0.04708	mg/L	0.002096	4.45%
Sr 421.552†	1162346.1	1.090	mg/L	0.0054	2.180	mg/L	0.0108	0.50%
Ti 334.903†	93577.9	4.292	mg/L	0.0066	8.584	mg/L	0.0132	0.15%
Tl 190.801†	4643.1	1.918	mg/L	0.0103	3.836	mg/L	0.0206	0.54%
V 292.402†	96657.8	0.6683	mg/L	0.00550	1.337	mg/L	0.0110	0.82%
Zn 206.200†	4929.7	1.218	mg/L	0.0022	2.437	mg/L	0.0044	0.18%

Sequence No.: 41
Sample ID: WS91 APOST SWC

Autosampler Location: 329
Date Collected: 6/13/2013 11:47:52 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS91 APOST SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WS91 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3160901.6	99.27	%	0.353				0.36%
ScR 361.383	365922.2	99.38	%	0.323				0.33%
Ag 328.068†	105814.3	0.5321	mg/L	0.00445	1.064	mg/L	0.0089	0.84%
Al 308.215†	109859.7	65.07	mg/L	0.156	130.1	mg/L	0.31	0.24%
As 188.979†	3521.4	2.100	mg/L	0.0115	4.200	mg/L	0.0230	0.55%
B 249.677†	364.5	0.04846	mg/L	0.001555	0.09693	mg/L	0.003110	3.21%
Ba 233.527†	14124.0	3.092	mg/L	0.0193	6.185	mg/L	0.0387	0.63%
Be 313.042†	307013.8	0.4841	mg/L	0.00391	0.9681	mg/L	0.00782	0.81%
Ca 317.933†	3303503.0	239.0	mg/L	0.62	478.0	mg/L	1.25	0.26%
Cd 228.802†	18842.6	0.5341	mg/L	0.00328	1.068	mg/L	0.0066	0.61%
Co 228.616†	21876.9	0.5492	mg/L	0.00233	1.098	mg/L	0.0047	0.42%
Cr 267.716†	4072.3	0.6447	mg/L	0.00140	1.289	mg/L	0.0028	0.22%
Cu 324.752†	243066.7	0.8262	mg/L	0.00273	1.652	mg/L	0.0055	0.33%
Fe 273.955†	117061.8	87.98	mg/L	0.202	176.0	mg/L	0.40	0.23%
K 766.490†	33526.1	14.46	mg/L	0.018	28.93	mg/L	0.037	0.13%
Mg 279.077†	49752.1	35.57	mg/L	0.185	71.13	mg/L	0.370	0.52%
Mn 257.610†	78057.3	2.100	mg/L	0.0030	4.201	mg/L	0.0059	0.14%
Mo 202.031†	232.2	0.00819	mg/L	0.000264	0.01638	mg/L	0.000527	3.22%
Na 589.592†	203063.2	14.29	mg/L	0.032	28.57	mg/L	0.064	0.22%
Na 330.237†	397.5	14.20	mg/L	0.126	28.40	mg/L	0.253	0.89%
Ni 231.604†	2411.9	0.5814	mg/L	0.00438	1.163	mg/L	0.0088	0.75%
Pb 220.353†	17752.6	2.089	mg/L	0.0076	4.177	mg/L	0.0152	0.36%
Sb 206.836†	36.9	0.00963	mg/L	0.000732	0.01925	mg/L	0.001464	7.60%
Se 196.026†	3048.8	2.098	mg/L	0.0096	4.196	mg/L	0.0192	0.46%
Si 288.158†	3327.8	1.591	mg/L	0.0327	3.182	mg/L	0.0654	2.05%
Sn 189.927†	5.1	0.03323	mg/L	0.000905	0.06647	mg/L	0.001810	2.72%
Sr 421.552†	1335578.0	1.252	mg/L	0.0028	2.505	mg/L	0.0057	0.23%
Ti 334.903†	119033.8	5.460	mg/L	0.0120	10.92	mg/L	0.024	0.22%
Tl 190.801†	4755.6	1.967	mg/L	0.0063	3.933	mg/L	0.0126	0.32%
V 292.402†	107468.1	0.7419	mg/L	0.00606	1.484	mg/L	0.0121	0.82%
Zn 206.200†	5610.2	1.386	mg/L	0.0065	2.772	mg/L	0.0129	0.47%

Sequence No.: 42
Sample ID: WS91 MB1SPK SWC

Autosampler Location: 330
Date Collected: 6/13/2013 11:51:14 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WS91 MB1SPK SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WS91 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3234971.9	101.6	%	0.28				0.27%
ScR 361.383	377393.2	102.5	%	0.86				0.84%
Ag 328.068†	106328.9	0.5347	mg/L	0.00227	1.069	mg/L	0.0045	0.42%
Al 308.215†	3477.7	2.053	mg/L	0.0109	4.105	mg/L	0.0217	0.53%
As 188.979†	3769.9	2.078	mg/L	0.0040	4.156	mg/L	0.0079	0.19%
B 249.677†	-5.4	-0.00183	mg/L	0.000613	-0.00366	mg/L	0.001226	33.50%
Ba 233.527†	9796.5	2.155	mg/L	0.0139	4.310	mg/L	0.0278	0.65%
Be 313.042†	305116.4	0.4812	mg/L	0.00296	0.9624	mg/L	0.00592	0.62%
Ca 317.933†	137783.9	9.968	mg/L	0.0567	19.94	mg/L	0.113	0.57%
Cd 228.802†	18365.9	0.5195	mg/L	0.00014	1.039	mg/L	0.0003	0.03%
Co 228.616†	20319.0	0.5199	mg/L	0.00138	1.040	mg/L	0.0028	0.27%
Cr 267.716†	3379.5	0.5356	mg/L	0.00290	1.071	mg/L	0.0058	0.54%
Cu 324.752†	153016.8	0.5185	mg/L	0.00217	1.037	mg/L	0.0043	0.42%
Fe 273.955†	2727.5	2.047	mg/L	0.0129	4.093	mg/L	0.0258	0.63%
K 766.490†	23252.7	10.03	mg/L	0.053	20.06	mg/L	0.106	0.53%
Mg 279.077†	13742.5	9.845	mg/L	0.0505	19.69	mg/L	0.101	0.51%
Mn 257.610†	18262.7	0.4919	mg/L	0.00289	0.9837	mg/L	0.00578	0.59%
Mo 202.031†	20.5	0.00084	mg/L	0.000262	0.00168	mg/L	0.000525	31.15%
Na 589.592†	143145.2	10.07	mg/L	0.045	20.14	mg/L	0.090	0.45%
Na 330.237†	288.4	10.03	mg/L	0.128	20.05	mg/L	0.256	1.27%
Ni 231.604†	2100.5	0.5062	mg/L	0.00251	1.012	mg/L	0.0050	0.50%
Pb 220.353†	17735.1	2.076	mg/L	0.0027	4.153	mg/L	0.0055	0.13%
Sb 206.836†	14.5	-0.00098	mg/L	0.000697	-0.00195	mg/L	0.001394	71.42%
Se 196.026†	2998.9	2.071	mg/L	0.0116	4.141	mg/L	0.0231	0.56%
Si 288.158†	33.9	0.01963	mg/L	0.000829	0.03926	mg/L	0.001658	4.22%
Sn 189.927†	-26.3	-0.00546	mg/L	0.000372	-0.01092	mg/L	0.000745	6.82%
Sr 421.552†	529723.4	0.4967	mg/L	0.00212	0.9934	mg/L	0.00424	0.43%
Ti 334.903†	53.8	0.00175	mg/L	0.000789	0.00350	mg/L	0.001578	45.05%
Tl 190.801†	5046.7	2.076	mg/L	0.0019	4.152	mg/L	0.0037	0.09%
V 292.402†	75800.9	0.5288	mg/L	0.00162	1.058	mg/L	0.0032	0.31%
Zn 206.200†	2042.7	0.5057	mg/L	0.00258	1.011	mg/L	0.0052	0.51%

Sequence No.: 43
Sample ID: CV 6

Autosampler Location: 7
Date Collected: 6/13/2013 11:55:15 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	229.0 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	3246354.9	102.0	%	0.23				0.22%
ScR 361.383	372050.4	101.0	%	0.21				0.21%
Ag 328.068†	211040.4	1.061	mg/L	0.0042	1.061	mg/L	0.0042	0.40%
Al 308.215†	3508.2	2.045	mg/L	0.0060	2.045	mg/L	0.0060	0.29%
As 188.979†	3671.6	2.053	mg/L	0.0025	2.053	mg/L	0.0025	0.12%
B 249.677†	7409.5	1.008	mg/L	0.0017	1.008	mg/L	0.0017	0.17%
Ba 233.527†	4841.0	1.064	mg/L	0.0027	1.064	mg/L	0.0027	0.25%
Be 313.042†	624960.6	0.9856	mg/L	0.00107	0.9856	mg/L	0.00107	0.11%
Ca 317.933†	27550.8	1.993	mg/L	0.0062	1.993	mg/L	0.0062	0.31%
Cd 228.802†	35827.0	1.025	mg/L	0.0008	1.025	mg/L	0.0008	0.07%
Co 228.616†	39873.5	1.019	mg/L	0.0063	1.019	mg/L	0.0063	0.62%
Cr 267.716†	6687.8	1.061	mg/L	0.0007	1.061	mg/L	0.0007	0.07%
Cu 324.752†	297771.2	1.009	mg/L	0.0011	1.009	mg/L	0.0011	0.11%
Fe 273.955†	2734.6	2.049	mg/L	0.0059	2.049	mg/L	0.0059	0.29%
K 766.490†	46463.7	20.05	mg/L	0.021	20.05	mg/L	0.021	0.10%
Mg 279.077†	2808.6	2.019	mg/L	0.0099	2.019	mg/L	0.0099	0.49%
Mn 257.610†	36373.3	0.9793	mg/L	0.00269	0.9793	mg/L	0.00269	0.27%
Mo 202.031†	20186.7	0.9790	mg/L	0.00307	0.9790	mg/L	0.00307	0.31%
Na 589.592†	713949.9	50.22	mg/L	0.082	50.22	mg/L	0.082	0.16%
Na 330.237†	1437.5	50.92	mg/L	0.231	50.92	mg/L	0.231	0.45%
Ni 231.604†	4335.4	1.047	mg/L	0.0004	1.047	mg/L	0.0004	0.04%
Pb 220.353†	17296.7	2.025	mg/L	0.0051	2.025	mg/L	0.0051	0.25%
Sb 206.836†	7012.6	2.078	mg/L	0.0064	2.078	mg/L	0.0064	0.31%
Se 196.026†	2938.5	2.028	mg/L	0.0029	2.028	mg/L	0.0029	0.14%
Si 288.158†	4316.6	2.060	mg/L	0.0033	2.060	mg/L	0.0033	0.16%
Sn 189.927†	3795.1	0.9869	mg/L	0.00450	0.9869	mg/L	0.00450	0.46%
Sr 421.552†	1060025.8	0.9940	mg/L	0.00160	0.9940	mg/L	0.00160	0.16%
Ti 334.903†	21613.6	0.9928	mg/L	0.00139	0.9928	mg/L	0.00139	0.14%
Tl 190.801†	5125.7	2.105	mg/L	0.0064	2.105	mg/L	0.0064	0.30%
V 292.402†	150219.7	1.048	mg/L	0.0053	1.048	mg/L	0.0053	0.51%
Zn 206.200†	4159.5	1.030	mg/L	0.0012	1.030	mg/L	0.0012	0.12%

Sequence No.: 44
Sample ID: CB 6

Autosampler Location: 1
Date Collected: 6/13/2013 11:59:20 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	229.0 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	3277692.6	102.9	%	0.22				0.21%
ScR 361.383	381783.1	103.7	%	0.46				0.44%
Ag 328.068†	7.8	0.00004	mg/L	0.000062	0.00004	mg/L	0.000062	158.92%
Al 308.215†	1.9	0.00110	mg/L	0.000573	0.00110	mg/L	0.000573	52.07%
As 188.979†	0.3	0.00017	mg/L	0.001279	0.00017	mg/L	0.001279	746.30%
B 249.677†	-1.0	-0.00013	mg/L	0.000410	-0.00013	mg/L	0.000410	306.12%
Ba 233.527†	1.1	0.00024	mg/L	0.000568	0.00024	mg/L	0.000568	235.29%
Be 313.042†	56.1	0.00009	mg/L	0.000030	0.00009	mg/L	0.000030	33.46%
Ca 317.933†	27.8	0.00201	mg/L	0.001156	0.00201	mg/L	0.001156	57.45%
Cd 228.802†	13.6	0.00039	mg/L	0.000068	0.00039	mg/L	0.000068	17.25%
Co 228.616†	0.7	0.00002	mg/L	0.000137	0.00002	mg/L	0.000137	755.05%
Cr 267.716†	0.5	0.00008	mg/L	0.000868	0.00008	mg/L	0.000868	>999.9%
Cu 324.752†	159.8	0.00054	mg/L	0.000044	0.00054	mg/L	0.000044	8.15%
Fe 273.955†	3.8	0.00285	mg/L	0.001869	0.00285	mg/L	0.001869	65.67%
K 766.490†	9.5	0.00410	mg/L	0.017393	0.00410	mg/L	0.017393	423.73%
Mg 279.077†	-0.7	-0.00048	mg/L	0.004182	-0.00048	mg/L	0.004182	877.81%
Mn 257.610†	0.2	0.00000	mg/L	0.000075	0.00000	mg/L	0.000075	>999.9%
Mo 202.031†	14.2	0.00069	mg/L	0.000268	0.00069	mg/L	0.000268	38.83%
Na 589.592†	147.6	0.01038	mg/L	0.001557	0.01038	mg/L	0.001557	15.00%
Na 330.237†	-1.1	-0.04067	mg/L	0.357074	-0.04067	mg/L	0.357074	878.07%
Ni 231.604†	2.4	0.00059	mg/L	0.000824	0.00059	mg/L	0.000824	140.75%
Pb 220.353†	-0.5	-0.00005	mg/L	0.000400	-0.00005	mg/L	0.000400	738.97%
Sb 206.836†	6.5	0.00194	mg/L	0.001214	0.00194	mg/L	0.001214	62.69%
Se 196.026†	4.6	0.00320	mg/L	0.000974	0.00320	mg/L	0.000974	30.38%
Si 288.158†	-1.2	-0.00058	mg/L	0.000503	-0.00058	mg/L	0.000503	87.40%
Sn 189.927†	2.9	0.00075	mg/L	0.000891	0.00075	mg/L	0.000891	119.34%
Sr 421.552†	21.6	0.00002	mg/L	0.000003	0.00002	mg/L	0.000003	14.36%
Ti 334.903†	9.8	0.00045	mg/L	0.000176	0.00045	mg/L	0.000176	39.28%
Tl 190.801†	5.6	0.00232	mg/L	0.001209	0.00232	mg/L	0.001209	52.05%
V 292.402†	15.9	0.00011	mg/L	0.000136	0.00011	mg/L	0.000136	122.37%
Zn 206.200†	1.5	0.00038	mg/L	0.000551	0.00038	mg/L	0.000551	144.41%

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP (ICP-MS) GFA CVA **Analysis Date:** 6-13-13

M2 Nexion STD	Analyst #6-14	Peer 6-14-13	Comment
Logbooks			
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	✓	✓	See log
Calibration Verification			
ICV/CCV	✓	✓	
ICB/CCB	✓	✓ s	See log
Samples			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	See log
Post Spikes/Serial Dilutions	✓	✓	W591
Analytic Spikes	—	—	
Matrix QC			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	W591
Matrix Duplicates	✓	✓	W591
Method Blanks	✓		W561
Data Distribution			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analyses Performed and CAF's	✓		CAF W591 W561

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 6-13-13 **Analyst:** AA **Page:** 1 of 6

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			B654
		1			B542
		2			B631
		3			B632
		4			B633
		5			B634
		Rinse Sample			V, Tl poor curve
		Dual Det Cal			
		STD 0			B654
		1			B542
		2			B631
		3			B632
		4			B633
		5			B634
		Rinse Sample			
		ICV			B523
		ICB			
		Cert			
		Ccv			
		Low check			
		ICSA			CdA (Mo interference)
		ICSAB			^{62}Ni 121%
		LR200			
		LR300			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 6-13-13 **Analyst:** MA **Page:** 2 of 6

All corrections made by analyst unless otherwise noted. MA 6-13-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		B1			
		~~B2~~			not Run
		CCV2			B655
		CCB2			
		WS30 MB1	SWN	20	
		WS90 F	REN	2	Ni
		WS61 AaDup	SPN		~~Cr~~, Ni RRCV (SC4)
		Aa			
		Aaspk		20 ✓	
		WS30 IDup	SWN	✓	
		I			
		Ispk		✓	
		Ref1		50 ✓	
		MB1spk		20 ✓	
		CCV3			
		CCB3			
		WS30 A	SWN	20	
		B			
		C			
		D			
		E			
		F			
		G			
		H			

WS91 : 01761

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 6-13-13 **Analyst:** AA **Page:** 3 of 6

All corrections made by analyst unless otherwise noted. AA 6-13-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		WS30 J	SWN	20	
		CCV 4			
		CCB 4			
		WT48 MB1	SWN	20	
		WS95 C	REN	5	MA
		D		5	
		E		50	
		ADup		5 ✓	
		A			
		ASpk			CAL
		WT48 A	SWN	20	
		B			RREN
WT		MBSpk		✓	
		CCV5			
		CCB5			
		WS91 MB1	SWN	20	
		WS61 Aq	SPN	2	Cr
		AqDup		✓	
		WT28 W	REN		
		X			
		WS91 ADup	SWN	20	~~As high RPD~~ ~~Sb high RPD~~
		A			CAF
		ASpk			Sb low %R
		APost		✓	0.06 mL Spk#2 1:10 0.06 mL Spk#1 1:10 (Sb)

WS91 : 81762

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 6-13-13 **Analyst:** MK **Page:** 4 of 6

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		WS91 MBlspk	SWN	20	
		CCV6			
		CCB6			
		WT28 MB1	REN	2	Zn Sn2 Pb 0.13
		A			
		C			
		D			
		E			
		F			
		BDup		✓	
		B			
		Bspk		✓	
		MBlspk		✓	
		CCV7			
		CCB7			
		WT28 G	REN	2	
		H			
		I			Rerun
		J			
		K			Rerun
✓		L			missed tube
		M			
		N			
		O			

6-14-13

WS91 : 81TSS

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Thursday, June 13, 2013 08:24:50
Sample Description:
Method File: C:\NexIONData\Method\Daily Performancenew.mth
Dataset File C.\NexIONData\Dataset\Default\Daily Performance Check.2111
MassCal File: C \NexIONData\MassCal\Default.tun
Conditions File: C:\NexIONData\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 60
Current Dead Time (ns): 60
Torch Z position (mm): 0.00

initial

Summary

Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
Be	9.0	5108.2	5108.232	28.611	0.6	Standard
Mg	24.0	41293.1	41293.125	287.565	0.7	Standard
In	114.9	70371.3	70371.285	380.229	0.5	Standard
Pb	208.0	33672.6	33672.562	212.177	0.6	Standard
U	238.1	58434.6	58434.630	257.771	0.4	Standard
CeO	155.9	1025.1	0.014	0.001	3.8	Standard
Ce	139.9	74346.8	74346.789	566.442	0.8	Standard
Ce++	70.0	1270.9	0.017	0.000	1.5	Standard
Bkgd	220.0	0.1	0.100	0.091	91.3	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
-1700.00	Analog Stage Voltage
900.00	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

W591 : 01764

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 6/13/2013 8:24:45 AM
nd Time: 6/13/2013 8:30:07 AM

aily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 5108.23
Obtained Intensity (Mg 23.985): 41293.13
Obtained Intensity (In 114.904): 70371.28
Obtained Intensity (Pb 207.977): 33672.56
Obtained Intensity (U 238.05): 58434.63
Obtained Intensity (Bkgd 220): 0.10
Obtained Formula (CeO 155.9 / Ce 139.905): 0.014 (=1025.13 / 74346.79)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.017 (=1270.90 / 74346.79)

orch Alignment - [Failed]
Error: optimum could not be found.

SmartTune Wizard - Summary

timization Summary

artTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

art Time: 6/13/2013 8:30:17 AM
d Time: 6/13/2013 8:33:08 AM

bulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 1.06
Obtained Intensity (In 114.904): 79478.21
Obtained Formula (CeO 155.9 / Ce 139.905): 0.017 (=1404.12 / 80388.88)

SmartTune Wizard - Summary

ıtimization Summary

ıartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

:art Time: 6/13/2013 8:33:16 AM
ıd Time: 6/13/2013 8:34:01 AM

ɔrch Alignment - [Passed]

Vertical	Horizontal	Intensity
0.87 mm	-0.48 mm	89310.03

SmartTune Wizard - Summary

)timization Summary

iartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

:art Time: 6/13/2013 8:34:25 AM
id Time: 6/13/2013 8:36:36 AM

iss Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.700)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.717)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.690)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.708)

SmartTune Wizard - Summary

)timization Summary

1artTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

:art Time: 6/13/2013 8:37:01 AM
1d Time: 6/13/2013 8:41:11 AM

1toLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.993; Intercept = -10.87

SmartTune Wizard - Summary

ɔtimization Summary

nartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 6/13/2013 8:41:26 AM
ıd Time: 6/13/2013 8:44:00 AM

ıily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 6578.13
Obtained Intensity (Mg 23.985): 50388.85
Obtained Intensity (In 114.904): 82518.49
Obtained Intensity (Pb 207.977): 37397.13
Obtained Intensity (U 238.05): 67536.64
Obtained Intensity (Bkgd 220): 0.13
Obtained Formula (CeO 155.9 / Ce 139.905): 0.023 (=1928.49 / 82934.38)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.023 (=1880.95 / 82934.38)

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time: Thursday, June 13, 2013 10:16:28
Sample Description:
Method File: C:\NexION Data\Method\Daily Performance.mth
Dataset File: C:\NexION Data\Dataset\Default\Daily Performance Check.2125
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	6269.9	6269.892	97.436	1.6	Standard
	Mg	24.0	48209.2	48209.189	469.030	1.0	Standard
	In	114.9	77293.4	77293.366	818.775	1.1	Standard
	U	238.1	62087.7	62087.724	683.119	1.1	Standard
⌈	CeO	155.9	1803.5	0.023	0.001	3.4	Standard
| >	Ce	139.9	78424.3	78424.300	348.131	0.4	Standard
⌊	Ce++	70.0	1777.8	0.023	0.001	2.3	Standard
	Bkgd	220.0	0.1	0.067	0.091	136.9	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
900.00	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
0.25	KED RPq

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\DUALDET.swz

tart Time: 6/13/2013 10:16:27 AM
nd Time: 6/13/2013 10:18:47 AM

aily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 6269.89
Obtained Intensity (Mg 23.985): 48209.19
Obtained Intensity (In 114.904): 77293.37
Obtained Intensity (U 238.05): 62087.72
Obtained Intensity (Bkgd 220): 0.07
Obtained Formula (CeO 155.9 / Ce 139.905): 0.023 (=1803.53 / 78424.30)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.023 (=1777.79 / 78424.30)

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 10:25:24
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L				1477068	1
	Be	9		ug/L				52	21
	C	13		ug/L				91865	1
	Cl	37		ug/L				4664629	0
>	Sc	45		ug/L				1199367	1
	V	51		ug/L				7921	2
	V-1	51		ug/L				182	6
	Cr	52		ug/L				23276	2
	Cr	53		ug/L				155	3
	Mn	55		ug/L				856	7
	Co	59		ug/L				217	8
>	Ge	72		ug/L				666955	1
	Ni	60		ug/L				57	11
	Ni	62		ug/L				234	9
	Cu	63		ug/L				374	3
	Cu	65		ug/L				101	14
	Zn	66		ug/L				850	5
	Zn	67		ug/L				128	1
	Zn	68		ug/L				745	4
	As	75		ug/L				118	42
	As-1	75		ug/L				9854	0
	Se	82		ug/L				0	1368
	Se	78		ug/L				10009	0
	Mo	98		ug/L				75	6
	Y	89		ug/L				438666	0
	Kr	83		ug/L				391	5
>	In	115		ug/L				956745	0
	Ag	107		ug/L				77	14
	Cd	111		ug/L				131	7
	Cd	114		ug/L				64	10
	Sb	121		ug/L				875	21
	Sb	123		ug/L				675	17
	Ba	135		ug/L				41	14
	Ba	137		ug/L				73	6
>	Tb	159		ug/L				1186124	0
	Tl	205		ug/L				270	15
	Pb	208		ug/L				477	2
	Bi	209		ug/L				2621879	1
	Th	232		ug/L				1082	22
	U	238		ug/L				146	16

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 10:29:32
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: C:\NexION Data\System\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1510538	0
	Be	9	0.200	ug/L	0.006	2	52	1023	1
	C	13		ug/L			91865	95590	2
	Cl	37		ug/L			4664629	4713906	0
>	Sc	45		ug/L			1199367	1240869	0
	V	51	0.200	ug/L	0.009	4	7921	13502	2
	V-1	51	0.500	ug/L	0.011	2	182	5171	2
	Cr	52	0.500	ug/L	0.023	4	23276	35236	2
	Cr	53	0.500	ug/L	0.019	3	155	1317	3
	Mn	55	0.500	ug/L	0.003	0	856	15047	1
	Co	59	0.200	ug/L	0.006	2	217	4520	3
>	Ge	72		ug/L			666955	678983	0
	Ni	60	0.500	ug/L	0.014	2	57	2226	2
	Ni	62	0.500	ug/L	0.031	6	234	532	3
	Cu	63	0.500	ug/L	0.004	0	374	5123	0
	Cu	65	0.500	ug/L	0.015	3	101	2269	3
	Zn	66	4.000	ug/L	0.091	2	850	10625	2
	Zn	67	4.000	ug/L	0.099	2	128	1612	2
	Zn	68	4.000	ug/L	0 064	1	745	7204	1
	As	75	0.200	ug/L	0.011	5	118	559	4
	As-1	75	0.200	ug/L	0.027	13	9854	10354	0
	Se	82	0.500	ug/L	0.053	10	0	109	10
	Se	78	0.500	ug/L	0.098	19	10009	10361	0
	Mo	98	0.200	ug/L	0.013	6	75	1167	6
	Y	89		ug/L			438666	453184	0
	Kr	83		ug/L			391	407	5
>	In	115		ug/L			956745	982188	0
	Ag	107	0.200	ug/L	0.014	7	77	2207	6
	Cd	111	0.100	ug/L	0.015	14	131	602	10
	Cd	114	0.100	ug/L	0.011	11	64	1252	10
	Sb	121	0.200	ug/L	0.009	4	875	3127	2
	Sb	123	0.200	ug/L	0.015	7	675	2375	4
	Ba	135	0.500	ug/L	0.008	1	41	2155	2
	Ba	137	0.500	ug/L	0.004	0	73	3785	1
>	Tb	159		ug/L			1186124	1190436	0
	Tl	205	0.200	ug/L	0.002	0	270	7885	1
	Pb	208	0.100	ug/L	0.003	2	477	5497	3
	Bi	209		ug/L			2621879	2690744	0
	Th	232	0.200	ug/L	0.001	0	1082	8361	0
	U	238	0.200	ug/L	0.004	2	146	9936	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 10:33:40
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\061213.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1477068	1566166	4
Be	9	10.000	ug/L	0.507	5	52	48391	1
C	13		ug/L			91865	94233	1
Cl	37		ug/L			4664629	4770269	4
> Sc	45		ug/L			1199367	1250582	1
V	51	10.000	ug/L	0.078	0	7921	250636	2
V-1	51	10.015	ug/L	0.080	0	182	243854	2
Cr	52	9.998	ug/L	0.017	0	23276	233411	1
Cr	53	10.001	ug/L	0.070	0	155	24206	1
Mn	55	10.000	ug/L	0.152	1	856	292168	3
Co	59	10.000	ug/L	0.171	1	217	212764	0
> Ge	72		ug/L			666955	685853	1
Ni	60	10.000	ug/L	0.086	0	57	44536	1
Ni	62	10.001	ug/L	0.227	2	234	6396	0
Cu	63	10.001	ug/L	0.075	0	374	99771	0
Cu	65	10.000	ug/L	0.231	2	101	44748	3
Zn	66	10.083	ug/L	0.205	2	850	27071	0
Zn	67	10.207	ug/L	0.021	0	128	4518	1
Zn	68	10.204	ug/L	0.144	1	745	19804	1
As	75	10.000	ug/L	0.133	1	118	22632	1
As-1	75	10.001	ug/L	0.105	1	9854	32798	1
Se	82	10.002	ug/L	0.252	2	0	2404	2
Se	78	10.011	ug/L	0.259	2	10009	16569	0
Mo	98	10.000	ug/L	0.116	1	75	53104	1
Y	89		ug/L			438666	460207	1
Kr	83		ug/L			391	419	4
> In	115		ug/L			956745	988515	1
Ag	107	10.000	ug/L	0.079	0	77	103792	1
Cd	111	10.000	ug/L	0.249	2	131	45721	1
Cd	114	10.000	ug/L	0.163	1	64	116115	0
Sb	121	10.001	ug/L	0.113	1	875	132541	2
Sb	123	10.001	ug/L	0.114	1	675	99198	0
Ba	135	10.001	ug/L	0.072	0	41	43707	0
Ba	137	10.000	ug/L	0.317	3	73	75487	2
> Tb	159		ug/L			1186124	1213356	1
Tl	205	10.000	ug/L	0.110	1	270	381024	1
Pb	208	10.000	ug/L	0.035	0	477	500700	0
Bi	209		ug/L			2621879	2703278	0
Th	232	10.001	ug/L	0.144	1	1082	454994	2
U	238	10.000	ug/L	0.056	0	146	485012	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 10:38:03
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1563691	0
	Be	9	20.107	ug/L	0.467	2	52	99340	1
	C	13		ug/L			91865	92802	1
	Cl	37		ug/L			4664629	4844867	2
>	Sc	45		ug/L			1199367	1248857	1
	V	51	20.085	ug/L	0.381	1	7921	502677	0
	V-1	51	20.084	ug/L	0.492	2	182	496343	1
	Cr	52	19.968	ug/L	0.616	3	23276	438590	2
	Cr	53	19.947	ug/L	0.570	2	155	47535	1
	Mn	55	20.008	ug/L	0 324	1	856	583496	0
	Co	59	19.985	ug/L	0.426	2	217	423081	0
>	Ge	72		ug/L			666955	687586	0
	Ni	60	20.004	ug/L	0.473	2	57	89331	1
	Ni	62	20.114	ug/L	0.305	1	234	12944	1
	Cu	63	19.939	ug/L	0.360	1	374	196639	1
	Cu	65	19.913	ug/L	0.785	3	101	87688	3
	Zn	66	19.976	ug/L	0.107	0	850	52702	0
	Zn	67	20.066	ug/L	0.376	1	128	8876	1
	Zn	68	19.936	ug/L	0.595	2	745	37653	2
	As	75	19.981	ug/L	0.430	2	118	45048	1
	As-1	75	19.979	ug/L	0.458	2	9854	55361	1
	Se	82	20.017	ug/L	0.517	2	0	4841	2
	Se	78	20.000	ug/L	0.672	3	10009	22889	1
	Mo	98	20.068	ug/L	0.452	2	75	108234	1
	Y	89		ug/L			438666	460825	2
	Kr	83		ug/L			391	398	4
>	In	115		ug/L			956745	967650	0
	Ag	107	19.993	ug/L	0.235	1	77	202755	1
	Cd	111	20.036	ug/L	0.262	1	131	90214	0
	Cd	114	20.053	ug/L	0.364	1	64	230325	1
	Sb	121	20.041	ug/L	0.072	0	875	261225	0
	Sb	123	20.120	ug/L	0.100	0	675	199453	0
	Ba	135	20.077	ug/L	0.193	0	41	87199	0
	Ba	137	20.079	ug/L	0.019	0	73	150690	0
>	Tb	159		ug/L			1186124	1217879	0
	Tl	205	19.980	ug/L	0.193	0	270	760713	0
	Pb	208	19.983	ug/L	0.143	0	477	1000340	0
	Bi	209		ug/L			2621879	2637275	1
	Th	232	20.069	ug/L	0.358	1	1082	928095	0
	U	238	19.969	ug/L	0.365	1	146	965909	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 10:42:34
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1556746	0
	Be	9	49.726	ug/L	0.792	1	52	238021	1
	C	13		ug/L			91865	93757	0
	Cl	37		ug/L			4664629	4935171	2
>	Sc	45		ug/L			1199367	1230639	1
	V	51	49.972	ug/L	1.062	2	7921	1217127	1
	V-1	51	50.016	ug/L	0.894	1	182	1219889	1
	Cr	52	49.996	ug/L	0.526	1	23276	1045925	0
	Cr	53	50.130	ug/L	0.741	1	155	119072	1
	Mn	55	49.830	ug/L	1.398	2	856	1406875	1
	Co	59	49.902	ug/L	0.127	0	217	1030838	1
>	Ge	72		ug/L			666955	672682	1
	Ni	60	49.822	ug/L	0.631	1	57	213774	0
	Ni	62	49.886	ug/L	0.865	1	234	30716	2
	Cu	63	49.800	ug/L	0.456	0	374	470490	0
	Cu	65	49.844	ug/L	0.020	0	101	211313	1
	Zn	66	50.021	ug/L	0.429	0	850	128083	1
	Zn	67	50.006	ug/L	0.502	1	128	21457	0
	Zn	68	49.921	ug/L	1.287	2	745	90411	1
	As	75	50.035	ug/L	0.550	1	118	110567	0
	As-1	75	50.048	ug/L	0.673	1	9854	121247	0
	Se	82	50.032	ug/L	0.222	0	0	11880	1
	Se	78	50.085	ug/L	0.710	1	10009	41157	0
	Mo	98	50.091	ug/L	0.871	1	75	266592	0
	Y	89		ug/L			438666	454748	0
	Kr	83		ug/L			391	430	3
>	In	115		ug/L			956745	958793	0
	Ag	107	49.754	ug/L	0.748	1	77	487816	1
	Cd	111	49.831	ug/L	0.045	0	131	218443	0
	Cd	114	49.837	ug/L	0.627	1	64	558013	1
	Sb	121	50.056	ug/L	0.611	1	875	648768	1
	Sb	123	49.927	ug/L	0.799	1	675	485855	1
	Ba	135	49.930	ug/L	0.574	1	41	213317	1
	Ba	137	49.970	ug/L	0.684	1	73	370377	1
>	Tb	159		ug/L			1186124	1209195	1
	Tl	205	49.851	ug/L	1.000	2	270	1856221	0
	Pb	208	49.834	ug/L	0.708	1	477	2435432	0
	Bi	209		ug/L			2621879	2567244	0
	Th	232	50.302	ug/L	0.766	1	1082	2379675	0
	U	238	50.219	ug/L	0.856	1	146	2465326	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 10:47:46
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\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1477068	1507522	2
	Be	9	100.851	ug/L	2.601	2	52	480899	1
	C	13		ug/L			91865	95782	1
	Cl	37		ug/L			4664629	4856154	3
>	Sc	45		ug/L			1199367	1237147	1
	V	51	100.737	ug/L	2.047	2	7921	2519519	0
	V-1	51	100.447	ug/L	2.089	2	182	2499477	0
	Cr	52	100.228	ug/L	2.453	2	23276	2099140	1
	Cr	53	99.229	ug/L	2.248	2	155	230793	0
	Mn	55	100.079	ug/L	1.883	1	856	2847243	1
	Co	59	100.318	ug/L	2.740	2	217	2104626	0
>	Ge	72		ug/L			666955	668649	0
	Ni	60	100.130	ug/L	1.020	1	57	428904	1
	Ni	62	100.219	ug/L	1.051	1	234	61544	0
	Cu	63	99.636	ug/L	0.555	0	374	924199	0
	Cu	65	99.448	ug/L	1.905	1	101	411434	2
	Zn	66	99.380	ug/L	0.573	0	850	247036	0
	Zn	67	99.678	ug/L	1.171	1	128	41944	1
	Zn	68	99.663	ug/L	2.141	2	745	176740	2
	As	75	100.088	ug/L	0.413	0	118	220393	0
	As-1	75	100.220	ug/L	0.633	0	9854	233103	0
	Se	82	99.511	ug/L	0.147	0	0	23113	0
	Se	78	100.023	ug/L	0.695	0	10009	71752	0
	Mo	98	100.021	ug/L	0.645	0	75	529502	0
	Y	89		ug/L			438666	450109	0
	Kr	83		ug/L			391	486	3
>	In	115		ug/L			956745	950655	0
	Ag	107	99.792	ug/L	1.312	1	77	963353	1
	Cd	111	99.817	ug/L	1.359	1	131	431082	1
	Cd	114	99.785	ug/L	0.541	0	64	1099849	0
	Sb	121	99.917	ug/L	1.385	1	875	1279572	0
	Sb	123	99.851	ug/L	0.615	0	675	958015	0
	Ba	135	100.312	ug/L	1.211	1	41	429353	1
	Ba	137	100.255	ug/L	0.937	0	73	742988	0
>	Tb	159		ug/L			1186124	1210007	0
	Tl	205	100.069	ug/L	2.212	2	270	3737142	1
	Pb	208	99.899	ug/L	1.087	1	477	4869045	0
	Bi	209		ug/L			2621879	2502515	0
	Th	232	99.961	ug/L	2.034	2	1082	4725154	1
	U	238	99.908	ug/L	1.568	1	146	4893251	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 10:53:19
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: C:\NexION Data\System\061213.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1526232	1
	Be	9	0.004	ug/L	0.008	220	52	71	52
	C	13		ug/L			91865	93963	0
	Cl	37		ug/L			4664629	4772499	0
>	Sc	45		ug/L			1199367	1220809	0
	V	51	0.005	ug/L	0 007	139	7921	8184	2
	V-1	51	0.004	ug/L	0.009	211	182	289	75
	Cr	52	0.003	ug/L	0.011	399	23276	23745	0
	Cr	53	0.000	ug/L	0.009	12195	155	158	13
	Mn	55	0.000	ug/L	0.005	1137	856	884	16
	Co	59	0.003	ug/L	0.006	184	217	286	41
>	Ge	72		ug/L			666955	666775	0
	Ni	60	0.002	ug/L	0.005	254	57	65	30
	Ni	62	0.182	ug/L	0.073	40	234	345	12
	Cu	63	0.012	ug/L	0.007	57	374	481	13
	Cu	65	0.003	ug/L	0.004	121	101	115	15
	Zn	66	0.003	ug/L	0.011	427	850	856	2
	Zn	67	0.000	ug/L	0.011	7721	128	128	2
	Zn	68	-0.021	ug/L	0.016	76	745	709	4
	As	75	0.014	ug/L	0.008	54	118	150	11
	As-1	75	0.028	ug/L	0.065	229	9854	9913	1
	Se	82	0.003	ug/L	0.037	1217	0	0	2926
	Se	78	0.083	ug/L	0.227	271	10009	10057	0
	Mo	98	0.012	ug/L	0.003	25	75	135	11
	Y	89		ug/L			438666	452952	1
	Kr	83		ug/L			391	415	4
>	In	115		ug/L			956745	959121	0
	Ag	107	0.001	ug/L	0.002	175	77	89	23
	Cd	111	0.002	ug/L	0.003	202	131	138	9
	Cd	114	0.000	ug/L	0.002	400	64	68	24
	Sb	121	0.146	ug/L	0.031	21	875	2765	14
	Sb	123	0.144	ug/L	0.030	20	675	2068	13
	Ba	135	0.002	ug/L	0 003	127	41	50	21
	Ba	137	0.005	ug/L	0.008	151	73	110	51
>	Tb	159		ug/L			1186124	1170649	1
	Tl	205	0.016	ug/L	0.016	98	270	862	68
	Pb	208	0.008	ug/L	0.017	210	477	847	93
	Bi	209		ug/L			2621879	2640947	0
	Th	232	0.143	ug/L	0.015	10	1082	7610	8
	U	238	0.009	ug/L	0.012	131	146	592	99

Sample Information

Sample Date/Time: Thursday, June 13, 2013 10:47:46
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\061213a.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	**0.9999**	0.003	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
V	51	**0.9999**	0.020	0.20	10	20	50	100
V-1	51	**1.0000**	0.020	0.50	10	20	50	100
Cr	52	**1.0000**	0.017	0.50	10	20	50	100
Cr	53	**0.9999**	0.002	0.50	10	20	50	100
Mn	55	**1.0000**	0.023	0.50	10	20	50	100
Co	59	**1.0000**	0.017	0.20	10	20	50	100
Ge	72							
Ni	60	**1.0000**	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	**0.9999**	0.006	0.50	10	20	50	100
Zn	66	**0.9999**	0.004	4.00	10	20	50	100
Zn	67	**1.0000**	0.001	4.00	10	20	50	100
Zn	68	**1.0000**	0.003	4.00	10	20	50	100
As	75	**1.0000**	0.003	0.20	10	20	50	100
As-1	75	**1.0000**	0.003	0.20	10	20	50	100
Se	82	**0.9999**	0.000	0.50	10	20	50	100
Se	78	**1.0000**	0.001	0.50	10	20	50	100
Mo	98	**1.0000**	0.008	0.20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**1.0000**	0.010	0.20	10	20	50	100
Cd	111	**1.0000**	0.005	0.10	10	20	50	100
Cd	114	**1.0000**	0.012	0.10	10	20	50	100
Sb	121	**1.0000**	0.013	0.20	10	20	50	100
Sb	123	**1.0000**	0.010	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	**1.0000**	0.031	0.20	10	20	50	100
Pb	208	**1.0000**	0.040	0.10	10	20	50	100
Bi	209							
Th	232	**1.0000**	0.039	0.20	10	20	50	100
U	238	**1.0000**	0.040	0.20	10	20	50	100

USA : 21782

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 11:00:11
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens	Meas Intens.	Intens. RSD
> Li	6		ug/L			1477068	1589291	1
Be	9	47.912	ug/L	1.610	3	52	240879	1
C	13		ug/L			91865	99664	0
Cl	37		ug/L			4664629	4895348	2
> Sc	45		ug/L			1199367	1289171	1
V	51	48.570	ug/L	0.271	0	7921	1270519	1
V-1	51	48.862	ug/L	0.224	0	182	1267379	1
Cr	52	48.831	ug/L	0.867	1	23276	1078741	1
Cr	53	49.832	ug/L	0.165	0	155	120893	1
Mn	55	50.417	ug/L	0.605	1	856	1495209	0
Co	59	48.371	ug/L	0.582	1	217	1057879	1
> Ge	72		ug/L			666955	691004	2
Ni	60	49.806	ug/L	1.490	2	57	220404	0
Ni	62	48.875	ug/L	2.151	4	234	31132	3
Cu	63	50.648	ug/L	0.915	1	374	485570	1
Cu	65	51.281	ug/L	1.759	3	101	219218	2
Zn	66	48.929	ug/L	1.591	3	850	126095	2
Zn	67	49.484	ug/L	0.860	1	128	21584	2
Zn	68	48.563	ug/L	1 764	3	745	89357	2
As	75	49.184	ug/L	1.373	2	118	111940	0
As-1	75	49.406	ug/L	1.617	3	9854	123878	0
Se	82	76.789	ug/L	1.332	1	0	18221	0
Se	78	75.577	ug/L	2.202	2	10009	58536	0
Mo	98	49.278	ug/L	1.564	3	75	269514	1
Y	89		ug/L			438666	470255	1
Kr	83		ug/L			391	457	4
> In	115		ug/L			956745	999634	1
Ag	107	49.220	ug/L	0.473	0	77	499646	0
Cd	111	47.660	ug/L	1.228	2	131	216479	2
Cd	114	47.224	ug/L	0.152	0	64	547364	1
Sb	121	49.255	ug/L	0.468	0	875	663711	0
Sb	123	49.216	ug/L	0.219	0	675	496876	1
Ba	135	49.128	ug/L	0.765	1	41	221112	1
Ba	137	48.676	ug/L	0.253	0	73	379376	1
> Tb	159		ug/L			1186124	1238697	1
Tl	205	49.061	ug/L	1.141	2	270	1875837	1
Pb	208	49.971	ug/L	0.422	0	477	2493648	0
Bi	209		ug/L			2621879	2633336	1
Th	232	49.814	ug/L	0.189	0	1082	2411315	0
U	238	49.325	ug/L	0.305	0	146	2473419	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 11:07:03
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1477068	1537330	0
	Be	9	-0.003	ug/L	0 001	42	52	38	16
	C	13		ug/L			91865	91644	0
	Cl	37		ug/L			4664629	4718297	1
>	Sc	45		ug/L			1199367	1228339	0
	V	51	0.003	ug/L	0.005	188	7921	8185	2
	V-1	51	-0.003	ug/L	0.000	11	182	116	7
	Cr	52	0.013	ug/L	0.020	156	23276	24108	2
	Cr	53	-0.007	ug/L	0.005	70	155	144	8
	Mn	55	-0.003	ug/L	0.000	11	856	780	2
	Co	59	-0.003	ug/L	0.000	11	217	150	5
>	Ge	72		ug/L			666955	665640	0
	Ni	60	0.007	ug/L	0.003	37	57	86	12
	Ni	62	0.077	ug/L	0.022	28	234	281	5
	Cu	63	0.001	ug/L	0.001	87	374	385	1
	Cu	65	0.001	ug/L	0.004	574	101	104	15
	Zn	66	0.609	ug/L	0.027	4	850	2349	3
	Zn	67	0.569	ug/L	0.054	9	128	366	6
	Zn	68	0.559	ug/L	0.012	2	745	1726	0
	As	75	0.010	ug/L	0.015	143	118	140	22
	As-1	75	-0.030	ug/L	0.041	138	9854	9767	0
	Se	82	0.059	ug/L	0.018	30	0	12	32
	Se	78	-0.087	ug/L	0.124	141	10009	9935	0
	Mo	98	-0.002	ug/L	0.002	72	75	63	13
	Y	89		ug/L			438666	446515	1
	Kr	83		ug/L			391	391	3
>	In	115		ug/L			956745	949594	1
	Ag	107	-0.002	ug/L	0.001	26	77	54	12
	Cd	111	-0.002	ug/L	0.003	163	131	121	12
	Cd	114	-0.002	ug/L	0.001	35	64	39	19
	Sb	121	-0.011	ug/L	0.010	93	875	730	18
	Sb	123	-0.009	ug/L	0.011	128	675	586	19
	Ba	135	-0.001	ug/L	0.001	100	41	37	9
	Ba	137	-0.002	ug/L	0.001	66	73	60	14
>	Tb	159		ug/L			1186124	1182540	0
	Tl	205	-0.000	ug/L	0.001	259	270	258	11
	Pb	208	-0.003	ug/L	0.000	13	477	312	6
	Bi	209		ug/L			2621879	2664742	1
	Th	232	0.045	ug/L	0.004	8	1082	3148	6
	U	238	-0.001	ug/L	0.000	6	146	108	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 11:11:12
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1477068	1581144	1
Be	9	48.230	ug/L	0.901	1	52	241285	1
C	13		ug/L			91865	95352	2
Cl	37		ug/L			4664629	4751814	2
Sc	45		ug/L			1199367	1239687	1
V	51	48.683	ug/L	1.125	2	7921	1224495	1
V-1	51	48.904	ug/L	1.060	2	182	1219676	1
Cr	52	49.161	ug/L	0.794	1	23276	1044145	0
Cr	53	49.920	ug/L	0.669	1	155	116447	0
Mn	55	49.445	ug/L	1.137	2	856	1410059	1
Co	59	48.999	ug/L	0.925	1	217	1030421	0
Ge	72		ug/L			666955	688262	1
Ni	60	48.277	ug/L	0.867	1	57	212911	2
Ni	62	48.855	ug/L	0.168	0	234	31005	1
Cu	63	49.111	ug/L	0.390	0	374	469063	0
Cu	65	49.770	ug/L	0.331	0	101	211985	1
Zn	66	48.183	ug/L	0.628	1	850	123723	0
Zn	67	48.750	ug/L	0.309	0	128	21184	1
Zn	68	48.472	ug/L	0.397	0	745	88877	1
As	75	48.464	ug/L	0.246	0	118	109905	0
As-1	75	48.104	ug/L	0.251	0	9854	120450	0
Se	82	49.832	ug/L	0.207	0	0	11780	1
Se	78	47.934	ug/L	0.251	0	10009	40768	1
Mo	98	48.411	ug/L	0.486	1	75	263820	0
Y	89		ug/L			438666	454770	0
Kr	83		ug/L			391	432	2
In	115		ug/L			956745	970833	0
Ag	107	49.116	ug/L	0.812	1	77	484308	2
Cd	111	49.284	ug/L	0.780	1	131	217444	2
Cd	114	49.334	ug/L	0.409	0	64	555326	0
Sb	121	48.507	ug/L	1.040	2	875	634791	1
Sb	123	49.134	ug/L	0.672	1	675	481755	1
Ba	135	48.932	ug/L	0.623	1	41	213894	1
Ba	137	49.073	ug/L	0.655	1	73	371425	0
Tb	159		ug/L			1186124	1204439	0
Tl	205	49.949	ug/L	0.404	0	270	1857126	0
Pb	208	50.031	ug/L	0.677	1	477	2427547	0
Bi	209		ug/L			2621879	2614406	0
Th	232	50.705	ug/L	0.827	1	1082	2386587	1
U	238	50.384	ug/L	0.359	0	146	2456558	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 11:17:44
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1497855	2
	Be	9	-0.002	ug/L	0.002	131	52	45	23
	C	13		ug/L			91865	90872	1
	Cl	37		ug/L			4664629	4681949	1
>	Sc	45		ug/L			1199367	1201905	0
	V	51	0.005	ug/L	0.005	106	7921	8059	1
	V-1	51	-0.003	ug/L	0.000	16	182	117	8
	Cr	52	0.030	ug/L	0.017	56	23276	23934	1
	Cr	53	0.004	ug/L	0.004	91	155	164	4
	Mn	55	-0.003	ug/L	0.002	61	856	773	7
	Co	59	-0.003	ug/L	0.000	15	217	158	5
>	Ge	72		ug/L			666955	665363	0
	Ni	60	-0.000	ug/L	0.002	1041	57	56	14
	Ni	62	0.058	ug/L	0.021	35	234	269	5
	Cu	63	0.001	ug/L	0.003	183	374	387	5
	Cu	65	0.000	ug/L	0.002	1122	101	102	6
	Zn	66	0.404	ug/L	0 016	3	850	1845	2
	Zn	67	0.353	ug/L	0.023	6	128	275	4
	Zn	68	0.375	ug/L	0.034	8	745	1403	5
	As	75	0.008	ug/L	0.011	138	118	135	18
	As-1	75	0.020	ug/L	0.034	166	9854	9875	0
	Se	82	0.006	ug/L	0.013	205	0	0	622
	Se	78	0.069	ug/L	0.161	231	10009	10027	0
	Mo	98	0.000	ug/L	0.002	517	75	76	11
	Y	89		ug/L			438666	448863	0
	Kr	83		ug/L			391	404	1
>	In	115		ug/L			956745	950603	0
	Ag	107	-0.002	ug/L	0.001	24	77	56	9
	Cd	111	-0.004	ug/L	0.002	38	131	111	7
	Cd	114	-0.002	ug/L	0.001	46	64	37	31
	Sb	121	0.029	ug/L	0.019	64	875	1241	19
	Sb	123	0.027	ug/L	0.017	64	675	931	17
	Ba	135	-0.000	ug/L	0.004	4008	41	41	36
	Ba	137	-0.000	ug/L	0.000	160	73	70	4
>	Tb	159		ug/L			1186124	1168315	1
	Tl	205	-0.001	ug/L	0.001	91	270	237	9
	Pb	208	-0.001	ug/L	0.000	9	477	402	1
	Bi	209		ug/L			2621879	2649212	1
	Th	232	0.071	ug/L	0.004	5	1082	4289	4
	U	238	-0.001	ug/L	0 000	22	146	102	8

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 11:21:52
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1541860	1
	Be	9	0.187	ug/L	0.005	2	52	967	1
	C	13		ug/L			91865	94314	1
	Cl	37		ug/L			4664629	4616270	2
>	Sc	45		ug/L			1199367	1203965	0
	V	51	0.209	ug/L	0.007	3	7921	13034	1
	V-1	51	0.189	ug/L	0.002	1	182	4766	1
	Cr	52	0.542	ug/L	0.024	4	23276	34289	1
	Cr	53	0.475	ug/L	0.015	3	155	1230	2
	Mn	55	0.484	ug/L	0 011	2	856	14251	2
	Co	59	0.195	ug/L	0 004	2	217	4191	1
>	Ge	72		ug/L			666955	657454	1
	Ni	60	0.505	ug/L	0.010	1	57	2182	3
	Ni	62	0.481	ug/L	0.051	10	234	520	4
	Cu	63	0.498	ug/L	0.015	2	374	4905	1
	Cu	65	0.512	ug/L	0.014	2	101	2183	2
	Zn	66	3.916	ug/L	0.026	0	850	10377	2
	Zn	67	3.432	ug/L	0.116	3	128	1541	1
	Zn	68	3.728	ug/L	0.160	4	745	7204	2
	As	75	0.201	ug/L	0.020	10	118	550	8
	As-1	75	0.259	ug/L	0.088	34	9854	10278	0
	Se	82	0.560	ug/L	0.051	9	0	125	10
	Se	78	0.740	ug/L	0.320	43	10009	10313	0
	Mo	98	0.196	ug/L	0 007	3	75	1091	1
	Y	89		ug/L			438666	445157	1
	Kr	83		ug/L			391	379	3
>	In	115		ug/L			956745	938780	2
	Ag	107	0.198	ug/L	0.005	2	77	1967	3
	Cd	111	0.093	ug/L	0.002	2	131	523	1
	Cd	114	0.099	ug/L	0.003	3	64	1142	0
	Sb	121	0.158	ug/L	0.010	6	875	2855	4
	Sb	123	0.167	ug/L	0.007	4	675	2238	2
	Ba	135	0.483	ug/L	0.022	4	41	2079	3
	Ba	137	0.490	ug/L	0.028	5	73	3653	2
>	Tb	159		ug/L			1186124	1162157	1
	Tl	205	0.199	ug/L	0.000	0	270	7391	1
	Pb	208	0.096	ug/L	0.001	1	477	4975	1
	Bi	209		ug/L			2621879	2635085	0
	Th	232	0.178	ug/L	0.005	2	1082	9145	1
	U	238	0.195	ug/L	0.003	1	146	9330	2

NS21 : 01765

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 11:26:00
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1617103	1
	Be	9	-0.006	ug/L	0.001	16	52	26	21
	C	13		ug/L			91865	199000	1
	Cl	37		ug/L			4664629	13168570	2
>	Sc	45		ug/L			1199367	1300953	3
	V	51	0.126	ug/L	0.045	35	7921	11862	6
	V-1	51	1.266	ug/L	0.026	2	182	33307	1
	Cr	52	0.630	ug/L	0.054	8	23276	38931	0
	Cr	53	4.535	ug/L	0.032	0	155	11257	3
	Mn	55	0.045	ug/L	0.002	4	856	2278	4
	Co	59	0.019	ug/L	0.002	8	217	665	2
>	Ge	72		ug/L			666955	686334	2
	Ni	60	0.331	ug/L	0.005	1	57	1515	2
	Ni	62	5.087	ug/L	0.726	14	234	3441	14
	Cu	63	1.002	ug/L	0.061	6	374	9931	7
	Cu	65	0.369	ug/L	0.020	5	101	1670	4
	Zn	66	0.723	ug/L	0.015	2	850	2712	2
	Zn	67	4.710	ug/L	0.068	1	128	2160	1
	Zn	68	0.151	ug/L	0.028	18	745	1042	6
	As	75	0.101	ug/L	0.024	23	118	348	13
	As-1	75	0.174	ug/L	0.080	45	9854	10536	0
	Se	82	-0.185	ug/L	0.055	29	0	-44	29
	Se	78	0.395	ug/L	0.199	50	10009	10548	0
	Mo	98	414.911	ug/L	8.604	2	75	2253766	0
	Y	89		ug/L			438666	467624	2
	Kr	83		ug/L			391	645	6
>	In	115		ug/L			956745	959455	2
	Ag	107	0.014	ug/L	0.001	7	77	212	5
	Cd	111	0.244	ug/L	0 031	12	131	1194	9
	Cd	114	0.350	ug/L	0.005	1	64	3958	0
	Sb	121	0.020	ug/L	0.004	21	875	1134	6
	Sb	123	0.015	ug/L	0.002	13	675	823	4
	Ba	135	0.039	ug/L	0.003	8	41	211	8
	Ba	137	0.033	ug/L	0.003	8	73	319	4
>	Tb	159		ug/L			1186124	1223181	1
	Tl	205	0.022	ug/L	0.002	7	270	1122	4
	Pb	208	0.026	ug/L	0.000	1	477	1789	1
	Bi	209		ug/L			2621879	2464744	1
	Th	232	0.056	ug/L	0.022	38	1082	3757	25
	U	238	-0.002	ug/L	0.000	18	146	56	28

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 11:32:31
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1477068	1614269	1
Be	9	-0.007	ug/L	0.001	12	52	20	22
C	13		ug/L			91865	202836	1
Cl	37		ug/L			4664629	13569977	3
Sc	45		ug/L			1199367	1335175	0
V	51	0.207	ug/L	0.032	15	7921	14385	6
V-1	51	1.228	ug/L	0.015	1	182	33185	1
Cr	52	19.796	ug/L	0.409	2	23276	468368	1
Cr	53	23.421	ug/L	0.497	2	155	58937	2
Mn	55	19.386	ug/L	0.123	0	856	596092	0
Co	59	18.827	ug/L	0.379	2	217	426613	1
Ge	72		ug/L			666955	686887	0
Ni	60	20.017	ug/L	0.328	1	57	88128	1
Ni	62	24.245	ug/L	0.950	3	234	15478	3
Cu	63	20.483	ug/L	0.349	1	374	195484	1
Cu	65	19.725	ug/L	0.344	1	101	83910	1
Zn	66	19.402	ug/L	0.222	1	850	50249	1
Zn	67	21.197	ug/L	0.088	0	128	9267	1
Zn	68	18.024	ug/L	0.240	1	745	33464	1
As	75	19.270	ug/L	0.096	0	118	43687	0
As-1	75	19.165	ug/L	0.147	0	9854	53999	0
Se	82	-0.194	ug/L	0.050	25	0	-46	26
Se	78	0.570	ug/L	0.181	31	10009	10669	0
Mo	98	417.794	ug/L	5 976	1	75	2271926	1
Y	89		ug/L			438666	472786	0
Kr	83		ug/L			391	648	6
In	115		ug/L			956745	1005556	0
Ag	107	18.775	ug/L	0.166	0	77	191790	1
Cd	111	19.353	ug/L	0.372	1	131	88528	2
Cd	114	19.434	ug/L	0.330	1	64	226629	1
Sb	121	0.011	ug/L	0.004	33	875	1068	5
Sb	123	0.010	ug/L	0.004	45	675	808	6
Ba	135	0.039	ug/L	0.005	13	41	221	11
Ba	137	0.033	ug/L	0.004	11	73	338	9
Tb	159		ug/L			1186124	1267565	0
Tl	205	0.020	ug/L	0.000	0	270	1082	0
Pb	208	0.025	ug/L	0.002	7	477	1791	4
Bi	209		ug/L			2621879	2494307	0
Th	232	0.006	ug/L	0.001	15	1082	1464	2
U	238	-0.002	ug/L	0.000	4	146	32	18

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 11:39:23
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1477068	1541502	1
	Be	9	191.123	ug/L	1.611	0	52	932084	0
	C	13		ug/L			91865	99601	1
	Cl	37		ug/L			4664629	4927811	1
>	Sc	45		ug/L			1199367	1279414	1
	V	51	195.964	ug/L	2.801	1	7921	5061168	0
	V-1	51	196.053	ug/L	2.006	1	182	5045714	0
	Cr	52	192.934	ug/L	4.836	2	23276	4155764	0
	Cr	53	193.213	ug/L	2.202	1	155	464659	0
	Mn	55	193.593	ug/L	0.096	0	856	5695946	1
	Co	59	189.308	ug/L	1.583	0	217	4108590	2
>	Ge	72		ug/L			666955	656874	0
	Ni	60	192.889	ug/L	3.172	1	57	811591	1
	Ni	62	197.156	ug/L	3.198	1	234	118730	2
	Cu	63	192.829	ug/L	2.624	1	374	1756792	1
	Cu	65	194.456	ug/L	2.727	1	101	790248	2
	Zn	66	188.666	ug/L	3.128	1	850	459978	1
	Zn	67	191.456	ug/L	0.670	0	128	79031	1
	Zn	68	190.426	ug/L	1.135	0	745	331077	0
	As	75	196.237	ug/L	0.975	0	118	424386	0
	As-1	75	196.184	ug/L	0.962	0	9854	438974	0
	Se	82	194.942	ug/L	0.676	0	0	43984	0
	Se	78	192.860	ug/L	1.338	0	10009	126750	1
	Mo	98	204.445	ug/L	1.311	0	75	1063175	0
	Y	89		ug/L			438666	448799	0
	Kr	83		ug/L			391	636	1
>	In	115		ug/L			956745	972903	0
	Ag	107	188.530	ug/L	1.921	1	77	1862669	1
	Cd	111	193.633	ug/L	1.913	0	131	855681	0
	Cd	114	201.588	ug/L	2.310	1	64	2273912	1
	Sb	121	200.891	ug/L	1.456	0	875	2631995	0
	Sb	123	196.573	ug/L	1.064	0	675	1929470	0
	Ba	135	196.680	ug/L	3.168	1	41	861403	0
	Ba	137	199.632	ug/L	1.987	0	73	1514041	1
>	Tb	159		ug/L			1186124	1218348	0
	Tl	205	195.047	ug/L	0.437	0	270	7335177	0
	Pb	208	194.684	ug/L	0.677	0	477	9554372	0
	Bi	209		ug/L			2621879	2421633	0
	Th	232	195.729	ug/L	1.622	0	1082	9315883	0
	U	238	193.634	ug/L	1.628	0	146	9549701	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 11:46:15
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: C:\NexION Data\System\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1508247	2
	Be	9	283.705	ug/L	4.487	1	52	1353399	1
	C	13		ug/L			91865	98935	1
	Cl	37		ug/L			4664629	5076037	1
>	Sc	45		ug/L			1199367	1244928	2
	V	51	298.399	ug/L	4.646	1	7921	7494575	1
	V-1	51	299.780	ug/L	4.678	1	182	7506540	1
	Cr	52	288.456	ug/L	4.088	1	23276	6034185	1
	Cr	53	293.109	ug/L	6.135	2	155	685689	1
	Mn	55	292.599	ug/L	4.685	1	856	8374438	1
	Co	59	284.869	ug/L	0.863	0	217	6015738	2
>	Ge	72		ug/L			666955	641518	1
	Ni	60	294.468	ug/L	3.635	1	57	1209947	1
	Ni	62	293.007	ug/L	5.576	1	234	172235	3
	Cu	63	297.706	ug/L	1.411	0	374	2648542	1
	Cu	65	286.728	ug/L	4.326	1	101	1138049	2
	Zn	66	277.994	ug/L	5.411	1	850	661399	0
	Zn	67	278.454	ug/L	3.000	1	128	112196	1
	Zn	68	280.526	ug/L	2.778	0	745	475977	1
	As	75	291.377	ug/L	1.955	0	118	615346	1
	As-1	75	291.843	ug/L	1.937	0	9854	633120	1
	Se	82	284.685	ug/L	1.682	0	0	62730	1
	Se	78	283.921	ug/L	1.558	0	10009	177677	1
	Mo	98	307.927	ug/L	2.833	0	75	1563798	1
	Y	89		ug/L			438666	438139	0
	Kr	83		ug/L			391	817	4
>	In	115		ug/L			956745	939191	0
	Ag	107	286.724	ug/L	2.720	0	77	2734395	0
	Cd	111	287.074	ug/L	1.150	0	131	1224615	0
	Cd	114	294.743	ug/L	1.618	0	64	3209409	0
	Sb	121	299.886	ug/L	2.165	0	875	3792481	0
	Sb	123	301.482	ug/L	3.516	1	675	2856297	0
	Ba	135	298.909	ug/L	4.292	1	41	1263818	1
	Ba	137	306.706	ug/L	3.339	1	73	2245411	0
>	Tb	159		ug/L			1186124	1196240	0
	Tl	205	288.881	ug/L	1.446	0	270	10666800	1
	Pb	208	288.820	ug/L	1.628	0	477	13916514	0
	Bi	209		ug/L			2621879	2307382	0
	Th	232	291.891	ug/L	2.569	0	1082	13639655	0
	U	238	291.436	ug/L	0.776	0	146	14112502	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 11:53:07
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\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
Li	6		ug/L			1477068	1536377	1
Be	9	0.004	ug/L	0.004	96	52	73	24
C	13		ug/L			91865	96755	0
Cl	37		ug/L			4664629	4825305	1
Sc	45		ug/L			1199367	1247392	2
V	51	0.011	ug/L	0.011	94	7921	8521	4
V-1	51	0.015	ug/L	0.001	8	182	578	6
Cr	52	0.017	ug/L	0.030	174	23276	24571	3
Cr	53	0.032	ug/L	0.010	31	155	236	9
Mn	55	0.010	ug/L	0.002	17	856	1186	3
Co	59	0.004	ug/L	0.002	45	217	310	13
Ge	72		ug/L			666955	667836	0
Ni	60	0.006	ug/L	0.002	28	57	82	8
Ni	62	0.402	ug/L	0.150	37	234	479	18
Cu	63	0.028	ug/L	0.012	43	374	631	16
Cu	65	0.007	ug/L	0.006	89	101	129	18
Zn	66	-0.133	ug/L	0.010	7	850	522	3
Zn	67	-0.087	ug/L	0.042	48	128	92	18
Zn	68	-0.147	ug/L	0.030	20	745	486	10
As	75	0.038	ug/L	0.048	124	118	202	50
As-1	75	0.079	ug/L	0.107	134	9854	10041	1
Se	82	-0.013	ug/L	0.052	403	0	-3	300
Se	78	0.173	ug/L	0.277	160	10009	10128	1
Mo	98	0.043	ug/L	0.011	25	75	300	18
Y	89		ug/L			438666	443982	1
Kr	83		ug/L			391	420	2
In	115		ug/L			956745	986460	1
Ag	107	0.008	ug/L	0.004	51	77	154	23
Cd	111	0.007	ug/L	0.005	75	131	164	12
Cd	114	0.008	ug/L	0.002	27	64	159	15
Sb	121	0.336	ug/L	0.066	19	875	5366	16
Sb	123	0.336	ug/L	0.074	21	675	4046	18
Ba	135	0.000	ug/L	0.003	1129	41	44	27
Ba	137	0.001	ug/L	0.001	102	73	81	6
Tb	159		ug/L			1186124	1204929	1
Tl	205	0.027	ug/L	0.004	13	270	1263	9
Pb	208	0.004	ug/L	0.001	25	477	668	6
Bi	209		ug/L			2621879	2705948	0
Th	232	0.122	ug/L	0.005	4	1082	6836	2
U	238	0.009	ug/L	0.002	25	146	575	17

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:01:38
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1550612	1
	Be	9	50.696	ug/L	1.529	3	52	248687	1
	C	13		ug/L			91865	96070	0
	Cl	37		ug/L			4664629	4929986	2
>	Sc	45		ug/L			1199367	1257493	0
	V	51	48.772	ug/L	0.952	1	7921	1244614	2
	V-1	51	48.866	ug/L	0.692	1	182	1236456	2
	Cr	52	48.847	ug/L	0.939	1	23276	1052702	2
	Cr	53	49.166	ug/L	0.813	1	155	116346	1
	Mn	55	48.771	ug/L	0.827	1	856	1410933	1
	Co	59	47.349	ug/L	0.330	0	217	1010190	1
>	Ge	72		ug/L			666955	664679	1
	Ni	60	50.529	ug/L	0.969	1	57	215142	0
	Ni	62	50.159	ug/L	0.882	1	234	30731	0
	Cu	63	50.369	ug/L	0.390	0	374	464588	0
	Cu	65	50.078	ug/L	0.341	0	101	205991	1
	Zn	66	50.607	ug/L	1.198	2	850	125446	1
	Zn	67	50.628	ug/L	1.481	2	128	21238	2
	Zn	68	49.836	ug/L	0.162	0	745	88224	1
	As	75	49.779	ug/L	0.683	1	118	109014	1
	As-1	75	49.513	ug/L	0.826	1	9854	119438	1
	Se	82	51.413	ug/L	0.381	0	0	11736	0
	Se	78	49.850	ug/L	0 700	1	10009	40544	0
	Mo	98	50.104	ug/L	0.434	0	75	263703	1
	Y	89		ug/L			438666	450435	1
	Kr	83		ug/L			391	440	0
>	In	115		ug/L			956745	981416	1
	Ag	107	48.148	ug/L	1.166	2	77	479802	1
	Cd	111	50.189	ug/L	1.210	2	131	223802	2
	Cd	114	50.448	ug/L	0.698	1	64	573971	0
	Sb	121	49.620	ug/L	0.665	1	875	656402	0
	Sb	123	49.831	ug/L	0.958	1	675	493831	1
	Ba	135	49.350	ug/L	0.646	1	41	218048	0
	Ba	137	49.721	ug/L	0.128	0	73	380457	2
>	Tb	159		ug/L			1186124	1231398	0
	Tl	205	49.911	ug/L	0.192	0	270	1897331	0
	Pb	208	49.717	ug/L	0.241	0	477	2466381	0
	Bi	209		ug/L			2621879	2624808	0
	Th	232	50.551	ug/L	0.605	1	1082	2432512	0
	U	238	50.576	ug/L	0.403	0	146	2521116	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:08:30
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1477068	1559529	1
	Be	9	-0.002	ug/L	0.002	113	52	46	22
	C	13		ug/L			91865	96387	1
	Cl	37		ug/L			4664629	4691333	2
>	Sc	45		ug/L			1199367	1228129	0
	V	51	-0.009	ug/L	0.002	27	7921	7888	1
	V-1	51	0.004	ug/L	0.001	23	182	285	8
	Cr	52	-0.026	ug/L	0.007	26	23276	23293	1
	Cr	53	0.018	ug/L	0.007	37	155	200	7
	Mn	55	0.004	ug/L	0.001	31	856	999	4
	Co	59	-0.001	ug/L	0.001	219	217	211	12
>	Ge	72		ug/L			666955	653059	1
	Ni	60	-0.001	ug/L	0.001	113	57	52	9
	Ni	62	0.126	ug/L	0.025	19	234	304	3
	Cu	63	0.009	ug/L	0.003	30	374	446	5
	Cu	65	0.002	ug/L	0.003	144	101	107	10
	Zn	66	0.448	ug/L	0.029	6	850	1917	4
	Zn	67	0.389	ug/L	0.067	17	128	285	10
	Zn	68	0.437	ug/L	0.050	11	745	1484	6
	As	75	0.060	ug/L	0.043	72	118	244	39
	As-1	75	0.120	ug/L	0.041	34	9854	9909	0
	Se	82	0.055	ug/L	0.037	66	0	11	72
	Se	78	0.291	ug/L	0.245	84	10009	9974	0
	Mo	98	0.013	ug/L	0.016	127	75	138	60
	Y	89		ug/L			438666	435050	1
	Kr	83		ug/L			391	397	1
>	In	115		ug/L			956745	965227	1
	Ag	107	0.002	ug/L	0.008	407	77	96	77
	Cd	111	-0.000	ug/L	0.008	1643	131	130	26
	Cd	114	0.002	ug/L	0.006	369	64	83	84
	Sb	121	0.067	ug/L	0.034	49	875	1756	24
	Sb	123	0.073	ug/L	0.033	45	675	1393	22
	Ba	135	0.003	ug/L	0.003	92	41	56	22
	Ba	137	0.002	ug/L	0.004	175	73	88	29
>	Tb	159		ug/L			1186124	1168556	0
	Tl	205	0.004	ug/L	0.004	105	270	419	38
	Pb	208	0.001	ug/L	0.003	228	477	540	29
	Bi	209		ug/L			2621879	2657865	0
	Th	232	0.077	ug/L	0.005	6	1082	4597	5
	U	238	0.001	ug/L	0.002	284	146	184	62

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS30 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:15:13
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1687018	3
	Be	9	-0.003	ug/L	0.003	90	52	44	30
	C	13		ug/L			91865	148752	3
	Cl	37		ug/L			4664629	4858644	2
>	Sc	45		ug/L			1199367	1332299	0
	V	51	0.022	ug/L	0.008	38	7921	9389	1
	V-1	51	0.004	ug/L	0.002	59	182	302	18
	Cr	52	0.088	ug/L	0.023	26	23276	27806	1
	Cr	53	0.025	ug/L	0.002	9	155	236	1
	Mn	55	0.007	ug/L	0.001	19	856	1167	2
	Co	59	-0.002	ug/L	0.002	85	217	186	24
>	Ge	72		ug/L			666955	700365	0
	Ni	60	0.030	ug/L	0.001	4	57	195	3
	Ni	62	0.063	ug/L	0.019	30	234	286	3
	Cu	63	0.019	ug/L	0.001	6	374	574	1
	Cu	65	0.022	ug/L	0.004	18	101	201	8
	Zn	66	0.109	ug/L	0.011	10	850	1176	2
	Zn	67	0.102	ug/L	0.030	29	128	180	7
	Zn	68	0.085	ug/L	0.001	0	745	940	0
	As	75	0.006	ug/L	0.012	194	118	138	18
	As-1	75	-0.191	ug/L	0.041	21	9854	9901	0
	Se	82	0.040	ug/L	0.038	95	0	8	106
	Se	78	-0.679	ug/L	0.128	18	10009	10071	0
	Mo	98	0.006	ug/L	0.014	221	75	114	68
	Y	89		ug/L			438666	476639	0
	Kr	83		ug/L			391	405	2
>	In	115		ug/L			956745	1028290	1
	Ag	107	0.003	ug/L	0.010	320	77	116	91
	Cd	111	0.002	ug/L	0.008	458	131	149	25
	Cd	114	0.006	ug/L	0.010	169	64	136	83
	Sb	121	-0.002	ug/L	0.006	313	875	915	7
	Sb	123	-0.006	ug/L	0.005	93	675	665	7
	Ba	135	0.005	ug/L	0.005	102	41	66	33
	Ba	137	0.006	ug/L	0 008	141	73	122	51
>	Tb	159		ug/L			1186124	1271793	0
	Tl	205	0.004	ug/L	0.004	97	270	444	33
	Pb	208	0.001	ug/L	0.004	291	477	579	33
	Bi	209		ug/L			2621879	2826435	0
	Th	232	0.043	ug/L	0.013	30	1082	3278	18
	U	238	-0.000	ug/L	0.002	514	146	133	85

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS90 F REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:19:21
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1607510	1
	Be	9	-0.005	ug/L	0.001	15	52	30	14
	C	13		ug/L			91865	112790	1
	Cl	37		ug/L			4664629	4844703	2
>	Sc	45		ug/L			1199367	1316432	0
	V	51	11.834	ug/L	0.135	1	7921	322707	1
	V-1	51	11.912	ug/L	0.188	1	182	315649	1
	Cr	52	6.481	ug/L	0.064	0	23276	168384	1
	Cr	53	6.711	ug/L	0 188	2	155	16770	2
	Mn	55	1.167	ug/L	0.009	0	856	36275	0
	Co	59	0.273	ug/L	0.003	0	217	6340	0
>	Ge	72		ug/L			666955	666418	1
	Ni	60	0.855	ug/L	0.029	3	57	3705	3
	Ni	62	0.647	ug/L	0.067	10	234	628	4
	Cu	63	4.878	ug/L	0.134	2	374	45439	1
	Cu	65	4.778	ug/L	0.076	1	101	19795	0
	Zn	66	2.341	ug/L	0.031	1	850	6627	0
	Zn	67	3.124	ug/L	0.093	2	128	1434	2
	Zn	68	3.152	ug/L	0.067	2	745	6291	1
	As	75	1.891	ug/L	0.036	1	118	4264	1
	As-1	75	1.834	ug/L	0.119	6	9854	13914	0
	Se	82	0.398	ug/L	0.041	10	0	90	9
	Se	78	0.290	ug/L	0.370	127	10009	10177	0
	Mo	98	5.238	ug/L	0.089	1	75	27701	0
	Y	89		ug/L			438666	460981	0
	Kr	83		ug/L			391	419	2
>	In	115		ug/L			956745	999396	0
	Ag	107	-0.002	ug/L	0.001	62	77	61	20
	Cd	111	0.062	ug/L	0.003	5	131	420	3
	Cd	114	0.069	ug/L	0.004	5	64	867	5
	Sb	121	2.695	ug/L	0.038	1	875	37177	1
	Sb	123	2.729	ug/L	0.065	2	675	28213	2
	Ba	135	9.017	ug/L	0.126	1	41	40614	1
	Ba	137	8.915	ug/L	0.005	0	73	69524	0
>	Tb	159		ug/L			1186124	1250055	0
	Tl	205	0.015	ug/L	0.001	3	270	881	3
	Pb	208	0.047	ug/L	0.000	0	477	2870	0
	Bi	209		ug/L			2621879	2596963	0
	Th	232	0.025	ug/L	0.007	26	1082	2362	14
	U	238	0.140	ug/L	0.004	2	146	7218	2

WS91 : 0178W

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS61 AaDUP SPN
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:23:28
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\061213a.cal

RL CV

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1477068	1764386	1
[	Be	9	-0.002	ug/L	0.001	24	52	50	4
	C	13		ug/L			91865	209810	1
	Cl	37		ug/L			4664629	5213812	2
[>	Sc	45		ug/L			1199367	1465801	1
[	V	51	0.851	ug/L	0.023	2	7921	34810	0
[	V-1	51	0.802	ug/L	0.030	3	182	23861	2
[	Cr	52	1.418	ug/L	0.045	3	23276	63238	0
[	Cr	53	1.255	ug/L	0.074	5	155	3644	4
[	Mn	55	373.164	ug/L	7.206	1	856	12575830	0
[	Co	59	1.795	ug/L	0.041	2	217	44885	1
[>	Ge	72		ug/L			666955	701775	1
[	Ni	60	6.801	ug/L	0.079	1	57	30628	0
[	Ni	62	6.486	ug/L	0.243	3	234	4410	3
[	Cu	63	11.792	ug/L	0.076	0	374	115142	0
[	Cu	65	11.770	ug/L	0.061	0	101	51199	0
[	Zn	66	11.186	ug/L	0.066	0	850	29977	1
[	Zn	67	14.867	ug/L	0.220	1	128	6680	1
[	Zn	68	15.065	ug/L	0.276	1	745	28703	0
[	As	75	1.621	ug/L	0.020	1	118	3869	0
[	As-1	75	1.675	ug/L	0.060	3	9854	14284	1
[	Se	82	0.089	ug/L	0 069	77	0	20	81
[	Se	78	0.368	ug/L	0.157	42	10009	10770	1
[	Mo	98	5.657	ug/L	0.164	2	75	31501	1
	Y	89		ug/L			438666	513652	0
	Kr	83		ug/L			391	428	11
[>	In	115		ug/L			956745	1088138	0
[	Ag	107	0.007	ug/L	0.002	28	77	161	12
[	Cd	111	0.029	ug/L	0.006	21	131	293	10
[	Cd	114	0.029	ug/L	0.002	8	64	432	6
[	Sb	121	0.403	ug/L	0.009	2	875	6905	1
[	Sb	123	0.401	ug/L	0.006	1	675	5167	1
[	Ba	135	80.432	ug/L	0.624	0	41	394059	0
[	Ba	137	80.512	ug/L	1.122	1	73	683011	1
[>	Tb	159		ug/L			1186124	1362939	0
[	Tl	205	0.002	ug/L	0.000	20	270	389	3
[	Pb	208	1.803	ug/L	0.020	1	477	99551	0
[	Bi	209		ug/L			2621879	2658096	0
[	Th	232	0.041	ug/L	0.009	21	1082	3437	14
[	U	238	0.006	ug/L	0.001	9	146	493	6

WS61 : 91795

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS61 Aa SPN
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:27:36
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\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
Li	6		ug/L			1477068	1792709	0
Be	9	0.016	ug/L	0.002	14	52	155	8
C	13		ug/L			91865	213321	1
Cl	37		ug/L			4664629	5282843	3
Sc	45		ug/L			1199367	1475476	2
V	51	0.950	ug/L	0.010	1	7921	38004	2
V-1	51	0.880	ug/L	0.014	1	182	26345	0
Cr	52	2.022	ug/L	0.040	1	23276	78555	1
Cr	53	1.789	ug/L	0.074	4	155	5148	1
Mn	55	372.457	ug/L	8.430	2	856	12632726	0
Co	59	1.780	ug/L	0.069	3	217	44799	1
Ge	72		ug/L			666955	715948	2
Ni	60	6.761	ug/L	0.049	0	57	31064	1
Ni	62	6.329	ug/L	0.110	1	234	4396	1
Cu	63	12.378	ug/L	0.120	0	374	123272	1
Cu	65	12.725	ug/L	0.171	1	101	56453	0
Zn	66	10.662	ug/L	0.440	4	850	29177	2
Zn	67	14.440	ug/L	0.327	2	128	6622	0
Zn	68	14.091	ug/L	0.468	3	745	27432	1
As	75	1.585	ug/L	0 027	1	118	3861	0
As-1	75	1.658	ug/L	0.084	5	9854	14529	0
Se	82	0.070	ug/L	0.032	45	0	16	49
Se	78	0.415	ug/L	0.181	43	10009	11017	0
Mo	98	5.840	ug/L	0.179	3	75	33170	1
Y	89		ug/L			438666	513793	1
Kr	83		ug/L			391	436	5
In	115		ug/L			956745	1104104	1
Ag	107	0.007	ug/L	0.003	39	77	163	18
Cd	111	0.033	ug/L	0.004	12	131	315	7
Cd	114	0.026	ug/L	0.002	7	64	409	5
Sb	121	0.368	ug/L	0.005	1	875	6479	1
Sb	123	0.365	ug/L	0.014	3	675	4841	2
Ba	135	79.276	ug/L	1.342	1	41	394039	0
Ba	137	79.555	ug/L	1.197	1	73	684704	0
Tb	159		ug/L			1186124	1379515	0
Tl	205	0.006	ug/L	0.000	2	270	590	1
Pb	208	1.726	ug/L	0.015	0	477	96458	0
Bi	209		ug/L			2621879	2664715	0
Th	232	0.005	ug/L	0.002	40	1082	1504	6
U	238	0.005	ug/L	0.000	3	146	471	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS61 AaSPK SPN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:31:43
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1581003	1
	Be	9	24.797	ug/L	0.288	1	52	124079	0
	C	13		ug/L			91865	105343	0
	Cl	37		ug/L			4664629	4824388	0
>	Sc	45		ug/L			1199367	1273981	1
	V	51	23.913	ug/L	0.600	2	7921	622352	1
	V-1	51	24.099	ug/L	0.752	3	182	617684	2
	Cr	52	24.474	ug/L	0.454	1	23276	546693	2
	Cr	53	25.113	ug/L	0.194	0	155	60283	1
	Mn	55	45.257	ug/L	0.854	1	856	1326353	1
	Co	59	24.481	ug/L	0.502	2	217	529109	0
>	Ge	72		ug/L			666955	684178	0
	Ni	60	25.444	ug/L	0.510	2	57	111564	2
	Ni	62	24.904	ug/L	0.555	2	234	15829	2
	Cu	63	26.407	ug/L	0.645	2	374	250923	2
	Cu	65	26.270	ug/L	0.229	0	101	111282	1
	Zn	66	80.866	ug/L	0.125	0	850	205845	0
	Zn	67	74.042	ug/L	0.989	1	128	31916	1
	Zn	68	78.906	ug/L	0.570	0	745	143342	0
	As	75	24.857	ug/L	0.323	1	118	56097	1
	As-1	75	25.053	ug/L	0.224	0	9854	67205	0
	Se	82	80.257	ug/L	0.449	0	0	18860	0
	Se	78	77.667	ug/L	0.540	0	10009	59298	1
	Mo	98	0.279	ug/L	0.007	2	75	1587	2
	Y	89		ug/L			438666	463690	2
	Kr	83		ug/L			391	414	2
>	In	115		ug/L			956745	1013557	0
	Ag	107	24.342	ug/L	0.461	1	77	250603	1
	Cd	111	24.932	ug/L	0.066	0	131	114905	0
	Cd	114	24.815	ug/L	0.462	1	64	291679	2
	Sb	121	-0.029	ug/L	0.004	13	875	526	9
	Sb	123	-0.030	ug/L	0.003	10	675	411	6
	Ba	135	29.027	ug/L	0.517	1	41	132496	2
	Ba	137	28.671	ug/L	0.170	0	73	226604	1
>	Tb	159		ug/L			1186124	1249058	0
	Tl	205	25.193	ug/L	0.201	0	270	971529	0
	Pb	208	25.792	ug/L	0.099	0	477	1298083	0
	Bi	209		ug/L			2621879	2783786	0
	Th	232	23.781	ug/L	0.133	0	1082	1161377	0
	U	238	24.631	ug/L	0.293	1	146	1245437	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS30 IDUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:35:51
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			1477068	1609081	2
	Be	9	0.136	ug/L	0.008	5	52	750	5
	C	13		ug/L			91865	149640	1
	Cl	37		ug/L			4664629	5129609	5
>	Sc	45		ug/L			1199367	1402551	0
	V	51	26.868	ug/L	0.494	1	7921	768757	1
	V-1	51	26.911	ug/L	0.562	2	182	759461	1
	Cr	52	12.977	ug/L	0.085	0	23276	331906	1
	Cr	53	13.033	ug/L	0.238	1	155	34532	1
	Mn	55	89.969	ug/L	1.753	1	856	2902577	2
	Co	59	3.528	ug/L	0.055	1	217	84174	1
>	Ge	72		ug/L			666955	693345	1
	Ni	60	9.311	ug/L	0.166	1	57	41411	2
	Ni	62	10.627	ug/L	0.298	2	234	6984	2
	Cu	63	37.492	ug/L	0.203	0	374	360861	1
	Cu	65	36.812	ug/L	0.599	1	101	157961	0
	Zn	66	53.163	ug/L	1.098	2	850	137436	2
	Zn	67	51.259	ug/L	0.614	1	128	22431	1
	Zn	68	52.364	ug/L	0.561	1	745	96656	0
	As	75	5.007	ug/L	0.035	0	118	11548	1
	As-1	75	4.815	ug/L	0.104	2	9854	21363	0
	Se	82	0.131	ug/L	0.038	28	0	30	29
	Se	78	-0.195	ug/L	0.310	158	10009	10279	0
	Mo	98	0.654	ug/L	0.017	2	75	3666	2
	Y	89		ug/L			438666	591658	0
	Kr	83		ug/L			391	532	3
>	In	115		ug/L			956745	1026080	2
	Ag	107	0.112	ug/L	0.006	5	77	1248	7
	Cd	111	0.192	ug/L	0.013	6	131	1038	7
	Cd	114	0.110	ug/L	0.006	5	64	1373	3
	Sb	121	-0.007	ug/L	0.003	42	875	837	4
	Sb	123	-0.007	ug/L	0.006	83	675	647	8
	Ba	135	32.208	ug/L	0.672	2	41	148779	0
	Ba	137	32.317	ug/L	0.604	1	73	258500	0
>	Tb	159		ug/L			1186124	1298007	1
	Tl	205	0.075	ug/L	0.001	1	270	3311	2
	Pb	208	20.846	ug/L	0.096	0	477	1090370	0
	Bi	209		ug/L			2621879	2719083	1
	Th	232	0.906	ug/L	0.053	5	1082	47107	5
	U	238	0.500	ug/L	0.011	2	146	26413	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS30 I SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:39:59
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			1477068	1671594	2
	Be	**9**	**0.148**	ug/L	0.010	6	52	840	4
	C	**13**		ug/L			91865	140875	1
	Cl	**37**		ug/L			4664629	4977074	3
>	**Sc**	**45**		ug/L			1199367	1406012	0
	V	**51**	**29.684**	ug/L	0.071	0	7921	850531	0
	V-1	**51**	**29.730**	ug/L	0.049	0	182	841146	0
	Cr	**52**	**13.596**	ug/L	0.414	3	23276	347238	2
	Cr	**53**	**13.646**	ug/L	0.298	2	155	36236	1
	Mn	**55**	**95.641**	ug/L	0.573	0	856	3092857	0
	Co	**59**	**3.494**	ug/L	0.057	1	217	83572	1
>	**Ge**	**72**		ug/L			666955	694885	0
	Ni	**60**	**8.562**	ug/L	0 035	0	57	38167	0
	Ni	**62**	**10.525**	ug/L	0.209	1	234	6935	1
	Cu	**63**	**36.733**	ug/L	0.295	0	374	354338	0
	Cu	**65**	**36.763**	ug/L	0.296	0	101	158124	0
	Zn	**66**	**55.988**	ug/L	0.236	0	850	145022	0
	Zn	**67**	**55.388**	ug/L	0.229	0	128	24281	0
	Zn	**68**	**55.362**	ug/L	0.901	1	745	102377	1
	As	**75**	**4.980**	ug/L	0.035	0	118	11513	0
	As-1	**75**	**4.757**	ug/L	0.003	0	9854	21278	0
	Se	**82**	**0.117**	ug/L	0.087	74	0	26	76
	Se	**78**	**-0.276**	ug/L	0.127	46	10009	10251	0
	Mo	**98**	**0.659**	ug/L	0.017	2	75	3705	2
	Y	**89**		ug/L			438666	597699	0
	Kr	**83**		ug/L			391	571	7
>	**In**	**115**		ug/L			956745	1029796	1
	Ag	**107**	**0.139**	ug/L	0.001	0	77	1540	0
	Cd	**111**	**0.223**	ug/L	0.027	12	131	1185	10
	Cd	**114**	**0.128**	ug/L	0.004	3	64	1601	2
	Sb	**121**	**-0.009**	ug/L	0.002	18	875	813	3
	Sb	**123**	**-0.011**	ug/L	0.002	17	675	607	3
	Ba	**135**	**52.816**	ug/L	0.322	0	41	244891	0
	Ba	**137**	**52.938**	ug/L	0.620	1	73	425018	1
>	**Tb**	**159**		ug/L			1186124	1296878	1
	Tl	**205**	**0.058**	ug/L	0.001	1	270	2620	0
	Pb	**208**	**18.696**	ug/L	0.295	1	477	976993	0
	Bi	**209**		ug/L			2621879	2714276	0
	Th	**232**	**0.761**	ug/L	0.017	2	1082	39728	1
	U	**238**	**0.505**	ug/L	0.005	1	146	26672	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS30 ISPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:44:07
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1477068	1609709	0
	Be	9	24.688	ug/L	0.054	0	52	125787	0
	C	13		ug/L			91865	138655	2
	Cl	37		ug/L			4664629	5026487	0
>	Sc	45		ug/L			1199367	1411417	0
	V	51	51.597	ug/L	0.471	0	7921	1477207	1
	V-1	51	51.699	ug/L	0.441	0	182	1468180	1
	Cr	52	36.951	ug/L	0.295	0	23276	900420	0
	Cr	53	37.203	ug/L	0.346	0	155	98860	1
	Mn	55	117.944	ug/L	0.356	0	856	3828584	0
	Co	59	25.720	ug/L	0.512	1	217	615999	1
>	Ge	72		ug/L			666955	687378	0
	Ni	60	34.732	ug/L	0.251	0	57	152976	0
	Ni	62	35.579	ug/L	0.374	1	234	22616	1
	Cu	63	69.648	ug/L	1.729	2	374	664245	2
	Cu	65	70.312	ug/L	0.662	0	101	299063	1
	Zn	66	152.870	ug/L	3.103	2	850	390166	1
	Zn	67	140.991	ug/L	0.311	0	128	60936	0
	Zn	68	148.405	ug/L	0.331	0	745	270181	0
	As	75	29.796	ug/L	0.286	0	118	67534	0
	As-1	75	30.183	ug/L	0.078	0	9854	79265	0
	Se	82	79.634	ug/L	0.257	0	0	18801	0
	Se	78	78.164	ug/L	1.184	1	10009	59890	1
	Mo	98	0.760	ug/L	0.003	0	75	4210	0
	Y	89		ug/L			438666	587341	0
	Kr	83		ug/L			391	566	9
>	In	115		ug/L			956745	1026952	0
	Ag	107	22.998	ug/L	0.308	1	77	239901	1
	Cd	111	25.368	ug/L	0.278	1	131	118458	1
	Cd	114	25.265	ug/L	0.365	1	64	300869	1
	Sb	121	-0.006	ug/L	0.001	21	875	849	2
	Sb	123	-0.009	ug/L	0.001	13	675	629	1
	Ba	135	61.647	ug/L	0.375	0	41	285046	0
	Ba	137	62.230	ug/L	0.509	0	73	498233	0
>	Tb	159		ug/L			1186124	1293802	0
	Tl	205	24.640	ug/L	0.193	0	270	984253	0
	Pb	208	46.285	ug/L	0.254	0	477	2412582	0
	Bi	209		ug/L			2621879	2697189	0
	Th	232	24.808	ug/L	0.193	0	1082	1254930	0
	U	238	24.818	ug/L	0.277	1	146	1299922	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS30 REF1 SWN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:48:14
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
Li	6		ug/L			1477068	1617144	3
Be	9	33.214	ug/L	0.383	1	52	169951	1
C	13		ug/L			91865	121775	1
Cl	37		ug/L			4664629	4926963	2
Sc	45		ug/L			1199367	1328932	2
V	51	28.217	ug/L	0.579	2	7921	764418	0
V-1	51	28.302	ug/L	0.657	2	182	756628	0
Cr	52	25.494	ug/L	0.467	1	23276	592794	0
Cr	53	25.766	ug/L	0.756	2	155	64494	0
Mn	55	168.951	ug/L	2.746	1	856	5162301	0
Co	59	26.365	ug/L	0.441	1	217	594440	1
Ge	72		ug/L			666955	687825	1
Ni	60	21.535	ug/L	0.440	2	57	94944	2
Ni	62	21.296	ug/L	0.136	0	234	13643	0
Cu	63	26.365	ug/L	0.336	1	374	251854	1
Cu	65	26.954	ug/L	0.404	1	101	114775	1
Zn	66	69.528	ug/L	0.405	0	850	178055	1
Zn	67	70.587	ug/L	1.322	1	128	30590	1
Zn	68	73.341	ug/L	0.299	0	745	133994	0
As	75	47.055	ug/L	0.313	0	118	106647	0
As-1	75	46.799	ug/L	0.123	0	9854	117387	1
Se	82	62.457	ug/L	1.512	2	0	14753	1
Se	78	60.279	ug/L	0.789	1	10009	48575	0
Mo	98	14.383	ug/L	0.375	2	75	78377	1
Y	89		ug/L			438666	599765	2
Kr	83		ug/L			391	509	4
In	115		ug/L			956745	1032950	1
Ag	107	37.450	ug/L	0.574	1	77	392903	2
Cd	111	25.612	ug/L	0.371	1	131	120284	1
Cd	114	25.840	ug/L	0.667	2	64	309444	1
Sb	121	1.456	ug/L	0.023	1	875	21192	0
Sb	123	1.477	ug/L	0.007	0	675	16118	1
Ba	135	120.502	ug/L	1.652	1	41	560339	0
Ba	137	120.909	ug/L	0.452	0	73	973591	1
Tb	159		ug/L			1186124	1296159	0
Tl	205	51.725	ug/L	1.611	3	270	2069615	2
Pb	208	49.178	ug/L	0.324	0	477	2568003	0
Bi	209		ug/L			2621879	2798283	0
Th	232	4.162	ug/L	0.059	1	1082	211905	1
U	238	0.558	ug/L	0.006	1	146	29423	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS30 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:52:22
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1587464	0
	Be	9	24.418	ug/L	0.112	0	52	122692	0
	C	13		ug/L			91865	110742	1
	Cl	37		ug/L			4664629	4771719	0
>	Sc	45		ug/L			1199367	1271981	1
	V	51	23.759	ug/L	0.072	0	7921	617512	1
	V-1	51	23.923	ug/L	0.199	0	182	612307	0
	Cr	52	24.509	ug/L	0.290	1	23276	546573	2
	Cr	53	25.075	ug/L	0.270	1	155	60098	0
	Mn	55	24.734	ug/L	0.368	1	856	724181	0
	Co	59	24.424	ug/L	0.601	2	217	527083	1
>	Ge	72		ug/L			666955	673367	2
	Ni	60	26.013	ug/L	0.606	2	57	112228	1
	Ni	62	24.942	ug/L	1.086	4	234	15593	2
	Cu	63	25.859	ug/L	0.825	3	374	241713	1
	Cu	65	26.038	ug/L	0.814	3	101	108503	0
	Zn	66	80.986	ug/L	2.964	3	850	202783	1
	Zn	67	73.566	ug/L	1.518	2	128	31199	0
	Zn	68	78.906	ug/L	1.552	1	745	141046	1
	As	75	24.657	ug/L	0.814	3	118	54741	1
	As-1	75	25.291	ug/L	0.891	3	9854	66646	0
	Se	82	79.774	ug/L	2.388	2	0	18442	0
	Se	78	78.759	ug/L	2.601	3	10009	59013	0
	Mo	98	0.002	ug/L	0.002	61	75	88	7
	Y	89		ug/L			438666	454960	0
	Kr	83		ug/L			391	393	7
>	In	115		ug/L			956745	1027359	1
	Ag	107	24.639	ug/L	0.466	1	77	257145	3
	Cd	111	24.793	ug/L	0.298	1	131	115809	0
	Cd	114	24.655	ug/L	0.426	1	64	293680	0
	Sb	121	-0.056	ug/L	0.001	1	875	167	8
	Sb	123	-0.058	ug/L	0.001	1	675	123	10
	Ba	135	24.407	ug/L	0.307	1	41	112916	0
	Ba	137	24.594	ug/L	0.655	2	73	196986	1
>	Tb	159		ug/L			1186124	1250243	0
	Tl	205	25.224	ug/L	0 169	0	270	973659	0
	Pb	208	25.490	ug/L	0.320	1	477	1284092	0
	Bi	209		ug/L			2621879	2803272	0
	Th	232	24.000	ug/L	0.449	1	1082	1173073	0
	U	238	24.519	ug/L	0.317	1	146	1240969	0

WS31 : 61892

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 12:57:35
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1477068	1549492	2
	Be	9	49.423	ug/L	1.668	3	52	242213	1
	C	13		ug/L			91865	98697	1
	Cl	37		ug/L			4664629	5050113	3
>	Sc	45		ug/L			1199367	1256650	0
	V	51	47.381	ug/L	1.052	2	7921	1208329	1
	V-1	51	47.749	ug/L	0.724	1	182	1207215	0
	Cr	52	48.125	ug/L	1.043	2	23276	1036646	1
	Cr	53	49.386	ug/L	1.019	2	155	116784	1
	Mn	55	48.520	ug/L	0.172	0	856	1402817	0
	Co	59	47.725	ug/L	0.334	0	217	1017478	0
>	Ge	72		ug/L			666955	661870	0
	Ni	60	49.348	ug/L	0.242	0	57	209266	0
	Ni	62	48.860	ug/L	0.889	1	234	29818	1
	Cu	63	50.431	ug/L	0.554	1	374	463200	0
	Cu	65	49.370	ug/L	0.447	0	101	202216	0
	Zn	66	49.607	ug/L	0.483	0	850	122482	0
	Zn	67	49.832	ug/L	0.104	0	128	20820	0
	Zn	68	49.708	ug/L	0.302	0	745	87630	0
	As	75	49.471	ug/L	0.438	0	118	107890	0
	As-1	75	49.349	ug/L	0.393	0	9854	118580	0
	Se	82	50.792	ug/L	0.325	0	0	11546	0
	Se	78	49.769	ug/L	0.293	0	10009	40326	0
	Mo	98	49.794	ug/L	0.137	0	75	260976	0
	Y	89		ug/L			438666	449235	1
	Kr	83		ug/L			391	439	4
>	In	115		ug/L			956745	1000824	0
	Ag	107	47.211	ug/L	0.462	0	77	479833	0
	Cd	111	49.022	ug/L	0.545	1	131	222946	0
	Cd	114	49.296	ug/L	1.006	2	64	571991	1
	Sb	121	48.209	ug/L	0.810	1	875	650389	0
	Sb	123	48.906	ug/L	1.068	2	675	494297	1
	Ba	135	48.446	ug/L	0.463	0	41	218306	0
	Ba	137	49.153	ug/L	0.497	1	73	383518	0
>	Tb	159		ug/L			1186124	1224000	0
	Tl	205	49.720	ug/L	0.386	0	270	1878662	0
	Pb	208	50.084	ug/L	0.097	0	477	2469726	0
	Bi	209		ug/L			2621879	2652502	0
	Th	232	50.858	ug/L	0.397	0	1082	2432723	0
	U	238	50.779	ug/L	0.314	0	146	2516067	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 13:04:28
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1521330	2
	Be	9	-0.003	ug/L	0 000	13	52	37	3
	C	13		ug/L			91865	96070	1
	Cl	37		ug/L			4664629	4741171	1
>	Sc	45		ug/L			1199367	1225794	1
	V	51	-0.010	ug/L	0.002	21	7921	7836	2
	V-1	51	-0.001	ug/L	0.001	121	182	161	20
	Cr	52	-0.038	ug/L	0.007	18	23276	23008	2
	Cr	53	-0.006	ug/L	0.002	38	155	145	4
	Mn	55	0.007	ug/L	0.002	29	856	1059	6
	Co	59	-0.001	ug/L	0.001	110	217	211	7
>	Ge	72		ug/L			666955	641584	1
	Ni	60	0.000	ug/L	0.001	323	57	57	11
	Ni	62	-0.028	ug/L	0.024	85	234	208	5
	Cu	63	-0.001	ug/L	0.002	326	374	354	6
	Cu	65	0.001	ug/L	0.006	490	101	103	24
	Zn	66	0.467	ug/L	0.017	3	850	1928	2
	Zn	67	0.362	ug/L	0.017	4	128	269	1
	Zn	68	0.407	ug/L	0.010	2	745	1406	2
	As	75	0.010	ug/L	0.006	62	118	134	8
	As-1	75	0.151	ug/L	0.074	49	9854	9799	0
	Se	82	0.040	ug/L	0.018	45	0	7	51
	Se	78	0.563	ug/L	0.276	49	10009	9960	0
	Mo	98	0.002	ug/L	0.001	74	75	80	7
	Y	89		ug/L			438666	434129	0
	Kr	83		ug/L			391	390	2
>	In	115		ug/L			956745	966702	0
	Ag	107	-0.001	ug/L	0.005	803	77	71	75
	Cd	111	-0.004	ug/L	0.001	25	131	116	3
	Cd	114	-0.001	ug/L	0.003	373	64	55	67
	Sb	121	0.021	ug/L	0.015	71	875	1161	17
	Sb	123	0.019	ug/L	0.017	85	675	870	18
	Ba	135	0.002	ug/L	0.005	350	41	49	49
	Ba	137	0.002	ug/L	0.004	242	73	87	38
>	Tb	159		ug/L			1186124	1198848	2
	Tl	205	-0.000	ug/L	0.002	6702	270	272	32
	Pb	208	-0.000	ug/L	0.001	267	477	461	14
	Bi	209		ug/L			2621879	2673265	1
	Th	232	0.077	ug/L	0.006	7	1082	4709	5
	U	238	-0.001	ug/L	0.001	125	146	106	52

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS30 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 13:10:18
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1570243	1
	Be	9	0.139	ug/L	0.006	4	52	746	5
	C	13		ug/L			91865	132537	2
	Cl	37		ug/L			4664629	5044901	2
>	Sc	45		ug/L			1199367	1351610	0
	V	51	29.487	ug/L	0.298	1	7921	812204	0
	V-1	51	29.664	ug/L	0.355	1	182	806734	0
	Cr	52	13.053	ug/L	0.127	0	23276	321539	0
	Cr	53	13.548	ug/L	0.242	1	155	34584	1
	Mn	55	120.659	ug/L	1.542	1	856	3750449	0
	Co	59	3.771	ug/L	0.042	1	217	86698	0
>	Ge	72		ug/L			666955	670314	0
	Ni	60	10.449	ug/L	0.153	1	57	44920	1
	Ni	62	11.951	ug/L	0.264	2	234	7564	2
	Cu	63	47.772	ug/L	0.692	1	374	444383	0
	Cu	65	47.868	ug/L	0.376	0	101	198574	0
	Zn	66	56.940	ug/L	1.158	2	850	142255	2
	Zn	67	55.868	ug/L	0.306	0	128	23624	0
	Zn	68	56.171	ug/L	0.386	0	745	100186	0
	As	75	5.406	ug/L	0.074	1	118	12045	1
	As-1	75	5.263	ug/L	0.115	2	9854	21653	0
	Se	82	0.117	ug/L	0.049	41	0	25	42
	Se	78	-0.010	ug/L	0.246	2502	10009	10053	0
	Mo	98	0.560	ug/L	0.027	4	75	3047	4
	Y	89		ug/L			438666	575896	1
	Kr	83		ug/L			391	521	1
>	In	115		ug/L			956745	1009824	1
	Ag	107	0.157	ug/L	0.002	1	77	1686	1
	Cd	111	0.262	ug/L	0.017	6	131	1340	5
	Cd	114	0.175	ug/L	0.006	3	64	2120	2
	Sb	121	0.006	ug/L	0.005	93	875	999	7
	Sb	123	0.006	ug/L	0.004	63	675	775	5
	Ba	135	58.394	ug/L	0.488	0	41	265494	0
	Ba	137	58.202	ug/L	0.197	0	73	458211	0
>	Tb	159		ug/L			1186124	1253109	0
	Tl	205	0.042	ug/L	0.002	4	270	1914	3
	Pb	208	36.127	ug/L	0.135	0	477	1823997	0
	Bi	209		ug/L			2621879	2642100	0
	Th	232	0.695	ug/L	0.006	0	1082	35152	0
	U	238	0.377	ug/L	0.005	1	146	19278	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS30 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 13:14:25
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: C:\NexION Data\System\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	**Li**	**6**		ug/L			1477068	1586763	2
	Be	**9**	**0.101**	ug/L	0.003	3	52	564	4
	C	**13**		ug/L			91865	121284	2
	Cl	**37**		ug/L			4664629	5026692	1
>	**Sc**	**45**		ug/L			1199367	1337364	1
	V	**51**	**24.871**	ug/L	0.473	1	7921	679180	0
	V-1	**51**	**24.944**	ug/L	0.446	1	182	671209	0
	Cr	**52**	**7.358**	ug/L	0.196	2	23276	190653	1
	Cr	**53**	**7.490**	ug/L	0.105	1	155	18994	0
	Mn	**55**	**78.674**	ug/L	1.340	1	856	2419872	0
	Co	**59**	**2.920**	ug/L	0.057	1	217	66486	2
>	**Ge**	**72**		ug/L			666955	683414	0
	Ni	**60**	**6.497**	ug/L	0.028	0	57	28499	0
	Ni	**62**	**7.703**	ug/L	0.131	1	234	5056	1
	Cu	**63**	**10.870**	ug/L	0.041	0	374	103394	0
	Cu	**65**	**10.637**	ug/L	0.083	0	101	45072	1
	Zn	**66**	**21.696**	ug/L	0.428	1	850	55806	2
	Zn	**67**	**22.168**	ug/L	0.472	2	128	9636	1
	Zn	**68**	**21.220**	ug/L	0.726	3	745	39065	3
	As	**75**	**1.757**	ug/L	0.043	2	118	4074	2
	As-1	**75**	**1.633**	ug/L	0.047	2	9854	13814	1
	Se	**82**	**0.030**	ug/L	0.030	99	0	6	115
	Se	**78**	**-0.217**	ug/L	0.076	35	10009	10120	0
	Mo	**98**	**0.215**	ug/L	0.011	4	75	1242	4
	Y	**89**		ug/L			438666	560706	1
	Kr	**83**		ug/L			391	503	3
>	**In**	**115**		ug/L			956745	1009658	1
	Ag	**107**	**0.036**	ug/L	0.004	11	77	452	10
	Cd	**111**	**0.099**	ug/L	0 013	12	131	591	10
	Cd	**114**	**0.029**	ug/L	0.001	3	64	408	2
	Sb	**121**	**-0.043**	ug/L	0.005	11	875	333	20
	Sb	**123**	**-0.046**	ug/L	0.005	10	675	242	19
	Ba	**135**	**17.316**	ug/L	0.289	1	41	78746	1
	Ba	**137**	**17.362**	ug/L	0.261	1	73	136717	1
>	**Tb**	**159**		ug/L			1186124	1273494	1
	Tl	**205**	**0.023**	ug/L	0.000	1	270	1197	1
	Pb	**208**	**4.013**	ug/L	0.059	1	477	206342	0
	Bi	**209**		ug/L			2621879	2719844	0
	Th	**232**	**0.582**	ug/L	0.013	2	1082	30103	0
	U	**238**	**0.184**	ug/L	0.005	2	146	9619	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS30 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 13:18:33
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1601954	1
	Be	9	0.170	ug/L	0.006	3	52	919	1
	C	13		ug/L			91865	130793	2
	Cl	37		ug/L			4664629	4999455	3
>	Sc	45		ug/L			1199367	1387893	2
	V	51	31.154	ug/L	0.722	2	7921	880385	0
	V-1	51	31.251	ug/L	0.744	2	182	872437	0
	Cr	52	11.633	ug/L	0.177	1	23276	297185	2
	Cr	53	11.835	ug/L	0.166	1	155	31040	1
	Mn	55	110.811	ug/L	2.318	2	856	3536385	1
	Co	59	4.075	ug/L	0.091	2	217	96161	0
>	Ge	72		ug/L			666955	678729	1
	Ni	60	10.448	ug/L	0.100	0	57	45479	1
	Ni	62	11.824	ug/L	0.128	1	234	7580	1
	Cu	63	17.902	ug/L	0.128	0	374	168878	2
	Cu	65	17.879	ug/L	0.460	2	101	75142	0
	Zn	66	23.662	ug/L	0.184	0	850	60364	1
	Zn	67	25.608	ug/L	0.904	3	128	11033	3
	Zn	68	23.445	ug/L	0.633	2	745	42776	2
	As	75	3.192	ug/L	0.051	1	118	7251	1
	As-1	75	3.061	ug/L	0.127	4	9854	16945	0
	Se	82	0.142	ug/L	0.046	32	0	32	33
	Se	78	-0.003	ug/L	0.299	8900	10009	10181	0
	Mo	98	0.263	ug/L	0.009	3	75	1486	2
	Y	89		ug/L			438666	600395	0
	Kr	83		ug/L			391	555	2
>	In	115		ug/L			956745	1016524	1
	Ag	107	0.050	ug/L	0.004	7	77	602	6
	Cd	111	0.122	ug/L	0.006	5	131	704	3
	Cd	114	0.042	ug/L	0.002	3	64	561	2
	Sb	121	-0.049	ug/L	0.003	7	875	254	17
	Sb	123	-0.050	ug/L	0.002	4	675	202	11
	Ba	135	23.552	ug/L	0.397	1	41	107809	0
	Ba	137	23.852	ug/L	0.500	2	73	189055	1
>	Tb	159		ug/L			1186124	1280105	1
	Tl	205	0.044	ug/L	0.001	2	270	2019	1
	Pb	208	2.507	ug/L	0.041	1	477	129761	0
	Bi	209		ug/L			2621879	2708534	0
	Th	232	0.861	ug/L	0.014	1	1082	44234	0
	U	238	0.269	ug/L	0.010	3	146	14116	2

WS91 : 014207

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS30 D SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 13:22:40
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1597374	1
	Be	9	0.112	ug/L	0.009	7	52	623	5
	C	13		ug/L			91865	140006	2
	Cl	37		ug/L			4664629	5158817	3
>	Sc	45		ug/L			1199367	1372814	3
	V	51	24.142	ug/L	1.230	5	7921	676232	1
	V-1	51	24.189	ug/L	1.279	5	182	667333	1
	Cr	52	11.022	ug/L	0.513	4	23276	279628	0
	Cr	53	11.093	ug/L	0.682	6	155	28752	2
	Mn	55	92.319	ug/L	4.447	4	856	2911418	0
	Co	59	3.238	ug/L	0.098	3	217	75615	2
>	Ge	72		ug/L			666955	681283	1
	Ni	60	8.777	ug/L	0.126	1	57	38360	1
	Ni	62	10.047	ug/L	0.066	0	234	6501	0
	Cu	63	31.455	ug/L	0.599	1	374	297500	0
	Cu	65	31.409	ug/L	0.344	1	101	132457	0
	Zn	66	43.093	ug/L	0.455	1	850	109631	0
	Zn	67	41.754	ug/L	0.891	2	128	17976	1
	Zn	68	42.564	ug/L	0.668	1	745	77338	0
	As	75	4.151	ug/L	0.046	1	118	9428	0
	As-1	75	3.973	ug/L	0.038	0	9854	19081	0
	Se	82	0.190	ug/L	0.051	26	0	43	27
	Se	78	-0.157	ug/L	0.097	62	10009	10125	0
	Mo	98	0.565	ug/L	0.002	0	75	3126	1
	Y	89		ug/L			438666	560875	1
	Kr	83		ug/L			391	500	2
>	In	115		ug/L			956745	1011539	1
	Ag	107	0.097	ug/L	0.004	3	77	1077	2
	Cd	111	0.177	ug/L	0.014	8	131	950	6
	Cd	114	0.115	ug/L	0.000	0	64	1413	0
	Sb	121	-0.034	ug/L	0.004	12	875	456	11
	Sb	123	-0.035	ug/L	0.003	9	675	352	8
	Ba	135	33.856	ug/L	0.586	1	41	154199	0
	Ba	137	34.088	ug/L	0.735	2	73	268821	1
>	Tb	159		ug/L			1186124	1257829	0
	Tl	205	0.038	ug/L	0.001	2	270	1746	2
	Pb	208	15.382	ug/L	0.207	1	477	779778	0
	Bi	209		ug/L			2621879	2697505	0
	Th	232	0.612	ug/L	0.010	1	1082	31196	0
	U	238	0.324	ug/L	0.004	1	146	16668	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS30 E SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 13:26:48
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\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1477068	1606947	1
Be	9	0.137	ug/L	0.003	2	52	752	2
C	13		ug/L			91865	151609	3
Cl	37		ug/L			4664629	4910369	1
> Sc	45		ug/L			1199367	1369937	0
V	51	36.088	ug/L	0.465	1	7921	1005568	1
V-1	51	36.066	ug/L	0.421	1	182	994170	1
Cr	52	11.229	ug/L	0.187	1	23276	284104	1
Cr	53	10.986	ug/L	0.094	0	155	28458	0
Mn	55	87.117	ug/L	1.046	1	856	2745083	1
Co	59	3.371	ug/L	0.064	1	217	78585	2
> Ge	72		ug/L			666955	677040	1
Ni	60	7.784	ug/L	0.235	3	57	33804	1
Ni	62	9.139	ug/L	0.179	1	234	5898	1
Cu	63	116.566	ug/L	2.145	1	374	1094539	0
Cu	65	119.943	ug/L	0.923	0	101	502370	0
Zn	66	81.621	ug/L	2.042	2	850	205539	1
Zn	67	74.892	ug/L	2.395	3	128	31932	1
Zn	68	77.676	ug/L	1.564	2	745	139619	0
As	75	5.130	ug/L	0.092	1	118	11549	0
As-1	75	4.994	ug/L	0.178	3	9854	21260	0
Se	82	0.065	ug/L	0.029	44	0	14	47
Se	78	0.015	ug/L	0.330	2187	10009	10149	0
Mo	98	0.349	ug/L	0.010	2	75	1943	1
Y	89		ug/L			438666	572216	1
Kr	83		ug/L			391	550	5
> In	115		ug/L			956745	1028834	0
Ag	107	0.107	ug/L	0.001	0	77	1203	0
Cd	111	0.178	ug/L	0.028	15	131	973	12
Cd	114	0.077	ug/L	0.003	4	64	990	4
Sb	121	-0.024	ug/L	0.000	1	875	603	1
Sb	123	-0.027	ug/L	0.001	2	675	447	1
Ba	135	27.449	ug/L	0.016	0	41	127178	0
Ba	137	27.398	ug/L	0.158	0	73	219800	0
> Tb	159		ug/L			1186124	1282608	1
Tl	205	0.038	ug/L	0.001	2	270	1796	1
Pb	208	15.239	ug/L	0.207	1	477	787749	0
Bi	209		ug/L			2621879	2713559	1
Th	232	0.660	ug/L	0.013	1	1082	34245	0
U	238	0.280	ug/L	0.003	1	146	14683	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS30 F SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 13:30:56
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1477068	1627043	0
Be	9	0.117	ug/L	0.006	5	52	658	5
C	13		ug/L			91865	142694	0
Cl	37		ug/L			4664629	4926334	0
> Sc	45		ug/L			1199367	1382641	0
V	51	29.290	ug/L	0.084	0	7921	825424	0
V-1	51	29.415	ug/L	0.060	0	182	818395	0
Cr	52	7.497	ug/L	0.038	0	23276	200356	0
Cr	53	7.780	ug/L	0.105	1	155	20392	0
Mn	55	83.822	ug/L	1.886	2	856	2665553	1
Co	59	3.005	ug/L	0.078	2	217	70718	2
> Ge	72		ug/L			666955	678821	1
Ni	60	6.473	ug/L	0.125	1	57	28201	1
Ni	62	7.717	ug/L	0.203	2	234	5030	1
Cu	63	10.105	ug/L	0.148	1	374	95485	0
Cu	65	10.028	ug/L	0.308	3	101	42197	1
Zn	66	17.199	ug/L	0.410	2	850	44111	1
Zn	67	18.469	ug/L	0.133	0	128	7997	2
Zn	68	16.996	ug/L	0.244	1	745	31224	0
As	75	2.506	ug/L	0.032	1	118	5718	0
As-1	75	2.355	ug/L	0.098	4	9854	15351	0
Se	82	0.056	ug/L	0.033	59	0	12	64
Se	78	-0.206	ug/L	0.237	114	10009	10057	0
Mo	98	0.241	ug/L	0.001	0	75	1371	1
Y	89		ug/L			438666	565107	0
Kr	83		ug/L			391	539	2
> In	115		ug/L			956745	1028210	1
Ag	107	0.028	ug/L	0.000	1	77	380	2
Cd	111	0.087	ug/L	0.009	10	131	545	8
Cd	114	0.023	ug/L	0.002	8	64	341	8
Sb	121	-0.055	ug/L	0.001	1	875	174	6
Sb	123	-0.058	ug/L	0.004	6	675	124	31
Ba	135	16.620	ug/L	0 094	0	41	76975	1
Ba	137	16.626	ug/L	0.259	1	73	133316	0
> Tb	159		ug/L			1186124	1276955	0
Tl	205	0.026	ug/L	0.001	2	270	1306	1
Pb	208	1.406	ug/L	0.007	0	477	72854	0
Bi	209		ug/L			2621879	2735084	0
Th	232	0.668	ug/L	0.009	1	1082	34504	1
U	238	0.212	ug/L	0.001	0	146	11139	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS30 G SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 13:35:03
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1617199	1
	Be	9	0.144	ug/L	0.002	1	52	795	2
	C	13		ug/L			91865	154243	2
	Cl	37		ug/L			4664629	5014339	1
>	Sc	45		ug/L			1199367	1362765	1
	V	51	29.350	ug/L	0.728	2	7921	815011	1
	V-1	51	29.507	ug/L	0.773	2	182	808976	1
	Cr	52	12.655	ug/L	0.080	0	23276	315124	1
	Cr	53	13.084	ug/L	0.173	1	155	33679	0
	Mn	55	94.075	ug/L	1.008	1	856	2948663	1
	Co	59	3.467	ug/L	0.039	1	217	80374	1
>	Ge	72		ug/L			666955	679255	0
	Ni	60	8.242	ug/L	0.091	1	57	35916	1
	Ni	62	9.737	ug/L	0.095	0	234	6290	1
	Cu	63	43.564	ug/L	0.286	0	374	410713	1
	Cu	65	43.912	ug/L	0.615	1	101	184595	1
	Zn	66	48.124	ug/L	0.257	0	850	121969	0
	Zn	67	55.643	ug/L	0.257	0	128	23844	0
	Zn	68	55.025	ug/L	0.349	0	745	99467	0
	As	75	4.876	ug/L	0.060	1	118	11020	1
	As-1	75	4.689	ug/L	0.079	1	9854	20646	0
	Se	82	0.113	ug/L	0.012	10	0	25	10
	Se	78	-0.194	ug/L	0.133	68	10009	10072	1
	Mo	98	0.447	ug/L	0.007	1	75	2481	0
	Y	89		ug/L			438666	590710	0
	Kr	83		ug/L			391	525	4
>	In	115		ug/L			956745	1037516	1
	Ag	107	0.163	ug/L	0.004	2	77	1804	2
	Cd	111	0.153	ug/L	0.019	12	131	862	9
	Cd	114	0.083	ug/L	0.005	6	64	1069	5
	Sb	121	-0.008	ug/L	0.002	28	875	843	3
	Sb	123	-0.011	ug/L	0.001	5	675	620	0
	Ba	135	163.752	ug/L	0.861	0	41	764891	1
	Ba	137	163.801	ug/L	2.052	1	73	1324699	0
>	Tb	159		ug/L			1186124	1283854	1
	Tl	205	0.039	ug/L	0.000	0	270	1854	0
	Pb	208	17.057	ug/L	0.174	1	477	882500	0
	Bi	209		ug/L			2621879	2720311	0
	Th	232	0.688	ug/L	0.003	0	1082	35675	1
	U	238	0.385	ug/L	0.007	1	146	20155	0

WS31 : 06161

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS30 H SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 13:39:11
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1602282	2
	Be	9	0.147	ug/L	0.011	7	52	799	4
	C	13		ug/L			91865	140606	1
	Cl	37		ug/L			4664629	4841324	1
>	Sc	45		ug/L			1199367	1336871	1
	V	51	29.976	ug/L	0.631	2	7921	816478	1
	V-1	51	30.106	ug/L	0 563	1	182	809797	1
	Cr	52	14.253	ug/L	0 195	1	23276	344912	1
	Cr	53	14.594	ug/L	0.155	1	155	36838	1
	Mn	55	96.870	ug/L	1.736	1	856	2978276	0
	Co	59	3.800	ug/L	0.078	2	217	86390	1
>	Ge	72		ug/L			666955	672255	0
	Ni	60	10.649	ug/L	0.154	1	57	45906	0
	Ni	62	12.247	ug/L	0.230	1	234	7769	2
	Cu	63	32.938	ug/L	0.431	1	374	307402	0
	Cu	65	33.635	ug/L	0.188	0	101	139970	1
	Zn	66	49.302	ug/L	0.546	1	850	123640	0
	Zn	67	47.824	ug/L	0.635	1	128	20301	1
	Zn	68	48.214	ug/L	0.333	0	745	86351	0
	As	75	4.244	ug/L	0.052	1	118	9508	0
	As-1	75	4.128	ug/L	0.067	1	9854	19176	0
	Se	82	0.095	ug/L	0.042	43	0	20	45
	Se	78	0.064	ug/L	0.085	133	10009	10128	0
	Mo	98	0.594	ug/L	0.014	2	75	3234	1
	Y	89		ug/L			438666	576308	0
	Kr	83		ug/L			391	557	2
>	In	115		ug/L			956745	1015371	1
	Ag	107	0.096	ug/L	0.002	1	77	1067	0
	Cd	111	0.180	ug/L	0.020	11	131	969	8
	Cd	114	0.115	ug/L	0.003	2	64	1416	1
	Sb	121	-0.029	ug/L	0.001	4	875	537	3
	Sb	123	-0.029	ug/L	0.001	2	675	423	2
	Ba	135	33.552	ug/L	0.311	0	41	153403	0
	Ba	137	33.339	ug/L	0.699	2	73	263906	0
>	Tb	159		ug/L			1186124	1259609	1
	Tl	205	0.043	ug/L	0.002	3	270	1971	2
	Pb	208	15.425	ug/L	0.276	1	477	782959	0
	Bi	209		ug/L			2621879	2677890	1
	Th	232	0.719	ug/L	0 014	1	1082	36515	0
	U	238	0.500	ug/L	0 008	1	146	25650	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS30 J SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 13:43:18
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1477068	1614060	3
Be	9	0.140	ug/L	0.003	1	52	773	5
C	13		ug/L			91865	154096	1
Cl	37		ug/L			4664629	4771541	1
Sc	45		ug/L			1199367	1397706	3
V	51	28.070	ug/L	0.574	2	7921	799632	1
V-1	51	28.207	ug/L	0.674	2	182	792874	1
Cr	52	14.198	ug/L	0 280	1	23276	359209	2
Cr	53	14.575	ug/L	0.563	3	155	38429	0
Mn	55	100.865	ug/L	2.131	2	856	3240900	1
Co	59	3.545	ug/L	0.125	3	217	84229	2
Ge	72		ug/L			666955	679756	0
Ni	60	10.470	ug/L	0.124	1	57	45640	0
Ni	62	12.090	ug/L	0.361	2	234	7757	2
Cu	63	38.639	ug/L	0 494	1	374	364599	1
Cu	65	37.839	ug/L	0.439	1	101	159199	0
Zn	66	52.256	ug/L	0.818	1	850	132457	0
Zn	67	51.124	ug/L	0.818	1	128	21933	1
Zn	68	51.738	ug/L	0.387	0	745	93639	0
As	75	5.185	ug/L	0.054	1	118	11720	0
As-1	75	4.995	ug/L	0.086	1	9854	21353	0
Se	82	0.091	ug/L	0.031	33	0	20	36
Se	78	-0.193	ug/L	0.152	78	10009	10080	0
Mo	98	0.756	ug/L	0.011	1	75	4145	1
Y	89		ug/L			438666	585124	0
Kr	83		ug/L			391	542	3
In	115		ug/L			956745	1019006	0
Ag	107	0.112	ug/L	0.001	0	77	1242	1
Cd	111	0.170	ug/L	0.017	9	131	927	9
Cd	114	0.110	ug/L	0.005	4	64	1364	4
Sb	121	-0.016	ug/L	0.002	9	875	705	2
Sb	123	-0.016	ug/L	0.003	17	675	552	5
Ba	135	40.924	ug/L	0.332	0	41	187775	0
Ba	137	41.311	ug/L	0.276	0	73	328224	1
Tb	159		ug/L			1186124	1272328	1
Tl	205	0.043	ug/L	0.002	4	270	1968	2
Pb	208	22.204	ug/L	0 215	0	477	1138325	0
Bi	209		ug/L			2621879	2718651	0
Th	232	0.721	ug/L	0.005	0	1082	36989	1
U	238	0.463	ug/L	0.003	0	146	24010	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 13:47:27
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\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1477068	1543386	0
Be	9	49.133	ug/L	1.211	2	52	239939	1
C	13		ug/L			91865	99161	2
Cl	37		ug/L			4664629	4808834	3
Sc	45		ug/L			1199367	1244904	1
V	51	47.724	ug/L	0.851	1	7921	1205523	0
V-1	51	47.997	ug/L	1.070	2	182	1201955	0
Cr	52	47.485	ug/L	0.224	0	23276	1013672	1
Cr	53	48.416	ug/L	1.055	2	155	113404	0
Mn	55	48.571	ug/L	0.426	0	856	1391097	1
Co	59	46.023	ug/L	0.758	1	217	971910	0
Ge	72		ug/L			666955	649877	0
Ni	60	49.024	ug/L	0.735	1	57	204124	1
Ni	62	48.247	ug/L	1.226	2	234	28914	2
Cu	63	50.326	ug/L	0.365	0	374	453875	0
Cu	65	49.574	ug/L	0.147	0	101	199378	0
Zn	66	49.794	ug/L	0 475	0	850	120713	0
Zn	67	49.279	ug/L	0.423	0	128	20218	1
Zn	68	49.223	ug/L	0.424	0	745	85207	0
As	75	49.708	ug/L	0.365	0	118	106443	0
As-1	75	49.320	ug/L	0.267	0	9854	116370	0
Se	82	51.558	ug/L	0.486	0	0	11508	1
Se	78	49.553	ug/L	0.164	0	10009	39466	0
Mo	98	49.553	ug/L	0.571	1	75	255010	1
Y	89		ug/L			438666	444223	0
Kr	83		ug/L			391	436	5
In	115		ug/L			956745	991161	2
Ag	107	47.841	ug/L	1.295	2	77	481418	1
Cd	111	49.257	ug/L	0.321	0	131	221844	1
Cd	114	49.668	ug/L	1.456	2	64	570543	0
Sb	121	49.140	ug/L	1.307	2	875	656331	0
Sb	123	48.915	ug/L	0.871	1	675	489536	0
Ba	135	48.680	ug/L	0.455	0	41	217228	1
Ba	137	48.922	ug/L	1.490	3	73	377881	0
Tb	159		ug/L			1186124	1227241	0
Tl	205	48.750	ug/L	0.713	1	270	1846781	0
Pb	208	49.183	ug/L	0.531	1	477	2431569	0
Bi	209		ug/L			2621879	2627381	0
Th	232	50.028	ug/L	0.746	1	1082	2399158	0
U	238	50.009	ug/L	0.718	1	146	2484310	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 13:54:20
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			1477068	1511693	1
	Be	**9**	**-0.006**	ug/L	0.001	10	52	23	13
	C	**13**		ug/L			91865	95524	0
	Cl	**37**		ug/L			4664629	4610647	1
>	**Sc**	**45**		ug/L			1199367	1210466	1
	V	**51**	**-0.010**	ug/L	0.001	12	7921	7747	1
	V-1	**51**	**-0.002**	ug/L	0.001	30	182	130	12
	Cr	**52**	**-0.025**	ug/L	0.007	26	23276	22988	0
	Cr	**53**	**0.002**	ug/L	0.005	211	155	162	5
	Mn	**55**	**0.002**	ug/L	0.001	66	856	922	4
	Co	**59**	**-0.001**	ug/L	0.000	28	217	202	3
>	**Ge**	**72**		ug/L			666955	647630	1
	Ni	**60**	**-0.000**	ug/L	0.001	1195	57	55	9
	Ni	**62**	**-0.036**	ug/L	0.047	131	234	206	13
	Cu	**63**	**-0.002**	ug/L	0.005	198	374	342	10
	Cu	**65**	**-0.001**	ug/L	0.002	140	101	93	5
	Zn	**66**	**0.461**	ug/L	0.015	3	850	1931	1
	Zn	**67**	**0.427**	ug/L	0.048	11	128	298	7
	Zn	**68**	**0.443**	ug/L	0.038	8	745	1480	2
	As	**75**	**0.015**	ug/L	0.012	82	118	146	18
	As-1	**75**	**0.082**	ug/L	0.032	39	9854	9745	0
	Se	**82**	**-0.008**	ug/L	0.030	366	0	-2	245
	Se	**78**	**0.260**	ug/L	0.151	58	10009	9873	0
	Mo	**98**	**-0.003**	ug/L	0.002	72	75	55	21
	Y	**89**		ug/L			438666	426197	0
	Kr	**83**		ug/L			391	397	2
>	**In**	**115**		ug/L			956745	962365	2
	Ag	**107**	**-0.004**	ug/L	0.002	41	77	42	33
	Cd	**111**	**-0.008**	ug/L	0.001	13	131	98	3
	Cd	**114**	**-0.003**	ug/L	0.001	27	64	33	25
	Sb	**121**	**0.016**	ug/L	0.015	94	875	1086	17
	Sb	**123**	**0.015**	ug/L	0.017	112	675	821	18
	Ba	**135**	**0.002**	ug/L	0.004	151	41	52	29
	Ba	**137**	**0.001**	ug/L	0.003	386	73	80	31
>	**Tb**	**159**		ug/L			1186124	1171189	0
	Tl	**205**	**-0.002**	ug/L	0.001	30	270	195	10
	Pb	**208**	**-0.001**	ug/L	0.000	48	477	425	4
	Bi	**209**		ug/L			2621879	2646342	0
	Th	**232**	**0.038**	ug/L	0.002	6	1082	2792	3
	U	**238**	**-0.001**	ug/L	0.000	12	146	78	9

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WT48 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 14:01:48
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1625339	0
	Be	9	-0.006	ug/L	0.000	5	52	26	5
	C	13		ug/L			91865	128422	3
	Cl	37		ug/L			4664629	4777834	2
>	Sc	45		ug/L			1199367	1301807	1
	V	51	0.003	ug/L	0.014	518	7921	8663	2
	V-1	51	-0.001	ug/L	0.001	90	182	164	16
	Cr	52	0.019	ug/L	0.041	221	23276	25657	1
	Cr	53	0.005	ug/L	0.004	68	155	181	6
	Mn	55	0.013	ug/L	0.002	12	856	1321	2
	Co	59	-0.003	ug/L	0.000	14	217	162	5
>	Ge	72		ug/L			666955	660065	0
	Ni	60	0.037	ug/L	0.002	6	57	215	4
	Ni	62	-0.023	ug/L	0.018	78	234	218	5
	Cu	63	0.059	ug/L	0 002	3	374	908	2
	Cu	65	0.065	ug/L	0.006	9	101	365	6
	Zn	66	0.148	ug/L	0.022	14	850	1204	4
	Zn	67	0.128	ug/L	0.028	22	128	180	6
	Zn	68	0.116	ug/L	0.031	26	745	939	5
	As	75	0.017	ug/L	0.013	75	118	154	17
	As-1	75	0.038	ug/L	0.034	87	9854	9836	0
	Se	82	0.031	ug/L	0.044	141	0	6	163
	Se	78	0.118	ug/L	0.106	90	10009	9977	0
	Mo	98	-0.008	ug/L	0.002	18	75	30	27
	Y	89		ug/L			438666	455962	1
	Kr	83		ug/L			391	396	1
>	In	115		ug/L			956745	1020109	1
	Ag	107	-0.005	ug/L	0.001	23	77	35	32
	Cd	111	-0.009	ug/L	0.000	3	131	99	1
	Cd	114	-0.002	ug/L	0.001	72	64	49	27
	Sb	121	-0.040	ug/L	0.005	13	875	387	17
	Sb	123	-0.042	ug/L	0.005	11	675	285	17
	Ba	135	0.005	ug/L	0.004	91	41	66	29
	Ba	137	0.004	ug/L	0.001	31	73	111	9
>	Tb	159		ug/L			1186124	1245671	1
	Tl	205	-0.003	ug/L	0.001	21	270	150	18
	Pb	208	0.002	ug/L	0.001	44	477	581	5
	Bi	209		ug/L			2621879	2791673	1
	Th	232	0.004	ug/L	0.002	46	1082	1342	6
	U	238	-0.002	ug/L	0.000	4	146	29	18

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS95 C REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, June 13, 2013 14:05:56
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1485666	1
	Be	9	0.002	ug/L	0.002	119	52	60	14
	C	13		ug/L			91865	107890	2
	Cl	37		ug/L			4664629	4640744	1
>	Sc	45		ug/L			1199367	1293848	0
	V	51	1.787	ug/L	0.005	0	7921	55140	0
	V-1	51	1.834	ug/L	0.018	0	182	47936	0
	Cr	52	1.966	ug/L	0.054	2	23276	67689	1
	Cr	53	2.129	ug/L	0.064	3	155	5345	3
	Mn	55	145.321	ug/L	2.096	1	856	4324214	1
	Co	59	0.470	ug/L	0.007	1	217	10552	1
>	Ge	72		ug/L			666955	632662	0
	Ni	60	2.045	ug/L	0.042	2	57	8340	1
	Ni	62	3.799	ug/L	1.040	27	234	2422	24
	Cu	63	1.635	ug/L	0.082	5	374	14694	4
	Cu	65	1.250	ug/L	0.023	1	101	4986	1
	Zn	66	6.225	ug/L	0.137	2	850	15395	1
	Zn	67	5.410	ug/L	0.253	4	128	2269	4
	Zn	68	6.334	ug/L	0.227	3	745	11289	2
	As	75	2.671	ug/L	0.054	2	118	5674	1
	As-1	75	2.786	ug/L	0.087	3	9854	15217	0
	Se	82	0.391	ug/L	0.076	19	0	84	20
	Se	78	0.969	ug/L	0.102	10	10009	10060	0
	Mo	98	0.977	ug/L	0 022	2	75	4963	2
	Y	89		ug/L			438666	450457	2
	Kr	83		ug/L			391	425	2
>	In	115		ug/L			956745	985909	0
	Ag	107	0.032	ug/L	0.004	11	77	398	8
	Cd	111	0.122	ug/L	0.001	0	131	681	0
	Cd	114	0.132	ug/L	0.002	1	64	1574	1
	Sb	121	0.090	ug/L	0.004	4	875	2102	2
	Sb	123	0.084	ug/L	0.013	14	675	1536	8
	Ba	135	2.191	ug/L	0.059	2	41	9765	2
	Ba	137	2.195	ug/L	0.026	1	73	16941	1
>	Tb	159		ug/L			1186124	1233698	0
	Tl	205	0.031	ug/L	0.003	9	270	1464	8
	Pb	208	0.335	ug/L	0.002	0	477	17126	0
	Bi	209		ug/L			2621879	2490613	1
	Th	232	-0.003	ug/L	0.001	33	1082	982	5
	U	238	0.306	ug/L	0.004	1	146	15445	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS95 D REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, June 13, 2013 14:10:03
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\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1477068	1546617	1
Be	9	0.002	ug/L	0.004	238	52	64	33
C	13		ug/L			91865	104374	2
Cl	37		ug/L			4664629	4695848	0
> Sc	45		ug/L			1199367	1278818	1
V	51	0.647	ug/L	0.012	1	7921	25118	0
V-1	51	0.685	ug/L	0.022	3	182	17800	1
Cr	52	0.150	ug/L	0.024	16	23276	28024	2
Cr	53	0.275	ug/L	0.031	11	155	826	6
Mn	55	198.621	ug/L	3.666	1	856	5839702	0
Co	59	0.165	ug/L	0.009	5	217	3806	3
> Ge	72		ug/L			666955	658876	1
Ni	60	0.678	ug/L	0.021	3	57	2919	2
Ni	62	0.474	ug/L	0.069	14	234	517	6
Cu	63	0.409	ug/L	0.014	3	374	4104	3
Cu	65	0.184	ug/L	0.008	4	101	848	2
Zn	66	0.741	ug/L	0.035	4	850	2649	2
Zn	67	0.588	ug/L	0.055	9	128	370	5
Zn	68	1.064	ug/L	0.056	5	745	2586	2
As	75	1.160	ug/L	0.021	1	118	2631	0
As-1	75	1.139	ug/L	0.060	5	9854	12233	0
Se	82	0.134	ug/L	0.066	49	0	29	49
Se	78	0.152	ug/L	0 162	106	10009	9979	0
Mo	98	0.179	ug/L	0.008	4	75	1005	5
Y	89		ug/L			438666	457371	0
Kr	83		ug/L			391	425	3
> In	115		ug/L			956745	1013585	0
Ag	107	-0.005	ug/L	0.001	15	77	31	24
Cd	111	0.001	ug/L	0.002	201	131	144	6
Cd	114	0.008	ug/L	0.000	5	64	165	3
Sb	121	-0.027	ug/L	0.002	6	875	554	3
Sb	123	-0.030	ug/L	0.003	8	675	410	6
Ba	135	1.184	ug/L	0.013	1	41	5447	0
Ba	137	1.203	ug/L	0.017	1	73	9580	1
> Tb	159		ug/L			1186124	1239177	1
Tl	205	0.029	ug/L	0.002	5	270	1375	4
Pb	208	0.007	ug/L	0.004	50	477	864	20
Bi	209		ug/L			2621879	2595993	0
Th	232	-0.013	ug/L	0.002	16	1082	500	20
U	238	0.071	ug/L	0.004	5	146	3701	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS95 E REN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Thursday, June 13, 2013 14:14:11
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	**Li**	**6**		ug/L			1477068	1513970	1
	Be	**9**	**-0.008**	ug/L	0.000	3	52	15	9
	C	**13**		ug/L			91865	101064	3
	Cl	**37**		ug/L			4664629	4705369	1
>	**Sc**	**45**		ug/L			1199367	1255766	1
	V	**51**	**0.120**	ug/L	0.007	5	7921	11327	0
	V-1	**51**	**0.139**	ug/L	0.003	2	182	3692	1
	Cr	**52**	**0.266**	ug/L	0.022	8	23276	29969	1
	Cr	**53**	**0.332**	ug/L	0.005	1	155	945	2
	Mn	**55**	**137.629**	ug/L	2.638	1	856	3974234	0
	Co	**59**	**0.019**	ug/L	0.003	14	217	637	8
>	**Ge**	**72**		ug/L			666955	668058	0
	Ni	**60**	**0.074**	ug/L	0.007	9	57	373	8
	Ni	**62**	**0.070**	ug/L	0.031	43	234	277	6
	Cu	**63**	**0.130**	ug/L	0.014	10	374	1580	7
	Cu	**65**	**0.051**	ug/L	0.002	4	101	313	1
	Zn	**66**	**0.234**	ug/L	0.022	9	850	1430	3
	Zn	**67**	**0.300**	ug/L	0.037	12	128	254	5
	Zn	**68**	**0.309**	ug/L	0.008	2	745	1291	1
	As	**75**	**0.044**	ug/L	0.010	23	118	215	9
	As-1	**75**	**-0.005**	ug/L	0.053	1034	9854	9858	1
	Se	**82**	**0.025**	ug/L	0.057	224	0	4	269
	Se	**78**	**-0.147**	ug/L	0.214	145	10009	9935	1
	Mo	**98**	**-0.007**	ug/L	0.000	5	75	39	4
	Y	**89**		ug/L			438666	447019	1
	Kr	**83**		ug/L			391	395	7
>	**In**	**115**		ug/L			956745	1001000	2
	Ag	**107**	**-0.004**	ug/L	0.000	4	77	44	2
	Cd	**111**	**-0.007**	ug/L	0.002	20	131	103	5
	Cd	**114**	**-0.000**	ug/L	0.000	97	64	62	7
	Sb	**121**	**-0.052**	ug/L	0.002	3	875	213	8
	Sb	**123**	**-0.053**	ug/L	0.003	5	675	169	15
	Ba	**135**	**1.654**	ug/L	0.044	2	41	7493	0
	Ba	**137**	**1.599**	ug/L	0.034	2	73	12550	0
>	**Tb**	**159**		ug/L			1186124	1216732	0
	Tl	**205**	**0.004**	ug/L	0.000	9	270	417	4
	Pb	**208**	**0.003**	ug/L	0.000	11	477	653	3
	Bi	**209**		ug/L			2621879	2683787	1
	Th	**232**	**-0.020**	ug/L	0.000	1	1082	154	11
	U	**238**	**-0.002**	ug/L	0.000	2	146	31	7

WS91 : 61213

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS95 ADUP REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, June 13, 2013 14:18:18
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens RSD
> Li	6		ug/L			1477068	1556303	2
Be	9	0.004	ug/L	0.002	62	52	73	13
C	13		ug/L			91865	104677	2
Cl	37		ug/L			4664629	4824511	1
> Sc	45		ug/L			1199367	1320936	2
V	51	0.404	ug/L	0.015	3	7921	19471	1
V-1	51	0.513	ug/L	0.015	2	182	13833	0
Cr	52	0.010	ug/L	0.038	374	23276	25854	2
Cr	53	0.382	ug/L	0.042	11	155	1118	7
Mn	55	143.589	ug/L	3.965	2	856	4360576	1
Co	59	0.865	ug/L	0.029	3	217	19609	1
> Ge	72		ug/L			666955	664268	0
Ni	60	1.427	ug/L	0.011	0	57	6127	0
Ni	62	1.223	ug/L	0.090	7	234	976	5
Cu	63	0.398	ug/L	0.016	3	374	4043	4
Cu	65	0.164	ug/L	0.005	3	101	776	2
Zn	66	1.640	ug/L	0.016	0	850	4883	1
Zn	67	1.567	ug/L	0.080	5	128	781	3
Zn	68	2.055	ug/L	0.014	0	745	4346	0
As	75	0.155	ug/L	0.017	11	118	457	8
As-1	75	0.140	ug/L	0.023	16	9854	10123	0
Se	82	0.035	ug/L	0.081	232	0	7	262
Se	78	-0.008	ug/L	0.096	1215	10009	9964	0
Mo	98	0.022	ug/L	0.002	7	75	190	4
Y	89		ug/L			438666	449822	1
Kr	83		ug/L			391	396	12
> In	115		ug/L			956745	1010639	1
Ag	107	-0.006	ug/L	0.000	5	77	22	14
Cd	111	-0.007	ug/L	0.002	26	131	106	7
Cd	114	0.002	ug/L	0.001	50	64	85	9
Sb	121	-0.046	ug/L	0.000	0	875	298	1
Sb	123	-0.048	ug/L	0.004	7	675	222	15
Ba	135	0.942	ug/L	0.019	2	41	4330	0
Ba	137	0.926	ug/L	0.016	1	73	7369	0
> Tb	159		ug/L			1186124	1241826	0
Tl	205	0.029	ug/L	0.002	7	270	1383	5
Pb	208	0.011	ug/L	0.001	9	477	1053	5
Bi	209		ug/L			2621879	2649929	0
Th	232	-0.016	ug/L	0.001	3	1082	347	8
U	238	0.003	ug/L	0.000	1	146	306	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS95 A REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, June 13, 2013 14:22:26
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1553068	0
	Be	9	0.007	ug/L	0.000	3	52	88	1
	C	13		ug/L			91865	102660	2
	Cl	37		ug/L			4664629	4837932	3
>	Sc	45		ug/L			1199367	1291980	0
	V	51	0.428	ug/L	0.012	2	7921	19671	1
	V-1	51	0.526	ug/L	0.015	2	182	13873	2
	Cr	52	0.044	ug/L	0.007	15	23276	26017	0
	Cr	53	0.378	ug/L	0.022	5	155	1085	5
	Mn	55	149.424	ug/L	2.441	1	856	4439500	1
	Co	59	0.901	ug/L	0.021	2	217	19986	1
>	Ge	72		ug/L			666955	665138	0
	Ni	60	1.466	ug/L	0.023	1	57	6304	1
	Ni	62	1.272	ug/L	0.097	7	234	1008	5
	Cu	63	0.392	ug/L	0.008	1	374	3990	1
	Cu	65	0.171	ug/L	0.007	4	101	804	3
	Zn	66	2.293	ug/L	0.083	3	850	6499	2
	Zn	67	2.100	ug/L	0.054	2	128	1004	1
	Zn	68	2.760	ug/L	0.054	1	745	5590	0
	As	75	0.156	ug/L	0 013	8	118	459	5
	As-1	75	0.152	ug/L	0.028	18	9854	10163	1
	Se	82	0.058	ug/L	0.055	93	0	12	100
	Se	78	0.042	ug/L	0.109	259	10009	10008	1
	Mo	98	0.021	ug/L	0.002	9	75	185	6
	Y	89		ug/L			438666	444627	0
	Kr	83		ug/L			391	386	3
>	In	115		ug/L			956745	1000854	1
	Ag	107	-0.004	ug/L	0.000	10	77	38	13
	Cd	111	-0.007	ug/L	0.002	33	131	107	8
	Cd	114	0.001	ug/L	0.001	71	64	77	10
	Sb	121	-0.047	ug/L	0.001	2	875	287	4
	Sb	123	-0.048	ug/L	0.004	8	675	219	18
	Ba	135	0.940	ug/L	0.040	4	41	4276	2
	Ba	137	0.954	ug/L	0.032	3	73	7516	3
>	Tb	159		ug/L			1186124	1240387	0
	Tl	205	0.032	ug/L	0.001	1	270	1522	1
	Pb	208	0.013	ug/L	0.000	0	477	1150	0
	Bi	209		ug/L			2621879	2658466	0
	Th	232	-0.017	ug/L	0.001	3	1082	295	8
	U	238	0.003	ug/L	0.000	7	146	297	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS95 ASPK REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, June 13, 2013 14:26:33
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
>	Li	6		ug/L			1477068	1543607	1
	Be	9	9.891	ug/L	0.105	1	52	48355	0
	C	13		ug/L			91865	102542	1
	Cl	37		ug/L			4664629	4570591	0
>	Sc	45		ug/L			1199367	1269774	0
	V	51	10.063	ug/L	0.107	1	7921	265936	0
	V-1	51	10.133	ug/L	0.113	1	182	259030	1
	Cr	52	9.747	ug/L	0.192	1	23276	231826	1
	Cr	53	9.984	ug/L	0.149	1	155	23987	1
	Mn	55	159.988	ug/L	0.767	0	856	4671918	0
	Co	59	10.480	ug/L	0.107	1	217	225949	1
>	Ge	72		ug/L			666955	651984	0
	Ni	60	11.650	ug/L	0.084	0	57	48708	0
	Ni	62	11.122	ug/L	0.225	2	234	6863	1
	Cu	63	10.591	ug/L	0.229	2	374	96117	2
	Cu	65	10.483	ug/L	0.095	0	101	42376	0
	Zn	66	34.261	ug/L	0.378	1	850	83588	1
	Zn	67	30.822	ug/L	0.527	1	128	12733	1
	Zn	68	33.535	ug/L	0.582	1	745	58470	1
	As	75	10.355	ug/L	0.135	1	118	22336	0
	As-1	75	10.464	ug/L	0.225	2	9854	32357	1
	Se	82	32.806	ug/L	0.109	0	0	7346	0
	Se	78	31.875	ug/L	0.383	1	10009	28959	0
	Mo	98	0.023	ug/L	0.001	3	75	192	2
	Y	89		ug/L			438666	439125	1
	Kr	83		ug/L			391	399	5
>	In	115		ug/L			956745	975871	0
	Ag	107	9.995	ug/L	0.156	1	77	99117	0
	Cd	111	10.229	ug/L	0.136	1	131	45468	1
	Cd	114	10.092	ug/L	0.119	1	64	114236	0
	Sb	121	-0.045	ug/L	0.001	2	875	302	5
	Sb	123	-0.048	ug/L	0.001	2	675	216	6
	Ba	135	11.132	ug/L	0.178	1	41	48943	0
	Ba	137	11.128	ug/L	0.057	0	73	84721	0
>	Tb	159		ug/L			1186124	1216341	0
	Tl	205	9.992	ug/L	0.089	0	270	375393	0
	Pb	208	10.114	ug/L	0.121	1	477	495955	0
	Bi	209		ug/L			2621879	2606408	0
	Th	232	9.631	ug/L	0.067	0	1082	458665	0
	U	238	9.918	ug/L	0.118	1	146	488444	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WT48 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 14:30:41
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1592981	0
	Be	9	0.174	ug/L	0.008	4	52	932	3
	C	13		ug/L			91865	173451	1
	Cl	37		ug/L			4664629	5059594	2
>	Sc	45		ug/L			1199367	1370864	1
	V	51	39.565	ug/L	0.919	2	7921	1102087	1
	V-1	51	39.697	ug/L	1.333	3	182	1094656	2
	Cr	52	58.732	ug/L	0.714	1	23276	1374252	0
	Cr	53	59.305	ug/L	2.081	3	155	152914	2
	Mn	55	391.823	ug/L	5.395	1	856	12349871	0
	Co	59	6.108	ug/L	0.181	2	217	142250	1
>	Ge	72		ug/L			666955	664215	1
	Ni	60	33.417	ug/L	0.974	2	57	142196	2
	Ni	62	35.231	ug/L	0.253	0	234	21642	1
	Cu	63	287.986	ug/L	6.205	2	374	2652394	1
	Cu	65	278.131	ug/L	7.199	2	101	1143084	3
	Zn	66	315.048	ug/L	3.046	0	850	776126	1
	Zn	67	286.060	ug/L	3.454	1	128	119344	2
	Zn	68	301.242	ug/L	3.210	1	745	529138	0
	As	75	4.665	ug/L	0.023	0	118	10316	1
	As-1	75	4.503	ug/L	0.053	1	9854	19775	0
	Se	82	0.050	ug/L	0.021	42	0	10	45
	Se	78	-0.034	ug/L	0.248	734	10009	9946	0
	Mo	98	4.160	ug/L	0.088	2	75	21943	1
	Y	89		ug/L			438666	597180	1
	Kr	83		ug/L			391	623	5
>	In	115		ug/L			956745	1015477	1
	Ag	107	0.101	ug/L	0.005	4	77	1123	2
	Cd	111	0.630	ug/L	0.009	1	131	3045	1
	Cd	114	0.556	ug/L	0.010	1	64	6612	2
	Sb	121	0.073	ug/L	0.003	3	875	1928	0
	Sb	123	0.075	ug/L	0.005	6	675	1480	3
	Ba	135	122.502	ug/L	3.409	2	41	559929	1
	Ba	137	122.276	ug/L	2.995	2	73	967771	1
>	Tb	159		ug/L			1186124	1251503	0
	Tl	205	0.039	ug/L	0.004	9	270	1804	7
	Pb	208	91.069	ug/L	0.198	0	477	4591208	0
	Bi	209		ug/L			2621879	2647192	1
	Th	232	0.916	ug/L	0.010	1	1082	45898	1
	U	238	0.230	ug/L	0.005	2	146	11824	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WT48 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 14:34:48
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1630942	0
	Be	9	0.176	ug/L	0.003	1	52	967	1
	C	13		ug/L			91865	178418	1
	Cl	37		ug/L			4664629	5038143	0
>	Sc	45		ug/L			1199367	1416040	1
	V	51	39.247	ug/L	0.852	2	7921	1129359	1
	V-1	51	39.184	ug/L	0.398	1	182	1116344	0
	Cr	52	53.163	ug/L	1.516	2	23276	1287353	1
	Cr	53	53.036	ug/L	0.794	1	155	141308	1
	Mn	55	302.778	ug/L	5.579	1	856	9857430	0
	Co	59	6.976	ug/L	0.088	1	217	167804	1
>	Ge	72		ug/L			666955	663671	2
	Ni	60	35.427	ug/L	0 870	2	57	150594	0
	Ni	62	37.476	ug/L	1.139	3	234	22978	1
	Cu	63	126.478	ug/L	3.225	2	374	1163830	0
	Cu	65	126.419	ug/L	4.476	3	101	518807	1
	Zn	66	349.551	ug/L	10.641	3	850	859865	0
	Zn	67	317.157	ug/L	12.050	3	128	132123	2
	Zn	68	338.396	ug/L	3.896	1	745	593785	1
	As	75	7.702	ug/L	0.158	2	118	16937	1
	As-1	75	7.542	ug/L	0.245	3	9854	26470	0
	Se	82	0.124	ug/L	0.030	24	0	27	24
	Se	78	0.160	ug/L	0.406	253	10009	10054	0
	Mo	98	3.150	ug/L	0.050	1	75	16624	2
	Y	89		ug/L			438666	614833	0
	Kr	83		ug/L			391	612	3
>	In	115		ug/L			956745	1015564	0
	Ag	107	0.104	ug/L	0.003	2	77	1157	2
	Cd	111	0.594	ug/L	0.025	4	131	2880	3
	Cd	114	0.502	ug/L	0.009	1	64	5973	1
	Sb	121	0.070	ug/L	0.007	10	875	1881	4
	Sb	123	0.066	ug/L	0.001	2	675	1389	1
	Ba	135	120.077	ug/L	1.777	1	41	549006	1
	Ba	137	120.515	ug/L	1.696	1	73	954078	0
>	Tb	159		ug/L			1186124	1263896	0
	Tl	205	0.038	ug/L	0.001	3	270	1785	1
	Pb	208	107.762	ug/L	0.878	0	477	5486312	0
	Bi	209		ug/L			2621879	2683222	1
	Th	232	0.942	ug/L	0.008	0	1082	47680	0
	U	238	0.243	ug/L	0.003	1	146	12608	0

WT #6-13-13

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS48 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 14:38:56
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			1477068	1539932	2
[	Be	9	24.629	ug/L	0.832	3	52	119991	2
	C	13		ug/L			91865	110862	1
	Cl	37		ug/L			4664629	4761035	1
[>	Sc	45		ug/L			1199367	1247517	1
[	V	51	23.807	ug/L	0.170	0	7921	606841	0
[	V-1	51	23.803	ug/L	0.318	1	182	597500	0
[	Cr	52	24.297	ug/L	0.065	0	23276	531610	1
[	Cr	53	24.285	ug/L	0.492	2	155	57084	0
[	Mn	55	24.788	ug/L	0.216	0	856	711930	1
[	Co	59	23.734	ug/L	0.291	1	217	502421	0
[>	Ge	72		ug/L			666955	647501	0
[	Ni	60	25.704	ug/L	0.347	1	57	106659	1
[	Ni	62	24.844	ug/L	0.584	2	234	14945	2
[	Cu	63	26.223	ug/L	0.338	1	374	235801	1
[	Cu	65	26.485	ug/L	0.193	0	101	106176	0
[	Zn	66	81.971	ug/L	1.331	1	850	197455	1
[	Zn	67	74.237	ug/L	1.333	1	128	30283	2
[	Zn	68	79.074	ug/L	1.829	2	745	135942	2
[	As	75	25.232	ug/L	0.251	0	118	53888	0
[	As-1	75	25.529	ug/L	0.311	1	9854	64628	0
[	Se	82	81.909	ug/L	0.390	0	0	18216	0
[	Se	78	79.631	ug/L	0.279	0	10009	57291	0
[	Mo	98	-0.004	ug/L	0.002	54	75	53	20
	Y	89		ug/L			438666	444709	1
	Kr	83		ug/L			391	408	4
[>	In	115		ug/L			956745	999797	1
[	Ag	107	24.513	ug/L	0.189	0	77	248921	1
[	Cd	111	25.267	ug/L	0.285	1	131	114851	0
[	Cd	114	24.801	ug/L	0.470	1	64	287476	0
[	Sb	121	-0.060	ug/L	0.002	3	875	106	22
[	Sb	123	-0.062	ug/L	0.002	2	675	76	19
[	Ba	135	24.354	ug/L	0.449	1	41	109634	0
[	Ba	137	24.348	ug/L	0.435	1	73	189797	0
[>	Tb	159		ug/L			1186124	1205712	1
[	Tl	205	25.256	ug/L	0.367	1	270	940035	0
[	Pb	208	25.528	ug/L	0.353	1	477	1240076	0
[	Bi	209		ug/L			2621879	2710996	1
[	Th	232	24.170	ug/L	0.411	1	1082	1139203	0
[	U	238	24.392	ug/L	0.762	3	146	1190243	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 14:43:05
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1509307	1
	Be	9	49.645	ug/L	0.814	1	52	237064	0
	C	13		ug/L			91865	99380	0
	Cl	37		ug/L			4664629	4831488	1
>	Sc	45		ug/L			1199367	1241191	0
	V	51	47.402	ug/L	0.566	1	7921	1194012	0
	V-1	51	47.614	ug/L	0.639	1	182	1189001	0
	Cr	52	47.131	ug/L	0.783	1	23276	1003294	1
	Cr	53	47.853	ug/L	0.840	1	155	111769	1
	Mn	55	47.264	ug/L	0.777	1	856	1349699	1
	Co	59	45.617	ug/L	0.796	1	217	960528	1
>	Ge	72		ug/L			666955	636700	2
	Ni	60	50.008	ug/L	0.567	1	57	203966	0
	Ni	62	48.796	ug/L	0.862	1	234	28643	1
	Cu	63	49.894	ug/L	1.202	2	374	440732	0
	Cu	65	49.789	ug/L	1.241	2	101	196123	1
	Zn	66	49.797	ug/L	0.893	1	850	118247	0
	Zn	67	49.920	ug/L	0.652	1	128	20060	0
	Zn	68	49.823	ug/L	0.250	0	745	84486	1
	As	75	49.743	ug/L	0.624	1	118	104340	0
	As-1	75	49.586	ug/L	0.667	1	9854	114555	0
	Se	82	51.509	ug/L	1 335	2	0	11260	1
	Se	78	50.316	ug/L	1.301	2	10009	39104	0
	Mo	98	50.452	ug/L	1.217	2	75	254305	1
	Y	89		ug/L			438666	438505	1
	Kr	83		ug/L			391	411	2
>	In	115		ug/L			956745	974014	1
	Ag	107	47.029	ug/L	1.039	2	77	465146	1
	Cd	111	50.000	ug/L	0.754	1	131	221306	1
	Cd	114	50.109	ug/L	0.516	1	64	565896	1
	Sb	121	49.153	ug/L	0.435	0	875	645395	0
	Sb	123	49.275	ug/L	0.517	1	675	484708	0
	Ba	135	49.070	ug/L	1.030	2	41	215188	1
	Ba	137	48.914	ug/L	0.713	1	73	371414	0
>	Tb	159		ug/L			1186124	1203303	0
	Tl	205	49.299	ug/L	0.144	0	270	1831288	0
	Pb	208	49.393	ug/L	0.267	0	477	2394421	0
	Bi	209		ug/L			2621879	2612470	0
	Th	232	50.994	ug/L	0.557	1	1082	2397831	0
	U	238	50.618	ug/L	0.671	1	146	2465630	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 14:49:57
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1488139	2
	Be	9	-0.007	ug/L	0.002	22	52	20	35
	C	13		ug/L			91865	98677	1
	Cl	37		ug/L			4664629	4728722	2
>	Sc	45		ug/L			1199367	1186537	1
	V	51	-0.007	ug/L	0.001	17	7921	7666	1
	V-1	51	-0.003	ug/L	0.001	28	182	118	15
	Cr	52	-0.022	ug/L	0.002	10	23276	22597	1
	Cr	53	-0.006	ug/L	0.003	40	155	139	3
	Mn	55	0.000	ug/L	0.001	885	856	851	4
	Co	59	-0.002	ug/L	0.000	15	217	169	4
>	Ge	72		ug/L			666955	621244	0
	Ni	60	0.000	ug/L	0.001	204	57	55	4
	Ni	62	-0.139	ug/L	0.017	11	234	139	6
	Cu	63	-0.013	ug/L	0.001	7	374	235	2
	Cu	65	-0.004	ug/L	0.002	48	101	80	8
	Zn	66	0.194	ug/L	0.017	8	850	1239	2
	Zn	67	0.196	ug/L	0.020	10	128	196	4
	Zn	68	0.171	ug/L	0.031	17	745	974	4
	As	75	0.023	ug/L	0.005	20	118	156	5
	As-1	75	0.254	ug/L	0.033	13	9854	9703	0
	Se	82	0.015	ug/L	0.053	366	0	2	527
	Se	78	0.883	ug/L	0 155	17	10009	9829	0
	Mo	98	-0.003	ug/L	0.002	75	75	56	18
	Y	89		ug/L			438666	420079	1
	Kr	83		ug/L			391	392	3
>	In	115		ug/L			956745	945983	0
	Ag	107	-0.003	ug/L	0.001	14	77	43	12
	Cd	111	-0.010	ug/L	0.002	19	131	87	9
	Cd	114	-0.003	ug/L	0.000	16	64	35	13
	Sb	121	0.018	ug/L	0.021	115	875	1094	23
	Sb	123	0.010	ug/L	0.017	162	675	766	20
	Ba	135	-0.003	ug/L	0.001	47	41	27	23
	Ba	137	-0.002	ug/L	0.001	40	73	58	8
>	Tb	159		ug/L			1186124	1152829	1
	Tl	205	-0.001	ug/L	0.000	23	270	220	6
	Pb	208	0.003	ug/L	0.000	8	477	613	2
	Bi	209		ug/L			2621879	2615563	1
	Th	232	0.061	ug/L	0.004	5	1082	3813	3
	U	238	-0.001	ug/L	0.000	25	146	94	14

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS91 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 14:55:32
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: C:\NexION Data\System\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			1477068	1492541	1
	Be	9	-0.006	ug/L	0.001	10	52	24	11
	C	13		ug/L			91865	108030	0
	Cl	37		ug/L			4664629	4668952	0
>	Sc	45		ug/L			1199367	1201418	0
	V	51	0.007	ug/L	0.011	169	7921	8094	3
	V-1	51	-0.003	ug/L	0.000	4	182	108	3
	Cr	52	0.038	ug/L	0.032	84	23276	24086	2
	Cr	53	0.005	ug/L	0.006	105	155	167	7
	Mn	55	0.002	ug/L	0.000	13	856	916	0
	Co	59	-0.003	ug/L	0.001	35	217	159	12
>	Ge	72		ug/L			666955	627064	0
	Ni	60	0.031	ug/L	0.004	11	57	179	8
	Ni	62	-0.110	ug/L	0.018	16	234	157	7
	Cu	63	0.009	ug/L	0.002	21	374	429	3
	Cu	65	0.017	ug/L	0.001	6	101	160	2
	Zn	66	0.055	ug/L	0.015	26	850	927	3
	Zn	67	0.043	ug/L	0.054	125	128	138	15
	Zn	68	0.049	ug/L	0.051	103	745	781	10
	As	75	0.021	ug/L	0.010	47	118	154	13
	As-1	75	0.228	ug/L	0.003	1	9854	9741	0
	Se	82	-0.010	ug/L	0.022	221	0	-3	156
	Se	78	0.779	ug/L	0.041	5	10009	9861	0
	Mo	98	-0.008	ug/L	0.000	4	75	30	6
	Y	89		ug/L			438666	425108	0
	Kr	83		ug/L			391	399	4
>	In	115		ug/L			956745	947357	1
	Ag	107	-0.004	ug/L	0.000	10	77	34	13
	Cd	111	-0.006	ug/L	0.002	26	131	104	7
	Cd	114	-0.001	ug/L	0.000	65	64	56	6
	Sb	121	-0.041	ug/L	0.002	5	875	347	6
	Sb	123	-0.043	ug/L	0.004	9	675	257	13
	Ba	135	-0.000	ug/L	0.001	284	41	39	14
	Ba	137	0.000	ug/L	0.002	1355	73	73	19
>	Tb	159		ug/L			1186124	1171379	0
	Tl	205	-0.003	ug/L	0.000	5	270	157	3
	Pb	208	-0.002	ug/L	0.001	44	477	377	11
	Bi	209		ug/L			2621879	2644374	1
	Th	232	0.019	ug/L	0.006	30	1082	1947	14
	U	238	-0.002	ug/L	0.000	5	146	32	19

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS61 Aa SPN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 13, 2013 14:59:39
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1634609	1
	Be	9	0.003	ug/L	0.001	37	52	74	9
	C	13		ug/L			91865	155796	0
	Cl	37		ug/L			4664629	5164877	2
>	Sc	45		ug/L			1199367	1323521	2
	V	51	0.478	ug/L	0.029	6	7921	21477	1
	V-1	51	0.445	ug/L	0.021	4	182	12036	2
	Cr	52	1.006	ug/L	0.053	5	23276	47962	0
	Cr	53	0.897	ug/L	0.036	4	155	2400	2
	Mn	55	186.161	ug/L	1.968	1	856	5665520	1
	Co	59	0.898	ug/L	0.015	1	217	20388	1
>	Ge	72		ug/L			666955	661871	2
	Ni	60	3.213	ug/L	0.100	3	57	13672	1
	Ni	62	2.957	ug/L	0.132	4	234	2021	1
	Cu	63	6.233	ug/L	0.285	4	374	57530	2
	Cu	65	6.336	ug/L	0.107	1	101	26034	0
	Zn	66	5.868	ug/L	0.088	1	850	15229	2
	Zn	67	7.970	ug/L	0.153	1	128	3436	0
	Zn	68	7.878	ug/L	0.370	4	745	14498	1
	As	75	0.854	ug/L	0.027	3	118	1977	1
	As-1	75	0.964	ug/L	0.143	14	9854	11898	0
	Se	82	0.091	ug/L	0.011	11	0	19	15
	Se	78	0.514	ug/L	0.437	84	10009	10242	0
	Mo	98	2.807	ug/L	0.063	2	75	14775	0
	Y	89		ug/L			438666	463454	2
	Kr	83		ug/L			391	387	2
>	In	115		ug/L			956745	1016679	1
	Ag	107	0.000	ug/L	0.001	505	77	85	19
	Cd	111	0.015	ug/L	0.001	5	131	210	1
	Cd	114	0.012	ug/L	0.001	5	64	210	2
	Sb	121	0.170	ug/L	0.004	2	875	3258	1
	Sb	123	0.172	ug/L	0.011	6	675	2483	3
	Ba	135	39.821	ug/L	0.276	0	41	182298	1
	Ba	137	39.958	ug/L	0.290	0	73	316727	0
>	Tb	159		ug/L			1186124	1275676	1
	Tl	205	0.003	ug/L	0.001	42	270	390	9
	Pb	208	0.889	ug/L	0.008	0	477	46194	0
	Bi	209		ug/L			2621879	2665935	1
	Th	232	0.026	ug/L	0.010	39	1082	2465	19
	U	238	0.002	ug/L	0.000	13	146	236	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS61 AaDUP SPN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 13, 2013 15:03:47
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1667189	1
	Be	9	-0.005	ug/L	0.001	25	52	35	16
	C	13		ug/L			91865	155169	3
	Cl	37		ug/L			4664629	5028977	1
>	Sc	45		ug/L			1199367	1346754	0
	V	51	0.408	ug/L	0.023	5	7921	19965	3
	V-1	51	0.387	ug/L	0.005	1	182	10685	1
	Cr	52	0.688	ug/L	0.037	5	23276	41658	2
	Cr	53	0.619	ug/L	0.031	4	155	1739	4
	Mn	55	187.971	ug/L	1.426	0	856	5821710	1
	Co	59	0.868	ug/L	0.004	0	217	20073	0
>	Ge	72		ug/L			666955	665023	2
	Ni	60	3.317	ug/L	0.085	2	57	14180	0
	Ni	62	2.923	ug/L	0.090	3	234	2011	2
	Cu	63	5.808	ug/L	0.182	3	374	53907	0
	Cu	65	5.826	ug/L	0.149	2	101	24056	0
	Zn	66	5.984	ug/L	0.168	2	850	15591	3
	Zn	67	7.960	ug/L	0.348	4	128	3447	2
	Zn	68	7.751	ug/L	0.193	2	745	14353	1
	As	75	0.867	ug/L	0.031	3	118	2015	1
	As-1	75	0.955	ug/L	0.125	13	9854	11937	0
	Se	82	0.032	ug/L	0.051	157	0	6	178
	Se	78	0.429	ug/L	0.352	82	10009	10240	0
	Mo	98	2.755	ug/L	0.059	2	75	14576	1
	Y	89		ug/L			438666	467335	0
	Kr	83		ug/L			391	424	4
>	In	115		ug/L			956745	1035884	1
	Ag	107	-0.001	ug/L	0 000	23	77	71	4
	Cd	111	0.013	ug/L	0.002	12	131	204	4
	Cd	114	0.013	ug/L	0.001	6	64	222	3
	Sb	121	0.166	ug/L	0.005	2	875	3263	1
	Sb	123	0.162	ug/L	0.001	0	675	2424	0
	Ba	135	39.697	ug/L	0.477	1	41	185152	0
	Ba	137	39.594	ug/L	0.510	1	73	319764	0
>	Tb	159		ug/L			1186124	1278797	0
	Tl	205	-0.003	ug/L	0.000	5	270	188	3
	Pb	208	0.916	ug/L	0.005	0	477	47718	0
	Bi	209		ug/L			2621879	2662761	0
	Th	232	-0.003	ug/L	0.002	56	1082	1025	7
	U	238	0.001	ug/L	0.000	30	146	231	9

WS91 · 61838

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WT28 W REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 13, 2013 15:07:54
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1565567	1
	Be	9	-0.007	ug/L	0.001	7	52	19	12
	C	13		ug/L			91865	109982	1
	Cl	37		ug/L			4664629	4659499	3
>	Sc	45		ug/L			1199367	1309535	1
	V	51	0.476	ug/L	0.016	3	7921	21212	0
	V-1	51	0.494	ug/L	0.006	1	182	13203	0
	Cr	52	0.015	ug/L	0.031	202	23276	25746	1
	Cr	53	0.072	ug/L	0.005	7	155	348	5
	Mn	55	0.315	ug/L	0.013	3	856	10408	2
	Co	59	0.063	ug/L	0.001	1	217	1628	1
>	Ge	72		ug/L			666955	657784	0
	Ni	60	0.208	ug/L	0.010	4	57	933	5
	Ni	62	-0.130	ug/L	0.023	17	234	153	8
	Cu	63	0.281	ug/L	0.008	2	374	2929	1
	Cu	65	0.271	ug/L	0.012	4	101	1203	3
	Zn	66	0.259	ug/L	0.049	18	850	1471	8
	Zn	67	0.899	ug/L	0.023	2	128	497	1
	Zn	68	1.129	ug/L	0.042	3	745	2696	3
	As	75	0.044	ug/L	0.013	29	118	211	13
	As-1	75	0.041	ug/L	0.011	26	9854	9807	0
	Se	82	0.130	ug/L	0.069	53	0	28	54
	Se	78	0.121	ug/L	0.087	71	10009	9945	0
	Mo	98	0.793	ug/L	0.009	1	75	4203	0
	Y	89		ug/L			438666	448800	2
	Kr	83		ug/L			391	392	5
>	In	115		ug/L			956745	991714	0
	Ag	107	-0.005	ug/L	0.000	7	77	25	15
	Cd	111	-0.005	ug/L	0.001	29	131	113	6
	Cd	114	0.001	ug/L	0.001	84	64	75	10
	Sb	121	-0.041	ug/L	0.002	4	875	353	7
	Sb	123	-0.043	ug/L	0.003	7	675	267	12
	Ba	135	9.700	ug/L	0.101	1	41	43348	1
	Ba	137	9.652	ug/L	0.071	0	73	74689	0
>	Tb	159		ug/L			1186124	1214490	1
	Tl	205	-0.002	ug/L	0.000	9	270	208	4
	Pb	208	0.003	ug/L	0.001	30	477	658	6
	Bi	209		ug/L			2621879	2647828	1
	Th	232	-0.020	ug/L	0.000	2	1082	163	14
	U	238	0.098	ug/L	0.002	2	146	4983	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WT28 X REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 13, 2013 15:12:02
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1556712	1
	Be	9	-0.006	ug/L	0.001	15	52	24	19
	C	13		ug/L			91865	108662	2
	Cl	37		ug/L			4664629	4708475	1
>	Sc	45		ug/L			1199367	1283134	1
	V	51	0.501	ug/L	0.011	2	7921	21430	0
	V-1	51	0.522	ug/L	0.008	1	182	13678	0
	Cr	52	0.007	ug/L	0.024	354	23276	25041	0
	Cr	53	0.077	ug/L	0.009	11	155	350	4
	Mn	55	106.328	ug/L	1.838	1	856	3137632	1
	Co	59	0.881	ug/L	0.012	1	217	19414	2
>	Ge	72		ug/L			666955	649242	0
	Ni	60	0.268	ug/L	0.006	2	57	1168	2
	Ni	62	-0.032	ug/L	0.044	136	234	209	12
	Cu	63	0.199	ug/L	0.009	4	374	2159	3
	Cu	65	0.178	ug/L	0.005	2	101	813	2
	Zn	66	1.066	ug/L	0.018	1	850	3390	1
	Zn	67	1.792	ug/L	0.047	2	128	855	2
	Zn	68	2.149	ug/L	0.039	1	745	4410	1
	As	75	0.371	ug/L	0.012	3	118	907	2
	As-1	75	0.438	ug/L	0.005	1	9854	10539	0
	Se	82	0.045	ug/L	0.028	61	0	9	67
	Se	78	0.332	ug/L	0.009	2	10009	9942	0
	Mo	98	0.861	ug/L	0.031	3	75	4496	3
	Y	89		ug/L			438666	444069	0
	Kr	83		ug/L			391	405	5
>	In	115		ug/L			956745	991063	2
	Ag	107	-0.005	ug/L	0.000	3	77	34	4
	Cd	111	-0.002	ug/L	0.001	62	131	128	5
	Cd	114	0.001	ug/L	0.001	93	64	76	14
	Sb	121	-0.039	ug/L	0.000	0	875	389	2
	Sb	123	-0.040	ug/L	0.002	4	675	295	7
	Ba	135	12.845	ug/L	0.342	2	41	57332	0
	Ba	137	12.792	ug/L	0.337	2	73	98865	0
>	Tb	159		ug/L			1186124	1224016	1
	Tl	205	0.003	ug/L	0.001	17	270	391	6
	Pb	208	0.009	ug/L	0.001	6	477	915	2
	Bi	209		ug/L			2621879	2677761	0
	Th	232	-0.016	ug/L	0.001	7	1082	349	18
	U	238	0.004	ug/L	0.001	18	146	372	12

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS91 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 15:16:09
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1533362	0
	Be	9	0.092	ug/L	0.008	8	52	501	8
	C	13		ug/L			91865	130079	1
	Cl	37		ug/L			4664629	4934898	1
>	Sc	45		ug/L			1199367	1307632	1
	V	51	18.457	ug/L	0.334	1	7921	495044	0
	V-1	51	18.528	ug/L	0.324	1	182	487532	0
	Cr	52	9.591	ug/L	0.143	1	23276	235315	1
	Cr	53	9.775	ug/L	0.098	1	155	24188	0
	Mn	55	141.486	ug/L	1.993	1	856	4254409	0
	Co	59	3.473	ug/L	0.083	2	217	77245	1
>	Ge	72		ug/L			666955	649866	1
	Ni	60	8.613	ug/L	0.126	1	57	35903	0
	Ni	62	9.975	ug/L	0.218	2	234	6158	2
	Cu	63	22.765	ug/L	0.378	1	374	205478	0
	Cu	65	23.058	ug/L	0.547	2	101	92768	1
	Zn	66	74.918	ug/L	0.772	1	850	181184	0
	Zn	67	73.064	ug/L	0.834	1	128	29914	1
	Zn	68	75.761	ug/L	0.488	0	745	130748	1
	As	75	2.304	ug/L	0.032	1	118	5043	0
	As-1	75	2.327	ug/L	0.090	3	9854	14637	0
	Se	82	0.069	ug/L	0.044	63	0	14	68
	Se	78	0.426	ug/L	0.213	50	10009	10007	0
	Mo	98	0.525	ug/L	0.010	1	75	2773	1
	Y	89		ug/L			438666	508166	1
	Kr	83		ug/L			391	517	3
>	In	115		ug/L			956745	1002076	1
	Ag	107	0.078	ug/L	0 006	7	77	877	6
	Cd	111	0.150	ug/L	0.001	0	131	819	0
	Cd	114	0.096	ug/L	0.002	2	64	1182	2
	Sb	121	-0.009	ug/L	0.003	28	875	789	3
	Sb	123	-0.010	ug/L	0.004	33	675	601	6
	Ba	135	83.400	ug/L	0.374	0	41	376274	1
	Ba	137	83.844	ug/L	1.365	1	73	654933	0
>	Tb	159		ug/L			1186124	1228479	0
	Tl	205	0.017	ug/L	0.001	5	270	907	4
	Pb	208	3.523	ug/L	0 025	0	477	174823	0
	Bi	209		ug/L			2621879	2653512	0
	Th	232	0.385	ug/L	0.005	1	1082	19603	1
	U	238	0.198	ug/L	0.002	1	146	9995	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS91 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 15:20:16
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1558728	0
	Be	9	0.093	ug/L	0.001	1	52	514	1
	C	13		ug/L			91865	140445	0
	Cl	37		ug/L			4664629	5039142	1
>	Sc	45		ug/L			1199367	1316493	0
	V	51	18.278	ug/L	0.224	1	7921	493698	1
	V-1	51	18.328	ug/L	0.196	1	182	485591	1
	Cr	52	9.669	ug/L	0.245	2	23276	238624	1
	Cr	53	9.782	ug/L	0.103	1	155	24371	1
	Mn	55	141.306	ug/L	1.852	1	856	4278128	0
	Co	59	3.479	ug/L	0.036	1	217	77922	1
>	Ge	72		ug/L			666955	650839	1
	Ni	60	8.566	ug/L	0.212	2	57	35762	2
	Ni	62	10.027	ug/L	0.533	5	234	6196	3
	Cu	63	25.355	ug/L	0.347	1	374	229176	1
	Cu	65	25.355	ug/L	0.493	1	101	102156	0
	Zn	66	78.647	ug/L	1.664	2	850	190431	0
	Zn	67	77.915	ug/L	2.948	3	128	31930	2
	Zn	68	80.693	ug/L	1.858	2	745	139411	1
	As	75	1.885	ug/L	0.026	1	118	4154	0
	As-1	75	1.900	ug/L	0.098	5	9854	13733	0
	Se	82	0.098	ug/L	0.059	59	0	21	63
	Se	78	0.377	ug/L	0.249	66	10009	9992	0
	Mo	98	0.551	ug/L	0.016	2	75	2912	1
	Y	89		ug/L			438666	515362	2
	Kr	83		ug/L			391	496	1
>	In	115		ug/L			956745	1005501	1
	Ag	107	0.086	ug/L	0.001	0	77	963	1
	Cd	111	0.164	ug/L	0.003	1	131	888	2
	Cd	114	0.105	ug/L	0.003	2	64	1287	1
	Sb	121	0.000	ug/L	0.002	15645	875	920	4
	Sb	123	-0.000	ug/L	0.007	3541	675	707	9
	Ba	135	86.834	ug/L	0.046	0	41	393106	1
	Ba	137	85.289	ug/L	0.742	0	73	668520	0
>	Tb	159		ug/L			1186124	1236881	0
	Tl	205	0.015	ug/L	0.001	7	270	858	5
	Pb	208	3.783	ug/L	0.032	0	477	188978	0
	Bi	209		ug/L			2621879	2654745	0
	Th	232	0.394	ug/L	0.005	1	1082	20165	0
	U	238	0.208	ug/L	0.000	0	146	10575	0

WS91 · 6163W

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS91 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 15:24:24
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1549626	0
	Be	9	24.094	ug/L	0.372	1	52	118178	1
	C	13		ug/L			91865	112860	1
	Cl	37		ug/L			4664629	5013245	0
>	Sc	45		ug/L			1199367	1302539	1
	V	51	39.562	ug/L	0.972	2	7921	1047007	1
	V-1	51	39.708	ug/L	0.857	2	182	1040445	0
	Cr	52	31.909	ug/L	0.298	0	23276	720979	1
	Cr	53	32.357	ug/L	0.219	0	155	79372	2
	Mn	55	156.878	ug/L	3.060	1	856	4698330	0
	Co	59	25.829	ug/L	0.393	1	217	570843	1
>	Ge	72		ug/L			666955	647385	0
	Ni	60	33.285	ug/L	0.356	1	57	138075	0
	Ni	62	33.937	ug/L	0.053	0	234	20328	0
	Cu	63	47.811	ug/L	0.085	0	374	429563	0
	Cu	65	48.571	ug/L	0.713	1	101	194600	1
	Zn	66	157.937	ug/L	1.931	1	850	379622	1
	Zn	67	152.038	ug/L	0.254	0	128	61878	0
	Zn	68	154.823	ug/L	1.275	0	745	265432	0
	As	75	26.259	ug/L	0.415	1	118	56068	1
	As-1	75	26.499	ug/L	0.183	0	9854	66709	0
	Se	82	79.402	ug/L	1.186	1	0	17656	1
	Se	78	77.187	ug/L	0.152	0	10009	55822	0
	Mo	98	23.379	ug/L	0.055	0	75	119887	0
	Y	89		ug/L			438666	499311	0
	Kr	83		ug/L			391	474	2
>	In	115		ug/L			956745	1002729	0
	Ag	107	22.122	ug/L	0.486	2	77	225316	2
	Cd	111	24.177	ug/L	0.326	1	131	110241	1
	Cd	114	24.106	ug/L	0.024	0	64	280308	0
	Sb	121	1.586	ug/L	0.020	1	875	22324	1
	Sb	123	1.577	ug/L	0.005	0	675	16652	0
	Ba	135	106.984	ug/L	1.119	1	41	482982	1
	Ba	137	106.957	ug/L	0.708	0	73	836103	1
>	Tb	159		ug/L			1186124	1233428	1
	Tl	205	24.167	ug/L	0.417	1	270	920224	0
	Pb	208	27.889	ug/L	0.338	1	477	1385908	0
	Bi	209		ug/L			2621879	2646965	1
	Th	232	24.047	ug/L	0.292	1	1082	1159615	0
	U	238	23.959	ug/L	0.364	1	146	1196267	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS91 APOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 15:28:58
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
[>	Li	6		ug/L			1477068	1546062	1
[	Be	9	24.906	ug/L	0.268	1	52	121871	1
	C	13		ug/L			91865	137261	3
	Cl	37		ug/L			4664629	5156437	1
[>	Sc	45		ug/L			1199367	1331250	1
[	V	51	40.127	ug/L	0.386	0	7921	1085414	0
[	V-1	51	40.131	ug/L	0.262	0	182	1074939	1
[	Cr	52	32.469	ug/L	0.739	2	23276	749231	0
[	Cr	53	32.432	ug/L	0.205	0	155	81313	2
[	Mn	55	160.858	ug/L	2.138	1	856	4924147	0
[	Co	59	25.812	ug/L	0.567	2	217	583018	1
[>	Ge	72		ug/L			666955	646662	1
[	Ni	60	33.655	ug/L	0.570	1	57	139440	1
[	Ni	62	33.647	ug/L	0.994	2	234	20129	1
[	Cu	63	49.982	ug/L	0.459	0	374	448517	0
[	Cu	65	51.339	ug/L	1.200	2	101	205428	1
[	Zn	66	158.900	ug/L	2.695	1	850	381483	1
[	Zn	67	147.980	ug/L	1.047	0	128	60160	1
[	Zn	68	156.066	ug/L	1.457	0	745	267237	0
[	As	75	27.073	ug/L	0.302	1	118	57733	0
[	As-1	75	27.207	ug/L	0.366	1	9854	68155	0
[	Se	82	82.611	ug/L	0.690	0	0	18348	0
[	Se	78	79.881	ug/L	0.791	0	10009	57362	0
[	Mo	98	25.831	ug/L	0.436	1	75	132287	0
	Y	89		ug/L			438666	513616	1
	Kr	83		ug/L			391	476	1
[>	In	115		ug/L			956745	996534	0
[	Ag	107	23.616	ug/L	0.190	0	77	239042	0
[	Cd	111	24.807	ug/L	0.329	1	131	112412	1
[	Cd	114	24.657	ug/L	0.226	0	64	284933	0
[	Sb	121	24.066	ug/L	0.165	0	875	323776	1
[	Sb	123	24.217	ug/L	0.256	1	675	244085	0
[	Ba	135	110.702	ug/L	0.846	0	41	496661	0
[	Ba	137	110.921	ug/L	0.626	0	73	861708	0
[>	Tb	159		ug/L			1186124	1242236	0
[	Tl	205	24.676	ug/L	0.152	0	270	946429	0
[	Pb	208	28.293	ug/L	0.189	0	477	1416166	0
[	Bi	209		ug/L			2621879	2654473	0
[	Th	232	24.457	ug/L	0.085	0	1082	1187884	0
[	U	238	24.313	ug/L	0.220	0	146	1222755	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WS91 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, June 13, 2013 15:33:06
Number of Replicates: 3
Method File: C:\NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1449208	1
	Be	9	24.647	ug/L	0.340	1	52	113069	2
	C	13		ug/L			91865	109021	0
	Cl	37		ug/L			4664629	4978743	1
>	Sc	45		ug/L			1199367	1197250	2
	V	51	23.946	ug/L	0.456	1	7921	585732	2
	V-1	51	24.078	ug/L	0.466	1	182	580039	2
	Cr	52	24.071	ug/L	0.100	0	23276	505670	2
	Cr	53	24.523	ug/L	0.272	1	155	55320	1
	Mn	55	24.236	ug/L	0.115	0	856	667980	2
	Co	59	23.567	ug/L	0.703	2	217	478584	0
>	Ge	72		ug/L			666955	626915	1
	Ni	60	25.518	ug/L	0.629	2	57	102497	1
	Ni	62	24.829	ug/L	1.056	4	234	14455	2
	Cu	63	25.640	ug/L	0.774	3	374	223178	1
	Cu	65	25.678	ug/L	1.003	3	101	99633	2
	Zn	66	80.969	ug/L	1.404	1	850	188826	0
	Zn	67	73.772	ug/L	0.859	1	128	29134	0
	Zn	68	78.315	ug/L	0.425	0	745	130359	1
	As	75	24.680	ug/L	0.517	2	118	51026	0
	As-1	75	25.213	ug/L	0.717	2	9854	61900	0
	Se	82	80.442	ug/L	1.148	1	0	17319	0
	Se	78	79.074	ug/L	1.765	2	10009	55138	0
	Mo	98	24.866	ug/L	0.425	1	75	123458	0
	Y	89		ug/L			438666	421185	0
	Kr	83		ug/L			391	397	3
>	In	115		ug/L			956745	950991	0
	Ag	107	24.137	ug/L	0.032	0	77	233156	0
	Cd	111	24.925	ug/L	0.310	1	131	107777	0
	Cd	114	25.223	ug/L	0.426	1	64	278148	1
	Sb	121	24.600	ug/L	0.276	1	875	315819	1
	Sb	123	24.742	ug/L	0.281	1	675	237968	0
	Ba	135	24.702	ug/L	0.407	1	41	105788	1
	Ba	137	24.776	ug/L	0.419	1	73	183723	1
>	Tb	159		ug/L			1186124	1174405	1
	Tl	205	25.011	ug/L	0.121	0	270	906874	0
	Pb	208	25.431	ug/L	0.314	1	477	1203358	0
	Bi	209		ug/L			2621879	2644904	0
	Th	232	24.173	ug/L	0.298	1	1082	1109894	0
	U	238	24.350	ug/L	0.110	0	146	1157694	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 15:38:19
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: C:\NexION Data\System\061213a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1477068	1473969	1
Be	9	50.137	ug/L	0.752	1	52	233846	1
C	13		ug/L			91865	97618	1
Cl	37		ug/L			4664629	4876811	0
Sc	45		ug/L			1199367	1207136	0
V	51	47.629	ug/L	0.379	0	7921	1166823	0
V-1	51	47.905	ug/L	0.540	1	182	1163475	0
Cr	52	47.377	ug/L	0.215	0	23276	980778	0
Cr	53	48.315	ug/L	0.833	1	155	109757	1
Mn	55	47.863	ug/L	0.329	0	856	1329315	0
Co	59	46.924	ug/L	0.827	1	217	960954	1
Ge	72		ug/L			666955	625272	1
Ni	60	50.043	ug/L	0.493	0	57	200459	0
Ni	62	48.050	ug/L	0 907	1	234	27703	0
Cu	63	50.273	ug/L	1.411	2	374	436128	1
Cu	65	49.639	ug/L	0.939	1	101	192055	0
Zn	66	49.899	ug/L	1.493	2	850	116358	1
Zn	67	49.311	ug/L	0.901	1	128	19462	0
Zn	68	50.313	ug/L	1.281	2	745	83765	1
As	75	49.800	ug/L	1.049	2	118	102583	0
As-1	75	49.528	ug/L	0.944	1	9854	112380	0
Se	82	51.880	ug/L	1.304	2	0	11139	1
Se	78	50.274	ug/L	0.970	1	10009	38383	0
Mo	98	50.315	ug/L	0.860	1	75	249096	1
Y	89		ug/L			438666	430515	2
Kr	83		ug/L			391	414	7
In	115		ug/L			956745	950597	0
Ag	107	47.298	ug/L	0.417	0	77	456604	0
Cd	111	49.900	ug/L	0.304	0	131	215554	0
Cd	114	49.926	ug/L	1.072	2	64	550266	2
Sb	121	49.497	ug/L	0.350	0	875	634317	1
Sb	123	49.768	ug/L	0.462	0	675	477792	0
Ba	135	49.364	ug/L	0.102	0	41	211295	1
Ba	137	49.526	ug/L	0.332	0	73	367043	0
Tb	159		ug/L			1186124	1179188	0
Tl	205	49.653	ug/L	0.416	0	270	1807449	0
Pb	208	50.146	ug/L	0.750	1	477	2382053	0
Bi	209		ug/L			2621879	2604369	0
Th	232	52.198	ug/L	0.504	0	1082	2405298	1
U	238	51.932	ug/L	0.373	0	146	2478953	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 13, 2013 15:45:11
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\061213a.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			1477068	1441483	1
	Be	9	-0.007	ug/L	0.001	9	52	20	15
	C	13		ug/L			91865	97832	0
	Cl	37		ug/L			4664629	4772170	3
>	Sc	45		ug/L			1199367	1159129	0
	V	51	-0.005	ug/L	0.003	70	7921	7545	0
	V-1	51	-0.003	ug/L	0.000	9	182	111	5
	Cr	52	-0.015	ug/L	0.014	92	23276	22201	0
	Cr	53	-0.009	ug/L	0.002	27	155	131	3
	Mn	55	0.009	ug/L	0.001	13	856	1068	2
	Co	59	-0.001	ug/L	0.000	30	217	186	3
>	Ge	72		ug/L			666955	613236	0
	Ni	60	0.003	ug/L	0.002	51	57	66	10
	Ni	62	-0.170	ug/L	0.002	1	234	120	1
	Cu	63	-0.015	ug/L	0.001	6	374	214	3
	Cu	65	-0.006	ug/L	0.000	3	101	71	1
	Zn	66	0.192	ug/L	0.014	7	850	1218	2
	Zn	67	0.188	ug/L	0.030	15	128	190	6
	Zn	68	0.172	ug/L	0.021	12	745	963	3
	As	75	0.017	ug/L	0.003	19	118	142	5
	As-1	75	0.295	ug/L	0.030	10	9854	9663	0
	Se	82	0.014	ug/L	0.023	167	0	2	239
	Se	78	1.062	ug/L	0.124	11	10009	9804	0
	Mo	98	-0.003	ug/L	0.002	78	75	55	20
	Y	89		ug/L			438666	409949	0
	Kr	83		ug/L			391	392	4
>	In	115		ug/L			956745	922288	0
	Ag	107	-0.003	ug/L	0.001	24	77	44	17
	Cd	111	-0.006	ug/L	0.001	21	131	101	5
	Cd	114	-0.003	ug/L	0.001	28	64	32	24
	Sb	121	0.027	ug/L	0.022	82	875	1175	22
	Sb	123	0.023	ug/L	0.020	85	675	863	20
	Ba	135	-0.002	ug/L	0.002	87	41	33	18
	Ba	137	-0.001	ug/L	0.001	45	73	60	7
>	Tb	159		ug/L			1186124	1144746	0
	Tl	205	-0.002	ug/L	0.001	39	270	204	11
	Pb	208	0.003	ug/L	0.000	9	477	605	2
	Bi	209		ug/L			2621879	2592619	0
	Th	232	0.065	ug/L	0.003	4	1082	3964	3
	U	238	-0.001	ug/L	0.000	40	146	93	21

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA **Analysis Date:** 6/13

	Analyst CB 6-14-13	Peer 6-14-13	Comment
Logbooks			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Instrument			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration			
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	✓	—	
Method Accuracy			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	See log
Matrix Duplicates	✓	✓	See log
Method Blanks	✓	✓	
Reports			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Other	✓	✓	See CAF's

US91 : 01848

Mercury Analysis Log

Analyst: CB

Instrument: CETAC

Date: 6-14-13

Page: 1 of 7

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			8.27	Begin CLP %R=103 ✓
ICB			-0.04	✓
CCV1			4.04	%R=101 ✓
CCB1			-0.03	✓
CRA			0.10	✓
WS42 mB1			-0.00	✓
" mB1spk			2.09	%R=105 ✓
" mB1spD			2.03	%R=102 ✓
" A			0.14	
" Adup			0.13	CB 6/14/13 Not RPD: undetected ✓
" Aspk			7.98	%R=784 High X
" B				
" D				
" E				
CCV2			4.07	%R=102 ✓
CCB2			-0.03	✓
WS42 F				
WT56 mB1			-0.00	✓
" mB1spk			2.10	%R=105 ✓
" A			0.87	
" Adup			0.86	RPA: 1.15 ✓
" Aspk			2.08	%R=121 ✓
" B	↓	↓		

Chemical/Reagent ID:

10% $SnCl_2$: mp2511

14% NH_2OH/NaCl: mp2477

Standard ID:

Standard: 3037-2

ICV/CCV: 59-6

Mercury Analysis Log

Analyst: CB

All corrections by CB 6/14/13

Date: 6-14-13

Instrument: CETAC

Page: 2 of 7

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments	
WTS6 C	SmA	1X			
" D					
" E					
CCV3			4.04	%R=101	✓
CCB3			-0.02		✓
WTS6 F					
" G					
WS91 MB1			-0.00		✓
" MB1SpK			2.09	%R = 105	✓
" A			0.03		✓
" Adup			0.03	No RPD: undetected	✓
" ASpK			1.15	%R= 115	✓
WS30 MB1			-0.00		✓
" MB1SpK		↓	2.08	%R= 104	✓
" REF1		5X	5.70	7.125 mg/Kg	✓
CCV4		1X	4.00	%R=100	✓
CCB4			-0.02		✓
WS30 A					
" B					
" C					
" D					
" E					
" F					
" G					
" H					
" I			1.66		
" Idup			0.82	RPD= 67.7 High	X
CCV5			4.02	%R= 101	✓
CCB5			-0.02		✓
WS30 ISpK	↓	↓	~~2.29~~ 2.29	%R= ~~63~~ 63 ~~114~~ 114 ~~229~~ 229 ~~Low~~	X

6-14-13

Chemical/Reagent ID:

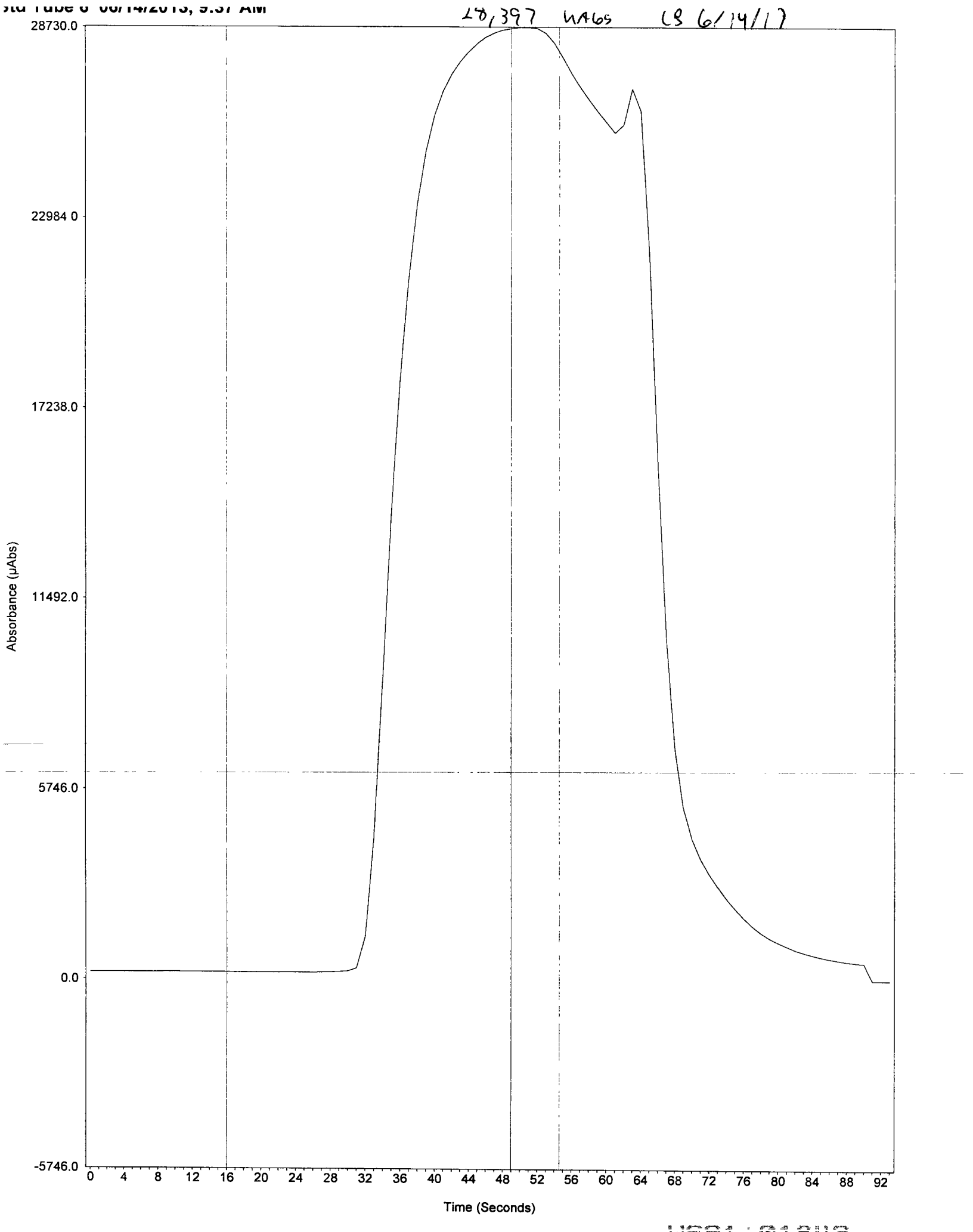
10% $SnCl_2$: MP2511

14% $NH_2OH/NaCl$: MP2427

Standard ID:

Standard: 3037-2

ICV/CCV: 59-6


28730.0
22984.0
17238.0
11492.0
5746.0
0.0
-5746.0
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 - 13061400.DB - Friday, June 14, 2013, 3:12:59 PM

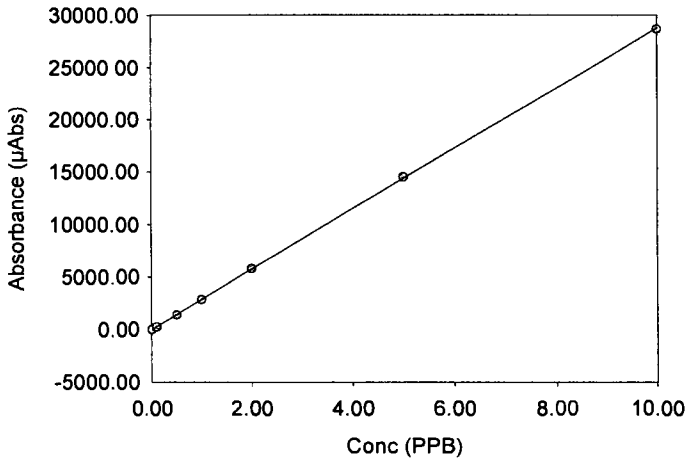
Analyst
Date Started Friday, June 14, 2013, 09:35:41
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Std Tube 6	14-Jun-2013, 09:35	10.00	0.63	28400.00	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	14-Jun-2013, 09:39	0.00	23.80	-7.89	1.00	
Standard #1	14-Jun-2013, 09:40	0.10	0.93	251.00	1.00	
Standard #2	14-Jun-2013, 09:42	0.50	0.25	1400.00	1.00	
Standard #3	14-Jun-2013, 09:43	1.00	0.16	2870.00	1.00	
Standard #4	14-Jun-2013, 09:45	2.00	0.26	5820.00	1.00	
Standard #5	14-Jun-2013, 09:47	5.00	0.23	14600.00	1.00	
Standard #6	14-Jun-2013, 09:48	10.00	0.28	28700.00	1.00	

Calibration Data



Int.	0.000
Slope	2882.080
Correlation	0.99997

Smm

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
ICV	14-Jun-2013, 09:52	8.27	0.05	23800.00	1.00	
ICB	14-Jun-2013, 09:53	-0.04	1.74	-127.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	14-Jun-2013, 09:55	4.04	0.18	11600.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	14-Jun-2013, 09:56	-0.03	2.82	-76.90	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
CRA	14-Jun-2013, 09:58	0.10	1.31	290.00	1.00	
WS42 MB1 SMM	14-Jun-2013, 10:00	-0.00	5.60	-12.90	1.00	
WS42 MB1SPK SMM	14-Jun-2013, 10:01	2.09	0.19	6010.00	1.00	
WS42 MB1SPD SMM	14-Jun-2013, 10:03	2.03	0.77	5840.00	1.00	
WS42 A SMM	14-Jun-2013, 10:04	0.14	0.41	407.00	1.00	
WS42 ADUP SMM	14-Jun-2013, 10:06	0.13	0.18	380.00	1.00	
WS42 ASPK SMM	14-Jun-2013, 10:08	7.98	0.27	23000.00	1.00	o/oR=Hi
WS42 B SMM	14-Jun-2013, 10:09	0.34	0.19	980.00	1.00	
WS42 D SMM	14-Jun-2013, 10:11	0.21	0.32	602.00	1.00	
WS42 E SMM	14-Jun-2013, 10:13	0.26	0.25	753.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	14-Jun-2013, 10:14	4.07	0.21	11700.00	1.00	

Analyst
Date Started Friday, June 14, 2013, 10:16:23
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	14-Jun-2013, 10:16	-0.02	1.49	-57.60	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WS42 F SMM	14-Jun-2013, 10:18	0.14	0.84	413.00	1.00	
WT56 MB1 SMM	14-Jun-2013, 10:19	-0.00	64.60	-5.67	1.00	
WT56 MB1SPK SMM	14-Jun-2013, 10:21	2.10	0.10	6060.00	1.00	
WT56 A SMM	14-Jun-2013, 10:22	0.87	0.18	2520.00	1.00	
WT56 ADUP SMM	14-Jun-2013, 10:24	0.86	0.24	2470.00	1.00	
WT56 ASPK SMM	14-Jun-2013, 10:25	2.08	0.21	5990.00	1.00	
WT56 B SMM	14-Jun-2013, 10:27	0.67	0.28	1930.00	1.00	
WT56 C SMM	14-Jun-2013, 10:29	0.27	0.24	773.00	1.00	
WT56 D SMM	14-Jun-2013, 10:30	0.27	0.49	785.00	1.00	
WT56 E SMM	14-Jun-2013, 10:32	0.32	0.35	913.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	14-Jun-2013, 10:34	4.04	0.22	11600.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	14-Jun-2013, 10:35	-0.02	4.46	-56.30	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WT56 F SMM	14-Jun-2013, 10:37	0.22	0.36	642.00	1.00	
WT56 G SMM	14-Jun-2013, 10:39	0.10	1.28	274.00	1.00	
WS91 MB1 SMM	14-Jun-2013, 10:40	-0.00	57.00	-5.57	1.00	
WS91 MB1SPK SMM	14-Jun-2013, 10:42	2.09	0.14	6030.00	1.00	
WS91, A SMM	14-Jun-2013, 10:43	0.03	2.41	95.00	1.00	
WS91 ADUP SMM	14-Jun-2013, 10:45	0.03	2.06	99.00	1.00	
WS91 ASPK SMM	14-Jun-2013, 10:47	1.15	0.19	3300.00	1.00	
WS30 MB1 SMM	14-Jun-2013, 10:48	-0.00	37.00	-10.60	1.00	
WS30 MB1SPK SMM	14-Jun-2013, 10:50	2.08	0.19	5980.00	1.00	
WS30 REF1 SMM	14-Jun-2013, 10:51	5.70	0.11	16400.00	5.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	14-Jun-2013, 10:53	4.00	0.26	11500.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	14-Jun-2013, 10:55	-0.02	1.21	-60.60	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WS30 A SMM	14-Jun-2013, 10:56	0.65	0.39	1880.00	1.00	
WS30 B SMM	14-Jun-2013, 10:58	0.08	0.74	223.00	1.00	
WS30 C SMM	14-Jun-2013, 11:00	0.20	0.30	583.00	1.00	
WS30 D SMM	14-Jun-2013, 11:01	0.57	0.11	1630.00	1.00	
WS30 E SMM	14-Jun-2013, 11:03	0.62	0.10	1780.00	1.00	
WS30 F SMM	14-Jun-2013, 11:05	0.09	0.51	270.00	1.00	
WS30 G SMM	14-Jun-2013, 11:06	0.80	0.16	2320.00	1.00	
WS30 H SMM	14-Jun-2013, 11:08	0.63	0.42	1810.00	1.00	
WS30 I SMM	14-Jun-2013, 11:09	1.66	0.53	4790.00	1.00	
WS30 IDUP SMM	14-Jun-2013, 11:11	0.82	0.35	2370.00	1.00	RPD = High

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	14-Jun-2013, 11:13	4.02	0.12	11600.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	14-Jun-2013, 11:14	-0.02	4.41	-56.30	1.00	

6/14/13

WS91 : 91&W5

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: 6-13-17

Bath Temp: 95°C Start Time: 1200 End Time: 1230

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	3037-2	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 **Matrix:** Soil

Analyst: CB **Date:** 6-12-13

Bath Temp: 95°C **Start Time:** 1035 **End Time:** 11-05-13

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WS91 A	6	-	0.232	50.0	6/20 1	Y	
" AMS	6	-	0.234		1		
" ASPK	6	-	0.236		1		
" MBI	-	-	-		1		
" MBISPK	-	-	-		1		
WS30 A	2	-	0.230		6/17 1		
" B	2	-	0.256		1		
" C	2	-	0.287		1		
" D	2	-	0.240		1		
" E	2	-	0.237		1		
" F	2	-	0.256		1		
" G	2	-	0.235		1		
" H	2	-	0.232		1		
" I	3	-	0.269		1		
" J	2	-	0.207		1		
" IDUP	3	-	0.268		1		
" ISPK	3	-	0.271		1		
" REF1	DOS3-S40	-	0.200		1		
" MBI	-	-	-		1	↓	
" MBISPK	-	-	-		1	Y	
WT48 A	1	-	0.201		6/21 1	N	
" B	1	-	0.231		1	↓	
" MBI	-	-	-	↓	1	↓	
" MBISPK	-	-	-	50.0	1	N	
			EB 6/12/13				

Chemical/Reagent ID:

HNO_3: I81169 **H_2SO_4:** I80144 **HCl:** -

5% $K_2S_2O_8$: MP2491 **5% $KMnO_4$:** MP2425 **Digest Tube Lot:** MH21KK06

WS91 01648

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: WS91

J
6-19-13

TOC Solids Prep Log

acid purging to remove IC and drying at 70°C for TOC analysis

General notes regarding prep method and samples (identify the acid used)

DATE:	6/17/13 (C)
ANALYST:	KE 14:50

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			12.9657		12.9656	-0.1 mg	
WS91 A7		-	13.1196	18.8064	15.3600	39.40%	
WS91 A7 dup		-	13.0413	18.8331	15.3299	39.51%	RPD = 0.30%
WS91 A7 trip		-	13.0406	18.4794	15.1002	37.87%	RSD = 2.36%
WT81 A1		-	13.1813	18.8548	15.6415	43.38%	
WT81 B1		-	13.1817	18.0770	15.2128	41.49%	
WT81 C1		-	13.0731	18.8206	15.4432	41.24%	

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 6-17-13 (W) 14:50 Date 6-17-13 (A)

Sample Idenification		IC	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID	Test	Tare	Wet	70 °C		
Blank			12.9657	~0	12.9656		
WS91 A2		—	13.1196	18.8064	15.3600		Very wet Sand + rocks
↓ A3		—	13.0413	18.8331	15.3299		↓
↓ A7		—	13.0406	18.4794	15.1002		
WT81 A1		—	13.1803	18.8548	15.6415		Very wet Sand
↓ B1		—	13.1817	18.0770	15.2128		↓
↓ C1		—	13.0731	18.8206	15.4432		

6-17-13 (W)

WS91 : 01851

6-19-13

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))*

DATE: 6/17/13 (A)

ANALYST: KE 11:16

Instrumentation

Drying Ovens: 12

Muffle Furnace: N / A

Analytical Balance: 1123230597

Batch drying time

record times as mm/dd/yy hh:mm

6/17/2013 13:16 date/time in oven KE

6/18/2013 6:36 date/time out KE

elapsed hrs = 17.3

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	6/17/13 11:40 KE	6/17/13 11:02 KE	6/18/13 6:52 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			1.0948	1.0948			0.00							
WS91 A7		6.2969	1.0985	2.8638			1.77	35.96%						
WS91 A7 dup		6.8698	1.0875	3.1129			2.03	35.03%						
							RPD =	3.10%				RPD =		NA
WS91 A7 trp		6.9312	1.0942	3.2581			2.16	37.07%						
							RSD =	4.48%				RSD =		NA
WT81 A1		8.3457	1.1019	4.1235			3.02	41.71%						
WT81 B6		6.4819	1.0947	3.2199			2.13	39.48%						
WT81 C6		7.2823	1.0865	3.5293			2.44	39.43%						

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

Analyst: (W)		Date: 6-17-13 (A) 11:16		Oven ID:	(2) 8.3457 6-18-13 (D) 017		Balance ID:	1123230597
Time in Oven:	13:16	Time Out of Oven:	6:36	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:		6-17-13 11:46	6-17-13 11:02	6-18-13 6:52						
Cal Weight (10.0000):		10.0000 (W)	10.0000 (W)	10.0000 (W)						

Sample ID	Dish #	Sample	Tare	Dry Weight 104°C			Dry Weight	Ash Weight 550°C		
				1	2	3	grams	1	2	3
BLANK	1	0	1.0948	1.0948						
WS91 A7	2	6.2969	1.0985	2.8638						
↓ nA7	3	6.8698	1.0875	3.1139						
↓ pA7	4	6.9312	1.0942	3.2581						
WT81 A1	5	~~8.0821~~	1.1019	4.1235						
↓ B6	6	6.4819	1.0947	3.2199						
↓ C6	7	7.2823	1.0865	3.5293						

6-17-13 (W)

D
6-19-13

TOC, Solids Data Analysis

DATE: 6/19/2013
ANALYST: KE 12:06

Instrument: Apollo 1
Mode: NPOC *Inlet:* Boat
Spike Std = 2,500 *ppm C*
Balance ID:

Calibration Data

Cal Curve ID: 6/18/2013 *Conc:* 5,000 *ppm*
Calibration Curve Standard: 00136-09 *Curve Date:* 05/16/13
CalFact: 1.384E+05 *intercept:* -1324 *r2 :* 0.99907
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

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	1000	1,000	*100.00%*
Blank				1.00		40.0	4.81	5	*Blank OK*
NIST 1941B				1.00		1.5	26603	26,603	*88.97%*
WS91 A1				1.00		1.8	22577	22,577	*Range OK!*
WS91 A1 dup				1.00		1.6	25875	25,875	*RPD=13.6%*
WS91 A1 trp				1.00		1.7	21804	21,804	*RSD=9.2%*
WS91 A1 ms				1.00	20	1.7	48324	48,324	*Range OK!*
Spike = *0.05*	*mg C to*		*1.7*	*mg comp=*	*29,412*	*ppm*		*88%*	
NIST 1941B				1.00		1.4	31330	31,330	*104.78%*
~~CCV~~				~~1.00~~		~~40.0~~	~~1184~~	~~1,184~~	~~*118.40%*~~
CCV				1.00		40.0	940	940	*94.00%*
Blank				1.00		40.0	5.71	6	*Blank OK*

WS91 : 0185H

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOC Solids Sample Run Log
Apollo 9000

Page 1 of 1

Set-Up Parameters MODE: NPOC			INLET: Boat Sampler	
Standards:	Source	Conc (ppm)	Analyst: (4)	
Calibration:	ARI – 00136-09	5000	Date:	6-19-13
Verification:	ERA – 0409-42-01	5000 to 1000 for CVS	Time:	12:06
SRM:	NBS – 19415 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			1.5			
WS91 A1			1.8			
↓ dA1			1.6			
+PA1			1.7			
↓ MA1			1.7	2800	20	
NBS 1941 B			1.4			
CCV			40/40			x change oRing
CCB			40			

6-19-13 (4)

WSS1 : 01855

6-19-13 (R)

Detailed Analysis Report Print Date/Time: 2013/06/19 15:47:35

Sample ID: ICV/CCV BOAT Mode: TOC
Method: Boat Sampler Filename: 06190621
Cal. Curve: 061813 BOAT CAL Timestamp: 2013/06/19 06:32
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	999.6273	39.9851	5531015	30.874	31.874	174

Sample ID: ICB/CCB BOAT Mode: TOC
Method: Boat Sampler Filename: 06190641
Cal. Curve: 061813 BOAT CAL Timestamp: 2013/06/19 06:48
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	4.8070	0.1923	25280	30.723	30.752	120

Last Message: Low Sample Detected

Sample ID: NBS 1941B Mode: TOC
Method: Boat Sampler Filename: 06190704
Cal. Curve: 061813 BOAT CAL Timestamp: 2013/06/19 07:22
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	26602.9297	39.9044	5519850	30.713	31.711	228

Sample ID: WS91 A1 Mode: TOC
Method: Boat Sampler Filename: 06191156
Cal. Curve: 061813 BOAT CAL Timestamp: 2013/06/19 12:01
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	22577.0410	40.6387	5622769	32.795	33.790	141

Sample ID: WS91 A1 DUP Mode: TOC
Method: Boat Sampler Filename: 06191217
Cal. Curve: 061813 BOAT CAL Timestamp: 2013/06/19 12:27
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	25874.8145	41.3997	5728065	32.427	33.425	143

Sample ID: WS91 A1 TRIP Mode: TOC
Method: Boat Sampler Filename: 06191339
Cal. Curve: 061813 BOAT CAL Timestamp: 2013/06/19 13:43
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	21804.1914	37.0671	5128609	31.799	32.798	138

Sample ID: WS91 A1 MS Mode: TOC
Method: Boat Sampler Filename: 06191402
Cal. Curve: 061813 BOAT CAL Timestamp: 2013/06/19 14:15
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

WS91 · 21865

1	48324.4375	82.1515	11366491	31.613	32.609	195

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 061813 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06191521
Timestamp: 2013/06/19 15:26
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	31330.0020	43.8620	6067425	31.147	32.146	254

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 061813 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06191530
Timestamp: 2013/06/19 15:35
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1184.0215	47.3609	6561527	31.578	32.572	179

Last Message: Out of Calibration

6-19-13 Low all run

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 061813 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06191536
Timestamp: 2013/06/19 15:40
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	940.4314	37.6173	5203401	31.439	32.435	141

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 061813 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06191542
Timestamp: 2013/06/19 15:45
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	5.7143	0.2286	30301	31.049	31.074	120

Last Message: Low Sample Detected

WS91 : 21857

Calibration Report Print Date/Time: 2013/06/18 15:54:45

Cal. Curve ID: 061813 BOAT CAL
Created: 2013/06/18 15:54
Calibration Factor (m): 1.384e+05
Y Intercept (b): -1324
r-squared: 0.99907

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Message	Date & Time
DI Water	29217	0.000	0.221	Low Sample De	2013/06/18 08:38
200 ppm	1009602	8.000	7.306		2013/06/18 09:18
500 ppm	2627379	20.000	18.999		2013/06/18 09:59
1000 ppm	5813974	40.000	42.030	Max Integrati	2013/06/18 10:48
2500 ppm	13757697	100.000	99.444		2013/06/18 15:51

USGL 021858

Detailed Analysis Report Print Date/Time: 2013/06/18 16:29:10

Sample ID: DI Water
Method: Boat Sampler
Cal. Curve: 061813 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06180822
Timestamp: 2013/06/18 08:38
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			37339	28.074	28.043	120
2			31175	28.007	28.004	120
3			19136	28.044	27.973	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 29217 Std Dev: 9258 RSD: 31.69

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 061813 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06180843
Timestamp: 2013/06/18 09:18
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			945900	28.051	29.048	85
2			1029190	28.091	29.087	103
3			1053715	28.052	29.048	97

<<<Statistics>>> Mean: 1009602 Std Dev: 56514 RSD: 5.60

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 061813 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06180935
Timestamp: 2013/06/18 09:59
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2389295	28.085	29.085	136
2			2724105	28.126	29.123	171
3			2768736	28.126	29.123	222

<<<Statistics>>> Mean: 2627379 Std Dev: 207391 RSD: 7.89

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 061813 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06181006
Timestamp: 2013/06/18 10:10
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2323107	62.057	62.990	69

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 061813 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06181013
Timestamp: 2013/06/18 10:48
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			5616615	28.126	29.126	215
2			5893458	28.047	29.191	300
3			5931846	28.428	29.695	301

Last Message: Max Integration Time Reached
<<<Statistics>>> Mean: 5813974 Std Dev: 171991 RSD: 2.96

Sample ID: 2500 ppm
Method: Boat Sampler
Mode: TOC
Filename: 06181522

WSDL 21659

Cal. Curve: 061813 BOAT CAL
Operator ID: TRINA
Timestamp: 2013/06/18 15:51
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			14807623	35.544	36.544	267
2			13072873	35.114	36.489	300
3			13392597	34.765	35.763	287

Last Message: Max Integration Time Reached
<<<Statistics>>> Mean: 13757697 Std Dev: 923208 RSD: 6.71

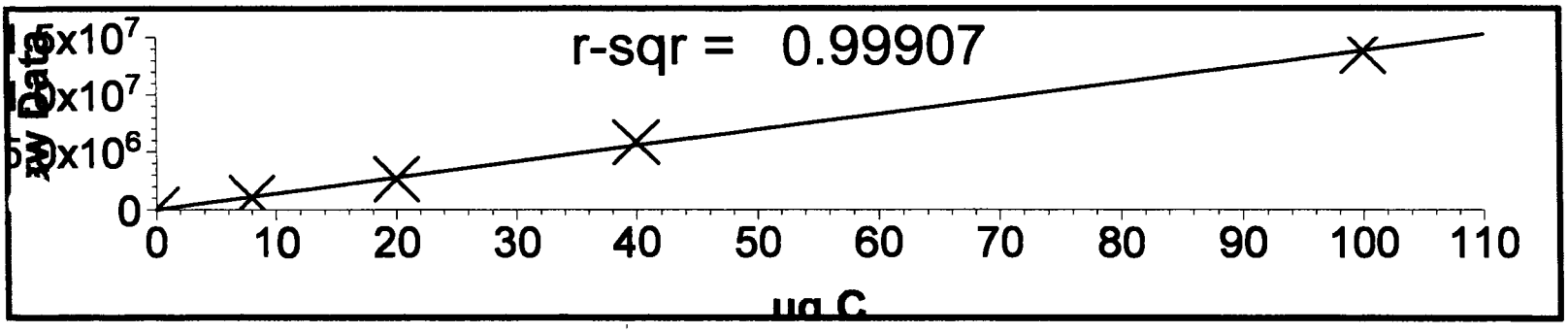
Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 061813 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06181555
Timestamp: 2013/06/18 16:06
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1165.1791	46.6072	6447246	33.971	35.062	301

Last Message: Out of Calibration

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 061813 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06181622
Timestamp: 2013/06/18 16:27
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1024.3831	40.9753	5668023	33.285	34.285	166


r-sqr = 0.99907
5x10^7
0
0
10
20
30
40
50
60
70
80
90
100
110
ug C

Geotechnical Raw Data
Analyst Notes and Raw Data

ARI Job ID: WS91

Sample: CL-MH-SPS-20130605-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WS91\WS91A.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: 6/18/2013 8:45:34AM
Reported: 6/18/2013 9:12:36AM
Liquid Visc: 0.7227 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: 108 / 83 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	95.0	0.4	117.77388
917.3	0.125	94.5	0.5	104.96608
866.0	0.208	93.9	0.6	93.55112
817.5	0.291	93.3	0.6	83.37752
771.8	0.374	92.6	0.7	74.31030
728.6	0.457	91.9	0.7	66.22912
687.9	0.540	91.1	0.8	59.02677
649.4	0.623	90.2	0.9	52.60766
613.1	0.706	89.3	0.9	46.88663
578.8	0.789	88.3	1.0	41.78775
546.4	0.872	87.2	1.1	37.24337
515.8	0.955	86.1	1.1	33.19319
487.0	1.038	84.9	1.2	29.58346
459.7	1.121	83.6	1.3	26.36629
434.0	1.204	82.2	1.4	23.49898
409.7	1.287	80.6	1.5	20.94349
386.8	1.370	79.0	1.6	18.66590
365.2	1.453	77.4	1.6	16.63600
344.7	1.536	75.7	1.7	14.82685
325.5	1.619	74.1	1.6	13.21445
307.3	1.702	72.5	1.6	11.77739
290.1	1.786	70.9	1.5	10.49661
273.8	1.869	69.5	1.4	9.35511
258.5	1.952	68.2	1.3	8.33775
244.1	2.035	67.0	1.2	7.43103
230.4	2.118	65.9	1.1	6.62291
217.5	2.201	64.8	1.1	5.90268
205.4	2.284	63.7	1.1	5.26077
193.9	2.367	62.6	1.1	4.68866
183.0	2.450	61.5	1.1	4.17878
172.8	2.533	60.5	1.1	3.72434
163.1	2.616	59.4	1.0	3.31932
154.0	2.699	58.4	1.0	2.95835
145.4	2.782	57.4	1.0	2.63663
137.2	2.865	56.3	1.0	2.34990
129.6	2.948	55.3	1.0	2.09435
122.3	3.031	54.3	1.0	1.86659
115.5	3.114	53.2	1.1	1.66360
109.0	3.197	52.1	1.1	1.48269
102.9	3.280	51.0	1.1	1.32144

Sample: CL-MH-SPS-20130605-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WS91\WS91A.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: 6/18/2013 8:45:34AM
Reported: 6/18/2013 9:12:36AM
Liquid Visc: 0.7227 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: 108 / 83 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	49.8	1.1	1.17774
91.73	3.447	48.7	1.1	1.04966
86.60	3.530	47.6	1.1	0.93551
81.75	3.613	46.6	1.0	0.83378
77.18	3.696	45.8	0.9	0.74310
72.86	3.779	45.0	0.8	0.66229
68.79	3.862	44.4	0.6	0.59027
64.94	3.945	44.0	0.4	0.52608
61.31	4.028	43.8	0.2	0.46887
57.88	4.111	43.7	0.1	0.41788
54.64	4.194	43.6	0.1	0.37243
51.58	4.277	43.5	0.1	0.33193
48.70	4.360	43.3	0.2	0.29583
45.97	4.443	43.1	0.2	0.26366
43.40	4.526	42.9	0.2	0.23499
40.97	4.609	42.7	0.2	0.20943
38.68	4.692	42.5	0.2	0.18666
36.52	4.775	42.4	0.1	0.16636
34.47	4.858	42.4	0.1	0.14827
32.55	4.941	42.3	0.1	0.13214
30.73	5.024	42.1	0.2	0.11777
29.01	5.107	41.8	0.4	0.10497
27.38	5.191	41.1	0.7	0.09355
25.85	5.274	39.9	1.2	0.08338
24.41	5.357	38.1	1.8	0.07431
23.04	5.440	35.5	2.6	0.06623
21.75	5.523	32.0	3.5	0.05903
20.54	5.606	27.7	4.3	0.05261
19.39	5.689	23.0	4.7	0.04689
18.30	5.772	18.3	4.7	0.04179
17.28	5.855	14.2	4.1	0.03724
16.31	5.938	10.9	3.2	0.03319
15.40	6.021	8.7	2.2	0.02958
14.54	6.104	7.4	1.3	0.02637
13.72	6.187	6.7	0.7	0.02350
12.96	6.270	6.5	0.3	0.02094
12.23	6.353	6.4	0.1	0.01867
11.55	6.436	6.4	0.0	0.01664
10.90	6.519	6.4	0.0	0.01483
10.29	6.602	6.4	0.0	0.01321

WS91 : 91864

Sample: CL-MH-SPS-20130605-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WS91\WS91A.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: 6/18/2013 8:45:34AM
Reported: 6/18/2013 9:12:36AM
Liquid Visc: 0.7227 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: 108 / 83 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	6.4	0.0	0.01178
9.173	6.768	6.3	0.1	0.01050
8.660	6.851	6.2	0.1	0.00936
8.175	6.935	6.0	0.1	0.00834
7.718	7.018	5.9	0.2	0.00743
7.286	7.101	5.7	0.2	0.00662
6.879	7.184	5.6	0.1	0.00590
6.494	7.267	5.4	0.1	0.00526
6.131	7.350	5.3	0.1	0.00469
5.788	7.433	5.1	0.2	0.00418
5.464	7.516	5.0	0.2	0.00372
5.158	7.599	4.8	0.2	0.00332
4.870	7.682	4.6	0.2	0.00296
4.597	7.765	4.4	0.2	0.00264
4.340	7.848	4.3	0.1	0.00235
4.097	7.931	4.2	0.1	0.00209
3.868	8.014	4.1	0.1	0.00187
3.652	8.097	4.1	0.1	0.00166
3.447	8.180	4.0	0.0	0.00148
3.255	8.263	4.0	0.0	0.00132
3.073	8.346	4.0	0.0	0.00118
2.901	8.429	4.1	0.0	0.00105
2.738	8.512	4.0	0.0	0.00094
2.585	8.595	4.0	0.1	0.00083
2.441	8.679	3.9	0.1	0.00074
2.304	8.762	3.7	0.2	0.00066
2.175	8.845	3.5	0.2	0.00059
2.054	8.928	3.4	0.2	0.00053
1.939	9.011	3.3	0.1	0.00047
1.830	9.094	3.2	0.1	0.00042
1.728	9.177	3.1	0.1	0.00037
1.631	9.260	3.0	0.1	0.00033
1.540	9.343	2.9	0.1	0.00030
1.454	9.426	2.8	0.1	0.00026
1.372	9.509	2.6	0.1	0.00023
1.296	9.592	2.5	0.1	0.00021
1.223	9.675	2.5	0.0	0.00019
1.155	9.758	2.5	0.0	0.00017
1.090	9.841	2.6	0.0	0.00015
1.029	9.924	2.6	0.0	0.00013

Sample: CL-MH-SPS-20130605-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WS91\WS91A.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: 6/18/2013 8:45:34AM
Reported: 6/18/2013 9:12:36AM
Liquid Visc: 0.7227 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: 108 / 83 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	43.8	10.9
4750	100.0	0.0	31.00	42.2	1.7
2000	98.9	1.1	15.60	9.1	33.0
1000	95.2	3.7	7.800	5.9	3.2
500.0	85.5	9.7	3.900	4.1	1.8
250.0	67.5	18.0	2.000	3.3	0.8
125.0	54.7	12.8	1.000	2.6	0.7

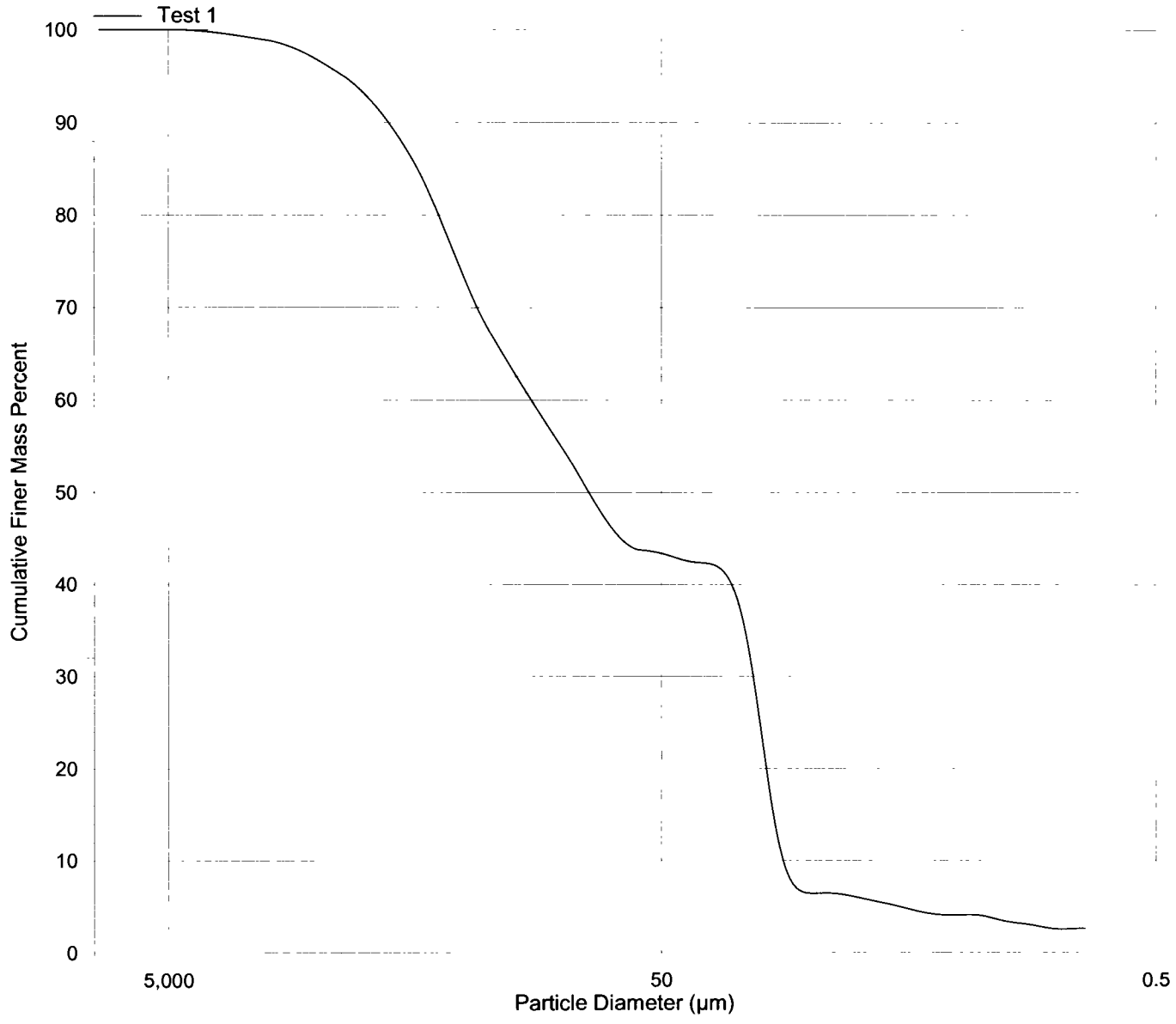
WS91 : 21255

Sample: CL-MH-SPS-20130605-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WS91\WS91A.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: 6/18/2013 8:45:34AM
Reported: 6/18/2013 9:12:36AM
Liquid Visc: 0.7227 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: 108 / 83 kCnts/s
Reynolds Number: 0.42

Cumulative Finer Mass Percent vs. Diameter



Sample: CL-MH-SPS-20130605-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WS91\WS91A-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: 6/18/2013 9:17:54AM
Reported: 6/18/2013 9:28:09AM
Liquid Visc: 0.7226 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: 108 / 82 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	95.6	0.4	117.78540
917.3	0.125	95.2	0.4	104.97634
866.0	0.208	94.7	0.5	93.56027
817.5	0.291	94.2	0.6	83.38567
771.8	0.374	93.6	0.6	74.31756
728.6	0.457	92.9	0.7	66.23560
687.9	0.540	92.1	0.7	59.03254
649.4	0.623	91.3	0.8	52.61280
613.1	0.706	90.4	0.9	46.89121
578.8	0.789	89.5	0.9	41.79184
546.4	0.872	88.5	1.0	37.24701
515.8	0.955	87.4	1.1	33.19643
487.0	1.038	86.3	1.1	29.58635
459.7	1.121	85.0	1.2	26.36887
434.0	1.204	83.7	1.3	23.50128
409.7	1.287	82.4	1.4	20.94553
386.8	1.370	81.0	1.4	18.66773
365.2	1.453	79.6	1.4	16.63763
344.7	1.536	78.1	1.4	14.82830
325.5	1.619	76.7	1.4	13.21574
307.3	1.702	75.3	1.4	11.77854
290.1	1.786	73.9	1.4	10.49763
273.8	1.869	72.6	1.3	9.35603
258.5	1.952	71.4	1.2	8.33857
244.1	2.035	70.2	1.2	7.43176
230.4	2.118	69.1	1.1	6.62356
217.5	2.201	68.0	1.1	5.90325
205.4	2.284	66.9	1.1	5.26128
193.9	2.367	65.8	1.1	4.68912
183.0	2.450	64.7	1.1	4.17918
172.8	2.533	63.6	1.1	3.72470
163.1	2.616	62.6	1.1	3.31964
154.0	2.699	61.5	1.0	2.95864
145.4	2.782	60.5	1.0	2.63689
137.2	2.865	59.5	1.0	2.35013
129.6	2.948	58.4	1.0	2.09455
122.3	3.031	57.4	1.0	1.86677
115.5	3.114	56.3	1.1	1.66376
109.0	3.197	55.3	1.1	1.48283
102.9	3.280	54.1	1.1	1.32157

Sample: CL-MH-SPS-20130605-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WS91\WS91A-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: 6/18/2013 9:17:54AM
Reported: 6/18/2013 9:28:09AM
Liquid Visc: 0.7226 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: 108 / 82 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	53.1	1.1	1.17785
91.73	3.447	52.0	1.1	1.04976
86.60	3.530	51.0	1.0	0.93560
81.75	3.613	50.0	0.9	0.83386
77.18	3.696	49.2	0.8	0.74318
72.86	3.779	48.5	0.7	0.66236
68.79	3.862	47.9	0.6	0.59033
64.94	3.945	47.5	0.4	0.52613
61.31	4.028	47.2	0.2	0.46891
57.88	4.111	47.1	0.1	0.41792
54.64	4.194	47.0	0.1	0.37247
51.58	4.277	46.8	0.2	0.33196
48.70	4.360	46.7	0.2	0.29586
45.97	4.443	46.5	0.2	0.26369
43.40	4.526	46.4	0.1	0.23501
40.97	4.609	46.3	0.1	0.20946
38.68	4.692	46.2	0.1	0.18668
36.52	4.775	46.1	0.1	0.16638
34.47	4.858	46.1	0.1	0.14828
32.55	4.941	46.0	0.1	0.13216
30.73	5.024	45.8	0.2	0.11779
29.01	5.107	45.5	0.3	0.10498
27.38	5.191	45.1	0.4	0.09356
25.85	5.274	44.5	0.6	0.08339
24.41	5.357	43.5	1.0	0.07432
23.04	5.440	41.9	1.6	0.06624
21.75	5.523	39.4	2.5	0.05903
20.54	5.606	35.9	3.5	0.05261
19.39	5.689	31.4	4.5	0.04689
18.30	5.772	26.2	5.2	0.04179
17.28	5.855	20.9	5.3	0.03725
16.31	5.938	16.2	4.7	0.03320
15.40	6.021	12.5	3.7	0.02959
14.54	6.104	10.0	2.5	0.02637
13.72	6.187	8.6	1.4	0.02350
12.96	6.270	7.9	0.7	0.02095
12.23	6.353	7.6	0.3	0.01867
11.55	6.436	7.5	0.1	0.01664
10.90	6.519	7.4	0.1	0.01483
10.29	6.602	7.2	0.1	0.01322

Sample: CL-MH-SPS-20130605-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WS91\WS91A-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: 6/18/2013 9:17:54AM
Reported: 6/18/2013 9:28:09AM
Liquid Visc: 0.7226 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: 108 / 82 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	7.1	0.2	0.01178
9.173	6.768	6.9	0.2	0.01050
8.660	6.851	6.7	0.2	0.00936
8.175	6.935	6.5	0.2	0.00834
7.718	7.018	6.3	0.1	0.00743
7.286	7.101	6.2	0.1	0.00662
6.879	7.184	6.2	0.1	0.00590
6.494	7.267	6.1	0.0	0.00526
6.131	7.350	6.1	0.0	0.00469
5.788	7.433	6.0	0.1	0.00418
5.464	7.516	5.9	0.1	0.00372
5.158	7.599	5.8	0.1	0.00332
4.870	7.682	5.6	0.2	0.00296
4.597	7.765	5.4	0.2	0.00264
4.340	7.848	5.3	0.2	0.00235
4.097	7.931	5.2	0.1	0.00209
3.868	8.014	5.1	0.1	0.00187
3.652	8.097	5.1	0.0	0.00166
3.447	8.180	5.0	0.0	0.00148
3.255	8.263	5.0	0.1	0.00132
3.073	8.346	4.9	0.1	0.00118
2.901	8.429	4.8	0.1	0.00105
2.738	8.512	4.7	0.1	0.00094
2.585	8.595	4.7	0.1	0.00083
2.441	8.679	4.6	0.0	0.00074
2.304	8.762	4.6	0.0	0.00066
2.175	8.845	4.5	0.1	0.00059
2.054	8.928	4.4	0.1	0.00053
1.939	9.011	4.3	0.1	0.00047
1.830	9.094	4.2	0.1	0.00042
1.728	9.177	4.1	0.1	0.00037
1.631	9.260	4.0	0.1	0.00033
1.540	9.343	3.9	0.1	0.00030
1.454	9.426	3.9	0.1	0.00026
1.372	9.509	3.8	0.1	0.00024
1.296	9.592	3.6	0.1	0.00021
1.223	9.675	3.4	0.2	0.00019
1.155	9.758	3.0	0.4	0.00017
1.090	9.841	2.5	0.5	0.00015
1.029	9.924	1.7	0.8	0.00013

WS91-01878

Sample: CL-MH-SPS-20130605-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WS91\WS91A-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: 6/18/2013 9:17:54AM
Reported: 6/18/2013 9:28:10AM
Liquid Visc: 0.7226 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: 108 / 82 kCnts/s
Reynolds Number: 0.42

Report by Size Table

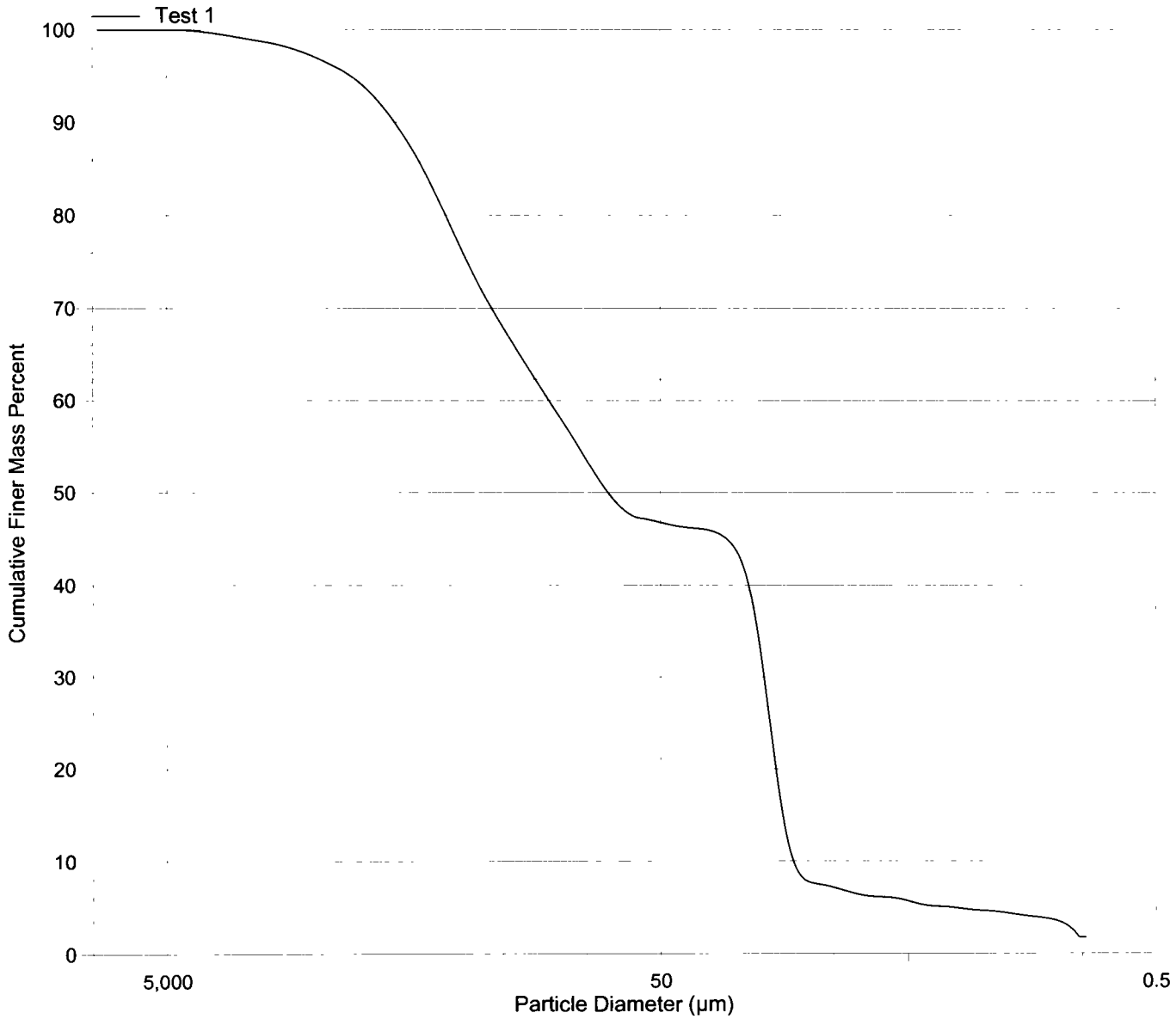
Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)
9500	100.0	0.0	63.00	47.3	10.5
4750	100.0	0.0	31.00	45.8	1.5
2000	98.7	1.3	15.60	13.2	32.6
1000	95.8	2.9	7.800	6.4	6.9
500.0	86.8	9.0	3.900	5.1	1.3
250.0	70.7	16.1	2.000	4.4	0.7
125.0	57.8	12.9	1.000	1.7	2.6

Sample: CL-MH-SPS-20130605-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WS91\WS91A-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: 6/18/2013 9:17:54AM
Reported: 6/18/2013 9:28:10AM
Liquid Visc: 0.7226 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: 108 / 82 kCnts/s
Reynolds Number: 0.42

Cumulative Finer Mass Percent vs. Diameter



Sample: CL-MH-SPS-20130605-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WS91\WS91A-3F.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: 6/18/2013 11:19:31AM
Reported: 6/18/2013 11:29:16AM
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: 108 / 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	96.5	0.3	117.80267
917.3	0.125	96.1	0.4	104.99174
866.0	0.208	95.6	0.5	93.57398
817.5	0.291	95.1	0.5	83.39790
771.8	0.374	94.5	0.6	74.32846
728.6	0.457	93.8	0.7	66.24531
687.9	0.540	93.1	0.7	59.04119
649.4	0.623	92.3	0.8	52.62052
613.1	0.706	91.4	0.9	46.89809
578.8	0.789	90.5	0.9	41.79796
546.4	0.872	89.5	1.0	37.25247
515.8	0.955	88.5	1.0	33.20130
487.0	1.038	87.4	1.1	29.59069
459.7	1.121	86.2	1.2	26.37273
434.0	1.204	84.9	1.3	23.50472
409.7	1.287	83.6	1.3	20.94861
386.8	1.370	82.2	1.4	18.67046
365.2	1.453	80.8	1.4	16.64007
344.7	1.536	79.4	1.4	14.83048
325.5	1.619	78.0	1.4	13.21768
307.3	1.702	76.6	1.4	11.78027
290.1	1.786	75.3	1.3	10.49917
273.8	1.869	74.0	1.3	9.35740
258.5	1.952	72.8	1.2	8.33979
244.1	2.035	71.8	1.1	7.43285
230.4	2.118	70.7	1.1	6.62453
217.5	2.201	69.6	1.0	5.90412
205.4	2.284	68.6	1.0	5.26205
193.9	2.367	67.6	1.0	4.68981
183.0	2.450	66.6	1.0	4.17980
172.8	2.533	65.5	1.0	3.72525
163.1	2.616	64.5	1.0	3.32013
154.0	2.699	63.6	1.0	2.95907
145.4	2.782	62.6	1.0	2.63727
137.2	2.865	61.6	1.0	2.35047
129.6	2.948	60.6	1.0	2.09486
122.3	3.031	59.6	1.0	1.86705
115.5	3.114	58.6	1.0	1.66401
109.0	3.197	57.5	1.1	1.48305
102.9	3.280	56.4	1.1	1.32177

Sample: CL-MH-SPS-20130605-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WS91\WS91A-3F.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: 6/18/2013 11:19:31AM
Reported: 6/18/2013 11:29:16AM
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: 108 / 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	55.2	1.1	1.17803
91.73	3.447	54.1	1.1	1.04992
86.60	3.530	53.1	1.0	0.93574
81.75	3.613	52.1	1.0	0.83398
77.18	3.696	51.3	0.8	0.74328
72.86	3.779	50.6	0.7	0.66245
68.79	3.862	50.0	0.5	0.59041
64.94	3.945	49.7	0.3	0.52621
61.31	4.028	49.6	0.1	0.46898
57.88	4.111	49.5	0.1	0.41798
54.64	4.194	49.5	0.1	0.37252
51.58	4.277	49.4	0.1	0.33201
48.70	4.360	49.3	0.1	0.29591
45.97	4.443	49.2	0.1	0.26373
43.40	4.526	49.2	0.1	0.23505
40.97	4.609	49.1	0.1	0.20949
38.68	4.692	49.0	0.1	0.18670
36.52	4.775	48.9	0.1	0.16640
34.47	4.858	48.7	0.2	0.14830
32.55	4.941	48.5	0.2	0.13218
30.73	5.024	48.2	0.3	0.11780
29.01	5.107	47.8	0.4	0.10499
27.38	5.191	47.2	0.6	0.09357
25.85	5.274	46.4	0.8	0.08340
24.41	5.357	45.2	1.2	0.07433
23.04	5.440	43.3	1.9	0.06625
21.75	5.523	40.5	2.8	0.05904
20.54	5.606	36.7	3.8	0.05262
19.39	5.689	32.0	4.7	0.04690
18.30	5.772	26.8	5.2	0.04180
17.28	5.855	21.7	5.2	0.03725
16.31	5.938	17.1	4.6	0.03320
15.40	6.021	13.5	3.6	0.02959
14.54	6.104	10.9	2.5	0.02637
13.72	6.187	9.4	1.6	0.02350
12.96	6.270	8.5	0.9	0.02095
12.23	6.353	8.1	0.4	0.01867
11.55	6.436	7.9	0.2	0.01664
10.90	6.519	7.9	0.0	0.01483
10.29	6.602	7.9	0.0	0.01322

WS91-918TS

Sample: CL-MH-SPS-20130605-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WS91\WS91A-3F.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: 6/18/2013 11:19:31AM
Reported: 6/18/2013 11:29:16AM
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: 108 / 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	7.8	0.0	0.01178
9.173	6.768	7.8	0.1	0.01050
8.660	6.851	7.6	0.1	0.00936
8.175	6.935	7.4	0.2	0.00834
7.718	7.018	7.2	0.2	0.00743
7.286	7.101	7.0	0.2	0.00662
6.879	7.184	6.8	0.2	0.00590
6.494	7.267	6.6	0.2	0.00526
6.131	7.350	6.4	0.2	0.00469
5.788	7.433	6.3	0.2	0.00418
5.464	7.516	6.1	0.2	0.00373
5.158	7.599	5.9	0.2	0.00332
4.870	7.682	5.7	0.2	0.00296
4.597	7.765	5.6	0.2	0.00264
4.340	7.848	5.4	0.1	0.00235
4.097	7.931	5.3	0.1	0.00209
3.868	8.014	5.3	0.0	0.00187
3.652	8.097	5.3	0.0	0.00166
3.447	8.180	5.3	0.0	0.00148
3.255	8.263	5.3	0.0	0.00132
3.073	8.346	5.2	0.1	0.00118
2.901	8.429	5.1	0.1	0.00105
2.738	8.512	4.9	0.1	0.00094
2.585	8.595	4.8	0.1	0.00083
2.441	8.679	4.7	0.1	0.00074
2.304	8.762	4.6	0.1	0.00066
2.175	8.845	4.6	0.0	0.00059
2.054	8.928	4.6	0.0	0.00053
1.939	9.011	4.6	0.0	0.00047
1.830	9.094	4.6	0.0	0.00042
1.728	9.177	4.5	0.0	0.00037
1.631	9.260	4.5	0.1	0.00033
1.540	9.343	4.3	0.1	0.00030
1.454	9.426	4.2	0.2	0.00026
1.372	9.509	4.0	0.2	0.00024
1.296	9.592	3.8	0.1	0.00021
1.223	9.675	3.8	0.1	0.00019
1.155	9.758	3.8	0.0	0.00017
1.090	9.841	3.8	0.0	0.00015
1.029	9.924	3.7	0.1	0.00013

Sample: CL-MH-SPS-20130605-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WS91\WS91A-3F.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: 6/18/2013 11:19:31AM
Reported: 6/18/2013 11:29:16AM
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: 108 / 84 kCnts/s
Reynolds Number: 0.42

Report by Size Table

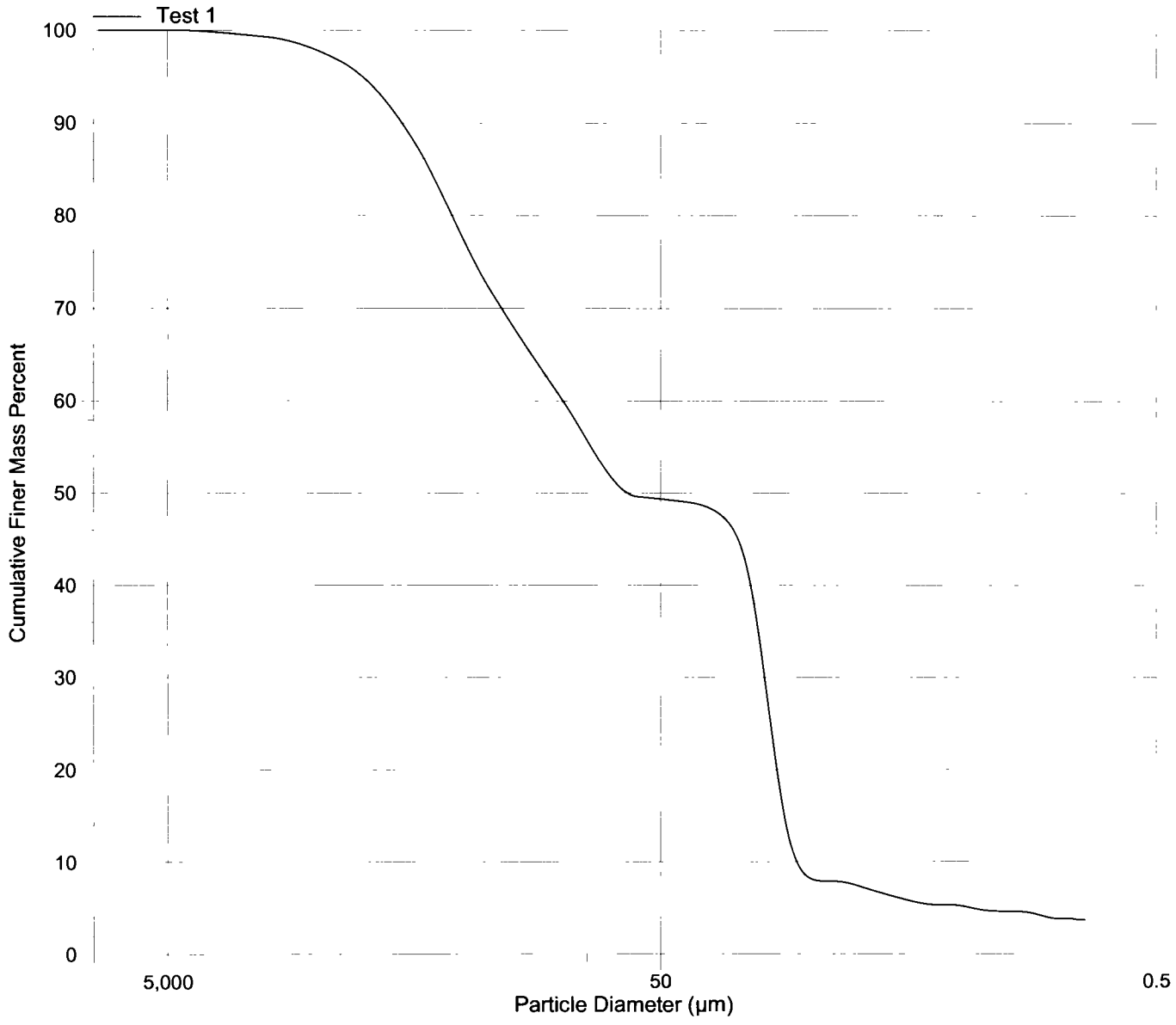
Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)
9500	100.0	0.0	63.00	49.6	10.4
4750	100.0	0.0	31.00	48.3	1.4
2000	99.3	0.7	15.60	14.2	34.1
1000	96.7	2.6	7.800	7.3	6.9
500.0	87.9	8.8	3.900	5.3	2.0
250.0	72.2	15.7	2.000	4.6	0.7
125.0	60.0	12.2	1.000	3.7	0.9

Sample: CL-MH-SPS-20130605-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WS91\WS91A-3F.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: 6/18/2013 11:19:31AM
Reported: 6/18/2013 11:29:16AM
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: 108 / 84 kCnts/s
Reynolds Number: 0.42

Cumulative Finer Mass Percent vs. Diameter



ANALYTICAL RESOURCES, INC.
SEDIGRAPH GRAIN SIZE ANALYSIS

Job No. WS91 ARI Sample No. A-1 Client Sample No. CL-MH-SPS-20130605-S

Set-up Date: 6.10.13 Sample Description: Gray, sandy, silty clay.

Sieve Set # 1 Date Sieved: 6/12/13

SOLIDS CONTENT

Moisture Content	Initials ly
Container No.	106
Tare Weight	1.6229
Wet Weight + Tare	29.6990
Dry Weight + Tare	11.7190

★ Test Sample	Initials ly
Container No.	106
Tare Weight	50.2570
Wet Weight + Tare	78.4433
Washed Sample Dry Weight + Tare	56.1451

SIEVE ANALYSIS
Initials ML

Sieve Size	Weight Retained
Tare	50.2679
4	50.2679
10	50.3797
18	50.7577
35	51.7410
60	53.5635
120	54.8572
230	55.9604
PAN	0.3078

SEDIGRAPH ANALYSIS
Initials ly
Date Sedigraphed 6.18.13

Centrifuged ☐ Oven Dried ☐
Suspension Liquid DI WATER

Beaker ID	1

★ Sample was creating bubbles in test sample tare
* after sample was #230 washed the fine material settled out quickly

ANALYTICAL RESOURCES, INC.
SEDIGRAPH GRAIN SIZE ANALYSIS

Job No. WS91 ARI Sample No. A-2 Client Sample No. CL-ML-SPS-20130605-S

Set-up Date: 6-10-13 Sample Description: Gray sandy silty clay

Sieve Set # 2 Date Sieved: 6/12/13

SOLIDS CONTENT

Moisture Content	Initials LY
Container No.	112
Tare Weight	1.5618
Wet Weight + Tare	29.6779
Dry Weight + Tare	11.7254

★ Test Sample	Initials LY
Container No.	112
Tare Weight	50.3286
Wet Weight + Tare	78.3678
Washed Sample Dry Weight + Tare	55.9267

SIEVE ANALYSIS
Initials ML

Sieve Size	Weight Retained
Tare	50.3458
4	50.3458
10	50.4786
18	50.7725
35	51.6794
60	53.3130
120	54.6188
230	55.6857
PAN	0.3060

SEDIGRAPH ANALYSIS
Initials LY
Date Sedigraphed 6-18-13

Centrifuged ☐ Oven Dried ☐
Suspension Liquid DI WATER

Beaker ID	4

★ Sample was creating bubbles in test sample tare
★ after sample was #230 washed the fine material settled out quickly

ANALYTICAL RESOURCES, INC.
SEDIGRAPH GRAIN SIZE ANALYSIS

Job No. WS91 ARI Sample No. A-3 Client Sample No. CL-MH-SPS-20130605-S

Set-up Date: 6-10-13 Sample Description: gray sandy, silty clay

Sieve Set # 1 Date Sieved: ~~AL~~ MLB 12/13

SOLIDS CONTENT

Moisture Content	Initials eg
Container No.	135
Tare Weight	1.6524
Wet Weight + Tare	35.2942
Dry Weight + Tare	13.6710

★ Test Sample	Initials eg
Container No.	135
Tare Weight	50.3543
Wet Weight + Tare	78.7045
Washed Sample Dry Weight + Tare	55.7855

SIEVE ANALYSIS
Initials ML

Sieve Size	Weight Retained
Tare	50.3675
4	50.3675
10	50.4432
18	50.7059
35	51.5905
60	53.1831
120	54.4177
230	55.4733
PAN	0.2891

SEDIGRAPH ANALYSIS
Initials eg
Date Sedigraphed 6-18-13

Centrifuged ☐ Oven Dried ☐
Suspension Liquid DI WATER

Beaker ID	33

★Sample was creating bubbles in test sample tare eg
★ after sample was #230 washed the fine material settled out quickly eg

Sample ID: CL-MH-SPS-20130605-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:	1.18 L	Sample ID:	A5781_11231_PCB_010	Date Extracted:	14-Aug-2013
Date Collected:	05-Jun-2013	pH	7	QC Batch No.:	11231	Date Analyzed:	20-Aug-2013

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	EMPC		3.27	J	ES PCB-1	63.4
PCB-81 344'5-TeCB	ND	1.49			ES PCB-3	71
PCB-105 233'44'-PeCB	20.8				ES PCB-4	78
PCB-114 2344'5-PeCB	ND	0.907			ES PCB-15	96.7
PCB-118 23'44'5-PeCB	74				ES PCB-19	92.7
PCB-123 23'44'5'-PeCB	1.11			J	ES PCB-37	91.1
PCB-126 33'44'5-PeCB	2.12			J	ES PCB-54	93.5
PCB-156/157 233'44'5/233'44'5'-HxCB	32.1			C	ES PCB-77	99.3
PCB-167 23'44'55'-HxCB	16.6				ES PCB-81	96.4
PCB-169 33'44'55'-HxCB	ND	1.14			ES PCB-104	98.3
PCB-189 233'44'55'-HpCB	7.36			J	ES PCB-105	99.7
					ES PCB-114	99.5
TEQs (WHO M/H)					ES PCB-118	96.2
					ES PCB-123	96.5
ND = 0	0.216		0.217		ES PCB-126	106
ND = 0.5 x DL	0.234		0.234		ES PCB-153	93.2
ND = DL	0.251		0.251		ES PCB-155	82.9
					ES PCB-156/157	90.1
Totals					ES PCB-167	89.6
Mono-CBs	ND	1.28			ES PCB-169	96.6
Di-CBs	92.8				ES PCB-170	92.3
Tri-CBs	137		148		ES PCB-180	90.6
Tetra-CBs	254		260		ES PCB-188	91.6
Penta-CBs	758		775		ES PCB-189	92.7
Hexa-CBs	2,490		2,500		ES PCB-202	103
Hepta-CBs	1,940				ES PCB-205	81.7
Octa-CBs	394				ES PCB-206	86.8
Nona-CBs	22.2				ES PCB-208	94.1
Deca-CB	3.42			J B	ES PCB-209	80.6
					CS PCB-28	87.9
Total PCB (Mono-Deca)	6,090		6,130		CS PCB-111	102
					CS PCB-178	109

Checkcode: 965-568-ZLJ

SGS AP PCB 2013 Rev. 2.0

Report Created: 21-Aug-2013 13:34 Analyst: LB

SGS ANALYTICAL PERSPECTIVES

2714 Exchange Drive
Wilmington
North Carolina 28405
USA

T: 910 794-1613
F: 910 794-3919
www.us.sgs.com

Sample ID: CL-MH-SPS-20130605-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:	1.18 L	Sample ID:	A5781_11231_PCB_010	Date Extracted:	14-Aug-2013
Date Collected:	05-Jun-2013	pH	7	QC Batch No.:	11231	Date Analyzed:	20-Aug-2013
		Units	pg/L	Checkcode:	965-568-ZLJ	Time Analyzed:	22:45:23

Mono	Conc.	Qualifiers
PCB-1	(1.23)	
PCB-2	(1.29)	
PCB-3	(1.33)	
Conc.	0	
EMPC	0	

Di	Conc.	Qualifiers
PCB-4	10.1	
PCB-10	(2.91)	
PCB-9	(2.86)	
PCB-7	(2.46)	
PCB-6	3.05	J
PCB-5	(2.61)	
PCB-8	13.4	
PCB-14	(2.16)	
PCB-11	59.4	B
PCB-13/12	(2.45)	C
PCB-15	6.89	J
Conc.	92.8	
EMPC	92.8	

Tri	Conc.	Qualifiers
PCB-19	4.34	J
PCB-30/18	22.7	C
PCB-17	10.1	
PCB-27	2.91	J
PCB-24	(1.26)	
PCB-16	13.3	
PCB-32	9.3	
PCB-34	(1.6)	
PCB-23	(1.56)	
PCB-26/29	4.25	J C
PCB-25	(1.55)	
PCB-31	20.5	
PCB-28/20	27	C
PCB-21/33	13.8	J C
PCB-22	[10.6]	EMPC
PCB-36	(1.53)	
PCB-39	(1.45)	
PCB-38	(1.6)	
PCB-35	(1.64)	
PCB-37	8.62	
Conc.	137	
EMPC	148	

Tetra	Conc.	Qualifiers
PCB-54	(0.928)	
PCB-50/53	4.5	J C
PCB-45	5.58	J
PCB-51	(1.18)	
PCB-46	2.47	J
PCB-52	56.5	
PCB-73	(0.954)	
PCB-43	(1.39)	
PCB-69/49	17.3	C
PCB-48	6.24	J
PCB-44/47/65	34.4	B C
PCB-59/62/75	[2.69]	J EMPC C
PCB-42	8.61	
PCB-41	4.09	J
PCB-71/40	16.8	J C
PCB-64	13.3	

Tetra	Conc.	Qualifiers
PCB-72	(1.5)	
PCB-68	(1.38)	
PCB-57	(1.53)	
PCB-58	(1.49)	
PCB-67	(1.46)	
PCB-63	(1.37)	
PCB-61/70/74/76	44.9	C
PCB-66	21.4	
PCB-55	(1.51)	
PCB-56	12.1	
PCB-60	5.47	J
PCB-80	(1.32)	
PCB-79	(1.37)	
PCB-78	(1.55)	
PCB-81	(1.49)	
PCB-77	[3.27]	J EMPC
Conc.	254	
EMPC	260	

SGS ANALYTICAL PERSPECTIVES

2714 Exchange Drive
Wilmington, NC 28405, USA

Tel: +1 910 794-1613
Fax: +1 910 794-3919
www.us.sgs.com

Totals	Conc.	EMPC
Mono-Tri	230	240
Tetra-Hexa	3,500	3,530
Hepta-Deca	2,360	2,360
Mono-Deca	6,090	6,130

Sample ID: CL-MH-SPS-20130605-W — Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(0.543)		PCB-109/119/86/97/125/87	64	C	PCB-155	(0.51)		PCB-165	(0.602)	
PCB-96	(0.635)		PCB-117	(1.23)		PCB-152	(0.538)		PCB-146	88.1	
PCB-103	(1.29)		PCB-116/85	9.56	J C	PCB-150	(0.532)		PCB-161	(0.54)	
PCB-94	(1.43)		PCB-110	150		PCB-136	78.4		PCB-153/168	505	C
PCB-95	146		PCB-115	(0.942)		PCB-145	(0.562)		PCB-141	137	
PCB-100/93	(1.33)	C	PCB-82	[7.84]	J EMPC	PCB-148	(0.702)		PCB-130	29.1	
PCB-102	[1.89]	J EMPC	PCB-111	(0.988)		PCB-151/135	221	C	PCB-137	8.6	
PCB-98	(1.63)		PCB-120	[2]	J EMPC	PCB-154	[3.21]	J EMPC	PCB-164	36.3	
PCB-88	(1.55)		PCB-108/124	[5.29]	J EMPC C	PCB-144	31.5		PCB-163/138/129	539	C
PCB-91	8.36	J	PCB-107	10.5		PCB-147/149	488	C	PCB-160	(0.557)	
PCB-84	21.3		PCB-123	1.11	J	PCB-134	24		PCB-158	43.4	
PCB-89	(1.47)		PCB-106	(1.06)		PCB-143	(0.742)		PCB-128/166	35.6	C
PCB-121	(0.99)		PCB-118	74		PCB-139/140	[3.4]	J EMPC C	PCB-159	8.23	J
PCB-92	31		PCB-122	(1.1)		PCB-131	4.18	J	PCB-162	2.55	J
PCB-113/90/101	190	C	PCB-114	(0.907)		PCB-142	(0.747)		PCB-167	16.6	
PCB-83	5.44	J	PCB-105	20.8		PCB-132	154		PCB-156/157	32.1	C
PCB-99	24.2		PCB-127	(1.04)		PCB-133	8.01	J	PCB-169	(1.14)	
PCB-112	(1.01)		PCB-126	[2.12]	J						
			Conc.	758					**Conc.**	2,490	
			EMPC	775					**EMPC**	2,500	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(0.722)		PCB-174	268		PCB-202	16.8		PCB-208	3.28	J
PCB-179	102		PCB-177	146		PCB-201	11.2		PCB-207	2.28	J
PCB-184	(0.807)		PCB-181	(1.36)		PCB-204	(0.799)		PCB-206	16.7	
PCB-176	32.3		PCB-171/173	73.8	C	PCB-197	3.28	J			
PCB-186	(0.757)		PCB-172	42		PCB-200	12.5		**Conc.**	22.2	
PCB-178	49.2		PCB-192	(1.18)		PCB-198/199	96.5	C	**EMPC**	22.2	
PCB-175	10.9		PCB-180/193	498	C	PCB-196	49.9				
PCB-187	259		PCB-191	10.2		PCB-203	59		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(1.29)		PCB-170	234		PCB-195	46		PCB-209	3.42	J B
PCB-183	126		PCB-190	48.5		PCB-194	94				
PCB-185	27.9		PCB-189	7.36	J	PCB-205	4.66	J			
			Conc.	1,940		**Conc.**	394				
			EMPC	1,940		**EMPC**	394				

Sample ID: CL-VT-EFF-20130605-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:	1.25 L	Sample ID:	A5781_11231_PCB_011	Date Extracted:	14-Aug-2013
Date Collected:	05-Jun-2013	pH	6	QC Batch No.:	11231	Date Analyzed:	20-Aug-2013

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	2.55			J	ES PCB-1	60.9
PCB-81 344'5-TeCB	ND	1.05			ES PCB-3	69.2
PCB-105 233'44'-PeCB	18.9				ES PCB-4	77.6
PCB-114 2344'5-PeCB	ND	0.639			ES PCB-15	99.3
PCB-118 23'44'5-PeCB	54				ES PCB-19	96.8
PCB-123 23'44'5'-PeCB	ND	0.638			ES PCB-37	94.1
PCB-126 33'44'5-PeCB	EMPC		1.67	J	ES PCB-54	92.1
PCB-156/157 233'44'5/233'44'5'-HxCB	20.8			C	ES PCB-77	103
PCB-167 23'44'55'-HxCB	11.1				ES PCB-81	102
PCB-169 33'44'55'-HxCB	ND	0.907			ES PCB-104	101
PCB-189 233'44'55'-HpCB	5.27			J	ES PCB-105	101
					ES PCB-114	101
TEQs (WHO M/H)					ES PCB-118	98.2
					ES PCB-123	99.3
ND = 0	0.00356		0.17		ES PCB-126	109
ND = 0.5 x DL	0.0599		0.184		ES PCB-153	96.1
ND = DL	0.116		0.198		ES PCB-155	85.9
					ES PCB-156/157	96.3
Totals					ES PCB-167	95
Mono-CBs	ND	1.31			ES PCB-169	101
Di-CBs	61				ES PCB-170	89.1
Tri-CBs	47.3		57.6		ES PCB-180	90.7
Tetra-CBs	101		104		ES PCB-188	98.3
Penta-CBs	505		516		ES PCB-189	93.6
Hexa-CBs	1,580		1,600		ES PCB-202	104
Hepta-CBs	1,290		1,290		ES PCB-205	85.4
Octa-CBs	288		290		ES PCB-206	94.3
Nona-CBs	13.7		15.7		ES PCB-208	93.8
Deca-CB	4.01			J B	ES PCB-209	85.6
					CS PCB-28	93.8
Total PCB (Mono-Deca)	3,890		3,950		CS PCB-111	106
					CS PCB-178	116

Checkcode: 242-817-KQL SGS AP PCB 2013 Rev. 2.0 Report Created: 21-Aug-2013 13:35 Analyst: LB

SGS ANALYTICAL PERSPECTIVES
2714 Exchange Drive
Wilmington
North Carolina 28405
USA
T: 910 794-1613
F: 910 794-3919
www.us.sgs.com

Sample ID: CL-VT-EFF-20130605-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:	1.25 L	Sample ID:	A5781_11231_PCB_011	Date Extracted:	14-Aug-2013
Date Collected:	05-Jun-2013	pH	6	QC Batch No.:	11231	Date Analyzed:	20-Aug-2013
		Units	pg/L	Checkcode:	242-817-KQL	Time Analyzed:	23:40:20

Mono	Conc.	Qualifiers	Tri	Conc.	Qualifiers	Tetra	Conc.	Qualifiers	Tetra	Conc.	Qualifiers
PCB-1	(1.25)		PCB-19	(1.97)		PCB-54	(0.869)		PCB-72	(1.06)	
PCB-2	(1.32)		PCB-30/18	10.9	J B C	PCB-50/53	[1.53]	J EMPC C	PCB-68	(0.976)	
PCB-3	(1.36)		PCB-17	[4.28]	J EMPC	PCB-45	2.2	J	PCB-57	(1.08)	
			PCB-27	(1.35)		PCB-51	(1.31)		PCB-58	(1.05)	
Conc.	0		PCB-24	(1.41)		PCB-46	(1.58)		PCB-67	(1.03)	
EMPC	0		PCB-16	[5.98]	J EMPC	PCB-52	21.6		PCB-63	(0.966)	
			PCB-32	3.2	J	PCB-73	(1.06)		PCB-61/70/74/76	22	J C
Di	**Conc.**	**Qualifiers**	PCB-34	(1.38)		PCB-43	(1.55)		PCB-66	9.89	
PCB-4	6.97	J	PCB-23	(1.34)		PCB-69/49	6.22	J C	PCB-55	(1.07)	
PCB-10	(3.64)		PCB-26/29	1.56	J C	PCB-48	[1.97]	J EMPC	PCB-56	5.42	J
PCB-9	(4.37)		PCB-25	(1.34)		PCB-44/47/65	13.2	J B C	PCB-60	2.17	J
PCB-7	(3.76)		PCB-31	8.3	B	PCB-59/62/75	1.19	J C	PCB-80	(0.935)	
PCB-6	(4.03)		PCB-28/20	9.94	J B C	PCB-42	3.05	J	PCB-79	(0.967)	
PCB-5	(3.99)		PCB-21/33	5.49	J B C	PCB-41	(1.56)		PCB-78	(1.09)	
PCB-8	6.14	J B	PCB-22	4.37	J B	PCB-71/40	6.37	J C	PCB-81	(1.05)	
PCB-14	(3.3)		PCB-36	(1.32)		PCB-64	5.09	J	PCB-77	2.55	J
PCB-11	47.9	B	PCB-39	(1.25)							
PCB-13/12	(3.75)	C	PCB-38	(1.38)							
PCB-15	(3.74)		PCB-35	(1.42)							
			PCB-37	3.52	J						
Conc.	61		**Conc.**	47.3					**Conc.**	101	
EMPC	61		**EMPC**	57.6					**EMPC**	104	

SGS
ANALYTICAL PERSPECTIVES

2714 Exchange Drive
Wilmington, NC 28405, USA

Tel: +1 910 794-1613
Fax: +1 910 794-3919
www.us.sgs.com

Totals	Conc.	EMPC
Mono-Tri	108	119
Tetra-Hexa	2,190	2,230
Hepta-Deca	1,590	1,600
Mono-Deca	3,890	3,950

Sample ID: CL-VT-EFF-20130605-W — Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(0.57)		PCB-109/119/86/97/125/87	45.5	J C	PCB-155	(0.479)		PCB-165	(0.586)	
PCB-96	(0.666)		PCB-117	1.49	J	PCB-152	(0.506)		PCB-146	58.3	
PCB-103	(0.87)		PCB-116/85	[5.14]	J EMPC C	PCB-150	(0.501)		PCB-161	(0.525)	
PCB-94	(0.967)		PCB-110	107		PCB-136	46.5		PCB-153/168	327	C
PCB-95	89.1		PCB-115	(0.636)		PCB-145	(0.529)		PCB-141	88.3	
PCB-100/93	(0.899)	C	PCB-82	7.24	J	PCB-148	(0.683)		PCB-130	[16.6]	EMPC
PCB-102	[1.14]	J EMPC	PCB-111	(0.667)		PCB-151/135	133	C	PCB-137	[3.48]	J EMPC
PCB-98	(1.1)		PCB-120	(0.662)		PCB-154	2.56	J	PCB-164	24.2	
PCB-88	(1.04)		PCB-108/124	3.84	J C	PCB-144	18.9		PCB-163/138/129	358	C
PCB-91	4.63	J	PCB-107	6.95	J	PCB-147/149	308	C	PCB-160	1.29	J
PCB-84	13.4		PCB-123	(0.638)		PCB-134	15.7		PCB-158	29.8	
PCB-89	(0.993)		PCB-106	(0.718)		PCB-143	(0.723)		PCB-128/166	23.9	C
PCB-121	(0.668)		PCB-118	54		PCB-139/140	2.42	J C	PCB-159	5.98	J
PCB-92	18.6		PCB-122	(0.775)		PCB-131	[2.28]	J EMPC	PCB-162	(0.809)	
PCB-113/90/101	118	C	PCB-114	(0.639)		PCB-142	(0.727)		PCB-167	11.1	
PCB-83	[3.72]	J EMPC	PCB-105	18.9		PCB-132	102		PCB-156/157	20.8	C
PCB-99	16.1		PCB-127	(0.748)		PCB-133	4.35	J	PCB-169	(0.907)	
PCB-112	(0.682)		PCB-126	[1.67]	J EMPC						
			Conc.	505					**Conc.**	1,580	
			EMPC	516					**EMPC**	1,600	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(0.478)		PCB-174	175		PCB-202	11.1		PCB-208	[2]	J EMPC
PCB-179	64.1		PCB-177	95.8		PCB-201	8.29		PCB-207	1.79	J
PCB-184	(0.535)		PCB-181	(1)		PCB-204	(0.662)		PCB-206	11.9	
PCB-176	19.2		PCB-171/173	46.6	C	PCB-197	[1.78]	J EMPC			
PCB-186	(0.502)		PCB-172	30.2		PCB-200	9.33		**Conc.**	13.7	
PCB-178	30.6		PCB-192	(0.869)		PCB-198/199	73.5	C	**EMPC**	15.7	
PCB-175	[6.41]	J EMPC	PCB-180/193	346	C	PCB-196	38.5				
PCB-187	175		PCB-191	7.66	J	PCB-203	43.2		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(0.948)		PCB-170	161		PCB-195	30.9		PCB-209	4.01	J B
PCB-183	86.2		PCB-190	33.1		PCB-194	69.9				
PCB-185	11.4		PCB-189	5.27	J	PCB-205	3.41	J			
			Conc.	1,290		**Conc.**	288				
			EMPC	1,290		**EMPC**	290				

Attachment H-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
6/5/13	**WAG503337**	King	Duwamish River

Discharges to: Surface Water ☒ Ground Water ☐ | Weather at time of inspection: Clear

Section B: Facility Data

Name and Location of Facility Inspected
Cadman Seattle
5225 E Marginal Way S
Seattle, WA 98134

Entry Time	Permit Effective Date
9:00	10/01/2010
Exit Time	**Permit Expiration Date**
14:50	10/01/2015

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)
Jason Adcox/Cadman Plant Maintenance Supervisor
Phone: (425) 961-7354

Other Participants:
Mahbub Alam - Ecology
Corey Wilson - SAIC
Christine Nancarrow - SAIC

Name, Address of Responsible Official/Title/Phone and Fax Number.
Rob Johnson/Vice President of Concrete Operations
Cadman Inc.
7554 185th Aveenue NE
PO Box 97038
Redmond, WA 98073-973
Phone Number Fax Contacted? ☐ Yes ☒ No

	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	☐	
☒	Permit Coverage Letter	☐		☐		☐	
☐		☐		☐		☐	

Section D: Summary of Findings/Comments

Background:

Cadman Concrete and Lehigh Northwest Cement share the 5-acre site located on the lower Duwamish Waterway. Lehigh Northwest operates a cement terminal and receives cement from barges. Some cement is used at Cadman, the rest is stored in silos for export by trucks to other facilities. Cadman operates a concrete batch plant. Both are subsidiaries of Heidelberg Cement Group. All activities at this facility are covered under the Cadman Seattle Sand and Gravel Permit. The property is owned by King County.

This inspection was conducted as part of a Department of Ecology inspection program to control the potential sources of pollutants discharged to the Lower Duwamish Waterway through storm drainage systems. 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.

Site Inspection:

Bob Wright and I arrived at the Cadman facility at approximately 8:30. Mahbub Alam, Ecology Toxics Cleanup Program and SAIC, Ecology sampling contractor, also participated in the inspection and sampling effort. A careful review of the site map was conducted and potential sampling locations were identified. The purpose of the source trace sampling was to spot check for contaminants of concern to the Duwamish River that may be present in the storm drainage system. All samples collected were split with representatives of Cadman Seattle with the understanding that Ecology and Cadman Seattle will share results of the sample analysis.

Inspection/Observations:

At approximately 8:30 Ecology arrived on-site for an unannounced inspection and met Jason Adcox, Cadman Plant Maintenance Supervisor. Ecology reviewed the site paperwork including the Stormwater Pollution Prevention Plan (SWPPP), Site Management Plan, Erosion and Sediment Control Plan, Monitoring Plan, and Spill Control Plan. At the time of inspection all paperwork appeared adequate except for the SWPPP site map. The stormwater drainage conveyance and discharge structures at CB13, CB14, and the pump station were not adequately mapped and the on-site drainage was unclear.

All stormwater on-site is type 3 stormwater. Stormwater is directed to CB13 where the pH is adjusted and polymer (Hyper Flock Hichem CB478) is added for treatment. After treatment, stormwater flows to an underground pump station equipped with two submersible pumps. Stormwater is pumped from the pump station to an aboveground detention vault. The pump station has an overflow pipe connected to CB14, which then discharges to the Duwamish River. Mr. Adcox explained a hydraulic plug had been installed in the conveyance line from the pump station to CB14 to prevent stormwater from discharging off-site to the Duwamish River. In the event of power outage or pump failure stormwater would flood the yard area and not be discharged to CB14.

Stormwater pumped to the above ground vault is used in the production of concrete. It is also used for dust suppression for material stockpiles on-site. A gate has been installed on the overflow valve that discharges to the river to allow for additional control of stormwater. During periods of heavy rain the vault stormwater can be directed to the sanitary sewer under a discharge authorization from King County Industrial Waste. The last reported stormwater discharge was in January 2011. All Cadman Seattle Discharge Monitoring Reports (DMRs) since then have reported No Discharge.

Cadman Seattle has authorization to discharge stormwater to surface waters and ground water. Cadman does not have authorization to discharge process water to ground water or surface waters. Process water was observed entering the stormwater drain near main office (photo #2). Also, the exit to the Portland cement loading area is routinely washed down and the process water enters the stormwater system (photo #6). If process water comingles with stormwater all water becomes process water. Ensure process water is kept separated from stormwater because Cadman Seattle does not have authorization to discharge process water to surface waters, or apply for permit modification to obtain proper discharge authorization. Process water from the cement truck wash station, tire bath, and truck washout reclaim settling ponds is directed to sanitary sewer.

Near the entrance to the Portland cement loading area the pavement is broken and sloped to the bank of Duwamish River (photo #4). Stormwater in this area has potential to discharge to the River unmonitored and untreated.

Two 275 gallon totes of liquid admixture Hycrete W1001 were stored outside without secondary containment or cover.

Issues & Permit Compliance Requirements:

- Update SWPPP site map. The site map must have all on-site stormwater drainage and discharge structures clearly and adequately mapped to reflect current site drainage. Update the SWPPP to include any changes made to stormwater management on-site.

- Separate all process water from stormwater on-site or apply for permit modification. If Cadman Seattle would like to add the discharge of process water to surface water to the facility's permit coverage, the company must submit a new Sand and Gravel Permit Application requesting a modification. This would be considered a major modification and would need to go through the public notice process. If you would like additional information regarding this process, please contact Cynthia Walcker, Ecology's Northwest Regional Office, Sand and Gravel Permit Specialist at (425) 649-7276.

- Repair broken roadway sloping to river bank near the entrance to the Portland Cement Loading area.

- Store all chemical liquids, fluids, and petroleum products, on an impervious surface 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.

- Prevent track-out from the facility and sweep as necessary to prevent track-out of sediments and debris onto West Marginal Way South.

Name(s) and Signatures of Inspector(s)	Agency/Office/Telephone	Date
Ken Waldo, Bob Wright	WA Dept. of Ecology/ NW Regional Office/ 425-649-7279 3190 160th Ave SE, Bellevue, WA 98008-5452	6/19/13
Signature of Management Q A Reviewer	**Agency/Office/Phone and Fax Numbers**	
Raman Iver	WA Dept. of Ecology/NWRO/ (425) 649-7000 Fax (425) 649-7098	06/19/13

UNANNOUNCED Inspection

Cadman Seattle Plant
6-5-13

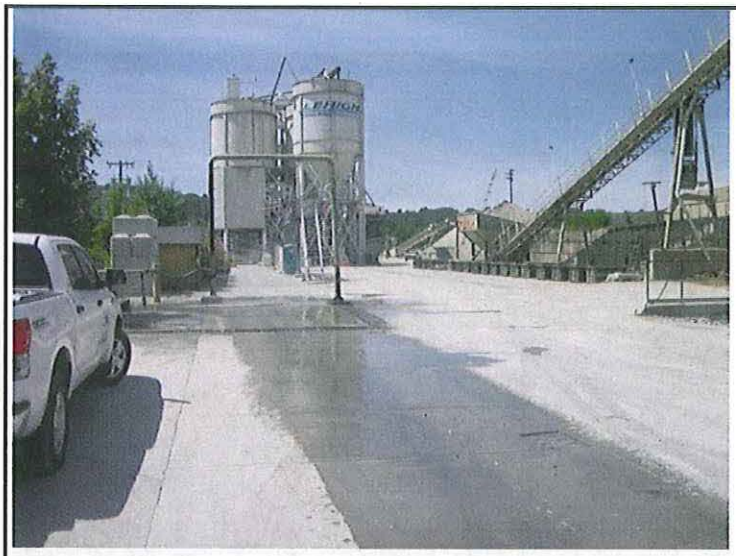
#1. DESCRIPTION: CONCRETE TRUCK LOST PART OF LOAD TO WEST MARGINAL WAY. SWEEPER TRUCK CALLED TO CLEAN UP ROADWAY.

#2. DESCRIPTION: PROCESS WATER ENTERING STORMWATER DRAIN NEAR MAIN OFFICE. PROCESS WATER MUST BE KEPT SEPARATE FROM STORMWATER. IF PROCESS WATER COMINGLES WITH STORMWATER ALL WATER BECOMES PROCESS WATER.

#3. DESCRIPTION: CB14 DISCHARGES TO THE RIVER. THE CB LID IS SEALED TO PREVENT SURFACE INFLOW. A HYDRAULIC PLUG HAS BEEN INSTALLED IN THE CONVEYANCE PIPE CONNECTING CB14 TO THE PUMP STATION OVERFLOW TO PREVENT DISCHARGE TO THE RIVER. MR. ADCOX EXPLAINED IF THE PUMP STATION WERE TO FAIL DURING HEAVY RAIN THE PUMP STATION WOULD FILL UP AND STORMWATER WOULD FLOOD THE YARD AREA. THE CURRENT SWPPP PLAN EXPLAINED THAT THE PUMP STATION OVERFLOWS TO CB14 AND THEN TO THE RIVER TO PREVENT THE YARD FROM FLOODING. THE SWPPP AND SITE MAP NEED TO BE UPDATED TO REFLECT THE CURRENT SITE DRAINAGE.

#4. DESCRIPTION: PAVEMENT BROKEN AND SLOPED TO BANK OF DUWAMISH RIVER ALLOWING FOR DISCHARGE OF UNTREATED UNMONITORED STORMWATER AND PROCESS WASTEWATER. LOCATION NEAR THE ENTRANCE TO THE PORTLAND CEMENT LOADING AREA.

Cadman Seattle Plant
6-5-13



#5. DESCRIPTION: PORTLAND CEMENT TANKER TRUCK WASH. WASH WATER DISCHARGED TO SANITARY SEWER.

.

#6. DESCRIPTION: EXIT FROM PORTLAND CEMENT LOADING AREA. RED ARROW INDICATES LOCATION OF STORMWATER DRAIN COLLECTING STORMWATER RUNOFF AND PROCESS WASTEWATER FROM THIS AREA. AREA IS ROUTINELY WASHED DOWN ALLOWING PROCESS WATER TO ENTER STORMWATER DRAIN.

#7. DESCRIPTION: TOTES OF LIQUID ADMIXTURE HYCRETE W1001 STORED OUTSIDE. ENSURE CHEMICAL LIQUID PRODUCTS ARE STORED PROPERLY WITH SECONDARY CONTAINMENT AND COVER.

#8. DESCRIPTION: PONDS ARE PART OF TRUCK WASHOUT RECLAIM AND SETTLING SYSTEM. PROCESS WATER OVERFLOWING TO DRAIN GOES TO SANITARY SEWER.